U.S. Environmental Protection Agency
Region 8
Technical and Management Services

Laboratory Services Program

Certificate of Analysis

Ref: 8TMS-L

MEMORANDUM

Date: 05/18/16

Subject: Analytical Results--- **Cowboy Timber_MAY2016 / NA**

From: Don Goodrich; EPA Region 8 Analytical Chemistry WAM

To: Craig Myers
Superfund
1595 Wynkoop Street

Received Sample Set(s), [Work Order : Date Received]:
[F160501 : 05/12/2016]

Attached are the analytical results for the samples received from the Cowboy Timber_MAY2016 sampling event, according to TDF NA. All analyses were performed within their method specified holding times unless otherwise noted in the following narrative.

These samples were prepared, analyzed, and verified by the Environmental Services Assistance Team Laboratory (ESAT) according to the requirements of the Technical Direction Form (TDF).

Note: The laboratory herewith transmits this deliverable to the program/project partner for determination of "final data usability" which may include data validation and data quality asessment per and in accordance with EPA QA/G-8, *Guidance on Environmental Data Verification and Data Validation*, November 2002, EPA/240/R-02/004. Laboratory data qualifiers are applied based on the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* June 2008, referred to as "NFG".

Laboratory policy is to dispose of any remaining sample 60 days after data analysis packages are delivered to EPA. If you would like the laboratory to retain the samples for a period longer than 60 days, please contact Don Goodrich within the 60 day period at (303) 312-6687.

Case Narrative

F160501

Quality Assessment: Unless indicated by exception, the QA/QC associated with this sample set produced data within the TDF-specified criteria.

Holding Times: All samples were analyzed within their method-specified technical holding time(s).

Sample Receipt: All samples were received within the temperature control limits of 4C +/- 2C.

1. Preparation (PB) / Method blanks (MB). No detections > PQL
Exceptions: None.

2. Initial and Continuing calibration verification analyses (ICVs and CCVs). All CCCs and SPCCs are within limits.
Exceptions: Closing CCV3 in sequence F160503 was 79%, data acceptable.

3. Laboratory Control Sample/ Blank Spike (LCS/BS). Recoveries are within 70-130% range. DCDFM recovery high; no hits in samples.
Exceptions: None.

4. Instrument tune (BFB/DFTPP). Tune passes, and all samples were analyzed within 12 hours.
Exceptions: None.

5. Laboratory Duplicate (DUP). "Source" identifies field sample duplicated in the laboratory. RPD limits are within limits.
Exceptions: None.

6. Laboratory Matrix Spike (MS) and Matrix Spike Duplicate (MSD). "Source" defines original field sample fortified prior to analysis. Percent Recovery (%R) limits do not apply when sample concentration(s) exceed the corresponding analyte spike level by a factor of 4 or greater.
Exceptions: None.

7. Internal standards. Area counts must be within 50% to 200% of responses established in associated opening CCV.
Exceptions: None.

8. Any calibration using more than two-points produced a correlation coefficient equal to or greater than 0.995 or have an average response factor of less than or equal to 15% for all non-CCC compounds or less than or equal to 30% for all CCC compounds.
Exceptions: None.

Acronyms and Definitions:

ESAT	Environmental Services Assistance Team
J	Data Estimated qualifier (also applied to all data less than PQL, greater than or equal to MDL)
MDL	Method Detection Limit
PQL	Practical Quantitation Limit, also known as reporting limit.
RPD	Relative Percent Difference (difference divided by the mean)
%D	Percent difference, serial dilution criteria unit, difference divided by the original result.
%R	Percent recovery, analyzed (less sample contribution) divided by true value
<	Analyte NOT DETECTED at or above the Method Detection Limit (MDL)
mg/L	Milligrams per liter (Parts per million). Solids equivalent = mg/Kg.
ug/L	Micrograms per liter (Parts per billion). Solids equivalent = ug/Kg.
NR	No Recovery (matrix spike) - Often seen for calcium/magnesium when their concentration exceeds the spike level by > 4x.
NFG	*USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* June 2008.
RE	Sample Re-analysis. Usually seen on raw data and sequences for required sample dilutions due to over-range analytes.
U	Analyte not detected at or above MDL qualifier
D	Diluted value qualifier

Method(s) Summary:

As defined in the Technical Direction Form (TDF), some or all of the methods listed below were used for the determination of the reported target analytes.

From EPA's *Methods for the Determination of Metals in Environmental Samples*, Supplement I, May 1994, dissolved, total, and/or total recoverable metals were determined by:

- Method 200.7 / 6010B using a PE Optima ICP-OE (ICP).
- Method 200.8 / 6020 using a Perkin-Elmer Elan 6000 ICP-MS.
- Method 200.2 for total recoverable metals (only) digestion.
- Method 245.1 using a Perkin-Elmer FIMS CVAA (aqueous mercury only).

From *Standard Methods for the Examination of Water and Wastewater*, 18th Edition, 1992, Method 2340B was used for the calculated hardness determination. Hardness is reported as mg (milligram) equivalent $CaCO_3$ per liter (L) determined as follows:

Calculated hardness = 2.497 * (Calcium, mg/L) + 4.118 * (Magnesium, mg/L).

From *EPA's Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846*,

- Method 3015A was used for microwave assisted total metals digestion.
- Method 7473 was used for mercury in solids.
- Method 8260B/5030B was used for volatile organic compounds.

From EPA's *Determination of Inorganic Anions by Ion Chromatography*, Revision 2.1, 1993, Method 300.0 was used to determine the anions.

From EPA's *Methods for Chemical Analysis of Water and Wastes*, March 1983:

- Method 310.1 was followed for the alkalinity determination.
- Method 160.1 was followed for gravimetric total dissolved solids (TDS) determination .
- Method 160.2 was used for gravimetric total suspended solids (TSS) determination.
- Method 415.3 was used for total organic carbon (TOC) determination using either an Apollo 9000 or Phoenix 8000 Non-Dispersive IR (NDIR) system. Also known as dissolved organic carbon (DOC) when performed on the dissolved sample fraction.

The quality control procedures listed in the TDF request were utilized by ESAT to verify accuracy of the results and to evaluate any matrix interferences.

Pentachlorophenol by GCMS method 8270D

Station ID: CTSO-C6D01-20160510 **Date / Time Sampled:** 05/10/16 16:54 **Workorder** F160501
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160501-01 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**744**	**D**	mg/kg	132	100	05/12/2016	SW	F160501
Surrogate: 2,4,6-Tribromophenol		*%*	*Limit 50-150*			*100*	*05/12/2016*	*SW*	*F160501*

Station ID: CTSO-C7D01-20160510 **Date / Time Sampled:** 05/10/16 16:48 **Workorder** F160501
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160501-02 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**4.67**		mg/kg	1.32	1	05/12/2016	SW	F160501
Surrogate: 2,4,6-Tribromophenol		*104 %*	*Limit 50-150*			*1*	*05/12/2016*	*SW*	*F160501*

Station ID: CTSO-D2D01-20160510 **Date / Time Sampled:** 05/10/16 17:13 **Workorder** F160501
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160501-03 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**377**	**D**	mg/kg	132	100	05/12/2016	SW	F160501
Surrogate: 2,4,6-Tribromophenol		*%*	*Limit 50-150*			*100*	*05/12/2016*	*SW*	*F160501*

Station ID: CTSO-D3D12-20160510 **Date / Time Sampled:** 05/10/16 17:10 **Workorder** F160501
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160501-04 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**3.48**		mg/kg	1.32	1	05/12/2016	SW	F160501
Surrogate: 2,4,6-Tribromophenol		*107 %*	*Limit 50-150*			*1*	*05/12/2016*	*SW*	*F160501*

Station ID: CTSO-D4D12-20160510 **Date / Time Sampled:** 05/10/16 17:01 **Workorder** F160501
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160501-05 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	Pentachlorophenol	< 2.00	**U**	mg/kg	1.32	1	05/13/2016	SW	F160501
Surrogate: 2,4,6-Tribromophenol		*93 %*	*Limit 50-150*			*1*	*05/13/2016*	*SW*	*F160501*

Station ID: CTSO-D5D12-20160510 **Date / Time Sampled:** 05/10/16 16:58 **Workorder** F160501
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160501-06 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch

EPA 8270D	Pentachlorophenol	< 2.00	**U**	mg/kg	1.32	1	05/12/2016	SW	F160501
Surrogate: 2,4,6-Tribromophenol		*100 %*		*Limit 50-150*		*1*	*05/12/2016*	*SW*	*F160501*

Station ID: CTSO-D6D12-20160510 **Date / Time Sampled:** 05/10/16 16:54 **Workorder** F160501
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160501-07 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**3.57**		mg/kg	1.32	1	05/12/2016	SW	F160501
Surrogate: 2,4,6-Tribromophenol		*96 %*		*Limit 50-150*		*1*	*05/12/2016*	*SW*	*F160501*

Station ID: CTSO-D7D12-20160510 **Date / Time Sampled:** 05/10/16 16:48 **Workorder** F160501
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160501-08 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**2.29**		mg/kg	1.32	1	05/12/2016	SW	F160501
Surrogate: 2,4,6-Tribromophenol		*97 %*		*Limit 50-150*		*1*	*05/12/2016*	*SW*	*F160501*

Station ID: CTSO-DUP-20160510 **Date / Time Sampled:** 05/10/16 00:00 **Workorder** F160501
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160501-09 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**4.94**		mg/kg	1.32	1	05/12/2016	SW	F160501
Surrogate: 2,4,6-Tribromophenol		*100 %*		*Limit 50-150*		*1*	*05/12/2016*	*SW*	*F160501*

Station ID: CTSO-DUP2-20160510 **Date / Time Sampled:** 05/10/16 00:00 **Workorder** F160501
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160501-10 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**30.8**		mg/kg	1.32	1	05/12/2016	SW	F160501
Surrogate: 2,4,6-Tribromophenol		*102 %*		*Limit 50-150*		*1*	*05/12/2016*	*SW*	*F160501*

Station ID: CTSO-B2D01-20160510 **Date / Time Sampled:** 05/10/16 17:15 **Workorder** F160501
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160501-11 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**234**	**D**	mg/kg	26.4	10	05/12/2016	SW	F160501
Surrogate: 2,4,6-Tribromophenol		*%*		*Limit 50-150*		*10*	*05/12/2016*	*SW*	*F160501*

Station ID: CTSO-B3D12-20160510 **Date / Time Sampled:** 05/10/16 17:16 **Workorder** F160501
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160501-12 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**92.1**		mg/kg	1.32	1	05/12/2016	SW	F160501
Surrogate: 2,4,6-Tribromophenol		*109 %*	*Limit 50-150*			*1*	*05/12/2016*	*SW*	*F160501*

Station ID: CTSO-B4D23-20160510 **Date / Time Sampled:** 05/10/16 17:20 **Workorder** F160501
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160501-13 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**2.26**		mg/kg	1.32	1	05/12/2016	SW	F160501
Surrogate: 2,4,6-Tribromophenol		*100 %*	*Limit 50-150*			*1*	*05/12/2016*	*SW*	*F160501*

Station ID: CTSO-B5D01-20160510 **Date / Time Sampled:** 05/10/16 17:20 **Workorder** F160501
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160501-14 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**4.50**		mg/kg	1.32	1	05/12/2016	SW	F160501
Surrogate: 2,4,6-Tribromophenol		*92 %*	*Limit 50-150*			*1*	*05/12/2016*	*SW*	*F160501*

Station ID: CTSO-B6D12-20160510 **Date / Time Sampled:** 05/10/16 17:23 **Workorder** F160501
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160501-15 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**11.7**		mg/kg	1.32	1	05/12/2016	SW	F160501
Surrogate: 2,4,6-Tribromophenol		*96 %*	*Limit 50-150*			*1*	*05/12/2016*	*SW*	*F160501*

Station ID: CTSO-B7D23-20160510 **Date / Time Sampled:** 05/10/16 17:25 **Workorder** F160501
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160501-16 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	Pentachlorophenol	< 2.00	**U**	mg/kg	1.32	1	05/12/2016	SW	F160501
Surrogate: 2,4,6-Tribromophenol		*95 %*	*Limit 50-150*			*1*	*05/12/2016*	*SW*	*F160501*

Station ID: CTSO-C2D01-20160517 **Date / Time Sampled:** 05/10/16 17:13 **Workorder** F160501
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160501-17 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**1.58**	**J**	mg/kg	1.32	1	05/12/2016	SW	F160501
Surrogate: 2,4,6-Tribromophenol		*102 %*	*Limit 50-150*			*1*	*05/12/2016*	*SW*	*F160501*

Station ID: CTSO-C3D12-20160510 **Date / Time Sampled:** 05/10/16 17:10 **Workorder** F160501
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160501-18 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**32.6**		mg/kg	1.32	1	05/12/2016	SW	F160501
Surrogate: 2,4,6-Tribromophenol		*101 %*	*Limit 50-150*			*1*	*05/12/2016*	*SW*	*F160501*

Station ID: CTSO-C4D12-20160510 **Date / Time Sampled:** 05/10/16 17:01 **Workorder** F160501
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160501-19 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**163**	**D**	mg/kg	13.2	10	05/12/2016	SW	F160501
Surrogate: 2,4,6-Tribromophenol		*110 %*	*Limit 50-150*			*10*	*05/12/2016*	*SW*	*F160501*

Station ID: CTSO-C5D01-20160510 **Date / Time Sampled:** 05/10/16 16:58 **Workorder** F160501
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160501-20 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**93.2**	**D**	mg/kg	13.2	10	05/12/2016	SW	F160501
Surrogate: 2,4,6-Tribromophenol		*106 %*	*Limit 50-150*			*10*	*05/12/2016*	*SW*	*F160501*

Classical Chemistry Parameters

Station ID: CTSO-C6D01-20160510 **Date / Time Sampled:** 05/10/16 16:54 **Workorder** F160501
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160501-01 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**97.4**		% by Weight		1	05/13/2016	KB	F160502

Station ID: CTSO-C7D01-20160510 **Date / Time Sampled:** 05/10/16 16:48 **Workorder** F160501
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160501-02 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**97.0**		% by Weight		1	05/13/2016	KB	F160502

Station ID: CTSO-D2D01-20160510 **Date / Time Sampled:** 05/10/16 17:13 **Workorder** F160501
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160501-03 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**94.6**		% by Weight		1	05/13/2016	KB	F160502

Station ID: CTSO-D3D12-20160510 **Date / Time Sampled:** 05/10/16 17:10 **Workorder** F160501
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160501-04 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**97.9**		% by Weight		1	05/13/2016	KB	F160502

Station ID: CTSO-D4D12-20160510 **Date / Time Sampled:** 05/10/16 17:01 **Workorder** F160501
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160501-05 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**97.0**		% by Weight		1	05/13/2016	KB	F160502

Station ID: CTSO-D5D12-20160510 **Date / Time Sampled:** 05/10/16 16:58 **Workorder** F160501
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160501-06 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**97.8**		% by Weight		1	05/13/2016	KB	F160502

Station ID: CTSO-D6D12-20160510 **Date / Time Sampled:** 05/10/16 16:54 **Workorder** F160501
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160501-07 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch

% Solids	**% Solids**	**98.6**	% by Weight	1	05/13/2016	KB	F160502	

Station ID: CTSO-D7D12-20160510 **Date / Time Sampled:** 05/10/16 16:48 **Workorder** F160501
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160501-08 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**98.8**		% by Weight		1	05/13/2016	KB	F160502

Station ID: CTSO-DUP-20160510 **Date / Time Sampled:** 05/10/16 00:00 **Workorder** F160501
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160501-09 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**96.9**		% by Weight		1	05/13/2016	KB	F160502

Station ID: CTSO-DUP2-20160510 **Date / Time Sampled:** 05/10/16 00:00 **Workorder** F160501
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160501-10 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**95.8**		% by Weight		1	05/13/2016	KB	F160502

Station ID: CTSO-B2D01-20160510 **Date / Time Sampled:** 05/10/16 17:15 **Workorder** F160501
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160501-11 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**93.1**		% by Weight		1	05/13/2016	KB	F160502

Station ID: CTSO-B3D12-20160510 **Date / Time Sampled:** 05/10/16 17:16 **Workorder** F160501
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160501-12 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**96.4**		% by Weight		1	05/13/2016	KB	F160502

Station ID: CTSO-B4D23-20160510 **Date / Time Sampled:** 05/10/16 17:20 **Workorder** F160501
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160501-13 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**97.3**		% by Weight		1	05/13/2016	KB	F160502

Station ID: CTSO-B5D01-20160510 **Date / Time Sampled:** 05/10/16 17:20 **Workorder** F160501
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160501-14 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**96.8**		% by Weight		1	05/13/2016	KB	F160502

Station ID: CTSO-B6D12-20160510 **Date / Time Sampled:** 05/10/16 17:23 **Workorder** F160501
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160501-15 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**97.9**		% by Weight		1	05/13/2016	KB	F160502

Station ID: CTSO-B7D23-20160510 **Date / Time Sampled:** 05/10/16 17:25 **Workorder** F160501
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160501-16 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**97.6**		% by Weight		1	05/13/2016	KB	F160502

Station ID: CTSO-C2D01-20160517 **Date / Time Sampled:** 05/10/16 17:13 **Workorder** F160501
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160501-17 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**96.5**		% by Weight		1	05/13/2016	KB	F160502

Station ID: CTSO-C3D12-20160510 **Date / Time Sampled:** 05/10/16 17:10 **Workorder** F160501
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160501-18 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**95.8**		% by Weight		1	05/13/2016	KB	F160502

Station ID: CTSO-C4D12-20160510 **Date / Time Sampled:** 05/10/16 17:01 **Workorder** F160501
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160501-19 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**95.6**		% by Weight		1	05/13/2016	KB	F160502

Station ID: CTSO-C5D01-20160510 **Date / Time Sampled:** 05/10/16 16:58 **Workorder** F160501
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160501-20 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch

Project Name: **Cowboy Timber_MAY2016** **Certificate of Analysis**

TDF #: **NA**

% Solids	**% Solids**	**95.7**	% by Weight	1	05/13/2016	KB	F160502

Note: "J" Qualifier indicates an estimated value. "U" Qualifier indicates analyte not detected at or above MDL.
"D" Qualifier indicates diluted value.

Pentachlorophenol by GCMS method 8270D - Quality Control

TechLaw, Inc. - ESAT Region 8 (Mobile Lab)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%R	%R Limits	%D or RPD	%D or RPD Limit
SVOC Field GCMS									
Batch F160501 - EPA 3550C			***Soil***						**SVOC Field GCMS**
Method Blank (F160501-BLK1)						Prepared & Analyzed: 05/12/16			
Pentachlorophenol	< 1.32	2.00	mg/kg						
Method Blank Spike (F160501-BS1)						Prepared & Analyzed: 05/12/16			
Pentachlorophenol	18.0	2.00	mg/kg	20.0		90	70-130		
Matrix Spike (F160501-MS1)			**Source: F160501-02**			Prepared & Analyzed: 05/12/16			
Pentachlorophenol	18.9	2.00	mg/kg	20.0	4.67	71	17-109		
Matrix Spike Dup (F160501-MSD1)			**Source: F160501-02**			Prepared & Analyzed: 05/12/16			
Pentachlorophenol	17.8	2.00	mg/kg	20.0	4.67	66	17-109	6	47

NOTE: %R = % Recovery, %R limits do not apply when sample levels exceed 4x the spike level.
RPD = Relative Percent Difference, %D = % Difference, DL = Detection Limit for QC sample .

TechLaw, Inc. - ESAT Region 8 (Mobile Lab)

Initial and Continuing Calibration Verification Results

SVOC Field GCMS Method: EPA 8270D Analysis Name: 8270 PCP

Sequence: F160503 Work Order: F160501 Units: mg/kg

Non-volatile Analyte	Initial (ICV1, ICV2)			Continuing Calibration Verification Standards (CCVs)								
	True	Found	%R	True	Found	%R	True	Found	%R	True	Found	%R
2,4,6-Tribromophenol				1			2			3		
				20.0	18.2	91.0	20.0	19.2	96.0	20.0	18.5	92.5
				4			5			6		
				7			8			9		
Pentachlorophenol				1			2			3		
				20.0	18.0	90.0	20.0	17.2	86.0	20.0	15.8	79.0
				4			5			6		
				7			8			9		
Phenanthrene-d10				1			2			3		
					0.00	0.0		0.00	0.0		0.00	0.0
				4			5			6		
				7			8			9		

TechLaw, Inc. - ESAT Region 8 (Mobile Lab)

Initial and Continuing Calibration Verification Results

SVOC Field GCMS Method: EPA 8270D Analysis Name: 8270 PCP

Sequence: F160504 Work Order: F160501 Units: mg/kg

Non-volatile Analyte	Initial (ICV1, ICV2)			Continuing Calibration Verification Standards (CCVs)								
	True	Found	%R	True	Found	%R	True	Found	%R	True	Found	%R
2,4,6-Tribromophenol				1			2			3		
				20.0	19.6	98.0	20.0	20.0	100.0			
				4			5			6		
				7			8			9		
Pentachlorophenol				1			2			3		
				20.0	18.0	90.0	20.0	18.6	93.0			
				4			5			6		
				7			8			9		
Phenanthrene-d10				1			2			3		
					0.00	0.0		0.00	0.0			
				4			5			6		
				7			8			9		

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270D

Laboratory: TechLaw, Inc. - ESAT Region 8 (Mobile Lab) SDG:

Client: Superfund Project: Cowboy Timber_MAY2016

Sequence: F160503 Instrument: SVOC Field GCMS

Matrix: Soil Calibration: UNASSIGNED

Internal Standard	Response	RT	Reference Response		Area %	Area % Limits	RT Diff		
Calibration Check (F160503-CCV1)			Lab File ID: CBTM-002.D			Analyzed: 05/12/16 10:46			
Phenanthrene-d10	50420950	11.57				50 - 200			
Blank (F160501-BLK1)			Lab File ID: CBTM-003.D			Analyzed: 05/12/16 11:11			
Phenanthrene-d10	43092970	11.57	50420950		85	50 - 200	0.0000		
LCS (F160501-BS1)			Lab File ID: CBTM-004.D			Analyzed: 05/12/16 11:36			
Phenanthrene-d10	46805530	11.57	50420950		93	50 - 200	0.0000		
CTSO-C7D01-20160510 (F160501-02)			Lab File ID: CBTM-006.D			Analyzed: 05/12/16 12:26			
Phenanthrene-d10	53026820	11.57	50420950		105	50 - 200	0.0000		
CTSO-D2D01-20160510 (F160501-03)			Lab File ID: CBTM-007.D			Analyzed: 05/12/16 12:51			
Phenanthrene-d10	51754590	11.57	50420950		103	50 - 200	0.0000		
CTSO-C6D01-20160510 (F160501-01)			Lab File ID: CBTM-008.D			Analyzed: 05/12/16 13:16			
Phenanthrene-d10	46576140	11.57	50420950		92	50 - 200	0.0000		
Matrix Spike (F160501-MS1)			Lab File ID: CBTM-009.D			Analyzed: 05/12/16 13:58			
Phenanthrene-d10	43607690	11.57	50420950		86	50 - 200	0.0000		
Matrix Spike Dup (F160501-MSD1)			Lab File ID: CBTM-010.D			Analyzed: 05/12/16 14:23			
Phenanthrene-d10	47005960	11.57	50420950		93	50 - 200	0.0000		
CTSO-D3D12-20160510 (F160501-04)			Lab File ID: CBTM-011.D			Analyzed: 05/12/16 14:49			
Phenanthrene-d10	44015860	11.57	50420950		87	50 - 200	0.0000		
CTSO-D5D12-20160510 (F160501-06)			Lab File ID: CBTM-013.D			Analyzed: 05/12/16 15:39			
Phenanthrene-d10	57162940	11.58	50420950		113	50 - 200	0.0100		
CTSO-D6D12-20160510 (F160501-07)			Lab File ID: CBTM-014.D			Analyzed: 05/12/16 16:04			
Phenanthrene-d10	52045010	11.57	50420950		103	50 - 200	0.0000		
CTSO-D7D12-20160510 (F160501-08)			Lab File ID: CBTM-015.D			Analyzed: 05/12/16 16:29			
Phenanthrene-d10	45126080	11.57	50420950		89	50 - 200	0.0000		
CTSO-DUP-20160510 (F160501-09)			Lab File ID: CBTM-016.D			Analyzed: 05/12/16 16:54			
Phenanthrene-d10	52086770	11.57	50420950		103	50 - 200	0.0000		
CTSO-DUP2-20160510 (F160501-10)			Lab File ID: CBTM-017.D			Analyzed: 05/12/16 17:19			
Phenanthrene-d10	50493360	11.57	50420950		100	50 - 200	0.0000		

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270D

Laboratory: TechLaw, Inc. - ESAT Region 8 (Mobile Lab) SDG:

Client: Superfund Project: Cowboy Timber_MAY2016

Sequence: F160503 Instrument: SVOC Field GCMS

Matrix: Soil Calibration: UNASSIGNED

Internal Standard	Response	RT	Reference Response		Area %	Area % Limits	RT Diff		
CTSO-B2D01-20160510 (F160501-11)			Lab File ID: CBTM-018.D			Analyzed: 05/12/16 17:43			
Phenanthrene-d10	46830980	11.57	50420950		93	50 - 200	0.0000		
CTSO-B3D12-20160510 (F160501-12)			Lab File ID: CBTM-019.D			Analyzed: 05/12/16 18:08			
Phenanthrene-d10	50228730	11.58	50420950		100	50 - 200	0.0100		
CTSO-B4D23-20160510 (F160501-13)			Lab File ID: CBTM-020.D			Analyzed: 05/12/16 18:33			
Phenanthrene-d10	45759730	11.57	50420950		91	50 - 200	0.0000		
CTSO-B5D01-20160510 (F160501-14)			Lab File ID: CBTM-021.D			Analyzed: 05/12/16 18:58			
Phenanthrene-d10	49243240	11.57	50420950		98	50 - 200	0.0000		
Calibration Check (F160503-CCV2)			Lab File ID: CBTM-024.D			Analyzed: 05/12/16 19:59			
Phenanthrene-d10	52134210	11.57	50420950		103	50 - 200	0.0000		
CTSO-B6D12-20160510 (F160501-15)			Lab File ID: CBTM-025.D			Analyzed: 05/12/16 20:24			
Phenanthrene-d10	46453250	11.57	52134210		89	50 - 200	0.0000		
CTSO-B7D23-20160510 (F160501-16)			Lab File ID: CBTM-026.D			Analyzed: 05/12/16 20:49			
Phenanthrene-d10	46588940	11.57	52134210		89	50 - 200	0.0000		
CTSO-C2D01-20160517 (F160501-17)			Lab File ID: CBTM-027.D			Analyzed: 05/12/16 21:14			
Phenanthrene-d10	44817210	11.57	52134210		86	50 - 200	0.0000		
CTSO-C3D12-20160510 (F160501-18)			Lab File ID: CBTM-028.D			Analyzed: 05/12/16 21:39			
Phenanthrene-d10	42540670	11.57	52134210		82	50 - 200	0.0000		
CTSO-C4D12-20160510 (F160501-19)			Lab File ID: CBTM-029.D			Analyzed: 05/12/16 22:03			
Phenanthrene-d10	48372690	11.57	52134210		93	50 - 200	0.0000		
CTSO-C5D01-20160510 (F160501-20)			Lab File ID: CBTM-030.D			Analyzed: 05/12/16 22:28			
Phenanthrene-d10	47087120	11.57	52134210		90	50 - 200	0.0000		
Calibration Check (F160503-CCV3)			Lab File ID: CBTM-032.D			Analyzed: 05/12/16 23:18			
Phenanthrene-d10	46579310	11.57	52134210		89	50 - 200	0.0000		

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270D

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270D

Laboratory:	TechLaw, Inc. - ESAT Region 8 (Mobile Lab)	SDG:	
Client:	Superfund	Project:	Cowboy Timber_MAY2016
Sequence:	F160504	Instrument:	SVOC Field GCMS
Matrix:	Soil	Calibration:	UNASSIGNED

Internal Standard	Response	RT	Reference Response		Area %	Area % Limits	RT Diff		
Calibration Check (F160504-CCV1)			Lab File ID: CBTM-035.D			Analyzed: 05/13/16 10:59			
Phenanthrene-d10	42000470	11.57				50 - 200			
CTSO-D4D12-20160510 (F160501-05)			Lab File ID: CBTM-036.D			Analyzed: 05/13/16 11:24			
Phenanthrene-d10	35161210	11.57	42000470		84	50 - 200	0.0000		
Calibration Check (F160504-CCV2)			Lab File ID: CBTM-037.D			Analyzed: 05/13/16 11:50			
Phenanthrene-d10	45762290	11.57	42000470		109	50 - 200	0.0000		

TechLaw Inc., ESAT Region 8

INSTRUMENT ANALYSIS SEQUENCE LOG

Analytical Method: EPA 8270D **Non-volatile** **Sequence ID#:** F160503

Instrument ID #: SVOC Field GCMS Soil **LSR #:**

Analysis ID	Sample Name	Analysis Date	Analysis Time
F160503-CCV1	Calibration Check	05/12/16	10:46
F160501-BLK1	Blank	05/12/16	11:11
F160501-BS1		05/12/16	11:36
F160501-02	CTSO-C7D01-20160510	05/12/16	12:26
F160501-03	CTSO-D2D01-20160510	05/12/16	12:51
F160501-01	CTSO-C6D01-20160510	05/12/16	13:16
F160501-MS1	Matrix Spike	05/12/16	13:58
F160501-MSD1	Matrix Spike Dup	05/12/16	14:23
F160501-04	CTSO-D3D12-20160510	05/12/16	14:49
F160501-06	CTSO-D5D12-20160510	05/12/16	15:39
F160501-07	CTSO-D6D12-20160510	05/12/16	16:04
F160501-08	CTSO-D7D12-20160510	05/12/16	16:29
F160501-09	CTSO-DUP-20160510	05/12/16	16:54
F160501-10	CTSO-DUP2-20160510	05/12/16	17:19
F160501-11	CTSO-B2D01-20160510	05/12/16	17:43
F160501-12	CTSO-B3D12-20160510	05/12/16	18:08
F160501-13	CTSO-B4D23-20160510	05/12/16	18:33
F160501-14	CTSO-B5D01-20160510	05/12/16	18:58
F160503-CCV2	Calibration Check	05/12/16	19:59
F160501-15	CTSO-B6D12-20160510	05/12/16	20:24
F160501-16	CTSO-B7D23-20160510	05/12/16	20:49
F160501-17	CTSO-C2D01-20160517	05/12/16	21:14
F160501-18	CTSO-C3D12-20160510	05/12/16	21:39
F160501-19	CTSO-C4D12-20160510	05/12/16	22:03
F160501-20	CTSO-C5D01-20160510	05/12/16	22:28
F160503-CCV3	Calibration Check	05/12/16	23:18

TechLaw Inc., ESAT Region 8

INSTRUMENT ANALYSIS SEQUENCE LOG

Analytical Method: EPA 8270D **Non-volatile** **Sequence ID#:** F160504

Instrument ID #: SVOC Field GCMS Soil **LSR #:**

Analysis ID	Sample Name	Analysis Date	Analysis Time
F160504-CCV1	Calibration Check	05/13/16	10:59
F160501-05	CTSO-D4D12-20160510	05/13/16	11:24
F160504-CCV2	Calibration Check	05/13/16	11:50

U.S. Environmental Protection Agency
Region 8
Technical and Management Services

Laboratory Services Program

Certificate of Analysis

Ref: 8TMS-L

MEMORANDUM

Date: 05/18/16

Subject: Analytical Results--- **Cowboy Timber_MAY2016 / NA**

From: Don Goodrich; EPA Region 8 Analytical Chemistry WAM

To: Craig Myers
Superfund
1595 Wynkoop Street

Received Sample Set(s), [Work Order : Date Received]:
[F160502 : 05/17/2016]

Attached are the analytical results for the samples received from the Cowboy Timber_MAY2016 sampling event, according to TDF NA. All analyses were performed within their method specified holding times unless otherwise noted in the following narrative.

These samples were prepared, analyzed, and verified by the Environmental Services Assistance Team Laboratory (ESAT) according to the requirements of the Technical Direction Form (TDF).

Note: The laboratory herewith transmits this deliverable to the program/project partner for determination of "final data usability" which may include data validation and data quality asessment per and in accordance with EPA QA/G-8, *Guidance on Environmental Data Verification and Data Validation*, November 2002, EPA/240/R-02/004. Laboratory data qualifiers are applied based on the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* June 2008, referred to as "NFG".

Laboratory policy is to dispose of any remaining sample 60 days after data analysis packages are delivered to EPA. If you would like the laboratory to retain the samples for a period longer than 60 days, please contact Don Goodrich within the 60 day period at (303) 312-6687.

Case Narrative

F160502

Quality Assessment: Unless indicated by exception, the QA/QC associated with this sample set produced data within the TDF-specified criteria.

Holding Times: All samples were analyzed within their method-specified technical holding time(s).

Sample Receipt: All samples were received within the temperature control limits of 4C +/- 2C.

1. Preparation (PB) / Method blanks (MB). No detections > PQL
Exceptions: None.

2. Initial and Continuing calibration verification analyses (ICVs and CCVs). All CCCs and SPCCs are within limits.
Exceptions: None.

3. Laboratory Control Sample/ Blank Spike (LCS/BS). Recoveries are within 70-130% range. DCDFM recovery high; no hits in samples.
Exceptions: None.

4. Instrument tune (BFB/DFTPP). Tune passes, and all samples were analyzed within 12 hours.
Exceptions: None.

5. Laboratory Duplicate (DUP). "Source" identifies field sample duplicated in the laboratory. RPD limits are within limits.
Exceptions: None.

6. Laboratory Matrix Spike (MS) and Matrix Spike Duplicate (MSD). "Source" defines original field sample fortified prior to analysis. Percent Recovery (%R) limits do not apply when sample concentration(s) exceed the corresponding analyte spike level by a factor of 4 or greater.
Exceptions: None.

7. Internal standards. Area counts must be within 50% to 200% of responses established in associated opening CCV.
Exceptions: None.

8. Any calibration using more than two-points produced a correlation coefficient equal to or greater than 0.995 or have an average response factor of less than or equal to 15% for all non-CCC compounds or less than or equal to 30% for all CCC compounds.
Exceptions: None.

Comments: Istrument time was incorrect and manually adjusted.

Acronyms and Definitions:

ESAT	Environmental Services Assistance Team
J	Data Estimated qualifier (also applied to all data less than PQL, greater than or equal to MDL)
MDL	Method Detection Limit
PQL	Practical Quantitation Limit, also known as reporting limit.
RPD	Relative Percent Difference (difference divided by the mean)
%D	Percent difference, serial dilution criteria unit, difference divided by the original result.
%R	Percent recovery, analyzed (less sample contribution) divided by true value
<	Analyte NOT DETECTED at or above the Method Detection Limit (MDL)
mg/L	Milligrams per liter (Parts per million). Solids equivalent = mg/Kg.
ug/L	Micrograms per liter (Parts per billion). Solids equivalent = ug/Kg.
NR	No Recovery (matrix spike) - Often seen for calcium/magnesium when their concentration exceeds the spike level by > 4x.
NFG	*USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* June 2008.
RE	Sample Re-analysis. Usually seen on raw data and sequences for required sample dilutions due to over-range analytes.
U	Analyte not detected at or above MDL qualifier
D	Diluted value qualifier

Method(s) Summary:

As defined in the Technical Direction Form (TDF), some or all of the methods listed below were used for the determination of the reported target analytes.

From EPA's *Methods for the Determination of Metals in Environmental Samples*, Supplement I, May 1994, dissolved, total, and/or total recoverable metals were determined by:

- Method 200.7 / 6010B using a PE Optima ICP-OE (ICP).
- Method 200.8 / 6020 using a Perkin-Elmer Elan 6000 ICP-MS.
- Method 200.2 for total recoverable metals (only) digestion.
- Method 245.1 using a Perkin-Elmer FIMS CVAA (aqueous mercury only).

From *Standard Methods for the Examination of Water and Wastewater*, 18th Edition, 1992, Method 2340B was used for the calculated hardness determination. Hardness is reported as mg (milligram) equivalent $CaCO_3$ per liter (L) determined as follows:

Calculated hardness = 2.497 * (Calcium, mg/L) + 4.118 * (Magnesium, mg/L).

From *EPA's Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846*,

- Method 3015A was used for microwave assisted total metals digestion.
- Method 7473 was used for mercury in solids.
- Method 8260B/5030B was used for volatile organic compounds.

From EPA's *Determination of Inorganic Anions by Ion Chromatography*, Revision 2.1, 1993, Method 300.0 was used to determine the anions.

From EPA's *Methods for Chemical Analysis of Water and Wastes*, March 1983:

- Method 310.1 was followed for the alkalinity determination.
- Method 160.1 was followed for gravimetric total dissolved solids (TDS) determination .
- Method 160.2 was used for gravimetric total suspended solids (TSS) determination.
- Method 415.3 was used for total organic carbon (TOC) determination using either an Apollo 9000 or Phoenix 8000 Non-Dispersive IR (NDIR) system. Also known as dissolved organic carbon (DOC) when performed on the dissolved sample fraction.

The quality control procedures listed in the TDF request were utilized by ESAT to verify accuracy of the results and to evaluate any matrix interferences.

Project Name: Cowboy Timber_MAY2016 **Certificate of Analysis**

TDF #: NA

Pentachlorophenol by GCMS method 8270D

Station ID: Foundation **Date / Time Sampled:** 05/17/16 07:07 **Workorder** F160502
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160502-01 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	Pentachlorophenol	< 2.00	U	mg/kg	1.32	1	05/17/2016	SW	F160505
Surrogate: 2,4,6-Tribromophenol		*89 %*	*Limit 50-150*			*1*	*05/17/2016*	*SW*	*F160505*

Station ID: Blacktar **Date / Time Sampled:** 05/17/16 07:11 **Workorder** F160502
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160502-02 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	Pentachlorophenol	< 20.0	U	mg/kg	13.2	10	05/17/2016	SW	F160505
Surrogate: 2,4,6-Tribromophenol		*100 %*	*Limit 50-150*			*10*	*05/17/2016*	*SW*	*F160505*

Station ID: CTSO-A5D23-20160517 **Date / Time Sampled:** 05/17/16 09:52 **Workorder** F160502
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160502-03 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	Pentachlorophenol	< 2.00	U	mg/kg	1.32	1	05/17/2016	SW	F160505
Surrogate: 2,4,6-Tribromophenol		*94 %*	*Limit 50-150*			*1*	*05/17/2016*	*SW*	*F160505*

Station ID: CTSO-A6D34-20160517 **Date / Time Sampled:** 05/17/16 09:49 **Workorder** F160502
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160502-04 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	Pentachlorophenol	< 2.00	U	mg/kg	1.32	1	05/17/2016	SW	F160505
Surrogate: 2,4,6-Tribromophenol		*87 %*	*Limit 50-150*			*1*	*05/17/2016*	*SW*	*F160505*

Station ID: CTSO-A7D34-20160517 **Date / Time Sampled:** 05/17/16 09:43 **Workorder** F160502
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160502-05 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	Pentachlorophenol	< 2.00	U	mg/kg	1.32	1	05/17/2016	SW	F160505
Surrogate: 2,4,6-Tribromophenol		*83 %*	*Limit 50-150*			*1*	*05/17/2016*	*SW*	*F160505*

Station ID: CTSO-B1D01-20160517 **Date / Time Sampled:** 05/17/16 09:55 **Workorder** F160502
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160502-06 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch

EPA 8270D	Pentachlorophenol	< 2.00	**U**	mg/kg	1.32	1	05/17/2016	SW	F160505
Surrogate: 2,4,6-Tribromophenol		*92 %*	*Limit 50-150*			*1*	*05/17/2016*	*SW*	*F160505*

Station ID: CTSO-C1D01-20160517 **Date / Time Sampled:** 05/17/16 09:59 **Workorder** F160502
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160502-07 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	Pentachlorophenol	< 2.00	**U**	mg/kg	1.32	1	05/17/2016	SW	F160505
Surrogate: 2,4,6-Tribromophenol		*90 %*	*Limit 50-150*			*1*	*05/17/2016*	*SW*	*F160505*

Station ID: CTSO-E4D12-20160517 **Date / Time Sampled:** 05/17/16 12:57 **Workorder** F160502
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160502-08 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	Pentachlorophenol	< 2.00	**U**	mg/kg	1.32	1	05/17/2016	SW	F160505
Surrogate: 2,4,6-Tribromophenol		*79 %*	*Limit 50-150*			*1*	*05/17/2016*	*SW*	*F160505*

Station ID: CTSO-E6D23-20160517 **Date / Time Sampled:** 05/17/16 12:51 **Workorder** F160502
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160502-09 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**1.72**	**J**	mg/kg	1.32	1	05/17/2016	SW	F160505
Surrogate: 2,4,6-Tribromophenol		*103 %*	*Limit 50-150*			*1*	*05/17/2016*	*SW*	*F160505*

Station ID: CTSO-E7D23-20160517 **Date / Time Sampled:** 05/17/16 12:48 **Workorder** F160502
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160502-10 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	Pentachlorophenol	< 2.00	**U**	mg/kg	1.32	1	05/17/2016	SW	F160505
Surrogate: 2,4,6-Tribromophenol		*84 %*	*Limit 50-150*			*1*	*05/17/2016*	*SW*	*F160505*

Station ID: CTSO-E3D01-20160517 **Date / Time Sampled:** 05/17/16 12:59 **Workorder** F160502
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160502-11 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**5.58**		mg/kg	1.32	1	05/17/2016	SW	F160505
Surrogate: 2,4,6-Tribromophenol		*108 %*	*Limit 50-150*			*1*	*05/17/2016*	*SW*	*F160505*

Project Name: **Cowboy Timber_MAY2016** **Certificate of Analysis**

TDF #: **NA**

Station ID: CTSO-E5D23-20160517 **Date / Time Sampled:** 05/17/16 12:54 **Workorder** F160502

EPA Tag No.: **Matrix:** Soil **Lab Number:** F160502-12 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**10.5**		mg/kg	1.32	1	05/17/2016	SW	F160505
Surrogate: 2,4,6-Tribromophenol		*103 %*		*Limit 50-150*		*1*	*05/17/2016*	*SW*	*F160505*

Classical Chemistry Parameters

Station ID: Foundation **Date / Time Sampled:** 05/17/16 07:07 **Workorder** F160502
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160502-01 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**92.4**		% by Weight		1	05/17/2016	SW	F160507

Station ID: Blacktar **Date / Time Sampled:** 05/17/16 07:11 **Workorder** F160502
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160502-02 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**77.3**		% by Weight		1	05/17/2016	SW	F160507

Station ID: CTSO-A5D23-20160517 **Date / Time Sampled:** 05/17/16 09:52 **Workorder** F160502
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160502-03 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**89.5**		% by Weight		1	05/17/2016	SW	F160507

Station ID: CTSO-A6D34-20160517 **Date / Time Sampled:** 05/17/16 09:49 **Workorder** F160502
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160502-04 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**83.1**		% by Weight		1	05/17/2016	SW	F160507

Station ID: CTSO-A7D34-20160517 **Date / Time Sampled:** 05/17/16 09:43 **Workorder** F160502
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160502-05 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**85.8**		% by Weight		1	05/17/2016	SW	F160507

Station ID: CTSO-B1D01-20160517 **Date / Time Sampled:** 05/17/16 09:55 **Workorder** F160502
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160502-06 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**82.2**		% by Weight		1	05/17/2016	SW	F160507

Station ID: CTSO-C1D01-20160517 **Date / Time Sampled:** 05/17/16 09:59 **Workorder** F160502
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160502-07 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**84.9**		% by Weight		1	05/17/2016	SW	F160507

Station ID: CTSO-E4D12-20160517 **Date / Time Sampled:** 05/17/16 12:57 **Workorder** F160502
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160502-08 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**90.1**		% by Weight		1	05/17/2016	SW	F160507

Station ID: CTSO-E6D23-20160517 **Date / Time Sampled:** 05/17/16 12:51 **Workorder** F160502
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160502-09 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**87.8**		% by Weight		1	05/17/2016	SW	F160507

Station ID: CTSO-E7D23-20160517 **Date / Time Sampled:** 05/17/16 12:48 **Workorder** F160502
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160502-10 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**86.6**		% by Weight		1	05/17/2016	SW	F160507

Station ID: CTSO-E3D01-20160517 **Date / Time Sampled:** 05/17/16 12:59 **Workorder** F160502
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160502-11 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**91.4**		% by Weight		1	05/17/2016	SW	F160507

Station ID: CTSO-E5D23-20160517 **Date / Time Sampled:** 05/17/16 12:54 **Workorder** F160502
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160502-12 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**91.4**		% by Weight		1	05/17/2016	SW	F160507

Note: "J" Qualifier indicates an estimated value. "U" Qualifier indicates analyte not detected at or above MDL.
"D" Qualifier indicates diluted value.

Pentachlorophenol by GCMS method 8270D - Quality Control

TechLaw, Inc. - ESAT Region 8 (Mobile Lab)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%R	%R Limits	%D or RPD	%D or RPD Limit
SVOC Field GCMS									
Batch F160505 - EPA 3550C			***Soil***						**SVOC Field GCMS**
Method Blank (F160505-BLK1)						Prepared & Analyzed: 05/17/16			
Pentachlorophenol	< 1.32	2.00	mg/kg						
Method Blank Spike (F160505-BS1)						Prepared & Analyzed: 05/17/16			
Pentachlorophenol	19.3	2.00	mg/kg	20.0		96	70-130		
Matrix Spike (F160505-MS1)			**Source: F160502-01**			Prepared & Analyzed: 05/17/16			
Pentachlorophenol	18.2	2.00	mg/kg	20.0	< 1.32	91	17-109		
Matrix Spike Dup (F160505-MSD1)			**Source: F160502-01**			Prepared & Analyzed: 05/17/16			
Pentachlorophenol	17.2	2.00	mg/kg	20.0	< 1.32	86	17-109	5	47

NOTE: %R = % Recovery, %R limits do not apply when sample levels exceed 4x the spike level.
RPD = Relative Percent Difference, %D = % Difference, DL = Detection Limit for QC sample .

TechLaw, Inc. - ESAT Region 8 (Mobile Lab)

Initial and Continuing Calibration Verification Results

SVOC Field GCMS Method: EPA 8270D Analysis Name: 8270 PCP

Sequence: F160506 Work Order: F160502 Units: mg/kg

Non-volatile Analyte	Initial (ICV1, ICV2)			Continuing Calibration Verification Standards (CCVs)								
	True	Found	%R	True	Found	%R	True	Found	%R	True	Found	%R
2,4,6-Tribromophenol				1			2			3		
				20.0	19.1	95.5	20.0	21.4	107.0			
				4			5			6		
				7			8			9		
Pentachlorophenol				1			2			3		
				20.0	17.6	88.0	20.0	19.5	97.5			
				4			5			6		
				7			8			9		
Phenanthrene-d10				1			2			3		
					0.00	0.0		0.00	0.0			
				4			5			6		
				7			8			9		

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270D

Laboratory: TechLaw, Inc. - ESAT Region 8 (Mobile Lab) SDG:

Client: Superfund Project: Cowboy Timber_MAY2016

Sequence: F160506 Instrument: SVOC Field GCMS

Matrix: Soil Calibration: UNASSIGNED

Internal Standard	Response	RT	Reference Response		Area %	Area % Limits	RT Diff		
Calibration Check (F160506-CCV1)			Lab File ID: CBTM-039.D			Analyzed: 05/17/16 07:22			
Phenanthrene-d10	38889510	11.55				50 - 200			
Foundation (F160502-01)			Lab File ID: CBTM-040.D			Analyzed: 05/17/16 08:37			
Phenanthrene-d10	37046100	11.55	38889510		95	50 - 200	0.0000		
Blank (F160505-BLK1)			Lab File ID: CBTM-041.D			Analyzed: 05/17/16 09:01			
Phenanthrene-d10	36206210	11.55	38889510		93	50 - 200	0.0000		
LCS (F160505-BS1)			Lab File ID: CBTM-042.D			Analyzed: 05/17/16 09:25			
Phenanthrene-d10	45711980	11.55	38889510		118	50 - 200	0.0000		
Matrix Spike (F160505-MS1)			Lab File ID: CBTM-044.D			Analyzed: 05/17/16 10:13			
Phenanthrene-d10	44852320	11.56	38889510		115	50 - 200	0.0100		
Matrix Spike Dup (F160505-MSD1)			Lab File ID: CBTM-045.D			Analyzed: 05/17/16 10:38			
Phenanthrene-d10	44311060	11.56	38889510		114	50 - 200	0.0100		
CTSO-A5D23-20160517 (F160502-03)			Lab File ID: CBTM-046.D			Analyzed: 05/17/16 11:16			
Phenanthrene-d10	35144630	11.56	38889510		90	50 - 200	0.0100		
CTSO-A6D34-20160517 (F160502-04)			Lab File ID: CBTM-047.D			Analyzed: 05/17/16 11:40			
Phenanthrene-d10	37111320	11.56	38889510		95	50 - 200	0.0100		
CTSO-A7D34-20160517 (F160502-05)			Lab File ID: CBTM-048.D			Analyzed: 05/17/16 12:05			
Phenanthrene-d10	38155890	11.56	38889510		98	50 - 200	0.0100		
CTSO-B1D01-20160517 (F160502-06)			Lab File ID: CBTM-049.D			Analyzed: 05/17/16 12:29			
Phenanthrene-d10	37500900	11.56	38889510		96	50 - 200	0.0100		
CTSO-C1D01-20160517 (F160502-07)			Lab File ID: CBTM-050.D			Analyzed: 05/17/16 12:54			
Phenanthrene-d10	44096300	11.56	38889510		113	50 - 200	0.0100		
CTSO-E4D12-20160517 (F160502-08)			Lab File ID: CBTM-051.D			Analyzed: 05/17/16 14:36			
Phenanthrene-d10	36117360	11.56	38889510		93	50 - 200	0.0100		
CTSO-E6D23-20160517 (F160502-09)			Lab File ID: CBTM-052.D			Analyzed: 05/17/16 15:00			
Phenanthrene-d10	40579010	11.56	38889510		104	50 - 200	0.0100		
CTSO-E7D23-20160517 (F160502-10)			Lab File ID: CBTM-053.D			Analyzed: 05/17/16 15:25			
Phenanthrene-d10	43845180	11.57	38889510		113	50 - 200	0.0200		

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270D

Laboratory: TechLaw, Inc. - ESAT Region 8 (Mobile Lab) SDG:

Client: Superfund Project: Cowboy Timber_MAY2016

Sequence: F160506 Instrument: SVOC Field GCMS

Matrix: Soil Calibration: UNASSIGNED

Internal Standard	Response	RT	Reference Response		Area %	Area % Limits	RT Diff		
CTSO-E3D01-20160517 (F160502-11)			Lab File ID: CBTM-054.D			Analyzed: 05/17/16 15:50			
Phenanthrene-d10	41795960	11.57	38889510		107	50 - 200	0.0200		
CTSO-E5D23-20160517 (F160502-12)			Lab File ID: CBTM-055.D			Analyzed: 05/17/16 16:15			
Phenanthrene-d10	42742930	11.57	38889510		110	50 - 200	0.0200		
Calibration Check (F160506-CCV2)			Lab File ID: CBTM-056.D			Analyzed: 05/17/16 16:41			
Phenanthrene-d10	46080880	11.57	38889510		118	50 - 200	0.0200		
Blacktar (F160502-02)			Lab File ID: CBTM-057.D			Analyzed: 05/17/16 17:06			
Phenanthrene-d10	34948850	11.59	46080880		76	50 - 200	0.0200		

TechLaw Inc., ESAT Region 8
INSTRUMENT ANALYSIS SEQUENCE LOG

Analytical Method: EPA 8270D **Non-volatile** **Sequence ID#:** F160506

Instrument ID #: SVOC Field GCMS Soil **LSR #:**

Analysis ID	Sample Name	Analysis Date	Analysis Time
F160506-CCV1	Calibration Check	05/17/16	07:22
F160502-01	Foundation	05/17/16	08:37
F160505-BLK1	Blank	05/17/16	09:01
F160505-BS1		05/17/16	09:25
F160505-MS1	Matrix Spike	05/17/16	10:13
F160505-MSD1	Matrix Spike Dup	05/17/16	10:38
F160502-03	CTSO-A5D23-20160517	05/17/16	11:16
F160502-04	CTSO-A6D34-20160517	05/17/16	11:40
F160502-05	CTSO-A7D34-20160517	05/17/16	12:05
F160502-06	CTSO-B1D01-20160517	05/17/16	12:29
F160502-07	CTSO-C1D01-20160517	05/17/16	12:54
F160502-08	CTSO-E4D12-20160517	05/17/16	14:36
F160502-09	CTSO-E6D23-20160517	05/17/16	15:00
F160502-10	CTSO-E7D23-20160517	05/17/16	15:25
F160502-11	CTSO-E3D01-20160517	05/17/16	15:50
F160502-12	CTSO-E5D23-20160517	05/17/16	16:15
F160506-CCV2	Calibration Check	05/17/16	16:41
F160502-02	Blacktar	05/17/16	17:06

U.S. Environmental Protection Agency
Region 8
Technical and Management Services

Laboratory Services Program

Certificate of Analysis

Ref: 8TMS-L

MEMORANDUM

Date: 05/19/16

Subject: Analytical Results--- **Cowboy Timber_MAY2016 / NA**

From: Don Goodrich; EPA Region 8 Analytical Chemistry WAM

To: Craig Myers
Superfund
1595 Wynkoop Street

Received Sample Set(s), [Work Order : Date Received]:
[F160503 : 05/18/2016]

Attached are the analytical results for the samples received from the Cowboy Timber_MAY2016 sampling event, according to TDF NA. All analyses were performed within their method specified holding times unless otherwise noted in the following narrative.

These samples were prepared, analyzed, and verified by the Environmental Services Assistance Team Laboratory (ESAT) according to the requirements of the Technical Direction Form (TDF).

Note: The laboratory herewith transmits this deliverable to the program/project partner for determination of "final data usability" which may include data validation and data quality asessment per and in accordance with EPA QA/G-8, *Guidance on Environmental Data Verification and Data Validation*, November 2002, EPA/240/R-02/004. Laboratory data qualifiers are applied based on the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* June 2008, referred to as "NFG".

Laboratory policy is to dispose of any remaining sample 60 days after data analysis packages are delivered to EPA. If you would like the laboratory to retain the samples for a period longer than 60 days, please contact Don Goodrich within the 60 day period at (303) 312-6687.

Case Narrative

F160503

Quality Assessment: Unless indicated by exception, the QA/QC associated with this sample set produced data within the TDF-specified criteria.

Holding Times: All samples were analyzed within their method-specified technical holding time(s).

Sample Receipt: All samples were received within the temperature control limits of 4C +/- 2C.

1. Preparation (PB) / Method blanks (MB). No detections > PQL
Exceptions: None.

2. Initial and Continuing calibration verification analyses (ICVs and CCVs). All CCCs and SPCCs are within limits.
Exceptions: None.

3. Laboratory Control Sample/ Blank Spike (LCS/BS). Recoveries are within 70-130% range. DCDFM recovery high; no hits in samples.
Exceptions: None.

4. Instrument tune (BFB/DFTPP). Tune passes, and all samples were analyzed within 12 hours.
Exceptions: None.

5. Laboratory Duplicate (DUP). "Source" identifies field sample duplicated in the laboratory. RPD limits are within limits.
Exceptions: None.

6. Laboratory Matrix Spike (MS) and Matrix Spike Duplicate (MSD). "Source" defines original field sample fortified prior to analysis. Percent Recovery (%R) limits do not apply when sample concentration(s) exceed the corresponding analyte spike level by a factor of 4 or greater.
Exceptions: None.

7. Internal standards. Area counts must be within 50% to 200% of responses established in associated opening CCV.
Exceptions: None.

8. Any calibration using more than two-points produced a correlation coefficient equal to or greater than 0.995 or have an average response factor of less than or equal to 15% for all non-CCC compounds or less than or equal to 30% for all CCC compounds.
Exceptions: None.

Acronyms and Definitions:

ESAT	Environmental Services Assistance Team
J	Data Estimated qualifier (also applied to all data less than PQL, greater than or equal to MDL)
MDL	Method Detection Limit
PQL	Practical Quantitation Limit, also known as reporting limit.
RPD	Relative Percent Difference (difference divided by the mean)
%D	Percent difference, serial dilution criteria unit, difference divided by the original result.
%R	Percent recovery, analyzed (less sample contribution) divided by true value
<	Analyte NOT DETECTED at or above the Method Detection Limit (MDL)
mg/L	Milligrams per liter (Parts per million). Solids equivalent = mg/Kg.
ug/L	Micrograms per liter (Parts per billion). Solids equivalent = ug/Kg.
NR	No Recovery (matrix spike) - Often seen for calcium/magnesium when their concentration exceeds the spike level by > 4x.
NFG	*USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* June 2008.
RE	Sample Re-analysis. Usually seen on raw data and sequences for required sample dilutions due to over-range analytes.
U	Analyte not detected at or above MDL qualifier
D	Diluted value qualifier

Method(s) Summary:

As defined in the Technical Direction Form (TDF), some or all of the methods listed below were used for the determination of the reported target analytes.

From EPA's *Methods for the Determination of Metals in Environmental Samples*, Supplement I, May 1994, dissolved, total, and/or total recoverable metals were determined by:

- Method 200.7 / 6010B using a PE Optima ICP-OE (ICP).
- Method 200.8 / 6020 using a Perkin-Elmer Elan 6000 ICP-MS.
- Method 200.2 for total recoverable metals (only) digestion.
- Method 245.1 using a Perkin-Elmer FIMS CVAA (aqueous mercury only).

From *Standard Methods for the Examination of Water and Wastewater*, 18th Edition, 1992, Method 2340B was used for the calculated hardness determination. Hardness is reported as mg (milligram) equivalent $CaCO_3$ per liter (L) determined as follows:

Calculated hardness = 2.497 * (Calcium, mg/L) + 4.118 * (Magnesium, mg/L).

From *EPA's Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846*,

- Method 3015A was used for microwave assisted total metals digestion.
- Method 7473 was used for mercury in solids.
- Method 8260B/5030B was used for volatile organic compounds.

From EPA's *Determination of Inorganic Anions by Ion Chromatography*, Revision 2.1, 1993, Method 300.0 was used to determine the anions.

From EPA's *Methods for Chemical Analysis of Water and Wastes*, March 1983:

- Method 310.1 was followed for the alkalinity determination.
- Method 160.1 was followed for gravimetric total dissolved solids (TDS) determination.
- Method 160.2 was used for gravimetric total suspended solids (TSS) determination.
- Method 415.3 was used for total organic carbon (TOC) determination using either an Apollo 9000 or Phoenix 8000 Non-Dispersive IR (NDIR) system. Also known as dissolved organic carbon (DOC) when performed on the dissolved sample fraction.

The quality control procedures listed in the TDF request were utilized by ESAT to verify accuracy of the results and to evaluate any matrix interferences.

Pentachlorophenol by GCMS method 8270D

Station ID: CTSO-A4D23-20160518 **Date / Time Sampled:** 05/18/16 13:19 **Workorder** F160503
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160503-01 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**1.36**	**J**	mg/kg	1.32	1	05/18/2016	SW	F160508
Surrogate: 2,4,6-Tribromophenol		*88 %*	*Limit 50-150*			*1*	*05/18/2016*	*SW*	*F160508*

Station ID: CTSO-A3D12-20160518 **Date / Time Sampled:** 05/18/16 13:14 **Workorder** F160503
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160503-02 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**2.26**		mg/kg	1.32	1	05/18/2016	SW	F160508
Surrogate: 2,4,6-Tribromophenol		*101 %*	*Limit 50-150*			*1*	*05/18/2016*	*SW*	*F160508*

Station ID: CTSO-A2D01-20160518 **Date / Time Sampled:** 05/18/16 13:11 **Workorder** F160503
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160503-03 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**1.84**	**J**	mg/kg	1.32	1	05/18/2016	SW	F160508
Surrogate: 2,4,6-Tribromophenol		*101 %*	*Limit 50-150*			*1*	*05/18/2016*	*SW*	*F160508*

Station ID: CTSO-A1D01-20160518 **Date / Time Sampled:** 05/18/16 13:08 **Workorder** F160503
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160503-04 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**20.1**		mg/kg	1.32	1	05/18/2016	SW	F160508
Surrogate: 2,4,6-Tribromophenol		*98 %*	*Limit 50-150*			*1*	*05/18/2016*	*SW*	*F160508*

Station ID: CTSO-D1D01-20160518 **Date / Time Sampled:** 05/18/16 13:22 **Workorder** F160503
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160503-05 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	Pentachlorophenol	< 2.00	**U**	mg/kg	1.32	1	05/18/2016	SW	F160508
Surrogate: 2,4,6-Tribromophenol		*103 %*	*Limit 50-150*			*1*	*05/18/2016*	*SW*	*F160508*

Station ID: CTSO-DUP3-20160518 **Date / Time Sampled:** 05/18/16 00:00 **Workorder** F160503
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160503-06 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch

EPA 8270D	**Pentachlorophenol**	**1.80**	**J**	mg/kg	1.32	1	05/18/2016	SW	F160508
Surrogate: 2,4,6-Tribromophenol		*99 %*		*Limit 50-150*		*1*	*05/18/2016*	*SW*	*F160508*

Station ID: CTSO-DUP4-20160518 **Date / Time Sampled:** 05/18/16 00:00 **Workorder** F160503
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160503-07 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	Pentachlorophenol	< 2.00	**U**	mg/kg	1.32	1	05/18/2016	SW	F160508
Surrogate: 2,4,6-Tribromophenol		*91 %*		*Limit 50-150*		*1*	*05/18/2016*	*SW*	*F160508*

Station ID: CTSO-C8D01-20160518 **Date / Time Sampled:** 05/18/16 13:49 **Workorder** F160503
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160503-08 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**10.6**		mg/kg	1.32	1	05/18/2016	SW	F160508
Surrogate: 2,4,6-Tribromophenol		*103 %*		*Limit 50-150*		*1*	*05/18/2016*	*SW*	*F160508*

Station ID: CTSO-A8D34-20160518 **Date / Time Sampled:** 05/18/16 13:39 **Workorder** F160503
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160503-09 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**2.37**		mg/kg	1.32	1	05/18/2016	SW	F160508
Surrogate: 2,4,6-Tribromophenol		*101 %*		*Limit 50-150*		*1*	*05/18/2016*	*SW*	*F160508*

Station ID: CTSO-B8D34-20160518 **Date / Time Sampled:** 05/18/16 13:46 **Workorder** F160503
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160503-10 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	Pentachlorophenol	< 2.00	**U**	mg/kg	1.32	1	05/18/2016	SW	F160508
Surrogate: 2,4,6-Tribromophenol		*105 %*		*Limit 50-150*		*1*	*05/18/2016*	*SW*	*F160508*

Station ID: CTSO-D8D23-20160518 **Date / Time Sampled:** 05/18/16 13:52 **Workorder** F160503
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160503-11 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**7.46**		mg/kg	1.32	1	05/18/2016	SW	F160508
Surrogate: 2,4,6-Tribromophenol		*102 %*		*Limit 50-150*		*1*	*05/18/2016*	*SW*	*F160508*

Station ID: CTSO-E8D23-20160518 **Date / Time Sampled:** 05/18/16 14:08 **Workorder** F160503
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160503-12 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**1.68**	**J**	mg/kg	1.32	1	05/18/2016	SW	F160508
Surrogate: 2,4,6-Tribromophenol		*94 %*		*Limit 50-150*		*1*	*05/18/2016*	*SW*	*F160508*

Station ID: Foundation2 **Date / Time Sampled:** 05/18/16 15:50 **Workorder** F160503
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160503-13 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	Pentachlorophenol	< 2.00	**U**	mg/kg	1.32	1	05/19/2016	SW	F160508
Surrogate: 2,4,6-Tribromophenol		*103 %*		*Limit 50-150*		*1*	*05/19/2016*	*SW*	*F160508*

Classical Chemistry Parameters

Station ID: CTSO-A4D23-20160518 **Date / Time Sampled:** 05/18/16 13:19 **Workorder** F160503
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160503-01 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**97.0**		% by Weight		1	05/19/2016	SW	F160510

Station ID: CTSO-A3D12-20160518 **Date / Time Sampled:** 05/18/16 13:14 **Workorder** F160503
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160503-02 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**96.8**		% by Weight		1	05/19/2016	SW	F160510

Station ID: CTSO-A2D01-20160518 **Date / Time Sampled:** 05/18/16 13:11 **Workorder** F160503
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160503-03 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**93.4**		% by Weight		1	05/19/2016	SW	F160510

Station ID: CTSO-A1D01-20160518 **Date / Time Sampled:** 05/18/16 13:08 **Workorder** F160503
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160503-04 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**96.6**		% by Weight		1	05/19/2016	SW	F160510

Station ID: CTSO-D1D01-20160518 **Date / Time Sampled:** 05/18/16 13:22 **Workorder** F160503
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160503-05 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**92.3**		% by Weight		1	05/19/2016	SW	F160510

Station ID: CTSO-DUP3-20160518 **Date / Time Sampled:** 05/18/16 00:00 **Workorder** F160503
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160503-06 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**93.8**		% by Weight		1	05/19/2016	SW	F160510

Station ID: CTSO-DUP4-20160518 **Date / Time Sampled:** 05/18/16 00:00 **Workorder** F160503
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160503-07 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch

% Solids	**% Solids**	**92.4**	% by Weight	1	05/19/2016	SW	F160510	

Station ID: CTSO-C8D01-20160518 **Date / Time Sampled:** 05/18/16 13:49 **Workorder** F160503
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160503-08 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**96.0**		% by Weight		1	05/19/2016	SW	F160510

Station ID: CTSO-A8D34-20160518 **Date / Time Sampled:** 05/18/16 13:39 **Workorder** F160503
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160503-09 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**94.2**		% by Weight		1	05/19/2016	SW	F160510

Station ID: CTSO-B8D34-20160518 **Date / Time Sampled:** 05/18/16 13:46 **Workorder** F160503
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160503-10 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**96.7**		% by Weight		1	05/19/2016	SW	F160510

Station ID: CTSO-D8D23-20160518 **Date / Time Sampled:** 05/18/16 13:52 **Workorder** F160503
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160503-11 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**97.2**		% by Weight		1	05/19/2016	SW	F160510

Station ID: CTSO-E8D23-20160518 **Date / Time Sampled:** 05/18/16 14:08 **Workorder** F160503
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160503-12 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**96.5**		% by Weight		1	05/19/2016	SW	F160510

Station ID: Foundation2 **Date / Time Sampled:** 05/18/16 15:50 **Workorder** F160503
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160503-13 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**94.8**		% by Weight		1	05/19/2016	SW	F160510

Note: "J" Qualifier indicates an estimated value. "U" Qualifier indicates analyte not detected at or above MDL.
"D" Qualifier indicates diluted value.

Pentachlorophenol by GCMS method 8270D - Quality Control

TechLaw, Inc. - ESAT Region 8 (Mobile Lab)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%R	%R Limits	%D or RPD	%D or RPD Limit
SVOC Field GCMS									
Batch F160508 - EPA 3550C			***Soil***						**SVOC Field GCMS**
Method Blank (F160508-BLK1)						Prepared & Analyzed: 05/18/16			
Pentachlorophenol	< 1.32	2.00	mg/kg						
Method Blank Spike (F160508-BS1)						Prepared & Analyzed: 05/18/16			
Pentachlorophenol	16.3	2.00	mg/kg	20.0		81	70-130		
Matrix Spike (F160508-MS1)			**Source: F160503-01**			Prepared & Analyzed: 05/18/16			
Pentachlorophenol	11.3	2.00	mg/kg	20.0	1.36	50	17-109		
Matrix Spike Dup (F160508-MSD1)			**Source: F160503-01**			Prepared & Analyzed: 05/18/16			
Pentachlorophenol	11.2	2.00	mg/kg	20.0	1.36	49	17-109	0.5	47

NOTE: %R = % Recovery, %R limits do not apply when sample levels exceed 4x the spike level.
RPD = Relative Percent Difference, %D = % Difference, DL = Detection Limit for QC sample .

TechLaw, Inc. - ESAT Region 8 (Mobile Lab)

Initial and Continuing Calibration Verification Results

SVOC Field GCMS Method: EPA 8270D Analysis Name: 8270 PCP

Sequence: F160509 Work Order: F160503 Units: mg/kg

Non-volatile Analyte	Initial (ICV1, ICV2)			Continuing Calibration Verification Standards (CCVs)								
	True	Found	%R	True	Found	%R	True	Found	%R	True	Found	%R
2,4,6-Tribromophenol				1			2			3		
				20.0	20.2	101.0	20.0	19.5	97.5	20.0	21.8	109.0
				4			5			6		
				20.0	20.6	103.0						
				7			8			9		
Pentachlorophenol				1			2			3		
				20.0	16.4	82.0	20.0	17.5	87.5	20.0	18.9	94.5
				4			5			6		
				20.0	17.5	87.5						
				7			8			9		
Phenanthrene-d10				1			2			3		
					0.00	0.0		0.00	0.0		0.00	0.0
				4			5			6		
					0.00	0.0						
				7			8			9		

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270D

Laboratory: TechLaw, Inc. - ESAT Region 8 (Mobile Lab) SDG:

Client: Superfund Project: Cowboy Timber_MAY2016

Sequence: F160509 Instrument: SVOC Field GCMS

Matrix: Soil Calibration: UNASSIGNED

Internal Standard	Response	RT	Reference Response		Area %	Area % Limits	RT Diff		
Calibration Check (F160509-CCV1)			Lab File ID: CBTM-059.D			Analyzed: 05/18/16 07:31			
Phenanthrene-d10	45446490	11.54				50 - 200			
Blank (F160508-BLK1)			Lab File ID: CBTM-060.D			Analyzed: 05/18/16 08:32			
Phenanthrene-d10	41687940	11.56	45446490		92	50 - 200	0.0200		
LCS (F160508-BS1)			Lab File ID: CBTM-061.D			Analyzed: 05/18/16 08:56			
Phenanthrene-d10	41252780	11.56	45446490		91	50 - 200	0.0200		
CTSO-A4D23-20160518 (F160503-01)			Lab File ID: CBTM-062.D			Analyzed: 05/18/16 13:59			
Phenanthrene-d10	34108140	11.57	45446490		75	50 - 200	0.0300		
CTSO-A3D12-20160518 (F160503-02)			Lab File ID: CBTM-063.D			Analyzed: 05/18/16 14:24			
Phenanthrene-d10	44581460	11.57	45446490		98	50 - 200	0.0300		
CTSO-A2D01-20160518 (F160503-03)			Lab File ID: CBTM-064.D			Analyzed: 05/18/16 14:50			
Phenanthrene-d10	42808710	11.57	45446490		94	50 - 200	0.0300		
Matrix Spike (F160508-MS1)			Lab File ID: CBTM-065.D			Analyzed: 05/18/16 15:15			
Phenanthrene-d10	45094760	11.57	45446490		99	50 - 200	0.0300		
Matrix Spike Dup (F160508-MSD1)			Lab File ID: CBTM-066.D			Analyzed: 05/18/16 15:40			
Phenanthrene-d10	44626350	11.57	45446490		98	50 - 200	0.0300		
CTSO-A1D01-20160518 (F160503-04)			Lab File ID: CBTM-067.D			Analyzed: 05/18/16 16:05			
Phenanthrene-d10	45084880	11.57	45446490		99	50 - 200	0.0300		
CTSO-D1D01-20160518 (F160503-05)			Lab File ID: CBTM-068.D			Analyzed: 05/18/16 16:31			
Phenanthrene-d10	44829150	11.57	45446490		99	50 - 200	0.0300		
CTSO-DUP3-20160518 (F160503-06)			Lab File ID: CBTM-069.D			Analyzed: 05/18/16 16:56			
Phenanthrene-d10	38127610	11.57	45446490		84	50 - 200	0.0300		
Calibration Check (F160509-CCV2)			Lab File ID: CBTM-072.D			Analyzed: 05/18/16 18:05			
Phenanthrene-d10	37530550	11.57	45446490		83	50 - 200	0.0300		
CTSO-DUP4-20160518 (F160503-07)			Lab File ID: CBTM-073.D			Analyzed: 05/18/16 18:31			
Phenanthrene-d10	36860540	11.57	37530550		98	50 - 200	0.0000		
CTSO-C8D01-20160518 (F160503-08)			Lab File ID: CBTM-074.D			Analyzed: 05/18/16 18:56			
Phenanthrene-d10	46376670	11.57	37530550		124	50 - 200	0.0000		

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270D

Laboratory: TechLaw, Inc. - ESAT Region 8 (Mobile Lab) SDG:

Client: Superfund Project: Cowboy Timber_MAY2016

Sequence: F160509 Instrument: SVOC Field GCMS

Matrix: Soil Calibration: UNASSIGNED

Internal Standard	Response	RT	Reference Response		Area %	Area % Limits	RT Diff		
CTSO-A8D34-20160518 (F160503-09)			Lab File ID: CBTM-075.D			Analyzed: 05/18/16 19:21			
Phenanthrene-d10	46364270	11.57	37530550		124	50 - 200	0.0000		
CTSO-B8D34-20160518 (F160503-10)			Lab File ID: CBTM-076.D			Analyzed: 05/18/16 19:46			
Phenanthrene-d10	46149540	11.57	37530550		123	50 - 200	0.0000		
CTSO-D8D23-20160518 (F160503-11)			Lab File ID: CBTM-077.D			Analyzed: 05/18/16 20:11			
Phenanthrene-d10	41887080	11.57	37530550		112	50 - 200	0.0000		
CTSO-E8D23-20160518 (F160503-12)			Lab File ID: CBTM-078.D			Analyzed: 05/18/16 20:37			
Phenanthrene-d10	37783560	11.57	37530550		101	50 - 200	0.0000		
Calibration Check (F160509-CCV3)			Lab File ID: CBTM-079.D			Analyzed: 05/18/16 21:02			
Phenanthrene-d10	48168870	11.57	37530550		128	50 - 200	0.0000		
Calibration Check (F160509-CCV4)			Lab File ID: CBTM-081.D			Analyzed: 05/19/16 07:36			
Phenanthrene-d10	45202210	11.56	48168870		94	50 - 200	-0.0100		
Foundation2 (F160503-13)			Lab File ID: CBTM-084.D			Analyzed: 05/19/16 08:52			
Phenanthrene-d10	41703140	11.57	45202210		92	50 - 200	0.0100		

TechLaw Inc., ESAT Region 8

INSTRUMENT ANALYSIS SEQUENCE LOG

Analytical Method: EPA 8270D **Non-volatile** **Sequence ID#:** F160509

Instrument ID #: SVOC Field GCMS Soil **LSR #:**

Analysis ID	Sample Name	Analysis Date	Analysis Time
F160509-CCV1	Calibration Check	05/18/16	07:31
F160508-BLK1	Blank	05/18/16	08:32
F160508-BS1		05/18/16	08:56
F160503-01	CTSO-A4D23-20160518	05/18/16	13:59
F160503-02	CTSO-A3D12-20160518	05/18/16	14:24
F160503-03	CTSO-A2D01-20160518	05/18/16	14:50
F160508-MS1	Matrix Spike	05/18/16	15:15
F160508-MSD1	Matrix Spike Dup	05/18/16	15:40
F160503-04	CTSO-A1D01-20160518	05/18/16	16:05
F160503-05	CTSO-D1D01-20160518	05/18/16	16:31
F160503-06	CTSO-DUP3-20160518	05/18/16	16:56
F160509-CCV2	Calibration Check	05/18/16	18:05
F160503-07	CTSO-DUP4-20160518	05/18/16	18:31
F160503-08	CTSO-C8D01-20160518	05/18/16	18:56
F160503-09	CTSO-A8D34-20160518	05/18/16	19:21
F160503-10	CTSO-B8D34-20160518	05/18/16	19:46
F160503-11	CTSO-D8D23-20160518	05/18/16	20:11
F160503-12	CTSO-E8D23-20160518	05/18/16	20:37
F160509-CCV3	Calibration Check	05/18/16	21:02
F160509-CCV4	Calibration Check	05/19/16	07:36
F160503-13	Foundation2	05/19/16	08:52

U.S. Environmental Protection Agency
Region 8
Technical and Management Services

Laboratory Services Program

Certificate of Analysis

Ref: 8TMS-L

MEMORANDUM

Date: 05/20/16

Subject: Analytical Results--- **Cowboy Timber_MAY2016 / NA**

From: Don Goodrich; EPA Region 8 Analytical Chemistry WAM

To: Craig Myers
Superfund
1595 Wynkoop Street

Received Sample Set(s), [Work Order : Date Received]:
[F160504 : 05/19/2016]

Attached are the analytical results for the samples received from the Cowboy Timber_MAY2016 sampling event, according to TDF NA. All analyses were performed within their method specified holding times unless otherwise noted in the following narrative.

These samples were prepared, analyzed, and verified by the Environmental Services Assistance Team Laboratory (ESAT) according to the requirements of the Technical Direction Form (TDF).

Note: The laboratory herewith transmits this deliverable to the program/project partner for determination of "final data usability" which may include data validation and data quality asessment per and in accordance with EPA QA/G-8, *Guidance on Environmental Data Verification and Data Validation*, November 2002, EPA/240/R-02/004. Laboratory data qualifiers are applied based on the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* June 2008, referred to as "NFG".

Laboratory policy is to dispose of any remaining sample 60 days after data analysis packages are delivered to EPA. If you would like the laboratory to retain the samples for a period longer than 60 days, please contact Don Goodrich within the 60 day period at (303) 312-6687.

Case Narrative

F160504

Quality Assessment: Unless indicated by exception, the QA/QC associated with this sample set produced data within the TDF-specified criteria.

Holding Times: All samples were analyzed within their method-specified technical holding time(s).

Sample Receipt: All samples were received within the temperature control limits of 4C +/- 2C.

1. Preparation (PB) / Method blanks (MB). No detections > PQL
Exceptions: None.

2. Initial and Continuing calibration verification analyses (ICVs and CCVs). All CCCs and SPCCs are within limits.
Exceptions: None.

3. Laboratory Control Sample/ Blank Spike (LCS/BS). Recoveries are within 70-130% range. DCDFM recovery high; no hits in samples.
Exceptions: None.

4. Instrument tune (BFB/DFTPP). Tune passes, and all samples were analyzed within 12 hours.
Exceptions: None.

5. Laboratory Duplicate (DUP). "Source" identifies field sample duplicated in the laboratory. RPD limits are within limits.
Exceptions: None.

6. Laboratory Matrix Spike (MS) and Matrix Spike Duplicate (MSD). "Source" defines original field sample fortified prior to analysis. Percent Recovery (%R) limits do not apply when sample concentration(s) exceed the corresponding analyte spike level by a factor of 4 or greater.
Exceptions: None.

7. Internal standards. Area counts must be within 50% to 200% of responses established in associated opening CCV.
Exceptions: None.

8. Any calibration using more than two-points produced a correlation coefficient equal to or greater than 0.995 or have an average response factor of less than or equal to 15% for all non-CCC compounds or less than or equal to 30% for all CCC compounds.
Exceptions: None.

Acronyms and Definitions:

ESAT	Environmental Services Assistance Team
J	Data Estimated qualifier (also applied to all data less than PQL, greater than or equal to MDL)
MDL	Method Detection Limit
PQL	Practical Quantitation Limit, also known as reporting limit.
RPD	Relative Percent Difference (difference divided by the mean)
%D	Percent difference, serial dilution criteria unit, difference divided by the original result.
%R	Percent recovery, analyzed (less sample contribution) divided by true value
<	Analyte NOT DETECTED at or above the Method Detection Limit (MDL)
mg/L	Milligrams per liter (Parts per million). Solids equivalent = mg/Kg.
ug/L	Micrograms per liter (Parts per billion). Solids equivalent = ug/Kg.
NR	No Recovery (matrix spike) - Often seen for calcium/magnesium when their concentration exceeds the spike level by > 4x.
NFG	*USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* June 2008.
RE	Sample Re-analysis. Usually seen on raw data and sequences for required sample dilutions due to over-range analytes.
U	Analyte not detected at or above MDL qualifier
D	Diluted value qualifier

Method(s) Summary:

As defined in the Technical Direction Form (TDF), some or all of the methods listed below were used for the determination of the reported target analytes.

From EPA's *Methods for the Determination of Metals in Environmental Samples*, Supplement I, May 1994, dissolved, total, and/or total recoverable metals were determined by:

- Method 200.7 / 6010B using a PE Optima ICP-OE (ICP).
- Method 200.8 / 6020 using a Perkin-Elmer Elan 6000 ICP-MS.
- Method 200.2 for total recoverable metals (only) digestion.
- Method 245.1 using a Perkin-Elmer FIMS CVAA (aqueous mercury only).

From *Standard Methods for the Examination of Water and Wastewater*, 18th Edition, 1992, Method 2340B was used for the calculated hardness determination. Hardness is reported as mg (milligram) equivalent $CaCO_3$ per liter (L) determined as follows:

Calculated hardness = 2.497 * (Calcium, mg/L) + 4.118 * (Magnesium, mg/L).

From *EPA's Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846*,

- Method 3015A was used for microwave assisted total metals digestion.
- Method 7473 was used for mercury in solids.
- Method 8260B/5030B was used for volatile organic compounds.

From EPA's *Determination of Inorganic Anions by Ion Chromatography*, Revision 2.1, 1993, Method 300.0 was used to determine the anions.

From EPA's *Methods for Chemical Analysis of Water and Wastes*, March 1983:

- Method 310.1 was followed for the alkalinity determination.
- Method 160.1 was followed for gravimetric total dissolved solids (TDS) determination .
- Method 160.2 was used for gravimetric total suspended solids (TSS) determination.
- Method 415.3 was used for total organic carbon (TOC) determination using either an Apollo 9000 or Phoenix 8000 Non-Dispersive IR (NDIR) system. Also known as dissolved organic carbon (DOC) when performed on the dissolved sample fraction.

The quality control procedures listed in the TDF request were utilized by ESAT to verify accuracy of the results and to evaluate any matrix interferences.

Pentachlorophenol by GCMS method 8270D

Station ID: CTSO-C5D12-20160519 **Date / Time Sampled:** 05/19/16 07:15 **Workorder** F160504
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160504-01 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**22.8**		mg/kg	1.32	1	05/19/2016	SW	F160511
Surrogate: 2,4,6-Tribromophenol		*100 %*	*Limit 50-150*			*1*	*05/19/2016*	*SW*	*F160511*

Station ID: CTSO-C6D12-20160519 **Date / Time Sampled:** 05/19/16 07:18 **Workorder** F160504
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160504-02 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**18.8**		mg/kg	1.32	1	05/19/2016	SW	F160511
Surrogate: 2,4,6-Tribromophenol		*109 %*	*Limit 50-150*			*1*	*05/19/2016*	*SW*	*F160511*

Station ID: CTSO-C7D12-20160519 **Date / Time Sampled:** 05/19/16 07:22 **Workorder** F160504
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160504-03 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**70.9**		mg/kg	1.32	1	05/19/2016	SW	F160511
Surrogate: 2,4,6-Tribromophenol		*104 %*	*Limit 50-150*			*1*	*05/19/2016*	*SW*	*F160511*

Station ID: CTSO-B5D12-20160519 **Date / Time Sampled:** 05/19/16 13:50 **Workorder** F160504
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160504-04 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**55.9**		mg/kg	1.32	1	05/19/2016	SW	F160511
Surrogate: 2,4,6-Tribromophenol		*104 %*	*Limit 50-150*			*1*	*05/19/2016*	*SW*	*F160511*

Project Name: Cowboy Timber_MAY2016 **Certificate of Analysis**

TDF #: NA

Classical Chemistry Parameters

Station ID: CTSO-C5D12-20160519 **Date / Time Sampled:** 05/19/16 07:15 **Workorder** F160504
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160504-01 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**95.7**		% by Weight		1	05/20/2016	MM	F160513

Station ID: CTSO-C6D12-20160519 **Date / Time Sampled:** 05/19/16 07:18 **Workorder** F160504
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160504-02 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**96.7**		% by Weight		1	05/20/2016	MM	F160513

Station ID: CTSO-C7D12-20160519 **Date / Time Sampled:** 05/19/16 07:22 **Workorder** F160504
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160504-03 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**95.8**		% by Weight		1	05/20/2016	MM	F160513

Station ID: CTSO-B5D12-20160519 **Date / Time Sampled:** 05/19/16 13:50 **Workorder** F160504
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160504-04 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**96.0**		% by Weight		1	05/20/2016	MM	F160513

Note: "J" Qualifier indicates an estimated value. "U" Qualifier indicates analyte not detected at or above MDL.
"D" Qualifier indicates diluted value.

Pentachlorophenol by GCMS method 8270D - Quality Control

TechLaw, Inc. - ESAT Region 8 (Mobile Lab)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%R	%R Limits	%D or RPD	%D or RPD Limit
SVOC Field GCMS									
Batch F160511 - EPA 3550C			***Soil***						**SVOC Field GCMS**
Method Blank (F160511-BLK1)						Prepared & Analyzed: 05/19/16			
Pentachlorophenol	< 1.32	2.00	mg/kg						
Method Blank Spike (F160511-BS1)						Prepared & Analyzed: 05/19/16			
Pentachlorophenol	16.9	2.00	mg/kg	20.0		85	70-130		
Matrix Spike (F160511-MS1)			**Source: F160504-01**			Prepared & Analyzed: 05/19/16			
Pentachlorophenol	39.3	2.00	mg/kg	20.0	22.8	82	17-109		
Matrix Spike Dup (F160511-MSD1)			**Source: F160504-01**			Prepared & Analyzed: 05/19/16			
Pentachlorophenol	40.5	2.00	mg/kg	20.0	22.8	88	17-109	3	47

NOTE: %R = % Recovery, %R limits do not apply when sample levels exceed 4x the spike level.
RPD = Relative Percent Difference, %D = % Difference, DL = Detection Limit for QC sample .

Project Name: **Cowboy Timber_MAY2016** **Certificate of Analysis**

TDF #: **NA**

TechLaw, Inc. - ESAT Region 8 (Mobile Lab)

Initial and Continuing Calibration Verification Results

SVOC Field GCMS Method: EPA 8270D Analysis Name: 8270 PCP

Sequence: F160512 Work Order: F160504 Units: mg/kg

Non-volatile Analyte	Initial (ICV1, ICV2)			Continuing Calibration Verification Standards (CCVs)								
	True	Found	%R	True	Found	%R	True	Found	%R	True	Found	%R
2,4,6-Tribromophenol				1			2			3		
				20.0	20.6	103.0	20.0	21.1	105.5			
				4			5			6		
				7			8			9		
Pentachlorophenol				1			2			3		
				20.0	17.5	87.5	20.0	18.2	91.0			
				4			5			6		
				7			8			9		
Phenanthrene-d10				1			2			3		
					0.00	0.0		0.00	0.0			
				4			5			6		
				7			8			9		

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270D

Laboratory: TechLaw, Inc. - ESAT Region 8 (Mobile Lab) SDG:

Client: Superfund Project: Cowboy Timber_MAY2016

Sequence: F160512 Instrument: SVOC Field GCMS

Matrix: Soil Calibration: UNASSIGNED

Internal Standard	Response	RT	Reference Response		Area %	Area % Limits	RT Diff		
Calibration Check (F160512-CCV1)			Lab File ID: CBTM-081.D			Analyzed: 05/19/16 07:36			
Phenanthrene-d10	45219250	11.56				50 - 200			
Blank (F160511-BLK1)			Lab File ID: CBTM-082.D			Analyzed: 05/19/16 08:01			
Phenanthrene-d10	42683320	11.56	45219250		94	50 - 200	0.0000		
LCS (F160511-BS1)			Lab File ID: CBTM-083.D			Analyzed: 05/19/16 08:25			
Phenanthrene-d10	42093520	11.56	45219250		93	50 - 200	0.0000		
CTSO-C5D12-20160519 (F160504-01)			Lab File ID: CBTM-085.D			Analyzed: 05/19/16 09:17			
Phenanthrene-d10	32979670	11.56	45219250		73	50 - 200	0.0000		
CTSO-C6D12-20160519 (F160504-02)			Lab File ID: CBTM-086.D			Analyzed: 05/19/16 09:42			
Phenanthrene-d10	42000450	11.57	45219250		93	50 - 200	0.0100		
CTSO-C7D12-20160519 (F160504-03)			Lab File ID: CBTM-087.D			Analyzed: 05/19/16 10:07			
Phenanthrene-d10	39452530	11.57	45219250		87	50 - 200	0.0100		
Matrix Spike (F160511-MS1)			Lab File ID: CBTM-088.D			Analyzed: 05/19/16 12:40			
Phenanthrene-d10	32692530	11.57	45219250		72	50 - 200	0.0100		
Matrix Spike Dup (F160511-MSD1)			Lab File ID: CBTM-089.D			Analyzed: 05/19/16 13:06			
Phenanthrene-d10	32101620	11.57	45219250		71	50 - 200	0.0100		
CTSO-B5D12-20160519 (F160504-04)			Lab File ID: CBTM-093.D			Analyzed: 05/19/16 15:22			
Phenanthrene-d10	29379080	11.57	45219250		65	50 - 200	0.0100		
Calibration Check (F160512-CCV2)			Lab File ID: CBTM-094.D			Analyzed: 05/19/16 17:56			
Phenanthrene-d10	46090900	11.58	45219250		102	50 - 200	0.0200		

TechLaw Inc., ESAT Region 8

INSTRUMENT ANALYSIS SEQUENCE LOG

Analytical Method: EPA 8270D **Non-volatile** **Sequence ID#:** F160512

Instrument ID #: SVOC Field GCMS Soil **LSR #:**

Analysis ID	Sample Name	Analysis Date	Analysis Time
F160512-CCV1	Calibration Check	05/19/16	07:36
F160511-BLK1	Blank	05/19/16	08:01
F160511-BS1		05/19/16	08:25
F160504-01	CTSO-C5D12-20160519	05/19/16	09:17
F160504-02	CTSO-C6D12-20160519	05/19/16	09:42
F160504-03	CTSO-C7D12-20160519	05/19/16	10:07
F160511-MS1	Matrix Spike	05/19/16	12:40
F160511-MSD1	Matrix Spike Dup	05/19/16	13:06
F160504-04	CTSO-B5D12-20160519	05/19/16	15:22
F160512-CCV2	Calibration Check	05/19/16	17:56

U.S. Environmental Protection Agency
Region 8
Technical and Management Services

Laboratory Services Program

Certificate of Analysis

Ref: 8TMS-L

MEMORANDUM

Date: 05/22/16

Subject: Analytical Results--- **Cowboy Timber_MAY2016 / NA**

From: Don Goodrich; EPA Region 8 Analytical Chemistry WAM

To: Craig Myers
Superfund
1595 Wynkoop Street

Received Sample Set(s), [Work Order : Date Received]:
[F160505 : 05/21/2016]

Attached are the analytical results for the samples received from the Cowboy Timber_MAY2016 sampling event, according to TDF NA. All analyses were performed within their method specified holding times unless otherwise noted in the following narrative.

These samples were prepared, analyzed, and verified by the Environmental Services Assistance Team Laboratory (ESAT) according to the requirements of the Technical Direction Form (TDF).

Note: The laboratory herewith transmits this deliverable to the program/project partner for determination of "final data usability" which may include data validation and data quality asessment per and in accordance with EPA QA/G-8, *Guidance on Environmental Data Verification and Data Validation*, November 2002, EPA/240/R-02/004. Laboratory data qualifiers are applied based on the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* June 2008, referred to as "NFG".

Laboratory policy is to dispose of any remaining sample 60 days after data analysis packages are delivered to EPA. If you would like the laboratory to retain the samples for a period longer than 60 days, please contact Don Goodrich within the 60 day period at (303) 312-6687.

Case Narrative

F160505

Quality Assessment: Unless indicated by exception, the QA/QC associated with this sample set produced data within the TDF-specified criteria.

Holding Times: All samples were analyzed within their method-specified technical holding time(s).

Sample Receipt: All samples were received within the temperature control limits of 4C +/- 2C.

1. Preparation (PB) / Method blanks (MB). No detections > PQL
Exceptions: None.

2. Initial and Continuing calibration verification analyses (ICVs and CCVs). All CCCs and SPCCs are within limits.
Exceptions: None.

3. Laboratory Control Sample/ Blank Spike (LCS/BS). Recoveries are within 70-130% range. DCDFM recovery high; no hits in samples.
Exceptions: None.

4. Instrument tune (BFB/DFTPP). Tune passes, and all samples were analyzed within 12 hours.
Exceptions: None.

5. Laboratory Duplicate (DUP). "Source" identifies field sample duplicated in the laboratory. RPD limits are within limits.
Exceptions: None.

6. Laboratory Matrix Spike (MS) and Matrix Spike Duplicate (MSD). "Source" defines original field sample fortified prior to analysis. Percent Recovery (%R) limits do not apply when sample concentration(s) exceed the corresponding analyte spike level by a factor of 4 or greater.
Exceptions: None.

7. Internal standards. Area counts must be within 50% to 200% of responses established in associated opening CCV.
Exceptions: None.

8. Any calibration using more than two-points produced a correlation coefficient equal to or greater than 0.995 or have an average response factor of less than or equal to 15% for all non-CCC compounds or less than or equal to 30% for all CCC compounds.
Exceptions: None.

Acronyms and Definitions:

ESAT	Environmental Services Assistance Team
J	Data Estimated qualifier (also applied to all data less than PQL, greater than or equal to MDL)
MDL	Method Detection Limit
PQL	Practical Quantitation Limit, also known as reporting limit.
RPD	Relative Percent Difference (difference divided by the mean)
%D	Percent difference, serial dilution criteria unit, difference divided by the original result.
%R	Percent recovery, analyzed (less sample contribution) divided by true value
<	Analyte NOT DETECTED at or above the Method Detection Limit (MDL)
mg/L	Milligrams per liter (Parts per million). Solids equivalent = mg/Kg.
ug/L	Micrograms per liter (Parts per billion). Solids equivalent = ug/Kg.
NR	No Recovery (matrix spike) - Often seen for calcium/magnesium when their concentration exceeds the spike level by > 4x.
NFG	*USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* June 2008.
RE	Sample Re-analysis. Usually seen on raw data and sequences for required sample dilutions due to over-range analytes.
U	Analyte not detected at or above MDL qualifier
D	Diluted value qualifier

Method(s) Summary:

As defined in the Technical Direction Form (TDF), some or all of the methods listed below were used for the determination of the reported target analytes.

From EPA's *Methods for the Determination of Metals in Environmental Samples*, Supplement I, May 1994, dissolved, total, and/or total recoverable metals were determined by:

- Method 200.7 / 6010B using a PE Optima ICP-OE (ICP).
- Method 200.8 / 6020 using a Perkin-Elmer Elan 6000 ICP-MS.
- Method 200.2 for total recoverable metals (only) digestion.
- Method 245.1 using a Perkin-Elmer FIMS CVAA (aqueous mercury only).

From *Standard Methods for the Examination of Water and Wastewater*, 18th Edition, 1992, Method 2340B was used for the calculated hardness determination. Hardness is reported as mg(milligram) equivalent $CaCO_3$ per liter (L) determined as follows:

Calculated hardness = 2.497 * (Calcium, mg/L) + 4.118 * (Magnesium, mg/L).

From *EPA's Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846*,

- Method 3015A was used for microwave assisted total metals digestion.
- Method 7473 was used for mercury in solids.
- Method 8260B/5030B was used for volatile organic compounds.

From EPA's *Determination of Inorganic Anions by Ion Chromatography* , Revision 2.1, 1993, Method 300.0 was used to determine the anions.

From EPA's *Methods for Chemical Analysis of Water and Wastes*, March 1983:

- Method 310.1 was followed for the alkalinity determination.
- Method 160.1 was followed for gravimetric total dissolved solids (TDS) determination.
- Method 160.2 was used for gravimetric total suspended solids (TSS) determination.
- Method 415.3 was used for total organic carbon (TOC) determination using either an Apollo 9000 or Phoenix 8000 Non-Dispersive IR (NDIR) system. Also known as dissolved organic carbon (DOC) when performed on the dissolved sample fraction.

The quality control procedures listed in the TDF request were utilized by ESAT to verify accuracy of the results and to evaluate any matrix interferences.

Pentachlorophenol by GCMS method 8270D

Station ID: CTSO-B1CON-20160520 **Date / Time Sampled:** 05/20/16 17:30 **Workorder** F160505
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160505-01 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**2.75**		mg/kg	1.32	1	05/21/2016	SW	F160515
Surrogate: 2,4,6-Tribromophenol		*95 %*	*Limit 50-150*			*1*	*05/21/2016*	*SW*	*F160515*

Station ID: CTSO-B2I-20160521 **Date / Time Sampled:** 05/21/16 07:05 **Workorder** F160505
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160505-02 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**57.5**		mg/kg	1.32	1	05/21/2016	SW	F160515
Surrogate: 2,4,6-Tribromophenol		*102 %*	*Limit 50-150*			*1*	*05/21/2016*	*SW*	*F160515*

Station ID: CTSO-DUP5-20160520 **Date / Time Sampled:** 05/20/16 00:00 **Workorder** F160505
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160505-03 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**3.45**		mg/kg	1.32	1	05/21/2016	SW	F160515
Surrogate: 2,4,6-Tribromophenol		*93 %*	*Limit 50-150*			*1*	*05/21/2016*	*SW*	*F160515*

Station ID: CTSO-D4D3-20160521 **Date / Time Sampled:** 05/21/16 07:45 **Workorder** F160505
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160505-04 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**1.38**	**J**	mg/kg	1.32	1	05/21/2016	SW	F160515
Surrogate: 2,4,6-Tribromophenol		*96 %*	*Limit 50-150*			*1*	*05/21/2016*	*SW*	*F160515*

Station ID: CTSO-D5D3-20160521 **Date / Time Sampled:** 05/21/16 07:47 **Workorder** F160505
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160505-05 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	Pentachlorophenol	< 2.00	**U**	mg/kg	1.32	1	05/21/2016	SW	F160515
Surrogate: 2,4,6-Tribromophenol		*102 %*	*Limit 50-150*			*1*	*05/21/2016*	*SW*	*F160515*

Station ID: CTSO-D6D3-20160521 **Date / Time Sampled:** 05/21/16 07:50 **Workorder** F160505
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160505-06 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**2.71**		mg/kg	1.32	1	05/21/2016	SW	F160515
Surrogate: 2,4,6-Tribromophenol		*97 %*	*Limit 50-150*			*1*	*05/21/2016*	*SW*	*F160515*

Station ID: CTSO-D7D3-20160521 **Date / Time Sampled:** 05/21/16 07:53 **Workorder** F160505
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160505-07 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**2.71**		mg/kg	1.32	1	05/21/2016	SW	F160515
Surrogate: 2,4,6-Tribromophenol		*94 %*	*Limit 50-150*			*1*	*05/21/2016*	*SW*	*F160515*

Station ID: CTSO-D2D3-20160521 **Date / Time Sampled:** 05/21/16 13:33 **Workorder** F160505
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160505-08 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**5.84**		mg/kg	1.32	1	05/21/2016	SW	F160515
Surrogate: 2,4,6-Tribromophenol		*94 %*	*Limit 50-150*			*1*	*05/21/2016*	*SW*	*F160515*

Station ID: CTSO-C5D3-20160521 **Date / Time Sampled:** 05/21/16 13:38 **Workorder** F160505
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160505-09 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**33.2**		mg/kg	1.32	1	05/21/2016	SW	F160515
Surrogate: 2,4,6-Tribromophenol		*95 %*	*Limit 50-150*			*1*	*05/21/2016*	*SW*	*F160515*

Station ID: CTSO-E5NS-20160521 **Date / Time Sampled:** 05/21/16 13:43 **Workorder** F160505
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160505-10 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**9.03**		mg/kg	1.32	1	05/21/2016	SW	F160515
Surrogate: 2,4,6-Tribromophenol		*96 %*	*Limit 50-150*			*1*	*05/21/2016*	*SW*	*F160515*

Station ID: CTSO-C4D3-20160521 **Date / Time Sampled:** 05/21/16 15:07 **Workorder** F160505
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160505-11 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**43.2**		mg/kg	1.32	1	05/21/2016	SW	F160515
Surrogate: 2,4,6-Tribromophenol		*105 %*	*Limit 50-150*			*1*	*05/21/2016*	*SW*	*F160515*

Station ID: CTSO-C6D3-20160521 **Date / Time Sampled:** 05/21/16 15:28 **Workorder** F160505

EPA Tag No.: **Matrix:** Soil **Lab Number:** F160505-12 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**39.9**		mg/kg	1.32	1	05/21/2016	SW	F160515
Surrogate: 2,4,6-Tribromophenol		*100 %*		*Limit 50-150*		*1*	*05/21/2016*	*SW*	*F160515*

Station ID: CTSO-C7D3-20160521 **Date / Time Sampled:** 05/21/16 16:33 **Workorder** F160505

EPA Tag No.: **Matrix:** Soil **Lab Number:** F160505-13 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**4.16**		mg/kg	1.32	1	05/21/2016	SW	F160515
Surrogate: 2,4,6-Tribromophenol		*51 %*		*Limit 50-150*		*1*	*05/21/2016*	*SW*	*F160515*

Classical Chemistry Parameters

Station ID: CTSO-B1CON-20160520 **Date / Time Sampled:** 05/20/16 17:30 **Workorder** F160505
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160505-01 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**95.7**		% by Weight		1	05/22/2016	MV	F160514

Station ID: CTSO-B2I-20160521 **Date / Time Sampled:** 05/21/16 07:05 **Workorder** F160505
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160505-02 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**91.1**		% by Weight		1	05/22/2016	MV	F160514

Station ID: CTSO-DUP5-20160520 **Date / Time Sampled:** 05/20/16 00:00 **Workorder** F160505
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160505-03 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**96.5**		% by Weight		1	05/22/2016	MV	F160514

Station ID: CTSO-D4D3-20160521 **Date / Time Sampled:** 05/21/16 07:45 **Workorder** F160505
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160505-04 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**96.6**		% by Weight		1	05/22/2016	MV	F160514

Station ID: CTSO-D5D3-20160521 **Date / Time Sampled:** 05/21/16 07:47 **Workorder** F160505
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160505-05 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**97.2**		% by Weight		1	05/22/2016	MV	F160514

Station ID: CTSO-D6D3-20160521 **Date / Time Sampled:** 05/21/16 07:50 **Workorder** F160505
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160505-06 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**96.8**		% by Weight		1	05/22/2016	MV	F160514

Station ID: CTSO-D7D3-20160521 **Date / Time Sampled:** 05/21/16 07:53 **Workorder** F160505
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160505-07 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch

% Solids	**% Solids**	**96.7**	% by Weight	1	05/22/2016	MV	F160514	

Station ID: CTSO-D2D3-20160521 **Date / Time Sampled:** 05/21/16 13:33 **Workorder** F160505
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160505-08 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**92.3**		% by Weight		1	05/22/2016	MV	F160514

Station ID: CTSO-C5D3-20160521 **Date / Time Sampled:** 05/21/16 13:38 **Workorder** F160505
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160505-09 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**95.9**		% by Weight		1	05/22/2016	MV	F160514

Station ID: CTSO-E5NS-20160521 **Date / Time Sampled:** 05/21/16 13:43 **Workorder** F160505
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160505-10 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**99.5**		% by Weight		1	05/22/2016	MV	F160514

Station ID: CTSO-C4D3-20160521 **Date / Time Sampled:** 05/21/16 15:07 **Workorder** F160505
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160505-11 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**92.3**		% by Weight		1	05/22/2016	MV	F160514

Station ID: CTSO-C6D3-20160521 **Date / Time Sampled:** 05/21/16 15:28 **Workorder** F160505
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160505-12 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**94.7**		% by Weight		1	05/22/2016	MV	F160514

Station ID: CTSO-C7D3-20160521 **Date / Time Sampled:** 05/21/16 16:33 **Workorder** F160505
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160505-13 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**94.9**		% by Weight		1	05/22/2016	MV	F160514

Note: "J" Qualifier indicates an estimated value. "U" Qualifier indicates analyte not detected at or above MDL.
"D" Qualifier indicates diluted value.

Pentachlorophenol by GCMS method 8270D - Quality Control

TechLaw, Inc. - ESAT Region 8 (Mobile Lab)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%R	%R Limits	%D or RPD	%D or RPD Limit
SVOC Field GCMS									
Batch F160515 - EPA 3550C			***Soil***						**SVOC Field GCMS**
Method Blank (F160515-BLK1)						Prepared & Analyzed: 05/21/16			
Pentachlorophenol	< 1.32	2.00	mg/kg						
Method Blank Spike (F160515-BS1)						Prepared & Analyzed: 05/21/16			
Pentachlorophenol	15.0	2.00	mg/kg	20.0		75	70-130		
Duplicate (F160515-DUP1)			**Source: F160505-13**			Prepared & Analyzed: 05/21/16			
Pentachlorophenol	3.28	2.00	mg/kg		4.16			24	47
Matrix Spike (F160515-MS1)			**Source: F160505-01**			Prepared & Analyzed: 05/21/16			
Pentachlorophenol	13.3	2.00	mg/kg	20.0	2.75	53	17-109		
Matrix Spike Dup (F160515-MSD1)			**Source: F160505-01**			Prepared & Analyzed: 05/21/16			
Pentachlorophenol	13.1	2.00	mg/kg	20.0	2.75	52	17-109	2	47

NOTE: %R = % Recovery, %R limits do not apply when sample levels exceed 4x the spike level.
RPD = Relative Percent Difference, %D = % Difference, DL = Detection Limit for QC sample .

Project Name: **Cowboy Timber_MAY2016** **Certificate of Analysis**

TDF #: **NA**

TechLaw, Inc. - ESAT Region 8 (Mobile Lab)

Initial and Continuing Calibration Verification Results

SVOC Field GCMS Method: EPA 8270D Analysis Name: 8270 PCP

Sequence: F160516 Work Order: F160505 Units: mg/kg

Non-volatile Analyte	Initial (ICV1, ICV2)			Continuing Calibration Verification Standards (CCVs)								
	True	Found	%R	True	Found	%R	True	Found	%R	True	Found	%R
2,4,6-Tribromophenol				1			2			3		
				20.0	20.2	101.0	20.0	20.8	104.0			
				4			5			6		
				7			8			9		
Pentachlorophenol				1			2			3		
				20.0	16.3	81.5	20.0	16.9	84.5			
				4			5			6		
				7			8			9		
Phenanthrene-d10				1			2			3		
					0.00	0.0		0.00	0.0			
				4			5			6		
				7			8			9		

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270D

Laboratory: TechLaw, Inc. - ESAT Region 8 (Mobile Lab) SDG:

Client: Superfund Project: Cowboy Timber_MAY2016

Sequence: F160516 Instrument: SVOC Field GCMS

Matrix: Soil Calibration: UNASSIGNED

Internal Standard	Response	RT	Reference Response		Area %	Area % Limits	RT Diff		
Calibration Check (F160516-CCV1)			Lab File ID: CBTM-096.D			Analyzed: 05/21/16 07:35			
Phenanthrene-d10	47339960	11.56				50 - 200			
Blank (F160515-BLK1)			Lab File ID: CBTM-097.D			Analyzed: 05/21/16 07:59			
Phenanthrene-d10	39019260	11.56	47339960		82	50 - 200	0.0000		
CTSO-B1CON-20160520 (F160505-01)			Lab File ID: CBTM-099.D			Analyzed: 05/21/16 08:48			
Phenanthrene-d10	39759090	11.57	47339960		84	50 - 200	0.0100		
Matrix Spike (F160515-MS1)			Lab File ID: CBTM-100.D			Analyzed: 05/21/16 09:13			
Phenanthrene-d10	40330800	11.57	47339960		85	50 - 200	0.0100		
Matrix Spike Dup (F160515-MSD1)			Lab File ID: CBTM-101.D			Analyzed: 05/21/16 09:37			
Phenanthrene-d10	39074410	11.57	47339960		83	50 - 200	0.0100		
LCS (F160515-BS1)			Lab File ID: CBTM-102.D			Analyzed: 05/21/16 10:05			
Phenanthrene-d10	37150550	11.57	47339960		78	50 - 200	0.0100		
CTSO-B2I-20160521 (F160505-02)			Lab File ID: CBTM-103.D			Analyzed: 05/21/16 10:30			
Phenanthrene-d10	44484150	11.57	47339960		94	50 - 200	0.0100		
CTSO-DUP5-20160520 (F160505-03)			Lab File ID: CBTM-104.D			Analyzed: 05/21/16 10:55			
Phenanthrene-d10	37886230	11.57	47339960		80	50 - 200	0.0100		
CTSO-D4D3-20160521 (F160505-04)			Lab File ID: CBTM-105.D			Analyzed: 05/21/16 11:20			
Phenanthrene-d10	41097220	11.57	47339960		87	50 - 200	0.0100		
CTSO-D5D3-20160521 (F160505-05)			Lab File ID: CBTM-106.D			Analyzed: 05/21/16 11:45			
Phenanthrene-d10	40791280	11.57	47339960		86	50 - 200	0.0100		
CTSO-D6D3-20160521 (F160505-06)			Lab File ID: CBTM-107.D			Analyzed: 05/21/16 12:11			
Phenanthrene-d10	42056810	11.57	47339960		89	50 - 200	0.0100		
CTSO-D7D3-20160521 (F160505-07)			Lab File ID: CBTM-108.D			Analyzed: 05/21/16 12:37			
Phenanthrene-d10	38214400	11.58	47339960		81	50 - 200	0.0200		
CTSO-D2D3-20160521 (F160505-08)			Lab File ID: CBTM-109.D			Analyzed: 05/21/16 14:26			
Phenanthrene-d10	35723550	11.57	47339960		75	50 - 200	0.0100		
CTSO-C5D3-20160521 (F160505-09)			Lab File ID: CBTM-110.D			Analyzed: 05/21/16 14:53			
Phenanthrene-d10	37368980	11.57	47339960		79	50 - 200	0.0100		

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270D

Laboratory: TechLaw, Inc. - ESAT Region 8 (Mobile Lab) SDG:

Client: Superfund Project: Cowboy Timber_MAY2016

Sequence: F160516 Instrument: SVOC Field GCMS

Matrix: Soil Calibration: UNASSIGNED

Internal Standard	Response	RT	Reference Response		Area %	Area % Limits	RT Diff		
CTSO-E5NS-20160521 (F160505-10)			Lab File ID: CBTM-111.D			Analyzed: 05/21/16 15:20			
Phenanthrene-d10	43037520	11.58	47339960		91	50 - 200	0.0200		
CTSO-C4D3-20160521 (F160505-11)			Lab File ID: CBTM-112.D			Analyzed: 05/21/16 16:02			
Phenanthrene-d10	44118020	11.58	47339960		93	50 - 200	0.0200		
CTSO-C6D3-20160521 (F160505-12)			Lab File ID: CBTM-113.D			Analyzed: 05/21/16 16:28			
Phenanthrene-d10	38644380	11.57	47339960		82	50 - 200	0.0100		
CTSO-C7D3-20160521 (F160505-13)			Lab File ID: CBTM-114.D			Analyzed: 05/21/16 16:53			
Phenanthrene-d10	37320150	11.57	47339960		79	50 - 200	0.0100		
Duplicate (F160515-DUP1)			Lab File ID: CBTM-116.D			Analyzed: 05/21/16 17:44			
Phenanthrene-d10	42415670	11.57	47339960		90	50 - 200	0.0100		
Calibration Check (F160516-CCV2)			Lab File ID: CBTM-117.D			Analyzed: 05/21/16 18:09			
Phenanthrene-d10	43760020	11.57	47339960		92	50 - 200	0.0100		

TechLaw Inc., ESAT Region 8

INSTRUMENT ANALYSIS SEQUENCE LOG

Analytical Method: EPA 8270D **Non-volatile** **Sequence ID#:** F160516

Instrument ID #: SVOC Field GCMS Soil **LSR #:**

Analysis ID	Sample Name	Analysis Date	Analysis Time
F160516-CCV1	Calibration Check	05/21/16	07:35
F160515-BLK1	Blank	05/21/16	07:59
F160505-01	CTSO-B1CON-20160520	05/21/16	08:48
F160515-MS1	Matrix Spike	05/21/16	09:13
F160515-MSD1	Matrix Spike Dup	05/21/16	09:37
F160515-BS1		05/21/16	10:05
F160505-02	CTSO-B2I-20160521	05/21/16	10:30
F160505-03	CTSO-DUP5-20160520	05/21/16	10:55
F160505-04	CTSO-D4D3-20160521	05/21/16	11:20
F160505-05	CTSO-D5D3-20160521	05/21/16	11:45
F160505-06	CTSO-D6D3-20160521	05/21/16	12:11
F160505-07	CTSO-D7D3-20160521	05/21/16	12:37
F160505-08	CTSO-D2D3-20160521	05/21/16	14:26
F160505-09	CTSO-C5D3-20160521	05/21/16	14:53
F160505-10	CTSO-E5NS-20160521	05/21/16	15:20
F160505-11	CTSO-C4D3-20160521	05/21/16	16:02
F160505-12	CTSO-C6D3-20160521	05/21/16	16:28
F160505-13	CTSO-C7D3-20160521	05/21/16	16:53
F160515-DUP1	Duplicate	05/21/16	17:44
F160516-CCV2	Calibration Check	05/21/16	18:09

U.S. Environmental Protection Agency
Region 8
Technical and Management Services

Laboratory Services Program

Certificate of Analysis

Ref: 8TMS-L

MEMORANDUM

Date: 05/24/16

Subject: Analytical Results--- **Cowboy Timber_MAY2016 / NA**

From: Don Goodrich; EPA Region 8 Analytical Chemistry WAM

To: Craig Myers
Superfund
1595 Wynkoop Street

Received Sample Set(s), [Work Order : Date Received]:
[F160507 : 05/23/2016]

Attached are the analytical results for the samples received from the Cowboy Timber_MAY2016 sampling event, according to TDF NA. All analyses were performed within their method specified holding times unless otherwise noted in the following narrative.

These samples were prepared, analyzed, and verified by the Environmental Services Assistance Team Laboratory (ESAT) according to the requirements of the Technical Direction Form (TDF).

Note: The laboratory herewith transmits this deliverable to the program/project partner for determination of "final data usability" which may include data validation and data quality asessment per and in accordance with EPA QA/G-8, *Guidance on Environmental Data Verification and Data Validation*, November 2002, EPA/240/R-02/004. Laboratory data qualifiers are applied based on the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* June 2008, referred to as "NFG".

Laboratory policy is to dispose of any remaining sample 60 days after data analysis packages are delivered to EPA. If you would like the laboratory to retain the samples for a period longer than 60 days, please contact Don Goodrich within the 60 day period at (303) 312-6687.

Case Narrative

F160507

Quality Assessment: Unless indicated by exception, the QA/QC associated with this sample set produced data within the TDF-specified criteria.

Holding Times: All samples were analyzed within their method-specified technical holding time(s).

Sample Receipt: All samples were received within the temperature control limits of 4C +/- 2C.

1. Preparation (PB) / Method blanks (MB). No detections > PQL
Exceptions: None.

2. Initial and Continuing calibration verification analyses (ICVs and CCVs). All CCCs and SPCCs are within limits.
Exceptions: None.

3. Laboratory Control Sample/ Blank Spike (LCS/BS). Recoveries are within 70-130% range. DCDFM recovery high; no hits in samples.
Exceptions: None.

4. Instrument tune (BFB/DFTPP). Tune passes, and all samples were analyzed within 12 hours.
Exceptions: None.

5. Laboratory Duplicate (DUP). "Source" identifies field sample duplicated in the laboratory. RPD limits are within limits.
Exceptions: None.

6. Laboratory Matrix Spike (MS) and Matrix Spike Duplicate (MSD). "Source" defines original field sample fortified prior to analysis. Percent Recovery (%R) limits do not apply when sample concentration(s) exceed the corresponding analyte spike level by a factor of 4 or greater.
Exceptions: None.

7. Internal standards. Area counts must be within 50% to 200% of responses established in associated opening CCV.
Exceptions: None.

8. Any calibration using more than two-points produced a correlation coefficient equal to or greater than 0.995 or have an average response factor of less than or equal to 15% for all non-CCC compounds or less than or equal to 30% for all CCC compounds.
Exceptions: None.

Note: F160506-04 exceeded calibration range for PCP. Result was "E" flagged for the exceedance.

Acronyms and Definitions:

ESAT	Environmental Services Assistance Team
J	Data Estimated qualifier (also applied to all data less than PQL, greater than or equal to MDL)
MDL	Method Detection Limit
PQL	Practical Quantitation Limit, also known as reporting limit.
RPD	Relative Percent Difference (difference divided by the mean)
%D	Percent difference, serial dilution criteria unit, difference divided by the original result.
%R	Percent recovery, analyzed (less sample contribution) divided by true value
<	Analyte NOT DETECTED at or above the Method Detection Limit (MDL)
mg/L	Milligrams per liter (Parts per million). Solids equivalent = mg/Kg.
ug/L	Micrograms per liter (Parts per billion). Solids equivalent = ug/Kg.
NR	No Recovery (matrix spike) - Often seen for calcium/magnesium when their concentration exceeds the spike level by > 4x.
NFG	*USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* June 2008.
RE	Sample Re-analysis. Usually seen on raw data and sequences for required sample dilutions due to over-range analytes.
U	Analyte not detected at or above MDL qualifier
D	Diluted value qualifier

Method(s) Summary:

As defined in the Technical Direction Form (TDF), some or all of the methods listed below were used for the determination of the reported target analytes.

From EPA's *Methods for the Determination of Metals in Environmental Samples*, Supplement I, May 1994, dissolved, total, and/or total recoverable metals were determined by:

- Method 200.7 / 6010B using a PE Optima ICP-OE (ICP).
- Method 200.8 / 6020 using a Perkin-Elmer Elan 6000 ICP-MS.
- Method 200.2 for total recoverable metals (only) digestion.
- Method 245.1 using a Perkin-Elmer FIMS CVAA (aqueous mercury only).

From *Standard Methods for the Examination of Water and Wastewater*, 18th Edition, 1992, Method 2340B was used for the calculated hardness determination. Hardness is reported as mg (milligram) equivalent $CaCO_3$ per liter (L) determined as follows:

Calculated hardness = 2.497 * (Calcium, mg/L) + 4.118 * (Magnesium, mg/L).

From *EPA's Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846*,

- Method 3015A was used for microwave assisted total metals digestion.
- Method 7473 was used for mercury in solids.
- Method 8260B/5030B was used for volatile organic compounds.

From EPA's *Determination of Inorganic Anions by Ion Chromatography*, Revision 2.1, 1993, Method 300.0 was used to determine the anions.

From EPA's *Methods for Chemical Analysis of Water and Wastes*, March 1983:

- Method 310.1 was followed for the alkalinity determination.
- Method 160.1 was followed for gravimetric total dissolved solids (TDS) determination .
- Method 160.2 was used for gravimetric total suspended solids (TSS) determination.
- Method 415.3 was used for total organic carbon (TOC) determination using either an Apollo 9000 or Phoenix 8000 Non-Dispersive IR (NDIR) system. Also known as dissolved organic carbon (DOC) when performed on the dissolved sample fraction.

The quality control procedures listed in the TDF request were utilized by ESAT to verify accuracy of the results and to evaluate any matrix interferences.

Project Name: Cowboy Timber_MAY2016 **Certificate of Analysis**

TDF #: NA

Pentachlorophenol by GCMS method 8270D

Station ID: CTSO-DPile2-20160523 **Date / Time Sampled:** 05/23/16 07:14 **Workorder** F160507
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160507-01 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**41.2**		mg/kg	1.32	1	05/23/2016	SW	F160520
Surrogate: 2,4,6-Tribromophenol		*100 %*	*Limit 50-150*			*1*	*05/23/2016*	*SW*	*F160520*

Station ID: CTSO-B7D3-20160523 **Date / Time Sampled:** 05/23/16 09:20 **Workorder** F160507
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160507-02 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**2.53**		mg/kg	1.32	1	05/23/2016	SW	F160520
Surrogate: 2,4,6-Tribromophenol		*89 %*	*Limit 50-150*			*1*	*05/23/2016*	*SW*	*F160520*

Station ID: CTSO-D6D4-20160523 **Date / Time Sampled:** 05/23/16 10:44 **Workorder** F160507
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160507-03 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	Pentachlorophenol	< 2.00	**U**	mg/kg	1.32	1	05/23/2016	SW	F160520
Surrogate: 2,4,6-Tribromophenol		*91 %*	*Limit 50-150*			*1*	*05/23/2016*	*SW*	*F160520*

Station ID: CTSO-B5D3-20160523 **Date / Time Sampled:** 05/23/16 11:10 **Workorder** F160507
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160507-04 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**174**	**E**	mg/kg	1.32	1	05/23/2016	SW	F160520
Surrogate: 2,4,6-Tribromophenol		*107 %*	*Limit 50-150*			*1*	*05/23/2016*	*SW*	*F160520*

Station ID: CTSO-B6D3-20160523 **Date / Time Sampled:** 05/23/16 13:33 **Workorder** F160507
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160507-05 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**7.12**		mg/kg	1.32	1	05/23/2016	SW	F160520
Surrogate: 2,4,6-Tribromophenol		*104 %*	*Limit 50-150*			*1*	*05/23/2016*	*SW*	*F160520*

Station ID: CTSO-D7D4-20160523 **Date / Time Sampled:** 05/23/16 14:42 **Workorder** F160507
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160507-06 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch

EPA 8270D	Pentachlorophenol	< 2.00	**U**	mg/kg	1.32	1	05/23/2016	SW	F160520
Surrogate: 2,4,6-Tribromophenol		*98 %*		*Limit 50-150*		*1*	*05/23/2016*	*SW*	*F160520*

Station ID: CTSO-B2D4-20160523 **Date / Time Sampled:** 05/23/16 14:47 **Workorder** F160507
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160507-07 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**54.7**		mg/kg	1.32	1	05/23/2016	SW	F160520
Surrogate: 2,4,6-Tribromophenol		*106 %*		*Limit 50-150*		*1*	*05/23/2016*	*SW*	*F160520*

Station ID: CTSO-DUP7-20160523 **Date / Time Sampled:** 05/23/16 00:00 **Workorder** F160507
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160507-08 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**43.5**		mg/kg	1.32	1	05/23/2016	SW	F160520
Surrogate: 2,4,6-Tribromophenol		*97 %*		*Limit 50-150*		*1*	*05/23/2016*	*SW*	*F160520*

Station ID: CTSO-B3D4-20160523 **Date / Time Sampled:** 05/23/16 17:05 **Workorder** F160507
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160507-09 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**2.79**		mg/kg	1.32	1	05/24/2016	SW	F160520
Surrogate: 2,4,6-Tribromophenol		*80 %*		*Limit 50-150*		*1*	*05/24/2016*	*SW*	*F160520*

Station ID: CTSO-C3D4-20160523 **Date / Time Sampled:** 05/23/16 17:09 **Workorder** F160507
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160507-10 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**90.4**		mg/kg	1.32	1	05/24/2016	SW	F160520
Surrogate: 2,4,6-Tribromophenol		*99 %*		*Limit 50-150*		*1*	*05/24/2016*	*SW*	*F160520*

Station ID: CTSO-C7D4-20160523 **Date / Time Sampled:** 05/23/16 17:15 **Workorder** F160507
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160507-11 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**10.2**		mg/kg	1.32	1	05/24/2016	SW	F160520
Surrogate: 2,4,6-Tribromophenol		*90 %*		*Limit 50-150*		*1*	*05/24/2016*	*SW*	*F160520*

Project Name: **Cowboy Timber_MAY2016** **Certificate of Analysis**

TDF #: **NA**

Station ID: CTSO-DUP8-20160523 **Date / Time Sampled:** 05/23/16 17:15 **Workorder** F160507

EPA Tag No.: **Matrix:** Soil **Lab Number:** F160507-12 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**3.51**		mg/kg	1.32	1	05/24/2016	SW	F160520
Surrogate: 2,4,6-Tribromophenol		*97 %*		*Limit 50-150*		*1*	*05/24/2016*	*SW*	*F160520*

Classical Chemistry Parameters

Station ID: CTSO-DPile2-20160523 **Date / Time Sampled:** 05/23/16 07:14 **Workorder** F160507
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160507-01 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**95.6**		% by Weight		1	05/24/2016	NP	F160522

Station ID: CTSO-B7D3-20160523 **Date / Time Sampled:** 05/23/16 09:20 **Workorder** F160507
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160507-02 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**94.2**		% by Weight		1	05/24/2016	NP	F160522

Station ID: CTSO-D6D4-20160523 **Date / Time Sampled:** 05/23/16 10:44 **Workorder** F160507
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160507-03 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**92.3**		% by Weight		1	05/24/2016	NP	F160522

Station ID: CTSO-B5D3-20160523 **Date / Time Sampled:** 05/23/16 11:10 **Workorder** F160507
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160507-04 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**96.1**		% by Weight		1	05/24/2016	NP	F160522

Station ID: CTSO-B6D3-20160523 **Date / Time Sampled:** 05/23/16 13:33 **Workorder** F160507
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160507-05 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**93.1**		% by Weight		1	05/24/2016	NP	F160522

Station ID: CTSO-D7D4-20160523 **Date / Time Sampled:** 05/23/16 14:42 **Workorder** F160507
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160507-06 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**92.5**		% by Weight		1	05/24/2016	NP	F160522

Station ID: CTSO-B2D4-20160523 **Date / Time Sampled:** 05/23/16 14:47 **Workorder** F160507
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160507-07 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch

% Solids	**% Solids**	**91.1**	% by Weight	1	05/24/2016	NP	F160522

Station ID: CTSO-DUP7-20160523 **Date / Time Sampled:** 05/23/16 00:00 **Workorder** F160507
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160507-08 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**90.0**		% by Weight		1	05/24/2016	NP	F160522

Station ID: CTSO-B3D4-20160523 **Date / Time Sampled:** 05/23/16 17:05 **Workorder** F160507
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160507-09 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**88.0**		% by Weight		1	05/24/2016	NP	F160522

Station ID: CTSO-C3D4-20160523 **Date / Time Sampled:** 05/23/16 17:09 **Workorder** F160507
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160507-10 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**90.9**		% by Weight		1	05/24/2016	NP	F160522

Station ID: CTSO-C7D4-20160523 **Date / Time Sampled:** 05/23/16 17:15 **Workorder** F160507
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160507-11 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**93.3**		% by Weight		1	05/24/2016	NP	F160522

Station ID: CTSO-DUP8-20160523 **Date / Time Sampled:** 05/23/16 17:15 **Workorder** F160507
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160507-12 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**93.4**		% by Weight		1	05/24/2016	NP	F160522

Note: "J" Qualifier indicates an estimated value. "U" Qualifier indicates analyte not detected at or above MDL.
"D" Qualifier indicates diluted value.

Pentachlorophenol by GCMS method 8270D - Quality Control

TechLaw, Inc. - ESAT Region 8 (Mobile Lab)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%R	%R Limits	%D or RPD	%D or RPD Limit
SVOC Field GCMS									
Batch F160520 - EPA 3550C			***Soil***						**SVOC Field GCMS**
Method Blank (F160520-BLK1)						Prepared & Analyzed: 05/23/16			
Pentachlorophenol	< 1.32	2.00	mg/kg						
Method Blank Spike (F160520-BS1)						Prepared & Analyzed: 05/23/16			
Pentachlorophenol	19.6	2.00	mg/kg	20.0		98	70-130		
Matrix Spike (F160520-MS1)			**Source: F160507-01**			Prepared & Analyzed: 05/23/16			
Pentachlorophenol	63.0	2.00	mg/kg	20.0	41.2	109	17-109		
Matrix Spike Dup (F160520-MSD1)			**Source: F160507-01**			Prepared & Analyzed: 05/23/16			
Pentachlorophenol	54.5	2.00	mg/kg	20.0	41.2	66	17-109	14	47

NOTE: %R = % Recovery, %R limits do not apply when sample levels exceed 4x the spike level.
RPD = Relative Percent Difference, %D = % Difference, DL = Detection Limit for QC sample .

TechLaw, Inc. - ESAT Region 8 (Mobile Lab)

Initial and Continuing Calibration Verification Results

SVOC Field GCMS Method: EPA 8270D Analysis Name: 8270 PCP

Sequence: F160521 Work Order: F160507 Units: mg/kg

Non-volatile Analyte	Initial (ICV1, ICV2)			Continuing Calibration Verification Standards (CCVs)								
	True	Found	%R	True	Found	%R	True	Found	%R	True	Found	%R
2,4,6-Tribromophenol				1			2			3		
				4			5			6		
				7			8			9		
Pentachlorophenol				1			2			3		
				4			5			6		
				7			8			9		
Phenanthrene-d10				1			2			3		
				4			5			6		
				7			8			9		

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270D

Laboratory: TechLaw, Inc. - ESAT Region 8 (Mobile Lab) SDG:

Client: Superfund Project: Cowboy Timber_MAY2016

Sequence: F160521 Instrument: SVOC Field GCMS

Matrix: Soil Calibration: UNASSIGNED

Internal Standard	Response	RT	Reference Response		Area %	Area % Limits	RT Diff		
Blank (F160520-BLK1)			Lab File ID: CBTM-151.D			Analyzed: 05/23/16 09:16			
Phenanthrene-d10	3161620	11.56				50 - 200			
LCS (F160520-BS1)			Lab File ID: CBTM-152.D			Analyzed: 05/23/16 09:40			
Phenanthrene-d10	4106999	11.56				50 - 200			
CTSO-B7D3-20160523 (F160507-02)			Lab File ID: CBTM-153.D			Analyzed: 05/23/16 10:05			
Phenanthrene-d10	3417793	11.56				50 - 200			
CTSO-DPile2-20160523 (F160507-01)			Lab File ID: CBTM-154.D			Analyzed: 05/23/16 11:37			
Phenanthrene-d10	3429458	11.57				50 - 200			
Matrix Spike (F160520-MS1)			Lab File ID: CBTM-155.D			Analyzed: 05/23/16 12:02			
Phenanthrene-d10	3995575	11.57				50 - 200			
Matrix Spike Dup (F160520-MSD1)			Lab File ID: CBTM-156.D			Analyzed: 05/23/16 12:27			
Phenanthrene-d10	3262202	11.57				50 - 200			
CTSO-D6D4-20160523 (F160507-03)			Lab File ID: CBTM-157.D			Analyzed: 05/23/16 12:52			
Phenanthrene-d10	3445320	11.56				50 - 200			
CTSO-B5D3-20160523 (F160507-04)			Lab File ID: CBTM-158.D			Analyzed: 05/23/16 13:17			
Phenanthrene-d10	4289858	11.57				50 - 200			
CTSO-B6D3-20160523 (F160507-05)			Lab File ID: CBTM-159.D			Analyzed: 05/23/16 14:02			
Phenanthrene-d10	4027015	11.57				50 - 200			
CTSO-D7D4-20160523 (F160507-06)			Lab File ID: CBTM-160.D			Analyzed: 05/23/16 15:21			
Phenanthrene-d10	4156127	11.57				50 - 200			
CTSO-B2D4-20160523 (F160507-07)			Lab File ID: CBTM-161.D			Analyzed: 05/23/16 15:46			
Phenanthrene-d10	4203656	11.57				50 - 200			
CTSO-DUP7-20160523 (F160507-08)			Lab File ID: CBTM-164.D			Analyzed: 05/23/16 18:54			
Phenanthrene-d10	3461647	11.56				50 - 200			
CTSO-B3D4-20160523 (F160507-09)			Lab File ID: CBTM-167.D			Analyzed: 05/24/16 08:25			
Phenanthrene-d10	3648067	11.55				50 - 200			
CTSO-C3D4-20160523 (F160507-10)			Lab File ID: CBTM-168.D			Analyzed: 05/24/16 08:49			
Phenanthrene-d10	3817174	11.56				50 - 200			

U.S. Environmental Protection Agency
Region 8
Technical and Management Services

Laboratory Services Program

Certificate of Analysis

Ref: 8TMS-L

MEMORANDUM

Date: 05/23/16

Subject: Analytical Results--- **Cowboy Timber_MAY2016 / NA**

From: Don Goodrich; EPA Region 8 Analytical Chemistry WAM

To: Craig Myers
Superfund
1595 Wynkoop Street

Received Sample Set(s), [Work Order : Date Received]:
[F160506 : 05/22/2016]

Attached are the analytical results for the samples received from the Cowboy Timber_MAY2016 sampling event, according to TDF NA. All analyses were performed within their method specified holding times unless otherwise noted in the following narrative.

These samples were prepared, analyzed, and verified by the Environmental Services Assistance Team Laboratory (ESAT) according to the requirements of the Technical Direction Form (TDF).

Note: The laboratory herewith transmits this deliverable to the program/project partner for determination of "final data usability" which may include data validation and data quality asessment per and in accordance with EPA QA/G-8, *Guidance on Environmental Data Verification and Data Validation*, November 2002, EPA/240/R-02/004. Laboratory data qualifiers are applied based on the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* June 2008, referred to as "NFG".

Laboratory policy is to dispose of any remaining sample 60 days after data analysis packages are delivered to EPA. If you would like the laboratory to retain the samples for a period longer than 60 days, please contact Don Goodrich within the 60 day period at (303) 312-6687.

Case Narrative

F160506

Quality Assessment: Unless indicated by exception, the QA/QC associated with this sample set produced data within the TDF-specified criteria.

Holding Times: All samples were analyzed within their method-specified technical holding time(s).

Sample Receipt: All samples were received within the temperature control limits of 4C +/- 2C.

1. Preparation (PB) / Method blanks (MB). No detections > PQL
Exceptions: None.

2. Initial and Continuing calibration verification analyses (ICVs and CCVs). All CCCs and SPCCs are within limits.
Exceptions: None.

3. Laboratory Control Sample/ Blank Spike (LCS/BS). Recoveries are within 70-130% range. DCDFM recovery high; no hits in samples.
Exceptions: None.

4. Instrument tune (BFB/DFTPP). Tune passes, and all samples were analyzed within 12 hours.
Exceptions: None.

5. Laboratory Duplicate (DUP). "Source" identifies field sample duplicated in the laboratory. RPD limits are within limits.
Exceptions: None.

6. Laboratory Matrix Spike (MS) and Matrix Spike Duplicate (MSD). "Source" defines original field sample fortified prior to analysis. Percent Recovery (%R) limits do not apply when sample concentration(s) exceed the corresponding analyte spike level by a factor of 4 or greater.
Exceptions: None.

7. Internal standards. Area counts must be within 50% to 200% of responses established in associated opening CCV.
Exceptions: None.

8. Any calibration using more than two-points produced a correlation coefficient equal to or greater than 0.995 or have an average response factor of less than or equal to 15% for all non-CCC compounds or less than or equal to 30% for all CCC compounds.
Exceptions: None.

Note: F160506-04 exceeded calibration range for PCP. Result was "E" flagged for the exceedance.

Project Name: **Cowboy Timber_MAY2016** **Certificate of Analysis**

TDF #: **NA**

Acronyms and Definitions:

ESAT	Environmental Services Assistance Team
J	Data Estimated qualifier (also applied to all data less than PQL, greater than or equal to MDL)
MDL	Method Detection Limit
PQL	Practical Quantitation Limit, also known as reporting limit.
RPD	Relative Percent Difference (difference divided by the mean)
%D	Percent difference, serial dilution criteria unit, difference divided by the original result.
%R	Percent recovery, analyzed (less sample contribution) divided by true value
<	Analyte NOT DETECTED at or above the Method Detection Limit (MDL)
mg/L	Milligrams per liter (Parts per million). Solids equivalent = mg/Kg.
ug/L	Micrograms per liter (Parts per billion). Solids equivalent = ug/Kg.
NR	No Recovery (matrix spike) - Often seen for calcium/magnesium when their concentration exceeds the spike level by > 4x.
NFG	*USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* June 2008.
RE	Sample Re-analysis. Usually seen on raw data and sequences for required sample dilutions due to over-range analytes.
U	Analyte not detected at or above MDL qualifier
D	Diluted value qualifier

Method(s) Summary:

As defined in the Technical Direction Form (TDF), some or all of the methods listed below were used for the determination of the reported target analytes.

From EPA's *Methods for the Determination of Metals in Environmental Samples*, Supplement I, May 1994, dissolved, total, and/or total recoverable metals were determined by:

- Method 200.7 / 6010B using a PE Optima ICP-OE (ICP).
- Method 200.8 / 6020 using a Perkin-Elmer Elan 6000 ICP-MS.
- Method 200.2 for total recoverable metals (only) digestion.
- Method 245.1 using a Perkin-Elmer FIMS CVAA (aqueous mercury only).

From *Standard Methods for the Examination of Water and Wastewater*, 18th Edition, 1992, Method 2340B was used for the calculated hardness determination. Hardness is reported as mg(milligram) equivalent $CaCO_3$ per liter (L) determined as follows:

Calculated hardness = 2.497 * (Calcium, mg/L) + 4.118 * (Magnesium, mg/L).

From *EPA's Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846*,

- Method 3015A was used for microwave assisted total metals digestion.
- Method 7473 was used for mercury in solids.
- Method 8260B/5030B was used for volatile organic compounds.

From EPA's *Determination of Inorganic Anions by Ion Chromatography* , Revision 2.1, 1993, Method 300.0 was used to determine the anions.

From EPA's *Methods for Chemical Analysis of Water and Wastes*, March 1983:

- Method 310.1 was followed for the alkalinity determination.
- Method 160.1 was followed for gravimetric total dissolved solids (TDS) determination.
- Method 160.2 was used for gravimetric total suspended solids (TSS) determination.
- Method 415.3 was used for total organic carbon (TOC) determination using either an Apollo 9000 or Phoenix 8000 Non-Dispersive IR (NDIR) system. Also known as dissolved organic carbon (DOC) when performed on the dissolved sample fraction.

The quality control procedures listed in the TDF request were utilized by ESAT to verify accuracy of the results and to evaluate any matrix interferences.

Pentachlorophenol by GCMS method 8270D

Station ID: CTSO-DPile1-20160522 **Date / Time Sampled:** 05/22/16 07:35 **Workorder** F160506
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160506-01 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**76.1**		mg/kg	1.32	1	05/22/2016	SW	F160518
Surrogate: 2,4,6-Tribromophenol		*110 %*	*Limit 50-150*			*1*	*05/22/2016*	*SW*	*F160518*

Station ID: CTSO-B2D3-20160522 **Date / Time Sampled:** 05/22/16 14:17 **Workorder** F160506
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160506-02 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**69.9**		mg/kg	1.32	1	05/22/2016	SW	F160518
Surrogate: 2,4,6-Tribromophenol		*110 %*	*Limit 50-150*			*1*	*05/22/2016*	*SW*	*F160518*

Station ID: CTSO-B3D3-20160522 **Date / Time Sampled:** 05/22/16 14:20 **Workorder** F160506
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160506-03 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**90.2**		mg/kg	1.32	1	05/22/2016	SW	F160518
Surrogate: 2,4,6-Tribromophenol		*103 %*	*Limit 50-150*			*1*	*05/22/2016*	*SW*	*F160518*

Station ID: CTSO-C3D3-20160522 **Date / Time Sampled:** 05/22/16 14:22 **Workorder** F160506
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160506-04 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**166**	**E**	mg/kg	1.32	1	05/22/2016	SW	F160518
Surrogate: 2,4,6-Tribromophenol		*101 %*	*Limit 50-150*			*1*	*05/22/2016*	*SW*	*F160518*

Station ID: CTSO-C4D3-20160522 **Date / Time Sampled:** 05/22/16 14:43 **Workorder** F160506
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160506-05 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**440**	**D**	mg/kg	26.4	20	05/22/2016	SW	F160518
Surrogate: 2,4,6-Tribromophenol		*%*	*Limit 50-150*			*20*	*05/22/2016*	*SW*	*F160518*

Station ID: CTSO-D3D4-20160522 **Date / Time Sampled:** 05/22/16 14:50 **Workorder** F160506
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160506-06 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch

EPA 8270D	Pentachlorophenol	< 2.00	**U**	mg/kg	1.32	1	05/22/2016	SW	F160518
Surrogate: 2,4,6-Tribromophenol		*101 %*	*Limit 50-150*			*1*	*05/22/2016*	*SW*	*F160518*

Station ID: CTSO-DUP6-20160522 **Date / Time Sampled:** 05/22/16 00:00 **Workorder** F160506
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160506-07 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	Pentachlorophenol	< 2.00	**U**	mg/kg	1.32	1	05/22/2016	SW	F160518
Surrogate: 2,4,6-Tribromophenol		*97 %*	*Limit 50-150*			*1*	*05/22/2016*	*SW*	*F160518*

Station ID: CTSO-D4D4-20160522 **Date / Time Sampled:** 05/22/16 15:15 **Workorder** F160506
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160506-08 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**1.41**	**J**	mg/kg	1.32	1	05/22/2016	SW	F160518
Surrogate: 2,4,6-Tribromophenol		*89 %*	*Limit 50-150*			*1*	*05/22/2016*	*SW*	*F160518*

Station ID: CTSO-B4D3-20160522 **Date / Time Sampled:** 05/22/16 17:11 **Workorder** F160506
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160506-09 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**52.7**		mg/kg	1.32	1	05/22/2016	SW	F160518
Surrogate: 2,4,6-Tribromophenol		*98 %*	*Limit 50-150*			*1*	*05/22/2016*	*SW*	*F160518*

Station ID: CTSO-D5D4-20160522 **Date / Time Sampled:** 05/22/16 17:15 **Workorder** F160506
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160506-10 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	Pentachlorophenol	< 2.00	**U**	mg/kg	1.32	1	05/22/2016	SW	F160518
Surrogate: 2,4,6-Tribromophenol		*91 %*	*Limit 50-150*			*1*	*05/22/2016*	*SW*	*F160518*

Classical Chemistry Parameters

Station ID: CTSO-DPile1-20160522 **Date / Time Sampled:** 05/22/16 07:35 **Workorder** F160506
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160506-01 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**95.5**		% by Weight		1	05/23/2016	MM	F160517

Station ID: CTSO-B2D3-20160522 **Date / Time Sampled:** 05/22/16 14:17 **Workorder** F160506
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160506-02 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**92.4**		% by Weight		1	05/23/2016	MM	F160517

Station ID: CTSO-B3D3-20160522 **Date / Time Sampled:** 05/22/16 14:20 **Workorder** F160506
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160506-03 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**89.0**		% by Weight		1	05/23/2016	MM	F160517

Station ID: CTSO-C3D3-20160522 **Date / Time Sampled:** 05/22/16 14:22 **Workorder** F160506
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160506-04 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**95.8**		% by Weight		1	05/23/2016	MM	F160517

Station ID: CTSO-C4D3-20160522 **Date / Time Sampled:** 05/22/16 14:43 **Workorder** F160506
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160506-05 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**95.0**		% by Weight		1	05/23/2016	MM	F160517

Station ID: CTSO-D3D4-20160522 **Date / Time Sampled:** 05/22/16 14:50 **Workorder** F160506
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160506-06 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**91.3**		% by Weight		1	05/23/2016	MM	F160517

Station ID: CTSO-DUP6-20160522 **Date / Time Sampled:** 05/22/16 00:00 **Workorder** F160506
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160506-07 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch

% Solids	**% Solids**	**91.5**	% by Weight	1	05/23/2016	MM	F160517

Station ID: CTSO-D4D4-20160522 **Date / Time Sampled:** 05/22/16 15:15 **Workorder** F160506
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160506-08 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**90.5**		% by Weight		1	05/23/2016	MM	F160517

Station ID: CTSO-B4D3-20160522 **Date / Time Sampled:** 05/22/16 17:11 **Workorder** F160506
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160506-09 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**88.4**		% by Weight		1	05/23/2016	MM	F160517

Station ID: CTSO-D5D4-20160522 **Date / Time Sampled:** 05/22/16 17:15 **Workorder** F160506
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160506-10 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**88.7**		% by Weight		1	05/23/2016	MM	F160517

Note: "J" Qualifier indicates an estimated value. "U" Qualifier indicates analyte not detected at or above MDL.
"D" Qualifier indicates diluted value.

Pentachlorophenol by GCMS method 8270D - Quality Control

TechLaw, Inc. - ESAT Region 8 (Mobile Lab)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%R	%R Limits	%D or RPD	%D or RPD Limit
SVOC Field GCMS									
Batch F160518 - EPA 3550C			***Soil***						**SVOC Field GCMS**
Method Blank (F160518-BLK1)						Prepared & Analyzed: 05/22/16			
Pentachlorophenol	< 1.32	2.00	mg/kg						
Method Blank Spike (F160518-BS1)						Prepared & Analyzed: 05/22/16			
Pentachlorophenol	22.6	2.00	mg/kg	20.0		113	70-130		
Matrix Spike (F160518-MS1)			**Source: F160506-06**			Prepared & Analyzed: 05/22/16			
Pentachlorophenol	17.7	2.00	mg/kg	20.0	< 1.32	88	17-109		
Matrix Spike Dup (F160518-MSD1)			**Source: F160506-06**			Prepared & Analyzed: 05/22/16			
Pentachlorophenol	20.2	2.00	mg/kg	20.0	< 1.32	101	17-109	13	47

NOTE: %R = % Recovery, %R limits do not apply when sample levels exceed 4x the spike level.
RPD = Relative Percent Difference, %D = % Difference, DL = Detection Limit for QC sample .

TechLaw, Inc. - ESAT Region 8 (Mobile Lab)

Initial and Continuing Calibration Verification Results

SVOC Field GCMS Method: EPA 8270D Analysis Name: 8270 PCP

Sequence: F160519 Work Order: F160506 Units: mg/kg

Non-volatile Analyte	Initial (ICV1, ICV2)			Continuing Calibration Verification Standards (CCVs)								
	True	Found	%R	True	Found	%R	True	Found	%R	True	Found	%R
2,4,6-Tribromophenol				1			2			3		
				20.0	17.8	89.0						
				4			5			6		
				7			8			9		
Pentachlorophenol				1			2			3		
				20.0	18.6	93.0						
				4			5			6		
				7			8			9		
Phenanthrene-d10				1			2			3		
					0.00	0.0						
				4			5			6		
				7			8			9		

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270D

Laboratory: TechLaw, Inc. - ESAT Region 8 (Mobile Lab) SDG:

Client: Superfund Project: Cowboy Timber_MAY2016

Sequence: F160519 Instrument: SVOC Field GCMS

Matrix: Soil Calibration: UNASSIGNED

Internal Standard	Response	RT	Reference Response		Area %	Area % Limits	RT Diff		
Calibration Check (F160519-CCV1)			Lab File ID: CBTM-134.D			Analyzed: 05/22/16 13:49			
Phenanthrene-d10	4120236	11.57				50 - 200			
Blank (F160518-BLK1)			Lab File ID: CBTM-135.D			Analyzed: 05/22/16 14:14			
Phenanthrene-d10	4191735	11.57	4120236		102	50 - 200	0.0000		
LCS (F160518-BS1)			Lab File ID: CBTM-136.D			Analyzed: 05/22/16 14:39			
Phenanthrene-d10	4332994	11.57	4120236		105	50 - 200	0.0000		
CTSO-DPile1-20160522 (F160506-01)			Lab File ID: CBTM-137.D			Analyzed: 05/22/16 15:04			
Phenanthrene-d10	3868818	11.57	4120236		94	50 - 200	0.0000		
CTSO-B2D3-20160522 (F160506-02)			Lab File ID: CBTM-138.D			Analyzed: 05/22/16 15:29			
Phenanthrene-d10	3129736	11.57	4120236		76	50 - 200	0.0000		
CTSO-B3D3-20160522 (F160506-03)			Lab File ID: CBTM-139.D			Analyzed: 05/22/16 15:54			
Phenanthrene-d10	3499401	11.57	4120236		85	50 - 200	0.0000		
CTSO-C3D3-20160522 (F160506-04)			Lab File ID: CBTM-140.D			Analyzed: 05/22/16 16:19			
Phenanthrene-d10	3370819	11.57	4120236		82	50 - 200	0.0000		
CTSO-C4D3-20160522 (F160506-05)			Lab File ID: CBTM-141.D			Analyzed: 05/22/16 16:45			
Phenanthrene-d10	4191077	11.57	4120236		102	50 - 200	0.0000		
CTSO-D3D4-20160522 (F160506-06)			Lab File ID: CBTM-142.D			Analyzed: 05/22/16 17:10			
Phenanthrene-d10	4042972	11.57	4120236		98	50 - 200	0.0000		
CTSO-DUP6-20160522 (F160506-07)			Lab File ID: CBTM-143.D			Analyzed: 05/22/16 17:35			
Phenanthrene-d10	4023969	11.57	4120236		98	50 - 200	0.0000		
CTSO-D4D4-20160522 (F160506-08)			Lab File ID: CBTM-144.D			Analyzed: 05/22/16 18:00			
Phenanthrene-d10	3526190	11.57	4120236		86	50 - 200	0.0000		
Matrix Spike (F160518-MS1)			Lab File ID: CBTM-145.D			Analyzed: 05/22/16 18:24			
Phenanthrene-d10	3752426	11.57	4120236		91	50 - 200	0.0000		
Matrix Spike Dup (F160518-MSD1)			Lab File ID: CBTM-146.D			Analyzed: 05/22/16 18:49			
Phenanthrene-d10	4386284	11.57	4120236		106	50 - 200	0.0000		
CTSO-B4D3-20160522 (F160506-09)			Lab File ID: CBTM-147.D			Analyzed: 05/22/16 19:14			
Phenanthrene-d10	3524724	11.57	4120236		86	50 - 200	0.0000		

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270D

Laboratory:	TechLaw, Inc. - ESAT Region 8 (Mobile Lab)	SDG:	
Client:	Superfund	Project:	Cowboy Timber_MAY2016
Sequence:	F160519	Instrument:	SVOC Field GCMS
Matrix:	Soil	Calibration:	UNASSIGNED

Internal Standard	Response	RT	Reference Response		Area %	Area % Limits	RT Diff		
CTSO-D5D4-20160522 (F160506-10)			Lab File ID: CBTM-148.D			Analyzed: 05/22/16 19:38			
Phenanthrene-d10	4211353	11.56	4120236		102	50 - 200	-0.0100		

TechLaw Inc., ESAT Region 8
INSTRUMENT ANALYSIS SEQUENCE LOG

Analytical Method: EPA 8270D **Non-volatile** **Sequence ID#:** F160519

Instrument ID #: SVOC Field GCMS Soil **LSR #:**

Analysis ID	Sample Name	Analysis Date	Analysis Time
F160519-CCV1	Calibration Check	05/22/16	13:49
F160518-BLK1	Blank	05/22/16	14:14
F160518-BS1		05/22/16	14:39
F160506-01	CTSO-DPile1-20160522	05/22/16	15:04
F160506-02	CTSO-B2D3-20160522	05/22/16	15:29
F160506-03	CTSO-B3D3-20160522	05/22/16	15:54
F160506-04	CTSO-C3D3-20160522	05/22/16	16:19
F160506-05	CTSO-C4D3-20160522	05/22/16	16:45
F160506-06	CTSO-D3D4-20160522	05/22/16	17:10
F160506-07	CTSO-DUP6-20160522	05/22/16	17:35
F160506-08	CTSO-D4D4-20160522	05/22/16	18:00
F160518-MS1	Matrix Spike	05/22/16	18:24
F160518-MSD1	Matrix Spike Dup	05/22/16	18:49
F160506-09	CTSO-B4D3-20160522	05/22/16	19:14
F160506-10	CTSO-D5D4-20160522	05/22/16	19:38

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270D

Laboratory:	TechLaw, Inc. - ESAT Region 8 (Mobile Lab)	SDG:	
Client:	Superfund	Project:	Cowboy Timber_MAY2016
Sequence:	F160521	Instrument:	SVOC Field GCMS
Matrix:	Soil	Calibration:	UNASSIGNED

Internal Standard	Response	RT	Reference Response		Area %	Area % Limits	RT Diff		
CTSO-C7D4-20160523 (F160507-11)			Lab File ID: CBTM-169.D			Analyzed: 05/24/16 09:14			
Phenanthrene-d10	3330927	11.56				50 - 200			
CTSO-DUP8-20160523 (F160507-12)			Lab File ID: CBTM-170.D			Analyzed: 05/24/16 09:38			
Phenanthrene-d10	4148431	11.56				50 - 200			

TechLaw Inc., ESAT Region 8
INSTRUMENT ANALYSIS SEQUENCE LOG

Analytical Method: EPA 8270D **Non-volatile** **Sequence ID#:** F160521

Instrument ID #: SVOC Field GCMS Soil **LSR #:**

Analysis ID	Sample Name	Analysis Date	Analysis Time
F160520-BLK1	Blank	05/23/16	09:16
F160520-BS1		05/23/16	09:40
F160507-02	CTSO-B7D3-20160523	05/23/16	10:05
F160507-01	CTSO-DPile2-20160523	05/23/16	11:37
F160520-MS1	Matrix Spike	05/23/16	12:02
F160520-MSD1	Matrix Spike Dup	05/23/16	12:27
F160507-03	CTSO-D6D4-20160523	05/23/16	12:52
F160507-04	CTSO-B5D3-20160523	05/23/16	13:17
F160507-05	CTSO-B6D3-20160523	05/23/16	14:02
F160507-06	CTSO-D7D4-20160523	05/23/16	15:21
F160507-07	CTSO-B2D4-20160523	05/23/16	15:46
F160507-08	CTSO-DUP7-20160523	05/23/16	18:54
F160507-09	CTSO-B3D4-20160523	05/24/16	08:25
F160507-10	CTSO-C3D4-20160523	05/24/16	08:49
F160507-11	CTSO-C7D4-20160523	05/24/16	09:14
F160507-12	CTSO-DUP8-20160523	05/24/16	09:38

U.S. Environmental Protection Agency
Region 8
Technical and Management Services

Laboratory Services Program

Certificate of Analysis

Ref: 8TMS-L

MEMORANDUM

Date: 05/25/16

Subject: Analytical Results--- **Cowboy Timber_MAY2016 / NA**

From: Don Goodrich; EPA Region 8 Analytical Chemistry WAM

To: Craig Myers
Superfund
1595 Wynkoop Street

Received Sample Set(s), [Work Order : Date Received]:
[F160508 : 05/24/2016]

Attached are the analytical results for the samples received from the Cowboy Timber_MAY2016 sampling event, according to TDF NA. All analyses were performed within their method specified holding times unless otherwise noted in the following narrative.

These samples were prepared, analyzed, and verified by the Environmental Services Assistance Team Laboratory (ESAT) according to the requirements of the Technical Direction Form (TDF).

Note: The laboratory herewith transmits this deliverable to the program/project partner for determination of "final data usability" which may include data validation and data quality asessment per and in accordance with EPA QA/G-8, *Guidance on Environmental Data Verification and Data Validation*, November 2002, EPA/240/R-02/004. Laboratory data qualifiers are applied based on the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* June 2008, referred to as "NFG".

Laboratory policy is to dispose of any remaining sample 60 days after data analysis packages are delivered to EPA. If you would like the laboratory to retain the samples for a period longer than 60 days, please contact Don Goodrich within the 60 day period at (303) 312-6687.

Case Narrative

F160508

Quality Assessment: Unless indicated by exception, the QA/QC associated with this sample set produced data within the TDF-specified criteria.

Holding Times: All samples were analyzed within their method-specified technical holding time(s).

Sample Receipt: All samples were received within the temperature control limits of 4C +/- 2C.

1. Preparation (PB) / Method blanks (MB). No detections > PQL
Exceptions: None.

2. Initial and Continuing calibration verification analyses (ICVs and CCVs). All CCCs and SPCCs are within limits.
Exceptions: None.

3. Laboratory Control Sample/ Blank Spike (LCS/BS). Recoveries are within 70-130% range. DCDFM recovery high; no hits in samples.
Exceptions: None.

4. Instrument tune (BFB/DFTPP). Tune passes, and all samples were analyzed within 12 hours.
Exceptions: None.

5. Laboratory Duplicate (DUP). "Source" identifies field sample duplicated in the laboratory. RPD limits are within limits.
Exceptions: None.

6. Laboratory Matrix Spike (MS) and Matrix Spike Duplicate (MSD). "Source" defines original field sample fortified prior to analysis. Percent Recovery (%R) limits do not apply when sample concentration(s) exceed the corresponding analyte spike level by a factor of 4 or greater.
Exceptions: None.

7. Internal standards. Area counts must be within 50% to 200% of responses established in associated opening CCV.
Exceptions: None.

8. Any calibration using more than two-points produced a correlation coefficient equal to or greater than 0.995 or have an average response factor of less than or equal to 15% for all non-CCC compounds or less than or equal to 30% for all CCC compounds.
Exceptions: None.

Note: F160506-04 exceeded calibration range for PCP. Result was "E" flagged for the exceedance.

Acronyms and Definitions:

ESAT	Environmental Services Assistance Team
J	Data Estimated qualifier (also applied to all data less than PQL, greater than or equal to MDL)
MDL	Method Detection Limit
PQL	Practical Quantitation Limit, also known as reporting limit.
RPD	Relative Percent Difference (difference divided by the mean)
%D	Percent difference, serial dilution criteria unit, difference divided by the original result.
%R	Percent recovery, analyzed (less sample contribution) divided by true value
<	Analyte NOT DETECTED at or above the Method Detection Limit (MDL)
mg/L	Milligrams per liter (Parts per million). Solids equivalent = mg/Kg.
ug/L	Micrograms per liter (Parts per billion). Solids equivalent = ug/Kg.
NR	No Recovery (matrix spike) - Often seen for calcium/magnesium when their concentration exceeds the spike level by > 4x.
NFG	*USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* June 2008.
RE	Sample Re-analysis. Usually seen on raw data and sequences for required sample dilutions due to over-range analytes.
U	Analyte not detected at or above MDL qualifier
D	Diluted value qualifier

Method(s) Summary:

As defined in the Technical Direction Form (TDF), some or all of the methods listed below were used for the determination of the reported target analytes.

From EPA's *Methods for the Determination of Metals in Environmental Samples*, Supplement I, May 1994, dissolved, total, and/or total recoverable metals were determined by:

- Method 200.7 / 6010B using a PE Optima ICP-OE (ICP).
- Method 200.8 / 6020 using a Perkin-Elmer Elan 6000 ICP-MS.
- Method 200.2 for total recoverable metals (only) digestion.
- Method 245.1 using a Perkin-Elmer FIMS CVAA (aqueous mercury only).

From *Standard Methods for the Examination of Water and Wastewater*, 18th Edition, 1992, Method 2340B was used for the calculated hardness determination. Hardness is reported as mg (milligram) equivalent $CaCO_3$ per liter (L) determined as follows:

Calculated hardness = 2.497 * (Calcium, mg/L) + 4.118 * (Magnesium, mg/L).

From *EPA's Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846*,

- Method 3015A was used for microwave assisted total metals digestion.
- Method 7473 was used for mercury in solids.
- Method 8260B/5030B was used for volatile organic compounds.

From EPA's *Determination of Inorganic Anions by Ion Chromatography*, Revision 2.1, 1993, Method 300.0 was used to determine the anions.

From EPA's *Methods for Chemical Analysis of Water and Wastes*, March 1983:

- Method 310.1 was followed for the alkalinity determination.
- Method 160.1 was followed for gravimetric total dissolved solids (TDS) determination.
- Method 160.2 was used for gravimetric total suspended solids (TSS) determination.
- Method 415.3 was used for total organic carbon (TOC) determination using either an Apollo 9000 or Phoenix 8000 Non-Dispersive IR (NDIR) system. Also known as dissolved organic carbon (DOC) when performed on the dissolved sample fraction.

The quality control procedures listed in the TDF request were utilized by ESAT to verify accuracy of the results and to evaluate any matrix interferences.

Project Name: Cowboy Timber_MAY2016 **Certificate of Analysis**

TDF #: NA

Pentachlorophenol by GCMS method 8270D

Station ID: CTSO-DPILE3-20160524 **Date / Time Sampled:** 05/23/16 07:30 **Workorder** F160508
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160508-01 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**34.2**		mg/kg	1.32	1	05/24/2016	NP	F160523
Surrogate: 2,4,6-Tribromophenol		*96 %*	*Limit 50-150*			*1*	*05/24/2016*	*NP*	*F160523*

Station ID: CTSO-B7D4-20160524 **Date / Time Sampled:** 05/23/16 13:08 **Workorder** F160508
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160508-02 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**7.23**		mg/kg	1.32	1	05/24/2016	NP	F160523
Surrogate: 2,4,6-Tribromophenol		*93 %*	*Limit 50-150*			*1*	*05/24/2016*	*NP*	*F160523*

Station ID: CTSO-DUP9-20160524 **Date / Time Sampled:** 05/23/16 13:08 **Workorder** F160508
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160508-03 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**5.57**		mg/kg	1.32	1	05/24/2016	NP	F160523
Surrogate: 2,4,6-Tribromophenol		*92 %*	*Limit 50-150*			*1*	*05/24/2016*	*NP*	*F160523*

Station ID: CTSO-E5D3-20160524 **Date / Time Sampled:** 05/23/16 14:42 **Workorder** F160508
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160508-04 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	Pentachlorophenol	< 2.00	**U**	mg/kg	1.32	1	05/24/2016	NP	F160523
Surrogate: 2,4,6-Tribromophenol		*86 %*	*Limit 50-150*			*1*	*05/24/2016*	*NP*	*F160523*

Station ID: CTSO-B4D4-20160524 **Date / Time Sampled:** 05/23/16 17:36 **Workorder** F160508
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160508-05 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**7.64**		mg/kg	1.32	1	05/24/2016	NP	F160523
Surrogate: 2,4,6-Tribromophenol		*82 %*	*Limit 50-150*			*1*	*05/24/2016*	*NP*	*F160523*

Project Name: Cowboy Timber_MAY2016 **Certificate of Analysis**

TDF #: NA

Classical Chemistry Parameters

Station ID: CTSO-DPILE3-20160524 **Date / Time Sampled:** 05/23/16 07:30 **Workorder** F160508
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160508-01 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**93.9**		% by Weight		1	05/25/2016	MM	F160524

Station ID: CTSO-B7D4-20160524 **Date / Time Sampled:** 05/23/16 13:08 **Workorder** F160508
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160508-02 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**96.2**		% by Weight		1	05/25/2016	MM	F160524

Station ID: CTSO-DUP9-20160524 **Date / Time Sampled:** 05/23/16 13:08 **Workorder** F160508
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160508-03 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**96.7**		% by Weight		1	05/25/2016	MM	F160524

Station ID: CTSO-E5D3-20160524 **Date / Time Sampled:** 05/23/16 14:42 **Workorder** F160508
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160508-04 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**92.1**		% by Weight		1	05/25/2016	MM	F160524

Station ID: CTSO-B4D4-20160524 **Date / Time Sampled:** 05/23/16 17:36 **Workorder** F160508
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160508-05 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**93.8**		% by Weight		1	05/25/2016	MM	F160524

Note: "J" Qualifier indicates an estimated value. "U" Qualifier indicates analyte not detected at or above MDL.
"D" Qualifier indicates diluted value.

Pentachlorophenol by GCMS method 8270D - Quality Control

TechLaw, Inc. - ESAT Region 8 (Mobile Lab)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%R	%R Limits	%D or RPD	%D or RPD Limit
SVOC Field GCMS									
Batch F160523 - EPA 3550C			***Soil***						**SVOC Field GCMS**
Method Blank (F160523-BLK1)						Prepared & Analyzed: 05/24/16			
Pentachlorophenol	< 1.32	2.00	mg/kg						
Method Blank Spike (F160523-BS1)						Prepared & Analyzed: 05/24/16			
Pentachlorophenol	17.9	2.00	mg/kg	20.0		90	70-130		
Matrix Spike (F160523-MS1)			**Source: F160508-03**			Prepared & Analyzed: 05/24/16			
Pentachlorophenol	26.1	2.00	mg/kg	20.0	5.57	103	17-109		
Matrix Spike Dup (F160523-MSD1)			**Source: F160508-03**			Prepared & Analyzed: 05/24/16			
Pentachlorophenol	29.1	2.00	mg/kg	20.0	5.57	118	17-109	11	47

NOTE: %R = % Recovery, %R limits do not apply when sample levels exceed 4x the spike level.
RPD = Relative Percent Difference, %D = % Difference, DL = Detection Limit for QC sample .

TechLaw, Inc. - ESAT Region 8 (Mobile Lab)

Initial and Continuing Calibration Verification Results

SVOC Field GCMS Method: EPA 8270D Analysis Name: 8270 PCP

Sequence: F160525 Work Order: F160508 Units: mg/kg

Non-volatile Analyte	Initial (ICV1, ICV2)			Continuing Calibration Verification Standards (CCVs)								
	True	Found	%R	True	Found	%R	True	Found	%R	True	Found	%R
2,4,6-Tribromophenol				1			2			3		
				20.0	18.4	92.0	20.0	18.3	91.5			
				4			5			6		
				7			8			9		
Pentachlorophenol				1			2			3		
				20.0	18.8	94.0	20.0	18.6	93.0			
				4			5			6		
				7			8			9		
Phenanthrene-d10				1			2			3		
				2000	0.00	0.0	2000	0.00	0.0			
				4			5			6		
				7			8			9		

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270D

Laboratory: TechLaw, Inc. - ESAT Region 8 (Mobile Lab) SDG:

Client: Superfund Project: Cowboy Timber_MAY2016

Sequence: F160525 Instrument: SVOC Field GCMS

Matrix: Soil Calibration: UNASSIGNED

Internal Standard	Response	RT	Reference Response		Area %	Area % Limits	RT Diff		
Calibration Check (F160525-CCV1)			Lab File ID: CBTM-173.D			Analyzed: 05/24/16 11:13			
Phenanthrene-d10	4029654	11.56				50 - 200			
Blank (F160523-BLK1)			Lab File ID: CBTM-174.D			Analyzed: 05/24/16 11:37			
Phenanthrene-d10	4154377	11.56	4029654		103	50 - 200	0.0000		
LCS (F160523-BS1)			Lab File ID: CBTM-175.D			Analyzed: 05/24/16 12:02			
Phenanthrene-d10	3992221	11.56	4029654		99	50 - 200	0.0000		
CTSO-DPILE3-20160524 (F160508-01)			Lab File ID: CBTM-176.D			Analyzed: 05/24/16 12:27			
Phenanthrene-d10	3966551	11.56	4029654		98	50 - 200	0.0000		
CTSO-B7D4-20160524 (F160508-02)			Lab File ID: CBTM-177.D			Analyzed: 05/24/16 14:32			
Phenanthrene-d10	3837522	11.56	4029654		95	50 - 200	0.0000		
CTSO-DUP9-20160524 (F160508-03)			Lab File ID: CBTM-178.D			Analyzed: 05/24/16 14:57			
Phenanthrene-d10	3422948	11.56	4029654		85	50 - 200	0.0000		
Matrix Spike (F160523-MS1)			Lab File ID: CBTM-179.D			Analyzed: 05/24/16 15:22			
Phenanthrene-d10	3395128	11.56	4029654		84	50 - 200	0.0000		
Matrix Spike Dup (F160523-MSD1)			Lab File ID: CBTM-180.D			Analyzed: 05/24/16 15:47			
Phenanthrene-d10	3303412	11.56	4029654		82	50 - 200	0.0000		
CTSO-E5D3-20160524 (F160508-04)			Lab File ID: CBTM-181.D			Analyzed: 05/24/16 16:13			
Phenanthrene-d10	3492547	11.56	4029654		87	50 - 200	0.0000		
Calibration Check (F160525-CCV2)			Lab File ID: CBTM-183.D			Analyzed: 05/24/16 17:28			
Phenanthrene-d10	3989798	11.56	4029654		99	50 - 200	0.0000		
CTSO-B4D4-20160524 (F160508-05)			Lab File ID: CBTM-184.D			Analyzed: 05/24/16 18:24			
Phenanthrene-d10	3215651	11.56	3989798		81	50 - 200	0.0000		

TechLaw Inc., ESAT Region 8

INSTRUMENT ANALYSIS SEQUENCE LOG

Analytical Method: EPA 8270D **Non-volatile** **Sequence ID#:** F160525

Instrument ID #: SVOC Field GCMS Soil **LSR #:**

Analysis ID	Sample Name	Analysis Date	Analysis Time
F160525-CCV1	Calibration Check	05/24/16	11:13
F160523-BLK1	Blank	05/24/16	11:37
F160523-BS1		05/24/16	12:02
F160508-01	CTSO-DPILE3-20160524	05/24/16	12:27
F160508-02	CTSO-B7D4-20160524	05/24/16	14:32
F160508-03	CTSO-DUP9-20160524	05/24/16	14:57
F160523-MS1	Matrix Spike	05/24/16	15:22
F160523-MSD1	Matrix Spike Dup	05/24/16	15:47
F160508-04	CTSO-E5D3-20160524	05/24/16	16:13
F160525-CCV2	Calibration Check	05/24/16	17:28
F160508-05	CTSO-B4D4-20160524	05/24/16	18:24

TechLaw Inc., ESAT Region 8

INSTRUMENT ANALYSIS SEQUENCE LOG

Analytical Method: % Solids **Non-volatile** **Sequence ID#:** F160526

Instrument ID #: SVOC Field GCMS Soil **LSR #:**

Analysis ID	Sample Name	Analysis Date	Analysis Time
F160508-01	CTSO-DPILE3-20160524	05/25/16	10:51
F160508-02	CTSO-B7D4-20160524	05/25/16	10:51
F160508-03	CTSO-DUP9-20160524	05/25/16	10:51
F160508-04	CTSO-E5D3-20160524	05/25/16	10:51
F160508-05	CTSO-B4D4-20160524	05/25/16	10:51

U.S. Environmental Protection Agency
Region 8
Technical and Management Services

Laboratory Services Program

Certificate of Analysis

Ref: 8TMS-L

MEMORANDUM

Date: 05/26/16

Subject: Analytical Results--- **Cowboy Timber_MAY2016 / NA**

From: Don Goodrich; EPA Region 8 Analytical Chemistry WAM

To: Craig Myers
Superfund
1595 Wynkoop Street

Received Sample Set(s), [Work Order : Date Received]:
[F160509 : 05/25/2016]

Attached are the analytical results for the samples received from the Cowboy Timber_MAY2016 sampling event, according to TDF NA. All analyses were performed within their method specified holding times unless otherwise noted in the following narrative.

These samples were prepared, analyzed, and verified by the Environmental Services Assistance Team Laboratory (ESAT) according to the requirements of the Technical Direction Form (TDF).

Note: The laboratory herewith transmits this deliverable to the program/project partner for determination of "final data usability" which may include data validation and data quality asessment per and in accordance with EPA QA/G-8, *Guidance on Environmental Data Verification and Data Validation*, November 2002, EPA/240/R-02/004. Laboratory data qualifiers are applied based on the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* June 2008, referred to as "NFG".

Laboratory policy is to dispose of any remaining sample 60 days after data analysis packages are delivered to EPA. If you would like the laboratory to retain the samples for a period longer than 60 days, please contact Don Goodrich within the 60 day period at (303) 312-6687.

Case Narrative

F160509

Quality Assessment: Unless indicated by exception, the QA/QC associated with this sample set produced data within the TDF-specified criteria.

Holding Times: All samples were analyzed within their method-specified technical holding time(s).

Sample Receipt: All samples were received within the temperature control limits of 4C +/- 2C.

1. Preparation (PB) / Method blanks (MB). No detections > PQL
Exceptions: None.

2. Initial and Continuing calibration verification analyses (ICVs and CCVs). All CCCs and SPCCs are within limits.
Exceptions: None.

3. Laboratory Control Sample/ Blank Spike (LCS/BS). Recoveries are within 70-130% range. DCDFM recovery high; no hits in samples.
Exceptions: None.

4. Instrument tune (BFB/DFTPP). Tune passes, and all samples were analyzed within 12 hours.
Exceptions: None.

5. Laboratory Duplicate (DUP). "Source" identifies field sample duplicated in the laboratory. RPD limits are within limits.
Exceptions: None.

6. Laboratory Matrix Spike (MS) and Matrix Spike Duplicate (MSD). "Source" defines original field sample fortified prior to analysis. Percent Recovery (%R) limits do not apply when sample concentration(s) exceed the corresponding analyte spike level by a factor of 4 or greater.
Exceptions: None.

7. Internal standards. Area counts must be within 50% to 200% of responses established in associated opening CCV.
Exceptions: None.

8. Any calibration using more than two-points produced a correlation coefficient equal to or greater than 0.995 or have an average response factor of less than or equal to 15% for all non-CCC compounds or less than or equal to 30% for all CCC compounds.
Exceptions: None.

Note: F160506-04 exceeded calibration range for PCP. Result was "E" flagged for the exceedance.

Acronyms and Definitions:

ESAT	Environmental Services Assistance Team
J	Data Estimated qualifier (also applied to all data less than PQL, greater than or equal to MDL)
MDL	Method Detection Limit
PQL	Practical Quantitation Limit, also known as reporting limit.
RPD	Relative Percent Difference (difference divided by the mean)
%D	Percent difference, serial dilution criteria unit, difference divided by the original result.
%R	Percent recovery, analyzed (less sample contribution) divided by true value
<	Analyte NOT DETECTED at or above the Method Detection Limit (MDL)
mg/L	Milligrams per liter (Parts per million). Solids equivalent = mg/Kg.
ug/L	Micrograms per liter (Parts per billion). Solids equivalent = ug/Kg.
NR	No Recovery (matrix spike) - Often seen for calcium/magnesium when their concentration exceeds the spike level by > 4x.
NFG	*USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* June 2008.
RE	Sample Re-analysis. Usually seen on raw data and sequences for required sample dilutions due to over-range analytes.
U	Analyte not detected at or above MDL qualifier
D	Diluted value qualifier

Method(s) Summary:

As defined in the Technical Direction Form (TDF), some or all of the methods listed below were used for the determination of the reported target analytes.

From EPA's *Methods for the Determination of Metals in Environmental Samples*, Supplement I, May 1994, dissolved, total, and/or total recoverable metals were determined by:

- Method 200.7 / 6010B using a PE Optima ICP-OE (ICP).
- Method 200.8 / 6020 using a Perkin-Elmer Elan 6000 ICP-MS.
- Method 200.2 for total recoverable metals (only) digestion.
- Method 245.1 using a Perkin-Elmer FIMS CVAA (aqueous mercury only).

From *Standard Methods for the Examination of Water and Wastewater*, 18th Edition, 1992, Method 2340B was used for the calculated hardness determination. Hardness is reported as mg (milligram) equivalent $CaCO_3$ per liter (L) determined as follows:

Calculated hardness = 2.497 * (Calcium, mg/L) + 4.118 * (Magnesium, mg/L).

From *EPA's Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846*,

- Method 3015A was used for microwave assisted total metals digestion.
- Method 7473 was used for mercury in solids.
- Method 8260B/5030B was used for volatile organic compounds.

From EPA's *Determination of Inorganic Anions by Ion Chromatography*, Revision 2.1, 1993, Method 300.0 was used to determine the anions.

From EPA's *Methods for Chemical Analysis of Water and Wastes*, March 1983:

- Method 310.1 was followed for the alkalinity determination.
- Method 160.1 was followed for gravimetric total dissolved solids (TDS) determination .
- Method 160.2 was used for gravimetric total suspended solids (TSS) determination.
- Method 415.3 was used for total organic carbon (TOC) determination using either an Apollo 9000 or Phoenix 8000 Non-Dispersive IR (NDIR) system. Also known as dissolved organic carbon (DOC) when performed on the dissolved sample fraction.

The quality control procedures listed in the TDF request were utilized by ESAT to verify accuracy of the results and to evaluate any matrix interferences.

Pentachlorophenol by GCMS method 8270D

Station ID: CTSO-C4D4-20160525 **Date / Time Sampled:** 05/25/16 10:42 **Workorder** F160509
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160509-01 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**137**	**D**	mg/kg	2.64	2	05/25/2016	NP	F160527
Surrogate: 2,4,6-Tribromophenol		*110 %*		*Limit 50-150*		*2*	*05/25/2016*	*NP*	*F160527*

Station ID: CTSO-B4D4-20160525 **Date / Time Sampled:** 05/25/16 10:46 **Workorder** F160509
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160509-02 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**74.3**		mg/kg	1.32	1	05/25/2016	NP	F160527
Surrogate: 2,4,6-Tribromophenol		*106 %*		*Limit 50-150*		*1*	*05/25/2016*	*NP*	*F160527*

Station ID: CTSO-DPIL4-20160525 **Date / Time Sampled:** 05/25/16 07:30 **Workorder** F160509
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160509-03 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**30.1**		mg/kg	1.32	1	05/25/2016	NP	F160527
Surrogate: 2,4,6-Tribromophenol		*106 %*		*Limit 50-150*		*1*	*05/25/2016*	*NP*	*F160527*

Station ID: CTSO-B5D4-20160525 **Date / Time Sampled:** 05/25/16 13:10 **Workorder** F160509
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160509-04 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**6.52**		mg/kg	1.32	1	05/25/2016	NP	F160527
Surrogate: 2,4,6-Tribromophenol		*104 %*		*Limit 50-150*		*1*	*05/25/2016*	*NP*	*F160527*

Station ID: CTSO-C5D4-20160525 **Date / Time Sampled:** 05/25/16 16:40 **Workorder** F160509
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160509-05 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**11.7**		mg/kg	1.32	1	05/26/2016	NP	F160527
Surrogate: 2,4,6-Tribromophenol		*81 %*		*Limit 50-150*		*1*	*05/26/2016*	*NP*	*F160527*

Station ID: CTSO-C6D4-20160525 **Date / Time Sampled:** 05/25/16 16:45 **Workorder** F160509
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160509-06 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch

EPA 8270D	**Pentachlorophenol**	**114**	**D**	mg/kg	2.64	2	05/25/2016	NP	F160527
Surrogate: 2,4,6-Tribromophenol		*124 %*	*Limit 50-150*			*2*	*05/25/2016*	*NP*	*F160527*

Station ID: CTSO-DUP10-20160525 **Date / Time Sampled:** 05/25/16 16:45 **Workorder** F160509

EPA Tag No.: **Matrix:** Soil **Lab Number:** F160509-07 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**123**	**D**	mg/kg	2.64	2	05/25/2016	NP	F160527
Surrogate: 2,4,6-Tribromophenol		*98 %*	*Limit 50-150*			*2*	*05/25/2016*	*NP*	*F160527*

Classical Chemistry Parameters

Station ID: CTSO-C4D4-20160525 **Date / Time Sampled:** 05/25/16 10:42 **Workorder** F160509
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160509-01 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**90.0**		% by Weight		1	05/26/2016	NP	F160528

Station ID: CTSO-B4D4-20160525 **Date / Time Sampled:** 05/25/16 10:46 **Workorder** F160509
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160509-02 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**90.2**		% by Weight		1	05/26/2016	NP	F160528

Station ID: CTSO-DPIL4-20160525 **Date / Time Sampled:** 05/25/16 07:30 **Workorder** F160509
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160509-03 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**89.2**		% by Weight		1	05/26/2016	NP	F160528

Station ID: CTSO-B5D4-20160525 **Date / Time Sampled:** 05/25/16 13:10 **Workorder** F160509
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160509-04 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**94.0**		% by Weight		1	05/26/2016	NP	F160528

Station ID: CTSO-C5D4-20160525 **Date / Time Sampled:** 05/25/16 16:40 **Workorder** F160509
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160509-05 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**85.4**		% by Weight		1	05/26/2016	NP	F160528

Station ID: CTSO-C6D4-20160525 **Date / Time Sampled:** 05/25/16 16:45 **Workorder** F160509
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160509-06 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**89.5**		% by Weight		1	05/26/2016	NP	F160528

Station ID: CTSO-DUP10-20160525 **Date / Time Sampled:** 05/25/16 16:45 **Workorder** F160509
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160509-07 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch

Project Name: Cowboy Timber_MAY2016 **Certificate of Analysis**

TDF #: NA

% Solids	**% Solids**	**89.2**	% by Weight	1	05/26/2016	NP	F160528

Note: "J" Qualifier indicates an estimated value. "U" Qualifier indicates analyte not detected at or above MDL.
"D" Qualifier indicates diluted value.

Pentachlorophenol by GCMS method 8270D - Quality Control

TechLaw, Inc. - ESAT Region 8 (Mobile Lab)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%R	%R Limits	%D or RPD	%D or RPD Limit
SVOC Field GCMS									
Batch F160527 - EPA 3550C			***Soil***						**SVOC Field GCMS**
Method Blank (F160527-BLK1)						Prepared & Analyzed: 05/25/16			
Pentachlorophenol	< 1.32	2.00	mg/kg						
Method Blank Spike (F160527-BS1)						Prepared & Analyzed: 05/25/16			
Pentachlorophenol	20.3	2.00	mg/kg	20.0		101	70-130		
Matrix Spike (F160527-MS1)			**Source: F160509-02**			Prepared & Analyzed: 05/25/16			
Pentachlorophenol	83.7	2.00	mg/kg	20.0	74.3	47	17-109		
Matrix Spike Dup (F160527-MSD1)			**Source: F160509-02**			Prepared & Analyzed: 05/25/16			
Pentachlorophenol	95.8	2.00	mg/kg	20.0	74.3	107	17-109	13	47

NOTE: %R = % Recovery, %R limits do not apply when sample levels exceed 4x the spike level.
RPD = Relative Percent Difference, %D = % Difference, DL = Detection Limit for QC sample .

Project Name: **Cowboy Timber_MAY2016** **Certificate of Analysis**

TDF #: **NA**

TechLaw, Inc. - ESAT Region 8 (Mobile Lab)

Initial and Continuing Calibration Verification Results

SVOC Field GCMS Method: EPA 8270D Analysis Name: 8270 PCP

Sequence: F160529 Work Order: F160509 Units: mg/kg

Non-volatile Analyte	Initial (ICV1, ICV2)			Continuing Calibration Verification Standards (CCVs)								
	True	Found	%R	True	Found	%R	True	Found	%R	True	Found	%R
2,4,6-Tribromophenol				1			2			3		
				20.0	19.9	99.5	20.0	21.5	107.5	20.0	22.0	110.0
				4			5			6		
				7			8			9		
Pentachlorophenol				1			2			3		
				20.0	23.0	115.0	20.0	23.5	117.5	20.0	23.2	116.0
				4			5			6		
				7			8			9		
Phenanthrene-d10				1			2			3		
				2000	0.00	0.0	2000	0.00	0.0	2000	0.00	0.0
				4			5			6		
				7			8			9		

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270D

Laboratory: TechLaw, Inc. - ESAT Region 8 (Mobile Lab) SDG:

Client: Superfund Project: Cowboy Timber_MAY2016

Sequence: F160529 Instrument: SVOC Field GCMS

Matrix: Soil Calibration: UNASSIGNED

Internal Standard	Response	RT	Reference Response		Area %	Area % Limits	RT Diff		
Calibration Check (F160529-CCV1)			Lab File ID: CBTM-202.D			Analyzed: 05/25/16 15:08			
Phenanthrene-d10	3517596	11.56				50 - 200			
Blank (F160527-BLK1)			Lab File ID: CBTM-203.D			Analyzed: 05/25/16 15:33			
Phenanthrene-d10	3527601	11.56	3517596		100	50 - 200	0.0000		
LCS (F160527-BS1)			Lab File ID: CBTM-204.D			Analyzed: 05/25/16 15:57			
Phenanthrene-d10	3044433	11.56	3517596		87	50 - 200	0.0000		
CTSO-C4D4-20160525 (F160509-01)			Lab File ID: CBTM-205.D			Analyzed: 05/25/16 16:22			
Phenanthrene-d10	3937868	11.56	3517596		112	50 - 200	0.0000		
CTSO-B4D4-20160525 (F160509-02)			Lab File ID: CBTM-206.D			Analyzed: 05/25/16 16:47			
Phenanthrene-d10	3846833	11.56	3517596		109	50 - 200	0.0000		
Matrix Spike (F160527-MS1)			Lab File ID: CBTM-207.D			Analyzed: 05/25/16 17:12			
Phenanthrene-d10	3622163	11.56	3517596		103	50 - 200	0.0000		
Matrix Spike Dup (F160527-MSD1)			Lab File ID: CBTM-208.D			Analyzed: 05/25/16 17:37			
Phenanthrene-d10	3531769	11.56	3517596		100	50 - 200	0.0000		
CTSO-DPIL4-20160525 (F160509-03)			Lab File ID: CBTM-209.D			Analyzed: 05/25/16 18:03			
Phenanthrene-d10	4381105	11.56	3517596		125	50 - 200	0.0000		
CTSO-B5D4-20160525 (F160509-04)			Lab File ID: CBTM-210.D			Analyzed: 05/25/16 18:28			
Phenanthrene-d10	3861245	11.56	3517596		110	50 - 200	0.0000		
CTSO-C6D4-20160525 (F160509-06)			Lab File ID: CBTM-212.D			Analyzed: 05/25/16 19:19			
Phenanthrene-d10	3621712	11.56	3517596		103	50 - 200	0.0000		
CTSO-DUP10-20160525 (F160509-07)			Lab File ID: CBTM-213.D			Analyzed: 05/25/16 19:45			
Phenanthrene-d10	3142732	11.56	3517596		89	50 - 200	0.0000		
Calibration Check (F160529-CCV2)			Lab File ID: CBTM-214.D			Analyzed: 05/25/16 20:10			
Phenanthrene-d10	3871005	11.56	3517596		110	50 - 200	0.0000		
Calibration Check (F160529-CCV3)			Lab File ID: CBTM-216.D			Analyzed: 05/26/16 07:46			
Phenanthrene-d10	4168090	11.54	3871005		108	50 - 200	-0.0200		
CTSO-C5D4-20160525 (F160509-05)			Lab File ID: CBTM-217.D			Analyzed: 05/26/16 08:10			
Phenanthrene-d10	3404157	11.54	4168090		82	50 - 200	0.0000		

TechLaw Inc., ESAT Region 8

INSTRUMENT ANALYSIS SEQUENCE LOG

Analytical Method: EPA 8270D **Non-volatile** **Sequence ID#:** F160529

Instrument ID #: SVOC Field GCMS Soil **LSR #:**

Analysis ID	Sample Name	Analysis Date	Analysis Time
F160529-CCV1	Calibration Check	05/25/16	15:08
F160527-BLK1	Blank	05/25/16	15:33
F160527-BS1		05/25/16	15:57
F160509-01	CTSO-C4D4-20160525	05/25/16	16:22
F160509-02	CTSO-B4D4-20160525	05/25/16	16:47
F160527-MS1	Matrix Spike	05/25/16	17:12
F160527-MSD1	Matrix Spike Dup	05/25/16	17:37
F160509-03	CTSO-DPIL4-20160525	05/25/16	18:03
F160509-04	CTSO-B5D4-20160525	05/25/16	18:28
F160509-06	CTSO-C6D4-20160525	05/25/16	19:19
F160509-07	CTSO-DUP10-20160525	05/25/16	19:45
F160529-CCV2	Calibration Check	05/25/16	20:10
F160529-CCV3	Calibration Check	05/26/16	07:46
F160509-05	CTSO-C5D4-20160525	05/26/16	08:10

TechLaw Inc., ESAT Region 8

INSTRUMENT ANALYSIS SEQUENCE LOG

Analytical Method: % Solids **Non-volatile** **Sequence ID#:** F160530

Instrument ID #: SVOC Field GCMS Soil **LSR #:**

Analysis ID	Sample Name	Analysis Date	Analysis Time
F160509-01	CTSO-C4D4-20160525	05/26/16	10:57
F160509-02	CTSO-B4D4-20160525	05/26/16	10:57
F160509-03	CTSO-DPIL4-20160525	05/26/16	10:57
F160509-04	CTSO-B5D4-20160525	05/26/16	10:57
F160509-05	CTSO-C5D4-20160525	05/26/16	10:57
F160509-06	CTSO-C6D4-20160525	05/26/16	10:57
F160509-07	CTSO-DUP10-20160525	05/26/16	10:57

U.S. Environmental Protection Agency
Region 8
Technical and Management Services

Laboratory Services Program

Certificate of Analysis

Ref: 8TMS-L

MEMORANDUM

Date: 05/27/16

Subject: Analytical Results--- **Cowboy Timber_MAY2016 / NA**

From: Don Goodrich; EPA Region 8 Analytical Chemistry WAM

To: Craig Myers
Superfund
1595 Wynkoop Street

Received Sample Set(s), [Work Order : Date Received]:
[F160510 : 05/26/2016]

Attached are the analytical results for the samples received from the Cowboy Timber_MAY2016 sampling event, according to TDF NA. All analyses were performed within their method specified holding times unless otherwise noted in the following narrative.

These samples were prepared, analyzed, and verified by the Environmental Services Assistance Team Laboratory (ESAT) according to the requirements of the Technical Direction Form (TDF).

Note: The laboratory herewith transmits this deliverable to the program/project partner for determination of "final data usability" which may include data validation and data quality asessment per and in accordance with EPA QA/G-8, *Guidance on Environmental Data Verification and Data Validation*, November 2002, EPA/240/R-02/004. Laboratory data qualifiers are applied based on the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* June 2008, referred to as "NFG".

Laboratory policy is to dispose of any remaining sample 60 days after data analysis packages are delivered to EPA. If you would like the laboratory to retain the samples for a period longer than 60 days, please contact Don Goodrich within the 60 day period at (303) 312-6687.

Case Narrative

F160510

Quality Assessment: Unless indicated by exception, the QA/QC associated with this sample set produced data within the TDF-specified criteria.

Holding Times: All samples were analyzed within their method-specified technical holding time(s).

Sample Receipt: All samples were received within the temperature control limits of 4C +/- 2C.

1. Preparation (PB) / Method blanks (MB). No detections > PQL
Exceptions: None.

2. Initial and Continuing calibration verification analyses (ICVs and CCVs). All CCCs and SPCCs are within limits.
Exceptions: None.

3. Laboratory Control Sample/ Blank Spike (LCS/BS). Recoveries are within 70-130% range. DCDFM recovery high; no hits in samples.
Exceptions: None.

4. Instrument tune (BFB/DFTPP). Tune passes, and all samples were analyzed within 12 hours.
Exceptions: None.

5. Laboratory Duplicate (DUP). "Source" identifies field sample duplicated in the laboratory. RPD limits are within limits.
Exceptions: None.

6. Laboratory Matrix Spike (MS) and Matrix Spike Duplicate (MSD). "Source" defines original field sample fortified prior to analysis. Percent Recovery (%R) limits do not apply when sample concentration(s) exceed the corresponding analyte spike level by a factor of 4 or greater.
Exceptions: None.

7. Internal standards. Area counts must be within 50% to 200% of responses established in associated opening CCV.
Exceptions: None.

8. Any calibration using more than two-points produced a correlation coefficient equal to or greater than 0.995 or have an average response factor of less than or equal to 15% for all non-CCC compounds or less than or equal to 30% for all CCC compounds.
Exceptions: None.

Note: F160506-04 exceeded calibration range for PCP. Result was "E" flagged for the exceedance.

Acronyms and Definitions:

ESAT	Environmental Services Assistance Team
J	Data Estimated qualifier (also applied to all data less than PQL, greater than or equal to MDL)
MDL	Method Detection Limit
PQL	Practical Quantitation Limit, also known as reporting limit.
RPD	Relative Percent Difference (difference divided by the mean)
%D	Percent difference, serial dilution criteria unit, difference divided by the original result.
%R	Percent recovery, analyzed (less sample contribution) divided by true value
<	Analyte NOT DETECTED at or above the Method Detection Limit (MDL)
mg/L	Milligrams per liter (Parts per million). Solids equivalent = mg/Kg.
ug/L	Micrograms per liter (Parts per billion). Solids equivalent = ug/Kg.
NR	No Recovery (matrix spike) - Often seen for calcium/magnesium when their concentration exceeds the spike level by > 4x.
NFG	*USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* June 2008.
RE	Sample Re-analysis. Usually seen on raw data and sequences for required sample dilutions due to over-range analytes.
U	Analyte not detected at or above MDL qualifier
D	Diluted value qualifier

Method(s) Summary:

As defined in the Technical Direction Form (TDF), some or all of the methods listed below were used for the determination of the reported target analytes.

From EPA's *Methods for the Determination of Metals in Environmental Samples*, Supplement I, May 1994, dissolved, total, and/or total recoverable metals were determined by:

- Method 200.7 / 6010B using a PE Optima ICP-OE (ICP).
- Method 200.8 / 6020 using a Perkin-Elmer Elan 6000 ICP-MS.
- Method 200.2 for total recoverable metals (only) digestion.
- Method 245.1 using a Perkin-Elmer FIMS CVAA (aqueous mercury only).

From *Standard Methods for the Examination of Water and Wastewater*, 18th Edition, 1992, Method 2340B was used for the calculated hardness determination. Hardness is reported as mg (milligram) equivalent $CaCO_3$ per liter (L) determined as follows:

Calculated hardness = 2.497 * (Calcium, mg/L) + 4.118 * (Magnesium, mg/L).

From *EPA's Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846*,

- Method 3015A was used for microwave assisted total metals digestion.
- Method 7473 was used for mercury in solids.
- Method 8260B/5030B was used for volatile organic compounds.

From EPA's *Determination of Inorganic Anions by Ion Chromatography*, Revision 2.1, 1993, Method 300.0 was used to determine the anions.

From EPA's *Methods for Chemical Analysis of Water and Wastes*, March 1983:

- Method 310.1 was followed for the alkalinity determination.
- Method 160.1 was followed for gravimetric total dissolved solids (TDS) determination .
- Method 160.2 was used for gravimetric total suspended solids (TSS) determination.
- Method 415.3 was used for total organic carbon (TOC) determination using either an Apollo 9000 or Phoenix 8000 Non-Dispersive IR (NDIR) system. Also known as dissolved organic carbon (DOC) when performed on the dissolved sample fraction.

The quality control procedures listed in the TDF request were utilized by ESAT to verify accuracy of the results and to evaluate any matrix interferences.

Pentachlorophenol by GCMS method 8270D

Station ID: CTSO-DPILE-20160526 **Date / Time Sampled:** 05/26/16 06:54 **Workorder** F160510
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160510-01 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**25.3**		mg/kg	1.32	1	05/26/2016	NP	F160531
Surrogate: 2,4,6-Tribromophenol		*98 %*	*Limit 50-150*			*1*	*05/26/2016*	*NP*	*F160531*

Station ID: CTSO-B6D4-20160526 **Date / Time Sampled:** 05/26/16 07:24 **Workorder** F160510
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160510-02 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**29.2**		mg/kg	1.32	1	05/26/2016	NP	F160531
Surrogate: 2,4,6-Tribromophenol		*92 %*	*Limit 50-150*			*1*	*05/26/2016*	*NP*	*F160531*

Station ID: CTSO-B2Stain-20160526 **Date / Time Sampled:** 05/26/16 10:24 **Workorder** F160510
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160510-03 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**195**	**D**	mg/kg	2.64	2	05/26/2016	NP	F160531
Surrogate: 2,4,6-Tribromophenol		*92 %*	*Limit 50-150*			*2*	*05/26/2016*	*NP*	*F160531*

Station ID: CTSO-B2Slope-20160526 **Date / Time Sampled:** 05/26/16 10:37 **Workorder** F160510
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160510-04 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	Pentachlorophenol	< 2.00	**U**	mg/kg	1.32	1	05/26/2016	NP	F160531
Surrogate: 2,4,6-Tribromophenol		*101 %*	*Limit 50-150*			*1*	*05/26/2016*	*NP*	*F160531*

Station ID: CTSO-B2D5-20160526 **Date / Time Sampled:** 05/26/16 16:04 **Workorder** F160510
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160510-05 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**12.7**		mg/kg	1.32	1	05/27/2016	NP	F160531
Surrogate: 2,4,6-Tribromophenol		*78 %*	*Limit 50-150*			*1*	*05/27/2016*	*NP*	*F160531*

Station ID: CTSO-C2D5-20160526 **Date / Time Sampled:** 05/26/16 16:07 **Workorder** F160510
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160510-06 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch

EPA 8270D	Pentachlorophenol	< 2.00	**U**	mg/kg	1.32	1	05/26/2016	NP	F160531
Surrogate: 2,4,6-Tribromophenol		*95 %*	*Limit 50-150*			*1*	*05/26/2016*	*NP*	*F160531*

Station ID: CTSO-B2ID3-20160526 **Date / Time Sampled:** 05/26/16 16:11 **Workorder** F160510
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160510-07 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**1.89**	**J**	mg/kg	1.32	1	05/26/2016	NP	F160531
Surrogate: 2,4,6-Tribromophenol		*83 %*	*Limit 50-150*			*1*	*05/26/2016*	*NP*	*F160531*

Station ID: CTSO-B3D5-20160526 **Date / Time Sampled:** 05/26/16 17:10 **Workorder** F160510
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160510-08 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**29.2**		mg/kg	1.32	1	05/27/2016	NP	F160531
Surrogate: 2,4,6-Tribromophenol		*93 %*	*Limit 50-150*			*1*	*05/27/2016*	*NP*	*F160531*

Station ID: CTSO-DUP11-20160526 **Date / Time Sampled:** 05/26/16 17:10 **Workorder** F160510
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160510-09 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**33.2**		mg/kg	1.32	1	05/27/2016	NP	F160531
Surrogate: 2,4,6-Tribromophenol		*96 %*	*Limit 50-150*			*1*	*05/27/2016*	*NP*	*F160531*

Classical Chemistry Parameters

Station ID: CTSO-DPILE-20160526 **Date / Time Sampled:** 05/26/16 06:54 **Workorder** F160510
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160510-01 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**89.3**		% by Weight		1	05/27/2016	NP	F160532

Station ID: CTSO-B6D4-20160526 **Date / Time Sampled:** 05/26/16 07:24 **Workorder** F160510
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160510-02 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**91.1**		% by Weight		1	05/27/2016	NP	F160532

Station ID: CTSO-B2Stain-20160526 **Date / Time Sampled:** 05/26/16 10:24 **Workorder** F160510
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160510-03 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**84.8**		% by Weight		1	05/27/2016	NP	F160532

Station ID: CTSO-B2Slope-20160526 **Date / Time Sampled:** 05/26/16 10:37 **Workorder** F160510
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160510-04 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**92.6**		% by Weight		1	05/27/2016	NP	F160532

Station ID: CTSO-B2D5-20160526 **Date / Time Sampled:** 05/26/16 16:04 **Workorder** F160510
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160510-05 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**79.7**		% by Weight		1	05/27/2016	NP	F160532

Station ID: CTSO-C2D5-20160526 **Date / Time Sampled:** 05/26/16 16:07 **Workorder** F160510
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160510-06 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**86.6**		% by Weight		1	05/27/2016	NP	F160532

Station ID: CTSO-B2ID3-20160526 **Date / Time Sampled:** 05/26/16 16:11 **Workorder** F160510
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160510-07 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch

% Solids	**% Solids**	**86.3**	% by Weight	1	05/27/2016	NP	F160532

Station ID: CTSO-B3D5-20160526 **Date / Time Sampled:** 05/26/16 17:10 **Workorder** F160510

EPA Tag No.: **Matrix:** Soil **Lab Number:** F160510-08 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**91.5**		% by Weight		1	05/27/2016	NP	F160532

Station ID: CTSO-DUP11-20160526 **Date / Time Sampled:** 05/26/16 17:10 **Workorder** F160510

EPA Tag No.: **Matrix:** Soil **Lab Number:** F160510-09 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**90.8**		% by Weight		1	05/27/2016	NP	F160532

Note: "J" Qualifier indicates an estimated value. "U" Qualifier indicates analyte not detected at or above MDL.
"D" Qualifier indicates diluted value.

Pentachlorophenol by GCMS method 8270D - Quality Control

TechLaw, Inc. - ESAT Region 8 (Mobile Lab)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%R	%R Limits	%D or RPD	%D or RPD Limit
SVOC Field GCMS									
Batch F160531 - EPA 3550C			***Soil***						**SVOC Field GCMS**
Method Blank (F160531-BLK1)						Prepared & Analyzed: 05/26/16			
Pentachlorophenol	< 1.32	2.00	mg/kg						
Method Blank Spike (F160531-BS1)						Prepared & Analyzed: 05/26/16			
Pentachlorophenol	22.6	2.00	mg/kg	20.0		113	70-130		
Matrix Spike (F160531-MS1)			**Source: F160510-02**			Prepared & Analyzed: 05/26/16			
Pentachlorophenol	52.0	2.00	mg/kg	20.0	29.2	114	17-109		
Matrix Spike Dup (F160531-MSD1)			**Source: F160510-02**			Prepared & Analyzed: 05/26/16			
Pentachlorophenol	45.5	2.00	mg/kg	20.0	29.2	82	17-109	13	47

NOTE: %R = % Recovery, %R limits do not apply when sample levels exceed 4x the spike level.
RPD = Relative Percent Difference, %D = % Difference, DL = Detection Limit for QC sample .

TechLaw, Inc. - ESAT Region 8 (Mobile Lab)

Initial and Continuing Calibration Verification Results

SVOC Field GCMS Method: EPA 8270D Analysis Name: 8270 PCP

Sequence: F160533 Work Order: F160510 Units: mg/kg

Non-volatile Analyte	Initial (ICV1, ICV2)			Continuing Calibration Verification Standards (CCVs)								
	True	Found	%R	True	Found	%R	True	Found	%R	True	Found	%R
2,4,6-Tribromophenol				1			2			3		
				20.0	21.6	108.0	20.0	20.5	102.5	20.0	21.1	105.5
				4			5			6		
				7			8			9		
Pentachlorophenol				1			2			3		
				20.0	23.2	116.0	20.0	17.8	89.0	20.0	18.9	94.5
				4			5			6		
				7			8			9		
Phenanthrene-d10				1			2			3		
				2000	0.00	0.0	2000	0.00	0.0	2000	0.00	0.0
				4			5			6		
				7			8			9		

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270D

Laboratory: TechLaw, Inc. - ESAT Region 8 (Mobile Lab) SDG:

Client: Superfund Project: Cowboy Timber_MAY2016

Sequence: F160533 Instrument: SVOC Field GCMS

Matrix: Soil Calibration: UNASSIGNED

Internal Standard	Response	RT	Reference Response		Area %	Area % Limits	RT Diff		
Calibration Check (F160533-CCV1)			Lab File ID: CBTM-219.D			Analyzed: 05/26/16 09:13			
Phenanthrene-d10	4122083	11.55				50 - 200			
Blank (F160531-BLK1)			Lab File ID: CBTM-220.D			Analyzed: 05/26/16 09:38			
Phenanthrene-d10	4160311	11.55	4122083		101	50 - 200	0.0000		
LCS (F160531-BS1)			Lab File ID: CBTM-221.D			Analyzed: 05/26/16 10:02			
Phenanthrene-d10	4057444	11.55	4122083		98	50 - 200	0.0000		
CTSO-DPILE-20160526 (F160510-01)			Lab File ID: CBTM-222.D			Analyzed: 05/26/16 10:27			
Phenanthrene-d10	3839791	11.55	4122083		93	50 - 200	0.0000		
CTSO-B6D4-20160526 (F160510-02)			Lab File ID: CBTM-223.D			Analyzed: 05/26/16 10:51			
Phenanthrene-d10	3364337	11.55	4122083		82	50 - 200	0.0000		
Matrix Spike (F160531-MS1)			Lab File ID: CBTM-224.D			Analyzed: 05/26/16 11:16			
Phenanthrene-d10	4233601	11.56	4122083		103	50 - 200	0.0100		
Matrix Spike Dup (F160531-MSD1)			Lab File ID: CBTM-225.D			Analyzed: 05/26/16 11:41			
Phenanthrene-d10	4109889	11.56	4122083		100	50 - 200	0.0100		
CTSO-B2Stain-20160526 (F160510-03)			Lab File ID: CBTM-226.D			Analyzed: 05/26/16 12:06			
Phenanthrene-d10	3677770	11.56	4122083		89	50 - 200	0.0100		
CTSO-B2Slope-20160526 (F160510-04)			Lab File ID: CBTM-227.D			Analyzed: 05/26/16 12:31			
Phenanthrene-d10	3941073	11.56	4122083		96	50 - 200	0.0100		
Calibration Check (F160533-CCV2)			Lab File ID: CBTM-230.D			Analyzed: 05/26/16 16:58			
Phenanthrene-d10	4090080	11.55	4122083		99	50 - 200	0.0000		
CTSO-C2D5-20160526 (F160510-06)			Lab File ID: CBTM-233.D			Analyzed: 05/26/16 18:14			
Phenanthrene-d10	4257286	11.56	4090080		104	50 - 200	0.0100		
CTSO-B2ID3-20160526 (F160510-07)			Lab File ID: CBTM-234.D			Analyzed: 05/26/16 18:39			
Phenanthrene-d10	4174898	11.56	4090080		102	50 - 200	0.0100		
Calibration Check (F160533-CCV3)			Lab File ID: CBTM-237.D			Analyzed: 05/27/16 07:56			
Phenanthrene-d10	4107839	11.54	4090080		100	50 - 200	-0.0100		
CTSO-B2D5-20160526 (F160510-05)			Lab File ID: CBTM-238.D			Analyzed: 05/27/16 08:20			
Phenanthrene-d10	3604725	11.55	4107839		88	50 - 200	0.0100		

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270D

Laboratory: TechLaw, Inc. - ESAT Region 8 (Mobile Lab) SDG:

Client: Superfund Project: Cowboy Timber_MAY2016

Sequence: F160533 Instrument: SVOC Field GCMS

Matrix: Soil Calibration: UNASSIGNED

Internal Standard	Response	RT	Reference Response		Area %	Area % Limits	RT Diff		
CTSO-B3D5-20160526 (F160510-08)			Lab File ID: CBTM-239.D			Analyzed: 05/27/16 08:45			
Phenanthrene-d10	3522898	11.55	4107839		86	50 - 200	0.0100		
CTSO-DUP11-20160526 (F160510-09)			Lab File ID: CBTM-240.D			Analyzed: 05/27/16 09:10			
Phenanthrene-d10	3693559	11.55	4107839		90	50 - 200	0.0100		

TechLaw Inc., ESAT Region 8

INSTRUMENT ANALYSIS SEQUENCE LOG

Analytical Method: EPA 8270D **Non-volatile** **Sequence ID#:** F160533

Instrument ID #: SVOC Field GCMS Soil **LSR #:**

Analysis ID	Sample Name	Analysis Date	Analysis Time
F160533-CCV1	Calibration Check	05/26/16	09:13
F160531-BLK1	Blank	05/26/16	09:38
F160531-BS1		05/26/16	10:02
F160510-01	CTSO-DPILE-20160526	05/26/16	10:27
F160510-02	CTSO-B6D4-20160526	05/26/16	10:51
F160531-MS1	Matrix Spike	05/26/16	11:16
F160531-MSD1	Matrix Spike Dup	05/26/16	11:41
F160510-03	CTSO-B2Stain-20160526	05/26/16	12:06
F160510-04	CTSO-B2Slope-20160526	05/26/16	12:31
F160533-CCV2	Calibration Check	05/26/16	16:58
F160510-06	CTSO-C2D5-20160526	05/26/16	18:14
F160510-07	CTSO-B2ID3-20160526	05/26/16	18:39
F160533-CCV3	Calibration Check	05/27/16	07:56
F160510-05	CTSO-B2D5-20160526	05/27/16	08:20
F160510-08	CTSO-B3D5-20160526	05/27/16	08:45
F160510-09	CTSO-DUP11-20160526	05/27/16	09:10

TechLaw Inc., ESAT Region 8

INSTRUMENT ANALYSIS SEQUENCE LOG

Analytical Method: % Solids **Non-volatile** **Sequence ID#:** F160534

Instrument ID #: SVOC Field GCMS Soil **LSR #:**

Analysis ID	Sample Name	Analysis Date	Analysis Time
F160510-01	CTSO-DPILE-20160526	05/27/16	11:32
F160510-02	CTSO-B6D4-20160526	05/27/16	11:32
F160510-03	CTSO-B2Stain-20160526	05/27/16	11:32
F160510-04	CTSO-B2Slope-20160526	05/27/16	11:32
F160510-05	CTSO-B2D5-20160526	05/27/16	11:32
F160510-06	CTSO-C2D5-20160526	05/27/16	11:32
F160510-07	CTSO-B2ID3-20160526	05/27/16	11:32
F160510-08	CTSO-B3D5-20160526	05/27/16	11:32
F160510-09	CTSO-DUP11-20160526	05/27/16	11:32

U.S. Environmental Protection Agency
Region 8
Technical and Management Services

Laboratory Services Program

Certificate of Analysis

Ref: 8TMS-L

MEMORANDUM

Date: 05/29/16

Subject: Analytical Results--- **Cowboy Timber_MAY2016 / NA**

From: Don Goodrich; EPA Region 8 Analytical Chemistry WAM

To: Craig Myers
Superfund
1595 Wynkoop Street

Received Sample Set(s), [Work Order : Date Received]:
[F160511 : 05/27/2016]

Attached are the analytical results for the samples received from the Cowboy Timber_MAY2016 sampling event, according to TDF NA. All analyses were performed within their method specified holding times unless otherwise noted in the following narrative.

These samples were prepared, analyzed, and verified by the Environmental Services Assistance Team Laboratory (ESAT) according to the requirements of the Technical Direction Form (TDF).

Note: The laboratory herewith transmits this deliverable to the program/project partner for determination of "final data usability" which may include data validation and data quality asessment per and in accordance with EPA QA/G-8, *Guidance on Environmental Data Verification and Data Validation*, November 2002, EPA/240/R-02/004. Laboratory data qualifiers are applied based on the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* June 2008, referred to as "NFG".

Laboratory policy is to dispose of any remaining sample 60 days after data analysis packages are delivered to EPA. If you would like the laboratory to retain the samples for a period longer than 60 days, please contact Don Goodrich within the 60 day period at (303) 312-6687.

Case Narrative

F160511

Quality Assessment: Unless indicated by exception, the QA/QC associated with this sample set produced data within the TDF-specified criteria.

Holding Times: All samples were analyzed within their method-specified technical holding time(s).

Sample Receipt: All samples were received within the temperature control limits of 4C +/- 2C.

1. Preparation (PB) / Method blanks (MB). No detections > PQL
Exceptions: None.

2. Initial and Continuing calibration verification analyses (ICVs and CCVs). All CCCs and SPCCs are within limits.
Exceptions: None.

3. Laboratory Control Sample/ Blank Spike (LCS/BS). Recoveries are within 70-130% range. DCDFM recovery high; no hits in samples.
Exceptions: None.

4. Instrument tune (BFB/DFTPP). Tune passes, and all samples were analyzed within 12 hours.
Exceptions: None.

5. Laboratory Duplicate (DUP). "Source" identifies field sample duplicated in the laboratory. RPD limits are within limits.
Exceptions: None.

6. Laboratory Matrix Spike (MS) and Matrix Spike Duplicate (MSD). "Source" defines original field sample fortified prior to analysis. Percent Recovery (%R) limits do not apply when sample concentration(s) exceed the corresponding analyte spike level by a factor of 4 or greater.
Exceptions: None.

7. Internal standards. Area counts must be within 50% to 200% of responses established in associated opening CCV.
Exceptions: None.

8. Any calibration using more than two-points produced a correlation coefficient equal to or greater than 0.995 or have an average response factor of less than or equal to 15% for all non-CCC compounds or less than or equal to 30% for all CCC compounds.
Exceptions: None.

NOTE: F160511-06, -08, & -09 exceeded the calibration limits for pentachlorophenol, values are considered estimated and flagged accordingly.

Acronyms and Definitions:

ESAT	Environmental Services Assistance Team
J	Data Estimated qualifier (also applied to all data less than PQL, greater than or equal to MDL)
MDL	Method Detection Limit
PQL	Practical Quantitation Limit, also known as reporting limit.
RPD	Relative Percent Difference (difference divided by the mean)
%D	Percent difference, serial dilution criteria unit, difference divided by the original result.
%R	Percent recovery, analyzed (less sample contribution) divided by true value
<	Analyte NOT DETECTED at or above the Method Detection Limit (MDL)
mg/L	Milligrams per liter (Parts per million). Solids equivalent = mg/Kg.
ug/L	Micrograms per liter (Parts per billion). Solids equivalent = ug/Kg.
NR	No Recovery (matrix spike) - Often seen for calcium/magnesium when their concentration exceeds the spike level by > 4x.
NFG	*USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* June 2008.
RE	Sample Re-analysis. Usually seen on raw data and sequences for required sample dilutions due to over-range analytes.
U	Analyte not detected at or above MDL qualifier
D	Diluted value qualifier

Method(s) Summary:

As defined in the Technical Direction Form (TDF), some or all of the methods listed below were used for the determination of the reported target analytes.

From EPA's *Methods for the Determination of Metals in Environmental Samples*, Supplement I, May 1994, dissolved, total, and/or total recoverable metals were determined by:

- Method 200.7 / 6010B using a PE Optima ICP-OE (ICP).
- Method 200.8 / 6020 using a Perkin-Elmer Elan 6000 ICP-MS.
- Method 200.2 for total recoverable metals (only) digestion.
- Method 245.1 using a Perkin-Elmer FIMS CVAA (aqueous mercury only).

From *Standard Methods for the Examination of Water and Wastewater*, 18th Edition, 1992, Method 2340B was used for the calculated hardness determination. Hardness is reported as mg (milligram) equivalent $CaCO_3$ per liter (L) determined as follows:

Calculated hardness = 2.497 * (Calcium, mg/L) + 4.118 * (Magnesium, mg/L).

From *EPA's Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846*,

- Method 3015A was used for microwave assisted total metals digestion.
- Method 7473 was used for mercury in solids.
- Method 8260B/5030B was used for volatile organic compounds.

From EPA's *Determination of Inorganic Anions by Ion Chromatography*, Revision 2.1, 1993, Method 300.0 was used to determine the anions.

From EPA's *Methods for Chemical Analysis of Water and Wastes*, March 1983:

- Method 310.1 was followed for the alkalinity determination.
- Method 160.1 was followed for gravimetric total dissolved solids (TDS) determination .
- Method 160.2 was used for gravimetric total suspended solids (TSS) determination.
- Method 415.3 was used for total organic carbon (TOC) determination using either an Apollo 9000 or Phoenix 8000 Non-Dispersive IR (NDIR) system. Also known as dissolved organic carbon (DOC) when performed on the dissolved sample fraction.

The quality control procedures listed in the TDF request were utilized by ESAT to verify accuracy of the results and to evaluate any matrix interferences.

Pentachlorophenol by GCMS method 8270D

Station ID: CTSO-DPILE6-20160527 **Date / Time Sampled:** 05/27/16 07:15 **Workorder** F160511
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160511-01 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**18.8**		mg/kg	1.32	1	05/27/2016	NP	F160535
Surrogate: 2,4,6-Tribromophenol		*100 %*	*Limit 50-150*			*1*	*05/27/2016*	*NP*	*F160535*

Station ID: CTSO-C3D5-20160527 **Date / Time Sampled:** 05/27/16 11:58 **Workorder** F160511
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160511-02 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**11.6**		mg/kg	1.32	1	05/27/2016	NP	F160535
Surrogate: 2,4,6-Tribromophenol		*96 %*	*Limit 50-150*			*1*	*05/27/2016*	*NP*	*F160535*

Station ID: CTSO-DRIPPADE-20160527 **Date / Time Sampled:** 05/27/16 12:05 **Workorder** F160511
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160511-03 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**152**	**D**	mg/kg	13.2	10	05/27/2016	NP	F160535
Surrogate: 2,4,6-Tribromophenol		*136 %*	*Limit 50-150*			*10*	*05/27/2016*	*NP*	*F160535*

Station ID: CTSO-DRIPPADN-20160527 **Date / Time Sampled:** 05/27/16 12:09 **Workorder** F160511
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160511-04 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**321**	**D**	mg/kg	13.2	10	05/27/2016	NP	F160535
Surrogate: 2,4,6-Tribromophenol		*140 %*	*Limit 50-150*			*10*	*05/27/2016*	*NP*	*F160535*

Station ID: CTSO-B4D5-20160527 **Date / Time Sampled:** 05/27/16 12:14 **Workorder** F160511
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160511-05 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**7.87**		mg/kg	1.32	1	05/27/2016	NP	F160535
Surrogate: 2,4,6-Tribromophenol		*92 %*	*Limit 50-150*			*1*	*05/27/2016*	*NP*	*F160535*

Station ID: CTSO-C4D5-20160527 **Date / Time Sampled:** 05/27/16 12:17 **Workorder** F160511
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160511-06 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch

EPA 8270D	**Pentachlorophenol**	**471**	**E**	mg/kg	1.32	1	05/27/2016	NP	F160535
Surrogate: 2,4,6-Tribromophenol		*100 %*	*Limit 50-150*			*1*	*05/27/2016*	*NP*	*F160535*

Station ID: CTSO-BORROW-20160527 **Date / Time Sampled:** 05/27/16 12:26 **Workorder** F160511
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160511-07 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	Pentachlorophenol	< 4.00	**U**	mg/kg	2.64	2	05/27/2016	NP	F160535
Surrogate: 2,4,6-Tribromophenol		*95 %*	*Limit 50-150*			*2*	*05/27/2016*	*NP*	*F160535*

Station ID: CTSO-C5D5-20160527 **Date / Time Sampled:** 05/27/16 15:52 **Workorder** F160511
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160511-08 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**362**	**E**	mg/kg	1.32	1	05/27/2016	NP	F160535
Surrogate: 2,4,6-Tribromophenol		*93 %*	*Limit 50-150*			*1*	*05/27/2016*	*NP*	*F160535*

Station ID: CTSO-C6D5-20160527 **Date / Time Sampled:** 05/27/16 16:15 **Workorder** F160511
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160511-09 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**334**	**E**	mg/kg	1.32	1	05/27/2016	NP	F160535
Surrogate: 2,4,6-Tribromophenol		*87 %*	*Limit 50-150*			*1*	*05/27/2016*	*NP*	*F160535*

Classical Chemistry Parameters

Station ID: CTSO-DPILE6-20160527 **Date / Time Sampled:** 05/27/16 07:15 **Workorder** F160511
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160511-01 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**88.7**		% by Weight		1	05/29/2016	NP	F160536

Station ID: CTSO-C3D5-20160527 **Date / Time Sampled:** 05/27/16 11:58 **Workorder** F160511
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160511-02 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**91.1**		% by Weight		1	05/29/2016	NP	F160536

Station ID: CTSO-DRIPPADE-20160527 **Date / Time Sampled:** 05/27/16 12:05 **Workorder** F160511
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160511-03 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**89.7**		% by Weight		1	05/29/2016	NP	F160536

Station ID: CTSO-DRIPPADN-20160527 **Date / Time Sampled:** 05/27/16 12:09 **Workorder** F160511
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160511-04 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**77.1**		% by Weight		1	05/29/2016	NP	F160536

Station ID: CTSO-B4D5-20160527 **Date / Time Sampled:** 05/27/16 12:14 **Workorder** F160511
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160511-05 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**95.1**		% by Weight		1	05/29/2016	NP	F160536

Station ID: CTSO-C4D5-20160527 **Date / Time Sampled:** 05/27/16 12:17 **Workorder** F160511
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160511-06 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**91.4**		% by Weight		1	05/29/2016	NP	F160536

Station ID: CTSO-BORROW-20160527 **Date / Time Sampled:** 05/27/16 12:26 **Workorder** F160511
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160511-07 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch

% Solids	**% Solids**	**97.4**	% by Weight	1	05/29/2016	NP	F160536

Station ID: CTSO-C5D5-20160527 **Date / Time Sampled:** 05/27/16 15:52 **Workorder** F160511

EPA Tag No.: **Matrix:** Soil **Lab Number:** F160511-08 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**89.7**		% by Weight		1	05/29/2016	NP	F160536

Station ID: CTSO-C6D5-20160527 **Date / Time Sampled:** 05/27/16 16:15 **Workorder** F160511

EPA Tag No.: **Matrix:** Soil **Lab Number:** F160511-09 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**89.6**		% by Weight		1	05/29/2016	NP	F160536

Note: "J" Qualifier indicates an estimated value. "U" Qualifier indicates analyte not detected at or above MDL.
"D" Qualifier indicates diluted value.

Pentachlorophenol by GCMS method 8270D - Quality Control

TechLaw, Inc. - ESAT Region 8 (Mobile Lab)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%R	%R Limits	%D or RPD	%D or RPD Limit
SVOC Field GCMS									
Batch F160535 - EPA 3550C			***Soil***						**SVOC Field GCMS**
Method Blank (F160535-BLK1)						Prepared & Analyzed: 05/27/16			
Pentachlorophenol	< 1.32	2.00	mg/kg						
Method Blank Spike (F160535-BS1)						Prepared & Analyzed: 05/27/16			
Pentachlorophenol	16.7	2.00	mg/kg	20.0		84	70-130		
Matrix Spike (F160535-MS1)			**Source: F160511-02**			Prepared & Analyzed: 05/27/16			
Pentachlorophenol	26.9	2.00	mg/kg	20.0	11.6	76	17-109		
Matrix Spike Dup (F160535-MSD1)			**Source: F160511-02**			Prepared & Analyzed: 05/27/16			
Pentachlorophenol	32.1	2.00	mg/kg	20.0	11.6	102	17-109	18	47

NOTE: %R = % Recovery, %R limits do not apply when sample levels exceed 4x the spike level.
RPD = Relative Percent Difference, %D = % Difference, DL = Detection Limit for QC sample .

TechLaw, Inc. - ESAT Region 8 (Mobile Lab)

Initial and Continuing Calibration Verification Results

SVOC Field GCMS Method: EPA 8270D Analysis Name: 8270 PCP

Sequence: F160537 Work Order: F160511 Units: mg/kg

Non-volatile Analyte	Initial (ICV1, ICV2)			Continuing Calibration Verification Standards (CCVs)								
	True	Found	%R	True	Found	%R	True	Found	%R	True	Found	%R
2,4,6-Tribromophenol				1			2			3		
				20.0	21.6	108.0	20.0	20.2	101.0			
				4			5			6		
				7			8			9		
Pentachlorophenol				1			2			3		
				20.0	21.4	107.0	20.0	18.3	91.5			
				4			5			6		
				7			8			9		
Phenanthrene-d10				1			2			3		
				2000	0.00	0.0	2000	0.00	0.0			
				4			5			6		
				7			8			9		

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270D

Laboratory: TechLaw, Inc. - ESAT Region 8 (Mobile Lab) SDG:

Client: Superfund Project: Cowboy Timber_MAY2016

Sequence: F160537 Instrument: SVOC Field GCMS

Matrix: Soil Calibration: UNASSIGNED

Internal Standard	Response	RT	Reference Response		Area %	Area % Limits	RT Diff		
Calibration Check (F160537-CCV1)			Lab File ID: CBTM-244.D			Analyzed: 05/27/16 12:58			
Phenanthrene-d10	4205724	11.56				50 - 200			
Blank (F160535-BLK1)			Lab File ID: CBTM-245.D			Analyzed: 05/27/16 13:24			
Phenanthrene-d10	4203035	11.56	4205724		100	50 - 200	0.0000		
LCS (F160535-BS1)			Lab File ID: CBTM-246.D			Analyzed: 05/27/16 14:25			
Phenanthrene-d10	3460511	11.56	4205724		82	50 - 200	0.0000		
CTSO-DPILE6-20160527 (F160511-01)			Lab File ID: CBTM-247.D			Analyzed: 05/27/16 14:50			
Phenanthrene-d10	4227714	11.56	4205724		101	50 - 200	0.0000		
CTSO-C3D5-20160527 (F160511-02)			Lab File ID: CBTM-248.D			Analyzed: 05/27/16 15:16			
Phenanthrene-d10	4371620	11.56	4205724		104	50 - 200	0.0000		
Matrix Spike (F160535-MS1)			Lab File ID: CBTM-249.D			Analyzed: 05/27/16 15:41			
Phenanthrene-d10	3586554	11.56	4205724		85	50 - 200	0.0000		
Matrix Spike Dup (F160535-MSD1)			Lab File ID: CBTM-250.D			Analyzed: 05/27/16 16:07			
Phenanthrene-d10	4266717	11.56	4205724		101	50 - 200	0.0000		
CTSO-DRIPPADE-20160527 (F160511-03)			Lab File ID: CBTM-251.D			Analyzed: 05/27/16 16:32			
Phenanthrene-d10	4264033	11.56	4205724		101	50 - 200	0.0000		
CTSO-DRIPPADN-20160527 (F160511-04)			Lab File ID: CBTM-252.D			Analyzed: 05/27/16 16:58			
Phenanthrene-d10	2914341	11.57	4205724		69	50 - 200	0.0100		
CTSO-B4D5-20160527 (F160511-05)			Lab File ID: CBTM-253.D			Analyzed: 05/27/16 17:24			
Phenanthrene-d10	4282214	11.56	4205724		102	50 - 200	0.0000		
CTSO-C4D5-20160527 (F160511-06)			Lab File ID: CBTM-254.D			Analyzed: 05/27/16 17:50			
Phenanthrene-d10	4107875	11.57	4205724		98	50 - 200	0.0100		
CTSO-BORROW-20160527 (F160511-07)			Lab File ID: CBTM-255.D			Analyzed: 05/27/16 18:16			
Phenanthrene-d10	4408766	11.56	4205724		105	50 - 200	0.0000		
CTSO-C5D5-20160527 (F160511-08)			Lab File ID: CBTM-256.D			Analyzed: 05/27/16 18:42			
Phenanthrene-d10	4124827	11.58	4205724		98	50 - 200	0.0200		
CTSO-C6D5-20160527 (F160511-09)			Lab File ID: CBTM-257.D			Analyzed: 05/27/16 19:09			
Phenanthrene-d10	4000833	11.57	4205724		95	50 - 200	0.0100		

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270D

Laboratory:	TechLaw, Inc. - ESAT Region 8 (Mobile Lab)	SDG:	
Client:	Superfund	Project:	Cowboy Timber_MAY2016
Sequence:	F160537	Instrument:	SVOC Field GCMS
Matrix:	Soil	Calibration:	UNASSIGNED

Internal Standard	Response	RT	Reference Response		Area %	Area % Limits	RT Diff		
Calibration Check (F160537-CCV2)			Lab File ID: CBTM-258.D			Analyzed: 05/27/16 19:35			
Phenanthrene-d10	4339242	11.56	4205724		103	50 - 200	0.0000		

TechLaw Inc., ESAT Region 8

INSTRUMENT ANALYSIS SEQUENCE LOG

Analytical Method: EPA 8270D **Non-volatile** **Sequence ID#:** F160537

Instrument ID #: SVOC Field GCMS Soil **LSR #:**

Analysis ID	Sample Name	Analysis Date	Analysis Time
F160537-CCV1	Calibration Check	05/27/16	12:58
F160535-BLK1	Blank	05/27/16	13:24
F160535-BS1		05/27/16	14:25
F160511-01	CTSO-DPILE6-20160527	05/27/16	14:50
F160511-02	CTSO-C3D5-20160527	05/27/16	15:16
F160535-MS1	Matrix Spike	05/27/16	15:41
F160535-MSD1	Matrix Spike Dup	05/27/16	16:07
F160511-03	CTSO-DRIPPADE-20160527	05/27/16	16:32
F160511-04	CTSO-DRIPPADN-20160527	05/27/16	16:58
F160511-05	CTSO-B4D5-20160527	05/27/16	17:24
F160511-06	CTSO-C4D5-20160527	05/27/16	17:50
F160511-07	CTSO-BORROW-20160527	05/27/16	18:16
F160511-08	CTSO-C5D5-20160527	05/27/16	18:42
F160511-09	CTSO-C6D5-20160527	05/27/16	19:09
F160537-CCV2	Calibration Check	05/27/16	19:35

TechLaw Inc., ESAT Region 8

INSTRUMENT ANALYSIS SEQUENCE LOG

Analytical Method: % Solids **Non-volatile** **Sequence ID#:** F160538

Instrument ID #: SVOC Field GCMS Soil **LSR #:**

Analysis ID	Sample Name	Analysis Date	Analysis Time
F160511-01	CTSO-DPILE6-20160527	05/29/16	08:53
F160511-02	CTSO-C3D5-20160527	05/29/16	08:53
F160511-03	CTSO-DRIPPADE-20160527	05/29/16	08:53
F160511-04	CTSO-DRIPPADN-20160527	05/29/16	08:53
F160511-05	CTSO-B4D5-20160527	05/29/16	08:53
F160511-06	CTSO-C4D5-20160527	05/29/16	08:53
F160511-07	CTSO-BORROW-20160527	05/29/16	08:53
F160511-08	CTSO-C5D5-20160527	05/29/16	08:53
F160511-09	CTSO-C6D5-20160527	05/29/16	08:53

U.S. Environmental Protection Agency
Region 8
Technical and Management Services

Laboratory Services Program

Certificate of Analysis

Ref: 8TMS-L

MEMORANDUM

Date: 05/30/16

Subject: Analytical Results--- **Cowboy Timber_MAY2016 / NA**

From: Don Goodrich; EPA Region 8 Analytical Chemistry WAM

To: Craig Myers
Superfund
1595 Wynkoop Street

Received Sample Set(s), [Work Order : Date Received]:
[F160512 : 05/29/2016]

Attached are the analytical results for the samples received from the Cowboy Timber_MAY2016 sampling event, according to TDF NA. All analyses were performed within their method specified holding times unless otherwise noted in the following narrative.

These samples were prepared, analyzed, and verified by the Environmental Services Assistance Team Laboratory (ESAT) according to the requirements of the Technical Direction Form (TDF).

Note: The laboratory herewith transmits this deliverable to the program/project partner for determination of "final data usability" which may include data validation and data quality asessment per and in accordance with EPA QA/G-8, *Guidance on Environmental Data Verification and Data Validation*, November 2002, EPA/240/R-02/004. Laboratory data qualifiers are applied based on the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* June 2008, referred to as "NFG".

Laboratory policy is to dispose of any remaining sample 60 days after data analysis packages are delivered to EPA. If you would like the laboratory to retain the samples for a period longer than 60 days, please contact Don Goodrich within the 60 day period at (303) 312-6687.

Case Narrative

F160512

Quality Assessment: Unless indicated by exception, the QA/QC associated with this sample set produced data within the TDF-specified criteria.

Holding Times: All samples were analyzed within their method-specified technical holding time(s).

Sample Receipt: All samples were received within the temperature control limits of 4C +/- 2C.

1. Preparation (PB) / Method blanks (MB). No detections > PQL
Exceptions: None.

2. Initial and Continuing calibration verification analyses (ICVs and CCVs). All CCCs and SPCCs are within limits.
Exceptions: None.

3. Laboratory Control Sample/ Blank Spike (LCS/BS). Recoveries are within 70-130% range. DCDFM recovery high; no hits in samples.
Exceptions: None.

4. Instrument tune (BFB/DFTPP). Tune passes, and all samples were analyzed within 12 hours.
Exceptions: None.

5. Laboratory Duplicate (DUP). "Source" identifies field sample duplicated in the laboratory. RPD limits are within limits.
Exceptions: None.

6. Laboratory Matrix Spike (MS) and Matrix Spike Duplicate (MSD). "Source" defines original field sample fortified prior to analysis. Percent Recovery (%R) limits do not apply when sample concentration(s) exceed the corresponding analyte spike level by a factor of 4 or greater.
Exceptions: None.

7. Internal standards. Area counts must be within 50% to 200% of responses established in associated opening CCV.
Exceptions: None.

8. Any calibration using more than two-points produced a correlation coefficient equal to or greater than 0.995 or have an average response factor of less than or equal to 15% for all non-CCC compounds or less than or equal to 30% for all CCC compounds.
Exceptions: None.

Acronyms and Definitions:

ESAT	Environmental Services Assistance Team
J	Data Estimated qualifier (also applied to all data less than PQL, greater than or equal to MDL)
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PQL	Practical Quantitation Limit, also known as reporting limit.
RPD	Relative Percent Difference (difference divided by the mean)
%D	Percent difference, serial dilution criteria unit, difference divided by the original result.
%R	Percent recovery, analyzed (less sample contribution) divided by true value
<	Analyte NOT DETECTED at or above the Method Detection Limit (MDL)
mg/L	Milligrams per liter (Parts per million). Solids equivalent = mg/Kg.
ug/L	Micrograms per liter (Parts per billion). Solids equivalent = ug/Kg.
NR	No Recovery (matrix spike) - Often seen for calcium/magnesium when their concentration exceeds the spike level by > 4x.
NFG	*USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* June 2008.
RE	Sample Re-analysis. Usually seen on raw data and sequences for required sample dilutions due to over-range analytes.
U	Analyte not detected at or above MDL qualifier
D	Diluted value qualifier

Method(s) Summary:

As defined in the Technical Direction Form (TDF), some or all of the methods listed below were used for the determination of the reported target analytes.

From EPA's *Methods for the Determination of Metals in Environmental Samples*, Supplement I, May 1994, dissolved, total, and/or total recoverable metals were determined by:

- Method 200.7 / 6010B using a PE Optima ICP-OE (ICP).
- Method 200.8 / 6020 using a Perkin-Elmer Elan 6000 ICP-MS.
- Method 200.2 for total recoverable metals (only) digestion.
- Method 245.1 using a Perkin-Elmer FIMS CVAA (aqueous mercury only).

From *Standard Methods for the Examination of Water and Wastewater*, 18th Edition, 1992, Method 2340B was used for the calculated hardness determination. Hardness is reported as mg (milligram) equivalent $CaCO_3$ per liter (L) determined as follows:

Calculated hardness = 2.497 * (Calcium, mg/L) + 4.118 * (Magnesium, mg/L).

From *EPA's Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846*,

- Method 3015A was used for microwave assisted total metals digestion.
- Method 7473 was used for mercury in solids.
- Method 8260B/5030B was used for volatile organic compounds.

From EPA's *Determination of Inorganic Anions by Ion Chromatography*, Revision 2.1, 1993, Method 300.0 was used to determine the anions.

From EPA's *Methods for Chemical Analysis of Water and Wastes*, March 1983:

- Method 310.1 was followed for the alkalinity determination.
- Method 160.1 was followed for gravimetric total dissolved solids (TDS) determination.
- Method 160.2 was used for gravimetric total suspended solids (TSS) determination.
- Method 415.3 was used for total organic carbon (TOC) determination using either an Apollo 9000 or Phoenix 8000 Non-Dispersive IR (NDIR) system. Also known as dissolved organic carbon (DOC) when performed on the dissolved sample fraction.

The quality control procedures listed in the TDF request were utilized by ESAT to verify accuracy of the results and to evaluate any matrix interferences.

Project Name: Cowboy Timber_MAY2016 **Certificate of Analysis**

TDF #: NA

Pentachlorophenol by GCMS method 8270D

Station ID: CTSO-B6D5-20160529 **Date / Time Sampled:** 05/29/16 14:00 **Workorder** F160512
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160512-01 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	Pentachlorophenol	< 2.00	U	mg/kg	1.32	1	05/29/2016	NP	F160539
Surrogate: 2,4,6-Tribromophenol		*96 %*	*Limit 50-150*			*1*	*05/29/2016*	*NP*	*F160539*

Station ID: CTSO-B7D5-20160529 **Date / Time Sampled:** 05/29/16 14:23 **Workorder** F160512
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160512-02 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	Pentachlorophenol	< 2.00	U	mg/kg	1.32	1	05/29/2016	NP	F160539
Surrogate: 2,4,6-Tribromophenol		*95 %*	*Limit 50-150*			*1*	*05/29/2016*	*NP*	*F160539*

Station ID: CTSO-C7D5-20160529 **Date / Time Sampled:** 05/29/16 16:45 **Workorder** F160512
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160512-03 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**41.5**		mg/kg	1.32	1	05/29/2016	NP	F160539
Surrogate: 2,4,6-Tribromophenol		*99 %*	*Limit 50-150*			*1*	*05/29/2016*	*NP*	*F160539*

Station ID: CTSO-B2D6-20160529 **Date / Time Sampled:** 05/29/16 17:25 **Workorder** F160512
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160512-04 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**94.0**		mg/kg	1.32	1	05/29/2016	NP	F160539
Surrogate: 2,4,6-Tribromophenol		*98 %*	*Limit 50-150*			*1*	*05/29/2016*	*NP*	*F160539*

Station ID: CTSO-DUP12-20160529 **Date / Time Sampled:** 05/29/16 17:25 **Workorder** F160512
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160512-05 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**80.4**		mg/kg	1.32	1	05/29/2016	NP	F160539
Surrogate: 2,4,6-Tribromophenol		*94 %*	*Limit 50-150*			*1*	*05/29/2016*	*NP*	*F160539*

Project Name: Cowboy Timber_MAY2016 **Certificate of Analysis**

TDF #: NA

Classical Chemistry Parameters

Station ID: CTSO-B6D5-20160529 **Date / Time Sampled:** 05/29/16 14:00 **Workorder** F160512
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160512-01 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**93.5**		% by Weight		1	05/30/2016	MM	F160540

Station ID: CTSO-B7D5-20160529 **Date / Time Sampled:** 05/29/16 14:23 **Workorder** F160512
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160512-02 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**91.1**		% by Weight		1	05/30/2016	MM	F160540

Station ID: CTSO-C7D5-20160529 **Date / Time Sampled:** 05/29/16 16:45 **Workorder** F160512
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160512-03 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**92.5**		% by Weight		1	05/30/2016	MM	F160540

Station ID: CTSO-B2D6-20160529 **Date / Time Sampled:** 05/29/16 17:25 **Workorder** F160512
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160512-04 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**84.7**		% by Weight		1	05/30/2016	MM	F160540

Station ID: CTSO-DUP12-20160529 **Date / Time Sampled:** 05/29/16 17:25 **Workorder** F160512
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160512-05 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**84.7**		% by Weight		1	05/30/2016	MM	F160540

Note: "J" Qualifier indicates an estimated value. "U" Qualifier indicates analyte not detected at or above MDL.
"D" Qualifier indicates diluted value.

Pentachlorophenol by GCMS method 8270D - Quality Control

TechLaw, Inc. - ESAT Region 8 (Mobile Lab)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%R	%R Limits	%D or RPD	%D or RPD Limit
SVOC Field GCMS									
Batch F160539 - EPA 3550C			***Soil***						**SVOC Field GCMS**
Method Blank (F160539-BLK1)						Prepared & Analyzed: 05/29/16			
Pentachlorophenol	< 1.32	2.00	mg/kg						
Method Blank Spike (F160539-BS1)						Prepared & Analyzed: 05/29/16			
Pentachlorophenol	20.0	2.00	mg/kg	20.0		100	70-130		
Matrix Spike (F160539-MS1)			**Source: F160512-03**			Prepared & Analyzed: 05/29/16			
Pentachlorophenol	65.3	2.00	mg/kg	20.0	41.5	119	17-109		
Matrix Spike Dup (F160539-MSD1)			**Source: F160512-03**			Prepared & Analyzed: 05/29/16			
Pentachlorophenol	61.6	2.00	mg/kg	20.0	41.5	101	17-109	6	47

NOTE: %R = % Recovery, %R limits do not apply when sample levels exceed 4x the spike level.
RPD = Relative Percent Difference, %D = % Difference, DL = Detection Limit for QC sample .

TechLaw, Inc. - ESAT Region 8 (Mobile Lab)

Initial and Continuing Calibration Verification Results

SVOC Field GCMS Method: EPA 8270D Analysis Name: 8270 PCP

Sequence: F160541 Work Order: F160512 Units: mg/kg

Non-volatile Analyte	Initial (ICV1, ICV2)			Continuing Calibration Verification Standards (CCVs)								
	True	Found	%R	True	Found	%R	True	Found	%R	True	Found	%R
2,4,6-Tribromophenol				1			2			3		
				20.0	21.2	106.0						
				4			5			6		
				7			8			9		
Pentachlorophenol				1			2			3		
				20.0	21.6	108.0						
				4			5			6		
				7			8			9		
Phenanthrene-d10				1			2			3		
				2000	0.00	0.0						
				4			5			6		
				7			8			9		

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270D

Laboratory: TechLaw, Inc. - ESAT Region 8 (Mobile Lab) SDG:

Client: Superfund Project: Cowboy Timber_MAY2016

Sequence: F160541 Instrument: SVOC Field GCMS

Matrix: Soil Calibration: UNASSIGNED

Internal Standard	Response	RT	Reference Response		Area %	Area % Limits	RT Diff		
Calibration Check (F160541-CCV1)			Lab File ID: CMBT-270.D			Analyzed: 05/29/16 18:33			
Phenanthrene-d10	4532484	11.57				50 - 200			
Blank (F160539-BLK1)			Lab File ID: CMBT-271.D			Analyzed: 05/29/16 18:59			
Phenanthrene-d10	3529468	11.56	4532484		78	50 - 200	-0.0100		
LCS (F160539-BS1)			Lab File ID: CMBT-272.D			Analyzed: 05/29/16 19:26			
Phenanthrene-d10	3706991	11.57	4532484		82	50 - 200	0.0000		
CTSO-B6D5-20160529 (F160512-01)			Lab File ID: CMBT-273.D			Analyzed: 05/29/16 19:52			
Phenanthrene-d10	3537352	11.56	4532484		78	50 - 200	-0.0100		
CTSO-B7D5-20160529 (F160512-02)			Lab File ID: CMBT-274.D			Analyzed: 05/29/16 20:18			
Phenanthrene-d10	3345069	11.56	4532484		74	50 - 200	-0.0100		
CTSO-C7D5-20160529 (F160512-03)			Lab File ID: CMBT-275.D			Analyzed: 05/29/16 20:44			
Phenanthrene-d10	3351690	11.57	4532484		74	50 - 200	0.0000		
Matrix Spike (F160539-MS1)			Lab File ID: CMBT-276.D			Analyzed: 05/29/16 21:10			
Phenanthrene-d10	3707598	11.57	4532484		82	50 - 200	0.0000		
Matrix Spike Dup (F160539-MSD1)			Lab File ID: CMBT-277.D			Analyzed: 05/29/16 21:36			
Phenanthrene-d10	3438653	11.57	4532484		76	50 - 200	0.0000		
CTSO-B2D6-20160529 (F160512-04)			Lab File ID: CMBT-278.D			Analyzed: 05/29/16 22:02			
Phenanthrene-d10	3170120	11.57	4532484		70	50 - 200	0.0000		
CTSO-DUP12-20160529 (F160512-05)			Lab File ID: CMBT-279.D			Analyzed: 05/29/16 22:28			
Phenanthrene-d10	3398321	11.57	4532484		75	50 - 200	0.0000		

TechLaw Inc., ESAT Region 8

INSTRUMENT ANALYSIS SEQUENCE LOG

Analytical Method: EPA 8270D **Non-volatile** **Sequence ID#:** F160541

Instrument ID #: SVOC Field GCMS Soil **LSR #:**

Analysis ID	Sample Name	Analysis Date	Analysis Time
F160541-CCV1	Calibration Check	05/29/16	18:33
F160539-BLK1	Blank	05/29/16	18:59
F160539-BS1		05/29/16	19:26
F160512-01	CTSO-B6D5-20160529	05/29/16	19:52
F160512-02	CTSO-B7D5-20160529	05/29/16	20:18
F160512-03	CTSO-C7D5-20160529	05/29/16	20:44
F160539-MS1	Matrix Spike	05/29/16	21:10
F160539-MSD1	Matrix Spike Dup	05/29/16	21:36
F160512-04	CTSO-B2D6-20160529	05/29/16	22:02
F160512-05	CTSO-DUP12-20160529	05/29/16	22:28

TechLaw Inc., ESAT Region 8

INSTRUMENT ANALYSIS SEQUENCE LOG

Analytical Method: % Solids **Non-volatile** **Sequence ID#:** F160542

Instrument ID #: SVOC Field GCMS Soil **LSR #:**

Analysis ID	Sample Name	Analysis Date	Analysis Time
F160512-01	CTSO-B6D5-20160529	05/30/16	08:58
F160512-02	CTSO-B7D5-20160529	05/30/16	08:58
F160512-03	CTSO-C7D5-20160529	05/30/16	08:58
F160512-04	CTSO-B2D6-20160529	05/30/16	08:58
F160512-05	CTSO-DUP12-20160529	05/30/16	08:58

U.S. Environmental Protection Agency
Region 8
Technical and Management Services

Laboratory Services Program

Certificate of Analysis

Ref: 8TMS-L

MEMORANDUM

Date: 05/31/16

Subject: Analytical Results--- **Cowboy Timber_MAY2016 / NA**

From: Don Goodrich; EPA Region 8 Analytical Chemistry WAM

To: Craig Myers
Superfund
1595 Wynkoop Street

Received Sample Set(s), [Work Order : Date Received]:
[F160513 : 05/30/2016]

Attached are the analytical results for the samples received from the Cowboy Timber_MAY2016 sampling event, according to TDF NA. All analyses were performed within their method specified holding times unless otherwise noted in the following narrative.

These samples were prepared, analyzed, and verified by the Environmental Services Assistance Team Laboratory (ESAT) according to the requirements of the Technical Direction Form (TDF).

Note: The laboratory herewith transmits this deliverable to the program/project partner for determination of "final data usability" which may include data validation and data quality asessment per and in accordance with EPA QA/G-8, *Guidance on Environmental Data Verification and Data Validation*, November 2002, EPA/240/R-02/004. Laboratory data qualifiers are applied based on the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* June 2008, referred to as "NFG".

Laboratory policy is to dispose of any remaining sample 60 days after data analysis packages are delivered to EPA. If you would like the laboratory to retain the samples for a period longer than 60 days, please contact Don Goodrich within the 60 day period at (303) 312-6687.

Case Narrative

F160513

Quality Assessment: Unless indicated by exception, the QA/QC associated with this sample set produced data within the TDF-specified criteria.

Holding Times: All samples were analyzed within their method-specified technical holding time(s).

Sample Receipt: All samples were received within the temperature control limits of 4C +/- 2C.

1. Preparation (PB) / Method blanks (MB). No detections > PQL
Exceptions: None.

2. Initial and Continuing calibration verification analyses (ICVs and CCVs). All CCCs and SPCCs are within limits.
Exceptions: None.

3. Laboratory Control Sample/ Blank Spike (LCS/BS). Recoveries are within 70-130% range. DCDFM recovery high; no hits in samples.
Exceptions: None.

4. Instrument tune (BFB/DFTPP). Tune passes, and all samples were analyzed within 12 hours.
Exceptions: None.

5. Laboratory Duplicate (DUP). "Source" identifies field sample duplicated in the laboratory. RPD limits are within limits.
Exceptions: None.

6. Laboratory Matrix Spike (MS) and Matrix Spike Duplicate (MSD). "Source" defines original field sample fortified prior to analysis. Percent Recovery (%R) limits do not apply when sample concentration(s) exceed the corresponding analyte spike level by a factor of 4 or greater.
Exceptions: None.

7. Internal standards. Area counts must be within 50% to 200% of responses established in associated opening CCV.
Exceptions: None.

8. Any calibration using more than two-points produced a correlation coefficient equal to or greater than 0.995 or have an average response factor of less than or equal to 15% for all non-CCC compounds or less than or equal to 30% for all CCC compounds.
Exceptions: None.

Acronyms and Definitions:

ESAT	Environmental Services Assistance Team
J	Data Estimated qualifier (also applied to all data less than PQL, greater than or equal to MDL)
MDL	Method Detection Limit
PQL	Practical Quantitation Limit, also known as reporting limit.
RPD	Relative Percent Difference (difference divided by the mean)
%D	Percent difference, serial dilution criteria unit, difference divided by the original result.
%R	Percent recovery, analyzed (less sample contribution) divided by true value
<	Analyte NOT DETECTED at or above the Method Detection Limit (MDL)
mg/L	Milligrams per liter (Parts per million). Solids equivalent = mg/Kg.
ug/L	Micrograms per liter (Parts per billion). Solids equivalent = ug/Kg.
NR	No Recovery (matrix spike) - Often seen for calcium/magnesium when their concentration exceeds the spike level by > 4x.
NFG	*USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* June 2008.
RE	Sample Re-analysis. Usually seen on raw data and sequences for required sample dilutions due to over-range analytes.
U	Analyte not detected at or above MDL qualifier
D	Diluted value qualifier

Method(s) Summary:

As defined in the Technical Direction Form (TDF), some or all of the methods listed below were used for the determination of the reported target analytes.

From EPA's *Methods for the Determination of Metals in Environmental Samples*, Supplement I, May 1994, dissolved, total, and/or total recoverable metals were determined by:

- Method 200.7 / 6010B using a PE Optima ICP-OE (ICP).
- Method 200.8 / 6020 using a Perkin-Elmer Elan 6000 ICP-MS.
- Method 200.2 for total recoverable metals (only) digestion.
- Method 245.1 using a Perkin-Elmer FIMS CVAA (aqueous mercury only).

From *Standard Methods for the Examination of Water and Wastewater*, 18th Edition, 1992, Method 2340B was used for the calculated hardness determination. Hardness is reported as mg (milligram) equivalent $CaCO_3$ per liter (L) determined as follows:

Calculated hardness = 2.497 * (Calcium, mg/L) + 4.118 * (Magnesium, mg/L).

From *EPA's Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846*,

- Method 3015A was used for microwave assisted total metals digestion.
- Method 7473 was used for mercury in solids.
- Method 8260B/5030B was used for volatile organic compounds.

From EPA's *Determination of Inorganic Anions by Ion Chromatography*, Revision 2.1, 1993, Method 300.0 was used to determine the anions.

From EPA's *Methods for Chemical Analysis of Water and Wastes*, March 1983:

- Method 310.1 was followed for the alkalinity determination.
- Method 160.1 was followed for gravimetric total dissolved solids (TDS) determination.
- Method 160.2 was used for gravimetric total suspended solids (TSS) determination.
- Method 415.3 was used for total organic carbon (TOC) determination using either an Apollo 9000 or Phoenix 8000 Non-Dispersive IR (NDIR) system. Also known as dissolved organic carbon (DOC) when performed on the dissolved sample fraction.

The quality control procedures listed in the TDF request were utilized by ESAT to verify accuracy of the results and to evaluate any matrix interferences.

Pentachlorophenol by GCMS method 8270D

Station ID: CTSO-C7DIRTY-20160530 **Date / Time Sampled:** 05/30/16 10:00 **Workorder** F160513
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160513-01 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**833**	**D**	mg/kg	13.2	10	05/30/2016	NP	F160543
Surrogate: 2,4,6-Tribromophenol		*120 %*	*Limit 50-150*			*10*	*05/30/2016*	*NP*	*F160543*

Station ID: CTSO-C6DIRTY-20160530 **Date / Time Sampled:** 05/30/16 10:02 **Workorder** F160513
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160513-02 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**378**	**D**	mg/kg	13.2	10	05/30/2016	NP	F160543
Surrogate: 2,4,6-Tribromophenol		*118 %*	*Limit 50-150*			*10*	*05/30/2016*	*NP*	*F160543*

Station ID: CTSO-C5DIRTY-20160530 **Date / Time Sampled:** 05/30/16 10:04 **Workorder** F160513
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160513-03 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**526**	**D**	mg/kg	13.2	10	05/30/2016	NP	F160543
Surrogate: 2,4,6-Tribromophenol		*120 %*	*Limit 50-150*			*10*	*05/30/2016*	*NP*	*F160543*

Station ID: CTSO-A1RAMP-20160530 **Date / Time Sampled:** 05/30/16 13:15 **Workorder** F160513
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160513-04 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	Pentachlorophenol	< 2.00	**U**	mg/kg	1.32	1	05/30/2016	NP	F160543
Surrogate: 2,4,6-Tribromophenol		*88 %*	*Limit 50-150*			*1*	*05/30/2016*	*NP*	*F160543*

Station ID: CTSO-C3D6-20160530 **Date / Time Sampled:** 05/30/16 15:46 **Workorder** F160513
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160513-05 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**9.73**		mg/kg	1.32	1	05/30/2016	NP	F160543
Surrogate: 2,4,6-Tribromophenol		*84 %*	*Limit 50-150*			*1*	*05/30/2016*	*NP*	*F160543*

Station ID: CTSO-B3D6-20160530 **Date / Time Sampled:** 05/30/16 15:48 **Workorder** F160513
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160513-06 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch

EPA 8270D	**Pentachlorophenol**	**2.73**		mg/kg	1.32	1	05/30/2016	NP	F160543
Surrogate: 2,4,6-Tribromophenol		*96 %*	*Limit 50-150*			*1*	*05/30/2016*	*NP*	*F160543*

Station ID: CTSO-C4D6-20160530 **Date / Time Sampled:** 05/30/16 15:52 **Workorder** F160513
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160513-07 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**77.8**	**D**	mg/kg	26.4	20	05/30/2016	NP	F160543
Surrogate: 2,4,6-Tribromophenol		*%*	*Limit 50-150*			*20*	*05/30/2016*	*NP*	*F160543*

Station ID: CTSO-B4D6-20160530 **Date / Time Sampled:** 05/30/16 15:16 **Workorder** F160513
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160513-08 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**10.2**		mg/kg	1.32	1	05/30/2016	NP	F160543
Surrogate: 2,4,6-Tribromophenol		*95 %*	*Limit 50-150*			*1*	*05/30/2016*	*NP*	*F160543*

Station ID: CTSO-C5D8-20160530 **Date / Time Sampled:** 05/30/16 16:37 **Workorder** F160513
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160513-09 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**148**	**D**	mg/kg	26.4	20	05/30/2016	NP	F160543
Surrogate: 2,4,6-Tribromophenol		*%*	*Limit 50-150*			*20*	*05/30/2016*	*NP*	*F160543*

Station ID: CTSO-C6D8-20160530 **Date / Time Sampled:** 05/30/16 16:40 **Workorder** F160513
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160513-10 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**124**	**D**	mg/kg	13.2	10	05/30/2016	NP	F160543
Surrogate: 2,4,6-Tribromophenol		*110 %*	*Limit 50-150*			*10*	*05/30/2016*	*NP*	*F160543*

Station ID: CTSO-C7D8-20160530 **Date / Time Sampled:** 05/30/16 16:45 **Workorder** F160513
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160513-11 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**24.0**		mg/kg	1.32	1	05/30/2016	NP	F160543
Surrogate: 2,4,6-Tribromophenol		*100 %*	*Limit 50-150*			*1*	*05/30/2016*	*NP*	*F160543*

Classical Chemistry Parameters

Station ID: CTSO-C7DIRTY-20160530 **Date / Time Sampled:** 05/30/16 10:00 **Workorder** F160513
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160513-01 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**93.6**		% by Weight		1	05/30/2016	MM	F160544

Station ID: CTSO-C6DIRTY-20160530 **Date / Time Sampled:** 05/30/16 10:02 **Workorder** F160513
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160513-02 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**90.1**		% by Weight		1	05/30/2016	MM	F160544

Station ID: CTSO-C5DIRTY-20160530 **Date / Time Sampled:** 05/30/16 10:04 **Workorder** F160513
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160513-03 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**91.6**		% by Weight		1	05/30/2016	MM	F160544

Station ID: CTSO-A1RAMP-20160530 **Date / Time Sampled:** 05/30/16 13:15 **Workorder** F160513
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160513-04 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**96.3**		% by Weight		1	05/30/2016	MM	F160544

Station ID: CTSO-C3D6-20160530 **Date / Time Sampled:** 05/30/16 15:46 **Workorder** F160513
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160513-05 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**92.6**		% by Weight		1	05/30/2016	MM	F160544

Station ID: CTSO-B3D6-20160530 **Date / Time Sampled:** 05/30/16 15:48 **Workorder** F160513
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160513-06 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**90.5**		% by Weight		1	05/30/2016	MM	F160544

Station ID: CTSO-C4D6-20160530 **Date / Time Sampled:** 05/30/16 15:52 **Workorder** F160513
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160513-07 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch

% Solids	**% Solids**	**92.6**	% by Weight	1	05/30/2016	MM	F160544

Station ID: CTSO-B4D6-20160530 **Date / Time Sampled:** 05/30/16 15:16 **Workorder** F160513
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160513-08 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**93.0**		% by Weight		1	05/30/2016	MM	F160544

Station ID: CTSO-C5D8-20160530 **Date / Time Sampled:** 05/30/16 16:37 **Workorder** F160513
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160513-09 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**97.1**		% by Weight		1	05/30/2016	MM	F160544

Station ID: CTSO-C6D8-20160530 **Date / Time Sampled:** 05/30/16 16:40 **Workorder** F160513
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160513-10 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**97.3**		% by Weight		1	05/30/2016	MM	F160544

Station ID: CTSO-C7D8-20160530 **Date / Time Sampled:** 05/30/16 16:45 **Workorder** F160513
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160513-11 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**98.1**		% by Weight		1	05/30/2016	MM	F160544

Note: "J" Qualifier indicates an estimated value. "U" Qualifier indicates analyte not detected at or above MDL.
"D" Qualifier indicates diluted value.

Pentachlorophenol by GCMS method 8270D - Quality Control

TechLaw, Inc. - ESAT Region 8 (Mobile Lab)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%R	%R Limits	%D or RPD	%D or RPD Limit
SVOC Field GCMS									
Batch F160543 - EPA 3550C			***Soil***						**SVOC Field GCMS**
Method Blank (F160543-BLK1)						Prepared & Analyzed: 05/30/16			
Pentachlorophenol	< 1.32	2.00	mg/kg						
Method Blank Spike (F160543-BS1)						Prepared & Analyzed: 05/30/16			
Pentachlorophenol	16.5	2.00	mg/kg	20.0		82	70-130		
Matrix Spike (F160543-MS1)			**Source: F160513-04**			Prepared & Analyzed: 05/30/16			
Pentachlorophenol	12.2	2.00	mg/kg	20.0	< 1.32	61	17-109		
Matrix Spike Dup (F160543-MSD1)			**Source: F160513-04**			Prepared & Analyzed: 05/30/16			
Pentachlorophenol	11.7	2.00	mg/kg	20.0	< 1.32	58	17-109	4	47

NOTE: %R = % Recovery, %R limits do not apply when sample levels exceed 4x the spike level.
RPD = Relative Percent Difference, %D = % Difference, DL = Detection Limit for QC sample .

TechLaw, Inc. - ESAT Region 8 (Mobile Lab)

Initial and Continuing Calibration Verification Results

SVOC Field GCMS Method: EPA 8270D Analysis Name: 8270 PCP

Sequence: F160545 Work Order: F160513 Units: mg/kg

Non-volatile Analyte	Initial (ICV1, ICV2)			Continuing Calibration Verification Standards (CCVs)								
	True	Found	%R	True	Found	%R	True	Found	%R	True	Found	%R
2,4,6-Tribromophenol				1			2			3		
				20.0	18.4	92.0						
				4			5			6		
				7			8			9		
Pentachlorophenol				1			2			3		
				20.0	17.3	86.5						
				4			5			6		
				7			8			9		
Phenanthrene-d10				1			2			3		
				2000	0.00	0.0						
				4			5			6		
				7			8			9		

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270D

Laboratory: TechLaw, Inc. - ESAT Region 8 (Mobile Lab) SDG:

Client: Superfund Project: Cowboy Timber_MAY2016

Sequence: F160545 Instrument: SVOC Field GCMS

Matrix: Soil Calibration: UNASSIGNED

Internal Standard	Response	RT	Reference Response		Area %	Area % Limits	RT Diff		
Calibration Check (F160545-CCV1)			Lab File ID: CMBT-295.D			Analyzed: 05/30/16 15:05			
Phenanthrene-d10	3447475	11.55				50 - 200			
Blank (F160543-BLK1)			Lab File ID: CMBT-296.D			Analyzed: 05/30/16 15:30			
Phenanthrene-d10	2613740	11.55	3447475		76	50 - 200	0.0000		
LCS (F160543-BS1)			Lab File ID: CMBT-297.D			Analyzed: 05/30/16 15:55			
Phenanthrene-d10	2767852	11.55	3447475		80	50 - 200	0.0000		
CTSO-A1RAMP-20160530 (F160513-04)			Lab File ID: CMBT-298.D			Analyzed: 05/30/16 16:19			
Phenanthrene-d10	3300905	11.56	3447475		96	50 - 200	0.0100		
Matrix Spike (F160543-MS1)			Lab File ID: CMBT-299.D			Analyzed: 05/30/16 16:44			
Phenanthrene-d10	3416947	11.56	3447475		99	50 - 200	0.0100		
Matrix Spike Dup (F160543-MSD1)			Lab File ID: CMBT-300.D			Analyzed: 05/30/16 17:09			
Phenanthrene-d10	2805362	11.56	3447475		81	50 - 200	0.0100		
CTSO-C7DIRTY-20160530 (F160513-01)			Lab File ID: CMBT-301.D			Analyzed: 05/30/16 17:34			
Phenanthrene-d10	3312714	11.56	3447475		96	50 - 200	0.0100		
CTSO-C6DIRTY-20160530 (F160513-02)			Lab File ID: CMBT-302.D			Analyzed: 05/30/16 17:59			
Phenanthrene-d10	3496600	11.56	3447475		101	50 - 200	0.0100		
CTSO-C5DIRTY-20160530 (F160513-03)			Lab File ID: CMBT-303.D			Analyzed: 05/30/16 18:25			
Phenanthrene-d10	3574070	11.57	3447475		104	50 - 200	0.0200		
CTSO-C3D6-20160530 (F160513-05)			Lab File ID: CMBT-304.D			Analyzed: 05/30/16 18:51			
Phenanthrene-d10	2963163	11.56	3447475		86	50 - 200	0.0100		
CTSO-B3D6-20160530 (F160513-06)			Lab File ID: CMBT-305.D			Analyzed: 05/30/16 19:17			
Phenanthrene-d10	3538287	11.56	3447475		103	50 - 200	0.0100		
CTSO-C4D6-20160530 (F160513-07)			Lab File ID: CMBT-306.D			Analyzed: 05/30/16 19:42			
Phenanthrene-d10	3591116	11.56	3447475		104	50 - 200	0.0100		
CTSO-B4D6-20160530 (F160513-08)			Lab File ID: CMBT-307.D			Analyzed: 05/30/16 20:08			
Phenanthrene-d10	3517415	11.56	3447475		102	50 - 200	0.0100		
CTSO-C5D8-20160530 (F160513-09)			Lab File ID: CMBT-308.D			Analyzed: 05/30/16 20:34			
Phenanthrene-d10	3457973	11.56	3447475		100	50 - 200	0.0100		

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270D

Laboratory:	TechLaw, Inc. - ESAT Region 8 (Mobile Lab)	SDG:	
Client:	Superfund	Project:	Cowboy Timber_MAY2016
Sequence:	F160545	Instrument:	SVOC Field GCMS
Matrix:	Soil	Calibration:	UNASSIGNED

Internal Standard	Response	RT	Reference Response		Area %	Area % Limits	RT Diff		
CTSO-C6D8-20160530 (F160513-10)			Lab File ID: CMBT-309.D			Analyzed: 05/30/16 20:59			
Phenanthrene-d10	3348295	11.56	3447475		97	50 - 200	0.0100		
CTSO-C7D8-20160530 (F160513-11)			Lab File ID: CMBT-310.D			Analyzed: 05/30/16 21:25			
Phenanthrene-d10	3441906	11.56	3447475		100	50 - 200	0.0100		

TechLaw Inc., ESAT Region 8

INSTRUMENT ANALYSIS SEQUENCE LOG

Analytical Method: EPA 8270D **Non-volatile** **Sequence ID#:** F160545

Instrument ID #: SVOC Field GCMS Soil **LSR #:**

Analysis ID	Sample Name	Analysis Date	Analysis Time
F160545-CCV1	Calibration Check	05/30/16	15:05
F160543-BLK1	Blank	05/30/16	15:30
F160543-BS1		05/30/16	15:55
F160513-04	CTSO-A1RAMP-20160530	05/30/16	16:19
F160543-MS1	Matrix Spike	05/30/16	16:44
F160543-MSD1	Matrix Spike Dup	05/30/16	17:09
F160513-01	CTSO-C7DIRTY-20160530	05/30/16	17:34
F160513-02	CTSO-C6DIRTY-20160530	05/30/16	17:59
F160513-03	CTSO-C5DIRTY-20160530	05/30/16	18:25
F160513-05	CTSO-C3D6-20160530	05/30/16	18:51
F160513-06	CTSO-B3D6-20160530	05/30/16	19:17
F160513-07	CTSO-C4D6-20160530	05/30/16	19:42
F160513-08	CTSO-B4D6-20160530	05/30/16	20:08
F160513-09	CTSO-C5D8-20160530	05/30/16	20:34
F160513-10	CTSO-C6D8-20160530	05/30/16	20:59
F160513-11	CTSO-C7D8-20160530	05/30/16	21:25

TechLaw Inc., ESAT Region 8

INSTRUMENT ANALYSIS SEQUENCE LOG

Analytical Method: % Solids **Non-volatile** **Sequence ID#:** F160546

Instrument ID #: SVOC Field GCMS Soil **LSR #:**

Analysis ID	Sample Name	Analysis Date	Analysis Time
F160513-04	CTSO-A1RAMP-20160530	05/30/16	17:00
F160513-01	CTSO-C7DIRTY-20160530	05/30/16	17:00
F160513-02	CTSO-C6DIRTY-20160530	05/30/16	17:00
F160513-03	CTSO-C5DIRTY-20160530	05/30/16	17:00
F160513-05	CTSO-C3D6-20160530	05/30/16	17:00
F160513-06	CTSO-B3D6-20160530	05/30/16	17:00
F160513-07	CTSO-C4D6-20160530	05/30/16	17:00
F160513-08	CTSO-B4D6-20160530	05/30/16	17:00
F160513-09	CTSO-C5D8-20160530	05/30/16	17:00
F160513-10	CTSO-C6D8-20160530	05/30/16	17:00
F160513-11	CTSO-C7D8-20160530	05/30/16	17:00

U.S. Environmental Protection Agency
Region 8
Technical and Management Services

Laboratory Services Program

Certificate of Analysis

Ref: 8TMS-L

MEMORANDUM

Date: 06/02/16

Subject: Analytical Results--- **Cowboy Timber_MAY2016 / NA**

From: Don Goodrich; EPA Region 8 Analytical Chemistry WAM

To: Craig Myers
Superfund
1595 Wynkoop Street

Received Sample Set(s), [Work Order : Date Received]:
[F160601 : 06/01/2016]

Attached are the analytical results for the samples received from the Cowboy Timber_MAY2016 sampling event, according to TDF NA. All analyses were performed within their method specified holding times unless otherwise noted in the following narrative.

These samples were prepared, analyzed, and verified by the Environmental Services Assistance Team Laboratory (ESAT) according to the requirements of the Technical Direction Form (TDF).

Note: The laboratory herewith transmits this deliverable to the program/project partner for determination of "final data usability" which may include data validation and data quality asessment per and in accordance with EPA QA/G-8, *Guidance on Environmental Data Verification and Data Validation*, November 2002, EPA/240/R-02/004. Laboratory data qualifiers are applied based on the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* June 2008, referred to as "NFG".

Laboratory policy is to dispose of any remaining sample 60 days after data analysis packages are delivered to EPA. If you would like the laboratory to retain the samples for a period longer than 60 days, please contact Don Goodrich within the 60 day period at (303) 312-6687.

Case Narrative

F160601

Quality Assessment: Unless indicated by exception, the QA/QC associated with this sample set produced data within the TDF-specified criteria.

Holding Times: All samples were analyzed within their method-specified technical holding time(s).

Sample Receipt: All samples were received within the temperature control limits of 4C +/- 2C.

1. Preparation (PB) / Method blanks (MB). No detections > PQL
Exceptions: None.

2. Initial and Continuing calibration verification analyses (ICVs and CCVs). All CCCs and SPCCs are within limits.
Exceptions: None.

3. Laboratory Control Sample/ Blank Spike (LCS/BS). Recoveries are within 70-130% range. DCDFM recovery high; no hits in samples.
Exceptions: None.

4. Instrument tune (BFB/DFTPP). Tune passes, and all samples were analyzed within 12 hours.
Exceptions: None.

5. Laboratory Duplicate (DUP). "Source" identifies field sample duplicated in the laboratory. RPD limits are within limits.
Exceptions: None.

6. Laboratory Matrix Spike (MS) and Matrix Spike Duplicate (MSD). "Source" defines original field sample fortified prior to analysis. Percent Recovery (%R) limits do not apply when sample concentration(s) exceed the corresponding analyte spike level by a factor of 4 or greater.
Exceptions: None.

7. Internal standards. Area counts must be within 50% to 200% of responses established in associated opening CCV.
Exceptions: None.

8. Any calibration using more than two-points produced a correlation coefficient equal to or greater than 0.995 or have an average response factor of less than or equal to 15% for all non-CCC compounds or less than or equal to 30% for all CCC compounds.
Exceptions: None.

Acronyms and Definitions:

ESAT	Environmental Services Assistance Team
J	Data Estimated qualifier (also applied to all data less than PQL, greater than or equal to MDL)
MDL	Method Detection Limit
PQL	Practical Quantitation Limit, also known as reporting limit.
RPD	Relative Percent Difference (difference divided by the mean)
%D	Percent difference, serial dilution criteria unit, difference divided by the original result.
%R	Percent recovery, analyzed (less sample contribution) divided by true value
<	Analyte NOT DETECTED at or above the Method Detection Limit (MDL)
mg/L	Milligrams per liter (Parts per million). Solids equivalent = mg/Kg.
ug/L	Micrograms per liter (Parts per billion). Solids equivalent = ug/Kg.
NR	No Recovery (matrix spike) - Often seen for calcium/magnesium when their concentration exceeds the spike level by > 4x.
NFG	*USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* June 2008.
RE	Sample Re-analysis. Usually seen on raw data and sequences for required sample dilutions due to over-range analytes.
U	Analyte not detected at or above MDL qualifier
D	Diluted value qualifier

Method(s) Summary:

As defined in the Technical Direction Form (TDF), some or all of the methods listed below were used for the determination of the reported target analytes.

From EPA's *Methods for the Determination of Metals in Environmental Samples*, Supplement I, May 1994, dissolved, total, and/or total recoverable metals were determined by:

- Method 200.7 / 6010B using a PE Optima ICP-OE (ICP).
- Method 200.8 / 6020 using a Perkin-Elmer Elan 6000 ICP-MS.
- Method 200.2 for total recoverable metals (only) digestion.
- Method 245.1 using a Perkin-Elmer FIMS CVAA (aqueous mercury only).

From *Standard Methods for the Examination of Water and Wastewater*, 18th Edition, 1992, Method 2340B was used for the calculated hardness determination. Hardness is reported as mg (milligram) equivalent $CaCO_3$ per liter (L) determined as follows:

Calculated hardness = 2.497 * (Calcium, mg/L) + 4.118 * (Magnesium, mg/L).

From *EPA's Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846*,

- Method 3015A was used for microwave assisted total metals digestion.
- Method 7473 was used for mercury in solids.
- Method 8260B/5030B was used for volatile organic compounds.

From EPA's *Determination of Inorganic Anions by Ion Chromatography*, Revision 2.1, 1993, Method 300.0 was used to determine the anions.

From EPA's *Methods for Chemical Analysis of Water and Wastes*, March 1983:

- Method 310.1 was followed for the alkalinity determination.
- Method 160.1 was followed for gravimetric total dissolved solids (TDS) determination.
- Method 160.2 was used for gravimetric total suspended solids (TSS) determination.
- Method 415.3 was used for total organic carbon (TOC) determination using either an Apollo 9000 or Phoenix 8000 Non-Dispersive IR (NDIR) system. Also known as dissolved organic carbon (DOC) when performed on the dissolved sample fraction.

The quality control procedures listed in the TDF request were utilized by ESAT to verify accuracy of the results and to evaluate any matrix interferences.

Pentachlorophenol by GCMS method 8270D

Station ID: CTSO-DPILE8-20160601 **Date / Time Sampled:** 06/01/16 07:55 **Workorder** F160601
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160601-01 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**25.0**	**D**	mg/kg	6.60	5	06/02/2016	MM	F160605
Surrogate: 2,4,6-Tribromophenol		*99 %*		*Limit 50-150*		*5*	*06/02/2016*	*MM*	*F160605*

Station ID: CTSO-A1D1-20160601 **Date / Time Sampled:** 06/01/16 08:20 **Workorder** F160601
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160601-02 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	Pentachlorophenol	< 2.00	**U**	mg/kg	1.32	1	06/02/2016	MM	F160605
Surrogate: 2,4,6-Tribromophenol		*91 %*		*Limit 50-150*		*1*	*06/02/2016*	*MM*	*F160605*

Station ID: CTSO-B2SIDEWALL-201606 **Date / Time Sampled:** 06/01/16 10:05 **Workorder** F160601
EPA Tag No.: 01 **Matrix:** Soil **Lab Number:** F160601-03 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**47.2**	**D**	mg/kg	6.60	5	06/02/2016	MM	F160605
Surrogate: 2,4,6-Tribromophenol		*85 %*		*Limit 50-150*		*5*	*06/02/2016*	*MM*	*F160605*

Station ID: CTSO-B2SIDEWALL2-20160 **Date / Time Sampled:** 06/01/16 13:09 **Workorder** F160601
EPA Tag No.: 601 **Matrix:** Soil **Lab Number:** F160601-04 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**80.1**	**D**	mg/kg	13.2	10	06/02/2016	MM	F160605
Surrogate: 2,4,6-Tribromophenol		*100 %*		*Limit 50-150*		*10*	*06/02/2016*	*MM*	*F160605*

Classical Chemistry Parameters

Station ID: CTSO-DPILE8-20160601 **Date / Time Sampled:** 06/01/16 07:55 **Workorder** F160601
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160601-01 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**93.1**		% by Weight		1	06/02/2016	MM	F160606

Station ID: CTSO-A1D1-20160601 **Date / Time Sampled:** 06/01/16 08:20 **Workorder** F160601
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160601-02 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**92.5**		% by Weight		1	06/02/2016	MM	F160606

Station ID: CTSO-B2SIDEWALL-201606 **Date / Time Sampled:** 06/01/16 10:05 **Workorder** F160601
EPA Tag No.: 01 **Matrix:** Soil **Lab Number:** F160601-03 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**85.6**		% by Weight		1	06/02/2016	MM	F160606

Station ID: CTSO-B2SIDEWALL2-20160 **Date / Time Sampled:** 06/01/16 13:09 **Workorder** F160601
EPA Tag No.: 601 **Matrix:** Soil **Lab Number:** F160601-04 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**86.8**		% by Weight		1	06/02/2016	MM	F160606

Note: "J" Qualifier indicates an estimated value. "U" Qualifier indicates analyte not detected at or above MDL.
"D" Qualifier indicates diluted value.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%R	%R Limits	%D or RPD	%D or RPD Limit

NOTE: %R = % Recovery, %R limits do not apply when sample levels exceed 4x the spike level.
RPD = Relative Percent Difference, %D = % Difference, DL = Detection Limit for QC sample .

TechLaw, Inc. - ESAT Region 8 (Mobile Lab)

Initial and Continuing Calibration Verification Results

SVOC Field GCMS Method: EPA 8270D Analysis Name: 8270 PCP

Sequence: F160607 Work Order: F160601 Units: mg/kg

Non-volatile Analyte	Initial (ICV1, ICV2)			Continuing Calibration Verification Standards (CCVs)								
	True	Found	%R	True	Found	%R	True	Found	%R	True	Found	%R
2,4,6-Tribromophenol				1			2			3		
				4			5			6		
				7			8			9		
Pentachlorophenol				1			2			3		
				4			5			6		
				7			8			9		
Phenanthrene-d10				1			2			3		
				4			5			6		
				7			8			9		

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270D

Laboratory: TechLaw, Inc. - ESAT Region 8 (Mobile Lab) SDG:

Client: Superfund Project: Cowboy Timber_MAY2016

Sequence: F160607 Instrument: SVOC Field GCMS

Matrix: Soil Calibration: UNASSIGNED

Internal Standard	Response	RT	Reference Response		Area %	Area % Limits	RT Diff		
CTSO-DPILE8-20160601 (F160601-01)			Lab File ID: CMBT-370.D			Analyzed: 06/02/16 10:14			
Phenanthrene-d10	2508681	11.55				50 - 200			
CTSO-A1D1-20160601 (F160601-02)			Lab File ID: CMBT-371.D			Analyzed: 06/02/16 10:39			
Phenanthrene-d10	2332913	11.55				50 - 200			
CTSO-B2SIDEWALL2-20160601 (F160601-04)			Lab File ID: CMBT-373.D			Analyzed: 06/02/16 11:29			
Phenanthrene-d10	2728826	11.55				50 - 200			
CTSO-B2SIDEWALL-20160601 (F160601-03)			Lab File ID: CMBT-374.D			Analyzed: 06/02/16 11:55			
Phenanthrene-d10	3538219	11.55				50 - 200			

TechLaw Inc., ESAT Region 8

INSTRUMENT ANALYSIS SEQUENCE LOG

Analytical Method: EPA 8270D **Non-volatile** **Sequence ID#:** F160607

Instrument ID #: SVOC Field GCMS Soil **LSR #:**

Analysis ID	Sample Name	Analysis Date	Analysis Time
F160601-01	CTSO-DPILE8-20160601	06/02/16	10:14
F160601-02	CTSO-A1D1-20160601	06/02/16	10:39
F160601-04	CTSO-B2SIDEWALL2-20160601	06/02/16	11:29
F160601-03	CTSO-B2SIDEWALL-20160601	06/02/16	11:55

TechLaw Inc., ESAT Region 8

INSTRUMENT ANALYSIS SEQUENCE LOG

Analytical Method: % Solids **Non-volatile** **Sequence ID#:** F160608

Instrument ID #: SVOC Field GCMS Soil **LSR #:**

Analysis ID	Sample Name	Analysis Date	Analysis Time
F160601-01	CTSO-DPILE8-20160601	06/02/16	16:07
F160601-02	CTSO-A1D1-20160601	06/02/16	16:07
F160601-03	CTSO-B2SIDEWALL-20160601	06/02/16	16:07
F160601-04	CTSO-B2SIDEWALL2-20160601	06/02/16	16:07

U.S. Environmental Protection Agency
Region 8
Technical and Management Services

Laboratory Services Program

Certificate of Analysis

Ref: 8TMS-L

MEMORANDUM

Date: 06/04/16

Subject: Analytical Results--- **Cowboy Timber_MAY2016 / NA**

From: Don Goodrich; EPA Region 8 Analytical Chemistry WAM

To: Craig Myers
Superfund
1595 Wynkoop Street

Received Sample Set(s), [Work Order : Date Received]:
[F160602 : 06/02/2016]

Attached are the analytical results for the samples received from the Cowboy Timber_MAY2016 sampling event, according to TDF NA. All analyses were performed within their method specified holding times unless otherwise noted in the following narrative.

These samples were prepared, analyzed, and verified by the Environmental Services Assistance Team Laboratory (ESAT) according to the requirements of the Technical Direction Form (TDF).

Note: The laboratory herewith transmits this deliverable to the program/project partner for determination of "final data usability" which may include data validation and data quality asessment per and in accordance with EPA QA/G-8, *Guidance on Environmental Data Verification and Data Validation*, November 2002, EPA/240/R-02/004. Laboratory data qualifiers are applied based on the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* June 2008, referred to as "NFG".

Laboratory policy is to dispose of any remaining sample 60 days after data analysis packages are delivered to EPA. If you would like the laboratory to retain the samples for a period longer than 60 days, please contact Don Goodrich within the 60 day period at (303) 312-6687.

Case Narrative

F160602

uality Assessment: Unless indicated by exception, the QA/QC associated with this sample set produced data within the TDF-specified criteria.

Holding Times: All samples were analyzed within their method-specified technical holding time(s).

Sample Receipt: All samples were received within the temperature control limits of 4C +/- 2C.

1. Preparation (PB) / Method blanks (MB). No detections > PQL
Exceptions: None.

2. Initial and Continuing calibration verification analyses (ICVs and CCVs). All CCCs and SPCCs are within limits.
Exceptions: None.

3. Laboratory Control Sample/ Blank Spike (LCS/BS). Recoveries are within 70-130% range. DCDFM recovery high; no hits in samples.
Exceptions: None.

4. Instrument tune (BFB/DFTPP). Tune passes, and all samples were analyzed within 12 hours.
Exceptions: None.

5. Laboratory Duplicate (DUP). "Source" identifies field sample duplicated in the laboratory. RPD limits are within limits.
Exceptions: None.

6. Laboratory Matrix Spike (MS) and Matrix Spike Duplicate (MSD). "Source" defines original field sample fortified prior to analysis. Percent Recovery (%R) limits do not apply when sample concentration(s) exceed the corresponding analyte spike level by a factor of 4 or greater.
Exceptions: None.

7. Internal standards. Area counts must be within 50% to 200% of responses established in associated opening CCV.
Exceptions: None.

8. Any calibration using more than two-points produced a correlation coefficient equal to or greater than 0.995 or have an average response factor of less than or equal to 15% for all non-CCC compounds or less than or equal to 30% for all CCC compounds.
Exceptions: None.

Acronyms and Definitions:

ESAT	Environmental Services Assistance Team
J	Data Estimated qualifier (also applied to all data less than PQL, greater than or equal to MDL)
MDL	Method Detection Limit
PQL	Practical Quantitation Limit, also known as reporting limit.
RPD	Relative Percent Difference (difference divided by the mean)
%D	Percent difference, serial dilution criteria unit, difference divided by the original result.
%R	Percent recovery, analyzed (less sample contribution) divided by true value
<	Analyte NOT DETECTED at or above the Method Detection Limit (MDL)
mg/L	Milligrams per liter (Parts per million). Solids equivalent = mg/Kg.
ug/L	Micrograms per liter (Parts per billion). Solids equivalent = ug/Kg.
NR	No Recovery (matrix spike) - Often seen for calcium/magnesium when their concentration exceeds the spike level by > 4x.
NFG	*USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* June 2008.
RE	Sample Re-analysis. Usually seen on raw data and sequences for required sample dilutions due to over-range analytes.
U	Analyte not detected at or above MDL qualifier
D	Diluted value qualifier

Method(s) Summary:

As defined in the Technical Direction Form (TDF), some or all of the methods listed below were used for the determination of the reported target analytes.

From EPA's *Methods for the Determination of Metals in Environmental Samples*, Supplement I, May 1994, dissolved, total, and/or total recoverable metals were determined by:

- Method 200.7 / 6010B using a PE Optima ICP-OE (ICP).
- Method 200.8 / 6020 using a Perkin-Elmer Elan 6000 ICP-MS.
- Method 200.2 for total recoverable metals (only) digestion.
- Method 245.1 using a Perkin-Elmer FIMS CVAA (aqueous mercury only).

From *Standard Methods for the Examination of Water and Wastewater*, 18th Edition, 1992, Method 2340B was used for the calculated hardness determination. Hardness is reported as mg (milligram) equivalent $CaCO_3$ per liter (L) determined as follows:

Calculated hardness = 2.497 * (Calcium, mg/L) + 4.118 * (Magnesium, mg/L).

From *EPA's Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846*,

- Method 3015A was used for microwave assisted total metals digestion.
- Method 7473 was used for mercury in solids.
- Method 8260B/5030B was used for volatile organic compounds.

From EPA's *Determination of Inorganic Anions by Ion Chromatography*, Revision 2.1, 1993, Method 300.0 was used to determine the anions.

From EPA's *Methods for Chemical Analysis of Water and Wastes*, March 1983:

- Method 310.1 was followed for the alkalinity determination.
- Method 160.1 was followed for gravimetric total dissolved solids (TDS) determination .
- Method 160.2 was used for gravimetric total suspended solids (TSS) determination.
- Method 415.3 was used for total organic carbon (TOC) determination using either an Apollo 9000 or Phoenix 8000 Non-Dispersive IR (NDIR) system. Also known as dissolved organic carbon (DOC) when performed on the dissolved sample fraction.

The quality control procedures listed in the TDF request were utilized by ESAT to verify accuracy of the results and to evaluate any matrix interferences.

Pentachlorophenol by GCMS method 8270D

Station ID: CTSO-DPILE9-20160602 **Date / Time Sampled:** 06/02/16 07:40 **Workorder** F160602
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160602-01 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**30.2**	**D**	mg/kg	2.64	2	06/03/2016	MM	F160609
Surrogate: 2,4,6-Tribromophenol		*86 %*	*Limit 50-150*			*2*	*06/03/2016*	*MM*	*F160609*

Station ID: CTSO-B2D8-20160602 **Date / Time Sampled:** 06/02/16 13:15 **Workorder** F160602
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160602-02 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**85.6**	**D**	mg/kg	6.60	5	06/03/2016	MM	F160609
Surrogate: 2,4,6-Tribromophenol		*87 %*	*Limit 50-150*			*5*	*06/03/2016*	*MM*	*F160609*

Station ID: CTSO-C6D11-20160602 **Date / Time Sampled:** 06/02/16 13:47 **Workorder** F160602
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160602-03 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**98.0**	**D**	mg/kg	13.2	10	06/03/2016	MM	F160609
Surrogate: 2,4,6-Tribromophenol		*98 %*	*Limit 50-150*			*10*	*06/03/2016*	*MM*	*F160609*

Station ID: CTSO-DUP14-20160602 **Date / Time Sampled:** 06/02/16 13:47 **Workorder** F160602
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160602-04 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**112**	**D**	mg/kg	13.2	10	06/03/2016	MM	F160609
Surrogate: 2,4,6-Tribromophenol		*106 %*	*Limit 50-150*			*10*	*06/03/2016*	*MM*	*F160609*

Station ID: CTSO-C5D11-20160602 **Date / Time Sampled:** 06/02/16 14:50 **Workorder** F160602
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160602-05 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**110**	**D**	mg/kg	13.2	10	06/03/2016	MM	F160609
Surrogate: 2,4,6-Tribromophenol		*93 %*	*Limit 50-150*			*10*	*06/03/2016*	*MM*	*F160609*

Station ID: CTSO-C5NSW-20160602 **Date / Time Sampled:** 06/02/16 14:51 **Workorder** F160602
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160602-06 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch

EPA 8270D	**Pentachlorophenol**	**134**	**D**	mg/kg	6.60	5	06/03/2016	MM	F160609
Surrogate: 2,4,6-Tribromophenol		*89 %*	*Limit 50-150*			*5*	*06/03/2016*	*MM*	*F160609*

Station ID: CTSO-C3D8-20160602 **Date / Time Sampled:** 06/02/16 16:20 **Workorder** F160602
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160602-07 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**127**	**D**	mg/kg	6.60	5	06/03/2016	MM	F160609
Surrogate: 2,4,6-Tribromophenol		*90 %*	*Limit 50-150*			*5*	*06/03/2016*	*MM*	*F160609*

Station ID: CTSO-B4D8-20160602 **Date / Time Sampled:** 06/02/16 17:20 **Workorder** F160602
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160602-08 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**22.5**		mg/kg	1.32	1	06/03/2016	MM	F160609
Surrogate: 2,4,6-Tribromophenol		*82 %*	*Limit 50-150*			*1*	*06/03/2016*	*MM*	*F160609*

Station ID: CTSO-C3ND8-20160602 **Date / Time Sampled:** 06/02/16 17:25 **Workorder** F160602
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160602-09 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**3.91**		mg/kg	1.32	1	06/04/2016	MM	F160609
Surrogate: 2,4,6-Tribromophenol		*83 %*	*Limit 50-150*			*1*	*06/04/2016*	*MM*	*F160609*

Classical Chemistry Parameters

Station ID: CTSO-DPILE9-20160602 **Date / Time Sampled:** 06/02/16 07:40 **Workorder** F160602
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160602-01 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**87.6**		% by Weight		1	06/03/2016	MM	F160610

Station ID: CTSO-B2D8-20160602 **Date / Time Sampled:** 06/02/16 13:15 **Workorder** F160602
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160602-02 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**98.8**		% by Weight		1	06/03/2016	MM	F160610

Station ID: CTSO-C6D11-20160602 **Date / Time Sampled:** 06/02/16 13:47 **Workorder** F160602
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160602-03 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**96.2**		% by Weight		1	06/03/2016	MM	F160610

Station ID: CTSO-DUP14-20160602 **Date / Time Sampled:** 06/02/16 13:47 **Workorder** F160602
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160602-04 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**96.0**		% by Weight		1	06/03/2016	MM	F160610

Station ID: CTSO-C5D11-20160602 **Date / Time Sampled:** 06/02/16 14:50 **Workorder** F160602
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160602-05 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**94.1**		% by Weight		1	06/03/2016	MM	F160610

Station ID: CTSO-C5NSW-20160602 **Date / Time Sampled:** 06/02/16 14:51 **Workorder** F160602
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160602-06 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**94.8**		% by Weight		1	06/03/2016	MM	F160610

Station ID: CTSO-C3D8-20160602 **Date / Time Sampled:** 06/02/16 16:20 **Workorder** F160602
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160602-07 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch

% Solids	**% Solids**	**92.7**	% by Weight	1	06/03/2016	MM	F160610

Station ID: CTSO-B4D8-20160602 **Date / Time Sampled:** 06/02/16 17:20 **Workorder** F160602
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160602-08 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**94.6**		% by Weight		1	06/03/2016	MM	F160610

Station ID: CTSO-C3ND8-20160602 **Date / Time Sampled:** 06/02/16 17:25 **Workorder** F160602
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160602-09 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**94.9**		% by Weight		1	06/03/2016	MM	F160610

Note: "J" Qualifier indicates an estimated value. "U" Qualifier indicates analyte not detected at or above MDL.
"D" Qualifier indicates diluted value.

Pentachlorophenol by GCMS method 8270D - Quality Control

TechLaw, Inc. - ESAT Region 8 (Mobile Lab)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%R	%R Limits	%D or RPD	%D or RPD Limit
SVOC Field GCMS									
Batch F160609 - EPA 3550C			***Soil***						**SVOC Field GCMS**
Method Blank (F160609-BLK1)						Prepared & Analyzed: 06/03/16			
Pentachlorophenol	< 1.32	2.00	mg/kg						
Method Blank Spike (F160609-BS1)						Prepared & Analyzed: 06/03/16			
Pentachlorophenol	17.1	2.00	mg/kg	20.0		86	70-130		
Matrix Spike (F160609-MS1)			**Source: F160602-01**			Prepared & Analyzed: 06/03/16			
Pentachlorophenol	83.5	4.00	mg/kg	20.0	30.2	267	17-109		
Matrix Spike Dup (F160609-MSD1)			**Source: F160602-01**			Prepared & Analyzed: 06/03/16			
Pentachlorophenol	87.0	4.00	mg/kg	20.0	30.2	284	17-109	4	47

NOTE: %R = % Recovery, %R limits do not apply when sample levels exceed 4x the spike level.
RPD = Relative Percent Difference, %D = % Difference, DL = Detection Limit for QC sample .

TechLaw, Inc. - ESAT Region 8 (Mobile Lab)

Initial and Continuing Calibration Verification Results

SVOC Field GCMS Method: EPA 8270D Analysis Name: 8270 PCP

Sequence: F160611 Work Order: F160602 Units: mg/kg

Non-volatile Analyte	Initial (ICV1, ICV2)			Continuing Calibration Verification Standards (CCVs)								
	True	Found	%R	True	Found	%R	True	Found	%R	True	Found	%R
2,4,6-Tribromophenol				1			2			3		
				20.0	17.9	89.5						
				4			5			6		
				7			8			9		
Pentachlorophenol				1			2			3		
				20.0	17.5	87.5						
				4			5			6		
				7			8			9		
Phenanthrene-d10				1			2			3		
				2000	0.00	0.0						
				4			5			6		
				7			8			9		

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270D

Laboratory: TechLaw, Inc. - ESAT Region 8 (Mobile Lab) SDG:

Client: Superfund Project: Cowboy Timber_MAY2016

Sequence: F160611 Instrument: SVOC Field GCMS

Matrix: Soil Calibration: UNASSIGNED

Internal Standard	Response	RT	Reference Response		Area %	Area % Limits	RT Diff		
Calibration Check (F160611-CCV1)			Lab File ID: CMBT-401.D			Analyzed: 06/03/16 15:14			
Phenanthrene-d10	2600203	11.54				50 - 200			
Blank (F160609-BLK1)			Lab File ID: CMBT-402.D			Analyzed: 06/03/16 15:44			
Phenanthrene-d10	2582866	11.55	2600203		99	50 - 200	0.0100		
LCS (F160609-BS1)			Lab File ID: CMBT-403.D			Analyzed: 06/03/16 16:09			
Phenanthrene-d10	3013846	11.55	2600203		116	50 - 200	0.0100		
CTSO-DPILE9-20160602 (F160602-01)			Lab File ID: CMBT-404.D			Analyzed: 06/03/16 16:34			
Phenanthrene-d10	2909690	11.55	2600203		112	50 - 200	0.0100		
Matrix Spike (F160609-MS1)			Lab File ID: CMBT-405.D			Analyzed: 06/03/16 16:59			
Phenanthrene-d10	2824277	11.55	2600203		109	50 - 200	0.0100		
Matrix Spike Dup (F160609-MSD1)			Lab File ID: CMBT-411.D			Analyzed: 06/03/16 20:15			
Phenanthrene-d10	2854846	11.55	2600203		110	50 - 200	0.0100		
CTSO-B2D8-20160602 (F160602-02)			Lab File ID: CMBT-412.D			Analyzed: 06/03/16 20:41			
Phenanthrene-d10	3033882	11.55	2600203		117	50 - 200	0.0100		
CTSO-C6D11-20160602 (F160602-03)			Lab File ID: CMBT-413.D			Analyzed: 06/03/16 21:06			
Phenanthrene-d10	3024669	11.55	2600203		116	50 - 200	0.0100		
CTSO-DUP14-20160602 (F160602-04)			Lab File ID: CMBT-414.D			Analyzed: 06/03/16 21:32			
Phenanthrene-d10	3543717	11.55	2600203		136	50 - 200	0.0100		
CTSO-C5D11-20160602 (F160602-05)			Lab File ID: CMBT-415.D			Analyzed: 06/03/16 21:57			
Phenanthrene-d10	2878129	11.55	2600203		111	50 - 200	0.0100		
CTSO-C5NSW-20160602 (F160602-06)			Lab File ID: CMBT-416.D			Analyzed: 06/03/16 22:23			
Phenanthrene-d10	2798396	11.55	2600203		108	50 - 200	0.0100		
CTSO-C3D8-20160602 (F160602-07)			Lab File ID: CMBT-417.D			Analyzed: 06/03/16 22:48			
Phenanthrene-d10	2971780	11.55	2600203		114	50 - 200	0.0100		
CTSO-B4D8-20160602 (F160602-08)			Lab File ID: CMBT-419.D			Analyzed: 06/03/16 23:39			
Phenanthrene-d10	2789563	11.55	2600203		107	50 - 200	0.0100		
CTSO-C3ND8-20160602 (F160602-09)			Lab File ID: CMBT-420.D			Analyzed: 06/04/16 00:04			
Phenanthrene-d10	2923287	11.54	2600203		112	50 - 200	0.0000		

TechLaw Inc., ESAT Region 8

INSTRUMENT ANALYSIS SEQUENCE LOG

Analytical Method: EPA 8270D **Non-volatile** **Sequence ID#:** F160611

Instrument ID #: SVOC Field GCMS Soil **LSR #:**

Analysis ID	Sample Name	Analysis Date	Analysis Time
F160611-CCV1	Calibration Check	06/03/16	15:14
F160609-BLK1	Blank	06/03/16	15:44
F160609-BS1		06/03/16	16:09
F160602-01	CTSO-DPILE9-20160602	06/03/16	16:34
F160609-MS1	Matrix Spike	06/03/16	16:59
F160609-MSD1	Matrix Spike Dup	06/03/16	20:15
F160602-02	CTSO-B2D8-20160602	06/03/16	20:41
F160602-03	CTSO-C6D11-20160602	06/03/16	21:06
F160602-04	CTSO-DUP14-20160602	06/03/16	21:32
F160602-05	CTSO-C5D11-20160602	06/03/16	21:57
F160602-06	CTSO-C5NSW-20160602	06/03/16	22:23
F160602-07	CTSO-C3D8-20160602	06/03/16	22:48
F160602-08	CTSO-B4D8-20160602	06/03/16	23:39
F160602-09	CTSO-C3ND8-20160602	06/04/16	00:04

TechLaw Inc., ESAT Region 8

INSTRUMENT ANALYSIS SEQUENCE LOG

Analytical Method: % Solids **Non-volatile** **Sequence ID#:** F160612

Instrument ID #: SVOC Field GCMS Soil **LSR #:**

Analysis ID	Sample Name	Analysis Date	Analysis Time
F160602-01	CTSO-DPILE9-20160602	06/03/16	09:22
F160602-02	CTSO-B2D8-20160602	06/03/16	09:22
F160602-03	CTSO-C6D11-20160602	06/03/16	09:22
F160602-04	CTSO-DUP14-20160602	06/03/16	09:22
F160602-05	CTSO-C5D11-20160602	06/03/16	09:22
F160602-06	CTSO-C5NSW-20160602	06/03/16	09:22
F160602-07	CTSO-C3D8-20160602	06/03/16	09:22
F160602-08	CTSO-B4D8-20160602	06/03/16	09:22
F160602-09	CTSO-C3ND8-20160602	06/03/16	09:22

U.S. Environmental Protection Agency
Region 8
Technical and Management Services

Laboratory Services Program

Certificate of Analysis

Ref: 8TMS-L

MEMORANDUM

Date: 06/04/16

Subject: Analytical Results--- **Cowboy Timber_MAY2016 / NA**

From: Don Goodrich; EPA Region 8 Analytical Chemistry WAM

To: Craig Myers
Superfund
1595 Wynkoop Street

Received Sample Set(s), [Work Order : Date Received]:
[F160603 : 06/03/2016]

Attached are the analytical results for the samples received from the Cowboy Timber_MAY2016 sampling event, according to TDF NA. All analyses were performed within their method specified holding times unless otherwise noted in the following narrative.

These samples were prepared, analyzed, and verified by the Environmental Services Assistance Team Laboratory (ESAT) according to the requirements of the Technical Direction Form (TDF).

Note: The laboratory herewith transmits this deliverable to the program/project partner for determination of "final data usability" which may include data validation and data quality asessment per and in accordance with EPA QA/G-8, *Guidance on Environmental Data Verification and Data Validation*, November 2002, EPA/240/R-02/004. Laboratory data qualifiers are applied based on the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* June 2008, referred to as "NFG".

Laboratory policy is to dispose of any remaining sample 60 days after data analysis packages are delivered to EPA. If you would like the laboratory to retain the samples for a period longer than 60 days, please contact Don Goodrich within the 60 day period at (303) 312-6687.

Case Narrative

F160603

Quality Assessment: Unless indicated by exception, the QA/QC associated with this sample set produced data within the TDF-specified criteria.

Holding Times: All samples were analyzed within their method-specified technical holding time(s).

Sample Receipt: All samples were received within the temperature control limits of 4C +/- 2C.

1. Preparation (PB) / Method blanks (MB). No detections > PQL
Exceptions: None.

2. Initial and Continuing calibration verification analyses (ICVs and CCVs). All CCCs and SPCCs are within limits.
Exceptions: None.

3. Laboratory Control Sample/ Blank Spike (LCS/BS). Recoveries are within 70-130% range. DCDFM recovery high; no hits in samples.
Exceptions: None.

4. Instrument tune (BFB/DFTPP). Tune passes, and all samples were analyzed within 12 hours.
Exceptions: None.

5. Laboratory Duplicate (DUP). "Source" identifies field sample duplicated in the laboratory. RPD limits are within limits.
Exceptions: None.

6. Laboratory Matrix Spike (MS) and Matrix Spike Duplicate (MSD). "Source" defines original field sample fortified prior to analysis. Percent Recovery (%R) limits do not apply when sample concentration(s) exceed the corresponding analyte spike level by a factor of 4 or greater.
Exceptions: None.

7. Internal standards. Area counts must be within 50% to 200% of responses established in associated opening CCV.
Exceptions: None.

8. Any calibration using more than two-points produced a correlation coefficient equal to or greater than 0.995 or have an average response factor of less than or equal to 15% for all non-CCC compounds or less than or equal to 30% for all CCC compounds.
Exceptions: None.

Acronyms and Definitions:

ESAT	Environmental Services Assistance Team
J	Data Estimated qualifier (also applied to all data less than PQL, greater than or equal to MDL)
MDL	Method Detection Limit
PQL	Practical Quantitation Limit, also known as reporting limit.
RPD	Relative Percent Difference (difference divided by the mean)
%D	Percent difference, serial dilution criteria unit, difference divided by the original result.
%R	Percent recovery, analyzed (less sample contribution) divided by true value
<	Analyte NOT DETECTED at or above the Method Detection Limit (MDL)
mg/L	Milligrams per liter (Parts per million). Solids equivalent = mg/Kg.
ug/L	Micrograms per liter (Parts per billion). Solids equivalent = ug/Kg.
NR	No Recovery (matrix spike) - Often seen for calcium/magnesium when their concentration exceeds the spike level by > 4x.
NFG	*USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* June 2008.
RE	Sample Re-analysis. Usually seen on raw data and sequences for required sample dilutions due to over-range analytes.
U	Analyte not detected at or above MDL qualifier
D	Diluted value qualifier

Method(s) Summary:

As defined in the Technical Direction Form (TDF), some or all of the methods listed below were used for the determination of the reported target analytes.

From EPA's *Methods for the Determination of Metals in Environmental Samples*, Supplement I, May 1994, dissolved, total, and/or total recoverable metals were determined by:

- Method 200.7 / 6010B using a PE Optima ICP-OE (ICP).
- Method 200.8 / 6020 using a Perkin-Elmer Elan 6000 ICP-MS.
- Method 200.2 for total recoverable metals (only) digestion.
- Method 245.1 using a Perkin-Elmer FIMS CVAA (aqueous mercury only).

From *Standard Methods for the Examination of Water and Wastewater*, 18th Edition, 1992, Method 2340B was used for the calculated hardness determination. Hardness is reported as mg (milligram) equivalent $CaCO_3$ per liter (L) determined as follows:

Calculated hardness = 2.497 * (Calcium, mg/L) + 4.118 * (Magnesium, mg/L).

From *EPA's Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846*,

- Method 3015A was used for microwave assisted total metals digestion.
- Method 7473 was used for mercury in solids.
- Method 8260B/5030B was used for volatile organic compounds.

From EPA's *Determination of Inorganic Anions by Ion Chromatography*, Revision 2.1, 1993, Method 300.0 was used to determine the anions.

From EPA's *Methods for Chemical Analysis of Water and Wastes*, March 1983:

- Method 310.1 was followed for the alkalinity determination.
- Method 160.1 was followed for gravimetric total dissolved solids (TDS) determination .
- Method 160.2 was used for gravimetric total suspended solids (TSS) determination.
- Method 415.3 was used for total organic carbon (TOC) determination using either an Apollo 9000 or Phoenix 8000 Non-Dispersive IR (NDIR) system. Also known as dissolved organic carbon (DOC) when performed on the dissolved sample fraction.

The quality control procedures listed in the TDF request were utilized by ESAT to verify accuracy of the results and to evaluate any matrix interferences.

Pentachlorophenol by GCMS method 8270D

Station ID: CTSO-DPILE10-20160603 **Date / Time Sampled:** 06/03/16 07:20 **Workorder** F160603
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160603-01 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**57.5**	**D**	mg/kg	2.64	2	06/03/2016	MM	F160613
Surrogate: 2,4,6-Tribromophenol		*86 %*	*Limit 50-150*			*2*	*06/03/2016*	*MM*	*F160613*

Station ID: CTSO-B2D9-20160603 **Date / Time Sampled:** 06/03/16 10:20 **Workorder** F160603
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160603-02 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**51.9**	**D**	mg/kg	13.2	10	06/03/2016	MM	F160613
Surrogate: 2,4,6-Tribromophenol		*90 %*	*Limit 50-150*			*10*	*06/03/2016*	*MM*	*F160613*

Station ID: CTSO-B4D9-20160603 **Date / Time Sampled:** 06/03/16 11:40 **Workorder** F160603
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160603-03 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**13.2**	**D**	mg/kg	2.64	2	06/03/2016	MM	F160613
Surrogate: 2,4,6-Tribromophenol		*80 %*	*Limit 50-150*			*2*	*06/03/2016*	*MM*	*F160613*

Station ID: CTSO-C4D11-20160603 **Date / Time Sampled:** 06/03/16 16:10 **Workorder** F160603
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160603-04 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**83.3**		mg/kg	1.32	1	06/03/2016	MM	F160613
Surrogate: 2,4,6-Tribromophenol		*86 %*	*Limit 50-150*			*1*	*06/03/2016*	*MM*	*F160613*

Station ID: CTSO-C4ESW-20160603 **Date / Time Sampled:** 06/03/16 16:12 **Workorder** F160603
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160603-05 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**83.7**		mg/kg	1.32	1	06/03/2016	MM	F160613
Surrogate: 2,4,6-Tribromophenol		*99 %*	*Limit 50-150*			*1*	*06/03/2016*	*MM*	*F160613*

Station ID: CTSO-C3ESW-20160603 **Date / Time Sampled:** 06/03/16 16:26 **Workorder** F160603
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160603-06 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch

EPA 8270D	**Pentachlorophenol**	**59.3**	mg/kg	1.32	1	06/03/2016	MM	F160613
Surrogate: 2,4,6-Tribromophenol		*93 %*	*Limit 50-150*		*2*	*06/03/2016*	*MM*	*F160613*

Station ID: CTSO-C3NSW-20160603 **Date / Time Sampled:** 06/03/16 16:28 **Workorder** F160603

EPA Tag No.: **Matrix:** Soil **Lab Number:** F160603-07 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**38.7**		mg/kg	1.32	1	06/03/2016	MM	F160613
Surrogate: 2,4,6-Tribromophenol		*87 %*	*Limit 50-150*			*2*	*06/03/2016*	*MM*	*F160613*

Station ID: CTSO-C3D11-20160603 **Date / Time Sampled:** 06/03/16 16:28 **Workorder** F160603

EPA Tag No.: **Matrix:** Soil **Lab Number:** F160603-08 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**70.6**		mg/kg	1.32	1	06/03/2016	MM	F160613
Surrogate: 2,4,6-Tribromophenol		*103 %*	*Limit 50-150*			*2*	*06/03/2016*	*MM*	*F160613*

Classical Chemistry Parameters

Station ID: CTSO-DPILE10-20160603 **Date / Time Sampled:** 06/03/16 07:20 **Workorder** F160603
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160603-01 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**96.2**		% by Weight		1	06/04/2016	MM	F160614

Station ID: CTSO-B2D9-20160603 **Date / Time Sampled:** 06/03/16 10:20 **Workorder** F160603
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160603-02 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**95.8**		% by Weight		1	06/04/2016	MM	F160614

Station ID: CTSO-B4D9-20160603 **Date / Time Sampled:** 06/03/16 11:40 **Workorder** F160603
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160603-03 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**98.8**		% by Weight		1	06/04/2016	MM	F160614

Station ID: CTSO-C4D11-20160603 **Date / Time Sampled:** 06/03/16 16:10 **Workorder** F160603
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160603-04 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**96.9**		% by Weight		1	06/04/2016	MM	F160614

Station ID: CTSO-C4ESW-20160603 **Date / Time Sampled:** 06/03/16 16:12 **Workorder** F160603
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160603-05 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**96.7**		% by Weight		1	06/04/2016	MM	F160614

Station ID: CTSO-C3ESW-20160603 **Date / Time Sampled:** 06/03/16 16:26 **Workorder** F160603
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160603-06 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**96.3**		% by Weight		1	06/04/2016	MM	F160614

Station ID: CTSO-C3NSW-20160603 **Date / Time Sampled:** 06/03/16 16:28 **Workorder** F160603
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160603-07 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch

% Solids	**% Solids**	**96.3**	% by Weight	1	06/04/2016	MM	F160614

Station ID: CTSO-C3D11-20160603 **Date / Time Sampled:** 06/03/16 16:28 **Workorder** F160603

EPA Tag No.: **Matrix:** Soil **Lab Number:** F160603-08 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**97.5**		% by Weight		1	06/04/2016	MM	F160614

Note: "J" Qualifier indicates an estimated value. "U" Qualifier indicates analyte not detected at or above MDL.
"D" Qualifier indicates diluted value.

Pentachlorophenol by GCMS method 8270D - Quality Control

TechLaw, Inc. - ESAT Region 8 (Mobile Lab)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%R	%R Limits	%D or RPD	%D or RPD Limit
SVOC Field GCMS									
Batch F160613 - EPA 3550C			***Soil***						**SVOC Field GCMS**
Method Blank (F160613-BLK1)						Prepared & Analyzed: 06/03/16			
Pentachlorophenol	< 1.32	2.00	mg/kg						
Method Blank Spike (F160613-BS1)						Prepared & Analyzed: 06/03/16			
Pentachlorophenol	17.1	2.00	mg/kg	20.0		86	70-130		
Matrix Spike (F160613-MS1)			**Source: F160603-01**			Prepared & Analyzed: 06/03/16			
Pentachlorophenol	68.6	4.00	mg/kg	20.0	57.5	56	17-109		
Matrix Spike Dup (F160613-MSD1)			**Source: F160603-01**			Prepared & Analyzed: 06/03/16			
Pentachlorophenol	69.7	4.00	mg/kg	20.0	57.5	61	17-109	2	47

NOTE: %R = % Recovery, %R limits do not apply when sample levels exceed 4x the spike level.
RPD = Relative Percent Difference, %D = % Difference, DL = Detection Limit for QC sample .

TechLaw, Inc. - ESAT Region 8 (Mobile Lab)

Initial and Continuing Calibration Verification Results

SVOC Field GCMS Method: EPA 8270D Analysis Name: 8270 PCP

Sequence: F160615 Work Order: F160603 Units: mg/kg

Non-volatile Analyte	Initial (ICV1, ICV2)			Continuing Calibration Verification Standards (CCVs)								
	True	Found	%R	True	Found	%R	True	Found	%R	True	Found	%R
2,4,6-Tribromophenol				1			2			3		
				20.0	18.1	90.5	20.0	17.9	89.5			
				4			5			6		
				7			8			9		
Pentachlorophenol				1			2			3		
				20.0	18.3	91.5	20.0	17.5	87.5			
				4			5			6		
				7			8			9		
Phenanthrene-d10				1			2			3		
				2000	0.00	0.0	2000	0.00	0.0			
				4			5			6		
				7			8			9		

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270D

Laboratory: TechLaw, Inc. - ESAT Region 8 (Mobile Lab) SDG:

Client: Superfund Project: Cowboy Timber_MAY2016

Sequence: F160615 Instrument: SVOC Field GCMS

Matrix: Soil Calibration: UNASSIGNED

Internal Standard	Response	RT	Reference Response		Area %	Area % Limits	RT Diff		
Calibration Check (F160615-CCV1)			Lab File ID: CMBT-390.D			Analyzed: 06/03/16 10:03			
Phenanthrene-d10	2659666	11.54				50 - 200			
Blank (F160613-BLK1)			Lab File ID: CMBT-391.D			Analyzed: 06/03/16 10:27			
Phenanthrene-d10	2960043	11.54	2659666		111	50 - 200	0.0000		
LCS (F160613-BS1)			Lab File ID: CMBT-392.D			Analyzed: 06/03/16 10:52			
Phenanthrene-d10	2624889	11.54	2659666		99	50 - 200	0.0000		
CTSO-DPILE10-20160603 (F160603-01)			Lab File ID: CMBT-393.D			Analyzed: 06/03/16 11:18			
Phenanthrene-d10	2784146	11.55	2659666		105	50 - 200	0.0100		
Matrix Spike (F160613-MS1)			Lab File ID: CMBT-394.D			Analyzed: 06/03/16 11:43			
Phenanthrene-d10	2747499	11.54	2659666		103	50 - 200	0.0000		
Matrix Spike Dup (F160613-MSD1)			Lab File ID: CMBT-395.D			Analyzed: 06/03/16 12:08			
Phenanthrene-d10	2812035	11.55	2659666		106	50 - 200	0.0100		
CTSO-B2D9-20160603 (F160603-02)			Lab File ID: CMBT-396.D			Analyzed: 06/03/16 12:33			
Phenanthrene-d10	2776470	11.54	2659666		104	50 - 200	0.0000		
CTSO-B4D9-20160603 (F160603-03)			Lab File ID: CMBT-399.D			Analyzed: 06/03/16 13:48			
Phenanthrene-d10	2770330	11.55	2659666		104	50 - 200	0.0100		
Calibration Check (F160615-CCV2)			Lab File ID: CMBT-401.D			Analyzed: 06/03/16 15:14			
Phenanthrene-d10	2600203	11.54	2659666		98	50 - 200	0.0000		
CTSO-C4D11-20160603 (F160603-04)			Lab File ID: CMBT-406.D			Analyzed: 06/03/16 17:51			
Phenanthrene-d10	2667952	11.55	2600203		103	50 - 200	0.0100		
CTSO-C4ESW-20160603 (F160603-05)			Lab File ID: CMBT-407.D			Analyzed: 06/03/16 18:16			
Phenanthrene-d10	3001357	11.55	2600203		115	50 - 200	0.0100		
CTSO-C3ESW-20160603 (F160603-06)			Lab File ID: CMBT-408.D			Analyzed: 06/03/16 18:59			
Phenanthrene-d10	2929188	11.55	2600203		113	50 - 200	0.0100		
CTSO-C3NSW-20160603 (F160603-07)			Lab File ID: CMBT-409.D			Analyzed: 06/03/16 19:24			
Phenanthrene-d10	3026050	11.55	2600203		116	50 - 200	0.0100		
CTSO-C3D11-20160603 (F160603-08)			Lab File ID: CMBT-410.D			Analyzed: 06/03/16 19:49			
Phenanthrene-d10	2596233	11.55	2600203		100	50 - 200	0.0100		

TechLaw Inc., ESAT Region 8

INSTRUMENT ANALYSIS SEQUENCE LOG

Analytical Method: EPA 8270D **Non-volatile** **Sequence ID#:** F160615

Instrument ID #: SVOC Field GCMS Soil **LSR #:**

Analysis ID	Sample Name	Analysis Date	Analysis Time
F160615-CCV1	Calibration Check	06/03/16	10:03
F160613-BLK1	Blank	06/03/16	10:27
F160613-BS1		06/03/16	10:52
F160603-01	CTSO-DPILE10-20160603	06/03/16	11:18
F160613-MS1	Matrix Spike	06/03/16	11:43
F160613-MSD1	Matrix Spike Dup	06/03/16	12:08
F160603-02	CTSO-B2D9-20160603	06/03/16	12:33
F160603-03	CTSO-B4D9-20160603	06/03/16	13:48
F160615-CCV2	Calibration Check	06/03/16	15:14
F160603-04	CTSO-C4D11-20160603	06/03/16	17:51
F160603-05	CTSO-C4ESW-20160603	06/03/16	18:16
F160603-06	CTSO-C3ESW-20160603	06/03/16	18:59
F160603-07	CTSO-C3NSW-20160603	06/03/16	19:24
F160603-08	CTSO-C3D11-20160603	06/03/16	19:49

TechLaw Inc., ESAT Region 8

INSTRUMENT ANALYSIS SEQUENCE LOG

Analytical Method: % Solids **Non-volatile** **Sequence ID#:** F160616

Instrument ID #: SVOC Field GCMS Soil **LSR #:**

Analysis ID	Sample Name	Analysis Date	Analysis Time
F160603-01	CTSO-DPILE10-20160603	06/04/16	10:43
F160603-02	CTSO-B2D9-20160603	06/04/16	10:43
F160603-03	CTSO-B4D9-20160603	06/04/16	10:43
F160603-04	CTSO-C4D11-20160603	06/04/16	10:43
F160603-05	CTSO-C4ESW-20160603	06/04/16	10:43
F160603-06	CTSO-C3ESW-20160603	06/04/16	10:43
F160603-07	CTSO-C3NSW-20160603	06/04/16	10:43
F160603-08	CTSO-C3D11-20160603	06/04/16	10:43

U.S. Environmental Protection Agency
Region 8
Technical and Management Services

Laboratory Services Program

Certificate of Analysis

Ref: 8TMS-L

MEMORANDUM

Date: 06/16/16

Subject: Analytical Results--- **Cowboy Timber_MAY2016 / NA**

From: Don Goodrich; EPA Region 8 Analytical Chemistry WAM

To: Craig Myers
Superfund
1595 Wynkoop Street

Received Sample Set(s), [Work Order : Date Received]:
[F160604 : 06/15/2016]

Attached are the analytical results for the samples received from the Cowboy Timber_MAY2016 sampling event, according to TDF NA. All analyses were performed within their method specified holding times unless otherwise noted in the following narrative.

These samples were prepared, analyzed, and verified by the Environmental Services Assistance Team Laboratory (ESAT) according to the requirements of the Technical Direction Form (TDF).

Note: The laboratory herewith transmits this deliverable to the program/project partner for determination of "final data usability" which may include data validation and data quality asessment per and in accordance with EPA QA/G-8, *Guidance on Environmental Data Verification and Data Validation*, November 2002, EPA/240/R-02/004. Laboratory data qualifiers are applied based on the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* June 2008, referred to as "NFG".

Laboratory policy is to dispose of any remaining sample 60 days after data analysis packages are delivered to EPA. If you would like the laboratory to retain the samples for a period longer than 60 days, please contact Don Goodrich within the 60 day period at (303) 312-6687.

Case Narrative

F160604

Quality Assessment: Unless indicated by exception, the QA/QC associated with this sample set produced data within the TDF-specified criteria.

Holding Times: All samples were analyzed within their method-specified technical holding time(s).

Sample Receipt: All samples were received within the temperature control limits of 4C +/- 2C.

1. Preparation (PB) / Method blanks (MB). No detections > PQL
Exceptions: None.

2. Initial and Continuing calibration verification analyses (ICVs and CCVs). All CCCs and SPCCs are within limits.
Exceptions: None.

3. Laboratory Control Sample/ Blank Spike (LCS/BS). Recoveries are within 70-130% range. DCDFM recovery high; no hits in samples.
Exceptions: None.

4. Instrument tune (BFB/DFTPP). Tune passes, and all samples were analyzed within 12 hours.
Exceptions: None.

5. Laboratory Duplicate (DUP). "Source" identifies field sample duplicated in the laboratory. RPD limits are within limits.
Exceptions: None.

6. Laboratory Matrix Spike (MS) and Matrix Spike Duplicate (MSD). "Source" defines original field sample fortified prior to analysis. Percent Recovery (%R) limits do not apply when sample concentration(s) exceed the corresponding analyte spike level by a factor of 4 or greater.
Exceptions: None.

7. Internal standards. Area counts must be within 50% to 200% of responses established in associated opening CCV.
Exceptions: None.

8. Any calibration using more than two-points produced a correlation coefficient equal to or greater than 0.995 or have an average response factor of less than or equal to 15% for all non-CCC compounds or less than or equal to 30% for all CCC compounds.
Exceptions: None.

Acronyms and Definitions:

ESAT	Environmental Services Assistance Team
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MDL	Method Detection Limit
PQL	Practical Quantitation Limit, also known as reporting limit.
RPD	Relative Percent Difference (difference divided by the mean)
%D	Percent difference, serial dilution criteria unit, difference divided by the original result.
%R	Percent recovery, analyzed (less sample contribution) divided by true value
<	Analyte NOT DETECTED at or above the Method Detection Limit (MDL)
mg/L	Milligrams per liter (Parts per million). Solids equivalent = mg/Kg.
ug/L	Micrograms per liter (Parts per billion). Solids equivalent = ug/Kg.
NR	No Recovery (matrix spike) - Often seen for calcium/magnesium when their concentration exceeds the spike level by > 4x.
NFG	*USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* June 2008.
RE	Sample Re-analysis. Usually seen on raw data and sequences for required sample dilutions due to over-range analytes.
U	Analyte not detected at or above MDL qualifier
D	Diluted value qualifier

Method(s) Summary:

As defined in the Technical Direction Form (TDF), some or all of the methods listed below were used for the determination of the reported target analytes.

From EPA's *Methods for the Determination of Metals in Environmental Samples*, Supplement I, May 1994, dissolved, total, and/or total recoverable metals were determined by:

- Method 200.7 / 6010B using a PE Optima ICP-OE (ICP).
- Method 200.8 / 6020 using a Perkin-Elmer Elan 6000 ICP-MS.
- Method 200.2 for total recoverable metals (only) digestion.
- Method 245.1 using a Perkin-Elmer FIMS CVAA (aqueous mercury only).

From *Standard Methods for the Examination of Water and Wastewater*, 18th Edition, 1992, Method 2340B was used for the calculated hardness determination. Hardness is reported as mg (milligram) equivalent $CaCO_3$ per liter (L) determined as follows:

Calculated hardness = 2.497 * (Calcium, mg/L) + 4.118 * (Magnesium, mg/L).

From *EPA's Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846*,

- Method 3015A was used for microwave assisted total metals digestion.
- Method 7473 was used for mercury in solids.
- Method 8260B/5030B was used for volatile organic compounds.

From EPA's *Determination of Inorganic Anions by Ion Chromatography*, Revision 2.1, 1993, Method 300.0 was used to determine the anions.

From EPA's *Methods for Chemical Analysis of Water and Wastes*, March 1983:

- Method 310.1 was followed for the alkalinity determination.
- Method 160.1 was followed for gravimetric total dissolved solids (TDS) determination .
- Method 160.2 was used for gravimetric total suspended solids (TSS) determination.
- Method 415.3 was used for total organic carbon (TOC) determination using either an Apollo 9000 or Phoenix 8000 Non-Dispersive IR (NDIR) system. Also known as dissolved organic carbon (DOC) when performed on the dissolved sample fraction.

The quality control procedures listed in the TDF request were utilized by ESAT to verify accuracy of the results and to evaluate any matrix interferences.

Pentachlorophenol by GCMS method 8270D

Station ID: CTSO-A11D1-20160615 **Date / Time Sampled:** 06/15/16 14:20 **Workorder** F160604
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160604-01 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**2.95**		mg/kg	1.32	1	06/15/2016	SW	F160618
Surrogate: 2,4,6-Tribromophenol		*85 %*	*Limit 50-150*			*1*	*06/15/2016*	*SW*	*F160618*

Station ID: CTSO-DUP16-20160615 **Date / Time Sampled:** 06/15/16 00:00 **Workorder** F160604
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160604-02 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**3.14**		mg/kg	1.32	1	06/15/2016	SW	F160618
Surrogate: 2,4,6-Tribromophenol		*88 %*	*Limit 50-150*			*1*	*06/15/2016*	*SW*	*F160618*

Station ID: CTSO-B11D1-20160615 **Date / Time Sampled:** 06/15/16 14:25 **Workorder** F160604
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160604-03 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**3.55**		mg/kg	1.32	1	06/15/2016	SW	F160618
Surrogate: 2,4,6-Tribromophenol		*96 %*	*Limit 50-150*			*1*	*06/15/2016*	*SW*	*F160618*

Station ID: CTSO-C11D1-20160615 **Date / Time Sampled:** 06/15/16 14:30 **Workorder** F160604
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160604-04 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**93.0**		mg/kg	1.32	1	06/15/2016	SW	F160618
Surrogate: 2,4,6-Tribromophenol		*103 %*	*Limit 50-150*			*1*	*06/15/2016*	*SW*	*F160618*

Station ID: CTSO-D11D1-20160615 **Date / Time Sampled:** 06/15/16 14:35 **Workorder** F160604
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160604-05 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**85.3**		mg/kg	1.32	1	06/15/2016	SW	F160618
Surrogate: 2,4,6-Tribromophenol		*103 %*	*Limit 50-150*			*1*	*06/15/2016*	*SW*	*F160618*

Station ID: CTSO-E11D1-20160615 **Date / Time Sampled:** 06/15/16 14:40 **Workorder** F160604
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160604-06 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**8.13**		mg/kg	1.32	1	06/15/2016	SW	F160618
Surrogate: 2,4,6-Tribromophenol		*99 %*	*Limit 50-150*			*1*	*06/15/2016*	*SW*	*F160618*

Station ID: CTSO-E10D1-20160615 **Date / Time Sampled:** 06/15/16 14:44 **Workorder** F160604
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160604-07 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**32.0**		mg/kg	1.32	1	06/15/2016	SW	F160618
Surrogate: 2,4,6-Tribromophenol		*102 %*	*Limit 50-150*			*1*	*06/15/2016*	*SW*	*F160618*

Station ID: CTSO-E9D1-20160615 **Date / Time Sampled:** 06/15/16 14:47 **Workorder** F160604
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160604-08 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**23.1**		mg/kg	1.32	1	06/15/2016	SW	F160618
Surrogate: 2,4,6-Tribromophenol		*99 %*	*Limit 50-150*			*1*	*06/15/2016*	*SW*	*F160618*

Station ID: CTSO-A10D1-20160615 **Date / Time Sampled:** 06/15/16 15:35 **Workorder** F160604
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160604-09 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**13.6**		mg/kg	1.32	1	06/15/2016	SW	F160618
Surrogate: 2,4,6-Tribromophenol		*102 %*	*Limit 50-150*			*1*	*06/15/2016*	*SW*	*F160618*

Station ID: CTSO-B10D1-20160615 **Date / Time Sampled:** 06/15/16 15:42 **Workorder** F160604
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160604-10 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**2.38**		mg/kg	1.32	1	06/15/2016	SW	F160618
Surrogate: 2,4,6-Tribromophenol		*101 %*	*Limit 50-150*			*1*	*06/15/2016*	*SW*	*F160618*

Station ID: CTSO-DUP17-20160615 **Date / Time Sampled:** 06/15/16 00:00 **Workorder** F160604
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160604-11 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**2.31**		mg/kg	1.32	1	06/15/2016	SW	F160618
Surrogate: 2,4,6-Tribromophenol		*98 %*	*Limit 50-150*			*1*	*06/15/2016*	*SW*	*F160618*

Project Name: **Cowboy Timber_MAY2016** **Certificate of Analysis**

TDF #: **NA**

Station ID: CTSO-A9D1-20160615 **Date / Time Sampled:** 06/15/16 16:45 **Workorder** F160604

EPA Tag No.: **Matrix:** Soil **Lab Number:** F160604-12 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**14.5**		mg/kg	1.32	1	06/15/2016	SW	F160618
Surrogate: 2,4,6-Tribromophenol		*99 %*		*Limit 50-150*		*1*	*06/15/2016*	*SW*	*F160618*

Classical Chemistry Parameters

Station ID: CTSO-A11D1-20160615 **Date / Time Sampled:** 06/15/16 14:20 **Workorder** F160604
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160604-01 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**98.7**		% by Weight		1	06/16/2016	SW	F160617

Station ID: CTSO-DUP16-20160615 **Date / Time Sampled:** 06/15/16 00:00 **Workorder** F160604
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160604-02 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**99.4**		% by Weight		1	06/16/2016	SW	F160617

Station ID: CTSO-B11D1-20160615 **Date / Time Sampled:** 06/15/16 14:25 **Workorder** F160604
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160604-03 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**97.7**		% by Weight		1	06/16/2016	SW	F160617

Station ID: CTSO-C11D1-20160615 **Date / Time Sampled:** 06/15/16 14:30 **Workorder** F160604
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160604-04 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**97.6**		% by Weight		1	06/16/2016	SW	F160617

Station ID: CTSO-D11D1-20160615 **Date / Time Sampled:** 06/15/16 14:35 **Workorder** F160604
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160604-05 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**97.8**		% by Weight		1	06/16/2016	SW	F160617

Station ID: CTSO-E11D1-20160615 **Date / Time Sampled:** 06/15/16 14:40 **Workorder** F160604
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160604-06 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**99.1**		% by Weight		1	06/16/2016	SW	F160617

Station ID: CTSO-E10D1-20160615 **Date / Time Sampled:** 06/15/16 14:44 **Workorder** F160604
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160604-07 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch

% Solids	**% Solids**	**98.1**		% by Weight		1	06/16/2016	SW	F160617

Station ID: CTSO-E9D1-20160615 **Date / Time Sampled:** 06/15/16 14:47 **Workorder** F160604
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160604-08 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**97.9**		% by Weight		1	06/16/2016	SW	F160617

Station ID: CTSO-A10D1-20160615 **Date / Time Sampled:** 06/15/16 15:35 **Workorder** F160604
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160604-09 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**97.5**		% by Weight		1	06/16/2016	SW	F160617

Station ID: CTSO-B10D1-20160615 **Date / Time Sampled:** 06/15/16 15:42 **Workorder** F160604
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160604-10 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**93.4**		% by Weight		1	06/16/2016	SW	F160617

Station ID: CTSO-DUP17-20160615 **Date / Time Sampled:** 06/15/16 00:00 **Workorder** F160604
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160604-11 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**94.1**		% by Weight		1	06/16/2016	SW	F160617

Station ID: CTSO-A9D1-20160615 **Date / Time Sampled:** 06/15/16 16:45 **Workorder** F160604
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160604-12 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**94.9**		% by Weight		1	06/16/2016	SW	F160617

Note: "J" Qualifier indicates an estimated value. "U" Qualifier indicates analyte not detected at or above MDL.
"D" Qualifier indicates diluted value.

Pentachlorophenol by GCMS method 8270D - Quality Control

TechLaw, Inc. - ESAT Region 8 (Mobile Lab)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%R	%R Limits	%D or RPD	%D or RPD Limit
SVOC Field GCMS									
Batch F160618 - EPA 3550C			***Soil***						**SVOC Field GCMS**
Method Blank (F160618-BLK1)						Prepared & Analyzed: 06/15/16			
Pentachlorophenol	< 1.32	2.00	mg/kg						
Method Blank Spike (F160618-BS1)						Prepared & Analyzed: 06/15/16			
Pentachlorophenol	20.0	2.00	mg/kg	20.0		100	70-130		
Matrix Spike (F160618-MS1)			**Source: F160604-01**			Prepared & Analyzed: 06/15/16			
Pentachlorophenol	17.2	2.00	mg/kg	20.0	2.95	71	17-109		
Matrix Spike Dup (F160618-MSD1)			**Source: F160604-01**			Prepared & Analyzed: 06/15/16			
Pentachlorophenol	17.9	2.00	mg/kg	20.0	2.95	75	17-109	4	47

NOTE: %R = % Recovery, %R limits do not apply when sample levels exceed 4x the spike level.
RPD = Relative Percent Difference, %D = % Difference, DL = Detection Limit for QC sample .

Project Name: **Cowboy Timber_MAY2016** **Certificate of Analysis**

TDF #: **NA**

TechLaw, Inc. - ESAT Region 8 (Mobile Lab)

Initial and Continuing Calibration Verification Results

SVOC Field GCMS Method: EPA 8270D Analysis Name: 8270 PCP

Sequence: F160619 Work Order: F160604 Units: mg/kg

Non-volatile Analyte	Initial (ICV1, ICV2)			Continuing Calibration Verification Standards (CCVs)								
	True	Found	%R	True	Found	%R	True	Found	%R	True	Found	%R
2,4,6-Tribromophenol				1			2			3		
				20.0	18.9	94.5	20.0	21.1	105.5			
				4			5			6		
				7			8			9		
Pentachlorophenol				1			2			3		
				20.0	19.9	99.5	20.0	24.0	120.0			
				4			5			6		
				7			8			9		
Phenanthrene-d10				1			2			3		
				2000	0.00	0.0	2000	0.00	0.0			
				4			5			6		
				7			8			9		

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270D

Laboratory: TechLaw, Inc. - ESAT Region 8 (Mobile Lab) SDG:

Client: Superfund Project: Cowboy Timber_MAY2016

Sequence: F160619 Instrument: SVOC Field GCMS

Matrix: Soil Calibration: UNASSIGNED

Internal Standard	Response	RT	Reference Response		Area %	Area % Limits	RT Diff		
Calibration Check (F160619-CCV1)			Lab File ID: CMBT-436.D			Analyzed: 06/15/16 14:34			
Phenanthrene-d10	2431894	11.54				50 - 200			
Blank (F160618-BLK1)			Lab File ID: CMBT-437.D			Analyzed: 06/15/16 15:00			
Phenanthrene-d10	2586420	11.55	2431894		106	50 - 200	0.0100		
LCS (F160618-BS1)			Lab File ID: CMBT-438.D			Analyzed: 06/15/16 15:26			
Phenanthrene-d10	2652210	11.55	2431894		109	50 - 200	0.0100		
CTSO-A11D1-20160615 (F160604-01)			Lab File ID: CMBT-439.D			Analyzed: 06/15/16 15:51			
Phenanthrene-d10	2669810	11.55	2431894		110	50 - 200	0.0100		
Matrix Spike (F160618-MS1)			Lab File ID: CMBT-440.D			Analyzed: 06/15/16 16:16			
Phenanthrene-d10	2828228	11.55	2431894		116	50 - 200	0.0100		
Matrix Spike Dup (F160618-MSD1)			Lab File ID: CMBT-441.D			Analyzed: 06/15/16 16:42			
Phenanthrene-d10	2792229	11.55	2431894		115	50 - 200	0.0100		
CTSO-DUP16-20160615 (F160604-02)			Lab File ID: CMBT-442.D			Analyzed: 06/15/16 17:07			
Phenanthrene-d10	2710078	11.55	2431894		111	50 - 200	0.0100		
CTSO-B11D1-20160615 (F160604-03)			Lab File ID: CMBT-443.D			Analyzed: 06/15/16 17:33			
Phenanthrene-d10	2934264	11.55	2431894		121	50 - 200	0.0100		
CTSO-C11D1-20160615 (F160604-04)			Lab File ID: CMBT-444.D			Analyzed: 06/15/16 17:59			
Phenanthrene-d10	2798674	11.55	2431894		115	50 - 200	0.0100		
CTSO-D11D1-20160615 (F160604-05)			Lab File ID: CMBT-445.D			Analyzed: 06/15/16 18:24			
Phenanthrene-d10	2877741	11.55	2431894		118	50 - 200	0.0100		
CTSO-E11D1-20160615 (F160604-06)			Lab File ID: CMBT-446.D			Analyzed: 06/15/16 18:49			
Phenanthrene-d10	2924983	11.55	2431894		120	50 - 200	0.0100		
CTSO-E10D1-20160615 (F160604-07)			Lab File ID: CMBT-447.D			Analyzed: 06/15/16 19:13			
Phenanthrene-d10	2943759	11.55	2431894		121	50 - 200	0.0100		
CTSO-E9D1-20160615 (F160604-08)			Lab File ID: CMBT-448.D			Analyzed: 06/15/16 19:38			
Phenanthrene-d10	2740882	11.55	2431894		113	50 - 200	0.0100		
CTSO-A10D1-20160615 (F160604-09)			Lab File ID: CMBT-449.D			Analyzed: 06/15/16 20:03			
Phenanthrene-d10	2836428	11.54	2431894		117	50 - 200	0.0000		

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270D

Laboratory: TechLaw, Inc. - ESAT Region 8 (Mobile Lab) SDG:

Client: Superfund Project: Cowboy Timber_MAY2016

Sequence: F160619 Instrument: SVOC Field GCMS

Matrix: Soil Calibration: UNASSIGNED

Internal Standard	Response	RT	Reference Response		Area %	Area % Limits	RT Diff		
CTSO-B10D1-20160615 (F160604-10)			Lab File ID: CMBT-450.D			Analyzed: 06/15/16 20:28			
Phenanthrene-d10	2964001	11.54	2431894		122	50 - 200	0.0000		
CTSO-DUP17-20160615 (F160604-11)			Lab File ID: CMBT-451.D			Analyzed: 06/15/16 20:52			
Phenanthrene-d10	2875963	11.54	2431894		118	50 - 200	0.0000		
CTSO-A9D1-20160615 (F160604-12)			Lab File ID: CMBT-452.D			Analyzed: 06/15/16 21:17			
Phenanthrene-d10	2882858	11.54	2431894		119	50 - 200	0.0000		
Calibration Check (F160619-CCV2)			Lab File ID: CMBT-453.D			Analyzed: 06/15/16 21:42			
Phenanthrene-d10	2557035	11.54	2431894		105	50 - 200	0.0000		

TechLaw Inc., ESAT Region 8
INSTRUMENT ANALYSIS SEQUENCE LOG

Analytical Method: EPA 8270D **Non-volatile** **Sequence ID#:** F160619

Instrument ID #: SVOC Field GCMS Soil **LSR #:**

Analysis ID	Sample Name	Analysis Date	Analysis Time
F160619-CCV1	Calibration Check	06/15/16	14:34
F160618-BLK1	Blank	06/15/16	15:00
F160618-BS1		06/15/16	15:26
F160604-01	CTSO-A11D1-20160615	06/15/16	15:51
F160618-MS1	Matrix Spike	06/15/16	16:16
F160618-MSD1	Matrix Spike Dup	06/15/16	16:42
F160604-02	CTSO-DUP16-20160615	06/15/16	17:07
F160604-03	CTSO-B11D1-20160615	06/15/16	17:33
F160604-04	CTSO-C11D1-20160615	06/15/16	17:59
F160604-05	CTSO-D11D1-20160615	06/15/16	18:24
F160604-06	CTSO-E11D1-20160615	06/15/16	18:49
F160604-07	CTSO-E10D1-20160615	06/15/16	19:13
F160604-08	CTSO-E9D1-20160615	06/15/16	19:38
F160604-09	CTSO-A10D1-20160615	06/15/16	20:03
F160604-10	CTSO-B10D1-20160615	06/15/16	20:28
F160604-11	CTSO-DUP17-20160615	06/15/16	20:52
F160604-12	CTSO-A9D1-20160615	06/15/16	21:17
F160619-CCV2	Calibration Check	06/15/16	21:42

U.S. Environmental Protection Agency
Region 8
Technical and Management Services

Laboratory Services Program

Certificate of Analysis

Ref: 8TMS-L

MEMORANDUM

Date: 06/17/16

Subject: Analytical Results--- **Cowboy Timber_MAY2016 / NA**

From: Don Goodrich; EPA Region 8 Analytical Chemistry WAM

To: Craig Myers
Superfund
1595 Wynkoop Street

Received Sample Set(s), [Work Order : Date Received]:
[F160605 : 06/16/2016]

Attached are the analytical results for the samples received from the Cowboy Timber_MAY2016 sampling event, according to TDF NA. All analyses were performed within their method specified holding times unless otherwise noted in the following narrative.

These samples were prepared, analyzed, and verified by the Environmental Services Assistance Team Laboratory (ESAT) according to the requirements of the Technical Direction Form (TDF).

Note: The laboratory herewith transmits this deliverable to the program/project partner for determination of "final data usability" which may include data validation and data quality asessment per and in accordance with EPA QA/G-8, *Guidance on Environmental Data Verification and Data Validation*, November 2002, EPA/240/R-02/004. Laboratory data qualifiers are applied based on the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* June 2008, referred to as "NFG".

Laboratory policy is to dispose of any remaining sample 60 days after data analysis packages are delivered to EPA. If you would like the laboratory to retain the samples for a period longer than 60 days, please contact Don Goodrich within the 60 day period at (303) 312-6687.

Case Narrative

F160605

Quality Assessment: Unless indicated by exception, the QA/QC associated with this sample set produced data within the TDF-specified criteria.

Holding Times: All samples were analyzed within their method-specified technical holding time(s).

Sample Receipt: All samples were received within the temperature control limits of 4C +/- 2C.

1. Preparation (PB) / Method blanks (MB). No detections > PQL
Exceptions: None.

2. Initial and Continuing calibration verification analyses (ICVs and CCVs). All CCCs and SPCCs are within limits.
Exceptions: None.

3. Laboratory Control Sample/ Blank Spike (LCS/BS). Recoveries are within 70-130% range. DCDFM recovery high; no hits in samples.
Exceptions: None.

4. Instrument tune (BFB/DFTPP). Tune passes, and all samples were analyzed within 12 hours.
Exceptions: None.

5. Laboratory Duplicate (DUP). "Source" identifies field sample duplicated in the laboratory. RPD limits are within limits.
Exceptions: None.

6. Laboratory Matrix Spike (MS) and Matrix Spike Duplicate (MSD). "Source" defines original field sample fortified prior to analysis. Percent Recovery (%R) limits do not apply when sample concentration(s) exceed the corresponding analyte spike level by a factor of 4 or greater.
Exceptions: None.

7. Internal standards. Area counts must be within 50% to 200% of responses established in associated opening CCV.
Exceptions: None.

8. Any calibration using more than two-points produced a correlation coefficient equal to or greater than 0.995 or have an average response factor of less than or equal to 15% for all non-CCC compounds or less than or equal to 30% for all CCC compounds.
Exceptions: None.

Acronyms and Definitions:

ESAT	Environmental Services Assistance Team
J	Data Estimated qualifier (also applied to all data less than PQL, greater than or equal to MDL)
MDL	Method Detection Limit
PQL	Practical Quantitation Limit, also known as reporting limit.
RPD	Relative Percent Difference (difference divided by the mean)
%D	Percent difference, serial dilution criteria unit, difference divided by the original result.
%R	Percent recovery, analyzed (less sample contribution) divided by true value
<	Analyte NOT DETECTED at or above the Method Detection Limit (MDL)
mg/L	Milligrams per liter (Parts per million). Solids equivalent = mg/Kg.
ug/L	Micrograms per liter (Parts per billion). Solids equivalent = ug/Kg.
NR	No Recovery (matrix spike) - Often seen for calcium/magnesium when their concentration exceeds the spike level by > 4x.
NFG	*USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* June 2008.
RE	Sample Re-analysis. Usually seen on raw data and sequences for required sample dilutions due to over-range analytes.
U	Analyte not detected at or above MDL qualifier
D	Diluted value qualifier

Method(s) Summary:

As defined in the Technical Direction Form (TDF), some or all of the methods listed below were used for the determination of the reported target analytes.

From EPA's *Methods for the Determination of Metals in Environmental Samples*, Supplement I, May 1994, dissolved, total, and/or total recoverable metals were determined by:

- Method 200.7 / 6010B using a PE Optima ICP-OE (ICP).
- Method 200.8 / 6020 using a Perkin-Elmer Elan 6000 ICP-MS.
- Method 200.2 for total recoverable metals (only) digestion.
- Method 245.1 using a Perkin-Elmer FIMS CVAA (aqueous mercury only).

From *Standard Methods for the Examination of Water and Wastewater*, 18th Edition, 1992, Method 2340B was used for the calculated hardness determination. Hardness is reported as mg (milligram) equivalent $CaCO_3$ per liter (L) determined as follows:

Calculated hardness = 2.497 * (Calcium, mg/L) + 4.118 * (Magnesium, mg/L).

From *EPA's Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846*,

- Method 3015A was used for microwave assisted total metals digestion.
- Method 7473 was used for mercury in solids.
- Method 8260B/5030B was used for volatile organic compounds.

From EPA's *Determination of Inorganic Anions by Ion Chromatography*, Revision 2.1, 1993, Method 300.0 was used to determine the anions.

From EPA's *Methods for Chemical Analysis of Water and Wastes*, March 1983:

- Method 310.1 was followed for the alkalinity determination.
- Method 160.1 was followed for gravimetric total dissolved solids (TDS) determination.
- Method 160.2 was used for gravimetric total suspended solids (TSS) determination.
- Method 415.3 was used for total organic carbon (TOC) determination using either an Apollo 9000 or Phoenix 8000 Non-Dispersive IR (NDIR) system. Also known as dissolved organic carbon (DOC) when performed on the dissolved sample fraction.

The quality control procedures listed in the TDF request were utilized by ESAT to verify accuracy of the results and to evaluate any matrix interferences.

Pentachlorophenol by GCMS method 8270D

Station ID: CTSO-C11D1S-20160616 **Date / Time Sampled:** 06/16/16 07:50 **Workorder** F160605
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160605-01 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	Pentachlorophenol	< 2.00	U	mg/kg	1.32	1	06/16/2016	SW	F160621
Surrogate: 2,4,6-Tribromophenol		*83 %*		*Limit 50-150*		*1*	*06/16/2016*	*SW*	*F160621*

Station ID: CTSO-C11STAIN-20160616 **Date / Time Sampled:** 06/16/16 08:00 **Workorder** F160605
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160605-02 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	Pentachlorophenol	< 2.00	U	mg/kg	1.32	1	06/16/2016	SW	F160621
Surrogate: 2,4,6-Tribromophenol		*94 %*		*Limit 50-150*		*1*	*06/16/2016*	*SW*	*F160621*

Station ID: CTSO-C10D1-20160616 **Date / Time Sampled:** 06/16/16 09:45 **Workorder** F160605
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160605-03 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**24.0**	**D**	mg/kg	2.64	2	06/16/2016	SW	F160621
Surrogate: 2,4,6-Tribromophenol		*87 %*		*Limit 50-150*		*2*	*06/16/2016*	*SW*	*F160621*

Station ID: CTSO-D10D1-20160616 **Date / Time Sampled:** 06/16/16 09:50 **Workorder** F160605
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160605-04 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**80.1**	**D**	mg/kg	2.64	2	06/16/2016	SW	F160621
Surrogate: 2,4,6-Tribromophenol		*99 %*		*Limit 50-150*		*2*	*06/16/2016*	*SW*	*F160621*

Project Name: Cowboy Timber_MAY2016 **Certificate of Analysis**

TDF #: NA

Classical Chemistry Parameters

Station ID: CTSO-C11D1S-20160616 **Date / Time Sampled:** 06/16/16 07:50 **Workorder** F160605
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160605-01 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**98.6**		% by Weight		1	06/17/2016	SW	F160620

Station ID: CTSO-C11STAIN-20160616 **Date / Time Sampled:** 06/16/16 08:00 **Workorder** F160605
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160605-02 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**97.0**		% by Weight		1	06/17/2016	SW	F160620

Station ID: CTSO-C10D1-20160616 **Date / Time Sampled:** 06/16/16 09:45 **Workorder** F160605
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160605-03 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**95.8**		% by Weight		1	06/17/2016	SW	F160620

Station ID: CTSO-D10D1-20160616 **Date / Time Sampled:** 06/16/16 09:50 **Workorder** F160605
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160605-04 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**95.5**		% by Weight		1	06/17/2016	SW	F160620

Note: "J" Qualifier indicates an estimated value. "U" Qualifier indicates analyte not detected at or above MDL.
"D" Qualifier indicates diluted value.

Pentachlorophenol by GCMS method 8270D - Quality Control

TechLaw, Inc. - ESAT Region 8 (Mobile Lab)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%R	%R Limits	%D or RPD	%D or RPD Limit
SVOC Field GCMS									
Batch F160621 - EPA 3550C			***Soil***						**SVOC Field GCMS**
Method Blank (F160621-BLK1)						Prepared & Analyzed: 06/16/16			
Pentachlorophenol	< 1.32	2.00	mg/kg						
Method Blank Spike (F160621-BS1)						Prepared & Analyzed: 06/16/16			
Pentachlorophenol	20.0	2.00	mg/kg	20.0		100	70-130		
Matrix Spike (F160621-MS1)			**Source: F160605-01**			Prepared & Analyzed: 06/16/16			
Pentachlorophenol	15.2	2.00	mg/kg	20.0	< 1.32	76	17-109		
Matrix Spike Dup (F160621-MSD1)			**Source: F160605-01**			Prepared & Analyzed: 06/16/16			
Pentachlorophenol	15.4	2.00	mg/kg	20.0	< 1.32	77	17-109	1	47

NOTE: %R = % Recovery, %R limits do not apply when sample levels exceed 4x the spike level.
RPD = Relative Percent Difference, %D = % Difference, DL = Detection Limit for QC sample .

Project Name: **Cowboy Timber_MAY2016** **Certificate of Analysis**

TDF #: **NA**

TechLaw, Inc. - ESAT Region 8 (Mobile Lab)

Initial and Continuing Calibration Verification Results

SVOC Field GCMS Method: EPA 8270D Analysis Name: 8270 PCP

Sequence: F160622 Work Order: F160605 Units: mg/kg

Non-volatile Analyte	Initial (ICV1, ICV2)			Continuing Calibration Verification Standards (CCVs)								
	True	Found	%R	True	Found	%R	True	Found	%R	True	Found	%R
2,4,6-Tribromophenol				1			2			3		
				20.0	18.4	92.0	20.0	20.3	101.5			
				4			5			6		
				7			8			9		
Pentachlorophenol				1			2			3		
				20.0	17.9	89.5	20.0	20.6	103.0			
				4			5			6		
				7			8			9		
Phenanthrene-d10				1			2			3		
				2000	0.00	0.0	2000	0.00	0.0			
				4			5			6		
				7			8			9		

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270D

Laboratory: TechLaw, Inc. - ESAT Region 8 (Mobile Lab) SDG:

Client: Superfund Project: Cowboy Timber_MAY2016

Sequence: F160622 Instrument: SVOC Field GCMS

Matrix: Soil Calibration: UNASSIGNED

Internal Standard	Response	RT	Reference Response		Area %	Area % Limits	RT Diff		
Calibration Check (F160622-CCV1)			Lab File ID: CMBT-455.D			Analyzed: 06/16/16 08:02			
Phenanthrene-d10	2661823	11.54				50 - 200			
CTSO-C11D1S-20160616 (F160605-01)			Lab File ID: CMBT-456.D			Analyzed: 06/16/16 08:26			
Phenanthrene-d10	2571290	11.54	2661823		97	50 - 200	0.0000		
CTSO-C11STAIN-20160616 (F160605-02)			Lab File ID: CMBT-457.D			Analyzed: 06/16/16 08:51			
Phenanthrene-d10	2932541	11.55	2661823		110	50 - 200	0.0100		
Blank (F160621-BLK1)			Lab File ID: CMBT-459.D			Analyzed: 06/16/16 11:11			
Phenanthrene-d10	2782713	11.55	2661823		105	50 - 200	0.0100		
LCS (F160621-BS1)			Lab File ID: CMBT-460.D			Analyzed: 06/16/16 11:36			
Phenanthrene-d10	3073280	11.55	2661823		115	50 - 200	0.0100		
Matrix Spike (F160621-MS1)			Lab File ID: CMBT-461.D			Analyzed: 06/16/16 12:01			
Phenanthrene-d10	3252301	11.55	2661823		122	50 - 200	0.0100		
Matrix Spike Dup (F160621-MSD1)			Lab File ID: CMBT-462.D			Analyzed: 06/16/16 12:27			
Phenanthrene-d10	3151199	11.55	2661823		118	50 - 200	0.0100		
CTSO-C10D1-20160616 (F160605-03)			Lab File ID: CMBT-463.D			Analyzed: 06/16/16 12:52			
Phenanthrene-d10	2785738	11.55	2661823		105	50 - 200	0.0100		
CTSO-D10D1-20160616 (F160605-04)			Lab File ID: CMBT-464.D			Analyzed: 06/16/16 13:17			
Phenanthrene-d10	2929366	11.55	2661823		110	50 - 200	0.0100		
Calibration Check (F160622-CCV2)			Lab File ID: CMBT-466.D			Analyzed: 06/16/16 14:56			
Phenanthrene-d10	3094535	11.55	2661823		116	50 - 200	0.0100		

TechLaw Inc., ESAT Region 8

INSTRUMENT ANALYSIS SEQUENCE LOG

Analytical Method: EPA 8270D **Non-volatile** **Sequence ID#:** F160622

Instrument ID #: SVOC Field GCMS Soil **LSR #:**

Analysis ID	Sample Name	Analysis Date	Analysis Time
F160622-CCV1	Calibration Check	06/16/16	08:02
F160605-01	CTSO-C11D1S-20160616	06/16/16	08:26
F160605-02	CTSO-C11STAIN-20160616	06/16/16	08:51
F160621-BLK1	Blank	06/16/16	11:11
F160621-BS1		06/16/16	11:36
F160621-MS1	Matrix Spike	06/16/16	12:01
F160621-MSD1	Matrix Spike Dup	06/16/16	12:27
F160605-03	CTSO-C10D1-20160616	06/16/16	12:52
F160605-04	CTSO-D10D1-20160616	06/16/16	13:17
F160622-CCV2	Calibration Check	06/16/16	14:56

U.S. Environmental Protection Agency
Region 8
Technical and Management Services

Laboratory Services Program

Certificate of Analysis

Ref: 8TMS-L

MEMORANDUM

Date: 06/19/16

Subject: Analytical Results--- **Cowboy Timber_MAY2016 / NA**

From: Don Goodrich; EPA Region 8 Analytical Chemistry WAM

To: Craig Myers
Superfund
1595 Wynkoop Street

Received Sample Set(s), [Work Order : Date Received]:
[F160606 : 06/17/2016]

Attached are the analytical results for the samples received from the Cowboy Timber_MAY2016 sampling event, according to TDF NA. All analyses were performed within their method specified holding times unless otherwise noted in the following narrative.

These samples were prepared, analyzed, and verified by the Environmental Services Assistance Team Laboratory (ESAT) according to the requirements of the Technical Direction Form (TDF).

Note: The laboratory herewith transmits this deliverable to the program/project partner for determination of "final data usability" which may include data validation and data quality asessment per and in accordance with EPA QA/G-8, *Guidance on Environmental Data Verification and Data Validation*, November 2002, EPA/240/R-02/004. Laboratory data qualifiers are applied based on the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* June 2008, referred to as "NFG".

Laboratory policy is to dispose of any remaining sample 60 days after data analysis packages are delivered to EPA. If you would like the laboratory to retain the samples for a period longer than 60 days, please contact Don Goodrich within the 60 day period at (303) 312-6687.

Case Narrative

F160606

Quality Assessment: Unless indicated by exception, the QA/QC associated with this sample set produced data within the TDF-specified criteria.

Holding Times: All samples were analyzed within their method-specified technical holding time(s).

Sample Receipt: All samples were received within the temperature control limits of 4C +/- 2C.

1. Preparation (PB) / Method blanks (MB). No detections > PQL
Exceptions: None.

2. Initial and Continuing calibration verification analyses (ICVs and CCVs). All CCCs and SPCCs are within limits.
Exceptions: None.

3. Laboratory Control Sample/ Blank Spike (LCS/BS). Recoveries are within 70-130% range. DCDFM recovery high; no hits in samples.
Exceptions: None.

4. Instrument tune (BFB/DFTPP). Tune passes, and all samples were analyzed within 12 hours.
Exceptions: None.

5. Laboratory Duplicate (DUP). "Source" identifies field sample duplicated in the laboratory. RPD limits are within limits.
Exceptions: None.

6. Laboratory Matrix Spike (MS) and Matrix Spike Duplicate (MSD). "Source" defines original field sample fortified prior to analysis. Percent Recovery (%R) limits do not apply when sample concentration(s) exceed the corresponding analyte spike level by a factor of 4 or greater.
Exceptions: None.

7. Internal standards. Area counts must be within 50% to 200% of responses established in associated opening CCV.
Exceptions: None.

8. Any calibration using more than two-points produced a correlation coefficient equal to or greater than 0.995 or have an average response factor of less than or equal to 15% for all non-CCC compounds or less than or equal to 30% for all CCC compounds.
Exceptions: None.

Acronyms and Definitions:

ESAT	Environmental Services Assistance Team
J	Data Estimated qualifier (also applied to all data less than PQL, greater than or equal to MDL)
MDL	Method Detection Limit
PQL	Practical Quantitation Limit, also known as reporting limit.
RPD	Relative Percent Difference (difference divided by the mean)
%D	Percent difference, serial dilution criteria unit, difference divided by the original result.
%R	Percent recovery, analyzed (less sample contribution) divided by true value
<	Analyte NOT DETECTED at or above the Method Detection Limit (MDL)
mg/L	Milligrams per liter (Parts per million). Solids equivalent = mg/Kg.
ug/L	Micrograms per liter (Parts per billion). Solids equivalent = ug/Kg.
NR	No Recovery (matrix spike) - Often seen for calcium/magnesium when their concentration exceeds the spike level by > 4x.
NFG	*USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* June 2008.
RE	Sample Re-analysis. Usually seen on raw data and sequences for required sample dilutions due to over-range analytes.
U	Analyte not detected at or above MDL qualifier
D	Diluted value qualifier

Method(s) Summary:

As defined in the Technical Direction Form (TDF), some or all of the methods listed below were used for the determination of the reported target analytes.

From EPA's *Methods for the Determination of Metals in Environmental Samples*, Supplement I, May 1994, dissolved, total, and/or total recoverable metals were determined by:

- Method 200.7 / 6010B using a PE Optima ICP-OE (ICP).
- Method 200.8 / 6020 using a Perkin-Elmer Elan 6000 ICP-MS.
- Method 200.2 for total recoverable metals (only) digestion.
- Method 245.1 using a Perkin-Elmer FIMS CVAA (aqueous mercury only).

From *Standard Methods for the Examination of Water and Wastewater*, 18th Edition, 1992, Method 2340B was used for the calculated hardness determination. Hardness is reported as mg (milligram) equivalent $CaCO_3$ per liter (L) determined as follows:

Calculated hardness = 2.497 * (Calcium, mg/L) + 4.118 * (Magnesium, mg/L).

From *EPA's Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846*,

- Method 3015A was used for microwave assisted total metals digestion.
- Method 7473 was used for mercury in solids.
- Method 8260B/5030B was used for volatile organic compounds.

From EPA's *Determination of Inorganic Anions by Ion Chromatography*, Revision 2.1, 1993, Method 300.0 was used to determine the anions.

From EPA's *Methods for Chemical Analysis of Water and Wastes*, March 1983:

- Method 310.1 was followed for the alkalinity determination.
- Method 160.1 was followed for gravimetric total dissolved solids (TDS) determination .
- Method 160.2 was used for gravimetric total suspended solids (TSS) determination.
- Method 415.3 was used for total organic carbon (TOC) determination using either an Apollo 9000 or Phoenix 8000 Non-Dispersive IR (NDIR) system. Also known as dissolved organic carbon (DOC) when performed on the dissolved sample fraction.

The quality control procedures listed in the TDF request were utilized by ESAT to verify accuracy of the results and to evaluate any matrix interferences.

Pentachlorophenol by GCMS method 8270D

Station ID: CTSO-B9D1-20160617 **Date / Time Sampled:** 06/17/16 07:30 **Workorder** F160606
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160606-01 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**16.2**		mg/kg	1.32	1	06/17/2016	SW	F160624
Surrogate: 2,4,6-Tribromophenol		*87 %*	*Limit 50-150*			*1*	*06/17/2016*	*SW*	*F160624*

Station ID: CTSO-E11D1S-20160617 **Date / Time Sampled:** 06/17/16 07:37 **Workorder** F160606
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160606-02 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	Pentachlorophenol	< 2.00	**U**	mg/kg	1.32	1	06/17/2016	SW	F160624
Surrogate: 2,4,6-Tribromophenol		*85 %*	*Limit 50-150*			*1*	*06/17/2016*	*SW*	*F160624*

Station ID: CTSO-D11D1S-20160617 **Date / Time Sampled:** 06/17/16 07:43 **Workorder** F160606
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160606-03 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**2.57**		mg/kg	1.32	1	06/17/2016	SW	F160624
Surrogate: 2,4,6-Tribromophenol		*89 %*	*Limit 50-150*			*1*	*06/17/2016*	*SW*	*F160624*

Station ID: CTSO-E9D2-20160617 **Date / Time Sampled:** 06/17/16 08:47 **Workorder** F160606
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160606-04 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	Pentachlorophenol	< 2.00	**U**	mg/kg	1.32	1	06/17/2016	SW	F160624
Surrogate: 2,4,6-Tribromophenol		*90 %*	*Limit 50-150*			*1*	*06/17/2016*	*SW*	*F160624*

Station ID: CTSO-E10D2-20160617 **Date / Time Sampled:** 06/17/16 08:55 **Workorder** F160606
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160606-05 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	Pentachlorophenol	< 2.00	**U**	mg/kg	1.32	1	06/17/2016	SW	F160624
Surrogate: 2,4,6-Tribromophenol		*97 %*	*Limit 50-150*			*1*	*06/17/2016*	*SW*	*F160624*

Station ID: CTSO-E11D2-20160617 **Date / Time Sampled:** 06/17/16 14:00 **Workorder** F160606
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160606-06 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch

EPA 8270D	Pentachlorophenol	< 2.00	**U**	mg/kg	1.32	1	06/17/2016	SW	F160624
Surrogate: 2,4,6-Tribromophenol		*86 %*	*Limit 50-150*			*1*	*06/17/2016*	*SW*	*F160624*

Station ID: CTSO-D11D3-20160617 **Date / Time Sampled:** 06/17/16 14:15 **Workorder** F160606

EPA Tag No.: **Matrix:** Soil **Lab Number:** F160606-07 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**8.69**		mg/kg	1.32	1	06/17/2016	SW	F160624
Surrogate: 2,4,6-Tribromophenol		*90 %*	*Limit 50-150*			*1*	*06/17/2016*	*SW*	*F160624*

Station ID: CTSO-D10D4-20160617 **Date / Time Sampled:** 06/17/16 14:18 **Workorder** F160606

EPA Tag No.: **Matrix:** Soil **Lab Number:** F160606-08 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**1.32**	**J**	mg/kg	1.32	1	06/17/2016	SW	F160624
Surrogate: 2,4,6-Tribromophenol		*88 %*	*Limit 50-150*			*1*	*06/17/2016*	*SW*	*F160624*

Classical Chemistry Parameters

Station ID: CTSO-B9D1-20160617 **Date / Time Sampled:** 06/17/16 07:30 **Workorder** F160606
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160606-01 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**96.7**		% by Weight		1	06/19/2016	SW	F160623

Station ID: CTSO-E11D1S-20160617 **Date / Time Sampled:** 06/17/16 07:37 **Workorder** F160606
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160606-02 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**99.2**		% by Weight		1	06/19/2016	SW	F160623

Station ID: CTSO-D11D1S-20160617 **Date / Time Sampled:** 06/17/16 07:43 **Workorder** F160606
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160606-03 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**98.6**		% by Weight		1	06/19/2016	SW	F160623

Station ID: CTSO-E9D2-20160617 **Date / Time Sampled:** 06/17/16 08:47 **Workorder** F160606
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160606-04 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**97.6**		% by Weight		1	06/19/2016	SW	F160623

Station ID: CTSO-E10D2-20160617 **Date / Time Sampled:** 06/17/16 08:55 **Workorder** F160606
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160606-05 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**95.5**		% by Weight		1	06/19/2016	SW	F160623

Station ID: CTSO-E11D2-20160617 **Date / Time Sampled:** 06/17/16 14:00 **Workorder** F160606
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160606-06 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**97.0**		% by Weight		1	06/19/2016	SW	F160623

Station ID: CTSO-D11D3-20160617 **Date / Time Sampled:** 06/17/16 14:15 **Workorder** F160606
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160606-07 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch

% Solids	**% Solids**	**93.9**	% by Weight	1	06/19/2016	SW	F160623

Station ID: CTSO-D10D4-20160617 **Date / Time Sampled:** 06/17/16 14:18 **Workorder** F160606

EPA Tag No.: **Matrix:** Soil **Lab Number:** F160606-08 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**96.2**		% by Weight		1	06/19/2016	SW	F160623

Note: "J" Qualifier indicates an estimated value. "U" Qualifier indicates analyte not detected at or above MDL.
"D" Qualifier indicates diluted value.

Pentachlorophenol by GCMS method 8270D - Quality Control

TechLaw, Inc. - ESAT Region 8 (Mobile Lab)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%R	%R Limits	%D or RPD	%D or RPD Limit
SVOC Field GCMS									
Batch F160624 - EPA 3550C			***Soil***						**SVOC Field GCMS**
Method Blank (F160624-BLK1)						Prepared & Analyzed: 06/17/16			
Pentachlorophenol	< 1.32	2.00	mg/kg						
Method Blank Spike (F160624-BS1)						Prepared & Analyzed: 06/17/16			
Pentachlorophenol	16.9	2.00	mg/kg	20.0		84	70-130		
Matrix Spike (F160624-MS1)			**Source: F160606-03**			Prepared & Analyzed: 06/17/16			
Pentachlorophenol	15.4	2.00	mg/kg	20.0	2.57	64	17-109		
Matrix Spike Dup (F160624-MSD1)			**Source: F160606-03**			Prepared & Analyzed: 06/17/16			
Pentachlorophenol	15.4	2.00	mg/kg	20.0	2.57	64	17-109	0.2	47

NOTE: %R = % Recovery, %R limits do not apply when sample levels exceed 4x the spike level.
RPD = Relative Percent Difference, %D = % Difference, DL = Detection Limit for QC sample .

Project Name: **Cowboy Timber_MAY2016** **Certificate of Analysis**

TDF #: **NA**

TechLaw, Inc. - ESAT Region 8 (Mobile Lab)

Initial and Continuing Calibration Verification Results

SVOC Field GCMS Method: EPA 8270D Analysis Name: 8270 PCP

Sequence: F160625 Work Order: F160606 Units: mg/kg

Non-volatile Analyte	Initial (ICV1, ICV2)			Continuing Calibration Verification Standards (CCVs)								
	True	Found	%R	True	Found	%R	True	Found	%R	True	Found	%R
2,4,6-Tribromophenol				1			2			3		
				20.0	19.4	97.0	20.0	18.1	90.5			
				4			5			6		
				7			8			9		
Pentachlorophenol				1			2			3		
				20.0	19.3	96.5	20.0	17.5	87.5			
				4			5			6		
				7			8			9		
Phenanthrene-d10				1			2			3		
				2000	0.00	0.0	2000	0.00	0.0			
				4			5			6		
				7			8			9		

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270D

Laboratory: TechLaw, Inc. - ESAT Region 8 (Mobile Lab) SDG:

Client: Superfund Project: Cowboy Timber_MAY2016

Sequence: F160625 Instrument: SVOC Field GCMS

Matrix: Soil Calibration: UNASSIGNED

Internal Standard	Response	RT	Reference Response		Area %	Area % Limits	RT Diff		
Calibration Check (F160625-CCV1)			Lab File ID: CMBT-468.D			Analyzed: 06/17/16 08:39			
Phenanthrene-d10	2849726	11.54				50 - 200			
Blank (F160624-BLK1)			Lab File ID: CMBT-469.D			Analyzed: 06/17/16 09:04			
Phenanthrene-d10	2510175	11.54	2849726		88	50 - 200	0.0000		
LCS (F160624-BS1)			Lab File ID: CMBT-470.D			Analyzed: 06/17/16 09:29			
Phenanthrene-d10	2717747	11.55	2849726		95	50 - 200	0.0100		
CTSO-B9D1-20160617 (F160606-01)			Lab File ID: CMBT-471.D			Analyzed: 06/17/16 09:54			
Phenanthrene-d10	2710607	11.55	2849726		95	50 - 200	0.0100		
CTSO-E11D1S-20160617 (F160606-02)			Lab File ID: CMBT-472.D			Analyzed: 06/17/16 10:19			
Phenanthrene-d10	2687195	11.55	2849726		94	50 - 200	0.0100		
CTSO-D11D1S-20160617 (F160606-03)			Lab File ID: CMBT-473.D			Analyzed: 06/17/16 10:44			
Phenanthrene-d10	2829300	11.55	2849726		99	50 - 200	0.0100		
Matrix Spike (F160624-MS1)			Lab File ID: CMBT-474.D			Analyzed: 06/17/16 11:09			
Phenanthrene-d10	2769314	11.55	2849726		97	50 - 200	0.0100		
Matrix Spike Dup (F160624-MSD1)			Lab File ID: CMBT-475.D			Analyzed: 06/17/16 11:34			
Phenanthrene-d10	2768088	11.55	2849726		97	50 - 200	0.0100		
CTSO-E9D2-20160617 (F160606-04)			Lab File ID: CMBT-476.D			Analyzed: 06/17/16 12:32			
Phenanthrene-d10	2733574	11.54	2849726		96	50 - 200	0.0000		
CTSO-E10D2-20160617 (F160606-05)			Lab File ID: CMBT-477.D			Analyzed: 06/17/16 12:57			
Phenanthrene-d10	3304442	11.55	2849726		116	50 - 200	0.0100		
CTSO-E11D2-20160617 (F160606-06)			Lab File ID: CMBT-478.D			Analyzed: 06/17/16 14:58			
Phenanthrene-d10	2630734	11.54	2849726		92	50 - 200	0.0000		
CTSO-D11D3-20160617 (F160606-07)			Lab File ID: CMBT-479.D			Analyzed: 06/17/16 15:23			
Phenanthrene-d10	2872713	11.54	2849726		101	50 - 200	0.0000		
CTSO-D10D4-20160617 (F160606-08)			Lab File ID: CMBT-480.D			Analyzed: 06/17/16 15:48			
Phenanthrene-d10	2729144	11.55	2849726		96	50 - 200	0.0100		
Calibration Check (F160625-CCV2)			Lab File ID: CMBT-481.D			Analyzed: 06/17/16 16:41			
Phenanthrene-d10	2548362	11.55	2849726		89	50 - 200	0.0100		

TechLaw Inc., ESAT Region 8

INSTRUMENT ANALYSIS SEQUENCE LOG

Analytical Method: EPA 8270D **Non-volatile** **Sequence ID#:** F160625

Instrument ID #: SVOC Field GCMS Soil **LSR #:**

Analysis ID	Sample Name	Analysis Date	Analysis Time
F160625-CCV1	Calibration Check	06/17/16	08:39
F160624-BLK1	Blank	06/17/16	09:04
F160624-BS1		06/17/16	09:29
F160606-01	CTSO-B9D1-20160617	06/17/16	09:54
F160606-02	CTSO-E11D1S-20160617	06/17/16	10:19
F160606-03	CTSO-D11D1S-20160617	06/17/16	10:44
F160624-MS1	Matrix Spike	06/17/16	11:09
F160624-MSD1	Matrix Spike Dup	06/17/16	11:34
F160606-04	CTSO-E9D2-20160617	06/17/16	12:32
F160606-05	CTSO-E10D2-20160617	06/17/16	12:57
F160606-06	CTSO-E11D2-20160617	06/17/16	14:58
F160606-07	CTSO-D11D3-20160617	06/17/16	15:23
F160606-08	CTSO-D10D4-20160617	06/17/16	15:48
F160625-CCV2	Calibration Check	06/17/16	16:41

U.S. Environmental Protection Agency
Region 8
Technical and Management Services

Laboratory Services Program

Certificate of Analysis

Ref: 8TMS-L

MEMORANDUM

Date: 06/20/16

Subject: Analytical Results--- **Cowboy Timber_MAY2016 / NA**

From: Don Goodrich; EPA Region 8 Analytical Chemistry WAM

To: Craig Myers
Superfund
1595 Wynkoop Street

Received Sample Set(s), [Work Order : Date Received]:
[F160607 : 06/19/2016]

Attached are the analytical results for the samples received from the Cowboy Timber_MAY2016 sampling event, according to TDF NA. All analyses were performed within their method specified holding times unless otherwise noted in the following narrative.

These samples were prepared, analyzed, and verified by the Environmental Services Assistance Team Laboratory (ESAT) according to the requirements of the Technical Direction Form (TDF).

Note: The laboratory herewith transmits this deliverable to the program/project partner for determination of "final data usability" which may include data validation and data quality asessment per and in accordance with EPA QA/G-8, *Guidance on Environmental Data Verification and Data Validation*, November 2002, EPA/240/R-02/004. Laboratory data qualifiers are applied based on the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* June 2008, referred to as "NFG".

Laboratory policy is to dispose of any remaining sample 60 days after data analysis packages are delivered to EPA. If you would like the laboratory to retain the samples for a period longer than 60 days, please contact Don Goodrich within the 60 day period at (303) 312-6687.

Case Narrative

F160607

Quality Assessment: Unless indicated by exception, the QA/QC associated with this sample set produced data within the TDF-specified criteria.

Holding Times: All samples were analyzed within their method-specified technical holding time(s).

Sample Receipt: All samples were received within the temperature control limits of 4C +/- 2C.

1. Preparation (PB) / Method blanks (MB). No detections > PQL
Exceptions: None.

2. Initial and Continuing calibration verification analyses (ICVs and CCVs). All CCCs and SPCCs are within limits.
Exceptions: None.

3. Laboratory Control Sample/ Blank Spike (LCS/BS). Recoveries are within 70-130% range. DCDFM recovery high; no hits in samples.
Exceptions: None.

4. Instrument tune (BFB/DFTPP). Tune passes, and all samples were analyzed within 12 hours.
Exceptions: None.

5. Laboratory Duplicate (DUP). "Source" identifies field sample duplicated in the laboratory. RPD limits are within limits.
Exceptions: None.

6. Laboratory Matrix Spike (MS) and Matrix Spike Duplicate (MSD). "Source" defines original field sample fortified prior to analysis. Percent Recovery (%R) limits do not apply when sample concentration(s) exceed the corresponding analyte spike level by a factor of 4 or greater.
Exceptions: None.

7. Internal standards. Area counts must be within 50% to 200% of responses established in associated opening CCV.
Exceptions: None.

8. Any calibration using more than two-points produced a correlation coefficient equal to or greater than 0.995 or have an average response factor of less than or equal to 15% for all non-CCC compounds or less than or equal to 30% for all CCC compounds.
Exceptions: None.

Acronyms and Definitions:

ESAT	Environmental Services Assistance Team
J	Data Estimated qualifier (also applied to all data less than PQL, greater than or equal to MDL)
MDL	Method Detection Limit
PQL	Practical Quantitation Limit, also known as reporting limit.
RPD	Relative Percent Difference (difference divided by the mean)
%D	Percent difference, serial dilution criteria unit, difference divided by the original result.
%R	Percent recovery, analyzed (less sample contribution) divided by true value
<	Analyte NOT DETECTED at or above the Method Detection Limit (MDL)
mg/L	Milligrams per liter (Parts per million). Solids equivalent = mg/Kg.
ug/L	Micrograms per liter (Parts per billion). Solids equivalent = ug/Kg.
NR	No Recovery (matrix spike) - Often seen for calcium/magnesium when their concentration exceeds the spike level by > 4x.
NFG	*USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* June 2008.
RE	Sample Re-analysis. Usually seen on raw data and sequences for required sample dilutions due to over-range analytes.
U	Analyte not detected at or above MDL qualifier
D	Diluted value qualifier

Method(s) Summary:

As defined in the Technical Direction Form (TDF), some or all of the methods listed below were used for the determination of the reported target analytes.

From EPA's *Methods for the Determination of Metals in Environmental Samples*, Supplement I, May 1994, dissolved, total, and/or total recoverable metals were determined by:

- Method 200.7 / 6010B using a PE Optima ICP-OE (ICP).
- Method 200.8 / 6020 using a Perkin-Elmer Elan 6000 ICP-MS.
- Method 200.2 for total recoverable metals (only) digestion.
- Method 245.1 using a Perkin-Elmer FIMS CVAA (aqueous mercury only).

From *Standard Methods for the Examination of Water and Wastewater*, 18th Edition, 1992, Method 2340B was used for the calculated hardness determination. Hardness is reported as mg (milligram) equivalent $CaCO_3$ per liter (L) determined as follows:

Calculated hardness = 2.497 * (Calcium, mg/L) + 4.118 * (Magnesium, mg/L).

From *EPA's Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846*,

- Method 3015A was used for microwave assisted total metals digestion.
- Method 7473 was used for mercury in solids.
- Method 8260B/5030B was used for volatile organic compounds.

From EPA's *Determination of Inorganic Anions by Ion Chromatography*, Revision 2.1, 1993, Method 300.0 was used to determine the anions.

From EPA's *Methods for Chemical Analysis of Water and Wastes*, March 1983:

- Method 310.1 was followed for the alkalinity determination.
- Method 160.1 was followed for gravimetric total dissolved solids (TDS) determination.
- Method 160.2 was used for gravimetric total suspended solids (TSS) determination.
- Method 415.3 was used for total organic carbon (TOC) determination using either an Apollo 9000 or Phoenix 8000 Non-Dispersive IR (NDIR) system. Also known as dissolved organic carbon (DOC) when performed on the dissolved sample fraction.

The quality control procedures listed in the TDF request were utilized by ESAT to verify accuracy of the results and to evaluate any matrix interferences.

Pentachlorophenol by GCMS method 8270D

Station ID: CTSO-C10D2-20160619 **Date / Time Sampled:** 06/19/16 09:15 **Workorder** F160607
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160607-01 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**6.42**		mg/kg	1.32	1	06/19/2016	SW	F160627
Surrogate: 2,4,6-Tribromophenol		*80 %*	*Limit 50-150*			*1*	*06/19/2016*	*SW*	*F160627*

Station ID: CTSO-C11D2-20160619 **Date / Time Sampled:** 06/19/16 09:20 **Workorder** F160607
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160607-02 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**43.2**		mg/kg	1.32	1	06/19/2016	SW	F160627
Surrogate: 2,4,6-Tribromophenol		*85 %*	*Limit 50-150*			*1*	*06/19/2016*	*SW*	*F160627*

Station ID: CTSO-A10D2-20160619 **Date / Time Sampled:** 06/19/16 11:40 **Workorder** F160607
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160607-03 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**201**	**D**	mg/kg	6.60	5	06/19/2016	SW	F160627
Surrogate: 2,4,6-Tribromophenol		*87 %*	*Limit 50-150*			*5*	*06/19/2016*	*SW*	*F160627*

Station ID: CTSO-DUP18-20160619 **Date / Time Sampled:** 06/19/16 00:00 **Workorder** F160607
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160607-04 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**197**	**D**	mg/kg	6.60	5	06/19/2016	SW	F160627
Surrogate: 2,4,6-Tribromophenol		*92 %*	*Limit 50-150*			*5*	*06/19/2016*	*SW*	*F160627*

Station ID: CTSO-A9D2-20160619 **Date / Time Sampled:** 06/19/16 15:30 **Workorder** F160607
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160607-05 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**352**	**D**	mg/kg	6.60	5	06/19/2016	SW	F160627
Surrogate: 2,4,6-Tribromophenol		*98 %*	*Limit 50-150*			*5*	*06/19/2016*	*SW*	*F160627*

Station ID: CTSO-B9D2-20160619 **Date / Time Sampled:** 06/19/16 16:00 **Workorder** F160607
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160607-06 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch

EPA 8270D	**Pentachlorophenol**	**41.4**	**D**	mg/kg	2.64	2	06/19/2016	SW	F160627
Surrogate: 2,4,6-Tribromophenol		*92 %*	*Limit 50-150*			*2*	*06/19/2016*	*SW*	*F160627*

Classical Chemistry Parameters

Station ID: CTSO-C10D2-20160619 **Date / Time Sampled:** 06/19/16 09:15 **Workorder** F160607
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160607-01 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**95.9**		% by Weight		1	06/20/2016	SW	F160626

Station ID: CTSO-C11D2-20160619 **Date / Time Sampled:** 06/19/16 09:20 **Workorder** F160607
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160607-02 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**95.2**		% by Weight		1	06/20/2016	SW	F160626

Station ID: CTSO-A10D2-20160619 **Date / Time Sampled:** 06/19/16 11:40 **Workorder** F160607
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160607-03 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**96.2**		% by Weight		1	06/20/2016	SW	F160626

Station ID: CTSO-DUP18-20160619 **Date / Time Sampled:** 06/19/16 00:00 **Workorder** F160607
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160607-04 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**96.2**		% by Weight		1	06/20/2016	SW	F160626

Station ID: CTSO-A9D2-20160619 **Date / Time Sampled:** 06/19/16 15:30 **Workorder** F160607
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160607-05 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**96.6**		% by Weight		1	06/20/2016	SW	F160626

Station ID: CTSO-B9D2-20160619 **Date / Time Sampled:** 06/19/16 16:00 **Workorder** F160607
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160607-06 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**93.8**		% by Weight		1	06/20/2016	SW	F160626

Note: "J" Qualifier indicates an estimated value. "U" Qualifier indicates analyte not detected at or above MDL.
"D" Qualifier indicates diluted value.

Pentachlorophenol by GCMS method 8270D - Quality Control

TechLaw, Inc. - ESAT Region 8 (Mobile Lab)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%R	%R Limits	%D or RPD	%D or RPD Limit
SVOC Field GCMS									
Batch F160627 - EPA 3550C			***Soil***						**SVOC Field GCMS**
Method Blank (F160627-BLK1)						Prepared & Analyzed: 06/19/16			
Pentachlorophenol	< 1.32	2.00	mg/kg						
Method Blank Spike (F160627-BS1)						Prepared & Analyzed: 06/19/16			
Pentachlorophenol	17.4	2.00	mg/kg	20.0		87	70-130		
Matrix Spike (F160627-MS1)			**Source: F160607-02**			Prepared & Analyzed: 06/19/16			
Pentachlorophenol	65.1	2.00	mg/kg	20.0	43.2	110	17-109		
Matrix Spike Dup (F160627-MSD1)			**Source: F160607-02**			Prepared & Analyzed: 06/19/16			
Pentachlorophenol	68.9	2.00	mg/kg	20.0	43.2	128	17-109	6	47

NOTE: %R = % Recovery, %R limits do not apply when sample levels exceed 4x the spike level.
RPD = Relative Percent Difference, %D = % Difference, DL = Detection Limit for QC sample .

TechLaw, Inc. - ESAT Region 8 (Mobile Lab)

Initial and Continuing Calibration Verification Results

SVOC Field GCMS Method: EPA 8270D Analysis Name: 8270 PCP

Sequence: F160628 Work Order: F160607 Units: mg/kg

Non-volatile Analyte	Initial (ICV1, ICV2)			Continuing Calibration Verification Standards (CCVs)								
	True	Found	%R	True	Found	%R	True	Found	%R	True	Found	%R
2,4,6-Tribromophenol				1			2			3		
				20.0	18.6	93.0	20.0	18.3	91.5			
				4			5			6		
				7			8			9		
Pentachlorophenol				1			2			3		
				20.0	17.8	89.0	20.0	18.3	91.5			
				4			5			6		
				7			8			9		
Phenanthrene-d10				1			2			3		
				2000	0.00	0.0	2000	0.00	0.0			
				4			5			6		
				7			8			9		

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270D

Laboratory: TechLaw, Inc. - ESAT Region 8 (Mobile Lab) SDG:

Client: Superfund Project: Cowboy Timber_MAY2016

Sequence: F160628 Instrument: SVOC Field GCMS

Matrix: Soil Calibration: UNASSIGNED

Internal Standard	Response	RT	Reference Response		Area %	Area % Limits	RT Diff		
Calibration Check (F160628-CCV1)			Lab File ID: CMBT-483.D			Analyzed: 06/19/16 07:38			
Phenanthrene-d10	2801343	11.54				50 - 200			
Blank (F160627-BLK1)			Lab File ID: CMBT-484.D			Analyzed: 06/19/16 08:04			
Phenanthrene-d10	2638412	11.54	2801343		94	50 - 200	0.0000		
LCS (F160627-BS1)			Lab File ID: CMBT-485.D			Analyzed: 06/19/16 08:29			
Phenanthrene-d10	2674808	11.55	2801343		95	50 - 200	0.0100		
CTSO-C10D2-20160619 (F160607-01)			Lab File ID: CMBT-486.D			Analyzed: 06/19/16 09:46			
Phenanthrene-d10	2634798	11.55	2801343		94	50 - 200	0.0100		
CTSO-C11D2-20160619 (F160607-02)			Lab File ID: CMBT-487.D			Analyzed: 06/19/16 10:11			
Phenanthrene-d10	2717276	11.55	2801343		97	50 - 200	0.0100		
Matrix Spike (F160627-MS1)			Lab File ID: CMBT-488.D			Analyzed: 06/19/16 10:36			
Phenanthrene-d10	2655302	11.55	2801343		95	50 - 200	0.0100		
Matrix Spike Dup (F160627-MSD1)			Lab File ID: CMBT-489.D			Analyzed: 06/19/16 11:02			
Phenanthrene-d10	2903491	11.55	2801343		104	50 - 200	0.0100		
CTSO-A10D2-20160619 (F160607-03)			Lab File ID: CMBT-490.D			Analyzed: 06/19/16 12:18			
Phenanthrene-d10	2676933	11.55	2801343		96	50 - 200	0.0100		
CTSO-DUP18-20160619 (F160607-04)			Lab File ID: CMBT-491.D			Analyzed: 06/19/16 12:43			
Phenanthrene-d10	2940946	11.55	2801343		105	50 - 200	0.0100		
CTSO-A9D2-20160619 (F160607-05)			Lab File ID: CMBT-492.D			Analyzed: 06/19/16 16:06			
Phenanthrene-d10	2686064	11.55	2801343		96	50 - 200	0.0100		
CTSO-B9D2-20160619 (F160607-06)			Lab File ID: CMBT-493.D			Analyzed: 06/19/16 16:32			
Phenanthrene-d10	2756019	11.55	2801343		98	50 - 200	0.0100		
Calibration Check (F160628-CCV2)			Lab File ID: CMBT-494.D			Analyzed: 06/19/16 16:57			
Phenanthrene-d10	2493383	11.55	2801343		89	50 - 200	0.0100		

TechLaw Inc., ESAT Region 8

INSTRUMENT ANALYSIS SEQUENCE LOG

Analytical Method: EPA 8270D **Non-volatile** **Sequence ID#:** F160628

Instrument ID #: SVOC Field GCMS Soil **LSR #:**

Analysis ID	Sample Name	Analysis Date	Analysis Time
F160628-CCV1	Calibration Check	06/19/16	07:38
F160627-BLK1	Blank	06/19/16	08:04
F160627-BS1		06/19/16	08:29
F160607-01	CTSO-C10D2-20160619	06/19/16	09:46
F160607-02	CTSO-C11D2-20160619	06/19/16	10:11
F160627-MS1	Matrix Spike	06/19/16	10:36
F160627-MSD1	Matrix Spike Dup	06/19/16	11:02
F160607-03	CTSO-A10D2-20160619	06/19/16	12:18
F160607-04	CTSO-DUP18-20160619	06/19/16	12:43
F160607-05	CTSO-A9D2-20160619	06/19/16	16:06
F160607-06	CTSO-B9D2-20160619	06/19/16	16:32
F160628-CCV2	Calibration Check	06/19/16	16:57

U.S. Environmental Protection Agency
Region 8
Technical and Management Services

Laboratory Services Program

Certificate of Analysis

Ref: 8TMS-L

MEMORANDUM

Date: 06/21/16

Subject: Analytical Results--- **Cowboy Timber_MAY2016 / NA**

From: Don Goodrich; EPA Region 8 Analytical Chemistry WAM

To: Craig Myers
Superfund
1595 Wynkoop Street

Received Sample Set(s), [Work Order : Date Received]:
[F160608 : 06/20/2016]

Attached are the analytical results for the samples received from the Cowboy Timber_MAY2016 sampling event, according to TDF NA. All analyses were performed within their method specified holding times unless otherwise noted in the following narrative.

These samples were prepared, analyzed, and verified by the Environmental Services Assistance Team Laboratory (ESAT) according to the requirements of the Technical Direction Form (TDF).

Note: The laboratory herewith transmits this deliverable to the program/project partner for determination of "final data usability" which may include data validation and data quality asessment per and in accordance with EPA QA/G-8, *Guidance on Environmental Data Verification and Data Validation*, November 2002, EPA/240/R-02/004. Laboratory data qualifiers are applied based on the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* June 2008, referred to as "NFG".

Laboratory policy is to dispose of any remaining sample 60 days after data analysis packages are delivered to EPA. If you would like the laboratory to retain the samples for a period longer than 60 days, please contact Don Goodrich within the 60 day period at (303) 312-6687.

Case Narrative

F160608

Quality Assessment: Unless indicated by exception, the QA/QC associated with this sample set produced data within the TDF-specified criteria.

Holding Times: All samples were analyzed within their method-specified technical holding time(s).

Sample Receipt: All samples were received within the temperature control limits of 4C +/- 2C.

1. Preparation (PB) / Method blanks (MB). No detections > PQL
Exceptions: None.

2. Initial and Continuing calibration verification analyses (ICVs and CCVs). All CCCs and SPCCs are within limits.
Exceptions: None.

3. Laboratory Control Sample/ Blank Spike (LCS/BS). Recoveries are within 70-130% range. DCDFM recovery high; no hits in samples.
Exceptions: None.

4. Instrument tune (BFB/DFTPP). Tune passes, and all samples were analyzed within 12 hours.
Exceptions: None.

5. Laboratory Duplicate (DUP). "Source" identifies field sample duplicated in the laboratory. RPD limits are within limits.
Exceptions: None.

6. Laboratory Matrix Spike (MS) and Matrix Spike Duplicate (MSD). "Source" defines original field sample fortified prior to analysis. Percent Recovery (%R) limits do not apply when sample concentration(s) exceed the corresponding analyte spike level by a factor of 4 or greater.
Exceptions: None.

7. Internal standards. Area counts must be within 50% to 200% of responses established in associated opening CCV.
Exceptions: None.

8. Any calibration using more than two-points produced a correlation coefficient equal to or greater than 0.995 or have an average response factor of less than or equal to 15% for all non-CCC compounds or less than or equal to 30% for all CCC compounds.
Exceptions: None.

Acronyms and Definitions:

ESAT	Environmental Services Assistance Team
J	Data Estimated qualifier (also applied to all data less than PQL, greater than or equal to MDL)
MDL	Method Detection Limit
PQL	Practical Quantitation Limit, also known as reporting limit.
RPD	Relative Percent Difference (difference divided by the mean)
%D	Percent difference, serial dilution criteria unit, difference divided by the original result.
%R	Percent recovery, analyzed (less sample contribution) divided by true value
<	Analyte NOT DETECTED at or above the Method Detection Limit (MDL)
mg/L	Milligrams per liter (Parts per million). Solids equivalent = mg/Kg.
ug/L	Micrograms per liter (Parts per billion). Solids equivalent = ug/Kg.
NR	No Recovery (matrix spike) - Often seen for calcium/magnesium when their concentration exceeds the spike level by > 4x.
NFG	*USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* June 2008.
RE	Sample Re-analysis. Usually seen on raw data and sequences for required sample dilutions due to over-range analytes.
U	Analyte not detected at or above MDL qualifier
D	Diluted value qualifier

Method(s) Summary:

As defined in the Technical Direction Form (TDF), some or all of the methods listed below were used for the determination of the reported target analytes.

From EPA's *Methods for the Determination of Metals in Environmental Samples*, Supplement I, May 1994, dissolved, total, and/or total recoverable metals were determined by:

- Method 200.7 / 6010B using a PE Optima ICP-OE (ICP).
- Method 200.8 / 6020 using a Perkin-Elmer Elan 6000 ICP-MS.
- Method 200.2 for total recoverable metals (only) digestion.
- Method 245.1 using a Perkin-Elmer FIMS CVAA (aqueous mercury only).

From *Standard Methods for the Examination of Water and Wastewater*, 18th Edition, 1992, Method 2340B was used for the calculated hardness determination. Hardness is reported as mg (milligram) equivalent $CaCO_3$ per liter (L) determined as follows:

Calculated hardness = 2.497 * (Calcium, mg/L) + 4.118 * (Magnesium, mg/L).

From *EPA's Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846*,

- Method 3015A was used for microwave assisted total metals digestion.
- Method 7473 was used for mercury in solids.
- Method 8260B/5030B was used for volatile organic compounds.

From EPA's *Determination of Inorganic Anions by Ion Chromatography*, Revision 2.1, 1993, Method 300.0 was used to determine the anions.

From EPA's *Methods for Chemical Analysis of Water and Wastes*, March 1983:

- Method 310.1 was followed for the alkalinity determination.
- Method 160.1 was followed for gravimetric total dissolved solids (TDS) determination.
- Method 160.2 was used for gravimetric total suspended solids (TSS) determination.
- Method 415.3 was used for total organic carbon (TOC) determination using either an Apollo 9000 or Phoenix 8000 Non-Dispersive IR (NDIR) system. Also known as dissolved organic carbon (DOC) when performed on the dissolved sample fraction.

The quality control procedures listed in the TDF request were utilized by ESAT to verify accuracy of the results and to evaluate any matrix interferences.

Pentachlorophenol by GCMS method 8270D

Station ID: CTSO-D11D3-20160620 **Date / Time Sampled:** 06/20/16 09:50 **Workorder** F160608
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160608-01 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	Pentachlorophenol	< 2.00	U	mg/kg	1.32	1	06/20/2016	SW	F160630
Surrogate: 2,4,6-Tribromophenol		*83 %*	*Limit 50-150*			*1*	*06/20/2016*	*SW*	*F160630*

Station ID: CTSO-C11D4-20160620 **Date / Time Sampled:** 06/20/16 09:55 **Workorder** F160608
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160608-02 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	Pentachlorophenol	< 2.00	U	mg/kg	1.32	1	06/20/2016	SW	F160630
Surrogate: 2,4,6-Tribromophenol		*87 %*	*Limit 50-150*			*1*	*06/20/2016*	*SW*	*F160630*

Station ID: CTSO-A10D3-20160620 **Date / Time Sampled:** 06/20/16 14:42 **Workorder** F160608
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160608-03 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**9.47**		mg/kg	1.32	1	06/20/2016	SW	F160630
Surrogate: 2,4,6-Tribromophenol		*80 %*	*Limit 50-150*			*1*	*06/20/2016*	*SW*	*F160630*

Station ID: CTSO-DUP19-20160620 **Date / Time Sampled:** 06/20/16 00:00 **Workorder** F160608
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160608-04 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**9.15**		mg/kg	1.32	1	06/20/2016	SW	F160630
Surrogate: 2,4,6-Tribromophenol		*81 %*	*Limit 50-150*			*1*	*06/20/2016*	*SW*	*F160630*

Station ID: CTSO-A10WSW-20160620 **Date / Time Sampled:** 06/20/16 14:46 **Workorder** F160608
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160608-05 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**723**	**E,**	mg/kg	6.60	5	06/20/2016	SW	F160630
Surrogate: 2,4,6-Tribromophenol		*93 %*	*Limit 50-150*			*5*	*06/20/2016*	*SW*	*F160630*

Station ID: CTSO-A9WSW-20160620 **Date / Time Sampled:** 06/20/16 15:55 **Workorder** F160608
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160608-06 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch

EPA 8270D	**Pentachlorophenol**	**636**	**E,**	mg/kg	6.60	5	06/20/2016	SW	F160630
Surrogate: 2,4,6-Tribromophenol		*91 %*	*Limit 50-150*			*5*	*06/20/2016*	*SW*	*F160630*

Station ID: CTSO-A9D3-20160620 **Date / Time Sampled:** 06/20/16 16:17 **Workorder** F160608

EPA Tag No.: **Matrix:** Soil **Lab Number:** F160608-07 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**1.77**	**J**	mg/kg	1.32	1	06/20/2016	SW	F160630
Surrogate: 2,4,6-Tribromophenol		*88 %*	*Limit 50-150*			*1*	*06/20/2016*	*SW*	*F160630*

Classical Chemistry Parameters

Station ID: CTSO-D11D3-20160620 **Date / Time Sampled:** 06/20/16 09:50 **Workorder** F160608
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160608-01 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**97.1**		% by Weight		1	06/21/2016	SW	F160629

Station ID: CTSO-C11D4-20160620 **Date / Time Sampled:** 06/20/16 09:55 **Workorder** F160608
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160608-02 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**96.2**		% by Weight		1	06/21/2016	SW	F160629

Station ID: CTSO-A10D3-20160620 **Date / Time Sampled:** 06/20/16 14:42 **Workorder** F160608
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160608-03 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**96.0**		% by Weight		1	06/21/2016	SW	F160629

Station ID: CTSO-DUP19-20160620 **Date / Time Sampled:** 06/20/16 00:00 **Workorder** F160608
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160608-04 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**96.1**		% by Weight		1	06/21/2016	SW	F160629

Station ID: CTSO-A10WSW-20160620 **Date / Time Sampled:** 06/20/16 14:46 **Workorder** F160608
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160608-05 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**96.2**		% by Weight		1	06/21/2016	SW	F160629

Station ID: CTSO-A9WSW-20160620 **Date / Time Sampled:** 06/20/16 15:55 **Workorder** F160608
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160608-06 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**95.8**		% by Weight		1	06/21/2016	SW	F160629

Station ID: CTSO-A9D3-20160620 **Date / Time Sampled:** 06/20/16 16:17 **Workorder** F160608
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160608-07 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch

Project Name: Cowboy Timber_MAY2016 **Certificate of Analysis**

TDF #: NA

% Solids	**% Solids**	**95.7**	% by Weight	1	06/21/2016	SW	F160629

Note: "J" Qualifier indicates an estimated value. "U" Qualifier indicates analyte not detected at or above MDL.
"D" Qualifier indicates diluted value.

Pentachlorophenol by GCMS method 8270D - Quality Control

TechLaw, Inc. - ESAT Region 8 (Mobile Lab)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%R	%R Limits	%D or RPD	%D or RPD Limit
SVOC Field GCMS									
Batch F160630 - EPA 3550C			***Soil***						**SVOC Field GCMS**
Method Blank (F160630-BLK1)						Prepared & Analyzed: 06/20/16			
Pentachlorophenol	< 1.32	2.00	mg/kg						
Method Blank Spike (F160630-BS1)						Prepared & Analyzed: 06/20/16			
Pentachlorophenol	17.5	2.00	mg/kg	20.0		88	70-130		
Matrix Spike (F160630-MS1)			**Source: F160608-01**			Prepared & Analyzed: 06/20/16			
Pentachlorophenol	14.5	2.00	mg/kg	20.0	< 1.32	72	17-109		
Matrix Spike Dup (F160630-MSD1)			**Source: F160608-01**			Prepared & Analyzed: 06/20/16			
Pentachlorophenol	15.6	2.00	mg/kg	20.0	< 1.32	78	17-109	7	47

NOTE: %R = % Recovery, %R limits do not apply when sample levels exceed 4x the spike level.
RPD = Relative Percent Difference, %D = % Difference, DL = Detection Limit for QC sample .

TechLaw, Inc. - ESAT Region 8 (Mobile Lab)

Initial and Continuing Calibration Verification Results

SVOC Field GCMS Method: EPA 8270D Analysis Name: 8270 PCP

Sequence: F160631 Work Order: F160608 Units: mg/kg

Non-volatile Analyte	Initial (ICV1, ICV2)			Continuing Calibration Verification Standards (CCVs)								
	True	Found	%R	True	Found	%R	True	Found	%R	True	Found	%R
2,4,6-Tribromophenol				1			2			3		
				20.0	18.2	91.0	20.0	18.9	94.5			
				4			5			6		
				7			8			9		
Pentachlorophenol				1			2			3		
				20.0	17.3	86.5	20.0	18.7	93.5			
				4			5			6		
				7			8			9		
Phenanthrene-d10				1			2			3		
				2000	0.00	0.0	2000	0.00	0.0			
				4			5			6		
				7			8			9		

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270D

Laboratory: TechLaw, Inc. - ESAT Region 8 (Mobile Lab) SDG:

Client: Superfund Project: Cowboy Timber_MAY2016

Sequence: F160631 Instrument: SVOC Field GCMS

Matrix: Soil Calibration: UNASSIGNED

Internal Standard	Response	RT	Reference Response		Area %	Area % Limits	RT Diff		
Calibration Check (F160631-CCV1)			Lab File ID: CMBT-496.D			Analyzed: 06/20/16 07:57			
Phenanthrene-d10	2872736	11.54				50 - 200			
Blank (F160630-BLK1)			Lab File ID: CMBT-497.D			Analyzed: 06/20/16 08:22			
Phenanthrene-d10	3106038	11.54	2872736		108	50 - 200	0.0000		
LCS (F160630-BS1)			Lab File ID: CMBT-498.D			Analyzed: 06/20/16 08:47			
Phenanthrene-d10	3122497	11.55	2872736		109	50 - 200	0.0100		
CTSO-D11D3-20160620 (F160608-01)			Lab File ID: CMBT-499.D			Analyzed: 06/20/16 10:32			
Phenanthrene-d10	2835788	11.55	2872736		99	50 - 200	0.0100		
CTSO-C11D4-20160620 (F160608-02)			Lab File ID: CMBT-500.D			Analyzed: 06/20/16 10:57			
Phenanthrene-d10	2862366	11.55	2872736		100	50 - 200	0.0100		
Matrix Spike (F160630-MS1)			Lab File ID: CMBT-501.D			Analyzed: 06/20/16 12:40			
Phenanthrene-d10	2776687	11.55	2872736		97	50 - 200	0.0100		
Matrix Spike Dup (F160630-MSD1)			Lab File ID: CMBT-502.D			Analyzed: 06/20/16 13:05			
Phenanthrene-d10	2797845	11.55	2872736		97	50 - 200	0.0100		
CTSO-A10D3-20160620 (F160608-03)			Lab File ID: CMBT-503.D			Analyzed: 06/20/16 15:23			
Phenanthrene-d10	2623728	11.54	2872736		91	50 - 200	0.0000		
CTSO-DUP19-20160620 (F160608-04)			Lab File ID: CMBT-504.D			Analyzed: 06/20/16 15:49			
Phenanthrene-d10	2768940	11.54	2872736		96	50 - 200	0.0000		
CTSO-A10WSW-20160620 (F160608-05)			Lab File ID: CMBT-505.D			Analyzed: 06/20/16 16:14			
Phenanthrene-d10	2602312	11.55	2872736		91	50 - 200	0.0100		
CTSO-A9WSW-20160620 (F160608-06)			Lab File ID: CMBT-506.D			Analyzed: 06/20/16 16:40			
Phenanthrene-d10	2695475	11.55	2872736		94	50 - 200	0.0100		
CTSO-A9D3-20160620 (F160608-07)			Lab File ID: CMBT-508.D			Analyzed: 06/20/16 17:31			
Phenanthrene-d10	2826328	11.55	2872736		98	50 - 200	0.0100		
Calibration Check (F160631-CCV2)			Lab File ID: CMBT-509.D			Analyzed: 06/20/16 17:57			
Phenanthrene-d10	2989810	11.55	2872736		104	50 - 200	0.0100		

TechLaw Inc., ESAT Region 8

INSTRUMENT ANALYSIS SEQUENCE LOG

Analytical Method: EPA 8270D **Non-volatile** **Sequence ID#:** F160631

Instrument ID #: SVOC Field GCMS Soil **LSR #:**

Analysis ID	Sample Name	Analysis Date	Analysis Time
F160631-CCV1	Calibration Check	06/20/16	07:57
F160630-BLK1	Blank	06/20/16	08:22
F160630-BS1		06/20/16	08:47
F160608-01	CTSO-D11D3-20160620	06/20/16	10:32
F160608-02	CTSO-C11D4-20160620	06/20/16	10:57
F160630-MS1	Matrix Spike	06/20/16	12:40
F160630-MSD1	Matrix Spike Dup	06/20/16	13:05
F160608-03	CTSO-A10D3-20160620	06/20/16	15:23
F160608-04	CTSO-DUP19-20160620	06/20/16	15:49
F160608-05	CTSO-A10WSW-20160620	06/20/16	16:14
F160608-06	CTSO-A9WSW-20160620	06/20/16	16:40
F160608-07	CTSO-A9D3-20160620	06/20/16	17:31
F160631-CCV2	Calibration Check	06/20/16	17:57

U.S. Environmental Protection Agency
Region 8
Technical and Management Services

Laboratory Services Program

Certificate of Analysis

Ref: 8TMS-L

MEMORANDUM

Date: 06/22/16

Subject: Analytical Results--- **Cowboy Timber_MAY2016 / NA**

From: Don Goodrich; EPA Region 8 Analytical Chemistry WAM

To: Craig Myers
Superfund
1595 Wynkoop Street

Received Sample Set(s), [Work Order : Date Received]:
[F160609 : 06/21/2016]

Attached are the analytical results for the samples received from the Cowboy Timber_MAY2016 sampling event, according to TDF NA. All analyses were performed within their method specified holding times unless otherwise noted in the following narrative.

These samples were prepared, analyzed, and verified by the Environmental Services Assistance Team Laboratory (ESAT) according to the requirements of the Technical Direction Form (TDF).

Note: The laboratory herewith transmits this deliverable to the program/project partner for determination of "final data usability" which may include data validation and data quality asessment per and in accordance with EPA QA/G-8, *Guidance on Environmental Data Verification and Data Validation*, November 2002, EPA/240/R-02/004. Laboratory data qualifiers are applied based on the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* June 2008, referred to as "NFG".

Laboratory policy is to dispose of any remaining sample 60 days after data analysis packages are delivered to EPA. If you would like the laboratory to retain the samples for a period longer than 60 days, please contact Don Goodrich within the 60 day period at (303) 312-6687.

Case Narrative

F160609

Quality Assessment: Unless indicated by exception, the QA/QC associated with this sample set produced data within the TDF-specified criteria.

Holding Times: All samples were analyzed within their method-specified technical holding time(s).

Sample Receipt: All samples were received within the temperature control limits of 4C +/- 2C.

1. Preparation (PB) / Method blanks (MB). No detections > PQL
Exceptions: None.

2. Initial and Continuing calibration verification analyses (ICVs and CCVs). All CCCs and SPCCs are within limits.
Exceptions: None.

3. Laboratory Control Sample/ Blank Spike (LCS/BS). Recoveries are within 70-130% range. DCDFM recovery high; no hits in samples.
Exceptions: None.

4. Instrument tune (BFB/DFTPP). Tune passes, and all samples were analyzed within 12 hours.
Exceptions: None.

5. Laboratory Duplicate (DUP). "Source" identifies field sample duplicated in the laboratory. RPD limits are within limits.
Exceptions: None.

6. Laboratory Matrix Spike (MS) and Matrix Spike Duplicate (MSD). "Source" defines original field sample fortified prior to analysis. Percent Recovery (%R) limits do not apply when sample concentration(s) exceed the corresponding analyte spike level by a factor of 4 or greater.
Exceptions: None.

7. Internal standards. Area counts must be within 50% to 200% of responses established in associated opening CCV.
Exceptions: None.

8. Any calibration using more than two-points produced a correlation coefficient equal to or greater than 0.995 or have an average response factor of less than or equal to 15% for all non-CCC compounds or less than or equal to 30% for all CCC compounds.
Exceptions: None.

Acronyms and Definitions:

ESAT	Environmental Services Assistance Team
J	Data Estimated qualifier (also applied to all data less than PQL, greater than or equal to MDL)
MDL	Method Detection Limit
PQL	Practical Quantitation Limit, also known as reporting limit.
RPD	Relative Percent Difference (difference divided by the mean)
%D	Percent difference, serial dilution criteria unit, difference divided by the original result.
%R	Percent recovery, analyzed (less sample contribution) divided by true value
<	Analyte NOT DETECTED at or above the Method Detection Limit (MDL)
mg/L	Milligrams per liter (Parts per million). Solids equivalent = mg/Kg.
ug/L	Micrograms per liter (Parts per billion). Solids equivalent = ug/Kg.
NR	No Recovery (matrix spike) - Often seen for calcium/magnesium when their concentration exceeds the spike level by > 4x.
NFG	*USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* June 2008.
RE	Sample Re-analysis. Usually seen on raw data and sequences for required sample dilutions due to over-range analytes.
U	Analyte not detected at or above MDL qualifier
D	Diluted value qualifier

Method(s) Summary:

As defined in the Technical Direction Form (TDF), some or all of the methods listed below were used for the determination of the reported target analytes.

From EPA's *Methods for the Determination of Metals in Environmental Samples*, Supplement I, May 1994, dissolved, total, and/or total recoverable metals were determined by:

- Method 200.7 / 6010B using a PE Optima ICP-OE (ICP).
- Method 200.8 / 6020 using a Perkin-Elmer Elan 6000 ICP-MS.
- Method 200.2 for total recoverable metals (only) digestion.
- Method 245.1 using a Perkin-Elmer FIMS CVAA (aqueous mercury only).

From *Standard Methods for the Examination of Water and Wastewater*, 18th Edition, 1992, Method 2340B was used for the calculated hardness determination. Hardness is reported as mg (milligram) equivalent $CaCO_3$ per liter (L) determined as follows:

Calculated hardness = 2.497 * (Calcium, mg/L) + 4.118 * (Magnesium, mg/L).

From *EPA's Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846*,

- Method 3015A was used for microwave assisted total metals digestion.
- Method 7473 was used for mercury in solids.
- Method 8260B/5030B was used for volatile organic compounds.

From EPA's *Determination of Inorganic Anions by Ion Chromatography*, Revision 2.1, 1993, Method 300.0 was used to determine the anions.

From EPA's *Methods for Chemical Analysis of Water and Wastes*, March 1983:

- Method 310.1 was followed for the alkalinity determination.
- Method 160.1 was followed for gravimetric total dissolved solids (TDS) determination .
- Method 160.2 was used for gravimetric total suspended solids (TSS) determination.
- Method 415.3 was used for total organic carbon (TOC) determination using either an Apollo 9000 or Phoenix 8000 Non-Dispersive IR (NDIR) system. Also known as dissolved organic carbon (DOC) when performed on the dissolved sample fraction.

The quality control procedures listed in the TDF request were utilized by ESAT to verify accuracy of the results and to evaluate any matrix interferences.

Pentachlorophenol by GCMS method 8270D

Station ID: CTSO-B9D3-20160621 **Date / Time Sampled:** 06/21/16 08:55 **Workorder** F160609
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160609-01 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**4.76**		mg/kg	1.32	1	06/21/2016	SW	F160633
Surrogate: 2,4,6-Tribromophenol		*93 %*	*Limit 50-150*			*1*	*06/21/2016*	*SW*	*F160633*

Station ID: CTSO-A10D4-20160621 **Date / Time Sampled:** 06/21/16 09:45 **Workorder** F160609
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160609-02 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**1.82**	**J**	mg/kg	1.32	1	06/21/2016	SW	F160633
Surrogate: 2,4,6-Tribromophenol		*95 %*	*Limit 50-150*			*1*	*06/21/2016*	*SW*	*F160633*

Station ID: CTSO-A8D2-20160621 **Date / Time Sampled:** 06/21/16 10:17 **Workorder** F160609
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160609-03 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**252**	**D**	mg/kg	6.60	5	06/21/2016	SW	F160633
Surrogate: 2,4,6-Tribromophenol		*105 %*	*Limit 50-150*			*5*	*06/21/2016*	*SW*	*F160633*

Station ID: CTSO-C9D1-20160621 **Date / Time Sampled:** 06/21/16 11:55 **Workorder** F160609
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160609-04 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**21.6**		mg/kg	1.32	1	06/21/2016	SW	F160633
Surrogate: 2,4,6-Tribromophenol		*99 %*	*Limit 50-150*			*1*	*06/21/2016*	*SW*	*F160633*

Station ID: CTSO-D9D1-20160621 **Date / Time Sampled:** 06/21/16 12:01 **Workorder** F160609
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160609-05 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**22.9**		mg/kg	1.32	1	06/21/2016	SW	F160633
Surrogate: 2,4,6-Tribromophenol		*95 %*	*Limit 50-150*			*1*	*06/21/2016*	*SW*	*F160633*

Station ID: CTSO-C8D1-20160621 **Date / Time Sampled:** 06/21/16 12:05 **Workorder** F160609
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160609-06 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch

EPA 8270D	**Pentachlorophenol**	**61.3**	**D**	mg/kg	2.64	2	06/21/2016	SW	F160633
Surrogate: 2,4,6-Tribromophenol		*97 %*	*Limit 50-150*			*2*	*06/21/2016*	*SW*	*F160633*

Project Name: Cowboy Timber_MAY2016 **Certificate of Analysis**

TDF #: NA

Classical Chemistry Parameters

Station ID: CTSO-B9D3-20160621 **Date / Time Sampled:** 06/21/16 08:55 **Workorder** F160609
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160609-01 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**98.1**		% by Weight		1	06/22/2016	SW	F160632

Station ID: CTSO-A10D4-20160621 **Date / Time Sampled:** 06/21/16 09:45 **Workorder** F160609
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160609-02 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**98.1**		% by Weight		1	06/22/2016	SW	F160632

Station ID: CTSO-A8D2-20160621 **Date / Time Sampled:** 06/21/16 10:17 **Workorder** F160609
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160609-03 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**96.2**		% by Weight		1	06/22/2016	SW	F160632

Station ID: CTSO-C9D1-20160621 **Date / Time Sampled:** 06/21/16 11:55 **Workorder** F160609
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160609-04 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**98.2**		% by Weight		1	06/22/2016	SW	F160632

Station ID: CTSO-D9D1-20160621 **Date / Time Sampled:** 06/21/16 12:01 **Workorder** F160609
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160609-05 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**97.3**		% by Weight		1	06/22/2016	SW	F160632

Station ID: CTSO-C8D1-20160621 **Date / Time Sampled:** 06/21/16 12:05 **Workorder** F160609
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160609-06 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**97.3**		% by Weight		1	06/22/2016	SW	F160632

Note: "J" Qualifier indicates an estimated value. "U" Qualifier indicates analyte not detected at or above MDL.
"D" Qualifier indicates diluted value.

Pentachlorophenol by GCMS method 8270D - Quality Control

TechLaw, Inc. - ESAT Region 8 (Mobile Lab)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%R	%R Limits	%D or RPD	%D or RPD Limit
SVOC Field GCMS									
Batch F160633 - EPA 3550C			***Soil***						**SVOC Field GCMS**
Method Blank (F160633-BLK1)						Prepared & Analyzed: 06/21/16			
Pentachlorophenol	< 1.32	2.00	mg/kg						
Method Blank Spike (F160633-BS1)						Prepared & Analyzed: 06/21/16			
Pentachlorophenol	19.3	2.00	mg/kg	20.0		96	70-130		
Matrix Spike (F160633-MS1)			**Source: F160609-01**			Prepared & Analyzed: 06/21/16			
Pentachlorophenol	23.1	2.00	mg/kg	20.0	4.76	92	17-109		
Matrix Spike Dup (F160633-MSD1)			**Source: F160609-01**			Prepared & Analyzed: 06/21/16			
Pentachlorophenol	22.6	2.00	mg/kg	20.0	4.76	89	17-109	2	47

NOTE: %R = % Recovery, %R limits do not apply when sample levels exceed 4x the spike level.
RPD = Relative Percent Difference, %D = % Difference, DL = Detection Limit for QC sample .

TechLaw, Inc. - ESAT Region 8 (Mobile Lab)

Initial and Continuing Calibration Verification Results

SVOC Field GCMS Method: EPA 8270D Analysis Name: 8270 PCP

Sequence: F160634 Work Order: F160609 Units: mg/kg

Non-volatile Analyte	Initial (ICV1, ICV2)			Continuing Calibration Verification Standards (CCVs)								
	True	Found	%R	True	Found	%R	True	Found	%R	True	Found	%R
2,4,6-Tribromophenol				1			2			3		
				20.0	21.4	107.0	20.0	22.1	110.5			
				4			5			6		
				7			8			9		
Pentachlorophenol				1			2			3		
				20.0	21.5	107.5	20.0	21.7	108.5			
				4			5			6		
				7			8			9		
Phenanthrene-d10				1			2			3		
				2000	0.00	0.0	2000	0.00	0.0			
				4			5			6		
				7			8			9		

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270D

Laboratory: TechLaw, Inc. - ESAT Region 8 (Mobile Lab) SDG:

Client: Superfund Project: Cowboy Timber_MAY2016

Sequence: F160634 Instrument: SVOC Field GCMS

Matrix: Soil Calibration: UNASSIGNED

Internal Standard	Response	RT	Reference Response		Area %	Area % Limits	RT Diff		
Calibration Check (F160634-CCV1)			Lab File ID: CMBT-511.D			Analyzed: 06/21/16 07:45			
Phenanthrene-d10	3045489	11.54				50 - 200			
Blank (F160633-BLK1)			Lab File ID: CMBT-512.D			Analyzed: 06/21/16 08:37			
Phenanthrene-d10	2730418	11.55	3045489		90	50 - 200	0.0100		
LCS (F160633-BS1)			Lab File ID: CMBT-513.D			Analyzed: 06/21/16 09:02			
Phenanthrene-d10	2822441	11.55	3045489		93	50 - 200	0.0100		
CTSO-B9D3-20160621 (F160609-01)			Lab File ID: CMBT-514.D			Analyzed: 06/21/16 09:33			
Phenanthrene-d10	2803089	11.55	3045489		92	50 - 200	0.0100		
Matrix Spike (F160633-MS1)			Lab File ID: CMBT-515.D			Analyzed: 06/21/16 09:59			
Phenanthrene-d10	2792934	11.55	3045489		92	50 - 200	0.0100		
Matrix Spike Dup (F160633-MSD1)			Lab File ID: CMBT-516.D			Analyzed: 06/21/16 10:26			
Phenanthrene-d10	2777428	11.55	3045489		91	50 - 200	0.0100		
CTSO-A10D4-20160621 (F160609-02)			Lab File ID: CMBT-517.D			Analyzed: 06/21/16 10:52			
Phenanthrene-d10	2860203	11.55	3045489		94	50 - 200	0.0100		
CTSO-A8D2-20160621 (F160609-03)			Lab File ID: CMBT-518.D			Analyzed: 06/21/16 11:18			
Phenanthrene-d10	2686800	11.55	3045489		88	50 - 200	0.0100		
CTSO-C9D1-20160621 (F160609-04)			Lab File ID: CMBT-519.D			Analyzed: 06/21/16 12:46			
Phenanthrene-d10	2817380	11.55	3045489		93	50 - 200	0.0100		
CTSO-D9D1-20160621 (F160609-05)			Lab File ID: CMBT-520.D			Analyzed: 06/21/16 13:11			
Phenanthrene-d10	2768122	11.55	3045489		91	50 - 200	0.0100		
CTSO-C8D1-20160621 (F160609-06)			Lab File ID: CMBT-521.D			Analyzed: 06/21/16 13:37			
Phenanthrene-d10	2949062	11.55	3045489		97	50 - 200	0.0100		
Calibration Check (F160634-CCV2)			Lab File ID: CMBT-522.D			Analyzed: 06/21/16 17:08			
Phenanthrene-d10	2834548	11.55	3045489		93	50 - 200	0.0100		

TechLaw Inc., ESAT Region 8

INSTRUMENT ANALYSIS SEQUENCE LOG

Analytical Method: EPA 8270D **Non-volatile** **Sequence ID#:** F160634

Instrument ID #: SVOC Field GCMS Soil **LSR #:**

Analysis ID	Sample Name	Analysis Date	Analysis Time
F160634-CCV1	Calibration Check	06/21/16	07:45
F160633-BLK1	Blank	06/21/16	08:37
F160633-BS1		06/21/16	09:02
F160609-01	CTSO-B9D3-20160621	06/21/16	09:33
F160633-MS1	Matrix Spike	06/21/16	09:59
F160633-MSD1	Matrix Spike Dup	06/21/16	10:26
F160609-02	CTSO-A10D4-20160621	06/21/16	10:52
F160609-03	CTSO-A8D2-20160621	06/21/16	11:18
F160609-04	CTSO-C9D1-20160621	06/21/16	12:46
F160609-05	CTSO-D9D1-20160621	06/21/16	13:11
F160609-06	CTSO-C8D1-20160621	06/21/16	13:37
F160634-CCV2	Calibration Check	06/21/16	17:08

U.S. Environmental Protection Agency
Region 8
Technical and Management Services

Laboratory Services Program

Certificate of Analysis

Ref: 8TMS-L

MEMORANDUM

Date: 06/23/16

Subject: Analytical Results--- **Cowboy Timber_MAY2016 / NA**

From: Don Goodrich; EPA Region 8 Analytical Chemistry WAM

To: Craig Myers
Superfund
1595 Wynkoop Street

Received Sample Set(s), [Work Order : Date Received]:
[F160610 : 06/22/2016]

Attached are the analytical results for the samples received from the Cowboy Timber_MAY2016 sampling event, according to TDF NA. All analyses were performed within their method specified holding times unless otherwise noted in the following narrative.

These samples were prepared, analyzed, and verified by the Environmental Services Assistance Team Laboratory (ESAT) according to the requirements of the Technical Direction Form (TDF).

Note: The laboratory herewith transmits this deliverable to the program/project partner for determination of "final data usability" which may include data validation and data quality asessment per and in accordance with EPA QA/G-8, *Guidance on Environmental Data Verification and Data Validation*, November 2002, EPA/240/R-02/004. Laboratory data qualifiers are applied based on the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* June 2008, referred to as "NFG".

Laboratory policy is to dispose of any remaining sample 60 days after data analysis packages are delivered to EPA. If you would like the laboratory to retain the samples for a period longer than 60 days, please contact Don Goodrich within the 60 day period at (303) 312-6687.

Case Narrative

F160610

Quality Assessment: Unless indicated by exception, the QA/QC associated with this sample set produced data within the TDF-specified criteria.

Holding Times: All samples were analyzed within their method-specified technical holding time(s).

Sample Receipt: All samples were received within the temperature control limits of 4C +/- 2C.

1. Preparation (PB) / Method blanks (MB). No detections > PQL
Exceptions: None.

2. Initial and Continuing calibration verification analyses (ICVs and CCVs). All CCCs and SPCCs are within limits.
Exceptions: None.

3. Laboratory Control Sample/ Blank Spike (LCS/BS). Recoveries are within 70-130% range. DCDFM recovery high; no hits in samples.
Exceptions: None.

4. Instrument tune (BFB/DFTPP). Tune passes, and all samples were analyzed within 12 hours.
Exceptions: None.

5. Laboratory Duplicate (DUP). "Source" identifies field sample duplicated in the laboratory. RPD limits are within limits.
Exceptions: None.

6. Laboratory Matrix Spike (MS) and Matrix Spike Duplicate (MSD). "Source" defines original field sample fortified prior to analysis. Percent Recovery (%R) limits do not apply when sample concentration(s) exceed the corresponding analyte spike level by a factor of 4 or greater.
Exceptions: None.

7. Internal standards. Area counts must be within 50% to 200% of responses established in associated opening CCV.
Exceptions: None.

8. Any calibration using more than two-points produced a correlation coefficient equal to or greater than 0.995 or have an average response factor of less than or equal to 15% for all non-CCC compounds or less than or equal to 30% for all CCC compounds.
Exceptions: None.

Acronyms and Definitions:

ESAT	Environmental Services Assistance Team
J	Data Estimated qualifier (also applied to all data less than PQL, greater than or equal to MDL)
MDL	Method Detection Limit
PQL	Practical Quantitation Limit, also known as reporting limit.
RPD	Relative Percent Difference (difference divided by the mean)
%D	Percent difference, serial dilution criteria unit, difference divided by the original result.
%R	Percent recovery, analyzed (less sample contribution) divided by true value
<	Analyte NOT DETECTED at or above the Method Detection Limit (MDL)
mg/L	Milligrams per liter (Parts per million). Solids equivalent = mg/Kg.
ug/L	Micrograms per liter (Parts per billion). Solids equivalent = ug/Kg.
NR	No Recovery (matrix spike) - Often seen for calcium/magnesium when their concentration exceeds the spike level by > 4x.
NFG	*USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* June 2008.
RE	Sample Re-analysis. Usually seen on raw data and sequences for required sample dilutions due to over-range analytes.
U	Analyte not detected at or above MDL qualifier
D	Diluted value qualifier

Method(s) Summary:

As defined in the Technical Direction Form (TDF), some or all of the methods listed below were used for the determination of the reported target analytes.

From EPA's *Methods for the Determination of Metals in Environmental Samples*, Supplement I, May 1994, dissolved, total, and/or total recoverable metals were determined by:

- Method 200.7 / 6010B using a PE Optima ICP-OE (ICP).
- Method 200.8 / 6020 using a Perkin-Elmer Elan 6000 ICP-MS.
- Method 200.2 for total recoverable metals (only) digestion.
- Method 245.1 using a Perkin-Elmer FIMS CVAA (aqueous mercury only).

From *Standard Methods for the Examination of Water and Wastewater*, 18th Edition, 1992, Method 2340B was used for the calculated hardness determination. Hardness is reported as mg (milligram) equivalent $CaCO_3$ per liter (L) determined as follows:

Calculated hardness = 2.497 * (Calcium, mg/L) + 4.118 * (Magnesium, mg/L).

From *EPA's Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846*,

- Method 3015A was used for microwave assisted total metals digestion.
- Method 7473 was used for mercury in solids.
- Method 8260B/5030B was used for volatile organic compounds.

From EPA's *Determination of Inorganic Anions by Ion Chromatography*, Revision 2.1, 1993, Method 300.0 was used to determine the anions.

From EPA's *Methods for Chemical Analysis of Water and Wastes*, March 1983:

- Method 310.1 was followed for the alkalinity determination.
- Method 160.1 was followed for gravimetric total dissolved solids (TDS) determination .
- Method 160.2 was used for gravimetric total suspended solids (TSS) determination.
- Method 415.3 was used for total organic carbon (TOC) determination using either an Apollo 9000 or Phoenix 8000 Non-Dispersive IR (NDIR) system. Also known as dissolved organic carbon (DOC) when performed on the dissolved sample fraction.

The quality control procedures listed in the TDF request were utilized by ESAT to verify accuracy of the results and to evaluate any matrix interferences.

Pentachlorophenol by GCMS method 8270D

Station ID: CTSO-C9D3-20160622 **Date / Time Sampled:** 06/22/16 08:50 **Workorder** F160610
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160610-01 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	Pentachlorophenol	< 2.00	U	mg/kg	1.32	1	06/22/2016	SW	F160636
Surrogate: 2,4,6-Tribromophenol		*92 %*		*Limit 50-150*		*1*	*06/22/2016*	*SW*	*F160636*

Station ID: CTSO-DUP20-20160622 **Date / Time Sampled:** 06/22/16 00:00 **Workorder** F160610
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160610-02 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	Pentachlorophenol	< 2.00	U	mg/kg	1.32	1	06/22/2016	SW	F160636
Surrogate: 2,4,6-Tribromophenol		*92 %*		*Limit 50-150*		*1*	*06/22/2016*	*SW*	*F160636*

Station ID: CTSO-D9D3-20160622 **Date / Time Sampled:** 06/22/16 08:54 **Workorder** F160610
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160610-03 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**2.54**		mg/kg	1.32	1	06/22/2016	SW	F160636
Surrogate: 2,4,6-Tribromophenol		*89 %*		*Limit 50-150*		*1*	*06/22/2016*	*SW*	*F160636*

Station ID: CTSO-C8D3-20160622 **Date / Time Sampled:** 06/22/16 11:18 **Workorder** F160610
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160610-04 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**4.83**		mg/kg	1.32	1	06/22/2016	SW	F160636
Surrogate: 2,4,6-Tribromophenol		*93 %*		*Limit 50-150*		*1*	*06/22/2016*	*SW*	*F160636*

Station ID: CTSO-AA10D1-20160622 **Date / Time Sampled:** 06/22/16 15:25 **Workorder** F160610
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160610-05 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**31.8**	**D**	mg/kg	13.2	10	06/22/2016	SW	F160636
Surrogate: 2,4,6-Tribromophenol		*124 %*		*Limit 50-150*		*10*	*06/22/2016*	*SW*	*F160636*

Station ID: CTSO-AA9D1-20160622 **Date / Time Sampled:** 06/22/16 15:35 **Workorder** F160610
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160610-06 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch

EPA 8270D	**Pentachlorophenol**	**56.0**	**D**	mg/kg	13.2	10	06/22/2016	SW	F160636
Surrogate: 2,4,6-Tribromophenol		*136 %*		*Limit 50-150*		*10*	*06/22/2016*	*SW*	*F160636*

Station ID: CTSO-A8D3-20160622 **Date / Time Sampled:** 06/22/16 15:40 **Workorder** F160610

EPA Tag No.: **Matrix:** Soil **Lab Number:** F160610-07 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**3.18**		mg/kg	1.32	1	06/22/2016	SW	F160636
Surrogate: 2,4,6-Tribromophenol		*93 %*		*Limit 50-150*		*1*	*06/22/2016*	*SW*	*F160636*

Station ID: CTSO-A8WSW-20160622 **Date / Time Sampled:** 06/22/16 15:43 **Workorder** F160610

EPA Tag No.: **Matrix:** Soil **Lab Number:** F160610-08 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**431**	**D**	mg/kg	13.2	10	06/22/2016	SW	F160636
Surrogate: 2,4,6-Tribromophenol		*142 %*		*Limit 50-150*		*10*	*06/22/2016*	*SW*	*F160636*

Classical Chemistry Parameters

Station ID: CTSO-C9D3-20160622 **Date / Time Sampled:** 06/22/16 08:50 **Workorder** F160610
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160610-01 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**96.9**		% by Weight		1	06/23/2016	SW	F160635

Station ID: CTSO-DUP20-20160622 **Date / Time Sampled:** 06/22/16 00:00 **Workorder** F160610
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160610-02 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**96.5**		% by Weight		1	06/23/2016	SW	F160635

Station ID: CTSO-D9D3-20160622 **Date / Time Sampled:** 06/22/16 08:54 **Workorder** F160610
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160610-03 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**96.6**		% by Weight		1	06/23/2016	SW	F160635

Station ID: CTSO-C8D3-20160622 **Date / Time Sampled:** 06/22/16 11:18 **Workorder** F160610
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160610-04 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**93.5**		% by Weight		1	06/23/2016	SW	F160635

Station ID: CTSO-AA10D1-20160622 **Date / Time Sampled:** 06/22/16 15:25 **Workorder** F160610
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160610-05 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**96.5**		% by Weight		1	06/23/2016	SW	F160635

Station ID: CTSO-AA9D1-20160622 **Date / Time Sampled:** 06/22/16 15:35 **Workorder** F160610
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160610-06 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**90.9**		% by Weight		1	06/23/2016	SW	F160635

Station ID: CTSO-A8D3-20160622 **Date / Time Sampled:** 06/22/16 15:40 **Workorder** F160610
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160610-07 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch

% Solids	**% Solids**	**97.8**	% by Weight	1	06/23/2016	SW	F160635

Station ID: CTSO-A8WSW-20160622 **Date / Time Sampled:** 06/22/16 15:43 **Workorder** F160610

EPA Tag No.: **Matrix:** Soil **Lab Number:** F160610-08 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**94.7**		% by Weight		1	06/23/2016	SW	F160635

Note: "J" Qualifier indicates an estimated value. "U" Qualifier indicates analyte not detected at or above MDL.
"D" Qualifier indicates diluted value.

Pentachlorophenol by GCMS method 8270D - Quality Control

TechLaw, Inc. - ESAT Region 8 (Mobile Lab)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%R	%R Limits	%D or RPD	%D or RPD Limit
SVOC Field GCMS									
Batch F160636 - EPA 3550C			***Soil***						**SVOC Field GCMS**
Method Blank (F160636-BLK1)						Prepared & Analyzed: 06/22/16			
Pentachlorophenol	< 1.32	2.00	mg/kg						
Method Blank Spike (F160636-BS1)						Prepared & Analyzed: 06/22/16			
Pentachlorophenol	18.6	2.00	mg/kg	20.0		93	70-130		
Matrix Spike (F160636-MS1)			**Source: F160610-01**			Prepared & Analyzed: 06/22/16			
Pentachlorophenol	14.3	2.00	mg/kg	20.0	< 1.32	71	17-109		
Matrix Spike Dup (F160636-MSD1)			**Source: F160610-01**			Prepared & Analyzed: 06/22/16			
Pentachlorophenol	14.1	2.00	mg/kg	20.0	< 1.32	71	17-109	1	47

NOTE: %R = % Recovery, %R limits do not apply when sample levels exceed 4x the spike level.
RPD = Relative Percent Difference, %D = % Difference, DL = Detection Limit for QC sample .

Project Name: **Cowboy Timber_MAY2016** **Certificate of Analysis**

TDF #: **NA**

TechLaw, Inc. - ESAT Region 8 (Mobile Lab)

Initial and Continuing Calibration Verification Results

SVOC Field GCMS Method: EPA 8270D Analysis Name: 8270 PCP

Sequence: F160637 Work Order: F160610 Units: mg/kg

Non-volatile Analyte	Initial (ICV1, ICV2)			Continuing Calibration Verification Standards (CCVs)								
	True	Found	%R	True	Found	%R	True	Found	%R	True	Found	%R
2,4,6-Tribromophenol				1			2			3		
				20.0	20.6	103.0	20.0	19.9	99.5			
				4			5			6		
				7			8			9		
Pentachlorophenol				1			2			3		
				20.0	20.3	101.5	20.0	20.8	104.0			
				4			5			6		
				7			8			9		
Phenanthrene-d10				1			2			3		
				2000	0.00	0.0	2000	0.00	0.0			
				4			5			6		
				7			8			9		

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270D

Laboratory: TechLaw, Inc. - ESAT Region 8 (Mobile Lab) SDG:

Client: Superfund Project: Cowboy Timber_MAY2016

Sequence: F160637 Instrument: SVOC Field GCMS

Matrix: Soil Calibration: UNASSIGNED

Internal Standard	Response	RT	Reference Response		Area %	Area % Limits	RT Diff		
Calibration Check (F160637-CCV1)			Lab File ID: CMBT-524.D			Analyzed: 06/22/16 07:41			
Phenanthrene-d10	2937515	11.54				50 - 200			
Blank (F160636-BLK1)			Lab File ID: CMBT-525.D			Analyzed: 06/22/16 08:31			
Phenanthrene-d10	2597327	11.55	2937515		88	50 - 200	0.0100		
LCS (F160636-BS1)			Lab File ID: CMBT-526.D			Analyzed: 06/22/16 08:56			
Phenanthrene-d10	2709002	11.55	2937515		92	50 - 200	0.0100		
CTSO-C9D3-20160622 (F160610-01)			Lab File ID: CMBT-527.D			Analyzed: 06/22/16 09:48			
Phenanthrene-d10	3051647	11.55	2937515		104	50 - 200	0.0100		
CTSO-DUP20-20160622 (F160610-02)			Lab File ID: CMBT-528.D			Analyzed: 06/22/16 10:13			
Phenanthrene-d10	2892111	11.54	2937515		98	50 - 200	0.0000		
CTSO-D9D3-20160622 (F160610-03)			Lab File ID: CMBT-529.D			Analyzed: 06/22/16 10:38			
Phenanthrene-d10	2877330	11.55	2937515		98	50 - 200	0.0100		
Matrix Spike (F160636-MS1)			Lab File ID: CMBT-530.D			Analyzed: 06/22/16 11:03			
Phenanthrene-d10	2739067	11.55	2937515		93	50 - 200	0.0100		
Matrix Spike Dup (F160636-MSD1)			Lab File ID: CMBT-531.D			Analyzed: 06/22/16 11:28			
Phenanthrene-d10	2683898	11.55	2937515		91	50 - 200	0.0100		
CTSO-C8D3-20160622 (F160610-04)			Lab File ID: CMBT-532.D			Analyzed: 06/22/16 11:53			
Phenanthrene-d10	2866434	11.55	2937515		98	50 - 200	0.0100		
CTSO-AA10D1-20160622 (F160610-05)			Lab File ID: CMBT-533.D			Analyzed: 06/22/16 16:07			
Phenanthrene-d10	2779893	11.54	2937515		95	50 - 200	0.0000		
CTSO-AA9D1-20160622 (F160610-06)			Lab File ID: CMBT-534.D			Analyzed: 06/22/16 16:33			
Phenanthrene-d10	2720011	11.54	2937515		93	50 - 200	0.0000		
CTSO-A8D3-20160622 (F160610-07)			Lab File ID: CMBT-535.D			Analyzed: 06/22/16 16:59			
Phenanthrene-d10	2846448	11.55	2937515		97	50 - 200	0.0100		
CTSO-A8WSW-20160622 (F160610-08)			Lab File ID: CMBT-536.D			Analyzed: 06/22/16 17:25			
Phenanthrene-d10	3326377	11.55	2937515		113	50 - 200	0.0100		
Calibration Check (F160637-CCV2)			Lab File ID: CMBT-537.D			Analyzed: 06/22/16 17:51			
Phenanthrene-d10	2666219	11.55	2937515		91	50 - 200	0.0100		

TechLaw Inc., ESAT Region 8

INSTRUMENT ANALYSIS SEQUENCE LOG

Analytical Method: EPA 8270D **Non-volatile** **Sequence ID#:** F160637

Instrument ID #: SVOC Field GCMS Soil **LSR #:**

Analysis ID	Sample Name	Analysis Date	Analysis Time
F160637-CCV1	Calibration Check	06/22/16	07:41
F160636-BLK1	Blank	06/22/16	08:31
F160636-BS1		06/22/16	08:56
F160610-01	CTSO-C9D3-20160622	06/22/16	09:48
F160610-02	CTSO-DUP20-20160622	06/22/16	10:13
F160610-03	CTSO-D9D3-20160622	06/22/16	10:38
F160636-MS1	Matrix Spike	06/22/16	11:03
F160636-MSD1	Matrix Spike Dup	06/22/16	11:28
F160610-04	CTSO-C8D3-20160622	06/22/16	11:53
F160610-05	CTSO-AA10D1-20160622	06/22/16	16:07
F160610-06	CTSO-AA9D1-20160622	06/22/16	16:33
F160610-07	CTSO-A8D3-20160622	06/22/16	16:59
F160610-08	CTSO-A8WSW-20160622	06/22/16	17:25
F160637-CCV2	Calibration Check	06/22/16	17:51

U.S. Environmental Protection Agency
Region 8
Technical and Management Services

Laboratory Services Program

Certificate of Analysis

Ref: 8TMS-L

MEMORANDUM

Date: 06/24/16

Subject: Analytical Results--- **Cowboy Timber_MAY2016 / NA**

From: Don Goodrich; EPA Region 8 Analytical Chemistry WAM

To: Craig Myers
Superfund
1595 Wynkoop Street

Received Sample Set(s), [Work Order : Date Received]:
[F160611 : 06/23/2016]

Attached are the analytical results for the samples received from the Cowboy Timber_MAY2016 sampling event, according to TDF NA. All analyses were performed within their method specified holding times unless otherwise noted in the following narrative.

These samples were prepared, analyzed, and verified by the Environmental Services Assistance Team Laboratory (ESAT) according to the requirements of the Technical Direction Form (TDF).

Note: The laboratory herewith transmits this deliverable to the program/project partner for determination of "final data usability" which may include data validation and data quality asessment per and in accordance with EPA QA/G-8, *Guidance on Environmental Data Verification and Data Validation*, November 2002, EPA/240/R-02/004. Laboratory data qualifiers are applied based on the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* June 2008, referred to as "NFG".

Laboratory policy is to dispose of any remaining sample 60 days after data analysis packages are delivered to EPA. If you would like the laboratory to retain the samples for a period longer than 60 days, please contact Don Goodrich within the 60 day period at (303) 312-6687.

Case Narrative

F160611

Quality Assessment: Unless indicated by exception, the QA/QC associated with this sample set produced data within the TDF-specified criteria.

Holding Times: All samples were analyzed within their method-specified technical holding time(s).

Sample Receipt: All samples were received within the temperature control limits of 4C +/- 2C.

1. Preparation (PB) / Method blanks (MB). No detections > PQL
Exceptions: None.

2. Initial and Continuing calibration verification analyses (ICVs and CCVs). All CCCs and SPCCs are within limits.
Exceptions: None.

3. Laboratory Control Sample/ Blank Spike (LCS/BS). Recoveries are within 70-130% range. DCDFM recovery high; no hits in samples.
Exceptions: None.

4. Instrument tune (BFB/DFTPP). Tune passes, and all samples were analyzed within 12 hours.
Exceptions: None.

5. Laboratory Duplicate (DUP). "Source" identifies field sample duplicated in the laboratory. RPD limits are within limits.
Exceptions: None.

6. Laboratory Matrix Spike (MS) and Matrix Spike Duplicate (MSD). "Source" defines original field sample fortified prior to analysis. Percent Recovery (%R) limits do not apply when sample concentration(s) exceed the corresponding analyte spike level by a factor of 4 or greater.
Exceptions: None.

7. Internal standards. Area counts must be within 50% to 200% of responses established in associated opening CCV.
Exceptions: None.

8. Any calibration using more than two-points produced a correlation coefficient equal to or greater than 0.995 or have an average response factor of less than or equal to 15% for all non-CCC compounds or less than or equal to 30% for all CCC compounds.
Exceptions: None.

Project Name: **Cowboy Timber_MAY2016** **Certificate of Analysis**

TDF #: **NA**

Acronyms and Definitions:

ESAT	Environmental Services Assistance Team
J	Data Estimated qualifier (also applied to all data less than PQL, greater than or equal to MDL)
MDL	Method Detection Limit
PQL	Practical Quantitation Limit, also known as reporting limit.
RPD	Relative Percent Difference (difference divided by the mean)
%D	Percent difference, serial dilution criteria unit, difference divided by the original result.
%R	Percent recovery, analyzed (less sample contribution) divided by true value
<	Analyte NOT DETECTED at or above the Method Detection Limit (MDL)
mg/L	Milligrams per liter (Parts per million). Solids equivalent = mg/Kg.
ug/L	Micrograms per liter (Parts per billion). Solids equivalent = ug/Kg.
NR	No Recovery (matrix spike) - Often seen for calcium/magnesium when their concentration exceeds the spike level by > 4x.
NFG	*USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* June 2008.
RE	Sample Re-analysis. Usually seen on raw data and sequences for required sample dilutions due to over-range analytes.
U	Analyte not detected at or above MDL qualifier
D	Diluted value qualifier

Method(s) Summary:

As defined in the Technical Direction Form (TDF), some or all of the methods listed below were used for the determination of the reported target analytes.

From EPA's *Methods for the Determination of Metals in Environmental Samples*, Supplement I, May 1994, dissolved, total, and/or total recoverable metals were determined by:

- Method 200.7 / 6010B using a PE Optima ICP-OE (ICP).
- Method 200.8 / 6020 using a Perkin-Elmer Elan 6000 ICP-MS.
- Method 200.2 for total recoverable metals (only) digestion.
- Method 245.1 using a Perkin-Elmer FIMS CVAA (aqueous mercury only).

From *Standard Methods for the Examination of Water and Wastewater*, 18th Edition, 1992, Method 2340B was used for the calculated hardness determination. Hardness is reported as mg (milligram) equivalent $CaCO_3$ per liter (L) determined as follows:

Calculated hardness = 2.497 * (Calcium, mg/L) + 4.118 * (Magnesium, mg/L).

From *EPA's Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846*,

- Method 3015A was used for microwave assisted total metals digestion.
- Method 7473 was used for mercury in solids.
- Method 8260B/5030B was used for volatile organic compounds.

From EPA's *Determination of Inorganic Anions by Ion Chromatography*, Revision 2.1, 1993, Method 300.0 was used to determine the anions.

From EPA's *Methods for Chemical Analysis of Water and Wastes*, March 1983:

- Method 310.1 was followed for the alkalinity determination.
- Method 160.1 was followed for gravimetric total dissolved solids (TDS) determination.
- Method 160.2 was used for gravimetric total suspended solids (TSS) determination.
- Method 415.3 was used for total organic carbon (TOC) determination using either an Apollo 9000 or Phoenix 8000 Non-Dispersive IR (NDIR) system. Also known as dissolved organic carbon (DOC) when performed on the dissolved sample fraction.

The quality control procedures listed in the TDF request were utilized by ESAT to verify accuracy of the results and to evaluate any matrix interferences.

Pentachlorophenol by GCMS method 8270D

Station ID: CTSO-AA8D1-20160623 **Date / Time Sampled:** 06/23/16 08:40 **Workorder** F160611
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160611-01 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**156**	**D**	mg/kg	66.0	50	06/23/2016	SW	F160639
Surrogate: 2,4,6-Tribromophenol		*%*	*Limit 50-150*			*50*	*06/23/2016*	*SW*	*F160639*

Station ID: CTSO-AA7D1-20160623 **Date / Time Sampled:** 06/23/16 08:47 **Workorder** F160611
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160611-02 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**112**	**D**	mg/kg	13.2	10	06/23/2016	SW	F160639
Surrogate: 2,4,6-Tribromophenol		*142 %*	*Limit 50-150*			*10*	*06/23/2016*	*SW*	*F160639*

Station ID: CTSO-A8NSW-20160623 **Date / Time Sampled:** 06/23/16 08:50 **Workorder** F160611
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160611-03 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**13.4**		mg/kg	1.32	1	06/23/2016	SW	F160639
Surrogate: 2,4,6-Tribromophenol		*89 %*	*Limit 50-150*			*1*	*06/23/2016*	*SW*	*F160639*

Station ID: CTSO-07-20160623 **Date / Time Sampled:** 06/23/16 09:00 **Workorder** F160611
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160611-04 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**70.2**	**D**	mg/kg	2.64	2	06/23/2016	SW	F160639
Surrogate: 2,4,6-Tribromophenol		*94 %*	*Limit 50-150*			*2*	*06/23/2016*	*SW*	*F160639*

Station ID: CTSO-AA10D4-20160623 **Date / Time Sampled:** 06/23/16 10:35 **Workorder** F160611
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160611-05 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**4.30**		mg/kg	1.32	1	06/23/2016	SW	F160639
Surrogate: 2,4,6-Tribromophenol		*92 %*	*Limit 50-150*			*1*	*06/23/2016*	*SW*	*F160639*

Station ID: CTSO-AASSW-20160623 **Date / Time Sampled:** 06/23/16 10:39 **Workorder** F160611
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160611-06 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**241**	**D**	mg/kg	2.64	2	06/23/2016	SW	F160639
Surrogate: 2,4,6-Tribromophenol		*106 %*	*Limit 50-150*			*2*	*06/23/2016*	*SW*	*F160639*

Station ID: CTSO-AAWSW-20160623 **Date / Time Sampled:** 06/23/16 10:41 **Workorder** F160611
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160611-07 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**101**	**E**	mg/kg	1.32	1	06/23/2016	SW	F160639
Surrogate: 2,4,6-Tribromophenol		*105 %*	*Limit 50-150*			*1*	*06/23/2016*	*SW*	*F160639*

Station ID: CTSO-A11D2-20160623 **Date / Time Sampled:** 06/23/16 14:05 **Workorder** F160611
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160611-08 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**52.7**	**D**	mg/kg	2.64	2	06/23/2016	SW	F160639
Surrogate: 2,4,6-Tribromophenol		*99 %*	*Limit 50-150*			*2*	*06/23/2016*	*SW*	*F160639*

Station ID: CTSO-B11D2-20160623 **Date / Time Sampled:** 06/23/16 14:07 **Workorder** F160611
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160611-09 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**11.2**		mg/kg	1.32	1	06/23/2016	SW	F160639
Surrogate: 2,4,6-Tribromophenol		*96 %*	*Limit 50-150*			*1*	*06/23/2016*	*SW*	*F160639*

Station ID: CTSO-B10D2-20160623 **Date / Time Sampled:** 06/23/16 14:15 **Workorder** F160611
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160611-10 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**44.6**		mg/kg	1.32	1	06/23/2016	SW	F160639
Surrogate: 2,4,6-Tribromophenol		*105 %*	*Limit 50-150*			*1*	*06/23/2016*	*SW*	*F160639*

Station ID: CTSO-AA9D4-20160623 **Date / Time Sampled:** 06/23/16 14:19 **Workorder** F160611
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160611-11 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**23.8**		mg/kg	1.32	1	06/23/2016	SW	F160639
Surrogate: 2,4,6-Tribromophenol		*96 %*	*Limit 50-150*			*1*	*06/23/2016*	*SW*	*F160639*

Project Name: **Cowboy Timber_MAY2016** **Certificate of Analysis**

TDF #: **NA**

Station ID: CTSO-AA9WSW-20160623 **Date / Time Sampled:** 06/23/16 14:30 **Workorder** F160611

EPA Tag No.: **Matrix:** Soil **Lab Number:** F160611-12 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**161**	**D**	mg/kg	2.64	2	06/23/2016	SW	F160639
Surrogate: 2,4,6-Tribromophenol		*99 %*		*Limit 50-150*		*2*	*06/23/2016*	*SW*	*F160639*

Classical Chemistry Parameters

Station ID: CTSO-AA8D1-20160623 **Date / Time Sampled:** 06/23/16 08:40 **Workorder** F160611
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160611-01 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**89.5**		% by Weight		1	06/24/2016	SW	F160638

Station ID: CTSO-AA7D1-20160623 **Date / Time Sampled:** 06/23/16 08:47 **Workorder** F160611
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160611-02 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**93.8**		% by Weight		1	06/24/2016	SW	F160638

Station ID: CTSO-A8NSW-20160623 **Date / Time Sampled:** 06/23/16 08:50 **Workorder** F160611
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160611-03 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**96.9**		% by Weight		1	06/24/2016	SW	F160638

Station ID: CTSO-07-20160623 **Date / Time Sampled:** 06/23/16 09:00 **Workorder** F160611
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160611-04 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**96.1**		% by Weight		1	06/24/2016	SW	F160638

Station ID: CTSO-AA10D4-20160623 **Date / Time Sampled:** 06/23/16 10:35 **Workorder** F160611
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160611-05 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**99.1**		% by Weight		1	06/24/2016	SW	F160638

Station ID: CTSO-AASSW-20160623 **Date / Time Sampled:** 06/23/16 10:39 **Workorder** F160611
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160611-06 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**97.8**		% by Weight		1	06/24/2016	SW	F160638

Station ID: CTSO-AAWSW-20160623 **Date / Time Sampled:** 06/23/16 10:41 **Workorder** F160611
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160611-07 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch

% Solids	**% Solids**	**96.2**		% by Weight		1	06/24/2016	SW	F160638

Station ID: CTSO-A11D2-20160623 **Date / Time Sampled:** 06/23/16 14:05 **Workorder** F160611
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160611-08 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**97.0**		% by Weight		1	06/24/2016	SW	F160638

Station ID: CTSO-B11D2-20160623 **Date / Time Sampled:** 06/23/16 14:07 **Workorder** F160611
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160611-09 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**96.2**		% by Weight		1	06/24/2016	SW	F160638

Station ID: CTSO-B10D2-20160623 **Date / Time Sampled:** 06/23/16 14:15 **Workorder** F160611
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160611-10 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**97.1**		% by Weight		1	06/24/2016	SW	F160638

Station ID: CTSO-AA9D4-20160623 **Date / Time Sampled:** 06/23/16 14:19 **Workorder** F160611
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160611-11 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**98.4**		% by Weight		1	06/24/2016	SW	F160638

Station ID: CTSO-AA9WSW-20160623 **Date / Time Sampled:** 06/23/16 14:30 **Workorder** F160611
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160611-12 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**97.8**		% by Weight		1	06/24/2016	SW	F160638

Note: "J" Qualifier indicates an estimated value. "U" Qualifier indicates analyte not detected at or above MDL.
"D" Qualifier indicates diluted value.

Pentachlorophenol by GCMS method 8270D - Quality Control

TechLaw, Inc. - ESAT Region 8 (Mobile Lab)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%R	%R Limits	%D or RPD	%D or RPD Limit
SVOC Field GCMS									
Batch F160639 - EPA 3550C			***Soil***						**SVOC Field GCMS**
Method Blank (F160639-BLK1)						Prepared & Analyzed: 06/23/16			
Pentachlorophenol	< 1.32	2.00	mg/kg						
Method Blank Spike (F160639-BS1)						Prepared & Analyzed: 06/23/16			
Pentachlorophenol	17.3	2.00	mg/kg	20.0		86	70-130		
Matrix Spike (F160639-MS1)			**Source: F160611-03**			Prepared & Analyzed: 06/23/16			
Pentachlorophenol	35.4	2.00	mg/kg	20.0	13.4	110	17-109		
Matrix Spike Dup (F160639-MSD1)			**Source: F160611-03**			Prepared & Analyzed: 06/23/16			
Pentachlorophenol	40.6	2.00	mg/kg	20.0	13.4	136	17-109	14	47

NOTE: %R = % Recovery, %R limits do not apply when sample levels exceed 4x the spike level.
RPD = Relative Percent Difference, %D = % Difference, DL = Detection Limit for QC sample .

TechLaw, Inc. - ESAT Region 8 (Mobile Lab)

Initial and Continuing Calibration Verification Results

SVOC Field GCMS Method: EPA 8270D Analysis Name: 8270 PCP

Sequence: F160640 Work Order: F160611 Units: mg/kg

Non-volatile Analyte	Initial (ICV1, ICV2)			Continuing Calibration Verification Standards (CCVs)								
	True	Found	%R	True	Found	%R	True	Found	%R	True	Found	%R
2,4,6-Tribromophenol				1			2			3		
				20.0	18.8	94.0	20.0	19.7	98.5			
				4			5			6		
				7			8			9		
Pentachlorophenol				1			2			3		
				20.0	17.3	86.5	20.0	19.3	96.5			
				4			5			6		
				7			8			9		
Phenanthrene-d10				1			2			3		
				2000	0.00	0.0	2000	0.00	0.0			
				4			5			6		
				7			8			9		

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270D

Laboratory: TechLaw, Inc. - ESAT Region 8 (Mobile Lab) SDG:

Client: Superfund Project: Cowboy Timber_MAY2016

Sequence: F160640 Instrument: SVOC Field GCMS

Matrix: Soil Calibration: UNASSIGNED

Internal Standard	Response	RT	Reference Response		Area %	Area % Limits	RT Diff		
Calibration Check (F160640-CCV1)			Lab File ID: CMBT-539.D			Analyzed: 06/23/16 08:01			
Phenanthrene-d10	2510747	11.54				50 - 200			
Blank (F160639-BLK1)			Lab File ID: CMBT-540.D			Analyzed: 06/23/16 08:26			
Phenanthrene-d10	2715229	11.54	2510747		108	50 - 200	0.0000		
LCS (F160639-BS1)			Lab File ID: CMBT-541.D			Analyzed: 06/23/16 08:51			
Phenanthrene-d10	2883874	11.55	2510747		115	50 - 200	0.0100		
CTSO-AA8D1-20160623 (F160611-01)			Lab File ID: CMBT-542.D			Analyzed: 06/23/16 09:41			
Phenanthrene-d10	2784722	11.55	2510747		111	50 - 200	0.0100		
CTSO-AA7D1-20160623 (F160611-02)			Lab File ID: CMBT-543.D			Analyzed: 06/23/16 10:06			
Phenanthrene-d10	2773268	11.55	2510747		110	50 - 200	0.0100		
CTSO-A8NSW-20160623 (F160611-03)			Lab File ID: CMBT-544.D			Analyzed: 06/23/16 10:40			
Phenanthrene-d10	2449825	11.55	2510747		98	50 - 200	0.0100		
Matrix Spike (F160639-MS1)			Lab File ID: CMBT-545.D			Analyzed: 06/23/16 11:06			
Phenanthrene-d10	2839983	11.55	2510747		113	50 - 200	0.0100		
Matrix Spike Dup (F160639-MSD1)			Lab File ID: CMBT-546.D			Analyzed: 06/23/16 11:31			
Phenanthrene-d10	2778331	11.55	2510747		111	50 - 200	0.0100		
CTSO-07-20160623 (F160611-04)			Lab File ID: CMBT-547.D			Analyzed: 06/23/16 11:56			
Phenanthrene-d10	2817208	11.55	2510747		112	50 - 200	0.0100		
CTSO-AA10D4-20160623 (F160611-05)			Lab File ID: CMBT-548.D			Analyzed: 06/23/16 12:22			
Phenanthrene-d10	2802070	11.55	2510747		112	50 - 200	0.0100		
CTSO-AASSW-20160623 (F160611-06)			Lab File ID: CMBT-549.D			Analyzed: 06/23/16 12:47			
Phenanthrene-d10	2807857	11.55	2510747		112	50 - 200	0.0100		
CTSO-AAWSW-20160623 (F160611-07)			Lab File ID: CMBT-550.D			Analyzed: 06/23/16 13:12			
Phenanthrene-d10	2722729	11.55	2510747		108	50 - 200	0.0100		
CTSO-AA9D4-20160623 (F160611-11)			Lab File ID: CMBT-551.D			Analyzed: 06/23/16 15:12			
Phenanthrene-d10	2859904	11.55	2510747		114	50 - 200	0.0100		
CTSO-A11D2-20160623 (F160611-08)			Lab File ID: CMBT-552.D			Analyzed: 06/23/16 15:37			
Phenanthrene-d10	2950561	11.55	2510747		118	50 - 200	0.0100		

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270D

Laboratory: TechLaw, Inc. - ESAT Region 8 (Mobile Lab) SDG:

Client: Superfund Project: Cowboy Timber_MAY2016

Sequence: F160640 Instrument: SVOC Field GCMS

Matrix: Soil Calibration: UNASSIGNED

Internal Standard	Response	RT	Reference Response		Area %	Area % Limits	RT Diff		
CTSO-B11D2-20160623 (F160611-09)			Lab File ID: CMBT-553.D			Analyzed: 06/23/16 16:02			
Phenanthrene-d10	2824090	11.55	2510747		112	50 - 200	0.0100		
CTSO-B10D2-20160623 (F160611-10)			Lab File ID: CMBT-555.D			Analyzed: 06/23/16 17:37			
Phenanthrene-d10	3496938	11.56	2510747		139	50 - 200	0.0200		
CTSO-AA9WSW-20160623 (F160611-12)			Lab File ID: CMBT-556.D			Analyzed: 06/23/16 18:03			
Phenanthrene-d10	2793923	11.55	2510747		111	50 - 200	0.0100		
Calibration Check (F160640-CCV2)			Lab File ID: CMBT-557.D			Analyzed: 06/23/16 18:29			
Phenanthrene-d10	2576099	11.55	2510747		103	50 - 200	0.0100		

TechLaw Inc., ESAT Region 8
INSTRUMENT ANALYSIS SEQUENCE LOG

Analytical Method: EPA 8270D **Non-volatile** **Sequence ID#:** F160640

Instrument ID #: SVOC Field GCMS Soil **LSR #:**

Analysis ID	Sample Name	Analysis Date	Analysis Time
F160640-CCV1	Calibration Check	06/23/16	08:01
F160639-BLK1	Blank	06/23/16	08:26
F160639-BS1		06/23/16	08:51
F160611-01	CTSO-AA8D1-20160623	06/23/16	09:41
F160611-02	CTSO-AA7D1-20160623	06/23/16	10:06
F160611-03	CTSO-A8NSW-20160623	06/23/16	10:40
F160639-MS1	Matrix Spike	06/23/16	11:06
F160639-MSD1	Matrix Spike Dup	06/23/16	11:31
F160611-04	CTSO-07-20160623	06/23/16	11:56
F160611-05	CTSO-AA10D4-20160623	06/23/16	12:22
F160611-06	CTSO-AASSW-20160623	06/23/16	12:47
F160611-07	CTSO-AAWSW-20160623	06/23/16	13:12
F160611-11	CTSO-AA9D4-20160623	06/23/16	15:12
F160611-08	CTSO-A11D2-20160623	06/23/16	15:37
F160611-09	CTSO-B11D2-20160623	06/23/16	16:02
F160611-10	CTSO-B10D2-20160623	06/23/16	17:37
F160611-12	CTSO-AA9WSW-20160623	06/23/16	18:03
F160640-CCV2	Calibration Check	06/23/16	18:29

U.S. Environmental Protection Agency
Region 8
Technical and Management Services

Laboratory Services Program

Certificate of Analysis

Ref: 8TMS-L

MEMORANDUM

Date: 06/25/16

Subject: Analytical Results--- **Cowboy Timber_MAY2016 / NA**

From: Don Goodrich; EPA Region 8 Analytical Chemistry WAM

To: Craig Myers
Superfund
1595 Wynkoop Street

Received Sample Set(s), [Work Order : Date Received]:
[F160612 : 06/24/2016]

Attached are the analytical results for the samples received from the Cowboy Timber_MAY2016 sampling event, according to TDF NA. All analyses were performed within their method specified holding times unless otherwise noted in the following narrative.

These samples were prepared, analyzed, and verified by the Environmental Services Assistance Team Laboratory (ESAT) according to the requirements of the Technical Direction Form (TDF).

Note: The laboratory herewith transmits this deliverable to the program/project partner for determination of "final data usability" which may include data validation and data quality asessment per and in accordance with EPA QA/G-8, *Guidance on Environmental Data Verification and Data Validation*, November 2002, EPA/240/R-02/004. Laboratory data qualifiers are applied based on the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* June 2008, referred to as "NFG".

Laboratory policy is to dispose of any remaining sample 60 days after data analysis packages are delivered to EPA. If you would like the laboratory to retain the samples for a period longer than 60 days, please contact Don Goodrich within the 60 day period at (303) 312-6687.

Case Narrative

F160612

Quality Assessment: Unless indicated by exception, the QA/QC associated with this sample set produced data within the TDF-specified criteria.

Holding Times: All samples were analyzed within their method-specified technical holding time(s).

Sample Receipt: All samples were received within the temperature control limits of 4C +/- 2C.

1. Preparation (PB) / Method blanks (MB). No detections > PQL
Exceptions: None.

2. Initial and Continuing calibration verification analyses (ICVs and CCVs). All CCCs and SPCCs are within limits.
Exceptions: None.

3. Laboratory Control Sample/ Blank Spike (LCS/BS). Recoveries are within 70-130% range. DCDFM recovery high; no hits in samples.
Exceptions: None.

4. Instrument tune (BFB/DFTPP). Tune passes, and all samples were analyzed within 12 hours.
Exceptions: None.

5. Laboratory Duplicate (DUP). "Source" identifies field sample duplicated in the laboratory. RPD limits are within limits.
Exceptions: None.

6. Laboratory Matrix Spike (MS) and Matrix Spike Duplicate (MSD). "Source" defines original field sample fortified prior to analysis. Percent Recovery (%R) limits do not apply when sample concentration(s) exceed the corresponding analyte spike level by a factor of 4 or greater.
Exceptions: None.

7. Internal standards. Area counts must be within 50% to 200% of responses established in associated opening CCV.
Exceptions: None.

8. Any calibration using more than two-points produced a correlation coefficient equal to or greater than 0.995 or have an average response factor of less than or equal to 15% for all non-CCC compounds or less than or equal to 30% for all CCC compounds.
Exceptions: None.

Acronyms and Definitions:

ESAT	Environmental Services Assistance Team
J	Data Estimated qualifier (also applied to all data less than PQL, greater than or equal to MDL)
MDL	Method Detection Limit
PQL	Practical Quantitation Limit, also known as reporting limit.
RPD	Relative Percent Difference (difference divided by the mean)
%D	Percent difference, serial dilution criteria unit, difference divided by the original result.
%R	Percent recovery, analyzed (less sample contribution) divided by true value
<	Analyte NOT DETECTED at or above the Method Detection Limit (MDL)
mg/L	Milligrams per liter (Parts per million). Solids equivalent = mg/Kg.
ug/L	Micrograms per liter (Parts per billion). Solids equivalent = ug/Kg.
NR	No Recovery (matrix spike) - Often seen for calcium/magnesium when their concentration exceeds the spike level by > 4x.
NFG	*USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* June 2008.
RE	Sample Re-analysis. Usually seen on raw data and sequences for required sample dilutions due to over-range analytes.
U	Analyte not detected at or above MDL qualifier
D	Diluted value qualifier

Method(s) Summary:

As defined in the Technical Direction Form (TDF), some or all of the methods listed below were used for the determination of the reported target analytes.

From EPA's *Methods for the Determination of Metals in Environmental Samples*, Supplement I, May 1994, dissolved, total, and/or total recoverable metals were determined by:

- Method 200.7 / 6010B using a PE Optima ICP-OE (ICP).
- Method 200.8 / 6020 using a Perkin-Elmer Elan 6000 ICP-MS.
- Method 200.2 for total recoverable metals (only) digestion.
- Method 245.1 using a Perkin-Elmer FIMS CVAA (aqueous mercury only).

From *Standard Methods for the Examination of Water and Wastewater*, 18th Edition, 1992, Method 2340B was used for the calculated hardness determination. Hardness is reported as mg (milligram) equivalent $CaCO_3$ per liter (L) determined as follows:

Calculated hardness = 2.497 * (Calcium, mg/L) + 4.118 * (Magnesium, mg/L).

From *EPA's Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846*,

- Method 3015A was used for microwave assisted total metals digestion.
- Method 7473 was used for mercury in solids.
- Method 8260B/5030B was used for volatile organic compounds.

From EPA's *Determination of Inorganic Anions by Ion Chromatography*, Revision 2.1, 1993, Method 300.0 was used to determine the anions.

From EPA's *Methods for Chemical Analysis of Water and Wastes*, March 1983:

- Method 310.1 was followed for the alkalinity determination.
- Method 160.1 was followed for gravimetric total dissolved solids (TDS) determination .
- Method 160.2 was used for gravimetric total suspended solids (TSS) determination.
- Method 415.3 was used for total organic carbon (TOC) determination using either an Apollo 9000 or Phoenix 8000 Non-Dispersive IR (NDIR) system. Also known as dissolved organic carbon (DOC) when performed on the dissolved sample fraction.

The quality control procedures listed in the TDF request were utilized by ESAT to verify accuracy of the results and to evaluate any matrix interferences.

Pentachlorophenol by GCMS method 8270D

Station ID: CTSO-AA8D4-20160624 **Date / Time Sampled:** 06/24/16 08:25 **Workorder** F160612
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160612-01 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**3.81**		mg/kg	1.32	1	06/24/2016	SW	F160641
Surrogate: 2,4,6-Tribromophenol		*92 %*	*Limit 50-150*			*1*	*06/24/2016*	*SW*	*F160641*

Station ID: CTSO-DUP21-20160624 **Date / Time Sampled:** 06/24/16 00:00 **Workorder** F160612
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160612-02 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**2.85**		mg/kg	1.32	1	06/24/2016	SW	F160641
Surrogate: 2,4,6-Tribromophenol		*90 %*	*Limit 50-150*			*1*	*06/24/2016*	*SW*	*F160641*

Station ID: CTSO-AA8WSW-20160624 **Date / Time Sampled:** 06/24/16 08:28 **Workorder** F160612
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160612-03 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**236**	**D**	mg/kg	6.60	5	06/24/2016	SW	F160641
Surrogate: 2,4,6-Tribromophenol		*110 %*	*Limit 50-150*			*5*	*06/24/2016*	*SW*	*F160641*

Station ID: CTSO-AA7TP-20160624 **Date / Time Sampled:** 06/24/16 09:45 **Workorder** F160612
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160612-04 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**1.50**	**J**	mg/kg	1.32	1	06/24/2016	SW	F160641
Surrogate: 2,4,6-Tribromophenol		*87 %*	*Limit 50-150*			*1*	*06/24/2016*	*SW*	*F160641*

Station ID: CTSO-AA8TP-20160624 **Date / Time Sampled:** 06/24/16 09:50 **Workorder** F160612
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160612-05 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**1.44**	**J**	mg/kg	1.32	1	06/24/2016	SW	F160641
Surrogate: 2,4,6-Tribromophenol		*87 %*	*Limit 50-150*			*1*	*06/24/2016*	*SW*	*F160641*

Station ID: CTSO-AA9TP-20160624 **Date / Time Sampled:** 06/24/16 09:57 **Workorder** F160612
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160612-06 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**1.40**	**J**	mg/kg	1.32	1	06/24/2016	SW	F160641
Surrogate: 2,4,6-Tribromophenol		*85 %*		*Limit 50-150*		*1*	*06/24/2016*	*SW*	*F160641*

Station ID: CTSO-AA10TP-20160624 **Date / Time Sampled:** 06/24/16 10:01 **Workorder** F160612
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160612-07 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**1.79**	**J**	mg/kg	1.32	1	06/24/2016	SW	F160641
Surrogate: 2,4,6-Tribromophenol		*86 %*		*Limit 50-150*		*1*	*06/24/2016*	*SW*	*F160641*

Station ID: CTSO-AA7D4-20160624 **Date / Time Sampled:** 06/24/16 11:15 **Workorder** F160612
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160612-08 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**19.2**		mg/kg	1.32	1	06/24/2016	SW	F160641
Surrogate: 2,4,6-Tribromophenol		*94 %*		*Limit 50-150*		*1*	*06/24/2016*	*SW*	*F160641*

Station ID: CTSO-AA7WSW-20160624 **Date / Time Sampled:** 06/24/16 11:19 **Workorder** F160612
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160612-09 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**25.0**	**D**	mg/kg	6.60	5	06/24/2016	SW	F160641
Surrogate: 2,4,6-Tribromophenol		*109 %*		*Limit 50-150*		*5*	*06/24/2016*	*SW*	*F160641*

Station ID: CTSO-AA7NSW-20160624 **Date / Time Sampled:** 06/24/16 11:22 **Workorder** F160612
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160612-10 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**183**	**D**	mg/kg	6.60	5	06/24/2016	SW	F160641
Surrogate: 2,4,6-Tribromophenol		*108 %*		*Limit 50-150*		*5*	*06/24/2016*	*SW*	*F160641*

Station ID: CTSO-A11D3-20160624 **Date / Time Sampled:** 06/24/16 16:50 **Workorder** F160612
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160612-11 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**1.65**	**J**	mg/kg	1.32	1	06/24/2016	SW	F160641
Surrogate: 2,4,6-Tribromophenol		*87 %*		*Limit 50-150*		*1*	*06/24/2016*	*SW*	*F160641*

Classical Chemistry Parameters

Station ID: CTSO-AA8D4-20160624 **Date / Time Sampled:** 06/24/16 08:25 **Workorder** F160612
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160612-01 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**98.7**		% by Weight		1	06/25/2016	NP	F160643

Station ID: CTSO-DUP21-20160624 **Date / Time Sampled:** 06/24/16 00:00 **Workorder** F160612
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160612-02 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**98.8**		% by Weight		1	06/25/2016	NP	F160643

Station ID: CTSO-AA8WSW-20160624 **Date / Time Sampled:** 06/24/16 08:28 **Workorder** F160612
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160612-03 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**97.6**		% by Weight		1	06/25/2016	NP	F160643

Station ID: CTSO-AA7TP-20160624 **Date / Time Sampled:** 06/24/16 09:45 **Workorder** F160612
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160612-04 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**94.9**		% by Weight		1	06/25/2016	NP	F160643

Station ID: CTSO-AA8TP-20160624 **Date / Time Sampled:** 06/24/16 09:50 **Workorder** F160612
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160612-05 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**95.9**		% by Weight		1	06/25/2016	NP	F160643

Station ID: CTSO-AA9TP-20160624 **Date / Time Sampled:** 06/24/16 09:57 **Workorder** F160612
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160612-06 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**96.0**		% by Weight		1	06/25/2016	NP	F160643

Station ID: CTSO-AA10TP-20160624 **Date / Time Sampled:** 06/24/16 10:01 **Workorder** F160612
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160612-07 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch

% Solids	**% Solids**	**96.2**	% by Weight	1	06/25/2016	NP	F160643

Station ID: CTSO-AA7D4-20160624 **Date / Time Sampled:** 06/24/16 11:15 **Workorder** F160612
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160612-08 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**97.9**		% by Weight		1	06/25/2016	NP	F160643

Station ID: CTSO-AA7WSW-20160624 **Date / Time Sampled:** 06/24/16 11:19 **Workorder** F160612
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160612-09 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**89.2**		% by Weight		1	06/25/2016	NP	F160643

Station ID: CTSO-AA7NSW-20160624 **Date / Time Sampled:** 06/24/16 11:22 **Workorder** F160612
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160612-10 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**89.2**		% by Weight		1	06/25/2016	NP	F160643

Station ID: CTSO-A11D3-20160624 **Date / Time Sampled:** 06/24/16 16:50 **Workorder** F160612
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160612-11 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**93.3**		% by Weight		1	06/25/2016	NP	F160643

Note: "J" Qualifier indicates an estimated value. "U" Qualifier indicates analyte not detected at or above MDL.
"D" Qualifier indicates diluted value.

Pentachlorophenol by GCMS method 8270D - Quality Control

TechLaw, Inc. - ESAT Region 8 (Mobile Lab)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%R	%R Limits	%D or RPD	%D or RPD Limit
SVOC Field GCMS									
Batch F160641 - EPA 3550C			***Soil***						**SVOC Field GCMS**
Method Blank (F160641-BLK1)						Prepared & Analyzed: 06/24/16			
Pentachlorophenol	< 1.32	2.00	mg/kg						
Method Blank Spike (F160641-BS1)						Prepared & Analyzed: 06/24/16			
Pentachlorophenol	16.9	2.00	mg/kg	20.0		84	70-130		
Matrix Spike (F160641-MS1)			**Source: F160612-02**			Prepared & Analyzed: 06/24/16			
Pentachlorophenol	19.7	2.00	mg/kg	20.0	2.85	84	17-109		
Matrix Spike Dup (F160641-MSD1)			**Source: F160612-02**			Prepared & Analyzed: 06/24/16			
Pentachlorophenol	19.7	2.00	mg/kg	20.0	2.85	84	17-109	0.4	47

NOTE: %R = % Recovery, %R limits do not apply when sample levels exceed 4x the spike level.
RPD = Relative Percent Difference, %D = % Difference, DL = Detection Limit for QC sample .

TechLaw, Inc. - ESAT Region 8 (Mobile Lab)

Initial and Continuing Calibration Verification Results

SVOC Field GCMS Method: EPA 8270D Analysis Name: 8270 PCP

Sequence: F160642 Work Order: F160612 Units: mg/kg

Non-volatile Analyte	Initial (ICV1, ICV2)			Continuing Calibration Verification Standards (CCVs)								
	True	Found	%R	True	Found	%R	True	Found	%R	True	Found	%R
2,4,6-Tribromophenol				1			2			3		
				20.0	19.3	96.5	20.0	18.5	92.5			
				4			5			6		
				7			8			9		
Pentachlorophenol				1			2			3		
				20.0	18.6	93.0	20.0	17.2	86.0			
				4			5			6		
				7			8			9		
Phenanthrene-d10				1			2			3		
				2000	0.00	0.0	2000	0.00	0.0			
				4			5			6		
				7			8			9		

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270D

Laboratory: TechLaw, Inc. - ESAT Region 8 (Mobile Lab) SDG:

Client: Superfund Project: Cowboy Timber_MAY2016

Sequence: F160642 Instrument: SVOC Field GCMS

Matrix: Soil Calibration: UNASSIGNED

Internal Standard	Response	RT	Reference Response		Area %	Area % Limits	RT Diff		
Calibration Check (F160642-CCV1)			Lab File ID: CMBT-559.D			Analyzed: 06/24/16 07:55			
Phenanthrene-d10	2674047	11.54				50 - 200			
Blank (F160641-BLK1)			Lab File ID: CMBT-560.D			Analyzed: 06/24/16 08:21			
Phenanthrene-d10	3070194	11.55	2674047		115	50 - 200	0.0100		
LCS (F160641-BS1)			Lab File ID: CMBT-561.D			Analyzed: 06/24/16 08:47			
Phenanthrene-d10	2835769	11.55	2674047		106	50 - 200	0.0100		
CTSO-AA8D4-20160624 (F160612-01)			Lab File ID: CMBT-562.D			Analyzed: 06/24/16 09:31			
Phenanthrene-d10	2939791	11.55	2674047		110	50 - 200	0.0100		
CTSO-DUP21-20160624 (F160612-02)			Lab File ID: CMBT-563.D			Analyzed: 06/24/16 09:58			
Phenanthrene-d10	2909240	11.55	2674047		109	50 - 200	0.0100		
Matrix Spike (F160641-MS1)			Lab File ID: CMBT-564.D			Analyzed: 06/24/16 10:24			
Phenanthrene-d10	3079784	11.55	2674047		115	50 - 200	0.0100		
Matrix Spike Dup (F160641-MSD1)			Lab File ID: CMBT-565.D			Analyzed: 06/24/16 10:51			
Phenanthrene-d10	3056093	11.55	2674047		114	50 - 200	0.0100		
CTSO-AA8WSW-20160624 (F160612-03)			Lab File ID: CMBT-566.D			Analyzed: 06/24/16 11:18			
Phenanthrene-d10	3464689	11.56	2674047		130	50 - 200	0.0200		
CTSO-AA7TP-20160624 (F160612-04)			Lab File ID: CMBT-567.D			Analyzed: 06/24/16 11:44			
Phenanthrene-d10	3013805	11.55	2674047		113	50 - 200	0.0100		
CTSO-AA8TP-20160624 (F160612-05)			Lab File ID: CMBT-568.D			Analyzed: 06/24/16 12:11			
Phenanthrene-d10	2854004	11.55	2674047		107	50 - 200	0.0100		
CTSO-AA9TP-20160624 (F160612-06)			Lab File ID: CMBT-569.D			Analyzed: 06/24/16 12:37			
Phenanthrene-d10	2838922	11.55	2674047		106	50 - 200	0.0100		
CTSO-AA10TP-20160624 (F160612-07)			Lab File ID: CMBT-570.D			Analyzed: 06/24/16 13:03			
Phenanthrene-d10	2883287	11.55	2674047		108	50 - 200	0.0100		
CTSO-AA7D4-20160624 (F160612-08)			Lab File ID: CMBT-571.D			Analyzed: 06/24/16 13:29			
Phenanthrene-d10	2877551	11.55	2674047		108	50 - 200	0.0100		
CTSO-AA7WSW-20160624 (F160612-09)			Lab File ID: CMBT-572.D			Analyzed: 06/24/16 13:56			
Phenanthrene-d10	2973048	11.55	2674047		111	50 - 200	0.0100		

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270D

Laboratory:	TechLaw, Inc. - ESAT Region 8 (Mobile Lab)	SDG:	
Client:	Superfund	Project:	Cowboy Timber_MAY2016
Sequence:	F160642	Instrument:	SVOC Field GCMS
Matrix:	Soil	Calibration:	UNASSIGNED

Internal Standard	Response	RT	Reference Response		Area %	Area % Limits	RT Diff		
CTSO-AA7NSW-20160624 (F160612-10)			Lab File ID: CMBT-573.D			Analyzed: 06/24/16 14:22			
Phenanthrene-d10	2833240	11.55	2674047		106	50 - 200	0.0100		
CTSO-A11D3-20160624 (F160612-11)			Lab File ID: CMBT-574.D			Analyzed: 06/24/16 17:45			
Phenanthrene-d10	2882569	11.55	2674047		108	50 - 200	0.0100		
Calibration Check (F160642-CCV2)			Lab File ID: CMBT-575.D			Analyzed: 06/24/16 18:11			
Phenanthrene-d10	2651743	11.55	2674047		99	50 - 200	0.0100		

TechLaw Inc., ESAT Region 8

INSTRUMENT ANALYSIS SEQUENCE LOG

Analytical Method: EPA 8270D **Non-volatile** **Sequence ID#:** F160642

Instrument ID #: SVOC Field GCMS Soil **LSR #:**

Analysis ID	Sample Name	Analysis Date	Analysis Time
F160642-CCV1	Calibration Check	06/24/16	07:55
F160641-BLK1	Blank	06/24/16	08:21
F160641-BS1		06/24/16	08:47
F160612-01	CTSO-AA8D4-20160624	06/24/16	09:31
F160612-02	CTSO-DUP21-20160624	06/24/16	09:58
F160641-MS1	Matrix Spike	06/24/16	10:24
F160641-MSD1	Matrix Spike Dup	06/24/16	10:51
F160612-03	CTSO-AA8WSW-20160624	06/24/16	11:18
F160612-04	CTSO-AA7TP-20160624	06/24/16	11:44
F160612-05	CTSO-AA8TP-20160624	06/24/16	12:11
F160612-06	CTSO-AA9TP-20160624	06/24/16	12:37
F160612-07	CTSO-AA10TP-20160624	06/24/16	13:03
F160612-08	CTSO-AA7D4-20160624	06/24/16	13:29
F160612-09	CTSO-AA7WSW-20160624	06/24/16	13:56
F160612-10	CTSO-AA7NSW-20160624	06/24/16	14:22
F160612-11	CTSO-A11D3-20160624	06/24/16	17:45
F160642-CCV2	Calibration Check	06/24/16	18:11

TechLaw Inc., ESAT Region 8

INSTRUMENT ANALYSIS SEQUENCE LOG

Analytical Method: % Solids **Non-volatile** **Sequence ID#:** F160644

Instrument ID #: SVOC Field GCMS Soil **LSR #:**

Analysis ID	Sample Name	Analysis Date	Analysis Time
F160612-01	CTSO-AA8D4-20160624	06/25/16	07:38
F160612-02	CTSO-DUP21-20160624	06/25/16	07:38
F160612-03	CTSO-AA8WSW-20160624	06/25/16	07:38
F160612-04	CTSO-AA7TP-20160624	06/25/16	07:38
F160612-05	CTSO-AA8TP-20160624	06/25/16	07:38
F160612-06	CTSO-AA9TP-20160624	06/25/16	07:38
F160612-07	CTSO-AA10TP-20160624	06/25/16	07:38
F160612-08	CTSO-AA7D4-20160624	06/25/16	07:38
F160612-09	CTSO-AA7WSW-20160624	06/25/16	07:38
F160612-10	CTSO-AA7NSW-20160624	06/25/16	07:38
F160612-11	CTSO-A11D3-20160624	06/25/16	07:38

U.S. Environmental Protection Agency
Region 8
Technical and Management Services

Laboratory Services Program

Certificate of Analysis

Ref: 8TMS-L

MEMORANDUM

Date: 06/26/16

Subject: Analytical Results--- **Cowboy Timber_MAY2016 / NA**

From: Don Goodrich; EPA Region 8 Analytical Chemistry WAM

To: Craig Myers
Superfund
1595 Wynkoop Street

Received Sample Set(s), [Work Order : Date Received]:
[F160613 : 06/25/2016]

Attached are the analytical results for the samples received from the Cowboy Timber_MAY2016 sampling event, according to TDF NA. All analyses were performed within their method specified holding times unless otherwise noted in the following narrative.

These samples were prepared, analyzed, and verified by the Environmental Services Assistance Team Laboratory (ESAT) according to the requirements of the Technical Direction Form (TDF).

Note: The laboratory herewith transmits this deliverable to the program/project partner for determination of "final data usability" which may include data validation and data quality asessment per and in accordance with EPA QA/G-8, *Guidance on Environmental Data Verification and Data Validation*, November 2002, EPA/240/R-02/004. Laboratory data qualifiers are applied based on the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* June 2008, referred to as "NFG".

Laboratory policy is to dispose of any remaining sample 60 days after data analysis packages are delivered to EPA. If you would like the laboratory to retain the samples for a period longer than 60 days, please contact Don Goodrich within the 60 day period at (303) 312-6687.

Case Narrative

F160613

Quality Assessment: Unless indicated by exception, the QA/QC associated with this sample set produced data within the TDF-specified criteria.

Holding Times: All samples were analyzed within their method-specified technical holding time(s).

Sample Receipt: All samples were received within the temperature control limits of 4C +/- 2C.

1. Preparation (PB) / Method blanks (MB). No detections > PQL
Exceptions: None.

2. Initial and Continuing calibration verification analyses (ICVs and CCVs). All CCCs and SPCCs are within limits.
Exceptions: None.

3. Laboratory Control Sample/ Blank Spike (LCS/BS). Recoveries are within 70-130% range. DCDFM recovery high; no hits in samples.
Exceptions: None.

4. Instrument tune (BFB/DFTPP). Tune passes, and all samples were analyzed within 12 hours.
Exceptions: None.

5. Laboratory Duplicate (DUP). "Source" identifies field sample duplicated in the laboratory. RPD limits are within limits.
Exceptions: None.

6. Laboratory Matrix Spike (MS) and Matrix Spike Duplicate (MSD). "Source" defines original field sample fortified prior to analysis. Percent Recovery (%R) limits do not apply when sample concentration(s) exceed the corresponding analyte spike level by a factor of 4 or greater.
Exceptions: None.

7. Internal standards. Area counts must be within 50% to 200% of responses established in associated opening CCV.
Exceptions: None.

8. Any calibration using more than two-points produced a correlation coefficient equal to or greater than 0.995 or have an average response factor of less than or equal to 15% for all non-CCC compounds or less than or equal to 30% for all CCC compounds.
Exceptions: None.

Acronyms and Definitions:

ESAT	Environmental Services Assistance Team
J	Data Estimated qualifier (also applied to all data less than PQL, greater than or equal to MDL)
MDL	Method Detection Limit
PQL	Practical Quantitation Limit, also known as reporting limit.
RPD	Relative Percent Difference (difference divided by the mean)
%D	Percent difference, serial dilution criteria unit, difference divided by the original result.
%R	Percent recovery, analyzed (less sample contribution) divided by true value
<	Analyte NOT DETECTED at or above the Method Detection Limit (MDL)
mg/L	Milligrams per liter (Parts per million). Solids equivalent = mg/Kg.
ug/L	Micrograms per liter (Parts per billion). Solids equivalent = ug/Kg.
NR	No Recovery (matrix spike) - Often seen for calcium/magnesium when their concentration exceeds the spike level by > 4x.
NFG	*USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* June 2008.
RE	Sample Re-analysis. Usually seen on raw data and sequences for required sample dilutions due to over-range analytes.
U	Analyte not detected at or above MDL qualifier
D	Diluted value qualifier

Method(s) Summary:

As defined in the Technical Direction Form (TDF), some or all of the methods listed below were used for the determination of the reported target analytes.

From EPA's *Methods for the Determination of Metals in Environmental Samples*, Supplement I, May 1994, dissolved, total, and/or total recoverable metals were determined by:

- Method 200.7 / 6010B using a PE Optima ICP-OE (ICP).
- Method 200.8 / 6020 using a Perkin-Elmer Elan 6000 ICP-MS.
- Method 200.2 for total recoverable metals (only) digestion.
- Method 245.1 using a Perkin-Elmer FIMS CVAA (aqueous mercury only).

From *Standard Methods for the Examination of Water and Wastewater*, 18th Edition, 1992, Method 2340B was used for the calculated hardness determination. Hardness is reported as mg (milligram) equivalent $CaCO_3$ per liter (L) determined as follows:

Calculated hardness = 2.497 * (Calcium, mg/L) + 4.118 * (Magnesium, mg/L).

From *EPA's Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846*,

- Method 3015A was used for microwave assisted total metals digestion.
- Method 7473 was used for mercury in solids.
- Method 8260B/5030B was used for volatile organic compounds.

From EPA's *Determination of Inorganic Anions by Ion Chromatography*, Revision 2.1, 1993, Method 300.0 was used to determine the anions.

From EPA's *Methods for Chemical Analysis of Water and Wastes*, March 1983:

- Method 310.1 was followed for the alkalinity determination.
- Method 160.1 was followed for gravimetric total dissolved solids (TDS) determination.
- Method 160.2 was used for gravimetric total suspended solids (TSS) determination.
- Method 415.3 was used for total organic carbon (TOC) determination using either an Apollo 9000 or Phoenix 8000 Non-Dispersive IR (NDIR) system. Also known as dissolved organic carbon (DOC) when performed on the dissolved sample fraction.

The quality control procedures listed in the TDF request were utilized by ESAT to verify accuracy of the results and to evaluate any matrix interferences.

Pentachlorophenol by GCMS method 8270D

Station ID: CTSO-AA7NSW-20160625 **Date / Time Sampled:** 06/25/16 07:00 **Workorder** F160613
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160613-01 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	Pentachlorophenol	< 2.00	U	mg/kg	1.32	1	06/25/2016	NP	F160645
Surrogate: 2,4,6-Tribromophenol		*78 %*		*Limit 50-150*		*1*	*06/25/2016*	*NP*	*F160645*

Station ID: CTSO-AA7D4-20160625 **Date / Time Sampled:** 06/25/16 07:04 **Workorder** F160613
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160613-02 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	Pentachlorophenol	< 2.00	U	mg/kg	1.32	1	06/25/2016	NP	F160645
Surrogate: 2,4,6-Tribromophenol		*80 %*		*Limit 50-150*		*1*	*06/25/2016*	*NP*	*F160645*

Station ID: CTSO-AA7WSW-20160625 **Date / Time Sampled:** 06/25/16 07:12 **Workorder** F160613
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160613-03 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**1.58**	**J**	mg/kg	1.32	1	06/25/2016	NP	F160645
Surrogate: 2,4,6-Tribromophenol		*80 %*		*Limit 50-150*		*1*	*06/25/2016*	*NP*	*F160645*

Station ID: CTSO-B10D3-20160625 **Date / Time Sampled:** 06/25/16 07:25 **Workorder** F160613
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160613-04 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**1.91**	**J**	mg/kg	1.32	1	06/25/2016	NP	F160645
Surrogate: 2,4,6-Tribromophenol		*80 %*		*Limit 50-150*		*1*	*06/25/2016*	*NP*	*F160645*

Station ID: CTSO-B11D3-20160625 **Date / Time Sampled:** 06/25/16 07:30 **Workorder** F160613
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160613-05 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	Pentachlorophenol	< 2.00	U	mg/kg	1.32	1	06/25/2016	NP	F160645
Surrogate: 2,4,6-Tribromophenol		*80 %*		*Limit 50-150*		*1*	*06/25/2016*	*NP*	*F160645*

Station ID: CTSO-AA10D3-20160625 **Date / Time Sampled:** 06/25/16 09:00 **Workorder** F160613
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160613-06 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch

EPA 8270D	Pentachlorophenol	< 2.00	**U**	mg/kg	1.32	1	06/25/2016	NP	F160645
Surrogate: 2,4,6-Tribromophenol		*83 %*		*Limit 50-150*		*1*	*06/25/2016*	*NP*	*F160645*

Station ID: CTSO-DUP22-20160625 **Date / Time Sampled:** 06/25/16 09:00 **Workorder** F160613
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160613-07 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	Pentachlorophenol	< 2.00	**U**	mg/kg	1.32	1	06/25/2016	NP	F160645
Surrogate: 2,4,6-Tribromophenol		*80 %*		*Limit 50-150*		*1*	*06/25/2016*	*NP*	*F160645*

Station ID: CTSO-AA10WSW-20160625 **Date / Time Sampled:** 06/25/16 09:04 **Workorder** F160613
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160613-08 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	Pentachlorophenol	< 2.00	**U**	mg/kg	1.32	1	06/25/2016	NP	F160645
Surrogate: 2,4,6-Tribromophenol		*82 %*		*Limit 50-150*		*1*	*06/25/2016*	*NP*	*F160645*

Station ID: CTSO-AA10SSW-20160625 **Date / Time Sampled:** 06/25/16 09:07 **Workorder** F160613
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160613-09 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**7.97**		mg/kg	1.32	1	06/25/2016	NP	F160645
Surrogate: 2,4,6-Tribromophenol		*81 %*		*Limit 50-150*		*1*	*06/25/2016*	*NP*	*F160645*

Station ID: CTSO-AA10SSW2-20160625 **Date / Time Sampled:** 06/25/16 16:25 **Workorder** F160613
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160613-10 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	Pentachlorophenol	< 2.00	**U**	mg/kg	1.32	1	06/25/2016	NP	F160645
Surrogate: 2,4,6-Tribromophenol		*83 %*		*Limit 50-150*		*1*	*06/25/2016*	*NP*	*F160645*

Classical Chemistry Parameters

Station ID: CTSO-AA7NSW-20160625 **Date / Time Sampled:** 06/25/16 07:00 **Workorder** F160613
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160613-01 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**97.4**		% by Weight		1	06/26/2016	NP	F160646

Station ID: CTSO-AA7D4-20160625 **Date / Time Sampled:** 06/25/16 07:04 **Workorder** F160613
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160613-02 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**97.3**		% by Weight		1	06/26/2016	NP	F160646

Station ID: CTSO-AA7WSW-20160625 **Date / Time Sampled:** 06/25/16 07:12 **Workorder** F160613
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160613-03 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**96.5**		% by Weight		1	06/26/2016	NP	F160646

Station ID: CTSO-B10D3-20160625 **Date / Time Sampled:** 06/25/16 07:25 **Workorder** F160613
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160613-04 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**95.1**		% by Weight		1	06/26/2016	NP	F160646

Station ID: CTSO-B11D3-20160625 **Date / Time Sampled:** 06/25/16 07:30 **Workorder** F160613
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160613-05 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**97.2**		% by Weight		1	06/26/2016	NP	F160646

Station ID: CTSO-AA10D3-20160625 **Date / Time Sampled:** 06/25/16 09:00 **Workorder** F160613
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160613-06 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**98.8**		% by Weight		1	06/26/2016	NP	F160646

Station ID: CTSO-DUP22-20160625 **Date / Time Sampled:** 06/25/16 09:00 **Workorder** F160613
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160613-07 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch

% Solids	**% Solids**	**98.9**	% by Weight	1	06/26/2016	NP	F160646

Station ID: CTSO-AA10WSW-20160625 **Date / Time Sampled:** 06/25/16 09:04 **Workorder** F160613
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160613-08 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**93.7**		% by Weight		1	06/26/2016	NP	F160646

Station ID: CTSO-AA10SSW-20160625 **Date / Time Sampled:** 06/25/16 09:07 **Workorder** F160613
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160613-09 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**97.2**		% by Weight		1	06/26/2016	NP	F160646

Station ID: CTSO-AA10SSW2-20160625 **Date / Time Sampled:** 06/25/16 16:25 **Workorder** F160613
EPA Tag No.: **Matrix:** Soil **Lab Number:** F160613-10 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**97.1**		% by Weight		1	06/26/2016	NP	F160646

Note: "J" Qualifier indicates an estimated value. "U" Qualifier indicates analyte not detected at or above MDL.
"D" Qualifier indicates diluted value.

Pentachlorophenol by GCMS method 8270D - Quality Control

TechLaw, Inc. - ESAT Region 8 (Mobile Lab)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%R	%R Limits	%D or RPD	%D or RPD Limit
SVOC Field GCMS									
Batch F160645 - EPA 3550C			***Soil***						**SVOC Field GCMS**
Method Blank (F160645-BLK1)						Prepared & Analyzed: 06/25/16			
Pentachlorophenol	< 1.32	2.00	mg/kg						
Method Blank Spike (F160645-BS1)						Prepared & Analyzed: 06/25/16			
Pentachlorophenol	16.2	2.00	mg/kg	20.0		81	70-130		
Matrix Spike (F160645-MS1)			**Source: F160613-01**			Prepared & Analyzed: 06/25/16			
Pentachlorophenol	14.8	2.00	mg/kg	20.0	< 1.32	74	17-109		
Matrix Spike Dup (F160645-MSD1)			**Source: F160613-01**			Prepared & Analyzed: 06/25/16			
Pentachlorophenol	13.2	2.00	mg/kg	20.0	< 1.32	66	17-109	12	47

NOTE: %R = % Recovery, %R limits do not apply when sample levels exceed 4x the spike level.
RPD = Relative Percent Difference, %D = % Difference, DL = Detection Limit for QC sample .

TechLaw, Inc. - ESAT Region 8 (Mobile Lab)

Initial and Continuing Calibration Verification Results

SVOC Field GCMS Method: EPA 8270D Analysis Name: 8270 PCP

Sequence: F160647 Work Order: F160613 Units: mg/kg

Non-volatile Analyte	Initial (ICV1, ICV2)			Continuing Calibration Verification Standards (CCVs)								
	True	Found	%R	True	Found	%R	True	Found	%R	True	Found	%R
2,4,6-Tribromophenol				1			2			3		
				20.0	21.3	106.5	20.0	22.3	111.5			
				4			5			6		
				7			8			9		
Pentachlorophenol				1			2			3		
				20.0	21.0	105.0	20.0	21.5	107.5			
				4			5			6		
				7			8			9		
Phenanthrene-d10				1			2			3		
				2000	0.00	0.0	2000	0.00	0.0			
				4			5			6		
				7			8			9		

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270D

Laboratory: TechLaw, Inc. - ESAT Region 8 (Mobile Lab) SDG:

Client: Superfund Project: Cowboy Timber_MAY2016

Sequence: F160647 Instrument: SVOC Field GCMS

Matrix: Soil Calibration: UNASSIGNED

Internal Standard	Response	RT	Reference Response		Area %	Area % Limits	RT Diff		
Calibration Check (F160647-CCV1)			Lab File ID: CMBT-578.D			Analyzed: 06/25/16 08:47			
Phenanthrene-d10	3080456	11.55				50 - 200			
Blank (F160645-BLK1)			Lab File ID: CMBT-579.D			Analyzed: 06/25/16 09:13			
Phenanthrene-d10	2776565	11.55	3080456		90	50 - 200	0.0000		
LCS (F160645-BS1)			Lab File ID: CMBT-581.D			Analyzed: 06/25/16 10:34			
Phenanthrene-d10	2912425	11.55	3080456		95	50 - 200	0.0000		
CTSO-AA7NSW-20160625 (F160613-01)			Lab File ID: CMBT-582.D			Analyzed: 06/25/16 11:00			
Phenanthrene-d10	2840097	11.54	3080456		92	50 - 200	-0.0100		
Matrix Spike (F160645-MS1)			Lab File ID: CMBT-583.D			Analyzed: 06/25/16 11:25			
Phenanthrene-d10	2820481	11.55	3080456		92	50 - 200	0.0000		
Matrix Spike Dup (F160645-MSD1)			Lab File ID: CMBT-584.D			Analyzed: 06/25/16 11:50			
Phenanthrene-d10	2838701	11.54	3080456		92	50 - 200	-0.0100		
CTSO-AA7D4-20160625 (F160613-02)			Lab File ID: CMBT-585.D			Analyzed: 06/25/16 12:15			
Phenanthrene-d10	2978119	11.55	3080456		97	50 - 200	0.0000		
CTSO-AA7WSW-20160625 (F160613-03)			Lab File ID: CMBT-586.D			Analyzed: 06/25/16 12:40			
Phenanthrene-d10	3005574	11.55	3080456		98	50 - 200	0.0000		
CTSO-B10D3-20160625 (F160613-04)			Lab File ID: CMBT-587.D			Analyzed: 06/25/16 13:06			
Phenanthrene-d10	2846303	11.55	3080456		92	50 - 200	0.0000		
CTSO-B11D3-20160625 (F160613-05)			Lab File ID: CMBT-588.D			Analyzed: 06/25/16 13:31			
Phenanthrene-d10	2774843	11.55	3080456		90	50 - 200	0.0000		
CTSO-AA10D3-20160625 (F160613-06)			Lab File ID: CMBT-589.D			Analyzed: 06/25/16 13:56			
Phenanthrene-d10	2914037	11.55	3080456		95	50 - 200	0.0000		
CTSO-DUP22-20160625 (F160613-07)			Lab File ID: CMBT-590.D			Analyzed: 06/25/16 14:21			
Phenanthrene-d10	2831392	11.55	3080456		92	50 - 200	0.0000		
CTSO-AA10WSW-20160625 (F160613-08)			Lab File ID: CMBT-591.D			Analyzed: 06/25/16 14:46			
Phenanthrene-d10	2977519	11.55	3080456		97	50 - 200	0.0000		
CTSO-AA10SSW-20160625 (F160613-09)			Lab File ID: CMBT-592.D			Analyzed: 06/25/16 15:12			
Phenanthrene-d10	2926387	11.55	3080456		95	50 - 200	0.0000		

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270D

Laboratory:	TechLaw, Inc. - ESAT Region 8 (Mobile Lab)	SDG:	
Client:	Superfund	Project:	Cowboy Timber_MAY2016
Sequence:	F160647	Instrument:	SVOC Field GCMS
Matrix:	Soil	Calibration:	UNASSIGNED

Internal Standard	Response	RT	Reference Response		Area %	Area % Limits	RT Diff		
CTSO-AA10SSW2-20160625 (F160613-10)			Lab File ID: CMBT-593.D			Analyzed: 06/25/16 16:41			
Phenanthrene-d10	2890631	11.55	3080456		94	50 - 200	0.0000		
Calibration Check (F160647-CCV2)			Lab File ID: CMBT-594.D			Analyzed: 06/25/16 17:07			
Phenanthrene-d10	3402108	11.55	3080456		110	50 - 200	0.0000		

TechLaw Inc., ESAT Region 8

INSTRUMENT ANALYSIS SEQUENCE LOG

Analytical Method: EPA 8270D **Non-volatile** **Sequence ID#:** F160647

Instrument ID #: SVOC Field GCMS Soil **LSR #:**

Analysis ID	Sample Name	Analysis Date	Analysis Time
F160647-CCV1	Calibration Check	06/25/16	08:47
F160645-BLK1	Blank	06/25/16	09:13
F160645-BS1		06/25/16	10:34
F160613-01	CTSO-AA7NSW-20160625	06/25/16	11:00
F160645-MS1	Matrix Spike	06/25/16	11:25
F160645-MSD1	Matrix Spike Dup	06/25/16	11:50
F160613-02	CTSO-AA7D4-20160625	06/25/16	12:15
F160613-03	CTSO-AA7WSW-20160625	06/25/16	12:40
F160613-04	CTSO-B10D3-20160625	06/25/16	13:06
F160613-05	CTSO-B11D3-20160625	06/25/16	13:31
F160613-06	CTSO-AA10D3-20160625	06/25/16	13:56
F160613-07	CTSO-DUP22-20160625	06/25/16	14:21
F160613-08	CTSO-AA10WSW-20160625	06/25/16	14:46
F160613-09	CTSO-AA10SSW-20160625	06/25/16	15:12
F160613-10	CTSO-AA10SSW2-20160625	06/25/16	16:41
F160647-CCV2	Calibration Check	06/25/16	17:07

TechLaw Inc., ESAT Region 8

INSTRUMENT ANALYSIS SEQUENCE LOG

Analytical Method: % Solids **Non-volatile** **Sequence ID#:** F160648

Instrument ID #: SVOC Field GCMS Soil **LSR #:**

Analysis ID	Sample Name	Analysis Date	Analysis Time
F160613-01	CTSO-AA7NSW-20160625	06/26/16	06:40
F160613-02	CTSO-AA7D4-20160625	06/26/16	06:40
F160613-03	CTSO-AA7WSW-20160625	06/26/16	06:40
F160613-04	CTSO-B10D3-20160625	06/26/16	06:40
F160613-05	CTSO-B11D3-20160625	06/26/16	06:40
F160613-06	CTSO-AA10D3-20160625	06/26/16	06:40
F160613-07	CTSO-DUP22-20160625	06/26/16	06:40
F160613-08	CTSO-AA10WSW-20160625	06/26/16	06:40
F160613-09	CTSO-AA10SSW-20160625	06/26/16	06:40
F160613-10	CTSO-AA10SSW2-20160625	06/26/16	06:40

U.S. Environmental Protection Agency
Region 8
Technical and Management Services

Laboratory Services Program

Certificate of Analysis

Ref: 8TMS-L

MEMORANDUM

Date: 07/14/16

Subject: Analytical Results--- **Cowboy Timber_MAY2016 / NA**

From: Don Goodrich; EPA Region 8 Analytical Chemistry WAM

To: Craig Myers
Superfund
1595 Wynkoop Street

Received Sample Set(s), [Work Order : Date Received]:
[F160701 : 07/05/2016]

Attached are the analytical results for the samples received from the Cowboy Timber_MAY2016 sampling event, according to TDF NA. All analyses were performed within their method specified holding times unless otherwise noted in the following narrative.

These samples were prepared, analyzed, and verified by the Environmental Services Assistance Team Laboratory (ESAT) according to the requirements of the Technical Direction Form (TDF).

Note: The laboratory herewith transmits this deliverable to the program/project partner for determination of "final data usability" which may include data validation and data quality asessment per and in accordance with EPA QA/G-8, *Guidance on Environmental Data Verification and Data Validation*, November 2002, EPA/240/R-02/004. Laboratory data qualifiers are applied based on the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* June 2008, referred to as "NFG".

Laboratory policy is to dispose of any remaining sample 60 days after data analysis packages are delivered to EPA. If you would like the laboratory to retain the samples for a period longer than 60 days, please contact Don Goodrich within the 60 day period at (303) 312-6687.

Case Narrative

F160701

Quality Assessment: Unless indicated by exception, the QA/QC associated with this sample set produced data within the TDF-specified criteria.

Holding Times: All samples were analyzed within their method-specified technical holding time(s).

Sample Receipt: All samples were received within the temperature control limits of 4C +/- 2C.

1. Preparation (PB) / Method blanks (MB). No detections > PQL
Exceptions: None.

2. Initial and Continuing calibration verification analyses (ICVs and CCVs). All CCCs and SPCCs are within limits.
Exceptions: None.

3. Laboratory Control Sample/ Blank Spike (LCS/BS). Recoveries are within 70-130% range. DCDFM recovery high; no hits in samples.
Exceptions: None.

4. Instrument tune (BFB/DFTPP). Tune passes, and all samples were analyzed within 12 hours.
Exceptions: None.

5. Laboratory Duplicate (DUP). "Source" identifies field sample duplicated in the laboratory. RPD limits are within limits.
Exceptions: None.

6. Laboratory Matrix Spike (MS) and Matrix Spike Duplicate (MSD). "Source" defines original field sample fortified prior to analysis. Percent Recovery (%R) limits do not apply when sample concentration(s) exceed the corresponding analyte spike level by a factor of 4 or greater.
Exceptions: None.

7. Internal standards. Area counts must be within 50% to 200% of responses established in associated opening CCV.
Exceptions: None.

8. Any calibration using more than two-points produced a correlation coefficient equal to or greater than 0.995 or have an average response factor of less than or equal to 15% for all non-CCC compounds or less than or equal to 30% for all CCC compounds.
Exceptions: None.

Acronyms and Definitions:

ESAT	Environmental Services Assistance Team
J	Data Estimated qualifier (also applied to all data less than PQL, greater than or equal to MDL)
MDL	Method Detection Limit
PQL	Practical Quantitation Limit, also known as reporting limit.
RPD	Relative Percent Difference (difference divided by the mean)
%D	Percent difference, serial dilution criteria unit, difference divided by the original result.
%R	Percent recovery, analyzed (less sample contribution) divided by true value
<	Analyte NOT DETECTED at or above the Method Detection Limit (MDL)
mg/L	Milligrams per liter (Parts per million). Solids equivalent = mg/Kg.
ug/L	Micrograms per liter (Parts per billion). Solids equivalent = ug/Kg.
NR	No Recovery (matrix spike) - Often seen for calcium/magnesium when their concentration exceeds the spike level by > 4x.
NFG	*USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* June 2008.
RE	Sample Re-analysis. Usually seen on raw data and sequences for required sample dilutions due to over-range analytes.
U	Analyte not detected at or above MDL qualifier
D	Diluted value qualifier

Method(s) Summary:

As defined in the Technical Direction Form (TDF), some or all of the methods listed below were used for the determination of the reported target analytes.

From EPA's *Methods for the Determination of Metals in Environmental Samples*, Supplement I, May 1994, dissolved, total, and/or total recoverable metals were determined by:

- Method 200.7 / 6010B using a PE Optima ICP-OE (ICP).
- Method 200.8 / 6020 using a Perkin-Elmer Elan 6000 ICP-MS.
- Method 200.2 for total recoverable metals (only) digestion.
- Method 245.1 using a Perkin-Elmer FIMS CVAA (aqueous mercury only).

From *Standard Methods for the Examination of Water and Wastewater*, 18th Edition, 1992, Method 2340B was used for the calculated hardness determination. Hardness is reported as mg (milligram) equivalent $CaCO_3$ per liter (L) determined as follows:

Calculated hardness = 2.497 * (Calcium, mg/L) + 4.118 * (Magnesium, mg/L).

From *EPA's Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846*,

- Method 3015A was used for microwave assisted total metals digestion.
- Method 7473 was used for mercury in solids.
- Method 8260B/5030B was used for volatile organic compounds.

From EPA's *Determination of Inorganic Anions by Ion Chromatography*, Revision 2.1, 1993, Method 300.0 was used to determine the anions.

From EPA's *Methods for Chemical Analysis of Water and Wastes*, March 1983:

- Method 310.1 was followed for the alkalinity determination.
- Method 160.1 was followed for gravimetric total dissolved solids (TDS) determination .
- Method 160.2 was used for gravimetric total suspended solids (TSS) determination.
- Method 415.3 was used for total organic carbon (TOC) determination using either an Apollo 9000 or Phoenix 8000 Non-Dispersive IR (NDIR) system. Also known as dissolved organic carbon (DOC) when performed on the dissolved sample fraction.

The quality control procedures listed in the TDF request were utilized by ESAT to verify accuracy of the results and to evaluate any matrix interferences.

Pentachlorophenol by GCMS method 8270D

Station ID: CTSO-CELL-20160630 **Date / Time Sampled:** 06/30/16 16:20 **Workorder** F160701

EPA Tag No.: **Matrix:** Soil **Lab Number:** F160701-01 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**54.5**		mg/kg	1.32	1	07/13/2016	SW	F160702
Surrogate: 2,4,6-Tribromophenol		*108 %*	*Limit 50-150*			*1*	*07/13/2016*	*SW*	*F160702*

Station ID: CTSO-DUP23-20160630 **Date / Time Sampled:** 06/30/16 00:00 **Workorder** F160701

EPA Tag No.: **Matrix:** Soil **Lab Number:** F160701-02 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**55.8**		mg/kg	1.32	1	07/13/2016	SW	F160702
Surrogate: 2,4,6-Tribromophenol		*111 %*	*Limit 50-150*			*1*	*07/13/2016*	*SW*	*F160702*

Project Name: **Cowboy Timber_MAY2016** **Certificate of Analysis**

TDF #: **NA**

Classical Chemistry Parameters

Station ID: CTSO-CELL-20160630 **Date / Time Sampled:** 06/30/16 16:20 **Workorder** F160701

EPA Tag No.: **Matrix:** Soil **Lab Number:** F160701-01 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**94.2**		% by Weight		1	07/13/2016	SW	F160701

Station ID: CTSO-DUP23-20160630 **Date / Time Sampled:** 06/30/16 00:00 **Workorder** F160701

EPA Tag No.: **Matrix:** Soil **Lab Number:** F160701-02 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**94.8**		% by Weight		1	07/13/2016	SW	F160701

Note: "J" Qualifier indicates an estimated value. "U" Qualifier indicates analyte not detected at or above MDL.
"D" Qualifier indicates diluted value.

Pentachlorophenol by GCMS method 8270D - Quality Control

TechLaw, Inc. - ESAT Region 8 (Mobile Lab)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%R	%R Limits	%D or RPD	%D or RPD Limit
SVOC Field GCMS									
Batch F160702 - EPA 3550C			***Soil***						**SVOC Field GCMS**
Method Blank (F160702-BLK1)						Prepared & Analyzed: 07/13/16			
Pentachlorophenol	< 1.32	2.00	mg/kg						
Method Blank Spike (F160702-BS1)						Prepared & Analyzed: 07/13/16			
Pentachlorophenol	23.7	2.00	mg/kg	20.0		119	70-130		
Matrix Spike (F160702-MS1)			**Source: F160701-01**			Prepared & Analyzed: 07/13/16			
Pentachlorophenol	73.3	2.00	mg/kg	20.0	54.5	94	17-109		
Matrix Spike Dup (F160702-MSD1)			**Source: F160701-01**			Prepared & Analyzed: 07/13/16			
Pentachlorophenol	73.4	2.00	mg/kg	20.0	54.5	95	17-109	0.2	47

NOTE: %R = % Recovery, %R limits do not apply when sample levels exceed 4x the spike level.
RPD = Relative Percent Difference, %D = % Difference, DL = Detection Limit for QC sample .

TechLaw, Inc. - ESAT Region 8 (Mobile Lab)

Initial and Continuing Calibration Verification Results

SVOC Field GCMS Method: EPA 8270D Analysis Name: 8270 PCP

Sequence: F160703 Work Order: F160701 Units: mg/kg

Non-volatile Analyte	Initial (ICV1, ICV2)			Continuing Calibration Verification Standards (CCVs)								
	True	Found	%R	True	Found	%R	True	Found	%R	True	Found	%R
2,4,6-Tribromophenol	20.0	20.0	100.0	1			2			3		
				20.0	21.3	106.5						
				4			5			6		
				7			8			9		
Pentachlorophenol	20.0	21.0	105.0	1			2			3		
				20.0	22.8	114.0						
				4			5			6		
				7			8			9		
Phenanthrene-d10	2000	0.00	0.0	1			2			3		
				2000	0.00	0.0						
				4			5			6		
				7			8			9		

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270D

Laboratory: TechLaw, Inc. - ESAT Region 8 (Mobile Lab) SDG:

Client: Superfund Project: Cowboy Timber_MAY2016

Sequence: F160703 Instrument: SVOC Field GCMS

Matrix: Soil Calibration: UNASSIGNED

Internal Standard	Response	RT	Reference Response		Area %	Area % Limits	RT Diff		
Initial Cal Check (F160703-ICV1)			Lab File ID: CMBT-606.D			Analyzed: 07/13/16 12:36			
Phenanthrene-d10	2373778	11.56				50 - 200			
Blank (F160702-BLK1)			Lab File ID: CMBT-607.D			Analyzed: 07/13/16 13:02			
Phenanthrene-d10	2634682	11.56	2373778		111	50 - 200	0.0000		
LCS (F160702-BS1)			Lab File ID: CMBT-608.D			Analyzed: 07/13/16 13:28			
Phenanthrene-d10	2941101	11.56	2373778		124	50 - 200	0.0000		
CTSO-CELL-20160630 (F160701-01)			Lab File ID: CMBT-609.D			Analyzed: 07/13/16 13:53			
Phenanthrene-d10	2734700	11.56	2373778		115	50 - 200	0.0000		
Matrix Spike (F160702-MS1)			Lab File ID: CMBT-610.D			Analyzed: 07/13/16 14:19			
Phenanthrene-d10	2692902	11.56	2373778		113	50 - 200	0.0000		
Matrix Spike Dup (F160702-MSD1)			Lab File ID: CMBT-611.D			Analyzed: 07/13/16 14:44			
Phenanthrene-d10	2575721	11.56	2373778		109	50 - 200	0.0000		
CTSO-DUP23-20160630 (F160701-02)			Lab File ID: CMBT-612.D			Analyzed: 07/13/16 15:10			
Phenanthrene-d10	2536558	11.56	2373778		107	50 - 200	0.0000		
Calibration Check (F160703-CCV1)			Lab File ID: CMBT-613.D			Analyzed: 07/13/16 15:36			
Phenanthrene-d10	2629638	11.56	2373778		111	50 - 200	0.0000		

TechLaw Inc., ESAT Region 8

INSTRUMENT ANALYSIS SEQUENCE LOG

Analytical Method: EPA 8270D **Non-volatile** **Sequence ID#:** F160703

Instrument ID #: SVOC Field GCMS Soil **LSR #:**

Analysis ID	Sample Name	Analysis Date	Analysis Time
F160703-ICV1	Initial Cal Check	07/13/16	12:36
F160702-BLK1	Blank	07/13/16	13:02
F160702-BS1		07/13/16	13:28
F160701-01	CTSO-CELL-20160630	07/13/16	13:53
F160702-MS1	Matrix Spike	07/13/16	14:19
F160702-MSD1	Matrix Spike Dup	07/13/16	14:44
F160701-02	CTSO-DUP23-20160630	07/13/16	15:10
F160703-CCV1	Calibration Check	07/13/16	15:36

U.S. Environmental Protection Agency
Region 8
Technical and Management Services

Laboratory Services Program

Certificate of Analysis

Ref: 8TMS-L

MEMORANDUM

Date: 10/17/16

Subject: Analytical Results--- **Cowboy Timber_MAY2016 / NA**

From: Don Goodrich; EPA Region 8 Analytical Chemistry WAM

To: Craig Myers
Superfund
1595 Wynkoop Street

Received Sample Set(s), [Work Order : Date Received]:
[F161001 : 10/13/2016]

Attached are the analytical results for the samples received from the Cowboy Timber_MAY2016 sampling event, according to TDF NA. All analyses were performed within their method specified holding times unless otherwise noted in the following narrative.

These samples were prepared, analyzed, and verified by the Environmental Services Assistance Team Laboratory (ESAT) according to the requirements of the Technical Direction Form (TDF).

Note: The laboratory herewith transmits this deliverable to the program/project partner for determination of "final data usability" which may include data validation and data quality asessment per and in accordance with EPA QA/G-8, *Guidance on Environmental Data Verification and Data Validation*, November 2002, EPA/240/R-02/004. Laboratory data qualifiers are applied based on the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* June 2008, referred to as "NFG".

Laboratory policy is to dispose of any remaining sample 60 days after data analysis packages are delivered to EPA. If you would like the laboratory to retain the samples for a period longer than 60 days, please contact Don Goodrich within the 60 day period at (303) 312-6687.

Case Narrative

F161001

Quality Assessment: Unless indicated by exception, the QA/QC associated with this sample set produced data within the TDF-specified criteria.

Holding Times: All samples were analyzed within their method-specified technical holding time(s).

Sample Receipt: All samples were received within the temperature control limits of 4C +/- 2C.

1. Preparation (PB) / Method blanks (MB). No detections > PQL
Exceptions: None.

2. Initial and Continuing calibration verification analyses (ICVs and CCVs). All CCCs and SPCCs are within limits.
Exceptions: None.

3. Laboratory Control Sample/ Blank Spike (LCS/BS). Recoveries are within 70-130% range. DCDFM recovery high; no hits in samples.
Exceptions: None.

4. Instrument tune (BFB/DFTPP). Tune passes, and all samples were analyzed within 12 hours.
Exceptions: None.

5. Laboratory Duplicate (DUP). "Source" identifies field sample duplicated in the laboratory. RPD limits are within limits.
Exceptions: None.

6. Laboratory Matrix Spike (MS) and Matrix Spike Duplicate (MSD). "Source" defines original field sample fortified prior to analysis. Percent Recovery (%R) limits do not apply when sample concentration(s) exceed the corresponding analyte spike level by a factor of 4 or greater.
Exceptions: None.

7. Internal standards. Area counts must be within 50% to 200% of responses established in associated opening CCV.
Exceptions: None.

8. Any calibration using more than two-points produced a correlation coefficient equal to or greater than 0.995 or have an average response factor of less than or equal to 15% for all non-CCC compounds or less than or equal to 30% for all CCC compounds.
Exceptions: None.

Acronyms and Definitions:

ESAT	Environmental Services Assistance Team
J	Data Estimated qualifier (also applied to all data less than PQL, greater than or equal to MDL)
MDL	Method Detection Limit
PQL	Practical Quantitation Limit, also known as reporting limit.
RPD	Relative Percent Difference (difference divided by the mean)
%D	Percent difference, serial dilution criteria unit, difference divided by the original result.
%R	Percent recovery, analyzed (less sample contribution) divided by true value
<	Analyte NOT DETECTED at or above the Method Detection Limit (MDL)
mg/L	Milligrams per liter (Parts per million). Solids equivalent = mg/Kg.
ug/L	Micrograms per liter (Parts per billion). Solids equivalent = ug/Kg.
NR	No Recovery (matrix spike) - Often seen for calcium/magnesium when their concentration exceeds the spike level by > 4x.
NFG	*USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* June 2008.
RE	Sample Re-analysis. Usually seen on raw data and sequences for required sample dilutions due to over-range analytes.
U	Analyte not detected at or above MDL qualifier
D	Diluted value qualifier

Method(s) Summary:

As defined in the Technical Direction Form (TDF), some or all of the methods listed below were used for the determination of the reported target analytes.

From EPA's *Methods for the Determination of Metals in Environmental Samples*, Supplement I, May 1994, dissolved, total, and/or total recoverable metals were determined by:

- Method 200.7 / 6010B using a PE Optima ICP-OE (ICP).
- Method 200.8 / 6020 using a Perkin-Elmer Elan 6000 ICP-MS.
- Method 200.2 for total recoverable metals (only) digestion.
- Method 245.1 using a Perkin-Elmer FIMS CVAA (aqueous mercury only).

From *Standard Methods for the Examination of Water and Wastewater*, 18th Edition, 1992, Method 2340B was used for the calculated hardness determination. Hardness is reported as mg (milligram) equivalent $CaCO_3$ per liter (L) determined as follows:

Calculated hardness = 2.497 * (Calcium, mg/L) + 4.118 * (Magnesium, mg/L).

From *EPA's Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846*,

- Method 3015A was used for microwave assisted total metals digestion.
- Method 7473 was used for mercury in solids.
- Method 8260B/5030B was used for volatile organic compounds.

From EPA's *Determination of Inorganic Anions by Ion Chromatography*, Revision 2.1, 1993, Method 300.0 was used to determine the anions.

From EPA's *Methods for Chemical Analysis of Water and Wastes*, March 1983:

- Method 310.1 was followed for the alkalinity determination.
- Method 160.1 was followed for gravimetric total dissolved solids (TDS) determination .
- Method 160.2 was used for gravimetric total suspended solids (TSS) determination.
- Method 415.3 was used for total organic carbon (TOC) determination using either an Apollo 9000 or Phoenix 8000 Non-Dispersive IR (NDIR) system. Also known as dissolved organic carbon (DOC) when performed on the dissolved sample fraction.

The quality control procedures listed in the TDF request were utilized by ESAT to verify accuracy of the results and to evaluate any matrix interferences.

Project Name: **Cowboy Timber_MAY2016** **Certificate of Analysis**

TDF #: **NA**

Pentachlorophenol by GCMS method 8270D

Station ID: CTSO-CELL-20161011 **Date / Time Sampled:** 10/11/16 10:00 **Workorder** F161001

EPA Tag No.: **Matrix:** Soil **Lab Number:** F161001-01 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**11.9**		mg/kg	1.32	1	10/14/2016	SW	F161001
Surrogate: 2,4,6-Tribromophenol		*91 %*	*Limit 50-150*			*1*	*10/14/2016*	*SW*	*F161001*

Project Name: **Cowboy Timber_MAY2016** **Certificate of Analysis**

TDF #: **NA**

Classical Chemistry Parameters

Station ID: CTSO-CELL-20161011 **Date / Time Sampled:** 10/11/16 10:00 **Workorder** F161001

EPA Tag No.: **Matrix:** Soil **Lab Number:** F161001-01 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**90.0**		% by Weight		1	10/17/2016	SW	F161003

Note: "J" Qualifier indicates an estimated value. "U" Qualifier indicates analyte not detected at or above MDL.
"D" Qualifier indicates diluted value.

Pentachlorophenol by GCMS method 8270D - Quality Control

TechLaw, Inc. - ESAT Region 8 (Mobile Lab)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%R	%R Limits	%D or RPD	%D or RPD Limit
SVOC Field GCMS									
Batch F161001 - EPA 3550C			***Soil***						**SVOC Field GCMS**
Method Blank (F161001-BLK1)						Prepared & Analyzed: 10/14/16			
Pentachlorophenol	1.46	2.00	mg/kg						
Method Blank Spike (F161001-BS1)						Prepared & Analyzed: 10/14/16			
Pentachlorophenol	20.7	2.00	mg/kg	20.0		103	70-130		
Duplicate (F161001-DUP1)			**Source: F161001-01**			Prepared & Analyzed: 10/14/16			
Pentachlorophenol	12.5	2.00	mg/kg		11.9			5	47
Matrix Spike (F161001-MS1)			**Source: F161001-01**			Prepared & Analyzed: 10/14/16			
Pentachlorophenol	30.2	2.00	mg/kg	20.0	11.9	92	17-109		
Matrix Spike Dup (F161001-MSD1)			**Source: F161001-01**			Prepared & Analyzed: 10/14/16			
Pentachlorophenol	26.1	2.00	mg/kg	20.0	11.9	71	17-109	15	47

NOTE: %R = % Recovery, %R limits do not apply when sample levels exceed 4x the spike level.
RPD = Relative Percent Difference, %D = % Difference, DL = Detection Limit for QC sample .

Project Name: **Cowboy Timber_MAY2016** **Certificate of Analysis**

TDF #: **NA**

TechLaw, Inc. - ESAT Region 8 (Mobile Lab)

Initial and Continuing Calibration Verification Results

SVOC Field GCMS Method: EPA 8270D Analysis Name: 8270 PCP

Sequence: F161002 Work Order: F161001 Units: mg/kg

Non-volatile Analyte	Initial (ICV1, ICV2)			Continuing Calibration Verification Standards (CCVs)								
	True	Found	%R	True	Found	%R	True	Found	%R	True	Found	%R
2,4,6-Tribromophenol	20.0	20.6	103.0	1			2			3		
				20.0	21.0	105.0						
				4			5			6		
				7			8			9		
Pentachlorophenol	20.0	21.2	106.0	1			2			3		
				20.0	21.9	109.5						
				4			5			6		
				7			8			9		
Phenanthrene-d10	2000	0.00	0.0	1			2			3		
				2000	0.00	0.0						
				4			5			6		
				7			8			9		

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270D

Laboratory: TechLaw, Inc. - ESAT Region 8 (Mobile Lab) SDG:

Client: Superfund Project: Cowboy Timber_MAY2016

Sequence: F161002 Instrument: SVOC Field GCMS

Matrix: Soil Calibration: UNASSIGNED

Internal Standard	Response	RT	Reference Response		Area %	Area % Limits	RT Diff		
Initial Cal Check (F161002-ICV1)			Lab File ID: CMBT-640.D			Analyzed: 10/14/16 14:06			
Phenanthrene-d10	3690145	11.55				50 - 200			
Blank (F161001-BLK1)			Lab File ID: CMBT-641.D			Analyzed: 10/14/16 14:33			
Phenanthrene-d10	4343416	11.55	3690145		118	50 - 200	0.0000		
LCS (F161001-BS1)			Lab File ID: CMBT-642.D			Analyzed: 10/14/16 14:59			
Phenanthrene-d10	4236986	11.55	3690145		115	50 - 200	0.0000		
CTSO-CELL-20161011 (F161001-01)			Lab File ID: CMBT-643.D			Analyzed: 10/14/16 15:25			
Phenanthrene-d10	4230695	11.55	3690145		115	50 - 200	0.0000		
Duplicate (F161001-DUP1)			Lab File ID: CMBT-644.D			Analyzed: 10/14/16 15:52			
Phenanthrene-d10	4228110	11.55	3690145		115	50 - 200	0.0000		
Matrix Spike (F161001-MS1)			Lab File ID: CMBT-645.D			Analyzed: 10/14/16 16:19			
Phenanthrene-d10	4537688	11.55	3690145		123	50 - 200	0.0000		
Matrix Spike Dup (F161001-MSD1)			Lab File ID: CMBT-646.D			Analyzed: 10/14/16 16:45			
Phenanthrene-d10	3725471	11.56	3690145		101	50 - 200	0.0100		
Calibration Check (F161002-CCV1)			Lab File ID: CMBT-647.D			Analyzed: 10/14/16 17:12			
Phenanthrene-d10	3956265	11.56	3690145		107	50 - 200	0.0100		

TechLaw Inc., ESAT Region 8

INSTRUMENT ANALYSIS SEQUENCE LOG

Analytical Method: EPA 8270D **Non-volatile** **Sequence ID#:** F161002

Instrument ID #: SVOC Field GCMS Soil **LSR #:**

Analysis ID	Sample Name	Analysis Date	Analysis Time
F161002-ICV1	Initial Cal Check	10/14/16	14:06
F161001-BLK1	Blank	10/14/16	14:33
F161001-BS1		10/14/16	14:59
F161001-01	CTSO-CELL-20161011	10/14/16	15:25
F161001-DUP1	Duplicate	10/14/16	15:52
F161001-MS1	Matrix Spike	10/14/16	16:19
F161001-MSD1	Matrix Spike Dup	10/14/16	16:45
F161002-CCV1	Calibration Check	10/14/16	17:12

U.S. Environmental Protection Agency
Region 8
Technical and Management Services

Laboratory Services Program

Certificate of Analysis

Ref: 8TMS-L

MEMORANDUM

Date: 11/22/16

Subject: Analytical Results--- **Cowboy Timber_MAY2016 / NA**

From: Don Goodrich; EPA Region 8 Analytical Chemistry WAM

To: Craig Myers
Superfund
1595 Wynkoop Street

Received Sample Set(s), [Work Order : Date Received]:
[F161101 : 11/21/2016]

Attached are the analytical results for the samples received from the Cowboy Timber_MAY2016 sampling event, according to TDF NA. All analyses were performed within their method specified holding times unless otherwise noted in the following narrative.

These samples were prepared, analyzed, and verified by the Environmental Services Assistance Team Laboratory (ESAT) according to the requirements of the Technical Direction Form (TDF).

Note: The laboratory herewith transmits this deliverable to the program/project partner for determination of "final data usability" which may include data validation and data quality asessment per and in accordance with EPA QA/G-8, *Guidance on Environmental Data Verification and Data Validation*, November 2002, EPA/240/R-02/004. Laboratory data qualifiers are applied based on the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* June 2008, referred to as "NFG".

Laboratory policy is to dispose of any remaining sample 60 days after data analysis packages are delivered to EPA. If you would like the laboratory to retain the samples for a period longer than 60 days, please contact Don Goodrich within the 60 day period at (303) 312-6687.

Case Narrative

F161101

Quality Assessment: Unless indicated by exception, the QA/QC associated with this sample set produced data within the TDF-specified criteria.

Holding Times: All samples were analyzed within their method-specified technical holding time(s).

Sample Receipt: All samples were received within the temperature control limits of 4C +/- 2C.

1. Preparation (PB) / Method blanks (MB). No detections > PQL
Exceptions: Slight detection in method blank. All detections in samples were greater than 2x detection in blank.

2. Initial and Continuing calibration verification analyses (ICVs and CCVs). All CCCs and SPCCs are within limits.
Exceptions: Closing CCV was high, suspect vial concentrated as IS recoveries were elevated.

3. Laboratory Control Sample/ Blank Spike (LCS/BS). Recoveries are within 70-130% range. DCDFM recovery high; no hits in samples.
Exceptions: None.

4. Instrument tune (BFB/DFTPP). Tune passes, and all samples were analyzed within 12 hours.
Exceptions: None.

5. Laboratory Duplicate (DUP). "Source" identifies field sample duplicated in the laboratory. RPD limits are within limits.
Exceptions: None.

6. Laboratory Matrix Spike (MS) and Matrix Spike Duplicate (MSD). "Source" defines original field sample fortified prior to analysis. Percent Recovery (%R) limits do not apply when sample concentration(s) exceed the corresponding analyte spike level by a factor of 4 or greater.
Exceptions: MSD recovery was slightly high; however, the MS/MSD RPD was still within acceptable limits. No qualifiers were assigned.

7. Internal standards. Area counts must be within 50% to 200% of responses established in associated opening CCV.
Exceptions: None.

8. Any calibration using more than two-points produced a correlation coefficient equal to or greater than 0.995 or have an average response factor of less than or equal to 15% for all non-CCC compounds or less than or equal to 30% for all CCC compounds.
Exceptions: None.

Acronyms and Definitions:

ESAT	Environmental Services Assistance Team
J	Data Estimated qualifier (also applied to all data less than PQL, greater than or equal to MDL)
MDL	Method Detection Limit
PQL	Practical Quantitation Limit, also known as reporting limit.
RPD	Relative Percent Difference (difference divided by the mean)
%D	Percent difference, serial dilution criteria unit, difference divided by the original result.
%R	Percent recovery, analyzed (less sample contribution) divided by true value
<	Analyte NOT DETECTED at or above the Method Detection Limit (MDL)
mg/L	Milligrams per liter (Parts per million). Solids equivalent = mg/Kg.
ug/L	Micrograms per liter (Parts per billion). Solids equivalent = ug/Kg.
NR	No Recovery (matrix spike) - Often seen for calcium/magnesium when their concentration exceeds the spike level by > 4x.
NFG	*USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review,* June 2008.
RE	Sample Re-analysis. Usually seen on raw data and sequences for required sample dilutions due to over-range analytes.
U	Analyte not detected at or above MDL qualifier
D	Diluted value qualifier

Method(s) Summary:

As defined in the Technical Direction Form (TDF), some or all of the methods listed below were used for the determination of the reported target analytes.

From EPA's *Methods for the Determination of Metals in Environmental Samples*, Supplement I, May 1994, dissolved, total, and/or total recoverable metals were determined by:

- Method 200.7 / 6010B using a PE Optima ICP-OE (ICP).
- Method 200.8 / 6020 using a Perkin-Elmer Elan 6000 ICP-MS.
- Method 200.2 for total recoverable metals (only) digestion.
- Method 245.1 using a Perkin-Elmer FIMS CVAA (aqueous mercury only).

From *Standard Methods for the Examination of Water and Wastewater*, 18th Edition, 1992, Method 2340B was used for the calculated hardness determination. Hardness is reported as mg(milligram) equivalent $CaCO_3$ per liter (L) determined as follows:

Calculated hardness = 2.497 * (Calcium, mg/L) + 4.118 * (Magnesium, mg/L).

From *EPA's Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846*,

- Method 3015A was used for microwave assisted total metals digestion.
- Method 7473 was used for mercury in solids.
- Method 8260B/5030B was used for volatile organic compounds.

From EPA's *Determination of Inorganic Anions by Ion Chromatography* , Revision 2.1, 1993, Method 300.0 was used to determine the anions.

From EPA's *Methods for Chemical Analysis of Water and Wastes*, March 1983:

- Method 310.1 was followed for the alkalinity determination.
- Method 160.1 was followed for gravimetric total dissolved solids (TDS) determination.
- Method 160.2 was used for gravimetric total suspended solids (TSS) determination.
- Method 415.3 was used for total organic carbon (TOC) determination using either an Apollo 9000 or Phoenix 8000 Non-Dispersive IR (NDIR) system. Also known as dissolved organic carbon (DOC) when performed on the dissolved sample fraction.

The quality control procedures listed in the TDF request were utilized by ESAT to verify accuracy of the results and to evaluate any matrix interferences.

Project Name: Cowboy Timber_MAY2016 **Certificate of Analysis**

TDF #: NA

Pentachlorophenol by GCMS method 8270D

Station ID: CTSO-SOUTH01-20161114 **Date / Time Sampled:** 11/14/16 10:00 **Workorder** F161101
EPA Tag No.: **Matrix:** Soil **Lab Number:** F161101-01 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**5.71**		mg/kg	1.32	1	11/21/2016	SW	F161102
Surrogate: 2,4,6-Tribromophenol		*92 %*	*Limit 50-150*			*1*	*11/21/2016*	*SW*	*F161102*

Station ID: CTSO-SOUTH12-20161114 **Date / Time Sampled:** 11/14/16 10:00 **Workorder** F161101
EPA Tag No.: **Matrix:** Soil **Lab Number:** F161101-02 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**10.0**		mg/kg	1.32	1	11/21/2016	SW	F161102
Surrogate: 2,4,6-Tribromophenol		*94 %*	*Limit 50-150*			*1*	*11/21/2016*	*SW*	*F161102*

Station ID: CTSO-SOUTH201-20161114 **Date / Time Sampled:** 11/14/16 11:00 **Workorder** F161101
EPA Tag No.: **Matrix:** Soil **Lab Number:** F161101-03 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**3.82**		mg/kg	1.32	1	11/21/2016	SW	F161102
Surrogate: 2,4,6-Tribromophenol		*101 %*	*Limit 50-150*			*1*	*11/21/2016*	*SW*	*F161102*

Station ID: CTSO-SOUTH212-20161114 **Date / Time Sampled:** 11/14/16 11:00 **Workorder** F161101
EPA Tag No.: **Matrix:** Soil **Lab Number:** F161101-04 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**11.4**		mg/kg	1.32	1	11/21/2016	SW	F161102
Surrogate: 2,4,6-Tribromophenol		*105 %*	*Limit 50-150*			*1*	*11/21/2016*	*SW*	*F161102*

Station ID: CTSO-NORTH01-20161114 **Date / Time Sampled:** 11/14/16 14:00 **Workorder** F161101
EPA Tag No.: **Matrix:** Soil **Lab Number:** F161101-05 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**10.2**		mg/kg	1.32	1	11/21/2016	SW	F161102
Surrogate: 2,4,6-Tribromophenol		*95 %*	*Limit 50-150*			*1*	*11/21/2016*	*SW*	*F161102*

Station ID: CTSO-NORTH12-20161114 **Date / Time Sampled:** 11/14/16 14:00 **Workorder** F161101
EPA Tag No.: **Matrix:** Soil **Lab Number:** F161101-06 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch

EPA 8270D	**Pentachlorophenol**	**4.47**	mg/kg	1.32	1	11/21/2016	SW	F161102
Surrogate: 2,4,6-Tribromophenol		*102 %*	*Limit 50-150*		*1*	*11/21/2016*	*SW*	*F161102*

Station ID: CTSO-NORTH201-20161114 **Date / Time Sampled:** 11/14/16 15:00 **Workorder** F161101

EPA Tag No.: **Matrix:** Soil **Lab Number:** F161101-07 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**11.0**		mg/kg	1.32	1	11/21/2016	SW	F161102
Surrogate: 2,4,6-Tribromophenol		*101 %*		*Limit 50-150*		*1*	*11/21/2016*	*SW*	*F161102*

Station ID: CTSO-NORTH212-20161114 **Date / Time Sampled:** 11/14/16 15:00 **Workorder** F161101

EPA Tag No.: **Matrix:** Soil **Lab Number:** F161101-08 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
EPA 8270D	**Pentachlorophenol**	**3.49**		mg/kg	1.32	1	11/21/2016	SW	F161102
Surrogate: 2,4,6-Tribromophenol		*101 %*		*Limit 50-150*		*1*	*11/21/2016*	*SW*	*F161102*

Classical Chemistry Parameters

Station ID: CTSO-SOUTH01-20161114 **Date / Time Sampled:** 11/14/16 10:00 **Workorder** F161101
EPA Tag No.: **Matrix:** Soil **Lab Number:** F161101-01 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**84.1**		% by Weight		1	11/22/2016	MC	F161101

Station ID: CTSO-SOUTH12-20161114 **Date / Time Sampled:** 11/14/16 10:00 **Workorder** F161101
EPA Tag No.: **Matrix:** Soil **Lab Number:** F161101-02 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**87.9**		% by Weight		1	11/22/2016	MC	F161101

Station ID: CTSO-SOUTH201-20161114 **Date / Time Sampled:** 11/14/16 11:00 **Workorder** F161101
EPA Tag No.: **Matrix:** Soil **Lab Number:** F161101-03 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**82.7**		% by Weight		1	11/22/2016	MC	F161101

Station ID: CTSO-SOUTH212-20161114 **Date / Time Sampled:** 11/14/16 11:00 **Workorder** F161101
EPA Tag No.: **Matrix:** Soil **Lab Number:** F161101-04 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**88.0**		% by Weight		1	11/22/2016	MC	F161101

Station ID: CTSO-NORTH01-20161114 **Date / Time Sampled:** 11/14/16 14:00 **Workorder** F161101
EPA Tag No.: **Matrix:** Soil **Lab Number:** F161101-05 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**88.3**		% by Weight		1	11/22/2016	MC	F161101

Station ID: CTSO-NORTH12-20161114 **Date / Time Sampled:** 11/14/16 14:00 **Workorder** F161101
EPA Tag No.: **Matrix:** Soil **Lab Number:** F161101-06 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**92.8**		% by Weight		1	11/22/2016	MC	F161101

Station ID: CTSO-NORTH201-20161114 **Date / Time Sampled:** 11/14/16 15:00 **Workorder** F161101
EPA Tag No.: **Matrix:** Soil **Lab Number:** F161101-07 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch

% Solids	**% Solids**	**84.5**	% by Weight	1	11/22/2016	MC	F161101

Station ID: CTSO-NORTH212-20161114 **Date / Time Sampled:** 11/14/16 15:00 **Workorder** F161101

EPA Tag No.: **Matrix:** Soil **Lab Number:** F161101-08 A

Method	Parameter	Results	Qual-ifier	Units	MDL	Dilution Factor	Analyzed	By	Batch
% Solids	**% Solids**	**87.6**		% by Weight		1	11/22/2016	MC	F161101

Note: "J" Qualifier indicates an estimated value. "U" Qualifier indicates analyte not detected at or above MDL.
"D" Qualifier indicates diluted value.

Pentachlorophenol by GCMS method 8270D - Quality Control

TechLaw, Inc. - ESAT Region 8 (Mobile Lab)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%R	%R Limits	%D or RPD	%D or RPD Limit
SVOC Field GCMS									
Batch F161102 - EPA 3550C			***Soil***						**SVOC Field GCMS**
Method Blank (F161102-BLK1)						Prepared & Analyzed: 11/21/16			
Pentachlorophenol	1.55	2.00	mg/kg						
Method Blank Spike (F161102-BS1)						Prepared & Analyzed: 11/21/16			
Pentachlorophenol	18.4	2.00	mg/kg	20.0		92	70-130		
Duplicate (F161102-DUP1)			**Source: F161101-02**			Prepared & Analyzed: 11/21/16			
Pentachlorophenol	10.2	2.00	mg/kg		10.0			1	47
Matrix Spike (F161102-MS1)			**Source: F161101-02**			Prepared & Analyzed: 11/21/16			
Pentachlorophenol	27.8	2.00	mg/kg	20.0	10.0	89	17-109		
Matrix Spike Dup (F161102-MSD1)			**Source: F161101-02**			Prepared & Analyzed: 11/21/16			
Pentachlorophenol	43.6	2.00	mg/kg	20.0	10.0	168	17-109	44	47

NOTE: %R = % Recovery, %R limits do not apply when sample levels exceed 4x the spike level.
RPD = Relative Percent Difference, %D = % Difference, DL = Detection Limit for QC sample .

TechLaw, Inc. - ESAT Region 8 (Mobile Lab)

Initial and Continuing Calibration Verification Results

SVOC Field GCMS Method: EPA 8270D Analysis Name: 8270 PCP

Sequence: F161103 Work Order: F161101 Units: mg/kg

Non-volatile Analyte	Initial (ICV1, ICV2)			Continuing Calibration Verification Standards (CCVs)								
	True	Found	%R	True	Found	%R	True	Found	%R	True	Found	%R
2,4,6-Tribromophenol	20.0	18.9	94.5	1			2			3		
				20.0	23.8	119.0						
				4			5			6		
				7			8			9		
Pentachlorophenol	20.0	19.0	95.0	1			2			3		
				20.0	24.7	123.5						
				4			5			6		
				7			8			9		
Phenanthrene-d10	2000	0.00	0.0	1			2			3		
				2000	0.00	0.0						
				4			5			6		
				7			8			9		

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270D

Laboratory: TechLaw, Inc. - ESAT Region 8 (Mobile Lab) SDG:

Client: Superfund Project: Cowboy Timber_MAY2016

Sequence: F161103 Instrument: SVOC Field GCMS

Matrix: Soil Calibration: UNASSIGNED

Internal Standard	Response	RT	Reference Response		Area %	Area % Limits	RT Diff		
Initial Cal Check (F161103-ICV1)			Lab File ID: CMBT-649.D			Analyzed: 11/21/16 13:39			
Phenanthrene-d10	2613494	11.55				50 - 200			
Blank (F161102-BLK1)			Lab File ID: CMBT-650.D			Analyzed: 11/21/16 14:05			
Phenanthrene-d10	3073739	11.55	2613494		118	50 - 200	0.0000		
LCS (F161102-BS1)			Lab File ID: CMBT-651.D			Analyzed: 11/21/16 14:32			
Phenanthrene-d10	3295328	11.55	2613494		126	50 - 200	0.0000		
CTSO-SOUTH01-20161114 (F161101-01)			Lab File ID: CMBT-652.D			Analyzed: 11/21/16 14:58			
Phenanthrene-d10	2966243	11.55	2613494		113	50 - 200	0.0000		
CTSO-SOUTH12-20161114 (F161101-02)			Lab File ID: CMBT-653.D			Analyzed: 11/21/16 15:24			
Phenanthrene-d10	3490903	11.55	2613494		134	50 - 200	0.0000		
Duplicate (F161102-DUP1)			Lab File ID: CMBT-654.D			Analyzed: 11/21/16 15:50			
Phenanthrene-d10	3991965	11.55	2613494		153	50 - 200	0.0000		
Matrix Spike (F161102-MS1)			Lab File ID: CMBT-655.D			Analyzed: 11/21/16 16:16			
Phenanthrene-d10	3854142	11.55	2613494		147	50 - 200	0.0000		
Matrix Spike Dup (F161102-MSD1)			Lab File ID: CMBT-656.D			Analyzed: 11/21/16 16:43			
Phenanthrene-d10	3581992	11.55	2613494		137	50 - 200	0.0000		
CTSO-SOUTH201-20161114 (F161101-03)			Lab File ID: CMBT-657.D			Analyzed: 11/21/16 17:09			
Phenanthrene-d10	3464761	11.55	2613494		133	50 - 200	0.0000		
CTSO-SOUTH212-20161114 (F161101-04)			Lab File ID: CMBT-658.D			Analyzed: 11/21/16 17:35			
Phenanthrene-d10	3638465	11.55	2613494		139	50 - 200	0.0000		
CTSO-NORTH01-20161114 (F161101-05)			Lab File ID: CMBT-659.D			Analyzed: 11/21/16 18:01			
Phenanthrene-d10	3486148	11.55	2613494		133	50 - 200	0.0000		
CTSO-NORTH12-20161114 (F161101-06)			Lab File ID: CMBT-660.D			Analyzed: 11/21/16 18:27			
Phenanthrene-d10	3171904	11.55	2613494		121	50 - 200	0.0000		
CTSO-NORTH201-20161114 (F161101-07)			Lab File ID: CMBT-661.D			Analyzed: 11/21/16 18:53			
Phenanthrene-d10	3779420	11.55	2613494		145	50 - 200	0.0000		
CTSO-NORTH212-20161114 (F161101-08)			Lab File ID: CMBT-662.D			Analyzed: 11/21/16 19:19			
Phenanthrene-d10	3602940	11.55	2613494		138	50 - 200	0.0000		

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270D

Laboratory:	TechLaw, Inc. - ESAT Region 8 (Mobile Lab)	SDG:	
Client:	Superfund	Project:	Cowboy Timber_MAY2016
Sequence:	F161103	Instrument:	SVOC Field GCMS
Matrix:	Soil	Calibration:	UNASSIGNED

Internal Standard	Response	RT	Reference Response		Area %	Area % Limits	RT Diff		
Calibration Check (F161103-CCV1)			Lab File ID: CMBT-663.D			Analyzed: 11/21/16 19:45			
Phenanthrene-d10	4436053	11.55	2613494		170	50 - 200	0.0000		

TechLaw Inc., ESAT Region 8
INSTRUMENT ANALYSIS SEQUENCE LOG

Analytical Method: EPA 8270D **Non-volatile** **Sequence ID#:** F161103

Instrument ID #: SVOC Field GCMS Soil **LSR #:**

Analysis ID	Sample Name	Analysis Date	Analysis Time
F161103-ICV1	Initial Cal Check	11/21/16	13:39
F161102-BLK1	Blank	11/21/16	14:05
F161102-BS1		11/21/16	14:32
F161101-01	CTSO-SOUTH01-20161114	11/21/16	14:58
F161101-02	CTSO-SOUTH12-20161114	11/21/16	15:24
F161102-DUP1	Duplicate	11/21/16	15:50
F161102-MS1	Matrix Spike	11/21/16	16:16
F161102-MSD1	Matrix Spike Dup	11/21/16	16:43
F161101-03	CTSO-SOUTH201-20161114	11/21/16	17:09
F161101-04	CTSO-SOUTH212-20161114	11/21/16	17:35
F161101-05	CTSO-NORTH01-20161114	11/21/16	18:01
F161101-06	CTSO-NORTH12-20161114	11/21/16	18:27
F161101-07	CTSO-NORTH201-20161114	11/21/16	18:53
F161101-08	CTSO-NORTH212-20161114	11/21/16	19:19
F161103-CCV1	Calibration Check	11/21/16	19:45

ANALYTICAL REPORT

Report Date: June 02, 2016

Moira Pryhoda
Weston Solutions, Inc.
1435 Garrison Street
Suite 100
Denver, CO 80215

Phone: (303) 729-6112

E-mail: moira.pryhoda@westonsolutions.com

Workorder: **34-1615338**
Client Project ID: Weston Solutions 060116
Purchase Order: NA
Project Manager: Kevin Griffiths

Analytical Results

Sample ID: **CTAS-Excavator-20160529** Collected: 05/29/2016
Lab ID: 1615338001 Received: 06/01/2016

Method: **OSHA 39** **Media:** SKC 226-97, XAD-7 (Specially Cleaned) **Analyzed:** 06/01/2016
Sampling Parameter: **Air Volume 51 L**

Analyte	Result (ug/sample)	Result (mg/m³)	Result (ppm)	RL (ug/sample)
Pentachlorophenol	<0.050	<0.00098	<0.000090	0.050

Sample ID: **CTAS-Residence-20160529** Collected: 05/29/2016
Lab ID: 1615338002 Received: 06/01/2016

Method: **OSHA 39** **Media:** SKC 226-97, XAD-7 (Specially Cleaned) **Analyzed:** 06/01/2016
Sampling Parameter: **Air Volume 53.4 L**

Analyte	Result (ug/sample)	Result (mg/m³)	Result (ppm)	RL (ug/sample)
Pentachlorophenol	<0.050	<0.00094	<0.000086	0.050

Sample ID: **CTAS-Exc-20160530** Collected: 05/30/2016
Lab ID: 1615338003 Received: 06/01/2016

Method: **OSHA 39** **Media:** SKC 226-97, XAD-7 (Specially Cleaned) **Analyzed:** 06/01/2016
Sampling Parameter: **Air Volume 51.6 L**

Analyte	Result (ug/sample)	Result (mg/m³)	Result (ppm)	RL (ug/sample)
Pentachlorophenol	<0.050	<0.00097	<0.000089	0.050

ANALYTICAL REPORT

Workorder: **34-1615338**
Client Project ID: Weston Solutions 060116
Purchase Order: NA
Project Manager: Kevin Griffiths

Analytical Results

Sample ID: **CTAS-Res-20160530** Collected: 05/30/2016
Lab ID: 1615338004 Received: 06/01/2016

Method: **OSHA 39** **Media:** SKC 226-97, XAD-7 (Specially Cleaned) **Analyzed:** 06/01/2016
Sampling Parameter: **Air Volume 53 L**

Analyte	Result (ug/sample)	Result (mg/m³)	Result (ppm)	RL (ug/sample)
Pentachlorophenol	<0.050	<0.00094	<0.000087	0.050

Sample ID: **CTAS-Blank-20160531** Collected: 05/31/2016
Lab ID: 1615338005 Received: 06/01/2016

Method: **OSHA 39** **Media:** SKC 226-97, XAD-7 (Specially Cleaned) **Analyzed:** 06/01/2016
Sampling Parameter: **Air Volume 0 L**

Analyte	Result (ug/sample)	Result (mg/m³)	Result (ppm)	RL (ug/sample)
Pentachlorophenol	<0.050	NA	NA	0.050

Comments

Quality Control: **OSHA 39 - (HBN: 170176)**

Tubes marked C section were not prepared or analyzed. The C tubes were not opened and exposed to atmosphere in sample train.

Report Authorization (/S/ is an electronic signature that complies with 21 CFR Part 11)

Method	Analyst	Peer Review
OSHA 39	/S/ Christopher Winter 06/02/2016 10:49	/S/ Thomas Bosch 06/02/2016 11:02

Laboratory Contact Information

ALS Environmental
960 W Levoy Drive
Salt Lake City, Utah 84123

Phone: (801) 266-7700
Email: alslt.lab@ALSGlobal.com
Web: www.alsslc.com

ANALYTICAL REPORT

Workorder: **34-1615338**
Client Project ID: Weston Solutions 060116
Purchase Order: NA
Project Manager: Kevin Griffiths

General Lab Comments

The results provided in this report relate only to the items tested.
Samples were received in acceptable condition unless otherwise noted.
Samples have not been blank corrected unless otherwise noted.
This test report shall not be reproduced, except in full, without written approval of ALS.

ALS provides professional analytical services for all samples submitted. ALS is not in a position to interpret the data and assumes no responsibility for the quality of the samples submitted.

All quality control samples processed with the samples in this report yielded acceptable results unless otherwise noted.

ALS is accredited for specific fields of testing (scopes) in the following testing sectors. The quality system implemented at ALS conforms to accreditation requirements and is applied to all analytical testing performed by ALS. The following table lists testing sector, accreditation body, accreditation number and website. Please contact these accrediting bodies or your ALS project manager for the current scope of accreditation that applies to your analytical testing.

Testing Sector	Accreditation Body (Standard)	Certificate Number	Website
Environmental	ACLASS (DoD ELAP)	ADE-1420	http://www.aclasscorp.com
	Utah (NELAC)	DATA1	http://health.utah.gov/lab/labimp/
	Nevada	UT00009	http://ndep.nv.gov/bsdw/labservice.htm
	Oklahoma	UT00009	http://www.deq.state.ok.us/CSDnew/
	Iowa	IA# 376	http://www.iowadnr.gov/InsideDNR/RegulatoryWater.aspx
	Florida (TNI)	E871067	http://www.dep.state.fl.us/labs/bars/sas/qa/
	Texas (TNI)	T104704456-11-1	http://www.tceq.texas.gov/field/qa/lab_accred_certif.html
Industrial Hygiene	AIHA-LAP, LLC (ISO 17025 and AIHA-LAP, LLC IHLAP/ELLAP)	101574	http://www.aihaaccreditedlabs.org
Lead Testing:			
CPSC	ACLASS (ISO 17025, CPSC)	ADE-1420	http://www.aclasscorp.com
Soil, Dust, Paint ,Air	AIHA-LAP, LLC (ISO 17025, AIHA-LAP, LLC ELLAP and NLLAP)	101574	http://www.aihaaccreditedlabs.org
Dietary Supplements	ACLASS (ISO 17025)	ADE-1420	http://www.aclasscorp.com

Definitions

LOD = Limit of Detection = MDL = Method Detection Limit, A statistical estimate of method/media/instrument sensitivity.
LOQ = Limit of Quantitation = RL = Reporting Limit, A verified value of method/media/instrument sensitivity.
ND = Not Detected, Testing result not detected above the LOD or LOQ.
NA = Not Applicable.
** No result could be reported, see sample comments for details.
< This testing result is less than the numerical value.
( ) This testing result is between the LOD and LOQ and has higher analytical uncertainty than values at or above the LOQ.

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Mt. Juliet, TN 37122
(615) 758-5858
(800) 767-5859
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Est. 1970

Quality Control Summary
SDG: L835437

For: Weston Solutions - CO
Cowboy Timber

L835437

Lab SampleID.	Client ID
L835437-01	CTDO-01-20160511
L835437-02	CTDO-02-20160511
L835437-03	CTDO-03-20160511
L835437-04	CTDO-04-20160511
L835437-05	CTGW-01-20160511

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Est. 1970

Quality Control Summary
SDG: L835437

For: Weston Solutions - CO
Project: Cowboy Timber
October 27, 2016

Sample Receiving and Handling

All sample aliquots were received at the correct temperature, in the proper containers, and with the appropriate preservatives. All method specified holding times were met.

Volatile Organic Compounds by Method 8260B

Laboratory Control Sample

Samples L835437-01, -02, -03, and -04 were analyzed in analytical batch WG872493. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

Sample L835437-05 was analyzed in analytical batch WG873015. The laboratory control sample associated with this sample had all target analytes within method limits except for 1,1,2,2-Tetrachloroethane. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

Matrix Spike/Matrix Spike Duplicate

For analytical batch WG872493 matrix spike/matrix spike duplicate analysis was performed on sample L835355-02. The matrix spike recoveries were below laboratory control limits for 1,1,1,2-Tetrachloroethane, 1,1,1-Trichloroethane, 1,1,2,2-Tetrachloroethane, 1,1,2-Trichloroethane, 1,1,2-Trichlorotrifluoroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,1-Dichloropropene, 1,2,3-Trichlorobenzene, 1,2,3-Trichloropropane, 1,2,3-Trimethylbenzene, 1,2,4-Trichlorobenzene, 1,2,4-Trimethylbenzene, 1,2-Dibromo-3-Chloropropane, 1,2-Dibromoethane, 1,2-Dichlorobenzene, 1,2-Dichloroethane, 1,2-Dichloropropane, 1,3,5-Trimethylbenzene, 1,3-Dichlorobenzene, 1,3-Dichloropropane, 1,4-Dichlorobenzene, 2,2-Dichloropropane, 2-Chlorotoluene, 4-Chlorotoluene, Benzene, Bromobenzene, Bromodichloromethane, Bromoform, Carbon tetrachloride, Chlorobenzene, Chlorodibromomethane, Chloroform, cis-1,2-Dichloroethene, cis-1,3-Dichloropropene, Dibromomethane, Di-isopropyl ether, Ethylbenzene, Hexachloro-1,3-butadiene, Isopropylbenzene, Methyl tert-butyl ether, Naphthalene, n-Butylbenzene, n-Propylbenzene, p-Isopropyltoluene, sec-Butylbenzene, Styrene, tert-Butylbenzene, Tetrachloroethene, Toluene, trans-1,2-Dichloroethene, trans-1,3-Dichloropropene, Trichloroethene, and Xylenes, Total. The spike recoveries were within limits for the remaining target compounds reported from this batch. The relative percent difference exceeded laboratory limits for 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, 1,2,3-Trichloropropane, 1,2-Dibromoethane, 1,2-Dichloroethane, 1,2-Dichloropropane, 1,3-Dichloropropane, 2-Butanone (MEK), 2-Chloroethyl vinyl ether, 4-Methyl-2-pentanone (MIBK), Benzene, Bromodichloromethane, Bromomethane, Chlorodibromomethane, Chloroethane, Chloroform, Chloromethane, cis-1,2-Dichloroethene, cis-1,3-Dichloropropene, Dibromomethane, Dichlorodifluoromethane, Di-isopropyl ether, Hexachloro-1,3-butadiene, Methyl tert-butyl ether, Methylene Chloride, trans-1,2-Dichloroethene, trans-1,3-Dichloropropene, and Vinyl chloride.

For analytical batch WG873015 matrix spike/matrix spike duplicate analysis was performed on sample L835717-01. The matrix spike recoveries were below laboratory control limits for 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, Acetone, Benzene, Ethylbenzene, Toluene, and Xylenes, Total. The spike recoveries were within limits for the remaining target compounds reported from this batch. The relative percent differences were within laboratory limits for all compounds.

Blank Analysis

The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit. Acetone was detected in the method blank above the MDL but below the RDL in WG872493.

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Est. 1970

Quality Control Summary
SDG: L835437

For: Weston Solutions - CO
Project: Cowboy Timber
October 27, 2016

Calibration Summary
Instrument VOCMS26 was calibrated on 3/23/2016. The initial calibration and continuing calibration verification standards were within method limits.

Instrument VOCMS7 was calibrated on 2/15/2016. The initial calibration and continuing calibration verification standards were within method limits.

Surrogate Summary
The surrogate recoveries were within method limits for all samples.

Internal Standards
The internal standard responses and retention times were within method limits for all samples and quality control samples.

Semi-Volatiles by Method 8270C
Laboratory Control Sample
Sample L835437-05 was analyzed in analytical batch WG872624. The laboratory control sample associated with this sample had all target analytes within method limits except for 3,3-Dichlorobenzidine. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

Matrix Spike/Matrix Spike Duplicate
Precision for batch WG872624 was evaluated using the LCS/LCSD. The RPDs were within method limits.

Blank Analysis
The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

Calibration Summary
Instrument BNAMS23 was calibrated on 5/12/2016. The initial calibration and continuing calibration verification standards were within method limits.

Surrogate Summary
The surrogate recoveries were within method limits for all samples.

Internal Standards
The internal standard responses and retention times were within method limits for all samples and quality control samples.

Nancy F. McLain
ESC Representative
ESC Lab Sciences

ANALYTICAL REPORT

October 27, 2016

Weston Solutions - CO

Sample Delivery Group:	L835437
Samples Received:	05/13/2016
Project Number:	20408.012.001.0345.0
Description:	Cowboy Timber

Report To: Moira Pryhoda
1435 Garrison St., Ste 100
Denver, CO 80215

Entire Report Reviewed By:

Shane Gambill
Technical Service Representative

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.esclabsciences.com

CTDO-01-20160511 L835437-01 Solid

Collected by: Eric Sandusky
Collected date/time: 05/11/16 00:00
Received date/time: 05/13/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG872493	5	05/13/16 17:32	05/14/16 07:04	CMJ

CTDO-02-20160511 L835437-02 Solid

Collected by: Eric Sandusky
Collected date/time: 05/11/16 00:00
Received date/time: 05/13/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG872493	5	05/13/16 17:32	05/14/16 07:25	CMJ

CTDO-03-20160511 L835437-03 Solid

Collected by: Eric Sandusky
Collected date/time: 05/11/16 00:00
Received date/time: 05/13/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG872493	5	05/13/16 17:32	05/14/16 07:44	CMJ

CTDO-04-20160511 L835437-04 Solid

Collected by: Eric Sandusky
Collected date/time: 05/11/16 00:00
Received date/time: 05/13/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG872493	5	05/13/16 17:32	05/14/16 08:04	CMJ

CTGW-01-20160511 L835437-05 GW

Collected by: Eric Sandusky
Collected date/time: 05/11/16 00:00
Received date/time: 05/13/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG872624	1	05/16/16 19:59	05/17/16 19:06	ADF
Volatile Organic Compounds (GC/MS) by Method 8260B	WG873015	1	05/17/16 11:54	05/17/16 11:54	CMJ

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. All MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Shane Gambill
Technical Service Representative

Project Narrative

Report revised to report in MDL

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/kg	Qualifier	MDL ug/kg	RDL ug/kg	Dilution	Analysis date / time	Batch
Acetone	U		50.0	250	5	05/14/2016 07:04	WG872493
Acrylonitrile	U		8.95	50.0	5	05/14/2016 07:04	WG872493
Benzene	U		1.35	5.00	5	05/14/2016 07:04	WG872493
Bromobenzene	U		1.42	5.00	5	05/14/2016 07:04	WG872493
Bromodichloromethane	U		1.27	5.00	5	05/14/2016 07:04	WG872493
Bromoform	U		2.12	5.00	5	05/14/2016 07:04	WG872493
Bromomethane	U		6.70	25.0	5	05/14/2016 07:04	WG872493
n-Butylbenzene	U		1.29	5.00	5	05/14/2016 07:04	WG872493
sec-Butylbenzene	U		1.00	5.00	5	05/14/2016 07:04	WG872493
tert-Butylbenzene	U		1.03	5.00	5	05/14/2016 07:04	WG872493
Carbon tetrachloride	U		1.64	5.00	5	05/14/2016 07:04	WG872493
Chlorobenzene	U		1.06	5.00	5	05/14/2016 07:04	WG872493
Chlorodibromomethane	U		1.86	5.00	5	05/14/2016 07:04	WG872493
Chloroethane	U		4.73	25.0	5	05/14/2016 07:04	WG872493
2-Chloroethyl vinyl ether	U		11.7	250	5	05/14/2016 07:04	WG872493
Chloroform	U		1.14	25.0	5	05/14/2016 07:04	WG872493
Chloromethane	U		1.88	12.5	5	05/14/2016 07:04	WG872493
2-Chlorotoluene	U		1.50	5.00	5	05/14/2016 07:04	WG872493
4-Chlorotoluene	U		1.20	5.00	5	05/14/2016 07:04	WG872493
1,2-Dibromo-3-Chloropropane	U		5.25	25.0	5	05/14/2016 07:04	WG872493
1,2-Dibromoethane	U		1.72	5.00	5	05/14/2016 07:04	WG872493
Dibromomethane	U		1.91	5.00	5	05/14/2016 07:04	WG872493
1,2-Dichlorobenzene	U		1.52	5.00	5	05/14/2016 07:04	WG872493
1,3-Dichlorobenzene	U		1.20	5.00	5	05/14/2016 07:04	WG872493
1,4-Dichlorobenzene	U		1.13	5.00	5	05/14/2016 07:04	WG872493
Dichlorodifluoromethane	U		3.56	25.0	5	05/14/2016 07:04	WG872493
1,1-Dichloroethane	U		0.995	5.00	5	05/14/2016 07:04	WG872493
1,2-Dichloroethane	U		1.32	5.00	5	05/14/2016 07:04	WG872493
1,1-Dichloroethene	U		1.52	5.00	5	05/14/2016 07:04	WG872493
cis-1,2-Dichloroethene	U		1.18	5.00	5	05/14/2016 07:04	WG872493
trans-1,2-Dichloroethene	U		1.32	5.00	5	05/14/2016 07:04	WG872493
1,2-Dichloropropane	U		1.79	5.00	5	05/14/2016 07:04	WG872493
1,1-Dichloropropene	U		1.58	5.00	5	05/14/2016 07:04	WG872493
1,3-Dichloropropane	U		1.04	5.00	5	05/14/2016 07:04	WG872493
cis-1,3-Dichloropropene	U		1.31	5.00	5	05/14/2016 07:04	WG872493
trans-1,3-Dichloropropene	U		1.34	5.00	5	05/14/2016 07:04	WG872493
2,2-Dichloropropane	U		1.40	5.00	5	05/14/2016 07:04	WG872493
Di-isopropyl ether	U		1.24	5.00	5	05/14/2016 07:04	WG872493
Ethylbenzene	U		1.48	5.00	5	05/14/2016 07:04	WG872493
Hexachloro-1,3-butadiene	U		1.71	5.00	5	05/14/2016 07:04	WG872493
Isopropylbenzene	U		1.22	5.00	5	05/14/2016 07:04	WG872493
p-Isopropyltoluene	U		1.02	5.00	5	05/14/2016 07:04	WG872493
2-Butanone (MEK)	U		23.4	50.0	5	05/14/2016 07:04	WG872493
Methylene Chloride	U		5.00	25.0	5	05/14/2016 07:04	WG872493
4-Methyl-2-pentanone (MIBK)	U		9.40	50.0	5	05/14/2016 07:04	WG872493
Methyl tert-butyl ether	U		1.06	5.00	5	05/14/2016 07:04	WG872493
Naphthalene	U		5.00	25.0	5	05/14/2016 07:04	WG872493
n-Propylbenzene	U		1.03	5.00	5	05/14/2016 07:04	WG872493
Styrene	U		1.17	5.00	5	05/14/2016 07:04	WG872493
1,1,1,2-Tetrachloroethane	U		1.32	5.00	5	05/14/2016 07:04	WG872493
1,1,2,2-Tetrachloroethane	U		1.82	5.00	5	05/14/2016 07:04	WG872493
1,1,2-Trichlorotrifluoroethane	U		1.82	5.00	5	05/14/2016 07:04	WG872493
Tetrachloroethene	U		1.38	5.00	5	05/14/2016 07:04	WG872493
Toluene	U		2.17	25.0	5	05/14/2016 07:04	WG872493
1,2,3-Trichlorobenzene	U		1.53	5.00	5	05/14/2016 07:04	WG872493
1,2,4-Trichlorobenzene	U		1.94	5.00	5	05/14/2016 07:04	WG872493

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/kg		ug/kg	ug/kg		date / time	
1,1,1-Trichloroethane	U		1.43	5.00	5	05/14/2016 07:04	WG872493
1,1,2-Trichloroethane	U		1.38	5.00	5	05/14/2016 07:04	WG872493
Trichloroethene	U		1.40	5.00	5	05/14/2016 07:04	WG872493
Trichlorofluoromethane	U		1.91	25.0	5	05/14/2016 07:04	WG872493
1,2,3-Trichloropropane	U		3.70	12.5	5	05/14/2016 07:04	WG872493
1,2,4-Trimethylbenzene	U		1.06	5.00	5	05/14/2016 07:04	WG872493
1,2,3-Trimethylbenzene	U		1.44	5.00	5	05/14/2016 07:04	WG872493
1,3,5-Trimethylbenzene	U		1.33	5.00	5	05/14/2016 07:04	WG872493
Vinyl chloride	U		1.46	5.00	5	05/14/2016 07:04	WG872493
Xylenes, Total	U		3.49	15.0	5	05/14/2016 07:04	WG872493
(S) Toluene-d8	*100*			*88.7-115*		*05/14/2016 07:04*	WG872493
(S) Dibromofluoromethane	*98.6*			*76.3-123*		*05/14/2016 07:04*	WG872493
(S) 4-Bromofluorobenzene	*95.4*			*69.7-129*		*05/14/2016 07:04*	WG872493

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/kg	Qualifier	MDL ug/kg	RDL ug/kg	Dilution	Analysis date / time	Batch
Acetone	U		50.0	250	5	05/14/2016 07:25	WG872493
Acrylonitrile	U		8.95	50.0	5	05/14/2016 07:25	WG872493
Benzene	U		1.35	5.00	5	05/14/2016 07:25	WG872493
Bromobenzene	U		1.42	5.00	5	05/14/2016 07:25	WG872493
Bromodichloromethane	U		1.27	5.00	5	05/14/2016 07:25	WG872493
Bromoform	U		2.12	5.00	5	05/14/2016 07:25	WG872493
Bromomethane	U		6.70	25.0	5	05/14/2016 07:25	WG872493
n-Butylbenzene	U		1.29	5.00	5	05/14/2016 07:25	WG872493
sec-Butylbenzene	U		1.00	5.00	5	05/14/2016 07:25	WG872493
tert-Butylbenzene	U		1.03	5.00	5	05/14/2016 07:25	WG872493
Carbon tetrachloride	U		1.64	5.00	5	05/14/2016 07:25	WG872493
Chlorobenzene	U		1.06	5.00	5	05/14/2016 07:25	WG872493
Chlorodibromomethane	U		1.86	5.00	5	05/14/2016 07:25	WG872493
Chloroethane	U		4.73	25.0	5	05/14/2016 07:25	WG872493
2-Chloroethyl vinyl ether	U		11.7	250	5	05/14/2016 07:25	WG872493
Chloroform	U		1.14	25.0	5	05/14/2016 07:25	WG872493
Chloromethane	U		1.88	12.5	5	05/14/2016 07:25	WG872493
2-Chlorotoluene	U		1.50	5.00	5	05/14/2016 07:25	WG872493
4-Chlorotoluene	U		1.20	5.00	5	05/14/2016 07:25	WG872493
1,2-Dibromo-3-Chloropropane	U		5.25	25.0	5	05/14/2016 07:25	WG872493
1,2-Dibromoethane	U		1.72	5.00	5	05/14/2016 07:25	WG872493
Dibromomethane	U		1.91	5.00	5	05/14/2016 07:25	WG872493
1,2-Dichlorobenzene	U		1.52	5.00	5	05/14/2016 07:25	WG872493
1,3-Dichlorobenzene	U		1.20	5.00	5	05/14/2016 07:25	WG872493
1,4-Dichlorobenzene	U		1.13	5.00	5	05/14/2016 07:25	WG872493
Dichlorodifluoromethane	U		3.56	25.0	5	05/14/2016 07:25	WG872493
1,1-Dichloroethane	U		0.995	5.00	5	05/14/2016 07:25	WG872493
1,2-Dichloroethane	U		1.32	5.00	5	05/14/2016 07:25	WG872493
1,1-Dichloroethene	U		1.52	5.00	5	05/14/2016 07:25	WG872493
cis-1,2-Dichloroethene	U		1.18	5.00	5	05/14/2016 07:25	WG872493
trans-1,2-Dichloroethene	U		1.32	5.00	5	05/14/2016 07:25	WG872493
1,2-Dichloropropane	U		1.79	5.00	5	05/14/2016 07:25	WG872493
1,1-Dichloropropene	U		1.58	5.00	5	05/14/2016 07:25	WG872493
1,3-Dichloropropane	U		1.04	5.00	5	05/14/2016 07:25	WG872493
cis-1,3-Dichloropropene	U		1.31	5.00	5	05/14/2016 07:25	WG872493
trans-1,3-Dichloropropene	U		1.34	5.00	5	05/14/2016 07:25	WG872493
2,2-Dichloropropane	U		1.40	5.00	5	05/14/2016 07:25	WG872493
Di-isopropyl ether	U		1.24	5.00	5	05/14/2016 07:25	WG872493
Ethylbenzene	U		1.48	5.00	5	05/14/2016 07:25	WG872493
Hexachloro-1,3-butadiene	U		1.71	5.00	5	05/14/2016 07:25	WG872493
Isopropylbenzene	U		1.22	5.00	5	05/14/2016 07:25	WG872493
p-Isopropyltoluene	U		1.02	5.00	5	05/14/2016 07:25	WG872493
2-Butanone (MEK)	U		23.4	50.0	5	05/14/2016 07:25	WG872493
Methylene Chloride	U		5.00	25.0	5	05/14/2016 07:25	WG872493
4-Methyl-2-pentanone (MIBK)	U		9.40	50.0	5	05/14/2016 07:25	WG872493
Methyl tert-butyl ether	U		1.06	5.00	5	05/14/2016 07:25	WG872493
Naphthalene	U		5.00	25.0	5	05/14/2016 07:25	WG872493
n-Propylbenzene	U		1.03	5.00	5	05/14/2016 07:25	WG872493
Styrene	U		1.17	5.00	5	05/14/2016 07:25	WG872493
1,1,1,2-Tetrachloroethane	U		1.32	5.00	5	05/14/2016 07:25	WG872493
1,1,2,2-Tetrachloroethane	U		1.82	5.00	5	05/14/2016 07:25	WG872493
1,1,2-Trichlorotrifluoroethane	U		1.82	5.00	5	05/14/2016 07:25	WG872493
Tetrachloroethene	U		1.38	5.00	5	05/14/2016 07:25	WG872493
Toluene	U		2.17	25.0	5	05/14/2016 07:25	WG872493
1,2,3-Trichlorobenzene	U		1.53	5.00	5	05/14/2016 07:25	WG872493
1,2,4-Trichlorobenzene	U		1.94	5.00	5	05/14/2016 07:25	WG872493

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/kg		ug/kg	ug/kg		date / time	
1,1,1-Trichloroethane	U		1.43	5.00	5	05/14/2016 07:25	WG872493
1,1,2-Trichloroethane	U		1.38	5.00	5	05/14/2016 07:25	WG872493
Trichloroethene	U		1.40	5.00	5	05/14/2016 07:25	WG872493
Trichlorofluoromethane	U		1.91	25.0	5	05/14/2016 07:25	WG872493
1,2,3-Trichloropropane	U		3.70	12.5	5	05/14/2016 07:25	WG872493
1,2,4-Trimethylbenzene	U		1.06	5.00	5	05/14/2016 07:25	WG872493
1,2,3-Trimethylbenzene	U		1.44	5.00	5	05/14/2016 07:25	WG872493
1,3,5-Trimethylbenzene	U		1.33	5.00	5	05/14/2016 07:25	WG872493
Vinyl chloride	U		1.46	5.00	5	05/14/2016 07:25	WG872493
Xylenes, Total	U		3.49	15.0	5	05/14/2016 07:25	WG872493
(S) Toluene-d8	*101*			*88.7-115*		*05/14/2016 07:25*	WG872493
(S) Dibromofluoromethane	*97.8*			*76.3-123*		*05/14/2016 07:25*	WG872493
(S) 4-Bromofluorobenzene	*97.5*			*69.7-129*		*05/14/2016 07:25*	WG872493

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/kg	Qualifier	MDL ug/kg	RDL ug/kg	Dilution	Analysis date / time	Batch
Acetone	U		50.0	250	5	05/14/2016 07:44	WG872493
Acrylonitrile	U		8.95	50.0	5	05/14/2016 07:44	WG872493
Benzene	U		1.35	5.00	5	05/14/2016 07:44	WG872493
Bromobenzene	U		1.42	5.00	5	05/14/2016 07:44	WG872493
Bromodichloromethane	U		1.27	5.00	5	05/14/2016 07:44	WG872493
Bromoform	U		2.12	5.00	5	05/14/2016 07:44	WG872493
Bromomethane	U		6.70	25.0	5	05/14/2016 07:44	WG872493
n-Butylbenzene	U		1.29	5.00	5	05/14/2016 07:44	WG872493
sec-Butylbenzene	U		1.00	5.00	5	05/14/2016 07:44	WG872493
tert-Butylbenzene	U		1.03	5.00	5	05/14/2016 07:44	WG872493
Carbon tetrachloride	U		1.64	5.00	5	05/14/2016 07:44	WG872493
Chlorobenzene	U		1.06	5.00	5	05/14/2016 07:44	WG872493
Chlorodibromomethane	U		1.86	5.00	5	05/14/2016 07:44	WG872493
Chloroethane	U		4.73	25.0	5	05/14/2016 07:44	WG872493
2-Chloroethyl vinyl ether	U		11.7	250	5	05/14/2016 07:44	WG872493
Chloroform	U		1.14	25.0	5	05/14/2016 07:44	WG872493
Chloromethane	U		1.88	12.5	5	05/14/2016 07:44	WG872493
2-Chlorotoluene	U		1.50	5.00	5	05/14/2016 07:44	WG872493
4-Chlorotoluene	U		1.20	5.00	5	05/14/2016 07:44	WG872493
1,2-Dibromo-3-Chloropropane	U		5.25	25.0	5	05/14/2016 07:44	WG872493
1,2-Dibromoethane	U		1.72	5.00	5	05/14/2016 07:44	WG872493
Dibromomethane	U		1.91	5.00	5	05/14/2016 07:44	WG872493
1,2-Dichlorobenzene	U		1.52	5.00	5	05/14/2016 07:44	WG872493
1,3-Dichlorobenzene	U		1.20	5.00	5	05/14/2016 07:44	WG872493
1,4-Dichlorobenzene	U		1.13	5.00	5	05/14/2016 07:44	WG872493
Dichlorodifluoromethane	U		3.56	25.0	5	05/14/2016 07:44	WG872493
1,1-Dichloroethane	U		0.995	5.00	5	05/14/2016 07:44	WG872493
1,2-Dichloroethane	U		1.32	5.00	5	05/14/2016 07:44	WG872493
1,1-Dichloroethene	U		1.52	5.00	5	05/14/2016 07:44	WG872493
cis-1,2-Dichloroethene	U		1.18	5.00	5	05/14/2016 07:44	WG872493
trans-1,2-Dichloroethene	U		1.32	5.00	5	05/14/2016 07:44	WG872493
1,2-Dichloropropane	U		1.79	5.00	5	05/14/2016 07:44	WG872493
1,1-Dichloropropene	U		1.58	5.00	5	05/14/2016 07:44	WG872493
1,3-Dichloropropane	U		1.04	5.00	5	05/14/2016 07:44	WG872493
cis-1,3-Dichloropropene	U		1.31	5.00	5	05/14/2016 07:44	WG872493
trans-1,3-Dichloropropene	U		1.34	5.00	5	05/14/2016 07:44	WG872493
2,2-Dichloropropane	U		1.40	5.00	5	05/14/2016 07:44	WG872493
Di-isopropyl ether	U		1.24	5.00	5	05/14/2016 07:44	WG872493
Ethylbenzene	U		1.48	5.00	5	05/14/2016 07:44	WG872493
Hexachloro-1,3-butadiene	U		1.71	5.00	5	05/14/2016 07:44	WG872493
Isopropylbenzene	U		1.22	5.00	5	05/14/2016 07:44	WG872493
p-Isopropyltoluene	U		1.02	5.00	5	05/14/2016 07:44	WG872493
2-Butanone (MEK)	U		23.4	50.0	5	05/14/2016 07:44	WG872493
Methylene Chloride	U		5.00	25.0	5	05/14/2016 07:44	WG872493
4-Methyl-2-pentanone (MIBK)	U		9.40	50.0	5	05/14/2016 07:44	WG872493
Methyl tert-butyl ether	U		1.06	5.00	5	05/14/2016 07:44	WG872493
Naphthalene	U		5.00	25.0	5	05/14/2016 07:44	WG872493
n-Propylbenzene	U		1.03	5.00	5	05/14/2016 07:44	WG872493
Styrene	U		1.17	5.00	5	05/14/2016 07:44	WG872493
1,1,1,2-Tetrachloroethane	U		1.32	5.00	5	05/14/2016 07:44	WG872493
1,1,2,2-Tetrachloroethane	U		1.82	5.00	5	05/14/2016 07:44	WG872493
1,1,2-Trichlorotrifluoroethane	U		1.82	5.00	5	05/14/2016 07:44	WG872493
Tetrachloroethene	U		1.38	5.00	5	05/14/2016 07:44	WG872493
Toluene	U		2.17	25.0	5	05/14/2016 07:44	WG872493
1,2,3-Trichlorobenzene	U		1.53	5.00	5	05/14/2016 07:44	WG872493
1,2,4-Trichlorobenzene	U		1.94	5.00	5	05/14/2016 07:44	WG872493

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/kg		ug/kg	ug/kg		date / time	
1,1,1-Trichloroethane	U		1.43	5.00	5	05/14/2016 07:44	WG872493
1,1,2-Trichloroethane	U		1.38	5.00	5	05/14/2016 07:44	WG872493
Trichloroethene	U		1.40	5.00	5	05/14/2016 07:44	WG872493
Trichlorofluoromethane	U		1.91	25.0	5	05/14/2016 07:44	WG872493
1,2,3-Trichloropropane	U		3.70	12.5	5	05/14/2016 07:44	WG872493
1,2,4-Trimethylbenzene	U		1.06	5.00	5	05/14/2016 07:44	WG872493
1,2,3-Trimethylbenzene	U		1.44	5.00	5	05/14/2016 07:44	WG872493
1,3,5-Trimethylbenzene	U		1.33	5.00	5	05/14/2016 07:44	WG872493
Vinyl chloride	U		1.46	5.00	5	05/14/2016 07:44	WG872493
Xylenes, Total	U		3.49	15.0	5	05/14/2016 07:44	WG872493
(S) Toluene-d8	*100*			*88.7-115*		*05/14/2016 07:44*	WG872493
(S) Dibromofluoromethane	*99.8*			*76.3-123*		*05/14/2016 07:44*	WG872493
(S) 4-Bromofluorobenzene	*96.7*			*69.7-129*		*05/14/2016 07:44*	WG872493

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/kg	Qualifier	MDL ug/kg	RDL ug/kg	Dilution	Analysis date / time	Batch
Acetone	U		50.0	250	5	05/14/2016 08:04	WG872493
Acrylonitrile	U		8.95	50.0	5	05/14/2016 08:04	WG872493
Benzene	U		1.35	5.00	5	05/14/2016 08:04	WG872493
Bromobenzene	U		1.42	5.00	5	05/14/2016 08:04	WG872493
Bromodichloromethane	U		1.27	5.00	5	05/14/2016 08:04	WG872493
Bromoform	U		2.12	5.00	5	05/14/2016 08:04	WG872493
Bromomethane	U		6.70	25.0	5	05/14/2016 08:04	WG872493
n-Butylbenzene	U		1.29	5.00	5	05/14/2016 08:04	WG872493
sec-Butylbenzene	U		1.00	5.00	5	05/14/2016 08:04	WG872493
tert-Butylbenzene	U		1.03	5.00	5	05/14/2016 08:04	WG872493
Carbon tetrachloride	U		1.64	5.00	5	05/14/2016 08:04	WG872493
Chlorobenzene	U		1.06	5.00	5	05/14/2016 08:04	WG872493
Chlorodibromomethane	U		1.86	5.00	5	05/14/2016 08:04	WG872493
Chloroethane	U		4.73	25.0	5	05/14/2016 08:04	WG872493
2-Chloroethyl vinyl ether	U		11.7	250	5	05/14/2016 08:04	WG872493
Chloroform	U		1.14	25.0	5	05/14/2016 08:04	WG872493
Chloromethane	U		1.88	12.5	5	05/14/2016 08:04	WG872493
2-Chlorotoluene	U		1.50	5.00	5	05/14/2016 08:04	WG872493
4-Chlorotoluene	U		1.20	5.00	5	05/14/2016 08:04	WG872493
1,2-Dibromo-3-Chloropropane	U		5.25	25.0	5	05/14/2016 08:04	WG872493
1,2-Dibromoethane	U		1.72	5.00	5	05/14/2016 08:04	WG872493
Dibromomethane	U		1.91	5.00	5	05/14/2016 08:04	WG872493
1,2-Dichlorobenzene	U		1.52	5.00	5	05/14/2016 08:04	WG872493
1,3-Dichlorobenzene	U		1.20	5.00	5	05/14/2016 08:04	WG872493
1,4-Dichlorobenzene	U		1.13	5.00	5	05/14/2016 08:04	WG872493
Dichlorodifluoromethane	U		3.56	25.0	5	05/14/2016 08:04	WG872493
1,1-Dichloroethane	U		0.995	5.00	5	05/14/2016 08:04	WG872493
1,2-Dichloroethane	U		1.32	5.00	5	05/14/2016 08:04	WG872493
1,1-Dichloroethene	U		1.52	5.00	5	05/14/2016 08:04	WG872493
cis-1,2-Dichloroethene	U		1.18	5.00	5	05/14/2016 08:04	WG872493
trans-1,2-Dichloroethene	U		1.32	5.00	5	05/14/2016 08:04	WG872493
1,2-Dichloropropane	U		1.79	5.00	5	05/14/2016 08:04	WG872493
1,1-Dichloropropene	U		1.58	5.00	5	05/14/2016 08:04	WG872493
1,3-Dichloropropane	U		1.04	5.00	5	05/14/2016 08:04	WG872493
cis-1,3-Dichloropropene	U		1.31	5.00	5	05/14/2016 08:04	WG872493
trans-1,3-Dichloropropene	U		1.34	5.00	5	05/14/2016 08:04	WG872493
2,2-Dichloropropane	U		1.40	5.00	5	05/14/2016 08:04	WG872493
Di-isopropyl ether	U		1.24	5.00	5	05/14/2016 08:04	WG872493
Ethylbenzene	U		1.48	5.00	5	05/14/2016 08:04	WG872493
Hexachloro-1,3-butadiene	U		1.71	5.00	5	05/14/2016 08:04	WG872493
Isopropylbenzene	U		1.22	5.00	5	05/14/2016 08:04	WG872493
p-Isopropyltoluene	U		1.02	5.00	5	05/14/2016 08:04	WG872493
2-Butanone (MEK)	U		23.4	50.0	5	05/14/2016 08:04	WG872493
Methylene Chloride	U		5.00	25.0	5	05/14/2016 08:04	WG872493
4-Methyl-2-pentanone (MIBK)	U		9.40	50.0	5	05/14/2016 08:04	WG872493
Methyl tert-butyl ether	U		1.06	5.00	5	05/14/2016 08:04	WG872493
Naphthalene	U		5.00	25.0	5	05/14/2016 08:04	WG872493
n-Propylbenzene	U		1.03	5.00	5	05/14/2016 08:04	WG872493
Styrene	U		1.17	5.00	5	05/14/2016 08:04	WG872493
1,1,1,2-Tetrachloroethane	U		1.32	5.00	5	05/14/2016 08:04	WG872493
1,1,2,2-Tetrachloroethane	U		1.82	5.00	5	05/14/2016 08:04	WG872493
1,1,2-Trichlorotrifluoroethane	U		1.82	5.00	5	05/14/2016 08:04	WG872493
Tetrachloroethene	U		1.38	5.00	5	05/14/2016 08:04	WG872493
Toluene	U		2.17	25.0	5	05/14/2016 08:04	WG872493
1,2,3-Trichlorobenzene	U		1.53	5.00	5	05/14/2016 08:04	WG872493
1,2,4-Trichlorobenzene	U		1.94	5.00	5	05/14/2016 08:04	WG872493

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/kg		ug/kg	ug/kg		date / time	
1,1,1-Trichloroethane	U		1.43	5.00	5	05/14/2016 08:04	WG872493
1,1,2-Trichloroethane	U		1.38	5.00	5	05/14/2016 08:04	WG872493
Trichloroethene	U		1.40	5.00	5	05/14/2016 08:04	WG872493
Trichlorofluoromethane	U		1.91	25.0	5	05/14/2016 08:04	WG872493
1,2,3-Trichloropropane	U		3.70	12.5	5	05/14/2016 08:04	WG872493
1,2,4-Trimethylbenzene	U		1.06	5.00	5	05/14/2016 08:04	WG872493
1,2,3-Trimethylbenzene	U		1.44	5.00	5	05/14/2016 08:04	WG872493
1,3,5-Trimethylbenzene	U		1.33	5.00	5	05/14/2016 08:04	WG872493
Vinyl chloride	U		1.46	5.00	5	05/14/2016 08:04	WG872493
Xylenes, Total	U		3.49	15.0	5	05/14/2016 08:04	WG872493
(S) Toluene-d8	*100*			*88.7-115*		*05/14/2016 08:04*	WG872493
(S) Dibromofluoromethane	*99.5*			*76.3-123*		*05/14/2016 08:04*	WG872493
(S) 4-Bromofluorobenzene	*96.2*			*69.7-129*		*05/14/2016 08:04*	WG872493

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		10.0	50.0	1	05/17/2016 11:54	WG873015
Acrolein	U		8.87	50.0	1	05/17/2016 11:54	WG873015
Acrylonitrile	U		1.87	10.0	1	05/17/2016 11:54	WG873015
Benzene	U		0.331	1.00	1	05/17/2016 11:54	WG873015
Bromobenzene	U		0.352	1.00	1	05/17/2016 11:54	WG873015
Bromodichloromethane	1.97		0.380	1.00	1	05/17/2016 11:54	WG873015
Bromoform	U		0.469	1.00	1	05/17/2016 11:54	WG873015
Bromomethane	U		0.866	5.00	1	05/17/2016 11:54	WG873015
n-Butylbenzene	U		0.361	1.00	1	05/17/2016 11:54	WG873015
sec-Butylbenzene	U		0.365	1.00	1	05/17/2016 11:54	WG873015
tert-Butylbenzene	U		0.399	1.00	1	05/17/2016 11:54	WG873015
Carbon tetrachloride	U		0.379	1.00	1	05/17/2016 11:54	WG873015
Chlorobenzene	U		0.348	1.00	1	05/17/2016 11:54	WG873015
Chlorodibromomethane	0.865	J	0.327	1.00	1	05/17/2016 11:54	WG873015
Chloroethane	U		0.453	5.00	1	05/17/2016 11:54	WG873015
2-Chloroethyl vinyl ether	U		3.01	50.0	1	05/17/2016 11:54	WG873015
Chloroform	2.95	J	0.324	5.00	1	05/17/2016 11:54	WG873015
Chloromethane	U		0.276	2.50	1	05/17/2016 11:54	WG873015
2-Chlorotoluene	U		0.375	1.00	1	05/17/2016 11:54	WG873015
4-Chlorotoluene	U		0.351	1.00	1	05/17/2016 11:54	WG873015
1,2-Dibromo-3-Chloropropane	U		1.33	5.00	1	05/17/2016 11:54	WG873015
1,2-Dibromoethane	U		0.381	1.00	1	05/17/2016 11:54	WG873015
Dibromomethane	U		0.346	1.00	1	05/17/2016 11:54	WG873015
1,2-Dichlorobenzene	U		0.349	1.00	1	05/17/2016 11:54	WG873015
1,3-Dichlorobenzene	U		0.220	1.00	1	05/17/2016 11:54	WG873015
1,4-Dichlorobenzene	U		0.274	1.00	1	05/17/2016 11:54	WG873015
Dichlorodifluoromethane	U		0.551	5.00	1	05/17/2016 11:54	WG873015
1,1-Dichloroethane	U		0.259	1.00	1	05/17/2016 11:54	WG873015
1,2-Dichloroethane	U		0.361	1.00	1	05/17/2016 11:54	WG873015
1,1-Dichloroethene	U		0.398	1.00	1	05/17/2016 11:54	WG873015
cis-1,2-Dichloroethene	0.372	J	0.260	1.00	1	05/17/2016 11:54	WG873015
trans-1,2-Dichloroethene	U		0.396	1.00	1	05/17/2016 11:54	WG873015
1,2-Dichloropropane	U		0.306	1.00	1	05/17/2016 11:54	WG873015
1,1-Dichloropropene	U		0.352	1.00	1	05/17/2016 11:54	WG873015
1,3-Dichloropropane	U		0.366	1.00	1	05/17/2016 11:54	WG873015
cis-1,3-Dichloropropene	U		0.418	1.00	1	05/17/2016 11:54	WG873015
trans-1,3-Dichloropropene	U		0.419	1.00	1	05/17/2016 11:54	WG873015
2,2-Dichloropropane	U		0.321	1.00	1	05/17/2016 11:54	WG873015
Di-isopropyl ether	U		0.320	1.00	1	05/17/2016 11:54	WG873015
Ethylbenzene	U		0.384	1.00	1	05/17/2016 11:54	WG873015
Hexachloro-1,3-butadiene	U		0.256	1.00	1	05/17/2016 11:54	WG873015
Isopropylbenzene	U		0.326	1.00	1	05/17/2016 11:54	WG873015
p-Isopropyltoluene	U		0.350	1.00	1	05/17/2016 11:54	WG873015
2-Butanone (MEK)	U		3.93	10.0	1	05/17/2016 11:54	WG873015
Methylene Chloride	U		1.00	5.00	1	05/17/2016 11:54	WG873015
4-Methyl-2-pentanone (MIBK)	U		2.14	10.0	1	05/17/2016 11:54	WG873015
Methyl tert-butyl ether	U		0.367	1.00	1	05/17/2016 11:54	WG873015
Naphthalene	U		1.00	5.00	1	05/17/2016 11:54	WG873015
n-Propylbenzene	U		0.349	1.00	1	05/17/2016 11:54	WG873015
Styrene	U		0.307	1.00	1	05/17/2016 11:54	WG873015
1,1,1,2-Tetrachloroethane	U		0.385	1.00	1	05/17/2016 11:54	WG873015
1,1,2,2-Tetrachloroethane	U	J4	0.130	1.00	1	05/17/2016 11:54	WG873015
1,1,2-Trichlorotrifluoroethane	U		0.303	1.00	1	05/17/2016 11:54	WG873015
Tetrachloroethene	U		0.372	1.00	1	05/17/2016 11:54	WG873015
Toluene	U		0.780	5.00	1	05/17/2016 11:54	WG873015
1,2,3-Trichlorobenzene	U		0.230	1.00	1	05/17/2016 11:54	WG873015

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,2,4-Trichlorobenzene	U		0.355	1.00	1	05/17/2016 11:54	WG873015
1,1,1-Trichloroethane	U		0.319	1.00	1	05/17/2016 11:54	WG873015
1,1,2-Trichloroethane	U		0.383	1.00	1	05/17/2016 11:54	WG873015
Trichloroethene	U		0.398	1.00	1	05/17/2016 11:54	WG873015
Trichlorofluoromethane	U		1.20	5.00	1	05/17/2016 11:54	WG873015
1,2,3-Trichloropropane	U		0.807	2.50	1	05/17/2016 11:54	WG873015
1,2,4-Trimethylbenzene	U		0.373	1.00	1	05/17/2016 11:54	WG873015
1,2,3-Trimethylbenzene	U		0.321	1.00	1	05/17/2016 11:54	WG873015
1,3,5-Trimethylbenzene	U		0.387	1.00	1	05/17/2016 11:54	WG873015
Vinyl chloride	U		0.259	1.00	1	05/17/2016 11:54	WG873015
Xylenes, Total	U		1.06	3.00	1	05/17/2016 11:54	WG873015
(S) Toluene-d8	*102*			*90.0-115*		*05/17/2016 11:54*	WG873015
(S) Dibromofluoromethane	*108*			*79.0-121*		*05/17/2016 11:54*	WG873015
(S) 4-Bromofluorobenzene	*96.3*			*80.1-120*		*05/17/2016 11:54*	WG873015

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acenaphthene	U		0.316	1.00	1	05/17/2016 19:06	WG872624
Acenaphthylene	U		0.309	1.00	1	05/17/2016 19:06	WG872624
Anthracene	U		0.291	1.00	1	05/17/2016 19:06	WG872624
Benzidine	U		2.10	10.0	1	05/17/2016 19:06	WG872624
Benzo(a)anthracene	U		0.111	1.00	1	05/17/2016 19:06	WG872624
Benzo(b)fluoranthene	U		0.0896	1.00	1	05/17/2016 19:06	WG872624
Benzo(k)fluoranthene	U		0.265	1.00	1	05/17/2016 19:06	WG872624
Benzo(g,h,i)perylene	U		0.161	1.00	1	05/17/2016 19:06	WG872624
Benzo(a)pyrene	U		0.269	1.00	1	05/17/2016 19:06	WG872624
Bis(2-chlorethoxy)methane	U		0.214	10.0	1	05/17/2016 19:06	WG872624
Bis(2-chloroethyl)ether	U		0.214	10.0	1	05/17/2016 19:06	WG872624
Bis(2-chloroisopropyl)ether	U		0.308	10.0	1	05/17/2016 19:06	WG872624
4-Bromophenyl-phenylether	U		0.180	10.0	1	05/17/2016 19:06	WG872624
2-Chloronaphthalene	U		0.204	1.00	1	05/17/2016 19:06	WG872624
4-Chlorophenyl-phenylether	U		0.170	10.0	1	05/17/2016 19:06	WG872624
Chrysene	U		0.133	1.00	1	05/17/2016 19:06	WG872624
Dibenz(a,h)anthracene	U		0.251	1.00	1	05/17/2016 19:06	WG872624
3,3-Dichlorobenzidine	U	J4	1.69	10.0	1	05/17/2016 19:06	WG872624
2,4-Dinitrotoluene	U		0.219	10.0	1	05/17/2016 19:06	WG872624
2,6-Dinitrotoluene	U		1.43	10.0	1	05/17/2016 19:06	WG872624
Fluoranthene	U		0.342	1.00	1	05/17/2016 19:06	WG872624
Fluorene	U		0.177	1.00	1	05/17/2016 19:06	WG872624
Hexachlorobenzene	U		0.227	1.00	1	05/17/2016 19:06	WG872624
Hexachloro-1,3-butadiene	U		2.64	10.0	1	05/17/2016 19:06	WG872624
Hexachlorocyclopentadiene	U		1.80	10.0	1	05/17/2016 19:06	WG872624
Hexachloroethane	U		3.13	10.0	1	05/17/2016 19:06	WG872624
Indeno(1,2,3-cd)pyrene	U		0.333	1.00	1	05/17/2016 19:06	WG872624
Isophorone	U		0.238	10.0	1	05/17/2016 19:06	WG872624
Naphthalene	U		0.413	1.00	1	05/17/2016 19:06	WG872624
Nitrobenzene	U		0.200	10.0	1	05/17/2016 19:06	WG872624
n-Nitrosodimethylamine	U		2.56	10.0	1	05/17/2016 19:06	WG872624
n-Nitrosodiphenylamine	U		0.137	10.0	1	05/17/2016 19:06	WG872624
n-Nitrosodi-n-propylamine	U		0.311	10.0	1	05/17/2016 19:06	WG872624
Phenanthrene	U		0.205	1.00	1	05/17/2016 19:06	WG872624
Benzylbutyl phthalate	U		0.395	3.00	1	05/17/2016 19:06	WG872624
Bis(2-ethylhexyl)phthalate	U		0.496	3.00	1	05/17/2016 19:06	WG872624
Di-n-butyl phthalate	U		0.275	3.00	1	05/17/2016 19:06	WG872624
Diethyl phthalate	U		0.356	3.00	1	05/17/2016 19:06	WG872624

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Dimethyl phthalate	U		0.338	3.00	1	05/17/2016 19:06	WG872624
Di-n-octyl phthalate	U		0.277	3.00	1	05/17/2016 19:06	WG872624
Pyrene	U		0.295	1.00	1	05/17/2016 19:06	WG872624
1,2,4-Trichlorobenzene	U		0.355	10.0	1	05/17/2016 19:06	WG872624
4-Chloro-3-methylphenol	U		0.229	10.0	1	05/17/2016 19:06	WG872624
2-Chlorophenol	U		0.190	10.0	1	05/17/2016 19:06	WG872624
2,4-Dichlorophenol	U		0.972	10.0	1	05/17/2016 19:06	WG872624
2,4-Dimethylphenol	U		1.34	10.0	1	05/17/2016 19:06	WG872624
4,6-Dinitro-2-methylphenol	U		2.60	10.0	1	05/17/2016 19:06	WG872624
2,4-Dinitrophenol	U		2.30	10.0	1	05/17/2016 19:06	WG872624
2-Nitrophenol	U		0.279	10.0	1	05/17/2016 19:06	WG872624
4-Nitrophenol	U		2.73	10.0	1	05/17/2016 19:06	WG872624
Pentachlorophenol	U		0.407	10.0	1	05/17/2016 19:06	WG872624
Phenol	U		1.13	10.0	1	05/17/2016 19:06	WG872624
2,4,6-Trichlorophenol	U		0.278	10.0	1	05/17/2016 19:06	WG872624
(S) 2-Fluorophenol	*36.6*			*10.0-74.1*		*05/17/2016 19:06*	WG872624
(S) Phenol-d5	*28.3*			*10.0-63.2*		*05/17/2016 19:06*	WG872624
(S) Nitrobenzene-d5	*91.4*			*28.3-123*		*05/17/2016 19:06*	WG872624
(S) 2-Fluorobiphenyl	*93.3*			*34.5-133*		*05/17/2016 19:06*	WG872624
(S) 2,4,6-Tribromophenol	*80.5*			*21.6-154*		*05/17/2016 19:06*	WG872624
(S) p-Terphenyl-d14	*106*			*30.4-148*		*05/17/2016 19:06*	WG872624

Method Blank (MB)

(MB) R3136802-3 05/14/16 00:04

Analyte	MB Result ug/kg	MB Qualifier	MB MDL ug/kg	MB RDL ug/kg
Acetone	11.2	J	10.0	50.0
Acrylonitrile	U		1.79	10.0
Benzene	U		0.270	1.00
Bromobenzene	U		0.284	1.00
Bromodichloromethane	U		0.254	1.00
Bromoform	U		0.424	1.00
Bromomethane	U		1.34	5.00
n-Butylbenzene	U		0.258	1.00
sec-Butylbenzene	U		0.201	1.00
tert-Butylbenzene	U		0.206	1.00
Carbon tetrachloride	U		0.328	1.00
Chlorobenzene	U		0.212	1.00
Chlorodibromomethane	U		0.373	1.00
Chloroethane	U		0.946	5.00
2-Chloroethyl vinyl ether	U		2.34	50.0
Chloroform	U		0.229	5.00
Chloromethane	U		0.375	2.50
2-Chlorotoluene	U		0.301	1.00
4-Chlorotoluene	U		0.240	1.00
1,2-Dibromo-3-Chloropropane	U		1.05	5.00
1,2-Dibromoethane	U		0.343	1.00
Dibromomethane	U		0.382	1.00
1,2-Dichlorobenzene	U		0.305	1.00
1,3-Dichlorobenzene	U		0.239	1.00
1,4-Dichlorobenzene	U		0.226	1.00
Dichlorodifluoromethane	U		0.713	5.00
1,1-Dichloroethane	U		0.199	1.00
1,2-Dichloroethane	U		0.265	1.00
1,1-Dichloroethene	U		0.303	1.00
cis-1,2-Dichloroethene	U		0.235	1.00
trans-1,2-Dichloroethene	U		0.264	1.00
1,2-Dichloropropane	U		0.358	1.00
1,1-Dichloropropene	U		0.317	1.00
1,3-Dichloropropane	U		0.207	1.00
cis-1,3-Dichloropropene	U		0.262	1.00
trans-1,3-Dichloropropene	U		0.267	1.00
2,2-Dichloropropane	U		0.279	1.00
Di-isopropyl ether	U		0.248	1.00
Ethylbenzene	U		0.297	1.00
Hexachloro-1,3-butadiene	U		0.342	1.00

Method Blank (MB)

(MB) R3136802-3 05/14/16 00:04

Analyte	MB Result ug/kg	MB Qualifier	MB MDL ug/kg	MB RDL ug/kg
Isopropylbenzene	U		0.243	1.00
p-Isopropyltoluene	U		0.204	1.00
2-Butanone (MEK)	U		4.68	10.0
Methylene Chloride	U		1.00	5.00
4-Methyl-2-pentanone (MIBK)	U		1.88	10.0
Methyl tert-butyl ether	U		0.212	1.00
Naphthalene	U		1.00	5.00
n-Propylbenzene	U		0.206	1.00
Styrene	U		0.234	1.00
1,1,1,2-Tetrachloroethane	U		0.264	1.00
1,1,2,2-Tetrachloroethane	U		0.365	1.00
Tetrachloroethene	U		0.276	1.00
Toluene	U		0.434	5.00
1,1,2-Trichlorotrifluoroethane	U		0.365	1.00
1,2,3-Trichlorobenzene	U		0.306	1.00
1,2,4-Trichlorobenzene	U		0.388	1.00
1,1,1-Trichloroethane	U		0.286	1.00
1,1,2-Trichloroethane	U		0.277	1.00
Trichloroethene	U		0.279	1.00
Trichlorofluoromethane	U		0.382	5.00
1,2,3-Trichloropropane	U		0.741	2.50
1,2,3-Trimethylbenzene	U		0.287	1.00
1,2,4-Trimethylbenzene	U		0.211	1.00
1,3,5-Trimethylbenzene	U		0.266	1.00
Vinyl chloride	U		0.291	1.00
Xylenes, Total	U		0.698	3.00
(S) Toluene-d8	*99.9*			*88.7-115*
(S) Dibromofluoromethane	*101*			*76.3-123*
(S) 4-Bromofluorobenzene	*97.9*			*69.7-129*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3136802-1 05/13/16 22:04 • (LCSD) R3136802-2 05/13/16 22:24

Analyte	Spike Amount ug/kg	LCS Result ug/kg	LCSD Result ug/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	125	98.4	93.0	78.7	74.4	25.3-178			5.59	22.9
Acrylonitrile	125	104	102	83.5	81.5	57.8-143			2.43	20
Benzene	25.0	22.9	23.1	91.8	92.4	72.6-120			0.720	20
Bromobenzene	25.0	22.6	23.1	90.5	92.4	80.3-115			2.04	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3136802-1 05/13/16 22:04 • (LCSD) R3136802-2 05/13/16 22:24

Analyte	Spike Amount ug/kg	LCS Result ug/kg	LCSD Result ug/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Bromodichloromethane	25.0	22.7	22.7	90.7	90.7	75.3-119			0.0600	20
Bromoform	25.0	24.7	25.4	98.7	102	69.1-135			2.85	20
Bromomethane	25.0	22.0	22.5	87.8	90.0	23.0-191			2.50	20
n-Butylbenzene	25.0	25.9	26.1	104	104	74.2-134			0.680	20
sec-Butylbenzene	25.0	24.9	26.6	99.7	106	77.8-129			6.34	20
tert-Butylbenzene	25.0	24.8	26.4	99.3	106	77.2-129			6.14	20
Carbon tetrachloride	25.0	22.5	23.7	90.1	94.8	69.4-129			5.08	20
Chlorobenzene	25.0	24.6	25.3	98.5	101	78.9-122			2.83	20
Chlorodibromomethane	25.0	23.9	24.6	95.6	98.6	76.4-126			3.05	20
Chloroethane	25.0	20.7	21.1	82.6	84.4	47.2-147			2.11	20
2-Chloroethyl vinyl ether	125	111	114	89.1	90.8	16.7-162			1.97	23.7
Chloroform	25.0	22.2	22.4	88.7	89.6	73.3-122			0.970	20
Chloromethane	25.0	22.8	23.4	91.2	93.5	53.1-135			2.42	20
2-Chlorotoluene	25.0	25.1	25.8	100	103	74.6-127			3.08	20
4-Chlorotoluene	25.0	24.0	24.6	96.1	98.3	79.5-123			2.26	20
1,2-Dibromo-3-Chloropropane	25.0	21.2	22.6	84.6	90.6	64.9-131			6.77	20
1,2-Dibromoethane	25.0	23.9	24.5	95.4	98.0	78.7-123			2.64	20
Dibromomethane	25.0	22.8	23.4	91.2	93.4	78.5-117			2.44	20
1,2-Dichlorobenzene	25.0	24.9	25.4	99.6	101	83.6-119			1.86	20
1,3-Dichlorobenzene	25.0	24.6	25.3	98.6	101	75.9-129			2.73	20
1,4-Dichlorobenzene	25.0	24.8	25.3	99.0	101	81.0-115			2.32	20
Dichlorodifluoromethane	25.0	27.5	27.6	110	111	50.9-139			0.470	20
1,1-Dichloroethane	25.0	22.3	22.3	89.0	89.1	71.7-125			0.0900	20
1,2-Dichloroethane	25.0	20.4	20.9	81.7	83.6	67.2-121			2.27	20
1,1-Dichloroethene	25.0	21.0	21.1	83.9	84.4	60.6-133			0.610	20
cis-1,2-Dichloroethene	25.0	23.2	23.5	92.8	93.9	76.1-121			1.22	20
trans-1,2-Dichloroethene	25.0	23.7	23.8	94.9	95.2	70.7-124			0.330	20
1,2-Dichloropropane	25.0	23.0	23.5	91.9	94.0	76.9-123			2.29	20
1,1-Dichloropropene	25.0	22.6	23.0	90.5	92.1	71.2-126			1.81	20
1,3-Dichloropropane	25.0	23.5	24.1	94.1	96.4	80.3-114			2.43	20
cis-1,3-Dichloropropene	25.0	23.4	23.7	93.6	95.0	77.3-123			1.49	20
trans-1,3-Dichloropropene	25.0	20.7	21.2	82.8	84.8	73.0-127			2.44	20
2,2-Dichloropropane	25.0	24.3	25.8	97.4	103	61.9-132			5.89	20
Di-isopropyl ether	25.0	22.0	22.8	88.0	91.1	67.2-131			3.48	20
Ethylbenzene	25.0	25.2	25.6	101	102	78.6-124			1.45	20
Hexachloro-1,3-butadiene	25.0	24.0	25.0	95.9	100	69.2-136			4.10	20
Isopropylbenzene	25.0	25.1	26.3	100	105	79.4-126			4.61	20
p-Isopropyltoluene	25.0	25.2	26.4	101	106	75.4-132			4.62	20
2-Butanone (MEK)	125	101	102	81.1	81.7	44.5-154			0.700	21.3
Methylene Chloride	25.0	22.8	23.2	91.3	92.8	68.2-119			1.68	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3136802-1 05/13/16 22:04 • (LCSD) R3136802-2 05/13/16 22:24

Analyte	Spike Amount ug/kg	LCS Result ug/kg	LCSD Result ug/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
4-Methyl-2-pentanone (MIBK)	125	111	113	88.5	90.7	61.1-138			2.46	20
Methyl tert-butyl ether	25.0	21.5	23.2	86.1	92.8	70.2-122			7.49	20
Naphthalene	25.0	18.7	19.7	74.7	78.7	69.9-132			5.25	20
n-Propylbenzene	25.0	24.5	25.0	97.8	100	80.2-124			2.35	20
Styrene	25.0	25.3	25.6	101	102	79.4-124			1.02	20
1,1,1,2-Tetrachloroethane	25.0	24.7	25.8	98.7	103	76.7-127			4.56	20
1,1,2,2-Tetrachloroethane	25.0	23.1	24.1	92.5	96.6	78.8-124			4.26	20
Tetrachloroethene	25.0	25.1	25.7	100	103	71.1-133			2.48	20
Toluene	25.0	23.5	23.9	94.1	95.4	76.7-116			1.44	20
1,1,2-Trichlorotrifluoroethane	25.0	23.6	23.9	94.3	95.6	62.6-138			1.32	20
1,2,3-Trichlorobenzene	25.0	19.1	20.4	76.4	81.8	72.5-137			6.81	20
1,2,4-Trichlorobenzene	25.0	21.7	22.6	86.8	90.4	74.0-137			4.06	20
1,1,1-Trichloroethane	25.0	22.9	24.1	91.7	96.6	69.9-127			5.14	20
1,1,2-Trichloroethane	25.0	23.3	24.1	93.3	96.4	81.9-119			3.26	20
Trichloroethene	25.0	24.0	24.4	96.2	97.6	77.2-122			1.42	20
Trichlorofluoromethane	25.0	20.1	20.7	80.2	82.9	51.5-151			3.30	20
1,2,3-Trichloropropane	25.0	22.2	22.8	88.9	91.1	74.0-124			2.42	20
1,2,3-Trimethylbenzene	25.0	24.7	25.7	98.8	103	79.4-118			4.16	20
1,2,4-Trimethylbenzene	25.0	24.3	25.1	97.4	100	77.1-124			3.09	20
1,3,5-Trimethylbenzene	25.0	24.7	25.7	98.6	103	79.0-125			4.32	20
Vinyl chloride	25.0	21.7	21.8	86.6	87.3	58.4-134			0.710	20
Xylenes, Total	75.0	74.7	76.4	99.6	102	78.1-123			2.27	20
(S) Toluene-d8				*99.2*	*99.5*	*88.7-115*				
(S) Dibromofluoromethane				*99.3*	*98.7*	*76.3-123*				
(S) 4-Bromofluorobenzene				*94.5*	*95.0*	*69.7-129*				

L835355-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L835355-02 05/14/16 01:44 • (MS) R3136802-4 05/14/16 00:44 • (MSD) R3136802-5 05/14/16 01:04

Analyte	Spike Amount ug/kg	Original Result ug/kg	MS Result ug/kg	MSD Result ug/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acetone	125	ND	306	409	48.9	65.5	5	10.0-130			29.0	31.5
Acrylonitrile	125	ND	382	500	61.1	80.0	5	39.3-152			26.7	27.2
Benzene	25.0	ND	37.0	51.6	29.6	41.3	5	47.8-131	J6	J3 J6	33.0	22.8
Bromobenzene	25.0	ND	17.4	18.8	14.0	15.0	5	40.0-130	J6	J6	7.24	27.4
Bromodichloromethane	25.0	ND	39.2	59.6	31.4	47.7	5	50.6-128	J6	J3 J6	41.2	22.8
Bromoform	25.0	ND	34.6	44.5	27.7	35.6	5	43.3-139	J6	J6	25.0	25.9
Bromomethane	25.0	ND	69.3	101	55.5	80.6	5	5.00-189		J3	37.0	26.7
n-Butylbenzene	25.0	ND	4.67	4.58	3.74	3.66	5	23.6-146	J6	J6	2.05	39.2

L835355-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L835355-02 05/14/16 01:44 • (MS) R3136802-4 05/14/16 00:44 • (MSD) R3136802-5 05/14/16 01:04

Analyte	Spike Amount ug/kg	Original Result ug/kg	MS Result ug/kg	MSD Result ug/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
sec-Butylbenzene	25.0	ND	5.11	4.93	4.09	3.95	5	31.0-142	J6	J6	3.53	34.7
tert-Butylbenzene	25.0	ND	6.16	6.41	4.93	5.13	5	36.9-142	J6	J6	3.91	31.7
Carbon tetrachloride	25.0	ND	21.8	25.1	17.4	20.0	5	46.0-140	J6	J6	14.1	27.2
Chlorobenzene	25.0	ND	24.4	28.2	19.5	22.6	5	44.1-134	J6	J6	14.4	25.7
Chlorodibromomethane	25.0	ND	37.4	53.1	29.9	42.5	5	49.7-134	J6	J3 J6	34.6	24
Chloroethane	25.0	ND	57.7	87.2	46.2	69.8	5	5.00-164		J3	40.7	28.4
2-Chloroethyl vinyl ether	125	ND	269	429	43.0	68.6	5	5.00-159		J3	46.0	40
Chloroform	25.0	ND	43.6	66.6	34.9	53.3	5	51.2-133	J6	J3	41.9	22.8
Chloromethane	25.0	ND	79.8	107	63.9	85.3	5	31.4-141		J3	28.7	24.6
2-Chlorotoluene	25.0	ND	11.9	12.6	9.51	10.1	5	36.1-137	J6	J6	5.66	28.9
4-Chlorotoluene	25.0	ND	12.3	13.1	9.84	10.5	5	35.4-137	J6	J6	6.52	29.8
1,2-Dibromo-3-Chloropropane	25.0	ND	28.8	33.1	23.0	26.5	5	40.4-138	J6	J6	13.8	30.8
1,2-Dibromoethane	25.0	ND	44.0	62.3	35.2	49.8	5	50.2-133	J6	J3 J6	34.4	23.6
Dibromomethane	25.0	ND	52.4	81.8	41.9	65.4	5	52.4-128	J6	J3	43.8	23
1,2-Dichlorobenzene	25.0	ND	14.0	13.9	11.2	11.1	5	34.6-139	J6	J6	1.19	29.9
1,3-Dichlorobenzene	25.0	ND	10.9	11.5	8.70	9.22	5	28.4-142	J6	J6	5.77	31.2
1,4-Dichlorobenzene	25.0	ND	13.5	14.0	10.8	11.2	5	35.0-133	J6	J6	3.65	31.1
Dichlorodifluoromethane	25.0	ND	45.7	64.6	36.5	51.7	5	31.2-144		J3	34.4	30.2
1,1-Dichloroethane	25.0	ND	47.8	74.0	38.2	59.2	5	49.1-136	J6	J3	43.0	22.9
1,2-Dichloroethane	25.0	ND	51.2	80.6	41.0	64.5	5	47.1-129	J6	J3	44.6	22.7
1,1-Dichloroethene	25.0	ND	35.5	49.5	28.4	39.6	5	36.1-142	J6	J3	32.8	25.6
cis-1,2-Dichloroethene	25.0	ND	50.3	78.1	40.3	62.4	5	50.6-133	J6	J3	43.2	23
trans-1,2-Dichloroethene	25.0	ND	45.0	67.1	36.0	53.7	5	43.8-135	J6	J3	39.5	24.8
1,2-Dichloropropane	25.0	ND	40.5	62.2	32.4	49.7	5	50.3-134	J6	J3 J6	42.2	22.7
1,1-Dichloropropene	25.0	ND	25.0	28.6	20.0	22.9	5	43.0-137	J6	J6	13.5	26.4
1,3-Dichloropropane	25.0	ND	44.4	66.8	35.5	53.4	5	51.4-127	J6	J3	40.3	23.1
cis-1,3-Dichloropropene	25.0	ND	41.1	60.7	32.9	48.6	5	48.4-134	J6	J3	38.6	23.6
trans-1,3-Dichloropropene	25.0	ND	38.3	57.1	30.6	45.7	5	46.6-135	J6	J3 J6	39.5	25.3
2,2-Dichloropropane	25.0	ND	41.5	53.6	33.2	42.9	5	45.2-141	J6	J6	25.3	26.6
Di-isopropyl ether	25.0	ND	53.4	81.2	42.8	65.0	5	46.7-140	J6	J3	41.3	23.5
Ethylbenzene	25.0	ND	17.2	17.9	13.8	14.3	5	44.8-135	J6	J6	3.94	26.9
Hexachloro-1,3-butadiene	25.0	ND	ND	1.72	0.000	1.38	5	10.0-149	J6	J3 J6	200	40
Isopropylbenzene	25.0	ND	9.84	10.4	7.87	8.32	5	41.9-139	J6	J6	5.47	29.3
p-Isopropyltoluene	25.0	ND	4.79	4.88	3.83	3.90	5	27.3-146	J6	J6	1.78	35.1
2-Butanone (MEK)	125	ND	308	440	49.3	70.4	5	23.9-170		J3	35.2	28.3
Methylene Chloride	25.0	ND	68.9	101	55.1	80.7	5	46.7-125		J3	37.7	22.2
4-Methyl-2-pentanone (MIBK)	125	ND	308	464	49.4	74.2	5	42.4-146		J3	40.2	26.7
Methyl tert-butyl ether	25.0	ND	61.2	93.4	48.9	74.8	5	50.4-131	J6	J3	41.7	24.8
Naphthalene	25.0	ND	7.62	8.39	6.09	6.71	5	18.4-145	J6	J6	9.68	34
n-Propylbenzene	25.0	ND	8.14	8.59	6.51	6.88	5	35.2-139	J6	J6	5.49	31.9

L835355-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L835355-02 05/14/16 01:44 • (MS) R3136802-4 05/14/16 00:44 • (MSD) R3136802-5 05/14/16 01:04

Analyte	Spike Amount ug/kg	Original Result ug/kg	MS Result ug/kg	MSD Result ug/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Styrene	25.0	ND	19.2	21.4	15.4	17.2	5	39.7-137	J6	J6	11.0	28.2
1,1,1,2-Tetrachloroethane	25.0	ND	29.2	33.2	23.3	26.5	5	48.8-136	J6	J6	12.9	25.5
1,1,2,2-Tetrachloroethane	25.0	ND	35.4	46.1	28.3	36.9	5	45.7-140	J6	J6	26.3	26.4
Tetrachloroethene	25.0	5.38	20.3	19.6	12.0	11.3	5	37.7-140	J6	J6	3.85	29.2
Toluene	25.0	ND	25.8	30.4	20.6	24.3	5	47.8-127	J6	J6	16.5	24.3
1,1,2-Trichlorotrifluoroethane	25.0	ND	18.8	20.5	15.1	16.4	5	35.7-146	J6	J6	8.39	28.8
1,2,3-Trichlorobenzene	25.0	ND	3.75	3.96	3.00	3.17	5	10.0-150	J6	J6	5.61	38.5
1,2,4-Trichlorobenzene	25.0	ND	4.43	4.17	3.54	3.34	5	10.0-153	J6	J6	5.89	39.3
1,1,1-Trichloroethane	25.0	ND	30.3	36.6	24.3	29.2	5	49.0-138	J6	J6	18.7	25.3
1,1,2-Trichloroethane	25.0	ND	46.6	68.9	37.3	55.1	5	52.3-132	J6	J3	38.6	23.4
Trichloroethene	25.0	ND	29.2	35.8	23.4	28.6	5	48.0-132	J6	J6	20.3	24.8
Trichlorofluoromethane	25.0	ND	27.6	34.7	22.1	27.8	5	12.8-169			22.7	29.7
1,2,3-Trichloropropane	25.0	ND	37.9	52.5	30.3	42.0	5	44.4-138	J6	J3 J6	32.3	26.3
1,2,3-Trimethylbenzene	25.0	ND	10.2	10.3	8.17	8.27	5	41.0-133	J6	J6	1.21	27.6
1,2,4-Trimethylbenzene	25.0	ND	8.06	8.45	6.45	6.76	5	32.9-139	J6	J6	4.71	30.6
1,3,5-Trimethylbenzene	25.0	ND	7.63	7.98	6.11	6.38	5	37.1-138	J6	J6	4.43	30.6
Vinyl chloride	25.0	ND	58.5	86.8	46.8	69.5	5	32.0-146		J3	38.9	26.3
Xylenes, Total	75.0	ND	48.7	51.6	13.0	13.8	5	42.7-135	J6	J6	5.89	26.6
(S) Toluene-d8					*99.5*	*99.5*		*88.7-115*				
(S) Dibromofluoromethane					*98.4*	*98.9*		*76.3-123*				
(S) 4-Bromofluorobenzene					*90.2*	*90.6*		*69.7-129*				

Method Blank (MB)

(MB) R3137400-3 05/17/16 07:45

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Acetone	U		10.0	50.0
Acrolein	U		8.87	50.0
Acrylonitrile	U		1.87	10.0
Benzene	U		0.331	1.00
Bromobenzene	U		0.352	1.00
Bromodichloromethane	U		0.380	1.00
Bromoform	U		0.469	1.00
Bromomethane	U		0.866	5.00
n-Butylbenzene	U		0.361	1.00
sec-Butylbenzene	U		0.365	1.00
tert-Butylbenzene	U		0.399	1.00
Carbon tetrachloride	U		0.379	1.00
Chlorobenzene	U		0.348	1.00
Chlorodibromomethane	U		0.327	1.00
Chloroethane	U		0.453	5.00
2-Chloroethyl vinyl ether	U		3.01	50.0
Chloroform	U		0.324	5.00
Chloromethane	U		0.276	2.50
2-Chlorotoluene	U		0.375	1.00
4-Chlorotoluene	U		0.351	1.00
1,2-Dibromo-3-Chloropropane	U		1.33	5.00
1,2-Dibromoethane	U		0.381	1.00
Dibromomethane	U		0.346	1.00
1,2-Dichlorobenzene	U		0.349	1.00
1,3-Dichlorobenzene	U		0.220	1.00
1,4-Dichlorobenzene	U		0.274	1.00
Dichlorodifluoromethane	U		0.551	5.00
1,1-Dichloroethane	U		0.259	1.00
1,2-Dichloroethane	U		0.361	1.00
1,1-Dichloroethene	U		0.398	1.00
cis-1,2-Dichloroethene	U		0.260	1.00
trans-1,2-Dichloroethene	U		0.396	1.00
1,2-Dichloropropane	U		0.306	1.00
1,1-Dichloropropene	U		0.352	1.00
1,3-Dichloropropane	U		0.366	1.00
cis-1,3-Dichloropropene	U		0.418	1.00
trans-1,3-Dichloropropene	U		0.419	1.00
2,2-Dichloropropane	U		0.321	1.00
Di-isopropyl ether	U		0.320	1.00
Ethylbenzene	U		0.384	1.00

Method Blank (MB)

(MB) R3137400-3 05/17/16 07:45

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Hexachloro-1,3-butadiene	U		0.256	1.00
Isopropylbenzene	U		0.326	1.00
p-Isopropyltoluene	U		0.350	1.00
2-Butanone (MEK)	U		3.93	10.0
Methylene Chloride	U		1.00	5.00
4-Methyl-2-pentanone (MIBK)	U		2.14	10.0
Methyl tert-butyl ether	U		0.367	1.00
Naphthalene	U		1.00	5.00
1,1,2,2-Tetrachloroethane	U		0.130	1.00
n-Propylbenzene	U		0.349	1.00
Tetrachloroethene	U		0.372	1.00
Styrene	U		0.307	1.00
1,1,1,2-Tetrachloroethane	U		0.385	1.00
Toluene	U		0.780	5.00
1,1,1-Trichloroethane	U		0.319	1.00
1,1,2-Trichloroethane	U		0.383	1.00
1,1,2-Trichlorotrifluoroethane	U		0.303	1.00
1,2,3-Trichlorobenzene	U		0.230	1.00
Trichloroethene	U		0.398	1.00
1,2,4-Trichlorobenzene	U		0.355	1.00
Trichlorofluoromethane	U		1.20	5.00
1,2,3-Trichloropropane	U		0.807	2.50
1,2,3-Trimethylbenzene	U		0.321	1.00
1,2,4-Trimethylbenzene	U		0.373	1.00
Vinyl chloride	U		0.259	1.00
1,3,5-Trimethylbenzene	U		0.387	1.00
Xylenes, Total	U		1.06	3.00
(S) Toluene-d8	*102*			*90.0-115*
(S) Dibromofluoromethane	*107*			*79.0-121*
(S) 4-Bromofluorobenzene	*99.0*			*80.1-120*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3137400-1 05/17/16 06:28 • (LCSD) R3137400-2 05/17/16 06:47

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	125	102	101	81.5	80.7	28.7-175			0.980	20.9
Acrolein	125	119	116	95.3	93.0	40.4-172			2.35	20
Acrylonitrile	125	114	112	90.9	89.6	58.2-145			1.45	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3137400-1 05/17/16 06:28 • (LCSD) R3137400-2 05/17/16 06:47

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	25.0	22.6	22.1	90.4	88.5	73.0-122			2.16	20
Bromobenzene	25.0	22.5	22.3	90.0	89.3	81.5-115			0.730	20
Bromodichloromethane	25.0	22.7	22.4	91.0	89.6	75.5-121			1.58	20
Bromoform	25.0	19.9	19.3	79.5	77.2	71.5-131			2.98	20
Bromomethane	25.0	28.9	28.0	116	112	22.4-187			3.13	20
n-Butylbenzene	25.0	24.3	24.2	97.3	97.0	75.9-134			0.360	20
sec-Butylbenzene	25.0	20.8	20.7	83.1	83.0	80.6-126			0.160	20
tert-Butylbenzene	25.0	21.1	20.7	84.2	82.9	79.3-127			1.65	20
Carbon tetrachloride	25.0	22.0	21.8	88.1	87.1	70.9-129			1.11	20
Chlorobenzene	25.0	21.6	21.3	86.5	85.2	79.7-122			1.51	20
Chlorodibromomethane	25.0	21.0	20.5	83.9	82.1	78.2-124			2.22	20
Chloroethane	25.0	23.8	23.3	95.1	93.3	41.2-153			1.91	20
2-Chloroethyl vinyl ether	125	49.1	50.8	39.3	40.6	23.4-162			3.42	23.5
Chloroform	25.0	24.1	23.5	96.3	93.8	73.2-125			2.59	20
Chloromethane	25.0	20.5	19.9	82.1	79.5	55.8-134			3.31	20
2-Chlorotoluene	25.0	21.0	20.8	84.1	83.2	76.4-125			1.15	20
4-Chlorotoluene	25.0	22.1	21.8	88.4	87.3	81.5-121			1.26	20
1,2-Dibromo-3-Chloropropane	25.0	20.5	20.0	81.9	80.0	64.8-131			2.29	20
1,2-Dibromoethane	25.0	22.5	21.6	90.1	86.4	79.8-122			4.21	20
1,2-Dichlorobenzene	25.0	23.1	23.5	92.2	93.8	84.7-118			1.70	20
Dibromomethane	25.0	22.1	21.9	88.6	87.8	79.5-118			0.910	20
1,3-Dichlorobenzene	25.0	20.8	20.0	83.4	80.2	77.6-127			3.90	20
1,4-Dichlorobenzene	25.0	21.6	21.5	86.4	85.8	82.2-114			0.600	20
Dichlorodifluoromethane	25.0	20.5	19.3	81.8	77.2	56.0-134			5.85	20
1,1-Dichloroethane	25.0	24.7	24.0	98.7	96.0	71.7-127			2.74	20
1,2-Dichloroethane	25.0	26.4	25.9	105	103	65.3-126			1.89	20
1,1-Dichloroethene	25.0	25.1	24.3	100	97.0	59.9-137			3.42	20
cis-1,2-Dichloroethene	25.0	23.2	23.1	92.9	92.2	77.3-122			0.750	20
trans-1,2-Dichloroethene	25.0	23.1	22.2	92.3	88.8	72.6-125			3.96	20
1,2-Dichloropropane	25.0	22.3	22.1	89.1	88.4	77.4-125			0.830	20
1,1-Dichloropropene	25.0	24.7	23.8	98.7	95.2	72.5-127			3.60	20
1,3-Dichloropropane	25.0	23.0	23.2	92.1	92.8	80.6-115			0.800	20
cis-1,3-Dichloropropene	25.0	23.1	22.6	92.3	90.3	77.7-124			2.21	20
trans-1,3-Dichloropropene	25.0	22.8	22.4	91.3	89.4	73.5-127			2.06	20
2,2-Dichloropropane	25.0	23.4	22.9	93.7	91.5	61.3-134			2.39	20
Di-isopropyl ether	25.0	22.6	22.0	90.5	88.1	65.1-135			2.77	20
Ethylbenzene	25.0	21.9	21.3	87.6	85.0	80.9-121			2.95	20
Hexachloro-1,3-butadiene	25.0	19.8	20.8	79.1	83.3	73.7-133			5.09	20
Isopropylbenzene	25.0	21.6	20.6	86.4	82.5	81.6-124			4.69	20
p-Isopropyltoluene	25.0	21.3	21.1	85.2	84.3	77.6-129			1.02	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3137400-1 05/17/16 06:28 • (LCSD) R3137400-2 05/17/16 06:47

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
2-Butanone (MEK)	125	102	101	81.3	80.8	46.4-155			0.560	20
Methylene Chloride	25.0	21.4	20.9	85.6	83.4	69.5-120			2.59	20
4-Methyl-2-pentanone (MIBK)	125	107	108	85.7	86.3	63.3-138			0.730	20
Methyl tert-butyl ether	25.0	23.3	22.8	93.4	91.3	70.1-125			2.23	20
Naphthalene	25.0	20.6	21.4	82.3	85.4	69.7-134			3.76	20
n-Propylbenzene	25.0	22.8	21.8	91.4	87.4	81.9-122			4.46	20
Styrene	25.0	21.9	21.2	87.7	84.8	79.9-124			3.36	20
1,1,1,2-Tetrachloroethane	25.0	20.5	20.2	82.0	80.8	78.5-125			1.45	20
1,1,2,2-Tetrachloroethane	25.0	19.6	18.9	78.3	75.6	79.3-123	J4	J4	3.48	20
Tetrachloroethene	25.0	21.0	19.9	84.2	79.8	73.5-130			5.41	20
Toluene	25.0	21.8	21.5	87.3	85.9	77.9-116			1.58	20
1,1,2-Trichlorotrifluoroethane	25.0	24.0	22.7	95.9	90.6	62.0-141			5.64	20
1,2,3-Trichlorobenzene	25.0	20.1	21.3	80.3	85.1	75.7-134			5.85	20
1,1,1-Trichloroethane	25.0	23.2	22.3	92.8	89.3	71.1-129			3.86	20
1,2,4-Trichlorobenzene	25.0	20.8	21.5	83.4	85.9	76.1-136			2.93	20
1,1,2-Trichloroethane	25.0	21.8	21.3	87.1	85.1	81.6-120			2.36	20
Trichloroethene	25.0	21.6	21.2	86.4	85.0	79.5-121			1.66	20
Trichlorofluoromethane	25.0	23.5	22.8	93.8	91.3	49.1-157			2.71	20
1,2,3-Trichloropropane	25.0	20.8	21.4	83.4	85.6	74.9-124			2.58	20
1,2,3-Trimethylbenzene	25.0	22.8	23.0	91.1	92.2	79.9-118			1.11	20
1,2,4-Trimethylbenzene	25.0	21.2	20.9	84.8	83.5	79.0-122			1.55	20
1,3,5-Trimethylbenzene	25.0	21.0	20.7	84.1	82.9	81.0-123			1.51	20
Vinyl chloride	25.0	22.9	22.2	91.8	89.0	61.5-134			3.12	20
Xylenes, Total	75.0	64.5	63.0	86.1	83.9	79.2-122			2.49	20
(S) Toluene-d8				*105*	*105*	*90.0-115*				
(S) Dibromofluoromethane				*107*	*108*	*79.0-121*				
(S) 4-Bromofluorobenzene				*101*	*99.1*	*80.1-120*				

L835717-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L835717-01 05/17/16 14:32 • (MS) R3137400-4 05/17/16 13:15 • (MSD) R3137400-5 05/17/16 13:34

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acetone	125	2320	2330	2300	5.28	0.000	1	25.0-156	E V	E V	1.34	21.5
Acrolein	125	ND	145	148	116	118	1	34.0-194			1.84	21.5
Acrylonitrile	125	ND	126	128	101	102	1	55.9-161			1.40	20
Benzene	25.0	766	761	756	0.000	0.000	1	58.6-133	E V	E V	0.730	20
Bromobenzene	25.0	ND	22.1	23.1	88.2	92.4	1	70.6-125			4.67	20
Bromodichloromethane	25.0	ND	21.9	22.6	87.8	90.4	1	69.2-127			2.97	20

L835717-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L835717-01 05/17/16 14:32 • (MS) R3137400-4 05/17/16 13:15 • (MSD) R3137400-5 05/17/16 13:34

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Bromoform	25.0	ND	18.5	20.2	74.0	80.7	1	66.3-140			8.62	20
Bromomethane	25.0	ND	20.4	21.1	81.5	84.3	1	16.6-183			3.48	20.5
n-Butylbenzene	25.0	1.36	21.9	24.0	82.3	90.6	1	64.8-145			8.97	20
sec-Butylbenzene	25.0	2.23	20.3	21.6	72.5	77.4	1	66.8-139			5.89	20
tert-Butylbenzene	25.0	ND	20.1	21.1	78.0	82.0	1	67.1-138			4.86	20
Carbon tetrachloride	25.0	ND	16.6	17.3	66.5	69.3	1	60.6-139			4.16	20
Chlorobenzene	25.0	ND	19.2	20.5	76.9	82.0	1	70.1-130			6.40	20
Chlorodibromomethane	25.0	ND	20.0	21.3	79.8	85.1	1	71.6-132			6.44	20
Chloroethane	25.0	ND	16.7	17.0	66.8	67.8	1	33.3-155			1.48	20
2-Chloroethyl vinyl ether	125	ND	10.8	9.65	8.67	7.72	1	5.00-149			11.6	40
Chloroform	25.0	ND	27.2	27.4	109	110	1	66.1-133			0.630	20
Chloromethane	25.0	ND	17.3	17.8	69.1	71.3	1	40.7-139			3.16	20
2-Chlorotoluene	25.0	ND	19.5	20.7	77.8	82.9	1	66.9-134			6.33	20
4-Chlorotoluene	25.0	ND	20.8	22.0	83.3	88.1	1	66.8-134			5.65	20
1,2-Dibromo-3-Chloropropane	25.0	ND	20.2	23.9	80.8	95.4	1	63.9-142			16.6	20.2
1,2-Dibromoethane	25.0	ND	20.5	22.3	81.9	89.1	1	73.8-131			8.42	20
1,2-Dichlorobenzene	25.0	ND	21.6	23.1	86.4	92.5	1	77.4-127			6.80	20
Dibromomethane	25.0	ND	21.3	21.8	85.2	87.0	1	72.8-127			2.14	20
1,3-Dichlorobenzene	25.0	ND	19.8	21.2	79.1	84.7	1	67.9-136			6.80	20
1,4-Dichlorobenzene	25.0	ND	20.3	21.6	81.3	86.3	1	74.4-123			6.08	20
Dichlorodifluoromethane	25.0	ND	17.3	17.6	69.1	70.5	1	42.2-146			1.99	20
1,1-Dichloroethane	25.0	ND	19.5	18.9	78.1	75.5	1	64.0-134			3.37	20
1,2-Dichloroethane	25.0	ND	20.7	20.9	82.8	83.7	1	60.7-132			1.04	20
1,1-Dichloroethene	25.0	ND	18.4	18.6	73.5	74.6	1	48.8-144			1.44	20
cis-1,2-Dichloroethene	25.0	ND	18.2	18.8	73.0	75.1	1	60.6-136			2.87	20
trans-1,2-Dichloroethene	25.0	ND	16.2	16.7	64.7	66.8	1	61.0-132			3.21	20
1,2-Dichloropropane	25.0	ND	21.9	21.4	87.5	85.7	1	69.7-130			2.01	20
1,1-Dichloropropene	25.0	ND	18.1	19.2	72.4	77.0	1	61.5-136			6.11	20
1,3-Dichloropropane	25.0	ND	21.5	22.8	85.9	91.2	1	74.3-123			6.05	20
cis-1,3-Dichloropropene	25.0	ND	20.7	21.0	82.9	84.2	1	71.1-129			1.50	20
trans-1,3-Dichloropropene	25.0	ND	22.5	22.9	89.9	91.4	1	66.3-136			1.62	20
2,2-Dichloropropane	25.0	ND	18.1	18.6	72.3	74.4	1	54.9-142			2.89	20
Di-isopropyl ether	25.0	ND	17.9	18.0	71.5	72.1	1	59.9-140			0.830	20
Ethylbenzene	25.0	166	164	163	0.000	0.000	1	62.7-136	V	V	0.760	20
Hexachloro-1,3-butadiene	25.0	ND	16.1	17.8	64.4	71.1	1	61.1-144			9.98	20.1
Isopropylbenzene	25.0	14.2	31.6	32.9	69.4	74.8	1	67.4-136			4.14	20
p-Isopropyltoluene	25.0	3.07	21.3	22.9	72.8	79.2	1	62.8-143			7.24	20
2-Butanone (MEK)	125	24.6	85.5	87.3	48.7	50.1	1	45.0-156			2.05	20.8
Methylene Chloride	25.0	ND	15.6	16.1	62.4	64.4	1	61.5-125			3.15	20
4-Methyl-2-pentanone (MIBK)	125	ND	129	132	94.9	97.4	1	60.7-150			2.46	20

L835717-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L835717-01 05/17/16 14:32 • (MS) R3137400-4 05/17/16 13:15 • (MSD) R3137400-5 05/17/16 13:34

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Methyl tert-butyl ether	25.0	ND	18.1	18.7	72.3	74.7	1	61.4-136			3.26	20
Naphthalene	25.0	14.9	34.0	36.2	76.6	85.4	1	61.8-143			6.26	20
n-Propylbenzene	25.0	15.9	34.6	35.7	74.9	79.2	1	63.2-139			3.06	20
Styrene	25.0	ND	18.6	19.7	74.2	78.7	1	68.2-133			5.83	20
1,1,1,2-Tetrachloroethane	25.0	ND	19.0	20.5	76.0	81.8	1	70.5-132			7.45	20
1,1,2,2-Tetrachloroethane	25.0	ND	19.5	20.7	77.9	82.7	1	64.9-145			6.01	20
Tetrachloroethene	25.0	ND	20.3	21.1	81.1	84.4	1	57.4-141			3.94	20
Toluene	25.0	1000	992	970	0.000	0.000	1	67.8-124	E V	E V	2.34	20
1,1,2-Trichlorotrifluoroethane	25.0	ND	17.5	18.6	70.2	74.3	1	53.7-150			5.64	20
1,2,3-Trichlorobenzene	25.0	ND	17.6	19.8	70.6	79.4	1	65.7-143			11.7	20
1,1,1-Trichloroethane	25.0	ND	18.0	18.3	71.9	73.3	1	58.7-134			1.92	20
1,2,4-Trichlorobenzene	25.0	ND	18.7	20.3	74.8	81.3	1	67.0-146			8.22	20
1,1,2-Trichloroethane	25.0	ND	28.9	29.8	116	119	1	74.1-130			2.94	20
Trichloroethene	25.0	ND	20.3	20.9	81.2	83.5	1	48.9-148			2.83	20
Trichlorofluoromethane	25.0	ND	15.7	16.3	62.7	65.4	1	39.9-165			4.26	20
1,2,3-Trichloropropane	25.0	ND	21.9	23.7	87.6	94.9	1	71.5-134			7.92	20
1,2,3-Trimethylbenzene	25.0	20.8	40.0	40.7	76.9	79.5	1	62.7-133			1.64	20
1,2,4-Trimethylbenzene	25.0	151	151	152	1.26	4.84	1	60.5-137	V	V	0.590	20
1,3,5-Trimethylbenzene	25.0	148	149	150	3.84	9.04	1	67.9-134	V	V	0.870	20
Vinyl chloride	25.0	ND	15.5	16.0	61.9	63.9	1	44.3-143			3.04	20
Xylenes, Total	75.0	1860	1760	1780	0.000	0.000	1	65.6-133	E V	E V	0.860	20
(S) Toluene-d8					*108*	*109*		*90.0-115*				
(S) Dibromofluoromethane					*86.7*	*87.5*		*79.0-121*				
(S) 4-Bromofluorobenzene					*102*	*102*		*80.1-120*				

Method Blank (MB)

(MB) R3137744-3 05/17/16 18:43

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acenaphthene	U		0.316	1.00
Acenaphthylene	U		0.309	1.00
Anthracene	U		0.291	1.00
Benzidine	U		2.10	10.0
Benzo(a)anthracene	U		0.111	1.00
Benzo(b)fluoranthene	U		0.0896	1.00
Benzo(k)fluoranthene	U		0.265	1.00
Benzo(g,h,i)perylene	U		0.161	1.00
Benzo(a)pyrene	U		0.269	1.00
Bis(2-chlorethoxy)methane	U		0.214	10.0
Bis(2-chloroethyl)ether	U		0.214	10.0
Bis(2-chloroisopropyl)ether	U		0.308	10.0
4-Bromophenyl-phenylether	U		0.180	10.0
2-Chloronaphthalene	U		0.204	1.00
4-Chlorophenyl-phenylether	U		0.170	10.0
Chrysene	U		0.133	1.00
Dibenz(a,h)anthracene	U		0.251	1.00
3,3-Dichlorobenzidine	U		1.69	10.0
2,4-Dinitrotoluene	U		0.219	10.0
2,6-Dinitrotoluene	U		1.43	10.0
Fluoranthene	U		0.342	1.00
Fluorene	U		0.177	1.00
Hexachlorobenzene	U		0.227	1.00
Hexachloro-1,3-butadiene	U		2.64	10.0
Hexachlorocyclopentadiene	U		1.80	10.0
Hexachloroethane	U		3.13	10.0
Indeno(1,2,3-cd)pyrene	U		0.333	1.00
Isophorone	U		0.238	10.0
Naphthalene	U		0.413	1.00
Nitrobenzene	U		0.200	10.0
n-Nitrosodimethylamine	U		2.56	10.0
n-Nitrosodiphenylamine	U		0.137	10.0
n-Nitrosodi-n-propylamine	U		0.311	10.0
Phenanthrene	U		0.205	1.00
Benzylbutyl phthalate	U		0.395	3.00
Bis(2-ethylhexyl)phthalate	U		0.496	3.00
Di-n-butyl phthalate	U		0.275	3.00
Diethyl phthalate	U		0.356	3.00
Dimethyl phthalate	U		0.338	3.00
Di-n-octyl phthalate	U		0.277	3.00

Method Blank (MB)

(MB) R3137744-3 05/17/16 18:43

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Pyrene	U		0.295	1.00
1,2,4-Trichlorobenzene	U		0.355	10.0
4-Chloro-3-methylphenol	U		0.229	10.0
2-Chlorophenol	U		0.190	10.0
2,4-Dichlorophenol	U		0.972	10.0
2,4-Dimethylphenol	U		1.34	10.0
4,6-Dinitro-2-methylphenol	U		2.60	10.0
2,4-Dinitrophenol	U		2.30	10.0
2-Nitrophenol	U		0.279	10.0
4-Nitrophenol	U		2.73	10.0
Pentachlorophenol	U		0.407	10.0
Phenol	U		1.13	10.0
2,4,6-Trichlorophenol	U		0.278	10.0
(S) Nitrobenzene-d5	*92.4*			*28.3-123*
(S) 2-Fluorobiphenyl	*93.8*			*34.5-133*
(S) p-Terphenyl-d14	*112*			*30.4-148*
(S) Phenol-d5	*42.1*			*10.0-63.2*
(S) 2-Fluorophenol	*62.5*			*10.0-74.1*
(S) 2,4,6-Tribromophenol	*85.0*			*21.6-154*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3137744-1 05/17/16 17:56 • (LCSD) R3137744-2 05/17/16 18:20

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Acenaphthene	20.0	19.1	18.9	95.6	94.6	39.0-128			1.12	20
Acenaphthylene	20.0	20.5	19.7	102	98.6	41.0-135			3.72	20
Anthracene	20.0	21.4	21.6	107	108	42.9-138			0.540	20
Benzidine	20.0	14.2	13.1	71.1	65.3	0.000-75.5			8.47	40
Benzo(a)anthracene	20.0	20.7	20.3	103	102	42.3-137			1.70	20
Benzo(b)fluoranthene	20.0	21.9	20.3	109	101	40.5-137			7.73	20
Benzo(k)fluoranthene	20.0	20.6	21.8	103	109	41.5-140			5.69	20
Benzo(g,h,i)perylene	20.0	21.5	21.1	107	105	38.8-137			1.88	20
Benzo(a)pyrene	20.0	21.4	21.2	107	106	41.7-138			0.690	20
Bis(2-chlorethoxy)methane	20.0	18.7	18.1	93.6	90.5	36.7-123			3.31	20
Bis(2-chloroethyl)ether	20.0	16.9	16.7	84.4	83.3	29.8-114			1.33	25.3
Bis(2-chloroisopropyl)ether	20.0	17.8	17.7	89.0	88.7	33.6-115			0.380	21.3
4-Bromophenyl-phenylether	20.0	20.3	20.6	102	103	39.0-137			1.28	20
2-Chloronaphthalene	20.0	17.9	17.2	89.6	85.9	35.1-123			4.26	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3137744-1 05/17/16 17:56 • (LCSD) R3137744-2 05/17/16 18:20

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
4-Chlorophenyl-phenylether	20.0	19.7	19.1	98.6	95.4	37.3-130			3.30	20
Chrysene	20.0	20.5	20.3	102	102	40.5-140			0.840	20
Dibenz(a,h)anthracene	20.0	21.8	21.1	109	106	39.9-141			3.00	20
3,3-Dichlorobenzidine	20.0	27.8	27.0	139	135	33.1-134	J4	J4	3.04	20
2,4-Dinitrotoluene	20.0	22.2	22.3	111	111	42.3-143			0.360	20
2,6-Dinitrotoluene	20.0	20.2	19.8	101	99.1	41.0-139			1.96	20
Fluoranthene	20.0	22.2	22.2	111	111	41.4-141			0.0900	20
Fluorene	20.0	19.8	19.5	99.1	97.5	39.9-132			1.70	20
Hexachlorobenzene	20.0	20.4	20.5	102	102	34.1-125			0.420	20
Hexachloro-1,3-butadiene	20.0	14.7	14.4	73.3	72.2	24.9-121			1.50	22
Hexachlorocyclopentadiene	20.0	15.1	14.9	75.3	74.5	13.5-122			1.03	21.6
Hexachloroethane	20.0	13.2	12.7	66.1	63.5	22.2-109			4.02	25.8
Indeno(1,2,3-cd)pyrene	20.0	22.0	21.5	110	107	41.0-140			2.70	20
Isophorone	20.0	19.3	18.7	96.3	93.4	30.5-109			3.05	20
Naphthalene	20.0	16.8	16.3	83.9	81.3	33.0-117			3.20	20
Nitrobenzene	20.0	17.5	16.6	87.6	83.1	34.4-121			5.30	21.2
n-Nitrosodimethylamine	20.0	7.34	7.28	36.7	36.4	12.3-70.5			0.800	33
n-Nitrosodiphenylamine	20.0	21.3	21.3	107	106	41.1-134			0.110	20
n-Nitrosodi-n-propylamine	20.0	18.7	18.6	93.3	92.9	35.6-125			0.450	20
Phenanthrene	20.0	19.6	19.9	97.8	99.4	41.4-134			1.56	20
Benzylbutyl phthalate	20.0	20.3	20.3	102	101	29.2-146			0.250	20.7
Bis(2-ethylhexyl)phthalate	20.0	20.6	19.9	103	99.6	41.4-150			3.12	20
Di-n-butyl phthalate	20.0	20.2	20.5	101	103	33.0-151			1.71	20
Diethyl phthalate	20.0	20.7	21.0	104	105	36.0-140			1.20	20
Dimethyl phthalate	20.0	20.7	20.6	103	103	23.4-138			0.330	20.2
Di-n-octyl phthalate	20.0	19.9	19.1	99.3	95.7	39.8-146			3.64	20
Pyrene	20.0	21.6	21.3	108	107	40.2-135			1.42	20
1,2,4-Trichlorobenzene	20.0	15.2	14.7	76.1	73.4	26.6-109			3.57	20
4-Chloro-3-methylphenol	20.0	19.7	19.4	98.3	97.2	34.6-130			1.13	20
2-Chlorophenol	20.0	16.3	16.2	81.3	81.0	31.2-103			0.380	20
2,4-Dichlorophenol	20.0	19.4	18.9	97.2	94.3	39.6-121			3.04	20
2,4-Dimethylphenol	20.0	17.1	17.1	85.5	85.7	33.8-126			0.300	20
4,6-Dinitro-2-methylphenol	20.0	18.8	17.4	94.1	86.9	28.2-134			7.95	29.2
2,4-Dinitrophenol	20.0	14.3	11.9	71.3	59.5	10.0-108			18.0	40
2-Nitrophenol	20.0	18.4	18.1	92.2	90.5	38.3-125			1.91	20
4-Nitrophenol	20.0	9.47	9.06	47.4	45.3	10.0-65.4			4.42	33.6
Pentachlorophenol	20.0	18.8	16.1	94.2	80.5	17.0-117			15.7	34.3
Phenol	20.0	8.70	8.40	43.5	42.0	10.0-77.3			3.46	24.6
2,4,6-Trichlorophenol	20.0	20.8	20.2	104	101	35.9-129			2.98	22.4
(S) Nitrobenzene-d5				*89.3*	*85.9*	*28.3-123*				

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3137744-1 05/17/16 17:56 • (LCSD) R3137744-2 05/17/16 18:20

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
(S) 2-Fluorobiphenyl				*91.3*	*88.4*	*34.5-133*				
(S) p-Terphenyl-d14				*111*	*107*	*30.4-148*				
(S) Phenol-d5				*40.7*	*39.4*	*10.0-63.2*				
(S) 2-Fluorophenol				*57.6*	*56.1*	*10.0-74.1*				
(S) 2,4,6-Tribromophenol				*96.5*	*98.9*	*21.6-154*				

Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
Rec.	Recovery.

Qualifier	Description
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
V	The sample concentration is too high to evaluate accurate spike recoveries.

ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our "one location" design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be **YOUR LAB OF CHOICE.**
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

State Accreditations

Alabama	40660	Nevada	TN-03-2002-34
Alaska	UST-080	New Hampshire	2975
Arizona	AZ0612	New Jersey–NELAP	TN002
Arkansas	88-0469	New Mexico	TN00003
California	01157CA	New York	11742
Colorado	TN00003	North Carolina	Env375
Conneticut	PH-0197	North Carolina [1]	DW21704
Florida	E87487	North Carolina [2]	41
Georgia	NELAP	North Dakota	R-140
Georgia [1]	923	Ohio–VAP	CL0069
Idaho	TN00003	Oklahoma	9915
Illinois	200008	Oregon	TN200002
Indiana	C-TN-01	Pennsylvania	68-02979
Iowa	364	Rhode Island	221
Kansas	E-10277	South Carolina	84004
Kentucky [1]	90010	South Dakota	n/a
Kentucky [2]	16	Tennessee [1 4]	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	6157585858
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	109
Minnesota	047-999-395	Washington	C1915
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA
Nebraska	NE-OS-15-05		

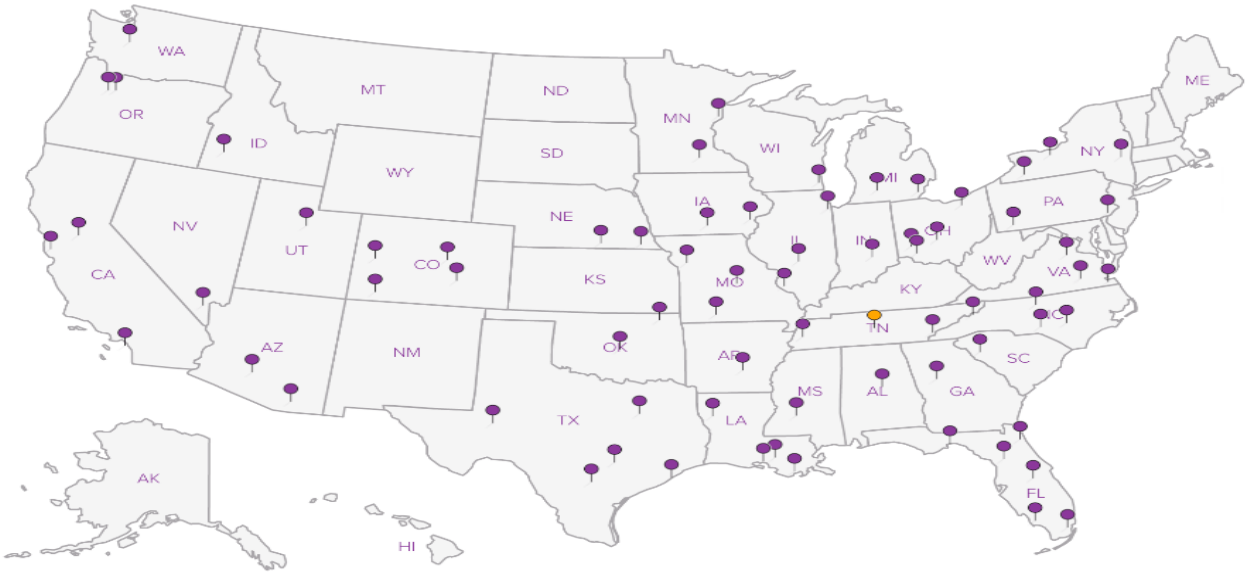
Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	S-67674
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [n/a] Accreditation not applicable

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. **ESC Lab Sciences performs all testing at our central laboratory.**



Company Name/Address:
Weston Solutions
1435 Garrison St., Ste. 100
Lakewood, CO 80215

Billing Information:

Report to: **Moira Pryhoda**

Email To: moira.pryhoda@WestonSolutions.com

Project Description: Cowboy Timber

City/State Collected: Henderson, WY

Phone: 303-729-6146
Fax:

Client Project # 20408.012.001.0345.00

Lab Project #

Collected by (print): Eric Sendusky

Site/Facility ID #

P.O. #

Collected by (signature): Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
X Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed: See Remarks

Email? ___No ✓Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

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12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L835137
J091

Acctnum: WESSOLLCO
Template:
Prelogin:
TSR:
PB:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOC's (1) 4 oz Soil Jar	VOC's (3) 40 mL vials	SVOC's (2) 1 L Amber Glass	Rem./Contaminant	Sample # (lab only)
CTSO-01-20160511	Grab	SS	0-1	5/11/16	RH	1	X				-01
CTSO-02-20160511	Grab	SS	0-1			1	X				02
CTSO-03-20160511	Grab	SS	0-1			1	X				03
CTSO-04-20160511	Grab	SS	0-1			1	X				04
CTSO-05-20160511	Grab	SS	0-1			0	X				
		~~SS~~									
~~CTSO~~ CTSOES											
CTGW-01-20160511	Grab	GW				4		X	X		

* Matrix: **SS** - Soil **GW** - Groundwater **WW** - WasteWater **DW** - Drinking Water **OT** - Other_____

Remarks: Need Soil data on Friday 5/13, Water data on 5/18

pH _____ Temp _____

Flow _____ Other _____

6711 0332 9042

Hold #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	5/12/16		FedEx
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☒ FedEx ☐ Courier ☐ _____

Temp: 2.1 °C Bottles Received: 8

Date: 5-13-16 Time: 0930

Condition: N (lab use only) TDH

COC Seal Intact: ___Y ___N ✓NA

pH Checked: NCF:

ESC Lab Sciences
Non-Conformance Form

Login #:L835437	Client: WESSOLLCO	Date:05/13/16	Evaluated by:Richard Hughes

Non-Conformance (check applicable items)

	Sample Integrity		Chain of Custody Clarification		
	Parameter(s) past holding time		Login Clarification Needed		**If Broken Container:**
	Improper temperature		Chain of custody is incomplete		Insufficient packing material around container
	Improper container type		Please specify Metals requested.	x	Insufficient packing material inside cooler
	Improper preservation		Please specify TCLP requested.		Improper handling by carrier (FedEx / UPS / Cour
	Insufficient sample volume.		Received additional samples not listed on coc.		Sample was frozen
	Sample is biphasic.		Sample ids on containers do not match ids on coc		Container lid not intact
	Vials received with headspace.		Trip Blank not received.		**If no Chain of Custody:**
x	Broken container		Client did not "X" analysis.		Received by:
	Broken container:		Chain of Custody is missing		Date/Time:
	Sufficient sample remains				Temp./Cont. Rec./pH:
					Carrier:
					Tracking#

Login Comments:The 4oz container from CTSO-05-20160511 received broken, and not salvagable. The amber liter for CTGW-01-20160511 received broken.

Client informed by:		Call		Email		Voice Mail		Date:	Time:
TSR Initials: CSG	Client Contact: Moira Pryhoda								

Login Instructions:

1) Client notified,
2) Please proceed with remaining samples

Volatile Organic Compounds by Method 8260B

ESC LAB SCIENCES
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12065 Lebanon Rd
Mt. Juliet, TN 37122
(615) 758-5858
(800) 767-5859
Fax (615) 758-5859
Tax I.D 62-0814289
Est. 1970

Quality Control Summary
SDG: L835437

Volatile Organic Compounds by Method 8260B
Weston Solutions - CO

Project: Cowboy Timber
Project No: 20408.012.001.0345.0

Login No: L835437

Lab SampleID.	Client ID
L835437-01	CTDO-01-20160511
L835437-02	CTDO-02-20160511
L835437-03	CTDO-03-20160511
L835437-04	CTDO-04-20160511
L835437-05	CTGW-01-20160511

I certify that this data package accurately represents the information in the raw data found herein, both technically and for completeness. Release of the data contained in this data package has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: _____ Name: ESC Lab Sciences

Date: _____ Title: Quality Control

ESC LAB SCIENCES
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12065 Lebanon Rd
Mt. Juliet, TN 37122
(615) 758-5858
(800) 767-5859
Fax (615) 758-5859
Tax I.D 62-0814289
Est. 1970

Quality Control Summary
SDG: L835437
Weston Solutions - CO

Test:	Volatile Organic Compounds by Method 8260B		
Project No:	20408.012.001.0345.0	Matrix:	Soil - mg/kg
Project:	Cowboy Timber	EPA ID:	TN00003
Collection Date:	5/11/2016	**Analytic Batch:**	**WG872493**
Analysis Date:	5/14/2016	Analyst:	073
Instrument ID:	VOCMS26		
Sample Numbers:	L835437-01, -02, -03, -04		

Method Blank Summary

Instrument	Client Sample ID	Lab Sample ID	File Name	Analysis Date	Analysis Time
VOCMS26	LCS WG872493	LCS WG872493	0513_36.D	5/13/2016	10:04 PM
VOCMS26	LCSD WG872493	LCSD WG872493	0513_37.D	5/13/2016	10:24 PM
VOCMS26	Blank WG872493	Blank WG872493	0513_42.D	5/14/2016	12:04 AM
VOCMS26	MS WG872493	MS WG872493	0513_44.D	5/14/2016	12:44 AM
VOCMS26	MSD WG872493	MSD WG872493	0513_45.D	5/14/2016	1:04 AM
VOCMS26	CTDO-01-20160511	L835437-01	0513_63.D	5/14/2016	7:04 AM
VOCMS26	CTDO-02-20160511	L835437-02	0513_64.D	5/14/2016	7:25 AM
VOCMS26	CTDO-03-20160511	L835437-03	0513_65.D	5/14/2016	7:44 AM
VOCMS26	CTDO-04-20160511	L835437-04	0513_66.D	5/14/2016	8:04 AM

Parameters in bold text are reported in this SDG

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12065 Lebanon Rd
Mt. Juliet, TN 37122
(615) 758-5858
(800) 767-5859
Fax (615) 758-5859
Tax I.D 62-0814289
Est. 1970

Quality Control Summary
SDG: L835437
Weston Solutions - CO

Test:	Volatile Organic Compounds by Method 8260B		
Project No:	20408.012.001.0345.0	Matrix:	Water - mg/L
Project:	Cowboy Timber	EPA ID:	TN00003
Collection Date:	5/11/2016	**Analytic Batch:**	**WG873015**
Analysis Date:	5/17/2016	Analyst:	077
Instrument ID:	VOCMS7		
Sample Numbers:	L835437-05		

Method Blank Summary

Instrument	Client Sample ID	Lab Sample ID	File Name	Analysis Date	Analysis Time
VOCMS7	LCS WG873015	LCS WG873015	0517_04.D	5/17/2016	6:28 AM
VOCMS7	LCSD WG873015	LCSD WG873015	0517_05.D	5/17/2016	6:47 AM
VOCMS7	Blank WG873015	Blank WG873015	0517_08.D	5/17/2016	7:45 AM
VOCMS7	CTGW-01-20160511	L835437-05	0517_10.D	5/17/2016	11:54 AM
VOCMS7	MS WG873015	MS WG873015	0517_14.D	5/17/2016	1:15 PM
VOCMS7	MSD WG873015	MSD WG873015	0517_15.D	5/17/2016	1:34 PM

Parameters in bold text are reported in this SDG

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Quality Control Summary
SDG: L835437
Weston Solutions - CO

Test:	Volatile Organic Compounds by Method 8260B		
Project No:	20408.012.001.0345.0	Matrix:	Soil - mg/kg
Project:	Cowboy Timber	EPA ID:	TN00003
Collection Date:	5/11/2016	**Analytic Batch:**	**WG872493**
Analysis Date:	5/14/2016	Analyst:	073
Instrument ID:	VOCMS26		
Sample Numbers:	L835437-01, -02, -03, -04		

Internal Standard Response and Retention Time Summary

File ID: 0513_35
Analyzed: 05/13/16 214400

	IS1		IS2		IS3		IS4	
	Response	**RT**	**Response**	**RT**	**Response**	**RT**	**Response**	**RT**
12 Hr. Std	777990	5.64	1447241	6.12	233149	7.81	549093	10.98
Upper Limit	1560000	6.14	2890000	6.62	466000	8.31	1100000	11.48
Lower Limit	389000	5.14	724000	5.62	117000	7.31	275000	10.48
Sample ID	**Response**	**RT**	**Response**	**RT**	**Response**	**RT**	**Response**	**RT**
L835437-01	759749	5.64	1419861	6.12	225420	7.81	514451	10.98
L835437-02	764313	5.64	1422571	6.12	220686	7.81	515262	10.98
L835437-03	748077	5.64	1398247	6.12	217998	7.81	509827	10.98
L835437-04	726011	5.64	1353317	6.12	214756	7.81	496962	10.98
MSD WG872493	685482	5.64	1269307	6.12	201765	7.81	423505	10.98
MS WG872493	672600	5.64	1245428	6.12	195081	7.81	397884	10.98
LCSD WG872493	791072	5.64	1465990	6.12	234959	7.81	548521	10.98
LCS WG872493	775692	5.64	1439600	6.12	232363	7.81	534854	10.98
BLANK WG872493	735911	5.64	1378314	6.12	216903	7.81	519471	10.98

Legend:
IS1 -- PENTAFLUOROBENZENE
IS2 -- 1,4-DIFLUOROBENZENE
IS3 -- 2-BROMO-1-CHLOROPROPANE
IS4 -- 1,4-DICHLOROBENZENE-D4

Parameters in bold text are reported in this SDG

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Quality Control Summary
SDG: L835437
Weston Solutions - CO

Test:	Volatile Organic Compounds by Method 8260B		
Project No:	20408.012.001.0345.0	Matrix:	Water - mg/L
Project:	Cowboy Timber	EPA ID:	TN00003
Collection Date:	5/11/2016	**Analytic Batch:**	**WG873015**
Analysis Date:	5/17/2016	Analyst:	077
Instrument ID:	VOCMS7		
Sample Numbers:	L835437-05		

Internal Standard Response and Retention Time Summary

File ID: 0517_02
Analyzed: 05/17/16 054900

	IS1		IS2		IS3		IS4	
	Response	**RT**	**Response**	**RT**	**Response**	**RT**	**Response**	**RT**
12 Hr. Std	447546	4.33	794934	4.66	143373	5.82	327824	8.21
Upper Limit	895000	4.83	1590000	5.16	287000	6.32	656000	8.71
Lower Limit	224000	3.83	397000	4.16	71700	5.32	164000	7.71
Sample ID	**Response**	**RT**	**Response**	**RT**	**Response**	**RT**	**Response**	**RT**
L835437-05	469842	4.33	818047	4.66	145876	5.82	332270	8.21
MSD WG873015	543048	4.33	802547	4.66	145586	5.82	338018	8.21
MS WG873015	544662	4.33	802654	4.66	149731	5.82	343124	8.21
LCSD WG873015	456615	4.33	808155	4.66	145868	5.82	330555	8.21
LCS WG873015	443664	4.33	791785	4.66	140997	5.82	324573	8.21
BLANK WG873015	475111	4.33	832352	4.66	145495	5.82	343941	8.21

Legend:
IS1 -- PENTAFLUOROBENZENE
IS2 -- 1,4-DIFLUOROBENZENE
IS3 -- 2-BROMO-1-CHLOROPROPANE
IS4 -- 1,4-DICHLOROBENZENE-D4

Parameters in bold text are reported in this SDG

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Quality Control Summary
SDG: L835437
Weston Solutions - CO

Test:	Volatile Organic Compounds by Method 8260B		
Project No:	20408.012.001.0345.0	Matrix:	Soil - mg/kg
Project:	Cowboy Timber	EPA ID:	TN00003
Collection Date:	5/11/2016	**Analytic Batch:**	**WG872493**
Analysis Date:	5/14/2016	Analyst:	073
Instrument ID:	VOCMS26		
Sample Numbers:	L835437-01, -02, -03, -04		

Surrogate Summary

			BFB		DFM		TD8		TFT	
Laboratory Sample ID	Instrument	File ID	ppm	% Rec	ppm	% Rec	ppm	% Rec	ppm	% Rec
L835437-01	VOCMS26	0513_63	0.0381	95.4	0.0394	98.6	0.0401	100		
L835437-02	VOCMS26	0513_64	0.0390	97.5	0.0391	97.8	0.0403	101		
L835437-03	VOCMS26	0513_65	0.0387	96.7	0.0399	99.8	0.0400	100		
L835437-04	VOCMS26	0513_66	0.0385	96.2	0.0398	99.5	0.0401	100		
LCS WG872493	VOCMS26	0513_36	0.0378	94.5	0.0397	99.3	0.0397	99.2	0.0401	100
LCSD WG872493	VOCMS26	0513_37	0.0380	95.0	0.0395	98.7	0.0398	99.5	0.0399	99.6
BLANK WG872493	VOCMS26	0513_42	0.0392	97.9	0.0404	101	0.0400	99.9	0.0406	101
MS WG872493	VOCMS26	0513_44	0.0361	90.2	0.0394	98.4	0.0398	99.5	0.0395	98.7
MSD WG872493	VOCMS26	0513_45	0.0362	90.6	0.0396	98.9	0.0398	99.5	0.0399	99.8

BFB --4-BROMOFLUOROBENZENE	True Value: 0.04 ppm	Limits: 69.7 - 129
DFM --DIBROMOFLUOROMETHANE	True Value: 0.04 ppm	Limits: 76.3 - 123
TD8 --TOLUENE-D8	True Value: 0.04 ppm	Limits: 88.70 - 115
TFT --A,A,A-TRIFLUOROTOLUENE	True Value: 0.04 ppm	Limits: 87.2 - 117

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Quality Control Summary
SDG: L835437
Weston Solutions - CO

Test:	Volatile Organic Compounds by Method 8260B		
Project No:	20408.012.001.0345.0	Matrix:	Water - mg/L
Project:	Cowboy Timber	EPA ID:	TN00003
Collection Date:	5/11/2016	**Analytic Batch:**	**WG873015**
Analysis Date:	5/17/2016	Analyst:	077
Instrument ID:	VOCMS7		
Sample Numbers:	L835437-05		

Surrogate Summary

			BFB		DFM		TD8		TFT	
Laboratory Sample ID	Instrument	File ID	ppm	% Rec	ppm	% Rec	ppm	% Rec	ppm	% Rec
L835437-05	VOCMS7	0517_10	0.0385	96.3	0.0433	108	0.0406	102		
LCS WG873015	VOCMS7	0517_04	0.0403	101	0.0430	107	0.0420	105	0.0398	99.5
LCSD WG873015	VOCMS7	0517_05	0.0396	99.1	0.0432	108	0.0421	105	0.0401	100
BLANK WG873015	VOCMS7	0517_08	0.0396	99.0	0.0430	107	0.0408	102	0.0394	98.6
MS WG873015	VOCMS7	0517_14	0.0406	102	0.0347	86.7	0.0432	108	0.0401	100
MSD WG873015	VOCMS7	0517_15	0.0407	102	0.0350	87.5	0.0435	109	0.0399	99.9

BFB --4-BROMOFLUOROBENZENE	True Value: 0.04 ppm	Limits: 80.1 - 120
DFM --DIBROMOFLUOROMETHANE	True Value: 0.04 ppm	Limits: 79 - 121
TD8 --TOLUENE-D8	True Value: 0.04 ppm	Limits: 90 - 115
TFT --A,A,A-TRIFLUOROTOLUENE	True Value: 0.04 ppm	Limits: 90.4 - 116

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Quality Control Summary
SDG: L835437
Weston Solutions - CO

Test: Volatile Organic Compounds by Method 8260B
Project No: 20408.012.001.0345.0
Project: Cowboy Timber EPA ID: TN00003
Collection Date: 5/11/2016
Instrument ID: VOCMS26

Instrument Performance Summary

FileID: 0513_34.D Date: 5/13/2016 Time: 9:24 PM

m/e	Ion Abundance Criteria	% Relative Abundance
50	15 - 40% of mass 95	15.5
75	30 - 60% of mass 95	45
95	100 - 100% of mass 95	100
96	5 - 9% of mass 95	6.4
173	0 - 2% of mass 174	1.1
174	50 - 150% of mass 95	68.4
175	5 - 9% of mass 174	7.7
176	95 - 101% of mass 174	97
177	5 - 9% of mass 176	6.2

This Check applies to the following samples and quality control samples

Client Sample ID	Laboratory Sample ID	Lab Filename	Date Analyzed	Time Analyzed
LCS WG872493	LCS WG872493	0513_36.D	5/13/2016	10:04 PM
LCSD WG872493	LCSD WG872493	0513_37.D	5/13/2016	10:24 PM
Blank WG872493	Blank WG872493	0513_42.D	5/14/2016	12:04 AM
MS WG872493	MS WG872493	0513_44.D	5/14/2016	12:44 AM
MSD WG872493	MSD WG872493	0513_45.D	5/14/2016	1:04 AM
CTDO-01-20160511	L835437-01	0513_63.D	5/14/2016	7:04 AM
CTDO-02-20160511	L835437-02	0513_64.D	5/14/2016	7:25 AM
CTDO-03-20160511	L835437-03	0513_65.D	5/14/2016	7:44 AM
CTDO-04-20160511	L835437-04	0513_66.D	5/14/2016	8:04 AM

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Quality Control Summary
SDG: L835437
Weston Solutions - CO

Test: Volatile Organic Compounds by Method 8260B
Project No: 20408.012.001.0345.0
Project: Cowboy Timber EPA ID: TN00003
Collection Date: 5/11/2016
Instrument ID: VOCMS7

Instrument Performance Summary

FileID: 0517_02.D Date: 5/17/2016 Time: 5:49 AM

m/e	Ion Abundance Criteria	% Relative Abundance
50	15 - 40% of mass 95	22
75	30 - 60% of mass 95	52.3
95	100 - 100% of mass 95	100
96	5 - 9% of mass 95	6.3
173	0 - 2% of mass 174	0
174	50 - 150% of mass 95	70.2
175	5 - 9% of mass 174	8.5
176	95 - 101% of mass 174	96.6
177	5 - 9% of mass 176	6.5

This Check applies to the following samples and quality control samples

Client Sample ID	Laboratory Sample ID	Lab Filename	Date Analyzed	Time Analyzed
LCS WG873015	LCS WG873015	0517_04.D	5/17/2016	6:28 AM
LCSD WG873015	LCSD WG873015	0517_05.D	5/17/2016	6:47 AM
Blank WG873015	Blank WG873015	0517_08.D	5/17/2016	7:45 AM
CTGW-01-20160511	L835437-05	0517_10.D	5/17/2016	11:54 AM
MS WG873015	MS WG873015	0517_14.D	5/17/2016	1:15 PM
MSD WG873015	MSD WG873015	0517_15.D	5/17/2016	1:34 PM

*** - calibrated by linear regression*

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Quality Control Summary
SDG: L835437
Weston Solutions - CO

Test: Volatile Organic Compounds by Method 8260B
Project: Cowboy Timber
Instrument ID: VOCMS7
Method Name : V807B15P.M

Relative Response Factor Summary

Compound Name	Level .25	Level .5	Level 1	Level 2	Level 5.0	Level 10	Level 25	Level 40	Level 75	Average RRF	%RSD
TPH (GC/MS) LOW FRACTION										0.000000	0.00
PROPENE		0.308	0.223	0.288	0.246	0.204	0.215	0.217	0.218	0.234838	15.04
DICHLORODIFLUOROMETHANE	0.893	0.646	0.617	0.624	0.549	0.600	0.584	0.588	0.595	0.623141	15.00
CHLOROMETHANE	1.089	0.952	0.918	0.913	0.803	0.846	0.828	0.832	0.847	0.893048	9.35
VINYL CHLORIDE	0.850	0.777	0.760	0.745	0.725	0.780	0.755	0.755	0.762	0.765670	4.35
1,3-BUTADIENE		0.831	0.806	0.733	0.649	0.664	0.643	0.651	0.626	0.683446	11.70
BROMOMETHANE			0.389	0.405	0.311	0.350	0.366	0.364	0.394	0.378802	9.02
CHLOROETHANE			0.520	0.422	0.383	0.431	0.395	0.388	0.382	0.410580	11.96
TRICHLOROFLUOROMETHANE	0.822	0.786	0.781	0.768	0.718	0.772	0.748	0.751	0.750	0.764713	3.52
DICHLOROFLUOROMETHANE	1.078	0.971	1.162	1.038	0.987	1.061	1.012	1.014	1.028	1.033416	5.14
ETHYL ETHER	0.564	0.526	0.473	0.505	0.436	0.486	0.473	0.476	0.471	0.485553	7.23
ACROLEIN	0.141	0.105	0.116	0.104	0.107	0.115	0.113	0.121	0.117	0.116876	9.00
1,1-DICHLOROETHENE	0.856	0.854	0.845	0.870	0.766	0.863	0.834	0.828	0.814	0.828476	4.32
1,1,2-TRICHLOROTRIFLUOROETHANE	0.526	0.525	0.487	0.463	0.449	0.480	0.474	0.463	0.460	0.475169	6.01
ACETONE	0.465	0.414	0.365	0.389	0.351	0.384	0.356	0.370	0.350	0.376406	9.67
IODOMETHANE	0.387	0.387	0.415	0.430	0.436	0.501	0.521	0.530	0.564	0.478341	14.44
CARBON DISULFIDE	2.127	2.055	1.938	1.906	1.750	1.868	1.813	1.799	1.777	1.863691	7.14
METHYLENE CHLORIDE	0.688	0.732	0.528	0.605	0.493	0.527	0.516	0.512	0.511	0.557192	14.62
ACRYLONITRILE	0.286	0.242	0.216	0.222	0.210	0.229	0.218	0.233	0.219	0.228846	9.19
n-Hexane		0.761	0.631	0.593	0.591	0.609	0.577	0.564	0.561	0.597635	10.72
TRANS-1,2-DICHLOROETHENE	0.453	0.680	0.494	0.509	0.458	0.497	0.484	0.475	0.482	0.497513	12.67
METHYL TERT-BUTYL ETHER	1.466	1.453	1.504	1.597	1.448	1.538	1.471	1.477	1.447	1.479910	3.42
1,1-DICHLOROETHANE	1.012	1.046	1.034	1.060	0.985	1.054	1.034	1.032	1.024	1.026910	2.46
VINYL ACETATE	1.265	1.516	1.326	1.334	1.279	1.378	1.310	1.323	1.254	1.306617	7.11
DI-ISOPROPYL ETHER	2.314	2.096	2.295	2.202	2.078	2.240	2.205	2.207	2.182	2.188120	3.76
2,2-Dichloropropane	1.005	0.953	0.891	0.844	0.794	0.834	0.818	0.814	0.812	0.849790	8.45
CIS-1,2-DICHLOROETHENE	0.576	0.517	0.501	0.589	0.505	0.561	0.530	0.535	0.543	0.539293	5.18
2-BUTANONE (MEK)	0.432	0.494	0.482	0.459	0.437	0.472	0.448	0.471	0.442	0.455348	4.87

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Quality Control Summary
SDG: L835437
Weston Solutions - CO

Test: Volatile Organic Compounds by Method 8260B
Project: Cowboy Timber
Instrument ID: VOCMS7
Method Name : V807B15P.M

Relative Response Factor Summary

Compound Name	Level .25	Level .5	Level 1	Level 2	Level 5.0	Level 10	Level 25	Level 40	Level 75	Average RRF	%RSD
BROMOCHLOROMETHANE	0.357	0.291	0.292	0.285	0.295	0.302	0.293	0.290	0.274	0.290801	9.08
TETRAHYDROFURAN			0.230	0.267	0.211	0.235	0.207	0.221	0.202	0.221123	9.20
CHLOROFORM		0.997	0.979	0.970	0.881	0.960	0.918	0.909	0.895	0.927238	4.97
DIBROMOFLUOROMETHANE	0.534	0.530	0.526	0.525	0.521	0.524	0.516	0.515	0.510	0.518344	2.21
1,1,1-TRICHLOROETHANE	0.886	0.824	0.814	0.769	0.712	0.777	0.738	0.738	0.736	0.769114	6.93
CARBON TETRACHLORIDE	0.826	0.763	0.684	0.639	0.633	0.680	0.647	0.639	0.661	0.678307	9.20
1,1-Dichloropropene	0.726	0.769	0.744	0.731	0.698	0.755	0.721	0.719	0.712	0.725794	3.31
2,2,4-TRIMETHYLPENTANE	2.773	2.643	2.542	2.630	2.438	2.621	2.532	2.525	2.518	2.561313	3.93
HEPTANE	1.203	1.409	1.272	1.347	1.205	1.244	1.194	1.177	1.159	1.231403	6.75
BENZENE	2.314	2.310	2.169	2.213	2.073	2.181	2.117	2.141	2.126	2.168922	3.79
1,2-DICHLOROETHANE	0.575	0.655	0.653	0.679	0.645	0.697	0.657	0.674	0.667	0.657068	4.76
TRICHLOROETHENE	0.281	0.320	0.284	0.282	0.277	0.291	0.281	0.280	0.278	0.285218	4.27
1,2-DICHLOROPROPANE	0.281	0.304	0.255	0.262	0.240	0.260	0.258	0.251	0.250	0.259322	7.20
DIBROMOMETHANE	0.239	0.211	0.187	0.187	0.168	0.182	0.178	0.182	0.178	0.188576	10.45
BROMODICHLOROMETHANE		0.548	0.437	0.426	0.413	0.440	0.414	0.408	0.399	0.427443	10.58
a,a,a-Trifluorotoluene	0.545	0.546	0.543	0.534	0.527	0.522	0.521	0.515	0.500	0.522235	3.72
2-CHLOROETHYL VINYL ETHER	0.039	0.037	0.034	0.034	0.036	0.041	0.042	0.040	0.032	0.036370	9.95
CIS-1,3-DICHLOROPROPENE	0.616	0.619	0.579	0.558	0.524	0.552	0.534	0.542	0.531	0.555612	6.28
4-METHYL-2-PENTANONE (MIBK)	0.500	0.441	0.426	0.398	0.384	0.414	0.391	0.406	0.371	0.405823	9.79
TOLUENE-D8	1.259	1.268	1.250	1.227	1.220	1.214	1.213	1.213	1.199	1.222388	2.16
TOLUENE		1.486	1.322	1.313	1.241	1.314	1.277	1.263	1.248	1.292967	5.92
TRANS-1,3-DICHLOROPROPENE	0.476	0.487	0.475	0.481	0.439	0.481	0.462	0.474	0.455	0.467412	3.27
1,1,2-TRICHLOROETHANE	1.438	1.702	1.442	1.491	1.285	1.414	1.438	1.410	1.376	1.439222	7.05
TETRACHLOROETHENE	1.139	1.291	1.235	1.279	1.161	1.232	1.180	1.169	1.143	1.198664	4.38
1,3-Dichloropropane	2.893	2.679	2.636	2.588	2.447	2.651	2.543	2.526	2.449	2.587871	4.96
2-HEXANONE	0.893	1.045	1.021	1.086	1.009	1.091	1.026	1.073	0.985	1.021934	5.51
CHLORODIBROMOMETHANE	1.934	1.968	1.688	1.646	1.447	1.638	1.552	1.583	1.545	1.657455	9.57
1,2-DIBROMOETHANE	1.834	1.514	1.529	1.331	1.311	1.484	1.434	1.452	1.417	1.477366	9.25
CHLOROBENZENE	4.873	4.955	4.638	4.414	4.100	4.355	4.211	4.169	4.058	4.379430	7.09

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Est. 1970

Quality Control Summary
SDG: L835437
Weston Solutions - CO

Test: Volatile Organic Compounds by Method 8260B
Project: Cowboy Timber
Instrument ID: VOCMS7
Method Name : V807B15P.M

Relative Response Factor Summary

Compound Name	Level .25	Level .5	Level 1	Level 2	Level 5.0	Level 10	Level 25	Level 40	Level 75	Average RRF	%RSD
1,1,1,2-TETRACHLOROETHANE	1.785	1.598	1.493	1.453	1.307	1.422	1.349	1.322	1.322	1.434697	10.17
ETHYLBENZENE	2.444	2.730	2.724	2.454	2.328	2.521	2.429	2.404	2.356	2.476655	5.40
M&P-XYLENE	3.198	3.373	3.050	3.157	2.803	3.018	2.879	2.887	2.849	3.012497	5.71
O-XYLENE	3.120	3.349	2.977	3.009	2.785	2.927	2.872	2.888	2.860	2.968513	5.21
STYRENE	5.316	5.015	4.901	5.122	4.541	4.886	4.852	4.765	4.721	4.890134	4.24
Bromoform	0.976	1.061	1.003	1.037	0.943	1.030	1.014	1.033	1.001	1.017780	3.46
Isopropylbenzene	8.005	9.245	7.820	8.181	7.571	7.858	7.670	7.610	7.493	7.869977	6.51
4-BROMOFLUOROBENZENE	2.567	2.549	2.525	2.523	2.518	2.497	2.517	2.524	2.527	2.541892	1.48
Bromobenzene	3.301	3.489	3.767	3.489	3.139	3.316	3.357	3.287	3.225	3.354915	5.15
1,1,2,2-TETRACHLOROETHANE	2.916	2.602	2.398	2.123	2.070	2.130	2.047	2.111	1.996	2.232289	12.93
1,2,3-TRICHLOROPROPANE	1.010	0.670	0.763	0.543	0.506	0.514	0.504	0.499	0.487	0.590673	27.83
TRANS-1,4-DICHLORO-2-BUTENE		0.848	0.560	0.581	0.527	0.600	0.611	0.626	0.620	0.623604	13.80
n-Propylbenzene	8.891	9.580	9.175	9.406	8.650	9.374	9.184	9.162	9.053	9.143748	2.97
4-ETHYLTOLUENE	8.552	8.863	7.968	7.731	7.181	7.657	7.488	7.520	7.284	7.713754	7.14
2-Chlorotoluene	1.733	1.918	1.683	1.747	1.530	1.678	1.596	1.582	1.599	1.671162	6.27
4-Chlorotoluene	5.908	6.665	5.490	5.593	5.156	5.422	5.371	5.420	5.292	5.554005	7.52
1,3,5-Trimethylbenzene	6.733	7.053	6.962	6.555	5.871	6.205	6.082	6.028	5.992	6.322491	6.77
tert-Butylbenzene	5.318	5.946	5.484	5.488	5.015	5.410	5.269	5.224	5.224	5.342142	4.65
1,2,4-Trimethylbenzene	7.263	7.608	6.574	6.551	5.909	6.228	6.165	6.103	5.964	6.396692	8.89
sec-Butylbenzene	9.409	9.545	8.644	8.462	8.121	8.686	8.491	8.369	8.254	8.586258	5.68
1,3-DICHLOROBENZENE	3.302	3.485	3.258	3.378	2.938	3.228	3.227	3.203	3.224	3.253187	4.16
p-Isopropyltoluene	7.300	7.347	6.928	7.289	6.450	6.803	6.682	6.691	6.586	6.853175	4.80
DICYCLOPENTADIENE	9.113	9.923	9.394	9.579	8.640	9.139	8.766	8.524	8.343	8.900893	6.53
1,4-DICHLOROBENZENE	1.541	1.415	1.427	1.358	1.209	1.280	1.245	1.232	1.219	1.307916	8.48
1,2,3-TRIMETHYLBENZENE	2.825	2.930	2.529	2.520	2.373	2.531	2.448	2.397	2.342	2.503362	8.19
1,2-DICHLOROBENZENE	1.164	1.280	1.221	1.225	1.172	1.245	1.228	1.221	1.194	1.211675	3.04
n-Butylbenzene	2.388	2.861	2.834	2.829	2.671	2.855	2.778	2.751	2.661	2.702654	5.98
1,2-Dibromo-3-chloropropane		0.215	0.135	0.141	0.144	0.153	0.162	0.165	0.159	0.160378	13.78
1,2,4-Trichlorobenzene	0.945	0.884	0.882	0.822	0.804	0.844	0.826	0.826	0.785	0.829648	7.21

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Quality Control Summary
SDG: L835437
Weston Solutions - CO

Test: Volatile Organic Compounds by Method 8260B
Project: Cowboy Timber
Instrument ID: VOCMS7
Method Name : V807B15P.M

Relative Response Factor Summary

Compound Name	Level .25	Level .5	Level 1	Level 2	Level 5.0	Level 10	Level 25	Level 40	Level 75	Average RRF	%RSD
HEXACHLORO-1,3-BUTADIENE	0.465	0.494	0.459	0.476	0.458	0.481	0.468	0.480	0.471	0.469786	2.98
Naphthalene	2.638	2.396	2.184	2.238	2.021	2.266	2.196	2.301	2.178	2.245622	7.44
1,2,3-Trichlorobenzene	0.877	0.759	0.732	0.808	0.735	0.786	0.773	0.768	0.734	0.763550	6.61
1-Methylnaphthalene	1.336	1.083	1.079	1.116	1.072	1.191	1.195	1.255	1.153	1.154015	7.58
2-Methylnaphthalene	1.249	1.017	1.036	1.076	0.910	0.978	0.989	1.046	0.950	1.006831	10.08
ETHANOL										0.008876	4.61
Bromoethane										0.404303	3.00
2-PROPANOL										0.048319	11.61
Methyl Acetate										0.448050	2.29
ACETONITRILE										0.079808	3.16
ALLYL CHLORIDE										0.259527	1.99
tert-BUTYL ALCOHOL										0.160802	3.37
chloroprene										0.836237	2.11
ETHYL TERT-BUTYL ETHER										1.749866	2.84
PROPIONITRILE										0.079823	2.85
Ethyl Acetate										0.605676	2.38
METHACRYLONITRILE										0.213529	3.12
Cyclohexane										1.112759	2.08
tert-butyl formate										0.000000	0.00
ISOBUTANOL										0.039290	5.09
t-Amyl Alcohol										0.056226	7.40
TERT-AMYL METHYL ETHER										1.740322	4.37
N-BUTANOL										0.011654	3.68
Methyl Cyclohexane										0.823254	16.72
2-nitropropane										0.112635	4.06
METHYL METHACRYLATE										0.345904	3.43
1,4-DIOXANE										0.003654	3.16
n-octane										0.308468	4.12
3,3-DIMETHYL-1-BUTANOL										0.054863	2.88

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Quality Control Summary
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Weston Solutions - CO

Test: Volatile Organic Compounds by Method 8260B
Project: Cowboy Timber
Instrument ID: VOCMS7
Method Name : V807B15P.M

Relative Response Factor Summary

Compound Name	Level .25	Level .5	Level 1	Level 2	Level 5.0	Level 10	Level 25	Level 40	Level 75	Average RRF	%RSD
ETHYL METHACRYLATE										2.081683	2.34
CIS-1,4-DICHLORO-2-BUTENE										0.572086	3.17
Cyclohexanone										0.506760	5.30
PENTACHLOROETHANE										1.019613	2.57
Hexachloroethane										1.267692	3.00

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Quality Control Summary
SDG: L835437
Weston Solutions - CO

Test: Volatile Organic Compounds by Method 8260B
Project: Cowboy Timber
Instrument ID: VOCMS26
Method Name : V826C23P.M

Relative Response Factor Summary

Compound Name	Level .25	Level .5	Level 1	Level 2	Level 5.0	Level 10	Level 25	Level 40	Level 75	Average RRF	%RSD
TPH (GC/MS) LOW FRACTION										0.000000	0.00
PROPENE				0.097	0.079	0.080	0.075	0.072	0.071	0.075969	13.30
DICHLORODIFLUOROMETHANE	0.493	0.511	0.551	0.513	0.463	0.517	0.504	0.505	0.516	0.506389	4.19
CHLOROMETHANE	0.731	0.690	0.650	0.642	0.625	0.649	0.630	0.612	0.634	0.644149	5.82
VINYL CHLORIDE	0.726	0.695	0.701	0.656	0.671	0.707	0.704	0.668	0.713	0.696468	3.18
1,3-BUTADIENE	0.483	0.443	0.416	0.385	0.367	0.390	0.390	0.383	0.397	0.404745	7.99
BROMOMETHANE	0.459	0.423	0.451	0.444	0.436	0.460	0.446	0.467	0.481	0.459914	5.17
CHLOROETHANE	0.368	0.413	0.421	0.407	0.392	0.416	0.414	0.407	0.424	0.410986	4.48
TRICHLOROFLUOROMETHANE			0.794	0.771	0.781	0.798	0.808	0.807	0.830	0.810788	3.66
DICHLOROFLUOROMETHANE	1.027	0.999	1.065	1.011	0.995	1.005	1.014	0.990	1.024	1.020801	2.45
ETHYL ETHER	0.277	0.380	0.391	0.374	0.370	0.394	0.406	0.381	0.410	0.381069	9.80
ACROLEIN			0.008	0.009	0.008	0.009	0.009	0.009	0.010	0.009099	10.37
1,1-DICHLOROETHENE	0.687	0.768	0.739	0.799	0.800	0.822	0.820	0.782	0.844	0.793698	6.01
1,1,2-TRICHLOROTRIFLUOROETHANE	0.423	0.487	0.518	0.516	0.507	0.524	0.524	0.513	0.535	0.508641	6.17
ACETONE				0.169	0.139	0.131	0.107	0.126	0.132	0.133512	13.03
IODOMETHANE	0.755	0.785	0.786	0.753	0.753	0.779	0.775	0.771	0.799	0.778399	2.46
CARBON DISULFIDE	1.646	1.723	1.690	1.666	1.698	1.726	1.707	1.625	1.764	1.707616	2.89
METHYLENE CHLORIDE	0.563	0.560	0.592	0.550	0.531	0.544	0.541	0.535	0.545	0.550849	3.01
ACRYLONITRILE	0.114	0.131	0.134	0.141	0.140	0.144	0.141	0.146	0.153	0.141027	8.48
n-HEXANE	0.537	0.508	0.481	0.506	0.501	0.504	0.505	0.507	0.511	0.507725	2.54
TRANS-1,2-DICHLOROETHENE	0.512	0.507	0.552	0.540	0.538	0.567	0.564	0.560	0.574	0.550816	4.32
METHYL TERT-BUTYL ETHER	1.051	1.127	1.227	1.137	1.171	1.177	1.181	1.159	1.195	1.170538	4.48
1,1-DICHLOROETHANE	0.817	0.976	1.015	0.982	0.977	0.990	1.009	0.997	1.015	0.982992	5.85
VINYL ACETATE	0.690	0.797	0.766	0.765	0.769	0.786	0.792	0.794	0.828	0.770935	5.19
DI-ISOPROPYL ETHER	1.343	1.427	1.518	1.475	1.507	1.516	1.528	1.516	1.548	1.502890	4.51
2,2-Dichloropropane	0.562	0.578	0.605	0.557	0.580	0.571	0.543	0.533	0.528	0.550552	6.45
CIS-1,2-DICHLOROETHENE	0.529	0.569	0.605	0.576	0.586	0.603	0.601	0.594	0.603	0.589405	4.08
2-BUTANONE (MEK)	0.193	0.197	0.197	0.199	0.194	0.196	0.194	0.204	0.215	0.202531	5.25

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Quality Control Summary
SDG: L835437
Weston Solutions - CO

Test: Volatile Organic Compounds by Method 8260B
Project: Cowboy Timber
Instrument ID: VOCMS26
Method Name : V826C23P.M

Relative Response Factor Summary

Compound Name	Level .25	Level .5	Level 1	Level 2	Level 5.0	Level 10	Level 25	Level 40	Level 75	Average RRF	%RSD
BROMOCHLOROMETHANE	0.265	0.290	0.315	0.304	0.299	0.310	0.313	0.311	0.320	0.306220	5.38
TETRAHYDROFURAN	0.142	0.134	0.120	0.132	0.119	0.121	0.109	0.118	0.123	0.124215	7.16
CHLOROFORM	0.894	1.004	0.992	0.977	0.970	0.996	0.994	0.986	1.007	0.986141	3.42
DIBROMOFLUOROMETHANE	0.572	0.573	0.579	0.559	0.558	0.568	0.569	0.558	0.567	0.566117	1.20
1,1,1-TRICHLOROETHANE	0.633	0.712	0.753	0.714	0.758	0.747	0.742	0.744	0.749	0.734579	5.20
CARBON TETRACHLORIDE	0.695	0.759	0.717	0.640	0.634	0.655	0.638	0.634	0.650	0.668917	5.96
1,1-Dichloropropene	0.692	0.788	0.810	0.793	0.799	0.823	0.832	0.826	0.845	0.808718	5.43
2,2,4-TRIMETHYLPENTANE	2.028	2.270	2.276	2.222	2.269	2.303	2.258	2.223	2.333	2.258406	3.93
n-Heptane	0.858	0.925	0.847	0.874	0.913	0.915	0.932	0.956	0.957	0.921212	4.98
BENZENE	1.956	2.277	2.256	2.188	2.219	2.240	2.255	2.234	2.270	2.223687	4.21
1,2-DICHLOROETHANE	0.553	0.573	0.598	0.601	0.603	0.601	0.613	0.608	0.619	0.600968	3.49
TRICHLOROETHENE	0.260	0.272	0.276	0.289	0.292	0.301	0.302	0.300	0.305	0.291633	5.34
1,2-DICHLOROPROPANE	0.171	0.210	0.212	0.209	0.207	0.212	0.213	0.215	0.214	0.208596	6.17
DIBROMOMETHANE	0.125	0.159	0.159	0.165	0.160	0.163	0.163	0.163	0.167	0.159760	7.48
BROMODICHLOROMETHANE	0.294	0.336	0.358	0.367	0.362	0.369	0.377	0.380	0.389	0.364752	7.89
a,a,a-Trifluorotoluene	0.507	0.510	0.513	0.505	0.511	0.514	0.502	0.498	0.498	0.504374	1.45
2-CHLOROETHYL VINYL ETHER	0.125	0.149	0.154	0.166	0.166	0.170	0.175	0.179	0.184	0.167118	11.08
CIS-1,3-DICHLOROPROPENE	0.382	0.410	0.451	0.447	0.458	0.472	0.483	0.487	0.491	0.460460	7.91
4-METHYL-2-PENTANONE (MIBK)	0.159	0.180	0.179	0.184	0.189	0.191	0.197	0.199	0.210	0.191314	8.09
TOLUENE-D8	1.257	1.259	1.264	1.253	1.247	1.253	1.243	1.235	1.228	1.241800	1.56
TOLUENE	1.184	1.261	1.270	1.280	1.273	1.265	1.265	1.270	1.283	1.262249	2.24
TRANS-1,3-DICHLOROPROPENE			0.435	0.555	0.454	0.434	0.422	0.423	0.429	0.446381	9.40
1,1,2-TRICHLOROETHANE	1.213	1.328	1.355	1.296	1.297	1.340	1.343	1.351	1.369	1.326867	3.35
TETRACHLOROETHENE	1.058	1.192	1.216	1.218	1.171	1.211	1.235	1.240	1.262	1.210034	4.77
1,3-Dichloropropane	2.008	2.383	2.464	2.466	2.374	2.474	2.499	2.514	2.564	2.438591	6.37
2-HEXANONE	0.402	0.435	0.470	0.499	0.498	0.535	0.553	0.575	0.608	0.525972	13.56
CHLORODIBROMOMETHANE	1.416	1.377	1.402	1.375	1.385	1.445	1.490	1.498	1.553	1.459633	5.08
1,2-DIBROMOETHANE	1.052	1.259	1.291	1.330	1.266	1.334	1.337	1.352	1.389	1.305759	7.25
CHLOROBENZENE	3.949	4.211	4.230	4.507	4.422	4.544	4.595	4.622	4.666	4.455356	5.18

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Quality Control Summary
SDG: L835437
Weston Solutions - CO

Test: Volatile Organic Compounds by Method 8260B
Project: Cowboy Timber
Instrument ID: VOCMS26
Method Name : V826C23P.M

Relative Response Factor Summary

Compound Name	Level .25	Level .5	Level 1	Level 2	Level 5.0	Level 10	Level 25	Level 40	Level 75	Average RRF	%RSD
1,1,1,2-TETRACHLOROETHANE	1.178	1.189	1.327	1.279	1.316	1.339	1.353	1.337	1.372	1.314531	5.47
ETHYLBENZENE	2.309	2.266	2.500	2.458	2.449	2.571	2.575	2.594	2.625	2.506961	5.00
M&P-XYLENE	2.738	2.986	3.003	3.013	3.000	3.121	3.158	3.174	3.232	3.072885	4.66
O-XYLENE	2.657	2.783	2.718	2.739	2.700	2.858	2.882	2.877	2.927	2.812924	3.41
STYRENE	3.412	4.067	4.115	4.283	4.333	4.610	4.776	4.836	5.007	4.480219	10.95
Bromoform	0.506	0.643	0.675	0.707	0.732	0.768	0.804	0.820	0.873	0.751332	15.18
Isopropylbenzene	6.669	7.111	7.369	7.337	7.353	7.716	7.698	7.703	7.795	7.456451	4.56
4-BROMOFLUOROBENZENE	2.728	2.661	2.667	2.668	2.605	2.661	2.661	2.624	2.637	2.638147	1.97
Bromobenzene	3.488	3.475	3.594	3.465	3.240	3.423	3.401	3.395	3.448	3.429011	2.52
1,1,2,2-TETRACHLOROETHANE	1.489	1.540	1.568	1.584	1.573	1.645	1.654	1.641	1.715	1.614691	4.25
1,2,3-TRICHLOROPROPANE		0.413	0.452	0.458	0.435	0.473	0.473	0.474	0.488	0.463443	5.18
TRANS-1,4-DICHLORO-2-BUTENE		0.337	0.356	0.377	0.363	0.388	0.397	0.398	0.428	0.389295	8.15
n-Propylbenzene	9.518	9.708	9.608	9.478	9.257	9.655	9.628	9.648	9.768	9.546236	1.88
4-ETHYLTOLUENE	8.126	7.934	7.945	7.651	7.597	7.857	7.963	7.961	8.038	7.873863	2.09
2-Chlorotoluene	1.519	1.543	1.674	1.688	1.647	1.700	1.695	1.701	1.722	1.662337	4.09
4-Chlorotoluene	5.197	5.366	5.463	5.631	5.414	5.602	5.641	5.639	5.703	5.521200	2.73
1,3,5-Trimethylbenzene	5.980	5.712	6.182	6.035	6.068	6.206	6.224	6.217	6.285	6.128762	2.78
tert-Butylbenzene	4.478	4.795	5.105	5.005	5.066	5.260	5.244	5.280	5.275	5.104000	5.17
1,2,4-Trimethylbenzene	6.250	6.034	6.314	6.092	6.046	6.284	6.281	6.243	6.342	6.222332	1.77
sec-Butylbenzene	7.033	7.795	8.160	8.264	8.218	8.472	8.374	8.408	8.443	8.172417	5.18
1,3-DICHLOROBENZENE	2.787	2.818	2.942	3.057	2.928	2.990	3.052	3.031	3.056	2.968359	3.13
p-Isopropyltoluene	5.664	6.061	6.343	6.481	6.562	6.693	6.749	6.817	6.829	6.539637	5.89
DICYCLOPENTADIENE	6.245	7.079	7.350	7.556	7.628	7.898	7.915	7.912	8.033	7.616971	7.33
1,4-DICHLOROBENZENE	1.222	1.319	1.298	1.333	1.270	1.273	1.274	1.292	1.310	1.289992	2.32
1,2,3-TRIMETHYLBENZENE	2.510	2.583	2.556	2.576	2.587	2.598	2.556	2.605	2.643	2.604577	2.51
1,2-DICHLOROBENZENE	1.027	1.126	1.123	1.165	1.144	1.161	1.150	1.168	1.184	1.148167	4.05
n-Butylbenzene	2.488	2.644	2.721	2.727	2.776	2.778	2.802	2.842	2.862	2.757845	4.05
1,2-Dibromo-3-chloropropane	0.085	0.081	0.119	0.092	0.106	0.105	0.107	0.111	0.120	0.106760	14.29
1,2,4-Trichlorobenzene	0.664	0.712	0.711	0.700	0.713	0.666	0.696	0.701	0.741	0.711496	4.72

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Est. 1970

Quality Control Summary
SDG: L835437
Weston Solutions - CO

Test: Volatile Organic Compounds by Method 8260B
Project: Cowboy Timber
Instrument ID: VOCMS26
Method Name : V826C23P.M

Relative Response Factor Summary

Compound Name	Level .25	Level .5	Level 1	Level 2	Level 5.0	Level 10	Level 25	Level 40	Level 75	Average RRF	%RSD
HEXACHLORO-1,3-BUTADIENE	0.323	0.337	0.364	0.384	0.387	0.371	0.370	0.377	0.390	0.376423	7.83
Naphthalene	2.352	1.919	1.860	1.821	1.752	1.678	1.726	1.786	1.945	1.895265	9.89
1,2,3-Trichlorobenzene	0.651	0.635	0.689	0.649	0.648	0.613	0.634	0.641	0.679	0.659990	5.00
1-Methylnaphthalene		1.134	1.046	1.022	0.938	0.895	0.973	1.037	1.157	1.059431	10.12
2-Methylnaphthalene	1.111	0.901	0.833	0.801	0.792	0.732	0.792	0.838	0.927	0.874792	12.13
ETHANOL										0.000000	0.00
Bromoethane										0.501689	5.42
2-PROPANOL										0.026756	5.97
Methyl Acetate										0.253490	6.92
ACETONITRILE										0.043243	9.18
ALLYL CHLORIDE										0.284275	5.27
tert-BUTYL ALCOHOL										0.057142	11.77
chloroprene										0.782760	4.64
ETHYL TERT-BUTYL ETHER										1.410874	5.21
PROPIONITRILE										0.055911	7.43
Ethyl Acetate										0.390286	6.80
METHACRYLONITRILE										0.178459	6.43
Cyclohexane										1.385616	5.47
tert-butyl formate										0.361080	8.85
ISOBUTANOL										0.010790	12.32
t-Amyl Alcohol										0.037620	11.04
TERT-AMYL METHYL ETHER										1.578298	4.45
N-BUTANOL										0.006725	12.62
Methyl Cyclohexane										0.800358	14.32
2-nitropropane										0.057354	6.84
METHYL METHACRYLATE										0.172041	7.38
1,4-DIOXANE										0.002302	25.87
n-octane										0.307481	4.23
3,3-DIMETHYL-1-BUTANOL										0.025466	12.04

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Quality Control Summary
SDG: L835437
Weston Solutions - CO

Test: Volatile Organic Compounds by Method 8260B
Project: Cowboy Timber
Instrument ID: VOCMS26
Method Name : V826C23P.M

Relative Response Factor Summary

Compound Name	Level .25	Level .5	Level 1	Level 2	Level 5.0	Level 10	Level 25	Level 40	Level 75	Average RRF	%RSD
ETHYL METHACRYLATE										1.859077	8.69
CIS-1,4-DICHLORO-2-BUTENE										0.390475	10.00
Cyclohexanone										0.107774	12.76
PENTACHLOROETHANE										0.954070	11.51
Hexachloroethane										1.256797	4.89

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Quality Control Summary
SDG: L835437
Weston Solutions - CO

Test: Volatile Organic Compounds by Method 8260B
Project No: 20408.012.001.0345.0
Project: Cowboy Timber EPA ID: TN00003
Collection Date: 5/11/2016
Instrument ID: VOCMS26

Method Name : V826C23P.M
FileName : 0513_35.D

Date : 5/13/2016
Time : 9:44 PM

Continuing Calibration Verification

Compound Name	Average RRF	CCC RRF	%D	
Dichlorodifluoromethane	0.5064	0.4263	15.8	
Chloromethane	0.6441	0.5650	12.3	>0.1
Vinyl chloride	0.6965	0.5887	15.5	
Bromomethane	0.4599	0.4031	12.4	
Chloroethane	0.4110	0.3512	14.6	
Trichlorofluoromethane	0.8108	0.7151	11.8	
1,1-Dichloroethene	0.7937	0.6935	12.6	
1,1,2-Trichlorotrifluoroethane	0.5086	0.5040	0.91	
Acetone	0.1335	0.1335	0.03	
Methylene Chloride	0.5508	0.5341	3.03	
Acrylonitrile	0.1410	0.1222	13.4	
trans-1,2-Dichloroethene	0.5508	0.5447	1.12	
Methyl tert-butyl ether	1.1705	1.1120	5	
1,1-Dichloroethane	0.9830	0.9309	5.3	>0.1
Di-isopropyl ether	1.5029	1.4544	3.23	
2,2-Dichloropropane	0.5506	0.5818	5.68	
cis-1,2-Dichloroethene	0.5894	0.5783	1.88	
2-Butanone (MEK)	0.2025	0.1859	8.23	
Chloroform	0.9861	0.9382	4.87	
1,1,1-Trichloroethane	0.7346	0.7414	0.93	
Carbon tetrachloride	0.6689	0.6548	2.11	
1,1-Dichloropropene	0.8087	0.7490	7.39	
Benzene	2.2237	2.1891	1.55	
1,2-Dichloroethane	0.6010	0.5227	13	
Trichloroethene	0.2916	0.2954	1.31	
1,2-Dichloropropane	0.2086	0.2089	0.17	
Dibromomethane	0.1598	0.1514	5.22	
Bromodichloromethane	0.3648	0.3480	4.59	
2-Chloroethyl vinyl ether	0.1671	0.1541	7.78	
cis-1,3-Dichloropropene	0.4605	0.4480	2.7	
4-Methyl-2-pentanone (MIBK)	0.1913	0.1776	7.17	

*** - calibrated by linear regression*

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Quality Control Summary
SDG: L835437
Weston Solutions - CO

Test: Volatile Organic Compounds by Method 8260B
Project No: 20408.012.001.0345.0
Project: Cowboy Timber EPA ID: TN00003
Collection Date: 5/11/2016
Instrument ID: VOCMS26

Method Name : V826C23P.M Date : 5/13/2016
FileName : 0513_35.D Time : 9:44 PM

Continuing Calibration Verification

Compound Name	Average RRF	CCC RRF	%D	
Toluene	1.2622	1.2690	0.53	
trans-1,3-Dichloropropene	0.4464	0.3925	12.1	
1,1,2-Trichloroethane	1.3269	1.3471	1.52	
Tetrachloroethene	1.2100	1.3046	7.82	
1,3-Dichloropropane	2.4386	2.4069	1.3	
Chlorodibromomethane	1.4596	1.4555	0.28	
1,2-Dibromoethane	1.3058	1.3076	0.14	
Chlorobenzene	4.4554	4.7402	6.39	>0.3
1,1,1,2-Tetrachloroethane	1.3145	1.4244	8.36	
Ethylbenzene	2.5070	2.7238	8.65	
Styrene	4.4802	4.8027	7.2	
Bromoform	0.7513	0.7899	5.13	>0.1
Isopropylbenzene	7.4565	8.2652	10.8	
Bromobenzene	3.4290	3.3094	3.49	
1,1,2,2-Tetrachloroethane	1.6147	1.6512	2.26	>0.3
1,2,3-Trichloropropane	0.4634	0.4487	3.17	
n-Propylbenzene	9.5462	10.0350	5.12	
2-Chlorotoluene	1.6623	1.7896	7.65	
4-Chlorotoluene	5.5212	5.5994	1.42	
1,3,5-Trimethylbenzene	6.1288	6.5428	6.76	
tert-Butylbenzene	5.1040	5.4360	6.5	
1,2,4-Trimethylbenzene	6.2223	6.4352	3.42	
sec-Butylbenzene	8.1724	8.9627	9.67	
1,3-Dichlorobenzene	2.9684	3.2736	10.3	
p-Isopropyltoluene	6.5396	7.0574	7.92	
1,4-Dichlorobenzene	1.2900	1.3760	6.67	
1,2,3-Trimethylbenzene	2.6046	2.7096	4.03	
1,2-Dichlorobenzene	1.1482	1.2110	5.48	
n-Butylbenzene	2.7578	3.0229	9.61	
1,2-Dibromo-3-Chloropropane	0.1068	0.0919	13.9	
1,2,4-Trichlorobenzene	0.7115	0.6569	7.67	

*** - calibrated by linear regression*

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Quality Control Summary
SDG: L835437
Weston Solutions - CO

Test: Volatile Organic Compounds by Method 8260B
Project No: 20408.012.001.0345.0
Project: Cowboy Timber EPA ID: TN00003
Collection Date: 5/11/2016
Instrument ID: VOCMS26

Method Name : V826C23P.M
FileName : 0513_35.D

Date : 5/13/2016
Time : 9:44 PM

Continuing Calibration Verification

Compound Name	Average RRF	CCC RRF	%D
Hexachloro-1,3-butadiene	0.3764	0.3765	0.02
Naphthalene	1.8953	1.4598	23
1,2,3-Trichlorobenzene	0.6600	0.5213	21

*** - calibrated by linear regression*

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Quality Control Summary
SDG: L835437
Weston Solutions - CO

Test: Volatile Organic Compounds by Method 8260B
Project No: 20408.012.001.0345.0
Project: Cowboy Timber EPA ID: TN00003
Collection Date: 5/11/2016
Instrument ID: VOCMS7

Method Name : V807B15P.M
FileName : 0517_02.D

Date : 5/17/2016
Time : 5:49 AM

Continuing Calibration Verification

Compound Name	Average RRF	CCC RRF	%D	
Dichlorodifluoromethane	0.6231	0.5120	17.8	
Chloromethane	0.8930	0.7597	14.9	>0.1
Vinyl chloride	0.7657	0.7146	6.67	
Bromomethane	0.3788	0.4209	11.1	
Chloroethane	0.4106	0.3930	4.29	
Trichlorofluoromethane	0.7647	0.7008	8.36	
Acrolein	0.1169	0.1255	7.39	
1,1-Dichloroethene	0.8285	0.8144	1.7	
1,1,2-Trichlorotrifluoroethane	0.4752	0.4310	9.31	
Acetone	0.3764	0.3293	12.5	
Methylene Chloride	0.5572	0.4626	17	
Acrylonitrile	0.2288	0.2024	11.5	
trans-1,2-Dichloroethene	0.4975	0.4348	12.6	
Methyl tert-butyl ether	1.4799	1.3852	6.4	
1,1-Dichloroethane	1.0269	0.9932	3.29	>0.1
Di-isopropyl ether	2.1881	2.0298	7.24	
2,2-Dichloropropane	0.8498	0.8181	3.72	
cis-1,2-Dichloroethene	0.5393	0.4873	9.65	
2-Butanone (MEK)	0.4553	0.3847	15.5	
Chloroform	0.9272	0.8608	7.17	
1,1,1-Trichloroethane	0.7691	0.6966	9.43	
Carbon tetrachloride	0.6783	0.6012	11.4	
1,1-Dichloropropene	0.7258	0.6811	6.16	
Benzene	2.1689	1.9459	10.3	
1,2-Dichloroethane	0.6571	0.6860	4.4	
Trichloroethene	0.2852	0.2437	14.5	
1,2-Dichloropropane	0.2593	0.2330	10.1	
Dibromomethane	0.1886	0.1623	13.9	
Bromodichloromethane	0.4274	0.3869	9.49	
2-Chloroethyl vinyl ether	0.0364	0.0170	53.3	
cis-1,3-Dichloropropene	0.5556	0.5015	9.73	

*** - calibrated by linear regression*

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Quality Control Summary
SDG: L835437
Weston Solutions - CO

Test: Volatile Organic Compounds by Method 8260B
Project No: 20408.012.001.0345.0
Project: Cowboy Timber EPA ID: TN00003
Collection Date: 5/11/2016
Instrument ID: VOCMS7

Method Name : V807B15P.M Date : 5/17/2016
FileName : 0517_02.D Time : 5:49 AM

Continuing Calibration Verification

Compound Name	Average RRF	CCC RRF	%D		
4-Methyl-2-pentanone (MIBK)	0.4058	0.3505	13.6		
Toluene	1.2930	1.1218	13.2		
trans-1,3-Dichloropropene	0.4674	0.4309	7.81		
1,1,2-Trichloroethane	1.4392	1.2600	12.4		
Tetrachloroethene	1.1987	0.9989	16.7		
1,3-Dichloropropane	2.5879	2.3345	9.79		
Chlorodibromomethane	1.6575	1.3289	19.8		
1,2-Dibromoethane	1.4774	1.2745	13.7		
Chlorobenzene	4.3794	3.6723	16.1	>0.3	
1,1,1,2-Tetrachloroethane	1.4347	1.1766	18		
Ethylbenzene	2.4767	2.1795	12		
Styrene	4.8901	4.0825	16.5		
Bromoform	1.0178	0.8146	20	>0.1	
Isopropylbenzene	7.8700	6.5772	16.4		
Bromobenzene	3.3549	3.0148	10.1		
1,1,2,2-Tetrachloroethane	2.2323	1.7781	20.3	>0.3	
1,2,3-Trichloropropane	0.5907	0.4078	18.7		**
n-Propylbenzene	9.1437	8.0742	11.7		
2-Chlorotoluene	1.6712	1.3700	18		
4-Chlorotoluene	5.5540	4.7637	14.2		
1,3,5-Trimethylbenzene	6.3225	5.2823	16.5		
tert-Butylbenzene	5.3421	4.3392	18.8		
1,2,4-Trimethylbenzene	6.3967	5.3294	16.7		
sec-Butylbenzene	8.5863	7.1681	16.5		
1,3-Dichlorobenzene	3.2532	2.6719	17.9		
p-Isopropyltoluene	6.8532	5.6417	17.7		
1,4-Dichlorobenzene	1.3079	1.1202	14.3		
1,2,3-Trimethylbenzene	2.5034	2.3003	8.11		
1,2-Dichlorobenzene	1.2117	1.1055	8.77		
n-Butylbenzene	2.7027	2.6112	3.38		
1,2-Dibromo-3-Chloropropane	0.1604	0.1292	19.5		

*** - calibrated by linear regression*

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Quality Control Summary
SDG: L835437
Weston Solutions - CO

Test: Volatile Organic Compounds by Method 8260B
Project No: 20408.012.001.0345.0
Project: Cowboy Timber EPA ID: TN00003
Collection Date: 5/11/2016
Instrument ID: VOCMS7

Method Name : V807B15P.M
FileName : 0517_02.D

Date : 5/17/2016
Time : 5:49 AM

Continuing Calibration Verification

Compound Name	Average RRF	CCC RRF	%D
1,2,4-Trichlorobenzene	0.8296	0.6912	16.7
Hexachloro-1,3-butadiene	0.4698	0.3718	20.9
Naphthalene	2.2456	1.8643	17
1,2,3-Trichlorobenzene	0.7636	0.6155	19.4

*** - calibrated by linear regression*

Raw Data

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

Injection Log

Instrument ID : VOCMS26
Computer Name : VOCCOMPAO
Released By : Glen Norton
Date Released : 9/21/2016 4:06:43 PM
Run ID : 051316
Signature : _____

#	File ID	Sample ID	Method	WG	Product	Matrix	Account #	State	Dil.	Mult.	Injected	Misc.
1	0513_01	INSTBLK	V826C23P						1	1	05/13/16 0507	"soil"
2	0513_02	ICV VMS 25 PPB	V826C23P						1	1	05/13/16 0527	"soil"
3	0513_02T	ICV VMS 25 ppb	V826C23P							1	05/13/16 0527	
4	0513_03	AP9CV 10A PPB	V826C23P						1	1	05/13/16 0547	"soil"
5	0513_04	LCS	V826C23P	WG870779	V8260	SS			1	1	05/13/16 0617	"soil"
6	0513_05	LCSD	V826C23P	WG870779	V8260	SS			1	1	05/13/16 0636	"soil"
7	0513_06	LCSAP9	V826C23P	WG870779	V8260	SS			1	1	05/13/16 0656	"soil"
8	0513_07	1PPB	V826C23P						1	1	05/13/16 0716	"soil"
9	0513_08	INSTBLK	V826C23P						1	1	05/13/16 0735	"soil"
10	0513_09	BLANK	V826C23P	WG870779	V8260	SS			1	1	05/13/16 0755	"soil"
11	0513_10	MB	V826C23P						1	1	05/13/16 0815	"soil"
12	0513_11	L834097-18	V826C23P	WG870779	V8260	SS	WASHGRBID	ID	5	5	05/13/16 0905	"soil"
13	0513_12	MS	V826C23P	WG870779	V8260	SS			5	5	05/13/16 0925	"soil"
14	0513_13	MSD	V826C23P	WG870779	V8260	SS			5	5	05/13/16 0945	"soil"
15	0513_14	INSTBLK	V826C23P						1	1	05/13/16 1011	"soil"
16	0513_15	L834097-20	V826C23P	WG870779	V8260	SS	WASHGRBID	ID	5	5	05/13/16 1031	"soil"
17	0513_16	L834097-24	V826C23P	WG870779	V8260	SS	WASHGRBID	ID	5	5	05/13/16 1052	"soil"
18	0513_17	L834097-22	V826C23P	WG870779	V8260	SS	WASHGRBID	ID	5	5	05/13/16 1112	"soil"
19	0513_18	L834097-26	V826C23P	WG870779	V8260	SS	WASHGRBID	ID	1	0.91	05/13/16 1132	"soil"
20	0513_19	DNR L834097-27	V826C23P	WG870779					1	0.93	05/13/16 1152	"soil"
21	0513_20	L834097-28	V826C23P	WG870779	V8260	SS	WASHGRBID	ID	1	0.99	05/13/16 1211	"soil"
22	0513_21	L834097-29	V826C23P	WG870779	V8260	SS	WASHGRBID	ID	1.02	1.02	05/13/16 1232	"soil"
23	0513_22	L834097-30	V826C23P	WG870779	V8260	SS	WASHGRBID	ID	1.12	1.12	05/13/16 1252	"soil"

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

Injection Log

Instrument ID : VOCMS26
Computer Name : VOCCOMPAO
Released By : Glen Norton
Date Released : 9/21/2016 4:06:43 PM
Run ID : 051316
Signature : _____

#	File ID	Sample ID	Method	WG	Product	Matrix	Account #	State	Dil.	Mult.	Injected	Misc.
24	0513_23	L834097-31	V826C23P	WG870779	V8260	SS	WASHGRBID	ID	1	0.98	05/13/16 1312	"soil"
25	0513_24	L834097-32	V826C23P	WG870779	V8260	SS	WASHGRBID	ID	1	0.89	05/13/16 1332	"soil"
26	0513_25	DNR L834097-33	V826C23P	WG870779					1	0.89	05/13/16 1352	"soil"
27	0513_26	L834097-34	V826C23P	WG870779	V8260	SS	WASHGRBID	ID	1	0.87	05/13/16 1412	"soil"
28	0513_27	DNR L834097-35	V826C23P	WG870779					1.05	1.05	05/13/16 1432	"soil"
29	0513_28	L834097-12	V826C23P	WG870779	V8260	SS	WASHGRBID	ID	43.25	43.25	05/13/16 1452	"soil"
30	0513_29	L834097-13	V826C23P	WG870779	V8260	SS	WASHGRBID	ID	75.75	75.75	05/13/16 1512	"soil"
31	0513_30	L834097-14	V826C23P	WG870779	V8260	SS	WASHGRBID	ID	62.75	62.75	05/13/16 1532	"soil"
32	0513_31	L834097-15	V826C23P	WG870779	V8260	SS	WASHGRBID	ID	32.25	32.25	05/13/16 1552	"soil"
33	0513_32	L834097-16	V826C23P	WG870779	V8260	SS	WASHGRBID	ID	32.5	32.5	05/13/16 1613	"soil"
34	0513_33	L834097-17	V826C23P	WG870779	V8260	SS	WASHGRBID	ID	40.75	40.75	05/13/16 1633	"soil"
35	0513_34	INSTBLK	V826C23P						1	1	05/13/16 2124	"soil"
36	0513_34T	INSTBLK	8260.M							1	05/13/16 2124	
37	0513_35	ICV VMS 25 PPB	V826C23P						1	1	05/13/16 2144	"soil"
38	0513_36	LCS	V826C23P	WG872493	V8260	SS			1	1	05/13/16 2204	"soil"
39	0513_37	LCSD	V826C23P	WG872493	V8260	SS			1	1	05/13/16 2224	"soil"
40	0513_38	AP9CV 10A PPB	V826C23P						1	1	05/13/16 2244	"soil"
41	0513_39	LCSAP9	V826C23P						1	1	05/13/16 2305	"soil"
42	0513_40	1PPB	V826C23P						1	1	05/13/16 2324	"soil"
43	0513_41	INSTBLK	V826C23P						1	1	05/13/16 2344	"soil"
44	0513_42	BLANK	V826C23P						1	1	05/14/16 0004	"water"
45	0513_43	MB	V826C23P						1	1	05/14/16 0024	"soil"
46	0513_44	MS	V826C23P	WG872493	V8260	SS			5	5	05/14/16 0044	"soil"

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

Injection Log

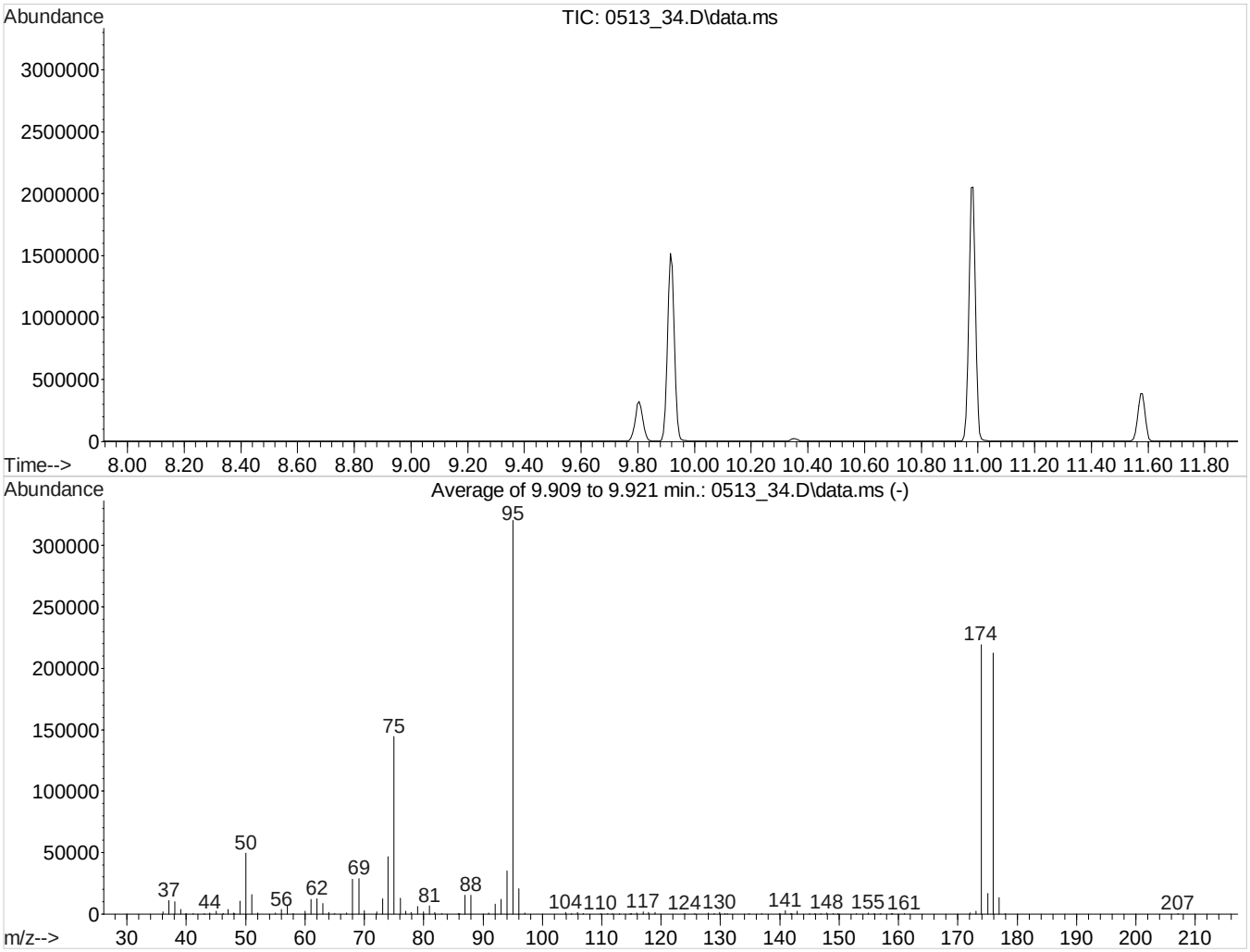
Instrument ID : VOCMS26
Computer Name : VOCCOMPAO
Released By : Glen Norton
Date Released : 9/21/2016 4:06:43 PM
Run ID : 051316
Signature : _____

#	File ID	Sample ID	Method	WG	Product	Matrix	Account #	State	Dil.	Mult.	Injected	Misc.
47	0513_45	MSD	V826C23P	WG872493	V8260	SS			5	5	05/14/16 0104	"soil"
48	0513_46	INSTBLK	V826C23P						1	1	05/14/16 0124	"soil"
49	0513_47	L835355-02	V826C23P	WG872493	V8260	SS	H2OLVNV	NV	5	5	05/14/16 0144	"soil"
50	0513_48	L833675-16	V826C23P	WG872493	V8260	SS	PMENVGTN	TN	5	5	05/14/16 0204	"soil"
51	0513_49	L834097-27	V826C23P	WG872493	V8260	SS	WASHGRBID	ID	1	0.89	05/14/16 0225	"soil"
52	0513_50	DNR L834097-33	V826C23P	WG872493					1	0.92	05/14/16 0245	"soil"
53	0513_51	L834097-35	V826C23P	WG872493	V8260	SS	WASHGRBID	ID	1.07	1.07	05/14/16 0305	"soil"
54	0513_52	L834118-07	V826C23P	WG872493	V8260HEX	SS	GCICOLOH	OH	5	5	05/14/16 0325	"soil"
55	0513_53	L834118-08	V826C23P	WG872493	V8260HEX	SS	GCICOLOH	OH	25	25	05/14/16 0345	"soil"
56	0513_54	L834427-08	V826C23P	WG872493	V8260	SS	WINENVGTN	TN	720	720	05/14/16 0405	"soil"
57	0513_55	L834427-09	V826C23P	WG872493	V8260	SS	WINENVGTN	TN	1	0.93	05/14/16 0425	"soil"
58	0513_56	L834427-10	V826C23P	WG872493	V8260	SS	WINENVGTN	TN	340	340	05/14/16 0445	"soil"
59	0513_57	L834427-12	V826C23P	WG872493	V8260	SS	WINENVGTN	TN	152	152	05/14/16 0505	"soil"
60	0513_58	L834436-11	V826C23P	WG872493	V8260	SS	CIRASSHTX	TX	1	0.69	05/14/16 0524	"soil"
61	0513_59	L835162-02	V826C23P	WG872493	V8260	SS	LEGBGKMO	NC	1	0.67	05/14/16 0544	"soil"
62	0513_60	L835162-03	V826C23P	WG872493	V8260	SS	LEGBGKMO	NC	1	0.73	05/14/16 0604	"soil"
63	0513_61	L835281-01	V826C23P	WG872493	V8260	SS	MPENVPAZ	NM	26.25	26.25	05/14/16 0624	"soil"
64	0513_62	DNR L835323-03	V826C23P	WG872493					1000	1000	05/14/16 0644	"soil"
65	0513_63	L835437-01	V826C23P	WG872493	V8260	SS	WESSOLLCO	WY	5	5	05/14/16 0704	"soil"
66	0513_64	L835437-02	V826C23P	WG872493	V8260	SS	WESSOLLCO	WY	5	5	05/14/16 0725	"soil"
67	0513_65	L835437-03	V826C23P	WG872493	V8260	SS	WESSOLLCO	WY	5	5	05/14/16 0744	"soil"
68	0513_66	L835437-04	V826C23P	WG872493	V8260	SS	WESSOLLCO	WY	5	5	05/14/16 0804	"soil"

Data Path : C:\msdchem\1\data\051316\
Data File : 0513 34.D
Acq On : 13 May 2016 9:24 pm
Operator : 605
Sample : INSTBLK
Misc : water
ALS Vial : 34 Sample Multiplier: 1

Integration File: RTEINT.P

Method : C:\msdchem\1\methods\V826C23P.M
Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
Last Update : Thu Mar 24 11:51:41 2016



AutoFind: Scans 1611, 1612, 1613; Background Corrected with Scan 1603

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	15.5	49627	PASS
75	95	30	60	45.0	144384	PASS
95	95	100	100	100.0	320597	PASS
96	95	5	9	6.4	20605	PASS
173	174	0.00	2	1.1	2310	PASS
174	95	50	150	68.4	219157	PASS
175	174	5	9	7.7	16876	PASS
176	174	95	101	97.0	212565	PASS
177	176	5	9	6.2	13073	PASS

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\051316\
Data File : 0513 35.D
Acq On : 13 May 2016 9:44 pm
Operator : 605
Sample : ICV VMS 25 ppb
Misc : soil
ALS Vial : 35 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: May 13 22:24:59 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 11:51:41 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 8260-PENTAFLUOROBENZENE	5.635	168	777990	40.0000000	ppb	0.00
41) 8260-1,4-DIFLUOROBENZENE	6.123	114	1447241	40.0000000	ppb	0.00
53) 8260-2-BROMO-1-CHLOROP...	7.806	79	233149	40.0000000	ppb	0.00
84) 8260-1,4-DICHLOROBENZE...	10.982	152	549093	40.0000000	ppb	0.00
96) AP9-PENTAFLUOROBENZENE	5.635	168	777990	40.0000000	ppb	0.00
114) AP9-1,4-DIFLUOROBENZENE	6.123	114	1447241	40.0000000	ppb	0.00
122) AP9-2-BROMO-1-CHLOROPR...	7.806	79	233149	40.0000000	ppb	0.00
128) AP9-1,4-DICHLOROBENZEN...	10.982	152	549093	40.0000000	ppb	0.00
System Monitoring Compounds						
33) DIBROMOFLUOROMETHANE	5.215	111	436242	39.6193553	ppb	0.00
Spiked Amount 40.000	Range 76 - 123		Recovery = 99.05%			
46) a,a,a-Trifluorotoluene	6.696	146	727070	39.8421325	ppb	0.00
Spiked Amount 40.000	Range 87 - 117		Recovery = 99.61%			
50) TOLUENE-D8	7.354	98	1789274	39.8239484	ppb	0.00
Spiked Amount 40.000	Range 89 - 115		Recovery = 99.56%			
68) 4-BROMOFLUOROBENZENE	9.915	95	586225	38.1234100	ppb	0.00
Spiked Amount 40.000	Range 70 - 129		Recovery = 95.31%			
Target Compounds						Qvalue
3) PROPENE	1.673	41	41516	28.0973111	ppb	97
4) DICHLORODIFLUOROMETHANE	1.727	85	207268	21.0442632	ppb	100
5) CHLOROMETHANE	1.880	50	274748	21.9297644	ppb	100
6) VINYL CHLORIDE	1.965	62	286257	21.1320251	ppb	99
7) 1,3-BUTADIENE	1.977	39	183894	23.3599479	ppb	93
8) BROMOMETHANE	2.252	94	195999	21.9110343	ppb	100
9) CHLOROETHANE	2.368	64	170760	21.3621538	ppb	99
10) TRICHLOROFLUOROMETHANE	2.483	101	347723	22.0501842	ppb	99
11) DICHLOROFLUOROMETHANE	2.532	67	419305	21.1190703	ppb	100
12) ETHYL ETHER	2.758	59	166450	22.4577204	ppb	97
13) ACROLEIN	3.294	56	86580	489.2173203	ppb	96
14) 1,1-DICHLOROETHENE	2.965	61	337210	21.8439525	ppb	90
15) 1,1,2-TRICHLOROTRIFLUO...	3.026	101	245077	24.7728995	ppb	91
16) ACETONE	3.575	43	324515	124.9683372	ppb	98
17) IODOMETHANE	3.111	142	2083234	137.6009950	ppb	98
18) CARBON DISULFIDE	3.008	76	833067	25.0827831	ppb	98
19) METHYLENE CHLORIDE	3.544	84	259718	24.2412804	ppb	96
20) ACRYLONITRILE	4.331	53	297023	108.2862657	ppb	97
21) n-HEXANE	3.788	56	244329	24.7418792	ppb	88
22) TRANS-1,2-DICHLOROETHENE	3.709	96	264842	24.7210100	ppb	96
23) METHYL TERT-BUTYL ETHER	3.800	73	540696	23.7494559	ppb	96
24) 1,1-DICHLOROETHANE	4.294	63	452629	23.6743786	ppb	99
25) VINYL ACETATE	4.520	43	1932095	128.8536294	ppb	98
26) DI-ISOPROPYL ETHER	4.166	45	707203	24.1937321	ppb	96
27) 2,2-Dichloropropane	4.904	77	282907	26.4199217	ppb	97
28) CIS-1,2-DICHLOROETHENE	4.800	96	281196	24.5290640	ppb	96
29) 2-BUTANONE (MEK)	5.312	43	451868	114.7111540	ppb	96
30) BROMOCHLOROMETHANE	4.983	130	149428	25.0891007	ppb	91
31) TETRAHYDROFURAN	5.190	42	46366	19.1915412	ppb	95
32) CHLOROFORM	5.050	83	456171	23.7834450	ppb	100
34) 1,1,1-TRICHLOROETHANE	5.245	97	360519	25.2333833	ppb	97
35) CARBON TETRACHLORIDE	5.184	117	318389	24.4721368	ppb	99
36) 1,1-Dichloropropene	5.355	75	364190	23.1535242	ppb	98

Data Path : C:\msdchem\1\data\051316\
Data File : 0513 35.D
Acq On : 13 May 2016 9:44 pm
Operator : 605
Sample : ICV VMS 25 ppb
Misc : soil
ALS Vial : 35 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: May 13 22:24:59 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 11:51:41 2016
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
37)	2,2,4-TRIMETHYLPENTANE	5.452	57	1097442	24.9842076	ppb		99
38)	n-Heptane	5.544	43	428121	23.8942355	ppb		96
39)	BENZENE	5.580	78	1064450	24.6114760	ppb		98
40)	1,2-DICHLOROETHANE	5.751	62	254171	21.7450599	ppb		97
42)	TRICHLOROETHENE	6.105	130	267235	25.3265173	ppb		99
43)	1,2-DICHLOROPROPANE	6.562	62	188997	25.0419017	ppb		98
44)	DIBROMOMETHANE	6.476	93	136961	23.6945303	ppb		99
45)	BROMODICHLOROMETHANE	6.623	83	314793	23.8531770	ppb		99
47)	2-CHLOROETHYL VINYL ETHER	7.117	63	697037	115.2791709	ppb		100
48)	CIS-1,3-DICHLOROPROPENE	7.184	75	405262	24.3255695	ppb		100
49)	4-METHYL-2-PENTANONE (...	7.726	43	803185	116.0347216	ppb		99
51)	TOLUENE	7.403	91	1147828	25.1333897	ppb		100
52)	TRANS-1,3-DICHLOROPROPENE	7.769	75	355035	21.9828570	ppb	#	98
54)	1,1,2-TRICHLOROETHANE	7.915	97	196294	25.3808445	ppb		99
55)	TETRACHLOROETHENE	7.757	164	190110	26.9546606	ppb		99
56)	1,3-Dichloropropane	8.165	76	350724	24.6747597	ppb		99
57)	2-HEXANONE	8.488	58	403810	131.7168181	ppb		94
58)	CHLORODIBROMOMETHANE	8.086	129	212098	24.9298284	ppb		100
59)	1,2-DIBROMOETHANE	8.305	107	190536	25.0345895	ppb		99
60)	CHLOROBENZENE	8.787	112	690734	26.5983578	ppb		97
61)	1,1,1,2-TETRACHLOROETHANE	8.842	133	207560	27.0893828	ppb	#	99
62)	ETHYLBENZENE	8.805	106	396913	27.1627732	ppb		97
63)	M&P-XYLENE	8.939	106	964191	53.8323275	ppb		98
64)	O-XYLENE	9.348	106	444020	27.0813926	ppb		98
65)	STYRENE	9.397	104	699835	26.7992641	ppb		96
66)	Bromoform	9.427	173	115104	26.2836092	ppb		100
67)	Isopropylbenzene	9.641	105	1204390	27.7115872	ppb		99
69)	Bromobenzene	10.025	77	482240	24.1279725	ppb		97
70)	1,1,2,2-TETRACHLOROETHANE	10.104	83	240614	25.5657070	ppb		99
71)	1,2,3-TRICHLOROPROPANE	10.238	110	65388	24.2062711	ppb		91
72)	TRANS-1,4-DICHLORO-2-B...	10.275	53	54784	24.1435629	ppb		97
73)	n-Propylbenzene	10.043	91	1462286	26.2800736	ppb		99
74)	4-ETHYLTOLUENE	10.147	105	1190075	25.9306204	ppb		99
75)	2-Chlorotoluene	10.195	126	260772	26.9133858	ppb		97
76)	4-Chlorotoluene	10.354	91	815931	25.3539928	ppb		98
77)	1,3,5-Trimethylbenzene	10.226	105	953403	26.6888714	ppb		99
78)	tert-Butylbenzene	10.531	119	792125	26.6262196	ppb		98
79)	1,2,4-Trimethylbenzene	10.598	105	937725	25.8552490	ppb		99
80)	sec-Butylbenzene	10.701	105	1306031	27.4175965	ppb		99
81)	1,3-DICHLOROBENZENE	10.915	146	477025	27.5709092	ppb		99
82)	p-Isopropyltoluene	10.835	119	1028398	26.9795080	ppb		98
83)	DICYCLOPENTADIENE	10.817	66	1091032	24.5743259	ppb		98
85)	1,4-DICHLOROBENZENE	10.994	146	472229	26.6673434	ppb		92
86)	1,2,3-TRIMETHYLBENZENE	11.012	105	929876	26.0077017	ppb		100
87)	1,2-DICHLOROBENZENE	11.384	146	415611	26.3691412	ppb		99
88)	n-Butylbenzene	11.232	91	1037419	27.4030237	ppb		99
89)	1,2-Dibromo-3-chloropr...	12.116	157	31541	21.5219679	ppb		96
90)	1,2,4-Trichlorobenzene	12.725	180	225439	23.0818668	ppb		99
91)	HEXACHLORO-1,3-BUTADIENE	12.695	225	129203	25.0040609	ppb		99
92)	Naphthalene	13.012	128	500977	19.2558115	ppb		99
93)	1,2,3-Trichlorobenzene	13.176	180	178898	19.7461365	ppb		98
94)	1-Methylnaphthalene	13.945	142	202708	13.9383820	ppb		100
95)	2-Methylnaphthalene	14.097	142	165200	13.7568599	ppb		98
98)	Bromoethane	3.258	108	2684	0.2750639	ppb		95

Data Path : C:\msdchem\1\data\051316\
Data File : 0513 35.D
Acq On : 13 May 2016 9:44 pm
Operator : 605
Sample : ICV VMS 25 ppb
Misc : soil
ALS Vial : 35 Sample Multiplier: 1
InstName : VOCMS26

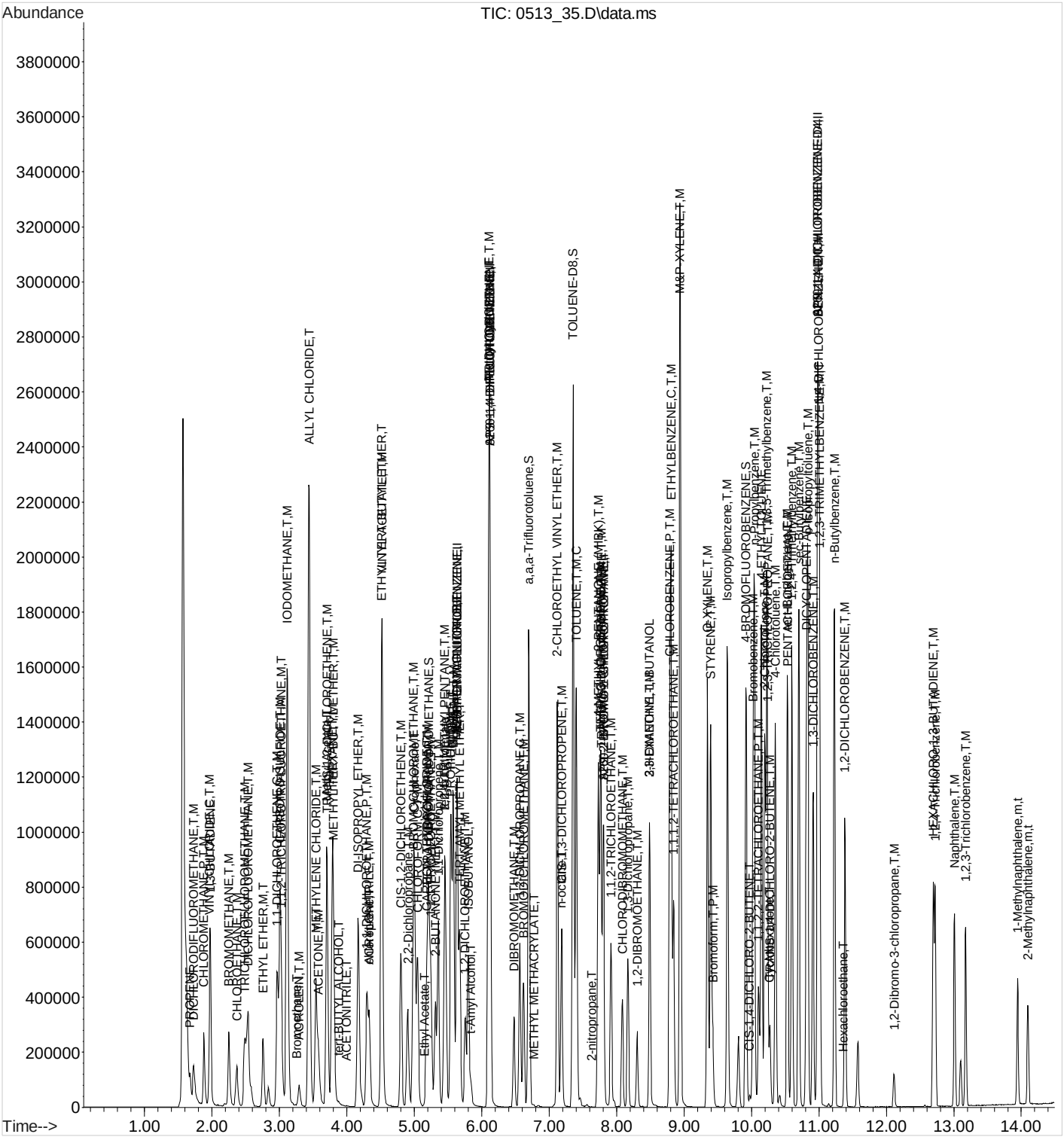
Quant Time: May 13 22:24:59 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 11:51:41 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
100) Methyl Acetate	3.703	43	555137	112.5967958 ppb	#	98
101) ACETONITRILE	3.995	41	898	1.0676860 ppb	#	1
102) ALLYL CHLORIDE	3.441	76	786109	142.1771673 ppb		92
103) tert-BUTYL ALCOHOL	3.879	59	13127	11.8112971 ppb	#	63
104) chloroprene	4.331	53	297023	19.5095588 ppb	#	19
105) ETHYL TERT-BUTYL ETHER	4.513	59	612539	22.3219220 ppb		97
106) PROPIONITRILE	5.538	54	3826	3.5183366 ppb	#	1
107) Ethyl Acetate	5.148	43	6743	0.8882929 ppb	#	81
108) METHACRYLONITRILE	5.629	67	2119	0.6104899 ppb	#	5
109) Cyclohexane	5.001	56	456063	16.9226306 ppb		96
110) tert-butyl formate	5.452	59	973	0.1385463 ppb	#	1
111) ISOBUTANOL	5.800	41	206946	986.0944199 ppb	#	1
112) t-Amyl Alcohol	5.836	59	75980	103.8392190 ppb		89
113) TERT-AMYL METHYL ETHER	5.672	73	576529	18.7809786 ppb		97
116) Methyl Cyclohexane	6.105	83	519953	17.9555632 ppb		98
117) 2-nitropropane	7.629	43	744	0.3585347 ppb	#	18
118) METHYL METHACRYLATE	6.769	41	902	0.1449088 ppb	#	13
120) n-octane	7.178	85	5315	0.4777542 ppb	#	31
121) 3,3-DIMETHYL-1-BUTANOL	8.488	57	128278	139.2221168 ppb	#	43
124) CIS-1,4-DICHLORO-2-BUTENE	9.970	53	2721	1.1955339 ppb	#	50
125) Cyclohexanone	10.268	55	1016	1.6173647 ppb	#	24
126) PENTACHLOROETHANE	10.537	117	28318	5.0922411 ppb	#	17
127) Hexachloroethane	11.360	117	1599	0.2182779 ppb	#	28

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\051316\
Data File : 0513 35.D
Acq On : 13 May 2016 9:44 pm
Operator : 605
Sample : ICV VMS 25 ppb
Misc : soil
ALS Vial : 35 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: May 13 22:24:59 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 11:51:41 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\051316\
Data File : 0513 36.D
Acq On : 13 May 2016 10:04 pm
Operator : 605
Sample : LCS 1x WG872493
Misc : soil
ALS Vial : 36 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: May 13 22:25:43 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 11:51:41 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 8260-PENTAFLUOROBENZENE	5.635	168	775692	40.0000000	ppb	0.00
41) 8260-1,4-DIFLUOROBENZENE	6.123	114	1439600	40.0000000	ppb	0.00
53) 8260-2-BROMO-1-CHLOROP...	7.805	79	232363	40.0000000	ppb	0.00
84) 8260-1,4-DICHLOROBENZE...	10.982	152	534854	40.0000000	ppb	0.00
96) AP9-PENTAFLUOROBENZENE	5.635	168	775692	40.0000000	ppb	0.00
114) AP9-1,4-DIFLUOROBENZENE	6.123	114	1439600	40.0000000	ppb	0.00
122) AP9-2-BROMO-1-CHLOROPR...	7.805	79	232363	40.0000000	ppb	0.00
128) AP9-1,4-DICHLOROBENZEN...	10.982	152	534854	40.0000000	ppb	0.00
System Monitoring Compounds						
33) DIBROMOFLUOROMETHANE	5.214	111	436266	39.7389144	ppb	0.00
Spiked Amount 40.000	Range 76 - 123		Recovery = 99.35%			
46) a,a,a-Trifluorotoluene	6.696	146	728578	40.1366779	ppb	0.00
Spiked Amount 40.000	Range 87 - 117		Recovery = 100.34%			
50) TOLUENE-D8	7.354	98	1772830	39.6673855	ppb	0.00
Spiked Amount 40.000	Range 89 - 115		Recovery = 99.17%			
68) 4-BROMOFLUOROBENZENE	9.915	95	579430	37.8089802	ppb	0.00
Spiked Amount 40.000	Range 70 - 129		Recovery = 94.52%			
Target Compounds						Qvalue
3) PROPENE	1.679	41	66153	44.9038421	ppb	97
4) DICHLORODIFLUOROMETHANE	1.727	85	270182	27.5132936	ppb	98
5) CHLOROMETHANE	1.880	50	284866	22.8047201	ppb	99
6) VINYL CHLORIDE	1.965	62	292573	21.6622692	ppb	98
7) 1,3-BUTADIENE	1.977	39	169483	21.5931079	ppb	95
8) BROMOMETHANE	2.252	94	195799	21.9535215	ppb	100
9) CHLOROETHANE	2.367	64	164648	20.6585603	ppb	98
10) TRICHLOROFLUOROMETHANE	2.483	101	315297	20.0531843	ppb	99
11) DICHLOROFLUOROMETHANE	2.538	67	388575	19.6292774	ppb	98
12) ETHYL ETHER	2.752	59	151840	20.5472057	ppb	97
13) ACROLEIN	3.288	56	123207	698.2393628	ppb	94
14) 1,1-DICHLOROETHENE	2.965	61	322854	20.9759506	ppb	90
15) 1,1,2-TRICHLOROTRIFLUO...	3.026	101	232642	23.5856099	ppb	95
16) ACETONE	3.575	43	254639	98.3501072	ppb	97
17) IODOMETHANE	3.111	142	1873531	124.1163813	ppb	100
18) CARBON DISULFIDE	3.008	76	785404	23.7177563	ppb	98
19) METHYLENE CHLORIDE	3.538	84	243814	22.8242674	ppb	95
20) ACRYLONITRILE	4.331	53	285318	104.3271084	ppb	98
21) n-HEXANE	3.782	56	221996	22.5469352	ppb	87
22) TRANS-1,2-DICHLOROETHENE	3.709	96	253347	23.7180959	ppb	95
23) METHYL TERT-BUTYL ETHER	3.800	73	488608	21.5251300	ppb	96
24) 1,1-DICHLOROETHANE	4.300	63	424232	22.2548330	ppb	99
25) VINYL ACETATE	4.519	43	1751783	117.1745215	ppb	99
26) DI-ISOPROPYL ETHER	4.166	45	640851	21.9887500	ppb	96
27) 2,2-Dichloropropane	4.904	77	259888	24.3421403	ppb	96
28) CIS-1,2-DICHLOROETHENE	4.800	96	265187	23.2011104	ppb	97
29) 2-BUTANONE (MEK)	5.312	43	398400	101.4373965	ppb	96
30) BROMOCHLOROMETHANE	4.983	130	140115	23.5951338	ppb	91
31) TETRAHYDROFURAN	5.190	42	45107	18.7257348	ppb	96
32) CHLOROFORM	5.044	83	424198	22.1819850	ppb	99
34) 1,1,1-TRICHLOROETHANE	5.245	97	326738	22.9367391	ppb	98
35) CARBON TETRACHLORIDE	5.184	117	292257	22.5301177	ppb	99
36) 1,1-Dichloropropene	5.355	75	354722	22.6184018	ppb	98

Data Path : C:\msdchem\1\data\051316\
Data File : 0513 36.D
Acq On : 13 May 2016 10:04 pm
Operator : 605
Sample : LCS 1x WG872493
Misc : soil
ALS Vial : 36 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: May 13 22:25:43 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 11:51:41 2016
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
37)	2,2,4-TRIMETHYLPENTANE	5.452	57	1001421	22.8657473	ppb		98
38)	n-Heptane	5.544	43	392420	21.9665799	ppb		95
39)	BENZENE	5.580	78	989307	22.9418364	ppb		98
40)	1,2-DICHLOROETHANE	5.757	62	238171	20.4365788	ppb		97
42)	TRICHLOROETHENE	6.105	130	252372	24.0448640	ppb		99
43)	1,2-DICHLOROPROPANE	6.562	62	172467	22.9729848	ppb		99
44)	DIBROMOMETHANE	6.476	93	131089	22.7990345	ppb		99
45)	BROMODICHLOROMETHANE	6.617	83	297786	22.6842518	ppb		99
47)	2-CHLOROETHYL VINYL ETHER	7.117	63	669558	111.3223166	ppb		100
48)	CIS-1,3-DICHLOROPROPENE	7.184	75	387633	23.3908980	ppb		100
49)	4-METHYL-2-PENTANONE (...	7.726	43	761607	110.6120196	ppb		98
51)	TOLUENE	7.403	91	1068456	23.5195989	ppb		99
52)	TRANS-1,3-DICHLOROPROPENE	7.769	75	332527	20.6985013	ppb	#	98
54)	1,1,2-TRICHLOROETHANE	7.915	97	179728	23.3174668	ppb		100
55)	TETRACHLOROETHENE	7.757	164	176133	25.0574124	ppb		99
56)	1,3-Dichloropropane	8.165	76	333164	23.5186341	ppb		98
57)	2-HEXANONE	8.488	58	358849	117.4471503	ppb		94
58)	CHLORODIBROMOMETHANE	8.086	129	202679	23.9033104	ppb		100
59)	1,2-DIBROMOETHANE	8.305	107	180949	23.8553724	ppb		99
60)	CHLOROBENZENE	8.787	112	637634	24.6366718	ppb		97
61)	1,1,1,2-TETRACHLOROETHANE	8.848	133	188427	24.6754546	ppb		99
62)	ETHYLBENZENE	8.805	106	366888	25.1929412	ppb		97
63)	M&P-XYLENE	8.939	106	881575	49.3862366	ppb		100
64)	O-XYLENE	9.348	106	413833	25.3256244	ppb		98
65)	STYRENE	9.397	104	659659	25.3462249	ppb		95
66)	Bromoform	9.427	173	107733	24.6836808	ppb		99
67)	Isopropylbenzene	9.640	105	1088290	25.1249659	ppb		99
69)	Bromobenzene	10.025	77	450740	22.6282142	ppb		97
70)	1,1,2,2-TETRACHLOROETHANE	10.104	83	216993	23.1339195	ppb		99
71)	1,2,3-TRICHLOROPROPANE	10.238	110	59865	22.2366524	ppb		96
72)	TRANS-1,4-DICHLORO-2-B...	10.274	53	52412	23.1763444	ppb		98
73)	n-Propylbenzene	10.043	91	1355955	24.4515342	ppb		99
74)	4-ETHYLTOLUENE	10.146	105	1124686	24.5887497	ppb		100
75)	2-Chlorotoluene	10.195	126	241990	25.0594411	ppb		97
76)	4-Chlorotoluene	10.354	91	770775	24.0318460	ppb		98
77)	1,3,5-Trimethylbenzene	10.226	105	877642	24.6511779	ppb		99
78)	tert-Butylbenzene	10.531	119	735734	24.8143668	ppb		97
79)	1,2,4-Trimethylbenzene	10.598	105	880095	24.3483405	ppb		100
80)	sec-Butylbenzene	10.701	105	1183694	24.9334241	ppb		100
81)	1,3-DICHLOROBENZENE	10.915	146	424864	24.6391921	ppb		99
82)	p-Isopropyltoluene	10.835	119	959164	25.2483065	ppb		98
83)	DICYCLOPENTADIENE	10.811	66	1045768	23.6344803	ppb		99
85)	1,4-DICHLOROBENZENE	10.994	146	426927	24.7509220	ppb		100
86)	1,2,3-TRIMETHYLBENZENE	11.012	105	859947	24.6921713	ppb		100
87)	1,2-DICHLOROBENZENE	11.384	146	382298	24.9012781	ppb		99
88)	n-Butylbenzene	11.226	91	955316	25.9060977	ppb		99
89)	1,2-Dibromo-3-chloropr...	12.109	157	30205	21.1590429	ppb		97
90)	1,2,4-Trichlorobenzene	12.725	180	206419	21.6971259	ppb		99
91)	HEXACHLORO-1,3-BUTADIENE	12.695	225	120732	23.9867277	ppb		98
92)	Naphthalene	13.012	128	473314	18.6768680	ppb		99
93)	1,2,3-Trichlorobenzene	13.176	180	168492	19.0926668	ppb		97
94)	1-Methylnaphthalene	13.944	142	200068	14.1230912	ppb		99
95)	2-Methylnaphthalene	14.097	142	156115	13.3464131	ppb		99
98)	Bromoethane	3.264	108	2965	0.3047618	ppb		86

Data Path : C:\msdchem\1\data\051316\
Data File : 0513 36.D
Acq On : 13 May 2016 10:04 pm
Operator : 605
Sample : LCS 1x WG872493
Misc : soil
ALS Vial : 36 Sample Multiplier: 1
InstName : VOCMS26

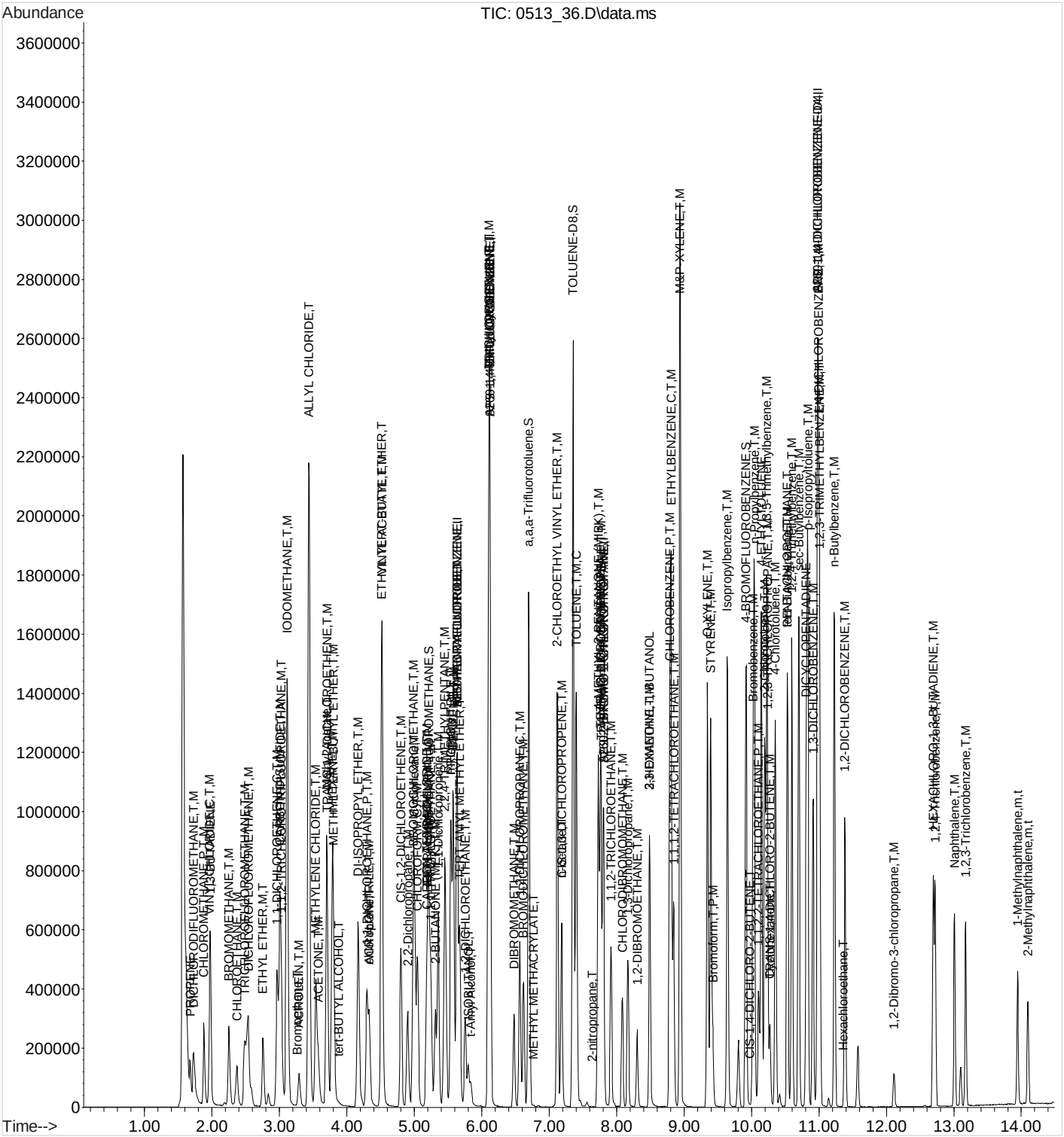
Quant Time: May 13 22:25:43 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 11:51:41 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
100) Methyl Acetate	3.703	43	548940	111.6697227 ppb	#	98
102) ALLYL CHLORIDE	3.434	76	758758	137.6369608 ppb		92
103) tert-BUTYL ALCOHOL	3.879	59	11851	10.6947788 ppb	#	90
104) chloroprene	4.331	53	285318	18.7962512 ppb	#	19
105) ETHYL TERT-BUTYL ETHER	4.513	59	595928	21.7809258 ppb		96
106) PROPIONITRILE	5.544	54	3351	3.0906622 ppb	#	1
107) Ethyl Acetate	5.190	43	10277	1.3578572 ppb	#	64
108) METHACRYLONITRILE	5.635	67	2606	0.7530202 ppb	#	5
109) Cyclohexane	5.001	56	417748	15.5468396 ppb		95
111) ISOBUTANOL	5.800	41	57441	274.5163141 ppb	#	1
112) t-Amyl Alcohol	5.836	59	58359	79.9934942 ppb		95
113) TERT-AMYL METHYL ETHER	5.672	73	548693	17.9271471 ppb		97
116) Methyl Cyclohexane	6.105	83	481909	16.7301179 ppb		97
117) 2-nitropropane	7.635	43	839	0.4064613 ppb	#	18
118) METHYL METHACRYLATE	6.763	41	846	0.1366336 ppb	#	13
120) n-octane	7.184	85	5406	0.4885132 ppb	#	27
121) 3,3-DIMETHYL-1-BUTANOL	8.488	57	116155	126.7339530 ppb	#	44
124) CIS-1,4-DICHLORO-2-BUTENE	9.976	53	1492	0.6577619 ppb	#	20
125) Cyclohexanone	10.274	55	952	1.5206098 ppb	#	24
126) PENTACHLOROETHANE	10.531	117	25501	4.6011901 ppb	#	17
127) Hexachloroethane	11.360	117	1488	0.2038125 ppb	#	54

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\051316\
Data File : 0513 36.D
Acq On : 13 May 2016 10:04 pm
Operator : 605
Sample : LCS 1x WG872493
Misc : soil
ALS Vial : 36 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: May 13 22:25:43 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 11:51:41 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\051316\
Data File : 0513 37.D
Acq On : 13 May 2016 10:24 pm
Operator : 605
Sample : LCSD 1x WG872493
Misc : soil
ALS Vial : 37 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: May 13 23:23:42 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 11:51:41 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 8260-PENTAFLUOROBENZENE	5.635	168	791072	40.0000000	ppb	0.00
41) 8260-1,4-DIFLUOROBENZENE	6.123	114	1465990	40.0000000	ppb	0.00
53) 8260-2-BROMO-1-CHLOROP...	7.806	79	234959	40.0000000	ppb	0.00
84) 8260-1,4-DICHLOROBENZE...	10.982	152	548521	40.0000000	ppb	0.00
96) AP9-PENTAFLUOROBENZENE	5.635	168	791072	40.0000000	ppb	0.00
114) AP9-1,4-DIFLUOROBENZENE	6.123	114	1465990	40.0000000	ppb	0.00
122) AP9-2-BROMO-1-CHLOROPR...	7.806	79	234959	40.0000000	ppb	0.00
128) AP9-1,4-DICHLOROBENZEN...	10.982	152	548521	40.0000000	ppb	0.00
System Monitoring Compounds						
33) DIBROMOFLUOROMETHANE	5.209	111	441951	39.4740832	ppb	0.00
Spiked Amount 40.000	Range 76 - 123		Recovery = 98.69%			
46) a,a,a-Trifluorotoluene	6.696	146	736732	39.8552680	ppb	0.00
Spiked Amount 40.000	Range 87 - 117		Recovery = 99.64%			
50) TOLUENE-D8	7.354	98	1812013	39.8142578	ppb	0.00
Spiked Amount 40.000	Range 89 - 115		Recovery = 99.54%			
68) 4-BROMOFLUOROBENZENE	9.915	95	588602	37.9831177	ppb	0.00
Spiked Amount 40.000	Range 70 - 129		Recovery = 94.96%			
Target Compounds						Qvalue
3) PROPENE	1.673	41	68093	45.3220689	ppb	97
4) DICHLORODIFLUOROMETHANE	1.721	85	276840	27.6431997	ppb	100
5) CHLOROMETHANE	1.880	50	297634	23.3636111	ppb	99
6) VINYL CHLORIDE	1.959	62	300496	21.8163303	ppb	98
7) 1,3-BUTADIENE	1.971	39	175734	21.9542247	ppb	94
8) BROMOMETHANE	2.246	94	204732	22.5088213	ppb	99
9) CHLOROETHANE	2.362	64	171491	21.0988228	ppb	98
10) TRICHLOROFLUOROMETHANE	2.483	101	332337	20.7260004	ppb	99
11) DICHLOROFLUOROMETHANE	2.532	67	400398	19.8332852	ppb	99
12) ETHYL ETHER	2.752	59	155502	20.6336401	ppb	97
13) ACROLEIN	3.294	56	128648	714.8999780	ppb	91
14) 1,1-DICHLOROETHENE	2.965	61	331267	21.1041058	ppb	89
15) 1,1,2-TRICHLOROTRIFLUO...	3.014	101	240404	23.8986835	ppb	94
16) ACETONE	3.575	43	245578	93.0063659	ppb	98
17) IODOMETHANE	3.111	142	1930759	125.4208065	ppb	100
18) CARBON DISULFIDE	3.002	76	815180	24.1383349	ppb	98
19) METHYLENE CHLORIDE	3.538	84	252854	23.2103311	ppb	94
20) ACRYLONITRILE	4.331	53	283975	101.8172603	ppb	99
21) n-HEXANE	3.782	56	226627	22.5697795	ppb	95
22) TRANS-1,2-DICHLOROETHENE	3.703	96	259233	23.7972975	ppb	95
23) METHYL TERT-BUTYL ETHER	3.800	73	537075	23.2002918	ppb	99
24) 1,1-DICHLOROETHANE	4.294	63	433044	22.2754374	ppb	99
25) VINYL ACETATE	4.520	43	1939747	127.2246514	ppb	98
26) DI-ISOPROPYL ETHER	4.166	45	676717	22.7679465	ppb	95
27) 2,2-Dichloropropane	4.904	77	281139	25.8206357	ppb	96
28) CIS-1,2-DICHLOROETHENE	4.800	96	273772	23.4865306	ppb	97
29) 2-BUTANONE (MEK)	5.312	43	409170	102.1541108	ppb	96
30) BROMOCHLOROMETHANE	4.983	130	145071	23.9547541	ppb	93
31) TETRAHYDROFURAN	5.190	42	47896	19.4969855	ppb	89
32) CHLOROFORM	5.050	83	436836	22.3987361	ppb	98
34) 1,1,1-TRICHLOROETHANE	5.245	97	350781	24.1457884	ppb	98
35) CARBON TETRACHLORIDE	5.184	117	313576	23.7036188	ppb	100
36) 1,1-Dichloropropene	5.355	75	368367	23.0317961	ppb	98

Data Path : C:\msdchem\1\data\051316\
Data File : 0513 37.D
Acq On : 13 May 2016 10:24 pm
Operator : 605
Sample : LCSD 1x WG872493
Misc : soil
ALS Vial : 37 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: May 13 23:23:42 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 11:51:41 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
37) 2,2,4-TRIMETHYLPENTANE	5.452	57	1052643	23.5680207	ppb		98
38) n-Heptane	5.544	43	412509	22.6421695	ppb		96
39) BENZENE	5.580	78	1016197	23.1072522	ppb		98
40) 1,2-DICHLOROETHANE	5.757	62	248475	20.9062102	ppb		97
42) TRICHLOROETHENE	6.099	130	260676	24.3889461	ppb		99
43) 1,2-DICHLOROPROPANE	6.562	62	179701	23.5056757	ppb		99
44) DIBROMOMETHANE	6.477	93	136791	23.3624594	ppb		99
45) BROMODICHLOROMETHANE	6.617	83	303063	22.6706479	ppb		99
47) 2-CHLOROETHYL VINYL ETHER	7.117	63	695404	113.5382109	ppb		100
48) CIS-1,3-DICHLOROPROPENE	7.184	75	400655	23.7414670	ppb		100
49) 4-METHYL-2-PENTANONE (...	7.726	43	794896	113.3685355	ppb		98
51) TOLUENE	7.403	91	1103784	23.8598766	ppb		99
52) TRANS-1,3-DICHLOROPROPENE	7.769	75	346971	21.2087950	ppb	#	98
54) 1,1,2-TRICHLOROETHANE	7.915	97	187765	24.0910183	ppb		100
55) TETRACHLOROETHENE	7.757	164	182572	25.6864774	ppb		99
56) 1,3-Dichloropropane	8.165	76	345167	24.0967342	ppb		99
57) 2-HEXANONE	8.488	58	371155	120.1326200	ppb		95
58) CHLORODIBROMOMETHANE	8.086	129	211291	24.6436588	ppb		99
59) 1,2-DIBROMOETHANE	8.306	107	187857	24.4924531	ppb		99
60) CHLOROBENZENE	8.787	112	663268	25.3439619	ppb		97
61) 1,1,1,2-TETRACHLOROETHANE	8.842	133	199426	25.8272816	ppb		100
62) ETHYLBENZENE	8.805	106	376397	25.5603272	ppb		98
63) M&P-XYLENE	8.940	106	915181	50.7024040	ppb		98
64) O-XYLENE	9.348	106	425054	25.7249204	ppb		98
65) STYRENE	9.397	104	673854	25.6055726	ppb		96
66) Bromoform	9.427	173	112085	25.3970663	ppb		99
67) Isopropylbenzene	9.641	105	1152363	26.3102538	ppb		99
69) Bromobenzene	10.019	77	465182	23.0952130	ppb		97
70) 1,1,2,2-TETRACHLOROETHANE	10.104	83	228963	24.1403573	ppb		99
71) 1,2,3-TRICHLOROPROPANE	10.238	110	62018	22.7818542	ppb		97
72) TRANS-1,4-DICHLORO-2-B...	10.275	53	53334	23.3234746	ppb		96
73) n-Propylbenzene	10.043	91	1403740	25.0335477	ppb		99
74) 4-ETHYLTOLUENE	10.147	105	1169842	25.2934026	ppb		99
75) 2-Chlorotoluene	10.195	126	252339	25.8424229	ppb		97
76) 4-Chlorotoluene	10.354	91	797236	24.5822314	ppb		99
77) 1,3,5-Trimethylbenzene	10.226	105	926601	25.7387785	ppb		99
78) tert-Butylbenzene	10.531	119	791042	26.3849821	ppb		97
79) 1,2,4-Trimethylbenzene	10.598	105	917859	25.1125418	ppb		99
80) sec-Butylbenzene	10.701	105	1275278	26.5657594	ppb		100
81) 1,3-DICHLOROBENZENE	10.915	146	441516	25.3219919	ppb		100
82) p-Isopropyltoluene	10.836	119	1015710	26.4413729	ppb		98
83) DICYCLOPENTADIENE	10.811	66	1121342	25.0624594	ppb		99
85) 1,4-DICHLOROBENZENE	10.994	146	448092	25.3306853	ppb		98
86) 1,2,3-TRIMETHYLBENZENE	11.012	105	919390	25.7412338	ppb		99
87) 1,2-DICHLOROBENZENE	11.384	146	399427	25.3687471	ppb		99
88) n-Butylbenzene	11.232	91	986406	26.0827058	ppb		100
89) 1,2-Dibromo-3-chloropr...	12.116	157	33146	22.6407232	ppb		96
90) 1,2,4-Trichlorobenzene	12.725	180	220463	22.5959311	ppb		100
91) HEXACHLORO-1,3-BUTADIENE	12.695	225	129006	24.9919710	ppb		100
92) Naphthalene	13.012	128	511563	19.6832049	ppb		100
93) 1,2,3-Trichlorobenzene	13.177	180	184988	20.4396217	ppb		98
94) 1-Methylnaphthalene	13.951	142	221665	15.2577764	ppb		99
95) 2-Methylnaphthalene	14.097	142	175581	14.6365741	ppb		100
98) Bromoethane	3.246	108	2188	0.2205243	ppb		98

Data Path : C:\msdchem\1\data\051316\
Data File : 0513 37.D
Acq On : 13 May 2016 10:24 pm
Operator : 605
Sample : LCSD 1x WG872493
Misc : soil
ALS Vial : 37 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: May 13 23:23:42 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 11:51:41 2016
Response via : Initial Calibration

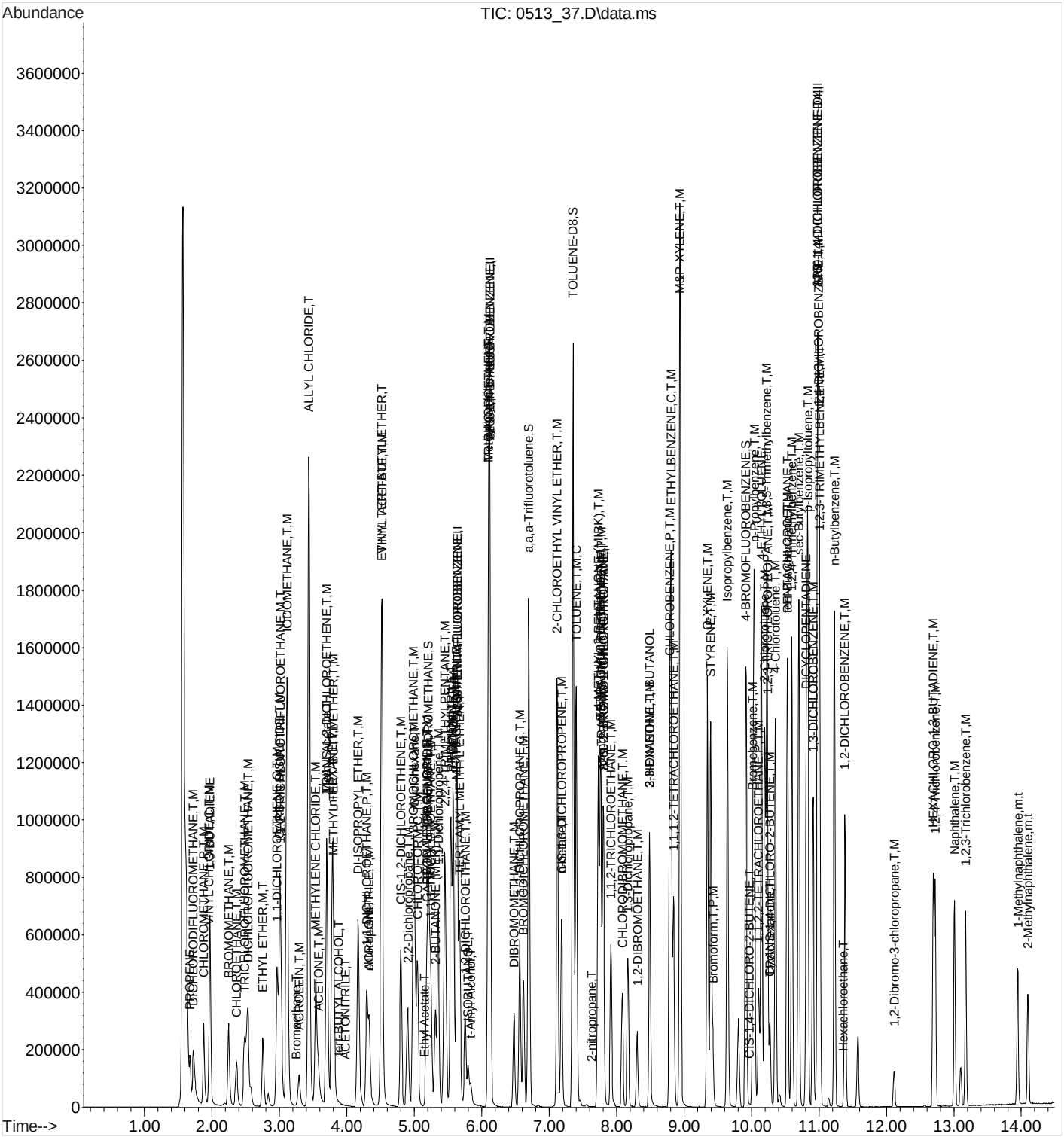
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
100) Methyl Acetate	3.703	43	562115	112.1266983	ppb	#	98
101) ACETONITRILE	3.977	41	1497	1.7504391	ppb	#	34
102) ALLYL CHLORIDE	3.435	76	779949	138.7302907	ppb		92
103) tert-BUTYL ALCOHOL	3.880	59	10484	9.2772043	ppb	#	63
104) chloroprene	4.331	53	283975	18.3440606	ppb	#	19
105) ETHYL TERT-BUTYL ETHER	4.514	59	637726	22.8554600	ppb		97
106) PROPIONITRILE	5.544	54	4046	3.6591170	ppb	#	1
107) Ethyl Acetate	5.148	43	1055	0.1366827	ppb	#	67
108) METHACRYLONITRILE	5.623	67	3639	1.0310686	ppb	#	5
109) Cyclohexane	5.001	56	448560	16.3689786	ppb		95
111) ISOBUTANOL	5.794	41	59496	278.8092865	ppb	#	1
112) t-Amyl Alcohol	5.836	59	61336	82.4395430	ppb		89
113) TERT-AMYL METHYL ETHER	5.672	73	592930	18.9958393	ppb		97
116) Methyl Cyclohexane	6.099	83	518799	17.6865825	ppb		97
117) 2-nitropropane	7.629	43	1057	0.5028553	ppb	#	18
120) n-octane	7.184	85	5417	0.4806953	ppb	#	25
121) 3,3-DIMETHYL-1-BUTANOL	8.488	57	119415	127.9454321	ppb	#	45
124) CIS-1,4-DICHLORO-2-BUTENE	9.970	53	1533	0.6683700	ppb	#	21
125) Cyclohexanone	10.275	55	865	1.3663811	ppb	#	24
126) PENTACHLOROETHANE	10.531	117	27206	4.8545899	ppb	#	17
127) Hexachloroethane	11.360	117	1686	0.2283812	ppb	#	36

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\051316\
Data File : 0513 37.D
Acq On : 13 May 2016 10:24 pm
Operator : 605
Sample : LCSD 1x WG872493
Misc : soil
ALS Vial : 37 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: May 13 23:23:42 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 11:51:41 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\051316\
Data File : 0513 42.D
Acq On : 14 May 2016 12:04 am
Operator : 605
Sample : BLANK
Misc : water
ALS Vial : 42 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Sep 21 15:57:35 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 11:51:41 2016
Response via : Initial Calibration

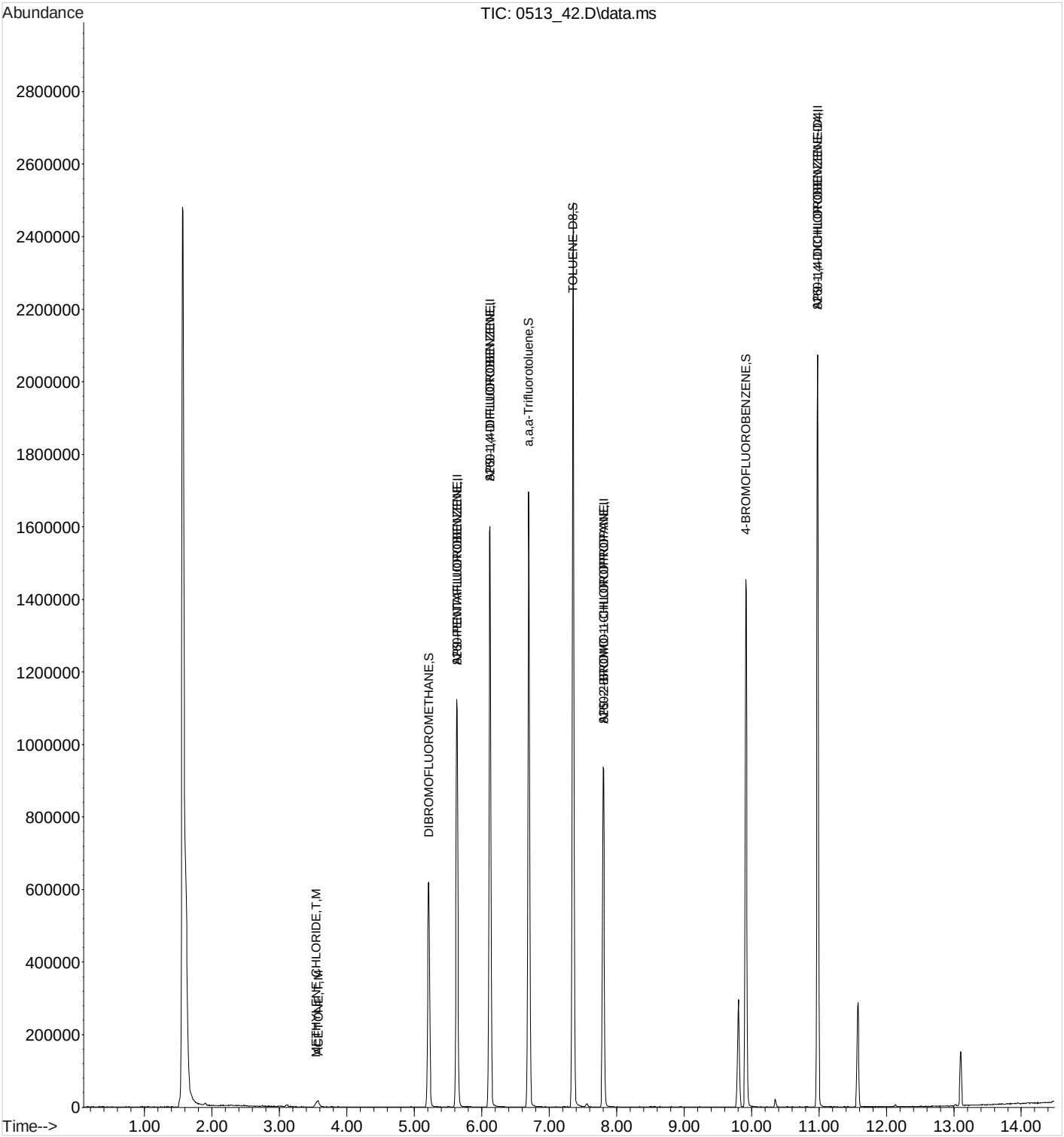
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 8260-PENTAFLUOROBENZENE	5.635	168	735911	40.0000000	ppb	0.00
41) 8260-1,4-DIFLUOROBENZENE	6.123	114	1378314	40.0000000	ppb	0.00
53) 8260-2-BROMO-1-CHLOROP...	7.806	79	216903	40.0000000	ppb	0.00
84) 8260-1,4-DICHLOROBENZE...	10.982	152	519471	40.0000000	ppb	0.00
96) AP9-PENTAFLUOROBENZENE	5.635	168	735911	40.0000000	ppb	0.00
114) AP9-1,4-DIFLUOROBENZENE	6.123	114	1378314	40.0000000	ppb	0.00
122) AP9-2-BROMO-1-CHLOROPR...	7.806	79	216903	40.0000000	ppb	0.00
128) AP9-1,4-DICHLOROBENZEN...	10.982	152	519471	40.0000000	ppb	0.00
System Monitoring Compounds						
33) DIBROMOFLUOROMETHANE	5.215	111	421017	40.4229758	ppb	0.00
Spiked Amount 40.000	Range 76 - 123		Recovery = 101.06%			
46) a,a,a-Trifluorotoluene	6.696	146	704814	40.5539874	ppb	0.00
Spiked Amount 40.000	Range 87 - 117		Recovery = 101.38%			
50) TOLUENE-D8	7.354	98	1710224	39.9680677	ppb	0.00
Spiked Amount 40.000	Range 89 - 115		Recovery = 99.92%			
68) 4-BROMOFLUOROBENZENE	9.915	95	560265	39.1641671	ppb	0.00
Spiked Amount 40.000	Range 70 - 129		Recovery = 97.91%			
Target Compounds						Qvalue
16) ACETONE	3.575	43	27555	11.2179720	ppb	99
19) METHYLENE CHLORIDE	3.544	84	5950	0.5871096	ppb	96

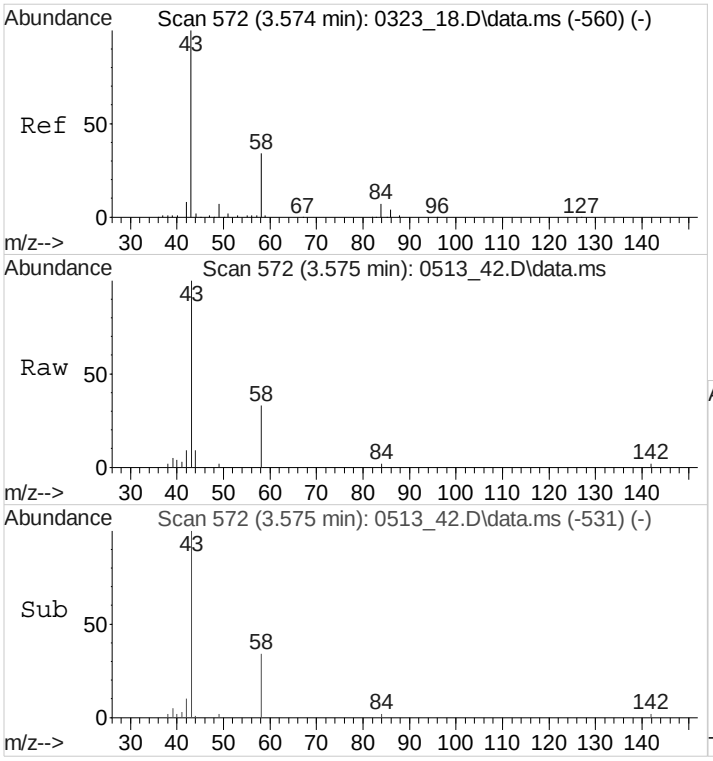
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\051316\
Data File : 0513 42.D
Acq On : 14 May 2016 12:04 am
Operator : 605
Sample : BLANK
Misc : water
ALS Vial : 42 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Sep 21 15:57:35 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 11:51:41 2016
Response via : Initial Calibration

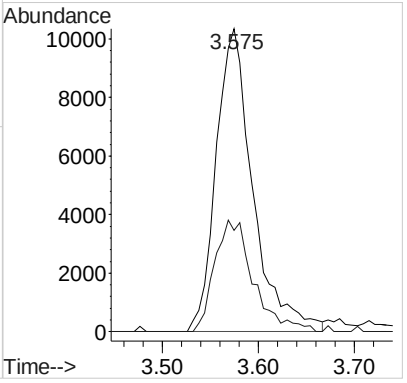


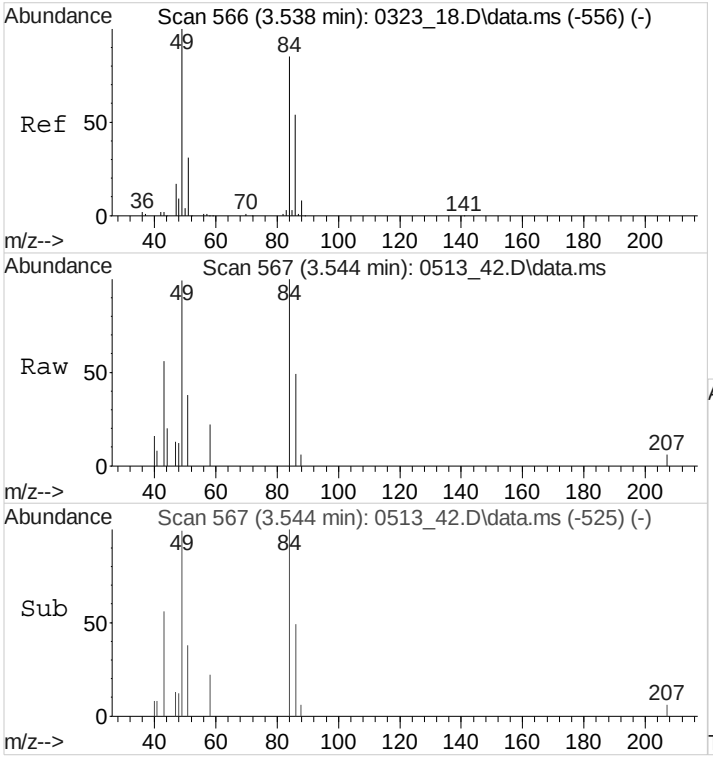


#16
ACETONE
Concen: 11.2179720 ppb
RT: 3.575 min Scan# 572
Delta R.T. 0.001 min
Lab File: 0513 42.D
Acq: 14 May 2016 12:04 am

Tgt Ion: 43 Resp: 27555

Ion	Ratio	Lower	Upper
43	100		
58	38.7	30.6	46.0

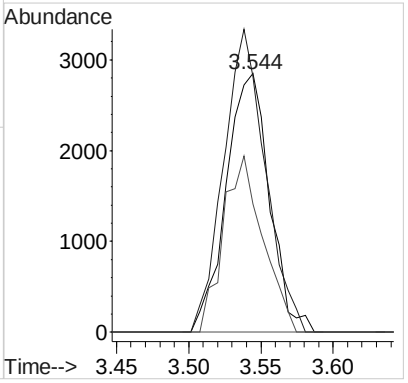




#19
METHYLENE CHLORIDE
Concen: 0.5871096 ppb
RT: 3.544 min Scan# 567
Delta R.T. 0.006 min
Lab File: 0513_42.D
Acq: 14 May 2016 12:04 am

Tgt Ion: 84 Resp: 5950

Ion	Ratio	Lower	Upper
84	100		
49	113.0	95.1	142.7
86	62.1	51.5	77.3



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\051316\
Data File : 0513 44.D
Acq On : 14 May 2016 12:44 am
Operator : 605
Sample : MS 5x WG872493 L835355-02
Misc : soil
ALS Vial : 44 Sample Multiplier: 5
InstName : VOCMS26

Quant Time: May 15 06:46:07 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 11:51:41 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 8260-PENTAFLUOROBENZENE	5.635	168	672600	40.0000000	ppb	0.00
41) 8260-1,4-DIFLUOROBENZENE	6.123	114	1245428	40.0000000	ppb	0.00
53) 8260-2-BROMO-1-CHLOROP...	7.806	79	195081	40.0000000	ppb	0.00
84) 8260-1,4-DICHLOROBENZE...	10.982	152	397884	40.0000000	ppb	0.00
96) AP9-PENTAFLUOROBENZENE	5.635	168	672600	40.0000000	ppb	0.00
114) AP9-1,4-DIFLUOROBENZENE	6.123	114	1245428	40.0000000	ppb	0.00
122) AP9-2-BROMO-1-CHLOROPR...	7.806	79	195081	40.0000000	ppb	0.00
128) AP9-1,4-DICHLOROBENZEN...	10.982	152	397884	40.0000000	ppb	0.00
System Monitoring Compounds						
33) DIBROMOFLUOROMETHANE	5.215	111	374807	39.3735682	ppb	0.00
Spiked Amount 40.000	Range 76 - 123		Recovery = 98.43%			
46) a,a,a-Trifluorotoluene	6.696	146	620032	39.4823220	ppb	0.00
Spiked Amount 40.000	Range 87 - 117		Recovery = 98.71%			
50) TOLUENE-D8	7.354	98	1539279	39.8113626	ppb	0.00
Spiked Amount 40.000	Range 89 - 115		Recovery = 99.53%			
68) 4-BROMOFLUOROBENZENE	9.915	95	464262	36.0835390	ppb	0.00
Spiked Amount 40.000	Range 70 - 129		Recovery = 90.21%			
Target Compounds						Qvalue
3) PROPENE	1.673	41	24005	93.9589430	ppb	96
4) DICHLORODIFLUOROMETHANE	1.721	85	77760	45.6609430	ppb	99
5) CHLOROMETHANE	1.874	50	172930	79.8283078	ppb	98
6) VINYL CHLORIDE	1.959	62	137107	58.5371786	ppb	100
7) 1,3-BUTADIENE	1.971	39	54422	39.9821334	ppb	93
8) BROMOMETHANE	2.246	94	107230	69.3286087	ppb	98
9) CHLOROETHANE	2.361	64	79776	57.7189343	ppb	99
10) TRICHLOROFLUOROMETHANE	2.477	101	75328	27.6262793	ppb	98
11) DICHLOROFLUOROMETHANE	2.532	67	189677	55.2518194	ppb	99
12) ETHYL ETHER	2.752	59	79890	62.3392321	ppb	97
13) ACROLEIN	3.288	56	63499	2075.0964386	ppb	96
14) 1,1-DICHLOROETHENE	2.965	61	94868	35.5416577	ppb	90
15) 1,1,2-TRICHLOROTRIFLUO...	3.014	101	32191	18.8189726	ppb	97
16) ACETONE	3.575	43	137300	305.7897392	ppb	98
17) IODOMETHANE	3.111	142	774455	295.8467913	ppb	100
18) CARBON DISULFIDE	3.002	76	200113	34.8464266	ppb	98
19) METHYLENE CHLORIDE	3.538	84	127656	68.9099434	ppb	94
20) ACRYLONITRILE	4.331	53	181260	382.1839358	ppb	97
21) n-HEXANE	3.788	56	18500	10.8346915	ppb #	30
22) TRANS-1,2-DICHLOROETHENE	3.703	96	83285	44.9607242	ppb	93
23) METHYL TERT-BUTYL ETHER	3.800	73	240839	61.1807054	ppb #	29
24) 1,1-DICHLOROETHANE	4.294	63	158013	47.7987114	ppb	99
25) VINYL ACETATE	4.520	43	287936	111.0583718	ppb	100
26) DI-ISOPROPYL ETHER	4.166	45	270087	53.4379280	ppb	96
27) 2,2-Dichloropropane	4.904	77	76918	41.5434894	ppb	97
28) CIS-1,2-DICHLOROETHENE	4.800	96	99765	50.3311903	ppb	97
29) 2-BUTANONE (MEK)	5.312	43	209854	308.1048038	ppb	99
30) BROMOCHLOROMETHANE	4.983	130	63412	61.5760345	ppb	94
31) TETRAHYDROFURAN	5.190	42	25727	61.5866419	ppb	94
32) CHLOROFORM	5.044	83	144475	43.5639196	ppb	98
34) 1,1,1-TRICHLOROETHANE	5.245	97	74892	30.3158613	ppb	99
35) CARBON TETRACHLORIDE	5.184	117	48948	21.7588503	ppb	98
36) 1,1-Dichloropropene	5.355	75	67872	24.9555353	ppb	98

Data Path : C:\msdchem\1\data\051316\
Data File : 0513 44.D
Acq On : 14 May 2016 12:44 am
Operator : 605
Sample : MS 5x WG872493 L835355-02
Misc : soil
ALS Vial : 44 Sample Multiplier: 5
InstName : VOCMS26

Quant Time: May 15 06:46:07 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 11:51:41 2016
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
37)	2,2,4-TRIMETHYLPENTANE	5.452	57	17394	2.2901853	ppb		95
38)	n-Heptane	5.544	43	8969	2.8950615	ppb		86
39)	BENZENE	5.574	78	276837	37.0189149	ppb		96
40)	1,2-DICHLOROETHANE	5.757	62	103474	51.1980011	ppb		96
42)	TRICHLOROETHENE	6.099	130	53050	29.2118970	ppb		98
43)	1,2-DICHLOROPROPANE	6.562	62	52630	40.5170673	ppb		99
44)	DIBROMOMETHANE	6.477	93	52110	52.3798795	ppb		98
45)	BROMODICHLOROMETHANE	6.617	83	89142	39.2460339	ppb		100
47)	2-CHLOROETHYL VINYL ETHER	7.123	63	279435	268.5146902	ppb		99
48)	CIS-1,3-DICHLOROPROPENE	7.184	75	117829	41.0933514	ppb		100
49)	4-METHYL-2-PENTANONE (...	7.726	43	367509	308.4839625	ppb		99
51)	TOLUENE	7.403	91	202462	25.7578737	ppb		99
52)	TRANS-1,3-DICHLOROPROPENE	7.769	75	106364	38.2648367	ppb	#	98
54)	1,1,2-TRICHLOROETHANE	7.915	97	60345	46.6260821	ppb		98
55)	TETRACHLOROETHENE	7.757	164	23988	20.3241099	ppb		99
56)	1,3-Dichloropropane	8.165	76	105518	44.3611285	ppb		99
57)	2-HEXANONE	8.488	58	147636	287.7696706	ppb		95
58)	CHLORODIBROMOMETHANE	8.086	129	53290	37.4297585	ppb		97
59)	1,2-DIBROMOETHANE	8.305	107	56045	44.0036693	ppb		98
60)	CHLOROBENZENE	8.787	112	106106	24.4158878	ppb		95
61)	1,1,1,2-TETRACHLOROETHANE	8.848	133	37382	29.1545652	ppb	#	98
62)	ETHYLBENZENE	8.811	106	42106	17.2191361	ppb		94
63)	M&P-XYLENE	8.939	106	95267	31.7841910	ppb		95
64)	O-XYLENE	9.348	106	46308	16.8776926	ppb		95
65)	STYRENE	9.397	104	83928	19.2053697	ppb		97
66)	Bromoform	9.427	173	25391	34.6467880	ppb		98
67)	Isopropylbenzene	9.641	105	71585	9.8424876	ppb		99
69)	Bromobenzene	10.025	77	58352	17.4462436	ppb		95
70)	1,1,2,2-TETRACHLOROETHANE	10.104	83	55681	35.3535092	ppb		99
71)	1,2,3-TRICHLOROPROPANE	10.238	110	17144	37.9254363	ppb		93
72)	TRANS-1,4-DICHLORO-2-B...	10.275	53	14897	39.2315102	ppb		96
73)	n-Propylbenzene	10.043	91	75751	8.1352558	ppb		98
74)	4-ETHYLTOLUENE	10.147	105	64593	8.4103219	ppb		98
75)	2-Chlorotoluene	10.201	126	19272	11.8856450	ppb	#	96
76)	4-Chlorotoluene	10.354	91	66241	12.3000931	ppb		98
77)	1,3,5-Trimethylbenzene	10.226	105	45634	7.6336250	ppb		98
78)	tert-Butylbenzene	10.531	119	30674	6.1613345	ppb		98
79)	1,2,4-Trimethylbenzene	10.598	105	48897	8.0564559	ppb		98
80)	sec-Butylbenzene	10.701	105	40722	5.1085022	ppb		97
81)	1,3-DICHLOROBENZENE	10.915	146	31484	10.8739777	ppb		97
82)	p-Isopropyltoluene	10.835	119	30550	4.7893062	ppb		98
83)	DICYCLOPENTADIENE	10.811	66	41918	5.6420024	ppb		97
85)	1,4-DICHLOROBENZENE	10.994	146	34674	13.5110929	ppb	#	1
86)	1,2,3-TRIMETHYLBENZENE	11.012	105	52935	10.2159625	ppb		99
87)	1,2-DICHLOROBENZENE	11.390	146	32081	14.0448235	ppb		97
88)	n-Butylbenzene	11.232	91	25645	4.6741907	ppb		98
89)	1,2-Dibromo-3-chloropr...	12.110	157	6114	28.7866675	ppb		92
90)	1,2,4-Trichlorobenzene	12.725	180	6264	4.4254054	ppb		89
91)	HEXACHLORO-1,3-BUTADIENE	12.695	225	1117	1.4915938	ppb		94
92)	Naphthalene	13.012	128	28724	7.6181302	ppb		99
93)	1,2,3-Trichlorobenzene	13.176	180	4920	3.7471509	ppb		98
94)	1-Methylnaphthalene	13.951	142	4164	1.9756574	ppb	#	87
95)	2-Methylnaphthalene	14.097	142	3236	1.8594188	ppb	#	90
98)	Bromoethane	3.264	108	1291	0.7651816	ppb	#	80

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\051316\
Data File : 0513 44.D
Acq On : 14 May 2016 12:44 am
Operator : 605
Sample : MS 5x WG872493 L835355-02
Misc : soil
ALS Vial : 44 Sample Multiplier: 5
InstName : VOCMS26

Quant Time: May 15 06:46:07 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 11:51:41 2016
Response via : Initial Calibration

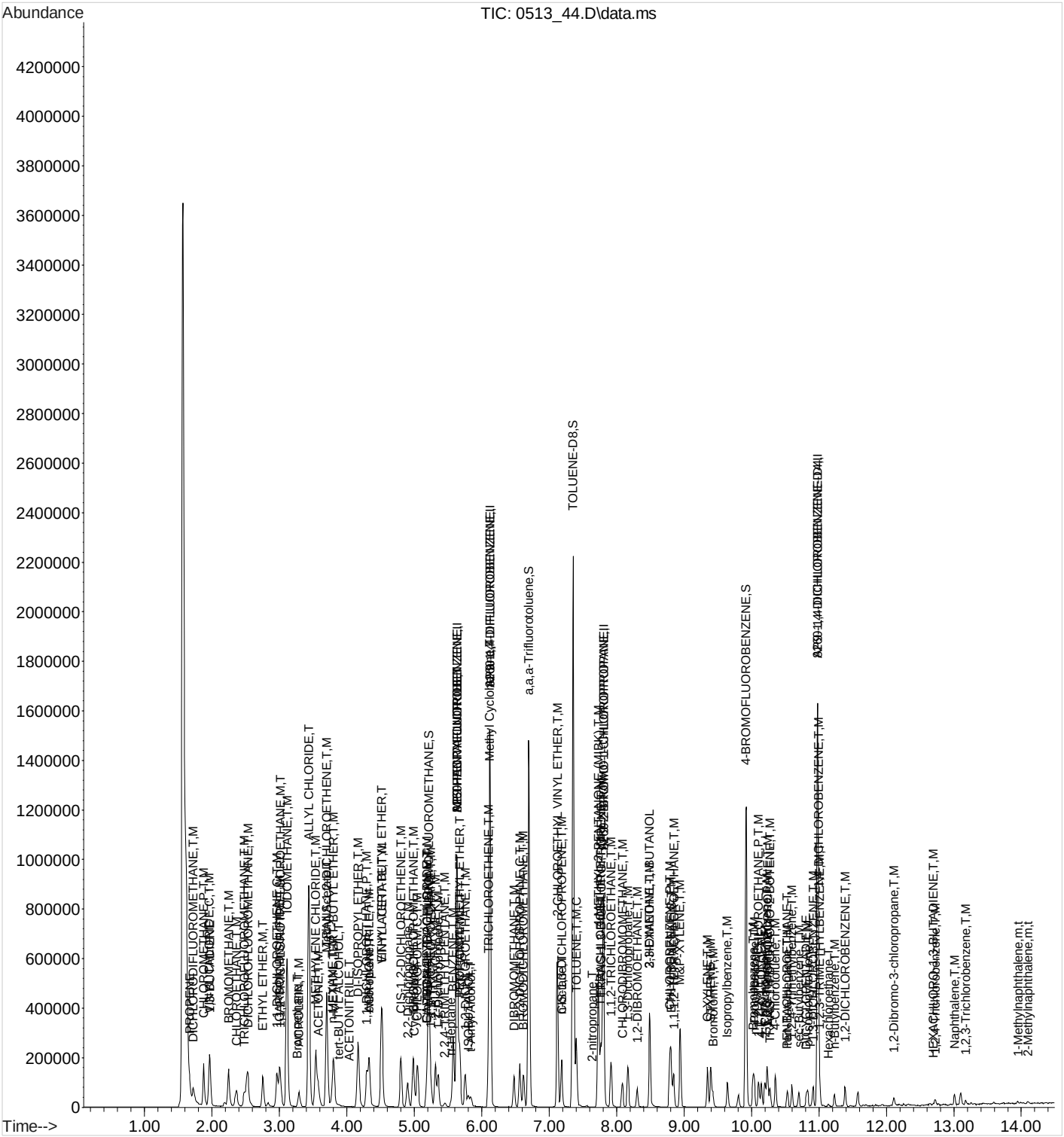
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
100) Methyl Acetate	3.697	43	410310	481.3102553	ppb	#	99
101) ACETONITRILE	4.032	41	664	4.5658584	ppb	#	34
102) ALLYL CHLORIDE	3.434	76	306013	320.0914851	ppb		91
103) tert-BUTYL ALCOHOL	3.879	59	5956	30.9937376	ppb	#	63
104) chloroprene	4.331	53	181260	68.8567466	ppb	#	19
105) ETHYL TERT-BUTYL ETHER	4.513	59	253740	53.4778493	ppb		98
106) PROPIONITRILE	5.672	54	880	4.6801767	ppb	#	1
107) Ethyl Acetate	5.184	43	6182	4.7099816	ppb	#	79
108) METHACRYLONITRILE	5.635	67	2118	3.5290727	ppb	#	5
109) Cyclohexane	5.001	56	27572	5.9169577	ppb	#	87
111) ISOBUTANOL	5.800	41	20989	578.4160941	ppb	#	1
112) t-Amyl Alcohol	5.836	59	28402	224.4906218	ppb		100
113) TERT-AMYL METHYL ETHER	5.672	73	219408	41.3367830	ppb	#	95
116) Methyl Cyclohexane	6.111	83	28679	5.7542826	ppb	#	77
117) 2-nitropropane	7.635	43	698	1.9543659	ppb	#	18
120) n-octane	7.184	85	1475	0.7703454	ppb	#	12
121) 3,3-DIMETHYL-1-BUTANOL	8.488	57	47478	299.3923541	ppb	#	43
126) PENTACHLOROETHANE	10.525	117	1408	1.5129955	ppb	#	17
127) Hexachloroethane	11.140	117	1229	1.0025400	ppb	#	12

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\051316\
Data File : 0513 44.D
Acq On : 14 May 2016 12:44 am
Operator : 605
Sample : MS 5x WG872493 L835355-02
Misc : soil
ALS Vial : 44 Sample Multiplier: 5
InstName : VOCMS26

Quant Time: May 15 06:46:07 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 11:51:41 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\051316\
Data File : 0513 45.D
Acq On : 14 May 2016 1:04 am
Operator : 605
Sample : MSD 5x WG872493 L835355-02
Misc : soil
ALS Vial : 45 Sample Multiplier: 5
InstName : VOCMS26

Quant Time: May 15 06:46:22 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 11:51:41 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 8260-PENTAFLUOROBENZENE	5.635	168	685482	40.0000000	ppb		0.00
41) 8260-1,4-DIFLUOROBENZENE	6.123	114	1269307	40.0000000	ppb		0.00
53) 8260-2-BROMO-1-CHLOROP...	7.806	79	201765	40.0000000	ppb		0.00
84) 8260-1,4-DICHLOROBENZE...	10.982	152	423505	40.0000000	ppb		0.00
96) AP9-PENTAFLUOROBENZENE	5.635	168	685482	40.0000000	ppb		0.00
114) AP9-1,4-DIFLUOROBENZENE	6.123	114	1269307	40.0000000	ppb		0.00
122) AP9-2-BROMO-1-CHLOROPR...	7.806	79	201765	40.0000000	ppb		0.00
128) AP9-1,4-DICHLOROBENZEN...	10.982	152	423505	40.0000000	ppb		0.00
System Monitoring Compounds							
33) DIBROMOFLUOROMETHANE	5.215	111	383937	39.5747204	ppb		0.00
Spiked Amount 40.000	Range 76 - 123		Recovery = 98.94%				
46) a,a,a-Trifluorotoluene	6.696	146	639098	39.9307982	ppb		0.00
Spiked Amount 40.000	Range 87 - 117		Recovery = 99.83%				
50) TOLUENE-D8	7.355	98	1568228	39.7970473	ppb		0.00
Spiked Amount 40.000	Range 89 - 115		Recovery = 99.49%				
68) 4-BROMOFLUOROBENZENE	9.915	95	482123	36.2303876	ppb		0.00
Spiked Amount 40.000	Range 70 - 129		Recovery = 90.58%				
Target Compounds							Qvalue
3) PROPENE	1.673	41	36991	142.0670270	ppb		99
4) DICHLORODIFLUOROMETHANE	1.728	85	112143	64.6132523	ppb		98
5) CHLOROMETHANE	1.880	50	235319	106.5870356	ppb		98
6) VINYL CHLORIDE	1.959	62	207308	86.8458415	ppb		99
7) 1,3-BUTADIENE	1.971	39	83568	60.2410152	ppb		93
8) BROMOMETHANE	2.246	94	158827	100.7584132	ppb		99
9) CHLOROETHANE	2.362	64	122887	87.2394255	ppb		98
10) TRICHLOROFLUOROMETHANE	2.484	101	96413	34.6946384	ppb		98
11) DICHLOROFLUOROMETHANE	2.532	67	291836	83.4125856	ppb		99
12) ETHYL ETHER	2.758	59	120425	92.2033052	ppb		96
13) ACROLEIN	3.288	56	94072	3016.4253659	ppb		92
14) 1,1-DICHLOROETHENE	2.965	61	134591	49.4760207	ppb		89
15) 1,1,2-TRICHLOROTRIFLUO...	3.020	101	35680	20.4666657	ppb		92
16) ACETONE	3.575	43	187375	409.4725801	ppb		99
17) IODOMETHANE	3.111	142	1227130	459.9621091	ppb		99
18) CARBON DISULFIDE	3.008	76	278247	47.5416494	ppb		98
19) METHYLENE CHLORIDE	3.544	84	190562	100.9340666	ppb		95
20) ACRYLONITRILE	4.331	53	241613	499.8636528	ppb		98
21) n-HEXANE	3.794	56	23492	13.4997467	ppb	#	1
22) TRANS-1,2-DICHLOROETHENE	3.703	96	126627	67.0739115	ppb		95
23) METHYL TERT-BUTYL ETHER	3.800	73	374872	93.4397086	ppb	#	26
24) 1,1-DICHLOROETHANE	4.294	63	249317	74.0007412	ppb		99
25) VINYL ACETATE	4.520	43	463064	175.2496510	ppb		99
26) DI-ISOPROPYL ETHER	4.166	45	418420	81.2305086	ppb		97
27) 2,2-Dichloropropane	4.904	77	101110	53.5833555	ppb		95
28) CIS-1,2-DICHLOROETHENE	4.800	96	157672	78.0502644	ppb		97
29) 2-BUTANONE (MEK)	5.312	43	305218	439.6956489	ppb		99
30) BROMOCHLOROMETHANE	4.983	130	98944	94.2736968	ppb		93
31) TETRAHYDROFURAN	5.190	42	35746	83.9625532	ppb		96
32) CHLOROFORM	5.050	83	225233	66.6387856	ppb		97
34) 1,1,1-TRICHLOROETHANE	5.245	97	92036	36.5555250	ppb		98
35) CARBON TETRACHLORIDE	5.184	117	57456	25.0609303	ppb		96
36) 1,1-Dichloropropene	5.355	75	79183	28.5672873	ppb		98

Data Path : C:\msdchem\1\data\051316\
Data File : 0513 45.D
Acq On : 14 May 2016 1:04 am
Operator : 605
Sample : MSD 5x WG872493 L835355-02
Misc : soil
ALS Vial : 45 Sample Multiplier: 5
InstName : VOCMS26

Quant Time: May 15 06:46:22 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 11:51:41 2016
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
37)	2,2,4-TRIMETHYLPENTANE	5.452	57	19986	2.5820096	ppb	#	90
38)	n-Heptane	5.550	43	8983	2.8450898	ppb		91
39)	BENZENE	5.581	78	393456	51.6245798	ppb		95
40)	1,2-DICHLOROETHANE	5.757	62	165968	80.5762285	ppb		97
42)	TRICHLOROETHENE	6.099	130	66267	35.8033474	ppb		96
43)	1,2-DICHLOROPROPANE	6.568	62	82304	62.1695217	ppb		98
44)	DIBROMOMETHANE	6.477	93	82908	81.7695883	ppb		99
45)	BROMODICHLOROMETHANE	6.623	83	138016	59.6203865	ppb		99
47)	2-CHLOROETHYL VINYL ETHER	7.123	63	454971	428.9660429	ppb		100
48)	CIS-1,3-DICHLOROPROPENE	7.184	75	177439	60.7184115	ppb		98
49)	4-METHYL-2-PENTANONE (...	7.726	43	563082	463.7545745	ppb		98
51)	TOLUENE	7.403	91	243346	30.3768438	ppb		99
52)	TRANS-1,3-DICHLOROPROPENE	7.769	75	161707	57.0802640	ppb	#	98
54)	1,1,2-TRICHLOROETHANE	7.915	97	92246	68.9135015	ppb		98
55)	TETRACHLOROETHENE	7.757	164	23872	19.5557934	ppb		98
56)	1,3-Dichloropropane	8.165	76	164230	66.7571318	ppb		99
57)	2-HEXANONE	8.489	58	228801	431.2010495	ppb		94
58)	CHLORODIBROMOMETHANE	8.086	129	78204	53.1091576	ppb		99
59)	1,2-DIBROMOETHANE	8.306	107	82009	62.2562097	ppb		97
60)	CHLOROBENZENE	8.787	112	126783	28.2073796	ppb		93
61)	1,1,1,2-TETRACHLOROETHANE	8.842	133	43977	33.1618520	ppb	#	99
62)	ETHYLBENZENE	8.812	106	45300	17.9116137	ppb		100
63)	M&P-XYLENE	8.946	106	103628	33.4283492	ppb		100
64)	O-XYLENE	9.348	106	51614	18.1883670	ppb		97
65)	STYRENE	9.397	104	96937	21.4473932	ppb		97
66)	Bromoform	9.427	173	33755	44.5338690	ppb		100
67)	Isopropylbenzene	9.641	105	78202	10.3960857	ppb		99
69)	Bromobenzene	10.019	77	64883	18.7562603	ppb		92
70)	1,1,2,2-TETRACHLOROETHANE	10.104	83	75062	46.0802446	ppb		98
71)	1,2,3-TRICHLOROPROPANE	10.238	110	24565	52.5417262	ppb		95
72)	TRANS-1,4-DICHLORO-2-B...	10.275	53	20950	53.3444667	ppb		94
73)	n-Propylbenzene	10.043	91	82765	8.5940664	ppb		98
74)	4-ETHYLTOLUENE	10.147	105	67663	8.5181945	ppb		98
75)	2-Chlorotoluene	10.195	126	21094	12.5783609	ppb	#	93
76)	4-Chlorotoluene	10.354	91	73130	13.1294409	ppb		99
77)	1,3,5-Trimethylbenzene	10.226	105	49337	7.9796559	ppb		99
78)	tert-Butylbenzene	10.531	119	32989	6.4068222	ppb		97
79)	1,2,4-Trimethylbenzene	10.598	105	53013	8.4452662	ppb		100
80)	sec-Butylbenzene	10.701	105	40658	4.9315068	ppb		99
81)	1,3-DICHLOROBENZENE	10.915	146	34499	11.5205757	ppb		99
82)	p-Isopropyltoluene	10.836	119	32164	4.8752915	ppb		98
83)	DICYCLOPENTADIENE	10.811	66	43847	5.7061310	ppb		99
85)	1,4-DICHLOROBENZENE	10.994	146	38278	14.0130834	ppb	#	1
86)	1,2,3-TRIMETHYLBENZENE	11.012	105	57028	10.3400454	ppb		99
87)	1,2-DICHLOROBENZENE	11.384	146	33742	13.8783279	ppb		98
88)	n-Butylbenzene	11.232	91	26743	4.5794338	ppb		96
89)	1,2-Dibromo-3-chloropr...	12.110	157	7475	33.0654995	ppb		94
90)	1,2,4-Trichlorobenzene	12.725	180	6286	4.1722817	ppb		93
91)	HEXACHLORO-1,3-BUTADIENE	12.695	225	1373	1.7225263	ppb		91
92)	Naphthalene	13.012	128	33685	8.3934008	ppb		98
93)	1,2,3-Trichlorobenzene	13.177	180	5539	3.9633770	ppb		93
94)	1-Methylnaphthalene	13.945	142	4766	2.1244811	ppb	#	91
95)	2-Methylnaphthalene	14.103	142	3613	1.9504490	ppb	#	89
98)	Bromoethane	3.258	108	1929	1.1218410	ppb		100

Data Path : C:\msdchem\1\data\051316\
Data File : 0513 45.D
Acq On : 14 May 2016 1:04 am
Operator : 605
Sample : MSD 5x WG872493 L835355-02
Misc : soil
ALS Vial : 45 Sample Multiplier: 5
InstName : VOCMS26

Quant Time: May 15 06:46:22 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 11:51:41 2016
Response via : Initial Calibration

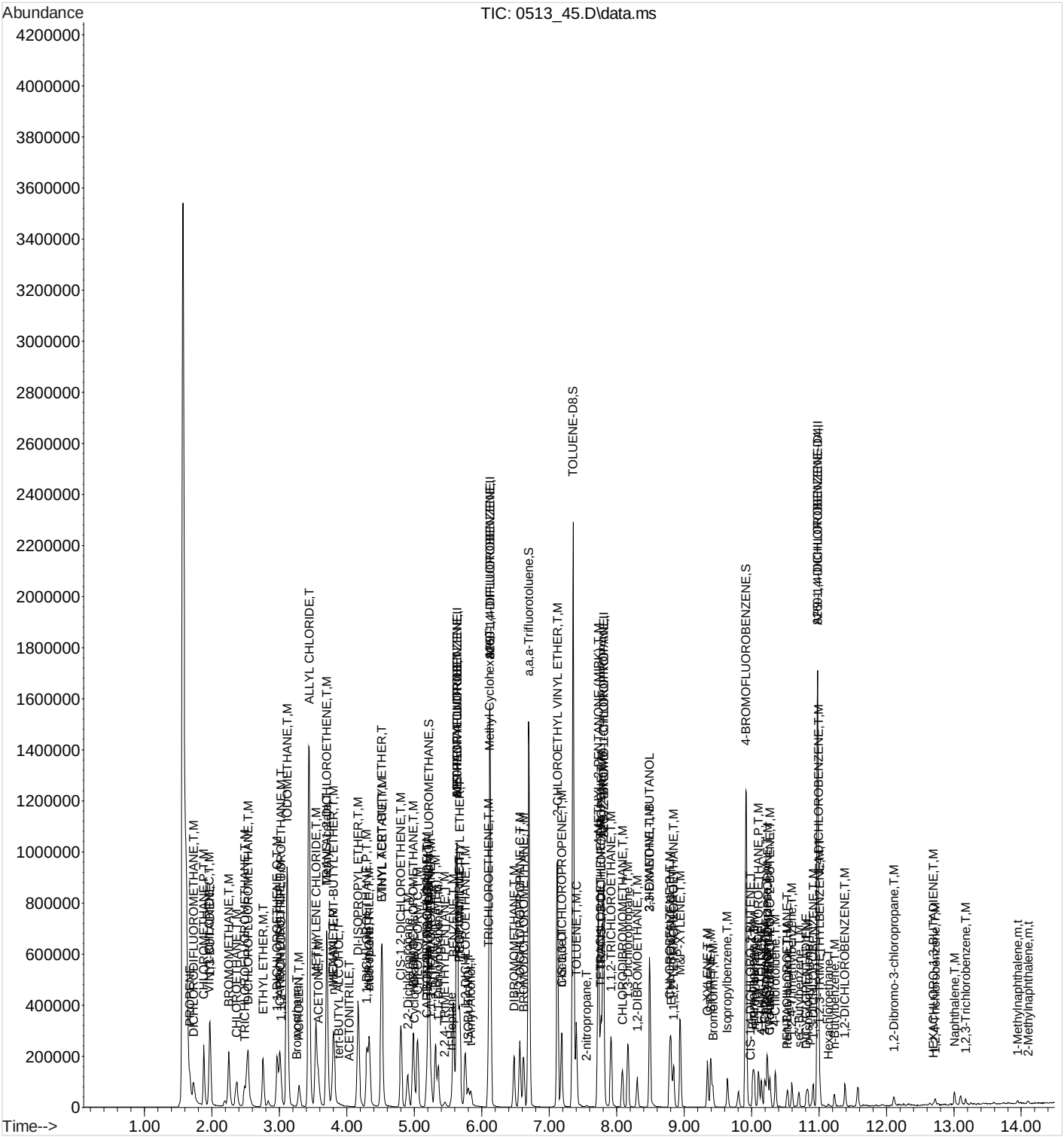
Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
100) Methyl Acetate	3.703	43	601911	692.7971647 ppb	#	99
101) ACETONITRILE	4.038	41	674	4.5475247 ppb	#	34
102) ALLYL CHLORIDE	3.441	76	492416	505.3906566 ppb		91
103) tert-BUTYL ALCOHOL	3.880	59	9913	50.6156918 ppb	#	63
104) chloroprene	4.331	53	241613	90.0586908 ppb	#	19
105) ETHYL TERT-BUTYL ETHER	4.514	59	397350	82.1710852 ppb		97
106) PROPIONITRILE	5.666	54	1344	7.0135783 ppb	#	1
107) Ethyl Acetate	5.196	43	7131	5.3309113 ppb	#	90
108) METHACRYLONITRILE	5.635	67	1922	3.1423087 ppb	#	5
109) Cyclohexane	5.001	56	30099	6.3378662 ppb		92
111) ISOBUTANOL	5.800	41	32866	888.7022498 ppb	#	1
112) t-Amyl Alcohol	5.837	59	44115	342.1341074 ppb		90
113) TERT-AMYL METHYL ETHER	5.672	73	349309	64.5735703 ppb	#	96
116) Methyl Cyclohexane	6.111	83	29607	5.8287246 ppb	#	76
117) 2-nitropropane	7.550	43	572	1.5714423 ppb	#	18
120) n-octane	7.184	85	2514	1.2882813 ppb	#	27
121) 3,3-DIMETHYL-1-BUTANOL	8.489	57	73596	455.3595509 ppb	#	44
124) CIS-1,4-DICHLORO-2-BUTENE	9.982	53	698	1.7719297 ppb	#	1
125) Cyclohexanone	10.269	55	796	7.3212469 ppb	#	24
126) PENTACHLOROETHANE	10.525	117	1246	1.2945599 ppb	#	17
127) Hexachloroethane	11.140	117	1478	1.1657177 ppb	#	12

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\051316\
Data File : 0513 45.D
Acq On : 14 May 2016 1:04 am
Operator : 605
Sample : MSD 5x WG872493 L835355-02
Misc : soil
ALS Vial : 45 Sample Multiplier: 5
InstName : VOCMS26

Quant Time: May 15 06:46:22 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 11:51:41 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\051316\
Data File : 0513 63.D
Acq On : 14 May 2016 7:04 am
Operator : 605
Sample : L835437-01 5x WG872493 V8260
Misc : soil
ALS Vial : 63 Sample Multiplier: 5
InstName : VOCMS26

Quant Time: Sep 21 15:59:10 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 11:51:41 2016
Response via : Initial Calibration

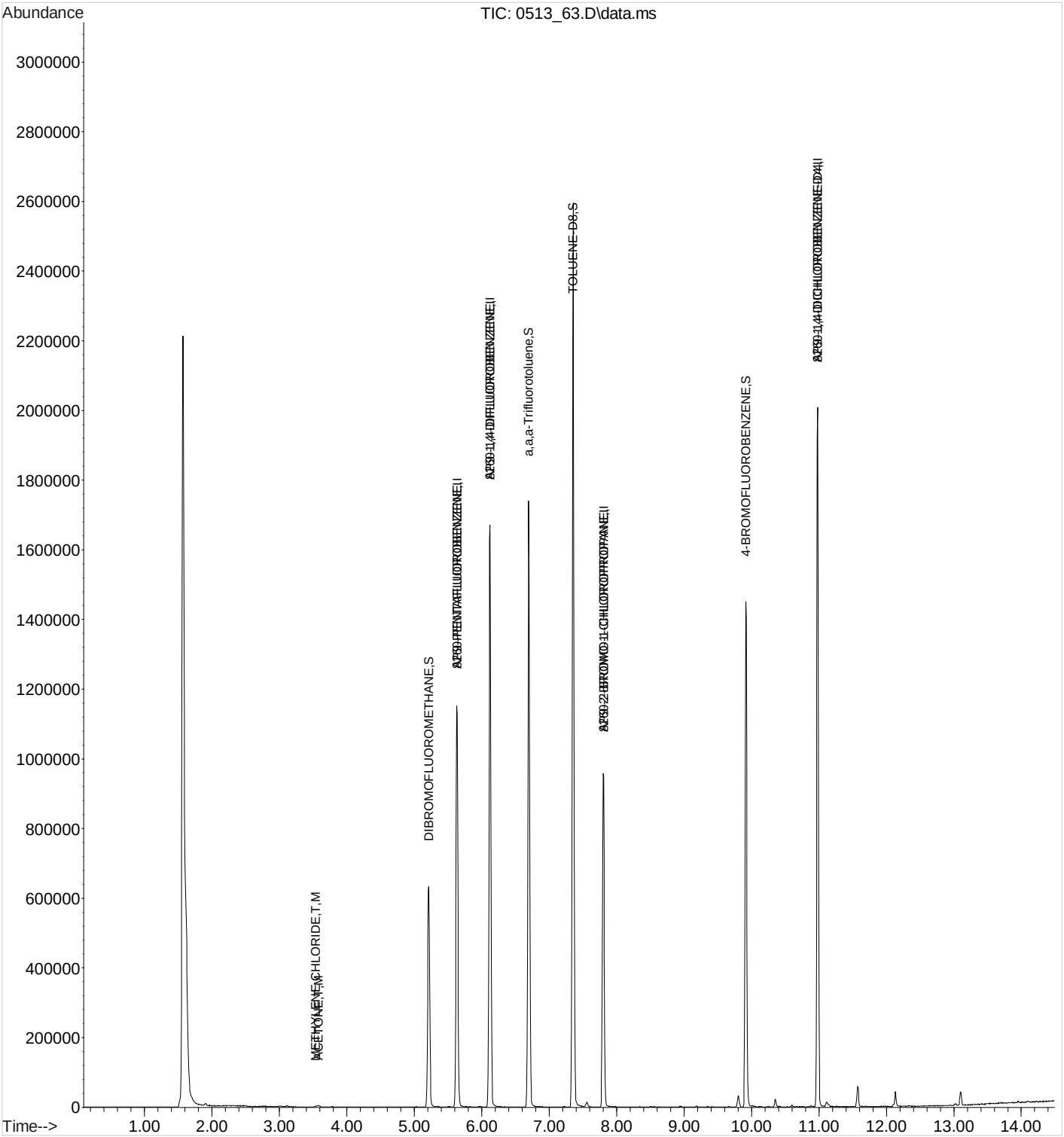
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 8260-PENTAFLUOROBENZENE	5.635	168	759749	40.0000000	ppb		0.00
41) 8260-1,4-DIFLUOROBENZENE	6.123	114	1419861	40.0000000	ppb		0.00
53) 8260-2-BROMO-1-CHLOROP...	7.806	79	225420	40.0000000	ppb		0.00
84) 8260-1,4-DICHLOROBENZE...	10.982	152	514451	40.0000000	ppb		0.00
96) AP9-PENTAFLUOROBENZENE	5.635	168	759749	40.0000000	ppb		0.00
114) AP9-1,4-DIFLUOROBENZENE	6.123	114	1419861	40.0000000	ppb		0.00
122) AP9-2-BROMO-1-CHLOROPR...	7.806	79	225420	40.0000000	ppb		0.00
128) AP9-1,4-DICHLOROBENZEN...	10.982	152	514451	40.0000000	ppb		0.00
System Monitoring Compounds							
33) DIBROMOFLUOROMETHANE	5.215	111	424157	39.4466789	ppb		0.00
Spiked Amount 40.000	Range 76 - 123			Recovery = 98.62%			
46) a,a,a-Trifluorotoluene	6.696	146	725003	40.4949793	ppb		0.00
Spiked Amount 40.000	Range 87 - 117			Recovery = 101.24%			
50) TOLUENE-D8	7.354	98	1769051	40.1331128	ppb		0.00
Spiked Amount 40.000	Range 89 - 115			Recovery = 100.33%			
68) 4-BROMOFLUOROBENZENE	9.915	95	567160	38.1482052	ppb		0.00
Spiked Amount 40.000	Range 70 - 129			Recovery = 95.37%			
Target Compounds							Qvalue
16) ACETONE	3.581	43	6940	13.6835432	ppb		97
18) CARBON DISULFIDE	2.996	76	2652	0.4088304	ppb	#	72
19) METHYLENE CHLORIDE	3.532	84	1557	0.7440738	ppb	#	92
63) M&P-XYLENE	8.952	106	751	0.2168359	ppb	#	60
79) 1,2,4-Trimethylbenzene	10.598	105	3402	0.4850859	ppb		100
86) 1,2,3-TRIMETHYLBENZENE	11.012	105	1210	0.1806068	ppb	#	34
92) Naphthalene	13.012	128	1937	0.3973247	ppb	#	71

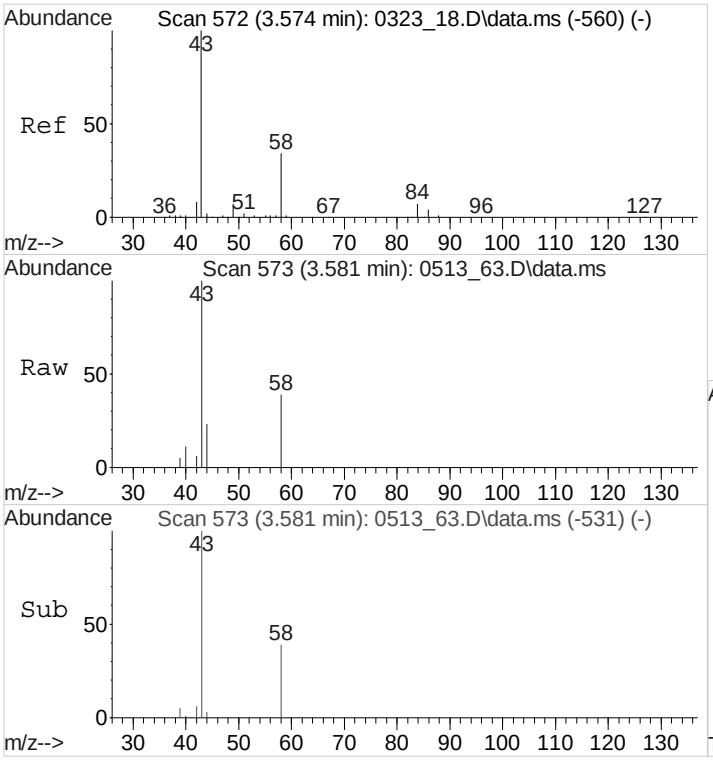
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\051316\
Data File : 0513 63.D
Acq On : 14 May 2016 7:04 am
Operator : 605
Sample : L835437-01 5x WG872493 V8260
Misc : soil
ALS Vial : 63 Sample Multiplier: 5
InstName : VOCMS26

Quant Time: Sep 21 15:59:10 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 11:51:41 2016
Response via : Initial Calibration

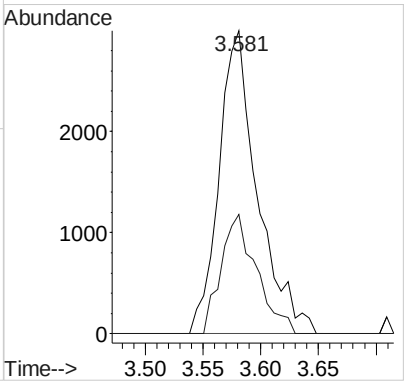


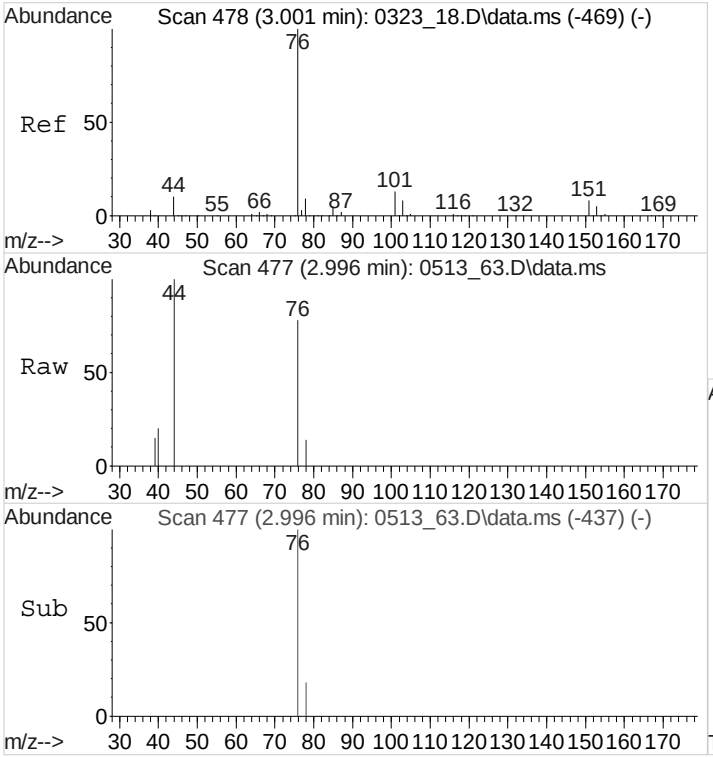


#16
ACETONE
Concen: 13.6835432 ppb
RT: 3.581 min Scan# 573
Delta R.T. 0.007 min
Lab File: 0513 63.D
Acq: 14 May 2016 7:04 am

Tgt Ion: 43 Resp: 6940

Ion	Ratio	Lower	Upper
43	100		
58	36.4	30.6	46.0

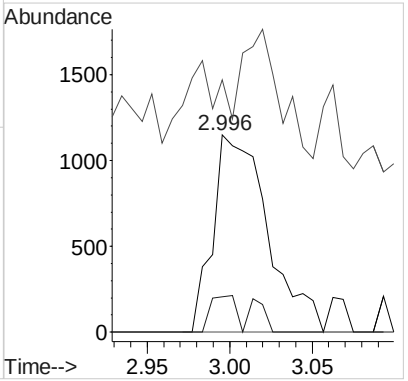


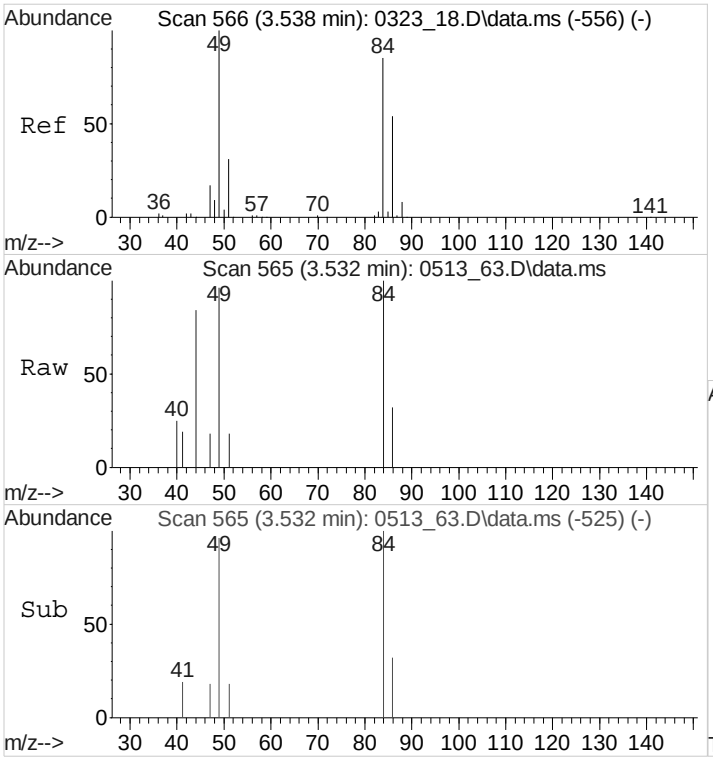


#18
CARBON DISULFIDE
Concen: 0.4088304 ppb
RT: 2.996 min Scan# 477
Delta R.T. -0.006 min
Lab File: 0513_63.D
Acq: 14 May 2016 7:04 am

Tgt Ion: 76 Resp: 2652

Ion	Ratio	Lower	Upper
76	100		
78	0.0	7.9	11.9#
44	0.0	8.5	12.7#

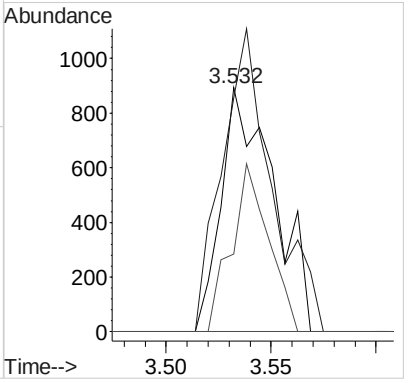


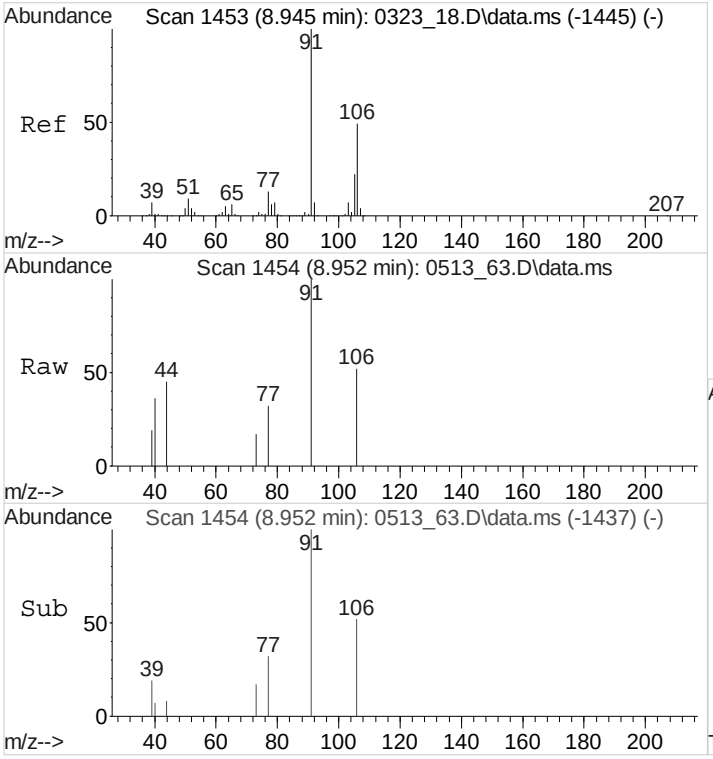


#19
METHYLENE CHLORIDE
Concen: 0.7440738 ppb
RT: 3.532 min Scan# 565
Delta R.T. -0.006 min
Lab File: 0513 63.D
Acq: 14 May 2016 7:04 am

Tgt Ion: 84 Resp: 1557

Ion	Ratio	Lower	Upper
84	100		
49	117.2	95.1	142.7
86	48.7	51.5	77.3#

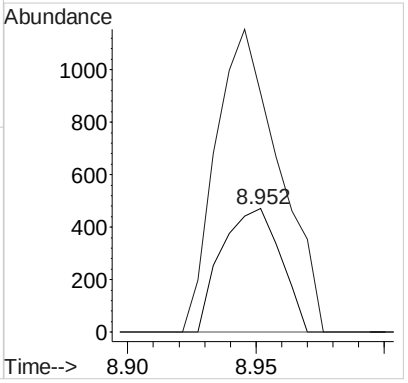


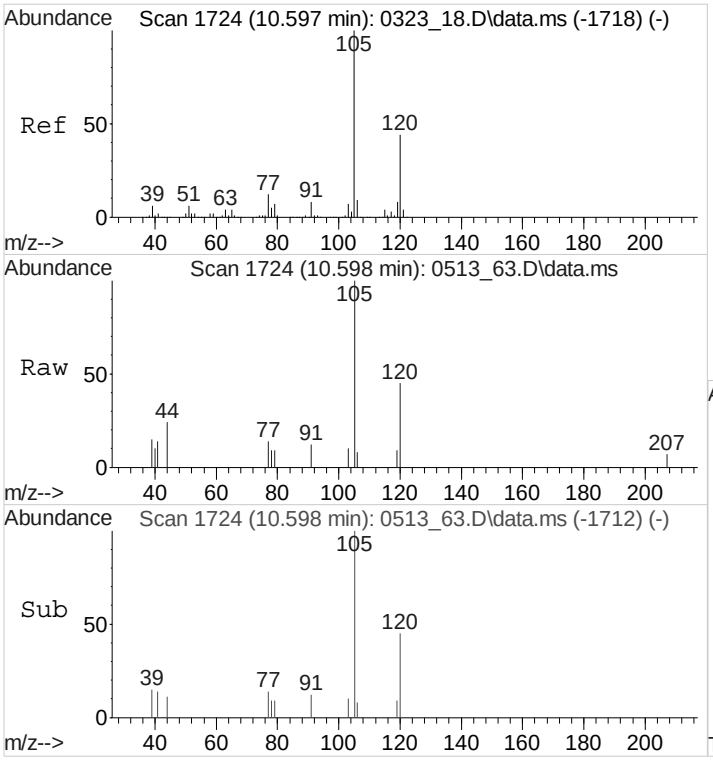


#63
M&P-XYLENE
Concen: 0.2168359 ppb
RT: 8.952 min Scan# 1454
Delta R.T. 0.006 min
Lab File: 0513_63.D
Acq: 14 May 2016 7:04 am

Tgt Ion:106 Resp: 751

Ion	Ratio	Lower	Upper
106	100		
91	264.3	162.3	243.5#

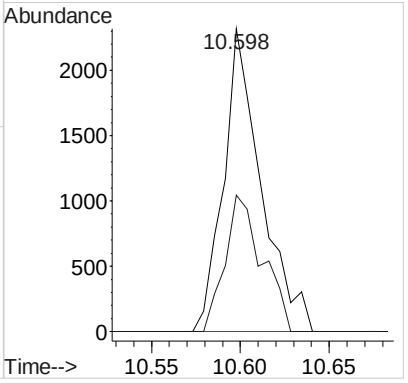


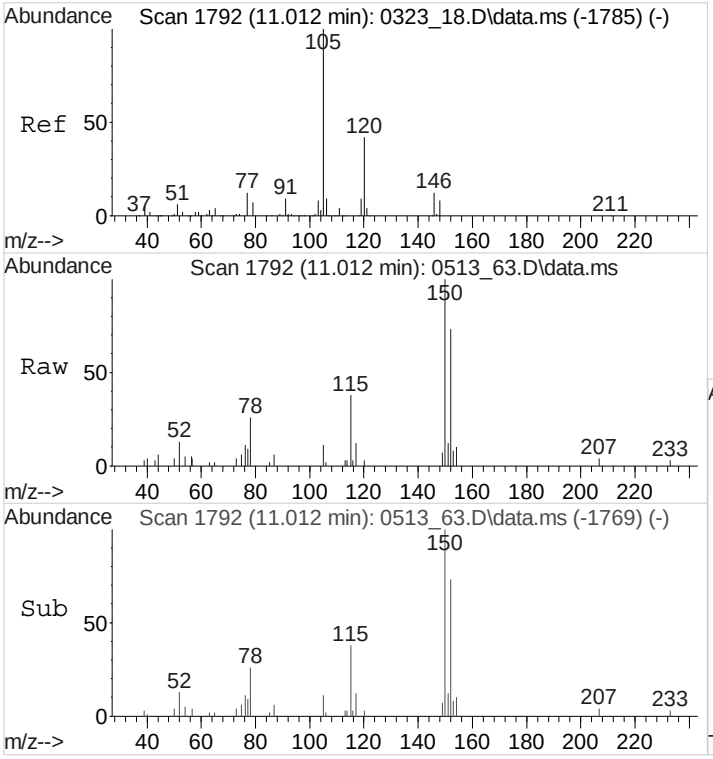


#79
1,2,4-Trimethylbenzene
Concen: 0.4850859 ppb
RT: 10.598 min Scan# 1724
Delta R.T. 0.000 min
Lab File: 0513 63.D
Acq: 14 May 2016 7:04 am

Tgt Ion:105 Resp: 3402

Ion	Ratio	Lower	Upper
105	100		
120	44.6	35.9	53.9

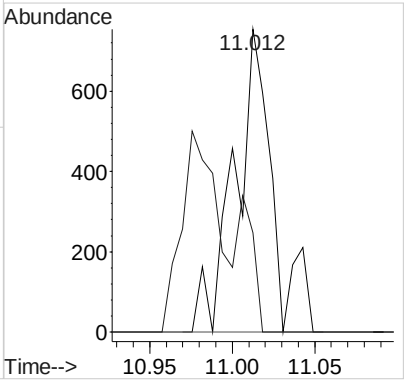


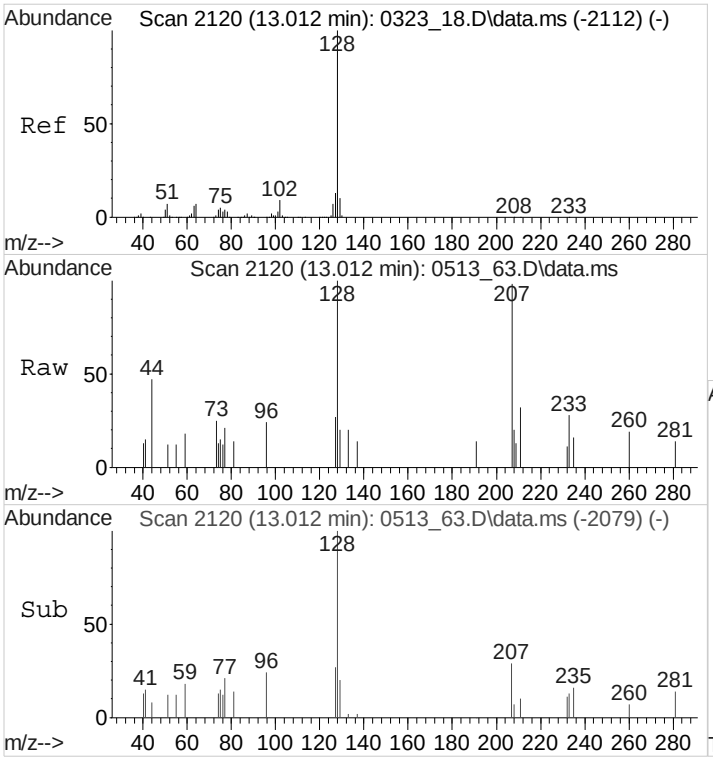


#86
1,2,3-TRIMETHYLBENZENE
Concen: 0.1806068 ppb
RT: 11.012 min Scan# 1792
Delta R.T. 0.000 min
Lab File: 0513_63.D
Acq: 14 May 2016 7:04 am

Tgt Ion:105 Resp: 1210

Ion	Ratio	Lower	Upper
105	100		
120	0.0	33.6	50.4#

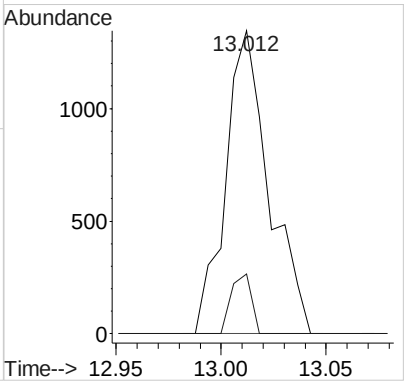




#92
Naphthalene
Concen: 0.3973247 ppb
RT: 13.012 min Scan# 2120
Delta R.T. 0.000 min
Lab File: 0513 63.D
Acq: 14 May 2016 7:04 am

Tgt Ion:128 Resp: 1937

Ion	Ratio	Lower	Upper
128	100		
129	0.0	8.6	13.0#



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\051316\
Data File : 0513 64.D
Acq On : 14 May 2016 7:25 am
Operator : 605
Sample : L835437-02 5x WG872493 V8260
Misc : soil
ALS Vial : 64 Sample Multiplier: 5
InstName : VOCMS26

Quant Time: Sep 21 15:59:37 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 11:51:41 2016
Response via : Initial Calibration

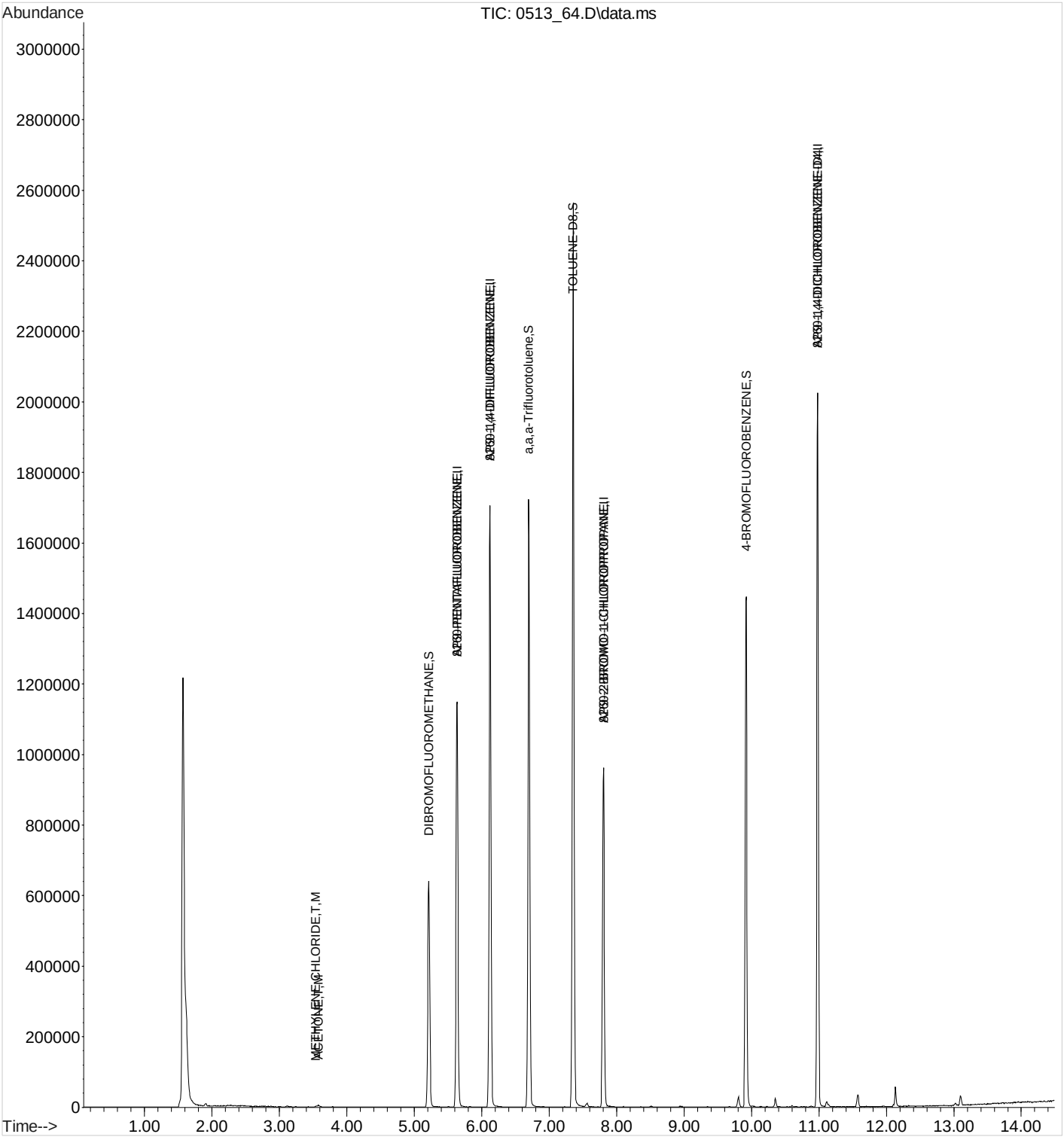
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 8260-PENTAFLUOROBENZENE	5.635	168	764313	40.0000000	ppb		0.00
41) 8260-1,4-DIFLUOROBENZENE	6.123	114	1422571	40.0000000	ppb		0.00
53) 8260-2-BROMO-1-CHLOROP...	7.806	79	220686	40.0000000	ppb		0.00
84) 8260-1,4-DICHLOROBENZE...	10.982	152	515262	40.0000000	ppb		0.00
96) AP9-PENTAFLUOROBENZENE	5.635	168	764313	40.0000000	ppb		0.00
114) AP9-1,4-DIFLUOROBENZENE	6.123	114	1422571	40.0000000	ppb		0.00
122) AP9-2-BROMO-1-CHLOROPR...	7.806	79	220686	40.0000000	ppb		0.00
128) AP9-1,4-DICHLOROBENZEN...	10.982	152	515262	40.0000000	ppb		0.00
System Monitoring Compounds							
33) DIBROMOFLUOROMETHANE	5.215	111	423386	39.1398530	ppb		0.00
Spiked Amount 40.000	Range 76 - 123			Recovery = 97.85%			
46) a,a,a-Trifluorotoluene	6.696	146	721831	40.2410020	ppb		0.00
Spiked Amount 40.000	Range 87 - 117			Recovery = 100.60%			
50) TOLUENE-D8	7.354	98	1780961	40.3263376	ppb		0.00
Spiked Amount 40.000	Range 89 - 115			Recovery = 100.82%			
68) 4-BROMOFLUOROBENZENE	9.921	95	567737	39.0061761	ppb		0.00
Spiked Amount 40.000	Range 70 - 129			Recovery = 97.52%			
Target Compounds							Qvalue
16) ACETONE	3.581	43	7704	15.0992113	ppb		97
18) CARBON DISULFIDE	3.002	76	2425	0.3716039	ppb	#	72
19) METHYLENE CHLORIDE	3.538	84	1546	0.7344052	ppb		87
51) TOLUENE	7.403	91	1968	0.2191978	ppb		90
63) M&P-XYLENE	8.952	106	1036	0.3055404	ppb		98
74) 4-ETHYLTOLUENE	10.153	105	1435	0.1651655	ppb	#	46
79) 1,2,4-Trimethylbenzene	10.604	105	2724	0.3967429	ppb		92
86) 1,2,3-TRIMETHYLBENZENE	11.012	105	1144	0.1704868	ppb	#	34
92) Naphthalene	13.018	128	1750	0.3584016	ppb	#	71

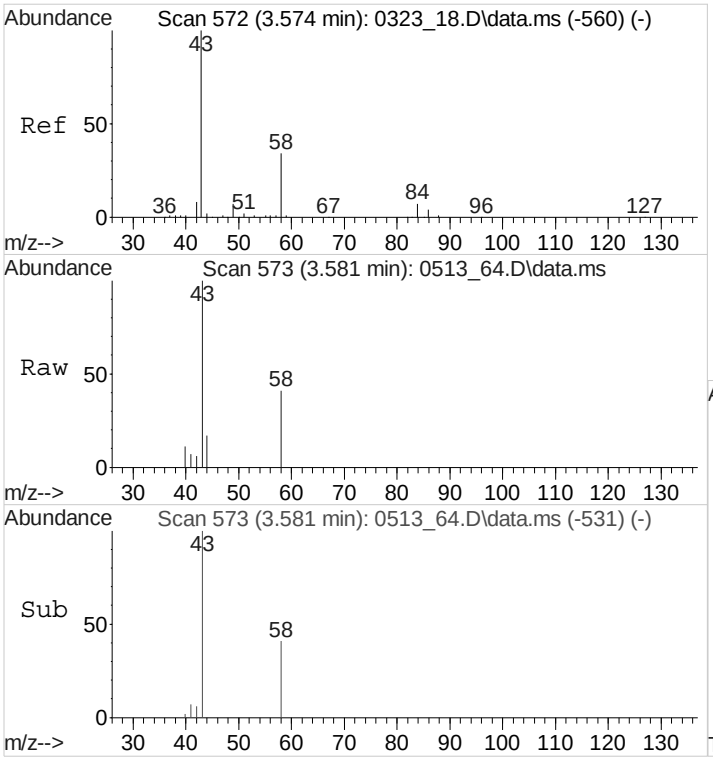
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\051316\
Data File : 0513 64.D
Acq On : 14 May 2016 7:25 am
Operator : 605
Sample : L835437-02 5x WG872493 V8260
Misc : soil
ALS Vial : 64 Sample Multiplier: 5
InstName : VOCMS26

Quant Time: Sep 21 15:59:37 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 11:51:41 2016
Response via : Initial Calibration

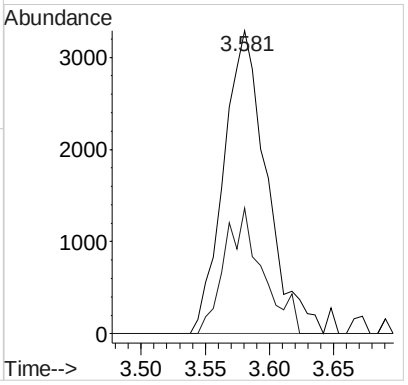


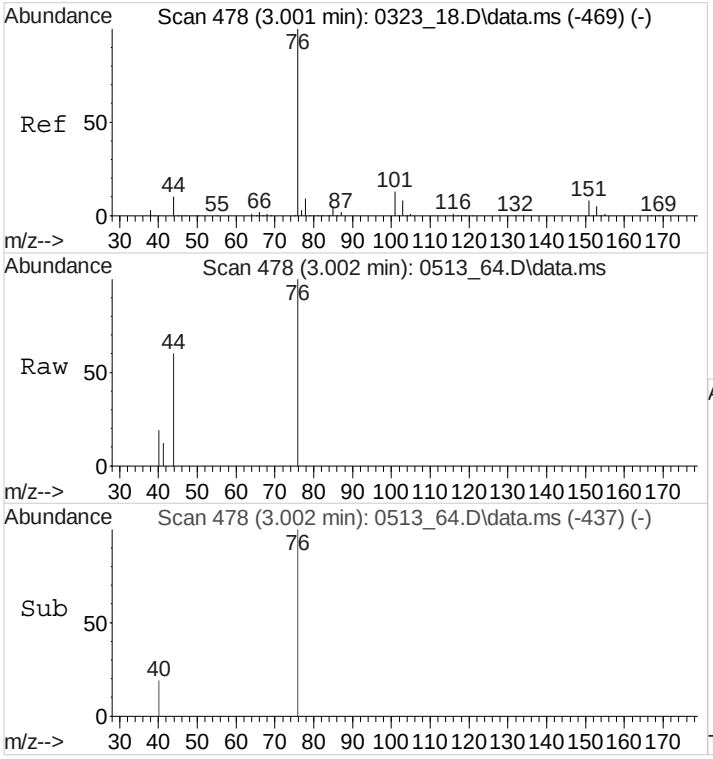


#16
ACETONE
Concen: 15.0992113 ppb
RT: 3.581 min Scan# 573
Delta R.T. 0.007 min
Lab File: 0513 64.D
Acq: 14 May 2016 7:25 am

Tgt Ion: 43 Resp: 7704

Ion	Ratio	Lower	Upper
43	100		
58	36.6	30.6	46.0

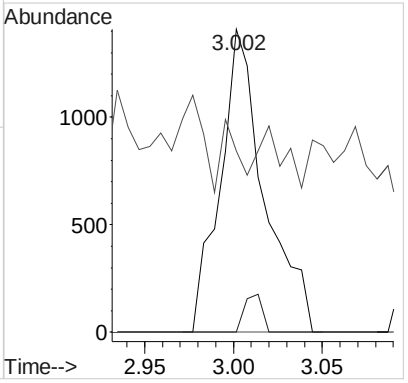


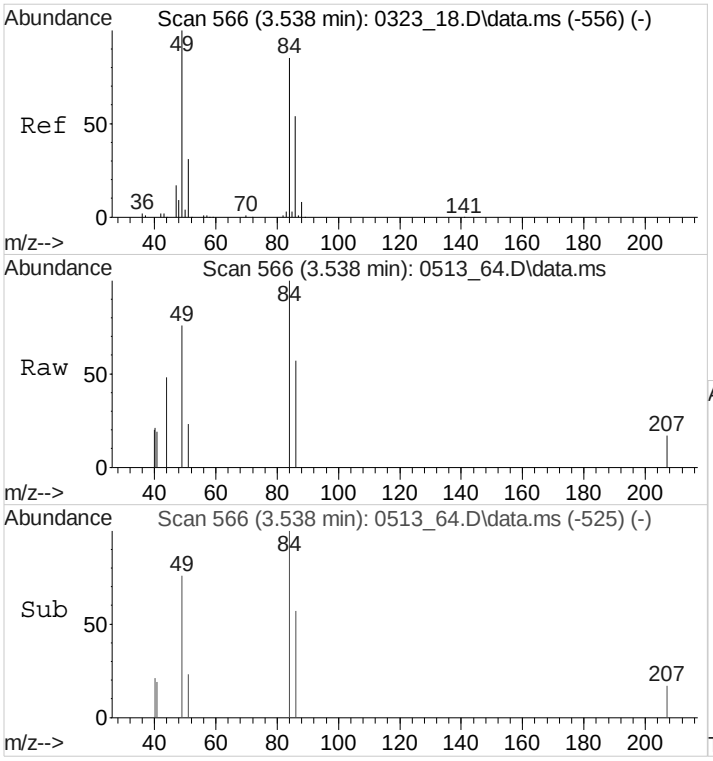


#18
CARBON DISULFIDE
Concen: 0.3716039 ppb
RT: 3.002 min Scan# 478
Delta R.T. 0.000 min
Lab File: 0513_64.D
Acq: 14 May 2016 7:25 am

Tgt Ion: 76 Resp: 2425

Ion	Ratio	Lower	Upper
76	100		
78	0.0	7.9	11.9#
44	0.0	8.5	12.7#

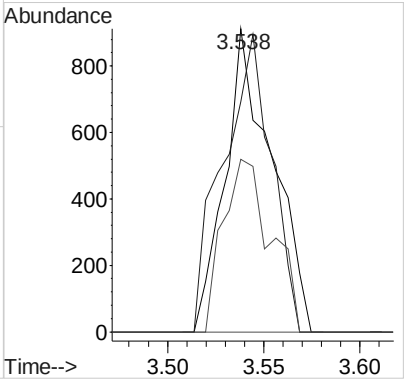


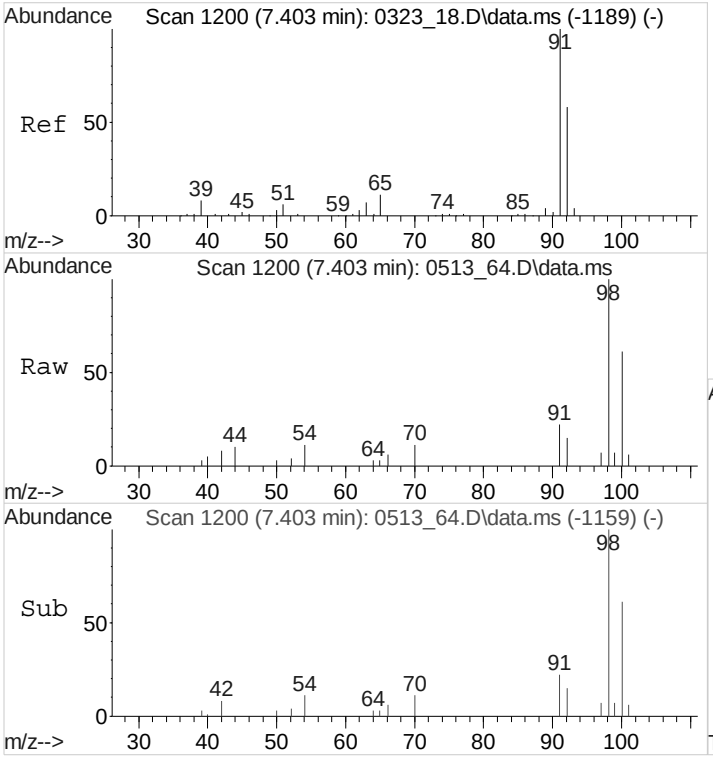


#19
METHYLENE CHLORIDE
Concen: 0.7344052 ppb
RT: 3.538 min Scan# 566
Delta R.T. 0.000 min
Lab File: 0513 64.D
Acq: 14 May 2016 7:25 am

Tgt Ion: 84 Resp: 1546

Ion	Ratio	Lower	Upper
84	100		
49	101.2	95.1	142.7
86	58.3	51.5	77.3

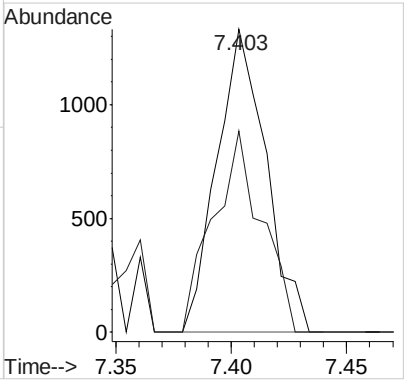


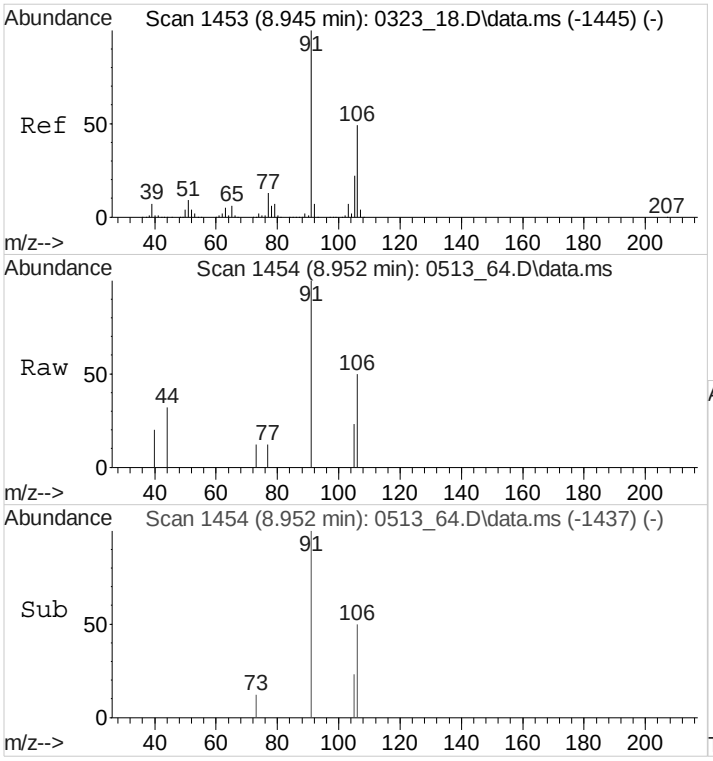


#51
TOLUENE
Concen: 0.2191978 ppb
RT: 7.403 min Scan# 1200
Delta R.T. 0.000 min
Lab File: 0513_64.D
Acq: 14 May 2016 7:25 am

Tgt Ion: 91 Resp: 1968

Ion	Ratio	Lower	Upper
91	100		
92	66.0	46.6	69.8

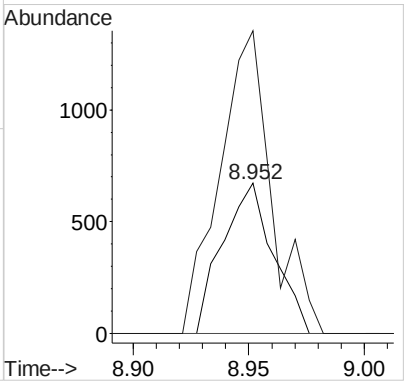


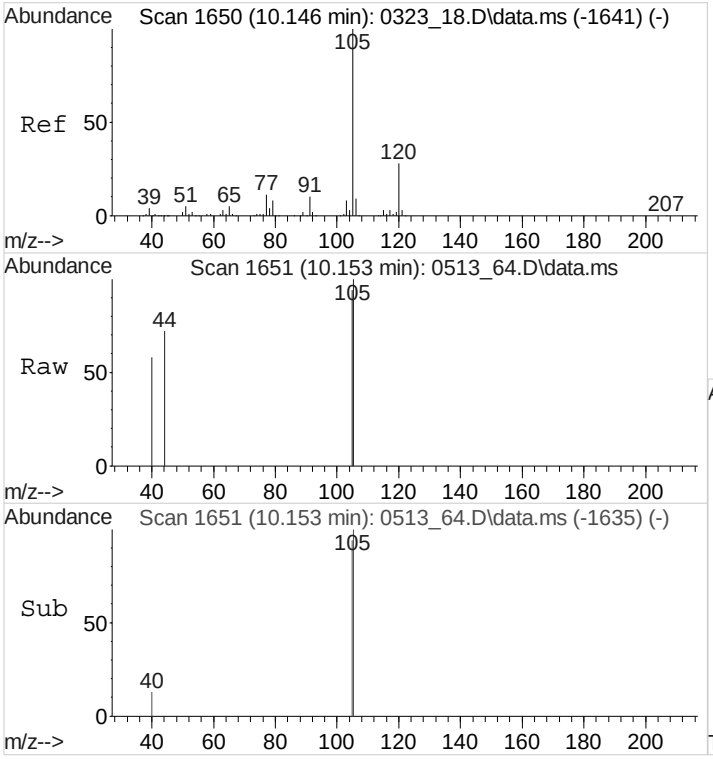


#63
M&P-XYLENE
Concen: 0.3055404 ppb
RT: 8.952 min Scan# 1454
Delta R.T. 0.006 min
Lab File: 0513 64.D
Acq: 14 May 2016 7:25 am

Tgt Ion:106 Resp: 1036

Ion	Ratio	Lower	Upper
106	100		
91	205.5	162.3	243.5

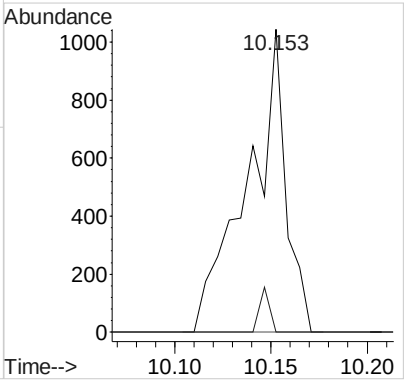


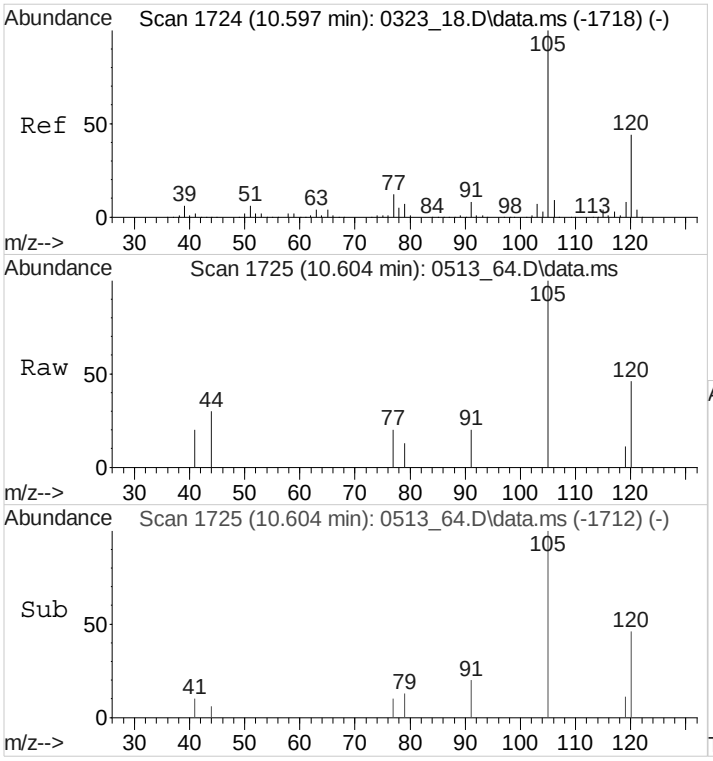


#74
4-ETHYLTOLUENE
Concen: 0.1651655 ppb
RT: 10.153 min Scan# 1651
Delta R.T. 0.006 min
Lab File: 0513_64.D
Acq: 14 May 2016 7:25 am

Tgt Ion:105 Resp: 1435

Ion	Ratio	Lower	Upper
105	100		
120	0.0	22.7	34.1#

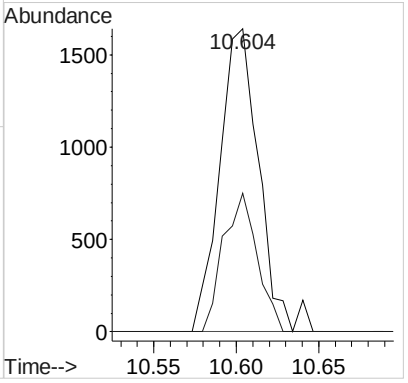


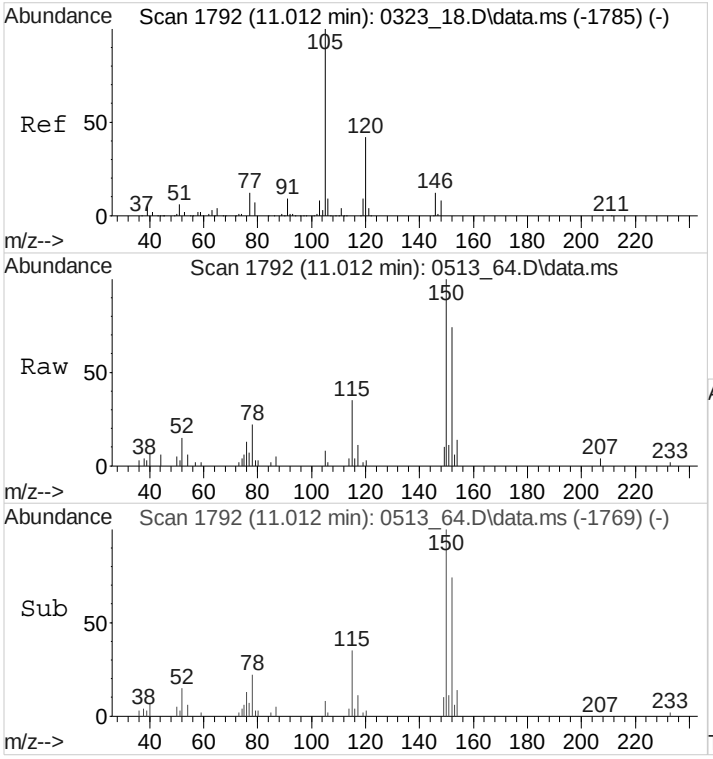


#79
1,2,4-Trimethylbenzene
Concen: 0.3967429 ppb
RT: 10.604 min Scan# 1725
Delta R.T. 0.006 min
Lab File: 0513 64.D
Acq: 14 May 2016 7:25 am

Tgt Ion:105 Resp: 2724

Ion	Ratio	Lower	Upper
105	100		
120	39.4	35.9	53.9

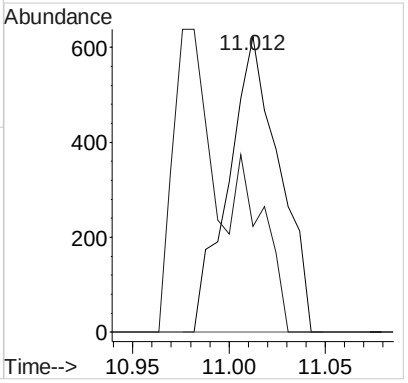


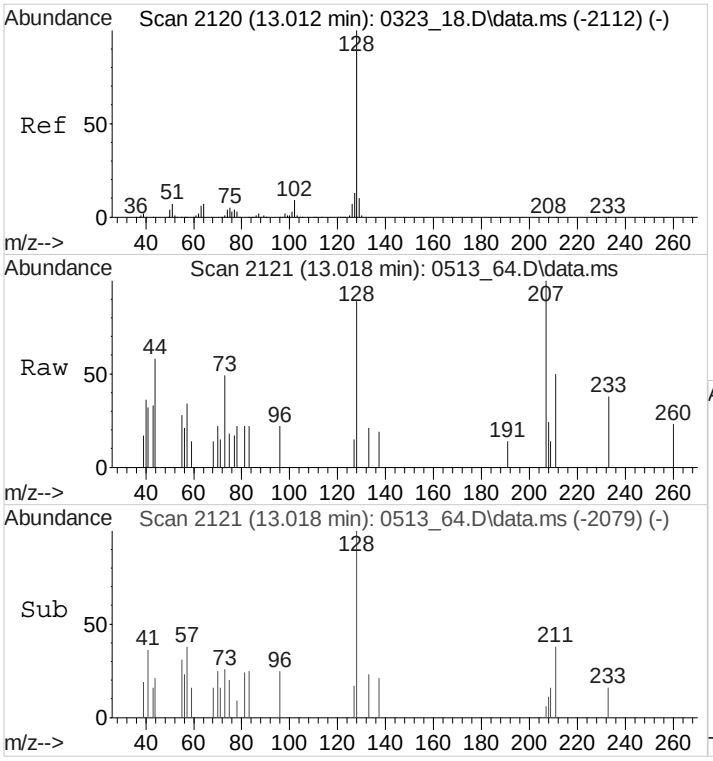


#86
1,2,3-TRIMETHYLBENZENE
Concen: 0.1704868 ppb
RT: 11.012 min Scan# 1792
Delta R.T. 0.000 min
Lab File: 0513_64.D
Acq: 14 May 2016 7:25 am

Tgt Ion:105 Resp: 1144

Ion	Ratio	Lower	Upper
105	100		
120	0.0	33.6	50.4#

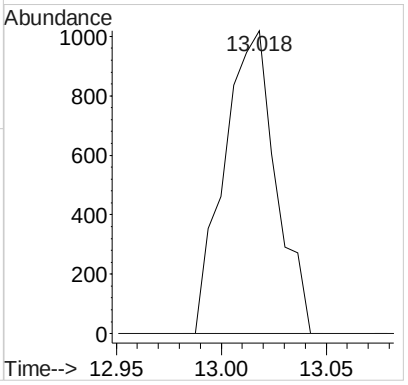




#92
Naphthalene
Concen: 0.3584016 ppb
RT: 13.018 min Scan# 2121
Delta R.T. 0.006 min
Lab File: 0513 64.D
Acq: 14 May 2016 7:25 am

Tgt Ion:128 Resp: 1750

Ion	Ratio	Lower	Upper
128	100		
129	0.0	8.6	13.0#



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\051316\
Data File : 0513 65.D
Acq On : 14 May 2016 7:44 am
Operator : 605
Sample : L835437-03 5x WG872493 V8260
Misc : soil
ALS Vial : 65 Sample Multiplier: 5
InstName : VOCMS26

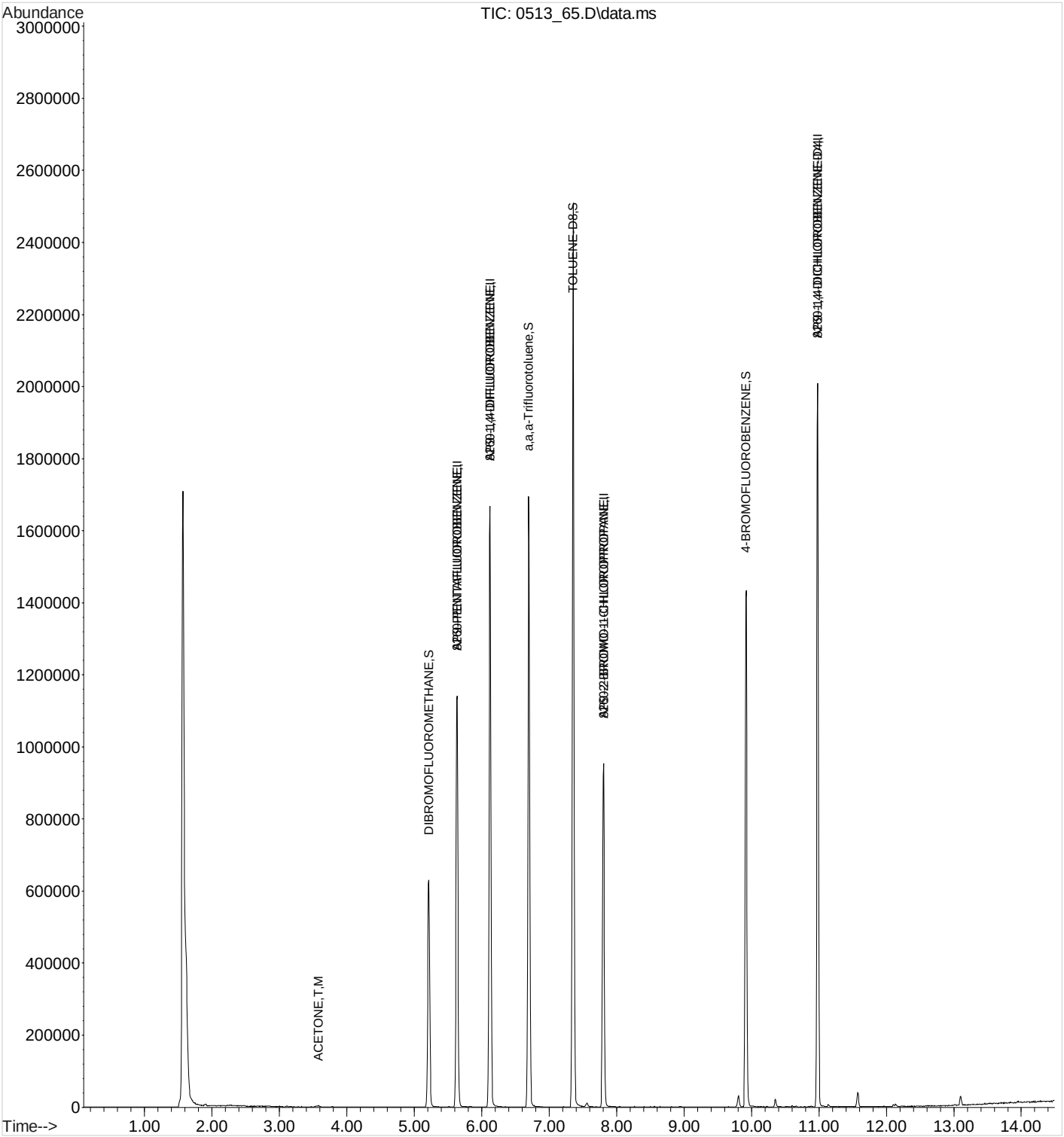
Quant Time: Sep 21 16:00:06 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 11:51:41 2016
Response via : Initial Calibration

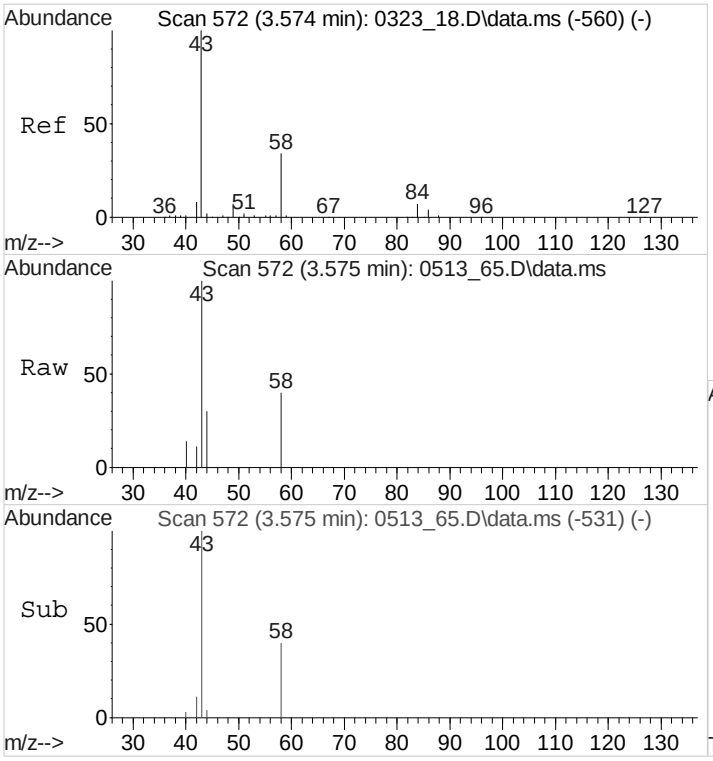
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 8260-PENTAFLUOROBENZENE	5.635	168	748077	40.0000000	ppb		0.00
41) 8260-1,4-DIFLUOROBENZENE	6.123	114	1398247	40.0000000	ppb		0.00
53) 8260-2-BROMO-1-CHLOROP...	7.806	79	217998	40.0000000	ppb		0.00
84) 8260-1,4-DICHLOROBENZE...	10.982	152	509827	40.0000000	ppb		0.00
96) AP9-PENTAFLUOROBENZENE	5.635	168	748077	40.0000000	ppb		0.00
114) AP9-1,4-DIFLUOROBENZENE	6.123	114	1398247	40.0000000	ppb		0.00
122) AP9-2-BROMO-1-CHLOROPR...	7.806	79	217998	40.0000000	ppb		0.00
128) AP9-1,4-DICHLOROBENZEN...	10.982	152	509827	40.0000000	ppb		0.00
System Monitoring Compounds							
33) DIBROMOFLUOROMETHANE	5.215	111	422645	39.9193423	ppb		0.00
Spiked Amount 40.000	Range 76 - 123			Recovery = 99.80%			
46) a,a,a-Trifluorotoluene	6.696	146	709537	40.2437423	ppb		0.00
Spiked Amount 40.000	Range 87 - 117			Recovery = 100.61%			
50) TOLUENE-D8	7.354	98	1738249	40.0439043	ppb		0.00
Spiked Amount 40.000	Range 89 - 115			Recovery = 100.11%			
68) 4-BROMOFLUOROBENZENE	9.915	95	556215	38.6857614	ppb		0.00
Spiked Amount 40.000	Range 70 - 129			Recovery = 96.71%			
Target Compounds							Qvalue
16) ACETONE	3.575	43	5717	11.4480396	ppb		95
19) METHYLENE CHLORIDE	3.550	84	1260	0.6115356	ppb		92
51) TOLUENE	7.409	91	1280	0.1450478	ppb		90
63) M&P-XYLENE	8.946	106	640	0.1910782	ppb		97
79) 1,2,4-Trimethylbenzene	10.598	105	2265	0.3339585	ppb		95
86) 1,2,3-TRIMETHYLBENZENE	11.012	105	950	0.1430848	ppb	#	34
92) Naphthalene	13.006	128	1304	0.2699073	ppb	#	71

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\051316\
Data File : 0513 65.D
Acq On : 14 May 2016 7:44 am
Operator : 605
Sample : L835437-03 5x WG872493 V8260
Misc : soil
ALS Vial : 65 Sample Multiplier: 5
InstName : VOCMS26

Quant Time: Sep 21 16:00:06 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 11:51:41 2016
Response via : Initial Calibration

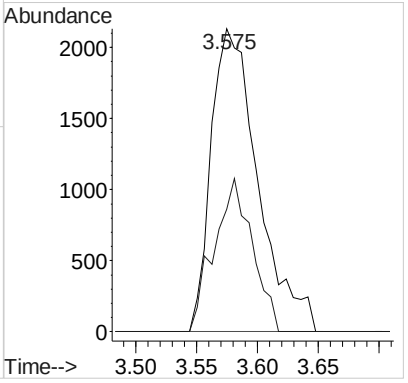


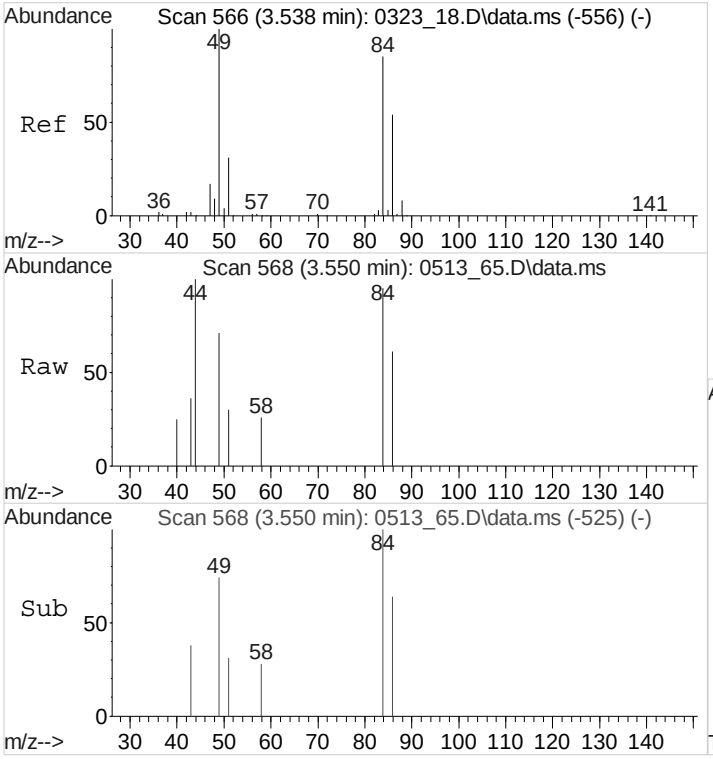


#16
ACETONE
Concen: 11.4480396 ppb
RT: 3.575 min Scan# 572
Delta R.T. 0.001 min
Lab File: 0513 65.D
Acq: 14 May 2016 7:44 am

Tgt Ion: 43 Resp: 5717

Ion	Ratio	Lower	Upper
43	100		
58	41.2	30.6	46.0

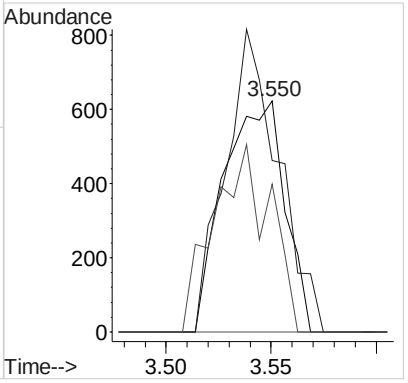


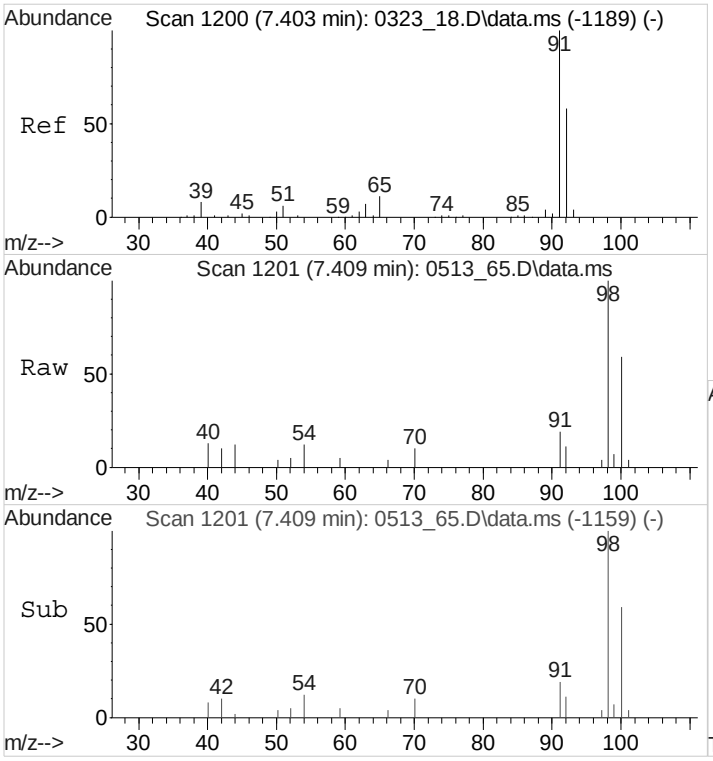


#19
METHYLENE CHLORIDE
Concen: 0.6115356 ppb
RT: 3.550 min Scan# 568
Delta R.T. 0.013 min
Lab File: 0513_65.D
Acq: 14 May 2016 7:44 am

Tgt Ion: 84 Resp: 1260

Ion	Ratio	Lower	Upper
84	100		
49	113.7	95.1	142.7
86	74.8	51.5	77.3

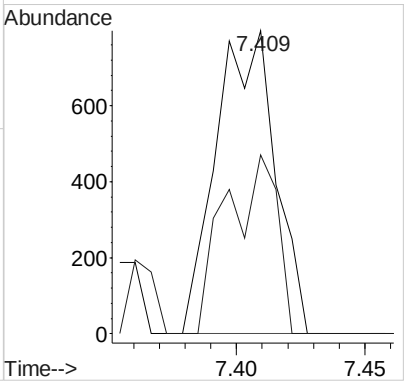


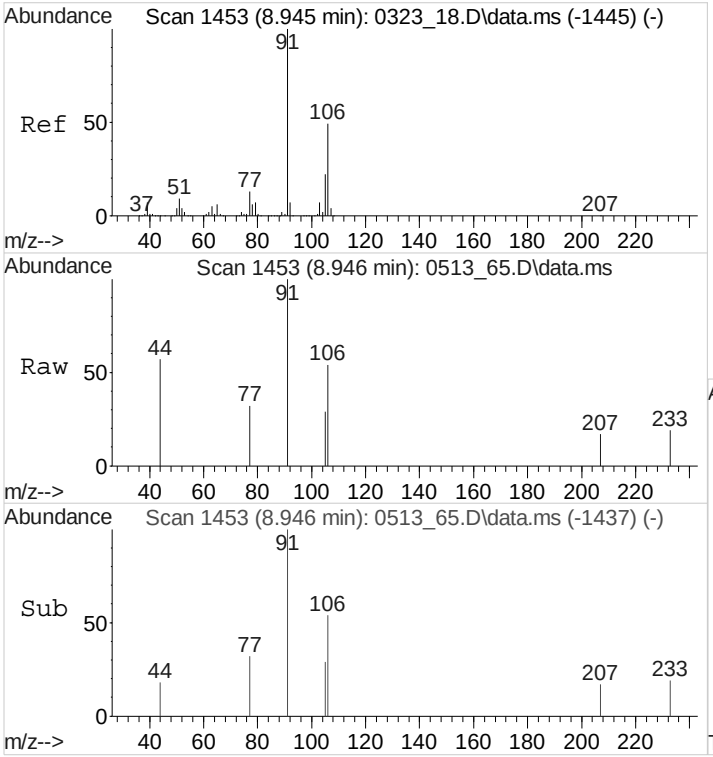


#51
TOLUENE
Concen: 0.1450478 ppb
RT: 7.409 min Scan# 1201
Delta R.T. 0.006 min
Lab File: 0513 65.D
Acq: 14 May 2016 7:44 am

Tgt Ion: 91 Resp: 1280

Ion	Ratio	Lower	Upper
91	100		
92	51.0	46.6	69.8

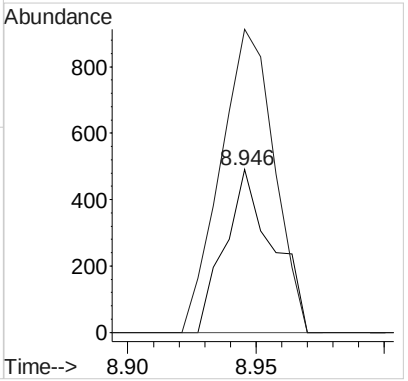


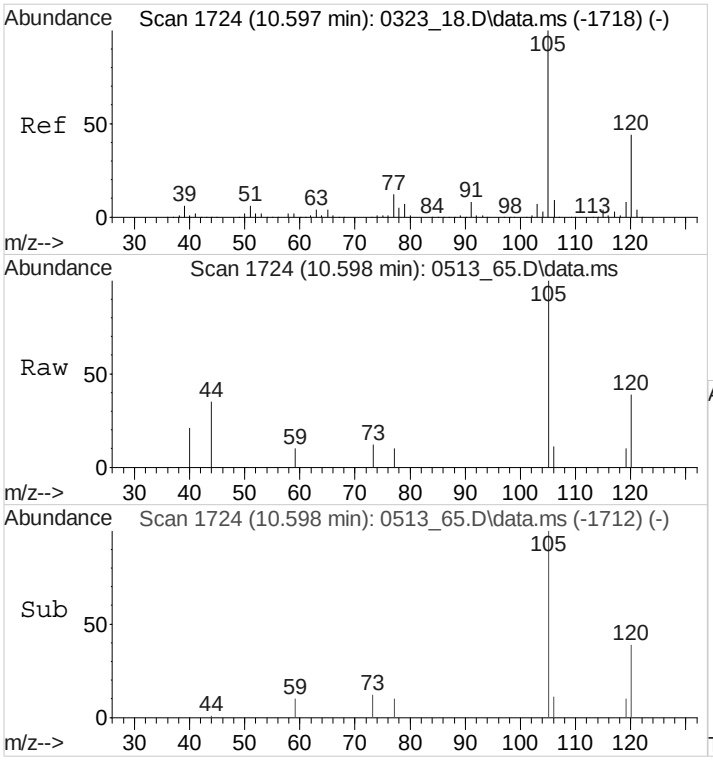


#63
M&P-XYLENE
Concen: 0.1910782 ppb
RT: 8.946 min Scan# 1453
Delta R.T. 0.000 min
Lab File: 0513_65.D
Acq: 14 May 2016 7:44 am

Tgt Ion:106 Resp: 640

Ion	Ratio	Lower	Upper
106	100		
91	207.3	162.3	243.5

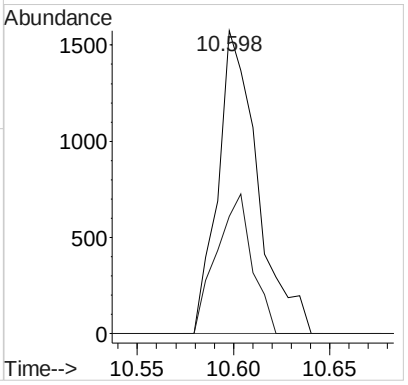


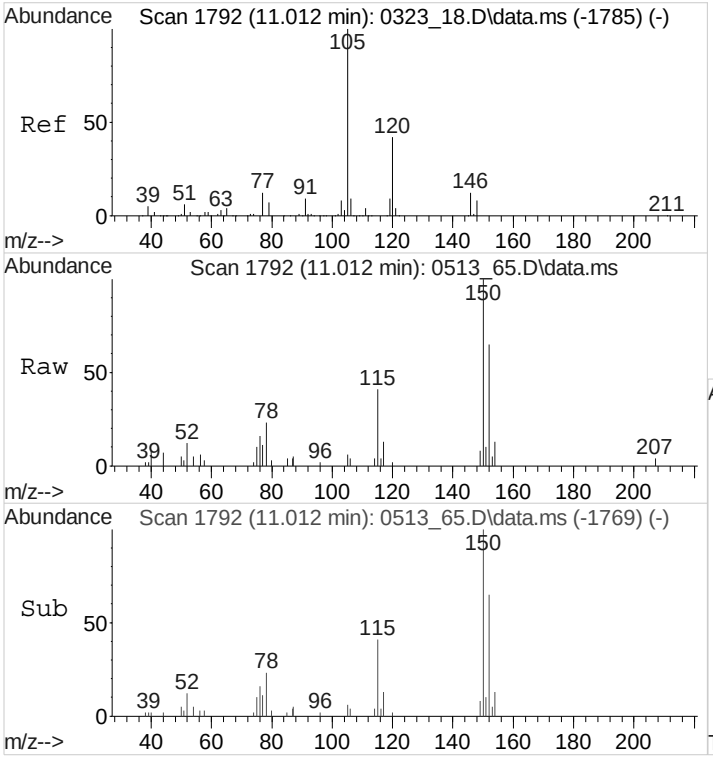


#79
1,2,4-Trimethylbenzene
Concen: 0.3339585 ppb
RT: 10.598 min Scan# 1724
Delta R.T. 0.000 min
Lab File: 0513 65.D
Acq: 14 May 2016 7:44 am

Tgt Ion:105 Resp: 2265

Ion	Ratio	Lower	Upper
105	100		
120	41.5	35.9	53.9

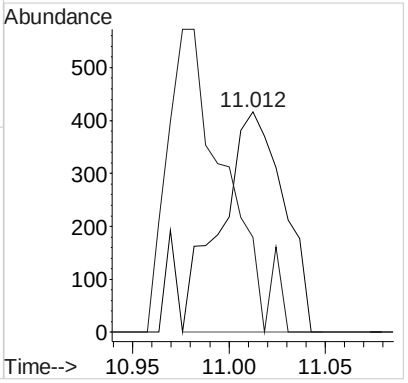


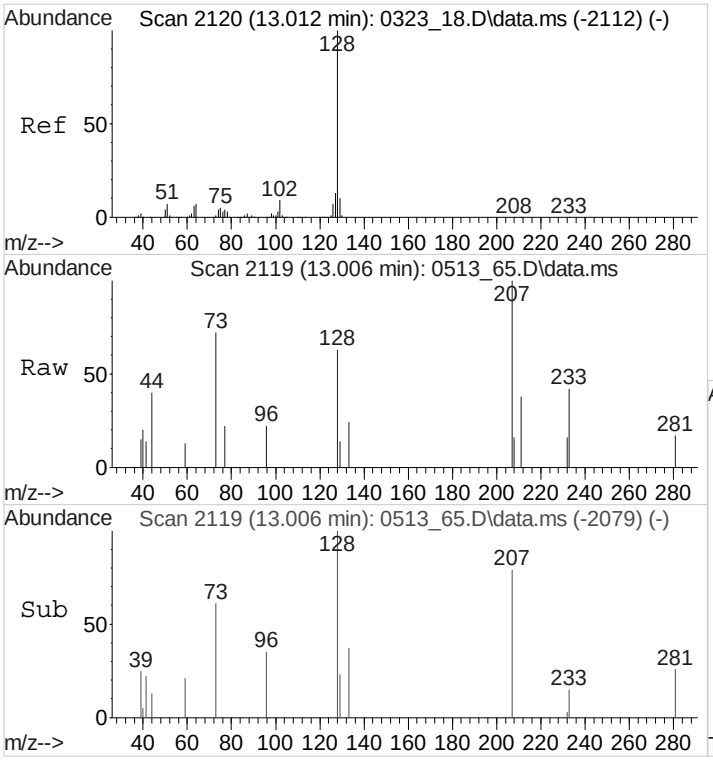


#86
1,2,3-TRIMETHYLBENZENE
Concen: 0.1430848 ppb
RT: 11.012 min Scan# 1792
Delta R.T. 0.000 min
Lab File: 0513_65.D
Acq: 14 May 2016 7:44 am

Tgt Ion:105 Resp: 950

Ion	Ratio	Lower	Upper
105	100		
120	0.0	33.6	50.4#

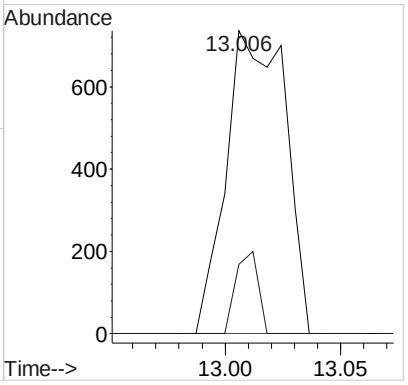




#92
Naphthalene
Concen: 0.2699073 ppb
RT: 13.006 min Scan# 2119
Delta R.T. -0.006 min
Lab File: 0513 65.D
Acq: 14 May 2016 7:44 am

Tgt Ion:128 Resp: 1304

Ion	Ratio	Lower	Upper
128	100		
129	0.0	8.6	13.0#



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\051316\
Data File : 0513 66.D
Acq On : 14 May 2016 8:04 am
Operator : 605
Sample : L835437-04 5x WG872493 V8260
Misc : soil
ALS Vial : 66 Sample Multiplier: 5
InstName : VOCMS26

Quant Time: Sep 21 16:00:34 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 11:51:41 2016
Response via : Initial Calibration

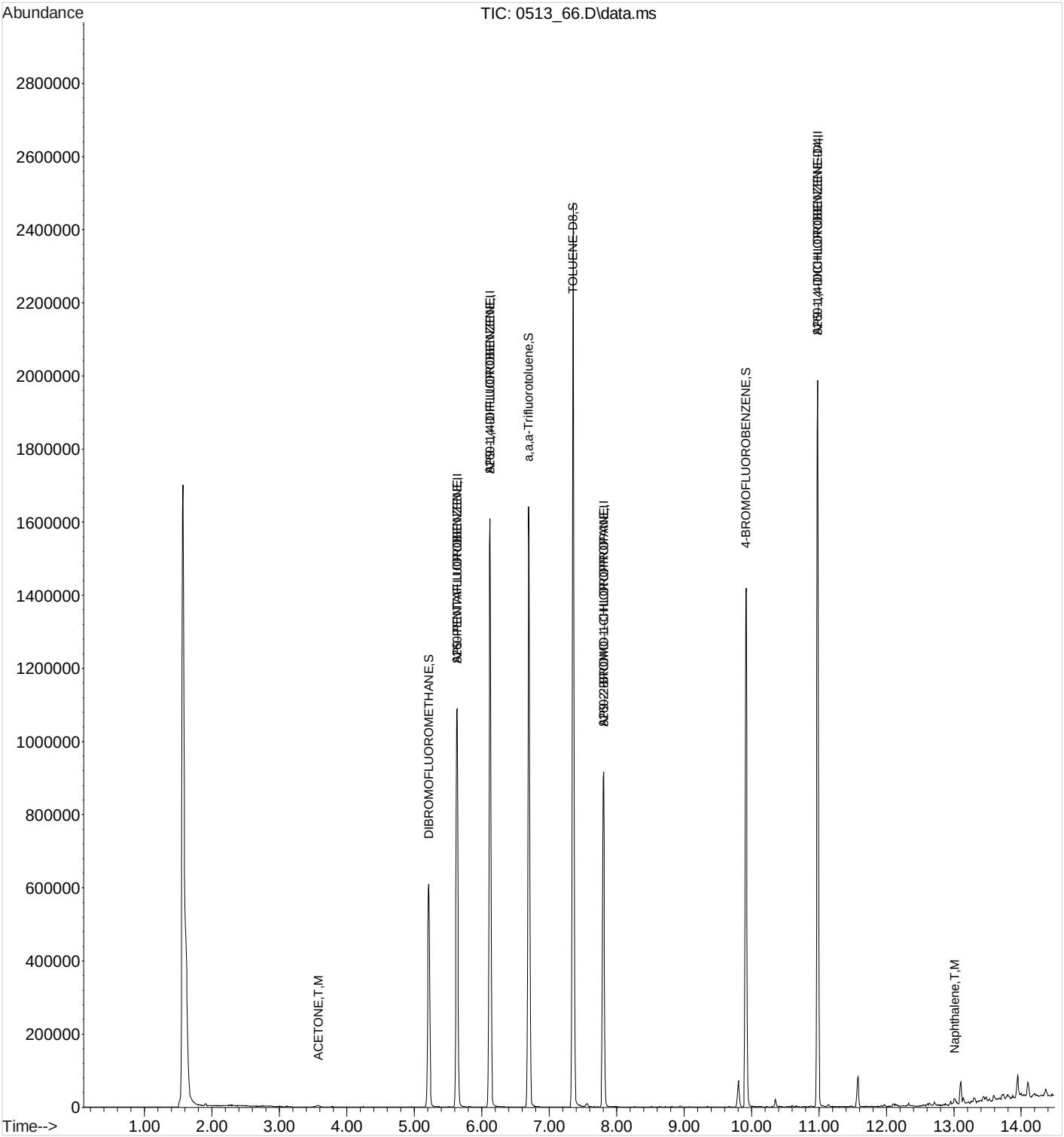
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 8260-PENTAFLUOROBENZENE	5.635	168	726011	40.0000000	ppb		0.00
41) 8260-1,4-DIFLUOROBENZENE	6.123	114	1353317	40.0000000	ppb		0.00
53) 8260-2-BROMO-1-CHLOROP...	7.806	79	214756	40.0000000	ppb		0.00
84) 8260-1,4-DICHLOROBENZE...	10.982	152	496962	40.0000000	ppb		0.00
96) AP9-PENTAFLUOROBENZENE	5.635	168	726011	40.0000000	ppb		0.00
114) AP9-1,4-DIFLUOROBENZENE	6.123	114	1353317	40.0000000	ppb		0.00
122) AP9-2-BROMO-1-CHLOROPR...	7.806	79	214756	40.0000000	ppb		0.00
128) AP9-1,4-DICHLOROBENZEN...	10.982	152	496962	40.0000000	ppb		0.00
System Monitoring Compounds							
33) DIBROMOFLUOROMETHANE	5.215	111	408776	39.7828720	ppb		0.00
Spiked Amount 40.000	Range 76 - 123		Recovery = 99.46%				
46) a,a,a-Trifluorotoluene	6.696	146	676899	39.6671997	ppb		0.00
Spiked Amount 40.000	Range 87 - 117		Recovery = 99.17%				
50) TOLUENE-D8	7.354	98	1684207	40.0870644	ppb		0.00
Spiked Amount 40.000	Range 89 - 115		Recovery = 100.22%				
68) 4-BROMOFLUOROBENZENE	9.915	95	545242	38.4950561	ppb		0.00
Spiked Amount 40.000	Range 70 - 129		Recovery = 96.24%				
Target Compounds							Qvalue
16) ACETONE	3.581	43	6942	14.3235492	ppb		89
19) METHYLENE CHLORIDE	3.538	84	1283	0.6416246	ppb		92
51) TOLUENE	7.397	91	1941	0.2272538	ppb		96
63) M&P-XYLENE	8.952	106	857	0.2597282	ppb		81
74) 4-ETHYLTOLUENE	10.134	105	1109	0.1311681	ppb	#	46
79) 1,2,4-Trimethylbenzene	10.604	105	1865	0.2791324	ppb	#	71
86) 1,2,3-TRIMETHYLBENZENE	11.006	105	1090	0.1684210	ppb	#	34
92) Naphthalene	13.012	128	10298	2.1867023	ppb	#	85

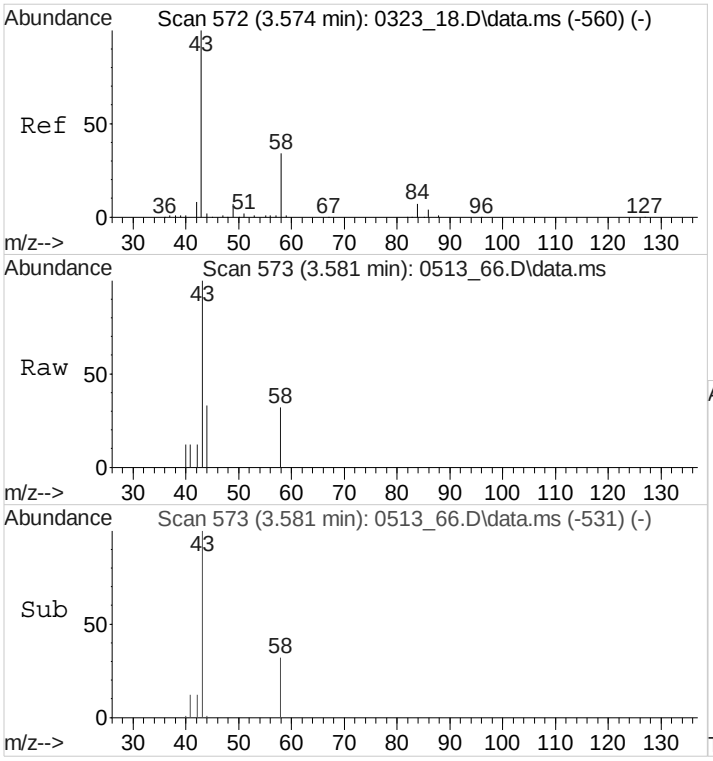
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\051316\
Data File : 0513 66.D
Acq On : 14 May 2016 8:04 am
Operator : 605
Sample : L835437-04 5x WG872493 V8260
Misc : soil
ALS Vial : 66 Sample Multiplier: 5
InstName : VOCMS26

Quant Time: Sep 21 16:00:34 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 11:51:41 2016
Response via : Initial Calibration

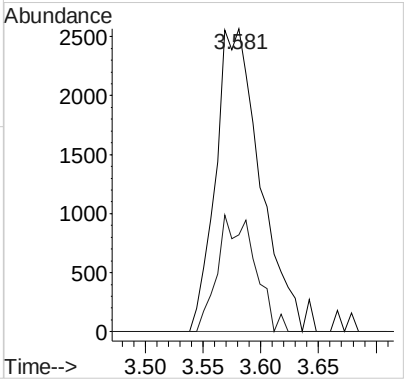


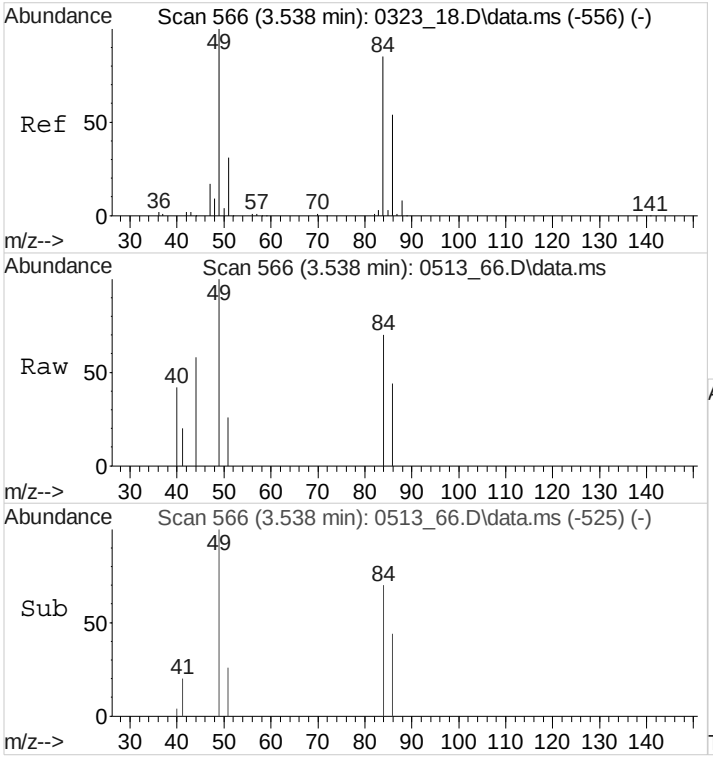


#16
ACETONE
Concen: 14.3235492 ppb
RT: 3.581 min Scan# 573
Delta R.T. 0.007 min
Lab File: 0513 66.D
Acq: 14 May 2016 8:04 am

Tgt Ion: 43 Resp: 6942

Ion	Ratio	Lower	Upper
43	100		
58	31.9	30.6	46.0

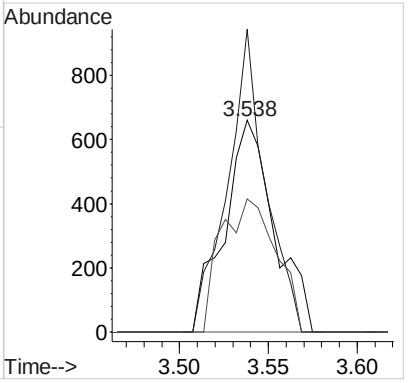


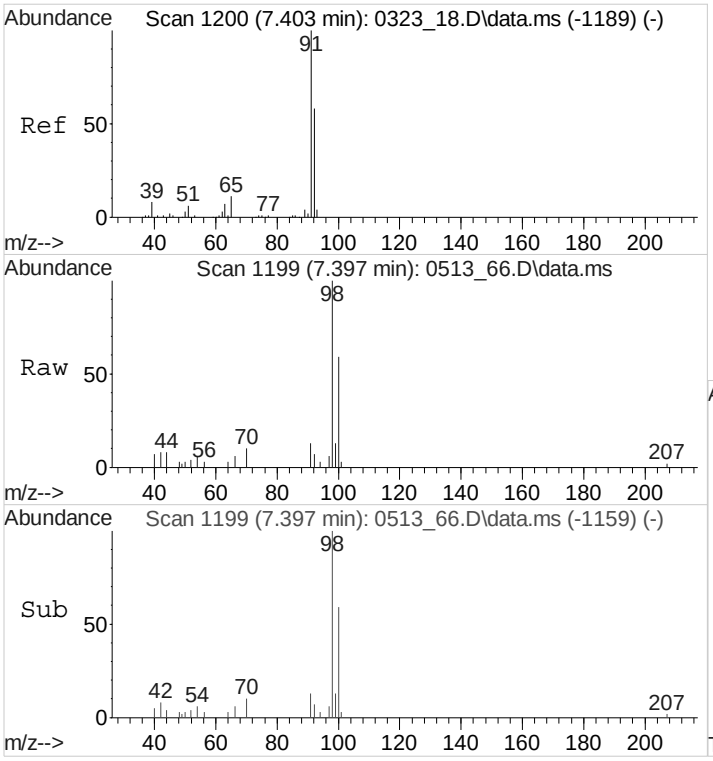


#19
METHYLENE CHLORIDE
Concen: 0.6416246 ppb
RT: 3.538 min Scan# 566
Delta R.T. 0.000 min
Lab File: 0513_66.D
Acq: 14 May 2016 8:04 am

Tgt Ion: 84 Resp: 1283

Ion	Ratio	Lower	Upper
84	100		
49	108.9	95.1	142.7
86	70.1	51.5	77.3

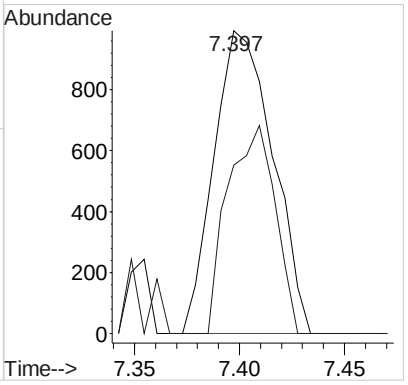


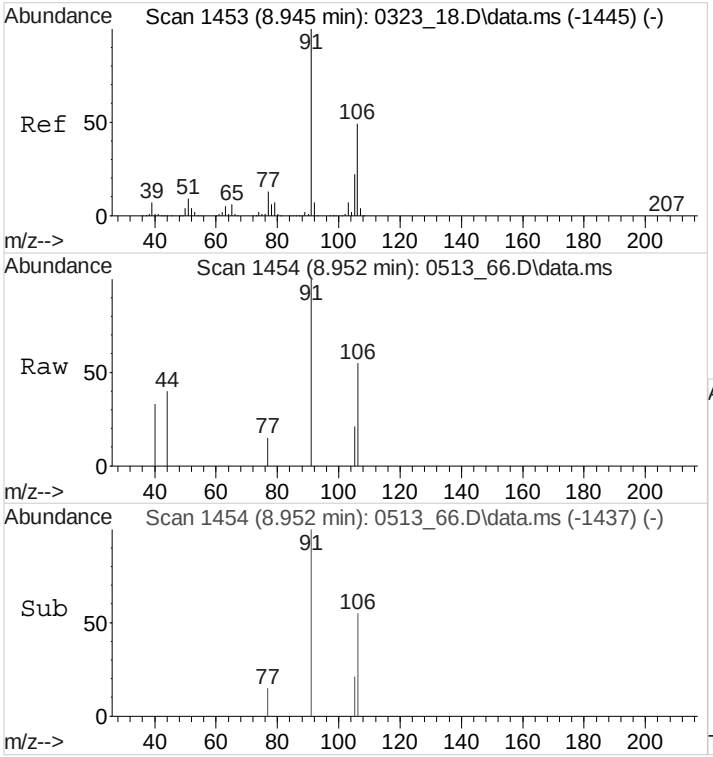


#51
TOLUENE
Concen: 0.2272538 ppb
RT: 7.397 min Scan# 1199
Delta R.T. -0.006 min
Lab File: 0513 66.D
Acq: 14 May 2016 8:04 am

Tgt Ion: 91 Resp: 1941

Ion	Ratio	Lower	Upper
91	100		
92	55.4	46.6	69.8

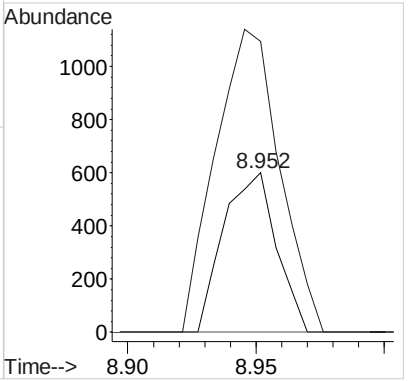


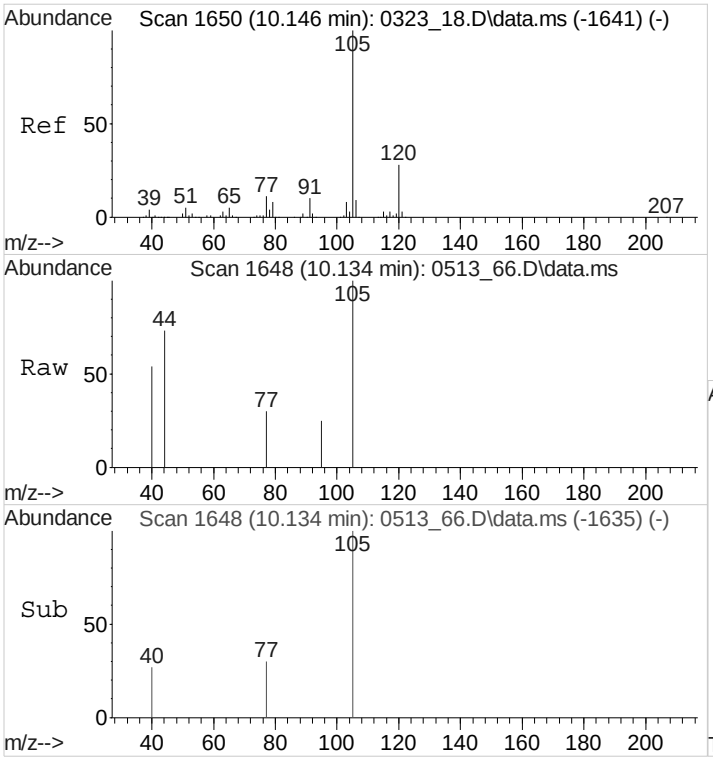


#63
M&P-XYLENE
Concen: 0.2597282 ppb
RT: 8.952 min Scan# 1454
Delta R.T. 0.006 min
Lab File: 0513_66.D
Acq: 14 May 2016 8:04 am

Tgt Ion:106 Resp: 857

Ion	Ratio	Lower	Upper
106	100		
91	231.5	162.3	243.5

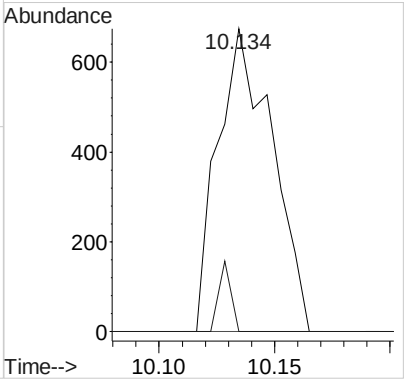


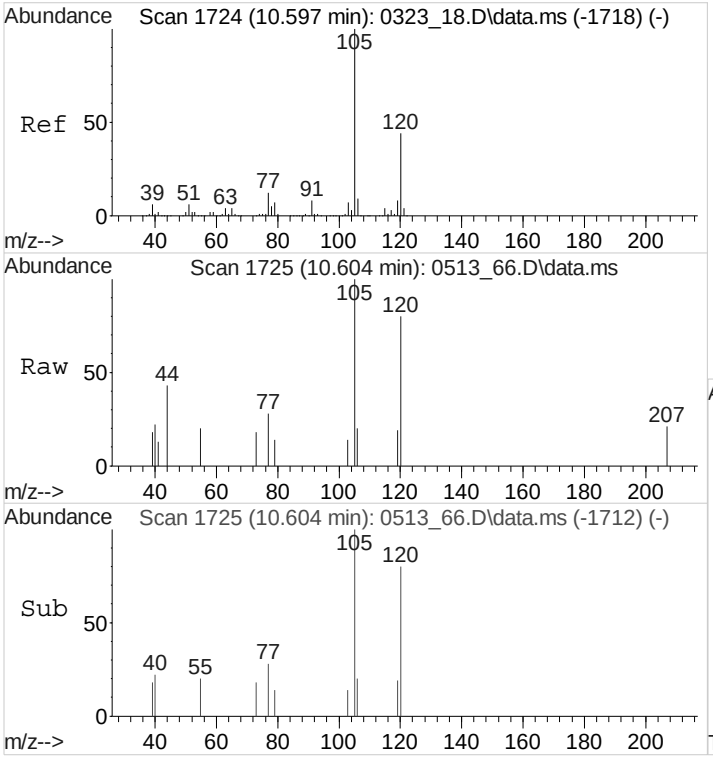


#74
4-ETHYLTOLUENE
Concen: 0.1311681 ppb
RT: 10.134 min Scan# 1648
Delta R.T. -0.012 min
Lab File: 0513 66.D
Acq: 14 May 2016 8:04 am

Tgt Ion:105 Resp: 1109

Ion	Ratio	Lower	Upper
105	100		
120	0.0	22.7	34.1#

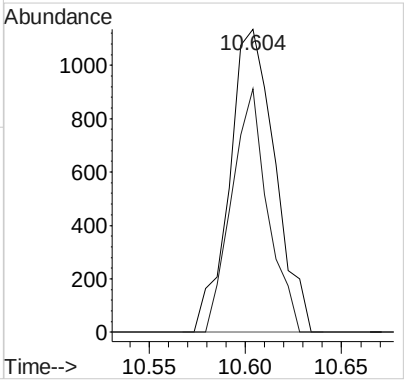


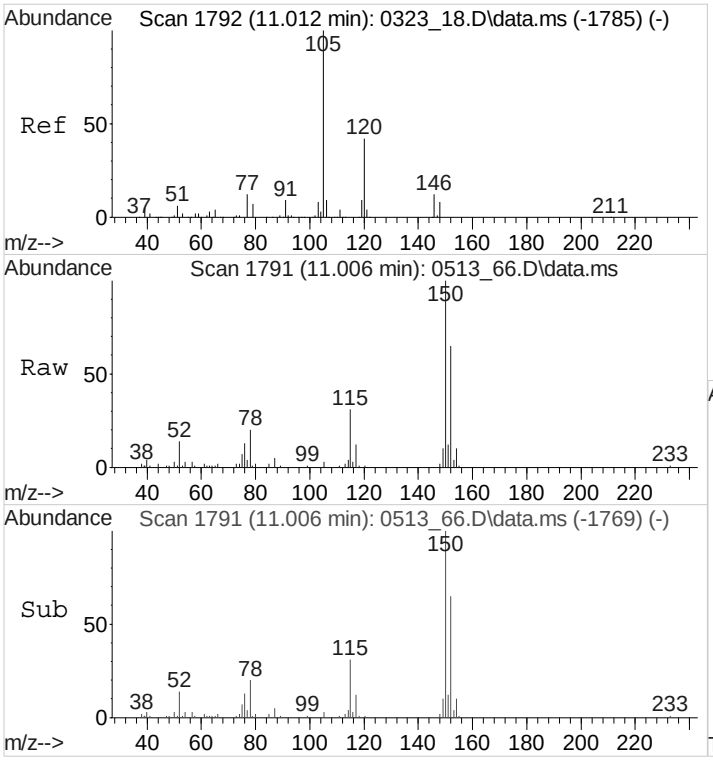


#79
1,2,4-Trimethylbenzene
Concen: 0.2791324 ppb
RT: 10.604 min Scan# 1725
Delta R.T. 0.006 min
Lab File: 0513_66.D
Acq: 14 May 2016 8:04 am

Tgt Ion:105 Resp: 1865

Ion	Ratio	Lower	Upper
105	100		
120	63.7	35.9	53.9#

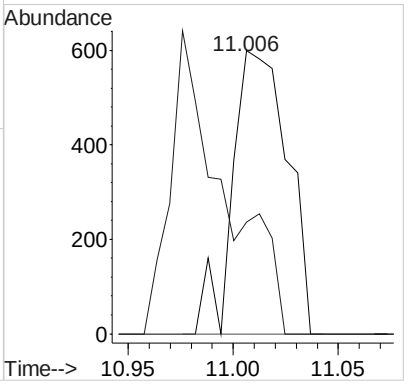


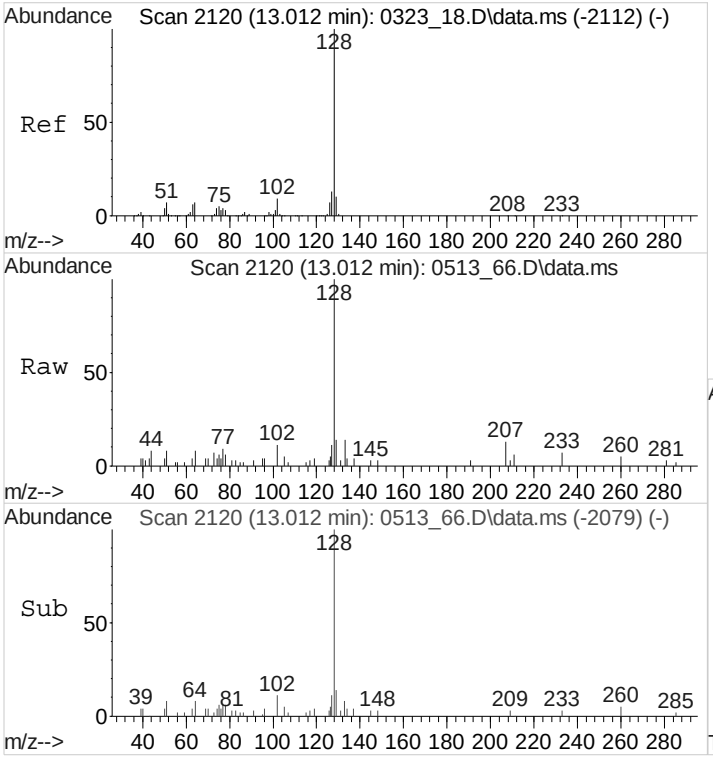


#86
1,2,3-TRIMETHYLBENZENE
Concen: 0.1684210 ppb
RT: 11.006 min Scan# 1791
Delta R.T. -0.006 min
Lab File: 0513 66.D
Acq: 14 May 2016 8:04 am

Tgt Ion:105 Resp: 1090

Ion	Ratio	Lower	Upper
105	100		
120	0.0	33.6	50.4#

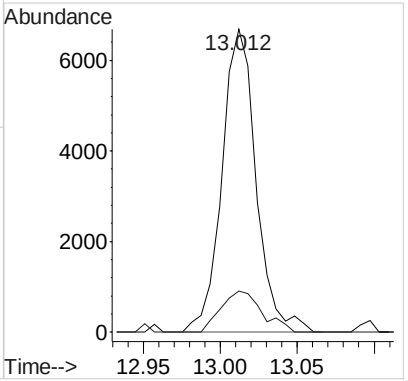




#92
Naphthalene
Concen: 2.1867023 ppb
RT: 13.012 min Scan# 2120
Delta R.T. 0.000 min
Lab File: 0513_66.D
Acq: 14 May 2016 8:04 am

Tgt Ion:128 Resp: 10298

Ion	Ratio	Lower	Upper
128	100		
129	16.3	8.6	13.0#



Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

Injection Log

Instrument ID : VOCMS7
Computer Name : VOCCOMPK
Released By : Glen Norton
Date Released : 9/21/2016 3:40:22 PM
Run ID : 051716
Signature : _____

#	File ID	Sample ID	Method	WG	Product	Matrix	Account #	State	Dil.	Mult.	Injected	Misc.
1	0517_01	INSTBLK	V807B15P						1	1	05/17/16 0530	"water"
2	0517_02	ICV VMS 25 PPB	V807B15P						1	1	05/17/16 0549	"water"
2	0517_02-1	ICV VMS 25 PPB	V807B15P						1	1	05/17/16 0549	"water"
3	0517_02T	ICV VMS 25 ppb	V807B15P							1	05/17/16 0549	
3	0517_02T-1	ICV VMS 25 ppb	V807B15P							1	05/17/16 0549	
4	0517_03	AP9CV 10A PPB	V807B15P						1	1	05/17/16 0609	"water"
5	0517_04	LCS	V807B15P	WG873015	V624TTO	WW			1	1	05/17/16 0628	"water"
5	0517_04-2	LCS	V807B15P	WG873015	V8260	GW	CESAOR		1	1	05/17/16 0628	"water"
6	0517_05	LCSD	V807B15P	WG873015	V624TTO	WW			1	1	05/17/16 0647	"water"
6	0517_05-2	LCSD	V807B15P	WG873015	V8260	GW	CESAOR		1	1	05/17/16 0647	"water"
7	0517_06	LCSAP9	V807B15P	WG873015	V624TTO	WW			1	1	05/17/16 0706	"water"
7	0517_06-2	LCSAP9	V807B15P	WG873015	V8260	GW	CESAOR		1	1	05/17/16 0706	"water"
8	0517_07	INSTBLK	V807B15P						1	1	05/17/16 0726	"water"
9	0517_08	BLANK	V807B15P						1	1	05/17/16 0745	"water"
10	0517_09	DNR	V807B15P						1	1	05/17/16 1134	"water"
11	0517_10	L835437-05	V807B15P	WG873015	V8260	GW	WESSOLLCO	WY	1	1	05/17/16 1154	"water"
12	0517_11	L834403-08	V807B15P	WG873015	V8260	GW	CESAOR	OR	10	10	05/17/16 1217	"water"
13	0517_12	L834403-10	V807B15P	WG873015	V8260	GW	CESAOR	OR	25	25	05/17/16 1236	"water"
14	0517_13	L834434-01	V807B15P	WG873015	V8260	GW	MEMCMO	MO	100	100	05/17/16 1255	"water"
15	0517_14	MS	V807B15P	WG873015	V624TTO	WW			1	1	05/17/16 1315	"water"
15	0517_14-2	MS	V807B15P	WG873015	V8260	GW	CESAOR		1	1	05/17/16 1315	"water"
16	0517_15	MSD	V807B15P	WG873015	V624TTO	WW			1	1	05/17/16 1334	"water"

Environmental Science Corporation
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Instrument ID : VOCMS7
Computer Name : VOCCOMPK
Released By : Glen Norton
Date Released : 9/21/2016 3:40:22 PM
Run ID : 051716
Signature : _____

#	File ID	Sample ID	Method	WG	Product	Matrix	Account #	State	Dil.	Mult.	Injected	Misc.
16	0517_15-2	MSD	V807B15P	WG873015	V8260	GW	CESAOR		1	1	05/17/16 1334	"water"
17	0517_16	INSTBLK	V807B15P						1	1	05/17/16 1353	"water"
18	0517_17	L834223-01	V807B15P	WG873015	V8260MISC	GW	GREENENVA	VA	20	20	05/17/16 1412	"water"
19	0517_18	L835717-01	V807B15P	WG873015	V8260	GW	BERPETDCO	CO	1	1	05/17/16 1432	"water"
20	0517_19	L835103-04	V807B15P	WG873015	V8260	GW	GEOSERSTN	TN	1	1	05/17/16 1451	"water"
21	0517_20	L835702-29	V807B15P	WG873015	V8260	GW	WATENVSOH	MI	1	1	05/17/16 1510	"water"
22	0517_21	L835702-30	V807B15P	WG873015	V8260	GW	WATENVSOH	MI	1	1	05/17/16 1529	"water"
23	0517_22	L835702-31	V807B15P	WG873015	V8260	GW	WATENVSOH	MI	1	1	05/17/16 1549	"water"
24	0517_23	L835717-02	V807B15P	WG873015	V8260	GW	BERPETDCO	CO	500	500	05/17/16 1608	"water"
25	0517_24	L835717-04	V807B15P	WG873015	V8260	GW	BERPETDCO	CO	500	500	05/17/16 1627	"water"
26	0517_25	L835717-05	V807B15P	WG873015	V8260	GW	BERPETDCO	CO	50	50	05/17/16 1646	"water"
27	0517_26	L835717-06	V807B15P	WG873015	V8260	GW	BERPETDCO	CO	500	500	05/17/16 1706	"water"
28	0517_27	L835717-07	V807B15P	WG873015	V8260	GW	BERPETDCO	CO	200	200	05/17/16 1725	"water"
29	0517_28	DNR L835823-01	V807B15P	WG873015					25	25	05/17/16 1805	"water"
30	0517_32	L835882-05	V807B15P	WG873015	V624TTO	WW	ZEPDTX	TX	1	1	05/17/16 1824	"water"
31	0517_33	L835882-06	V807B15P	WG873015	V624TTO	WW	ZEPDTX	TX	1	1	05/17/16 1843	"water"
32	0517_34	L835882-07	V807B15P	WG873015	V624TTO	WW	ZEPDTX	TX	1	1	05/17/16 1903	"water"
33	0517_35	L835882-08	V807B15P	WG873015	V624TTO	WW	ZEPDTX	TX	1	1	05/17/16 1922	"water"
34	0517_36	INSTBLK	V807B15P						1	1	05/18/16 0040	"water"
35	0517_37	ICV VMS 25 PPB	V807B15P						1	1	05/18/16 0100	"water"
35	0517_37-1	ICV VMS 25 PPB	V807B15P						1	1	05/18/16 0100	"water"
35	0517_37-2	ICV VMS 25 PPB	V807B15P						1	1	05/18/16 0100	"water"
36	0517_37T	ICV	V807B15P							1	05/18/16 0100	

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Run ID : 051716
Signature : _____

#	File ID	Sample ID	Method	WG	Product	Matrix	Account #	State	Dil.	Mult.	Injected	Misc.
37	0517_38	AP9CV 10A PPB	V807B15P						1	1	05/18/16 0119	"water"
38	0517_39	LCS	V807B15P	WG872208	V6200	GW			1	1	05/18/16 0138	"water"
39	0517_40	LCSD	V807B15P	WG872208	V6200	GW			1	1	05/18/16 0157	"water"
40	0517_41	LCSAP9	V807B15P	WG872208	V6200	GW			1	1	05/18/16 0216	"water"
41	0517_42	INSTBLK	V807B15P						1	1	05/18/16 0236	"water"
42	0517_43	BLANK	V807B15P	WG872208	V6200	GW			1	1	05/18/16 0255	"water"
43	0517_44	RL VMS 1PPB	V807B15P						1	1	05/18/16 0549	"water"
44	0517_45	L835152-15	V807B15P	WG872208	V6200	GW	EXCELSERV	NC	1	1	05/18/16 0621	"water"
45	0517_46	L835152-17	V807B15P	WG872208	V6200	GW	EXCELSERV	NC	1	1	05/18/16 0640	"water"
46	0517_47	L835152-06	V807B15P	WG872208	V6200	GW	EXCELSERV	NC	1	1	05/18/16 0659	"water"
47	0517_48	MS	V807B15P	WG872208	V6200	GW			1	1	05/18/16 0718	"water"
48	0517_49	MSD	V807B15P	WG872208	V6200	GW			1	1	05/18/16 0738	"water"
49	0517_50	INSTBLK	V807B15P						1	1	05/18/16 0757	"water"
50	0517_51	DNR L835152-07	V807B15P	WG872208					500	500	05/18/16 0816	"water"
51	0517_52	L835152-08	V807B15P	WG872208	V6200	GW	EXCELSERV	NC	1	1	05/18/16 0835	"water"
52	0517_53	L835152-09	V807B15P	WG872208	V6200	GW	EXCELSERV	NC	25	25	05/18/16 0855	"water"
53	0517_54	DNR L835152-10	V807B15P	WG872208					1	1	05/18/16 0914	"water"
54	0517_55	L835152-11	V807B15P	WG872208	V6200	GW	EXCELSERV	NC	1	1	05/18/16 0933	"water"
55	0517_56	L835152-12	V807B15P	WG872208	V6200	GW	EXCELSERV	NC	1	1	05/18/16 0952	"water"
56	0517_57	L835152-13	V807B15P	WG872208	V6200	GW	EXCELSERV	NC	1	1	05/18/16 1012	"water"
57	0517_58	L835152-14	V807B15P	WG872208	V6200	GW	EXCELSERV	NC	1	1	05/18/16 1031	"water"
58	0517_59	L835152-16	V807B15P	WG872208	V6200	GW	EXCELSERV	NC	1	1	05/18/16 1050	"water"
59	0517_60	L835202-01	V807B15P	WG872208	V6200	GW	WITHRAVS	NC	1	1	05/18/16 1109	"water"

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

Injection Log

Instrument ID : VOCMS7
Computer Name : VOCCOMPK
Released By : Glen Norton
Date Released : 9/21/2016 3:40:22 PM
Run ID : 051716
Signature : _____

#	File ID	Sample ID	Method	WG	Product	Matrix	Account #	State	Dil.	Mult.	Injected	Misc.
60	0517_61	L835202-02	V807B15P	WG872208	V6200	GW	WITHRAVS	NC	1	1	05/18/16 1129	"water"
61	0517_62	L835202-03	V807B15P	WG872208	V6200	GW	WITHRAVS	NC	1	1	05/18/16 1148	"water"
62	0517_63	L835202-04	V807B15P	WG872208	V6200	GW	WITHRAVS	NC	1	1	05/18/16 1207	"water"
63	0517_64	L835202-05	V807B15P	WG872208	V6200	GW	WITHRAVS	NC	1	1	05/18/16 1227	"water"
64	0517_65	L835202-06	V807B15P	WG872208	V6200	GW	WITHRAVS	NC	1	1	05/18/16 1246	"water"
65	0517_66	DNR L835202-07	V807B15P	WG872208					1	1	05/18/16 1305	"water"
66	0517_67	DNR L835202-08	V807B15P	WG872208					1	1	05/18/16 1324	"water"

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\051716\
Data File : 0517 02.D
Acq On : 17 May 2016 5:49 am
Operator : 605
Sample : ICV VMS 25 ppb
Misc : water
ALS Vial : 2 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: May 17 13:25:51 2016
Quant Method : C:\msdchem\1\methods\V807B15P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Mon Feb 15 15:00:04 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 8260-PENTAFLUOROBENZENE	4.328	168	447546	40.0000000	ppb	0.00
41) 8260-1,4-DIFLUOROBENZENE	4.657	114	794934	40.0000000	ppb	0.00
53) 8260-2-BROMO-1-CHLOROP...	5.819	79	143373	40.0000000	ppb	0.00
84) 8260-1,4-DICHLOROBENZE...	8.210	152	327824	40.0000000	ppb	0.00
96) AP9-PENTAFLUOROBENZENE	4.328	168	447546	40.0000000	ppb	0.00
114) AP9-1,4-DIFLUOROBENZENE	4.657	114	794934	40.0000000	ppb	0.00
122) AP9-2-BROMO-1-CHLOROPR...	5.819	79	143373	40.0000000	ppb	# 0.00
128) AP9-1,4-DICHLOROBENZEN...	8.210	152	327824	40.0000000	ppb	0.00
System Monitoring Compounds						
33) DIBROMOFLUOROMETHANE	4.091	111	250725	43.2316440	ppb	0.00
Spiked Amount 40.000	Range 78 - 121		Recovery = 108.08%			
46) a,a,a-Trifluorotoluene	5.022	146	417348	40.2125201	ppb	0.00
Spiked Amount 40.000	Range 85 - 114		Recovery = 100.53%			
50) TOLUENE-D8	5.484	98	1032588	42.5056832	ppb	0.00
Spiked Amount 40.000	Range 89 - 111		Recovery = 106.26%			
68) 4-BROMOFLUOROBENZENE	7.364	95	370127	40.6243416	ppb	0.00
Spiked Amount 40.000	Range 71 - 126		Recovery = 101.56%			
Target Compounds						Qvalue
3) PROPENE	1.682	41	29768	11.3293164	ppb	98
4) DICHLORODIFLUOROMETHANE	1.718	85	143208	20.5401399	ppb	99
5) CHLOROMETHANE	1.895	50	212498	21.2668028	ppb	99
6) VINYL CHLORIDE	1.962	62	199894	23.3335306	ppb	100
7) 1,3-BUTADIENE	1.974	39	169788	22.2037026	ppb	100
8) BROMOMETHANE	2.217	94	117721	27.7756036	ppb	99
9) CHLOROETHANE	2.303	64	109921	23.9279487	ppb	98
10) TRICHLOROFLUOROMETHANE	2.406	101	196021	22.9100644	ppb	97
11) DICHLOROFLUOROMETHANE	2.442	67	281355	24.3333473	ppb	96
12) ETHYL ETHER	2.601	59	121366	22.3399893	ppb	97
13) ACROLEIN	2.947	56	175534	134.2323123	ppb	99
14) 1,1-DICHLOROETHENE	2.747	61	227801	24.5752571	ppb	94
15) 1,1,2-TRICHLOROTRIFLUO...	2.759	101	120544	22.6735629	ppb	98
16) ACETONE	3.118	43	460494	109.3428040	ppb	99
17) IODOMETHANE	2.850	142	691626	129.2279159	ppb	98
18) CARBON DISULFIDE	2.789	76	446258	21.4010142	ppb	99
19) METHYLENE CHLORIDE	3.099	84	129393	20.7552489	ppb	93
20) ACRYLONITRILE	3.574	53	283139	110.5803132	ppb	99
21) n-Hexane	3.221	56	142564	21.3204314	ppb	93
22) TRANS-1,2-DICHLOROETHENE	3.197	96	121632	21.8507114	ppb	94
23) METHYL TERT-BUTYL ETHER	3.233	73	387466	23.4002631	ppb	95
24) 1,1-DICHLOROETHANE	3.550	63	277806	24.1786266	ppb	99
25) VINYL ACETATE	3.653	43	1703417	116.5184945	ppb	100
26) DI-ISOPROPYL ETHER	3.434	45	567758	23.1907286	ppb	100
27) 2,2-Dichloropropane	3.909	77	228846	24.0687824	ppb	95
28) CIS-1,2-DICHLOROETHENE	3.848	96	136295	22.5879780	ppb	97
29) 2-BUTANONE (MEK)	4.146	43	537971	105.5935996	ppb	100
30) BROMOCHLOROMETHANE	3.963	130	73473	22.5815935	ppb	91
31) TETRAHYDROFURAN	4.091	42	52719	21.3085898	ppb	99
32) CHLOROFORM	3.988	83	240778	23.2085427	ppb	99
34) 1,1,1-TRICHLOROETHANE	4.122	97	194837	22.6413900	ppb	98
35) CARBON TETRACHLORIDE	4.085	117	168165	22.1580544	ppb	93
36) 1,1-Dichloropropene	4.188	75	190504	23.4591757	ppb	96

Data Path : C:\msdchem\1\data\051716\
Data File : 0517 02.D
Acq On : 17 May 2016 5:49 am
Operator : 605
Sample : ICV VMS 25 ppb
Misc : water
ALS Vial : 2 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: May 17 13:25:51 2016
Quant Method : C:\msdchem\1\methods\V807B15P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Mon Feb 15 15:00:04 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
37) 2,2,4-TRIMETHYLPENTANE	4.225	57	646600	22.5629209 ppb		99
38) HEPTANE	4.261	43	290719	21.1006306 ppb		100
39) BENZENE	4.328	78	544292	22.4290201 ppb		99
40) 1,2-DICHLOROETHANE	4.444	62	191877	26.0996710 ppb		96
42) TRICHLOROETHENE	4.657	130	121094	21.3636418 ppb		97
43) 1,2-DICHLOROPROPANE	4.967	62	115770	22.4638970 ppb		98
44) DIBROMOMETHANE	4.912	93	80637	21.5167222 ppb		95
45) BROMODICHLOROMETHANE	4.991	83	192204	22.6262630 ppb		99
47) 2-CHLOROETHYL VINYL ETHER	5.302	63	42224	58.4172389 ppb		97
48) CIS-1,3-DICHLOROPROPENE	5.369	75	249186	22.5673891 ppb		99
49) 4-METHYL-2-PENTANONE (...	5.728	43	870591	107.9458888 ppb		98
51) TOLUENE	5.515	91	557351	21.6905325 ppb		99
52) TRANS-1,3-DICHLOROPROPENE	5.770	75	214094	23.0479988 ppb		97
54) 1,1,2-TRICHLOROETHANE	5.880	97	112910	21.8875618 ppb		98
55) TETRACHLOROETHENE	5.770	164	89507	20.8330186 ppb		98
56) 1,3-Dichloropropane	6.068	76	209186	22.5518729 ppb		100
57) 2-HEXANONE	6.269	58	380043	103.7534153 ppb		99
58) CHLORODIBROMOMETHANE	6.007	129	119077	20.0437348 ppb		98
59) 1,2-DIBROMOETHANE	6.184	107	114208	21.5675655 ppb		97
60) CHLOROBENZENE	6.525	112	329067	20.9632850 ppb		95
61) 1,1,1,2-TETRACHLOROETHANE	6.555	133	105434	20.5027931 ppb	#	97
62) ETHYLBENZENE	6.512	106	195304	22.0007849 ppb		100
63) M&P-XYLENE	6.610	106	451936	41.8545796 ppb		96
64) O-XYLENE	6.920	106	231000	21.7102886 ppb		97
65) STYRENE	6.956	104	365827	20.8712107 ppb		93
66) Bromoform	7.005	173	72991	20.0081950 ppb		99
67) Isopropylbenzene	7.133	105	589375	20.8934850 ppb		99
69) Bromobenzene	7.455	77	270148	22.4653312 ppb		96
70) 1,1,2,2-TETRACHLOROETHANE	7.492	83	159329	19.9130145 ppb		99
71) 1,2,3-TRICHLOROPROPANE	7.607	110	36541	20.3341455 ppb		94
72) TRANS-1,4-DICHLORO-2-B...	7.626	53	48454	21.6777223 ppb		96
73) n-Propylbenzene	7.437	91	723514	22.0757417 ppb		99
74) 4-ETHYLTOLUENE	7.516	105	569487	20.5973173 ppb		99
75) 2-Chlorotoluene	7.577	126	122759	20.4940314 ppb		96
76) 4-Chlorotoluene	7.699	91	426865	21.4425745 ppb		96
77) 1,3,5-Trimethylbenzene	7.571	105	473341	20.8871185 ppb		99
78) tert-Butylbenzene	7.820	119	388831	20.3066399 ppb		94
79) 1,2,4-Trimethylbenzene	7.875	105	477557	20.8287123 ppb		99
80) sec-Butylbenzene	7.960	105	642320	20.8708505 ppb		100
81) 1,3-DICHLOROBENZENE	8.155	146	239421	20.5326878 ppb		98
82) p-Isopropyltoluene	8.058	119	505543	20.5806397 ppb		98
83) DICYCLOPENTADIENE	8.070	66	651939	20.4345933 ppb		99
85) 1,4-DICHLOROBENZENE	8.222	146	229526	21.4126884 ppb		87
86) 1,2,3-TRIMETHYLBENZENE	8.216	105	471317	22.9725271 ppb		100
87) 1,2-DICHLOROBENZENE	8.556	146	226500	22.8087325 ppb		99
88) n-Butylbenzene	8.392	91	535005	24.1538652 ppb		99
89) 1,2-Dibromo-3-chloropr...	9.201	157	26468	20.1370806 ppb		93
90) 1,2,4-Trichlorobenzene	9.749	180	141614	20.8272306 ppb		98
91) HEXACHLORO-1,3-BUTADIENE	9.706	225	76173	19.7842994 ppb		98
92) Naphthalene	10.023	128	381975	20.7547479 ppb		99
93) 1,2,3-Trichlorobenzene	10.181	180	126116	20.1535802 ppb		95
94) 1-Methylnaphthalene	10.838	142	162556	17.1874233 ppb		97
95) 2-Methylnaphthalene	10.953	142	138319	16.7627143 ppb		98
97) ETHANOL	2.686	45	12059	121.4326315 ppb	#	86

Data Path : C:\msdchem\1\data\051716\
Data File : 0517 02.D
Acq On : 17 May 2016 5:49 am
Operator : 605
Sample : ICV VMS 25 ppb
Misc : water
ALS Vial : 2 Sample Multiplier: 1
InstName : VOCMS7

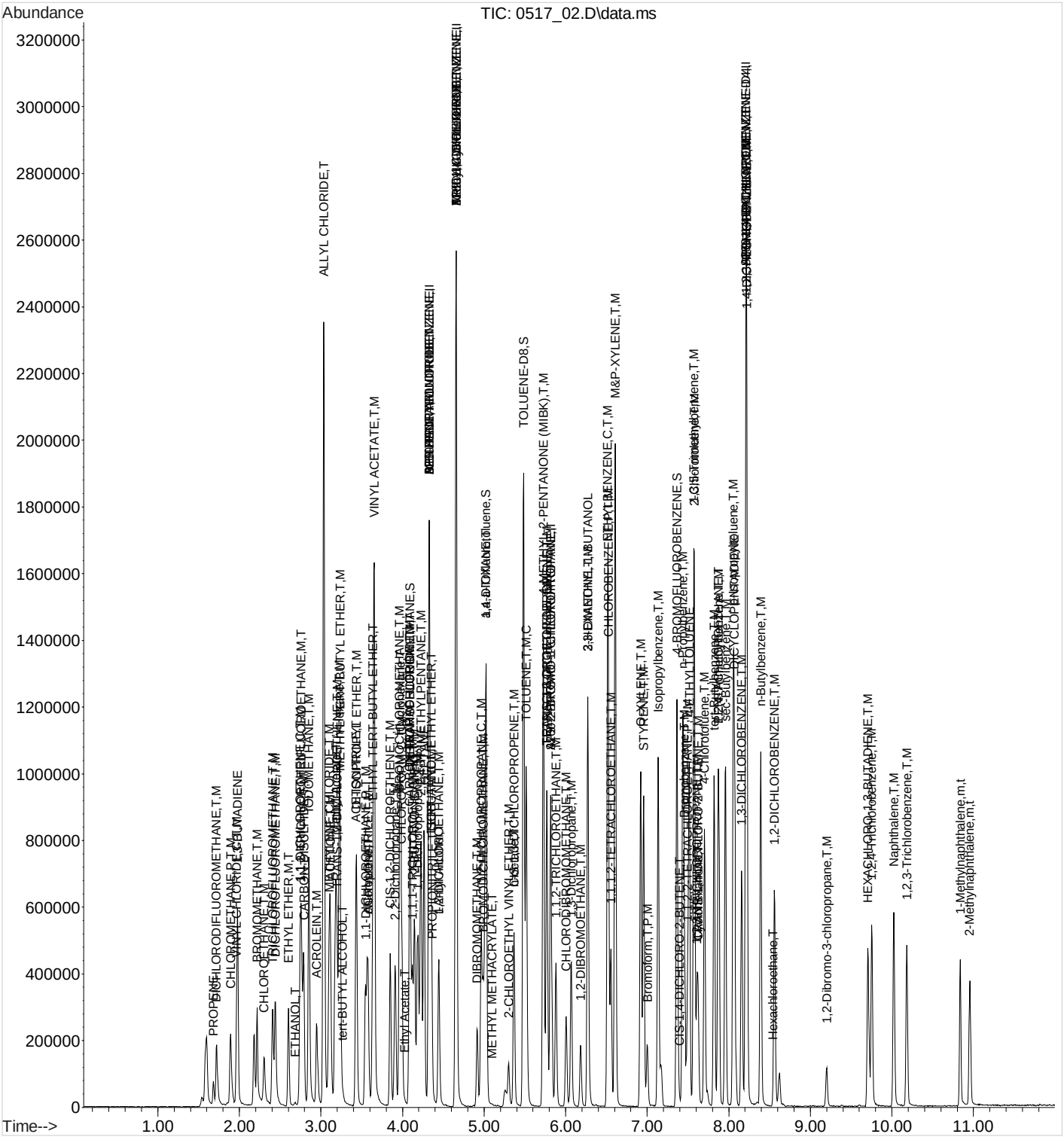
Quant Time: May 17 13:25:51 2016
Quant Method : C:\msdchem\1\methods\V807B15P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Mon Feb 15 15:00:04 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
100) Methyl Acetate	3.179	43	543822	108.4808038 ppb	#	99
101) ACETONITRILE	3.428	41	86144	96.4723908 ppb	#	39
102) ALLYL CHLORIDE	3.033	76	391463	134.8126365 ppb		93
103) tert-BUTYL ALCOHOL	3.264	59	18814	10.4571447 ppb	#	61
104) chloroprene	3.574	53	281844	30.1232400 ppb	#	26
105) ETHYL TERT-BUTYL ETHER	3.635	59	442298	22.5908451 ppb		99
106) PROPIONITRILE	4.365	54	526	0.5889538 ppb	#	1
107) Ethyl Acetate	4.024	43	6535	0.9643346 ppb	#	85
108) METHACRYLONITRILE	4.328	67	1601	0.6701271 ppb	#	1
109) Cyclohexane	3.975	84	207836	16.6932856 ppb		95
111) ISOBUTANOL	4.353	43	135491	308.2116301 ppb	#	76
112) t-Amyl Alcohol	4.444	59	72602	115.4078418 ppb		91
113) TERT-AMYL METHYL ETHER	4.353	73	385968	19.8218441 ppb	#	55
116) Methyl Cyclohexane	4.657	83	254113	17.1820504 ppb		96
118) METHYL METHACRYLATE	5.095	41	1084	0.1576896 ppb	#	21
119) 1,4-DIOXANE	5.022	88	5477	75.4212962 ppb	#	46
120) n-octane	5.369	85	3416	0.5572330 ppb	#	29
121) 3,3-DIMETHYL-1-BUTANOL	6.269	57	129137	118.4398560 ppb	#	45
124) CIS-1,4-DICHLORO-2-BUTENE	7.394	53	2805	1.3679297 ppb	#	8
125) Cyclohexanone	7.626	55	968	0.5329245 ppb	#	1
126) PENTACHLOROETHANE	7.875	117	15590	4.2658263 ppb	#	16
127) Hexachloroethane	8.538	117	904	0.1989515 ppb	#	15

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\051716\
Data File : 0517 02.D
Acq On : 17 May 2016 5:49 am
Operator : 605
Sample : ICV VMS 25 ppb
Misc : water
ALS Vial : 2 Sample Multiplier: 1
InstName : VOCMS7

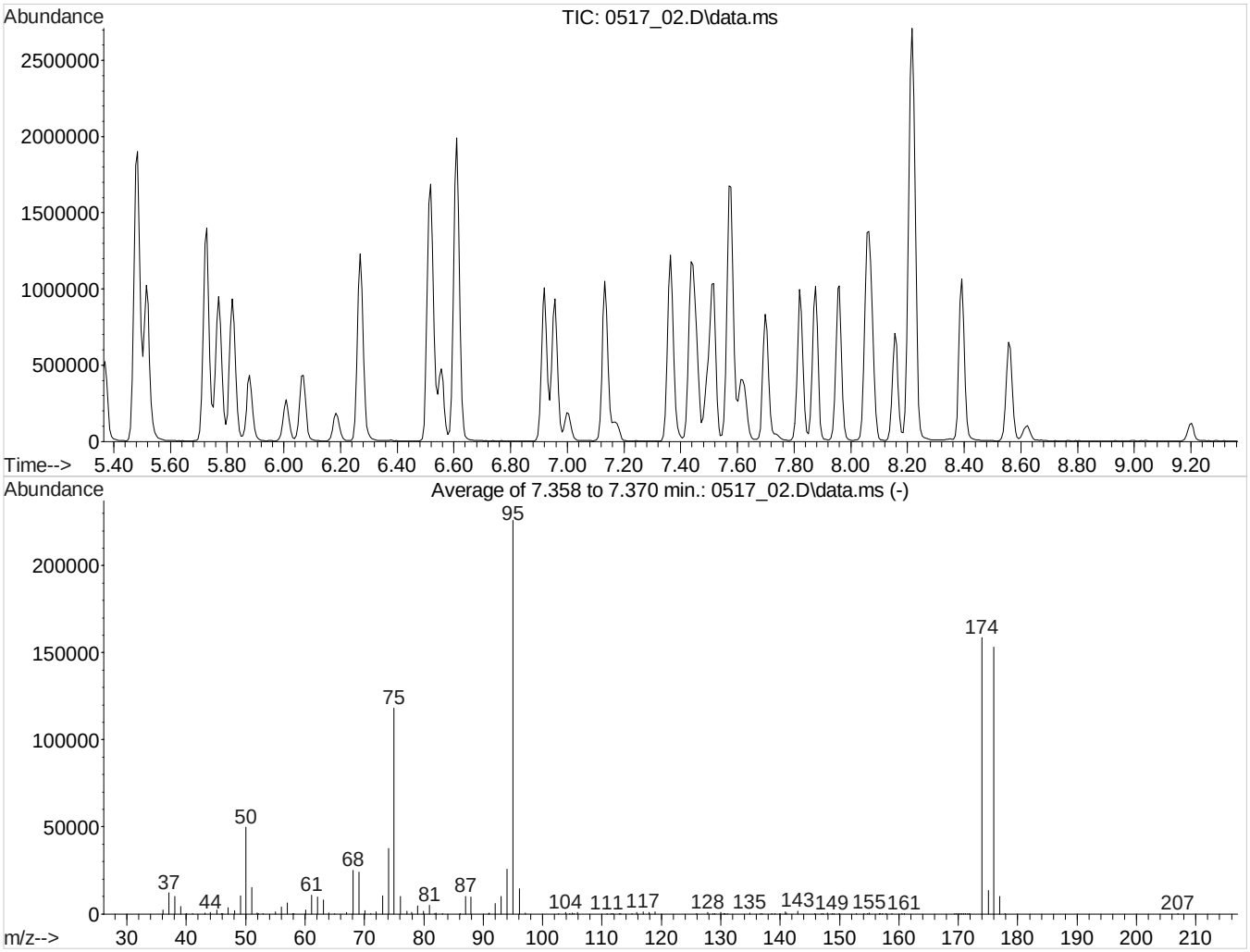
Quant Time: May 17 13:25:51 2016
Quant Method : C:\msdchem\1\methods\V807B15P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Mon Feb 15 15:00:04 2016
Response via : Initial Calibration



Data Path : C:\msdchem\1\data\051716\
Data File : 0517 02.D
Acq On : 17 May 2016 5:49 am
Operator : 605
Sample : ICV VMS 25 ppb
Misc : water
ALS Vial : 2 Sample Multiplier: 1

Integration File: RTEINT.P

Method : C:\msdchem\1\methods\V807B15P.M
Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
Last Update : Mon Feb 15 15:00:04 2016



AutoFind: Scans 1196, 1197, 1198; Background Corrected with Scan 1189

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	22.0	49680	PASS
75	95	30	60	52.3	118312	PASS
95	95	100	100	100.0	226048	PASS
96	95	5	9	6.3	14325	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	150	70.2	158699	PASS
175	174	5	9	8.5	13505	PASS
176	174	95	101	96.6	153237	PASS
177	176	5	9	6.5	10018	PASS

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\051716\
Data File : 0517 04.D
Acq On : 17 May 2016 6:28 am
Operator : 605
Sample : LCS 1x WG873015
Misc : water
ALS Vial : 4 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: May 17 13:26:01 2016
Quant Method : C:\msdchem\1\methods\V807B15P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Mon Feb 15 15:00:04 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 8260-PENTAFLUOROBENZENE	4.328	168	443664	40.0000000	ppb	0.00
41) 8260-1,4-DIFLUOROBENZENE	4.657	114	791785	40.0000000	ppb	0.00
53) 8260-2-BROMO-1-CHLOROP...	5.819	79	140997	40.0000000	ppb	0.00
84) 8260-1,4-DICHLOROBENZE...	8.210	152	324573	40.0000000	ppb	0.00
96) AP9-PENTAFLUOROBENZENE	4.328	168	443664	40.0000000	ppb	0.00
114) AP9-1,4-DIFLUOROBENZENE	4.657	114	791785	40.0000000	ppb	0.00
122) AP9-2-BROMO-1-CHLOROPR...	5.819	79	140997	40.0000000	ppb	# 0.00
128) AP9-1,4-DICHLOROBENZEN...	8.210	152	324573	40.0000000	ppb	0.00
System Monitoring Compounds						
33) DIBROMOFLUOROMETHANE	4.091	111	247202	42.9971412	ppb	0.00
Spiked Amount 40.000	Range 78 - 121		Recovery = 107.49%			
46) a,a,a-Trifluorotoluene	5.022	146	411448	39.8017083	ppb	0.00
Spiked Amount 40.000	Range 85 - 114		Recovery = 99.50%			
50) TOLUENE-D8	5.484	98	1017347	42.0448530	ppb	0.00
Spiked Amount 40.000	Range 89 - 111		Recovery = 105.11%			
68) 4-BROMOFLUOROBENZENE	7.364	95	361145	40.3064617	ppb	0.00
Spiked Amount 40.000	Range 71 - 126		Recovery = 100.77%			
Target Compounds						Qvalue
3) PROPENE	1.682	41	51263	19.6807461	ppb	98
4) DICHLORODIFLUOROMETHANE	1.725	85	141352	20.4513304	ppb	98
5) CHLOROMETHANE	1.895	50	203387	20.5330771	ppb	99
6) VINYL CHLORIDE	1.962	62	194877	22.9469396	ppb	99
7) 1,3-BUTADIENE	1.974	39	169044	22.2998355	ppb	98
8) BROMOMETHANE	2.217	94	121595	28.9406825	ppb	98
9) CHLOROETHANE	2.303	64	108327	23.7872919	ppb	100
10) TRICHLOROFLUOROMETHANE	2.406	101	198970	23.4582061	ppb	98
11) DICHLOROFLUOROMETHANE	2.442	67	279099	24.3494405	ppb	97
12) ETHYL ETHER	2.601	59	122630	22.7701630	ppb	98
13) ACROLEIN	2.947	56	154356	119.0701299	ppb	99
14) 1,1-DICHLOROETHENE	2.747	61	230676	25.1031572	ppb	96
15) 1,1,2-TRICHLOROTRIFLUO...	2.765	101	126348	23.9732014	ppb	94
16) ACETONE	3.118	43	425410	101.8960655	ppb	100
17) IODOMETHANE	2.850	142	708224	133.4870571	ppb	97
18) CARBON DISULFIDE	2.789	76	450638	21.8001579	ppb	98
19) METHYLENE CHLORIDE	3.100	84	132246	21.3984934	ppb	99
20) ACRYLONITRILE	3.574	53	288415	113.6264543	ppb	100
21) n-Hexane	3.221	56	144084	21.7362871	ppb	96
22) TRANS-1,2-DICHLOROETHENE	3.197	96	127401	23.0873486	ppb	98
23) METHYL TERT-BUTYL ETHER	3.233	73	383080	23.3378105	ppb	95
24) 1,1-DICHLOROETHANE	3.550	63	280954	24.6665674	ppb	100
25) VINYL ACETATE	3.653	43	1670304	115.2531749	ppb	100
26) DI-ISOPROPYL ETHER	3.434	45	549328	22.6342629	ppb	100
27) 2,2-Dichloropropane	3.909	77	220895	23.4358209	ppb	95
28) CIS-1,2-DICHLOROETHENE	3.848	96	138989	23.2359991	ppb	97
29) 2-BUTANONE (MEK)	4.146	43	513131	101.5992430	ppb	98
30) BROMOCHLOROMETHANE	3.963	130	74683	23.1543213	ppb	95
31) TETRAHYDROFURAN	4.091	42	54225	22.1090761	ppb	99
32) CHLOROFORM	3.988	83	247528	24.0679384	ppb	99
34) 1,1,1-TRICHLOROETHANE	4.122	97	197977	23.2075813	ppb	96
35) CARBON TETRACHLORIDE	4.085	117	165641	22.0164527	ppb	99
36) 1,1-Dichloropropene	4.188	75	198569	24.6662760	ppb	97

Data Path : C:\msdchem\1\data\051716\
Data File : 0517 04.D
Acq On : 17 May 2016 6:28 am
Operator : 605
Sample : LCS 1x WG873015
Misc : water
ALS Vial : 4 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: May 17 13:26:01 2016
Quant Method : C:\msdchem\1\methods\V807B15P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Mon Feb 15 15:00:04 2016
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
37)	2,2,4-TRIMETHYLPENTANE	4.225	57	641820	22.5920873	ppb		100
38)	HEPTANE	4.261	43	289954	21.2292480	ppb		100
39)	BENZENE	4.328	78	543645	22.5983763	ppb		98
40)	1,2-DICHLOROETHANE	4.444	62	192071	26.3546589	ppb		97
42)	TRICHLOROETHENE	4.657	130	121930	21.5966822	ppb		97
43)	1,2-DICHLOROPROPANE	4.967	62	114392	22.2847887	ppb		99
44)	DIBROMOMETHANE	4.912	93	82647	22.1407662	ppb		96
45)	BROMODICHLOROMETHANE	4.992	83	192440	22.7441421	ppb		100
47)	2-CHLOROETHYL VINYL ETHER	5.302	63	35330	49.0737327	ppb		97
48)	CIS-1,3-DICHLOROPROPENE	5.369	75	253713	23.0687573	ppb		100
49)	4-METHYL-2-PENTANONE (...	5.728	43	860245	107.0872813	ppb		98
51)	TOLUENE	5.515	91	558460	21.8201285	ppb		100
52)	TRANS-1,3-DICHLOROPROPENE	5.770	75	211124	22.8186598	ppb		98
54)	1,1,2-TRICHLOROETHANE	5.880	97	110457	21.7728722	ppb		96
55)	TETRACHLOROETHENE	5.770	164	88929	21.0472864	ppb		98
56)	1,3-Dichloropropane	6.068	76	209952	23.0158763	ppb		99
57)	2-HEXANONE	6.269	58	369946	102.6988310	ppb		99
58)	CHLORODIBROMOMETHANE	6.007	129	122572	20.9797127	ppb		99
59)	1,2-DIBROMOETHANE	6.184	107	117285	22.5218765	ppb		96
60)	CHLOROBENZENE	6.525	112	333856	21.6267716	ppb		96
61)	1,1,1,2-TETRACHLOROETHANE	6.555	133	103619	20.4894001	ppb	#	99
62)	ETHYLBENZENE	6.512	106	191151	21.8958149	ppb		97
63)	M&P-XYLENE	6.610	106	452587	42.6211950	ppb		98
64)	O-XYLENE	6.920	106	229412	21.9243764	ppb		99
65)	STYRENE	6.957	104	377797	21.9173424	ppb		95
66)	Bromoform	7.005	173	71294	19.8723433	ppb		99
67)	Isopropylbenzene	7.133	105	599327	21.6043159	ppb		98
69)	Bromobenzene	7.455	77	266063	22.4984735	ppb		97
70)	1,1,2,2-TETRACHLOROETHANE	7.492	83	154006	19.5720953	ppb		100
71)	1,2,3-TRICHLOROPROPANE	7.614	110	36832	20.8482058	ppb		93
72)	TRANS-1,4-DICHLORO-2-B...	7.626	53	50385	22.9214864	ppb		96
73)	n-Propylbenzene	7.437	91	736359	22.8462784	ppb		99
74)	4-ETHYLTOLUENE	7.516	105	582956	21.4397700	ppb		99
75)	2-Chlorotoluene	7.577	126	123911	21.0349468	ppb		94
76)	4-Chlorotoluene	7.699	91	432728	22.1033896	ppb		98
77)	1,3,5-Trimethylbenzene	7.571	105	468724	21.0319286	ppb		99
78)	tert-Butylbenzene	7.820	119	396554	21.0589649	ppb		95
79)	1,2,4-Trimethylbenzene	7.875	105	477936	21.1965144	ppb		99
80)	sec-Butylbenzene	7.954	105	628642	20.7706265	ppb		100
81)	1,3-DICHLOROBENZENE	8.155	146	238986	20.8407587	ppb		98
82)	p-Isopropyltoluene	8.058	119	514378	21.2931863	ppb		97
83)	DICYCLOPENTADIENE	8.070	66	678933	21.6393124	ppb		99
85)	1,4-DICHLOROBENZENE	8.222	146	229128	21.5896613	ppb		89
86)	1,2,3-TRIMETHYLBENZENE	8.222	105	462882	22.7873759	ppb		100
87)	1,2-DICHLOROBENZENE	8.556	146	226683	23.0558030	ppb		99
88)	n-Butylbenzene	8.392	91	533575	24.3305892	ppb		99
89)	1,2-Dibromo-3-chloropr...	9.201	157	26645	20.4747903	ppb		91
90)	1,2,4-Trichlorobenzene	9.755	180	140328	20.8448141	ppb		98
91)	HEXACHLORO-1,3-BUTADIENE	9.706	225	75420	19.7849291	ppb		100
92)	Naphthalene	10.023	128	374800	20.5688713	ppb		99
93)	1,2,3-Trichlorobenzene	10.181	180	124322	20.0658871	ppb		98
94)	1-Methylnaphthalene	10.838	142	165528	17.6769606	ppb		98
95)	2-Methylnaphthalene	10.953	142	134589	16.4740517	ppb		99
97)	ETHANOL	2.680	45	10786	109.5640347	ppb	#	96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\051716\
Data File : 0517 04.D
Acq On : 17 May 2016 6:28 am
Operator : 605
Sample : LCS 1x WG873015
Misc : water
ALS Vial : 4 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: May 17 13:26:01 2016
Quant Method : C:\msdchem\1\methods\V807B15P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Mon Feb 15 15:00:04 2016
Response via : Initial Calibration

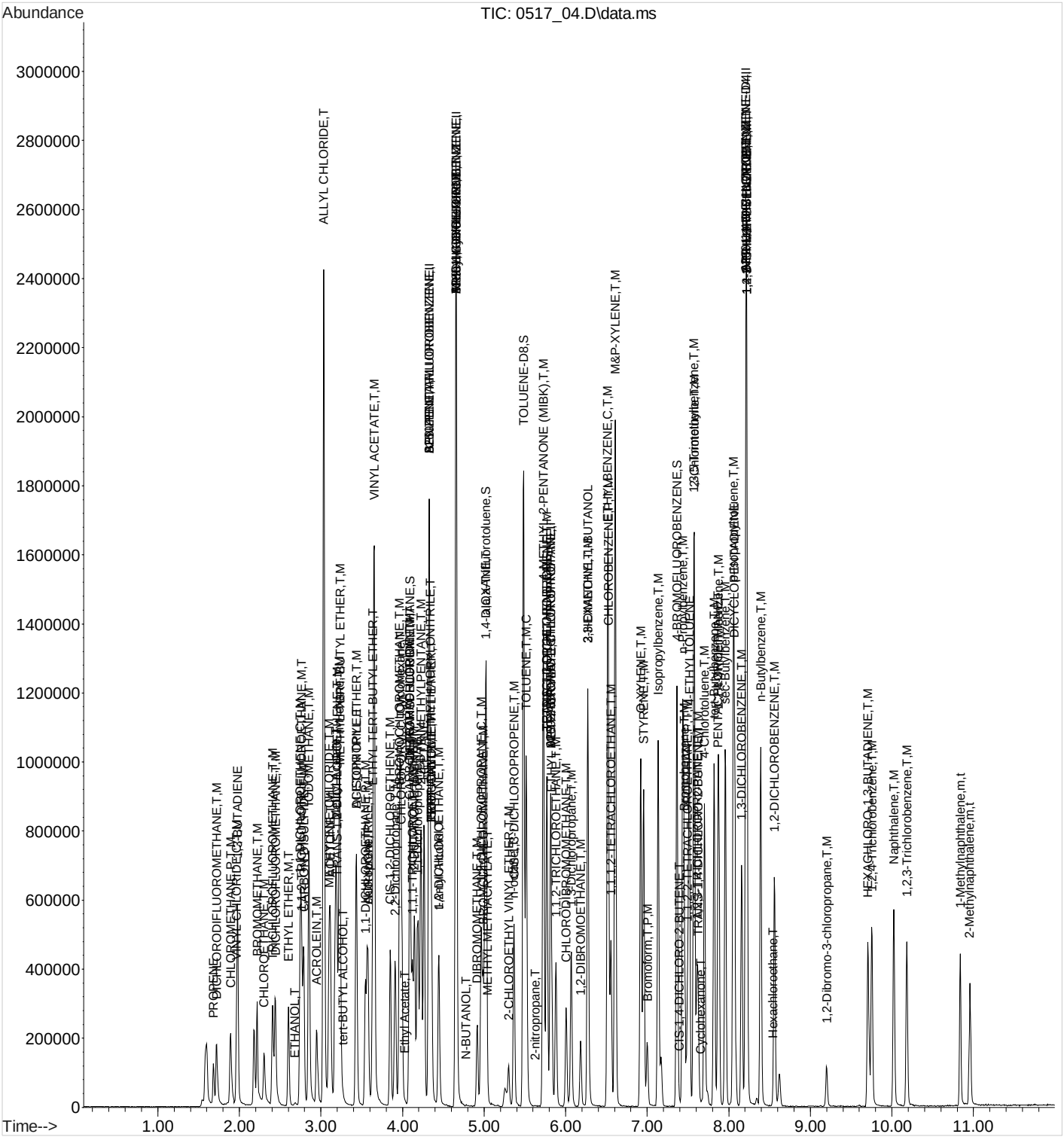
Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
100) Methyl Acetate	3.179	43	551001	110.8745827 ppb	#	98
101) ACETONITRILE	3.434	41	82865	93.6122388 ppb	#	40
102) ALLYL CHLORIDE	3.033	76	407037	141.4025562 ppb		92
103) tert-BUTYL ALCOHOL	3.270	59	18582	10.4185655 ppb	#	61
104) chloroprene	3.574	53	288415	31.0952621 ppb	#	26
105) ETHYL TERT-BUTYL ETHER	3.635	59	465563	23.9871942 ppb		99
106) PROPIONITRILE	4.353	54	2218	2.5051893 ppb	#	1
107) Ethyl Acetate	4.024	43	1834	0.2730015 ppb	#	70
108) METHACRYLONITRILE	4.341	67	4375	1.8472574 ppb	#	1
109) Cyclohexane	3.976	84	210453	17.0513849 ppb		94
111) ISOBUTANOL	4.353	43	138293	317.3381325 ppb	#	76
112) t-Amyl Alcohol	4.444	59	75363	120.8449211 ppb		99
113) TERT-AMYL METHYL ETHER	4.353	73	393777	20.3998320 ppb	#	55
115) N-BUTANOL	4.779	56	2735	11.8562115 ppb	#	58
116) Methyl Cyclohexane	4.657	83	264302	17.9701168 ppb		98
117) 2-nitropropane	5.630	43	518	0.2323323 ppb	#	18
118) METHYL METHACRYLATE	5.040	41	1219	0.1780333 ppb	#	21
119) 1,4-DIOXANE	5.016	88	5207	71.9884183 ppb	#	38
120) n-octane	5.363	85	3250	0.5322629 ppb	#	26
121) 3,3-DIMETHYL-1-BUTANOL	6.269	57	122638	112.9265446 ppb	#	45
123) ETHYL METHACRYLATE	5.825	69	2872	0.3913993 ppb	#	1
124) CIS-1,4-DICHLORO-2-BUTENE	7.395	53	1216	0.6030065 ppb	#	8
125) Cyclohexanone	7.656	55	1872	1.0479816 ppb		90
126) PENTACHLOROETHANE	7.869	117	16737	4.6568491 ppb	#	17
127) Hexachloroethane	8.538	117	1355	0.3032324 ppb	#	24

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\051716\
Data File : 0517 04.D
Acq On : 17 May 2016 6:28 am
Operator : 605
Sample : LCS 1x WG873015
Misc : water
ALS Vial : 4 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: May 17 13:26:01 2016
Quant Method : C:\msdchem\1\methods\V807B15P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Mon Feb 15 15:00:04 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\051716\
Data File : 0517 05.D
Acq On : 17 May 2016 6:47 am
Operator : 605
Sample : LCSD 1x WG873015
Misc : water
ALS Vial : 5 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: May 17 13:26:06 2016
Quant Method : C:\msdchem\1\methods\V807B15P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Mon Feb 15 15:00:04 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 8260-PENTAFLUOROBENZENE	4.329	168	456615	40.0000000 ppb	0.00
41) 8260-1,4-DIFLUOROBENZENE	4.657	114	808155	40.0000000 ppb	0.00
53) 8260-2-BROMO-1-CHLOROP...	5.819	79	145868	40.0000000 ppb	0.00
84) 8260-1,4-DICHLOROBENZE...	8.210	152	330555	40.0000000 ppb	0.00
96) AP9-PENTAFLUOROBENZENE	4.329	168	456615	40.0000000 ppb	0.00
114) AP9-1,4-DIFLUOROBENZENE	4.657	114	808155	40.0000000 ppb	0.00
122) AP9-2-BROMO-1-CHLOROPR...	5.819	79	145868	40.0000000 ppb	# 0.00
128) AP9-1,4-DICHLOROBENZEN...	8.210	152	330555	40.0000000 ppb	0.00
System Monitoring Compounds					
33) DIBROMOFLUOROMETHANE	4.091	111	255517	43.1828615 ppb	0.00
Spiked Amount 40.000	Range 78 - 121		Recovery = 107.96%		
46) a,a,a-Trifluorotoluene	5.022	146	423603	40.1474892 ppb	0.00
Spiked Amount 40.000	Range 85 - 114		Recovery = 100.37%		
50) TOLUENE-D8	5.484	98	1039669	42.0970274 ppb	0.00
Spiked Amount 40.000	Range 89 - 111		Recovery = 105.24%		
68) 4-BROMOFLUOROBENZENE	7.364	95	367525	39.6487773 ppb	0.00
Spiked Amount 40.000	Range 71 - 126		Recovery = 99.12%		
Target Compounds					Qvalue
3) PROPENE	1.682	41	53938	20.1203900 ppb	97
4) DICHLORODIFLUOROMETHANE	1.725	85	137205	19.2882827 ppb	98
5) CHLOROMETHANE	1.895	50	202506	19.8642768 ppb	98
6) VINYL CHLORIDE	1.962	62	194404	22.2419777 ppb	99
7) 1,3-BUTADIENE	1.974	39	167705	21.4957165 ppb	100
8) BROMOMETHANE	2.218	94	121283	28.0476836 ppb	98
9) CHLOROETHANE	2.303	64	109380	23.3372792 ppb	96
10) TRICHLOROFLUOROMETHANE	2.406	101	199305	22.8312352 ppb	100
11) DICHLOROFLUOROMETHANE	2.443	67	279537	23.6959444 ppb	97
12) ETHYL ETHER	2.601	59	122782	22.1517545 ppb	99
13) ACROLEIN	2.954	56	155174	116.3060438 ppb	100
14) 1,1-DICHLOROETHENE	2.747	61	229425	24.2588768 ppb	97
15) 1,1,2-TRICHLOROTRIFLUO...	2.765	101	122908	22.6590569 ppb	95
16) ACETONE	3.118	43	433566	100.9041329 ppb	98
17) IODOMETHANE	2.850	142	726833	133.1089237 ppb	99
18) CARBON DISULFIDE	2.789	76	447729	21.0451037 ppb	99
19) METHYLENE CHLORIDE	3.100	84	132625	20.8511526 ppb	98
20) ACRYLONITRILE	3.574	53	292567	111.9930226 ppb	97
21) n-Hexane	3.221	56	140165	20.5453339 ppb	95
22) TRANS-1,2-DICHLOROETHENE	3.197	96	126031	22.1912937 ppb	96
23) METHYL TERT-BUTYL ETHER	3.234	73	385575	22.8235667 ppb	93
24) 1,1-DICHLOROETHANE	3.550	63	281331	23.9991082 ppb	100
25) VINYL ACETATE	3.653	43	1690513	113.3391387 ppb	100
26) DI-ISOPROPYL ETHER	3.434	45	549943	22.0169074 ppb	98
27) 2,2-Dichloropropane	3.909	77	221965	22.8814109 ppb	96
28) CIS-1,2-DICHLOROETHENE	3.848	96	141977	23.0623167 ppb	98
29) 2-BUTANONE (MEK)	4.146	43	525166	101.0329042 ppb	99
30) BROMOCHLOROMETHANE	3.970	130	77358	23.3034140 ppb	98
31) TETRAHYDROFURAN	4.085	42	49298	19.5300948 ppb	98
32) CHLOROFORM	3.988	83	248239	23.4524699 ppb	98
34) 1,1,1-TRICHLOROETHANE	4.122	97	196042	22.3289490 ppb	97
35) CARBON TETRACHLORIDE	4.085	117	168602	21.7744022 ppb	96
36) 1,1-Dichloropropene	4.189	75	197132	23.7932234 ppb	98

Data Path : C:\msdchem\1\data\051716\
Data File : 0517 05.D
Acq On : 17 May 2016 6:47 am
Operator : 605
Sample : LCSD 1x WG873015
Misc : water
ALS Vial : 5 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: May 17 13:26:06 2016
Quant Method : C:\msdchem\1\methods\V807B15P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Mon Feb 15 15:00:04 2016
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
37)	2,2,4-TRIMETHYLPENTANE	4.225	57	639156	21.8601933	ppb		99
38)	HEPTANE	4.262	43	289254	20.5773240	ppb		98
39)	BENZENE	4.329	78	547564	22.1157027	ppb		99
40)	1,2-DICHLOROETHANE	4.444	62	193986	25.8624704	ppb		95
42)	TRICHLOROETHENE	4.657	130	122403	21.2413020	ppb		97
43)	1,2-DICHLOROPROPANE	4.967	62	115793	22.1007891	ppb		98
44)	DIBROMOMETHANE	4.919	93	83592	21.9403158	ppb		95
45)	BROMODICHLOROMETHANE	4.992	83	193344	22.3881144	ppb		99
47)	2-CHLOROETHYL VINYL ETHER	5.302	63	37317	50.7837520	ppb		97
48)	CIS-1,3-DICHLOROPROPENE	5.369	75	253310	22.5655759	ppb		99
49)	4-METHYL-2-PENTANONE (...	5.728	43	884445	107.8696259	ppb		99
51)	TOLUENE	5.515	91	561045	21.4770948	ppb		100
52)	TRANS-1,3-DICHLOROPROPENE	5.770	75	211092	22.3530561	ppb		99
54)	1,1,2-TRICHLOROETHANE	5.880	97	111607	21.2649202	ppb		95
55)	TETRACHLOROETHENE	5.770	164	87158	19.9392951	ppb		95
56)	1,3-Dichloropropane	6.068	76	218953	23.2010822	ppb		100
57)	2-HEXANONE	6.269	58	385445	103.4283091	ppb		97
58)	CHLORODIBROMOMETHANE	6.008	129	124022	20.5190306	ppb		99
59)	1,2-DIBROMOETHANE	6.184	107	116331	21.5927226	ppb		100
60)	CHLOROBENZENE	6.525	112	340212	21.3025689	ppb		99
61)	1,1,1,2-TETRACHLOROETHANE	6.555	133	105651	20.1935792	ppb	#	97
62)	ETHYLBENZENE	6.513	106	192004	21.2590894	ppb		99
63)	M&P-XYLENE	6.610	106	459665	41.8422305	ppb		99
64)	O-XYLENE	6.920	106	228566	21.1141008	ppb		97
65)	STYRENE	6.957	104	377924	21.1925738	ppb		95
66)	Bromoform	6.999	173	71591	19.2887627	ppb		98
67)	Isopropylbenzene	7.133	105	591614	20.6141277	ppb		99
69)	Bromobenzene	7.456	77	273266	22.3359286	ppb		98
70)	1,1,2,2-TETRACHLOROETHANE	7.492	83	153884	18.9035335	ppb		97
71)	1,2,3-TRICHLOROPROPANE	7.614	110	39089	21.3938758	ppb		97
72)	TRANS-1,4-DICHLORO-2-B...	7.626	53	51288	22.5531455	ppb		96
73)	n-Propylbenzene	7.437	91	728543	21.8489665	ppb		99
74)	4-ETHYLTOLUENE	7.516	105	592599	21.0666318	ppb		100
75)	2-Chlorotoluene	7.577	126	126725	20.7942710	ppb		97
76)	4-Chlorotoluene	7.699	91	442071	21.8265829	ppb		99
77)	1,3,5-Trimethylbenzene	7.571	105	477646	20.7165722	ppb		99
78)	tert-Butylbenzene	7.821	119	403527	20.7136736	ppb		97
79)	1,2,4-Trimethylbenzene	7.875	105	486834	20.8701443	ppb		100
80)	sec-Butylbenzene	7.954	105	649335	20.7379040	ppb		100
81)	1,3-DICHLOROBENZENE	8.155	146	237783	20.0434146	ppb		100
82)	p-Isopropyltoluene	8.058	119	526774	21.0781477	ppb		98
83)	DICYCLOPENTADIENE	8.070	66	688598	21.2144677	ppb		99
85)	1,4-DICHLOROBENZENE	8.222	146	231950	21.4600486	ppb		88
86)	1,2,3-TRIMETHYLBENZENE	8.216	105	476652	23.0406169	ppb		100
87)	1,2-DICHLOROBENZENE	8.557	146	234823	23.4514982	ppb		99
88)	n-Butylbenzene	8.392	91	541482	24.2443104	ppb		99
89)	1,2-Dibromo-3-chloropr...	9.201	157	26521	20.0107005	ppb		88
90)	1,2,4-Trichlorobenzene	9.749	180	147169	21.4653853	ppb		98
91)	HEXACHLORO-1,3-BUTADIENE	9.706	225	80823	20.8186036	ppb		96
92)	Naphthalene	10.023	128	396348	21.3577849	ppb		100
93)	1,2,3-Trichlorobenzene	10.181	180	134243	21.2750546	ppb		98
94)	1-Methylnaphthalene	10.838	142	179722	18.8454289	ppb		96
95)	2-Methylnaphthalene	10.954	142	147635	17.7438904	ppb		98
97)	ETHANOL	2.686	45	10402	102.6664314	ppb	#	93

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\051716\
Data File : 0517 05.D
Acq On : 17 May 2016 6:47 am
Operator : 605
Sample : LCSD 1x WG873015
Misc : water
ALS Vial : 5 Sample Multiplier: 1
InstName : VOCMS7

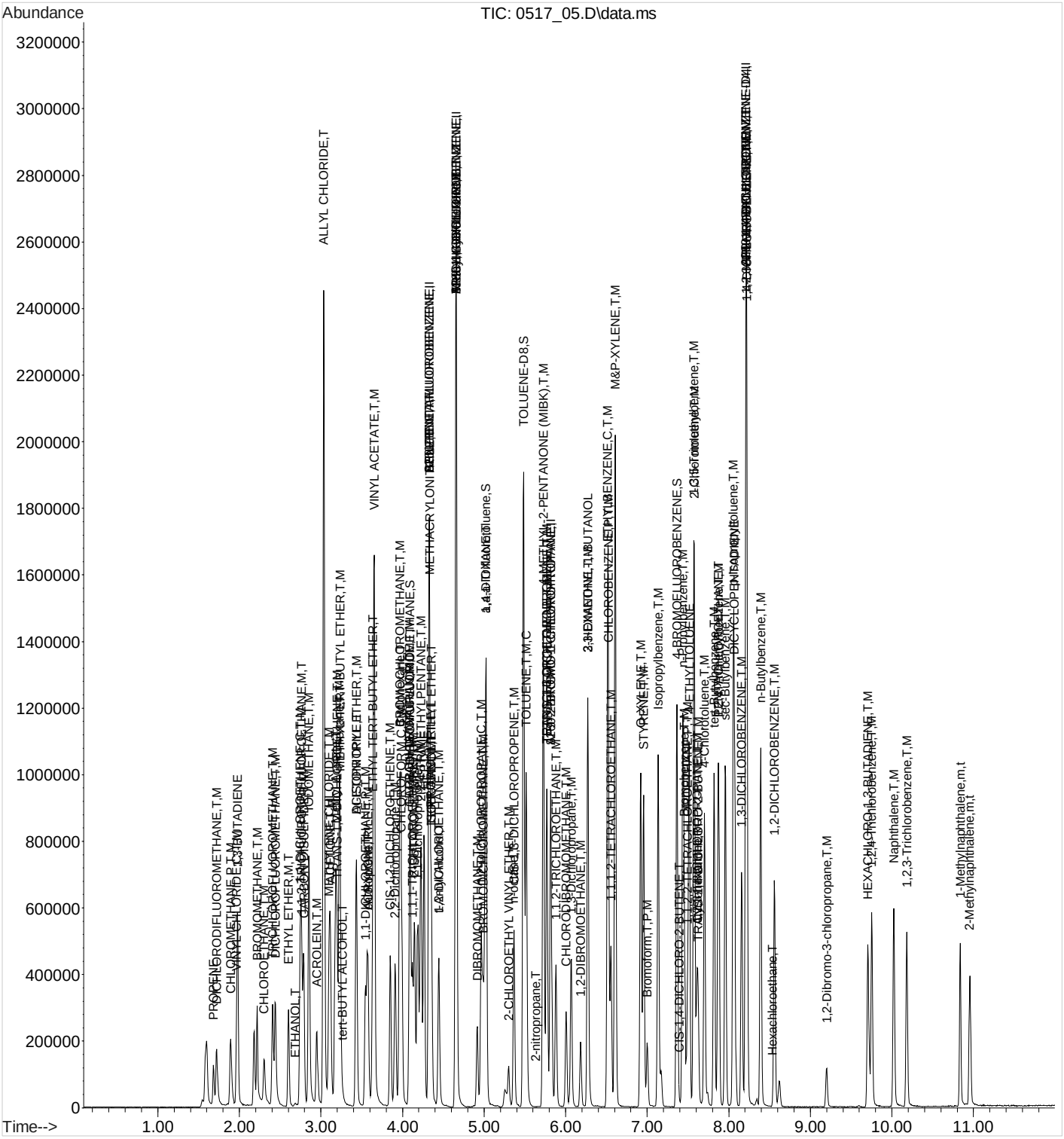
Quant Time: May 17 13:26:06 2016
Quant Method : C:\msdchem\1\methods\V807B15P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Mon Feb 15 15:00:04 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
100) Methyl Acetate	3.179	43	567061	110.8698364 ppb	#	98
101) ACETONITRILE	3.434	41	83484	91.6365569 ppb	#	40
102) ALLYL CHLORIDE	3.033	76	404768	136.6260645 ppb		96
103) tert-BUTYL ALCOHOL	3.264	59	19656	10.7081545 ppb	#	61
104) chloroprene	3.574	53	292399	30.6306546 ppb	#	26
105) ETHYL TERT-BUTYL ETHER	3.635	59	476073	23.8329916 ppb		99
106) PROPIONITRILE	4.347	54	948	1.0403785 ppb	#	1
108) METHACRYLONITRILE	4.335	67	3281	1.3460451 ppb	#	1
109) Cyclohexane	3.976	84	211362	16.6393158 ppb		94
111) ISOBUTANOL	4.353	43	141793	316.1410353 ppb	#	76
112) t-Amyl Alcohol	4.444	59	76791	119.6422478 ppb		98
113) TERT-AMYL METHYL ETHER	4.353	73	400895	20.1795232 ppb	#	55
116) Methyl Cyclohexane	4.657	83	265818	17.6978170 ppb		98
117) 2-nitropropane	5.637	43	614	0.2698117 ppb	#	18
119) 1,4-DIOXANE	5.022	88	5687	77.0319493 ppb	#	34
120) n-octane	5.363	85	2742	0.4399698 ppb	#	28
121) 3,3-DIMETHYL-1-BUTANOL	6.269	57	128467	115.8977937 ppb	#	47
124) CIS-1,4-DICHLORO-2-BUTENE	7.395	53	1508	0.7228357 ppb	#	28
125) Cyclohexanone	7.620	55	1172	0.6341986 ppb	#	1
126) PENTACHLOROETHANE	7.875	117	16557	4.4529318 ppb	#	13
127) Hexachloroethane	8.532	117	983	0.2126374 ppb	#	32

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\051716\
Data File : 0517 05.D
Acq On : 17 May 2016 6:47 am
Operator : 605
Sample : LCSD 1x WG873015
Misc : water
ALS Vial : 5 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: May 17 13:26:06 2016
Quant Method : C:\msdchem\1\methods\V807B15P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Mon Feb 15 15:00:04 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\051716\
Data File : 0517 08.D
Acq On : 17 May 2016 7:45 am
Operator : 605
Sample : BLANK
Misc : water
ALS Vial : 8 Sample Multiplier: 1
InstName : VOCMS7

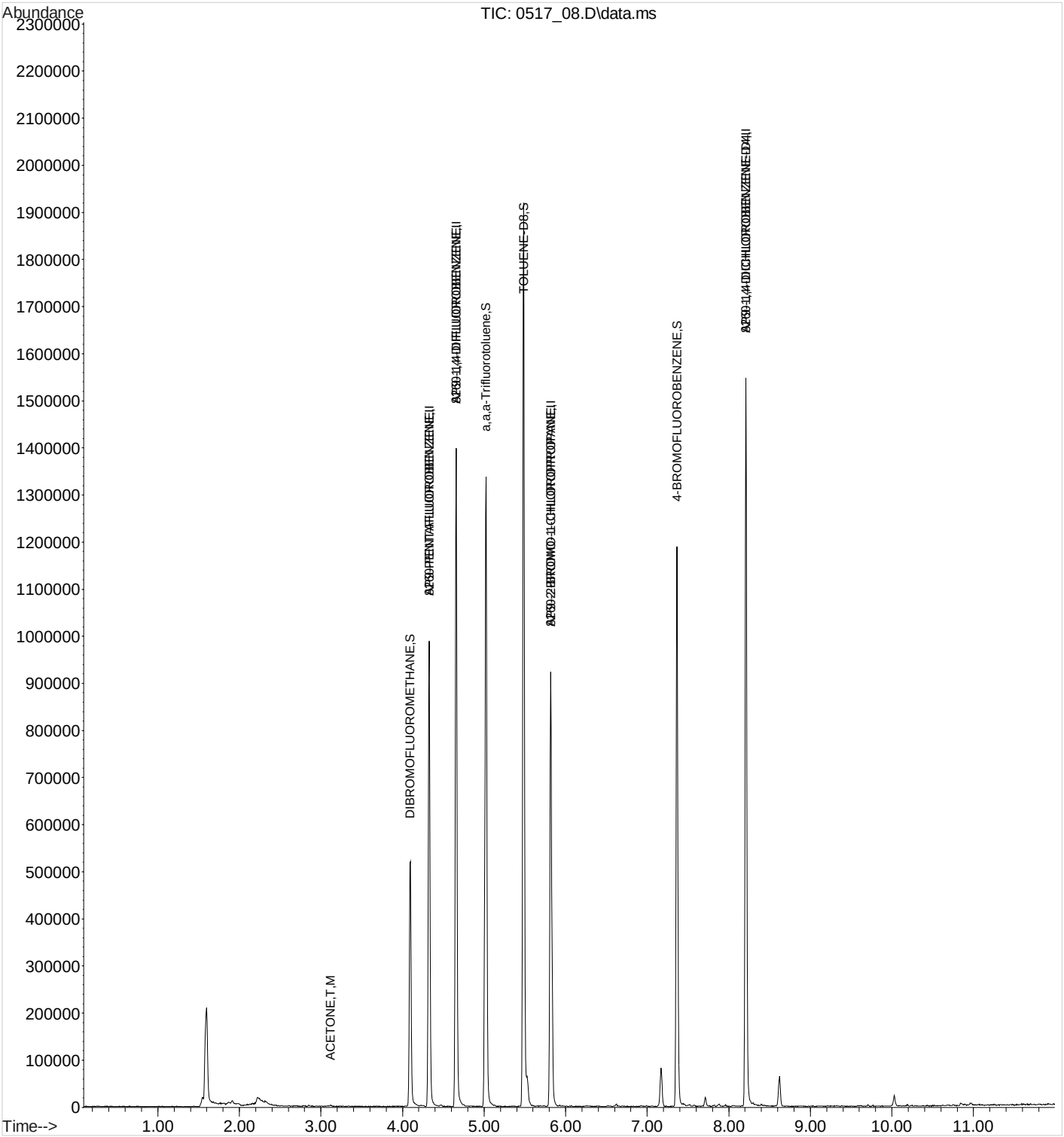
Quant Time: Sep 21 15:35:59 2016
Quant Method : C:\msdchem\1\methods\V807B15P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Mon Feb 15 15:00:04 2016
Response via : Initial Calibration

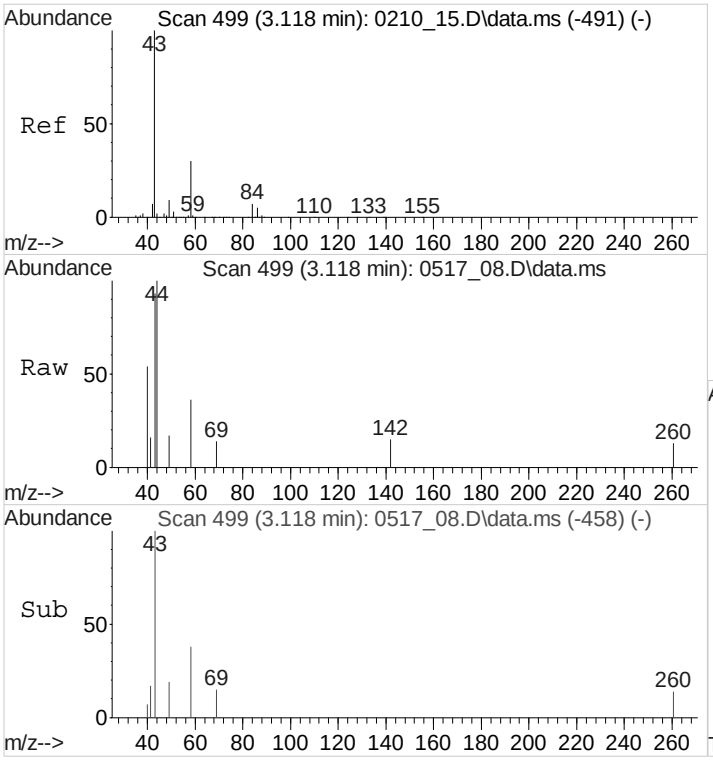
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 8260-PENTAFLUOROBENZENE	4.328	168	475111	40.0000000	ppb		0.00
41) 8260-1,4-DIFLUOROBENZENE	4.657	114	832352	40.0000000	ppb		0.00
53) 8260-2-BROMO-1-CHLOROP...	5.819	79	145495	40.0000000	ppb		0.00
84) 8260-1,4-DICHLOROBENZE...	8.210	152	343941	40.0000000	ppb		0.00
96) AP9-PENTAFLUOROBENZENE	4.328	168	475111	40.0000000	ppb		0.00
114) AP9-1,4-DIFLUOROBENZENE	4.657	114	832352	40.0000000	ppb		0.00
122) AP9-2-BROMO-1-CHLOROPR...	5.819	79	145495	40.0000000	ppb	#	0.00
128) AP9-1,4-DICHLOROBENZEN...	8.210	152	343941	40.0000000	ppb		0.00
System Monitoring Compounds							
33) DIBROMOFLUOROMETHANE	4.091	111	264562	42.9708724	ppb		0.00
Spiked Amount 40.000	Range 78 - 121		Recovery = 107.43%				
46) a,a,a-Trifluorotoluene	5.022	146	428611	39.4412174	ppb		0.00
Spiked Amount 40.000	Range 85 - 114		Recovery = 98.60%				
50) TOLUENE-D8	5.484	98	1038814	40.8396269	ppb		0.00
Spiked Amount 40.000	Range 89 - 111		Recovery = 102.10%				
68) 4-BROMOFLUOROBENZENE	7.364	95	366297	39.6176065	ppb		0.00
Spiked Amount 40.000	Range 71 - 126		Recovery = 99.04%				
Target Compounds							Qvalue
16) ACETONE	3.118	43	1878	0.4200533	ppb	#	44

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\051716\
Data File : 0517 08.D
Acq On : 17 May 2016 7:45 am
Operator : 605
Sample : BLANK
Misc : water
ALS Vial : 8 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Sep 21 15:35:59 2016
Quant Method : C:\msdchem\1\methods\V807B15P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Mon Feb 15 15:00:04 2016
Response via : Initial Calibration

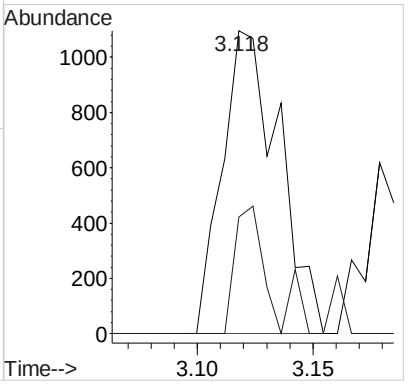




#16
ACETONE
Concen: 0.4200533 ppb
RT: 3.118 min Scan# 499
Delta R.T. -0.000 min
Lab File: 0517 08.D
Acq: 17 May 2016 7:45 am

Tgt Ion: 43 Resp: 1878

Ion	Ratio	Lower	Upper
43	100		
58	0.0	24.6	37.0#



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\051716\
Data File : 0517 10.D
Acq On : 17 May 2016 11:54 am
Operator : 605
Sample : L835437-05 1x WG873015 V8260
Misc : water
ALS Vial : 10 Sample Multiplier: 1
InstName : VOCMS7

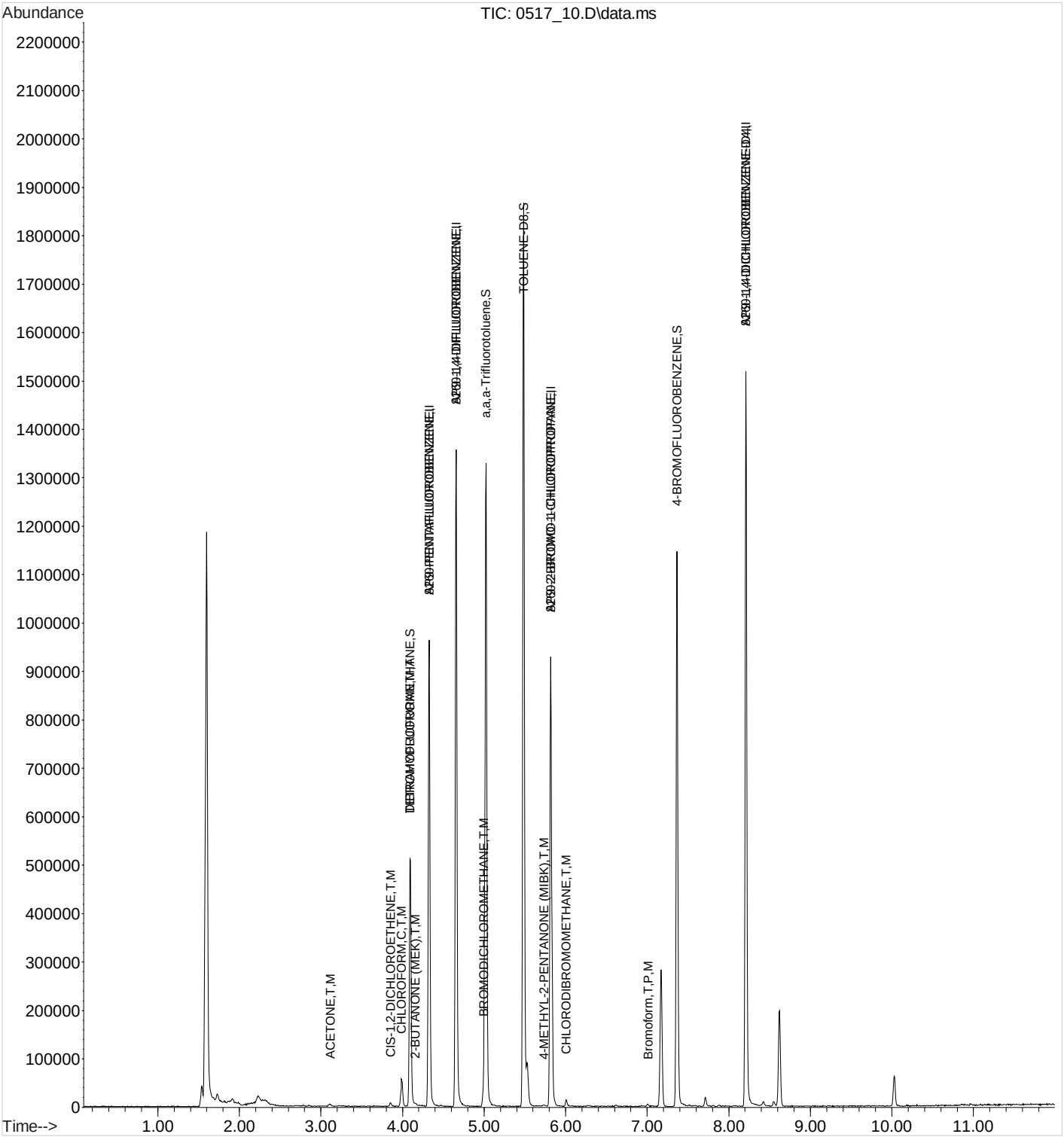
Quant Time: Sep 21 15:37:15 2016
Quant Method : C:\msdchem\1\methods\V807B15P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Mon Feb 15 15:00:04 2016
Response via : Initial Calibration

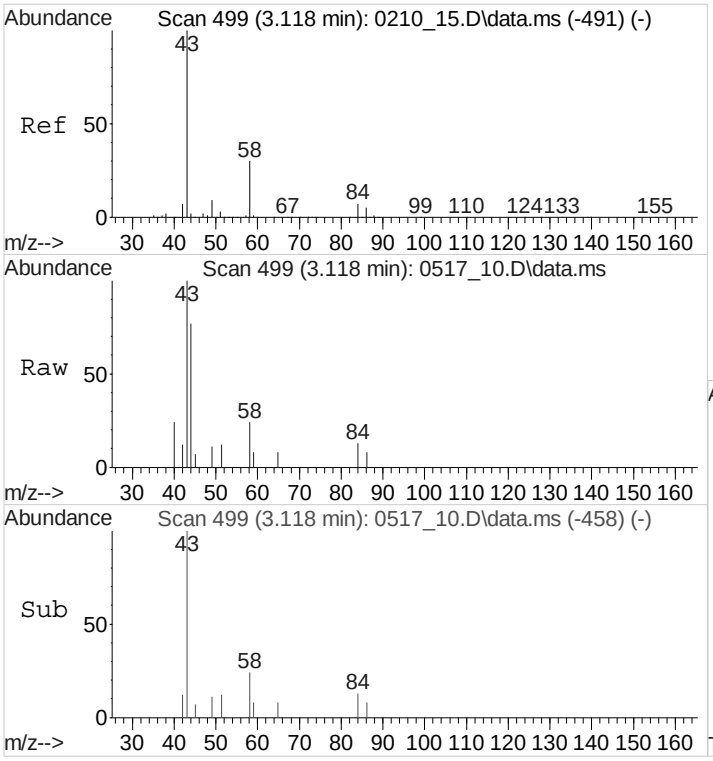
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 8260-PENTAFLUOROBENZENE	4.328	168	469842	40.0000000	ppb		0.00
41) 8260-1,4-DIFLUOROBENZENE	4.657	114	818047	40.0000000	ppb		0.00
53) 8260-2-BROMO-1-CHLOROP...	5.819	79	145876	40.0000000	ppb		0.00
84) 8260-1,4-DICHLOROBENZE...	8.210	152	332270	40.0000000	ppb		0.00
96) AP9-PENTAFLUOROBENZENE	4.328	168	469842	40.0000000	ppb		0.00
114) AP9-1,4-DIFLUOROBENZENE	4.657	114	818047	40.0000000	ppb		0.00
122) AP9-2-BROMO-1-CHLOROPR...	5.819	79	145876	40.0000000	ppb	#	0.00
128) AP9-1,4-DICHLOROBENZEN...	8.210	152	332270	40.0000000	ppb		0.00
System Monitoring Compounds							
33) DIBROMOFLUOROMETHANE	4.091	111	263578	43.2911490	ppb		0.00
Spiked Amount 40.000	Range 78 - 121		Recovery = 108.23%				
46) a,a,a-Trifluorotoluene	5.022	146	425917	39.8786773	ppb		0.00
Spiked Amount 40.000	Range 85 - 114		Recovery = 99.70%				
50) TOLUENE-D8	5.484	98	1015330	40.6143925	ppb		0.00
Spiked Amount 40.000	Range 89 - 111		Recovery = 101.54%				
68) 4-BROMOFLUOROBENZENE	7.364	95	357015	38.5128411	ppb		0.00
Spiked Amount 40.000	Range 71 - 126		Recovery = 96.28%				
Target Compounds							Qvalue
16) ACETONE	3.118	43	3771	0.8529206	ppb	#	87
28) CIS-1,2-DICHLOROETHENE	3.854	96	2354	0.3716120	ppb		91
29) 2-BUTANONE (MEK)	4.158	43	1373	0.2567055	ppb	#	54
31) TETRAHYDROFURAN	4.091	42	626	0.2410170	ppb	#	24
32) CHLOROFORM	3.988	83	32170	2.9537108	ppb		96
45) BROMODICHLOROMETHANE	4.998	83	17193	1.9667759	ppb	#	90
49) 4-METHYL-2-PENTANONE (...	5.734	43	1897	0.2285662	ppb		97
58) CHLORODIBROMOMETHANE	6.008	129	5228	0.8649079	ppb		91
66) Bromoform	7.011	173	1652	0.4450739	ppb	#	86

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\051716\
Data File : 0517 10.D
Acq On : 17 May 2016 11:54 am
Operator : 605
Sample : L835437-05 1x WG873015 V8260
Misc : water
ALS Vial : 10 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Sep 21 15:37:15 2016
Quant Method : C:\msdchem\1\methods\V807B15P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Mon Feb 15 15:00:04 2016
Response via : Initial Calibration

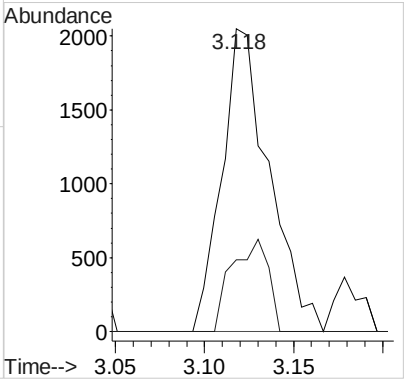


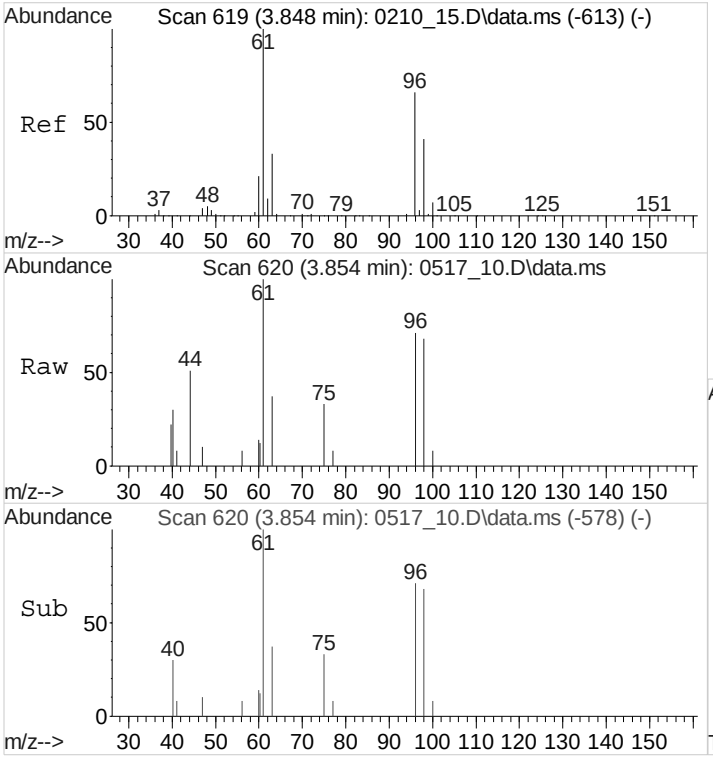


#16
ACETONE
Concen: 0.8529206 ppb
RT: 3.118 min Scan# 499
Delta R.T. -0.000 min
Lab File: 0517 10.D
Acq: 17 May 2016 11:54 am

Tgt Ion: 43 Resp: 3771

Ion	Ratio	Lower	Upper
43	100		
58	23.5	24.6	37.0#

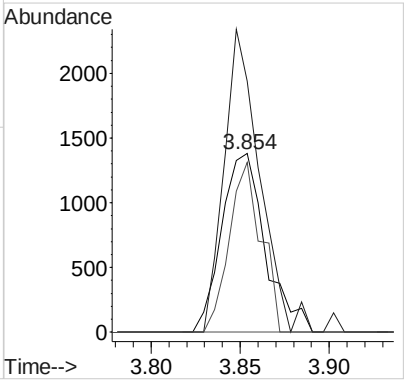


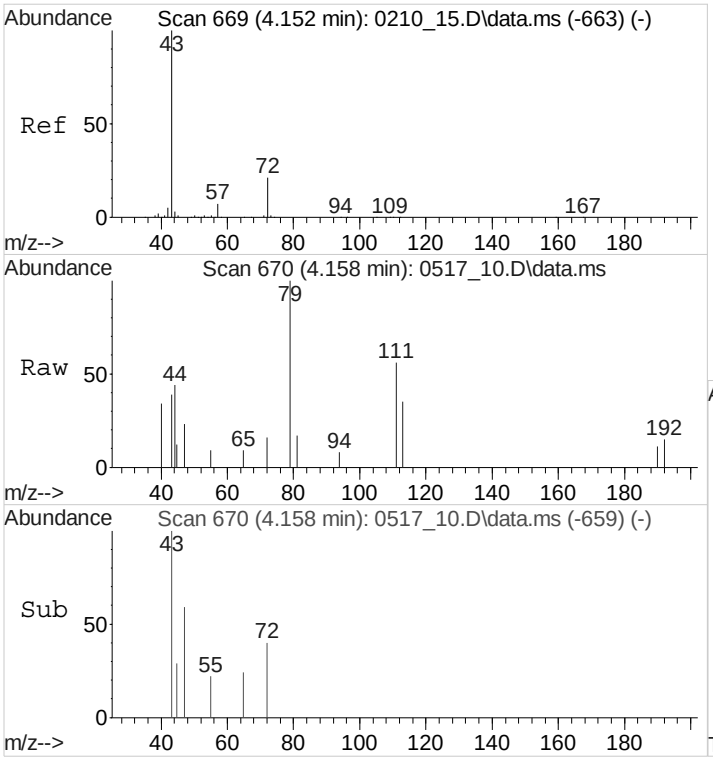


#28
CIS-1,2-DICHLOROETHENE
Concen: 0.3716120 ppb
RT: 3.854 min Scan# 620
Delta R.T. 0.006 min
Lab File: 0517_10.D
Acq: 17 May 2016 11:54 am

Tgt Ion: 96 Resp: 2354

Ion	Ratio	Lower	Upper
96	100		
61	138.1	121.0	181.6
98	69.6	51.6	77.4

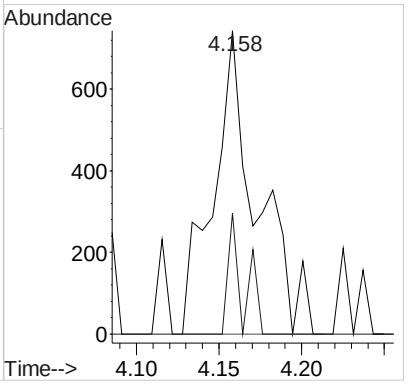


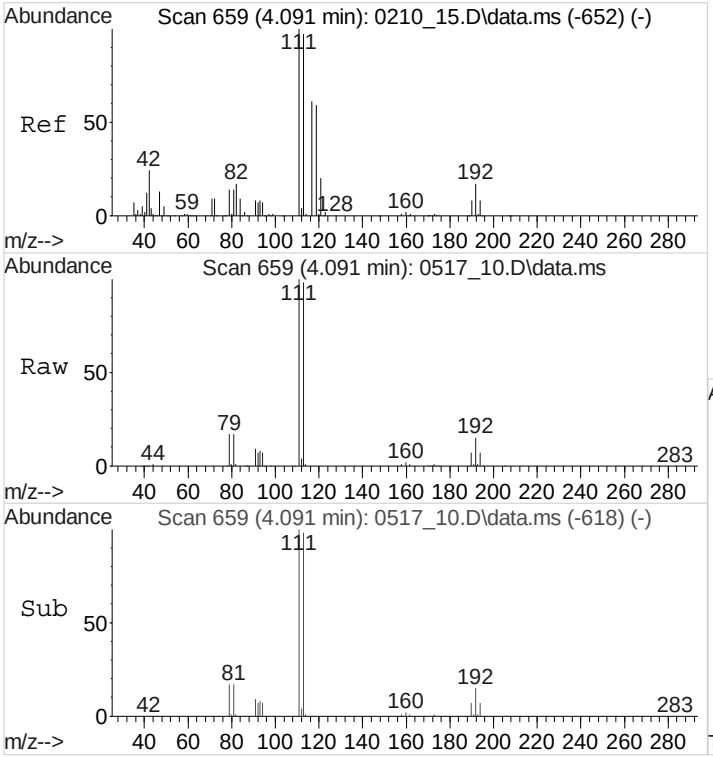


#29
2-BUTANONE (MEK)
Concen: 0.2567055 ppb
RT: 4.158 min Scan# 670
Delta R.T. 0.006 min
Lab File: 0517 10.D
Acq: 17 May 2016 11:54 am

Tgt Ion: 43 Resp: 1373

Ion	Ratio	Lower	Upper
43	100		
72	0.0	17.7	26.5#

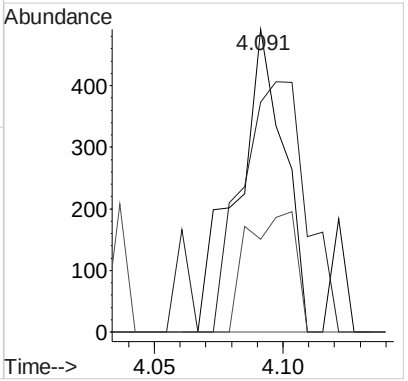


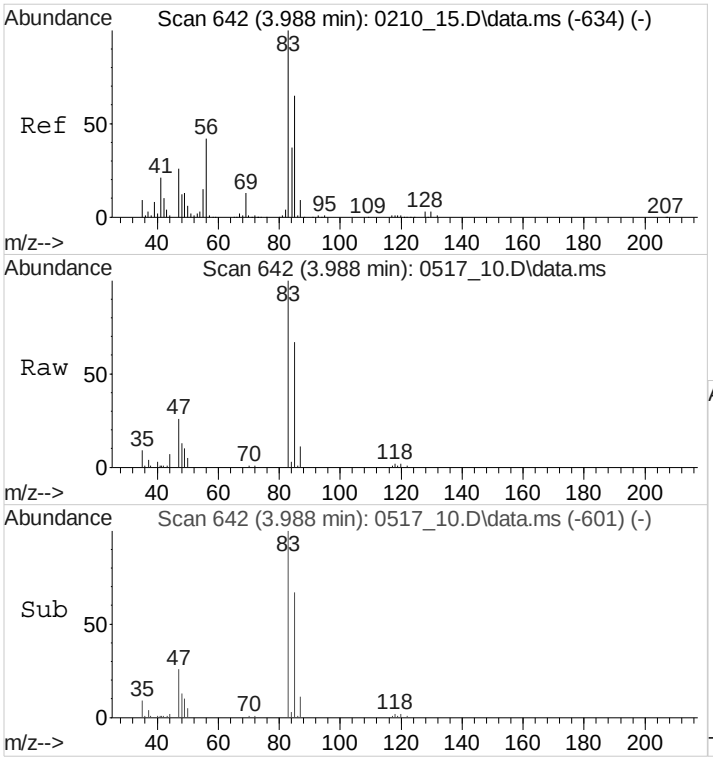


#31
TETRAHYDROFURAN
Concen: 0.2410170 ppb
RT: 4.091 min Scan# 659
Delta R.T. 0.000 min
Lab File: 0517_10.D
Acq: 17 May 2016 11:54 am

Tgt Ion: 42 Resp: 626

Ion	Ratio	Lower	Upper
42	100		
41	113.6	41.1	61.7#
39	0.0	15.1	22.7#

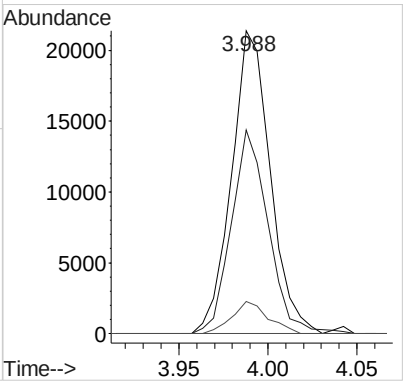


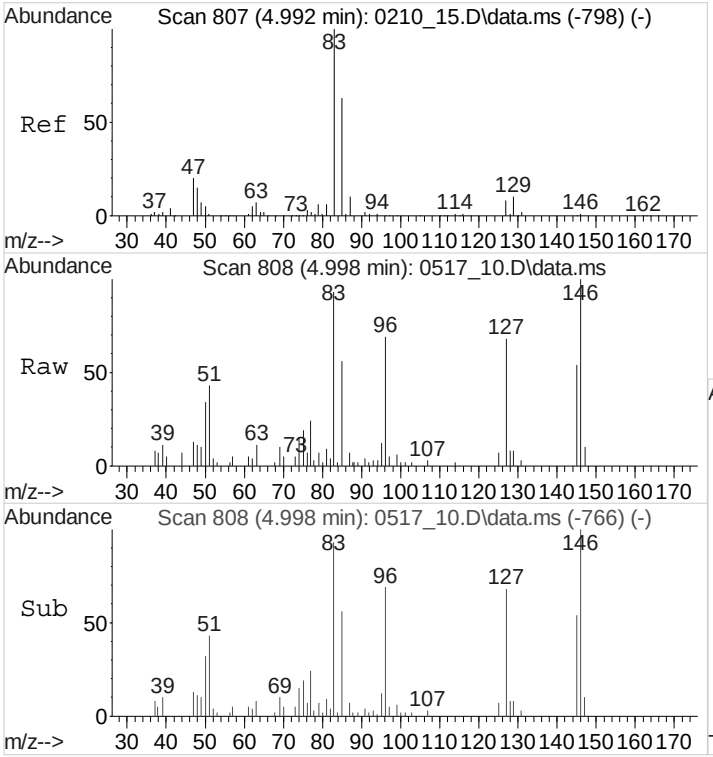


#32
CHLOROFORM
Concen: 2.9537108 ppb
RT: 3.988 min Scan# 642
Delta R.T. 0.001 min
Lab File: 0517 10.D
Acq: 17 May 2016 11:54 am

Tgt Ion: 83 Resp: 32170

Ion	Ratio	Lower	Upper
83	100		
85	64.1	53.9	80.9
87	10.0	7.8	11.6

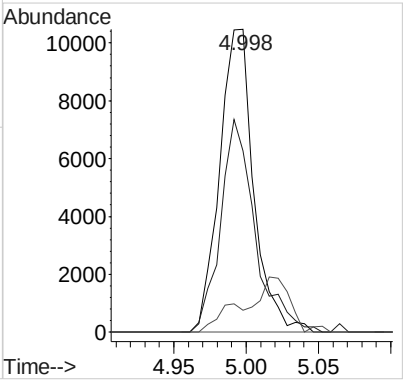


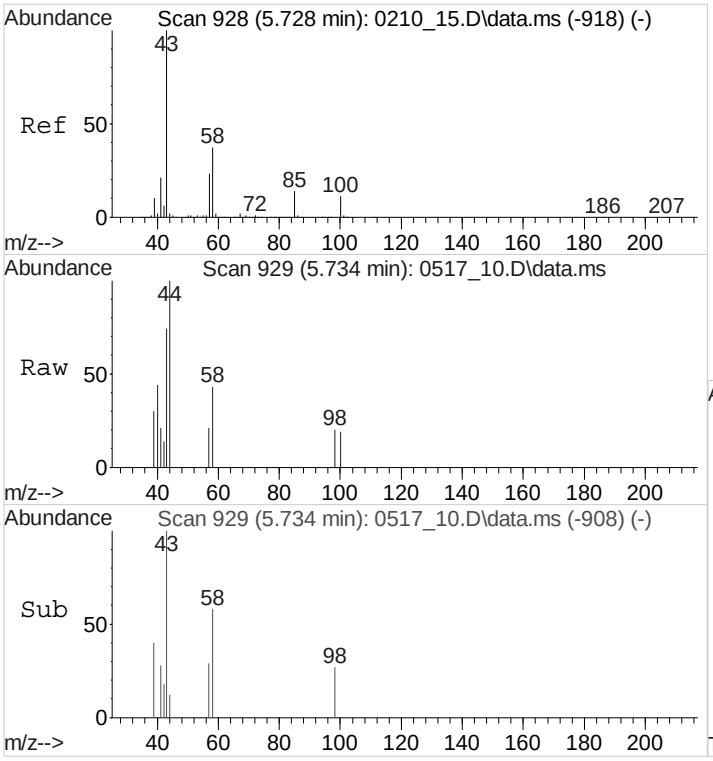


#45
BROMODICHLOROMETHANE
Concen: 1.9667759 ppb
RT: 4.998 min Scan# 808
Delta R.T. 0.007 min
Lab File: 0517_10.D
Acq: 17 May 2016 11:54 am

Tgt Ion: 83 Resp: 17193

Ion	Ratio	Lower	Upper
83	100		
85	71.2	50.6	75.8
87	7.2	9.1	13.7#

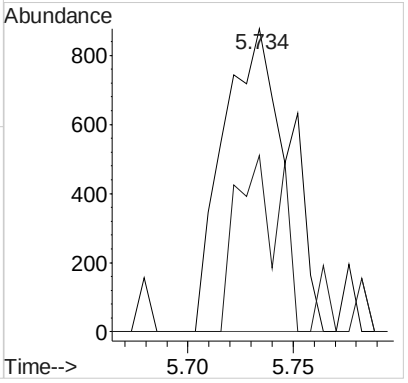


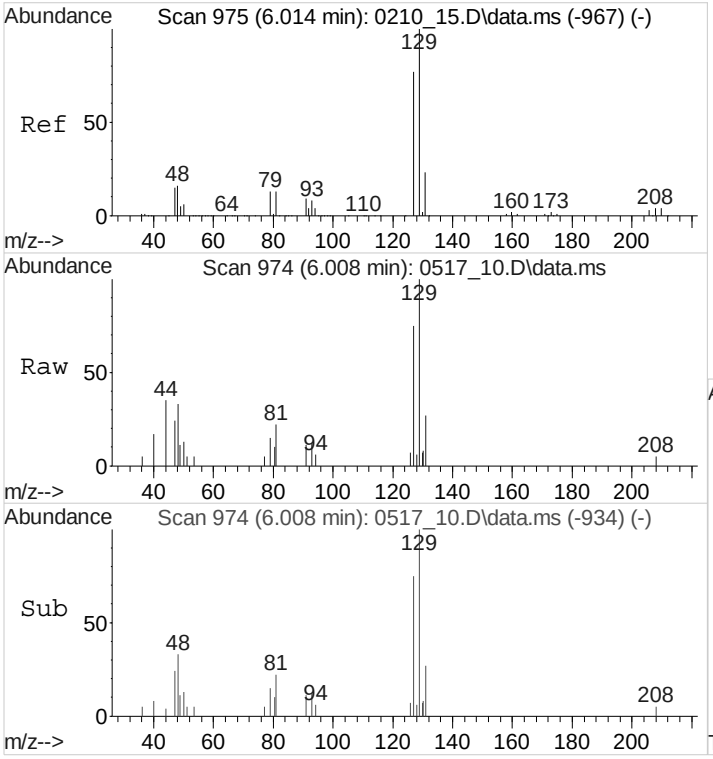


#49
4-METHYL-2-PENTANONE (MIBK)
Concen: 0.2285662 ppb
RT: 5.734 min Scan# 929
Delta R.T. 0.006 min
Lab File: 0517 10.D
Acq: 17 May 2016 11:54 am

Tgt Ion: 43 Resp: 1897

Ion	Ratio	Lower	Upper
43	100		
58	38.5	29.4	44.2

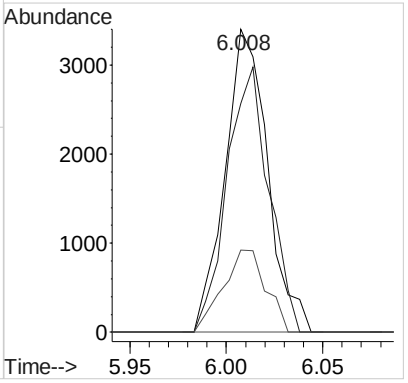


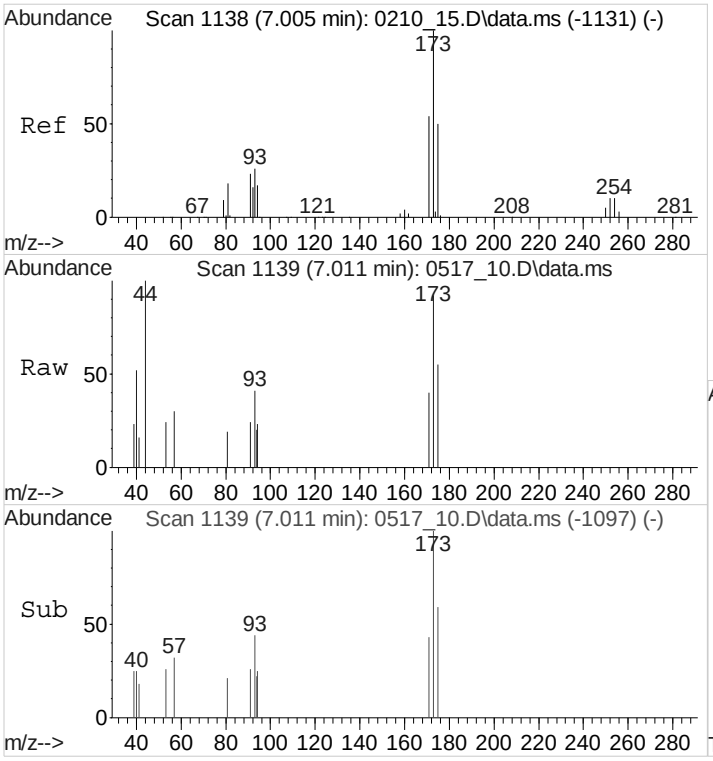


#58
CHLORODIBROMOMETHANE
Concen: 0.8649079 ppb
RT: 6.008 min Scan# 974
Delta R.T. -0.006 min
Lab File: 0517_10.D
Acq: 17 May 2016 11:54 am

Tgt Ion:129 Resp: 5228

Ion	Ratio	Lower	Upper
129	100		
127	85.7	62.1	93.1
131	27.3	18.8	28.2

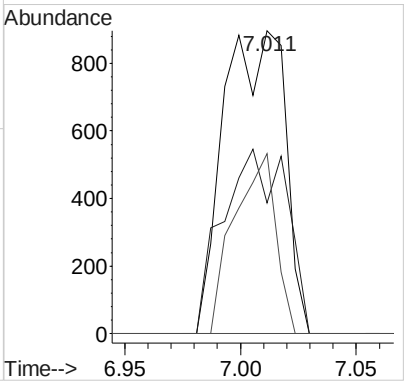




#66
Bromoform
Concen: 0.4450739 ppb
RT: 7.011 min Scan# 1139
Delta R.T. 0.006 min
Lab File: 0517 10.D
Acq: 17 May 2016 11:54 am

Tgt Ion:173 Resp: 1652

Ion	Ratio	Lower	Upper
173	100		
171	62.7	41.0	61.4#
175	40.3	37.9	56.9



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\051716\
Data File : 0517 14.D
Acq On : 17 May 2016 1:15 pm
Operator : 605
Sample : MS 1x WG873015 L835717-01
Misc : water
ALS Vial : 14 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: May 17 14:18:58 2016
Quant Method : C:\msdchem\1\methods\V807B15P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Mon Feb 15 15:00:04 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 8260-PENTAFLUOROBENZENE	4.328	168	544662	40.0000000	ppb		0.00
41) 8260-1,4-DIFLUOROBENZENE	4.657	114	802654	40.0000000	ppb		0.00
53) 8260-2-BROMO-1-CHLOROP...	5.819	79	149731	40.0000000	ppb		0.00
84) 8260-1,4-DICHLOROBENZE...	8.210	152	343124	40.0000000	ppb		0.00
96) AP9-PENTAFLUOROBENZENE	4.328	168	544662	40.0000000	ppb		0.00
114) AP9-1,4-DIFLUOROBENZENE	4.657	114	802654	40.0000000	ppb		0.00
122) AP9-2-BROMO-1-CHLOROPR...	5.819	79	149611	40.0000000	ppb	#	0.00
128) AP9-1,4-DICHLOROBENZEN...	8.210	152	343124	40.0000000	ppb		0.00
System Monitoring Compounds							
33) DIBROMOFLUOROMETHANE	4.091	111	244823	34.6870152	ppb		0.00
Spiked Amount 40.000	Range 78 - 121		Recovery = 86.72%				
46) a,a,a-Trifluorotoluene	5.022	146	419863	40.0657482	ppb		0.00
Spiked Amount 40.000	Range 85 - 114		Recovery = 100.16%				
50) TOLUENE-D8	5.490	98	1060856	43.2492980	ppb		0.00
Spiked Amount 40.000	Range 89 - 111		Recovery = 108.12%				
68) 4-BROMOFLUOROBENZENE	7.364	95	386362	40.6055709	ppb		0.00
Spiked Amount 40.000	Range 71 - 126		Recovery = 101.51%				
Target Compounds							Qvalue
3) PROPENE	1.682	41	708970	221.7136910	ppb	#	53
4) DICHLORODIFLUOROMETHANE	1.725	85	146580	17.2751345	ppb		99
5) CHLOROMETHANE	1.895	50	210055	17.2739232	ppb	#	94
6) VINYL CHLORIDE	1.962	62	161469	15.4874693	ppb		98
7) 1,3-BUTADIENE	1.974	39	157282	16.9008301	ppb		86
8) BROMOMETHANE	2.217	94	105040	20.3645529	ppb		98
9) CHLOROETHANE	2.303	64	93386	16.7038728	ppb		99
10) TRICHLOROFLUOROMETHANE	2.406	101	163105	15.6639608	ppb		99
11) DICHLOROFLUOROMETHANE	2.436	67	250618	17.8102526	ppb		95
12) ETHYL ETHER	2.601	59	113087	17.1044537	ppb		100
13) ACROLEIN	2.947	56	231260	145.3138291	ppb	#	82
14) 1,1-DICHLOROETHENE	2.747	61	207321	18.3779194	ppb		97
15) 1,1,2-TRICHLOROTRIFLUO...	2.759	101	113526	17.5460803	ppb		96
16) ACETONE	3.118	43	11946403	2330.8482283	ppb		93
17) IODOMETHANE	2.850	142	606203	93.0708572	ppb		99
18) CARBON DISULFIDE	2.783	76	350002	13.7920705	ppb		98
19) METHYLENE CHLORIDE	3.100	84	118342	15.5979194	ppb	#	92
20) ACRYLONITRILE	3.574	53	392918	126.0929049	ppb		85
21) n-Hexane	3.221	56	563261	69.2159846	ppb		95
22) TRANS-1,2-DICHLOROETHENE	3.197	96	109626	16.1823617	ppb		96
23) METHYL TERT-BUTYL ETHER	3.233	73	364323	18.0794133	ppb	#	1
24) 1,1-DICHLOROETHANE	3.550	63	273024	19.5254673	ppb		98
25) VINYL ACETATE	3.653	43	1841227	103.4884365	ppb		99
26) DI-ISOPROPYL ETHER	3.434	45	532316	17.8661615	ppb		99
27) 2,2-Dichloropropane	3.909	77	209090	18.0698548	ppb		98
28) CIS-1,2-DICHLOROETHENE	3.848	96	134006	18.2487146	ppb		98
29) 2-BUTANONE (MEK)	4.152	43	530026	85.4843291	ppb		99
30) BROMOCHLOROMETHANE	3.963	130	66293	16.7419133	ppb		100
31) TETRAHYDROFURAN	4.091	42	82846	27.5150111	ppb	#	1
32) CHLOROFORM	3.988	83	343527	27.2083715	ppb	#	93
34) 1,1,1-TRICHLOROETHANE	4.122	97	188307	17.9807880	ppb		98
35) CARBON TETRACHLORIDE	4.085	117	153564	16.6263161	ppb		100
36) 1,1-Dichloropropene	4.188	75	178937	18.1058703	ppb		95

Data Path : C:\msdchem\1\data\051716\
Data File : 0517 14.D
Acq On : 17 May 2016 1:15 pm
Operator : 605
Sample : MS 1x WG873015 L835717-01
Misc : water
ALS Vial : 14 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: May 17 14:18:58 2016
Quant Method : C:\msdchem\1\methods\V807B15P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Mon Feb 15 15:00:04 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
37) 2,2,4-TRIMETHYLPENTANE	4.225	57	606070	17.3777287	ppb	#	81
38) HEPTANE	4.268	43	997307	59.4787028	ppb		99
39) BENZENE	4.316	78	22489026m	761.4819252	ppb		
40) 1,2-DICHLOROETHANE	4.444	62	185206	20.7003538	ppb		97
42) TRICHLOROETHENE	4.657	130	116190	20.3013123	ppb	#	36
43) 1,2-DICHLOROPROPANE	4.967	62	113803	21.8698334	ppb		99
44) DIBROMOMETHANE	4.918	93	80584	21.2957662	ppb		96
45) BROMODICHLOROMETHANE	4.992	83	188212	21.9432230	ppb		91
47) 2-CHLOROETHYL VINYL ETHER	5.265	63	7910	10.8382917	ppb	#	1
48) CIS-1,3-DICHLOROPROPENE	5.369	75	231127	20.7305612	ppb		98
49) 4-METHYL-2-PENTANONE (...	5.728	43	1046679	128.5310757	ppb		100
51) TOLUENE	5.509	91	25749968m	992.4778447	ppb		
52) TRANS-1,3-DICHLOROPROPENE	5.770	75	210900	22.4857824	ppb		98
54) 1,1,2-TRICHLOROETHANE	5.880	97	155870	28.9323134	ppb	#	1
55) TETRACHLOROETHENE	5.776	164	91000	20.2811343	ppb		97
56) 1,3-Dichloropropane	6.068	76	207954	21.4670775	ppb		98
57) 2-HEXANONE	6.269	58	361544	94.5118948	ppb		97
58) CHLORODIBROMOMETHANE	6.007	129	123782	19.9509650	ppb		99
59) 1,2-DIBROMOETHANE	6.184	107	113259	20.4801423	ppb		98
60) CHLOROBENZENE	6.525	112	315365	19.2373013	ppb	#	6
61) 1,1,1,2-TETRACHLOROETHANE	6.561	133	101992	18.9912741	ppb	#	98
62) ETHYLBENZENE	6.518	106	1520772	164.0388791	ppb		94
63) M&P-XYLENE	6.610	106	16189174	1435.6427601	ppb	#	1
64) O-XYLENE	6.920	106	3648025	328.2971185	ppb		90
65) STYRENE	6.957	104	339634	18.5540488	ppb		97
66) Bromoform	7.005	173	70472	18.4974066	ppb		96
67) Isopropylbenzene	7.133	105	929865	31.5641955	ppb		99
69) Bromobenzene	7.455	77	276978	22.0552503	ppb		95
70) 1,1,2,2-TETRACHLOROETHANE	7.492	83	162683	19.4688366	ppb	#	97
71) 1,2,3-TRICHLOROPROPANE	7.614	110	41083	21.9115599	ppb		89
72) TRANS-1,4-DICHLORO-2-B...	7.626	53	56190	24.0712528	ppb		92
73) n-Propylbenzene	7.437	91	1185185	34.6266246	ppb		99
74) 4-ETHYLTOLUENE	7.504	105	3789630	131.2439531	ppb		97
75) 2-Chlorotoluene	7.577	126	121744	19.4615430	ppb	#	1
76) 4-Chlorotoluene	7.699	91	432780	20.8165719	ppb		99
77) 1,3,5-Trimethylbenzene	7.571	105	3524525	148.9226139	ppb		98
78) tert-Butylbenzene	7.820	119	402822	20.1440140	ppb		97
79) 1,2,4-Trimethylbenzene	7.875	105	3623847	151.3431284	ppb		97
80) sec-Butylbenzene	7.960	105	653991	20.3477373	ppb		93
81) 1,3-DICHLOROBENZENE	8.155	146	240862	19.7791443	ppb		97
82) p-Isopropyltoluene	8.058	119	545872	21.2788050	ppb		99
83) DICYCLOPENTADIENE	8.070	66	643107	19.3018049	ppb		99
85) 1,4-DICHLOROBENZENE	8.222	146	227901	20.3130524	ppb		83
86) 1,2,3-TRIMETHYLBENZENE	8.222	105	859479	40.0240090	ppb		99
87) 1,2-DICHLOROBENZENE	8.563	146	224511	21.6003217	ppb		99
88) n-Butylbenzene	8.392	91	508684	21.9415106	ppb		98
89) 1,2-Dibromo-3-chloropr...	9.201	157	27793	20.2022834	ppb		89
90) 1,2,4-Trichlorobenzene	9.755	180	133155	18.7099430	ppb		99
91) HEXACHLORO-1,3-BUTADIENE	9.706	225	64860	16.0948231	ppb		96
92) Naphthalene	10.023	128	655140	34.0099730	ppb		100
93) 1,2,3-Trichlorobenzene	10.181	180	115601	17.6495347	ppb		97
94) 1-Methylnaphthalene	10.838	142	268516	27.1248651	ppb		97
95) 2-Methylnaphthalene	10.953	142	159376	18.4533439	ppb		97
97) ETHANOL	2.686	45	209163	1730.6911661	ppb	#	99

Data Path : C:\msdchem\1\data\051716\
Data File : 0517 14.D
Acq On : 17 May 2016 1:15 pm
Operator : 605
Sample : MS 1x WG873015 L835717-01
Misc : water
ALS Vial : 14 Sample Multiplier: 1
InstName : VOCMS7

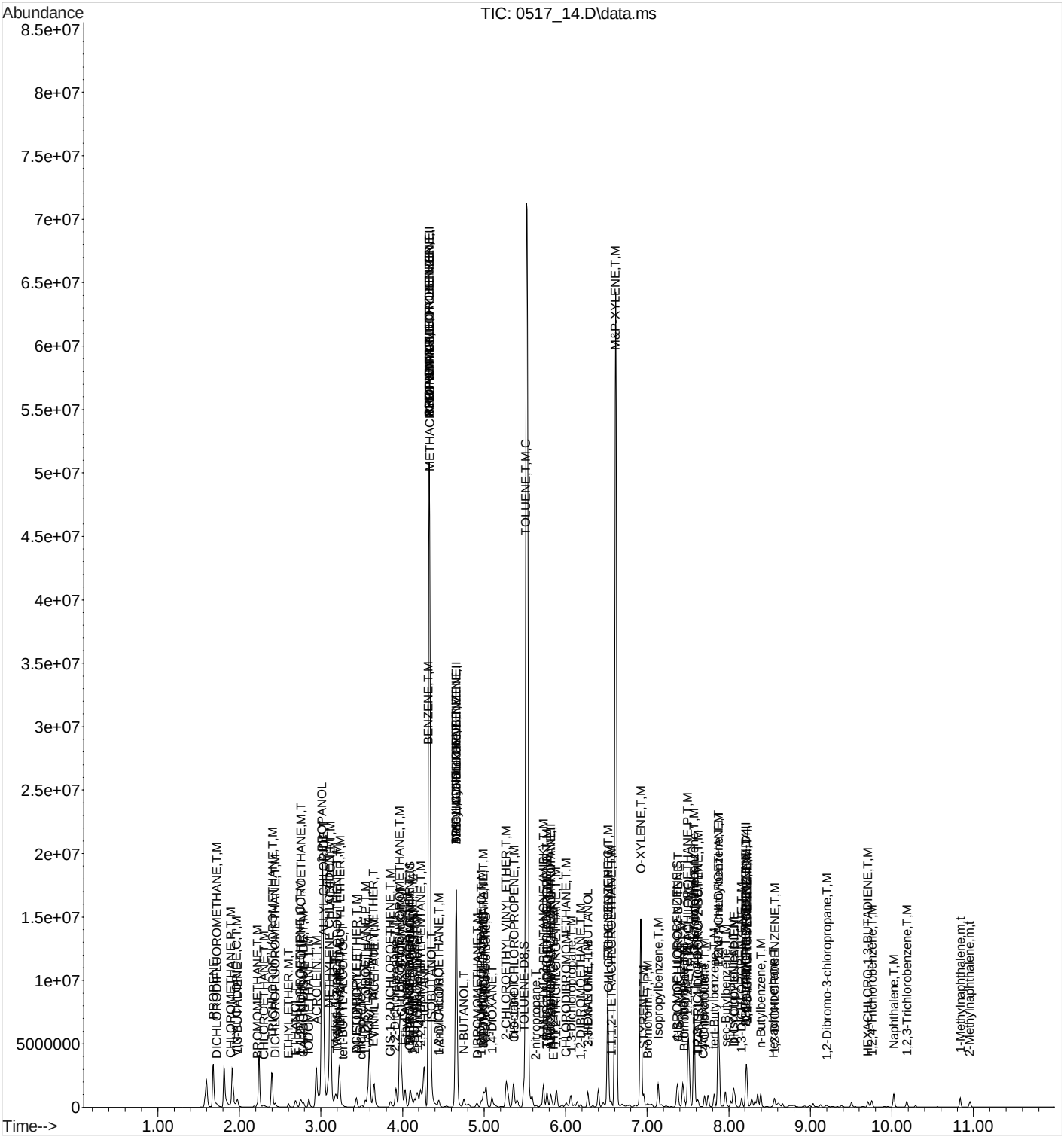
Quant Time: May 17 14:18:58 2016
Quant Method : C:\msdchem\1\methods\V807B15P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Mon Feb 15 15:00:04 2016
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
99)	2-PROPANOL	3.008	45	21477725	32644.0975907 ppb		97
100)	Methyl Acetate	3.179	43	638312	104.6260270 ppb	#	94
101)	ACETONITRILE	3.434	41	94941	87.3659921 ppb	#	33
102)	ALLYL CHLORIDE	3.033	76	344720	97.5476849 ppb	#	1
103)	tert-BUTYL ALCOHOL	3.270	59	79693	36.3967628 ppb	#	61
104)	chloroprene	3.495	53	2298	0.2018150 ppb	#	26
105)	ETHYL TERT-BUTYL ETHER	3.641	59	432755	18.1622731 ppb	#	94
106)	PROPIONITRILE	4.328	54	6536	6.0133733 ppb	#	1
107)	Ethyl Acetate	4.030	43	460658	55.8562016 ppb	#	56
108)	METHACRYLONITRILE	4.334	67	2668	0.9176188 ppb	#	1
109)	Cyclohexane	3.976	84	2321230	153.1968467 ppb		93
111)	ISOBUTANOL	4.359	43	115359	215.6257686 ppb	#	76
112)	t-Amyl Alcohol	4.444	59	102174	133.4558864 ppb		92
113)	TERT-AMYL METHYL ETHER	4.328	73	1098612	46.3604558 ppb	#	21
115)	N-BUTANOL	4.754	56	157115	671.8698510 ppb	#	53
116)	Methyl Cyclohexane	4.657	83	5382879	373.1387473 ppb		97
117)	2-nitropropane	5.636	43	29277	12.9534432 ppb	#	62
118)	METHYL METHACRYLATE	4.998	41	165149	23.7931805 ppb	#	21
119)	1,4-DIOXANE	5.101	88	2712	36.9865339 ppb	#	1
120)	n-octane	5.363	85	251659	40.6568911 ppb		99
121)	3,3-DIMETHYL-1-BUTANOL	6.269	57	127106	115.4558459 ppb	#	49
123)	ETHYL METHACRYLATE	5.849	69	32098	4.1224929 ppb	#	1
124)	CIS-1,4-DICHLORO-2-BUTENE	7.376	53	12012	5.6137116 ppb	#	1
125)	Cyclohexanone	7.687	55	1631	0.8604946 ppb	#	21
126)	PENTACHLOROETHANE	7.875	117	123226	32.3119558 ppb	#	13
127)	Hexachloroethane	8.544	117	1545	0.3258450 ppb	#	18

(#) = qualifier out of range (m) = manual integration (+) = signals summed

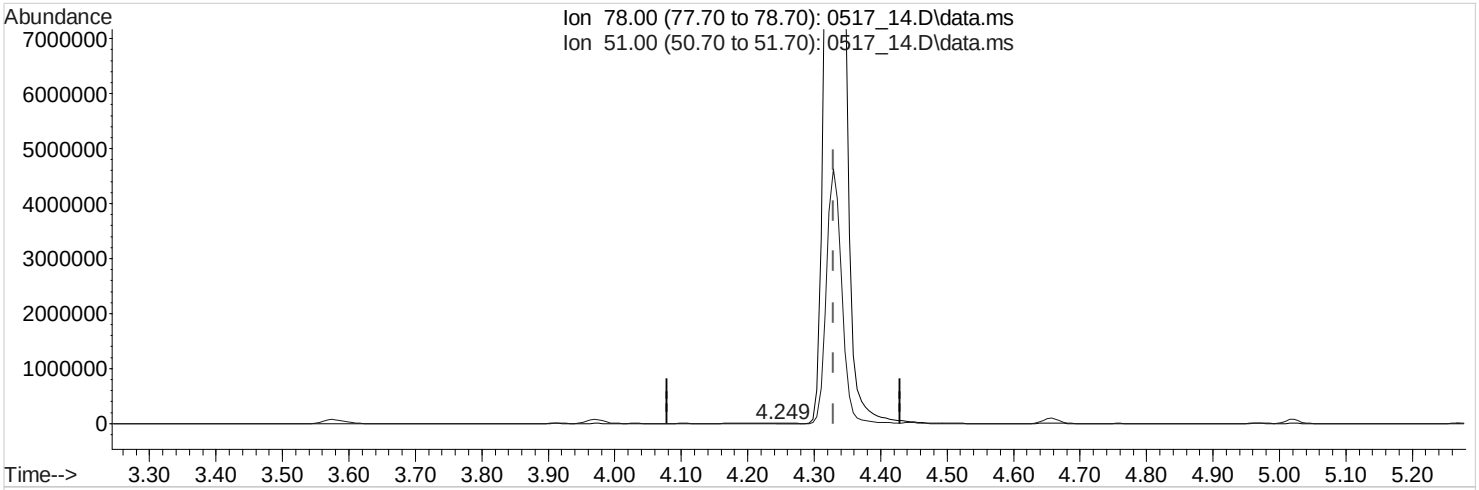
Data Path : C:\msdchem\1\data\051716\
Data File : 0517 14.D
Acq On : 17 May 2016 1:15 pm
Operator : 605
Sample : MS 1x WG873015 L835717-01
Misc : water
ALS Vial : 14 Sample Multiplier: 1
InstName : VOCMS7

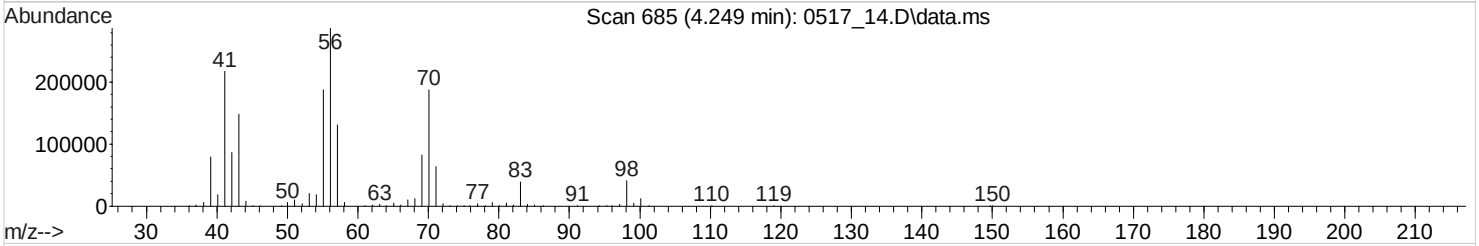
Quant Time: May 17 14:18:58 2016
Quant Method : C:\msdchem\1\methods\V807B15P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Mon Feb 15 15:00:04 2016
Response via : Initial Calibration

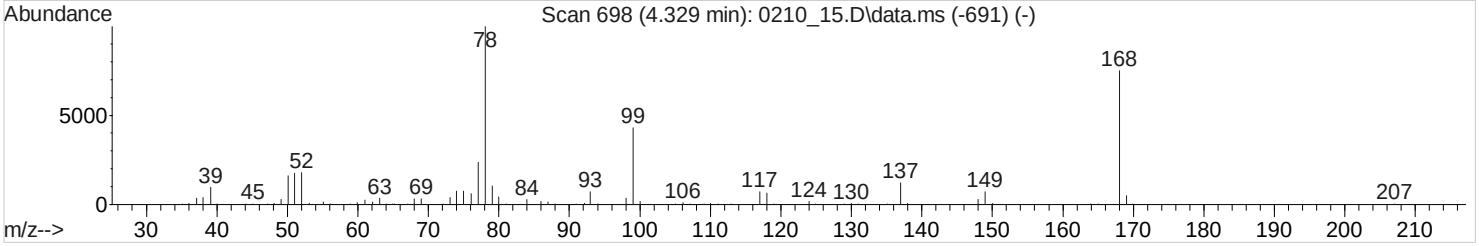


Data Path : C:\msdchem\1\data\051716\
Data File : 0517 14.D
Acq On : 17 May 2016 1:15 pm
Operator : 605
Sample : MS 1x WG873015 L835717-01
Misc : water
ALS Vial : 14 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: May 17 14:18:38 2016
Quant Method : C:\msdchem\1\methods\V807B15P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Mon Feb 15 15:00:04 2016
Response via : Initial Calibration







TIC: 0517_14.D\data.ms

(39) BENZENE (T,M)

4.249min (-0.079) 0.0368398 ppb

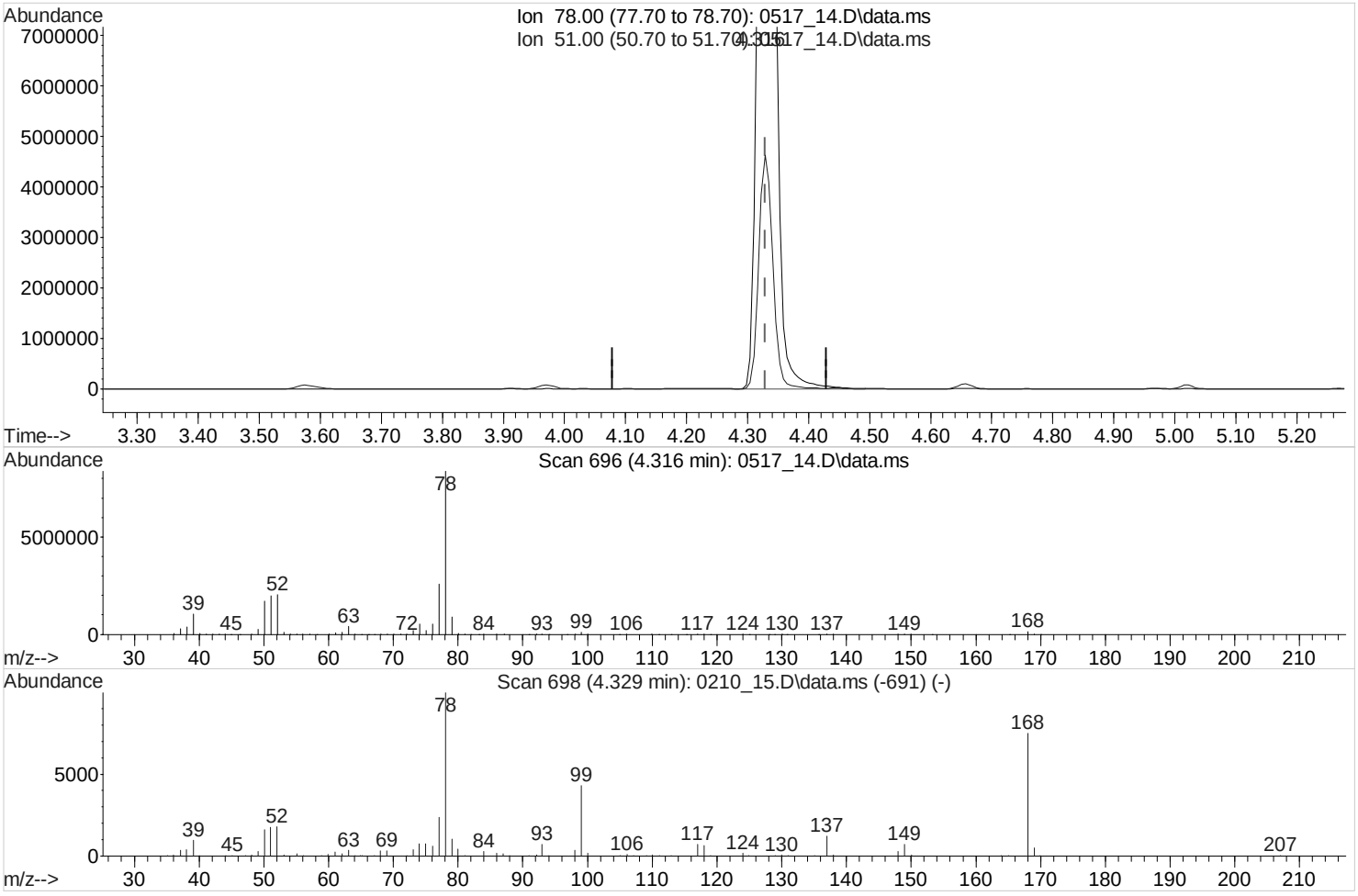
Qvalue = 1

response 1088

Ion	Exp%	Act%
78.00	100	100
51.00	18.50	1885.39#
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : C:\msdchem\1\data\051716\
Data File : 0517 14.D
Acq On : 17 May 2016 1:15 pm
Operator : 605
Sample : MS 1x WG873015 L835717-01
Misc : water
ALS Vial : 14 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: May 17 14:18:38 2016
Quant Method : C:\msdchem\1\methods\V807B15P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Mon Feb 15 15:00:04 2016
Response via : Initial Calibration



TIC: 0517_14.D\data.ms

(39) BENZENE (T,M)

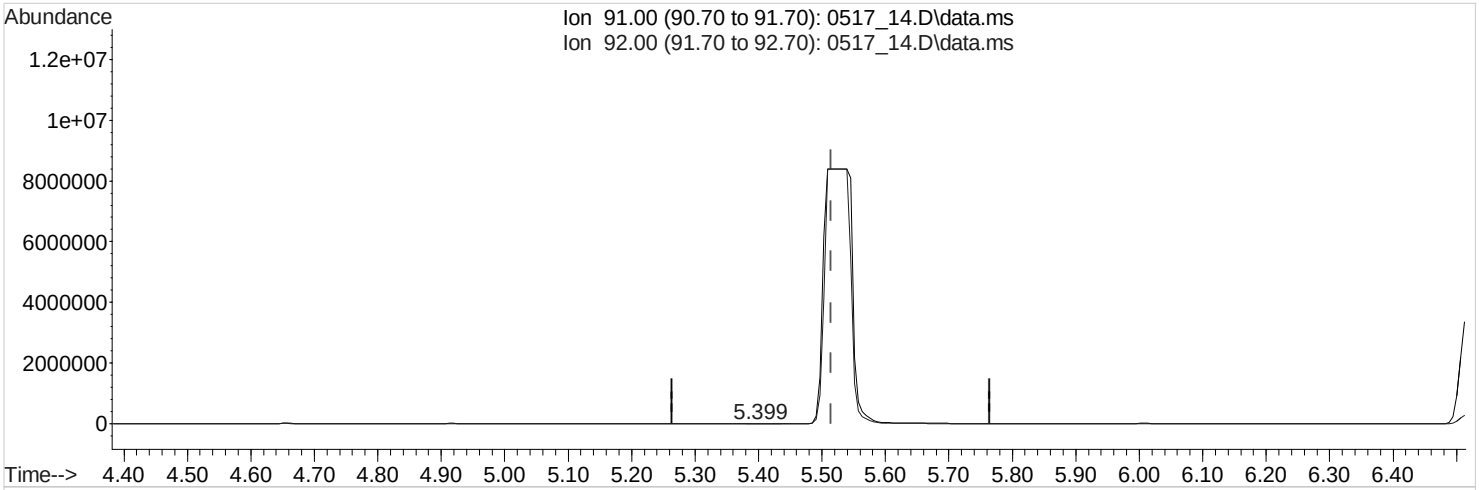
4.316min (-0.012) 761.4819252 ppb m

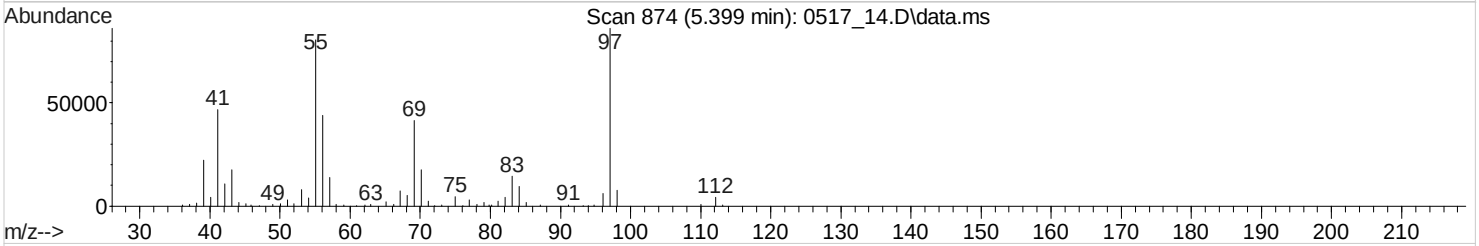
response 22489026

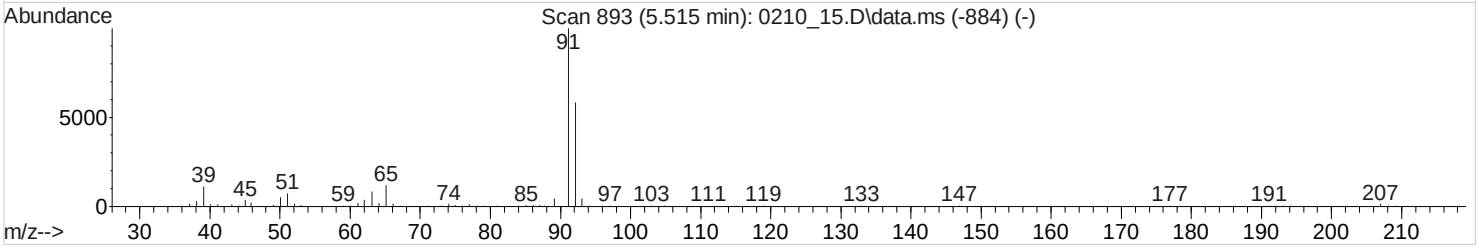
Ion	Exp%	Act%
78.00	100	100
51.00	18.50	0.09#
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : C:\msdchem\1\data\051716\
Data File : 0517 14.D
Acq On : 17 May 2016 1:15 pm
Operator : 605
Sample : MS 1x WG873015 L835717-01
Misc : water
ALS Vial : 14 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: May 17 14:18:38 2016
Quant Method : C:\msdchem\1\methods\V807B15P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Mon Feb 15 15:00:04 2016
Response via : Initial Calibration







TIC: 0517_14.D\data.ms

(51) TOLUENE (T,M,C)

5.399min (-0.115) 0.0459431 ppb

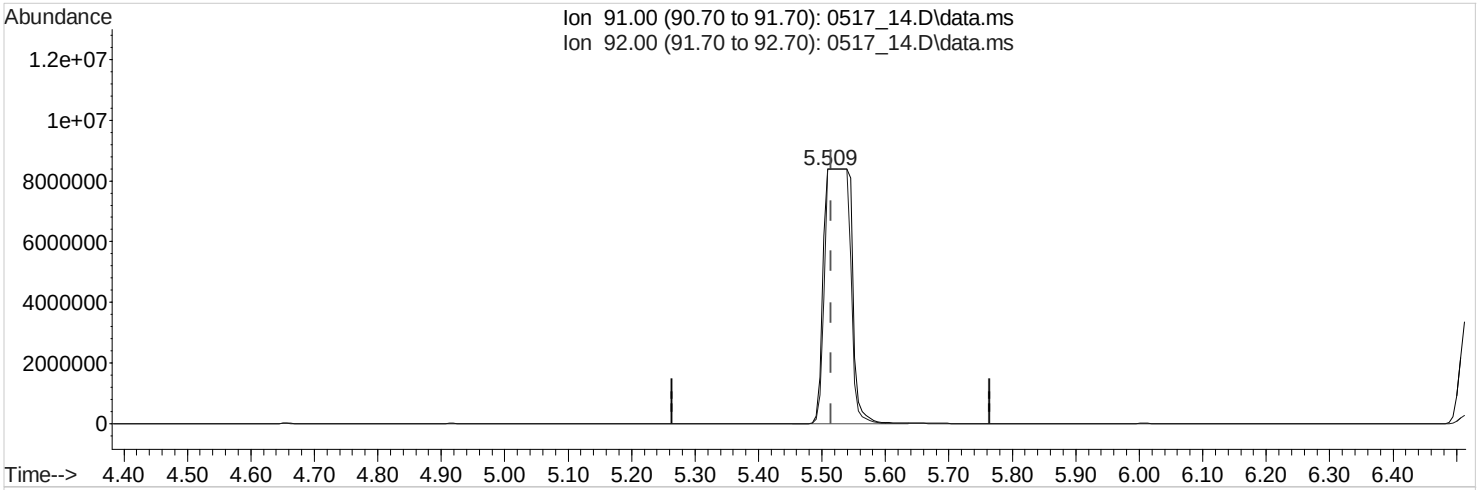
Qvalue = 22

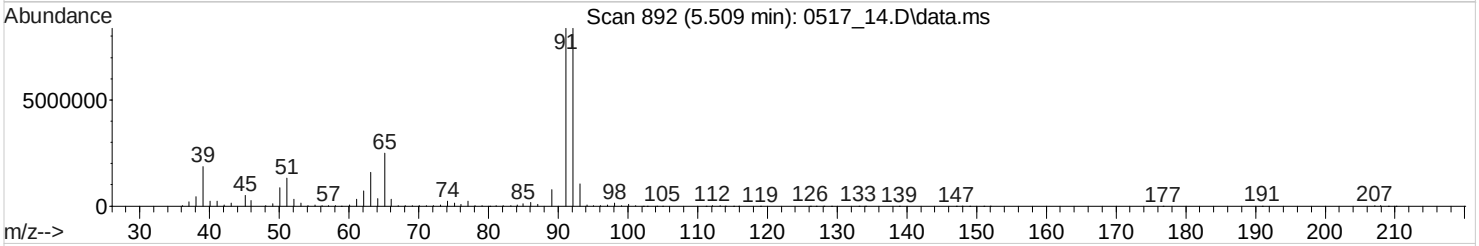
response 1192

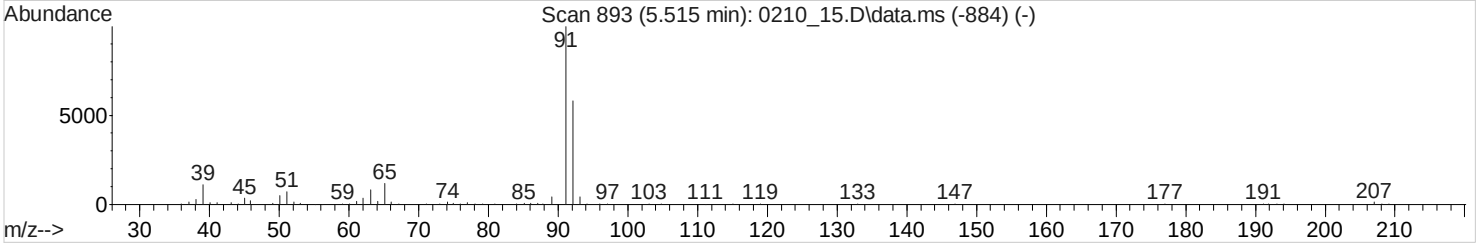
Ion	Exp%	Act%
91.00	100	100
92.00	58.60	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : C:\msdchem\1\data\051716\
Data File : 0517 14.D
Acq On : 17 May 2016 1:15 pm
Operator : 605
Sample : MS 1x WG873015 L835717-01
Misc : water
ALS Vial : 14 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: May 17 14:18:38 2016
Quant Method : C:\msdchem\1\methods\V807B15P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Mon Feb 15 15:00:04 2016
Response via : Initial Calibration







TIC: 0517_14.D\data.ms

(51) TOLUENE (T,M,C)

5.509min (-0.005) 992.4778447 ppb m

response 25749968

Ion	Exp%	Act%
91.00	100	100
92.00	58.60	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\051716\
Data File : 0517 15.D
Acq On : 17 May 2016 1:34 pm
Operator : 605
Sample : MSD 1x WG873015 L835717-01
Misc : water
ALS Vial : 15 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: May 17 14:19:22 2016
Quant Method : C:\msdchem\1\methods\V807B15P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Mon Feb 15 15:00:04 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 8260-PENTAFLUOROBENZENE	4.329	168	543048	40.0000000	ppb		0.00
41) 8260-1,4-DIFLUOROBENZENE	4.657	114	802547	40.0000000	ppb		0.00
53) 8260-2-BROMO-1-CHLOROP...	5.819	79	145586	40.0000000	ppb		0.00
84) 8260-1,4-DICHLOROBENZE...	8.210	152	338018	40.0000000	ppb		0.00
96) AP9-PENTAFLUOROBENZENE	4.329	168	543048	40.0000000	ppb		0.00
114) AP9-1,4-DIFLUOROBENZENE	4.657	114	802547	40.0000000	ppb		0.00
122) AP9-2-BROMO-1-CHLOROPR...	5.819	79	145586	40.0000000	ppb	#	0.00
128) AP9-1,4-DICHLOROBENZEN...	8.210	152	338018	40.0000000	ppb		0.00
System Monitoring Compounds							
33) DIBROMOFLUOROMETHANE	4.091	111	246178	34.9826586	ppb		0.00
Spiked Amount 40.000	Range 78 - 121		Recovery = 87.46%				
46) a,a,a-Trifluorotoluene	5.022	146	418515	39.9424389	ppb		0.00
Spiked Amount 40.000	Range 85 - 114		Recovery = 99.86%				
50) TOLUENE-D8	5.484	98	1066069	43.4676177	ppb		0.00
Spiked Amount 40.000	Range 89 - 111		Recovery = 108.67%				
68) 4-BROMOFLUOROBENZENE	7.364	95	376800	40.7281066	ppb		0.00
Spiked Amount 40.000	Range 71 - 126		Recovery = 101.82%				
Target Compounds							Qvalue
3) PROPENE	1.676	41	700259	219.6403923	ppb	#	53
4) DICHLORODIFLUOROMETHANE	1.719	85	149081	17.6221087	ppb		99
5) CHLOROMETHANE	1.895	50	216150	17.8279768	ppb	#	95
6) VINYL CHLORIDE	1.962	62	165967	15.9662124	ppb		98
7) 1,3-BUTADIENE	1.974	39	167111	18.0103814	ppb	#	80
8) BROMOMETHANE	2.211	94	108435	21.0852380	ppb		98
9) CHLOROETHANE	2.303	64	94500	16.9533710	ppb		98
10) TRICHLOROFLUOROMETHANE	2.406	101	169692	16.3449855	ppb		99
11) DICHLOROFLUOROMETHANE	2.437	67	256592	18.2889928	ppb		96
12) ETHYL ETHER	2.601	59	117475	17.8209494	ppb		98
13) ACROLEIN	2.948	56	234857	148.0126358	ppb	#	82
14) 1,1-DICHLOROETHENE	2.747	61	209704	18.6444089	ppb		98
15) 1,1,2-TRICHLOROTRIFLUO...	2.759	101	119761	18.5647475	ppb		96
16) ACETONE	3.112	43	11752993	2299.9276259	ppb		93
17) IODOMETHANE	2.850	142	670765	103.2891929	ppb		100
18) CARBON DISULFIDE	2.783	76	357919	14.1459642	ppb		99
19) METHYLENE CHLORIDE	3.100	84	121772	16.0977087	ppb	#	91
20) ACRYLONITRILE	3.574	53	397288	127.8742297	ppb		85
21) n-Hexane	3.221	56	542654	66.8818975	ppb		97
22) TRANS-1,2-DICHLOROETHENE	3.191	96	112869	16.7105934	ppb		95
23) METHYL TERT-BUTYL ETHER	3.233	73	375284	18.6787002	ppb	#	1
24) 1,1-DICHLOROETHANE	3.544	63	263201	18.8789138	ppb		99
25) VINYL ACETATE	3.653	43	1866678	105.2307723	ppb		99
26) DI-ISOPROPYL ETHER	3.434	45	535176	18.0155374	ppb		98
27) 2,2-Dichloropropane	3.909	77	214587	18.6000309	ppb		97
28) CIS-1,2-DICHLOROETHENE	3.848	96	137499	18.7800365	ppb		98
29) 2-BUTANONE (MEK)	4.146	43	539377	87.2510405	ppb		99
30) BROMOCHLOROMETHANE	3.964	130	68369	17.3175121	ppb		99
31) TETRAHYDROFURAN	4.091	42	86277	28.7396875	ppb	#	1
32) CHLOROFORM	3.988	83	344687	27.3813864	ppb	#	81
34) 1,1,1-TRICHLOROETHANE	4.122	97	191391	18.3295847	ppb		96
35) CARBON TETRACHLORIDE	4.085	117	159616	17.3329266	ppb		95
36) 1,1-Dichloropropene	4.189	75	189655	19.2474149	ppb		95

Data Path : C:\msdchem\1\data\051716\
Data File : 0517 15.D
Acq On : 17 May 2016 1:34 pm
Operator : 605
Sample : MSD 1x WG873015 L835717-01
Misc : water
ALS Vial : 15 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: May 17 14:19:22 2016
Quant Method : C:\msdchem\1\methods\V807B15P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Mon Feb 15 15:00:04 2016
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
37)	2,2,4-TRIMETHYLPENTANE	4.225	57	622213	17.8936181	ppb		92
38)	HEPTANE	4.268	43	983769	58.8456836	ppb		100
39)	BENZENE	4.316	78	22258753m	755.9248820	ppb		
40)	1,2-DICHLOROETHANE	4.444	62	186589	20.9169140	ppb		98
42)	TRICHLOROETHENE	4.657	130	119505	20.8833100	ppb	#	40
43)	1,2-DICHLOROPROPANE	4.967	62	111529	21.4356901	ppb		96
44)	DIBROMOMETHANE	4.913	93	82320	21.7574357	ppb		97
45)	BROMODICHLOROMETHANE	4.992	83	193861	22.6048409	ppb		92
47)	2-CHLOROETHYL VINYL ETHER	5.271	63	7040	9.6475027	ppb	#	1
48)	CIS-1,3-DICHLOROPROPENE	5.369	75	234579	21.0429879	ppb		96
49)	4-METHYL-2-PENTANONE (...	5.728	43	1072558	131.7265497	ppb		100
51)	TOLUENE	5.509	91	25151133m	969.5262664	ppb		
52)	TRANS-1,3-DICHLOROPROPENE	5.770	75	214308	22.8521837	ppb		98
54)	1,1,2-TRICHLOROETHANE	5.880	97	156083	29.7967118	ppb	#	1
55)	TETRACHLOROETHENE	5.776	164	92039	21.0967158	ppb		99
56)	1,3-Dichloropropane	6.068	76	214804	22.8055275	ppb		99
57)	2-HEXANONE	6.269	58	375979	101.0836723	ppb		96
58)	CHLORODIBROMOMETHANE	6.008	129	128369	21.2793658	ppb		100
59)	1,2-DIBROMOETHANE	6.184	107	119803	22.2802496	ppb		99
60)	CHLOROBENZENE	6.525	112	326901	20.5087417	ppb	#	15
61)	1,1,1,2-TETRACHLOROETHANE	6.561	133	106845	20.4613511	ppb	#	99
62)	ETHYLBENZENE	6.513	106	1467436	162.7923400	ppb		96
63)	M&P-XYLENE	6.610	106	15960907	1455.6982925	ppb	#	1
64)	O-XYLENE	6.920	106	3494574	323.4414070	ppb		91
65)	STYRENE	6.957	104	350078	19.6690990	ppb		96
66)	Bromoform	7.005	173	74692	20.1632458	ppb		98
67)	Isopropylbenzene	7.133	105	942385	32.8999547	ppb		99
69)	Bromobenzene	7.455	77	282180	23.1092077	ppb		96
70)	1,1,2,2-TETRACHLOROETHANE	7.492	83	167979	20.6749720	ppb	#	97
71)	1,2,3-TRICHLOROPROPANE	7.614	110	43198	23.7175444	ppb		93
72)	TRANS-1,4-DICHLORO-2-B...	7.626	53	56963	25.0971627	ppb		94
73)	n-Propylbenzene	7.437	91	1188160	35.7018771	ppb		100
74)	4-ETHYLTOLUENE	7.504	105	3718773	132.4568045	ppb		96
75)	2-Chlorotoluene	7.577	126	126112	20.7337677	ppb	#	1
76)	4-Chlorotoluene	7.699	91	445250	22.0261233	ppb		99
77)	1,3,5-Trimethylbenzene	7.571	105	3456847	150.2215796	ppb		98
78)	tert-Butylbenzene	7.821	119	411169	21.1468316	ppb		96
79)	1,2,4-Trimethylbenzene	7.875	105	3544411	152.2400930	ppb		97
80)	sec-Butylbenzene	7.954	105	674493	21.5831042	ppb		93
81)	1,3-DICHLOROBENZENE	8.155	146	250690	21.1723143	ppb		98
82)	p-Isopropyltoluene	8.058	119	570635	22.8774141	ppb	#	81
83)	DICYCLOPENTADIENE	8.070	66	661157	20.4085146	ppb		99
85)	1,4-DICHLOROBENZENE	8.222	146	238592	21.5871895	ppb		89
86)	1,2,3-TRIMETHYLBENZENE	8.222	105	860665	40.6846635	ppb		100
87)	1,2-DICHLOROBENZENE	8.563	146	236738	23.1207457	ppb		99
88)	n-Butylbenzene	8.392	91	548164	24.0016018	ppb		99
89)	1,2-Dibromo-3-chloropr...	9.201	157	32332	23.8566176	ppb		96
90)	1,2,4-Trichlorobenzene	9.749	180	142417	20.3136556	ppb		98
91)	HEXACHLORO-1,3-BUTADIENE	9.706	225	70608	17.7858425	ppb		97
92)	Naphthalene	10.023	128	687089	36.2073246	ppb		100
93)	1,2,3-Trichlorobenzene	10.181	180	128019	19.8407172	ppb		97
94)	1-Methylnaphthalene	10.838	142	290850	29.8248148	ppb		98
95)	2-Methylnaphthalene	10.954	142	174843	20.5499926	ppb		98
97)	ETHANOL	2.686	45	203890	1692.0745696	ppb	#	97

Data Path : C:\msdchem\1\data\051716\
Data File : 0517 15.D
Acq On : 17 May 2016 1:34 pm
Operator : 605
Sample : MSD 1x WG873015 L835717-01
Misc : water
ALS Vial : 15 Sample Multiplier: 1
InstName : VOCMS7

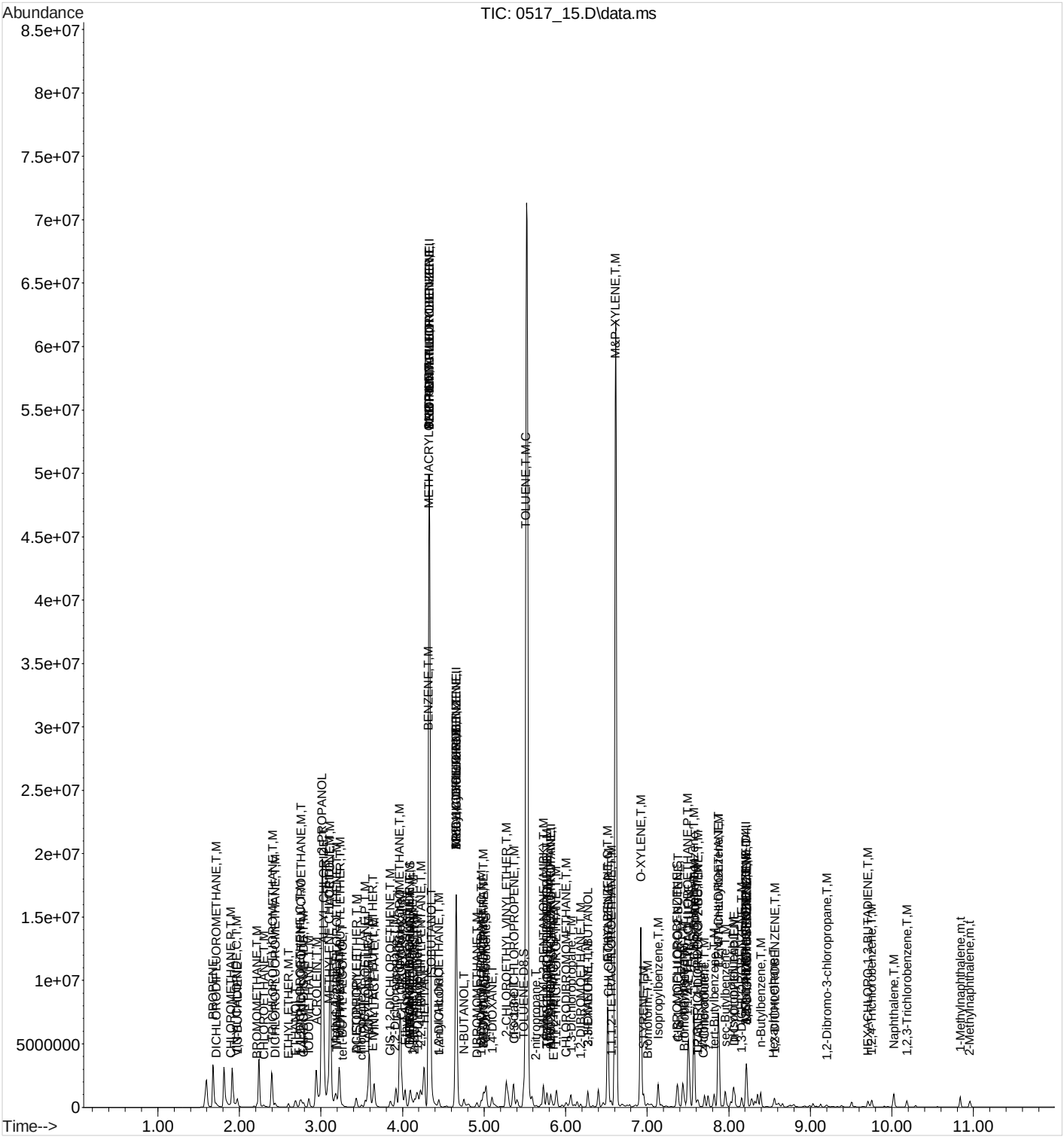
Quant Time: May 17 14:19:22 2016
Quant Method : C:\msdchem\1\methods\V807B15P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Mon Feb 15 15:00:04 2016
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
99)	2-PROPANOL	3.008	45	21614948	32950.3053158 ppb		97
100)	Methyl Acetate	3.179	43	665667	109.4340849 ppb	#	94
101)	ACETONITRILE	3.434	41	97125	89.6413732 ppb	#	42
102)	ALLYL CHLORIDE	3.033	76	354141	100.5114534 ppb	#	1
103)	tert-BUTYL ALCOHOL	3.264	59	82292	37.6954609 ppb	#	61
104)	chloroprene	3.495	53	1916	0.1687671 ppb	#	26
105)	ETHYL TERT-BUTYL ETHER	3.635	59	444808	18.7236086 ppb	#	92
106)	PROPIONITRILE	4.329	54	6805	6.2794717 ppb	#	1
107)	Ethyl Acetate	4.030	43	442528	53.8173605 ppb	#	53
108)	METHACRYLONITRILE	4.322	67	2732	0.9424233 ppb	#	1
109)	Cyclohexane	3.976	84	2268436	150.1575038 ppb		93
111)	ISOBUTANOL	4.353	43	118804	222.7250672 ppb	#	76
112)	t-Amyl Alcohol	4.444	59	106614	139.6691319 ppb		96
113)	TERT-AMYL METHYL ETHER	4.329	73	1091176	46.1835191 ppb	#	21
115)	N-BUTANOL	4.754	56	154275	659.8131357 ppb	#	34
116)	Methyl Cyclohexane	4.657	83	5298568	367.3334656 ppb		97
117)	2-nitropropane	5.637	43	28168	12.4644340 ppb	#	56
118)	METHYL METHACRYLATE	4.998	41	164838	23.7515407 ppb	#	21
119)	1,4-DIOXANE	5.101	88	2829	38.5873359 ppb	#	1
120)	n-octane	5.363	85	249823	40.3656562 ppb		98
121)	3,3-DIMETHYL-1-BUTANOL	6.269	57	130064	118.1584760 ppb	#	46
123)	ETHYL METHACRYLATE	5.849	69	38230	5.0458014 ppb	#	1
124)	CIS-1,4-DICHLORO-2-BUTENE	7.376	53	13167	6.3236164 ppb	#	1
125)	Cyclohexanone	7.687	55	992	0.5378359 ppb	#	74
126)	PENTACHLOROETHANE	7.875	117	121806	32.8226384 ppb	#	13
127)	Hexachloroethane	8.544	117	1816	0.3935885 ppb	#	12

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\051716\
Data File : 0517 15.D
Acq On : 17 May 2016 1:34 pm
Operator : 605
Sample : MSD 1x WG873015 L835717-01
Misc : water
ALS Vial : 15 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: May 17 14:19:22 2016
Quant Method : C:\msdchem\1\methods\V807B15P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Mon Feb 15 15:00:04 2016
Response via : Initial Calibration



Calibration

Instrument: VOCMS7
Method: V807B10P

Initial Calibration Run Log

File ID	Level ID	Date Analyzed
0210_09.D	.25	2/10/2016 10:46:00 PM
0210_10.D	.5	2/10/2016 11:05:00 PM
0210_11.D	1	2/10/2016 11:24:00 PM
0210_12.D	2	2/10/2016 11:44:00 PM
0210_13.D	5.0	2/11/2016 12:03:00 AM
0210_14.D	10	2/11/2016 12:22:00 AM
0210_15.D	25	2/11/2016 12:41:00 AM
0210_16.D	40	2/11/2016 1:01:00 AM
0210_17.D	75	2/11/2016 1:20:00 AM
0210_18.D	100	2/11/2016 1:39:00 AM
0210_19.D	200	2/11/2016 1:58:00 AM
0126_04.D	1A	1/26/2016 8:38:00 PM
0126_05.D	2.5A	1/26/2016 8:57:00 PM
0126_06.D	5A	1/26/2016 9:16:00 PM
0126_07.D	7.5A	1/26/2016 9:36:00 PM
0126_08.D	10A	1/26/2016 9:55:00 PM
0126_09.D	12A	1/26/2016 10:14:00 PM
0126_10.D	15A	1/26/2016 10:33:00 PM
0126_11.D	17A	1/26/2016 10:53:00 PM
0126_12.D	20A	1/26/2016 11:12:00 PM

Mint Miner 2.6.4 Directory Scan: y:\021016

11 Feb 2016 13:44

Level	Status	Code	Operator	Instrument	Sample ID
Scan File Path: y:\021016\0210_01.D					
Original Path: 0210_01.D					
0	Scanned		522	VOCMS7	INSTBLK (water)
Scan File Path: y:\021016\0210_02.D					
Original Path: y:\021016\0210_02.D					
0	No Audit				
Scan File Path: y:\021016\0210_03.D					
Original Path: C:\msdchem\1\data\021016\0210_03.D\data.ms					
0	Scanned		522	VOCMS7	1 ppb (water)
Scan File Path: y:\021016\0210_04.D					
Original Path: 0210_04.D					
0	Scanned		522	VOCMS7	1 ppb (water)
Scan File Path: y:\021016\0210_05.D					
Original Path: 0210_05.D					
0	Scanned		522	VOCMS7	1 ppb (water)
Scan File Path: y:\021016\0210_06.D					
Original Path: C:\msdchem\1\data\021016\0210_06.D\data.ms					
0	Scanned		522	VOCMS7	1 ppb (water)
Scan File Path: y:\021016\0210_07.D					
Original Path: 0210_07.D					
0	Scanned		522	VOCMS7	1 ppb (water)
Scan File Path: y:\021016\0210_08.D					
Original Path: 0210_08.D					
0	Scanned		522	VOCMS7	INSTBLK (water)
Scan File Path: y:\021016\0210_09.D					
Original Path: C:\msdchem\1\data\021016\0210_09.D					
30	Scanned	M(1), D(24), MZ(5)	522	VOCMS7	STD VMS .25 ppb 16B10218 (water 15L26724)
Scan File Path: y:\021016\0210_10.D					
Original Path: C:\msdchem\1\data\021016\0210_10.D					
43	Scanned	MR(1), MB(1), M(1), D(29), MZ(7)	522	VOCMS7	STD VMS .5 ppb 16B10218 (water 15L26724)
Scan File Path: y:\021016\0210_11A.D					
Original Path: C:\msdchem\1\data\021016\0210_11.D					
31	Scanned	D(26), MZ(5)	522	VOCMS7	STD VMS 1 ppb 16B10218 (water 15L26724)

Level	Status	Code	Operator	Instrument	Sample ID
Scan File Path: y:\021016\0210_11.D					
Original Path: C:\msdchem\1\data\021016\0210_11.D					
31	Scanned	D(26), MZ(5)	522	VOCMS7	STD VMS 1 ppb 16B10218 (water 15L26724)
Scan File Path: y:\021016\0210_12A.D					
Original Path: C:\msdchem\1\data\021016\0210_12.D					
36	Scanned	D(31), MZ(5)	522	VOCMS7	STD VMS 2 ppb 16B10218 (water 15L26724)
Scan File Path: y:\021016\0210_12.D					
Original Path: C:\msdchem\1\data\021016\0210_12.D					
36	Scanned	D(31), MZ(5)	522	VOCMS7	STD VMS 2 ppb 16B10218 (water 15L26724)
Scan File Path: y:\021016\0210_13.D					
Original Path: C:\msdchem\1\data\021016\0210_13.D					
35	Scanned	D(30), MZ(5)	522	VOCMS7	STD VMS 5 ppb 16B10218 (water 15L26724)
Scan File Path: y:\021016\0210_13A.D					
Original Path: C:\msdchem\1\data\021016\0210_13.D					
35	Scanned	D(30), MZ(5)	522	VOCMS7	STD VMS 5 ppb 16B10218 (water 15L26724)
Scan File Path: y:\021016\0210_14.D					
Original Path: C:\msdchem\1\data\021016\0210_14.D					
35	Scanned	D(30), MZ(5)	522	VOCMS7	STD VMS 10 ppb 16B10218 (water 15L26724)
Scan File Path: y:\021016\0210_15.D					
Original Path: C:\msdchem\1\data\021016\0210_15.D					
129	Scanned	D(124), MZ(5)	522	VOCMS7	MSTD VMS 25 ppb 16B10218 (water 15L26724
Scan File Path: y:\021016\0210_16.D					
Original Path: C:\msdchem\1\data\021016\0210_16.D					
38	Scanned	D(33), MZ(5)	522	VOCMS7	STD VMS 40 ppb 16B10218 (water 15L26724)
Scan File Path: y:\021016\0210_17.D					
Original Path: C:\msdchem\1\data\021016\0210_17.D					
37	Scanned	D(32), MZ(5)	522	VOCMS7	STD VMS 75 ppb 16B10218 (water 15L26724)
Scan File Path: y:\021016\0210_18.D					
Original Path: C:\msdchem\1\data\021016\0210_18.D					
37	Scanned	D(32), MZ(5)	522	VOCMS7	STD VMS 100 ppb 16B10218 (water 15L26724)
Scan File Path: y:\021016\0210_19.D					
Original Path: C:\msdchem\1\data\021016\0210_19.D					
38	Scanned	D(33), MZ(5)	522	VOCMS7	STD VMS 200 ppb 16B10218 (water 15L26724)

Level	Status	Code	Operator	Instrument	Sample ID
Scan File Path: y:\021016\0210_20.D					
Original Path: C:\msdchem\1\data\021016\0210_20.D\data.ms					
0	Scanned		522	VOCMS7	INSTBLK (water)
Scan File Path: y:\021016\0210_21.D					
Original Path: C:\msdchem\1\data\021016\0210_21.D\data.ms					
0	Scanned		522	VOCMS7	INSTBLK (water)
Scan File Path: y:\021016\0210_22.D					
Original Path: C:\msdchem\1\data\021016\0210_22.D\data.ms					
0	Scanned		522	VOCMS7	SSCV VMS 25 ppb 16B10219 (water 15L26724)

D = Deletion of any analyte
MB = Manual integration of a common contaminant
MZ = Manual integrated but indicator missing from either the quant report or audit file
M = Manual integration (non-specific)
MR = Manual integration with before/after ratio <10%

ScanSummary.rpt

Total Files Scanned	25	Beginning Analyzed Date	2/10/2016 4:03:00PM
Methods	0	Ending Analyzed Date	2/11/2016 2:56:00AM
Samples	20	Analyzed Range	10 hours, 53 minutes
Tunes	5	Greatest Time Between Tunes	2 hours, 52 minutes
CCCs	0	Greatest Time Between CCCs	N/A

Distinct Method Last Updated count 0
Operators 1 Intruments 1

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

Injection Log

Instrument ID : VOCMS7
Computer Name : VOCCOMPK
Released By : Amy Green
Date Released : 2/11/2016 12:17:35 PM
Run ID : 012616
Signature : _____

#	File ID	Sample ID	Method	WG	Product	Matrix	Account #	State	Dil.	Mult.	Injected	Misc.
1	0126_01	INSTBLK	V807A26P						1	1	01/26/16 1940	"water 15L26724"
2	0126_01	INSTBLK								1	01/26/16 1940	
3	0126_02	INSTBLK	V807A26P						1	1	01/26/16 1959	"water 15L26724"
4	0126_04	STD AP9 1A PPB 15L28743	V807A26P						1	1	01/26/16 2038	"water 15L26724"
5	0126_04A	RL AP9 1A PPB 15L28743	V807A26P						1	1	01/26/16 2038	"water 15L26724"
6	0126_05	STD AP9 2.5A PPB 15L28743	V807A26P						1	1	01/26/16 2057	"water 15L26724"
7	0126_06	STD AP9 5A PPB 15L28743	V807A26P						1	1	01/26/16 2116	"water 15L26724"
8	0126_07	STD AP9 7.5A PPB 15L28743	V807A26P						1	1	01/26/16 2136	"water 15L26724"
9	0126_08	MSTD AP9 10A PPB 15L28743	V807A26P						1	1	01/26/16 2155	"water 15L26724"
10	0126_09	STD AP9 12.5A PPB 15L28743	V807A26P						1	1	01/26/16 2214	"water 15L26724"
11	0126_10	STD AP9 15A PPB 15L28743	V807A26P						1	1	01/26/16 2233	"water 15L26724"
12	0126_11	STD AP9 17.5A PPB 15L28743	V807A26P						1	1	01/26/16 2253	"water 15L26724"
13	0126_12	STD AP9 20A PPB 15L28743	V807A26P						1	1	01/26/16 2312	"water 15L26724"
14	0126_13	INSTBLK	V807A26P						1	1	01/26/16 2331	"water 15L26724"
15	0126_14	INSTBLK	V807A26P						1	1	01/26/16 2351	"water 15L26724"

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

Injection Log

Instrument ID : VOCMS7
Computer Name : VOCCOMPK
Released By : Amy Green
Date Released : 2/11/2016 12:17:35 PM
Run ID : 012616
Signature : _____

#	File ID	Sample ID	Method	WG	Product	Matrix	Account #	State	Dil.	Mult.	Injected	Misc.
16	0126_15	SSCV AP9 10A PPB 16A19936	V807A26P						1	1	01/27/16 0010	"water 15L26724"
17	0210_01	INSTBLK	V807A26P						1	1	02/10/16 1603	"water"
18	0210_01	INSTBLK								1	02/10/16 1603	
19	0210_04	1 ppb								1	02/10/16 1711	
20	0210_05	1 ppb								1	02/10/16 1856	
21	0210_07	1 ppb								1	02/10/16 1934	
22	0210_08	INSTBLK	V807B10P						1	1	02/10/16 2226	"water"
23	0210_08	INSTBLK	V807B10P							1	02/10/16 2226	
24	0210_09	STD VMS .25 PPB 16B10218	V807B10P						1	1	02/10/16 2246	"water 15L26724"
25	0210_10	STD VMS .5 PPB 16B10218	V807B10P						1	1	02/10/16 2305	"water 15L26724"
26	0210_11	STD VMS 1 PPB 16B10218	V807B10P						1	1	02/10/16 2324	"water 15L26724"
27	0210_11A	RL VMS 1 PPB 16B10218	V807B10P						1	1	02/10/16 2324	"water 15L26724"
28	0210_12	STD VMS 2 PPB 16B10218	V807B10P						1	1	02/10/16 2344	"water 15L26724"
29	0210_12A	RL VMS 2 PPB 16B10218	V807B10P						1	1	02/10/16 2344	"water 15L26724"
30	0210_13	STD VMS 5 PPB 16B10218	V807B10P						1	1	02/11/16 0003	"water 15L26724"
31	0210_13A	RL VMS 5.0 PPB 16B10218	V807B10P						1	1	02/11/16 0003	"water 15L26724"

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

Injection Log

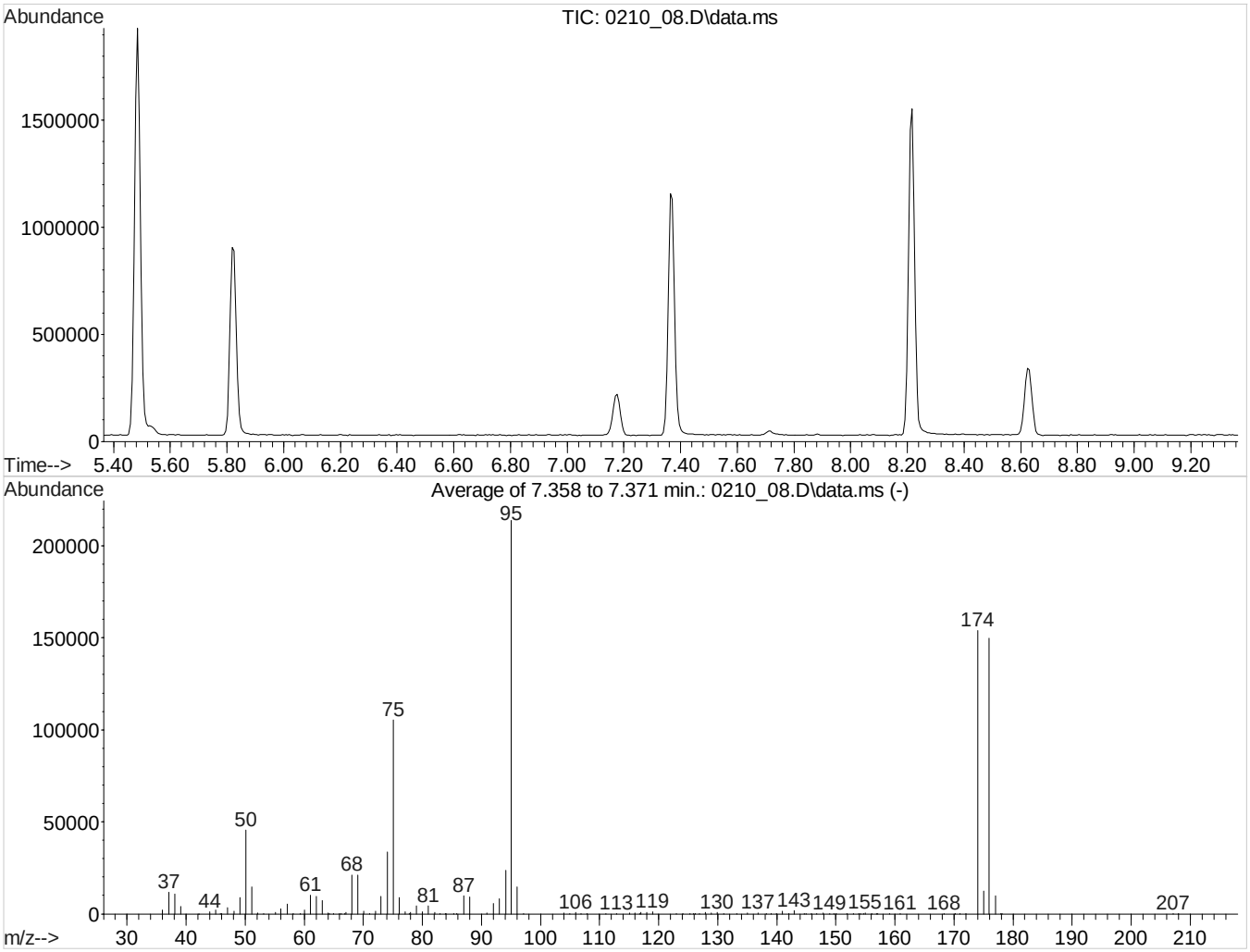
Instrument ID : VOCMS7
Computer Name : VOCCOMPK
Released By : Amy Green
Date Released : 2/11/2016 12:17:35 PM
Run ID : 012616
Signature : _____

#	File ID	Sample ID	Method	WG	Product	Matrix	Account #	State	Dil.	Mult.	Injected	Misc.
32	0210_14	STD VMS 10 PPB 16B10218	V807B10P						1	1	02/11/16 0022	"water 15L26724"
33	0210_15	MSTD VMS 25 PPB 16B10218	V807B10P						1	1	02/11/16 0041	"water 15L26724"
34	0210_16	STD VMS 40 PPB 16B10218	V807B10P						1	1	02/11/16 0101	"water 15L26724"
35	0210_17	STD VMS 75 PPB 16B10218	V807B10P						1	1	02/11/16 0120	"water 15L26724"
36	0210_18	STD VMS 100 PPB 16B10218	V807B10P						1	1	02/11/16 0139	"water 15L26724"
37	0210_19	STD VMS 200 PPB 16B10218	V807B10P						1	1	02/11/16 0158	"water 15L26724"
38	0210_22	SSCV VMS 25 PPB 16B10219	V807B10P						1	1	02/11/16 0256	"water 15L26724"

Data Path : C:\msdchem\1\data\021016\
Data File : 0210 08.D
Acq On : 10 Feb 2016 10:26 pm
Operator : 522
Sample : INSTBLK
Misc : water
ALS Vial : 8 Sample Multiplier: 1

Integration File: RTEINT.P

Method : C:\msdchem\1\methods\V807B10P.M
Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
Last Update : Thu Feb 11 11:59:29 2016



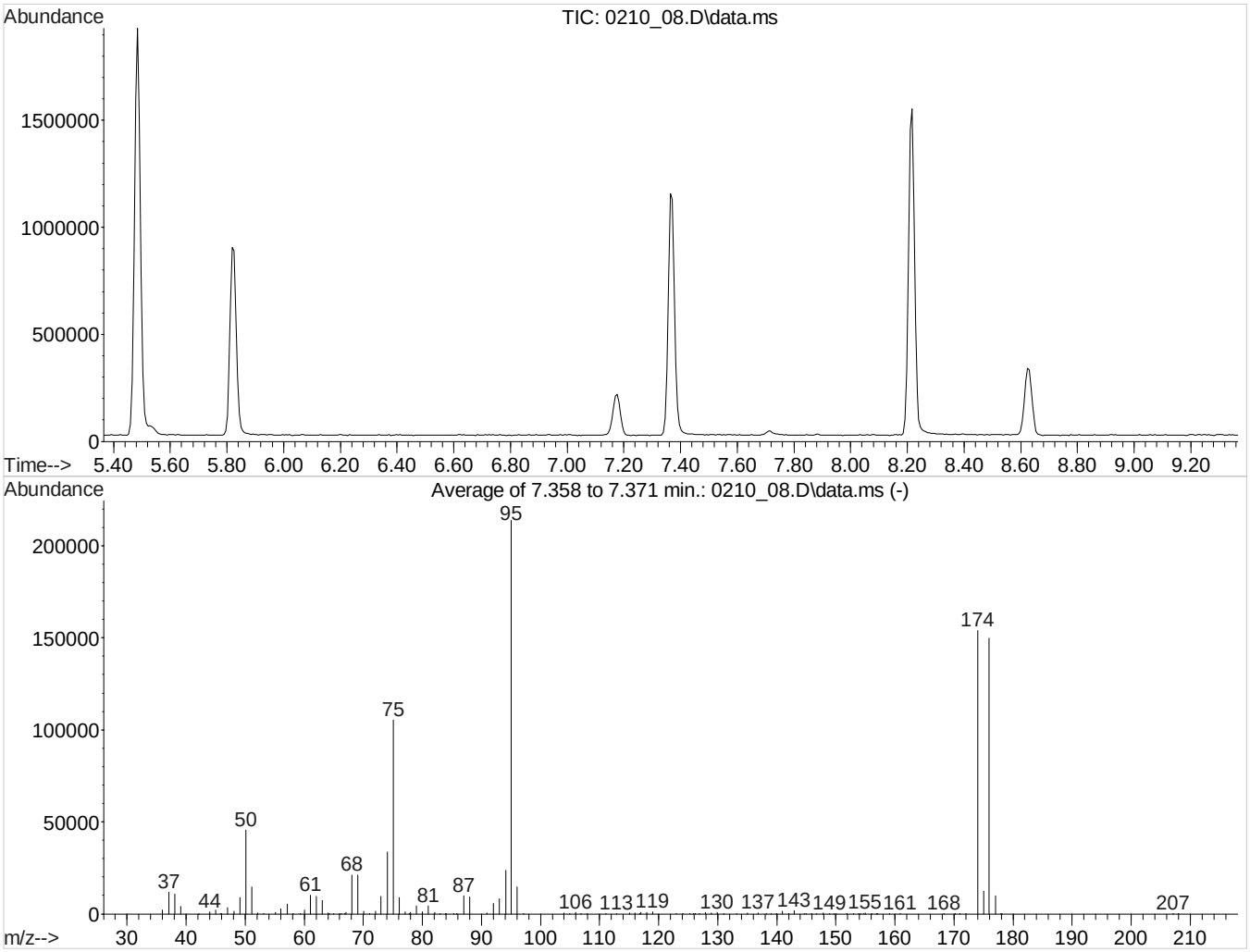
AutoFind: Scans 1196, 1197, 1198; Background Corrected with Scan 1188

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	21.3	45475	PASS
75	95	30	60	49.3	105488	PASS
95	95	100	100	100.0	213896	PASS
96	95	5	9	6.9	14809	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	150	72.0	153989	PASS
175	174	5	9	8.0	12395	PASS
176	174	95	101	97.2	149712	PASS
177	176	5	9	6.6	9812	PASS

Data Path : C:\msdchem\1\data\021016\
Data File : 0210 08.D
Acq On : 10 Feb 2016 10:26 pm
Operator : 522
Sample : INSTBLK
Misc : water
ALS Vial : 8 Sample Multiplier: 1

Integration File: RTEINT.P

Method : C:\msdchem\1\methods\V807B10P.M
Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
Last Update : Thu Feb 11 11:59:29 2016



AutoFind: Scans 1196, 1197, 1198; Background Corrected with Scan 1188

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	21.3	45475	PASS
75	95	30	60	49.3	105488	PASS
95	95	100	100	100.0	213896	PASS
96	95	5	9	6.9	14809	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	150	72.0	153989	PASS
175	174	5	9	8.0	12395	PASS
176	174	95	101	97.2	149712	PASS
177	176	5	9	6.6	9812	PASS

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS7
Method : V807B10P
Review Method : 6200
Review Protocol : SM 20th
Released By : Amy Green
Released On : 2/11/2016 12:17:35 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V807B10P -- ICal Updated Time: Thu Feb 11 11:59:29 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	AvgRF	%RSD	COD	Cur
8260-PENTAFLUOROBENZENE															
TPH (GC/MS) LOW FRACTION												0	0	0	1
PROPENE		0.308	0.223	0.288	0.246	0.204	0.215	0.217	0.218	0.216	0.213	0.234838	15.04	0.15	1
DICHLORODIFLUOROMETHANE	0.893	0.646	0.617	0.624	0.549	0.6	0.584	0.588	0.595	0.593	0.565	0.623141	15	0.15	1
CHLOROMETHANE	1.089	0.952	0.918	0.913	0.803	0.846	0.828	0.832	0.847	0.843	0.954	0.893048	9.35	0.093	1
VINYL CHLORIDE	0.85	0.777	0.76	0.745	0.725	0.78	0.755	0.755	0.762	0.779	0.733	0.76567	4.35	0.044	1
1,3-BUTADIENE		0.831	0.806	0.733	0.649	0.664	0.643	0.651	0.626	0.646	0.586	0.683446	11.7	0.117	1
BROMOMETHANE			0.389	0.405	0.311	0.35	0.366	0.364	0.394	0.416	0.413	0.378802	9.02	0.09	1
CHLOROETHANE			0.52	0.422	0.383	0.431	0.395	0.388	0.382	0.364		0.41058	11.96	0.12	1
TRICHLOROFLUOROMETHANE	0.822	0.786	0.781	0.768	0.718	0.772	0.748	0.751	0.75	0.765	0.75	0.764713	3.52	0.035	1
DICHLOROFLUOROMETHANE	1.078	0.971	1.162	1.038	0.987	1.061	1.012	1.014	1.028	1.029	0.988	1.033416	5.14	0.051	1
ETHYL ETHER	0.564	0.526	0.473	0.505	0.436	0.486	0.473	0.476	0.471	0.475	0.455	0.485553	7.23	0.072	1
ACROLEIN	0.141	0.105	0.116	0.104	0.107	0.115	0.113	0.121	0.117	0.124	0.123	0.116876	9	0.09	1
1,1-DICHLOROETHENE	0.856	0.854	0.845	0.87	0.766	0.863	0.834	0.828	0.814	0.819	0.764	0.828476	4.32	0.043	1
1,1,2 -TRICHLOROTRIFLUOROETHANE	0.526	0.525	0.487	0.463	0.449	0.48	0.474	0.463	0.46	0.462	0.436	0.475169	6.01	0.06	1
ACETONE	0.465	0.414	0.365	0.389	0.351	0.384	0.356	0.37	0.35	0.358	0.337	0.376406	9.67	0.097	1
IODOMETHANE	0.387	0.387	0.415	0.43	0.436	0.501	0.521	0.53	0.564	0.571	0.52	0.478341	14.44	0.144	1
CARBON DISULFIDE	2.127	2.055	1.938	1.906	1.75	1.868	1.813	1.799	1.777	1.773	1.695	1.863691	7.14	0.071	1
METHYLENE CHLORIDE	0.688	0.732	0.528	0.605	0.493	0.527	0.516	0.512	0.511	0.518	0.5	0.557192	14.62	0.146	1
ACRYLONITRILE	0.286	0.242	0.216	0.222	0.21	0.229	0.218	0.233	0.219	0.226	0.216	0.228846	9.19	0.092	1
n-Hexane		0.761	0.631	0.593	0.591	0.609	0.577	0.564	0.561	0.558	0.53	0.597635	10.72	0.107	1
TRANS-1,2-DICHLOROETHENE	0.453	0.68	0.494	0.509	0.458	0.497	0.484	0.475	0.482	0.478	0.462	0.497513	12.67	0.127	1

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS7
Method : V807B10P
Review Method : 6200
Review Protocol : SM 20th
Released By : Amy Green
Released On : 2/11/2016 12:17:35 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V807B10P -- ICal Updated Time: Thu Feb 11 11:59:29 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	AvgRF	%RSD	COD	Cur
METHYL TERT-BUTYL ETHER	1.466	1.453	1.504	1.597	1.448	1.538	1.471	1.477	1.447	1.468	1.41	1.47991	3.42	0.034	1
1,1-DICHLOROETHANE	1.012	1.046	1.034	1.06	0.985	1.054	1.034	1.032	1.024	1.033	0.981	1.02691	2.46	0.025	1
VINYL ACETATE	1.265	1.516	1.326	1.334	1.279	1.378	1.31	1.323	1.254	1.249	1.14	1.306617	7.11	0.071	1
DI-ISOPROPYL ETHER	2.314	2.096	2.295	2.202	2.078	2.24	2.205	2.207	2.182	2.192	2.059	2.18812	3.76	0.038	1
2,2-Dichloropropane	1.005	0.953	0.891	0.844	0.794	0.834	0.818	0.814	0.812	0.817	0.767	0.84979	8.45	0.084	1
CIS-1,2-DICHLOROETHENE	0.576	0.517	0.501	0.589	0.505	0.561	0.53	0.535	0.543	0.55	0.525	0.539293	5.18	0.052	1
2-BUTANONE (MEK)	0.432	0.494	0.482	0.459	0.437	0.472	0.448	0.471	0.442	0.449	0.423	0.455348	4.87	0.049	1
BROMOCHLOROMETHANE	0.357	0.291	0.292	0.285	0.295	0.302	0.293	0.29	0.274	0.272	0.248	0.290801	9.08	0.091	1
TETRAHYDROFURAN			0.23	0.267	0.211	0.235	0.207	0.221	0.202	0.212	0.206	0.221123	9.2	0.092	1
CHLOROFORM		0.997	0.979	0.97	0.881	0.96	0.918	0.909	0.895	0.904	0.859	0.927238	4.97	0.05	1
DIBROMOFLUOROMETHANE	0.534	0.53	0.526	0.525	0.521	0.524	0.516	0.515	0.51	0.506	0.495	0.518344	2.21	0.022	1
1,1,1-TRICHLOROETHANE	0.886	0.824	0.814	0.769	0.712	0.777	0.738	0.738	0.736	0.75	0.715	0.769114	6.93	0.069	1
CARBON TETRACHLORIDE	0.826	0.763	0.684	0.639	0.633	0.68	0.647	0.639	0.661	0.668	0.621	0.678307	9.2	0.092	1
1,1-Dichloropropene	0.726	0.769	0.744	0.731	0.698	0.755	0.721	0.719	0.712	0.725	0.685	0.725794	3.31	0.033	1
2,2,4-TRIMETHYLPENTANE	2.773	2.643	2.542	2.63	2.438	2.621	2.532	2.525	2.518	2.54	2.414	2.561313	3.93	0.039	1
HEPTANE	1.203	1.409	1.272	1.347	1.205	1.244	1.194	1.177	1.159	1.21	1.126	1.231403	6.75	0.068	1
BENZENE	2.314	2.31	2.169	2.213	2.073	2.181	2.117	2.141	2.126	2.14	2.074	2.168922	3.79	0.038	1
1,2-DICHLOROETHANE	0.575	0.655	0.653	0.679	0.645	0.697	0.657	0.674	0.667	0.676	0.649	0.657068	4.76	0.048	1
8260-1,4-DIFLUOROBENZENE															
TRICHLOROETHENE	0.281	0.32	0.284	0.282	0.277	0.291	0.281	0.28	0.278	0.284	0.278	0.285218	4.27	0.043	1
1,2-DICHLOROPROPANE	0.281	0.304	0.255	0.262	0.24	0.26	0.258	0.251	0.25	0.25	0.24	0.259322	7.2	0.072	1
DIBROMOMETHANE	0.239	0.211	0.187	0.187	0.168	0.182	0.178	0.182	0.178	0.184	0.18	0.188576	10.45	0.104	1

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS7
Method : V807B10P
Review Method : 6200
Review Protocol : SM 20th
Released By : Amy Green
Released On : 2/11/2016 12:17:35 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V807B10P -- ICal Updated Time: Thu Feb 11 11:59:29 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	AvgRF	%RSD	COD	Cur
BROMODICHLOROMETHANE		0.548	0.437	0.426	0.413	0.44	0.414	0.408	0.399	0.4	0.39	0.427443	10.58	0.106	1
1,a,a-Trifluorotoluene	0.545	0.546	0.543	0.534	0.527	0.522	0.521	0.515	0.5	0.5	0.489	0.522235	3.72	0.037	1
-CHLOROETHYL VINYL ETHER	0.039	0.037	0.034	0.034	0.036	0.041	0.042	0.04	0.032	0.033	0.033	0.03637	9.95	0.099	1
CIS-1,3-DICHLOROPROPENE	0.616	0.619	0.579	0.558	0.524	0.552	0.534	0.542	0.531	0.537	0.519	0.555612	6.28	0.063	1
-METHYL-2-PENTANONE (MIBK)	0.5	0.441	0.426	0.398	0.384	0.414	0.391	0.406	0.371	0.379	0.356	0.405823	9.79	0.098	1
TOLUENE-D8	1.259	1.268	1.25	1.227	1.22	1.214	1.213	1.213	1.199	1.186	1.197	1.222388	2.16	0.022	1
TOLUENE		1.486	1.322	1.313	1.241	1.314	1.277	1.263	1.248	1.249	1.217	1.292967	5.92	0.059	1
TRANS-1,3-DICHLOROPROPENE	0.476	0.487	0.475	0.481	0.439	0.481	0.462	0.474	0.455	0.461	0.449	0.467412	3.27	0.033	1
8260-2-BROMO-1 -CHLOROPROPANE															
1,1,2-TRICHLOROETHANE	1.438	1.702	1.442	1.491	1.285	1.414	1.438	1.41	1.376	1.44	1.396	1.439222	7.05	0.07	1
TETRACHLOROETHENE	1.139	1.291	1.235	1.279	1.161	1.232	1.18	1.169	1.143	1.184	1.173	1.198664	4.38	0.044	1
1,3-Dichloropropane	2.893	2.679	2.636	2.588	2.447	2.651	2.543	2.526	2.449	2.577	2.479	2.587871	4.96	0.05	1
2-HEXANONE	0.893	1.045	1.021	1.086	1.009	1.091	1.026	1.073	0.985	1.03	0.984	1.021934	5.51	0.055	1
CHLORODIBROMOMETHANE	1.934	1.968	1.688	1.646	1.447	1.638	1.552	1.583	1.545	1.621	1.61	1.657455	9.57	0.096	1
1,2-DIBROMOETHANE	1.834	1.514	1.529	1.331	1.311	1.484	1.434	1.452	1.417	1.484	1.461	1.477366	9.25	0.093	1
CHLOROBENZENE	4.873	4.955	4.638	4.414	4.1	4.355	4.211	4.169	4.058	4.23	4.171	4.37943	7.09	0.071	1
1,1,1,2-TETRACHLOROETHANE	1.785	1.598	1.493	1.453	1.307	1.422	1.349	1.322	1.322	1.37	1.36	1.434697	10.17	0.102	1
ETHYLBENZENE	2.444	2.73	2.724	2.454	2.328	2.521	2.429	2.404	2.356	2.447	2.407	2.476655	5.4	0.054	1
M&P-XYLENE	3.198	3.373	3.05	3.157	2.803	3.018	2.879	2.887	2.849	2.959	2.965	3.012497	5.71	0.057	1
O-XYLENE	3.12	3.349	2.977	3.009	2.785	2.927	2.872	2.888	2.86	2.981	2.886	2.968513	5.21	0.052	1
STYRENE	5.316	5.015	4.901	5.122	4.541	4.886	4.852	4.765	4.721	4.892	4.782	4.890134	4.24	0.042	1
Bromoform	0.976	1.061	1.003	1.037	0.943	1.03	1.014	1.033	1.001	1.045	1.051	1.01778	3.46	0.035	1

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS7
Method : V807B10P
Review Method : 6200
Review Protocol : SM 20th
Released By : Amy Green
Released On : 2/11/2016 12:17:35 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V807B10P -- ICal Updated Time: Thu Feb 11 11:59:29 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	AvgRF	%RSD	COD	Cur
Isopropylbenzene	8.005	9.245	7.82	8.181	7.571	7.858	7.67	7.61	7.493	7.756	7.36	7.869977	6.51	0.065	1
4-BROMOFLUOROBENZENE	2.567	2.549	2.525	2.523	2.518	2.497	2.517	2.524	2.527	2.589	2.626	2.541892	1.48	0.015	1
Bromobenzene	3.301	3.489	3.767	3.489	3.139	3.316	3.357	3.287	3.225	3.319	3.215	3.354915	5.15	0.052	1
1,1,2,2-TETRACHLOROETHANE	2.916	2.602	2.398	2.123	2.07	2.13	2.047	2.111	1.996	2.111	2.051	2.232289	12.93	0.129	1
1,2,3-TRICHLOROPROPANE	1.01	0.67	0.763	0.543	0.506	0.514	0.504	0.499	0.487	0.509	0.492	0.590673	27.83	1	0
TRANS-1,4-DICHLORO-2-BUTENE		0.848	0.56	0.581	0.527	0.6	0.611	0.626	0.62	0.635	0.629	0.623604	13.8	0.138	1
n-Propylbenzene	8.891	9.58	9.175	9.406	8.65	9.374	9.184	9.162	9.053	9.263	8.843	9.143748	2.97	0.03	1
4-ETHYLTOLUENE	8.552	8.863	7.968	7.731	7.181	7.657	7.488	7.52	7.284	7.457	7.15	7.713754	7.14	0.071	1
2-Chlorotoluene	1.733	1.918	1.683	1.747	1.53	1.678	1.596	1.582	1.599	1.658	1.658	1.671162	6.27	0.063	1
4-Chlorotoluene	5.908	6.665	5.49	5.593	5.156	5.422	5.371	5.42	5.292	5.508	5.268	5.554005	7.52	0.075	1
1,3,5-Trimethylbenzene	6.733	7.053	6.962	6.555	5.871	6.205	6.082	6.028	5.992	6.152	5.914	6.322491	6.77	0.068	1
tert-Butylbenzene	5.318	5.946	5.484	5.488	5.015	5.41	5.269	5.224	5.224	5.294	5.092	5.342142	4.65	0.046	1
1,2,4-Trimethylbenzene	7.263	7.608	6.574	6.551	5.909	6.228	6.165	6.103	5.964	6.166	5.833	6.396692	8.89	0.089	1
sec-Butylbenzene	9.409	9.545	8.644	8.462	8.121	8.686	8.491	8.369	8.254	8.479	7.989	8.586258	5.68	0.057	1
1,3-DICHLOROBENZENE	3.302	3.485	3.258	3.378	2.938	3.228	3.227	3.203	3.224	3.328	3.214	3.253187	4.16	0.042	1
p-Isopropyltoluene	7.3	7.347	6.928	7.289	6.45	6.803	6.682	6.691	6.586	6.842	6.466	6.853175	4.8	0.048	1
DICYCLOPENTADIENE	9.113	9.923	9.394	9.579	8.64	9.139	8.766	8.524	8.343	8.497	7.991	8.900893	6.53	0.065	1
8260-1,4-DICHLOROBENZENE-D4															
1,4-DICHLOROBENZENE	1.541	1.415	1.427	1.358	1.209	1.28	1.245	1.232	1.219	1.241	1.22	1.307916	8.48	0.085	1
1,2,3-TRIMETHYLBENZENE	2.825	2.93	2.529	2.52	2.373	2.531	2.448	2.397	2.342	2.387	2.255	2.503362	8.19	0.082	1
1,2-DICHLOROBENZENE	1.164	1.28	1.221	1.225	1.172	1.245	1.228	1.221	1.194	1.22	1.158	1.211675	3.04	0.03	1
n-Butylbenzene	2.388	2.861	2.834	2.829	2.671	2.855	2.778	2.751	2.661	2.661	2.44	2.702654	5.98	0.06	1

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS7
Method : V807B10P
Review Method : 6200
Review Protocol : SM 20th
Released By : Amy Green
Released On : 2/11/2016 12:17:35 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V807B10P -- ICal Updated Time: Thu Feb 11 11:59:29 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	AvgRF	%RSD	COD	Cur
1,2-Dibromo-3-chloropropane		0.215	0.135	0.141	0.144	0.153	0.162	0.165	0.159	0.169	0.161	0.160378	13.78	0.138	1
1,2,4-Trichlorobenzene	0.945	0.884	0.882	0.822	0.804	0.844	0.826	0.826	0.785	0.789	0.72	0.829648	7.21	0.072	1
HEXACHLORO-1,3-BUTADIENE	0.465	0.494	0.459	0.476	0.458	0.481	0.468	0.48	0.471	0.477	0.441	0.469786	2.98	0.03	1
Naphthalene	2.638	2.396	2.184	2.238	2.021	2.266	2.196	2.301	2.178	2.232	2.051	2.245622	7.44	0.074	1
1,2,3-Trichlorobenzene	0.877	0.759	0.732	0.808	0.735	0.786	0.773	0.768	0.734	0.747	0.68	0.76355	6.61	0.066	1
1-Methylnaphthalene	1.336	1.083	1.079	1.116	1.072	1.191	1.195	1.255	1.153	1.164	1.049	1.154015	7.58	0.076	1
2-Methylnaphthalene	1.249	1.017	1.036	1.076	0.91	0.978	0.989	1.046	0.95	0.961	0.862	1.006831	10.08	0.101	1
AP9-PENTAFLUOROBENZENE															
ETHANOL												0	0	0	1
Bromoethane												0	0	0	1
2-PROPANOL												0	0	0	1
Methyl Acetate												0	0	0	1
ACETONITRILE												0	0	0	1
ALLYL CHLORIDE												0	0	0	1
tert-BUTYL ALCOHOL												0	0	0	1
chloroprene												0	0	0	1
ETHYL TERT-BUTYL ETHER												0	0	0	1
PROPIONITRILE												0	0	0	1
Ethyl Acetate												0	0	0	1
METHACRYLONITRILE												0	0	0	1
Cyclohexane												0	0	0	1
tert-butyl formate												0	0	0	1
ISOBUTANOL												0	0	0	1
t-Amyl Alcohol												0	0	0	1
TERT-AMYL METHYL ETHER												0	0	0	1
AP9-1,4-DIFLUOROBENZENE															
N-BUTANOL												0	0	0	1
Methyl Cyclohexane												0	0	0	1

INITIAL CALIBRATION SUMMARY

Instrument ID	: VOCMS7	Review Method	: 6200	Released By	: Amy Green
Method	: V807B10P	Review Protocol	: SM 20th	Released On	: 2/11/2016 12:17:35 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V807B10P -- ICal Updated Time: Thu Feb 11 11:59:29 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	AvgRF	%RSD	COD	Cur
2-nitropropane												0	0	0	1
METHYL METHACRYLATE												0	0	0	1
1,4-DIOXANE												0	0	0	1
n-octane												0	0	0	1
3,3-DIMETHYL-1-BUTANOL												0	0	0	1
AP9-2-BROMO-1 ACHLOROPROPANE															
ETHYL METHACRYLATE												0	0	0	1
CIS-1,4-DICHLORO-2-BUTENE												0	0	0	1
Cyclohexanone												0	0	0	1
PENTACHLOROETHANE												0	0	0	1
Hexachloroethane												0	0	0	1
AP9-1,4-DICHLOROBENZENE-D4															

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS7
Method : V807B10P
Review Method : 601-602
Review Protocol : EPA
Released By : Amy Green
Released On : 2/11/2016 12:14:34 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V807B10P -- ICal Updated Time: Thu Feb 11 11:59:29 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	AvgRF	%RSD	COD	Cur
8260-PENTAFLUOROBENZENE															
TPH (GC/MS) LOW FRACTION												0	0	0	1
PROPENE		0.308	0.223	0.288	0.246	0.204	0.215	0.217	0.218	0.216	0.213	0.234838	15.04	0.15	1
DICHLORODIFLUOROMETHANE	0.893	0.646	0.617	0.624	0.549	0.6	0.584	0.588	0.595	0.593	0.565	0.623141	15	0.15	1
CHLOROMETHANE	1.089	0.952	0.918	0.913	0.803	0.846	0.828	0.832	0.847	0.843	0.954	0.893048	9.35	0.093	1
VINYL CHLORIDE	0.85	0.777	0.76	0.745	0.725	0.78	0.755	0.755	0.762	0.779	0.733	0.76567	4.35	0.044	1
1,3-BUTADIENE		0.831	0.806	0.733	0.649	0.664	0.643	0.651	0.626	0.646	0.586	0.683446	11.7	0.117	1
BROMOMETHANE			0.389	0.405	0.311	0.35	0.366	0.364	0.394	0.416	0.413	0.378802	9.02	0.09	1
CHLOROETHANE			0.52	0.422	0.383	0.431	0.395	0.388	0.382	0.364		0.41058	11.96	0.12	1
TRICHLOROFLUOROMETHANE	0.822	0.786	0.781	0.768	0.718	0.772	0.748	0.751	0.75	0.765	0.75	0.764713	3.52	0.035	1
DICHLOROFLUOROMETHANE	1.078	0.971	1.162	1.038	0.987	1.061	1.012	1.014	1.028	1.029	0.988	1.033416	5.14	0.051	1
ETHYL ETHER	0.564	0.526	0.473	0.505	0.436	0.486	0.473	0.476	0.471	0.475	0.455	0.485553	7.23	0.072	1
ACROLEIN	0.141	0.105	0.116	0.104	0.107	0.115	0.113	0.121	0.117	0.124	0.123	0.116876	9	0.09	1
1,1-DICHLOROETHENE	0.856	0.854	0.845	0.87	0.766	0.863	0.834	0.828	0.814	0.819	0.764	0.828476	4.32	0.043	1
1,1,2 -TRICHLOROTRIFLUOROETHANE	0.526	0.525	0.487	0.463	0.449	0.48	0.474	0.463	0.46	0.462	0.436	0.475169	6.01	0.06	1
ACETONE	0.465	0.414	0.365	0.389	0.351	0.384	0.356	0.37	0.35	0.358	0.337	0.376406	9.67	0.097	1
IODOMETHANE	0.387	0.387	0.415	0.43	0.436	0.501	0.521	0.53	0.564	0.571	0.52	0.478341	14.44	0.144	1
CARBON DISULFIDE	2.127	2.055	1.938	1.906	1.75	1.868	1.813	1.799	1.777	1.773	1.695	1.863691	7.14	0.071	1
METHYLENE CHLORIDE	0.688	0.732	0.528	0.605	0.493	0.527	0.516	0.512	0.511	0.518	0.5	0.557192	14.62	0.146	1
ACRYLONITRILE	0.286	0.242	0.216	0.222	0.21	0.229	0.218	0.233	0.219	0.226	0.216	0.228846	9.19	0.092	1
n-Hexane		0.761	0.631	0.593	0.591	0.609	0.577	0.564	0.561	0.558	0.53	0.597635	10.72	0.107	1
TRANS-1,2-DICHLOROETHENE	0.453	0.68	0.494	0.509	0.458	0.497	0.484	0.475	0.482	0.478	0.462	0.497513	12.67	0.127	1

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS7
Method : V807B10P
Review Method : 601-602
Review Protocol : EPA
Released By : Amy Green
Released On : 2/11/2016 12:14:34 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V807B10P -- ICal Updated Time: Thu Feb 11 11:59:29 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	AvgRF	%RSD	COD	Cur
METHYL TERT-BUTYL ETHER	1.466	1.453	1.504	1.597	1.448	1.538	1.471	1.477	1.447	1.468	1.41	1.47991	3.42	0.034	1
1,1-DICHLOROETHANE	1.012	1.046	1.034	1.06	0.985	1.054	1.034	1.032	1.024	1.033	0.981	1.02691	2.46	0.025	1
VINYL ACETATE	1.265	1.516	1.326	1.334	1.279	1.378	1.31	1.323	1.254	1.249	1.14	1.306617	7.11	0.071	1
DI-ISOPROPYL ETHER	2.314	2.096	2.295	2.202	2.078	2.24	2.205	2.207	2.182	2.192	2.059	2.18812	3.76	0.038	1
2,2-Dichloropropane	1.005	0.953	0.891	0.844	0.794	0.834	0.818	0.814	0.812	0.817	0.767	0.84979	8.45	0.084	1
CIS-1,2-DICHLOROETHENE	0.576	0.517	0.501	0.589	0.505	0.561	0.53	0.535	0.543	0.55	0.525	0.539293	5.18	0.052	1
2-BUTANONE (MEK)	0.432	0.494	0.482	0.459	0.437	0.472	0.448	0.471	0.442	0.449	0.423	0.455348	4.87	0.049	1
BROMOCHLOROMETHANE	0.357	0.291	0.292	0.285	0.295	0.302	0.293	0.29	0.274	0.272	0.248	0.290801	9.08	0.091	1
TETRAHYDROFURAN			0.23	0.267	0.211	0.235	0.207	0.221	0.202	0.212	0.206	0.221123	9.2	0.092	1
CHLOROFORM		0.997	0.979	0.97	0.881	0.96	0.918	0.909	0.895	0.904	0.859	0.927238	4.97	0.05	1
DIBROMOFLUOROMETHANE	0.534	0.53	0.526	0.525	0.521	0.524	0.516	0.515	0.51	0.506	0.495	0.518344	2.21	0.022	1
1,1,1-TRICHLOROETHANE	0.886	0.824	0.814	0.769	0.712	0.777	0.738	0.738	0.736	0.75	0.715	0.769114	6.93	0.069	1
CARBON TETRACHLORIDE	0.826	0.763	0.684	0.639	0.633	0.68	0.647	0.639	0.661	0.668	0.621	0.678307	9.2	0.092	1
1,1-Dichloropropene	0.726	0.769	0.744	0.731	0.698	0.755	0.721	0.719	0.712	0.725	0.685	0.725794	3.31	0.033	1
2,2,4-TRIMETHYLPENTANE	2.773	2.643	2.542	2.63	2.438	2.621	2.532	2.525	2.518	2.54	2.414	2.561313	3.93	0.039	1
HEPTANE	1.203	1.409	1.272	1.347	1.205	1.244	1.194	1.177	1.159	1.21	1.126	1.231403	6.75	0.068	1
BENZENE	2.314	2.31	2.169	2.213	2.073	2.181	2.117	2.141	2.126	2.14	2.074	2.168922	3.79	0.038	1
1,2-DICHLOROETHANE	0.575	0.655	0.653	0.679	0.645	0.697	0.657	0.674	0.667	0.676	0.649	0.657068	4.76	0.048	1
8260-1,4-DIFLUOROBENZENE															
TRICHLOROETHENE	0.281	0.32	0.284	0.282	0.277	0.291	0.281	0.28	0.278	0.284	0.278	0.285218	4.27	0.043	1
1,2-DICHLOROPROPANE	0.281	0.304	0.255	0.262	0.24	0.26	0.258	0.251	0.25	0.25	0.24	0.259322	7.2	0.072	1
DIBROMOMETHANE	0.239	0.211	0.187	0.187	0.168	0.182	0.178	0.182	0.178	0.184	0.18	0.188576	10.45	0.104	1

Environmental Science Corporation
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INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS7
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Released On : 2/11/2016 12:14:34 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V807B10P -- ICal Updated Time: Thu Feb 11 11:59:29 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	AvgRF	%RSD	COD	Cur
BROMODICHLOROMETHANE		0.548	0.437	0.426	0.413	0.44	0.414	0.408	0.399	0.4	0.39	0.427443	10.58	0.106	1
1,a,a,a-Trifluorotoluene	0.545	0.546	0.543	0.534	0.527	0.522	0.521	0.515	0.5	0.5	0.489	0.522235	3.72	0.037	1
2-CHLOROETHYL VINYL ETHER	0.039	0.037	0.034	0.034	0.036	0.041	0.042	0.04	0.032	0.033	0.033	0.03637	9.95	0.099	1
CIS-1,3-DICHLOROPROPENE	0.616	0.619	0.579	0.558	0.524	0.552	0.534	0.542	0.531	0.537	0.519	0.555612	6.28	0.063	1
4-METHYL-2-PENTANONE (MIBK)	0.5	0.441	0.426	0.398	0.384	0.414	0.391	0.406	0.371	0.379	0.356	0.405823	9.79	0.098	1
TOLUENE-D8	1.259	1.268	1.25	1.227	1.22	1.214	1.213	1.213	1.199	1.186	1.197	1.222388	2.16	0.022	1
TOLUENE		1.486	1.322	1.313	1.241	1.314	1.277	1.263	1.248	1.249	1.217	1.292967	5.92	0.059	1
TRANS-1,3-DICHLOROPROPENE	0.476	0.487	0.475	0.481	0.439	0.481	0.462	0.474	0.455	0.461	0.449	0.467412	3.27	0.033	1
8260-2-BROMO-1 -CHLOROPROPANE															
1,1,2-TRICHLOROETHANE	1.438	1.702	1.442	1.491	1.285	1.414	1.438	1.41	1.376	1.44	1.396	1.439222	7.05	0.07	1
TETRACHLOROETHENE	1.139	1.291	1.235	1.279	1.161	1.232	1.18	1.169	1.143	1.184	1.173	1.198664	4.38	0.044	1
1,3-Dichloropropane	2.893	2.679	2.636	2.588	2.447	2.651	2.543	2.526	2.449	2.577	2.479	2.587871	4.96	0.05	1
2-HEXANONE	0.893	1.045	1.021	1.086	1.009	1.091	1.026	1.073	0.985	1.03	0.984	1.021934	5.51	0.055	1
CHLORODIBROMOMETHANE	1.934	1.968	1.688	1.646	1.447	1.638	1.552	1.583	1.545	1.621	1.61	1.657455	9.57	0.096	1
1,2-DIBROMOETHANE	1.834	1.514	1.529	1.331	1.311	1.484	1.434	1.452	1.417	1.484	1.461	1.477366	9.25	0.093	1
CHLOROBENZENE	4.873	4.955	4.638	4.414	4.1	4.355	4.211	4.169	4.058	4.23	4.171	4.37943	7.09	0.071	1
1,1,1,2-TETRACHLOROETHANE	1.785	1.598	1.493	1.453	1.307	1.422	1.349	1.322	1.322	1.37	1.36	1.434697	10.17	0.102	1
ETHYLBENZENE	2.444	2.73	2.724	2.454	2.328	2.521	2.429	2.404	2.356	2.447	2.407	2.476655	5.4	0.054	1
M&P-XYLENE	3.198	3.373	3.05	3.157	2.803	3.018	2.879	2.887	2.849	2.959	2.965	3.012497	5.71	0.057	1
O-XYLENE	3.12	3.349	2.977	3.009	2.785	2.927	2.872	2.888	2.86	2.981	2.886	2.968513	5.21	0.052	1
STYRENE	5.316	5.015	4.901	5.122	4.541	4.886	4.852	4.765	4.721	4.892	4.782	4.890134	4.24	0.042	1
Bromoform	0.976	1.061	1.003	1.037	0.943	1.03	1.014	1.033	1.001	1.045	1.051	1.01778	3.46	0.035	1

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS7
Method : V807B10P
Review Method : 601-602
Review Protocol : EPA
Released By : Amy Green
Released On : 2/11/2016 12:14:34 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V807B10P -- ICal Updated Time: Thu Feb 11 11:59:29 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	AvgRF	%RSD	COD	Cur
Isopropylbenzene	8.005	9.245	7.82	8.181	7.571	7.858	7.67	7.61	7.493	7.756	7.36	7.869977	6.51	0.065	1
4-BROMOFLUOROBENZENE	2.567	2.549	2.525	2.523	2.518	2.497	2.517	2.524	2.527	2.589	2.626	2.541892	1.48	0.015	1
Bromobenzene	3.301	3.489	3.767	3.489	3.139	3.316	3.357	3.287	3.225	3.319	3.215	3.354915	5.15	0.052	1
1,1,2,2-TETRACHLOROETHANE	2.916	2.602	2.398	2.123	2.07	2.13	2.047	2.111	1.996	2.111	2.051	2.232289	12.93	0.129	1
1,2,3-TRICHLOROPROPANE	1.01	0.67	0.763	0.543	0.506	0.514	0.504	0.499	0.487	0.509	0.492	0.590673	27.83	1	0
TRANS-1,4-DICHLORO-2-BUTENE		0.848	0.56	0.581	0.527	0.6	0.611	0.626	0.62	0.635	0.629	0.623604	13.8	0.138	1
n-Propylbenzene	8.891	9.58	9.175	9.406	8.65	9.374	9.184	9.162	9.053	9.263	8.843	9.143748	2.97	0.03	1
4-ETHYLTOLUENE	8.552	8.863	7.968	7.731	7.181	7.657	7.488	7.52	7.284	7.457	7.15	7.713754	7.14	0.071	1
2-Chlorotoluene	1.733	1.918	1.683	1.747	1.53	1.678	1.596	1.582	1.599	1.658	1.658	1.671162	6.27	0.063	1
4-Chlorotoluene	5.908	6.665	5.49	5.593	5.156	5.422	5.371	5.42	5.292	5.508	5.268	5.554005	7.52	0.075	1
1,3,5-Trimethylbenzene	6.733	7.053	6.962	6.555	5.871	6.205	6.082	6.028	5.992	6.152	5.914	6.322491	6.77	0.068	1
tert-Butylbenzene	5.318	5.946	5.484	5.488	5.015	5.41	5.269	5.224	5.224	5.294	5.092	5.342142	4.65	0.046	1
1,2,4-Trimethylbenzene	7.263	7.608	6.574	6.551	5.909	6.228	6.165	6.103	5.964	6.166	5.833	6.396692	8.89	0.089	1
sec-Butylbenzene	9.409	9.545	8.644	8.462	8.121	8.686	8.491	8.369	8.254	8.479	7.989	8.586258	5.68	0.057	1
1,3-DICHLOROBENZENE	3.302	3.485	3.258	3.378	2.938	3.228	3.227	3.203	3.224	3.328	3.214	3.253187	4.16	0.042	1
p-Isopropyltoluene	7.3	7.347	6.928	7.289	6.45	6.803	6.682	6.691	6.586	6.842	6.466	6.853175	4.8	0.048	1
DICYCLOPENTADIENE	9.113	9.923	9.394	9.579	8.64	9.139	8.766	8.524	8.343	8.497	7.991	8.900893	6.53	0.065	1
8260-1,4-DICHLOROBENZENE-D4															
1,4-DICHLOROBENZENE	1.541	1.415	1.427	1.358	1.209	1.28	1.245	1.232	1.219	1.241	1.22	1.307916	8.48	0.085	1
1,2,3-TRIMETHYLBENZENE	2.825	2.93	2.529	2.52	2.373	2.531	2.448	2.397	2.342	2.387	2.255	2.503362	8.19	0.082	1
1,2-DICHLOROBENZENE	1.164	1.28	1.221	1.225	1.172	1.245	1.228	1.221	1.194	1.22	1.158	1.211675	3.04	0.03	1
n-Butylbenzene	2.388	2.861	2.834	2.829	2.671	2.855	2.778	2.751	2.661	2.661	2.44	2.702654	5.98	0.06	1

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS7
Method : V807B10P
Review Method : 601-602
Review Protocol : EPA
Released By : Amy Green
Released On : 2/11/2016 12:14:34 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V807B10P -- ICal Updated Time: Thu Feb 11 11:59:29 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	AvgRF	%RSD	COD	Cur
1,2-Dibromo-3-chloropropane		0.215	0.135	0.141	0.144	0.153	0.162	0.165	0.159	0.169	0.161	0.160378	13.78	0.138	1
1,2,4-Trichlorobenzene	0.945	0.884	0.882	0.822	0.804	0.844	0.826	0.826	0.785	0.789	0.72	0.829648	7.21	0.072	1
HEXACHLORO-1,3-BUTADIENE	0.465	0.494	0.459	0.476	0.458	0.481	0.468	0.48	0.471	0.477	0.441	0.469786	2.98	0.03	1
Naphthalene	2.638	2.396	2.184	2.238	2.021	2.266	2.196	2.301	2.178	2.232	2.051	2.245622	7.44	0.074	1
1,2,3-Trichlorobenzene	0.877	0.759	0.732	0.808	0.735	0.786	0.773	0.768	0.734	0.747	0.68	0.76355	6.61	0.066	1
1-Methylnaphthalene	1.336	1.083	1.079	1.116	1.072	1.191	1.195	1.255	1.153	1.164	1.049	1.154015	7.58	0.076	1
2-Methylnaphthalene	1.249	1.017	1.036	1.076	0.91	0.978	0.989	1.046	0.95	0.961	0.862	1.006831	10.08	0.101	1
AP9-PENTAFLUOROBENZENE															
ETHANOL												0	0	0	1
Bromoethane												0	0	0	1
2-PROPANOL												0	0	0	1
Methyl Acetate												0	0	0	1
ACETONITRILE												0	0	0	1
ALLYL CHLORIDE												0	0	0	1
tert-BUTYL ALCOHOL												0	0	0	1
chloroprene												0	0	0	1
ETHYL TERT-BUTYL ETHER												0	0	0	1
PROPIONITRILE												0	0	0	1
Ethyl Acetate												0	0	0	1
METHACRYLONITRILE												0	0	0	1
Cyclohexane												0	0	0	1
tert-butyl formate												0	0	0	1
ISOBUTANOL												0	0	0	1
t-Amyl Alcohol												0	0	0	1
TERT-AMYL METHYL ETHER												0	0	0	1
AP9-1,4-DIFLUOROBENZENE															
N-BUTANOL												0	0	0	1
Methyl Cyclohexane												0	0	0	1

Environmental Science Corporation
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INITIAL CALIBRATION SUMMARY

Instrument ID	: VOCMS7	Review Method	: 601-602	Released By	: Amy Green
Method	: V807B10P	Review Protocol	: EPA	Released On	: 2/11/2016 12:14:34 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V807B10P -- ICal Updated Time: Thu Feb 11 11:59:29 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	AvgRF	%RSD	COD	Cur
2-nitropropane												0	0	0	1
METHYL METHACRYLATE												0	0	0	1
1,4-DIOXANE												0	0	0	1
n-octane												0	0	0	1
3,3-DIMETHYL-1-BUTANOL												0	0	0	1
AP9-2-BROMO-1 ACHLOROPROPANE															
ETHYL METHACRYLATE												0	0	0	1
CIS-1,4-DICHLORO-2-BUTENE												0	0	0	1
Cyclohexanone												0	0	0	1
PENTACHLOROETHANE												0	0	0	1
Hexachloroethane												0	0	0	1
AP9-1,4-DICHLOROBENZENE-D4															

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS7
Method : V807B10P
Review Method : 624
Review Protocol : EPA
Released By : Amy Green
Released On : 2/11/2016 12:15:12 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V807B10P -- ICal Updated Time: Thu Feb 11 11:59:29 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	AvgRF	%RSD	COD	Cur
8260-PENTAFLUOROBENZENE															
TPH (GC/MS) LOW FRACTION												0	0	0	1
PROPENE		0.308	0.223	0.288	0.246	0.204	0.215	0.217	0.218	0.216	0.213	0.234838	15.04	0.15	1
DICHLORODIFLUOROMETHANE	0.893	0.646	0.617	0.624	0.549	0.6	0.584	0.588	0.595	0.593	0.565	0.623141	15	0.15	1
CHLOROMETHANE	1.089	0.952	0.918	0.913	0.803	0.846	0.828	0.832	0.847	0.843	0.954	0.893048	9.35	0.093	1
VINYL CHLORIDE	0.85	0.777	0.76	0.745	0.725	0.78	0.755	0.755	0.762	0.779	0.733	0.76567	4.35	0.044	1
1,3-BUTADIENE		0.831	0.806	0.733	0.649	0.664	0.643	0.651	0.626	0.646	0.586	0.683446	11.7	0.117	1
BROMOMETHANE			0.389	0.405	0.311	0.35	0.366	0.364	0.394	0.416	0.413	0.378802	9.02	0.09	1
CHLOROETHANE			0.52	0.422	0.383	0.431	0.395	0.388	0.382	0.364		0.41058	11.96	0.12	1
TRICHLOROFLUOROMETHANE	0.822	0.786	0.781	0.768	0.718	0.772	0.748	0.751	0.75	0.765	0.75	0.764713	3.52	0.035	1
DICHLOROFLUOROMETHANE	1.078	0.971	1.162	1.038	0.987	1.061	1.012	1.014	1.028	1.029	0.988	1.033416	5.14	0.051	1
ETHYL ETHER	0.564	0.526	0.473	0.505	0.436	0.486	0.473	0.476	0.471	0.475	0.455	0.485553	7.23	0.072	1
ACROLEIN	0.141	0.105	0.116	0.104	0.107	0.115	0.113	0.121	0.117	0.124	0.123	0.116876	9	0.09	1
1,1-DICHLOROETHENE	0.856	0.854	0.845	0.87	0.766	0.863	0.834	0.828	0.814	0.819	0.764	0.828476	4.32	0.043	1
1,1,2 -TRICHLOROTRIFLUOROETHANE	0.526	0.525	0.487	0.463	0.449	0.48	0.474	0.463	0.46	0.462	0.436	0.475169	6.01	0.06	1
ACETONE	0.465	0.414	0.365	0.389	0.351	0.384	0.356	0.37	0.35	0.358	0.337	0.376406	9.67	0.097	1
IODOMETHANE	0.387	0.387	0.415	0.43	0.436	0.501	0.521	0.53	0.564	0.571	0.52	0.478341	14.44	0.144	1
CARBON DISULFIDE	2.127	2.055	1.938	1.906	1.75	1.868	1.813	1.799	1.777	1.773	1.695	1.863691	7.14	0.071	1
METHYLENE CHLORIDE	0.688	0.732	0.528	0.605	0.493	0.527	0.516	0.512	0.511	0.518	0.5	0.557192	14.62	0.146	1
ACRYLONITRILE	0.286	0.242	0.216	0.222	0.21	0.229	0.218	0.233	0.219	0.226	0.216	0.228846	9.19	0.092	1
n-Hexane		0.761	0.631	0.593	0.591	0.609	0.577	0.564	0.561	0.558	0.53	0.597635	10.72	0.107	1
TRANS-1,2-DICHLOROETHENE	0.453	0.68	0.494	0.509	0.458	0.497	0.484	0.475	0.482	0.478	0.462	0.497513	12.67	0.127	1

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS7
Method : V807B10P
Review Method : 624
Review Protocol : EPA
Released By : Amy Green
Released On : 2/11/2016 12:15:12 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V807B10P -- ICal Updated Time: Thu Feb 11 11:59:29 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	AvgRF	%RSD	COD	Cur
METHYL TERT-BUTYL ETHER	1.466	1.453	1.504	1.597	1.448	1.538	1.471	1.477	1.447	1.468	1.41	1.47991	3.42	0.034	1
1,1-DICHLOROETHANE	1.012	1.046	1.034	1.06	0.985	1.054	1.034	1.032	1.024	1.033	0.981	1.02691	2.46	0.025	1
VINYL ACETATE	1.265	1.516	1.326	1.334	1.279	1.378	1.31	1.323	1.254	1.249	1.14	1.306617	7.11	0.071	1
DI-ISOPROPYL ETHER	2.314	2.096	2.295	2.202	2.078	2.24	2.205	2.207	2.182	2.192	2.059	2.18812	3.76	0.038	1
2,2-Dichloropropane	1.005	0.953	0.891	0.844	0.794	0.834	0.818	0.814	0.812	0.817	0.767	0.84979	8.45	0.084	1
CIS-1,2-DICHLOROETHENE	0.576	0.517	0.501	0.589	0.505	0.561	0.53	0.535	0.543	0.55	0.525	0.539293	5.18	0.052	1
2-BUTANONE (MEK)	0.432	0.494	0.482	0.459	0.437	0.472	0.448	0.471	0.442	0.449	0.423	0.455348	4.87	0.049	1
BROMOCHLOROMETHANE	0.357	0.291	0.292	0.285	0.295	0.302	0.293	0.29	0.274	0.272	0.248	0.290801	9.08	0.091	1
TETRAHYDROFURAN			0.23	0.267	0.211	0.235	0.207	0.221	0.202	0.212	0.206	0.221123	9.2	0.092	1
CHLOROFORM		0.997	0.979	0.97	0.881	0.96	0.918	0.909	0.895	0.904	0.859	0.927238	4.97	0.05	1
DIBROMOFLUOROMETHANE	0.534	0.53	0.526	0.525	0.521	0.524	0.516	0.515	0.51	0.506	0.495	0.518344	2.21	0.022	1
1,1,1-TRICHLOROETHANE	0.886	0.824	0.814	0.769	0.712	0.777	0.738	0.738	0.736	0.75	0.715	0.769114	6.93	0.069	1
CARBON TETRACHLORIDE	0.826	0.763	0.684	0.639	0.633	0.68	0.647	0.639	0.661	0.668	0.621	0.678307	9.2	0.092	1
1,1-Dichloropropene	0.726	0.769	0.744	0.731	0.698	0.755	0.721	0.719	0.712	0.725	0.685	0.725794	3.31	0.033	1
2,2,4-TRIMETHYLPENTANE	2.773	2.643	2.542	2.63	2.438	2.621	2.532	2.525	2.518	2.54	2.414	2.561313	3.93	0.039	1
HEPTANE	1.203	1.409	1.272	1.347	1.205	1.244	1.194	1.177	1.159	1.21	1.126	1.231403	6.75	0.068	1
BENZENE	2.314	2.31	2.169	2.213	2.073	2.181	2.117	2.141	2.126	2.14	2.074	2.168922	3.79	0.038	1
1,2-DICHLOROETHANE	0.575	0.655	0.653	0.679	0.645	0.697	0.657	0.674	0.667	0.676	0.649	0.657068	4.76	0.048	1
8260-1,4-DIFLUOROBENZENE															
TRICHLOROETHENE	0.281	0.32	0.284	0.282	0.277	0.291	0.281	0.28	0.278	0.284	0.278	0.285218	4.27	0.043	1
1,2-DICHLOROPROPANE	0.281	0.304	0.255	0.262	0.24	0.26	0.258	0.251	0.25	0.25	0.24	0.259322	7.2	0.072	1
DIBROMOMETHANE	0.239	0.211	0.187	0.187	0.168	0.182	0.178	0.182	0.178	0.184	0.18	0.188576	10.45	0.104	1

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS7
Method : V807B10P
Review Method : 624
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Released By : Amy Green
Released On : 2/11/2016 12:15:12 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V807B10P -- ICal Updated Time: Thu Feb 11 11:59:29 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	AvgRF	%RSD	COD	Cur
BROMODICHLOROMETHANE		0.548	0.437	0.426	0.413	0.44	0.414	0.408	0.399	0.4	0.39	0.427443	10.58	0.106	1
1,a,a-Trifluorotoluene	0.545	0.546	0.543	0.534	0.527	0.522	0.521	0.515	0.5	0.5	0.489	0.522235	3.72	0.037	1
-CHLOROETHYL VINYL ETHER	0.039	0.037	0.034	0.034	0.036	0.041	0.042	0.04	0.032	0.033	0.033	0.03637	9.95	0.099	1
CIS-1,3-DICHLOROPROPENE	0.616	0.619	0.579	0.558	0.524	0.552	0.534	0.542	0.531	0.537	0.519	0.555612	6.28	0.063	1
-METHYL-2-PENTANONE (MIBK)	0.5	0.441	0.426	0.398	0.384	0.414	0.391	0.406	0.371	0.379	0.356	0.405823	9.79	0.098	1
TOLUENE-D8	1.259	1.268	1.25	1.227	1.22	1.214	1.213	1.213	1.199	1.186	1.197	1.222388	2.16	0.022	1
TOLUENE		1.486	1.322	1.313	1.241	1.314	1.277	1.263	1.248	1.249	1.217	1.292967	5.92	0.059	1
TRANS-1,3-DICHLOROPROPENE	0.476	0.487	0.475	0.481	0.439	0.481	0.462	0.474	0.455	0.461	0.449	0.467412	3.27	0.033	1
8260-2-BROMO-1 -CHLOROPROPANE															
1,1,2-TRICHLOROETHANE	1.438	1.702	1.442	1.491	1.285	1.414	1.438	1.41	1.376	1.44	1.396	1.439222	7.05	0.07	1
TETRACHLOROETHENE	1.139	1.291	1.235	1.279	1.161	1.232	1.18	1.169	1.143	1.184	1.173	1.198664	4.38	0.044	1
1,3-Dichloropropane	2.893	2.679	2.636	2.588	2.447	2.651	2.543	2.526	2.449	2.577	2.479	2.587871	4.96	0.05	1
2-HEXANONE	0.893	1.045	1.021	1.086	1.009	1.091	1.026	1.073	0.985	1.03	0.984	1.021934	5.51	0.055	1
CHLORODIBROMOMETHANE	1.934	1.968	1.688	1.646	1.447	1.638	1.552	1.583	1.545	1.621	1.61	1.657455	9.57	0.096	1
1,2-DIBROMOETHANE	1.834	1.514	1.529	1.331	1.311	1.484	1.434	1.452	1.417	1.484	1.461	1.477366	9.25	0.093	1
CHLOROBENZENE	4.873	4.955	4.638	4.414	4.1	4.355	4.211	4.169	4.058	4.23	4.171	4.37943	7.09	0.071	1
1,1,1,2-TETRACHLOROETHANE	1.785	1.598	1.493	1.453	1.307	1.422	1.349	1.322	1.322	1.37	1.36	1.434697	10.17	0.102	1
ETHYLBENZENE	2.444	2.73	2.724	2.454	2.328	2.521	2.429	2.404	2.356	2.447	2.407	2.476655	5.4	0.054	1
M&P-XYLENE	3.198	3.373	3.05	3.157	2.803	3.018	2.879	2.887	2.849	2.959	2.965	3.012497	5.71	0.057	1
O-XYLENE	3.12	3.349	2.977	3.009	2.785	2.927	2.872	2.888	2.86	2.981	2.886	2.968513	5.21	0.052	1
STYRENE	5.316	5.015	4.901	5.122	4.541	4.886	4.852	4.765	4.721	4.892	4.782	4.890134	4.24	0.042	1
Bromoform	0.976	1.061	1.003	1.037	0.943	1.03	1.014	1.033	1.001	1.045	1.051	1.01778	3.46	0.035	1

INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS7
Method : V807B10P
Review Method : 624
Review Protocol : EPA
Released By : Amy Green
Released On : 2/11/2016 12:15:12 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V807B10P -- ICal Updated Time: Thu Feb 11 11:59:29 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	AvgRF	%RSD	COD	Cur
Isopropylbenzene	8.005	9.245	7.82	8.181	7.571	7.858	7.67	7.61	7.493	7.756	7.36	7.869977	6.51	0.065	1
4-BROMOFLUOROBENZENE	2.567	2.549	2.525	2.523	2.518	2.497	2.517	2.524	2.527	2.589	2.626	2.541892	1.48	0.015	1
Bromobenzene	3.301	3.489	3.767	3.489	3.139	3.316	3.357	3.287	3.225	3.319	3.215	3.354915	5.15	0.052	1
1,1,2,2-TETRACHLOROETHANE	2.916	2.602	2.398	2.123	2.07	2.13	2.047	2.111	1.996	2.111	2.051	2.232289	12.93	0.129	1
1,2,3-TRICHLOROPROPANE	1.01	0.67	0.763	0.543	0.506	0.514	0.504	0.499	0.487	0.509	0.492	0.590673	27.83	1	0
TRANS-1,4-DICHLORO-2-BUTENE		0.848	0.56	0.581	0.527	0.6	0.611	0.626	0.62	0.635	0.629	0.623604	13.8	0.138	1
n-Propylbenzene	8.891	9.58	9.175	9.406	8.65	9.374	9.184	9.162	9.053	9.263	8.843	9.143748	2.97	0.03	1
4-ETHYLTOLUENE	8.552	8.863	7.968	7.731	7.181	7.657	7.488	7.52	7.284	7.457	7.15	7.713754	7.14	0.071	1
2-Chlorotoluene	1.733	1.918	1.683	1.747	1.53	1.678	1.596	1.582	1.599	1.658	1.658	1.671162	6.27	0.063	1
4-Chlorotoluene	5.908	6.665	5.49	5.593	5.156	5.422	5.371	5.42	5.292	5.508	5.268	5.554005	7.52	0.075	1
1,3,5-Trimethylbenzene	6.733	7.053	6.962	6.555	5.871	6.205	6.082	6.028	5.992	6.152	5.914	6.322491	6.77	0.068	1
tert-Butylbenzene	5.318	5.946	5.484	5.488	5.015	5.41	5.269	5.224	5.224	5.294	5.092	5.342142	4.65	0.046	1
1,2,4-Trimethylbenzene	7.263	7.608	6.574	6.551	5.909	6.228	6.165	6.103	5.964	6.166	5.833	6.396692	8.89	0.089	1
sec-Butylbenzene	9.409	9.545	8.644	8.462	8.121	8.686	8.491	8.369	8.254	8.479	7.989	8.586258	5.68	0.057	1
1,3-DICHLOROBENZENE	3.302	3.485	3.258	3.378	2.938	3.228	3.227	3.203	3.224	3.328	3.214	3.253187	4.16	0.042	1
p-Isopropyltoluene	7.3	7.347	6.928	7.289	6.45	6.803	6.682	6.691	6.586	6.842	6.466	6.853175	4.8	0.048	1
DICYCLOPENTADIENE	9.113	9.923	9.394	9.579	8.64	9.139	8.766	8.524	8.343	8.497	7.991	8.900893	6.53	0.065	1
8260-1,4-DICHLOROBENZENE-D4															
1,4-DICHLOROBENZENE	1.541	1.415	1.427	1.358	1.209	1.28	1.245	1.232	1.219	1.241	1.22	1.307916	8.48	0.085	1
1,2,3-TRIMETHYLBENZENE	2.825	2.93	2.529	2.52	2.373	2.531	2.448	2.397	2.342	2.387	2.255	2.503362	8.19	0.082	1
1,2-DICHLOROBENZENE	1.164	1.28	1.221	1.225	1.172	1.245	1.228	1.221	1.194	1.22	1.158	1.211675	3.04	0.03	1
n-Butylbenzene	2.388	2.861	2.834	2.829	2.671	2.855	2.778	2.751	2.661	2.661	2.44	2.702654	5.98	0.06	1

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS7
Method : V807B10P
Review Method : 624
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Released By : Amy Green
Released On : 2/11/2016 12:15:12 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V807B10P -- ICal Updated Time: Thu Feb 11 11:59:29 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	AvgRF	%RSD	COD	Cur
1,2-Dibromo-3-chloropropane		0.215	0.135	0.141	0.144	0.153	0.162	0.165	0.159	0.169	0.161	0.160378	13.78	0.138	1
1,2,4-Trichlorobenzene	0.945	0.884	0.882	0.822	0.804	0.844	0.826	0.826	0.785	0.789	0.72	0.829648	7.21	0.072	1
HEXACHLORO-1,3-BUTADIENE	0.465	0.494	0.459	0.476	0.458	0.481	0.468	0.48	0.471	0.477	0.441	0.469786	2.98	0.03	1
Naphthalene	2.638	2.396	2.184	2.238	2.021	2.266	2.196	2.301	2.178	2.232	2.051	2.245622	7.44	0.074	1
1,2,3-Trichlorobenzene	0.877	0.759	0.732	0.808	0.735	0.786	0.773	0.768	0.734	0.747	0.68	0.76355	6.61	0.066	1
1-Methylnaphthalene	1.336	1.083	1.079	1.116	1.072	1.191	1.195	1.255	1.153	1.164	1.049	1.154015	7.58	0.076	1
2-Methylnaphthalene	1.249	1.017	1.036	1.076	0.91	0.978	0.989	1.046	0.95	0.961	0.862	1.006831	10.08	0.101	1
AP9-PENTAFLUOROBENZENE															
ETHANOL												0	0	0	1
Bromoethane												0	0	0	1
2-PROPANOL												0	0	0	1
Methyl Acetate												0	0	0	1
ACETONITRILE												0	0	0	1
ALLYL CHLORIDE												0	0	0	1
tert-BUTYL ALCOHOL												0	0	0	1
chloroprene												0	0	0	1
ETHYL TERT-BUTYL ETHER												0	0	0	1
PROPIONITRILE												0	0	0	1
Ethyl Acetate												0	0	0	1
METHACRYLONITRILE												0	0	0	1
Cyclohexane												0	0	0	1
tert-butyl formate												0	0	0	1
ISOBUTANOL												0	0	0	1
t-Amyl Alcohol												0	0	0	1
TERT-AMYL METHYL ETHER												0	0	0	1
AP9-1,4-DIFLUOROBENZENE															
N-BUTANOL												0	0	0	1
Methyl Cyclohexane												0	0	0	1

INITIAL CALIBRATION SUMMARY

Instrument ID	: VOCMS7	Review Method	: 624	Released By	: Amy Green
Method	: V807B10P	Review Protocol	: EPA	Released On	: 2/11/2016 12:15:12 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V807B10P -- ICal Updated Time: Thu Feb 11 11:59:29 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	AvgRF	%RSD	COD	Cur
2-nitropropane												0	0	0	1
METHYL METHACRYLATE												0	0	0	1
1,4-DIOXANE												0	0	0	1
n-octane												0	0	0	1
3,3-DIMETHYL-1-BUTANOL												0	0	0	1
AP9-2-BROMO-1 ACHLOROPROPANE															
ETHYL METHACRYLATE												0	0	0	1
CIS-1,4-DICHLORO-2-BUTENE												0	0	0	1
Cyclohexanone												0	0	0	1
PENTACHLOROETHANE												0	0	0	1
Hexachloroethane												0	0	0	1
AP9-1,4-DICHLOROBENZENE-D4															

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS7
Method : V807B10P
Review Method : 8260SC
Review Protocol : SC
Released By : Amy Green
Released On : 2/11/2016 12:15:46 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V807B10P -- ICal Updated Time: Thu Feb 11 11:59:29 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	AvgRF	%RSD	COD	Cur
8260-PENTAFLUOROBENZENE															
TPH (GC/MS) LOW FRACTION												0	0	0	1
PROPENE		0.308	0.223	0.288	0.246	0.204	0.215	0.217	0.218	0.216	0.213	0.234838	15.04	0.15	1
DICHLORODIFLUOROMETHANE	0.893	0.646	0.617	0.624	0.549	0.6	0.584	0.588	0.595	0.593	0.565	0.623141	15	0.15	1
CHLOROMETHANE	1.089	0.952	0.918	0.913	0.803	0.846	0.828	0.832	0.847	0.843	0.954	0.893048	9.35	0.093	1
VINYL CHLORIDE	0.85	0.777	0.76	0.745	0.725	0.78	0.755	0.755	0.762	0.779	0.733	0.76567	4.35	0.044	1
1,3-BUTADIENE		0.831	0.806	0.733	0.649	0.664	0.643	0.651	0.626	0.646	0.586	0.683446	11.7	0.117	1
BROMOMETHANE			0.389	0.405	0.311	0.35	0.366	0.364	0.394	0.416	0.413	0.378802	9.02	0.09	1
CHLOROETHANE			0.52	0.422	0.383	0.431	0.395	0.388	0.382	0.364		0.41058	11.96	0.12	1
TRICHLOROFLUOROMETHANE	0.822	0.786	0.781	0.768	0.718	0.772	0.748	0.751	0.75	0.765	0.75	0.764713	3.52	0.035	1
DICHLOROFLUOROMETHANE	1.078	0.971	1.162	1.038	0.987	1.061	1.012	1.014	1.028	1.029	0.988	1.033416	5.14	0.051	1
ETHYL ETHER	0.564	0.526	0.473	0.505	0.436	0.486	0.473	0.476	0.471	0.475	0.455	0.485553	7.23	0.072	1
ACROLEIN	0.141	0.105	0.116	0.104	0.107	0.115	0.113	0.121	0.117	0.124	0.123	0.116876	9	0.09	1
1,1-DICHLOROETHENE	0.856	0.854	0.845	0.87	0.766	0.863	0.834	0.828	0.814	0.819	0.764	0.828476	4.32	0.043	1
1,1,2 -TRICHLOROTRIFLUOROETHANE	0.526	0.525	0.487	0.463	0.449	0.48	0.474	0.463	0.46	0.462	0.436	0.475169	6.01	0.06	1
ACETONE	0.465	0.414	0.365	0.389	0.351	0.384	0.356	0.37	0.35	0.358	0.337	0.376406	9.67	0.097	1
IODOMETHANE	0.387	0.387	0.415	0.43	0.436	0.501	0.521	0.53	0.564	0.571	0.52	0.478341	14.44	0.144	1
CARBON DISULFIDE	2.127	2.055	1.938	1.906	1.75	1.868	1.813	1.799	1.777	1.773	1.695	1.863691	7.14	0.071	1
METHYLENE CHLORIDE	0.688	0.732	0.528	0.605	0.493	0.527	0.516	0.512	0.511	0.518	0.5	0.557192	14.62	0.146	1
ACRYLONITRILE	0.286	0.242	0.216	0.222	0.21	0.229	0.218	0.233	0.219	0.226	0.216	0.228846	9.19	0.092	1
n-Hexane		0.761	0.631	0.593	0.591	0.609	0.577	0.564	0.561	0.558	0.53	0.597635	10.72	0.107	1
TRANS-1,2-DICHLOROETHENE	0.453	0.68	0.494	0.509	0.458	0.497	0.484	0.475	0.482	0.478	0.462	0.497513	12.67	0.127	1

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS7
Method : V807B10P
Review Method : 8260SC
Review Protocol : SC
Released By : Amy Green
Released On : 2/11/2016 12:15:46 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V807B10P -- ICal Updated Time: Thu Feb 11 11:59:29 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	AvgRF	%RSD	COD	Cur
METHYL TERT-BUTYL ETHER	1.466	1.453	1.504	1.597	1.448	1.538	1.471	1.477	1.447	1.468	1.41	1.47991	3.42	0.034	1
1,1-DICHLOROETHANE	1.012	1.046	1.034	1.06	0.985	1.054	1.034	1.032	1.024	1.033	0.981	1.02691	2.46	0.025	1
VINYL ACETATE	1.265	1.516	1.326	1.334	1.279	1.378	1.31	1.323	1.254	1.249	1.14	1.306617	7.11	0.071	1
DI-ISOPROPYL ETHER	2.314	2.096	2.295	2.202	2.078	2.24	2.205	2.207	2.182	2.192	2.059	2.18812	3.76	0.038	1
2,2-Dichloropropane	1.005	0.953	0.891	0.844	0.794	0.834	0.818	0.814	0.812	0.817	0.767	0.84979	8.45	0.084	1
CIS-1,2-DICHLOROETHENE	0.576	0.517	0.501	0.589	0.505	0.561	0.53	0.535	0.543	0.55	0.525	0.539293	5.18	0.052	1
2-BUTANONE (MEK)	0.432	0.494	0.482	0.459	0.437	0.472	0.448	0.471	0.442	0.449	0.423	0.455348	4.87	0.049	1
BROMOCHLOROMETHANE	0.357	0.291	0.292	0.285	0.295	0.302	0.293	0.29	0.274	0.272	0.248	0.290801	9.08	0.091	1
TETRAHYDROFURAN			0.23	0.267	0.211	0.235	0.207	0.221	0.202	0.212	0.206	0.221123	9.2	0.092	1
CHLOROFORM		0.997	0.979	0.97	0.881	0.96	0.918	0.909	0.895	0.904	0.859	0.927238	4.97	0.05	1
DIBROMOFLUOROMETHANE	0.534	0.53	0.526	0.525	0.521	0.524	0.516	0.515	0.51	0.506	0.495	0.518344	2.21	0.022	1
1,1,1-TRICHLOROETHANE	0.886	0.824	0.814	0.769	0.712	0.777	0.738	0.738	0.736	0.75	0.715	0.769114	6.93	0.069	1
CARBON TETRACHLORIDE	0.826	0.763	0.684	0.639	0.633	0.68	0.647	0.639	0.661	0.668	0.621	0.678307	9.2	0.092	1
1,1-Dichloropropene	0.726	0.769	0.744	0.731	0.698	0.755	0.721	0.719	0.712	0.725	0.685	0.725794	3.31	0.033	1
2,2,4-TRIMETHYLPENTANE	2.773	2.643	2.542	2.63	2.438	2.621	2.532	2.525	2.518	2.54	2.414	2.561313	3.93	0.039	1
HEPTANE	1.203	1.409	1.272	1.347	1.205	1.244	1.194	1.177	1.159	1.21	1.126	1.231403	6.75	0.068	1
BENZENE	2.314	2.31	2.169	2.213	2.073	2.181	2.117	2.141	2.126	2.14	2.074	2.168922	3.79	0.038	1
1,2-DICHLOROETHANE	0.575	0.655	0.653	0.679	0.645	0.697	0.657	0.674	0.667	0.676	0.649	0.657068	4.76	0.048	1
8260-1,4-DIFLUOROBENZENE															
TRICHLOROETHENE	0.281	0.32	0.284	0.282	0.277	0.291	0.281	0.28	0.278	0.284	0.278	0.285218	4.27	0.043	1
1,2-DICHLOROPROPANE	0.281	0.304	0.255	0.262	0.24	0.26	0.258	0.251	0.25	0.25	0.24	0.259322	7.2	0.072	1
DIBROMOMETHANE	0.239	0.211	0.187	0.187	0.168	0.182	0.178	0.182	0.178	0.184	0.18	0.188576	10.45	0.104	1

Environmental Science Corporation
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INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS7
Method : V807B10P
Review Method : 8260SC
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Released By : Amy Green
Released On : 2/11/2016 12:15:46 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V807B10P -- ICal Updated Time: Thu Feb 11 11:59:29 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	AvgRF	%RSD	COD	Cur
BROMODICHLOROMETHANE		0.548	0.437	0.426	0.413	0.44	0.414	0.408	0.399	0.4	0.39	0.427443	10.58	0.106	1
1,a,a-Trifluorotoluene	0.545	0.546	0.543	0.534	0.527	0.522	0.521	0.515	0.5	0.5	0.489	0.522235	3.72	0.037	1
-CHLOROETHYL VINYL ETHER	0.039	0.037	0.034	0.034	0.036	0.041	0.042	0.04	0.032	0.033	0.033	0.03637	9.95	0.099	1
CIS-1,3-DICHLOROPROPENE	0.616	0.619	0.579	0.558	0.524	0.552	0.534	0.542	0.531	0.537	0.519	0.555612	6.28	0.063	1
-METHYL-2-PENTANONE (MIBK)	0.5	0.441	0.426	0.398	0.384	0.414	0.391	0.406	0.371	0.379	0.356	0.405823	9.79	0.098	1
TOLUENE-D8	1.259	1.268	1.25	1.227	1.22	1.214	1.213	1.213	1.199	1.186	1.197	1.222388	2.16	0.022	1
TOLUENE		1.486	1.322	1.313	1.241	1.314	1.277	1.263	1.248	1.249	1.217	1.292967	5.92	0.059	1
TRANS-1,3-DICHLOROPROPENE	0.476	0.487	0.475	0.481	0.439	0.481	0.462	0.474	0.455	0.461	0.449	0.467412	3.27	0.033	1
8260-2-BROMO-1 -CHLOROPROPANE															
1,1,2-TRICHLOROETHANE	1.438	1.702	1.442	1.491	1.285	1.414	1.438	1.41	1.376	1.44	1.396	1.439222	7.05	0.07	1
TETRACHLOROETHENE	1.139	1.291	1.235	1.279	1.161	1.232	1.18	1.169	1.143	1.184	1.173	1.198664	4.38	0.044	1
1,3-Dichloropropane	2.893	2.679	2.636	2.588	2.447	2.651	2.543	2.526	2.449	2.577	2.479	2.587871	4.96	0.05	1
2-HEXANONE	0.893	1.045	1.021	1.086	1.009	1.091	1.026	1.073	0.985	1.03	0.984	1.021934	5.51	0.055	1
CHLORODIBROMOMETHANE	1.934	1.968	1.688	1.646	1.447	1.638	1.552	1.583	1.545	1.621	1.61	1.657455	9.57	0.096	1
1,2-DIBROMOETHANE	1.834	1.514	1.529	1.331	1.311	1.484	1.434	1.452	1.417	1.484	1.461	1.477366	9.25	0.093	1
CHLOROBENZENE	4.873	4.955	4.638	4.414	4.1	4.355	4.211	4.169	4.058	4.23	4.171	4.37943	7.09	0.071	1
1,1,1,2-TETRACHLOROETHANE	1.785	1.598	1.493	1.453	1.307	1.422	1.349	1.322	1.322	1.37	1.36	1.434697	10.17	0.102	1
ETHYLBENZENE	2.444	2.73	2.724	2.454	2.328	2.521	2.429	2.404	2.356	2.447	2.407	2.476655	5.4	0.054	1
M&P-XYLENE	3.198	3.373	3.05	3.157	2.803	3.018	2.879	2.887	2.849	2.959	2.965	3.012497	5.71	0.057	1
O-XYLENE	3.12	3.349	2.977	3.009	2.785	2.927	2.872	2.888	2.86	2.981	2.886	2.968513	5.21	0.052	1
STYRENE	5.316	5.015	4.901	5.122	4.541	4.886	4.852	4.765	4.721	4.892	4.782	4.890134	4.24	0.042	1
Bromoform	0.976	1.061	1.003	1.037	0.943	1.03	1.014	1.033	1.001	1.045	1.051	1.01778	3.46	0.035	1

Environmental Science Corporation
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INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS7
Method : V807B10P
Review Method : 8260SC
Review Protocol : SC
Released By : Amy Green
Released On : 2/11/2016 12:15:46 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V807B10P -- ICal Updated Time: Thu Feb 11 11:59:29 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	AvgRF	%RSD	COD	Cur
Isopropylbenzene	8.005	9.245	7.82	8.181	7.571	7.858	7.67	7.61	7.493	7.756	7.36	7.869977	6.51	0.065	1
4-BROMOFLUOROBENZENE	2.567	2.549	2.525	2.523	2.518	2.497	2.517	2.524	2.527	2.589	2.626	2.541892	1.48	0.015	1
Bromobenzene	3.301	3.489	3.767	3.489	3.139	3.316	3.357	3.287	3.225	3.319	3.215	3.354915	5.15	0.052	1
1,1,2,2-TETRACHLOROETHANE	2.916	2.602	2.398	2.123	2.07	2.13	2.047	2.111	1.996	2.111	2.051	2.232289	12.93	0.129	1
1,2,3-TRICHLOROPROPANE	1.01	0.67	0.763	0.543	0.506	0.514	0.504	0.499	0.487	0.509	0.492	0.590673	27.83	1	0
TRANS-1,4-DICHLORO-2-BUTENE		0.848	0.56	0.581	0.527	0.6	0.611	0.626	0.62	0.635	0.629	0.623604	13.8	0.138	1
n-Propylbenzene	8.891	9.58	9.175	9.406	8.65	9.374	9.184	9.162	9.053	9.263	8.843	9.143748	2.97	0.03	1
4-ETHYLTOLUENE	8.552	8.863	7.968	7.731	7.181	7.657	7.488	7.52	7.284	7.457	7.15	7.713754	7.14	0.071	1
2-Chlorotoluene	1.733	1.918	1.683	1.747	1.53	1.678	1.596	1.582	1.599	1.658	1.658	1.671162	6.27	0.063	1
4-Chlorotoluene	5.908	6.665	5.49	5.593	5.156	5.422	5.371	5.42	5.292	5.508	5.268	5.554005	7.52	0.075	1
1,3,5-Trimethylbenzene	6.733	7.053	6.962	6.555	5.871	6.205	6.082	6.028	5.992	6.152	5.914	6.322491	6.77	0.068	1
tert-Butylbenzene	5.318	5.946	5.484	5.488	5.015	5.41	5.269	5.224	5.224	5.294	5.092	5.342142	4.65	0.046	1
1,2,4-Trimethylbenzene	7.263	7.608	6.574	6.551	5.909	6.228	6.165	6.103	5.964	6.166	5.833	6.396692	8.89	0.089	1
sec-Butylbenzene	9.409	9.545	8.644	8.462	8.121	8.686	8.491	8.369	8.254	8.479	7.989	8.586258	5.68	0.057	1
1,3-DICHLOROBENZENE	3.302	3.485	3.258	3.378	2.938	3.228	3.227	3.203	3.224	3.328	3.214	3.253187	4.16	0.042	1
p-Isopropyltoluene	7.3	7.347	6.928	7.289	6.45	6.803	6.682	6.691	6.586	6.842	6.466	6.853175	4.8	0.048	1
DICYCLOPENTADIENE	9.113	9.923	9.394	9.579	8.64	9.139	8.766	8.524	8.343	8.497	7.991	8.900893	6.53	0.065	1
8260-1,4-DICHLOROBENZENE-D4															
1,4-DICHLOROBENZENE	1.541	1.415	1.427	1.358	1.209	1.28	1.245	1.232	1.219	1.241	1.22	1.307916	8.48	0.085	1
1,2,3-TRIMETHYLBENZENE	2.825	2.93	2.529	2.52	2.373	2.531	2.448	2.397	2.342	2.387	2.255	2.503362	8.19	0.082	1
1,2-DICHLOROBENZENE	1.164	1.28	1.221	1.225	1.172	1.245	1.228	1.221	1.194	1.22	1.158	1.211675	3.04	0.03	1
n-Butylbenzene	2.388	2.861	2.834	2.829	2.671	2.855	2.778	2.751	2.661	2.661	2.44	2.702654	5.98	0.06	1

Environmental Science Corporation
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INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS7
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Review Method : 8260SC
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Released By : Amy Green
Released On : 2/11/2016 12:15:46 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V807B10P -- ICal Updated Time: Thu Feb 11 11:59:29 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	AvgRF	%RSD	COD	Cur
1,2-Dibromo-3-chloropropane		0.215	0.135	0.141	0.144	0.153	0.162	0.165	0.159	0.169	0.161	0.160378	13.78	0.138	1
1,2,4-Trichlorobenzene	0.945	0.884	0.882	0.822	0.804	0.844	0.826	0.826	0.785	0.789	0.72	0.829648	7.21	0.072	1
HEXACHLORO-1,3-BUTADIENE	0.465	0.494	0.459	0.476	0.458	0.481	0.468	0.48	0.471	0.477	0.441	0.469786	2.98	0.03	1
Naphthalene	2.638	2.396	2.184	2.238	2.021	2.266	2.196	2.301	2.178	2.232	2.051	2.245622	7.44	0.074	1
1,2,3-Trichlorobenzene	0.877	0.759	0.732	0.808	0.735	0.786	0.773	0.768	0.734	0.747	0.68	0.76355	6.61	0.066	1
1-Methylnaphthalene	1.336	1.083	1.079	1.116	1.072	1.191	1.195	1.255	1.153	1.164	1.049	1.154015	7.58	0.076	1
2-Methylnaphthalene	1.249	1.017	1.036	1.076	0.91	0.978	0.989	1.046	0.95	0.961	0.862	1.006831	10.08	0.101	1
AP9-PENTAFLUOROBENZENE															
ETHANOL												0	0	0	1
Bromoethane												0	0	0	1
2-PROPANOL												0	0	0	1
Methyl Acetate												0	0	0	1
ACETONITRILE												0	0	0	1
ALLYL CHLORIDE												0	0	0	1
tert-BUTYL ALCOHOL												0	0	0	1
chloroprene												0	0	0	1
ETHYL TERT-BUTYL ETHER												0	0	0	1
PROPIONITRILE												0	0	0	1
Ethyl Acetate												0	0	0	1
METHACRYLONITRILE												0	0	0	1
Cyclohexane												0	0	0	1
tert-butyl formate												0	0	0	1
ISOBUTANOL												0	0	0	1
t-Amyl Alcohol												0	0	0	1
TERT-AMYL METHYL ETHER												0	0	0	1
AP9-1,4-DIFLUOROBENZENE															
N-BUTANOL												0	0	0	1
Methyl Cyclohexane												0	0	0	1

Environmental Science Corporation
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INITIAL CALIBRATION SUMMARY

Instrument ID	: VOCMS7	Review Method	: 8260SC	Released By	: Amy Green
Method	: V807B10P	Review Protocol	: SC	Released On	: 2/11/2016 12:15:46 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V807B10P -- ICal Updated Time: Thu Feb 11 11:59:29 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	AvgRF	%RSD	COD	Cur
2-nitropropane												0	0	0	1
METHYL METHACRYLATE												0	0	0	1
1,4-DIOXANE												0	0	0	1
n-octane												0	0	0	1
3,3-DIMETHYL-1-BUTANOL												0	0	0	1
AP9-2-BROMO-1 ACHLOROPROPANE															
ETHYL METHACRYLATE												0	0	0	1
CIS-1,4-DICHLORO-2-BUTENE												0	0	0	1
Cyclohexanone												0	0	0	1
PENTACHLOROETHANE												0	0	0	1
Hexachloroethane												0	0	0	1
AP9-1,4-DICHLOROBENZENE-D4															

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS7
Method : V807B10P
Review Method : 8260B
Review Protocol : SW846
Released By : Amy Green
Released On : 2/11/2016 12:16:23 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V807B10P -- ICal Updated Time: Thu Feb 11 11:59:29 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	AvgRF	%RSD	COD	Cur
8260-PENTAFLUOROBENZENE															
TPH (GC/MS) LOW FRACTION												0	0	0	1
PROPENE		0.308	0.223	0.288	0.246	0.204	0.215	0.217	0.218	0.216	0.213	0.234838	15.04	0.15	1
DICHLORODIFLUOROMETHANE	0.893	0.646	0.617	0.624	0.549	0.6	0.584	0.588	0.595	0.593	0.565	0.623141	15	0.15	1
CHLOROMETHANE	1.089	0.952	0.918	0.913	0.803	0.846	0.828	0.832	0.847	0.843	0.954	0.893048	9.35	0.093	1
VINYL CHLORIDE	0.85	0.777	0.76	0.745	0.725	0.78	0.755	0.755	0.762	0.779	0.733	0.76567	4.35	0.044	1
1,3-BUTADIENE		0.831	0.806	0.733	0.649	0.664	0.643	0.651	0.626	0.646	0.586	0.683446	11.7	0.117	1
BROMOMETHANE			0.389	0.405	0.311	0.35	0.366	0.364	0.394	0.416	0.413	0.378802	9.02	0.09	1
CHLOROETHANE			0.52	0.422	0.383	0.431	0.395	0.388	0.382	0.364		0.41058	11.96	0.12	1
TRICHLOROFLUOROMETHANE	0.822	0.786	0.781	0.768	0.718	0.772	0.748	0.751	0.75	0.765	0.75	0.764713	3.52	0.035	1
DICHLOROFLUOROMETHANE	1.078	0.971	1.162	1.038	0.987	1.061	1.012	1.014	1.028	1.029	0.988	1.033416	5.14	0.051	1
ETHYL ETHER	0.564	0.526	0.473	0.505	0.436	0.486	0.473	0.476	0.471	0.475	0.455	0.485553	7.23	0.072	1
ACROLEIN	0.141	0.105	0.116	0.104	0.107	0.115	0.113	0.121	0.117	0.124	0.123	0.116876	9	0.09	1
1,1-DICHLOROETHENE	0.856	0.854	0.845	0.87	0.766	0.863	0.834	0.828	0.814	0.819	0.764	0.828476	4.32	0.043	1
1,1,2 -TRICHLOROTRIFLUOROETHANE	0.526	0.525	0.487	0.463	0.449	0.48	0.474	0.463	0.46	0.462	0.436	0.475169	6.01	0.06	1
ACETONE	0.465	0.414	0.365	0.389	0.351	0.384	0.356	0.37	0.35	0.358	0.337	0.376406	9.67	0.097	1
IODOMETHANE	0.387	0.387	0.415	0.43	0.436	0.501	0.521	0.53	0.564	0.571	0.52	0.478341	14.44	0.144	1
CARBON DISULFIDE	2.127	2.055	1.938	1.906	1.75	1.868	1.813	1.799	1.777	1.773	1.695	1.863691	7.14	0.071	1
METHYLENE CHLORIDE	0.688	0.732	0.528	0.605	0.493	0.527	0.516	0.512	0.511	0.518	0.5	0.557192	14.62	0.146	1
ACRYLONITRILE	0.286	0.242	0.216	0.222	0.21	0.229	0.218	0.233	0.219	0.226	0.216	0.228846	9.19	0.092	1
n-Hexane		0.761	0.631	0.593	0.591	0.609	0.577	0.564	0.561	0.558	0.53	0.597635	10.72	0.107	1
TRANS-1,2-DICHLOROETHENE	0.453	0.68	0.494	0.509	0.458	0.497	0.484	0.475	0.482	0.478	0.462	0.497513	12.67	0.127	1

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS7
Method : V807B10P
Review Method : 8260B
Review Protocol : SW846
Released By : Amy Green
Released On : 2/11/2016 12:16:23 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V807B10P -- ICal Updated Time: Thu Feb 11 11:59:29 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	AvgRF	%RSD	COD	Cur
METHYL TERT-BUTYL ETHER	1.466	1.453	1.504	1.597	1.448	1.538	1.471	1.477	1.447	1.468	1.41	1.47991	3.42	0.034	1
1,1-DICHLOROETHANE	1.012	1.046	1.034	1.06	0.985	1.054	1.034	1.032	1.024	1.033	0.981	1.02691	2.46	0.025	1
VINYL ACETATE	1.265	1.516	1.326	1.334	1.279	1.378	1.31	1.323	1.254	1.249	1.14	1.306617	7.11	0.071	1
DI-ISOPROPYL ETHER	2.314	2.096	2.295	2.202	2.078	2.24	2.205	2.207	2.182	2.192	2.059	2.18812	3.76	0.038	1
2,2-Dichloropropane	1.005	0.953	0.891	0.844	0.794	0.834	0.818	0.814	0.812	0.817	0.767	0.84979	8.45	0.084	1
CIS-1,2-DICHLOROETHENE	0.576	0.517	0.501	0.589	0.505	0.561	0.53	0.535	0.543	0.55	0.525	0.539293	5.18	0.052	1
2-BUTANONE (MEK)	0.432	0.494	0.482	0.459	0.437	0.472	0.448	0.471	0.442	0.449	0.423	0.455348	4.87	0.049	1
BROMOCHLOROMETHANE	0.357	0.291	0.292	0.285	0.295	0.302	0.293	0.29	0.274	0.272	0.248	0.290801	9.08	0.091	1
TETRAHYDROFURAN			0.23	0.267	0.211	0.235	0.207	0.221	0.202	0.212	0.206	0.221123	9.2	0.092	1
CHLOROFORM		0.997	0.979	0.97	0.881	0.96	0.918	0.909	0.895	0.904	0.859	0.927238	4.97	0.05	1
DIBROMOFLUOROMETHANE	0.534	0.53	0.526	0.525	0.521	0.524	0.516	0.515	0.51	0.506	0.495	0.518344	2.21	0.022	1
1,1,1-TRICHLOROETHANE	0.886	0.824	0.814	0.769	0.712	0.777	0.738	0.738	0.736	0.75	0.715	0.769114	6.93	0.069	1
CARBON TETRACHLORIDE	0.826	0.763	0.684	0.639	0.633	0.68	0.647	0.639	0.661	0.668	0.621	0.678307	9.2	0.092	1
1,1-Dichloropropene	0.726	0.769	0.744	0.731	0.698	0.755	0.721	0.719	0.712	0.725	0.685	0.725794	3.31	0.033	1
2,2,4-TRIMETHYLPENTANE	2.773	2.643	2.542	2.63	2.438	2.621	2.532	2.525	2.518	2.54	2.414	2.561313	3.93	0.039	1
HEPTANE	1.203	1.409	1.272	1.347	1.205	1.244	1.194	1.177	1.159	1.21	1.126	1.231403	6.75	0.068	1
BENZENE	2.314	2.31	2.169	2.213	2.073	2.181	2.117	2.141	2.126	2.14	2.074	2.168922	3.79	0.038	1
1,2-DICHLOROETHANE	0.575	0.655	0.653	0.679	0.645	0.697	0.657	0.674	0.667	0.676	0.649	0.657068	4.76	0.048	1
8260-1,4-DIFLUOROBENZENE															
TRICHLOROETHENE	0.281	0.32	0.284	0.282	0.277	0.291	0.281	0.28	0.278	0.284	0.278	0.285218	4.27	0.043	1
1,2-DICHLOROPROPANE	0.281	0.304	0.255	0.262	0.24	0.26	0.258	0.251	0.25	0.25	0.24	0.259322	7.2	0.072	1
DIBROMOMETHANE	0.239	0.211	0.187	0.187	0.168	0.182	0.178	0.182	0.178	0.184	0.18	0.188576	10.45	0.104	1

Environmental Science Corporation
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INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS7
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Released By : Amy Green
Released On : 2/11/2016 12:16:23 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V807B10P -- ICal Updated Time: Thu Feb 11 11:59:29 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	AvgRF	%RSD	COD	Cur
BROMODICHLOROMETHANE		0.548	0.437	0.426	0.413	0.44	0.414	0.408	0.399	0.4	0.39	0.427443	10.58	0.106	1
1,a,a,a-Trifluorotoluene	0.545	0.546	0.543	0.534	0.527	0.522	0.521	0.515	0.5	0.5	0.489	0.522235	3.72	0.037	1
2-CHLOROETHYL VINYL ETHER	0.039	0.037	0.034	0.034	0.036	0.041	0.042	0.04	0.032	0.033	0.033	0.03637	9.95	0.099	1
CIS-1,3-DICHLOROPROPENE	0.616	0.619	0.579	0.558	0.524	0.552	0.534	0.542	0.531	0.537	0.519	0.555612	6.28	0.063	1
4-METHYL-2-PENTANONE (MIBK)	0.5	0.441	0.426	0.398	0.384	0.414	0.391	0.406	0.371	0.379	0.356	0.405823	9.79	0.098	1
TOLUENE-D8	1.259	1.268	1.25	1.227	1.22	1.214	1.213	1.213	1.199	1.186	1.197	1.222388	2.16	0.022	1
TOLUENE		1.486	1.322	1.313	1.241	1.314	1.277	1.263	1.248	1.249	1.217	1.292967	5.92	0.059	1
TRANS-1,3-DICHLOROPROPENE	0.476	0.487	0.475	0.481	0.439	0.481	0.462	0.474	0.455	0.461	0.449	0.467412	3.27	0.033	1
8260-2-BROMO-1 -CHLOROPROPANE															
1,1,2-TRICHLOROETHANE	1.438	1.702	1.442	1.491	1.285	1.414	1.438	1.41	1.376	1.44	1.396	1.439222	7.05	0.07	1
TETRACHLOROETHENE	1.139	1.291	1.235	1.279	1.161	1.232	1.18	1.169	1.143	1.184	1.173	1.198664	4.38	0.044	1
1,3-Dichloropropane	2.893	2.679	2.636	2.588	2.447	2.651	2.543	2.526	2.449	2.577	2.479	2.587871	4.96	0.05	1
2-HEXANONE	0.893	1.045	1.021	1.086	1.009	1.091	1.026	1.073	0.985	1.03	0.984	1.021934	5.51	0.055	1
CHLORODIBROMOMETHANE	1.934	1.968	1.688	1.646	1.447	1.638	1.552	1.583	1.545	1.621	1.61	1.657455	9.57	0.096	1
1,2-DIBROMOETHANE	1.834	1.514	1.529	1.331	1.311	1.484	1.434	1.452	1.417	1.484	1.461	1.477366	9.25	0.093	1
CHLOROBENZENE	4.873	4.955	4.638	4.414	4.1	4.355	4.211	4.169	4.058	4.23	4.171	4.37943	7.09	0.071	1
1,1,1,2-TETRACHLOROETHANE	1.785	1.598	1.493	1.453	1.307	1.422	1.349	1.322	1.322	1.37	1.36	1.434697	10.17	0.102	1
ETHYLBENZENE	2.444	2.73	2.724	2.454	2.328	2.521	2.429	2.404	2.356	2.447	2.407	2.476655	5.4	0.054	1
M&P-XYLENE	3.198	3.373	3.05	3.157	2.803	3.018	2.879	2.887	2.849	2.959	2.965	3.012497	5.71	0.057	1
O-XYLENE	3.12	3.349	2.977	3.009	2.785	2.927	2.872	2.888	2.86	2.981	2.886	2.968513	5.21	0.052	1
STYRENE	5.316	5.015	4.901	5.122	4.541	4.886	4.852	4.765	4.721	4.892	4.782	4.890134	4.24	0.042	1
Bromoform	0.976	1.061	1.003	1.037	0.943	1.03	1.014	1.033	1.001	1.045	1.051	1.01778	3.46	0.035	1

Environmental Science Corporation
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INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS7
Method : V807B10P
Review Method : 8260B
Review Protocol : SW846
Released By : Amy Green
Released On : 2/11/2016 12:16:23 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V807B10P -- ICal Updated Time: Thu Feb 11 11:59:29 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	AvgRF	%RSD	COD	Cur
Isopropylbenzene	8.005	9.245	7.82	8.181	7.571	7.858	7.67	7.61	7.493	7.756	7.36	7.869977	6.51	0.065	1
4-BROMOFLUOROBENZENE	2.567	2.549	2.525	2.523	2.518	2.497	2.517	2.524	2.527	2.589	2.626	2.541892	1.48	0.015	1
Bromobenzene	3.301	3.489	3.767	3.489	3.139	3.316	3.357	3.287	3.225	3.319	3.215	3.354915	5.15	0.052	1
1,1,2,2-TETRACHLOROETHANE	2.916	2.602	2.398	2.123	2.07	2.13	2.047	2.111	1.996	2.111	2.051	2.232289	12.93	0.129	1
1,2,3-TRICHLOROPROPANE	1.01	0.67	0.763	0.543	0.506	0.514	0.504	0.499	0.487	0.509	0.492	0.590673	27.83	1	0
TRANS-1,4-DICHLORO-2-BUTENE		0.848	0.56	0.581	0.527	0.6	0.611	0.626	0.62	0.635	0.629	0.623604	13.8	0.138	1
n-Propylbenzene	8.891	9.58	9.175	9.406	8.65	9.374	9.184	9.162	9.053	9.263	8.843	9.143748	2.97	0.03	1
4-ETHYLTOLUENE	8.552	8.863	7.968	7.731	7.181	7.657	7.488	7.52	7.284	7.457	7.15	7.713754	7.14	0.071	1
2-Chlorotoluene	1.733	1.918	1.683	1.747	1.53	1.678	1.596	1.582	1.599	1.658	1.658	1.671162	6.27	0.063	1
4-Chlorotoluene	5.908	6.665	5.49	5.593	5.156	5.422	5.371	5.42	5.292	5.508	5.268	5.554005	7.52	0.075	1
1,3,5-Trimethylbenzene	6.733	7.053	6.962	6.555	5.871	6.205	6.082	6.028	5.992	6.152	5.914	6.322491	6.77	0.068	1
tert-Butylbenzene	5.318	5.946	5.484	5.488	5.015	5.41	5.269	5.224	5.224	5.294	5.092	5.342142	4.65	0.046	1
1,2,4-Trimethylbenzene	7.263	7.608	6.574	6.551	5.909	6.228	6.165	6.103	5.964	6.166	5.833	6.396692	8.89	0.089	1
sec-Butylbenzene	9.409	9.545	8.644	8.462	8.121	8.686	8.491	8.369	8.254	8.479	7.989	8.586258	5.68	0.057	1
1,3-DICHLOROBENZENE	3.302	3.485	3.258	3.378	2.938	3.228	3.227	3.203	3.224	3.328	3.214	3.253187	4.16	0.042	1
p-Isopropyltoluene	7.3	7.347	6.928	7.289	6.45	6.803	6.682	6.691	6.586	6.842	6.466	6.853175	4.8	0.048	1
DICYCLOPENTADIENE	9.113	9.923	9.394	9.579	8.64	9.139	8.766	8.524	8.343	8.497	7.991	8.900893	6.53	0.065	1
8260-1,4-DICHLOROBENZENE-D4															
1,4-DICHLOROBENZENE	1.541	1.415	1.427	1.358	1.209	1.28	1.245	1.232	1.219	1.241	1.22	1.307916	8.48	0.085	1
1,2,3-TRIMETHYLBENZENE	2.825	2.93	2.529	2.52	2.373	2.531	2.448	2.397	2.342	2.387	2.255	2.503362	8.19	0.082	1
1,2-DICHLOROBENZENE	1.164	1.28	1.221	1.225	1.172	1.245	1.228	1.221	1.194	1.22	1.158	1.211675	3.04	0.03	1
n-Butylbenzene	2.388	2.861	2.834	2.829	2.671	2.855	2.778	2.751	2.661	2.661	2.44	2.702654	5.98	0.06	1

Environmental Science Corporation
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INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS7
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Review Method : 8260B
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Released By : Amy Green
Released On : 2/11/2016 12:16:23 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V807B10P -- ICal Updated Time: Thu Feb 11 11:59:29 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	AvgRF	%RSD	COD	Cur
1,2-Dibromo-3-chloropropane		0.215	0.135	0.141	0.144	0.153	0.162	0.165	0.159	0.169	0.161	0.160378	13.78	0.138	1
1,2,4-Trichlorobenzene	0.945	0.884	0.882	0.822	0.804	0.844	0.826	0.826	0.785	0.789	0.72	0.829648	7.21	0.072	1
HEXACHLORO-1,3-BUTADIENE	0.465	0.494	0.459	0.476	0.458	0.481	0.468	0.48	0.471	0.477	0.441	0.469786	2.98	0.03	1
Naphthalene	2.638	2.396	2.184	2.238	2.021	2.266	2.196	2.301	2.178	2.232	2.051	2.245622	7.44	0.074	1
1,2,3-Trichlorobenzene	0.877	0.759	0.732	0.808	0.735	0.786	0.773	0.768	0.734	0.747	0.68	0.76355	6.61	0.066	1
1-Methylnaphthalene	1.336	1.083	1.079	1.116	1.072	1.191	1.195	1.255	1.153	1.164	1.049	1.154015	7.58	0.076	1
2-Methylnaphthalene	1.249	1.017	1.036	1.076	0.91	0.978	0.989	1.046	0.95	0.961	0.862	1.006831	10.08	0.101	1
AP9-PENTAFLUOROBENZENE															
ETHANOL												0	0	0	1
Bromoethane												0	0	0	1
2-PROPANOL												0	0	0	1
Methyl Acetate												0	0	0	1
ACETONITRILE												0	0	0	1
ALLYL CHLORIDE												0	0	0	1
tert-BUTYL ALCOHOL												0	0	0	1
chloroprene												0	0	0	1
ETHYL TERT-BUTYL ETHER												0	0	0	1
PROPIONITRILE												0	0	0	1
Ethyl Acetate												0	0	0	1
METHACRYLONITRILE												0	0	0	1
Cyclohexane												0	0	0	1
tert-butyl formate												0	0	0	1
ISOBUTANOL												0	0	0	1
t-Amyl Alcohol												0	0	0	1
TERT-AMYL METHYL ETHER												0	0	0	1
AP9-1,4-DIFLUOROBENZENE															
N-BUTANOL												0	0	0	1
Methyl Cyclohexane												0	0	0	1

Environmental Science Corporation
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INITIAL CALIBRATION SUMMARY

Instrument ID	: VOCMS7	Review Method	: 8260B	Released By	: Amy Green
Method	: V807B10P	Review Protocol	: SW846	Released On	: 2/11/2016 12:16:23 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V807B10P -- ICal Updated Time: Thu Feb 11 11:59:29 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	AvgRF	%RSD	COD	Cur
2-nitropropane												0	0	0	1
METHYL METHACRYLATE												0	0	0	1
1,4-DIOXANE												0	0	0	1
n-octane												0	0	0	1
3,3-DIMETHYL-1-BUTANOL												0	0	0	1
AP9-2-BROMO-1 ACHLOROPROPANE															
ETHYL METHACRYLATE												0	0	0	1
CIS-1,4-DICHLORO-2-BUTENE												0	0	0	1
Cyclohexanone												0	0	0	1
PENTACHLOROETHANE												0	0	0	1
Hexachloroethane												0	0	0	1
AP9-1,4-DICHLOROBENZENE-D4															

Environmental Science Corporation
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INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS7
Method : V807B10P
Review Method : 8260C
Review Protocol : SW846
Released By : Amy Green
Released On : 2/11/2016 12:16:58 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V807B10P -- ICal Updated Time: Thu Feb 11 11:59:29 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	AvgRF	%RSD	COD	Cur	RF
8260-PENTAFLUOROBENZENE																
TPH (GC/MS) LOW FRACTION												0	0	0	1	
PROPENE		0.308	0.223	0.288	0.246	0.204	0.215	0.217	0.218	0.216	0.213	0.234838	15.04	0.15	1	
DICHLORODIFLUOROMETHANE	0.893	0.646	0.617	0.624	0.549	0.6	0.584	0.588	0.595	0.593	0.565	0.623141	15	0.15	1	0.1
CHLOROMETHANE	1.089	0.952	0.918	0.913	0.803	0.846	0.828	0.832	0.847	0.843	0.954	0.893048	9.35	0.093	1	0.1
VINYL CHLORIDE	0.85	0.777	0.76	0.745	0.725	0.78	0.755	0.755	0.762	0.779	0.733	0.76567	4.35	0.044	1	0.1
1,3-BUTADIENE		0.831	0.806	0.733	0.649	0.664	0.643	0.651	0.626	0.646	0.586	0.683446	11.7	0.117	1	
BROMOMETHANE			0.389	0.405	0.311	0.35	0.366	0.364	0.394	0.416	0.413	0.378802	9.02	0.09	1	0.1
CHLOROETHANE			0.52	0.422	0.383	0.431	0.395	0.388	0.382	0.364		0.41058	11.96	0.12	1	0.1
TRICHLOROFLUOROMETHANE	0.822	0.786	0.781	0.768	0.718	0.772	0.748	0.751	0.75	0.765	0.75	0.764713	3.52	0.035	1	0.1
DICHLOROFLUOROMETHANE	1.078	0.971	1.162	1.038	0.987	1.061	1.012	1.014	1.028	1.029	0.988	1.033416	5.14	0.051	1	
ETHYL ETHER	0.564	0.526	0.473	0.505	0.436	0.486	0.473	0.476	0.471	0.475	0.455	0.485553	7.23	0.072	1	
ACROLEIN	0.141	0.105	0.116	0.104	0.107	0.115	0.113	0.121	0.117	0.124	0.123	0.116876	9	0.09	1	
1,1-DICHLOROETHENE	0.856	0.854	0.845	0.87	0.766	0.863	0.834	0.828	0.814	0.819	0.764	0.828476	4.32	0.043	1	0.1
1,1,2 -TRICHLOROTRIFLUOROETHANE	0.526	0.525	0.487	0.463	0.449	0.48	0.474	0.463	0.46	0.462	0.436	0.475169	6.01	0.06	1	0.1
ACETONE	0.465	0.414	0.365	0.389	0.351	0.384	0.356	0.37	0.35	0.358	0.337	0.376406	9.67	0.097	1	0.1
IODOMETHANE	0.387	0.387	0.415	0.43	0.436	0.501	0.521	0.53	0.564	0.571	0.52	0.478341	14.44	0.144	1	
CARBON DISULFIDE	2.127	2.055	1.938	1.906	1.75	1.868	1.813	1.799	1.777	1.773	1.695	1.863691	7.14	0.071	1	0.1
METHYLENE CHLORIDE	0.688	0.732	0.528	0.605	0.493	0.527	0.516	0.512	0.511	0.518	0.5	0.557192	14.62	0.146	1	0.1
ACRYLONITRILE	0.286	0.242	0.216	0.222	0.21	0.229	0.218	0.233	0.219	0.226	0.216	0.228846	9.19	0.092	1	
n-Hexane		0.761	0.631	0.593	0.591	0.609	0.577	0.564	0.561	0.558	0.53	0.597635	10.72	0.107	1	
TRANS-1,2-DICHLOROETHENE	0.453	0.68	0.494	0.509	0.458	0.497	0.484	0.475	0.482	0.478	0.462	0.497513	12.67	0.127	1	0.1

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS7
Method : V807B10P
Review Method : 8260C
Review Protocol : SW846
Released By : Amy Green
Released On : 2/11/2016 12:16:58 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V807B10P -- ICal Updated Time: Thu Feb 11 11:59:29 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	AvgRF	%RSD	COD	Cur	RF
METHYL TERT-BUTYL ETHER	1.466	1.453	1.504	1.597	1.448	1.538	1.471	1.477	1.447	1.468	1.41	1.47991	3.42	0.034	1	0.1
1,1-DICHLOROETHANE	1.012	1.046	1.034	1.06	0.985	1.054	1.034	1.032	1.024	1.033	0.981	1.02691	2.46	0.025	1	0.2
VINYL ACETATE	1.265	1.516	1.326	1.334	1.279	1.378	1.31	1.323	1.254	1.249	1.14	1.306617	7.11	0.071	1	
DI-ISOPROPYL ETHER	2.314	2.096	2.295	2.202	2.078	2.24	2.205	2.207	2.182	2.192	2.059	2.18812	3.76	0.038	1	
2,2-Dichloropropane	1.005	0.953	0.891	0.844	0.794	0.834	0.818	0.814	0.812	0.817	0.767	0.84979	8.45	0.084	1	
CIS-1,2-DICHLOROETHENE	0.576	0.517	0.501	0.589	0.505	0.561	0.53	0.535	0.543	0.55	0.525	0.539293	5.18	0.052	1	0.1
2-BUTANONE (MEK)	0.432	0.494	0.482	0.459	0.437	0.472	0.448	0.471	0.442	0.449	0.423	0.455348	4.87	0.049	1	0.1
BROMOCHLOROMETHANE	0.357	0.291	0.292	0.285	0.295	0.302	0.293	0.29	0.274	0.272	0.248	0.290801	9.08	0.091	1	
TETRAHYDROFURAN			0.23	0.267	0.211	0.235	0.207	0.221	0.202	0.212	0.206	0.221123	9.2	0.092	1	
CHLOROFORM		0.997	0.979	0.97	0.881	0.96	0.918	0.909	0.895	0.904	0.859	0.927238	4.97	0.05	1	0.2
DIBROMOFLUOROMETHANE	0.534	0.53	0.526	0.525	0.521	0.524	0.516	0.515	0.51	0.506	0.495	0.518344	2.21	0.022	1	
1,1,1-TRICHLOROETHANE	0.886	0.824	0.814	0.769	0.712	0.777	0.738	0.738	0.736	0.75	0.715	0.769114	6.93	0.069	1	0.1
CARBON TETRACHLORIDE	0.826	0.763	0.684	0.639	0.633	0.68	0.647	0.639	0.661	0.668	0.621	0.678307	9.2	0.092	1	0.1
1,1-Dichloropropene	0.726	0.769	0.744	0.731	0.698	0.755	0.721	0.719	0.712	0.725	0.685	0.725794	3.31	0.033	1	
2,2,4-TRIMETHYLPENTANE	2.773	2.643	2.542	2.63	2.438	2.621	2.532	2.525	2.518	2.54	2.414	2.561313	3.93	0.039	1	
HEPTANE	1.203	1.409	1.272	1.347	1.205	1.244	1.194	1.177	1.159	1.21	1.126	1.231403	6.75	0.068	1	
BENZENE	2.314	2.31	2.169	2.213	2.073	2.181	2.117	2.141	2.126	2.14	2.074	2.168922	3.79	0.038	1	0.5
1,2-DICHLOROETHANE	0.575	0.655	0.653	0.679	0.645	0.697	0.657	0.674	0.667	0.676	0.649	0.657068	4.76	0.048	1	0.1
8260-1,4-DIFLUOROBENZENE																
TRICHLOROETHENE	0.281	0.32	0.284	0.282	0.277	0.291	0.281	0.28	0.278	0.284	0.278	0.285218	4.27	0.043	1	0.2
1,2-DICHLOROPROPANE	0.281	0.304	0.255	0.262	0.24	0.26	0.258	0.251	0.25	0.25	0.24	0.259322	7.2	0.072	1	0.1
DIBROMOMETHANE	0.239	0.211	0.187	0.187	0.168	0.182	0.178	0.182	0.178	0.184	0.18	0.188576	10.45	0.104	1	

INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS7
Method : V807B10P
Review Method : 8260C
Review Protocol : SW846
Released By : Amy Green
Released On : 2/11/2016 12:16:58 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V807B10P -- ICal Updated Time: Thu Feb 11 11:59:29 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	AvgRF	%RSD	COD	Cur	RF
BROMODICHLOROMETHANE		0.548	0.437	0.426	0.413	0.44	0.414	0.408	0.399	0.4	0.39	0.427443	10.58	0.106	1	0.2
1,a,a,a-Trifluorotoluene	0.545	0.546	0.543	0.534	0.527	0.522	0.521	0.515	0.5	0.5	0.489	0.522235	3.72	0.037	1	
2-CHLOROETHYL VINYL ETHER	0.039	0.037	0.034	0.034	0.036	0.041	0.042	0.04	0.032	0.033	0.033	0.03637	9.95	0.099	1	
CIS-1,3-DICHLOROPROPENE	0.616	0.619	0.579	0.558	0.524	0.552	0.534	0.542	0.531	0.537	0.519	0.555612	6.28	0.063	1	0.2
4-METHYL-2-PENTANONE (MIBK)	0.5	0.441	0.426	0.398	0.384	0.414	0.391	0.406	0.371	0.379	0.356	0.405823	9.79	0.098	1	0.1
TOLUENE-D8	1.259	1.268	1.25	1.227	1.22	1.214	1.213	1.213	1.199	1.186	1.197	1.222388	2.16	0.022	1	
TOLUENE		1.486	1.322	1.313	1.241	1.314	1.277	1.263	1.248	1.249	1.217	1.292967	5.92	0.059	1	0.4
TRANS-1,3-DICHLOROPROPENE	0.476	0.487	0.475	0.481	0.439	0.481	0.462	0.474	0.455	0.461	0.449	0.467412	3.27	0.033	1	0.1
8260-2-BROMO-1 -CHLOROPROPANE																
1,1,2-TRICHLOROETHANE	1.438	1.702	1.442	1.491	1.285	1.414	1.438	1.41	1.376	1.44	1.396	1.439222	7.05	0.07	1	0.1
TETRACHLOROETHENE	1.139	1.291	1.235	1.279	1.161	1.232	1.18	1.169	1.143	1.184	1.173	1.198664	4.38	0.044	1	0.2
1,3-Dichloropropane	2.893	2.679	2.636	2.588	2.447	2.651	2.543	2.526	2.449	2.577	2.479	2.587871	4.96	0.05	1	
2-HEXANONE	0.893	1.045	1.021	1.086	1.009	1.091	1.026	1.073	0.985	1.03	0.984	1.021934	5.51	0.055	1	0.1
CHLORODIBROMOMETHANE	1.934	1.968	1.688	1.646	1.447	1.638	1.552	1.583	1.545	1.621	1.61	1.657455	9.57	0.096	1	0.1
1,2-DIBROMOETHANE	1.834	1.514	1.529	1.331	1.311	1.484	1.434	1.452	1.417	1.484	1.461	1.477366	9.25	0.093	1	0.1
CHLOROBENZENE	4.873	4.955	4.638	4.414	4.1	4.355	4.211	4.169	4.058	4.23	4.171	4.37943	7.09	0.071	1	0.5
1,1,1,2-TETRACHLOROETHANE	1.785	1.598	1.493	1.453	1.307	1.422	1.349	1.322	1.322	1.37	1.36	1.434697	10.17	0.102	1	
ETHYLBENZENE	2.444	2.73	2.724	2.454	2.328	2.521	2.429	2.404	2.356	2.447	2.407	2.476655	5.4	0.054	1	0.1
M&P-XYLENE	3.198	3.373	3.05	3.157	2.803	3.018	2.879	2.887	2.849	2.959	2.965	3.012497	5.71	0.057	1	0.1
O-XYLENE	3.12	3.349	2.977	3.009	2.785	2.927	2.872	2.888	2.86	2.981	2.886	2.968513	5.21	0.052	1	0.3
STYRENE	5.316	5.015	4.901	5.122	4.541	4.886	4.852	4.765	4.721	4.892	4.782	4.890134	4.24	0.042	1	0.3
Bromoform	0.976	1.061	1.003	1.037	0.943	1.03	1.014	1.033	1.001	1.045	1.051	1.01778	3.46	0.035	1	0.1

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS7
Method : V807B10P
Review Method : 8260C
Review Protocol : SW846
Released By : Amy Green
Released On : 2/11/2016 12:16:58 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V807B10P -- ICal Updated Time: Thu Feb 11 11:59:29 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	AvgRF	%RSD	COD	Cur	RF
Isopropylbenzene	8.005	9.245	7.82	8.181	7.571	7.858	7.67	7.61	7.493	7.756	7.36	7.869977	6.51	0.065	1	0.1
4-BROMOFLUOROBENZENE	2.567	2.549	2.525	2.523	2.518	2.497	2.517	2.524	2.527	2.589	2.626	2.541892	1.48	0.015	1	
Bromobenzene	3.301	3.489	3.767	3.489	3.139	3.316	3.357	3.287	3.225	3.319	3.215	3.354915	5.15	0.052	1	
1,1,2,2-TETRACHLOROETHANE	2.916	2.602	2.398	2.123	2.07	2.13	2.047	2.111	1.996	2.111	2.051	2.232289	12.93	0.129	1	0.3
1,2,3-TRICHLOROPROPANE	1.01	0.67	0.763	0.543	0.506	0.514	0.504	0.499	0.487	0.509	0.492	0.590673	27.83	1	0	
TRANS-1,4-DICHLORO-2-BUTENE		0.848	0.56	0.581	0.527	0.6	0.611	0.626	0.62	0.635	0.629	0.623604	13.8	0.138	1	
n-Propylbenzene	8.891	9.58	9.175	9.406	8.65	9.374	9.184	9.162	9.053	9.263	8.843	9.143748	2.97	0.03	1	
4-ETHYLTOLUENE	8.552	8.863	7.968	7.731	7.181	7.657	7.488	7.52	7.284	7.457	7.15	7.713754	7.14	0.071	1	
2-Chlorotoluene	1.733	1.918	1.683	1.747	1.53	1.678	1.596	1.582	1.599	1.658	1.658	1.671162	6.27	0.063	1	
4-Chlorotoluene	5.908	6.665	5.49	5.593	5.156	5.422	5.371	5.42	5.292	5.508	5.268	5.554005	7.52	0.075	1	
1,3,5-Trimethylbenzene	6.733	7.053	6.962	6.555	5.871	6.205	6.082	6.028	5.992	6.152	5.914	6.322491	6.77	0.068	1	
tert-Butylbenzene	5.318	5.946	5.484	5.488	5.015	5.41	5.269	5.224	5.224	5.294	5.092	5.342142	4.65	0.046	1	
1,2,4-Trimethylbenzene	7.263	7.608	6.574	6.551	5.909	6.228	6.165	6.103	5.964	6.166	5.833	6.396692	8.89	0.089	1	
sec-Butylbenzene	9.409	9.545	8.644	8.462	8.121	8.686	8.491	8.369	8.254	8.479	7.989	8.586258	5.68	0.057	1	
1,3-DICHLOROBENZENE	3.302	3.485	3.258	3.378	2.938	3.228	3.227	3.203	3.224	3.328	3.214	3.253187	4.16	0.042	1	0.6
p-Isopropyltoluene	7.3	7.347	6.928	7.289	6.45	6.803	6.682	6.691	6.586	6.842	6.466	6.853175	4.8	0.048	1	
DICYCLOPENTADIENE	9.113	9.923	9.394	9.579	8.64	9.139	8.766	8.524	8.343	8.497	7.991	8.900893	6.53	0.065	1	
8260-1,4-DICHLOROBENZENE-D4																
1,4-DICHLOROBENZENE	1.541	1.415	1.427	1.358	1.209	1.28	1.245	1.232	1.219	1.241	1.22	1.307916	8.48	0.085	1	
1,2,3-TRIMETHYLBENZENE	2.825	2.93	2.529	2.52	2.373	2.531	2.448	2.397	2.342	2.387	2.255	2.503362	8.19	0.082	1	
1,2-DICHLOROBENZENE	1.164	1.28	1.221	1.225	1.172	1.245	1.228	1.221	1.194	1.22	1.158	1.211675	3.04	0.03	1	0.4
n-Butylbenzene	2.388	2.861	2.834	2.829	2.671	2.855	2.778	2.751	2.661	2.661	2.44	2.702654	5.98	0.06	1	

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INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS7
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Released By : Amy Green
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INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V807B10P -- ICal Updated Time: Thu Feb 11 11:59:29 2016

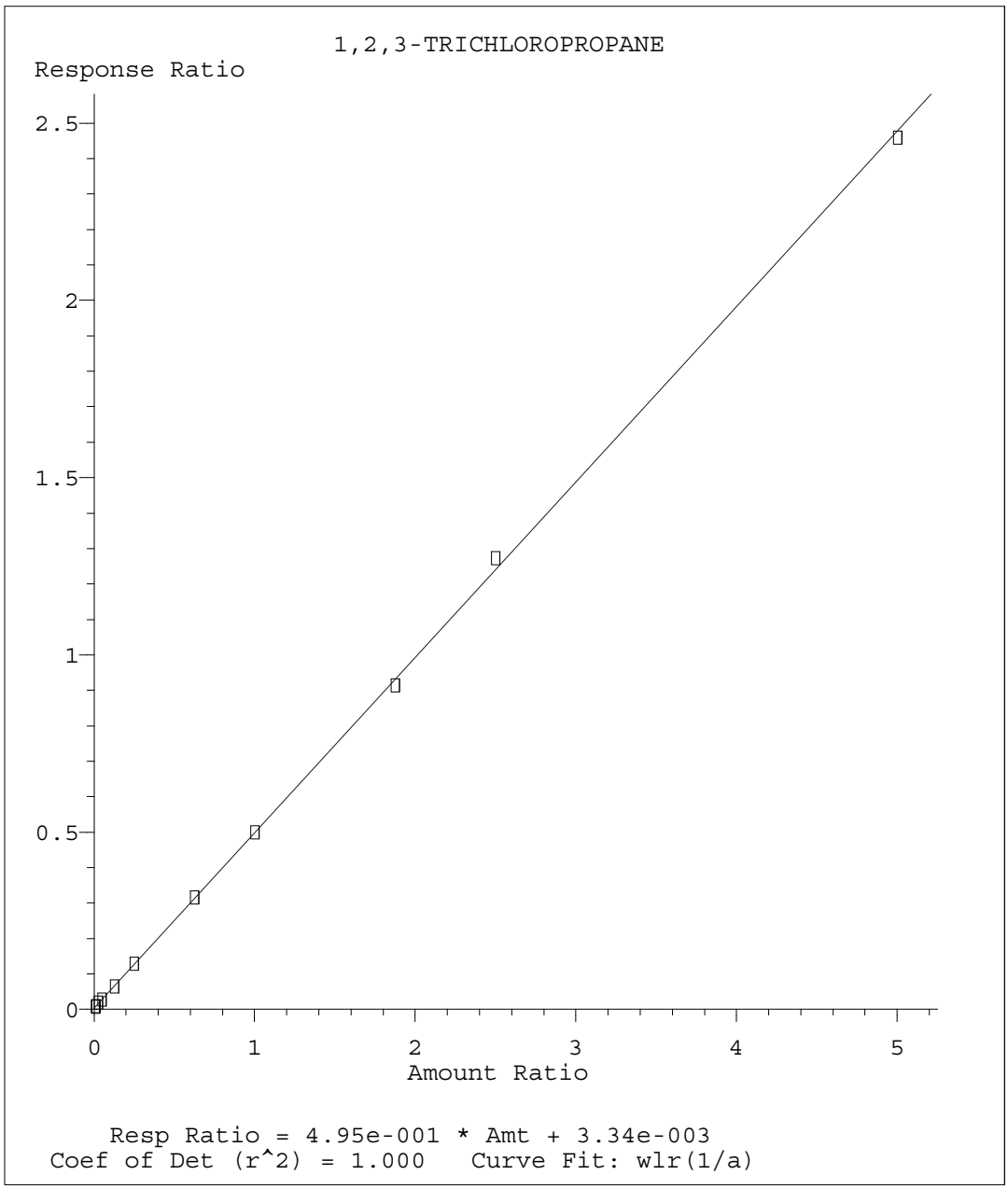
Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	AvgRF	%RSD	COD	Cur	RF
1,2-Dibromo-3-chloropropane		0.215	0.135	0.141	0.144	0.153	0.162	0.165	0.159	0.169	0.161	0.160378	13.78	0.138	1	0.05
1,2,4-Trichlorobenzene	0.945	0.884	0.882	0.822	0.804	0.844	0.826	0.826	0.785	0.789	0.72	0.829648	7.21	0.072	1	0.2
HEXACHLORO-1,3-BUTADIENE	0.465	0.494	0.459	0.476	0.458	0.481	0.468	0.48	0.471	0.477	0.441	0.469786	2.98	0.03	1	
Naphthalene	2.638	2.396	2.184	2.238	2.021	2.266	2.196	2.301	2.178	2.232	2.051	2.245622	7.44	0.074	1	
1,2,3-Trichlorobenzene	0.877	0.759	0.732	0.808	0.735	0.786	0.773	0.768	0.734	0.747	0.68	0.76355	6.61	0.066	1	
1-Methylnaphthalene	1.336	1.083	1.079	1.116	1.072	1.191	1.195	1.255	1.153	1.164	1.049	1.154015	7.58	0.076	1	
2-Methylnaphthalene	1.249	1.017	1.036	1.076	0.91	0.978	0.989	1.046	0.95	0.961	0.862	1.006831	10.08	0.101	1	
AP9-PENTAFLUOROBENZENE																
ETHANOL												0	0	0	1	
Bromoethane												0	0	0	1	
2-PROPANOL												0	0	0	1	
Methyl Acetate												0	0	0	1	0.1
ACETONITRILE												0	0	0	1	
ALLYL CHLORIDE												0	0	0	1	
tert-BUTYL ALCOHOL												0	0	0	1	
chloroprene												0	0	0	1	
ETHYL TERT-BUTYL ETHER												0	0	0	1	
PROPIONITRILE												0	0	0	1	
Ethyl Acetate												0	0	0	1	
METHACRYLONITRILE												0	0	0	1	
Cyclohexane												0	0	0	1	0.1
tert-butyl formate												0	0	0	1	
ISOBUTANOL												0	0	0	1	
t-Amyl Alcohol												0	0	0	1	
TERT-AMYL METHYL ETHER												0	0	0	1	
AP9-1,4-DIFLUOROBENZENE																
N-BUTANOL												0	0	0	1	
Methyl Cyclohexane												0	0	0	1	0.1

INITIAL CALIBRATION SUMMARY

Instrument ID	: VOCMS7	Review Method	: 8260C	Released By	: Amy Green
Method	: V807B10P	Review Protocol	: SW846	Released On	: 2/11/2016 12:16:58 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V807B10P -- ICal Updated Time: Thu Feb 11 11:59:29 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	AvgRF	%RSD	COD	Cur	RF
2-nitropropane												0	0	0	1	
METHYL METHACRYLATE												0	0	0	1	
1,4-DIOXANE												0	0	0	1	
n-octane												0	0	0	1	
3,3-DIMETHYL-1-BUTANOL												0	0	0	1	
AP9-2-BROMO-1 ACHLOROPROPANE																
ETHYL METHACRYLATE												0	0	0	1	
CIS-1,4-DICHLORO-2-BUTENE												0	0	0	1	
Cyclohexanone												0	0	0	1	
PENTACHLOROETHANE												0	0	0	1	
Hexachloroethane												0	0	0	1	
AP9-1,4-DICHLOROBENZENE-D4																



Method Name: C:\msdchem\1\methods\V807B10P.M

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\021016\
Data File : 0210 08.D
Acq On : 10 Feb 2016 10:26 pm
Operator : 522
Sample : INSTBLK
Misc : water
ALS Vial : 8 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 11 12:00:14 2016
Quant Method : C:\msdchem\1\methods\V807B10P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Thu Feb 11 11:59:29 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 8260-PENTAFLUOROBENZENE	4.329	168	482760	40.0000000	ppb		0.00
41) 8260-1,4-DIFLUOROBENZENE	4.657	114	808224	40.0000000	ppb		0.00
53) 8260-2-BROMO-1-CHLOROP...	5.825	79	144099	40.0000000	ppb		0.00
84) 8260-1,4-DICHLOROBENZE...	8.216	152	359178	40.0000000	ppb		0.00
96) AP9-PENTAFLUOROBENZENE	4.329	168	482760	40.0000000	ppb		0.00
114) AP9-1,4-DIFLUOROBENZENE	4.657	114	808224	40.0000000	ppb		0.00
122) AP9-2-BROMO-1-CHLOROPR...	5.825	79	144099	40.0000000	ppb	#	0.00
128) AP9-1,4-DICHLOROBENZEN...	8.216	152	359178	40.0000000	ppb		0.00
System Monitoring Compounds							
33) DIBROMOFLUOROMETHANE	4.098	111	255079	40.7741784	ppb		0.00
Spiked Amount 40.000	Range 78 - 121		Recovery = 101.94%				
46) a,a,a-Trifluorotoluene	5.022	146	442579	41.9423816	ppb		0.00
Spiked Amount 40.000	Range 85 - 114		Recovery = 104.86%				
50) TOLUENE-D8	5.485	98	1007701	40.7991342	ppb		0.00
Spiked Amount 40.000	Range 89 - 111		Recovery = 102.00%				
68) 4-BROMOFLUOROBENZENE	7.365	95	366874	40.0644245	ppb		0.00
Spiked Amount 40.000	Range 71 - 126		Recovery = 100.16%				
Target Compounds							Qvalue
3) PROPENE	1.689	41	6547	2.3099511	ppb	#	75
5) CHLOROMETHANE	1.920	50	2714	0.2518046	ppb	#	50
8) BROMOMETHANE	2.212	94	592	0.1294904	ppb	#	13
9) CHLOROETHANE	2.340	64	529	0.1067547	ppb	#	1
11) DICHLOROFLUOROMETHANE	2.437	67	675	0.0541200	ppb	#	41
12) ETHYL ETHER	2.577	59	925	0.1578462	ppb	#	13
13) ACROLEIN	2.942	56	548	0.3884926	ppb	#	15
16) ACETONE	3.124	43	3045	0.6702857	ppb		97
17) IODOMETHANE	2.851	142	1347	0.2333238	ppb	#	73
18) CARBON DISULFIDE	2.790	76	1793	0.0797141	ppb	#	70
21) n-Hexane	3.179	56	764	0.1059219	ppb	#	26
22) TRANS-1,2-DICHLOROETHENE	3.185	96	575	0.0957617	ppb	#	1
25) VINYL ACETATE	3.623	43	952	0.0603695	ppb	#	80
26) DI-ISOPROPYL ETHER	3.459	45	546	0.0206752	ppb	#	1
27) 2,2-Dichloropropane	3.946	77	604	0.0588917	ppb	#	56
28) CIS-1,2-DICHLOROETHENE	3.836	96	1256	0.1929716	ppb	#	1
29) 2-BUTANONE (MEK)	4.159	43	1079	0.1963390	ppb	#	54
34) 1,1,1-TRICHLOROETHANE	4.037	97	795	0.0856456	ppb	#	23
35) CARBON TETRACHLORIDE	4.061	117	798	0.0974777	ppb	#	2
37) 2,2,4-TRIMETHYLPENTANE	4.201	57	693	0.0224181	ppb	#	49
38) HEPTANE	4.323	43	4237	0.2850932	ppb	#	50
43) 1,2-DICHLOROPROPANE	5.016	62	8686	1.6577087	ppb	#	19
45) BROMODICHLOROMETHANE	5.016	83	978	0.1132371	ppb	#	1
49) 4-METHYL-2-PENTANONE (...	5.704	43	808	0.0985377	ppb	#	38
51) TOLUENE	5.521	91	753	0.0288228	ppb	#	22
52) TRANS-1,3-DICHLOROPROPENE	5.819	75	7581	0.8027024	ppb	#	1
54) 1,1,2-TRICHLOROETHANE	5.898	97	552	0.1064659	ppb	#	12
57) 2-HEXANONE	6.160	58	676	0.1836212	ppb	#	1
67) Isopropylbenzene	7.127	105	552	0.0194699	ppb	#	55
69) Bromobenzene	7.365	77	2323	0.1922059	ppb	#	30
70) 1,1,2,2-TETRACHLOROETHANE	7.541	83	590	0.0733670	ppb	#	26
71) 1,2,3-TRICHLOROPROPANE	7.614	110	718	0.1327443	ppb	#	22
72) TRANS-1,4-DICHLORO-2-B...	7.699	53	945	0.4206513	ppb	#	22

Data Path : C:\msdchem\1\data\021016\
Data File : 0210 08.D
Acq On : 10 Feb 2016 10:26 pm
Operator : 522
Sample : INSTBLK
Misc : water
ALS Vial : 8 Sample Multiplier: 1
InstName : VOCMS7

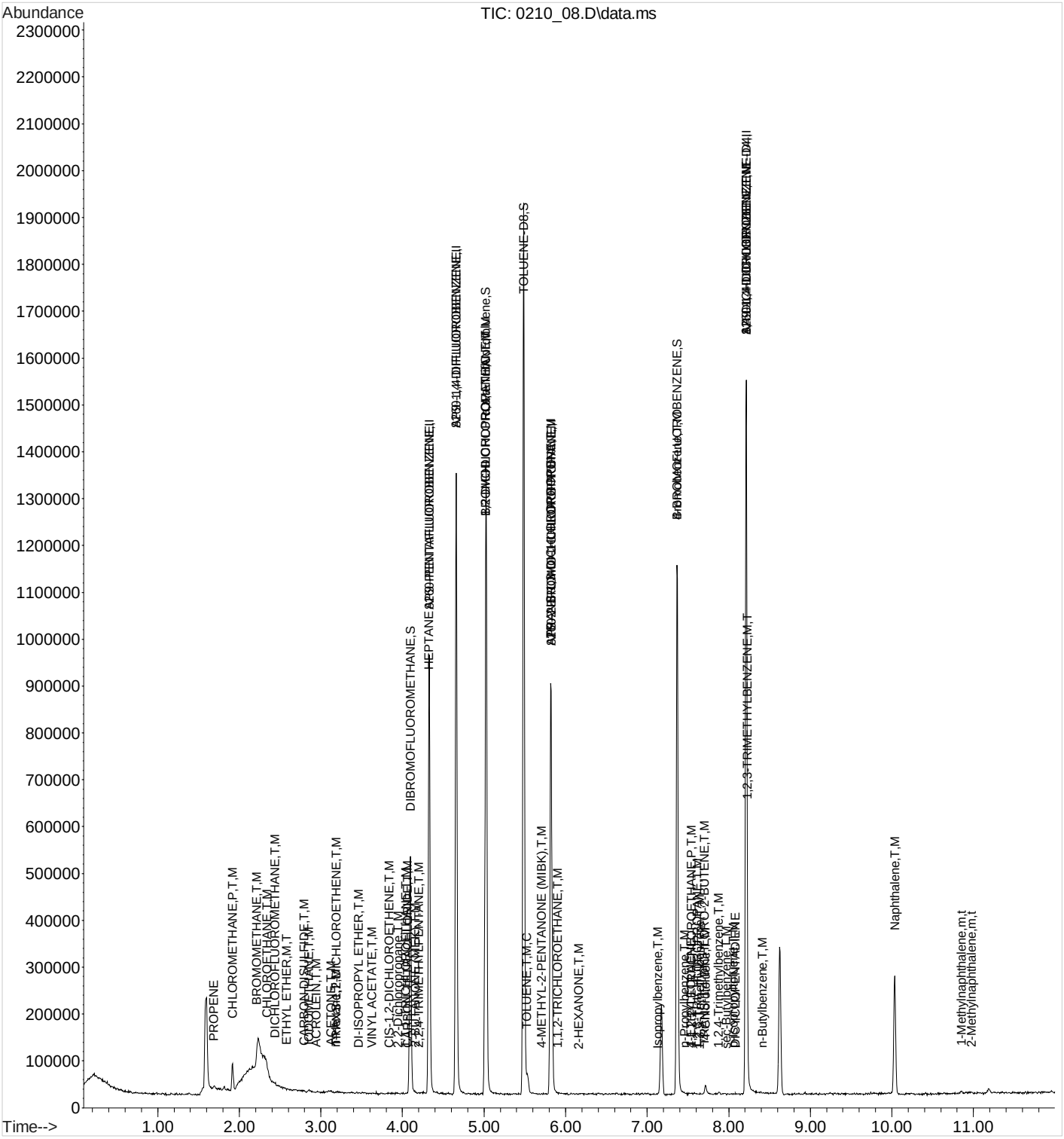
Quant Time: Feb 11 12:00:14 2016
Quant Method : C:\msdchem\1\methods\V807B10P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Thu Feb 11 11:59:29 2016
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
73)	n-Propylbenzene	7.462	91	511	0.0155130	ppb	#	61
74)	4-ETHYLTOLUENE	7.535	105	1782	0.0641270	ppb	#	47
76)	4-Chlorotoluene	7.711	91	716	0.0357854	ppb	#	50
77)	1,3,5-Trimethylbenzene	7.644	105	741	0.0325334	ppb	#	28
79)	1,2,4-Trimethylbenzene	7.876	105	2144	0.0930397	ppb		92
80)	sec-Butylbenzene	7.967	105	1512	0.0488818	ppb	#	60
82)	p-Isopropyltoluene	8.058	119	761	0.0308242	ppb	#	48
83)	DICYCLOPENTADIENE	8.082	66	561	0.0174956	ppb	#	73
85)	1,4-DICHLOROBENZENE	8.216	146	607	0.0516843	ppb	#	1
86)	1,2,3-TRIMETHYLBENZENE	8.228	105	1054	0.0468886	ppb	#	40
88)	n-Butylbenzene	8.411	91	1044	0.0430190	ppb	#	32
92)	Naphthalene	10.035	128	2664	0.1321137	ppb	#	53
94)	1-Methylnaphthalene	10.850	142	1743	0.1682039	ppb	#	71
95)	2-Methylnaphthalene	10.972	142	1716	0.1898064	ppb	#	90

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\021016\
Data File : 0210 08.D
Acq On : 10 Feb 2016 10:26 pm
Operator : 522
Sample : INSTBLK
Misc : water
ALS Vial : 8 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 11 12:00:14 2016
Quant Method : C:\msdchem\1\methods\V807B10P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Thu Feb 11 11:59:29 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\021016\
Data File : 0210 08.D
Acq On : 10 Feb 2016 10:26 pm
Operator : 522
Sample : INSTBLK
Misc : water
ALS Vial : 8 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 11 12:00:14 2016
Quant Method : C:\msdchem\1\methods\V807B10P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Thu Feb 11 11:59:29 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 8260-PENTAFLUOROBENZENE	4.329	168	482760	40.0000000	ppb		0.00
41) 8260-1,4-DIFLUOROBENZENE	4.657	114	808224	40.0000000	ppb		0.00
53) 8260-2-BROMO-1-CHLOROP...	5.825	79	144099	40.0000000	ppb		0.00
84) 8260-1,4-DICHLOROBENZE...	8.216	152	359178	40.0000000	ppb		0.00
96) AP9-PENTAFLUOROBENZENE	4.329	168	482760	40.0000000	ppb		0.00
114) AP9-1,4-DIFLUOROBENZENE	4.657	114	808224	40.0000000	ppb		0.00
122) AP9-2-BROMO-1-CHLOROPR...	5.825	79	144099	40.0000000	ppb	#	0.00
128) AP9-1,4-DICHLOROBENZEN...	8.216	152	359178	40.0000000	ppb		0.00
System Monitoring Compounds							
33) DIBROMOFLUOROMETHANE	4.098	111	255079	40.7741784	ppb		0.00
Spiked Amount 40.000	Range 78 - 121			Recovery = 101.94%			
46) a,a,a-Trifluorotoluene	5.022	146	442579	41.9423816	ppb		0.00
Spiked Amount 40.000	Range 85 - 114			Recovery = 104.86%			
50) TOLUENE-D8	5.485	98	1007701	40.7991342	ppb		0.00
Spiked Amount 40.000	Range 89 - 111			Recovery = 102.00%			
68) 4-BROMOFLUOROBENZENE	7.365	95	366874	40.0644245	ppb		0.00
Spiked Amount 40.000	Range 71 - 126			Recovery = 100.16%			
Target Compounds							Qvalue
3) PROPENE	1.689	41	6547	2.3099511	ppb	#	75
5) CHLOROMETHANE	1.920	50	2714	0.2518046	ppb	#	50
8) BROMOMETHANE	2.212	94	592	0.1294904	ppb	#	13
9) CHLOROETHANE	2.340	64	529	0.1067547	ppb	#	1
11) DICHLOROFLUOROMETHANE	2.437	67	675	0.0541200	ppb	#	41
12) ETHYL ETHER	2.577	59	925	0.1578462	ppb	#	13
13) ACROLEIN	2.942	56	548	0.3884926	ppb	#	15
16) ACETONE	3.124	43	3045	0.6702857	ppb		97
17) IODOMETHANE	2.851	142	1347	0.2333238	ppb	#	73
18) CARBON DISULFIDE	2.790	76	1793	0.0797141	ppb	#	70
21) n-Hexane	3.179	56	764	0.1059219	ppb	#	26
22) TRANS-1,2-DICHLOROETHENE	3.185	96	575	0.0957617	ppb	#	1
25) VINYL ACETATE	3.623	43	952	0.0603695	ppb	#	80
26) DI-ISOPROPYL ETHER	3.459	45	546	0.0206752	ppb	#	1
27) 2,2-Dichloropropane	3.946	77	604	0.0588917	ppb	#	56
28) CIS-1,2-DICHLOROETHENE	3.836	96	1256	0.1929716	ppb	#	1
29) 2-BUTANONE (MEK)	4.159	43	1079	0.1963390	ppb	#	54
34) 1,1,1-TRICHLOROETHANE	4.037	97	795	0.0856456	ppb	#	23
35) CARBON TETRACHLORIDE	4.061	117	798	0.0974777	ppb	#	2
37) 2,2,4-TRIMETHYLPENTANE	4.201	57	693	0.0224181	ppb	#	49
38) HEPTANE	4.323	43	4237	0.2850932	ppb	#	50
43) 1,2-DICHLOROPROPANE	5.016	62	8686	1.6577087	ppb	#	19
45) BROMODICHLOROMETHANE	5.016	83	978	0.1132371	ppb	#	1
49) 4-METHYL-2-PENTANONE (...	5.704	43	808	0.0985377	ppb	#	38
51) TOLUENE	5.521	91	753	0.0288228	ppb	#	22
52) TRANS-1,3-DICHLOROPROPENE	5.819	75	7581	0.8027024	ppb	#	1
54) 1,1,2-TRICHLOROETHANE	5.898	97	552	0.1064659	ppb	#	12
57) 2-HEXANONE	6.160	58	676	0.1836212	ppb	#	1
67) Isopropylbenzene	7.127	105	552	0.0194699	ppb	#	55
69) Bromobenzene	7.365	77	2323	0.1922059	ppb	#	30
70) 1,1,2,2-TETRACHLOROETHANE	7.541	83	590	0.0733670	ppb	#	26
71) 1,2,3-TRICHLOROPROPANE	7.614	110	718	0.1327443	ppb	#	22
72) TRANS-1,4-DICHLORO-2-B...	7.699	53	945	0.4206513	ppb	#	22

Data Path : C:\msdchem\1\data\021016\
Data File : 0210 08.D
Acq On : 10 Feb 2016 10:26 pm
Operator : 522
Sample : INSTBLK
Misc : water
ALS Vial : 8 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 11 12:00:14 2016
Quant Method : C:\msdchem\1\methods\V807B10P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Thu Feb 11 11:59:29 2016
Response via : Initial Calibration

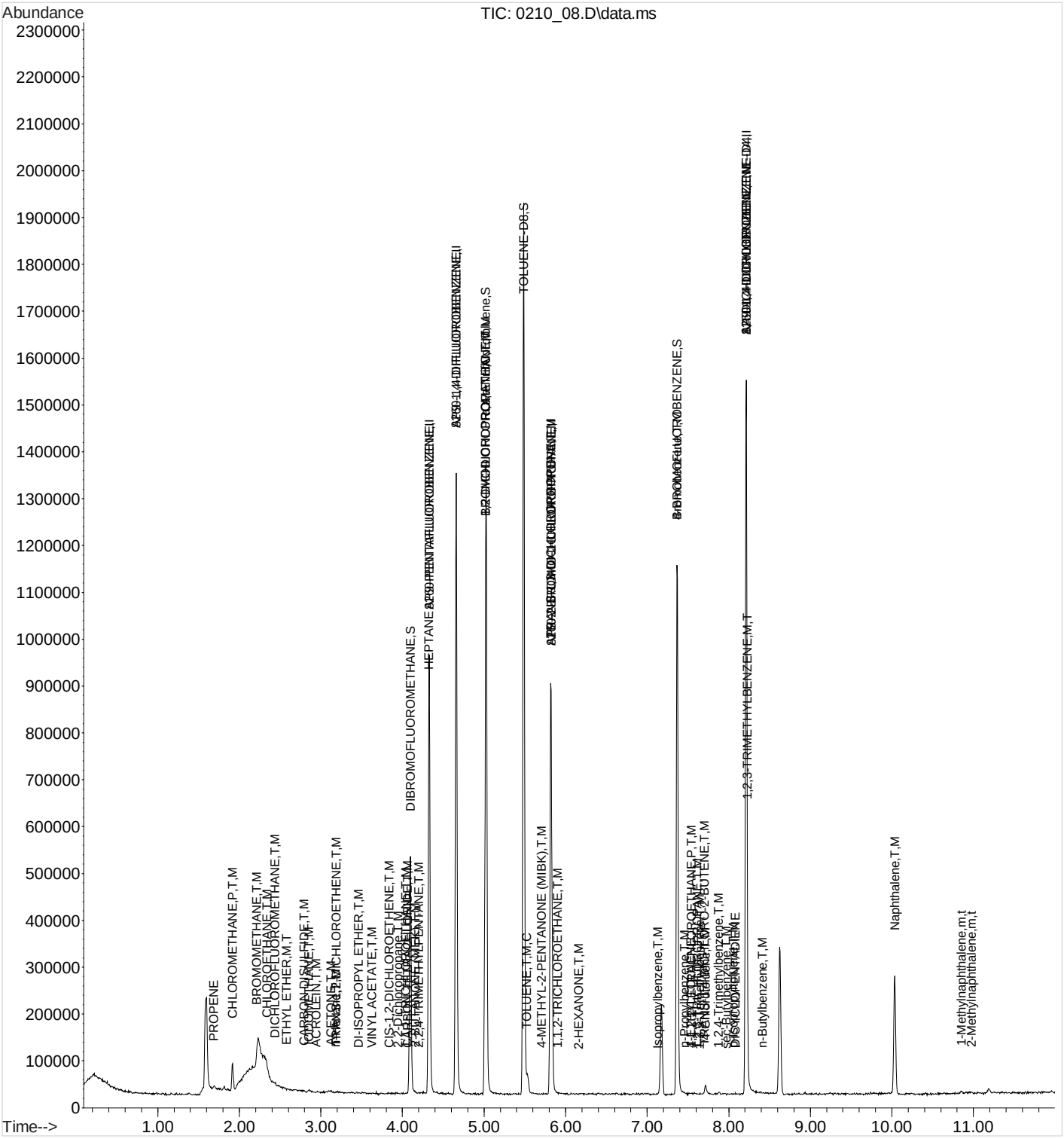
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
73) n-Propylbenzene	7.462	91	511	0.0155130	ppb	#	61
74) 4-ETHYLTOLUENE	7.535	105	1782	0.0641270	ppb	#	47
76) 4-Chlorotoluene	7.711	91	716	0.0357854	ppb	#	50
77) 1,3,5-Trimethylbenzene	7.644	105	741	0.0325334	ppb	#	28
79) 1,2,4-Trimethylbenzene	7.876	105	2144	0.0930397	ppb		92
80) sec-Butylbenzene	7.967	105	1512	0.0488818	ppb	#	60
82) p-Isopropyltoluene	8.058	119	761	0.0308242	ppb	#	48
83) DICYCLOPENTADIENE	8.082	66	561	0.0174956	ppb	#	73
85) 1,4-DICHLOROBENZENE	8.216	146	607	0.0516843	ppb	#	1
86) 1,2,3-TRIMETHYLBENZENE	8.228	105	1054	0.0468886	ppb	#	40
88) n-Butylbenzene	8.411	91	1044	0.0430190	ppb	#	32
92) Naphthalene	10.035	128	2664	0.1321137	ppb	#	53
94) 1-Methylnaphthalene	10.850	142	1743	0.1682039	ppb	#	71
95) 2-Methylnaphthalene	10.972	142	1716	0.1898064	ppb	#	90

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\021016\
Data File : 0210 08.D
Acq On : 10 Feb 2016 10:26 pm
Operator : 522
Sample : INSTBLK
Misc : water
ALS Vial : 8 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 11 12:00:14 2016
Quant Method : C:\msdchem\1\methods\V807B10P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Thu Feb 11 11:59:29 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\021016\
Data File : 0210 11A.D
Acq On : 10 Feb 2016 11:24 pm
Operator : 522
Sample : RL VMS 1 ppb 16B10218
Misc : water 15L26724
ALS Vial : 11 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 11 12:02:05 2016
Quant Method : C:\msdchem\1\methods\V807B10P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Thu Feb 11 11:59:29 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 8260-PENTAFLUOROBENZENE	4.329	168	463273	40.0000000	ppb		0.00
41) 8260-1,4-DIFLUOROBENZENE	4.657	114	778018	40.0000000	ppb		0.00
53) 8260-2-BROMO-1-CHLOROP...	5.825	79	142741	40.0000000	ppb		0.00
84) 8260-1,4-DICHLOROBENZE...	8.216	152	348295	40.0000000	ppb		0.00
96) AP9-PENTAFLUOROBENZENE	4.329	168	463273	40.0000000	ppb		0.00
114) AP9-1,4-DIFLUOROBENZENE	4.657	114	778018	40.0000000	ppb		0.00
122) AP9-2-BROMO-1-CHLOROPR...	5.825	79	142741	40.0000000	ppb	#	0.00
128) AP9-1,4-DICHLOROBENZEN...	8.216	152	348295	40.0000000	ppb		0.00
System Monitoring Compounds							
33) DIBROMOFLUOROMETHANE	4.098	111	249582	41.5736411	ppb		0.00
Spiked Amount 40.000	Range 78 - 121		Recovery = 103.93%				
46) a,a,a-Trifluorotoluene	5.022	146	432887	42.6166125	ppb		0.00
Spiked Amount 40.000	Range 85 - 114		Recovery = 106.54%				
50) TOLUENE-D8	5.485	98	996650	41.9183352	ppb		0.00
Spiked Amount 40.000	Range 89 - 111		Recovery = 104.80%				
68) 4-BROMOFLUOROBENZENE	7.364	95	369434	40.7278109	ppb		0.00
Spiked Amount 40.000	Range 71 - 126		Recovery = 101.82%				
Target Compounds							Qvalue
3) PROPENE	1.688	41	2582	0.9493164	ppb	#	71
4) DICHLORODIFLUOROMETHANE	1.725	85	7149	0.9905630	ppb		94
5) CHLOROMETHANE	1.895	50	10631	1.0278321	ppb		99
6) VINYL CHLORIDE	1.962	62	8807	0.9931375	ppb	#	95
7) 1,3-BUTADIENE	1.974	39	9332	1.1789458	ppb		93
8) BROMOMETHANE	2.218	94	4507	1.0273012	ppb	#	47
9) CHLOROETHANE	2.303	64	6017	1.2653349	ppb	#	76
10) TRICHLOROFLUOROMETHANE	2.406	101	9051	1.0219296	ppb		99
11) DICHLOROFLUOROMETHANE	2.437	67	13456	1.1242526	ppb		100
12) ETHYL ETHER	2.601	59	5481	0.9746449	ppb		94
13) ACROLEIN	2.954	56	6716	4.9614338	ppb		94
14) 1,1-DICHLOROETHENE	2.747	61	9785	1.0197741	ppb		94
15) 1,1,2-TRICHLOROTRIFLUO...	2.765	101	5642	1.0251985	ppb	#	89
16) ACETONE	3.118	43	21115	4.8434855	ppb		91
17) IODOMETHANE	2.857	142	24047	4.3405686	ppb		98
18) CARBON DISULFIDE	2.784	76	22444	1.0397987	ppb	#	80
19) METHYLENE CHLORIDE	3.106	84	6117	0.9478865	ppb		91
20) ACRYLONITRILE	3.580	53	12504	4.7176724	ppb		99
21) n-Hexane	3.222	56	7308	1.0558090	ppb		77
22) TRANS-1,2-DICHLOROETHENE	3.197	96	5722	0.9930389	ppb	#	93
23) METHYL TERT-BUTYL ETHER	3.240	73	17421	1.0163912	ppb		88
24) 1,1-DICHLOROETHANE	3.550	63	11970	1.0064330	ppb		96
25) VINYL ACETATE	3.660	43	76768	5.0728825	ppb		99
26) DI-ISOPROPYL ETHER	3.434	45	26575	1.0486368	ppb		90
27) 2,2-Dichloropropane	3.915	77	10315	1.0480469	ppb		95
28) CIS-1,2-DICHLOROETHENE	3.854	96	5804	0.9292349	ppb		91
29) 2-BUTANONE (MEK)	4.152	43	27885	5.2874962	ppb		95
30) BROMOCHLOROMETHANE	3.970	130	3382	1.0041558	ppb		93
31) TETRAHYDROFURAN	4.085	42	2659	1.0382611	ppb	#	62
32) CHLOROFORM	3.988	83	11344	1.0563260	ppb		94
34) 1,1,1-TRICHLOROETHANE	4.122	97	9426	1.0581806	ppb		94
35) CARBON TETRACHLORIDE	4.085	117	7921	1.0082697	ppb		98
36) 1,1-Dichloropropene	4.189	75	8618	1.0252171	ppb	#	83

Data Path : C:\msdchem\1\data\021016\
Data File : 0210 11A.D
Acq On : 10 Feb 2016 11:24 pm
Operator : 522
Sample : RL VMS 1 ppb 16B10218
Misc : water 15L26724
ALS Vial : 11 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 11 12:02:05 2016
Quant Method : C:\msdchem\1\methods\V807B10P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Thu Feb 11 11:59:29 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
37) 2,2,4-TRIMETHYLPENTANE	4.225	57	29444	0.9925608	ppb		91
38) HEPTANE	4.268	43	14729	1.0327518	ppb		91
39) BENZENE	4.335	78	25123	1.0001164	ppb	#	62
40) 1,2-DICHLOROETHANE	4.444	62	7564	0.9939495	ppb	#	84
42) TRICHLOROETHENE	4.657	130	5525	0.9959244	ppb		92
43) 1,2-DICHLOROPROPANE	4.968	62	4969	0.9851435	ppb	#	95
44) DIBROMOMETHANE	4.919	93	3631	0.9899413	ppb		85
45) BROMODICHLOROMETHANE	4.998	83	8504	1.0228574	ppb	#	91
47) 2-CHLOROETHYL VINYL ETHER	5.308	63	3303	4.6690836	ppb	#	76
48) CIS-1,3-DICHLOROPROPENE	5.369	75	11258	1.0417424	ppb	#	93
49) 4-METHYL-2-PENTANONE (...	5.728	43	41421	5.2475180	ppb		97
51) TOLUENE	5.521	91	25706	1.0221564	ppb		96
52) TRANS-1,3-DICHLOROPROPENE	5.777	75	9243	1.0166773	ppb	#	95
54) 1,1,2-TRICHLOROETHANE	5.880	97	5147	1.0021617	ppb		90
55) TETRACHLOROETHENE	5.771	164	4408	1.0305176	ppb		96
56) 1,3-Dichloropropane	6.069	76	9406	1.0185295	ppb	#	84
57) 2-HEXANONE	6.275	58	18209	4.9931475	ppb		97
58) CHLORODIBROMOMETHANE	6.014	129	6025	1.0186534	ppb		95
59) 1,2-DIBROMOETHANE	6.190	107	5457	1.0350878	ppb		97
60) CHLOROBENZENE	6.525	112	16550	1.0589895	ppb		93
61) 1,1,1,2-TETRACHLOROETHANE	6.561	133	5327	1.0404799	ppb	#	91
62) ETHYLBENZENE	6.519	106	9720	1.0997955	ppb		99
63) M&P-XYLENE	6.616	106	21769	2.0249913	ppb		97
64) O-XYLENE	6.920	106	10623	1.0028118	ppb		97
65) STYRENE	6.963	104	17491	1.0023172	ppb		94
66) Bromoform	7.006	173	3581	0.9859651	ppb		92
67) Isopropylbenzene	7.139	105	27907	0.9936901	ppb	#	92
69) Bromobenzene	7.456	77	13441	1.1226937	ppb		95
70) 1,1,2,2-TETRACHLOROETHANE	7.498	83	8558	1.0743186	ppb	#	93
71) 1,2,3-TRICHLOROPROPANE	7.620	110	2722	1.2715666	ppb		85
72) TRANS-1,4-DICHLORO-2-B...	7.632	53	1997	0.8973889	ppb	#	85
73) n-Propylbenzene	7.444	91	32741	1.0034112	ppb	#	98
74) 4-ETHYLTOLUENE	7.517	105	28434	1.0329599	ppb		95
75) 2-Chlorotoluene	7.583	126	6007	1.0072803	ppb		98
76) 4-Chlorotoluene	7.705	91	19591	0.9884657	ppb		95
77) 1,3,5-Trimethylbenzene	7.577	105	24844	1.1011451	ppb		94
78) tert-Butylbenzene	7.827	119	19569	1.0265130	ppb		98
79) 1,2,4-Trimethylbenzene	7.882	105	23458	1.0276538	ppb		98
80) sec-Butylbenzene	7.961	105	30846	1.0067142	ppb		98
81) 1,3-DICHLOROBENZENE	8.161	146	11625	1.0013714	ppb		98
82) p-Isopropyltoluene	8.064	119	24723	1.0109288	ppb		99
83) DICYCLOPENTADIENE	8.070	66	33521	1.0553454	ppb		99
85) 1,4-DICHLOROBENZENE	8.228	146	12426	1.0910990	ppb	#	1
86) 1,2,3-TRIMETHYLBENZENE	8.222	105	22025	1.0104273	ppb		94
87) 1,2-DICHLOROBENZENE	8.563	146	10632	1.0077236	ppb		98
88) n-Butylbenzene	8.399	91	24676	1.0485691	ppb		99
89) 1,2-Dibromo-3-chloropr...	9.208	157	1173	0.8399760	ppb	#	62
90) 1,2,4-Trichlorobenzene	9.755	180	7676	1.0625608	ppb		89
91) HEXACHLORO-1,3-BUTADIENE	9.713	225	3995	0.9766296	ppb		99
92) Naphthalene	10.029	128	19021	0.9727682	ppb		96
93) 1,2,3-Trichlorobenzene	10.187	180	6375	0.9588611	ppb		97
94) 1-Methylnaphthalene	10.844	142	9393	0.9347718	ppb	#	94
95) 2-Methylnaphthalene	10.960	142	9017	1.0285326	ppb		85

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\021016\
Data File : 0210 11A.D
Acq On : 10 Feb 2016 11:24 pm
Operator : 522
Sample : RL VMS 1 ppb 16B10218
Misc : water 15L26724
ALS Vial : 11 Sample Multiplier: 1
InstName : VOCMS7

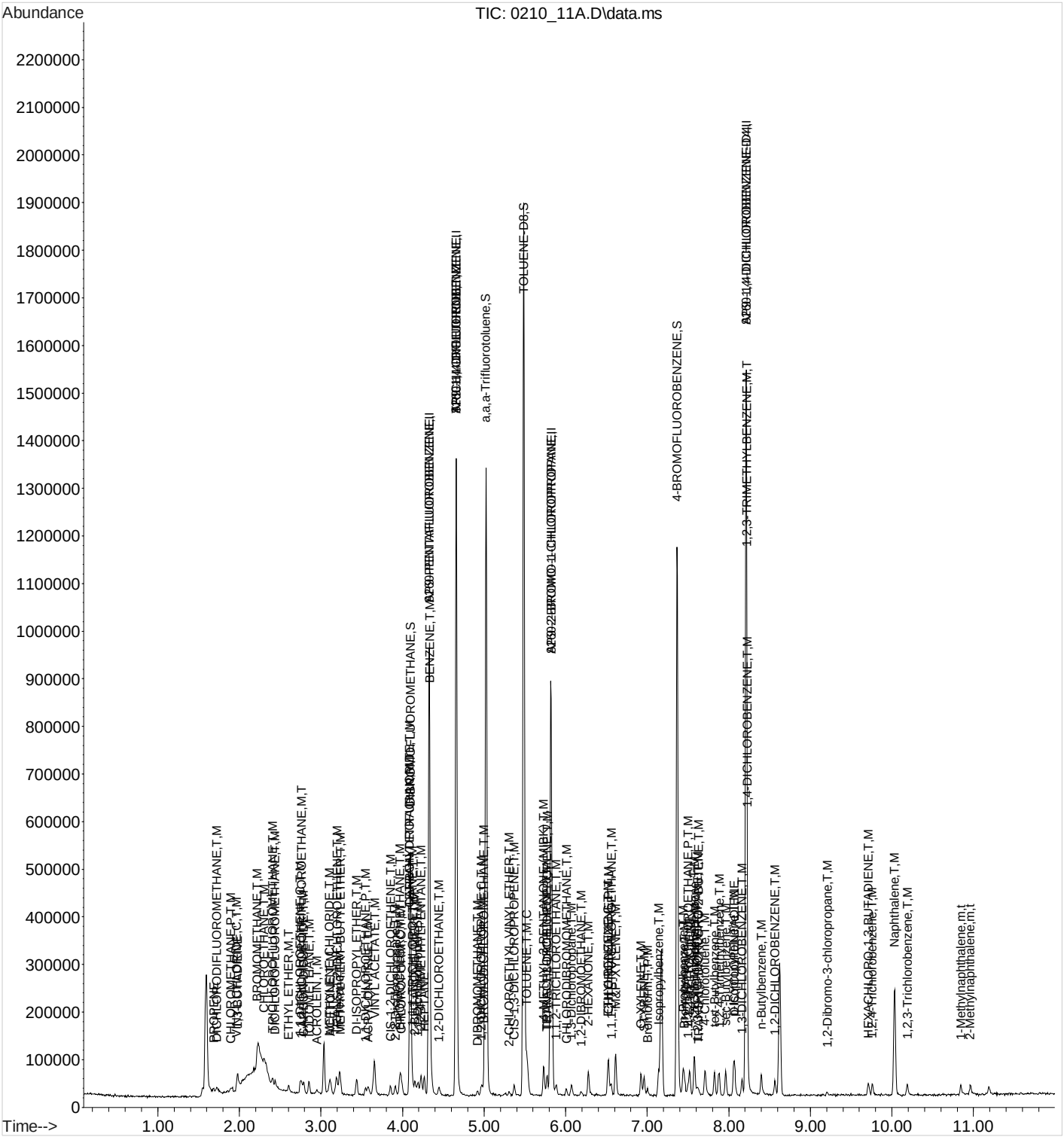
Quant Time: Feb 11 12:02:05 2016
Quant Method : C:\msdchem\1\methods\V807B10P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Thu Feb 11 11:59:29 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\021016\
Data File : 0210 11A.D
Acq On : 10 Feb 2016 11:24 pm
Operator : 522
Sample : RL VMS 1 ppb 16B10218
Misc : water 15L26724
ALS Vial : 11 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 11 12:02:05 2016
Quant Method : C:\msdchem\1\methods\V807B10P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Thu Feb 11 11:59:29 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\021016\
Data File : 0210 12A.D
Acq On : 10 Feb 2016 11:44 pm
Operator : 522
Sample : RL VMS 2 ppb 16B10218
Misc : water 15L26724
ALS Vial : 12 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 11 12:02:17 2016
Quant Method : C:\msdchem\1\methods\V807B10P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Thu Feb 11 11:59:29 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 8260-PENTAFLUOROBENZENE	4.329	168	459944	40.0000000	ppb		0.00
41) 8260-1,4-DIFLUOROBENZENE	4.657	114	782748	40.0000000	ppb		0.00
53) 8260-2-BROMO-1-CHLOROP...	5.819	79	141702	40.0000000	ppb		0.00
84) 8260-1,4-DICHLOROBENZE...	8.216	152	361407	40.0000000	ppb		0.00
96) AP9-PENTAFLUOROBENZENE	4.329	168	459944	40.0000000	ppb		0.00
114) AP9-1,4-DIFLUOROBENZENE	4.657	114	782748	40.0000000	ppb		0.00
122) AP9-2-BROMO-1-CHLOROPR...	5.819	79	141702	40.0000000	ppb	#	0.00
128) AP9-1,4-DICHLOROBENZEN...	8.216	152	361407	40.0000000	ppb		0.00
System Monitoring Compounds							
33) DIBROMOFLUOROMETHANE	4.098	111	253634	42.5543836	ppb		0.00
Spiked Amount 40.000	Range 78 - 121		Recovery = 106.39%				
46) a,a,a-Trifluorotoluene	5.022	146	439050	42.9621534	ppb		0.00
Spiked Amount 40.000	Range 85 - 114		Recovery = 107.41%				
50) TOLUENE-D8	5.485	98	1008732	42.1701195	ppb		0.00
Spiked Amount 40.000	Range 89 - 111		Recovery = 105.43%				
68) 4-BROMOFLUOROBENZENE	7.365	95	375346	41.6829793	ppb		0.00
Spiked Amount 40.000	Range 71 - 126		Recovery = 104.21%				
Target Compounds							Qvalue
3) PROPENE	1.689	41	6633	2.4563869	ppb	#	90
4) DICHLORODIFLUOROMETHANE	1.725	85	14345	2.0020245	ppb		98
5) CHLOROMETHANE	1.901	50	21001	2.0451259	ppb		99
6) VINYL CHLORIDE	1.962	62	17124	1.9449957	ppb	#	98
7) 1,3-BUTADIENE	1.974	39	16854	2.1446386	ppb		91
8) BROMOMETHANE	2.218	94	9317	2.1390374	ppb	#	74
9) CHLOROETHANE	2.303	64	9704	2.0554566	ppb	#	77
10) TRICHLOROFLUOROMETHANE	2.406	101	17666	2.0090681	ppb		99
11) DICHLOROFLUOROMETHANE	2.437	67	23864	2.0082750	ppb		96
12) ETHYL ETHER	2.601	59	11614	2.0801778	ppb		96
13) ACROLEIN	2.954	56	11976	8.9112850	ppb		92
14) 1,1-DICHLOROETHENE	2.747	61	20010	2.1004979	ppb		98
15) 1,1,2-TRICHLOROTRIFLUO...	2.759	101	10655	1.9501156	ppb	#	89
16) ACETONE	3.118	43	44777	10.3455586	ppb		100
17) IODOMETHANE	2.851	142	49397	8.9808682	ppb		99
18) CARBON DISULFIDE	2.784	76	43826	2.0450922	ppb	#	94
19) METHYLENE CHLORIDE	3.106	84	13913	2.1715542	ppb		93
20) ACRYLONITRILE	3.574	53	25520	9.6982084	ppb		98
21) n-Hexane	3.228	56	13645	1.9856028	ppb		86
22) TRANS-1,2-DICHLOROETHENE	3.197	96	11702	2.0455521	ppb		96
23) METHYL TERT-BUTYL ETHER	3.240	73	36717	2.1576801	ppb		96
24) 1,1-DICHLOROETHANE	3.550	63	24385	2.0651209	ppb		98
25) VINYL ACETATE	3.654	43	153360	10.2074840	ppb		100
26) DI-ISOPROPYL ETHER	3.435	45	50639	2.0126533	ppb		98
27) 2,2-Dichloropropane	3.915	77	19401	1.9854897	ppb	#	82
28) CIS-1,2-DICHLOROETHENE	3.848	96	13552	2.1854131	ppb		90
29) 2-BUTANONE (MEK)	4.152	43	52728	10.0705398	ppb		96
30) BROMOCHLOROMETHANE	3.970	130	6550	1.9588484	ppb		88
31) TETRAHYDROFURAN	4.092	42	6132	2.4116952	ppb	#	85
32) CHLOROFORM	3.988	83	22296	2.0911768	ppb		97
34) 1,1,1-TRICHLOROETHANE	4.122	97	17693	2.0006257	ppb		99
35) CARBON TETRACHLORIDE	4.092	117	14691	1.8835628	ppb		97
36) 1,1-Dichloropropene	4.189	75	16808	2.0139905	ppb		93

Data Path : C:\msdchem\1\data\021016\
Data File : 0210 12A.D
Acq On : 10 Feb 2016 11:44 pm
Operator : 522
Sample : RL VMS 2 ppb 16B10218
Misc : water 15L26724
ALS Vial : 12 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 11 12:02:17 2016
Quant Method : C:\msdchem\1\methods\V807B10P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Thu Feb 11 11:59:29 2016
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
37)	2,2,4-TRIMETHYLPENTANE	4.225	57	60479	2.0535106	ppb		95
38)	HEPTANE	4.262	43	30971	2.1873081	ppb	#	91
39)	BENZENE	4.329	78	50890	2.0405325	ppb	#	79
40)	1,2-DICHLOROETHANE	4.444	62	15605	2.0654211	ppb		96
42)	TRICHLOROETHENE	4.657	130	11043	1.9785582	ppb		98
43)	1,2-DICHLOROPROPANE	4.968	62	10269	2.0236077	ppb		95
44)	DIBROMOMETHANE	4.919	93	7302	1.9787580	ppb		91
45)	BROMODICHLOROMETHANE	4.992	83	16663	1.9921072	ppb	#	74
47)	2-CHLOROETHYL VINYL ETHER	5.302	63	6597	9.2690931	ppb	#	90
48)	CIS-1,3-DICHLOROPROPENE	5.369	75	21842	2.0089040	ppb		98
49)	4-METHYL-2-PENTANONE (...	5.728	43	77800	9.7967187	ppb		100
51)	TOLUENE	5.521	91	51382	2.0307737	ppb		98
52)	TRANS-1,3-DICHLOROPROPENE	5.771	75	18833	2.0590047	ppb	#	95
54)	1,1,2-TRICHLOROETHANE	5.886	97	10561	2.0713878	ppb		94
55)	TETRACHLOROETHENE	5.771	164	9059	2.1333733	ppb		96
56)	1,3-Dichloropropane	6.069	76	18338	2.0002918	ppb		95
57)	2-HEXANONE	6.276	58	38476	10.6279860	ppb		100
58)	CHLORODIBROMOMETHANE	6.014	129	11659	1.9856535	ppb		97
59)	1,2-DIBROMOETHANE	6.190	107	9428	1.8014224	ppb		83
60)	CHLOROBENZENE	6.525	112	31275	2.0158756	ppb		96
61)	1,1,1,2-TETRACHLOROETHANE	6.561	133	10298	2.0261735	ppb	#	99
62)	ETHYLBENZENE	6.519	106	17390	1.9820655	ppb		97
63)	M&P-XYLENE	6.610	106	44731	4.1914670	ppb		99
64)	O-XYLENE	6.920	106	21319	2.0272711	ppb		99
65)	STYRENE	6.963	104	36289	2.0947793	ppb		97
66)	Bromoform	7.006	173	7350	2.0385310	ppb		97
67)	Isopropylbenzene	7.139	105	57965	2.0791049	ppb		96
69)	Bromobenzene	7.456	77	24723	2.0801930	ppb		99
70)	1,1,2,2-TETRACHLOROETHANE	7.498	83	15043	1.9022519	ppb		99
71)	1,2,3-TRICHLOROPROPANE	7.620	110	3846	1.9241292	ppb		85
72)	TRANS-1,4-DICHLORO-2-B...	7.632	53	4114	1.8622573	ppb	#	86
73)	n-Propylbenzene	7.444	91	66643	2.0573790	ppb		99
74)	4-ETHYLTOLUENE	7.517	105	54776	2.0045115	ppb		98
75)	2-Chlorotoluene	7.584	126	12375	2.0903098	ppb		90
76)	4-Chlorotoluene	7.705	91	39629	2.0141457	ppb		100
77)	1,3,5-Trimethylbenzene	7.577	105	46443	2.0735574	ppb		100
78)	tert-Butylbenzene	7.827	119	38882	2.0545522	ppb		100
79)	1,2,4-Trimethylbenzene	7.876	105	46412	2.0481364	ppb		100
80)	sec-Butylbenzene	7.961	105	59951	1.9709542	ppb		97
81)	1,3-DICHLOROBENZENE	8.161	146	23931	2.0765185	ppb		99
82)	p-Isopropyltoluene	8.064	119	51646	2.1273005	ppb		98
83)	DICYCLOPENTADIENE	8.070	66	67866	2.1522994	ppb		98
85)	1,4-DICHLOROBENZENE	8.228	146	24542	2.0767941	ppb	#	1
86)	1,2,3-TRIMETHYLBENZENE	8.222	105	45545	2.0136341	ppb		99
87)	1,2-DICHLOROBENZENE	8.563	146	22138	2.0221600	ppb		98
88)	n-Butylbenzene	8.399	91	51117	2.0933331	ppb		98
89)	1,2-Dibromo-3-chloropr...	9.208	157	2542	1.7542647	ppb		85
90)	1,2,4-Trichlorobenzene	9.761	180	14853	1.9814527	ppb		99
91)	HEXACHLORO-1,3-BUTADIENE	9.713	225	8593	2.0244573	ppb		95
92)	Naphthalene	10.029	128	40449	1.9935838	ppb		100
93)	1,2,3-Trichlorobenzene	10.187	180	14601	2.1164539	ppb		98
94)	1-Methylnaphthalene	10.844	142	20165	1.9339720	ppb		98
95)	2-Methylnaphthalene	10.960	142	19450	2.1380915	ppb		90

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\021016\
Data File : 0210 12A.D
Acq On : 10 Feb 2016 11:44 pm
Operator : 522
Sample : RL VMS 2 ppb 16B10218
Misc : water 15L26724
ALS Vial : 12 Sample Multiplier: 1
InstName : VOCMS7

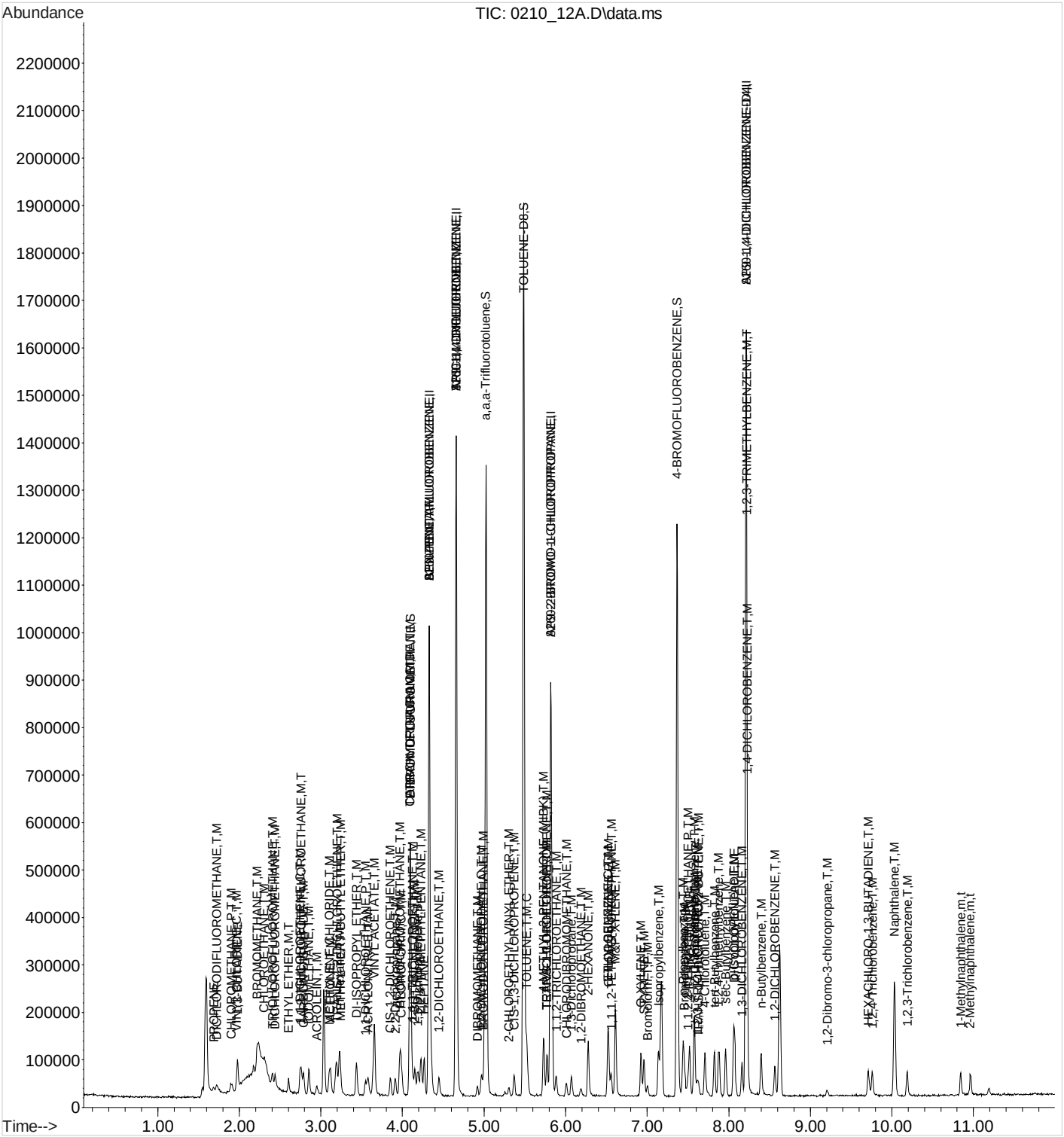
Quant Time: Feb 11 12:02:17 2016
Quant Method : C:\msdchem\1\methods\V807B10P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Thu Feb 11 11:59:29 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\021016\
Data File : 0210 12A.D
Acq On : 10 Feb 2016 11:44 pm
Operator : 522
Sample : RL VMS 2 ppb 16B10218
Misc : water 15L26724
ALS Vial : 12 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 11 12:02:17 2016
Quant Method : C:\msdchem\1\methods\V807B10P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Thu Feb 11 11:59:29 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\021016\
Data File : 0210 13A.D
Acq On : 11 Feb 2016 12:03 am
Operator : 522
Sample : RL VMS 5.0 ppb 16B10218
Misc : water 15L26724
ALS Vial : 13 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 11 12:02:34 2016
Quant Method : C:\msdchem\1\methods\V807B10P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Thu Feb 11 11:59:29 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 8260-PENTAFLUOROBENZENE	4.329	168	475659	40.0000000	ppb		0.00
41) 8260-1,4-DIFLUOROBENZENE	4.657	114	809470	40.0000000	ppb		0.00
53) 8260-2-BROMO-1-CHLOROP...	5.825	79	148342	40.0000000	ppb		0.00
84) 8260-1,4-DICHLOROBENZE...	8.216	152	366024	40.0000000	ppb		0.00
96) AP9-PENTAFLUOROBENZENE	4.329	168	475659	40.0000000	ppb		0.00
114) AP9-1,4-DIFLUOROBENZENE	4.657	114	809470	40.0000000	ppb		0.00
122) AP9-2-BROMO-1-CHLOROPR...	5.825	79	148342	40.0000000	ppb	#	0.00
128) AP9-1,4-DICHLOROBENZEN...	8.216	152	366024	40.0000000	ppb		0.00
System Monitoring Compounds							
33) DIBROMOFLUOROMETHANE	4.098	111	266588	43.2500555	ppb		0.00
Spiked Amount 40.000	Range 78 - 121		Recovery = 108.13%				
46) a,a,a-Trifluorotoluene	5.022	146	458883	43.4205417	ppb		0.00
Spiked Amount 40.000	Range 85 - 114		Recovery = 108.55%				
50) TOLUENE-D8	5.485	98	1061591	42.9148373	ppb		0.00
Spiked Amount 40.000	Range 89 - 111		Recovery = 107.29%				
68) 4-BROMOFLUOROBENZENE	7.364	95	401564	42.5984290	ppb		0.00
Spiked Amount 40.000	Range 71 - 126		Recovery = 106.50%				
Target Compounds							Qvalue
3) PROPENE	1.682	41	14646	5.2446323	ppb		91
4) DICHLORODIFLUOROMETHANE	1.725	85	32667	4.4084643	ppb		97
5) CHLOROMETHANE	1.895	50	47731	4.4945876	ppb		97
6) VINYL CHLORIDE	1.962	62	43125	4.7364370	ppb		95
7) 1,3-BUTADIENE	1.974	39	38563	4.7449450	ppb		95
8) BROMOMETHANE	2.212	94	18499	4.1067643	ppb	#	82
9) CHLOROETHANE	2.303	64	22799	4.6696309	ppb		97
10) TRICHLOROFLUOROMETHANE	2.406	101	42662	4.6914477	ppb		99
11) DICHLOROFLUOROMETHANE	2.437	67	58697	4.7764483	ppb		98
12) ETHYL ETHER	2.601	59	25939	4.4924279	ppb		97
13) ACROLEIN	2.948	56	31696	22.8056388	ppb		95
14) 1,1-DICHLOROETHENE	2.747	61	45574	4.6259566	ppb		99
15) 1,1,2-TRICHLOROTRIFLUO...	2.759	101	26718	4.7284639	ppb		99
16) ACETONE	3.118	43	104404	23.3251975	ppb		98
17) IODOMETHANE	2.850	142	129480	22.7630096	ppb		98
18) CARBON DISULFIDE	2.783	76	104038	4.6944238	ppb		97
19) METHYLENE CHLORIDE	3.100	84	29330	4.4266093	ppb		95
20) ACRYLONITRILE	3.574	53	62345	22.9098219	ppb		99
21) n-Hexane	3.221	56	35134	4.9437406	ppb		99
22) TRANS-1,2-DICHLOROETHENE	3.197	96	27228	4.6023054	ppb		94
23) METHYL TERT-BUTYL ETHER	3.234	73	86118	4.8935388	ppb		99
24) 1,1-DICHLOROETHANE	3.550	63	58595	4.7983567	ppb		98
25) VINYL ACETATE	3.653	43	380347	24.4791224	ppb		99
26) DI-ISOPROPYL ETHER	3.434	45	123567	4.7489281	ppb		99
27) 2,2-Dichloropropane	3.915	77	47211	4.6719260	ppb		98
28) CIS-1,2-DICHLOROETHENE	3.848	96	30055	4.6865810	ppb		98
29) 2-BUTANONE (MEK)	4.152	43	129812	23.9737257	ppb		99
30) BROMOCHLOROMETHANE	3.970	130	17512	5.0641262	ppb		98
31) TETRAHYDROFURAN	4.091	42	12519	4.7610106	ppb	#	95
32) CHLOROFORM	3.988	83	52384	4.7508540	ppb		98
34) 1,1,1-TRICHLOROETHANE	4.122	97	42345	4.6299441	ppb		99
35) CARBON TETRACHLORIDE	4.085	117	37655	4.6683201	ppb		99
36) 1,1-Dichloropropene	4.189	75	41495	4.8077998	ppb		95

Data Path : C:\msdchem\1\data\021016\
Data File : 0210 13A.D
Acq On : 11 Feb 2016 12:03 am
Operator : 522
Sample : RL VMS 5.0 ppb 16B10218
Misc : water 15L26724
ALS Vial : 13 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 11 12:02:34 2016
Quant Method : C:\msdchem\1\methods\V807B10P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Thu Feb 11 11:59:29 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
37) 2,2,4-TRIMETHYLPENTANE	4.225	57	144928	4.7583226	ppb		99
38) HEPTANE	4.262	43	71636	4.8920998	ppb	#	92
39) BENZENE	4.329	78	123243	4.7784008	ppb		95
40) 1,2-DICHLOROETHANE	4.444	62	38350	4.9081683	ppb		100
42) TRICHLOROETHENE	4.657	130	28060	4.8615040	ppb		96
43) 1,2-DICHLOROPROPANE	4.967	62	24281	4.6268556	ppb		97
44) DIBROMOMETHANE	4.913	93	16969	4.4466026	ppb		99
45) BROMODICHLOROMETHANE	4.992	83	41752	4.8267856	ppb		97
47) 2-CHLOROETHYL VINYL ETHER	5.308	63	18005	24.4627397	ppb		92
48) CIS-1,3-DICHLOROPROPENE	5.369	75	52981	4.7120311	ppb		98
49) 4-METHYL-2-PENTANONE (...	5.728	43	194282	23.6567355	ppb		98
51) TOLUENE	5.521	91	125565	4.7988850	ppb		99
52) TRANS-1,3-DICHLOROPROPENE	5.771	75	44370	4.6908168	ppb		96
54) 1,1,2-TRICHLOROETHANE	5.880	97	23822	4.4632010	ppb		95
55) TETRACHLOROETHENE	5.777	164	21522	4.8415127	ppb		97
56) 1,3-Dichloropropane	6.069	76	45368	4.7271880	ppb		99
57) 2-HEXANONE	6.275	58	93509	24.6732477	ppb		96
58) CHLORODIBROMOMETHANE	6.014	129	26832	4.3652292	ppb		98
59) 1,2-DIBROMOETHANE	6.190	107	24314	4.4377645	ppb		95
60) CHLOROBENZENE	6.525	112	76017	4.6804647	ppb		99
61) 1,1,1,2-TETRACHLOROETHANE	6.561	133	24228	4.5535819	ppb	#	97
62) ETHYLBENZENE	6.519	106	43166	4.6997211	ppb		96
63) M&P-XYLENE	6.610	106	103960	9.3054110	ppb		99
64) O-XYLENE	6.926	106	51650	4.6916671	ppb		100
65) STYRENE	6.963	104	84194	4.6425466	ppb		99
66) Bromoform	7.005	173	17491	4.6340048	ppb		97
67) Isopropylbenzene	7.139	105	140385	4.8099784	ppb		99
69) Bromobenzene	7.456	77	58199	4.6776727	ppb		98
70) 1,1,2,2-TETRACHLOROETHANE	7.498	83	38389	4.6371615	ppb		100
71) 1,2,3-TRICHLOROPROPANE	7.614	110	9379	4.8412767	ppb	#	84
72) TRANS-1,4-DICHLORO-2-B...	7.632	53	9774	4.2262929	ppb		95
73) n-Propylbenzene	7.444	91	160396	4.7300436	ppb		99
74) 4-ETHYLTOLUENE	7.516	105	133153	4.6545858	ppb		99
75) 2-Chlorotoluene	7.583	126	28374	4.5782327	ppb		98
76) 4-Chlorotoluene	7.705	91	95604	4.6415783	ppb		99
77) 1,3,5-Trimethylbenzene	7.577	105	108867	4.6430558	ppb		99
78) tert-Butylbenzene	7.827	119	92993	4.6938660	ppb		100
79) 1,2,4-Trimethylbenzene	7.875	105	109569	4.6187893	ppb		100
80) sec-Butylbenzene	7.961	105	150584	4.7290159	ppb		100
81) 1,3-DICHLOROBENZENE	8.161	146	54475	4.5152733	ppb		96
82) p-Isopropyltoluene	8.064	119	119609	4.7061728	ppb		99
83) DICYCLOPENTADIENE	8.076	66	160216	4.8536468	ppb		98
85) 1,4-DICHLOROBENZENE	8.228	146	55298	4.6204036	ppb	#	1
86) 1,2,3-TRIMETHYLBENZENE	8.222	105	108574	4.7397200	ppb		99
87) 1,2-DICHLOROBENZENE	8.563	146	53620	4.8360517	ppb		98
88) n-Butylbenzene	8.399	91	122226	4.9422371	ppb		99
89) 1,2-Dibromo-3-chloropr...	9.208	157	6603	4.4993302	ppb		92
90) 1,2,4-Trichlorobenzene	9.755	180	36763	4.8424758	ppb		99
91) HEXACHLORO-1,3-BUTADIENE	9.713	225	20954	4.8743615	ppb		98
92) Naphthalene	10.029	128	92472	4.5001186	ppb		99
93) 1,2,3-Trichlorobenzene	10.187	180	33616	4.8112646	ppb		98
94) 1-Methylnaphthalene	10.844	142	49035	4.6434966	ppb		99
95) 2-Methylnaphthalene	10.960	142	41616	4.5170409	ppb		98

Data Path : C:\msdchem\1\data\021016\
Data File : 0210 13A.D
Acq On : 11 Feb 2016 12:03 am
Operator : 522
Sample : RL VMS 5.0 ppb 16B10218
Misc : water 15L26724
ALS Vial : 13 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 11 12:02:34 2016
Quant Method : C:\msdchem\1\methods\V807B10P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Thu Feb 11 11:59:29 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\021016\
Data File : 0210 13A.D
Acq On : 11 Feb 2016 12:03 am
Operator : 522
Sample : RL VMS 5.0 ppb 16B10218
Misc : water 15L26724
ALS Vial : 13 Sample Multiplier: 1
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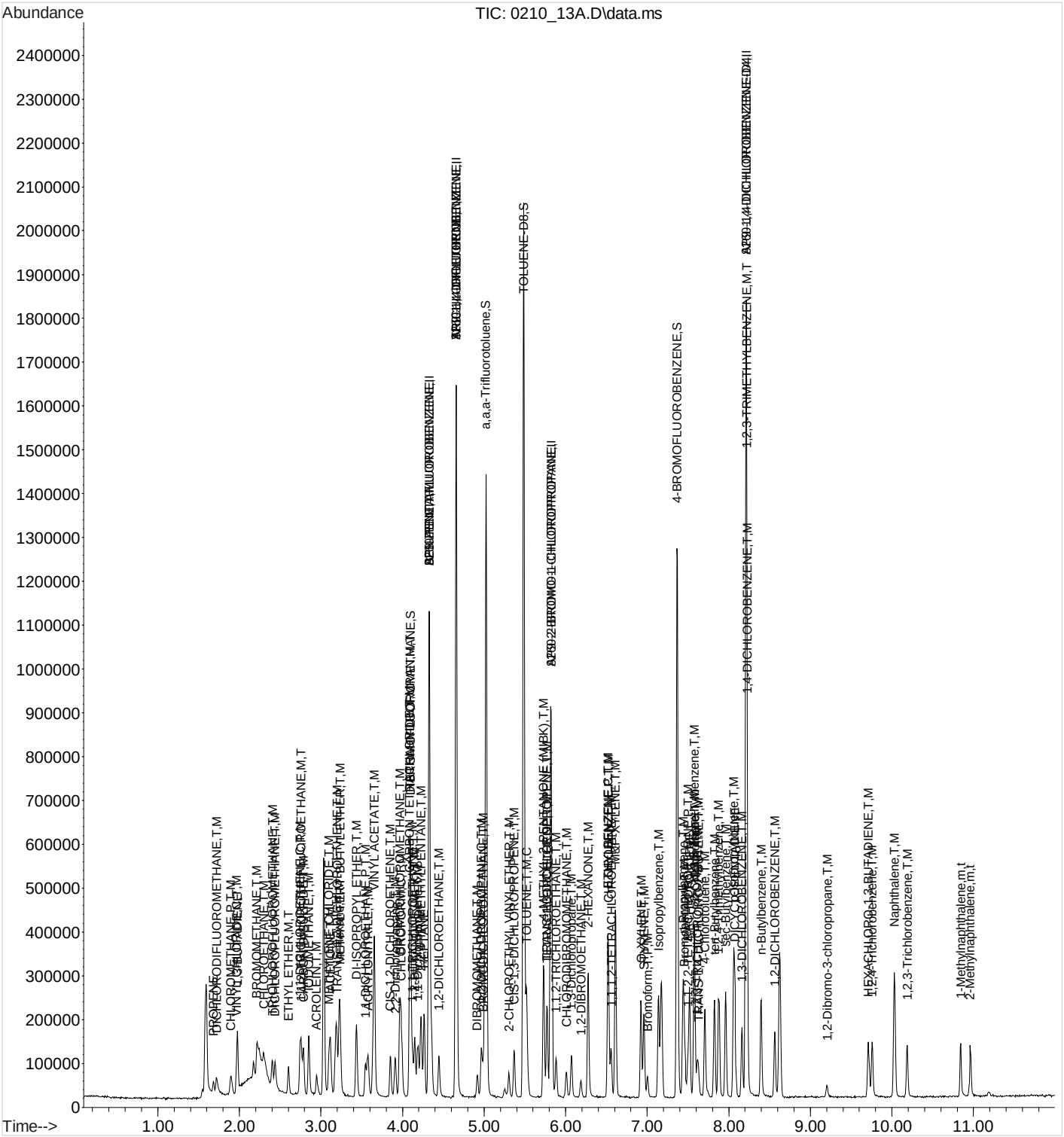
Quant Time: Feb 11 12:02:34 2016
Quant Method : C:\msdchem\1\methods\V807B10P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Thu Feb 11 11:59:29 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\021016\
Data File : 0210 22.D
Acq On : 11 Feb 2016 2:56 am
Operator : 522
Sample : SSCV VMS 25 ppb 16B10219
Misc : water 15L26724
ALS Vial : 22 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 11 11:59:42 2016
Quant Method : C:\msdchem\1\methods\V807B10P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Thu Feb 11 11:59:29 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 8260-PENTAFLUOROBENZENE	4.329	168	444951	40.0000000	ppb	0.00
41) 8260-1,4-DIFLUOROBENZENE	4.657	114	772580	40.0000000	ppb	0.00
53) 8260-2-BROMO-1-CHLOROP...	5.819	79	139639	40.0000000	ppb	0.00
84) 8260-1,4-DICHLOROBENZE...	8.216	152	347969	40.0000000	ppb	0.00
96) AP9-PENTAFLUOROBENZENE	4.329	168	444951	40.0000000	ppb	0.00
114) AP9-1,4-DIFLUOROBENZENE	4.657	114	772580	40.0000000	ppb	0.00
122) AP9-2-BROMO-1-CHLOROPR...	5.819	79	139639	40.0000000	ppb	# 0.00
128) AP9-1,4-DICHLOROBENZEN...	8.216	152	347969	40.0000000	ppb	0.00
System Monitoring Compounds						
33) DIBROMOFLUOROMETHANE	4.098	111	239030	41.4554864	ppb	0.00
Spiked Amount 40.000	Range 78 - 121		Recovery = 103.64%			
46) a,a,a-Trifluorotoluene	5.022	146	423907	42.0262997	ppb	0.00
Spiked Amount 40.000	Range 85 - 114		Recovery = 105.07%			
50) TOLUENE-D8	5.485	98	987530	41.8271079	ppb	0.00
Spiked Amount 40.000	Range 89 - 111		Recovery = 104.57%			
68) 4-BROMOFLUOROBENZENE	7.364	95	369469	41.6365001	ppb	0.00
Spiked Amount 40.000	Range 71 - 126		Recovery = 104.09%			
Target Compounds						Qvalue
3) PROPENE	1.688	41	37344	14.2955338	ppb	98
4) DICHLORODIFLUOROMETHANE	1.725	85	161611	23.3148448	ppb	99
5) CHLOROMETHANE	1.895	50	236086	23.7652882	ppb	99
6) VINYL CHLORIDE	1.962	62	211194	24.7963505	ppb	99
7) 1,3-BUTADIENE	1.974	39	186665	24.5531262	ppb	100
8) BROMOMETHANE	2.218	94	98873	23.4645790	ppb	98
9) CHLOROETHANE	2.303	64	112332	24.5953939	ppb	97
10) TRICHLOROFLUOROMETHANE	2.406	101	211428	24.8548819	ppb	100
11) DICHLOROFLUOROMETHANE	2.437	67	288219	25.0723659	ppb	97
12) ETHYL ETHER	2.601	59	133847	24.7810701	ppb	99
13) ACROLEIN	2.954	56	164425	126.4704796	ppb	99
14) 1,1-DICHLOROETHENE	2.747	61	240903	26.1402745	ppb	99
15) 1,1,2-TRICHLOROTRIFLUO...	2.759	101	134912	25.5240887	ppb	98
16) ACETONE	3.118	43	387998	92.6661694	ppb	99
17) IODOMETHANE	2.850	142	706772	132.8280686	ppb	99
18) CARBON DISULFIDE	2.783	76	512332	24.7129912	ppb	99
19) METHYLENE CHLORIDE	3.100	84	144193	23.2641309	ppb	99
20) ACRYLONITRILE	3.574	53	320964	126.0839883	ppb	100
21) n-Hexane	3.221	56	159813	24.0394049	ppb	97
22) TRANS-1,2-DICHLOROETHENE	3.197	96	138078	24.9498371	ppb	99
23) METHYL TERT-BUTYL ETHER	3.234	73	407881	24.7768510	ppb	99
24) 1,1-DICHLOROETHANE	3.550	63	287888	25.2022353	ppb	100
25) VINYL ACETATE	3.653	43	1867256	128.4704495	ppb	100
26) DI-ISOPROPYL ETHER	3.434	45	600522	24.6720676	ppb	99
27) 2,2-Dichloropropane	3.915	77	224887	23.7903395	ppb	97
28) CIS-1,2-DICHLOROETHENE	3.854	96	155070	25.8494145	ppb	96
29) 2-BUTANONE (MEK)	4.152	43	533217	105.2708694	ppb	100
30) BROMOCHLOROMETHANE	3.964	130	83510	25.8161091	ppb	95
31) TETRAHYDROFURAN	4.091	42	61174	24.8702366	ppb	98
32) CHLOROFORM	3.988	83	258419	25.0542267	ppb	99
34) 1,1,1-TRICHLOROETHANE	4.122	97	206623	24.1510384	ppb	99
35) CARBON TETRACHLORIDE	4.085	117	184927	24.5087877	ppb	99
36) 1,1-Dichloropropene	4.189	75	209744	25.9790752	ppb	99

Data Path : C:\msdchem\1\data\021016\
Data File : 0210 22.D
Acq On : 11 Feb 2016 2:56 am
Operator : 522
Sample : SSCV VMS 25 ppb 16B10219
Misc : water 15L26724
ALS Vial : 22 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 11 11:59:42 2016
Quant Method : C:\msdchem\1\methods\V807B10P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Thu Feb 11 11:59:29 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
37) 2,2,4-TRIMETHYLPENTANE	4.225	57	705106	24.7479668	ppb		99
38) HEPTANE	4.268	43	329579	24.0606326	ppb		93
39) BENZENE	4.329	78	591513	24.5170457	ppb		99
40) 1,2-DICHLOROETHANE	4.444	62	187810	25.6954554	ppb		99
42) TRICHLOROETHENE	4.657	130	135125	24.5287818	ppb		99
43) 1,2-DICHLOROPROPANE	4.968	62	124018	24.7606134	ppb		99
44) DIBROMOMETHANE	4.919	93	88168	24.2069655	ppb		97
45) BROMODICHLOROMETHANE	4.992	83	199341	24.1454138	ppb		99
47) 2-CHLOROETHYL VINYL ETHER	5.302	63	103843	147.8245246	ppb		100
48) CIS-1,3-DICHLOROPROPENE	5.369	75	266942	24.8749490	ppb		99
49) 4-METHYL-2-PENTANONE (...	5.728	43	913078	116.4896723	ppb		99
51) TOLUENE	5.521	91	611632	24.4917174	ppb		100
52) TRANS-1,3-DICHLOROPROPENE	5.771	75	224291	24.8443812	ppb		99
54) 1,1,2-TRICHLOROETHANE	5.880	97	122599	24.4012767	ppb		98
55) TETRACHLOROETHENE	5.777	164	103511	24.7367334	ppb		98
56) 1,3-Dichloropropane	6.069	76	229368	25.3888757	ppb		100
57) 2-HEXANONE	6.269	58	408761	114.5776101	ppb		98
58) CHLORODIBROMOMETHANE	6.008	129	142396	24.6098630	ppb		99
59) 1,2-DIBROMOETHANE	6.184	107	129355	25.0812087	ppb		98
60) CHLOROBENZENE	6.525	112	369770	24.1861823	ppb		100
61) 1,1,1,2-TETRACHLOROETHANE	6.555	133	120005	23.9603043	ppb	#	96
62) ETHYLBENZENE	6.519	106	210524	24.3494577	ppb		99
63) M&P-XYLENE	6.610	106	498561	47.4072750	ppb		100
64) O-XYLENE	6.920	106	254970	24.6038655	ppb		99
65) STYRENE	6.957	104	423949	24.8339696	ppb		100
66) Bromoform	7.005	173	88397	24.8792204	ppb		99
67) Isopropylbenzene	7.139	105	665204	24.2122233	ppb		99
69) Bromobenzene	7.456	77	294170	25.1171345	ppb		98
70) 1,1,2,2-TETRACHLOROETHANE	7.498	83	175445	22.5135416	ppb		100
71) 1,2,3-TRICHLOROPROPANE	7.614	110	44898	25.7233426	ppb		99
72) TRANS-1,4-DICHLORO-2-B...	7.626	53	53581	24.6124854	ppb		97
73) n-Propylbenzene	7.437	91	811311	25.4165366	ppb		100
74) 4-ETHYLTOLUENE	7.517	105	635224	23.5892638	ppb		99
75) 2-Chlorotoluene	7.583	126	141450	24.2458632	ppb		96
76) 4-Chlorotoluene	7.705	91	469522	24.2160313	ppb		100
77) 1,3,5-Trimethylbenzene	7.577	105	526882	23.8714287	ppb		99
78) tert-Butylbenzene	7.827	119	458453	24.5828735	ppb		99
79) 1,2,4-Trimethylbenzene	7.875	105	534750	23.9468637	ppb		99
80) sec-Butylbenzene	7.961	105	723052	24.1223090	ppb		100
81) 1,3-DICHLOROBENZENE	8.161	146	271543	23.9101785	ppb		99
82) p-Isopropyltoluene	8.064	119	588781	24.6102031	ppb		99
83) DICYCLOPENTADIENE	8.076	66	736899	23.7152467	ppb		99
85) 1,4-DICHLOROBENZENE	8.228	146	265028	23.2933128	ppb		98
86) 1,2,3-TRIMETHYLBENZENE	8.222	105	529672	24.3222010	ppb		100
87) 1,2-DICHLOROBENZENE	8.563	146	267368	25.3654495	ppb		99
88) n-Butylbenzene	8.393	91	586660	24.9525805	ppb		100
89) 1,2-Dibromo-3-chloropr...	9.202	157	36043	25.8342885	ppb		99
90) 1,2,4-Trichlorobenzene	9.755	180	175459	24.3109077	ppb		99
91) HEXACHLORO-1,3-BUTADIENE	9.713	225	101443	24.8222925	ppb		99
92) Naphthalene	10.029	128	485038	24.8289570	ppb		99
93) 1,2,3-Trichlorobenzene	10.187	180	162129	24.4086025	ppb		97
94) 1-Methylnaphthalene	10.838	142	260581	25.9567734	ppb		97
95) 2-Methylnaphthalene	10.960	142	213130	24.3336512	ppb		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\021016\
Data File : 0210 22.D
Acq On : 11 Feb 2016 2:56 am
Operator : 522
Sample : SSCV VMS 25 ppb 16B10219
Misc : water 15L26724
ALS Vial : 22 Sample Multiplier: 1
InstName : VOCMS7

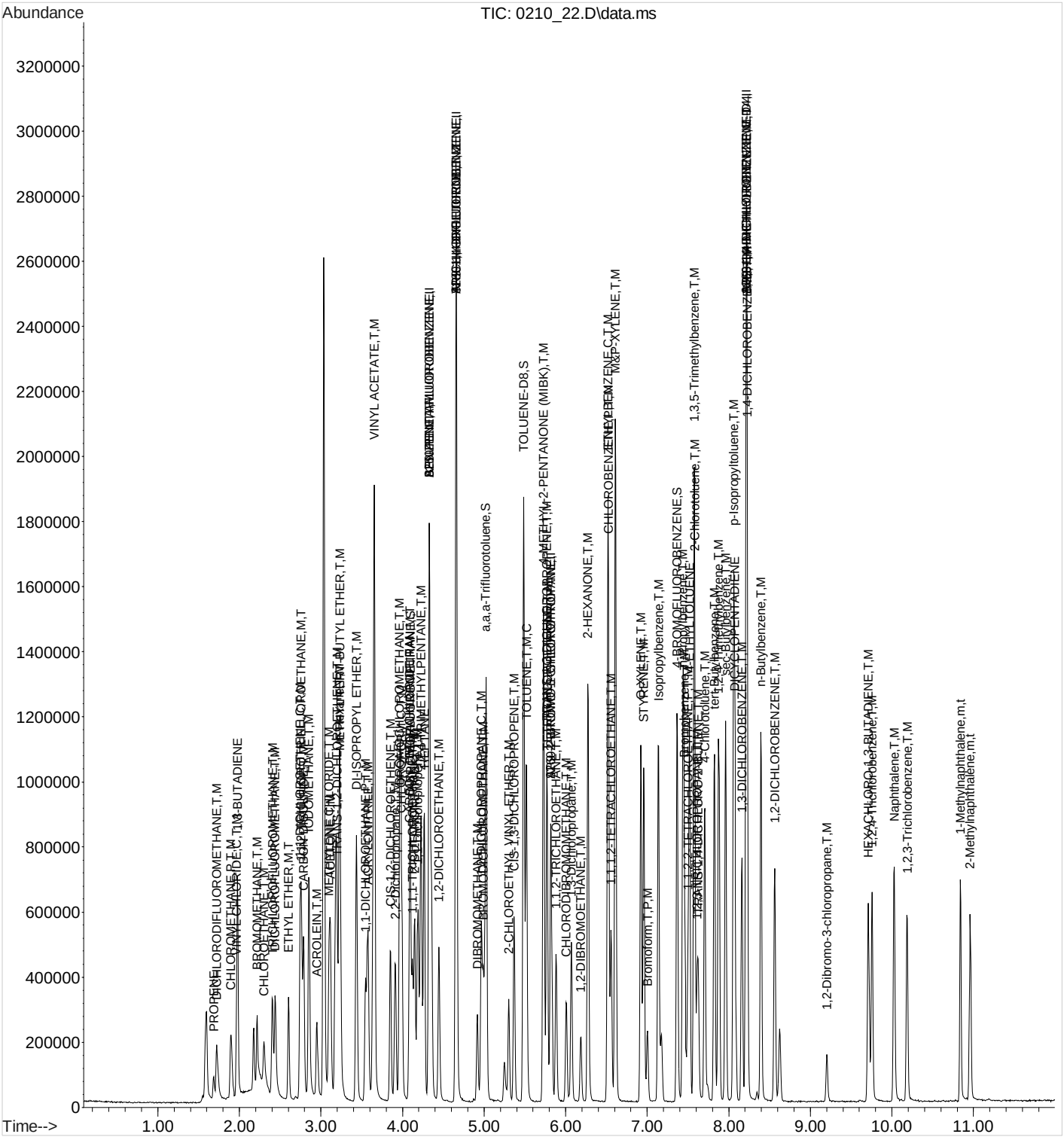
Quant Time: Feb 11 11:59:42 2016
Quant Method : C:\msdchem\1\methods\V807B10P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Thu Feb 11 11:59:29 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\021016\
Data File : 0210 22.D
Acq On : 11 Feb 2016 2:56 am
Operator : 522
Sample : SSCV VMS 25 ppb 16B10219
Misc : water 15L26724
ALS Vial : 22 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 11 11:59:42 2016
Quant Method : C:\msdchem\1\methods\V807B10P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Thu Feb 11 11:59:29 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\021016\
Data File : 0210 09.D
Acq On : 10 Feb 2016 10:46 pm
Operator : 522
Sample : STD VMS .25 ppb 16B10218
Misc : water 15L26724
ALS Vial : 9 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 11 11:43:30 2016
Quant Method : C:\msdchem\1\methods\V807B10P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Thu Feb 11 11:35:07 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 8260-PENTAFLUOROBENZENE	4.329	168	469287	40.0000000	ppb		0.00
41) 8260-1,4-DIFLUOROBENZENE	4.657	114	784392	40.0000000	ppb		0.00
53) 8260-2-BROMO-1-CHLOROP...	5.819	79	144633	40.0000000	ppb		0.00
84) 8260-1,4-DICHLOROBENZE...	8.216	152	354646	40.0000000	ppb		0.00
96) AP9-PENTAFLUOROBENZENE	0.000	168	0m	40.0000000	ppb		-4.33
114) AP9-1,4-DIFLUOROBENZENE	0.000	114	0m	40.0000000	ppb		-4.66
122) AP9-2-BROMO-1-CHLOROPR...	0.000	79	0m	40.0000000	ppb		-5.82
128) AP9-1,4-DICHLOROBENZEN...	0.000	152	0m	40.0000000	ppb		-8.22
System Monitoring Compounds							
33) DIBROMOFLUOROMETHANE	4.097	111	250402	41.3976822	ppb		0.00
Spiked Amount 40.000	Range 78 - 121		Recovery = 103.49%				
46) a,a,a-Trifluorotoluene	5.022	146	427676	41.8508640	ppb		0.00
Spiked Amount 40.000	Range 85 - 114		Recovery = 104.63%				
50) TOLUENE-D8	5.485	98	987643	41.5272439	ppb		0.00
Spiked Amount 40.000	Range 89 - 111		Recovery = 103.82%				
68) 4-BROMOFLUOROBENZENE	7.364	95	371218	40.7907572	ppb		0.00
Spiked Amount 40.000	Range 71 - 126		Recovery = 101.98%				
Target Compounds							Qvalue
2) TPH (GC/MS) LOW FRACTION	4.406	TIC	-5872984m	Below Cal			
3) PROPENE	1.688	41	1049	0.4167761	ppb	#	75
4) DICHLORODIFLUOROMETHANE	1.725	85	2620	0.3822141	ppb		94
5) CHLOROMETHANE	1.901	50	3194	0.3289466	ppb	#	88
6) VINYL CHLORIDE	1.962	62	2494	0.2815526	ppb	#	93
7) 1,3-BUTADIENE	1.980	39	3467	0.4593642	ppb		99
8) BROMOMETHANE	2.218	94	2870	0.6694322	ppb	#	11
9) CHLOROETHANE	2.309	64	1745	0.3769209	ppb	#	85
10) TRICHLOROFLUOROMETHANE	2.406	101	2412	0.2747865	ppb	#	88
11) DICHLOROFLUOROMETHANE	2.437	67	3161	0.2663430	ppb	#	81
12) ETHYL ETHER	2.601	59	1655	0.2984917	ppb	#	70
13) ACROLEIN	2.954	56	2068	1.5638462	ppb	#	1
14) 1,1-DICHLOROETHENE	2.747	61	2510	0.2563885	ppb		88
15) 1,1,2-TRICHLOROTRIFLUO...	2.765	101	1543	0.2772087	ppb	#	70
16) ACETONE	3.118	43	6818	1.6327974	ppb	#	87
17) IODOMETHANE	2.850	142	5669	0.9275617	ppb	#	97
18) CARBON DISULFIDE	2.783	76	6239	0.2933570	ppb	#	35
19) METHYLENE CHLORIDE	3.100	84	2017	0.3331227	ppb		91
20) ACRYLONITRILE	3.580	53	4195	1.6395333	ppb	#	80
21) n-Hexane	3.221	56	3065	0.4530774	ppb	#	57
22) TRANS-1,2-DICHLOROETHENE	3.197	96	1329	0.2340951	ppb	#	78
23) METHYL TERT-BUTYL ETHER	3.240	73	4300	0.2492170	ppb		82
24) 1,1-DICHLOROETHANE	3.550	63	2969	0.2447052	ppb	#	66
25) VINYL ACETATE	3.659	43	18557	1.2077207	ppb		100
26) DI-ISOPROPYL ETHER	3.440	45	6786	0.2622874	ppb		100
27) 2,2-Dichloropropane	3.915	77	2948	0.3072393	ppb	#	45
28) CIS-1,2-DICHLOROETHENE	3.860	96	1689	0.2718208	ppb	#	80
29) 2-BUTANONE (MEK)	4.158	43	6342	1.2060275	ppb	#	73
30) BROMOCHLOROMETHANE	3.970	130	1046	0.3041945	ppb		98
31) TETRAHYDROFURAN	4.097	42	995	0.4097228	ppb	#	21
32) CHLOROFORM	3.988	83	4203	0.3902433	ppb	#	92
34) 1,1,1-TRICHLOROETHANE	4.128	97	2600	0.3002332	ppb	#	90
35) CARBON TETRACHLORIDE	4.085	117	2424	0.3193661	ppb		87

Data Path : C:\msdchem\1\data\021016\
Data File : 0210 09.D
Acq On : 10 Feb 2016 10:46 pm
Operator : 522
Sample : STD VMS .25 ppb 16B10218
Misc : water 15L26724
ALS Vial : 9 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 11 11:43:30 2016
Quant Method : C:\msdchem\1\methods\V807B10P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Thu Feb 11 11:35:07 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
36) 1,1-Dichloropropene	4.195	75	2128	0.2515773	ppb	#	31
37) 2,2,4-TRIMETHYLPENTANE	4.225	57	8132	0.2737333	ppb		97
38) HEPTANE	4.274	43	3528	0.2518607	ppb		97
39) BENZENE	4.329	78	6787	0.2733062	ppb	#	1
40) 1,2-DICHLOROETHANE	4.444	62	1687	0.2190248	ppb	#	75
42) TRICHLOROETHENE	4.657	130	1377	0.2494591	ppb	#	78
43) 1,2-DICHLOROPROPANE	4.974	62	1380	0.2723680	ppb	#	94
44) DIBROMOMETHANE	4.919	93	1170	0.3345733	ppb	#	58
45) BROMODICHLOROMETHANE	4.998	83	2986	0.3674556	ppb	#	1
47) 2-CHLOROETHYL VINYL ETHER	5.308	63	964	1.1766390	ppb	#	49
48) CIS-1,3-DICHLOROPROPENE	5.375	75	3022	0.2886521	ppb	#	94
49) 4-METHYL-2-PENTANONE (...	5.734	43	12249	1.5993435	ppb		99
51) TOLUENE	5.515	91	8452	0.3374410	ppb		97
52) TRANS-1,3-DICHLOROPROPENE	5.777	75	2336	0.2578642	ppb	#	61
54) 1,1,2-TRICHLOROETHANE	5.886	97	1300	0.2500469	ppb	#	67
55) TETRACHLOROETHENE	5.777	164	1030	0.2414703	ppb	#	85
56) 1,3-Dichloropropane	6.069	76	2615	0.2843987	ppb	#	71
57) 2-HEXANONE	6.281	58	4035m	1.0872425	ppb		
58) CHLORODIBROMOMETHANE	6.008	129	1748	0.3114652	ppb	#	77
59) 1,2-DIBROMOETHANE	6.184	107	1658	0.3197034	ppb		88
60) CHLOROBENZENE	6.531	112	4405	0.2892721	ppb	#	92
61) 1,1,1,2-TETRACHLOROETHANE	6.561	133	1614	0.3309800	ppb	#	96
62) ETHYLBENZENE	6.525	106	2209	0.2515465	ppb		90
63) M&P-XYLENE	6.616	106	5781	0.5554011	ppb		99
64) O-XYLENE	6.932	106	2820	0.2715653	ppb		90
65) STYRENE	6.963	104	4805	0.2738941	ppb	#	84
66) Bromoform	7.005	173	882	0.2406400	ppb	#	59
67) Isopropylbenzene	7.139	105	7236	0.2609244	ppb	#	91
69) Bromobenzene	7.456	77	2984	0.2458101	ppb		99
70) 1,1,2,2-TETRACHLOROETHANE	7.498	83	2636	0.3562134	ppb	#	83
71) 1,2,3-TRICHLOROPROPANE	7.614	110	913	0.5011642	ppb	#	66
72) TRANS-1,4-DICHLORO-2-B...	7.638	53	1280	0.5791013	ppb	#	22
73) n-Propylbenzene	7.443	91	8037	0.2420140	ppb	#	92
74) 4-ETHYLTOLUENE	7.523	105	7731	0.2855440	ppb		91
75) 2-Chlorotoluene	7.583	126	1567	0.2714527	ppb		93
76) 4-Chlorotoluene	7.705	91	5341	0.2750080	ppb	#	92
77) 1,3,5-Trimethylbenzene	7.577	105	6086	0.2767387	ppb		95
78) tert-Butylbenzene	7.827	119	4807	0.2523220	ppb		92
79) 1,2,4-Trimethylbenzene	7.881	105	6565	0.2945152	ppb		93
80) sec-Butylbenzene	7.961	105	8505	0.2770162	ppb		94
81) 1,3-DICHLOROBENZENE	8.161	146	2985	0.2557862	ppb		96
82) p-Isopropyltoluene	8.064	119	6599	0.2731339	ppb		97
83) DICYCLOPENTADIENE	8.076	66	8238	0.2598985	ppb	#	93
85) 1,4-DICHLOROBENZENE	8.222	146	3416	0.3093635	ppb	#	1
86) 1,2,3-TRIMETHYLBENZENE	8.228	105	6261	0.2884815	ppb		93
87) 1,2-DICHLOROBENZENE	8.563	146	2581	0.2369873	ppb		95
88) n-Butylbenzene	8.405	91	5294	0.2149691	ppb	#	83
90) 1,2,4-Trichlorobenzene	9.761	180	2095	0.2860497	ppb	#	81
91) HEXACHLORO-1,3-BUTADIENE	9.713	225	1031	0.2486661	ppb	#	90
92) Naphthalene	10.035	128	5847	0.3002562	ppb		100
93) 1,2,3-Trichlorobenzene	10.187	180	1944	0.2837814	ppb	#	73
94) 1-Methylnaphthalene	10.850	142	2962	0.2795978	ppb	#	90
95) 2-Methylnaphthalene	10.966	142	2769	0.3156417	ppb	#	78

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\021016\
Data File : 0210 09.D
Acq On : 10 Feb 2016 10:46 pm
Operator : 522
Sample : STD VMS .25 ppb 16B10218
Misc : water 15L26724
ALS Vial : 9 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 11 11:43:30 2016
Quant Method : C:\msdchem\1\methods\V807B10P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Thu Feb 11 11:35:07 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\021016\
Data File : 0210 09.D
Acq On : 10 Feb 2016 10:46 pm
Operator : 522
Sample : STD VMS .25 ppb 16B10218
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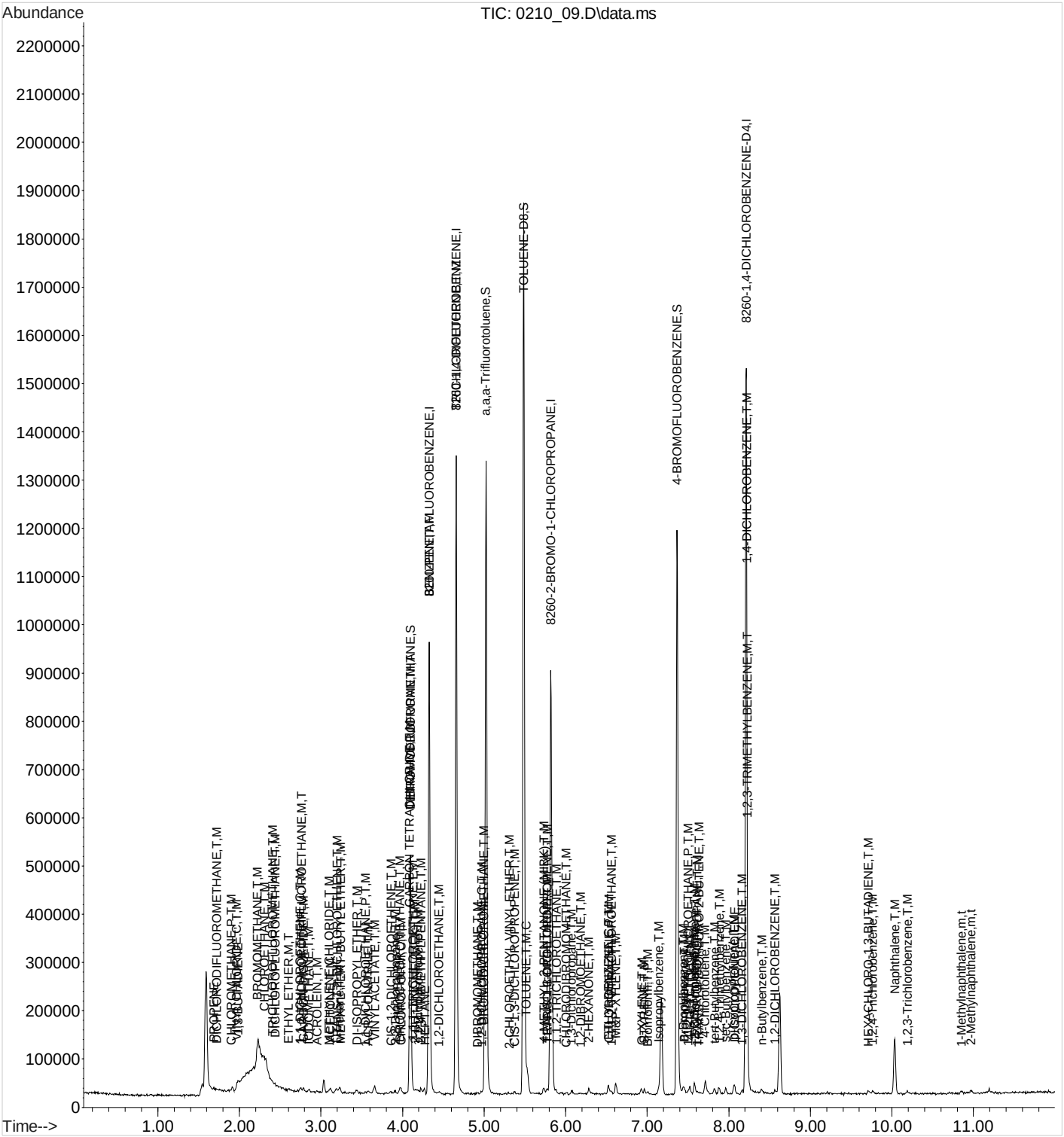
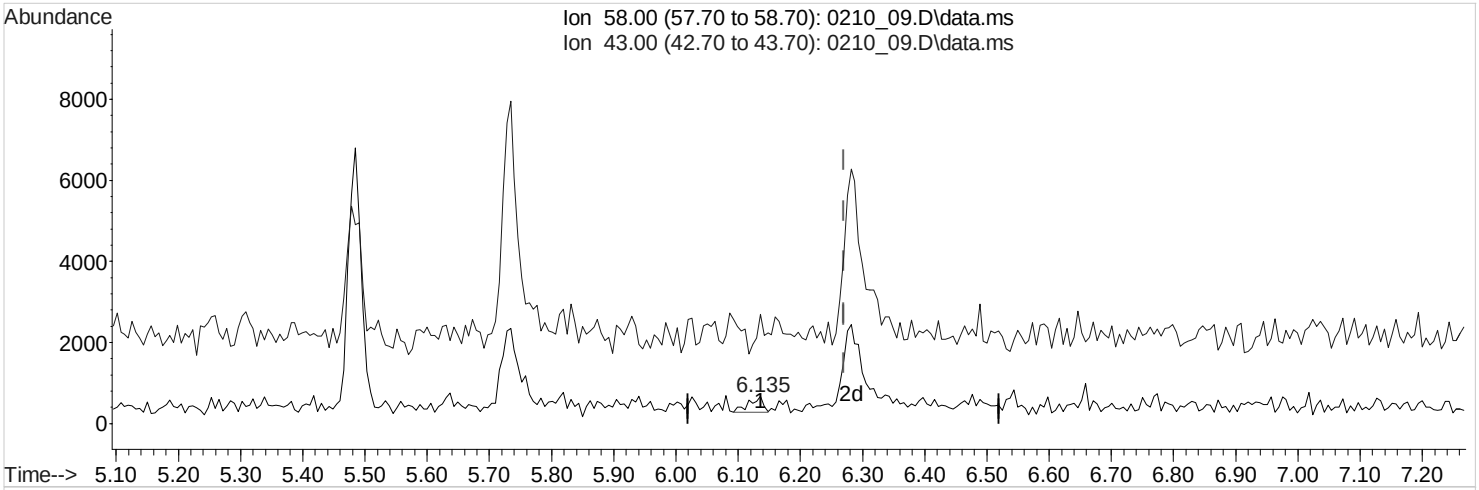
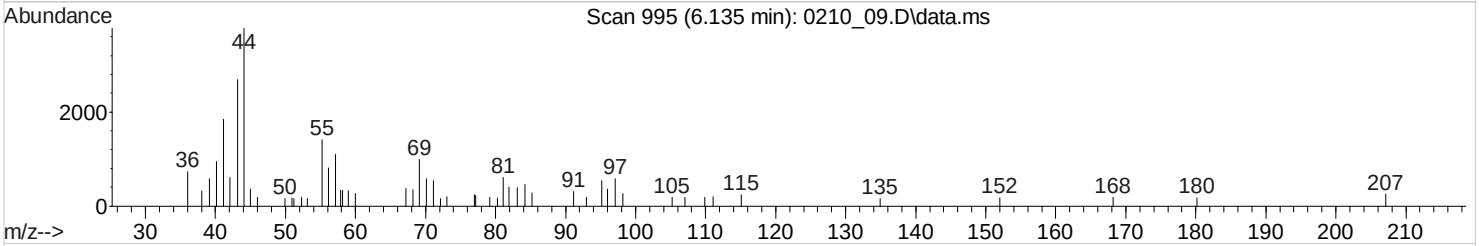
QLast Update : Thu Feb 11 11:35:07 2016
Response via : Initial Calibration

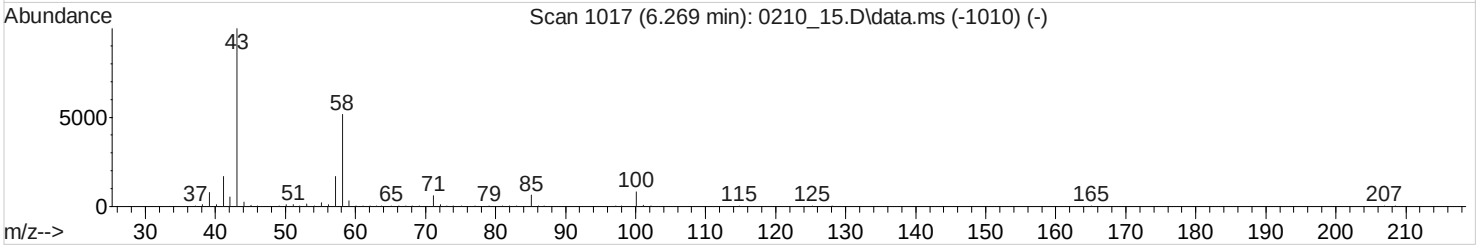


Data Path : C:\msdchem\1\data\021016\
Data File : 0210 09.D
Acq On : 10 Feb 2016 10:46 pm
Operator : 522
Sample : STD VMS .25 ppb 16B10218
Misc : water 15L26724
ALS Vial : 9 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 11 11:38:02 2016
Quant Method : C:\msdchem\1\methods\V807B10P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Thu Feb 11 11:35:07 2016
Response via : Initial Calibration







TIC: 0210_09.D\data.ms

(57) 2-HEXANONE (T,M)

6.135min (-0.134) 0.1605939 ppb

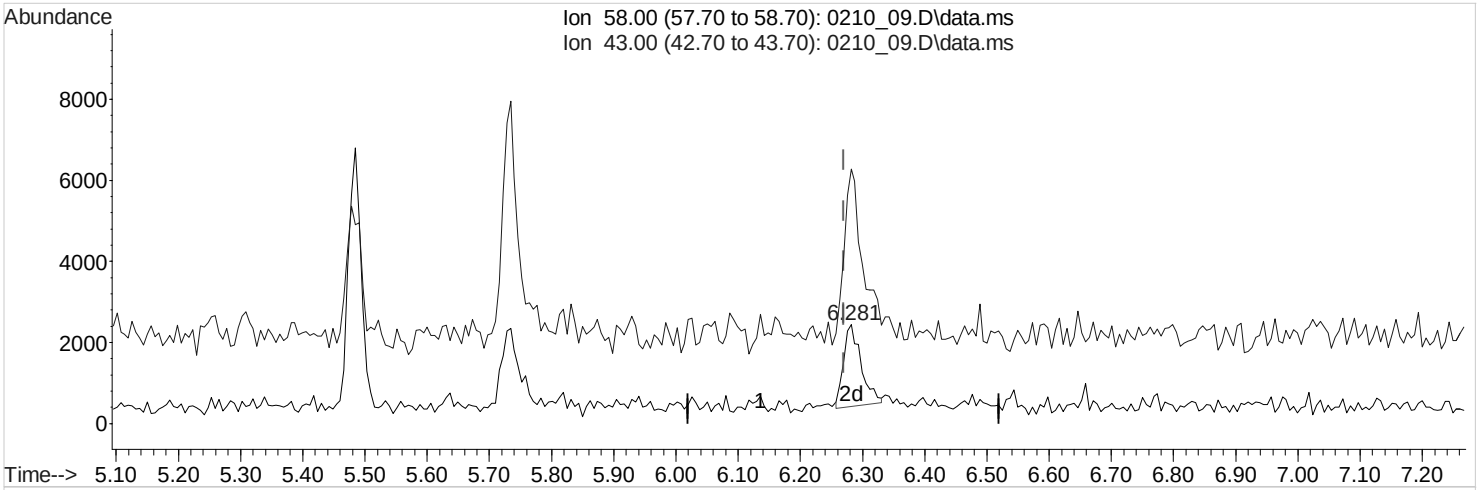
Qvalue = 97

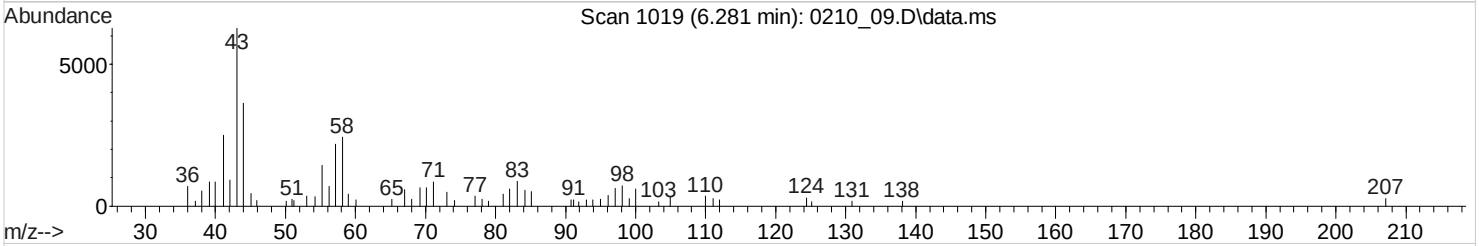
response 596

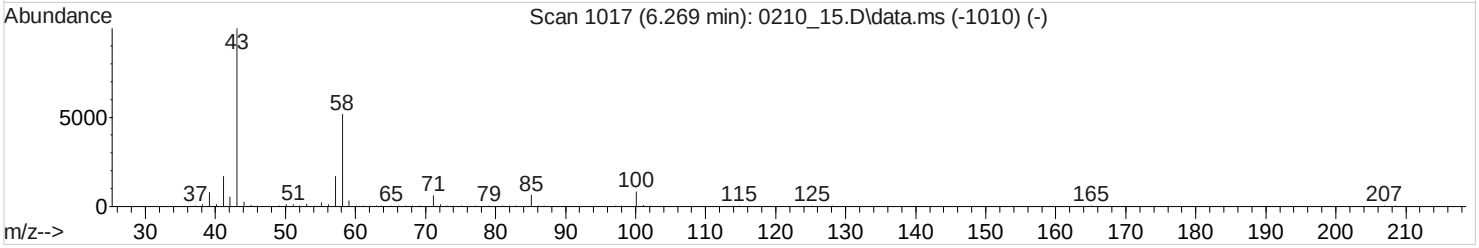
Ion	Exp%	Act%
58.00	100	100
43.00	194.40	189.26
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : C:\msdchem\1\data\021016\
Data File : 0210 09.D
Acq On : 10 Feb 2016 10:46 pm
Operator : 522
Sample : STD VMS .25 ppb 16B10218
Misc : water 15L26724
ALS Vial : 9 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 11 11:38:02 2016
Quant Method : C:\msdchem\1\methods\V807B10P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Thu Feb 11 11:35:07 2016
Response via : Initial Calibration







TIC: 0210_09.D\data.ms

(57) 2-HEXANONE (T,M)

6.281min (+0.012) 1.0872425 ppb m

response 4035

Ion	Exp%	Act%
58.00	100	100
43.00	194.40	27.96#
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : C:\msdchem\1\data\021016\
Data File : 0210 10.D
Acq On : 10 Feb 2016 11:05 pm
Operator : 522
Sample : STD VMS .5 ppb 16B10218
Misc : water 15L26724
ALS Vial : 10 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 11 11:44:59 2016
Quant Method : C:\msdchem\1\methods\V807B10P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Thu Feb 11 11:35:07 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 8260-PENTAFLUOROBENZENE	4.329	168	463458	40.0000000	ppb		0.00
41) 8260-1,4-DIFLUOROBENZENE	4.657	114	771866	40.0000000	ppb		0.00
53) 8260-2-BROMO-1-CHLOROP...	5.819	79	141639	40.0000000	ppb		0.00
84) 8260-1,4-DICHLOROBENZE...	8.216	152	348430	40.0000000	ppb		0.00
96) AP9-PENTAFLUOROBENZENE	0.000	168	0m	40.0000000	ppb		-4.33
114) AP9-1,4-DIFLUOROBENZENE	0.000	114	0m	40.0000000	ppb		-4.66
122) AP9-2-BROMO-1-CHLOROPR...	0.000	79	0m	40.0000000	ppb		-5.82
128) AP9-1,4-DICHLOROBENZEN...	0.000	152	0m	40.0000000	ppb		-8.22
System Monitoring Compounds							
33) DIBROMOFLUOROMETHANE	4.098	111	245863	41.1585011	ppb		0.00
Spiked Amount 40.000	Range 78 - 121		Recovery = 102.90%				
46) a,a,a-Trifluorotoluene	5.022	146	421580	41.9238147	ppb		0.00
Spiked Amount 40.000	Range 85 - 114		Recovery = 104.81%				
50) TOLUENE-D8	5.485	98	978792	41.8229608	ppb		0.00
Spiked Amount 40.000	Range 89 - 111		Recovery = 104.56%				
68) 4-BROMOFLUOROBENZENE	7.364	95	361015	40.5081613	ppb		0.00
Spiked Amount 40.000	Range 71 - 126		Recovery = 101.27%				
Target Compounds							Qvalue
2) TPH (GC/MS) LOW FRACTION	4.406	TIC	-5457396m	Below Cal			
3) PROPENE	1.682	41	1782	0.7169076	ppb	#	72
4) DICHLORODIFLUOROMETHANE	1.725	85	3741	0.5526132	ppb		93
5) CHLOROMETHANE	1.901	50	5514	0.5750233	ppb	#	87
6) VINYL CHLORIDE	1.962	62	4504	0.5148606	ppb	#	94
7) 1,3-BUTADIENE	1.974	39	4813	0.6457245	ppb		89
8) BROMOMETHANE	2.212	94	5691	1.3441305	ppb	#	73
9) CHLOROETHANE	2.303	64	3444	0.7532620	ppb	#	74
10) TRICHLOROFLUOROMETHANE	2.406	101	4552	0.5251079	ppb	#	89
11) DICHLOROFLUOROMETHANE	2.443	67	5625	0.4799185	ppb		90
12) ETHYL ETHER	2.601	59	3049	0.5568265	ppb		96
13) ACROLEIN	2.954	56	3053	2.3377520	ppb		98
14) 1,1-DICHLOROETHENE	2.753	61	4946	0.5115724	ppb	#	79
15) 1,1,2-TRICHLOROTRIFLUO...	2.765	101	3042	0.5533861	ppb	#	88
16) ACETONE	3.118	43	12002	2.9104294	ppb		91
17) IODOMETHANE	2.857	142	11212	1.8575802	ppb	#	93
18) CARBON DISULFIDE	2.790	76	11904	0.5667643	ppb	#	69
19) METHYLENE CHLORIDE	3.100	84	4239m	0.7089080	ppb		
20) ACRYLONITRILE	3.581	53	7010	2.7741787	ppb		98
21) n-Hexane	3.222	56	4408	0.6597989	ppb	#	76
22) TRANS-1,2-DICHLOROETHENE	3.197	96	3942	0.7030920	ppb	#	79
23) METHYL TERT-BUTYL ETHER	3.240	73	8415	0.4938459	ppb	#	63
24) 1,1-DICHLOROETHANE	3.550	63	6061	0.5058311	ppb	#	78
25) VINYL ACETATE	3.660	43	43904	2.8932834	ppb		97
26) DI-ISOPROPYL ETHER	3.434	45	12141	0.4751668	ppb	#	71
27) 2,2-Dichloropropane	3.909	77	5520	0.5825277	ppb		93
28) CIS-1,2-DICHLOROETHENE	3.848	96	2995	0.4880654	ppb	#	84
29) 2-BUTANONE (MEK)	4.152	43	14322	2.7578000	ppb		97
30) BROMOCHLOROMETHANE	3.970	130	1684	0.4958952	ppb		91
31) TETRAHYDROFURAN	4.092	42	1971	0.8218296	ppb	#	75
32) CHLOROFORM	3.988	83	5773	0.5427574	ppb	#	93
34) 1,1,1-TRICHLOROETHANE	4.128	97	4776	0.5584416	ppb	#	85
35) CARBON TETRACHLORIDE	4.085	117	4419	0.5895332	ppb		91

Data Path : C:\msdchem\1\data\021016\
Data File : 0210 10.D
Acq On : 10 Feb 2016 11:05 pm
Operator : 522
Sample : STD VMS .5 ppb 16B10218
Misc : water 15L26724
ALS Vial : 10 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 11 11:44:59 2016
Quant Method : C:\msdchem\1\methods\V807B10P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Thu Feb 11 11:35:07 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
36) 1,1-Dichloropropene	4.189	75	4453	0.5330657	ppb	#	71
37) 2,2,4-TRIMETHYLPENTANE	4.225	57	15311	0.5218696	ppb		95
38) HEPTANE	4.268	43	8161	0.5899339	ppb	#	83
39) BENZENE	4.335	78	13385	0.5457808	ppb	#	19
40) 1,2-DICHLOROETHANE	4.450	62	3797	0.4991683	ppb	#	71
42) TRICHLOROETHENE	4.657	130	3088	0.5685045	ppb		99
43) 1,2-DICHLOROPROPANE	4.968	62	2932	0.5880744	ppb		89
44) DIBROMOMETHANE	4.919	93	2039	0.5925348	ppb	#	55
45) BROMODICHLOROMETHANE	4.992	83	5283	0.6606736	ppb	#	78
47) 2-CHLOROETHYL VINYL ETHER	5.308	63	1787	2.2165728	ppb	#	71
48) CIS-1,3-DICHLOROPROPENE	5.369	75	5970	0.5794898	ppb	#	64
49) 4-METHYL-2-PENTANONE (...	5.728	43	21277	2.8232072	ppb		92
51) TOLUENE	5.515	91	14339	0.5817661	ppb		99
52) TRANS-1,3-DICHLOROPROPENE	5.777	75	4698	0.5270143	ppb	#	66
54) 1,1,2-TRICHLOROETHANE	5.880	97	3013	0.5917821	ppb		95
55) TETRACHLOROETHENE	5.771	164	2286	0.5472518	ppb		92
56) 1,3-Dichloropropane	6.075	76	4743	0.5267368	ppb	#	88
57) 2-HEXANONE	6.276	58	9249	2.5448501	ppb		99
58) CHLORODIBROMOMETHANE	6.014	129	3485	0.6340966	ppb		87
59) 1,2-DIBROMOETHANE	6.190	107	2681	0.5278908	ppb		97
60) CHLOROBENZENE	6.525	112	8772	0.5882254	ppb		100
61) 1,1,1,2-TETRACHLOROETHANE	6.561	133	2830	0.5926103	ppb	#	97
62) ETHYLBENZENE	6.519	106	4834	0.5621001	ppb		95
63) M&P-XYLENE	6.616	106	11944	1.1717584	ppb		94
64) O-XYLENE	6.926	106	5929	0.5830303	ppb		97
65) STYRENE	6.969	104	8879	0.5168183	ppb		90
66) Bromoform	7.012	173	1879	0.5234925	ppb		96
67) Isopropylbenzene	7.139	105	16369	0.6027300	ppb		99
69) Bromobenzene	7.462	77	6177	0.5195928	ppb		95
70) 1,1,2,2-TETRACHLOROETHANE	7.492	83	4606	0.6355845	ppb	#	88
71) 1,2,3-TRICHLOROPROPANE	7.614	110	1187	0.6653413	ppb	#	15
72) TRANS-1,4-DICHLORO-2-B...	7.644	53	1502	0.6939034	ppb	#	56
73) n-Propylbenzene	7.444	91	16961	0.5215338	ppb	#	95
74) 4-ETHYLTOLUENE	7.517	105	15692	0.5918343	ppb		99
75) 2-Chlorotoluene	7.577	126	3396	0.6007273	ppb		87
76) 4-Chlorotoluene	7.705	91	11800	0.6204249	ppb		96
77) 1,3,5-Trimethylbenzene	7.577	105	12487	0.5798032	ppb		96
78) tert-Butylbenzene	7.827	119	10528	0.5643017	ppb		100
79) 1,2,4-Trimethylbenzene	7.882	105	13470	0.6170569	ppb		99
80) sec-Butylbenzene	7.961	105	16899	0.5620518	ppb		99
81) 1,3-DICHLOROBENZENE	8.161	146	6171	0.5399740	ppb		96
82) p-Isopropyltoluene	8.058	119	13007	0.5497423	ppb		97
83) DICYCLOPENTADIENE	8.076	66	17569	0.5659963	ppb		97
85) 1,4-DICHLOROBENZENE	8.222	146	6163	0.5680976	ppb	#	1
86) 1,2,3-TRIMETHYLBENZENE	8.228	105	12762	0.5985116	ppb		97
87) 1,2-DICHLOROBENZENE	8.563	146	5575	0.5210285	ppb		87
88) n-Butylbenzene	8.405	91	12461	0.5150204	ppb		96
89) 1,2-Dibromo-3-chloropr...	9.208	157	935	0.6607499	ppb		92
90) 1,2,4-Trichlorobenzene	9.761	180	3852	0.5353321	ppb		99
91) HEXACHLORO-1,3-BUTADIENE	9.713	225	2150	0.5278079	ppb		98
92) Naphthalene	10.035	128	10435	0.5454197	ppb	#	92
93) 1,2,3-Trichlorobenzene	10.193	180	3307	0.4913618	ppb		85
94) 1-Methylnaphthalene	10.850	142	4718	0.4533005	ppb	#	75
95) 2-Methylnaphthalene	10.966	142	4429	0.5138740	ppb		91

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\021016\
Data File : 0210 10.D
Acq On : 10 Feb 2016 11:05 pm
Operator : 522
Sample : STD VMS .5 ppb 16B10218
Misc : water 15L26724
ALS Vial : 10 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 11 11:44:59 2016
Quant Method : C:\msdchem\1\methods\V807B10P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Thu Feb 11 11:35:07 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\021016\
Data File : 0210 10.D
Acq On : 10 Feb 2016 11:05 pm
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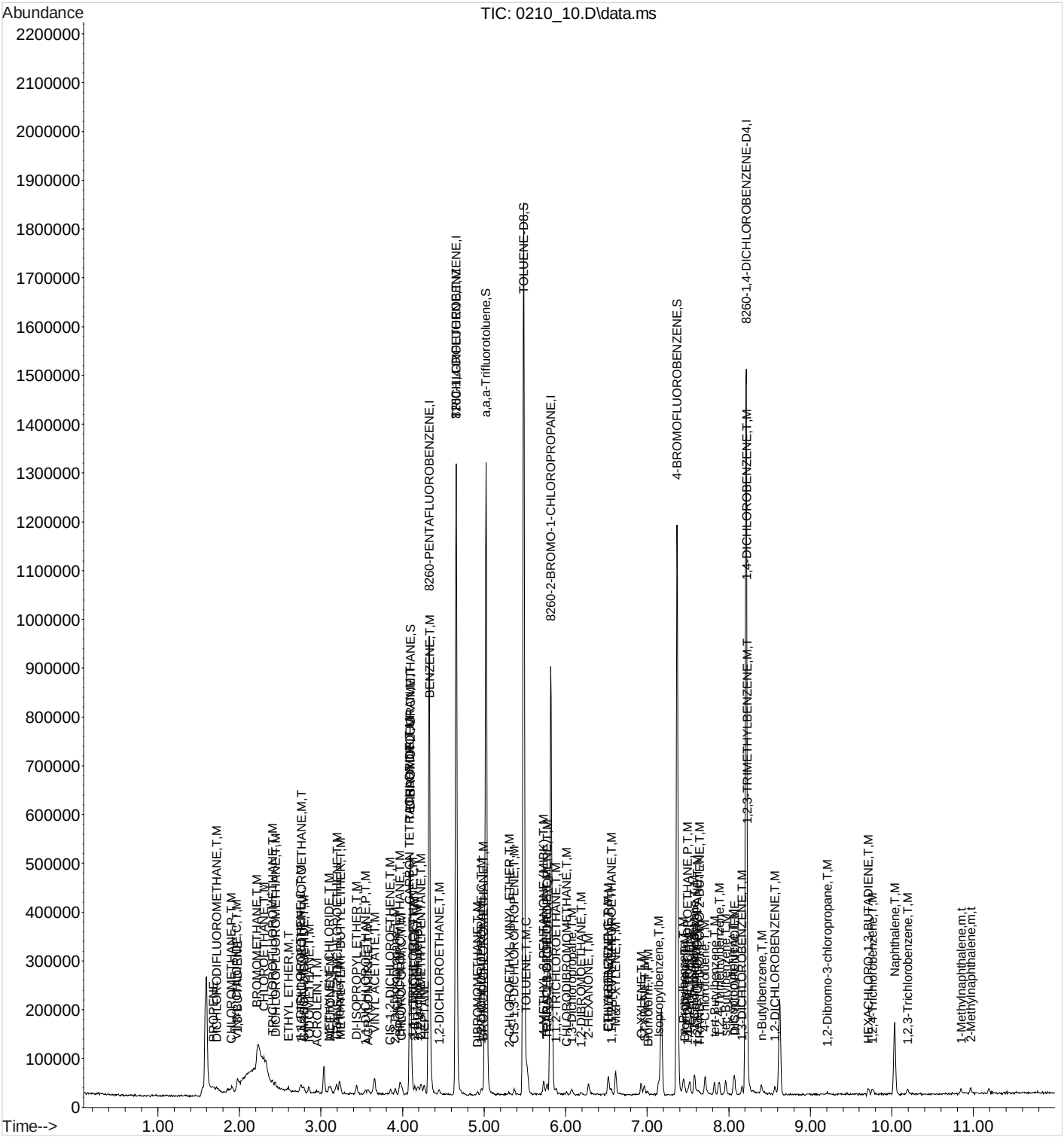
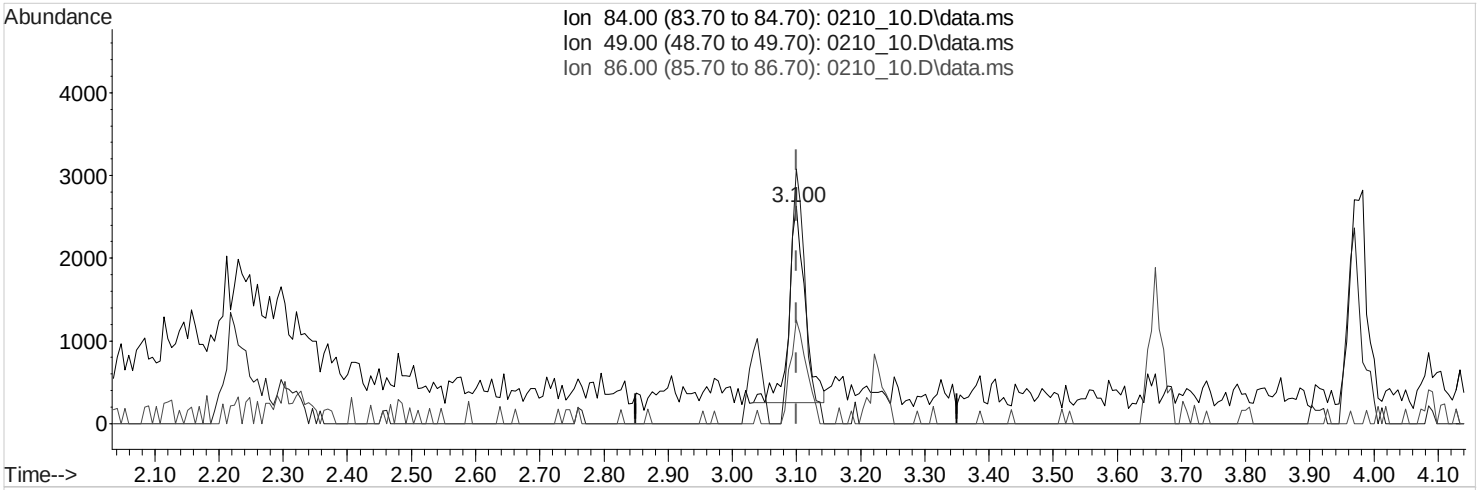
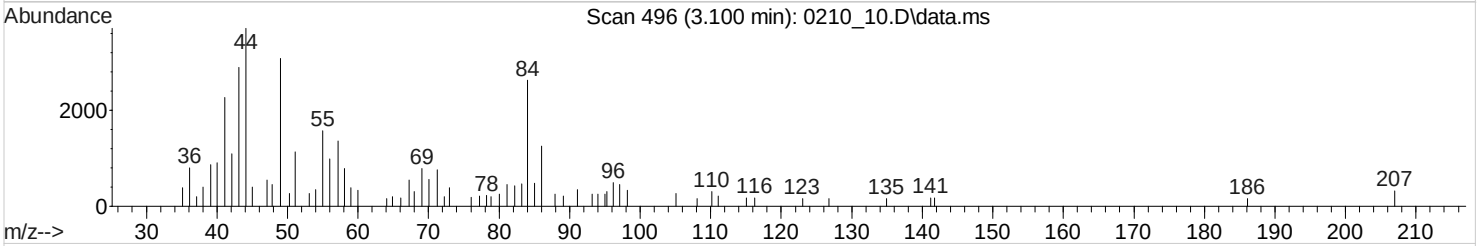
QLast Update : Thu Feb 11 11:35:07 2016
Response via : Initial Calibration

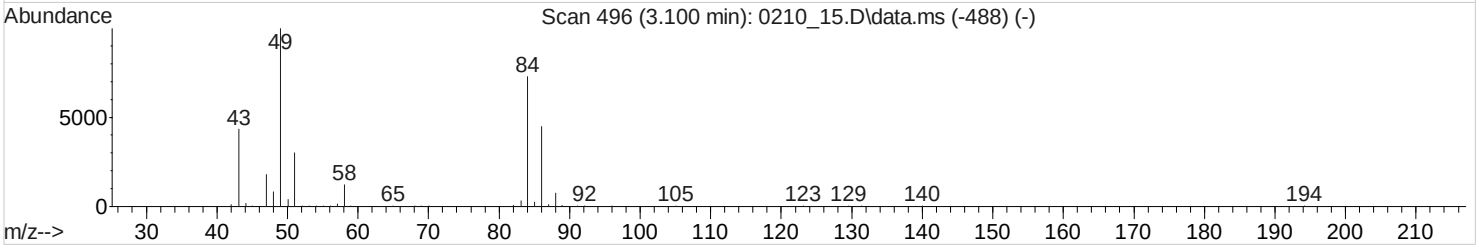


Data Path : C:\msdchem\1\data\021016\
Data File : 0210 10.D
Acq On : 10 Feb 2016 11:05 pm
Operator : 522
Sample : STD VMS .5 ppb 16B10218
Misc : water 15L26724
ALS Vial : 10 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 11 11:38:06 2016
Quant Method : C:\msdchem\1\methods\V807B10P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Thu Feb 11 11:35:07 2016
Response via : Initial Calibration







TIC: 0210_10.D\data.ms

(19) METHYLENE CHLORIDE (T,M)

3.100min (+0.000) 0.7079046 ppb

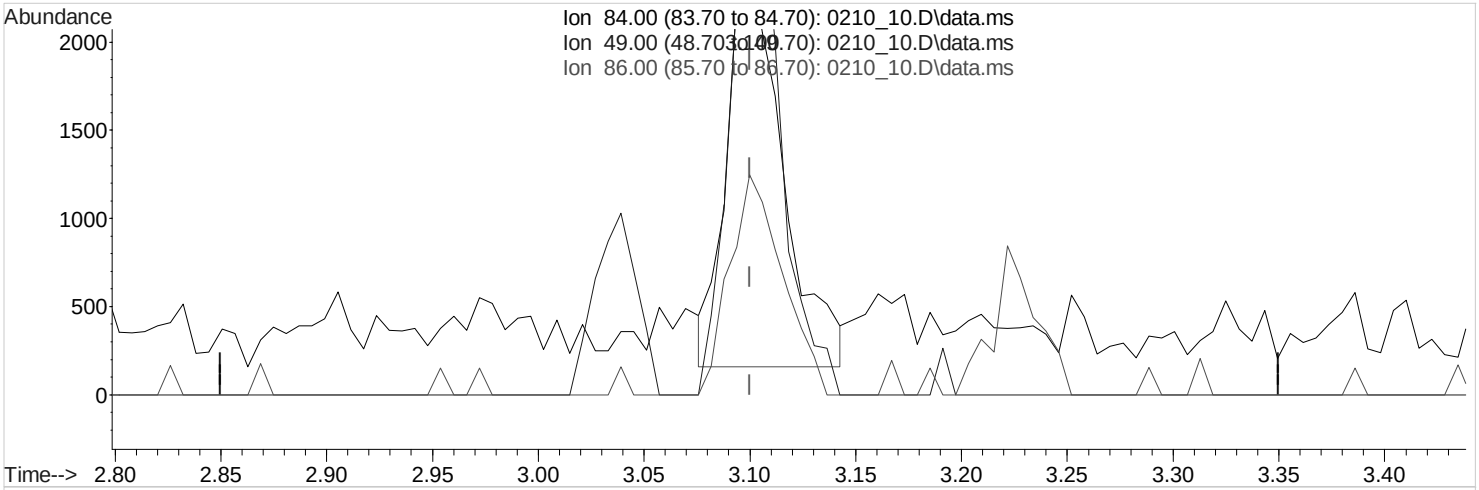
Qvalue = 78

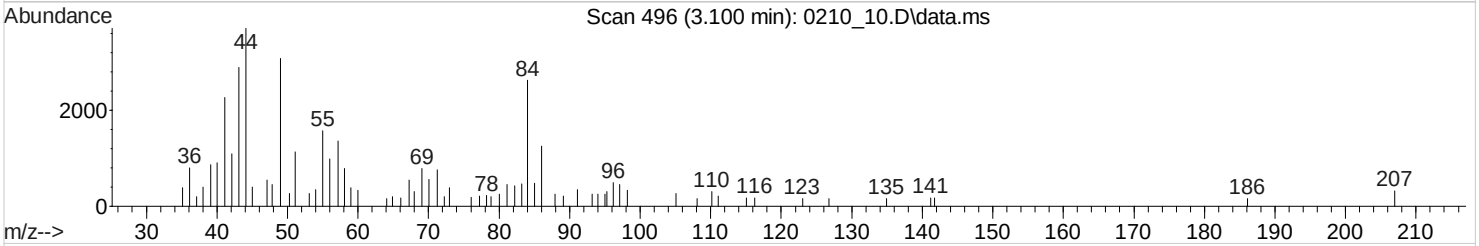
response 4233

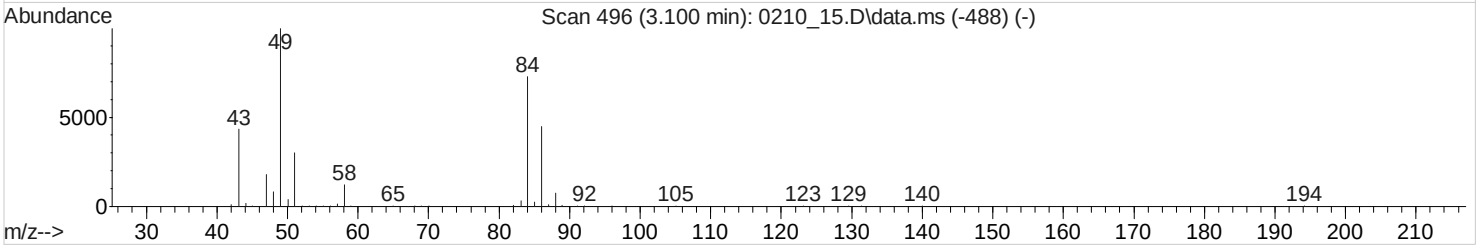
Ion	Exp%	Act%
84.00	100	100
49.00	146.90	115.64#
86.00	62.50	51.64
0.00	0.00	0.00

Data Path : C:\msdchem\1\data\021016\
Data File : 0210 10.D
Acq On : 10 Feb 2016 11:05 pm
Operator : 522
Sample : STD VMS .5 ppb 16B10218
Misc : water 15L26724
ALS Vial : 10 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 11 11:38:06 2016
Quant Method : C:\msdchem\1\methods\V807B10P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Thu Feb 11 11:35:07 2016
Response via : Initial Calibration







TIC: 0210_10.D\data.ms

(19) METHYLENE CHLORIDE (T,M)

3.100min (+0.000) 0.7089080 ppb m

response 4239

Ion	Exp%	Act%
84.00	100	100
49.00	146.90	115.48#
86.00	62.50	51.57
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\021016\
Data File : 0210 11.D
Acq On : 10 Feb 2016 11:24 pm
Operator : 522
Sample : STD VMS 1 ppb 16B10218
Misc : water 15L26724
ALS Vial : 11 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 11 11:45:57 2016
Quant Method : C:\msdchem\1\methods\V807B10P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Thu Feb 11 11:35:07 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 8260-PENTAFLUOROBENZENE	4.329	168	463273	40.0000000	ppb	0.00
41) 8260-1,4-DIFLUOROBENZENE	4.657	114	778018	40.0000000	ppb	0.00
53) 8260-2-BROMO-1-CHLOROP...	5.825	79	142741	40.0000000	ppb	0.00
84) 8260-1,4-DICHLOROBENZE...	8.216	152	348295	40.0000000	ppb	0.00
96) AP9-PENTAFLUOROBENZENE	0.000	168	0m	40.0000000	ppb	-4.33
114) AP9-1,4-DIFLUOROBENZENE	0.000	114	0m	40.0000000	ppb	-4.66
122) AP9-2-BROMO-1-CHLOROPR...	0.000	79	0m	40.0000000	ppb	-5.82
128) AP9-1,4-DICHLOROBENZEN...	0.000	152	0m	40.0000000	ppb	-8.22
System Monitoring Compounds						
33) DIBROMOFLUOROMETHANE	4.098	111	249582	41.7977619	ppb	0.00
Spiked Amount 40.000	Range 78 - 121		Recovery = 104.49%			
46) a,a,a-Trifluorotoluene	5.022	146	432887	42.7078397	ppb	0.00
Spiked Amount 40.000	Range 85 - 114		Recovery = 106.77%			
50) TOLUENE-D8	5.485	98	996650	42.2492789	ppb	0.00
Spiked Amount 40.000	Range 89 - 111		Recovery = 105.62%			
68) 4-BROMOFLUOROBENZENE	7.364	95	369434	41.1327989	ppb	0.00
Spiked Amount 40.000	Range 71 - 126		Recovery = 102.83%			
Target Compounds						Qvalue
2) TPH (GC/MS) LOW FRACTION	4.406	TIC	-4554450m	Below Cal		
3) PROPENE	1.688	41	2582	1.0391665	ppb #	71
4) DICHLORODIFLUOROMETHANE	1.725	85	7149	1.0564580	ppb	94
5) CHLOROMETHANE	1.895	50	10631	1.1090885	ppb	99
6) VINYL CHLORIDE	1.962	62	8807	1.0071465	ppb #	95
7) 1,3-BUTADIENE	1.974	39	9332	1.2525052	ppb	93
8) BROMOMETHANE	2.218	94	4507	1.0649122	ppb #	47
9) CHLOROETHANE	2.303	64	6017	1.3165469	ppb #	76
10) TRICHLOROFLUOROMETHANE	2.406	101	9051	1.0445187	ppb	99
11) DICHLOROFLUOROMETHANE	2.437	67	13456	1.1485088	ppb	100
12) ETHYL ETHER	2.601	59	5481	1.0013725	ppb	94
13) ACROLEIN	2.954	56	6716	5.1446486	ppb	94
14) 1,1-DICHLOROETHENE	2.747	61	9785	1.0124818	ppb	94
15) 1,1,2-TRICHLOROTRIFLUO...	2.765	101	5642	1.0267755	ppb #	89
16) ACETONE	3.118	43	21115	5.1223344	ppb	91
17) IODOMETHANE	2.857	142	24047	3.9856466	ppb	98
18) CARBON DISULFIDE	2.784	76	22444	1.0690137	ppb #	80
19) METHYLENE CHLORIDE	3.106	84	6117	1.0233833	ppb	91
20) ACRYLONITRILE	3.580	53	12504	4.9503827	ppb	99
21) n-Hexane	3.222	56	7308	1.0943140	ppb	77
22) TRANS-1,2-DICHLOROETHENE	3.197	96	5722	1.0209789	ppb #	93
23) METHYL TERT-BUTYL ETHER	3.240	73	17421	1.0227838	ppb	88
24) 1,1-DICHLOROETHANE	3.550	63	11970	0.9993756	ppb	96
25) VINYL ACETATE	3.660	43	76768	5.0610485	ppb	99
26) DI-ISOPROPYL ETHER	3.434	45	26575	1.0404910	ppb	90
27) 2,2-Dichloropropane	3.915	77	10315	1.0889805	ppb	95
28) CIS-1,2-DICHLOROETHENE	3.854	96	5804	0.9461979	ppb	91
29) 2-BUTANONE (MEK)	4.152	43	27885	5.3715935	ppb	95
30) BROMOCHLOROMETHANE	3.970	130	3382	0.9963108	ppb	93
31) TETRAHYDROFURAN	4.085	42	2659	1.1091413	ppb #	62
32) CHLOROFORM	3.988	83	11344	1.0669494	ppb	94
34) 1,1,1-TRICHLOROETHANE	4.122	97	9426	1.1025906	ppb	94
35) CARBON TETRACHLORIDE	4.085	117	7921	1.0571527	ppb	98

Data Path : C:\msdchem\1\data\021016\
Data File : 0210 11.D
Acq On : 10 Feb 2016 11:24 pm
Operator : 522
Sample : STD VMS 1 ppb 16B10218
Misc : water 15L26724
ALS Vial : 11 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 11 11:45:57 2016
Quant Method : C:\msdchem\1\methods\V807B10P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Thu Feb 11 11:35:07 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
36) 1,1-Dichloropropene	4.189	75	8618	1.0320670	ppb	#	83
37) 2,2,4-TRIMETHYLPENTANE	4.225	57	29444	1.0039883	ppb		91
38) HEPTANE	4.268	43	14729	1.0651398	ppb		91
39) BENZENE	4.335	78	25123	1.0248133	ppb	#	62
40) 1,2-DICHLOROETHANE	4.444	62	7564	0.9947898	ppb	#	84
42) TRICHLOROETHENE	4.657	130	5525	1.0091161	ppb		92
43) 1,2-DICHLOROPROPANE	4.968	62	4969	0.9887569	ppb	#	95
44) DIBROMOMETHANE	4.919	93	3631	1.0468276	ppb		85
45) BROMODICHLOROMETHANE	4.998	83	8504	1.0550713	ppb	#	91
47) 2-CHLOROETHYL VINYL ETHER	5.308	63	3303	4.0646044	ppb	#	76
48) CIS-1,3-DICHLOROPROPENE	5.369	75	11258	1.0841391	ppb	#	93
49) 4-METHYL-2-PENTANONE (...	5.728	43	41421	5.4526196	ppb		97
51) TOLUENE	5.521	91	25706	1.0347045	ppb		96
52) TRANS-1,3-DICHLOROPROPENE	5.777	75	9243	1.0286666	ppb	#	95
54) 1,1,2-TRICHLOROETHANE	5.880	97	5147	1.0031156	ppb		90
55) TETRACHLOROETHENE	5.771	164	4408	1.0470964	ppb		96
56) 1,3-Dichloropropane	6.069	76	9406	1.0365245	ppb	#	84
57) 2-HEXANONE	6.275	58	18209	4.9715022	ppb		97
58) CHLORODIBROMOMETHANE	6.014	129	6025	1.0877869	ppb		95
59) 1,2-DIBROMOETHANE	6.190	107	5457	1.0661918	ppb		97
60) CHLOROBENZENE	6.525	112	16550	1.1012281	ppb		93
61) 1,1,1,2-TETRACHLOROETHANE	6.561	133	5327	1.1068775	ppb	#	91
62) ETHYLBENZENE	6.519	106	9720	1.1215211	ppb		99
63) M&P-XYLENE	6.616	106	21769	2.1191460	ppb		97
64) O-XYLENE	6.920	106	10623	1.0365516	ppb		97
65) STYRENE	6.963	104	17491	1.0102354	ppb		94
66) Bromoform	7.006	173	3581	0.9899702	ppb		92
67) Isopropylbenzene	7.139	105	27907	1.0196425	ppb	#	92
69) Bromobenzene	7.456	77	13441	1.1218924	ppb		95
70) 1,1,2,2-TETRACHLOROETHANE	7.498	83	8558	1.1718060	ppb	#	93
71) 1,2,3-TRICHLOROPROPANE	7.620	110	2722	1.5139656	ppb		85
72) TRANS-1,4-DICHLORO-2-B...	7.632	53	1997	0.9154640	ppb	#	85
73) n-Propylbenzene	7.444	91	32741	0.9989806	ppb	#	98
74) 4-ETHYLTOLUENE	7.517	105	28434	1.0641281	ppb		95
75) 2-Chlorotoluene	7.583	126	6007	1.0543903	ppb		98
76) 4-Chlorotoluene	7.705	91	19591	1.0221108	ppb		95
77) 1,3,5-Trimethylbenzene	7.577	105	24844	1.1446644	ppb		94
78) tert-Butylbenzene	7.827	119	19569	1.0408023	ppb		98
79) 1,2,4-Trimethylbenzene	7.882	105	23458	1.0663080	ppb		98
80) sec-Butylbenzene	7.961	105	30846	1.0180013	ppb		98
81) 1,3-DICHLOROBENZENE	8.161	146	11625	1.0093560	ppb		98
82) p-Isopropyltoluene	8.064	119	24723	1.0368532	ppb		99
83) DICYCLOPENTADIENE	8.070	66	33521	1.0715628	ppb		99
85) 1,4-DICHLOROBENZENE	8.228	146	12426	1.1458569	ppb	#	1
86) 1,2,3-TRIMETHYLBENZENE	8.222	105	22025	1.0333277	ppb		94
87) 1,2-DICHLOROBENZENE	8.563	146	10632	0.9940308	ppb		98
88) n-Butylbenzene	8.399	91	24676	1.0202688	ppb		99
89) 1,2-Dibromo-3-chloropr...	9.208	157	1173	0.8292621	ppb	#	62
90) 1,2,4-Trichlorobenzene	9.755	180	7676	1.0671864	ppb		89
91) HEXACHLORO-1,3-BUTADIENE	9.713	225	3995	0.9811209	ppb		99
92) Naphthalene	10.029	128	19021	0.9945807	ppb		96
93) 1,2,3-Trichlorobenzene	10.187	180	6375	0.9475796	ppb		97
94) 1-Methylnaphthalene	10.844	142	9393	0.9028194	ppb	#	94
95) 2-Methylnaphthalene	10.960	142	9017	1.0466014	ppb		85

Data Path : C:\msdchem\1\data\021016\
Data File : 0210 11.D
Acq On : 10 Feb 2016 11:24 pm
Operator : 522
Sample : STD VMS 1 ppb 16B10218
Misc : water 15L26724
ALS Vial : 11 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 11 11:45:57 2016
Quant Method : C:\msdchem\1\methods\V807B10P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Thu Feb 11 11:35:07 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\021016\
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Acq On : 10 Feb 2016 11:24 pm
Operator : 522
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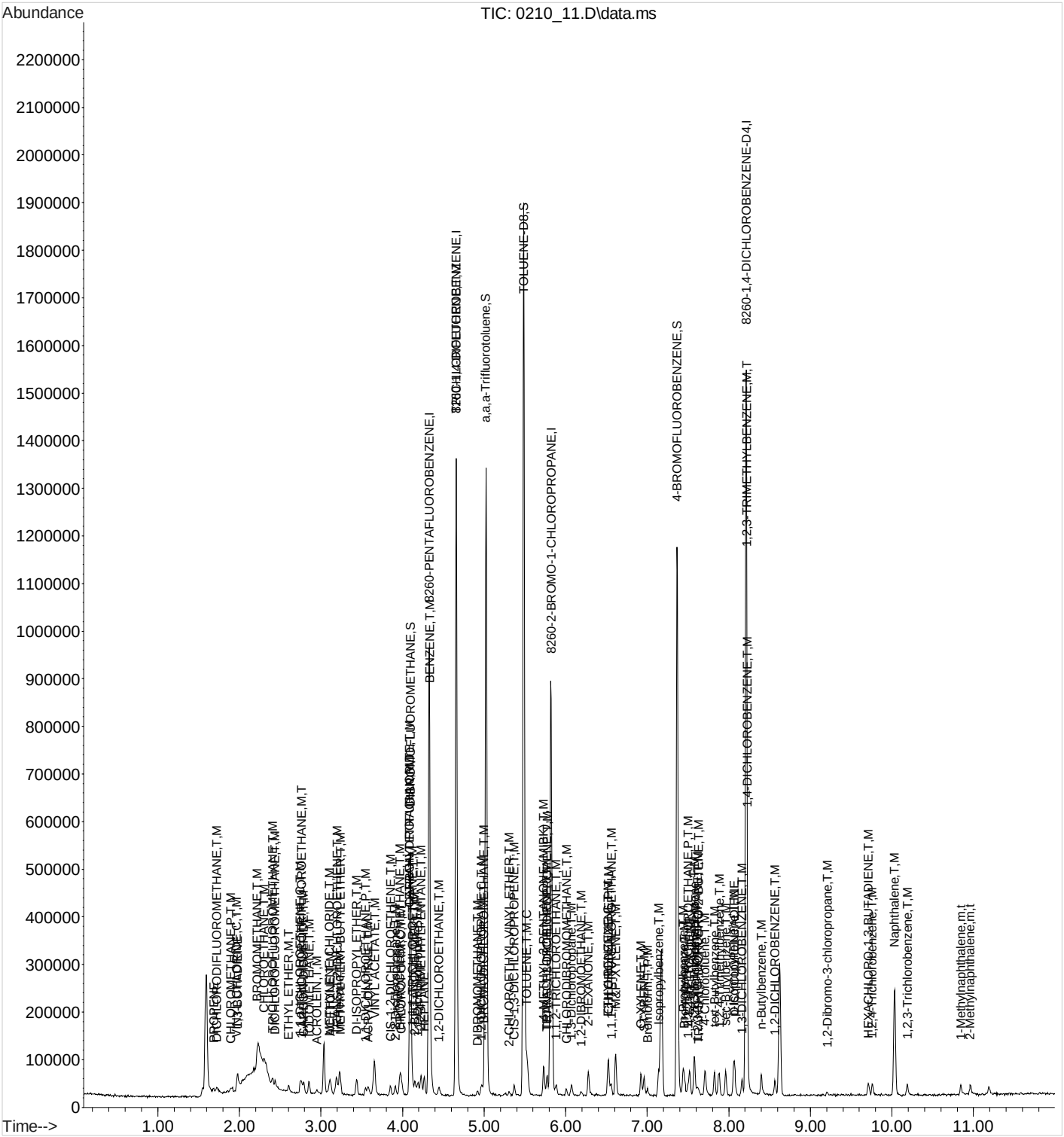
QLast Update : Thu Feb 11 11:35:07 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\021016\
Data File : 0210 12.D
Acq On : 10 Feb 2016 11:44 pm
Operator : 522
Sample : STD VMS 2 ppb 16B10218
Misc : water 15L26724
ALS Vial : 12 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 11 11:47:02 2016
Quant Method : C:\msdchem\1\methods\V807B10P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Thu Feb 11 11:35:07 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 8260-PENTAFLUOROBENZENE	4.329	168	459944	40.0000000	ppb		0.00
41) 8260-1,4-DIFLUOROBENZENE	4.657	114	782748	40.0000000	ppb		0.00
53) 8260-2-BROMO-1-CHLOROP...	5.819	79	141702	40.0000000	ppb		0.00
84) 8260-1,4-DICHLOROBENZE...	8.216	152	361407	40.0000000	ppb		0.00
96) AP9-PENTAFLUOROBENZENE	0.000	168	0m	40.0000000	ppb		-4.33
114) AP9-1,4-DIFLUOROBENZENE	0.000	114	0m	40.0000000	ppb		-4.66
122) AP9-2-BROMO-1-CHLOROPR...	0.000	79	0m	40.0000000	ppb		-5.82
128) AP9-1,4-DICHLOROBENZEN...	0.000	152	0m	40.0000000	ppb		-8.22
System Monitoring Compounds							
33) DIBROMOFLUOROMETHANE	4.098	111	253634	42.7837916	ppb		0.00
Spiked Amount 40.000	Range 78 - 121		Recovery = 106.96%				
46) a,a,a-Trifluorotoluene	5.022	146	439050	43.0541203	ppb		0.00
Spiked Amount 40.000	Range 85 - 114		Recovery = 107.64%				
50) TOLUENE-D8	5.485	98	1008732	42.5030510	ppb		0.00
Spiked Amount 40.000	Range 89 - 111		Recovery = 106.26%				
68) 4-BROMOFLUOROBENZENE	7.365	95	375346	42.0974653	ppb		0.00
Spiked Amount 40.000	Range 71 - 126		Recovery = 105.24%				
Target Compounds							Qvalue
2) TPH (GC/MS) LOW FRACTION	4.406	TIC	-3663094m	Below Cal			
3) PROPENE	1.689	41	6633	2.6888770	ppb	#	90
4) DICHLORODIFLUOROMETHANE	1.725	85	14345	2.1352047	ppb		98
5) CHLOROMETHANE	1.901	50	21001	2.2068056	ppb		99
6) VINYL CHLORIDE	1.962	62	17124	1.9724313	ppb	#	98
7) 1,3-BUTADIENE	1.974	39	16854	2.2784517	ppb		91
8) BROMOMETHANE	2.218	94	9317	2.2173507	ppb	#	74
9) CHLOROETHANE	2.303	64	9704	2.1386471	ppb	#	77
10) TRICHLOROFLUOROMETHANE	2.406	101	17666	2.0534773	ppb		99
11) DICHLOROFLUOROMETHANE	2.437	67	23864	2.0516043	ppb		96
12) ETHYL ETHER	2.601	59	11614	2.1372223	ppb		96
13) ACROLEIN	2.954	56	11976	9.2403591	ppb		92
14) 1,1-DICHLOROETHENE	2.747	61	20010	2.0854776	ppb		98
15) 1,1,2-TRICHLOROTRIFLUO...	2.759	101	10655	1.9531153	ppb	#	89
16) ACETONE	3.118	43	44777	10.9411725	ppb		100
17) IODOMETHANE	2.851	142	49397	8.2465158	ppb		99
18) CARBON DISULFIDE	2.784	76	43826	2.1025525	ppb	#	94
19) METHYLENE CHLORIDE	3.106	84	13913	2.3445131	ppb		93
20) ACRYLONITRILE	3.574	53	25520	10.1765956	ppb		98
21) n-Hexane	3.228	56	13645	2.0580172	ppb		86
22) TRANS-1,2-DICHLOROETHENE	3.197	96	11702	2.1031053	ppb		96
23) METHYL TERT-BUTYL ETHER	3.240	73	36717	2.1712507	ppb		96
24) 1,1-DICHLOROETHANE	3.550	63	24385	2.0506399	ppb		98
25) VINYL ACETATE	3.654	43	153360	10.1836721	ppb		100
26) DI-ISOPROPYL ETHER	3.435	45	50639	1.9970190	ppb		98
27) 2,2-Dichloropropane	3.915	77	19401	2.0630371	ppb	#	82
28) CIS-1,2-DICHLOROETHENE	3.848	96	13552	2.2253073	ppb		90
29) 2-BUTANONE (MEK)	4.152	43	52728	10.2307111	ppb		96
30) BROMOCHLOROMETHANE	3.970	130	6550	1.9435449	ppb		88
31) TETRAHYDROFURAN	4.092	42	6132	2.5763373	ppb	#	85
32) CHLOROFORM	3.988	83	22296	2.1122075	ppb		97
34) 1,1,1-TRICHLOROETHANE	4.122	97	17693	2.0845886	ppb		99
35) CARBON TETRACHLORIDE	4.092	117	14691	1.9748817	ppb		97

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Misc : water 15L26724
ALS Vial : 12 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 11 11:47:02 2016
Quant Method : C:\msdchem\1\methods\V807B10P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Thu Feb 11 11:35:07 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
36) 1,1-Dichloropropene	4.189	75	16808	2.0274469	ppb		93
37) 2,2,4-TRIMETHYLPENTANE	4.225	57	60479	2.0771529	ppb		95
38) HEPTANE	4.262	43	30971	2.2559041	ppb	#	91
39) BENZENE	4.329	78	50890	2.0909215	ppb	#	79
40) 1,2-DICHLOROETHANE	4.444	62	15605	2.0671672	ppb		96
42) TRICHLOROETHENE	4.657	130	11043	2.0047656	ppb		98
43) 1,2-DICHLOROPROPANE	4.968	62	10269	2.0310302	ppb		95
44) DIBROMOMETHANE	4.919	93	7302	2.0924661	ppb		91
45) BROMODICHLOROMETHANE	4.992	83	16663	2.0548468	ppb	#	74
47) 2-CHLOROETHYL VINYL ETHER	5.302	63	6597	8.0690773	ppb	#	90
48) CIS-1,3-DICHLOROPROPENE	5.369	75	21842	2.0906620	ppb		98
49) 4-METHYL-2-PENTANONE (...	5.728	43	77800	10.1796278	ppb		100
51) TOLUENE	5.521	91	51382	2.0557037	ppb		98
52) TRANS-1,3-DICHLOROPROPENE	5.771	75	18833	2.0832858	ppb	#	95
54) 1,1,2-TRICHLOROETHANE	5.886	97	10561	2.0733595	ppb		94
55) TETRACHLOROETHENE	5.771	164	9059	2.1676946	ppb		96
56) 1,3-Dichloropropane	6.069	76	18338	2.0356323	ppb		95
57) 2-HEXANONE	6.276	58	38476	10.5819137	ppb		100
58) CHLORODIBROMOMETHANE	6.014	129	11659	2.1204148	ppb		97
59) 1,2-DIBROMOETHANE	6.190	107	9428	1.8555545	ppb		83
60) CHLOROBENZENE	6.525	112	31275	2.0962804	ppb		96
61) 1,1,1,2-TETRACHLOROETHANE	6.561	133	10298	2.1554726	ppb	#	99
62) ETHYLBENZENE	6.519	106	17390	2.0212196	ppb		97
63) M&P-XYLENE	6.610	106	44731	4.3863549	ppb		99
64) O-XYLENE	6.920	106	21319	2.0954791	ppb		99
65) STYRENE	6.963	104	36289	2.1113280	ppb		97
66) Bromoform	7.006	173	7350	2.0468118	ppb		97
67) Isopropylbenzene	7.139	105	57965	2.1334052	ppb		96
69) Bromobenzene	7.456	77	24723	2.0787083	ppb		99
70) 1,1,2,2-TETRACHLOROETHANE	7.498	83	15043	2.0748689	ppb		99
71) 1,2,3-TRICHLOROPROPANE	7.620	110	3846	2.1548146	ppb		85
72) TRANS-1,4-DICHLORO-2-B...	7.632	53	4114	1.8997666	ppb	#	86
73) n-Propylbenzene	7.444	91	66643	2.0482946	ppb		99
74) 4-ETHYLTOLUENE	7.517	105	54776	2.0649952	ppb		98
75) 2-Chlorotoluene	7.584	126	12375	2.1880727	ppb		90
76) 4-Chlorotoluene	7.705	91	39629	2.0827025	ppb		100
77) 1,3,5-Trimethylbenzene	7.577	105	46443	2.1555081	ppb		100
78) tert-Butylbenzene	7.827	119	38882	2.0831520	ppb		100
79) 1,2,4-Trimethylbenzene	7.876	105	46412	2.1251752	ppb		100
80) sec-Butylbenzene	7.961	105	59951	1.9930522	ppb		97
81) 1,3-DICHLOROBENZENE	8.161	146	23931	2.0930760	ppb		99
82) p-Isopropyltoluene	8.064	119	51646	2.1818534	ppb		98
83) DICYCLOPENTADIENE	8.070	66	67866	2.1853734	ppb		98
85) 1,4-DICHLOROBENZENE	8.228	146	24542	2.1810202	ppb	#	1
86) 1,2,3-TRIMETHYLBENZENE	8.222	105	45545	2.0592711	ppb		99
87) 1,2-DICHLOROBENZENE	8.563	146	22138	1.9946833	ppb		98
88) n-Butylbenzene	8.399	91	51117	2.0368351	ppb		98
89) 1,2-Dibromo-3-chloropr...	9.208	157	2542	1.7318890	ppb		85
90) 1,2,4-Trichlorobenzene	9.761	180	14853	1.9900783	ppb		99
91) HEXACHLORO-1,3-BUTADIENE	9.713	225	8593	2.0337672	ppb		95
92) Naphthalene	10.029	128	40449	2.0382861	ppb		100
93) 1,2,3-Trichlorobenzene	10.187	180	14601	2.0915527	ppb		98
94) 1-Methylnaphthalene	10.844	142	20165	1.8678649	ppb		98
95) 2-Methylnaphthalene	10.960	142	19450	2.1756526	ppb		90

Data Path : C:\msdchem\1\data\021016\
Data File : 0210 12.D
Acq On : 10 Feb 2016 11:44 pm
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Misc : water 15L26724
ALS Vial : 12 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 11 11:47:02 2016
Quant Method : C:\msdchem\1\methods\V807B10P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Thu Feb 11 11:35:07 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\021016\
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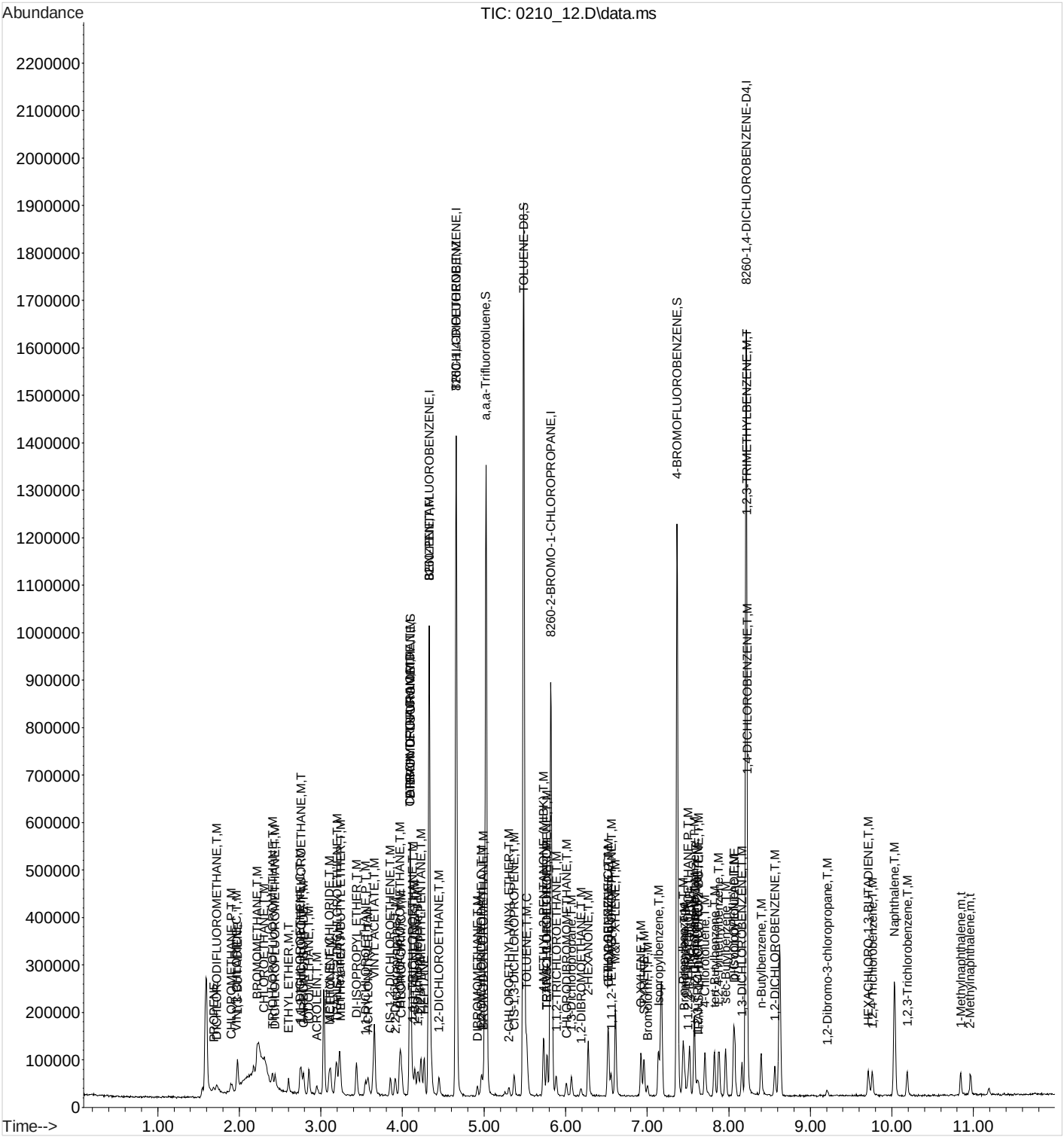

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\021016\
Data File : 0210 13.D
Acq On : 11 Feb 2016 12:03 am
Operator : 522
Sample : STD VMS 5 ppb 16B10218
Misc : water 15L26724
ALS Vial : 13 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 11 11:48:03 2016
Quant Method : C:\msdchem\1\methods\V807B10P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Thu Feb 11 11:35:07 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 8260-PENTAFLUOROBENZENE	4.329	168	475659	40.0000000	ppb	0.00
41) 8260-1,4-DIFLUOROBENZENE	4.657	114	809470	40.0000000	ppb	0.00
53) 8260-2-BROMO-1-CHLOROP...	5.825	79	148342	40.0000000	ppb	0.00
84) 8260-1,4-DICHLOROBENZE...	8.216	152	366024	40.0000000	ppb	0.00
96) AP9-PENTAFLUOROBENZENE	0.000	168	0m	40.0000000	ppb	-4.33
114) AP9-1,4-DIFLUOROBENZENE	0.000	114	0m	40.0000000	ppb	-4.66
122) AP9-2-BROMO-1-CHLOROPR...	0.000	79	0m	40.0000000	ppb	-5.82
128) AP9-1,4-DICHLOROBENZEN...	0.000	152	0m	40.0000000	ppb	-8.22
System Monitoring Compounds						
33) DIBROMOFLUOROMETHANE	4.098	111	266588	43.4832138	ppb	0.00
Spiked Amount 40.000	Range 78 - 121		Recovery = 108.71%			
46) a,a,a-Trifluorotoluene	5.022	146	458883	43.5134899	ppb	0.00
Spiked Amount 40.000	Range 85 - 114		Recovery = 108.78%			
50) TOLUENE-D8	5.485	98	1061591	43.2536483	ppb	0.00
Spiked Amount 40.000	Range 89 - 111		Recovery = 108.13%			
68) 4-BROMOFLUOROBENZENE	7.364	95	401564	43.0220179	ppb	0.00
Spiked Amount 40.000	Range 71 - 126		Recovery = 107.56%			
Target Compounds						Qvalue
2) TPH (GC/MS) LOW FRACTION	4.406	TIC	-519957m	Below Cal		
3) PROPENE	1.682	41	14646	5.7410219	ppb	91
4) DICHLORODIFLUOROMETHANE	1.725	85	32667	4.7017274	ppb	97
5) CHLOROMETHANE	1.895	50	47731	4.8499122	ppb	97
6) VINYL CHLORIDE	1.962	62	43125	4.8032481	ppb	95
7) 1,3-BUTADIENE	1.974	39	38563	5.0410022	ppb	95
8) BROMOMETHANE	2.212	94	18499	4.2571189	ppb #	82
9) CHLOROETHANE	2.303	64	22799	4.8586251	ppb	97
10) TRICHLOROFLUOROMETHANE	2.406	101	42662	4.7951494	ppb	99
11) DICHLOROFLUOROMETHANE	2.437	67	58697	4.8795021	ppb	98
12) ETHYL ETHER	2.601	59	25939	4.6156232	ppb	97
13) ACROLEIN	2.948	56	31696	23.6478009	ppb	95
14) 1,1-DICHLOROETHENE	2.747	61	45574	4.5928771	ppb	99
15) 1,1,2-TRICHLOROTRIFLUO...	2.759	101	26718	4.7357375	ppb	99
16) ACETONE	3.118	43	104404	24.6680744	ppb	98
17) IODOMETHANE	2.850	142	129480	20.9017115	ppb	98
18) CARBON DISULFIDE	2.783	76	104038	4.8263216	ppb	97
19) METHYLENE CHLORIDE	3.100	84	29330	4.7791778	ppb	95
20) ACRYLONITRILE	3.574	53	62345	24.0399031	ppb	99
21) n-Hexane	3.221	56	35134	5.1240374	ppb	99
22) TRANS-1,2-DICHLOROETHENE	3.197	96	27228	4.7317949	ppb	94
23) METHYL TERT-BUTYL ETHER	3.234	73	86118	4.9243164	ppb	99
24) 1,1-DICHLOROETHANE	3.550	63	58595	4.7647097	ppb	98
25) VINYL ACETATE	3.653	43	380347	24.4220176	ppb	99
26) DI-ISOPROPYL ETHER	3.434	45	123567	4.7120384	ppb	99
27) 2,2-Dichloropropane	3.915	77	47211	4.8543977	ppb	98
28) CIS-1,2-DICHLOROETHENE	3.848	96	30055	4.7721333	ppb	98
29) 2-BUTANONE (MEK)	4.152	43	129812	24.3550263	ppb	99
30) BROMOCHLOROMETHANE	3.970	130	17512	5.0245625	ppb	98
31) TETRAHYDROFURAN	4.091	42	12519	5.0860363	ppb #	95
32) CHLOROFORM	3.988	83	52384	4.7986328	ppb	98
34) 1,1,1-TRICHLOROETHANE	4.122	97	42345	4.8242551	ppb	99
35) CARBON TETRACHLORIDE	4.085	117	37655	4.8946497	ppb	99

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Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
36)	1,1-Dichloropropene	4.189	75	41495	4.8399231	ppb		95
37)	2,2,4-TRIMETHYLPENTANE	4.225	57	144928	4.8131058	ppb		99
38)	HEPTANE	4.262	43	71636	5.0455204	ppb	#	92
39)	BENZENE	4.329	78	123243	4.8963987	ppb		95
40)	1,2-DICHLOROETHANE	4.444	62	38350	4.9123176	ppb		100
42)	TRICHLOROETHENE	4.657	130	28060	4.9258980	ppb		96
43)	1,2-DICHLOROPROPANE	4.967	62	24281	4.6438266	ppb		97
44)	DIBROMOMETHANE	4.913	93	16969	4.7021239	ppb		99
45)	BROMODICHLOROMETHANE	4.992	83	41752	4.9788008	ppb		97
47)	2-CHLOROETHYL VINYL ETHER	5.308	63	18005	21.2956905	ppb		92
48)	CIS-1,3-DICHLOROPROPENE	5.369	75	52981	4.9038004	ppb		98
49)	4-METHYL-2-PENTANONE (...	5.728	43	194282	24.5813695	ppb		98
51)	TOLUENE	5.521	91	125565	4.8577967	ppb		99
52)	TRANS-1,3-DICHLOROPROPENE	5.771	75	44370	4.7461339	ppb		96
54)	1,1,2-TRICHLOROETHANE	5.880	97	23822	4.4674494	ppb		95
55)	TETRACHLOROETHENE	5.777	164	21522	4.9194020	ppb		97
56)	1,3-Dichloropropane	6.069	76	45368	4.8107064	ppb		99
57)	2-HEXANONE	6.275	58	93509	24.5662893	ppb		96
58)	CHLORODIBROMOMETHANE	6.014	129	26832	4.6614865	ppb		98
59)	1,2-DIBROMOETHANE	6.190	107	24314	4.5711177	ppb		95
60)	CHLOROBENZENE	6.525	112	76017	4.8671488	ppb		99
61)	1,1,1,2-TETRACHLOROETHANE	6.561	133	24228	4.8441662	ppb	#	97
62)	ETHYLBENZENE	6.519	106	43166	4.7925602	ppb		96
63)	M&P-XYLENE	6.610	106	103960	9.7380787	ppb		99
64)	O-XYLENE	6.926	106	51650	4.8495192	ppb		100
65)	STYRENE	6.963	104	84194	4.6792224	ppb		99
66)	Bromoform	7.005	173	17491	4.6528286	ppb		97
67)	Isopropylbenzene	7.139	105	140385	4.9356013	ppb		99
69)	Bromobenzene	7.456	77	58199	4.6743341	ppb		98
70)	1,1,2,2-TETRACHLOROETHANE	7.498	83	38389	5.0579538	ppb		100
71)	1,2,3-TRICHLOROPROPANE	7.614	110	9379	5.0195990	ppb	#	84
72)	TRANS-1,4-DICHLORO-2-B...	7.632	53	9774	4.3114181	ppb		95
73)	n-Propylbenzene	7.444	91	160396	4.7091581	ppb		99
74)	4-ETHYLTOLUENE	7.516	105	133153	4.7950322	ppb		99
75)	2-Chlorotoluene	7.583	126	28374	4.7923547	ppb		98
76)	4-Chlorotoluene	7.705	91	95604	4.7995667	ppb		99
77)	1,3,5-Trimethylbenzene	7.577	105	108867	4.8265577	ppb		99
78)	tert-Butylbenzene	7.827	119	92993	4.7592057	ppb		100
79)	1,2,4-Trimethylbenzene	7.875	105	109569	4.7925208	ppb		100
80)	sec-Butylbenzene	7.961	105	150584	4.7820368	ppb		100
81)	1,3-DICHLOROBENZENE	8.161	146	54475	4.5512766	ppb		96
82)	p-Isopropyltoluene	8.064	119	119609	4.8268587	ppb		99
83)	DICYCLOPENTADIENE	8.076	66	160216	4.9282319	ppb		98
85)	1,4-DICHLOROBENZENE	8.228	146	55298	4.8522833	ppb	#	1
86)	1,2,3-TRIMETHYLBENZENE	8.222	105	108574	4.8471410	ppb		99
87)	1,2-DICHLOROBENZENE	8.563	146	53620	4.7703405	ppb		98
88)	n-Butylbenzene	8.399	91	122226	4.8088486	ppb		99
89)	1,2-Dibromo-3-chloropr...	9.208	157	6603	4.4419410	ppb		92
90)	1,2,4-Trichlorobenzene	9.755	180	36763	4.8635560	ppb		99
91)	HEXACHLORO-1,3-BUTADIENE	9.713	225	20954	4.8967773	ppb		98
92)	Naphthalene	10.029	128	92472	4.6010251	ppb		99
93)	1,2,3-Trichlorobenzene	10.187	180	33616	4.7546575	ppb		98
94)	1-Methylnaphthalene	10.844	142	49035	4.4847724	ppb		99
95)	2-Methylnaphthalene	10.960	142	41616	4.5963942	ppb		98

Data Path : C:\msdchem\1\data\021016\
Data File : 0210 13.D
Acq On : 11 Feb 2016 12:03 am
Operator : 522
Sample : STD VMS 5 ppb 16B10218
Misc : water 15L26724
ALS Vial : 13 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 11 11:48:03 2016
Quant Method : C:\msdchem\1\methods\V807B10P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Thu Feb 11 11:35:07 2016
Response via : Initial Calibration

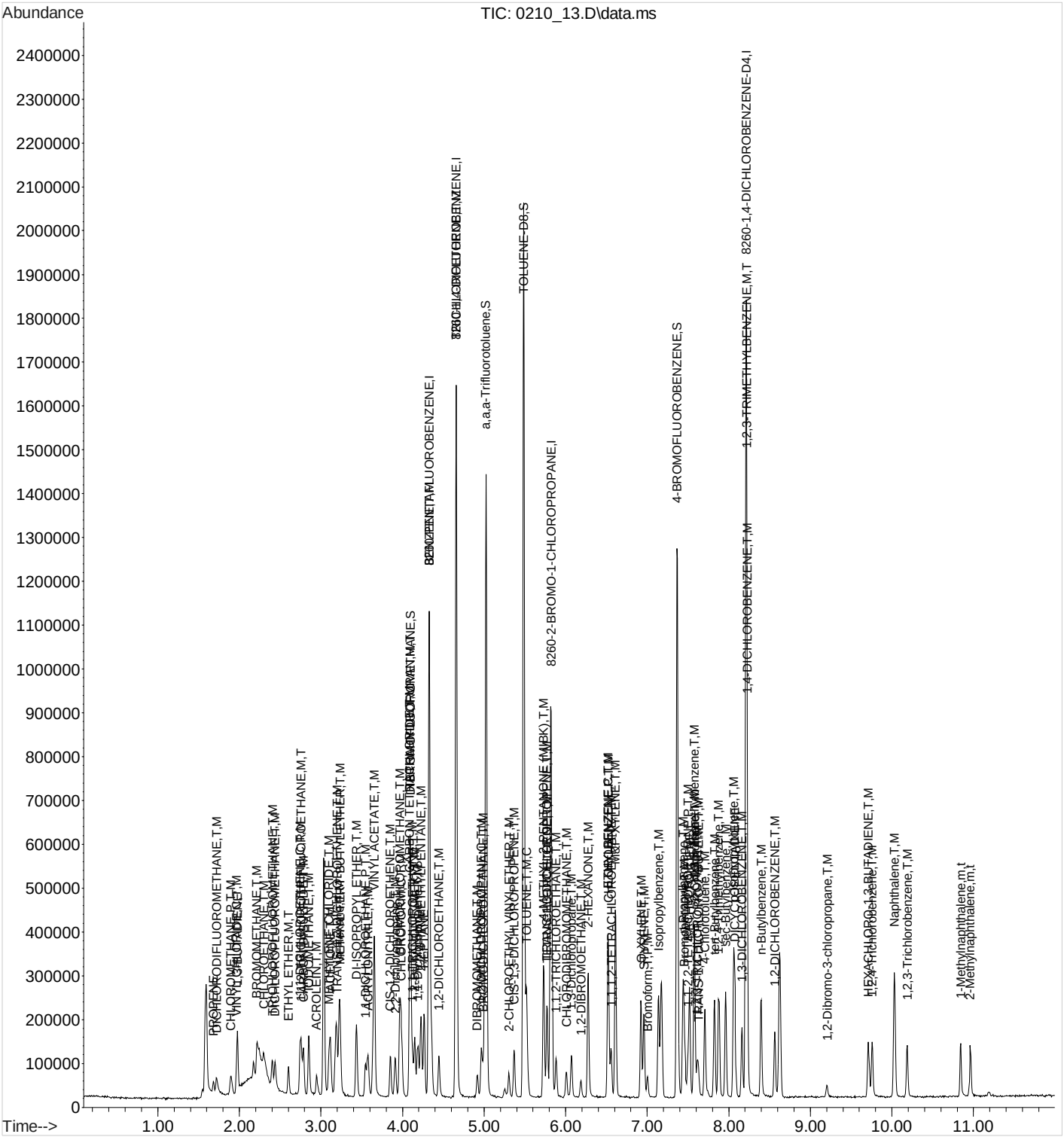
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\021016\
Data File : 0210 13.D
Acq On : 11 Feb 2016 12:03 am
Operator : 522
Sample : STD VMS 5 ppb 16B10218
Misc : water 15L26724
ALS Vial : 13 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 11 11:48:03 2016
Quant Method : C:\msdchem\1\methods\V807B10P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Thu Feb 11 11:35:07 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\021016\
Data File : 0210 14.D
Acq On : 11 Feb 2016 12:22 am
Operator : 522
Sample : STD VMS 10 ppb 16B10218
Misc : water 15L26724
ALS Vial : 14 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 11 11:49:06 2016
Quant Method : C:\msdchem\1\methods\V807B10P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Thu Feb 11 11:35:07 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 8260-PENTAFLUOROBENZENE	4.329	168	449076	40.0000000	ppb	0.00
41) 8260-1,4-DIFLUOROBENZENE	4.657	114	770028	40.0000000	ppb	0.00
53) 8260-2-BROMO-1-CHLOROP...	5.819	79	140590	40.0000000	ppb	0.00
84) 8260-1,4-DICHLOROBENZE...	8.216	152	346805	40.0000000	ppb	0.00
96) AP9-PENTAFLUOROBENZENE	0.000	168	0m	40.0000000	ppb	-4.33
114) AP9-1,4-DIFLUOROBENZENE	0.000	114	0m	40.0000000	ppb	-4.66
122) AP9-2-BROMO-1-CHLOROPR...	0.000	79	0m	40.0000000	ppb	-5.82
128) AP9-1,4-DICHLOROBENZEN...	0.000	152	0m	40.0000000	ppb	-8.22
System Monitoring Compounds						
33) DIBROMOFLUOROMETHANE	4.098	111	258826	44.7161920	ppb	0.00
Spiked Amount 40.000	Range 78 - 121		Recovery = 111.79%			
46) a,a,a-Trifluorotoluene	5.022	146	442228	44.0821151	ppb	0.00
Spiked Amount 40.000	Range 85 - 114		Recovery = 110.21%			
50) TOLUENE-D8	5.485	98	1027983	44.0296963	ppb	0.00
Spiked Amount 40.000	Range 89 - 111		Recovery = 110.07%			
68) 4-BROMOFLUOROBENZENE	7.364	95	386170	43.6540194	ppb	0.00
Spiked Amount 40.000	Range 71 - 126		Recovery = 109.14%			
Target Compounds						Qvalue
2) TPH (GC/MS) LOW FRACTION	4.406	TIC	5158349m	2.5552742	ppm	
3) PROPENE	1.688	41	22877	9.4982833	ppb	88
4) DICHLORODIFLUOROMETHANE	1.725	85	67410	10.2765750	ppb	100
5) CHLOROMETHANE	1.895	50	94982	10.2223449	ppb	98
6) VINYL CHLORIDE	1.962	62	87609	10.3354766	ppb	100
7) 1,3-BUTADIENE	1.974	39	74601	10.3291978	ppb	98
8) BROMOMETHANE	2.218	94	39325	9.5854417	ppb	89
9) CHLOROETHANE	2.297	64	48380	10.9204196	ppb	97
10) TRICHLOROFLUOROMETHANE	2.400	101	86690	10.3206204	ppb	99
11) DICHLOROFLUOROMETHANE	2.437	67	119093	10.4862863	ppb	96
12) ETHYL ETHER	2.601	59	54596	10.2899630	ppb	98
13) ACROLEIN	2.948	56	64422	50.9092124	ppb	98
14) 1,1-DICHLOROETHENE	2.747	61	96861	10.3393325	ppb	97
15) 1,1,2-TRICHLOROTRIFLUO...	2.759	101	53920	10.1230045	ppb	96
16) ACETONE	3.118	43	215417	53.9105742	ppb	100
17) IODOMETHANE	2.850	142	281356	48.1073254	ppb	98
18) CARBON DISULFIDE	2.783	76	209721	10.3048591	ppb	98
19) METHYLENE CHLORIDE	3.100	84	59178	10.2135632	ppb	95
20) ACRYLONITRILE	3.574	53	128363	52.4260111	ppb	98
21) n-Hexane	3.221	56	68426	10.5701638	ppb	99
22) TRANS-1,2-DICHLOROETHENE	3.197	96	55837	10.2779884	ppb	97
23) METHYL TERT-BUTYL ETHER	3.234	73	172684	10.4587549	ppb	98
24) 1,1-DICHLOROETHANE	3.550	63	118313	10.1902355	ppb	99
25) VINYL ACETATE	3.653	43	773253	52.5894988	ppb	100
26) DI-ISOPROPYL ETHER	3.434	45	251461	10.1567048	ppb	99
27) 2,2-Dichloropropane	3.915	77	93679	10.2025863	ppb	97
28) CIS-1,2-DICHLOROETHENE	3.854	96	62961	10.5887166	ppb	95
29) 2-BUTANONE (MEK)	4.152	43	264826	52.6271989	ppb	99
30) BROMOCHLOROMETHANE	3.964	130	33947	10.3166758	ppb	99
31) TETRAHYDROFURAN	4.091	42	26356	11.3413614	ppb	97
32) CHLOROFORM	3.988	83	107820	10.4615025	ppb	98
34) 1,1,1-TRICHLOROETHANE	4.122	97	87200	10.5225375	ppb	98
35) CARBON TETRACHLORIDE	4.085	117	76397	10.5184354	ppb	99

Data Path : C:\msdchem\1\data\021016\
Data File : 0210 14.D
Acq On : 11 Feb 2016 12:22 am
Operator : 522
Sample : STD VMS 10 ppb 16B10218
Misc : water 15L26724
ALS Vial : 14 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 11 11:49:06 2016
Quant Method : C:\msdchem\1\methods\V807B10P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Thu Feb 11 11:35:07 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
36) 1,1-Dichloropropene	4.189	75	84783	10.4743564	ppb		97
37) 2,2,4-TRIMETHYLPENTANE	4.225	57	294263	10.3510556	ppb		99
38) HEPTANE	4.268	43	139675	10.4200353	ppb		92
39) BENZENE	4.329	78	244898	10.3056556	ppb		97
40) 1,2-DICHLOROETHANE	4.444	62	78248	10.6162269	ppb		100
42) TRICHLOROETHENE	4.657	130	56086	10.3501455	ppb		98
43) 1,2-DICHLOROPROPANE	4.967	62	49963	10.0450517	ppb		98
44) DIBROMOMETHANE	4.919	93	35020	10.2011281	ppb		98
45) BROMODICHLOROMETHANE	4.992	83	84718	10.6198260	ppb		99
47) 2-CHLOROETHYL VINYL ETHER	5.302	63	39352	48.9282463	ppb		99
48) CIS-1,3-DICHLOROPROPENE	5.369	75	106327	10.3454749	ppb		99
49) 4-METHYL-2-PENTANONE (...	5.728	43	398762	53.0373133	ppb		100
51) TOLUENE	5.521	91	253050	10.2913255	ppb		99
52) TRANS-1,3-DICHLOROPROPENE	5.771	75	92654	10.4185905	ppb		99
54) 1,1,2-TRICHLOROETHANE	5.880	97	49687	9.8318195	ppb		97
55) TETRACHLOROETHENE	5.777	164	43296	10.4420834	ppb		98
56) 1,3-Dichloropropane	6.069	76	93159	10.4230240	ppb		98
57) 2-HEXANONE	6.269	58	191648	53.1251464	ppb		97
58) CHLORODIBROMOMETHANE	6.014	129	57580	10.5548665	ppb		97
59) 1,2-DIBROMOETHANE	6.184	107	52165	10.3479639	ppb		100
60) CHLOROBENZENE	6.525	112	153067	10.3408245	ppb		100
61) 1,1,1,2-TETRACHLOROETHANE	6.555	133	49987	10.5455259	ppb	#	97
62) ETHYLBENZENE	6.519	106	88595	10.3787412	ppb		98
63) M&P-XYLENE	6.610	106	212170	20.9701088	ppb		100
64) O-XYLENE	6.920	106	102878	10.1920272	ppb		99
65) STYRENE	6.957	104	171718	10.0697356	ppb		98
66) Bromoform	7.005	173	36202	10.1611925	ppb		98
67) Isopropylbenzene	7.133	105	276204	10.2461103	ppb		99
69) Bromobenzene	7.456	77	116548	9.8768568	ppb		97
70) 1,1,2,2-TETRACHLOROETHANE	7.498	83	74864	10.4076046	ppb		99
71) 1,2,3-TRICHLOROPROPANE	7.614	110	18083	10.2115735	ppb		98
72) TRANS-1,4-DICHLORO-2-B...	7.632	53	21074	9.8085427	ppb		96
73) n-Propylbenzene	7.437	91	329480	10.2067740	ppb		100
74) 4-ETHYLTOLUENE	7.517	105	269118	10.2256993	ppb		99
75) 2-Chlorotoluene	7.583	126	58962	10.5077636	ppb		96
76) 4-Chlorotoluene	7.705	91	190572	10.0947312	ppb		100
77) 1,3,5-Trimethylbenzene	7.577	105	218095	10.2022664	ppb		98
78) tert-Butylbenzene	7.827	119	190151	10.2681577	ppb		99
79) 1,2,4-Trimethylbenzene	7.875	105	218902	10.1026600	ppb		99
80) sec-Butylbenzene	7.961	105	305285	10.2293786	ppb		100
81) 1,3-DICHLOROBENZENE	8.161	146	113450	10.0011558	ppb		100
82) p-Isopropyltoluene	8.064	119	239122	10.1819266	ppb		99
83) DICYCLOPENTADIENE	8.076	66	321227	10.4257424	ppb		100
85) 1,4-DICHLOROBENZENE	8.228	146	111011	10.2808011	ppb	#	1
86) 1,2,3-TRIMETHYLBENZENE	8.222	105	219438	10.3394125	ppb		100
87) 1,2-DICHLOROBENZENE	8.563	146	107976	10.1385073	ppb		98
88) n-Butylbenzene	8.393	91	247526	10.2783296	ppb		100
89) 1,2-Dibromo-3-chloropr...	9.202	157	13300	9.4429425	ppb		93
90) 1,2,4-Trichlorobenzene	9.755	180	73165	10.2157573	ppb		99
91) HEXACHLORO-1,3-BUTADIENE	9.713	225	41668	10.2770929	ppb		100
92) Naphthalene	10.029	128	196491	10.3183730	ppb		100
93) 1,2,3-Trichlorobenzene	10.187	180	68166	10.1757217	ppb		98
94) 1-Methylnaphthalene	10.844	142	103294	9.9708811	ppb		98
95) 2-Methylnaphthalene	10.960	142	84828	9.8882714	ppb		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\021016\
Data File : 0210 14.D
Acq On : 11 Feb 2016 12:22 am
Operator : 522
Sample : STD VMS 10 ppb 16B10218
Misc : water 15L26724
ALS Vial : 14 Sample Multiplier: 1
InstName : VOCMS7

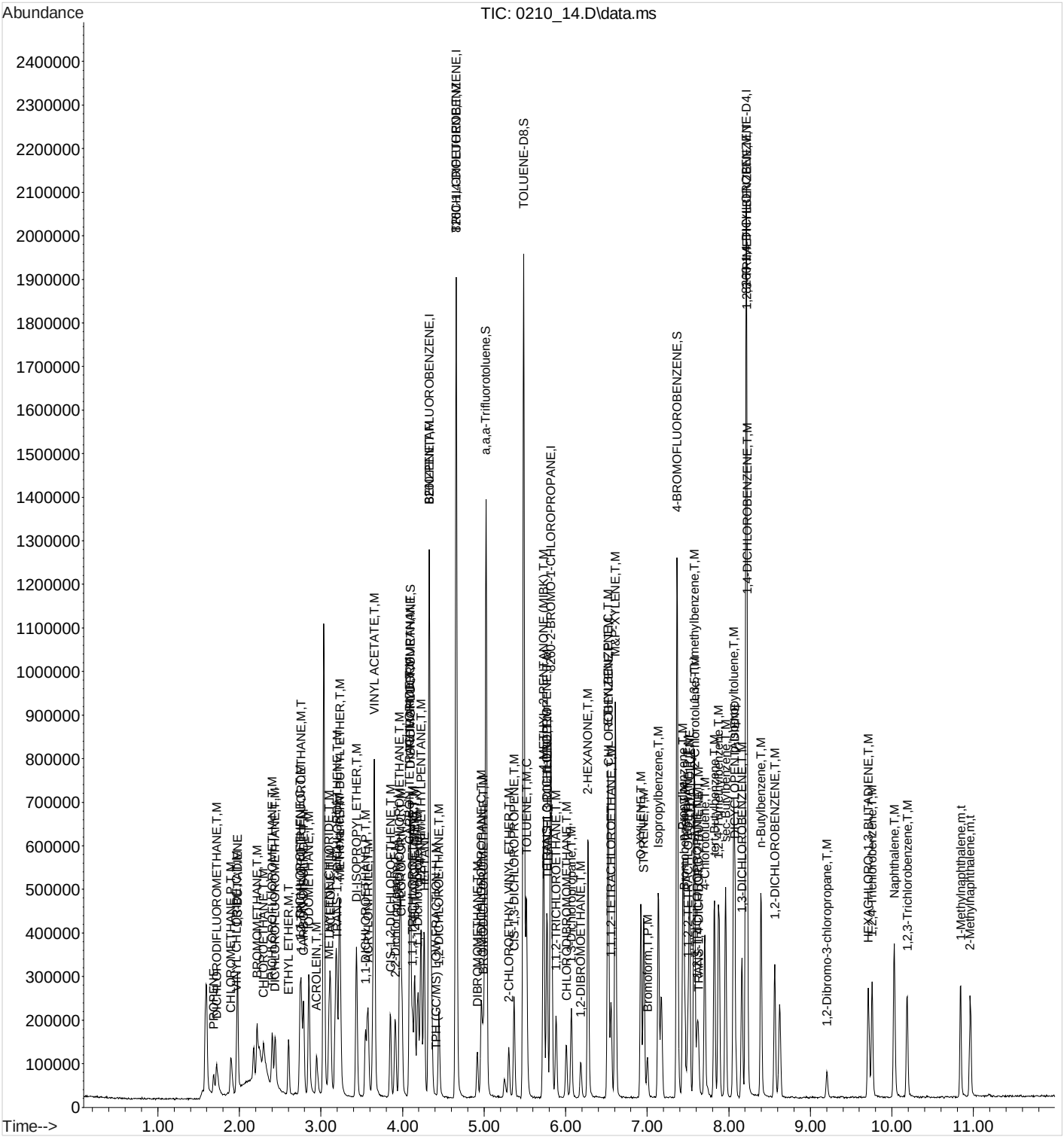
Quant Time: Feb 11 11:49:06 2016
Quant Method : C:\msdchem\1\methods\V807B10P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Thu Feb 11 11:35:07 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\021016\
Data File : 0210 14.D
Acq On : 11 Feb 2016 12:22 am
Operator : 522
Sample : STD VMS 10 ppb 16B10218
Misc : water 15L26724
ALS Vial : 14 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 11 11:49:06 2016
Quant Method : C:\msdchem\1\methods\V807B10P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Thu Feb 11 11:35:07 2016
Response via : Initial Calibration



Data Path : C:\msdchem\1\data\021016\
Data File : 0210 15.D
Acq On : 11 Feb 2016 12:41 am
Operator : 522
Sample : MSTD VMS 25 ppb 16B10218
Misc : water 15L26724
ALS Vial : 15 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 11 11:49:24 2016
Quant Method : C:\msdchem\1\methods\V807B10P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Thu Feb 11 11:35:07 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 8260-PENTAFLUOROBENZENE	4.329	168	443680	40.0000000	ppb	0.00
41) 8260-1,4-DIFLUOROBENZENE	4.657	114	764682	40.0000000	ppb	0.00
53) 8260-2-BROMO-1-CHLOROP...	5.819	79	138304	40.0000000	ppb	0.00
84) 8260-1,4-DICHLOROBENZE...	8.216	152	346229	40.0000000	ppb	0.00
96) AP9-PENTAFLUOROBENZENE	0.000	168	0m	40.0000000	ppb	-4.33
114) AP9-1,4-DIFLUOROBENZENE	0.000	114	0m	40.0000000	ppb	-4.66
122) AP9-2-BROMO-1-CHLOROPR...	0.000	79	0m	40.0000000	ppb	-5.82
128) AP9-1,4-DICHLOROBENZEN...	0.000	152	0m	40.0000000	ppb	-8.22
System Monitoring Compounds						
33) DIBROMOFLUOROMETHANE	4.097	111	257339	45.0000000	ppb	0.00
Spiked Amount 40.000	Range 78 - 121			Recovery = 112.50%		
46) a,a,a-Trifluorotoluene	5.022	146	448302	45.0000000	ppb	0.00
Spiked Amount 40.000	Range 85 - 114			Recovery = 112.50%		
50) TOLUENE-D8	5.485	98	1043343	45.0000000	ppb	0.00
Spiked Amount 40.000	Range 89 - 111			Recovery = 112.50%#		
68) 4-BROMOFLUOROBENZENE	7.364	95	391604	45.0000000	ppb	0.00
Spiked Amount 40.000	Range 71 - 126			Recovery = 112.50%		
Target Compounds						Qvalue
2) TPH (GC/MS) LOW FRACTION	4.406	TIC	19944503m	10.0000000	ppm	
3) PROPENE	1.688	41	59490	25.0000000	ppb	100
4) DICHLORODIFLUOROMETHANE	1.725	85	162019	25.0000000	ppb	100
5) CHLOROMETHANE	1.895	50	229499	25.0000000	ppb	100
6) VINYL CHLORIDE	1.962	62	209367	25.0000000	ppb	100
7) 1,3-BUTADIENE	1.974	39	178389	25.0000000	ppb	100
8) BROMOMETHANE	2.212	94	101537	25.0505763	ppb	100
9) CHLOROETHANE	2.297	64	109425	25.0000000	ppb	100
10) TRICHLOROFLUOROMETHANE	2.400	101	207469	25.0000000	ppb	100
11) DICHLOROFLUOROMETHANE	2.437	67	280514	25.0000000	ppb	100
12) ETHYL ETHER	2.601	59	131050	25.0000000	ppb	100
13) ACROLEIN	2.948	56	156278	125.0000000	ppb	100
14) 1,1-DICHLOROETHENE	2.747	61	231391	25.0000000	ppb	100
15) 1,1,2-TRICHLOROTRIFLUO...	2.759	101	131562	25.0000000	ppb	100
16) ACETONE	3.118	43	493476	125.0000000	ppb	100
17) IODOMETHANE	2.850	142	722279	125.0000000	ppb	100
18) CARBON DISULFIDE	2.783	76	502678	25.0000000	ppb	100
19) METHYLENE CHLORIDE	3.100	84	143111	25.0000000	ppb	100
20) ACRYLONITRILE	3.574	53	302380	125.0000000	ppb	100
21) n-Hexane	3.221	56	159893	25.0000000	ppb	100
22) TRANS-1,2-DICHLOROETHENE	3.191	96	134185	25.0000000	ppb	100
23) METHYL TERT-BUTYL ETHER	3.234	73	407814	25.0000000	ppb	100
24) 1,1-DICHLOROETHANE	3.550	63	286773	25.0000000	ppb	100
25) VINYL ACETATE	3.653	43	1815861	125.0000000	ppb	100
26) DI-ISOPROPYL ETHER	3.434	45	611516	25.0000000	ppb	100
27) 2,2-Dichloropropane	3.909	77	226789	25.0000000	ppb	100
28) CIS-1,2-DICHLOROETHENE	3.848	96	146865	25.0000000	ppb	100
29) 2-BUTANONE (MEK)	4.152	43	621456	125.0000000	ppb	100
30) BROMOCHLOROMETHANE	3.964	130	81274	25.0000000	ppb	99
31) TETRAHYDROFURAN	4.091	42	57399	25.0000000	ppb	100
32) CHLOROFORM	3.988	83	254563	25.0000000	ppb	100
34) 1,1,1-TRICHLOROETHANE	4.122	97	204685	25.0000000	ppb	100
35) CARBON TETRACHLORIDE	4.085	117	179397	25.0000000	ppb	100

Data Path : C:\msdchem\1\data\021016\
Data File : 0210 15.D
Acq On : 11 Feb 2016 12:41 am
Operator : 522
Sample : MSTD VMS 25 ppb 16B10218
Misc : water 15L26724
ALS Vial : 15 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 11 11:49:24 2016
Quant Method : C:\msdchem\1\methods\V807B10P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Thu Feb 11 11:35:07 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
36) 1,1-Dichloropropene	4.189	75	199927	25.0000000	ppb		100
37) 2,2,4-TRIMETHYLPENTANE	4.225	57	702168	25.0000000	ppb		100
38) HEPTANE	4.262	43	331085	25.0000000	ppb		100
39) BENZENE	4.329	78	586948	25.0000000	ppb		100
40) 1,2-DICHLOROETHANE	4.444	62	182051	25.0000000	ppb		100
42) TRICHLOROETHENE	4.657	130	134531	25.0000000	ppb		100
43) 1,2-DICHLOROPROPANE	4.967	62	123484	25.0000000	ppb		100
44) DIBROMOMETHANE	4.913	93	85228	25.0000000	ppb		100
45) BROMODICHLOROMETHANE	4.992	83	198049	25.0000000	ppb		100
47) 2-CHLOROETHYL VINYL ETHER	5.302	63	99837	125.0000000	ppb		100
48) CIS-1,3-DICHLOROPROPENE	5.369	75	255157	25.0000000	ppb		100
49) 4-METHYL-2-PENTANONE (...	5.728	43	933290	125.0000000	ppb		100
51) TOLUENE	5.515	91	610449	25.0000000	ppb		100
52) TRANS-1,3-DICHLOROPROPENE	5.770	75	220785	25.0000000	ppb		100
54) 1,1,2-TRICHLOROETHANE	5.880	97	124288	25.0000000	ppb		100
55) TETRACHLOROETHENE	5.777	164	101972	25.0000000	ppb		100
56) 1,3-Dichloropropane	6.069	76	219812	25.0000000	ppb		100
57) 2-HEXANONE	6.269	58	443603	125.0000000	ppb		100
58) CHLORODIBROMOMETHANE	6.014	129	134165	25.0000000	ppb		100
59) 1,2-DIBROMOETHANE	6.190	107	123978	25.0000000	ppb		100
60) CHLOROBENZENE	6.525	112	364038	25.0000000	ppb		100
61) 1,1,1,2-TETRACHLOROETHANE	6.555	133	116576	25.0000000	ppb	#	100
62) ETHYLBENZENE	6.519	106	209935	25.0000000	ppb		100
63) M&P-XYLENE	6.610	106	497661	50.0000000	ppb		100
64) O-XYLENE	6.920	106	248246	25.0000000	ppb		100
65) STYRENE	6.957	104	419390	25.0000000	ppb		100
66) Bromoform	7.005	173	87621	25.0000000	ppb		100
67) Isopropylbenzene	7.139	105	662966	25.0000000	ppb		100
69) Bromobenzene	7.456	77	290206	25.0000000	ppb		100
70) 1,1,2,2-TETRACHLOROETHANE	7.498	83	176906	25.0000000	ppb		100
71) 1,2,3-TRICHLOROPROPANE	7.614	110	43551	25.0000000	ppb		100
72) TRANS-1,4-DICHLORO-2-B...	7.632	53	52840	25.0000000	ppb		100
73) n-Propylbenzene	7.443	91	793891	25.0000000	ppb		100
74) 4-ETHYLTOLUENE	7.516	105	647247	25.0000000	ppb		100
75) 2-Chlorotoluene	7.583	126	138001	25.0000000	ppb		100
76) 4-Chlorotoluene	7.705	91	464285	25.0000000	ppb		100
77) 1,3,5-Trimethylbenzene	7.577	105	525738	25.0000000	ppb		100
78) tert-Butylbenzene	7.827	119	455435	25.0000000	ppb		100
79) 1,2,4-Trimethylbenzene	7.875	105	532886	25.0000000	ppb		100
80) sec-Butylbenzene	7.961	105	733967	25.0000000	ppb		100
81) 1,3-DICHLOROBENZENE	8.161	146	278981	25.0000000	ppb		100
82) p-Isopropyltoluene	8.058	119	577577	25.0000000	ppb		100
83) DICYCLOPENTADIENE	8.076	66	757749	25.0000000	ppb		100
85) 1,4-DICHLOROBENZENE	8.228	146	269499	25.0000000	ppb		100
86) 1,2,3-TRIMETHYLBENZENE	8.222	105	529705	25.0000000	ppb		100
87) 1,2-DICHLOROBENZENE	8.563	146	265810	25.0000000	ppb		100
88) n-Butylbenzene	8.392	91	601058	25.0000000	ppb		100
89) 1,2-Dibromo-3-chloropr...	9.202	157	35153	25.0000000	ppb		100
90) 1,2,4-Trichlorobenzene	9.755	180	178752	25.0000000	ppb		100
91) HEXACHLORO-1,3-BUTADIENE	9.713	225	101193	25.0000000	ppb		100
92) Naphthalene	10.029	128	475280	25.0000000	ppb		100
93) 1,2,3-Trichlorobenzene	10.187	180	167194	25.0000000	ppb		100
94) 1-Methylnaphthalene	10.838	142	258559	25.0000000	ppb		100
95) 2-Methylnaphthalene	10.960	142	214110	25.0000000	ppb		100

Data Path : C:\msdchem\1\data\021016\
Data File : 0210 15.D
Acq On : 11 Feb 2016 12:41 am
Operator : 522
Sample : MSTD VMS 25 ppb 16B10218
Misc : water 15L26724
ALS Vial : 15 Sample Multiplier: 1
InstName : VOCMS7

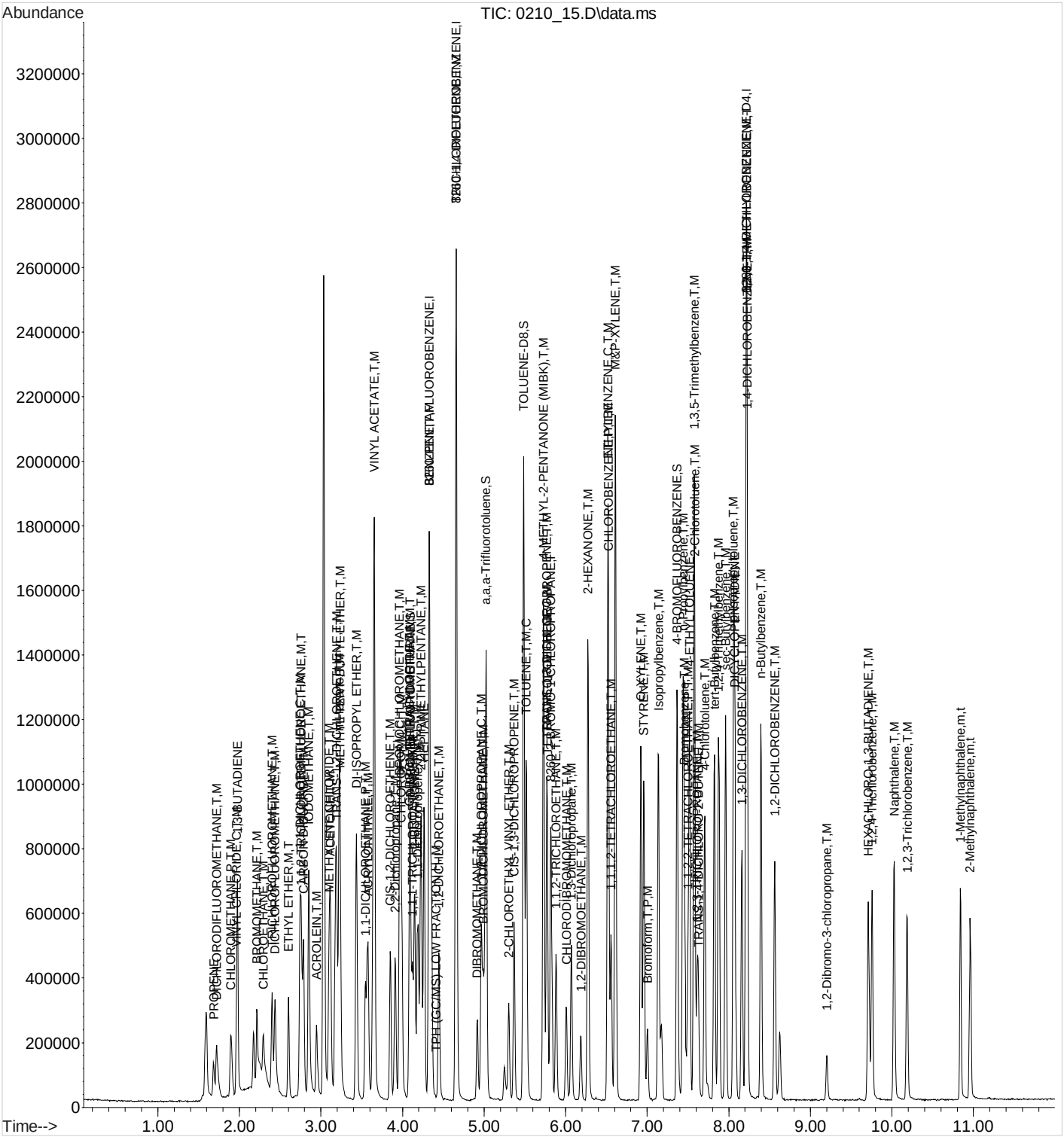
Quant Time: Feb 11 11:49:24 2016
Quant Method : C:\msdchem\1\methods\V807B10P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Thu Feb 11 11:35:07 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\021016\
Data File : 0210 15.D
Acq On : 11 Feb 2016 12:41 am
Operator : 522
Sample : MSTD VMS 25 ppb 16B10218
Misc : water 15L26724
ALS Vial : 15 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 11 11:49:24 2016
Quant Method : C:\msdchem\1\methods\V807B10P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Thu Feb 11 11:35:07 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\021016\
Data File : 0210 16.D
Acq On : 11 Feb 2016 1:01 am
Operator : 522
Sample : STD VMS 40 ppb 16B10218
Misc : water 15L26724
ALS Vial : 16 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 11 11:50:26 2016
Quant Method : C:\msdchem\1\methods\V807B10P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Thu Feb 11 11:35:07 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 8260-PENTAFLUOROBENZENE	4.329	168	435507	40.0000000	ppb	0.00
41) 8260-1,4-DIFLUOROBENZENE	4.657	114	754313	40.0000000	ppb	0.00
53) 8260-2-BROMO-1-CHLOROP...	5.819	79	138116	40.0000000	ppb	0.00
84) 8260-1,4-DICHLOROBENZE...	8.216	152	348922	40.0000000	ppb	0.00
96) AP9-PENTAFLUOROBENZENE	0.000	168	0m	40.0000000	ppb	-4.33
114) AP9-1,4-DIFLUOROBENZENE	0.000	114	0m	40.0000000	ppb	-4.66
122) AP9-2-BROMO-1-CHLOROPR...	0.000	79	0m	40.0000000	ppb	-5.82
128) AP9-1,4-DICHLOROBENZEN...	0.000	152	0m	40.0000000	ppb	-8.22
System Monitoring Compounds						
33) DIBROMOFLUOROMETHANE	4.098	111	257748	45.9173611	ppb	0.00
Spiked Amount 40.000	Range 78 - 121		Recovery = 114.79%			
46) a,a,a-Trifluorotoluene	5.022	146	447082	45.4944372	ppb	0.00
Spiked Amount 40.000	Range 85 - 114		Recovery = 113.74%			
50) TOLUENE-D8	5.485	98	1052629	46.0245989	ppb	0.00
Spiked Amount 40.000	Range 89 - 111		Recovery = 115.06%#			
68) 4-BROMOFLUOROBENZENE	7.364	95	400876	46.1281672	ppb	0.00
Spiked Amount 40.000	Range 71 - 126		Recovery = 115.32%			
Target Compounds						Qvalue
2) TPH (GC/MS) LOW FRACTION	4.406	TIC	36083894m	18.4316782	ppm	
3) PROPENE	1.688	41	94579	40.4916496	ppb	96
4) DICHLORODIFLUOROMETHANE	1.725	85	256029	40.2474096	ppb	100
5) CHLOROMETHANE	1.901	50	362148	40.1901859	ppb	99
6) VINYL CHLORIDE	1.962	62	328887	40.0085856	ppb	99
7) 1,3-BUTADIENE	1.974	39	283417	40.4643480	ppb	99
8) BROMOMETHANE	2.212	94	158697	39.8875006	ppb	97
9) CHLOROETHANE	2.291	64	169043	39.3455261	ppb	99
10) TRICHLOROFLUOROMETHANE	2.400	101	326923	40.1334951	ppb	100
11) DICHLOROFLUOROMETHANE	2.437	67	441776	40.1108900	ppb	97
12) ETHYL ETHER	2.601	59	207220	40.2725719	ppb	98
13) ACROLEIN	2.948	56	262482	213.8879939	ppb	98
14) 1,1-DICHLOROETHENE	2.747	61	360404	39.6696036	ppb	99
15) 1,1,2-TRICHLOROTRIFLUO...	2.759	101	201625	39.0327037	ppb	97
16) ACETONE	3.118	43	806659	208.1654613	ppb	99
17) IODOMETHANE	2.850	142	1153245	203.3299330	ppb	99
18) CARBON DISULFIDE	2.784	76	783579	39.7015654	ppb	100
19) METHYLENE CHLORIDE	3.100	84	222988	39.6847087	ppb	99
20) ACRYLONITRILE	3.574	53	508053	213.9639874	ppb	99
21) n-Hexane	3.222	56	245715	39.1396501	ppb	97
22) TRANS-1,2-DICHLOROETHENE	3.191	96	206975	39.2851704	ppb	98
23) METHYL TERT-BUTYL ETHER	3.234	73	643071	40.1616471	ppb	98
24) 1,1-DICHLOROETHANE	3.544	63	449357	39.9087360	ppb	99
25) VINYL ACETATE	3.653	43	2880098	201.9804752	ppb	99
26) DI-ISOPROPYL ETHER	3.434	45	961024	40.0259022	ppb	99
27) 2,2-Dichloropropane	3.909	77	354475	39.8087321	ppb	99
28) CIS-1,2-DICHLOROETHENE	3.848	96	233192	40.4398987	ppb	98
29) 2-BUTANONE (MEK)	4.152	43	1025431	210.1264786	ppb	100
30) BROMOCHLOROMETHANE	3.964	130	126454	39.6274072	ppb	98
31) TETRAHYDROFURAN	4.091	42	96338	42.7472342	ppb	98
32) CHLOROFORM	3.988	83	395678	39.5877979	ppb	100
34) 1,1,1-TRICHLOROETHANE	4.122	97	321534	40.0088075	ppb	98
35) CARBON TETRACHLORIDE	4.085	117	278196	39.4957555	ppb	98

Data Path : C:\msdchem\1\data\021016\
Data File : 0210 16.D
Acq On : 11 Feb 2016 1:01 am
Operator : 522
Sample : STD VMS 40 ppb 16B10218
Misc : water 15L26724
ALS Vial : 16 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 11 11:50:26 2016
Quant Method : C:\msdchem\1\methods\V807B10P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Thu Feb 11 11:35:07 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
36) 1,1-Dichloropropene	4.189	75	312928	39.8646262	ppb		99
37) 2,2,4-TRIMETHYLPENTANE	4.225	57	1099667	39.8873221	ppb		100
38) HEPTANE	4.262	43	512627	39.4345321	ppb	#	64
39) BENZENE	4.329	78	932355	40.4572536	ppb		99
40) 1,2-DICHLOROETHANE	4.444	62	293692	41.0878833	ppb		98
42) TRICHLOROETHENE	4.657	130	211070	39.7624763	ppb		100
43) 1,2-DICHLOROPROPANE	4.968	62	189505	38.8937007	ppb		98
44) DIBROMOMETHANE	4.919	93	137088	40.7649043	ppb		98
45) BROMODICHLOROMETHANE	4.992	83	307472	39.3461463	ppb		99
47) 2-CHLOROETHYL VINYL ETHER	5.302	63	151142	191.8372456	ppb		100
48) CIS-1,3-DICHLOROPROPENE	5.369	75	408708	40.5952233	ppb		100
49) 4-METHYL-2-PENTANONE (...	5.728	43	1530179	207.7614238	ppb		99
51) TOLUENE	5.515	91	952453	39.5424388	ppb		99
52) TRANS-1,3-DICHLOROPROPENE	5.771	75	357913	41.0844230	ppb		98
54) 1,1,2-TRICHLOROETHANE	5.880	97	194721	39.2206105	ppb		97
55) TETRACHLOROETHENE	5.777	164	161457	39.6375405	ppb		99
56) 1,3-Dichloropropane	6.069	76	348827	39.7273368	ppb		99
57) 2-HEXANONE	6.269	58	740687	208.9974607	ppb		97
58) CHLORODIBROMOMETHANE	6.014	129	218584	40.7858851	ppb		99
59) 1,2-DIBROMOETHANE	6.184	107	200484	40.4823625	ppb		98
60) CHLOROBENZENE	6.525	112	575855	39.6001818	ppb		99
61) 1,1,1,2-TETRACHLOROETHANE	6.561	133	182654	39.2239020	ppb	#	98
62) ETHYLBENZENE	6.519	106	331987	39.5883121	ppb		99
63) M&P-XYLENE	6.610	106	797491	80.2329823	ppb		98
64) O-XYLENE	6.920	106	398884	40.2249131	ppb		100
65) STYRENE	6.957	104	658111	39.2836503	ppb		100
66) Bromoform	7.005	173	142704	40.7716886	ppb		99
67) Isopropylbenzene	7.139	105	1050997	39.6863335	ppb		99
69) Bromobenzene	7.456	77	454029	39.1658867	ppb		98
70) 1,1,2,2-TETRACHLOROETHANE	7.498	83	291620	41.2672473	ppb		99
71) 1,2,3-TRICHLOROPROPANE	7.614	110	68980	39.6511526	ppb		98
72) TRANS-1,4-DICHLORO-2-B...	7.626	53	86496	40.9792469	ppb		98
73) n-Propylbenzene	7.437	91	1265427	39.9031311	ppb		100
74) 4-ETHYLTOLUENE	7.517	105	1038593	40.1703950	ppb		99
75) 2-Chlorotoluene	7.577	126	218454	39.6285813	ppb		98
76) 4-Chlorotoluene	7.705	91	748538	40.3608178	ppb		98
77) 1,3,5-Trimethylbenzene	7.577	105	832518	39.6419510	ppb		100
78) tert-Butylbenzene	7.827	119	721517	39.6598368	ppb		99
79) 1,2,4-Trimethylbenzene	7.875	105	842912	39.5984953	ppb		99
80) sec-Butylbenzene	7.961	105	1155961	39.4273334	ppb		99
81) 1,3-DICHLOROBENZENE	8.161	146	442379	39.6963552	ppb		100
82) p-Isopropyltoluene	8.064	119	924136	40.0550018	ppb		99
83) DICYCLOPENTADIENE	8.076	66	1177290	38.8945580	ppb		99
85) 1,4-DICHLOROBENZENE	8.228	146	429740	39.5570338	ppb	#	64
86) 1,2,3-TRIMETHYLBENZENE	8.222	105	836223	39.1618440	ppb		100
87) 1,2-DICHLOROBENZENE	8.563	146	425970	39.7541796	ppb		99
88) n-Butylbenzene	8.393	91	959781	39.6123733	ppb		99
89) 1,2-Dibromo-3-chloropr...	9.202	157	57449	40.5410671	ppb		97
90) 1,2,4-Trichlorobenzene	9.755	180	288329	40.0140502	ppb		98
91) HEXACHLORO-1,3-BUTADIENE	9.713	225	167324	41.0187918	ppb		98
92) Naphthalene	10.029	128	802724	41.8978565	ppb		100
93) 1,2,3-Trichlorobenzene	10.187	180	267959	39.7578378	ppb		96
94) 1-Methylnaphthalene	10.838	142	437920	42.0155659	ppb		99
95) 2-Methylnaphthalene	10.960	142	365118	42.3030216	ppb		98

Data Path : C:\msdchem\1\data\021016\
Data File : 0210 16.D
Acq On : 11 Feb 2016 1:01 am
Operator : 522
Sample : STD VMS 40 ppb 16B10218
Misc : water 15L26724
ALS Vial : 16 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 11 11:50:26 2016
Quant Method : C:\msdchem\1\methods\V807B10P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Thu Feb 11 11:35:07 2016
Response via : Initial Calibration

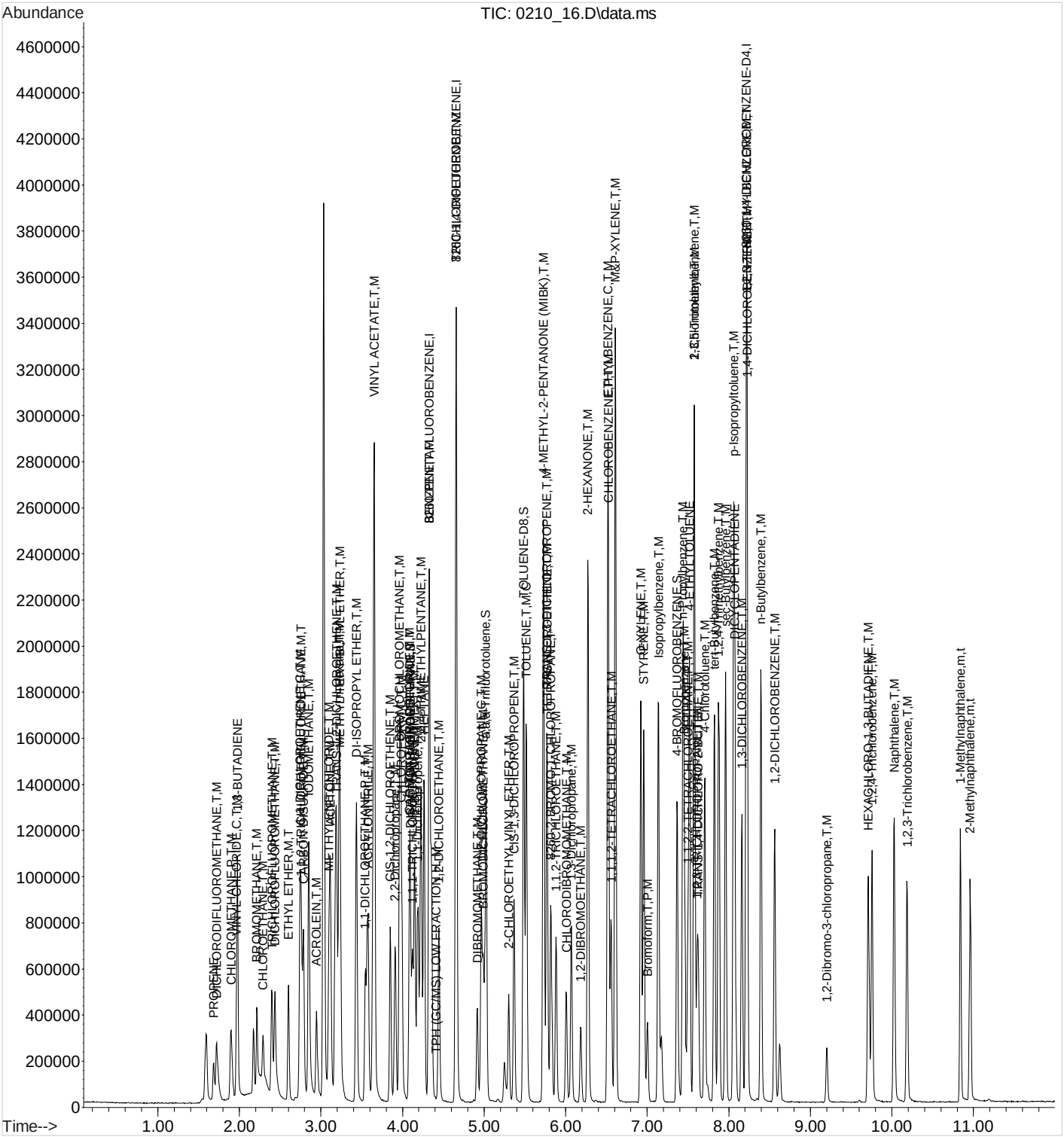
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\021016\
Data File : 0210 16.D
Acq On : 11 Feb 2016 1:01 am
Operator : 522
Sample : STD VMS 40 ppb 16B10218
Misc : water 15L26724
ALS Vial : 16 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 11 11:50:26 2016
Quant Method : C:\msdchem\1\methods\V807B10P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Thu Feb 11 11:35:07 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\021016\
Data File : 0210 17.D
Acq On : 11 Feb 2016 1:20 am
Operator : 522
Sample : STD VMS 75 ppb 16B10218
Misc : water 15L26724
ALS Vial : 17 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 11 11:51:29 2016
Quant Method : C:\msdchem\1\methods\V807B10P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Thu Feb 11 11:35:07 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 8260-PENTAFLUOROBENZENE	4.329	168	426347	40.0000000	ppb	0.00
41) 8260-1,4-DIFLUOROBENZENE	4.657	114	748210	40.0000000	ppb	0.00
53) 8260-2-BROMO-1-CHLOROP...	5.819	79	137894	40.0000000	ppb	0.00
84) 8260-1,4-DICHLOROBENZE...	8.216	152	355166	40.0000000	ppb	0.00
96) AP9-PENTAFLUOROBENZENE	0.000	168	0m	40.0000000	ppb	-4.33
114) AP9-1,4-DIFLUOROBENZENE	0.000	114	0m	40.0000000	ppb	-4.66
122) AP9-2-BROMO-1-CHLOROPR...	0.000	79	0m	40.0000000	ppb	-5.82
128) AP9-1,4-DICHLOROBENZEN...	0.000	152	0m	40.0000000	ppb	-8.22
System Monitoring Compounds						
33) DIBROMOFLUOROMETHANE	4.092	111	255687	46.5288366	ppb	0.00
Spiked Amount 40.000	Range 78 - 121			Recovery = 116.32%		
46) a,a,a-Trifluorotoluene	5.022	146	439964	45.1353005	ppb	0.00
Spiked Amount 40.000	Range 85 - 114			Recovery = 112.84%		
50) TOLUENE-D8	5.485	98	1054379	46.4771526	ppb	0.00
Spiked Amount 40.000	Range 89 - 111			Recovery = 116.19%#		
68) 4-BROMOFLUOROBENZENE	7.364	95	409492	47.1954561	ppb	0.00
Spiked Amount 40.000	Range 71 - 126			Recovery = 117.99%		
Target Compounds						Qvalue
2) TPH (GC/MS) LOW FRACTION	4.406	TIC	72934355m	38.0553358	ppm	
3) PROPENE	1.682	41	174587	76.3509742	ppb	98
4) DICHLORODIFLUOROMETHANE	1.725	85	475443	76.3447469	ppb	100
5) CHLOROMETHANE	1.895	50	676737	76.7159688	ppb	100
6) VINYL CHLORIDE	1.962	62	608782	75.6484828	ppb	99
7) 1,3-BUTADIENE	1.974	39	500717	73.0248906	ppb	100
8) BROMOMETHANE	2.212	94	315144	80.9112812	ppb	97
9) CHLOROETHANE	2.291	64	305128	72.5457803	ppb	97
10) TRICHLOROFLUOROMETHANE	2.394	101	599930	75.2305117	ppb	100
11) DICHLOROFLUOROMETHANE	2.437	67	821795	76.2176586	ppb	96
12) ETHYL ETHER	2.601	59	376621	74.7677233	ppb	98
13) ACROLEIN	2.948	56	468933	390.3279093	ppb	100
14) 1,1-DICHLOROETHENE	2.747	61	650733	73.1649395	ppb	98
15) 1,1,2-TRICHLOROTRIFLUO...	2.759	101	368098	72.7913276	ppb	97
16) ACETONE	3.118	43	1400867	369.2729730	ppb	99
17) IODOMETHANE	2.850	142	2255177	406.1554633	ppb	99
18) CARBON DISULFIDE	2.784	76	1420745	73.5314123	ppb	100
19) METHYLENE CHLORIDE	3.100	84	408400	74.2436589	ppb	99
20) ACRYLONITRILE	3.574	53	874451	376.1829171	ppb	100
21) n-Hexane	3.222	56	448669	73.0034294	ppb	99
22) TRANS-1,2-DICHLOROETHENE	3.191	96	385336	74.7106068	ppb	98
23) METHYL TERT-BUTYL ETHER	3.234	73	1156900	73.8040747	ppb	100
24) 1,1-DICHLOROETHANE	3.544	63	818506	74.2557788	ppb	99
25) VINYL ACETATE	3.654	43	5012533	359.0800669	ppb	99
26) DI-ISOPROPYL ETHER	3.434	45	1744531	74.2194131	ppb	99
27) 2,2-Dichloropropane	3.909	77	649062	74.4579109	ppb	100
28) CIS-1,2-DICHLOROETHENE	3.848	96	433703	76.8282191	ppb	96
29) 2-BUTANONE (MEK)	4.152	43	1768660	370.2121113	ppb	99
30) BROMOCHLOROMETHANE	3.964	130	219294	70.1975192	ppb	97
31) TETRAHYDROFURAN	4.092	42	161680	73.2822211	ppb	98
32) CHLOROFORM	3.988	83	715798	73.1546353	ppb	99
34) 1,1,1-TRICHLOROETHANE	4.122	97	588499	74.8008204	ppb	99
35) CARBON TETRACHLORIDE	4.085	117	528504	76.6442806	ppb	100

Data Path : C:\msdchem\1\data\021016\
Data File : 0210 17.D
Acq On : 11 Feb 2016 1:20 am
Operator : 522
Sample : STD VMS 75 ppb 16B10218
Misc : water 15L26724
ALS Vial : 17 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 11 11:51:29 2016
Quant Method : C:\msdchem\1\methods\V807B10P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Thu Feb 11 11:35:07 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
36) 1,1-Dichloropropene	4.189	75	569091	74.0554317	ppb		99
37) 2,2,4-TRIMETHYLPENTANE	4.225	57	2012505	74.5662983	ppb		98
38) HEPTANE	4.262	43	926724	72.8211536	ppb		99
39) BENZENE	4.329	78	1699483	75.3292853	ppb		99
40) 1,2-DICHLOROETHANE	4.444	62	533364	76.2214629	ppb		100
42) TRICHLOROETHENE	4.657	130	390448	74.1546176	ppb		100
43) 1,2-DICHLOROPROPANE	4.968	62	350713	72.5668954	ppb		99
44) DIBROMOMETHANE	4.913	93	249790	74.8841869	ppb		99
45) BROMODICHLOROMETHANE	4.992	83	559289	72.1540963	ppb		99
47) 2-CHLOROETHYL VINYL ETHER	5.302	63	221410	283.3172916	ppb		99
48) CIS-1,3-DICHLOROPROPENE	5.369	75	745579	74.6592371	ppb		99
49) 4-METHYL-2-PENTANONE (...	5.728	43	2601661	356.1241833	ppb		99
51) TOLUENE	5.515	91	1750473	73.2661545	ppb		99
52) TRANS-1,3-DICHLOROPROPENE	5.771	75	637955	73.8274467	ppb		99
54) 1,1,2-TRICHLOROETHANE	5.880	97	355694	71.7590565	ppb		97
55) TETRACHLOROETHENE	5.777	164	295596	72.6853683	ppb		99
56) 1,3-Dichloropropane	6.069	76	633298	72.2413908	ppb		99
57) 2-HEXANONE	6.269	58	1273122	359.8114112	ppb		97
58) CHLORODIBROMOMETHANE	6.008	129	399468	74.6572760	ppb		99
59) 1,2-DIBROMOETHANE	6.184	107	366474	74.1187220	ppb		99
60) CHLOROBENZENE	6.525	112	1049158	72.2642595	ppb		99
61) 1,1,1,2-TETRACHLOROETHANE	6.555	133	341698	73.4958246	ppb	#	97
62) ETHYLBENZENE	6.519	106	609176	72.7590995	ppb		99
63) M&P-XYLENE	6.610	106	1473466	148.4792915	ppb		96
64) O-XYLENE	6.920	106	739523	74.6962511	ppb		98
65) STYRENE	6.957	104	1220584	72.9758197	ppb		100
66) Bromoform	7.006	173	258782	74.0551455	ppb		99
67) Isopropylbenzene	7.133	105	1937263	73.2700870	ppb		100
69) Bromobenzene	7.456	77	833830	72.0444465	ppb		97
70) 1,1,2,2-TETRACHLOROETHANE	7.498	83	515980	73.1340602	ppb		99
71) 1,2,3-TRICHLOROPROPANE	7.614	110	125926	72.5014440	ppb		91
72) TRANS-1,4-DICHLORO-2-B...	7.626	53	160194	76.0173659	ppb		99
73) n-Propylbenzene	7.437	91	2340571	73.9248277	ppb		99
74) 4-ETHYLTOLUENE	7.517	105	1883341	72.9605828	ppb		99
75) 2-Chlorotoluene	7.583	126	413374	75.1087101	ppb		93
76) 4-Chlorotoluene	7.705	91	1368360	73.9001121	ppb		99
77) 1,3,5-Trimethylbenzene	7.577	105	1549227	73.8881969	ppb		99
78) tert-Butylbenzene	7.827	119	1350757	74.3669900	ppb		100
79) 1,2,4-Trimethylbenzene	7.875	105	1542102	72.5618204	ppb		97
80) sec-Butylbenzene	7.961	105	2134202	72.9102132	ppb		99
81) 1,3-DICHLOROBENZENE	8.161	146	833660	74.9279270	ppb		99
82) p-Isopropyltoluene	8.064	119	1702897	73.9278149	ppb		99
83) DICYCLOPENTADIENE	8.076	66	2157207	71.3831698	ppb		99
85) 1,4-DICHLOROBENZENE	8.228	146	811455	73.3802773	ppb	#	35
86) 1,2,3-TRIMETHYLBENZENE	8.222	105	1559458	71.7483101	ppb		99
87) 1,2-DICHLOROBENZENE	8.563	146	795267	72.9144681	ppb		99
88) n-Butylbenzene	8.393	91	1771905	71.8449286	ppb		99
89) 1,2-Dibromo-3-chloropr...	9.202	157	105770	73.3283945	ppb		98
90) 1,2,4-Trichlorobenzene	9.755	180	522638	71.2561149	ppb		99
91) HEXACHLORO-1,3-BUTADIENE	9.713	225	313325	75.4599726	ppb		97
92) Naphthalene	10.029	128	1450196	74.3616863	ppb		100
93) 1,2,3-Trichlorobenzene	10.187	180	488736	71.2402948	ppb		96
94) 1-Methylnaphthalene	10.838	142	768039	72.3928509	ppb		99
95) 2-Methylnaphthalene	10.960	142	632518	71.9959395	ppb		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\021016\
Data File : 0210 17.D
Acq On : 11 Feb 2016 1:20 am
Operator : 522
Sample : STD VMS 75 ppb 16B10218
Misc : water 15L26724
ALS Vial : 17 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 11 11:51:29 2016
Quant Method : C:\msdchem\1\methods\V807B10P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Thu Feb 11 11:35:07 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\021016\
Data File : 0210 17.D
Acq On : 11 Feb 2016 1:20 am
Operator : 522
Sample : STD VMS 75 ppb 16B10218
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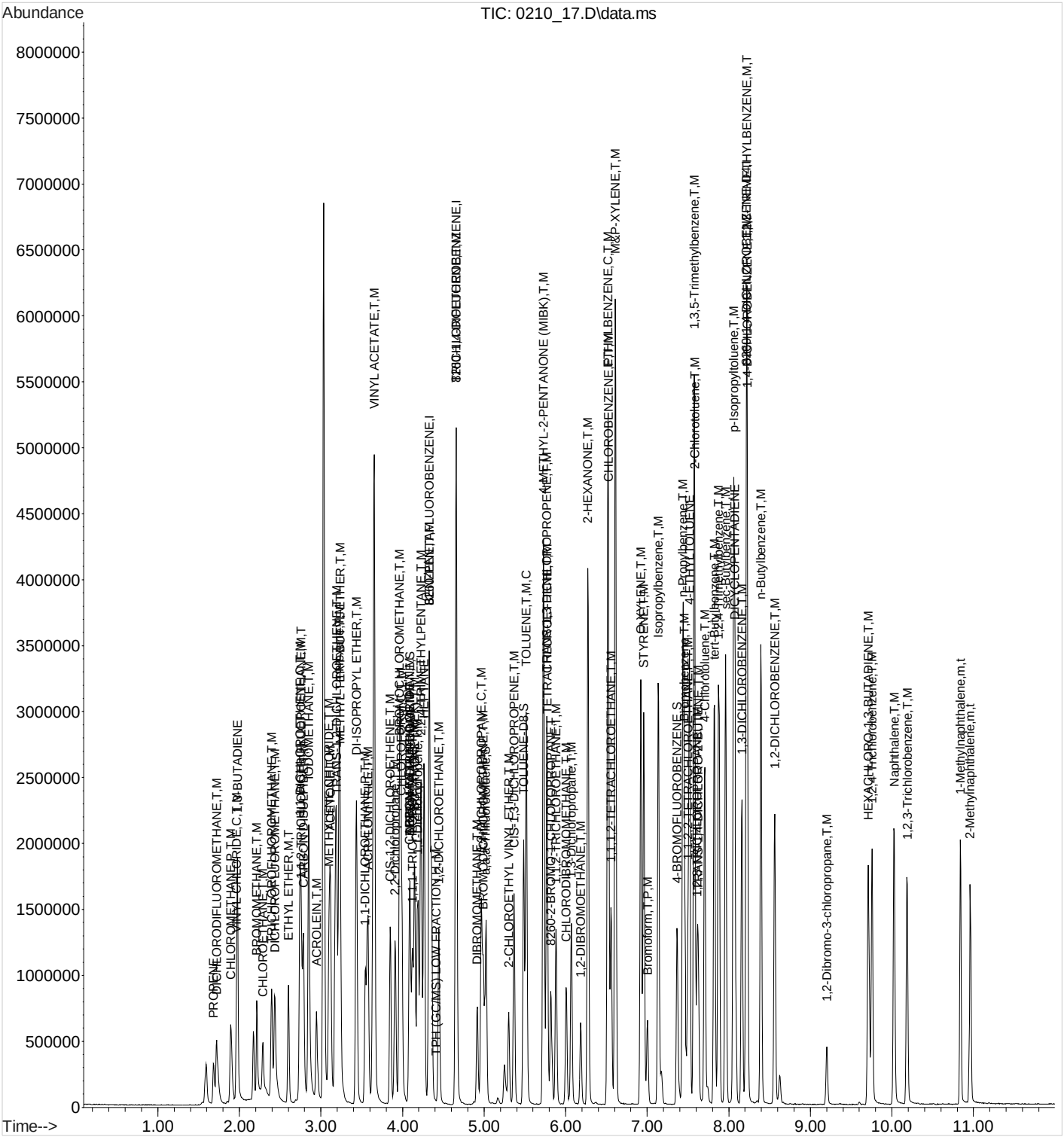
Quant Time: Feb 11 11:51:29 2016
Quant Method : C:\msdchem\1\methods\V807B10P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Thu Feb 11 11:35:07 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\021016\
Data File : 0210 18.D
Acq On : 11 Feb 2016 1:39 am
Operator : 522
Sample : STD VMS 100 ppb 16B10218
Misc : water 15L26724
ALS Vial : 18 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 11 11:54:55 2016
Quant Method : C:\msdchem\1\methods\V807B10P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Thu Feb 11 11:35:07 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 8260-PENTAFLUOROBENZENE	4.329	168	427757	40.0000000	ppb	0.00
41) 8260-1,4-DIFLUOROBENZENE	4.657	114	749997	40.0000000	ppb	0.00
53) 8260-2-BROMO-1-CHLOROP...	5.819	79	135248	40.0000000	ppb	0.00
84) 8260-1,4-DICHLOROBENZE...	8.216	152	354815	40.0000000	ppb	# 0.00
96) AP9-PENTAFLUOROBENZENE	0.000	168	0m	40.0000000	ppb	-4.33
114) AP9-1,4-DIFLUOROBENZENE	0.000	114	0m	40.0000000	ppb	-4.66
122) AP9-2-BROMO-1-CHLOROPR...	0.000	79	0m	40.0000000	ppb	-5.82
128) AP9-1,4-DICHLOROBENZEN...	0.000	152	0m	40.0000000	ppb	-8.22
System Monitoring Compounds						
33) DIBROMOFLUOROMETHANE	4.091	111	259911	47.1415971	ppb	0.00
Spiked Amount 40.000	Range 78 - 121		Recovery = 117.85%			
46) a,a,a-Trifluorotoluene	5.022	146	450244	46.0798559	ppb	0.00
Spiked Amount 40.000	Range 85 - 114		Recovery = 115.20%#			
50) TOLUENE-D8	5.485	98	1066959	46.9196193	ppb	0.00
Spiked Amount 40.000	Range 89 - 111		Recovery = 117.30%#			
68) 4-BROMOFLUOROBENZENE	7.364	95	420160	49.3723715	ppb	0.00
Spiked Amount 40.000	Range 71 - 126		Recovery = 123.43%			
Target Compounds						Qvalue
2) TPH (GC/MS) LOW FRACTION	4.406	TIC	102407681m	53.2576539	ppm	
3) PROPENE	1.682	41	231437	100.8791834	ppb	98
4) DICHLORODIFLUOROMETHANE	1.719	85	633808	101.4388939	ppb	99
5) CHLOROMETHANE	1.895	50	901306	101.8366725	ppb	100
6) VINYL CHLORIDE	1.962	62	833162	103.1891320	ppb	100
7) 1,3-BUTADIENE	1.974	39	690415	100.3586667	ppb	99
8) BROMOMETHANE	2.212	94	444402	113.7213813	ppb	97
9) CHLOROETHANE	2.285	64	389596	92.3231619	ppb	93
10) TRICHLOROFLUOROMETHANE	2.388	101	818181	102.2607355	ppb	100
11) DICHLOROFLUOROMETHANE	2.431	67	1100427	101.7230638	ppb	97
12) ETHYL ETHER	2.601	59	508299	100.5761404	ppb	99
13) ACROLEIN	2.948	56	662696	549.7930488	ppb	100
14) 1,1-DICHLOROETHENE	2.741	61	875872	98.1537543	ppb	98
15) 1,1,2-TRICHLOROTRIFLUO...	2.753	101	494277	97.4210196	ppb	97
16) ACETONE	3.118	43	1914617	503.0354768	ppb	99
17) IODOMETHANE	2.850	142	3055130	548.4126283	ppb	99
18) CARBON DISULFIDE	2.784	76	1896101	97.8102400	ppb	100
19) METHYLENE CHLORIDE	3.100	84	553499	100.2897526	ppb	100
20) ACRYLONITRILE	3.574	53	1210378	518.9800919	ppb	99
21) n-Hexane	3.222	56	597103	96.8350403	ppb	98
22) TRANS-1,2-DICHLOROETHENE	3.191	96	511355	98.8169106	ppb	99
23) METHYL TERT-BUTYL ETHER	3.234	73	1570184	99.8392138	ppb	98
24) 1,1-DICHLOROETHANE	3.544	63	1104710	99.8901721	ppb	99
25) VINYL ACETATE	3.653	43	6676026	476.6703714	ppb	98
26) DI-ISOPROPYL ETHER	3.434	45	2343974	99.3934353	ppb	99
27) 2,2-Dichloropropane	3.909	77	873391	99.8618166	ppb	98
28) CIS-1,2-DICHLOROETHENE	3.848	96	587790	103.7807056	ppb	96
29) 2-BUTANONE (MEK)	4.146	43	2400918	500.8984435	ppb	99
30) BROMOCHLOROMETHANE	3.964	130	290701	92.7486564	ppb	94
31) TETRAHYDROFURAN	4.091	42	227143	102.6142716	ppb	99
32) CHLOROFORM	3.988	83	966881	98.4896244	ppb	99
34) 1,1,1-TRICHLOROETHANE	4.122	97	801753	101.5704349	ppb	98
35) CARBON TETRACHLORIDE	4.085	117	714596	103.2899674	ppb	100

Data Path : C:\msdchem\1\data\021016\
Data File : 0210 18.D
Acq On : 11 Feb 2016 1:39 am
Operator : 522
Sample : STD VMS 100 ppb 16B10218
Misc : water 15L26724
ALS Vial : 18 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 11 11:54:55 2016
Quant Method : C:\msdchem\1\methods\V807B10P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Thu Feb 11 11:35:07 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
36) 1,1-Dichloropropene	4.183	75	775341	100.5620311 ppb		99
37) 2,2,4-TRIMETHYLPENTANE	4.225	57	2715935	100.2977231 ppb		99
38) HEPTANE	4.262	43	1294052	101.3502814 ppb		97
39) BENZENE	4.329	78	2288597	101.1072813 ppb		98
40) 1,2-DICHLOROETHANE	4.444	62	723330	103.0282076 ppb		100
42) TRICHLOROETHENE	4.657	130	532271	100.8490437 ppb		100
43) 1,2-DICHLOROPROPANE	4.968	62	469254	96.8631624 ppb		99
44) DIBROMOMETHANE	4.913	93	344650	103.0759475 ppb		99
45) BROMODICHLOROMETHANE	4.992	83	750127	96.5436010 ppb		99
47) 2-CHLOROETHYL VINYL ETHER	5.302	63	309409	394.9778795 ppb		98
48) CIS-1,3-DICHLOROPROPENE	5.369	75	1007488	100.6453570 ppb		100
49) 4-METHYL-2-PENTANONE (...	5.728	43	3548704	484.6012363 ppb		98
51) TOLUENE	5.515	91	2341841	97.7843534 ppb		98
52) TRANS-1,3-DICHLOROPROPENE	5.771	75	864814	99.8422816 ppb		99
54) 1,1,2-TRICHLOROETHANE	5.880	97	487011	100.1736432 ppb		97
55) TETRACHLOROETHENE	5.777	164	400173	100.3253639 ppb		99
56) 1,3-Dichloropropane	6.069	76	871304	101.3356384 ppb		99
57) 2-HEXANONE	6.269	58	1741311	501.7596933 ppb		94
58) CHLORODIBROMOMETHANE	6.008	129	548231	104.4643851 ppb		100
59) 1,2-DIBROMOETHANE	6.184	107	501610	103.4345091 ppb		99
60) CHLOROBENZENE	6.525	112	1430324	100.4457588 ppb		98
61) 1,1,1,2-TETRACHLOROETHANE	6.561	133	463211	101.5812640 ppb	#	97
62) ETHYLBENZENE	6.519	106	827464	100.7646398 ppb		97
63) M&P-XYLENE	6.610	106	2000782	205.5606855 ppb		95
64) O-XYLENE	6.920	106	1007819	103.7872919 ppb		97
65) STYRENE	6.957	104	1653927	100.8189486 ppb		99
66) Bromoform	7.005	173	353458	103.1272669 ppb		99
67) Isopropylbenzene	7.139	105	2622567	101.1298199 ppb		99
69) Bromobenzene	7.456	77	1122114	98.8495033 ppb		96
70) 1,1,2,2-TETRACHLOROETHANE	7.498	83	713915	103.1686724 ppb		99
71) 1,2,3-TRICHLOROPROPANE	7.614	110	172135	101.0450284 ppb		98
72) TRANS-1,4-DICHLORO-2-B...	7.626	53	214626	103.8396990 ppb		98
73) n-Propylbenzene	7.437	91	3131941	100.8548044 ppb		99
74) 4-ETHYLTOLUENE	7.517	105	2521310	99.5864149 ppb		98
75) 2-Chlorotoluene	7.583	126	560642	103.8597550 ppb		93
76) 4-Chlorotoluene	7.705	91	1862464	102.5527078 ppb		99
77) 1,3,5-Trimethylbenzene	7.577	105	2080281	101.1571376 ppb		99
78) tert-Butylbenzene	7.827	119	1790014	100.4786804 ppb		99
79) 1,2,4-Trimethylbenzene	7.875	105	2084886	100.0211631 ppb		98
80) sec-Butylbenzene	7.961	105	2866993	99.8605598 ppb		98
81) 1,3-DICHLOROBENZENE	8.161	146	1125213	103.1107658 ppb		100
82) p-Isopropyltoluene	8.064	119	2313401	102.3964561 ppb		99
83) DICYCLOPENTADIENE	8.076	66	2873066	96.9313204 ppb		98
85) 1,4-DICHLOROBENZENE	8.228	146	1100600	99.6262604 ppb	#	26
86) 1,2,3-TRIMETHYLBENZENE	8.222	105	2117492	97.5189877 ppb		99
87) 1,2-DICHLOROBENZENE	8.563	146	1081743	99.2782828 ppb		98
88) n-Butylbenzene	8.393	91	2360827	95.8184762 ppb		98
89) 1,2-Dibromo-3-chloropr...	9.202	157	149586	103.8078111 ppb		98
90) 1,2,4-Trichlorobenzene	9.755	180	699670	95.4869061 ppb		98
91) HEXACHLORO-1,3-BUTADIENE	9.713	225	423016	101.9783079 ppb		97
92) Naphthalene	10.029	128	1980003	101.6290316 ppb		100
93) 1,2,3-Trichlorobenzene	10.187	180	662801	96.7083437 ppb		95
94) 1-Methylnaphthalene	10.838	142	1032899	97.4540015 ppb		99
95) 2-Methylnaphthalene	10.960	142	852765	97.1614292 ppb		98

Data Path : C:\msdchem\1\data\021016\
Data File : 0210 18.D
Acq On : 11 Feb 2016 1:39 am
Operator : 522
Sample : STD VMS 100 ppb 16B10218
Misc : water 15L26724
ALS Vial : 18 Sample Multiplier: 1
InstName : VOCMS7

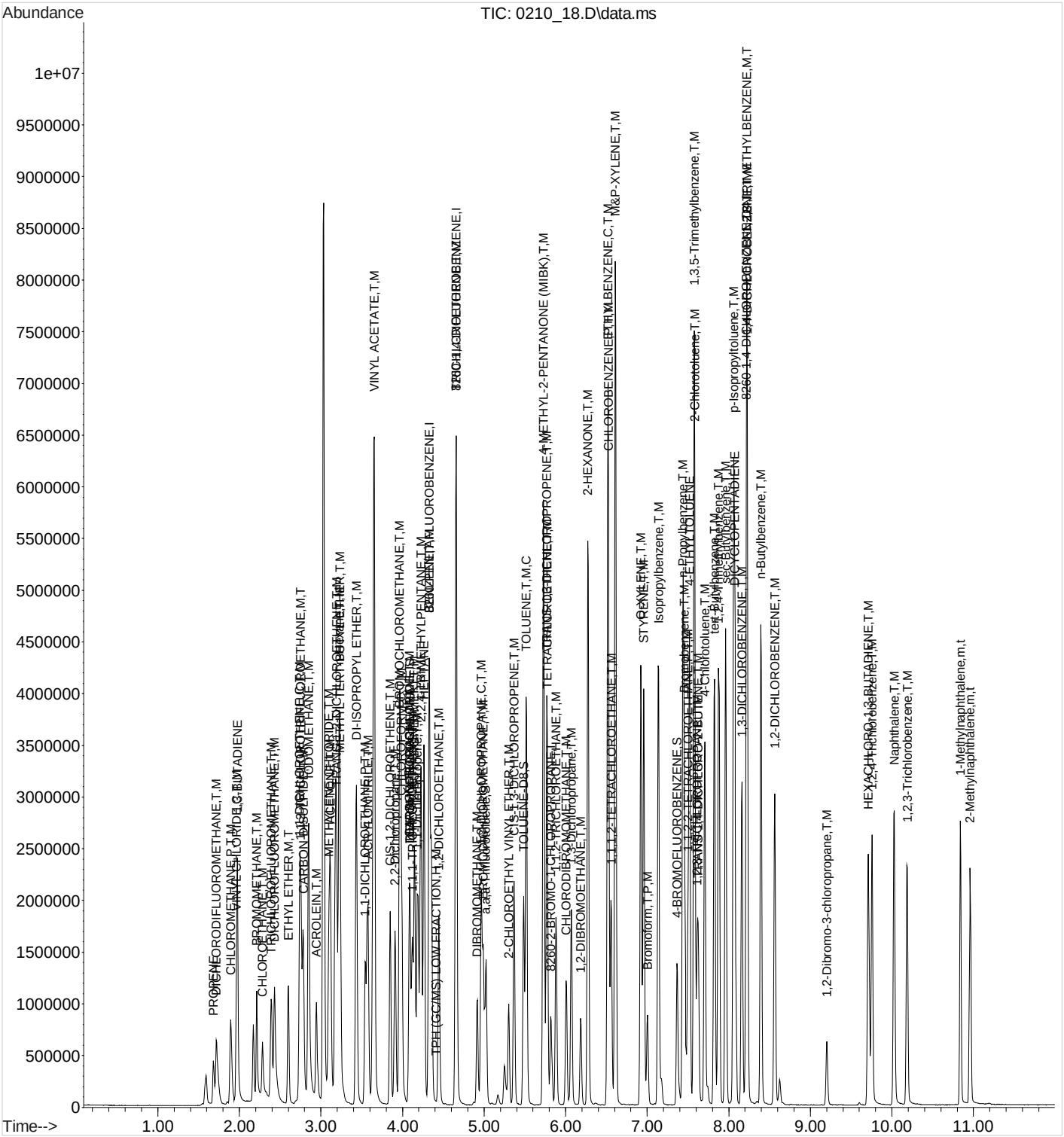
Quant Time: Feb 11 11:54:55 2016
Quant Method : C:\msdchem\1\methods\V807B10P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Thu Feb 11 11:35:07 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\021016\
Data File : 0210 18.D
Acq On : 11 Feb 2016 1:39 am
Operator : 522
Sample : STD VMS 100 ppb 16B10218
Misc : water 15L26724
ALS Vial : 18 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 11 11:54:55 2016
Quant Method : C:\msdchem\1\methods\V807B10P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Thu Feb 11 11:35:07 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\021016\
Data File : 0210 19.D
Acq On : 11 Feb 2016 1:58 am
Operator : 522
Sample : STD VMS 200 ppb 16B10218
Misc : water 15L26724
ALS Vial : 19 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 11 11:56:07 2016
Quant Method : C:\msdchem\1\methods\V807B10P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Thu Feb 11 11:35:07 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 8260-PENTAFLUOROBENZENE	4.329	168	434979	40.0000000	ppb	0.00
41) 8260-1,4-DIFLUOROBENZENE	4.657	114	753798	40.0000000	ppb	0.00
53) 8260-2-BROMO-1-CHLOROP...	5.825	79	137652	40.0000000	ppb	0.00
84) 8260-1,4-DICHLOROBENZE...	8.216	152	364497	40.0000000	ppb	# 0.00
96) AP9-PENTAFLUOROBENZENE	0.000	168	0m	40.0000000	ppb	-4.33
114) AP9-1,4-DIFLUOROBENZENE	0.000	114	0m	40.0000000	ppb	-4.66
122) AP9-2-BROMO-1-CHLOROPR...	0.000	79	0m	40.0000000	ppb	-5.82
128) AP9-1,4-DICHLOROBENZEN...	0.000	152	0m	40.0000000	ppb	-8.22
System Monitoring Compounds						
33) DIBROMOFLUOROMETHANE	4.092	111	263583	47.0138550	ppb	0.00
Spiked Amount 40.000	Range 78 - 121		Recovery = 117.53%			
46) a,a,a-Trifluorotoluene	5.022	146	451988	46.0250881	ppb	0.00
Spiked Amount 40.000	Range 85 - 114		Recovery = 115.06%#			
50) TOLUENE-D8	5.485	98	1105541	48.3711204	ppb	0.00
Spiked Amount 40.000	Range 89 - 111		Recovery = 120.93%#			
68) 4-BROMOFLUOROBENZENE	7.364	95	442722	51.1150410	ppb	0.00
Spiked Amount 40.000	Range 71 - 126		Recovery = 127.79%#			
Target Compounds						Qvalue
2) TPH (GC/MS) LOW FRACTION	4.406	TIC	209429525m	107.1066016	ppm	
3) PROPENE	1.682	41	462818	198.3845482	ppb	96
4) DICHLORODIFLUOROMETHANE	1.719	85	1228926	193.4199896	ppb	99
5) CHLOROMETHANE	1.895	50	2075519	230.6149652	ppb	100
6) VINYL CHLORIDE	1.962	62	1594337	194.1840100	ppb	99
7) 1,3-BUTADIENE	1.974	39	1274297	182.1562849	ppb	98
8) BROMOMETHANE	2.212	94	898638	226.1412223	ppb	96
9) CHLOROETHANE	2.279	64	444996	103.7005649	ppb	98
10) TRICHLOROFLUOROMETHANE	2.376	101	1631139	200.4838199	ppb	100
11) DICHLOROFLUOROMETHANE	2.425	67	2149593	195.4084179	ppb	98
12) ETHYL ETHER	2.595	59	989243	192.4897156	ppb	99
13) ACROLEIN	2.948	56	1339777	1093.0656536	ppb	100
14) 1,1-DICHLOROETHENE	2.741	61	1662566	183.2204739	ppb	96
15) 1,1,2-TRICHLOROTRIFLUO...	2.753	101	947196	183.5908188	ppb	96
16) ACETONE	3.118	43	3668109	947.7368592	ppb	98
17) IODOMETHANE	2.844	142	5658755	998.9125693	ppb	98
18) CARBON DISULFIDE	2.777	76	3686319	187.0012918	ppb	100
19) METHYLENE CHLORIDE	3.100	84	1086578	193.6107475	ppb	99
20) ACRYLONITRILE	3.574	53	2353851	992.5159171	ppb	98
21) n-Hexane	3.215	56	1153398	183.9464087	ppb	94
22) TRANS-1,2-DICHLOROETHENE	3.191	96	1003806	190.7600322	ppb	96
23) METHYL TERT-BUTYL ETHER	3.234	73	3067354	191.7976757	ppb	98
24) 1,1-DICHLOROETHANE	3.544	63	2134539	189.8048934	ppb	98
25) VINYL ACETATE	3.654	43	12402103	870.8118041	ppb	97
26) DI-ISOPROPYL ETHER	3.434	45	4478758	186.7632156	ppb	98
27) 2,2-Dichloropropane	3.909	77	1667328	187.4738196	ppb	99
28) CIS-1,2-DICHLOROETHENE	3.848	96	1142730	198.4115226	ppb	96
29) 2-BUTANONE (MEK)	4.146	43	4597375	943.2159132	ppb	98
30) BROMOCHLOROMETHANE	3.964	130	539716	169.3383130	ppb	90
31) TETRAHYDROFURAN	4.085	42	447414	198.7681582	ppb	100
32) CHLOROFORM	3.988	83	1869061	187.2275548	ppb	99
34) 1,1,1-TRICHLOROETHANE	4.122	97	1554922	193.7154061	ppb	98
35) CARBON TETRACHLORIDE	4.085	117	1349606	191.8374507	ppb	99

Data Path : C:\msdchem\1\data\021016\
Data File : 0210 19.D
Acq On : 11 Feb 2016 1:58 am
Operator : 522
Sample : STD VMS 200 ppb 16B10218
Misc : water 15L26724
ALS Vial : 19 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 11 11:56:07 2016
Quant Method : C:\msdchem\1\methods\V807B10P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Thu Feb 11 11:35:07 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
36) 1,1-Dichloropropene	4.183	75	1489966	190.0406378	ppb		99
37) 2,2,4-TRIMETHYLPENTANE	4.225	57	5250013	190.6605826	ppb		98
38) HEPTANE	4.262	43	2449099	188.6289756	ppb		97
39) BENZENE	4.329	78	4510664	195.9667639	ppb		97
40) 1,2-DICHLOROETHANE	4.444	62	1411624	197.7277093	ppb		100
42) TRICHLOROETHENE	4.657	130	1048075	197.5767724	ppb		100
43) 1,2-DICHLOROPROPANE	4.968	62	904331	185.7302420	ppb		98
44) DIBROMOMETHANE	4.913	93	676696	201.3618568	ppb		98
45) BROMODICHLOROMETHANE	4.992	83	1471585	188.4423857	ppb		98
47) 2-CHLOROETHYL VINYL ETHER	5.302	63	624412	793.0774799	ppb		100
48) CIS-1,3-DICHLOROPROPENE	5.369	75	1956906	194.5039264	ppb		99
49) 4-METHYL-2-PENTANONE (...	5.728	43	6705155	911.0204141	ppb		96
51) TOLUENE	5.515	91	4586347	190.5387969	ppb		97
52) TRANS-1,3-DICHLOROPROPENE	5.771	75	1694023	194.5878114	ppb		98
54) 1,1,2-TRICHLOROETHANE	5.880	97	961128	194.2424976	ppb		98
55) TETRACHLOROETHENE	5.777	164	807236	198.8436874	ppb		98
56) 1,3-Dichloropropane	6.069	76	1705984	194.9466514	ppb		99
57) 2-HEXANONE	6.276	58	3387034	958.9308922	ppb		90
58) CHLORODIBROMOMETHANE	6.008	129	1107774	207.3978054	ppb		99
59) 1,2-DIBROMOETHANE	6.184	107	1005221	203.6615996	ppb		99
60) CHLOROBENZENE	6.525	112	2870570	198.0676942	ppb		95
61) 1,1,1,2-TETRACHLOROETHANE	6.555	133	936068	201.6928362	ppb	#	96
62) ETHYLBENZENE	6.519	106	1656380	198.1834353	ppb		93
63) M&P-XYLENE	6.610	106	4080787	411.9386473	ppb		89
64) O-XYLENE	6.920	106	1986355	200.9864745	ppb		94
65) STYRENE	6.957	104	3291475	197.1354432	ppb		98
66) Bromoform	7.006	173	723554	207.4220715	ppb		99
67) Isopropylbenzene	7.139	105	5065801	191.9327531	ppb		98
69) Bromobenzene	7.456	77	2212935	191.5377997	ppb		94
70) 1,1,2,2-TETRACHLOROETHANE	7.498	83	1411500	200.4151478	ppb		98
71) 1,2,3-TRICHLOROPROPANE	7.614	110	338389	195.1687718	ppb		97
72) TRANS-1,4-DICHLORO-2-B...	7.632	53	432795	205.7366432	ppb		98
73) n-Propylbenzene	7.444	91	6086535	192.5756928	ppb		98
74) 4-ETHYLTOLUENE	7.517	105	4921310	190.9866013	ppb		97
75) 2-Chlorotoluene	7.583	126	1141398	207.7529013	ppb		87
76) 4-Chlorotoluene	7.705	91	3625797	196.1602725	ppb		99
77) 1,3,5-Trimethylbenzene	7.577	105	4070648	194.4851313	ppb		97
78) tert-Butylbenzene	7.827	119	3504291	193.2706842	ppb		99
79) 1,2,4-Trimethylbenzene	7.875	105	4014928	189.2499069	ppb		96
80) sec-Butylbenzene	7.961	105	5498461	188.1727963	ppb		97
81) 1,3-DICHLOROBENZENE	8.161	146	2211991	199.1594658	ppb		99
82) p-Isopropyltoluene	8.064	119	4450188	193.5355234	ppb		99
83) DICYCLOPENTADIENE	8.076	66	5499612	182.3051355	ppb		97
85) 1,4-DICHLOROBENZENE	8.228	146	2224129	195.9802497	ppb	#	14
86) 1,2,3-TRIMETHYLBENZENE	8.222	105	4109425	184.2283567	ppb		97
87) 1,2-DICHLOROBENZENE	8.563	146	2109746	188.4813347	ppb		98
88) n-Butylbenzene	8.393	91	4447032	175.6966029	ppb		97
89) 1,2-Dibromo-3-chloropr...	9.202	157	294210	198.7488057	ppb		97
90) 1,2,4-Trichlorobenzene	9.755	180	1311575	174.2415445	ppb		98
91) HEXACHLORO-1,3-BUTADIENE	9.713	225	804404	188.7701157	ppb		98
92) Naphthalene	10.029	128	3737859	186.7595709	ppb		100
93) 1,2,3-Trichlorobenzene	10.187	180	1239108	175.9940416	ppb		95
94) 1-Methylnaphthalene	10.838	142	1912037	175.6087391	ppb		100
95) 2-Methylnaphthalene	10.960	142	1571103	174.2517700	ppb		96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\021016\
Data File : 0210 19.D
Acq On : 11 Feb 2016 1:58 am
Operator : 522
Sample : STD VMS 200 ppb 16B10218
Misc : water 15L26724
ALS Vial : 19 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 11 11:56:07 2016
Quant Method : C:\msdchem\1\methods\V807B10P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Thu Feb 11 11:35:07 2016
Response via : Initial Calibration

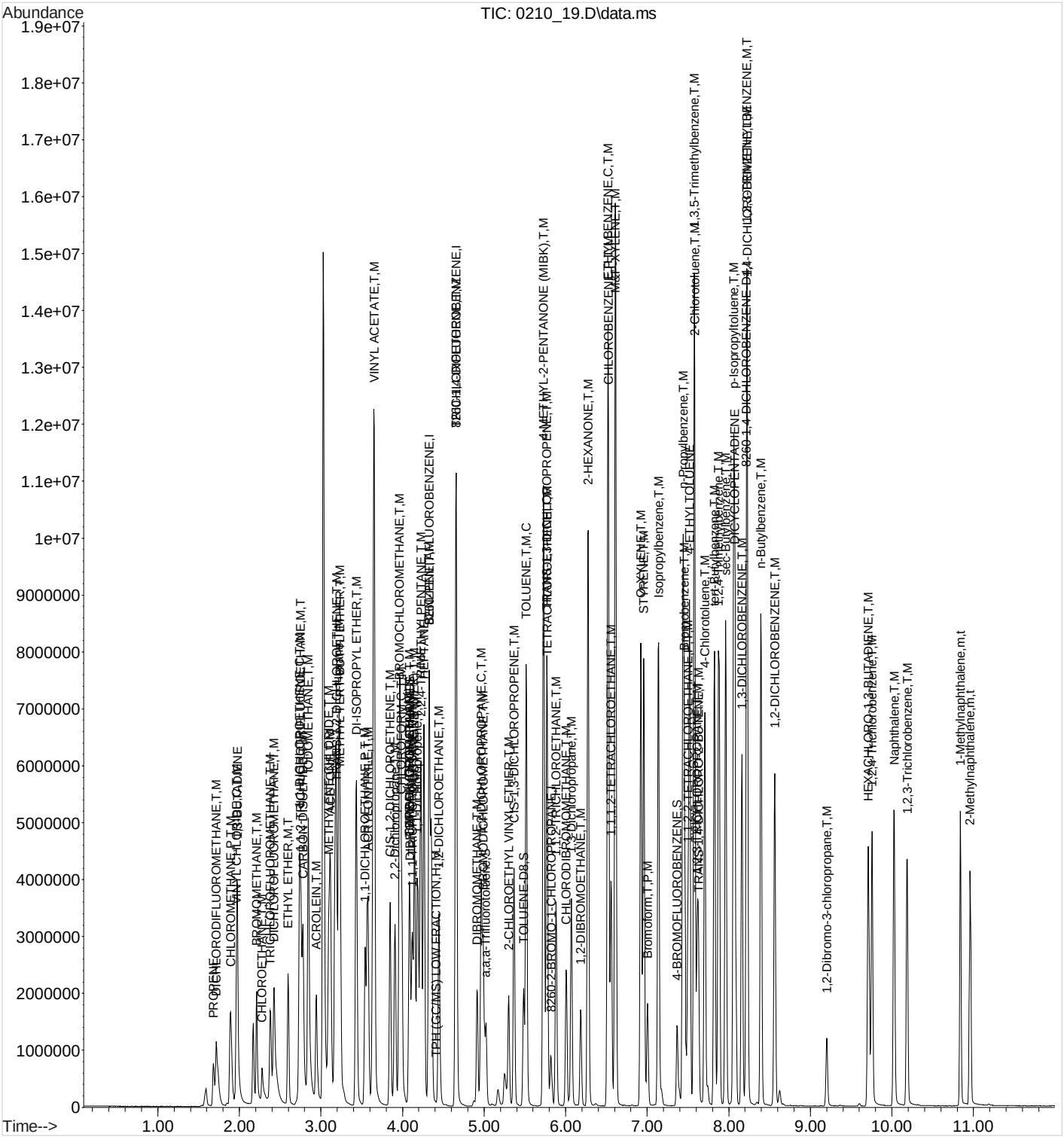
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\021016\
Data File : 0210 19.D
Acq On : 11 Feb 2016 1:58 am
Operator : 522
Sample : STD VMS 200 ppb 16B10218
Misc : water 15L26724
ALS Vial : 19 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 11 11:56:07 2016
Quant Method : C:\msdchem\1\methods\V807B10P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Thu Feb 11 11:35:07 2016
Response via : Initial Calibration



Instrument: VOCMS7
Method: V807B15P

Initial Calibration Run Log

File ID	Level ID	Date Analyzed
0210_09.D	.25	2/10/2016 10:46:00 PM
0210_10.D	.5	2/10/2016 11:05:00 PM
0210_11.D	1	2/10/2016 11:24:00 PM
0210_12.D	2	2/10/2016 11:44:00 PM
0210_13.D	5.0	2/11/2016 12:03:00 AM
0210_14.D	10	2/11/2016 12:22:00 AM
0210_15.D	25	2/11/2016 12:41:00 AM
0210_16.D	40	2/11/2016 1:01:00 AM
0210_17.D	75	2/11/2016 1:20:00 AM
0210_18.D	100	2/11/2016 1:39:00 AM
0210_19.D	200	2/11/2016 1:58:00 AM
0211_05.D	1A	2/11/2016 4:41:00 PM
0211_06.D	2.5A	2/11/2016 5:00:00 PM
0211_07.D	5A	2/11/2016 5:19:00 PM
0211_08.D	7.5A	2/11/2016 5:39:00 PM
0211_09.D	10A	2/11/2016 5:58:00 PM
0211_10.D	12A	2/11/2016 6:17:00 PM
0211_11.D	15A	2/11/2016 6:37:00 PM
0211_12.D	17A	2/11/2016 6:56:00 PM
0211_13.D	20A	2/11/2016 7:15:00 PM

Mint Miner 2.6.4 Directory Scan: z:\021116

16 Feb 2016 10:05

Level	Status	Code	Operator	Instrument	Sample ID
Scan File Path: z:\021116\0211_01.D					
Original Path: 0211_01.D					
0	Scanned		522	VOCMS7	INSTBLK (water)
Scan File Path: z:\021116\0211_02.D					
Original Path: z:\021116\0211_02.D					
0	No Audit				
Scan File Path: z:\021116\0211_03.D					
Original Path: z:\021116\0211_03.D					
0	No Audit				
Scan File Path: z:\021116\0211_04.D					
Original Path: C:\msdchem\1\data\021116\0211_04.D\data.ms					
0	Scanned		522	VOCMS7	LOD AP9 0.5 ppb 16B02726 (water)
Scan File Path: z:\021116\0211_05.D					
Original Path: C:\msdchem\1\data\021116\0211_05.D					
93	Scanned	D(63), DK(3), DC(4), DS(2), DB(3), DP(2), MZ(4)	522	VOCMS7	STD AP9 1a ppb 16B02726 (water)
Scan File Path: z:\021116\0211_05A.D					
Original Path: C:\msdchem\1\data\021116\0211_05.D					
93	Scanned	D(63), DK(3), DC(4), DS(2), DB(3), DP(2), MZ(4)	522	VOCMS7	STD AP9 1a ppb 16B02726 (water)
Scan File Path: z:\021116\0211_06.D					
Original Path: C:\msdchem\1\data\021116\0211_06.D					
96	Scanned	D(67), DK(4), DC(4), DP(3), DS(2), DB(3), ENR(1)	522	VOCMS7	STD AP9 2.5a ppb 16B02726 (water)
Scan File Path: z:\021116\0211_07.D					
Original Path: C:\msdchem\1\data\021116\0211_07.D					
90	Scanned	D(61), DK(4), DC(4), DP(3), DS(2), DB(3), ENR(1)	522	VOCMS7	STD AP9 5a ppb 16B02726 (water)
Scan File Path: z:\021116\0211_08.D					
Original Path: C:\msdchem\1\data\021116\0211_08.D					
94	Scanned	D(65), DK(4), DC(4), DP(3), DS(2), DB(3), ENR(1)	522	VOCMS7	STD AP9 7.5a ppb 16B02726 (water)
Scan File Path: z:\021116\0211_09.D					
Original Path: C:\msdchem\1\data\021116\0211_09.D					
168	Scanned	D(120), DC(8), DK(6), DP(6), DS(4), DB(4), MZ(4)	522	VOCMS7	MSTD AP9 10a ppb 16B02726 (water)

Level	Status	Code	Operator	Instrument	Sample ID
Scan File Path: z:\021116\0211_10.D					
Original Path: C:\msdchem\1\data\021116\0211_10.D					
92	Scanned	D(63), DK(4), DC(4), DP(3), DS(2), DB(3), ENR(1)	522	VOCMS7	STD AP9 12.5a ppb 16B02726 (water)
Scan File Path: z:\021116\0211_11.D					
Original Path: C:\msdchem\1\data\021116\0211_11.D					
83	Scanned	D(60), DC(4), DK(3), DP(3), DS(2), DB(2), ENR(1)	522	VOCMS7	STD AP9 15a ppb 16B02726 (water)
Scan File Path: z:\021116\0211_12.D					
Original Path: C:\msdchem\1\data\021116\0211_12.D					
81	Scanned	D(59), DC(4), DK(4), DS(2), DP(1), DB(2), ENR(1)	522	VOCMS7	STD AP9 17.5a ppb 16B02726 (water)
Scan File Path: z:\021116\0211_13.D					
Original Path: C:\msdchem\1\data\021116\0211_13.D					
84	Scanned	D(61), DC(4), DK(3), DP(3), DS(2), DB(2), ENR(1)	522	VOCMS7	STD AP9 20a ppb 16B02726 (water)
Scan File Path: z:\021116\0211_14.D					
Original Path: z:\021116\0211_14.D					
0	No Audit				
Scan File Path: z:\021116\0211_15.D					
Original Path: C:\msdchem\1\data\021116\0211_15.D\data.ms					
0	Scanned		522	VOCMS7	SSCV AP9 10a ppb 16A19936 (water)

D = Deletion of any analyte
DB = Deletion of a common contaminant
DC = Deletion of a CCC
DK = Deletion of a spike compound
DP = Deletion of an SPCC
DS = Deletion of a surrogate
ENR = Quant report set to not reviewed (Disables MZ code)
MZ = Manual integrated but indicator missing from either the quant report or audit file

ScanSummary.rpt

Total Files Scanned	16	Beginning Analyzed Date	2/11/2016 3:24:00PM
Methods	0	Ending Analyzed Date	2/11/2016 7:54:00PM
Samples	15	Analyzed Range	4 hours, 30 minutes
Tunes	1	Greatest Time Between Tunes	N/A
CCCs	0	Greatest Time Between CCCs	N/A

Distinct Method Last Updated count 0
Operators 1 Intruments 1

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

Injection Log

Instrument ID : VOCMS7
Computer Name : VOCCOMPK
Released By : Amy Green
Date Released : 2/15/2016 3:09:52 PM
Run ID : 021016
Signature : _____

#	File ID	Sample ID	Method	WG	Product	Matrix	Account #	State	Dil.	Mult.	Injected	Misc.
1	0210_01	INSTBLK	V807A26P						1	1	02/10/16 1603	"water"
2	0210_01	INSTBLK								1	02/10/16 1603	
3	0210_04	1 ppb								1	02/10/16 1711	
4	0210_05	1 ppb								1	02/10/16 1856	
5	0210_07	1 ppb								1	02/10/16 1934	
6	0210_08	INSTBLK	V807B10P						1	1	02/10/16 2226	"water"
7	0210_08	INSTBLK	V807B10P							1	02/10/16 2226	
8	0210_09	STD VMS .25 PPB 16B10218	V807B10P						1	1	02/10/16 2246	"water 15L26724"
9	0210_10	STD VMS .5 PPB 16B10218	V807B10P						1	1	02/10/16 2305	"water 15L26724"
10	0210_11	STD VMS 1 PPB 16B10218	V807B10P						1	1	02/10/16 2324	"water 15L26724"
11	0210_11A	RL VMS 1 PPB 16B10218	V807B10P						1	1	02/10/16 2324	"water 15L26724"
12	0210_12	STD VMS 2 PPB 16B10218	V807B10P						1	1	02/10/16 2344	"water 15L26724"
13	0210_12A	RL VMS 2 PPB 16B10218	V807B10P						1	1	02/10/16 2344	"water 15L26724"
14	0210_13	STD VMS 5 PPB 16B10218	V807B10P						1	1	02/11/16 0003	"water 15L26724"
15	0210_13A	RL VMS 5.0 PPB 16B10218	V807B10P						1	1	02/11/16 0003	"water 15L26724"
16	0210_14	STD VMS 10 PPB 16B10218	V807B10P						1	1	02/11/16 0022	"water 15L26724"

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

Injection Log

Instrument ID : VOCMS7
Computer Name : VOCCOMPK
Released By : Amy Green
Date Released : 2/15/2016 3:09:53 PM
Run ID : 021016
Signature : _____

#	File ID	Sample ID	Method	WG	Product	Matrix	Account #	State	Dil.	Mult.	Injected	Misc.
17	0210_15	MSTD VMS 25 PPB 16B10218	V807B10P						1	1	02/11/16 0041	"water 15L26724"
18	0210_16	STD VMS 40 PPB 16B10218	V807B10P						1	1	02/11/16 0101	"water 15L26724"
19	0210_17	STD VMS 75 PPB 16B10218	V807B10P						1	1	02/11/16 0120	"water 15L26724"
20	0210_18	STD VMS 100 PPB 16B10218	V807B10P						1	1	02/11/16 0139	"water 15L26724"
21	0210_19	STD VMS 200 PPB 16B10218	V807B10P						1	1	02/11/16 0158	"water 15L26724"
22	0210_22	SSCV VMS 25 PPB 16B10219	V807B10P						1	1	02/11/16 0256	"water 15L26724"
23	0211_01	INSTBLK	V807B15P						1	1	02/11/16 1524	"water"
24	0211_01	INSTBLK	V807B15P							1	02/11/16 1524	
25	0211_05	STD AP9 1A PPB 16B02726	V807B15P						1	1	02/11/16 1641	"water"
26	0211_05A	RL AP9 1A PPB 16B02726	V807B15P						1	1	02/11/16 1641	"water"
27	0211_06	STD AP9 2.5A PPB 16B02726	V807B15P						1	1	02/11/16 1700	"water"
28	0211_07	STD AP9 5A PPB 16B02726	V807B15P						1	1	02/11/16 1719	"water"
29	0211_08	STD AP9 7.5A PPB 16B02726	V807B15P						1	1	02/11/16 1739	"water"
30	0211_09	MSTD AP9 10A PPB 16B02726	V807B15P						1	1	02/11/16 1758	"water"

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

Injection Log

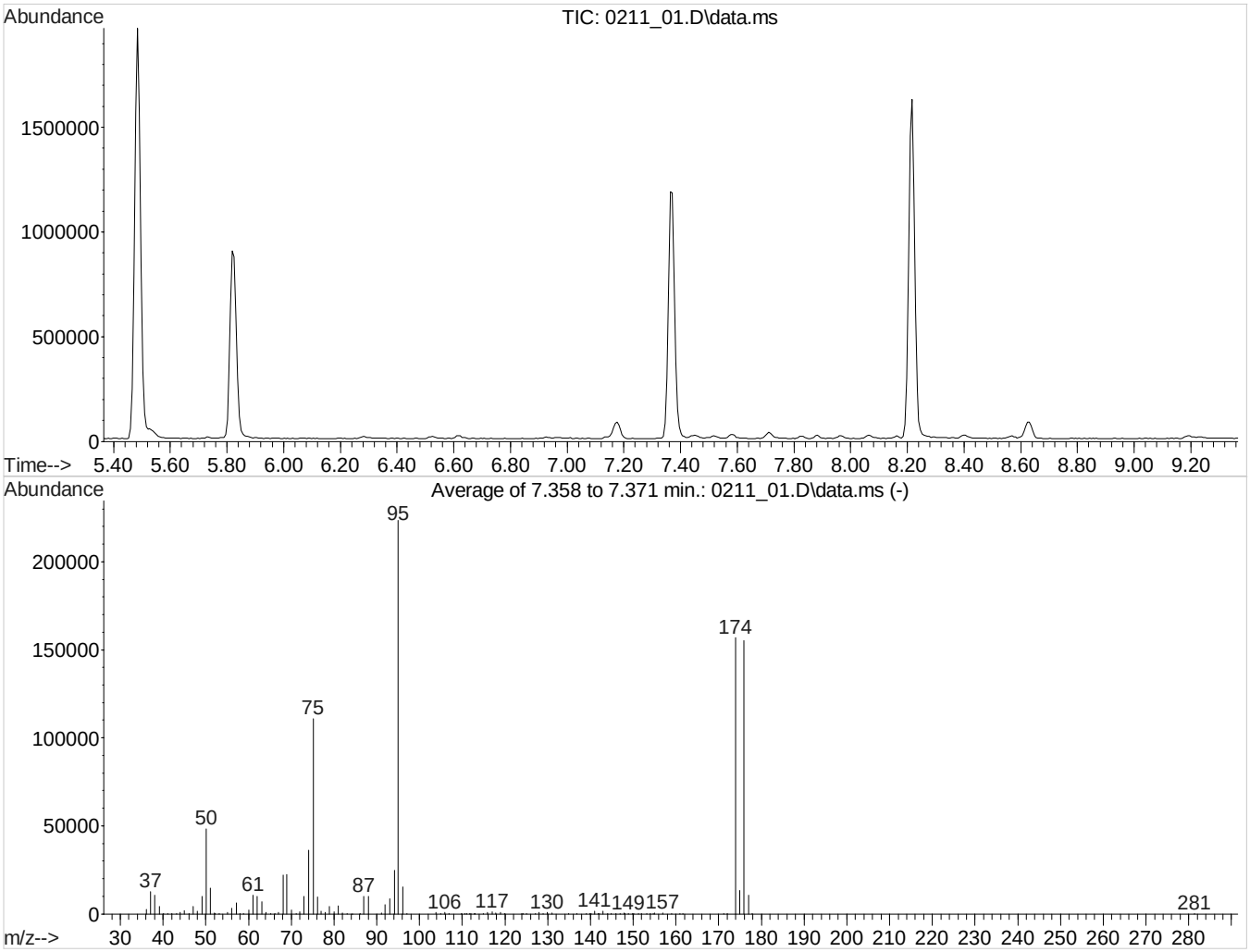
Instrument ID : VOCMS7
Computer Name : VOCCOMPK
Released By : Amy Green
Date Released : 2/15/2016 3:09:53 PM
Run ID : 021016
Signature : _____

#	File ID	Sample ID	Method	WG	Product	Matrix	Account #	State	Dil.	Mult.	Injected	Misc.
31	0211_10	STD AP9 12.5A PPB 16B02726	V807B15P						1	1	02/11/16 1817	"water"
32	0211_11	STD AP9 15A PPB 16B02726	V807B15P						1	1	02/11/16 1837	"water"
33	0211_12	STD AP9 17.5A PPB 16B02726	V807B15P						1	1	02/11/16 1856	"water"
34	0211_13	STD AP9 20A PPB 16B02726	V807B15P						1	1	02/11/16 1915	"water"
35	0211_15	SSCV AP9 10A PPB 16A19936	V807B15P						1	1	02/11/16 1954	"water"

Data Path : C:\msdchem\1\data\021116\
Data File : 0211 01.D
Acq On : 11 Feb 2016 3:24 pm
Operator : 522
Sample : INSTBLK
Misc : water
ALS Vial : 1 Sample Multiplier: 1

Integration File: RTEINT.P

Method : C:\msdchem\1\methods\V807B15P.M
Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
Last Update : Mon Feb 15 15:00:04 2016



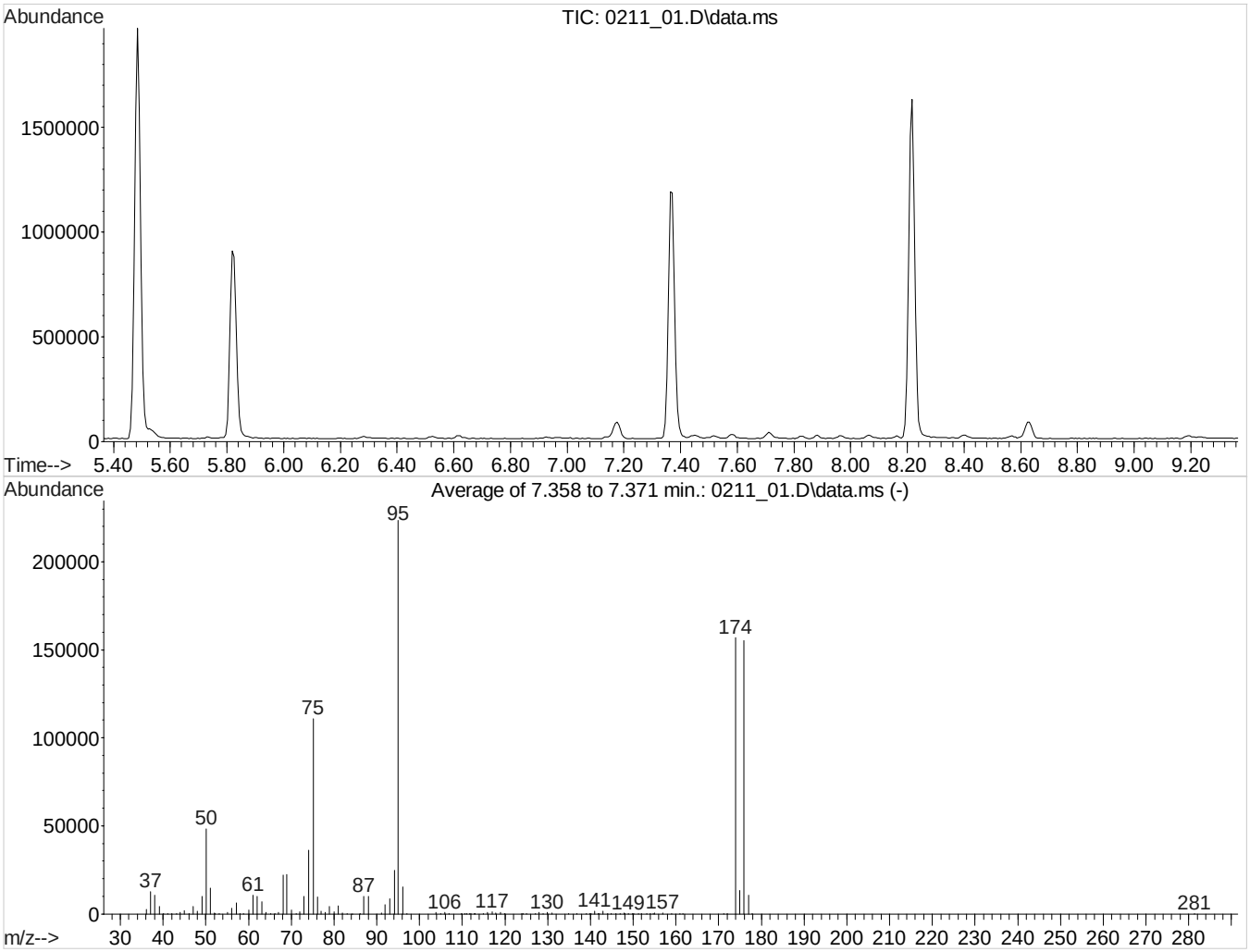
AutoFind: Scans 1196, 1197, 1198; Background Corrected with Scan 1189

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	21.7	48416	PASS
75	95	30	60	49.5	110747	PASS
95	95	100	100	100.0	223573	PASS
96	95	5	9	6.8	15152	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	150	70.2	156981	PASS
175	174	5	9	8.4	13197	PASS
176	174	95	101	98.8	155085	PASS
177	176	5	9	6.9	10700	PASS

Data Path : C:\msdchem\1\data\021116\
Data File : 0211 01.D
Acq On : 11 Feb 2016 3:24 pm
Operator : 522
Sample : INSTBLK
Misc : water
ALS Vial : 1 Sample Multiplier: 1

Integration File: RTEINT.P

Method : C:\msdchem\1\methods\V807B15P.M
Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
Last Update : Mon Feb 15 15:00:04 2016



AutoFind: Scans 1196, 1197, 1198; Background Corrected with Scan 1189

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	21.7	48416	PASS
75	95	30	60	49.5	110747	PASS
95	95	100	100	100.0	223573	PASS
96	95	5	9	6.8	15152	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	150	70.2	156981	PASS
175	174	5	9	8.4	13197	PASS
176	174	95	101	98.8	155085	PASS
177	176	5	9	6.9	10700	PASS

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID	: VOCMS7	Review Method	: 6200	Released By	: Amy Green
Method	: V807B15P	Review Protocol	: SM 20th	Released On	: 2/15/2016 3:09:53 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V807B15P -- ICal Updated Time: Mon Feb 15 15:00:04 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
8260-PENTAFLUOROBENZENE																								
TPH (GC/MS) LOW FRACTION																					0	0	0	1
PROPENE		0.308	0.223	0.288	0.246	0.204	0.215	0.217	0.218	0.216	0.213										0.234838	15.04	0.15	1
DICHLORODIFLUOROMETHANE	0.893	0.646	0.617	0.624	0.549	0.6	0.584	0.588	0.595	0.593	0.565										0.623141	15	0.15	1
CHLOROMETHANE	1.089	0.952	0.918	0.913	0.803	0.846	0.828	0.832	0.847	0.843	0.954										0.893048	9.35	0.093	1
VINYL CHLORIDE	0.85	0.777	0.76	0.745	0.725	0.78	0.755	0.755	0.762	0.779	0.733										0.76567	4.35	0.044	1
1,3-BUTADIENE		0.831	0.806	0.733	0.649	0.664	0.643	0.651	0.626	0.646	0.586										0.683446	11.7	0.117	1
BROMOMETHANE			0.389	0.405	0.311	0.35	0.366	0.364	0.394	0.416	0.413										0.378802	9.02	0.09	1
CHLOROETHANE			0.52	0.422	0.383	0.431	0.395	0.388	0.382	0.364											0.41058	11.96	0.12	1
TRICHLOROFLUOROMETHANE	0.822	0.786	0.781	0.768	0.718	0.772	0.748	0.751	0.75	0.765	0.75										0.764713	3.52	0.035	1
DICHLOROFLUOROMETHANE	1.078	0.971	1.162	1.038	0.987	1.061	1.012	1.014	1.028	1.029	0.988										1.033416	5.14	0.051	1
ETHYL ETHER	0.564	0.526	0.473	0.505	0.436	0.486	0.473	0.476	0.471	0.475	0.455										0.485553	7.23	0.072	1
ACROLEIN	0.141	0.105	0.116	0.104	0.107	0.115	0.113	0.121	0.117	0.124	0.123										0.116876	9	0.09	1
1,1-DICHLOROETHENE	0.856	0.854	0.845	0.87	0.766	0.863	0.834	0.828	0.814	0.819	0.764										0.828476	4.32	0.043	1
1,1,2 -TRICHLOROTRIFLUOROETHANE	0.526	0.525	0.487	0.463	0.449	0.48	0.474	0.463	0.46	0.462	0.436										0.475169	6.01	0.06	1
ACETONE	0.465	0.414	0.365	0.389	0.351	0.384	0.356	0.37	0.35	0.358	0.337										0.376406	9.67	0.097	1
IODOMETHANE	0.387	0.387	0.415	0.43	0.436	0.501	0.521	0.53	0.564	0.571	0.52										0.478341	14.44	0.144	1
CARBON DISULFIDE	2.127	2.055	1.938	1.906	1.75	1.868	1.813	1.799	1.777	1.773	1.695										1.863691	7.14	0.071	1
METHYLENE CHLORIDE	0.688	0.732	0.528	0.605	0.493	0.527	0.516	0.512	0.511	0.518	0.5										0.557192	14.62	0.146	1
ACRYLONITRILE	0.286	0.242	0.216	0.222	0.21	0.229	0.218	0.233	0.219	0.226	0.216										0.228846	9.19	0.092	1
n-Hexane		0.761	0.631	0.593	0.591	0.609	0.577	0.564	0.561	0.558	0.53										0.597635	10.72	0.107	1
TRANS-1,2-DICHLOROETHENE	0.453	0.68	0.494	0.509	0.458	0.497	0.484	0.475	0.482	0.478	0.462										0.497513	12.67	0.127	1

Environmental Science Corporation
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INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS7
Method : V807B15P
Review Method : 6200
Review Protocol : SM 20th
Released By : Amy Green
Released On : 2/15/2016 3:09:53 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V807B15P -- ICal Updated Time: Mon Feb 15 15:00:04 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
METHYL TERT-BUTYL ETHER	1.466	1.453	1.504	1.597	1.448	1.538	1.471	1.477	1.447	1.468	1.41										1.47991	3.42	0.034	1
1,1-DICHLOROETHANE	1.012	1.046	1.034	1.06	0.985	1.054	1.034	1.032	1.024	1.033	0.981										1.02691	2.46	0.025	1
VINYL ACETATE	1.265	1.516	1.326	1.334	1.279	1.378	1.31	1.323	1.254	1.249	1.14										1.306617	7.11	0.071	1
DI-ISOPROPYL ETHER	2.314	2.096	2.295	2.202	2.078	2.24	2.205	2.207	2.182	2.192	2.059										2.18812	3.76	0.038	1
2,2-Dichloropropane	1.005	0.953	0.891	0.844	0.794	0.834	0.818	0.814	0.812	0.817	0.767										0.84979	8.45	0.084	1
CIS-1,2-DICHLOROETHENE	0.576	0.517	0.501	0.589	0.505	0.561	0.53	0.535	0.543	0.55	0.525										0.539293	5.18	0.052	1
2-BUTANONE (MEK)	0.432	0.494	0.482	0.459	0.437	0.472	0.448	0.471	0.442	0.449	0.423										0.455348	4.87	0.049	1
BROMOCHLOROMETHANE	0.357	0.291	0.292	0.285	0.295	0.302	0.293	0.29	0.274	0.272	0.248										0.290801	9.08	0.091	1
TETRAHYDROFURAN			0.23	0.267	0.211	0.235	0.207	0.221	0.202	0.212	0.206										0.221123	9.2	0.092	1
CHLOROFORM		0.997	0.979	0.97	0.881	0.96	0.918	0.909	0.895	0.904	0.859										0.927238	4.97	0.05	1
DIBROMOFLUOROMETHANE	0.534	0.53	0.526	0.525	0.521	0.524	0.516	0.515	0.51	0.506	0.495										0.518344	2.21	0.022	1
1,1,1-TRICHLOROETHANE	0.886	0.824	0.814	0.769	0.712	0.777	0.738	0.738	0.736	0.75	0.715										0.769114	6.93	0.069	1
CARBON TETRACHLORIDE	0.826	0.763	0.684	0.639	0.633	0.68	0.647	0.639	0.661	0.668	0.621										0.678307	9.2	0.092	1
1,1-Dichloropropene	0.726	0.769	0.744	0.731	0.698	0.755	0.721	0.719	0.712	0.725	0.685										0.725794	3.31	0.033	1
2,2,4-TRIMETHYLPENTANE	2.773	2.643	2.542	2.63	2.438	2.621	2.532	2.525	2.518	2.54	2.414										2.561313	3.93	0.039	1
HEPTANE	1.203	1.409	1.272	1.347	1.205	1.244	1.194	1.177	1.159	1.21	1.126										1.231403	6.75	0.068	1
BENZENE	2.314	2.31	2.169	2.213	2.073	2.181	2.117	2.141	2.126	2.14	2.074										2.168922	3.79	0.038	1
1,2-DICHLOROETHANE	0.575	0.655	0.653	0.679	0.645	0.697	0.657	0.674	0.667	0.676	0.649										0.657068	4.76	0.048	1
8260-1,4-DIFLUOROBENZENE																								
TRICHLOROETHENE	0.281	0.32	0.284	0.282	0.277	0.291	0.281	0.28	0.278	0.284	0.278										0.285218	4.27	0.043	1
1,2-DICHLOROPROPANE	0.281	0.304	0.255	0.262	0.24	0.26	0.258	0.251	0.25	0.25	0.24										0.259322	7.2	0.072	1
DIBROMOMETHANE	0.239	0.211	0.187	0.187	0.168	0.182	0.178	0.182	0.178	0.184	0.18										0.188576	10.45	0.104	1

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INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS7
Method : V807B15P
Review Method : 6200
Review Protocol : SM 20th
Released By : Amy Green
Released On : 2/15/2016 3:09:53 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V807B15P -- ICal Updated Time: Mon Feb 15 15:00:04 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
BROMODICHLOROMETHANE		0.548	0.437	0.426	0.413	0.44	0.414	0.408	0.399	0.4	0.39										0.427443	10.58	0.106	1
a,a,a-Trifluorotoluene	0.545	0.546	0.543	0.534	0.527	0.522	0.521	0.515	0.5	0.5	0.489										0.522235	3.72	0.037	1
-CHLOROETHYL VINYL ETHER	0.039	0.037	0.034	0.034	0.036	0.041	0.042	0.04	0.032	0.033	0.033										0.03637	9.95	0.099	1
CIS-1,3-DICHLOROPROPENE	0.616	0.619	0.579	0.558	0.524	0.552	0.534	0.542	0.531	0.537	0.519										0.555612	6.28	0.063	1
-METHYL-2-PENTANONE (MIBK)	0.5	0.441	0.426	0.398	0.384	0.414	0.391	0.406	0.371	0.379	0.356										0.405823	9.79	0.098	1
TOLUENE-D8	1.259	1.268	1.25	1.227	1.22	1.214	1.213	1.213	1.199	1.186	1.197										1.222388	2.16	0.022	1
TOLUENE		1.486	1.322	1.313	1.241	1.314	1.277	1.263	1.248	1.249	1.217										1.292967	5.92	0.059	1
TRANS-1,3-DICHLOROPROPENE	0.476	0.487	0.475	0.481	0.439	0.481	0.462	0.474	0.455	0.461	0.449										0.467412	3.27	0.033	1
8260-2-BROMO-1 -CHLOROPROPANE																								
1,1,2-TRICHLOROETHANE	1.438	1.702	1.442	1.491	1.285	1.414	1.438	1.41	1.376	1.44	1.396										1.439222	7.05	0.07	1
TETRACHLOROETHENE	1.139	1.291	1.235	1.279	1.161	1.232	1.18	1.169	1.143	1.184	1.173										1.198664	4.38	0.044	1
1,3-Dichloropropane	2.893	2.679	2.636	2.588	2.447	2.651	2.543	2.526	2.449	2.577	2.479										2.587871	4.96	0.05	1
2-HEXANONE	0.893	1.045	1.021	1.086	1.009	1.091	1.026	1.073	0.985	1.03	0.984										1.021934	5.51	0.055	1
CHLORODIBROMOMETHANE	1.934	1.968	1.688	1.646	1.447	1.638	1.552	1.583	1.545	1.621	1.61										1.657455	9.57	0.096	1
1,2-DIBROMOETHANE	1.834	1.514	1.529	1.331	1.311	1.484	1.434	1.452	1.417	1.484	1.461										1.477366	9.25	0.093	1
CHLOROBENZENE	4.873	4.955	4.638	4.414	4.1	4.355	4.211	4.169	4.058	4.23	4.171										4.37943	7.09	0.071	1
1,1,1,2-TETRACHLOROETHANE	1.785	1.598	1.493	1.453	1.307	1.422	1.349	1.322	1.322	1.37	1.36										1.434697	10.17	0.102	1
ETHYLBENZENE	2.444	2.73	2.724	2.454	2.328	2.521	2.429	2.404	2.356	2.447	2.407										2.476655	5.4	0.054	1
M&P-XYLENE	3.198	3.373	3.05	3.157	2.803	3.018	2.879	2.887	2.849	2.959	2.965										3.012497	5.71	0.057	1
O-XYLENE	3.12	3.349	2.977	3.009	2.785	2.927	2.872	2.888	2.86	2.981	2.886										2.968513	5.21	0.052	1
STYRENE	5.316	5.015	4.901	5.122	4.541	4.886	4.852	4.765	4.721	4.892	4.782										4.890134	4.24	0.042	1
Bromoform	0.976	1.061	1.003	1.037	0.943	1.03	1.014	1.033	1.001	1.045	1.051										1.01778	3.46	0.035	1

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Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
Isopropylbenzene	8.005	9.245	7.82	8.181	7.571	7.858	7.67	7.61	7.493	7.756	7.36										7.869977	6.51	0.065	1
4-BROMOFLUOROBENZENE	2.567	2.549	2.525	2.523	2.518	2.497	2.517	2.524	2.527	2.589	2.626										2.541892	1.48	0.015	1
Bromobenzene	3.301	3.489	3.767	3.489	3.139	3.316	3.357	3.287	3.225	3.319	3.215										3.354915	5.15	0.052	1
1,1,2,2-TETRACHLOROETHANE	2.916	2.602	2.398	2.123	2.07	2.13	2.047	2.111	1.996	2.111	2.051										2.232289	12.93	0.129	1
1,2,3-TRICHLOROPROPANE	1.01	0.67	0.763	0.543	0.506	0.514	0.504	0.499	0.487	0.509	0.492										0.590673	27.83	1	0
TRANS-1,4-DICHLORO-2-BUTENE		0.848	0.56	0.581	0.527	0.6	0.611	0.626	0.62	0.635	0.629										0.623604	13.8	0.138	1
n-Propylbenzene	8.891	9.58	9.175	9.406	8.65	9.374	9.184	9.162	9.053	9.263	8.843										9.143748	2.97	0.03	1
4-ETHYLTOLUENE	8.552	8.863	7.968	7.731	7.181	7.657	7.488	7.52	7.284	7.457	7.15										7.713754	7.14	0.071	1
2-Chlorotoluene	1.733	1.918	1.683	1.747	1.53	1.678	1.596	1.582	1.599	1.658	1.658										1.671162	6.27	0.063	1
4-Chlorotoluene	5.908	6.665	5.49	5.593	5.156	5.422	5.371	5.42	5.292	5.508	5.268										5.554005	7.52	0.075	1
1,3,5-Trimethylbenzene	6.733	7.053	6.962	6.555	5.871	6.205	6.082	6.028	5.992	6.152	5.914										6.322491	6.77	0.068	1
tert-Butylbenzene	5.318	5.946	5.484	5.488	5.015	5.41	5.269	5.224	5.224	5.294	5.092										5.342142	4.65	0.046	1
1,2,4-Trimethylbenzene	7.263	7.608	6.574	6.551	5.909	6.228	6.165	6.103	5.964	6.166	5.833										6.396692	8.89	0.089	1
sec-Butylbenzene	9.409	9.545	8.644	8.462	8.121	8.686	8.491	8.369	8.254	8.479	7.989										8.586258	5.68	0.057	1
1,3-DICHLOROBENZENE	3.302	3.485	3.258	3.378	2.938	3.228	3.227	3.203	3.224	3.328	3.214										3.253187	4.16	0.042	1
p-Isopropyltoluene	7.3	7.347	6.928	7.289	6.45	6.803	6.682	6.691	6.586	6.842	6.466										6.853175	4.8	0.048	1
DICYCLOPENTADIENE	9.113	9.923	9.394	9.579	8.64	9.139	8.766	8.524	8.343	8.497	7.991										8.900893	6.53	0.065	1
8260-1,4-DICHLOROBENZENE-D4																								
1,4-DICHLOROBENZENE	1.541	1.415	1.427	1.358	1.209	1.28	1.245	1.232	1.219	1.241	1.22										1.307916	8.48	0.085	1
1,2,3-TRIMETHYLBENZENE	2.825	2.93	2.529	2.52	2.373	2.531	2.448	2.397	2.342	2.387	2.255										2.503362	8.19	0.082	1
1,2-DICHLOROBENZENE	1.164	1.28	1.221	1.225	1.172	1.245	1.228	1.221	1.194	1.22	1.158										1.211675	3.04	0.03	1
n-Butylbenzene	2.388	2.861	2.834	2.829	2.671	2.855	2.778	2.751	2.661	2.661	2.44										2.702654	5.98	0.06	1

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1,2-Dibromo-3-chloropropane		0.215	0.135	0.141	0.144	0.153	0.162	0.165	0.159	0.169	0.161										0.160378	13.78	0.138	1
1,2,4-Trichlorobenzene	0.945	0.884	0.882	0.822	0.804	0.844	0.826	0.826	0.785	0.789	0.72										0.829648	7.21	0.072	1
HEXACHLORO-1,3-BUTADIENE	0.465	0.494	0.459	0.476	0.458	0.481	0.468	0.48	0.471	0.477	0.441										0.469786	2.98	0.03	1
Naphthalene	2.638	2.396	2.184	2.238	2.021	2.266	2.196	2.301	2.178	2.232	2.051										2.245622	7.44	0.074	1
1,2,3-Trichlorobenzene	0.877	0.759	0.732	0.808	0.735	0.786	0.773	0.768	0.734	0.747	0.68										0.76355	6.61	0.066	1
2-Methylnaphthalene	1.336	1.083	1.079	1.116	1.072	1.191	1.195	1.255	1.153	1.164	1.049										1.154015	7.58	0.076	1
1-Methylnaphthalene	1.249	1.017	1.036	1.076	0.91	0.978	0.989	1.046	0.95	0.961	0.862										1.006831	10.08	0.101	1
AP9-PENTAFLUOROBENZENE																								
ETHANOL												0.008	0.009	0.008	0.009	0.01	0.009	0.009	0.009	0.009	0.008876	4.61	0.046	1
Bromoethane												0.431	0.394	0.391	0.395	0.409	0.402	0.406	0.41	0.401	0.404303	3	0.03	1
2-PROPANOL												0.057	0.059	0.044	0.045	0.049	0.045	0.047	0.045	0.045	0.048319	11.61	0.116	1
Methyl Acetate												0.458	0.455	0.443	0.44	0.463	0.451	0.452	0.438	0.432	0.44805	2.29	0.023	1
ACETONITRILE												0.077	0.081	0.077	0.078	0.084	0.081	0.081	0.081	0.078	0.079808	3.16	0.032	1
ALLYL CHLORIDE												0.268	0.258	0.261	0.251	0.263	0.261	0.256	0.263	0.256	0.259527	1.99	0.02	1
tert-BUTYL ALCOHOL												0.167	0.153	0.155	0.158	0.168	0.162	0.165	0.163	0.156	0.160802	3.37	0.034	1
chloroprene												0.869	0.844	0.824	0.824	0.851	0.848	0.822	0.827	0.817	0.836237	2.11	0.021	1
ETHYL TERT-BUTYL ETHER												1.858	1.736	1.727	1.695	1.802	1.733	1.736	1.744	1.718	1.749866	2.84	0.028	1
PROPIONITRILE												0.082	0.082	0.078	0.078	0.083	0.08	0.08	0.079	0.076	0.079823	2.85	0.028	1
Ethyl Acetate												0.627	0.616	0.594	0.596	0.622	0.605	0.61	0.596	0.584	0.605676	2.38	0.024	1
METHACRYLONITRILE												0.225	0.221	0.209	0.208	0.217	0.212	0.213	0.211	0.205	0.213529	3.12	0.031	1
Cyclohexane												1.149	1.114	1.101	1.073	1.137	1.127	1.107	1.113	1.092	1.112759	2.08	0.021	1
tert-butyl formate																					0	0	0	1

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID	: VOCMS7	Review Method	: 6200	Released By	: Amy Green
Method	: V807B15P	Review Protocol	: SM 20th	Released On	: 2/15/2016 3:09:53 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V807B15P -- ICal Updated Time: Mon Feb 15 15:00:04 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
ISOBUTANOL												0.044	0.039	0.039	0.037	0.041	0.039	0.039	0.038	0.037	0.03929	5.09	0.051	1
1-Amyl Alcohol												0.054	0.064	0.051	0.053	0.061	0.058	0.055	0.057	0.053	0.056226	7.4	0.074	1
TERT-AMYL METHYL ETHER												1.923	1.754	1.701	1.701	1.775	1.712	1.725	1.71	1.661	1.740322	4.37	0.044	1
AP9-1,4-DIFLUOROBENZENE																								
N-BUTANOL												0.011	0.012	0.011	0.011	0.012	0.012	0.012	0.012	0.011	0.011654	3.68	0.037	1
Methyl Cyclohexane												1.164	0.899	0.822	0.765	0.767	0.766	0.754	0.738	0.734	0.823254	16.72	1	0
2-nitropropane												0.121	0.117	0.113	0.106	0.114	0.111	0.112	0.11	0.108	0.112635	4.06	0.041	1
METHYL METHACRYLATE												0.372	0.348	0.341	0.333	0.351	0.345	0.35	0.341	0.333	0.345904	3.43	0.034	1
1,4-DIOXANE												0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.003	0.003654	3.16	0.032	1
n-octane												0.339	0.311	0.308	0.295	0.312	0.304	0.3	0.307	0.3	0.308468	4.12	0.041	1
3,3-DIMETHYL-1-BUTANOL												0.056	0.054	0.052	0.053	0.057	0.056	0.056	0.056	0.053	0.054863	2.88	0.029	1
AP9-2-BROMO-1 -CHLOROPROPANE																								
ETHYL METHACRYLATE												2.13	2.009	2.033	2.036	2.096	2.121	2.151	2.094	2.066	2.081683	2.34	0.023	1
CIS-1,4-DICHLORO-2-BUTENE												0.548	0.549	0.563	0.562	0.591	0.579	0.6	0.585	0.571	0.572086	3.17	0.032	1
Cyclohexanone												0.515	0.528	0.515	0.515	0.513	0.527	0.522	0.481	0.445	0.50676	5.3	0.053	1
PENTACHLOROETHANE												1.019	0.975	0.979	1.017	1.044	1.045	1.039	1.032	1.026	1.019613	2.57	0.026	1
Hexachloroethane												1.288	1.211	1.27	1.204	1.266	1.27	1.313	1.309	1.28	1.267692	3	0.03	1
AP9-1,4-DICHLOROBENZENE-D4																								

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS7
Method : V807B15P
Review Method : 601-602
Review Protocol : EPA
Released By : Amy Green
Released On : 2/15/2016 3:07:01 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V807B15P -- ICal Updated Time: Mon Feb 15 15:00:04 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
8260-PENTAFLUOROBENZENE																								
TPH (GC/MS) LOW FRACTION																					0	0	0	1
PROPENE		0.308	0.223	0.288	0.246	0.204	0.215	0.217	0.218	0.216	0.213										0.234838	15.04	0.15	1
DICHLORODIFLUOROMETHANE	0.893	0.646	0.617	0.624	0.549	0.6	0.584	0.588	0.595	0.593	0.565										0.623141	15	0.15	1
CHLOROMETHANE	1.089	0.952	0.918	0.913	0.803	0.846	0.828	0.832	0.847	0.843	0.954										0.893048	9.35	0.093	1
VINYL CHLORIDE	0.85	0.777	0.76	0.745	0.725	0.78	0.755	0.755	0.762	0.779	0.733										0.76567	4.35	0.044	1
1,3-BUTADIENE		0.831	0.806	0.733	0.649	0.664	0.643	0.651	0.626	0.646	0.586										0.683446	11.7	0.117	1
BROMOMETHANE			0.389	0.405	0.311	0.35	0.366	0.364	0.394	0.416	0.413										0.378802	9.02	0.09	1
CHLOROETHANE			0.52	0.422	0.383	0.431	0.395	0.388	0.382	0.364											0.41058	11.96	0.12	1
TRICHLOROFLUOROMETHANE	0.822	0.786	0.781	0.768	0.718	0.772	0.748	0.751	0.75	0.765	0.75										0.764713	3.52	0.035	1
DICHLOROFLUOROMETHANE	1.078	0.971	1.162	1.038	0.987	1.061	1.012	1.014	1.028	1.029	0.988										1.033416	5.14	0.051	1
ETHYL ETHER	0.564	0.526	0.473	0.505	0.436	0.486	0.473	0.476	0.471	0.475	0.455										0.485553	7.23	0.072	1
ACROLEIN	0.141	0.105	0.116	0.104	0.107	0.115	0.113	0.121	0.117	0.124	0.123										0.116876	9	0.09	1
1,1-DICHLOROETHENE	0.856	0.854	0.845	0.87	0.766	0.863	0.834	0.828	0.814	0.819	0.764										0.828476	4.32	0.043	1
1,1,2 -TRICHLOROTRIFLUOROETHANE	0.526	0.525	0.487	0.463	0.449	0.48	0.474	0.463	0.46	0.462	0.436										0.475169	6.01	0.06	1
ACETONE	0.465	0.414	0.365	0.389	0.351	0.384	0.356	0.37	0.35	0.358	0.337										0.376406	9.67	0.097	1
IODOMETHANE	0.387	0.387	0.415	0.43	0.436	0.501	0.521	0.53	0.564	0.571	0.52										0.478341	14.44	0.144	1
CARBON DISULFIDE	2.127	2.055	1.938	1.906	1.75	1.868	1.813	1.799	1.777	1.773	1.695										1.863691	7.14	0.071	1
METHYLENE CHLORIDE	0.688	0.732	0.528	0.605	0.493	0.527	0.516	0.512	0.511	0.518	0.5										0.557192	14.62	0.146	1
ACRYLONITRILE	0.286	0.242	0.216	0.222	0.21	0.229	0.218	0.233	0.219	0.226	0.216										0.228846	9.19	0.092	1
n-Hexane		0.761	0.631	0.593	0.591	0.609	0.577	0.564	0.561	0.558	0.53										0.597635	10.72	0.107	1
TRANS-1,2-DICHLOROETHENE	0.453	0.68	0.494	0.509	0.458	0.497	0.484	0.475	0.482	0.478	0.462										0.497513	12.67	0.127	1

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS7
Method : V807B15P
Review Method : 601-602
Review Protocol : EPA
Released By : Amy Green
Released On : 2/15/2016 3:07:01 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V807B15P -- ICal Updated Time: Mon Feb 15 15:00:04 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
METHYL TERT-BUTYL ETHER	1.466	1.453	1.504	1.597	1.448	1.538	1.471	1.477	1.447	1.468	1.41										1.47991	3.42	0.034	1
1,1-DICHLOROETHANE	1.012	1.046	1.034	1.06	0.985	1.054	1.034	1.032	1.024	1.033	0.981										1.02691	2.46	0.025	1
VINYL ACETATE	1.265	1.516	1.326	1.334	1.279	1.378	1.31	1.323	1.254	1.249	1.14										1.306617	7.11	0.071	1
DI-ISOPROPYL ETHER	2.314	2.096	2.295	2.202	2.078	2.24	2.205	2.207	2.182	2.192	2.059										2.18812	3.76	0.038	1
2,2-Dichloropropane	1.005	0.953	0.891	0.844	0.794	0.834	0.818	0.814	0.812	0.817	0.767										0.84979	8.45	0.084	1
CIS-1,2-DICHLOROETHENE	0.576	0.517	0.501	0.589	0.505	0.561	0.53	0.535	0.543	0.55	0.525										0.539293	5.18	0.052	1
2-BUTANONE (MEK)	0.432	0.494	0.482	0.459	0.437	0.472	0.448	0.471	0.442	0.449	0.423										0.455348	4.87	0.049	1
BROMOCHLOROMETHANE	0.357	0.291	0.292	0.285	0.295	0.302	0.293	0.29	0.274	0.272	0.248										0.290801	9.08	0.091	1
TETRAHYDROFURAN			0.23	0.267	0.211	0.235	0.207	0.221	0.202	0.212	0.206										0.221123	9.2	0.092	1
CHLOROFORM		0.997	0.979	0.97	0.881	0.96	0.918	0.909	0.895	0.904	0.859										0.927238	4.97	0.05	1
DIBROMOFLUOROMETHANE	0.534	0.53	0.526	0.525	0.521	0.524	0.516	0.515	0.51	0.506	0.495										0.518344	2.21	0.022	1
1,1,1-TRICHLOROETHANE	0.886	0.824	0.814	0.769	0.712	0.777	0.738	0.738	0.736	0.75	0.715										0.769114	6.93	0.069	1
CARBON TETRACHLORIDE	0.826	0.763	0.684	0.639	0.633	0.68	0.647	0.639	0.661	0.668	0.621										0.678307	9.2	0.092	1
1,1-Dichloropropene	0.726	0.769	0.744	0.731	0.698	0.755	0.721	0.719	0.712	0.725	0.685										0.725794	3.31	0.033	1
2,2,4-TRIMETHYLPENTANE	2.773	2.643	2.542	2.63	2.438	2.621	2.532	2.525	2.518	2.54	2.414										2.561313	3.93	0.039	1
HEPTANE	1.203	1.409	1.272	1.347	1.205	1.244	1.194	1.177	1.159	1.21	1.126										1.231403	6.75	0.068	1
BENZENE	2.314	2.31	2.169	2.213	2.073	2.181	2.117	2.141	2.126	2.14	2.074										2.168922	3.79	0.038	1
1,2-DICHLOROETHANE	0.575	0.655	0.653	0.679	0.645	0.697	0.657	0.674	0.667	0.676	0.649										0.657068	4.76	0.048	1
8260-1,4-DIFLUOROBENZENE																								
TRICHLOROETHENE	0.281	0.32	0.284	0.282	0.277	0.291	0.281	0.28	0.278	0.284	0.278										0.285218	4.27	0.043	1
1,2-DICHLOROPROPANE	0.281	0.304	0.255	0.262	0.24	0.26	0.258	0.251	0.25	0.25	0.24										0.259322	7.2	0.072	1
DIBROMOMETHANE	0.239	0.211	0.187	0.187	0.168	0.182	0.178	0.182	0.178	0.184	0.18										0.188576	10.45	0.104	1

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS7
Method : V807B15P
Review Method : 601-602
Review Protocol : EPA
Released By : Amy Green
Released On : 2/15/2016 3:07:01 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V807B15P -- ICal Updated Time: Mon Feb 15 15:00:04 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
BROMODICHLOROMETHANE		0.548	0.437	0.426	0.413	0.44	0.414	0.408	0.399	0.4	0.39										0.427443	10.58	0.106	1
a,a,a-Trifluorotoluene	0.545	0.546	0.543	0.534	0.527	0.522	0.521	0.515	0.5	0.5	0.489										0.522235	3.72	0.037	1
-CHLOROETHYL VINYL ETHER	0.039	0.037	0.034	0.034	0.036	0.041	0.042	0.04	0.032	0.033	0.033										0.03637	9.95	0.099	1
CIS-1,3-DICHLOROPROPENE	0.616	0.619	0.579	0.558	0.524	0.552	0.534	0.542	0.531	0.537	0.519										0.555612	6.28	0.063	1
-METHYL-2-PENTANONE (MIBK)	0.5	0.441	0.426	0.398	0.384	0.414	0.391	0.406	0.371	0.379	0.356										0.405823	9.79	0.098	1
TOLUENE-D8	1.259	1.268	1.25	1.227	1.22	1.214	1.213	1.213	1.199	1.186	1.197										1.222388	2.16	0.022	1
TOLUENE		1.486	1.322	1.313	1.241	1.314	1.277	1.263	1.248	1.249	1.217										1.292967	5.92	0.059	1
TRANS-1,3-DICHLOROPROPENE	0.476	0.487	0.475	0.481	0.439	0.481	0.462	0.474	0.455	0.461	0.449										0.467412	3.27	0.033	1
8260-2-BROMO-1 -CHLOROPROPANE																								
1,1,2-TRICHLOROETHANE	1.438	1.702	1.442	1.491	1.285	1.414	1.438	1.41	1.376	1.44	1.396										1.439222	7.05	0.07	1
TETRACHLOROETHENE	1.139	1.291	1.235	1.279	1.161	1.232	1.18	1.169	1.143	1.184	1.173										1.198664	4.38	0.044	1
1,3-Dichloropropane	2.893	2.679	2.636	2.588	2.447	2.651	2.543	2.526	2.449	2.577	2.479										2.587871	4.96	0.05	1
2-HEXANONE	0.893	1.045	1.021	1.086	1.009	1.091	1.026	1.073	0.985	1.03	0.984										1.021934	5.51	0.055	1
CHLORODIBROMOMETHANE	1.934	1.968	1.688	1.646	1.447	1.638	1.552	1.583	1.545	1.621	1.61										1.657455	9.57	0.096	1
1,2-DIBROMOETHANE	1.834	1.514	1.529	1.331	1.311	1.484	1.434	1.452	1.417	1.484	1.461										1.477366	9.25	0.093	1
CHLOROBENZENE	4.873	4.955	4.638	4.414	4.1	4.355	4.211	4.169	4.058	4.23	4.171										4.37943	7.09	0.071	1
1,1,1,2-TETRACHLOROETHANE	1.785	1.598	1.493	1.453	1.307	1.422	1.349	1.322	1.322	1.37	1.36										1.434697	10.17	0.102	1
ETHYLBENZENE	2.444	2.73	2.724	2.454	2.328	2.521	2.429	2.404	2.356	2.447	2.407										2.476655	5.4	0.054	1
M&P-XYLENE	3.198	3.373	3.05	3.157	2.803	3.018	2.879	2.887	2.849	2.959	2.965										3.012497	5.71	0.057	1
O-XYLENE	3.12	3.349	2.977	3.009	2.785	2.927	2.872	2.888	2.86	2.981	2.886										2.968513	5.21	0.052	1
STYRENE	5.316	5.015	4.901	5.122	4.541	4.886	4.852	4.765	4.721	4.892	4.782										4.890134	4.24	0.042	1
Bromoform	0.976	1.061	1.003	1.037	0.943	1.03	1.014	1.033	1.001	1.045	1.051										1.01778	3.46	0.035	1

Environmental Science Corporation
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INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS7
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INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V807B15P -- ICal Updated Time: Mon Feb 15 15:00:04 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
Isopropylbenzene	8.005	9.245	7.82	8.181	7.571	7.858	7.67	7.61	7.493	7.756	7.36										7.869977	6.51	0.065	1
4-BROMOFLUOROBENZENE	2.567	2.549	2.525	2.523	2.518	2.497	2.517	2.524	2.527	2.589	2.626										2.541892	1.48	0.015	1
Bromobenzene	3.301	3.489	3.767	3.489	3.139	3.316	3.357	3.287	3.225	3.319	3.215										3.354915	5.15	0.052	1
1,1,2,2-TETRACHLOROETHANE	2.916	2.602	2.398	2.123	2.07	2.13	2.047	2.111	1.996	2.111	2.051										2.232289	12.93	0.129	1
1,2,3-TRICHLOROPROPANE	1.01	0.67	0.763	0.543	0.506	0.514	0.504	0.499	0.487	0.509	0.492										0.590673	27.83	1	0
TRANS-1,4-DICHLORO-2-BUTENE		0.848	0.56	0.581	0.527	0.6	0.611	0.626	0.62	0.635	0.629										0.623604	13.8	0.138	1
n-Propylbenzene	8.891	9.58	9.175	9.406	8.65	9.374	9.184	9.162	9.053	9.263	8.843										9.143748	2.97	0.03	1
4-ETHYLTOLUENE	8.552	8.863	7.968	7.731	7.181	7.657	7.488	7.52	7.284	7.457	7.15										7.713754	7.14	0.071	1
2-Chlorotoluene	1.733	1.918	1.683	1.747	1.53	1.678	1.596	1.582	1.599	1.658	1.658										1.671162	6.27	0.063	1
4-Chlorotoluene	5.908	6.665	5.49	5.593	5.156	5.422	5.371	5.42	5.292	5.508	5.268										5.554005	7.52	0.075	1
1,3,5-Trimethylbenzene	6.733	7.053	6.962	6.555	5.871	6.205	6.082	6.028	5.992	6.152	5.914										6.322491	6.77	0.068	1
tert-Butylbenzene	5.318	5.946	5.484	5.488	5.015	5.41	5.269	5.224	5.224	5.294	5.092										5.342142	4.65	0.046	1
1,2,4-Trimethylbenzene	7.263	7.608	6.574	6.551	5.909	6.228	6.165	6.103	5.964	6.166	5.833										6.396692	8.89	0.089	1
sec-Butylbenzene	9.409	9.545	8.644	8.462	8.121	8.686	8.491	8.369	8.254	8.479	7.989										8.586258	5.68	0.057	1
1,3-DICHLOROBENZENE	3.302	3.485	3.258	3.378	2.938	3.228	3.227	3.203	3.224	3.328	3.214										3.253187	4.16	0.042	1
p-Isopropyltoluene	7.3	7.347	6.928	7.289	6.45	6.803	6.682	6.691	6.586	6.842	6.466										6.853175	4.8	0.048	1
DICYCLOPENTADIENE	9.113	9.923	9.394	9.579	8.64	9.139	8.766	8.524	8.343	8.497	7.991										8.900893	6.53	0.065	1
8260-1,4-DICHLOROBENZENE-D4																								
1,4-DICHLOROBENZENE	1.541	1.415	1.427	1.358	1.209	1.28	1.245	1.232	1.219	1.241	1.22										1.307916	8.48	0.085	1
1,2,3-TRIMETHYLBENZENE	2.825	2.93	2.529	2.52	2.373	2.531	2.448	2.397	2.342	2.387	2.255										2.503362	8.19	0.082	1
1,2-DICHLOROBENZENE	1.164	1.28	1.221	1.225	1.172	1.245	1.228	1.221	1.194	1.22	1.158										1.211675	3.04	0.03	1
n-Butylbenzene	2.388	2.861	2.834	2.829	2.671	2.855	2.778	2.751	2.661	2.661	2.44										2.702654	5.98	0.06	1

Environmental Science Corporation
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INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS7
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Review Method : 601-602
Review Protocol : EPA
Released By : Amy Green
Released On : 2/15/2016 3:07:01 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V807B15P -- ICal Updated Time: Mon Feb 15 15:00:04 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
1,2-Dibromo-3-chloropropane		0.215	0.135	0.141	0.144	0.153	0.162	0.165	0.159	0.169	0.161										0.160378	13.78	0.138	1
1,2,4-Trichlorobenzene	0.945	0.884	0.882	0.822	0.804	0.844	0.826	0.826	0.785	0.789	0.72										0.829648	7.21	0.072	1
HEXACHLORO-1,3-BUTADIENE	0.465	0.494	0.459	0.476	0.458	0.481	0.468	0.48	0.471	0.477	0.441										0.469786	2.98	0.03	1
Naphthalene	2.638	2.396	2.184	2.238	2.021	2.266	2.196	2.301	2.178	2.232	2.051										2.245622	7.44	0.074	1
1,2,3-Trichlorobenzene	0.877	0.759	0.732	0.808	0.735	0.786	0.773	0.768	0.734	0.747	0.68										0.76355	6.61	0.066	1
2-Methylnaphthalene	1.336	1.083	1.079	1.116	1.072	1.191	1.195	1.255	1.153	1.164	1.049										1.154015	7.58	0.076	1
1-Methylnaphthalene	1.249	1.017	1.036	1.076	0.91	0.978	0.989	1.046	0.95	0.961	0.862										1.006831	10.08	0.101	1
AP9-PENTAFLUOROBENZENE																								
ETHANOL												0.008	0.009	0.008	0.009	0.01	0.009	0.009	0.009	0.009	0.008876	4.61	0.046	1
Bromoethane												0.431	0.394	0.391	0.395	0.409	0.402	0.406	0.41	0.401	0.404303	3	0.03	1
2-PROPANOL												0.057	0.059	0.044	0.045	0.049	0.045	0.047	0.045	0.045	0.048319	11.61	0.116	1
Methyl Acetate												0.458	0.455	0.443	0.44	0.463	0.451	0.452	0.438	0.432	0.44805	2.29	0.023	1
ACETONITRILE												0.077	0.081	0.077	0.078	0.084	0.081	0.081	0.081	0.078	0.079808	3.16	0.032	1
ALLYL CHLORIDE												0.268	0.258	0.261	0.251	0.263	0.261	0.256	0.263	0.256	0.259527	1.99	0.02	1
tert-BUTYL ALCOHOL												0.167	0.153	0.155	0.158	0.168	0.162	0.165	0.163	0.156	0.160802	3.37	0.034	1
chloroprene												0.869	0.844	0.824	0.824	0.851	0.848	0.822	0.827	0.817	0.836237	2.11	0.021	1
ETHYL TERT-BUTYL ETHER												1.858	1.736	1.727	1.695	1.802	1.733	1.736	1.744	1.718	1.749866	2.84	0.028	1
PROPIONITRILE												0.082	0.082	0.078	0.078	0.083	0.08	0.08	0.079	0.076	0.079823	2.85	0.028	1
Ethyl Acetate												0.627	0.616	0.594	0.596	0.622	0.605	0.61	0.596	0.584	0.605676	2.38	0.024	1
METHACRYLONITRILE												0.225	0.221	0.209	0.208	0.217	0.212	0.213	0.211	0.205	0.213529	3.12	0.031	1
Cyclohexane												1.149	1.114	1.101	1.073	1.137	1.127	1.107	1.113	1.092	1.112759	2.08	0.021	1
tert-butyl formate																					0	0	0	1

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Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
ISOBUTANOL												0.044	0.039	0.039	0.037	0.041	0.039	0.039	0.038	0.037	0.03929	5.09	0.051	1
1-Amyl Alcohol												0.054	0.064	0.051	0.053	0.061	0.058	0.055	0.057	0.053	0.056226	7.4	0.074	1
TERT-AMYL METHYL ETHER												1.923	1.754	1.701	1.701	1.775	1.712	1.725	1.71	1.661	1.740322	4.37	0.044	1
AP9-1,4-DIFLUOROBENZENE																								
N-BUTANOL												0.011	0.012	0.011	0.011	0.012	0.012	0.012	0.012	0.011	0.011654	3.68	0.037	1
Methyl Cyclohexane												1.164	0.899	0.822	0.765	0.767	0.766	0.754	0.738	0.734	0.823254	16.72	1	0
2-nitropropane												0.121	0.117	0.113	0.106	0.114	0.111	0.112	0.11	0.108	0.112635	4.06	0.041	1
METHYL METHACRYLATE												0.372	0.348	0.341	0.333	0.351	0.345	0.35	0.341	0.333	0.345904	3.43	0.034	1
1,4-DIOXANE												0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.003	0.003654	3.16	0.032	1
n-octane												0.339	0.311	0.308	0.295	0.312	0.304	0.3	0.307	0.3	0.308468	4.12	0.041	1
3,3-DIMETHYL-1-BUTANOL												0.056	0.054	0.052	0.053	0.057	0.056	0.056	0.056	0.053	0.054863	2.88	0.029	1
AP9-2-BROMO-1 -CHLOROPROPANE																								
ETHYL METHACRYLATE												2.13	2.009	2.033	2.036	2.096	2.121	2.151	2.094	2.066	2.081683	2.34	0.023	1
CIS-1,4-DICHLORO-2-BUTENE												0.548	0.549	0.563	0.562	0.591	0.579	0.6	0.585	0.571	0.572086	3.17	0.032	1
Cyclohexanone												0.515	0.528	0.515	0.515	0.513	0.527	0.522	0.481	0.445	0.50676	5.3	0.053	1
PENTACHLOROETHANE												1.019	0.975	0.979	1.017	1.044	1.045	1.039	1.032	1.026	1.019613	2.57	0.026	1
Hexachloroethane												1.288	1.211	1.27	1.204	1.266	1.27	1.313	1.309	1.28	1.267692	3	0.03	1
AP9-1,4-DICHLOROBENZENE-D4																								

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8260-PENTAFLUOROBENZENE																								
TPH (GC/MS) LOW FRACTION																					0	0	0	1
PROPENE		0.308	0.223	0.288	0.246	0.204	0.215	0.217	0.218	0.216	0.213										0.234838	15.04	0.15	1
DICHLORODIFLUOROMETHANE	0.893	0.646	0.617	0.624	0.549	0.6	0.584	0.588	0.595	0.593	0.565										0.623141	15	0.15	1
CHLOROMETHANE	1.089	0.952	0.918	0.913	0.803	0.846	0.828	0.832	0.847	0.843	0.954										0.893048	9.35	0.093	1
VINYL CHLORIDE	0.85	0.777	0.76	0.745	0.725	0.78	0.755	0.755	0.762	0.779	0.733										0.76567	4.35	0.044	1
1,3-BUTADIENE		0.831	0.806	0.733	0.649	0.664	0.643	0.651	0.626	0.646	0.586										0.683446	11.7	0.117	1
BROMOMETHANE			0.389	0.405	0.311	0.35	0.366	0.364	0.394	0.416	0.413										0.378802	9.02	0.09	1
CHLOROETHANE			0.52	0.422	0.383	0.431	0.395	0.388	0.382	0.364											0.41058	11.96	0.12	1
TRICHLOROFLUOROMETHANE	0.822	0.786	0.781	0.768	0.718	0.772	0.748	0.751	0.75	0.765	0.75										0.764713	3.52	0.035	1
DICHLOROFLUOROMETHANE	1.078	0.971	1.162	1.038	0.987	1.061	1.012	1.014	1.028	1.029	0.988										1.033416	5.14	0.051	1
ETHYL ETHER	0.564	0.526	0.473	0.505	0.436	0.486	0.473	0.476	0.471	0.475	0.455										0.485553	7.23	0.072	1
ACROLEIN	0.141	0.105	0.116	0.104	0.107	0.115	0.113	0.121	0.117	0.124	0.123										0.116876	9	0.09	1
1,1-DICHLOROETHENE	0.856	0.854	0.845	0.87	0.766	0.863	0.834	0.828	0.814	0.819	0.764										0.828476	4.32	0.043	1
1,1,2 -TRICHLOROTRIFLUOROETHANE	0.526	0.525	0.487	0.463	0.449	0.48	0.474	0.463	0.46	0.462	0.436										0.475169	6.01	0.06	1
ACETONE	0.465	0.414	0.365	0.389	0.351	0.384	0.356	0.37	0.35	0.358	0.337										0.376406	9.67	0.097	1
IODOMETHANE	0.387	0.387	0.415	0.43	0.436	0.501	0.521	0.53	0.564	0.571	0.52										0.478341	14.44	0.144	1
CARBON DISULFIDE	2.127	2.055	1.938	1.906	1.75	1.868	1.813	1.799	1.777	1.773	1.695										1.863691	7.14	0.071	1
METHYLENE CHLORIDE	0.688	0.732	0.528	0.605	0.493	0.527	0.516	0.512	0.511	0.518	0.5										0.557192	14.62	0.146	1
ACRYLONITRILE	0.286	0.242	0.216	0.222	0.21	0.229	0.218	0.233	0.219	0.226	0.216										0.228846	9.19	0.092	1
n-Hexane		0.761	0.631	0.593	0.591	0.609	0.577	0.564	0.561	0.558	0.53										0.597635	10.72	0.107	1
TRANS-1,2-DICHLOROETHENE	0.453	0.68	0.494	0.509	0.458	0.497	0.484	0.475	0.482	0.478	0.462										0.497513	12.67	0.127	1

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METHYL TERT-BUTYL ETHER	1.466	1.453	1.504	1.597	1.448	1.538	1.471	1.477	1.447	1.468	1.41										1.47991	3.42	0.034	1
1,1-DICHLOROETHANE	1.012	1.046	1.034	1.06	0.985	1.054	1.034	1.032	1.024	1.033	0.981										1.02691	2.46	0.025	1
VINYL ACETATE	1.265	1.516	1.326	1.334	1.279	1.378	1.31	1.323	1.254	1.249	1.14										1.306617	7.11	0.071	1
DI-ISOPROPYL ETHER	2.314	2.096	2.295	2.202	2.078	2.24	2.205	2.207	2.182	2.192	2.059										2.18812	3.76	0.038	1
2,2-Dichloropropane	1.005	0.953	0.891	0.844	0.794	0.834	0.818	0.814	0.812	0.817	0.767										0.84979	8.45	0.084	1
CIS-1,2-DICHLOROETHENE	0.576	0.517	0.501	0.589	0.505	0.561	0.53	0.535	0.543	0.55	0.525										0.539293	5.18	0.052	1
2-BUTANONE (MEK)	0.432	0.494	0.482	0.459	0.437	0.472	0.448	0.471	0.442	0.449	0.423										0.455348	4.87	0.049	1
BROMOCHLOROMETHANE	0.357	0.291	0.292	0.285	0.295	0.302	0.293	0.29	0.274	0.272	0.248										0.290801	9.08	0.091	1
TETRAHYDROFURAN			0.23	0.267	0.211	0.235	0.207	0.221	0.202	0.212	0.206										0.221123	9.2	0.092	1
CHLOROFORM		0.997	0.979	0.97	0.881	0.96	0.918	0.909	0.895	0.904	0.859										0.927238	4.97	0.05	1
DIBROMOFLUOROMETHANE	0.534	0.53	0.526	0.525	0.521	0.524	0.516	0.515	0.51	0.506	0.495										0.518344	2.21	0.022	1
1,1,1-TRICHLOROETHANE	0.886	0.824	0.814	0.769	0.712	0.777	0.738	0.738	0.736	0.75	0.715										0.769114	6.93	0.069	1
CARBON TETRACHLORIDE	0.826	0.763	0.684	0.639	0.633	0.68	0.647	0.639	0.661	0.668	0.621										0.678307	9.2	0.092	1
1,1-Dichloropropene	0.726	0.769	0.744	0.731	0.698	0.755	0.721	0.719	0.712	0.725	0.685										0.725794	3.31	0.033	1
2,2,4-TRIMETHYLPENTANE	2.773	2.643	2.542	2.63	2.438	2.621	2.532	2.525	2.518	2.54	2.414										2.561313	3.93	0.039	1
HEPTANE	1.203	1.409	1.272	1.347	1.205	1.244	1.194	1.177	1.159	1.21	1.126										1.231403	6.75	0.068	1
BENZENE	2.314	2.31	2.169	2.213	2.073	2.181	2.117	2.141	2.126	2.14	2.074										2.168922	3.79	0.038	1
1,2-DICHLOROETHANE	0.575	0.655	0.653	0.679	0.645	0.697	0.657	0.674	0.667	0.676	0.649										0.657068	4.76	0.048	1
8260-1,4-DIFLUOROBENZENE																								
TRICHLOROETHENE	0.281	0.32	0.284	0.282	0.277	0.291	0.281	0.28	0.278	0.284	0.278										0.285218	4.27	0.043	1
1,2-DICHLOROPROPANE	0.281	0.304	0.255	0.262	0.24	0.26	0.258	0.251	0.25	0.25	0.24										0.259322	7.2	0.072	1
DIBROMOMETHANE	0.239	0.211	0.187	0.187	0.168	0.182	0.178	0.182	0.178	0.184	0.18										0.188576	10.45	0.104	1

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BROMODICHLOROMETHANE		0.548	0.437	0.426	0.413	0.44	0.414	0.408	0.399	0.4	0.39										0.427443	10.58	0.106	1
a,a,a-Trifluorotoluene	0.545	0.546	0.543	0.534	0.527	0.522	0.521	0.515	0.5	0.5	0.489										0.522235	3.72	0.037	1
-CHLOROETHYL VINYL ETHER	0.039	0.037	0.034	0.034	0.036	0.041	0.042	0.04	0.032	0.033	0.033										0.03637	9.95	0.099	1
CIS-1,3-DICHLOROPROPENE	0.616	0.619	0.579	0.558	0.524	0.552	0.534	0.542	0.531	0.537	0.519										0.555612	6.28	0.063	1
-METHYL-2-PENTANONE (MIBK)	0.5	0.441	0.426	0.398	0.384	0.414	0.391	0.406	0.371	0.379	0.356										0.405823	9.79	0.098	1
TOLUENE-D8	1.259	1.268	1.25	1.227	1.22	1.214	1.213	1.213	1.199	1.186	1.197										1.222388	2.16	0.022	1
TOLUENE		1.486	1.322	1.313	1.241	1.314	1.277	1.263	1.248	1.249	1.217										1.292967	5.92	0.059	1
TRANS-1,3-DICHLOROPROPENE	0.476	0.487	0.475	0.481	0.439	0.481	0.462	0.474	0.455	0.461	0.449										0.467412	3.27	0.033	1
8260-2-BROMO-1 -CHLOROPROPANE																								
1,1,2-TRICHLOROETHANE	1.438	1.702	1.442	1.491	1.285	1.414	1.438	1.41	1.376	1.44	1.396										1.439222	7.05	0.07	1
TETRACHLOROETHENE	1.139	1.291	1.235	1.279	1.161	1.232	1.18	1.169	1.143	1.184	1.173										1.198664	4.38	0.044	1
1,3-Dichloropropane	2.893	2.679	2.636	2.588	2.447	2.651	2.543	2.526	2.449	2.577	2.479										2.587871	4.96	0.05	1
2-HEXANONE	0.893	1.045	1.021	1.086	1.009	1.091	1.026	1.073	0.985	1.03	0.984										1.021934	5.51	0.055	1
CHLORODIBROMOMETHANE	1.934	1.968	1.688	1.646	1.447	1.638	1.552	1.583	1.545	1.621	1.61										1.657455	9.57	0.096	1
1,2-DIBROMOETHANE	1.834	1.514	1.529	1.331	1.311	1.484	1.434	1.452	1.417	1.484	1.461										1.477366	9.25	0.093	1
CHLOROBENZENE	4.873	4.955	4.638	4.414	4.1	4.355	4.211	4.169	4.058	4.23	4.171										4.37943	7.09	0.071	1
1,1,1,2-TETRACHLOROETHANE	1.785	1.598	1.493	1.453	1.307	1.422	1.349	1.322	1.322	1.37	1.36										1.434697	10.17	0.102	1
ETHYLBENZENE	2.444	2.73	2.724	2.454	2.328	2.521	2.429	2.404	2.356	2.447	2.407										2.476655	5.4	0.054	1
M&P-XYLENE	3.198	3.373	3.05	3.157	2.803	3.018	2.879	2.887	2.849	2.959	2.965										3.012497	5.71	0.057	1
O-XYLENE	3.12	3.349	2.977	3.009	2.785	2.927	2.872	2.888	2.86	2.981	2.886										2.968513	5.21	0.052	1
STYRENE	5.316	5.015	4.901	5.122	4.541	4.886	4.852	4.765	4.721	4.892	4.782										4.890134	4.24	0.042	1
Bromoform	0.976	1.061	1.003	1.037	0.943	1.03	1.014	1.033	1.001	1.045	1.051										1.01778	3.46	0.035	1

Environmental Science Corporation
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INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS7
Method : V807B15P
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Released On : 2/15/2016 3:07:37 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V807B15P -- ICal Updated Time: Mon Feb 15 15:00:04 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
Isopropylbenzene	8.005	9.245	7.82	8.181	7.571	7.858	7.67	7.61	7.493	7.756	7.36										7.869977	6.51	0.065	1
4-BROMOFLUOROBENZENE	2.567	2.549	2.525	2.523	2.518	2.497	2.517	2.524	2.527	2.589	2.626										2.541892	1.48	0.015	1
Bromobenzene	3.301	3.489	3.767	3.489	3.139	3.316	3.357	3.287	3.225	3.319	3.215										3.354915	5.15	0.052	1
1,1,2,2-TETRACHLOROETHANE	2.916	2.602	2.398	2.123	2.07	2.13	2.047	2.111	1.996	2.111	2.051										2.232289	12.93	0.129	1
1,2,3-TRICHLOROPROPANE	1.01	0.67	0.763	0.543	0.506	0.514	0.504	0.499	0.487	0.509	0.492										0.590673	27.83	1	0
TRANS-1,4-DICHLORO-2-BUTENE		0.848	0.56	0.581	0.527	0.6	0.611	0.626	0.62	0.635	0.629										0.623604	13.8	0.138	1
n-Propylbenzene	8.891	9.58	9.175	9.406	8.65	9.374	9.184	9.162	9.053	9.263	8.843										9.143748	2.97	0.03	1
4-ETHYLTOLUENE	8.552	8.863	7.968	7.731	7.181	7.657	7.488	7.52	7.284	7.457	7.15										7.713754	7.14	0.071	1
2-Chlorotoluene	1.733	1.918	1.683	1.747	1.53	1.678	1.596	1.582	1.599	1.658	1.658										1.671162	6.27	0.063	1
4-Chlorotoluene	5.908	6.665	5.49	5.593	5.156	5.422	5.371	5.42	5.292	5.508	5.268										5.554005	7.52	0.075	1
1,3,5-Trimethylbenzene	6.733	7.053	6.962	6.555	5.871	6.205	6.082	6.028	5.992	6.152	5.914										6.322491	6.77	0.068	1
tert-Butylbenzene	5.318	5.946	5.484	5.488	5.015	5.41	5.269	5.224	5.224	5.294	5.092										5.342142	4.65	0.046	1
1,2,4-Trimethylbenzene	7.263	7.608	6.574	6.551	5.909	6.228	6.165	6.103	5.964	6.166	5.833										6.396692	8.89	0.089	1
sec-Butylbenzene	9.409	9.545	8.644	8.462	8.121	8.686	8.491	8.369	8.254	8.479	7.989										8.586258	5.68	0.057	1
1,3-DICHLOROBENZENE	3.302	3.485	3.258	3.378	2.938	3.228	3.227	3.203	3.224	3.328	3.214										3.253187	4.16	0.042	1
p-Isopropyltoluene	7.3	7.347	6.928	7.289	6.45	6.803	6.682	6.691	6.586	6.842	6.466										6.853175	4.8	0.048	1
DICYCLOPENTADIENE	9.113	9.923	9.394	9.579	8.64	9.139	8.766	8.524	8.343	8.497	7.991										8.900893	6.53	0.065	1
8260-1,4-DICHLOROBENZENE-D4																								
1,4-DICHLOROBENZENE	1.541	1.415	1.427	1.358	1.209	1.28	1.245	1.232	1.219	1.241	1.22										1.307916	8.48	0.085	1
1,2,3-TRIMETHYLBENZENE	2.825	2.93	2.529	2.52	2.373	2.531	2.448	2.397	2.342	2.387	2.255										2.503362	8.19	0.082	1
1,2-DICHLOROBENZENE	1.164	1.28	1.221	1.225	1.172	1.245	1.228	1.221	1.194	1.22	1.158										1.211675	3.04	0.03	1
n-Butylbenzene	2.388	2.861	2.834	2.829	2.671	2.855	2.778	2.751	2.661	2.661	2.44										2.702654	5.98	0.06	1

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Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
1,2-Dibromo-3-chloropropane		0.215	0.135	0.141	0.144	0.153	0.162	0.165	0.159	0.169	0.161										0.160378	13.78	0.138	1
1,2,4-Trichlorobenzene	0.945	0.884	0.882	0.822	0.804	0.844	0.826	0.826	0.785	0.789	0.72										0.829648	7.21	0.072	1
HEXACHLORO-1,3-BUTADIENE	0.465	0.494	0.459	0.476	0.458	0.481	0.468	0.48	0.471	0.477	0.441										0.469786	2.98	0.03	1
Naphthalene	2.638	2.396	2.184	2.238	2.021	2.266	2.196	2.301	2.178	2.232	2.051										2.245622	7.44	0.074	1
1,2,3-Trichlorobenzene	0.877	0.759	0.732	0.808	0.735	0.786	0.773	0.768	0.734	0.747	0.68										0.76355	6.61	0.066	1
2-Methylnaphthalene	1.336	1.083	1.079	1.116	1.072	1.191	1.195	1.255	1.153	1.164	1.049										1.154015	7.58	0.076	1
1-Methylnaphthalene	1.249	1.017	1.036	1.076	0.91	0.978	0.989	1.046	0.95	0.961	0.862										1.006831	10.08	0.101	1
AP9-PENTAFLUOROBENZENE																								
ETHANOL												0.008	0.009	0.008	0.009	0.01	0.009	0.009	0.009	0.009	0.008876	4.61	0.046	1
Bromoethane												0.431	0.394	0.391	0.395	0.409	0.402	0.406	0.41	0.401	0.404303	3	0.03	1
2-PROPANOL												0.057	0.059	0.044	0.045	0.049	0.045	0.047	0.045	0.045	0.048319	11.61	0.116	1
Methyl Acetate												0.458	0.455	0.443	0.44	0.463	0.451	0.452	0.438	0.432	0.44805	2.29	0.023	1
ACETONITRILE												0.077	0.081	0.077	0.078	0.084	0.081	0.081	0.081	0.078	0.079808	3.16	0.032	1
ALLYL CHLORIDE												0.268	0.258	0.261	0.251	0.263	0.261	0.256	0.263	0.256	0.259527	1.99	0.02	1
tert-BUTYL ALCOHOL												0.167	0.153	0.155	0.158	0.168	0.162	0.165	0.163	0.156	0.160802	3.37	0.034	1
chloroprene												0.869	0.844	0.824	0.824	0.851	0.848	0.822	0.827	0.817	0.836237	2.11	0.021	1
ETHYL TERT-BUTYL ETHER												1.858	1.736	1.727	1.695	1.802	1.733	1.736	1.744	1.718	1.749866	2.84	0.028	1
PROPIONITRILE												0.082	0.082	0.078	0.078	0.083	0.08	0.08	0.079	0.076	0.079823	2.85	0.028	1
Ethyl Acetate												0.627	0.616	0.594	0.596	0.622	0.605	0.61	0.596	0.584	0.605676	2.38	0.024	1
METHACRYLONITRILE												0.225	0.221	0.209	0.208	0.217	0.212	0.213	0.211	0.205	0.213529	3.12	0.031	1
Cyclohexane												1.149	1.114	1.101	1.073	1.137	1.127	1.107	1.113	1.092	1.112759	2.08	0.021	1
tert-butyl formate																					0	0	0	1

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INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V807B15P -- ICal Updated Time: Mon Feb 15 15:00:04 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
ISOBUTANOL												0.044	0.039	0.039	0.037	0.041	0.039	0.039	0.038	0.037	0.03929	5.09	0.051	1
1-Amyl Alcohol												0.054	0.064	0.051	0.053	0.061	0.058	0.055	0.057	0.053	0.056226	7.4	0.074	1
TERT-AMYL METHYL ETHER												1.923	1.754	1.701	1.701	1.775	1.712	1.725	1.71	1.661	1.740322	4.37	0.044	1
AP9-1,4-DIFLUOROBENZENE																								
N-BUTANOL												0.011	0.012	0.011	0.011	0.012	0.012	0.012	0.012	0.011	0.011654	3.68	0.037	1
Methyl Cyclohexane												1.164	0.899	0.822	0.765	0.767	0.766	0.754	0.738	0.734	0.823254	16.72	1	0
2-nitropropane												0.121	0.117	0.113	0.106	0.114	0.111	0.112	0.11	0.108	0.112635	4.06	0.041	1
METHYL METHACRYLATE												0.372	0.348	0.341	0.333	0.351	0.345	0.35	0.341	0.333	0.345904	3.43	0.034	1
1,4-DIOXANE												0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.003	0.003654	3.16	0.032	1
n-octane												0.339	0.311	0.308	0.295	0.312	0.304	0.3	0.307	0.3	0.308468	4.12	0.041	1
3,3-DIMETHYL-1-BUTANOL												0.056	0.054	0.052	0.053	0.057	0.056	0.056	0.056	0.053	0.054863	2.88	0.029	1
AP9-2-BROMO-1 -CHLOROPROPANE																								
ETHYL METHACRYLATE												2.13	2.009	2.033	2.036	2.096	2.121	2.151	2.094	2.066	2.081683	2.34	0.023	1
CIS-1,4-DICHLORO-2-BUTENE												0.548	0.549	0.563	0.562	0.591	0.579	0.6	0.585	0.571	0.572086	3.17	0.032	1
Cyclohexanone												0.515	0.528	0.515	0.515	0.513	0.527	0.522	0.481	0.445	0.50676	5.3	0.053	1
PENTACHLOROETHANE												1.019	0.975	0.979	1.017	1.044	1.045	1.039	1.032	1.026	1.019613	2.57	0.026	1
Hexachloroethane												1.288	1.211	1.27	1.204	1.266	1.27	1.313	1.309	1.28	1.267692	3	0.03	1
AP9-1,4-DICHLOROBENZENE-D4																								

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INITIAL CALIBRATION SUMMARY

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Review Protocol : SC
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Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
8260-PENTAFLUOROBENZENE																								
TPH (GC/MS) LOW FRACTION																					0	0	0	1
PROPENE		0.308	0.223	0.288	0.246	0.204	0.215	0.217	0.218	0.216	0.213										0.234838	15.04	0.15	1
DICHLORODIFLUOROMETHANE	0.893	0.646	0.617	0.624	0.549	0.6	0.584	0.588	0.595	0.593	0.565										0.623141	15	0.15	1
CHLOROMETHANE	1.089	0.952	0.918	0.913	0.803	0.846	0.828	0.832	0.847	0.843	0.954										0.893048	9.35	0.093	1
VINYL CHLORIDE	0.85	0.777	0.76	0.745	0.725	0.78	0.755	0.755	0.762	0.779	0.733										0.76567	4.35	0.044	1
1,3-BUTADIENE		0.831	0.806	0.733	0.649	0.664	0.643	0.651	0.626	0.646	0.586										0.683446	11.7	0.117	1
BROMOMETHANE			0.389	0.405	0.311	0.35	0.366	0.364	0.394	0.416	0.413										0.378802	9.02	0.09	1
CHLOROETHANE			0.52	0.422	0.383	0.431	0.395	0.388	0.382	0.364											0.41058	11.96	0.12	1
TRICHLOROFLUOROMETHANE	0.822	0.786	0.781	0.768	0.718	0.772	0.748	0.751	0.75	0.765	0.75										0.764713	3.52	0.035	1
DICHLOROFLUOROMETHANE	1.078	0.971	1.162	1.038	0.987	1.061	1.012	1.014	1.028	1.029	0.988										1.033416	5.14	0.051	1
ETHYL ETHER	0.564	0.526	0.473	0.505	0.436	0.486	0.473	0.476	0.471	0.475	0.455										0.485553	7.23	0.072	1
ACROLEIN	0.141	0.105	0.116	0.104	0.107	0.115	0.113	0.121	0.117	0.124	0.123										0.116876	9	0.09	1
1,1-DICHLOROETHENE	0.856	0.854	0.845	0.87	0.766	0.863	0.834	0.828	0.814	0.819	0.764										0.828476	4.32	0.043	1
1,1,2 -TRICHLOROTRIFLUOROETHANE	0.526	0.525	0.487	0.463	0.449	0.48	0.474	0.463	0.46	0.462	0.436										0.475169	6.01	0.06	1
ACETONE	0.465	0.414	0.365	0.389	0.351	0.384	0.356	0.37	0.35	0.358	0.337										0.376406	9.67	0.097	1
IODOMETHANE	0.387	0.387	0.415	0.43	0.436	0.501	0.521	0.53	0.564	0.571	0.52										0.478341	14.44	0.144	1
CARBON DISULFIDE	2.127	2.055	1.938	1.906	1.75	1.868	1.813	1.799	1.777	1.773	1.695										1.863691	7.14	0.071	1
METHYLENE CHLORIDE	0.688	0.732	0.528	0.605	0.493	0.527	0.516	0.512	0.511	0.518	0.5										0.557192	14.62	0.146	1
ACRYLONITRILE	0.286	0.242	0.216	0.222	0.21	0.229	0.218	0.233	0.219	0.226	0.216										0.228846	9.19	0.092	1
n-Hexane		0.761	0.631	0.593	0.591	0.609	0.577	0.564	0.561	0.558	0.53										0.597635	10.72	0.107	1
TRANS-1,2-DICHLOROETHENE	0.453	0.68	0.494	0.509	0.458	0.497	0.484	0.475	0.482	0.478	0.462										0.497513	12.67	0.127	1

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METHYL TERT-BUTYL ETHER	1.466	1.453	1.504	1.597	1.448	1.538	1.471	1.477	1.447	1.468	1.41										1.47991	3.42	0.034	1
1,1-DICHLOROETHANE	1.012	1.046	1.034	1.06	0.985	1.054	1.034	1.032	1.024	1.033	0.981										1.02691	2.46	0.025	1
VINYL ACETATE	1.265	1.516	1.326	1.334	1.279	1.378	1.31	1.323	1.254	1.249	1.14										1.306617	7.11	0.071	1
DI-ISOPROPYL ETHER	2.314	2.096	2.295	2.202	2.078	2.24	2.205	2.207	2.182	2.192	2.059										2.18812	3.76	0.038	1
2,2-Dichloropropane	1.005	0.953	0.891	0.844	0.794	0.834	0.818	0.814	0.812	0.817	0.767										0.84979	8.45	0.084	1
CIS-1,2-DICHLOROETHENE	0.576	0.517	0.501	0.589	0.505	0.561	0.53	0.535	0.543	0.55	0.525										0.539293	5.18	0.052	1
2-BUTANONE (MEK)	0.432	0.494	0.482	0.459	0.437	0.472	0.448	0.471	0.442	0.449	0.423										0.455348	4.87	0.049	1
BROMOCHLOROMETHANE	0.357	0.291	0.292	0.285	0.295	0.302	0.293	0.29	0.274	0.272	0.248										0.290801	9.08	0.091	1
TETRAHYDROFURAN			0.23	0.267	0.211	0.235	0.207	0.221	0.202	0.212	0.206										0.221123	9.2	0.092	1
CHLOROFORM		0.997	0.979	0.97	0.881	0.96	0.918	0.909	0.895	0.904	0.859										0.927238	4.97	0.05	1
DIBROMOFLUOROMETHANE	0.534	0.53	0.526	0.525	0.521	0.524	0.516	0.515	0.51	0.506	0.495										0.518344	2.21	0.022	1
1,1,1-TRICHLOROETHANE	0.886	0.824	0.814	0.769	0.712	0.777	0.738	0.738	0.736	0.75	0.715										0.769114	6.93	0.069	1
CARBON TETRACHLORIDE	0.826	0.763	0.684	0.639	0.633	0.68	0.647	0.639	0.661	0.668	0.621										0.678307	9.2	0.092	1
1,1-Dichloropropene	0.726	0.769	0.744	0.731	0.698	0.755	0.721	0.719	0.712	0.725	0.685										0.725794	3.31	0.033	1
2,2,4-TRIMETHYLPENTANE	2.773	2.643	2.542	2.63	2.438	2.621	2.532	2.525	2.518	2.54	2.414										2.561313	3.93	0.039	1
HEPTANE	1.203	1.409	1.272	1.347	1.205	1.244	1.194	1.177	1.159	1.21	1.126										1.231403	6.75	0.068	1
BENZENE	2.314	2.31	2.169	2.213	2.073	2.181	2.117	2.141	2.126	2.14	2.074										2.168922	3.79	0.038	1
1,2-DICHLOROETHANE	0.575	0.655	0.653	0.679	0.645	0.697	0.657	0.674	0.667	0.676	0.649										0.657068	4.76	0.048	1
8260-1,4-DIFLUOROBENZENE																								
TRICHLOROETHENE	0.281	0.32	0.284	0.282	0.277	0.291	0.281	0.28	0.278	0.284	0.278										0.285218	4.27	0.043	1
1,2-DICHLOROPROPANE	0.281	0.304	0.255	0.262	0.24	0.26	0.258	0.251	0.25	0.25	0.24										0.259322	7.2	0.072	1
DIBROMOMETHANE	0.239	0.211	0.187	0.187	0.168	0.182	0.178	0.182	0.178	0.184	0.18										0.188576	10.45	0.104	1

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS7
Method : V807B15P
Review Method : 8260SC
Review Protocol : SC
Released By : Amy Green
Released On : 2/15/2016 3:08:09 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V807B15P -- ICal Updated Time: Mon Feb 15 15:00:04 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
BROMODICHLOROMETHANE		0.548	0.437	0.426	0.413	0.44	0.414	0.408	0.399	0.4	0.39										0.427443	10.58	0.106	1
a,a,a-Trifluorotoluene	0.545	0.546	0.543	0.534	0.527	0.522	0.521	0.515	0.5	0.5	0.489										0.522235	3.72	0.037	1
-CHLOROETHYL VINYL ETHER	0.039	0.037	0.034	0.034	0.036	0.041	0.042	0.04	0.032	0.033	0.033										0.03637	9.95	0.099	1
CIS-1,3-DICHLOROPROPENE	0.616	0.619	0.579	0.558	0.524	0.552	0.534	0.542	0.531	0.537	0.519										0.555612	6.28	0.063	1
-METHYL-2-PENTANONE (MIBK)	0.5	0.441	0.426	0.398	0.384	0.414	0.391	0.406	0.371	0.379	0.356										0.405823	9.79	0.098	1
TOLUENE-D8	1.259	1.268	1.25	1.227	1.22	1.214	1.213	1.213	1.199	1.186	1.197										1.222388	2.16	0.022	1
TOLUENE		1.486	1.322	1.313	1.241	1.314	1.277	1.263	1.248	1.249	1.217										1.292967	5.92	0.059	1
TRANS-1,3-DICHLOROPROPENE	0.476	0.487	0.475	0.481	0.439	0.481	0.462	0.474	0.455	0.461	0.449										0.467412	3.27	0.033	1
8260-2-BROMO-1 -CHLOROPROPANE																								
1,1,2-TRICHLOROETHANE	1.438	1.702	1.442	1.491	1.285	1.414	1.438	1.41	1.376	1.44	1.396										1.439222	7.05	0.07	1
TETRACHLOROETHENE	1.139	1.291	1.235	1.279	1.161	1.232	1.18	1.169	1.143	1.184	1.173										1.198664	4.38	0.044	1
1,3-Dichloropropane	2.893	2.679	2.636	2.588	2.447	2.651	2.543	2.526	2.449	2.577	2.479										2.587871	4.96	0.05	1
2-HEXANONE	0.893	1.045	1.021	1.086	1.009	1.091	1.026	1.073	0.985	1.03	0.984										1.021934	5.51	0.055	1
CHLORODIBROMOMETHANE	1.934	1.968	1.688	1.646	1.447	1.638	1.552	1.583	1.545	1.621	1.61										1.657455	9.57	0.096	1
1,2-DIBROMOETHANE	1.834	1.514	1.529	1.331	1.311	1.484	1.434	1.452	1.417	1.484	1.461										1.477366	9.25	0.093	1
CHLOROBENZENE	4.873	4.955	4.638	4.414	4.1	4.355	4.211	4.169	4.058	4.23	4.171										4.37943	7.09	0.071	1
1,1,1,2-TETRACHLOROETHANE	1.785	1.598	1.493	1.453	1.307	1.422	1.349	1.322	1.322	1.37	1.36										1.434697	10.17	0.102	1
ETHYLBENZENE	2.444	2.73	2.724	2.454	2.328	2.521	2.429	2.404	2.356	2.447	2.407										2.476655	5.4	0.054	1
M&P-XYLENE	3.198	3.373	3.05	3.157	2.803	3.018	2.879	2.887	2.849	2.959	2.965										3.012497	5.71	0.057	1
O-XYLENE	3.12	3.349	2.977	3.009	2.785	2.927	2.872	2.888	2.86	2.981	2.886										2.968513	5.21	0.052	1
STYRENE	5.316	5.015	4.901	5.122	4.541	4.886	4.852	4.765	4.721	4.892	4.782										4.890134	4.24	0.042	1
Bromoform	0.976	1.061	1.003	1.037	0.943	1.03	1.014	1.033	1.001	1.045	1.051										1.01778	3.46	0.035	1

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INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V807B15P -- ICal Updated Time: Mon Feb 15 15:00:04 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
Isopropylbenzene	8.005	9.245	7.82	8.181	7.571	7.858	7.67	7.61	7.493	7.756	7.36										7.869977	6.51	0.065	1
4-BROMOFLUOROBENZENE	2.567	2.549	2.525	2.523	2.518	2.497	2.517	2.524	2.527	2.589	2.626										2.541892	1.48	0.015	1
Bromobenzene	3.301	3.489	3.767	3.489	3.139	3.316	3.357	3.287	3.225	3.319	3.215										3.354915	5.15	0.052	1
1,1,2,2-TETRACHLOROETHANE	2.916	2.602	2.398	2.123	2.07	2.13	2.047	2.111	1.996	2.111	2.051										2.232289	12.93	0.129	1
1,2,3-TRICHLOROPROPANE	1.01	0.67	0.763	0.543	0.506	0.514	0.504	0.499	0.487	0.509	0.492										0.590673	27.83	1	0
TRANS-1,4-DICHLORO-2-BUTENE		0.848	0.56	0.581	0.527	0.6	0.611	0.626	0.62	0.635	0.629										0.623604	13.8	0.138	1
n-Propylbenzene	8.891	9.58	9.175	9.406	8.65	9.374	9.184	9.162	9.053	9.263	8.843										9.143748	2.97	0.03	1
4-ETHYLTOLUENE	8.552	8.863	7.968	7.731	7.181	7.657	7.488	7.52	7.284	7.457	7.15										7.713754	7.14	0.071	1
2-Chlorotoluene	1.733	1.918	1.683	1.747	1.53	1.678	1.596	1.582	1.599	1.658	1.658										1.671162	6.27	0.063	1
4-Chlorotoluene	5.908	6.665	5.49	5.593	5.156	5.422	5.371	5.42	5.292	5.508	5.268										5.554005	7.52	0.075	1
1,3,5-Trimethylbenzene	6.733	7.053	6.962	6.555	5.871	6.205	6.082	6.028	5.992	6.152	5.914										6.322491	6.77	0.068	1
tert-Butylbenzene	5.318	5.946	5.484	5.488	5.015	5.41	5.269	5.224	5.224	5.294	5.092										5.342142	4.65	0.046	1
1,2,4-Trimethylbenzene	7.263	7.608	6.574	6.551	5.909	6.228	6.165	6.103	5.964	6.166	5.833										6.396692	8.89	0.089	1
sec-Butylbenzene	9.409	9.545	8.644	8.462	8.121	8.686	8.491	8.369	8.254	8.479	7.989										8.586258	5.68	0.057	1
1,3-DICHLOROBENZENE	3.302	3.485	3.258	3.378	2.938	3.228	3.227	3.203	3.224	3.328	3.214										3.253187	4.16	0.042	1
p-Isopropyltoluene	7.3	7.347	6.928	7.289	6.45	6.803	6.682	6.691	6.586	6.842	6.466										6.853175	4.8	0.048	1
DICYCLOPENTADIENE	9.113	9.923	9.394	9.579	8.64	9.139	8.766	8.524	8.343	8.497	7.991										8.900893	6.53	0.065	1
8260-1,4-DICHLOROBENZENE-D4																								
1,4-DICHLOROBENZENE	1.541	1.415	1.427	1.358	1.209	1.28	1.245	1.232	1.219	1.241	1.22										1.307916	8.48	0.085	1
1,2,3-TRIMETHYLBENZENE	2.825	2.93	2.529	2.52	2.373	2.531	2.448	2.397	2.342	2.387	2.255										2.503362	8.19	0.082	1
1,2-DICHLOROBENZENE	1.164	1.28	1.221	1.225	1.172	1.245	1.228	1.221	1.194	1.22	1.158										1.211675	3.04	0.03	1
n-Butylbenzene	2.388	2.861	2.834	2.829	2.671	2.855	2.778	2.751	2.661	2.661	2.44										2.702654	5.98	0.06	1

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS7
Method : V807B15P
Review Method : 8260SC
Review Protocol : SC
Released By : Amy Green
Released On : 2/15/2016 3:08:09 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V807B15P -- ICal Updated Time: Mon Feb 15 15:00:04 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
1,2-Dibromo-3-chloropropane		0.215	0.135	0.141	0.144	0.153	0.162	0.165	0.159	0.169	0.161										0.160378	13.78	0.138	1
1,2,4-Trichlorobenzene	0.945	0.884	0.882	0.822	0.804	0.844	0.826	0.826	0.785	0.789	0.72										0.829648	7.21	0.072	1
HEXACHLORO-1,3-BUTADIENE	0.465	0.494	0.459	0.476	0.458	0.481	0.468	0.48	0.471	0.477	0.441										0.469786	2.98	0.03	1
Naphthalene	2.638	2.396	2.184	2.238	2.021	2.266	2.196	2.301	2.178	2.232	2.051										2.245622	7.44	0.074	1
1,2,3-Trichlorobenzene	0.877	0.759	0.732	0.808	0.735	0.786	0.773	0.768	0.734	0.747	0.68										0.76355	6.61	0.066	1
2-Methylnaphthalene	1.336	1.083	1.079	1.116	1.072	1.191	1.195	1.255	1.153	1.164	1.049										1.154015	7.58	0.076	1
1-Methylnaphthalene	1.249	1.017	1.036	1.076	0.91	0.978	0.989	1.046	0.95	0.961	0.862										1.006831	10.08	0.101	1
AP9-PENTAFLUOROBENZENE																								
ETHANOL												0.008	0.009	0.008	0.009	0.01	0.009	0.009	0.009	0.009	0.008876	4.61	0.046	1
Bromoethane												0.431	0.394	0.391	0.395	0.409	0.402	0.406	0.41	0.401	0.404303	3	0.03	1
2-PROPANOL												0.057	0.059	0.044	0.045	0.049	0.045	0.047	0.045	0.045	0.048319	11.61	0.116	1
Methyl Acetate												0.458	0.455	0.443	0.44	0.463	0.451	0.452	0.438	0.432	0.44805	2.29	0.023	1
ACETONITRILE												0.077	0.081	0.077	0.078	0.084	0.081	0.081	0.081	0.078	0.079808	3.16	0.032	1
ALLYL CHLORIDE												0.268	0.258	0.261	0.251	0.263	0.261	0.256	0.263	0.256	0.259527	1.99	0.02	1
tert-BUTYL ALCOHOL												0.167	0.153	0.155	0.158	0.168	0.162	0.165	0.163	0.156	0.160802	3.37	0.034	1
chloroprene												0.869	0.844	0.824	0.824	0.851	0.848	0.822	0.827	0.817	0.836237	2.11	0.021	1
ETHYL TERT-BUTYL ETHER												1.858	1.736	1.727	1.695	1.802	1.733	1.736	1.744	1.718	1.749866	2.84	0.028	1
PROPIONITRILE												0.082	0.082	0.078	0.078	0.083	0.08	0.08	0.079	0.076	0.079823	2.85	0.028	1
Ethyl Acetate												0.627	0.616	0.594	0.596	0.622	0.605	0.61	0.596	0.584	0.605676	2.38	0.024	1
METHACRYLONITRILE												0.225	0.221	0.209	0.208	0.217	0.212	0.213	0.211	0.205	0.213529	3.12	0.031	1
Cyclohexane												1.149	1.114	1.101	1.073	1.137	1.127	1.107	1.113	1.092	1.112759	2.08	0.021	1
tert-butyl formate																					0	0	0	1

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Released On : 2/15/2016 3:08:09 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V807B15P -- ICal Updated Time: Mon Feb 15 15:00:04 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
ISOBUTANOL												0.044	0.039	0.039	0.037	0.041	0.039	0.039	0.038	0.037	0.03929	5.09	0.051	1
1-Amyl Alcohol												0.054	0.064	0.051	0.053	0.061	0.058	0.055	0.057	0.053	0.056226	7.4	0.074	1
TERT-AMYL METHYL ETHER												1.923	1.754	1.701	1.701	1.775	1.712	1.725	1.71	1.661	1.740322	4.37	0.044	1
AP9-1,4-DIFLUOROBENZENE																								
N-BUTANOL												0.011	0.012	0.011	0.011	0.012	0.012	0.012	0.012	0.011	0.011654	3.68	0.037	1
Methyl Cyclohexane												1.164	0.899	0.822	0.765	0.767	0.766	0.754	0.738	0.734	0.823254	16.72	1	0
2-nitropropane												0.121	0.117	0.113	0.106	0.114	0.111	0.112	0.11	0.108	0.112635	4.06	0.041	1
METHYL METHACRYLATE												0.372	0.348	0.341	0.333	0.351	0.345	0.35	0.341	0.333	0.345904	3.43	0.034	1
1,4-DIOXANE												0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.003	0.003654	3.16	0.032	1
n-octane												0.339	0.311	0.308	0.295	0.312	0.304	0.3	0.307	0.3	0.308468	4.12	0.041	1
3,3-DIMETHYL-1-BUTANOL												0.056	0.054	0.052	0.053	0.057	0.056	0.056	0.056	0.053	0.054863	2.88	0.029	1
AP9-2-BROMO-1 -CHLOROPROPANE																								
ETHYL METHACRYLATE												2.13	2.009	2.033	2.036	2.096	2.121	2.151	2.094	2.066	2.081683	2.34	0.023	1
CIS-1,4-DICHLORO-2-BUTENE												0.548	0.549	0.563	0.562	0.591	0.579	0.6	0.585	0.571	0.572086	3.17	0.032	1
Cyclohexanone												0.515	0.528	0.515	0.515	0.513	0.527	0.522	0.481	0.445	0.50676	5.3	0.053	1
PENTACHLOROETHANE												1.019	0.975	0.979	1.017	1.044	1.045	1.039	1.032	1.026	1.019613	2.57	0.026	1
Hexachloroethane												1.288	1.211	1.27	1.204	1.266	1.27	1.313	1.309	1.28	1.267692	3	0.03	1
AP9-1,4-DICHLOROBENZENE-D4																								

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INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS7
Method : V807B15P
Review Method : 8260B
Review Protocol : SW846
Released By : Amy Green
Released On : 2/15/2016 3:08:44 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V807B15P -- ICal Updated Time: Mon Feb 15 15:00:04 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
8260-PENTAFLUOROBENZENE																								
TPH (GC/MS) LOW FRACTION																					0	0	0	1
PROPENE		0.308	0.223	0.288	0.246	0.204	0.215	0.217	0.218	0.216	0.213										0.234838	15.04	0.15	1
DICHLORODIFLUOROMETHANE	0.893	0.646	0.617	0.624	0.549	0.6	0.584	0.588	0.595	0.593	0.565										0.623141	15	0.15	1
CHLOROMETHANE	1.089	0.952	0.918	0.913	0.803	0.846	0.828	0.832	0.847	0.843	0.954										0.893048	9.35	0.093	1
VINYL CHLORIDE	0.85	0.777	0.76	0.745	0.725	0.78	0.755	0.755	0.762	0.779	0.733										0.76567	4.35	0.044	1
1,3-BUTADIENE		0.831	0.806	0.733	0.649	0.664	0.643	0.651	0.626	0.646	0.586										0.683446	11.7	0.117	1
BROMOMETHANE			0.389	0.405	0.311	0.35	0.366	0.364	0.394	0.416	0.413										0.378802	9.02	0.09	1
CHLOROETHANE			0.52	0.422	0.383	0.431	0.395	0.388	0.382	0.364											0.41058	11.96	0.12	1
TRICHLOROFLUOROMETHANE	0.822	0.786	0.781	0.768	0.718	0.772	0.748	0.751	0.75	0.765	0.75										0.764713	3.52	0.035	1
DICHLOROFLUOROMETHANE	1.078	0.971	1.162	1.038	0.987	1.061	1.012	1.014	1.028	1.029	0.988										1.033416	5.14	0.051	1
ETHYL ETHER	0.564	0.526	0.473	0.505	0.436	0.486	0.473	0.476	0.471	0.475	0.455										0.485553	7.23	0.072	1
ACROLEIN	0.141	0.105	0.116	0.104	0.107	0.115	0.113	0.121	0.117	0.124	0.123										0.116876	9	0.09	1
1,1-DICHLOROETHENE	0.856	0.854	0.845	0.87	0.766	0.863	0.834	0.828	0.814	0.819	0.764										0.828476	4.32	0.043	1
1,1,2 -TRICHLOROTRIFLUOROETHANE	0.526	0.525	0.487	0.463	0.449	0.48	0.474	0.463	0.46	0.462	0.436										0.475169	6.01	0.06	1
ACETONE	0.465	0.414	0.365	0.389	0.351	0.384	0.356	0.37	0.35	0.358	0.337										0.376406	9.67	0.097	1
IODOMETHANE	0.387	0.387	0.415	0.43	0.436	0.501	0.521	0.53	0.564	0.571	0.52										0.478341	14.44	0.144	1
CARBON DISULFIDE	2.127	2.055	1.938	1.906	1.75	1.868	1.813	1.799	1.777	1.773	1.695										1.863691	7.14	0.071	1
METHYLENE CHLORIDE	0.688	0.732	0.528	0.605	0.493	0.527	0.516	0.512	0.511	0.518	0.5										0.557192	14.62	0.146	1
ACRYLONITRILE	0.286	0.242	0.216	0.222	0.21	0.229	0.218	0.233	0.219	0.226	0.216										0.228846	9.19	0.092	1
n-Hexane		0.761	0.631	0.593	0.591	0.609	0.577	0.564	0.561	0.558	0.53										0.597635	10.72	0.107	1
TRANS-1,2-DICHLOROETHENE	0.453	0.68	0.494	0.509	0.458	0.497	0.484	0.475	0.482	0.478	0.462										0.497513	12.67	0.127	1

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Released On : 2/15/2016 3:08:44 PM

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Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
METHYL TERT-BUTYL ETHER	1.466	1.453	1.504	1.597	1.448	1.538	1.471	1.477	1.447	1.468	1.41										1.47991	3.42	0.034	1
1,1-DICHLOROETHANE	1.012	1.046	1.034	1.06	0.985	1.054	1.034	1.032	1.024	1.033	0.981										1.02691	2.46	0.025	1
VINYL ACETATE	1.265	1.516	1.326	1.334	1.279	1.378	1.31	1.323	1.254	1.249	1.14										1.306617	7.11	0.071	1
DI-ISOPROPYL ETHER	2.314	2.096	2.295	2.202	2.078	2.24	2.205	2.207	2.182	2.192	2.059										2.18812	3.76	0.038	1
2,2-Dichloropropane	1.005	0.953	0.891	0.844	0.794	0.834	0.818	0.814	0.812	0.817	0.767										0.84979	8.45	0.084	1
CIS-1,2-DICHLOROETHENE	0.576	0.517	0.501	0.589	0.505	0.561	0.53	0.535	0.543	0.55	0.525										0.539293	5.18	0.052	1
2-BUTANONE (MEK)	0.432	0.494	0.482	0.459	0.437	0.472	0.448	0.471	0.442	0.449	0.423										0.455348	4.87	0.049	1
BROMOCHLOROMETHANE	0.357	0.291	0.292	0.285	0.295	0.302	0.293	0.29	0.274	0.272	0.248										0.290801	9.08	0.091	1
TETRAHYDROFURAN			0.23	0.267	0.211	0.235	0.207	0.221	0.202	0.212	0.206										0.221123	9.2	0.092	1
CHLOROFORM		0.997	0.979	0.97	0.881	0.96	0.918	0.909	0.895	0.904	0.859										0.927238	4.97	0.05	1
DIBROMOFLUOROMETHANE	0.534	0.53	0.526	0.525	0.521	0.524	0.516	0.515	0.51	0.506	0.495										0.518344	2.21	0.022	1
1,1,1-TRICHLOROETHANE	0.886	0.824	0.814	0.769	0.712	0.777	0.738	0.738	0.736	0.75	0.715										0.769114	6.93	0.069	1
CARBON TETRACHLORIDE	0.826	0.763	0.684	0.639	0.633	0.68	0.647	0.639	0.661	0.668	0.621										0.678307	9.2	0.092	1
1,1-Dichloropropene	0.726	0.769	0.744	0.731	0.698	0.755	0.721	0.719	0.712	0.725	0.685										0.725794	3.31	0.033	1
2,2,4-TRIMETHYLPENTANE	2.773	2.643	2.542	2.63	2.438	2.621	2.532	2.525	2.518	2.54	2.414										2.561313	3.93	0.039	1
HEPTANE	1.203	1.409	1.272	1.347	1.205	1.244	1.194	1.177	1.159	1.21	1.126										1.231403	6.75	0.068	1
BENZENE	2.314	2.31	2.169	2.213	2.073	2.181	2.117	2.141	2.126	2.14	2.074										2.168922	3.79	0.038	1
1,2-DICHLOROETHANE	0.575	0.655	0.653	0.679	0.645	0.697	0.657	0.674	0.667	0.676	0.649										0.657068	4.76	0.048	1
8260-1,4-DIFLUOROBENZENE																								
TRICHLOROETHENE	0.281	0.32	0.284	0.282	0.277	0.291	0.281	0.28	0.278	0.284	0.278										0.285218	4.27	0.043	1
1,2-DICHLOROPROPANE	0.281	0.304	0.255	0.262	0.24	0.26	0.258	0.251	0.25	0.25	0.24										0.259322	7.2	0.072	1
DIBROMOMETHANE	0.239	0.211	0.187	0.187	0.168	0.182	0.178	0.182	0.178	0.184	0.18										0.188576	10.45	0.104	1

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BROMODICHLOROMETHANE		0.548	0.437	0.426	0.413	0.44	0.414	0.408	0.399	0.4	0.39										0.427443	10.58	0.106	1
a,a,a-Trifluorotoluene	0.545	0.546	0.543	0.534	0.527	0.522	0.521	0.515	0.5	0.5	0.489										0.522235	3.72	0.037	1
-CHLOROETHYL VINYL ETHER	0.039	0.037	0.034	0.034	0.036	0.041	0.042	0.04	0.032	0.033	0.033										0.03637	9.95	0.099	1
CIS-1,3-DICHLOROPROPENE	0.616	0.619	0.579	0.558	0.524	0.552	0.534	0.542	0.531	0.537	0.519										0.555612	6.28	0.063	1
-METHYL-2-PENTANONE (MIBK)	0.5	0.441	0.426	0.398	0.384	0.414	0.391	0.406	0.371	0.379	0.356										0.405823	9.79	0.098	1
TOLUENE-D8	1.259	1.268	1.25	1.227	1.22	1.214	1.213	1.213	1.199	1.186	1.197										1.222388	2.16	0.022	1
TOLUENE		1.486	1.322	1.313	1.241	1.314	1.277	1.263	1.248	1.249	1.217										1.292967	5.92	0.059	1
TRANS-1,3-DICHLOROPROPENE	0.476	0.487	0.475	0.481	0.439	0.481	0.462	0.474	0.455	0.461	0.449										0.467412	3.27	0.033	1
8260-2-BROMO-1 -CHLOROPROPANE																								
1,1,2-TRICHLOROETHANE	1.438	1.702	1.442	1.491	1.285	1.414	1.438	1.41	1.376	1.44	1.396										1.439222	7.05	0.07	1
TETRACHLOROETHENE	1.139	1.291	1.235	1.279	1.161	1.232	1.18	1.169	1.143	1.184	1.173										1.198664	4.38	0.044	1
1,3-Dichloropropane	2.893	2.679	2.636	2.588	2.447	2.651	2.543	2.526	2.449	2.577	2.479										2.587871	4.96	0.05	1
2-HEXANONE	0.893	1.045	1.021	1.086	1.009	1.091	1.026	1.073	0.985	1.03	0.984										1.021934	5.51	0.055	1
CHLORODIBROMOMETHANE	1.934	1.968	1.688	1.646	1.447	1.638	1.552	1.583	1.545	1.621	1.61										1.657455	9.57	0.096	1
1,2-DIBROMOETHANE	1.834	1.514	1.529	1.331	1.311	1.484	1.434	1.452	1.417	1.484	1.461										1.477366	9.25	0.093	1
CHLOROBENZENE	4.873	4.955	4.638	4.414	4.1	4.355	4.211	4.169	4.058	4.23	4.171										4.37943	7.09	0.071	1
1,1,1,2-TETRACHLOROETHANE	1.785	1.598	1.493	1.453	1.307	1.422	1.349	1.322	1.322	1.37	1.36										1.434697	10.17	0.102	1
ETHYLBENZENE	2.444	2.73	2.724	2.454	2.328	2.521	2.429	2.404	2.356	2.447	2.407										2.476655	5.4	0.054	1
M&P-XYLENE	3.198	3.373	3.05	3.157	2.803	3.018	2.879	2.887	2.849	2.959	2.965										3.012497	5.71	0.057	1
O-XYLENE	3.12	3.349	2.977	3.009	2.785	2.927	2.872	2.888	2.86	2.981	2.886										2.968513	5.21	0.052	1
STYRENE	5.316	5.015	4.901	5.122	4.541	4.886	4.852	4.765	4.721	4.892	4.782										4.890134	4.24	0.042	1
Bromoform	0.976	1.061	1.003	1.037	0.943	1.03	1.014	1.033	1.001	1.045	1.051										1.01778	3.46	0.035	1

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Isopropylbenzene	8.005	9.245	7.82	8.181	7.571	7.858	7.67	7.61	7.493	7.756	7.36										7.869977	6.51	0.065	1
4-BROMOFLUOROBENZENE	2.567	2.549	2.525	2.523	2.518	2.497	2.517	2.524	2.527	2.589	2.626										2.541892	1.48	0.015	1
Bromobenzene	3.301	3.489	3.767	3.489	3.139	3.316	3.357	3.287	3.225	3.319	3.215										3.354915	5.15	0.052	1
1,1,2,2-TETRACHLOROETHANE	2.916	2.602	2.398	2.123	2.07	2.13	2.047	2.111	1.996	2.111	2.051										2.232289	12.93	0.129	1
1,2,3-TRICHLOROPROPANE	1.01	0.67	0.763	0.543	0.506	0.514	0.504	0.499	0.487	0.509	0.492										0.590673	27.83	1	0
TRANS-1,4-DICHLORO-2-BUTENE		0.848	0.56	0.581	0.527	0.6	0.611	0.626	0.62	0.635	0.629										0.623604	13.8	0.138	1
n-Propylbenzene	8.891	9.58	9.175	9.406	8.65	9.374	9.184	9.162	9.053	9.263	8.843										9.143748	2.97	0.03	1
4-ETHYLTOLUENE	8.552	8.863	7.968	7.731	7.181	7.657	7.488	7.52	7.284	7.457	7.15										7.713754	7.14	0.071	1
2-Chlorotoluene	1.733	1.918	1.683	1.747	1.53	1.678	1.596	1.582	1.599	1.658	1.658										1.671162	6.27	0.063	1
4-Chlorotoluene	5.908	6.665	5.49	5.593	5.156	5.422	5.371	5.42	5.292	5.508	5.268										5.554005	7.52	0.075	1
1,3,5-Trimethylbenzene	6.733	7.053	6.962	6.555	5.871	6.205	6.082	6.028	5.992	6.152	5.914										6.322491	6.77	0.068	1
tert-Butylbenzene	5.318	5.946	5.484	5.488	5.015	5.41	5.269	5.224	5.224	5.294	5.092										5.342142	4.65	0.046	1
1,2,4-Trimethylbenzene	7.263	7.608	6.574	6.551	5.909	6.228	6.165	6.103	5.964	6.166	5.833										6.396692	8.89	0.089	1
sec-Butylbenzene	9.409	9.545	8.644	8.462	8.121	8.686	8.491	8.369	8.254	8.479	7.989										8.586258	5.68	0.057	1
1,3-DICHLOROBENZENE	3.302	3.485	3.258	3.378	2.938	3.228	3.227	3.203	3.224	3.328	3.214										3.253187	4.16	0.042	1
p-Isopropyltoluene	7.3	7.347	6.928	7.289	6.45	6.803	6.682	6.691	6.586	6.842	6.466										6.853175	4.8	0.048	1
DICYCLOPENTADIENE	9.113	9.923	9.394	9.579	8.64	9.139	8.766	8.524	8.343	8.497	7.991										8.900893	6.53	0.065	1
8260-1,4-DICHLOROBENZENE-D4																								
1,4-DICHLOROBENZENE	1.541	1.415	1.427	1.358	1.209	1.28	1.245	1.232	1.219	1.241	1.22										1.307916	8.48	0.085	1
1,2,3-TRIMETHYLBENZENE	2.825	2.93	2.529	2.52	2.373	2.531	2.448	2.397	2.342	2.387	2.255										2.503362	8.19	0.082	1
1,2-DICHLOROBENZENE	1.164	1.28	1.221	1.225	1.172	1.245	1.228	1.221	1.194	1.22	1.158										1.211675	3.04	0.03	1
n-Butylbenzene	2.388	2.861	2.834	2.829	2.671	2.855	2.778	2.751	2.661	2.661	2.44										2.702654	5.98	0.06	1

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1,2-Dibromo-3-chloropropane		0.215	0.135	0.141	0.144	0.153	0.162	0.165	0.159	0.169	0.161										0.160378	13.78	0.138	1
1,2,4-Trichlorobenzene	0.945	0.884	0.882	0.822	0.804	0.844	0.826	0.826	0.785	0.789	0.72										0.829648	7.21	0.072	1
HEXACHLORO-1,3-BUTADIENE	0.465	0.494	0.459	0.476	0.458	0.481	0.468	0.48	0.471	0.477	0.441										0.469786	2.98	0.03	1
Naphthalene	2.638	2.396	2.184	2.238	2.021	2.266	2.196	2.301	2.178	2.232	2.051										2.245622	7.44	0.074	1
1,2,3-Trichlorobenzene	0.877	0.759	0.732	0.808	0.735	0.786	0.773	0.768	0.734	0.747	0.68										0.76355	6.61	0.066	1
2-Methylnaphthalene	1.336	1.083	1.079	1.116	1.072	1.191	1.195	1.255	1.153	1.164	1.049										1.154015	7.58	0.076	1
1-Methylnaphthalene	1.249	1.017	1.036	1.076	0.91	0.978	0.989	1.046	0.95	0.961	0.862										1.006831	10.08	0.101	1
AP9-PENTAFLUOROBENZENE																								
ETHANOL												0.008	0.009	0.008	0.009	0.01	0.009	0.009	0.009	0.009	0.008876	4.61	0.046	1
Bromoethane												0.431	0.394	0.391	0.395	0.409	0.402	0.406	0.41	0.401	0.404303	3	0.03	1
2-PROPANOL												0.057	0.059	0.044	0.045	0.049	0.045	0.047	0.045	0.045	0.048319	11.61	0.116	1
Methyl Acetate												0.458	0.455	0.443	0.44	0.463	0.451	0.452	0.438	0.432	0.44805	2.29	0.023	1
ACETONITRILE												0.077	0.081	0.077	0.078	0.084	0.081	0.081	0.081	0.078	0.079808	3.16	0.032	1
ALLYL CHLORIDE												0.268	0.258	0.261	0.251	0.263	0.261	0.256	0.263	0.256	0.259527	1.99	0.02	1
tert-BUTYL ALCOHOL												0.167	0.153	0.155	0.158	0.168	0.162	0.165	0.163	0.156	0.160802	3.37	0.034	1
chloroprene												0.869	0.844	0.824	0.824	0.851	0.848	0.822	0.827	0.817	0.836237	2.11	0.021	1
ETHYL TERT-BUTYL ETHER												1.858	1.736	1.727	1.695	1.802	1.733	1.736	1.744	1.718	1.749866	2.84	0.028	1
PROPIONITRILE												0.082	0.082	0.078	0.078	0.083	0.08	0.08	0.079	0.076	0.079823	2.85	0.028	1
Ethyl Acetate												0.627	0.616	0.594	0.596	0.622	0.605	0.61	0.596	0.584	0.605676	2.38	0.024	1
METHACRYLONITRILE												0.225	0.221	0.209	0.208	0.217	0.212	0.213	0.211	0.205	0.213529	3.12	0.031	1
Cyclohexane												1.149	1.114	1.101	1.073	1.137	1.127	1.107	1.113	1.092	1.112759	2.08	0.021	1
tert-butyl formate																					0	0	0	1

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS7
Method : V807B15P
Review Method : 8260B
Review Protocol : SW846
Released By : Amy Green
Released On : 2/15/2016 3:08:44 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V807B15P -- ICal Updated Time: Mon Feb 15 15:00:04 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
ISOBUTANOL												0.044	0.039	0.039	0.037	0.041	0.039	0.039	0.038	0.037	0.03929	5.09	0.051	1
1-Amyl Alcohol												0.054	0.064	0.051	0.053	0.061	0.058	0.055	0.057	0.053	0.056226	7.4	0.074	1
TERT-AMYL METHYL ETHER												1.923	1.754	1.701	1.701	1.775	1.712	1.725	1.71	1.661	1.740322	4.37	0.044	1
AP9-1,4-DIFLUOROBENZENE																								
N-BUTANOL												0.011	0.012	0.011	0.011	0.012	0.012	0.012	0.012	0.011	0.011654	3.68	0.037	1
Methyl Cyclohexane												1.164	0.899	0.822	0.765	0.767	0.766	0.754	0.738	0.734	0.823254	16.72	1	0
2-nitropropane												0.121	0.117	0.113	0.106	0.114	0.111	0.112	0.11	0.108	0.112635	4.06	0.041	1
METHYL METHACRYLATE												0.372	0.348	0.341	0.333	0.351	0.345	0.35	0.341	0.333	0.345904	3.43	0.034	1
1,4-DIOXANE												0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.003	0.003654	3.16	0.032	1
n-octane												0.339	0.311	0.308	0.295	0.312	0.304	0.3	0.307	0.3	0.308468	4.12	0.041	1
3,3-DIMETHYL-1-BUTANOL												0.056	0.054	0.052	0.053	0.057	0.056	0.056	0.056	0.053	0.054863	2.88	0.029	1
AP9-2-BROMO-1 -CHLOROPROPANE																								
ETHYL METHACRYLATE												2.13	2.009	2.033	2.036	2.096	2.121	2.151	2.094	2.066	2.081683	2.34	0.023	1
CIS-1,4-DICHLORO-2-BUTENE												0.548	0.549	0.563	0.562	0.591	0.579	0.6	0.585	0.571	0.572086	3.17	0.032	1
Cyclohexanone												0.515	0.528	0.515	0.515	0.513	0.527	0.522	0.481	0.445	0.50676	5.3	0.053	1
PENTACHLOROETHANE												1.019	0.975	0.979	1.017	1.044	1.045	1.039	1.032	1.026	1.019613	2.57	0.026	1
Hexachloroethane												1.288	1.211	1.27	1.204	1.266	1.27	1.313	1.309	1.28	1.267692	3	0.03	1
AP9-1,4-DICHLOROBENZENE-D4																								

Environmental Science Corporation
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INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS7
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Review Protocol : SW846
Released By : Amy Green
Released On : 2/15/2016 3:09:18 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V807B15P -- ICal Updated Time: Mon Feb 15 15:00:04 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur	RF
8260-PENTAFLUOROBENZENE																									
TPH (GC/MS) LOW FRACTION																					0	0	0	1	
PROPENE		0.308	0.223	0.288	0.246	0.204	0.215	0.217	0.218	0.216	0.213										0.234838	15.04	0.15	1	
DICHLORODIFLUOROMETHANE	0.893	0.646	0.617	0.624	0.549	0.6	0.584	0.588	0.595	0.593	0.565										0.623141	15	0.15	1	0.1
CHLOROMETHANE	1.089	0.952	0.918	0.913	0.803	0.846	0.828	0.832	0.847	0.843	0.954										0.893048	9.35	0.093	1	0.1
VINYL CHLORIDE	0.85	0.777	0.76	0.745	0.725	0.78	0.755	0.755	0.762	0.779	0.733										0.76567	4.35	0.044	1	0.1
1,3-BUTADIENE		0.831	0.806	0.733	0.649	0.664	0.643	0.651	0.626	0.646	0.586										0.683446	11.7	0.117	1	
BROMOMETHANE			0.389	0.405	0.311	0.35	0.366	0.364	0.394	0.416	0.413										0.378802	9.02	0.09	1	0.1
CHLOROETHANE			0.52	0.422	0.383	0.431	0.395	0.388	0.382	0.364											0.41058	11.96	0.12	1	0.1
TRICHLOROFLUOROMETHANE	0.822	0.786	0.781	0.768	0.718	0.772	0.748	0.751	0.75	0.765	0.75										0.764713	3.52	0.035	1	0.1
DICHLOROFLUOROMETHANE	1.078	0.971	1.162	1.038	0.987	1.061	1.012	1.014	1.028	1.029	0.988										1.033416	5.14	0.051	1	
ETHYL ETHER	0.564	0.526	0.473	0.505	0.436	0.486	0.473	0.476	0.471	0.475	0.455										0.485553	7.23	0.072	1	
ACROLEIN	0.141	0.105	0.116	0.104	0.107	0.115	0.113	0.121	0.117	0.124	0.123										0.116876	9	0.09	1	
1,1-DICHLOROETHENE	0.856	0.854	0.845	0.87	0.766	0.863	0.834	0.828	0.814	0.819	0.764										0.828476	4.32	0.043	1	0.1
1,1,2 -TRICHLOROTRIFLUOROETHANE	0.526	0.525	0.487	0.463	0.449	0.48	0.474	0.463	0.46	0.462	0.436										0.475169	6.01	0.06	1	0.1
ACETONE	0.465	0.414	0.365	0.389	0.351	0.384	0.356	0.37	0.35	0.358	0.337										0.376406	9.67	0.097	1	0.1
IODOMETHANE	0.387	0.387	0.415	0.43	0.436	0.501	0.521	0.53	0.564	0.571	0.52										0.478341	14.44	0.144	1	
CARBON DISULFIDE	2.127	2.055	1.938	1.906	1.75	1.868	1.813	1.799	1.777	1.773	1.695										1.863691	7.14	0.071	1	0.1
METHYLENE CHLORIDE	0.688	0.732	0.528	0.605	0.493	0.527	0.516	0.512	0.511	0.518	0.5										0.557192	14.62	0.146	1	0.1
ACRYLONITRILE	0.286	0.242	0.216	0.222	0.21	0.229	0.218	0.233	0.219	0.226	0.216										0.228846	9.19	0.092	1	
n-Hexane		0.761	0.631	0.593	0.591	0.609	0.577	0.564	0.561	0.558	0.53										0.597635	10.72	0.107	1	
TRANS-1,2-DICHLOROETHENE	0.453	0.68	0.494	0.509	0.458	0.497	0.484	0.475	0.482	0.478	0.462										0.497513	12.67	0.127	1	0.1

Environmental Science Corporation
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INITIAL CALIBRATION SUMMARY

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Released On : 2/15/2016 3:09:18 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V807B15P -- ICal Updated Time: Mon Feb 15 15:00:04 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur	RF
METHYL TERT-BUTYL ETHER	1.466	1.453	1.504	1.597	1.448	1.538	1.471	1.477	1.447	1.468	1.41										1.47991	3.42	0.034	1	0.1
1,1-DICHLOROETHANE	1.012	1.046	1.034	1.06	0.985	1.054	1.034	1.032	1.024	1.033	0.981										1.02691	2.46	0.025	1	0.2
VINYL ACETATE	1.265	1.516	1.326	1.334	1.279	1.378	1.31	1.323	1.254	1.249	1.14										1.306617	7.11	0.071	1	
DI-ISOPROPYL ETHER	2.314	2.096	2.295	2.202	2.078	2.24	2.205	2.207	2.182	2.192	2.059										2.18812	3.76	0.038	1	
2,2-Dichloropropane	1.005	0.953	0.891	0.844	0.794	0.834	0.818	0.814	0.812	0.817	0.767										0.84979	8.45	0.084	1	
CIS-1,2-DICHLOROETHENE	0.576	0.517	0.501	0.589	0.505	0.561	0.53	0.535	0.543	0.55	0.525										0.539293	5.18	0.052	1	0.1
2-BUTANONE (MEK)	0.432	0.494	0.482	0.459	0.437	0.472	0.448	0.471	0.442	0.449	0.423										0.455348	4.87	0.049	1	0.1
BROMOCHLOROMETHANE	0.357	0.291	0.292	0.285	0.295	0.302	0.293	0.29	0.274	0.272	0.248										0.290801	9.08	0.091	1	
TETRAHYDROFURAN			0.23	0.267	0.211	0.235	0.207	0.221	0.202	0.212	0.206										0.221123	9.2	0.092	1	
CHLOROFORM		0.997	0.979	0.97	0.881	0.96	0.918	0.909	0.895	0.904	0.859										0.927238	4.97	0.05	1	0.2
DIBROMOFLUOROMETHANE	0.534	0.53	0.526	0.525	0.521	0.524	0.516	0.515	0.51	0.506	0.495										0.518344	2.21	0.022	1	
1,1,1-TRICHLOROETHANE	0.886	0.824	0.814	0.769	0.712	0.777	0.738	0.738	0.736	0.75	0.715										0.769114	6.93	0.069	1	0.1
CARBON TETRACHLORIDE	0.826	0.763	0.684	0.639	0.633	0.68	0.647	0.639	0.661	0.668	0.621										0.678307	9.2	0.092	1	0.1
1,1-Dichloropropene	0.726	0.769	0.744	0.731	0.698	0.755	0.721	0.719	0.712	0.725	0.685										0.725794	3.31	0.033	1	
2,2,4-TRIMETHYLPENTANE	2.773	2.643	2.542	2.63	2.438	2.621	2.532	2.525	2.518	2.54	2.414										2.561313	3.93	0.039	1	
HEPTANE	1.203	1.409	1.272	1.347	1.205	1.244	1.194	1.177	1.159	1.21	1.126										1.231403	6.75	0.068	1	
BENZENE	2.314	2.31	2.169	2.213	2.073	2.181	2.117	2.141	2.126	2.14	2.074										2.168922	3.79	0.038	1	0.5
1,2-DICHLOROETHANE	0.575	0.655	0.653	0.679	0.645	0.697	0.657	0.674	0.667	0.676	0.649										0.657068	4.76	0.048	1	0.1
8260-1,4-DIFLUOROBENZENE																									
TRICHLOROETHENE	0.281	0.32	0.284	0.282	0.277	0.291	0.281	0.28	0.278	0.284	0.278										0.285218	4.27	0.043	1	0.2
1,2-DICHLOROPROPANE	0.281	0.304	0.255	0.262	0.24	0.26	0.258	0.251	0.25	0.25	0.24										0.259322	7.2	0.072	1	0.1
DIBROMOMETHANE	0.239	0.211	0.187	0.187	0.168	0.182	0.178	0.182	0.178	0.184	0.18										0.188576	10.45	0.104	1	

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INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS7
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INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V807B15P -- ICal Updated Time: Mon Feb 15 15:00:04 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur	RF
BROMODICHLOROMETHANE		0.548	0.437	0.426	0.413	0.44	0.414	0.408	0.399	0.4	0.39										0.427443	10.58	0.106	1	0.2
a,a,a-Trifluorotoluene	0.545	0.546	0.543	0.534	0.527	0.522	0.521	0.515	0.5	0.5	0.489										0.522235	3.72	0.037	1	
-CHLOROETHYL VINYL ETHER	0.039	0.037	0.034	0.034	0.036	0.041	0.042	0.04	0.032	0.033	0.033										0.03637	9.95	0.099	1	
CIS-1,3-DICHLOROPROPENE	0.616	0.619	0.579	0.558	0.524	0.552	0.534	0.542	0.531	0.537	0.519										0.555612	6.28	0.063	1	0.2
-METHYL-2-PENTANONE (MIBK)	0.5	0.441	0.426	0.398	0.384	0.414	0.391	0.406	0.371	0.379	0.356										0.405823	9.79	0.098	1	0.1
TOLUENE-D8	1.259	1.268	1.25	1.227	1.22	1.214	1.213	1.213	1.199	1.186	1.197										1.222388	2.16	0.022	1	
TOLUENE		1.486	1.322	1.313	1.241	1.314	1.277	1.263	1.248	1.249	1.217										1.292967	5.92	0.059	1	0.4
TRANS-1,3-DICHLOROPROPENE	0.476	0.487	0.475	0.481	0.439	0.481	0.462	0.474	0.455	0.461	0.449										0.467412	3.27	0.033	1	0.1
8260-2-BROMO-1 -CHLOROPROPANE																									
1,1,2-TRICHLOROETHANE	1.438	1.702	1.442	1.491	1.285	1.414	1.438	1.41	1.376	1.44	1.396										1.439222	7.05	0.07	1	0.1
TETRACHLOROETHENE	1.139	1.291	1.235	1.279	1.161	1.232	1.18	1.169	1.143	1.184	1.173										1.198664	4.38	0.044	1	0.2
1,3-Dichloropropane	2.893	2.679	2.636	2.588	2.447	2.651	2.543	2.526	2.449	2.577	2.479										2.587871	4.96	0.05	1	
2-HEXANONE	0.893	1.045	1.021	1.086	1.009	1.091	1.026	1.073	0.985	1.03	0.984										1.021934	5.51	0.055	1	0.1
CHLORODIBROMOMETHANE	1.934	1.968	1.688	1.646	1.447	1.638	1.552	1.583	1.545	1.621	1.61										1.657455	9.57	0.096	1	0.1
1,2-DIBROMOETHANE	1.834	1.514	1.529	1.331	1.311	1.484	1.434	1.452	1.417	1.484	1.461										1.477366	9.25	0.093	1	0.1
CHLOROBENZENE	4.873	4.955	4.638	4.414	4.1	4.355	4.211	4.169	4.058	4.23	4.171										4.37943	7.09	0.071	1	0.5
1,1,1,2-TETRACHLOROETHANE	1.785	1.598	1.493	1.453	1.307	1.422	1.349	1.322	1.322	1.37	1.36										1.434697	10.17	0.102	1	
ETHYLBENZENE	2.444	2.73	2.724	2.454	2.328	2.521	2.429	2.404	2.356	2.447	2.407										2.476655	5.4	0.054	1	0.1
M&P-XYLENE	3.198	3.373	3.05	3.157	2.803	3.018	2.879	2.887	2.849	2.959	2.965										3.012497	5.71	0.057	1	0.1
O-XYLENE	3.12	3.349	2.977	3.009	2.785	2.927	2.872	2.888	2.86	2.981	2.886										2.968513	5.21	0.052	1	0.3
STYRENE	5.316	5.015	4.901	5.122	4.541	4.886	4.852	4.765	4.721	4.892	4.782										4.890134	4.24	0.042	1	0.3
Bromoform	0.976	1.061	1.003	1.037	0.943	1.03	1.014	1.033	1.001	1.045	1.051										1.01778	3.46	0.035	1	0.1

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Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur	RF
Isopropylbenzene	8.005	9.245	7.82	8.181	7.571	7.858	7.67	7.61	7.493	7.756	7.36										7.869977	6.51	0.065	1	0.1
4-BROMOFLUOROBENZENE	2.567	2.549	2.525	2.523	2.518	2.497	2.517	2.524	2.527	2.589	2.626										2.541892	1.48	0.015	1	
Bromobenzene	3.301	3.489	3.767	3.489	3.139	3.316	3.357	3.287	3.225	3.319	3.215										3.354915	5.15	0.052	1	
1,1,2,2-TETRACHLOROETHANE	2.916	2.602	2.398	2.123	2.07	2.13	2.047	2.111	1.996	2.111	2.051										2.232289	12.93	0.129	1	0.3
1,2,3-TRICHLOROPROPANE	1.01	0.67	0.763	0.543	0.506	0.514	0.504	0.499	0.487	0.509	0.492										0.590673	27.83	1	0	
TRANS-1,4-DICHLORO-2-BUTENE		0.848	0.56	0.581	0.527	0.6	0.611	0.626	0.62	0.635	0.629										0.623604	13.8	0.138	1	
n-Propylbenzene	8.891	9.58	9.175	9.406	8.65	9.374	9.184	9.162	9.053	9.263	8.843										9.143748	2.97	0.03	1	
4-ETHYLTOLUENE	8.552	8.863	7.968	7.731	7.181	7.657	7.488	7.52	7.284	7.457	7.15										7.713754	7.14	0.071	1	
2-Chlorotoluene	1.733	1.918	1.683	1.747	1.53	1.678	1.596	1.582	1.599	1.658	1.658										1.671162	6.27	0.063	1	
4-Chlorotoluene	5.908	6.665	5.49	5.593	5.156	5.422	5.371	5.42	5.292	5.508	5.268										5.554005	7.52	0.075	1	
1,3,5-Trimethylbenzene	6.733	7.053	6.962	6.555	5.871	6.205	6.082	6.028	5.992	6.152	5.914										6.322491	6.77	0.068	1	
tert-Butylbenzene	5.318	5.946	5.484	5.488	5.015	5.41	5.269	5.224	5.224	5.294	5.092										5.342142	4.65	0.046	1	
1,2,4-Trimethylbenzene	7.263	7.608	6.574	6.551	5.909	6.228	6.165	6.103	5.964	6.166	5.833										6.396692	8.89	0.089	1	
sec-Butylbenzene	9.409	9.545	8.644	8.462	8.121	8.686	8.491	8.369	8.254	8.479	7.989										8.586258	5.68	0.057	1	
1,3-DICHLOROBENZENE	3.302	3.485	3.258	3.378	2.938	3.228	3.227	3.203	3.224	3.328	3.214										3.253187	4.16	0.042	1	0.6
p-Isopropyltoluene	7.3	7.347	6.928	7.289	6.45	6.803	6.682	6.691	6.586	6.842	6.466										6.853175	4.8	0.048	1	
DICYCLOPENTADIENE	9.113	9.923	9.394	9.579	8.64	9.139	8.766	8.524	8.343	8.497	7.991										8.900893	6.53	0.065	1	
8260-1,4-DICHLOROBENZENE-D4																									
1,4-DICHLOROBENZENE	1.541	1.415	1.427	1.358	1.209	1.28	1.245	1.232	1.219	1.241	1.22										1.307916	8.48	0.085	1	
1,2,3-TRIMETHYLBENZENE	2.825	2.93	2.529	2.52	2.373	2.531	2.448	2.397	2.342	2.387	2.255										2.503362	8.19	0.082	1	
1,2-DICHLOROBENZENE	1.164	1.28	1.221	1.225	1.172	1.245	1.228	1.221	1.194	1.22	1.158										1.211675	3.04	0.03	1	0.4
n-Butylbenzene	2.388	2.861	2.834	2.829	2.671	2.855	2.778	2.751	2.661	2.661	2.44										2.702654	5.98	0.06	1	

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS7
Method : V807B15P
Review Method : 8260C
Review Protocol : SW846
Released By : Amy Green
Released On : 2/15/2016 3:09:18 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V807B15P -- ICal Updated Time: Mon Feb 15 15:00:04 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur	RF
1,2-Dibromo-3-chloropropane		0.215	0.135	0.141	0.144	0.153	0.162	0.165	0.159	0.169	0.161										0.160378	13.78	0.138	1	0.05
1,2,4-Trichlorobenzene	0.945	0.884	0.882	0.822	0.804	0.844	0.826	0.826	0.785	0.789	0.72										0.829648	7.21	0.072	1	0.2
HEXACHLORO-1,3-BUTADIENE	0.465	0.494	0.459	0.476	0.458	0.481	0.468	0.48	0.471	0.477	0.441										0.469786	2.98	0.03	1	
Naphthalene	2.638	2.396	2.184	2.238	2.021	2.266	2.196	2.301	2.178	2.232	2.051										2.245622	7.44	0.074	1	
1,2,3-Trichlorobenzene	0.877	0.759	0.732	0.808	0.735	0.786	0.773	0.768	0.734	0.747	0.68										0.76355	6.61	0.066	1	
1-Methylnaphthalene	1.336	1.083	1.079	1.116	1.072	1.191	1.195	1.255	1.153	1.164	1.049										1.154015	7.58	0.076	1	
2-Methylnaphthalene	1.249	1.017	1.036	1.076	0.91	0.978	0.989	1.046	0.95	0.961	0.862										1.006831	10.08	0.101	1	
AP9-PENTAFLUOROBENZENE																									
ETHANOL												0.008	0.009	0.008	0.009	0.01	0.009	0.009	0.009	0.009	0.008876	4.61	0.046	1	
Bromoethane												0.431	0.394	0.391	0.395	0.409	0.402	0.406	0.41	0.401	0.404303	3	0.03	1	
2-PROPANOL												0.057	0.059	0.044	0.045	0.049	0.045	0.047	0.045	0.045	0.048319	11.61	0.116	1	
Methyl Acetate												0.458	0.455	0.443	0.44	0.463	0.451	0.452	0.438	0.432	0.44805	2.29	0.023	1	0.1
ACETONITRILE												0.077	0.081	0.077	0.078	0.084	0.081	0.081	0.081	0.078	0.079808	3.16	0.032	1	
ALLYL CHLORIDE												0.268	0.258	0.261	0.251	0.263	0.261	0.256	0.263	0.256	0.259527	1.99	0.02	1	
tert-BUTYL ALCOHOL												0.167	0.153	0.155	0.158	0.168	0.162	0.165	0.163	0.156	0.160802	3.37	0.034	1	
chloroprene												0.869	0.844	0.824	0.824	0.851	0.848	0.822	0.827	0.817	0.836237	2.11	0.021	1	
ETHYL TERT-BUTYL ETHER												1.858	1.736	1.727	1.695	1.802	1.733	1.736	1.744	1.718	1.749866	2.84	0.028	1	
PROPIONITRILE												0.082	0.082	0.078	0.078	0.083	0.08	0.08	0.079	0.076	0.079823	2.85	0.028	1	
Ethyl Acetate												0.627	0.616	0.594	0.596	0.622	0.605	0.61	0.596	0.584	0.605676	2.38	0.024	1	
METHACRYLONITRILE												0.225	0.221	0.209	0.208	0.217	0.212	0.213	0.211	0.205	0.213529	3.12	0.031	1	
Cyclohexane												1.149	1.114	1.101	1.073	1.137	1.127	1.107	1.113	1.092	1.112759	2.08	0.021	1	0.1
tert-butyl formate																					0	0	0	1	

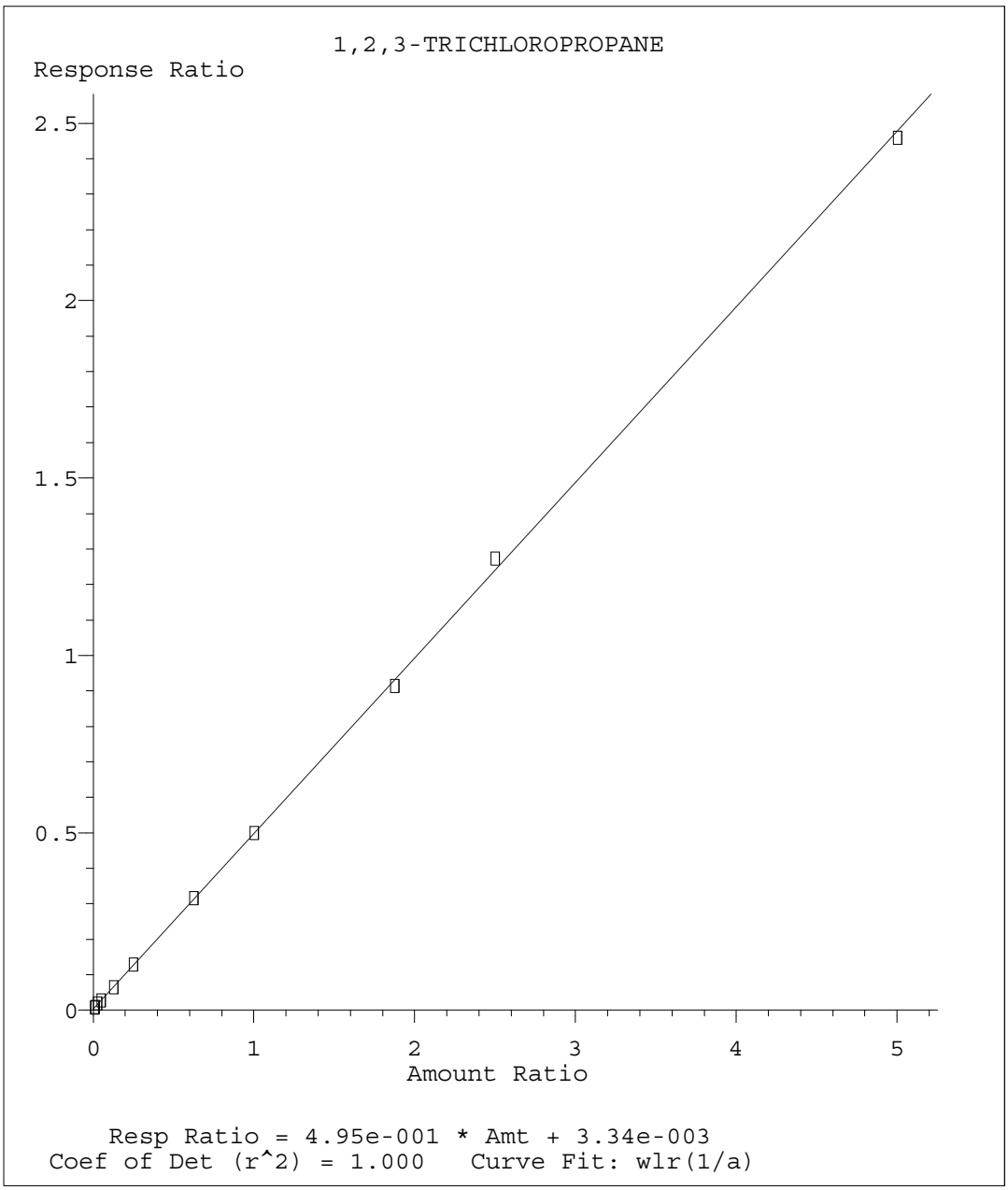
Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

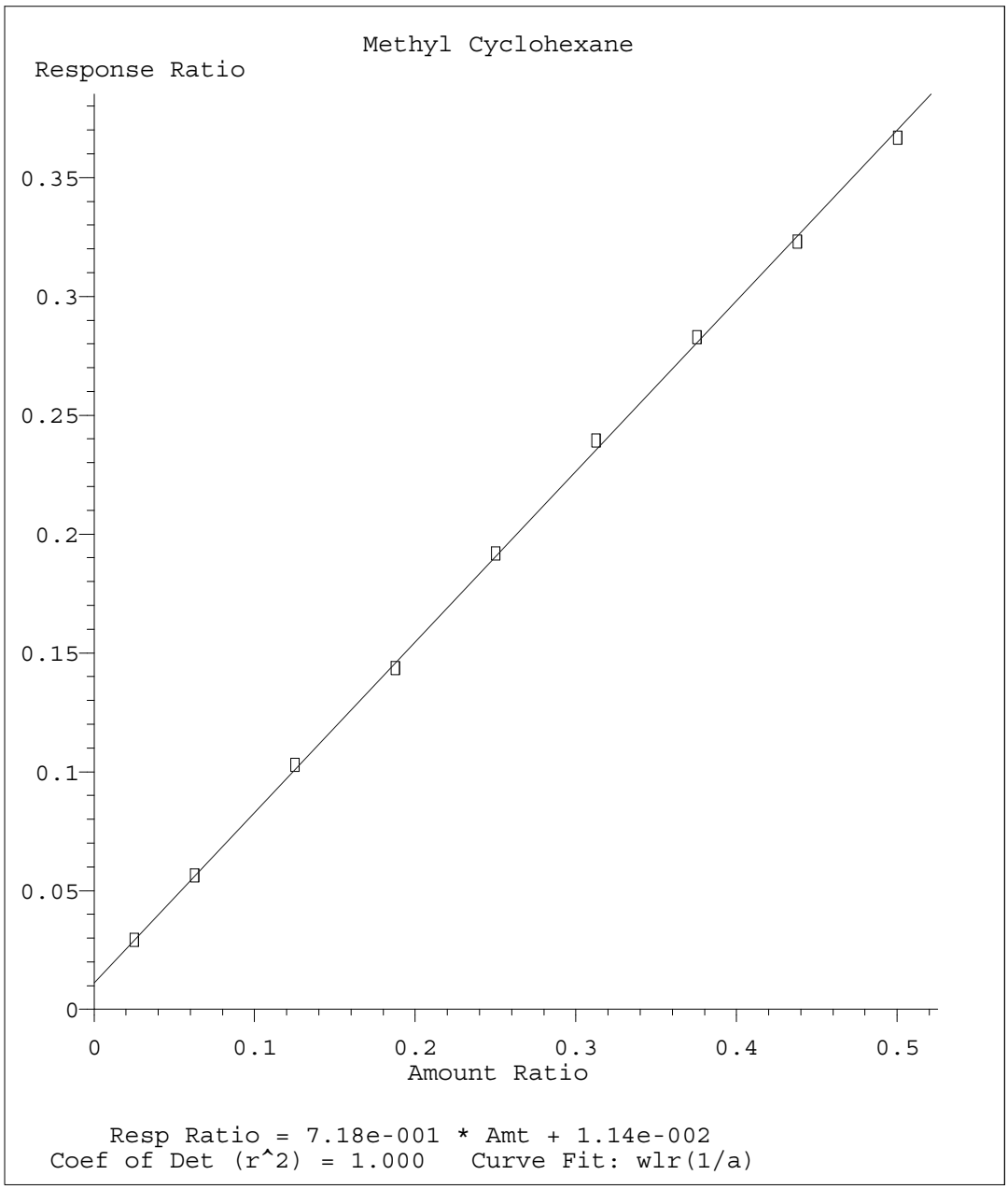
Instrument ID : VOCMS7
Method : V807B15P
Review Method : 8260C
Review Protocol : SW846
Released By : Amy Green
Released On : 2/15/2016 3:09:18 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V807B15P -- ICal Updated Time: Mon Feb 15 15:00:04 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur	RF
ISOBUTANOL												0.044	0.039	0.039	0.037	0.041	0.039	0.039	0.038	0.037	0.03929	5.09	0.051	1	
1-Amyl Alcohol												0.054	0.064	0.051	0.053	0.061	0.058	0.055	0.057	0.053	0.056226	7.4	0.074	1	
TERT-AMYL METHYL ETHER												1.923	1.754	1.701	1.701	1.775	1.712	1.725	1.71	1.661	1.740322	4.37	0.044	1	
AP9-1,4-DIFLUOROBENZENE																									
N-BUTANOL												0.011	0.012	0.011	0.011	0.012	0.012	0.012	0.012	0.011	0.011654	3.68	0.037	1	
Methyl Cyclohexane												1.164	0.899	0.822	0.765	0.767	0.766	0.754	0.738	0.734	0.823254	16.72	1	0	0.1
2-nitropropane												0.121	0.117	0.113	0.106	0.114	0.111	0.112	0.11	0.108	0.112635	4.06	0.041	1	
METHYL METHACRYLATE												0.372	0.348	0.341	0.333	0.351	0.345	0.35	0.341	0.333	0.345904	3.43	0.034	1	
1,4-DIOXANE												0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.003	0.003654	3.16	0.032	1	
n-octane												0.339	0.311	0.308	0.295	0.312	0.304	0.3	0.307	0.3	0.308468	4.12	0.041	1	
3,3-DIMETHYL-1-BUTANOL												0.056	0.054	0.052	0.053	0.057	0.056	0.056	0.056	0.053	0.054863	2.88	0.029	1	
AP9-2-BROMO-1 -CHLOROPROPANE																									
ETHYL METHACRYLATE												2.13	2.009	2.033	2.036	2.096	2.121	2.151	2.094	2.066	2.081683	2.34	0.023	1	
CIS-1,4-DICHLORO-2-BUTENE												0.548	0.549	0.563	0.562	0.591	0.579	0.6	0.585	0.571	0.572086	3.17	0.032	1	
Cyclohexanone												0.515	0.528	0.515	0.515	0.513	0.527	0.522	0.481	0.445	0.50676	5.3	0.053	1	
PENTACHLOROETHANE												1.019	0.975	0.979	1.017	1.044	1.045	1.039	1.032	1.026	1.019613	2.57	0.026	1	
Hexachloroethane												1.288	1.211	1.27	1.204	1.266	1.27	1.313	1.309	1.28	1.267692	3	0.03	1	
AP9-1,4-DICHLOROBENZENE-D4																									



Method Name: C:\msdchem\1\methods\V807B15P.M



Method Name: C:\msdchem\1\methods\V807B15P.M

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\021116\
Data File : 0211 01.D
Acq On : 11 Feb 2016 3:24 pm
Operator : 522
Sample : INSTBLK
Misc : water
ALS Vial : 1 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 15 15:00:31 2016
Quant Method : C:\msdchem\1\methods\V807B15P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Mon Feb 15 15:00:04 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 8260-PENTAFLUOROBENZENE	4.329	168	497826	40.0000000	ppb		0.00
41) 8260-1,4-DIFLUOROBENZENE	4.657	114	839523	40.0000000	ppb		0.00
53) 8260-2-BROMO-1-CHLOROP...	5.819	79	147732	40.0000000	ppb		0.00
84) 8260-1,4-DICHLOROBENZE...	8.216	152	372788	40.0000000	ppb		0.00
96) AP9-PENTAFLUOROBENZENE	4.329	168	497826	40.0000000	ppb		0.00
114) AP9-1,4-DIFLUOROBENZENE	4.657	114	839523	40.0000000	ppb		0.00
122) AP9-2-BROMO-1-CHLOROPR...	5.819	79	147732	40.0000000	ppb	#	0.00
128) AP9-1,4-DICHLOROBENZEN...	8.216	152	372788	40.0000000	ppb		0.00
System Monitoring Compounds							
33) DIBROMOFLUOROMETHANE	4.098	111	267752	41.5046676	ppb		0.00
Spiked Amount 40.000	Range 78 - 121		Recovery = 103.76%				
46) a,a,a-Trifluorotoluene	5.022	146	455885	41.5926633	ppb		0.00
Spiked Amount 40.000	Range 85 - 114		Recovery = 103.98%				
50) TOLUENE-D8	5.485	98	1034472	40.3215428	ppb		0.00
Spiked Amount 40.000	Range 89 - 111		Recovery = 100.80%				
68) 4-BROMOFLUOROBENZENE	7.365	95	381775	40.6664114	ppb		0.00
Spiked Amount 40.000	Range 71 - 126		Recovery = 101.67%				
Target Compounds							Qvalue
3) PROPENE	1.689	41	4845	1.6577076	ppb	#	75
4) DICHLORODIFLUOROMETHANE	1.725	85	1814	0.2339018	ppb	#	43
5) CHLOROMETHANE	1.920	50	10430	0.9384082	ppb	#	74
8) BROMOMETHANE	2.218	94	832	0.1764790	ppb	#	1
12) ETHYL ETHER	2.613	59	1021	0.1689553	ppb	#	13
13) ACROLEIN	2.960	56	1352	0.9294641	ppb	#	78
16) ACETONE	3.118	43	4397	0.9386049	ppb	#	80
17) IODOMETHANE	2.851	142	4374	0.7347235	ppb		93
19) METHYLENE CHLORIDE	3.106	84	1726	0.2488961	ppb		96
20) ACRYLONITRILE	3.581	53	1958	0.6874655	ppb	#	61
21) n-Hexane	3.228	56	2439	0.3279125	ppb	#	11
29) 2-BUTANONE (MEK)	4.165	43	2769	0.4886094	ppb	#	54
31) TETRAHYDROFURAN	4.098	42	1904	0.6918542	ppb	#	67
43) 1,2-DICHLOROPROPANE	5.022	62	8489	1.5597108	ppb	#	24
49) 4-METHYL-2-PENTANONE (...	5.728	43	5120	0.6011189	ppb		99
51) TOLUENE	5.515	91	3640	0.1341347	ppb	#	80
52) TRANS-1,3-DICHLOROPROPENE	5.819	75	7576	0.7722664	ppb	#	1
54) 1,1,2-TRICHLOROETHANE	5.971	97	907	0.1706338	ppb	#	12
57) 2-HEXANONE	6.282	58	3694	0.9787220	ppb		93
60) CHLOROBENZENE	6.531	112	2750	0.1700202	ppb		87
63) M&P-XYLENE	6.616	106	3317	0.2981291	ppb		89
64) O-XYLENE	6.927	106	1658	0.1512276	ppb	#	70
65) STYRENE	6.963	104	2992	0.1656633	ppb		95
67) Isopropylbenzene	7.139	105	5245	0.1804502	ppb	#	78
69) Bromobenzene	7.456	77	3449	0.2783537	ppb		89
70) 1,1,2,2-TETRACHLOROETHANE	7.498	83	1346	0.1632601	ppb	#	37
73) n-Propylbenzene	7.450	91	8459	0.2504841	ppb	#	96
74) 4-ETHYLTOLUENE	7.523	105	7608	0.2670485	ppb		98
75) 2-Chlorotoluene	7.590	126	1224	0.1983117	ppb		92
76) 4-Chlorotoluene	7.711	91	6147	0.2996694	ppb		98
77) 1,3,5-Trimethylbenzene	7.577	105	6036	0.2584916	ppb		92
78) tert-Butylbenzene	7.833	119	4973	0.2520510	ppb	#	82
79) 1,2,4-Trimethylbenzene	7.882	105	7801	0.3302024	ppb		100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\021116\
Data File : 0211 01.D
Acq On : 11 Feb 2016 3:24 pm
Operator : 522
Sample : INSTBLK
Misc : water
ALS Vial : 1 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 15 15:00:31 2016
Quant Method : C:\msdchem\1\methods\V807B15P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Mon Feb 15 15:00:04 2016
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
80)	sec-Butylbenzene	7.961	105	9316	0.2937724	ppb		99
81)	1,3-DICHLOROBENZENE	8.162	146	4134	0.3440700	ppb		93
82)	p-Isopropyltoluene	8.064	119	7529	0.2974616	ppb	#	91
85)	1,4-DICHLOROBENZENE	8.228	146	4953	0.4063371	ppb	#	1
86)	1,2,3-TRIMETHYLBENZENE	8.228	105	7885	0.3379685	ppb		99
87)	1,2-DICHLOROBENZENE	8.563	146	4660	0.4126650	ppb		95
88)	n-Butylbenzene	8.399	91	9029	0.3584654	ppb		95
90)	1,2,4-Trichlorobenzene	9.761	180	6123	0.7918965	ppb		97
91)	HEXACHLORO-1,3-BUTADIENE	9.719	225	2969	0.6781232	ppb		94
92)	Naphthalene	10.029	128	20312	0.9705413	ppb		96
93)	1,2,3-Trichlorobenzene	10.193	180	6487	0.9116009	ppb		99
94)	1-Methylnaphthalene	10.844	142	19607	1.8230465	ppb	#	94
95)	2-Methylnaphthalene	10.960	142	15465	1.6481292	ppb	#	94
100)	Methyl Acetate	3.179	43	1283	0.2300821	ppb	#	58
101)	ACETONITRILE	3.471	41	561	0.5648082	ppb	#	25
103)	tert-BUTYL ALCOHOL	3.270	59	1859	0.9289054	ppb	#	78
104)	chloroprene	3.581	53	1958	0.1881333	ppb	#	26
107)	Ethyl Acetate	4.025	43	1165	0.1545497	ppb	#	68
108)	METHACRYLONITRILE	4.329	67	2073	0.7800551	ppb	#	1
111)	ISOBUTANOL	4.359	43	525	1.0736383	ppb	#	76
112)	t-Amyl Alcohol	4.444	59	535	0.7645407	ppb	#	1
115)	N-BUTANOL	4.785	56	543	2.2200518	ppb	#	1
116)	Methyl Cyclohexane	4.657	83	8662	Below Cal		#	49
117)	2-nitropropane	5.612	43	680	0.2876493	ppb	#	18
119)	1,4-DIOXANE	5.022	88	5098	66.4736546	ppb	#	42
121)	3,3-DIMETHYL-1-BUTANOL	6.203	57	613	0.5323609	ppb	#	14
125)	Cyclohexanone	7.675	55	1460	0.7800743	ppb	#	21

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\021116\
Data File : 0211 01.D
Acq On : 11 Feb 2016 3:24 pm
Operator : 522
Sample : INSTBLK
Misc : water
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InstName : VOCMS7

Quant Time: Feb 15 15:00:31 2016
Quant Method : C:\msdchem\1\methods\V807B15P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
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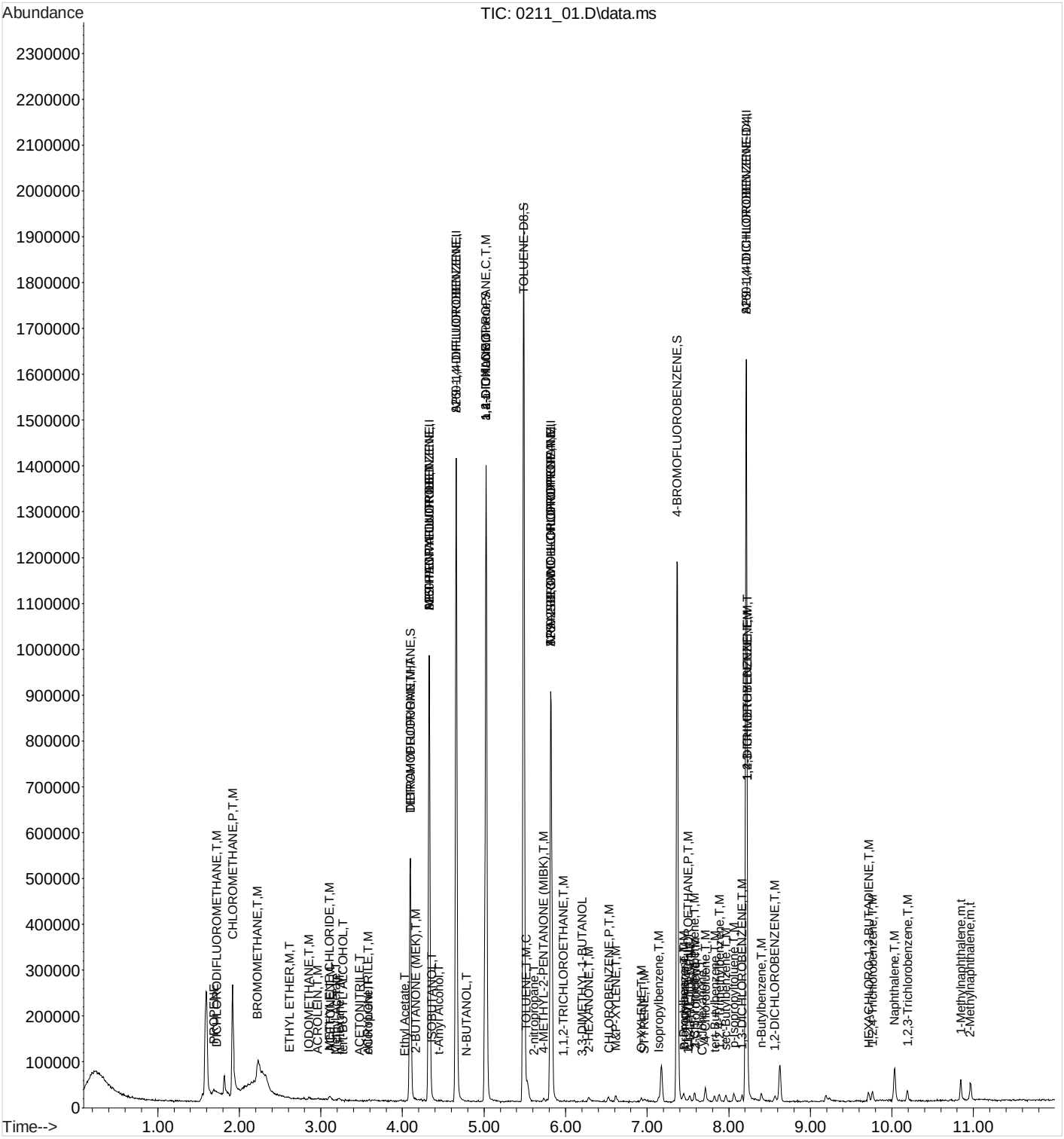

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\021116\
Data File : 0211 01.D
Acq On : 11 Feb 2016 3:24 pm
Operator : 522
Sample : INSTBLK
Misc : water
ALS Vial : 1 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 15 15:00:31 2016
Quant Method : C:\msdchem\1\methods\V807B15P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
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Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 8260-PENTAFLUOROBENZENE	4.329	168	497826	40.0000000	ppb		0.00
41) 8260-1,4-DIFLUOROBENZENE	4.657	114	839523	40.0000000	ppb		0.00
53) 8260-2-BROMO-1-CHLOROP...	5.819	79	147732	40.0000000	ppb		0.00
84) 8260-1,4-DICHLOROBENZE...	8.216	152	372788	40.0000000	ppb		0.00
96) AP9-PENTAFLUOROBENZENE	4.329	168	497826	40.0000000	ppb		0.00
114) AP9-1,4-DIFLUOROBENZENE	4.657	114	839523	40.0000000	ppb		0.00
122) AP9-2-BROMO-1-CHLOROPR...	5.819	79	147732	40.0000000	ppb	#	0.00
128) AP9-1,4-DICHLOROBENZEN...	8.216	152	372788	40.0000000	ppb		0.00
System Monitoring Compounds							
33) DIBROMOFLUOROMETHANE	4.098	111	267752	41.5046676	ppb		0.00
Spiked Amount 40.000	Range 78 - 121		Recovery = 103.76%				
46) a,a,a-Trifluorotoluene	5.022	146	455885	41.5926633	ppb		0.00
Spiked Amount 40.000	Range 85 - 114		Recovery = 103.98%				
50) TOLUENE-D8	5.485	98	1034472	40.3215428	ppb		0.00
Spiked Amount 40.000	Range 89 - 111		Recovery = 100.80%				
68) 4-BROMOFLUOROBENZENE	7.365	95	381775	40.6664114	ppb		0.00
Spiked Amount 40.000	Range 71 - 126		Recovery = 101.67%				
Target Compounds							Qvalue
3) PROPENE	1.689	41	4845	1.6577076	ppb	#	75
4) DICHLORODIFLUOROMETHANE	1.725	85	1814	0.2339018	ppb	#	43
5) CHLOROMETHANE	1.920	50	10430	0.9384082	ppb	#	74
8) BROMOMETHANE	2.218	94	832	0.1764790	ppb	#	1
12) ETHYL ETHER	2.613	59	1021	0.1689553	ppb	#	13
13) ACROLEIN	2.960	56	1352	0.9294641	ppb	#	78
16) ACETONE	3.118	43	4397	0.9386049	ppb	#	80
17) IODOMETHANE	2.851	142	4374	0.7347235	ppb		93
19) METHYLENE CHLORIDE	3.106	84	1726	0.2488961	ppb		96
20) ACRYLONITRILE	3.581	53	1958	0.6874655	ppb	#	61
21) n-Hexane	3.228	56	2439	0.3279125	ppb	#	11
29) 2-BUTANONE (MEK)	4.165	43	2769	0.4886094	ppb	#	54
31) TETRAHYDROFURAN	4.098	42	1904	0.6918542	ppb	#	67
43) 1,2-DICHLOROPROPANE	5.022	62	8489	1.5597108	ppb	#	24
49) 4-METHYL-2-PENTANONE (...	5.728	43	5120	0.6011189	ppb		99
51) TOLUENE	5.515	91	3640	0.1341347	ppb	#	80
52) TRANS-1,3-DICHLOROPROPENE	5.819	75	7576	0.7722664	ppb	#	1
54) 1,1,2-TRICHLOROETHANE	5.971	97	907	0.1706338	ppb	#	12
57) 2-HEXANONE	6.282	58	3694	0.9787220	ppb		93
60) CHLOROBENZENE	6.531	112	2750	0.1700202	ppb		87
63) M&P-XYLENE	6.616	106	3317	0.2981291	ppb		89
64) O-XYLENE	6.927	106	1658	0.1512276	ppb	#	70
65) STYRENE	6.963	104	2992	0.1656633	ppb		95
67) Isopropylbenzene	7.139	105	5245	0.1804502	ppb	#	78
69) Bromobenzene	7.456	77	3449	0.2783537	ppb		89
70) 1,1,2,2-TETRACHLOROETHANE	7.498	83	1346	0.1632601	ppb	#	37
73) n-Propylbenzene	7.450	91	8459	0.2504841	ppb	#	96
74) 4-ETHYLTOLUENE	7.523	105	7608	0.2670485	ppb		98
75) 2-Chlorotoluene	7.590	126	1224	0.1983117	ppb		92
76) 4-Chlorotoluene	7.711	91	6147	0.2996694	ppb		98
77) 1,3,5-Trimethylbenzene	7.577	105	6036	0.2584916	ppb		92
78) tert-Butylbenzene	7.833	119	4973	0.2520510	ppb	#	82
79) 1,2,4-Trimethylbenzene	7.882	105	7801	0.3302024	ppb		100

Data Path : C:\msdchem\1\data\021116\
Data File : 0211 01.D
Acq On : 11 Feb 2016 3:24 pm
Operator : 522
Sample : INSTBLK
Misc : water
ALS Vial : 1 Sample Multiplier: 1
InstName : VOCMS7

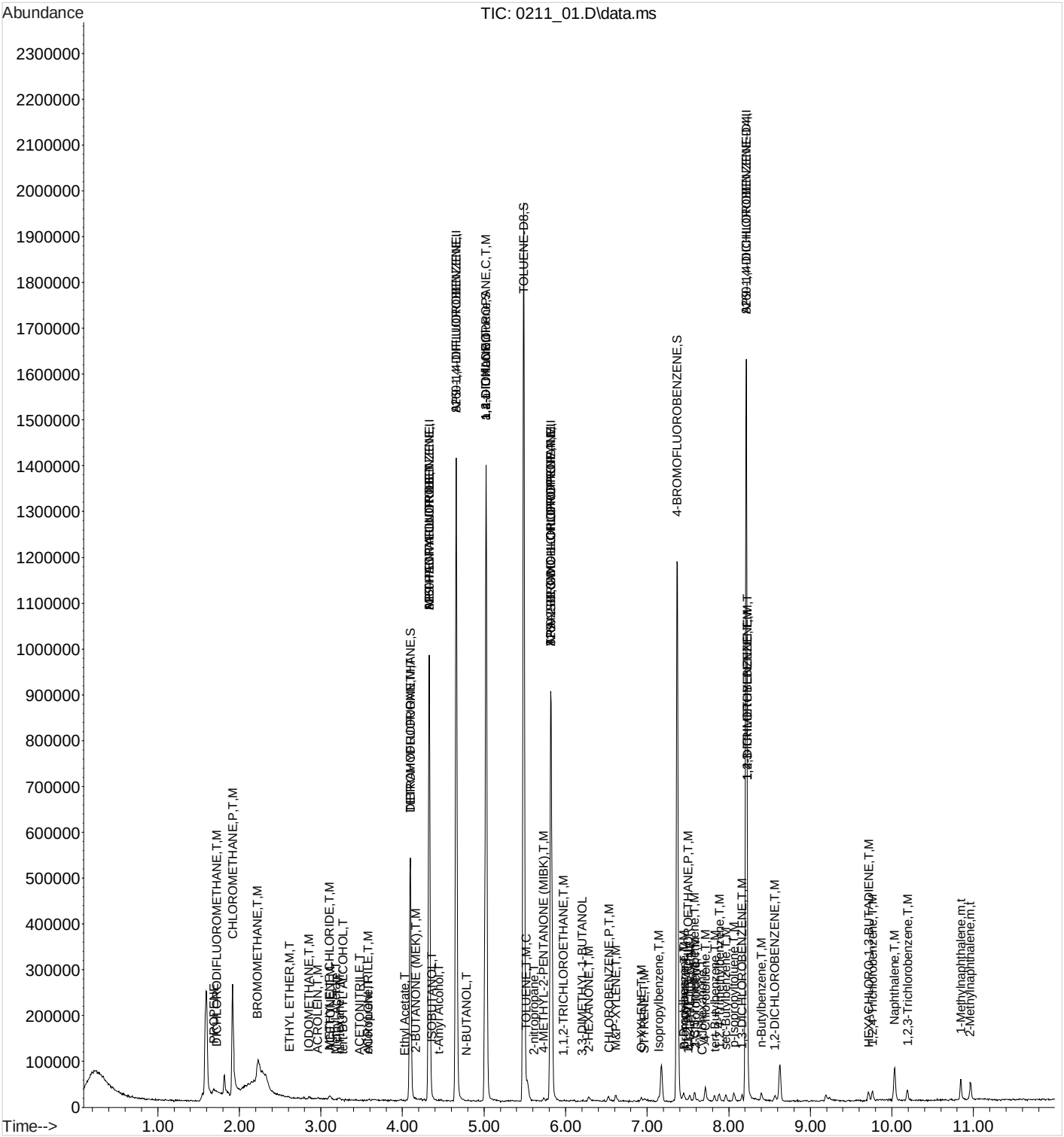
Quant Time: Feb 15 15:00:31 2016
Quant Method : C:\msdchem\1\methods\V807B15P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Mon Feb 15 15:00:04 2016
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
80)	sec-Butylbenzene	7.961	105	9316	0.2937724	ppb		99
81)	1,3-DICHLOROBENZENE	8.162	146	4134	0.3440700	ppb		93
82)	p-Isopropyltoluene	8.064	119	7529	0.2974616	ppb	#	91
85)	1,4-DICHLOROBENZENE	8.228	146	4953	0.4063371	ppb	#	1
86)	1,2,3-TRIMETHYLBENZENE	8.228	105	7885	0.3379685	ppb		99
87)	1,2-DICHLOROBENZENE	8.563	146	4660	0.4126650	ppb		95
88)	n-Butylbenzene	8.399	91	9029	0.3584654	ppb		95
90)	1,2,4-Trichlorobenzene	9.761	180	6123	0.7918965	ppb		97
91)	HEXACHLORO-1,3-BUTADIENE	9.719	225	2969	0.6781232	ppb		94
92)	Naphthalene	10.029	128	20312	0.9705413	ppb		96
93)	1,2,3-Trichlorobenzene	10.193	180	6487	0.9116009	ppb		99
94)	1-Methylnaphthalene	10.844	142	19607	1.8230465	ppb	#	94
95)	2-Methylnaphthalene	10.960	142	15465	1.6481292	ppb	#	94
100)	Methyl Acetate	3.179	43	1283	0.2300821	ppb	#	58
101)	ACETONITRILE	3.471	41	561	0.5648082	ppb	#	25
103)	tert-BUTYL ALCOHOL	3.270	59	1859	0.9289054	ppb	#	78
104)	chloroprene	3.581	53	1958	0.1881333	ppb	#	26
107)	Ethyl Acetate	4.025	43	1165	0.1545497	ppb	#	68
108)	METHACRYLONITRILE	4.329	67	2073	0.7800551	ppb	#	1
111)	ISOBUTANOL	4.359	43	525	1.0736383	ppb	#	76
112)	t-Amyl Alcohol	4.444	59	535	0.7645407	ppb	#	1
115)	N-BUTANOL	4.785	56	543	2.2200518	ppb	#	1
116)	Methyl Cyclohexane	4.657	83	8662	Below Cal		#	49
117)	2-nitropropane	5.612	43	680	0.2876493	ppb	#	18
119)	1,4-DIOXANE	5.022	88	5098	66.4736546	ppb	#	42
121)	3,3-DIMETHYL-1-BUTANOL	6.203	57	613	0.5323609	ppb	#	14
125)	Cyclohexanone	7.675	55	1460	0.7800743	ppb	#	21

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\021116\
Data File : 0211 01.D
Acq On : 11 Feb 2016 3:24 pm
Operator : 522
Sample : INSTBLK
Misc : water
ALS Vial : 1 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 15 15:00:31 2016
Quant Method : C:\msdchem\1\methods\V807B15P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Mon Feb 15 15:00:04 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\021116\
Data File : 0211 05A.D
Acq On : 11 Feb 2016 4:41 pm
Operator : 522
Sample : RL AP9 1a ppb 16B02726
Misc : water
ALS Vial : 5 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 15 15:01:49 2016
Quant Method : C:\msdchem\1\methods\V807B15P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Mon Feb 15 15:00:04 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 8260-PENTAFLUOROBENZENE	4.329	168	468298	40.0000000	ppb		0.00
41) 8260-1,4-DIFLUOROBENZENE	4.657	114	781738	40.0000000	ppb		0.00
53) 8260-2-BROMO-1-CHLOROP...	5.825	79	141692	40.0000000	ppb		0.00
84) 8260-1,4-DICHLOROBENZE...	8.216	152	355743	40.0000000	ppb		0.00
96) AP9-PENTAFLUOROBENZENE	4.329	168	468298	40.0000000	ppb		0.00
114) AP9-1,4-DIFLUOROBENZENE	4.657	114	781738	40.0000000	ppb		0.00
122) AP9-2-BROMO-1-CHLOROPR...	5.825	79	141692	40.0000000	ppb	#	0.00
128) AP9-1,4-DICHLOROBENZEN...	8.216	152	355743	40.0000000	ppb		0.00
System Monitoring Compounds							
33) DIBROMOFLUOROMETHANE	4.098	111	250142	41.2198214	ppb		0.00
Spiked Amount 40.000	Range 78 - 121		Recovery = 103.05%				
46) a,a,a-Trifluorotoluene	5.022	146	431276	42.2559718	ppb		0.00
Spiked Amount 40.000	Range 85 - 114		Recovery = 105.64%				
50) TOLUENE-D8	5.485	98	990491	41.4610513	ppb		0.00
Spiked Amount 40.000	Range 89 - 111		Recovery = 103.65%				
68) 4-BROMOFLUOROBENZENE	7.364	95	368762	40.9547022	ppb		0.00
Spiked Amount 40.000	Range 71 - 126		Recovery = 102.39%				
Target Compounds							Qvalue
3) PROPENE	1.713	41	1293	0.4702924	ppb	#	15
4) DICHLORODIFLUOROMETHANE	1.719	85	657	0.0900569	ppb	#	43
5) CHLOROMETHANE	1.907	50	588	0.0562393	ppb	#	50
7) 1,3-BUTADIENE	1.974	39	1072	0.1339765	ppb	#	51
8) BROMOMETHANE	2.230	94	927	0.2090281	ppb	#	65
9) CHLOROETHANE	2.279	64	624	0.1298150	ppb	#	44
11) DICHLOROFLUOROMETHANE	2.473	67	551	0.0455422	ppb	#	41
13) ACROLEIN	2.990	56	542	0.3961051	ppb	#	15
16) ACETONE	3.124	43	3188	0.7234357	ppb	#	61
17) IODOMETHANE	2.850	142	1247	0.2226726	ppb	#	44
18) CARBON DISULFIDE	2.784	76	1079	0.0494521	ppb	#	31
19) METHYLENE CHLORIDE	3.106	84	2041	0.3128784	ppb	#	60
20) ACRYLONITRILE	3.532	53	50877	18.9895640	ppb	#	51
21) n-Hexane	3.222	56	807	0.1153387	ppb	#	1
24) 1,1-DICHLOROETHANE	3.526	63	804	0.0668746	ppb	#	43
25) VINYL ACETATE	3.629	43	2839	0.1855900	ppb	#	80
26) DI-ISOPROPYL ETHER	3.489	45	578	0.0225629	ppb	#	32
27) 2,2-Dichloropropane	3.866	77	651	0.0654346	ppb	#	56
29) 2-BUTANONE (MEK)	4.171	43	1676	0.3143896	ppb	#	54
31) TETRAHYDROFURAN	4.031	42	4744	1.8325153	ppb	#	35
32) CHLOROFORM	3.976	83	1355	0.1248204	ppb	#	37
34) 1,1,1-TRICHLOROETHANE	4.134	97	952	0.1057265	ppb	#	23
35) CARBON TETRACHLORIDE	4.055	117	579	0.0729105	ppb	#	2
38) HEPTANE	4.225	43	1501	0.1041161	ppb	#	58
43) 1,2-DICHLOROPROPANE	5.016	62	8485	1.6742132	ppb	#	8
45) BROMODICHLOROMETHANE	5.022	83	1570	0.1879403	ppb	#	1
49) 4-METHYL-2-PENTANONE (...	5.728	43	650	0.0819549	ppb	#	38
51) TOLUENE	5.515	91	1802	0.0713126	ppb	#	22
52) TRANS-1,3-DICHLOROPROPENE	5.819	75	6683	0.7315938	ppb	#	1
54) 1,1,2-TRICHLOROETHANE	5.959	97	619	0.1214165	ppb	#	12
55) TETRACHLOROETHENE	5.783	164	664	0.1563815	ppb		90
57) 2-HEXANONE	6.300	58	806	0.2226521	ppb	#	54
63) M&P-XYLENE	6.616	106	695	0.0651288	ppb	#	1

Data Path : C:\msdchem\1\data\021116\
Data File : 0211 05A.D
Acq On : 11 Feb 2016 4:41 pm
Operator : 522
Sample : RL AP9 1a ppb 16B02726
Misc : water
ALS Vial : 5 Sample Multiplier: 1
InstName : VOCMS7

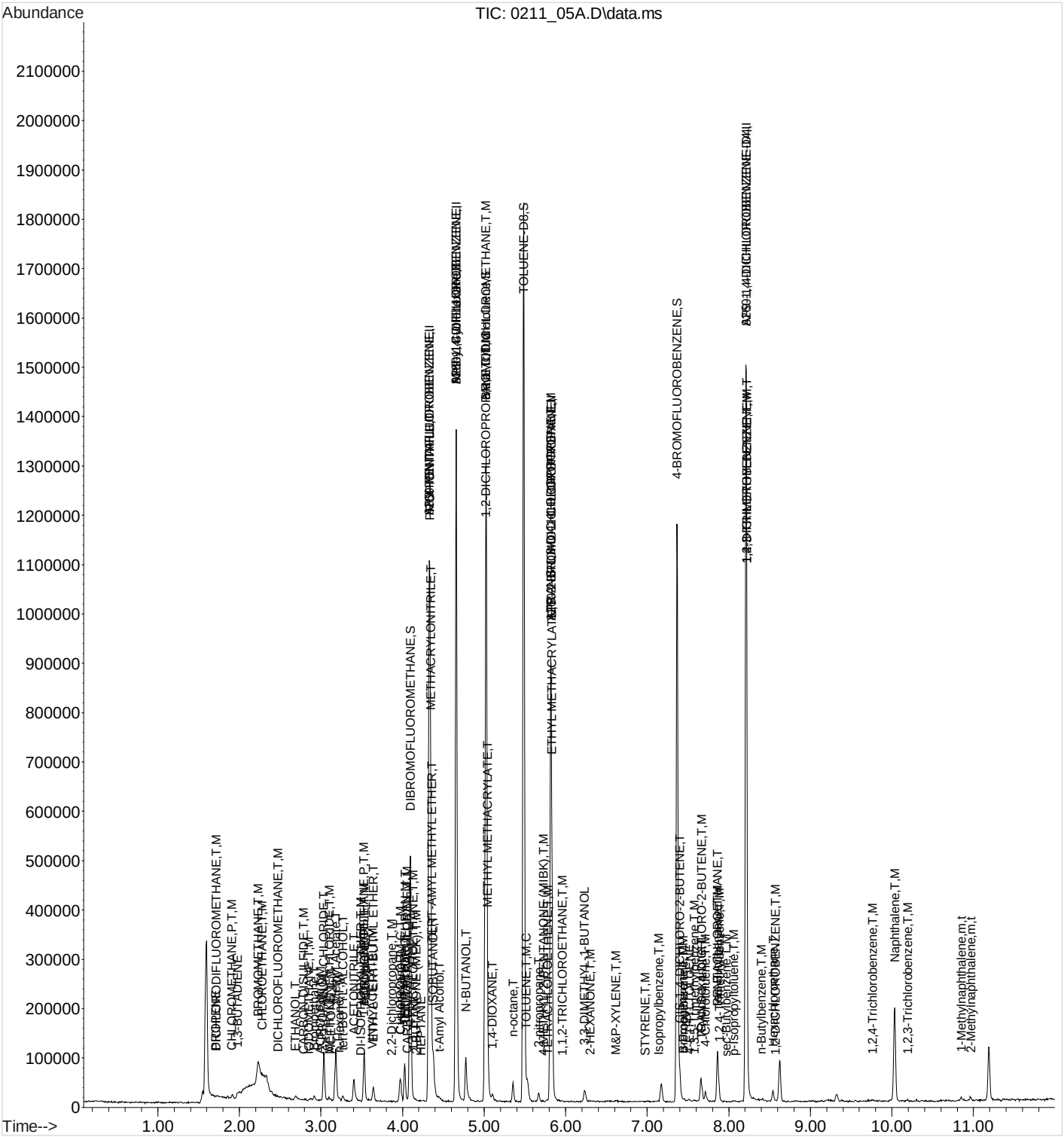
Quant Time: Feb 15 15:01:49 2016
Quant Method : C:\msdchem\1\methods\V807B15P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Mon Feb 15 15:00:04 2016
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
65)	STYRENE	6.975	104	641	0.0370043	ppb	#	32
67)	Isopropylbenzene	7.139	105	1278	0.0458429	ppb	#	55
69)	Bromobenzene	7.444	77	1140	0.0959264	ppb	#	30
72)	TRANS-1,4-DICHLORO-2-B...	7.669	53	1527	0.6912658	ppb	#	22
73)	n-Propylbenzene	7.444	91	1722	0.0531647	ppb	#	61
74)	4-ETHYLTOLUENE	7.517	105	2555	0.0935061	ppb	#	87
76)	4-Chlorotoluene	7.711	91	1620	0.0823424	ppb	#	50
77)	1,3,5-Trimethylbenzene	7.577	105	1354	0.0604568	ppb	#	28
78)	tert-Butylbenzene	7.863	119	18384	0.9714920	ppb	#	34
79)	1,2,4-Trimethylbenzene	7.882	105	3077	0.1357959	ppb		100
80)	sec-Butylbenzene	7.967	105	1225	0.0402760	ppb	#	60
82)	p-Isopropyltoluene	8.064	119	837	0.0344785	ppb	#	48
85)	1,4-DICHLOROBENZENE	8.222	146	900	0.0773724	ppb	#	1
86)	1,2,3-TRIMETHYLBENZENE	8.222	105	1650	0.0741112	ppb	#	72
87)	1,2-DICHLOROBENZENE	8.569	146	544	0.0504820	ppb	#	24
88)	n-Butylbenzene	8.399	91	1759	0.0731811	ppb	#	79
90)	1,2,4-Trichlorobenzene	9.761	180	955	0.1294294	ppb	#	59
92)	Naphthalene	10.035	128	4675	0.2340823	ppb	#	71
93)	1,2,3-Trichlorobenzene	10.193	180	518	0.0762810	ppb	#	69
94)	1-Methylnaphthalene	10.850	142	3393	0.3305948	ppb		92
95)	2-Methylnaphthalene	10.966	142	2590	0.2892455	ppb	#	80
97)	ETHANOL	2.686	45	9720	93.5418065	ppb	#	99
98)	Bromoethane	2.917	108	5047	1.0662626	ppb		97
99)	2-PROPANOL	3.015	45	3335	5.8954506	ppb		94
100)	Methyl Acetate	3.179	43	107240	20.4441145	ppb	#	99
101)	ACETONITRILE	3.404	41	45302	48.4853751	ppb		98
102)	ALLYL CHLORIDE	3.033	76	15709	5.1701578	ppb		94
103)	tert-BUTYL ALCOHOL	3.270	59	9752	5.1801346	ppb		98
104)	chloroprene	3.532	53	50877	5.1967253	ppb		97
105)	ETHYL TERT-BUTYL ETHER	3.641	59	21758	1.0620668	ppb		97
106)	PROPIONITRILE	4.335	54	48049	51.4156400	ppb	#	78
107)	Ethyl Acetate	4.025	43	73459	10.3595900	ppb		98
108)	METHACRYLONITRILE	4.347	67	131864	52.7481821	ppb		95
109)	Cyclohexane	3.976	84	13457	1.0329628	ppb		94
111)	ISOBUTANOL	4.377	43	51398	111.7378141	ppb	#	100
112)	t-Amyl Alcohol	4.450	59	3189	4.8445856	ppb	#	59
113)	TERT-AMYL METHYL ETHER	4.359	73	22519	1.1052416	ppb	#	21
115)	N-BUTANOL	4.779	56	43813	192.3701334	ppb		96
116)	Methyl Cyclohexane	4.657	83	22745	0.9873615	ppb	#	81
117)	2-nitropropane	5.667	43	11851	5.3836994	ppb	#	95
118)	METHYL METHACRYLATE	5.041	41	36390	5.3830171	ppb	#	27
119)	1,4-DIOXANE	5.101	88	7182	100.5695486	ppb	#	93
120)	n-octane	5.357	85	6621	1.0982784	ppb		95
121)	3,3-DIMETHYL-1-BUTANOL	6.233	57	10874	10.1415972	ppb		99
123)	ETHYL METHACRYLATE	5.831	69	37720	5.1153084	ppb	#	1
124)	CIS-1,4-DICHLORO-2-BUTENE	7.401	53	9710	4.7915078	ppb	#	27
125)	Cyclohexanone	7.663	55	18232	10.1565608	ppb		94
126)	PENTACHLOROETHANE	7.863	117	18050	4.9975402	ppb		96
127)	Hexachloroethane	8.545	117	4561	1.0156893	ppb		94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\021116\
Data File : 0211 05A.D
Acq On : 11 Feb 2016 4:41 pm
Operator : 522
Sample : RL AP9 1a ppb 16B02726
Misc : water
ALS Vial : 5 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 15 15:01:49 2016
Quant Method : C:\msdchem\1\methods\V807B15P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Mon Feb 15 15:00:04 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\021116\
Data File : 0211 15.D
Acq On : 11 Feb 2016 7:54 pm
Operator : 522
Sample : SSCV AP9 10a ppb 16A19936
Misc : water
ALS Vial : 15 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 15 15:00:20 2016
Quant Method : C:\msdchem\1\methods\V807B15P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Mon Feb 15 15:00:04 2016
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards								
1)	8260-PENTAFLUOROBENZENE	4.329	168	444838	40.0000000	ppb		0.00
41)	8260-1,4-DIFLUOROBENZENE	4.657	114	766253	40.0000000	ppb		0.00
53)	8260-2-BROMO-1-CHLOROP...	5.819	79	136115	40.0000000	ppb	#	0.00
84)	8260-1,4-DICHLOROBENZE...	8.216	152	347001	40.0000000	ppb		0.00
96)	AP9-PENTAFLUOROBENZENE	4.329	168	444838	40.0000000	ppb		0.00
114)	AP9-1,4-DIFLUOROBENZENE	4.657	114	766253	40.0000000	ppb		0.00
122)	AP9-2-BROMO-1-CHLOROPR...	5.819	79	136115	40.0000000	ppb		0.00
128)	AP9-1,4-DICHLOROBENZEN...	8.216	152	347001	40.0000000	ppb		0.00
System Monitoring Compounds								
33)	DIBROMOFLUOROMETHANE	4.091	111	235763	40.8992704	ppb		0.00
	Spiked Amount 40.000	Range 78 - 121		Recovery = 102.25%				
46)	a,a,a-Trifluorotoluene	5.022	146	422147	42.1973858	ppb		0.00
	Spiked Amount 40.000	Range 85 - 114		Recovery = 105.49%				
50)	TOLUENE-D8	5.485	98	967915	41.3348182	ppb		0.00
	Spiked Amount 40.000	Range 89 - 111		Recovery = 103.34%				
68)	4-BROMOFLUOROBENZENE	7.364	95	363673	42.0443858	ppb		0.00
	Spiked Amount 40.000	Range 71 - 126		Recovery = 105.11%				
Target Compounds								Qvalue
7)	1,3-BUTADIENE	1.974	39	3744	0.4925951	ppb		94
8)	BROMOMETHANE	2.212	94	2235	0.5305458	ppb	#	86
12)	ETHYL ETHER	2.613	59	783	0.1450052	ppb	#	13
13)	ACROLEIN	2.881	56	520	0.4000691	ppb	#	35
16)	ACETONE	3.124	43	3242	0.7744886	ppb	#	54
17)	IODOMETHANE	2.856	142	1142	0.2146777	ppb	#	44
19)	METHYLENE CHLORIDE	3.100	84	4675	0.7544572	ppb		90
20)	ACRYLONITRILE	3.532	53	486119	191.0101818	ppb	#	50
21)	n-Hexane	3.221	56	945	0.1421850	ppb	#	1
24)	1,1-DICHLOROETHANE	3.532	63	7096	0.6213545	ppb	#	43
25)	VINYL ACETATE	3.641	43	18664	1.2844417	ppb	#	80
29)	2-BUTANONE (MEK)	4.231	43	107414	21.2116973	ppb	#	54
31)	TETRAHYDROFURAN	4.018	42	43300	17.6080491	ppb	#	47
32)	CHLOROFORM	3.976	83	9542	0.9253505	ppb	#	73
37)	2,2,4-TRIMETHYLPENTANE	4.231	57	580546	20.3813083	ppb	#	2
38)	HEPTANE	4.231	43	113183	8.2649269	ppb	#	1
40)	1,2-DICHLOROETHANE	4.347	62	25339	3.4676670	ppb	#	75
42)	TRICHLOROETHENE	4.663	130	5048	0.9239126	ppb	#	67
43)	1,2-DICHLOROPROPANE	5.022	62	8137	1.6379938	ppb	#	12
45)	BROMODICHLOROMETHANE	5.040	83	2432	0.2970112	ppb	#	1
49)	4-METHYL-2-PENTANONE (...	5.667	43	106388	13.6849578	ppb	#	39
52)	TRANS-1,3-DICHLOROPROPENE	5.825	75	6969	0.7783198	ppb	#	1
54)	1,1,2-TRICHLOROETHANE	5.831	97	2057	0.4200110	ppb	#	1
55)	TETRACHLOROETHENE	5.770	164	14834	3.6367618	ppb		97
57)	2-HEXANONE	6.227	58	3785	1.0884211	ppb	#	6
61)	1,1,1,2-TETRACHLOROETHANE	6.561	133	2546	0.5214974	ppb	#	99
69)	Bromobenzene	7.401	77	39152	3.4294652	ppb	#	30
72)	TRANS-1,4-DICHLORO-2-B...	7.632	53	3083	1.4528438	ppb	#	82
73)	n-Propylbenzene	7.395	91	15755	0.5063469	ppb	#	70
78)	tert-Butylbenzene	7.863	119	159722	8.7862450	ppb	#	31
94)	1-Methylnaphthalene	10.850	142	1310	0.1308546	ppb	#	84
97)	ETHANOL	2.692	45	104382	1057.5125389	ppb	#	99
98)	Bromoethane	2.917	108	46501	10.3422152	ppb		99

Data Path : C:\msdchem\1\data\021116\
Data File : 0211 15.D
Acq On : 11 Feb 2016 7:54 pm
Operator : 522
Sample : SSCV AP9 10a ppb 16A19936
Misc : water
ALS Vial : 15 Sample Multiplier: 1
InstName : VOCMS7

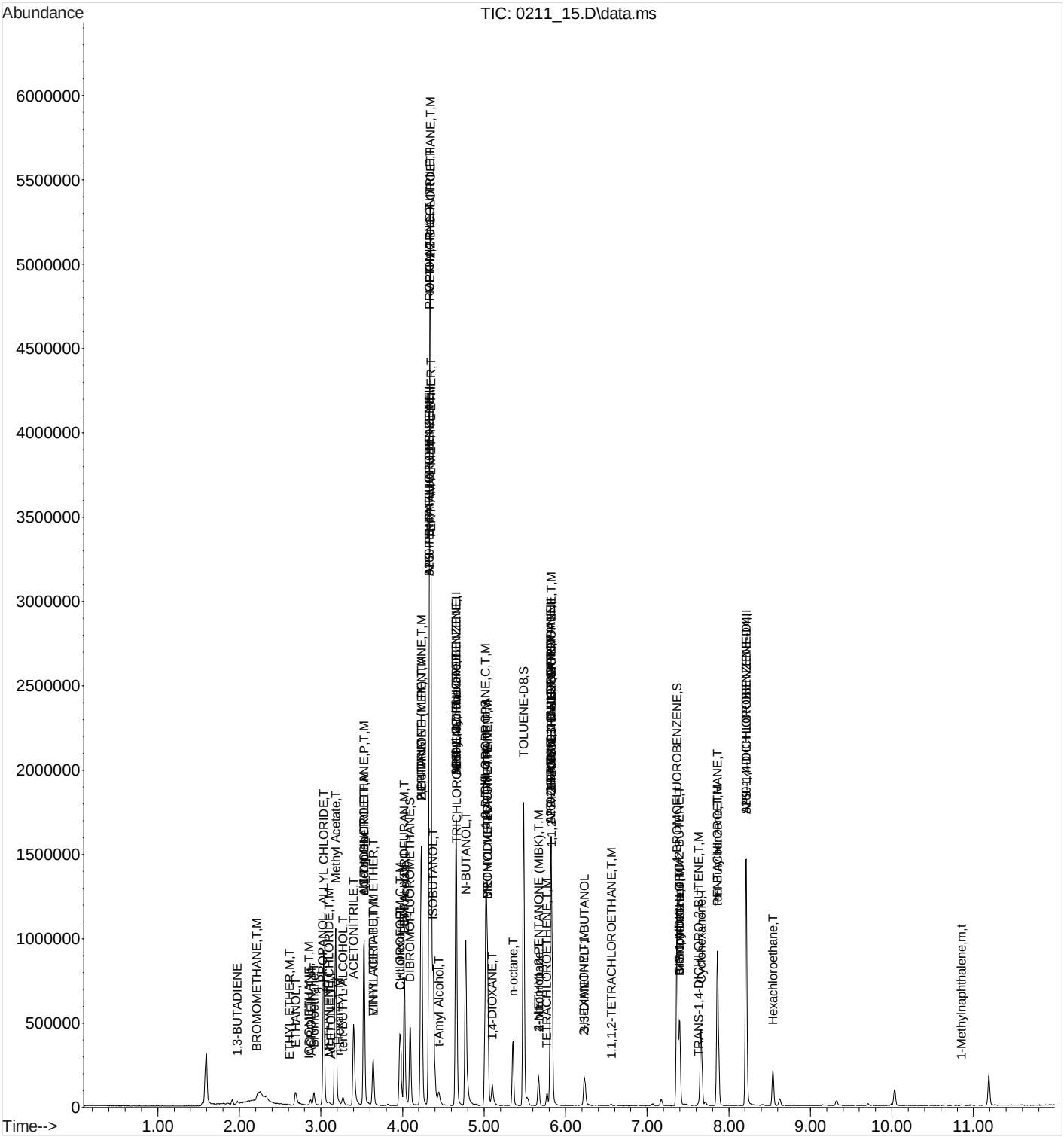
Quant Time: Feb 15 15:00:20 2016
Quant Method : C:\msdchem\1\methods\V807B15P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Mon Feb 15 15:00:04 2016
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
99)	2-PROPANOL	3.021	45	26878	50.0194068	ppb		92
100)	Methyl Acetate	3.179	43	1044601	209.6439623	ppb	#	100
101)	ACETONITRILE	3.398	41	468974	528.3997141	ppb		100
102)	ALLYL CHLORIDE	3.033	76	148554	51.4706950	ppb		99
103)	tert-BUTYL ALCOHOL	3.270	59	47541	26.5849650	ppb		99
104)	chloroprene	3.532	53	486119	52.2722609	ppb		100
105)	ETHYL TERT-BUTYL ETHER	3.641	59	197524	10.1501667	ppb		99
106)	PROPIONITRILE	4.335	54	455337	512.9372720	ppb		99
107)	Ethyl Acetate	4.024	43	704185	104.5453565	ppb		99
108)	METHACRYLONITRILE	4.341	67	1186827	499.7917610	ppb		99
109)	Cyclohexane	3.976	84	126077	10.1880886	ppb		99
111)	ISOBUTANOL	4.377	43	436776	999.6158676	ppb	#	99
112)	t-Amyl Alcohol	4.444	59	32190	51.4805896	ppb		96
113)	TERT-AMYL METHYL ETHER	4.353	73	194958	10.0732501	ppb	#	99
115)	N-BUTANOL	4.779	56	480072	2150.4535526	ppb		99
116)	Methyl Cyclohexane	4.657	83	144736	9.8932711	ppb		99
117)	2-nitropropane	5.667	43	103666	48.0453301	ppb		97
118)	METHYL METHACRYLATE	5.040	41	324830	49.0217566	ppb		98
119)	1,4-DIOXANE	5.101	88	68984	985.5042666	ppb		97
120)	n-octane	5.357	85	56555	9.5708144	ppb		98
121)	3,3-DIMETHYL-1-BUTANOL	6.233	57	75497	71.8349439	ppb		97
123)	ETHYL METHACRYLATE	5.825	69	355237	50.1484683	ppb		99
124)	CIS-1,4-DICHLORO-2-BUTENE	7.395	53	101062	51.9134865	ppb		97
125)	Cyclohexanone	7.662	55	178065	103.2595589	ppb		99
126)	PENTACHLOROETHANE	7.863	117	167375	48.2401915	ppb		99
127)	Hexachloroethane	8.539	117	43685	10.1268056	ppb		98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\021116\
Data File : 0211 15.D
Acq On : 11 Feb 2016 7:54 pm
Operator : 522
Sample : SSCV AP9 10a ppb 16A19936
Misc : water
ALS Vial : 15 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 15 15:00:20 2016
Quant Method : C:\msdchem\1\methods\V807B15P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Mon Feb 15 15:00:04 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\021116\
Data File : 0211 05.D
Acq On : 11 Feb 2016 4:41 pm
Operator : 522
Sample : STD AP9 1a ppb 16B02726
Misc : water
ALS Vial : 5 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 15 14:53:17 2016
Quant Method : C:\msdchem\1\methods\V807B15P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Mon Feb 15 14:52:04 2016
Response via : Initial Calibration

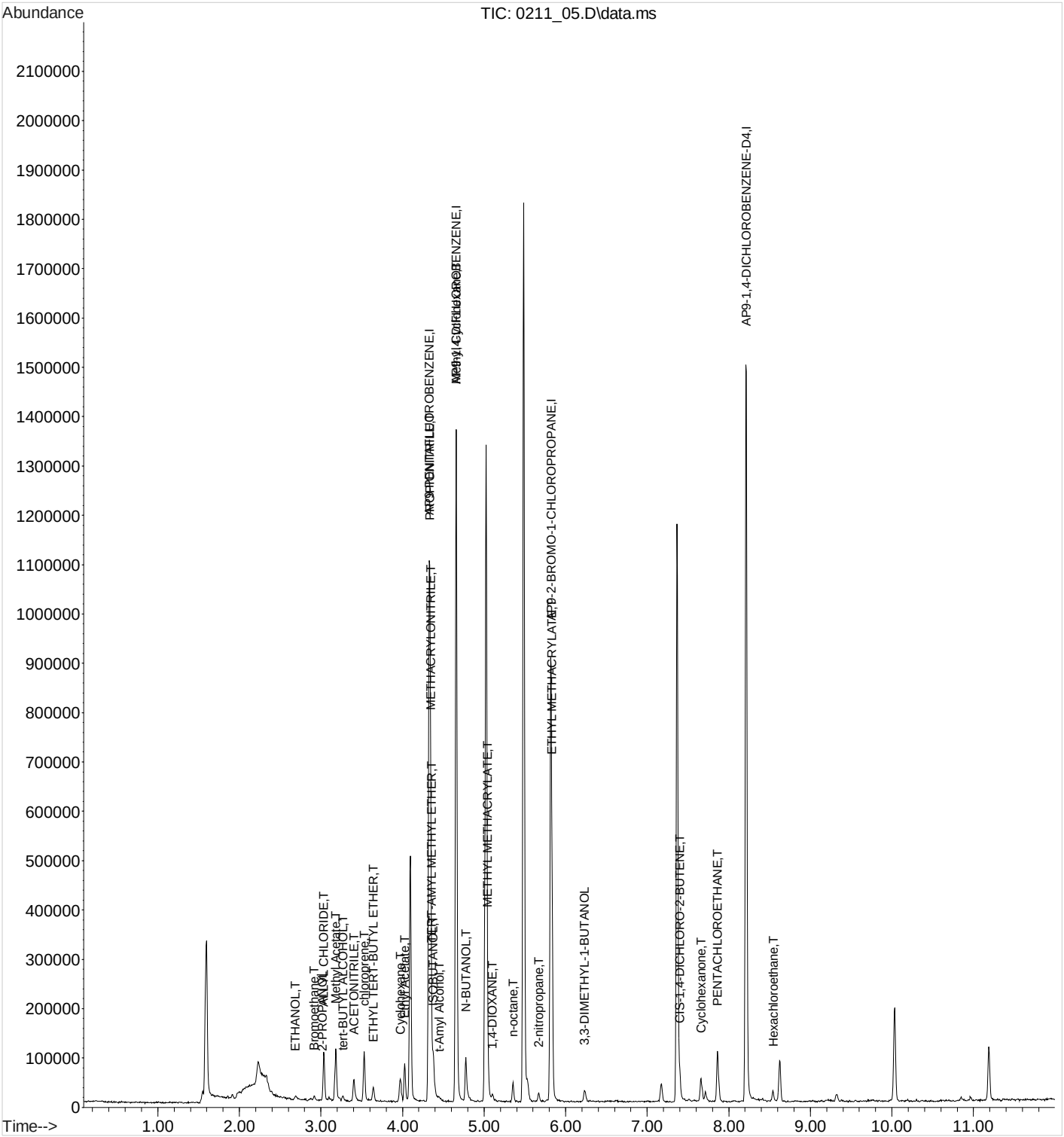
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 8260-PENTAFLUOROBENZENE	0.000	168	0m	40.0000000	ppb		-4.33
41) 8260-1,4-DIFLUOROBENZENE	0.000	114	0m	40.0000000	ppb		-4.66
53) 8260-2-BROMO-1-CHLOROP...	0.000	79	0m	40.0000000	ppb		-5.82
84) 8260-1,4-DICHLOROBENZE...	0.000	152	0m	40.0000000	ppb		-8.22
96) AP9-PENTAFLUOROBENZENE	4.329	168	468298	40.0000000	ppb		0.00
114) AP9-1,4-DIFLUOROBENZENE	4.657	114	781738	40.0000000	ppb		0.00
122) AP9-2-BROMO-1-CHLOROPR...	5.825	79	141692	40.0000000	ppb	#	0.00
128) AP9-1,4-DICHLOROBENZEN...	8.216	152	355743	40.0000000	ppb		0.00
System Monitoring Compounds							
33) DIBROMOFLUOROMETHANE	0.000	111	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 78 - 121		Recovery =	0.00%#			
46) a,a,a-Trifluorotoluene	0.000	146	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 85 - 114		Recovery =	0.00%#			
50) TOLUENE-D8	0.000	98	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 89 - 111		Recovery =	0.00%#			
68) 4-BROMOFLUOROBENZENE	0.000	95	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 71 - 126		Recovery =	0.00%#			
Target Compounds							Qvalue
97) ETHANOL	2.686	45	9720	87.3635498	ppb	#	99
98) Bromoethane	2.917	108	5047	1.0550382	ppb		97
99) 2-PROPANOL	3.015	45	3335	5.8517503	ppb		94
100) Methyl Acetate	3.179	43	107240	19.7815777	ppb	#	99
101) ACETONITRILE	3.404	41	45302	46.0634410	ppb		98
102) ALLYL CHLORIDE	3.033	76	15709	5.0949130	ppb		94
103) tert-BUTYL ALCOHOL	3.270	59	9752	4.9508585	ppb		98
104) chloroprene	3.532	53	50877	5.1054719	ppb		97
105) ETHYL TERT-BUTYL ETHER	3.641	59	21758	1.0313717	ppb		97
106) PROPIONITRILE	4.335	54	48049	49.5020961	ppb	#	78
107) Ethyl Acetate	4.025	43	73459	10.0883255	ppb		98
108) METHACRYLONITRILE	4.347	67	131864	51.7966433	ppb		95
109) Cyclohexane	3.976	84	13457	1.0108554	ppb		94
111) ISOBUTANOL	4.377	43	51398	108.0313016	ppb	#	100
112) t-Amyl Alcohol	4.450	59	3189	4.5001933	ppb	#	59
113) TERT-AMYL METHYL ETHER	4.359	73	22519	1.0833698	ppb	#	21
115) N-BUTANOL	4.779	56	43813	182.4208021	ppb		96
116) Methyl Cyclohexane	4.657	83	22745	1.5171181	ppb	#	81
117) 2-nitropropane	5.667	43	11851	5.3054780	ppb	#	95
118) METHYL METHACRYLATE	5.041	41	36390	5.3115407	ppb	#	27
119) 1,4-DIOXANE	5.101	88	7182	94.7525370	ppb	#	93
120) n-octane	5.357	85	6621	1.0862338	ppb		95
121) 3,3-DIMETHYL-1-BUTANOL	6.233	57	10874	9.7280335	ppb		99
123) ETHYL METHACRYLATE	5.831	69	37720	5.0810032	ppb	#	1
124) CIS-1,4-DICHLORO-2-BUTENE	7.401	53	9710	4.6364756	ppb	#	27
125) Cyclohexanone	7.663	55	18232	10.0403554	ppb		94
126) PENTACHLOROETHANE	7.863	117	18050	4.8814893	ppb		96
127) Hexachloroethane	8.545	117	4561	1.0173193	ppb		94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\021116\
Data File : 0211 05.D
Acq On : 11 Feb 2016 4:41 pm
Operator : 522
Sample : STD AP9 1a ppb 16B02726
Misc : water
ALS Vial : 5 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 15 14:53:17 2016
Quant Method : C:\msdchem\1\methods\V807B15P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Mon Feb 15 14:52:04 2016
Response via : Initial Calibration



Data Path : C:\msdchem\1\data\021116\
Data File : 0211 06.D
Acq On : 11 Feb 2016 5:00 pm
Operator : 522
Sample : STD AP9 2.5a ppb 16B02726
Misc : water
ALS Vial : 6 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 15 14:54:29 2016
Quant Method : C:\msdchem\1\methods\V807B15P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Mon Feb 15 14:53:44 2016
Response via : Initial Calibration

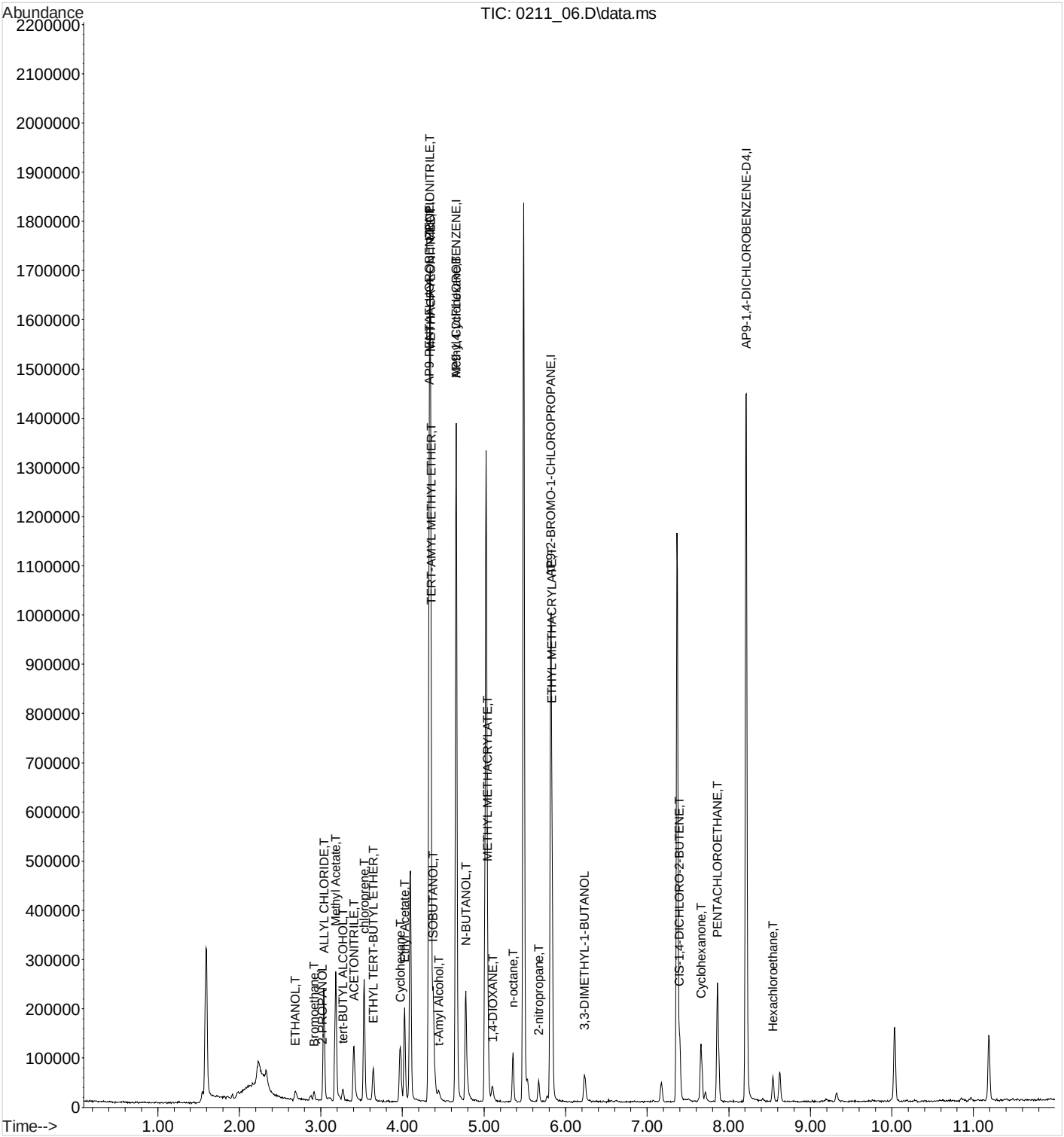
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 8260-PENTAFLUOROBENZENE	0.000	168	0m	40.0000000	ppb		-4.33
41) 8260-1,4-DIFLUOROBENZENE	0.000	114	0m	40.0000000	ppb		-4.66
53) 8260-2-BROMO-1-CHLOROP...	0.000	79	0m	40.0000000	ppb		-5.82
84) 8260-1,4-DICHLOROBENZE...	0.000	152	0m	40.0000000	ppb		-8.22
96) AP9-PENTAFLUOROBENZENE	4.329	168	462966	40.0000000	ppb		0.00
114) AP9-1,4-DIFLUOROBENZENE	4.657	114	769031	40.0000000	ppb		0.00
122) AP9-2-BROMO-1-CHLOROPR...	5.819	79	140057	40.0000000	ppb	#	0.00
128) AP9-1,4-DICHLOROBENZEN...	8.216	152	348405	40.0000000	ppb		0.00
System Monitoring Compounds							
33) DIBROMOFLUOROMETHANE	0.000	111	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 78 - 121		Recovery =	0.00%#			
46) a,a,a-Trifluorotoluene	0.000	146	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 85 - 114		Recovery =	0.00%#			
50) TOLUENE-D8	0.000	98	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 89 - 111		Recovery =	0.00%#			
68) 4-BROMOFLUOROBENZENE	0.000	95	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 71 - 126		Recovery =	0.00%#			
Target Compounds							Qvalue
97) ETHANOL	2.686	45	25321	245.7327016	ppb		97
98) Bromoethane	2.917	108	11395	2.3449442	ppb		95
99) 2-PROPANOL	3.015	45	8498	13.8988891	ppb		95
100) Methyl Acetate	3.179	43	263481	49.4315943	ppb	#	100
101) ACETONITRILE	3.404	41	117796	126.1201885	ppb		99
102) ALLYL CHLORIDE	3.039	76	37277	12.1143414	ppb		98
103) tert-BUTYL ALCOHOL	3.270	59	22157	11.4343224	ppb	#	82
104) chloroprene	3.532	53	122138	12.2682271	ppb		99
105) ETHYL TERT-BUTYL ETHER	3.641	59	50227	2.3710859	ppb		98
106) PROPIONITRILE	4.335	54	118531	124.1401195	ppb		92
107) Ethyl Acetate	4.025	43	178369	24.6690779	ppb		99
108) METHACRYLONITRILE	4.347	67	320296	125.0162976	ppb		99
109) Cyclohexane	3.976	84	32248	2.4370584	ppb		98
111) ISOBUTANOL	4.377	43	112692	230.3408630	ppb	#	95
112) t-Amyl Alcohol	4.444	59	9278	13.9402892	ppb		87
113) TERT-AMYL METHYL ETHER	4.353	73	50764	2.3714845	ppb	#	28
115) N-BUTANOL	4.779	56	111339	492.8951509	ppb		98
116) Methyl Cyclohexane	4.657	83	43213	2.3280465	ppb		91
117) 2-nitropropane	5.667	43	28147	12.4294202	ppb		98
118) METHYL METHACRYLATE	5.041	41	83539	12.0204727	ppb	#	74
119) 1,4-DIOXANE	5.108	88	17367	239.1853076	ppb		99
120) n-octane	5.357	85	14962	2.3920693	ppb		99
121) 3,3-DIMETHYL-1-BUTANOL	6.233	57	26139	24.0984036	ppb		96
123) ETHYL METHACRYLATE	5.831	69	87937	11.8873811	ppb	#	1
124) CIS-1,4-DICHLORO-2-BUTENE	7.395	53	24018	12.0400385	ppb	#	27
125) Cyclohexanone	7.663	55	46204	25.6897239	ppb		96
126) PENTACHLOROETHANE	7.863	117	42668	11.8139609	ppb		97
127) Hexachloroethane	8.539	117	10601	2.3715916	ppb		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\021116\
Data File : 0211 06.D
Acq On : 11 Feb 2016 5:00 pm
Operator : 522
Sample : STD AP9 2.5a ppb 16B02726
Misc : water
ALS Vial : 6 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 15 14:54:29 2016
Quant Method : C:\msdchem\1\methods\V807B15P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Mon Feb 15 14:53:44 2016
Response via : Initial Calibration



Data Path : C:\msdchem\1\data\021116\
Data File : 0211 07.D
Acq On : 11 Feb 2016 5:19 pm
Operator : 522
Sample : STD AP9 5a ppb 16B02726
Misc : water
ALS Vial : 7 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 15 14:55:07 2016
Quant Method : C:\msdchem\1\methods\V807B15P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Mon Feb 15 14:52:04 2016
Response via : Initial Calibration

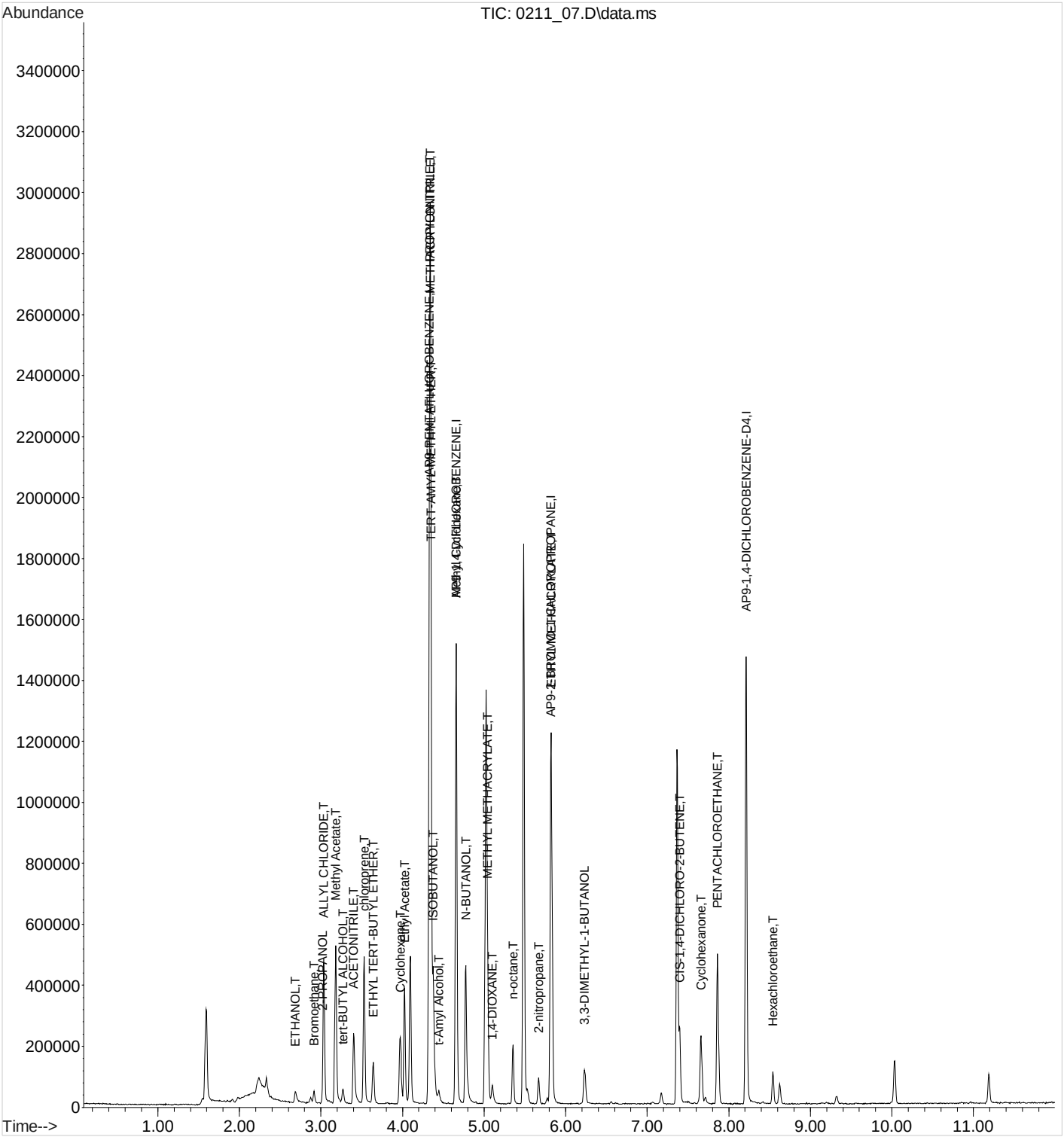
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 8260-PENTAFLUOROBENZENE	0.000	168	0m	40.0000000	ppb		-4.33
41) 8260-1,4-DIFLUOROBENZENE	0.000	114	0m	40.0000000	ppb		-4.66
53) 8260-2-BROMO-1-CHLOROP...	0.000	79	0m	40.0000000	ppb		-5.82
84) 8260-1,4-DICHLOROBENZE...	0.000	152	0m	40.0000000	ppb		-8.22
96) AP9-PENTAFLUOROBENZENE	4.329	168	466104	40.0000000	ppb		0.00
114) AP9-1,4-DIFLUOROBENZENE	4.657	114	769882	40.0000000	ppb		0.00
122) AP9-2-BROMO-1-CHLOROPR...	5.819	79	139992	40.0000000	ppb	#	0.00
128) AP9-1,4-DICHLOROBENZEN...	8.216	152	355706	40.0000000	ppb		0.00
System Monitoring Compounds							
33) DIBROMOFLUOROMETHANE	0.000	111	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 78 - 121		Recovery =	0.00%#			
46) a,a,a-Trifluorotoluene	0.000	146	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 85 - 114		Recovery =	0.00%#			
50) TOLUENE-D8	0.000	98	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 89 - 111		Recovery =	0.00%#			
68) 4-BROMOFLUOROBENZENE	0.000	95	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 71 - 126		Recovery =	0.00%#			
Target Compounds							Qvalue
97) ETHANOL	2.686	45	49225	444.5178499	ppb		99
98) Bromoethane	2.917	108	22766	4.7814660	ppb		95
99) 2-PROPANOL	3.021	45	12746	22.4700137	ppb	#	83
100) Methyl Acetate	3.179	43	516273	95.6804054	ppb	#	99
101) ACETONITRILE	3.398	41	223080	227.8972636	ppb		99
102) ALLYL CHLORIDE	3.033	76	75964	24.7534381	ppb		100
103) tert-BUTYL ALCOHOL	3.270	59	45209	23.0595697	ppb		99
104) chloroprene	3.532	53	240007	24.1979057	ppb		100
105) ETHYL TERT-BUTYL ETHER	3.641	59	100632	4.7926070	ppb		99
106) PROPIONITRILE	4.335	54	227880	235.8766325	ppb		95
107) Ethyl Acetate	4.024	43	346068	47.7501776	ppb		100
108) METHACRYLONITRILE	4.341	67	608758	240.2478582	ppb		97
109) Cyclohexane	3.976	84	64171	4.8430514	ppb		100
111) ISOBUTANOL	4.377	43	224385	473.8454152	ppb	#	98
112) t-Amyl Alcohol	4.444	59	14866	21.0770708	ppb	#	81
113) TERT-AMYL METHYL ETHER	4.353	73	99077	4.7889460	ppb	#	31
115) N-BUTANOL	4.779	56	216649	915.9359720	ppb		98
116) Methyl Cyclohexane	4.657	83	79145	5.3603603	ppb		94
117) 2-nitropropane	5.667	43	54361	24.7112103	ppb		99
118) METHYL METHACRYLATE	5.040	41	163943	24.2978805	ppb		92
119) 1,4-DIOXANE	5.101	88	35461	475.0436117	ppb		98
120) n-octane	5.357	85	29663	4.9414208	ppb		99
121) 3,3-DIMETHYL-1-BUTANOL	6.233	57	50496	45.8701082	ppb		100
123) ETHYL METHACRYLATE	5.825	69	177892	24.2536056	ppb	#	38
124) CIS-1,4-DICHLORO-2-BUTENE	7.401	53	49296	23.8244314	ppb	#	27
125) Cyclohexanone	7.662	55	90114	50.2283781	ppb		96
126) PENTACHLOROETHANE	7.863	117	85642	23.4425067	ppb		97
127) Hexachloroethane	8.538	117	22216	5.0153954	ppb		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\021116\
Data File : 0211 07.D
Acq On : 11 Feb 2016 5:19 pm
Operator : 522
Sample : STD AP9 5a ppb 16B02726
Misc : water
ALS Vial : 7 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 15 14:55:07 2016
Quant Method : C:\msdchem\1\methods\V807B15P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Mon Feb 15 14:52:04 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\021116\
Data File : 0211 08.D
Acq On : 11 Feb 2016 5:39 pm
Operator : 522
Sample : STD AP9 7.5a ppb 16B02726
Misc : water
ALS Vial : 8 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 15 14:55:46 2016
Quant Method : C:\msdchem\1\methods\V807B15P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Mon Feb 15 14:55:31 2016
Response via : Initial Calibration

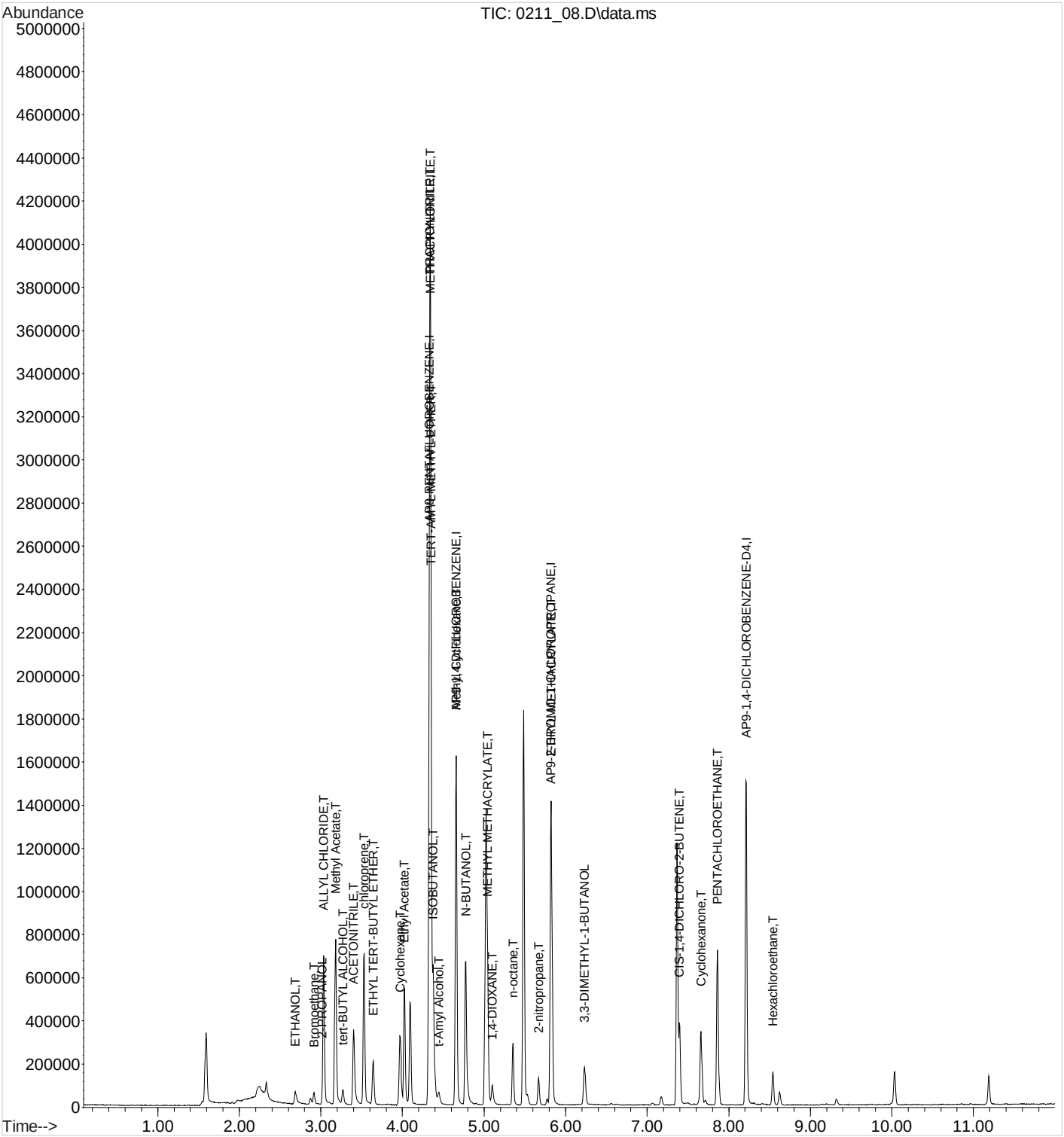
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 8260-PENTAFLUOROBENZENE	0.000	168	0m	40.0000000	ppb		-4.33
41) 8260-1,4-DIFLUOROBENZENE	0.000	114	0m	40.0000000	ppb		-4.66
53) 8260-2-BROMO-1-CHLOROP...	0.000	79	0m	40.0000000	ppb		-5.82
84) 8260-1,4-DICHLOROBENZE...	0.000	152	0m	40.0000000	ppb		-8.22
96) AP9-PENTAFLUOROBENZENE	4.329	168	461405	40.0000000	ppb		0.00
114) AP9-1,4-DIFLUOROBENZENE	4.657	114	776025	40.0000000	ppb		0.00
122) AP9-2-BROMO-1-CHLOROPR...	5.819	79	138255	40.0000000	ppb		0.00
128) AP9-1,4-DICHLOROBENZEN...	8.216	152	357750	40.0000000	ppb		0.00
System Monitoring Compounds							
33) DIBROMOFLUOROMETHANE	0.000	111	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 78 - 121		Recovery =	0.00%#			
46) a,a,a-Trifluorotoluene	0.000	146	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 85 - 114		Recovery =	0.00%#			
50) TOLUENE-D8	0.000	98	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 89 - 111		Recovery =	0.00%#			
68) 4-BROMOFLUOROBENZENE	0.000	95	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 71 - 126		Recovery =	0.00%#			
Target Compounds							Qvalue
97) ETHANOL	2.686	45	74501	738.0157710	ppb		100
98) Bromoethane	2.917	108	34164	7.2937889	ppb		100
99) 2-PROPANOL	3.015	45	19288	32.1338625	ppb		97
100) Methyl Acetate	3.179	43	761443	145.1264689	ppb	#	100
101) ACETONITRILE	3.398	41	336277	365.1005713	ppb		100
102) ALLYL CHLORIDE	3.033	76	108434	35.8060756	ppb		98
103) tert-BUTYL ALCOHOL	3.270	59	68201	36.7701506	ppb		100
104) chloroprene	3.532	53	356635	36.4977232	ppb		99
105) ETHYL TERT-BUTYL ETHER	3.641	59	146603	7.1365748	ppb		99
106) PROPIONITRILE	4.335	54	336051	358.3994467	ppb		98
107) Ethyl Acetate	4.019	43	515363	72.6516594	ppb		100
108) METHACRYLONITRILE	4.341	67	899076	357.0949316	ppb		99
109) Cyclohexane	3.976	84	92865	7.1522671	ppb		98
111) ISOBUTANOL	4.377	43	323855	693.2291541	ppb	#	98
112) t-Amyl Alcohol	4.444	59	22911	34.5175114	ppb		93
113) TERT-AMYL METHYL ETHER	4.353	73	147147	7.1326347	ppb	#	32
115) N-BUTANOL	4.779	56	327711	1458.1700206	ppb		99
116) Methyl Cyclohexane	4.657	83	111351	6.2857648	ppb		97
117) 2-nitropropane	5.667	43	77278	34.2153335	ppb		98
118) METHYL METHACRYLATE	5.041	41	242351	35.4057999	ppb		96
119) 1,4-DIOXANE	5.101	88	51849	719.8092802	ppb		98
120) n-octane	5.357	85	42866	6.9580300	ppb		98
121) 3,3-DIMETHYL-1-BUTANOL	6.233	57	77588	72.8161423	ppb		98
123) ETHYL METHACRYLATE	5.825	69	263844	36.9316077	ppb		79
124) CIS-1,4-DICHLORO-2-BUTENE	7.395	53	72896	37.4668730	ppb		90
125) Cyclohexanone	7.663	55	133594	74.6846474	ppb		97
126) PENTACHLOROETHANE	7.863	117	131879	37.9970482	ppb		100
127) Hexachloroethane	8.539	117	31206	7.1742566	ppb		98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\021116\
Data File : 0211 08.D
Acq On : 11 Feb 2016 5:39 pm
Operator : 522
Sample : STD AP9 7.5a ppb 16B02726
Misc : water
ALS Vial : 8 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 15 14:55:46 2016
Quant Method : C:\msdchem\1\methods\V807B15P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Mon Feb 15 14:55:31 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\021116\
Data File : 0211 09.D
Acq On : 11 Feb 2016 5:58 pm
Operator : 522
Sample : MSTD AP9 10a ppb 16B02726
Misc : water
ALS Vial : 9 Sample Multiplier: 1
InstName : VOCMS7

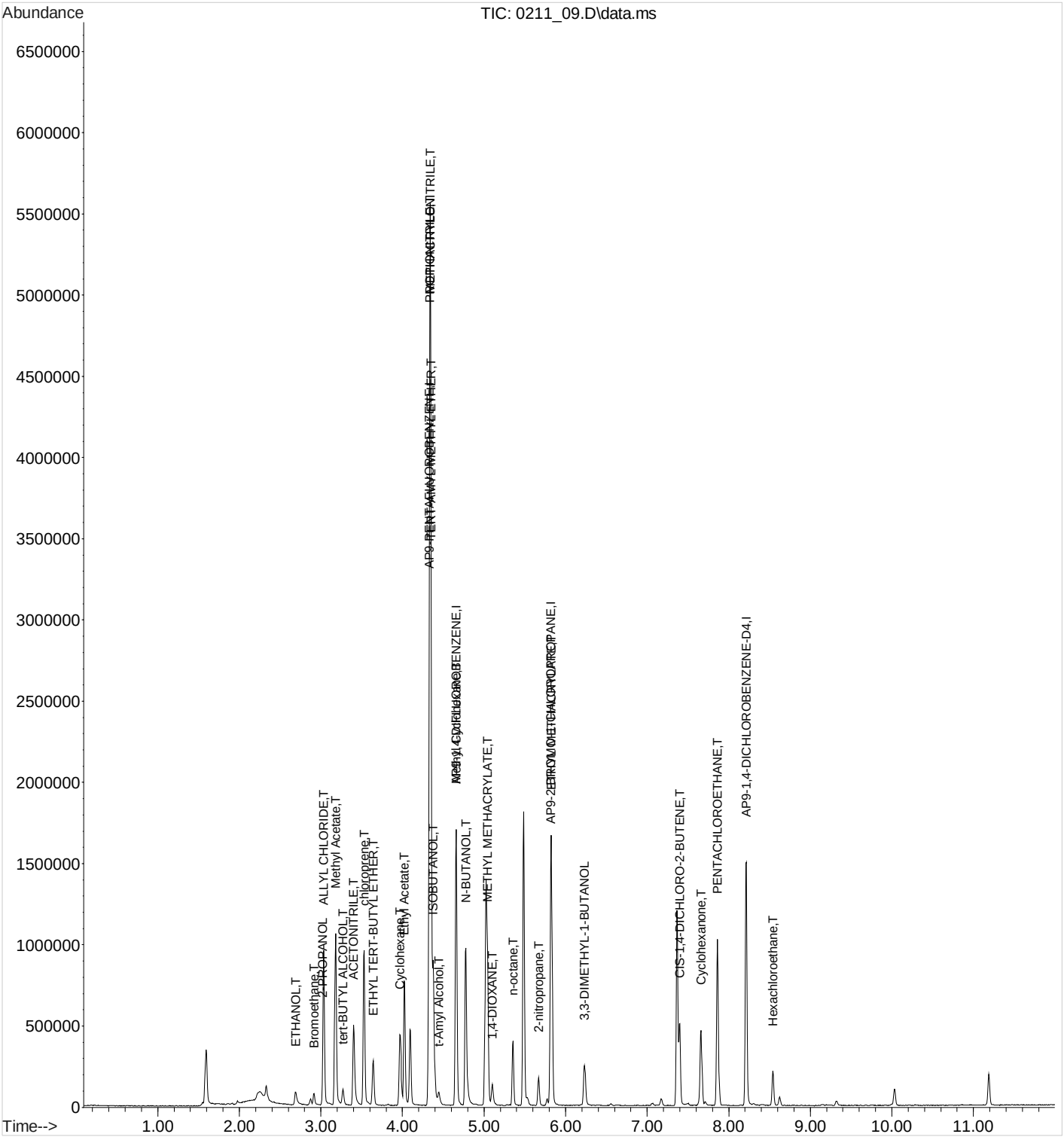
Quant Time: Feb 15 14:54:03 2016
Quant Method : C:\msdchem\1\methods\V807B15P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Mon Feb 15 14:52:04 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 8260-PENTAFLUOROBENZENE	0.000	168	0m	40.0000000	ppb		-4.33
41) 8260-1,4-DIFLUOROBENZENE	0.000	114	0m	40.0000000	ppb		-4.66
53) 8260-2-BROMO-1-CHLOROP...	0.000	79	0m	40.0000000	ppb		-5.82
84) 8260-1,4-DICHLOROBENZE...	0.000	152	0m	40.0000000	ppb		-8.22
96) AP9-PENTAFLUOROBENZENE	4.329	168	453035	40.0000000	ppb		0.00
114) AP9-1,4-DIFLUOROBENZENE	4.657	114	768429	40.0000000	ppb		0.00
122) AP9-2-BROMO-1-CHLOROPR...	5.819	79	140363	40.0000000	ppb		0.00
128) AP9-1,4-DICHLOROBENZEN...	8.216	152	358204	40.0000000	ppb		0.00
System Monitoring Compounds							
33) DIBROMOFLUOROMETHANE	0.000	111	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 78 - 121		Recovery =	0.00%#			
46) a,a,a-Trifluorotoluene	0.000	146	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 85 - 114		Recovery =	0.00%#			
50) TOLUENE-D8	0.000	98	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 89 - 111		Recovery =	0.00%#			
68) 4-BROMOFLUOROBENZENE	0.000	95	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 71 - 126		Recovery =	0.00%#			
Target Compounds							Qvalue
97) ETHANOL	2.692	45	107633	1000.0000000	ppb		100
98) Bromoethane	2.917	108	46278	10.0000000	ppb		100
99) 2-PROPANOL	3.021	45	27567	50.0000000	ppb		100
100) Methyl Acetate	3.179	43	1048903	200.0000000	ppb	#	100
101) ACETONITRILE	3.398	41	475708	500.0000000	ppb		100
102) ALLYL CHLORIDE	3.033	76	149139	50.0000000	ppb		100
103) tert-BUTYL ALCOHOL	3.270	59	95278	50.0000000	ppb		100
104) chloroprene	3.532	53	482020	50.0000000	ppb		100
105) ETHYL TERT-BUTYL ETHER	3.641	59	204086	10.0000000	ppb		100
106) PROPIONITRILE	4.335	54	469505	500.0000000	ppb		100
107) Ethyl Acetate	4.019	43	704426	100.0000000	ppb		100
108) METHACRYLONITRILE	4.341	67	1231414	500.0000000	ppb		100
109) Cyclohexane	3.970	84	128786	10.0000000	ppb		100
111) ISOBUTANOL	4.378	43	460263	1000.0000000	ppb	#	100
112) t-Amyl Alcohol	4.444	59	34277	50.0000000	ppb		97
113) TERT-AMYL METHYL ETHER	4.353	73	201086	10.0000000	ppb	#	100
115) N-BUTANOL	4.779	56	472173	2000.0000000	ppb		100
116) Methyl Cyclohexane	4.657	83	147370	10.0000000	ppb		100
117) 2-nitropropane	5.667	43	109785	50.0000000	ppb		100
118) METHYL METHACRYLATE	5.041	41	336724	50.0000000	ppb		100
119) 1,4-DIOXANE	5.101	88	74507	1000.0000000	ppb		100
120) n-octane	5.357	85	59916	10.0000000	ppb		100
121) 3,3-DIMETHYL-1-BUTANOL	6.233	57	109877	100.0000000	ppb		100
123) ETHYL METHACRYLATE	5.825	69	367705	50.0000000	ppb		100
124) CIS-1,4-DICHLORO-2-BUTENE	7.401	53	103731	50.0000000	ppb		100
125) Cyclohexanone	7.663	55	179884	100.0000000	ppb		100
126) PENTACHLOROETHANE	7.863	117	183148	50.0000000	ppb		100
127) Hexachloroethane	8.539	117	44413	10.0000000	ppb		100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\021116\
Data File : 0211 09.D
Acq On : 11 Feb 2016 5:58 pm
Operator : 522
Sample : MSTD AP9 10a ppb 16B02726
Misc : water
ALS Vial : 9 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 15 14:54:03 2016
Quant Method : C:\msdchem\1\methods\V807B15P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Mon Feb 15 14:52:04 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\021116\
Data File : 0211 10.D
Acq On : 11 Feb 2016 6:17 pm
Operator : 522
Sample : STD AP9 12.5a ppb 16B02726
Misc : water
ALS Vial : 10 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 15 14:56:34 2016
Quant Method : C:\msdchem\1\methods\V807B15P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Mon Feb 15 14:56:18 2016
Response via : Initial Calibration

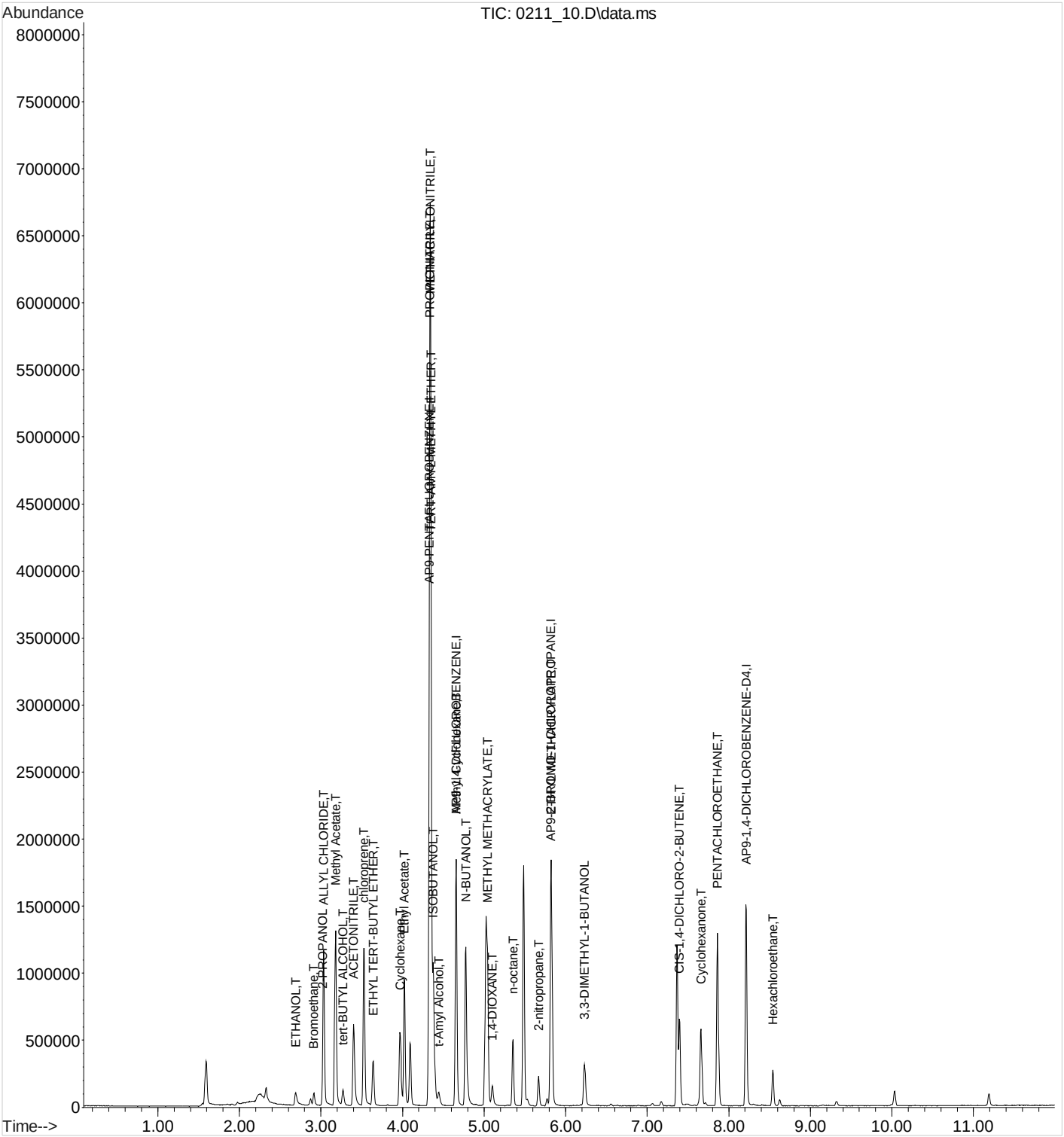
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 8260-PENTAFLUOROBENZENE	0.000	168	0m	40.0000000	ppb		-4.33
41) 8260-1,4-DIFLUOROBENZENE	0.000	114	0m	40.0000000	ppb		-4.66
53) 8260-2-BROMO-1-CHLOROP...	0.000	79	0m	40.0000000	ppb		-5.82
84) 8260-1,4-DICHLOROBENZE...	0.000	152	0m	40.0000000	ppb		-8.22
96) AP9-PENTAFLUOROBENZENE	4.329	168	459705	40.0000000	ppb		0.00
114) AP9-1,4-DIFLUOROBENZENE	4.657	114	771901	40.0000000	ppb		0.00
122) AP9-2-BROMO-1-CHLOROPR...	5.819	79	137087	40.0000000	ppb		0.00
128) AP9-1,4-DICHLOROBENZEN...	8.216	152	358050	40.0000000	ppb		0.00
System Monitoring Compounds							
33) DIBROMOFLUOROMETHANE	0.000	111	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 78 - 121		Recovery =	0.00%#			
46) a,a,a-Trifluorotoluene	0.000	146	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 85 - 114		Recovery =	0.00%#			
50) TOLUENE-D8	0.000	98	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 89 - 111		Recovery =	0.00%#			
68) 4-BROMOFLUOROBENZENE	0.000	95	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 71 - 126		Recovery =	0.00%#			
Target Compounds							Qvalue
97) ETHANOL	2.692	45	131355	1310.2173815	ppb		98
98) Bromoethane	2.911	108	57741	12.4413242	ppb		93
99) 2-PROPANOL	3.021	45	32675	56.2477265	ppb		96
100) Methyl Acetate	3.179	43	1296945	249.7267876	ppb	#	100
101) ACETONITRILE	3.398	41	582735	638.3936191	ppb		99
102) ALLYL CHLORIDE	3.033	76	187123	62.5839324	ppb		99
103) tert-BUTYL ALCOHOL	3.270	59	116198	63.1248256	ppb		98
104) chloroprene	3.526	53	609303	62.9224948	ppb		98
105) ETHYL TERT-BUTYL ETHER	3.641	59	248985	12.2843629	ppb		100
106) PROPIONITRILE	4.335	54	578059	624.3089764	ppb		99
107) Ethyl Acetate	4.018	43	868490	123.6597609	ppb		99
108) METHACRYLONITRILE	4.341	67	1526060	614.2273165	ppb		99
109) Cyclohexane	3.976	84	161880	12.6308876	ppb		97
111) ISOBUTANOL	4.377	43	561718	1225.3852117	ppb	#	99
112) t-Amyl Alcohol	4.444	59	41834	64.2823250	ppb		100
113) TERT-AMYL METHYL ETHER	4.353	73	245978	12.0857445	ppb	#	99
115) N-BUTANOL	4.779	56	573161	2578.3203139	ppb		99
116) Methyl Cyclohexane	4.657	83	184759	10.8362422	ppb		100
117) 2-nitropropane	5.667	43	134212	60.8059189	ppb		99
118) METHYL METHACRYLATE	5.040	41	415723	61.7484005	ppb		98
119) 1,4-DIOXANE	5.101	88	88058	1238.9979202	ppb		96
120) n-octane	5.357	85	73443	12.1607486	ppb		99
121) 3,3-DIMETHYL-1-BUTANOL	6.233	57	135245	128.3526963	ppb		99
123) ETHYL METHACRYLATE	5.825	69	454283	64.3251165	ppb		88
124) CIS-1,4-DICHLORO-2-BUTENE	7.395	53	123981	64.2776804	ppb		96
125) Cyclohexanone	7.662	55	225569	127.2839778	ppb		99
126) PENTACHLOROETHANE	7.863	117	223877	64.8811454	ppb		98
127) Hexachloroethane	8.539	117	54397	12.7229348	ppb		96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\021116\
Data File : 0211 10.D
Acq On : 11 Feb 2016 6:17 pm
Operator : 522
Sample : STD AP9 12.5a ppb 16B02726
Misc : water
ALS Vial : 10 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 15 14:56:34 2016
Quant Method : C:\msdchem\1\methods\V807B15P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Mon Feb 15 14:56:18 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\021116\
Data File : 0211 11.D
Acq On : 11 Feb 2016 6:37 pm
Operator : 522
Sample : STD AP9 15a ppb 16B02726
Misc : water
ALS Vial : 11 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 15 14:57:26 2016
Quant Method : C:\msdchem\1\methods\V807B15P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Mon Feb 15 14:52:04 2016
Response via : Initial Calibration

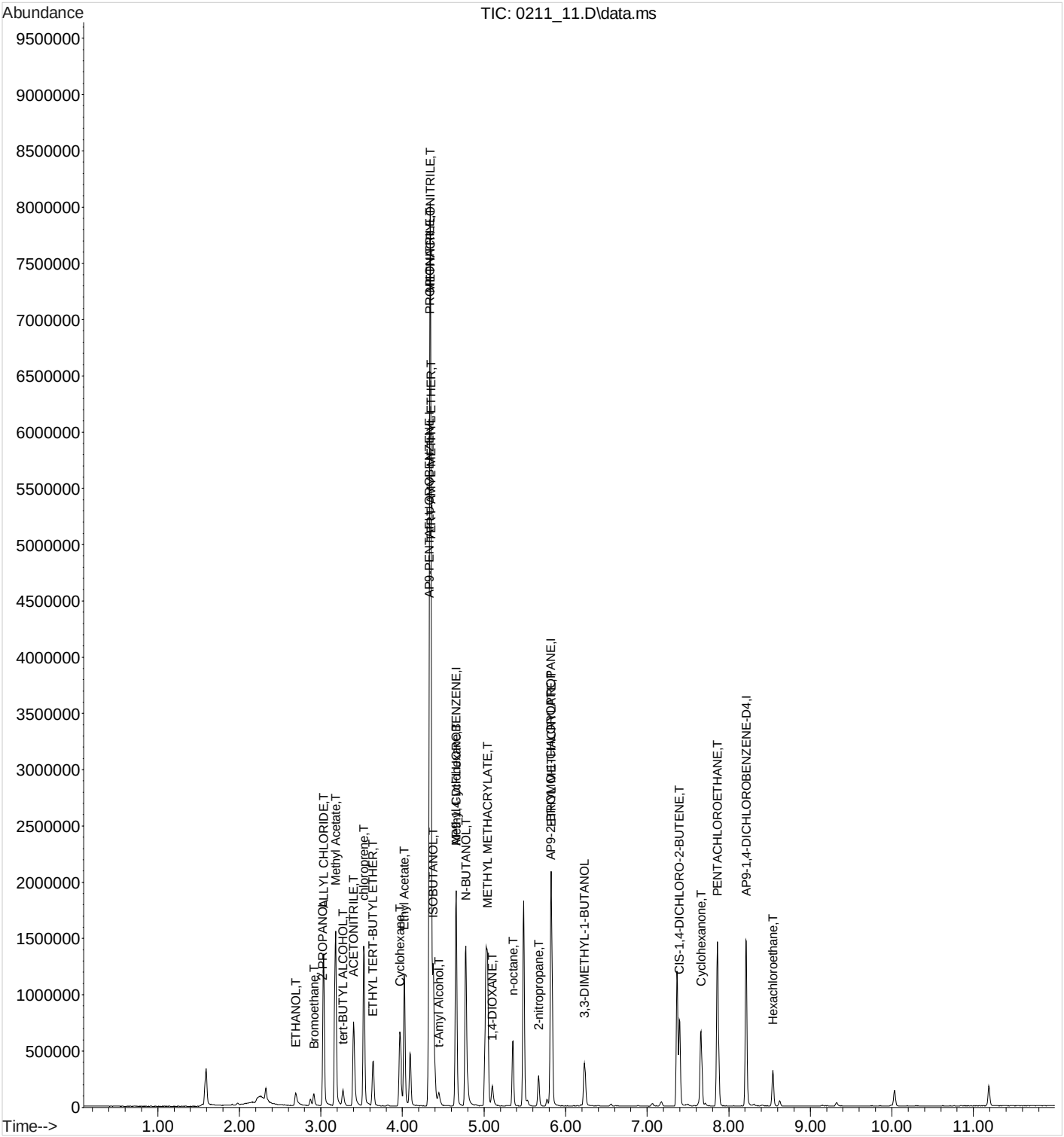
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 8260-PENTAFLUOROBENZENE	0.000	168	0m	40.0000000	ppb		-4.33
41) 8260-1,4-DIFLUOROBENZENE	0.000	114	0m	40.0000000	ppb		-4.66
53) 8260-2-BROMO-1-CHLOROP...	0.000	79	0m	40.0000000	ppb		-5.82
84) 8260-1,4-DICHLOROBENZE...	0.000	152	0m	40.0000000	ppb		-8.22
96) AP9-PENTAFLUOROBENZENE	4.329	168	462893	40.0000000	ppb		0.00
114) AP9-1,4-DIFLUOROBENZENE	4.657	114	770827	40.0000000	ppb		0.00
122) AP9-2-BROMO-1-CHLOROPR...	5.819	79	136433	40.0000000	ppb	#	0.00
128) AP9-1,4-DICHLOROBENZEN...	8.216	152	355130	40.0000000	ppb		0.00
System Monitoring Compounds							
33) DIBROMOFLUOROMETHANE	0.000	111	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 78 - 121		Recovery =	0.00%#			
46) a,a,a-Trifluorotoluene	0.000	146	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 85 - 114		Recovery =	0.00%#			
50) TOLUENE-D8	0.000	98	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 89 - 111		Recovery =	0.00%#			
68) 4-BROMOFLUOROBENZENE	0.000	95	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 71 - 126		Recovery =	0.00%#			
Target Compounds							Qvalue
97) ETHANOL	2.692	45	163182	1483.8088208	ppb		99
98) Bromoethane	2.917	108	70560	14.9222782	ppb		98
99) 2-PROPANOL	3.021	45	40625	72.1149014	ppb		97
100) Methyl Acetate	3.179	43	1567867	292.5870024	ppb	#	100
101) ACETONITRILE	3.398	41	706959	727.2352460	ppb		99
102) ALLYL CHLORIDE	3.033	76	222007	72.8444700	ppb		100
103) tert-BUTYL ALCOHOL	3.270	59	143587	73.7468774	ppb		99
104) chloroprene	3.526	53	713251	72.4099883	ppb		100
105) ETHYL TERT-BUTYL ETHER	3.635	59	301340	14.4508939	ppb		99
106) PROPIONITRILE	4.335	54	692088	721.3437014	ppb		99
107) Ethyl Acetate	4.019	43	1059573	147.2131644	ppb		99
108) METHACRYLONITRILE	4.341	67	1846776	733.8905267	ppb		98
109) Cyclohexane	3.970	84	192218	14.6075218	ppb		98
111) ISOBUTANOL	4.377	43	683713	1453.8477072	ppb	#	99
112) t-Amyl Alcohol	4.444	59	47572	67.9156329	ppb		88
113) TERT-AMYL METHYL ETHER	4.353	73	299413	14.5726978	ppb	#	97
115) N-BUTANOL	4.779	56	706698	2984.0736415	ppb		99
116) Methyl Cyclohexane	4.657	83	217906	14.7403207	ppb		100
117) 2-nitropropane	5.667	43	162589	73.8184609	ppb		97
118) METHYL METHACRYLATE	5.041	41	505956	74.8954632	ppb		96
119) 1,4-DIOXANE	5.101	88	107341	1436.2015396	ppb		96
120) n-octane	5.357	85	86801	14.4420467	ppb		97
121) 3,3-DIMETHYL-1-BUTANOL	6.233	57	161203	146.2558192	ppb		98
123) ETHYL METHACRYLATE	5.825	69	550315	76.9865809	ppb		81
124) CIS-1,4-DICHLORO-2-BUTENE	7.395	53	153419	76.0805775	ppb		98
125) Cyclohexanone	7.663	55	267315	152.8846932	ppb		98
126) PENTACHLOROETHANE	7.863	117	265894	74.6809054	ppb		99
127) Hexachloroethane	8.539	117	67170	15.5596008	ppb		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\021116\
Data File : 0211 11.D
Acq On : 11 Feb 2016 6:37 pm
Operator : 522
Sample : STD AP9 15a ppb 16B02726
Misc : water
ALS Vial : 11 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 15 14:57:26 2016
Quant Method : C:\msdchem\1\methods\V807B15P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Mon Feb 15 14:52:04 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\021116\
Data File : 0211 12.D
Acq On : 11 Feb 2016 6:56 pm
Operator : 522
Sample : STD AP9 17.5a ppb 16B02726
Misc : water
ALS Vial : 12 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 15 14:58:11 2016
Quant Method : C:\msdchem\1\methods\V807B15P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Mon Feb 15 14:52:04 2016
Response via : Initial Calibration

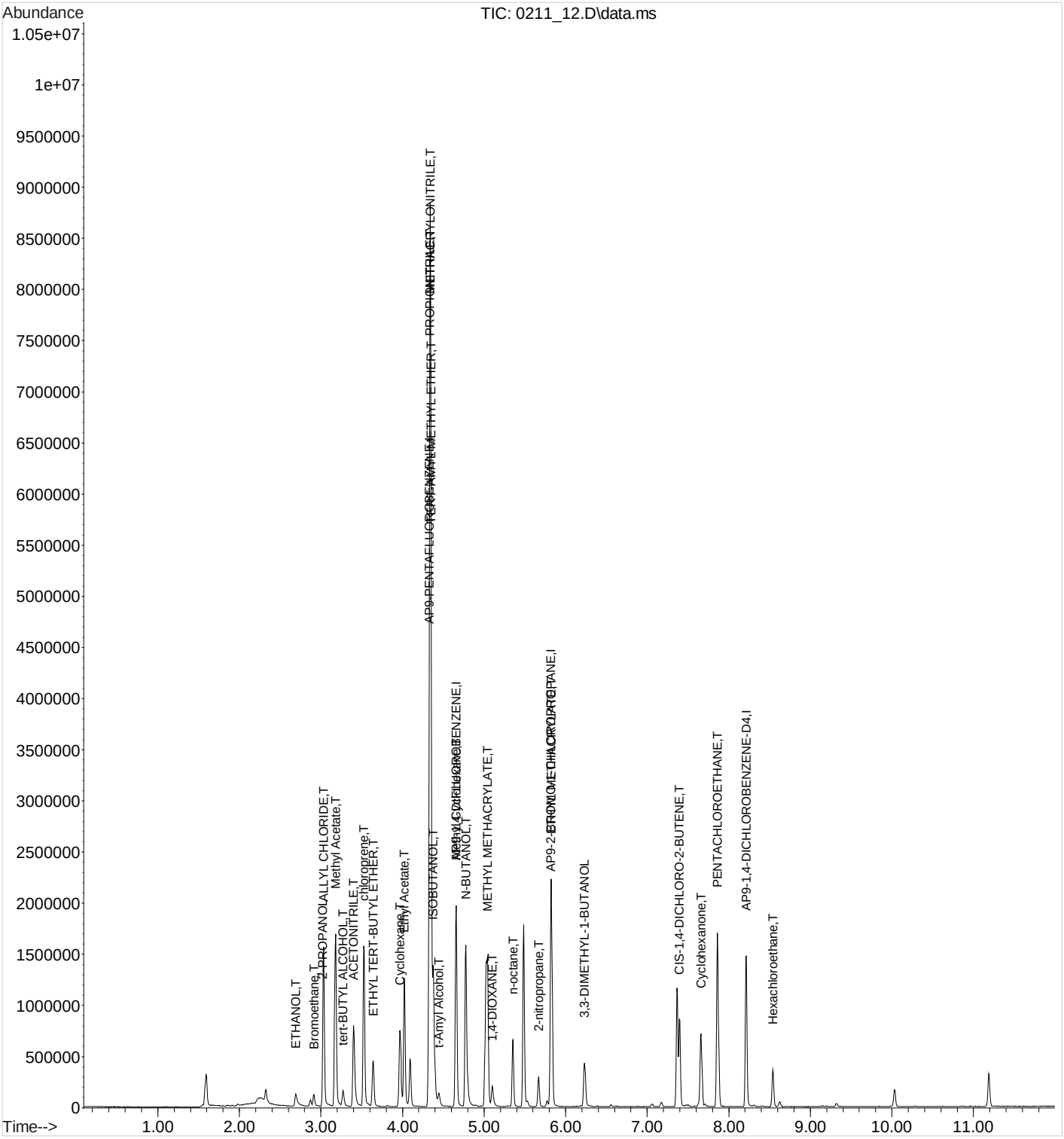
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 8260-PENTAFLUOROBENZENE	0.000	168	0m	40.0000000	ppb		-4.33
41) 8260-1,4-DIFLUOROBENZENE	0.000	114	0m	40.0000000	ppb		-4.66
53) 8260-2-BROMO-1-CHLOROP...	0.000	79	0m	40.0000000	ppb		-5.82
84) 8260-1,4-DICHLOROBENZE...	0.000	152	0m	40.0000000	ppb		-8.22
96) AP9-PENTAFLUOROBENZENE	4.329	168	444292	40.0000000	ppb		0.00
114) AP9-1,4-DIFLUOROBENZENE	4.657	114	748171	40.0000000	ppb		0.00
122) AP9-2-BROMO-1-CHLOROPR...	5.819	79	133892	40.0000000	ppb	#	0.00
128) AP9-1,4-DICHLOROBENZEN...	8.216	152	353545	40.0000000	ppb		0.00
System Monitoring Compounds							
33) DIBROMOFLUOROMETHANE	0.000	111	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 78 - 121		Recovery =	0.00%#			
46) a,a,a-Trifluorotoluene	0.000	146	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 85 - 114		Recovery =	0.00%#			
50) TOLUENE-D8	0.000	98	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 89 - 111		Recovery =	0.00%#			
68) 4-BROMOFLUOROBENZENE	0.000	95	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 71 - 126		Recovery =	0.00%#			
Target Compounds							Qvalue
97) ETHANOL	2.692	45	172871	1637.7211629	ppb	#	97
98) Bromoethane	2.917	108	79731	17.5677398	ppb		98
99) 2-PROPANOL	3.021	45	43931	81.2484060	ppb		98
100) Methyl Acetate	3.179	43	1700830	330.6883063	ppb	#	100
101) ACETONITRILE	3.398	41	786208	842.6171033	ppb		99
102) ALLYL CHLORIDE	3.033	76	255301	87.2759441	ppb		96
103) tert-BUTYL ALCOHOL	3.270	59	158260	84.6860342	ppb		99
104) chloroprene	3.526	53	803408	84.9775802	ppb		100
105) ETHYL TERT-BUTYL ETHER	3.641	59	338959	16.9354686	ppb		99
106) PROPIONITRILE	4.335	54	771186	837.4370704	ppb		99
107) Ethyl Acetate	4.018	43	1159006	167.7697159	ppb		99
108) METHACRYLONITRILE	4.341	67	2050636	849.0196798	ppb		97
109) Cyclohexane	3.970	84	216381	17.1322235	ppb		99
111) ISOBUTANOL	4.377	43	745213	1650.9640658	ppb	#	99
112) t-Amyl Alcohol	4.444	59	55268	82.2061314	ppb		99
113) TERT-AMYL METHYL ETHER	4.353	73	332395	16.8552776	ppb	#	99
115) N-BUTANOL	4.779	56	777498	3382.4470197	ppb		99
116) Methyl Cyclohexane	4.657	83	241667	16.8426779	ppb		97
117) 2-nitropropane	5.667	43	179348	83.8931328	ppb		99
118) METHYL METHACRYLATE	5.040	41	558304	85.1470386	ppb		97
119) 1,4-DIOXANE	5.101	88	119734	1650.5294982	ppb		97
120) n-octane	5.357	85	100393	17.2093115	ppb		99
121) 3,3-DIMETHYL-1-BUTANOL	6.233	57	182265	170.3724477	ppb		99
123) ETHYL METHACRYLATE	5.825	69	613228	87.4159051	ppb	#	75
124) CIS-1,4-DICHLORO-2-BUTENE	7.395	53	171459	86.6402585	ppb		99
125) Cyclohexanone	7.662	55	281897	164.2842505	ppb		98
126) PENTACHLOROETHANE	7.863	117	302308	86.5197941	ppb		98
127) Hexachloroethane	8.539	117	76664	18.0958663	ppb		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\021116\
Data File : 0211 12.D
Acq On : 11 Feb 2016 6:56 pm
Operator : 522
Sample : STD AP9 17.5a ppb 16B02726
Misc : water
ALS Vial : 12 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 15 14:58:11 2016
Quant Method : C:\msdchem\1\methods\V807B15P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Mon Feb 15 14:52:04 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\021116\
Data File : 0211 13.D
Acq On : 11 Feb 2016 7:15 pm
Operator : 522
Sample : STD AP9 20a ppb 16B02726
Misc : water
ALS Vial : 13 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 15 14:58:49 2016
Quant Method : C:\msdchem\1\methods\V807B15P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Mon Feb 15 14:52:04 2016
Response via : Initial Calibration

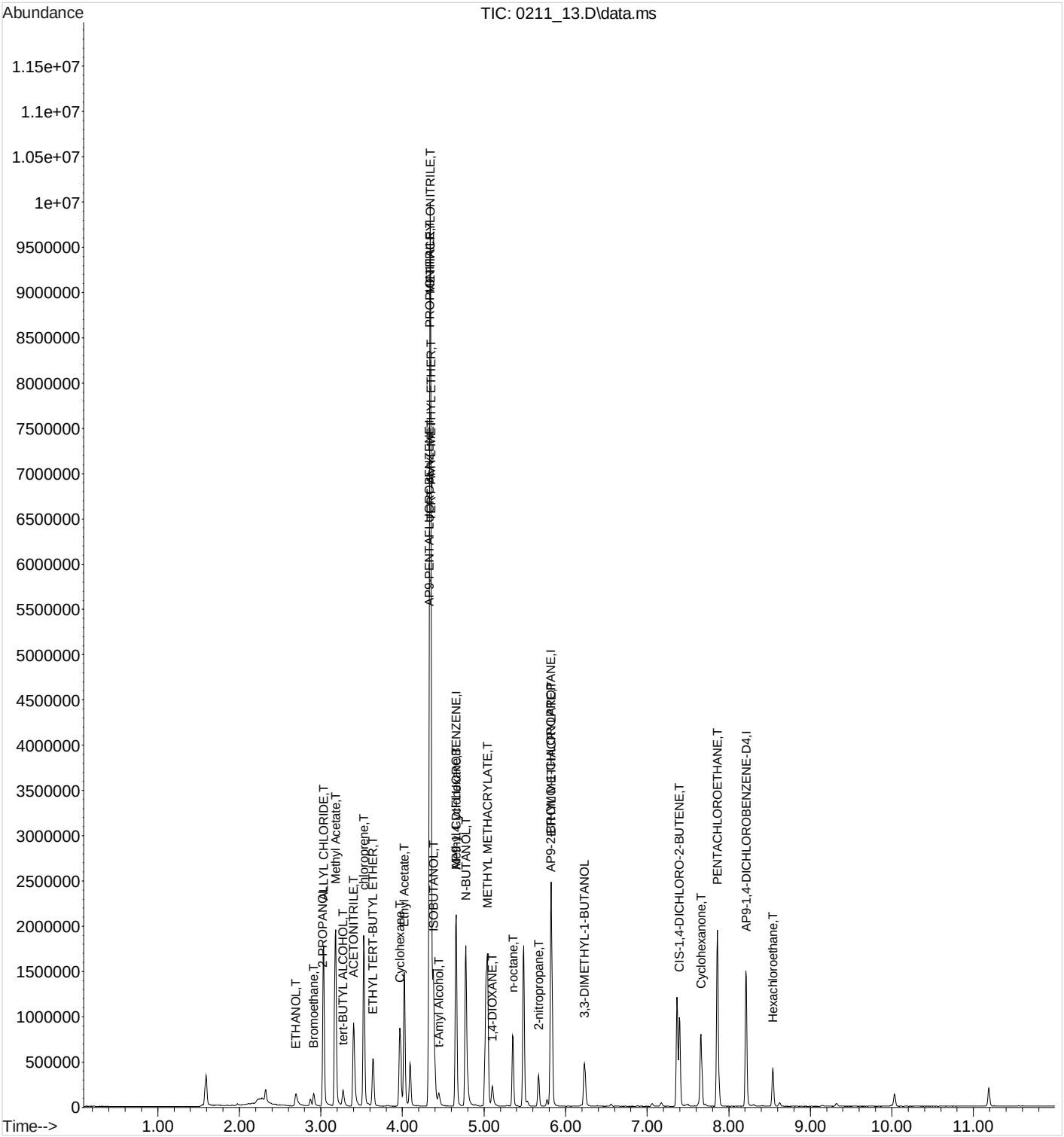
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 8260-PENTAFLUOROBENZENE	0.000	168	0m	40.0000000	ppb		-4.33
41) 8260-1,4-DIFLUOROBENZENE	0.000	114	0m	40.0000000	ppb		-4.66
53) 8260-2-BROMO-1-CHLOROP...	0.000	79	0m	40.0000000	ppb		-5.82
84) 8260-1,4-DICHLOROBENZE...	0.000	152	0m	40.0000000	ppb		-8.22
96) AP9-PENTAFLUOROBENZENE	4.329	168	462170	40.0000000	ppb		0.00
114) AP9-1,4-DIFLUOROBENZENE	4.657	114	777806	40.0000000	ppb		0.00
122) AP9-2-BROMO-1-CHLOROPR...	5.819	79	137325	40.0000000	ppb	#	0.00
128) AP9-1,4-DICHLOROBENZEN...	8.216	152	355531	40.0000000	ppb		0.00
System Monitoring Compounds							
33) DIBROMOFLUOROMETHANE	0.000	111	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 78 - 121		Recovery =	0.00%#			
46) a,a,a-Trifluorotoluene	0.000	146	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 85 - 114		Recovery =	0.00%#			
50) TOLUENE-D8	0.000	98	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 89 - 111		Recovery =	0.00%#			
68) 4-BROMOFLUOROBENZENE	0.000	95	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 71 - 126		Recovery =	0.00%#			
Target Compounds							Qvalue
97) ETHANOL	2.692	45	203951	1857.4211983	ppb	#	98
98) Bromoethane	2.911	108	92658	19.6262960	ppb		98
99) 2-PROPANOL	3.021	45	51576	91.6976402	ppb		96
100) Methyl Acetate	3.179	43	1998668	373.5642703	ppb	#	100
101) ACETONITRILE	3.398	41	897313	924.4927570	ppb		99
102) ALLYL CHLORIDE	3.033	76	295720	97.1828160	ppb		98
103) tert-BUTYL ALCOHOL	3.270	59	180619	92.9117863	ppb		100
104) chloroprene	3.526	53	943471	95.9320015	ppb		99
105) ETHYL TERT-BUTYL ETHER	3.635	59	396956	19.0659812	ppb		99
106) PROPIONITRILE	4.335	54	878198	916.7527690	ppb		100
107) Ethyl Acetate	4.019	43	1350278	187.8961228	ppb		99
108) METHACRYLONITRILE	4.341	67	2364075	940.9296888	ppb		95
109) Cyclohexane	3.970	84	252255	19.1999958	ppb		98
111) ISOBUTANOL	4.384	43	863133	1838.2376688	ppb	#	99
112) t-Amyl Alcohol	4.444	59	61216	87.5310528	ppb		95
113) TERT-AMYL METHYL ETHER	4.353	73	383838	18.7109628	ppb	#	97
115) N-BUTANOL	4.779	56	879243	3679.3425520	ppb		99
116) Methyl Cyclohexane	4.657	83	285263	19.1235634	ppb		99
117) 2-nitropropane	5.667	43	210912	94.8988054	ppb		99
118) METHYL METHACRYLATE	5.041	41	647219	94.9466504	ppb		96
119) 1,4-DIOXANE	5.101	88	134170	1779.0608400	ppb		98
120) n-octane	5.357	85	116652	19.2345413	ppb		99
121) 3,3-DIMETHYL-1-BUTANOL	6.233	57	207041	186.1581356	ppb		99
123) ETHYL METHACRYLATE	5.825	69	709264	98.5783217	ppb	#	71
124) CIS-1,4-DICHLORO-2-BUTENE	7.395	53	195961	96.5459635	ppb		98
125) Cyclohexanone	7.663	55	305623	173.6586947	ppb		98
126) PENTACHLOROETHANE	7.863	117	352112	98.2543268	ppb		99
127) Hexachloroethane	8.539	117	87899	20.2291139	ppb		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\021116\
Data File : 0211 13.D
Acq On : 11 Feb 2016 7:15 pm
Operator : 522
Sample : STD AP9 20a ppb 16B02726
Misc : water
ALS Vial : 13 Sample Multiplier: 1
InstName : VOCMS7

Quant Time: Feb 15 14:58:49 2016
Quant Method : C:\msdchem\1\methods\V807B15P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS07
QLast Update : Mon Feb 15 14:52:04 2016
Response via : Initial Calibration



Instrument: VOCMS26
Method: V826C23P

Initial Calibration Run Log

File ID	Level ID	Date Analyzed
0323_12.D	.25	3/23/2016 8:24:00 PM
0323_13.D	.5	3/23/2016 8:44:00 PM
0323_14.D	1	3/23/2016 9:04:00 PM
0323_15.D	2	3/23/2016 9:23:00 PM
0323_16.D	5.0	3/23/2016 9:43:00 PM
0323_17.D	10	3/23/2016 10:03:00 PM
0323_18.D	25	3/23/2016 10:23:00 PM
0323_19.D	40	3/23/2016 10:42:00 PM
0323_20.D	75	3/23/2016 11:02:00 PM
0323_21.D	100	3/23/2016 11:21:00 PM
0323_22.D	200	3/23/2016 11:41:00 PM
0323_39.D	1A	3/24/2016 11:31:00 AM
0323_28.D	2.5A	3/24/2016 1:40:00 AM
0323_29.D	5A	3/24/2016 2:00:00 AM
0323_30.D	7.5A	3/24/2016 2:20:00 AM
0323_31.D	10A	3/24/2016 2:39:00 AM
0323_32.D	12A	3/24/2016 2:59:00 AM
0323_33.D	15A	3/24/2016 3:19:00 AM
0323_34.D	17A	3/24/2016 3:39:00 AM
0323_35.D	20A	3/24/2016 3:58:00 AM

Mint Miner 2.6.4 Directory Scan: y:\032316

24 Mar 2016 14:32

Level	Status	Code	Operator	Instrument	Sample ID
Scan File Path: y:\032316\0323_01.D					
Original Path: y:\032316\0323_01.D					
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Scan File Path: y:\032316\0323_02.D					
Original Path: C:\msdchem\1\data\032316\0323_02.D\data.ms					
0	Scanned			VOCMS26	ICV VMS 25 ppb (water)
Scan File Path: y:\032316\0323_03.D					
Original Path: y:\032316\0323_03.D					
0	No Audit				
Scan File Path: y:\032316\0323_04.D					
Original Path: C:\msdchem\1\data\032316\0323_04.D\data.ms					
0	Scanned			VOCMS26	LCS (water)
Scan File Path: y:\032316\0323_05.D					
Original Path: y:\032316\0323_05.D					
0	No Audit				
Scan File Path: y:\032316\0323_06.D					
Original Path: 0323_06.D					
0	Scanned			VOCMS26	1ppb (water)
Scan File Path: y:\032316\0323_07.D					
Original Path: 0323_07.D					
0	Scanned			VOCMS26	25 ppb (water)
Scan File Path: y:\032316\0323_08.D					
Original Path: 0323_08.D					
0	Scanned			VOCMS26	25 ppb (water)
Scan File Path: y:\032316\0323_09.D					
Original Path: C:\msdchem\1\data\032316\0323_09.D\data.ms					
0	Scanned			VOCMS26	1ppb (water)
Scan File Path: y:\032316\0323_10.D					
Original Path: y:\032316\0323_10.D					
0	No Audit				
Scan File Path: y:\032316\0323_11.D					
Original Path: 0323_11.D					
5	Scanned	TA(1)		VOCMS26	INSTBLK (water)

Level	Status	Code	Operator	Instrument	Sample ID
Scan File Path: y:\032316\0323_12.D					
Original Path: C:\msdchem\1\data\032316\0323_12.D\data.ms					
20	Scanned	M(1), D(19)		VOCMS26	STD VMS .25 ppb 16C22692 (water)
Scan File Path: y:\032316\0323_13.D					
Original Path: C:\msdchem\1\data\032316\0323_13.D\data.ms					
20	Scanned	D(20)		VOCMS26	STD VMS .5 ppb 16C22692 (water)
Scan File Path: y:\032316\0323_14.D					
Original Path: C:\msdchem\1\data\032316\0323_14.D\data.ms					
19	Scanned	D(19)		VOCMS26	STD VMS 1 ppb 16C22692 (water)
Scan File Path: y:\032316\0323_14A.D					
Original Path: C:\msdchem\1\data\032316\0323_14A.D\data.ms					
37	Scanned	D(37)		VOCMS26	RL VMS 1 ppb 16C22692 (water)
Scan File Path: y:\032316\0323_15.D					
Original Path: C:\msdchem\1\data\032316\0323_15.D\data.ms					
21	Scanned	D(21)		VOCMS26	STD VMS 2 ppb 16C22692 (water)
Scan File Path: y:\032316\0323_15a.D					
Original Path: C:\msdchem\1\data\032316\0323_15a.D\data.ms					
41	Scanned	D(41)		VOCMS26	RL VMS 2 ppb 16C22692 (water)
Scan File Path: y:\032316\0323_16.D					
Original Path: C:\msdchem\1\data\032316\0323_16.D\data.ms					
27	Scanned	D(27)		VOCMS26	STD VMS 5 ppb 16C22692 (water)
Scan File Path: y:\032316\0323_16a.D					
Original Path: C:\msdchem\1\data\032316\0323_16a.D\data.ms					
53	Scanned	D(53)		VOCMS26	RL VMS 5 ppb 16C22692 (water)
Scan File Path: y:\032316\0323_17.D					
Original Path: C:\msdchem\1\data\032316\0323_17.D\data.ms					
30	Scanned	D(30)		VOCMS26	STD VMS 10 ppb 16C22692 (water)
Scan File Path: y:\032316\0323_18.D					
Original Path: C:\msdchem\1\data\032316\0323_18.D\data.ms					
64	Scanned	D(64)		VOCMS26	MSTD VMS 25 ppb 16C22692 (water)
Scan File Path: y:\032316\0323_19.D					
Original Path: C:\msdchem\1\data\032316\0323_19.D\data.ms					
32	Scanned	D(32)		VOCMS26	STD VMS 40 ppb 16C22692 (water)

Level	Status	Code	Operator	Instrument	Sample ID
Scan File Path: y:\032316\0323_20.D					
Original Path: C:\msdchem\1\data\032316\0323_20.D\data.ms					
31	Scanned	D(31)		VOCMS26	STD VMS 75 ppb 16C22692 (water)
Scan File Path: y:\032316\0323_21.D					
Original Path: C:\msdchem\1\data\032316\0323_21.D\data.ms					
32	Scanned	D(32)		VOCMS26	STD VMS 100 ppb 16C22692 (water)
Scan File Path: y:\032316\0323_22.D					
Original Path: C:\msdchem\1\data\032316\0323_22.D\data.ms					
31	Scanned	D(31)		VOCMS26	STD VMS 200 ppb 16C22692 (water)
Scan File Path: y:\032316\0323_23.D					
Original Path: y:\032316\0323_23.D					
0	No Audit				
Scan File Path: y:\032316\0323_24.D					
Original Path: C:\msdchem\1\data\032316\0323_24.D\data.ms					
0	Scanned			VOCMS26	SSCV VMS 25 ppb 16C22693 (water)
Scan File Path: y:\032316\0323_25.D					
Original Path: 0323_25.D					
5	Scanned	TA(1)		VOCMS26	INSTBLK (water)
Scan File Path: y:\032316\0323_26.D					
Original Path: C:\msdchem\1\data\032316\0323_26.D\data.ms					
83	Scanned	D(55), DK(5), DC(3), DS(2), DP(1), DB(3), M(2)		VOCMS26	STD VMS .5a ppb 16B23985 (water)
Scan File Path: y:\032316\0323_27.D					
Original Path: C:\msdchem\1\data\032316\0323_27.D\data.ms					
184	Scanned	D(118), DK(10), DC(8), DS(4), DP(6), DB(6), M(3), MR(1)		VOCMS26	STD VMS 1a ppb 16B23985 (water)
Scan File Path: y:\032316\0323_28.D					
Original Path: C:\msdchem\1\data\032316\0323_28.D\data.ms					
167	Scanned	D(112), DK(10), DC(8), DS(4), DP(4), DB(4), M(4), MR(1)		VOCMS26	STD VMS 2.5a ppb 16B23985 (water)
Scan File Path: y:\032316\0323_29.D					
Original Path: C:\msdchem\1\data\032316\0323_29.D\data.ms					
174	Scanned	D(118), DK(8), DC(8), DS(4), DB(6), DP(4), M(2)		VOCMS26	STD VMS 5a ppb 16B23985 (water)

Level	Status	Code	Operator	Instrument	Sample ID
Scan File Path: y:\032316\0323_30.D					
Original Path: C:\msdchem\1\data\032316\0323_30.D\data.ms					
180	Scanned	D(120), DK(8), DC(8), DS(4), DB(6), DP(2), M(3), MR(1)		VOCMS26	STD VMS 7.5a ppb 16B23985 (water)
Scan File Path: y:\032316\0323_31.D					
Original Path: C:\msdchem\1\data\032316\0323_31.D\data.ms					
168	Scanned	D(118), DK(8), DC(8), DS(4), DP(4), DB(4), MR(1), M(1)		VOCMS26	MSTD VMS 10a ppb 16B23985 (water)
Scan File Path: y:\032316\0323_32.D					
Original Path: C:\msdchem\1\data\032316\0323_32.D\data.ms					
87	Scanned	D(59), DC(4), DK(4), DS(2), DP(2), DB(2), MR(1), M(1)		VOCMS26	STD VMS 12.5a ppb 16B23985 (water)
Scan File Path: y:\032316\0323_33.D					
Original Path: C:\msdchem\1\data\032316\0323_33.D\data.ms					
87	Scanned	D(59), DC(4), DK(4), DS(2), DB(3), DP(2), M(1)		VOCMS26	STD VMS 15a ppb 16B23985 (water)
Scan File Path: y:\032316\0323_34.D					
Original Path: C:\msdchem\1\data\032316\0323_34.D\data.ms					
80	Scanned	D(57), DC(4), DK(4), DS(2), DP(2), DB(2), M(1)		VOCMS26	STD VMS 17.5a ppb 16B23985 (water)
Scan File Path: y:\032316\0323_35.D					
Original Path: C:\msdchem\1\data\032316\0323_35.D\data.ms					
82	Scanned	D(55), DC(4), DK(4), DS(2), DB(3), DP(1), M(1)		VOCMS26	STD VMS 20a ppb 16B23985 (water)
Scan File Path: y:\032316\0323_36.D					
Original Path: y:\032316\0323_36.D					
0	No Audit				
Scan File Path: y:\032316\0323_37.D					
Original Path: C:\msdchem\1\data\032316\0323_37.D\data.ms					
0	Scanned			VOCMS26	SSCV VMS 10a ppb 16A19936 (water)
Scan File Path: y:\032316\0323_38.D					
Original Path: 0323_38.D					
0	Scanned			VOCMS26	INSTBLK (water)
Scan File Path: y:\032316\0323_39.D					
Original Path: C:\msdchem\1\data\032316\0323_39.D\data.ms					
54	Scanned	D(42), DS(2), DC(3), DK(1), DP(1), DB(1)		VOCMS26	STD VMS 1a ppb 16B23985 (water)

Level	Status	Code	Operator	Instrument	Sample ID
Scan File Path: y:\032316\0323_39A.D					
Original Path: C:\msdchem\1\data\032316\0323_39A.D\data.ms					
108	Scanned	D(84), DS(4), DC(6), DK(2), DP(2), DB(2)		VOCMS26	RL VMS 1a ppb 16B23985 (water)
Scan File Path: y:\032316\0323_40.D					
Original Path: C:\msdchem\1\data\032316\0323_40.D\data.ms					
1	Scanned	M(1)		VOCMS26	SSCV VMS 10a ppb 16A19936 (water)

D = Deletion of any analyte
DB = Deletion of a common contaminant
DC = Deletion of a CCC
DK = Deletion of a spike compound
DP = Deletion of an SPCC
DS = Deletion of a surrogate
M = Manual integration (non-specific)
MR = Manual integration with before/after ratio <10%
TA = Tune spectrum obtained by spectral averaging

ScanSummary.rpt

Total Files Scanned	44	Beginning Analyzed Date	3/23/2016 9:02:18AM
Methods	0	Ending Analyzed Date	3/24/2016 11:51:00AM
Samples	38	Analyzed Range	26 hours, 49 minutes
Tunes	6	Greatest Time Between Tunes	9 hours, 44 minutes
CCCs	0	Greatest Time Between CCCs	N/A

Distinct Method Last Updated count 0
Operators 0 Intruments 1

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

Injection Log

Instrument ID : VOCMS26
Computer Name : VOCCOMPAO
Released By : Jessica hawkins
Date Released : 3/24/2016 1:42:30 PM
Run ID : 032316
Signature : _____

#	File ID	Sample ID	Method	WG	Product	Matrix	Account #	State	Dil.	Mult.	Injected	Misc.
1	0323_06	1ppb	V826B19P							1	03/23/16 1245	
2	0323_07	25 ppb	V826B19P							1	03/23/16 1317	
3	0323_08	25 ppb	V826B19P							1	03/23/16 1616	
4	0323_12	STD VMS .25 PPB 16C22692	V826C23P						1	1	03/23/16 2024	"water"
5	0323_13	STD VMS .5 PPB 16C22692	V826C23P						1	1	03/23/16 2044	"water"
6	0323_14	STD VMS 1 PPB 16C22692	V826C23P						1	1	03/23/16 2104	"water"
7	0323_14A	RL VMS 1 PPB 16C22692	V826C23P						1	1	03/23/16 2104	"water"
8	0323_15	STD VMS 2 PPB 16C22692	V826C23P						1	1	03/23/16 2123	"water"
9	0323_15a	RL VMS 2 PPB 16C22692	V826C23P						1	1	03/23/16 2123	"water"
10	0323_16	STD VMS 5.0 PPB 16C22692	V826C23P						1	1	03/23/16 2143	"water"
11	0323_16a	RL VMS 5.0 PPB 16C22692	V826C23P						1	1	03/23/16 2143	"water"
12	0323_17	STD VMS 10 PPB 16C22692	V826C23P						1	1	03/23/16 2203	"water"
13	0323_18	MSTD VMS 25 PPB 16C22692	V826C23P						1	1	03/23/16 2223	"water"
14	0323_19	STD VMS 40 PPB 16C22692	V826C23P						1	1	03/23/16 2242	"water"
15	0323_20	STD VMS 75 PPB 16C22692	V826C23P						1	1	03/23/16 2302	"water"

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#	File ID	Sample ID	Method	WG	Product	Matrix	Account #	State	Dil.	Mult.	Injected	Misc.
16	0323_21	STD VMS 100 PPB 16C22692	V826C23P						1	1	03/23/16 2321	"water"
17	0323_22	STD VMS 200 PPB 16C22692	V826C23P						1	1	03/23/16 2341	"water"
18	0323_24	SSCV VMS 25 PPB 16C22693	V826C23P						1	1	03/24/16 0021	"water"
19	0323_28	STD VMS 2.5A PPB 16B23985	V826C23P						1	1	03/24/16 0140	"water"
20	0323_29	STD VMS 5A PPB 16B23985	V826C23P						1	1	03/24/16 0200	"water"
21	0323_30	STD VMS 7.5A PPB 16B23985	V826C23P						1	1	03/24/16 0220	"water"
22	0323_31	MSTD VMS 10A PPB 16B23985	V826C23P						1	1	03/24/16 0239	"water"
23	0323_32	STD VMS 12.5A PPB 16B23985	V826C23P						1	1	03/24/16 0259	"water"
24	0323_33	STD VMS 15A PPB 16B23985	V826C23P						1	1	03/24/16 0319	"water"
25	0323_34	STD VMS 17.5A PPB 16B23985	V826C23P						1	1	03/24/16 0339	"water"
26	0323_35	STD VMS 20A PPB 16B23985	V826C23P						1	1	03/24/16 0358	"water"
27	0323_39	STD VMS 1A PPB 16B23985	V826C23P						1	1	03/24/16 1131	"water"
28	0323_39A	RL VMS 1A PPB 16B23985	V826C23P						1	1	03/24/16 1131	"water"

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

Injection Log

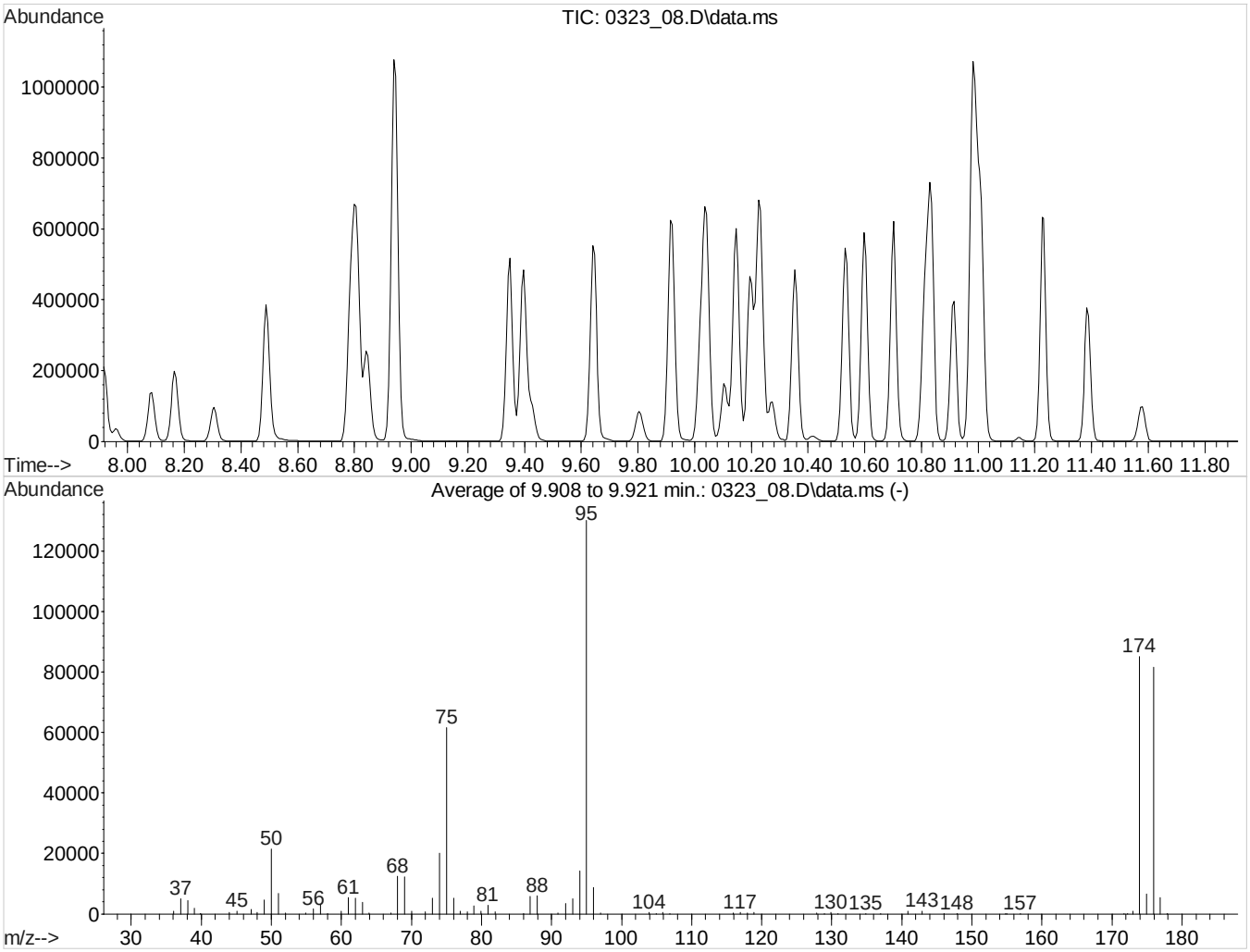
Instrument ID : VOCMS26
Computer Name : VOCCOMPAO
Released By : Jessica hawkins
Date Released : 3/24/2016 1:42:30 PM
Run ID : 032316
Signature : _____

#	File ID	Sample ID	Method	WG	Product	Matrix	Account #	State	Dil.	Mult.	Injected	Misc.
29	0323_40	SSCV VMS 10A PPB 16A19936	V826C23P						1	1	03/24/16 1151	"water"

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 08.D
Acq On : 23 Mar 2016 4:16 pm
Operator :
Sample : 25 ppb
Misc : water
ALS Vial : 8 Sample Multiplier: 1

Integration File: RTEINT.P

Method : C:\msdchem\1\methods\V826B19P.M
Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
Last Update : Mon Feb 22 09:55:05 2016



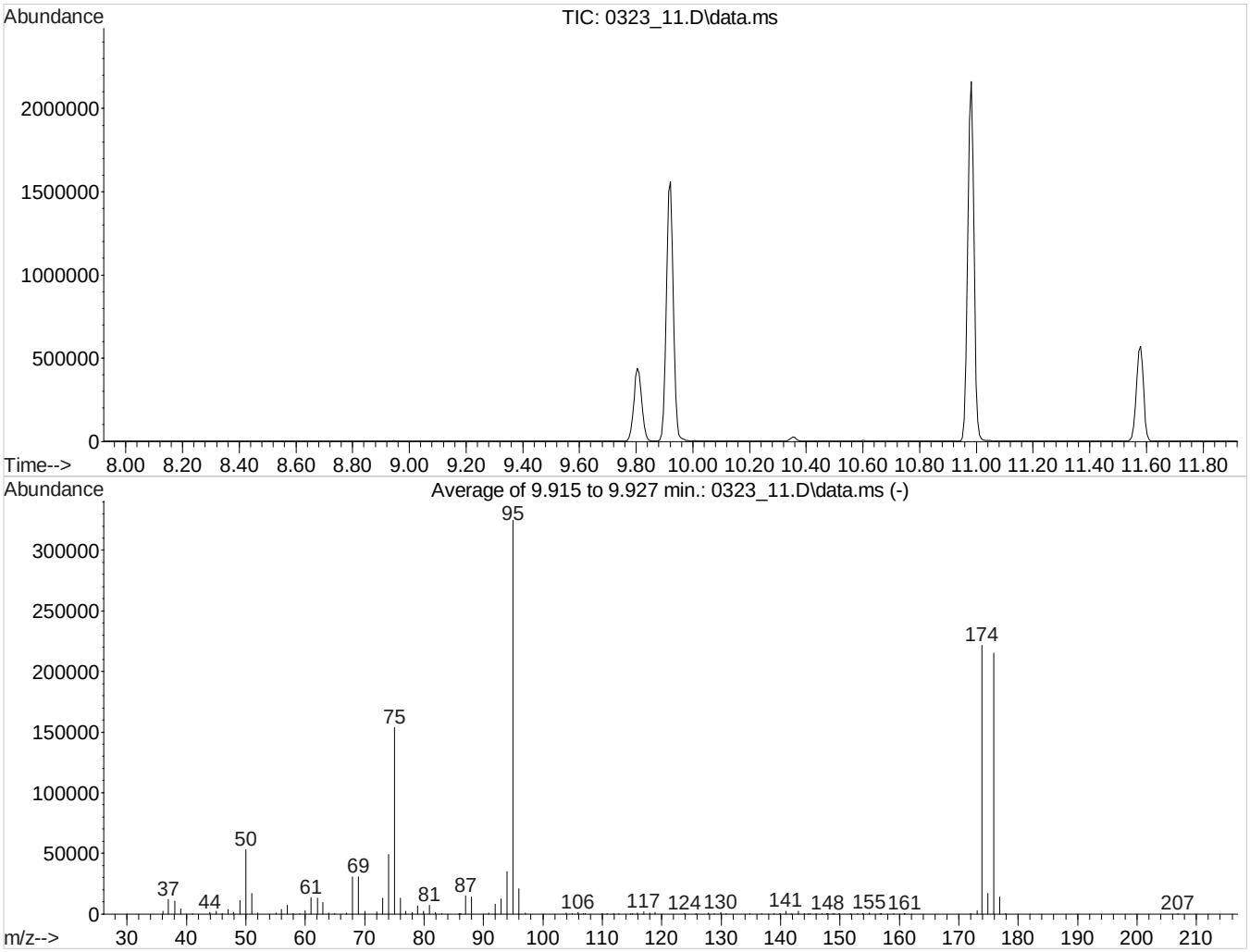
AutoFind: Scans 1611, 1612, 1613; Background Corrected with Scan 1603

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	16.5	21523	PASS
75	95	30	60	47.3	61571	PASS
95	95	100	100	100.0	130173	PASS
96	95	5	9	6.7	8672	PASS
173	174	0.00	2	1.1	950	PASS
174	95	50	150	65.4	85101	PASS
175	174	5	9	7.7	6595	PASS
176	174	95	101	95.9	81621	PASS
177	176	5	9	6.6	5390	PASS

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 11.D
Acq On : 23 Mar 2016 8:05 pm
Operator :
Sample : INSTBLK
Misc : water
ALS Vial : 2 Sample Multiplier: 1

Integration File: RTEINT.P

Method : C:\msdchem\1\methods\V826C23P.M
Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
Last Update : Thu Mar 24 11:51:41 2016



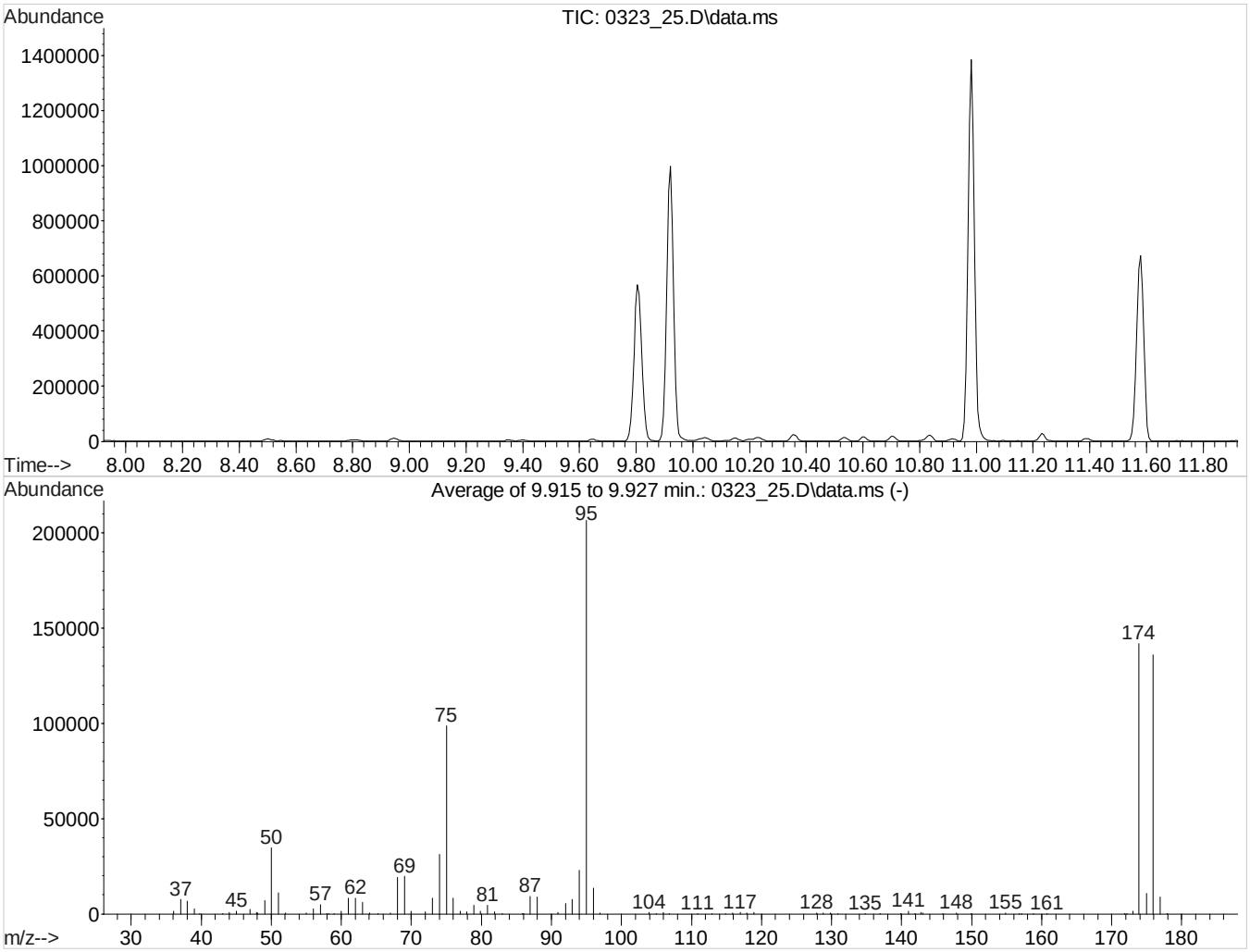
Spectrum Information: Average of 9.915 to 9.927 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	16.3	52920	PASS
75	95	30	60	47.3	153488	PASS
95	95	100	100	100.0	324779	PASS
96	95	5	9	6.4	20748	PASS
173	174	0.00	2	1.1	2520	PASS
174	95	50	150	68.2	221589	PASS
175	174	5	9	7.6	16855	PASS
176	174	95	101	97.2	215317	PASS
177	176	5	9	6.5	14021	PASS

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 25.D
Acq On : 24 Mar 2016 12:41 am
Operator :
Sample : INSTBLK
Misc : water
ALS Vial : 16 Sample Multiplier: 1

Integration File: RTEINT.P

Method : C:\msdchem\1\methods\V826C23P.M
Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
Last Update : Thu Mar 24 11:51:41 2016



Spectrum Information: Average of 9.915 to 9.927 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	16.8	34632	PASS
75	95	30	60	47.8	98877	PASS
95	95	100	100	100.0	206699	PASS
96	95	5	9	6.5	13397	PASS
173	174	0.00	2	1.1	1563	PASS
174	95	50	150	68.6	141824	PASS
175	174	5	9	7.5	10585	PASS
176	174	95	101	96.0	136117	PASS
177	176	5	9	6.5	8900	PASS

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS26
Method : V826C23P
Review Method : 624
Review Protocol : EPA
Released By : Jessica hawkins
Released On : 3/24/2016 1:42:31 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V826C23P -- ICal Updated Time: Thu Mar 24 11:51:41 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
8260-PENTAFLUOROBENZENE																								
TPH (GC/MS) LOW FRACTION																					0	0	0	1
PROPENE				0.097	0.079	0.08	0.075	0.072	0.071	0.07	0.063										0.075969	13.3	0.133	1
DICHLORODIFLUOROMETHANE	0.493	0.511	0.551	0.513	0.463	0.517	0.504	0.505	0.516	0.504	0.494										0.506389	4.19	0.042	1
CHLOROMETHANE	0.731	0.69	0.65	0.642	0.625	0.649	0.63	0.612	0.634	0.626	0.596										0.644149	5.82	0.058	1
VINYL CHLORIDE	0.726	0.695	0.701	0.656	0.671	0.707	0.704	0.668	0.713	0.714	0.706										0.696468	3.18	0.032	1
1,3-BUTADIENE	0.483	0.443	0.416	0.385	0.367	0.39	0.39	0.383	0.397	0.4	0.397										0.404745	7.99	0.08	1
BROMOMETHANE	0.459	0.423	0.451	0.444	0.436	0.46	0.446	0.467	0.481	0.501	0.491										0.459914	5.17	0.052	1
CHLOROETHANE	0.368	0.413	0.421	0.407	0.392	0.416	0.414	0.407	0.424	0.436	0.424										0.410986	4.48	0.045	1
TRICHLOROFLUOROMETHANE			0.794	0.771	0.781	0.798	0.808	0.807	0.83	0.856	0.852										0.810788	3.66	0.037	1
DICHLOROFLUOROMETHANE	1.027	0.999	1.065	1.011	0.995	1.005	1.014	0.99	1.024	1.059	1.04										1.020801	2.45	0.024	1
ETHYL ETHER	0.277	0.38	0.391	0.374	0.37	0.394	0.406	0.381	0.41	0.41	0.398										0.381069	9.8	0.098	1
ACROLEIN			0.008	0.009	0.008	0.009	0.009	0.009	0.01	0.011											0.009099	10.37	0.104	1
1,1-DICHLOROETHENE	0.687	0.768	0.739	0.799	0.8	0.822	0.82	0.782	0.844	0.841	0.829										0.793698	6.01	0.06	1
1,1,2 -TRICHLOROTRIFLUOROETHANE	0.423	0.487	0.518	0.516	0.507	0.524	0.524	0.513	0.535	0.535	0.513										0.508641	6.17	0.062	1
ACETONE				0.169	0.139	0.131	0.107	0.126	0.132	0.131	0.134										0.133512	13.03	0.13	1
IODOMETHANE	0.755	0.785	0.786	0.753	0.753	0.779	0.775	0.771	0.799	0.809	0.796										0.778399	2.46	0.025	1
CARBON DISULFIDE	1.646	1.723	1.69	1.666	1.698	1.726	1.707	1.625	1.764	1.784	1.754										1.707616	2.89	0.029	1
METHYLENE CHLORIDE	0.563	0.56	0.592	0.55	0.531	0.544	0.541	0.535	0.545	0.55	0.548										0.550849	3.01	0.03	1
ACRYLONITRILE	0.114	0.131	0.134	0.141	0.14	0.144	0.141	0.146	0.153	0.153	0.155										0.141027	8.48	0.085	1
N-HEXANE	0.537	0.508	0.481	0.506	0.501	0.504	0.505	0.507	0.511	0.514	0.51										0.507725	2.54	0.025	1
TRANS-1,2-DICHLOROETHENE	0.512	0.507	0.552	0.54	0.538	0.567	0.564	0.56	0.574	0.57	0.575										0.550816	4.32	0.043	1

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS26
Method : V826C23P
Review Method : 624
Review Protocol : EPA
Released By : Jessica hawkins
Released On : 3/24/2016 1:42:31 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V826C23P -- ICal Updated Time: Thu Mar 24 11:51:41 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
METHYL TERT-BUTYL ETHER	1.051	1.127	1.227	1.137	1.171	1.177	1.181	1.159	1.195	1.226	1.225										1.170538	4.48	0.045	1
1,1-DICHLOROETHANE	0.817	0.976	1.015	0.982	0.977	0.99	1.009	0.997	1.015	1.022	1.014										0.982992	5.85	0.059	1
VINYL ACETATE	0.69	0.797	0.766	0.765	0.769	0.786	0.792	0.794	0.828	0.786	0.708										0.770935	5.19	0.052	1
DI-ISOPROPYL ETHER	1.343	1.427	1.518	1.475	1.507	1.516	1.528	1.516	1.548	1.578	1.574										1.50289	4.51	0.045	1
2,2-Dichloropropane	0.562	0.578	0.605	0.557	0.58	0.571	0.543	0.533	0.528	0.521	0.476										0.550552	6.45	0.064	1
CIS-1,2-DICHLOROETHENE	0.529	0.569	0.605	0.576	0.586	0.603	0.601	0.594	0.603	0.609	0.608										0.589405	4.08	0.041	1
2-BUTANONE (MEK)	0.193	0.197	0.197	0.199	0.194	0.196	0.194	0.204	0.215	0.218	0.222										0.202531	5.25	0.052	1
BROMOCHLOROMETHANE	0.265	0.29	0.315	0.304	0.299	0.31	0.313	0.311	0.32	0.32	0.321										0.30622	5.38	0.054	1
TETRAHYDROFURAN	0.142	0.134	0.12	0.132	0.119	0.121	0.109	0.118	0.123	0.124	0.124										0.124215	7.16	0.072	1
CHLOROFORM	0.894	1.004	0.992	0.977	0.97	0.996	0.994	0.986	1.007	1.016	1.012										0.986141	3.42	0.034	1
DIBROMOFLUOROMETHANE	0.572	0.573	0.579	0.559	0.558	0.568	0.569	0.558	0.567	0.559	0.567										0.566117	1.2	0.012	1
1,1,1-TRICHLOROETHANE	0.633	0.712	0.753	0.714	0.758	0.747	0.742	0.744	0.749	0.756	0.772										0.734579	5.2	0.052	1
CARBON TETRACHLORIDE	0.695	0.759	0.717	0.64	0.634	0.655	0.638	0.634	0.65	0.664	0.674										0.668917	5.96	0.06	1
1,1-Dichloropropene	0.692	0.788	0.81	0.793	0.799	0.823	0.832	0.826	0.845	0.845	0.844										0.808718	5.43	0.054	1
2,2,4-TRIMETHYLPENTANE	2.028	2.27	2.276	2.222	2.269	2.303	2.258	2.223	2.333	2.378	2.282										2.258406	3.93	0.039	1
n-Heptane	0.858	0.925	0.847	0.874	0.913	0.915	0.932	0.956	0.957	0.97	0.986										0.921212	4.98	0.05	1
BENZENE	1.956	2.277	2.256	2.188	2.219	2.24	2.255	2.234	2.27	2.296	2.271										2.223687	4.21	0.042	1
1,2-DICHLOROETHANE	0.553	0.573	0.598	0.601	0.603	0.601	0.613	0.608	0.619	0.625	0.617										0.600968	3.49	0.035	1
8260-1,4-DIFLUOROBENZENE																								
TRICHLOROETHENE	0.26	0.272	0.276	0.289	0.292	0.301	0.302	0.3	0.305	0.305	0.305										0.291633	5.34	0.053	1
1,2-DICHLOROPROPANE	0.171	0.21	0.212	0.209	0.207	0.212	0.213	0.215	0.214	0.218	0.212										0.208596	6.17	0.062	1
DIBROMOMETHANE	0.125	0.159	0.159	0.165	0.16	0.163	0.163	0.163	0.167	0.167	0.165										0.15976	7.48	0.075	1

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS26
Method : V826C23P
Review Method : 624
Review Protocol : EPA
Released By : Jessica hawkins
Released On : 3/24/2016 1:42:31 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V826C23P -- ICal Updated Time: Thu Mar 24 11:51:41 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
BROMODICHLOROMETHANE	0.294	0.336	0.358	0.367	0.362	0.369	0.377	0.38	0.389	0.393	0.388										0.364752	7.89	0.079	1
a,a,a-Trifluorotoluene	0.507	0.51	0.513	0.505	0.511	0.514	0.502	0.498	0.498	0.497	0.492										0.504374	1.45	0.015	1
-CHLOROETHYL VINYL ETHER	0.125	0.149	0.154	0.166	0.166	0.17	0.175	0.179	0.184	0.188	0.182										0.167118	11.08	0.111	1
CIS-1,3-DICHLOROPROPENE	0.382	0.41	0.451	0.447	0.458	0.472	0.483	0.487	0.491	0.496	0.488										0.46046	7.91	0.079	1
4-METHYL-2-PENTANONE (MIBK)	0.159	0.18	0.179	0.184	0.189	0.191	0.197	0.199	0.21	0.211	0.206										0.191314	8.09	0.081	1
TOLUENE-D8	1.257	1.259	1.264	1.253	1.247	1.253	1.243	1.235	1.228	1.219	1.201										1.2418	1.56	0.016	1
TOLUENE	1.184	1.261	1.27	1.28	1.273	1.265	1.265	1.27	1.283	1.287	1.246										1.262249	2.24	0.022	1
TRANS-1,3-DICHLOROPROPENE			0.435	0.555	0.454	0.434	0.422	0.423	0.429	0.437	0.427										0.446381	9.4	0.094	1
8260-2-BROMO-1 -CHLOROPROPANE																								
1,1,2-TRICHLOROETHANE	1.213	1.328	1.355	1.296	1.297	1.34	1.343	1.351	1.369	1.353	1.351										1.326867	3.35	0.033	1
TETRACHLOROETHENE	1.058	1.192	1.216	1.218	1.171	1.211	1.235	1.24	1.262	1.253	1.257										1.210034	4.77	0.048	1
1,3-Dichloropropane	2.008	2.383	2.464	2.466	2.374	2.474	2.499	2.514	2.564	2.556	2.523										2.438591	6.37	0.064	1
2-HEXANONE	0.402	0.435	0.47	0.499	0.498	0.535	0.553	0.575	0.608	0.599	0.611										0.525972	13.56	0.136	1
CHLORODIBROMOMETHANE	1.416	1.377	1.402	1.375	1.385	1.445	1.49	1.498	1.553	1.549	1.565										1.459633	5.08	0.051	1
1,2-DIBROMOETHANE	1.052	1.259	1.291	1.33	1.266	1.334	1.337	1.352	1.389	1.377	1.376										1.305759	7.25	0.073	1
CHLOROBENZENE	3.949	4.211	4.23	4.507	4.422	4.544	4.595	4.622	4.666	4.635	4.627										4.455356	5.18	0.052	1
1,1,1,2-TETRACHLOROETHANE	1.178	1.189	1.327	1.279	1.316	1.339	1.353	1.337	1.372	1.394	1.375										1.314531	5.47	0.055	1
ETHYLBENZENE	2.309	2.266	2.5	2.458	2.449	2.571	2.575	2.594	2.625	2.619	2.611										2.506961	5	0.05	1
M&P-XYLENE	2.738	2.986	3.003	3.013	3	3.121	3.158	3.174	3.232	3.186	3.189										3.072885	4.66	0.047	1
O-XYLENE	2.657	2.783	2.718	2.739	2.7	2.858	2.882	2.877	2.927	2.92	2.882										2.812924	3.41	0.034	1
STYRENE	3.412	4.067	4.115	4.283	4.333	4.61	4.776	4.836	5.007	4.933	4.912										4.480219	10.95	0.11	1
Bromoform	0.506	0.643	0.675	0.707	0.732	0.768	0.804	0.82	0.873	0.864	0.873										0.751332	15.18	0.152	1

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS26
Method : V826C23P
Review Method : 624
Review Protocol : EPA
Released By : Jessica hawkins
Released On : 3/24/2016 1:42:31 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V826C23P -- ICal Updated Time: Thu Mar 24 11:51:41 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
Isopropylbenzene	6.669	7.111	7.369	7.337	7.353	7.716	7.698	7.703	7.795	7.735	7.536										7.456451	4.56	0.046	1
4-BROMOFLUOROBENZENE	2.728	2.661	2.667	2.668	2.605	2.661	2.661	2.624	2.637	2.564	2.544										2.638147	1.97	0.02	1
Bromobenzene	3.488	3.475	3.594	3.465	3.24	3.423	3.401	3.395	3.448	3.405	3.385										3.429011	2.52	0.025	1
1,1,2,2-TETRACHLOROETHANE	1.489	1.54	1.568	1.584	1.573	1.645	1.654	1.641	1.715	1.685	1.668										1.614691	4.25	0.043	1
1,2,3-TRICHLOROPROPANE		0.413	0.452	0.458	0.435	0.473	0.473	0.474	0.488	0.482	0.485										0.463443	5.18	0.052	1
TRANS-1,4-DICHLORO-2-BUTENE		0.337	0.356	0.377	0.363	0.388	0.397	0.398	0.428	0.413	0.435										0.389295	8.15	0.081	1
n-Propylbenzene	9.518	9.708	9.608	9.478	9.257	9.655	9.628	9.648	9.768	9.545	9.194										9.546236	1.88	0.019	1
4-ETHYLTOLUENE	8.126	7.934	7.945	7.651	7.597	7.857	7.963	7.961	8.038	7.833	7.706										7.873863	2.09	0.021	1
2-Chlorotoluene	1.519	1.543	1.674	1.688	1.647	1.7	1.695	1.701	1.722	1.708	1.689										1.662337	4.09	0.041	1
4-Chlorotoluene	5.197	5.366	5.463	5.631	5.414	5.602	5.641	5.639	5.703	5.575	5.502										5.5212	2.73	0.027	1
1,3,5-Trimethylbenzene	5.98	5.712	6.182	6.035	6.068	6.206	6.224	6.217	6.285	6.248	6.259										6.128762	2.78	0.028	1
tert-Butylbenzene	4.478	4.795	5.105	5.005	5.066	5.26	5.244	5.28	5.275	5.299	5.337										5.104	5.17	0.052	1
1,2,4-Trimethylbenzene	6.25	6.034	6.314	6.092	6.046	6.284	6.281	6.243	6.342	6.29	6.27										6.222332	1.77	0.018	1
sec-Butylbenzene	7.033	7.795	8.16	8.264	8.218	8.472	8.374	8.408	8.443	8.415	8.314										8.172417	5.18	0.052	1
1,3-DICHLOROBENZENE	2.787	2.818	2.942	3.057	2.928	2.99	3.052	3.031	3.056	3.004	2.987										2.968359	3.13	0.031	1
p-Isopropyltoluene	5.664	6.061	6.343	6.481	6.562	6.693	6.749	6.817	6.829	6.839	6.897										6.539637	5.89	0.059	1
DICYCLOPENTADIENE	6.245	7.079	7.35	7.556	7.628	7.898	7.915	7.912	8.033	8.076	8.095										7.616971	7.33	0.073	1
8260-1,4-DICHLOROBENZENE-D4																								
1,4-DICHLOROBENZENE	1.222	1.319	1.298	1.333	1.27	1.273	1.274	1.292	1.31	1.303	1.296										1.289992	2.32	0.023	1
1,2,3-TRIMETHYLBENZENE	2.51	2.583	2.556	2.576	2.587	2.598	2.556	2.605	2.643	2.731	2.704										2.604577	2.51	0.025	1
1,2-DICHLOROBENZENE	1.027	1.126	1.123	1.165	1.144	1.161	1.15	1.168	1.184	1.199	1.183										1.148167	4.05	0.04	1
n-Butylbenzene	2.488	2.644	2.721	2.727	2.776	2.778	2.802	2.842	2.862	2.853	2.841										2.757845	4.05	0.041	1
1,2-Dibromo-3-chloropropane	0.085	0.081	0.119	0.092	0.106	0.105	0.107	0.111	0.12	0.123	0.125										0.10676	14.29	0.042	1

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Released On : 3/24/2016 1:42:31 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V826C23P -- ICal Updated Time: Thu Mar 24 11:51:41 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
1,2,4-Trichlorobenzene	0.664	0.712	0.711	0.7	0.713	0.666	0.696	0.701	0.741	0.746	0.778										0.711496	4.72	0.047	1
HEXACHLORO-1,3-BUTADIENE	0.323	0.337	0.364	0.384	0.387	0.371	0.37	0.377	0.39	0.409	0.428										0.376423	7.83	0.078	1
Naphthalene	2.352	1.919	1.86	1.821	1.752	1.678	1.726	1.786	1.945	2	2.01										1.895265	9.89	0.099	1
1,2,3-Trichlorobenzene	0.651	0.635	0.689	0.649	0.648	0.613	0.634	0.641	0.679	0.705	0.718										0.65999	5	0.05	1
1-Methylnaphthalene		1.134	1.046	1.022	0.938	0.895	0.973	1.037	1.157	1.193	1.199										1.059431	10.12	0.101	1
2-Methylnaphthalene	1.111	0.901	0.833	0.801	0.792	0.732	0.792	0.838	0.927	0.952	0.943										0.874792	12.13	0.121	1
AP9-PENTAFLUOROBENZENE																								
ETHANOL																					0	0	0	1
Bromoethane												0.445	0.506	0.521	0.519	0.529	0.522	0.473	0.495	0.504	0.501689	5.42	0.054	1
2-PROPANOL												0.026	0.028	0.029	0.024	0.026	0.029	0.026	0.027	0.026	0.026756	5.97	0.06	1
Methyl Acetate												0.217	0.248	0.269	0.254	0.269	0.274	0.242	0.25	0.259	0.25349	6.92	0.069	1
ACETONITRILE												0.034	0.042	0.044	0.043	0.046	0.048	0.042	0.043	0.045	0.043243	9.18	0.092	1
ALLYL CHLORIDE												0.253	0.286	0.295	0.292	0.299	0.296	0.268	0.284	0.286	0.284275	5.27	0.053	1
tert-BUTYL ALCOHOL												0.042	0.057	0.062	0.054	0.062	0.063	0.057	0.055	0.063	0.057142	11.77	0.118	1
chloroprene												0.699	0.765	0.793	0.788	0.827	0.814	0.793	0.778	0.787	0.78276	4.64	0.046	1
ETHYL TERT-BUTYL ETHER												1.264	1.369	1.477	1.405	1.509	1.435	1.435	1.354	1.45	1.410874	5.21	0.052	1
PROPIONITRILE												0.046	0.054	0.059	0.055	0.06	0.061	0.057	0.055	0.056	0.055911	7.43	0.074	1
Ethyl Acetate												0.331	0.372	0.405	0.386	0.413	0.42	0.395	0.392	0.399	0.390286	6.8	0.068	1
METHACRYLONITRILE												0.153	0.171	0.186	0.179	0.189	0.191	0.18	0.177	0.182	0.178459	6.43	0.064	1
Cyclohexane												1.235	1.373	1.45	1.362	1.491	1.419	1.415	1.317	1.408	1.385616	5.47	0.055	1
tert-butyl formate												0.289	0.341	0.373	0.356	0.392	0.379	0.378	0.352	0.389	0.36108	8.85	0.088	1
ISOBUTANOL												0.008	0.01	0.011	0.01	0.012	0.012	0.011	0.011	0.012	0.01079	12.32	0.123	1

Environmental Science Corporation
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INITIAL CALIBRATION SUMMARY

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Released On : 3/24/2016 1:42:31 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V826C23P -- ICal Updated Time: Thu Mar 24 11:51:41 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
Amyl Alcohol												0.028	0.039	0.042	0.036	0.039	0.041	0.039	0.036	0.039	0.03762	11.04	0.11	1
TERT-AMYL METHYL ETHER												1.483	1.531	1.659	1.549	1.678	1.596	1.605	1.488	1.617	1.578298	4.45	0.044	1
AP9-1,4-DIFLUOROBENZENE																								
N-BUTANOL												0.005	0.006	0.007	0.006	0.007	0.008	0.007	0.007	0.007	0.006725	12.62	0.126	1
Methyl Cyclohexane												1.078	0.843	0.818	0.749	0.799	0.749	0.754	0.684	0.729	0.800358	14.32	0.143	1
2-nitropropane												0.05	0.052	0.06	0.056	0.062	0.061	0.058	0.058	0.059	0.057354	6.84	0.068	1
METHYL METHACRYLATE												0.142	0.165	0.179	0.174	0.18	0.186	0.175	0.174	0.174	0.172041	7.38	0.074	1
1,4-DIOXANE												0.001	0.003	0.002	0.002	0.003	0.003				0.002302	25.87	0.994	0
n-octane												0.283	0.291	0.316	0.31	0.322	0.317	0.318	0.305	0.307	0.307481	4.23	0.042	1
3,3-DIMETHYL-1-BUTANOL												0.019	0.022	0.026	0.025	0.028	0.029	0.027	0.025	0.028	0.025466	12.04	0.12	1
AP9-2-BROMO-1 -CHLOROPROPANE																								
ETHYL METHACRYLATE												1.526	1.661	1.874	1.849	1.975	2.008	1.942	1.943	1.954	1.859077	8.69	0.087	1
CIS-1,4-DICHLORO-2-BUTENE												0.298	0.363	0.398	0.399	0.42	0.427	0.404	0.4	0.406	0.390475	10	0.1	1
Cyclohexanone												0.089	0.116	0.113	0.12	0.13	0.097	0.098	0.095	0.112	0.107774	12.76	0.128	1
PENTACHLOROETHANE												0.692	0.878	0.985	0.948	1.033	1.02	1.026	0.981	1.022	0.95407	11.51	0.115	1
Hexachloroethane												1.178	1.146	1.253	1.243	1.337	1.301	1.292	1.26	1.3	1.256797	4.89	0.049	1
AP9-1,4-DICHLOROBENZENE-D4																								

Environmental Science Corporation
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INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS26
Method : V826C23P
Review Method : 601-602
Review Protocol : EPA
Released By : Jessica hawkins
Released On : 3/24/2016 1:40:05 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V826C23P -- ICal Updated Time: Thu Mar 24 11:51:41 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
8260-PENTAFLUOROBENZENE																								
TPH (GC/MS) LOW FRACTION																					0	0	0	1
PROPENE				0.097	0.079	0.08	0.075	0.072	0.071	0.07	0.063										0.075969	13.3	0.133	1
DICHLORODIFLUOROMETHANE	0.493	0.511	0.551	0.513	0.463	0.517	0.504	0.505	0.516	0.504	0.494										0.506389	4.19	0.042	1
CHLOROMETHANE	0.731	0.69	0.65	0.642	0.625	0.649	0.63	0.612	0.634	0.626	0.596										0.644149	5.82	0.058	1
VINYL CHLORIDE	0.726	0.695	0.701	0.656	0.671	0.707	0.704	0.668	0.713	0.714	0.706										0.696468	3.18	0.032	1
1,3-BUTADIENE	0.483	0.443	0.416	0.385	0.367	0.39	0.39	0.383	0.397	0.4	0.397										0.404745	7.99	0.08	1
BROMOMETHANE	0.459	0.423	0.451	0.444	0.436	0.46	0.446	0.467	0.481	0.501	0.491										0.459914	5.17	0.052	1
CHLOROETHANE	0.368	0.413	0.421	0.407	0.392	0.416	0.414	0.407	0.424	0.436	0.424										0.410986	4.48	0.045	1
TRICHLOROFLUOROMETHANE			0.794	0.771	0.781	0.798	0.808	0.807	0.83	0.856	0.852										0.810788	3.66	0.037	1
DICHLOROFLUOROMETHANE	1.027	0.999	1.065	1.011	0.995	1.005	1.014	0.99	1.024	1.059	1.04										1.020801	2.45	0.024	1
ETHYL ETHER	0.277	0.38	0.391	0.374	0.37	0.394	0.406	0.381	0.41	0.41	0.398										0.381069	9.8	0.098	1
ACROLEIN			0.008	0.009	0.008	0.009	0.009	0.009	0.01	0.011											0.009099	10.37	0.104	1
1,1-DICHLOROETHENE	0.687	0.768	0.739	0.799	0.8	0.822	0.82	0.782	0.844	0.841	0.829										0.793698	6.01	0.06	1
1,1,2 -TRICHLOROTRIFLUOROETHANE	0.423	0.487	0.518	0.516	0.507	0.524	0.524	0.513	0.535	0.535	0.513										0.508641	6.17	0.062	1
ACETONE				0.169	0.139	0.131	0.107	0.126	0.132	0.131	0.134										0.133512	13.03	0.13	1
IODOMETHANE	0.755	0.785	0.786	0.753	0.753	0.779	0.775	0.771	0.799	0.809	0.796										0.778399	2.46	0.025	1
CARBON DISULFIDE	1.646	1.723	1.69	1.666	1.698	1.726	1.707	1.625	1.764	1.784	1.754										1.707616	2.89	0.029	1
METHYLENE CHLORIDE	0.563	0.56	0.592	0.55	0.531	0.544	0.541	0.535	0.545	0.55	0.548										0.550849	3.01	0.03	1
ACRYLONITRILE	0.114	0.131	0.134	0.141	0.14	0.144	0.141	0.146	0.153	0.153	0.155										0.141027	8.48	0.085	1
N-HEXANE	0.537	0.508	0.481	0.506	0.501	0.504	0.505	0.507	0.511	0.514	0.51										0.507725	2.54	0.025	1
TRANS-1,2-DICHLOROETHENE	0.512	0.507	0.552	0.54	0.538	0.567	0.564	0.56	0.574	0.57	0.575										0.550816	4.32	0.043	1

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METHYL TERT-BUTYL ETHER	1.051	1.127	1.227	1.137	1.171	1.177	1.181	1.159	1.195	1.226	1.225										1.170538	4.48	0.045	1
1,1-DICHLOROETHANE	0.817	0.976	1.015	0.982	0.977	0.99	1.009	0.997	1.015	1.022	1.014										0.982992	5.85	0.059	1
VINYL ACETATE	0.69	0.797	0.766	0.765	0.769	0.786	0.792	0.794	0.828	0.786	0.708										0.770935	5.19	0.052	1
DI-ISOPROPYL ETHER	1.343	1.427	1.518	1.475	1.507	1.516	1.528	1.516	1.548	1.578	1.574										1.50289	4.51	0.045	1
2,2-Dichloropropane	0.562	0.578	0.605	0.557	0.58	0.571	0.543	0.533	0.528	0.521	0.476										0.550552	6.45	0.064	1
CIS-1,2-DICHLOROETHENE	0.529	0.569	0.605	0.576	0.586	0.603	0.601	0.594	0.603	0.609	0.608										0.589405	4.08	0.041	1
2-BUTANONE (MEK)	0.193	0.197	0.197	0.199	0.194	0.196	0.194	0.204	0.215	0.218	0.222										0.202531	5.25	0.052	1
BROMOCHLOROMETHANE	0.265	0.29	0.315	0.304	0.299	0.31	0.313	0.311	0.32	0.32	0.321										0.30622	5.38	0.054	1
TETRAHYDROFURAN	0.142	0.134	0.12	0.132	0.119	0.121	0.109	0.118	0.123	0.124	0.124										0.124215	7.16	0.072	1
CHLOROFORM	0.894	1.004	0.992	0.977	0.97	0.996	0.994	0.986	1.007	1.016	1.012										0.986141	3.42	0.034	1
DIBROMOFLUOROMETHANE	0.572	0.573	0.579	0.559	0.558	0.568	0.569	0.558	0.567	0.559	0.567										0.566117	1.2	0.012	1
1,1,1-TRICHLOROETHANE	0.633	0.712	0.753	0.714	0.758	0.747	0.742	0.744	0.749	0.756	0.772										0.734579	5.2	0.052	1
CARBON TETRACHLORIDE	0.695	0.759	0.717	0.64	0.634	0.655	0.638	0.634	0.65	0.664	0.674										0.668917	5.96	0.06	1
1,1-Dichloropropene	0.692	0.788	0.81	0.793	0.799	0.823	0.832	0.826	0.845	0.845	0.844										0.808718	5.43	0.054	1
2,2,4-TRIMETHYLPENTANE	2.028	2.27	2.276	2.222	2.269	2.303	2.258	2.223	2.333	2.378	2.282										2.258406	3.93	0.039	1
n-Heptane	0.858	0.925	0.847	0.874	0.913	0.915	0.932	0.956	0.957	0.97	0.986										0.921212	4.98	0.05	1
BENZENE	1.956	2.277	2.256	2.188	2.219	2.24	2.255	2.234	2.27	2.296	2.271										2.223687	4.21	0.042	1
1,2-DICHLOROETHANE	0.553	0.573	0.598	0.601	0.603	0.601	0.613	0.608	0.619	0.625	0.617										0.600968	3.49	0.035	1
8260-1,4-DIFLUOROBENZENE																								
TRICHLOROETHENE	0.26	0.272	0.276	0.289	0.292	0.301	0.302	0.3	0.305	0.305	0.305										0.291633	5.34	0.053	1
1,2-DICHLOROPROPANE	0.171	0.21	0.212	0.209	0.207	0.212	0.213	0.215	0.214	0.218	0.212										0.208596	6.17	0.062	1
DIBROMOMETHANE	0.125	0.159	0.159	0.165	0.16	0.163	0.163	0.163	0.167	0.167	0.165										0.15976	7.48	0.075	1

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS26
Method : V826C23P
Review Method : 601-602
Review Protocol : EPA
Released By : Jessica hawkins
Released On : 3/24/2016 1:40:05 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V826C23P -- ICal Updated Time: Thu Mar 24 11:51:41 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
BROMODICHLOROMETHANE	0.294	0.336	0.358	0.367	0.362	0.369	0.377	0.38	0.389	0.393	0.388										0.364752	7.89	0.079	1
a,a,a-Trifluorotoluene	0.507	0.51	0.513	0.505	0.511	0.514	0.502	0.498	0.498	0.497	0.492										0.504374	1.45	0.015	1
-CHLOROETHYL VINYL ETHER	0.125	0.149	0.154	0.166	0.166	0.17	0.175	0.179	0.184	0.188	0.182										0.167118	11.08	0.111	1
CIS-1,3-DICHLOROPROPENE	0.382	0.41	0.451	0.447	0.458	0.472	0.483	0.487	0.491	0.496	0.488										0.46046	7.91	0.079	1
4-METHYL-2-PENTANONE (MIBK)	0.159	0.18	0.179	0.184	0.189	0.191	0.197	0.199	0.21	0.211	0.206										0.191314	8.09	0.081	1
TOLUENE-D8	1.257	1.259	1.264	1.253	1.247	1.253	1.243	1.235	1.228	1.219	1.201										1.2418	1.56	0.016	1
TOLUENE	1.184	1.261	1.27	1.28	1.273	1.265	1.265	1.27	1.283	1.287	1.246										1.262249	2.24	0.022	1
TRANS-1,3-DICHLOROPROPENE			0.435	0.555	0.454	0.434	0.422	0.423	0.429	0.437	0.427										0.446381	9.4	0.094	1
8260-2-BROMO-1 -CHLOROPROPANE																								
1,1,2-TRICHLOROETHANE	1.213	1.328	1.355	1.296	1.297	1.34	1.343	1.351	1.369	1.353	1.351										1.326867	3.35	0.033	1
TETRACHLOROETHENE	1.058	1.192	1.216	1.218	1.171	1.211	1.235	1.24	1.262	1.253	1.257										1.210034	4.77	0.048	1
1,3-Dichloropropane	2.008	2.383	2.464	2.466	2.374	2.474	2.499	2.514	2.564	2.556	2.523										2.438591	6.37	0.064	1
2-HEXANONE	0.402	0.435	0.47	0.499	0.498	0.535	0.553	0.575	0.608	0.599	0.611										0.525972	13.56	0.136	1
CHLORODIBROMOMETHANE	1.416	1.377	1.402	1.375	1.385	1.445	1.49	1.498	1.553	1.549	1.565										1.459633	5.08	0.051	1
1,2-DIBROMOETHANE	1.052	1.259	1.291	1.33	1.266	1.334	1.337	1.352	1.389	1.377	1.376										1.305759	7.25	0.073	1
CHLOROBENZENE	3.949	4.211	4.23	4.507	4.422	4.544	4.595	4.622	4.666	4.635	4.627										4.455356	5.18	0.052	1
1,1,1,2-TETRACHLOROETHANE	1.178	1.189	1.327	1.279	1.316	1.339	1.353	1.337	1.372	1.394	1.375										1.314531	5.47	0.055	1
ETHYLBENZENE	2.309	2.266	2.5	2.458	2.449	2.571	2.575	2.594	2.625	2.619	2.611										2.506961	5	0.05	1
M&P-XYLENE	2.738	2.986	3.003	3.013	3	3.121	3.158	3.174	3.232	3.186	3.189										3.072885	4.66	0.047	1
O-XYLENE	2.657	2.783	2.718	2.739	2.7	2.858	2.882	2.877	2.927	2.92	2.882										2.812924	3.41	0.034	1
STYRENE	3.412	4.067	4.115	4.283	4.333	4.61	4.776	4.836	5.007	4.933	4.912										4.480219	10.95	0.11	1
Bromoform	0.506	0.643	0.675	0.707	0.732	0.768	0.804	0.82	0.873	0.864	0.873										0.751332	15.18	0.152	1

Environmental Science Corporation
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INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS26
Method : V826C23P
Review Method : 601-602
Review Protocol : EPA
Released By : Jessica hawkins
Released On : 3/24/2016 1:40:05 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V826C23P -- ICal Updated Time: Thu Mar 24 11:51:41 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
Isopropylbenzene	6.669	7.111	7.369	7.337	7.353	7.716	7.698	7.703	7.795	7.735	7.536										7.456451	4.56	0.046	1
4-BROMOFLUOROBENZENE	2.728	2.661	2.667	2.668	2.605	2.661	2.661	2.624	2.637	2.564	2.544										2.638147	1.97	0.02	1
Bromobenzene	3.488	3.475	3.594	3.465	3.24	3.423	3.401	3.395	3.448	3.405	3.385										3.429011	2.52	0.025	1
1,1,2,2-TETRACHLOROETHANE	1.489	1.54	1.568	1.584	1.573	1.645	1.654	1.641	1.715	1.685	1.668										1.614691	4.25	0.043	1
1,2,3-TRICHLOROPROPANE		0.413	0.452	0.458	0.435	0.473	0.473	0.474	0.488	0.482	0.485										0.463443	5.18	0.052	1
TRANS-1,4-DICHLORO-2-BUTENE		0.337	0.356	0.377	0.363	0.388	0.397	0.398	0.428	0.413	0.435										0.389295	8.15	0.081	1
n-Propylbenzene	9.518	9.708	9.608	9.478	9.257	9.655	9.628	9.648	9.768	9.545	9.194										9.546236	1.88	0.019	1
4-ETHYLTOLUENE	8.126	7.934	7.945	7.651	7.597	7.857	7.963	7.961	8.038	7.833	7.706										7.873863	2.09	0.021	1
2-Chlorotoluene	1.519	1.543	1.674	1.688	1.647	1.7	1.695	1.701	1.722	1.708	1.689										1.662337	4.09	0.041	1
4-Chlorotoluene	5.197	5.366	5.463	5.631	5.414	5.602	5.641	5.639	5.703	5.575	5.502										5.5212	2.73	0.027	1
1,3,5-Trimethylbenzene	5.98	5.712	6.182	6.035	6.068	6.206	6.224	6.217	6.285	6.248	6.259										6.128762	2.78	0.028	1
tert-Butylbenzene	4.478	4.795	5.105	5.005	5.066	5.26	5.244	5.28	5.275	5.299	5.337										5.104	5.17	0.052	1
1,2,4-Trimethylbenzene	6.25	6.034	6.314	6.092	6.046	6.284	6.281	6.243	6.342	6.29	6.27										6.222332	1.77	0.018	1
sec-Butylbenzene	7.033	7.795	8.16	8.264	8.218	8.472	8.374	8.408	8.443	8.415	8.314										8.172417	5.18	0.052	1
1,3-DICHLOROBENZENE	2.787	2.818	2.942	3.057	2.928	2.99	3.052	3.031	3.056	3.004	2.987										2.968359	3.13	0.031	1
p-Isopropyltoluene	5.664	6.061	6.343	6.481	6.562	6.693	6.749	6.817	6.829	6.839	6.897										6.539637	5.89	0.059	1
DICYCLOPENTADIENE	6.245	7.079	7.35	7.556	7.628	7.898	7.915	7.912	8.033	8.076	8.095										7.616971	7.33	0.073	1
8260-1,4-DICHLOROBENZENE-D4																								
1,4-DICHLOROBENZENE	1.222	1.319	1.298	1.333	1.27	1.273	1.274	1.292	1.31	1.303	1.296										1.289992	2.32	0.023	1
1,2,3-TRIMETHYLBENZENE	2.51	2.583	2.556	2.576	2.587	2.598	2.556	2.605	2.643	2.731	2.704										2.604577	2.51	0.025	1
1,2-DICHLOROBENZENE	1.027	1.126	1.123	1.165	1.144	1.161	1.15	1.168	1.184	1.199	1.183										1.148167	4.05	0.04	1
n-Butylbenzene	2.488	2.644	2.721	2.727	2.776	2.778	2.802	2.842	2.862	2.853	2.841										2.757845	4.05	0.041	1
1,2-Dibromo-3-chloropropane	0.085	0.081	0.119	0.092	0.106	0.105	0.107	0.111	0.12	0.123	0.125										0.10676	14.29	0.042	1

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS26
Method : V826C23P
Review Method : 601-602
Review Protocol : EPA
Released By : Jessica hawkins
Released On : 3/24/2016 1:40:05 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V826C23P -- ICal Updated Time: Thu Mar 24 11:51:41 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
1,2,4-Trichlorobenzene	0.664	0.712	0.711	0.7	0.713	0.666	0.696	0.701	0.741	0.746	0.778										0.711496	4.72	0.047	1
HEXACHLORO-1,3-BUTADIENE	0.323	0.337	0.364	0.384	0.387	0.371	0.37	0.377	0.39	0.409	0.428										0.376423	7.83	0.078	1
Naphthalene	2.352	1.919	1.86	1.821	1.752	1.678	1.726	1.786	1.945	2	2.01										1.895265	9.89	0.099	1
1,2,3-Trichlorobenzene	0.651	0.635	0.689	0.649	0.648	0.613	0.634	0.641	0.679	0.705	0.718										0.65999	5	0.05	1
1-Methylnaphthalene		1.134	1.046	1.022	0.938	0.895	0.973	1.037	1.157	1.193	1.199										1.059431	10.12	0.101	1
2-Methylnaphthalene	1.111	0.901	0.833	0.801	0.792	0.732	0.792	0.838	0.927	0.952	0.943										0.874792	12.13	0.121	1
AP9-PENTAFLUOROBENZENE																								
ETHANOL																					0	0	0	1
Bromoethane												0.445	0.506	0.521	0.519	0.529	0.522	0.473	0.495	0.504	0.501689	5.42	0.054	1
2-PROPANOL												0.026	0.028	0.029	0.024	0.026	0.029	0.026	0.027	0.026	0.026756	5.97	0.06	1
Methyl Acetate												0.217	0.248	0.269	0.254	0.269	0.274	0.242	0.25	0.259	0.25349	6.92	0.069	1
ACETONITRILE												0.034	0.042	0.044	0.043	0.046	0.048	0.042	0.043	0.045	0.043243	9.18	0.092	1
ALLYL CHLORIDE												0.253	0.286	0.295	0.292	0.299	0.296	0.268	0.284	0.286	0.284275	5.27	0.053	1
tert-BUTYL ALCOHOL												0.042	0.057	0.062	0.054	0.062	0.063	0.057	0.055	0.063	0.057142	11.77	0.118	1
chloroprene												0.699	0.765	0.793	0.788	0.827	0.814	0.793	0.778	0.787	0.78276	4.64	0.046	1
ETHYL TERT-BUTYL ETHER												1.264	1.369	1.477	1.405	1.509	1.435	1.435	1.354	1.45	1.410874	5.21	0.052	1
PROPIONITRILE												0.046	0.054	0.059	0.055	0.06	0.061	0.057	0.055	0.056	0.055911	7.43	0.074	1
Ethyl Acetate												0.331	0.372	0.405	0.386	0.413	0.42	0.395	0.392	0.399	0.390286	6.8	0.068	1
METHACRYLONITRILE												0.153	0.171	0.186	0.179	0.189	0.191	0.18	0.177	0.182	0.178459	6.43	0.064	1
Cyclohexane												1.235	1.373	1.45	1.362	1.491	1.419	1.415	1.317	1.408	1.385616	5.47	0.055	1
tert-butyl formate												0.289	0.341	0.373	0.356	0.392	0.379	0.378	0.352	0.389	0.36108	8.85	0.088	1
ISOBUTANOL												0.008	0.01	0.011	0.01	0.012	0.012	0.011	0.011	0.012	0.01079	12.32	0.123	1

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS26
Method : V826C23P
Review Method : 601-602
Review Protocol : EPA
Released By : Jessica hawkins
Released On : 3/24/2016 1:40:05 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V826C23P -- ICal Updated Time: Thu Mar 24 11:51:41 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
Amyl Alcohol												0.028	0.039	0.042	0.036	0.039	0.041	0.039	0.036	0.039	0.037662	11.04	0.11	1
TERT-AMYL METHYL ETHER												1.483	1.531	1.659	1.549	1.678	1.596	1.605	1.488	1.617	1.578298	4.45	0.044	1
AP9-1,4-DIFLUOROBENZENE																								
N-BUTANOL												0.005	0.006	0.007	0.006	0.007	0.008	0.007	0.007	0.007	0.006725	12.62	0.126	1
Methyl Cyclohexane												1.078	0.843	0.818	0.749	0.799	0.749	0.754	0.684	0.729	0.800358	14.32	0.143	1
2-nitropropane												0.05	0.052	0.06	0.056	0.062	0.061	0.058	0.058	0.059	0.057354	6.84	0.068	1
METHYL METHACRYLATE												0.142	0.165	0.179	0.174	0.18	0.186	0.175	0.174	0.174	0.172041	7.38	0.074	1
1,4-DIOXANE												0.001	0.003	0.002	0.002	0.003	0.003				0.002302	25.87	0.994	0
n-octane												0.283	0.291	0.316	0.31	0.322	0.317	0.318	0.305	0.307	0.307481	4.23	0.042	1
3,3-DIMETHYL-1-BUTANOL												0.019	0.022	0.026	0.025	0.028	0.029	0.027	0.025	0.028	0.025466	12.04	0.12	1
AP9-2-BROMO-1 -CHLOROPROPANE																								
ETHYL METHACRYLATE												1.526	1.661	1.874	1.849	1.975	2.008	1.942	1.943	1.954	1.859077	8.69	0.087	1
CIS-1,4-DICHLORO-2-BUTENE												0.298	0.363	0.398	0.399	0.42	0.427	0.404	0.4	0.406	0.390475	10	0.1	1
Cyclohexanone												0.089	0.116	0.113	0.12	0.13	0.097	0.098	0.095	0.112	0.107774	12.76	0.128	1
PENTACHLOROETHANE												0.692	0.878	0.985	0.948	1.033	1.02	1.026	0.981	1.022	0.95407	11.51	0.115	1
Hexachloroethane												1.178	1.146	1.253	1.243	1.337	1.301	1.292	1.26	1.3	1.256797	4.89	0.049	1
AP9-1,4-DICHLOROBENZENE-D4																								

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS26
Method : V826C23P
Review Method : 8260SC
Review Protocol : SC
Released By : Jessica hawkins
Released On : 3/24/2016 1:40:34 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V826C23P -- ICal Updated Time: Thu Mar 24 11:51:41 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
8260-PENTAFLUOROBENZENE																								
TPH (GC/MS) LOW FRACTION																					0	0	0	1
PROPENE				0.097	0.079	0.08	0.075	0.072	0.071	0.07	0.063										0.075969	13.3	0.133	1
DICHLORODIFLUOROMETHANE	0.493	0.511	0.551	0.513	0.463	0.517	0.504	0.505	0.516	0.504	0.494										0.506389	4.19	0.042	1
CHLOROMETHANE	0.731	0.69	0.65	0.642	0.625	0.649	0.63	0.612	0.634	0.626	0.596										0.644149	5.82	0.058	1
VINYL CHLORIDE	0.726	0.695	0.701	0.656	0.671	0.707	0.704	0.668	0.713	0.714	0.706										0.696468	3.18	0.032	1
1,3-BUTADIENE	0.483	0.443	0.416	0.385	0.367	0.39	0.39	0.383	0.397	0.4	0.397										0.404745	7.99	0.08	1
BROMOMETHANE	0.459	0.423	0.451	0.444	0.436	0.46	0.446	0.467	0.481	0.501	0.491										0.459914	5.17	0.052	1
CHLOROETHANE	0.368	0.413	0.421	0.407	0.392	0.416	0.414	0.407	0.424	0.436	0.424										0.410986	4.48	0.045	1
TRICHLOROFLUOROMETHANE			0.794	0.771	0.781	0.798	0.808	0.807	0.83	0.856	0.852										0.810788	3.66	0.037	1
DICHLOROFLUOROMETHANE	1.027	0.999	1.065	1.011	0.995	1.005	1.014	0.99	1.024	1.059	1.04										1.020801	2.45	0.024	1
ETHYL ETHER	0.277	0.38	0.391	0.374	0.37	0.394	0.406	0.381	0.41	0.41	0.398										0.381069	9.8	0.098	1
ACROLEIN			0.008	0.009	0.008	0.009	0.009	0.009	0.01	0.011											0.009099	10.37	0.104	1
1,1-DICHLOROETHENE	0.687	0.768	0.739	0.799	0.8	0.822	0.82	0.782	0.844	0.841	0.829										0.793698	6.01	0.06	1
1,1,2 -TRICHLOROTRIFLUOROETHANE	0.423	0.487	0.518	0.516	0.507	0.524	0.524	0.513	0.535	0.535	0.513										0.508641	6.17	0.062	1
ACETONE				0.169	0.139	0.131	0.107	0.126	0.132	0.131	0.134										0.133512	13.03	0.13	1
IODOMETHANE	0.755	0.785	0.786	0.753	0.753	0.779	0.775	0.771	0.799	0.809	0.796										0.778399	2.46	0.025	1
CARBON DISULFIDE	1.646	1.723	1.69	1.666	1.698	1.726	1.707	1.625	1.764	1.784	1.754										1.707616	2.89	0.029	1
METHYLENE CHLORIDE	0.563	0.56	0.592	0.55	0.531	0.544	0.541	0.535	0.545	0.55	0.548										0.550849	3.01	0.03	1
ACRYLONITRILE	0.114	0.131	0.134	0.141	0.14	0.144	0.141	0.146	0.153	0.153	0.155										0.141027	8.48	0.085	1
N-HEXANE	0.537	0.508	0.481	0.506	0.501	0.504	0.505	0.507	0.511	0.514	0.51										0.507725	2.54	0.025	1
TRANS-1,2-DICHLOROETHENE	0.512	0.507	0.552	0.54	0.538	0.567	0.564	0.56	0.574	0.57	0.575										0.550816	4.32	0.043	1

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS26
Method : V826C23P
Review Method : 8260SC
Review Protocol : SC
Released By : Jessica hawkins
Released On : 3/24/2016 1:40:34 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V826C23P -- ICal Updated Time: Thu Mar 24 11:51:41 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
METHYL TERT-BUTYL ETHER	1.051	1.127	1.227	1.137	1.171	1.177	1.181	1.159	1.195	1.226	1.225										1.170538	4.48	0.045	1
1,1-DICHLOROETHANE	0.817	0.976	1.015	0.982	0.977	0.99	1.009	0.997	1.015	1.022	1.014										0.982992	5.85	0.059	1
VINYL ACETATE	0.69	0.797	0.766	0.765	0.769	0.786	0.792	0.794	0.828	0.786	0.708										0.770935	5.19	0.052	1
DI-ISOPROPYL ETHER	1.343	1.427	1.518	1.475	1.507	1.516	1.528	1.516	1.548	1.578	1.574										1.50289	4.51	0.045	1
2,2-Dichloropropane	0.562	0.578	0.605	0.557	0.58	0.571	0.543	0.533	0.528	0.521	0.476										0.550552	6.45	0.064	1
CIS-1,2-DICHLOROETHENE	0.529	0.569	0.605	0.576	0.586	0.603	0.601	0.594	0.603	0.609	0.608										0.589405	4.08	0.041	1
2-BUTANONE (MEK)	0.193	0.197	0.197	0.199	0.194	0.196	0.194	0.204	0.215	0.218	0.222										0.202531	5.25	0.052	1
BROMOCHLOROMETHANE	0.265	0.29	0.315	0.304	0.299	0.31	0.313	0.311	0.32	0.32	0.321										0.30622	5.38	0.054	1
TETRAHYDROFURAN	0.142	0.134	0.12	0.132	0.119	0.121	0.109	0.118	0.123	0.124	0.124										0.124215	7.16	0.072	1
CHLOROFORM	0.894	1.004	0.992	0.977	0.97	0.996	0.994	0.986	1.007	1.016	1.012										0.986141	3.42	0.034	1
DIBROMOFLUOROMETHANE	0.572	0.573	0.579	0.559	0.558	0.568	0.569	0.558	0.567	0.559	0.567										0.566117	1.2	0.012	1
1,1,1-TRICHLOROETHANE	0.633	0.712	0.753	0.714	0.758	0.747	0.742	0.744	0.749	0.756	0.772										0.734579	5.2	0.052	1
CARBON TETRACHLORIDE	0.695	0.759	0.717	0.64	0.634	0.655	0.638	0.634	0.65	0.664	0.674										0.668917	5.96	0.06	1
1,1-Dichloropropene	0.692	0.788	0.81	0.793	0.799	0.823	0.832	0.826	0.845	0.845	0.844										0.808718	5.43	0.054	1
2,2,4-TRIMETHYLPENTANE	2.028	2.27	2.276	2.222	2.269	2.303	2.258	2.223	2.333	2.378	2.282										2.258406	3.93	0.039	1
n-Heptane	0.858	0.925	0.847	0.874	0.913	0.915	0.932	0.956	0.957	0.97	0.986										0.921212	4.98	0.05	1
BENZENE	1.956	2.277	2.256	2.188	2.219	2.24	2.255	2.234	2.27	2.296	2.271										2.223687	4.21	0.042	1
1,2-DICHLOROETHANE	0.553	0.573	0.598	0.601	0.603	0.601	0.613	0.608	0.619	0.625	0.617										0.600968	3.49	0.035	1
8260-1,4-DIFLUOROBENZENE																								
TRICHLOROETHENE	0.26	0.272	0.276	0.289	0.292	0.301	0.302	0.3	0.305	0.305	0.305										0.291633	5.34	0.053	1
1,2-DICHLOROPROPANE	0.171	0.21	0.212	0.209	0.207	0.212	0.213	0.215	0.214	0.218	0.212										0.208596	6.17	0.062	1
DIBROMOMETHANE	0.125	0.159	0.159	0.165	0.16	0.163	0.163	0.163	0.167	0.167	0.165										0.15976	7.48	0.075	1

Environmental Science Corporation
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Instrument ID : VOCMS26
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Review Protocol : SC
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Released On : 3/24/2016 1:40:34 PM

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BROMODICHLOROMETHANE	0.294	0.336	0.358	0.367	0.362	0.369	0.377	0.38	0.389	0.393	0.388										0.364752	7.89	0.079	1
a,a,a-Trifluorotoluene	0.507	0.51	0.513	0.505	0.511	0.514	0.502	0.498	0.498	0.497	0.492										0.504374	1.45	0.015	1
-CHLOROETHYL VINYL ETHER	0.125	0.149	0.154	0.166	0.166	0.17	0.175	0.179	0.184	0.188	0.182										0.167118	11.08	0.111	1
CIS-1,3-DICHLOROPROPENE	0.382	0.41	0.451	0.447	0.458	0.472	0.483	0.487	0.491	0.496	0.488										0.46046	7.91	0.079	1
4-METHYL-2-PENTANONE (MIBK)	0.159	0.18	0.179	0.184	0.189	0.191	0.197	0.199	0.21	0.211	0.206										0.191314	8.09	0.081	1
TOLUENE-D8	1.257	1.259	1.264	1.253	1.247	1.253	1.243	1.235	1.228	1.219	1.201										1.2418	1.56	0.016	1
TOLUENE	1.184	1.261	1.27	1.28	1.273	1.265	1.265	1.27	1.283	1.287	1.246										1.262249	2.24	0.022	1
TRANS-1,3-DICHLOROPROPENE			0.435	0.555	0.454	0.434	0.422	0.423	0.429	0.437	0.427										0.446381	9.4	0.094	1
8260-2-BROMO-1 -CHLOROPROPANE																								
1,1,2-TRICHLOROETHANE	1.213	1.328	1.355	1.296	1.297	1.34	1.343	1.351	1.369	1.353	1.351										1.326867	3.35	0.033	1
TETRACHLOROETHENE	1.058	1.192	1.216	1.218	1.171	1.211	1.235	1.24	1.262	1.253	1.257										1.210034	4.77	0.048	1
1,3-Dichloropropane	2.008	2.383	2.464	2.466	2.374	2.474	2.499	2.514	2.564	2.556	2.523										2.438591	6.37	0.064	1
2-HEXANONE	0.402	0.435	0.47	0.499	0.498	0.535	0.553	0.575	0.608	0.599	0.611										0.525972	13.56	0.136	1
CHLORODIBROMOMETHANE	1.416	1.377	1.402	1.375	1.385	1.445	1.49	1.498	1.553	1.549	1.565										1.459633	5.08	0.051	1
1,2-DIBROMOETHANE	1.052	1.259	1.291	1.33	1.266	1.334	1.337	1.352	1.389	1.377	1.376										1.305759	7.25	0.073	1
CHLOROBENZENE	3.949	4.211	4.23	4.507	4.422	4.544	4.595	4.622	4.666	4.635	4.627										4.455356	5.18	0.052	1
1,1,1,2-TETRACHLOROETHANE	1.178	1.189	1.327	1.279	1.316	1.339	1.353	1.337	1.372	1.394	1.375										1.314531	5.47	0.055	1
ETHYLBENZENE	2.309	2.266	2.5	2.458	2.449	2.571	2.575	2.594	2.625	2.619	2.611										2.506961	5	0.05	1
M&P-XYLENE	2.738	2.986	3.003	3.013	3	3.121	3.158	3.174	3.232	3.186	3.189										3.072885	4.66	0.047	1
O-XYLENE	2.657	2.783	2.718	2.739	2.7	2.858	2.882	2.877	2.927	2.92	2.882										2.812924	3.41	0.034	1
STYRENE	3.412	4.067	4.115	4.283	4.333	4.61	4.776	4.836	5.007	4.933	4.912										4.480219	10.95	0.11	1
Bromoform	0.506	0.643	0.675	0.707	0.732	0.768	0.804	0.82	0.873	0.864	0.873										0.751332	15.18	0.152	1

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Released On : 3/24/2016 1:40:34 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V826C23P -- ICal Updated Time: Thu Mar 24 11:51:41 2016

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Isopropylbenzene	6.669	7.111	7.369	7.337	7.353	7.716	7.698	7.703	7.795	7.735	7.536										7.456451	4.56	0.046	1
4-BROMOFLUOROBENZENE	2.728	2.661	2.667	2.668	2.605	2.661	2.661	2.624	2.637	2.564	2.544										2.638147	1.97	0.02	1
Bromobenzene	3.488	3.475	3.594	3.465	3.24	3.423	3.401	3.395	3.448	3.405	3.385										3.429011	2.52	0.025	1
1,1,2,2-TETRACHLOROETHANE	1.489	1.54	1.568	1.584	1.573	1.645	1.654	1.641	1.715	1.685	1.668										1.614691	4.25	0.043	1
1,2,3-TRICHLOROPROPANE		0.413	0.452	0.458	0.435	0.473	0.473	0.474	0.488	0.482	0.485										0.463443	5.18	0.052	1
TRANS-1,4-DICHLORO-2-BUTENE		0.337	0.356	0.377	0.363	0.388	0.397	0.398	0.428	0.413	0.435										0.389295	8.15	0.081	1
n-Propylbenzene	9.518	9.708	9.608	9.478	9.257	9.655	9.628	9.648	9.768	9.545	9.194										9.546236	1.88	0.019	1
4-ETHYLTOLUENE	8.126	7.934	7.945	7.651	7.597	7.857	7.963	7.961	8.038	7.833	7.706										7.873863	2.09	0.021	1
2-Chlorotoluene	1.519	1.543	1.674	1.688	1.647	1.7	1.695	1.701	1.722	1.708	1.689										1.662337	4.09	0.041	1
4-Chlorotoluene	5.197	5.366	5.463	5.631	5.414	5.602	5.641	5.639	5.703	5.575	5.502										5.5212	2.73	0.027	1
1,3,5-Trimethylbenzene	5.98	5.712	6.182	6.035	6.068	6.206	6.224	6.217	6.285	6.248	6.259										6.128762	2.78	0.028	1
tert-Butylbenzene	4.478	4.795	5.105	5.005	5.066	5.26	5.244	5.28	5.275	5.299	5.337										5.104	5.17	0.052	1
1,2,4-Trimethylbenzene	6.25	6.034	6.314	6.092	6.046	6.284	6.281	6.243	6.342	6.29	6.27										6.222332	1.77	0.018	1
sec-Butylbenzene	7.033	7.795	8.16	8.264	8.218	8.472	8.374	8.408	8.443	8.415	8.314										8.172417	5.18	0.052	1
1,3-DICHLOROBENZENE	2.787	2.818	2.942	3.057	2.928	2.99	3.052	3.031	3.056	3.004	2.987										2.968359	3.13	0.031	1
p-Isopropyltoluene	5.664	6.061	6.343	6.481	6.562	6.693	6.749	6.817	6.829	6.839	6.897										6.539637	5.89	0.059	1
DICYCLOPENTADIENE	6.245	7.079	7.35	7.556	7.628	7.898	7.915	7.912	8.033	8.076	8.095										7.616971	7.33	0.073	1
8260-1,4-DICHLOROBENZENE-D4																								
1,4-DICHLOROBENZENE	1.222	1.319	1.298	1.333	1.27	1.273	1.274	1.292	1.31	1.303	1.296										1.289992	2.32	0.023	1
1,2,3-TRIMETHYLBENZENE	2.51	2.583	2.556	2.576	2.587	2.598	2.556	2.605	2.643	2.731	2.704										2.604577	2.51	0.025	1
1,2-DICHLOROBENZENE	1.027	1.126	1.123	1.165	1.144	1.161	1.15	1.168	1.184	1.199	1.183										1.148167	4.05	0.04	1
n-Butylbenzene	2.488	2.644	2.721	2.727	2.776	2.778	2.802	2.842	2.862	2.853	2.841										2.757845	4.05	0.041	1
1,2-Dibromo-3-chloropropane	0.085	0.081	0.119	0.092	0.106	0.105	0.107	0.111	0.12	0.123	0.125										0.10676	14.29	0.042	1

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1,2,4-Trichlorobenzene	0.664	0.712	0.711	0.7	0.713	0.666	0.696	0.701	0.741	0.746	0.778										0.711496	4.72	0.047	1
HEXACHLORO-1,3-BUTADIENE	0.323	0.337	0.364	0.384	0.387	0.371	0.37	0.377	0.39	0.409	0.428										0.376423	7.83	0.078	1
Naphthalene	2.352	1.919	1.86	1.821	1.752	1.678	1.726	1.786	1.945	2	2.01										1.895265	9.89	0.099	1
1,2,3-Trichlorobenzene	0.651	0.635	0.689	0.649	0.648	0.613	0.634	0.641	0.679	0.705	0.718										0.65999	5	0.05	1
1-Methylnaphthalene		1.134	1.046	1.022	0.938	0.895	0.973	1.037	1.157	1.193	1.199										1.059431	10.12	0.101	1
2-Methylnaphthalene	1.111	0.901	0.833	0.801	0.792	0.732	0.792	0.838	0.927	0.952	0.943										0.874792	12.13	0.121	1
AP9-PENTAFLUOROBENZENE																								
ETHANOL																					0	0	0	1
Bromoethane												0.445	0.506	0.521	0.519	0.529	0.522	0.473	0.495	0.504	0.501689	5.42	0.054	1
2-PROPANOL												0.026	0.028	0.029	0.024	0.026	0.029	0.026	0.027	0.026	0.026756	5.97	0.06	1
Methyl Acetate												0.217	0.248	0.269	0.254	0.269	0.274	0.242	0.25	0.259	0.25349	6.92	0.069	1
ACETONITRILE												0.034	0.042	0.044	0.043	0.046	0.048	0.042	0.043	0.045	0.043243	9.18	0.092	1
ALLYL CHLORIDE												0.253	0.286	0.295	0.292	0.299	0.296	0.268	0.284	0.286	0.284275	5.27	0.053	1
tert-BUTYL ALCOHOL												0.042	0.057	0.062	0.054	0.062	0.063	0.057	0.055	0.063	0.057142	11.77	0.118	1
chloroprene												0.699	0.765	0.793	0.788	0.827	0.814	0.793	0.778	0.787	0.78276	4.64	0.046	1
ETHYL TERT-BUTYL ETHER												1.264	1.369	1.477	1.405	1.509	1.435	1.435	1.354	1.45	1.410874	5.21	0.052	1
PROPIONITRILE												0.046	0.054	0.059	0.055	0.06	0.061	0.057	0.055	0.056	0.055911	7.43	0.074	1
Ethyl Acetate												0.331	0.372	0.405	0.386	0.413	0.42	0.395	0.392	0.399	0.390286	6.8	0.068	1
METHACRYLONITRILE												0.153	0.171	0.186	0.179	0.189	0.191	0.18	0.177	0.182	0.178459	6.43	0.064	1
Cyclohexane												1.235	1.373	1.45	1.362	1.491	1.419	1.415	1.317	1.408	1.385616	5.47	0.055	1
tert-butyl formate												0.289	0.341	0.373	0.356	0.392	0.379	0.378	0.352	0.389	0.36108	8.85	0.088	1
ISOBUTANOL												0.008	0.01	0.011	0.01	0.012	0.012	0.011	0.011	0.012	0.01079	12.32	0.123	1

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Amyl Alcohol												0.028	0.039	0.042	0.036	0.039	0.041	0.039	0.036	0.039	0.03762	11.04	0.11	1
TERT-AMYL METHYL ETHER												1.483	1.531	1.659	1.549	1.678	1.596	1.605	1.488	1.617	1.578298	4.45	0.044	1
AP9-1,4-DIFLUOROBENZENE																								
N-BUTANOL												0.005	0.006	0.007	0.006	0.007	0.008	0.007	0.007	0.007	0.006725	12.62	0.126	1
Methyl Cyclohexane												1.078	0.843	0.818	0.749	0.799	0.749	0.754	0.684	0.729	0.800358	14.32	0.143	1
2-nitropropane												0.05	0.052	0.06	0.056	0.062	0.061	0.058	0.058	0.059	0.057354	6.84	0.068	1
METHYL METHACRYLATE												0.142	0.165	0.179	0.174	0.18	0.186	0.175	0.174	0.174	0.172041	7.38	0.074	1
1,4-DIOXANE												0.001	0.003	0.002	0.002	0.003	0.003				0.002302	25.87	0.994	0
n-octane												0.283	0.291	0.316	0.31	0.322	0.317	0.318	0.305	0.307	0.307481	4.23	0.042	1
3,3-DIMETHYL-1-BUTANOL												0.019	0.022	0.026	0.025	0.028	0.029	0.027	0.025	0.028	0.025466	12.04	0.12	1
AP9-2-BROMO-1 -CHLOROPROPANE																								
ETHYL METHACRYLATE												1.526	1.661	1.874	1.849	1.975	2.008	1.942	1.943	1.954	1.859077	8.69	0.087	1
CIS-1,4-DICHLORO-2-BUTENE												0.298	0.363	0.398	0.399	0.42	0.427	0.404	0.4	0.406	0.390475	10	0.1	1
Cyclohexanone												0.089	0.116	0.113	0.12	0.13	0.097	0.098	0.095	0.112	0.107774	12.76	0.128	1
PENTACHLOROETHANE												0.692	0.878	0.985	0.948	1.033	1.02	1.026	0.981	1.022	0.95407	11.51	0.115	1
Hexachloroethane												1.178	1.146	1.253	1.243	1.337	1.301	1.292	1.26	1.3	1.256797	4.89	0.049	1
AP9-1,4-DICHLOROBENZENE-D4																								

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS26
Method : V826C23P
Review Method : 6200
Review Protocol : SM 20th
Released By : Jessica hawkins
Released On : 3/24/2016 1:41:03 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V826C23P -- ICal Updated Time: Thu Mar 24 11:51:41 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
8260-PENTAFLUOROBENZENE																								
TPH (GC/MS) LOW FRACTION																					0	0	0	1
PROPENE				0.097	0.079	0.08	0.075	0.072	0.071	0.07	0.063										0.075969	13.3	0.133	1
DICHLORODIFLUOROMETHANE	0.493	0.511	0.551	0.513	0.463	0.517	0.504	0.505	0.516	0.504	0.494										0.506389	4.19	0.042	1
CHLOROMETHANE	0.731	0.69	0.65	0.642	0.625	0.649	0.63	0.612	0.634	0.626	0.596										0.644149	5.82	0.058	1
VINYL CHLORIDE	0.726	0.695	0.701	0.656	0.671	0.707	0.704	0.668	0.713	0.714	0.706										0.696468	3.18	0.032	1
1,3-BUTADIENE	0.483	0.443	0.416	0.385	0.367	0.39	0.39	0.383	0.397	0.4	0.397										0.404745	7.99	0.08	1
BROMOMETHANE	0.459	0.423	0.451	0.444	0.436	0.46	0.446	0.467	0.481	0.501	0.491										0.459914	5.17	0.052	1
CHLOROETHANE	0.368	0.413	0.421	0.407	0.392	0.416	0.414	0.407	0.424	0.436	0.424										0.410986	4.48	0.045	1
TRICHLOROFLUOROMETHANE			0.794	0.771	0.781	0.798	0.808	0.807	0.83	0.856	0.852										0.810788	3.66	0.037	1
DICHLOROFLUOROMETHANE	1.027	0.999	1.065	1.011	0.995	1.005	1.014	0.99	1.024	1.059	1.04										1.020801	2.45	0.024	1
ETHYL ETHER	0.277	0.38	0.391	0.374	0.37	0.394	0.406	0.381	0.41	0.41	0.398										0.381069	9.8	0.098	1
ACROLEIN			0.008	0.009	0.008	0.009	0.009	0.009	0.01	0.011											0.009099	10.37	0.104	1
1,1-DICHLOROETHENE	0.687	0.768	0.739	0.799	0.8	0.822	0.82	0.782	0.844	0.841	0.829										0.793698	6.01	0.06	1
1,1,2 -TRICHLOROTRIFLUOROETHANE	0.423	0.487	0.518	0.516	0.507	0.524	0.524	0.513	0.535	0.535	0.513										0.508641	6.17	0.062	1
ACETONE				0.169	0.139	0.131	0.107	0.126	0.132	0.131	0.134										0.133512	13.03	0.13	1
IODOMETHANE	0.755	0.785	0.786	0.753	0.753	0.779	0.775	0.771	0.799	0.809	0.796										0.778399	2.46	0.025	1
CARBON DISULFIDE	1.646	1.723	1.69	1.666	1.698	1.726	1.707	1.625	1.764	1.784	1.754										1.707616	2.89	0.029	1
METHYLENE CHLORIDE	0.563	0.56	0.592	0.55	0.531	0.544	0.541	0.535	0.545	0.55	0.548										0.550849	3.01	0.03	1
ACRYLONITRILE	0.114	0.131	0.134	0.141	0.14	0.144	0.141	0.146	0.153	0.153	0.155										0.141027	8.48	0.085	1
N-HEXANE	0.537	0.508	0.481	0.506	0.501	0.504	0.505	0.507	0.511	0.514	0.51										0.507725	2.54	0.025	1
TRANS-1,2-DICHLOROETHENE	0.512	0.507	0.552	0.54	0.538	0.567	0.564	0.56	0.574	0.57	0.575										0.550816	4.32	0.043	1

Environmental Science Corporation
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Review Protocol : SM 20th
Released By : Jessica hawkins
Released On : 3/24/2016 1:41:03 PM

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METHYL TERT-BUTYL ETHER	1.051	1.127	1.227	1.137	1.171	1.177	1.181	1.159	1.195	1.226	1.225										1.170538	4.48	0.045	1
,1-DICHLOROETHANE	0.817	0.976	1.015	0.982	0.977	0.99	1.009	0.997	1.015	1.022	1.014										0.982992	5.85	0.059	1
VINYL ACETATE	0.69	0.797	0.766	0.765	0.769	0.786	0.792	0.794	0.828	0.786	0.708										0.770935	5.19	0.052	1
DI-ISOPROPYL ETHER	1.343	1.427	1.518	1.475	1.507	1.516	1.528	1.516	1.548	1.578	1.574										1.50289	4.51	0.045	1
2,2-Dichloropropane	0.562	0.578	0.605	0.557	0.58	0.571	0.543	0.533	0.528	0.521	0.476										0.550552	6.45	0.064	1
CIS-1,2-DICHLOROETHENE	0.529	0.569	0.605	0.576	0.586	0.603	0.601	0.594	0.603	0.609	0.608										0.589405	4.08	0.041	1
2-BUTANONE (MEK)	0.193	0.197	0.197	0.199	0.194	0.196	0.194	0.204	0.215	0.218	0.222										0.202531	5.25	0.052	1
BROMOCHLOROMETHANE	0.265	0.29	0.315	0.304	0.299	0.31	0.313	0.311	0.32	0.32	0.321										0.30622	5.38	0.054	1
TETRAHYDROFURAN	0.142	0.134	0.12	0.132	0.119	0.121	0.109	0.118	0.123	0.124	0.124										0.124215	7.16	0.072	1
CHLOROFORM	0.894	1.004	0.992	0.977	0.97	0.996	0.994	0.986	1.007	1.016	1.012										0.986141	3.42	0.034	1
DIBROMOFLUOROMETHANE	0.572	0.573	0.579	0.559	0.558	0.568	0.569	0.558	0.567	0.559	0.567										0.566117	1.2	0.012	1
1,1,1-TRICHLOROETHANE	0.633	0.712	0.753	0.714	0.758	0.747	0.742	0.744	0.749	0.756	0.772										0.734579	5.2	0.052	1
CARBON TETRACHLORIDE	0.695	0.759	0.717	0.64	0.634	0.655	0.638	0.634	0.65	0.664	0.674										0.668917	5.96	0.06	1
1,1-Dichloropropene	0.692	0.788	0.81	0.793	0.799	0.823	0.832	0.826	0.845	0.845	0.844										0.808718	5.43	0.054	1
2,2,4-TRIMETHYLPENTANE	2.028	2.27	2.276	2.222	2.269	2.303	2.258	2.223	2.333	2.378	2.282										2.258406	3.93	0.039	1
n-Heptane	0.858	0.925	0.847	0.874	0.913	0.915	0.932	0.956	0.957	0.97	0.986										0.921212	4.98	0.05	1
BENZENE	1.956	2.277	2.256	2.188	2.219	2.24	2.255	2.234	2.27	2.296	2.271										2.223687	4.21	0.042	1
1,2-DICHLOROETHANE	0.553	0.573	0.598	0.601	0.603	0.601	0.613	0.608	0.619	0.625	0.617										0.600968	3.49	0.035	1
8260-1,4-DIFLUOROBENZENE																								
TRICHLOROETHENE	0.26	0.272	0.276	0.289	0.292	0.301	0.302	0.3	0.305	0.305	0.305										0.291633	5.34	0.053	1
,2-DICHLOROPROPANE	0.171	0.21	0.212	0.209	0.207	0.212	0.213	0.215	0.214	0.218	0.212										0.208596	6.17	0.062	1
DIBROMOMETHANE	0.125	0.159	0.159	0.165	0.16	0.163	0.163	0.163	0.167	0.167	0.165										0.15976	7.48	0.075	1

Environmental Science Corporation
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Released By : Jessica hawkins
Released On : 3/24/2016 1:41:03 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V826C23P -- ICal Updated Time: Thu Mar 24 11:51:41 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
BROMODICHLOROMETHANE	0.294	0.336	0.358	0.367	0.362	0.369	0.377	0.38	0.389	0.393	0.388										0.364752	7.89	0.079	1
a,a,a-Trifluorotoluene	0.507	0.51	0.513	0.505	0.511	0.514	0.502	0.498	0.498	0.497	0.492										0.504374	1.45	0.015	1
-CHLOROETHYL VINYL ETHER	0.125	0.149	0.154	0.166	0.166	0.17	0.175	0.179	0.184	0.188	0.182										0.167118	11.08	0.111	1
CIS-1,3-DICHLOROPROPENE	0.382	0.41	0.451	0.447	0.458	0.472	0.483	0.487	0.491	0.496	0.488										0.46046	7.91	0.079	1
4-METHYL-2-PENTANONE (MIBK)	0.159	0.18	0.179	0.184	0.189	0.191	0.197	0.199	0.21	0.211	0.206										0.191314	8.09	0.081	1
TOLUENE-D8	1.257	1.259	1.264	1.253	1.247	1.253	1.243	1.235	1.228	1.219	1.201										1.2418	1.56	0.016	1
TOLUENE	1.184	1.261	1.27	1.28	1.273	1.265	1.265	1.27	1.283	1.287	1.246										1.262249	2.24	0.022	1
TRANS-1,3-DICHLOROPROPENE			0.435	0.555	0.454	0.434	0.422	0.423	0.429	0.437	0.427										0.446381	9.4	0.094	1
8260-2-BROMO-1 -CHLOROPROPANE																								
1,1,2-TRICHLOROETHANE	1.213	1.328	1.355	1.296	1.297	1.34	1.343	1.351	1.369	1.353	1.351										1.326867	3.35	0.033	1
TETRACHLOROETHENE	1.058	1.192	1.216	1.218	1.171	1.211	1.235	1.24	1.262	1.253	1.257										1.210034	4.77	0.048	1
1,3-Dichloropropane	2.008	2.383	2.464	2.466	2.374	2.474	2.499	2.514	2.564	2.556	2.523										2.438591	6.37	0.064	1
2-HEXANONE	0.402	0.435	0.47	0.499	0.498	0.535	0.553	0.575	0.608	0.599	0.611										0.525972	13.56	0.136	1
CHLORODIBROMOMETHANE	1.416	1.377	1.402	1.375	1.385	1.445	1.49	1.498	1.553	1.549	1.565										1.459633	5.08	0.051	1
1,2-DIBROMOETHANE	1.052	1.259	1.291	1.33	1.266	1.334	1.337	1.352	1.389	1.377	1.376										1.305759	7.25	0.073	1
CHLOROBENZENE	3.949	4.211	4.23	4.507	4.422	4.544	4.595	4.622	4.666	4.635	4.627										4.455356	5.18	0.052	1
1,1,1,2-TETRACHLOROETHANE	1.178	1.189	1.327	1.279	1.316	1.339	1.353	1.337	1.372	1.394	1.375										1.314531	5.47	0.055	1
ETHYLBENZENE	2.309	2.266	2.5	2.458	2.449	2.571	2.575	2.594	2.625	2.619	2.611										2.506961	5	0.05	1
M&P-XYLENE	2.738	2.986	3.003	3.013	3	3.121	3.158	3.174	3.232	3.186	3.189										3.072885	4.66	0.047	1
O-XYLENE	2.657	2.783	2.718	2.739	2.7	2.858	2.882	2.877	2.927	2.92	2.882										2.812924	3.41	0.034	1
STYRENE	3.412	4.067	4.115	4.283	4.333	4.61	4.776	4.836	5.007	4.933	4.912										4.480219	10.95	0.11	1
Bromoform	0.506	0.643	0.675	0.707	0.732	0.768	0.804	0.82	0.873	0.864	0.873										0.751332	15.18	0.152	1

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Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
Isopropylbenzene	6.669	7.111	7.369	7.337	7.353	7.716	7.698	7.703	7.795	7.735	7.536										7.456451	4.56	0.046	1
4-BROMOFLUOROBENZENE	2.728	2.661	2.667	2.668	2.605	2.661	2.661	2.624	2.637	2.564	2.544										2.638147	1.97	0.02	1
Bromobenzene	3.488	3.475	3.594	3.465	3.24	3.423	3.401	3.395	3.448	3.405	3.385										3.429011	2.52	0.025	1
1,1,2,2-TETRACHLOROETHANE	1.489	1.54	1.568	1.584	1.573	1.645	1.654	1.641	1.715	1.685	1.668										1.614691	4.25	0.043	1
1,2,3-TRICHLOROPROPANE		0.413	0.452	0.458	0.435	0.473	0.473	0.474	0.488	0.482	0.485										0.463443	5.18	0.052	1
TRANS-1,4-DICHLORO-2-BUTENE		0.337	0.356	0.377	0.363	0.388	0.397	0.398	0.428	0.413	0.435										0.389295	8.15	0.081	1
n-Propylbenzene	9.518	9.708	9.608	9.478	9.257	9.655	9.628	9.648	9.768	9.545	9.194										9.546236	1.88	0.019	1
4-ETHYLTOLUENE	8.126	7.934	7.945	7.651	7.597	7.857	7.963	7.961	8.038	7.833	7.706										7.873863	2.09	0.021	1
2-Chlorotoluene	1.519	1.543	1.674	1.688	1.647	1.7	1.695	1.701	1.722	1.708	1.689										1.662337	4.09	0.041	1
4-Chlorotoluene	5.197	5.366	5.463	5.631	5.414	5.602	5.641	5.639	5.703	5.575	5.502										5.5212	2.73	0.027	1
1,3,5-Trimethylbenzene	5.98	5.712	6.182	6.035	6.068	6.206	6.224	6.217	6.285	6.248	6.259										6.128762	2.78	0.028	1
tert-Butylbenzene	4.478	4.795	5.105	5.005	5.066	5.26	5.244	5.28	5.275	5.299	5.337										5.104	5.17	0.052	1
1,2,4-Trimethylbenzene	6.25	6.034	6.314	6.092	6.046	6.284	6.281	6.243	6.342	6.29	6.27										6.222332	1.77	0.018	1
sec-Butylbenzene	7.033	7.795	8.16	8.264	8.218	8.472	8.374	8.408	8.443	8.415	8.314										8.172417	5.18	0.052	1
1,3-DICHLOROBENZENE	2.787	2.818	2.942	3.057	2.928	2.99	3.052	3.031	3.056	3.004	2.987										2.968359	3.13	0.031	1
p-Isopropyltoluene	5.664	6.061	6.343	6.481	6.562	6.693	6.749	6.817	6.829	6.839	6.897										6.539637	5.89	0.059	1
DICYCLOPENTADIENE	6.245	7.079	7.35	7.556	7.628	7.898	7.915	7.912	8.033	8.076	8.095										7.616971	7.33	0.073	1
8260-1,4-DICHLOROBENZENE-D4																								
1,4-DICHLOROBENZENE	1.222	1.319	1.298	1.333	1.27	1.273	1.274	1.292	1.31	1.303	1.296										1.289992	2.32	0.023	1
1,2,3-TRIMETHYLBENZENE	2.51	2.583	2.556	2.576	2.587	2.598	2.556	2.605	2.643	2.731	2.704										2.604577	2.51	0.025	1
1,2-DICHLOROBENZENE	1.027	1.126	1.123	1.165	1.144	1.161	1.15	1.168	1.184	1.199	1.183										1.148167	4.05	0.04	1
n-Butylbenzene	2.488	2.644	2.721	2.727	2.776	2.778	2.802	2.842	2.862	2.853	2.841										2.757845	4.05	0.041	1
1,2-Dibromo-3-chloropropane	0.085	0.081	0.119	0.092	0.106	0.105	0.107	0.111	0.12	0.123	0.125										0.10676	14.29	0.042	1

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1,2,4-Trichlorobenzene	0.664	0.712	0.711	0.7	0.713	0.666	0.696	0.701	0.741	0.746	0.778										0.711496	4.72	0.047	1
HEXACHLORO-1,3-BUTADIENE	0.323	0.337	0.364	0.384	0.387	0.371	0.37	0.377	0.39	0.409	0.428										0.376423	7.83	0.078	1
Naphthalene	2.352	1.919	1.86	1.821	1.752	1.678	1.726	1.786	1.945	2	2.01										1.895265	9.89	0.099	1
1,2,3-Trichlorobenzene	0.651	0.635	0.689	0.649	0.648	0.613	0.634	0.641	0.679	0.705	0.718										0.65999	5	0.05	1
1-Methylnaphthalene		1.134	1.046	1.022	0.938	0.895	0.973	1.037	1.157	1.193	1.199										1.059431	10.12	0.101	1
2-Methylnaphthalene	1.111	0.901	0.833	0.801	0.792	0.732	0.792	0.838	0.927	0.952	0.943										0.874792	12.13	0.121	1
AP9-PENTAFLUOROBENZENE																								
ETHANOL																					0	0	0	1
Bromoethane												0.445	0.506	0.521	0.519	0.529	0.522	0.473	0.495	0.504	0.501689	5.42	0.054	1
2-PROPANOL												0.026	0.028	0.029	0.024	0.026	0.029	0.026	0.027	0.026	0.026756	5.97	0.06	1
Methyl Acetate												0.217	0.248	0.269	0.254	0.269	0.274	0.242	0.25	0.259	0.25349	6.92	0.069	1
ACETONITRILE												0.034	0.042	0.044	0.043	0.046	0.048	0.042	0.043	0.045	0.043243	9.18	0.092	1
ALLYL CHLORIDE												0.253	0.286	0.295	0.292	0.299	0.296	0.268	0.284	0.286	0.284275	5.27	0.053	1
tert-BUTYL ALCOHOL												0.042	0.057	0.062	0.054	0.062	0.063	0.057	0.055	0.063	0.057142	11.77	0.118	1
chloroprene												0.699	0.765	0.793	0.788	0.827	0.814	0.793	0.778	0.787	0.78276	4.64	0.046	1
ETHYL TERT-BUTYL ETHER												1.264	1.369	1.477	1.405	1.509	1.435	1.435	1.354	1.45	1.410874	5.21	0.052	1
PROPIONITRILE												0.046	0.054	0.059	0.055	0.06	0.061	0.057	0.055	0.056	0.055911	7.43	0.074	1
Ethyl Acetate												0.331	0.372	0.405	0.386	0.413	0.42	0.395	0.392	0.399	0.390286	6.8	0.068	1
METHACRYLONITRILE												0.153	0.171	0.186	0.179	0.189	0.191	0.18	0.177	0.182	0.178459	6.43	0.064	1
Cyclohexane												1.235	1.373	1.45	1.362	1.491	1.419	1.415	1.317	1.408	1.385616	5.47	0.055	1
tert-butyl formate												0.289	0.341	0.373	0.356	0.392	0.379	0.378	0.352	0.389	0.36108	8.85	0.088	1
ISOBUTANOL												0.008	0.01	0.011	0.01	0.012	0.012	0.011	0.011	0.012	0.01079	12.32	0.123	1

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID	: VOCMS26	Review Method	: 6200	Released By	: Jessica hawkins
Method	: V826C23P	Review Protocol	: SM 20th	Released On	: 3/24/2016 1:41:03 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V826C23P -- ICal Updated Time: Thu Mar 24 11:51:41 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
Amyl Alcohol												0.028	0.039	0.042	0.036	0.039	0.041	0.039	0.036	0.039	0.03762	11.04	0.11	1
TERT-AMYL METHYL ETHER												1.483	1.531	1.659	1.549	1.678	1.596	1.605	1.488	1.617	1.578298	4.45	0.044	1
AP9-1,4-DIFLUOROBENZENE																								
N-BUTANOL												0.005	0.006	0.007	0.006	0.007	0.008	0.007	0.007	0.007	0.006725	12.62	0.126	1
Methyl Cyclohexane												1.078	0.843	0.818	0.749	0.799	0.749	0.754	0.684	0.729	0.800358	14.32	0.143	1
2-nitropropane												0.05	0.052	0.06	0.056	0.062	0.061	0.058	0.058	0.059	0.057354	6.84	0.068	1
METHYL METHACRYLATE												0.142	0.165	0.179	0.174	0.18	0.186	0.175	0.174	0.174	0.172041	7.38	0.074	1
1,4-DIOXANE												0.001	0.003	0.002	0.002	0.003	0.003				0.002302	25.87	0.994	0
n-octane												0.283	0.291	0.316	0.31	0.322	0.317	0.318	0.305	0.307	0.307481	4.23	0.042	1
3,3-DIMETHYL-1-BUTANOL												0.019	0.022	0.026	0.025	0.028	0.029	0.027	0.025	0.028	0.025466	12.04	0.12	1
AP9-2-BROMO-1 -CHLOROPROPANE																								
ETHYL METHACRYLATE												1.526	1.661	1.874	1.849	1.975	2.008	1.942	1.943	1.954	1.859077	8.69	0.087	1
CIS-1,4-DICHLORO-2-BUTENE												0.298	0.363	0.398	0.399	0.42	0.427	0.404	0.4	0.406	0.390475	10	0.1	1
Cyclohexanone												0.089	0.116	0.113	0.12	0.13	0.097	0.098	0.095	0.112	0.107774	12.76	0.128	1
PENTACHLOROETHANE												0.692	0.878	0.985	0.948	1.033	1.02	1.026	0.981	1.022	0.95407	11.51	0.115	1
Hexachloroethane												1.178	1.146	1.253	1.243	1.337	1.301	1.292	1.26	1.3	1.256797	4.89	0.049	1
AP9-1,4-DICHLOROBENZENE-D4																								

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS26
Method : V826C23P
Review Method : 8260B
Review Protocol : SW846
Released By : Jessica hawkins
Released On : 3/24/2016 1:41:32 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V826C23P -- ICal Updated Time: Thu Mar 24 11:51:41 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
8260-PENTAFLUOROBENZENE																								
TPH (GC/MS) LOW FRACTION																					0	0	0	1
PROPENE				0.097	0.079	0.08	0.075	0.072	0.071	0.07	0.063										0.075969	13.3	0.133	1
DICHLORODIFLUOROMETHANE	0.493	0.511	0.551	0.513	0.463	0.517	0.504	0.505	0.516	0.504	0.494										0.506389	4.19	0.042	1
CHLOROMETHANE	0.731	0.69	0.65	0.642	0.625	0.649	0.63	0.612	0.634	0.626	0.596										0.644149	5.82	0.058	1
VINYL CHLORIDE	0.726	0.695	0.701	0.656	0.671	0.707	0.704	0.668	0.713	0.714	0.706										0.696468	3.18	0.032	1
1,3-BUTADIENE	0.483	0.443	0.416	0.385	0.367	0.39	0.39	0.383	0.397	0.4	0.397										0.404745	7.99	0.08	1
BROMOMETHANE	0.459	0.423	0.451	0.444	0.436	0.46	0.446	0.467	0.481	0.501	0.491										0.459914	5.17	0.052	1
CHLOROETHANE	0.368	0.413	0.421	0.407	0.392	0.416	0.414	0.407	0.424	0.436	0.424										0.410986	4.48	0.045	1
TRICHLOROFLUOROMETHANE			0.794	0.771	0.781	0.798	0.808	0.807	0.83	0.856	0.852										0.810788	3.66	0.037	1
DICHLOROFLUOROMETHANE	1.027	0.999	1.065	1.011	0.995	1.005	1.014	0.99	1.024	1.059	1.04										1.020801	2.45	0.024	1
ETHYL ETHER	0.277	0.38	0.391	0.374	0.37	0.394	0.406	0.381	0.41	0.41	0.398										0.381069	9.8	0.098	1
ACROLEIN			0.008	0.009	0.008	0.009	0.009	0.009	0.01	0.011											0.009099	10.37	0.104	1
1,1-DICHLOROETHENE	0.687	0.768	0.739	0.799	0.8	0.822	0.82	0.782	0.844	0.841	0.829										0.793698	6.01	0.06	1
1,1,2 -TRICHLOROTRIFLUOROETHANE	0.423	0.487	0.518	0.516	0.507	0.524	0.524	0.513	0.535	0.535	0.513										0.508641	6.17	0.062	1
ACETONE				0.169	0.139	0.131	0.107	0.126	0.132	0.131	0.134										0.133512	13.03	0.13	1
IODOMETHANE	0.755	0.785	0.786	0.753	0.753	0.779	0.775	0.771	0.799	0.809	0.796										0.778399	2.46	0.025	1
CARBON DISULFIDE	1.646	1.723	1.69	1.666	1.698	1.726	1.707	1.625	1.764	1.784	1.754										1.707616	2.89	0.029	1
METHYLENE CHLORIDE	0.563	0.56	0.592	0.55	0.531	0.544	0.541	0.535	0.545	0.55	0.548										0.550849	3.01	0.03	1
ACRYLONITRILE	0.114	0.131	0.134	0.141	0.14	0.144	0.141	0.146	0.153	0.153	0.155										0.141027	8.48	0.085	1
N-HEXANE	0.537	0.508	0.481	0.506	0.501	0.504	0.505	0.507	0.511	0.514	0.51										0.507725	2.54	0.025	1
TRANS-1,2-DICHLOROETHENE	0.512	0.507	0.552	0.54	0.538	0.567	0.564	0.56	0.574	0.57	0.575										0.550816	4.32	0.043	1

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS26
Method : V826C23P
Review Method : 8260B
Review Protocol : SW846
Released By : Jessica hawkins
Released On : 3/24/2016 1:41:32 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V826C23P -- ICal Updated Time: Thu Mar 24 11:51:41 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
METHYL TERT-BUTYL ETHER	1.051	1.127	1.227	1.137	1.171	1.177	1.181	1.159	1.195	1.226	1.225										1.170538	4.48	0.045	1
1,1-DICHLOROETHANE	0.817	0.976	1.015	0.982	0.977	0.99	1.009	0.997	1.015	1.022	1.014										0.982992	5.85	0.059	1
VINYL ACETATE	0.69	0.797	0.766	0.765	0.769	0.786	0.792	0.794	0.828	0.786	0.708										0.770935	5.19	0.052	1
DI-ISOPROPYL ETHER	1.343	1.427	1.518	1.475	1.507	1.516	1.528	1.516	1.548	1.578	1.574										1.50289	4.51	0.045	1
2,2-Dichloropropane	0.562	0.578	0.605	0.557	0.58	0.571	0.543	0.533	0.528	0.521	0.476										0.550552	6.45	0.064	1
CIS-1,2-DICHLOROETHENE	0.529	0.569	0.605	0.576	0.586	0.603	0.601	0.594	0.603	0.609	0.608										0.589405	4.08	0.041	1
2-BUTANONE (MEK)	0.193	0.197	0.197	0.199	0.194	0.196	0.194	0.204	0.215	0.218	0.222										0.202531	5.25	0.052	1
BROMOCHLOROMETHANE	0.265	0.29	0.315	0.304	0.299	0.31	0.313	0.311	0.32	0.32	0.321										0.30622	5.38	0.054	1
TETRAHYDROFURAN	0.142	0.134	0.12	0.132	0.119	0.121	0.109	0.118	0.123	0.124	0.124										0.124215	7.16	0.072	1
CHLOROFORM	0.894	1.004	0.992	0.977	0.97	0.996	0.994	0.986	1.007	1.016	1.012										0.986141	3.42	0.034	1
DIBROMOFLUOROMETHANE	0.572	0.573	0.579	0.559	0.558	0.568	0.569	0.558	0.567	0.559	0.567										0.566117	1.2	0.012	1
1,1,1-TRICHLOROETHANE	0.633	0.712	0.753	0.714	0.758	0.747	0.742	0.744	0.749	0.756	0.772										0.734579	5.2	0.052	1
CARBON TETRACHLORIDE	0.695	0.759	0.717	0.64	0.634	0.655	0.638	0.634	0.65	0.664	0.674										0.668917	5.96	0.06	1
1,1-Dichloropropene	0.692	0.788	0.81	0.793	0.799	0.823	0.832	0.826	0.845	0.845	0.844										0.808718	5.43	0.054	1
2,2,4-TRIMETHYLPENTANE	2.028	2.27	2.276	2.222	2.269	2.303	2.258	2.223	2.333	2.378	2.282										2.258406	3.93	0.039	1
n-Heptane	0.858	0.925	0.847	0.874	0.913	0.915	0.932	0.956	0.957	0.97	0.986										0.921212	4.98	0.05	1
BENZENE	1.956	2.277	2.256	2.188	2.219	2.24	2.255	2.234	2.27	2.296	2.271										2.223687	4.21	0.042	1
1,2-DICHLOROETHANE	0.553	0.573	0.598	0.601	0.603	0.601	0.613	0.608	0.619	0.625	0.617										0.600968	3.49	0.035	1
8260-1,4-DIFLUOROBENZENE																								
TRICHLOROETHENE	0.26	0.272	0.276	0.289	0.292	0.301	0.302	0.3	0.305	0.305	0.305										0.291633	5.34	0.053	1
1,2-DICHLOROPROPANE	0.171	0.21	0.212	0.209	0.207	0.212	0.213	0.215	0.214	0.218	0.212										0.208596	6.17	0.062	1
DIBROMOMETHANE	0.125	0.159	0.159	0.165	0.16	0.163	0.163	0.163	0.167	0.167	0.165										0.15976	7.48	0.075	1

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS26
Method : V826C23P
Review Method : 8260B
Review Protocol : SW846
Released By : Jessica hawkins
Released On : 3/24/2016 1:41:32 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V826C23P -- ICal Updated Time: Thu Mar 24 11:51:41 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
BROMODICHLOROMETHANE	0.294	0.336	0.358	0.367	0.362	0.369	0.377	0.38	0.389	0.393	0.388										0.364752	7.89	0.079	1
a,a,a-Trifluorotoluene	0.507	0.51	0.513	0.505	0.511	0.514	0.502	0.498	0.498	0.497	0.492										0.504374	1.45	0.015	1
2-CHLOROETHYL VINYL ETHER	0.125	0.149	0.154	0.166	0.166	0.17	0.175	0.179	0.184	0.188	0.182										0.167118	11.08	0.111	1
CIS-1,3-DICHLOROPROPENE	0.382	0.41	0.451	0.447	0.458	0.472	0.483	0.487	0.491	0.496	0.488										0.46046	7.91	0.079	1
4-METHYL-2-PENTANONE (MIBK)	0.159	0.18	0.179	0.184	0.189	0.191	0.197	0.199	0.21	0.211	0.206										0.191314	8.09	0.081	1
TOLUENE-D8	1.257	1.259	1.264	1.253	1.247	1.253	1.243	1.235	1.228	1.219	1.201										1.2418	1.56	0.016	1
TOLUENE	1.184	1.261	1.27	1.28	1.273	1.265	1.265	1.27	1.283	1.287	1.246										1.262249	2.24	0.022	1
TRANS-1,3-DICHLOROPROPENE			0.435	0.555	0.454	0.434	0.422	0.423	0.429	0.437	0.427										0.446381	9.4	0.094	1
8260-2-BROMO-1 -CHLOROPROPANE																								
1,1,2-TRICHLOROETHANE	1.213	1.328	1.355	1.296	1.297	1.34	1.343	1.351	1.369	1.353	1.351										1.326867	3.35	0.033	1
TETRACHLOROETHENE	1.058	1.192	1.216	1.218	1.171	1.211	1.235	1.24	1.262	1.253	1.257										1.210034	4.77	0.048	1
1,3-Dichloropropane	2.008	2.383	2.464	2.466	2.374	2.474	2.499	2.514	2.564	2.556	2.523										2.438591	6.37	0.064	1
2-HEXANONE	0.402	0.435	0.47	0.499	0.498	0.535	0.553	0.575	0.608	0.599	0.611										0.525972	13.56	0.136	1
CHLORODIBROMOMETHANE	1.416	1.377	1.402	1.375	1.385	1.445	1.49	1.498	1.553	1.549	1.565										1.459633	5.08	0.051	1
1,2-DIBROMOETHANE	1.052	1.259	1.291	1.33	1.266	1.334	1.337	1.352	1.389	1.377	1.376										1.305759	7.25	0.073	1
CHLOROBENZENE	3.949	4.211	4.23	4.507	4.422	4.544	4.595	4.622	4.666	4.635	4.627										4.455356	5.18	0.052	1
1,1,1,2-TETRACHLOROETHANE	1.178	1.189	1.327	1.279	1.316	1.339	1.353	1.337	1.372	1.394	1.375										1.314531	5.47	0.055	1
ETHYLBENZENE	2.309	2.266	2.5	2.458	2.449	2.571	2.575	2.594	2.625	2.619	2.611										2.506961	5	0.05	1
M&P-XYLENE	2.738	2.986	3.003	3.013	3	3.121	3.158	3.174	3.232	3.186	3.189										3.072885	4.66	0.047	1
O-XYLENE	2.657	2.783	2.718	2.739	2.7	2.858	2.882	2.877	2.927	2.92	2.882										2.812924	3.41	0.034	1
STYRENE	3.412	4.067	4.115	4.283	4.333	4.61	4.776	4.836	5.007	4.933	4.912										4.480219	10.95	0.11	1
Bromoform	0.506	0.643	0.675	0.707	0.732	0.768	0.804	0.82	0.873	0.864	0.873										0.751332	15.18	0.152	1

INITIAL CALIBRATION SUMMARY

Instrument ID	: VOCMS26	Review Method	: 8260B	Released By	: Jessica hawkins
Method	: V826C23P	Review Protocol	: SW846	Released On	: 3/24/2016 1:41:32 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V826C23P -- ICal Updated Time: Thu Mar 24 11:51:41 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
Isopropylbenzene	6.669	7.111	7.369	7.337	7.353	7.716	7.698	7.703	7.795	7.735	7.536										7.4564 51	4.56	0.046	1
4-BROMOFLUOROBENZENE	2.728	2.661	2.667	2.668	2.605	2.661	2.661	2.624	2.637	2.564	2.544										2.6381 47	1.97	0.02	1
Bromobenzene	3.488	3.475	3.594	3.465	3.24	3.423	3.401	3.395	3.448	3.405	3.385										3.4290 11	2.52	0.025	1
1,1,2,2-TETRACHLOROETHANE	1.489	1.54	1.568	1.584	1.573	1.645	1.654	1.641	1.715	1.685	1.668										1.6146 91	4.25	0.043	1
1,2,3-TRICHLOROPROPANE		0.413	0.452	0.458	0.435	0.473	0.473	0.474	0.488	0.482	0.485										0.4634 43	5.18	0.052	1
TRANS-1,4-DICHLORO-2-BUTENE		0.337	0.356	0.377	0.363	0.388	0.397	0.398	0.428	0.413	0.435										0.3892 95	8.15	0.081	1
n-Propylbenzene	9.518	9.708	9.608	9.478	9.257	9.655	9.628	9.648	9.768	9.545	9.194										9.5462 36	1.88	0.019	1
4-ETHYLTOLUENE	8.126	7.934	7.945	7.651	7.597	7.857	7.963	7.961	8.038	7.833	7.706										7.8738 63	2.09	0.021	1
2-Chlorotoluene	1.519	1.543	1.674	1.688	1.647	1.7	1.695	1.701	1.722	1.708	1.689										1.6623 37	4.09	0.041	1
4-Chlorotoluene	5.197	5.366	5.463	5.631	5.414	5.602	5.641	5.639	5.703	5.575	5.502										5.5212	2.73	0.027	1
1,3,5-Trimethylbenzene	5.98	5.712	6.182	6.035	6.068	6.206	6.224	6.217	6.285	6.248	6.259										6.1287 62	2.78	0.028	1
tert-Butylbenzene	4.478	4.795	5.105	5.005	5.066	5.26	5.244	5.28	5.275	5.299	5.337										5.104	5.17	0.052	1
1,2,4-Trimethylbenzene	6.25	6.034	6.314	6.092	6.046	6.284	6.281	6.243	6.342	6.29	6.27										6.2223 32	1.77	0.018	1
sec-Butylbenzene	7.033	7.795	8.16	8.264	8.218	8.472	8.374	8.408	8.443	8.415	8.314										8.1724 17	5.18	0.052	1
1,3-DICHLOROBENZENE	2.787	2.818	2.942	3.057	2.928	2.99	3.052	3.031	3.056	3.004	2.987										2.9683 59	3.13	0.031	1
p-Isopropyltoluene	5.664	6.061	6.343	6.481	6.562	6.693	6.749	6.817	6.829	6.839	6.897										6.5396 37	5.89	0.059	1
DICYCLOPENTADIENE	6.245	7.079	7.35	7.556	7.628	7.898	7.915	7.912	8.033	8.076	8.095										7.6169 71	7.33	0.073	1
8260-1,4-DICHLOROBENZENE-D4																								
1,4-DICHLOROBENZENE	1.222	1.319	1.298	1.333	1.27	1.273	1.274	1.292	1.31	1.303	1.296										1.2899 92	2.32	0.023	1
1,2,3-TRIMETHYLBENZENE	2.51	2.583	2.556	2.576	2.587	2.598	2.556	2.605	2.643	2.731	2.704										2.6045 77	2.51	0.025	1
1,2-DICHLOROBENZENE	1.027	1.126	1.123	1.165	1.144	1.161	1.15	1.168	1.184	1.199	1.183										1.1481 67	4.05	0.04	1
n-Butylbenzene	2.488	2.644	2.721	2.727	2.776	2.778	2.802	2.842	2.862	2.853	2.841										2.7578 45	4.05	0.041	1
1,2-Dibromo-3-chloropropane	0.085	0.081	0.119	0.092	0.106	0.105	0.107	0.111	0.12	0.123	0.125										0.1067 6	14.29	0.143	1

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS26
Method : V826C23P
Review Method : 8260B
Review Protocol : SW846
Released By : Jessica hawkins
Released On : 3/24/2016 1:41:32 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V826C23P -- ICal Updated Time: Thu Mar 24 11:51:41 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
1,2,4-Trichlorobenzene	0.664	0.712	0.711	0.7	0.713	0.666	0.696	0.701	0.741	0.746	0.778										0.711496	4.72	0.047	1
HEXACHLORO-1,3-BUTADIENE	0.323	0.337	0.364	0.384	0.387	0.371	0.37	0.377	0.39	0.409	0.428										0.376423	7.83	0.078	1
Naphthalene	2.352	1.919	1.86	1.821	1.752	1.678	1.726	1.786	1.945	2	2.01										1.895265	9.89	0.099	1
1,2,3-Trichlorobenzene	0.651	0.635	0.689	0.649	0.648	0.613	0.634	0.641	0.679	0.705	0.718										0.65999	5	0.05	1
1-Methylnaphthalene		1.134	1.046	1.022	0.938	0.895	0.973	1.037	1.157	1.193	1.199										1.059431	10.12	0.101	1
2-Methylnaphthalene	1.111	0.901	0.833	0.801	0.792	0.732	0.792	0.838	0.927	0.952	0.943										0.874792	12.13	0.121	1
AP9-PENTAFLUOROBENZENE																								
ETHANOL																					0	0	0	1
Bromoethane												0.445	0.506	0.521	0.519	0.529	0.522	0.473	0.495	0.504	0.501689	5.42	0.054	1
2-PROPANOL												0.026	0.028	0.029	0.024	0.026	0.029	0.026	0.027	0.026	0.026756	5.97	0.06	1
Methyl Acetate												0.217	0.248	0.269	0.254	0.269	0.274	0.242	0.25	0.259	0.25349	6.92	0.069	1
ACETONITRILE												0.034	0.042	0.044	0.043	0.046	0.048	0.042	0.043	0.045	0.043243	9.18	0.092	1
ALLYL CHLORIDE												0.253	0.286	0.295	0.292	0.299	0.296	0.268	0.284	0.286	0.284275	5.27	0.053	1
tert-BUTYL ALCOHOL												0.042	0.057	0.062	0.054	0.062	0.063	0.057	0.055	0.063	0.057142	11.77	0.118	1
chloroprene												0.699	0.765	0.793	0.788	0.827	0.814	0.793	0.778	0.787	0.78276	4.64	0.046	1
ETHYL TERT-BUTYL ETHER												1.264	1.369	1.477	1.405	1.509	1.435	1.435	1.354	1.45	1.410874	5.21	0.052	1
PROPIONITRILE												0.046	0.054	0.059	0.055	0.06	0.061	0.057	0.055	0.056	0.055911	7.43	0.074	1
Ethyl Acetate												0.331	0.372	0.405	0.386	0.413	0.42	0.395	0.392	0.399	0.390286	6.8	0.068	1
METHACRYLONITRILE												0.153	0.171	0.186	0.179	0.189	0.191	0.18	0.177	0.182	0.178459	6.43	0.064	1
Cyclohexane												1.235	1.373	1.45	1.362	1.491	1.419	1.415	1.317	1.408	1.385616	5.47	0.055	1
tert-butyl formate												0.289	0.341	0.373	0.356	0.392	0.379	0.378	0.352	0.389	0.36108	8.85	0.088	1
ISOBUTANOL												0.008	0.01	0.011	0.01	0.012	0.012	0.011	0.011	0.012	0.01079	12.32	0.123	1

Environmental Science Corporation
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INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS26
Method : V826C23P
Review Method : 8260B
Review Protocol : SW846
Released By : Jessica hawkins
Released On : 3/24/2016 1:41:32 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V826C23P -- ICal Updated Time: Thu Mar 24 11:51:41 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
Amyl Alcohol												0.028	0.039	0.042	0.036	0.039	0.041	0.039	0.036	0.039	0.03762	11.04	0.11	1
TERT-AMYL METHYL ETHER												1.483	1.531	1.659	1.549	1.678	1.596	1.605	1.488	1.617	1.578298	4.45	0.044	1
AP9-1,4-DIFLUOROBENZENE																								
N-BUTANOL												0.005	0.006	0.007	0.006	0.007	0.008	0.007	0.007	0.007	0.006725	12.62	0.126	1
Methyl Cyclohexane												1.078	0.843	0.818	0.749	0.799	0.749	0.754	0.684	0.729	0.800358	14.32	0.143	1
2-nitropropane												0.05	0.052	0.06	0.056	0.062	0.061	0.058	0.058	0.059	0.057354	6.84	0.068	1
METHYL METHACRYLATE												0.142	0.165	0.179	0.174	0.18	0.186	0.175	0.174	0.174	0.172041	7.38	0.074	1
1,4-DIOXANE												0.001	0.003	0.002	0.002	0.003	0.003				0.002302	25.87	0.994	0
n-octane												0.283	0.291	0.316	0.31	0.322	0.317	0.318	0.305	0.307	0.307481	4.23	0.042	1
3,3-DIMETHYL-1-BUTANOL												0.019	0.022	0.026	0.025	0.028	0.029	0.027	0.025	0.028	0.025466	12.04	0.12	1
AP9-2-BROMO-1 -CHLOROPROPANE																								
ETHYL METHACRYLATE												1.526	1.661	1.874	1.849	1.975	2.008	1.942	1.943	1.954	1.859077	8.69	0.087	1
CIS-1,4-DICHLORO-2-BUTENE												0.298	0.363	0.398	0.399	0.42	0.427	0.404	0.4	0.406	0.390475	10	0.1	1
Cyclohexanone												0.089	0.116	0.113	0.12	0.13	0.097	0.098	0.095	0.112	0.107774	12.76	0.128	1
PENTACHLOROETHANE												0.692	0.878	0.985	0.948	1.033	1.02	1.026	0.981	1.022	0.95407	11.51	0.115	1
Hexachloroethane												1.178	1.146	1.253	1.243	1.337	1.301	1.292	1.26	1.3	1.256797	4.89	0.049	1
AP9-1,4-DICHLOROBENZENE-D4																								

Environmental Science Corporation
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INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS26
Method : V826C23P
Review Method : 8260C
Review Protocol : SW846
Released By : Jessica hawkins
Released On : 3/24/2016 1:42:01 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V826C23P -- ICal Updated Time: Thu Mar 24 11:51:41 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur	RF
8260-PENTAFLUOROBENZENE																									
TPH (GC/MS) LOW FRACTION																					0	0	0	1	
PROPENE				0.097	0.079	0.08	0.075	0.072	0.071	0.07	0.063										0.075969	13.3	0.133	1	
DICHLORODIFLUOROMETHANE	0.493	0.511	0.551	0.513	0.463	0.517	0.504	0.505	0.516	0.504	0.494										0.506389	4.19	0.042	1	0.1
CHLOROMETHANE	0.731	0.69	0.65	0.642	0.625	0.649	0.63	0.612	0.634	0.626	0.596										0.644149	5.82	0.058	1	0.1
VINYL CHLORIDE	0.726	0.695	0.701	0.656	0.671	0.707	0.704	0.668	0.713	0.714	0.706										0.696468	3.18	0.032	1	0.1
1,3-BUTADIENE	0.483	0.443	0.416	0.385	0.367	0.39	0.39	0.383	0.397	0.4	0.397										0.404745	7.99	0.08	1	
BROMOMETHANE	0.459	0.423	0.451	0.444	0.436	0.46	0.446	0.467	0.481	0.501	0.491										0.459914	5.17	0.052	1	0.1
CHLOROETHANE	0.368	0.413	0.421	0.407	0.392	0.416	0.414	0.407	0.424	0.436	0.424										0.410986	4.48	0.045	1	0.1
TRICHLOROFLUOROMETHANE			0.794	0.771	0.781	0.798	0.808	0.807	0.83	0.856	0.852										0.810788	3.66	0.037	1	0.1
DICHLOROFLUOROMETHANE	1.027	0.999	1.065	1.011	0.995	1.005	1.014	0.99	1.024	1.059	1.04										1.020801	2.45	0.024	1	
ETHYL ETHER	0.277	0.38	0.391	0.374	0.37	0.394	0.406	0.381	0.41	0.41	0.398										0.381069	9.8	0.098	1	
ACROLEIN			0.008	0.009	0.008	0.009	0.009	0.009	0.01	0.011											0.009099	10.37	0.104	1	
1,1-DICHLOROETHENE	0.687	0.768	0.739	0.799	0.8	0.822	0.82	0.782	0.844	0.841	0.829										0.793698	6.01	0.06	1	0.1
1,1,2 -TRICHLOROTRIFLUOROETHANE	0.423	0.487	0.518	0.516	0.507	0.524	0.524	0.513	0.535	0.535	0.513										0.508641	6.17	0.062	1	0.1
ACETONE				0.169	0.139	0.131	0.107	0.126	0.132	0.131	0.134										0.133512	13.03	0.13	1	0.1
IODOMETHANE	0.755	0.785	0.786	0.753	0.753	0.779	0.775	0.771	0.799	0.809	0.796										0.778399	2.46	0.025	1	
CARBON DISULFIDE	1.646	1.723	1.69	1.666	1.698	1.726	1.707	1.625	1.764	1.784	1.754										1.707616	2.89	0.029	1	0.1
METHYLENE CHLORIDE	0.563	0.56	0.592	0.55	0.531	0.544	0.541	0.535	0.545	0.55	0.548										0.550849	3.01	0.03	1	0.1
ACRYLONITRILE	0.114	0.131	0.134	0.141	0.14	0.144	0.141	0.146	0.153	0.153	0.155										0.141027	8.48	0.085	1	
N-HEXANE	0.537	0.508	0.481	0.506	0.501	0.504	0.505	0.507	0.511	0.514	0.51										0.507725	2.54	0.025	1	
TRANS-1,2-DICHLOROETHENE	0.512	0.507	0.552	0.54	0.538	0.567	0.564	0.56	0.574	0.57	0.575										0.550816	4.32	0.043	1	0.1

Environmental Science Corporation
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INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS26
Method : V826C23P
Review Method : 8260C
Review Protocol : SW846
Released By : Jessica hawkins
Released On : 3/24/2016 1:42:01 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V826C23P -- ICal Updated Time: Thu Mar 24 11:51:41 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur	RF
METHYL TERT-BUTYL ETHER	1.051	1.127	1.227	1.137	1.171	1.177	1.181	1.159	1.195	1.226	1.225										1.170538	4.48	0.045	1	0.1
1,1-DICHLOROETHANE	0.817	0.976	1.015	0.982	0.977	0.99	1.009	0.997	1.015	1.022	1.014										0.982992	5.85	0.059	1	0.2
VINYL ACETATE	0.69	0.797	0.766	0.765	0.769	0.786	0.792	0.794	0.828	0.786	0.708										0.770935	5.19	0.052	1	
DI-ISOPROPYL ETHER	1.343	1.427	1.518	1.475	1.507	1.516	1.528	1.516	1.548	1.578	1.574										1.50289	4.51	0.045	1	
2,2-Dichloropropane	0.562	0.578	0.605	0.557	0.58	0.571	0.543	0.533	0.528	0.521	0.476										0.550552	6.45	0.064	1	
CIS-1,2-DICHLOROETHENE	0.529	0.569	0.605	0.576	0.586	0.603	0.601	0.594	0.603	0.609	0.608										0.589405	4.08	0.041	1	0.1
2-BUTANONE (MEK)	0.193	0.197	0.197	0.199	0.194	0.196	0.194	0.204	0.215	0.218	0.222										0.202531	5.25	0.052	1	0.1
BROMOCHLOROMETHANE	0.265	0.29	0.315	0.304	0.299	0.31	0.313	0.311	0.32	0.32	0.321										0.30622	5.38	0.054	1	
TETRAHYDROFURAN	0.142	0.134	0.12	0.132	0.119	0.121	0.109	0.118	0.123	0.124	0.124										0.124215	7.16	0.072	1	
CHLOROFORM	0.894	1.004	0.992	0.977	0.97	0.996	0.994	0.986	1.007	1.016	1.012										0.986141	3.42	0.034	1	0.2
DIBROMOFLUOROMETHANE	0.572	0.573	0.579	0.559	0.558	0.568	0.569	0.558	0.567	0.559	0.567										0.566117	1.2	0.012	1	
1,1,1-TRICHLOROETHANE	0.633	0.712	0.753	0.714	0.758	0.747	0.742	0.744	0.749	0.756	0.772										0.734579	5.2	0.052	1	0.1
CARBON TETRACHLORIDE	0.695	0.759	0.717	0.64	0.634	0.655	0.638	0.634	0.65	0.664	0.674										0.668917	5.96	0.06	1	0.1
1,1-Dichloropropene	0.692	0.788	0.81	0.793	0.799	0.823	0.832	0.826	0.845	0.845	0.844										0.808718	5.43	0.054	1	
2,2,4-TRIMETHYLPENTANE	2.028	2.27	2.276	2.222	2.269	2.303	2.258	2.223	2.333	2.378	2.282										2.258406	3.93	0.039	1	
n-Heptane	0.858	0.925	0.847	0.874	0.913	0.915	0.932	0.956	0.957	0.97	0.986										0.921212	4.98	0.05	1	
BENZENE	1.956	2.277	2.256	2.188	2.219	2.24	2.255	2.234	2.27	2.296	2.271										2.223687	4.21	0.042	1	0.5
1,2-DICHLOROETHANE	0.553	0.573	0.598	0.601	0.603	0.601	0.613	0.608	0.619	0.625	0.617										0.600968	3.49	0.035	1	0.1
8260-1,4-DIFLUOROBENZENE																									
TRICHLOROETHENE	0.26	0.272	0.276	0.289	0.292	0.301	0.302	0.3	0.305	0.305	0.305										0.291633	5.34	0.053	1	0.2
1,2-DICHLOROPROPANE	0.171	0.21	0.212	0.209	0.207	0.212	0.213	0.215	0.214	0.218	0.212										0.208596	6.17	0.062	1	0.1
DIBROMOMETHANE	0.125	0.159	0.159	0.165	0.16	0.163	0.163	0.163	0.167	0.167	0.165										0.15976	7.48	0.075	1	

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Released By : Jessica hawkins
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INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V826C23P -- ICal Updated Time: Thu Mar 24 11:51:41 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur	RF
BROMODICHLOROMETHANE	0.294	0.336	0.358	0.367	0.362	0.369	0.377	0.38	0.389	0.393	0.388										0.364752	7.89	0.079	1	0.2
a,a,a-Trifluorotoluene	0.507	0.51	0.513	0.505	0.511	0.514	0.502	0.498	0.498	0.497	0.492										0.504374	1.45	0.015	1	
-CHLOROETHYL VINYL ETHER	0.125	0.149	0.154	0.166	0.166	0.17	0.175	0.179	0.184	0.188	0.182										0.167118	11.08	0.111	1	
CIS-1,3-DICHLOROPROPENE	0.382	0.41	0.451	0.447	0.458	0.472	0.483	0.487	0.491	0.496	0.488										0.46046	7.91	0.079	1	0.2
4-METHYL-2-PENTANONE (MIBK)	0.159	0.18	0.179	0.184	0.189	0.191	0.197	0.199	0.21	0.211	0.206										0.191314	8.09	0.081	1	0.1
TOLUENE-D8	1.257	1.259	1.264	1.253	1.247	1.253	1.243	1.235	1.228	1.219	1.201										1.2418	1.56	0.016	1	
TOLUENE	1.184	1.261	1.27	1.28	1.273	1.265	1.265	1.27	1.283	1.287	1.246										1.262249	2.24	0.022	1	0.4
TRANS-1,3-DICHLOROPROPENE			0.435	0.555	0.454	0.434	0.422	0.423	0.429	0.437	0.427										0.446381	9.4	0.094	1	0.1
8260-2-BROMO-1 -CHLOROPROPANE																									
1,1,2-TRICHLOROETHANE	1.213	1.328	1.355	1.296	1.297	1.34	1.343	1.351	1.369	1.353	1.351										1.326867	3.35	0.033	1	0.1
TETRACHLOROETHENE	1.058	1.192	1.216	1.218	1.171	1.211	1.235	1.24	1.262	1.253	1.257										1.210034	4.77	0.048	1	0.2
1,3-Dichloropropane	2.008	2.383	2.464	2.466	2.374	2.474	2.499	2.514	2.564	2.556	2.523										2.438591	6.37	0.064	1	
2-HEXANONE	0.402	0.435	0.47	0.499	0.498	0.535	0.553	0.575	0.608	0.599	0.611										0.525972	13.56	0.136	1	0.1
CHLORODIBROMOMETHANE	1.416	1.377	1.402	1.375	1.385	1.445	1.49	1.498	1.553	1.549	1.565										1.459633	5.08	0.051	1	0.1
1,2-DIBROMOETHANE	1.052	1.259	1.291	1.33	1.266	1.334	1.337	1.352	1.389	1.377	1.376										1.305759	7.25	0.073	1	0.1
CHLOROBENZENE	3.949	4.211	4.23	4.507	4.422	4.544	4.595	4.622	4.666	4.635	4.627										4.455356	5.18	0.052	1	0.5
1,1,1,2-TETRACHLOROETHANE	1.178	1.189	1.327	1.279	1.316	1.339	1.353	1.337	1.372	1.394	1.375										1.314531	5.47	0.055	1	
ETHYLBENZENE	2.309	2.266	2.5	2.458	2.449	2.571	2.575	2.594	2.625	2.619	2.611										2.506961	5	0.05	1	0.1
M&P-XYLENE	2.738	2.986	3.003	3.013	3	3.121	3.158	3.174	3.232	3.186	3.189										3.072885	4.66	0.047	1	0.1
O-XYLENE	2.657	2.783	2.718	2.739	2.7	2.858	2.882	2.877	2.927	2.92	2.882										2.812924	3.41	0.034	1	0.3
STYRENE	3.412	4.067	4.115	4.283	4.333	4.61	4.776	4.836	5.007	4.933	4.912										4.480219	10.95	0.11	1	0.3
Bromoform	0.506	0.643	0.675	0.707	0.732	0.768	0.804	0.82	0.873	0.864	0.873										0.751332	15.18	0.152	1	0.1

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS26
Method : V826C23P
Review Method : 8260C
Review Protocol : SW846
Released By : Jessica hawkins
Released On : 3/24/2016 1:42:01 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V826C23P -- ICal Updated Time: Thu Mar 24 11:51:41 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur	RF
Isopropylbenzene	6.669	7.111	7.369	7.337	7.353	7.716	7.698	7.703	7.795	7.735	7.536										7.456451	4.56	0.046	1	0.1
4-BROMOFLUOROBENZENE	2.728	2.661	2.667	2.668	2.605	2.661	2.661	2.624	2.637	2.564	2.544										2.638147	1.97	0.02	1	
Bromobenzene	3.488	3.475	3.594	3.465	3.24	3.423	3.401	3.395	3.448	3.405	3.385										3.429011	2.52	0.025	1	
1,1,2,2-TETRACHLOROETHANE	1.489	1.54	1.568	1.584	1.573	1.645	1.654	1.641	1.715	1.685	1.668										1.614691	4.25	0.043	1	0.3
1,2,3-TRICHLOROPROPANE		0.413	0.452	0.458	0.435	0.473	0.473	0.474	0.488	0.482	0.485										0.463443	5.18	0.052	1	
TRANS-1,4-DICHLORO-2-BUTENE		0.337	0.356	0.377	0.363	0.388	0.397	0.398	0.428	0.413	0.435										0.389295	8.15	0.081	1	
n-Propylbenzene	9.518	9.708	9.608	9.478	9.257	9.655	9.628	9.648	9.768	9.545	9.194										9.546236	1.88	0.019	1	
4-ETHYLTOLUENE	8.126	7.934	7.945	7.651	7.597	7.857	7.963	7.961	8.038	7.833	7.706										7.873863	2.09	0.021	1	
2-Chlorotoluene	1.519	1.543	1.674	1.688	1.647	1.7	1.695	1.701	1.722	1.708	1.689										1.662337	4.09	0.041	1	
4-Chlorotoluene	5.197	5.366	5.463	5.631	5.414	5.602	5.641	5.639	5.703	5.575	5.502										5.5212	2.73	0.027	1	
1,3,5-Trimethylbenzene	5.98	5.712	6.182	6.035	6.068	6.206	6.224	6.217	6.285	6.248	6.259										6.128762	2.78	0.028	1	
tert-Butylbenzene	4.478	4.795	5.105	5.005	5.066	5.26	5.244	5.28	5.275	5.299	5.337										5.104	5.17	0.052	1	
1,2,4-Trimethylbenzene	6.25	6.034	6.314	6.092	6.046	6.284	6.281	6.243	6.342	6.29	6.27										6.222332	1.77	0.018	1	
sec-Butylbenzene	7.033	7.795	8.16	8.264	8.218	8.472	8.374	8.408	8.443	8.415	8.314										8.172417	5.18	0.052	1	
1,3-DICHLOROBENZENE	2.787	2.818	2.942	3.057	2.928	2.99	3.052	3.031	3.056	3.004	2.987										2.968359	3.13	0.031	1	0.6
p-Isopropyltoluene	5.664	6.061	6.343	6.481	6.562	6.693	6.749	6.817	6.829	6.839	6.897										6.539637	5.89	0.059	1	
DICYCLOPENTADIENE	6.245	7.079	7.35	7.556	7.628	7.898	7.915	7.912	8.033	8.076	8.095										7.616971	7.33	0.073	1	
8260-1,4-DICHLOROBENZENE-D4																									
1,4-DICHLOROBENZENE	1.222	1.319	1.298	1.333	1.27	1.273	1.274	1.292	1.31	1.303	1.296										1.289992	2.32	0.023	1	
1,2,3-TRIMETHYLBENZENE	2.51	2.583	2.556	2.576	2.587	2.598	2.556	2.605	2.643	2.731	2.704										2.604577	2.51	0.025	1	
1,2-DICHLOROBENZENE	1.027	1.126	1.123	1.165	1.144	1.161	1.15	1.168	1.184	1.199	1.183										1.148167	4.05	0.04	1	0.4
n-Butylbenzene	2.488	2.644	2.721	2.727	2.776	2.778	2.802	2.842	2.862	2.853	2.841										2.757845	4.05	0.041	1	
1,2-Dibromo-3-chloropropane	0.085	0.081	0.119	0.092	0.106	0.105	0.107	0.111	0.12	0.123	0.125										0.10676	14.29	0.042	1	0.05

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Released By : Jessica hawkins
Released On : 3/24/2016 1:42:01 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V826C23P -- ICal Updated Time: Thu Mar 24 11:51:41 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur	RF
1,2,4-Trichlorobenzene	0.664	0.712	0.711	0.7	0.713	0.666	0.696	0.701	0.741	0.746	0.778										0.711496	4.72	0.047	1	0.2
HEXACHLORO-1,3-BUTADIENE	0.323	0.337	0.364	0.384	0.387	0.371	0.37	0.377	0.39	0.409	0.428										0.376423	7.83	0.078	1	
Naphthalene	2.352	1.919	1.86	1.821	1.752	1.678	1.726	1.786	1.945	2	2.01										1.895265	9.89	0.099	1	
1,2,3-Trichlorobenzene	0.651	0.635	0.689	0.649	0.648	0.613	0.634	0.641	0.679	0.705	0.718										0.65999	5	0.05	1	
1-Methylnaphthalene		1.134	1.046	1.022	0.938	0.895	0.973	1.037	1.157	1.193	1.199										1.059431	10.12	0.101	1	
2-Methylnaphthalene	1.111	0.901	0.833	0.801	0.792	0.732	0.792	0.838	0.927	0.952	0.943										0.874792	12.13	0.121	1	
AP9-PENTAFLUOROBENZENE																									
ETHANOL																					0	0	0	1	
Bromoethane												0.445	0.506	0.521	0.519	0.529	0.522	0.473	0.495	0.504	0.501689	5.42	0.054	1	
2-PROPANOL												0.026	0.028	0.029	0.024	0.026	0.029	0.026	0.027	0.026	0.026756	5.97	0.06	1	
Methyl Acetate												0.217	0.248	0.269	0.254	0.269	0.274	0.242	0.25	0.259	0.25349	6.92	0.069	1	0.1
ACETONITRILE												0.034	0.042	0.044	0.043	0.046	0.048	0.042	0.043	0.045	0.043243	9.18	0.092	1	
ALLYL CHLORIDE												0.253	0.286	0.295	0.292	0.299	0.296	0.268	0.284	0.286	0.284275	5.27	0.053	1	
tert-BUTYL ALCOHOL												0.042	0.057	0.062	0.054	0.062	0.063	0.057	0.055	0.063	0.057142	11.77	0.118	1	
chloroprene												0.699	0.765	0.793	0.788	0.827	0.814	0.793	0.778	0.787	0.78276	4.64	0.046	1	
ETHYL TERT-BUTYL ETHER												1.264	1.369	1.477	1.405	1.509	1.435	1.435	1.354	1.45	1.410874	5.21	0.052	1	
PROPIONITRILE												0.046	0.054	0.059	0.055	0.06	0.061	0.057	0.055	0.056	0.055911	7.43	0.074	1	
Ethyl Acetate												0.331	0.372	0.405	0.386	0.413	0.42	0.395	0.392	0.399	0.390286	6.8	0.068	1	
METHACRYLONITRILE												0.153	0.171	0.186	0.179	0.189	0.191	0.18	0.177	0.182	0.178459	6.43	0.064	1	
Cyclohexane												1.235	1.373	1.45	1.362	1.491	1.419	1.415	1.317	1.408	1.385616	5.47	0.055	1	0.1
tert-butyl formate												0.289	0.341	0.373	0.356	0.392	0.379	0.378	0.352	0.389	0.36108	8.85	0.088	1	
ISOBUTANOL												0.008	0.01	0.011	0.01	0.012	0.012	0.011	0.011	0.012	0.01079	12.32	0.123	1	

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Instrument ID : VOCMS26
Method : V826C23P
Review Method : 8260C
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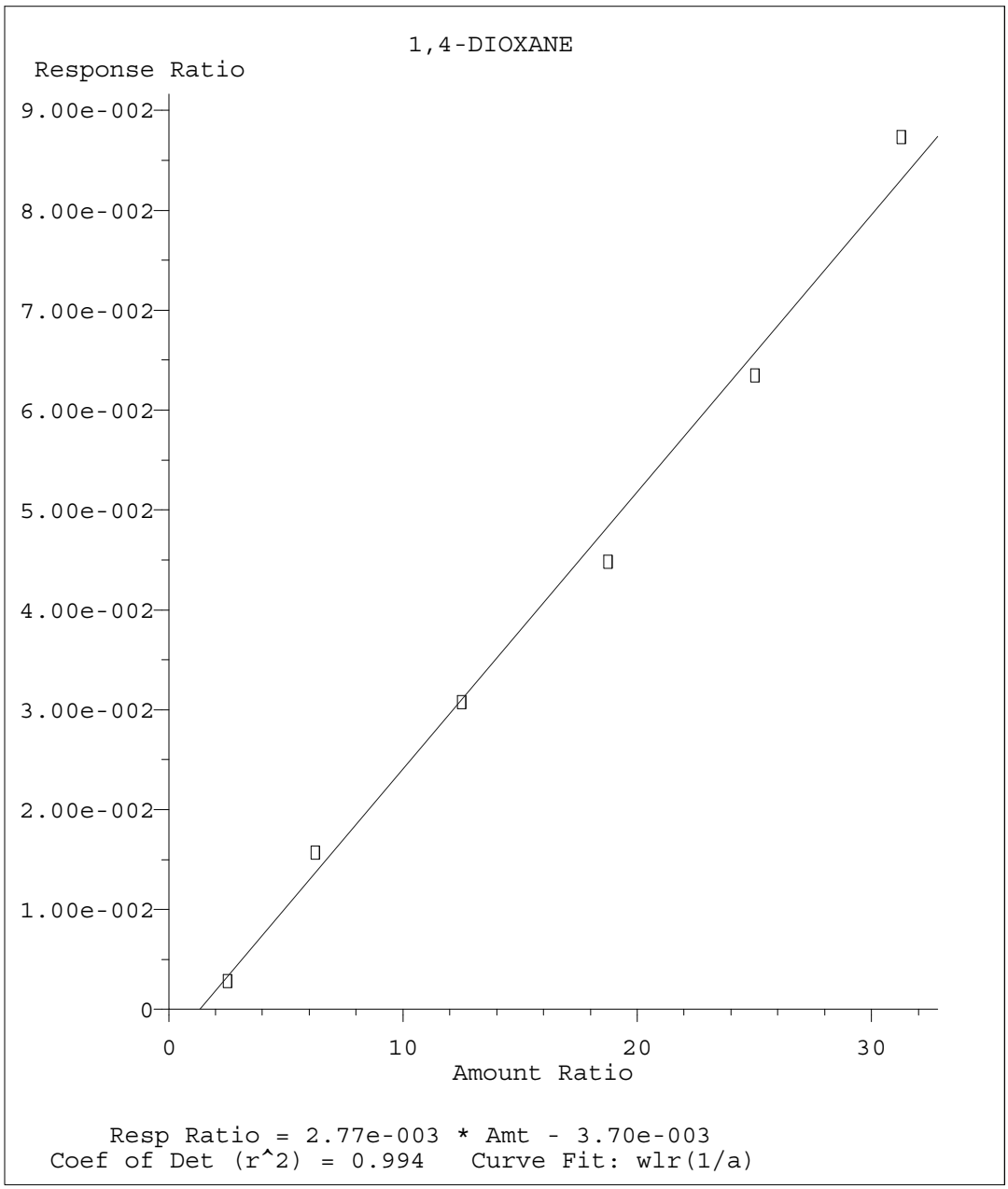
Released By : Jessica hawkins
Released On : 3/24/2016 1:42:01 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V826C23P -- ICal Updated Time: Thu Mar 24 11:51:41 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur	RF
Amyl Alcohol												0.028	0.039	0.042	0.036	0.039	0.041	0.039	0.036	0.039	0.03762	11.04	0.11	1	
TERT-AMYL METHYL ETHER												1.483	1.531	1.659	1.549	1.678	1.596	1.605	1.488	1.617	1.578298	4.45	0.044	1	
AP9-1,4-DIFLUOROBENZENE																									
N-BUTANOL												0.005	0.006	0.007	0.006	0.007	0.008	0.007	0.007	0.007	0.006725	12.62	0.126	1	
Methyl Cyclohexane												1.078	0.843	0.818	0.749	0.799	0.749	0.754	0.684	0.729	0.800358	14.32	0.143	1	0.1
2-nitropropane												0.05	0.052	0.06	0.056	0.062	0.061	0.058	0.058	0.059	0.057354	6.84	0.068	1	
METHYL METHACRYLATE												0.142	0.165	0.179	0.174	0.18	0.186	0.175	0.174	0.174	0.172041	7.38	0.074	1	
1,4-DIOXANE												0.001	0.003	0.002	0.002	0.003	0.003				0.002302	25.87	0.994	0	
n-octane												0.283	0.291	0.316	0.31	0.322	0.317	0.318	0.305	0.307	0.307481	4.23	0.042	1	
3,3-DIMETHYL-1-BUTANOL												0.019	0.022	0.026	0.025	0.028	0.029	0.027	0.025	0.028	0.025466	12.04	0.12	1	
AP9-2-BROMO-1 -CHLOROPROPANE																									
ETHYL METHACRYLATE												1.526	1.661	1.874	1.849	1.975	2.008	1.942	1.943	1.954	1.859077	8.69	0.087	1	
CIS-1,4-DICHLORO-2-BUTENE												0.298	0.363	0.398	0.399	0.42	0.427	0.404	0.4	0.406	0.390475	10	0.1	1	
Cyclohexanone												0.089	0.116	0.113	0.12	0.13	0.097	0.098	0.095	0.112	0.107774	12.76	0.128	1	
PENTACHLOROETHANE												0.692	0.878	0.985	0.948	1.033	1.02	1.026	0.981	1.022	0.95407	11.51	0.115	1	
Hexachloroethane												1.178	1.146	1.253	1.243	1.337	1.301	1.292	1.26	1.3	1.256797	4.89	0.049	1	
AP9-1,4-DICHLOROBENZENE-D4																									



Method Name: C:\msdchem\1\methods\V826C23P.M

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 14A.D
Acq On : 23 Mar 2016 9:04 pm
Operator :
Sample : RL VMS 1 ppb 16C22692
Misc : water
ALS Vial : 5 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 13:19:44 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 11:51:41 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 8260-PENTAFLUOROBENZENE	5.635	168	705997	40.0000000	ppb		0.00
41) 8260-1,4-DIFLUOROBENZENE	6.123	114	1339579	40.0000000	ppb		0.00
53) 8260-2-BROMO-1-CHLOROP...	7.805	79	227367	40.0000000	ppb		0.00
84) 8260-1,4-DICHLOROBENZE...	10.982	152	543184	40.0000000	ppb		0.00
96) AP9-PENTAFLUOROBENZENE	0.000	168	0m	40.0000000	ppb		-5.64
114) AP9-1,4-DIFLUOROBENZENE	0.000	114	0m	40.0000000	ppb		-6.12
122) AP9-2-BROMO-1-CHLOROPR...	0.000	79	0m	40.0000000	ppb		-7.81
128) AP9-1,4-DICHLOROBENZEN...	0.000	152	0m	40.0000000	ppb		-10.98
System Monitoring Compounds							
33) DIBROMOFLUOROMETHANE	5.214	111	418653	41.8991580	ppb		0.00
Spiked Amount 40.000	Range 79 - 121		Recovery = 104.75%				
46) a,a,a-Trifluorotoluene	6.702	146	704880	41.7305458	ppb		0.00
Spiked Amount 40.000	Range 90 - 116		Recovery = 104.33%				
50) TOLUENE-D8	7.354	98	1735588	41.7336751	ppb		0.00
Spiked Amount 40.000	Range 90 - 115		Recovery = 104.33%				
68) 4-BROMOFLUOROBENZENE	9.921	95	621641	41.4546431	ppb		0.00
Spiked Amount 40.000	Range 80 - 120		Recovery = 103.64%				
Target Compounds							Qvalue
3) PROPENE	1.672	41	2231	1.6638723	ppb		93
4) DICHLORODIFLUOROMETHANE	1.721	85	9720	1.0875241	ppb		93
5) CHLOROMETHANE	1.874	50	11476	1.0093949	ppb		98
6) VINYL CHLORIDE	1.953	62	12367	1.0060522	ppb		99
7) 1,3-BUTADIENE	1.971	39	7348	1.0285955	ppb		87
8) BROMOMETHANE	2.245	94	7956	0.9801103	ppb		94
9) CHLOROETHANE	2.367	64	7430	1.0242804	ppb	#	92
10) TRICHLOROFLUOROMETHANE	2.489	101	14007	0.9788026	ppb		97
11) DICHLOROFLUOROMETHANE	2.532	67	18791	1.0429556	ppb		95
12) ETHYL ETHER	2.751	59	6897	1.0254471	ppb	#	87
13) ACROLEIN	3.294	56	672	4.1843179	ppb	#	12
14) 1,1-DICHLOROETHENE	2.959	61	13041	0.9309210	ppb		95
15) 1,1,2-TRICHLOROTRIFLUO...	3.020	101	9135	1.0175459	ppb		98
16) ACETONE	3.574	43	27090	11.4959636	ppb		95
17) IODOMETHANE	3.111	142	69374	5.0495353	ppb		100
18) CARBON DISULFIDE	3.001	76	29830	0.9897379	ppb	#	93
19) METHYLENE CHLORIDE	3.538	84	10448	1.0746272	ppb		97
20) ACRYLONITRILE	4.336	53	11802	4.7414379	ppb		99
21) n-HEXANE	3.782	56	8493	0.9477416	ppb		93
22) TRANS-1,2-DICHLOROETHENE	3.702	96	9736	1.0014542	ppb		98
23) METHYL TERT-BUTYL ETHER	3.806	73	21664	1.0486011	ppb	#	1
24) 1,1-DICHLOROETHANE	4.294	63	17923	1.0330422	ppb		99
25) VINYL ACETATE	4.525	43	67561	4.9651847	ppb		99
26) DI-ISOPROPYL ETHER	4.166	45	26789	1.0099187	ppb		94
27) 2,2-Dichloropropane	4.903	77	10685	1.0995969	ppb		100
28) CIS-1,2-DICHLOROETHENE	4.800	96	10675	1.0261501	ppb		98
29) 2-BUTANONE (MEK)	5.318	43	17349	4.8533283	ppb		98
30) BROMOCHLOROMETHANE	4.989	130	5554	1.0276143	ppb		94
31) TETRAHYDROFURAN	5.196	42	2124	0.9688039	ppb	#	66
32) CHLOROFORM	5.044	83	17502	1.0055552	ppb		100
34) 1,1,1-TRICHLOROETHANE	5.245	97	13294	1.0253548	ppb		99
35) CARBON TETRACHLORIDE	5.190	117	12649	1.0713742	ppb		93
36) 1,1-Dichloropropene	5.361	75	14291	1.0012047	ppb		98

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 14A.D
Acq On : 23 Mar 2016 9:04 pm
Operator :
Sample : RL VMS 1 ppb 16C22692
Misc : water
ALS Vial : 5 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 13:19:44 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 11:51:41 2016
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
37)	2,2,4-TRIMETHYLPENTANE	5.452	57	40170	1.0077597	ppb		94
38)	n-Heptane	5.544	43	14943	0.9190424	ppb		98
39)	BENZENE	5.580	78	39811	1.0143472	ppb		100
40)	1,2-DICHLOROETHANE	5.757	62	10550	0.9946224	ppb		95
42)	TRICHLOROETHENE	6.104	130	9251	0.9472036	ppb		92
43)	1,2-DICHLOROPROPANE	6.574	62	7107	1.0173520	ppb		98
44)	DIBROMOMETHANE	6.476	93	5318	0.9939672	ppb		99
45)	BROMODICHLOROMETHANE	6.623	83	11974	0.9802412	ppb		99
47)	2-CHLOROETHYL VINYL ETHER	7.122	63	25793	4.6086041	ppb		98
48)	CIS-1,3-DICHLOROPROPENE	7.190	75	15111	0.9799251	ppb	#	95
49)	4-METHYL-2-PENTANONE (...	7.732	43	29985	4.6800334	ppb		96
51)	TOLUENE	7.403	91	42544	1.0064335	ppb		98
52)	TRANS-1,3-DICHLOROPROPENE	7.775	75	14564	0.9742405	ppb	#	94
54)	1,1,2-TRICHLOROETHANE	7.921	97	7701	1.0210624	ppb		93
55)	TETRACHLOROETHENE	7.757	164	6910	1.0046460	ppb		95
56)	1,3-Dichloropropane	8.171	76	14006	1.0104334	ppb		97
57)	2-HEXANONE	8.494	58	13372	4.4726679	ppb		90
58)	CHLORODIBROMOMETHANE	8.086	129	7971	0.9607307	ppb		96
59)	1,2-DIBROMOETHANE	8.305	107	7337	0.9885260	ppb		94
60)	CHLOROBENZENE	8.793	112	24046	0.9494956	ppb		95
61)	1,1,1,2-TETRACHLOROETHANE	8.848	133	7541	1.0092308	ppb	#	99
62)	ETHYLBENZENE	8.805	106	14211	0.9972626	ppb		97
63)	M&P-XYLENE	8.945	106	34136	1.9543342	ppb		97
64)	O-XYLENE	9.348	106	15452	0.9664053	ppb		99
65)	STYRENE	9.396	104	23388	0.9183885	ppb		99
66)	Bromoform	9.427	173	3837	0.8984471	ppb		95
67)	Isopropylbenzene	9.646	105	41887	0.9882792	ppb		100
69)	Bromobenzene	10.024	77	20428	1.0480683	ppb		96
70)	1,1,2,2-TETRACHLOROETHANE	10.104	83	8911	0.9708888	ppb		97
71)	1,2,3-TRICHLOROPROPANE	10.238	110	2568	0.9748347	ppb		96
72)	TRANS-1,4-DICHLORO-2-B...	10.274	53	2026	0.9155734	ppb		93
73)	n-Propylbenzene	10.043	91	54613	1.0064598	ppb		100
74)	4-ETHYLTOLUENE	10.146	105	45163	1.0090844	ppb		100
75)	2-Chlorotoluene	10.201	126	9514	1.0068775	ppb		98
76)	4-Chlorotoluene	10.354	91	31051	0.9894062	ppb		99
77)	1,3,5-Trimethylbenzene	10.226	105	35141	1.0087277	ppb		99
78)	tert-Butylbenzene	10.530	119	29015	1.0001024	ppb		97
79)	1,2,4-Trimethylbenzene	10.597	105	35891	1.0147637	ppb		99
80)	sec-Butylbenzene	10.701	105	46384	0.9985049	ppb		100
81)	1,3-DICHLOROBENZENE	10.914	146	16721	0.9910106	ppb		98
82)	p-Isopropyltoluene	10.835	119	36053	0.9698852	ppb		99
83)	DICYCLOPENTADIENE	10.817	66	41778	0.9649346	ppb		98
85)	1,4-DICHLOROBENZENE	10.994	146	17633	1.0065892	ppb	#	1
86)	1,2,3-TRIMETHYLBENZENE	11.012	105	34713	0.9814496	ppb		97
87)	1,2-DICHLOROBENZENE	11.390	146	15253	0.9782800	ppb		98
88)	n-Butylbenzene	11.231	91	36949	0.9866109	ppb		99
89)	1,2-Dibromo-3-chloropr...	12.109	157	1611	1.1112224	ppb		91
90)	1,2,4-Trichlorobenzene	12.725	180	9655	0.9992936	ppb		99
91)	HEXACHLORO-1,3-BUTADIENE	12.695	225	4941	0.9666110	ppb		98
92)	Naphthalene	13.012	128	25257	0.9813518	ppb		99
93)	1,2,3-Trichlorobenzene	13.176	180	9362	1.0445861	ppb		98
94)	1-Methylnaphthalene	13.950	142	14200	0.9870264	ppb		96
95)	2-Methylnaphthalene	14.097	142	11314	0.9524110	ppb	#	93

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 14A.D
Acq On : 23 Mar 2016 9:04 pm
Operator :
Sample : RL VMS 1 ppb 16C22692
Misc : water
ALS Vial : 5 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 13:19:44 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 11:51:41 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 14A.D
Acq On : 23 Mar 2016 9:04 pm
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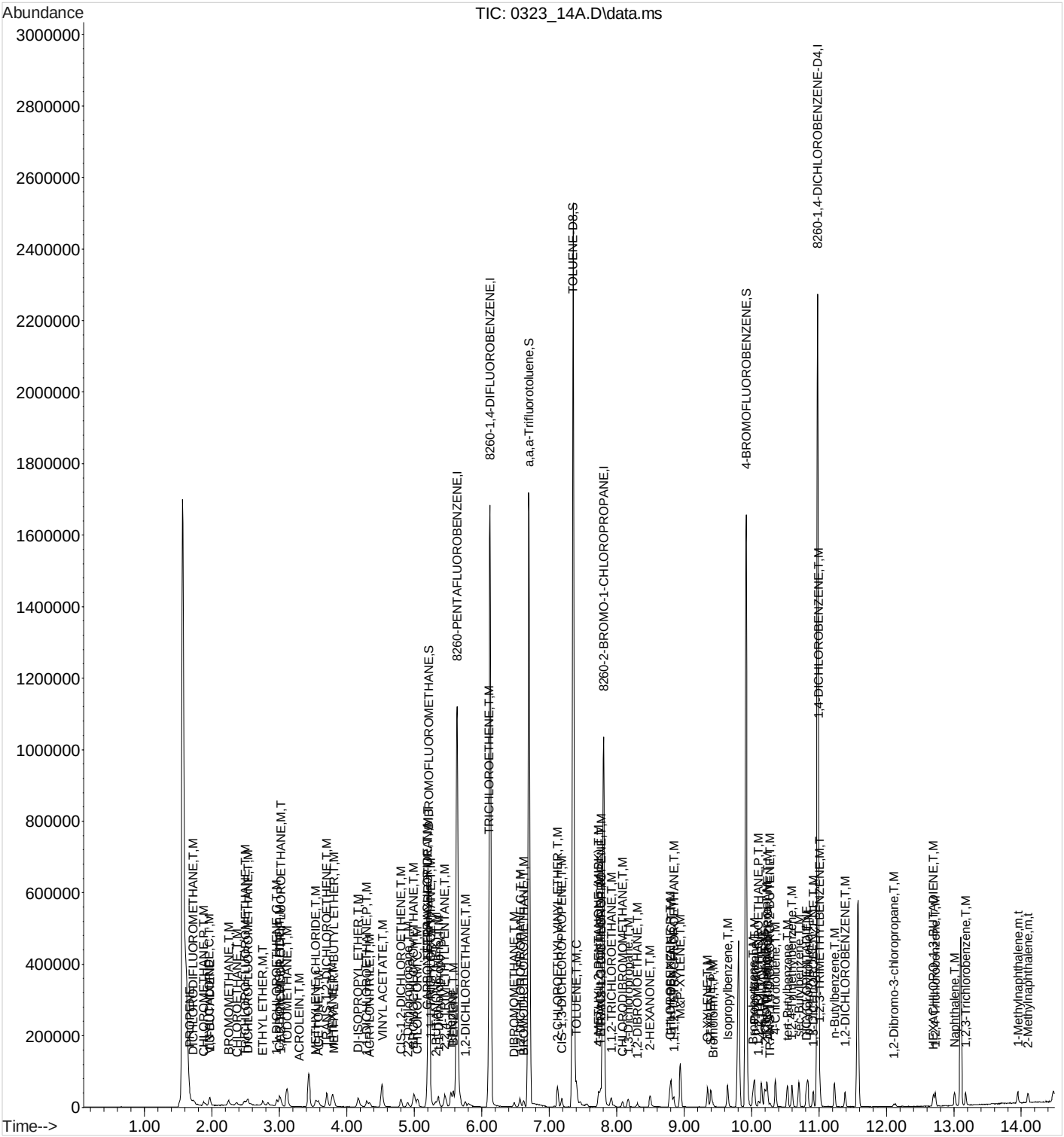
QLast Update : Thu Mar 24 11:51:41 2016
Response via : Initial Calibration



Data Path : C:\msdchem\1\data\032316\
Data File : 0323 15a.D
Acq On : 23 Mar 2016 9:23 pm
Operator :
Sample : RL VMS 2 ppb 16C22692
Misc : water
ALS Vial : 6 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 13:31:00 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 11:51:41 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 8260-PENTAFLUOROBENZENE	5.635	168	718492	40.0000000	ppb		0.00
41) 8260-1,4-DIFLUOROBENZENE	6.123	114	1344399	40.0000000	ppb		0.00
53) 8260-2-BROMO-1-CHLOROP...	7.805	79	225896	40.0000000	ppb		0.00
84) 8260-1,4-DICHLOROBENZE...	10.982	152	536225	40.0000000	ppb		0.00
96) AP9-PENTAFLUOROBENZENE	0.000	168	0m	40.0000000	ppb		-5.64
114) AP9-1,4-DIFLUOROBENZENE	0.000	114	0m	40.0000000	ppb		-6.12
122) AP9-2-BROMO-1-CHLOROPR...	0.000	79	0m	40.0000000	ppb		-7.81
128) AP9-1,4-DICHLOROBENZEN...	0.000	152	0m	40.0000000	ppb		-10.98
System Monitoring Compounds							
33) DIBROMOFLUOROMETHANE	5.214	111	421687	41.4688717	ppb		0.00
Spiked Amount 40.000	Range 79 - 121		Recovery = 103.67%				
46) a,a,a-Trifluorotoluene	6.702	146	712807	42.0485460	ppb		0.00
Spiked Amount 40.000	Range 90 - 116		Recovery = 105.12%				
50) TOLUENE-D8	7.354	98	1769212	42.3896683	ppb		0.00
Spiked Amount 40.000	Range 90 - 115		Recovery = 105.97%				
68) 4-BROMOFLUOROBENZENE	9.921	95	632925	42.4819722	ppb		0.00
Spiked Amount 40.000	Range 80 - 120		Recovery = 106.20%				
Target Compounds							Qvalue
3) PROPENE	1.672	41	3498	2.5634281	ppb		97
4) DICHLORODIFLUOROMETHANE	1.733	85	18428	2.0259641	ppb		99
5) CHLOROMETHANE	1.880	50	23063	1.9932754	ppb		98
6) VINYL CHLORIDE	1.959	62	23550	1.8824697	ppb		96
7) 1,3-BUTADIENE	1.971	39	13839	1.9035360	ppb		96
8) BROMOMETHANE	2.245	94	15945	1.9301258	ppb		98
9) CHLOROETHANE	2.367	64	14613	1.9794765	ppb		98
10) TRICHLOROFLUOROMETHANE	2.489	101	27707	1.9024813	ppb	#	97
11) DICHLOROFLUOROMETHANE	2.538	67	36325	1.9810820	ppb		99
12) ETHYL ETHER	2.751	59	13445	1.9642409	ppb		92
13) ACROLEIN	3.282	56	1636	10.0096668	ppb		96
14) 1,1-DICHLOROETHENE	2.959	61	28713	2.0140091	ppb		98
15) 1,1,2-TRICHLOROTRIFLUO...	3.020	101	18534	2.0285958	ppb		99
16) ACETONE	3.580	43	30430	12.6887618	ppb		95
17) IODOMETHANE	3.111	142	135219	9.6710431	ppb		99
18) CARBON DISULFIDE	3.001	76	59864	1.9517024	ppb		97
19) METHYLENE CHLORIDE	3.544	84	19755	1.9965612	ppb		98
20) ACRYLONITRILE	4.336	53	25272	9.9764260	ppb		96
21) n-HEXANE	3.782	56	18189	1.9944289	ppb		88
22) TRANS-1,2-DICHLOROETHENE	3.702	96	19385	1.9592833	ppb		99
23) METHYL TERT-BUTYL ETHER	3.806	73	40847	1.9427314	ppb	#	1
24) 1,1-DICHLOROETHANE	4.294	63	35273	1.9977019	ppb		98
25) VINYL ACETATE	4.519	43	137404	9.9224663	ppb		98
26) DI-ISOPROPYL ETHER	4.166	45	52978	1.9624853	ppb		96
27) 2,2-Dichloropropane	4.910	77	20018	2.0242334	ppb		97
28) CIS-1,2-DICHLOROETHENE	4.806	96	20707	1.9558750	ppb		98
29) 2-BUTANONE (MEK)	5.318	43	35774	9.8336250	ppb		99
30) BROMOCHLOROMETHANE	4.989	130	10916	1.9845805	ppb		96
31) TETRAHYDROFURAN	5.196	42	4745	2.1266622	ppb	#	81
32) CHLOROFORM	5.050	83	35106	1.9818944	ppb		100
34) 1,1,1-TRICHLOROETHANE	5.245	97	25655	1.9443365	ppb		97
35) CARBON TETRACHLORIDE	5.190	117	22996	1.9138955	ppb		95
36) 1,1-Dichloropropene	5.361	75	28484	1.9608399	ppb		99

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 15a.D
Acq On : 23 Mar 2016 9:23 pm
Operator :
Sample : RL VMS 2 ppb 16C22692
Misc : water
ALS Vial : 6 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 13:31:00 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 11:51:41 2016
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
37)	2,2,4-TRIMETHYLPENTANE	5.452	57	79821	1.9676744	ppb		100
38)	n-Heptane	5.544	43	31406	1.8979786	ppb		97
39)	BENZENE	5.580	78	78603	1.9679026	ppb		98
40)	1,2-DICHLOROETHANE	5.757	62	21597	2.0006915	ppb		96
42)	TRICHLOROETHENE	6.104	130	19451	1.9844344	ppb		96
43)	1,2-DICHLOROPROPANE	6.568	62	14074	2.0074402	ppb		98
44)	DIBROMOMETHANE	6.482	93	11079	2.0633097	ppb		94
45)	BROMODICHLOROMETHANE	6.623	83	24641	2.0099820	ppb		98
47)	2-CHLOROETHYL VINYL ETHER	7.122	63	55733	9.9224772	ppb		99
48)	CIS-1,3-DICHLOROPROPENE	7.190	75	30046	1.9414512	ppb		98
49)	4-METHYL-2-PENTANONE (...	7.732	43	61761	9.6050443	ppb		98
51)	TOLUENE	7.403	91	86065	2.0286798	ppb		100
52)	TRANS-1,3-DICHLOROPROPENE	7.775	75	37331	2.4882572	ppb	#	90
54)	1,1,2-TRICHLOROETHANE	7.915	97	14634	1.9529320	ppb		98
55)	TETRACHLOROETHENE	7.757	164	13757	2.0131571	ppb		99
56)	1,3-Dichloropropane	8.171	76	27854	2.0225536	ppb		98
57)	2-HEXANONE	8.494	58	28188	9.4897209	ppb		100
58)	CHLORODIBROMOMETHANE	8.086	129	15533	1.8843565	ppb		99
59)	1,2-DIBROMOETHANE	8.305	107	15026	2.0376605	ppb		98
60)	CHLOROBENZENE	8.793	112	50907	2.0232358	ppb		99
61)	1,1,1,2-TETRACHLOROETHANE	8.848	133	14443	1.9455297	ppb	#	99
62)	ETHYLBENZENE	8.811	106	27757	1.9605428	ppb		98
63)	M&P-XYLENE	8.945	106	68066	3.9222505	ppb		98
64)	O-XYLENE	9.348	106	30936	1.9474111	ppb		96
65)	STYRENE	9.396	104	48373	1.9118563	ppb		94
66)	Bromoform	9.427	173	7981	1.8809485	ppb		96
67)	Isopropylbenzene	9.646	105	82868	1.9679141	ppb		98
69)	Bromobenzene	10.024	77	39133	2.0208113	ppb		96
70)	1,1,2,2-TETRACHLOROETHANE	10.104	83	17896	1.9625372	ppb		98
71)	1,2,3-TRICHLOROPROPANE	10.244	110	5176	1.9776486	ppb		94
72)	TRANS-1,4-DICHLORO-2-B...	10.280	53	4259	1.9372259	ppb		95
73)	n-Propylbenzene	10.043	91	107055	1.9857576	ppb		100
74)	4-ETHYLTOLUENE	10.146	105	86416	1.9433801	ppb		98
75)	2-Chlorotoluene	10.201	126	19062	2.0304900	ppb	#	96
76)	4-Chlorotoluene	10.354	91	63601	2.0397732	ppb		99
77)	1,3,5-Trimethylbenzene	10.226	105	68160	1.9692837	ppb		100
78)	tert-Butylbenzene	10.536	119	56525	1.9610171	ppb		98
79)	1,2,4-Trimethylbenzene	10.604	105	68808	1.9581104	ppb		100
80)	sec-Butylbenzene	10.701	105	93337	2.0223427	ppb		99
81)	1,3-DICHLOROBENZENE	10.914	146	34528	2.0597115	ppb		100
82)	p-Isopropyltoluene	10.835	119	73207	1.9822135	ppb		98
83)	DICYCLOPENTADIENE	10.817	66	85342	1.9839556	ppb		100
85)	1,4-DICHLOROBENZENE	11.000	146	35740	2.0667146	ppb	#	1
86)	1,2,3-TRIMETHYLBENZENE	11.012	105	69061	1.9779197	ppb		100
87)	1,2-DICHLOROBENZENE	11.390	146	31232	2.0291194	ppb		99
88)	n-Butylbenzene	11.231	91	73118	1.9777320	ppb		99
89)	1,2-Dibromo-3-chloropr...	12.115	157	2459	1.7181612	ppb	#	77
90)	1,2,4-Trichlorobenzene	12.725	180	18768	1.9676993	ppb		97
91)	HEXACHLORO-1,3-BUTADIENE	12.701	225	10284	2.0379751	ppb		97
92)	Naphthalene	13.012	128	48817	1.9213831	ppb		100
93)	1,2,3-Trichlorobenzene	13.176	180	17390	1.9655092	ppb		97
94)	1-Methylnaphthalene	13.950	142	27404	1.9295422	ppb		98
95)	2-Methylnaphthalene	14.103	142	21482	1.8318201	ppb		97

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 15a.D
Acq On : 23 Mar 2016 9:23 pm
Operator :
Sample : RL VMS 2 ppb 16C22692
Misc : water
ALS Vial : 6 Sample Multiplier: 1
InstName : VOCMS26

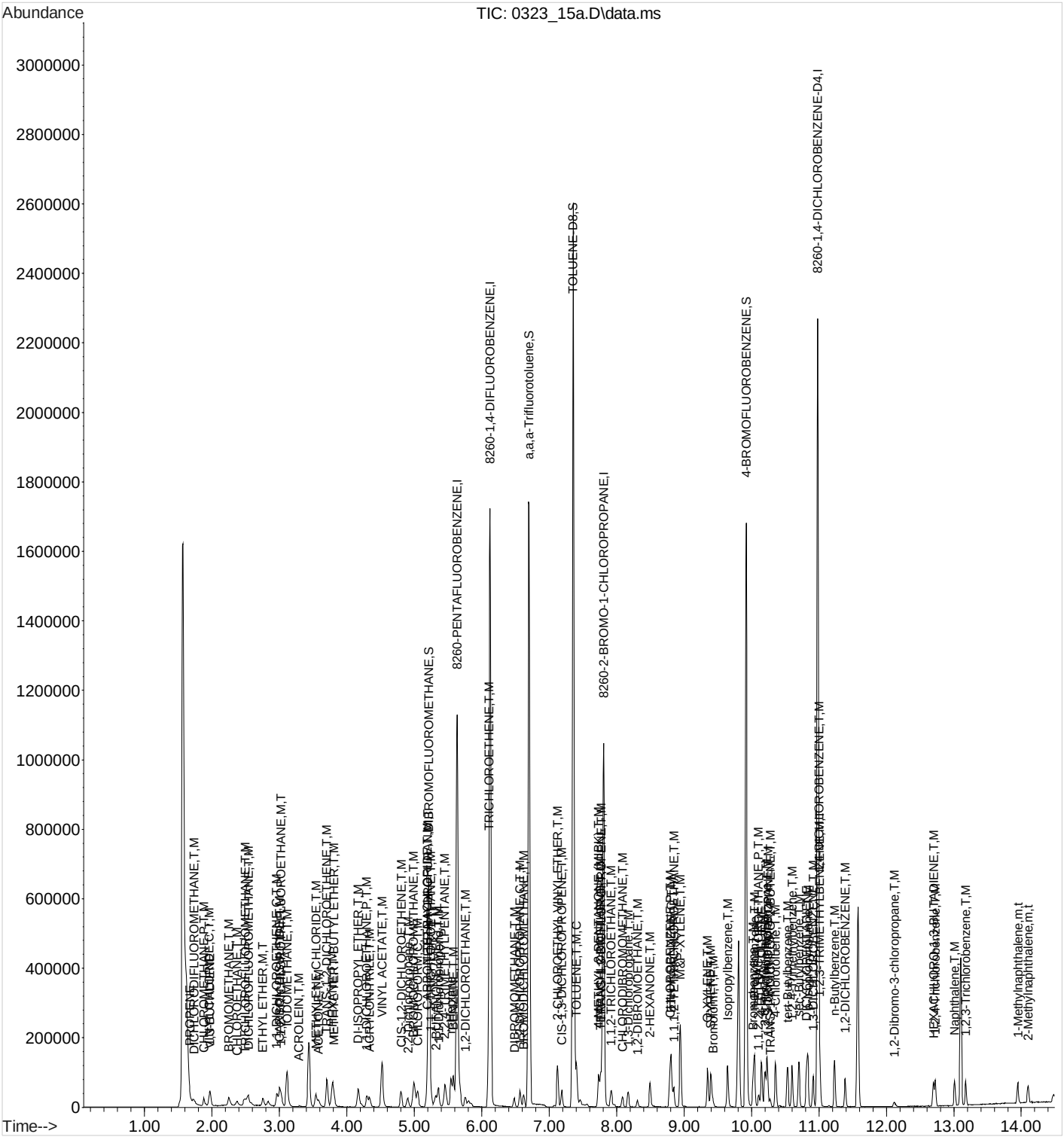
Quant Time: Mar 24 13:31:00 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 11:51:41 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 15a.D
Acq On : 23 Mar 2016 9:23 pm
Operator :
Sample : RL VMS 2 ppb 16C22692
Misc : water
ALS Vial : 6 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 13:31:00 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 11:51:41 2016
Response via : Initial Calibration



Data Path : C:\msdchem\1\data\032316\
Data File : 0323 16a.D
Acq On : 23 Mar 2016 9:43 pm
Operator :
Sample : RL VMS 5.0 ppb 16C22692
Misc : water
ALS Vial : 7 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 13:23:56 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 11:51:41 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 8260-PENTAFLUOROBENZENE	5.635	168	727433	40.0000000	ppb		0.00
41) 8260-1,4-DIFLUOROBENZENE	6.123	114	1363291	40.0000000	ppb		0.00
53) 8260-2-BROMO-1-CHLOROP...	7.805	79	233364	40.0000000	ppb		0.00
84) 8260-1,4-DICHLOROBENZE...	10.981	152	546834	40.0000000	ppb		0.00
96) AP9-PENTAFLUOROBENZENE	0.000	168	0m	40.0000000	ppb		-5.64
114) AP9-1,4-DIFLUOROBENZENE	0.000	114	0m	40.0000000	ppb		-6.12
122) AP9-2-BROMO-1-CHLOROPR...	0.000	79	0m	40.0000000	ppb		-7.81
128) AP9-1,4-DICHLOROBENZEN...	0.000	152	0m	40.0000000	ppb		-10.98
System Monitoring Compounds							
33) DIBROMOFLUOROMETHANE	5.214	111	436603	42.4079872	ppb		0.00
Spiked Amount 40.000	Range 79 - 121		Recovery = 106.02%				
46) a,a,a-Trifluorotoluene	6.702	146	748892	43.5650113	ppb		0.00
Spiked Amount 40.000	Range 90 - 116		Recovery = 108.91%				
50) TOLUENE-D8	7.354	98	1827075	43.1694117	ppb		0.00
Spiked Amount 40.000	Range 90 - 115		Recovery = 107.92%				
68) 4-BROMOFLUOROBENZENE	9.921	95	653387	42.4519447	ppb		0.00
Spiked Amount 40.000	Range 80 - 120		Recovery = 106.13%				
Target Compounds							Qvalue
3) PROPENE	1.672	41	7199	5.2107765	ppb		95
4) DICHLORODIFLUOROMETHANE	1.727	85	42086	4.5700414	ppb		95
5) CHLOROMETHANE	1.880	50	56865	4.8542874	ppb		99
6) VINYL CHLORIDE	1.959	62	60976	4.8142091	ppb		99
7) 1,3-BUTADIENE	1.971	39	33369	4.5334467	ppb		98
8) BROMOMETHANE	2.251	94	39674	4.7434686	ppb		100
9) CHLOROETHANE	2.367	64	35601	4.7632360	ppb		97
10) TRICHLOROFLUOROMETHANE	2.483	101	71019	4.8165312	ppb		98
11) DICHLOROFLUOROMETHANE	2.532	67	90462	4.8729500	ppb		99
12) ETHYL ETHER	2.757	59	33677	4.8595526	ppb		95
13) ACROLEIN	3.306	56	3713	22.4383133	ppb		95
14) 1,1-DICHLOROETHENE	2.965	61	72705	5.0370478	ppb		99
15) 1,1,2-TRICHLOROTRIFLUO...	3.026	101	46077	4.9812633	ppb		98
16) ACETONE	3.580	43	63192	26.0260543	ppb		95
17) IODOMETHANE	3.111	142	342515	24.1960309	ppb		100
18) CARBON DISULFIDE	3.001	76	154408	4.9721773	ppb		98
19) METHYLENE CHLORIDE	3.544	84	48309	4.8223926	ppb		100
20) ACRYLONITRILE	4.336	53	63594	24.7959331	ppb		98
21) n-HEXANE	3.782	56	45581	4.9365385	ppb		89
22) TRANS-1,2-DICHLOROETHENE	3.702	96	48910	4.8826774	ppb		99
23) METHYL TERT-BUTYL ETHER	3.806	73	106452	5.0007524	ppb		99
24) 1,1-DICHLOROETHANE	4.294	63	88849	4.9701532	ppb		99
25) VINYL ACETATE	4.525	43	349537	24.9311522	ppb		100
26) DI-ISOPROPYL ETHER	4.172	45	137015	5.0131177	ppb		97
27) 2,2-Dichloropropane	4.903	77	52758	5.2693515	ppb		99
28) CIS-1,2-DICHLOROETHENE	4.800	96	53303	4.9728402	ppb		99
29) 2-BUTANONE (MEK)	5.318	43	88046	23.9047776	ppb		99
30) BROMOCHLOROMETHANE	4.983	130	27233	4.8902337	ppb		93
31) TETRAHYDROFURAN	5.196	42	10778	4.7712197	ppb	#	92
32) CHLOROFORM	5.050	83	88191	4.9175906	ppb		94
34) 1,1,1-TRICHLOROETHANE	5.245	97	68967	5.1626143	ppb		100
35) CARBON TETRACHLORIDE	5.190	117	57632	4.7376017	ppb		99
36) 1,1-Dichloropropene	5.361	75	72625	4.9380587	ppb		99

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 16a.D
Acq On : 23 Mar 2016 9:43 pm
Operator :
Sample : RL VMS 5.0 ppb 16C22692
Misc : water
ALS Vial : 7 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 13:23:56 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 11:51:41 2016
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
37)	2,2,4-TRIMETHYLPENTANE	5.458	57	206321	5.0235237	ppb		99
38)	n-Heptane	5.543	43	83038	4.9566072	ppb		95
39)	BENZENE	5.580	78	201739	4.9886527	ppb		99
40)	1,2-DICHLOROETHANE	5.757	62	54797	5.0138624	ppb		98
42)	TRICHLOROETHENE	6.104	130	49686	4.9988311	ppb		99
43)	1,2-DICHLOROPROPANE	6.568	62	35318	4.9677621	ppb		99
44)	DIBROMOMETHANE	6.482	93	27334	5.0200341	ppb		98
45)	BROMODICHLOROMETHANE	6.623	83	61623	4.9569700	ppb		100
47)	2-CHLOROETHYL VINYL ETHER	7.122	63	141253	24.7996175	ppb		100
48)	CIS-1,3-DICHLOROPROPENE	7.183	75	77973	4.9684814	ppb		98
49)	4-METHYL-2-PENTANONE (...	7.732	43	161222	24.7257213	ppb		100
51)	TOLUENE	7.403	91	217013	5.0444322	ppb		98
52)	TRANS-1,3-DICHLOROPROPENE	7.769	75	77450	5.0908075	ppb	#	95
54)	1,1,2-TRICHLOROETHANE	7.921	97	37843	4.8885977	ppb		99
55)	TETRACHLOROETHENE	7.763	164	34150	4.8374814	ppb		97
56)	1,3-Dichloropropane	8.171	76	69239	4.8667376	ppb		99
57)	2-HEXANONE	8.494	58	72584	23.6540089	ppb		98
58)	CHLORODIBROMOMETHANE	8.086	129	40406	4.7449132	ppb		100
59)	1,2-DIBROMOETHANE	8.305	107	36944	4.8496125	ppb		100
60)	CHLOROBENZENE	8.793	112	128994	4.9626449	ppb		99
61)	1,1,1,2-TETRACHLOROETHANE	8.848	133	38395	5.0064492	ppb	#	100
62)	ETHYLBENZENE	8.811	106	71429	4.8837458	ppb		99
63)	M&P-XYLENE	8.945	106	175046	9.7640945	ppb		99
64)	O-XYLENE	9.348	106	78772	4.7999867	ppb		97
65)	STYRENE	9.396	104	126382	4.8351743	ppb		99
66)	Bromoform	9.427	173	21362	4.8734464	ppb		99
67)	Isopropylbenzene	9.646	105	214498	4.9307979	ppb		100
69)	Bromobenzene	10.024	77	94504	4.7239739	ppb		100
70)	1,1,2,2-TETRACHLOROETHANE	10.104	83	45876	4.8699237	ppb		96
71)	1,2,3-TRICHLOROPROPANE	10.238	110	12698	4.6963976	ppb		100
72)	TRANS-1,4-DICHLORO-2-B...	10.274	53	10589	4.6623220	ppb		96
73)	n-Propylbenzene	10.043	91	270033	4.8485379	ppb		99
74)	4-ETHYLTOLUENE	10.146	105	221622	4.8244870	ppb		99
75)	2-Chlorotoluene	10.201	126	48057	4.9552290	ppb		97
76)	4-Chlorotoluene	10.354	91	157935	4.9031029	ppb		100
77)	1,3,5-Trimethylbenzene	10.226	105	177019	4.9507760	ppb		99
78)	tert-Butylbenzene	10.530	119	147786	4.9630515	ppb		99
79)	1,2,4-Trimethylbenzene	10.597	105	176362	4.8582286	ppb		100
80)	sec-Butylbenzene	10.701	105	239731	5.0280523	ppb		99
81)	1,3-DICHLOROBENZENE	10.914	146	85404	4.9316001	ppb		99
82)	p-Isopropyltoluene	10.835	119	191410	5.0169194	ppb		99
83)	DICYCLOPENTADIENE	10.817	66	222499	5.0069342	ppb		100
85)	1,4-DICHLOROBENZENE	10.994	146	86833	4.9238215	ppb	#	1
86)	1,2,3-TRIMETHYLBENZENE	11.012	105	176810	4.9656277	ppb		99
87)	1,2-DICHLOROBENZENE	11.390	146	78223	4.9834926	ppb		99
88)	n-Butylbenzene	11.231	91	189725	5.0322157	ppb		99
89)	1,2-Dibromo-3-chloropr...	12.115	157	7268	4.9797993	ppb		97
90)	1,2,4-Trichlorobenzene	12.725	180	48705	5.0073255	ppb		98
91)	HEXACHLORO-1,3-BUTADIENE	12.701	225	26464	5.1426129	ppb		98
92)	Naphthalene	13.012	128	119744	4.6215558	ppb		99
93)	1,2,3-Trichlorobenzene	13.176	180	44291	4.9088813	ppb		100
94)	1-Methylnaphthalene	13.950	142	64125	4.4275069	ppb		96
95)	2-Methylnaphthalene	14.097	142	54160	4.5287498	ppb		99

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 16a.D
Acq On : 23 Mar 2016 9:43 pm
Operator :
Sample : RL VMS 5.0 ppb 16C22692
Misc : water
ALS Vial : 7 Sample Multiplier: 1
InstName : VOCMS26

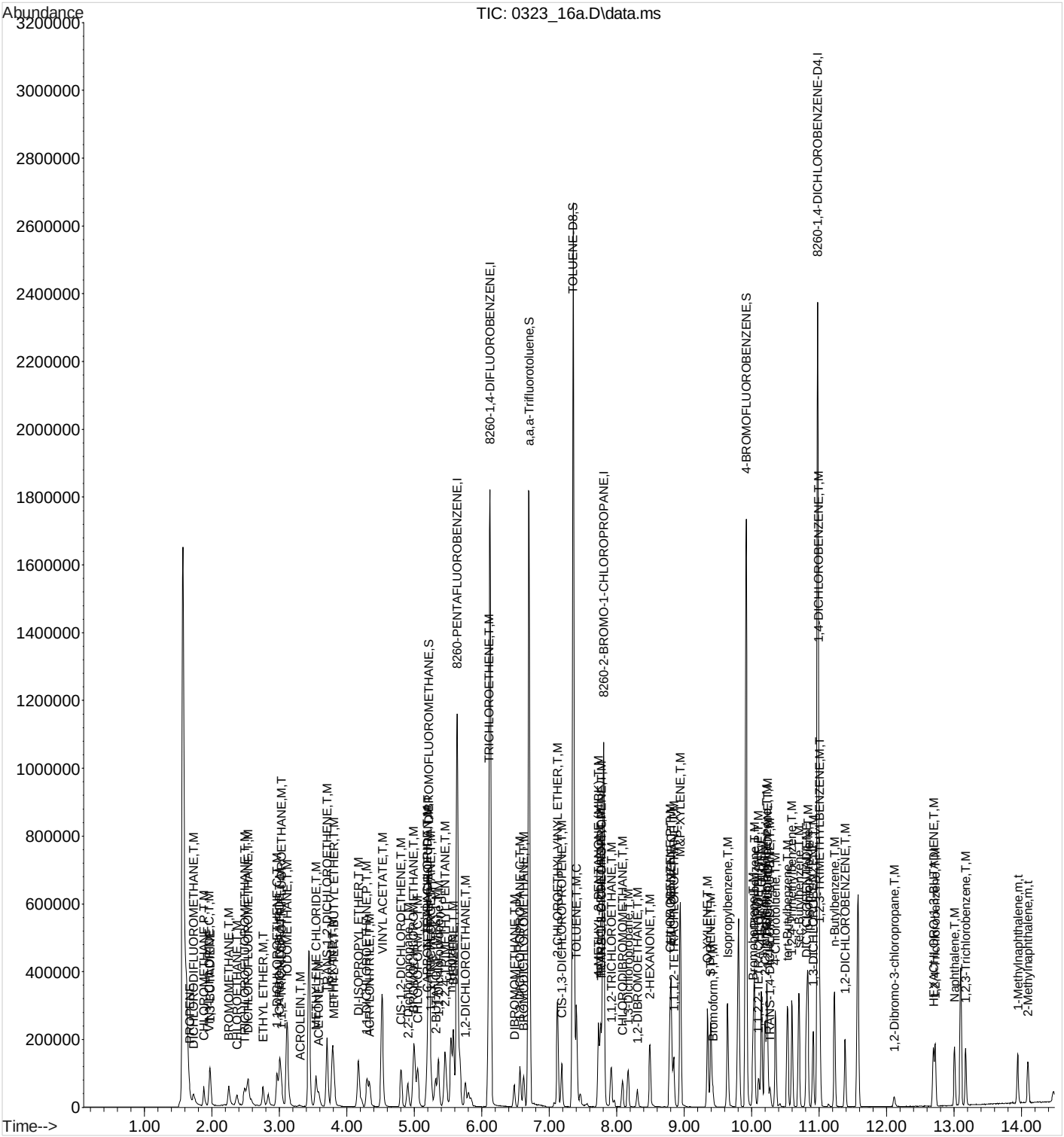
Quant Time: Mar 24 13:23:56 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 11:51:41 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 16a.D
Acq On : 23 Mar 2016 9:43 pm
Operator :
Sample : RL VMS 5.0 ppb 16C22692
Misc : water
ALS Vial : 7 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 13:23:56 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 11:51:41 2016
Response via : Initial Calibration



Data Path : C:\msdchem\1\data\032316\
Data File : 0323 39A.D
Acq On : 24 Mar 2016 11:31 am
Operator :
Sample : RL VMS 1a ppb 16B23985
Misc : water
ALS Vial : 30 Sample Multiplier: 1
InstName : VOCMS26

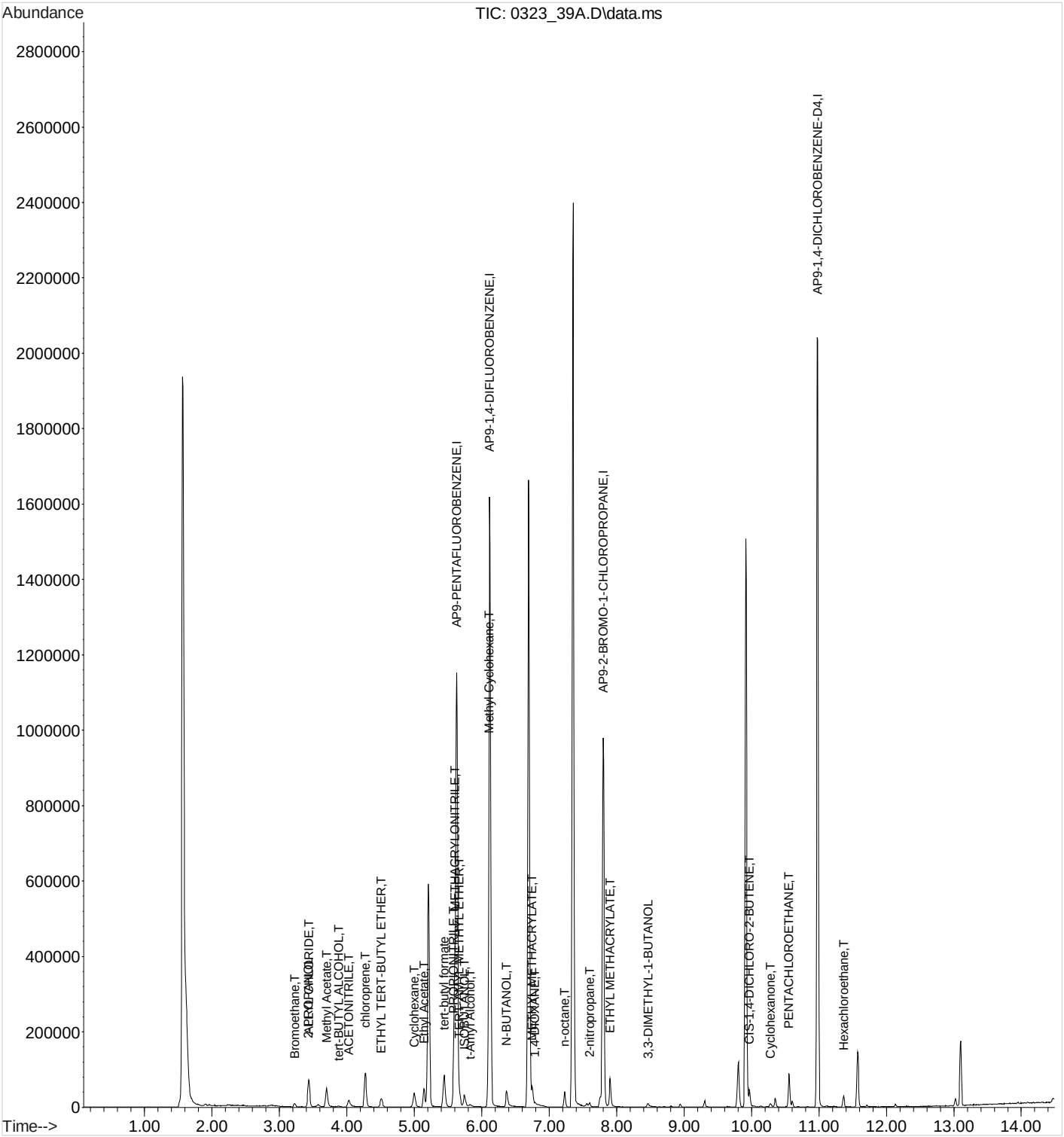
Quant Time: Mar 24 13:20:27 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 11:51:41 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 8260-PENTAFLUOROBENZENE	0.000	168	0m	40.0000000	ppb	-5.63
41) 8260-1,4-DIFLUOROBENZENE	0.000	114	0m	40.0000000	ppb	-6.12
53) 8260-2-BROMO-1-CHLOROP...	0.000	79	0m	40.0000000	ppb	-7.81
84) 8260-1,4-DICHLOROBENZE...	0.000	152	0m	40.0000000	ppb	-10.98
96) AP9-PENTAFLUOROBENZENE	5.629	168	695973	40.0000000	ppb	0.00
114) AP9-1,4-DIFLUOROBENZENE	6.117	114	1303258	40.0000000	ppb	0.00
122) AP9-2-BROMO-1-CHLOROPR...	7.799	79	213403	40.0000000	ppb	0.00
128) AP9-1,4-DICHLOROBENZEN...	10.982	152	512352	40.0000000	ppb	0.00
System Monitoring Compounds						
33) DIBROMOFLUOROMETHANE	0.000	111	0d	0.0000000	ppb	
Spiked Amount 40.000	Range 79 - 121		Recovery =	0.00%#		
46) a,a,a-Trifluorotoluene	0.000	146	0d	0.0000000	ppb	
Spiked Amount 40.000	Range 90 - 116		Recovery =	0.00%#		
50) TOLUENE-D8	0.000	98	0d	0.0000000	ppb	
Spiked Amount 40.000	Range 90 - 115		Recovery =	0.00%#		
68) 4-BROMOFLUOROBENZENE	0.000	95	0d	0.0000000	ppb	
Spiked Amount 40.000	Range 80 - 120		Recovery =	0.00%#		
Target Compounds						Qvalue
98) Bromoethane	3.227	108	7746	0.8873812	ppb	94
99) 2-PROPANOL	3.428	45	2222	4.7729398	ppb #	47
100) Methyl Acetate	3.696	43	75366	17.0876739	ppb #	99
101) ACETONITRILE	4.026	41	29677	39.4428986	ppb	96
102) ALLYL CHLORIDE	3.434	76	21976	4.4430107	ppb	98
103) tert-BUTYL ALCOHOL	3.879	59	3632	3.6530833	ppb #	74
104) chloroprene	4.269	53	60805	4.4645561	ppb	99
105) ETHYL TERT-BUTYL ETHER	4.507	59	21998	0.8961128	ppb	99
106) PROPIONITRILE	5.580	54	40396	41.5252642	ppb #	99
107) Ethyl Acetate	5.141	43	57539	8.4731908	ppb	100
108) METHACRYLONITRILE	5.598	67	132795	42.7672026	ppb	99
109) Cyclohexane	5.001	56	21491	0.8914178	ppb	96
110) tert-butyl formate	5.440	59	50314	8.0085238	ppb	94
111) ISOBUTANOL	5.745	41	13473	71.7641256	ppb	94
112) t-Amyl Alcohol	5.830	59	2419	3.6955545	ppb	91
113) TERT-AMYL METHYL ETHER	5.666	73	25795	0.9393214	ppb #	64
115) N-BUTANOL	6.367	56	31060	141.7591368	ppb	97
116) Methyl Cyclohexane	6.104	83	35116	1.3466367	ppb #	82
117) 2-nitropropane	7.598	43	8175	4.3747822	ppb	98
118) METHYL METHACRYLATE	6.745	41	23109	4.1226821	ppb	97
119) 1,4-DIOXANE	6.787	88	3646	93.7157438	ppb #	88
120) n-octane	7.232	85	9210	0.9193298	ppb	99
121) 3,3-DIMETHYL-1-BUTANOL	8.464	57	6282	7.5711952	ppb	93
123) ETHYL METHACRYLATE	7.903	69	40716	4.1051329	ppb	95
124) CIS-1,4-DICHLORO-2-BUTENE	9.970	53	7941	3.8119006	ppb	85
125) Cyclohexanone	10.281	55	4727	8.2211561	ppb	99
126) PENTACHLOROETHANE	10.555	117	18465	3.6276780	ppb	94
127) Hexachloroethane	11.366	117	6285	0.9373452	ppb	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 39A.D
Acq On : 24 Mar 2016 11:31 am
Operator :
Sample : RL VMS 1a ppb 16B23985
Misc : water
ALS Vial : 30 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 13:20:27 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 11:51:41 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 24.D
Acq On : 24 Mar 2016 12:21 am
Operator :
Sample : SSCV VMS 25 ppb 16C22693
Misc : water
ALS Vial : 15 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 13:15:41 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 11:51:41 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 8260-PENTAFLUOROBENZENE	5.635	168	710491	40.0000000	ppb	0.00
41) 8260-1,4-DIFLUOROBENZENE	6.123	114	1349567	40.0000000	ppb	0.00
53) 8260-2-BROMO-1-CHLOROP...	7.805	79	228828	40.0000000	ppb	0.00
84) 8260-1,4-DICHLOROBENZE...	10.982	152	548239	40.0000000	ppb	0.00
96) AP9-PENTAFLUOROBENZENE	5.635	168	710491	40.0000000	ppb	0.00
114) AP9-1,4-DIFLUOROBENZENE	6.123	114	1349567	40.0000000	ppb	0.00
122) AP9-2-BROMO-1-CHLOROPR...	7.805	79	228828	40.0000000	ppb	0.00
128) AP9-1,4-DICHLOROBENZEN...	10.982	152	548239	40.0000000	ppb	0.00
System Monitoring Compounds						
33) DIBROMOFLUOROMETHANE	5.214	111	415417	41.3123241	ppb	0.00
Spiked Amount 40.000	Range 79 - 121			Recovery = 103.28%		
46) a,a,a-Trifluorotoluene	6.696	146	689387	40.5112690	ppb	0.00
Spiked Amount 40.000	Range 90 - 116			Recovery = 101.28%		
50) TOLUENE-D8	7.354	98	1701024	40.5998392	ppb	0.00
Spiked Amount 40.000	Range 90 - 115			Recovery = 101.50%		
68) 4-BROMOFLUOROBENZENE	9.921	95	611244	40.5010615	ppb	0.00
Spiked Amount 40.000	Range 80 - 120			Recovery = 101.25%		
Target Compounds						Qvalue
3) PROPENE	1.672	41	28529	21.1422517	ppb	97
4) DICHLORODIFLUOROMETHANE	1.721	85	293207	32.5980211	ppb	98
5) CHLOROMETHANE	1.880	50	309631	27.0619629	ppb	99
6) VINYL CHLORIDE	1.965	62	329552	26.6393968	ppb	99
7) 1,3-BUTADIENE	1.971	39	164378	22.8645909	ppb	100
8) BROMOMETHANE	2.246	94	213615	26.1490672	ppb	99
9) CHLOROETHANE	2.367	64	191988	26.2995555	ppb	99
10) TRICHLOROFLUOROMETHANE	2.489	101	352244	24.4589519	ppb	99
11) DICHLOROFLUOROMETHANE	2.532	67	459152	25.3230883	ppb	98
12) ETHYL ETHER	2.752	59	174073	25.7174982	ppb	97
13) ACROLEIN	3.294	56	29678	183.6260564	ppb	98
14) 1,1-DICHLOROETHENE	2.965	61	340822	24.1754092	ppb	99
15) 1,1,2-TRICHLOROTRIFLUO...	3.020	101	222003	24.5724558	ppb	99
16) ACETONE	3.581	43	271802	114.6128461	ppb	97
17) IODOMETHANE	3.111	142	1734472	125.4487234	ppb	99
18) CARBON DISULFIDE	3.001	76	747511	24.6449994	ppb	99
19) METHYLENE CHLORIDE	3.538	84	244372	24.9758560	ppb	99
20) ACRYLONITRILE	4.330	53	326006	130.1440518	ppb	98
21) n-HEXANE	3.782	56	220098	24.4055834	ppb	95
22) TRANS-1,2-DICHLOROETHENE	3.703	96	250768	25.6310797	ppb	99
23) METHYL TERT-BUTYL ETHER	3.800	73	560854	26.9752677	ppb	92
24) 1,1-DICHLOROETHANE	4.294	63	446410	25.5673409	ppb	100
25) VINYL ACETATE	4.519	43	1740604	127.1111331	ppb	99
26) DI-ISOPROPYL ETHER	4.166	45	704367	26.3859787	ppb	100
27) 2,2-Dichloropropane	4.904	77	253898	25.9634587	ppb	99
28) CIS-1,2-DICHLOROETHENE	4.800	96	269548	25.7468075	ppb	99
29) 2-BUTANONE (MEK)	5.312	43	462273	128.5014487	ppb	99
30) BROMOCHLOROMETHANE	4.983	130	141306	25.9794018	ppb	98
31) TETRAHYDROFURAN	5.190	42	51498	23.3408151	ppb	98
32) CHLOROFORM	5.050	83	447722	25.5605949	ppb	99
34) 1,1,1-TRICHLOROETHANE	5.245	97	351658	26.9515199	ppb	100
35) CARBON TETRACHLORIDE	5.184	117	302646	25.4720682	ppb	100
36) 1,1-Dichloropropene	5.355	75	368178	25.6308114	ppb	100

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 24.D
Acq On : 24 Mar 2016 12:21 am
Operator :
Sample : SSCV VMS 25 ppb 16C22693
Misc : water
ALS Vial : 15 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 13:15:41 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 11:51:41 2016
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
37)	2,2,4-TRIMETHYLPENTANE	5.458	57	1032537	25.7397935	ppb		99
38)	n-Heptane	5.544	43	414299	25.3195467	ppb		99
39)	BENZENE	5.580	78	1007084	25.4972607	ppb		100
40)	1,2-DICHLOROETHANE	5.757	62	275036	25.7655601	ppb		100
42)	TRICHLOROETHENE	6.105	130	252271	25.6386924	ppb		98
43)	1,2-DICHLOROPROPANE	6.568	62	180188	25.6026352	ppb		100
44)	DIBROMOMETHANE	6.476	93	139107	25.8075381	ppb		99
45)	BROMODICHLOROMETHANE	6.623	83	316688	25.7335190	ppb		99
47)	2-CHLOROETHYL VINYL ETHER	7.123	63	738288	130.9384601	ppb		100
48)	CIS-1,3-DICHLOROPROPENE	7.184	75	406554	26.1692803	ppb		100
49)	4-METHYL-2-PENTANONE (...	7.726	43	856433	132.6820509	ppb		100
51)	TOLUENE	7.403	91	1067859	25.0746321	ppb		99
52)	TRANS-1,3-DICHLOROPROPENE	7.769	75	357406	23.7312827	ppb	#	100
54)	1,1,2-TRICHLOROETHANE	7.921	97	192037	25.2992909	ppb		99
55)	TETRACHLOROETHENE	7.757	164	177608	25.6575877	ppb		99
56)	1,3-Dichloropropane	8.165	76	353729	25.3561029	ppb		99
57)	2-HEXANONE	8.488	58	407045	135.2791849	ppb		98
58)	CHLORODIBROMOMETHANE	8.086	129	209018	25.0317260	ppb		98
59)	1,2-DIBROMOETHANE	8.305	107	191542	25.6419967	ppb		100
60)	CHLOROBENZENE	8.787	112	650269	25.5129943	ppb		99
61)	1,1,1,2-TETRACHLOROETHANE	8.848	133	199937	26.5872250	ppb		100
62)	ETHYLBENZENE	8.811	106	366602	25.5621869	ppb		98
63)	M&P-XYLENE	8.945	106	898120	51.0903461	ppb		98
64)	O-XYLENE	9.348	106	418129	25.9838286	ppb		98
65)	STYRENE	9.397	104	687097	26.8083234	ppb		100
66)	Bromoform	9.427	173	115358	26.8390226	ppb		100
67)	Isopropylbenzene	9.647	105	1143303	26.8027895	ppb		100
69)	Bromobenzene	10.025	77	493232	25.1439345	ppb		99
70)	1,1,2,2-TETRACHLOROETHANE	10.104	83	240481	26.0340705	ppb		100
71)	1,2,3-TRICHLOROPROPANE	10.238	110	68251	25.7432427	ppb		100
72)	TRANS-1,4-DICHLORO-2-B...	10.274	53	56131	25.2043088	ppb		98
73)	n-Propylbenzene	10.043	91	1411369	25.8439696	ppb		99
74)	4-ETHYLTOLUENE	10.146	105	1159848	25.7492181	ppb		99
75)	2-Chlorotoluene	10.201	126	247804	26.0579402	ppb		97
76)	4-Chlorotoluene	10.354	91	818150	25.9030114	ppb		100
77)	1,3,5-Trimethylbenzene	10.226	105	918249	26.1901841	ppb		99
78)	tert-Butylbenzene	10.531	119	783346	26.8283406	ppb		99
79)	1,2,4-Trimethylbenzene	10.598	105	927150	26.0463952	ppb		100
80)	sec-Butylbenzene	10.701	105	1262028	26.9941265	ppb		99
81)	1,3-DICHLOROBENZENE	10.915	146	442122	26.0361321	ppb		100
82)	p-Isopropyltoluene	10.835	119	1014989	27.1305457	ppb		100
83)	DICYCLOPENTADIENE	10.817	66	1171760	26.8910145	ppb		100
85)	1,4-DICHLOROBENZENE	10.994	146	440275	24.9015916	ppb		99
86)	1,2,3-TRIMETHYLBENZENE	11.012	105	926065	25.9414583	ppb		100
87)	1,2-DICHLOROBENZENE	11.390	146	404441	25.7004134	ppb		99
88)	n-Butylbenzene	11.232	91	997361	26.3859449	ppb		100
89)	1,2-Dibromo-3-chloropr...	12.116	157	39412	26.9346276	ppb		99
90)	1,2,4-Trichlorobenzene	12.725	180	248893	25.5229309	ppb		99
91)	HEXACHLORO-1,3-BUTADIENE	12.695	225	135489	26.2614056	ppb		98
92)	Naphthalene	13.012	128	657626	25.3162278	ppb		100
93)	1,2,3-Trichlorobenzene	13.176	180	231696	25.6136320	ppb		98
94)	1-Methylnaphthalene	13.944	142	394987	27.2019637	ppb		100
95)	2-Methylnaphthalene	14.097	142	325917	27.1826795	ppb		99
98)	Bromoethane	3.258	108	1735	0.1947000	ppb		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 24.D
Acq On : 24 Mar 2016 12:21 am
Operator :
Sample : SSCV VMS 25 ppb 16C22693
Misc : water
ALS Vial : 15 Sample Multiplier: 1
InstName : VOCMS26

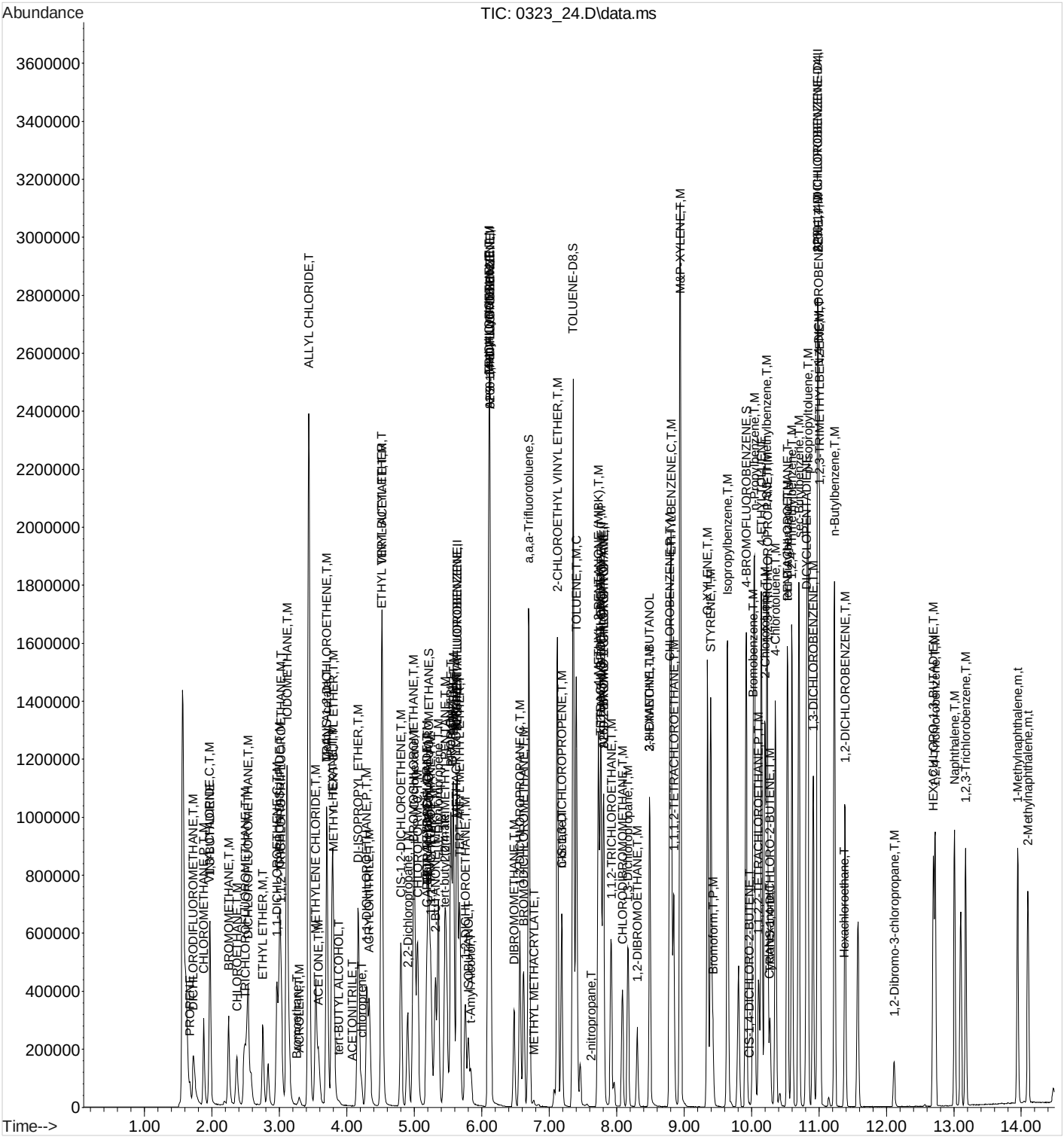
Quant Time: Mar 24 13:15:41 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 11:51:41 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
100) Methyl Acetate	3.703	43	667729	148.3001293 ppb	#	100
101) ACETONITRILE	4.081	41	577	0.7512050 ppb	#	34
102) ALLYL CHLORIDE	3.434	76	759635	150.4414426 ppb		99
103) tert-BUTYL ALCOHOL	3.879	59	17363	17.1069390 ppb	#	63
104) chloroprene	4.221	53	4445	0.3197014 ppb	#	19
105) ETHYL TERT-BUTYL ETHER	4.513	59	670864	26.7699625 ppb		99
106) PROPIONITRILE	5.544	54	3905	3.9321393 ppb	#	1
107) Ethyl Acetate	5.190	43	12007	1.7320204 ppb	#	62
108) METHACRYLONITRILE	5.623	67	2411	0.7606067 ppb	#	5
109) Cyclohexane	5.001	56	450185	18.2915071 ppb		98
110) tert-butyl formate	5.446	59	939	0.1464074 ppb	#	1
111) ISOBUTANOL	5.800	41	95474	498.1521589 ppb	#	1
112) t-Amyl Alcohol	5.836	59	87669	131.1969111 ppb		100
113) TERT-AMYL METHYL ETHER	5.672	73	616579	21.9938482 ppb		96
116) Methyl Cyclohexane	6.105	83	511890	18.9564931 ppb		99
117) 2-nitropropane	7.623	43	1265	0.6537251 ppb	#	18
118) METHYL METHACRYLATE	6.769	41	3372	0.5809279 ppb	#	30
120) n-octane	7.184	85	5649	0.5445267 ppb	#	28
121) 3,3-DIMETHYL-1-BUTANOL	8.488	57	136276	158.6068126 ppb	#	42
124) CIS-1,4-DICHLORO-2-BUTENE	9.970	53	1358	0.6079355 ppb	#	19
125) Cyclohexanone	10.268	55	996	1.6154666 ppb	#	24
126) PENTACHLOROETHANE	10.531	117	27344	5.0099434 ppb	#	17
127) Hexachloroethane	11.372	117	1706	0.2372819 ppb	#	36

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 24.D
Acq On : 24 Mar 2016 12:21 am
Operator :
Sample : SSCV VMS 25 ppb 16C22693
Misc : water
ALS Vial : 15 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 13:15:41 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 11:51:41 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 40.D
Acq On : 24 Mar 2016 11:51 am
Operator :
Sample : SSCV VMS 10a ppb 16A19936
Misc : water
ALS Vial : 32 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 13:15:18 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 11:51:41 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 8260-PENTAFLUOROBENZENE	5.635	168	701511	40.0000000	ppb		0.00
41) 8260-1,4-DIFLUOROBENZENE	6.123	114	1304081	40.0000000	ppb		0.00
53) 8260-2-BROMO-1-CHLOROP...	7.805	79	217820	40.0000000	ppb		0.00
84) 8260-1,4-DICHLOROBENZE...	10.981	152	531144	40.0000000	ppb		0.00
96) AP9-PENTAFLUOROBENZENE	5.635	168	701511	40.0000000	ppb		0.00
114) AP9-1,4-DIFLUOROBENZENE	6.123	114	1304081	40.0000000	ppb		0.00
122) AP9-2-BROMO-1-CHLOROPR...	7.805	79	217820	40.0000000	ppb		0.00
128) AP9-1,4-DICHLOROBENZEN...	10.981	152	531144	40.0000000	ppb		0.00
System Monitoring Compounds							
33) DIBROMOFLUOROMETHANE	5.214	111	394994	39.7841384	ppb		0.00
Spiked Amount 40.000	Range 79 - 121		Recovery = 99.46%				
46) a,a,a-Trifluorotoluene	6.696	146	671317	40.8253847	ppb		0.00
Spiked Amount 40.000	Range 90 - 116		Recovery = 102.06%				
50) TOLUENE-D8	7.354	98	1634056	40.3618154	ppb		0.00
Spiked Amount 40.000	Range 90 - 115		Recovery = 100.90%				
68) 4-BROMOFLUOROBENZENE	9.915	95	584406	40.6797124	ppb		0.00
Spiked Amount 40.000	Range 80 - 120		Recovery = 101.70%				
Target Compounds							Qvalue
3) PROPENE	1.666	41	1183	0.8879194	ppb	#	81
4) DICHLORODIFLUOROMETHANE	1.727	85	2166	0.2438931	ppb		94
5) CHLOROMETHANE	1.873	50	3068	0.2715778	ppb	#	93
6) VINYL CHLORIDE	1.959	62	2650	0.2169554	ppb	#	95
7) 1,3-BUTADIENE	1.959	39	6964	0.9810759	ppb		91
8) BROMOMETHANE	2.239	94	1896	0.2350644	ppb	#	90
9) CHLOROETHANE	2.361	64	1515	0.2101895	ppb	#	76
10) TRICHLOROFLUOROMETHANE	2.483	101	2834	0.1993050	ppb	#	94
11) DICHLOROFLUOROMETHANE	2.532	67	3979	0.2222584	ppb		99
12) ETHYL ETHER	2.757	59	1444	0.2160671	ppb	#	62
14) 1,1-DICHLOROETHENE	2.953	61	2801	0.2012257	ppb	#	86
16) ACETONE	3.574	43	19331	8.2557981	ppb		95
17) IODOMETHANE	3.111	142	15441	1.1310934	ppb		99
18) CARBON DISULFIDE	3.001	76	6196	0.2068934	ppb	#	85
19) METHYLENE CHLORIDE	3.538	84	6459	0.6685876	ppb		97
20) ACRYLONITRILE	4.275	53	612171	247.5116118	ppb	#	49
21) n-HEXANE	3.776	56	1957	0.2197799	ppb	#	1
22) TRANS-1,2-DICHLOROETHENE	3.702	96	2095	0.2168717	ppb		95
23) METHYL TERT-BUTYL ETHER	3.806	73	5190	0.2528177	ppb		87
24) 1,1-DICHLOROETHANE	4.275	63	13300	0.7714848	ppb	#	63
25) VINYL ACETATE	4.519	43	35103	2.5962825	ppb	#	87
26) DI-ISOPROPYL ETHER	4.166	45	6075	0.2304860	ppb		91
27) 2,2-Dichloropropane	4.897	77	2544	0.2634781	ppb	#	57
28) CIS-1,2-DICHLOROETHENE	4.806	96	2448	0.2368224	ppb		97
29) 2-BUTANONE (MEK)	5.324	43	5532	1.5574559	ppb	#	87
30) BROMOCHLOROMETHANE	4.983	130	1222	0.2275432	ppb	#	72
31) TETRAHYDROFURAN	5.141	42	35685	16.3808130	ppb	#	43
32) CHLOROFORM	5.050	83	3066	0.1772796	ppb	#	20
34) 1,1,1-TRICHLOROETHANE	5.245	97	2895	0.2247167	ppb	#	78
35) CARBON TETRACHLORIDE	5.184	117	3776	0.3218736	ppb	#	71
36) 1,1-Dichloropropene	5.354	75	3118	0.2198390	ppb		94
37) 2,2,4-TRIMETHYLPENTANE	5.446	57	606211	15.3054937	ppb	#	1
38) n-Heptane	5.543	43	3372	0.2087150	ppb		95

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 40.D
Acq On : 24 Mar 2016 11:51 am
Operator :
Sample : SSCV VMS 10a ppb 16A19936
Misc : water
ALS Vial : 32 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 13:15:18 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 11:51:41 2016
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
39)	BENZENE	5.580	78	9570	0.2453940	ppb	#	1
40)	1,2-DICHLOROETHANE	5.757	62	2435	0.2310325	ppb	#	72
42)	TRICHLOROETHENE	6.104	130	8077	0.8495100	ppb	#	72
43)	1,2-DICHLOROPROPANE	6.562	62	1529	0.2248310	ppb		99
44)	DIBROMOMETHANE	6.476	93	1123	0.2156092	ppb		94
45)	BROMODICHLOROMETHANE	6.616	83	2609	0.2193974	ppb	#	87
47)	2-CHLOROETHYL VINYL ETHER	7.122	63	5636	1.0344328	ppb	#	94
48)	CIS-1,3-DICHLOROPROPENE	7.183	75	3372	0.2246213	ppb	#	94
49)	4-METHYL-2-PENTANONE (...	7.732	43	6753	1.0826932	ppb		89
51)	TOLUENE	7.397	91	11508	0.2796471	ppb		97
52)	TRANS-1,3-DICHLOROPROPENE	7.799	75	13435	0.9231811	ppb	#	51
54)	1,1,2-TRICHLOROETHANE	7.909	97	3135	0.4338828	ppb	#	1
55)	TETRACHLOROETHENE	7.756	164	82589	12.5339200	ppb		99
56)	1,3-Dichloropropane	8.165	76	3115	0.2345748	ppb		97
57)	2-HEXANONE	8.500	58	3647	1.2733146	ppb	#	69
58)	CHLORODIBROMOMETHANE	8.080	129	1764	0.2219306	ppb	#	83
59)	1,2-DIBROMOETHANE	8.311	107	1830	0.2573655	ppb		97
60)	CHLOROBENZENE	8.793	112	5228	0.2154842	ppb	#	87
61)	1,1,1,2-TETRACHLOROETHANE	8.842	133	5034	0.7032415	ppb	#	100
62)	ETHYLBENZENE	8.811	106	3312	0.2426079	ppb		76
63)	M&P-XYLENE	8.945	106	9028	0.5395199	ppb		88
64)	O-XYLENE	9.348	106	4099	0.2675976	ppb		90
65)	STYRENE	9.396	104	6377	0.2613843	ppb		97
66)	Bromoform	9.421	173	920	0.2248631	ppb	#	60
67)	Isopropylbenzene	9.640	105	10174	0.2505658	ppb		97
69)	Bromobenzene	10.024	77	4487	0.2402976	ppb		98
70)	1,1,2,2-TETRACHLOROETHANE	10.104	83	2217	0.2521381	ppb	#	88
71)	1,2,3-TRICHLOROPROPANE	10.238	110	573	0.2270494	ppb	#	22
72)	TRANS-1,4-DICHLORO-2-B...	10.274	53	5269	2.4854877	ppb	#	77
73)	n-Propylbenzene	10.043	91	13876	0.2669281	ppb		99
74)	4-ETHYLTOLUENE	10.146	105	12471	0.2908544	ppb		96
75)	2-Chlorotoluene	10.201	126	2105	0.2325387	ppb	#	86
76)	4-Chlorotoluene	10.354	91	7922	0.2634897	ppb		93
77)	1,3,5-Trimethylbenzene	10.232	105	8762	0.2625383	ppb		99
78)	tert-Butylbenzene	10.555	119	188842	6.7943855	ppb	#	31
79)	1,2,4-Trimethylbenzene	10.603	105	10606	0.3130118	ppb		98
80)	sec-Butylbenzene	10.701	105	11122	0.2499163	ppb		97
81)	1,3-DICHLOROBENZENE	10.914	146	4264	0.2637928	ppb		92
82)	p-Isopropyltoluene	10.829	119	8873	0.2491604	ppb		97
83)	DICYCLOPENTADIENE	10.811	66	10034	0.2419101	ppb		98
85)	1,4-DICHLOROBENZENE	10.994	146	4288	0.2503315	ppb	#	1
86)	1,2,3-TRIMETHYLBENZENE	11.012	105	8716	0.2520158	ppb		97
87)	1,2-DICHLOROBENZENE	11.390	146	3741	0.2453750	ppb		94
88)	n-Butylbenzene	11.225	91	9119	0.2490148	ppb		97
90)	1,2,4-Trichlorobenzene	12.725	180	2280	0.2413295	ppb		91
91)	HEXACHLORO-1,3-BUTADIENE	12.701	225	1388	0.2776905	ppb	#	82
92)	Naphthalene	13.012	128	6028	0.2395250	ppb		99
93)	1,2,3-Trichlorobenzene	13.176	180	2072	0.2364286	ppb	#	83
94)	1-Methylnaphthalene	13.944	142	3532	0.2510706	ppb		88
95)	2-Methylnaphthalene	14.097	142	2807	0.2416492	ppb		92
98)	Bromoethane	3.227	108	71941	8.1764938	ppb		100
99)	2-PROPANOL	3.434	45	17685	37.6881547	ppb		99
100)	Methyl Acetate	3.702	43	859064	193.2372760	ppb	#	100
101)	ACETONITRILE	4.032	41	325682	429.4380170	ppb		98

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 40.D
Acq On : 24 Mar 2016 11:51 am
Operator :
Sample : SSCV VMS 10a ppb 16A19936
Misc : water
ALS Vial : 32 Sample Multiplier: 1
InstName : VOCMS26

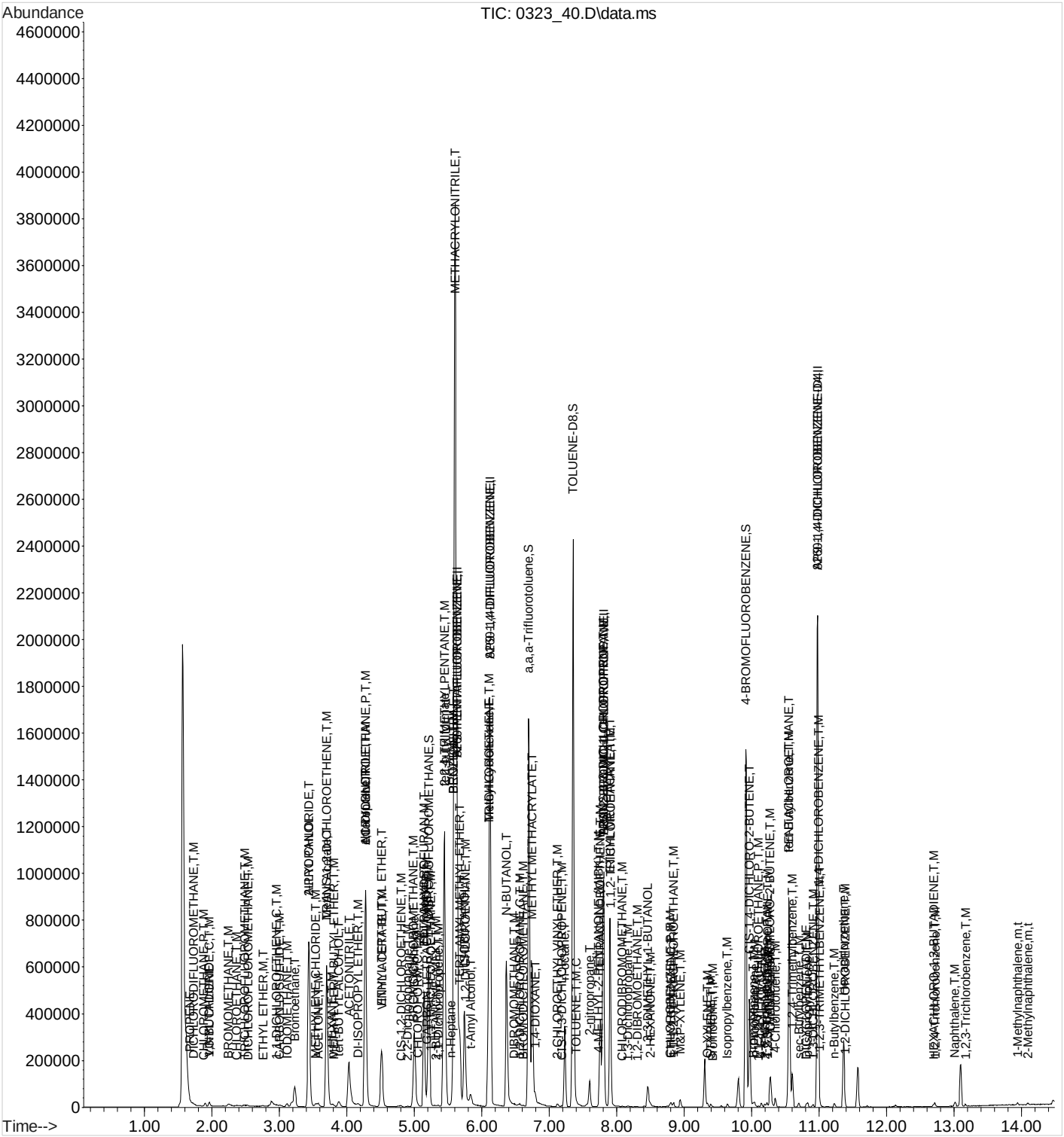
Quant Time: Mar 24 13:15:18 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 11:51:41 2016
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
102)	ALLYL CHLORIDE	3.434	76	224586	45.0473552	ppb		100
103)	tert-BUTYL ALCOHOL	3.879	59	38996	38.9127298	ppb		98
104)	chloroprene	4.275	53	612171	44.5933038	ppb		100
105)	ETHYL TERT-BUTYL ETHER	4.513	59	238653	9.6450452	ppb		100
106)	PROPIONITRILE	5.580	54	439328	448.0441695	ppb	#	100
107)	Ethyl Acetate	5.141	43	569998	83.2752440	ppb		100
108)	METHACRYLONITRILE	5.604	67	1424606	455.1785585	ppb		99
109)	Cyclohexane	5.001	56	185202	7.6212856	ppb		100
110)	tert-butyl formate	5.446	59	717758	113.3442709	ppb		99
111)	ISOBUTANOL	5.745	41	174333	921.2565697	ppb		99
112)	t-Amyl Alcohol	5.836	59	28377	43.0098703	ppb		92
113)	TERT-AMYL METHYL ETHER	5.672	73	264378	9.5512872	ppb		97
115)	N-BUTANOL	6.367	56	407512	1858.7280064	ppb		99
116)	Methyl Cyclohexane	6.104	83	199430	7.6429624	ppb		98
117)	2-nitropropane	7.598	43	80387	42.9912755	ppb		99
118)	METHYL METHACRYLATE	6.744	41	279651	49.8586952	ppb		99
119)	1,4-DIOXANE	6.793	88	60342m	720.5861359	ppb		
120)	n-octane	7.232	85	73206	7.3027124	ppb		99
121)	3,3-DIMETHYL-1-BUTANOL	8.458	57	51761	62.3440485	ppb		98
123)	ETHYL METHACRYLATE	7.903	69	431830	42.6557608	ppb		99
124)	CIS-1,4-DICHLORO-2-BUTENE	9.969	53	95078	44.7145826	ppb		100
125)	Cyclohexanone	10.280	55	59261	100.9762025	ppb		99
126)	PENTACHLOROETHANE	10.555	117	190699	36.7054543	ppb		99
127)	Hexachloroethane	11.366	117	65320	9.5442812	ppb		100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

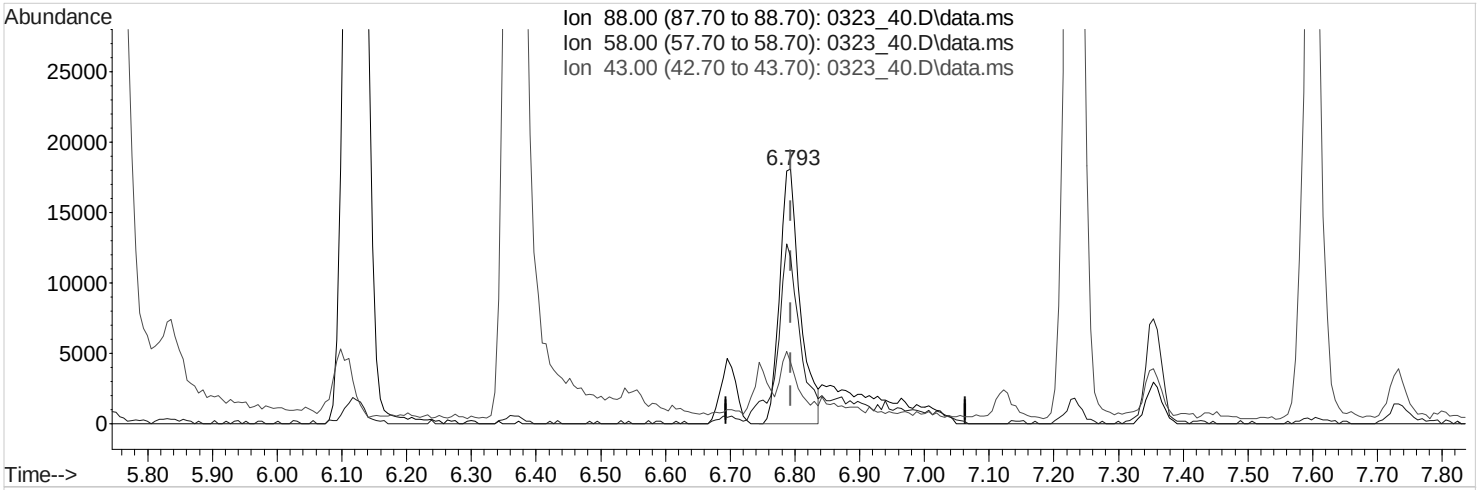
Data Path : C:\msdchem\1\data\032316\
Data File : 0323 40.D
Acq On : 24 Mar 2016 11:51 am
Operator :
Sample : SSCV VMS 10a ppb 16A19936
Misc : water
ALS Vial : 32 Sample Multiplier: 1
InstName : VOCMS26

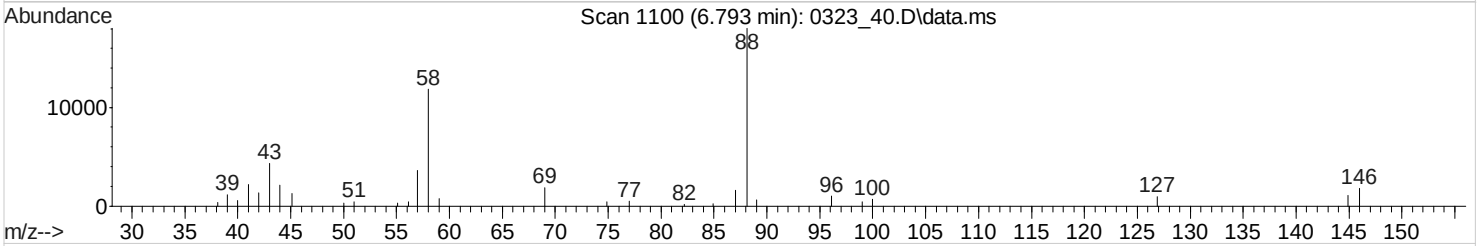
Quant Time: Mar 24 13:15:18 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 11:51:41 2016
Response via : Initial Calibration

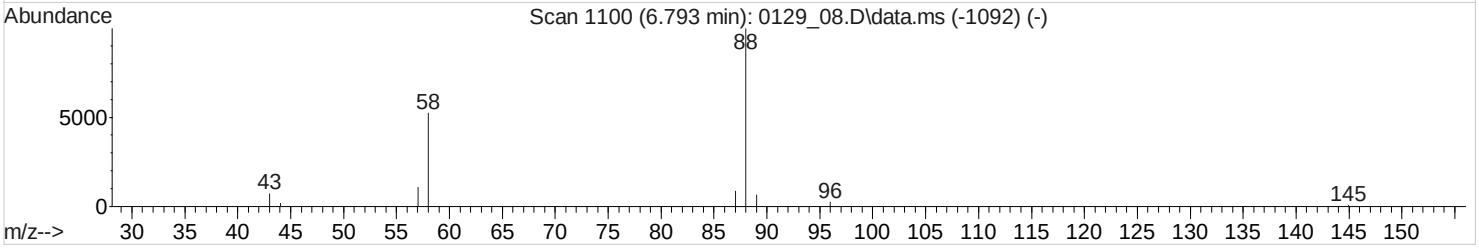


Data Path : C:\msdchem\1\data\032316\
Data File : 0323 40.D
Acq On : 24 Mar 2016 11:51 am
Operator :
Sample : SSCV VMS 10a ppb 16A19936
Misc : water
ALS Vial : 32 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 13:15:01 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 11:51:41 2016
Response via : Initial Calibration







TIC: 0323_40.D\data.ms

(119) 1,4-DIOXANE (T)

6.793min (+0.000) 492.8974215 ppb

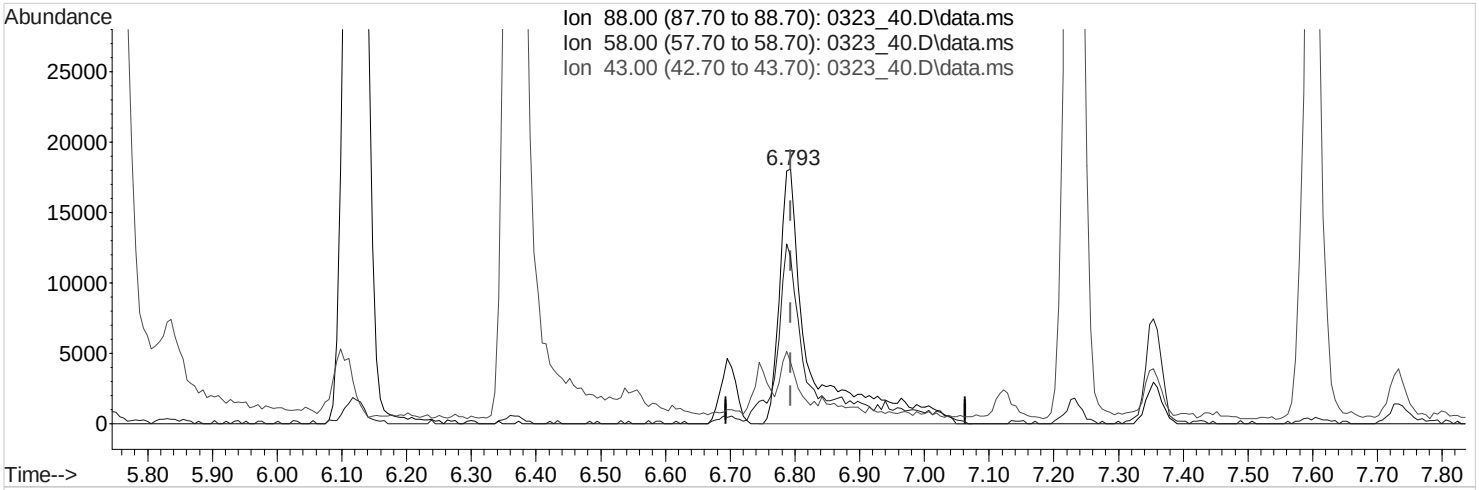
Qvalue = 84

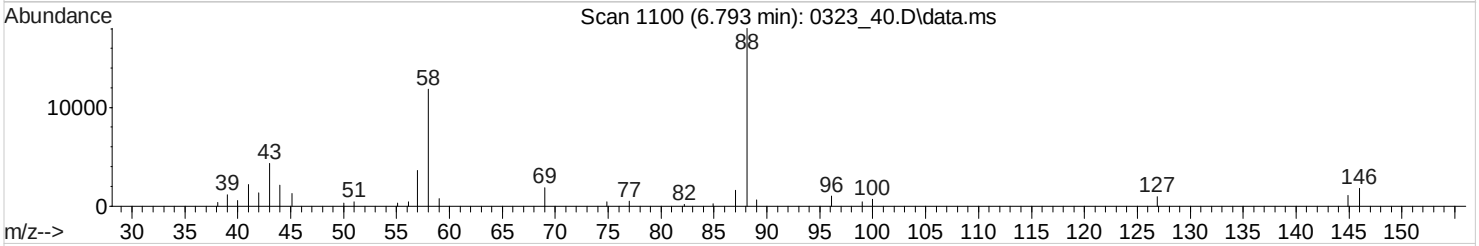
response 39750

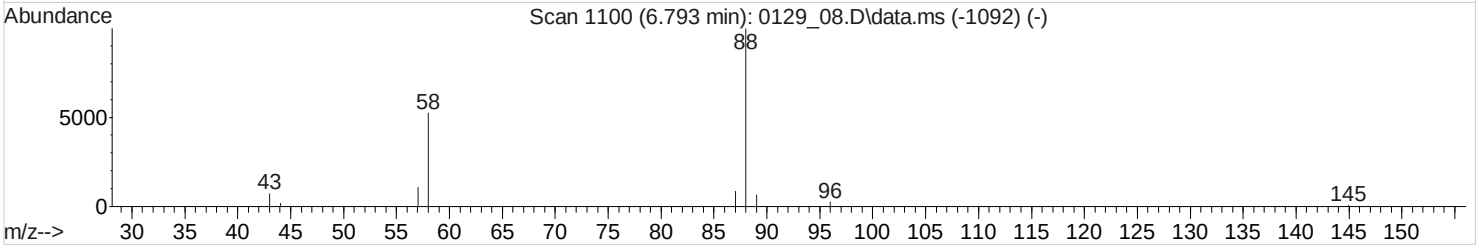
Ion	Exp%	Act%
88.00	100	100
58.00	64.60	78.52#
43.00	20.40	15.91#
0.00	0.00	0.00

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 40.D
Acq On : 24 Mar 2016 11:51 am
Operator :
Sample : SSCV VMS 10a ppb 16A19936
Misc : water
ALS Vial : 32 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 13:15:01 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 11:51:41 2016
Response via : Initial Calibration







TIC: 0323_40.D\data.ms

(119) 1,4-DIOXANE (T)

6.793min (+0.000) 720.5861359 ppb m

response 60342

Ion	Exp%	Act%
88.00	100	100
58.00	64.60	51.72
43.00	20.40	10.48#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 12.D
Acq On : 23 Mar 2016 8:24 pm
Operator :
Sample : STD VMS .25 ppb 16C22692
Misc : water
ALS Vial : 3 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 09:37:20 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:36:35 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 8260-PENTAFLUOROBENZENE	5.635	168	711146	40.0000000	ppb		0.00
41) 8260-1,4-DIFLUOROBENZENE	6.123	114	1345944	40.0000000	ppb		0.00
53) 8260-2-BROMO-1-CHLOROP...	7.805	79	223233	40.0000000	ppb		0.00
84) 8260-1,4-DICHLOROBENZE...	10.981	152	539133	40.0000000	ppb		0.00
96) AP9-PENTAFLUOROBENZENE	0.000	168	0m	40.0000000	ppb		-5.64
114) AP9-1,4-DIFLUOROBENZENE	0.000	114	0m	40.0000000	ppb		-6.12
122) AP9-2-BROMO-1-CHLOROPR...	0.000	79	0m	40.0000000	ppb		-7.81
128) AP9-1,4-DICHLOROBENZEN...	0.000	152	0m	40.0000000	ppb		-10.98
System Monitoring Compounds							
33) DIBROMOFLUOROMETHANE	5.214	111	406450	40.2140031	ppb		0.00
Spiked Amount 40.000	Range 79 - 121		Recovery = 100.54%				
46) a,a,a-Trifluorotoluene	6.696	146	682948	40.4552703	ppb		0.00
Spiked Amount 40.000	Range 90 - 116		Recovery = 101.14%				
50) TOLUENE-D8	7.354	98	1691828	40.4379281	ppb		0.00
Spiked Amount 40.000	Range 90 - 115		Recovery = 101.09%				
68) 4-BROMOFLUOROBENZENE	9.921	95	608984	41.0034377	ppb		0.00
Spiked Amount 40.000	Range 80 - 120		Recovery = 102.51%				
Target Compounds							Qvalue
3) PROPENE	1.666	41	1168	0.8749046	ppb		92
4) DICHLORODIFLUOROMETHANE	1.715	85	2189	0.2442949	ppb		91
5) CHLOROMETHANE	1.873	50	3250	0.2900793	ppb	#	89
6) VINYL CHLORIDE	1.947	62	3229	0.2579292	ppb	#	94
7) 1,3-BUTADIENE	1.971	39	2145	0.3093420	ppb	#	65
8) BROMOMETHANE	2.245	94	2038	0.2573056	ppb	#	91
9) CHLOROETHANE	2.367	64	1635	0.2221163	ppb	#	84
10) TRICHLOROFLUOROMETHANE	2.477	101	3101	0.2159279	ppb	#	89
11) DICHLOROFLUOROMETHANE	2.532	67	4565	0.2531337	ppb	#	87
12) ETHYL ETHER	2.757	59	1229	0.1703160	ppb	#	21
14) 1,1-DICHLOROETHENE	2.959	61	3054	0.2094660	ppb		96
15) 1,1,2-TRICHLOROTRIFLUO...	3.013	101	1881	0.2018885	ppb	#	88
16) ACETONE	3.580	43	17208	9.0831416	ppb		93
17) IODOMETHANE	3.111	142	16775	1.2167341	ppb		97
18) CARBON DISULFIDE	3.007	76	7318	0.2410719	ppb	#	86
19) METHYLENE CHLORIDE	3.544	84	2503	0.2602612	ppb		98
20) ACRYLONITRILE	4.343	53	2525	1.0067802	ppb	#	91
21) n-HEXANE	3.788	56	2385	0.2657416	ppb	#	95
22) TRANS-1,2-DICHLOROETHENE	3.708	96	2277	0.2271029	ppb		88
23) METHYL TERT-BUTYL ETHER	3.806	73	4672	0.2225888	ppb		98
24) 1,1-DICHLOROETHANE	4.300	63	3631	0.2024148	ppb		99
25) VINYL ACETATE	4.525	43	15328	1.0884297	ppb		95
26) DI-ISOPROPYL ETHER	4.172	45	5971	0.2197543	ppb	#	80
27) 2,2-Dichloropropane	4.909	77	2500	0.2590561	ppb	#	57
28) CIS-1,2-DICHLOROETHENE	4.806	96	2350	0.2199725	ppb		92
29) 2-BUTANONE (MEK)	5.324	43	4300	1.2484779	ppb	#	86
30) BROMOCHLOROMETHANE	4.989	130	1180	0.2121212	ppb		98
31) TETRAHYDROFURAN	5.208	42	631	0.3247558	ppb	#	32
32) CHLOROFORM	5.044	83	3973	0.2249262	ppb	#	95
34) 1,1,1-TRICHLOROETHANE	5.245	97	2812	0.2132227	ppb		88
35) CARBON TETRACHLORIDE	5.190	117	3090	0.2725959	ppb	#	74
36) 1,1-Dichloropropene	5.354	75	3076	0.2079846	ppb		96
37) 2,2,4-TRIMETHYLPENTANE	5.452	57	9013	0.2245391	ppb	#	90

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 12.D
Acq On : 23 Mar 2016 8:24 pm
Operator :
Sample : STD VMS .25 ppb 16C22692
Misc : water
ALS Vial : 3 Sample Multiplier: 1
InstName : VOCMS26

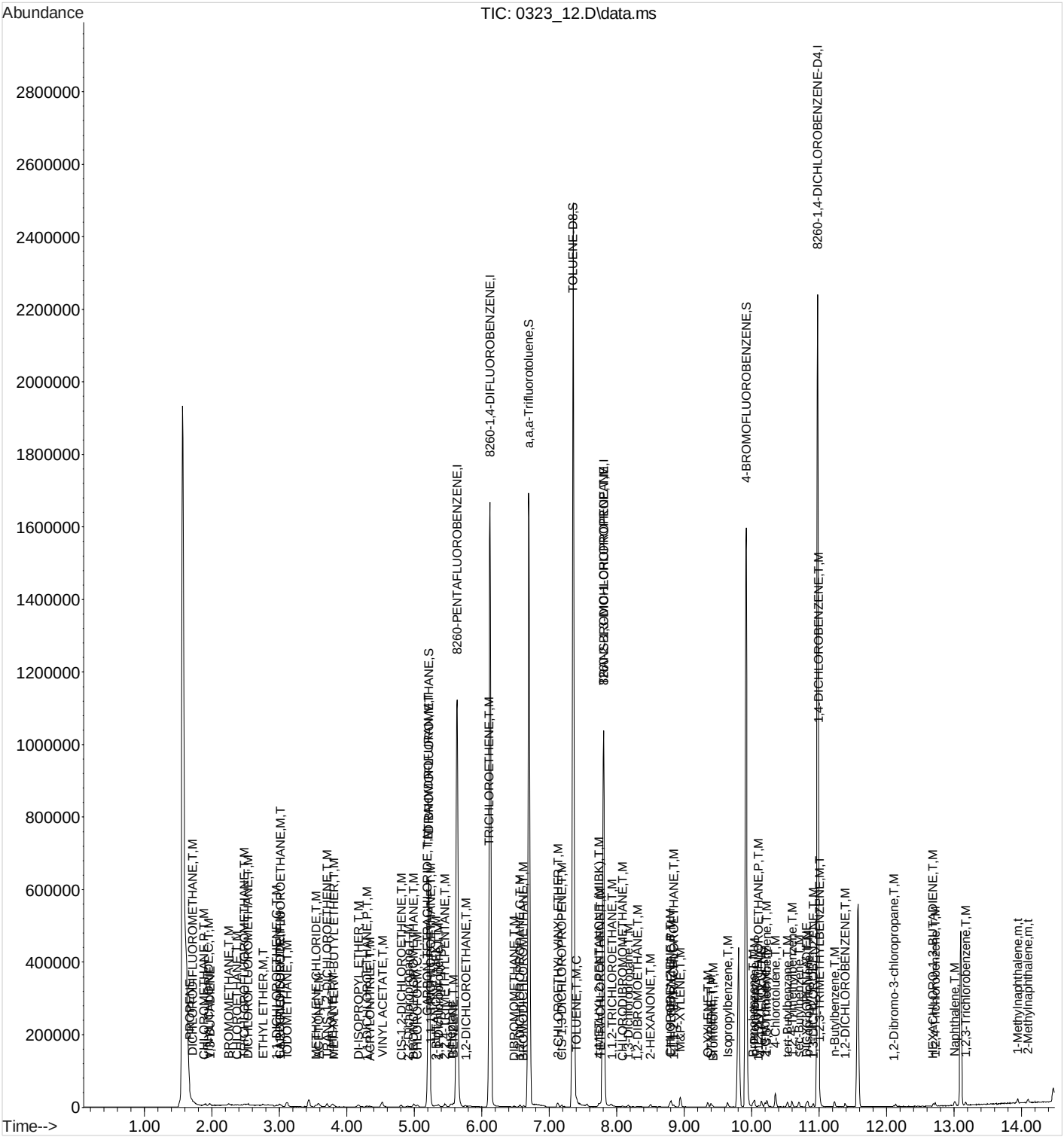
Quant Time: Mar 24 09:37:20 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:36:35 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
38) n-Heptane	5.543	43	3815	0.2303529 ppb		91
39) BENZENE	5.580	78	8695	0.2169121 ppb		98
40) 1,2-DICHLOROETHANE	5.763	62	2459	0.2255488 ppb	#	72
42) TRICHLOROETHENE	6.104	130	2188	0.2154712 ppb		94
43) 1,2-DICHLOROPROPANE	6.568	62	1437	0.2002120 ppb		97
44) DIBROMOMETHANE	6.476	93	1050	0.1913035 ppb		92
45) BROMODICHLOROMETHANE	6.616	83	2470	0.1949300 ppb	#	93
47) 2-CHLOROETHYL VINYL ETHER	7.129	63	5262	0.8951828 ppb	#	90
48) CIS-1,3-DICHLOROPROPENE	7.183	75	3214	0.1978044 ppb	#	86
49) 4-METHYL-2-PENTANONE (...	7.738	43	6700	1.0109921 ppb		92
51) TOLUENE	7.403	91	9961	0.2340578 ppb		99
52) TRANS-1,3-DICHLOROPROPENE	7.805	75	13523	0.9512688 ppb	#	51
54) 1,1,2-TRICHLOROETHANE	7.927	97	1692	0.2257783 ppb		90
55) TETRACHLOROETHENE	7.756	164	1476	0.2141816 ppb		97
56) 1,3-Dichloropropane	8.171	76	2801	0.2008367 ppb		99
57) 2-HEXANONE	8.500	58	2803	0.9077714 ppb	#	57
58) CHLORODIBROMOMETHANE	8.086	129	1976	0.2376644 ppb	#	72
59) 1,2-DIBROMOETHANE	8.311	107	1468	0.1967504 ppb		94
60) CHLOROBENZENE	8.793	112	5509	0.2148142 ppb		88
61) 1,1,1,2-TETRACHLOROETHANE	8.842	133	1644	0.2176902 ppb	#	96
62) ETHYLBENZENE	8.805	106	3221	0.2241227 ppb		99
63) M&P-XYLENE	8.945	106	7641	0.4334903 ppb		96
64) O-XYLENE	9.354	106	3707	0.2298624 ppb		96
65) STYRENE	9.402	104	4760	0.1785932 ppb	#	79
66) Bromoform	9.433	173	706	0.1574233 ppb	#	28
67) Isopropylbenzene	9.646	105	9305	0.2166022 ppb		97
69) Bromobenzene	10.024	77	4867	0.2564051 ppb	#	88
70) 1,1,2,2-TETRACHLOROETHANE	10.104	83	2078	0.2250663 ppb	#	88
73) n-Propylbenzene	10.043	91	13280	0.2471594 ppb		97
74) 4-ETHYLTOLUENE	10.146	105	11338	0.2551193 ppb		100
75) 2-Chlorotoluene	10.201	126	2119	0.2239672 ppb		98
76) 4-Chlorotoluene	10.354	91	7251	0.2303083 ppb		99
77) 1,3,5-Trimethylbenzene	10.226	105	8343	0.2401486 ppb		98
78) tert-Butylbenzene	10.530	119	6248	0.2134714 ppb		96
79) 1,2,4-Trimethylbenzene	10.603	105	8720	0.2487679 ppb		100
80) sec-Butylbenzene	10.701	105	9812	0.2099590 ppb		99
81) 1,3-DICHLOROBENZENE	10.914	146	3889	0.2283597 ppb		97
82) p-Isopropyltoluene	10.835	119	7902	0.2097938 ppb		99
83) DICYCLOPENTADIENE	10.817	66	8713	0.1972486 ppb		98
85) 1,4-DICHLOROBENZENE	10.994	146	4116	0.2396872 ppb	#	1
86) 1,2,3-TRIMETHYLBENZENE	11.012	105	8458	0.2454836 ppb		90
87) 1,2-DICHLOROBENZENE	11.390	146	3462	0.2234089 ppb		97
88) n-Butylbenzene	11.231	91	8385	0.2219900 ppb		95
89) 1,2-Dibromo-3-chloropr...	12.109	157	287m	0.1988961 ppb		
90) 1,2,4-Trichlorobenzene	12.725	180	2236	0.2385054 ppb		97
91) HEXACHLORO-1,3-BUTADIENE	12.688	225	1090	0.2186995 ppb	#	88
92) Naphthalene	13.012	128	7925	0.3407583 ppb		100
93) 1,2,3-Trichlorobenzene	13.176	180	2193	0.2568076 ppb		94
94) 1-Methylnaphthalene	13.944	142	5437	0.4142747 ppb		96
95) 2-Methylnaphthalene	14.097	142	3745	0.3506067 ppb	#	89

(#) = qualifier out of range (m) = manual integration (+) = signals summed

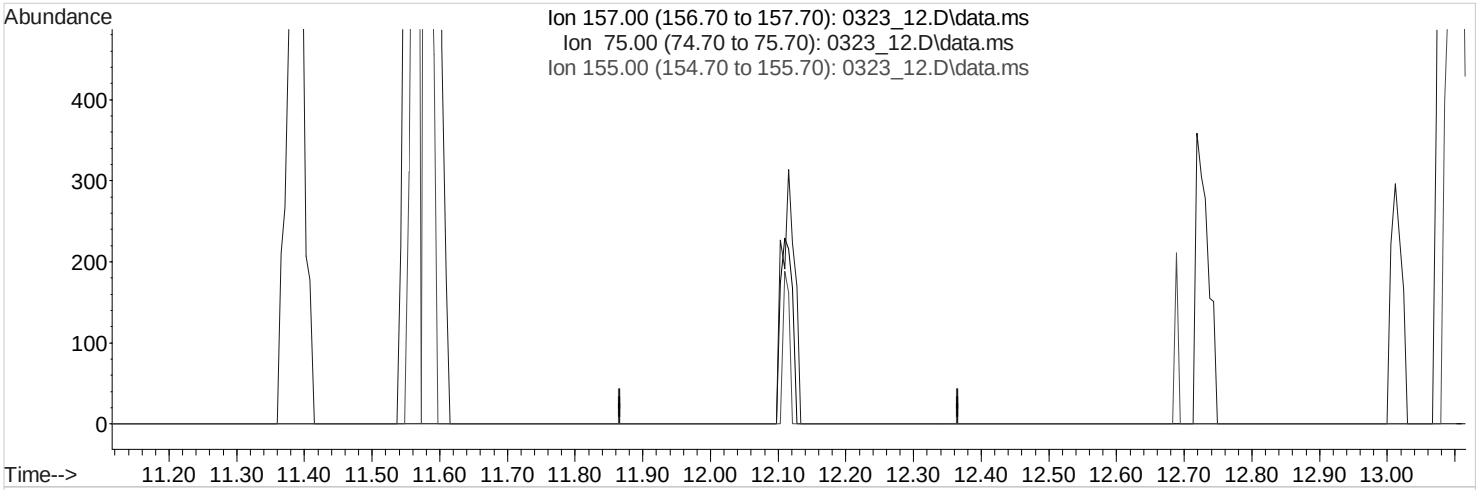
Data Path : C:\msdchem\1\data\032316\
Data File : 0323 12.D
Acq On : 23 Mar 2016 8:24 pm
Operator :
Sample : STD VMS .25 ppb 16C22692
Misc : water
ALS Vial : 3 Sample Multiplier: 1
InstName : VOCMS26

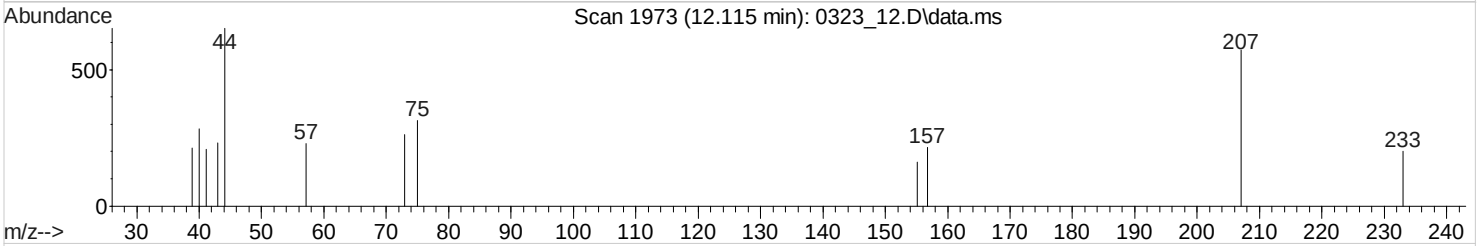
Quant Time: Mar 24 09:37:20 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:36:35 2016
Response via : Initial Calibration

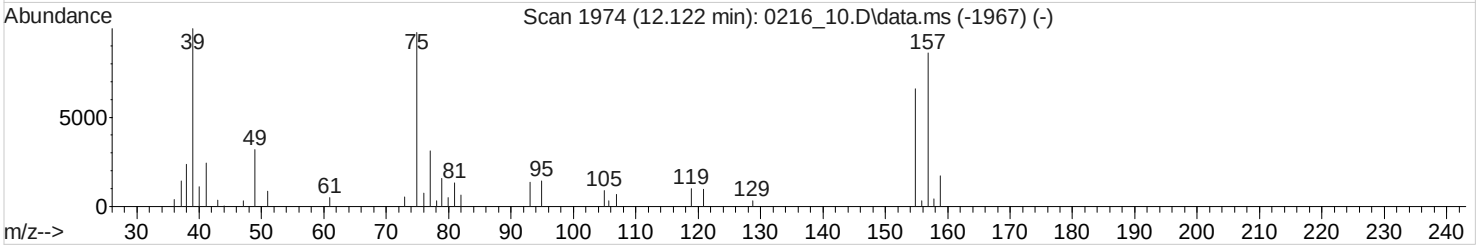


Data Path : C:\msdchem\1\data\032316\
Data File : 0323 12.D
Acq On : 23 Mar 2016 8:24 pm
Operator :
Sample : STD VMS .25 ppb 16C22692
Misc : water
ALS Vial : 3 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 09:36:56 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:36:35 2016
Response via : Initial Calibration







TIC: 0323_12.D\data.ms

(89) 1,2-Dibromo-3-chloropropane (T,M)

12.115min (-12.115) 0.0000000 ppb

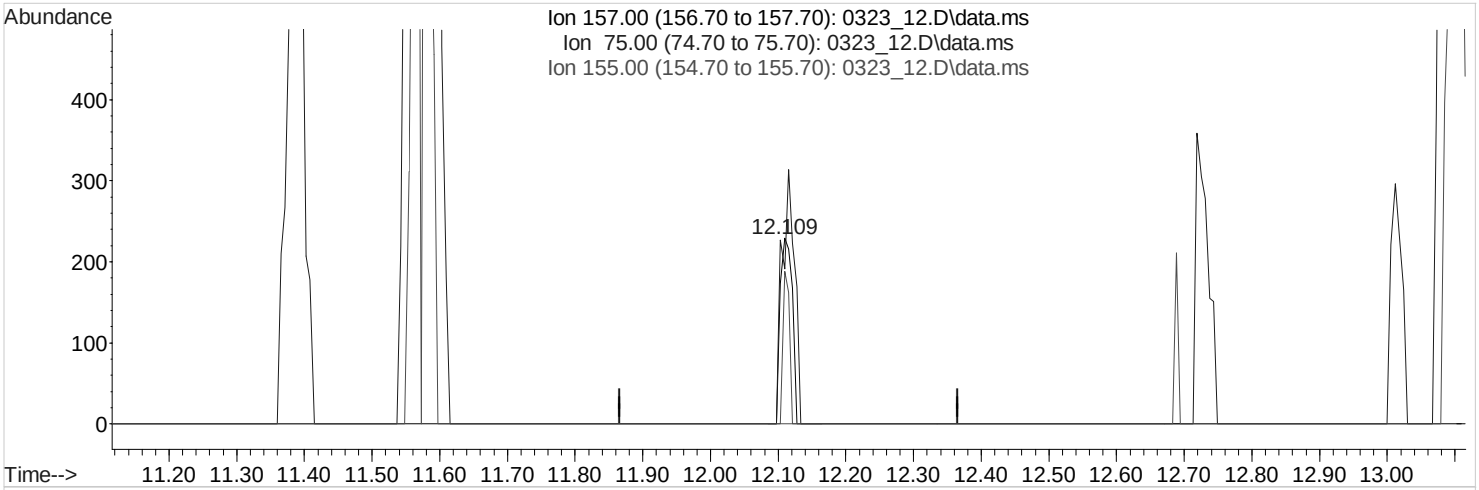
Qvalue = 0

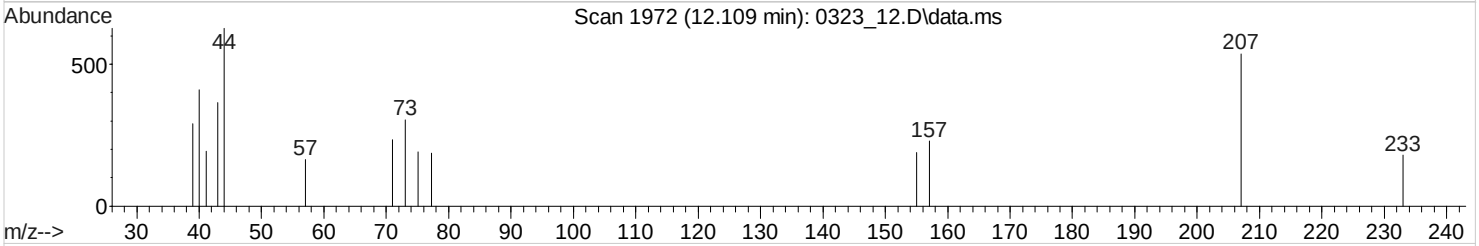
response 0

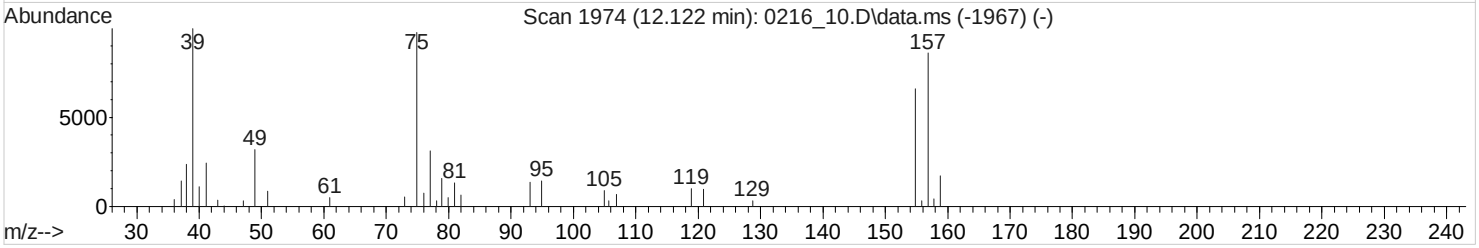
Ion	Exp%	Act%
157.00	100	0.00
75.00	101.30	0.00#
155.00	78.90	0.00#
0.00	0.00	0.00

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 12.D
Acq On : 23 Mar 2016 8:24 pm
Operator :
Sample : STD VMS .25 ppb 16C22692
Misc : water
ALS Vial : 3 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 09:36:56 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:36:35 2016
Response via : Initial Calibration







TIC: 0323_12.D\data.ms

(89) 1,2-Dibromo-3-chloropropane (T,M)

12.109min (-0.006) 0.1988961 ppb m

response 287

Ion	Exp%	Act%
157.00	100	100
75.00	101.30	0.00#
155.00	78.90	0.00#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 13.D
Acq On : 23 Mar 2016 8:44 pm
Operator :
Sample : STD VMS .5 ppb 16C22692
Misc : water
ALS Vial : 4 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 09:37:49 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:37:29 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 8260-PENTAFLUOROBENZENE	5.635	168	705986	40.0000000	ppb		0.00
41) 8260-1,4-DIFLUOROBENZENE	6.123	114	1333479	40.0000000	ppb		0.00
53) 8260-2-BROMO-1-CHLOROP...	7.805	79	223114	40.0000000	ppb		0.00
84) 8260-1,4-DICHLOROBENZE...	10.981	152	526075	40.0000000	ppb		0.00
96) AP9-PENTAFLUOROBENZENE	0.000	168	0m	40.0000000	ppb		-5.64
114) AP9-1,4-DIFLUOROBENZENE	0.000	114	0m	40.0000000	ppb		-6.12
122) AP9-2-BROMO-1-CHLOROPR...	0.000	79	0m	40.0000000	ppb		-7.81
128) AP9-1,4-DICHLOROBENZEN...	0.000	152	0m	40.0000000	ppb		-10.98
System Monitoring Compounds							
33) DIBROMOFLUOROMETHANE	5.214	111	404249	40.1810807	ppb		0.00
Spiked Amount 40.000	Range 79 - 121			Recovery = 100.45%			
46) a,a,a-Trifluorotoluene	6.702	146	680152	40.4361453	ppb		0.00
Spiked Amount 40.000	Range 90 - 116			Recovery = 101.09%			
50) TOLUENE-D8	7.354	98	1679396	40.2954234	ppb		0.00
Spiked Amount 40.000	Range 90 - 115			Recovery = 100.74%			
68) 4-BROMOFLUOROBENZENE	9.921	95	593670	39.4982269	ppb		0.00
Spiked Amount 40.000	Range 80 - 120			Recovery = 98.75%			
Target Compounds							Qvalue
3) PROPENE	1.666	41	1637	0.5490141	ppb		89
4) DICHLORODIFLUOROMETHANE	1.721	85	4513	0.5131928	ppb		96
5) CHLOROMETHANE	1.880	50	6088	0.5067376	ppb		96
6) VINYL CHLORIDE	1.953	62	6133	0.4857747	ppb	#	93
7) 1,3-BUTADIENE	1.977	39	3906	0.5072232	ppb		87
8) BROMOMETHANE	2.251	94	3735	0.4681647	ppb	#	82
9) CHLOROETHANE	2.373	64	3643	0.5279655	ppb		93
10) TRICHLOROFLUOROMETHANE	2.477	101	3384	0.2547131	ppb	#	29
11) DICHLOROFLUOROMETHANE	2.538	67	8819	0.4895283	ppb	#	86
12) ETHYL ETHER	2.751	59	3354	0.5569593	ppb	#	74
14) 1,1-DICHLOROETHENE	2.959	61	6775	0.5093697	ppb		96
15) 1,1,2-TRICHLOROTRIFLUO...	3.026	101	4298	0.5141508	ppb	#	96
16) ACETONE	3.580	43	35732	4.5965641	ppb		92
17) IODOMETHANE	3.111	142	34637	2.5648016	ppb		99
18) CARBON DISULFIDE	3.007	76	15201	0.5135869	ppb	#	91
19) METHYLENE CHLORIDE	3.538	84	4939	0.5069064	ppb		97
20) ACRYLONITRILE	4.336	53	5788	2.5752253	ppb		99
21) n-HEXANE	3.782	56	4486	0.4881249	ppb		84
22) TRANS-1,2-DICHLOROETHENE	3.702	96	4478	0.4714812	ppb		96
23) METHYL TERT-BUTYL ETHER	3.800	73	9947	0.5050587	ppb		96
24) 1,1-DICHLOROETHANE	4.294	63	8609	0.5342746	ppb		96
25) VINYL ACETATE	4.525	43	35164	2.6890045	ppb		98
26) DI-ISOPROPYL ETHER	4.166	45	12596	0.4970326	ppb		88
27) 2,2-Dichloropropane	4.897	77	5105	0.5233793	ppb		97
28) CIS-1,2-DICHLOROETHENE	4.800	96	5021	0.5036757	ppb		98
29) 2-BUTANONE (MEK)	5.324	43	8695	2.5445393	ppb		100
30) BROMOCHLOROMETHANE	4.989	130	2563	0.5021431	ppb		92
31) TETRAHYDROFURAN	5.196	42	1180	0.5321804	ppb	#	83
32) CHLOROFORM	5.050	83	8860	0.5319389	ppb		94
34) 1,1,1-TRICHLOROETHANE	5.245	97	6284	0.5180804	ppb		97
35) CARBON TETRACHLORIDE	5.190	117	6694	0.5691323	ppb		84
36) 1,1-Dichloropropene	5.354	75	6954	0.5170843	ppb		98
37) 2,2,4-TRIMETHYLPENTANE	5.452	57	20036	0.5297785	ppb		94

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 13.D
Acq On : 23 Mar 2016 8:44 pm
Operator :
Sample : STD VMS .5 ppb 16C22692
Misc : water
ALS Vial : 4 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 09:37:49 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:37:29 2016
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
38)	n-Heptane	5.543	43	8161	0.5166718 ppb		96
39)	BENZENE	5.580	78	20097	0.5408079 ppb		93
40)	1,2-DICHLOROETHANE	5.763	62	5059	0.4914555 ppb		99
42)	TRICHLOROETHENE	6.104	130	4539	0.4846409 ppb		97
43)	1,2-DICHLOROPROPANE	6.574	62	3498	0.5463197 ppb		95
44)	DIBROMOMETHANE	6.482	93	2652	0.5525614 ppb		95
45)	BROMODICHLOROMETHANE	6.622	83	5607	0.5019164 ppb		99
47)	2-CHLOROETHYL VINYL ETHER	7.122	63	12431	2.4876166 ppb		99
48)	CIS-1,3-DICHLOROPROPENE	7.183	75	6836	0.4741488 ppb	#	91
49)	4-METHYL-2-PENTANONE (...	7.732	43	14964	2.5200110 ppb		99
51)	TOLUENE	7.403	91	21022	0.5150007 ppb		97
52)	TRANS-1,3-DICHLOROPROPENE	7.799	75	16645	0.4919088 ppb	#	53
54)	1,1,2-TRICHLOROETHANE	7.921	97	3703	0.5195561 ppb		98
55)	TETRACHLOROETHENE	7.763	164	3324	0.5198410 ppb		97
56)	1,3-Dichloropropane	8.171	76	6647	0.5288566 ppb		92
57)	2-HEXANONE	8.500	58	6064	2.2765581 ppb		85
58)	CHLORODIBROMOMETHANE	8.086	129	3840	0.4737933 ppb		99
59)	1,2-DIBROMOETHANE	8.305	107	3511	0.5269350 ppb		96
60)	CHLOROBENZENE	8.793	112	11745	0.4929075 ppb		95
61)	1,1,1,2-TETRACHLOROETHANE	8.842	133	3316	0.4696723 ppb	#	99
62)	ETHYLBENZENE	8.811	106	6320	0.4640054 ppb		91
63)	M&P-XYLENE	8.945	106	16655	1.0127345 ppb		100
64)	O-XYLENE	9.354	106	7761	0.5017044 ppb		99
65)	STYRENE	9.396	104	11343	0.4967550 ppb		96
66)	Bromoform	9.427	173	1794	0.4911821 ppb		95
67)	Isopropylbenzene	9.646	105	19831	0.4949324 ppb		98
69)	Bromobenzene	10.024	77	9692	0.5044083 ppb		98
70)	1,1,2,2-TETRACHLOROETHANE	10.110	83	4294	0.4897498 ppb	#	98
71)	1,2,3-TRICHLOROPROPANE	10.244	110	1153	0.4374049 ppb		99
72)	TRANS-1,4-DICHLORO-2-B...	10.280	53	939	0.4240536 ppb	#	60
73)	n-Propylbenzene	10.043	91	27076	0.5070718 ppb		97
74)	4-ETHYLTOLUENE	10.146	105	22126	0.4930800 ppb		100
75)	2-Chlorotoluene	10.195	126	4303	0.4800407 ppb		93
76)	4-Chlorotoluene	10.353	91	14964	0.4950406 ppb		99
77)	1,3,5-Trimethylbenzene	10.225	105	15929	0.4679723 ppb		99
78)	tert-Butylbenzene	10.536	119	13373	0.4931807 ppb		98
79)	1,2,4-Trimethylbenzene	10.603	105	16829	0.4815476 ppb		99
80)	sec-Butylbenzene	10.701	105	21741	0.5059865 ppb		99
81)	1,3-DICHLOROBENZENE	10.914	146	7860	0.4826708 ppb		93
82)	p-Isopropyltoluene	10.835	119	16904	0.4882965 ppb		98
83)	DICYCLOPENTADIENE	10.817	66	19742	0.4999078 ppb		100
85)	1,4-DICHLOROBENZENE	10.994	146	8671	0.5283700 ppb	#	1
86)	1,2,3-TRIMETHYLBENZENE	11.012	105	16988	0.5099012 ppb		93
87)	1,2-DICHLOROBENZENE	11.390	146	7404	0.5171561 ppb		98
88)	n-Butylbenzene	11.231	91	17386	0.4997071 ppb		98
89)	1,2-Dibromo-3-chloropr...	12.109	157	531	0.4200600 ppb	#	32
90)	1,2,4-Trichlorobenzene	12.725	180	4680	0.5236259 ppb		97
91)	HEXACHLORO-1,3-BUTADIENE	12.701	225	2216	0.4860879 ppb		96
92)	Naphthalene	13.011	128	12620	0.4706683 ppb		100
93)	1,2,3-Trichlorobenzene	13.176	180	4174	0.4941932 ppb		98
94)	1-Methylnaphthalene	13.944	142	7455	0.4381747 ppb		94
95)	2-Methylnaphthalene	14.097	142	5924	0.4731638 ppb		97

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 13.D
Acq On : 23 Mar 2016 8:44 pm
Operator :
Sample : STD VMS .5 ppb 16C22692
Misc : water
ALS Vial : 4 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 09:37:49 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:37:29 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 13.D
Acq On : 23 Mar 2016 8:44 pm
Operator :
Sample : STD VMS .5 ppb 16C22692
Misc : water
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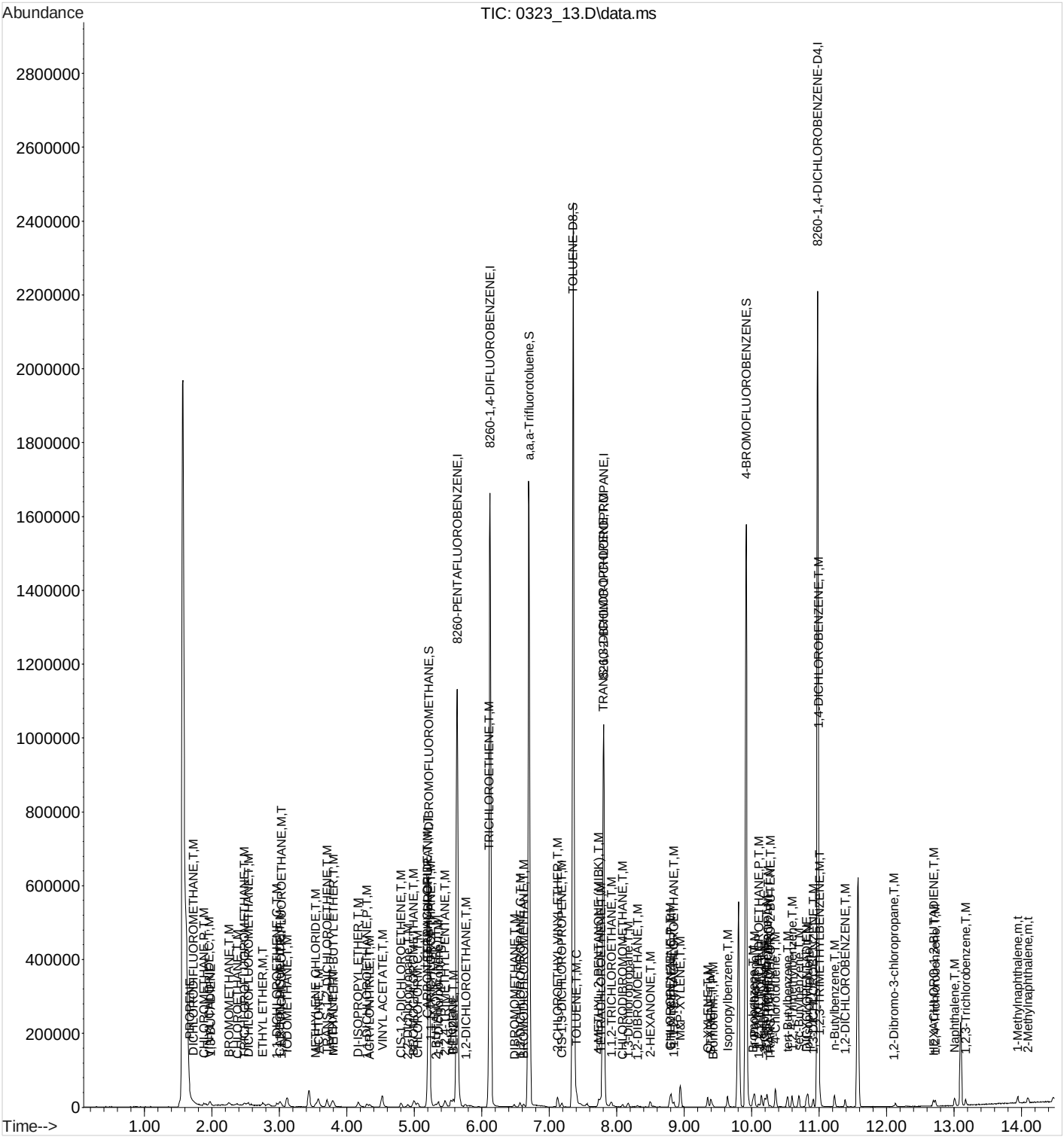
Quant Time: Mar 24 09:37:49 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:37:29 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 14.D
Acq On : 23 Mar 2016 9:04 pm
Operator :
Sample : STD VMS 1 ppb 16C22692
Misc : water
ALS Vial : 5 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 09:38:15 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:37:54 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 8260-PENTAFLUOROBENZENE	5.635	168	705997	40.0000000	ppb		0.00
41) 8260-1,4-DIFLUOROBENZENE	6.123	114	1339579	40.0000000	ppb		0.00
53) 8260-2-BROMO-1-CHLOROP...	7.805	79	227367	40.0000000	ppb		0.00
84) 8260-1,4-DICHLOROBENZE...	10.982	152	543184	40.0000000	ppb		0.00
96) AP9-PENTAFLUOROBENZENE	0.000	168	0m	40.0000000	ppb		-5.64
114) AP9-1,4-DIFLUOROBENZENE	0.000	114	0m	40.0000000	ppb		-6.12
122) AP9-2-BROMO-1-CHLOROPR...	0.000	79	0m	40.0000000	ppb		-7.81
128) AP9-1,4-DICHLOROBENZEN...	0.000	152	0m	40.0000000	ppb		-10.98
System Monitoring Compounds							
33) DIBROMOFLUOROMETHANE	5.214	111	418653	41.5494463	ppb		0.00
Spiked Amount 40.000	Range 79 - 121		Recovery = 103.87%				
46) a,a,a-Trifluorotoluene	6.702	146	704880	41.5643704	ppb		0.00
Spiked Amount 40.000	Range 90 - 116		Recovery = 103.91%				
50) TOLUENE-D8	7.354	98	1735588	41.3522589	ppb		0.00
Spiked Amount 40.000	Range 90 - 115		Recovery = 103.38%				
68) 4-BROMOFLUOROBENZENE	9.921	95	621641	40.7559784	ppb		0.00
Spiked Amount 40.000	Range 80 - 120		Recovery = 101.89%				
Target Compounds							Qvalue
3) PROPENE	1.672	41	2231	0.7245419	ppb		93
4) DICHLORODIFLUOROMETHANE	1.721	85	9720	1.0956497	ppb		93
5) CHLOROMETHANE	1.874	50	11476	0.9509242	ppb		98
6) VINYL CHLORIDE	1.953	62	12367	0.9889124	ppb		99
7) 1,3-BUTADIENE	1.971	39	7348	0.9496049	ppb		87
8) BROMOMETHANE	2.245	94	7956	1.0188554	ppb		94
9) CHLOROETHANE	2.367	64	7430	1.0570758	ppb	#	92
10) TRICHLOROFLUOROMETHANE	2.489	101	14007	1.2603934	ppb		97
11) DICHLOROFLUOROMETHANE	2.532	67	18791	1.0503743	ppb		95
12) ETHYL ETHER	2.751	59	6897	1.1033870	ppb	#	87
13) ACROLEIN	3.294	56	672	4.2379561	ppb	#	12
14) 1,1-DICHLOROETHENE	2.959	61	13041	0.9743692	ppb		95
15) 1,1,2-TRICHLOROTRIFLUO...	3.020	101	9135	1.0825502	ppb		98
16) ACETONE	3.574	43	27090	2.7234771	ppb		95
17) IODOMETHANE	3.111	142	69374	5.0929240	ppb		100
18) CARBON DISULFIDE	3.001	76	29830	0.9987854	ppb	#	93
19) METHYLENE CHLORIDE	3.538	84	10448	1.0673826	ppb		97
20) ACRYLONITRILE	4.336	53	11802	5.1987778	ppb		99
21) n-HEXANE	3.782	56	8493	0.9314894	ppb		93
22) TRANS-1,2-DICHLOROETHENE	3.702	96	9736	1.0449382	ppb		98
23) METHYL TERT-BUTYL ETHER	3.806	73	21664	1.0962748	ppb	#	1
24) 1,1-DICHLOROETHANE	4.294	63	17923	1.0874366	ppb		99
25) VINYL ACETATE	4.525	43	67561	5.0393406	ppb		99
26) DI-ISOPROPYL ETHER	4.166	45	26789	1.0591609	ppb		94
27) 2,2-Dichloropropane	4.903	77	10685	1.0786282	ppb		100
28) CIS-1,2-DICHLOROETHENE	4.800	96	10675	1.0682157	ppb		98
29) 2-BUTANONE (MEK)	5.318	43	17349	5.0470290	ppb		98
30) BROMOCHLOROMETHANE	4.989	130	5554	1.0865706	ppb		94
31) TETRAHYDROFURAN	5.196	42	2124	0.9377908	ppb	#	66
32) CHLOROFORM	5.044	83	17502	1.0288659	ppb		100
34) 1,1,1-TRICHLOROETHANE	5.245	97	13294	1.0829449	ppb		99
35) CARBON TETRACHLORIDE	5.190	117	12649	1.0280368	ppb		93
36) 1,1-Dichloropropene	5.361	75	14291	1.0506645	ppb		98

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 14.D
Acq On : 23 Mar 2016 9:04 pm
Operator :
Sample : STD VMS 1 ppb 16C22692
Misc : water
ALS Vial : 5 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 09:38:15 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:37:54 2016
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
37)	2,2,4-TRIMETHYLPENTANE	5.452	57	40170	1.0414563	ppb		94
38)	n-Heptane	5.544	43	14943	0.9356256	ppb		98
39)	BENZENE	5.580	78	39811	1.0429197	ppb		100
40)	1,2-DICHLOROETHANE	5.757	62	10550	1.0307330	ppb		95
42)	TRICHLOROETHENE	6.104	130	9251	0.9934277	ppb		92
43)	1,2-DICHLOROPROPANE	6.574	62	7107	1.0718233	ppb		98
44)	DIBROMOMETHANE	6.476	93	5318	1.0656527	ppb		99
45)	BROMODICHLOROMETHANE	6.623	83	11974	1.0656227	ppb		99
47)	2-CHLOROETHYL VINYL ETHER	7.122	63	25793	5.1465329	ppb		98
48)	CIS-1,3-DICHLOROPROPENE	7.190	75	15111	1.0616310	ppb	#	95
49)	4-METHYL-2-PENTANONE (...	7.732	43	29985	5.0132508	ppb		96
51)	TOLUENE	7.403	91	42544	1.0272316	ppb		98
52)	TRANS-1,3-DICHLOROPROPENE	7.775	75	14564	0.4307728	ppb	#	94
54)	1,1,2-TRICHLOROETHANE	7.921	97	7701	1.0466459	ppb		93
55)	TETRACHLOROETHENE	7.757	164	6910	1.0465984	ppb		95
56)	1,3-Dichloropropane	8.171	76	14006	1.0728779	ppb		97
57)	2-HEXANONE	8.494	58	13372	5.0775075	ppb		90
58)	CHLORODIBROMOMETHANE	8.086	129	7971	0.9822558	ppb		96
59)	1,2-DIBROMOETHANE	8.305	107	7337	1.0614874	ppb		94
60)	CHLOROBENZENE	8.793	112	24046	0.9949769	ppb		95
61)	1,1,1,2-TETRACHLOROETHANE	8.848	133	7541	1.0697431	ppb	#	99
62)	ETHYLBENZENE	8.805	106	14211	1.0490074	ppb		97
63)	M&P-XYLENE	8.945	106	34136	2.0282589	ppb		97
64)	O-XYLENE	9.348	106	15452	0.9790866	ppb		99
65)	STYRENE	9.396	104	23388	1.0072733	ppb		99
66)	Bromoform	9.427	173	3837	1.0369835	ppb		95
67)	Isopropylbenzene	9.646	105	41887	1.0293181	ppb		100
69)	Bromobenzene	10.024	77	20428	1.0402066	ppb		96
70)	1,1,2,2-TETRACHLOROETHANE	10.104	83	8911	1.0041902	ppb		97
71)	1,2,3-TRICHLOROPROPANE	10.238	110	2568	1.0198153	ppb		96
72)	TRANS-1,4-DICHLORO-2-B...	10.274	53	2026	0.9716209	ppb		93
73)	n-Propylbenzene	10.043	91	54613	0.9989361	ppb		100
74)	4-ETHYLTOLUENE	10.146	105	45163	0.9922128	ppb		100
75)	2-Chlorotoluene	10.201	126	9514	1.0555696	ppb		98
76)	4-Chlorotoluene	10.354	91	31051	1.0113615	ppb		99
77)	1,3,5-Trimethylbenzene	10.226	105	35141	1.0351863	ppb		99
78)	tert-Butylbenzene	10.530	119	29015	1.0548194	ppb		97
79)	1,2,4-Trimethylbenzene	10.597	105	35891	1.0203321	ppb		99
80)	sec-Butylbenzene	10.701	105	46384	1.0551086	ppb		100
81)	1,3-DICHLOROBENZENE	10.914	146	16721	1.0193813	ppb		98
82)	p-Isopropyltoluene	10.835	119	36053	1.0299988	ppb		99
83)	DICYCLOPENTADIENE	10.817	66	41778	1.0381796	ppb		98
85)	1,4-DICHLOROBENZENE	10.994	146	17633	1.0213125	ppb	#	1
86)	1,2,3-TRIMETHYLBENZENE	11.012	105	34713	1.0024884	ppb		97
87)	1,2-DICHLOROBENZENE	11.390	146	15253	1.0201691	ppb		98
88)	n-Butylbenzene	11.231	91	36949	1.0287362	ppb		99
89)	1,2-Dibromo-3-chloropr...	12.109	157	1611	1.3037598	ppb		91
90)	1,2,4-Trichlorobenzene	12.725	180	9655	1.0300094	ppb		99
91)	HEXACHLORO-1,3-BUTADIENE	12.695	225	4941	1.0595156	ppb		98
92)	Naphthalene	13.012	128	25257	0.9304961	ppb		99
93)	1,2,3-Trichlorobenzene	13.176	180	9362	1.0777007	ppb		98
94)	1-Methylnaphthalene	13.950	142	14200	0.8430790	ppb		96
95)	2-Methylnaphthalene	14.097	142	11314	0.8911557	ppb	#	93

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 14.D
Acq On : 23 Mar 2016 9:04 pm
Operator :
Sample : STD VMS 1 ppb 16C22692
Misc : water
ALS Vial : 5 Sample Multiplier: 1
InstName : VOCMS26

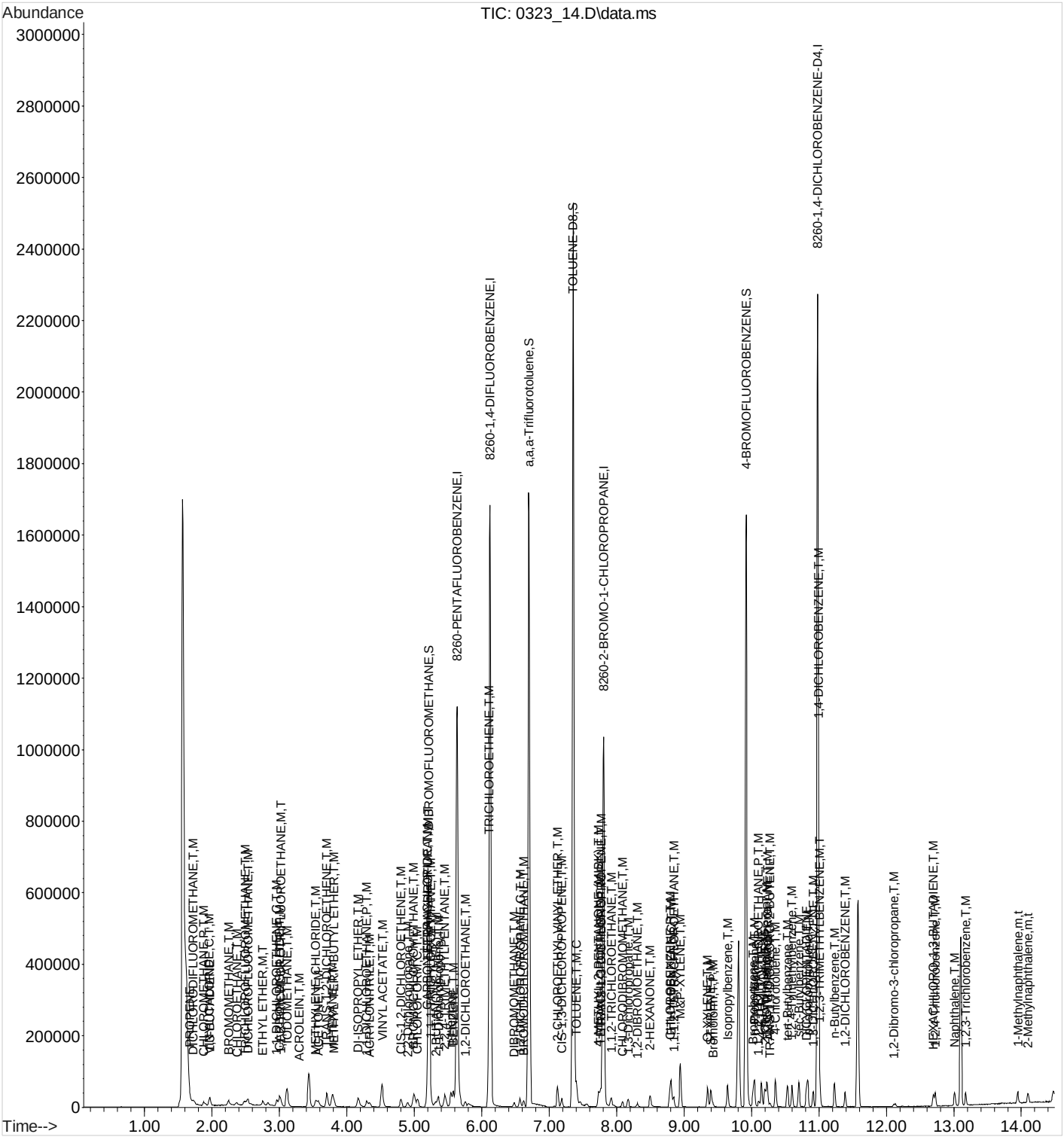
Quant Time: Mar 24 09:38:15 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:37:54 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 14.D
Acq On : 23 Mar 2016 9:04 pm
Operator :
Sample : STD VMS 1 ppb 16C22692
Misc : water
ALS Vial : 5 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 09:38:15 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:37:54 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 15.D
Acq On : 23 Mar 2016 9:23 pm
Operator :
Sample : STD VMS 2 ppb 16C22692
Misc : water
ALS Vial : 6 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 09:38:33 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:38:21 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 8260-PENTAFLUOROBENZENE	5.635	168	718492	40.0000000	ppb		0.00
41) 8260-1,4-DIFLUOROBENZENE	6.123	114	1344399	40.0000000	ppb		0.00
53) 8260-2-BROMO-1-CHLOROP...	7.805	79	225896	40.0000000	ppb		0.00
84) 8260-1,4-DICHLOROBENZE...	10.982	152	536225	40.0000000	ppb		0.00
96) AP9-PENTAFLUOROBENZENE	0.000	168	0m	40.0000000	ppb		-5.64
114) AP9-1,4-DIFLUOROBENZENE	0.000	114	0m	40.0000000	ppb		-6.12
122) AP9-2-BROMO-1-CHLOROPR...	0.000	79	0m	40.0000000	ppb		-7.81
128) AP9-1,4-DICHLOROBENZEN...	0.000	152	0m	40.0000000	ppb		-10.98
System Monitoring Compounds							
33) DIBROMOFLUOROMETHANE	5.214	111	421687	40.9854386	ppb		0.00
Spiked Amount 40.000	Range 79 - 121			Recovery = 102.46%			
46) a,a,a-Trifluorotoluene	6.702	146	712807	41.7374738	ppb		0.00
Spiked Amount 40.000	Range 90 - 116			Recovery = 104.34%			
50) TOLUENE-D8	7.354	98	1769212	41.9122327	ppb		0.00
Spiked Amount 40.000	Range 90 - 115			Recovery = 104.78%			
68) 4-BROMOFLUOROBENZENE	9.921	95	632925	41.8282310	ppb		0.00
Spiked Amount 40.000	Range 80 - 120			Recovery = 104.57%			
Target Compounds							Qvalue
3) PROPENE	1.672	41	3498	1.1988140	ppb		97
4) DICHLORODIFLUOROMETHANE	1.733	85	18428	1.9934336	ppb		99
5) CHLOROMETHANE	1.880	50	23063	1.9011368	ppb		98
6) VINYL CHLORIDE	1.959	62	23550	1.8555420	ppb		96
7) 1,3-BUTADIENE	1.971	39	13839	1.7797777	ppb		96
8) BROMOMETHANE	2.245	94	15945	1.9970127	ppb		98
9) CHLOROETHANE	2.367	64	14613	2.0141161	ppb		98
10) TRICHLOROFLUOROMETHANE	2.489	101	27707	2.3000734	ppb	#	97
11) DICHLOROFLUOROMETHANE	2.538	67	36325	1.9703599	ppb		99
12) ETHYL ETHER	2.751	59	13445	2.0602830	ppb		92
13) ACROLEIN	3.282	56	1636	10.9742666	ppb		96
14) 1,1-DICHLOROETHENE	2.959	61	28713	2.1216021	ppb		98
15) 1,1,2-TRICHLOROTRIFLUO...	3.020	101	18534	2.1145503	ppb		99
16) ACETONE	3.580	43	30430	3.3921782	ppb		95
17) IODOMETHANE	3.111	142	135219	9.7090325	ppb		99
18) CARBON DISULFIDE	3.001	76	59864	1.9701418	ppb		97
19) METHYLENE CHLORIDE	3.544	84	19755	1.9502482	ppb		98
20) ACRYLONITRILE	4.336	53	25272	10.8310630	ppb		96
21) n-HEXANE	3.782	56	18189	1.9943870	ppb		88
22) TRANS-1,2-DICHLOROETHENE	3.702	96	19385	2.0216449	ppb		99
23) METHYL TERT-BUTYL ETHER	3.806	73	40847	1.9833199	ppb	#	1
24) 1,1-DICHLOROETHANE	4.294	63	35273	2.0579059	ppb		98
25) VINYL ACETATE	4.519	43	137404	10.0508897	ppb		98
26) DI-ISOPROPYL ETHER	4.166	45	52978	2.0281760	ppb		96
27) 2,2-Dichloropropane	4.910	77	20018	1.9473532	ppb		97
28) CIS-1,2-DICHLOROETHENE	4.806	96	20707	2.0019130	ppb		98
29) 2-BUTANONE (MEK)	5.318	43	35774	10.2021041	ppb		99
30) BROMOCHLOROMETHANE	4.989	130	10916	2.0539861	ppb		96
31) TETRAHYDROFURAN	5.196	42	4745	2.0911055	ppb	#	81
32) CHLOROFORM	5.050	83	35106	2.0133095	ppb		100
34) 1,1,1-TRICHLOROETHANE	5.245	97	25655	2.0118245	ppb		97
35) CARBON TETRACHLORIDE	5.190	117	22996	1.8236952	ppb		95
36) 1,1-Dichloropropene	5.361	75	28484	2.0319689	ppb		99

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 15.D
Acq On : 23 Mar 2016 9:23 pm
Operator :
Sample : STD VMS 2 ppb 16C22692
Misc : water
ALS Vial : 6 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 09:38:33 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:38:21 2016
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
37)	2,2,4-TRIMETHYLPENTANE	5.452	57	79821	2.0126090	ppb		100
38)	n-Heptane	5.544	43	31406	1.9638307	ppb		97
39)	BENZENE	5.580	78	78603	2.0018554	ppb		98
40)	1,2-DICHLOROETHANE	5.757	62	21597	2.0575199	ppb		96
42)	TRICHLOROETHENE	6.104	130	19451	2.0847012	ppb		96
43)	1,2-DICHLOROPROPANE	6.568	62	14074	2.0776177	ppb		98
44)	DIBROMOMETHANE	6.482	93	11079	2.1763953	ppb		94
45)	BROMODICHLOROMETHANE	6.623	83	24641	2.1497879	ppb		98
47)	2-CHLOROETHYL VINYL ETHER	7.122	63	55733	11.0000623	ppb		99
48)	CIS-1,3-DICHLOROPROPENE	7.190	75	30046	2.0714131	ppb		98
49)	4-METHYL-2-PENTANONE (...	7.732	43	61761	10.2821090	ppb		98
51)	TOLUENE	7.403	91	86065	2.0566015	ppb		100
52)	TRANS-1,3-DICHLOROPROPENE	7.775	75	37331	1.2827601	ppb	#	90
54)	1,1,2-TRICHLOROETHANE	7.915	97	14634	1.9787885	ppb		98
55)	TETRACHLOROETHENE	7.757	164	13757	2.0730726	ppb		99
56)	1,3-Dichloropropane	8.171	76	27854	2.1091197	ppb		98
57)	2-HEXANONE	8.494	58	28188	10.7314290	ppb		100
58)	CHLORODIBROMOMETHANE	8.086	129	15533	1.9351599	ppb		99
59)	1,2-DIBROMOETHANE	8.305	107	15026	2.1549315	ppb		98
60)	CHLOROBENZENE	8.793	112	50907	2.1228156	ppb		99
61)	1,1,1,2-TETRACHLOROETHANE	8.848	133	14443	2.0268418	ppb	#	99
62)	ETHYLBENZENE	8.811	106	27757	2.0373082	ppb		98
63)	M&P-XYLENE	8.945	106	68066	4.0562853	ppb		98
64)	O-XYLENE	9.348	106	30936	1.9833350	ppb		96
65)	STYRENE	9.396	104	48373	2.0930865	ppb		94
66)	Bromoform	9.427	173	7981	2.1510934	ppb		96
67)	Isopropylbenzene	9.646	105	82868	2.0347194	ppb		98
69)	Bromobenzene	10.024	77	39133	1.9856935	ppb		96
70)	1,1,2,2-TETRACHLOROETHANE	10.104	83	17896	2.0277280	ppb		98
71)	1,2,3-TRICHLOROPROPANE	10.244	110	5176	2.0553251	ppb		94
72)	TRANS-1,4-DICHLORO-2-B...	10.280	53	4259	2.0754476	ppb		95
73)	n-Propylbenzene	10.043	91	107055	1.9714376	ppb		100
74)	4-ETHYLTOLUENE	10.146	105	86416	1.9146148	ppb		98
75)	2-Chlorotoluene	10.201	126	19062	2.0995161	ppb	#	96
76)	4-Chlorotoluene	10.354	91	63601	2.0791309	ppb		99
77)	1,3,5-Trimethylbenzene	10.226	105	68160	2.0033152	ppb		100
78)	tert-Butylbenzene	10.536	119	56525	2.0403444	ppb		98
79)	1,2,4-Trimethylbenzene	10.604	105	68808	1.9588982	ppb		100
80)	sec-Butylbenzene	10.701	105	93337	2.1079446	ppb		99
81)	1,3-DICHLOROBENZENE	10.914	146	34528	2.1084607	ppb		100
82)	p-Isopropyltoluene	10.835	119	73207	2.0894014	ppb		98
83)	DICYCLOPENTADIENE	10.817	66	85342	2.1143697	ppb		100
85)	1,4-DICHLOROBENZENE	11.000	146	35740	2.0858307	ppb	#	1
86)	1,2,3-TRIMETHYLBENZENE	11.012	105	69061	2.0190631	ppb		100
87)	1,2-DICHLOROBENZENE	11.390	146	31232	2.1053887	ppb		99
88)	n-Butylbenzene	11.231	91	73118	2.0474661	ppb		99
89)	1,2-Dibromo-3-chloropr...	12.115	157	2459	1.8735809	ppb	#	77
90)	1,2,4-Trichlorobenzene	12.725	180	18768	2.0130786	ppb		97
91)	HEXACHLORO-1,3-BUTADIENE	12.701	225	10284	2.2011024	ppb		97
92)	Naphthalene	13.012	128	48817	1.8540286	ppb		100
93)	1,2,3-Trichlorobenzene	13.176	180	17390	1.9891781	ppb		97
94)	1-Methylnaphthalene	13.950	142	27404	1.7154359	ppb		98
95)	2-Methylnaphthalene	14.103	142	21482	1.7619493	ppb		97

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 15.D
Acq On : 23 Mar 2016 9:23 pm
Operator :
Sample : STD VMS 2 ppb 16C22692
Misc : water
ALS Vial : 6 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 09:38:33 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:38:21 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\032316\
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Operator :
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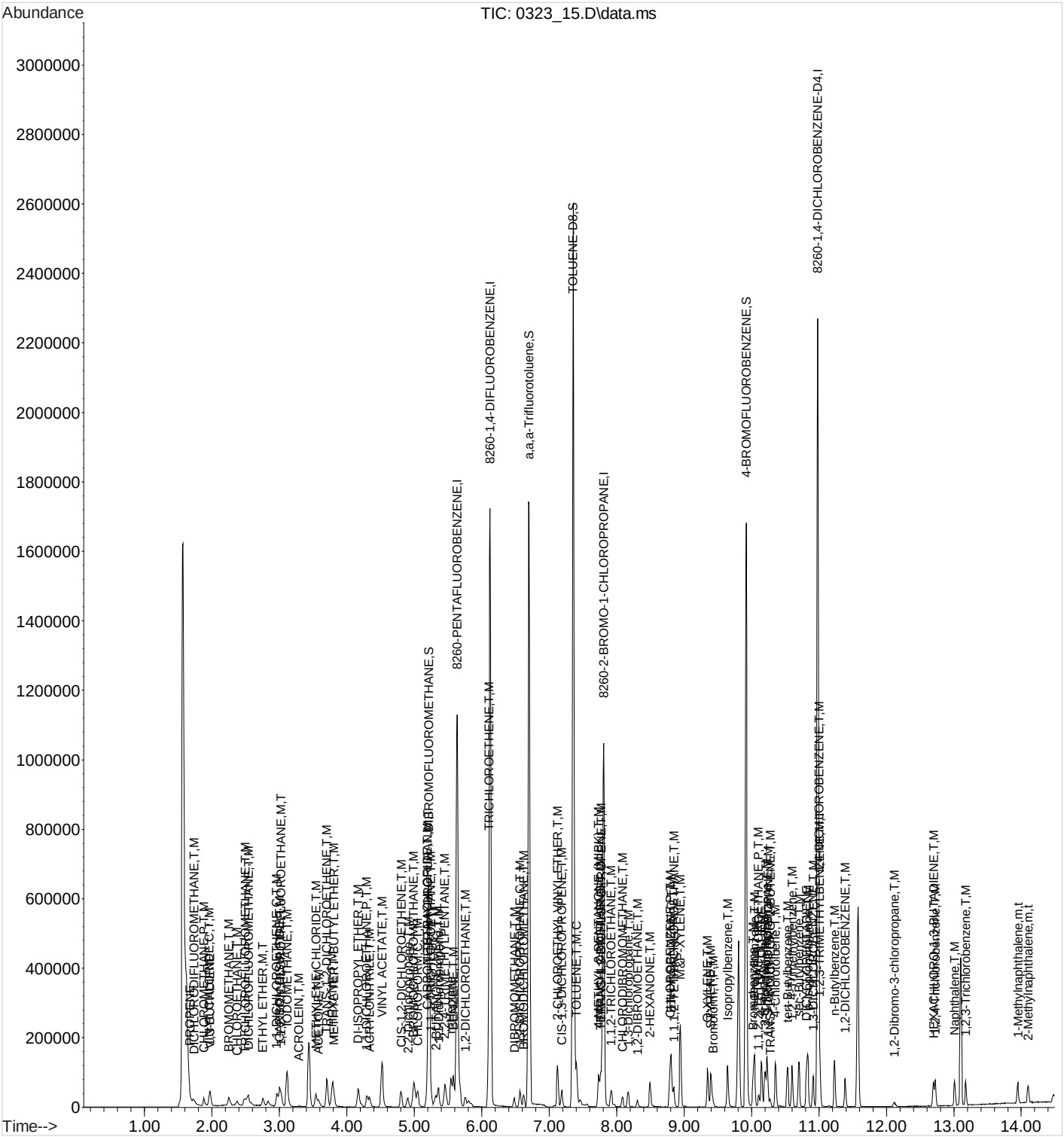

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 16.D
Acq On : 23 Mar 2016 9:43 pm
Operator :
Sample : STD VMS 5.0 ppb 16C22692
Misc : water
ALS Vial : 7 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 09:38:51 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:38:38 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 8260-PENTAFLUOROBENZENE	5.635	168	727433	40.0000000	ppb		0.00
41) 8260-1,4-DIFLUOROBENZENE	6.123	114	1363291	40.0000000	ppb		0.00
53) 8260-2-BROMO-1-CHLOROP...	7.805	79	233364	40.0000000	ppb		0.00
84) 8260-1,4-DICHLOROBENZE...	10.981	152	546834	40.0000000	ppb		0.00
96) AP9-PENTAFLUOROBENZENE	0.000	168	0m	40.0000000	ppb		-5.64
114) AP9-1,4-DIFLUOROBENZENE	0.000	114	0m	40.0000000	ppb		-6.12
122) AP9-2-BROMO-1-CHLOROPR...	0.000	79	0m	40.0000000	ppb		-7.81
128) AP9-1,4-DICHLOROBENZEN...	0.000	152	0m	40.0000000	ppb		-10.98
System Monitoring Compounds							
33) DIBROMOFLUOROMETHANE	5.214	111	436603	42.1170841	ppb		0.00
Spiked Amount 40.000	Range 79 - 121		Recovery = 105.29%				
46) a,a,a-Trifluorotoluene	6.702	146	748892	43.2968469	ppb		0.00
Spiked Amount 40.000	Range 90 - 116		Recovery = 108.24%				
50) TOLUENE-D8	7.354	98	1827075	42.7010403	ppb		0.00
Spiked Amount 40.000	Range 90 - 115		Recovery = 106.75%				
68) 4-BROMOFLUOROBENZENE	9.921	95	653387	41.8328827	ppb		0.00
Spiked Amount 40.000	Range 80 - 120		Recovery = 104.58%				
Target Compounds							Qvalue
3) PROPENE	1.672	41	7199	2.6491178	ppb		95
4) DICHLORODIFLUOROMETHANE	1.727	85	42086	4.4996157	ppb		95
5) CHLOROMETHANE	1.880	50	56865	4.6761291	ppb		99
6) VINYL CHLORIDE	1.959	62	60976	4.8148996	ppb		99
7) 1,3-BUTADIENE	1.971	39	33369	4.3341526	ppb		98
8) BROMOMETHANE	2.251	94	39674	4.9093159	ppb		100
9) CHLOROETHANE	2.367	64	35601	4.8397578	ppb		97
10) TRICHLOROFLUOROMETHANE	2.483	101	71019	5.6534735	ppb		98
11) DICHLOROFLUOROMETHANE	2.532	67	90462	4.8609844	ppb		99
12) ETHYL ETHER	2.757	59	33677	5.0666185	ppb		95
13) ACROLEIN	3.306	56	3713	23.8268328	ppb		95
14) 1,1-DICHLOROETHENE	2.965	61	72705	5.2423899	ppb		99
15) 1,1,2-TRICHLOROTRIFLUO...	3.026	101	46077	5.1335219	ppb		98
16) ACETONE	3.580	43	63192	8.0172662	ppb		95
17) IODOMETHANE	3.111	142	342515	24.4332625	ppb		100
18) CARBON DISULFIDE	3.001	76	154408	5.0341847	ppb		98
19) METHYLENE CHLORIDE	3.544	84	48309	4.7340835	ppb		100
20) ACRYLONITRILE	4.336	53	63594	26.4799624	ppb		98
21) n-HEXANE	3.782	56	45581	4.9392070	ppb		89
22) TRANS-1,2-DICHLOROETHENE	3.702	96	48910	5.0272057	ppb		99
23) METHYL TERT-BUTYL ETHER	3.806	73	106452	5.1137604	ppb		99
24) 1,1-DICHLOROETHANE	4.294	63	88849	5.0904600	ppb		99
25) VINYL ACETATE	4.525	43	349537	25.2281512	ppb		100
26) DI-ISOPROPYL ETHER	4.172	45	137015	5.1663662	ppb		97
27) 2,2-Dichloropropane	4.903	77	52758	5.0960510	ppb		99
28) CIS-1,2-DICHLOROETHENE	4.800	96	53303	5.0889189	ppb		99
29) 2-BUTANONE (MEK)	5.318	43	88046	24.7006795	ppb		99
30) BROMOCHLOROMETHANE	4.983	130	27233	5.0340800	ppb		93
31) TETRAHYDROFURAN	5.196	42	10778	4.6490916	ppb	#	92
32) CHLOROFORM	5.050	83	88191	4.9888995	ppb		94
34) 1,1,1-TRICHLOROETHANE	5.245	97	68967	5.3354999	ppb		100
35) CARBON TETRACHLORIDE	5.190	117	57632	4.5953405	ppb		99
36) 1,1-Dichloropropene	5.361	75	72625	5.1008785	ppb		99

Data Path : C:\msdchem\1\data\032316\
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Acq On : 23 Mar 2016 9:43 pm
Operator :
Sample : STD VMS 5.0 ppb 16C22692
Misc : water
ALS Vial : 7 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 09:38:51 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:38:38 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
37) 2,2,4-TRIMETHYLPENTANE	5.458	57	206321	5.1317722	ppb		99
38) n-Heptane	5.543	43	83038	5.1471983	ppb		95
39) BENZENE	5.580	78	201739	5.0737820	ppb		99
40) 1,2-DICHLOROETHANE	5.757	62	54797	5.1267889	ppb		98
42) TRICHLOROETHENE	6.104	130	49686	5.2072988	ppb		99
43) 1,2-DICHLOROPROPANE	6.568	62	35318	5.1018294	ppb		99
44) DIBROMOMETHANE	6.482	93	27334	5.2033861	ppb		98
45) BROMODICHLOROMETHANE	6.623	83	61623	5.2235140	ppb		100
47) 2-CHLOROETHYL VINYL ETHER	7.122	63	141253	26.9537575	ppb		100
48) CIS-1,3-DICHLOROPROPENE	7.183	75	77973	5.2634863	ppb		98
49) 4-METHYL-2-PENTANONE (...	7.732	43	161222	26.3201477	ppb		100
51) TOLUENE	7.403	91	217013	5.0850789	ppb		98
52) TRANS-1,3-DICHLOROPROPENE	7.769	75	77450	2.8272208	ppb	#	95
54) 1,1,2-TRICHLOROETHANE	7.921	97	37843	4.9638512	ppb		99
55) TETRACHLOROETHENE	7.763	164	34150	4.9453178	ppb		97
56) 1,3-Dichloropropane	8.171	76	69239	5.0202551	ppb		99
57) 2-HEXANONE	8.494	58	72584	26.3634219	ppb		98
58) CHLORODIBROMOMETHANE	8.086	129	40406	4.9046406	ppb		100
59) 1,2-DIBROMOETHANE	8.305	107	36944	5.0504687	ppb		100
60) CHLOROBENZENE	8.793	112	128994	5.1437236	ppb		99
61) 1,1,1,2-TETRACHLOROETHANE	8.848	133	38395	5.2017279	ppb	#	100
62) ETHYLBENZENE	8.811	106	71429	5.0561064	ppb		99
63) M&P-XYLENE	8.945	106	175046	10.0694241	ppb		99
64) O-XYLENE	9.348	106	78772	4.8966923	ppb		97
65) STYRENE	9.396	104	126382	5.2446929	ppb		99
66) Bromoform	9.427	173	21362	5.4904220	ppb		99
67) Isopropylbenzene	9.646	105	214498	5.0805458	ppb		100
69) Bromobenzene	10.024	77	94504	4.6485307	ppb		100
70) 1,1,2,2-TETRACHLOROETHANE	10.104	83	45876	5.0177776	ppb		96
71) 1,2,3-TRICHLOROPROPANE	10.238	110	12698	4.8473366	ppb		100
72) TRANS-1,4-DICHLORO-2-B...	10.274	53	10589	4.9483128	ppb		96
73) n-Propylbenzene	10.043	91	270033	4.8273616	ppb		99
74) 4-ETHYLTOLUENE	10.146	105	221622	4.7940103	ppb		99
75) 2-Chlorotoluene	10.201	126	48057	5.0731945	ppb		97
76) 4-Chlorotoluene	10.354	91	157935	4.9584721	ppb		100
77) 1,3,5-Trimethylbenzene	10.226	105	177019	5.0346619	ppb		99
78) tert-Butylbenzene	10.530	119	147786	5.1430680	ppb		99
79) 1,2,4-Trimethylbenzene	10.597	105	176362	4.8802418	ppb		100
80) sec-Butylbenzene	10.701	105	239731	5.1849119	ppb		99
81) 1,3-DICHLOROBENZENE	10.914	146	85404	4.9941543	ppb		99
82) p-Isopropyltoluene	10.835	119	191410	5.2413501	ppb		99
83) DICYCLOPENTADIENE	10.817	66	222499	5.2757235	ppb		100
85) 1,4-DICHLOROBENZENE	10.994	146	86833	4.9270752	ppb	#	1
86) 1,2,3-TRIMETHYLBENZENE	11.012	105	176810	5.0592750	ppb		99
87) 1,2-DICHLOROBENZENE	11.390	146	78223	5.1168829	ppb		99
88) n-Butylbenzene	11.231	91	189725	5.1850383	ppb		99
89) 1,2-Dibromo-3-chloropr...	12.115	157	7268	5.4997848	ppb		97
90) 1,2,4-Trichlorobenzene	12.725	180	48705	5.1161140	ppb		98
91) HEXACHLORO-1,3-BUTADIENE	12.701	225	26464	5.4447521	ppb		98
92) Naphthalene	13.012	128	119744	4.5256069	ppb		99
93) 1,2,3-Trichlorobenzene	13.176	180	44291	4.9733768	ppb		100
94) 1-Methylnaphthalene	13.950	142	64125	4.0515124	ppb		96
95) 2-Methylnaphthalene	14.097	142	54160	4.4622341	ppb		99

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 16.D
Acq On : 23 Mar 2016 9:43 pm
Operator :
Sample : STD VMS 5.0 ppb 16C22692
Misc : water
ALS Vial : 7 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 09:38:51 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:38:38 2016
Response via : Initial Calibration

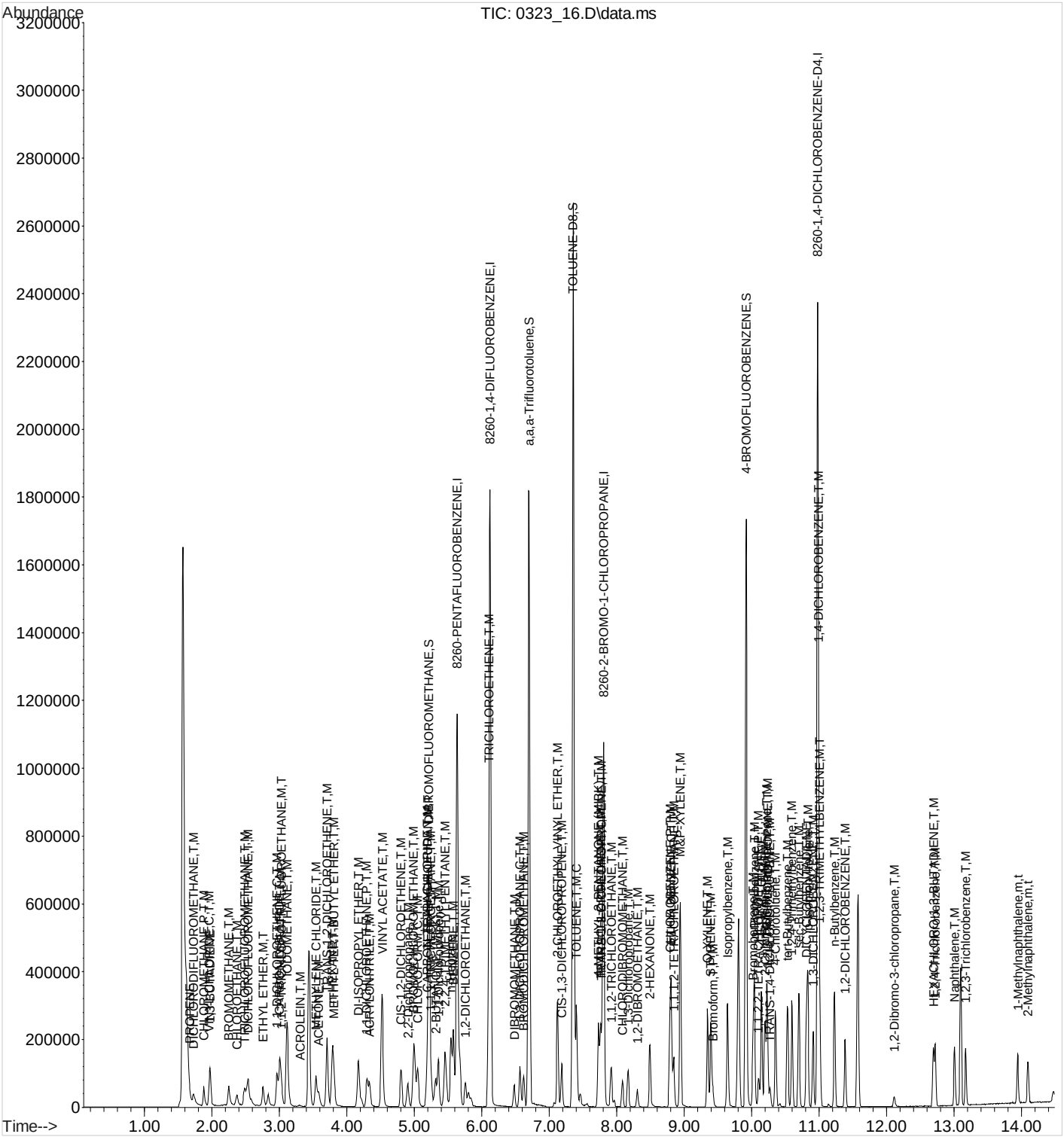
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 16.D
Acq On : 23 Mar 2016 9:43 pm
Operator :
Sample : STD VMS 5.0 ppb 16C22692
Misc : water
ALS Vial : 7 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 09:38:51 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:38:38 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 17.D
Acq On : 23 Mar 2016 10:03 pm
Operator :
Sample : STD VMS 10 ppb 16C22692
Misc : water
ALS Vial : 8 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 09:39:10 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:38:57 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 8260-PENTAFLUOROBENZENE	5.635	168	699906	40.0000000	ppb	0.00
41) 8260-1,4-DIFLUOROBENZENE	6.123	114	1315542	40.0000000	ppb	0.00
53) 8260-2-BROMO-1-CHLOROP...	7.805	79	220020	40.0000000	ppb	0.00
84) 8260-1,4-DICHLOROBENZE...	10.981	152	525361	40.0000000	ppb	0.00
96) AP9-PENTAFLUOROBENZENE	0.000	168	0m	40.0000000	ppb	-5.64
114) AP9-1,4-DIFLUOROBENZENE	0.000	114	0m	40.0000000	ppb	-6.12
122) AP9-2-BROMO-1-CHLOROPR...	0.000	79	0m	40.0000000	ppb	-7.81
128) AP9-1,4-DICHLOROBENZEN...	0.000	152	0m	40.0000000	ppb	-10.98
System Monitoring Compounds						
33) DIBROMOFLUOROMETHANE	5.214	111	437107	43.9745492	ppb	0.00
Spiked Amount 40.000	Range 79 - 121		Recovery = 109.94%			
46) a,a,a-Trifluorotoluene	6.702	146	743637	44.5023064	ppb	0.00
Spiked Amount 40.000	Range 90 - 116		Recovery = 111.26%			
50) TOLUENE-D8	7.354	98	1812828	43.9567996	ppb	0.00
Spiked Amount 40.000	Range 90 - 115		Recovery = 109.89%			
68) 4-BROMOFLUOROBENZENE	9.921	95	643933	43.9267189	ppb	0.00
Spiked Amount 40.000	Range 80 - 120		Recovery = 109.82%			
Target Compounds						Qvalue
3) PROPENE	1.672	41	13942	5.7855871	ppb	99
4) DICHLORODIFLUOROMETHANE	1.727	85	90434	10.2194540	ppb	99
5) CHLOROMETHANE	1.873	50	113559	9.8113845	ppb	100
6) VINYL CHLORIDE	1.959	62	123774	10.2211301	ppb	99
7) 1,3-BUTADIENE	1.971	39	68207	9.4165311	ppb	100
8) BROMOMETHANE	2.245	94	80494	10.3835668	ppb	99
9) CHLOROETHANE	2.367	64	72711	10.3285842	ppb	99
10) TRICHLOROFLUOROMETHANE	2.477	101	139697	11.3115659	ppb	99
11) DICHLOROFLUOROMETHANE	2.532	67	175815	9.8647113	ppb	98
12) ETHYL ETHER	2.751	59	68991	10.7638390	ppb	99
13) ACROLEIN	3.288	56	7990	53.9220695	ppb	95
14) 1,1-DICHLOROETHENE	2.959	61	143896	10.6972510	ppb	99
15) 1,1,2-TRICHLOROTRIFLUO...	3.020	101	91655	10.5660346	ppb	99
16) ACETONE	3.580	43	114572	17.0364546	ppb	95
17) IODOMETHANE	3.111	142	681679	50.7316566	ppb	100
18) CARBON DISULFIDE	3.001	76	302050	10.2234360	ppb	99
19) METHYLENE CHLORIDE	3.538	84	95251	9.7880773	ppb	99
20) ACRYLONITRILE	4.336	53	125764	53.8948063	ppb	99
21) n-HEXANE	3.782	56	88165	9.9495591	ppb	93
22) TRANS-1,2-DICHLOROETHENE	3.702	96	99259	10.5939642	ppb	97
23) METHYL TERT-BUTYL ETHER	3.800	73	205975	10.2449680	ppb	99
24) 1,1-DICHLOROETHANE	4.294	63	173235	10.2845629	ppb	99
25) VINYL ACETATE	4.519	43	688070	51.5368787	ppb	99
26) DI-ISOPROPYL ETHER	4.166	45	265284	10.3390270	ppb	100
27) 2,2-Dichloropropane	4.903	77	99928	9.9999462	ppb	100
28) CIS-1,2-DICHLOROETHENE	4.800	96	105449	10.4324015	ppb	99
29) 2-BUTANONE (MEK)	5.312	43	171069	49.9794366	ppb	100
30) BROMOCHLOROMETHANE	4.983	130	54200	10.4012161	ppb	99
31) TETRAHYDROFURAN	5.196	42	21103	9.5727621	ppb	99
32) CHLOROFORM	5.050	83	174338	10.2538405	ppb	99
34) 1,1,1-TRICHLOROETHANE	5.245	97	130623	10.3866816	ppb	98
35) CARBON TETRACHLORIDE	5.184	117	114566	9.6241183	ppb	99
36) 1,1-Dichloropropene	5.354	75	143952	10.4730193	ppb	100

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 17.D
Acq On : 23 Mar 2016 10:03 pm
Operator :
Sample : STD VMS 10 ppb 16C22692
Misc : water
ALS Vial : 8 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 09:39:10 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:38:57 2016
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
37)	2,2,4-TRIMETHYLPENTANE	5.458	57	403042	10.3734711	ppb		99
38)	n-Heptane	5.543	43	160149	10.2670536	ppb		97
39)	BENZENE	5.580	78	391930	10.2196715	ppb		100
40)	1,2-DICHLOROETHANE	5.757	62	105195	10.1860415	ppb		99
42)	TRICHLOROETHENE	6.104	130	99014	10.6799269	ppb		100
43)	1,2-DICHLOROPROPANE	6.568	62	69645	10.3903932	ppb		99
44)	DIBROMOMETHANE	6.476	93	53623	10.5071138	ppb		99
45)	BROMODICHLOROMETHANE	6.622	83	121414	10.5864132	ppb		100
47)	2-CHLOROETHYL VINYL ETHER	7.122	63	279956	54.6481017	ppb		100
48)	CIS-1,3-DICHLOROPROPENE	7.183	75	155334	10.7716424	ppb		99
49)	4-METHYL-2-PENTANONE (...	7.726	43	314530	52.7478114	ppb		99
51)	TOLUENE	7.403	91	415912	10.0708783	ppb		100
52)	TRANS-1,3-DICHLOROPROPENE	7.769	75	142694	5.8194145	ppb	#	97
54)	1,1,2-TRICHLOROETHANE	7.915	97	73726	10.2694974	ppb		100
55)	TETRACHLOROETHENE	7.756	164	66587	10.2460619	ppb		98
56)	1,3-Dichloropropane	8.171	76	136083	10.4582122	ppb		99
57)	2-HEXANONE	8.494	58	147191	56.1932511	ppb		98
58)	CHLORODIBROMOMETHANE	8.086	129	79499	10.2677991	ppb		99
59)	1,2-DIBROMOETHANE	8.305	107	73367	10.6201397	ppb		99
60)	CHLOROBENZENE	8.793	112	249951	10.5210491	ppb		99
61)	1,1,1,2-TETRACHLOROETHANE	8.848	133	73664	10.5145192	ppb		99
62)	ETHYLBENZENE	8.811	106	141411	10.5970519	ppb		99
63)	M&P-XYLENE	8.945	106	343385	20.9268202	ppb		100
64)	O-XYLENE	9.348	106	157196	10.4002134	ppb		98
65)	STYRENE	9.396	104	253562	11.0703866	ppb		99
66)	Bromoform	9.427	173	42231	11.3272555	ppb		100
67)	Isopropylbenzene	9.646	105	424395	10.6332157	ppb		99
69)	Bromobenzene	10.024	77	188268	9.9387509	ppb		99
70)	1,1,2,2-TETRACHLOROETHANE	10.104	83	90502	10.4929707	ppb		99
71)	1,2,3-TRICHLOROPROPANE	10.238	110	26043	10.6093977	ppb		98
72)	TRANS-1,4-DICHLORO-2-B...	10.274	53	21323	10.5906114	ppb		97
73)	n-Propylbenzene	10.043	91	531099	10.1285339	ppb		100
74)	4-ETHYLTOLUENE	10.146	105	432200	9.9846959	ppb		100
75)	2-Chlorotoluene	10.195	126	93501	10.4437027	ppb		99
76)	4-Chlorotoluene	10.353	91	308160	10.2758806	ppb		99
77)	1,3,5-Trimethylbenzene	10.225	105	341372	10.2860476	ppb		100
78)	tert-Butylbenzene	10.536	119	289328	10.6288173	ppb		99
79)	1,2,4-Trimethylbenzene	10.597	105	345643	10.1852791	ppb		99
80)	sec-Butylbenzene	10.701	105	465997	10.6243738	ppb		100
81)	1,3-DICHLOROBENZENE	10.914	146	164454	10.2019812	ppb		100
82)	p-Isopropyltoluene	10.835	119	368169	10.6076100	ppb		100
83)	DICYCLOPENTADIENE	10.817	66	434446	10.8265027	ppb		100
85)	1,4-DICHLOROBENZENE	10.994	146	167199	9.8990318	ppb	#	1
86)	1,2,3-TRIMETHYLBENZENE	11.012	105	341277	10.1444596	ppb		99
87)	1,2-DICHLOROBENZENE	11.384	146	152424	10.3379227	ppb		99
88)	n-Butylbenzene	11.231	91	364899	10.3163789	ppb		99
89)	1,2-Dibromo-3-chloropr...	12.115	157	13792	10.6851393	ppb		99
90)	1,2,4-Trichlorobenzene	12.725	180	87507	9.5308024	ppb		100
91)	HEXACHLORO-1,3-BUTADIENE	12.694	225	48752	10.2877772	ppb		99
92)	Naphthalene	13.011	128	220362	8.8080521	ppb		99
93)	1,2,3-Trichlorobenzene	13.176	180	80456	9.4119059	ppb		97
94)	1-Methylnaphthalene	13.944	142	117579	7.9849048	ppb		99
95)	2-Methylnaphthalene	14.097	142	96089	8.3907470	ppb		97

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 17.D
Acq On : 23 Mar 2016 10:03 pm
Operator :
Sample : STD VMS 10 ppb 16C22692
Misc : water
ALS Vial : 8 Sample Multiplier: 1
InstName : VOCMS26

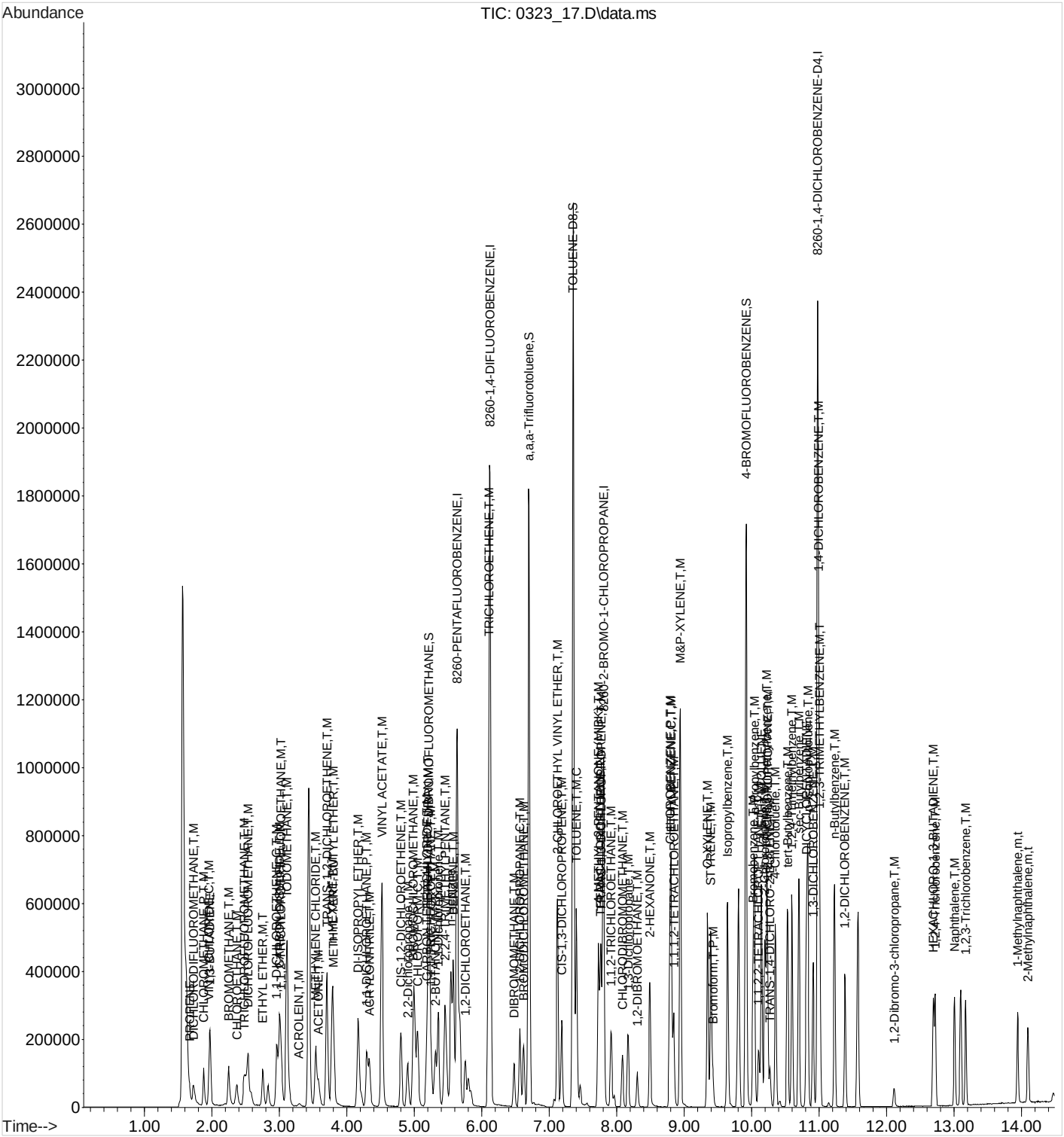
Quant Time: Mar 24 09:39:10 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:38:57 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 17.D
Acq On : 23 Mar 2016 10:03 pm
Operator :
Sample : STD VMS 10 ppb 16C22692
Misc : water
ALS Vial : 8 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 09:39:10 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:38:57 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 18.D
Acq On : 23 Mar 2016 10:23 pm
Operator :
Sample : MSTD VMS 25 ppb 16C22692
Misc : water
ALS Vial : 9 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 09:40:55 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:40:40 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 8260-PENTAFLUOROBENZENE	5.635	168	699127	40.0000000	ppb	0.00
41) 8260-1,4-DIFLUOROBENZENE	6.123	114	1325085	40.0000000	ppb	0.00
53) 8260-2-BROMO-1-CHLOROP...	7.805	79	222088	40.0000000	ppb	0.00
84) 8260-1,4-DICHLOROBENZE...	10.981	152	534035	40.0000000	ppb	0.00
96) AP9-PENTAFLUOROBENZENE	0.000	168	0m	40.0000000	ppb	-5.64
114) AP9-1,4-DIFLUOROBENZENE	0.000	114	0m	40.0000000	ppb	-6.12
122) AP9-2-BROMO-1-CHLOROPR...	0.000	79	0m	40.0000000	ppb	-7.81
128) AP9-1,4-DICHLOROBENZEN...	0.000	152	0m	40.0000000	ppb	-10.98
System Monitoring Compounds						
33) DIBROMOFLUOROMETHANE	5.214	111	447136	45.1894969	ppb	0.00
Spiked Amount 40.000	Range 79 - 121			Recovery = 112.97%		
46) a,a,a-Trifluorotoluene	6.696	146	747897	44.7615649	ppb	0.00
Spiked Amount 40.000	Range 90 - 116			Recovery = 111.90%		
50) TOLUENE-D8	7.354	98	1853517	45.0568845	ppb	0.00
Spiked Amount 40.000	Range 90 - 115			Recovery = 112.64%		
68) 4-BROMOFLUOROBENZENE	9.921	95	664913	45.3942340	ppb	0.00
Spiked Amount 40.000	Range 80 - 120			Recovery = 113.49%		
Target Compounds						Qvalue
3) PROPENE	1.672	41	32811	17.4637017	ppb	100
4) DICHLORODIFLUOROMETHANE	1.727	85	220226	24.8821554	ppb	100
5) CHLOROMETHANE	1.880	50	275362	24.4580243	ppb	100
6) VINYL CHLORIDE	1.959	62	307684	25.2759714	ppb	100
7) 1,3-BUTADIENE	1.971	39	170422	24.0906161	ppb	100
8) BROMOMETHANE	2.245	94	194667	24.2169418	ppb	100
9) CHLOROETHANE	2.367	64	180915	25.1855481	ppb	100
10) TRICHLOROFLUOROMETHANE	2.489	101	352964	26.5139239	ppb	100
11) DICHLOROFLUOROMETHANE	2.538	67	443229	24.8422463	ppb	100
12) ETHYL ETHER	2.751	59	177351	26.6276876	ppb	100
13) ACROLEIN	3.288	56	19628	114.0349851	ppb	100
14) 1,1-DICHLOROETHENE	2.959	61	358338	25.8310217	ppb	100
15) 1,1,2-TRICHLOROTRIFLUO...	3.020	101	228989	25.7576861	ppb	100
16) ACETONE	3.574	43	232810	49.5136046	ppb	100
17) IODOMETHANE	3.111	142	1694237	124.5304683	ppb	100
18) CARBON DISULFIDE	3.001	76	746076	24.9975128	ppb	100
19) METHYLENE CHLORIDE	3.538	84	236368	24.5504878	ppb	100
20) ACRYLONITRILE	4.330	53	308201	125.0360600	ppb	100
21) n-HEXANE	3.782	56	220580	24.8566007	ppb	100
22) TRANS-1,2-DICHLOROETHENE	3.702	96	246421	25.5961713	ppb	100
23) METHYL TERT-BUTYL ETHER	3.800	73	515866	25.2147899	ppb	100
24) 1,1-DICHLOROETHANE	4.294	63	440881	25.6611158	ppb	100
25) VINYL ACETATE	4.519	43	1730583	128.4335693	ppb	100
26) DI-ISOPROPYL ETHER	4.166	45	667801	25.4228233	ppb	100
27) 2,2-Dichloropropane	4.903	77	237183	24.6484339	ppb	100
28) CIS-1,2-DICHLOROETHENE	4.800	96	262565	25.4874632	ppb	100
29) 2-BUTANONE (MEK)	5.312	43	423248	119.5657842	ppb	100
30) BROMOCHLOROMETHANE	4.983	130	136721	25.5450217	ppb	100
31) TETRAHYDROFURAN	5.190	42	47754	21.9957065	ppb	100
32) CHLOROFORM	5.050	83	434126	25.1872542	ppb	100
34) 1,1,1-TRICHLOROETHANE	5.245	97	324130	25.2455302	ppb	100
35) CARBON TETRACHLORIDE	5.184	117	278597	23.8291314	ppb	100
36) 1,1-Dichloropropene	5.355	75	363490	25.7157677	ppb	100

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 18.D
Acq On : 23 Mar 2016 10:23 pm
Operator :
Sample : MSTD VMS 25 ppb 16C22692
Misc : water
ALS Vial : 9 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 09:40:55 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:40:40 2016
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
37)	2,2,4-TRIMETHYLPENTANE	5.458	57	986540	24.9928994	ppb		100
38)	n-Heptane	5.544	43	407041	25.2803280	ppb		100
39)	BENZENE	5.580	78	985197	25.3485671	ppb		100
40)	1,2-DICHLOROETHANE	5.757	62	267951	25.5098517	ppb		100
42)	TRICHLOROETHENE	6.104	130	249928	25.8698654	ppb		100
43)	1,2-DICHLOROPROPANE	6.568	62	176654	25.5642462	ppb		100
44)	DIBROMOMETHANE	6.476	93	135090	25.5253383	ppb		100
45)	BROMODICHLOROMETHANE	6.623	83	311871	25.8103133	ppb		100
47)	2-CHLOROETHYL VINYL ETHER	7.122	63	723379	130.6646258	ppb		100
48)	CIS-1,3-DICHLOROPROPENE	7.183	75	399914	26.2174749	ppb		100
49)	4-METHYL-2-PENTANONE (...	7.726	43	815152	128.6139155	ppb		100
51)	TOLUENE	7.403	91	1047458	25.0500149	ppb		100
52)	TRANS-1,3-DICHLOROPROPENE	7.769	75	349620	17.5263453	ppb	#	100
54)	1,1,2-TRICHLOROETHANE	7.921	97	186391	25.3006947	ppb		100
55)	TETRACHLOROETHENE	7.757	164	171400	25.5122162	ppb		100
56)	1,3-Dichloropropane	8.171	76	346878	25.6196190	ppb		100
57)	2-HEXANONE	8.488	58	383993	131.4909711	ppb		100
58)	CHLORODIBROMOMETHANE	8.086	129	206790	25.5164771	ppb		100
59)	1,2-DIBROMOETHANE	8.305	107	185574	25.5969973	ppb		100
60)	CHLOROBENZENE	8.787	112	637847	25.7851090	ppb		100
61)	1,1,1,2-TETRACHLOROETHANE	8.848	133	187832	25.7355524	ppb		100
62)	ETHYLBENZENE	8.811	106	357447	25.6802297	ppb		100
63)	M&P-XYLENE	8.945	106	876814	51.3920597	ppb		100
64)	O-XYLENE	9.348	106	399985	25.6039570	ppb		100
65)	STYRENE	9.396	104	662901	26.6492105	ppb		100
66)	Bromoform	9.427	173	111543	26.7390128	ppb		100
67)	Isopropylbenzene	9.646	105	1068465	25.8085155	ppb		100
69)	Bromobenzene	10.024	77	472108	24.7974728	ppb		100
70)	1,1,2,2-TETRACHLOROETHANE	10.104	83	229637	25.6145802	ppb		100
71)	1,2,3-TRICHLOROPROPANE	10.238	110	65597	25.4930784	ppb		100
72)	TRANS-1,4-DICHLORO-2-B...	10.274	53	55104	25.4940721	ppb		100
73)	n-Propylbenzene	10.043	91	1336373	25.2133418	ppb		100
74)	4-ETHYLTOLUENE	10.146	105	1105350	25.2840625	ppb		100
75)	2-Chlorotoluene	10.201	126	235317	25.4958295	ppb		100
76)	4-Chlorotoluene	10.354	91	783060	25.5444428	ppb		100
77)	1,3,5-Trimethylbenzene	10.226	105	863944	25.3887842	ppb		100
78)	tert-Butylbenzene	10.530	119	727961	25.6881226	ppb		100
79)	1,2,4-Trimethylbenzene	10.597	105	871824	25.2354187	ppb		100
80)	sec-Butylbenzene	10.701	105	1162331	25.6161690	ppb		100
81)	1,3-DICHLOROBENZENE	10.914	146	423570	25.7006202	ppb		100
82)	p-Isopropyltoluene	10.835	119	936809	25.8007494	ppb		100
83)	DICYCLOPENTADIENE	10.817	66	1098653	25.9784440	ppb		100
85)	1,4-DICHLOROBENZENE	10.994	146	425250	24.6915077	ppb		100
86)	1,2,3-TRIMETHYLBENZENE	11.012	105	853216	24.5364717	ppb		100
87)	1,2-DICHLOROBENZENE	11.390	146	383743	25.0337324	ppb		100
88)	n-Butylbenzene	11.231	91	935370	25.4041057	ppb		100
89)	1,2-Dibromo-3-chloropr...	12.115	157	35733	25.0698760	ppb		100
90)	1,2,4-Trichlorobenzene	12.725	180	232160	24.4402398	ppb		100
91)	HEXACHLORO-1,3-BUTADIENE	12.695	225	123422	24.5587759	ppb		100
92)	Naphthalene	13.012	128	575926	22.7607679	ppb		100
93)	1,2,3-Trichlorobenzene	13.176	180	211468	23.9992402	ppb		100
94)	1-Methylnaphthalene	13.944	142	324881	21.9257707	ppb		100
95)	2-Methylnaphthalene	14.097	142	264512	22.6480511	ppb		100

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 18.D
Acq On : 23 Mar 2016 10:23 pm
Operator :
Sample : MSTD VMS 25 ppb 16C22692
Misc : water
ALS Vial : 9 Sample Multiplier: 1
InstName : VOCMS26

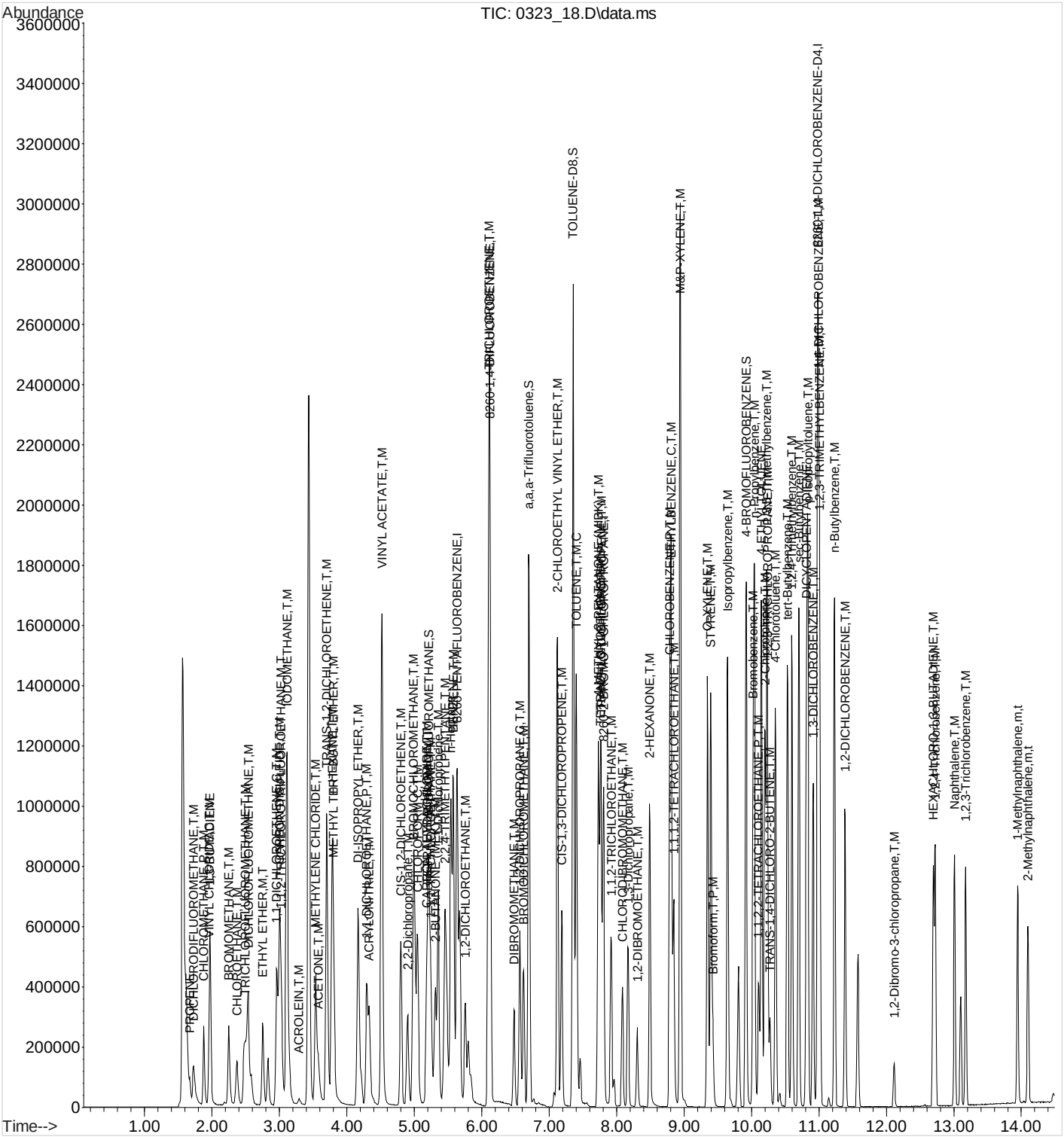
Quant Time: Mar 24 09:40:55 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:40:40 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 18.D
Acq On : 23 Mar 2016 10:23 pm
Operator :
Sample : MSTD VMS 25 ppb 16C22692
Misc : water
ALS Vial : 9 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 09:40:55 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:40:40 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 19.D
Acq On : 23 Mar 2016 10:42 pm
Operator :
Sample : STD VMS 40 ppb 16C22692
Misc : water
ALS Vial : 10 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 09:39:38 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:39:14 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 8260-PENTAFLUOROBENZENE	5.635	168	712076	40.0000000	ppb	0.00
41) 8260-1,4-DIFLUOROBENZENE	6.123	114	1346483	40.0000000	ppb	0.00
53) 8260-2-BROMO-1-CHLOROP...	7.805	79	224174	40.0000000	ppb	0.00
84) 8260-1,4-DICHLOROBENZE...	10.981	152	531037	40.0000000	ppb	0.00
96) AP9-PENTAFLUOROBENZENE	0.000	168	0m	40.0000000	ppb	-5.64
114) AP9-1,4-DIFLUOROBENZENE	0.000	114	0m	40.0000000	ppb	-6.12
122) AP9-2-BROMO-1-CHLOROPR...	0.000	79	0m	40.0000000	ppb	-7.81
128) AP9-1,4-DICHLOROBENZEN...	0.000	152	0m	40.0000000	ppb	-10.98
System Monitoring Compounds						
33) DIBROMOFLUOROMETHANE	5.214	111	456603	45.1545638	ppb	0.00
Spiked Amount 40.000	Range 79 - 121		Recovery = 112.89%			
46) a,a,a-Trifluorotoluene	6.696	146	771336	45.0257831	ppb	0.00
Spiked Amount 40.000	Range 90 - 116		Recovery = 112.56%			
50) TOLUENE-D8	7.354	98	1912738	45.3199803	ppb	0.00
Spiked Amount 40.000	Range 90 - 115		Recovery = 113.30%			
68) 4-BROMOFLUOROBENZENE	9.921	95	676488	45.3031543	ppb	0.00
Spiked Amount 40.000	Range 80 - 120		Recovery = 113.26%			
Target Compounds						Qvalue
3) PROPENE	1.672	41	51115	22.1845885	ppb	98
4) DICHLORODIFLUOROMETHANE	1.727	85	359324	39.7865367	ppb	100
5) CHLOROMETHANE	1.880	50	435744	37.1043910	ppb	98
6) VINYL CHLORIDE	1.965	62	475903	38.5062765	ppb	99
7) 1,3-BUTADIENE	1.977	39	273049	37.3638044	ppb	98
8) BROMOMETHANE	2.245	94	332541	41.9342022	ppb	99
9) CHLOROETHANE	2.367	64	289795	40.2727325	ppb	99
10) TRICHLOROFLUOROMETHANE	2.477	101	574563	44.8874300	ppb	99
11) DICHLOROFLUOROMETHANE	2.538	67	704799	38.9446025	ppb	98
12) ETHYL ETHER	2.751	59	271598	41.2003917	ppb	98
13) ACROLEIN	3.288	56	32469	212.0516292	ppb	99
14) 1,1-DICHLOROETHENE	2.959	61	556653	40.2732706	ppb	98
15) 1,1,2-TRICHLOROTRIFLUO...	3.026	101	365277	41.0576311	ppb	100
16) ACETONE	3.580	43	448746	72.4058281	ppb	95
17) IODOMETHANE	3.111	142	2746668	200.4987837	ppb	100
18) CARBON DISULFIDE	3.001	76	1156940	38.3670325	ppb	100
19) METHYLENE CHLORIDE	3.538	84	380861	38.5855350	ppb	100
20) ACRYLONITRILE	4.330	53	519137	216.2617835	ppb	98
21) n-HEXANE	3.782	56	360780	40.0476009	ppb	92
22) TRANS-1,2-DICHLOROETHENE	3.702	96	399117	41.5176412	ppb	99
23) METHYL TERT-BUTYL ETHER	3.800	73	825011	40.1931482	ppb	98
24) 1,1-DICHLOROETHANE	4.294	63	709797	41.2511269	ppb	100
25) VINYL ACETATE	4.519	43	2826055	207.1460322	ppb	100
26) DI-ISOPROPYL ETHER	4.166	45	1079821	41.1656932	ppb	100
27) 2,2-Dichloropropane	4.903	77	379757	37.3533844	ppb	99
28) CIS-1,2-DICHLOROETHENE	4.800	96	422985	40.8795122	ppb	99
29) 2-BUTANONE (MEK)	5.312	43	725727	208.4165514	ppb	100
30) BROMOCHLOROMETHANE	4.983	130	221116	41.4702114	ppb	99
31) TETRAHYDROFURAN	5.196	42	83913	37.6438886	ppb	95
32) CHLOROFORM	5.050	83	702353	40.4567767	ppb	100
34) 1,1,1-TRICHLOROETHANE	5.245	97	529854	41.1845476	ppb	99
35) CARBON TETRACHLORIDE	5.184	117	451416	37.4743279	ppb	100
36) 1,1-Dichloropropene	5.354	75	588158	41.7769510	ppb	100

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 19.D
Acq On : 23 Mar 2016 10:42 pm
Operator :
Sample : STD VMS 40 ppb 16C22692
Misc : water
ALS Vial : 10 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 09:39:38 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:39:14 2016
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
37)	2,2,4-TRIMETHYLPENTANE	5.458	57	1582920	39.8322830	ppb		99
38)	n-Heptane	5.543	43	680874	42.7413283	ppb		97
39)	BENZENE	5.580	78	1590620	40.6394184	ppb		99
40)	1,2-DICHLOROETHANE	5.757	62	432694	41.0725697	ppb		100
42)	TRICHLOROETHENE	6.104	130	404242	42.1909108	ppb		99
43)	1,2-DICHLOROPROPANE	6.568	62	290037	42.0420552	ppb		99
44)	DIBROMOMETHANE	6.476	93	219978	41.8100344	ppb		99
45)	BROMODICHLOROMETHANE	6.623	83	511543	43.2158429	ppb		99
47)	2-CHLOROETHYL VINYL ETHER	7.122	63	1204044	226.6219161	ppb		100
48)	CIS-1,3-DICHLOROPROPENE	7.183	75	655081	43.8988369	ppb		100
49)	4-METHYL-2-PENTANONE (...	7.726	43	1339610	217.7851735	ppb		100
51)	TOLUENE	7.403	91	1709927	40.4117622	ppb		100
52)	TRANS-1,3-DICHLOROPROPENE	7.769	75	569958	24.1526229	ppb	#	100
54)	1,1,2-TRICHLOROETHANE	7.915	97	302807	41.2384697	ppb		99
55)	TETRACHLOROETHENE	7.756	164	277971	41.8330946	ppb		99
56)	1,3-Dichloropropane	8.165	76	563608	42.2351523	ppb		100
57)	2-HEXANONE	8.488	58	644456	237.2768958	ppb		97
58)	CHLORODIBROMOMETHANE	8.086	129	335863	42.4127533	ppb		99
59)	1,2-DIBROMOETHANE	8.305	107	303096	42.6831106	ppb		100
60)	CHLOROBENZENE	8.787	112	1036129	42.4887734	ppb		100
61)	1,1,1,2-TETRACHLOROETHANE	8.848	133	299784	41.6906803	ppb		99
62)	ETHYLBENZENE	8.811	106	581551	42.4109566	ppb		100
63)	M&P-XYLENE	8.945	106	1423247	84.5694493	ppb		99
64)	O-XYLENE	9.348	106	644912	41.6391831	ppb		100
65)	STYRENE	9.396	104	1084073	45.7534058	ppb		100
66)	Bromoform	9.427	173	183921	47.5164621	ppb		100
67)	Isopropylbenzene	9.646	105	1726848	42.0837524	ppb		100
69)	Bromobenzene	10.024	77	761159	39.4718762	ppb		100
70)	1,1,2,2-TETRACHLOROETHANE	10.104	83	367775	41.5577124	ppb		99
71)	1,2,3-TRICHLOROPROPANE	10.238	110	106228	42.0462168	ppb		99
72)	TRANS-1,4-DICHLORO-2-B...	10.274	53	89250	43.0827865	ppb		98
73)	n-Propylbenzene	10.043	91	2162816	40.4083276	ppb		100
74)	4-ETHYLTOLUENE	10.146	105	1784555	40.4717419	ppb		100
75)	2-Chlorotoluene	10.195	126	381398	41.5479347	ppb		99
76)	4-Chlorotoluene	10.354	91	1264083	41.2085218	ppb		99
77)	1,3,5-Trimethylbenzene	10.225	105	1393696	41.0482383	ppb		100
78)	tert-Butylbenzene	10.530	119	1183571	42.2942976	ppb		100
79)	1,2,4-Trimethylbenzene	10.597	105	1399497	40.3688214	ppb		100
80)	sec-Butylbenzene	10.701	105	1884910	41.8052852	ppb		100
81)	1,3-DICHLOROBENZENE	10.914	146	679542	41.2555110	ppb		100
82)	p-Isopropyltoluene	10.835	119	1528305	42.8453613	ppb		100
83)	DICYCLOPENTADIENE	10.817	66	1773713	42.8760627	ppb		100
85)	1,4-DICHLOROBENZENE	10.994	146	686164	40.2482406	ppb	#	63
86)	1,2,3-TRIMETHYLBENZENE	11.012	105	1383532	40.6021302	ppb		100
87)	1,2-DICHLOROBENZENE	11.384	146	620130	41.4099035	ppb		99
88)	n-Butylbenzene	11.231	91	1509306	42.0248817	ppb		100
89)	1,2-Dibromo-3-chloropr...	12.115	157	58871	44.6845432	ppb		98
90)	1,2,4-Trichlorobenzene	12.725	180	372430	40.4003542	ppb		99
91)	HEXACHLORO-1,3-BUTADIENE	12.695	225	200391	41.6637740	ppb		98
92)	Naphthalene	13.012	128	948614	38.1614196	ppb		100
93)	1,2,3-Trichlorobenzene	13.176	180	340308	39.7180956	ppb		98
94)	1-Methylnaphthalene	13.944	142	550811	38.1031763	ppb		99
95)	2-Methylnaphthalene	14.097	142	444908	39.3396878	ppb		100

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 19.D
Acq On : 23 Mar 2016 10:42 pm
Operator :
Sample : STD VMS 40 ppb 16C22692
Misc : water
ALS Vial : 10 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 09:39:38 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:39:14 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 19.D
Acq On : 23 Mar 2016 10:42 pm
Operator :
Sample : STD VMS 40 ppb 16C22692
Misc : water
ALS Vial : 10 Sample Multiplier: 1
InstName : VOCMS26

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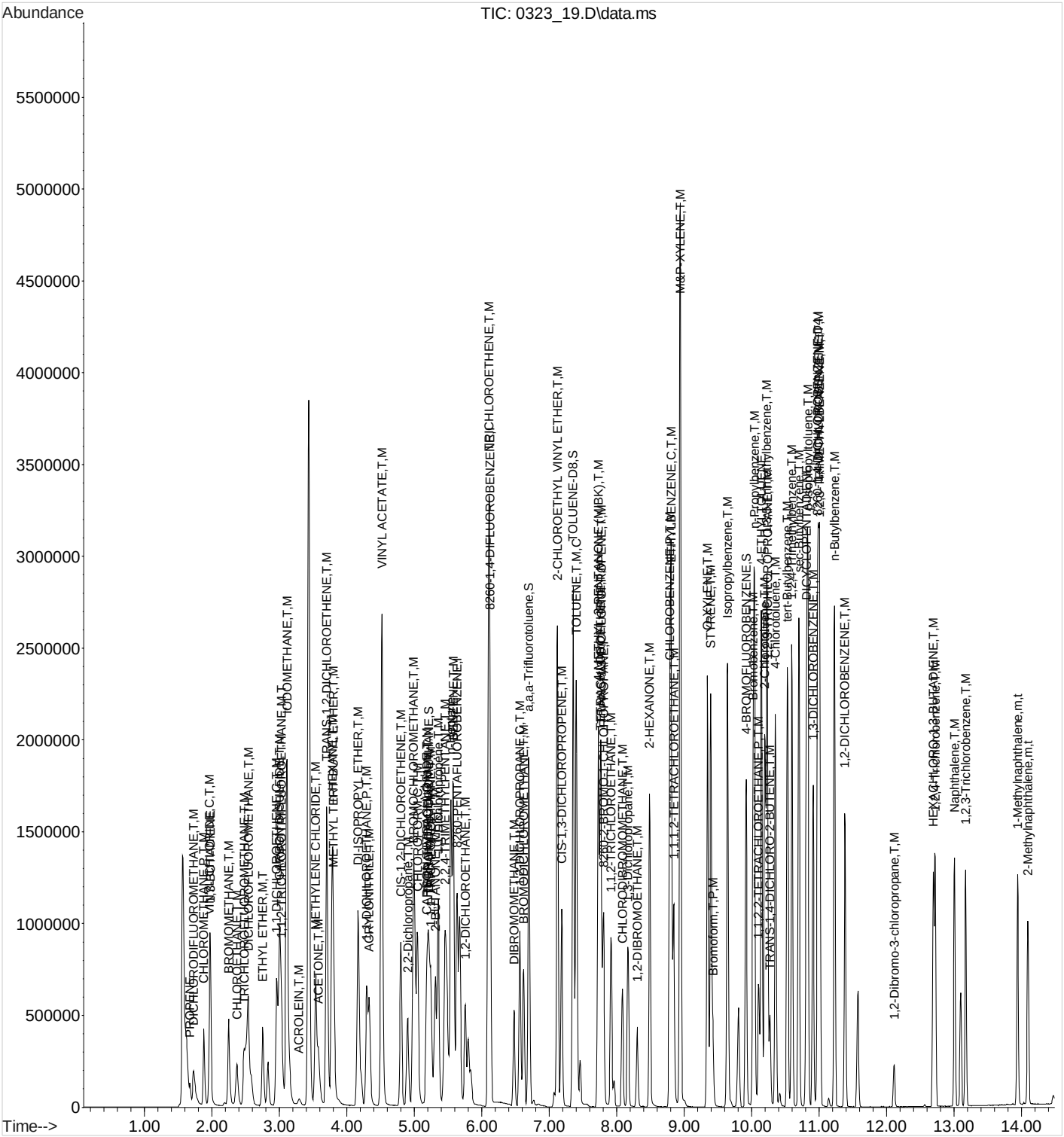
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:39:14 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 20.D
Acq On : 23 Mar 2016 11:02 pm
Operator :
Sample : STD VMS 75 ppb 16C22692
Misc : water
ALS Vial : 11 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 09:39:56 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:39:43 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 8260-PENTAFLUOROBENZENE	5.635	168	696392	40.0000000	ppb	0.00
41) 8260-1,4-DIFLUOROBENZENE	6.123	114	1324177	40.0000000	ppb	0.00
53) 8260-2-BROMO-1-CHLOROP...	7.805	79	219185	40.0000000	ppb	0.00
84) 8260-1,4-DICHLOROBENZE...	10.982	152	519439	40.0000000	ppb	0.00
96) AP9-PENTAFLUOROBENZENE	0.000	168	0m	40.0000000	ppb	-5.64
114) AP9-1,4-DIFLUOROBENZENE	0.000	114	0m	40.0000000	ppb	-6.12
122) AP9-2-BROMO-1-CHLOROPR...	0.000	79	0m	40.0000000	ppb	-7.81
128) AP9-1,4-DICHLOROBENZEN...	0.000	152	0m	40.0000000	ppb	-10.98
System Monitoring Compounds						
33) DIBROMOFLUOROMETHANE	5.214	111	463633	46.9903515	ppb	0.00
Spiked Amount 40.000	Range 79 - 121		Recovery = 117.48%			
46) a,a,a-Trifluorotoluene	6.702	146	774909	46.1184240	ppb	0.00
Spiked Amount 40.000	Range 90 - 116		Recovery = 115.30%			
50) TOLUENE-D8	7.354	98	1911138	46.1300978	ppb	0.00
Spiked Amount 40.000	Range 90 - 115		Recovery = 115.33%#			
68) 4-BROMOFLUOROBENZENE	9.921	95	679021	46.5960521	ppb	0.00
Spiked Amount 40.000	Range 80 - 120		Recovery = 116.49%			
Target Compounds						Qvalue
3) PROPENE	1.678	41	92881	43.6495868	ppb	98
4) DICHLORODIFLUOROMETHANE	1.727	85	674298	76.3948637	ppb	100
5) CHLOROMETHANE	1.880	50	827982	72.7503497	ppb	99
6) VINYL CHLORIDE	1.965	62	931053	77.3912828	ppb	99
7) 1,3-BUTADIENE	1.977	39	518741	73.1857004	ppb	100
8) BROMOMETHANE	2.245	94	628277	80.5248238	ppb	100
9) CHLOROETHANE	2.367	64	554041	78.6619489	ppb	100
10) TRICHLOROFLUOROMETHANE	2.483	101	1083818	85.2772309	ppb	99
11) DICHLOROFLUOROMETHANE	2.538	67	1337661	75.8290050	ppb	99
12) ETHYL ETHER	2.751	59	535215	82.7083850	ppb	98
13) ACROLEIN	3.288	56	66046	436.6685579	ppb	94
14) 1,1-DICHLOROETHENE	2.959	61	1102237	81.4721524	ppb	100
15) 1,1,2-TRICHLOROTRIFLUO...	3.026	101	698923	80.0645837	ppb	100
16) ACETONE	3.574	43	858780	153.9642483	ppb	96
17) IODOMETHANE	3.105	142	5215651	389.1807110	ppb	100
18) CARBON DISULFIDE	3.001	76	2302998	78.4938080	ppb	99
19) METHYLENE CHLORIDE	3.538	84	711138	73.9960282	ppb	99
20) ACRYLONITRILE	4.330	53	1000271	421.7900481	ppb	98
21) n-HEXANE	3.782	56	667840	75.7904446	ppb	91
22) TRANS-1,2-DICHLOROETHENE	3.702	96	749164	79.3098432	ppb	99
23) METHYL TERT-BUTYL ETHER	3.800	73	1560029	77.6668115	ppb	99
24) 1,1-DICHLOROETHANE	4.294	63	1324705	78.4149241	ppb	100
25) VINYL ACETATE	4.519	43	5408443	403.5575562	ppb	100
26) DI-ISOPROPYL ETHER	4.166	45	2021904	78.5303622	ppb	100
27) 2,2-Dichloropropane	4.903	77	689593	69.9352985	ppb	100
28) CIS-1,2-DICHLOROETHENE	4.800	96	787959	77.6541953	ppb	98
29) 2-BUTANONE (MEK)	5.312	43	1404320	410.2220776	ppb	99
30) BROMOCHLOROMETHANE	4.983	130	417346	79.6698781	ppb	100
31) TETRAHYDROFURAN	5.190	42	161102	74.4471734	ppb	97
32) CHLOROFORM	5.050	83	1314393	77.3061718	ppb	100
34) 1,1,1-TRICHLOROETHANE	5.245	97	978415	77.4763398	ppb	99
35) CARBON TETRACHLORIDE	5.184	117	848162	72.5687523	ppb	100
36) 1,1-Dichloropropene	5.355	75	1103247	79.6861984	ppb	100

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 20.D
Acq On : 23 Mar 2016 11:02 pm
Operator :
Sample : STD VMS 75 ppb 16C22692
Misc : water
ALS Vial : 11 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 09:39:56 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:39:43 2016
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
37)	2,2,4-TRIMETHYLPENTANE	5.464	57	3046815	78.4372886	ppb		100
38)	n-Heptane	5.544	43	1249808	79.5412727	ppb		98
39)	BENZENE	5.580	78	2963661	77.2707649	ppb		99
40)	1,2-DICHLOROETHANE	5.757	62	808453	78.2069103	ppb		100
42)	TRICHLOROETHENE	6.104	130	756037	79.6915080	ppb		99
43)	1,2-DICHLOROPROPANE	6.568	62	531581	77.8560214	ppb		99
44)	DIBROMOMETHANE	6.476	93	415291	79.8103152	ppb		99
45)	BROMODICHLOROMETHANE	6.623	83	966514	82.2017690	ppb		99
47)	2-CHLOROETHYL VINYL ETHER	7.122	63	2284180	430.0095209	ppb		100
48)	CIS-1,3-DICHLOROPROPENE	7.183	75	1220042	82.1349914	ppb		100
49)	4-METHYL-2-PENTANONE (...	7.726	43	2603059	425.5865627	ppb		100
51)	TOLUENE	7.403	91	3186353	76.4751731	ppb		99
52)	TRANS-1,3-DICHLOROPROPENE	7.769	75	1066026	48.3284081	ppb	#	99
54)	1,1,2-TRICHLOROETHANE	7.915	97	562437	78.0382200	ppb		99
55)	TETRACHLOROETHENE	7.757	164	518462	79.3471116	ppb		100
56)	1,3-Dichloropropane	8.165	76	1053908	80.2141694	ppb		100
57)	2-HEXANONE	8.488	58	1249524	459.8106684	ppb		97
58)	CHLORODIBROMOMETHANE	8.086	129	638062	81.7917240	ppb		99
59)	1,2-DIBROMOETHANE	8.305	107	570928	81.5465054	ppb		100
60)	CHLOROBENZENE	8.787	112	1917673	79.8076839	ppb		99
61)	1,1,1,2-TETRACHLOROETHANE	8.848	133	564041	79.8044513	ppb		100
62)	ETHYLBENZENE	8.811	106	1078807	79.8635508	ppb		100
63)	M&P-XYLENE	8.945	106	2656504	160.2980974	ppb		100
64)	O-XYLENE	9.348	106	1202727	79.0176741	ppb		100
65)	STYRENE	9.396	104	2057852	87.2598499	ppb		99
66)	Bromoform	9.427	173	358834	92.6398023	ppb		100
67)	Isopropylbenzene	9.646	105	3203492	79.3303848	ppb		100
69)	Bromobenzene	10.024	77	1417037	75.2809915	ppb		100
70)	1,1,2,2-TETRACHLOROETHANE	10.104	83	704870	81.0669652	ppb		99
71)	1,2,3-TRICHLOROPROPANE	10.238	110	200646	80.6362998	ppb		99
72)	TRANS-1,4-DICHLORO-2-B...	10.274	53	176007	85.9497230	ppb		97
73)	n-Propylbenzene	10.043	91	4014480	76.6127754	ppb		100
74)	4-ETHYLTOLUENE	10.146	105	3303301	76.5076315	ppb		99
75)	2-Chlorotoluene	10.201	126	707829	78.4834429	ppb	#	96
76)	4-Chlorotoluene	10.354	91	2343911	77.8556068	ppb		100
77)	1,3,5-Trimethylbenzene	10.226	105	2582900	77.5511354	ppb		100
78)	tert-Butylbenzene	10.536	119	2167923	78.6689081	ppb		100
79)	1,2,4-Trimethylbenzene	10.597	105	2606390	76.8046730	ppb		100
80)	sec-Butylbenzene	10.701	105	3470019	78.2714974	ppb		100
81)	1,3-DICHLOROBENZENE	10.914	146	1255950	77.6804657	ppb		100
82)	p-Isopropyltoluene	10.835	119	2806323	79.7556154	ppb		100
83)	DICYCLOPENTADIENE	10.817	66	3301360	80.8933786	ppb		100
85)	1,4-DICHLOROBENZENE	10.994	146	1275897	76.4518576	ppb	#	34
86)	1,2,3-TRIMETHYLBENZENE	11.012	105	2574267	77.0880400	ppb		100
87)	1,2-DICHLOROBENZENE	11.390	146	1152962	78.3641491	ppb		100
88)	n-Butylbenzene	11.231	91	2787906	78.8602418	ppb		100
89)	1,2-Dibromo-3-chloropr...	12.115	157	117210	89.6394468	ppb		99
90)	1,2,4-Trichlorobenzene	12.725	180	721325	79.8948377	ppb		100
91)	HEXACHLORO-1,3-BUTADIENE	12.695	225	379794	80.3094306	ppb		99
92)	Naphthalene	13.012	128	1894049	78.3463725	ppb		100
93)	1,2,3-Trichlorobenzene	13.176	180	661028	78.9421777	ppb		99
94)	1-Methylnaphthalene	13.944	142	1126884	80.1696503	ppb		99
95)	2-Methylnaphthalene	14.097	142	902517	81.7529430	ppb		100

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 20.D
Acq On : 23 Mar 2016 11:02 pm
Operator :
Sample : STD VMS 75 ppb 16C22692
Misc : water
ALS Vial : 11 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 09:39:56 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:39:43 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 20.D
Acq On : 23 Mar 2016 11:02 pm
Operator :
Sample : STD VMS 75 ppb 16C22692
Misc : water
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Quant Time: Mar 24 09:39:56 2016
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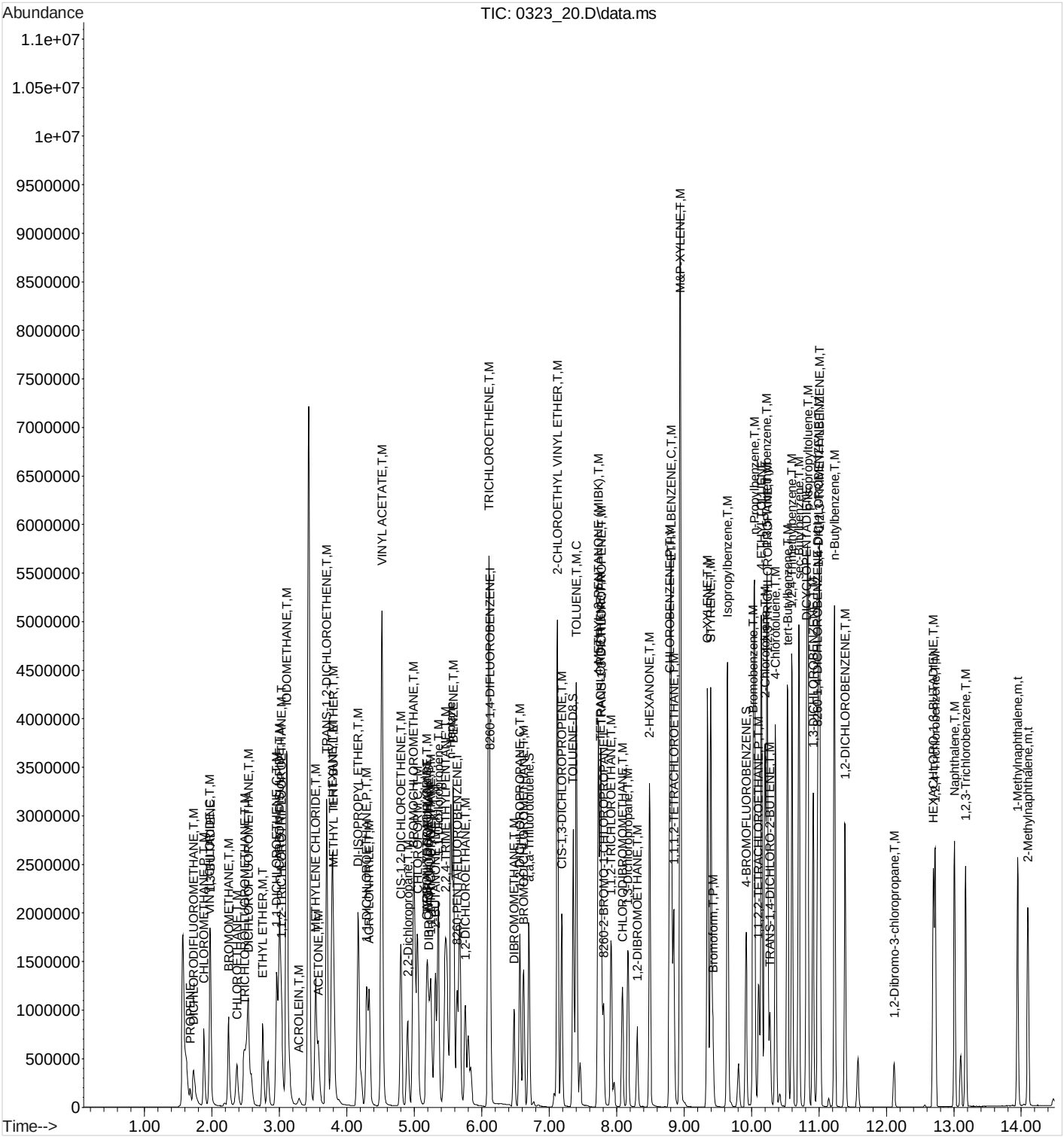
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:39:43 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 21.D
Acq On : 23 Mar 2016 11:21 pm
Operator :
Sample : STD VMS 100 ppb 16C22692
Misc : water
ALS Vial : 12 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 09:40:14 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:40:00 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 8260-PENTAFLUOROBENZENE	5.635	168	712721	40.0000000	ppb	0.00
41) 8260-1,4-DIFLUOROBENZENE	6.123	114	1361769	40.0000000	ppb	0.00
53) 8260-2-BROMO-1-CHLOROP...	7.805	79	229063	40.0000000	ppb	# 0.00
84) 8260-1,4-DICHLOROBENZE...	10.982	152	534832	40.0000000	ppb	# 0.00
96) AP9-PENTAFLUOROBENZENE	0.000	168	0m	40.0000000	ppb	-5.64
114) AP9-1,4-DIFLUOROBENZENE	0.000	114	0m	40.0000000	ppb	-6.12
122) AP9-2-BROMO-1-CHLOROPR...	0.000	79	0m	40.0000000	ppb	-7.81
128) AP9-1,4-DICHLOROBENZEN...	0.000	152	0m	40.0000000	ppb	-10.98
System Monitoring Compounds						
33) DIBROMOFLUOROMETHANE	5.214	111	478516	47.3887160	ppb	0.00
Spiked Amount 40.000	Range 79 - 121		Recovery = 118.47%			
46) a,a,a-Trifluorotoluene	6.702	146	812434	47.1151415	ppb	0.00
Spiked Amount 40.000	Range 90 - 116		Recovery = 117.79%#			
50) TOLUENE-D8	7.354	98	1991951	46.8497873	ppb	0.00
Spiked Amount 40.000	Range 90 - 115		Recovery = 117.12%#			
68) 4-BROMOFLUOROBENZENE	9.921	95	704760	46.3210057	ppb	0.00
Spiked Amount 40.000	Range 80 - 120		Recovery = 115.80%			
Target Compounds						Qvalue
3) PROPENE	1.679	41	124815	60.1047135	ppb	99
4) DICHLORODIFLUOROMETHANE	1.727	85	898904	99.3032110	ppb	100
5) CHLOROMETHANE	1.880	50	1115019	96.0462728	ppb	99
6) VINYL CHLORIDE	1.965	62	1271904	102.9367286	ppb	98
7) 1,3-BUTADIENE	1.971	39	713545	98.6279792	ppb	100
8) BROMOMETHANE	2.239	94	893543	110.9910853	ppb	99
9) CHLOROETHANE	2.361	64	777213	107.2376640	ppb	99
10) TRICHLOROFLUOROMETHANE	2.477	101	1525912	115.5521172	ppb	99
11) DICHLOROFLUOROMETHANE	2.532	67	1886238	104.3486768	ppb	99
12) ETHYL ETHER	2.751	59	730704	109.0851174	ppb	99
13) ACROLEIN	3.288	56	94002	593.3240173	ppb	96
14) 1,1-DICHLOROETHENE	2.959	61	1498443	107.1924777	ppb	100
15) 1,1,2-TRICHLOROTRIFLUO...	3.020	101	954131	106.0002663	ppb	99
16) ACETONE	3.581	43	1164332	218.2559174	ppb	95
17) IODOMETHANE	3.111	142	7207506	523.2883494	ppb	99
18) CARBON DISULFIDE	3.001	76	3178524	105.3075321	ppb	99
19) METHYLENE CHLORIDE	3.538	84	980618	99.8470039	ppb	99
20) ACRYLONITRILE	4.330	53	1363224	553.9881952	ppb	98
21) n-HEXANE	3.782	56	916124	101.4663954	ppb	92
22) TRANS-1,2-DICHLOROETHENE	3.703	96	1015412	104.3668477	ppb	100
23) METHYL TERT-BUTYL ETHER	3.800	73	2184338	105.8386812	ppb	99
24) 1,1-DICHLOROETHANE	4.294	63	1820158	104.7445023	ppb	100
25) VINYL ACETATE	4.519	43	6998746	505.9741795	ppb	100
26) DI-ISOPROPYL ETHER	4.166	45	2811863	106.1548721	ppb	100
27) 2,2-Dichloropropane	4.904	77	928718	92.7240904	ppb	99
28) CIS-1,2-DICHLOROETHENE	4.800	96	1085687	104.1347792	ppb	99
29) 2-BUTANONE (MEK)	5.312	43	1941889	548.5329039	ppb	99
30) BROMOCHLOROMETHANE	4.983	130	570846	105.7442660	ppb	100
31) TETRAHYDROFURAN	5.190	42	221180	99.9500894	ppb	96
32) CHLOROFORM	5.050	83	1810454	103.6882113	ppb	100
34) 1,1,1-TRICHLOROETHANE	5.245	97	1347417	103.8704167	ppb	100
35) CARBON TETRACHLORIDE	5.184	117	1182782	99.2377380	ppb	100
36) 1,1-Dichloropropene	5.355	75	1505653	105.5272903	ppb	100

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 21.D
Acq On : 23 Mar 2016 11:21 pm
Operator :
Sample : STD VMS 100 ppb 16C22692
Misc : water
ALS Vial : 12 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 09:40:14 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:40:00 2016
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
37)	2,2,4-TRIMETHYLPENTANE	5.470	57	4237193	106.0432464	ppb		99
38)	n-Heptane	5.544	43	1728910	106.7932426	ppb		97
39)	BENZENE	5.580	78	4090324	103.8532419	ppb		99
40)	1,2-DICHLOROETHANE	5.757	62	1113058	104.7089797	ppb		100
42)	TRICHLOROETHENE	6.104	130	1039571	105.8175438	ppb		99
43)	1,2-DICHLOROPROPANE	6.568	62	742991	105.3695732	ppb		100
44)	DIBROMOMETHANE	6.476	93	570128	105.7882656	ppb		99
45)	BROMODICHLOROMETHANE	6.623	83	1339219	109.5867747	ppb		99
47)	2-CHLOROETHYL VINYL ETHER	7.123	63	3204645	577.2297711	ppb		100
48)	CIS-1,3-DICHLOROPROPENE	7.184	75	1688558	109.3818990	ppb		99
49)	4-METHYL-2-PENTANONE (...	7.726	43	3587568	561.9342001	ppb		100
51)	TOLUENE	7.403	91	4379890	101.9962705	ppb		100
52)	TRANS-1,3-DICHLOROPROPENE	7.769	75	1486983	68.2483277	ppb	#	99
54)	1,1,2-TRICHLOROETHANE	7.921	97	775035	102.4378065	ppb		99
55)	TETRACHLOROETHENE	7.763	164	717441	104.3922621	ppb		99
56)	1,3-Dichloropropane	8.171	76	1463528	105.7702204	ppb		100
57)	2-HEXANONE	8.488	58	1715403	589.2206185	ppb		98
58)	CHLORODIBROMOMETHANE	8.086	129	886899	107.7031932	ppb		98
59)	1,2-DIBROMOETHANE	8.305	107	788459	106.7252768	ppb		100
60)	CHLOROBENZENE	8.793	112	2654176	104.9478294	ppb		99
61)	1,1,1,2-TETRACHLOROETHANE	8.848	133	798082	107.2851499	ppb		99
62)	ETHYLBENZENE	8.811	106	1499930	105.4905972	ppb		99
63)	M&P-XYLENE	8.945	106	3649316	209.1148757	ppb		100
64)	O-XYLENE	9.348	106	1672050	104.4924763	ppb		100
65)	STYRENE	9.397	104	2824978	112.5781428	ppb		100
66)	Bromoform	9.427	173	494652	119.0847135	ppb		100
67)	Isopropylbenzene	9.646	105	4429306	104.2870109	ppb		100
69)	Bromobenzene	10.024	77	1949786	99.0754882	ppb		100
70)	1,1,2,2-TETRACHLOROETHANE	10.104	83	964799	105.2304859	ppb		99
71)	1,2,3-TRICHLOROPROPANE	10.238	110	276049	105.1674881	ppb		99
72)	TRANS-1,4-DICHLORO-2-B...	10.274	53	236632	108.5899615	ppb		97
73)	n-Propylbenzene	10.043	91	5466138	99.5799614	ppb		100
74)	4-ETHYLTOLUENE	10.146	105	4485892	99.1955935	ppb		100
75)	2-Chlorotoluene	10.201	126	977822	103.2119309	ppb	#	96
76)	4-Chlorotoluene	10.354	91	3192523	101.0427778	ppb		100
77)	1,3,5-Trimethylbenzene	10.232	105	3578167	102.4138647	ppb		99
78)	tert-Butylbenzene	10.537	119	3034686	104.8032464	ppb		100
79)	1,2,4-Trimethylbenzene	10.598	105	3601914	101.2926406	ppb		100
80)	sec-Butylbenzene	10.701	105	4818748	103.5051825	ppb		100
81)	1,3-DICHLOROBENZENE	10.915	146	1720256	101.4068384	ppb		100
82)	p-Isopropyltoluene	10.835	119	3916685	105.7667388	ppb		100
83)	DICYCLOPENTADIENE	10.817	66	4624606	107.4918099	ppb		100
85)	1,4-DICHLOROBENZENE	10.994	146	1741606	101.1361429	ppb	#	26
86)	1,2,3-TRIMETHYLBENZENE	11.012	105	3651964	105.8853074	ppb		100
87)	1,2-DICHLOROBENZENE	11.390	146	1603289	105.3106507	ppb		100
88)	n-Butylbenzene	11.232	91	3815310	104.2198339	ppb		100
89)	1,2-Dibromo-3-chloropr...	12.116	157	165089	120.0194097	ppb		99
90)	1,2,4-Trichlorobenzene	12.725	180	997446	106.5261733	ppb		100
91)	HEXACHLORO-1,3-BUTADIENE	12.695	225	546987	111.4576554	ppb		99
92)	Naphthalene	13.012	128	2674329	106.9084302	ppb		100
93)	1,2,3-Trichlorobenzene	13.176	180	942285	108.6574924	ppb		99
94)	1-Methylnaphthalene	13.944	142	1595584	109.4092755	ppb		99
95)	2-Methylnaphthalene	14.097	142	1272542	110.8444750	ppb		99

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 21.D
Acq On : 23 Mar 2016 11:21 pm
Operator :
Sample : STD VMS 100 ppb 16C22692
Misc : water
ALS Vial : 12 Sample Multiplier: 1
InstName : VOCMS26

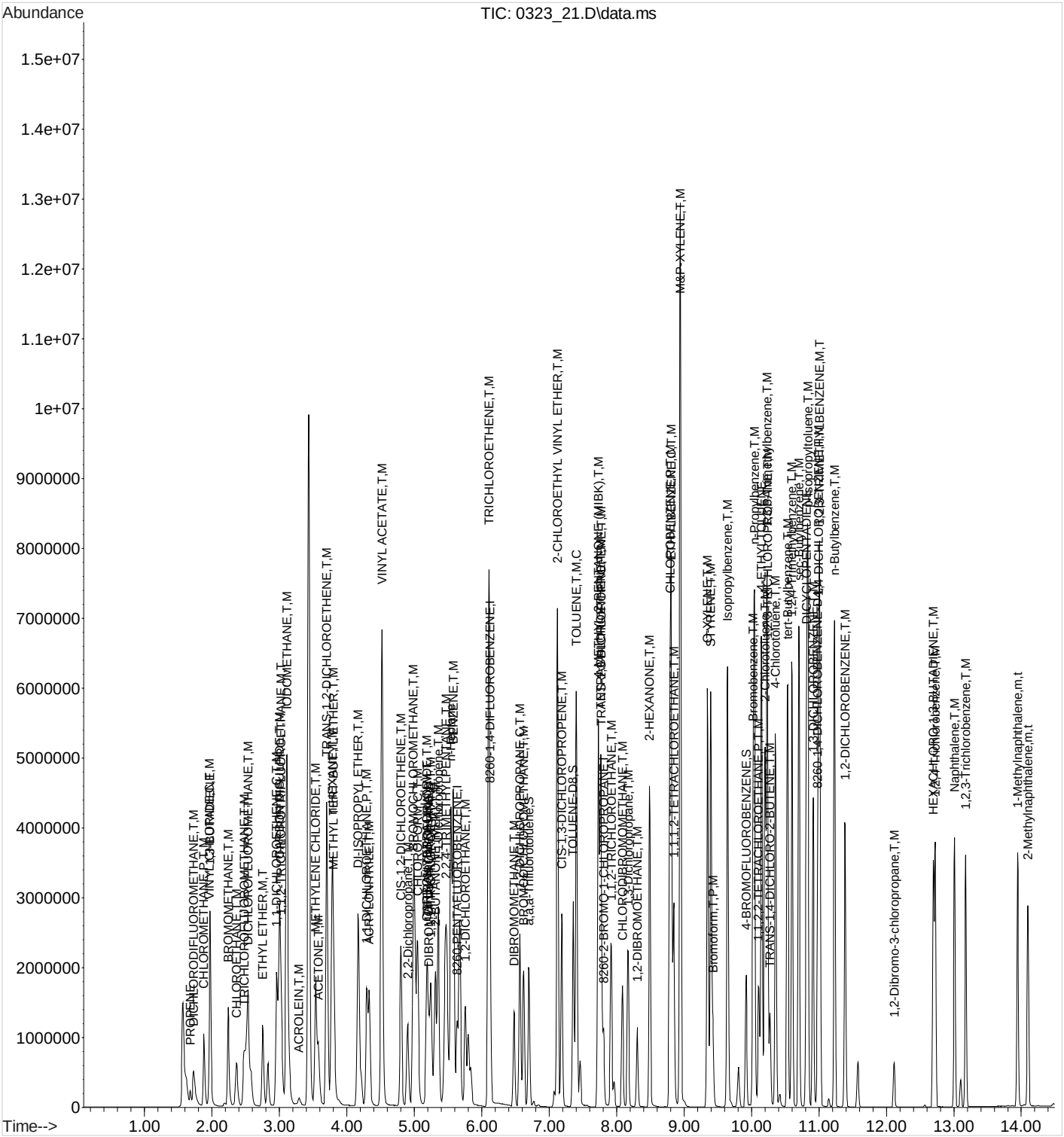
Quant Time: Mar 24 09:40:14 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:40:00 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 21.D
Acq On : 23 Mar 2016 11:21 pm
Operator :
Sample : STD VMS 100 ppb 16C22692
Misc : water
ALS Vial : 12 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 09:40:14 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:40:00 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 22.D
Acq On : 23 Mar 2016 11:41 pm
Operator :
Sample : STD VMS 200 ppb 16C22692
Misc : water
ALS Vial : 13 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 09:40:35 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:40:19 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 8260-PENTAFLUOROBENZENE	5.635	168	711130	40.0000000	ppb	0.00
41) 8260-1,4-DIFLUOROBENZENE	6.123	114	1371934	40.0000000	ppb	0.00
53) 8260-2-BROMO-1-CHLOROP...	7.805	79	225994	40.0000000	ppb	# 0.00
84) 8260-1,4-DICHLOROBENZE...	10.982	152	536341	40.0000000	ppb	# 0.00
96) AP9-PENTAFLUOROBENZENE	0.000	168	0m	40.0000000	ppb	-5.64
114) AP9-1,4-DIFLUOROBENZENE	0.000	114	0m	40.0000000	ppb	-6.12
122) AP9-2-BROMO-1-CHLOROPR...	0.000	79	0m	40.0000000	ppb	-7.81
128) AP9-1,4-DICHLOROBENZEN...	0.000	152	0m	40.0000000	ppb	-10.98
System Monitoring Compounds						
33) DIBROMOFLUOROMETHANE	5.214	111	494271	49.1210445	ppb	0.00
Spiked Amount 40.000	Range 79 - 121		Recovery = 122.80%#			
46) a,a,a-Trifluorotoluene	6.696	146	827533	47.7231714	ppb	0.00
Spiked Amount 40.000	Range 90 - 116		Recovery = 119.31%#			
50) TOLUENE-D8	7.354	98	2017970	47.2232466	ppb	0.00
Spiked Amount 40.000	Range 90 - 115		Recovery = 118.06%#			
68) 4-BROMOFLUOROBENZENE	9.921	95	704281	47.0828263	ppb	0.00
Spiked Amount 40.000	Range 80 - 120		Recovery = 117.71%			
Target Compounds						Qvalue
3) PROPENE	1.678	41	225694	113.4524077	ppb	96
4) DICHLORODIFLUOROMETHANE	1.721	85	1754746	194.4184659	ppb	99
5) CHLOROMETHANE	1.880	50	2119118	183.6726234	ppb	99
6) VINYL CHLORIDE	1.965	62	2510757	203.0568899	ppb	99
7) 1,3-BUTADIENE	1.971	39	1413138	196.0334430	ppb	99
8) BROMOMETHANE	2.233	94	1746440	215.0549977	ppb	98
9) CHLOROETHANE	2.361	64	1507079	206.9102021	ppb	99
10) TRICHLOROFLUOROMETHANE	2.477	101	3028432	226.3260712	ppb	99
11) DICHLOROFLUOROMETHANE	2.532	67	3696972	204.0904396	ppb	99
12) ETHYL ETHER	2.751	59	1415958	209.9506115	ppb	98
13) ACROLEIN	3.288	56	281561	1740.5309744	ppb	94
14) 1,1-DICHLOROETHENE	2.953	61	2947013	209.7800648	ppb	99
15) 1,1,2-TRICHLOROTRIFLUO...	3.014	101	1824040	201.8857972	ppb	99
16) ACETONE	3.574	43	2380644	473.9611186	ppb	96
17) IODOMETHANE	3.105	142	14156847	1025.3568622	ppb	98
18) CARBON DISULFIDE	2.995	76	6237094	206.0097846	ppb	99
19) METHYLENE CHLORIDE	3.532	84	1949318	198.9550080	ppb	99
20) ACRYLONITRILE	4.330	53	2761738	1112.8127652	ppb	98
21) n-HEXANE	3.776	56	1814412	201.1120325	ppb	91
22) TRANS-1,2-DICHLOROETHENE	3.696	96	2043740	209.6158438	ppb	99
23) METHYL TERT-BUTYL ETHER	3.800	73	4357188	210.3648133	ppb	99
24) 1,1-DICHLOROETHANE	4.294	63	3605725	206.9806117	ppb	100
25) VINYL ACETATE	4.519	43	12586314	910.8746986	ppb	99
26) DI-ISOPROPYL ETHER	4.166	45	5597566	210.4993299	ppb	99
27) 2,2-Dichloropropane	4.897	77	1691544	170.5037800	ppb	100
28) CIS-1,2-DICHLOROETHENE	4.800	96	2161863	206.9654618	ppb	99
29) 2-BUTANONE (MEK)	5.312	43	3941813	1105.2223735	ppb	98
30) BROMOCHLOROMETHANE	4.983	130	1142397	210.8812215	ppb	99
31) TETRAHYDROFURAN	5.190	42	442626	200.4778912	ppb	98
32) CHLOROFORM	5.044	83	3598413	205.7901704	ppb	100
34) 1,1,1-TRICHLOROETHANE	5.245	97	2744506	211.2257860	ppb	99
35) CARBON TETRACHLORIDE	5.184	117	2396775	201.6977917	ppb	100
36) 1,1-Dichloropropene	5.355	75	3001207	209.6585301	ppb	99

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 22.D
Acq On : 23 Mar 2016 11:41 pm
Operator :
Sample : STD VMS 200 ppb 16C22692
Misc : water
ALS Vial : 13 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 09:40:35 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:40:19 2016
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
37)	2,2,4-TRIMETHYLPENTANE	5.476	57	8113199	202.2790019	ppb		100
38)	n-Heptane	5.544	43	3504737	215.5048674	ppb		97
39)	BENZENE	5.580	78	8074924	204.6921183	ppb		99
40)	1,2-DICHLOROETHANE	5.757	62	2192691	205.7661053	ppb		100
42)	TRICHLOROETHENE	6.104	130	2095392	210.4843546	ppb		99
43)	1,2-DICHLOROPROPANE	6.568	62	1455793	203.8336032	ppb		100
44)	DIBROMOMETHANE	6.476	93	1132931	207.4589839	ppb		99
45)	BROMODICHLOROMETHANE	6.623	83	2663123	214.2517312	ppb		99
47)	2-CHLOROETHYL VINYL ETHER	7.122	63	6254712	1101.2591333	ppb		99
48)	CIS-1,3-DICHLOROPROPENE	7.183	75	3347817	213.2582782	ppb		100
49)	4-METHYL-2-PENTANONE (...	7.732	43	7066163	1085.1573282	ppb		99
51)	TOLUENE	7.403	91	8547551	197.1818371	ppb		99
52)	TRANS-1,3-DICHLOROPROPENE	7.775	75	2930770	137.8958566	ppb	#	99
54)	1,1,2-TRICHLOROETHANE	7.915	97	1527046	204.0758774	ppb		99
55)	TETRACHLOROETHENE	7.763	164	1419817	208.4822884	ppb		99
56)	1,3-Dichloropropane	8.171	76	2850388	207.5991721	ppb		99
57)	2-HEXANONE	8.488	58	3452702	1180.9938289	ppb		96
58)	CHLORODIBROMOMETHANE	8.086	129	1768932	216.0682494	ppb		99
59)	1,2-DIBROMOETHANE	8.305	107	1554590	211.8610435	ppb		99
60)	CHLOROBENZENE	8.793	112	5228517	208.5147521	ppb		100
61)	1,1,1,2-TETRACHLOROETHANE	8.848	133	1553819	210.1832621	ppb		100
62)	ETHYLBENZENE	8.811	106	2950435	209.1745447	ppb		96
63)	M&P-XYLENE	8.945	106	7206282	416.6467243	ppb		92
64)	O-XYLENE	9.348	106	3256530	205.3535389	ppb		100
65)	STYRENE	9.396	104	5550277	221.4028233	ppb		100
66)	Bromoform	9.427	173	986125	236.1217341	ppb		100
67)	Isopropylbenzene	9.646	105	8515501	202.3508015	ppb		99
69)	Bromobenzene	10.024	77	3825110	197.1891131	ppb		100
70)	1,1,2,2-TETRACHLOROETHANE	10.110	83	1884261	207.2231038	ppb		99
71)	1,2,3-TRICHLOROPROPANE	10.238	110	548576	210.6219962	ppb		100
72)	TRANS-1,4-DICHLORO-2-B...	10.274	53	492094	226.7236815	ppb		96
73)	n-Propylbenzene	10.043	91	10389059	191.9146235	ppb		99
74)	4-ETHYLTOLUENE	10.152	105	8707704	195.3236131	ppb		99
75)	2-Chlorotoluene	10.201	126	1908272	203.5052997	ppb	#	97
76)	4-Chlorotoluene	10.360	91	6216817	199.2254078	ppb		100
77)	1,3,5-Trimethylbenzene	10.232	105	7072697	204.6888435	ppb		99
78)	tert-Butylbenzene	10.536	119	6030442	210.0811688	ppb		99
79)	1,2,4-Trimethylbenzene	10.604	105	7084727	201.6808600	ppb		99
80)	sec-Butylbenzene	10.707	105	9394721	203.8215890	ppb		99
81)	1,3-DICHLOROBENZENE	10.914	146	3375393	201.3937503	ppb		100
82)	p-Isopropyltoluene	10.835	119	7793749	212.0985259	ppb		99
83)	DICYCLOPENTADIENE	10.817	66	9147545	213.9053774	ppb		99
85)	1,4-DICHLOROBENZENE	11.000	146	3475919	201.0524493	ppb	#	14
86)	1,2,3-TRIMETHYLBENZENE	11.012	105	7250418	208.4011836	ppb		99
87)	1,2-DICHLOROBENZENE	11.390	146	3172681	206.7107173	ppb		100
88)	n-Butylbenzene	11.231	91	7619991	206.6914901	ppb		99
89)	1,2-Dibromo-3-chloropr...	12.115	157	335250	238.2703961	ppb		99
90)	1,2,4-Trichlorobenzene	12.725	180	2086060	220.7217054	ppb		99
91)	HEXACHLORO-1,3-BUTADIENE	12.701	225	1148387	230.7011964	ppb		98
92)	Naphthalene	13.012	128	5389934	213.3865174	ppb		100
93)	1,2,3-Trichlorobenzene	13.176	180	1925238	219.4797684	ppb		99
94)	1-Methylnaphthalene	13.944	142	3214085	217.7213021	ppb		99
95)	2-Methylnaphthalene	14.097	142	2529936	217.3919736	ppb		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 22.D
Acq On : 23 Mar 2016 11:41 pm
Operator :
Sample : STD VMS 200 ppb 16C22692
Misc : water
ALS Vial : 13 Sample Multiplier: 1
InstName : VOCMS26

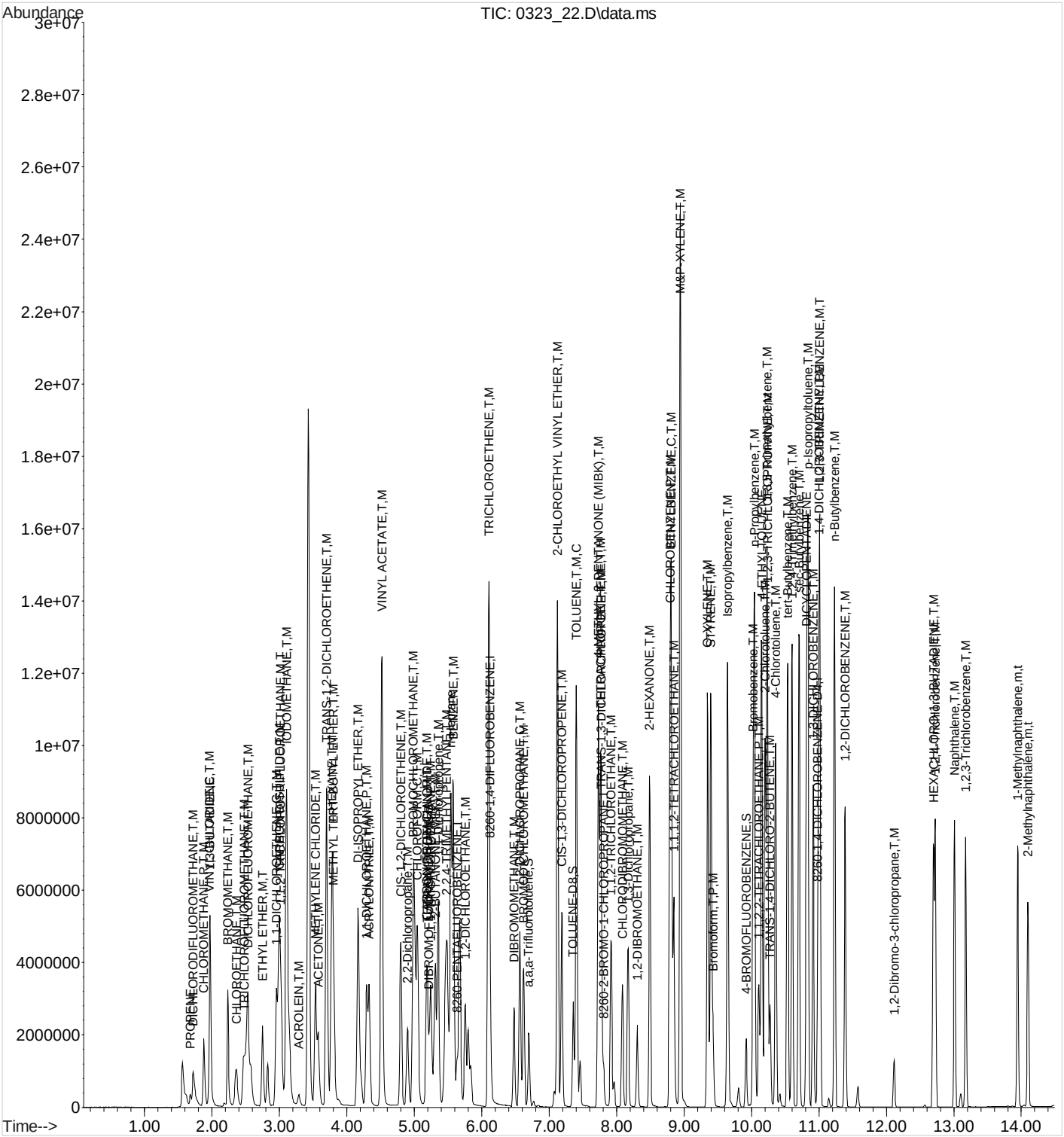
Quant Time: Mar 24 09:40:35 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:40:19 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 22.D
Acq On : 23 Mar 2016 11:41 pm
Operator :
Sample : STD VMS 200 ppb 16C22692
Misc : water
ALS Vial : 13 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 09:40:35 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:40:19 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 28.D
Acq On : 24 Mar 2016 1:40 am
Operator :
Sample : STD VMS 2.5a ppb 16B23985
Misc : water
ALS Vial : 19 Sample Multiplier: 1
InstName : VOCMS26

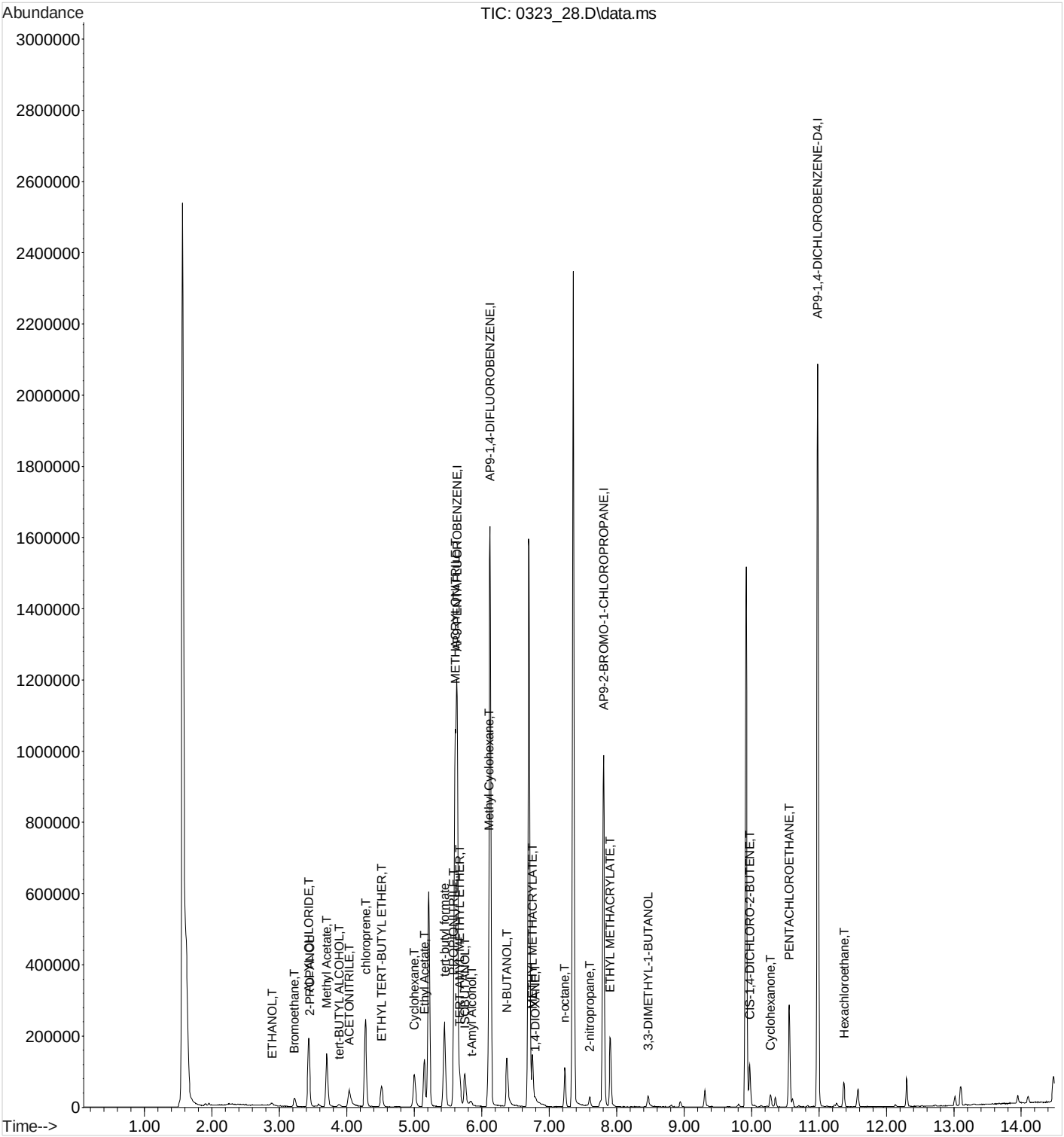
Quant Time: Mar 24 09:56:27 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:56:04 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 8260-PENTAFLUOROBENZENE	0.000	168	0m	40.0000000	ppb		-5.63
41) 8260-1,4-DIFLUOROBENZENE	0.000	114	0m	40.0000000	ppb		-6.12
53) 8260-2-BROMO-1-CHLOROP...	0.000	79	0m	40.0000000	ppb		-7.81
84) 8260-1,4-DICHLOROBENZE...	0.000	152	0m	40.0000000	ppb		-10.98
96) AP9-PENTAFLUOROBENZENE	5.635	168	680648	40.0000000	ppb		0.00
114) AP9-1,4-DIFLUOROBENZENE	6.123	114	1277197	40.0000000	ppb		0.00
122) AP9-2-BROMO-1-CHLOROPR...	7.805	79	213643	40.0000000	ppb		0.00
128) AP9-1,4-DICHLOROBENZEN...	10.982	152	502505	40.0000000	ppb		0.00
System Monitoring Compounds							
33) DIBROMOFLUOROMETHANE	0.000	111	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 79 - 121		Recovery =	0.00%#			
46) a,a,a-Trifluorotoluene	0.000	146	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 90 - 116		Recovery =	0.00%#			
50) TOLUENE-D8	0.000	98	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 90 - 115		Recovery =	0.00%#			
68) 4-BROMOFLUOROBENZENE	0.000	95	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 80 - 120		Recovery =	0.00%#			
Target Compounds							Qvalue
97) ETHANOL	2.892	45	20451m	272.0731679	ppb		
98) Bromoethane	3.221	108	21516	2.0456816	ppb		96
99) 2-PROPANOL	3.447	45	5928	9.6516340	ppb		92
100) Methyl Acetate	3.703	43	211392	40.0172621	ppb	#	100
101) ACETONITRILE	4.032	41	89873	102.2850663	ppb		98
102) ALLYL CHLORIDE	3.434	76	60849	10.2333562	ppb		97
103) tert-BUTYL ALCOHOL	3.885	59	12023	10.1232782	ppb		94
104) chloroprene	4.276	53	162663	10.1127436	ppb		100
105) ETHYL TERT-BUTYL ETHER	4.513	59	58223	1.9786048	ppb		98
106) PROPIONITRILE	5.580	54	115874	100.3531096	ppb	#	100
107) Ethyl Acetate	5.147	43	158073	19.7569019	ppb		100
108) METHACRYLONITRILE	5.605	67	363578	99.2515374	ppb		98
109) Cyclohexane	5.001	56	58404	2.0185784	ppb		97
110) tert-butyl formate	5.446	59	145075	19.6386136	ppb		97
111) ISOBUTANOL	5.751	41	42322	184.9536721	ppb	#	93
112) t-Amyl Alcohol	5.848	59	8366	9.8623241	ppb		90
113) TERT-AMYL METHYL ETHER	5.672	73	65133	1.9770460	ppb		94
115) N-BUTANOL	6.373	56	100361	398.3042346	ppb		100
116) Methyl Cyclohexane	6.105	83	67286	1.7074042	ppb		92
117) 2-nitropropane	7.598	43	20812	9.5619904	ppb		95
118) METHYL METHACRYLATE	6.751	41	65682	9.9909564	ppb		97
119) 1,4-DIOXANE	6.793	88	20043	242.8612840	ppb	#	85
120) n-octane	7.232	85	23268	1.9785728	ppb		97
121) 3,3-DIMETHYL-1-BUTANOL	8.464	57	17802	18.6317184	ppb		95
123) ETHYL METHACRYLATE	7.903	69	110871	9.5536930	ppb		97
124) CIS-1,4-DICHLORO-2-BUTENE	9.976	53	24243	9.7991209	ppb		96
125) Cyclohexanone	10.281	55	15494	20.7258117	ppb		99
126) PENTACHLOROETHANE	10.561	117	58639	9.6001748	ppb		98
127) Hexachloroethane	11.372	117	15300	1.9322690	ppb		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

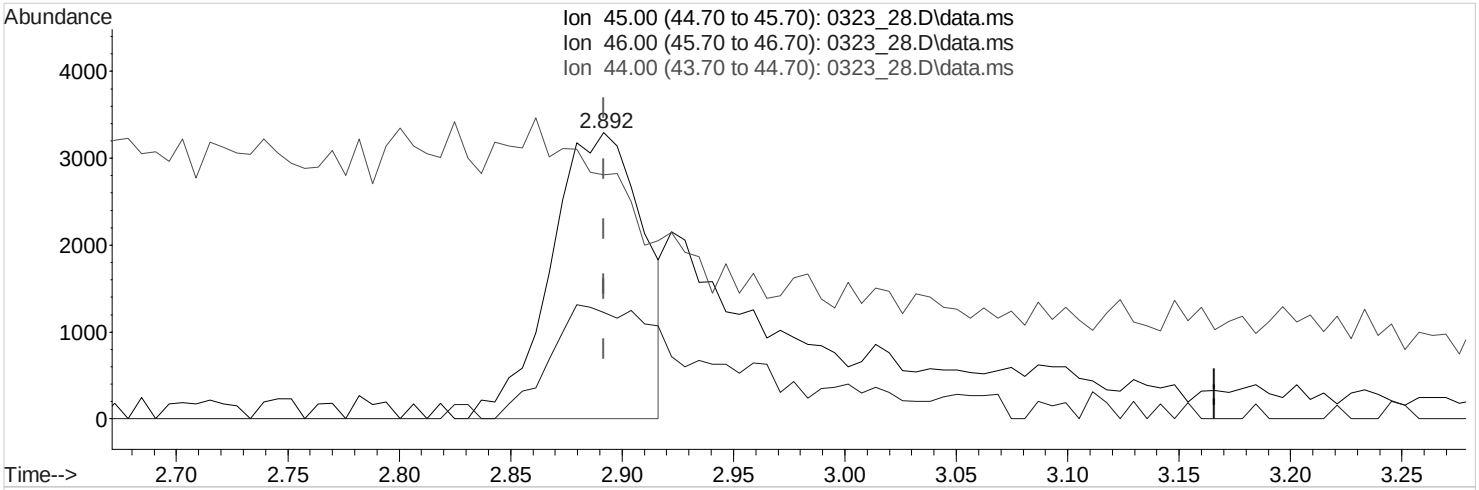
Data Path : C:\msdchem\1\data\032316\
Data File : 0323 28.D
Acq On : 24 Mar 2016 1:40 am
Operator :
Sample : STD VMS 2.5a ppb 16B23985
Misc : water
ALS Vial : 19 Sample Multiplier: 1
InstName : VOCMS26

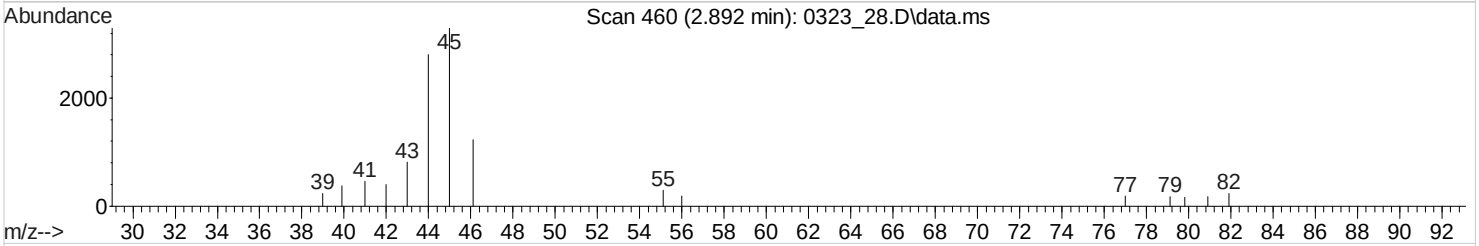
Quant Time: Mar 24 09:56:27 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:56:04 2016
Response via : Initial Calibration

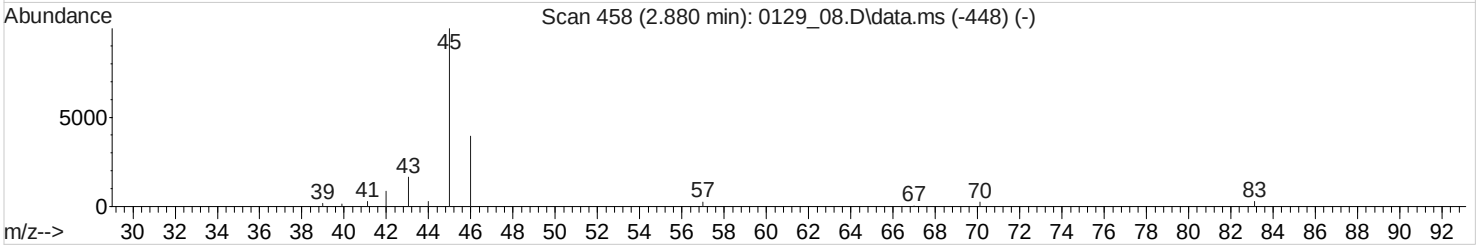


Data Path : C:\msdchem\1\data\032316\
Data File : 0323 28.D
Acq On : 24 Mar 2016 1:40 am
Operator :
Sample : STD VMS 2.5a ppb 16B23985
Misc : water
ALS Vial : 19 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 09:48:25 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:48:20 2016
Response via : Initial Calibration







TIC: 0323_28.D\data.ms

(97) ETHANOL (T)

2.892min (+0.000) 82.8371198 ppb

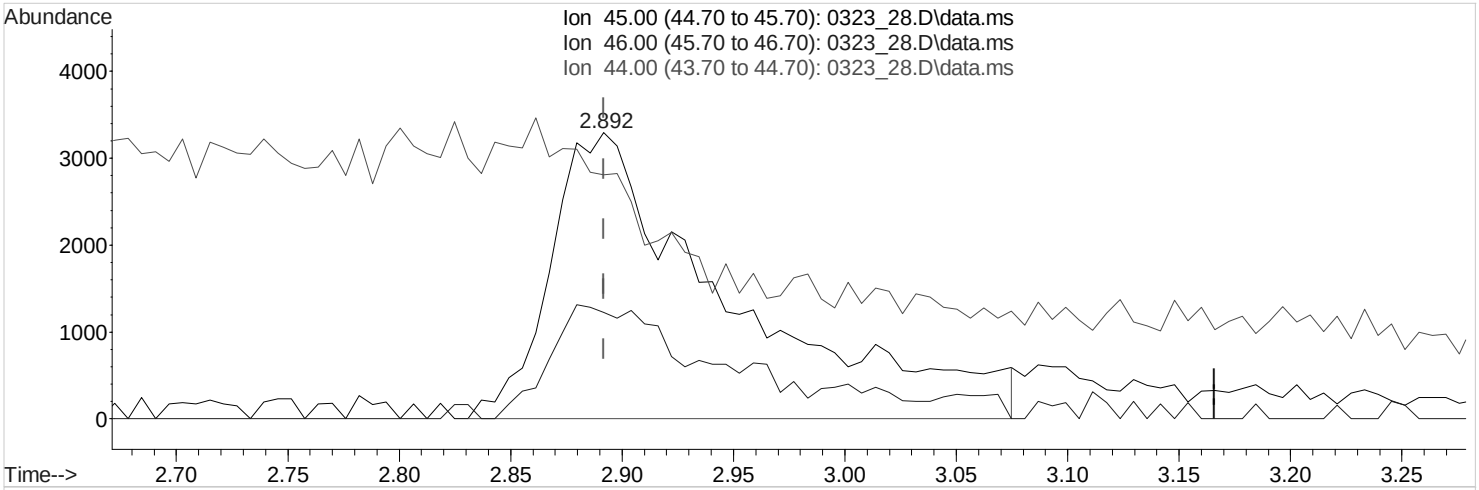
Qvalue = 53

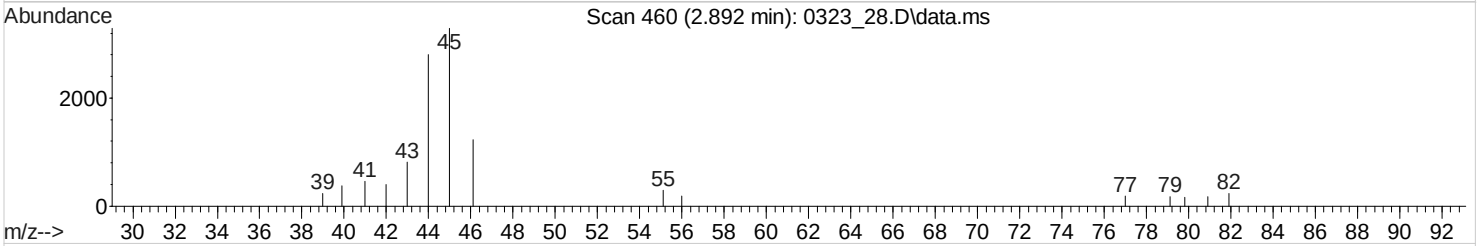
response 9497

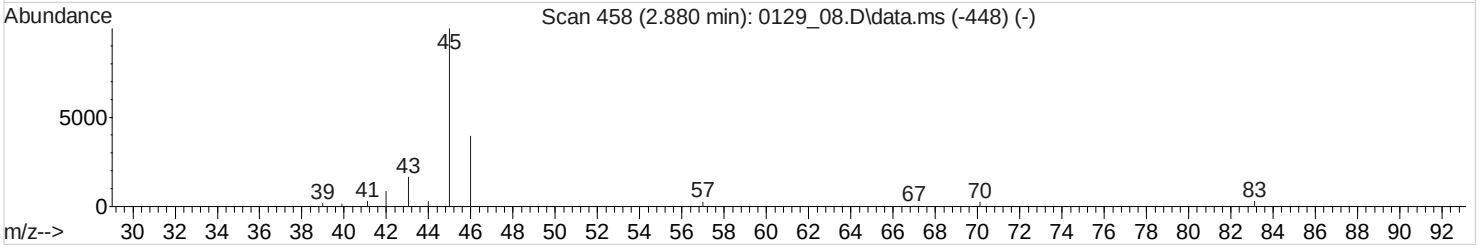
Ion	Exp%	Act%
45.00	100	100
46.00	37.40	65.28#
44.00	0.00	0.00
0.00	0.00	0.00

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 28.D
Acq On : 24 Mar 2016 1:40 am
Operator :
Sample : STD VMS 2.5a ppb 16B23985
Misc : water
ALS Vial : 19 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 09:48:25 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:48:20 2016
Response via : Initial Calibration







TIC: 0323_28.D\data.ms

(97) ETHANOL (T)

2.892min (+0.000) 211.7971010 ppb m

response 18385

Ion	Exp%	Act%
45.00	100	100
46.00	37.40	33.72
44.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 29.D
Acq On : 24 Mar 2016 2:00 am
Operator :
Sample : STD VMS 5a ppb 16B23985
Misc : water
ALS Vial : 20 Sample Multiplier: 1
InstName : VOCMS26

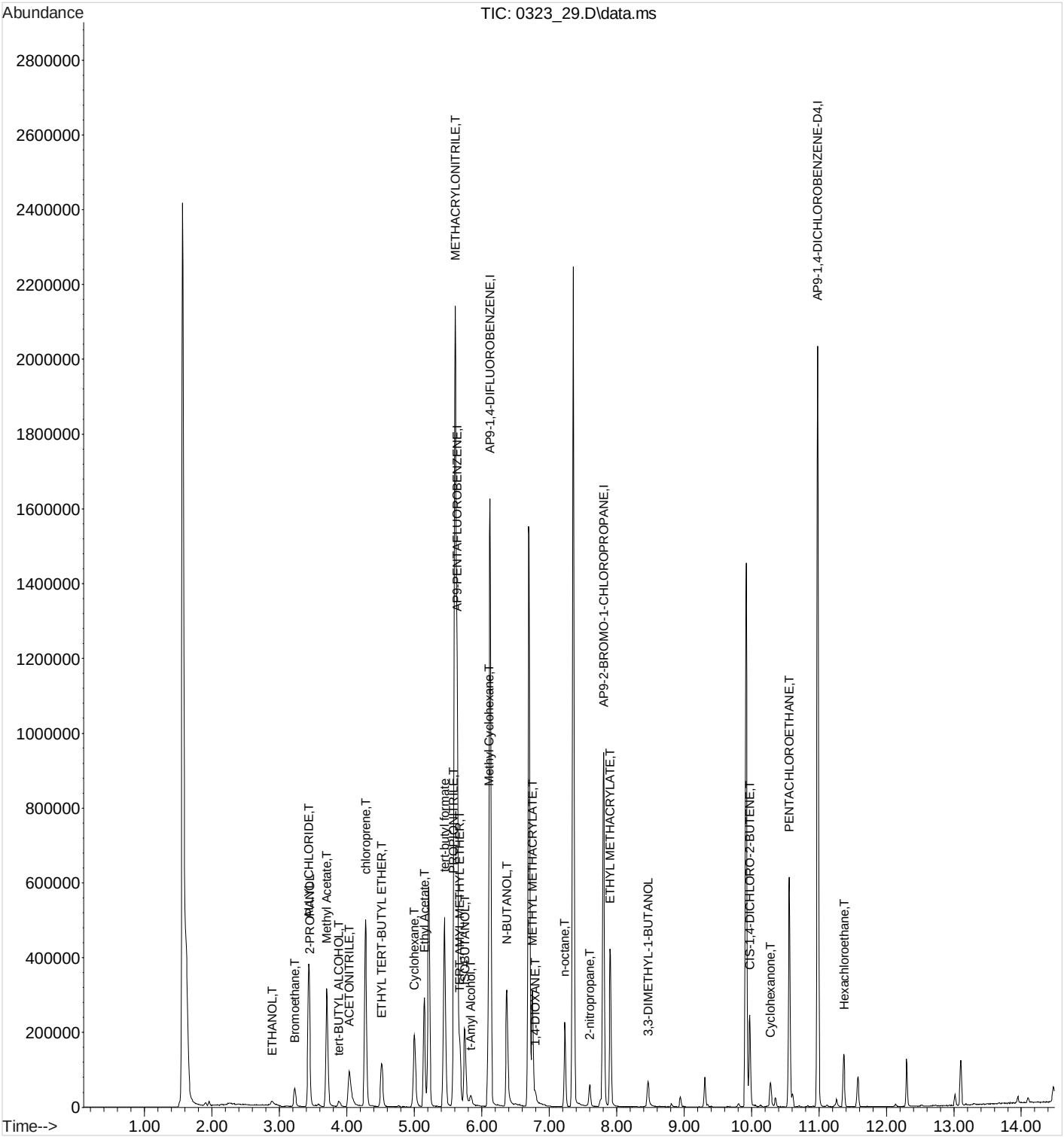
Quant Time: Mar 24 09:57:26 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:56:45 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 8260-PENTAFLUOROBENZENE	0.000	168	0m	40.0000000	ppb		-5.63
41) 8260-1,4-DIFLUOROBENZENE	0.000	114	0m	40.0000000	ppb		-6.12
53) 8260-2-BROMO-1-CHLOROP...	0.000	79	0m	40.0000000	ppb		-7.81
84) 8260-1,4-DICHLOROBENZE...	0.000	152	0m	40.0000000	ppb		-10.98
96) AP9-PENTAFLUOROBENZENE	5.635	168	662115	40.0000000	ppb		0.00
114) AP9-1,4-DIFLUOROBENZENE	6.123	114	1239034	40.0000000	ppb		0.00
122) AP9-2-BROMO-1-CHLOROPR...	7.805	79	205853	40.0000000	ppb		0.00
128) AP9-1,4-DICHLOROBENZEN...	10.982	152	482215	40.0000000	ppb		0.00
System Monitoring Compounds							
33) DIBROMOFLUOROMETHANE	0.000	111	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 79 - 121		Recovery =	0.00%#			
46) a,a,a-Trifluorotoluene	0.000	146	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 90 - 116		Recovery =	0.00%#			
50) TOLUENE-D8	0.000	98	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 90 - 115		Recovery =	0.00%#			
68) 4-BROMOFLUOROBENZENE	0.000	95	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 80 - 120		Recovery =	0.00%#			
Target Compounds							Qvalue
97) ETHANOL	2.892	45	30397	424.5942659	ppb	#	91
98) Bromoethane	3.227	108	43140	4.2164387	ppb		100
99) 2-PROPANOL	3.446	45	12014	26.3440580	ppb		93
100) Methyl Acetate	3.703	43	444542	86.5088959	ppb	#	100
101) ACETONITRILE	4.038	41	183204	214.3419068	ppb		97
102) ALLYL CHLORIDE	3.434	76	122233	21.1320807	ppb		98
103) tert-BUTYL ALCOHOL	3.879	59	25601	22.1592166	ppb	#	94
104) chloroprene	4.276	53	328240	20.9778449	ppb		99
105) ETHYL TERT-BUTYL ETHER	4.513	59	122228	4.2699652	ppb		99
106) PROPIONITRILE	5.580	54	243476	216.7654888	ppb	#	99
107) Ethyl Acetate	5.147	43	335382	43.0913445	ppb		100
108) METHACRYLONITRILE	5.605	67	768488	215.6581536	ppb		99
109) Cyclohexane	5.001	56	120001	4.2636058	ppb		98
110) tert-butyl formate	5.446	59	308650	42.9510390	ppb		99
111) ISOBUTANOL	5.751	41	90669	418.2365130	ppb		95
112) t-Amyl Alcohol	5.836	59	17274	20.9335782	ppb		93
113) TERT-AMYL METHYL ETHER	5.672	73	137278	4.2835691	ppb		96
115) N-BUTANOL	6.373	56	216818	886.9924917	ppb		98
116) Methyl Cyclohexane	6.104	83	126672	4.8222593	ppb		98
117) 2-nitropropane	7.598	43	46177	22.0627878	ppb		98
118) METHYL METHACRYLATE	6.751	41	138307	21.6860034	ppb		100
119) 1,4-DIOXANE	6.793	88	38107m	474.6720038	ppb		
120) n-octane	7.232	85	48878	4.2843118	ppb		98
121) 3,3-DIMETHYL-1-BUTANOL	8.464	57	40099	43.2605786	ppb		98
123) ETHYL METHACRYLATE	7.903	69	241115	21.5629916	ppb		99
124) CIS-1,4-DICHLORO-2-BUTENE	9.976	53	51142	21.4540818	ppb		96
125) Cyclohexanone	10.281	55	29145	40.4616438	ppb		97
126) PENTACHLOROETHANE	10.561	117	126718	21.5309088	ppb		98
127) Hexachloroethane	11.372	117	32253	4.2274429	ppb		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 29.D
Acq On : 24 Mar 2016 2:00 am
Operator :
Sample : STD VMS 5a ppb 16B23985
Misc : water
ALS Vial : 20 Sample Multiplier: 1
InstName : VOCMS26

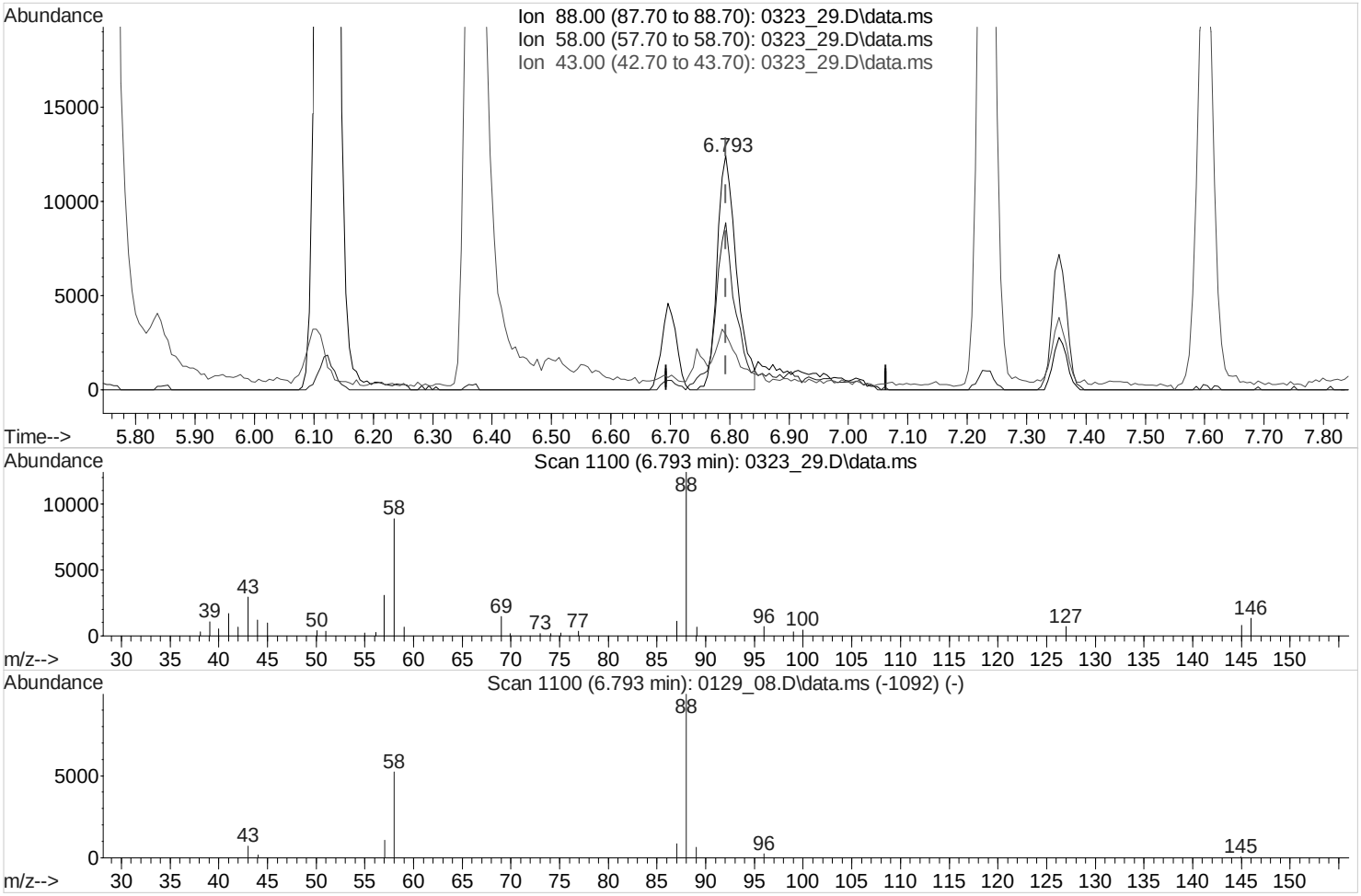
Quant Time: Mar 24 09:57:26 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:56:45 2016
Response via : Initial Calibration



Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 29.D
Acq On : 24 Mar 2016 2:00 am
Operator :
Sample : STD VMS 5a ppb 16B23985
Misc : water
ALS Vial : 20 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 09:56:48 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:56:45 2016
Response via : Initial Calibration



TIC: 0323_29.D\data.ms

(119) 1,4-DIOXANE (T)

6.793min (+0.000) 355.7891318 ppb

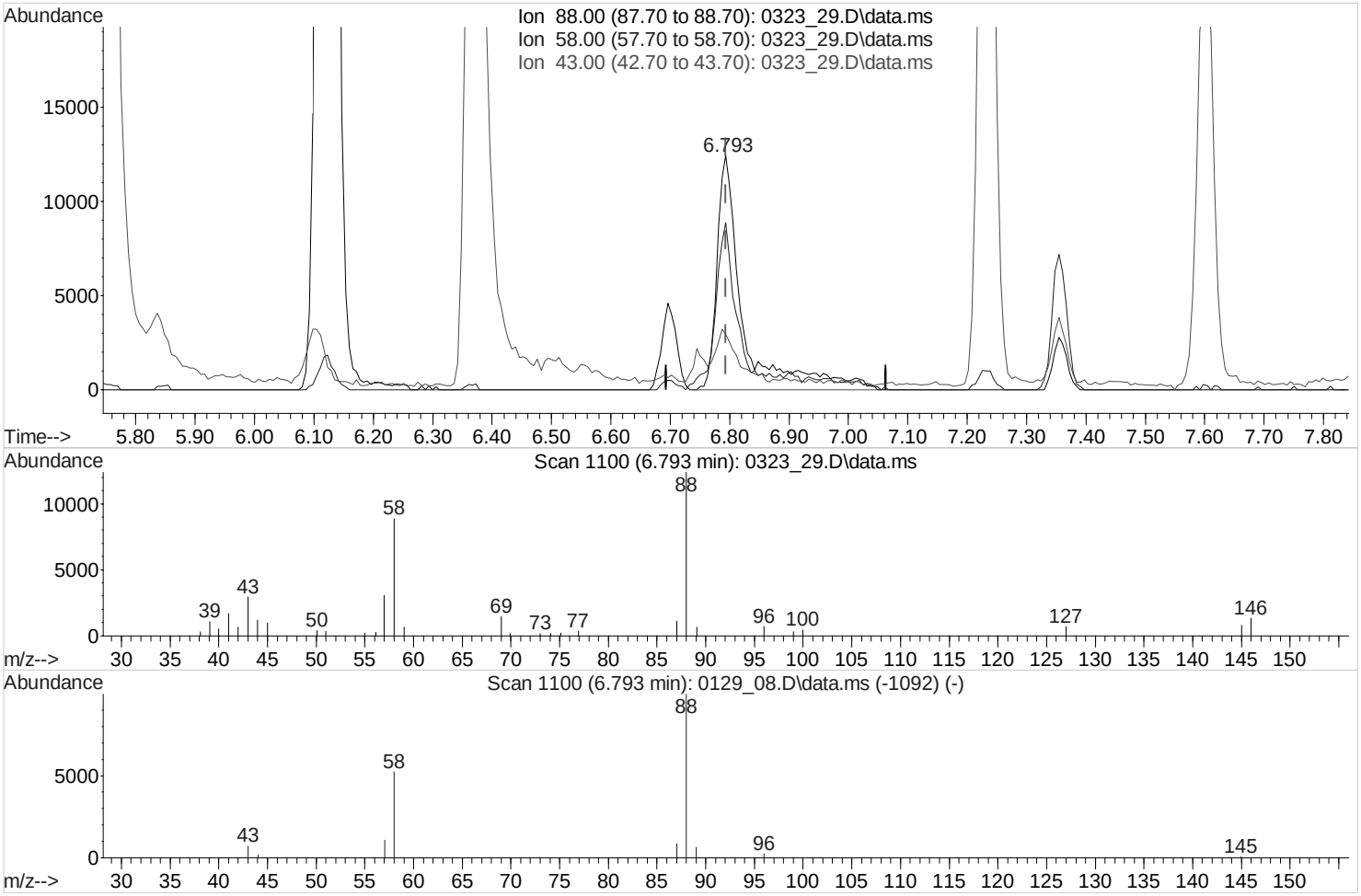
Qvalue = 84

response 28563

Ion	Exp%	Act%
88.00	100	100
58.00	64.60	79.14#
43.00	20.40	24.84#
0.00	0.00	0.00

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 29.D
Acq On : 24 Mar 2016 2:00 am
Operator :
Sample : STD VMS 5a ppb 16B23985
Misc : water
ALS Vial : 20 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 09:56:48 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:56:45 2016
Response via : Initial Calibration



TIC: 0323_29.D\data.ms

(119) 1,4-DIOXANE (T)

6.793min (+0.000) 474.6720038 ppb m

response 38107

Ion	Exp%	Act%
88.00	100	100
58.00	64.60	59.32
43.00	20.40	18.62
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 30.D
Acq On : 24 Mar 2016 2:20 am
Operator :
Sample : STD VMS 7.5a ppb 16B23985
Misc : water
ALS Vial : 21 Sample Multiplier: 1
InstName : VOCMS26

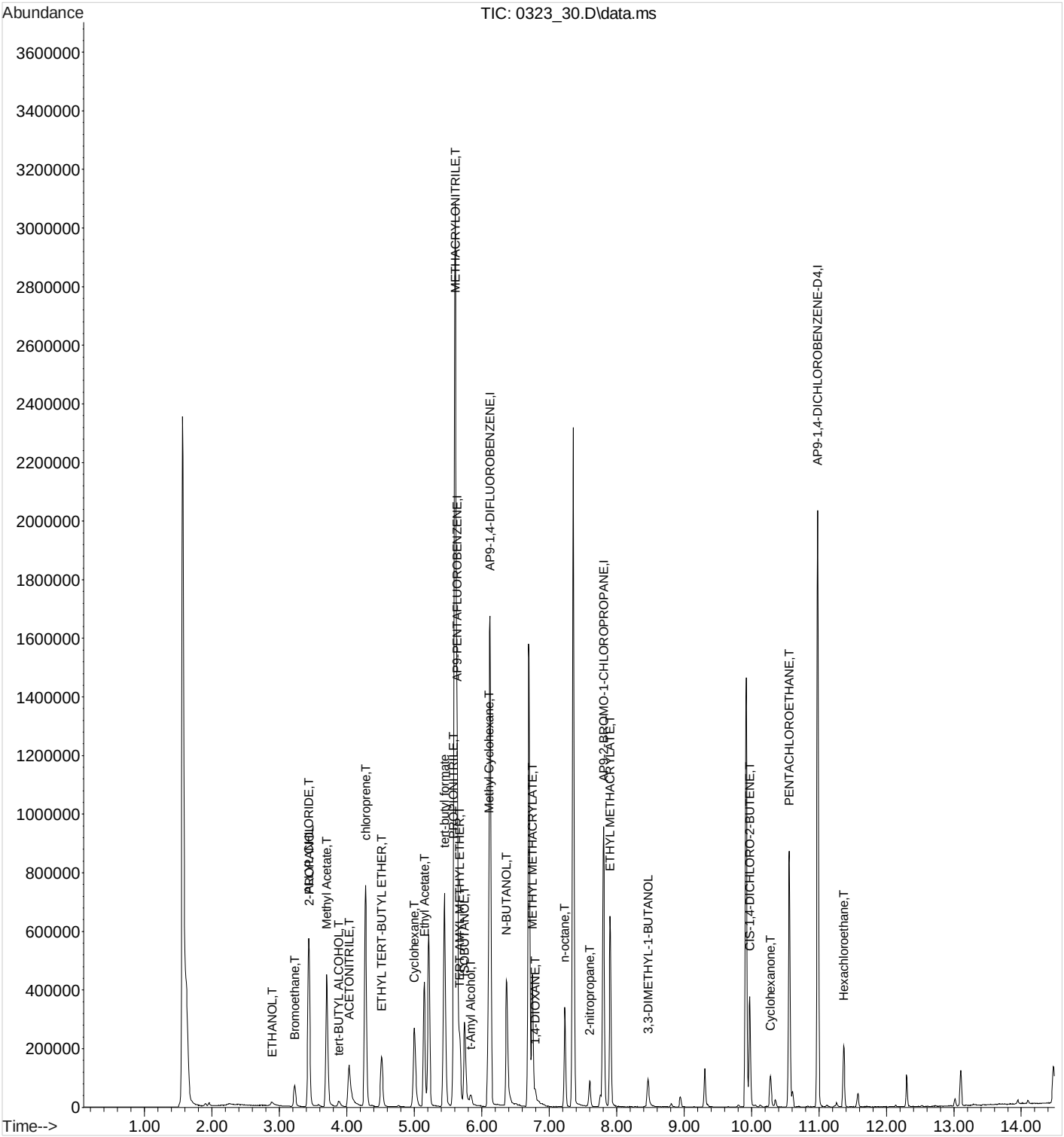
Quant Time: Mar 24 09:54:41 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:52:32 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 8260-PENTAFLUOROBENZENE	0.000	168	0m	40.0000000	ppb		-5.63
41) 8260-1,4-DIFLUOROBENZENE	0.000	114	0m	40.0000000	ppb		-6.12
53) 8260-2-BROMO-1-CHLOROP...	0.000	79	0m	40.0000000	ppb		-7.81
84) 8260-1,4-DICHLOROBENZE...	0.000	152	0m	40.0000000	ppb		-10.98
96) AP9-PENTAFLUOROBENZENE	5.635	168	670972	40.0000000	ppb		0.00
114) AP9-1,4-DIFLUOROBENZENE	6.123	114	1252386	40.0000000	ppb		0.00
122) AP9-2-BROMO-1-CHLOROPR...	7.805	79	207829	40.0000000	ppb		0.00
128) AP9-1,4-DICHLOROBENZEN...	10.982	152	488735	40.0000000	ppb		0.00
System Monitoring Compounds							
33) DIBROMOFLUOROMETHANE	0.000	111	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 79 - 121		Recovery =	0.00%#			
46) a,a,a-Trifluorotoluene	0.000	146	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 90 - 116		Recovery =	0.00%#			
50) TOLUENE-D8	0.000	98	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 90 - 115		Recovery =	0.00%#			
68) 4-BROMOFLUOROBENZENE	0.000	95	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 80 - 120		Recovery =	0.00%#			
Target Compounds							Qvalue
97) ETHANOL	2.892	45	50495m	777.3519567	ppb		
98) Bromoethane	3.227	108	65300	6.2980755	ppb		97
99) 2-PROPANOL	3.440	45	15366	34.7582958	ppb		97
100) Methyl Acetate	3.703	43	639428	122.7915975	ppb	#	100
101) ACETONITRILE	4.032	41	272186	314.2439688	ppb		98
102) ALLYL CHLORIDE	3.434	76	183561	31.3157801	ppb		98
103) tert-BUTYL ALCOHOL	3.879	59	34217	29.2259362	ppb		96
104) chloroprene	4.276	53	495882	31.2735181	ppb		100
105) ETHYL TERT-BUTYL ETHER	4.513	59	176793	6.0946353	ppb		100
106) PROPIONITRILE	5.580	54	348200	305.9086642	ppb	#	100
107) Ethyl Acetate	5.147	43	485909	61.6075967	ppb		100
108) METHACRYLONITRILE	5.605	67	1122943	310.9678808	ppb		100
109) Cyclohexane	5.001	56	171312	6.0063273	ppb		98
110) tert-butyl formate	5.446	59	448183	61.5448619	ppb		99
111) ISOBUTANOL	5.745	41	130206	538.8749746	ppb		96
112) t-Amyl Alcohol	5.836	59	22471	26.8721233	ppb		100
113) TERT-AMYL METHYL ETHER	5.672	73	194854	5.9998887	ppb		98
115) N-BUTANOL	6.367	56	302557	1224.5508796	ppb		99
116) Methyl Cyclohexane	6.104	83	175894	7.2243214	ppb		99
117) 2-nitropropane	7.598	43	65863	30.4226739	ppb		97
118) METHYL METHACRYLATE	6.751	41	203996	31.6447764	ppb		99
119) 1,4-DIOXANE	6.793	88	56104m	700.7973423	ppb		
120) n-octane	7.232	85	72700	6.3044481	ppb		100
121) 3,3-DIMETHYL-1-BUTANOL	8.464	57	57623	61.5034767	ppb		99
123) ETHYL METHACRYLATE	7.903	69	360259	31.9117541	ppb		99
124) CIS-1,4-DICHLORO-2-BUTENE	9.976	53	77660	32.2686400	ppb		99
125) Cyclohexanone	10.280	55	46685	64.1959867	ppb		100
126) PENTACHLOROETHANE	10.561	117	184742	31.0914334	ppb		99
127) Hexachloroethane	11.366	117	48455	6.2906755	ppb		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

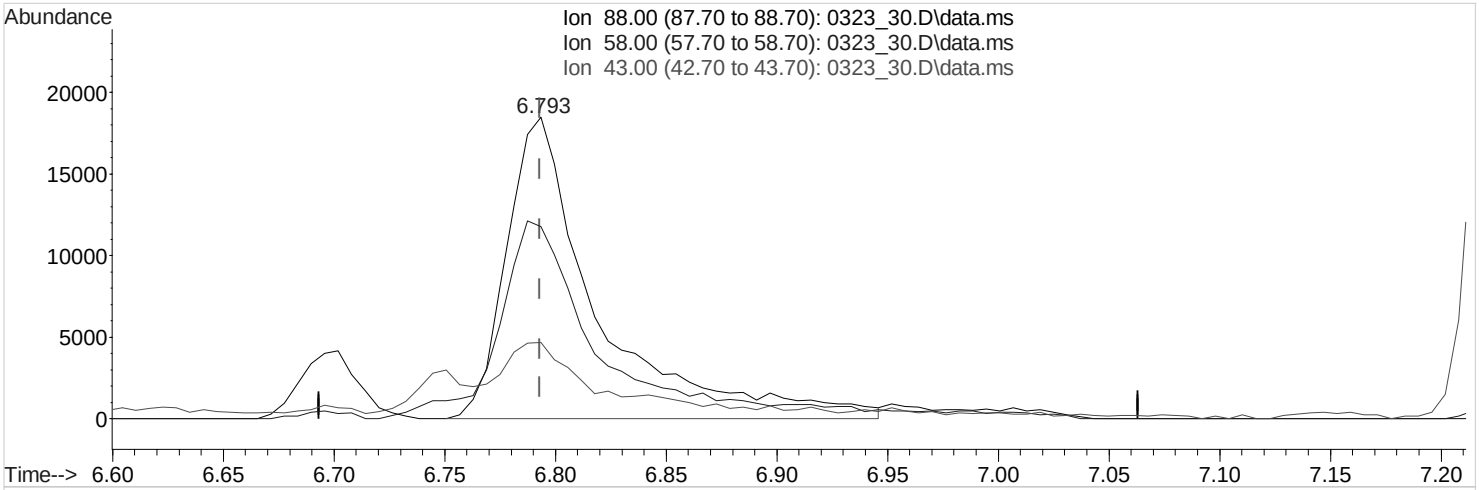
Data Path : C:\msdchem\1\data\032316\
Data File : 0323 30.D
Acq On : 24 Mar 2016 2:20 am
Operator :
Sample : STD VMS 7.5a ppb 16B23985
Misc : water
ALS Vial : 21 Sample Multiplier: 1
InstName : VOCMS26

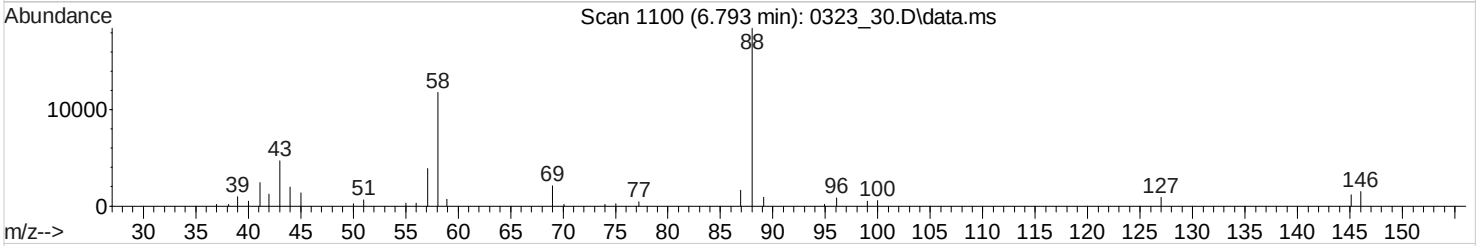
Quant Time: Mar 24 09:54:41 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:52:32 2016
Response via : Initial Calibration

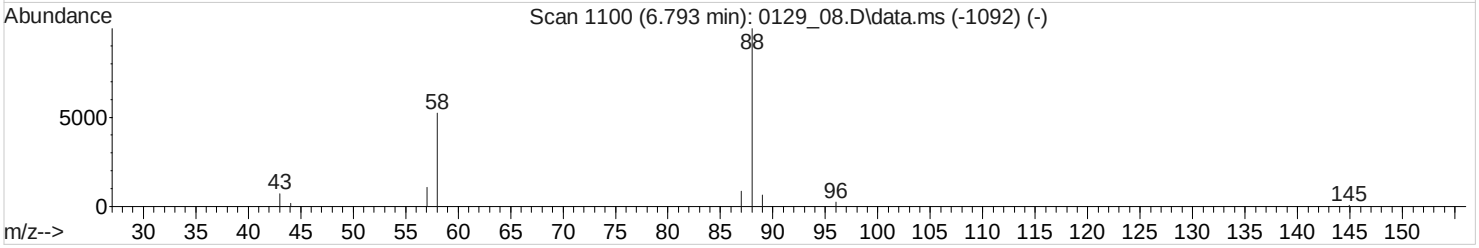


Data Path : C:\msdchem\1\data\032316\
Data File : 0323 30.D
Acq On : 24 Mar 2016 2:20 am
Operator :
Sample : STD VMS 7.5a ppb 16B23985
Misc : water
ALS Vial : 21 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 09:54:05 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:52:32 2016
Response via : Initial Calibration







TIC: 0323_30.D\data.ms

(119) 1,4-DIOXANE (T)

6.793min (+0.000) 663.2742563 ppb

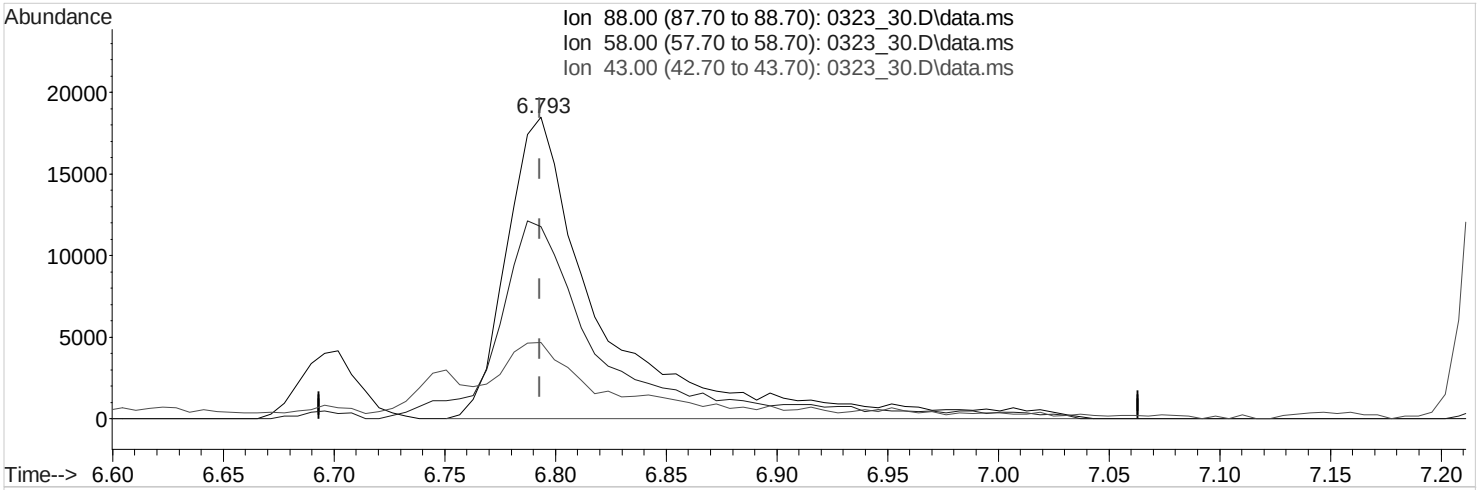
Qvalue = 94

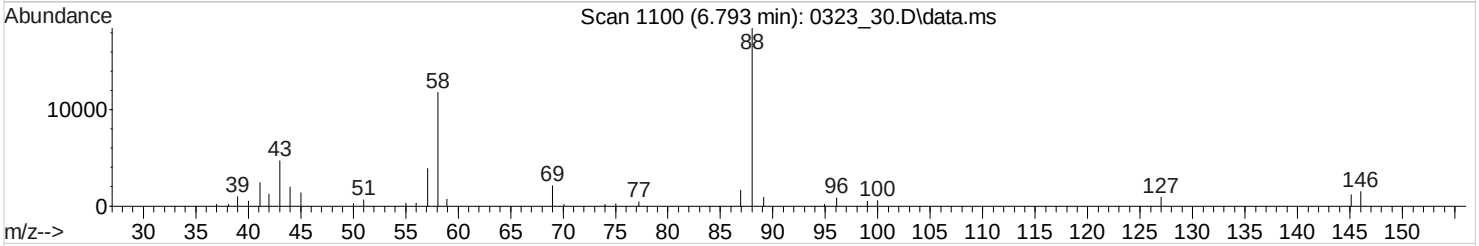
response 53100

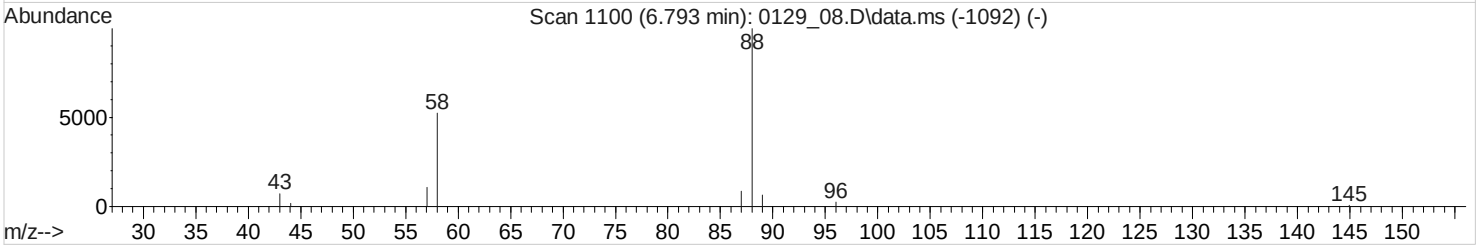
Ion	Exp%	Act%
88.00	100	100
58.00	64.60	67.96
43.00	20.40	25.34#
0.00	0.00	0.00

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 30.D
Acq On : 24 Mar 2016 2:20 am
Operator :
Sample : STD VMS 7.5a ppb 16B23985
Misc : water
ALS Vial : 21 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 09:54:05 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:52:32 2016
Response via : Initial Calibration







TIC: 0323_30.D\data.ms

(119) 1,4-DIOXANE (T)

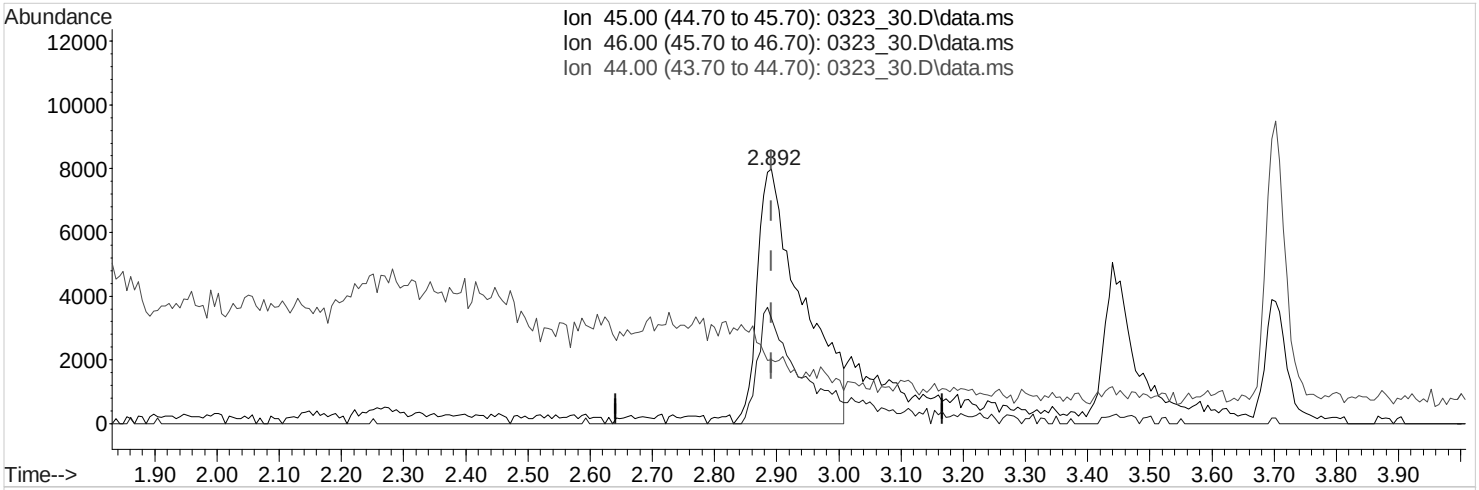
6.793min (+0.000) 700.7973423 ppb m

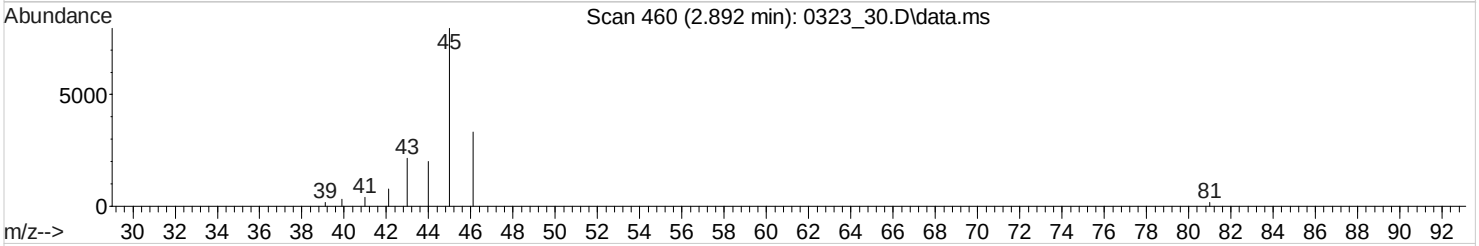
response 56104

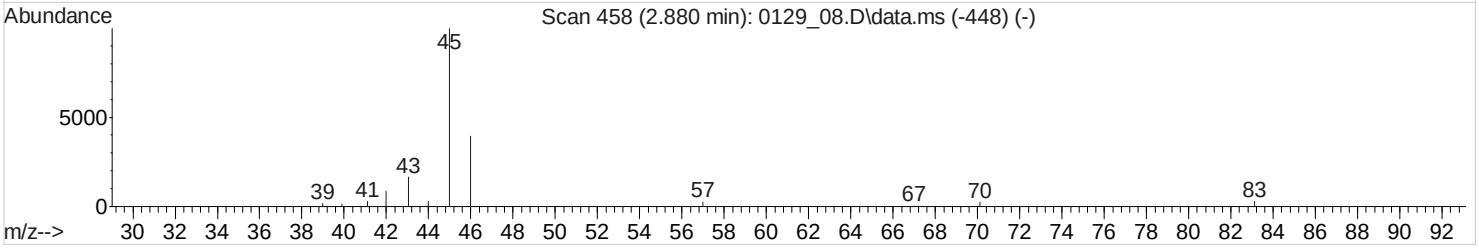
Ion	Exp%	Act%
88.00	100	100
58.00	64.60	64.32
43.00	20.40	23.98
0.00	0.00	0.00

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 30.D
Acq On : 24 Mar 2016 2:20 am
Operator :
Sample : STD VMS 7.5a ppb 16B23985
Misc : water
ALS Vial : 21 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 09:54:05 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:52:32 2016
Response via : Initial Calibration







TIC: 0323_30.D\data.ms

(97) ETHANOL (T)

2.892min (-0.000) 611.8046936 ppb

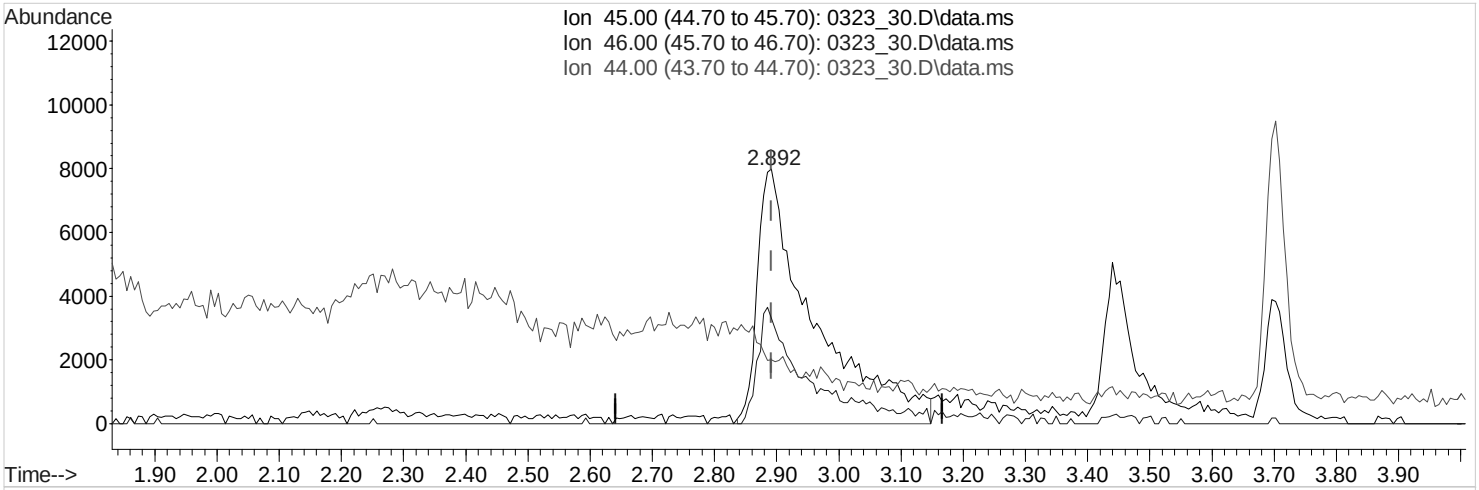
Qvalue = 93

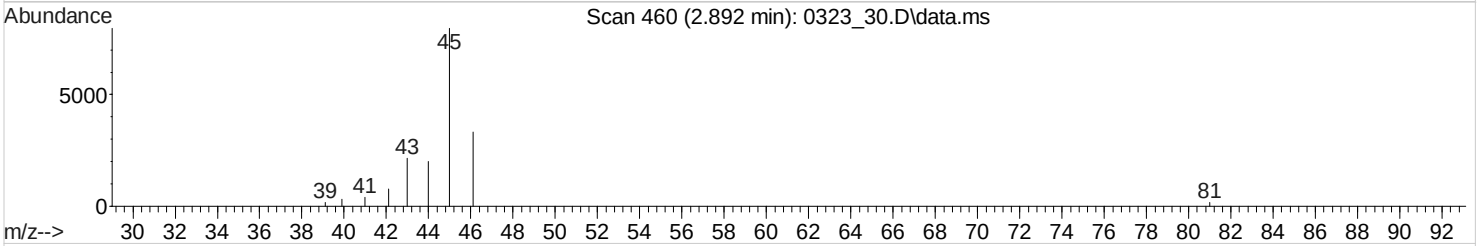
response 40034

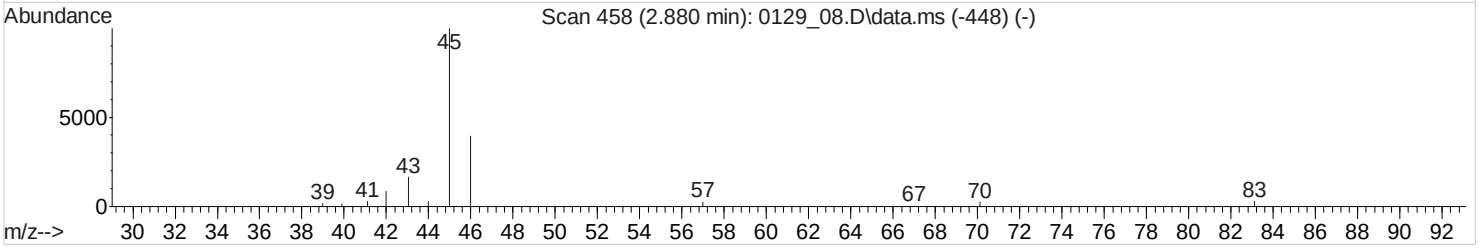
Ion	Exp%	Act%
45.00	100	100
46.00	37.40	41.47
44.00	0.00	0.00
0.00	0.00	0.00

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 30.D
Acq On : 24 Mar 2016 2:20 am
Operator :
Sample : STD VMS 7.5a ppb 16B23985
Misc : water
ALS Vial : 21 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 09:54:05 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:52:32 2016
Response via : Initial Calibration







TIC: 0323_30.D\data.ms

(97) ETHANOL (T)

2.892min (-0.000) 777.3519567 ppb m

response 50495

Ion	Exp%	Act%
45.00	100	100
46.00	37.40	32.88
44.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 31.D
Acq On : 24 Mar 2016 2:39 am
Operator :
Sample : MSTD VMS 10a ppb 16B23985
Misc : water
ALS Vial : 22 Sample Multiplier: 1
InstName : VOCMS26

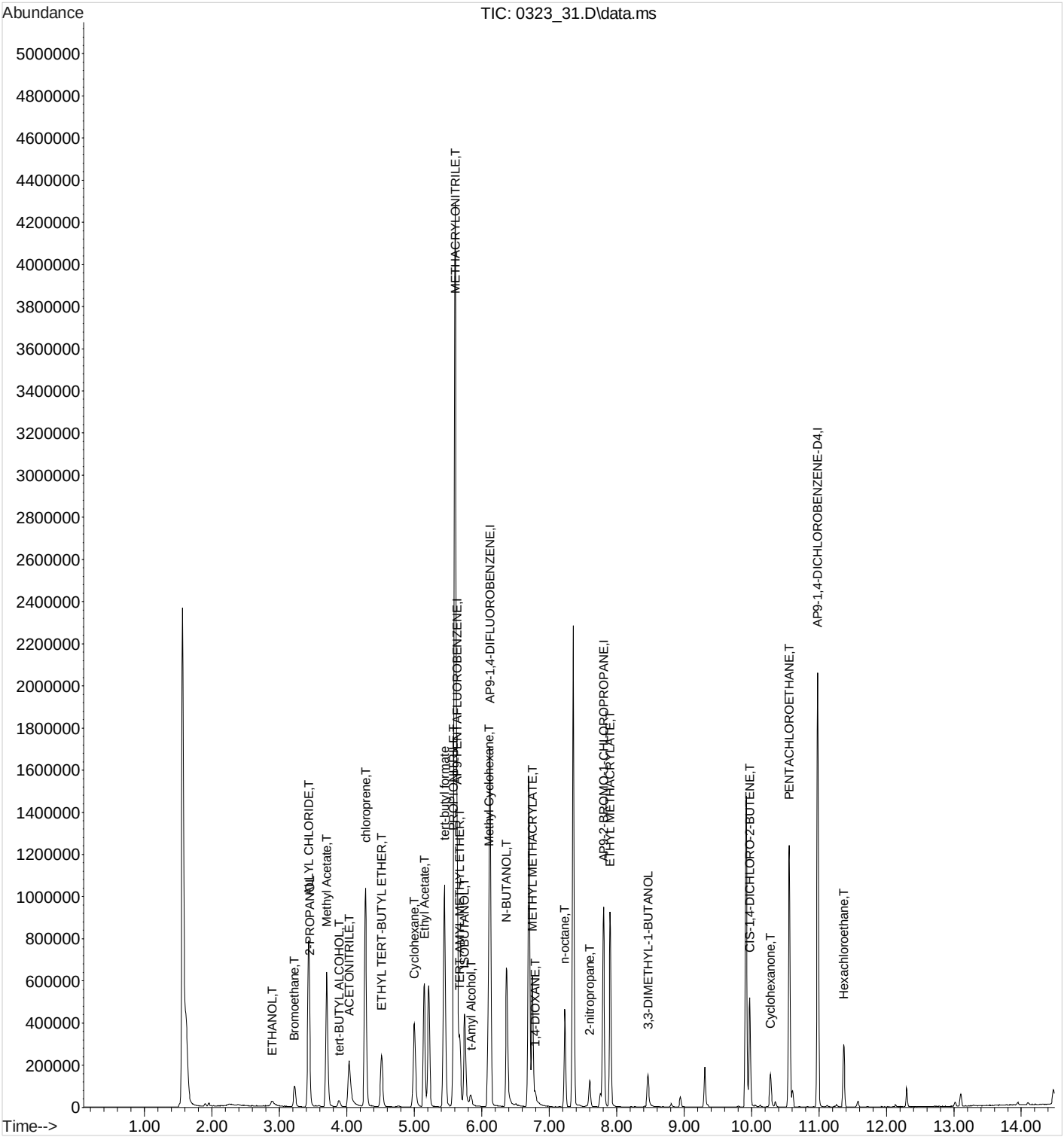
Quant Time: Mar 24 10:00:09 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:59:44 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 8260-PENTAFLUOROBENZENE	0.000	168	0m	40.0000000	ppb		-5.63
41) 8260-1,4-DIFLUOROBENZENE	0.000	114	0m	40.0000000	ppb		-6.12
53) 8260-2-BROMO-1-CHLOROP...	0.000	79	0m	40.0000000	ppb		-7.81
84) 8260-1,4-DICHLOROBENZE...	0.000	152	0m	40.0000000	ppb		-10.98
96) AP9-PENTAFLUOROBENZENE	5.635	168	659787	40.0000000	ppb		0.00
114) AP9-1,4-DIFLUOROBENZENE	6.123	114	1238054	40.0000000	ppb		0.00
122) AP9-2-BROMO-1-CHLOROPR...	7.805	79	204768	40.0000000	ppb		0.00
128) AP9-1,4-DICHLOROBENZEN...	10.982	152	493366	40.0000000	ppb		0.00
System Monitoring Compounds							
33) DIBROMOFLUOROMETHANE	0.000	111	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 79 - 121		Recovery =	0.00%#			
46) a,a,a-Trifluorotoluene	0.000	146	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 90 - 116		Recovery =	0.00%#			
50) TOLUENE-D8	0.000	98	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 90 - 115		Recovery =	0.00%#			
68) 4-BROMOFLUOROBENZENE	0.000	95	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 80 - 120		Recovery =	0.00%#			
Target Compounds							Qvalue
97) ETHANOL	2.892	45	70480	1119.6172059	ppb	#	100
98) Bromoethane	3.221	108	87319	9.3693383	ppb		100
99) 2-PROPANOL	3.446	45	21487	48.0141300	ppb		100
100) Methyl Acetate	3.703	43	887667	187.9606593	ppb	#	100
101) ACETONITRILE	4.032	41	383143	478.3781630	ppb		100
102) ALLYL CHLORIDE	3.434	76	246503	46.6863829	ppb		100
103) tert-BUTYL ALCOHOL	3.885	59	51320	47.7442957	ppb		100
104) chloroprene	4.276	53	681937	47.1044910	ppb		100
105) ETHYL TERT-BUTYL ETHER	4.513	59	248984	9.4870314	ppb		100
106) PROPIONITRILE	5.580	54	491748	472.5883540	ppb	#	100
107) Ethyl Acetate	5.147	43	681662	94.0052790	ppb		100
108) METHACRYLONITRILE	5.605	67	1557178	470.4804631	ppb		100
109) Cyclohexane	5.001	56	245995	9.5456016	ppb		100
110) tert-butyl formate	5.446	59	647058	96.2338523	ppb		100
111) ISOBUTANOL	5.745	41	193910	962.4024696	ppb		100
112) t-Amyl Alcohol	5.842	59	31818	42.9026580	ppb		100
113) TERT-AMYL METHYL ETHER	5.672	73	276737	9.4454038	ppb		100
115) N-BUTANOL	6.367	56	445747	1898.1396292	ppb		100
116) Methyl Cyclohexane	6.104	83	247296	10.6199824	ppb		100
117) 2-nitropropane	7.598	43	95314	48.2523766	ppb		100
118) METHYL METHACRYLATE	6.751	41	277978	46.4689682	ppb		100
119) 1,4-DIOXANE	6.793	88	78576m	987.2310567	ppb		
120) n-octane	7.232	85	99722	9.3923048	ppb		100
121) 3,3-DIMETHYL-1-BUTANOL	8.464	57	86638	97.3392788	ppb		100
123) ETHYL METHACRYLATE	7.903	69	505395	47.4868129	ppb		100
124) CIS-1,4-DICHLORO-2-BUTENE	9.976	53	107520	47.8153457	ppb		100
125) Cyclohexanone	10.281	55	66797	106.6037817	ppb		100
126) PENTACHLOROETHANE	10.561	117	264488	47.6049074	ppb		100
127) Hexachloroethane	11.366	117	68451	9.5770480	ppb		100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

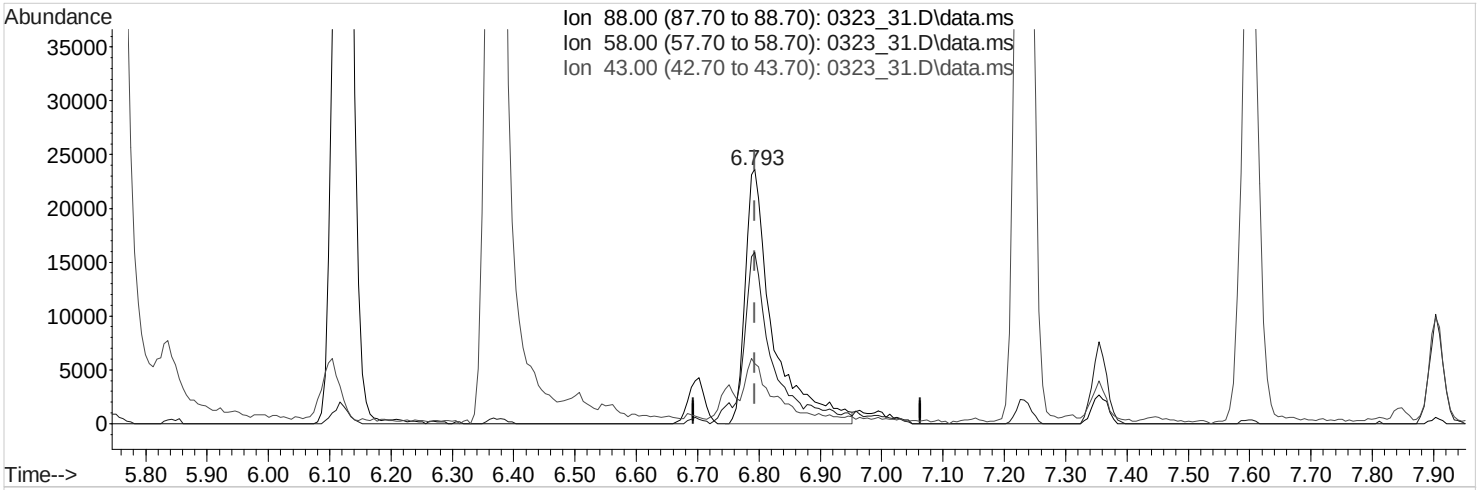
Data Path : C:\msdchem\1\data\032316\
Data File : 0323 31.D
Acq On : 24 Mar 2016 2:39 am
Operator :
Sample : MSTD VMS 10a ppb 16B23985
Misc : water
ALS Vial : 22 Sample Multiplier: 1
InstName : VOCMS26

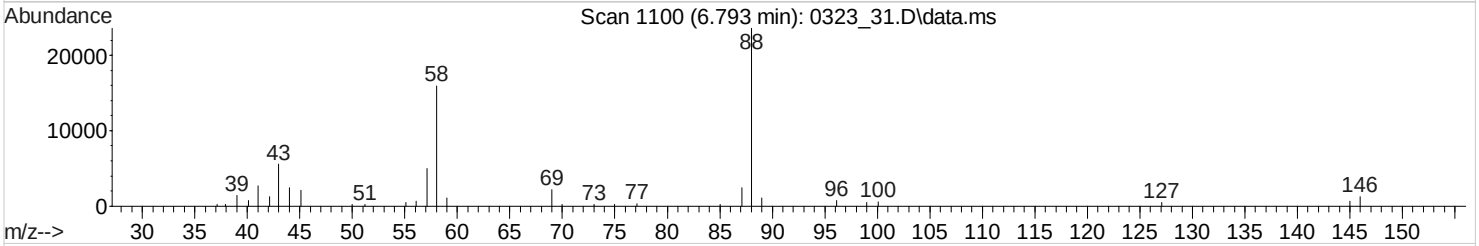
Quant Time: Mar 24 10:00:09 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:59:44 2016
Response via : Initial Calibration

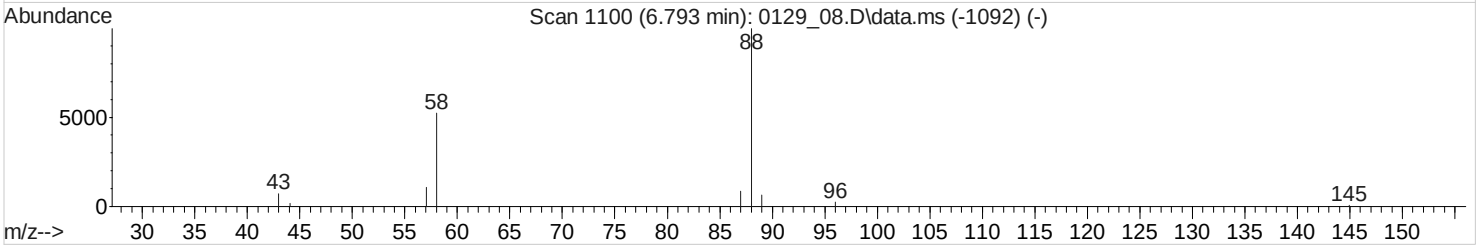


Data Path : C:\msdchem\1\data\032316\
Data File : 0323 31.D
Acq On : 24 Mar 2016 2:39 am
Operator :
Sample : MSTD VMS 10a ppb 16B23985
Misc : water
ALS Vial : 22 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 09:59:50 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:59:44 2016
Response via : Initial Calibration







TIC: 0323_31.D\data.ms

(119) 1,4-DIOXANE (T)

6.793min (+0.000) 931.5849771 ppb

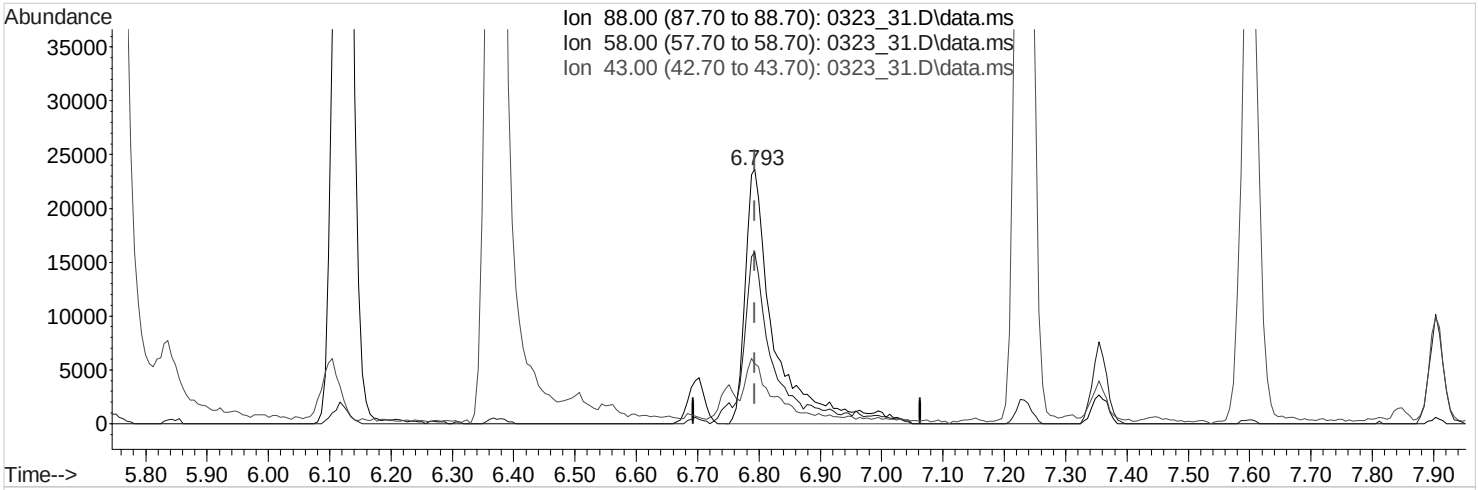
Qvalue = 99

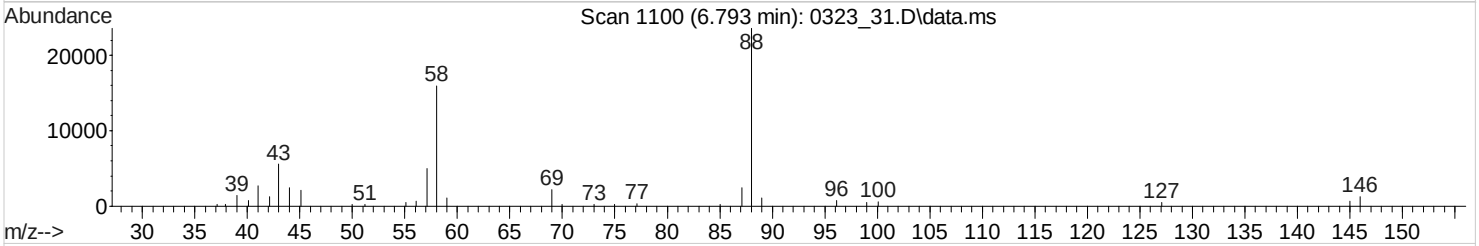
response 74147

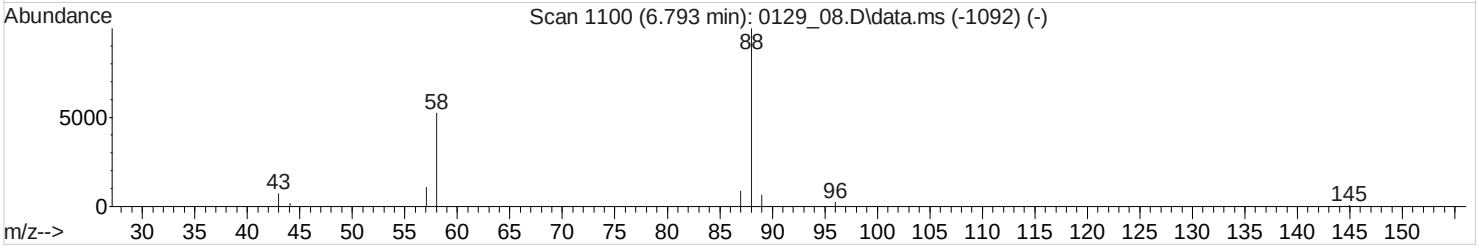
Ion	Exp%	Act%
88.00	100	100
58.00	64.60	63.51
43.00	20.40	20.04
0.00	0.00	0.00

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 31.D
Acq On : 24 Mar 2016 2:39 am
Operator :
Sample : MSTD VMS 10a ppb 16B23985
Misc : water
ALS Vial : 22 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 09:59:50 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:59:44 2016
Response via : Initial Calibration







TIC: 0323_31.D\data.ms

(119) 1,4-DIOXANE (T)

6.793min (+0.000) 987.2310567 ppb m

response 78576

Ion	Exp%	Act%
88.00	100	100
58.00	64.60	59.93
43.00	20.40	18.91
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 32.D
Acq On : 24 Mar 2016 2:59 am
Operator :
Sample : STD VMS 12.5a ppb 16B23985
Misc : water
ALS Vial : 23 Sample Multiplier: 1
InstName : VOCMS26

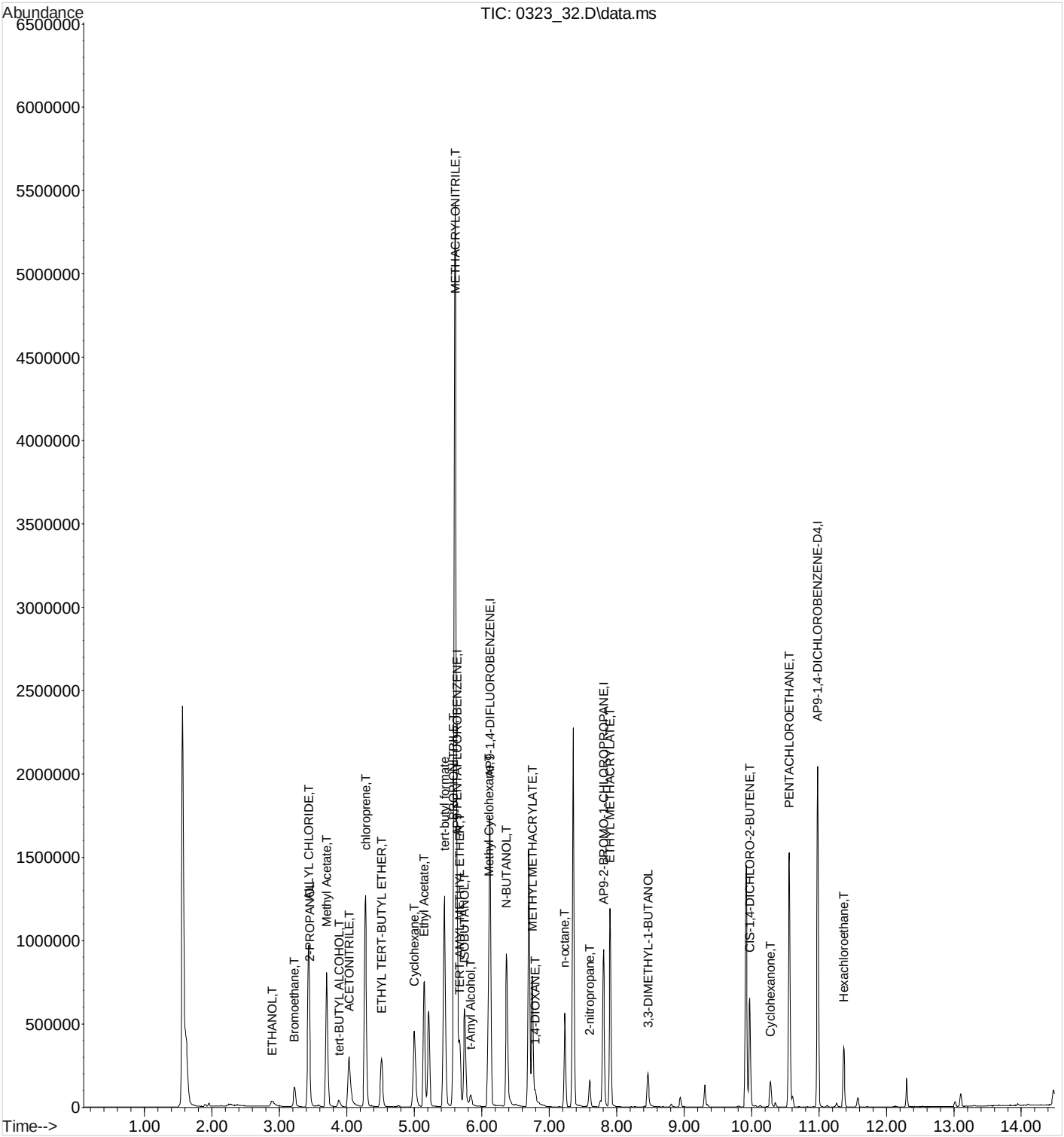
Quant Time: Mar 24 09:58:10 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:57:43 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 8260-PENTAFLUOROBENZENE	0.000	168	0m	40.0000000	ppb		-5.63
41) 8260-1,4-DIFLUOROBENZENE	0.000	114	0m	40.0000000	ppb		-6.12
53) 8260-2-BROMO-1-CHLOROP...	0.000	79	0m	40.0000000	ppb		-7.81
84) 8260-1,4-DICHLOROBENZE...	0.000	152	0m	40.0000000	ppb		-10.98
96) AP9-PENTAFLUOROBENZENE	5.635	168	664637	40.0000000	ppb		0.00
114) AP9-1,4-DIFLUOROBENZENE	6.123	114	1232663	40.0000000	ppb		0.00
122) AP9-2-BROMO-1-CHLOROPR...	7.805	79	204908	40.0000000	ppb		0.00
128) AP9-1,4-DICHLOROBENZEN...	10.982	152	487830	40.0000000	ppb		0.00
System Monitoring Compounds							
33) DIBROMOFLUOROMETHANE	0.000	111	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 79 - 121		Recovery =	0.00%#			
46) a,a,a-Trifluorotoluene	0.000	146	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 90 - 116		Recovery =	0.00%#			
50) TOLUENE-D8	0.000	98	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 90 - 115		Recovery =	0.00%#			
68) 4-BROMOFLUOROBENZENE	0.000	95	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 80 - 120		Recovery =	0.00%#			
Target Compounds							Qvalue
97) ETHANOL	2.892	45	95002	1419.5325761	ppb	#	96
98) Bromoethane	3.221	108	108379	10.5526056	ppb		99
99) 2-PROPANOL	3.446	45	30207	74.6475844	ppb		95
100) Methyl Acetate	3.702	43	1137915	220.6006078	ppb	#	100
101) ACETONITRILE	4.032	41	501715	584.7606444	ppb		99
102) ALLYL CHLORIDE	3.434	76	306902	52.8569891	ppb		100
103) tert-BUTYL ALCOHOL	3.885	59	65162	56.1876399	ppb		98
104) chloroprene	4.276	53	844978	53.7976964	ppb		100
105) ETHYL TERT-BUTYL ETHER	4.513	59	297984	10.3703994	ppb		100
106) PROPIONITRILE	5.580	54	628965	557.8396406	ppb	#	100
107) Ethyl Acetate	5.141	43	871876	111.5973623	ppb		99
108) METHACRYLONITRILE	5.605	67	1981333	553.9048622	ppb		100
109) Cyclohexane	5.001	56	294709	10.4312053	ppb		99
110) tert-butyl formate	5.446	59	787914	109.2282868	ppb		99
111) ISOBUTANOL	5.745	41	252192	1193.6198733	ppb		98
112) t-Amyl Alcohol	5.836	59	42278	51.0403802	ppb		96
113) TERT-AMYL METHYL ETHER	5.672	73	331539	10.3059581	ppb		99
115) N-BUTANOL	6.367	56	594097	2442.9851808	ppb		100
116) Methyl Cyclohexane	6.104	83	288656	13.1159500	ppb		99
117) 2-nitropropane	7.598	43	117899	56.6217983	ppb		98
118) METHYL METHACRYLATE	6.751	41	358426	56.4902802	ppb		99
119) 1,4-DIOXANE	6.793	88	107587m	1285.9126020	ppb		
120) n-octane	7.232	85	121936	10.7433185	ppb		100
121) 3,3-DIMETHYL-1-BUTANOL	8.464	57	110134	119.4315471	ppb		99
123) ETHYL METHACRYLATE	7.903	69	642847	57.7551469	ppb		100
124) CIS-1,4-DICHLORO-2-BUTENE	9.976	53	136741	57.6274312	ppb		99
125) Cyclohexanone	10.280	55	62326	86.9254613	ppb		100
126) PENTACHLOROETHANE	10.561	117	326579	55.7455997	ppb		99
127) Hexachloroethane	11.366	117	83331	10.9726749	ppb		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

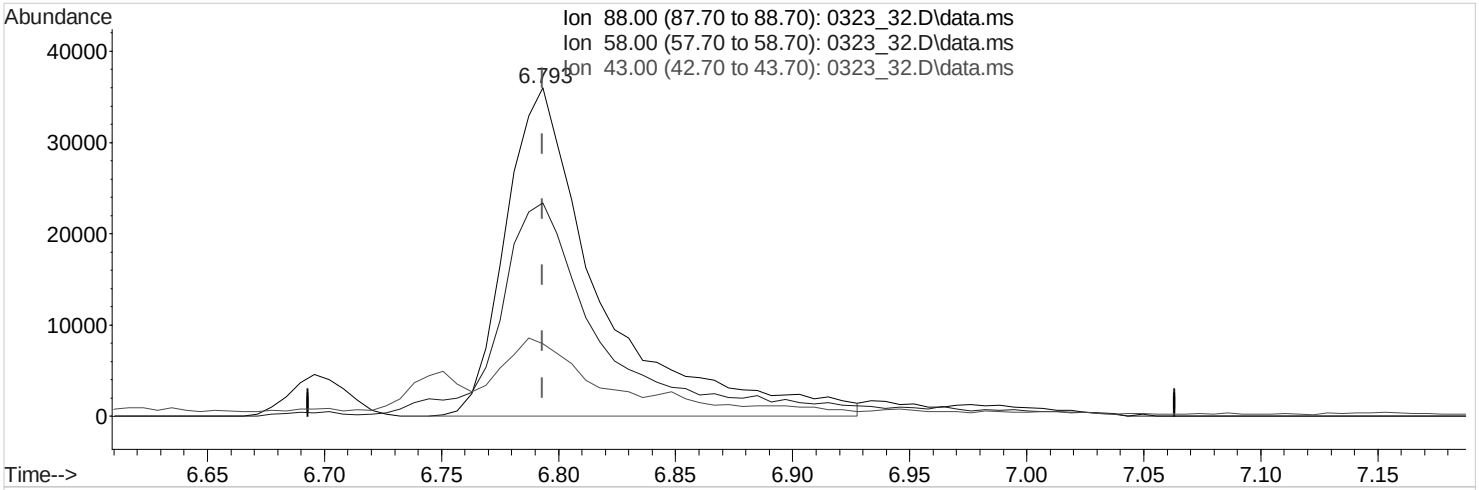
Data Path : C:\msdchem\1\data\032316\
Data File : 0323 32.D
Acq On : 24 Mar 2016 2:59 am
Operator :
Sample : STD VMS 12.5a ppb 16B23985
Misc : water
ALS Vial : 23 Sample Multiplier: 1
InstName : VOCMS26

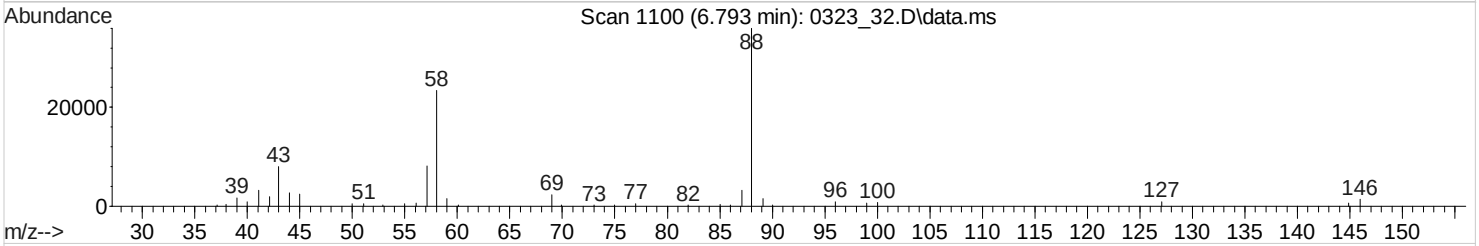
Quant Time: Mar 24 09:58:10 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:57:43 2016
Response via : Initial Calibration

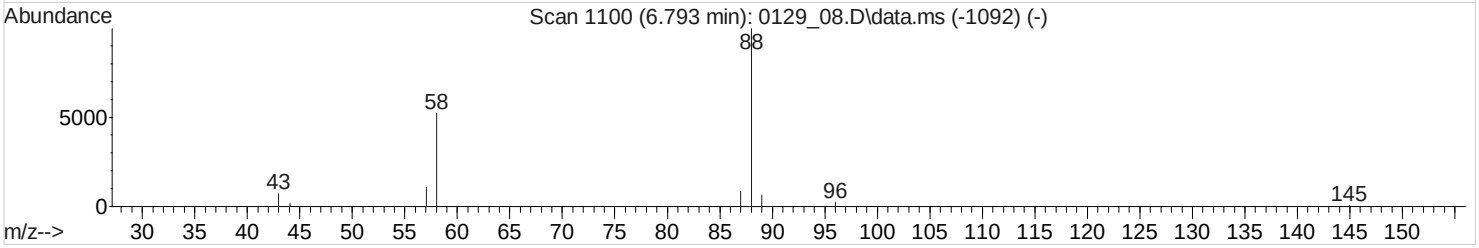


Data Path : C:\msdchem\1\data\032316\
Data File : 0323 32.D
Acq On : 24 Mar 2016 2:59 am
Operator :
Sample : STD VMS 12.5a ppb 16B23985
Misc : water
ALS Vial : 23 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 09:57:50 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:57:43 2016
Response via : Initial Calibration







TIC: 0323_32.D\data.ms

(119) 1,4-DIOXANE (T)

6.793min (+0.000) 1207.1947235 ppb

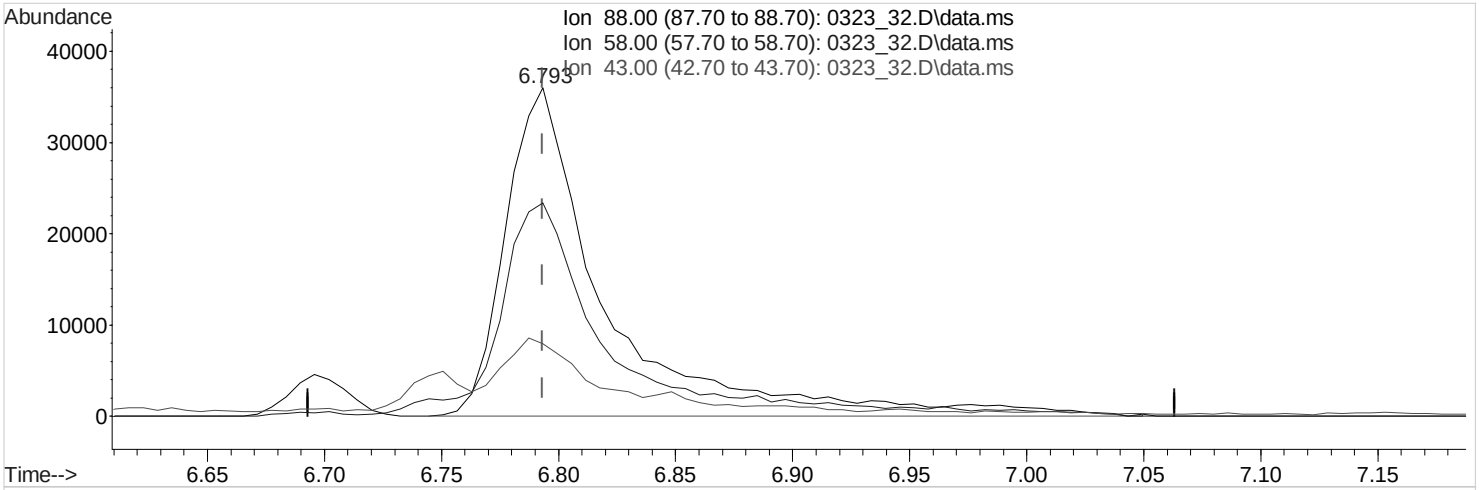
Qvalue = 93

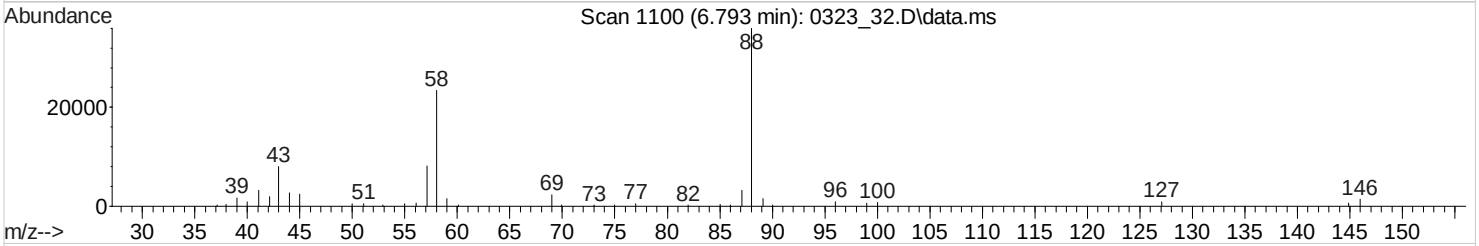
response 101001

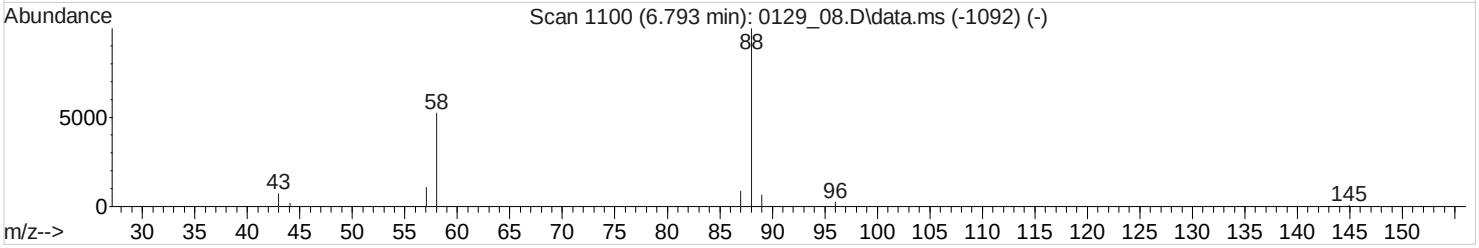
Ion	Exp%	Act%
88.00	100	100
58.00	64.60	68.83
43.00	20.40	14.39#
0.00	0.00	0.00

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 32.D
Acq On : 24 Mar 2016 2:59 am
Operator :
Sample : STD VMS 12.5a ppb 16B23985
Misc : water
ALS Vial : 23 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 09:57:50 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:57:43 2016
Response via : Initial Calibration







TIC: 0323_32.D\data.ms

(119) 1,4-DIOXANE (T)

6.793min (+0.000) 1285.9126020 ppb m

response 107587

Ion	Exp%	Act%
88.00	100	100
58.00	64.60	64.61
43.00	20.40	13.51#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 33.D
Acq On : 24 Mar 2016 3:19 am
Operator :
Sample : STD VMS 15a ppb 16B23985
Misc : water
ALS Vial : 24 Sample Multiplier: 1
InstName : VOCMS26

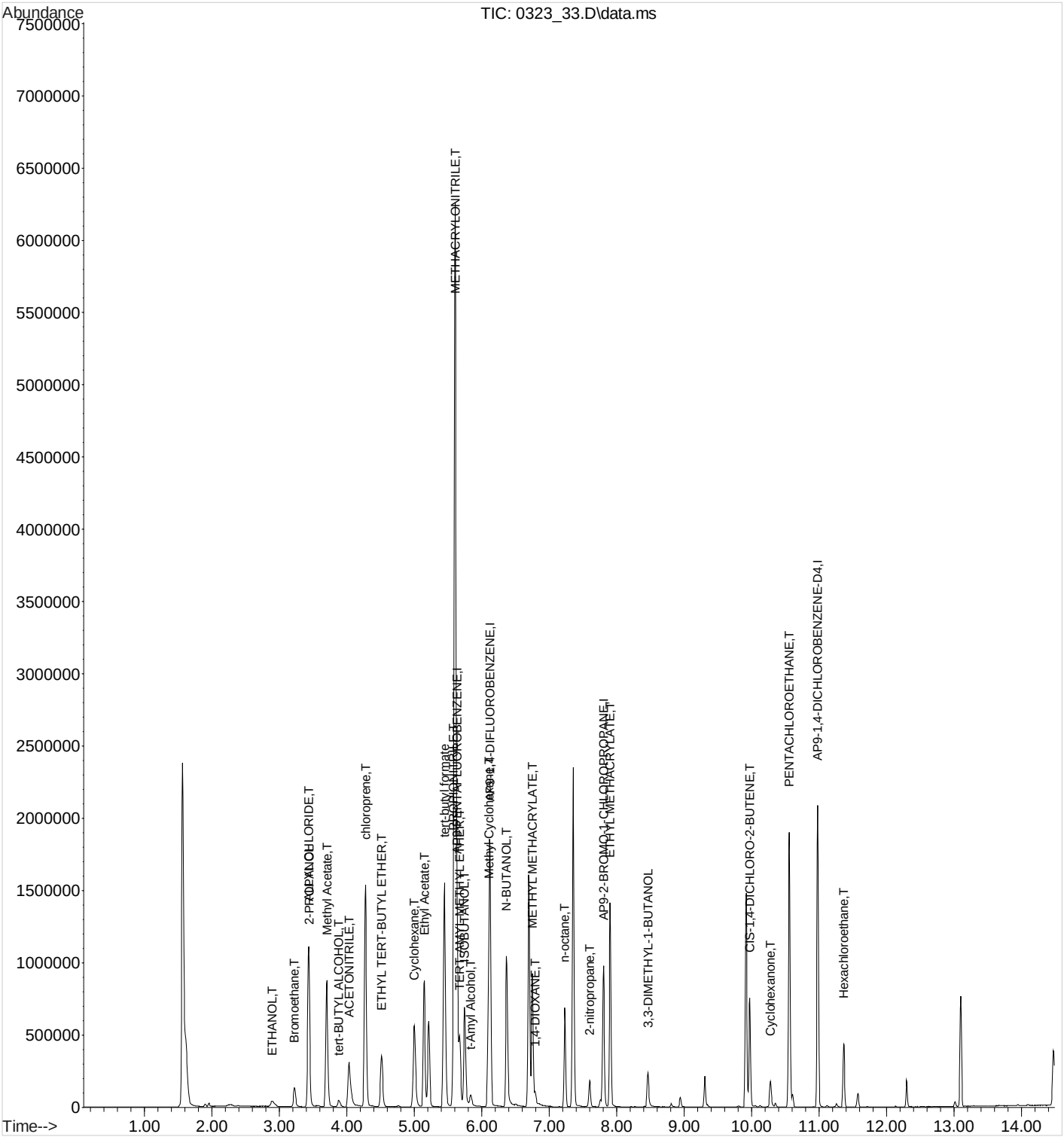
Quant Time: Mar 24 09:58:38 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:58:19 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 8260-PENTAFLUOROBENZENE	0.000	168	0m	40.0000000	ppb		-5.63
41) 8260-1,4-DIFLUOROBENZENE	0.000	114	0m	40.0000000	ppb		-6.12
53) 8260-2-BROMO-1-CHLOROP...	0.000	79	0m	40.0000000	ppb		-7.81
84) 8260-1,4-DICHLOROBENZE...	0.000	152	0m	40.0000000	ppb		-10.98
96) AP9-PENTAFLUOROBENZENE	5.635	168	676166	40.0000000	ppb		0.00
114) AP9-1,4-DIFLUOROBENZENE	6.123	114	1264925	40.0000000	ppb		0.00
122) AP9-2-BROMO-1-CHLOROPR...	7.805	79	209631	40.0000000	ppb		0.00
128) AP9-1,4-DICHLOROBENZEN...	10.981	152	504104	40.0000000	ppb		0.00
System Monitoring Compounds							
33) DIBROMOFLUOROMETHANE	0.000	111	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 79 - 121		Recovery =	0.00%#			
46) a,a,a-Trifluorotoluene	0.000	146	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 90 - 116		Recovery =	0.00%#			
50) TOLUENE-D8	0.000	98	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 90 - 115		Recovery =	0.00%#			
68) 4-BROMOFLUOROBENZENE	0.000	95	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 80 - 120		Recovery =	0.00%#			
Target Compounds							Qvalue
97) ETHANOL	2.892	45	87628	1195.9544611	ppb	#	92
98) Bromoethane	3.221	108	119981	11.7891850	ppb		99
99) 2-PROPANOL	3.440	45	32718	71.8122878	ppb	#	88
100) Methyl Acetate	3.702	43	1225461	238.1903048	ppb	#	99
101) ACETONITRILE	4.032	41	533759	618.1342743	ppb		99
102) ALLYL CHLORIDE	3.434	76	339834	59.0492741	ppb		99
103) tert-BUTYL ALCOHOL	3.879	59	72852	62.8046412	ppb		99
104) chloroprene	4.275	53	1005950	64.4500026	ppb		100
105) ETHYL TERT-BUTYL ETHER	4.513	59	363764	12.8074761	ppb		100
106) PROPIONITRILE	5.580	54	717206	636.6583680	ppb	#	99
107) Ethyl Acetate	5.147	43	1001559	128.3033613	ppb		100
108) METHACRYLONITRILE	5.604	67	2286084	640.3446490	ppb		100
109) Cyclohexane	5.001	56	358897	12.8407378	ppb		99
110) tert-butyl formate	5.446	59	957635	133.2961641	ppb		100
111) ISOBUTANOL	5.745	41	289135	1355.3256695	ppb		99
112) t-Amyl Alcohol	5.836	59	49771	60.9236100	ppb		92
113) TERT-AMYL METHYL ETHER	5.671	73	406894	12.8073879	ppb		99
115) N-BUTANOL	6.366	56	681952	2743.1575917	ppb		99
116) Methyl Cyclohexane	6.104	83	357776	15.8516057	ppb		99
117) 2-nitropropane	7.598	43	138535	65.8679588	ppb		100
118) METHYL METHACRYLATE	6.751	41	416149	64.9559598	ppb		99
119) 1,4-DIOXANE	6.793	88	111754m	1295.4472281	ppb		
120) n-octane	7.232	85	150742	13.2529822	ppb		99
121) 3,3-DIMETHYL-1-BUTANOL	8.464	57	129773	138.1650085	ppb		98
123) ETHYL METHACRYLATE	7.903	69	763414	67.9010926	ppb		100
124) CIS-1,4-DICHLORO-2-BUTENE	9.976	53	158807	66.2801609	ppb		100
125) Cyclohexanone	10.280	55	77037	110.6387492	ppb		99
126) PENTACHLOROETHANE	10.561	117	403369	68.5365068	ppb		99
127) Hexachloroethane	11.365	117	101555	13.3427715	ppb		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

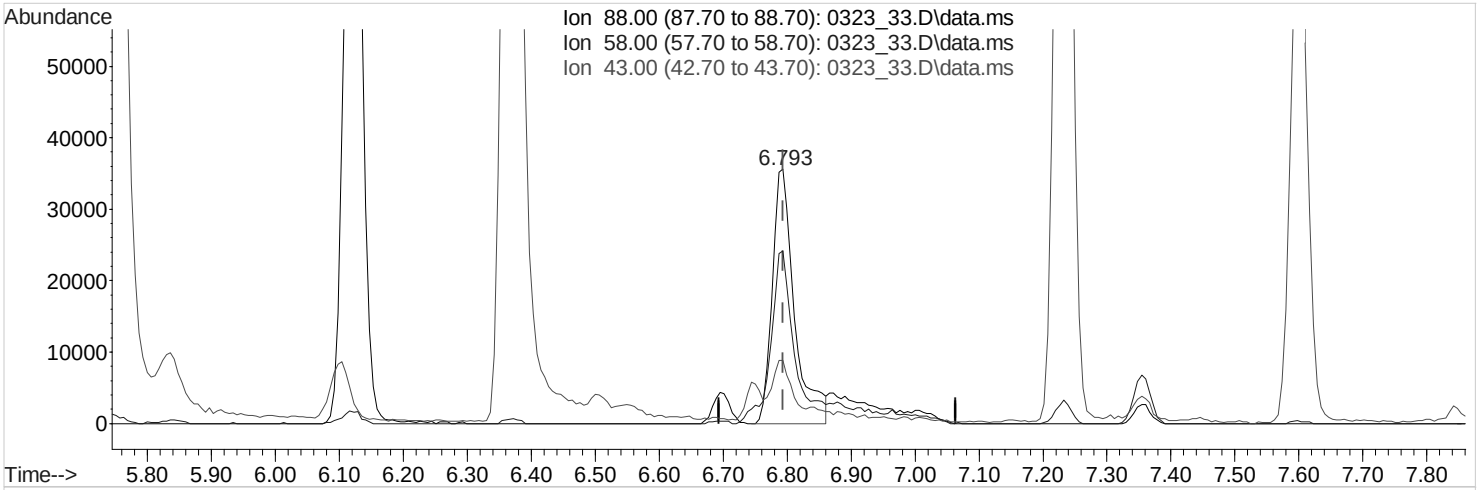
Data Path : C:\msdchem\1\data\032316\
Data File : 0323 33.D
Acq On : 24 Mar 2016 3:19 am
Operator :
Sample : STD VMS 15a ppb 16B23985
Misc : water
ALS Vial : 24 Sample Multiplier: 1
InstName : VOCMS26

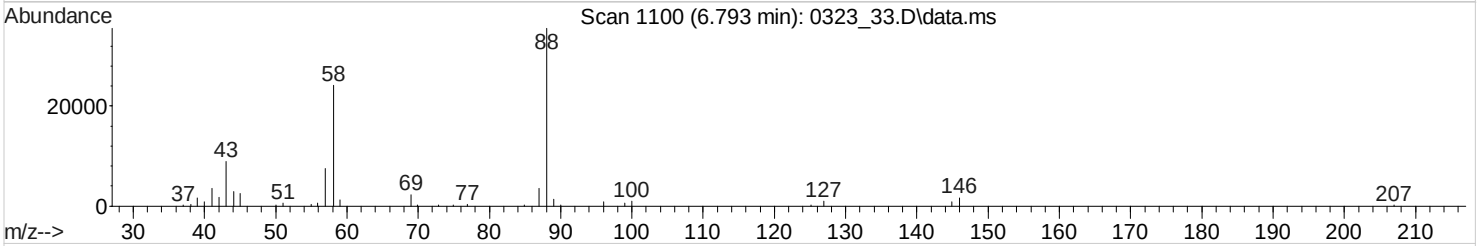
Quant Time: Mar 24 09:58:38 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:58:19 2016
Response via : Initial Calibration

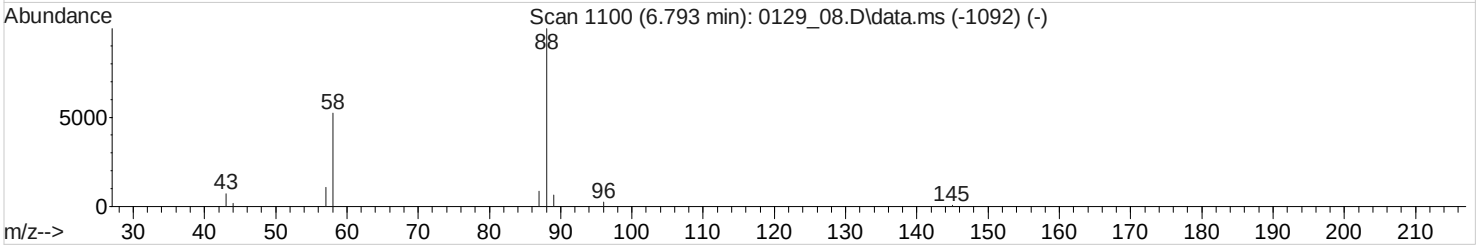


Data Path : C:\msdchem\1\data\032316\
Data File : 0323 33.D
Acq On : 24 Mar 2016 3:19 am
Operator :
Sample : STD VMS 15a ppb 16B23985
Misc : water
ALS Vial : 24 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 09:58:22 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:58:19 2016
Response via : Initial Calibration







TIC: 0323_33.D\data.ms

(119) 1,4-DIOXANE (T)

6.793min (+0.000) 1001.7998492 ppb

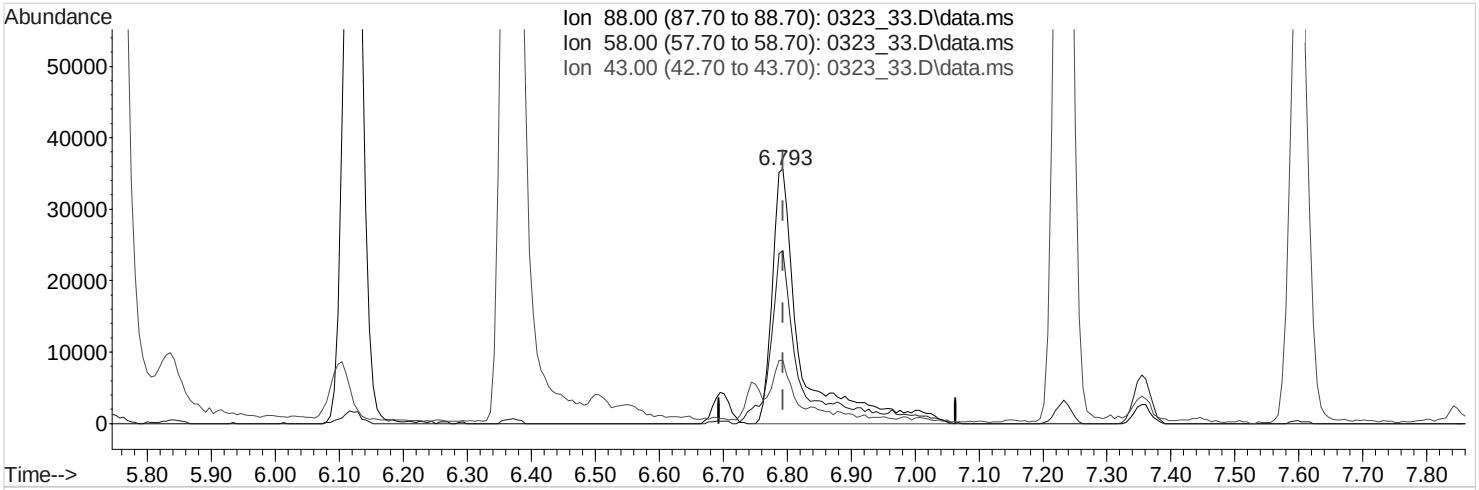
Qvalue = 88

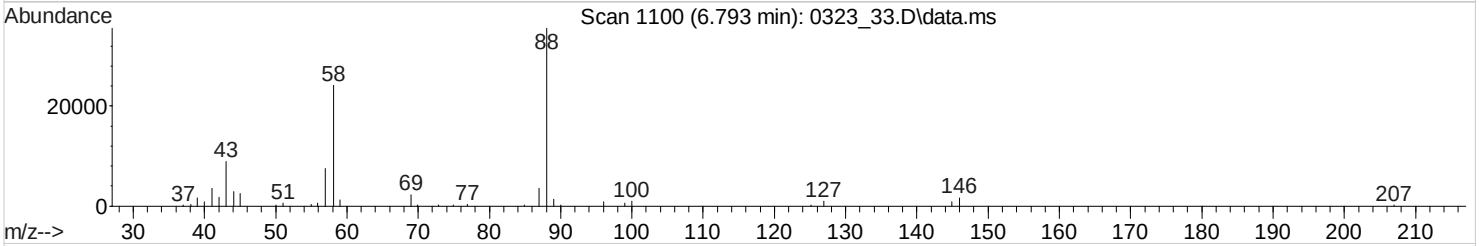
response 86422

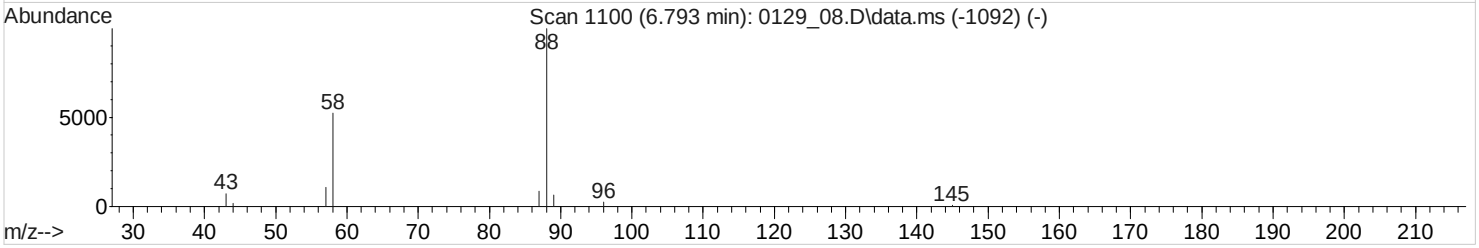
Ion	Exp%	Act%
88.00	100	100
58.00	64.60	74.29
43.00	20.40	16.28#
0.00	0.00	0.00

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 33.D
Acq On : 24 Mar 2016 3:19 am
Operator :
Sample : STD VMS 15a ppb 16B23985
Misc : water
ALS Vial : 24 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 09:58:22 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:58:19 2016
Response via : Initial Calibration







TIC: 0323_33.D\data.ms

(119) 1,4-DIOXANE (T)

6.793min (+0.000) 1295.4472281 ppb m

response 111754

Ion	Exp%	Act%
88.00	100	100
58.00	64.60	57.45
43.00	20.40	12.59#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 34.D
Acq On : 24 Mar 2016 3:39 am
Operator :
Sample : STD VMS 17.5a ppb 16B23985
Misc : water
ALS Vial : 25 Sample Multiplier: 1
InstName : VOCMS26

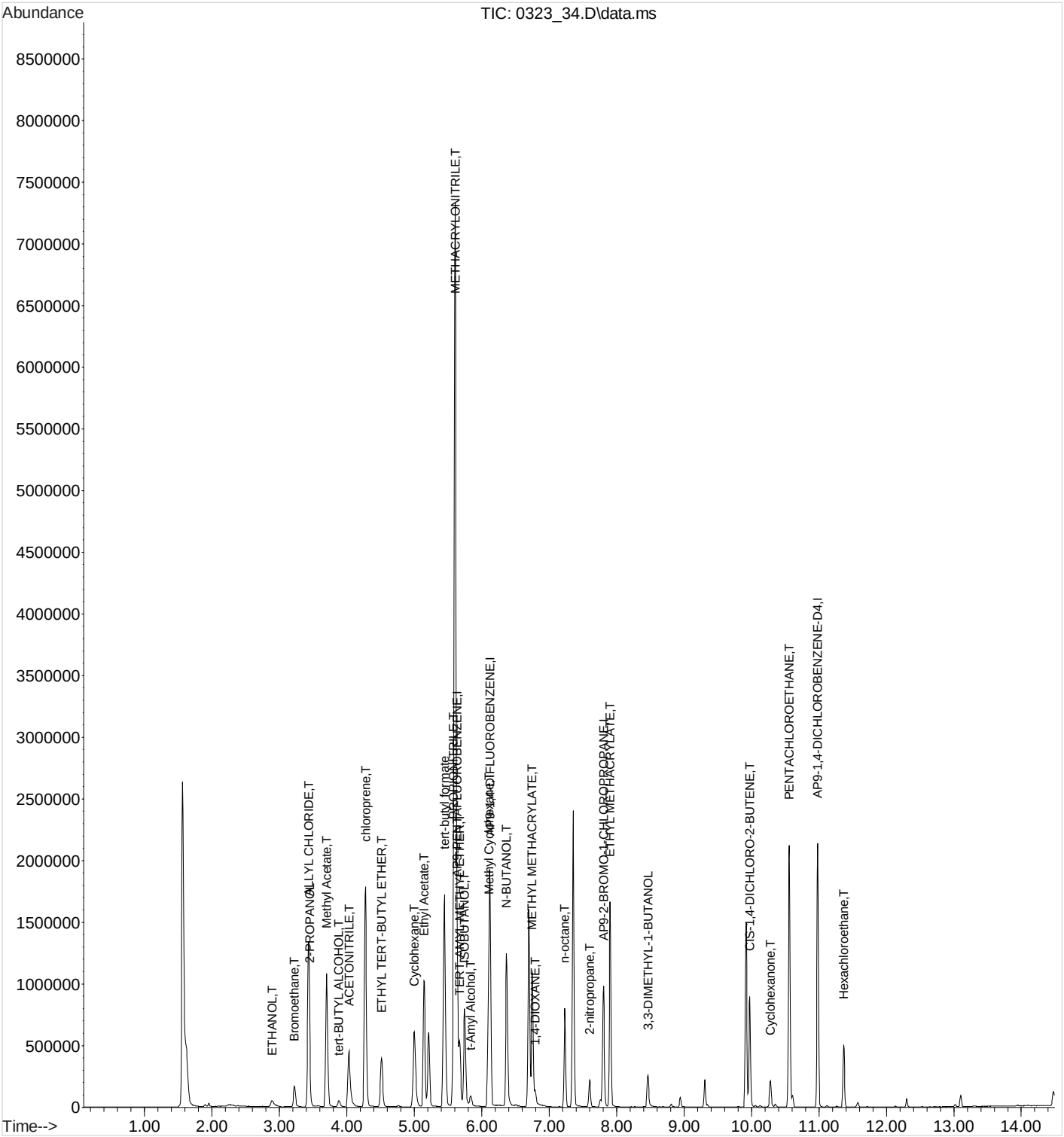
Quant Time: Mar 24 09:59:07 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:58:45 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 8260-PENTAFLUOROBENZENE	0.000	168	0m	40.0000000	ppb		-5.63
41) 8260-1,4-DIFLUOROBENZENE	0.000	114	0m	40.0000000	ppb		-6.12
53) 8260-2-BROMO-1-CHLOROP...	0.000	79	0m	40.0000000	ppb		-7.81
84) 8260-1,4-DICHLOROBENZE...	0.000	152	0m	40.0000000	ppb		-10.98
96) AP9-PENTAFLUOROBENZENE	5.635	168	693763	40.0000000	ppb		0.00
114) AP9-1,4-DIFLUOROBENZENE	6.123	114	1294243	40.0000000	ppb		0.00
122) AP9-2-BROMO-1-CHLOROPR...	7.805	79	211675	40.0000000	ppb		0.00
128) AP9-1,4-DICHLOROBENZEN...	10.982	152	509045	40.0000000	ppb		0.00
System Monitoring Compounds							
33) DIBROMOFLUOROMETHANE	0.000	111	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 79 - 121		Recovery =	0.00%#			
46) a,a,a-Trifluorotoluene	0.000	146	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 90 - 116		Recovery =	0.00%#			
50) TOLUENE-D8	0.000	98	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 90 - 115		Recovery =	0.00%#			
68) 4-BROMOFLUOROBENZENE	0.000	95	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 80 - 120		Recovery =	0.00%#			
Target Compounds							Qvalue
97) ETHANOL	2.892	45	114100	1691.7895299	ppb	#	92
98) Bromoethane	3.221	108	150378	14.8554381	ppb		98
99) 2-PROPANOL	3.447	45	40586	89.2986410	ppb	#	81
100) Methyl Acetate	3.703	43	1517881	296.2641273	ppb	#	100
101) ACETONITRILE	4.032	41	657561	761.3134180	ppb		98
102) ALLYL CHLORIDE	3.434	76	430567	75.2021320	ppb		99
103) tert-BUTYL ALCOHOL	3.879	59	82884	71.2968780	ppb		97
104) chloroprene	4.276	53	1181181	75.2698969	ppb		100
105) ETHYL TERT-BUTYL ETHER	4.513	59	411078	14.4070435	ppb		100
106) PROPIONITRILE	5.580	54	833167	736.7419745	ppb	#	98
107) Ethyl Acetate	5.141	43	1189227	151.6130190	ppb		100
108) METHACRYLONITRILE	5.605	67	2680920	747.5060554	ppb		100
109) Cyclohexane	5.001	56	399754	14.2324373	ppb		100
110) tert-butyl formate	5.446	59	1069057	147.3754621	ppb		99
111) ISOBUTANOL	5.745	41	342178	1585.1224361	ppb		98
112) t-Amyl Alcohol	5.836	59	54832	67.2185091	ppb		95
113) TERT-AMYL METHYL ETHER	5.672	73	451509	14.1466256	ppb		99
115) N-BUTANOL	6.367	56	771159	3069.2641126	ppb		99
116) Methyl Cyclohexane	6.105	83	387176	16.5304525	ppb		99
117) 2-nitropropane	7.598	43	163304	77.2291436	ppb		99
118) METHYL METHACRYLATE	6.745	41	492614	76.6152221	ppb		99
119) 1,4-DIOXANE	6.793	88	127086m	1468.4102030	ppb		
120) n-octane	7.232	85	172431	15.0671230	ppb		99
121) 3,3-DIMETHYL-1-BUTANOL	8.464	57	143179	150.6832269	ppb		99
123) ETHYL METHACRYLATE	7.903	69	899489	80.3176352	ppb		99
124) CIS-1,4-DICHLORO-2-BUTENE	9.976	53	185314	77.8900436	ppb		98
125) Cyclohexanone	10.281	55	87799	129.7408551	ppb		99
126) PENTACHLOROETHANE	10.561	117	454402	77.4150831	ppb		99
127) Hexachloroethane	11.366	117	116707	15.4289644	ppb		100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

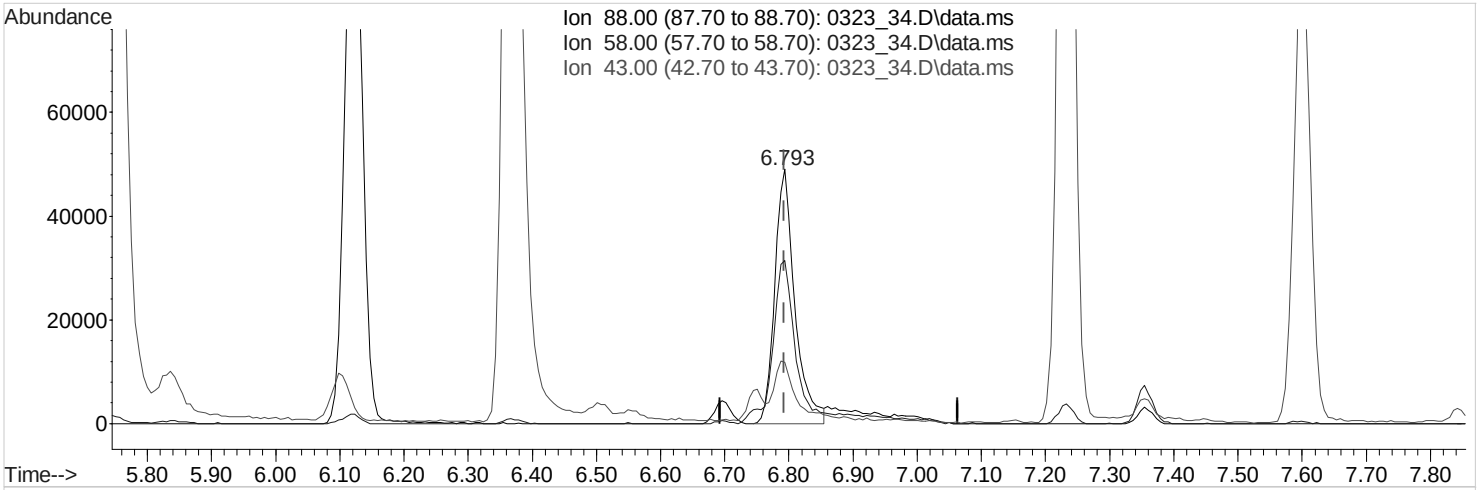
Data Path : C:\msdchem\1\data\032316\
Data File : 0323 34.D
Acq On : 24 Mar 2016 3:39 am
Operator :
Sample : STD VMS 17.5a ppb 16B23985
Misc : water
ALS Vial : 25 Sample Multiplier: 1
InstName : VOCMS26

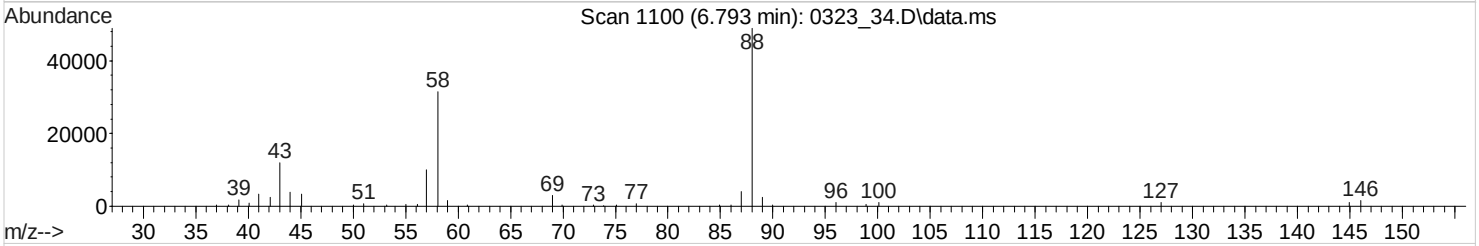
Quant Time: Mar 24 09:59:07 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:58:45 2016
Response via : Initial Calibration

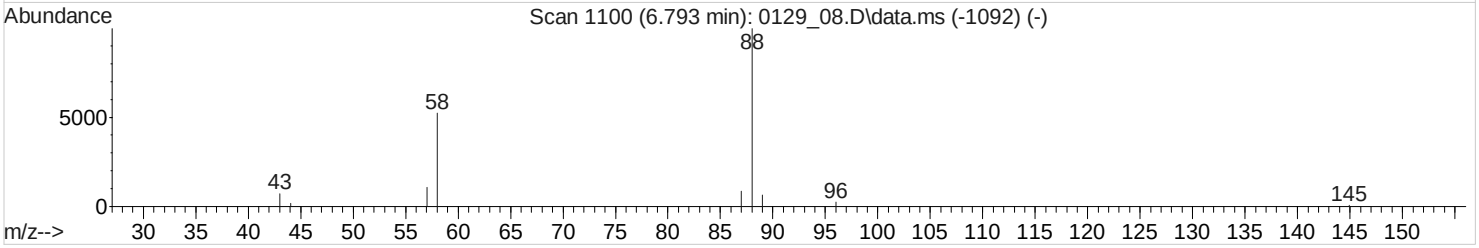


Data Path : C:\msdchem\1\data\032316\
Data File : 0323 34.D
Acq On : 24 Mar 2016 3:39 am
Operator :
Sample : STD VMS 17.5a ppb 16B23985
Misc : water
ALS Vial : 25 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 09:58:49 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:58:45 2016
Response via : Initial Calibration







TIC: 0323_34.D\data.ms

(119) 1,4-DIOXANE (T)

6.793min (+0.000) 1242.5320491 ppb

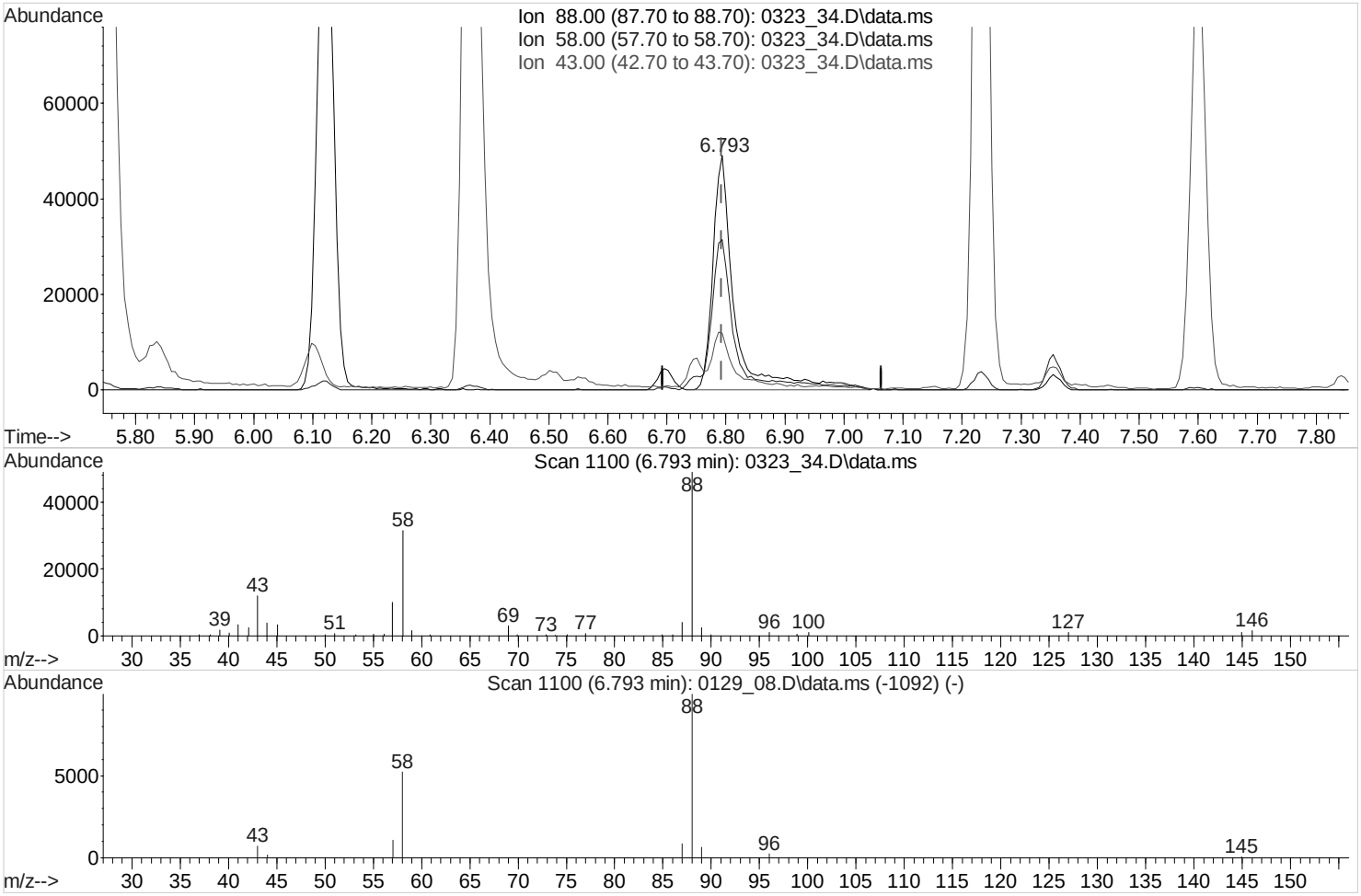
Qvalue = 90

response 107537

Ion	Exp%	Act%
88.00	100	100
58.00	64.60	73.38
43.00	20.40	23.61
0.00	0.00	0.00

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 34.D
Acq On : 24 Mar 2016 3:39 am
Operator :
Sample : STD VMS 17.5a ppb 16B23985
Misc : water
ALS Vial : 25 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 09:58:49 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:58:45 2016
Response via : Initial Calibration



TIC: 0323_34.D\data.ms

(119) 1,4-DIOXANE (T)

6.793min (+0.000) 1468.4102030 ppb m

response 127086

Ion	Exp%	Act%
88.00	100	100
58.00	64.60	62.09
43.00	20.40	19.98
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 35.D
Acq On : 24 Mar 2016 3:58 am
Operator :
Sample : STD VMS 20a ppb 16B23985
Misc : water
ALS Vial : 26 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 09:59:36 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:59:14 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 8260-PENTAFLUOROBENZENE	5.635	168	689059	40.0000000	ppb	0.00
41) 8260-1,4-DIFLUOROBENZENE	0.000	114	0m	40.0000000	ppb	-6.12
53) 8260-2-BROMO-1-CHLOROP...	0.000	79	0m	40.0000000	ppb	-7.81
84) 8260-1,4-DICHLOROBENZE...	0.000	152	0m	40.0000000	ppb	-10.98
96) AP9-PENTAFLUOROBENZENE	5.635	168	689059	40.0000000	ppb	0.00
114) AP9-1,4-DIFLUOROBENZENE	6.123	114	1287896	40.0000000	ppb	0.00
122) AP9-2-BROMO-1-CHLOROPR...	7.805	79	214690	40.0000000	ppb	0.00
128) AP9-1,4-DICHLOROBENZEN...	10.982	152	523254	40.0000000	ppb	0.00
System Monitoring Compounds						
33) DIBROMOFLUOROMETHANE	0.000	111	0d	0.0000000	ppb	
Spiked Amount 40.000	Range 79 - 121		Recovery =	0.00%#		
46) a,a,a-Trifluorotoluene	0.000	146	0d	0.0000000	ppb	
Spiked Amount 40.000	Range 90 - 116		Recovery =	0.00%#		
50) TOLUENE-D8	0.000	98	0d	0.0000000	ppb	
Spiked Amount 40.000	Range 90 - 115		Recovery =	0.00%#		
68) 4-BROMOFLUOROBENZENE	0.000	95	0d	0.0000000	ppb	
Spiked Amount 40.000	Range 80 - 120		Recovery =	0.00%#		
Target Compounds						Qvalue
3) PROPENE	1.666	41	902	0.6892446	ppb #	59
7) 1,3-BUTADIENE	1.953	39	9520	1.3653967	ppb	99
97) ETHANOL	2.892	45	114455	1733.9968041	ppb #	91
98) Bromoethane	3.221	108	173691	17.6082169	ppb	99
99) 2-PROPANOL	3.447	45	45211	99.6326043	ppb #	88
100) Methyl Acetate	3.703	43	1784496	357.5422549	ppb #	100
101) ACETONITRILE	4.032	41	776646	920.2726739	ppb	98
102) ALLYL CHLORIDE	3.434	76	493415	88.3190022	ppb	100
103) tert-BUTYL ALCOHOL	3.885	59	107995	95.7478677	ppb	99
104) chloroprene	4.276	53	1356349	88.5698525	ppb	100
105) ETHYL TERT-BUTYL ETHER	4.513	59	499456	18.0220768	ppb	100
106) PROPIONITRILE	5.586	54	972136	882.9350579	ppb #	99
107) Ethyl Acetate	5.147	43	1374641	179.4452289	ppb	100
108) METHACRYLONITRILE	5.605	67	3131103	895.2943594	ppb	100
109) Cyclohexane	5.001	56	485135	17.8057501	ppb	100
110) tert-butyl formate	5.446	59	1339616	189.6769075	ppb	99
111) ISOBUTANOL	5.745	41	397563	1876.3611924	ppb	99
112) t-Amyl Alcohol	5.836	59	67704	86.0583044	ppb	99
113) TERT-AMYL METHYL ETHER	5.672	73	557213	18.0090804	ppb	99
115) N-BUTANOL	6.367	56	916794	3724.1741399	ppb	99
116) Methyl Cyclohexane	6.105	83	469579	20.8097845	ppb	98
117) 2-nitropropane	7.598	43	190725	91.9912486	ppb	100
118) METHYL METHACRYLATE	6.751	41	561601	89.1615099	ppb	99
119) 1,4-DIOXANE	6.787	88	140098m	1660.1254199	ppb	
120) n-octane	7.232	85	197647	17.6625590	ppb	100
121) 3,3-DIMETHYL-1-BUTANOL	8.464	57	180025	193.7595115	ppb	98
123) ETHYL METHACRYLATE	7.903	69	1048999	93.3097421	ppb	99
124) CIS-1,4-DICHLORO-2-BUTENE	9.976	53	217900	91.5571404	ppb	98
125) Cyclohexanone	10.281	55	119833	180.4235312	ppb	100
126) PENTACHLOROETHANE	10.561	117	548582	93.4947138	ppb	98
127) Hexachloroethane	11.366	117	139527	18.4598616	ppb	100

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 35.D
Acq On : 24 Mar 2016 3:58 am
Operator :
Sample : STD VMS 20a ppb 16B23985
Misc : water
ALS Vial : 26 Sample Multiplier: 1
InstName : VOCMS26

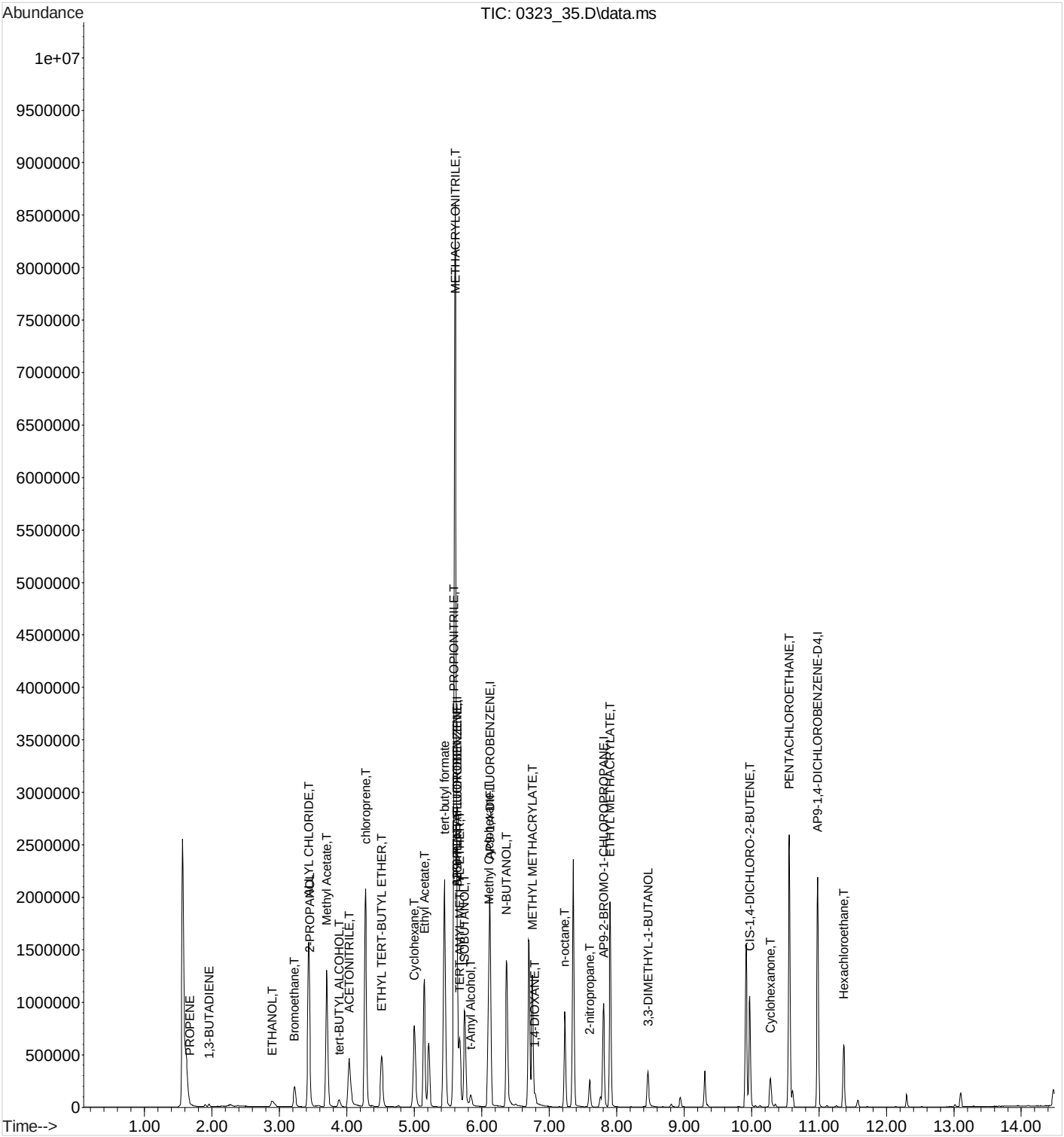
Quant Time: Mar 24 09:59:36 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:59:14 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

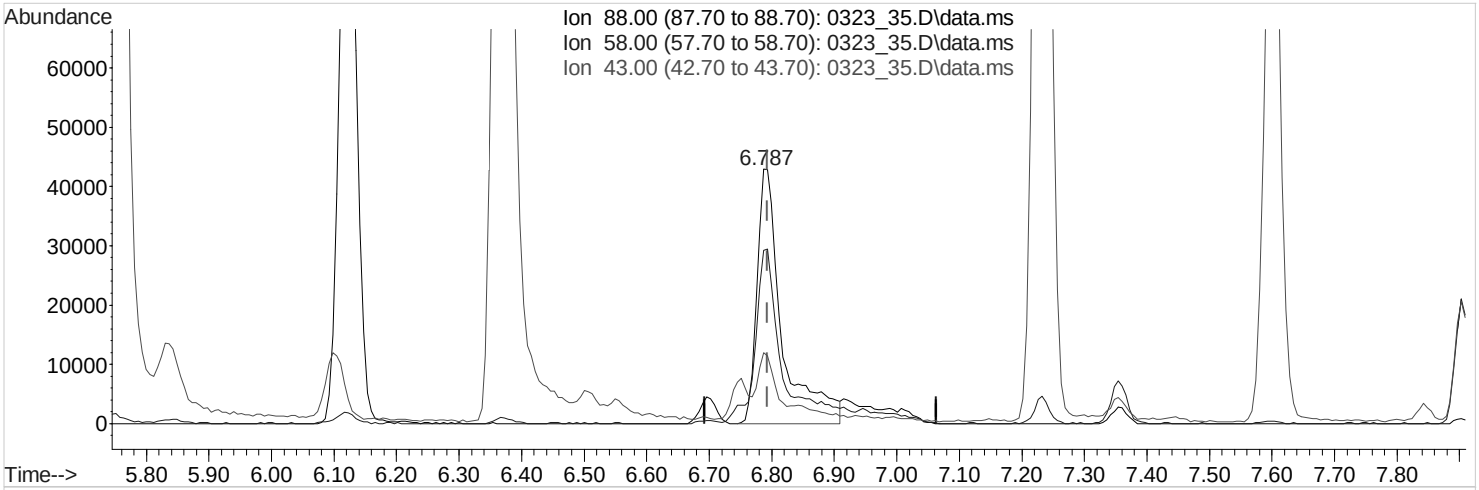
Data Path : C:\msdchem\1\data\032316\
Data File : 0323 35.D
Acq On : 24 Mar 2016 3:58 am
Operator :
Sample : STD VMS 20a ppb 16B23985
Misc : water
ALS Vial : 26 Sample Multiplier: 1
InstName : VOCMS26

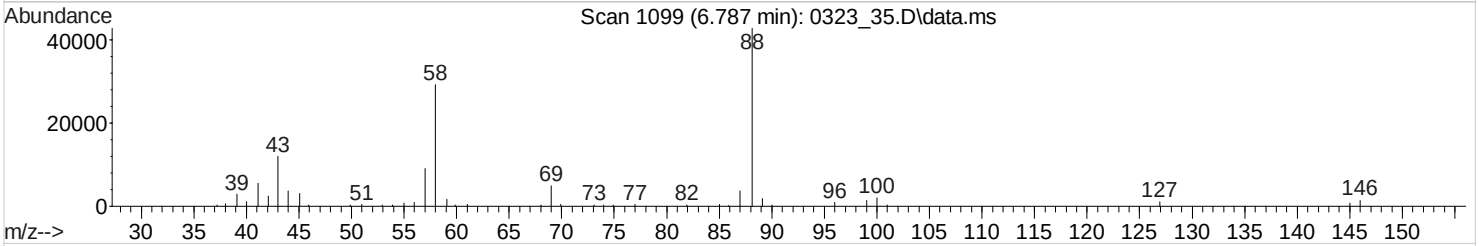
Quant Time: Mar 24 09:59:36 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:59:14 2016
Response via : Initial Calibration

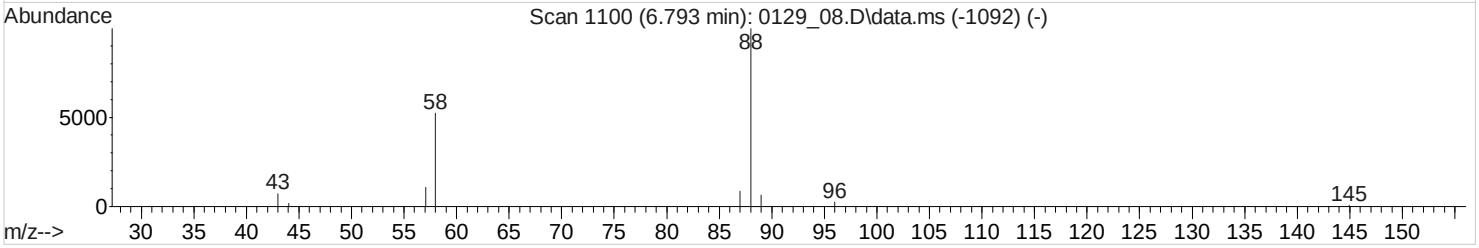


Data Path : C:\msdchem\1\data\032316\
Data File : 0323 35.D
Acq On : 24 Mar 2016 3:58 am
Operator :
Sample : STD VMS 20a ppb 16B23985
Misc : water
ALS Vial : 26 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 09:59:18 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:59:14 2016
Response via : Initial Calibration







TIC: 0323_35.D\data.ms

(119) 1,4-DIOXANE (T)

6.787min (-0.006) 1425.7374857 ppb

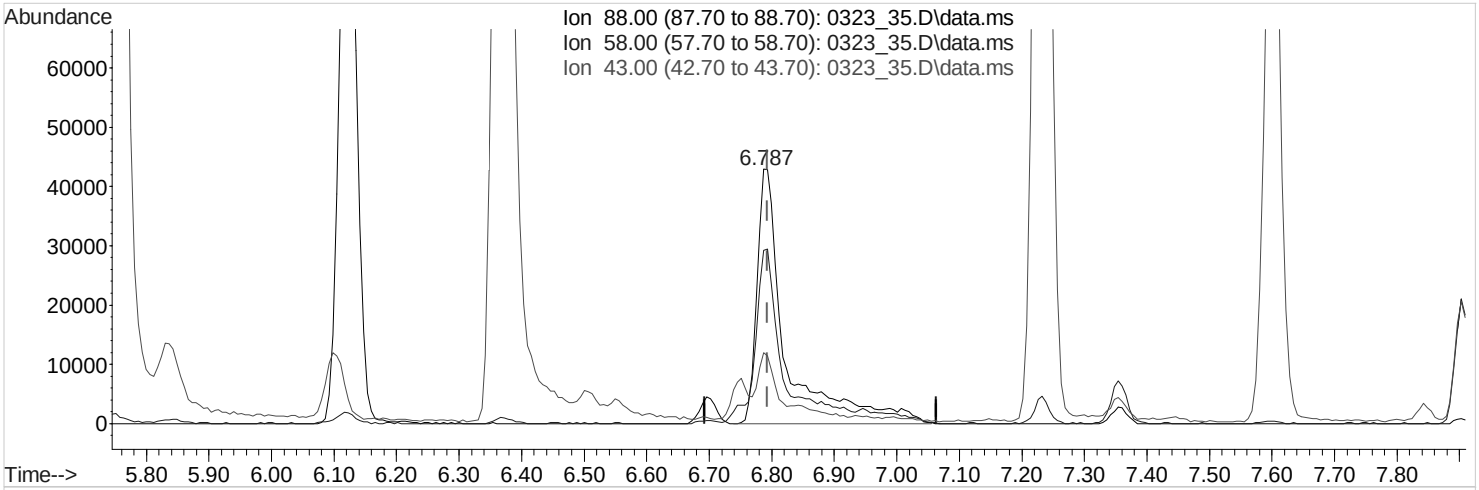
Qvalue = 89

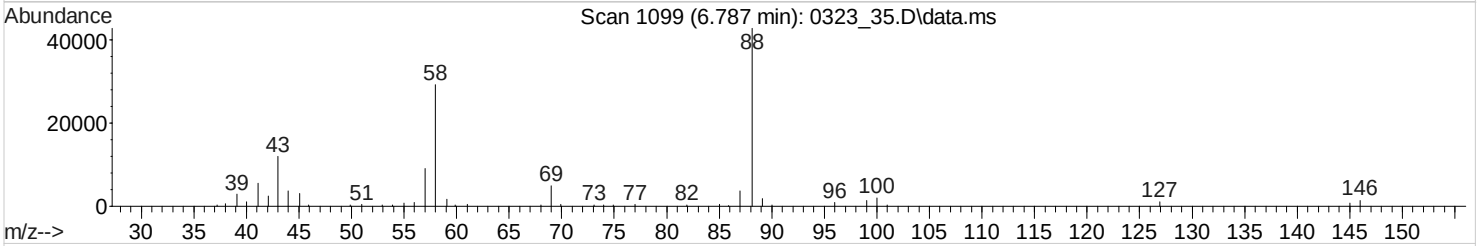
response 120318

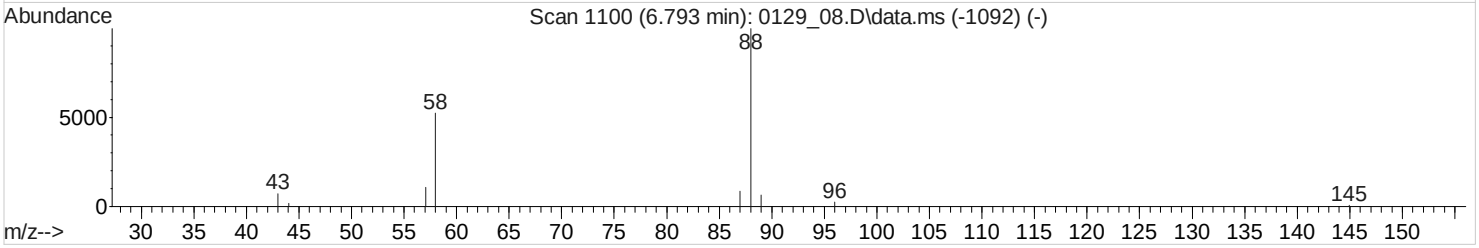
Ion	Exp%	Act%
88.00	100	100
58.00	64.60	72.79
43.00	20.40	13.53#
0.00	0.00	0.00

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 35.D
Acq On : 24 Mar 2016 3:58 am
Operator :
Sample : STD VMS 20a ppb 16B23985
Misc : water
ALS Vial : 26 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 09:59:18 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 09:59:14 2016
Response via : Initial Calibration







TIC: 0323_35.D\data.ms

(119) 1,4-DIOXANE (T)

6.787min (-0.006) 1660.1254199 ppb m

response 140098

Ion	Exp%	Act%
88.00	100	100
58.00	64.60	62.51
43.00	20.40	11.62#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 39.D
Acq On : 24 Mar 2016 11:31 am
Operator :
Sample : STD VMS 1a ppb 16B23985
Misc : water
ALS Vial : 30 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 11:46:37 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 10:05:37 2016
Response via : Initial Calibration

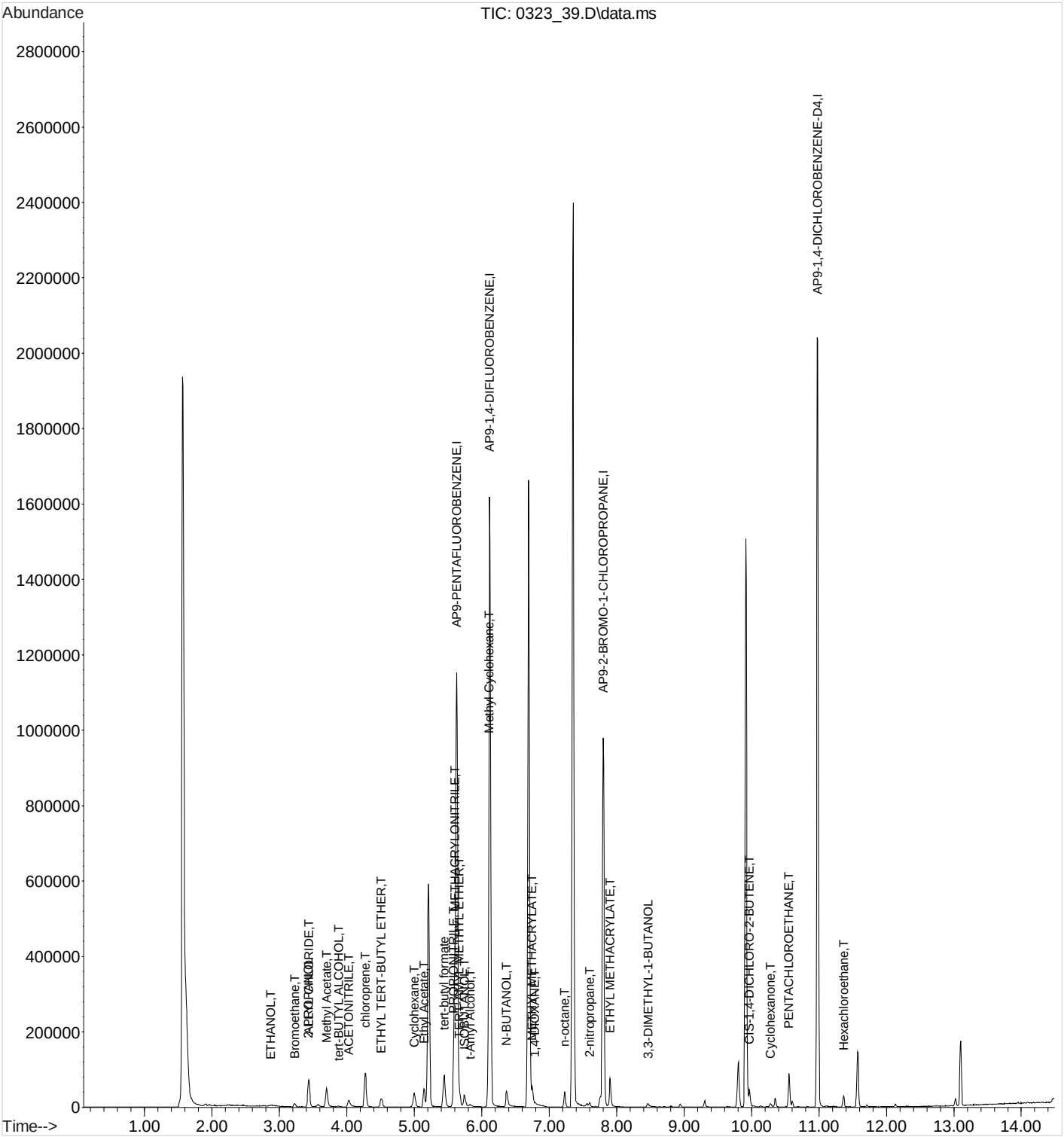
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 8260-PENTAFLUOROBENZENE	0.000	168	0m	40.0000000	ppb		-5.63
41) 8260-1,4-DIFLUOROBENZENE	0.000	114	0m	40.0000000	ppb		-6.12
53) 8260-2-BROMO-1-CHLOROP...	0.000	79	0m	40.0000000	ppb		-7.81
84) 8260-1,4-DICHLOROBENZE...	0.000	152	0m	40.0000000	ppb		-10.98
96) AP9-PENTAFLUOROBENZENE	5.629	168	695973	40.0000000	ppb		0.00
114) AP9-1,4-DIFLUOROBENZENE	6.117	114	1303258	40.0000000	ppb		0.00
122) AP9-2-BROMO-1-CHLOROPR...	7.799	79	213403	40.0000000	ppb		0.00
128) AP9-1,4-DICHLOROBENZEN...	10.982	152	512352	40.0000000	ppb		0.00
System Monitoring Compounds							
33) DIBROMOFLUOROMETHANE	0.000	111	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 79 - 121		Recovery =	0.00%#			
46) a,a,a-Trifluorotoluene	0.000	146	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 90 - 116		Recovery =	0.00%#			
50) TOLUENE-D8	0.000	98	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 90 - 115		Recovery =	0.00%#			
68) 4-BROMOFLUOROBENZENE	0.000	95	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 80 - 120		Recovery =	0.00%#			
Target Compounds							Qvalue
97) ETHANOL	2.873	45	4444	58.8046910	ppb	#	95
98) Bromoethane	3.227	108	7746	0.7879325	ppb		94
99) 2-PROPANOL	3.428	45	2222	4.7459991	ppb	#	47
100) Methyl Acetate	3.696	43	75366	15.1287732	ppb	#	99
101) ACETONITRILE	4.026	41	29677	35.1270607	ppb		96
102) ALLYL CHLORIDE	3.434	76	21976	3.9457360	ppb		98
103) tert-BUTYL ALCOHOL	3.879	59	3632	3.2032589	ppb	#	74
104) chloroprene	4.269	53	60805	3.9817017	ppb		99
105) ETHYL TERT-BUTYL ETHER	4.507	59	21998	0.7946090	ppb		99
106) PROPIONITRILE	5.580	54	40396	36.8035862	ppb	#	99
107) Ethyl Acetate	5.141	43	57539	7.5224071	ppb		100
108) METHACRYLONITRILE	5.598	67	132795	38.0361385	ppb		99
109) Cyclohexane	5.001	56	21491	0.7905785	ppb		96
110) tert-butyl formate	5.440	59	50314	7.0928654	ppb		94
111) ISOBUTANOL	5.745	41	13473	63.3916703	ppb		94
112) t-Amyl Alcohol	5.830	59	2419	3.0921358	ppb		91
113) TERT-AMYL METHYL ETHER	5.666	73	25795	0.8346419	ppb	#	64
115) N-BUTANOL	6.367	56	31060	125.6464918	ppb		97
116) Methyl Cyclohexane	6.104	83	35116	0.1676079	ppb	#	82
117) 2-nitropropane	7.598	43	8175	3.9315062	ppb		98
118) METHYL METHACRYLATE	6.745	41	23109	3.6698046	ppb		97
119) 1,4-DIOXANE	6.787	88	3646	43.1722044	ppb	#	88
120) n-octane	7.232	85	9210	0.8240433	ppb		99
121) 3,3-DIMETHYL-1-BUTANOL	8.464	57	6282	6.7048154	ppb		93
123) ETHYL METHACRYLATE	7.903	69	40716	3.6708679	ppb		95
124) CIS-1,4-DICHLORO-2-BUTENE	9.970	53	7941	3.3885571	ppb		85
125) Cyclohexanone	10.281	55	4727	7.2387374	ppb		99
126) PENTACHLOROETHANE	10.555	117	18465	3.1890155	ppb		94
127) Hexachloroethane	11.366	117	6285	0.8437596	ppb		98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\032316\
Data File : 0323 39.D
Acq On : 24 Mar 2016 11:31 am
Operator :
Sample : STD VMS 1a ppb 16B23985
Misc : water
ALS Vial : 30 Sample Multiplier: 1
InstName : VOCMS26

Quant Time: Mar 24 11:46:37 2016
Quant Method : C:\msdchem\1\methods\V826C23P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS26
QLast Update : Thu Mar 24 10:05:37 2016
Response via : Initial Calibration



Semi-Volatiles by Method 8270C

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12065 Lebanon Rd
Mt. Juliet, TN 37122
(615) 758-5858
(800) 767-5859
Fax (615) 758-5859
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Est. 1970

Quality Control Summary
SDG: L835437

Semi-Volatiles by Method 8270C
Weston Solutions - CO

Project: Cowboy Timber
Project No: 20408.012.001.0345.0

Login No: L835437

Lab SampleID.	Client ID
L835437-01	CTDO-01-20160511
L835437-02	CTDO-02-20160511
L835437-03	CTDO-03-20160511
L835437-04	CTDO-04-20160511
L835437-05	CTGW-01-20160511

I certify that this data package accurately represents the information in the raw data found herein, both technically and for completeness. Release of the data contained in this data package has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: _____ Name: ESC Lab Sciences

Date: _____ Title: Quality Control

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Quality Control Summary
SDG: L835437
Weston Solutions - CO

Test:	Semi-Volatiles by Method 8270C		
Project No:	20408.012.001.0345.0	Matrix:	Water - ug/L
Project:	Cowboy Timber	EPA ID:	TN00003
Collection Date:	5/11/2016	**Analytic Batch:**	**WG872624**
Analysis Date:	5/17/2016	Analyst:	694
Instrument ID:	BNAMS23	Prep Date:	5/15/2016
Sample Numbers:	L835437-05		

Method Blank Summary

Instrument	Client Sample ID	Lab Sample ID	File Name	Analysis Date	Analysis Time
BNAMS23	LCS WG872624	LCS WG872624	0517a_08.D	5/17/2016	5:56 PM
BNAMS23	LCSD WG872624	LCSD WG872624	0517a_09.D	5/17/2016	6:20 PM
BNAMS23	Blank WG872624	Blank WG872624	0517a_10.D	5/17/2016	6:43 PM
BNAMS23	CTGW-01-20160511	L835437-05	0517a_11.D	5/17/2016	7:06 PM

Parameters in bold text are reported in this SDG

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Quality Control Summary
SDG: L835437
Weston Solutions - CO

Test:	Semi-Volatiles by Method 8270C		
Project No:	20408.012.001.0345.0	Matrix:	Water - ug/L
Project:	Cowboy Timber	EPA ID:	TN00003
Collection Date:	5/11/2016	**Analytic Batch:**	**WG872624**
Analysis Date:	5/17/2016	Analyst:	694
Instrument ID:	BNAMS23	Prep Date:	5/15/2016
Sample Numbers:	L835437-05		

Internal Standard Response and Retention Time Summary

File ID: 0517a_03
Analyzed: 05/17/16 160100

	IS4		NAP		ACE		PHEN	
	Response	**RT**	**Response**	**RT**	**Response**	**RT**	**Response**	**RT**
12 Hr. Std	63031	5.43	357840	6.71	212128	8.60	372952	10.23
Upper Limit	126000	5.93	716000	7.21	424000	9.10	746000	10.73
Lower Limit	31500	4.93	179000	6.21	106000	8.10	186000	9.73
Sample ID	**Response**	**RT**	**Response**	**RT**	**Response**	**RT**	**Response**	**RT**
L835437-05	64006	5.43	366323	6.71	212992	8.60	375197	10.23
LCSD WG872624	62926	5.43	368862	6.71	216526	8.60	368728	10.23
LCS WG872624	61277	5.43	350257	6.71	205909	8.60	356847	10.23
BLANK WG872624	66333	5.43	376661	6.71	222666	8.60	383848	10.23

Legend:
IS4 -- 1,4-Dichlorobenzene-d4
NAP -- Naphthalene-d8
ACE -- Acenaphthene-d10
PHEN -- Phenanthrene-d10
CHR -- Chrysene-d12
PER -- Perylene-d12

Parameters in bold text are reported in this SDG

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Quality Control Summary
SDG: L835437
Weston Solutions - CO

Test:	Semi-Volatiles by Method 8270C		
Project No:	20408.012.001.0345.0	Matrix:	Water - ug/L
Project:	Cowboy Timber	EPA ID:	TN00003
Collection Date:	5/11/2016	**Analytic Batch:**	**WG872624**
Analysis Date:	5/17/2016	Analyst:	694
Instrument ID:	BNAMS23	Prep Date:	5/15/2016
Sample Numbers:	L835437-05		

Internal Standard Response and Retention Time Summary

File ID: 0517a_03
Analyzed: 05/17/16 160100

	IS4		CHR		PER	
	Response	**RT**	**Response**	**RT**	**Response**	**RT**
12 Hr. Std	63031	5.43	361516	13.13	352138	15.01
Upper Limit	126000	5.93	723000	13.63	704000	15.51
Lower Limit	31500	4.93	181000	12.63	176000	14.51
Sample ID	**Response**	**RT**	**Response**	**RT**	**Response**	**RT**
L835437-05	64006	5.43	343811	13.12	329290	15.01
LCSD WG872624	62926	5.43	363403	13.13	349090	15.01
LCS WG872624	61277	5.43	343392	13.13	332090	15.01
BLANK WG872624	66333	5.43	353794	13.12	344261	15.01

Legend:
IS4 -- 1,4-Dichlorobenzene-d4
NAP -- Naphthalene-d8
ACE -- Acenaphthene-d10
PHEN -- Phenanthrene-d10
CHR -- Chrysene-d12
PER -- Perylene-d12

Parameters in bold text are reported in this SDG

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Quality Control Summary
SDG: L835437
Weston Solutions - CO

Test:	Semi-Volatiles by Method 8270C		
Project No:	20408.012.001.0345.0	Matrix:	Water - ug/L
Project:	Cowboy Timber	EPA ID:	TN00003
Collection Date:	5/11/2016	**Analytic Batch:**	**WG872624**
Analysis Date:	5/17/2016	Analyst:	694
Instrument ID:	BNAMS23	Prep Date:	5/15/2016
Sample Numbers:	L835437-05		

Surrogate Summary

			TBP		FBP		2FP		NBZ	
Laboratory Sample ID	Instrument	File ID	ppm	% Rec	ppm	% Rec	ppm	% Rec	ppm	% Rec
L835437-05	BNAMS23	0517a_11	0.0161	80.5	0.00933	93.3	0.00733	36.6	0.00914	91.4
LCS WG872624	BNAMS23	0517a_08	0.0193	96.5	0.00913	91.3	0.0115	57.6	0.00893	89.3
LCSD WG872624	BNAMS23	0517a_09	0.0198	98.9	0.00884	88.4	0.0112	56.1	0.00859	85.9
BLANK WG872624	BNAMS23	0517a_10	0.0170	85.0	0.00938	93.8	0.0125	62.5	0.00924	92.4

TBP --2,4,6-TRIBROMOPHENOL	True Value: 0.02 ppm	Limits: 21.6 - 154
FBP --2-FLUOROBIPHENYL	True Value: 0.01 ppm	Limits: 34.5 - 133
2FP --2-FLUOROPHENOL	True Value: 0.02 ppm	Limits: 10 - 74.1
NBZ --NITROBENZENE-D5	True Value: 0.01 ppm	Limits: 28.3 - 123
TPH --P-TERPHENYL-D14	True Value: 0.01 ppm	Limits: 30.4 - 148
PHL --PHENOL-D5	True Value: 0.02 ppm	Limits: 10 - 63.2

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Quality Control Summary
SDG: L835437
Weston Solutions - CO

Test:	Semi-Volatiles by Method 8270C		
Project No:	20408.012.001.0345.0	Matrix:	Water - ug/L
Project:	Cowboy Timber	EPA ID:	TN00003
Collection Date:	5/11/2016	**Analytic Batch:**	**WG872624**
Analysis Date:	5/17/2016	Analyst:	694
Instrument ID:	BNAMS23	Prep Date:	5/15/2016
Sample Numbers:	L835437-05		

Surrogate Summary

			TPH		PHL	
Laboratory Sample ID	Instrument	File ID	ppm	% Rec	ppm	% Rec
L835437-05	BNAMS23	0517a_11	0.0106	106	0.00565	28.3
LCS WG872624	BNAMS23	0517a_08	0.0111	111	0.00815	40.7
LCSD WG872624	BNAMS23	0517a_09	0.0107	107	0.00787	39.4
BLANK WG872624	BNAMS23	0517a_10	0.0112	112	0.00842	42.1

TBP --2,4,6-TRIBROMOPHENOL	True Value: 0.02 ppm	Limits: 21.6 - 154
FBP --2-FLUOROBIPHENYL	True Value: 0.01 ppm	Limits: 34.5 - 133
2FP --2-FLUOROPHENOL	True Value: 0.02 ppm	Limits: 10 - 74.1
NBZ --NITROBENZENE-D5	True Value: 0.01 ppm	Limits: 28.3 - 123
TPH --P-TERPHENYL-D14	True Value: 0.01 ppm	Limits: 30.4 - 148
PHL --PHENOL-D5	True Value: 0.02 ppm	Limits: 10 - 63.2

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Quality Control Summary
SDG: L835437
Weston Solutions - CO

Test:	Semi-Volatiles by Method 8270C		
Project No:	20408.012.001.0345.0	Matrix:	Water - mg/L
Project:	Cowboy Timber	EPA ID:	TN00003
Collection Date:	5/11/2016	**Analytic Batch:**	**WG872624**
Analysis Date:	5/17/2016	Analyst:	694
Instrument ID:	BNAMS23	Prep Date:	5/15/2016
Sample Numbers:	L835437-05		

Instrument Performance Summary

FileID:0517a_02.D Date:5/17/2016 Time: 3:38 PM

m/e	Ion Abundance Criteria	% Relative Abundance
51	30 - 60% of mass 198	39.7
68	Less than 2% of mass 69	1.3
69	Less than 100% of mass 198	40.8
70	Less than 2% of mass 69	0.5
127	40 - 60% of mass 198	58.2
197	Less than 1% of mass 198	0.4
198	Base Peak, 100% relative abundance	100.0
199	5 - 9% of mass 198	6.9
275	10 - 30% of mass 198	23.3
365	1 - 100% of mass 198	2.8
441	Present, but less than mass 443	78.1
442	40 - 100% of mass 198	72.1
443	17 - 23% of mass 442	19.8

This Check applies to the following samples and quality control samples

Client Sample ID	Laboratory Sample ID	Lab Filename	Date Analyzed	Time Analyzed
LCS WG872624	LCS WG872624	0517a_08.D	5/17/2016	5:56 PM
LCSD WG872624	LCSD WG872624	0517a_09.D	5/17/2016	6:20 PM
Blank WG872624	Blank WG872624	0517a_10.D	5/17/2016	6:43 PM
CTGW-01-20160511	L835437-05	0517a_11.D	5/17/2016	7:06 PM

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Quality Control Summary
SDG: L835437
Weston Solutions - CO

Test: Semi-Volatiles by Method 8270C
Project: Cowboy Timber
Instrument ID: BNAMS23
Method Name : S823E12P.M

Relative Response Factor Summary

Compound Name	Level 40	Level 200	Level 1K	Level 2K	Level 5K	Level 10K	Level 20K	Level 30K	Level 40K	Average RRF	%RSD
Pyridine		1.645	1.912	1.996	2.082	2.239	2.120	2.140	2.113	2.043242	8.62
N-Nitrosodimethylamine			0.751	0.712	0.781	0.925	0.815	0.838	0.832	0.808416	7.88
2-Fluorophenol		1.388	1.518	1.423	1.573	1.703	1.632	1.678	1.647	1.581906	7.28
Aniline		0.806	0.963	0.861	0.923	1.022	0.943	0.955	0.929	0.927787	6.69
bis(2-Chloroethyl)ether		1.841	1.853	1.699	1.784	1.955	1.801	1.797	1.745	1.807095	3.99
Phenol-d5		1.794	1.899	1.837	2.008	2.188	2.076	2.142	2.078	2.016001	7.00
Phenol		1.916	1.990	1.974	2.082	2.276	2.158	2.212	2.146	2.103884	5.77
Benzaldehyde										0.681845	6.44
2-Chlorophenol		1.866	1.816	1.737	1.921	2.117	1.997	2.047	2.006	1.951258	6.40
n-Decane		0.997	0.935	0.893	0.910	1.033	0.892	0.885	0.839	0.913188	7.27
1,3-Dichlorobenzene		2.241	2.234	2.074	2.144	2.365	2.182	2.249	2.189	2.213715	3.65
1,4-Dichlorobenzene		2.234	2.236	2.081	2.231	2.385	2.245	2.312	2.246	2.251076	3.61
Benzyl Alcohol		1.218	1.275	1.180	1.348	1.492	1.394	1.432	1.407	1.352462	7.84
1,2-Dichlorobenzene		2.107	2.195	2.061	2.148	2.312	2.162	2.188	2.150	2.167205	3.17
bis(2-Chloroisopropyl)ether		0.603	0.627	0.612	0.653	0.689	0.645	0.655	0.641	0.641753	3.98
2-Methylphenol		1.521	1.583	1.558	1.670	1.844	1.723	1.766	1.722	1.681340	6.36
Hexachloroethane		0.849	0.891	0.876	0.941	1.035	0.970	0.985	0.967	0.944876	6.44
N-Nitrosodi-n-propylamine		0.775	0.795	0.808	0.895	1.005	0.902	0.982	0.966	0.895618	9.52
3&4-Methyl phenol		1.740	1.873	1.757	1.958	2.118	1.986	2.041	1.998	1.944506	6.64
Acetophenone										2.516106	6.16
Nitrobenzene-d5		0.266	0.290	0.288	0.307	0.337	0.328	0.336	0.326	0.311133	7.96
Nitrobenzene		0.296	0.294	0.300	0.319	0.342	0.328	0.333	0.325	0.317334	5.37
Isophorone		0.457	0.510	0.516	0.561	0.611	0.606	0.620	0.603	0.564502	10.13
2-Nitrophenol			0.139	0.146	0.167	0.193	0.193	0.205	0.202	0.180495	14.60
2,4-Dimethylphenol		0.289	0.311	0.309	0.327	0.345	0.325	0.334	0.322	0.319359	5.10
bis(2-Chlorethoxy)methane		0.382	0.394	0.401	0.401	0.428	0.413	0.425	0.414	0.407074	3.64
2,4-Dichlorophenol		0.227	0.236	0.234	0.264	0.291	0.285	0.297	0.292	0.267733	10.58
Benzoic Acid										0.192136	37.41

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Est. 1970

Quality Control Summary
SDG: L835437
Weston Solutions - CO

Test: Semi-Volatiles by Method 8270C
Project: Cowboy Timber
Instrument ID: BNAMS23
Method Name : S823E12P.M

Relative Response Factor Summary

Compound Name	Level 40	Level 200	Level 1K	Level 2K	Level 5K	Level 10K	Level 20K	Level 30K	Level 40K	Average RRF	%RSD
1,2,4-Trichlorobenzene		0.298	0.297	0.294	0.298	0.314	0.304	0.316	0.308	0.303212	2.58
Naphthalene	1.797	1.231	1.124	1.078	1.082	1.141	1.094	1.121	1.083	1.180843	18.80
4-Chloroaniline		0.109	0.104	0.111	0.113	0.123	0.115	0.119	0.115	0.113586	4.85
Hexachloro-1,3-butadiene			0.152	0.138	0.147	0.157	0.151	0.154	0.152	0.150099	3.81
Caprolactam										0.096614	11.86
4-Chloro-3-methylphenol		0.248	0.254	0.257	0.279	0.310	0.305	0.316	0.312	0.287258	9.68
2-Methylnaphthalene	0.677	0.694	0.706	0.696	0.723	0.768	0.747	0.757	0.752	0.725731	4.28
1-Methylnaphthalene	0.702	0.684	0.691	0.676	0.691	0.738	0.709	0.719	0.709	0.701181	2.60
1,2,4,5-Tetrachlorobenzene										0.276442	3.11
Hexachlorocyclopentadiene		0.261	0.266	0.270	0.284	0.317	0.328	0.342	0.333	0.304833	11.15
2,4,6-Trichlorophenol			0.241	0.251	0.285	0.324	0.331	0.346	0.339	0.307204	13.85
2,4,5-Trichlorophenol			0.264	0.277	0.315	0.354	0.361	0.371	0.366	0.334393	13.02
2-Fluorobiphenyl		1.281	1.282	1.215	1.252	1.332	1.314	1.313	1.292	1.283043	2.80
Biphenyl		1.482	1.450	1.421	1.451	1.531	1.518	1.538	1.488	1.484110	2.67
2-Chloronaphthalene	1.069	1.161	1.125	1.116	1.136	1.193	1.191	1.209	1.174	1.153727	3.68
2-Nitroaniline			0.293	0.320	0.363	0.422	0.449	0.458	0.448	0.400011	16.38
Acenaphthylene	1.660	1.620	1.774	1.776	1.852	2.010	1.970	2.011	1.942	1.852529	7.59
Dimethyl phthalate		1.111	1.159	1.160	1.230	1.283	1.272	1.287	1.247	1.222235	5.20
2,6-Dinitrotoluene			0.248	0.268	0.294	0.317	0.315	0.322	0.314	0.299099	9.14
3-Nitroaniline			0.279	0.306	0.346	0.370	0.358	0.353	0.343	0.337287	8.90
Acenaphthene	1.161	1.148	1.179	1.171	1.186	1.245	1.234	1.236	1.211	1.198024	2.82
2,4-Dinitrophenol				0.066	0.099	0.126	0.135	0.156	0.159	0.129560	28.04
Dibenzofuran		1.698	1.710	1.631	1.681	1.731	1.707	1.725	1.670	1.691053	1.88
2,4-Dinitrotoluene			0.281	0.315	0.369	0.405	0.408	0.419	0.410	0.378201	13.97
2,3,4,6-Tetrachlorophenol										0.200125	21.29
4-Nitrophenol			0.185	0.204	0.246	0.286	0.296	0.315	0.315	0.270802	19.48
Fluorene	1.360	1.310	1.328	1.321	1.344	1.426	1.389	1.404	1.368	1.361875	2.73
4-Chlorophenyl-phenylether		0.518	0.529	0.527	0.550	0.571	0.569	0.571	0.555	0.549616	3.69
Diethyl phthalate		1.153	1.263	1.271	1.317	1.382	1.359	1.398	1.358	1.318698	5.91

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Est. 1970

Quality Control Summary
SDG: L835437
Weston Solutions - CO

Test: Semi-Volatiles by Method 8270C
Project: Cowboy Timber
Instrument ID: BNAMS23
Method Name : S823E12P.M

Relative Response Factor Summary

Compound Name	Level 40	Level 200	Level 1K	Level 2K	Level 5K	Level 10K	Level 20K	Level 30K	Level 40K	Average RRF	%RSD
4-Nitroaniline		0.223	0.274	0.296	0.291	0.199	0.220	0.238	0.238	0.245897	13.65
Azobenzene		0.954	1.177	1.204	1.266	1.366	1.312	1.314	1.271	1.234575	9.72
Atrazine										0.310315	14.23
4,6-Dinitro-2-methylphenol				0.054	0.077	0.093	0.101	0.114	0.117	0.096254	25.20
N-Nitrosodiphenylamine		0.561	0.588	0.604	0.616	0.664	0.622	0.647	0.645	0.619002	5.14
2,4,6-Tribromophenol			0.052	0.058	0.071	0.083	0.087	0.092	0.096	0.078957	21.20
4-Bromophenyl-phenylether		0.165	0.162	0.160	0.172	0.185	0.182	0.187	0.188	0.175948	6.48
Hexachlorobenzene		0.194	0.192	0.190	0.188	0.200	0.198	0.203	0.207	0.196941	3.18
n-octadecane		0.114	0.119	0.117	0.120	0.135	0.128	0.129	0.126	0.123209	5.39
Pentachlorophenol			0.055	0.069	0.082	0.103	0.112	0.123	0.130	0.100355	28.39
Phenanthrene	1.243	1.130	1.140	1.083	1.101	1.172	1.114	1.159	1.144	1.140525	3.92
Anthracene	1.023	0.919	1.017	1.033	1.066	1.177	1.126	1.180	1.181	1.086542	8.17
Carbazole		0.977	1.044	1.059	1.099	1.134	0.951	0.914	0.852	0.976150	12.55
Di-n-butyl phthalate		1.033	1.160	1.210	1.373	1.571	1.525	1.626	1.581	1.398333	15.36
2-nitrodiphenylamine										0.247859	26.72
Fluoranthene	0.942	1.006	1.043	1.064	1.123	1.251	1.193	1.269	1.246	1.132494	10.08
Benzidine										0.592921	26.59
Pyrene	1.160	1.063	1.171	1.146	1.218	1.303	1.329	1.325	1.316	1.231986	7.57
p-Terphenyl-d14		0.719	0.791	0.767	0.814	0.859	0.861	0.882	0.881	0.825947	6.89
Benzylbutyl phthalate		0.466	0.514	0.531	0.641	0.742	0.760	0.784	0.792	0.666730	19.65
3,3-Dichlorobenzidine										0.346832	8.75
Benzo(a)anthracene	1.579	1.120	1.149	1.119	1.180	1.253	1.222	1.252	1.258	1.235859	10.68
Chrysene	1.177	1.151	1.171	1.133	1.148	1.198	1.191	1.215	1.189	1.172071	2.26
bis(2-Ethylhexyl)phthalate		0.791	0.799	0.788	0.936	1.075	1.080	1.131	1.156	0.984942	15.93
Di-n-octyl phthalate		1.100	1.304	1.335	1.604	1.859	1.889	1.973	1.990	1.662540	20.27
Benzo(b)fluoranthene	1.131	1.117	1.168	1.182	1.193	1.345	1.284	1.279	1.327	1.231295	6.70
Benzo(k)fluoranthene	1.059	0.968	1.112	1.092	1.158	1.218	1.211	1.278	1.210	1.150847	8.06
Benzo(a)pyrene	1.038	0.984	1.044	1.088	1.140	1.246	1.211	1.263	1.229	1.146633	8.84
Indeno(1,2,3-cd)pyrene	1.021	1.072	1.202	1.186	1.254	1.379	1.333	1.359	1.324	1.242877	9.80

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Quality Control Summary
SDG: L835437
Weston Solutions - CO

Test: Semi-Volatiles by Method 8270C
Project: Cowboy Timber
Instrument ID: BNAMS23
Method Name : S823E12P.M

Relative Response Factor Summary

Compound Name	Level 40	Level 200	Level 1K	Level 2K	Level 5K	Level 10K	Level 20K	Level 30K	Level 40K	Average RRF	%RSD
Dibenz(a,h)anthracene	0.949	0.911	1.051	1.052	1.087	1.191	1.152	1.176	1.148	1.084127	8.73
Benzo(g,h,i)perylene	0.907	0.979	1.057	1.028	1.071	1.163	1.124	1.134	1.103	1.062421	7.22

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Quality Control Summary
SDG: L835437
Weston Solutions - CO

Test: Semi-Volatiles by Method 8270C
Project No: 20408.012.001.0345.0
Project: Cowboy Timber EPA ID: TN00003
Collection Date: 5/11/2016
Instrument ID: BNAMS23

Method Name : S823E12P.M
FileName : 0517a_03.D

Date : 5/17/2016
Time : 4:01 PM

Continuing Calibration Verification

Compound Name	Average RRF	CCC RRF	%D		
n-Nitrosodimethylamine	0.8084	0.8191	1.32		
Bis(2-chloroethyl)ether	1.8071	1.8740	3.7		
Phenol	2.1039	2.2037	4.75		
2-Chlorophenol	1.9513	2.0507	5.09		
1,4-Dichlorobenzene	2.2511	2.3421	4.05		
Bis(2-chloroisopropyl)ether	0.6418	0.6661	3.79		
Hexachloroethane	0.9449	0.9730	2.98		
n-Nitrosodi-n-propylamine	0.8956	0.9275	3.56	>0.05	
Nitrobenzene	0.3173	0.3358	5.83		
Isophorone	0.5645	0.6226	10.3		
2-Nitrophenol	0.1805	0.1921	6.42		
2,4-Dimethylphenol	0.3194	0.3348	4.84		
Bis(2-chlorethoxy)methane	0.4071	0.4310	5.87		
2,4-Dichlorophenol	0.2677	0.2930	9.44		
1,2,4-Trichlorobenzene	0.3032	0.3124	3.01		
Naphthalene	1.1808	1.1422	3.27		**
Hexachloro-1,3-butadiene	0.1501	0.1572	4.73		
4-Chloro-3-methylphenol	0.2873	0.3027	5.38		
Hexachlorocyclopentadiene	0.3048	0.3253	6.72	>0.05	
2,4,6-Trichlorophenol	0.3072	0.3245	5.63		
2-Chloronaphthalene	1.1537	1.2178	5.55		
Acenaphthylene	1.8525	1.9949	7.69		
Dimethyl phthalate	1.2222	1.2814	4.84		
2,6-Dinitrotoluene	0.2991	0.3186	6.54		
Acenaphthene	1.1980	1.2486	4.22		
2,4-Dinitrophenol	0.1296	0.1086	16.2	>0.05	**
2,4-Dinitrotoluene	0.3782	0.4051	7.1		
4-Nitrophenol	0.2708	0.2844	5.02	>0.05	**
Fluorene	1.3619	1.4304	5.03		
4-Chlorophenyl-phenylether	0.5496	0.5784	5.23		
Diethyl phthalate	1.3187	1.3736	4.16		

*** - calibrated by linear regression*

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Quality Control Summary
SDG: L835437
Weston Solutions - CO

Test: Semi-Volatiles by Method 8270C
Project No: 20408.012.001.0345.0
Project: Cowboy Timber EPA ID: TN00003
Collection Date: 5/11/2016
Instrument ID: BNAMS23

Method Name : S823E12P.M Date : 5/17/2016
FileName : 0517a_03.D Time : 4:01 PM

Continuing Calibration Verification

Compound Name	Average RRF	CCC RRF	%D	
4,6-Dinitro-2-methylphenol	0.0963	0.0892	7.33	**
n-Nitrosodiphenylamine	0.6190	0.6625	7.03	
4-Bromophenyl-phenylether	0.1759	0.1840	4.58	
Hexachlorobenzene	0.1969	0.2005	1.8	
Pentachlorophenol	0.1004	0.0982	2.17	**
Phenanthrene	1.1405	1.1658	2.21	
Anthracene	1.0865	1.1754	8.17	
Di-n-butyl phthalate	1.3983	1.5285	9.31	**
Fluoranthene	1.1325	1.2179	7.54	
Pyrene	1.2320	1.3214	7.26	
Benzylbutyl phthalate	0.6667	0.7331	9.96	**
Benzo(a)anthracene	1.2359	1.2450	0.74	
Chrysene	1.1721	1.1988	2.28	
Bis(2-ethylhexyl)phthalate	0.9849	1.0663	8.26	**
Di-n-octyl phthalate	1.6625	1.8031	8.45	**
Benzo(b)fluoranthene	1.2313	1.2811	4.04	
Benzo(k)fluoranthene	1.1508	1.2185	5.88	
Benzo(a)pyrene	1.1466	1.2084	5.39	
Indeno(1,2,3-cd)pyrene	1.2429	1.3411	7.91	
Dibenz(a,h)anthracene	1.0841	1.1600	6.99	
Benzo(g,h,i)perylene	1.0624	1.1331	6.66	

*** - calibrated by linear regression*

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Quality Control Summary
SDG: L835437
Weston Solutions - CO

Test: Semi-Volatiles by Method 8270C
Project No: 20408.012.001.0345.0
Project: Cowboy Timber EPA ID: TN00003
Collection Date: 5/11/2016
Instrument ID: BNAMS23

Method Name : S823E12P.M
FileName : 0517a_04.D

Date : 5/17/2016
Time : 4:24 PM

Continuing Calibration Verification

Compound Name	Average RRF	CCC RRF	%D	
Benzidine	0.5929	0.6265	5.67	**

** - *calibrated by linear regression*

Raw Data

View as PDF (CreatePDF?batchnum=WG872624)

BNA H2O Extractions Benchsheet

Batch #: WG872624

Analyst: RTG176 **Prep Start Date/Time:** 05/16/16 19:59 **Prep End Date/Time:** 05/16/16 22:21 **SOP:** 330702 **Method:** 3510C

Na2SO4: 16D27005 Exp. Date:10/27/16 **MeCl2:** 16E09760 Exp. Date:11/09/16 **NaOH:** 16D28016 Exp. Date:09/01/16 **H2SO4:** 16E10790 Exp. Date:09/01/16 **Surrogate:** 16E03367 Amt. Used: 1 mL Exp. Date:09/30/16

LCS/MS Spike: 16E04456 Amt. Used: 1 mL Exp. Date:08/31/16

Sample Number	Qualifiers	Initial Sample Vol (mL)	Adjusted pH<2	Adjusted pH >11	Solvent Volume (mL)	Emulsion	Final Volume (mL)	Extract Color	Sample Comments
BLANK		1000	<2	>11	300	No Emulsion	1	Colorless	
LCS		1000	<2	>11	300	No Emulsion	1	Yellow	
LCSD		1000	<2	>11	300	No Emulsion	1	Yellow	
1. L835343-01		1000	<2	>11	300	No Emulsion	1	Colorless	
2. L835437-05		1000	<2	>11	300	No Emulsion	1	Colorless	

Comments:

Reviewed By:JF694 on 05/17/16 12:34:09

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

Injection Log

Instrument ID : BNAMS23
Computer Name : SVCOMPAZ
Released By : Allen Fuller
Date Released : 9/15/2016 8:44:32 AM
Run ID : 051716a
Signature : _____

#	File ID	Sample ID	Method	WG	Product	Matrix	Account #	State	Dil.	Mult.	Injected	Misc.
1	0517a_01	INSTBLK	S823E12P						1	1	05/17/16 1514	"instrument blank"
2	0517a_02	TUNE SVMS 50 PPM 16D04430	TUNEC						1	1	05/17/16 1538	"dftpp tune "
3	0517a_02T	TUNE SVMS 50 PPM 16D04430								1	05/17/16 1538	
4	0517a_03	ICV SVMS 10K PPB 16D25863	S823E12P						1	1	05/17/16 1601	"8270 PRIMARY CALIBRATION IS 16E12001"
4	0517a_03-1	ICV SVMS 10K PPB 16D25863	S823E12P						1	1	05/17/16 1601	"8270 PRIMARY CALIBRATION IS 16E12001"
5	0517a_04	ICV TCL 10K1 PPB 16D25867	S823E12P						1	1	05/17/16 1624	"8270 TCL CALIBRATION IS 16E12001"
5	0517a_04-1	ICV TCL 10K1 PPB 16D25867	S823E12P						1	1	05/17/16 1624	"8270 TCL CALIBRATION IS 16E12001"
6	0517a_05	BLANK	S823E12P	WG873129	625	WW			1	0.005	05/17/16 1647	"water IS 16E03322"
7	0517a_06	LCS	S823E12P	WG873129	625	WW			1	0.005	05/17/16 1710	"water IS 16E03322"
8	0517a_07	LCSD	S823E12P	WG873129	625	WW			1	0.005	05/17/16 1733	"water IS 16E03322"
9	0517a_08	LCS	S823E12P	WG872624	SV625	WW			1	0.001	05/17/16 1756	"water IS 16E12001"
10	0517a_09	LCSD	S823E12P	WG872624	SV625	WW			1	0.001	05/17/16 1820	"water IS 16E12001"
11	0517a_10	BLANK	S823E12P	WG872624	SV625	WW			1	0.001	05/17/16 1843	"water IS 16E12001"
12	0517a_11	L835437-05	S823E12P	WG872624	SV8270	GW	WESSOLLCO	WY	1	0.001	05/17/16 1906	"water IS 16E12001"
13	0517a_12	L835343-01	S823E12P	WG872624	SV625	WW	HAZCLEBAL	AL	1	0.001	05/17/16 1929	"water IS 16E12001"
14	0517a_13	L834826-02	S823E12P	WG873129	625TTO	WW	HOLLRPD	KY	1	0.005	05/17/16 1952	"water IS 16E03322"
15	0517a_14	L834586-02	S823E12P	WG873129	625TTO	WW	HALLKY	KY	1	0.005	05/17/16 2015	"water IS 16E03322"
16	0517a_15	RR L834645-01	S823E12P	WG873129					5	0.025	05/17/16 2038	"water IS 16E03322"
17	0517a_16	L834717-01	S823E12P	WG873129	625TTO	WW	MAUHOS	TN	5	0.025	05/17/16 2101	"water IS 16E03322"

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

Injection Log

Instrument ID : BNAMS23
Computer Name : SVCOMPAZ
Released By : Allen Fuller
Date Released : 9/15/2016 8:44:32 AM
Run ID : 051716a
Signature : _____

#	File ID	Sample ID	Method	WG	Product	Matrix	Account #	State	Dil.	Mult.	Injected	Misc.
18	0517a_17	L834829-02	S823E12P	WG873129	625BN	WW	SMYR02	TN	10	0.05	05/17/16 2124	"water IS 16E03322"
19	0517a_18	RR L835131-01	S823E12P	WG873129					5.55	0.0277	05/17/16 2148	"water IS 16E03322"
20	0517a_19	RR L835131-02	S823E12P	WG873129					5.9	0.0295	05/17/16 2211	"water IS 16E03322"
21	0517a_20	RR L835131-02	S823E12P	WG873129					6.25	0.0313	05/17/16 2235	"water IS 16E03322"
22	0517a_21	L835131-01	S823E12P	WG873129	625TIC	GW	APEXENV	VA	1.11	0.0055	05/18/16 0835	"water IS 16E03322"
23	0517a_22	L835131-02	S823E12P	WG873129	625TIC	GW	APEXENV	VA	1.18	0.0059	05/18/16 0858	"water IS 16E03322"
24	0517a_23	L835131-03	S823E12P	WG873129	625TIC	GW	APEXENV	VA	1.25	0.0062	05/18/16 0922	"water IS 16E03322"
25	0517a_24	L834645-01	S823E12P	WG873129	625	WW	BURPARFKY	KY	1	0.005	05/18/16 0945	"water IS 16E03322"

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\051716a\
Data File : 0517a 02.D
Acq On : 17 May 2016 3:38 pm
Operator : 377
Sample : TUNE SVMS 50 PPM 16D04430
Misc : dftpp tune
ALS Vial : 2 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 17 15:58:13 2016
Quant Method : C:\msdchem\1\methods\TUNEC.M
Quant Title : 8270 BNA
QLast Update : Thu Sep 13 10:14:57 2012
Response via : Initial Calibration
DataAcq Meth:BNAMS23B.M

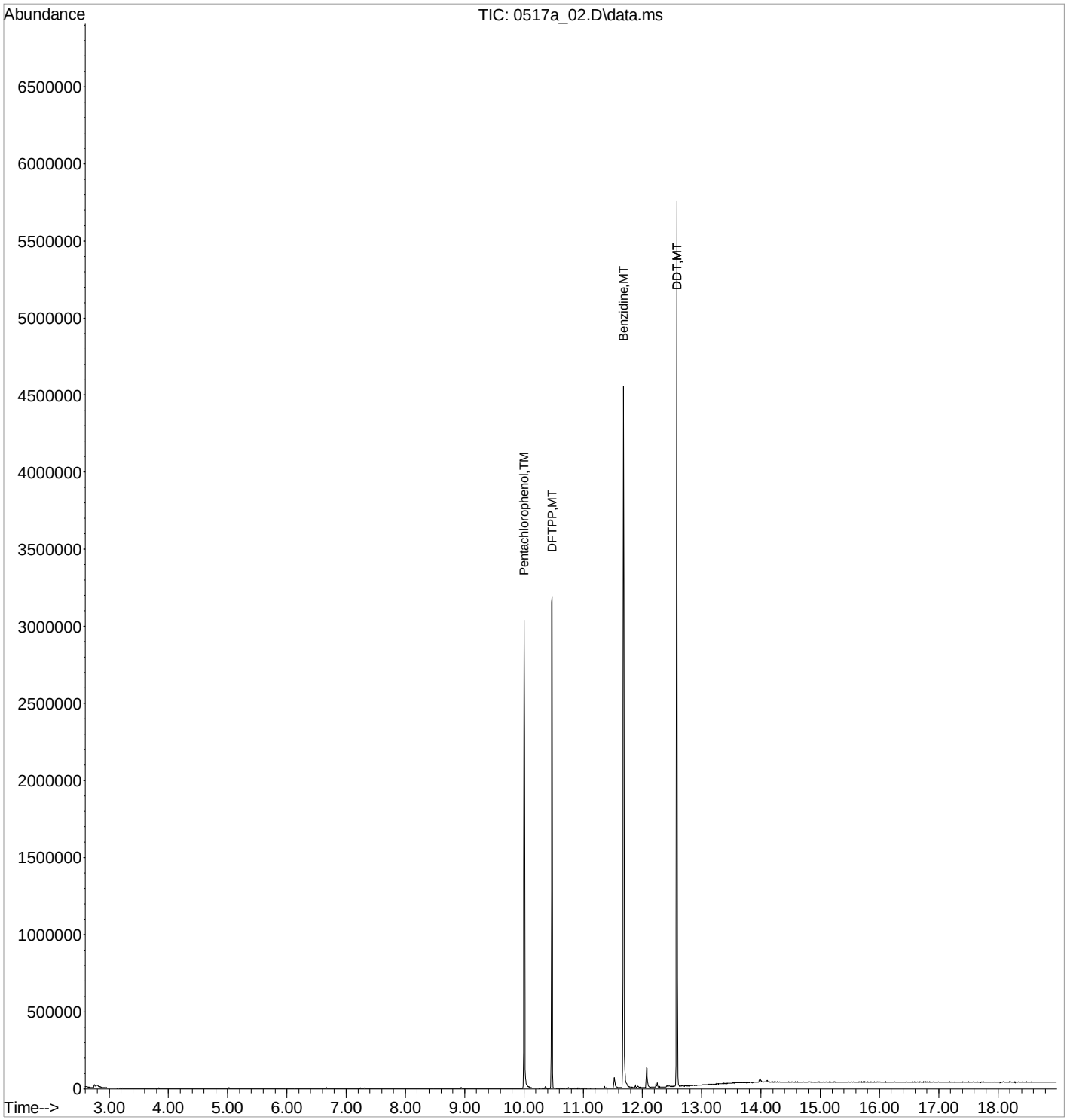
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Target Compounds						Qvalue
1) Pentachlorophenol	10.004	264	190430	32.6344760	ug/mL	100
2) DFTPP	10.475	198	364987	49.3301671	ug/mL	100
3) Benzidine	11.680	184	1800635	75.0213319	ug/mL	100
4) DDT	12.580	TIC	5225069	388.3013952	ug/ml	100
5) DDT	12.580	235	988083	73.4294624	ug/mL	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\051716a\
Data File : 0517a 02.D
Acq On : 17 May 2016 3:38 pm
Operator : 377
Sample : TUNE SVMS 50 PPM 16D04430
Misc : dftpp tune
ALS Vial : 2 Sample Multiplier: 1
InstName : BNAMS23

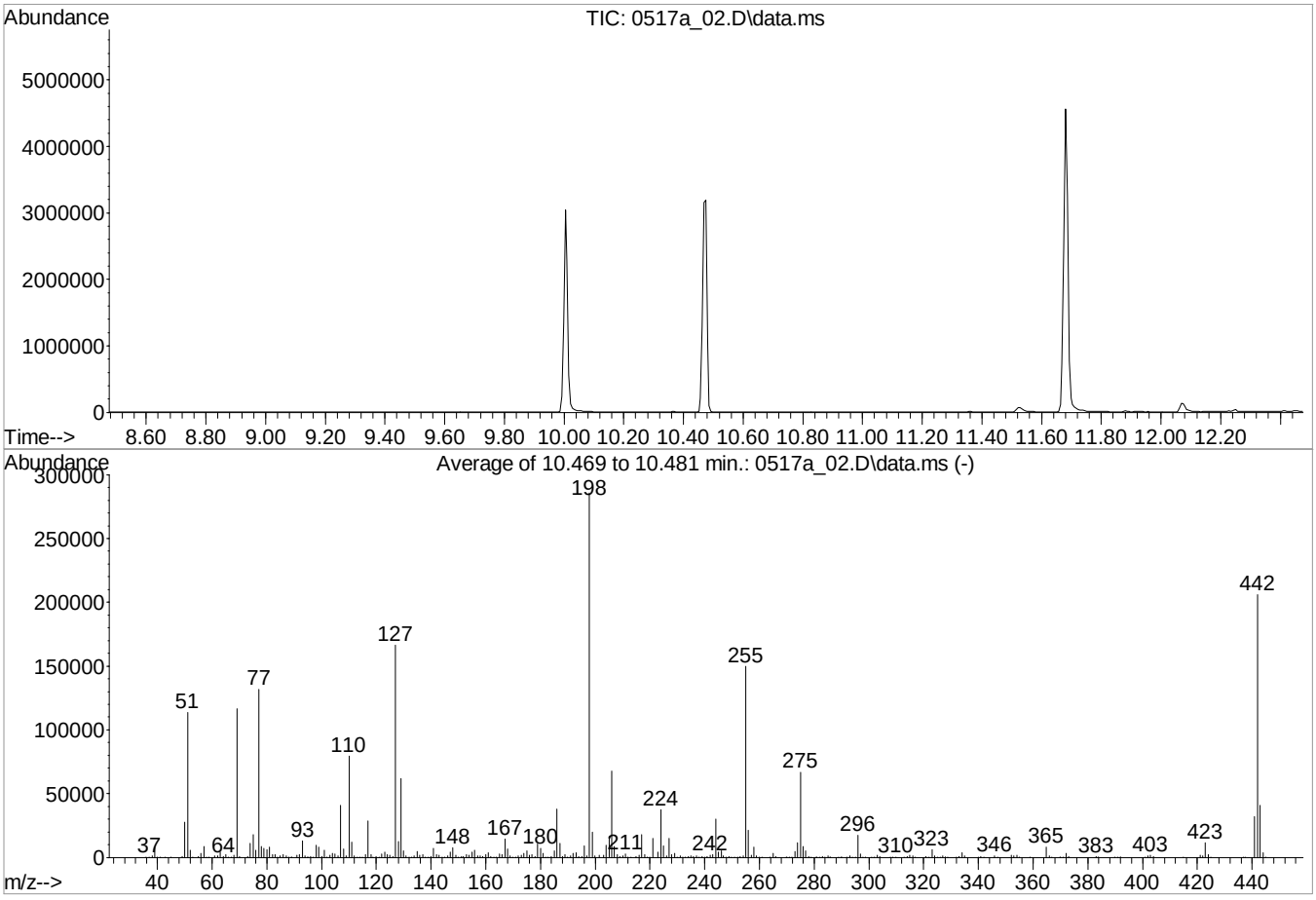
Quant Time: May 17 15:58:13 2016
Quant Method : C:\msdchem\1\methods\TUNEC.M
Quant Title : 8270 BNA
QLast Update : Thu Sep 13 10:14:57 2012
Response via : Initial Calibration
DataAcq Meth:BNAMS23B.M



Data Path : C:\msdchem\1\data\051716a\
Data File : 0517a 02.D
Acq On : 17 May 2016 3:38 pm
Operator : 377
Sample : TUNE SVMS 50 PPM 16D04430
Misc : dftpp tune
ALS Vial : 2 Sample Multiplier: 1

Integration File: RTEINT.P

Method : C:\msdchem\1\methods\TUNEC.M
Title : 8270 BNA
Last Update : Thu Sep 13 10:14:57 2012



AutoFind: Scans 1340, 1341, 1342; Background Corrected with Scan 1334

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	39.7	113413	PASS
68	69	0.00	2	1.3	1562	PASS
69	198	0.00	100	40.8	116744	PASS
70	69	0.00	2	0.5	581	PASS
127	198	40	60	58.2	166197	PASS
197	198	0.00	1	0.4	1015	PASS
198	198	100	100	100.0	285797	PASS
199	198	5	9	6.9	19737	PASS
275	198	10	30	23.3	66688	PASS
365	198	1	100	2.8	8100	PASS
441	443	0.01	100	78.1	31947	PASS
442	198	40	100	72.1	206144	PASS
443	442	17	23	19.8	40899	PASS

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\051716a\
Data File : 0517a 03.D
Acq On : 17 May 2016 4:01 pm
Operator : 377
Sample : ICV SVMS 10K PPB 16D25863
Misc : 8270 PRIMARY CALIBRATION IS 16E12001
ALS Vial : 3 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 17 17:29:32 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:52:25 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	5.431	152	63031	8000.0000000 ppb	0.00
22) Naphthalene-d8	6.713	136	357840	8000.0000000 ppb	0.00
40) Acenaphthene-d10	8.601	164	212128	8000.0000000 ppb	0.00
64) Phenanthrene-d10	10.230	188	372952	8000.0000000 ppb	0.00
78) Chrysene-d12	13.130	240	361516	8000.0000000 ppb	0.00
88) Perylene-d12	15.012	264	352138	8000.0000000 ppb	-0.01
System Monitoring Compounds					
4) 2-Fluorophenol	4.296	112	128990	10349.3040925 ppb	0.00
Spiked Amount 20.000	Range 10 - 87		Recovery = 51746.52%#		
7) Phenol-d5	5.037	99	164179	10336.2429095 ppb	0.00
Spiked Amount 20.000	Range 10 - 67		Recovery = 51681.21%#		
23) Nitrobenzene-d5	5.960	82	149481	10740.9074248 ppb	0.00
Spiked Amount 10.000	Range 12 - 120		Recovery = 107409.07%#		
44) 2-Fluorobiphenyl	7.854	172	355496	10449.2614756 ppb	0.00
Spiked Amount 10.000	Range 26 - 122		Recovery = 104492.61%#		
67) 2,4,6-Tribromophenol	9.460	330	41199	10068.3512614 ppb	0.00
Spiked Amount 20.000	Range 10 - 148		Recovery = 50341.76%#		
81) p-Terphenyl-d14	11.948	244	395517	10596.8154738 ppb	-0.01
Spiked Amount 10.000	Range 34 - 149		Recovery = 105968.15%#		
Target Compounds					Qvalue
2) Pyridine	3.360	79	171532	10655.1885616 ppb	98
3) N-Nitrosodimethylamine	3.325	42	64535	10132.0224042 ppb	90
5) Aniline	5.119	66	75807	10370.4350253 ppb	94
6) bis(2-Chloroethyl)ether	5.160	93	147648	10370.0864839 ppb	99
8) Phenol	5.048	94	173630	10474.6307278 ppb	97
10) 2-Chlorophenol	5.231	128	161569	10509.4268215 ppb	99
11) n-Decane	5.248	41	71824	9982.6303040 ppb	98
12) 1,3-Dichlorobenzene	5.384	146	178215	10217.8205984 ppb	97
13) 1,4-Dichlorobenzene	5.448	146	184535	10404.5736083 ppb	97
14) Benzyl Alcohol	5.537	79	110562	10375.6786471 ppb	100
15) 1,2-Dichlorobenzene	5.595	146	174202	10202.0852911 ppb	99
16) bis(2-Chloroisopropyl)...	5.672	121	52480	10379.1545800 ppb #	87
17) 2-Methylphenol	5.625	108	140678	10619.5605865 ppb	96
18) Hexachloroethane	5.931	117	76663	10297.8527880 ppb	97
19) N-Nitrosodi-n-propylamine	5.795	70	73080	10356.4670217 ppb	96
20) 3&4-Methyl phenol	5.772	107	158517	10346.7135435 ppb	98
24) Nitrobenzene	5.984	77	150218	10582.9560083 ppb	97
25) Isophorone	6.219	82	278473	11028.5568551 ppb	98
26) 2-Nitrophenol	6.307	139	85918	10641.9111334 ppb	96
27) 2,4-Dimethylphenol	6.319	107	149767	10484.2828795 ppb	99
28) bis(2-Chlorethoxy)methane	6.425	93	192764	10586.5233976 ppb	98
29) 2,4-Dichlorophenol	6.542	162	131063	10944.0798924 ppb	98
31) 1,2,4-Trichlorobenzene	6.642	180	139715	10301.4369203 ppb	96
32) Naphthalene	6.737	128	510921	10491.7502657 ppb	99
33) 4-Chloroaniline	6.772	65	53383	10507.0296293 ppb	95
34) Hexachloro-1,3-butadiene	6.854	225	70313	10472.6757653 ppb	99
36) 4-Chloro-3-methylphenol	7.260	107	135399	10537.6501577 ppb	98
37) 2-Methylnaphthalene	7.466	142	340466	10488.1536815 ppb	100
38) 1-Methylnaphthalene	7.578	142	323055	10300.2388547 ppb	99
41) Hexachlorocyclopentadiene	7.631	237	86258	10671.5911244 ppb	98

Data Path : C:\msdchem\1\data\051716a\
Data File : 0517a 03.D
Acq On : 17 May 2016 4:01 pm
Operator : 377
Sample : ICV SVMS 10K PPB 16D25863
Misc : 8270 PRIMARY CALIBRATION IS 16E12001
ALS Vial : 3 Sample Multiplier: 1
InstName : BNAMS23

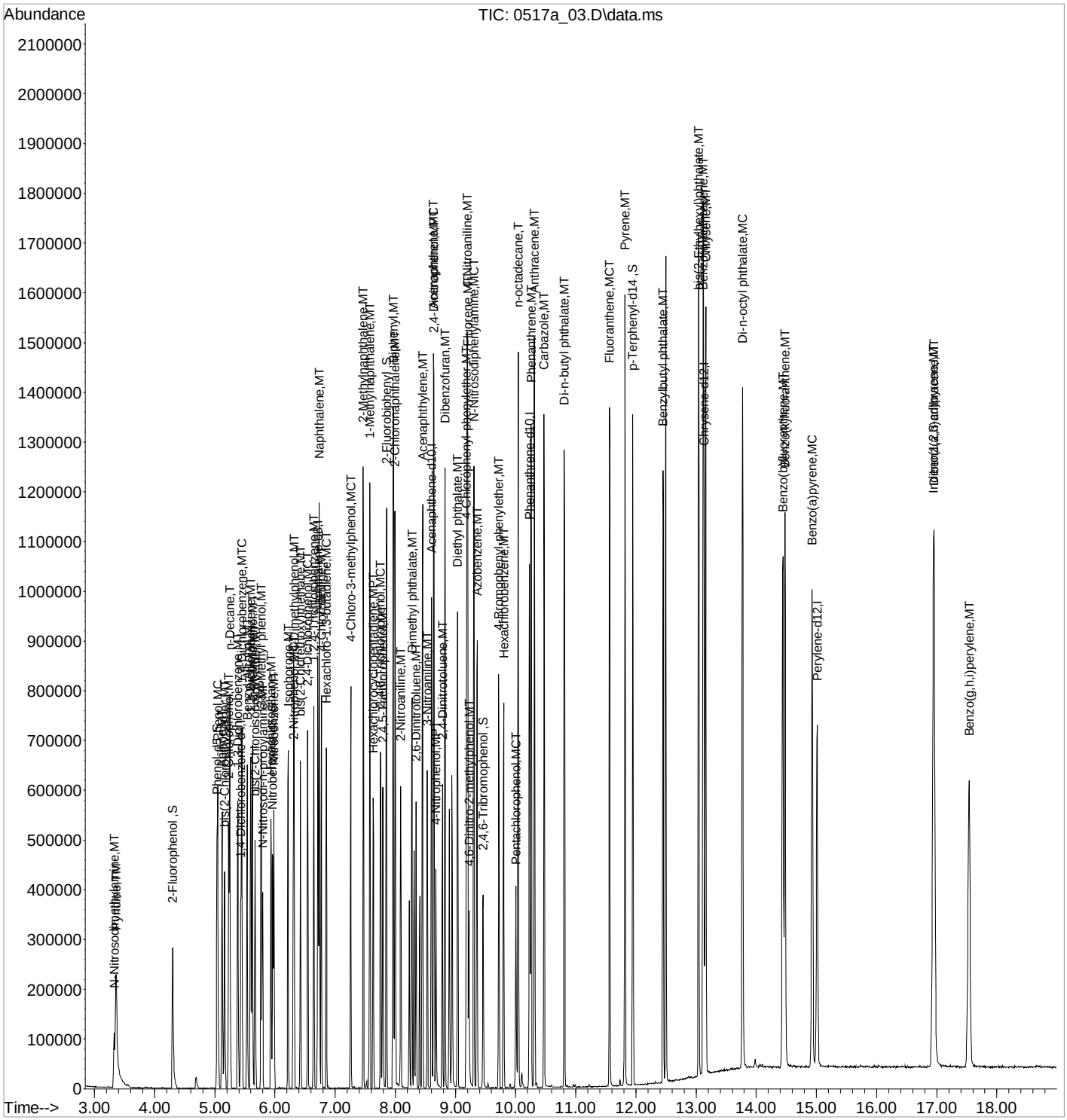
Quant Time: May 17 17:29:32 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:52:25 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M

Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
42) 2,4,6-Trichlorophenol	7.754	196	86043	10562.8462651 ppb		95
43) 2,4,5-Trichlorophenol	7.795	196	93871	10586.8267854 ppb		99
45) Biphenyl	7.966	154	407564	10356.7095924 ppb		100
46) 2-Chloronaphthalene	7.995	162	322912	10555.3584128 ppb		100
47) 2-Nitroaniline	8.089	138	114248	9982.6540783 ppb		99
48) Acenaphthylene	8.454	152	528980	10768.7721758 ppb		99
49) Dimethyl phthalate	8.278	163	339770	10483.8875079 ppb		95
50) 2,6-Dinitrotoluene	8.348	165	84492	10653.5218556 ppb		95
51) 3-Nitroaniline	8.531	138	99379	11111.8646336 ppb		99
52) Acenaphthene	8.636	153	331084	10422.3269315 ppb		98
53) 2,4-Dinitrophenol	8.642	184	28789	8203.8533744 ppb	#	91
54) Dibenzofuran	8.825	168	466605	10406.0059728 ppb		99
55) 2,4-Dinitrotoluene	8.783	165	107404	10710.0104606 ppb		97
57) 4-Nitrophenol	8.678	139	75410	9569.7007867 ppb		97
58) Fluorene	9.201	166	379285	10503.1693782 ppb		98
59) 4-Chlorophenyl-phenyle...	9.183	204	153360	10523.1239391 ppb		98
60) Diethyl phthalate	9.036	149	364212	10415.9972709 ppb		98
61) 4-Nitroaniline	9.195	138	79645	12215.0902924 ppb		97
62) Azobenzene	9.360	77	355283	10852.9767502 ppb		99
65) 4,6-Dinitro-2-methylph...	9.225	198	41584	8934.6870352 ppb		92
66) N-Nitrosodiphenylamine	9.307	169	308869	10703.3385511 ppb		99
68) 4-Bromophenyl-phenylether	9.719	248	85783	10458.1547185 ppb		95
69) Hexachlorobenzene	9.801	284	93468	10180.3958198 ppb		95
70) n-octadecane	10.042	55	60016	10448.6482991 ppb		98
71) Pentachlorophenol	10.007	266	45767	8595.8985142 ppb		97
72) Phenanthrene	10.260	178	543464	10221.2268914 ppb		99
73) Anthracene	10.313	178	547937	10817.3522670 ppb		100
74) Carbazole	10.472	167	535146	11759.6082542 ppb		99
75) Di-n-butyl phthalate	10.807	149	712555	9961.3449884 ppb		99
77) Fluoranthene	11.560	202	567783	10754.3363155 ppb		99
80) Pyrene	11.819	202	597150	10726.0579610 ppb		99
82) Benzylbutyl phthalate	12.448	149	331297	9649.3938218 ppb		96
84) Benzo(a)anthracene	13.118	228	562617	10074.1063252 ppb		99
85) Chrysene	13.160	228	541748	10228.3572405 ppb		100
86) bis(2-Ethylhexyl)phtha...	13.042	149	481854	9698.7091400 ppb		99
87) Di-n-octyl phthalate	13.771	149	814804	9505.1043636 ppb		99
89) Benzo(b)fluoranthene	14.442	252	563890	10404.2142147 ppb		97
90) Benzo(k)fluoranthene	14.477	252	536343	10587.7079584 ppb		100
91) Benzo(a)pyrene	14.930	252	531904	10538.6712184 ppb		100
92) Indeno(1,2,3-cd)pyrene	16.948	276	590333	10790.6119207 ppb		96
93) Dibenz(a,h)anthracene	16.954	278	510580	10699.4352530 ppb		94
94) Benzo(g,h,i)perylene	17.536	276	498773	10665.5551792 ppb		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

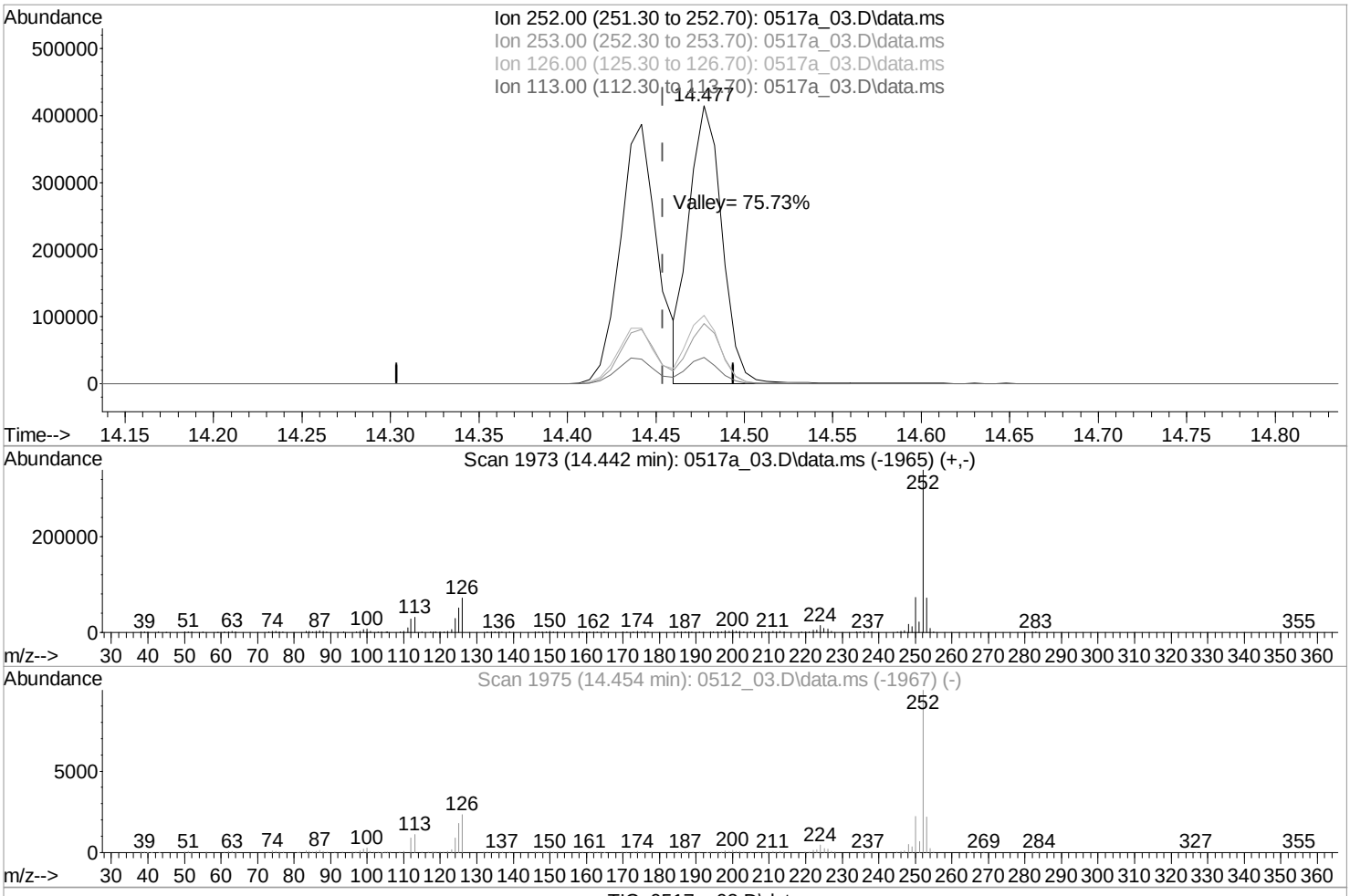
Data Path : C:\msdchem\1\data\051716a\
Data File : 0517a 03.D
Acq On : 17 May 2016 4:01 pm
Operator : 377
Sample : ICV SVMS 10K PPB 16D25863
Misc : 8270 PRIMARY CALIBRATION IS 16E12001
ALS Vial : 3 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 17 17:29:32 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:52:25 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M



Data Path : C:\msdchem\1\data\051716a\
Data File : 0517a 03.D
Acq On : 17 May 2016 4:01 pm
Operator : 377
Sample : ICV SVMS 10K PPB 16D25863
Misc : 8270 PRIMARY CALIBRATION IS 16E12001
ALS Vial : 3 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 17 16:35:40 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:52:25 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M



TIC: 0517a_03.D\data.ms

(89) Benzo(b)fluoranthene (MT)

14.442min (-0.012) 10404.2142147 ppb

Qvalue = 97

response 563890

Ion	Exp%	Act%
252.00	100	100
253.00	21.70	21.06
126.00	23.30	20.88
113.00	11.00	9.31

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\051716a\
Data File : 0517a 04.D
Acq On : 17 May 2016 4:24 pm
Operator : 377
Sample : ICV TCL 10K1 PPB 16D25867
Misc : 8270 TCL CALIBRATION IS 16E12001
ALS Vial : 4 Sample Multiplier: 1
InstName : BNAMS23

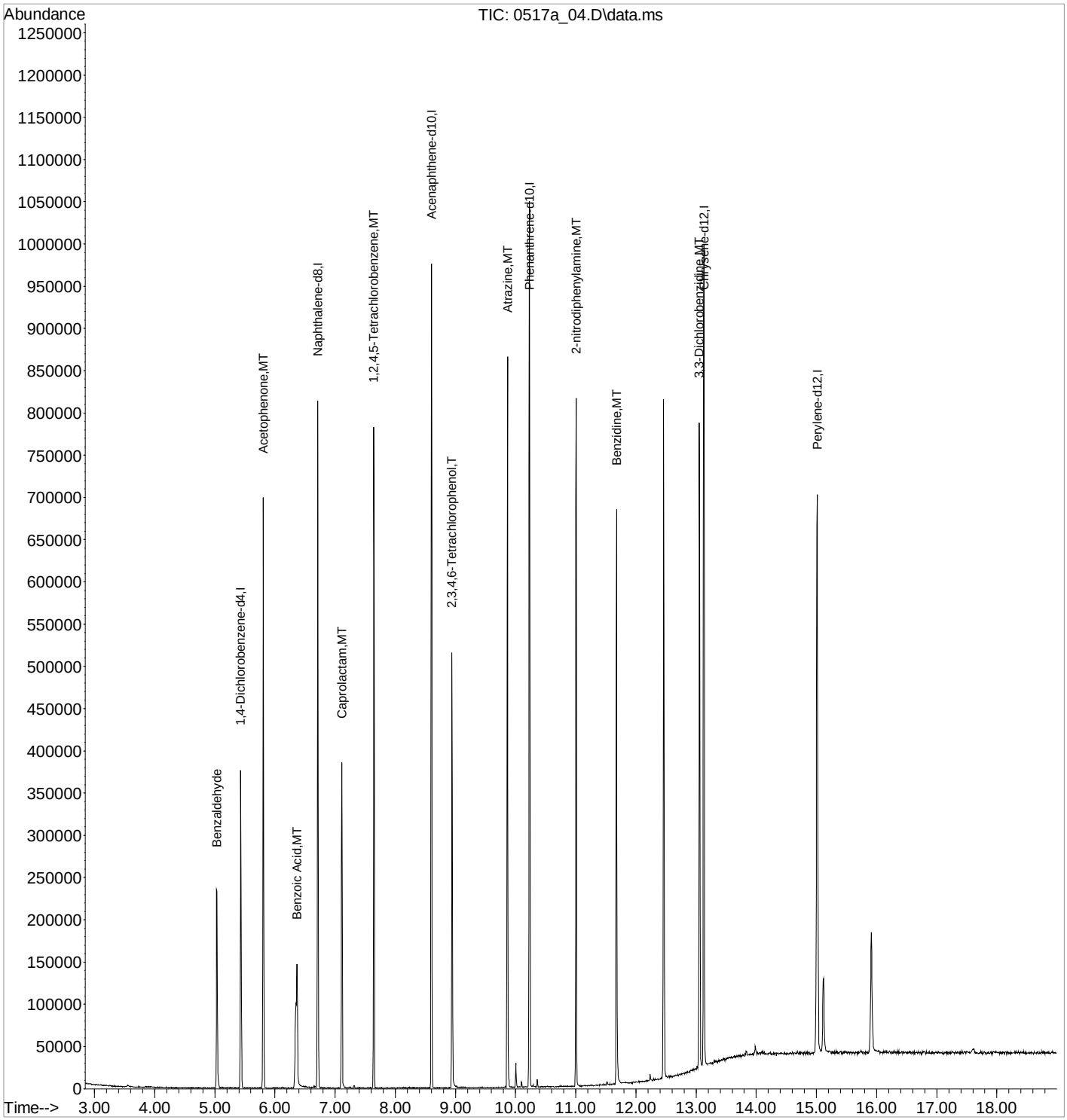
Quant Time: May 17 17:28:39 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:52:25 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	5.431	152	63066	8000.0000000	ppb	0.00
22) Naphthalene-d8	6.713	136	364250	8000.0000000	ppb	0.00
40) Acenaphthene-d10	8.601	164	211184	8000.0000000	ppb	0.00
64) Phenanthrene-d10	10.230	188	369878	8000.0000000	ppb	0.00
78) Chrysene-d12	13.130	240	346356	8000.0000000	ppb	0.00
88) Perylene-d12	15.012	264	330544	8000.0000000	ppb	-0.01
System Monitoring Compounds						
4) 2-Fluorophenol	0.000	112	0	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 87		Recovery =	0.00%#		
7) Phenol-d5	0.000	99	0	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 67		Recovery =	0.00%#		
23) Nitrobenzene-d5	0.000	82	0	0.0000000	ppb	
Spiked Amount 10.000	Range 12 - 120		Recovery =	0.00%#		
44) 2-Fluorobiphenyl	0.000	172	0	0.0000000	ppb	
Spiked Amount 10.000	Range 26 - 122		Recovery =	0.00%#		
67) 2,4,6-Tribromophenol	0.000	330	0	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 148		Recovery =	0.00%#		
81) p-Terphenyl-d14	0.000	244	0	0.0000000	ppb	
Spiked Amount 10.000	Range 34 - 149		Recovery =	0.00%#		
Target Compounds						Qvalue
9) Benzaldehyde	5.037	105	55838	10388.1625091	ppb	99
21) Acetophenone	5.807	105	201339	10150.6456100	ppb	99
30) Benzoic Acid	6.366	105	83506	9477.8928924	ppb	94
35) Caprolactam	7.113	113	46026	10462.9800459	ppb	98
39) 1,2,4,5-Tetrachloroben...	7.642	216	126685	10064.9466764	ppb	99
56) 2,3,4,6-Tetrachlorophenol	8.942	232	55782	9530.4912714	ppb	98
63) Atrazine	9.866	200	81564	9956.9236636	ppb	99
76) 2-nitrodiphenylamine	11.007	167	116117	8998.0862587	ppb	92
79) Benzidine	11.677	184	271248	9260.6294202	ppb	98
83) 3,3-Dichlorobenzidine	13.054	252	159724	10636.9793715	ppb	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\051716a\
Data File : 0517a 04.D
Acq On : 17 May 2016 4:24 pm
Operator : 377
Sample : ICV TCL 10K1 PPB 16D25867
Misc : 8270 TCL CALIBRATION IS 16E12001
ALS Vial : 4 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 17 17:28:39 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:52:25 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\051716a\
Data File : 0517a 08.D
Acq On : 17 May 2016 5:56 pm
Operator : 377
Sample : LCS 1x WG872624 1000-1.0
Misc : water IS 16E12001
ALS Vial : 34 Sample Multiplier: 0.001
InstName : BNAMS23

Quant Time: May 18 09:42:18 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:52:25 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 1,4-Dichlorobenzene-d4	5.431	152	61277	8000.0000000	ppb		0.00
22) Naphthalene-d8	6.713	136	350257	8000.0000000	ppb		0.00
40) Acenaphthene-d10	8.601	164	205909	8000.0000000	ppb		0.00
64) Phenanthrene-d10	10.231	188	356847	8000.0000000	ppb		0.00
78) Chrysene-d12	13.130	240	343392	8000.0000000	ppb		0.00
88) Perylene-d12	15.013	264	332090	8000.0000000	ppb		-0.01
System Monitoring Compounds							
4) 2-Fluorophenol	4.296	112	139702	11.5296051	ppb		0.00
Spiked Amount 20.000	Range 10 - 87		Recovery = 57.65%				
7) Phenol-d5	5.037	99	125776	8.1451593	ppb		0.00
Spiked Amount 20.000	Range 10 - 67		Recovery = 40.73%				
23) Nitrobenzene-d5	5.960	82	121656	8.9308043	ppb		0.00
Spiked Amount 10.000	Range 12 - 120		Recovery = 89.31%				
44) 2-Fluorobiphenyl	7.854	172	301507	9.1300035	ppb		0.00
Spiked Amount 10.000	Range 26 - 122		Recovery = 91.30%				
67) 2,4,6-Tribromophenol	9.460	330	78094	19.2965664	ppb		0.00
Spiked Amount 20.000	Range 10 - 148		Recovery = 96.48%				
81) p-Terphenyl-d14	11.948	244	394978	11.1409051	ppb		-0.01
Spiked Amount 10.000	Range 34 - 149		Recovery = 111.41%				
Target Compounds							Qvalue
2) Pyridine	3.360	79	85264	5.4480162	ppb		94
3) N-Nitrosodimethylamine	3.325	42	45452	7.3402445	ppb		84
5) Aniline	5.119	66	92420	13.0049992	ppb		93
6) bis(2-Chloroethyl)ether	5.160	93	233733	16.8861851	ppb		98
8) Phenol	5.049	94	140171	8.6981888	ppb		98
9) Benzaldehyde	5.037	105	115310	22.0787074	ppb		97
10) 2-Chlorophenol	5.231	128	243015	16.2596344	ppb		98
11) n-Decane	5.249	41	71256	10.1871697	ppb	#	97
12) 1,3-Dichlorobenzene	5.378	146	231835	13.6725564	ppb		99
13) 1,4-Dichlorobenzene	5.449	146	245102	14.2150730	ppb		97
14) Benzyl Alcohol	5.537	79	133972	12.9324667	ppb		99
15) 1,2-Dichlorobenzene	5.596	146	243257	14.6540565	ppb		99
16) bis(2-Chloroisopropyl)...	5.672	121	87505	17.8015462	ppb	#	81
17) 2-Methylphenol	5.625	108	207026	16.0754062	ppb		97
18) Hexachloroethane	5.931	117	95707	13.2239523	ppb		98
19) N-Nitrosodi-n-propylamine	5.796	70	128056	18.6667935	ppb		99
20) 3&4-Methyl phenol	5.772	107	252147	16.9292255	ppb		86
21) Acetophenone	5.807	105	335379	17.4020101	ppb		99
24) Nitrobenzene	5.984	77	243433	17.5213082	ppb		97
25) Isophorone	6.219	82	476248	19.2695166	ppb		97
26) 2-Nitrophenol	6.307	139	145718	18.4395676	ppb		96
27) 2,4-Dimethylphenol	6.319	107	239043	17.0962434	ppb		98
28) bis(2-Chlorethoxy)methane	6.425	93	333585	18.7169900	ppb		97
29) 2,4-Dichlorophenol	6.543	162	227943	19.4458742	ppb		98
30) Benzoic Acid	6.325	105	5863m	1.4351614	ppb		
31) 1,2,4-Trichlorobenzene	6.643	180	202088	15.2228988	ppb		97
32) Naphthalene	6.737	128	799316	16.7856852	ppb		100
33) 4-Chloroaniline	6.772	65	86877	17.4696361	ppb		91
34) Hexachloro-1,3-butadiene	6.854	225	96388	14.6671948	ppb		99
35) Caprolactam	7.113	113	17472	4.1305466	ppb		97

Data Path : C:\msdchem\1\data\051716a\
Data File : 0517a 08.D
Acq On : 17 May 2016 5:56 pm
Operator : 377
Sample : LCS 1x WG872624 1000-1.0
Misc : water IS 16E12001
ALS Vial : 34 Sample Multiplier: 0.001
InstName : BNAMS23

Quant Time: May 18 09:42:18 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:52:25 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
36)	4-Chloro-3-methylphenol	7.260	107	247195	19.6548649	ppb		99
37)	2-Methylnaphthalene	7.466	142	555969	17.4975778	ppb		99
38)	1-Methylnaphthalene	7.578	142	524209	17.0756547	ppb		99
39)	1,2,4,5-Tetrachloroben...	7.643	216	197319	16.3030149	ppb		98
41)	Hexachlorocyclopentadiene	7.631	237	118172	15.0614591	ppb		97
42)	2,4,6-Trichlorophenol	7.754	196	164216	20.7684245	ppb		96
43)	2,4,5-Trichlorophenol	7.795	196	186030	21.6142424	ppb		98
45)	Biphenyl	7.966	154	677109	17.7258568	ppb		100
46)	2-Chloronaphthalene	7.995	162	532183	17.9214220	ppb		100
47)	2-Nitroaniline	8.090	138	228469	20.0421095	ppb		97
48)	Acenaphthylene	8.454	152	975658	20.4619592	ppb		100
49)	Dimethyl phthalate	8.278	163	650330	20.6725370	ppb		96
50)	2,6-Dinitrotoluene	8.348	165	155665	20.2204704	ppb		96
51)	3-Nitroaniline	8.531	138	179541	20.6813378	ppb		95
52)	Acenaphthene	8.637	153	589822	19.1280251	ppb		98
53)	2,4-Dinitrophenol	8.642	184	53462	14.2500831	ppb	#	77
54)	Dibenzofuran	8.825	168	801522	18.4150456	ppb		99
55)	2,4-Dinitrotoluene	8.784	165	216122	22.2019482	ppb		97
56)	2,3,4,6-Tetrachlorophenol	8.942	232	112466	18.9965990	ppb		100
57)	4-Nitrophenol	8.678	139	72394	9.4711304	ppb		96
58)	Fluorene	9.201	166	694929	19.8252104	ppb		98
59)	4-Chlorophenyl-phenyle...	9.184	204	279059	19.7265568	ppb		98
60)	Diethyl phthalate	9.037	149	704010	20.7418793	ppb		100
61)	4-Nitroaniline	9.201	138	188118	29.7229004	ppb		99
62)	Azobenzene	9.360	77	658366	20.7187957	ppb		98
63)	Atrazine	9.866	200	169866	21.2676157	ppb		98
65)	4,6-Dinitro-2-methylph...	9.225	198	92319	18.8142219	ppb		93
66)	N-Nitrosodiphenylamine	9.307	169	588678	21.3203160	ppb		99
68)	4-Bromophenyl-phenylether	9.719	248	159701	20.3484980	ppb		97
69)	Hexachlorobenzene	9.801	284	179273	20.4073912	ppb		98
70)	n-octadecane	10.042	55	112776	20.5201552	ppb		99
71)	Pentachlorophenol	10.007	266	101841	18.8325442	ppb		96
72)	Phenanthrene	10.260	178	995586	19.5695987	ppb		99
73)	Anthracene	10.313	178	1039158	21.4408906	ppb		99
74)	Carbazole	10.472	167	1033310	23.7313308	ppb		99
75)	Di-n-butyl phthalate	10.807	149	1389767	20.1696939	ppb		100
76)	2-nitrodiphenylamine	11.007	167	279997	21.3103245	ppb		94
77)	Fluoranthene	11.566	202	1122768	22.2260428	ppb		99
79)	Benzidine	11.678	184	427210	14.2143069	ppb		98
80)	Pyrene	11.819	202	1143927	21.6317853	ppb		99
82)	Benzylbutyl phthalate	12.454	149	669112	20.3140738	ppb		97
83)	3,3-Dichlorobenzidine	13.060	252	413713	27.7894435	ppb		96
84)	Benzo(a)anthracene	13.119	228	1096183	20.6639857	ppb		99
85)	Chrysene	13.160	228	1031226	20.4974472	ppb		97
86)	bis(2-Ethylhexyl)phtha...	13.042	149	978533	20.5604384	ppb		99
87)	Di-n-octyl phthalate	13.772	149	1632818	19.8505967	ppb		99
89)	Benzo(b)fluoranthene	14.442	252	1119345m	21.8995883	ppb		
90)	Benzo(k)fluoranthene	14.483	252	985086	20.6200911	ppb		99
91)	Benzo(a)pyrene	14.936	252	1016456	21.3549362	ppb		100
92)	Indeno(1,2,3-cd)pyrene	16.954	276	1137579	22.0489379	ppb		98
93)	Dibenz(a,h)anthracene	16.965	278	978975	21.7533302	ppb		97
94)	Benzo(g,h,i)perylene	17.548	276	947066	21.4742434	ppb		99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\051716a\
Data File : 0517a 08.D
Acq On : 17 May 2016 5:56 pm
Operator : 377
Sample : LCS 1x WG872624 1000-1.0
Misc : water IS 16E12001
ALS Vial : 34 Sample Multiplier: 0.001
InstName : BNAMS23

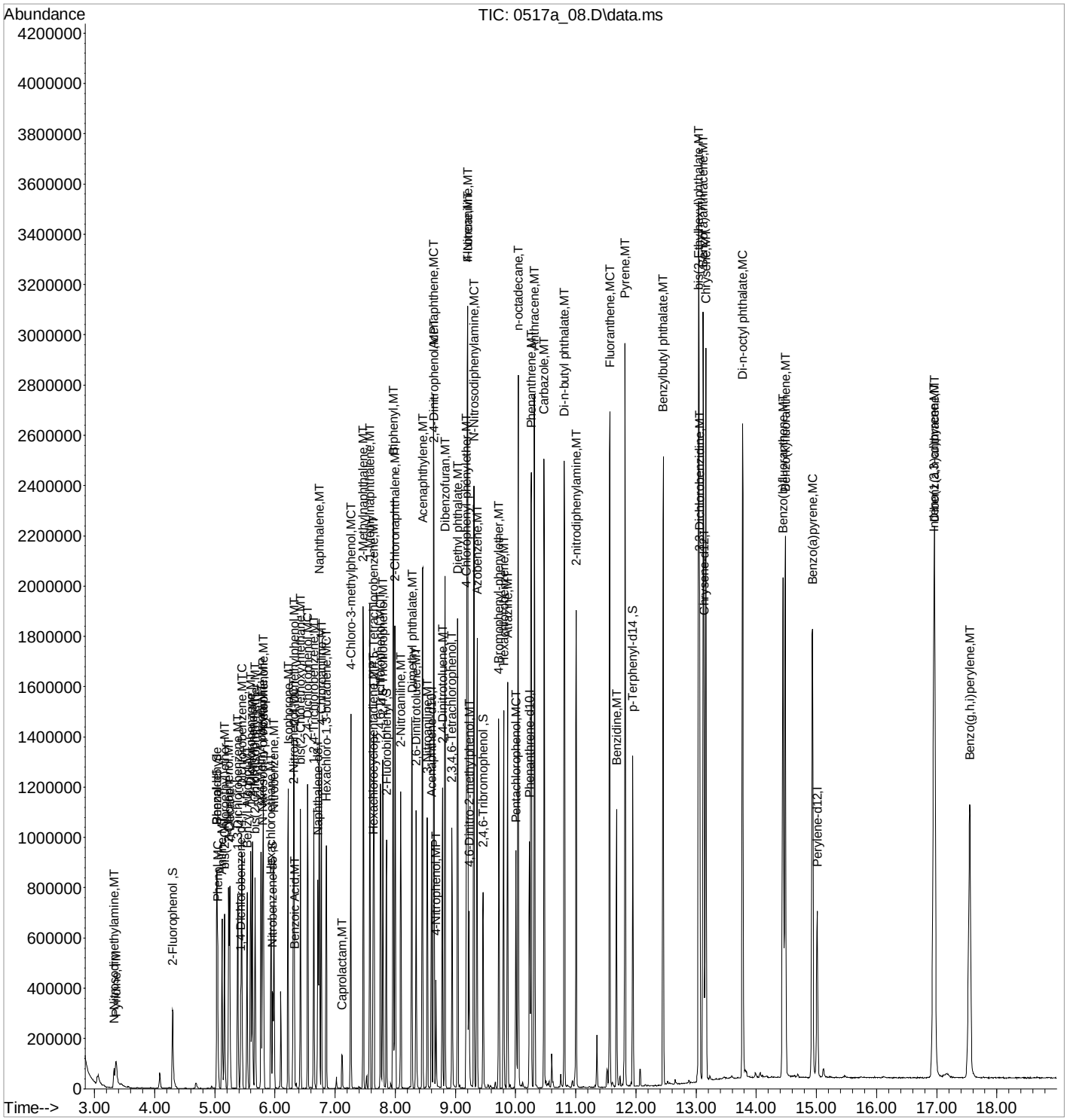
Quant Time: May 18 09:42:18 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:52:25 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\051716a\
Data File : 0517a 08.D
Acq On : 17 May 2016 5:56 pm
Operator : 377
Sample : LCS 1x WG872624 1000-1.0
Misc : water IS 16E12001
ALS Vial : 34 Sample Multiplier: 0.001
InstName : BNAMS23

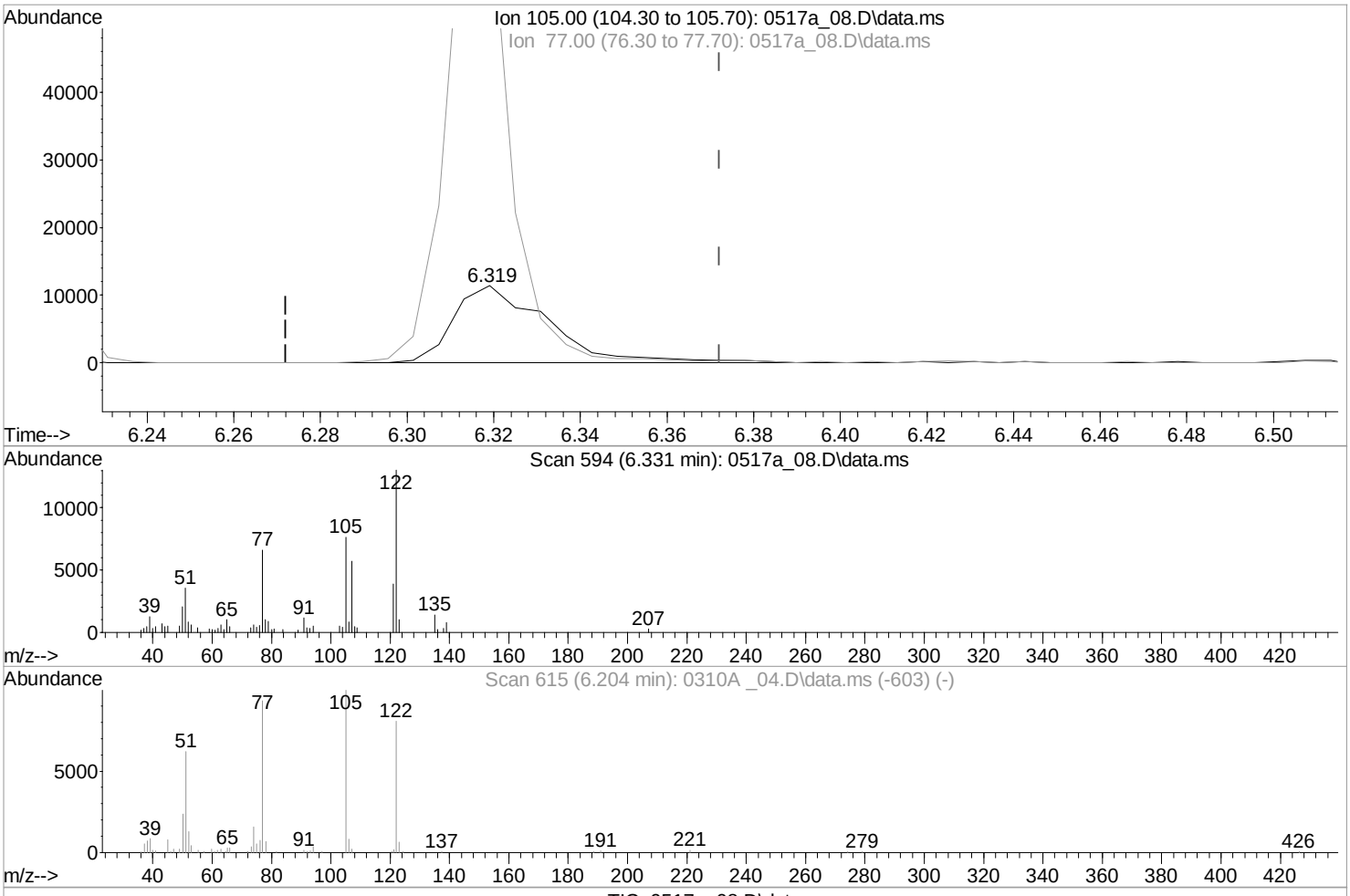
Quant Time: May 18 09:42:18 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:52:25 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M



Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\051716a\
Data File : 0517a 08.D
Acq On : 17 May 2016 5:56 pm
Operator : 377
Sample : LCS 1x WG872624 1000-1.0
Misc : water IS 16E12001
ALS Vial : 34 Sample Multiplier: 0.001
InstName : BNAMS23

Quant Time: May 18 08:28:39 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:52:25 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M



TIC: 0517a_08.D\data.ms

(30) Benzoic Acid (MT)

6.319min (-0.053) 2.7401056 ppb

Qvalue = 1

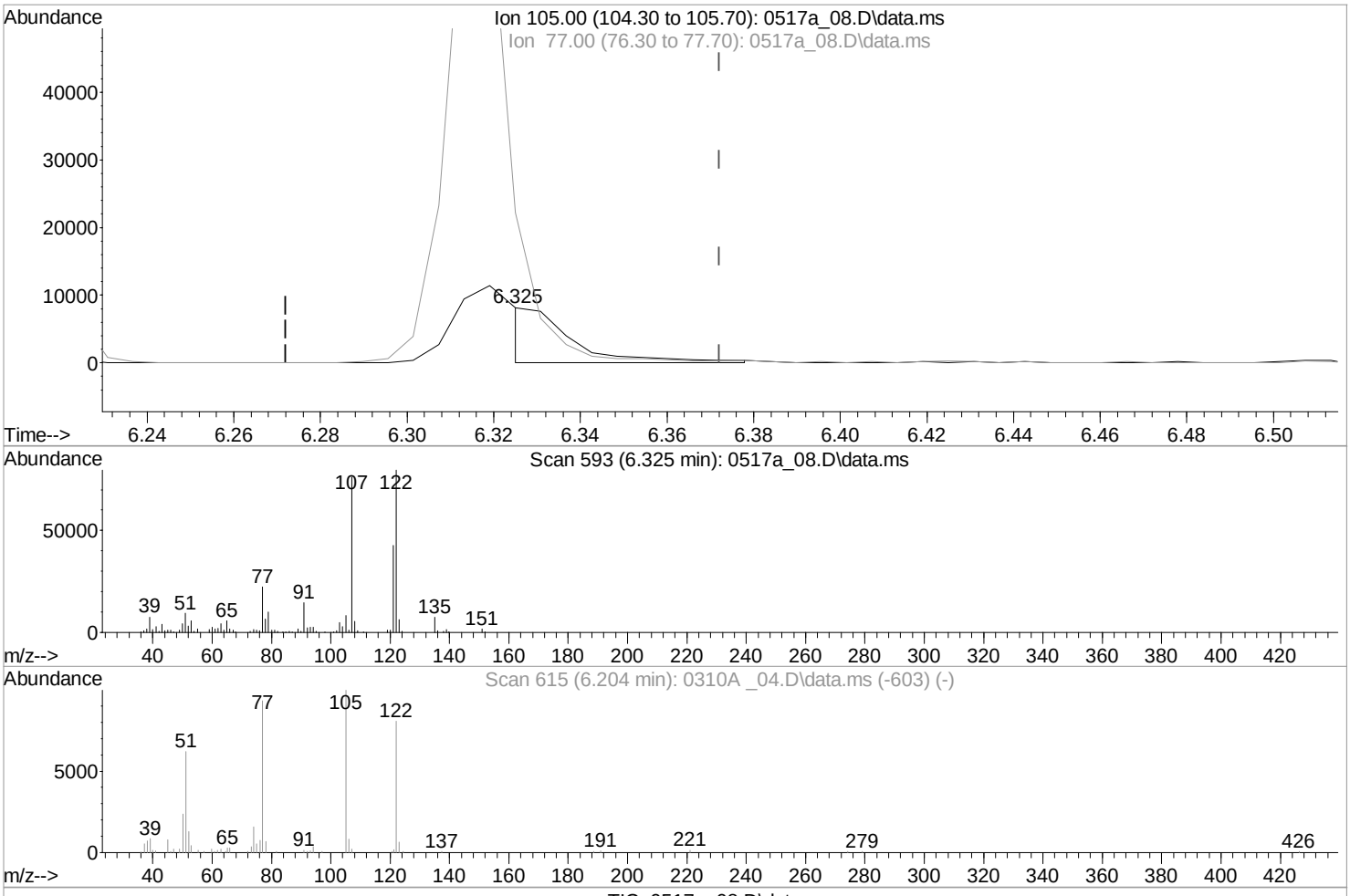
response 17254

Ion	Exp%	Act%
105.00	100	100
77.00	62.20	421.38#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\051716a\
Data File : 0517a 08.D
Acq On : 17 May 2016 5:56 pm
Operator : 377
Sample : LCS 1x WG872624 1000-1.0
Misc : water IS 16E12001
ALS Vial : 34 Sample Multiplier: 0.001
InstName : BNAMS23

Quant Time: May 18 08:28:39 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:52:25 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M



TIC: 0517a_08.D\data.ms

(30) Benzoic Acid (MT)

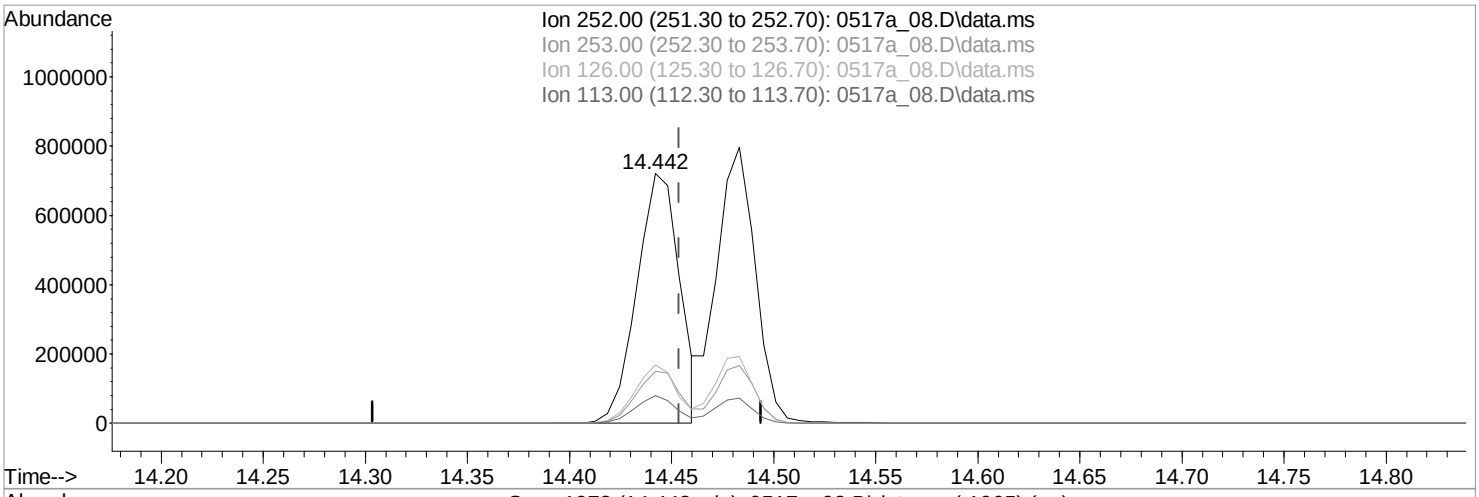
6.325min (-0.047) 1.4351614 ppb m

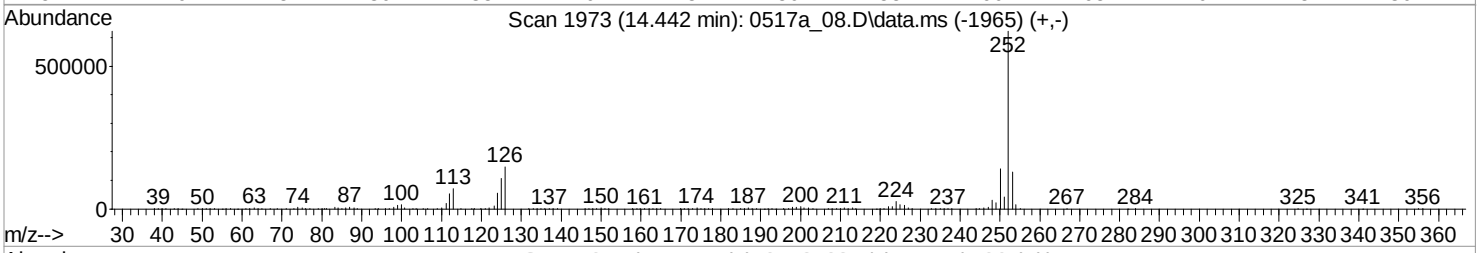
response 5863

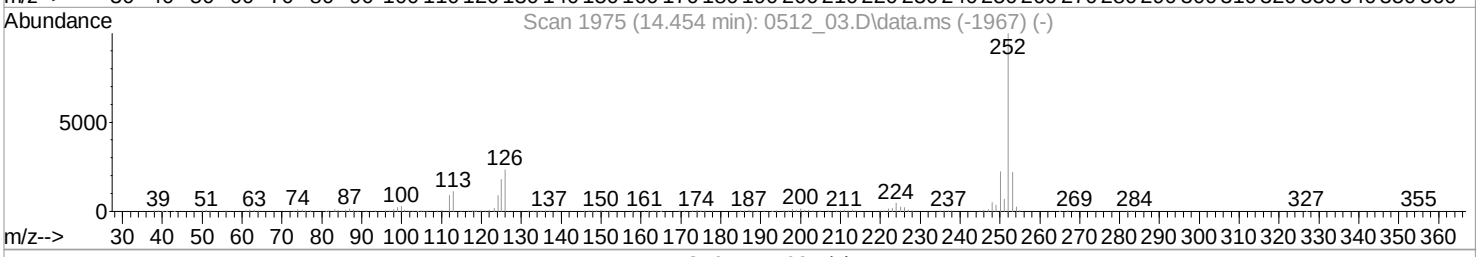
Ion	Exp%	Act%
105.00	100	100
77.00	62.20	1240.06#
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : C:\msdchem\1\data\051716a\
Data File : 0517a 08.D
Acq On : 17 May 2016 5:56 pm
Operator : 377
Sample : LCS 1x WG872624 1000-1.0
Misc : water IS 16E12001
ALS Vial : 34 Sample Multiplier: 0.001
InstName : BNAMS23

Quant Time: May 18 08:28:39 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:52:25 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M







TIC: 0517a_08.D\data.ms

(89) Benzo(b)fluoranthene (MT)

14.442min (-0.012) 20.5541472 ppb

Qvalue = 99

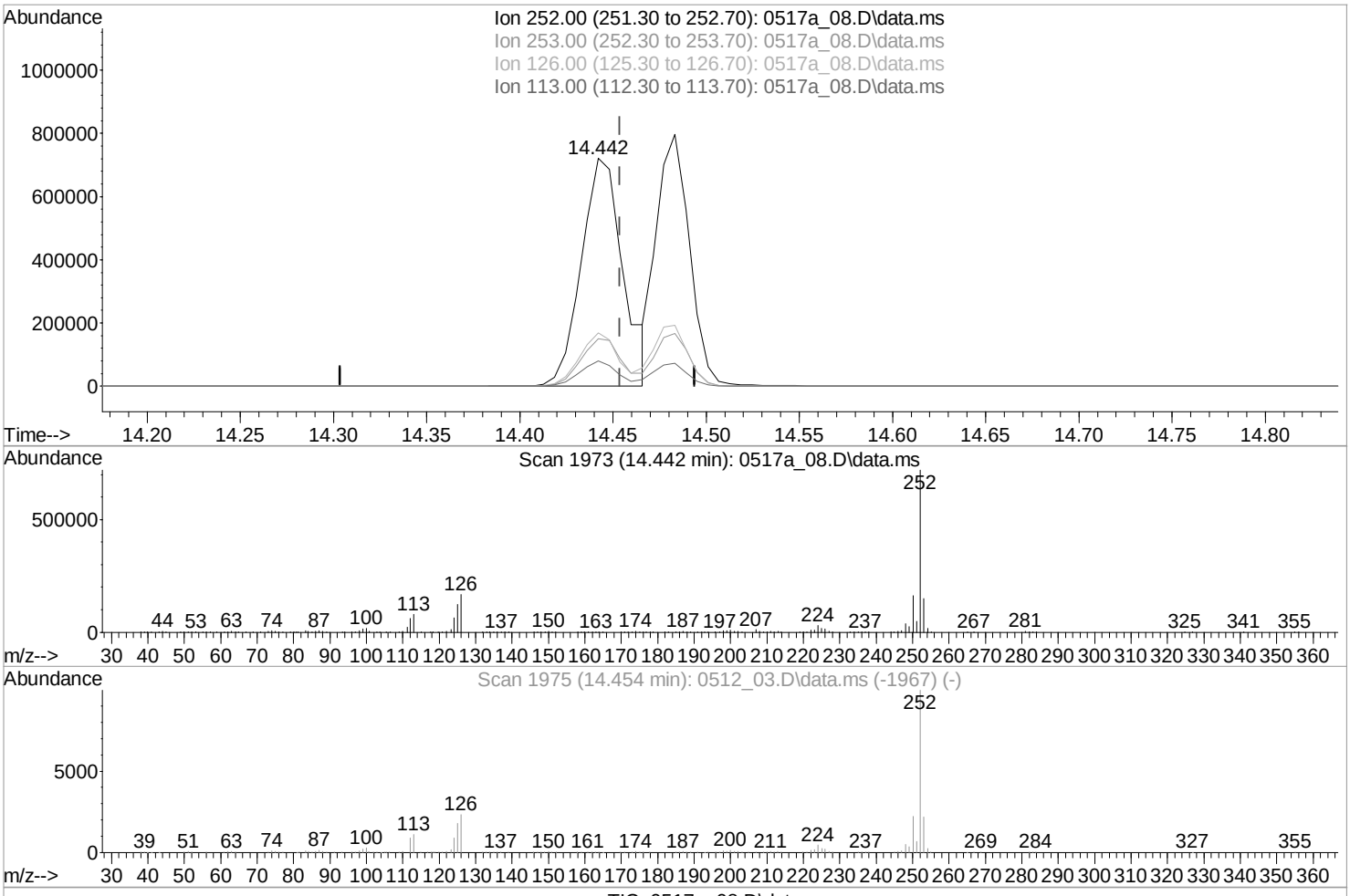
response 1050576

Ion	Exp%	Act%
252.00	100	100
253.00	21.70	20.81
126.00	23.30	23.68
113.00	11.00	11.43

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\051716a\
Data File : 0517a 08.D
Acq On : 17 May 2016 5:56 pm
Operator : 377
Sample : LCS 1x WG872624 1000-1.0
Misc : water IS 16E12001
ALS Vial : 34 Sample Multiplier: 0.001
InstName : BNAMS23

Quant Time: May 18 08:28:39 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:52:25 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M



TIC: 0517a_08.D\data.ms

(89) Benzo(b)fluoranthene (MT)

14.442min (-0.012) 21.8995883 ppb m

response 1119345

Ion	Exp%	Act%
252.00	100	100
253.00	21.70	20.84
126.00	23.30	23.31
113.00	11.00	10.99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\051716a\
Data File : 0517a 09.D
Acq On : 17 May 2016 6:20 pm
Operator : 377
Sample : LCSD 1x WG872624 1000-1.0
Misc : water IS 16E12001
ALS Vial : 35 Sample Multiplier: 0.001
InstName : BNAMS23

Quant Time: May 18 09:42:44 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:52:25 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 1,4-Dichlorobenzene-d4	5.431	152	62926	8000.0000000	ppb		0.00
22) Naphthalene-d8	6.713	136	368862	8000.0000000	ppb		0.00
40) Acenaphthene-d10	8.601	164	216526	8000.0000000	ppb		0.00
64) Phenanthrene-d10	10.230	188	368728	8000.0000000	ppb		0.00
78) Chrysene-d12	13.130	240	363403	8000.0000000	ppb		0.00
88) Perylene-d12	15.013	264	349090	8000.0000000	ppb		-0.01
System Monitoring Compounds							
4) 2-Fluorophenol	4.296	112	139667	11.2246545	ppb		0.00
Spiked Amount 20.000	Range 10 - 87		Recovery = 56.12%				
7) Phenol-d5	5.037	99	124857	7.8737581	ppb		0.00
Spiked Amount 20.000	Range 10 - 67		Recovery = 39.37%				
23) Nitrobenzene-d5	5.960	82	123212	8.5888092	ppb		0.00
Spiked Amount 10.000	Range 12 - 120		Recovery = 85.89%				
44) 2-Fluorobiphenyl	7.854	172	307078	8.8427536	ppb		0.00
Spiked Amount 10.000	Range 26 - 122		Recovery = 88.43%				
67) 2,4,6-Tribromophenol	9.460	330	82824	19.7884187	ppb		0.00
Spiked Amount 20.000	Range 10 - 148		Recovery = 98.94%				
81) p-Terphenyl-d14	11.948	244	401833	10.7101322	ppb		-0.01
Spiked Amount 10.000	Range 34 - 149		Recovery = 107.10%				
Target Compounds							Qvalue
2) Pyridine	3.360	79	86801	5.4008832	ppb		94
3) N-Nitrosodimethylamine	3.325	42	46305	7.2820354	ppb		90
5) Aniline	5.119	66	94779	12.9874491	ppb		94
6) bis(2-Chloroethyl)ether	5.160	93	236863	16.6638791	ppb		98
8) Phenol	5.048	94	139048	8.4023888	ppb		98
9) Benzaldehyde	5.037	105	116764	21.7712320	ppb		97
10) 2-Chlorophenol	5.231	128	248614	16.1983451	ppb		98
11) n-Decane	5.248	41	68592	9.5493308	ppb	#	98
12) 1,3-Dichlorobenzene	5.378	146	227680	13.0756405	ppb		99
13) 1,4-Dichlorobenzene	5.448	146	237832	13.4319757	ppb		98
14) Benzyl Alcohol	5.537	79	135762	12.7618291	ppb		100
15) 1,2-Dichlorobenzene	5.596	146	240501	14.1083677	ppb		98
16) bis(2-Chloroisopropyl)...	5.672	121	89518	17.7338322	ppb	#	77
17) 2-Methylphenol	5.625	108	211011	15.9554673	ppb		98
18) Hexachloroethane	5.931	117	94413	12.7033054	ppb		96
19) N-Nitrosodi-n-propylamine	5.795	70	130908	18.5824660	ppb		98
20) 3&4-Methyl phenol	5.772	107	254902	16.6657129	ppb		86
21) Acetophenone	5.807	105	344082	17.3857277	ppb		100
24) Nitrobenzene	5.984	77	243126	16.6165703	ppb		96
25) Isophorone	6.219	82	486454	18.6897004	ppb		96
26) 2-Nitrophenol	6.307	139	150552	18.0903499	ppb		97
27) 2,4-Dimethylphenol	6.319	107	252484	17.1467348	ppb		99
28) bis(2-Chlorethoxy)methane	6.425	93	339854	18.1069285	ppb		97
29) 2,4-Dichlorophenol	6.543	162	232859	18.8632772	ppb		97
30) Benzoic Acid	6.325	105	5172m	1.3247184	ppb		
31) 1,2,4-Trichlorobenzene	6.643	180	205356	14.6888277	ppb		97
32) Naphthalene	6.737	128	815308	16.2570660	ppb		100
33) 4-Chloroaniline	6.772	65	90428	17.2665223	ppb		95
34) Hexachloro-1,3-butadiene	6.854	225	100001	14.4494508	ppb		98
35) Caprolactam	7.113	113	17967	4.0333265	ppb		95

Data Path : C:\msdchem\1\data\051716a\
Data File : 0517a 09.D
Acq On : 17 May 2016 6:20 pm
Operator : 377
Sample : LCSD 1x WG872624 1000-1.0
Misc : water IS 16E12001
ALS Vial : 35 Sample Multiplier: 0.001
InstName : BNAMS23

Quant Time: May 18 09:42:44 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:52:25 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M

Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
36) 4-Chloro-3-methylphenol	7.260	107	257410	19.4347385 ppb		99
37) 2-Methylnaphthalene	7.466	142	570549	17.0507392 ppb		99
38) 1-Methylnaphthalene	7.578	142	530729	16.4160481 ppb		99
39) 1,2,4,5-Tetrachloroben...	7.642	216	202298	15.8713371 ppb		99
41) Hexachlorocyclopentadiene	7.631	237	122988	14.9066645 ppb		98
42) 2,4,6-Trichlorophenol	7.754	196	167608	20.1580307 ppb		96
43) 2,4,5-Trichlorophenol	7.795	196	190383	21.0353854 ppb		99
45) Biphenyl	7.966	154	691516	17.2153620 ppb		99
46) 2-Chloronaphthalene	7.995	162	536259	17.1732044 ppb		99
47) 2-Nitroaniline	8.089	138	238315	19.8847294 ppb		98
48) Acenaphthylene	8.454	152	988463	19.7140248 ppb		99
49) Dimethyl phthalate	8.278	163	681633	20.6051545 ppb		95
50) 2,6-Dinitrotoluene	8.348	165	160507	19.8271153 ppb		95
51) 3-Nitroaniline	8.531	138	183344	20.0838499 ppb		97
52) Acenaphthene	8.636	153	613344	18.9155322 ppb		99
53) 2,4-Dinitrophenol	8.642	184	45773	11.8963732 ppb	#	69
54) Dibenzofuran	8.825	168	831690	18.1712208 ppb		99
55) 2,4-Dinitrotoluene	8.784	165	228089	22.2823876 ppb		95
56) 2,3,4,6-Tetrachlorophenol	8.942	232	115876	18.6263166 ppb		99
57) 4-Nitrophenol	8.678	139	72609	9.0616072 ppb		96
58) Fluorene	9.201	166	718409	19.4901154 ppb		98
59) 4-Chlorophenyl-phenyle...	9.184	204	283920	19.0860702 ppb		97
60) Diethyl phthalate	9.036	149	749229	20.9917734 ppb		100
61) 4-Nitroaniline	9.201	138	196302	29.4951652 ppb		98
62) Azobenzene	9.360	77	692981	20.7388045 ppb		98
63) Atrazine	9.866	200	180217	21.4572161 ppb		98
65) 4,6-Dinitro-2-methylph...	9.225	198	87489	17.3756556 ppb		93
66) N-Nitrosodiphenylamine	9.307	169	607598	21.2964933 ppb		100
68) 4-Bromophenyl-phenylether	9.719	248	167144	20.6106385 ppb		98
69) Hexachlorobenzene	9.801	284	186015	20.4925736 ppb		97
70) n-octadecane	10.042	55	116983	20.5997828 ppb		98
71) Pentachlorophenol	10.007	266	89180	16.0931734 ppb		96
72) Phenanthrene	10.260	178	1044885	19.8768502 ppb		99
73) Anthracene	10.313	178	1079537	21.5563239 ppb		100
74) Carbazole	10.472	167	1070011	23.7823976 ppb		99
75) Di-n-butyl phthalate	10.813	149	1460899	20.5166067 ppb		100
76) 2-nitrodiphenylamine	11.007	167	289956	21.3554888 ppb		94
77) Fluoranthene	11.566	202	1159149	22.2068683 ppb		99
79) Benzidine	11.677	184	413047	13.0592338 ppb		98
80) Pyrene	11.819	202	1193516	21.3267149 ppb		99
82) Benzylbutyl phthalate	12.454	149	706342	20.2639696 ppb		96
83) 3,3-Dichlorobenzidine	13.060	252	424702	26.9566955 ppb		96
84) Benzo(a)anthracene	13.119	228	1140512	20.3157357 ppb		99
85) Chrysene	13.160	228	1082243	20.3269571 ppb		99
86) bis(2-Ethylhexyl)phtha...	13.042	149	1003525	19.9292233 ppb		99
87) Di-n-octyl phthalate	13.771	149	1665552	19.1401418 ppb		98
89) Benzo(b)fluoranthene	14.442	252	1089034	20.2689764 ppb		99
90) Benzo(k)fluoranthene	14.483	252	1096107	21.8266846 ppb		99
91) Benzo(a)pyrene	14.936	252	1061125	21.2077518 ppb		99
92) Indeno(1,2,3-cd)pyrene	16.954	276	1163963	21.4616779 ppb		98
93) Dibenz(a,h)anthracene	16.965	278	998640	21.1096726 ppb		95
94) Benzo(g,h,i)perylene	17.548	276	976975	21.0736356 ppb		98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\051716a\
Data File : 0517a 09.D
Acq On : 17 May 2016 6:20 pm
Operator : 377
Sample : LCSD 1x WG872624 1000-1.0
Misc : water IS 16E12001
ALS Vial : 35 Sample Multiplier: 0.001
InstName : BNAMS23

Quant Time: May 18 09:42:44 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:52:25 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M

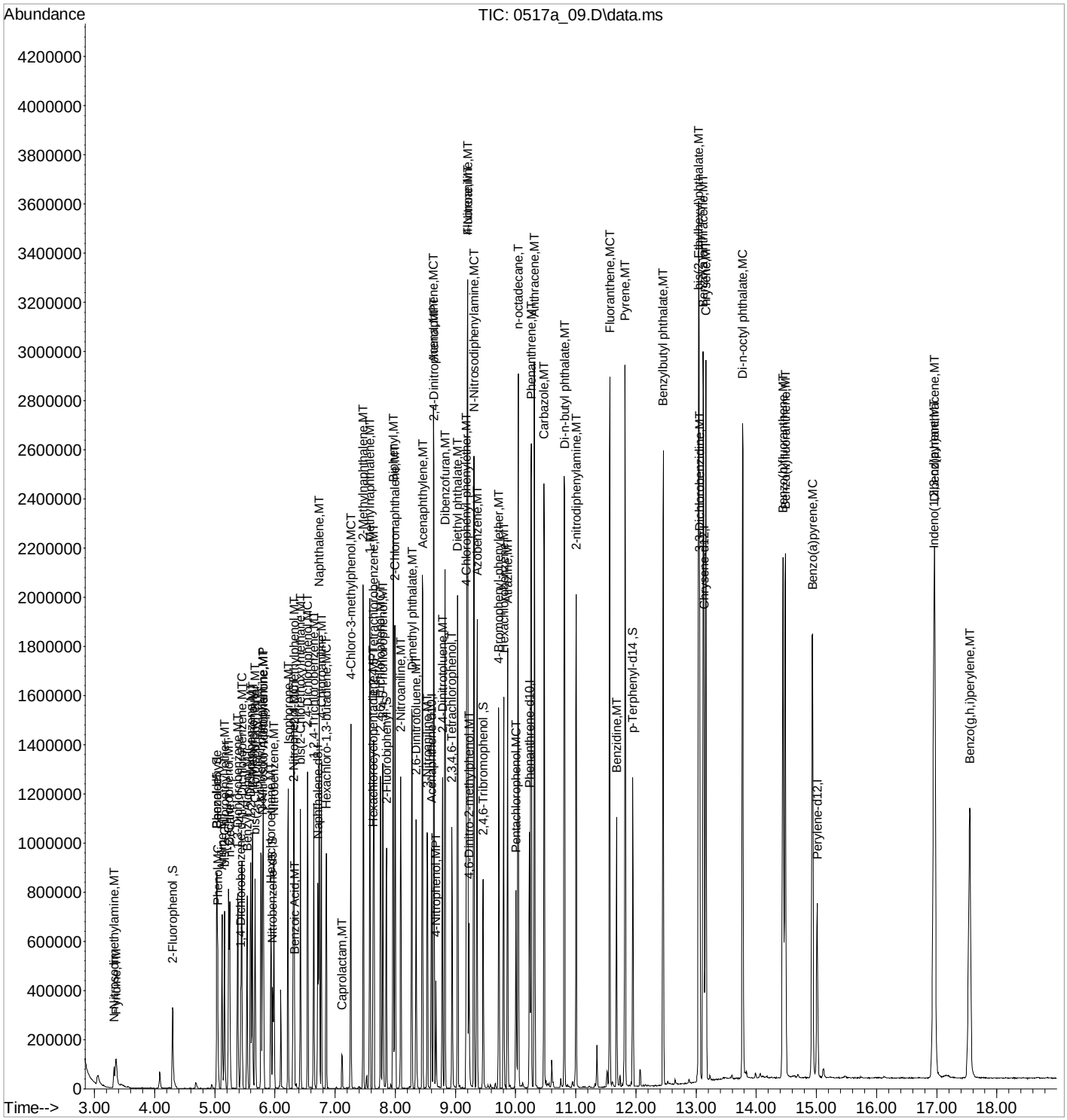
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\051716a\
Data File : 0517a 09.D
Acq On : 17 May 2016 6:20 pm
Operator : 377
Sample : LCSD 1x WG872624 1000-1.0
Misc : water IS 16E12001
ALS Vial : 35 Sample Multiplier: 0.001
InstName : BNAMS23

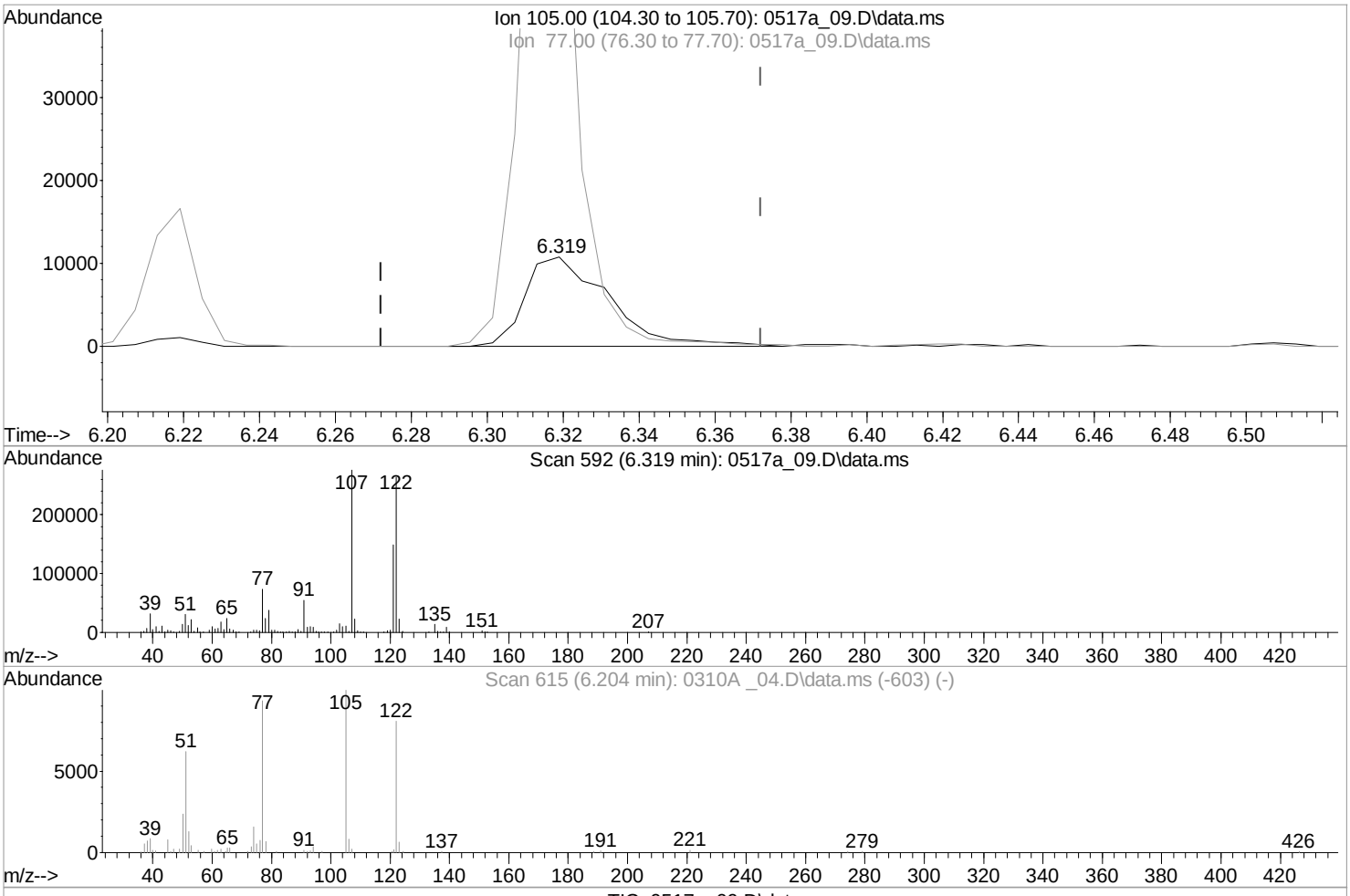
Quant Time: May 18 09:42:44 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:52:25 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M



Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\051716a\
Data File : 0517a 09.D
Acq On : 17 May 2016 6:20 pm
Operator : 377
Sample : LCSD 1x WG872624 1000-1.0
Misc : water IS 16E12001
ALS Vial : 35 Sample Multiplier: 0.001
InstName : BNAMS23

Quant Time: May 18 08:28:42 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:52:25 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M



TIC: 0517a_09.D\data.ms

(30) Benzoic Acid (MT)

6.319min (-0.053) 2.5482217 ppb

Qvalue = 1

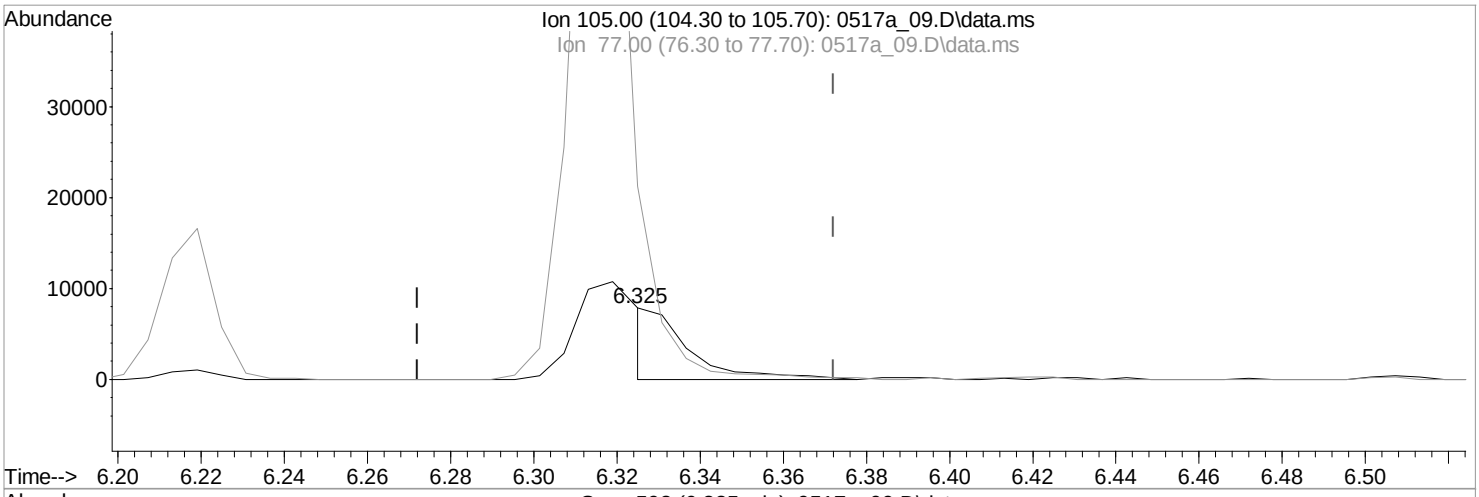
response 16389

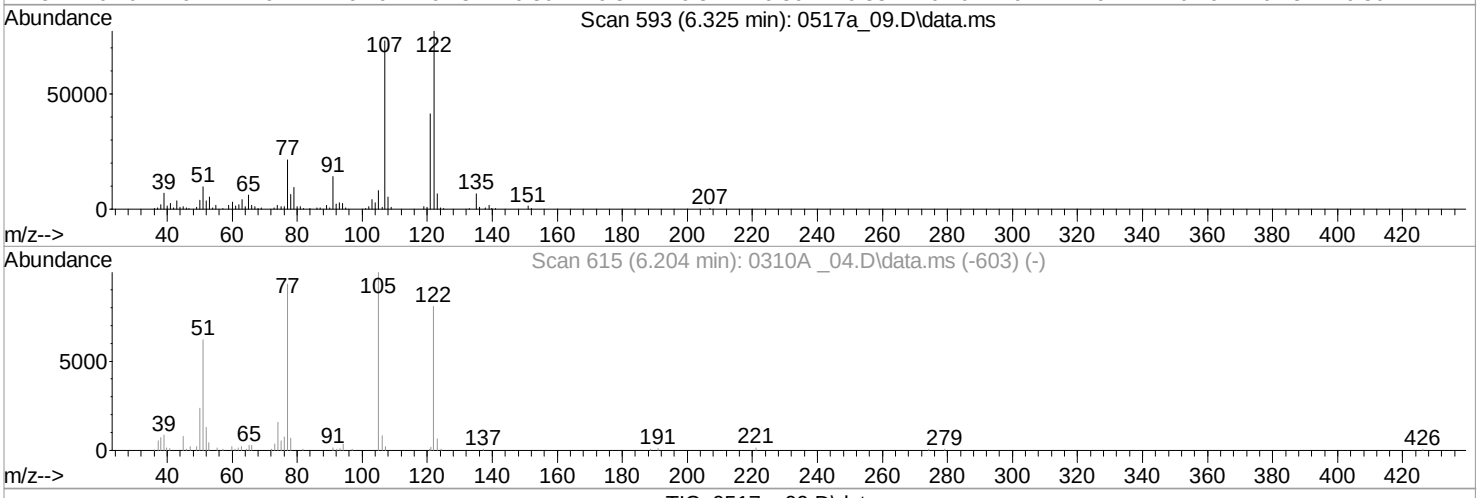
Ion	Exp%	Act%
105.00	100	100
77.00	62.20	461.55#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\051716a\
Data File : 0517a 09.D
Acq On : 17 May 2016 6:20 pm
Operator : 377
Sample : LCSD 1x WG872624 1000-1.0
Misc : water IS 16E12001
ALS Vial : 35 Sample Multiplier: 0.001
InstName : BNAMS23

Quant Time: May 18 08:28:42 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:52:25 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M





TIC: 0517a_09.D\data.ms

(30) Benzoic Acid (MT)

6.325min (-0.047) 1.3247184 ppb m

response 5172

Ion	Exp%	Act%
105.00	100	100
77.00	62.20	1462.57#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\051716a\
Data File : 0517a 10.D
Acq On : 17 May 2016 6:43 pm
Operator : 377
Sample : Blank 1x WG872624 1000-1.0
Misc : water IS 16E12001
ALS Vial : 36 Sample Multiplier: 0.001
InstName : BNAMS23

Quant Time: May 18 09:43:46 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:52:25 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M

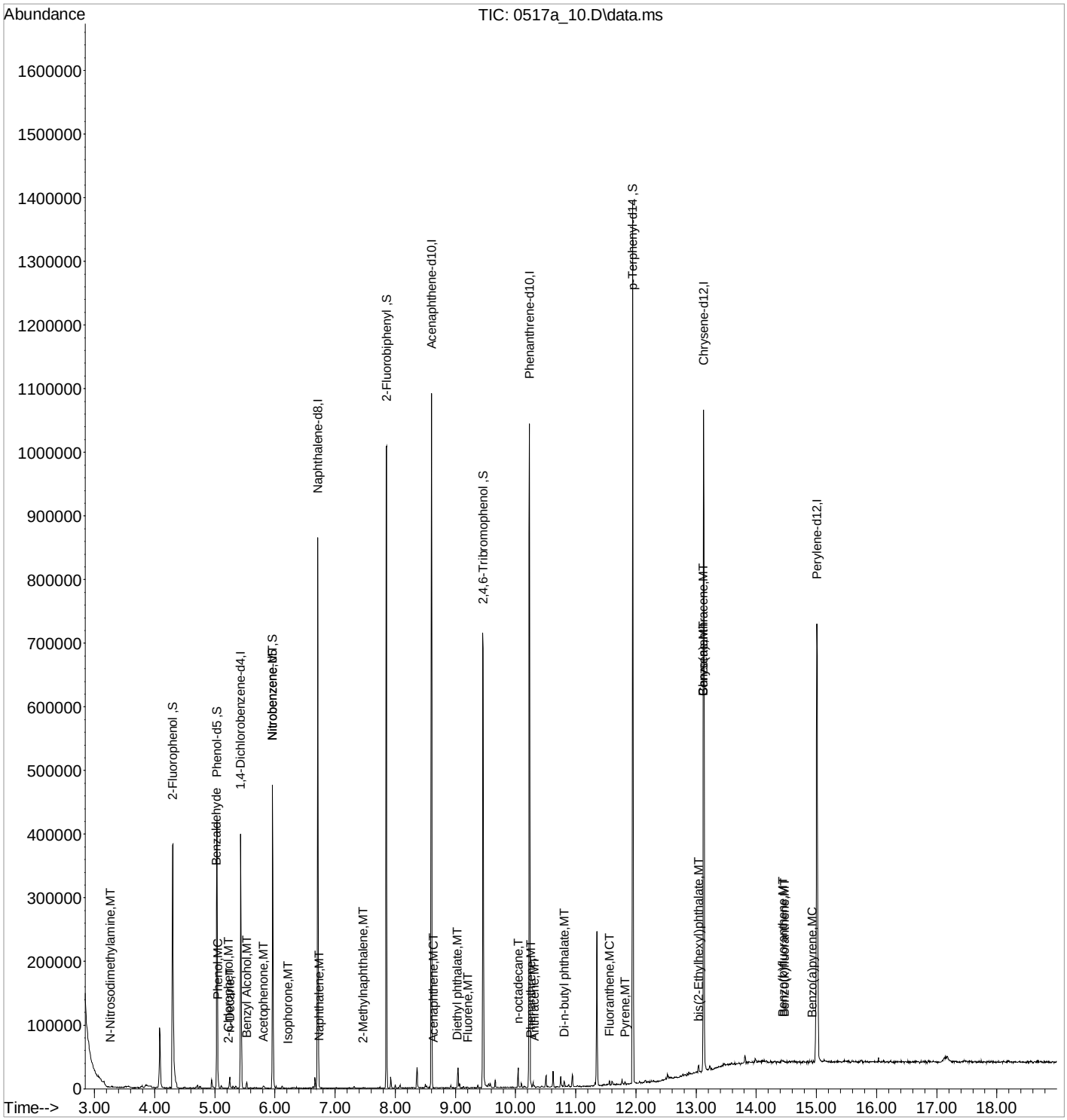
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	5.431	152	66333	8000.0000000	ppb	0.00
22) Naphthalene-d8	6.713	136	376661	8000.0000000	ppb	0.00
40) Acenaphthene-d10	8.601	164	222666	8000.0000000	ppb	0.00
64) Phenanthrene-d10	10.230	188	383848	8000.0000000	ppb	0.00
78) Chrysene-d12	13.124	240	353794	8000.0000000	ppb	-0.01
88) Perylene-d12	15.007	264	344261	8000.0000000	ppb	-0.02
System Monitoring Compounds						
4) 2-Fluorophenol	4.301	112	164016	12.5044870	ppb	0.00
Spiked Amount 20.000	Range 10 - 87		Recovery = 62.52%			
7) Phenol-d5	5.037	99	140754	8.4203551	ppb	0.00
Spiked Amount 20.000	Range 10 - 67		Recovery = 42.10%			
23) Nitrobenzene-d5	5.960	82	135405	9.2433183	ppb	0.00
Spiked Amount 10.000	Range 12 - 120		Recovery = 92.43%			
44) 2-Fluorobiphenyl	7.854	172	335140	9.3847181	ppb	0.00
Spiked Amount 10.000	Range 26 - 122		Recovery = 93.85%			
67) 2,4,6-Tribromophenol	9.460	330	73661	17.0023947	ppb	0.00
Spiked Amount 20.000	Range 10 - 148		Recovery = 85.01%			
81) p-Terphenyl-d14	11.948	244	409058	11.1988175	ppb	-0.01
Spiked Amount 10.000	Range 34 - 149		Recovery = 111.99%			
Target Compounds						Qvalue
11) n-Decane	5.248	41	1703	0.2249130	ppb #	95
70) n-octadecane	10.042	55	1445	0.2444300	ppb #	93
75) Di-n-butyl phthalate	10.807	149	4856	0.1958195	ppb	98
86) bis(2-Ethylhexyl)phtha...	13.042	149	3954	0.2337385	ppb	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\051716a\
Data File : 0517a 10.D
Acq On : 17 May 2016 6:43 pm
Operator : 377
Sample : Blank 1x WG872624 1000-1.0
Misc : water IS 16E12001
ALS Vial : 36 Sample Multiplier: 0.001
InstName : BNAMS23

Quant Time: May 18 09:43:46 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:52:25 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\051716a\
Data File : 0517a 11.D
Acq On : 17 May 2016 7:06 pm
Operator : 377
Sample : L835437-05 1x WG872624 1000-1.0
Misc : water IS 16E12001
ALS Vial : 37 Sample Multiplier: 0.001
InstName : BNAMS23

Quant Time: Sep 15 08:41:34 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:52:25 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M

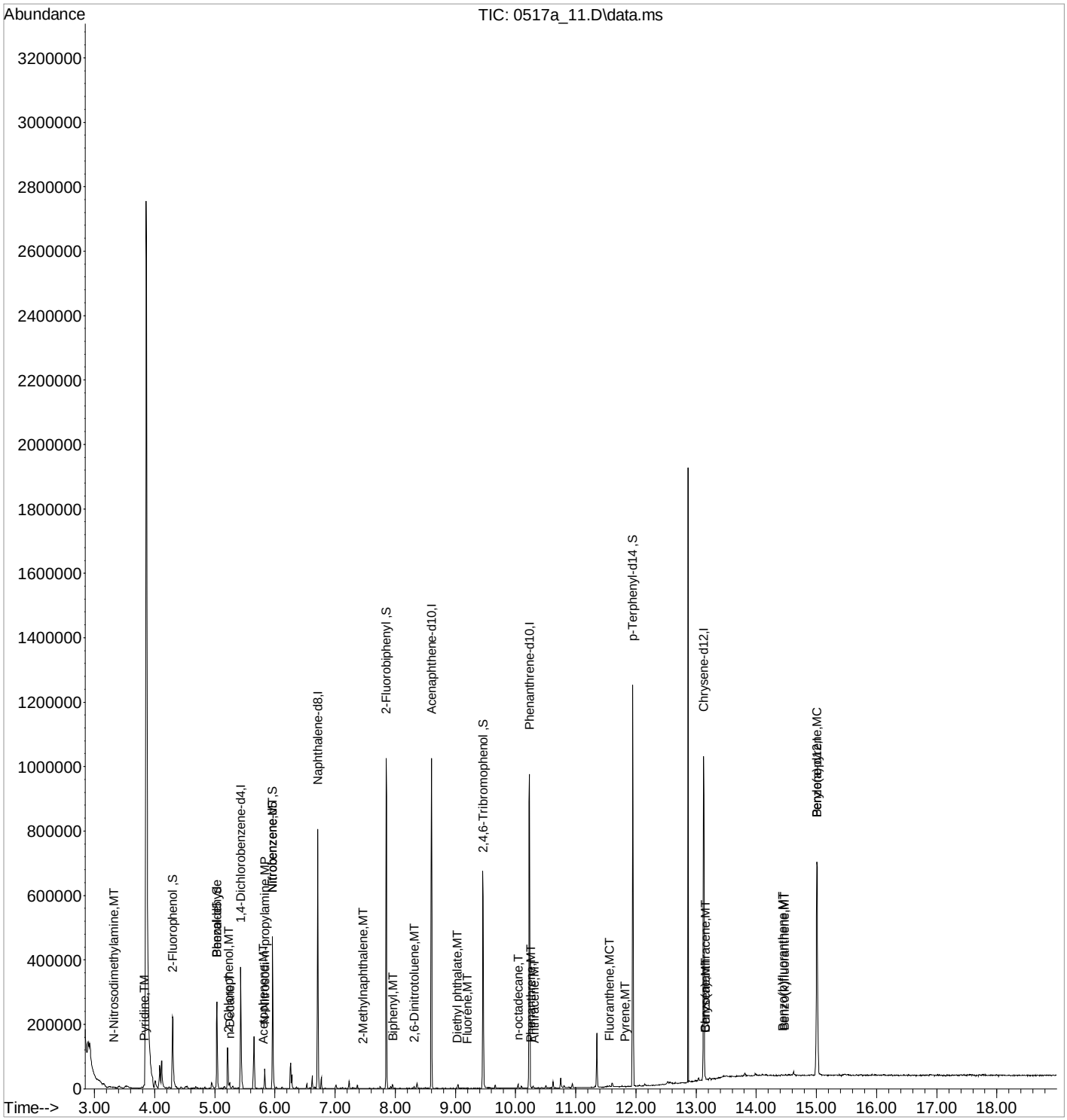
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	5.431	152	64006	8000.0000000	ppb	0.00
22) Naphthalene-d8	6.713	136	366323	8000.0000000	ppb	0.00
40) Acenaphthene-d10	8.601	164	212992	8000.0000000	ppb	0.00
64) Phenanthrene-d10	10.230	188	375197	8000.0000000	ppb	0.00
78) Chrysene-d12	13.124	240	343811	8000.0000000	ppb	-0.01
88) Perylene-d12	15.007	264	329290	8000.0000000	ppb	-0.02
System Monitoring Compounds						
4) 2-Fluorophenol	4.296	112	92741	7.3275770	ppb	0.00
Spiked Amount 20.000	Range 10 - 87		Recovery = 36.64%			
7) Phenol-d5	5.037	99	91153	5.6513158	ppb	0.00
Spiked Amount 20.000	Range 10 - 67		Recovery = 28.26%			
23) Nitrobenzene-d5	5.960	82	130287	9.1449379	ppb	0.00
Spiked Amount 10.000	Range 12 - 120		Recovery = 91.45%			
44) 2-Fluorobiphenyl	7.848	172	318828	9.3334464	ppb	-0.01
Spiked Amount 10.000	Range 26 - 122		Recovery = 93.33%			
67) 2,4,6-Tribromophenol	9.460	330	68044	16.1044054	ppb	0.00
Spiked Amount 20.000	Range 10 - 148		Recovery = 80.52%			
81) p-Terphenyl-d14	11.948	244	377260	10.6281759	ppb	-0.01
Spiked Amount 10.000	Range 34 - 149		Recovery = 106.28%			
Target Compounds						Qvalue
11) n-Decane	5.248	41	2681	0.3669490	ppb	# 76
32) Naphthalene	6.737	128	1238	Below Cal		87
70) n-octadecane	10.042	55	658	0.1138708	ppb	# 79

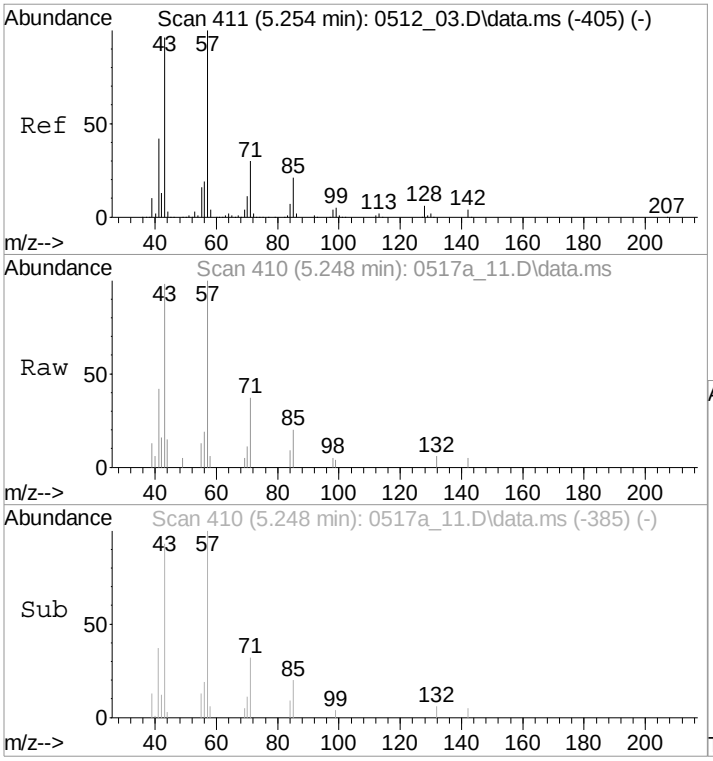
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\051716a\
Data File : 0517a 11.D
Acq On : 17 May 2016 7:06 pm
Operator : 377
Sample : L835437-05 1x WG872624 1000-1.0
Misc : water IS 16E12001
ALS Vial : 37 Sample Multiplier: 0.001
InstName : BNAMS23

Quant Time: Sep 15 08:41:34 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:52:25 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M

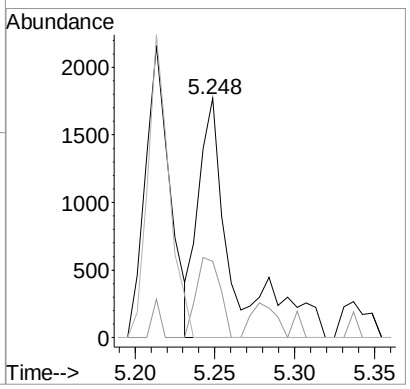


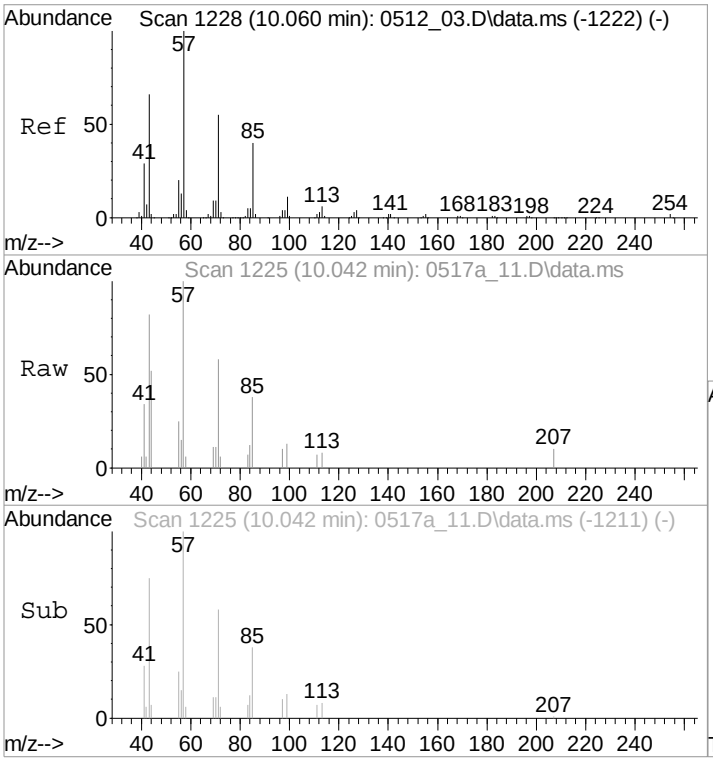


#11
n-Decane
Concen: 0.3669490 ppb
RT: 5.248 min Scan# 410
Delta R.T. -0.006 min
Lab File: 0517a 11.D
Acq: 17 May 2016 7:06 pm

Tgt Ion: 41 Resp: 2681

Ion	Ratio	Lower	Upper
41	100		
55	23.1	30.8	46.2#
67	0.0	2.0	3.0#

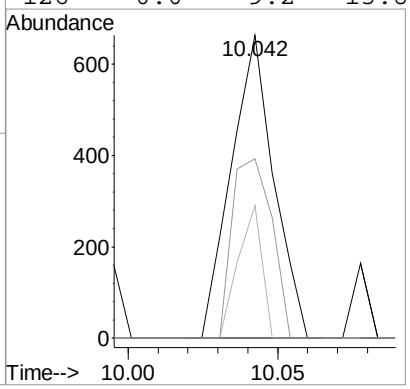




#70
n-octadecane
Concen: 0.1138708 ppb
RT: 10.042 min Scan# 1225
Delta R.T. -0.018 min
Lab File: 0517a_11.D
Acq: 17 May 2016 7:06 pm

Tgt Ion: 55 Resp: 658

Ion	Ratio	Lower	Upper
55	100		
56	55.2	52.6	79.0
70	24.5	34.9	52.3#
126	0.0	9.2	13.8#



Calibration

Instrument: BNAMS23
Method: S823E12P

Initial Calibration Run Log

File ID	Level ID	Date Analyzed
0512_04.D	40	5/12/2016 12:21:00 PM
0512_05.D	200	5/12/2016 12:44:00 PM
0512_06.D	1000	5/12/2016 1:07:00 PM
0512_07.D	2000	5/12/2016 1:30:00 PM
0512_08.D	5000	5/12/2016 1:53:00 PM
0512_03.D	10000	5/12/2016 11:58:00 AM
0512_09.D	20000	5/12/2016 2:16:00 PM
0512_10.D	30000	5/12/2016 2:39:00 PM
0512_11.D	40000	5/12/2016 3:02:00 PM
0512_12.D	50000	5/12/2016 3:25:00 PM
0512_14.D	1K1	5/12/2016 4:11:00 PM
0512_15.D	2K1	5/12/2016 4:35:00 PM
0512_16.D	5K1	5/12/2016 4:58:00 PM
0512_13.D	10K1	5/12/2016 3:48:00 PM
0512_17.D	20K1	5/12/2016 5:21:00 PM
0512_18.D	30K1	5/12/2016 5:44:00 PM
0512_19.D	40K1	5/12/2016 6:07:00 PM
0512_20.D	50K1	5/12/2016 6:30:00 PM

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

Injection Log

Instrument ID : BNAMS23
Computer Name : SVCOMPAZ
Released By : Jessica Freeman
Date Released : 5/16/2016 11:20:14 AM
Run ID : 051216
Signature : _____

#	File ID	Sample ID	Method	WG	Product	Matrix	Account #	State	Dil.	Mult.	Injected	Misc.
1	0512_01	INSTBLK	S823E06P						1	1	05/12/16 1112	"instrument blank"
2	0512_02	TUNE SVMS 50 PPM 16D04430								1	05/12/16 1135	
3	0512_03	MSTD SVMS 10K PPB 16D25863	S823E12P						1	1	05/12/16 1158	"8270 PRIMARY CALIBRATION IS 16E03322"
4	0512_04	STD SVMS 40 PPB 16D25863	S823E12P						1	1	05/12/16 1221	"8270 PRIMARY CALIBRATION IS 16E12001"
5	0512_05	STD SVMS 200 PPB 16D25863	S823E12P						1	1	05/12/16 1244	"8270 PRIMARY CALIBRATION IS 16E12001"
6	0512_05 mrl	MRL SVMS 200 PPB 16D25863	S823E12P						1	1	05/12/16 1244	"8270 PRIMARY CALIBRATION IS 16E12001"
7	0512_06	STD SVMS 1K PPB 16D25863	S823E12P						1	1	05/12/16 1307	"8270 PRIMARY CALIBRATION IS 16E12001"
8	0512_06 mrl	MRL SVMS 1K PPB 16D25863	S823E12P						1	1	05/12/16 1307	"8270 PRIMARY CALIBRATION IS 16E12001"
9	0512_07	STD SVMS 2K PPB 16D25863	S823E12P						1	1	05/12/16 1330	"8270 PRIMARY CALIBRATION IS 16E12001"
10	0512_07 mrl	MRL SVMS 2K PPB 16D25863	S823E12P						1	1	05/12/16 1330	"8270 PRIMARY CALIBRATION IS 16E12001"
11	0512_08	STD SVMS 5K PPB 16D25863	S823E12P						1	1	05/12/16 1353	"8270 PRIMARY CALIBRATION IS 16E12001"
12	0512_09	STD SVMS 20K PPB 16D25863	S823E12P						1	1	05/12/16 1416	"8270 PRIMARY CALIBRATION IS 16E12001"
13	0512_10	STD SVMS 30K PPB 16D25863	S823E12P						1	1	05/12/16 1439	"8270 PRIMARY CALIBRATION IS 16E12001"
14	0512_11	STD SVMS 40K PPB 16D25863	S823E12P						1	1	05/12/16 1502	"8270 PRIMARY CALIBRATION IS 16E12001"

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

Injection Log

Instrument ID : BNAMS23
Computer Name : SVCOMPAZ
Released By : Jessica Freeman
Date Released : 5/16/2016 11:20:14 AM
Run ID : 051216
Signature : _____

#	File ID	Sample ID	Method	WG	Product	Matrix	Account #	State	Dil.	Mult.	Injected	Misc.
15	0512_12	STD SVMS 50K PPB 16D25863	S823E12P						1	1	05/12/16 1525	"8270 PRIMARY CALIBRATION IS 16E12001"
16	0512_13	MSTD TCL 10K1 PPB 16D25867	S823E12P						1	1	05/12/16 1548	"8270 TCL CALIBRATION IS 16E12001"
17	0512_14	STD TCL 1K1 PPB 16D25867	S823E12P						1	1	05/12/16 1611	"8270 TCL CALIBRATION IS 16E12001"
18	0512_15	STD TCL 2K1 PPB 16D25867	S823E12P						1	1	05/12/16 1635	"8270 TCL CALIBRATION IS 16E12001"
19	0512_15 mrl	MRL TCL 2K1 PPB 16D25867	S823E12P						1	1	05/12/16 1635	"8270 TCL CALIBRATION IS 16E12001"
20	0512_16	STD TCL 5K1 PPB 16D25867	S823E12P						1	1	05/12/16 1658	"8270 TCL CALIBRATION IS 16E12001"
21	0512_17	STD TCL 20K1 PPB 16D25867	S823E12P						1	1	05/12/16 1721	"8270 TCL CALIBRATION IS 16E12001"
22	0512_18	STD TCL 30K1 PPB 16D25867	S823E12P						1	1	05/12/16 1744	"8270 TCL CALIBRATION IS 16E12001"
23	0512_19	STD TCL 40K1 PPB 16D25867	S823E12P						1	1	05/12/16 1807	"8270 TCL CALIBRATION IS 16E12001"
24	0512_20	STD TCL 50K1 PPB 16D25867	S823E12P						1	1	05/12/16 1830	"8270 TCL CALIBRATION IS 16E12001"
25	0512_22	MRL SVMS 500 PPB 16D25863	S823E12P						1	1	05/12/16 1916	"8270 PRIMARY CALIBRATION 16E12001"
26	0512_26	SSCV SVMS 10K PPB 16A25209	S823E12P						1	1	05/16/16 1001	"8270 SECONDARY SOURCE 16E12001"

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 02.D
Acq On : 12 May 2016 11:35 am
Operator : 377
Sample : TUNE SVMS 50 PPM 16D04430
Misc : dftpp tune
ALS Vial : 2 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 12 11:55:56 2016
Quant Method : C:\msdchem\1\methods\TUNEC.M
Quant Title : 8270 BNA
QLast Update : Thu Sep 13 10:14:57 2012
Response via : Initial Calibration
DataAcq Meth:BNAMS23B.M

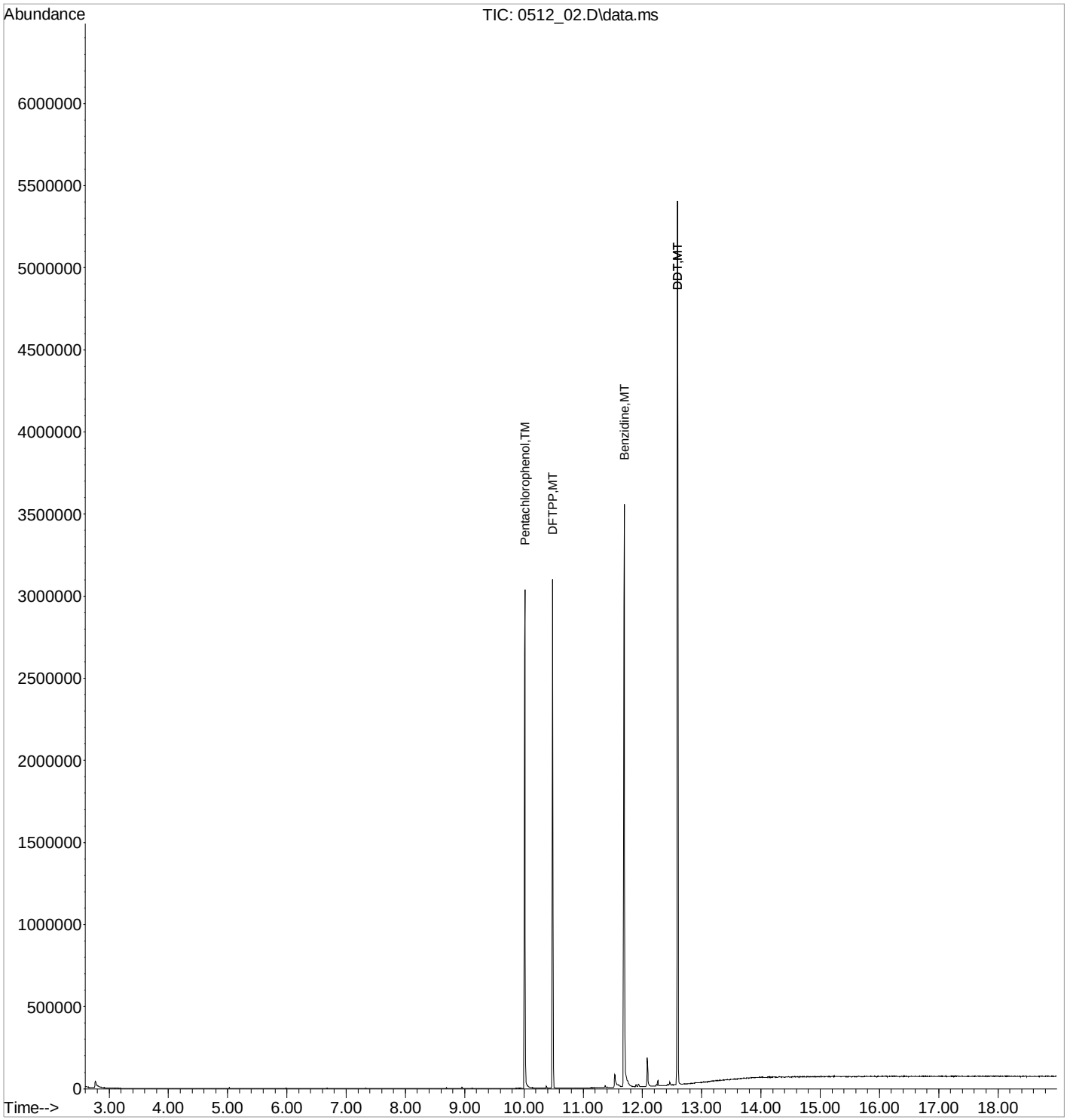
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Target Compounds						Qvalue
1) Pentachlorophenol	10.016	264	188309	32.2709949	ug/mL	100
2) DFTPP	10.486	198	343076	46.3687649	ug/mL	100
3) Benzidine	11.692	184	1472490	61.3495578	ug/mL	100
4) DDT	12.592	TIC	5037139	374.3353631	ug/ml	100
5) DDT	12.592	235	933534	69.3756493	ug/mL	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

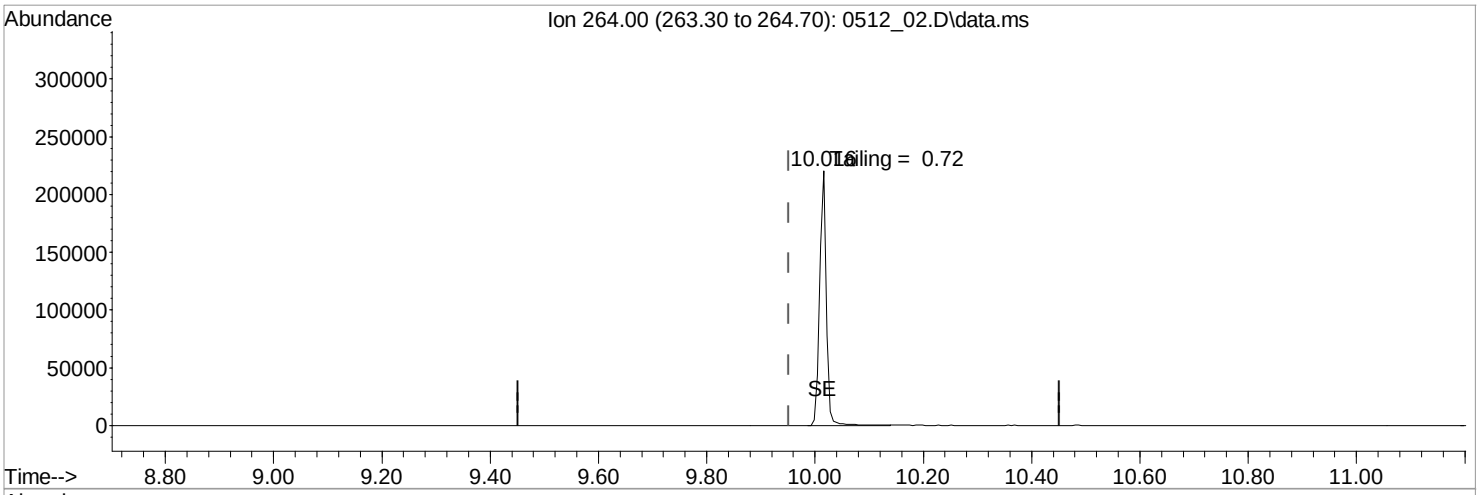
Data Path : C:\msdchem\1\data\051216\
Data File : 0512 02.D
Acq On : 12 May 2016 11:35 am
Operator : 377
Sample : TUNE SVMS 50 PPM 16D04430
Misc : dftpp tune
ALS Vial : 2 Sample Multiplier: 1
InstName : BNAMS23

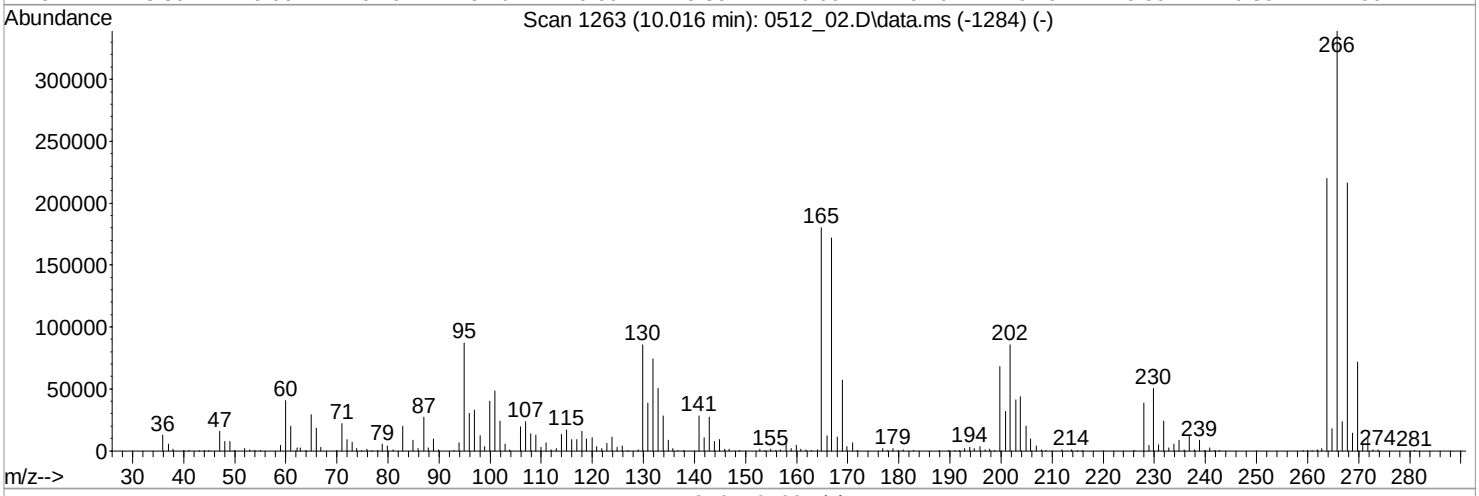
Quant Time: May 12 11:55:56 2016
Quant Method : C:\msdchem\1\methods\TUNEC.M
Quant Title : 8270 BNA
QLast Update : Thu Sep 13 10:14:57 2012
Response via : Initial Calibration
DataAcq Meth:BNAMS23B.M



Data Path : C:\msdchem\1\data\051216\
Data File : 0512 02.D
Acq On : 12 May 2016 11:35 am
Operator : 377
Sample : TUNE SVMS 50 PPM 16D04430
Misc : dftpp tune
ALS Vial : 2 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 12 11:55:56 2016
Quant Method : C:\msdchem\1\methods\TUNEC.M
Quant Title : 8270 BNA
QLast Update : Thu Sep 13 10:14:57 2012
Response via : Initial Calibration
DataAcq Meth:BNAMS23B.M





TIC: 0512_02.D\data.ms

(1) Pentachlorophenol (TM)

10.016min (+0.065) 32.2709949 ug/mL

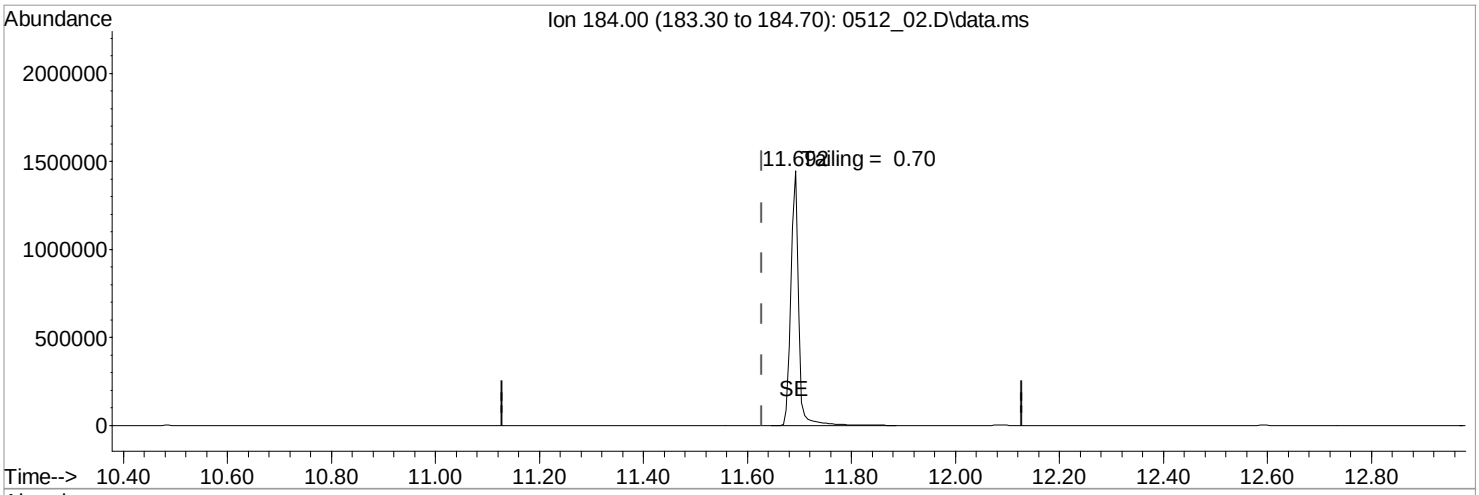
Qvalue = 100

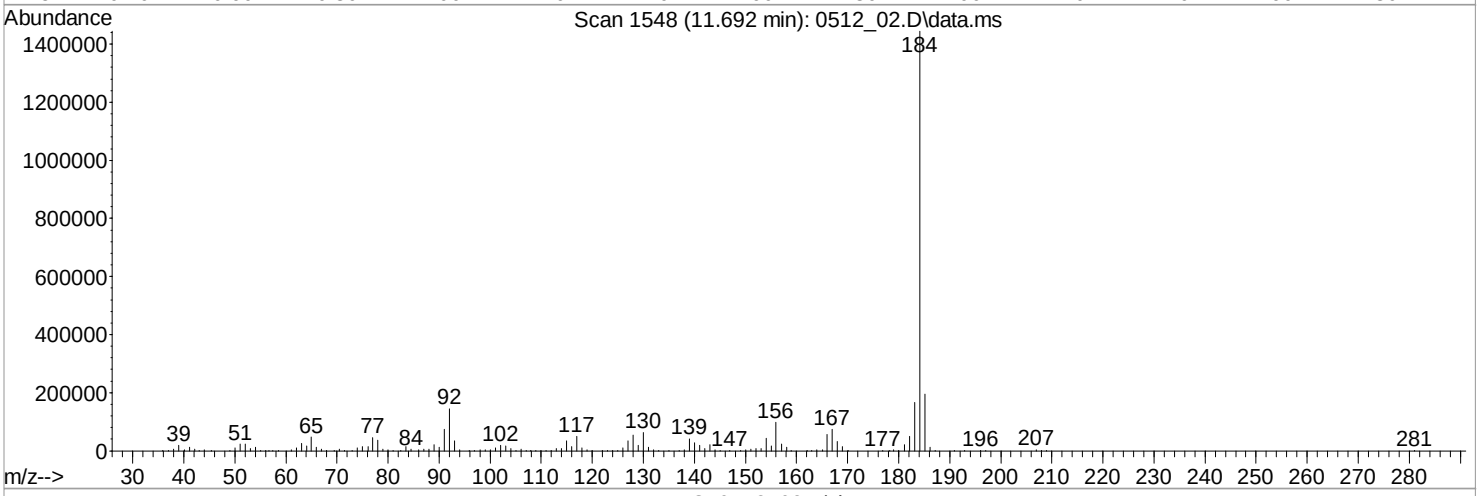
response 188309

Ion	Exp%	Act%
264.00	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 02.D
Acq On : 12 May 2016 11:35 am
Operator : 377
Sample : TUNE SVMS 50 PPM 16D04430
Misc : dftpp tune
ALS Vial : 2 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 12 11:55:56 2016
Quant Method : C:\msdchem\1\methods\TUNEC.M
Quant Title : 8270 BNA
QLast Update : Thu Sep 13 10:14:57 2012
Response via : Initial Calibration
DataAcq Meth:BNAMS23B.M





TIC: 0512_02.D\data.ms

(3) Benzidine (MT)

11.692min (+0.065) 61.3495578 ug/mL

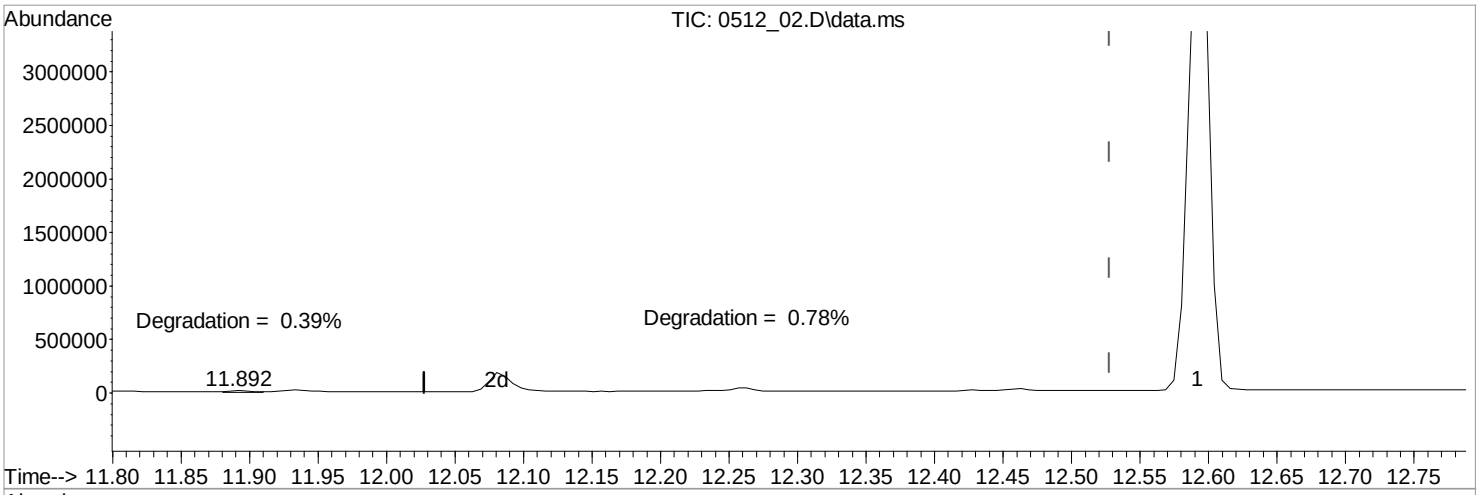
Qvalue = 100

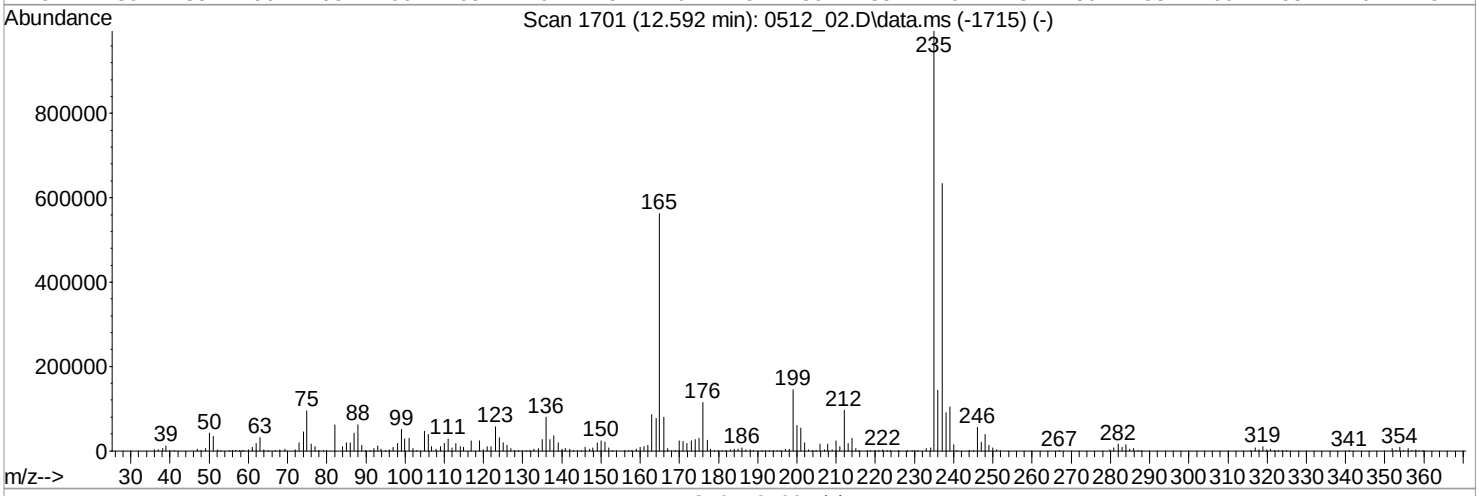
response 1472490

Ion	Exp%	Act%
184.00	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 02.D
Acq On : 12 May 2016 11:35 am
Operator : 377
Sample : TUNE SVMS 50 PPM 16D04430
Misc : dftpp tune
ALS Vial : 2 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 12 11:55:56 2016
Quant Method : C:\msdchem\1\methods\TUNEC.M
Quant Title : 8270 BNA
QLast Update : Thu Sep 13 10:14:57 2012
Response via : Initial Calibration
DataAcq Meth:BNAMS23B.M





TIC: 0512_02.D\data.ms

(4) DDT (MT)

12.592min (+0.065) 374.3353631 ug/ml

Qvalue = 100

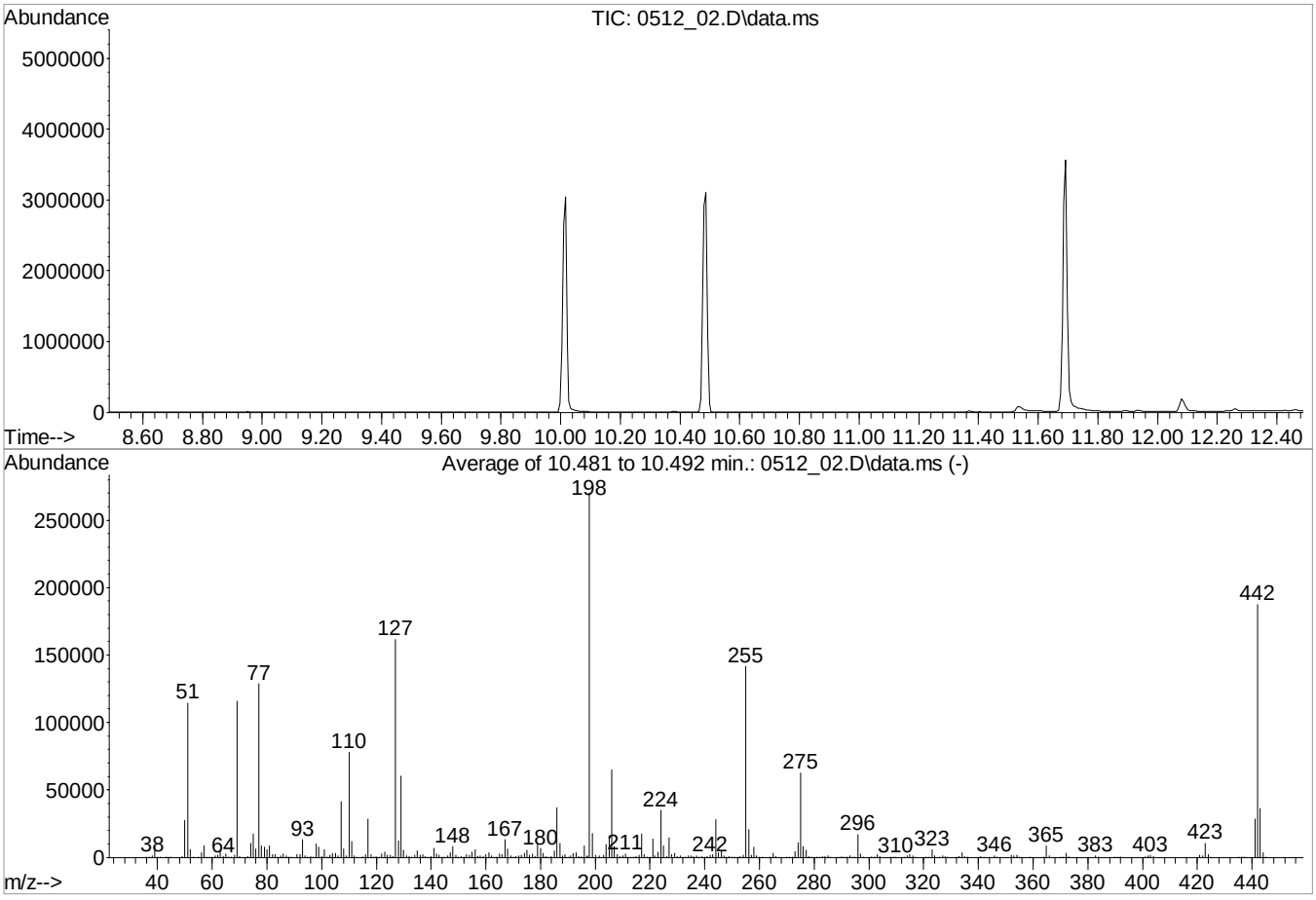
response 5037139

Signal	Exp%	Act%
TIC	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 02.D
Acq On : 12 May 2016 11:35 am
Operator : 377
Sample : TUNE SVMS 50 PPM 16D04430
Misc : dftpp tune
ALS Vial : 2 Sample Multiplier: 1

Integration File: RTEINT.P

Method : C:\msdchem\1\methods\TUNEC.M
Title : 8270 BNA
Last Update : Thu Sep 13 10:14:57 2012



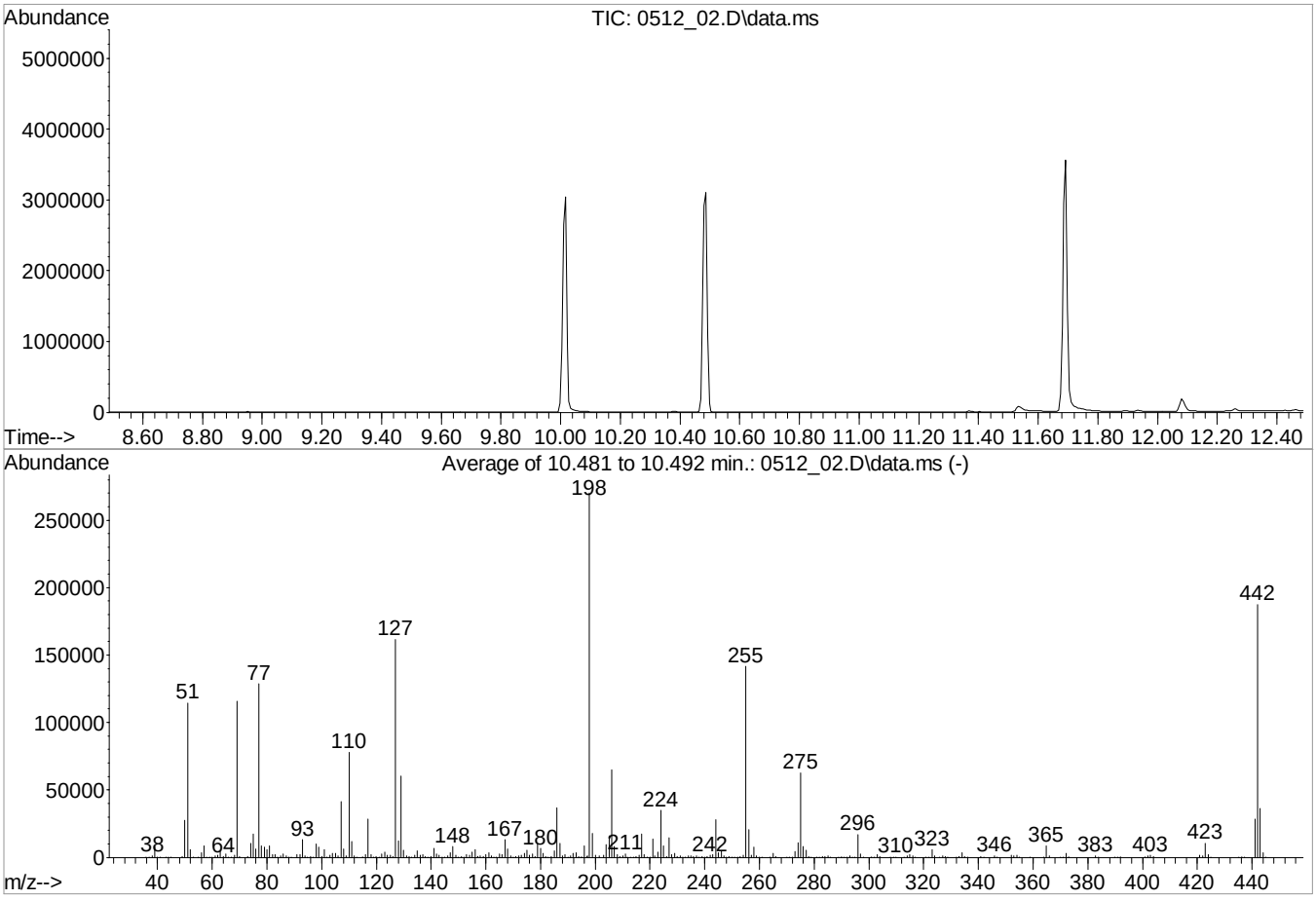
Spectrum Information: Average of 10.481 to 10.492 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	42.4	114520	PASS
68	69	0.00	2	1.4	1613	PASS
69	198	0.00	100	42.9	116008	PASS
70	69	0.00	2	0.5	570	PASS
127	198	40	60	59.8	161520	PASS
197	198	0.00	1	0.4	1128	PASS
198	198	100	100	100.0	270243	PASS
199	198	5	9	6.6	17931	PASS
275	198	10	30	23.1	62560	PASS
365	198	1	100	3.2	8635	PASS
441	443	0.01	100	77.3	28248	PASS
442	198	40	100	69.4	187499	PASS
443	442	17	23	19.5	36520	PASS

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 02.D
Acq On : 12 May 2016 11:35 am
Operator : 377
Sample : TUNE SVMS 50 PPM 16D04430
Misc : dftpp tune
ALS Vial : 2 Sample Multiplier: 1

Integration File: events.e

Method : C:\msdchem\1\methods\TUNED.M
Title :
Last Update : Thu Sep 13 10:14:12 2012



Spectrum Information: Average of 10.481 to 10.492 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	42.4	114520	PASS
68	69	0.00	2	1.4	1613	PASS
69	69	100	100	100.0	116008	PASS
70	69	0.00	2	0.5	570	PASS
127	198	10	80	59.8	161520	PASS
197	198	0.00	2	0.4	1128	PASS
198	198	50	100	100.0	270243	PASS
199	198	5	9	6.6	17931	PASS
275	198	10	60	23.1	62560	PASS
365	198	1	100	3.2	8635	PASS
441	442	0.01	24	15.1	28248	PASS
442	198	50	100	69.4	187499	PASS
443	442	15	24	19.5	36520	PASS

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID	: BNAMS23	Review Method	: 8270C	Released By	: Jessica Freeman
Method	: S823E12P	Review Protocol	: SW846	Released On	: 5/16/2016 11:20:14 AM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- S823E12P -- ICal Updated Time: Fri May 13 16:52:25 2016

Parameter	40	200	1000	2000	5000	10000	20000	30000	40000	50000	1K1	2K1	5K1	10K1	20K1	30K1	40K1	50K1	AvgRF	%RSD	COD	Cur
1,4-Dichlorobenzene-d4																						
Pyridine		1.645	1.912	1.996	2.082	2.239	2.12	2.14	2.113	2.144									2.043242	8.62	0.086	1
N-Nitrosodimethylamine			0.751	0.712	0.781	0.925	0.815	0.838	0.832	0.814									0.808416	7.88	0.079	1
2-Fluorophenol		1.388	1.518	1.423	1.573	1.703	1.632	1.678	1.647	1.675									1.581906	7.28	0.073	1
Aniline		0.806	0.963	0.861	0.923	1.022	0.943	0.955	0.929	0.947									0.927787	6.69	0.067	1
bis(2-Chloroethyl)ether		1.841	1.853	1.699	1.784	1.955	1.801	1.797	1.745	1.789									1.807095	3.99	0.04	1
Phenol-d5		1.794	1.899	1.837	2.008	2.188	2.076	2.142	2.078	2.122									2.016001	7	0.07	1
Phenol		1.916	1.99	1.974	2.082	2.276	2.158	2.212	2.146	2.18									2.103884	5.77	0.058	1
Benzaldehyde											0.614	0.635	0.64	0.714	0.707	0.724	0.704	0.715	0.681845	6.44	0.064	1
2-Chlorophenol		1.866	1.816	1.737	1.921	2.117	1.997	2.047	2.006	2.054									1.951258	6.4	0.064	1
n-Decane		0.997	0.935	0.893	0.91	1.033	0.892	0.885	0.839	0.835									0.913188	7.27	0.073	1
1,3-Dichlorobenzene		2.241	2.234	2.074	2.144	2.365	2.182	2.249	2.189	2.246									2.213715	3.65	0.037	1
1,4-Dichlorobenzene		2.234	2.236	2.081	2.231	2.385	2.245	2.312	2.246	2.29									2.251076	3.61	0.036	1
Benzyl Alcohol		1.218	1.275	1.18	1.348	1.492	1.394	1.432	1.407	1.426									1.352462	7.84	0.078	1
1,2-Dichlorobenzene		2.107	2.195	2.061	2.148	2.312	2.162	2.188	2.15	2.183									2.167205	3.17	0.032	1
bis(2-Chloroisopropyl)ether		0.603	0.627	0.612	0.653	0.689	0.645	0.655	0.641	0.652									0.641753	3.98	0.04	1
2-Methylphenol		1.521	1.583	1.558	1.67	1.844	1.723	1.766	1.722	1.745									1.68134	6.36	0.064	1
Hexachloroethane		0.849	0.891	0.876	0.941	1.035	0.97	0.985	0.967	0.99									0.944876	6.44	0.064	1
N-Nitrosodi-n-propylamine		0.775	0.795	0.808	0.895	1.005	0.902	0.982	0.966	0.933									0.895618	9.52	0.095	1
3&4-Methyl phenol		1.74	1.873	1.757	1.958	2.118	1.986	2.041	1.998	2.03									1.944506	6.64	0.066	1

Environmental Science Corporation
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INITIAL CALIBRATION SUMMARY

Instrument ID	: BNAMS23	Review Method	: 8270C	Released By	: Jessica Freeman
Method	: S823E12P	Review Protocol	: SW846	Released On	: 5/16/2016 11:20:14 AM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- S823E12P -- ICal Updated Time: Fri May 13 16:52:25 2016

Parameter	40	200	1000	2000	5000	10000	20000	30000	40000	50000	1K1	2K1	5K1	10K1	20K1	30K1	40K1	50K1	AvgRF	%RSD	COD	Cur
Acetophenone											2.277	2.298	2.444	2.642	2.633	2.642	2.593	2.599	2.516106	6.16	0.062	1
Naphthalene-d8																						
Nitrobenzene-d5		0.266	0.29	0.288	0.307	0.337	0.328	0.336	0.326	0.322									0.311133	7.96	0.08	1
Nitrobenzene		0.296	0.294	0.3	0.319	0.342	0.328	0.333	0.325	0.321									0.317334	5.37	0.054	1
Isophorone		0.457	0.51	0.516	0.561	0.611	0.606	0.62	0.603	0.597									0.564502	10.13	0.101	1
2-Nitrophenol			0.139	0.146	0.167	0.193	0.193	0.205	0.202	0.2									0.180495	14.6	0.146	1
2,4-Dimethylphenol		0.289	0.311	0.309	0.327	0.345	0.325	0.334	0.322	0.313									0.319359	5.1	0.051	1
bis(2-Chlorethoxy)methane		0.382	0.394	0.401	0.401	0.428	0.413	0.425	0.414	0.405									0.407074	3.64	0.036	1
2,4-Dichlorophenol		0.227	0.236	0.234	0.264	0.291	0.285	0.297	0.292	0.284									0.267733	10.58	0.106	1
Benzoic Acid											0.093	0.103	0.14	0.193	0.22	0.253	0.259	0.274	0.192136	37.41	0.998	3
1,2,4-Trichlorobenzene		0.298	0.297	0.294	0.298	0.314	0.304	0.316	0.308	0.299									0.303212	2.58	0.026	1
Naphthalene	1.797	1.231	1.124	1.078	1.082	1.141	1.094	1.121	1.083	1.057									1.180843	18.8	0.999	0
4-Chloroaniline		0.109	0.104	0.111	0.113	0.123	0.115	0.119	0.115	0.113									0.113586	4.85	0.048	1
Hexachloro-1,3-butadiene			0.152	0.138	0.147	0.157	0.151	0.154	0.152	0.15									0.150099	3.81	0.038	1
Caprolactam											0.08	0.083	0.087	0.102	0.104	0.108	0.104	0.106	0.096614	11.86	0.119	1
4-Chloro-3-methylphenol		0.248	0.254	0.257	0.279	0.31	0.305	0.316	0.312	0.304									0.287258	9.68	0.097	1
2-Methylnaphthalene	0.677	0.694	0.706	0.696	0.723	0.768	0.747	0.757	0.752	0.738									0.725731	4.28	0.043	1
1-Methylnaphthalene	0.702	0.684	0.691	0.676	0.691	0.738	0.709	0.719	0.709	0.693									0.701181	2.6	0.026	1
1,2,4,5-Tetrachlorobenzene											0.261	0.272	0.269	0.277	0.284	0.286	0.277	0.284	0.276442	3.11	0.031	1
Acenaphthene-d10																						

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INITIAL CALIBRATION SUMMARY

Instrument ID	: BNAMS23	Review Method	: 8270C	Released By	: Jessica Freeman
Method	: S823E12P	Review Protocol	: SW846	Released On	: 5/16/2016 11:20:14 AM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- S823E12P -- ICal Updated Time: Fri May 13 16:52:25 2016

Parameter	40	200	1000	2000	5000	10000	20000	30000	40000	50000	1K1	2K1	5K1	10K1	20K1	30K1	40K1	50K1	AvgRF	%RSD	COD	Cur
Hexachlorocyclopentadiene		0.261	0.266	0.27	0.284	0.317	0.328	0.342	0.333	0.342									0.304833	11.15	0.111	1
2,4,6-Trichlorophenol			0.241	0.251	0.285	0.324	0.331	0.346	0.339	0.341									0.307204	13.85	0.138	1
2,4,5-Trichlorophenol			0.264	0.277	0.315	0.354	0.361	0.371	0.366	0.369									0.334393	13.02	0.13	1
2-Fluorobiphenyl		1.281	1.282	1.215	1.252	1.332	1.314	1.313	1.292	1.267									1.283043	2.8	0.028	1
Biphenyl		1.482	1.45	1.421	1.451	1.531	1.518	1.538	1.488	1.478									1.48411	2.67	0.027	1
2-Chloronaphthalene	1.069	1.161	1.125	1.116	1.136	1.193	1.191	1.209	1.174	1.163									1.153727	3.68	0.037	1
2-Nitroaniline			0.293	0.32	0.363	0.422	0.449	0.458	0.448	0.447									0.400011	16.38	0.999	0
Acenaphthylene	1.66	1.62	1.774	1.776	1.852	2.01	1.97	2.011	1.942	1.911									1.852529	7.59	0.076	1
Dimethyl phthalate		1.111	1.159	1.16	1.23	1.283	1.272	1.287	1.247	1.253									1.222235	5.2	0.052	1
2,6-Dinitrotoluene			0.248	0.268	0.294	0.317	0.315	0.322	0.314	0.316									0.299099	9.14	0.091	1
3-Nitroaniline			0.279	0.306	0.346	0.37	0.358	0.353	0.343	0.344									0.337287	8.9	0.089	1
Acenaphthene	1.161	1.148	1.179	1.171	1.186	1.245	1.234	1.236	1.211	1.211									1.198024	2.82	0.028	1
2,4-Dinitrophenol				0.066	0.099	0.126	0.135	0.156	0.159	0.166									0.12956	28.04	0.996	0
Dibenzofuran		1.698	1.71	1.631	1.681	1.731	1.707	1.725	1.67	1.666									1.691053	1.88	0.019	1
2,4-Dinitrotoluene			0.281	0.315	0.369	0.405	0.408	0.419	0.41	0.419									0.378201	13.97	0.14	1
2,3,4,6-Tetrachlorophenol											0.136	0.149	0.169	0.209	0.225	0.239	0.237	0.237	0.200125	21.29	0.998	0
4-Nitrophenol			0.185	0.204	0.246	0.286	0.296	0.315	0.315	0.319									0.270802	19.48	0.999	0
Fluorene	1.36	1.31	1.328	1.321	1.344	1.426	1.389	1.404	1.368	1.368									1.361875	2.73	0.027	1
4-Chlorophenyl-phenylether		0.518	0.529	0.527	0.55	0.571	0.569	0.571	0.555	0.556									0.549616	3.69	0.037	1
Diethyl phthalate		1.153	1.263	1.271	1.317	1.382	1.359	1.398	1.358	1.367									1.318698	5.91	0.059	1

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INITIAL CALIBRATION SUMMARY

Instrument ID	: BNAMS23	Review Method	: 8270C	Released By	: Jessica Freeman
Method	: S823E12P	Review Protocol	: SW846	Released On	: 5/16/2016 11:20:14 AM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- S823E12P -- ICal Updated Time: Fri May 13 16:52:25 2016

Parameter	40	200	1000	2000	5000	10000	20000	30000	40000	50000	1K1	2K1	5K1	10K1	20K1	30K1	40K1	50K1	AvgRF	%RSD	COD	Cur
4-Nitroaniline		0.223	0.274	0.296	0.291	0.199	0.22	0.238	0.238	0.234									0.245897	13.65	0.136	1
Azobenzene		0.954	1.177	1.204	1.266	1.366	1.312	1.314	1.271	1.248									1.234575	9.72	0.097	1
Atrazine											0.237	0.259	0.284	0.328	0.33	0.348	0.347	0.349	0.310315	14.23	0.142	1
Phenanthrene-d10																						
4,6-Dinitro-2-methylphenol				0.054	0.077	0.093	0.101	0.114	0.117	0.119									0.096254	25.2	0.997	0
N-Nitrosodiphenylamine		0.561	0.588	0.604	0.616	0.664	0.622	0.647	0.645	0.623									0.619002	5.14	0.051	1
2,4,6-Tribromophenol			0.052	0.058	0.071	0.083	0.087	0.092	0.096	0.094									0.078957	21.2	0.998	0
4-Bromophenyl-phenylether		0.165	0.162	0.16	0.172	0.185	0.182	0.187	0.188	0.184									0.175948	6.48	0.065	1
Hexachlorobenzene		0.194	0.192	0.19	0.188	0.2	0.198	0.203	0.207	0.2									0.196941	3.18	0.032	1
n-octadecane		0.114	0.119	0.117	0.12	0.135	0.128	0.129	0.126	0.122									0.123209	5.39	0.054	1
Pentachlorophenol			0.055	0.069	0.082	0.103	0.112	0.123	0.13	0.129									0.100355	28.39	0.995	0
Phenanthrene	1.243	1.13	1.14	1.083	1.101	1.172	1.114	1.159	1.144	1.119									1.140525	3.92	0.039	1
Anthracene	1.023	0.919	1.017	1.033	1.066	1.177	1.126	1.18	1.181	1.143									1.086542	8.17	0.082	1
Carbazole		0.977	1.044	1.059	1.099	1.134	0.951	0.914	0.852	0.756									0.97615	12.55	0.125	1
Di-n-butyl phthalate		1.033	1.16	1.21	1.373	1.571	1.525	1.626	1.581	1.505									1.398333	15.36	0.998	0
2-nitrodiphenylamine											0.146	0.162	0.207	0.275	0.28	0.303	0.302	0.307	0.247859	26.72	0.998	0
Fluoranthene	0.942	1.006	1.043	1.064	1.123	1.251	1.193	1.269	1.246	1.188									1.132494	10.08	0.101	1
Chrysene-d12																						
Benzidine											0.371	0.398	0.489	0.586	0.661	0.735	0.729	0.773	0.592921	26.59	0.994	0
Pyrene	1.16	1.063	1.171	1.146	1.218	1.303	1.329	1.325	1.316	1.289									1.231986	7.57	0.076	1

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID	: BNAMS23	Review Method	: 8270C	Released By	: Jessica Freeman
Method	: S823E12P	Review Protocol	: SW846	Released On	: 5/16/2016 11:20:14 AM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- S823E12P -- ICal Updated Time: Fri May 13 16:52:25 2016

Parameter	40	200	1000	2000	5000	10000	20000	30000	40000	50000	1K1	2K1	5K1	10K1	20K1	30K1	40K1	50K1	AvgRF	%RSD	COD	Cur
p-Terphenyl-d14		0.719	0.791	0.767	0.814	0.859	0.861	0.882	0.881	0.859									0.825947	6.89	0.069	1
Benzylbutyl phthalate		0.466	0.514	0.531	0.641	0.742	0.76	0.784	0.792	0.771									0.66673	19.65	0.998	0
3,3-Dichlorobenzidine											0.29	0.314	0.339	0.367	0.368	0.373	0.358	0.367	0.346832	8.75	0.087	1
Benzo(a)anthracene	1.579	1.12	1.149	1.119	1.18	1.253	1.222	1.252	1.258	1.227									1.235859	10.68	0.107	1
Chrysene	1.177	1.151	1.171	1.133	1.148	1.198	1.191	1.215	1.189	1.149									1.172071	2.26	0.023	1
bis(2-Ethylhexyl)phthalate		0.791	0.799	0.788	0.936	1.075	1.08	1.131	1.156	1.109									0.984942	15.93	0.998	0
Di-n-octyl phthalate		1.1	1.304	1.335	1.604	1.859	1.889	1.973	1.99	1.909									1.66254	20.27	0.998	0
Perylene-d12																						
Benzo(b)fluoranthene	1.131	1.117	1.168	1.182	1.193	1.345	1.284	1.279	1.327	1.288									1.231295	6.7	0.067	1
Benzo(k)fluoranthene	1.059	0.968	1.112	1.092	1.158	1.218	1.211	1.278	1.21	1.203									1.150847	8.06	0.081	1
Benzo(a)pyrene	1.038	0.984	1.044	1.088	1.14	1.246	1.211	1.263	1.229	1.223									1.146633	8.84	0.088	1
Indeno(1,2,3-cd)pyrene	1.021	1.072	1.202	1.186	1.254	1.379	1.333	1.359	1.324	1.298									1.242877	9.8	0.098	1
Dibenz(a,h)anthracene	0.949	0.911	1.051	1.052	1.087	1.191	1.152	1.176	1.148	1.123									1.084127	8.73	0.087	1
Benzo(g,h,i)perylene	0.907	0.979	1.057	1.028	1.071	1.163	1.124	1.134	1.103	1.059									1.062421	7.22	0.072	1

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID	: BNAMS23	Review Method	: 625	Released By	: Jessica Freeman
Method	: S823E12P	Review Protocol	: EPA	Released On	: 5/16/2016 11:19:56 AM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- S823E12P -- ICal Updated Time: Fri May 13 16:52:25 2016

Parameter	40	200	1000	2000	5000	10000	20000	30000	40000	50000	1K1	2K1	5K1	10K1	20K1	30K1	40K1	50K1	AvgRF	%RSD	COD	Cur
1,4-Dichlorobenzene-d4																						
Pyridine		1.645	1.912	1.996	2.082	2.239	2.12	2.14	2.113	2.144									2.043242	8.62	0.086	1
N-Nitrosodimethylamine			0.751	0.712	0.781	0.925	0.815	0.838	0.832	0.814									0.808416	7.88	0.079	1
2-Fluorophenol		1.388	1.518	1.423	1.573	1.703	1.632	1.678	1.647	1.675									1.581906	7.28	0.073	1
Aniline		0.806	0.963	0.861	0.923	1.022	0.943	0.955	0.929	0.947									0.927787	6.69	0.067	1
bis(2-Chloroethyl)ether		1.841	1.853	1.699	1.784	1.955	1.801	1.797	1.745	1.789									1.807095	3.99	0.04	1
Phenol-d5		1.794	1.899	1.837	2.008	2.188	2.076	2.142	2.078	2.122									2.016001	7	0.07	1
Phenol		1.916	1.99	1.974	2.082	2.276	2.158	2.212	2.146	2.18									2.103884	5.77	0.058	1
Benzaldehyde											0.614	0.635	0.64	0.714	0.707	0.724	0.704	0.715	0.681845	6.44	0.064	1
2-Chlorophenol		1.866	1.816	1.737	1.921	2.117	1.997	2.047	2.006	2.054									1.951258	6.4	0.064	1
n-Decane		0.997	0.935	0.893	0.91	1.033	0.892	0.885	0.839	0.835									0.913188	7.27	0.073	1
1,3-Dichlorobenzene		2.241	2.234	2.074	2.144	2.365	2.182	2.249	2.189	2.246									2.213715	3.65	0.037	1
1,4-Dichlorobenzene		2.234	2.236	2.081	2.231	2.385	2.245	2.312	2.246	2.29									2.251076	3.61	0.036	1
Benzyl Alcohol		1.218	1.275	1.18	1.348	1.492	1.394	1.432	1.407	1.426									1.352462	7.84	0.078	1
1,2-Dichlorobenzene		2.107	2.195	2.061	2.148	2.312	2.162	2.188	2.15	2.183									2.167205	3.17	0.032	1
bis(2-Chloroisopropyl)ether		0.603	0.627	0.612	0.653	0.689	0.645	0.655	0.641	0.652									0.641753	3.98	0.04	1
2-Methylphenol		1.521	1.583	1.558	1.67	1.844	1.723	1.766	1.722	1.745									1.68134	6.36	0.064	1
Hexachloroethane		0.849	0.891	0.876	0.941	1.035	0.97	0.985	0.967	0.99									0.944876	6.44	0.064	1
N-Nitrosodi-n-propylamine		0.775	0.795	0.808	0.895	1.005	0.902	0.982	0.966	0.933									0.895618	9.52	0.095	1
3&4-Methyl phenol		1.74	1.873	1.757	1.958	2.118	1.986	2.041	1.998	2.03									1.944506	6.64	0.066	1

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID	: BNAMS23	Review Method	: 625	Released By	: Jessica Freeman
Method	: S823E12P	Review Protocol	: EPA	Released On	: 5/16/2016 11:19:56 AM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- S823E12P -- ICal Updated Time: Fri May 13 16:52:25 2016

Parameter	40	200	1000	2000	5000	10000	20000	30000	40000	50000	1K1	2K1	5K1	10K1	20K1	30K1	40K1	50K1	AvgRF	%RSD	COD	Cur
Acetophenone											2.277	2.298	2.444	2.642	2.633	2.642	2.593	2.599	2.516106	6.16	0.062	1
Naphthalene-d8																						
Nitrobenzene-d5		0.266	0.29	0.288	0.307	0.337	0.328	0.336	0.326	0.322									0.311133	7.96	0.08	1
Nitrobenzene		0.296	0.294	0.3	0.319	0.342	0.328	0.333	0.325	0.321									0.317334	5.37	0.054	1
Isophorone		0.457	0.51	0.516	0.561	0.611	0.606	0.62	0.603	0.597									0.564502	10.13	0.101	1
2-Nitrophenol			0.139	0.146	0.167	0.193	0.193	0.205	0.202	0.2									0.180495	14.6	0.146	1
2,4-Dimethylphenol		0.289	0.311	0.309	0.327	0.345	0.325	0.334	0.322	0.313									0.319359	5.1	0.051	1
bis(2-Chlorethoxy)methane		0.382	0.394	0.401	0.401	0.428	0.413	0.425	0.414	0.405									0.407074	3.64	0.036	1
2,4-Dichlorophenol		0.227	0.236	0.234	0.264	0.291	0.285	0.297	0.292	0.284									0.267733	10.58	0.106	1
Benzoic Acid											0.093	0.103	0.14	0.193	0.22	0.253	0.259	0.274	0.192136	37.41	0.998	3
1,2,4-Trichlorobenzene		0.298	0.297	0.294	0.298	0.314	0.304	0.316	0.308	0.299									0.303212	2.58	0.026	1
Naphthalene	1.797	1.231	1.124	1.078	1.082	1.141	1.094	1.121	1.083	1.057									1.180843	18.8	0.999	0
4-Chloroaniline		0.109	0.104	0.111	0.113	0.123	0.115	0.119	0.115	0.113									0.113586	4.85	0.048	1
Hexachloro-1,3-butadiene			0.152	0.138	0.147	0.157	0.151	0.154	0.152	0.15									0.150099	3.81	0.038	1
Caprolactam											0.08	0.083	0.087	0.102	0.104	0.108	0.104	0.106	0.096614	11.86	0.119	1
4-Chloro-3-methylphenol		0.248	0.254	0.257	0.279	0.31	0.305	0.316	0.312	0.304									0.287258	9.68	0.097	1
2-Methylnaphthalene	0.677	0.694	0.706	0.696	0.723	0.768	0.747	0.757	0.752	0.738									0.725731	4.28	0.043	1
1-Methylnaphthalene	0.702	0.684	0.691	0.676	0.691	0.738	0.709	0.719	0.709	0.693									0.701181	2.6	0.026	1
1,2,4,5-Tetrachlorobenzene											0.261	0.272	0.269	0.277	0.284	0.286	0.277	0.284	0.276442	3.11	0.031	1
Acenaphthene-d10																						

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID	: BNAMS23	Review Method	: 625	Released By	: Jessica Freeman
Method	: S823E12P	Review Protocol	: EPA	Released On	: 5/16/2016 11:19:56 AM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- S823E12P -- ICal Updated Time: Fri May 13 16:52:25 2016

Parameter	40	200	1000	2000	5000	10000	20000	30000	40000	50000	1K1	2K1	5K1	10K1	20K1	30K1	40K1	50K1	AvgRF	%RSD	COD	Cur
Hexachlorocyclopentadiene		0.261	0.266	0.27	0.284	0.317	0.328	0.342	0.333	0.342									0.304833	11.15	0.111	1
2,4,6-Trichlorophenol			0.241	0.251	0.285	0.324	0.331	0.346	0.339	0.341									0.307204	13.85	0.138	1
2,4,5-Trichlorophenol			0.264	0.277	0.315	0.354	0.361	0.371	0.366	0.369									0.334393	13.02	0.13	1
2-Fluorobiphenyl		1.281	1.282	1.215	1.252	1.332	1.314	1.313	1.292	1.267									1.283043	2.8	0.028	1
Biphenyl		1.482	1.45	1.421	1.451	1.531	1.518	1.538	1.488	1.478									1.48411	2.67	0.027	1
2-Chloronaphthalene	1.069	1.161	1.125	1.116	1.136	1.193	1.191	1.209	1.174	1.163									1.153727	3.68	0.037	1
2-Nitroaniline			0.293	0.32	0.363	0.422	0.449	0.458	0.448	0.447									0.400011	16.38	0.999	0
Acenaphthylene	1.66	1.62	1.774	1.776	1.852	2.01	1.97	2.011	1.942	1.911									1.852529	7.59	0.076	1
Dimethyl phthalate		1.111	1.159	1.16	1.23	1.283	1.272	1.287	1.247	1.253									1.222235	5.2	0.052	1
2,6-Dinitrotoluene			0.248	0.268	0.294	0.317	0.315	0.322	0.314	0.316									0.299099	9.14	0.091	1
3-Nitroaniline			0.279	0.306	0.346	0.37	0.358	0.353	0.343	0.344									0.337287	8.9	0.089	1
Acenaphthene	1.161	1.148	1.179	1.171	1.186	1.245	1.234	1.236	1.211	1.211									1.198024	2.82	0.028	1
2,4-Dinitrophenol				0.066	0.099	0.126	0.135	0.156	0.159	0.166									0.12956	28.04	0.996	0
Dibenzofuran		1.698	1.71	1.631	1.681	1.731	1.707	1.725	1.67	1.666									1.691053	1.88	0.019	1
2,4-Dinitrotoluene			0.281	0.315	0.369	0.405	0.408	0.419	0.41	0.419									0.378201	13.97	0.14	1
2,3,4,6-Tetrachlorophenol											0.136	0.149	0.169	0.209	0.225	0.239	0.237	0.237	0.200125	21.29	0.998	0
4-Nitrophenol			0.185	0.204	0.246	0.286	0.296	0.315	0.315	0.319									0.270802	19.48	0.999	0
Fluorene	1.36	1.31	1.328	1.321	1.344	1.426	1.389	1.404	1.368	1.368									1.361875	2.73	0.027	1
4-Chlorophenyl-phenylether		0.518	0.529	0.527	0.55	0.571	0.569	0.571	0.555	0.556									0.549616	3.69	0.037	1
Diethyl phthalate		1.153	1.263	1.271	1.317	1.382	1.359	1.398	1.358	1.367									1.318698	5.91	0.059	1

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID	: BNAMS23	Review Method	: 625	Released By	: Jessica Freeman
Method	: S823E12P	Review Protocol	: EPA	Released On	: 5/16/2016 11:19:56 AM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- S823E12P -- ICal Updated Time: Fri May 13 16:52:25 2016

Parameter	40	200	1000	2000	5000	10000	20000	30000	40000	50000	1K1	2K1	5K1	10K1	20K1	30K1	40K1	50K1	AvgRF	%RSD	COD	Cur
4-Nitroaniline		0.223	0.274	0.296	0.291	0.199	0.22	0.238	0.238	0.234									0.245897	13.65	0.136	1
Azobenzene		0.954	1.177	1.204	1.266	1.366	1.312	1.314	1.271	1.248									1.234575	9.72	0.097	1
Atrazine											0.237	0.259	0.284	0.328	0.33	0.348	0.347	0.349	0.310315	14.23	0.142	1
Phenanthrene-d10																						
4,6-Dinitro-2-methylphenol				0.054	0.077	0.093	0.101	0.114	0.117	0.119									0.096254	25.2	0.997	0
N-Nitrosodiphenylamine		0.561	0.588	0.604	0.616	0.664	0.622	0.647	0.645	0.623									0.619002	5.14	0.051	1
2,4,6-Tribromophenol			0.052	0.058	0.071	0.083	0.087	0.092	0.096	0.094									0.078957	21.2	0.998	0
4-Bromophenyl-phenylether		0.165	0.162	0.16	0.172	0.185	0.182	0.187	0.188	0.184									0.175948	6.48	0.065	1
Hexachlorobenzene		0.194	0.192	0.19	0.188	0.2	0.198	0.203	0.207	0.2									0.196941	3.18	0.032	1
n-octadecane		0.114	0.119	0.117	0.12	0.135	0.128	0.129	0.126	0.122									0.123209	5.39	0.054	1
Pentachlorophenol			0.055	0.069	0.082	0.103	0.112	0.123	0.13	0.129									0.100355	28.39	0.995	0
Phenanthrene	1.243	1.13	1.14	1.083	1.101	1.172	1.114	1.159	1.144	1.119									1.140525	3.92	0.039	1
Anthracene	1.023	0.919	1.017	1.033	1.066	1.177	1.126	1.18	1.181	1.143									1.086542	8.17	0.082	1
Carbazole		0.977	1.044	1.059	1.099	1.134	0.951	0.914	0.852	0.756									0.97615	12.55	0.125	1
Di-n-butyl phthalate		1.033	1.16	1.21	1.373	1.571	1.525	1.626	1.581	1.505									1.398333	15.36	0.998	0
2-nitrodiphenylamine											0.146	0.162	0.207	0.275	0.28	0.303	0.302	0.307	0.247859	26.72	0.998	0
Fluoranthene	0.942	1.006	1.043	1.064	1.123	1.251	1.193	1.269	1.246	1.188									1.132494	10.08	0.101	1
Chrysene-d12																						
Benzidine											0.371	0.398	0.489	0.586	0.661	0.735	0.729	0.773	0.592921	26.59	0.994	0
Pyrene	1.16	1.063	1.171	1.146	1.218	1.303	1.329	1.325	1.316	1.289									1.231986	7.57	0.076	1

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID	: BNAMS23	Review Method	: 625	Released By	: Jessica Freeman
Method	: S823E12P	Review Protocol	: EPA	Released On	: 5/16/2016 11:19:56 AM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- S823E12P -- ICal Updated Time: Fri May 13 16:52:25 2016

Parameter	40	200	1000	2000	5000	10000	20000	30000	40000	50000	1K1	2K1	5K1	10K1	20K1	30K1	40K1	50K1	AvgRF	%RSD	COD	Cur
p-Terphenyl-d14		0.719	0.791	0.767	0.814	0.859	0.861	0.882	0.881	0.859									0.825947	6.89	0.069	1
Benzylbutyl phthalate		0.466	0.514	0.531	0.641	0.742	0.76	0.784	0.792	0.771									0.66673	19.65	0.998	0
3,3-Dichlorobenzidine											0.29	0.314	0.339	0.367	0.368	0.373	0.358	0.367	0.346832	8.75	0.087	1
Benzo(a)anthracene	1.579	1.12	1.149	1.119	1.18	1.253	1.222	1.252	1.258	1.227									1.235859	10.68	0.107	1
Chrysene	1.177	1.151	1.171	1.133	1.148	1.198	1.191	1.215	1.189	1.149									1.172071	2.26	0.023	1
bis(2-Ethylhexyl)phthalate		0.791	0.799	0.788	0.936	1.075	1.08	1.131	1.156	1.109									0.984942	15.93	0.998	0
Di-n-octyl phthalate		1.1	1.304	1.335	1.604	1.859	1.889	1.973	1.99	1.909									1.66254	20.27	0.998	0
Perylene-d12																						
Benzo(b)fluoranthene	1.131	1.117	1.168	1.182	1.193	1.345	1.284	1.279	1.327	1.288									1.231295	6.7	0.067	1
Benzo(k)fluoranthene	1.059	0.968	1.112	1.092	1.158	1.218	1.211	1.278	1.21	1.203									1.150847	8.06	0.081	1
Benzo(a)pyrene	1.038	0.984	1.044	1.088	1.14	1.246	1.211	1.263	1.229	1.223									1.146633	8.84	0.088	1
Indeno(1,2,3-cd)pyrene	1.021	1.072	1.202	1.186	1.254	1.379	1.333	1.359	1.324	1.298									1.242877	9.8	0.098	1
Dibenz(a,h)anthracene	0.949	0.911	1.051	1.052	1.087	1.191	1.152	1.176	1.148	1.123									1.084127	8.73	0.087	1
Benzo(g,h,i)perylene	0.907	0.979	1.057	1.028	1.071	1.163	1.124	1.134	1.103	1.059									1.062421	7.22	0.072	1

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID	: BNAMS23	Review Method	: 8270D	Released By	: Jessica Freeman
Method	: S823E12P	Review Protocol	: SW846	Released On	: 5/16/2016 11:20:08 AM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- S823E12P -- ICal Updated Time: Fri May 13 16:52:25 2016

Parameter	40	200	1000	2000	5000	10000	20000	30000	40000	50000	1K1	2K1	5K1	10K1	20K1	30K1	40K1	50K1	AvgRF	%RSD	COD	Cur	RF
1,4-Dichlorobenzene-d4																							
Pyridine		1.645	1.912	1.996	2.082	2.239	2.12	2.14	2.113	2.144									2.043242	8.62	0.086	1	
N-Nitrosodimethylamine			0.751	0.712	0.781	0.925	0.815	0.838	0.832	0.814									0.808416	7.88	0.079	1	
2-Fluorophenol		1.388	1.518	1.423	1.573	1.703	1.632	1.678	1.647	1.675									1.581906	7.28	0.073	1	
Aniline		0.806	0.963	0.861	0.923	1.022	0.943	0.955	0.929	0.947									0.927787	6.69	0.067	1	
bis(2-Chloroethyl)ether		1.841	1.853	1.699	1.784	1.955	1.801	1.797	1.745	1.789									1.807095	3.99	0.04	1	0.7
Phenol-d5		1.794	1.899	1.837	2.008	2.188	2.076	2.142	2.078	2.122									2.016001	7	0.07	1	
Phenol		1.916	1.99	1.974	2.082	2.276	2.158	2.212	2.146	2.18									2.103884	5.77	0.058	1	0.8
Benzaldehyde											0.614	0.635	0.64	0.714	0.707	0.724	0.704	0.715	0.681845	6.44	0.064	1	0.01
2-Chlorophenol		1.866	1.816	1.737	1.921	2.117	1.997	2.047	2.006	2.054									1.951258	6.4	0.064	1	0.8
n-Decane		0.997	0.935	0.893	0.91	1.033	0.892	0.885	0.839	0.835									0.913188	7.27	0.073	1	
1,3-Dichlorobenzene		2.241	2.234	2.074	2.144	2.365	2.182	2.249	2.189	2.246									2.213715	3.65	0.037	1	
1,4-Dichlorobenzene		2.234	2.236	2.081	2.231	2.385	2.245	2.312	2.246	2.29									2.251076	3.61	0.036	1	
Benzyl Alcohol		1.218	1.275	1.18	1.348	1.492	1.394	1.432	1.407	1.426									1.352462	7.84	0.078	1	
1,2-Dichlorobenzene		2.107	2.195	2.061	2.148	2.312	2.162	2.188	2.15	2.183									2.167205	3.17	0.032	1	
bis(2-Chloroisopropyl)ether		0.603	0.627	0.612	0.653	0.689	0.645	0.655	0.641	0.652									0.641753	3.98	0.04	1	
2-Methylphenol		1.521	1.583	1.558	1.67	1.844	1.723	1.766	1.722	1.745									1.68134	6.36	0.064	1	0.7
Hexachloroethane		0.849	0.891	0.876	0.941	1.035	0.97	0.985	0.967	0.99									0.944876	6.44	0.064	1	0.3
N-Nitrosodi-n-propylamine		0.775	0.795	0.808	0.895	1.005	0.902	0.982	0.966	0.933									0.895618	9.52	0.095	1	0.5
3&4-Methyl phenol		1.74	1.873	1.757	1.958	2.118	1.986	2.041	1.998	2.03									1.944506	6.64	0.066	1	0.6

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID : BNAMS23
Method : S823E12P
Review Method : 8270D
Review Protocol : SW846
Released By : Jessica Freeman
Released On : 5/16/2016 11:20:08 AM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- S823E12P -- ICal Updated Time: Fri May 13 16:52:25 2016

Parameter	40	200	1000	2000	5000	10000	20000	30000	40000	50000	1K1	2K1	5K1	10K1	20K1	30K1	40K1	50K1	AvgRF	%RSD	COD	Cur	RF
Acetophenone											2.277	2.298	2.444	2.642	2.633	2.642	2.593	2.599	2.516106	6.16	0.062	1	0.01
Naphthalene-d8																							
Nitrobenzene-d5		0.266	0.29	0.288	0.307	0.337	0.328	0.336	0.326	0.322									0.311133	7.96	0.08	1	
Nitrobenzene		0.296	0.294	0.3	0.319	0.342	0.328	0.333	0.325	0.321									0.317334	5.37	0.054	1	0.2
Isophorone		0.457	0.51	0.516	0.561	0.611	0.606	0.62	0.603	0.597									0.564502	10.13	0.101	1	0.4
2-Nitrophenol			0.139	0.146	0.167	0.193	0.193	0.205	0.202	0.2									0.180495	14.6	0.146	1	0.1
2,4-Dimethylphenol		0.289	0.311	0.309	0.327	0.345	0.325	0.334	0.322	0.313									0.319359	5.1	0.051	1	0.2
bis(2-Chlorethoxy)methane		0.382	0.394	0.401	0.401	0.428	0.413	0.425	0.414	0.405									0.407074	3.64	0.036	1	0.3
2,4-Dichlorophenol		0.227	0.236	0.234	0.264	0.291	0.285	0.297	0.292	0.284									0.267733	10.58	0.106	1	0.2
Benzoic Acid											0.093	0.103	0.14	0.193	0.22	0.253	0.259	0.274	0.192136	37.41	0.998	3	
1,2,4-Trichlorobenzene		0.298	0.297	0.294	0.298	0.314	0.304	0.316	0.308	0.299									0.303212	2.58	0.026	1	
Naphthalene	1.797	1.231	1.124	1.078	1.082	1.141	1.094	1.121	1.083	1.057									1.180843	18.8	0.999	0	0.7
4-Chloroaniline		0.109	0.104	0.111	0.113	0.123	0.115	0.119	0.115	0.113									0.113586	4.85	0.048	1	0.01
Hexachloro-1,3-butadiene			0.152	0.138	0.147	0.157	0.151	0.154	0.152	0.15									0.150099	3.81	0.038	1	0.01
Caprolactam											0.08	0.083	0.087	0.102	0.104	0.108	0.104	0.106	0.096614	11.86	0.119	1	0.01
4-Chloro-3-methylphenol		0.248	0.254	0.257	0.279	0.31	0.305	0.316	0.312	0.304									0.287258	9.68	0.097	1	0.2
2-Methylnaphthalene	0.677	0.694	0.706	0.696	0.723	0.768	0.747	0.757	0.752	0.738									0.725731	4.28	0.043	1	0.4
1-Methylnaphthalene	0.702	0.684	0.691	0.676	0.691	0.738	0.709	0.719	0.709	0.693									0.701181	2.6	0.026	1	
1,2,4,5-Tetrachlorobenzene											0.261	0.272	0.269	0.277	0.284	0.286	0.277	0.284	0.276442	3.11	0.031	1	0.01
Acenaphthene-d10																							

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID	: BNAMS23	Review Method	: 8270D	Released By	: Jessica Freeman
Method	: S823E12P	Review Protocol	: SW846	Released On	: 5/16/2016 11:20:08 AM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- S823E12P -- ICal Updated Time: Fri May 13 16:52:25 2016

Parameter	40	200	1000	2000	5000	10000	20000	30000	40000	50000	1K1	2K1	5K1	10K1	20K1	30K1	40K1	50K1	AvgRF	%RSD	COD	Cur	RF
Hexachlorocyclopentadiene		0.261	0.266	0.27	0.284	0.317	0.328	0.342	0.333	0.342									0.304833	11.15	0.111	1	0.05
2,4,6-Trichlorophenol			0.241	0.251	0.285	0.324	0.331	0.346	0.339	0.341									0.307204	13.85	0.138	1	0.2
2,4,5-Trichlorophenol			0.264	0.277	0.315	0.354	0.361	0.371	0.366	0.369									0.334393	13.02	0.13	1	0.2
2-Fluorobiphenyl		1.281	1.282	1.215	1.252	1.332	1.314	1.313	1.292	1.267									1.283043	2.8	0.028	1	
Biphenyl		1.482	1.45	1.421	1.451	1.531	1.518	1.538	1.488	1.478									1.48411	2.67	0.027	1	0.01
2-Chloronaphthalene	1.069	1.161	1.125	1.116	1.136	1.193	1.191	1.209	1.174	1.163									1.153727	3.68	0.037	1	0.8
2-Nitroaniline			0.293	0.32	0.363	0.422	0.449	0.458	0.448	0.447									0.400011	16.38	0.999	0	0.01
Acenaphthylene	1.66	1.62	1.774	1.776	1.852	2.01	1.97	2.011	1.942	1.911									1.852529	7.59	0.076	1	0.9
Dimethyl phthalate		1.111	1.159	1.16	1.23	1.283	1.272	1.287	1.247	1.253									1.222235	5.2	0.052	1	0.01
2,6-Dinitrotoluene			0.248	0.268	0.294	0.317	0.315	0.322	0.314	0.316									0.299099	9.14	0.091	1	0.2
3-Nitroaniline			0.279	0.306	0.346	0.37	0.358	0.353	0.343	0.344									0.337287	8.9	0.089	1	0.01
Acenaphthene	1.161	1.148	1.179	1.171	1.186	1.245	1.234	1.236	1.211	1.211									1.198024	2.82	0.028	1	0.9
2,4-Dinitrophenol				0.066	0.099	0.126	0.135	0.156	0.159	0.166									0.12956	28.04	0.996	0	0.01
Dibenzofuran		1.698	1.71	1.631	1.681	1.731	1.707	1.725	1.67	1.666									1.691053	1.88	0.019	1	0.8
2,4-Dinitrotoluene			0.281	0.315	0.369	0.405	0.408	0.419	0.41	0.419									0.378201	13.97	0.14	1	0.2
2,3,4,6-Tetrachlorophenol											0.136	0.149	0.169	0.209	0.225	0.239	0.237	0.237	0.200125	21.29	0.998	0	0.01
4-Nitrophenol			0.185	0.204	0.246	0.286	0.296	0.315	0.315	0.319									0.270802	19.48	0.999	0	0.01
Fluorene	1.36	1.31	1.328	1.321	1.344	1.426	1.389	1.404	1.368	1.368									1.361875	2.73	0.027	1	0.9
4-Chlorophenyl-phenylether		0.518	0.529	0.527	0.55	0.571	0.569	0.571	0.555	0.556									0.549616	3.69	0.037	1	0.4
Diethyl phthalate		1.153	1.263	1.271	1.317	1.382	1.359	1.398	1.358	1.367									1.318698	5.91	0.059	1	0.01

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID	: BNAMS23	Review Method	: 8270D	Released By	: Jessica Freeman
Method	: S823E12P	Review Protocol	: SW846	Released On	: 5/16/2016 11:20:08 AM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- S823E12P -- ICal Updated Time: Fri May 13 16:52:25 2016

Parameter	40	200	1000	2000	5000	10000	20000	30000	40000	50000	1K1	2K1	5K1	10K1	20K1	30K1	40K1	50K1	AvgRF	%RSD	COD	Cur	RF
4-Nitroaniline		0.223	0.274	0.296	0.291	0.199	0.22	0.238	0.238	0.234									0.245897	13.65	0.136	1	0.01
Azobenzene		0.954	1.177	1.204	1.266	1.366	1.312	1.314	1.271	1.248									1.234575	9.72	0.097	1	
Atrazine											0.237	0.259	0.284	0.328	0.33	0.348	0.347	0.349	0.310315	14.23	0.142	1	0.01
Phenanthrene-d10																							
4,6-Dinitro-2-methylphenol				0.054	0.077	0.093	0.101	0.114	0.117	0.119									0.096254	25.2	0.997	0	0.01
N-Nitrosodiphenylamine		0.561	0.588	0.604	0.616	0.664	0.622	0.647	0.645	0.623									0.619002	5.14	0.051	1	0.01
2,4,6-Tribromophenol			0.052	0.058	0.071	0.083	0.087	0.092	0.096	0.094									0.078957	21.2	0.998	0	
4-Bromophenyl-phenylether		0.165	0.162	0.16	0.172	0.185	0.182	0.187	0.188	0.184									0.175948	6.48	0.065	1	0.1
Hexachlorobenzene		0.194	0.192	0.19	0.188	0.2	0.198	0.203	0.207	0.2									0.196941	3.18	0.032	1	0.1
n-octadecane		0.114	0.119	0.117	0.12	0.135	0.128	0.129	0.126	0.122									0.123209	5.39	0.054	1	
Pentachlorophenol			0.055	0.069	0.082	0.103	0.112	0.123	0.13	0.129									0.100355	28.39	0.995	0	0.05
Phenanthrene	1.243	1.13	1.14	1.083	1.101	1.172	1.114	1.159	1.144	1.119									1.140525	3.92	0.039	1	0.7
Anthracene	1.023	0.919	1.017	1.033	1.066	1.177	1.126	1.18	1.181	1.143									1.086542	8.17	0.082	1	0.7
Carbazole		0.977	1.044	1.059	1.099	1.134	0.951	0.914	0.852	0.756									0.97615	12.55	0.125	1	0.01
Di-n-butyl phthalate		1.033	1.16	1.21	1.373	1.571	1.525	1.626	1.581	1.505									1.398333	15.36	0.998	0	0.01
2-nitrodiphenylamine											0.146	0.162	0.207	0.275	0.28	0.303	0.302	0.307	0.247859	26.72	0.998	0	
Fluoranthene	0.942	1.006	1.043	1.064	1.123	1.251	1.193	1.269	1.246	1.188									1.132494	10.08	0.101	1	0.6
Chrysene-d12																							
Benzidine											0.371	0.398	0.489	0.586	0.661	0.735	0.729	0.773	0.592921	26.59	0.994	0	
Pyrene	1.16	1.063	1.171	1.146	1.218	1.303	1.329	1.325	1.316	1.289									1.231986	7.57	0.076	1	0.6

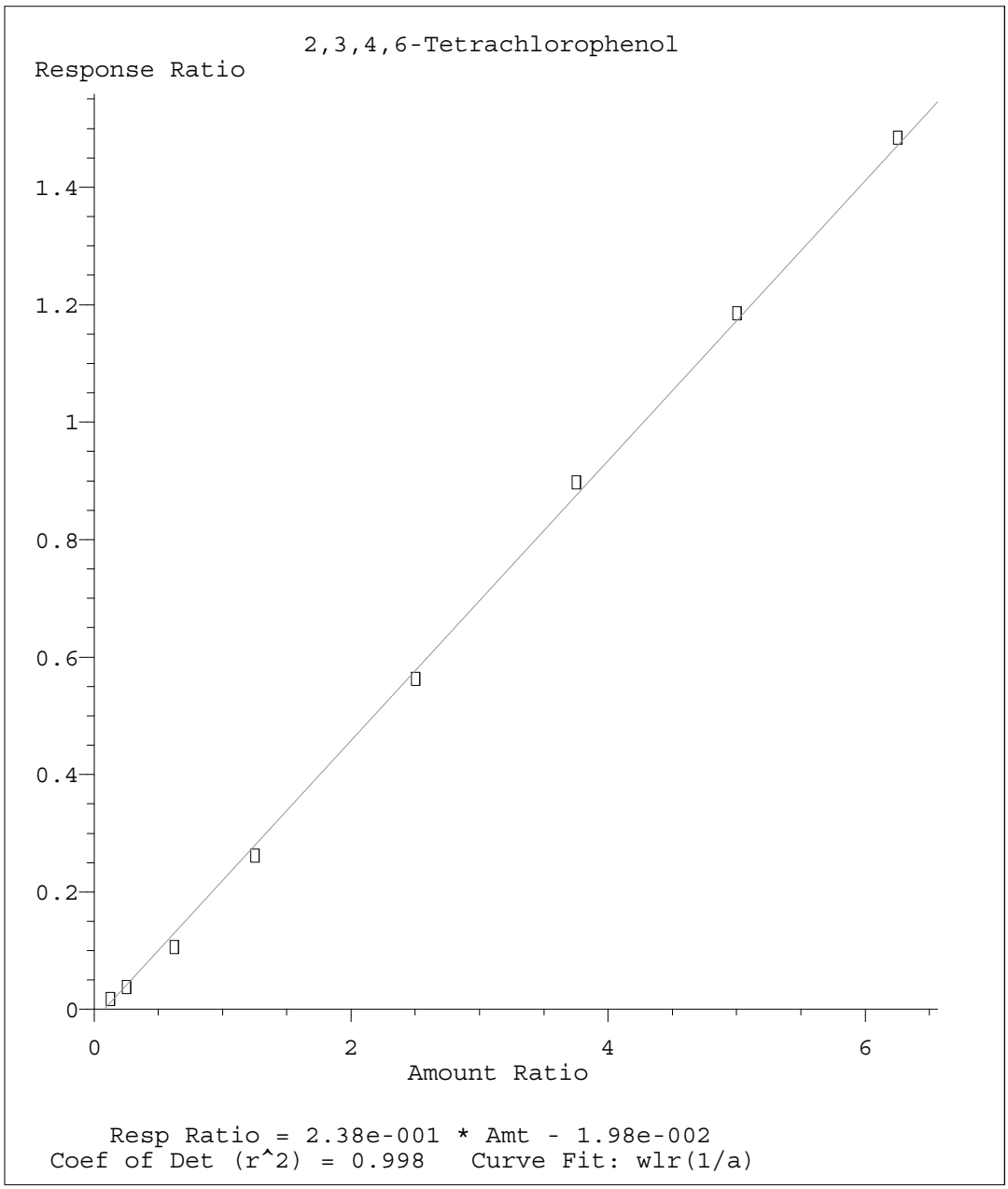
Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID	: BNAMS23	Review Method	: 8270D	Released By	: Jessica Freeman
Method	: S823E12P	Review Protocol	: SW846	Released On	: 5/16/2016 11:20:08 AM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- S823E12P -- ICal Updated Time: Fri May 13 16:52:25 2016

Parameter	40	200	1000	2000	5000	10000	20000	30000	40000	50000	1K1	2K1	5K1	10K1	20K1	30K1	40K1	50K1	AvgRF	%RSD	COD	Cur	RF
p-Terphenyl-d14		0.719	0.791	0.767	0.814	0.859	0.861	0.882	0.881	0.859									0.825947	6.89	0.069	1	
Benzylbutyl phthalate		0.466	0.514	0.531	0.641	0.742	0.76	0.784	0.792	0.771									0.66673	19.65	0.998	0	0.01
3,3-Dichlorobenzidine											0.29	0.314	0.339	0.367	0.368	0.373	0.358	0.367	0.346832	8.75	0.087	1	0.01
Benzo(a)anthracene	1.579	1.12	1.149	1.119	1.18	1.253	1.222	1.252	1.258	1.227									1.235859	10.68	0.107	1	0.8
Chrysene	1.177	1.151	1.171	1.133	1.148	1.198	1.191	1.215	1.189	1.149									1.172071	2.26	0.023	1	0.7
bis(2-Ethylhexyl)phthalate		0.791	0.799	0.788	0.936	1.075	1.08	1.131	1.156	1.109									0.984942	15.93	0.998	0	0.01
Di-n-octyl phthalate		1.1	1.304	1.335	1.604	1.859	1.889	1.973	1.99	1.909									1.66254	20.27	0.998	0	0.01
Perylene-d12																							
Benzo(b)fluoranthene	1.131	1.117	1.168	1.182	1.193	1.345	1.284	1.279	1.327	1.288									1.231295	6.7	0.067	1	0.7
Benzo(k)fluoranthene	1.059	0.968	1.112	1.092	1.158	1.218	1.211	1.278	1.21	1.203									1.150847	8.06	0.081	1	0.7
Benzo(a)pyrene	1.038	0.984	1.044	1.088	1.14	1.246	1.211	1.263	1.229	1.223									1.146633	8.84	0.088	1	0.7
Indeno(1,2,3-cd)pyrene	1.021	1.072	1.202	1.186	1.254	1.379	1.333	1.359	1.324	1.298									1.242877	9.8	0.098	1	0.5
Dibenz(a,h)anthracene	0.949	0.911	1.051	1.052	1.087	1.191	1.152	1.176	1.148	1.123									1.084127	8.73	0.087	1	0.4
Benzo(g,h,i)perylene	0.907	0.979	1.057	1.028	1.071	1.163	1.124	1.134	1.103	1.059									1.062421	7.22	0.072	1	0.5



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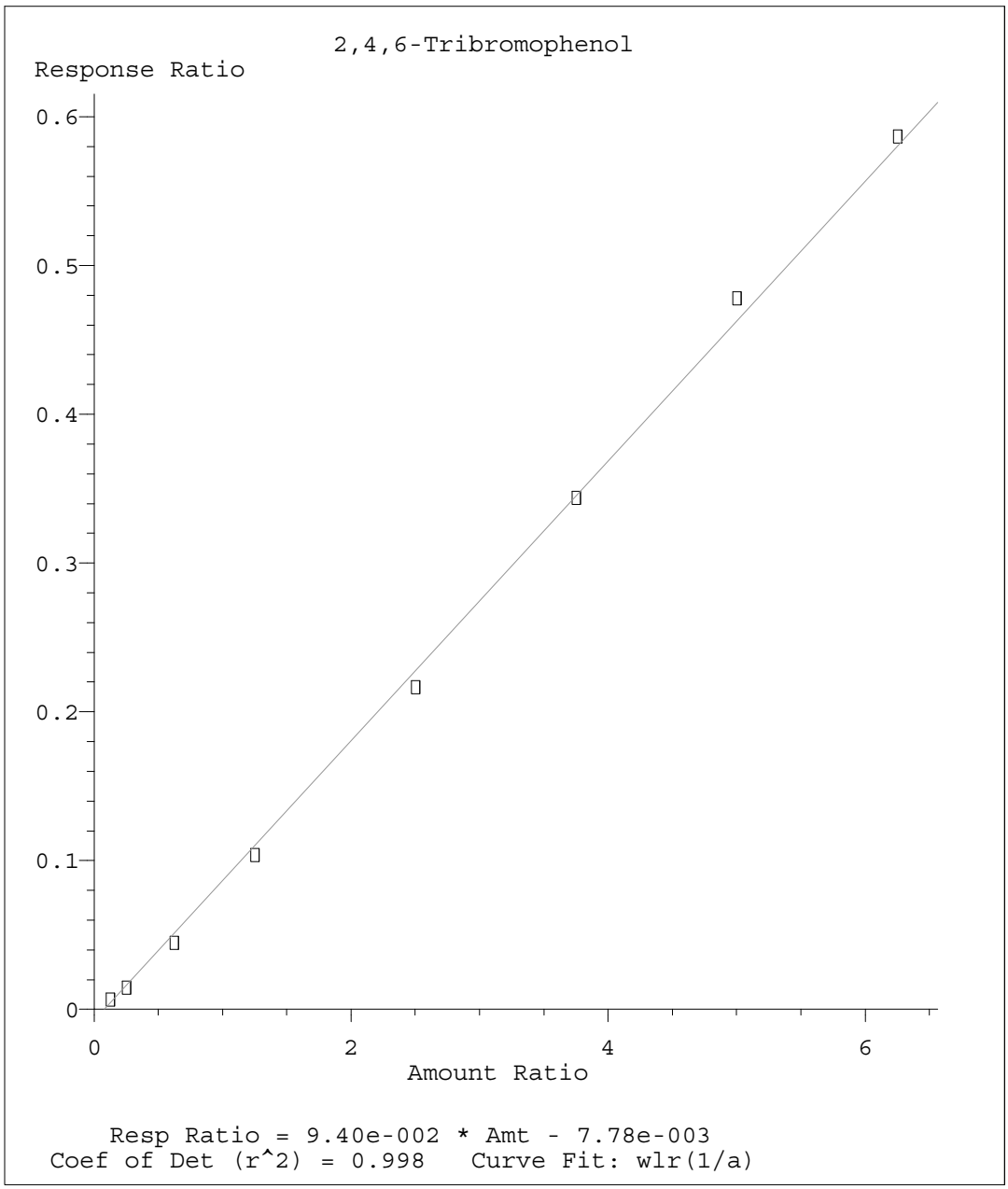

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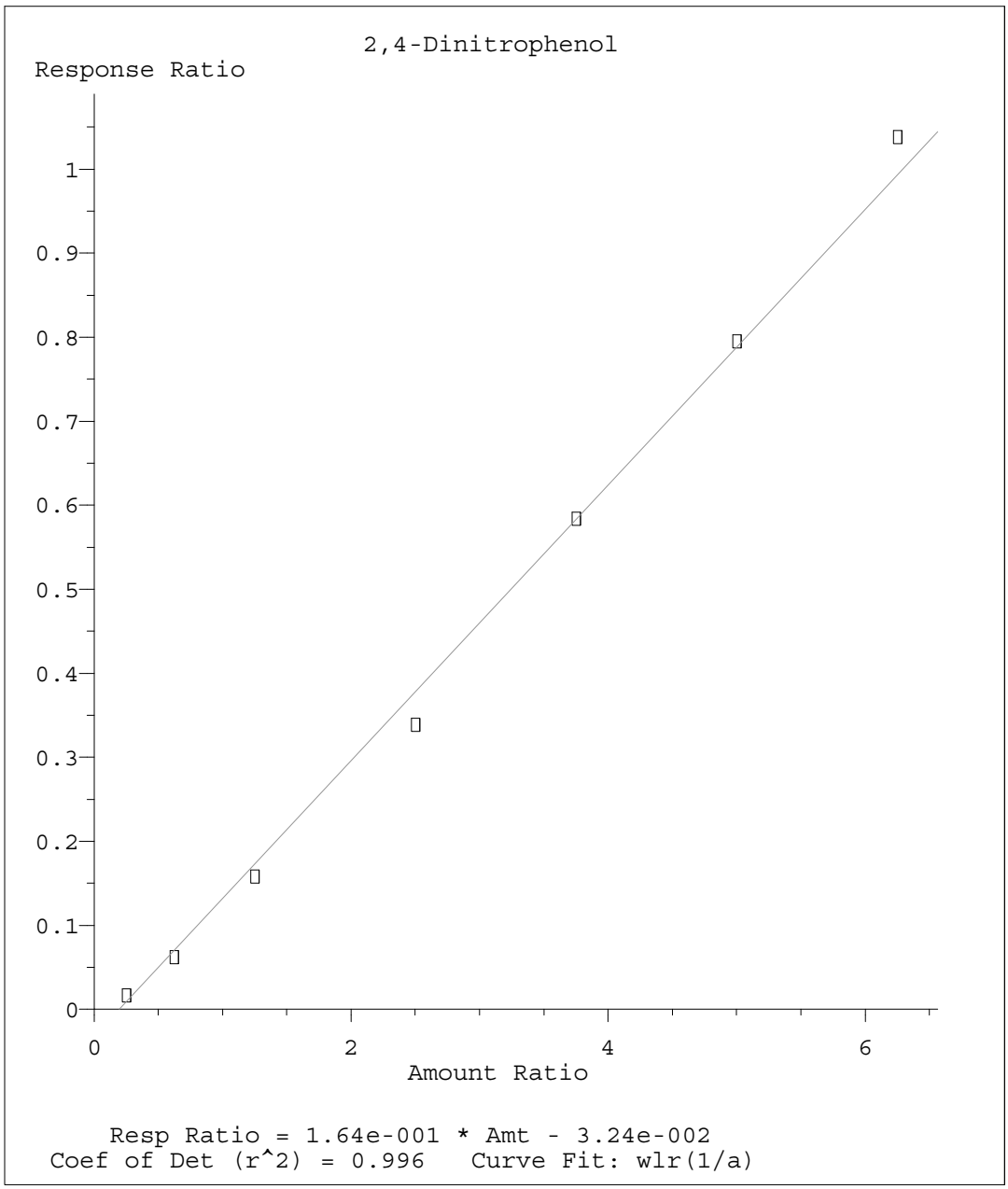

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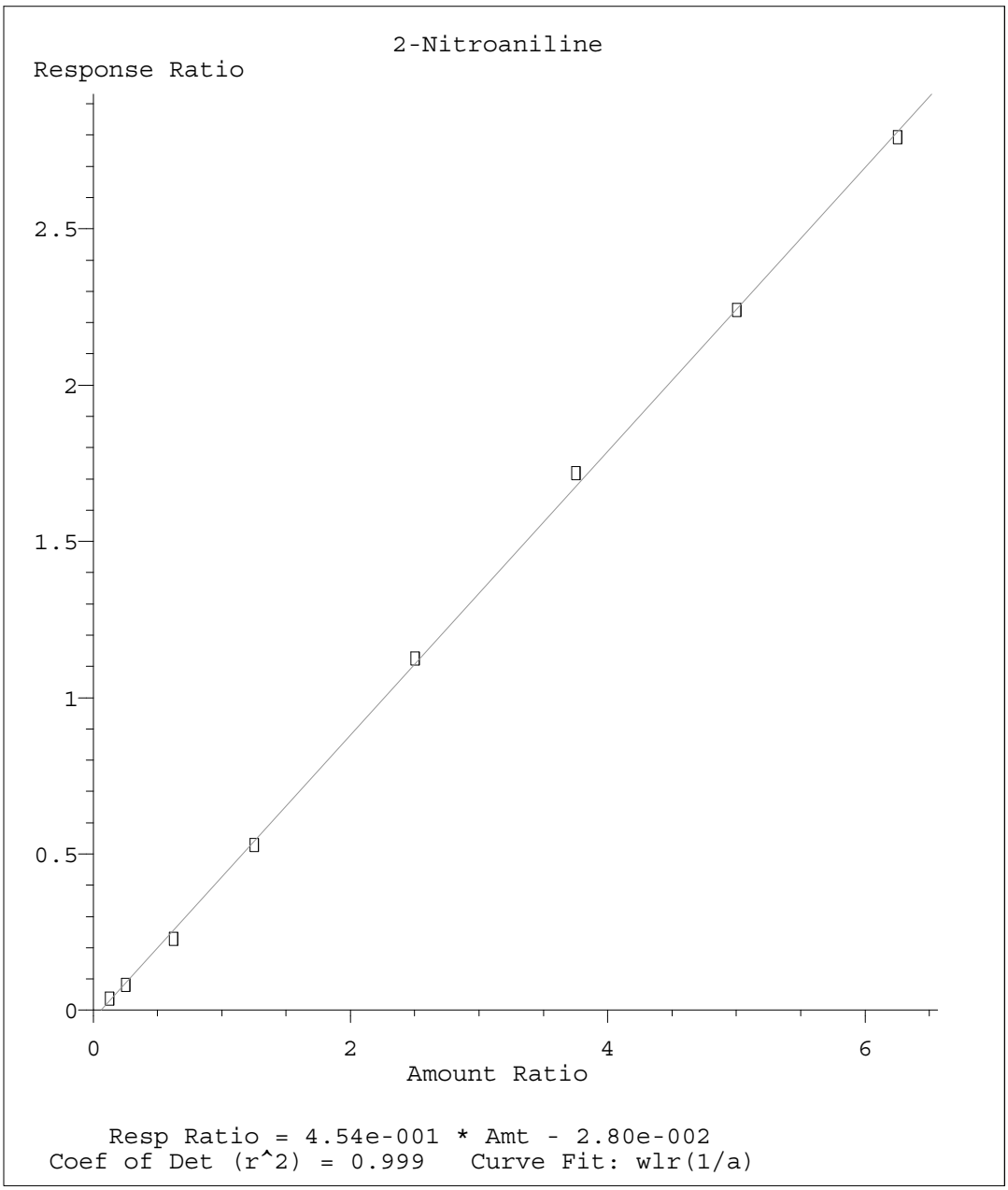
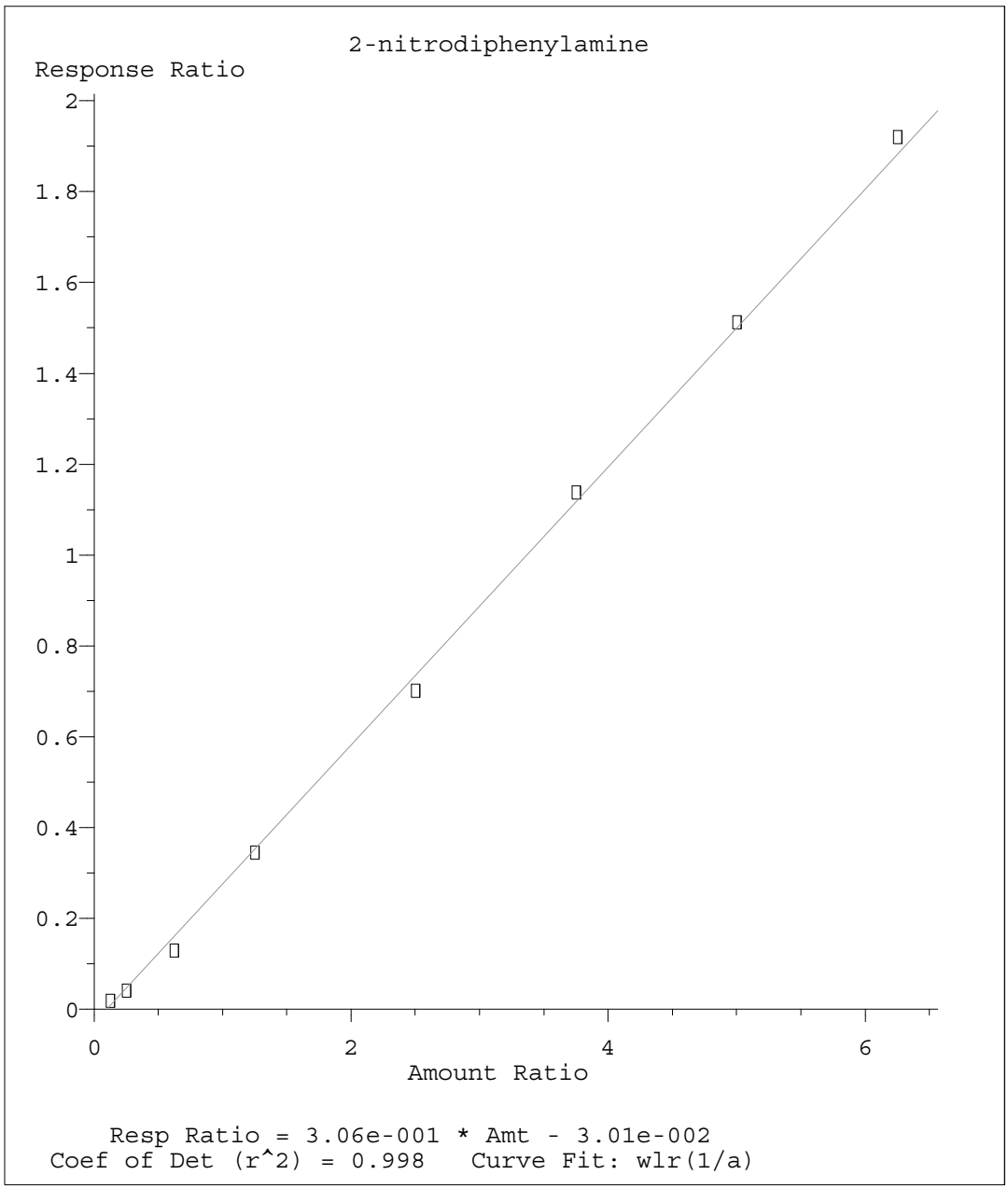
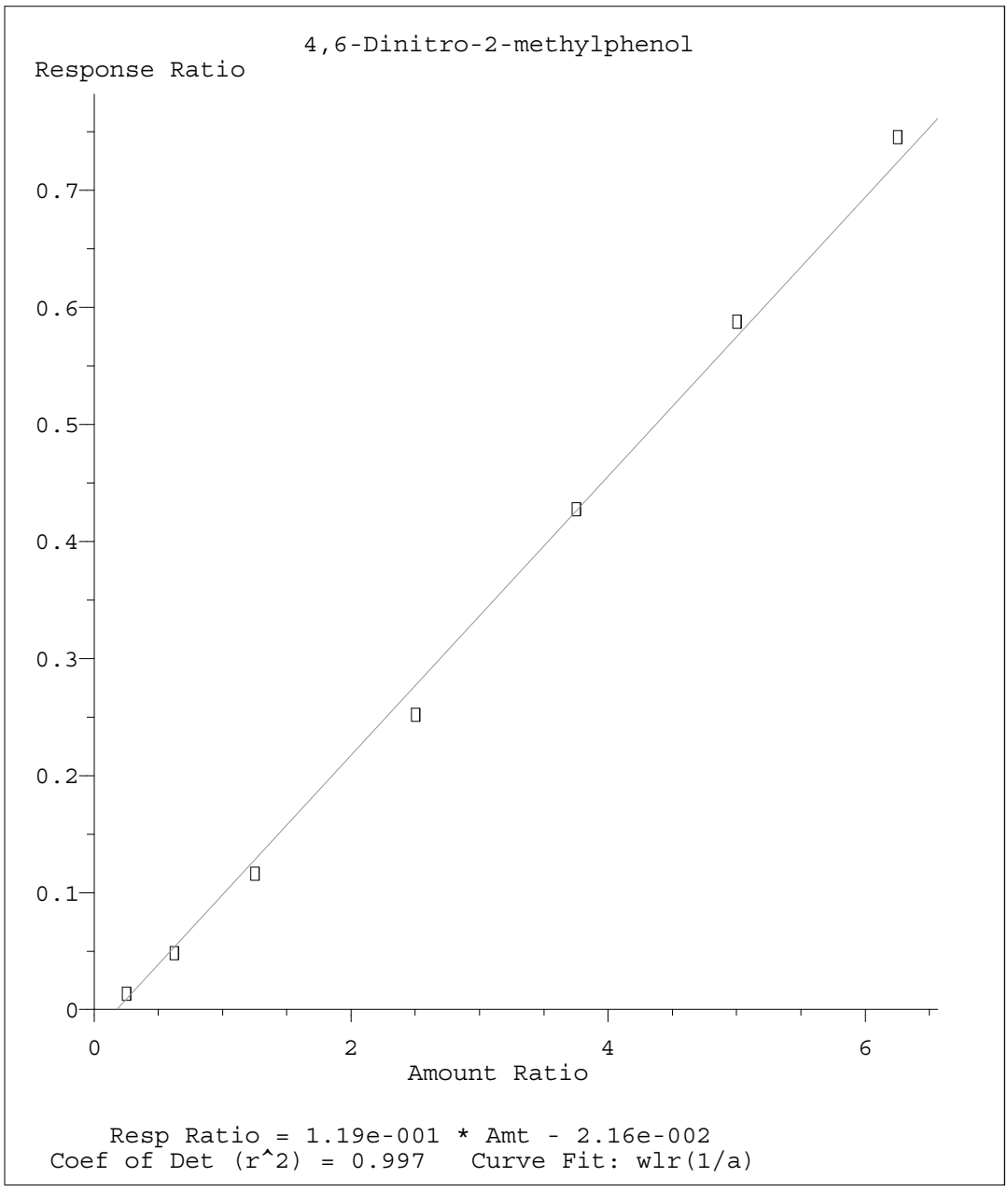


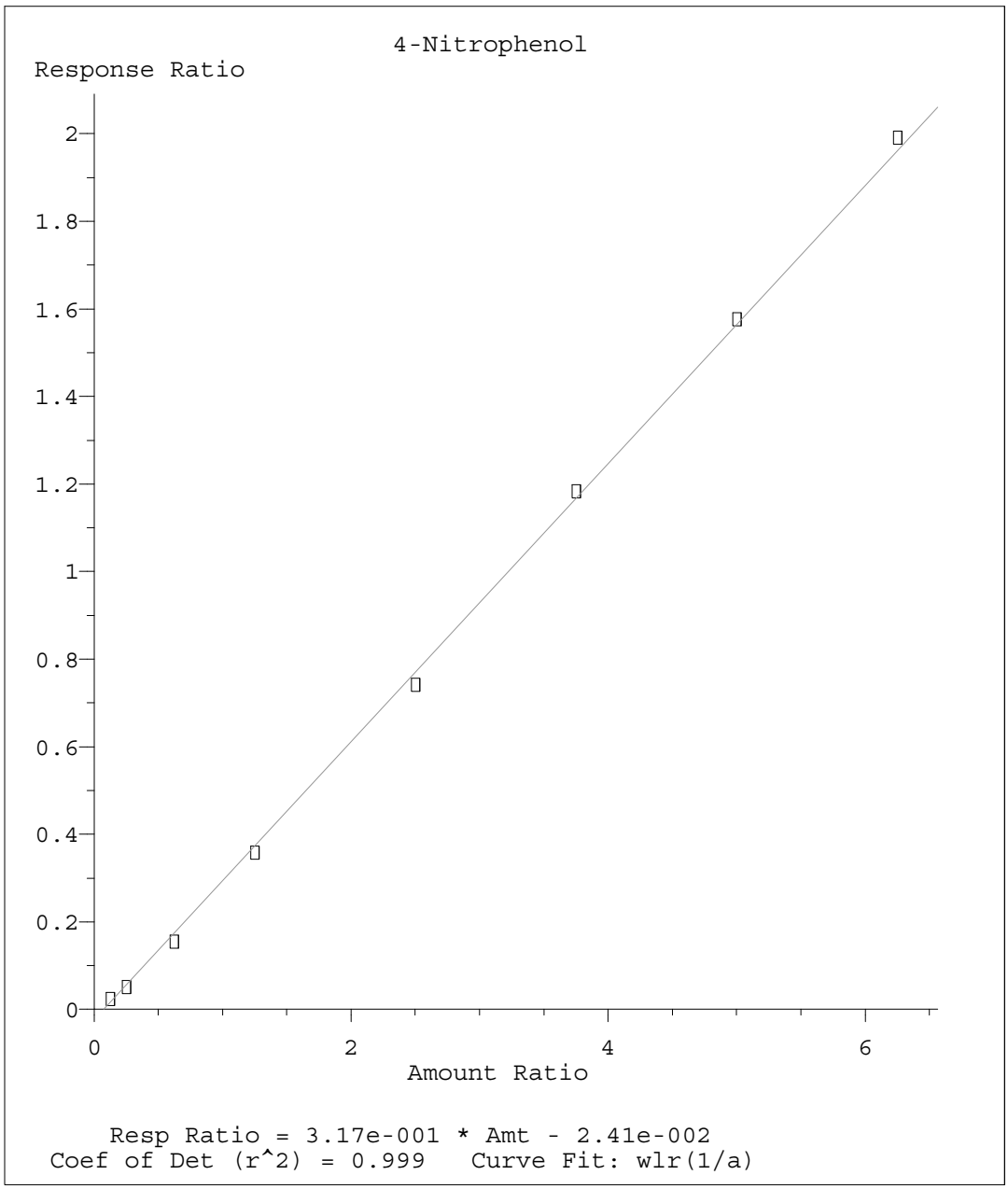
Method Name: C:\msdchem\1\methods\S823E12P.M



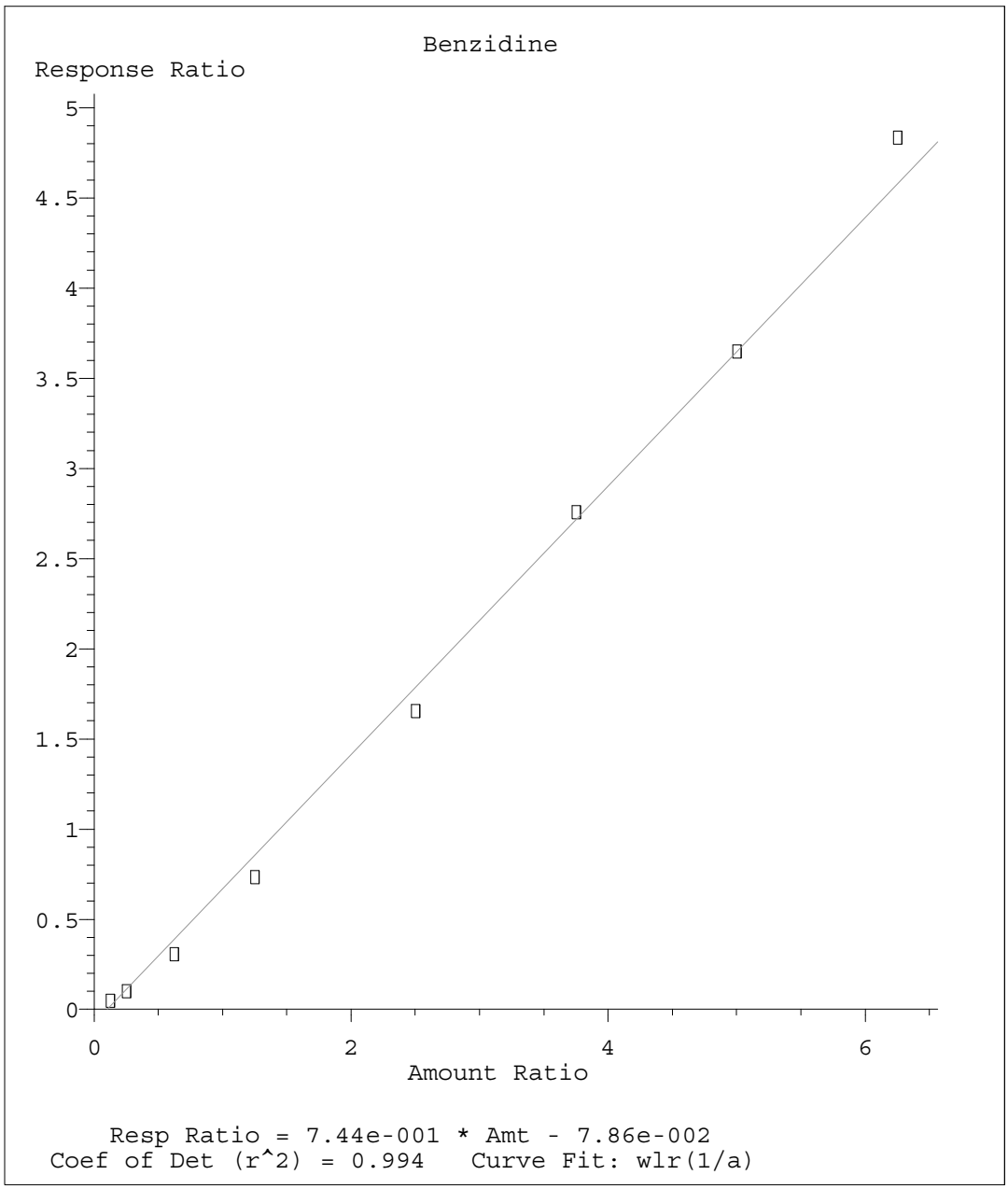
Method Name: C:\msdchem\1\methods\S823E12P.M



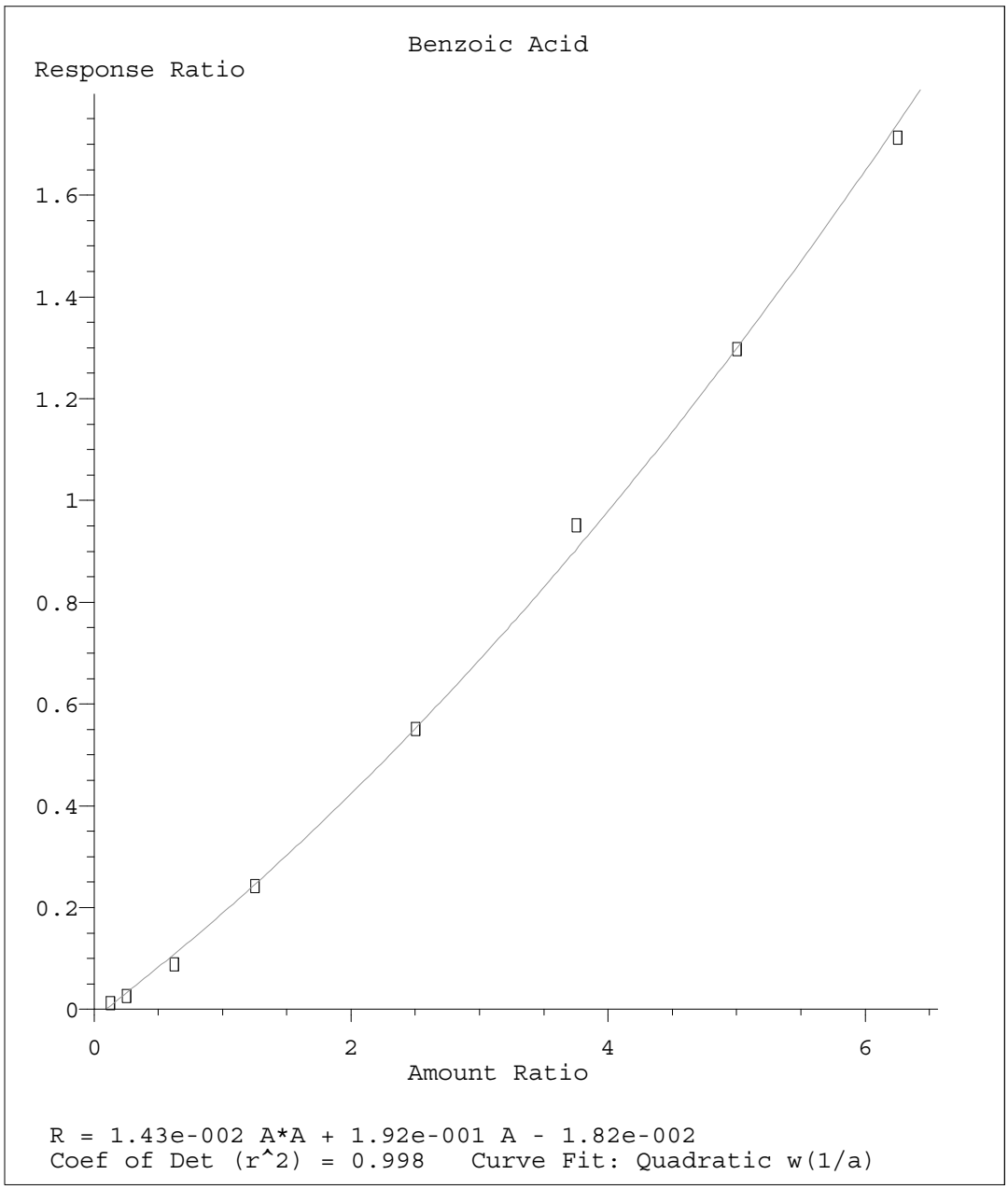
Method Name: C:\msdchem\1\methods\S823E12P.M



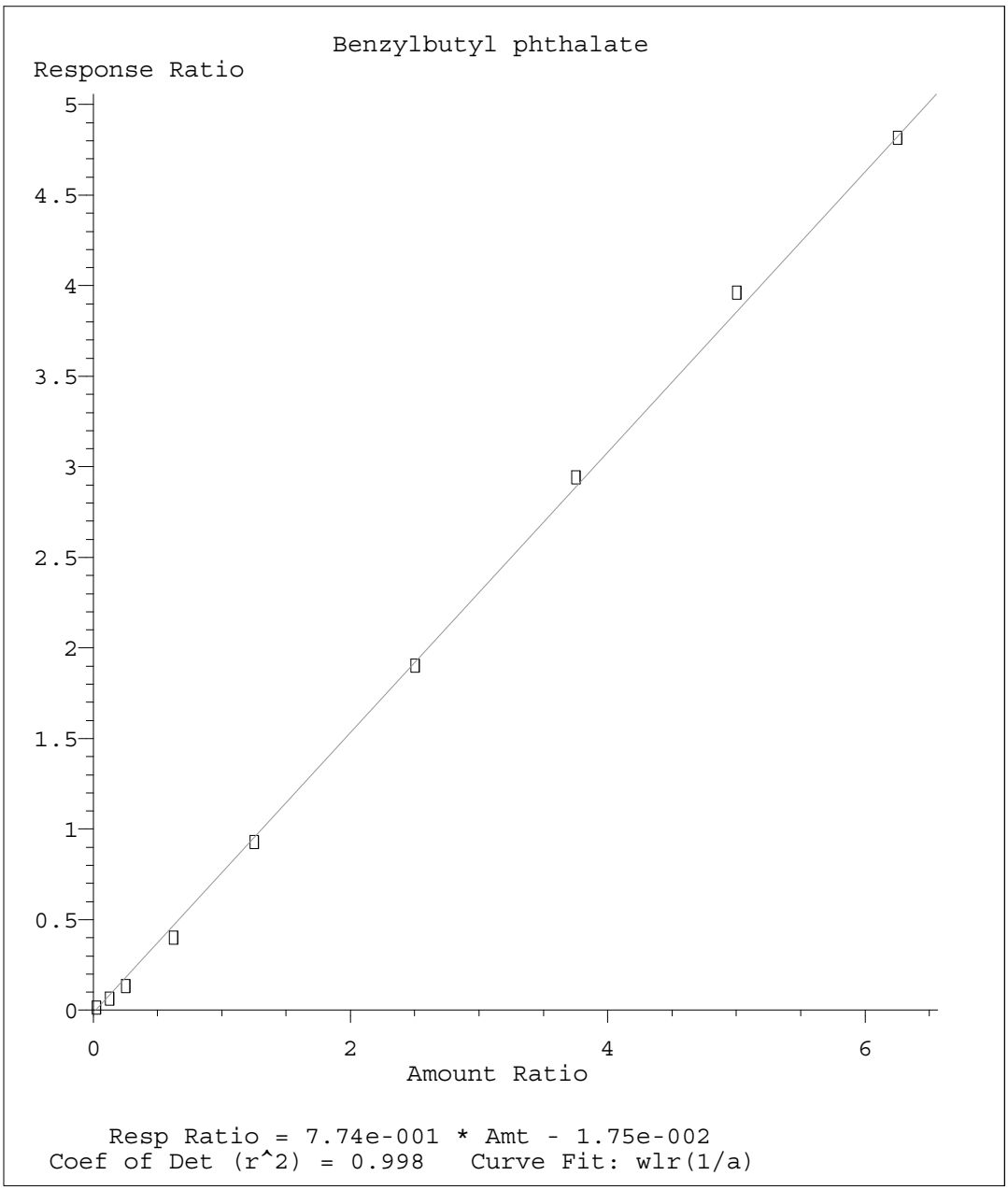
Method Name: C:\msdchem\1\methods\S823E12P.M



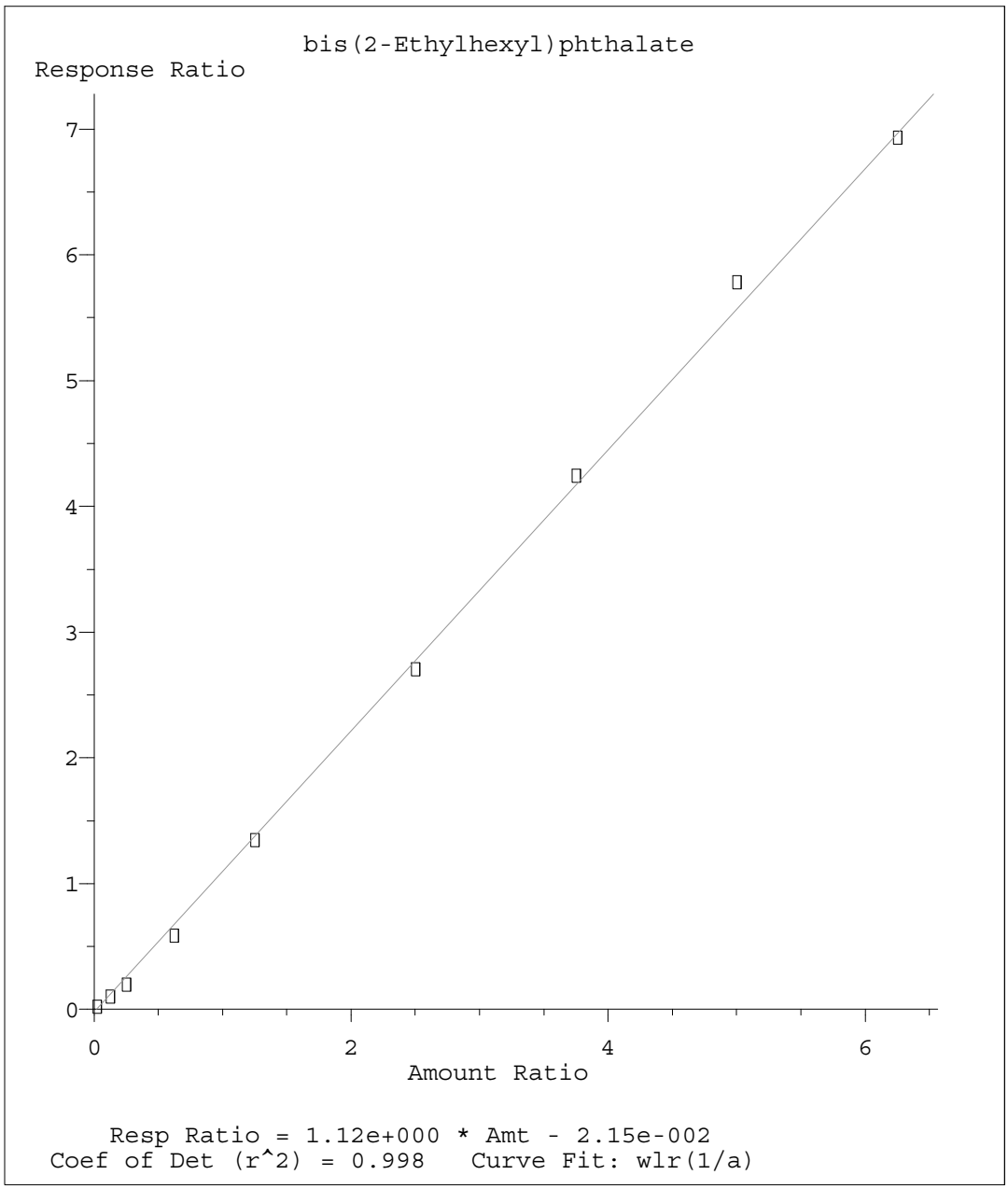
Method Name: C:\msdchem\1\methods\S823E12P.M



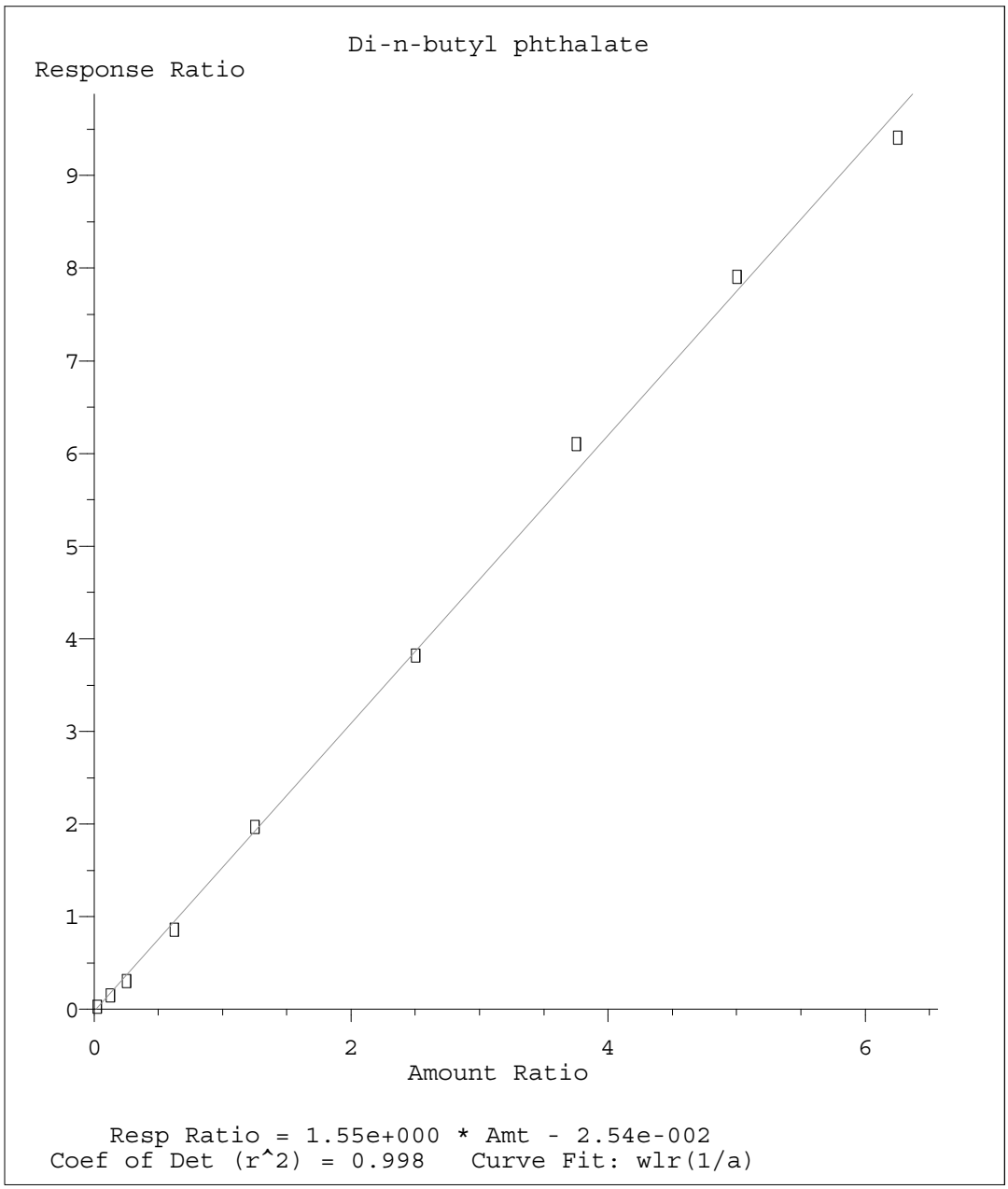
Method Name: C:\msdchem\1\methods\S823E12P.M



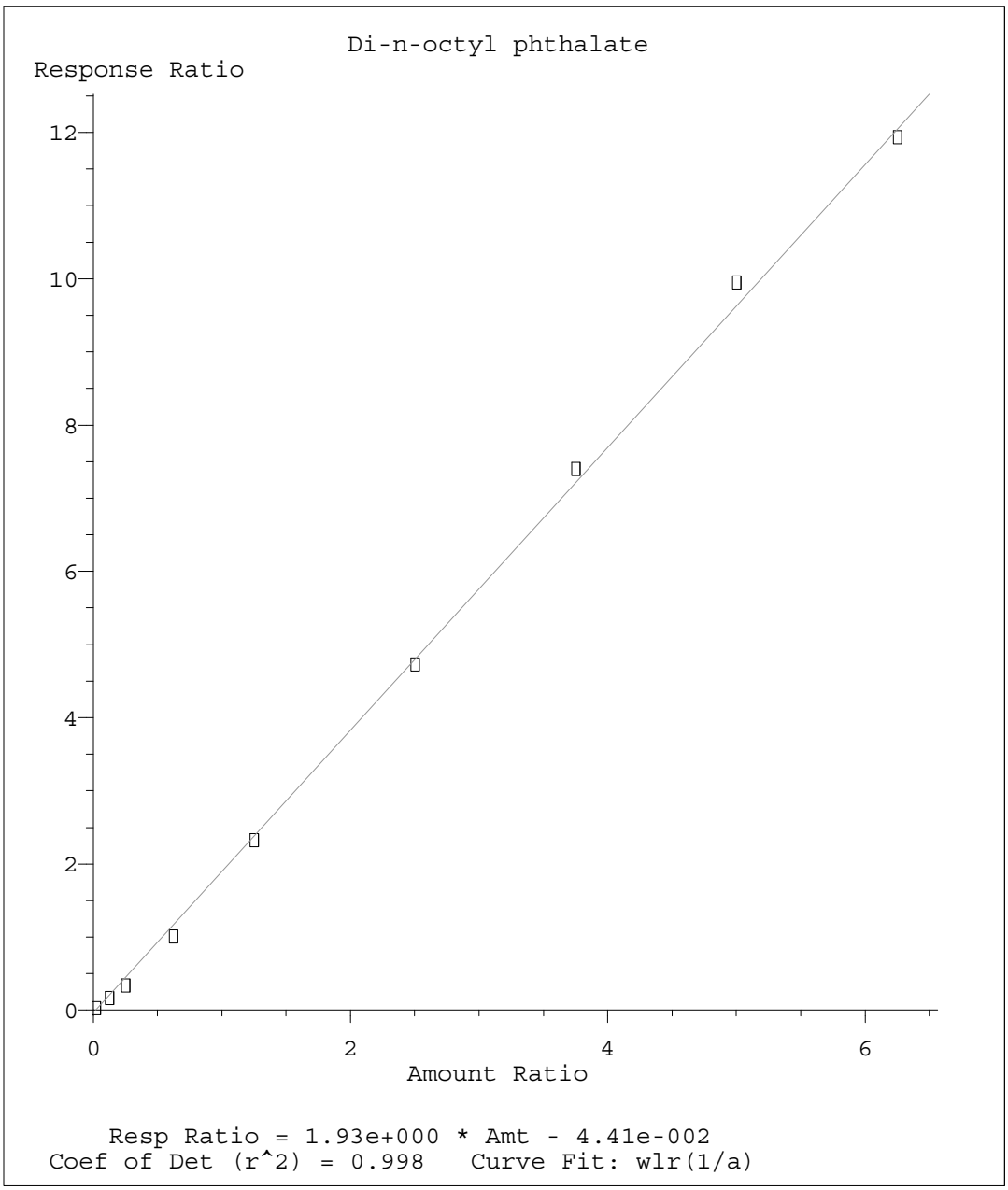
Method Name: C:\msdchem\1\methods\S823E12P.M



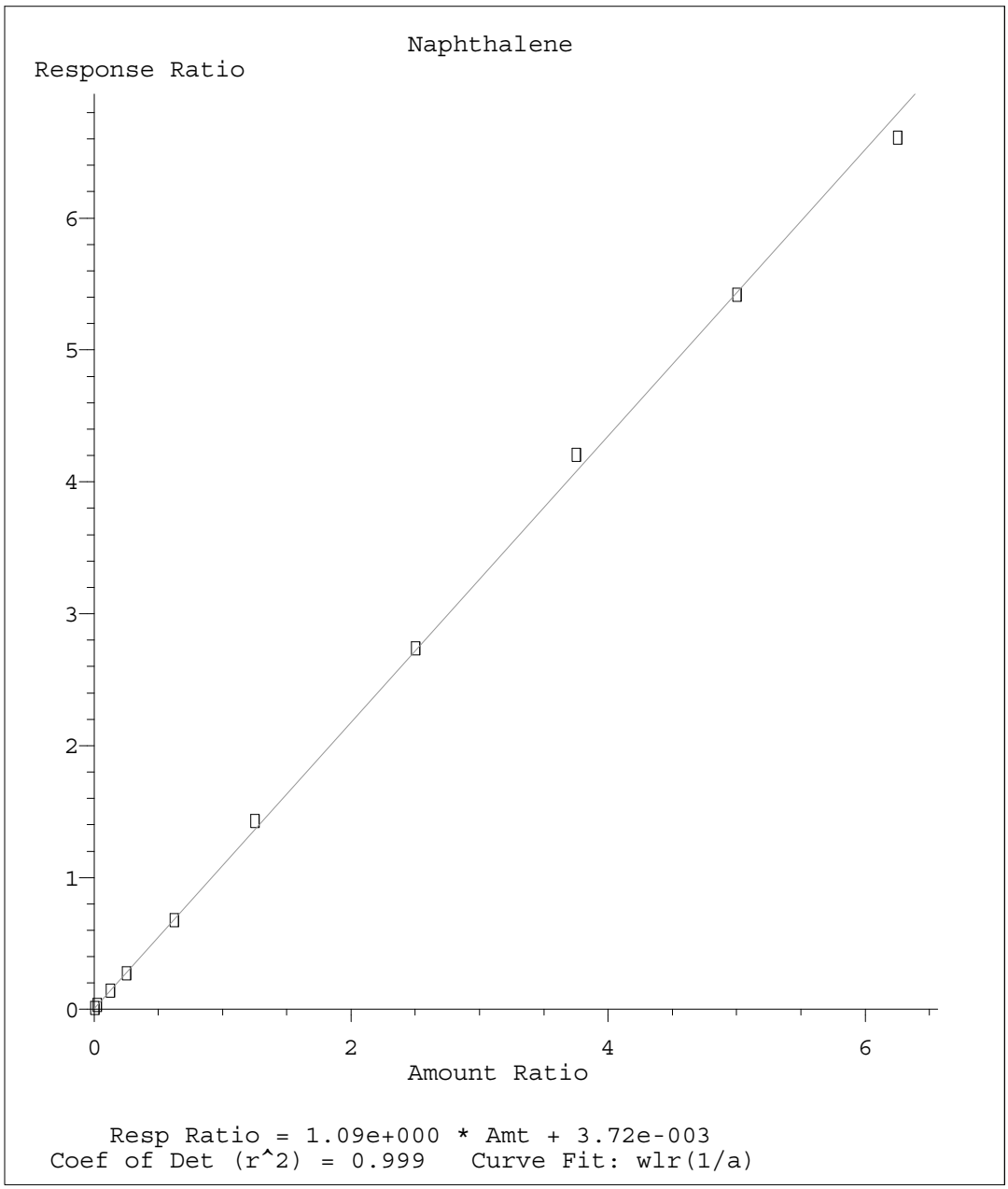
Method Name: C:\msdchem\1\methods\S823E12P.M



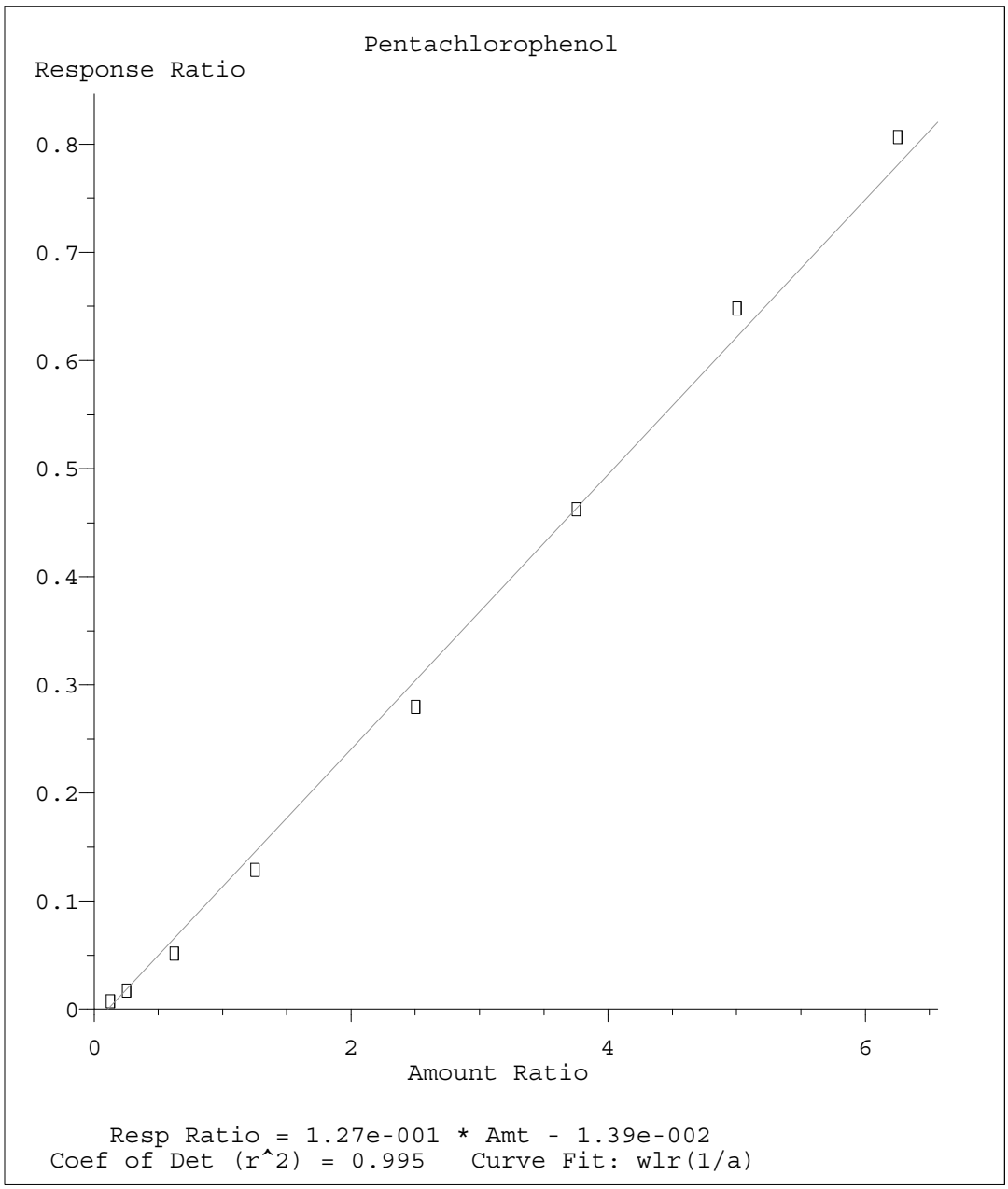
Method Name: C:\msdchem\1\methods\S823E12P.M



Method Name: C:\msdchem\1\methods\S823E12P.M



Method Name: C:\msdchem\1\methods\S823E12P.M



Method Name: C:\msdchem\1\methods\S823E12P.M

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 05mrl.D
Acq On : 12 May 2016 12:44 pm
Operator : 377
Sample : MRL SVMS 200 PPB 16D25863
Misc : 8270 PRIMARY CALIBRATION IS 16E12001
ALS Vial : 5 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 16 11:13:31 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:52:25 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 1,4-Dichlorobenzene-d4	5.437	152	56228	8000.0000000	ppb		0.00
22) Naphthalene-d8	6.719	136	325186	8000.0000000	ppb		0.00
40) Acenaphthene-d10	8.607	164	190495	8000.0000000	ppb		0.00
64) Phenanthrene-d10	10.236	188	339198	8000.0000000	ppb		0.00
78) Chrysene-d12	13.136	240	322664	8000.0000000	ppb		0.00
88) Perylene-d12	15.024	264	308336	8000.0000000	ppb		0.00
System Monitoring Compounds							
4) 2-Fluorophenol	4.301	112	1951	175.4744686	ppb		0.00
Spiked Amount 20.000	Range 10 - 87		Recovery = 877.37%#				
7) Phenol-d5	5.037	99	2522	177.9884186	ppb		0.00
Spiked Amount 20.000	Range 10 - 67		Recovery = 889.94%#				
23) Nitrobenzene-d5	5.966	82	2165	171.1866625	ppb		0.00
Spiked Amount 10.000	Range 12 - 120		Recovery = 1711.87%#				
44) 2-Fluorobiphenyl	7.860	172	6100	199.6618678	ppb		0.00
Spiked Amount 10.000	Range 26 - 122		Recovery = 1996.62%#				
67) 2,4,6-Tribromophenol	9.466	330	352	750.5282517	ppb		0.00
Spiked Amount 20.000	Range 10 - 148		Recovery = 3752.64%#				
81) p-Terphenyl-d14	11.960	244	5799	174.0765759	ppb		0.00
Spiked Amount 10.000	Range 34 - 149		Recovery = 1740.77%#				
Target Compounds							Qvalue
2) Pyridine	3.378	79	2312	160.9924017	ppb	#	99
3) N-Nitrosodimethylamine	3.348	42	774	136.2207757	ppb	#	89
5) Aniline	5.125	66	1133	173.7477286	ppb		89
6) bis(2-Chloroethyl)ether	5.166	93	2588	203.7608028	ppb		95
8) Phenol	5.054	94	2693	182.1175800	ppb		99
10) 2-Chlorophenol	5.237	128	2623	191.2585440	ppb		93
11) n-Decane	5.254	41	1402	218.4363820	ppb	#	92
12) 1,3-Dichlorobenzene	5.384	146	3150	202.4538935	ppb		94
13) 1,4-Dichlorobenzene	5.454	146	3141	198.5249226	ppb		93
14) Benzyl Alcohol	5.542	79	1712	180.1009268	ppb		99
15) 1,2-Dichlorobenzene	5.601	146	2962	194.4564838	ppb		96
16) bis(2-Chloroisopropyl)...	5.678	121	848	188.0033410	ppb	#	75
17) 2-Methylphenol	5.625	108	2138	180.9212683	ppb		95
18) Hexachloroethane	5.942	117	1194	179.7905069	ppb		85
19) N-Nitrosodi-n-propylamine	5.795	70	1089	172.9985762	ppb		88
20) 3&4-Methyl phenol	5.772	107	2446	178.9717954	ppb		95
24) Nitrobenzene	5.984	77	2406	186.5252727	ppb	#	83
25) Isophorone	6.225	82	3719	162.0760398	ppb		96
26) 2-Nitrophenol	6.313	139	973	132.6188796	ppb		91
27) 2,4-Dimethylphenol	6.319	107	2349	180.9516976	ppb		93
28) bis(2-Chlorethoxy)methane	6.431	93	3108	187.8302287	ppb		96
29) 2,4-Dichlorophenol	6.548	162	1844	169.4404562	ppb		95
31) 1,2,4-Trichlorobenzene	6.648	180	2425	196.7539956	ppb		90
32) Naphthalene	6.742	128	10008	199.3453705	ppb		98
33) 4-Chloroaniline	6.778	65	890	192.7631579	ppb		91
34) Hexachloro-1,3-butadiene	6.860	225	1118	183.2402513	ppb		92
36) 4-Chloro-3-methylphenol	7.266	107	2015	172.5680593	ppb		97
37) 2-Methylnaphthalene	7.472	142	5640	191.1883579	ppb		98
38) 1-Methylnaphthalene	7.583	142	5562	195.1456426	ppb		99
41) Hexachlorocyclopentadiene	7.642	237	1245	171.5195231	ppb		85

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 05mrl.D
Acq On : 12 May 2016 12:44 pm
Operator : 377
Sample : MRL SVMS 200 PPB 16D25863
Misc : 8270 PRIMARY CALIBRATION IS 16E12001
ALS Vial : 5 Sample Multiplier: 1
InstName : BNAMS23

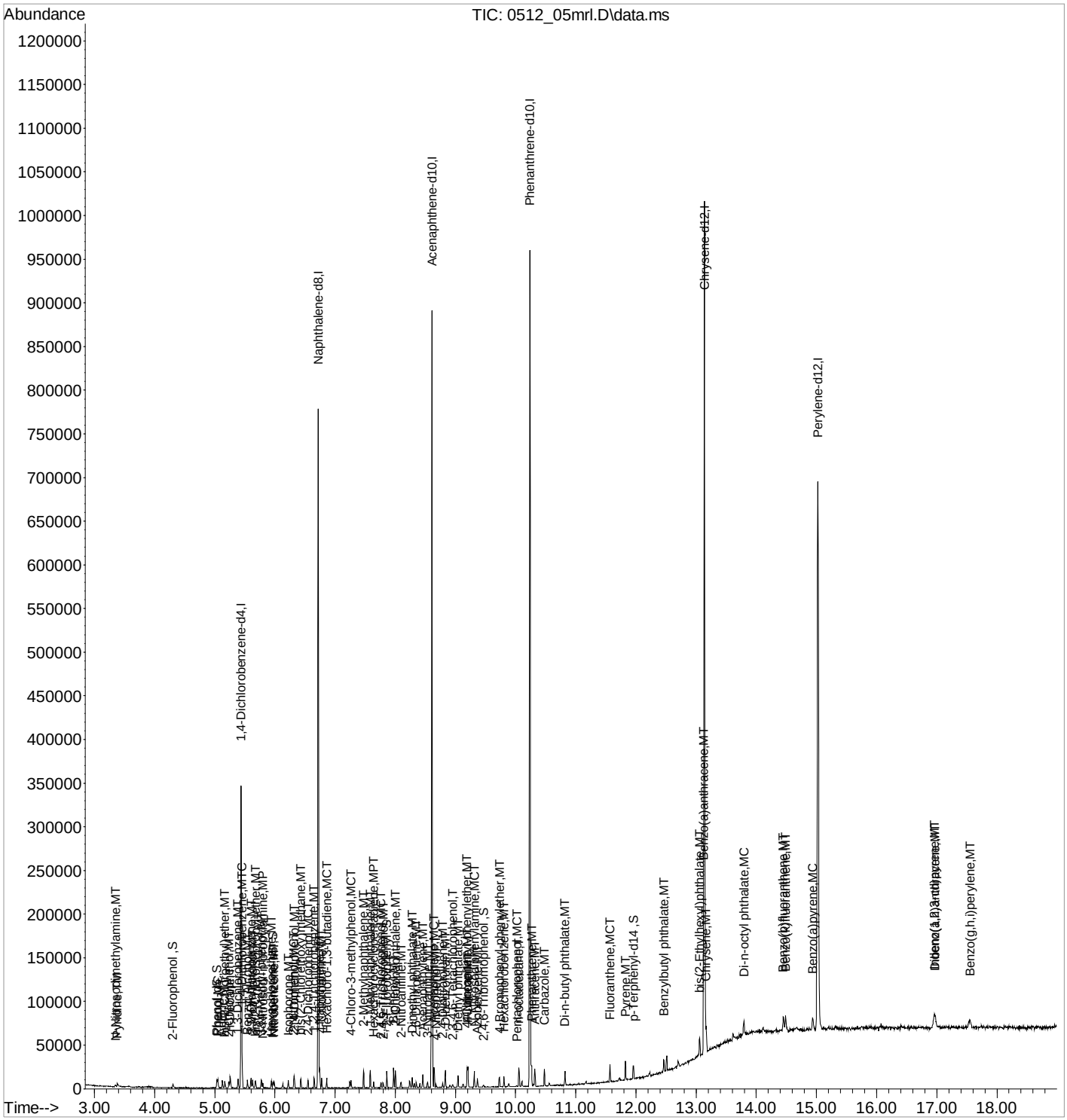
Quant Time: May 16 11:13:31 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:52:25 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M

Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
42) 2,4,6-Trichlorophenol	7.760	196	885	120.9826524 ppb		82
43) 2,4,5-Trichlorophenol	7.801	196	1037	130.2349464 ppb		90
45) Biphenyl	7.972	154	7058	199.7202279 ppb		99
46) 2-Chloronaphthalene	8.001	162	5527	201.1836490 ppb		98
47) 2-Nitroaniline	8.095	138	1429	626.2107544 ppb	#	98
48) Acenaphthylene	8.454	152	7714	174.8722861 ppb		96
49) Dimethyl phthalate	8.283	163	5289	181.7294472 ppb		94
50) 2,6-Dinitrotoluene	8.348	165	854	119.9084800 ppb		90
51) 3-Nitroaniline	8.536	138	952	118.5342031 ppb		98
52) Acenaphthene	8.642	153	5469	191.7117971 ppb		91
54) Dibenzofuran	8.830	168	8086	200.8088439 ppb	#	98
55) 2,4-Dinitrotoluene	8.789	165	1054	117.0373464 ppb		95
56) 2,3,4,6-Tetrachlorophenol	8.954	232	629	776.4222725 ppb		80
57) 4-Nitrophenol	8.678	139	659	695.9446975 ppb	#	69
58) Fluorene	9.207	166	6241	192.4523863 ppb		94
59) 4-Chlorophenyl-phenyle...	9.189	204	2466	188.4256726 ppb		86
60) Diethyl phthalate	9.042	149	5491	174.8688551 ppb		95
61) 4-Nitroaniline	9.195	138	1061	181.2040771 ppb		90
62) Azobenzene	9.366	77	4541	154.4686544 ppb		97
66) N-Nitrosodiphenylamine	9.313	169	4758	181.2879908 ppb		95
68) 4-Bromophenyl-phenylether	9.730	248	1396	187.1280569 ppb		89
69) Hexachlorobenzene	9.807	284	1648	197.3597467 ppb		95
70) n-octadecane	10.054	55	967	185.1054458 ppb	#	96
71) Pentachlorophenol	10.019	266	180	907.2077010 ppb	#	49
72) Phenanthrene	10.266	178	9581	198.1265812 ppb		98
73) Anthracene	10.319	178	7792	169.1371259 ppb		98
74) Carbazole	10.477	167	8284	200.1521772 ppb		97
75) Di-n-butyl phthalate	10.819	149	8760	263.6084315 ppb		97
77) Fluoranthene	11.571	202	8530	177.6437439 ppb		96
80) Pyrene	11.824	202	8578	172.6313848 ppb		99
82) Benzylbutyl phthalate	12.466	149	3761	300.8173231 ppb		98
84) Benzo(a)anthracene	13.124	228	9032	181.1985084 ppb		93
85) Chrysene	13.165	228	9282	196.3482998 ppb		97
86) bis(2-Ethylhexyl)phtha...	13.060	149	7162	312.6587272 ppb		93
87) Di-n-octyl phthalate	13.795	149	8877	296.1709219 ppb		95
89) Benzo(b)fluoranthene	14.448	252	8607	181.3657828 ppb		94
90) Benzo(k)fluoranthene	14.489	252	7461	168.2073760 ppb		94
91) Benzo(a)pyrene	14.936	252	7583	171.5861835 ppb		97
92) Indeno(1,2,3-cd)pyrene	16.965	276	8264	172.5154439 ppb		93
93) Dibenz(a,h)anthracene	16.971	278	7020	168.0052400 ppb		94
94) Benzo(g,h,i)perylene	17.553	276	7544	184.2344618 ppb		91

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 05mrl.D
Acq On : 12 May 2016 12:44 pm
Operator : 377
Sample : MRL SVMS 200 PPB 16D25863
Misc : 8270 PRIMARY CALIBRATION IS 16E12001
ALS Vial : 5 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 16 11:13:31 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:52:25 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 06mrl.D
Acq On : 12 May 2016 1:07 pm
Operator : 377
Sample : MRL SVMS 1K PPB 16D25863
Misc : 8270 PRIMARY CALIBRATION IS 16E12001
ALS Vial : 6 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 16 11:59:10 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:52:25 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 1,4-Dichlorobenzene-d4	5.437	152	55715	8000.0000000	ppb		0.00
22) Naphthalene-d8	6.719	136	325634	8000.0000000	ppb		0.00
40) Acenaphthene-d10	8.607	164	193439	8000.0000000	ppb		0.00
64) Phenanthrene-d10	10.236	188	346379	8000.0000000	ppb		0.00
78) Chrysene-d12	13.136	240	325391	8000.0000000	ppb		0.00
88) Perylene-d12	15.024	264	317386	8000.0000000	ppb		0.00
System Monitoring Compounds							
4) 2-Fluorophenol	4.301	112	10570	959.4274836	ppb		0.00
Spiked Amount 20.000	Range 10 - 87		Recovery = 4797.14%#				
7) Phenol-d5	5.043	99	13225	941.9391418	ppb		0.00
Spiked Amount 20.000	Range 10 - 67		Recovery = 4709.70%#				
23) Nitrobenzene-d5	5.966	82	11817	933.0853173	ppb		0.00
Spiked Amount 10.000	Range 12 - 120		Recovery = 9330.85%#				
44) 2-Fluorobiphenyl	7.860	172	30989	998.8778879	ppb		0.00
Spiked Amount 10.000	Range 26 - 122		Recovery = 9988.78%#				
67) 2,4,6-Tribromophenol	9.466	330	2240	1212.8163151	ppb		0.00
Spiked Amount 20.000	Range 10 - 148		Recovery = 6064.08%#				
81) p-Terphenyl-d14	11.960	244	32197	958.4017786	ppb		0.00
Spiked Amount 10.000	Range 34 - 149		Recovery = 9584.02%#				
Target Compounds							Qvalue
2) Pyridine	3.372	79	13314	935.6353103	ppb	#	92
3) N-Nitrosodimethylamine	3.343	42	5230	928.9334002	ppb		97
5) Aniline	5.125	66	6710	1038.4659171	ppb		95
6) bis(2-Chloroethyl)ether	5.166	93	12908	1025.6420759	ppb		97
8) Phenol	5.054	94	13858	945.7940457	ppb		96
10) 2-Chlorophenol	5.237	128	12645	930.5118103	ppb		98
11) n-Decane	5.254	41	6509	1023.4620267	ppb	#	93
12) 1,3-Dichlorobenzene	5.384	146	15557	1009.0714820	ppb		99
13) 1,4-Dichlorobenzene	5.454	146	15570	993.1531237	ppb		99
14) Benzyl Alcohol	5.543	79	8879	942.6636155	ppb		99
15) 1,2-Dichlorobenzene	5.601	146	15285	1012.7058500	ppb		97
16) bis(2-Chloroisopropyl)...	5.678	121	4365	976.6399025	ppb		97
17) 2-Methylphenol	5.631	108	11028	941.8010744	ppb		98
18) Hexachloroethane	5.937	117	6206	943.0933937	ppb		89
19) N-Nitrosodi-n-propylamine	5.795	70	5537	887.7070601	ppb		91
20) 3&4-Methyl phenol	5.772	107	13042	963.0588784	ppb		97
24) Nitrobenzene	5.984	77	11970	926.6981732	ppb		91
25) Isophorone	6.225	82	20759	903.4438440	ppb		97
26) 2-Nitrophenol	6.313	139	5655	769.7101604	ppb		91
27) 2,4-Dimethylphenol	6.319	107	12641	972.4408007	ppb		94
28) bis(2-Chlorethoxy)methane	6.431	93	16021	966.8880520	ppb		96
29) 2,4-Dichlorophenol	6.548	162	9592	880.1718231	ppb		98
31) 1,2,4-Trichlorobenzene	6.648	180	12109	981.1201445	ppb		91
32) Naphthalene	6.742	128	45736	1007.3744002	ppb		99
33) 4-Chloroaniline	6.778	65	4222	913.1757092	ppb		94
34) Hexachloro-1,3-butadiene	6.860	225	6168	1009.5446603	ppb		92
36) 4-Chloro-3-methylphenol	7.266	107	10341	884.4025755	ppb		96
37) 2-Methylnaphthalene	7.472	142	28731	972.6020425	ppb		99
38) 1-Methylnaphthalene	7.584	142	28127	985.4926351	ppb		99
41) Hexachlorocyclopentadiene	7.642	237	6436	873.1719729	ppb		91

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 06mrl.D
Acq On : 12 May 2016 1:07 pm
Operator : 377
Sample : MRL SVMS 1K PPB 16D25863
Misc : 8270 PRIMARY CALIBRATION IS 16E12001
ALS Vial : 6 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 16 11:59:10 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:52:25 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M

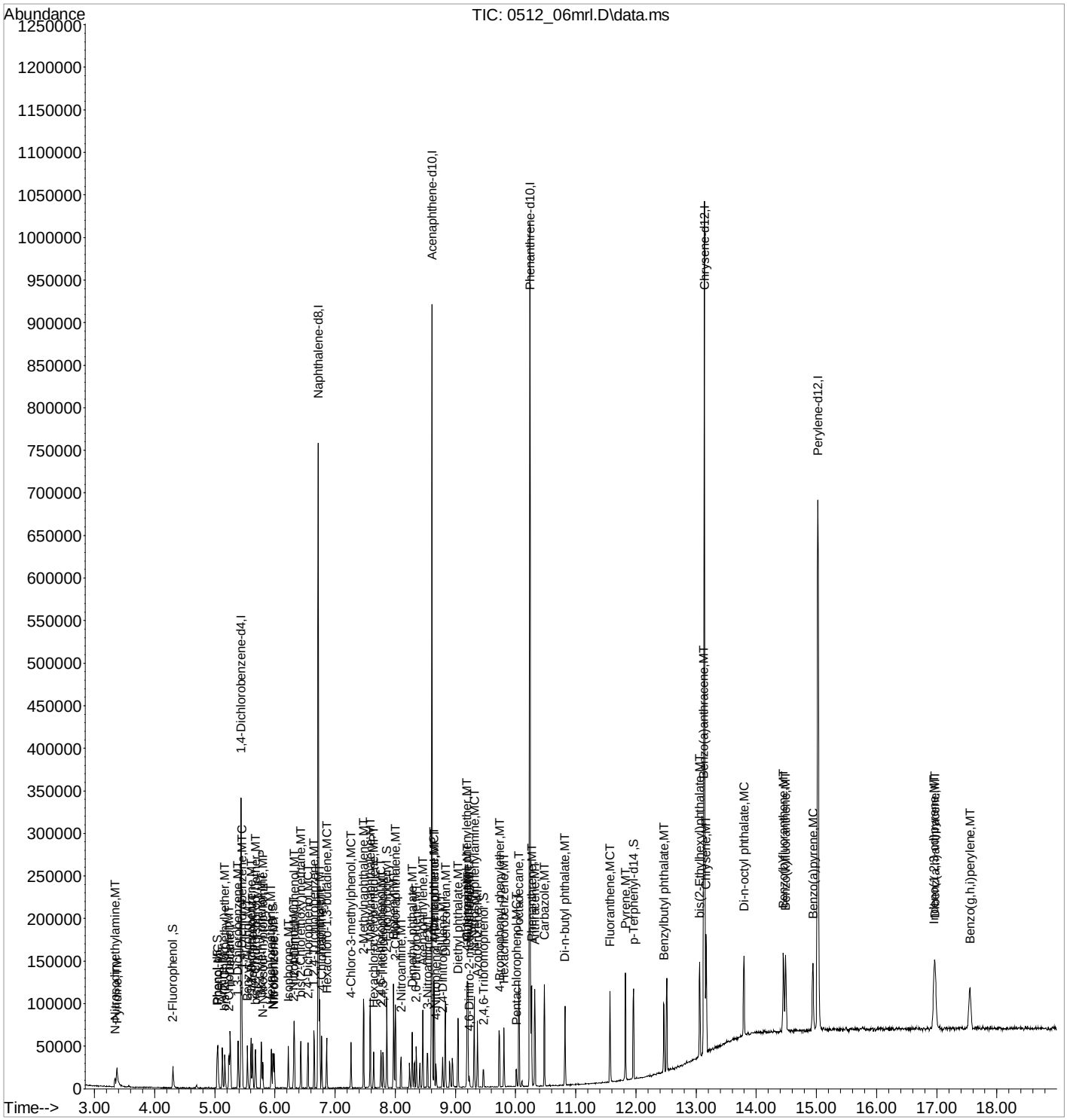
Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
42) 2,4,6-Trichlorophenol	7.760	196	5818	783.2368112 ppb		87
43) 2,4,5-Trichlorophenol	7.795	196	6374	788.3160724 ppb		92
45) Biphenyl	7.972	154	35069	977.2446997 ppb		100
46) 2-Chloronaphthalene	8.001	162	27204	975.1592063 ppb		96
47) 2-Nitroaniline	8.095	138	7079	1138.7831582 ppb		96
48) Acenaphthylene	8.454	152	42895	957.6075642 ppb		98
49) Dimethyl phthalate	8.278	163	28024	948.2468428 ppb		99
50) 2,6-Dinitrotoluene	8.348	165	5997	829.2120767 ppb		92
51) 3-Nitroaniline	8.536	138	6742	826.6754242 ppb		92
52) Acenaphthene	8.642	153	28516	984.3942395 ppb		98
53) 2,4-Dinitrophenol	8.648	184	1013	1837.8204456 ppb	#	1
54) Dibenzofuran	8.831	168	41352	1011.3120004 ppb		99
55) 2,4-Dinitrotoluene	8.789	165	6785	741.9476268 ppb		96
57) 4-Nitrophenol	8.678	139	4475	1191.8824666 ppb		92
58) Fluorene	9.207	166	32121	975.4336149 ppb		99
59) 4-Chlorophenyl-phenyle...	9.189	204	12794	962.7042541 ppb		91
60) Diethyl phthalate	9.042	149	30540	957.7884561 ppb		98
61) 4-Nitroaniline	9.195	138	6618	1113.0607969 ppb		95
62) Azobenzene	9.366	77	28469	953.6754801 ppb		99
65) 4,6-Dinitro-2-methylph...	9.231	198	1636	1768.6203952 ppb		93
66) N-Nitrosodiphenylamine	9.313	169	25471	950.3691337 ppb		99
68) 4-Bromophenyl-phenylether	9.730	248	7007	919.7871461 ppb		96
69) Hexachlorobenzene	9.807	284	8302	973.6118015 ppb		95
70) n-octadecane	10.054	55	5155	966.3247884 ppb		96
71) Pentachlorophenol	10.013	266	2397	1309.2780154 ppb		97
72) Phenanthrene	10.266	178	49377	999.9040657 ppb		97
73) Anthracene	10.319	178	44048	936.3062569 ppb		99
74) Carbazole	10.477	167	45216	1069.8283377 ppb		99
75) Di-n-butyl phthalate	10.819	149	50240	877.0264634 ppb		100
77) Fluoranthene	11.572	202	45169	921.1770104 ppb		99
80) Pyrene	11.824	202	47641	950.7351665 ppb		99
82) Benzylbutyl phthalate	12.466	149	20920	844.6884928 ppb		97
84) Benzo(a)anthracene	13.124	228	46730	929.6328186 ppb		99
85) Chrysene	13.166	228	47638	999.2728270 ppb		98
86) bis(2-Ethylhexyl)phtha...	13.060	149	32488	868.7038633 ppb		99
87) Di-n-octyl phthalate	13.795	149	53044	856.6656759 ppb		100
89) Benzo(b)fluoranthene	14.448	252	46340	948.6282403 ppb		99
90) Benzo(k)fluoranthene	14.489	252	44116	966.2301659 ppb		99
91) Benzo(a)pyrene	14.942	252	41431	910.7583100 ppb		99
92) Indeno(1,2,3-cd)pyrene	16.954	276	47669	966.7410967 ppb		97
93) Dibenz(a,h)anthracene	16.971	278	41701	969.5465222 ppb		93
94) Benzo(g,h,i)perylene	17.554	276	41931	994.8116860 ppb		96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 06mrl.D
Acq On : 12 May 2016 1:07 pm
Operator : 377
Sample : MRL SVMS 1K PPB 16D25863
Misc : 8270 PRIMARY CALIBRATION IS 16E12001
ALS Vial : 6 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 16 11:59:10 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:52:25 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 07mrl.D
Acq On : 12 May 2016 1:30 pm
Operator : 377
Sample : MRL SVMS 2K PPB 16D25863
Misc : 8270 PRIMARY CALIBRATION IS 16E12001
ALS Vial : 7 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 16 11:10:59 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:52:25 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 1,4-Dichlorobenzene-d4	5.437	152	60265	8000.0000000	ppb		0.00
22) Naphthalene-d8	6.719	136	338690	8000.0000000	ppb		0.00
40) Acenaphthene-d10	8.607	164	201621	8000.0000000	ppb		0.00
64) Phenanthrene-d10	10.236	188	357060	8000.0000000	ppb		0.00
78) Chrysene-d12	13.136	240	348686	8000.0000000	ppb		0.00
88) Perylene-d12	15.024	264	334538	8000.0000000	ppb		0.00
System Monitoring Compounds							
4) 2-Fluorophenol	4.302	112	21446	1799.6599145	ppb		0.00
Spiked Amount 20.000	Range 10 - 87		Recovery = 8998.30%#				
7) Phenol-d5	5.043	99	27672	1822.1103977	ppb		0.00
Spiked Amount 20.000	Range 10 - 67		Recovery = 9110.55%#				
23) Nitrobenzene-d5	5.966	82	24352	1848.7412227	ppb		0.00
Spiked Amount 10.000	Range 12 - 120		Recovery = 18487.41%#				
44) 2-Fluorobiphenyl	7.860	172	61230	1893.5525871	ppb		0.00
Spiked Amount 10.000	Range 26 - 122		Recovery = 18935.53%#				
67) 2,4,6-Tribromophenol	9.466	330	5202	1902.7003415	ppb		0.00
Spiked Amount 20.000	Range 10 - 148		Recovery = 9513.50%#				
81) p-Terphenyl-d14	11.960	244	66839	1856.6633864	ppb		0.00
Spiked Amount 10.000	Range 34 - 149		Recovery = 18566.63%#				
Target Compounds							Qvalue
2) Pyridine	3.372	79	30070	1953.6126237	ppb	#	97
3) N-Nitrosodimethylamine	3.337	42	10724	1760.9485562	ppb		92
5) Aniline	5.125	66	12972	1856.0242283	ppb		97
6) bis(2-Chloroethyl)ether	5.166	93	25602	1880.6922699	ppb		100
8) Phenol	5.054	94	29738	1876.3538800	ppb		96
10) 2-Chlorophenol	5.237	128	26167	1780.1801920	ppb		98
11) n-Decane	5.254	41	13450	1955.1798849	ppb	#	99
12) 1,3-Dichlorobenzene	5.384	146	31245	1873.6289307	ppb		97
13) 1,4-Dichlorobenzene	5.454	146	31357	1849.1369645	ppb		98
14) Benzyl Alcohol	5.543	79	17777	1744.8501498	ppb		96
15) 1,2-Dichlorobenzene	5.601	146	31055	1902.2009017	ppb		96
16) bis(2-Chloroisopropyl)...	5.678	121	9215	1906.1300575	ppb		94
17) 2-Methylphenol	5.631	108	23479	1853.7407369	ppb		97
18) Hexachloroethane	5.937	117	13199	1854.3466936	ppb		98
19) N-Nitrosodi-n-propylamine	5.796	70	12176	1804.7072532	ppb		97
20) 3&4-Methyl phenol	5.772	107	26471	1807.1157267	ppb		94
24) Nitrobenzene	5.984	77	25373	1888.6146140	ppb		94
25) Isophorone	6.225	82	43729	1829.7495540	ppb		98
26) 2-Nitrophenol	6.313	139	12350	1616.1770585	ppb		97
27) 2,4-Dimethylphenol	6.319	107	26163	1935.0698758	ppb		95
28) bis(2-Chlorethoxy)methane	6.431	93	33950	1969.9432797	ppb		97
29) 2,4-Dichlorophenol	6.548	162	19824	1748.9482139	ppb		99
31) 1,2,4-Trichlorobenzene	6.648	180	24882	1938.3248754	ppb		96
32) Naphthalene	6.743	128	91281	1958.2124432	ppb		100
33) 4-Chloroaniline	6.778	65	9423	1959.5334556	ppb		95
34) Hexachloro-1,3-butadiene	6.860	225	11670	1836.4512198	ppb		97
36) 4-Chloro-3-methylphenol	7.266	107	21779	1790.8234201	ppb		98
37) 2-Methylnaphthalene	7.472	142	58909	1917.3149365	ppb		99
38) 1-Methylnaphthalene	7.584	142	57209	1927.1774097	ppb		99
41) Hexachlorocyclopentadiene	7.643	237	13628	1773.8796467	ppb		97

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 07mrl.D
Acq On : 12 May 2016 1:30 pm
Operator : 377
Sample : MRL SVMS 2K PPB 16D25863
Misc : 8270 PRIMARY CALIBRATION IS 16E12001
ALS Vial : 7 Sample Multiplier: 1
InstName : BNAMS23

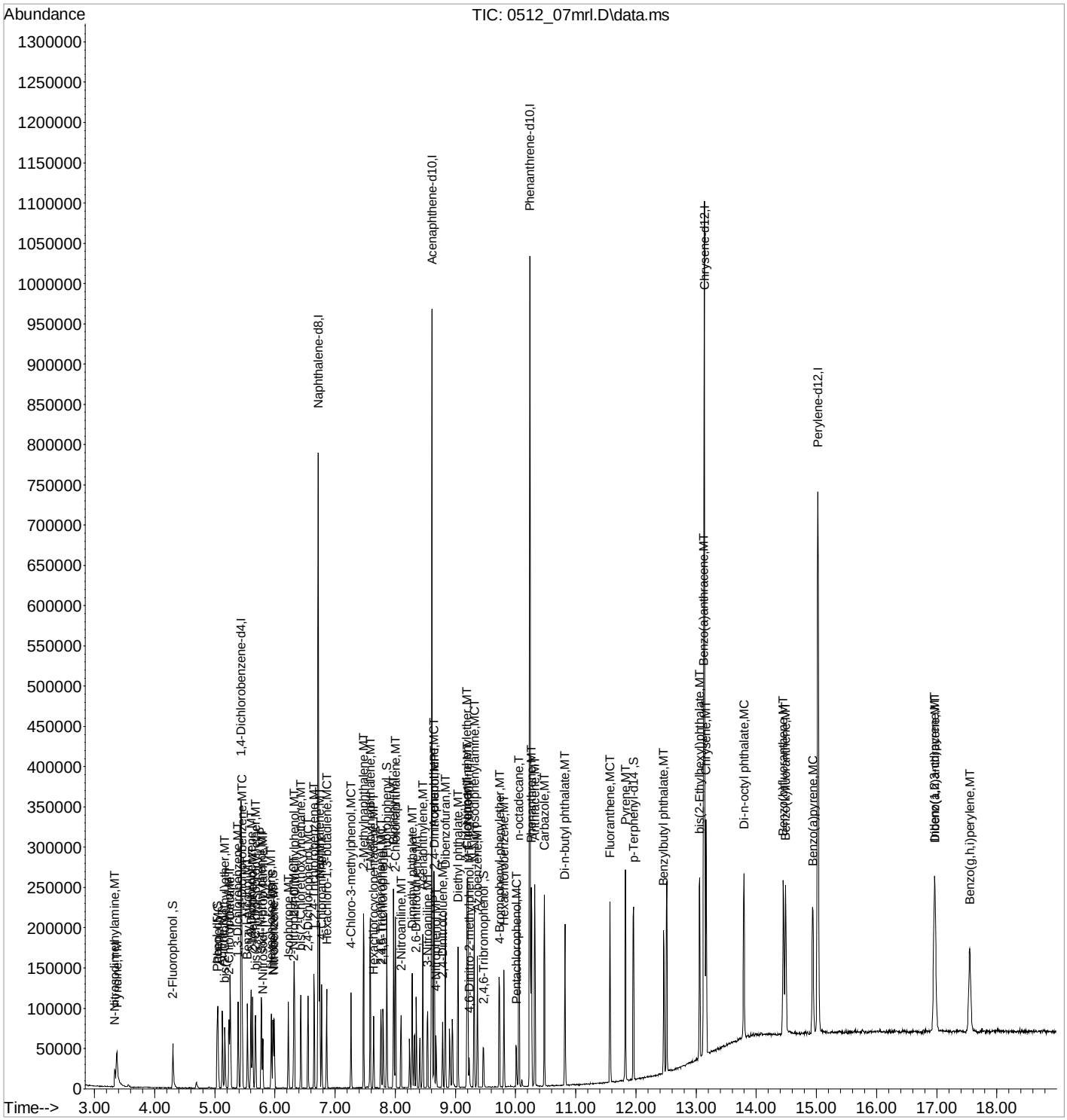
Quant Time: May 16 11:10:59 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:52:25 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M

Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
42) 2,4,6-Trichlorophenol	7.760	196	12636	1632.0642994 ppb		89
43) 2,4,5-Trichlorophenol	7.795	196	13954	1655.7521005 ppb		89
45) Biphenyl	7.972	154	71615	1914.6624136 ppb		99
46) 2-Chloronaphthalene	8.001	162	56273	1935.3125000 ppb		98
47) 2-Nitroaniline	8.095	138	16140	1904.3764673 ppb		100
48) Acenaphthylene	8.454	152	89522	1917.4274740 ppb		100
49) Dimethyl phthalate	8.278	163	58448	1897.4450602 ppb		98
50) 2,6-Dinitrotoluene	8.348	165	13485	1788.9194852 ppb		94
51) 3-Nitroaniline	8.537	138	15425	1814.5950648 ppb		94
52) Acenaphthene	8.642	153	59003	1954.1721761 ppb		97
53) 2,4-Dinitrophenol	8.648	184	3330	2388.1387662 ppb	#	1
54) Dibenzofuran	8.831	168	82229	1929.3984454 ppb		99
55) 2,4-Dinitrotoluene	8.790	165	15888	1666.8668253 ppb		94
57) 4-Nitrophenol	8.678	139	10293	1895.5981767 ppb		88
58) Fluorene	9.207	166	66592	1940.1664621 ppb		98
59) 4-Chlorophenyl-phenyle...	9.189	204	26583	1919.1053218 ppb		93
60) Diethyl phthalate	9.042	149	64062	1927.5663348 ppb		99
61) 4-Nitroaniline	9.195	138	14907	2405.4185142 ppb		97
62) Azobenzene	9.366	77	60693	1950.6317238 ppb		99
65) 4,6-Dinitro-2-methylph...	9.231	198	4785	2351.0225126 ppb		88
66) N-Nitrosodiphenylamine	9.313	169	53905	1951.1278623 ppb		97
68) 4-Bromophenyl-phenylether	9.731	248	14255	1815.2347365 ppb		95
69) Hexachlorobenzene	9.807	284	16996	1933.5712335 ppb		92
70) n-octadecane	10.054	55	10446	1899.5679157 ppb		98
71) Pentachlorophenol	10.013	266	6133	1954.6681238 ppb		97
72) Phenanthrene	10.260	178	96709	1899.8131102 ppb		99
73) Anthracene	10.319	178	92188	1900.9753180 ppb		99
74) Carbazole	10.478	167	94504	2169.1146201 ppb		99
75) Di-n-butyl phthalate	10.819	149	107991	1686.9133182 ppb		99
77) Fluoranthene	11.572	202	95005	1879.5740084 ppb		98
80) Pyrene	11.825	202	99931	1861.0153222 ppb		99
82) Benzylbutyl phthalate	12.460	149	46261	1551.2452951 ppb		95
84) Benzo(a)anthracene	13.125	228	97551	1810.9998649 ppb		99
85) Chrysene	13.166	228	98740	1932.8346686 ppb		99
86) bis(2-Ethylhexyl)phtha...	13.060	149	68658	1563.7880433 ppb		99
87) Di-n-octyl phthalate	13.795	149	116425	1563.4864479 ppb		99
89) Benzo(b)fluoranthene	14.448	252	98834	1919.5025882 ppb		98
90) Benzo(k)fluoranthene	14.489	252	91357	1898.3164166 ppb		97
91) Benzo(a)pyrene	14.942	252	91086	1899.6415809 ppb		98
92) Indeno(1,2,3-cd)pyrene	16.960	276	99185	1908.3694129 ppb		96
93) Dibenz(a,h)anthracene	16.971	278	87950	1939.9937772 ppb		97
94) Benzo(g,h,i)perylene	17.548	276	86015	1936.0749321 ppb		98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 07mrl.D
Acq On : 12 May 2016 1:30 pm
Operator : 377
Sample : MRL SVMS 2K PPB 16D25863
Misc : 8270 PRIMARY CALIBRATION IS 16E12001
ALS Vial : 7 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 16 11:10:59 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:52:25 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 15mrl.D
Acq On : 12 May 2016 4:35 pm
Operator : 377
Sample : MRL TCL 2K1 PPB 16D25867
Misc : 8270 TCL CALIBRATION IS 16E12001
ALS Vial : 15 Sample Multiplier: 1
InstName : BNAMS23

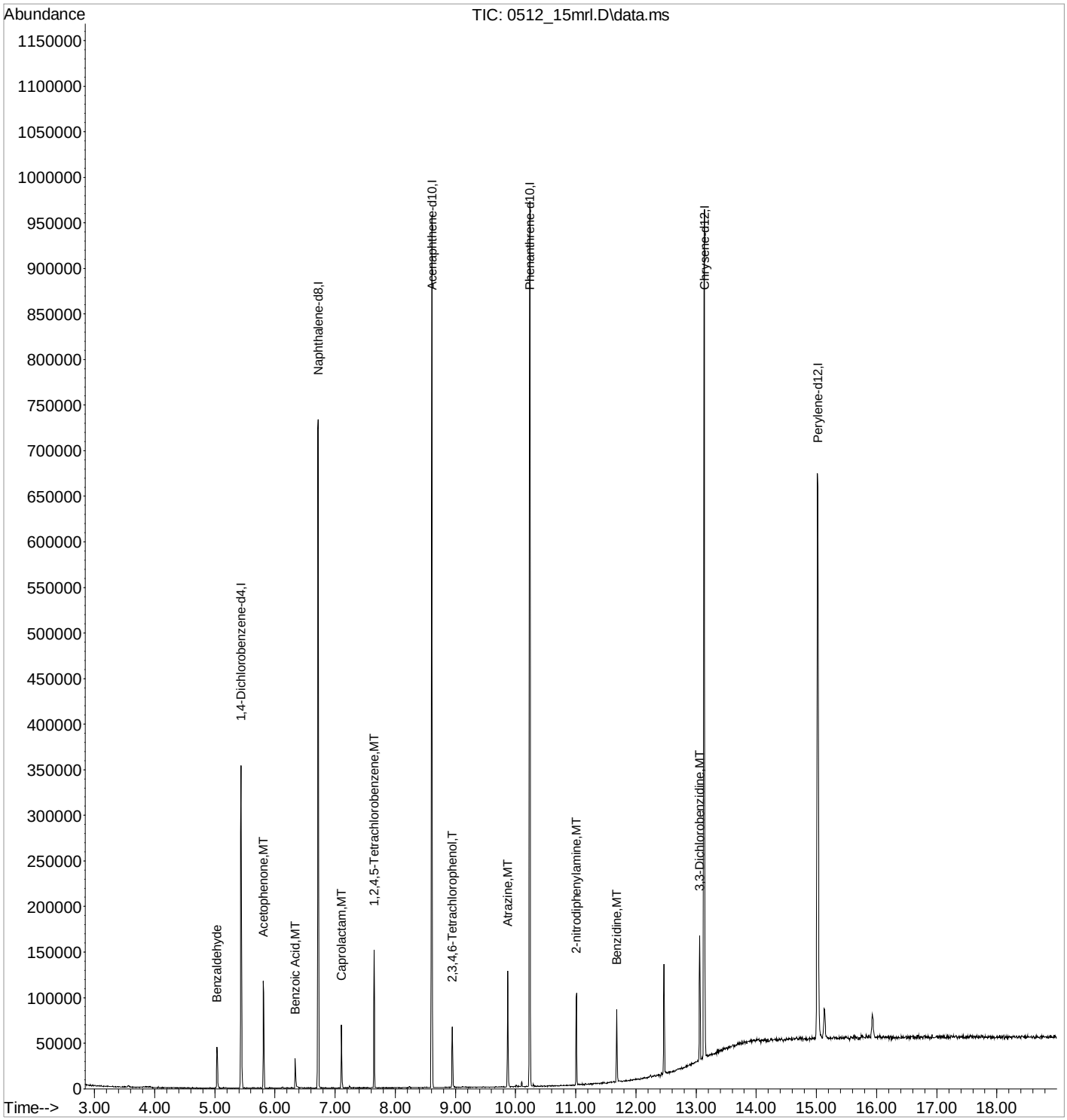
Quant Time: May 16 10:32:08 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:52:25 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	5.437	152	59810	8000.0000000	ppb	0.00
22) Naphthalene-d8	6.719	136	341283	8000.0000000	ppb	0.00
40) Acenaphthene-d10	8.607	164	197870	8000.0000000	ppb	0.00
64) Phenanthrene-d10	10.236	188	352418	8000.0000000	ppb	0.00
78) Chrysene-d12	13.136	240	331547	8000.0000000	ppb	0.00
88) Perylene-d12	15.024	264	318620	8000.0000000	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	0.000	112	0	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 87		Recovery =	0.00%#		
7) Phenol-d5	0.000	99	0	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 67		Recovery =	0.00%#		
23) Nitrobenzene-d5	0.000	82	0	0.0000000	ppb	
Spiked Amount 10.000	Range 12 - 120		Recovery =	0.00%#		
44) 2-Fluorobiphenyl	0.000	172	0	0.0000000	ppb	
Spiked Amount 10.000	Range 26 - 122		Recovery =	0.00%#		
67) 2,4,6-Tribromophenol	0.000	330	0	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 148		Recovery =	0.00%#		
81) p-Terphenyl-d14	0.000	244	0	0.0000000	ppb	
Spiked Amount 10.000	Range 34 - 149		Recovery =	0.00%#		
Target Compounds						Qvalue
9) Benzaldehyde	5.037	105	9502	1863.9977798	ppb	98
21) Acetophenone	5.807	105	34368	1827.0124297	ppb	99
30) Benzoic Acid	6.337	105	8793	1800.3757428	ppb	94
35) Caprolactam	7.107	113	7043	1708.8138567	ppb	95
39) 1,2,4,5-Tetrachloroben...	7.648	216	23244	1970.9792588	ppb	97
56) 2,3,4,6-Tetrachlorophenol	8.948	232	7363	1914.4684858	ppb	98
63) Atrazine	9.872	200	12822	1670.5654370	ppb	97
76) 2-nitrodiphenylamine	11.007	167	14303	1848.1714020	ppb #	88
79) Benzidine	11.683	184	32995	1913.7344399	ppb	98
83) 3,3-Dichlorobenzidine	13.060	252	25998	1808.6964722	ppb	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 15mrl.D
Acq On : 12 May 2016 4:35 pm
Operator : 377
Sample : MRL TCL 2K1 PPB 16D25867
Misc : 8270 TCL CALIBRATION IS 16E12001
ALS Vial : 15 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 16 10:32:08 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:52:25 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 22.D
Acq On : 12 May 2016 7:16 pm
Operator : 377
Sample : MRL SVMS 500 PPB 16D25863
Misc : 8270 PRIMARY CALIBRATION 16E12001
ALS Vial : 22 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 16 14:13:56 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:52:25 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M

Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	5.437	152	59739	8000.0000000 ppb		0.00
22) Naphthalene-d8	6.713	136	341203	8000.0000000 ppb		0.00
40) Acenaphthene-d10	8.607	164	198452	8000.0000000 ppb		0.00
64) Phenanthrene-d10	10.236	188	345912	8000.0000000 ppb		0.00
78) Chrysene-d12	13.130	240	321120	8000.0000000 ppb		0.00
88) Perylene-d12	15.018	264	313064	8000.0000000 ppb		0.00
System Monitoring Compounds						
4) 2-Fluorophenol	4.302	112	5468	462.8921971 ppb		0.00
Spiked Amount 20.000	Range 10 - 87		Recovery = 2314.46%#			
7) Phenol-d5	5.037	99	7340	487.5704872 ppb		0.00
Spiked Amount 20.000	Range 10 - 67		Recovery = 2437.85%#			
23) Nitrobenzene-d5	5.966	82	6241	470.3110749 ppb		0.00
Spiked Amount 10.000	Range 12 - 120		Recovery = 4703.11%#			
44) 2-Fluorobiphenyl	7.854	172	15952	501.1970852 ppb		0.00
Spiked Amount 10.000	Range 26 - 122		Recovery = 5011.97%#			
67) 2,4,6-Tribromophenol	9.460	330	1113	936.1395084 ppb		0.00
Spiked Amount 20.000	Range 10 - 148		Recovery = 4680.70%#			
81) p-Terphenyl-d14	11.954	244	16221	489.2693485 ppb		0.00
Spiked Amount 10.000	Range 34 - 149		Recovery = 4892.69%#			
Target Compounds						Qvalue
2) Pyridine	3.366	79	7189	471.1733527 ppb	#	84
3) N-Nitrosodimethylamine	3.337	42	2535	419.9281993 ppb		98
5) Aniline	5.125	66	3273	472.4217879 ppb		86
6) bis(2-Chloroethyl)ether	5.166	93	6830	506.1412839 ppb		96
8) Phenol	5.049	94	8113	516.4064772 ppb		97
10) 2-Chlorophenol	5.231	128	6908	474.0995807 ppb		97
11) n-Decane	5.254	41	3543	519.5684854 ppb	#	96
12) 1,3-Dichlorobenzene	5.384	146	8472	512.5027667 ppb		98
13) 1,4-Dichlorobenzene	5.449	146	8911	530.1127263 ppb		91
14) Benzyl Alcohol	5.537	79	4766	471.9118828 ppb		98
15) 1,2-Dichlorobenzene	5.601	146	8164	504.4696673 ppb		93
16) bis(2-Chloroisopropyl)...	5.672	121	2493	520.2195644 ppb	#	77
17) 2-Methylphenol	5.625	108	5775	459.9690382 ppb		95
18) Hexachloroethane	5.937	117	3504	496.6165806 ppb		92
19) N-Nitrosodi-n-propylamine	5.796	70	3098	463.2236776 ppb		91
20) 3&4-Methyl phenol	5.772	107	6885	474.1620310 ppb		99
24) Nitrobenzene	5.984	77	6305	465.8500543 ppb		94
25) Isophorone	6.219	82	11178	464.2754743 ppb		100
26) 2-Nitrophenol	6.307	139	2908	377.7512546 ppb		95
27) 2,4-Dimethylphenol	6.319	107	6570	482.3519221 ppb		99
28) bis(2-Chlorethoxy)methane	6.425	93	8390	483.2428500 ppb		97
29) 2,4-Dichlorophenol	6.548	162	4656	407.7445510 ppb		90
31) 1,2,4-Trichlorobenzene	6.648	180	6524	504.4809474 ppb		92
32) Naphthalene	6.737	128	24817	508.4647357 ppb		98
33) 4-Chloroaniline	6.772	65	2354	485.9140796 ppb		95
34) Hexachloro-1,3-butadiene	6.860	225	3287	513.4495506 ppb		96
36) 4-Chloro-3-methylphenol	7.260	107	5106	416.7591792 ppb		98
37) 2-Methylnaphthalene	7.472	142	15343	495.6916728 ppb		97
38) 1-Methylnaphthalene	7.578	142	14942	499.6381653 ppb		98
41) Hexachlorocyclopentadiene	7.637	237	3354	443.5426311 ppb		96

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 22.D
Acq On : 12 May 2016 7:16 pm
Operator : 377
Sample : MRL SVMS 500 PPB 16D25863
Misc : 8270 PRIMARY CALIBRATION 16E12001
ALS Vial : 22 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 16 14:13:56 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:52:25 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M

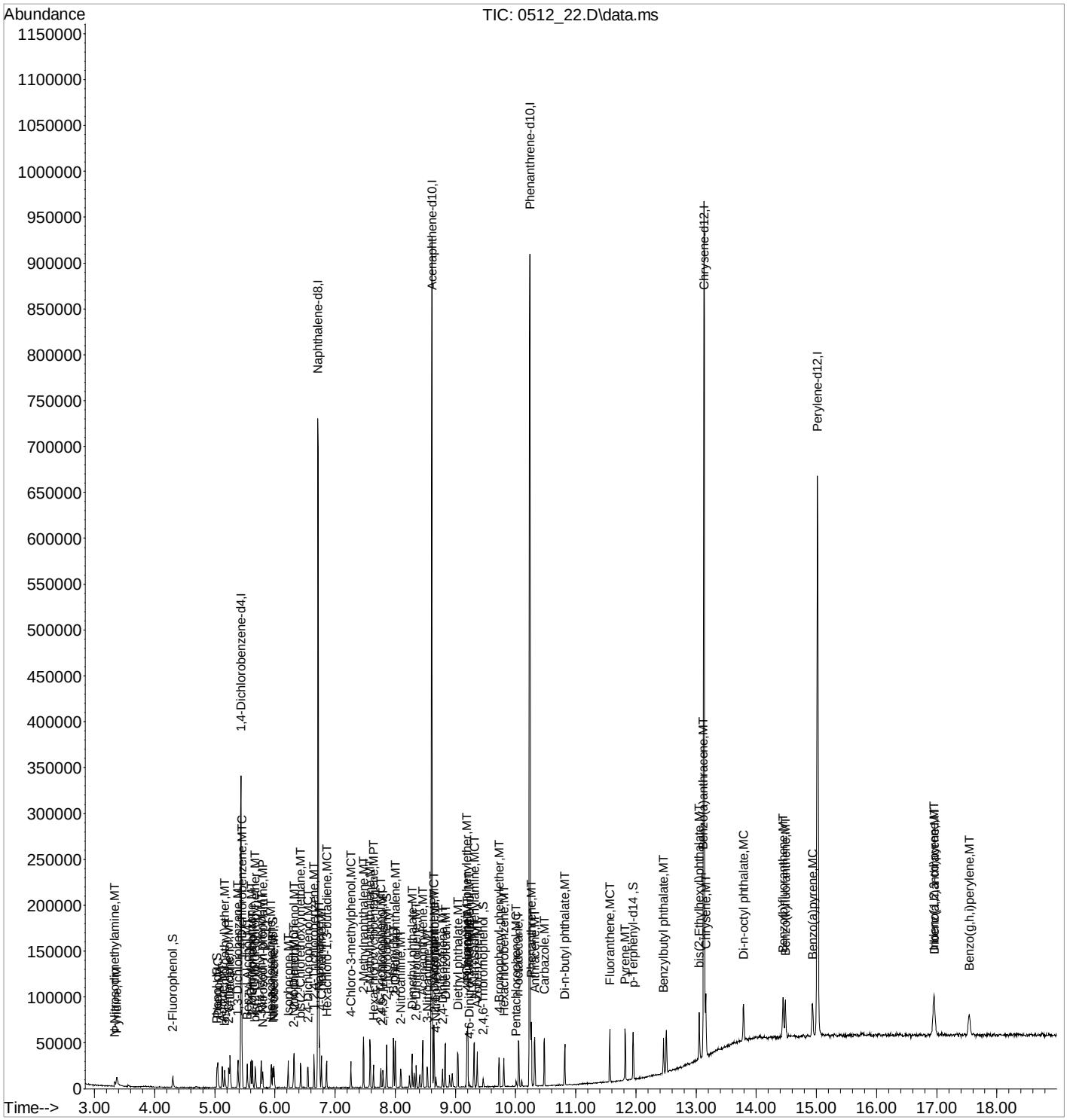
Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
42) 2,4,6-Trichlorophenol	7.760	196	2875	377.2643613 ppb		96
43) 2,4,5-Trichlorophenol	7.795	196	2987	360.0908641 ppb		92
45) Biphenyl	7.972	154	18162	493.3239171 ppb		98
46) 2-Chloronaphthalene	8.001	162	14621	510.8676406 ppb		99
47) 2-Nitroaniline	8.090	138	3778	829.4468790 ppb		93
48) Acenaphthylene	8.454	152	21707	472.3558087 ppb		99
49) Dimethyl phthalate	8.278	163	14804	488.2687345 ppb		98
50) 2,6-Dinitrotoluene	8.348	165	3070	413.7695276 ppb		95
51) 3-Nitroaniline	8.531	138	3544	423.5732744 ppb		90
52) Acenaphthene	8.642	153	15572	523.9784320 ppb		93
53) 2,4-Dinitrophenol	8.648	184	209	1633.7008906 ppb	#	1
54) Dibenzofuran	8.831	168	21227	506.0178298 ppb		98
55) 2,4-Dinitrotoluene	8.784	165	3441	366.7723847 ppb		91
57) 4-Nitrophenol	8.678	139	1975	859.6050560 ppb		97
58) Fluorene	9.201	166	16526	489.1758038 ppb		95
59) 4-Chlorophenyl-phenyle...	9.189	204	6539	479.6080238 ppb		97
60) Diethyl phthalate	9.042	149	15698	479.8808823 ppb		98
61) 4-Nitroaniline	9.195	138	3498	573.4565101 ppb		95
62) Azobenzene	9.360	77	13942	455.2417047 ppb		97
65) 4,6-Dinitro-2-methylph...	9.231	198	733	1593.8510143 ppb	#	78
66) N-Nitrosodiphenylamine	9.313	169	13132	490.6401977 ppb		99
68) 4-Bromophenyl-phenylether	9.725	248	3727	489.8922139 ppb		96
69) Hexachlorobenzene	9.807	284	4469	524.8067120 ppb		95
70) n-octadecane	10.048	55	2257	423.6546090 ppb	#	96
71) Pentachlorophenol	10.007	266	1008	1057.1854782 ppb		93
72) Phenanthrene	10.260	178	24667	500.1910239 ppb		98
73) Anthracene	10.319	178	21971	467.6570452 ppb		97
74) Carbazole	10.478	167	22560	534.4990999 ppb		99
75) Di-n-butyl phthalate	10.819	149	24253	491.4837998 ppb		99
77) Fluoranthene	11.566	202	22573	460.9754770 ppb		99
80) Pyrene	11.819	202	22923	463.5411834 ppb		98
82) Benzylbutyl phthalate	12.460	149	9713	492.9147784 ppb		95
84) Benzo(a)anthracene	13.119	228	23691	477.5702230 ppb		99
85) Chrysene	13.160	228	23847	506.8768900 ppb		98
86) bis(2-Ethylhexyl)phtha...	13.054	149	15693	503.6713059 ppb		99
87) Di-n-octyl phthalate	13.789	149	24352	496.0518272 ppb		99
89) Benzo(b)fluoranthene	14.442	252	22876	474.7606806 ppb		95
90) Benzo(k)fluoranthene	14.483	252	21462	476.5508963 ppb		97
91) Benzo(a)pyrene	14.936	252	19382	431.9474874 ppb		98
92) Indeno(1,2,3-cd)pyrene	16.954	276	22971	472.2899211 ppb		96
93) Dibenz(a,h)anthracene	16.960	278	18769	442.4028883 ppb		91
94) Benzo(g,h,i)perylene	17.536	276	19189	461.5434981 ppb		93

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 22.D
Acq On : 12 May 2016 7:16 pm
Operator : 377
Sample : MRL SVMS 500 PPB 16D25863
Misc : 8270 PRIMARY CALIBRATION 16E12001
ALS Vial : 22 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 16 14:13:56 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:52:25 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M



Data Path : C:\msdchem\1\data\051216\
Data File : 0512 26.D
Acq On : 16 May 2016 10:01 am
Operator : 377
Sample : SSCV SVMS 10K PPB 16A25209
Misc : 8270 SECONDARY SOURCE 16E12001
ALS Vial : 21 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 16 10:31:20 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:52:25 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	5.437	152	59323	8000.0000000 ppb	0.00
22) Naphthalene-d8	6.719	136	343697	8000.0000000 ppb	0.00
40) Acenaphthene-d10	8.607	164	206950	8000.0000000 ppb	0.00
64) Phenanthrene-d10	10.236	188	360952	8000.0000000 ppb	0.00
78) Chrysene-d12	13.136	240	357506	8000.0000000 ppb	0.00
88) Perylene-d12	15.024	264	342789	8000.0000000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol	0.000	112	0	0.0000000 ppb	
Spiked Amount 20.000	Range 10 - 87		Recovery =	0.00%#	
7) Phenol-d5	0.000	99	0	0.0000000 ppb	
Spiked Amount 20.000	Range 10 - 67		Recovery =	0.00%#	
23) Nitrobenzene-d5	5.937	82	13406	1002.9224150 ppb	-0.03
Spiked Amount 10.000	Range 12 - 120		Recovery =	10029.22%#	
44) 2-Fluorobiphenyl	7.795	172	172	5.1821728 ppb	-0.06
Spiked Amount 10.000	Range 26 - 122		Recovery =	51.82%	
67) 2,4,6-Tribromophenol	0.000	330	0	0.0000000 ppb	
Spiked Amount 20.000	Range 10 - 148		Recovery =	0.00%#	
81) p-Terphenyl-d14	0.000	244	0	0.0000000 ppb	
Spiked Amount 10.000	Range 34 - 149		Recovery =	0.00%#	
Target Compounds					Qvalue
2) Pyridine	3.360	79	153928	10159.3215628 ppb	95
3) N-Nitrosodimethylamine	3.325	42	61272	10221.0138193 ppb	96
5) Aniline	5.125	66	65149	9469.4882723 ppb	97
6) bis(2-Chloroethyl)ether	5.166	93	136429	10181.0506387 ppb	99
8) Phenol	5.048	94	154944	9931.6135284 ppb	99
10) 2-Chlorophenol	5.231	128	145404	10049.1294178 ppb	99
11) n-Decane	5.231	41	342	50.5047933 ppb #	1
12) 1,3-Dichlorobenzene	5.384	146	161200	9819.9696973 ppb	99
13) 1,4-Dichlorobenzene	5.454	146	167227	10018.0461606 ppb	98
14) Benzyl Alcohol	5.537	79	101162	10086.9327408 ppb	100
15) 1,2-Dichlorobenzene	5.601	146	162282	10098.0439486 ppb	98
16) bis(2-Chloroisopropyl)...	5.672	121	49256m	10350.4298484 ppb	
17) 2-Methylphenol	5.625	108	127984	10265.1933269 ppb	99
18) Hexachloroethane	5.937	117	72340	10324.5341535 ppb	96
19) N-Nitrosodi-n-propylamine	5.795	70	69799	10509.7740787 ppb	98
20) 3&4-Methyl phenol	5.772	107	145689	10103.7928861 ppb	95
24) Nitrobenzene	5.984	77	137208	10064.1614020 ppb	97
25) Isophorone	6.219	82	246730	10173.5071690 ppb	98
26) 2-Nitrophenol	6.307	139	77571	10003.4084750 ppb	97
27) 2,4-Dimethylphenol	6.319	107	137162	9996.9967899 ppb	99
28) bis(2-Chlorethoxy)methane	6.431	93	182648	10443.7266651 ppb	97
29) 2,4-Dichlorophenol	6.548	162	115779	10065.6560947 ppb	96
31) 1,2,4-Trichlorobenzene	6.648	180	129567	9946.3175242 ppb	99
32) Naphthalene	6.737	128	487160	10415.2728431 ppb	99
33) 4-Chloroaniline	6.772	65	47864	9808.4213527 ppb	92
34) Hexachloro-1,3-butadiene	6.860	225	72690	11272.2300241 ppb	98
36) 4-Chloro-3-methylphenol	7.266	107	127075	10296.7835043 ppb	98
37) 2-Methylnaphthalene	7.472	142	321873	10323.4054764 ppb	99
38) 1-Methylnaphthalene	7.584	142	308667	10246.4676545 ppb	99
41) Hexachlorocyclopentadiene	7.637	237	62004	7862.8875931 ppb	98

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 26.D
Acq On : 16 May 2016 10:01 am
Operator : 377
Sample : SSCV SVMS 10K PPB 16A25209
Misc : 8270 SECONDARY SOURCE 16E12001
ALS Vial : 21 Sample Multiplier: 1
InstName : BNAMS23

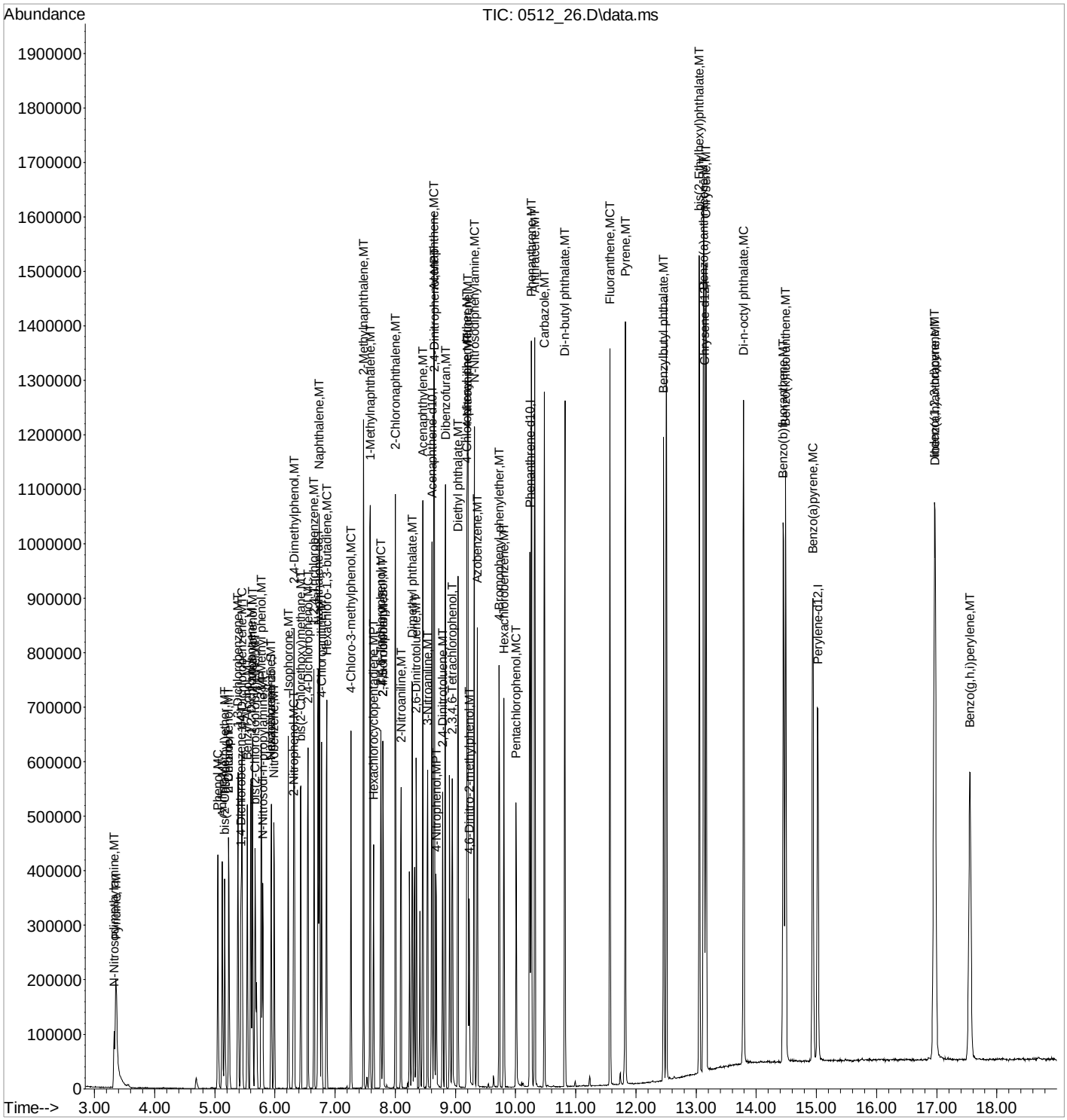
Quant Time: May 16 10:31:20 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:52:25 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M

Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
42) 2,4,6-Trichlorophenol	7.760	196	78524	9880.9885434 ppb		95
43) 2,4,5-Trichlorophenol	7.795	196	89109	10301.2161407 ppb		94
46) 2-Chloronaphthalene	8.001	162	303826	10179.9654185 ppb		99
47) 2-Nitroaniline	8.095	138	106454	9556.5552708 ppb		99
48) Acenaphthylene	8.454	152	493132	10290.1732985 ppb		100
49) Dimethyl phthalate	8.284	163	323462	10230.4127594 ppb		97
50) 2,6-Dinitrotoluene	8.348	165	82319	10639.2316124 ppb		98
51) 3-Nitroaniline	8.537	138	93882	10759.8748331 ppb		90
52) Acenaphthene	8.642	153	324643	10475.2671666 ppb		98
53) 2,4-Dinitrophenol	8.648	184	31438	8994.0482032 ppb	#	72
54) Dibenzofuran	8.831	168	430303	9836.5232568 ppb		100
55) 2,4-Dinitrotoluene	8.789	165	104500	10681.1569371 ppb		95
56) 2,3,4,6-Tetrachlorophenol	8.948	232	62698	10833.4368350 ppb		99
57) 4-Nitrophenol	8.684	139	70404	9184.1628341 ppb		92
58) Fluorene	9.207	166	362562	10291.2837364 ppb		98
59) 4-Chlorophenyl-phenyle...	9.189	204	142870	10048.6147644 ppb		96
60) Diethyl phthalate	9.042	149	351516	10304.4370606 ppb		99
61) 4-Nitroaniline	9.195	138	55337	8699.3407531 ppb		97
62) Azobenzene	9.360	77	351259	10998.5256631 ppb		99
65) 4,6-Dinitro-2-methylph...	9.231	198	42318	9319.9388140 ppb		92
66) N-Nitrosodiphenylamine	9.313	169	291967	10453.9927821 ppb		100
68) 4-Bromophenyl-phenylether	9.725	248	80309	10116.2962349 ppb		93
69) Hexachlorobenzene	9.807	284	89474	10069.3643395 ppb		97
71) Pentachlorophenol	10.007	266	52650	10052.5728757 ppb		96
72) Phenanthrene	10.260	178	511896	9947.5807169 ppb		99
73) Anthracene	10.319	178	514934	10503.7747859 ppb		99
74) Carbazole	10.478	167	488076	11081.8307111 ppb		100
75) Di-n-butyl phthalate	10.819	149	660853	9551.1581706 ppb		100
77) Fluoranthene	11.566	202	542361	10614.3442650 ppb		99
80) Pyrene	11.825	202	561641	10201.3980784 ppb		99
82) Benzylbutyl phthalate	12.460	149	291433	8603.4449971 ppb		97
84) Benzo(a)anthracene	13.124	228	538313	9747.0397162 ppb		98
85) Chrysene	13.166	228	526156	10045.4012026 ppb		98
86) bis(2-Ethylhexyl)phtha...	13.054	149	418001	8526.7255767 ppb		97
87) Di-n-octyl phthalate	13.789	149	726201	8584.5349844 ppb		100
89) Benzo(b)fluoranthene	14.448	252	551493	10452.9991022 ppb		97
90) Benzo(k)fluoranthene	14.489	252	514326	10429.9885606 ppb		98
91) Benzo(a)pyrene	14.942	252	502504	10227.7037220 ppb		97
92) Indeno(1,2,3-cd)pyrene	16.965	276	567779	10661.4028576 ppb		95
93) Dibenz(a,h)anthracene	16.971	278	502796	10823.6785602 ppb		97
94) Benzo(g,h,i)perylene	17.548	276	491849	10804.3424264 ppb		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

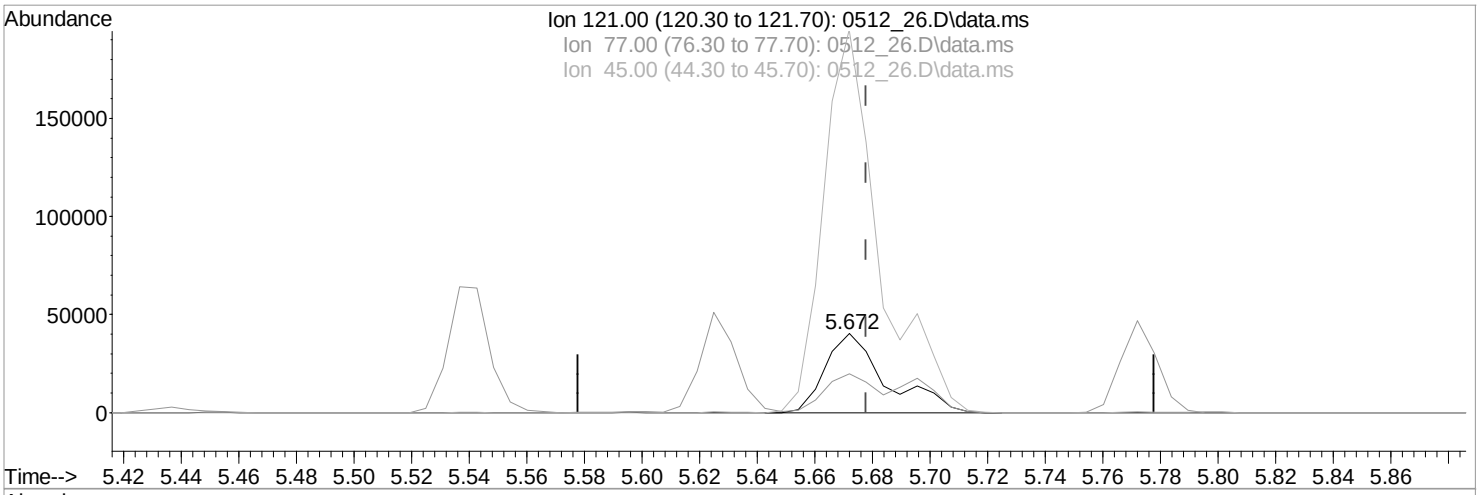
Data Path : C:\msdchem\1\data\051216\
Data File : 0512 26.D
Acq On : 16 May 2016 10:01 am
Operator : 377
Sample : SSCV SVMS 10K PPB 16A25209
Misc : 8270 SECONDARY SOURCE 16E12001
ALS Vial : 21 Sample Multiplier: 1
InstName : BNAMS23

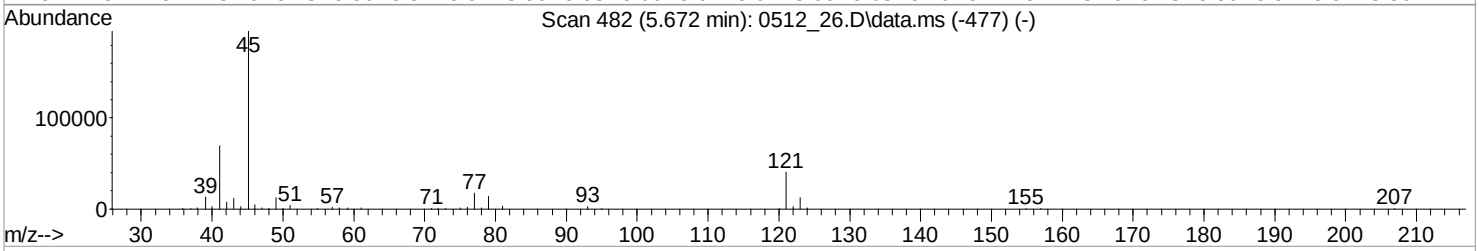
Quant Time: May 16 10:31:20 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:52:25 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M

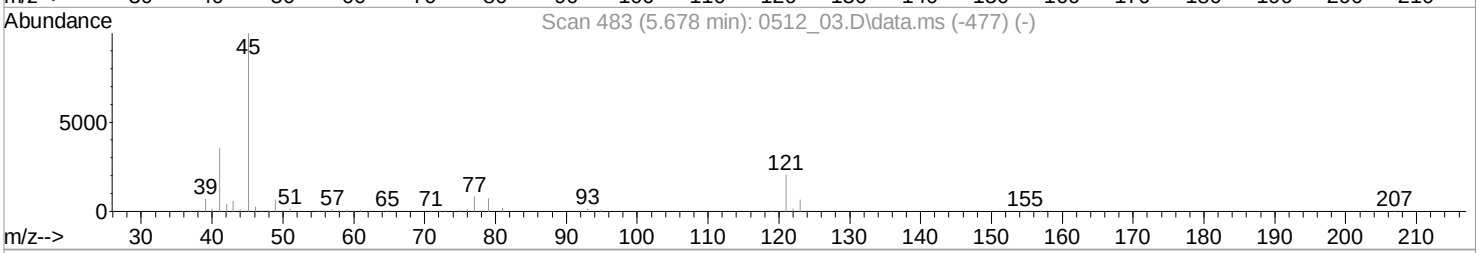


Data Path : C:\msdchem\1\data\051216\
Data File : 0512 26.D
Acq On : 16 May 2016 10:01 am
Operator : 377
Sample : SSCV SVMS 10K PPB 16A25209
Misc : 8270 SECONDARY SOURCE 16E12001
ALS Vial : 21 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 16 10:30:18 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:52:25 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M







TIC: 0512_26.D\data.ms

(16) bis(2-Chloroisopropyl)ether (MT)

5.672min (-0.006) 12325.9128556 ppb

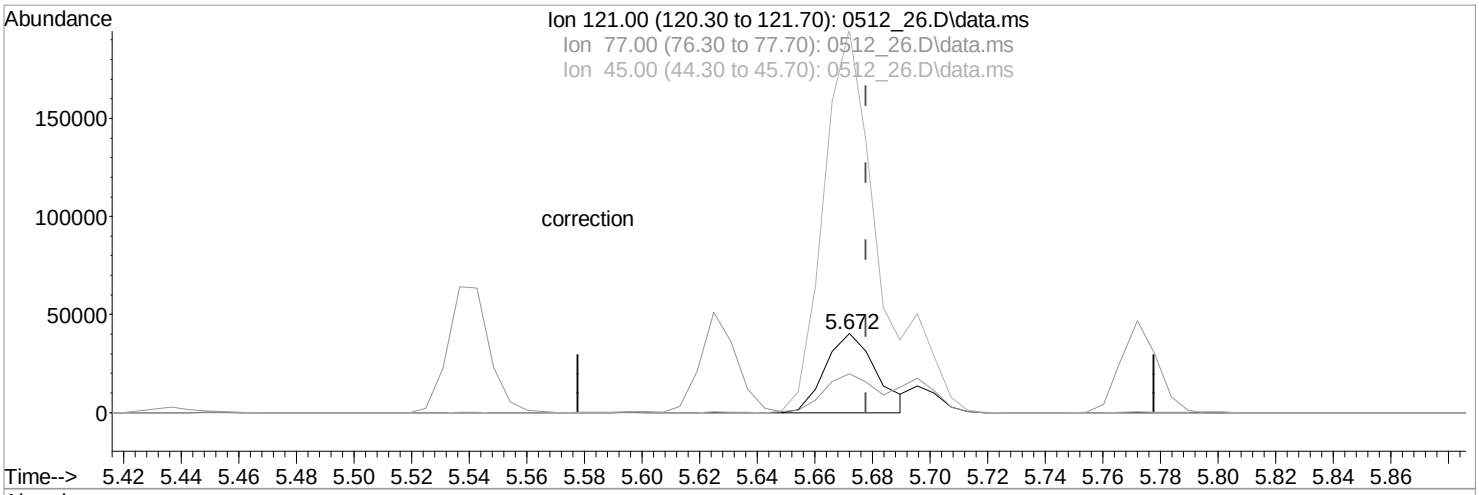
Qvalue = 98

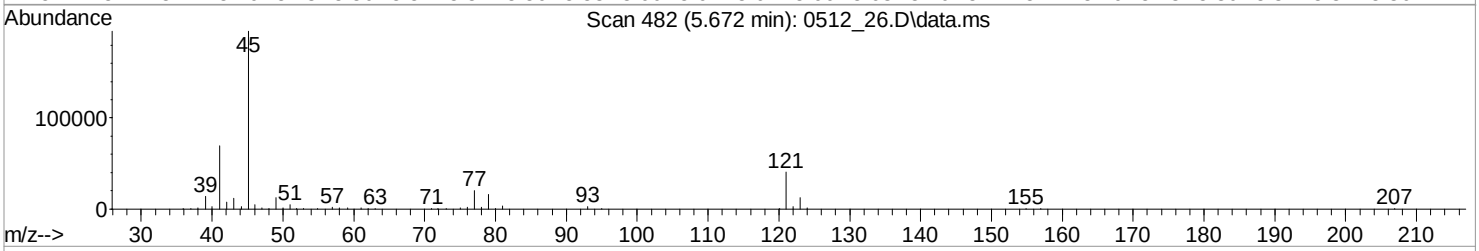
response 58657

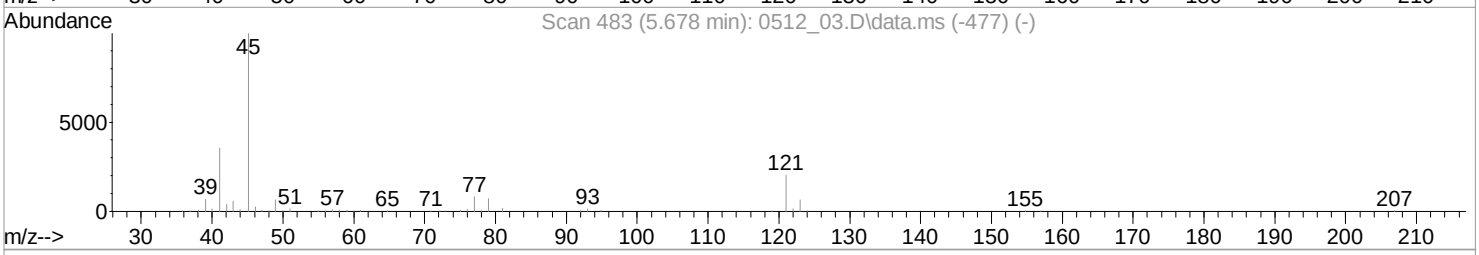
Ion	Exp%	Act%
121.00	100	100
77.00	49.40	49.05
45.00	490.30	485.01
0.00	0.00	0.00

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 26.D
Acq On : 16 May 2016 10:01 am
Operator : 377
Sample : SSCV SVMS 10K PPB 16A25209
Misc : 8270 SECONDARY SOURCE 16E12001
ALS Vial : 21 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 16 10:30:18 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:52:25 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M







TIC: 0512_26.D\data.ms

(16) bis(2-Chloroisopropyl)ether (MT)

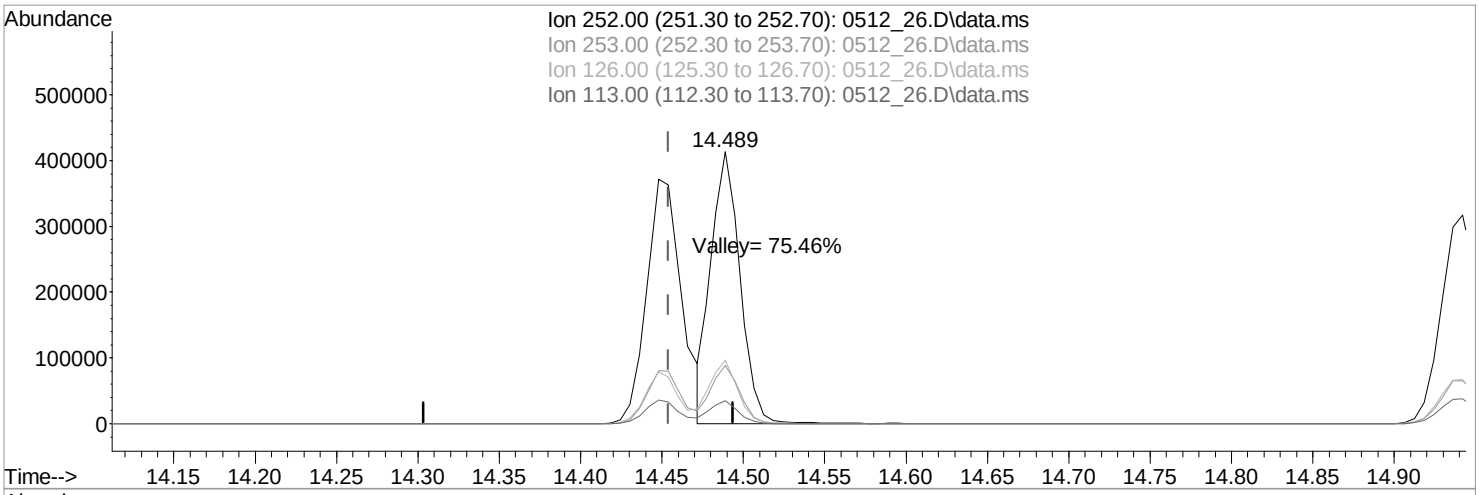
5.672min (-0.006) 10350.4298484 ppb m

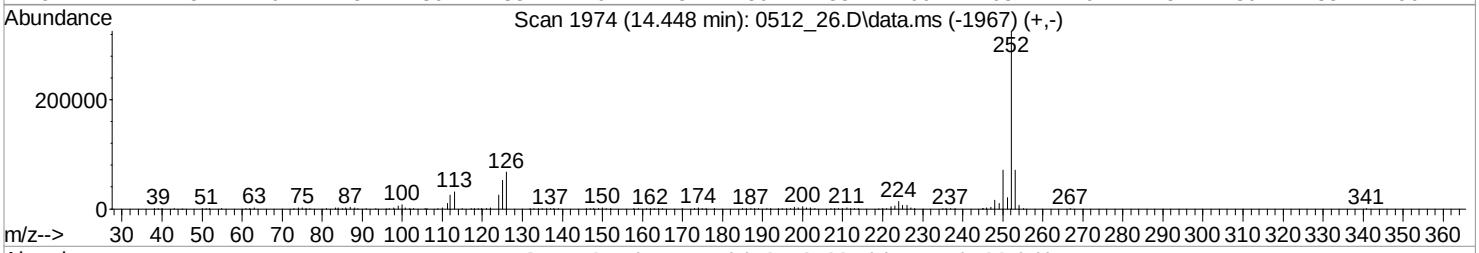
response 49256

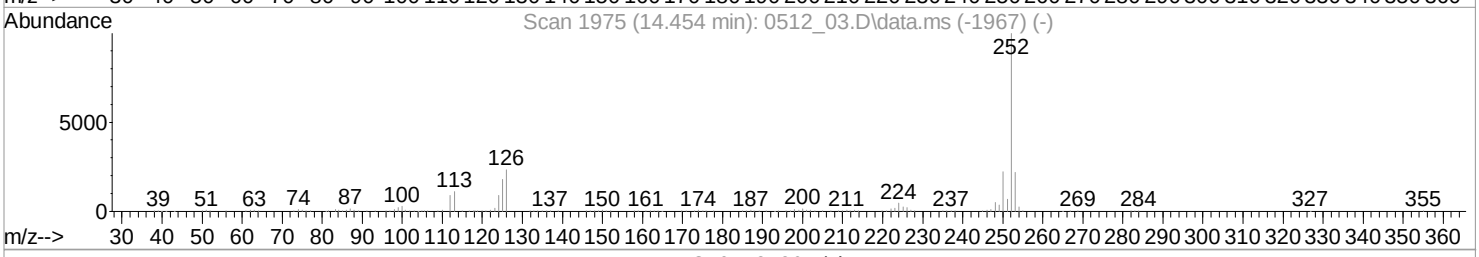
Ion	Exp%	Act%
121.00	100	100
77.00	49.40	49.05
45.00	490.30	485.01
0.00	0.00	0.00

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 26.D
Acq On : 16 May 2016 10:01 am
Operator : 377
Sample : SSCV SVMS 10K PPB 16A25209
Misc : 8270 SECONDARY SOURCE 16E12001
ALS Vial : 21 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 16 10:30:18 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:52:25 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M







TIC: 0512_26.D\data.ms

(89) Benzo(b)fluoranthene (MT)

14.448min (-0.006) 10452.9991022 ppb

Qvalue = 97

response 551493

Ion	Exp%	Act%
252.00	100	100
253.00	21.70	21.76
126.00	23.30	20.78
113.00	11.00	9.69

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 21.D
Acq On : 12 May 2016 6:53 pm
Operator : 377
Sample : dnr SSCV SVMS 10K PPB 16A25209
Misc : 8270 SECONDARY SOURCE 16E12001
ALS Vial : 21 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 16 12:04:25 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:52:25 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	5.437	152	60024	8000.0000000 ppb	0.00
22) Naphthalene-d8	6.719	136	345745	8000.0000000 ppb	0.00
40) Acenaphthene-d10	8.607	164	202235	8000.0000000 ppb	0.00
64) Phenanthrene-d10	10.236	188	358294	8000.0000000 ppb	0.00
78) Chrysene-d12	13.136	240	344711	8000.0000000 ppb	0.00
88) Perylene-d12	15.018	264	330853	8000.0000000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol	0.000	112	0	0.0000000 ppb	
Spiked Amount 20.000	Range 10 - 87		Recovery = 0.00%#		
7) Phenol-d5	0.000	99	0	0.0000000 ppb	
Spiked Amount 20.000	Range 10 - 67		Recovery = 0.00%#		
23) Nitrobenzene-d5	5.937	82	14096	1048.2958026 ppb	-0.03
Spiked Amount 10.000	Range 12 - 120		Recovery = 10482.96%#		
44) 2-Fluorobiphenyl	7.795	172	149	4.5938713 ppb	-0.06
Spiked Amount 10.000	Range 26 - 122		Recovery = 45.94%		
67) 2,4,6-Tribromophenol	0.000	330	0	0.0000000 ppb	
Spiked Amount 20.000	Range 10 - 148		Recovery = 0.00%#		
81) p-Terphenyl-d14	0.000	244	0	0.0000000 ppb	
Spiked Amount 10.000	Range 34 - 149		Recovery = 0.00%#		
Target Compounds					Qvalue
2) Pyridine	3.366	79	166852	10883.7026740 ppb	96
3) N-Nitrosodimethylamine	3.331	42	63322	10439.6205688 ppb	93
5) Aniline	5.125	66	69608	9999.4493346 ppb	94
6) bis(2-Chloroethyl)ether	5.166	93	147878	10906.5562102 ppb	99
8) Phenol	5.048	94	170987	10831.9416674 ppb	97
10) 2-Chlorophenol	5.231	128	156414	10683.8032074 ppb	97
11) n-Decane	5.231	41	302	44.0769573 ppb #	1
12) 1,3-Dichlorobenzene	5.384	146	172852	10406.8115701 ppb	99
13) 1,4-Dichlorobenzene	5.454	146	181864	10767.6651293 ppb	97
14) Benzyl Alcohol	5.543	79	111681	11005.7383605 ppb	100
15) 1,2-Dichlorobenzene	5.601	146	171117	10523.4522484 ppb	98
16) bis(2-Chloroisopropyl)...	5.672	121	53311m	11071.6983960 ppb	
17) 2-Methylphenol	5.625	108	136948	10855.8871405 ppb	100
18) Hexachloroethane	5.937	117	77659	10954.2318015 ppb	97
19) N-Nitrosodi-n-propylamine	5.795	70	74601	11101.6364420 ppb	98
20) 3&4-Methyl phenol	5.772	107	155462	10655.6536404 ppb	95
24) Nitrobenzene	5.984	77	148592	10834.6134245 ppb	99
25) Isophorone	6.219	82	270584	11090.9994157 ppb	99
26) 2-Nitrophenol	6.307	139	85034	10900.8673458 ppb	98
27) 2,4-Dimethylphenol	6.319	107	145588	10548.2680315 ppb	98
28) bis(2-Chlorethoxy)methane	6.431	93	197511	11226.6891221 ppb	97
29) 2,4-Dichlorophenol	6.548	162	126501	10932.6661349 ppb	94
31) 1,2,4-Trichlorobenzene	6.648	180	139139	10617.8510113 ppb	98
32) Naphthalene	6.742	128	522120	11098.3732145 ppb	99
33) 4-Chloroaniline	6.772	65	51694	10530.5267544 ppb	94
34) Hexachloro-1,3-butadiene	6.860	225	80035	12337.7213116 ppb	98
36) 4-Chloro-3-methylphenol	7.260	107	134998	10873.9825248 ppb	97
37) 2-Methylnaphthalene	7.472	142	335201	10687.1911317 ppb	99
38) 1-Methylnaphthalene	7.584	142	323828	10686.0746364 ppb	100
41) Hexachlorocyclopentadiene	7.637	237	67067	8703.2278014 ppb	99

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 21.D
Acq On : 12 May 2016 6:53 pm
Operator : 377
Sample : dnr SSCV SVMS 10K PPB 16A25209
Misc : 8270 SECONDARY SOURCE 16E12001
ALS Vial : 21 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 16 12:04:25 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:52:25 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M

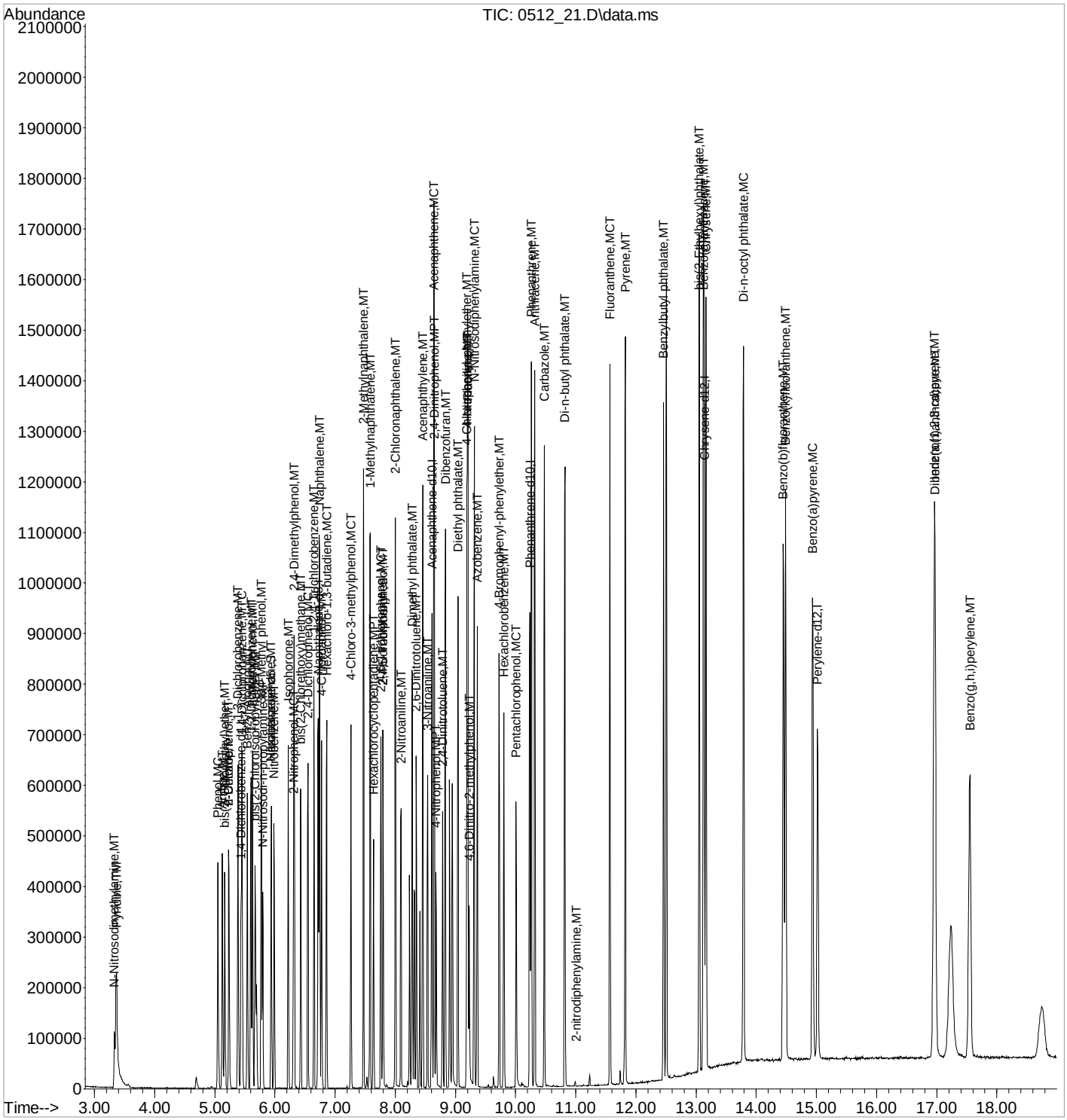
Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
42) 2,4,6-Trichlorophenol	7.760	196	82512	10624.8842344 ppb		96
43) 2,4,5-Trichlorophenol	7.795	196	93841	11101.1678231 ppb		95
46) 2-Chloronaphthalene	8.001	162	319690	10961.2360329 ppb		100
47) 2-Nitroaniline	8.095	138	116634	10654.6783345 ppb		99
48) Acenaphthylene	8.454	152	527980	11274.2091307 ppb		100
49) Dimethyl phthalate	8.278	163	344144	11138.3074708 ppb		98
50) 2,6-Dinitrotoluene	8.348	165	85739	11339.5991491 ppb		96
51) 3-Nitroaniline	8.536	138	98413	11542.1434797 ppb		90
52) Acenaphthene	8.642	153	343712	11349.1378611 ppb		98
53) 2,4-Dinitrophenol	8.648	184	33074	9561.5396098 ppb	#	66
54) Dibenzofuran	8.831	168	453541	10609.4510612 ppb		99
55) 2,4-Dinitrotoluene	8.789	165	110427	11550.1171931 ppb		94
57) 4-Nitrophenol	8.678	139	74008	9833.3067526 ppb		95
58) Fluorene	9.207	166	383603	11142.3904928 ppb		98
59) 4-Chlorophenyl-phenyle...	9.189	204	152930	11006.9489464 ppb		99
60) Diethyl phthalate	9.042	149	367140	11013.3638734 ppb		99
61) 4-Nitroaniline	9.195	138	73787	11870.2453683 ppb		98
62) Azobenzene	9.360	77	362331	11609.7165304 ppb		99
65) 4,6-Dinitro-2-methylph...	9.231	198	44515	9789.8343938 ppb		90
66) N-Nitrosodiphenylamine	9.313	169	307754	11100.9987005 ppb		100
68) 4-Bromophenyl-phenylether	9.725	248	85216	10814.0502154 ppb		95
69) Hexachlorobenzene	9.807	284	96826	10977.5926192 ppb		98
71) Pentachlorophenol	10.007	266	56670	10826.6927279 ppb		98
72) Phenanthrene	10.260	178	542407	10618.6899082 ppb		100
73) Anthracene	10.319	178	542149	11140.9547707 ppb		99
74) Carbazole	10.478	167	503119	11508.1282792 ppb		100
75) Di-n-butyl phthalate	10.819	149	714854	10396.5361432 ppb		99
76) 2-nitrodiphenylamine	11.007	167	932	854.6274575 ppb	#	27
77) Fluoranthene	11.566	202	566605	11171.0767663 ppb		99
80) Pyrene	11.824	202	599594	11295.0032940 ppb		98
82) Benzylbutyl phthalate	12.460	149	335853	10247.5839034 ppb		98
84) Benzo(a)anthracene	13.124	228	568047	10667.1973755 ppb		99
85) Chrysene	13.166	228	550202	10894.3949826 ppb		99
86) bis(2-Ethylhexyl)phtha...	13.054	149	488962	10311.7034822 ppb		98
87) Di-n-octyl phthalate	13.789	149	846181	10336.1043134 ppb		100
89) Benzo(b)fluoranthene	14.448	252	542057	10644.8039196 ppb		98
90) Benzo(k)fluoranthene	14.489	252	558084	11725.6445467 ppb		99
91) Benzo(a)pyrene	14.936	252	517998	10923.4166386 ppb		99
92) Indeno(1,2,3-cd)pyrene	16.959	276	578593	11256.4126050 ppb		98
93) Dibenz(a,h)anthracene	16.971	278	507190	11312.1603994 ppb		98
94) Benzo(g,h,i)perylene	17.554	276	506385	11524.9534533 ppb		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 21.D
Acq On : 12 May 2016 6:53 pm
Operator : 377
Sample : dnr SSCV SVMS 10K PPB 16A25209
Misc : 8270 SECONDARY SOURCE 16E12001
ALS Vial : 21 Sample Multiplier: 1
InstName : BNAMS23

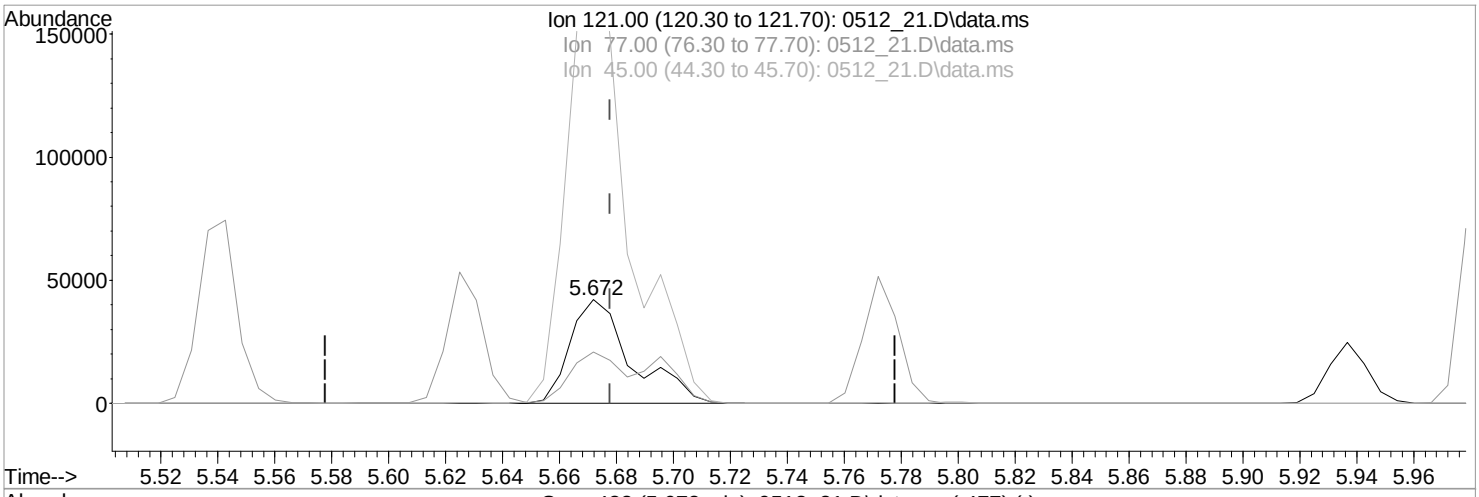
Quant Time: May 16 12:04:25 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:52:25 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M

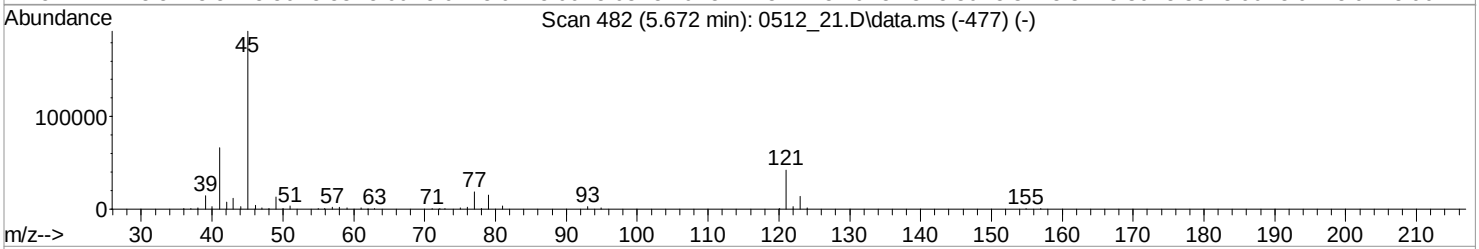


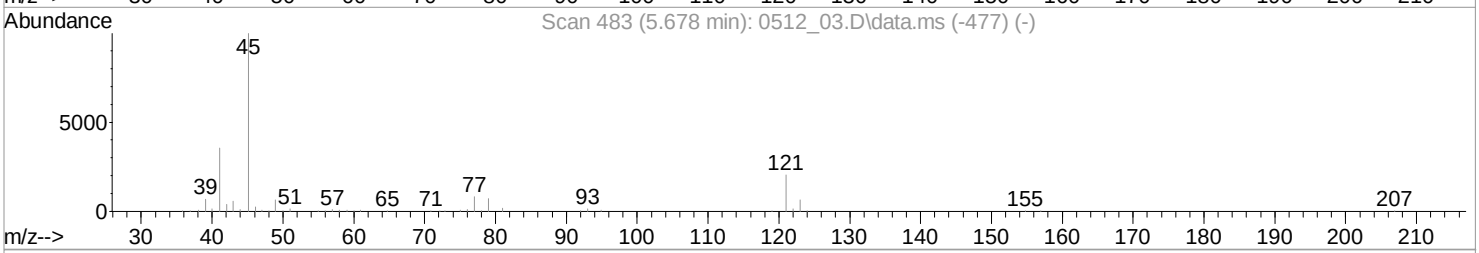
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 21.D
Acq On : 12 May 2016 6:53 pm
Operator : 377
Sample : dnr SSCV SVMS 10K PPB 16A25209
Misc : 8270 SECONDARY SOURCE 16E12001
ALS Vial : 21 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 16 08:45:28 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:52:25 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M







TIC: 0512_21.D\data.ms

(16) bis(2-Chloroisopropyl)ether (MT)

5.672min (-0.006) 13147.8884668 ppb

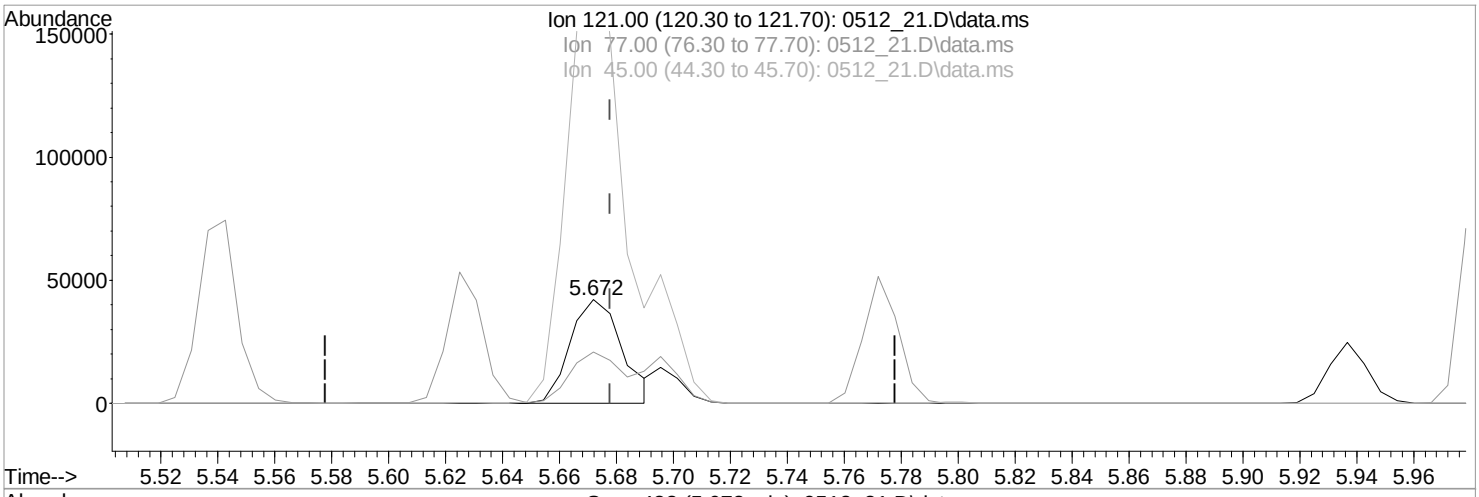
Qvalue = 88

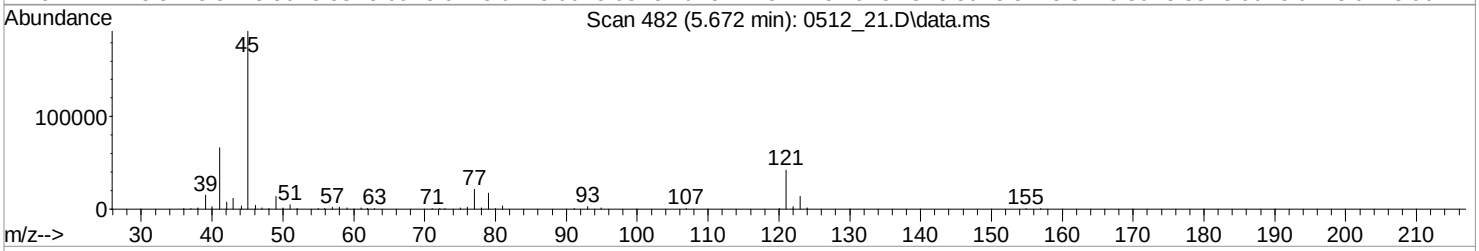
response 63308

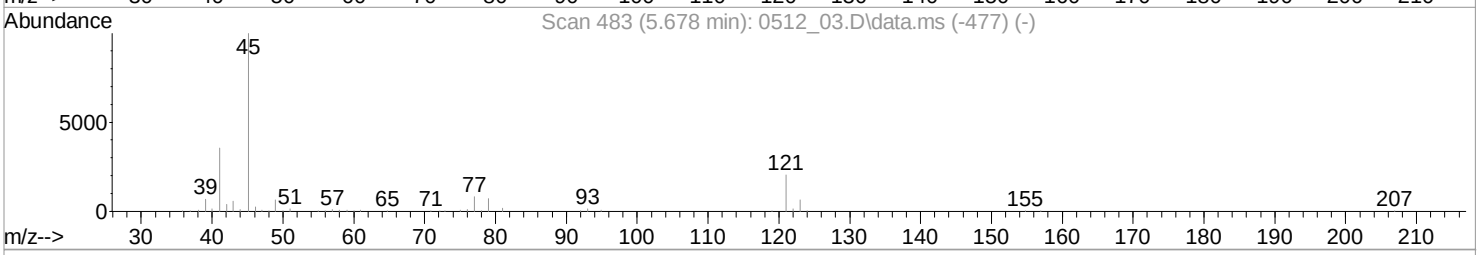
Ion	Exp%	Act%
121.00	100	100
77.00	49.40	49.40
45.00	490.30	455.65#
0.00	0.00	0.00

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 21.D
Acq On : 12 May 2016 6:53 pm
Operator : 377
Sample : dnr SSCV SVMS 10K PPB 16A25209
Misc : 8270 SECONDARY SOURCE 16E12001
ALS Vial : 21 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 16 08:45:28 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:52:25 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M







TIC: 0512_21.D\data.ms

(16) bis(2-Chloroisopropyl)ether (MT)

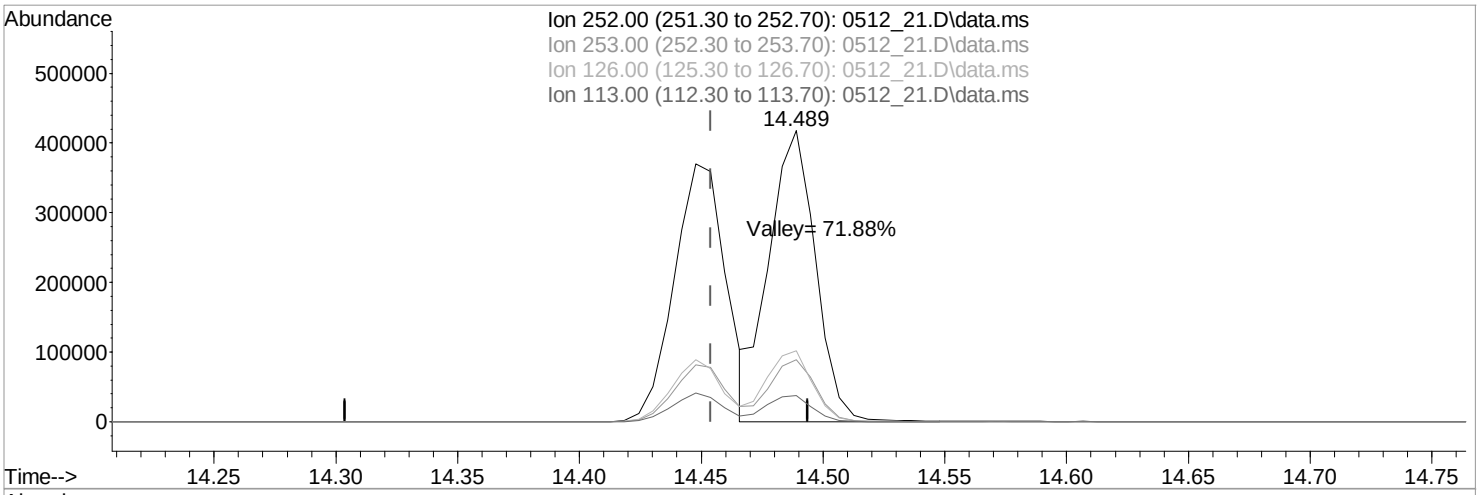
5.672min (-0.006) 11071.6983960 ppb m

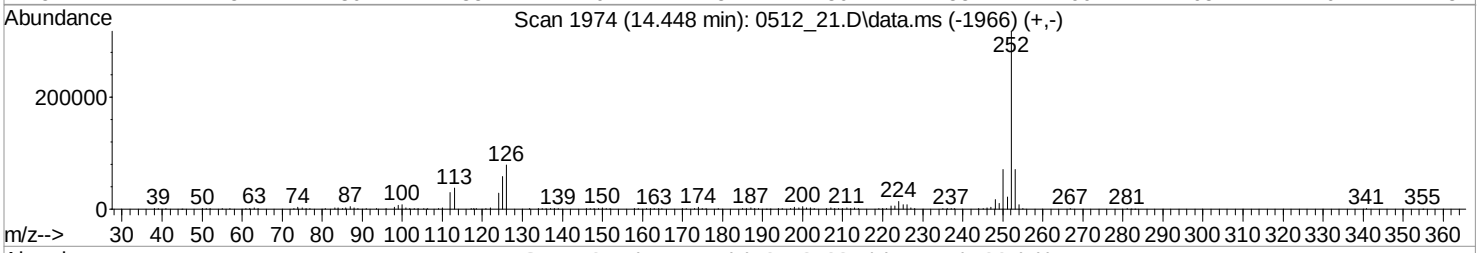
response 53311

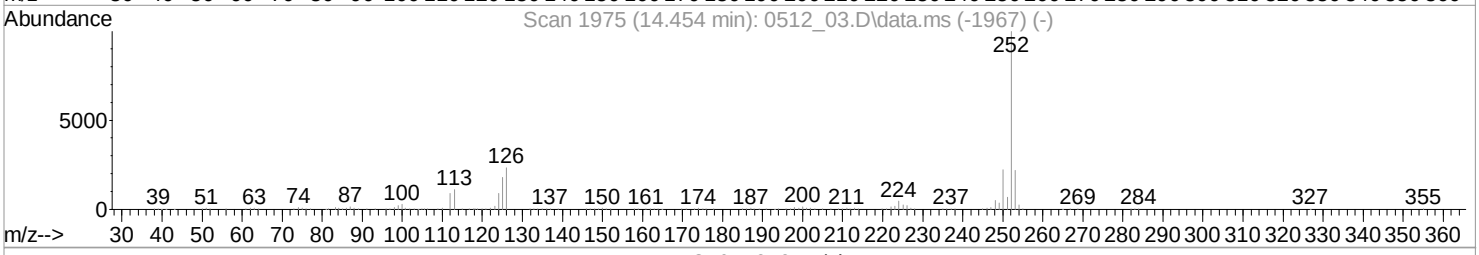
Ion	Exp%	Act%
121.00	100	100
77.00	49.40	49.40
45.00	490.30	455.65#
0.00	0.00	0.00

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 21.D
Acq On : 12 May 2016 6:53 pm
Operator : 377
Sample : dnr SSCV SVMS 10K PPB 16A25209
Misc : 8270 SECONDARY SOURCE 16E12001
ALS Vial : 21 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 16 08:45:28 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:52:25 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M







TIC: 0512_21.D\data.ms

(89) Benzo(b)fluoranthene (MT)

14.448min (-0.006) 10644.8039196 ppb

Qvalue = 98

response 542057

Ion	Exp%	Act%
252.00	100	100
253.00	21.70	22.19
126.00	23.30	24.63
113.00	11.00	11.65

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 03.D
Acq On : 12 May 2016 11:58 am
Operator : 377
Sample : MSTD SVMS 10K PPB 16D25863
Misc : 8270 PRIMARY CALIBRATION IS 16E12001
ALS Vial : 3 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 13 15:48:31 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 15:47:12 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	5.437	152	56451	8000.0000000 ppb	0.00
22) Naphthalene-d8	6.719	136	337258	8000.0000000 ppb	0.00
40) Acenaphthene-d10	8.613	164	203326	8000.0000000 ppb	0.00
64) Phenanthrene-d10	10.236	188	357079	8000.0000000 ppb	0.00
78) Chrysene-d12	13.142	240	350822	8000.0000000 ppb	0.00
88) Perylene-d12	15.030	264	329898	8000.0000000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol	4.301	112	120179	10000.0000000 ppb	0.00
Spiked Amount 20.000	Range 10 - 87		Recovery = 50000.00%#		
7) Phenol-d5	5.043	99	154414	10000.0000000 ppb	0.00
Spiked Amount 20.000	Range 10 - 67		Recovery = 50000.00%#		
23) Nitrobenzene-d5	5.966	82	141996	10000.0000000 ppb	0.00
Spiked Amount 10.000	Range 12 - 120		Recovery = 100000.00%#		
44) 2-Fluorobiphenyl	7.860	172	338653	10000.0000000 ppb	0.00
Spiked Amount 10.000	Range 26 - 122		Recovery = 100000.00%#		
67) 2,4,6-Tribromophenol	9.466	330	37042	10000.0000000 ppb	0.00
Spiked Amount 20.000	Range 10 - 148		Recovery = 50000.00%#		
81) p-Terphenyl-d14	11.960	244	376565	10005.6330094 ppb	0.00
Spiked Amount 10.000	Range 34 - 149		Recovery = 100056.33%#		
Target Compounds					Qvalue
2) Pyridine	3.366	79	157972	10000.0000000 ppb	100
3) N-Nitrosodimethylamine	3.337	42	65247	10000.0000000 ppb	100
5) Aniline	5.125	66	72101	10000.0000000 ppb	100
6) bis(2-Chloroethyl)ether	5.166	93	137937	10000.0000000 ppb	100
8) Phenol	5.054	94	160613	10000.0000000 ppb	100
10) 2-Chlorophenol	5.237	128	149400	10000.0000000 ppb	100
11) n-Decane	5.254	41	72915	10000.0000000 ppb	100
12) 1,3-Dichlorobenzene	5.384	146	166868	10000.0000000 ppb	100
13) 1,4-Dichlorobenzene	5.454	146	168297	10000.0000000 ppb	100
14) Benzyl Alcohol	5.543	79	105294	10000.0000000 ppb	100
15) 1,2-Dichlorobenzene	5.601	146	163110	10000.0000000 ppb	100
16) bis(2-Chloroisopropyl)...	5.678	121	48611	10000.0000000 ppb	100
17) 2-Methylphenol	5.631	108	130097	10000.0000000 ppb	100
18) Hexachloroethane	5.937	117	73029	10000.0000000 ppb	100
19) N-Nitrosodi-n-propylamine	5.801	70	70911	10000.0000000 ppb	100
20) 3&4-Methyl phenol	5.778	107	149419	10000.0000000 ppb	100
24) Nitrobenzene	5.990	77	144094	10000.0000000 ppb	100
25) Isophorone	6.225	82	257380	10000.0000000 ppb	100
26) 2-Nitrophenol	6.313	139	81278	10000.0000000 ppb	100
27) 2,4-Dimethylphenol	6.325	107	145467	10000.0000000 ppb	100
28) bis(2-Chlorethoxy)methane	6.431	93	180543	10000.0000000 ppb	100
29) 2,4-Dichlorophenol	6.548	162	122802	10000.0000000 ppb	100
31) 1,2,4-Trichlorobenzene	6.654	180	132579	10000.0000000 ppb	100
32) Naphthalene	6.742	128	480980	10000.0000000 ppb	100
33) 4-Chloroaniline	6.778	65	51997	10000.0000000 ppb	100
34) Hexachloro-1,3-butadiene	6.860	225	66195	10000.0000000 ppb	100
36) 4-Chloro-3-methylphenol	7.266	107	130702	10000.0000000 ppb	100
37) 2-Methylnaphthalene	7.478	142	323619	10000.0000000 ppb	100
38) 1-Methylnaphthalene	7.584	142	310980	10000.0000000 ppb	100
41) Hexachlorocyclopentadiene	7.642	237	80504	10000.0000000 ppb	100

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 03.D
Acq On : 12 May 2016 11:58 am
Operator : 377
Sample : MSTD SVMS 10K PPB 16D25863
Misc : 8270 PRIMARY CALIBRATION IS 16E12001
ALS Vial : 3 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 13 15:48:31 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 15:47:12 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M

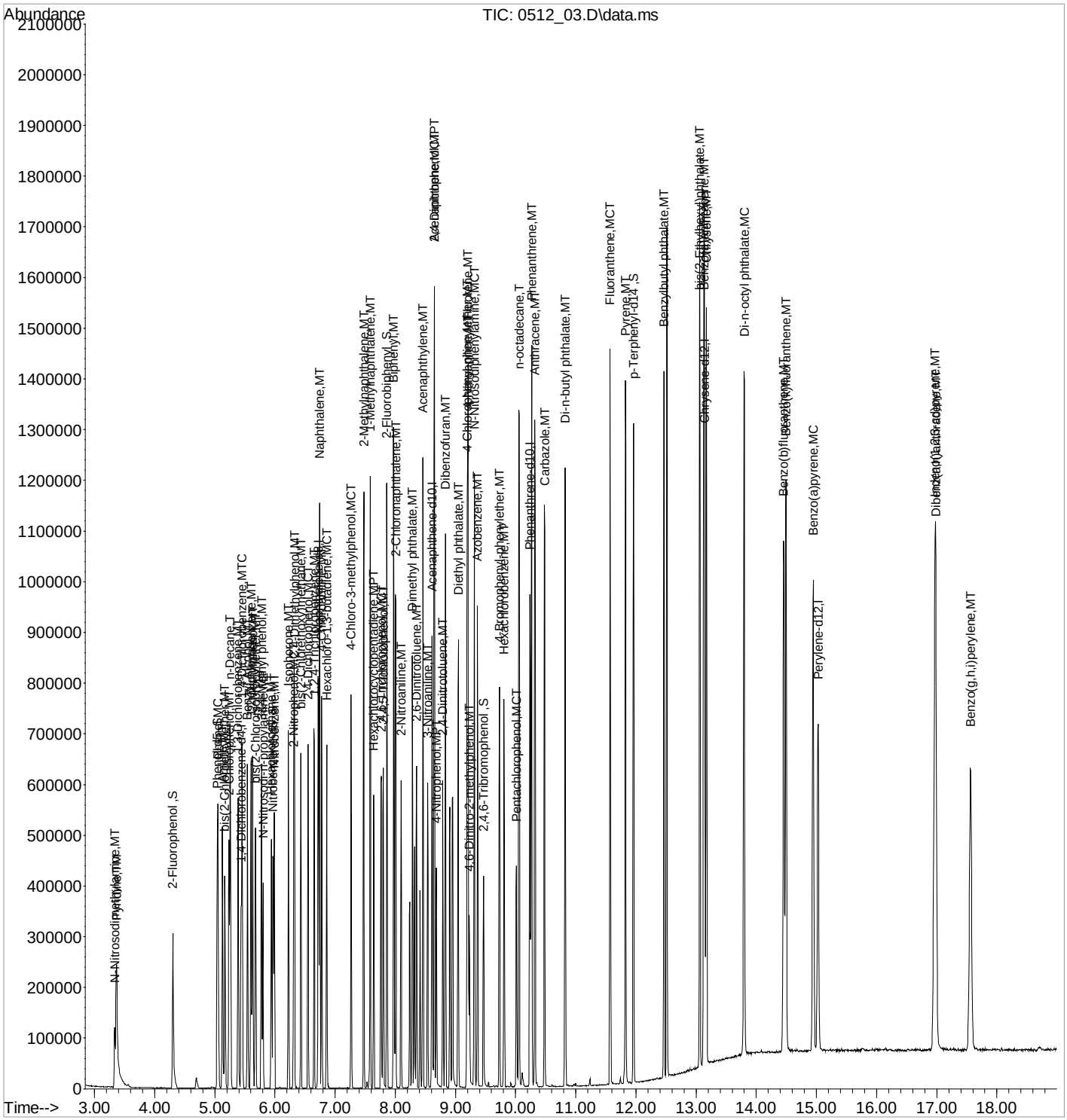
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
42) 2,4,6-Trichlorophenol	7.766	196	82447	10000.0000000 ppb	100
43) 2,4,5-Trichlorophenol	7.801	196	89879	10000.0000000 ppb	100
45) Biphenyl	7.972	154	389021	10000.0000000 ppb	100
46) 2-Chloronaphthalene	8.007	162	303180	10000.0000000 ppb	100
47) 2-Nitroaniline	8.095	138	107283	10000.0000000 ppb	100
48) Acenaphthylene	8.460	152	510791	10000.0000000 ppb	100
49) Dimethyl phthalate	8.284	163	326034	10000.0000000 ppb	100
50) 2,6-Dinitrotoluene	8.354	165	80584	10000.0000000 ppb	100
51) 3-Nitroaniline	8.536	138	94125	10000.0000000 ppb	100
52) Acenaphthene	8.648	153	316369	10000.0000000 ppb	100
53) 2,4-Dinitrophenol	8.648	184	32071	9958.3915541 ppb	100
54) Dibenzofuran	8.831	168	439939	10000.0000000 ppb	100
55) 2,4-Dinitrotoluene	8.789	165	102810	10000.0000000 ppb	100
57) 4-Nitrophenol	8.683	139	72593	9995.7314386 ppb	100
58) Fluorene	9.207	166	362334	10000.0000000 ppb	100
59) 4-Chlorophenyl-phenyle...	9.195	204	145188	10000.0000000 ppb	100
60) Diethyl phthalate	9.048	149	351195	10000.0000000 ppb	100
61) 4-Nitroaniline	9.201	138	50567	9921.9071912 ppb	100
62) Azobenzene	9.366	77	347158	10000.0000000 ppb	100
65) 4,6-Dinitro-2-methylph...	9.230	198	41297	10000.0000000 ppb	100
66) N-Nitrosodiphenylamine	9.313	169	296578	10000.0000000 ppb	100
68) 4-Bromophenyl-phenylether	9.730	248	82411	10000.0000000 ppb	100
69) Hexachlorobenzene	9.807	284	89384	10000.0000000 ppb	100
70) n-octadecane	10.060	55	60239	10000.0000000 ppb	100
71) Pentachlorophenol	10.013	266	45937	10000.0000000 ppb	100
72) Phenanthrene	10.266	178	523288	10000.0000000 ppb	100
73) Anthracene	10.319	178	525344	10000.0000000 ppb	100
74) Carbazole	10.483	167	506285	10000.0000000 ppb	100
75) Di-n-butyl phthalate	10.825	149	701229	10000.0000000 ppb	100
77) Fluoranthene	11.572	202	558193	10000.0000000 ppb	100
80) Pyrene	11.824	202	571486	10000.0000000 ppb	100
82) Benzylbutyl phthalate	12.466	149	325270	10001.9064722 ppb	100
84) Benzo(a)anthracene	13.130	228	549420	10000.0000000 ppb	100
85) Chrysene	13.171	228	525234	10000.0000000 ppb	100
86) bis(2-Ethylhexyl)phtha...	13.060	149	471575	10000.0000000 ppb	100
87) Di-n-octyl phthalate	13.801	149	815079	10001.1902103 ppb	100
89) Benzo(b)fluoranthene	14.454	252	554669m	10000.4031852 ppb	
90) Benzo(k)fluoranthene	14.495	252	502085	9997.0739570 ppb	100
91) Benzo(a)pyrene	14.948	252	513928	10000.0606248 ppb	100
92) Indeno(1,2,3-cd)pyrene	16.971	276	568864	9998.2678882 ppb	100
93) Dibenz(a,h)anthracene	16.983	278	491204	9999.9995504 ppb	100
94) Benzo(g,h,i)perylene	17.565	276	479416	9998.5173090 ppb	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

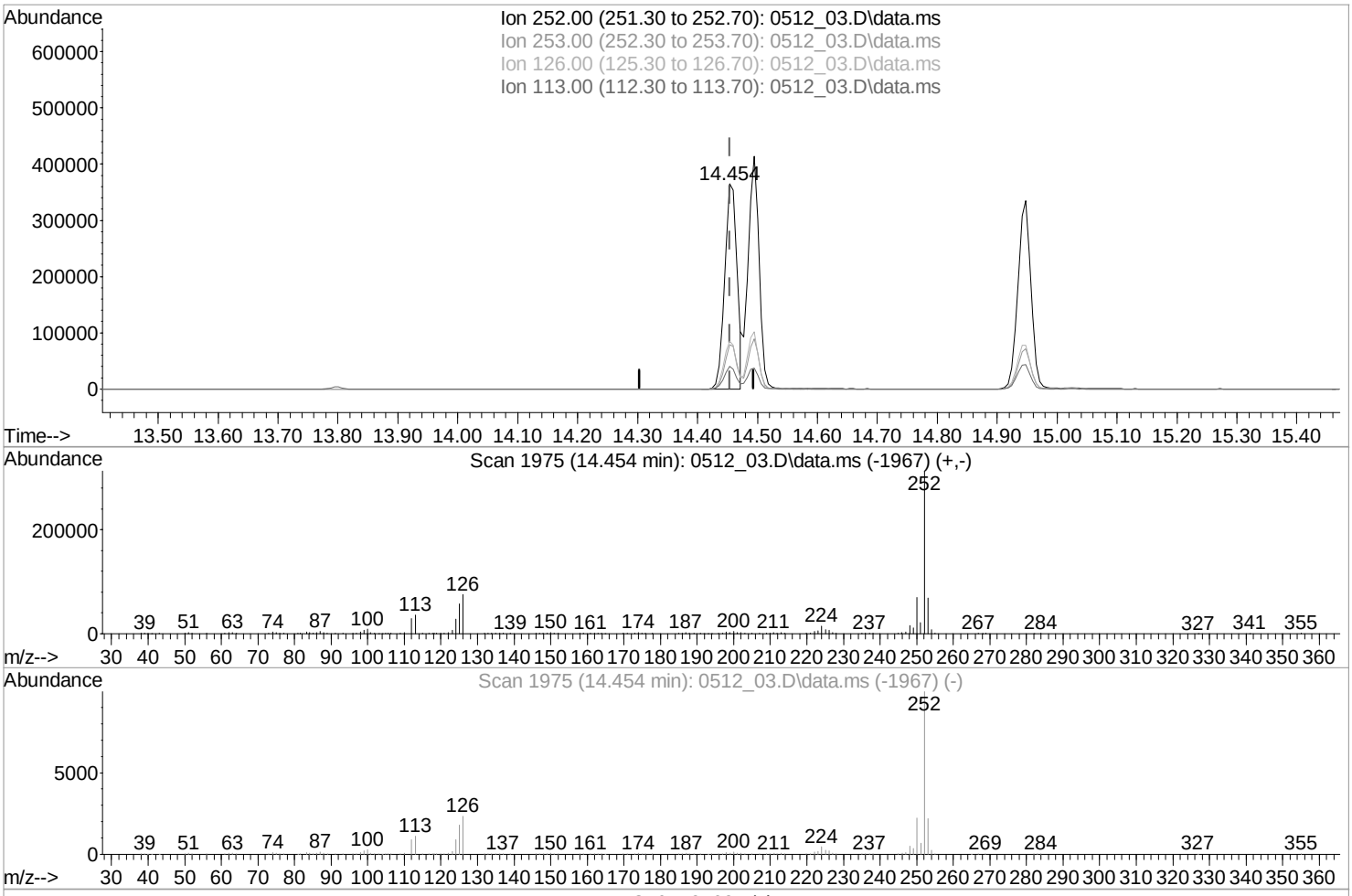
Data Path : C:\msdchem\1\data\051216\
Data File : 0512 03.D
Acq On : 12 May 2016 11:58 am
Operator : 377
Sample : MSTD SVMS 10K PPB 16D25863
Misc : 8270 PRIMARY CALIBRATION IS 16E12001
ALS Vial : 3 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 13 15:48:31 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 15:47:12 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M



Data Path : C:\msdchem\1\data\051216\
Data File : 0512 03.D
Acq On : 12 May 2016 11:58 am
Operator : 377
Sample : MSTD SVMS 10K PPB 16D25863
Misc : 8270 PRIMARY CALIBRATION IS 16E03322
ALS Vial : 3 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 13 15:47:43 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 15:47:12 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M



TIC: 0512_03.D\data.ms

(89) Benzo(b)fluoranthene (MT)

14.454min (0.000) 9412.0826619 ppb

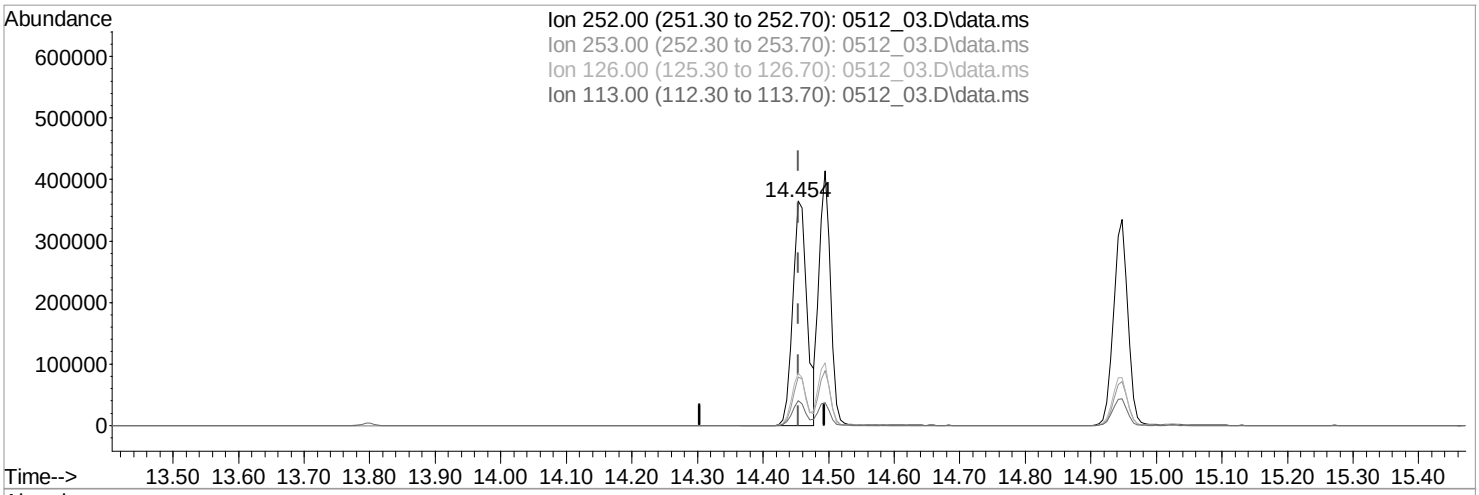
Qvalue = 99

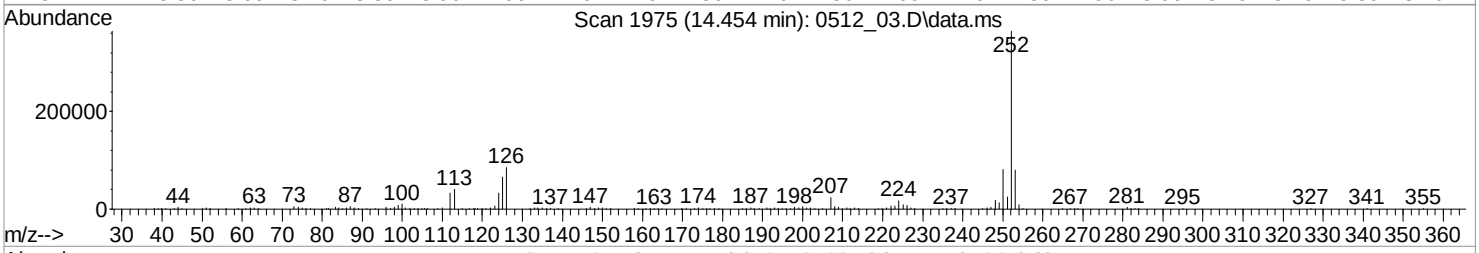
response 522038

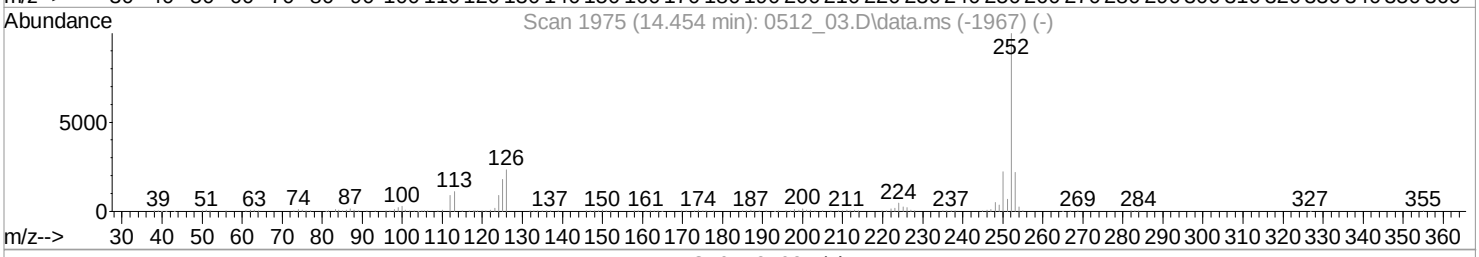
Ion	Exp%	Act%
252.00	100	100
253.00	21.70	21.77
126.00	23.30	23.81
113.00	11.00	11.27

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 03.D
Acq On : 12 May 2016 11:58 am
Operator : 377
Sample : MSTD SVMS 10K PPB 16D25863
Misc : 8270 PRIMARY CALIBRATION IS 16E03322
ALS Vial : 3 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 13 15:47:43 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 15:47:12 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M







TIC: 0512_03.D\data.ms

(89) Benzo(b)fluoranthene (MT)

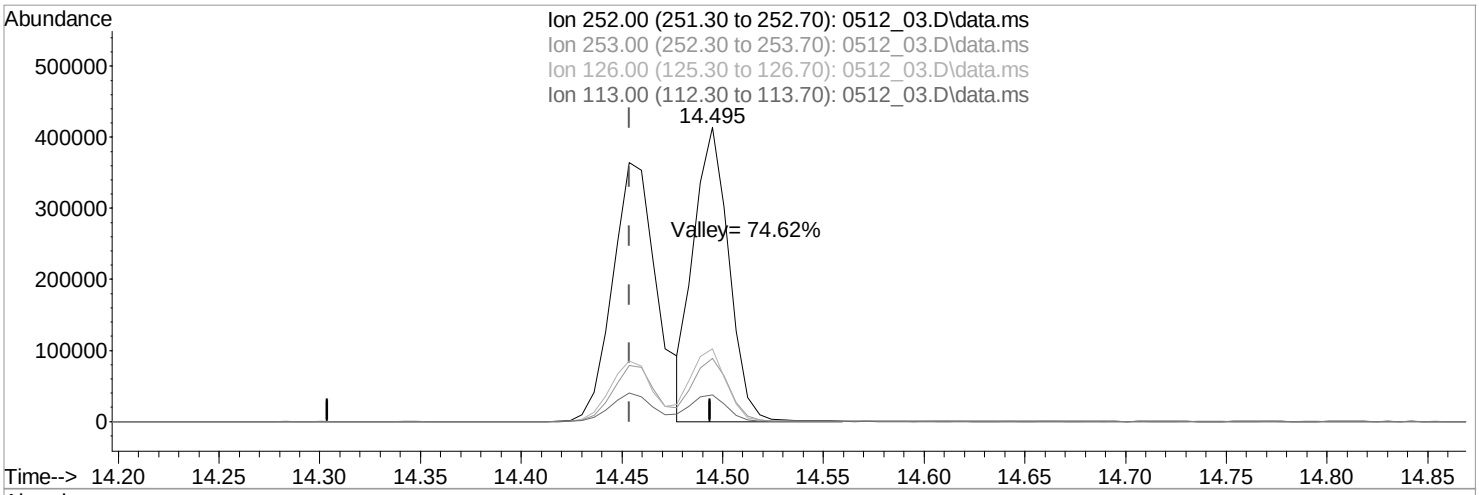
14.454min (0.000) 10000.4031852 ppb m

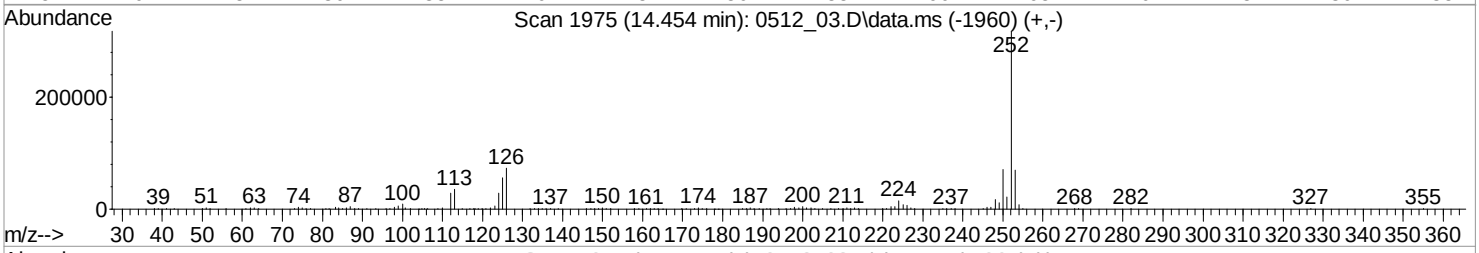
response 554669

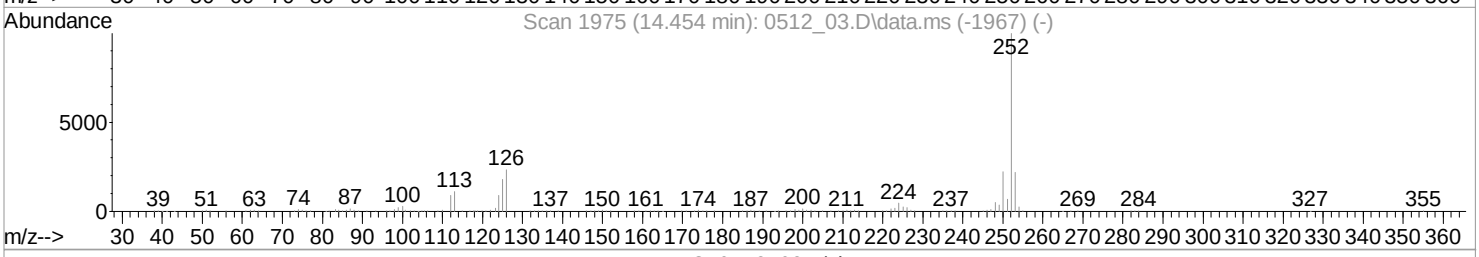
Ion	Exp%	Act%
252.00	100	100
253.00	21.70	21.67
126.00	23.30	23.35
113.00	11.00	10.97

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 03.D
Acq On : 12 May 2016 11:58 am
Operator : 377
Sample : MSTD SVMS 10K PPB 16D25863
Misc : 8270 PRIMARY CALIBRATION IS 16E12001
ALS Vial : 3 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 13 15:48:31 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 15:47:12 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M







TIC: 0512_03.D\data.ms

(89) Benzo(b)fluoranthene (MT)

14.454min (0.000) 10000.4031852 ppb m

response 554669

Ion	Exp%	Act%
252.00	100	100
253.00	21.70	21.67
126.00	23.30	23.35
113.00	11.00	10.97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 04.D
Acq On : 12 May 2016 12:21 pm
Operator : 377
Sample : STD SVMS 40 PPB 16D25863
Misc : 8270 PRIMARY CALIBRATION IS 16E12001
ALS Vial : 4 Sample Multiplier: 1
InstName : BNAMS23

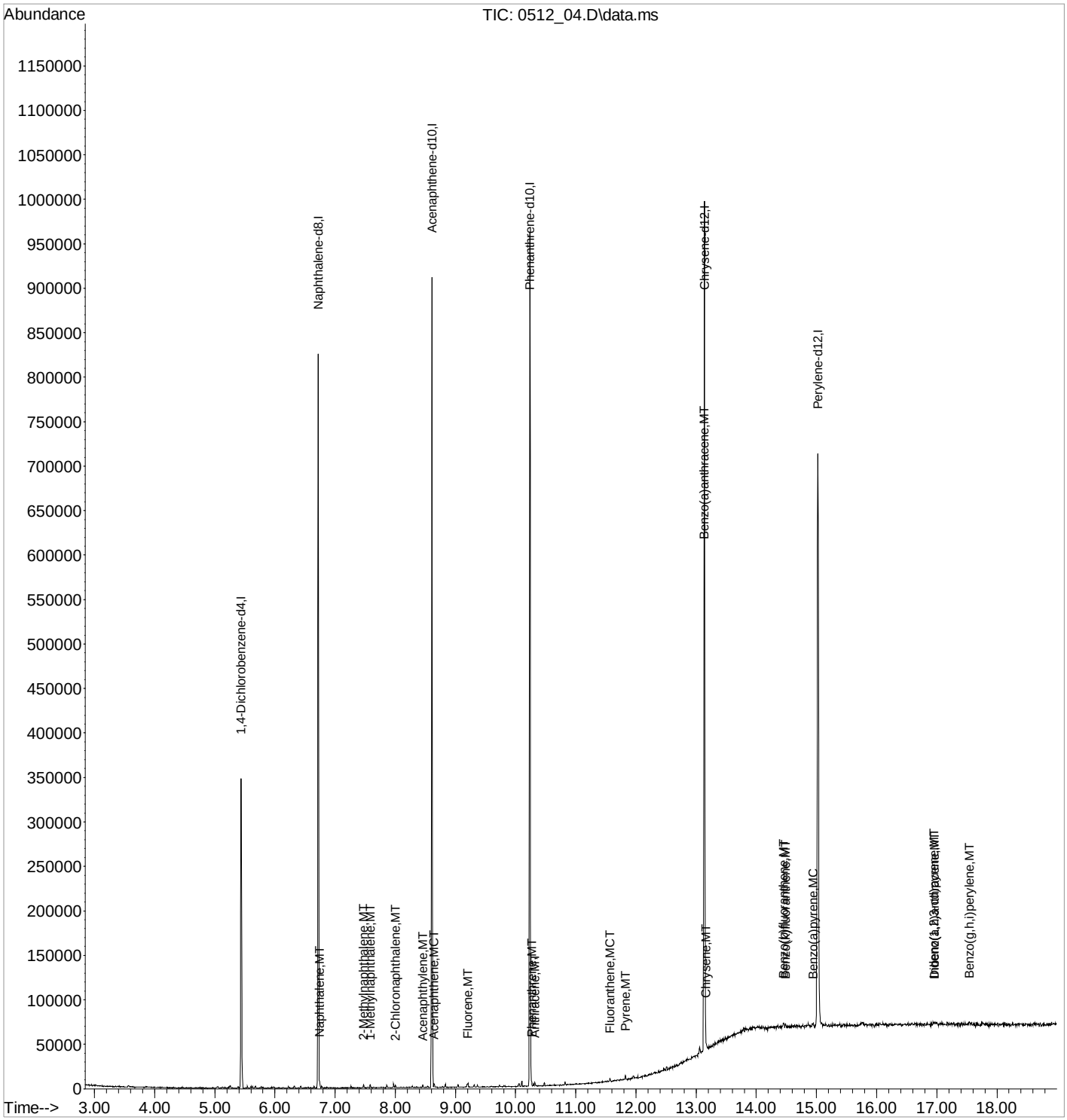
Quant Time: May 13 15:50:54 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 15:49:02 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 1,4-Dichlorobenzene-d4	5.437	152	58357	8000.0000000	ppb		0.00
22) Naphthalene-d8	6.719	136	344010	8000.0000000	ppb		0.00
40) Acenaphthene-d10	8.607	164	197942	8000.0000000	ppb		0.00
64) Phenanthrene-d10	10.236	188	350796	8000.0000000	ppb		0.00
78) Chrysene-d12	13.136	240	327168	8000.0000000	ppb		0.00
88) Perylene-d12	15.024	264	316621	8000.0000000	ppb		0.00
System Monitoring Compounds							
4) 2-Fluorophenol	0.000	112	0d	0.0000000	ppb		
Spiked Amount 20.000	Range 10 - 87		Recovery =	0.00%#			
7) Phenol-d5	0.000	99	0d	0.0000000	ppb		
Spiked Amount 20.000	Range 10 - 67		Recovery =	0.00%#			
23) Nitrobenzene-d5	0.000	82	0d	0.0000000	ppb		
Spiked Amount 10.000	Range 12 - 120		Recovery =	0.00%#			
44) 2-Fluorobiphenyl	0.000	172	0d	0.0000000	ppb		
Spiked Amount 10.000	Range 26 - 122		Recovery =	0.00%#			
67) 2,4,6-Tribromophenol	0.000	330	0	0.0000000	ppb		
Spiked Amount 20.000	Range 10 - 148		Recovery =	0.00%#			
81) p-Terphenyl-d14	0.000	244	0d	0.0000000	ppb		
Spiked Amount 10.000	Range 34 - 149		Recovery =	0.00%#			
Target Compounds							Qvalue
32) Naphthalene	6.742	128	3091	63.0032829	ppb		96
37) 2-Methylnaphthalene	7.472	142	1165	35.2925555	ppb	#	90
38) 1-Methylnaphthalene	7.583	142	1208	38.0825191	ppb	#	85
46) 2-Chloronaphthalene	8.001	162	1058	35.8459490	ppb		95
48) Acenaphthylene	8.460	152	1643	33.0407038	ppb		84
52) Acenaphthene	8.642	153	1149	37.3062048	ppb		95
58) Fluorene	9.207	166	1346	38.1584684	ppb		95
72) Phenanthrene	10.266	178	2180	42.4058131	ppb		92
73) Anthracene	10.319	178	1795	34.7800621	ppb		94
77) Fluoranthene	11.566	202	1652	30.1255743	ppb		97
80) Pyrene	11.824	202	1897	35.5940770	ppb		94
84) Benzo(a)anthracene	13.130	228	2583m	50.4122339	ppb		
85) Chrysene	13.166	228	1925	39.3001224	ppb		90
89) Benzo(b)fluoranthene	14.454	252	1791m	33.6435378	ppb		
90) Benzo(k)fluoranthene	14.489	252	1676	34.7805731	ppb		82
91) Benzo(a)pyrene	14.942	252	1643	33.3100474	ppb		87
92) Indeno(1,2,3-cd)pyrene	16.953	276	1616	29.5987160	ppb	#	78
93) Dibenz(a,h)anthracene	16.965	278	1503	31.8813756	ppb		84
94) Benzo(g,h,i)perylene	17.542	276	1436	31.2091458	ppb	#	35

(#) = qualifier out of range (m) = manual integration (+) = signals summed

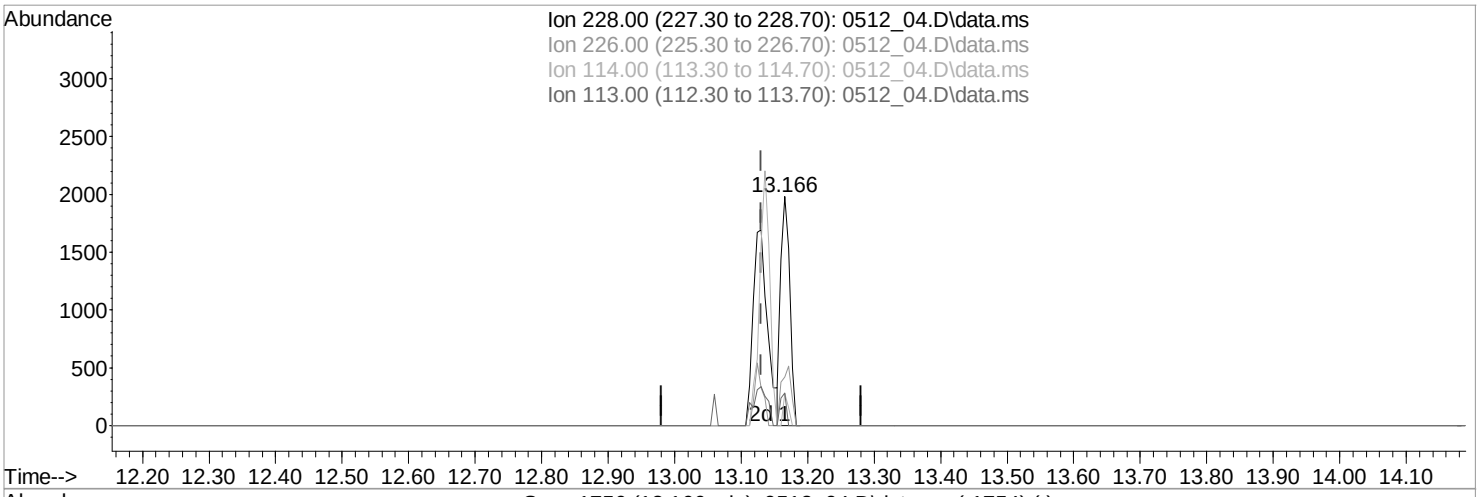
Data Path : C:\msdchem\1\data\051216\
Data File : 0512 04.D
Acq On : 12 May 2016 12:21 pm
Operator : 377
Sample : STD SVMS 40 PPB 16D25863
Misc : 8270 PRIMARY CALIBRATION IS 16E12001
ALS Vial : 4 Sample Multiplier: 1
InstName : BNAMS23

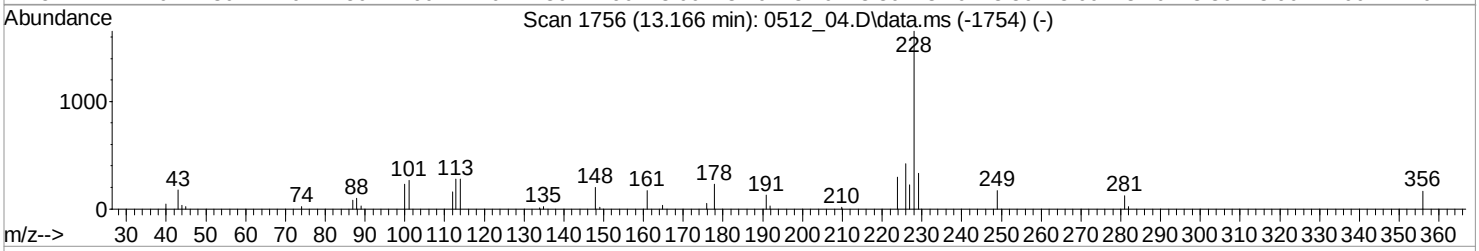
Quant Time: May 13 15:50:54 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 15:49:02 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M

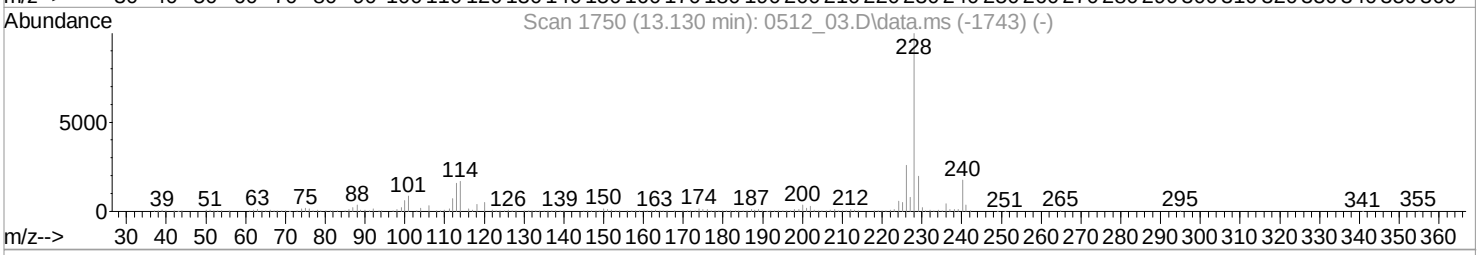


Data Path : C:\msdchem\1\data\051216\
Data File : 0512 04.D
Acq On : 12 May 2016 12:21 pm
Operator : 377
Sample : STD SVMS 40 PPB 16D25863
Misc : 8270 PRIMARY CALIBRATION IS 16E12001
ALS Vial : 4 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 13 15:49:05 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 15:49:02 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M







TIC: 0512_04.D\data.ms

(84) Benzo(a)anthracene (MT)

13.166min (+0.035) 37.5700930 ppb

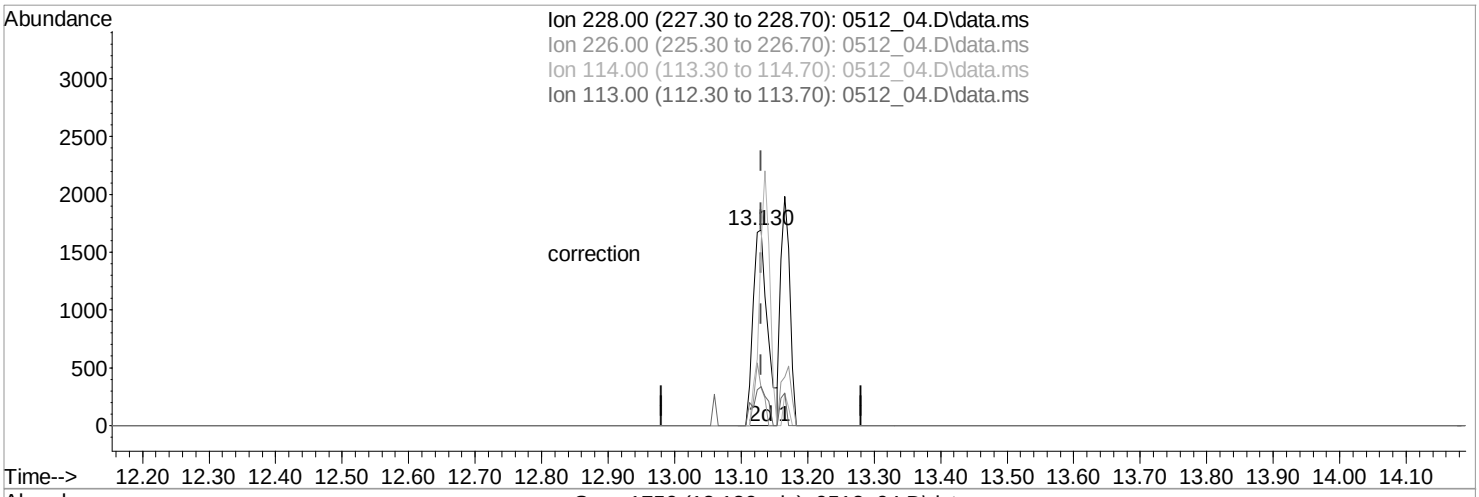
Qvalue = 93

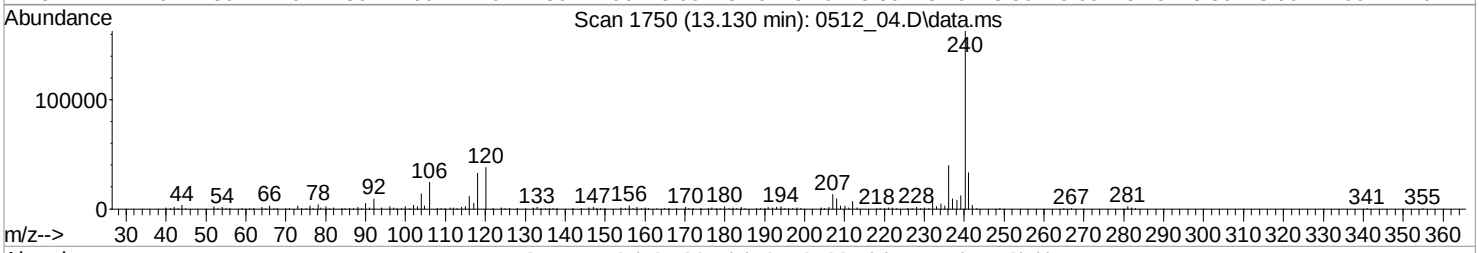
response 1925

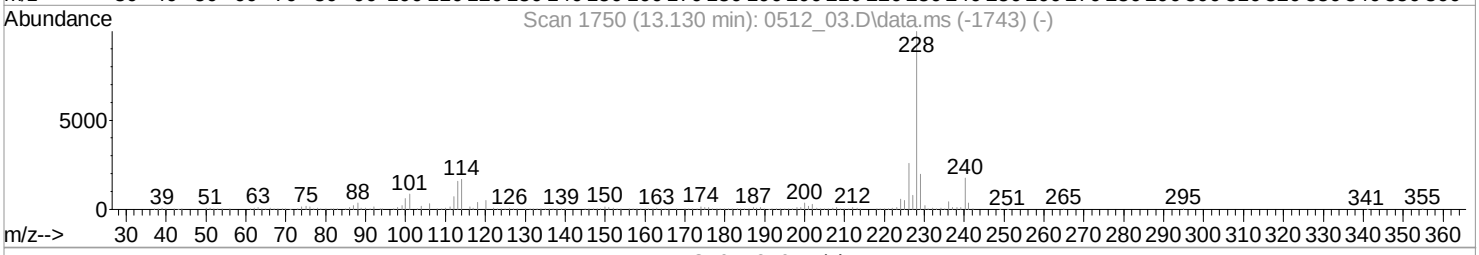
Ion	Exp%	Act%
228.00	100	100
226.00	25.60	21.12
114.00	16.70	13.91
113.00	15.60	14.06

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 04.D
Acq On : 12 May 2016 12:21 pm
Operator : 377
Sample : STD SVMS 40 PPB 16D25863
Misc : 8270 PRIMARY CALIBRATION IS 16E12001
ALS Vial : 4 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 13 15:49:05 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 15:49:02 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M







TIC: 0512_04.D\data.ms

(84) Benzo(a)anthracene (MT)

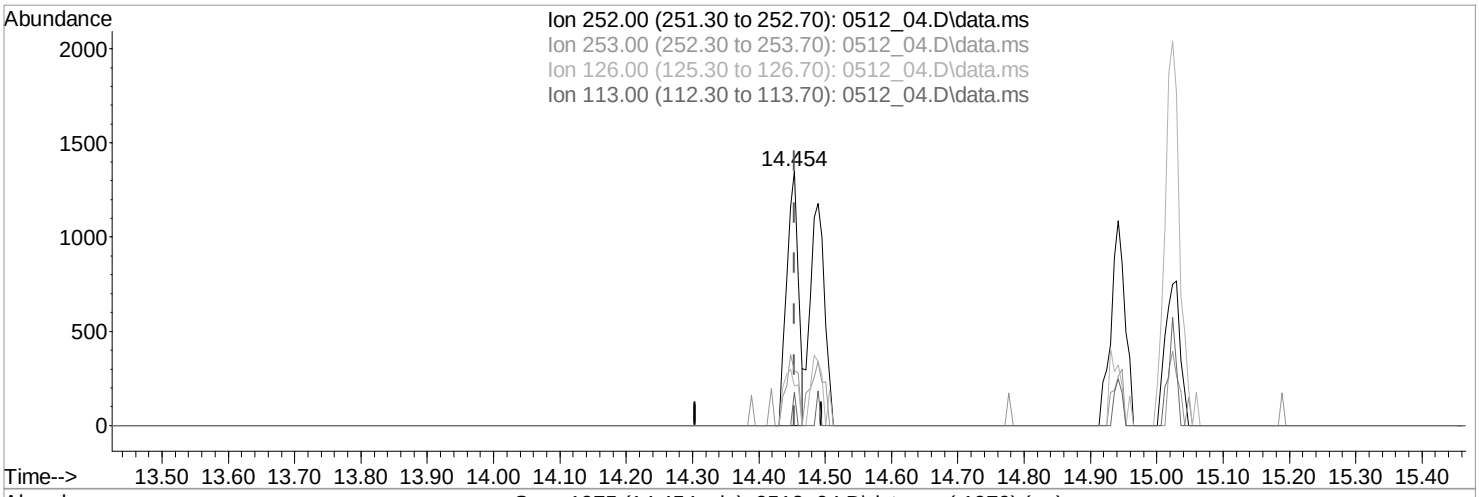
13.130min (-0.000) 50.4122339 ppb m

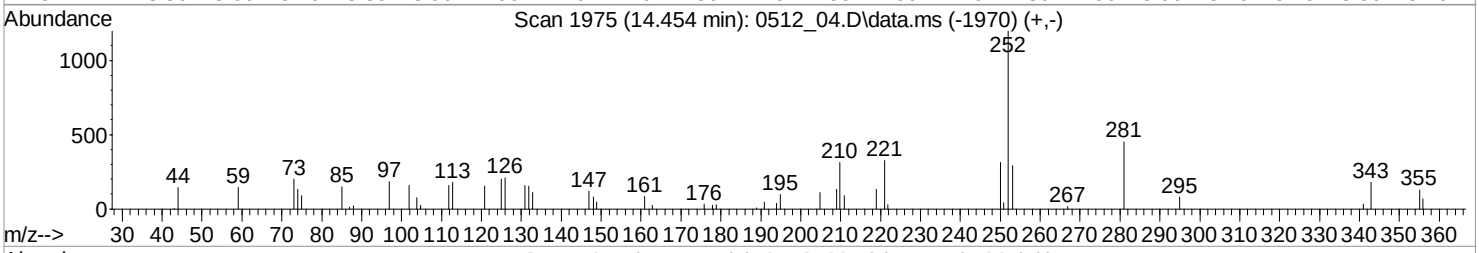
response 2583

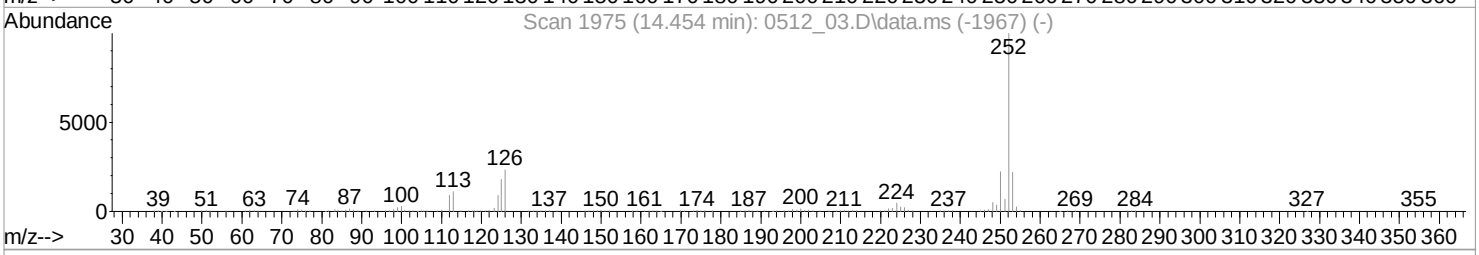
Ion	Exp%	Act%
228.00	100	100
226.00	25.60	19.15
114.00	16.70	93.32#
113.00	15.60	20.04

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 04.D
Acq On : 12 May 2016 12:21 pm
Operator : 377
Sample : STD SVMS 40 PPB 16D25863
Misc : 8270 PRIMARY CALIBRATION IS 16E12001
ALS Vial : 4 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 13 15:49:05 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 15:49:02 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M







TIC: 0512_04.D\data.ms

(89) Benzo(b)fluoranthene (MT)

14.454min (-0.000) 31.7087057 ppb

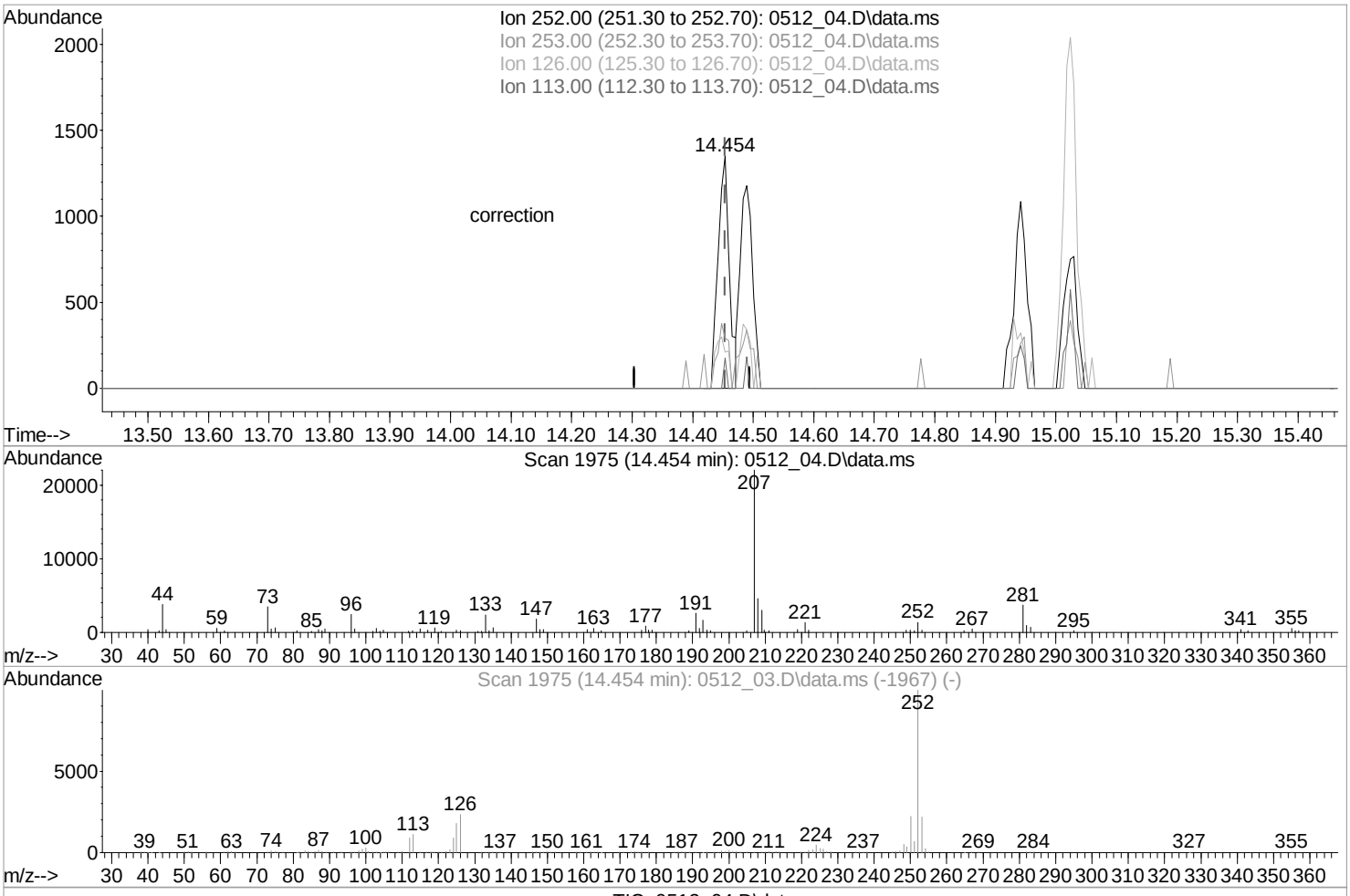
Qvalue = 91

response 1688

Ion	Exp%	Act%
252.00	100	100
253.00	21.70	24.43
126.00	23.30	17.59
113.00	11.00	14.76

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 04.D
Acq On : 12 May 2016 12:21 pm
Operator : 377
Sample : STD SVMS 40 PPB 16D25863
Misc : 8270 PRIMARY CALIBRATION IS 16E12001
ALS Vial : 4 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 13 15:49:05 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 15:49:02 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M



TIC: 0512_04.D\data.ms

(89) Benzo(b)fluoranthene (MT)

14.454min (-0.000) 33.6435378 ppb m

response 1791

Ion	Exp%	Act%
252.00	100	100
253.00	21.70	21.69
126.00	23.30	15.62
113.00	11.00	13.10

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 05.D
Acq On : 12 May 2016 12:44 pm
Operator : 377
Sample : STD SVMS 200 PPB 16D25863
Misc : 8270 PRIMARY CALIBRATION IS 16E12001
ALS Vial : 5 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 13 15:52:56 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 15:51:14 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M

Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	5.437	152	56228	8000.0000000 ppb		0.00
22) Naphthalene-d8	6.719	136	325186	8000.0000000 ppb		0.00
40) Acenaphthene-d10	8.607	164	190495	8000.0000000 ppb		0.00
64) Phenanthrene-d10	10.236	188	339198	8000.0000000 ppb		0.00
78) Chrysene-d12	13.136	240	322664	8000.0000000 ppb		0.00
88) Perylene-d12	15.024	264	308336	8000.0000000 ppb		0.00
System Monitoring Compounds						
4) 2-Fluorophenol	4.301	112	1951	162.9850188 ppb		0.00
Spiked Amount 20.000	Range 10 - 87		Recovery = 814.93%#			
7) Phenol-d5	5.037	99	2522	163.9749142 ppb		0.00
Spiked Amount 20.000	Range 10 - 67		Recovery = 819.87%#			
23) Nitrobenzene-d5	5.966	82	2165	158.1292497 ppb		0.00
Spiked Amount 10.000	Range 12 - 120		Recovery = 1581.29%#			
44) 2-Fluorobiphenyl	7.860	172	6100	192.2579219 ppb		0.00
Spiked Amount 10.000	Range 26 - 122		Recovery = 1922.58%#			
67) 2,4,6-Tribromophenol	9.466	330	352	100.0366784 ppb		0.00
Spiked Amount 20.000	Range 10 - 148		Recovery = 500.18%#			
81) p-Terphenyl-d14	11.960	244	5799	167.4362403 ppb		0.00
Spiked Amount 10.000	Range 34 - 149		Recovery = 1674.36%#			
Target Compounds						Qvalue
2) Pyridine	3.378	79	2312	146.9354937 ppb	#	99
3) N-Nitrosodimethylamine	3.348	42	774	119.0966145 ppb	#	89
5) Aniline	5.125	66	1133	157.7638969 ppb		89
6) bis(2-Chloroethyl)ether	5.166	93	2588	188.3659929 ppb		95
8) Phenol	5.054	94	2693	168.3350928 ppb		99
10) 2-Chlorophenol	5.237	128	2623	176.2652481 ppb		93
11) n-Decane	5.254	41	1402	193.0412571 ppb	#	92
12) 1,3-Dichlorobenzene	5.384	146	3150	189.5206322 ppb		94
13) 1,4-Dichlorobenzene	5.454	146	3141	187.3745338 ppb		93
14) Benzyl Alcohol	5.542	79	1712	163.2372010 ppb		99
15) 1,2-Dichlorobenzene	5.601	146	2962	182.3154484 ppb		96
16) bis(2-Chloroisopropyl)...	5.678	121	848	175.1379655 ppb	#	75
17) 2-Methylphenol	5.625	108	2138	164.9906838 ppb		95
18) Hexachloroethane	5.942	117	1194	164.1451203 ppb		85
19) N-Nitrosodi-n-propylamine	5.795	70	1089	154.1818574 ppb		88
20) 3&4-Methyl phenol	5.772	107	2446	164.3499706 ppb		95
24) Nitrobenzene	5.984	77	2406	173.1729862 ppb	#	83
25) Isophorone	6.225	82	3719	149.8586452 ppb		96
26) 2-Nitrophenol	6.313	139	973	124.1567261 ppb		91
27) 2,4-Dimethylphenol	6.319	107	2349	167.4746021 ppb		93
28) bis(2-Chlorethoxy)methane	6.431	93	3108	178.5380453 ppb		96
29) 2,4-Dichlorophenol	6.548	162	1844	155.7348816 ppb		95
31) 1,2,4-Trichlorobenzene	6.648	180	2425	189.7000408 ppb		90
32) Naphthalene	6.742	128	10008	167.6060222 ppb		98
33) 4-Chloroaniline	6.778	65	890	177.5178950 ppb		91
34) Hexachloro-1,3-butadiene	6.860	225	1118	175.1648806 ppb		92
36) 4-Chloro-3-methylphenol	7.266	107	2015	159.8907124 ppb		97
37) 2-Methylnaphthalene	7.472	142	5640	192.0496242 ppb		98
38) 1-Methylnaphthalene	7.583	142	5562	190.0487934 ppb		99
41) Hexachlorocyclopentadiene	7.642	237	1245	165.0673684 ppb		85

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 05.D
Acq On : 12 May 2016 12:44 pm
Operator : 377
Sample : STD SVMS 200 PPB 16D25863
Misc : 8270 PRIMARY CALIBRATION IS 16E12001
ALS Vial : 5 Sample Multiplier: 1
InstName : BNAMS23

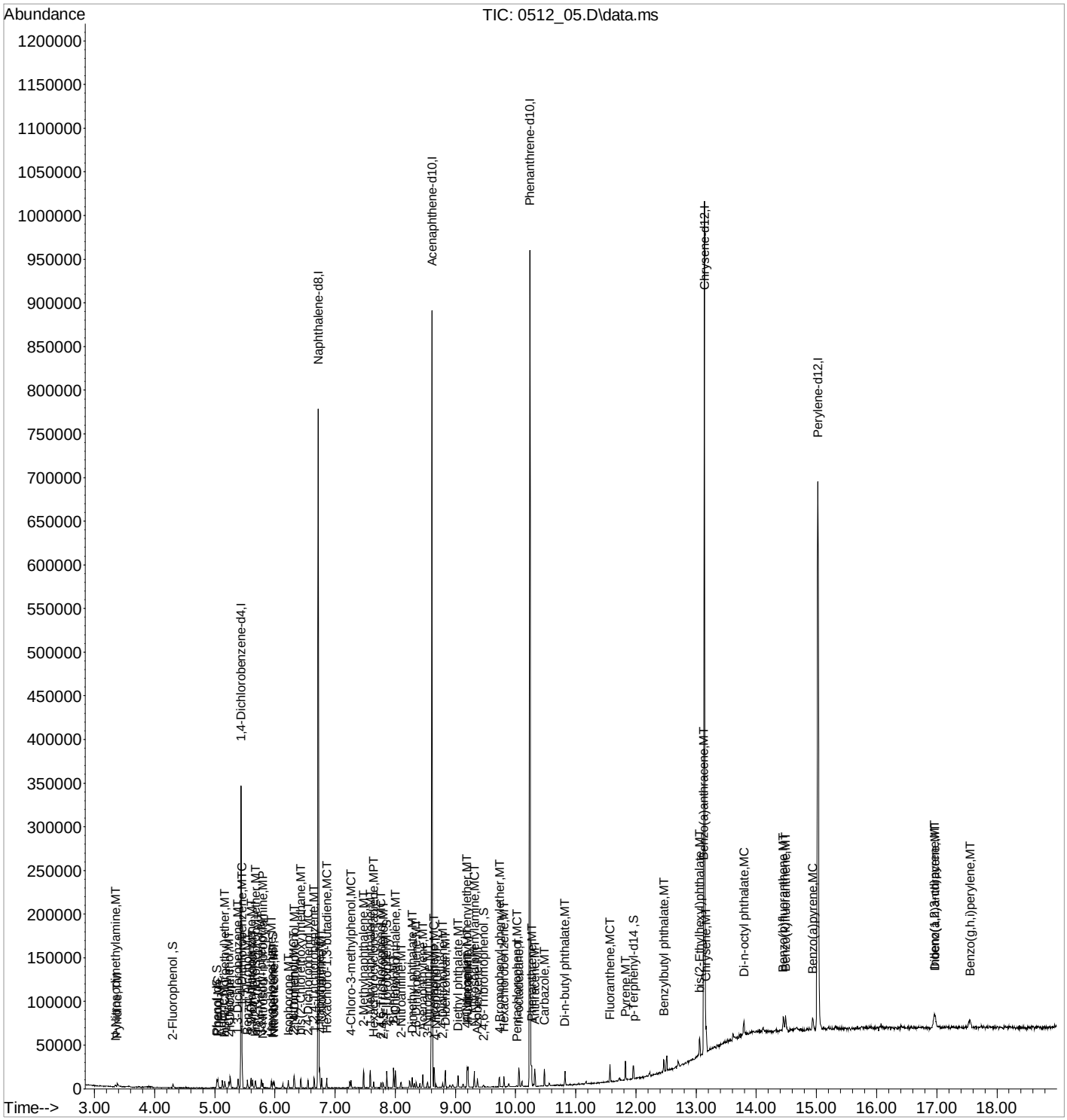
Quant Time: May 13 15:52:56 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 15:51:14 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M

Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
42) 2,4,6-Trichlorophenol	7.760	196	885	114.5718034 ppb		82
43) 2,4,5-Trichlorophenol	7.801	196	1037	123.1487082 ppb		90
45) Biphenyl	7.972	154	7058	193.6501974 ppb		99
46) 2-Chloronaphthalene	8.001	162	5527	205.2370905 ppb		98
47) 2-Nitroaniline	8.095	138	1429	142.1708812 ppb	#	98
48) Acenaphthylene	8.454	152	7714	176.5512397 ppb		96
49) Dimethyl phthalate	8.283	163	5289	173.1490092 ppb		94
50) 2,6-Dinitrotoluene	8.348	165	854	113.1145275 ppb		90
51) 3-Nitroaniline	8.536	138	952	107.9546354 ppb		98
52) Acenaphthene	8.642	153	5469	190.9409028 ppb		91
54) Dibenzofuran	8.830	168	8086	196.1781386 ppb	#	98
55) 2,4-Dinitrotoluene	8.789	165	1054	109.4245042 ppb		95
57) 4-Nitrophenol	8.678	139	659	96.8946963 ppb	#	69
58) Fluorene	9.207	166	6241	188.1777957 ppb		94
59) 4-Chlorophenyl-phenyle...	9.189	204	2466	181.2890968 ppb		86
60) Diethyl phthalate	9.042	149	5491	166.8831372 ppb		95
61) 4-Nitroaniline	9.195	138	1061	223.9533333 ppb		90
62) Azobenzene	9.366	77	4541	139.6155077 ppb		97
66) N-Nitrosodiphenylamine	9.313	169	4758	168.8871211 ppb		95
68) 4-Bromophenyl-phenylether	9.730	248	1396	178.3246011 ppb		89
69) Hexachlorobenzene	9.807	284	1648	194.0923635 ppb		95
70) n-octadecane	10.054	55	967	168.9895103 ppb	#	96
71) Pentachlorophenol	10.019	266	180	41.2497103 ppb	#	49
72) Phenanthrene	10.266	178	9581	187.1169929 ppb		98
73) Anthracene	10.319	178	7792	167.0399532 ppb		98
74) Carbazole	10.477	167	8284	172.2487412 ppb		97
75) Di-n-butyl phthalate	10.819	149	8760	131.5089362 ppb		97
77) Fluoranthene	11.571	202	8530	183.5224627 ppb		96
80) Pyrene	11.824	202	8578	172.7105913 ppb		99
82) Benzylbutyl phthalate	12.466	149	3761	125.7174694 ppb		98
84) Benzo(a)anthracene	13.124	228	9032	158.1534092 ppb		93
85) Chrysene	13.165	228	9282	193.8390035 ppb		97
86) bis(2-Ethylhexyl)phtha...	13.060	149	6380m	147.0978117 ppb		
87) Di-n-octyl phthalate	13.795	149	8877	118.4139375 ppb		95
89) Benzo(b)fluoranthene	14.448	252	8608m	180.3761679 ppb		
90) Benzo(k)fluoranthene	14.489	252	7461	170.0890829 ppb		94
91) Benzo(a)pyrene	14.936	252	7583	172.2743864 ppb		97
92) Indeno(1,2,3-cd)pyrene	16.965	276	8264	178.6594800 ppb		93
93) Dibenz(a,h)anthracene	16.971	278	7020	170.1783361 ppb		94
94) Benzo(g,h,i)perylene	17.553	276	7544	189.1467202 ppb		91

(#) = qualifier out of range (m) = manual integration (+) = signals summed

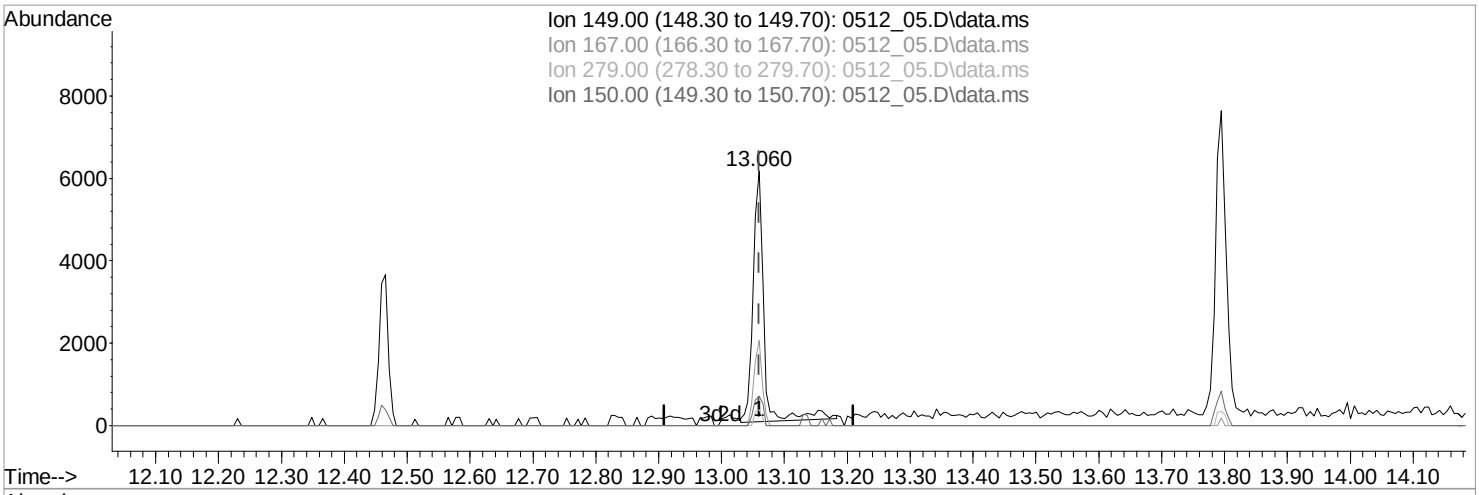
Data Path : C:\msdchem\1\data\051216\
Data File : 0512 05.D
Acq On : 12 May 2016 12:44 pm
Operator : 377
Sample : STD SVMS 200 PPB 16D25863
Misc : 8270 PRIMARY CALIBRATION IS 16E12001
ALS Vial : 5 Sample Multiplier: 1
InstName : BNAMS23

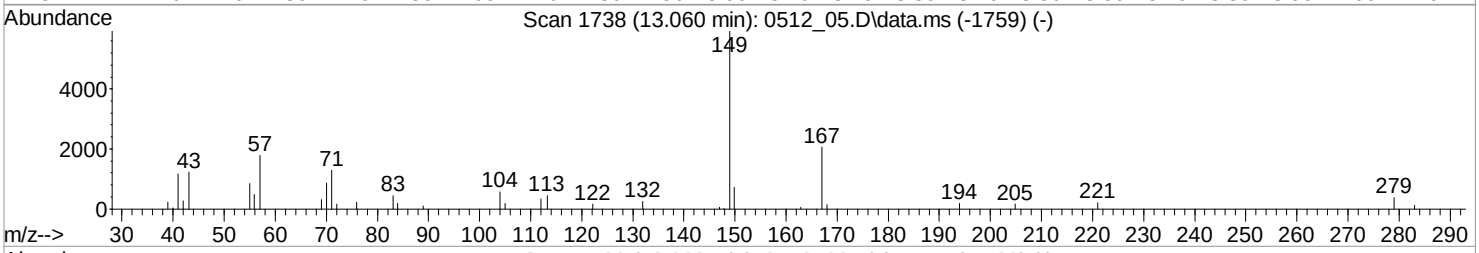
Quant Time: May 13 15:52:56 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 15:51:14 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M

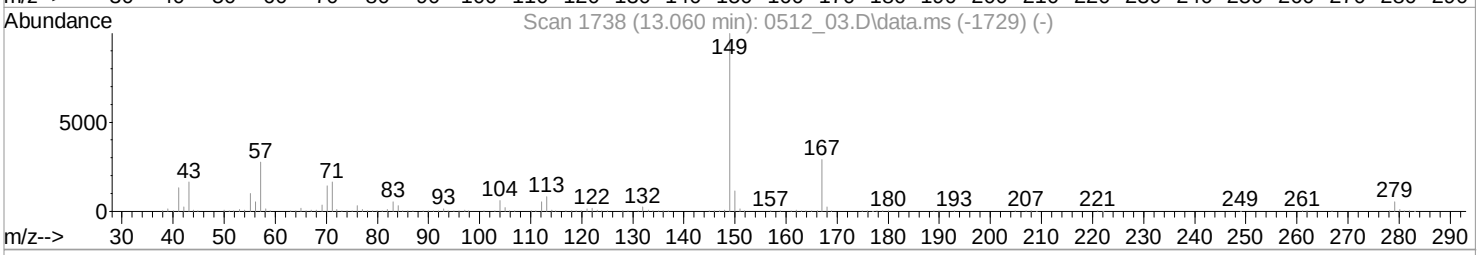


Data Path : C:\msdchem\1\data\051216\
Data File : 0512 05.D
Acq On : 12 May 2016 12:44 pm
Operator : 377
Sample : STD SVMS 200 PPB 16D25863
Misc : 8270 PRIMARY CALIBRATION IS 16E12001
ALS Vial : 5 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 13 15:51:17 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 15:51:14 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M







TIC: 0512_05.D\data.ms

(86) bis(2-Ethylhexyl)phthalate (MT)

13.060min (-0.000) 165.1276689 ppb

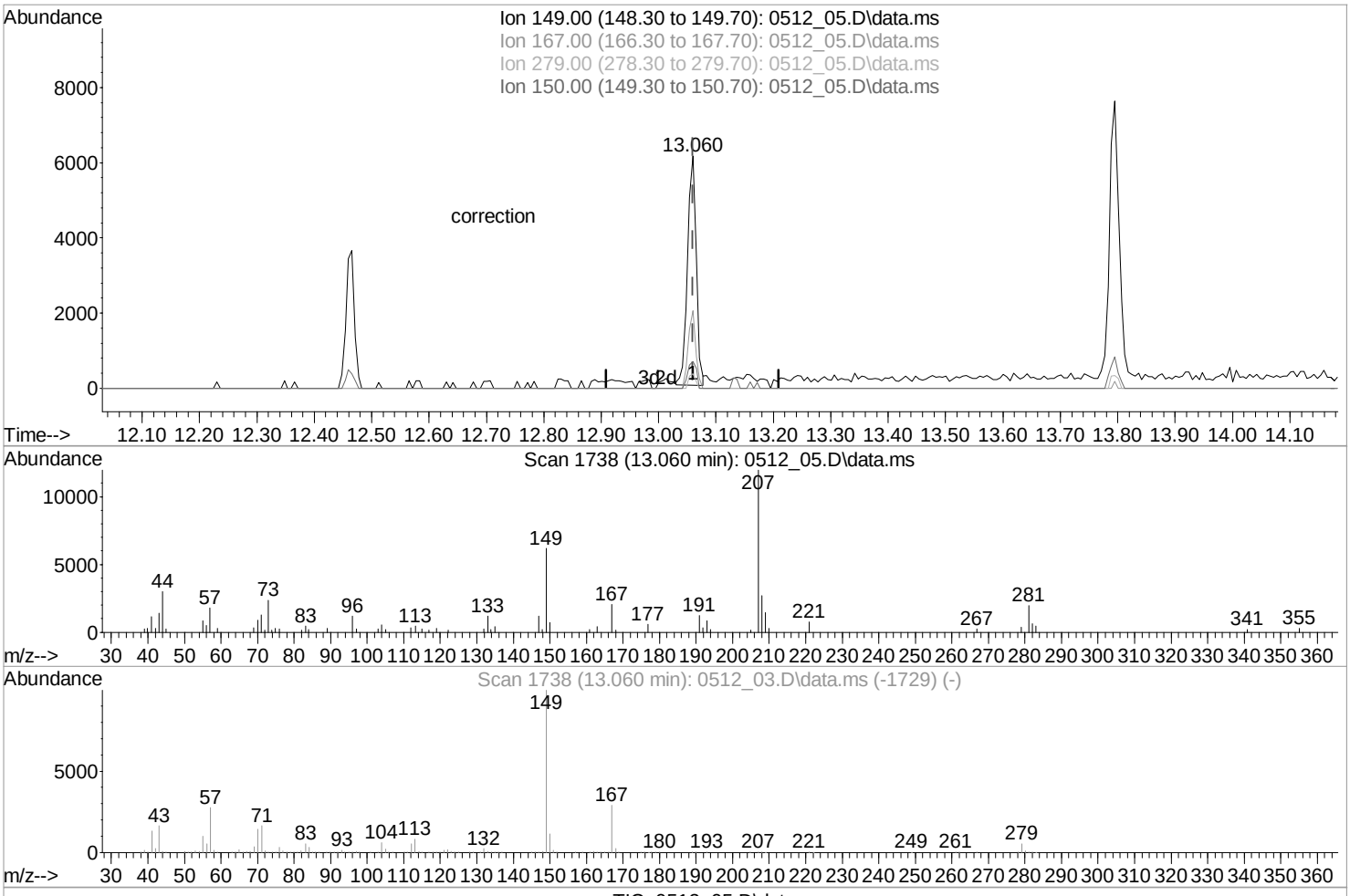
Qvalue = 93

response 7162

Ion	Exp%	Act%
149.00	100	100
167.00	28.80	34.33
279.00	5.20	6.40
150.00	11.50	11.75

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 05.D
Acq On : 12 May 2016 12:44 pm
Operator : 377
Sample : STD SVMS 200 PPB 16D25863
Misc : 8270 PRIMARY CALIBRATION IS 16E12001
ALS Vial : 5 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 13 15:51:17 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 15:51:14 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M



TIC: 0512_05.D\data.ms

(86) bis(2-Ethylhexyl)phthalate (MT)

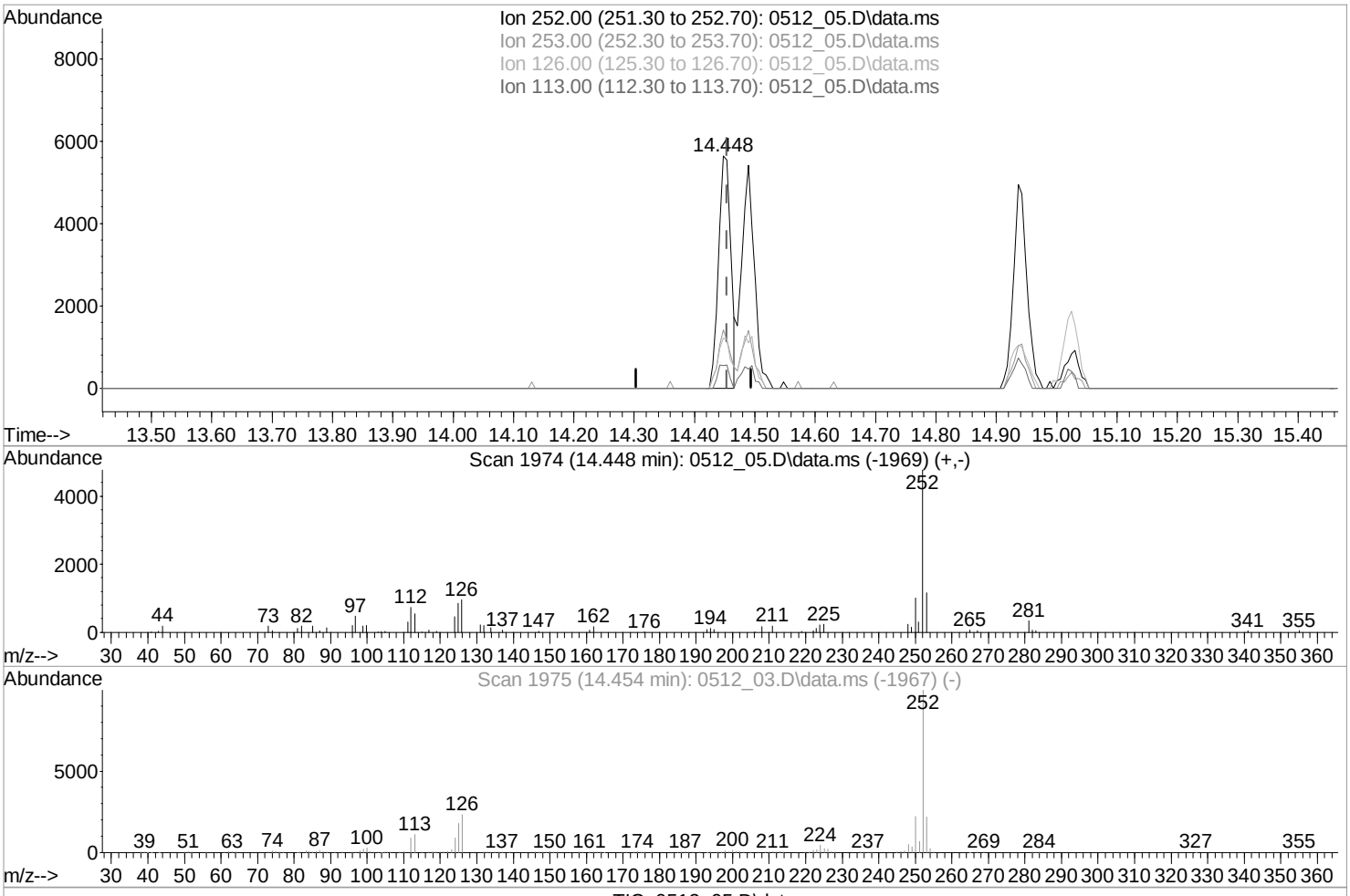
13.060min (-0.000) 147.0978117 ppb m

response 6380

Ion	Exp%	Act%
149.00	100	100
167.00	28.80	33.44
279.00	5.20	6.23
150.00	11.50	11.44

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 05.D
Acq On : 12 May 2016 12:44 pm
Operator : 377
Sample : STD SVMS 200 PPB 16D25863
Misc : 8270 PRIMARY CALIBRATION IS 16E12001
ALS Vial : 5 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 13 15:51:17 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 15:51:14 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M



TIC: 0512_05.D\data.ms

(89) Benzo(b)fluoranthene (MT)

14.448min (-0.006) 169.1445663 ppb

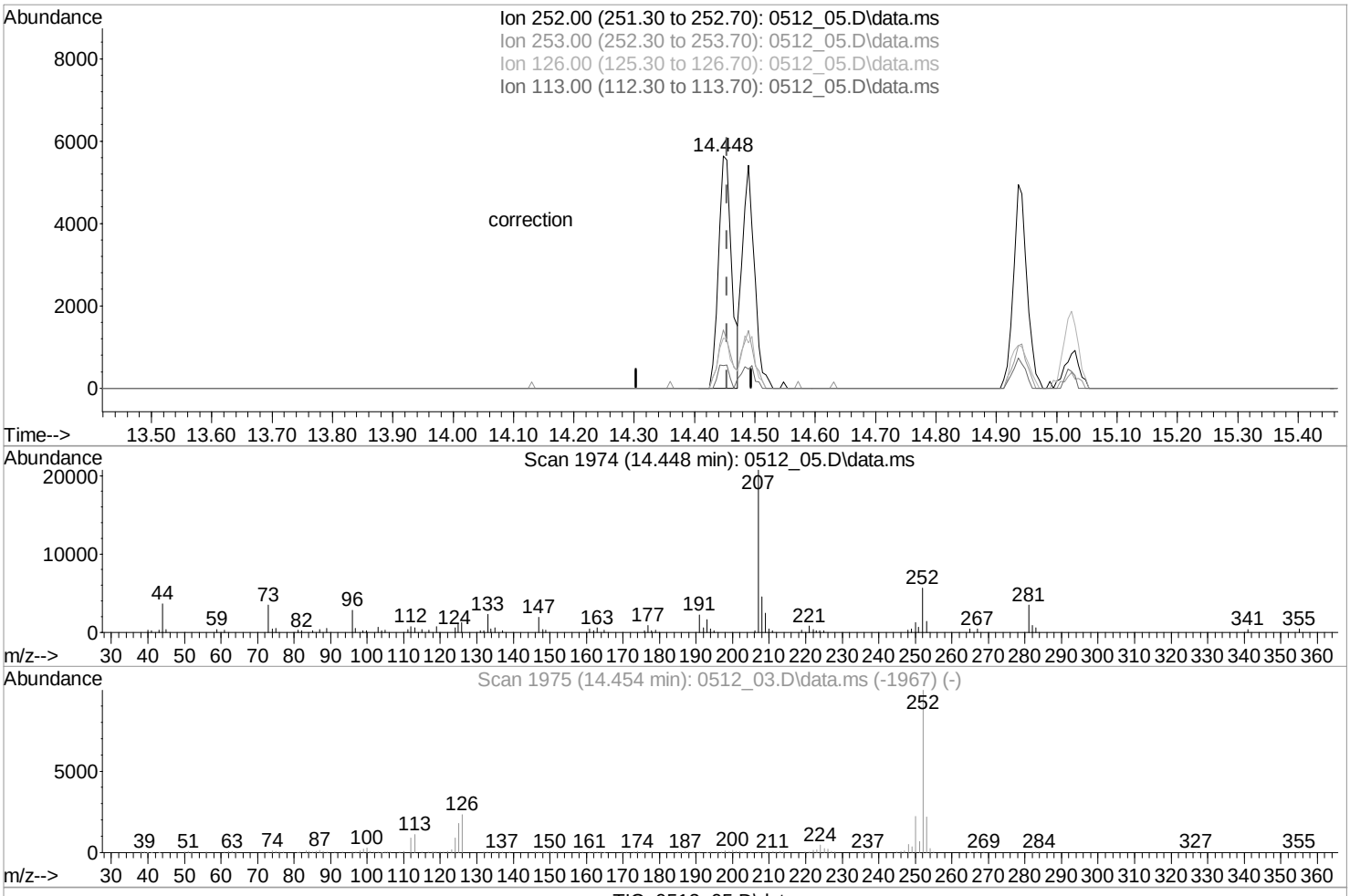
Qvalue = 95

response 8072

Ion	Exp%	Act%
252.00	100	100
253.00	21.70	24.47
126.00	23.30	19.91
113.00	11.00	11.52

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 05.D
Acq On : 12 May 2016 12:44 pm
Operator : 377
Sample : STD SVMS 200 PPB 16D25863
Misc : 8270 PRIMARY CALIBRATION IS 16E12001
ALS Vial : 5 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 13 15:51:17 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 15:51:14 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M



TIC: 0512_05.D\data.ms

(89) Benzo(b)fluoranthene (MT)

14.448min (-0.006) 180.3761679 ppb m

response 8608

Ion	Exp%	Act%
252.00	100	100
253.00	21.70	25.21
126.00	23.30	21.64
113.00	11.00	9.76

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 06.D
Acq On : 12 May 2016 1:07 pm
Operator : 377
Sample : STD SVMS 1K PPB 16D25863
Misc : 8270 PRIMARY CALIBRATION IS 16E12001
ALS Vial : 6 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 13 15:54:11 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 15:53:08 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	5.437	152	55715	8000.0000000 ppb	0.00
22) Naphthalene-d8	6.719	136	325634	8000.0000000 ppb	0.00
40) Acenaphthene-d10	8.607	164	193439	8000.0000000 ppb	0.00
64) Phenanthrene-d10	10.236	188	346379	8000.0000000 ppb	0.00
78) Chrysene-d12	13.136	240	325452	8000.0000000 ppb	0.00
88) Perylene-d12	15.024	264	317386	8000.0000000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol	4.301	112	10570	982.0129079 ppb	0.00
Spiked Amount 20.000	Range 10 - 87		Recovery = 4910.06%#		
7) Phenol-d5	5.043	99	13225	953.6676506 ppb	0.00
Spiked Amount 20.000	Range 10 - 67		Recovery = 4768.34%#		
23) Nitrobenzene-d5	5.966	82	11817	962.6841902 ppb	0.00
Spiked Amount 10.000	Range 12 - 120		Recovery = 9626.84%#		
44) 2-Fluorobiphenyl	7.860	172	30989	980.8210580 ppb	0.00
Spiked Amount 10.000	Range 26 - 122		Recovery = 9808.21%#		
67) 2,4,6-Tribromophenol	9.466	330	2240	831.0975253 ppb	0.00
Spiked Amount 20.000	Range 10 - 148		Recovery = 4155.49%#		
81) p-Terphenyl-d14	11.960	244	32197	1003.3520302 ppb	0.00
Spiked Amount 10.000	Range 34 - 149		Recovery = 10033.52%#		
Target Compounds					Qvalue
2) Pyridine	3.372	79	13314	984.5532246 ppb #	92
3) N-Nitrosodimethylamine	3.343	42	5230	1018.0718764 ppb	97
5) Aniline	5.125	66	6710	1054.2514711 ppb	95
6) bis(2-Chloroethyl)ether	5.166	93	12908	976.5544929 ppb	97
8) Phenol	5.054	94	13858	949.3716552 ppb	96
10) 2-Chlorophenol	5.237	128	12645	911.6615188 ppb	98
11) n-Decane	5.254	41	6509	920.4893061 ppb #	93
12) 1,3-Dichlorobenzene	5.384	146	15557	970.0225282 ppb	99
13) 1,4-Dichlorobenzene	5.454	146	15570	967.9226831 ppb	99
14) Benzyl Alcohol	5.543	79	8879	940.8699700 ppb	99
15) 1,2-Dichlorobenzene	5.601	146	15285	993.3962228 ppb	97
16) bis(2-Chloroisopropyl)...	5.678	121	4365	970.1037203 ppb	97
17) 2-Methylphenol	5.631	108	11028	941.2547745 ppb	98
18) Hexachloroethane	5.937	117	6206	945.8045937 ppb	89
19) N-Nitrosodi-n-propylamine	5.795	70	5537	893.4990571 ppb	91
20) 3&4-Methyl phenol	5.772	107	13042	970.9103431 ppb	97
24) Nitrobenzene	5.984	77	11970	922.2115620 ppb	91
25) Isophorone	6.225	82	20759	955.0619212 ppb	97
26) 2-Nitrophenol	6.313	139	5655	889.1951208 ppb	91
27) 2,4-Dimethylphenol	6.319	107	12641	979.6752314 ppb	94
28) bis(2-Chlorethoxy)methane	6.431	93	16021	971.1625753 ppb	96
29) 2,4-Dichlorophenol	6.548	162	9592	909.6404946 ppb	98
31) 1,2,4-Trichlorobenzene	6.648	180	12109	970.9471617 ppb	91
32) Naphthalene	6.742	128	45736	808.5499476 ppb	99
33) 4-Chloroaniline	6.778	65	4222	891.0352929 ppb	94
34) Hexachloro-1,3-butadiene	6.860	225	6168	1028.9387167 ppb	92
36) 4-Chloro-3-methylphenol	7.266	107	10341	910.7562776 ppb	96
37) 2-Methylnaphthalene	7.472	142	28731	990.1029088 ppb	99
38) 1-Methylnaphthalene	7.584	142	28127	975.9396554 ppb	99
41) Hexachlorocyclopentadiene	7.642	237	6436	920.7345294 ppb	91

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 06.D
Acq On : 12 May 2016 1:07 pm
Operator : 377
Sample : STD SVMS 1K PPB 16D25863
Misc : 8270 PRIMARY CALIBRATION IS 16E12001
ALS Vial : 6 Sample Multiplier: 1
InstName : BNAMS23

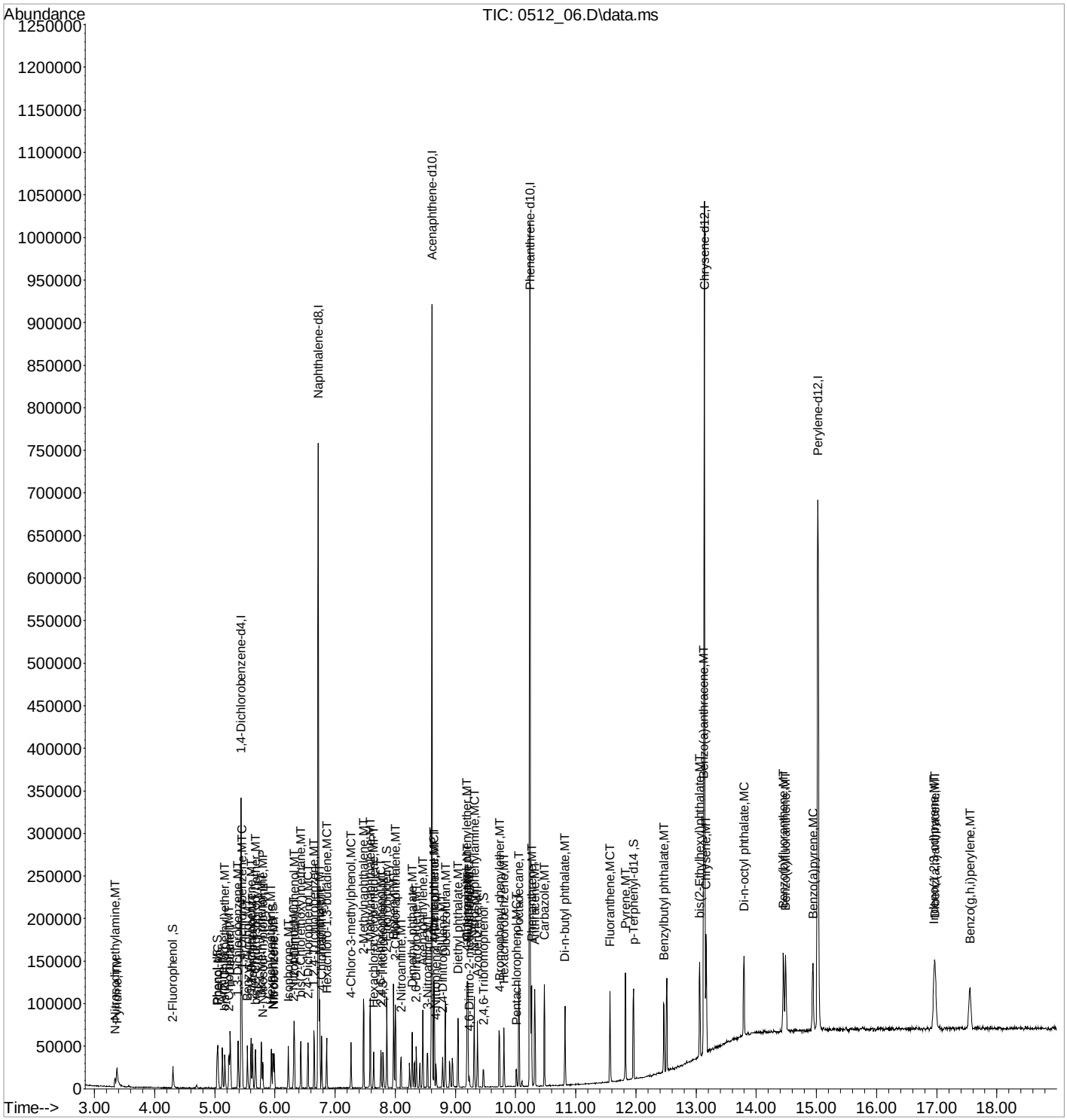
Quant Time: May 13 15:54:11 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 15:53:08 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M

Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
42) 2,4,6-Trichlorophenol	7.760	196	5818	943.1655668 ppb		87
43) 2,4,5-Trichlorophenol	7.795	196	6374	922.6994741 ppb		92
45) Biphenyl	7.972	154	35069	962.8280465 ppb		100
46) 2-Chloronaphthalene	8.001	162	27204	986.1986624 ppb		96
47) 2-Nitroaniline	8.095	138	7079	810.7870894 ppb		96
48) Acenaphthylene	8.454	152	42895	1006.1221076 ppb		98
49) Dimethyl phthalate	8.278	163	28024	968.4870304 ppb		99
50) 2,6-Dinitrotoluene	8.348	165	5997	999.2884778 ppb		92
51) 3-Nitroaniline	8.536	138	6742	977.9257533 ppb		92
52) Acenaphthene	8.642	153	28516	995.4659191 ppb		98
53) 2,4-Dinitrophenol	8.648	184	1013	332.0059157 ppb	#	1
54) Dibenzofuran	8.831	168	41352	997.5218526 ppb		99
55) 2,4-Dinitrotoluene	8.789	165	6785	896.7443704 ppb		96
57) 4-Nitrophenol	8.678	139	4475	872.9808670 ppb		92
58) Fluorene	9.207	166	32121	972.9385676 ppb		99
59) 4-Chlorophenyl-phenyle...	9.189	204	12794	971.6953107 ppb		91
60) Diethyl phthalate	9.042	149	30540	996.5562733 ppb		98
61) 4-Nitroaniline	9.195	138	6618	1297.9273665 ppb		95
62) Azobenzene	9.366	77	28469	1015.2345558 ppb		99
65) 4,6-Dinitro-2-methylph...	9.231	198	1636	408.3923059 ppb		93
66) N-Nitrosodiphenylamine	9.313	169	25471	960.0333452 ppb		99
68) 4-Bromophenyl-phenylether	9.730	248	7007	926.7340022 ppb		96
69) Hexachlorobenzene	9.807	284	8302	971.8464911 ppb		95
70) n-octadecane	10.054	55	5155	956.3341027 ppb		96
71) Pentachlorophenol	10.013	266	2397	891.8901164 ppb		97
72) Phenanthrene	10.266	178	49377	965.0624506 ppb		97
73) Anthracene	10.319	178	44048	978.4461506 ppb		99
74) Carbazole	10.477	167	45216	989.3195448 ppb		99
75) Di-n-butyl phthalate	10.819	149	50240	891.1837719 ppb		100
77) Fluoranthene	11.572	202	45169	978.5343452 ppb		99
80) Pyrene	11.824	202	47641	996.3075061 ppb		99
82) Benzylbutyl phthalate	12.466	149	20920	851.4055663 ppb		97
84) Benzo(a)anthracene	13.124	228	46730	872.0706042 ppb		99
85) Chrysene	13.166	228	47638	996.5503011 ppb		98
86) bis(2-Ethylhexyl)phtha...	13.060	149	32488	855.8155910 ppb		99
87) Di-n-octyl phthalate	13.795	149	53044	881.2606121 ppb		100
89) Benzo(b)fluoranthene	14.448	252	46332m	975.0706703 ppb		
90) Benzo(k)fluoranthene	14.489	252	44116	1028.3016239 ppb		99
91) Benzo(a)pyrene	14.942	252	41431	958.7127026 ppb		99
92) Indeno(1,2,3-cd)pyrene	16.954	276	47669	1038.0934350 ppb		97
93) Dibenz(a,h)anthracene	16.971	278	41701	1033.4527774 ppb		93
94) Benzo(g,h,i)perylene	17.554	276	41931	1040.1515231 ppb		96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

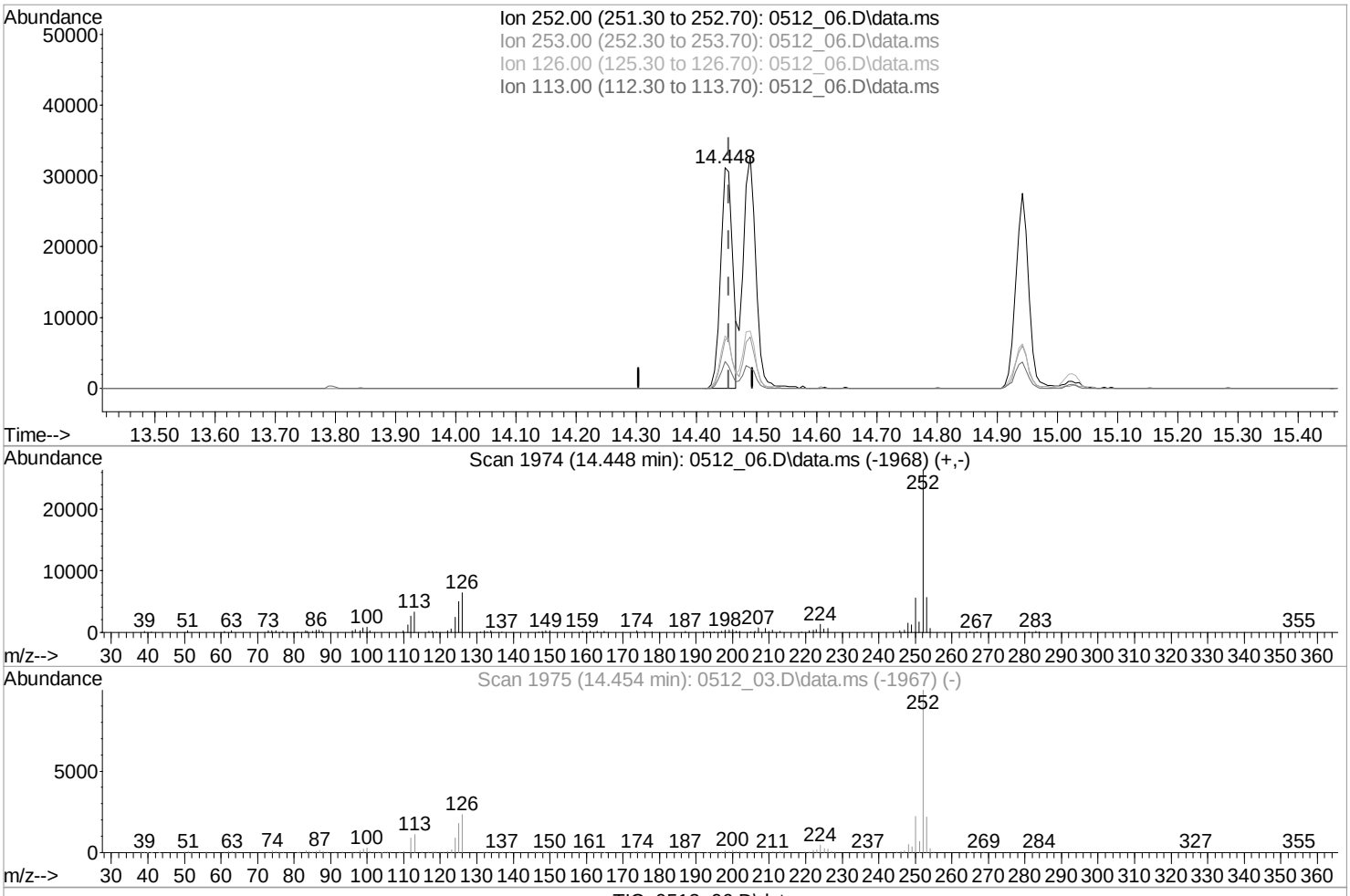
Data Path : C:\msdchem\1\data\051216\
Data File : 0512 06.D
Acq On : 12 May 2016 1:07 pm
Operator : 377
Sample : STD SVMS 1K PPB 16D25863
Misc : 8270 PRIMARY CALIBRATION IS 16E12001
ALS Vial : 6 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 13 15:54:11 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 15:53:08 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M



Data Path : C:\msdchem\1\data\051216\
Data File : 0512 06.D
Acq On : 12 May 2016 1:07 pm
Operator : 377
Sample : STD SVMS 1K PPB 16D25863
Misc : 8270 PRIMARY CALIBRATION IS 16E12001
ALS Vial : 6 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 13 15:53:19 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 15:53:08 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M



TIC: 0512_06.D\data.ms

(89) Benzo(b)fluoranthene (MT)

14.448min (-0.006) 914.7758963 ppb

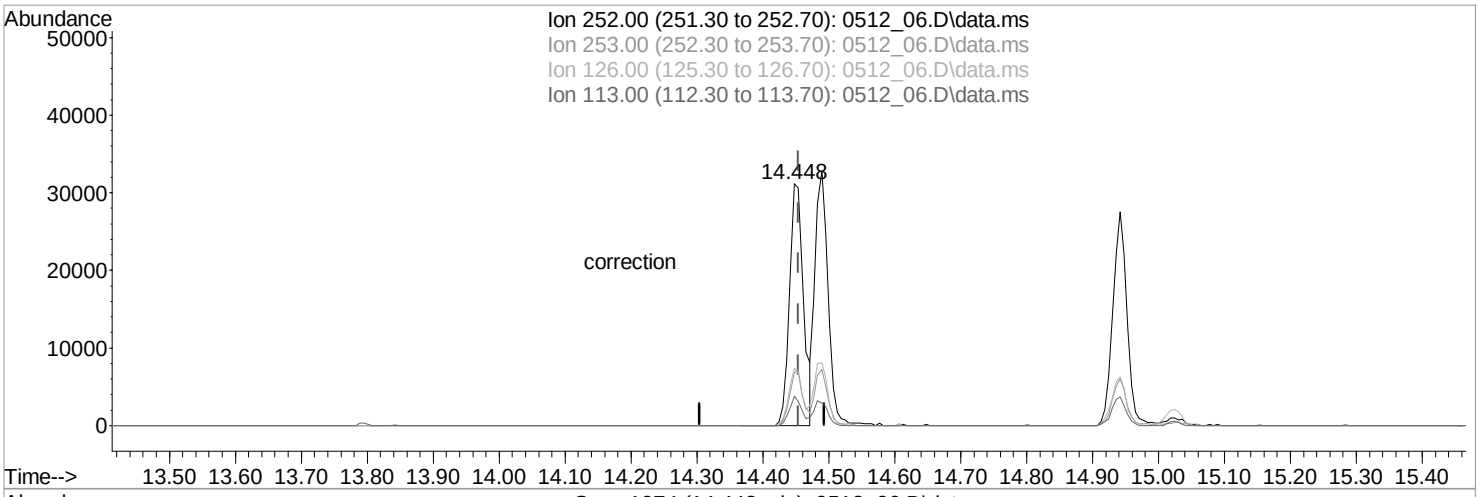
Qvalue = 98

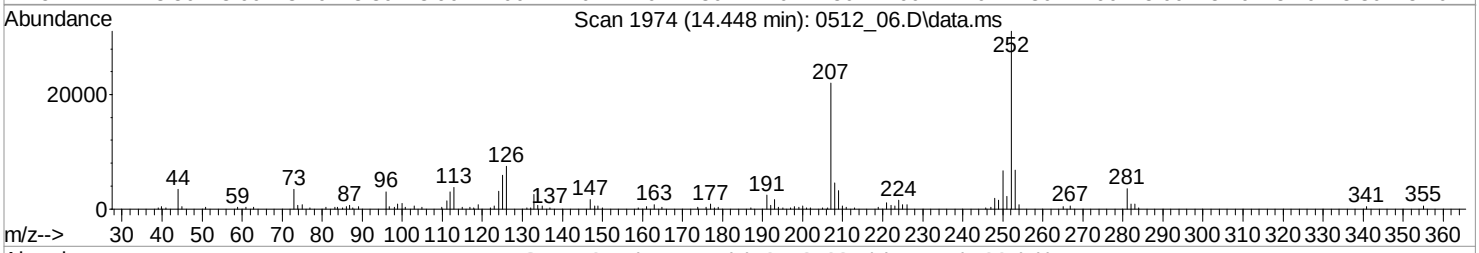
response 43467

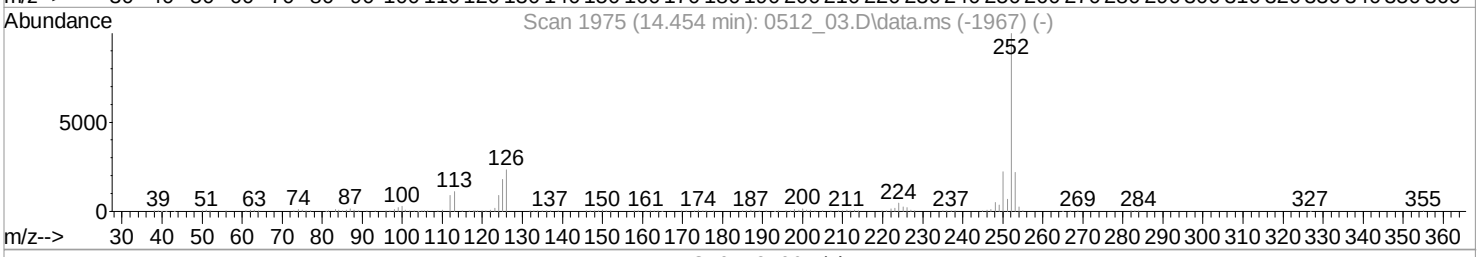
Ion	Exp%	Act%
252.00	100	100
253.00	21.70	21.33
126.00	23.30	24.20
113.00	11.00	12.45

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 06.D
Acq On : 12 May 2016 1:07 pm
Operator : 377
Sample : STD SVMS 1K PPB 16D25863
Misc : 8270 PRIMARY CALIBRATION IS 16E12001
ALS Vial : 6 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 13 15:53:19 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 15:53:08 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M







TIC: 0512_06.D\data.ms

(89) Benzo(b)fluoranthene (MT)

14.448min (-0.006) 975.0706703 ppb m

response 46332

Ion	Exp%	Act%
252.00	100	100
253.00	21.70	21.81
126.00	23.30	23.81
113.00	11.00	12.02

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 07.D
Acq On : 12 May 2016 1:30 pm
Operator : 377
Sample : STD SVMS 2K PPB 16D25863
Misc : 8270 PRIMARY CALIBRATION IS 16E12001
ALS Vial : 7 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 13 15:55:21 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 15:54:24 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 1,4-Dichlorobenzene-d4	5.437	152	60265	8000.0000000	ppb		0.00
22) Naphthalene-d8	6.719	136	338690	8000.0000000	ppb		0.00
40) Acenaphthene-d10	8.607	164	201621	8000.0000000	ppb		0.00
64) Phenanthrene-d10	10.236	188	357060	8000.0000000	ppb		0.00
78) Chrysene-d12	13.136	240	348686	8000.0000000	ppb		0.00
88) Perylene-d12	15.024	264	334538	8000.0000000	ppb		0.00
System Monitoring Compounds							
4) 2-Fluorophenol	4.302	112	21446	1853.1356902	ppb		0.00
Spiked Amount 20.000	Range 10 - 87		Recovery = 9265.68%#				
7) Phenol-d5	5.043	99	27672	1873.7365207	ppb		0.00
Spiked Amount 20.000	Range 10 - 67		Recovery = 9368.68%#				
23) Nitrobenzene-d5	5.966	82	24352	1931.4101255	ppb		0.00
Spiked Amount 10.000	Range 12 - 120		Recovery = 19314.10%#				
44) 2-Fluorobiphenyl	7.860	172	61230	1871.2857136	ppb		0.00
Spiked Amount 10.000	Range 26 - 122		Recovery = 18712.86%#				
67) 2,4,6-Tribromophenol	9.466	330	5202	1984.0430746	ppb		0.00
Spiked Amount 20.000	Range 10 - 148		Recovery = 9920.22%#				
81) p-Terphenyl-d14	11.960	244	66839	1941.9378157	ppb		0.00
Spiked Amount 10.000	Range 34 - 149		Recovery = 19419.38%#				
Target Compounds							Qvalue
2) Pyridine	3.372	79	30070	2066.3932516	ppb	#	97
3) N-Nitrosodimethylamine	3.337	42	10724	1918.3692623	ppb		92
5) Aniline	5.125	66	12972	1850.7683861	ppb		97
6) bis(2-Chloroethyl)ether	5.166	93	25602	1804.7864009	ppb		100
8) Phenol	5.054	94	29738	1915.7824380	ppb		96
10) 2-Chlorophenol	5.237	128	26167	1797.0330574	ppb		98
11) n-Decane	5.254	41	13450	1806.3394568	ppb	#	99
12) 1,3-Dichlorobenzene	5.384	146	31245	1819.3027796	ppb		97
13) 1,4-Dichlorobenzene	5.454	146	31357	1821.6385429	ppb		98
14) Benzyl Alcohol	5.543	79	17777	1776.5458876	ppb		96
15) 1,2-Dichlorobenzene	5.601	146	31055	1870.0474108	ppb		96
16) bis(2-Chloroisopropyl)...	5.678	121	9215	1912.4314388	ppb		94
17) 2-Methylphenol	5.631	108	23479	1889.6684584	ppb		97
18) Hexachloroethane	5.937	117	13199	1893.8909563	ppb		98
19) N-Nitrosodi-n-propylamine	5.796	70	12176	1883.3415938	ppb		97
20) 3&4-Methyl phenol	5.772	107	26471	1839.6870987	ppb		94
24) Nitrobenzene	5.984	77	25373	1929.5018608	ppb		94
25) Isophorone	6.225	82	43729	1963.7069896	ppb		98
26) 2-Nitrophenol	6.313	139	12350	1938.6667919	ppb		97
27) 2,4-Dimethylphenol	6.319	107	26163	1962.7633133	ppb		95
28) bis(2-Chlorethoxy)methane	6.431	93	33950	1997.8565641	ppb		97
29) 2,4-Dichlorophenol	6.548	162	19824	1863.6364539	ppb		99
31) 1,2,4-Trichlorobenzene	6.648	180	24882	1936.9851885	ppb		96
32) Naphthalene	6.743	128	91281	1629.5090209	ppb		100
33) 4-Chloroaniline	6.778	65	9423	1984.0887730	ppb		95
34) Hexachloro-1,3-butadiene	6.860	225	11670	1853.8480660	ppb		97
36) 4-Chloro-3-methylphenol	7.266	107	21779	1900.7296615	ppb		98
37) 2-Methylnaphthalene	7.472	142	58909	1956.6561367	ppb		99
38) 1-Methylnaphthalene	7.584	142	57209	1920.0453448	ppb		99
41) Hexachlorocyclopentadiene	7.643	237	13628	1921.2680628	ppb		97

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 07.D
Acq On : 12 May 2016 1:30 pm
Operator : 377
Sample : STD SVMS 2K PPB 16D25863
Misc : 8270 PRIMARY CALIBRATION IS 16E12001
ALS Vial : 7 Sample Multiplier: 1
InstName : BNAMS23

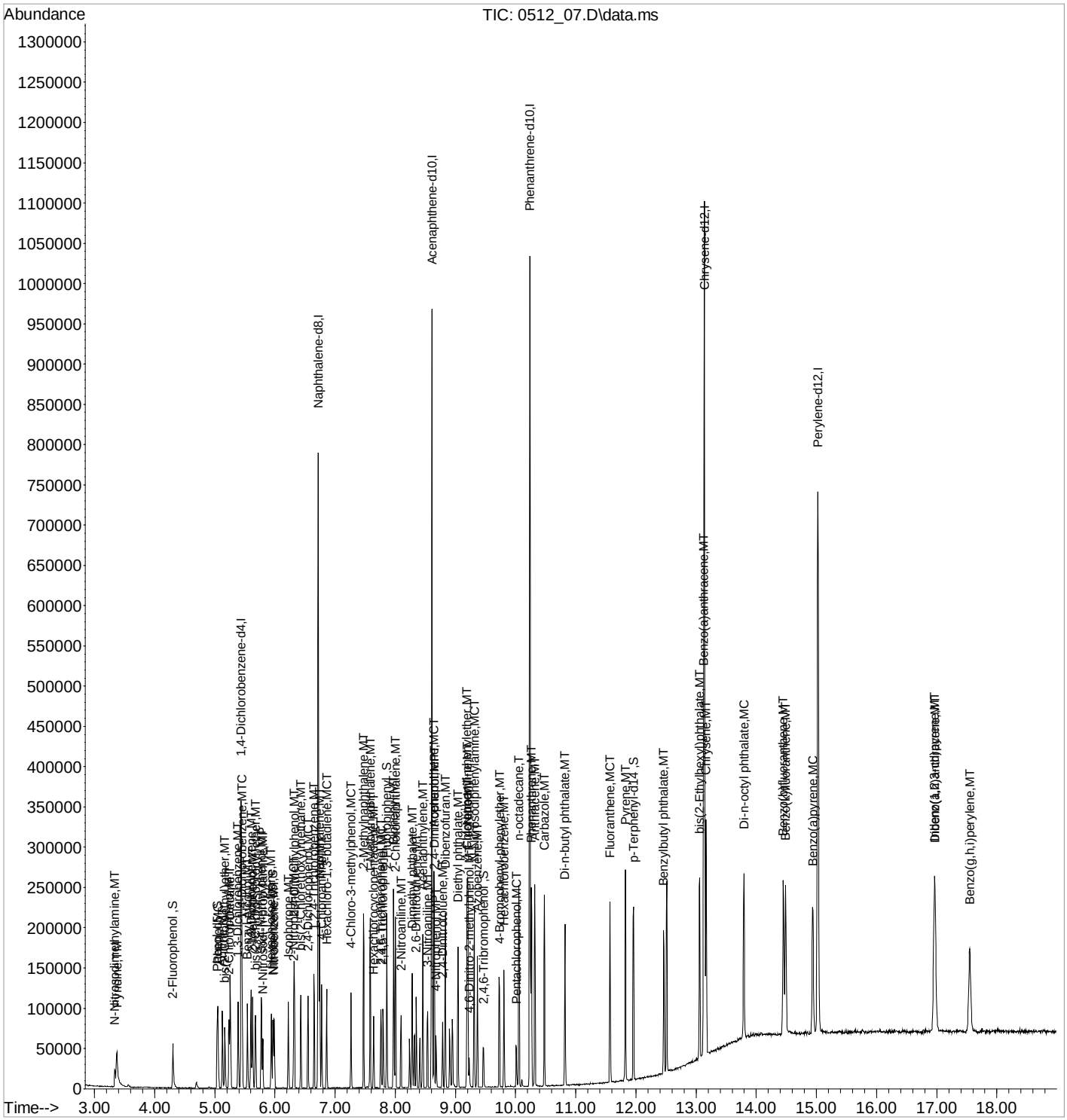
Quant Time: May 13 15:55:21 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 15:54:24 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M

Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
42) 2,4,6-Trichlorophenol	7.760	196	12636	2003.2662405 ppb		89
43) 2,4,5-Trichlorophenol	7.795	196	13954	1989.2634350 ppb		89
45) Biphenyl	7.972	154	71615	1910.0838311 ppb		99
46) 2-Chloronaphthalene	8.001	162	56273	1963.9979851 ppb		98
47) 2-Nitroaniline	8.095	138	16140	1892.9538291 ppb		100
48) Acenaphthylene	8.454	152	89522	2011.4900035 ppb		100
49) Dimethyl phthalate	8.278	163	58448	1958.5186553 ppb		98
50) 2,6-Dinitrotoluene	8.348	165	13485	2156.3490975 ppb		94
51) 3-Nitroaniline	8.537	138	15425	2162.5092355 ppb		94
52) Acenaphthene	8.642	153	59003	1978.3936920 ppb		97
53) 2,4-Dinitrophenol	8.648	184	3330	1572.2178629 ppb	#	1
54) Dibenzofuran	8.831	168	82229	1904.6627090 ppb		99
55) 2,4-Dinitrotoluene	8.790	165	15888	2086.4471823 ppb		94
57) 4-Nitrophenol	8.678	139	10293	2011.6408840 ppb		88
58) Fluorene	9.207	166	66592	1948.3852629 ppb		98
59) 4-Chlorophenyl-phenyle...	9.189	204	26583	1955.4783026 ppb		93
60) Diethyl phthalate	9.042	149	64062	2007.8921350 ppb		99
61) 4-Nitroaniline	9.195	138	14907	2551.5396432 ppb		97
62) Azobenzene	9.366	77	60693	2066.0518238 ppb		99
65) 4,6-Dinitro-2-methylph...	9.231	198	4785	1645.4811041 ppb		88
66) N-Nitrosodiphenylamine	9.313	169	53905	1997.5809009 ppb		97
68) 4-Bromophenyl-phenylether	9.731	248	14255	1874.7292564 ppb		95
69) Hexachlorobenzene	9.807	284	16996	1948.3496598 ppb		92
70) n-octadecane	10.054	55	10446	1907.6956515 ppb		98
71) Pentachlorophenol	10.013	266	6133	2296.4981669 ppb		97
72) Phenanthrene	10.260	178	96709	1849.7708171 ppb		99
73) Anthracene	10.319	178	92188	1997.2939601 ppb		99
74) Carbazole	10.478	167	94504	2013.0469606 ppb		99
75) Di-n-butyl phthalate	10.819	149	107991	1928.2401086 ppb		99
77) Fluoranthene	11.572	202	95005	2007.3786146 ppb		98
80) Pyrene	11.825	202	99931	1952.3887369 ppb		99
82) Benzylbutyl phthalate	12.460	149	46261	1848.8620892 ppb		95
84) Benzo(a)anthracene	13.125	228	97551	1755.3218144 ppb		99
85) Chrysene	13.166	228	98740	1929.5941317 ppb		99
86) bis(2-Ethylhexyl)phtha...	13.060	149	68658	1773.3395280 ppb		99
87) Di-n-octyl phthalate	13.795	149	116402	1879.4019903 ppb		99
89) Benzo(b)fluoranthene	14.448	252	98840m	1985.8444584 ppb		
90) Benzo(k)fluoranthene	14.489	252	91357	2006.0721235 ppb		97
91) Benzo(a)pyrene	14.942	252	91022	2019.0996627 ppb		98
92) Indeno(1,2,3-cd)pyrene	16.960	276	99185	2029.8892252 ppb		96
93) Dibenz(a,h)anthracene	16.971	278	87950	2050.7151288 ppb		97
94) Benzo(g,h,i)perylene	17.548	276	86015	2004.1961841 ppb		98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

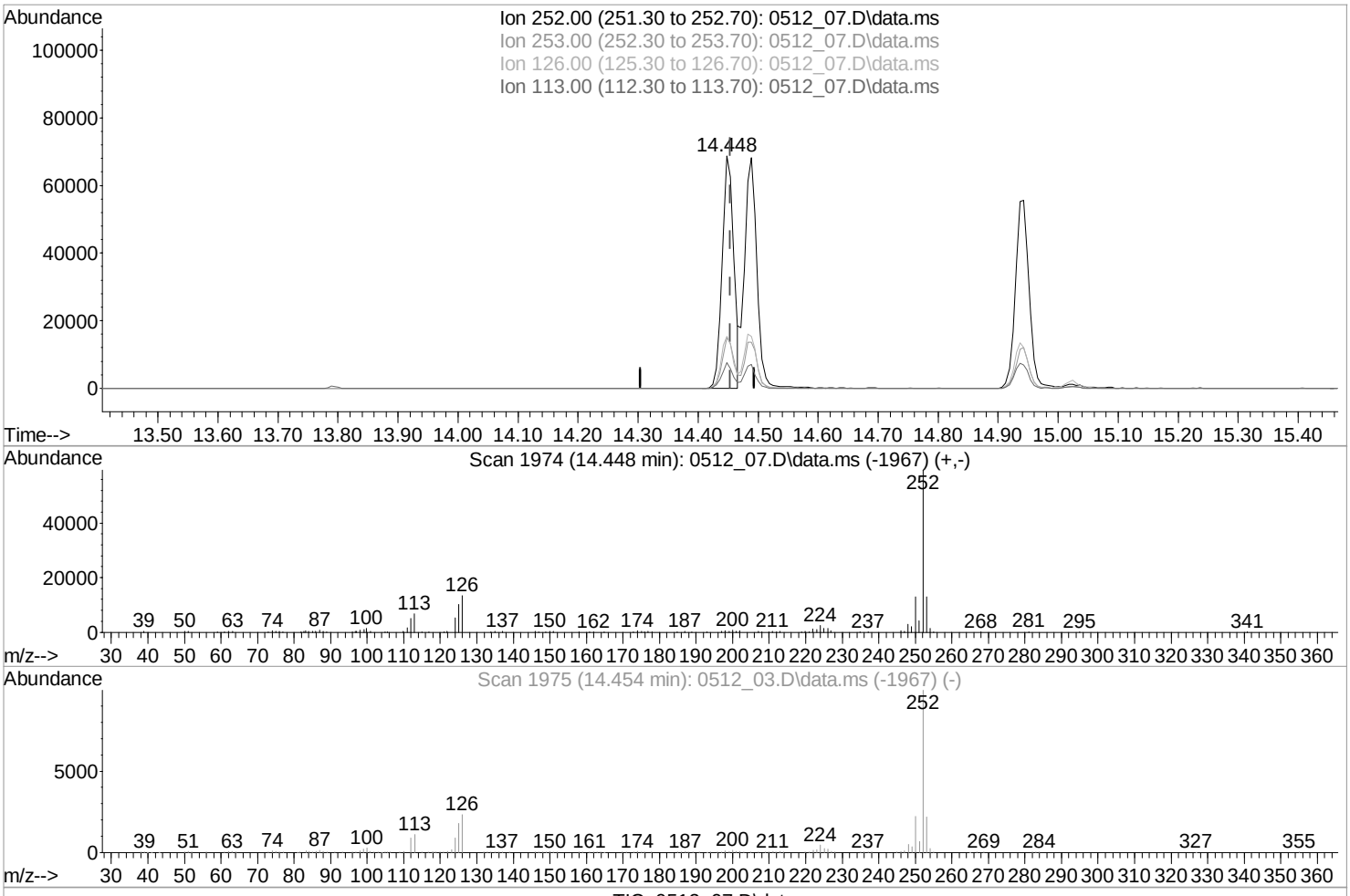
Data Path : C:\msdchem\1\data\051216\
Data File : 0512 07.D
Acq On : 12 May 2016 1:30 pm
Operator : 377
Sample : STD SVMS 2K PPB 16D25863
Misc : 8270 PRIMARY CALIBRATION IS 16E12001
ALS Vial : 7 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 13 15:55:21 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 15:54:24 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M



Data Path : C:\msdchem\1\data\051216\
Data File : 0512 07.D
Acq On : 12 May 2016 1:30 pm
Operator : 377
Sample : STD SVMS 2K PPB 16D25863
Misc : 8270 PRIMARY CALIBRATION IS 16E12001
ALS Vial : 7 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 13 15:54:27 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 15:54:24 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M



TIC: 0512_07.D\data.ms

(89) Benzo(b)fluoranthene (MT)

14.448min (-0.006) 1858.1026629 ppb

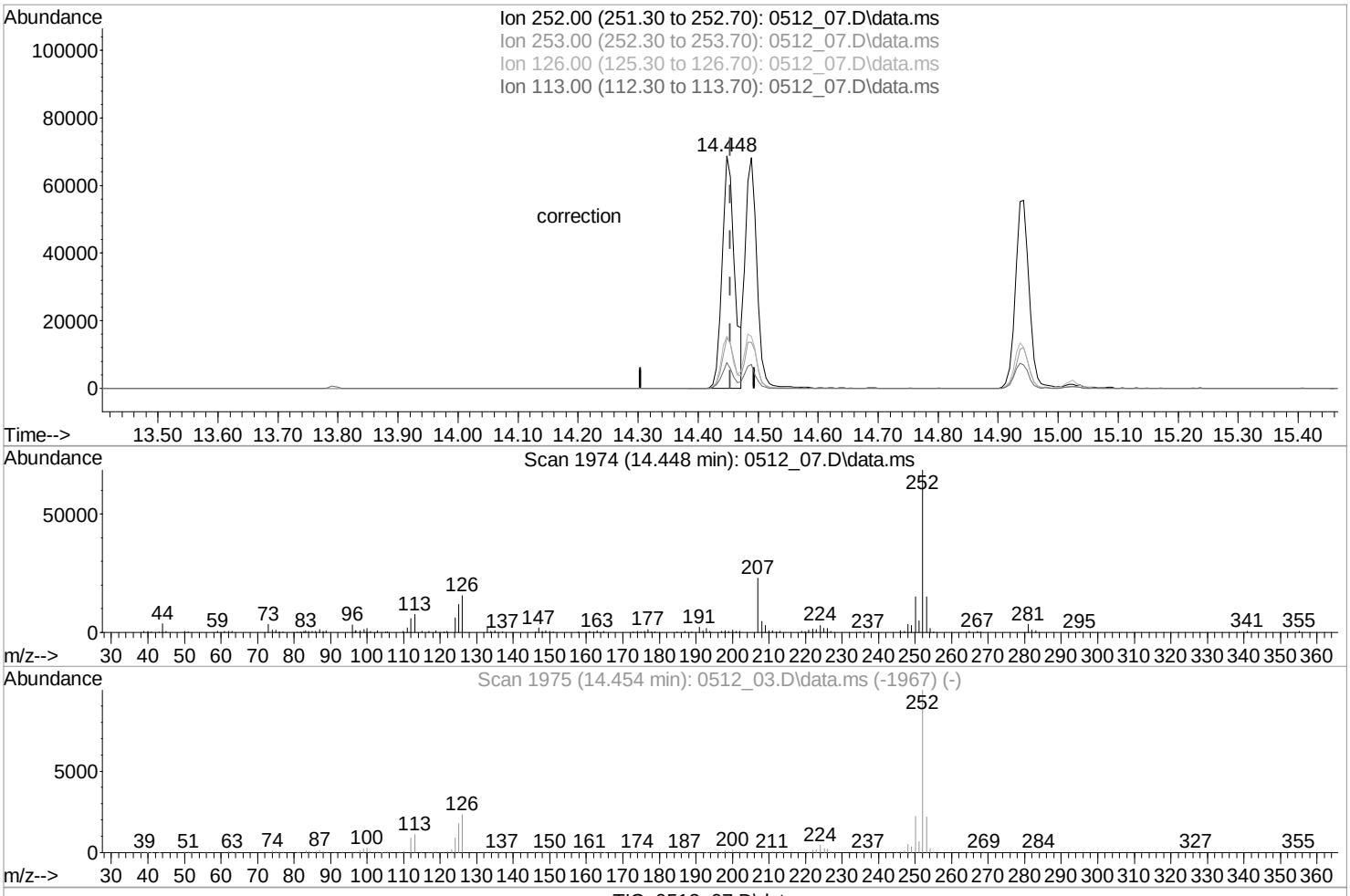
Qvalue = 99

response 92482

Ion	Exp%	Act%
252.00	100	100
253.00	21.70	21.83
126.00	23.30	22.35
113.00	11.00	11.27

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 07.D
Acq On : 12 May 2016 1:30 pm
Operator : 377
Sample : STD SVMS 2K PPB 16D25863
Misc : 8270 PRIMARY CALIBRATION IS 16E12001
ALS Vial : 7 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 13 15:54:27 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 15:54:24 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M



TIC: 0512_07.D\data.ms

(89) Benzo(b)fluoranthene (MT)

14.448min (-0.006) 1985.8444584 ppb m

response 98840

Ion	Exp%	Act%
252.00	100	100
253.00	21.70	21.77
126.00	23.30	22.40
113.00	11.00	10.98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 08.D
Acq On : 12 May 2016 1:53 pm
Operator : 377
Sample : STD SVMS 5K PPB 16D25863
Misc : 8270 PRIMARY CALIBRATION IS 16E12001
ALS Vial : 8 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 13 15:56:23 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 15:55:32 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	5.437	152	60237	8000.0000000 ppb	0.00
22) Naphthalene-d8	6.719	136	349740	8000.0000000 ppb	0.00
40) Acenaphthene-d10	8.607	164	209065	8000.0000000 ppb	0.00
64) Phenanthrene-d10	10.236	188	375193	8000.0000000 ppb	0.00
78) Chrysene-d12	13.136	240	361457	8000.0000000 ppb	0.00
88) Perylene-d12	15.024	264	348827	8000.0000000 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol	4.301	112	59230	5216.1655117 ppb	0.00
Spiked Amount 20.000	Range 10 - 87		Recovery = 26080.83%#		
7) Phenol-d5	5.043	99	75607	5204.0434541 ppb	0.00
Spiked Amount 20.000	Range 10 - 67		Recovery = 26020.22%#		
23) Nitrobenzene-d5	5.966	82	67109	5198.9696735 ppb	0.00
Spiked Amount 10.000	Range 12 - 120		Recovery = 51989.70%#		
44) 2-Fluorobiphenyl	7.860	172	163561	4899.5291009 ppb	0.00
Spiked Amount 10.000	Range 26 - 122		Recovery = 48995.29%#		
67) 2,4,6-Tribromophenol	9.466	330	16665	6060.9354118 ppb	0.00
Spiked Amount 20.000	Range 10 - 148		Recovery = 30304.68%#		
81) p-Terphenyl-d14	11.954	244	183936	5192.9421975 ppb	0.00
Spiked Amount 10.000	Range 34 - 149		Recovery = 51929.42%#		
Target Compounds					Qvalue
2) Pyridine	3.372	79	78373	5343.9014513 ppb	99
3) N-Nitrosodimethylamine	3.337	42	29400	5315.9243887 ppb	95
5) Aniline	5.125	66	34762	5056.2616103 ppb	97
6) bis(2-Chloroethyl)ether	5.166	93	67174	4856.0585912 ppb	99
8) Phenol	5.054	94	78398	5106.6651123 ppb	97
10) 2-Chlorophenol	5.237	128	72339	5099.6112516 ppb	98
11) n-Decane	5.254	41	34255	4716.7780081 ppb	99
12) 1,3-Dichlorobenzene	5.384	146	80710	4810.3379034 ppb	99
13) 1,4-Dichlorobenzene	5.454	146	83994	4993.0973757 ppb	99
14) Benzyl Alcohol	5.543	79	50753	5220.1712455 ppb	100
15) 1,2-Dichlorobenzene	5.601	146	80858	4951.7480977 ppb	97
16) bis(2-Chloroisopropyl)...	5.678	121	24567	5157.3251673 ppb	94
17) 2-Methylphenol	5.631	108	62857	5132.0718453 ppb	99
18) Hexachloroethane	5.937	117	35425	5153.7635641 ppb	97
19) N-Nitrosodi-n-propylamine	5.801	70	33703	5292.6659846 ppb	94
20) 3&4-Methyl phenol	5.772	107	73718	5230.4643097 ppb	94
24) Nitrobenzene	5.990	77	69688	5177.6481336 ppb	98
25) Isophorone	6.225	82	122528	5352.7168121 ppb	98
26) 2-Nitrophenol	6.313	139	36402	5576.4901639 ppb	99
27) 2,4-Dimethylphenol	6.319	107	71438	5214.2629271 ppb	97
28) bis(2-Chlorethoxy)methane	6.431	93	87562	4991.2996494 ppb	99
29) 2,4-Dichlorophenol	6.548	162	57627	5337.2745953 ppb	98
31) 1,2,4-Trichlorobenzene	6.648	180	65220	4955.7945534 ppb	97
32) Naphthalene	6.742	128	236503	4245.8628152 ppb	99
33) 4-Chloroaniline	6.778	65	24770	5060.8051132 ppb	97
34) Hexachloro-1,3-butadiene	6.860	225	32162	5039.7720031 ppb	95
36) 4-Chloro-3-methylphenol	7.266	107	60996	5219.9173477 ppb	98
37) 2-Methylnaphthalene	7.472	142	158114	5107.9512565 ppb	99
38) 1-Methylnaphthalene	7.584	142	151036	4948.4708381 ppb	100
41) Hexachlorocyclopentadiene	7.642	237	37084	5092.0436663 ppb	99

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 08.D
Acq On : 12 May 2016 1:53 pm
Operator : 377
Sample : STD SVMS 5K PPB 16D25863
Misc : 8270 PRIMARY CALIBRATION IS 16E12001
ALS Vial : 8 Sample Multiplier: 1
InstName : BNAMS23

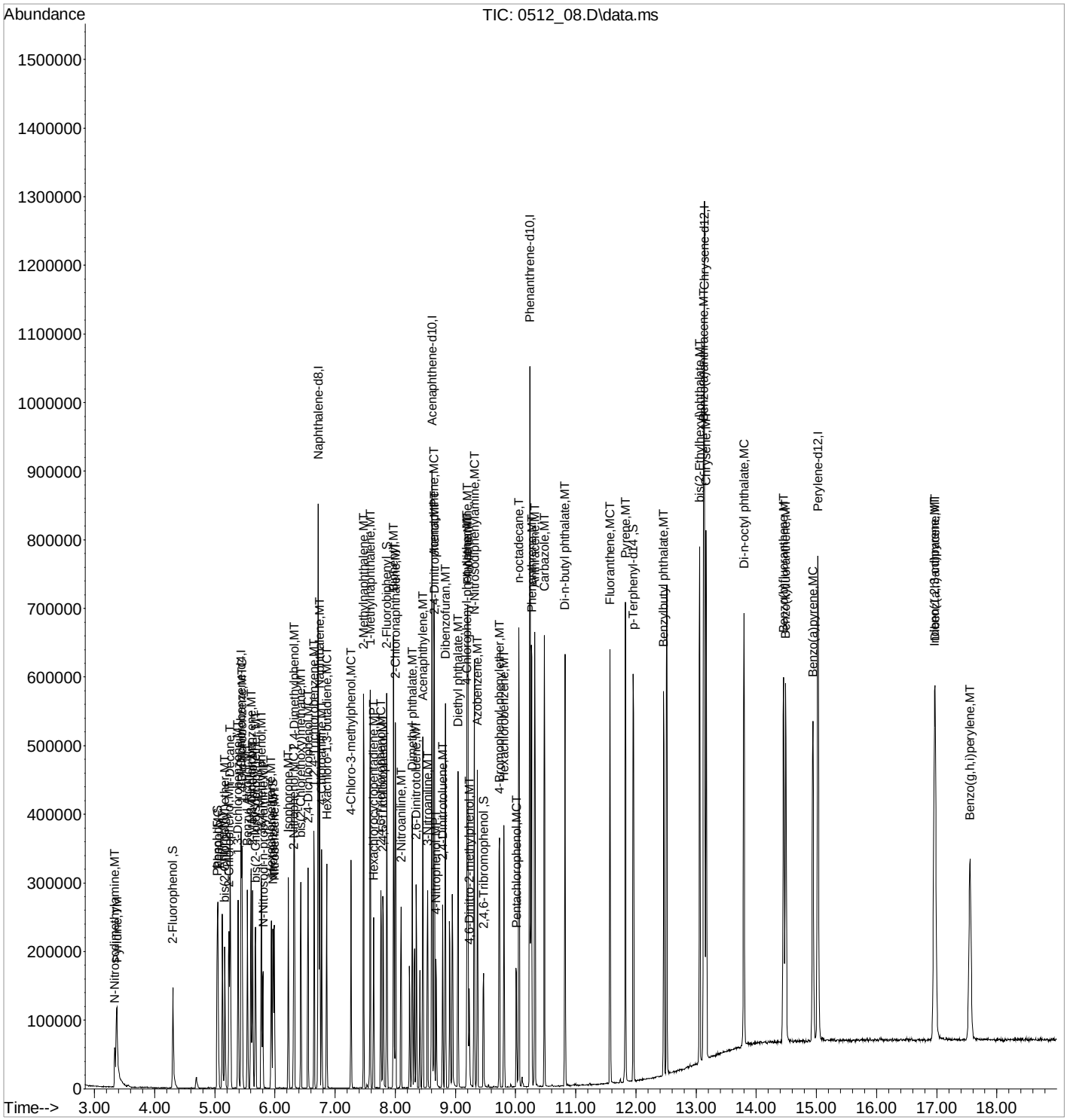
Quant Time: May 13 15:56:23 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 15:55:32 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
42) 2,4,6-Trichlorophenol	7.760	196	37199	5685.0917001 ppb	95
43) 2,4,5-Trichlorophenol	7.795	196	41120	5660.8854150 ppb	94
45) Biphenyl	7.972	154	189596	4932.2029097 ppb	100
46) 2-Chloronaphthalene	8.001	162	148480	5015.6789369 ppb	98
47) 2-Nitroaniline	8.095	138	47408	5434.9178160 ppb	98
48) Acenaphthylene	8.460	152	242038	5238.7463551 ppb	99
49) Dimethyl phthalate	8.284	163	160735	5221.3245883 ppb	97
50) 2,6-Dinitrotoluene	8.348	165	38374	5804.3528400 ppb	94
51) 3-Nitroaniline	8.536	138	45189	5988.0616364 ppb	94
52) Acenaphthene	8.642	153	154906	5019.9646779 ppb	97
53) 2,4-Dinitrophenol	8.648	184	12874	6311.8924675 ppb	96
54) Dibenzofuran	8.831	168	219694	4966.7504707 ppb	99
55) 2,4-Dinitrotoluene	8.789	165	48168	6035.0857143 ppb	95
57) 4-Nitrophenol	8.678	139	32172	6054.9349994 ppb	89
58) Fluorene	9.207	166	175568	4979.6632608 ppb	99
59) 4-Chlorophenyl-phenyle...	9.189	204	71898	5129.1327919 ppb	94
60) Diethyl phthalate	9.042	149	172147	5198.3503753 ppb	99
61) 4-Nitroaniline	9.195	138	38085	5881.2025124 ppb	99
62) Azobenzene	9.366	77	165369	5384.4347320 ppb	99
65) 4,6-Dinitro-2-methylph...	9.231	198	17939	6239.4448876 ppb	88
66) N-Nitrosodiphenylamine	9.313	169	144502	5097.6146619 ppb	100
68) 4-Bromophenyl-phenylether	9.730	248	40397	5136.4288779 ppb	94
69) Hexachlorobenzene	9.807	284	44039	4835.6752012 ppb	97
70) n-octadecane	10.054	55	28060	4933.7058090 ppb	99
71) Pentachlorophenol	10.013	266	19311	6635.5899575 ppb	97
72) Phenanthrene	10.266	178	258127	4770.2903409 ppb	99
73) Anthracene	10.319	178	249935	5154.6440907 ppb	99
74) Carbazole	10.477	167	257637	5214.2364517 ppb	100
75) Di-n-butyl phthalate	10.819	149	322050	5522.0014847 ppb	99
77) Fluoranthene	11.572	202	263322	5290.9799817 ppb	100
80) Pyrene	11.824	202	275080	5209.2549799 ppb	99
82) Benzylbutyl phthalate	12.460	149	144752	5688.2049164 ppb	97
84) Benzo(a)anthracene	13.124	228	266634	4744.3511145 ppb	99
85) Chrysene	13.166	228	259263	4922.2057380 ppb	98
86) bis(2-Ethylhexyl)phtha...	13.060	149	211384	5420.4217388 ppb	97
87) Di-n-octyl phthalate	13.795	149	362353	5730.1461803 ppb	98
89) Benzo(b)fluoranthene	14.454	252	260196m	5020.6930944 ppb	
90) Benzo(k)fluoranthene	14.489	252	252436	5312.8522392 ppb	98
91) Benzo(a)pyrene	14.942	252	248641	5279.4756688 ppb	98
92) Indeno(1,2,3-cd)pyrene	16.965	276	273462	5351.3401009 ppb	98
93) Dibenz(a,h)anthracene	16.971	278	237055	5274.2050592 ppb	92
94) Benzo(g,h,i)perylene	17.548	276	233543	5216.5822037 ppb	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

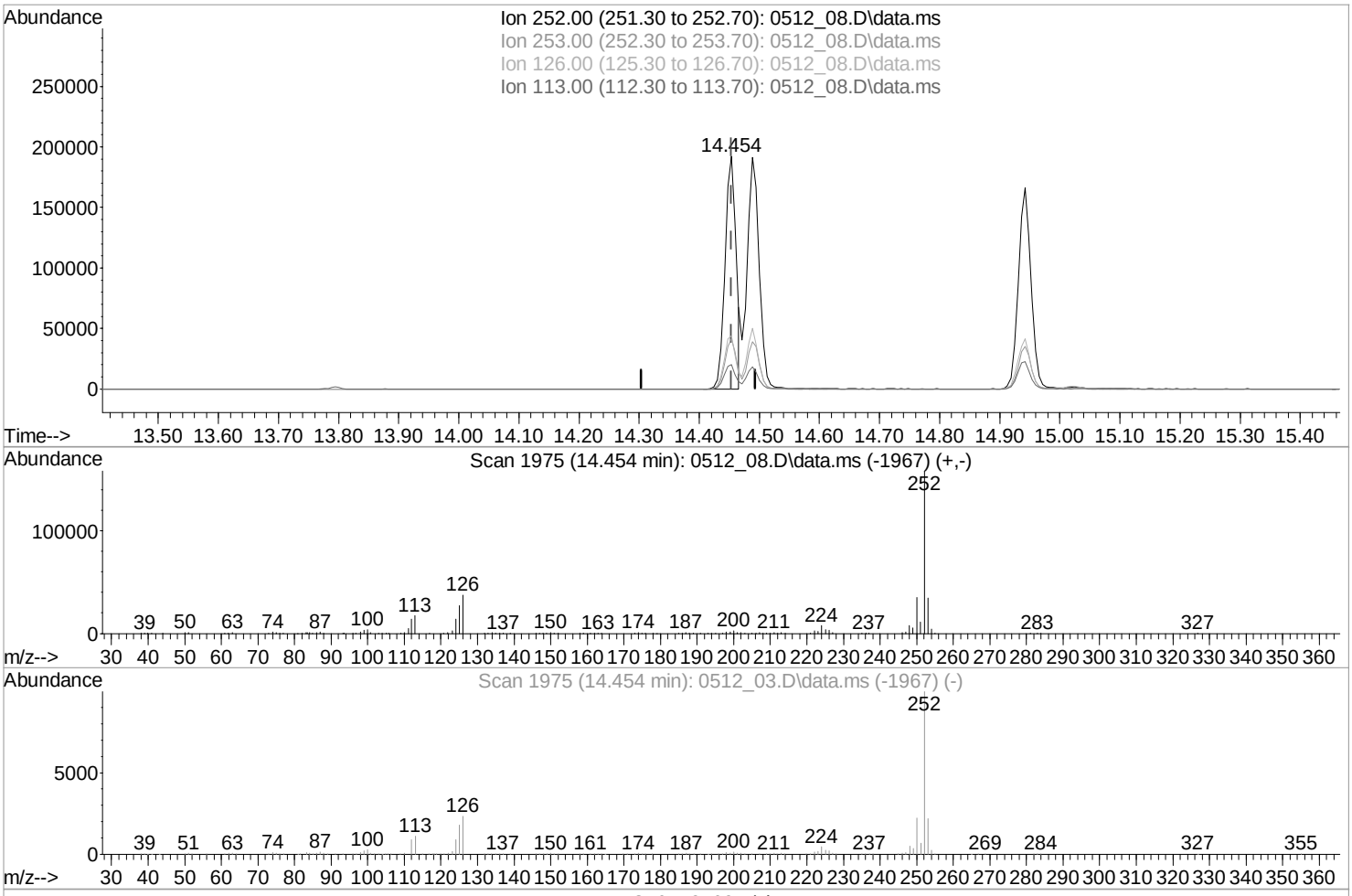
Data Path : C:\msdchem\1\data\051216\
Data File : 0512 08.D
Acq On : 12 May 2016 1:53 pm
Operator : 377
Sample : STD SVMS 5K PPB 16D25863
Misc : 8270 PRIMARY CALIBRATION IS 16E12001
ALS Vial : 8 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 13 15:56:23 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 15:55:32 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M



Data Path : C:\msdchem\1\data\051216\
Data File : 0512 08.D
Acq On : 12 May 2016 1:53 pm
Operator : 377
Sample : STD SVMS 5K PPB 16D25863
Misc : 8270 PRIMARY CALIBRATION IS 16E12001
ALS Vial : 8 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 13 15:55:36 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 15:55:32 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M



TIC: 0512_08.D\data.ms

(89) Benzo(b)fluoranthene (MT)

14.454min (+0.000) 4746.3645354 ppb

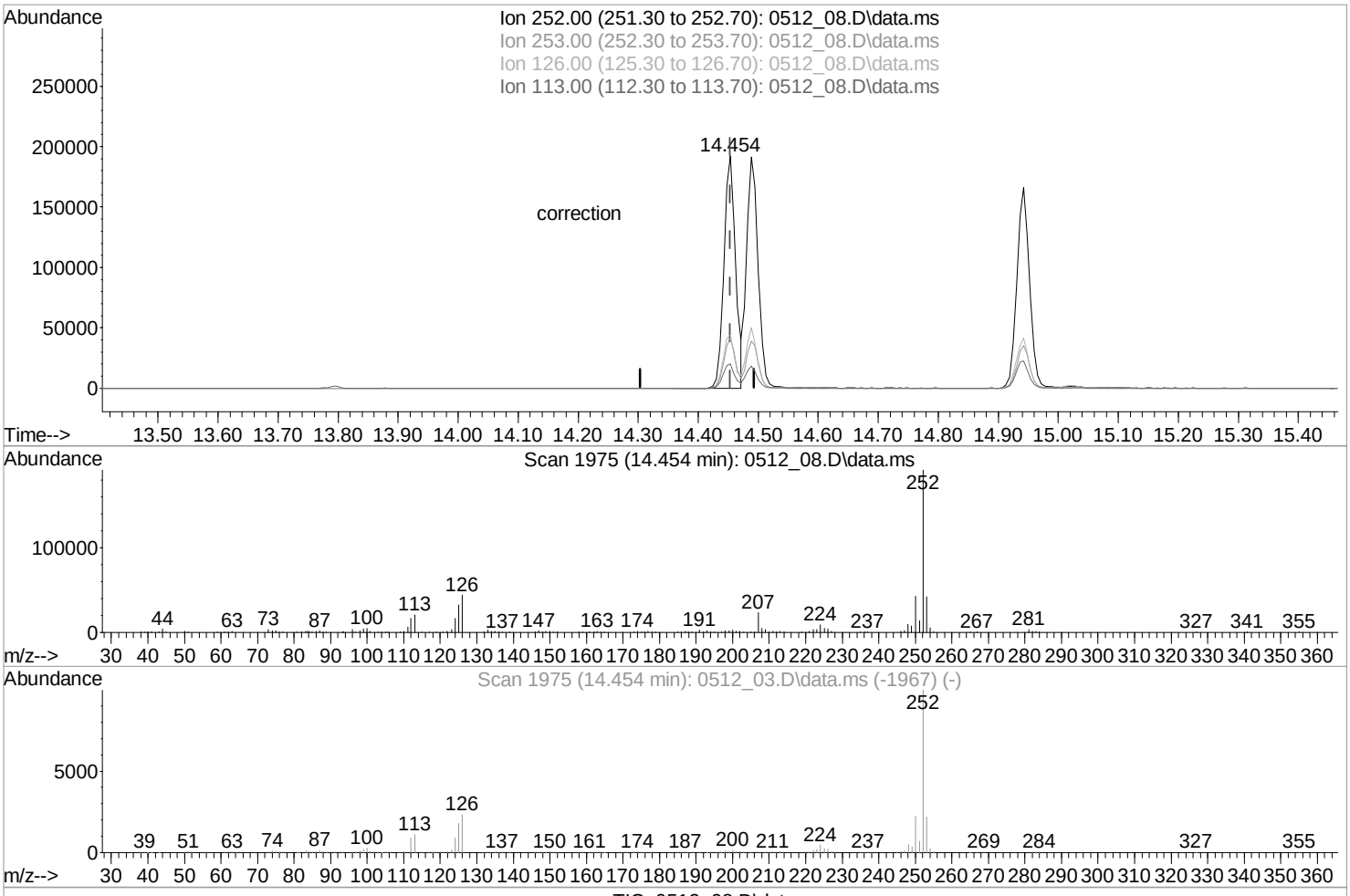
Qvalue = 100

response 245979

Ion	Exp%	Act%
252.00	100	100
253.00	21.70	21.65
126.00	23.30	23.59
113.00	11.00	10.90

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 08.D
Acq On : 12 May 2016 1:53 pm
Operator : 377
Sample : STD SVMS 5K PPB 16D25863
Misc : 8270 PRIMARY CALIBRATION IS 16E12001
ALS Vial : 8 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 13 15:55:36 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 15:55:32 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M



TIC: 0512_08.D\data.ms

(89) Benzo(b)fluoranthene (MT)

14.454min (+0.000) 5020.6930944 ppb m

response 260196

Ion	Exp%	Act%
252.00	100	100
253.00	21.70	21.67
126.00	23.30	22.80
113.00	11.00	10.53

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 09.D
Acq On : 12 May 2016 2:16 pm
Operator : 377
Sample : STD SVMS 20K PPB 16D25863
Misc : 8270 PRIMARY CALIBRATION IS 16E12001
ALS Vial : 9 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 13 15:57:27 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 15:56:35 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M

Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	5.437	152	61528	8000.0000000 ppb		0.00
22) Naphthalene-d8	6.719	136	353083	8000.0000000 ppb		0.00
40) Acenaphthene-d10	8.607	164	206420	8000.0000000 ppb		0.00
64) Phenanthrene-d10	10.236	188	366874	8000.0000000 ppb		0.00
78) Chrysene-d12	13.142	240	345874	8000.0000000 ppb		0.00
88) Perylene-d12	15.024	264	329476	8000.0000000 ppb		0.00
System Monitoring Compounds						
4) 2-Fluorophenol	4.301	112	251082	21462.3221047 ppb		0.00
Spiked Amount 20.000	Range 10 - 87		Recovery = 107311.61%#			
7) Phenol-d5	5.042	99	319316	21343.2186531 ppb		0.00
Spiked Amount 20.000	Range 10 - 67		Recovery = 106716.09%#			
23) Nitrobenzene-d5	5.972	82	289721	22056.7852511 ppb		0.00
Spiked Amount 10.000	Range 12 - 120		Recovery = 220567.85%#			
44) 2-Fluorobiphenyl	7.860	172	678303	20662.2092863 ppb		0.00
Spiked Amount 10.000	Range 26 - 122		Recovery = 206622.09%#			
67) 2,4,6-Tribromophenol	9.466	330	79427	28339.3769808 ppb		0.00
Spiked Amount 20.000	Range 10 - 148		Recovery = 141696.88%#			
81) p-Terphenyl-d14	11.960	244	744920	21810.0281940 ppb		0.00
Spiked Amount 10.000	Range 34 - 149		Recovery = 218100.28%#			
Target Compounds						Qvalue
2) Pyridine	3.360	79	326041	21469.4668337 ppb		98
3) N-Nitrosodimethylamine	3.331	42	125364	21914.9790755 ppb		93
5) Aniline	5.125	66	145043	20607.9990101 ppb		95
6) bis(2-Chloroethyl)ether	5.166	93	276967	19715.5553982 ppb		99
8) Phenol	5.054	94	331990	21081.3739572 ppb		98
10) 2-Chlorophenol	5.237	128	307186	21116.8696110 ppb		98
11) n-Decane	5.254	41	137138	18698.9820342 ppb		98
12) 1,3-Dichlorobenzene	5.384	146	335624	19733.2724429 ppb		99
13) 1,4-Dichlorobenzene	5.454	146	345340	20103.8446687 ppb		99
14) Benzyl Alcohol	5.542	79	214485	21409.3001352 ppb		100
15) 1,2-Dichlorobenzene	5.601	146	332496	19973.3789063 ppb		99
16) bis(2-Chloroisopropyl)...	5.678	121	99205	20261.5204164 ppb	#	89
17) 2-Methylphenol	5.631	108	265011	21071.9744581 ppb		98
18) Hexachloroethane	5.937	117	149188	21119.1334350 ppb		99
19) N-Nitrosodi-n-propylamine	5.801	70	138737	21083.0851015 ppb		98
20) 3&4-Methyl phenol	5.778	107	305460	21024.5325316 ppb		99
24) Nitrobenzene	5.989	77	289351	21144.2783078 ppb		98
25) Isophorone	6.225	82	534964	22826.9286457 ppb		100
26) 2-Nitrophenol	6.313	139	170439	25279.7184428 ppb		95
27) 2,4-Dimethylphenol	6.325	107	287252	20591.5448180 ppb		99
28) bis(2-Chlorethoxy)methane	6.431	93	364840	20607.2520102 ppb		99
29) 2,4-Dichlorophenol	6.548	162	251496	22765.2920583 ppb		99
31) 1,2,4-Trichlorobenzene	6.648	180	268311	20230.5682737 ppb		96
32) Naphthalene	6.742	128	965920	17619.5891062 ppb		100
33) 4-Chloroaniline	6.778	65	101356	20462.3993792 ppb		92
34) Hexachloro-1,3-butadiene	6.860	225	133669	20714.6060037 ppb		98
36) 4-Chloro-3-methylphenol	7.266	107	269563	22651.0009977 ppb		99
37) 2-Methylnaphthalene	7.478	142	659780	21037.0148441 ppb		99
38) 1-Methylnaphthalene	7.583	142	625840	20345.5276394 ppb		100
41) Hexachlorocyclopentadiene	7.642	237	169209	23445.6641061 ppb		99

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 09.D
Acq On : 12 May 2016 2:16 pm
Operator : 377
Sample : STD SVMS 20K PPB 16D25863
Misc : 8270 PRIMARY CALIBRATION IS 16E12001
ALS Vial : 9 Sample Multiplier: 1
InstName : BNAMS23

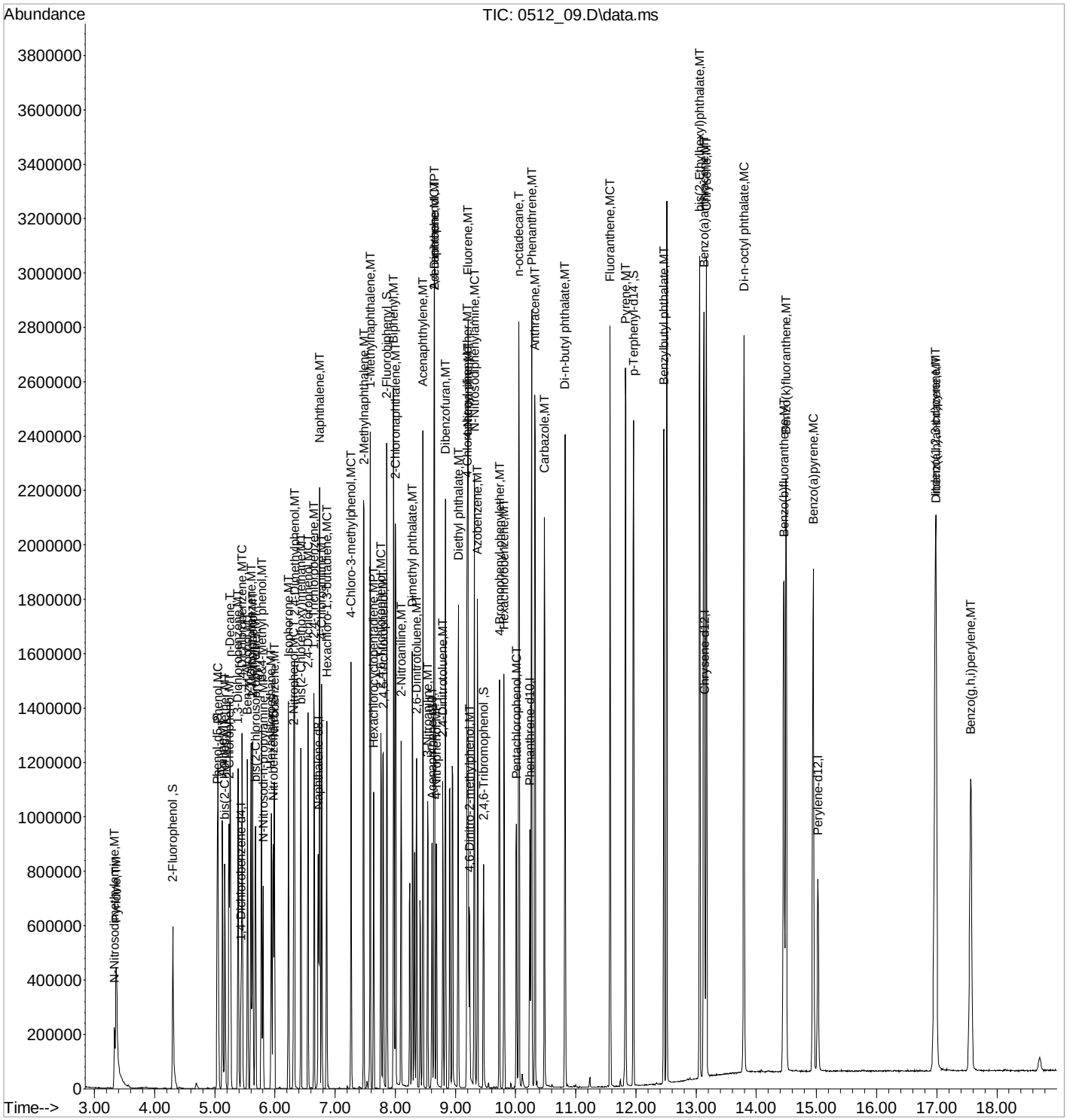
Quant Time: May 13 15:57:27 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 15:56:35 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M

Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
42) 2,4,6-Trichlorophenol	7.760	196	170885	25745.3380660 ppb		93
43) 2,4,5-Trichlorophenol	7.801	196	186503	25334.6559350 ppb		98
45) Biphenyl	7.972	154	783292	20693.9964612 ppb		99
46) 2-Chloronaphthalene	8.001	162	614601	21016.3685059 ppb		98
47) 2-Nitroaniline	8.095	138	231952	26471.5089349 ppb		97
48) Acenaphthylene	8.460	152	1016487	22107.1458495 ppb		99
49) Dimethyl phthalate	8.283	163	656325	21403.7988750 ppb		100
50) 2,6-Dinitrotoluene	8.354	165	162314	24090.6939389 ppb		98
51) 3-Nitroaniline	8.536	138	185003	23885.1504793 ppb		99
52) Acenaphthene	8.648	153	636590	20880.1142487 ppb		99
53) 2,4-Dinitrophenol	8.648	184	69906	32576.0241129 ppb	#	78
54) Dibenzofuran	8.830	168	880795	20194.6594092 ppb		99
55) 2,4-Dinitrotoluene	8.789	165	210627	25665.4820959 ppb		99
57) 4-Nitrophenol	8.683	139	152875	27960.6632479 ppb		98
58) Fluorene	9.207	166	716974	20610.1941979 ppb		99
59) 4-Chlorophenyl-phenyle...	9.195	204	293501	21097.3926134 ppb		95
60) Diethyl phthalate	9.048	149	701179	21276.1208030 ppb		99
61) 4-Nitroaniline	9.201	138	113388	17130.2770112 ppb		96
62) Azobenzene	9.366	77	676883	21983.7458465 ppb		99
65) 4,6-Dinitro-2-methylph...	9.236	198	92235	30893.5702770 ppb		82
66) N-Nitrosodiphenylamine	9.313	169	570807	20512.9343220 ppb		99
68) 4-Bromophenyl-phenylether	9.730	248	166745	21564.4908176 ppb		95
69) Hexachlorobenzene	9.807	284	181671	20535.5864660 ppb		99
70) n-octadecane	10.054	55	116984	21091.2840069 ppb		99
71) Pentachlorophenol	10.013	266	102425	33782.8457655 ppb		99
72) Phenanthrene	10.266	178	1021678	19458.1433015 ppb		100
73) Anthracene	10.319	178	1032833	21672.3772813 ppb		99
74) Carbazole	10.477	167	872128	17897.5958762 ppb		99
75) Di-n-butyl phthalate	10.819	149	1399119	24032.0567728 ppb		100
77) Fluoranthene	11.571	202	1094555	22275.7474586 ppb		99
80) Pyrene	11.824	202	1148874	22579.2215065 ppb		99
82) Benzylbutyl phthalate	12.466	149	657403	26274.0678413 ppb		94
84) Benzo(a)anthracene	13.130	228	1056751	19819.3515330 ppb		99
85) Chrysene	13.171	228	1029513	20479.4094241 ppb		99
86) bis(2-Ethylhexyl)phtha...	13.060	149	934256	24621.9725455 ppb		98
87) Di-n-octyl phthalate	13.795	149	1633713	26232.8866810 ppb		99
89) Benzo(b)fluoranthene	14.460	252	1057245m	21583.6826494 ppb		
90) Benzo(k)fluoranthene	14.495	252	997775	22003.4016324 ppb		99
91) Benzo(a)pyrene	14.948	252	997412	22215.2830095 ppb		99
92) Indeno(1,2,3-cd)pyrene	16.977	276	1097698	22479.0592475 ppb		98
93) Dibenz(a,h)anthracene	16.989	278	949132	22154.8758927 ppb		98
94) Benzo(g,h,i)perylene	17.565	276	925434	21728.3563460 ppb		98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

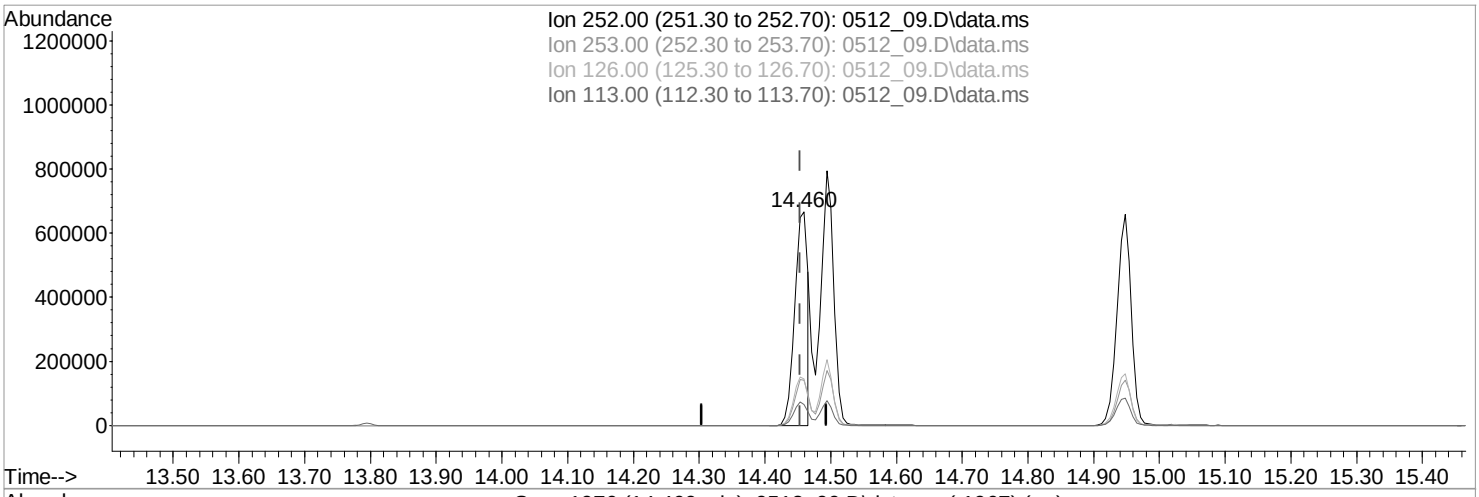
Data Path : C:\msdchem\1\data\051216\
Data File : 0512 09.D
Acq On : 12 May 2016 2:16 pm
Operator : 377
Sample : STD SVMS 20K PPB 16D25863
Misc : 8270 PRIMARY CALIBRATION IS 16E12001
ALS Vial : 9 Sample Multiplier: 1
InstName : BNAMS23

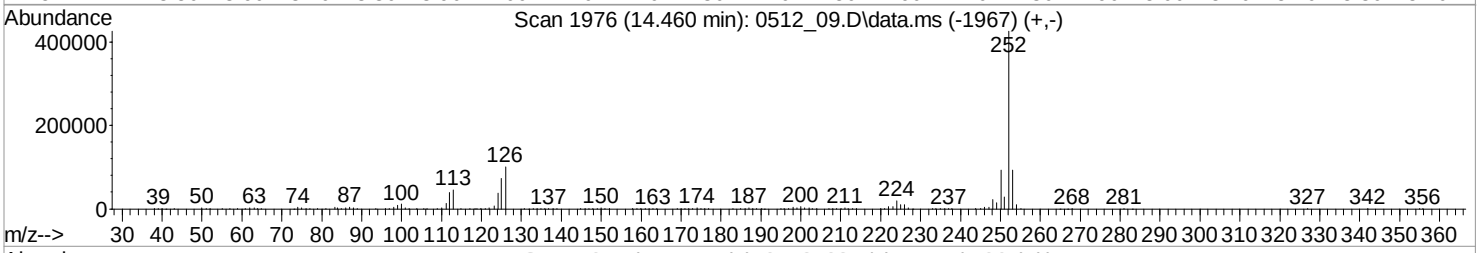
Quant Time: May 13 15:57:27 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 15:56:35 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M

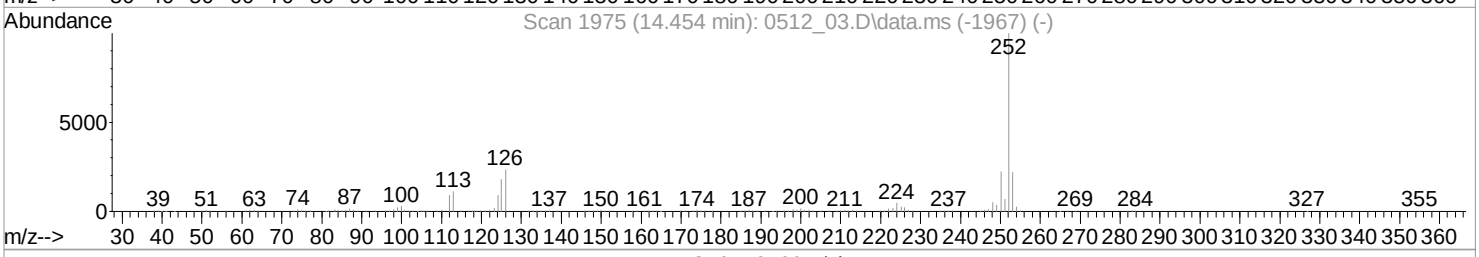


Data Path : C:\msdchem\1\data\051216\
Data File : 0512 09.D
Acq On : 12 May 2016 2:16 pm
Operator : 377
Sample : STD SVMS 20K PPB 16D25863
Misc : 8270 PRIMARY CALIBRATION IS 16E12001
ALS Vial : 9 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 13 15:56:38 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 15:56:35 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M







TIC: 0512_09.D\data.ms

(89) Benzo(b)fluoranthene (MT)

14.460min (+0.006) 18793.7449769 ppb

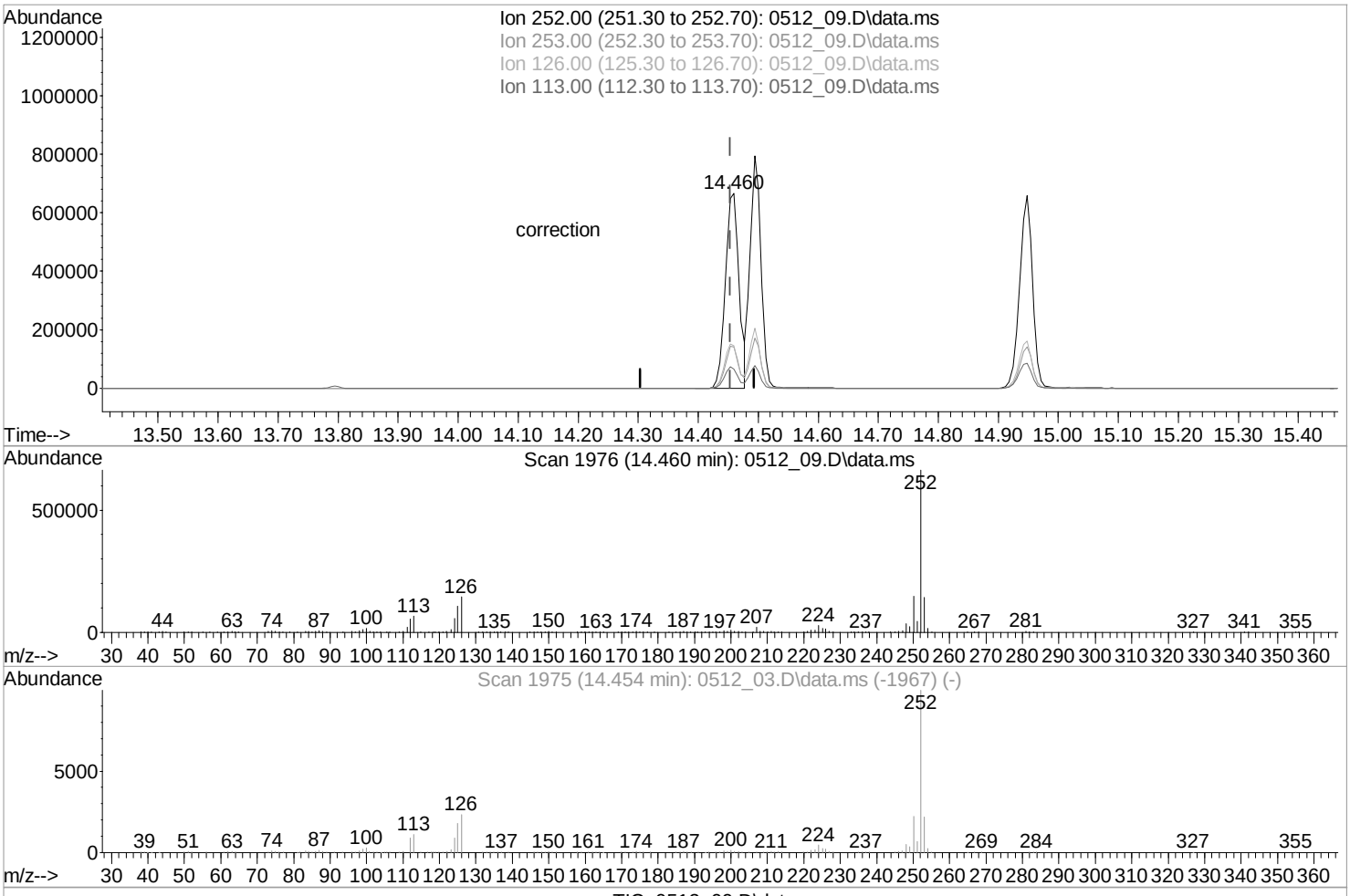
Qvalue = 100

response 920584

Ion	Exp%	Act%
252.00	100	100
253.00	21.70	21.67
126.00	23.30	23.45
113.00	11.00	10.46

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 09.D
Acq On : 12 May 2016 2:16 pm
Operator : 377
Sample : STD SVMS 20K PPB 16D25863
Misc : 8270 PRIMARY CALIBRATION IS 16E12001
ALS Vial : 9 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 13 15:56:38 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 15:56:35 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M



TIC: 0512_09.D\data.ms

(89) Benzo(b)fluoranthene (MT)

14.460min (+0.006) 21583.6826494 ppb m

response 1057245

Ion	Exp%	Act%
252.00	100	100
253.00	21.70	21.33
126.00	23.30	21.81
113.00	11.00	9.95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 10.D
Acq On : 12 May 2016 2:39 pm
Operator : 377
Sample : STD SVMS 30K PPB 16D25863
Misc : 8270 PRIMARY CALIBRATION IS 16E12001
ALS Vial : 10 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 13 15:58:49 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 15:57:42 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M

Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	5.437	152	62318	8000.0000000 ppb		0.00
22) Naphthalene-d8	6.719	136	355832	8000.0000000 ppb		0.00
40) Acenaphthene-d10	8.613	164	211969	8000.0000000 ppb		0.00
64) Phenanthrene-d10	10.236	188	369929	8000.0000000 ppb		0.00
78) Chrysene-d12	13.142	240	365138	8000.0000000 ppb		0.00
88) Perylene-d12	15.030	264	350526	8000.0000000 ppb		0.00
System Monitoring Compounds						
4) 2-Fluorophenol	4.301	112	392033	32687.5757691 ppb		0.00
Spiked Amount 20.000	Range 10 - 87		Recovery = 163437.88%#			
7) Phenol-d5	5.043	99	500638	32672.9291574 ppb		0.00
Spiked Amount 20.000	Range 10 - 67		Recovery = 163364.65%#			
23) Nitrobenzene-d5	5.972	82	447730	33252.9025425 ppb		0.00
Spiked Amount 10.000	Range 12 - 120		Recovery = 332529.03%#			
44) 2-Fluorobiphenyl	7.860	172	1043455	30783.3683235 ppb		0.00
Spiked Amount 10.000	Range 26 - 122		Recovery = 307833.68%#			
67) 2,4,6-Tribromophenol	9.466	330	127134	42063.3372543 ppb		0.00
Spiked Amount 20.000	Range 10 - 148		Recovery = 210316.69%#			
81) p-Terphenyl-d14	11.960	244	1207211	32982.9018833 ppb		0.00
Spiked Amount 10.000	Range 34 - 149		Recovery = 329829.02%#			
Target Compounds						Qvalue
2) Pyridine	3.366	79	500008	32114.3701107 ppb		95
3) N-Nitrosodimethylamine	3.337	42	195750	33254.7325479 ppb		91
5) Aniline	5.131	66	223266	31162.0534326 ppb		92
6) bis(2-Chloroethyl)ether	5.166	93	419872	29579.2975129 ppb		99
8) Phenol	5.054	94	516987	32123.0467316 ppb		99
10) 2-Chlorophenol	5.237	128	478397	32170.1041580 ppb		99
11) n-Decane	5.254	41	206803	28145.6012474 ppb		98
12) 1,3-Dichlorobenzene	5.390	146	525553	30576.5377319 ppb		97
13) 1,4-Dichlorobenzene	5.454	146	540209	31022.5632240 ppb		98
14) Benzyl Alcohol	5.543	79	334555	32588.2959817 ppb		99
15) 1,2-Dichlorobenzene	5.601	146	511259	30329.2540697 ppb		99
16) bis(2-Chloroisopropyl)...	5.678	121	152994	30784.1181211 ppb	#	85
17) 2-Methylphenol	5.631	108	412708	32113.0185543 ppb		99
18) Hexachloroethane	5.937	117	230215	31878.9201694 ppb		98
19) N-Nitrosodi-n-propylamine	5.807	70	229474	34121.8373231 ppb		95
20) 3&4-Methyl phenol	5.778	107	477008	32141.3998284 ppb		96
24) Nitrobenzene	5.990	77	444123	31899.3099848 ppb		99
25) Isophorone	6.225	82	827297	34221.8775806 ppb		99
26) 2-Nitrophenol	6.313	139	273083	38497.2940300 ppb		95
27) 2,4-Dimethylphenol	6.325	107	445454	31530.0692858 ppb		99
28) bis(2-Chlorethoxy)methane	6.431	93	567772	31661.4817877 ppb		99
29) 2,4-Dichlorophenol	6.548	162	396555	34816.3328250 ppb		100
31) 1,2,4-Trichlorobenzene	6.654	180	421367	31465.0391915 ppb		99
32) Naphthalene	6.742	128	1496087	27548.0620288 ppb		100
33) 4-Chloroaniline	6.778	65	158232	31576.4246954 ppb		94
34) Hexachloro-1,3-butadiene	6.860	225	205555	31421.5246757 ppb		98
36) 4-Chloro-3-methylphenol	7.266	107	422106	34434.2476824 ppb		99
37) 2-Methylnaphthalene	7.478	142	1009635	31708.5292913 ppb		100
38) 1-Methylnaphthalene	7.584	142	959383	30871.5846850 ppb		99
41) Hexachlorocyclopentadiene	7.642	237	271851	35657.8245042 ppb		99

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 10.D
Acq On : 12 May 2016 2:39 pm
Operator : 377
Sample : STD SVMS 30K PPB 16D25863
Misc : 8270 PRIMARY CALIBRATION IS 16E12001
ALS Vial : 10 Sample Multiplier: 1
InstName : BNAMS23

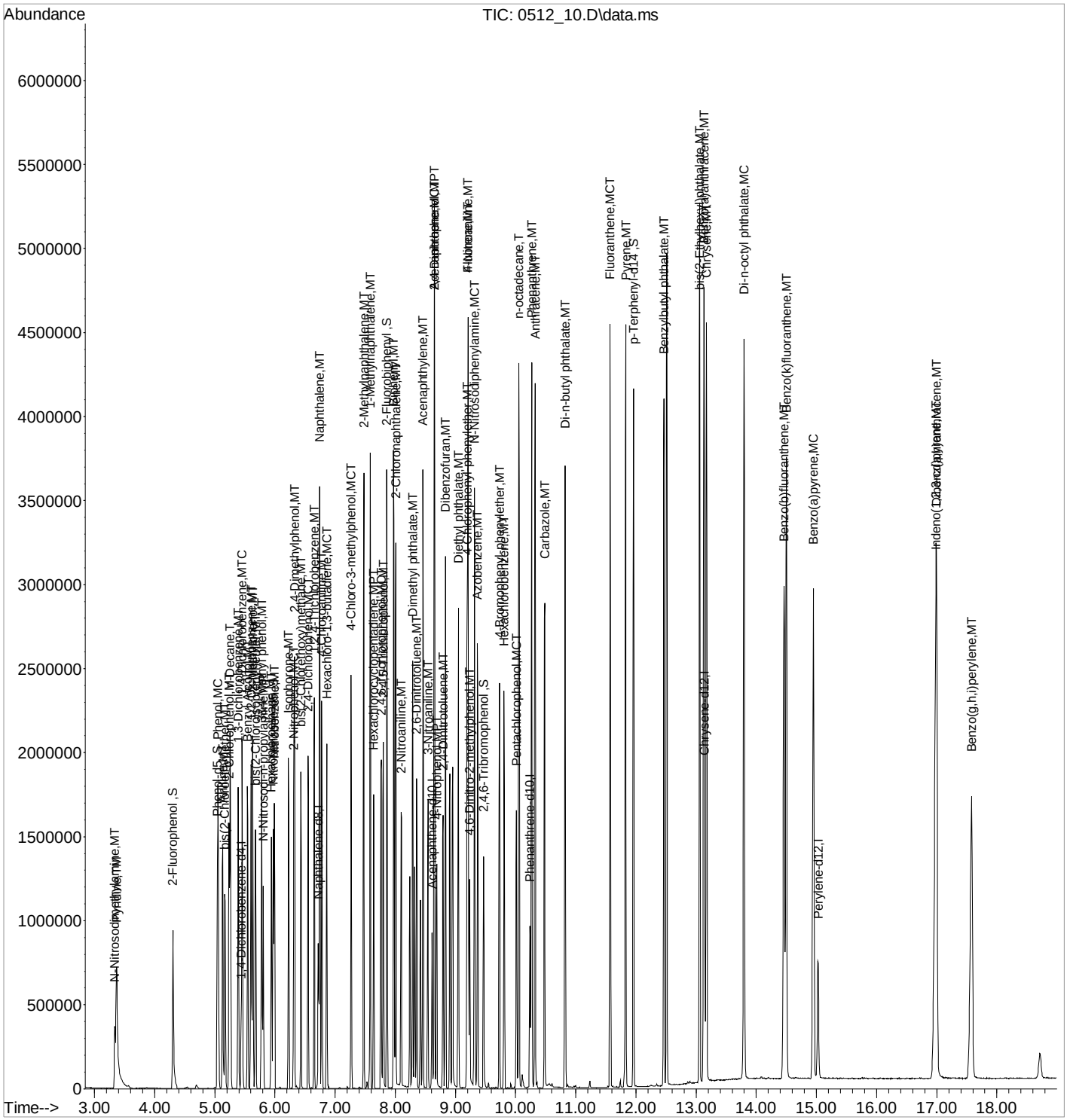
Quant Time: May 13 15:58:49 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 15:57:42 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M

Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
42) 2,4,6-Trichlorophenol	7.766	196	274741	38466.8750597 ppb		96
43) 2,4,5-Trichlorophenol	7.801	196	294636	37316.8085175 ppb		99
45) Biphenyl	7.972	154	1222663	31275.3695579 ppb		100
46) 2-Chloronaphthalene	8.007	162	961364	31782.6568907 ppb		100
47) 2-Nitroaniline	8.101	138	364176	38402.5325795 ppb		97
48) Acenaphthylene	8.460	152	1598145	33345.6025591 ppb		99
49) Dimethyl phthalate	8.289	163	1022752	32104.8499026 ppb		97
50) 2,6-Dinitrotoluene	8.354	165	256090	35793.7668909 ppb		97
51) 3-Nitroaniline	8.542	138	280265	34131.8236083 ppb		94
52) Acenaphthene	8.648	153	982256	31178.5211568 ppb		98
53) 2,4-Dinitrophenol	8.648	184	123774	49893.7983744 ppb	#	83
54) Dibenzofuran	8.836	168	1370816	30557.3968816 ppb		99
55) 2,4-Dinitrotoluene	8.795	165	333392	37777.6749796 ppb		94
57) 4-Nitrophenol	8.689	139	250739	41881.0030763 ppb		94
58) Fluorene	9.207	166	1116205	31110.9512967 ppb		99
59) 4-Chlorophenyl-phenyle...	9.195	204	453733	31473.5291091 ppb		96
60) Diethyl phthalate	9.048	149	1111299	32492.2541994 ppb		99
61) 4-Nitroaniline	9.207	138	189195	28516.6459794 ppb		97
62) Azobenzene	9.366	77	1044594	32500.8199696 ppb		98
65) 4,6-Dinitro-2-methylph...	9.236	198	157959	47316.0971884 ppb		87
66) N-Nitrosodiphenylamine	9.319	169	897311	31844.0012441 ppb		98
68) 4-Bromophenyl-phenylether	9.730	248	259775	32889.4649572 ppb		94
69) Hexachlorobenzene	9.807	284	281231	31386.9569450 ppb		98
70) n-octadecane	10.054	55	179298	31770.1244504 ppb		99
71) Pentachlorophenol	10.013	266	170943	50155.7757342 ppb		98
72) Phenanthrene	10.266	178	1607612	30482.5509396 ppb		100
73) Anthracene	10.325	178	1637351	33671.2815930 ppb		100
74) Carbazole	10.483	167	1268122	26269.4123589 ppb		100
75) Di-n-butyl phthalate	10.825	149	2255691	37175.9222009 ppb		99
77) Fluoranthene	11.572	202	1760658	34967.5671007 ppb		99
80) Pyrene	11.830	202	1814872	33175.3294249 ppb		100
82) Benzylbutyl phthalate	12.466	149	1073341	38615.4689487 ppb		96
84) Benzo(a)anthracene	13.130	228	1714751	30502.7836401 ppb		99
85) Chrysene	13.171	228	1664325	31253.5948029 ppb		98
86) bis(2-Ethylhexyl)phtha...	13.060	149	1548705	37228.2958505 ppb		98
87) Di-n-octyl phthalate	13.795	149	2701106	39055.4424637 ppb		99
89) Benzo(b)fluoranthene	14.460	252	1680555m	31887.5400010 ppb		
90) Benzo(k)fluoranthene	14.501	252	1679670	34325.2737181 ppb		100
91) Benzo(a)pyrene	14.948	252	1660413	34219.8971495 ppb		98
92) Indeno(1,2,3-cd)pyrene	16.983	276	1786929	33797.3851322 ppb		98
93) Dibenz(a,h)anthracene	16.995	278	1546283	33411.9259235 ppb		98
94) Benzo(g,h,i)perylene	17.577	276	1490826	32499.9890823 ppb		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

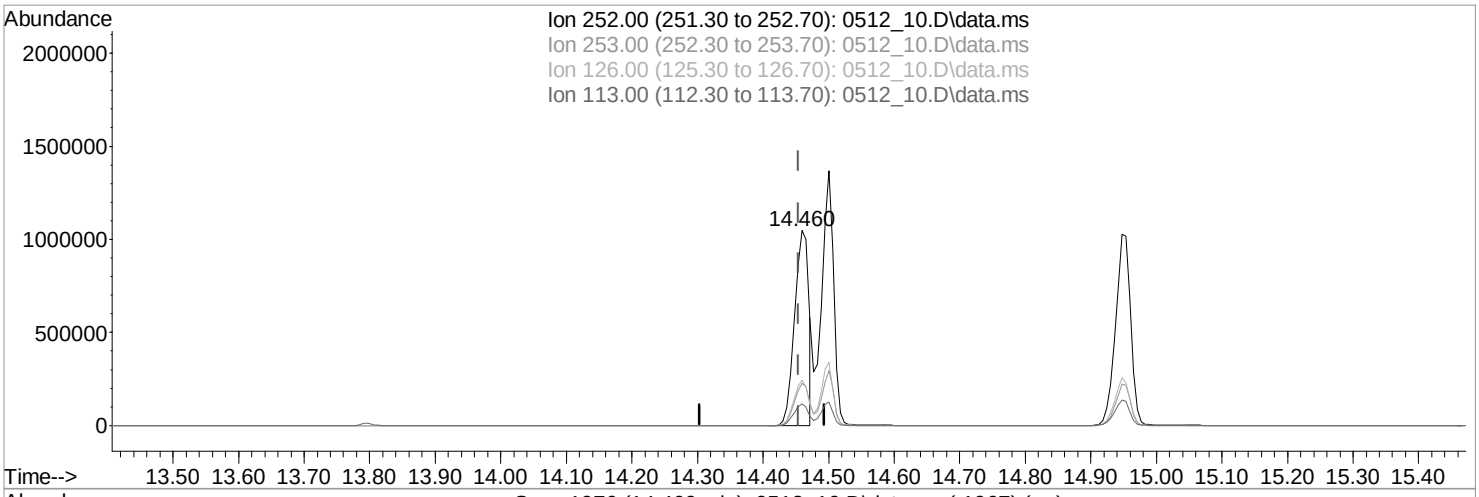
Data Path : C:\msdchem\1\data\051216\
Data File : 0512 10.D
Acq On : 12 May 2016 2:39 pm
Operator : 377
Sample : STD SVMS 30K PPB 16D25863
Misc : 8270 PRIMARY CALIBRATION IS 16E12001
ALS Vial : 10 Sample Multiplier: 1
InstName : BNAMS23

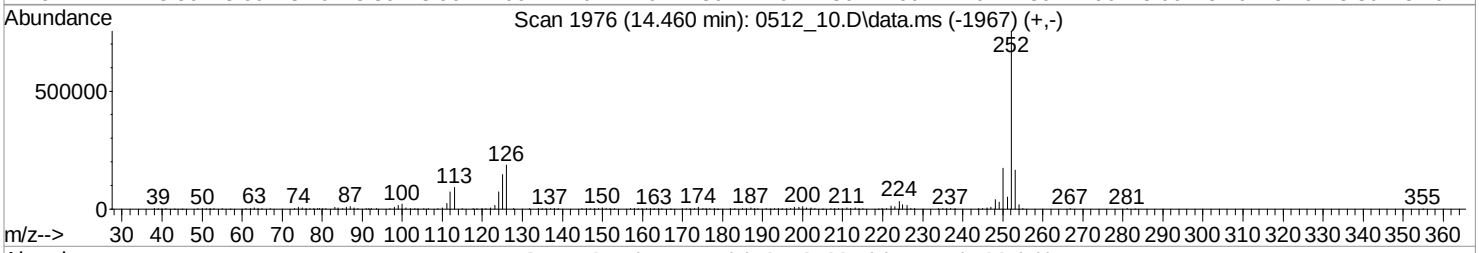
Quant Time: May 13 15:58:49 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 15:57:42 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M

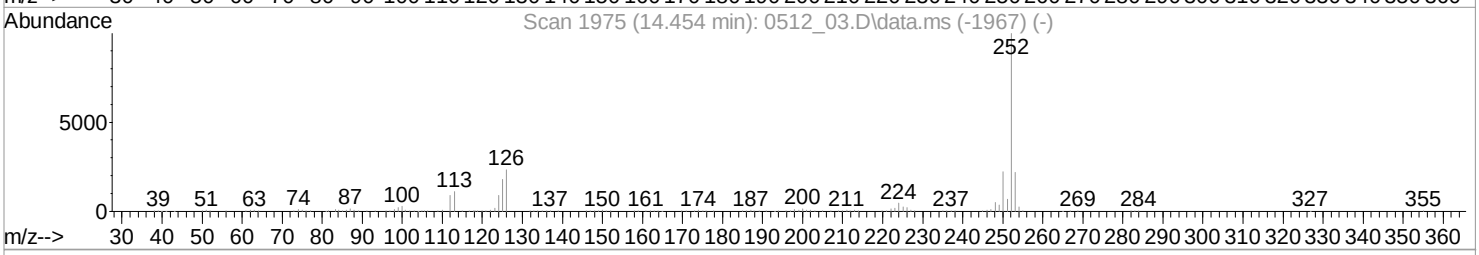


Data Path : C:\msdchem\1\data\051216\
Data File : 0512 10.D
Acq On : 12 May 2016 2:39 pm
Operator : 377
Sample : STD SVMS 30K PPB 16D25863
Misc : 8270 PRIMARY CALIBRATION IS 16E12001
ALS Vial : 10 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 13 15:57:45 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 15:57:42 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M







TIC: 0512_10.D\data.ms

(89) Benzo(b)fluoranthene (MT)

14.460min (+0.006) 29969.1512281 ppb

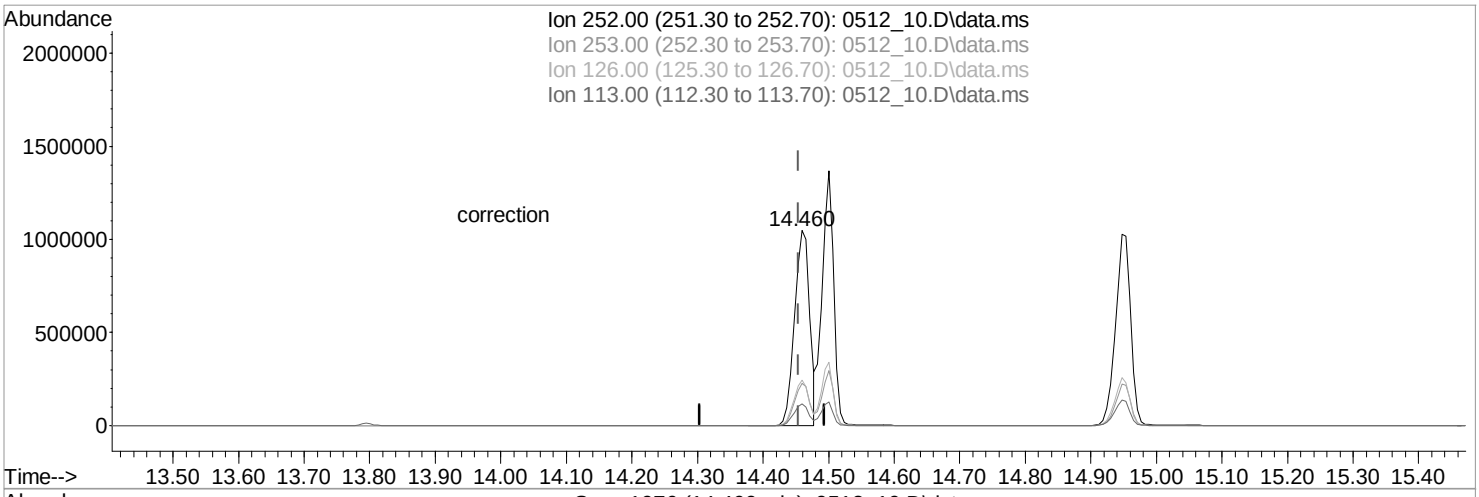
Qvalue = 98

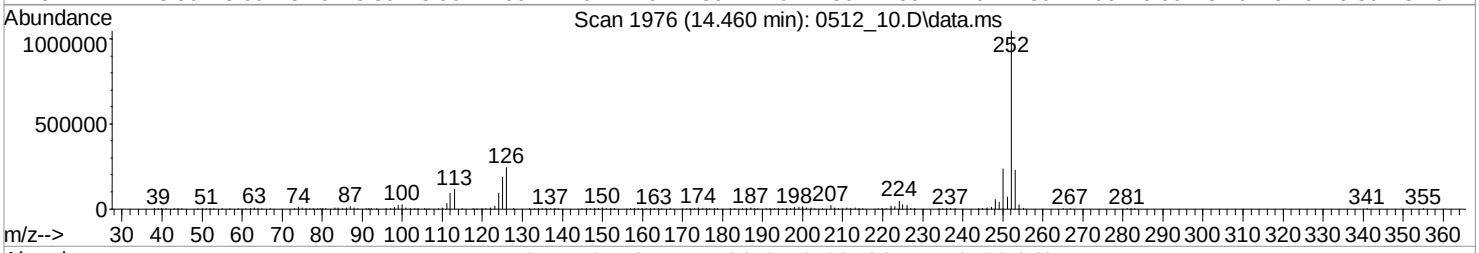
response 1579451

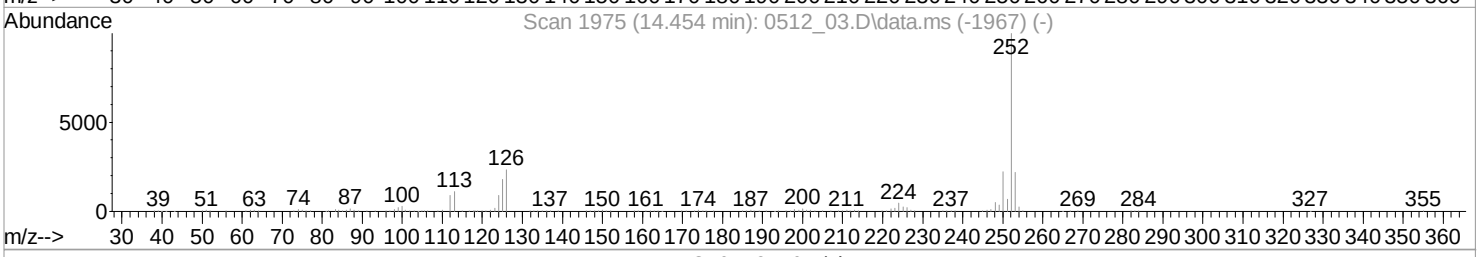
Ion	Exp%	Act%
252.00	100	100
253.00	21.70	21.87
126.00	23.30	24.56
113.00	11.00	11.93

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 10.D
Acq On : 12 May 2016 2:39 pm
Operator : 377
Sample : STD SVMS 30K PPB 16D25863
Misc : 8270 PRIMARY CALIBRATION IS 16E12001
ALS Vial : 10 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 13 15:57:45 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 15:57:42 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M







TIC: 0512_10.D\data.ms

(89) Benzo(b)fluoranthene (MT)

14.460min (+0.006) 31887.5400010 ppb m

response 1680555

Ion	Exp%	Act%
252.00	100	100
253.00	21.70	21.63
126.00	23.30	23.26
113.00	11.00	11.08

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 11.D
Acq On : 12 May 2016 3:02 pm
Operator : 377
Sample : STD SVMS 40K PPB 16D25863
Misc : 8270 PRIMARY CALIBRATION IS 16E12001
ALS Vial : 11 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 13 16:00:01 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 15:59:06 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M

Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	5.437	152	64460	8000.0000000 ppb		0.00
22) Naphthalene-d8	6.719	136	366911	8000.0000000 ppb		0.00
40) Acenaphthene-d10	8.613	164	219647	8000.0000000 ppb		0.00
64) Phenanthrene-d10	10.236	188	374903	8000.0000000 ppb		0.00
78) Chrysene-d12	13.142	240	364536	8000.0000000 ppb		0.00
88) Perylene-d12	15.024	264	352553	8000.0000000 ppb		0.00
System Monitoring Compounds						
4) 2-Fluorophenol	4.301	112	530753	42242.8220591 ppb		0.00
Spiked Amount 20.000	Range 10 - 87		Recovery = 211214.11%#			
7) Phenol-d5	5.043	99	669709	41723.4952940 ppb		0.00
Spiked Amount 20.000	Range 10 - 67		Recovery = 208617.48%#			
23) Nitrobenzene-d5	5.972	82	598080	42421.0347106 ppb		0.00
Spiked Amount 10.000	Range 12 - 120		Recovery = 424210.35%#			
44) 2-Fluorobiphenyl	7.860	172	1419034	40249.9407151 ppb		0.00
Spiked Amount 10.000	Range 26 - 122		Recovery = 402499.41%#			
67) 2,4,6-Tribromophenol	9.466	330	179064	55283.0749993 ppb		0.00
Spiked Amount 20.000	Range 10 - 148		Recovery = 276415.37%#			
81) p-Terphenyl-d14	11.960	244	1605735	43328.2068400 ppb		0.00
Spiked Amount 10.000	Range 34 - 149		Recovery = 433282.07%#			
Target Compounds						Qvalue
2) Pyridine	3.366	79	680980	41862.8914071 ppb		97
3) N-Nitrosodimethylamine	3.337	42	268200	43376.4778674 ppb		92
5) Aniline	5.131	66	299307	40164.9262618 ppb		91
6) bis(2-Chloroethyl)ether	5.172	93	562416	38381.5694350 ppb		97
8) Phenol	5.060	94	691715	41135.7049820 ppb		95
10) 2-Chlorophenol	5.237	128	646527	41601.5006469 ppb		99
11) n-Decane	5.254	41	270493	35907.4851577 ppb		97
12) 1,3-Dichlorobenzene	5.390	146	705623	39580.1135596 ppb		98
13) 1,4-Dichlorobenzene	5.454	146	723840	39991.9009724 ppb		98
14) Benzyl Alcohol	5.548	79	453379	42175.3482241 ppb		99
15) 1,2-Dichlorobenzene	5.601	146	692918	39677.6027526 ppb		99
16) bis(2-Chloroisopropyl)...	5.678	121	206691	40057.0072642 ppb	#	81
17) 2-Methylphenol	5.631	108	555133	41343.8069117 ppb		99
18) Hexachloroethane	5.937	117	311531	41335.7672869 ppb		98
19) N-Nitrosodi-n-propylamine	5.807	70	311356	43897.2890539 ppb		95
20) 3&4-Methyl phenol	5.784	107	644093	41534.0971148 ppb		99
24) Nitrobenzene	5.990	77	595375	41100.0774656 ppb		99
25) Isophorone	6.231	82	1105488	43474.6565205 ppb		94
26) 2-Nitrophenol	6.313	139	370373	48666.7516677 ppb		96
27) 2,4-Dimethylphenol	6.325	107	590791	40261.2621403 ppb		99
28) bis(2-Chlorethoxy)methane	6.431	93	759767	40766.1242262 ppb		99
29) 2,4-Dichlorophenol	6.554	162	535850	44602.4891418 ppb		93
31) 1,2,4-Trichlorobenzene	6.654	180	564168	40573.3804186 ppb		98
32) Naphthalene	6.742	128	1986914	35847.3694983 ppb		99
33) 4-Chloroaniline	6.778	65	210365	40409.0287495 ppb		92
34) Hexachloro-1,3-butadiene	6.860	225	277944	40927.0909479 ppb		98
36) 4-Chloro-3-methylphenol	7.266	107	571585	44285.2715901 ppb		97
37) 2-Methylnaphthalene	7.478	142	1378670	41694.1920391 ppb		99
38) 1-Methylnaphthalene	7.584	142	1301093	40456.2091785 ppb		100
41) Hexachlorocyclopentadiene	7.642	237	365992	45112.4746201 ppb		99

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 11.D
Acq On : 12 May 2016 3:02 pm
Operator : 377
Sample : STD SVMS 40K PPB 16D25863
Misc : 8270 PRIMARY CALIBRATION IS 16E12001
ALS Vial : 11 Sample Multiplier: 1
InstName : BNAMS23

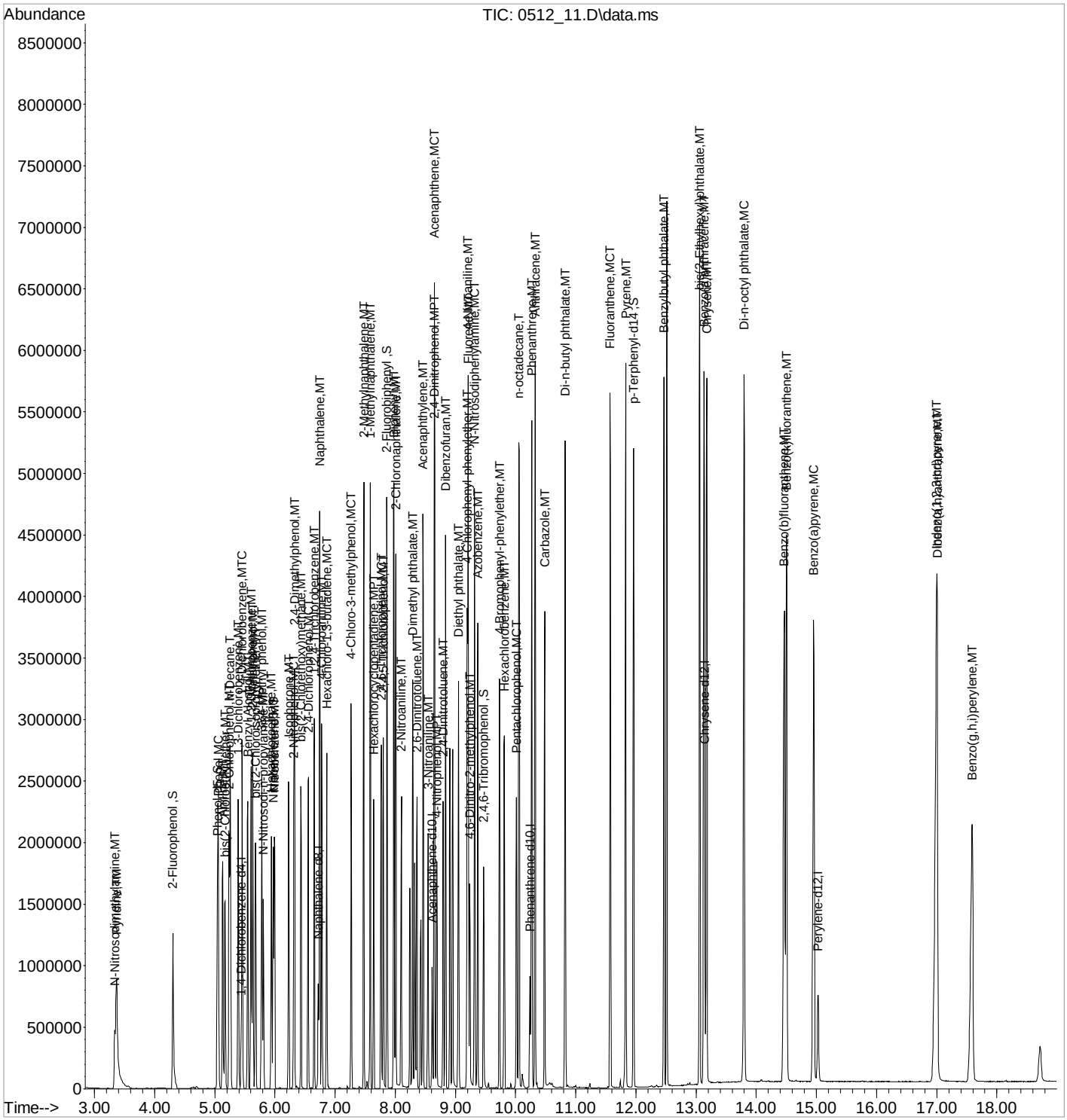
Quant Time: May 13 16:00:01 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 15:59:06 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M

	Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
42)	2,4,6-Trichlorophenol	7.766	196	372573	48389.9957766 ppb		99
43)	2,4,5-Trichlorophenol	7.801	196	401580	47431.1670791 ppb		99
45)	Biphenyl	7.978	154	1634156	40096.5210394 ppb		100
46)	2-Chloronaphthalene	8.007	162	1288818	40815.6867701 ppb		100
47)	2-Nitroaniline	8.101	138	491946	48136.5186865 ppb		97
48)	Acenaphthylene	8.460	152	2133201	42363.2218335 ppb		99
49)	Dimethyl phthalate	8.289	163	1369284	41068.5727944 ppb		98
50)	2,6-Dinitrotoluene	8.360	165	344332	45198.0443567 ppb		95
51)	3-Nitroaniline	8.542	138	376166	43356.6102161 ppb		98
52)	Acenaphthene	8.648	153	1329450	40524.9529254 ppb		99
53)	2,4-Dinitrophenol	8.654	184	174493	61124.5127858 ppb	#	13
54)	Dibenzofuran	8.836	168	1834073	39350.4474056 ppb		99
55)	2,4-Dinitrotoluene	8.795	165	450494	47503.1134843 ppb		98
57)	4-Nitrophenol	8.689	139	346035	52791.1913080 ppb		99
58)	Fluorene	9.213	166	1502280	40221.8084168 ppb		98
59)	4-Chlorophenyl-phenyle...	9.195	204	609591	40522.2899253 ppb		97
60)	Diethyl phthalate	9.054	149	1491309	41585.2985341 ppb		99
61)	4-Nitroaniline	9.207	138	261601	38322.4995911 ppb		97
62)	Azobenzene	9.372	77	1395935	41420.7298420 ppb		97
65)	4,6-Dinitro-2-methylph...	9.236	198	220223	59379.5176186 ppb		95
66)	N-Nitrosodiphenylamine	9.319	169	1209414	41981.9124853 ppb		100
68)	4-Bromophenyl-phenylether	9.731	248	351672	43337.2982963 ppb		97
69)	Hexachlorobenzene	9.813	284	387518	42395.3740412 ppb		99
70)	n-octadecane	10.054	55	235259	40789.0681013 ppb		99
71)	Pentachlorophenol	10.013	266	242933	64173.1006079 ppb		99
72)	Phenanthrene	10.266	178	2144074	40034.7364363 ppb		99
73)	Anthracene	10.325	178	2213871	44246.2558010 ppb		99
74)	Carbazole	10.483	167	1596562	33224.5444860 ppb		100
75)	Di-n-butyl phthalate	10.825	149	2963828	46606.0421533 ppb		100
77)	Fluoranthene	11.572	202	2335700	44844.5415752 ppb		99
80)	Pyrene	11.830	202	2398058	43334.8466394 ppb		100
82)	Benzylbutyl phthalate	12.466	149	1443938	49983.5565218 ppb		98
84)	Benzo(a)anthracene	13.130	228	2292257	40757.6804516 ppb		97
85)	Chrysene	13.177	228	2166485	40538.8648871 ppb		99
86)	bis(2-Ethylhexyl)phtha...	13.060	149	2107074	49046.0179175 ppb		98
87)	Di-n-octyl phthalate	13.795	149	3626878	50356.4072819 ppb		98
89)	Benzo(b)fluoranthene	14.466	252	2339061m	43782.7867048 ppb		
90)	Benzo(k)fluoranthene	14.501	252	2133685	42585.2320195 ppb		98
91)	Benzo(a)pyrene	14.954	252	2165719	43610.4634178 ppb		97
92)	Indeno(1,2,3-cd)pyrene	16.995	276	2334719	43220.3661812 ppb		96
93)	Dibenz(a,h)anthracene	17.007	278	2023352	42859.7055556 ppb		96
94)	Benzo(g,h,i)perylene	17.589	276	1944282	41707.1825665 ppb		98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

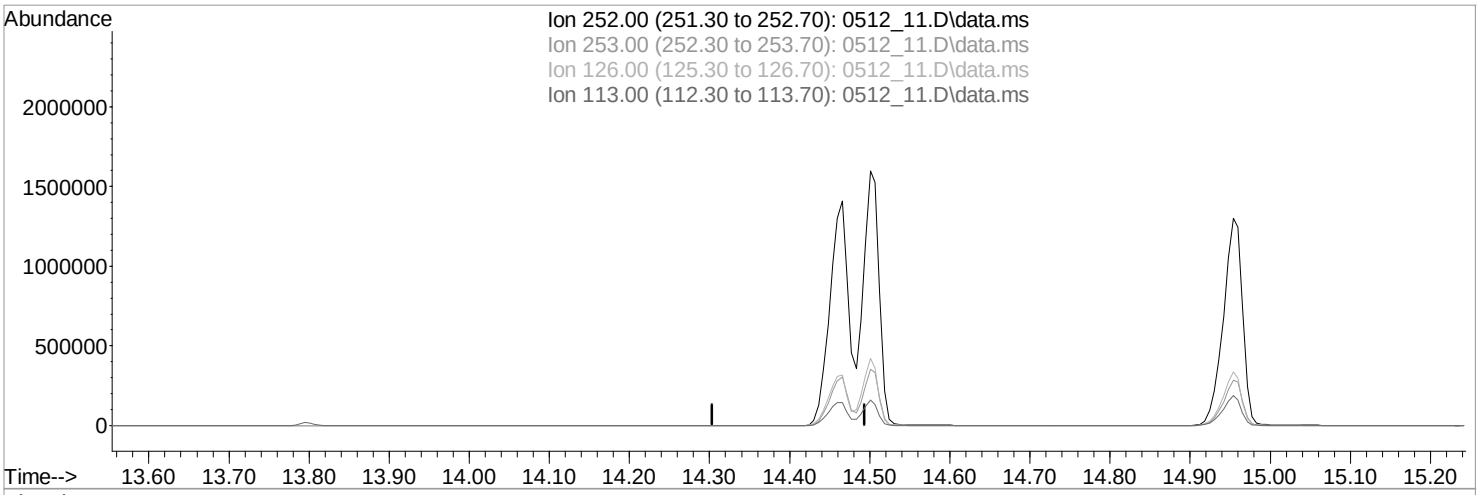
Data Path : C:\msdchem\1\data\051216\
Data File : 0512 11.D
Acq On : 12 May 2016 3:02 pm
Operator : 377
Sample : STD SVMS 40K PPB 16D25863
Misc : 8270 PRIMARY CALIBRATION IS 16E12001
ALS Vial : 11 Sample Multiplier: 1
InstName : BNAMS23

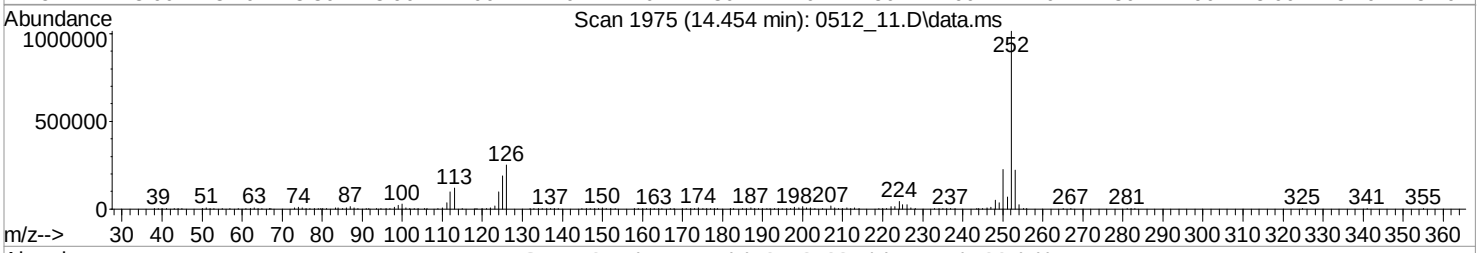
Quant Time: May 13 16:00:01 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 15:59:06 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M

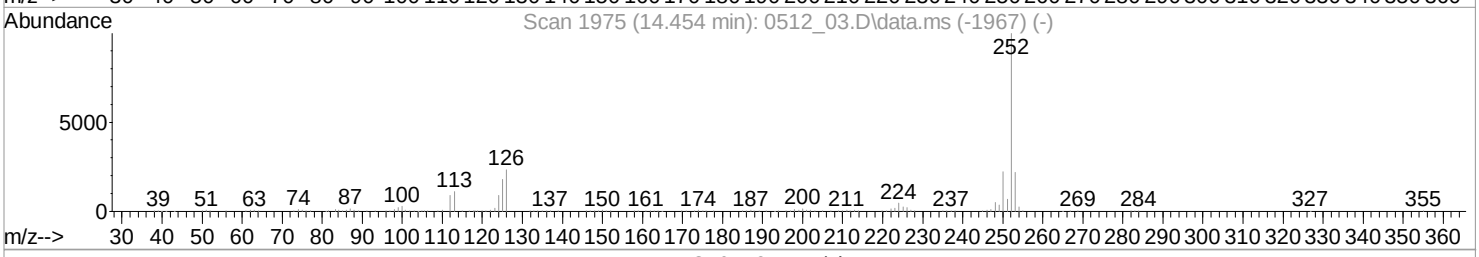


Data Path : C:\msdchem\1\data\051216\
Data File : 0512 11.D
Acq On : 12 May 2016 3:02 pm
Operator : 377
Sample : STD SVMS 40K PPB 16D25863
Misc : 8270 PRIMARY CALIBRATION IS 16E12001
ALS Vial : 11 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 13 15:59:10 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 15:59:06 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M







TIC: 0512_11.D\data.ms

(89) Benzo(b)fluoranthene (MT)

14.454min (-14.454) 0.0000000 ppb

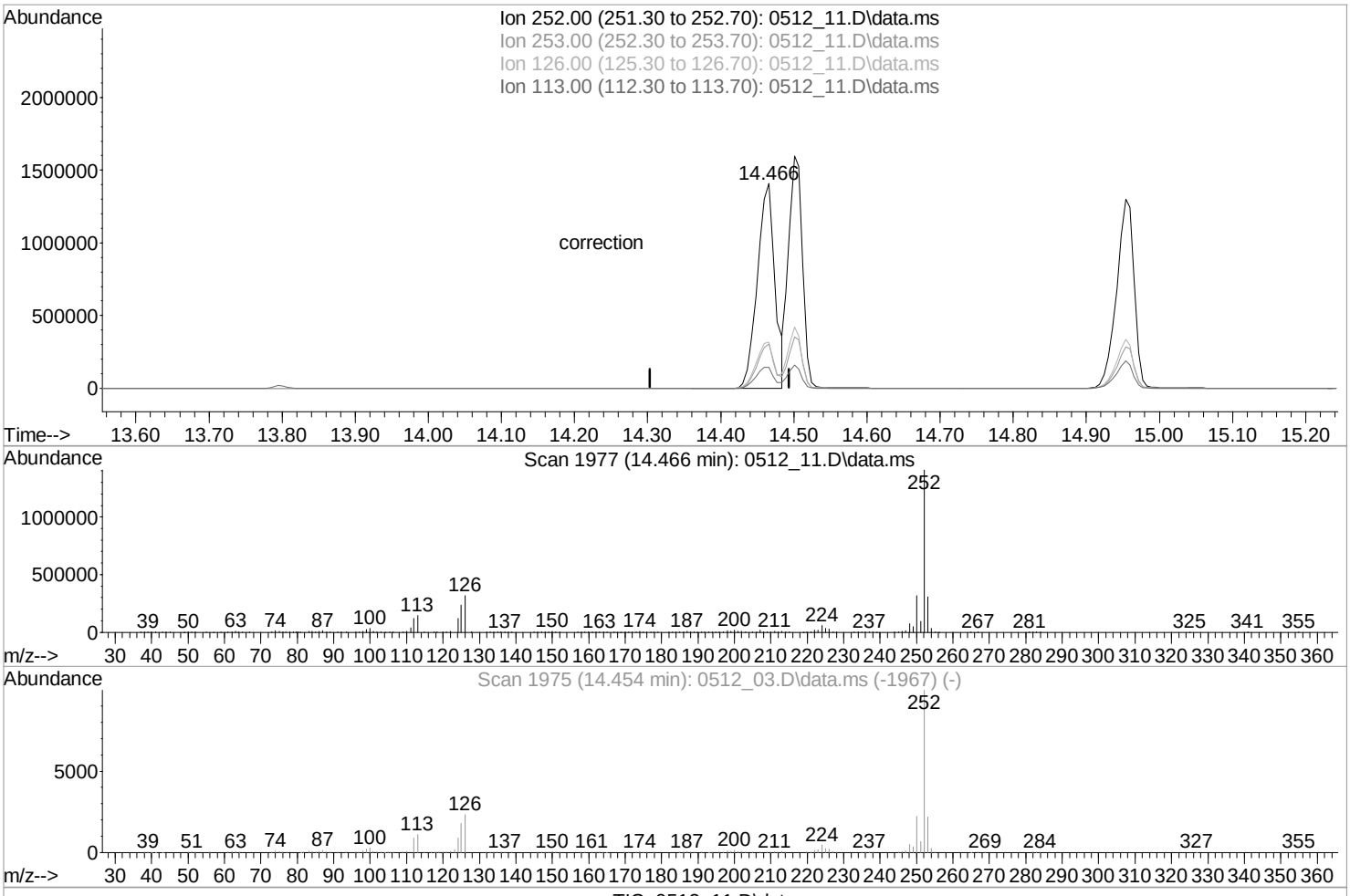
Qvalue = 0

response 0

Ion	Exp%	Act%
252.00	100	0.00
253.00	21.70	0.00#
126.00	23.30	0.00#
113.00	11.00	0.00

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 11.D
Acq On : 12 May 2016 3:02 pm
Operator : 377
Sample : STD SVMS 40K PPB 16D25863
Misc : 8270 PRIMARY CALIBRATION IS 16E12001
ALS Vial : 11 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 13 15:59:10 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 15:59:06 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M



TIC: 0512_11.D\data.ms

(89) Benzo(b)fluoranthene (MT)

14.466min (+0.012) 43782.7867048 ppb m

response 2339061

Ion	Exp%	Act%
252.00	100	100
253.00	21.70	21.69
126.00	23.30	22.56
113.00	11.00	10.14

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 12.D
Acq On : 12 May 2016 3:25 pm
Operator : 377
Sample : STD SVMS 50K PPB 16D25863
Misc : 8270 PRIMARY CALIBRATION IS 16E12001
ALS Vial : 12 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 13 16:01:12 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:00:15 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M

Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	5.437	152	62725	8000.0000000 ppb		0.00
22) Naphthalene-d8	6.719	136	369687	8000.0000000 ppb		0.00
40) Acenaphthene-d10	8.613	164	216868	8000.0000000 ppb		0.00
64) Phenanthrene-d10	10.236	188	379617	8000.0000000 ppb		0.00
78) Chrysene-d12	13.142	240	363571	8000.0000000 ppb		0.00
88) Perylene-d12	15.030	264	344050	8000.0000000 ppb		0.00
System Monitoring Compounds						
4) 2-Fluorophenol	4.301	112	656671	53336.5181003 ppb		0.00
Spiked Amount 20.000	Range 10 - 87		Recovery = 266682.59%#			
7) Phenol-d5	5.048	99	831731	52965.6453032 ppb		0.00
Spiked Amount 20.000	Range 10 - 67		Recovery = 264828.23%#			
23) Nitrobenzene-d5	5.972	82	744855	52041.1493080 ppb		0.00
Spiked Amount 10.000	Range 12 - 120		Recovery = 520411.49%#			
44) 2-Fluorobiphenyl	7.866	172	1716939	49285.3711399 ppb		0.00
Spiked Amount 10.000	Range 26 - 122		Recovery = 492853.71%#			
67) 2,4,6-Tribromophenol	9.472	330	222597	64776.1045586 ppb		0.00
Spiked Amount 20.000	Range 10 - 148		Recovery = 323880.52%#			
81) p-Terphenyl-d14	11.960	244	1952885	52291.4982705 ppb		0.00
Spiked Amount 10.000	Range 34 - 149		Recovery = 522914.98%#			
Target Compounds						Qvalue
2) Pyridine	3.366	79	840643	52800.1511875 ppb		95
3) N-Nitrosodimethylamine	3.337	42	319199	52498.6597524 ppb		89
5) Aniline	5.131	66	371448	51198.1160192 ppb		92
6) bis(2-Chloroethyl)ether	5.172	93	701235	49428.8306799 ppb		97
8) Phenol	5.060	94	854731	52051.3768097 ppb		95
10) 2-Chlorophenol	5.237	128	805253	52982.9608984 ppb		99
11) n-Decane	5.254	41	327367	45238.0160974 ppb		97
12) 1,3-Dichlorobenzene	5.390	146	880569	50826.1908207 ppb		97
13) 1,4-Dichlorobenzene	5.454	146	897611	50965.7311148 ppb		98
14) Benzyl Alcohol	5.548	79	559217	53098.8291815 ppb		99
15) 1,2-Dichlorobenzene	5.601	146	855895	50416.3581296 ppb		99
16) bis(2-Chloroisopropyl)...	5.678	121	255511	50879.0277718 ppb	#	81
17) 2-Methylphenol	5.631	108	683960	52128.3282792 ppb		98
18) Hexachloroethane	5.937	117	388047	52692.5972067 ppb		97
19) N-Nitrosodi-n-propylamine	5.807	70	365600	52333.3992604 ppb		97
20) 3&4-Methyl phenol	5.784	107	795757	52481.8622991 ppb		98
24) Nitrobenzene	5.995	77	740616	50568.6380696 ppb		95
25) Isophorone	6.231	82	1379193	53252.9219426 ppb		98
26) 2-Nitrophenol	6.313	139	462616	58740.0684688 ppb		95
27) 2,4-Dimethylphenol	6.325	107	722217	48808.2618787 ppb		100
28) bis(2-Chlorethoxy)methane	6.437	93	935795	49715.0353436 ppb		96
29) 2,4-Dichlorophenol	6.554	162	655920	53418.4669659 ppb		94
31) 1,2,4-Trichlorobenzene	6.654	180	691186	49246.6566364 ppb		98
32) Naphthalene	6.742	128	2442901	44253.6792720 ppb		99
33) 4-Chloroaniline	6.778	65	261212	49735.8835881 ppb		93
34) Hexachloro-1,3-butadiene	6.860	225	347278	50605.8818254 ppb		98
36) 4-Chloro-3-methylphenol	7.266	107	702033	53270.3222123 ppb		98
37) 2-Methylnaphthalene	7.478	142	1705397	50948.1302634 ppb		99
38) 1-Methylnaphthalene	7.584	142	1600888	49341.7260786 ppb		100
41) Hexachlorocyclopentadiene	7.642	237	463323	56931.8195414 ppb		99

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 12.D
Acq On : 12 May 2016 3:25 pm
Operator : 377
Sample : STD SVMS 50K PPB 16D25863
Misc : 8270 PRIMARY CALIBRATION IS 16E12001
ALS Vial : 12 Sample Multiplier: 1
InstName : BNAMS23

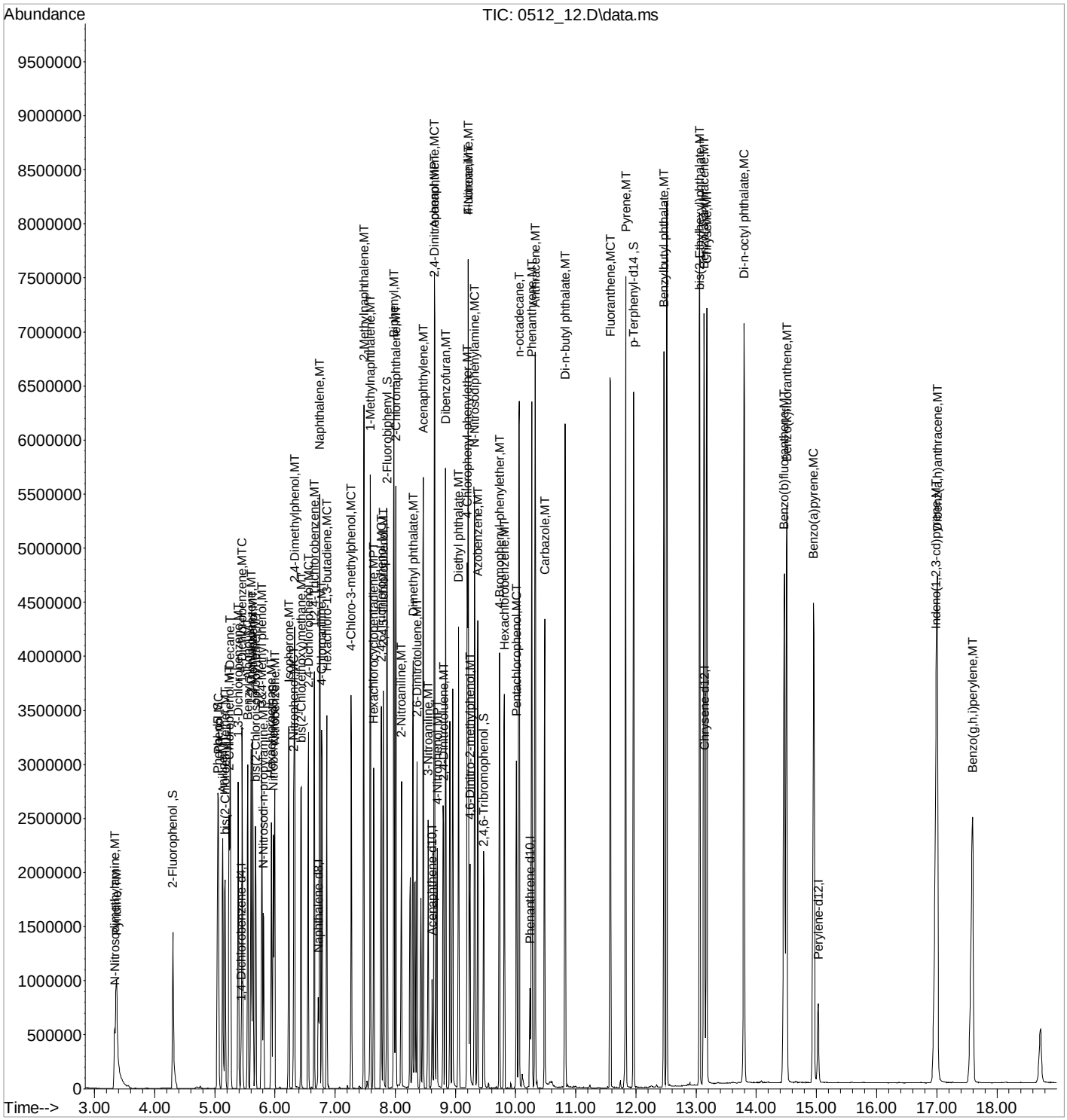
Quant Time: May 13 16:01:12 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:00:15 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M

Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
42) 2,4,6-Trichlorophenol	7.766	196	462502	59285.3901579 ppb		98
43) 2,4,5-Trichlorophenol	7.801	196	499666	58415.9303840 ppb		99
45) Biphenyl	7.978	154	2003575	49775.7267794 ppb		100
46) 2-Chloronaphthalene	8.007	162	1576459	50450.4550093 ppb		99
47) 2-Nitroaniline	8.101	138	605354	58504.8505986 ppb		96
48) Acenaphthylene	8.466	152	2589709	51748.3324298 ppb		99
49) Dimethyl phthalate	8.295	163	1698031	51409.5348199 ppb		96
50) 2,6-Dinitrotoluene	8.360	165	428667	56078.2129132 ppb		97
51) 3-Nitroaniline	8.548	138	465817	53813.2413226 ppb		91
52) Acenaphthene	8.648	153	1641268	50597.2585132 ppb		99
53) 2,4-Dinitrophenol	8.654	184	225114	74264.5627854 ppb	#	27
54) Dibenzofuran	8.836	168	2258630	49180.2124313 ppb		99
55) 2,4-Dinitrotoluene	8.801	165	567754	59245.8062237 ppb		90
57) 4-Nitrophenol	8.695	139	431752	64148.0929833 ppb		93
58) Fluorene	9.213	166	1854172	50248.4912472 ppb		99
59) 4-Chlorophenyl-phenyle...	9.195	204	753765	50665.5712720 ppb		98
60) Diethyl phthalate	9.054	149	1853313	52084.0263867 ppb		99
61) 4-Nitroaniline	9.213	138	317817	47402.8000427 ppb		98
62) Azobenzene	9.372	77	1691286	50602.9110716 ppb		97
65) 4,6-Dinitro-2-methylph...	9.242	198	282910	70458.1927498 ppb		86
66) N-Nitrosodiphenylamine	9.319	169	1477485	50338.7090096 ppb		99
68) 4-Bromophenyl-phenylether	9.730	248	436091	52525.3073023 ppb		98
69) Hexachlorobenzene	9.813	284	475448	50987.5396095 ppb		97
70) n-octadecane	10.060	55	289099	49379.6272563 ppb		98
71) Pentachlorophenol	10.013	266	306080	74241.6780636 ppb		99
72) Phenanthrene	10.266	178	2654878	48952.3033936 ppb		99
73) Anthracene	10.325	178	2711497	52894.9255461 ppb		99
74) Carbazole	10.483	167	1793106	37648.4122820 ppb		100
75) Di-n-butyl phthalate	10.825	149	3570377	54325.3245557 ppb		100
77) Fluoranthene	11.577	202	2817569	52715.0956589 ppb		98
80) Pyrene	11.830	202	2928460	52573.0914141 ppb		100
82) Benzylbutyl phthalate	12.466	149	1750938	58932.9587231 ppb		99
84) Benzo(a)anthracene	13.130	228	2788021	49599.8424520 ppb		97
85) Chrysene	13.177	228	2611970	48931.1795181 ppb		98
86) bis(2-Ethylhexyl)phtha...	13.060	149	2519453	57184.0293014 ppb		98
87) Di-n-octyl phthalate	13.795	149	4337064	58483.8634203 ppb		99
89) Benzo(b)fluoranthene	14.465	252	2769103m	52561.0666782 ppb		
90) Benzo(k)fluoranthene	14.507	252	2585857	52508.3606847 ppb		100
91) Benzo(a)pyrene	14.954	252	2629217	53713.5687066 ppb		98
92) Indeno(1,2,3-cd)pyrene	16.989	276	2791281	52479.8451737 ppb		98
93) Dibenz(a,h)anthracene	17.006	278	2415871	52025.7188996 ppb		97
94) Benzo(g,h,i)perylene	17.595	276	2276390	49801.9659502 ppb		98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

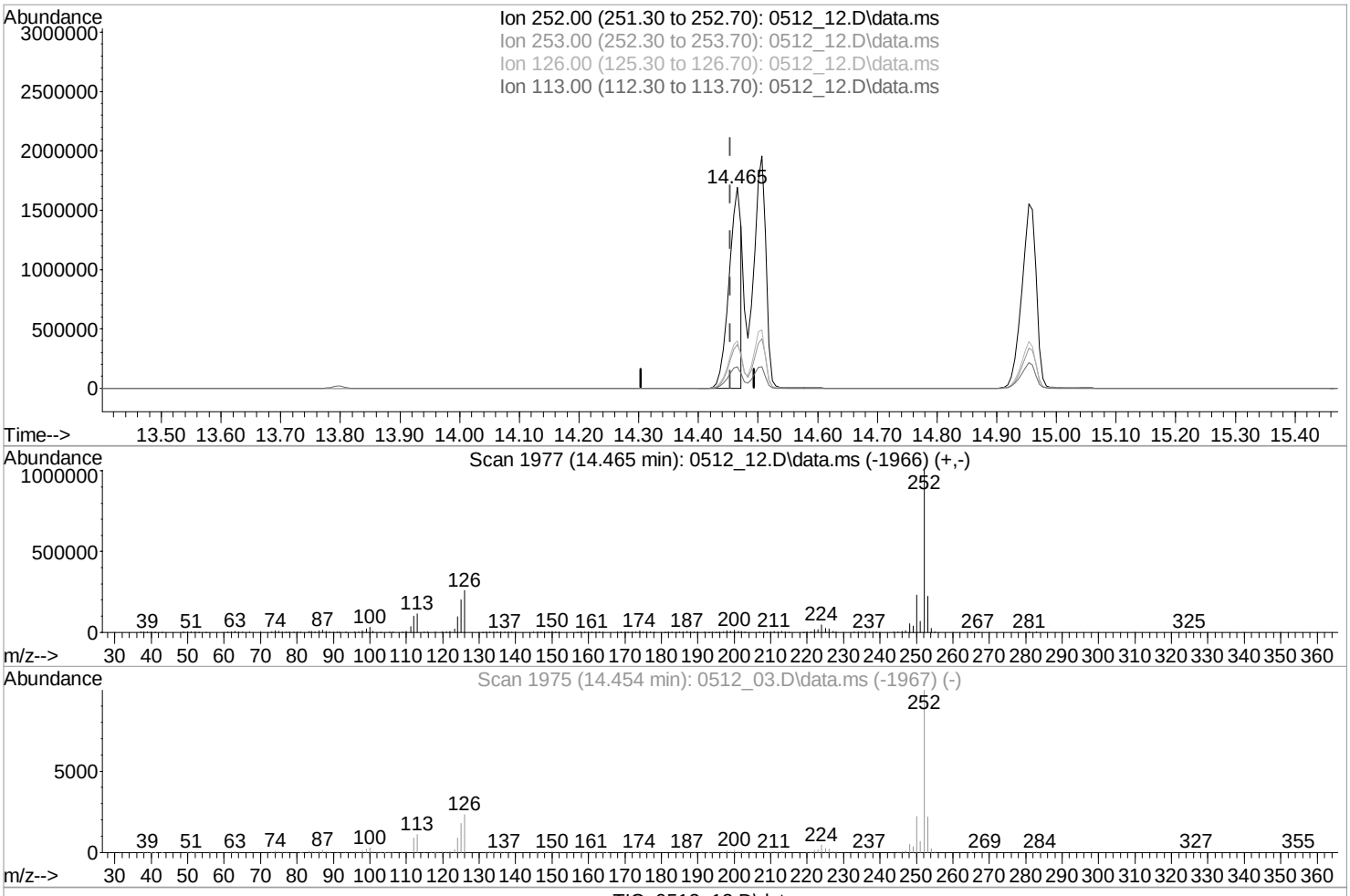
Data Path : C:\msdchem\1\data\051216\
Data File : 0512 12.D
Acq On : 12 May 2016 3:25 pm
Operator : 377
Sample : STD SVMS 50K PPB 16D25863
Misc : 8270 PRIMARY CALIBRATION IS 16E12001
ALS Vial : 12 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 13 16:01:12 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:00:15 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M



Data Path : C:\msdchem\1\data\051216\
Data File : 0512 12.D
Acq On : 12 May 2016 3:25 pm
Operator : 377
Sample : STD SVMS 50K PPB 16D25863
Misc : 8270 PRIMARY CALIBRATION IS 16E12001
ALS Vial : 12 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 13 16:00:18 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:00:15 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M



TIC: 0512_12.D\data.ms

(89) Benzo(b)fluoranthene (MT)

14.465min (+0.012) 45270.3833234 ppb

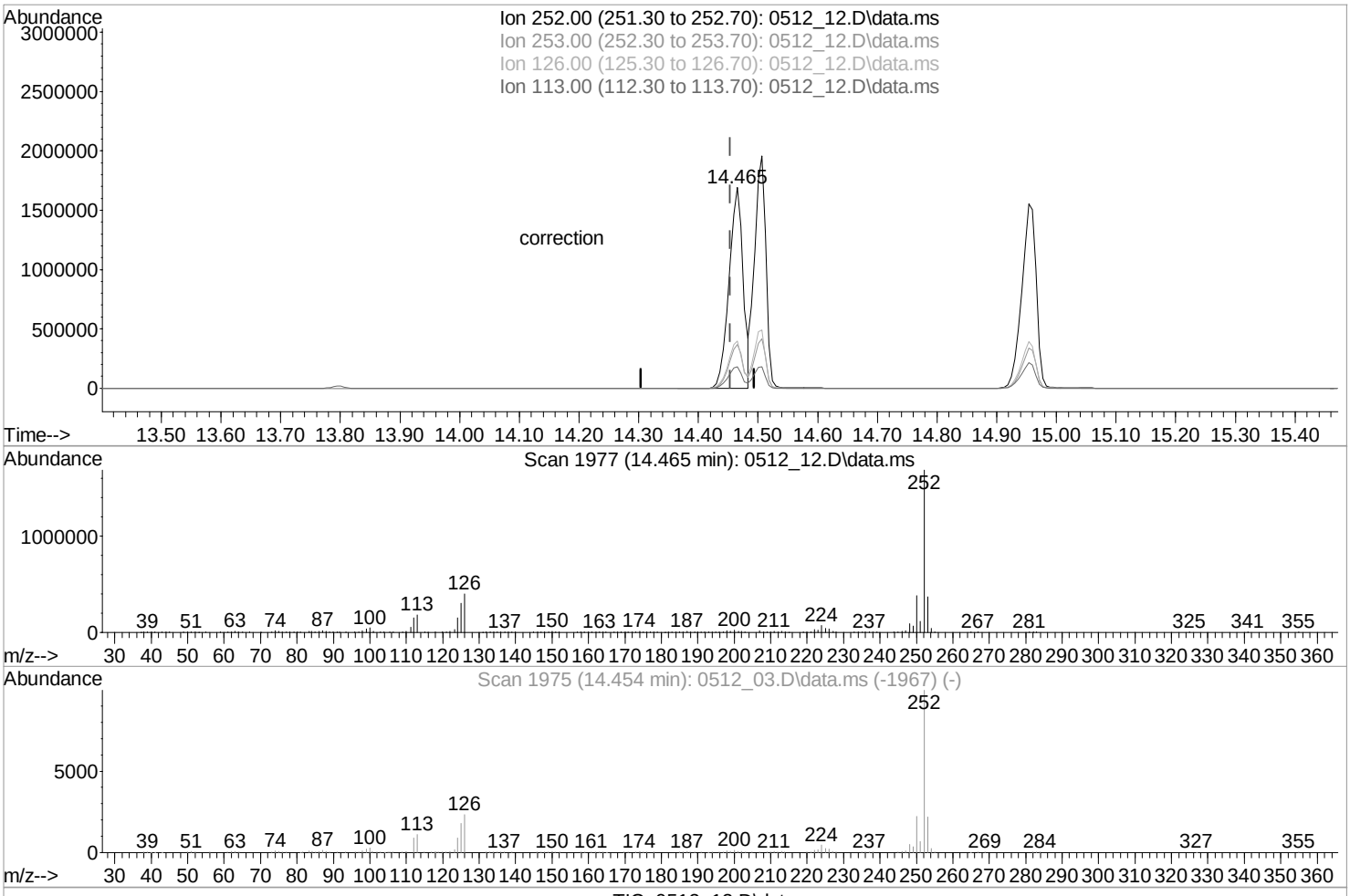
Qvalue = 97

response 2385004

Ion	Exp%	Act%
252.00	100	100
253.00	21.70	22.07
126.00	23.30	25.66
113.00	11.00	11.52

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 12.D
Acq On : 12 May 2016 3:25 pm
Operator : 377
Sample : STD SVMS 50K PPB 16D25863
Misc : 8270 PRIMARY CALIBRATION IS 16E12001
ALS Vial : 12 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 13 16:00:18 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:00:15 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M



TIC: 0512_12.D\data.ms

(89) Benzo(b)fluoranthene (MT)

14.465min (+0.012) 52561.0666782 ppb m

response 2769103

Ion	Exp%	Act%
252.00	100	100
253.00	21.70	21.79
126.00	23.30	23.39
113.00	11.00	10.59

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 13.D
Acq On : 12 May 2016 3:48 pm
Operator : 377
Sample : MSTD TCL 10K1 PPB 16D25867
Misc : 8270 TCL CALIBRATION IS 16E12001
ALS Vial : 13 Sample Multiplier: 1
InstName : BNAMS23

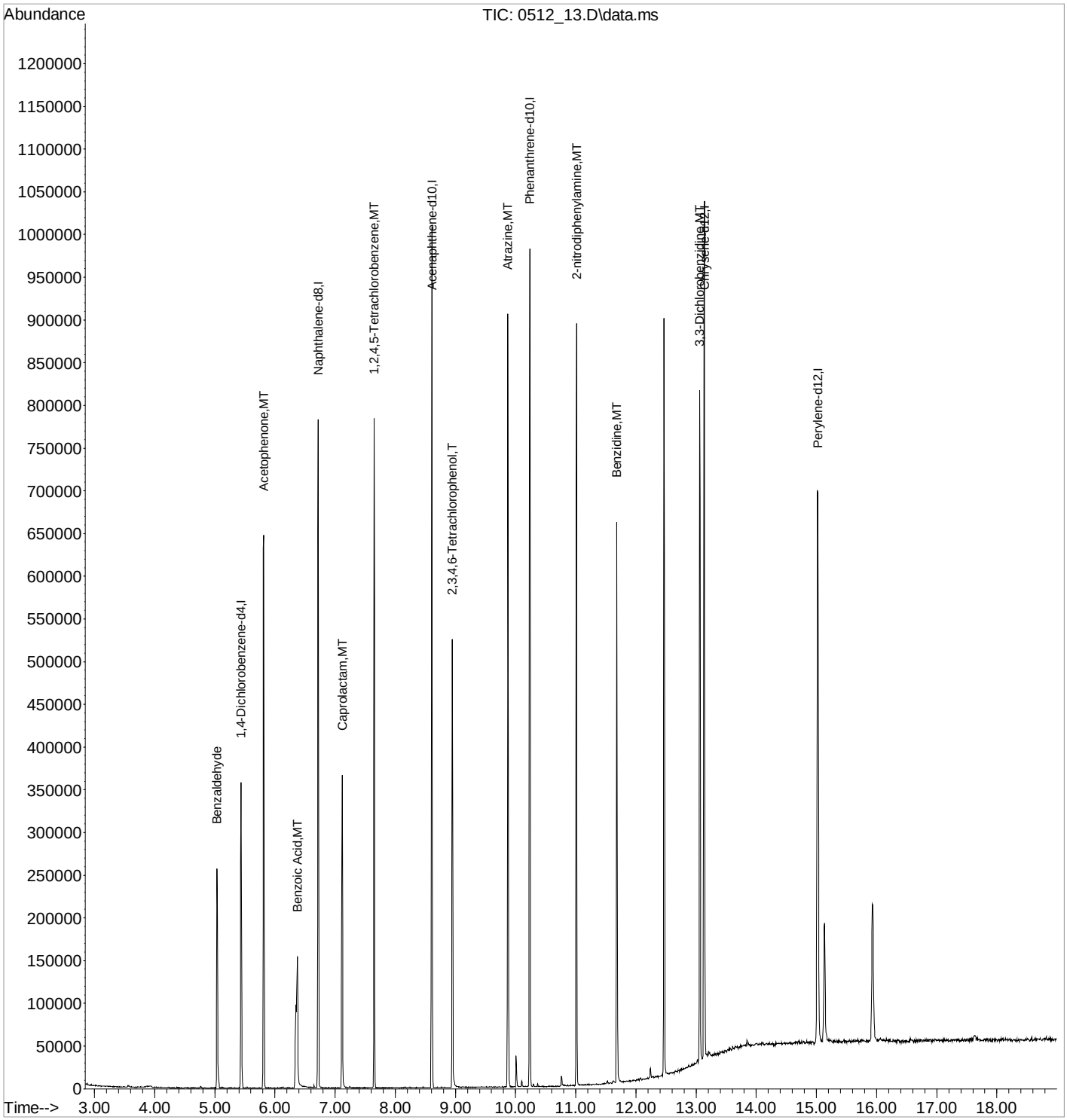
Quant Time: May 13 16:03:15 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:02:47 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	5.437	152	60943	8000.0000000	ppb	0.00
22) Naphthalene-d8	6.719	136	355096	8000.0000000	ppb	0.00
40) Acenaphthene-d10	8.607	164	204605	8000.0000000	ppb	0.00
64) Phenanthrene-d10	10.236	188	363326	8000.0000000	ppb	0.00
78) Chrysene-d12	13.136	240	348938	8000.0000000	ppb	0.00
88) Perylene-d12	15.024	264	334933	8000.0000000	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	0.000	112	0	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 87		Recovery =	0.00%#		
7) Phenol-d5	0.000	99	0	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 67		Recovery =	0.00%#		
23) Nitrobenzene-d5	0.000	82	0	0.0000000	ppb	
Spiked Amount 10.000	Range 12 - 120		Recovery =	0.00%#		
44) 2-Fluorobiphenyl	0.000	172	0	0.0000000	ppb	
Spiked Amount 10.000	Range 26 - 122		Recovery =	0.00%#		
67) 2,4,6-Tribromophenol	0.000	330	0	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 148		Recovery =	0.00%#		
81) p-Terphenyl-d14	0.000	244	0	0.0000000	ppb	
Spiked Amount 10.000	Range 34 - 149		Recovery =	0.00%#		
Target Compounds						Qvalue
9) Benzaldehyde	5.037	105	54393	10000.0000000	ppb	100
21) Acetophenone	5.813	105	201279	10000.0000000	ppb	100
30) Benzoic Acid	6.372	105	85742	10188.2174006	ppb	94
35) Caprolactam	7.119	113	45388	10000.2203274	ppb	100
39) 1,2,4,5-Tetrachloroben...	7.648	216	122924	10000.3254149	ppb	100
56) 2,3,4,6-Tetrachlorophenol	8.948	232	53375	10000.1873571	ppb	100
63) Atrazine	9.872	200	83804	10019.0089067	ppb	100
76) 2-nitrodiphenylamine	11.013	167	124962	10000.2400787	ppb	94
79) Benzidine	11.683	184	255809	10009.4299756	ppb	97
83) 3,3-Dichlorobenzidine	13.060	252	160105	9994.9433783	ppb	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 13.D
Acq On : 12 May 2016 3:48 pm
Operator : 377
Sample : MSTD TCL 10K1 PPB 16D25867
Misc : 8270 TCL CALIBRATION IS 16E12001
ALS Vial : 13 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 13 16:03:15 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:02:47 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 14.D
Acq On : 12 May 2016 4:11 pm
Operator : 377
Sample : STD TCL 1K1 PPB 16D25867
Misc : 8270 TCL CALIBRATION IS 16E12001
ALS Vial : 14 Sample Multiplier: 1
InstName : BNAMS23

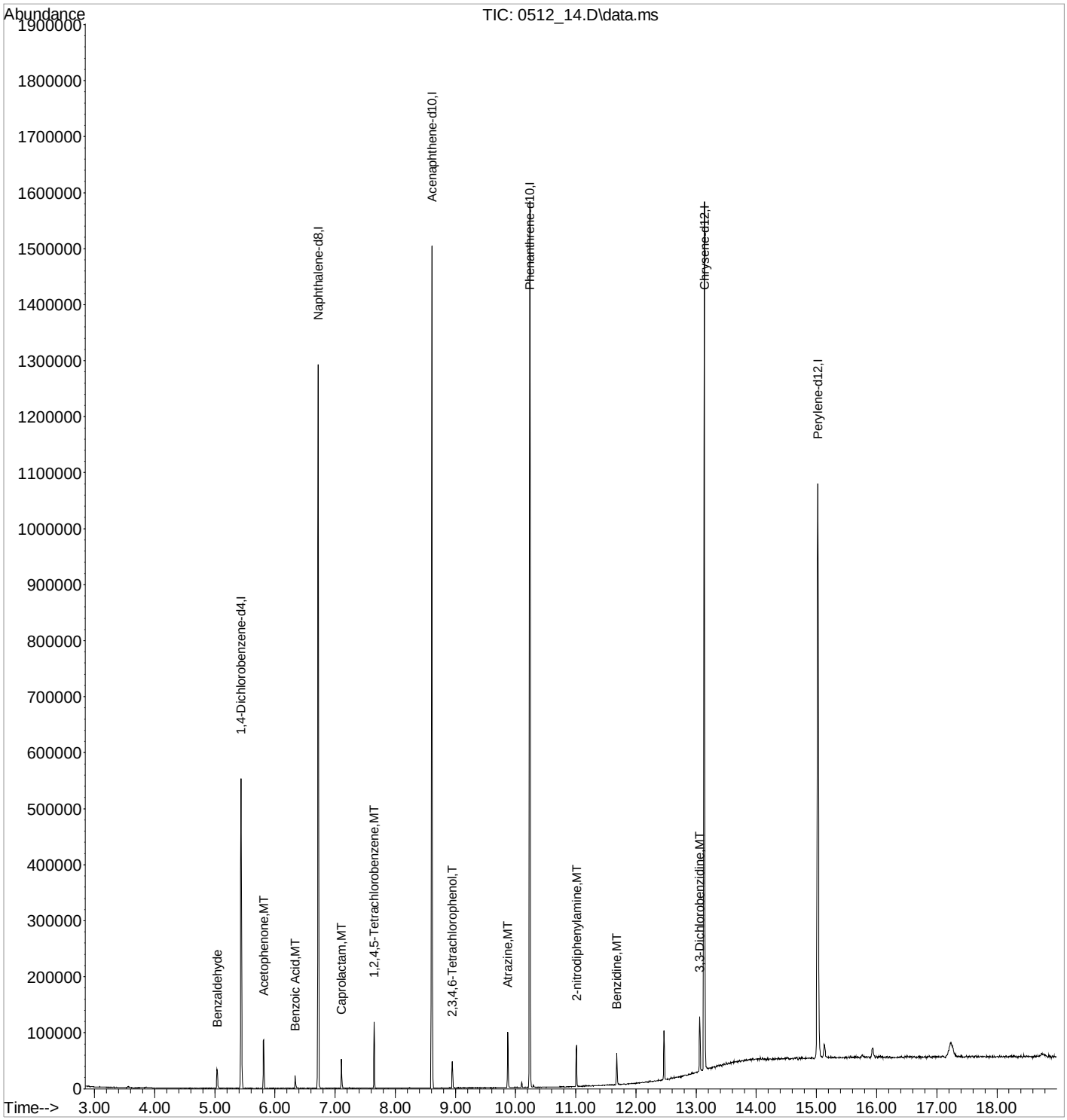
Quant Time: May 13 16:04:06 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:03:33 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	5.437	152	95976	8000.0000000	ppb	0.00
22) Naphthalene-d8	6.719	136	549409	8000.0000000	ppb	0.00
40) Acenaphthene-d10	8.607	164	317413	8000.0000000	ppb	0.00
64) Phenanthrene-d10	10.236	188	547185	8000.0000000	ppb	0.00
78) Chrysene-d12	13.136	240	509152	8000.0000000	ppb	0.00
88) Perylene-d12	15.024	264	494756	8000.0000000	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	0.000	112	0	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 87		Recovery =	0.00%#		
7) Phenol-d5	0.000	99	0	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 67		Recovery =	0.00%#		
23) Nitrobenzene-d5	0.000	82	0	0.0000000	ppb	
Spiked Amount 10.000	Range 12 - 120		Recovery =	0.00%#		
44) 2-Fluorobiphenyl	0.000	172	0	0.0000000	ppb	
Spiked Amount 10.000	Range 26 - 122		Recovery =	0.00%#		
67) 2,4,6-Tribromophenol	0.000	330	0	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 148		Recovery =	0.00%#		
81) p-Terphenyl-d14	0.000	244	0	0.0000000	ppb	
Spiked Amount 10.000	Range 34 - 149		Recovery =	0.00%#		
Target Compounds						Qvalue
9) Benzaldehyde	5.042	105	7368	860.1373129	ppb	97
21) Acetophenone	5.813	105	27313	861.6524395	ppb	99
30) Benzoic Acid	6.337	105	6421	484.0152788	ppb	95
35) Caprolactam	7.107	113	5491	781.9165551	ppb	95
39) 1,2,4,5-Tetrachloroben...	7.648	216	17944	943.4797589	ppb	96
56) 2,3,4,6-Tetrachlorophenol	8.948	232	5381	649.8552573	ppb	94
63) Atrazine	9.872	200	9414	724.1040533	ppb	98
76) 2-nitrodiphenylamine	11.013	167	9986	530.6105593	ppb #	84
79) Benzidine	11.683	184	23602	632.3154587	ppb	97
83) 3,3-Dichlorobenzidine	13.060	252	18455	789.9688527	ppb	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 14.D
Acq On : 12 May 2016 4:11 pm
Operator : 377
Sample : STD TCL 1K1 PPB 16D25867
Misc : 8270 TCL CALIBRATION IS 16E12001
ALS Vial : 14 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 13 16:04:06 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:03:33 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 15.D
Acq On : 12 May 2016 4:35 pm
Operator : 377
Sample : STD TCL 2K1 PPB 16D25867
Misc : 8270 TCL CALIBRATION IS 16E12001
ALS Vial : 15 Sample Multiplier: 1
InstName : BNAMS23

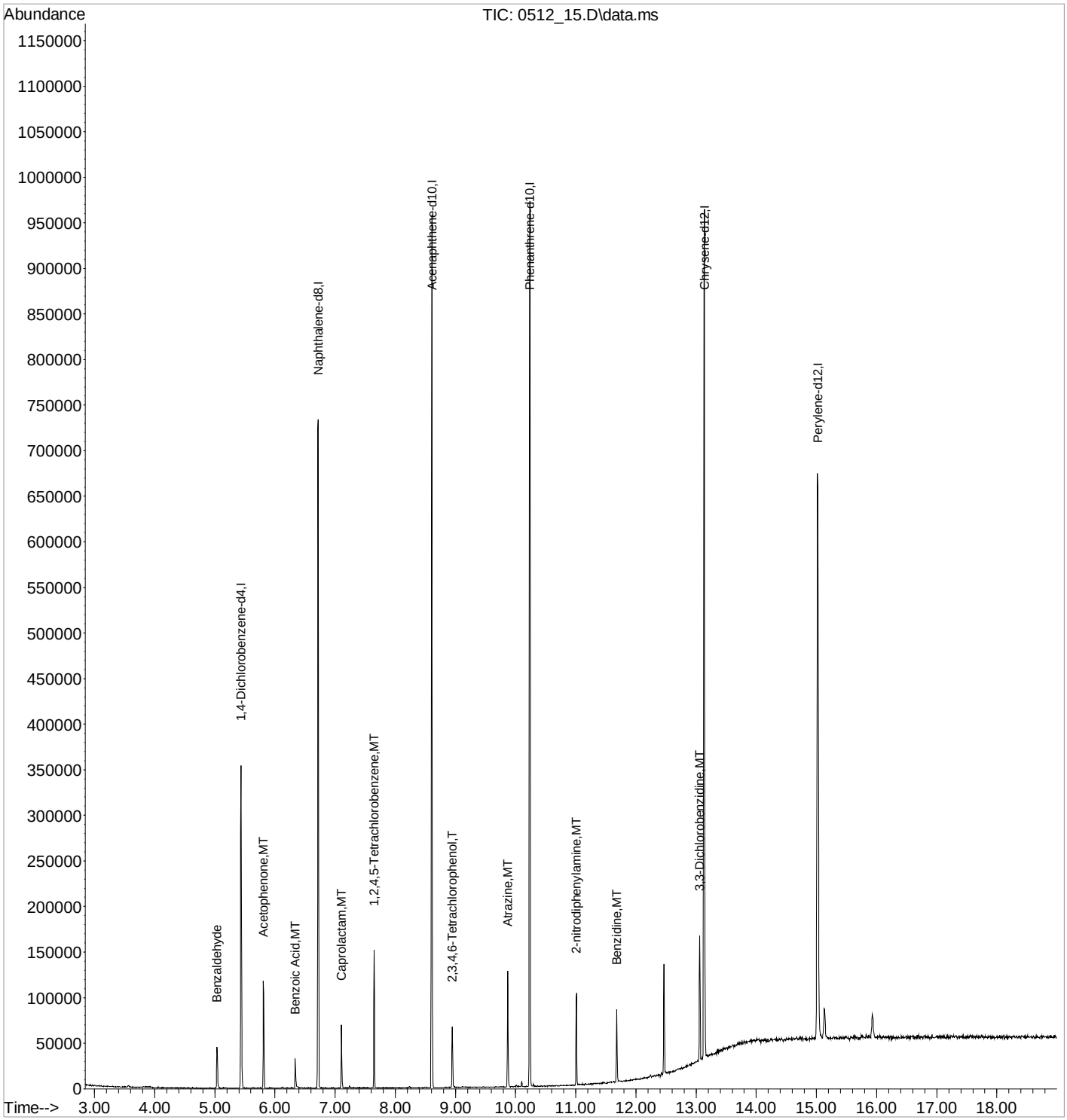
Quant Time: May 13 16:04:48 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:04:12 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	5.437	152	59810	8000.0000000	ppb	0.00
22) Naphthalene-d8	6.719	136	341283	8000.0000000	ppb	0.00
40) Acenaphthene-d10	8.607	164	197870	8000.0000000	ppb	0.00
64) Phenanthrene-d10	10.236	188	352418	8000.0000000	ppb	0.00
78) Chrysene-d12	13.136	240	331547	8000.0000000	ppb	0.00
88) Perylene-d12	15.024	264	318620	8000.0000000	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	0.000	112	0	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 87		Recovery =	0.00%#		
7) Phenol-d5	0.000	99	0	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 67		Recovery =	0.00%#		
23) Nitrobenzene-d5	0.000	82	0	0.0000000	ppb	
Spiked Amount 10.000	Range 12 - 120		Recovery =	0.00%#		
44) 2-Fluorobiphenyl	0.000	172	0	0.0000000	ppb	
Spiked Amount 10.000	Range 26 - 122		Recovery =	0.00%#		
67) 2,4,6-Tribromophenol	0.000	330	0	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 148		Recovery =	0.00%#		
81) p-Terphenyl-d14	0.000	244	0	0.0000000	ppb	
Spiked Amount 10.000	Range 34 - 149		Recovery =	0.00%#		
Target Compounds						Qvalue
9) Benzaldehyde	5.037	105	9502	1913.8461877	ppb	98
21) Acetophenone	5.807	105	34368	1869.1201190	ppb	99
30) Benzoic Acid	6.337	105	8793	1438.0242555	ppb	94
35) Caprolactam	7.107	113	7043	1812.1343788	ppb	95
39) 1,2,4,5-Tetrachloroben...	7.648	216	23244	2024.6748168	ppb	97
56) 2,3,4,6-Tetrachlorophenol	8.948	232	7363	1729.1686449	ppb	98
63) Atrazine	9.872	200	12822	1835.2440972	ppb	97
76) 2-nitrodiphenylamine	11.007	167	14303	1541.8881018	ppb #	88
79) Benzidine	11.683	184	32995	1663.2647356	ppb	98
83) 3,3-Dichlorobenzidine	13.060	252	25998	1909.5134916	ppb	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 15.D
Acq On : 12 May 2016 4:35 pm
Operator : 377
Sample : STD TCL 2K1 PPB 16D25867
Misc : 8270 TCL CALIBRATION IS 16E12001
ALS Vial : 15 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 13 16:04:48 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:04:12 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 16.D
Acq On : 12 May 2016 4:58 pm
Operator : 377
Sample : STD TCL 5K1 PPB 16D25867
Misc : 8270 TCL CALIBRATION IS 16E12001
ALS Vial : 16 Sample Multiplier: 1
InstName : BNAMS23

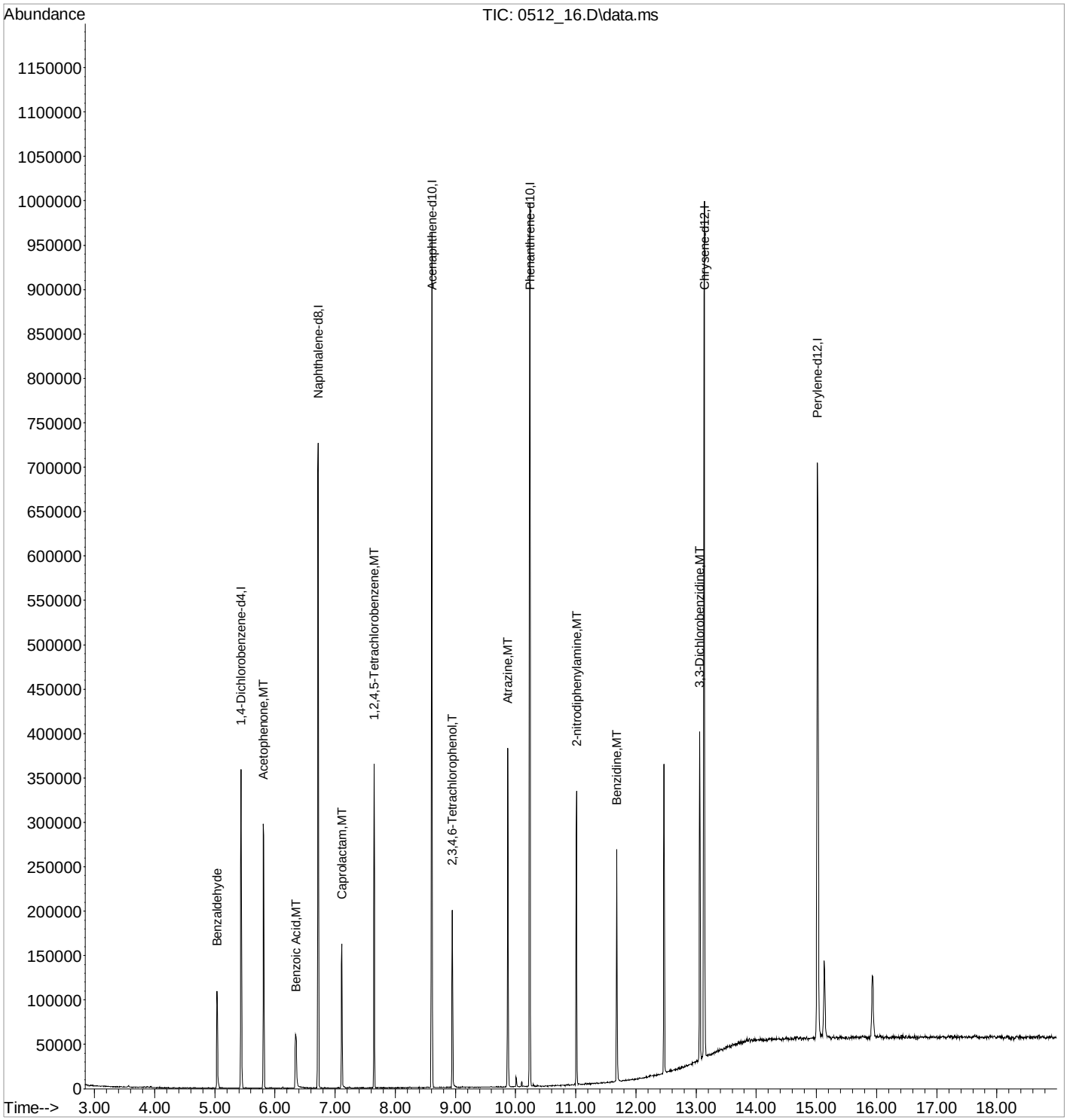
Quant Time: May 13 16:05:27 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:04:55 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	5.437	152	58399	8000.0000000	ppb	0.00
22) Naphthalene-d8	6.719	136	335347	8000.0000000	ppb	0.00
40) Acenaphthene-d10	8.607	164	197649	8000.0000000	ppb	0.00
64) Phenanthrene-d10	10.236	188	348495	8000.0000000	ppb	0.00
78) Chrysene-d12	13.136	240	333372	8000.0000000	ppb	0.00
88) Perylene-d12	15.019	264	319630	8000.0000000	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	0.000	112	0	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 87		Recovery =	0.00%#		
7) Phenol-d5	0.000	99	0	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 67		Recovery =	0.00%#		
23) Nitrobenzene-d5	0.000	82	0	0.0000000	ppb	
Spiked Amount 10.000	Range 12 - 120		Recovery =	0.00%#		
44) 2-Fluorobiphenyl	0.000	172	0	0.0000000	ppb	
Spiked Amount 10.000	Range 26 - 122		Recovery =	0.00%#		
67) 2,4,6-Tribromophenol	0.000	330	0	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 148		Recovery =	0.00%#		
81) p-Terphenyl-d14	0.000	244	0	0.0000000	ppb	
Spiked Amount 10.000	Range 34 - 149		Recovery =	0.00%#		
Target Compounds						Qvalue
9) Benzaldehyde	5.037	105	23376	4892.2858160	ppb	98
21) Acetophenone	5.807	105	89219	5080.2717988	ppb	97
30) Benzoic Acid	6.348	105	29371	5393.5935002	ppb	94
35) Caprolactam	7.113	113	18177	4913.4976452	ppb	93
39) 1,2,4,5-Tetrachloroben...	7.648	216	56406	4979.7505385	ppb	98
56) 2,3,4,6-Tetrachlorophenol	8.948	232	20911	5148.7562216	ppb	94
63) Atrazine	9.872	200	35042	5163.0282751	ppb	97
76) 2-nitrodiphenylamine	11.013	167	45023	5313.9220186	ppb	92
79) Benzidine	11.683	184	101931	5414.0205599	ppb	98
83) 3,3-Dichlorobenzidine	13.060	252	70594	5235.5955069	ppb	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 16.D
Acq On : 12 May 2016 4:58 pm
Operator : 377
Sample : STD TCL 5K1 PPB 16D25867
Misc : 8270 TCL CALIBRATION IS 16E12001
ALS Vial : 16 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 13 16:05:27 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:04:55 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M



Data Path : C:\msdchem\1\data\051216\
Data File : 0512 17.D
Acq On : 12 May 2016 5:21 pm
Operator : 377
Sample : STD TCL 20K1 PPB 16D25867
Misc : 8270 TCL CALIBRATION IS 16E12001
ALS Vial : 17 Sample Multiplier: 1
InstName : BNAMS23

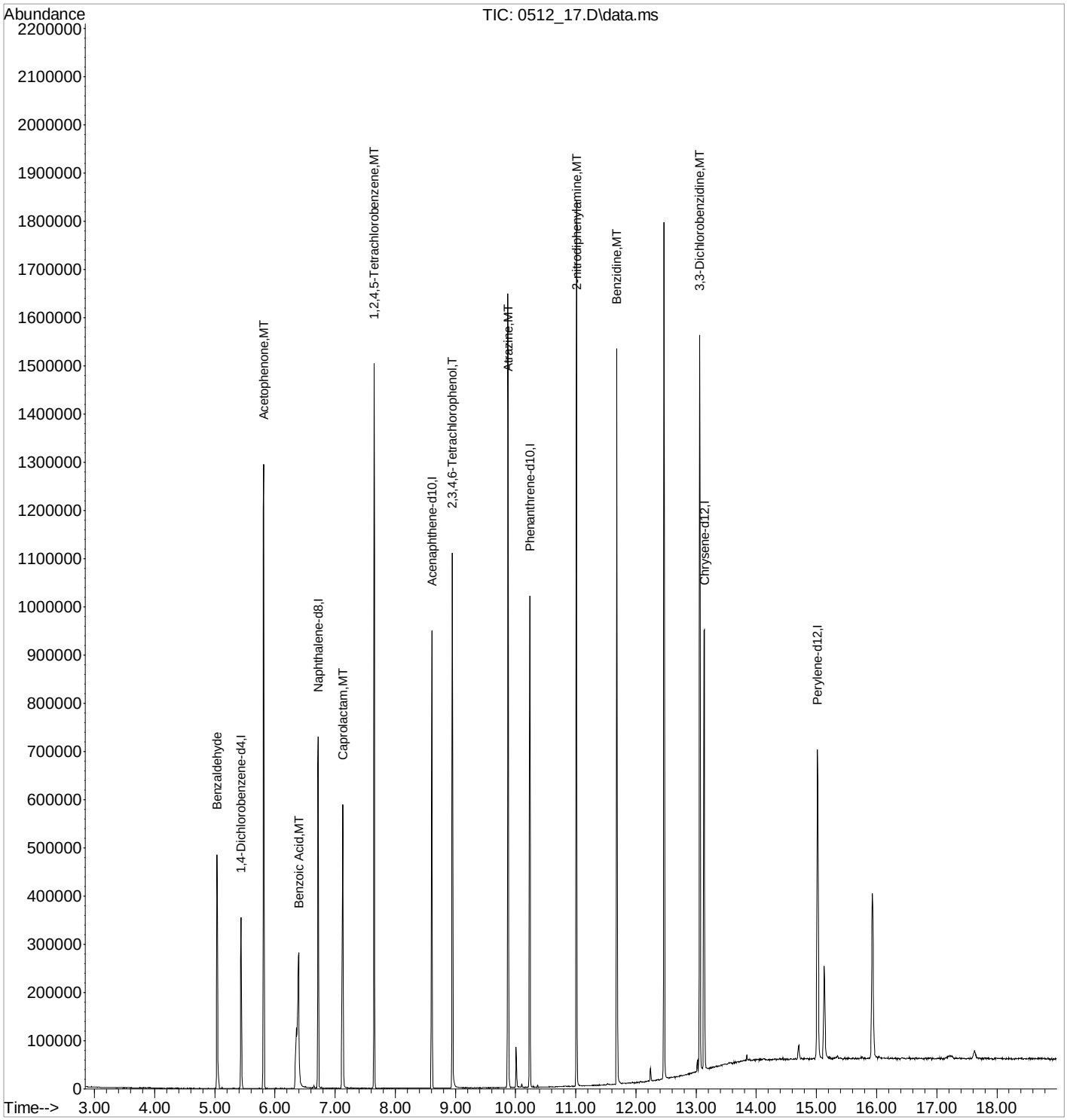
Quant Time: May 13 16:06:37 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:05:33 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	5.437	152	58422	8000.0000000	ppb	0.00
22) Naphthalene-d8	6.719	136	334024	8000.0000000	ppb	0.00
40) Acenaphthene-d10	8.607	164	198634	8000.0000000	ppb	0.00
64) Phenanthrene-d10	10.236	188	358892	8000.0000000	ppb	0.00
78) Chrysene-d12	13.136	240	344067	8000.0000000	ppb	0.00
88) Perylene-d12	15.018	264	329566	8000.0000000	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	0.000	112	0	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 87		Recovery =	0.00%#		
7) Phenol-d5	0.000	99	0	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 67		Recovery =	0.00%#		
23) Nitrobenzene-d5	0.000	82	0	0.0000000	ppb	
Spiked Amount 10.000	Range 12 - 120		Recovery =	0.00%#		
44) 2-Fluorobiphenyl	0.000	172	0d	0.0000000	ppb	
Spiked Amount 10.000	Range 26 - 122		Recovery =	0.00%#		
67) 2,4,6-Tribromophenol	0.000	330	0	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 148		Recovery =	0.00%#		
81) p-Terphenyl-d14	0.000	244	0d	0.0000000	ppb	
Spiked Amount 10.000	Range 34 - 149		Recovery =	0.00%#		
Target Compounds						Qvalue
9) Benzaldehyde	5.037	105	103276	21722.7761440	ppb	99
21) Acetophenone	5.813	105	384596	21803.3767233	ppb	98
30) Benzoic Acid	6.395	105	183946	33258.5121810	ppb	94
35) Caprolactam	7.131	113	86999	23712.7546280	ppb	96
39) 1,2,4,5-Tetrachloroben...	7.648	216	236862	21015.2404509	ppb	98
56) 2,3,4,6-Tetrachlorophenol	8.948	232	111688	27161.6924955	ppb	99
63) Atrazine	9.878	200	163958	23843.1427980	ppb	98
76) 2-nitrodiphenylamine	11.013	167	251323	28358.4161141	ppb	94
79) Benzidine	11.683	184	568799	28678.7347745	ppb	97
83) 3,3-Dichlorobenzidine	13.060	252	316893	22506.6598561	ppb	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 17.D
Acq On : 12 May 2016 5:21 pm
Operator : 377
Sample : STD TCL 20K1 PPB 16D25867
Misc : 8270 TCL CALIBRATION IS 16E12001
ALS Vial : 17 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 13 16:06:37 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:05:33 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 18.D
Acq On : 12 May 2016 5:44 pm
Operator : 377
Sample : STD TCL 30K1 PPB 16D25867
Misc : 8270 TCL CALIBRATION IS 16E12001
ALS Vial : 18 Sample Multiplier: 1
InstName : BNAMS23

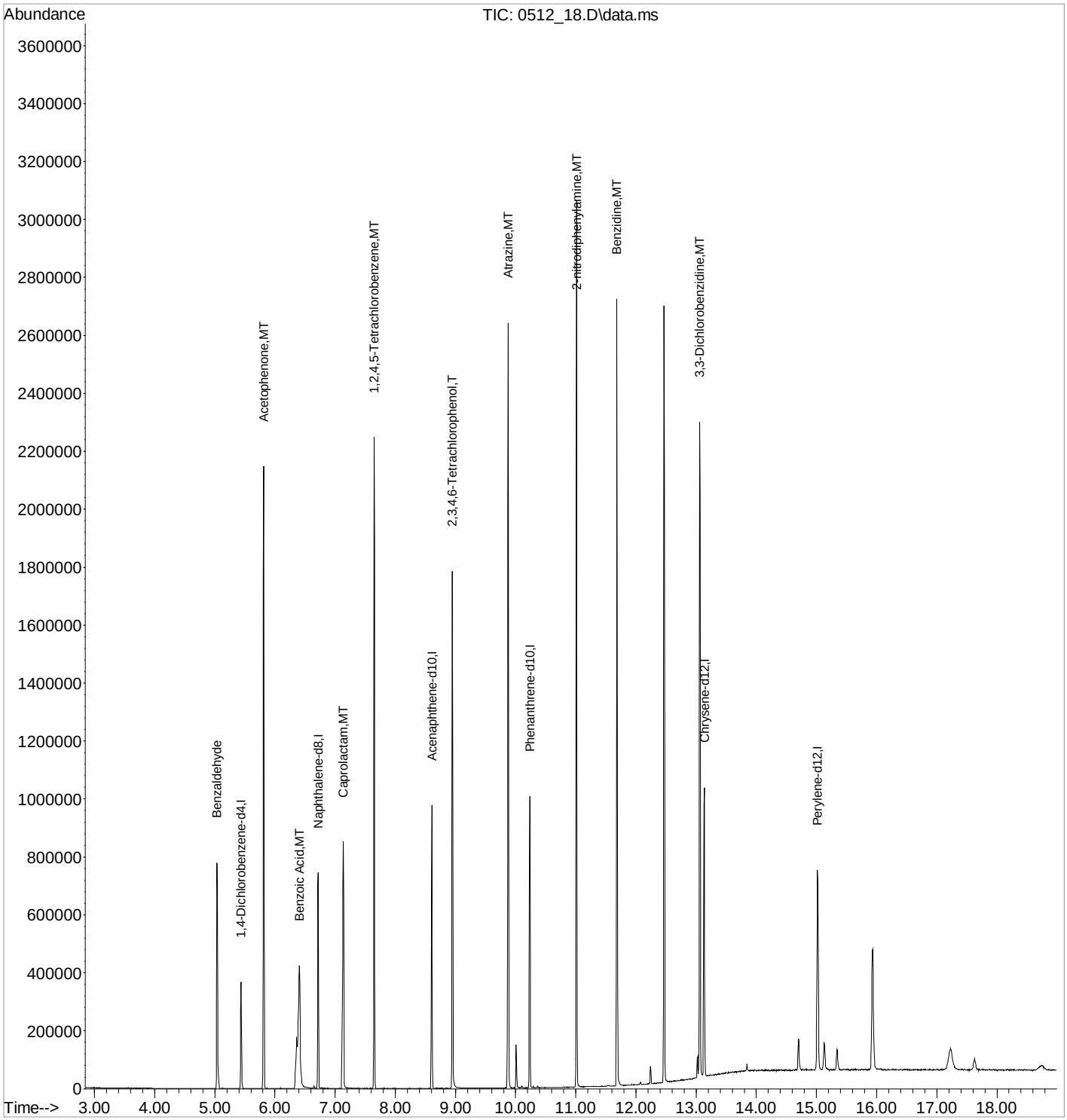
Quant Time: May 13 16:07:16 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:06:43 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	5.437	152	60993	8000.0000000	ppb	0.00
22) Naphthalene-d8	6.719	136	347510	8000.0000000	ppb	0.00
40) Acenaphthene-d10	8.607	164	203430	8000.0000000	ppb	0.00
64) Phenanthrene-d10	10.236	188	369693	8000.0000000	ppb	0.00
78) Chrysene-d12	13.136	240	352054	8000.0000000	ppb	0.00
88) Perylene-d12	15.018	264	339122	8000.0000000	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	0.000	112	0	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 87		Recovery =	0.00%#		
7) Phenol-d5	0.000	99	0	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 67		Recovery =	0.00%#		
23) Nitrobenzene-d5	0.000	82	0	0.0000000	ppb	
Spiked Amount 10.000	Range 12 - 120		Recovery =	0.00%#		
44) 2-Fluorobiphenyl	0.000	172	0	0.0000000	ppb	
Spiked Amount 10.000	Range 26 - 122		Recovery =	0.00%#		
67) 2,4,6-Tribromophenol	0.000	330	0	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 148		Recovery =	0.00%#		
81) p-Terphenyl-d14	0.000	244	0	0.0000000	ppb	
Spiked Amount 10.000	Range 34 - 149		Recovery =	0.00%#		
Target Compounds						Qvalue
9) Benzaldehyde	5.037	105	165608	32800.1214250	ppb	99
21) Acetophenone	5.813	105	604206	32228.3648276	ppb	99
30) Benzoic Acid	6.407	105	330304	50683.4087195	ppb	95
35) Caprolactam	7.136	113	140214	35419.0837528	ppb	97
39) 1,2,4,5-Tetrachloroben...	7.648	216	373354	31519.7848304	ppb	100
56) 2,3,4,6-Tetrachlorophenol	8.948	232	182493	40438.5476678	ppb	99
63) Atrazine	9.877	200	265601	36317.9527516	ppb	100
76) 2-nitrodiphenylamine	11.013	167	420213	42479.4731184	ppb	95
79) Benzidine	11.683	184	970088	43984.6823242	ppb	97
83) 3,3-Dichlorobenzidine	13.060	252	491860	33305.9297914	ppb	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 18.D
Acq On : 12 May 2016 5:44 pm
Operator : 377
Sample : STD TCL 30K1 PPB 16D25867
Misc : 8270 TCL CALIBRATION IS 16E12001
ALS Vial : 18 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 13 16:07:16 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:06:43 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 19.D
Acq On : 12 May 2016 6:07 pm
Operator : 377
Sample : STD TCL 40K1 PPB 16D25867
Misc : 8270 TCL CALIBRATION IS 16E12001
ALS Vial : 19 Sample Multiplier: 1
InstName : BNAMS23

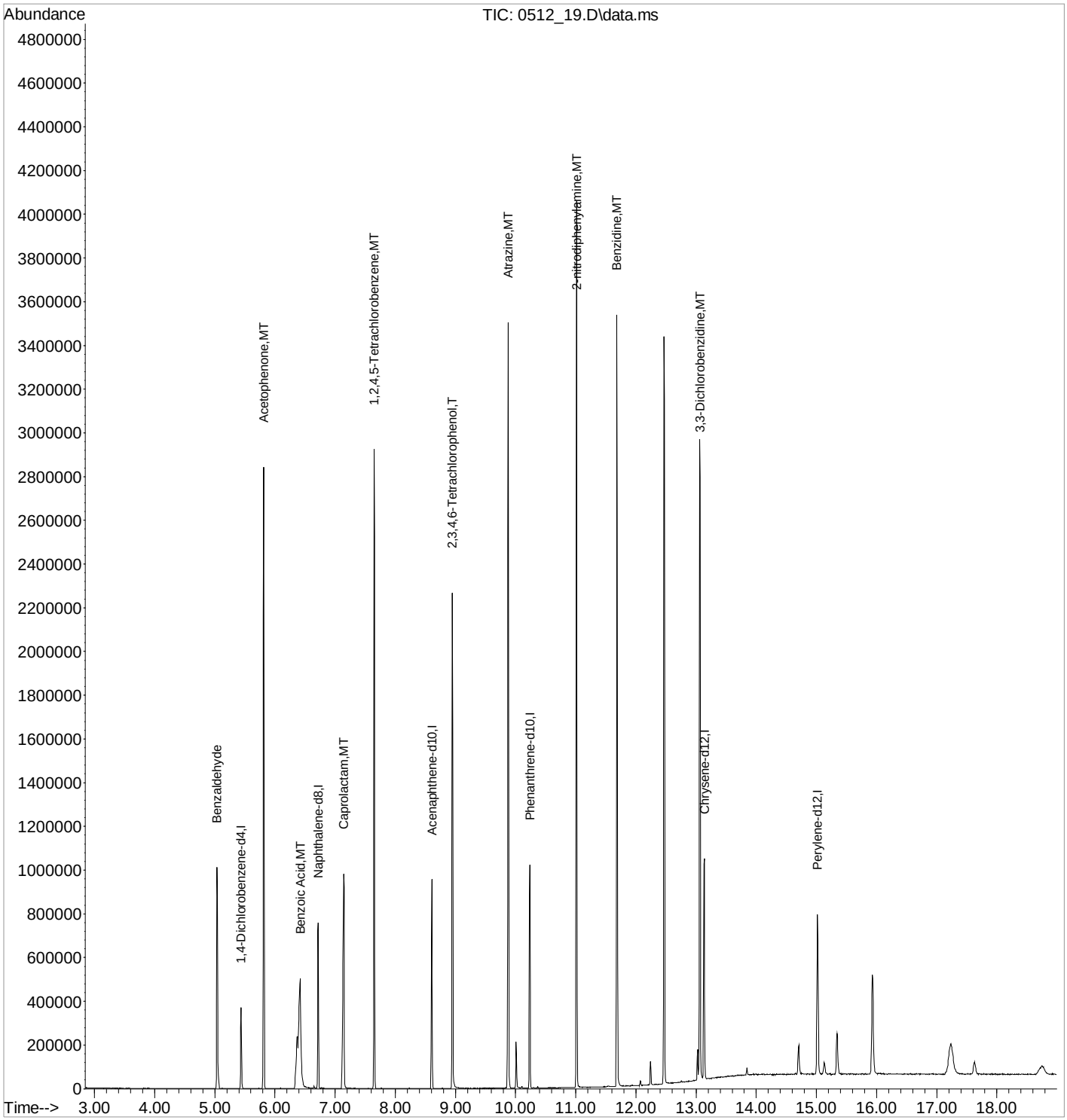
Quant Time: May 13 16:09:02 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:07:38 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	5.437	152	62671	8000.0000000	ppb	0.00
22) Naphthalene-d8	6.719	136	355917	8000.0000000	ppb	0.00
40) Acenaphthene-d10	8.607	164	205616	8000.0000000	ppb	0.00
64) Phenanthrene-d10	10.236	188	378038	8000.0000000	ppb	0.00
78) Chrysene-d12	13.136	240	365933	8000.0000000	ppb	0.00
88) Perylene-d12	15.018	264	346650	8000.0000000	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	0.000	112	0	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 87		Recovery =	0.00%#		
7) Phenol-d5	0.000	99	0	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 67		Recovery =	0.00%#		
23) Nitrobenzene-d5	0.000	82	0	0.0000000	ppb	
Spiked Amount 10.000	Range 12 - 120		Recovery =	0.00%#		
44) 2-Fluorobiphenyl	0.000	172	0	0.0000000	ppb	
Spiked Amount 10.000	Range 26 - 122		Recovery =	0.00%#		
67) 2,4,6-Tribromophenol	0.000	330	0	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 148		Recovery =	0.00%#		
81) p-Terphenyl-d14	0.000	244	0	0.0000000	ppb	
Spiked Amount 10.000	Range 34 - 149		Recovery =	0.00%#		
Target Compounds						Qvalue
9) Benzaldehyde	5.037	105	220751	41899.2466600	ppb	99
21) Acetophenone	5.813	105	812597	41667.5868879	ppb	100
30) Benzoic Acid	6.419	105	461731	62046.9769131	ppb	95
35) Caprolactam	7.142	113	184878	44265.7499511	ppb	99
39) 1,2,4,5-Tetrachloroben...	7.648	216	493292	40321.2158310	ppb	99
56) 2,3,4,6-Tetrachlorophenol	8.948	232	243660	50490.4586919	ppb	96
63) Atrazine	9.878	200	357184	46683.0845878	ppb	100
76) 2-nitrodiphenylamine	11.013	167	571688	52852.1389754	ppb	94
79) Benzidine	11.683	184	1334500	54015.9078258	ppb	97
83) 3,3-Dichlorobenzidine	13.066	252	654258	41853.5977770	ppb	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 19.D
Acq On : 12 May 2016 6:07 pm
Operator : 377
Sample : STD TCL 40K1 PPB 16D25867
Misc : 8270 TCL CALIBRATION IS 16E12001
ALS Vial : 19 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 13 16:09:02 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:07:38 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 20.D
Acq On : 12 May 2016 6:30 pm
Operator : 377
Sample : STD TCL 50K1 PPB 16D25867
Misc : 8270 TCL CALIBRATION IS 16E12001
ALS Vial : 20 Sample Multiplier: 1
InstName : BNAMS23

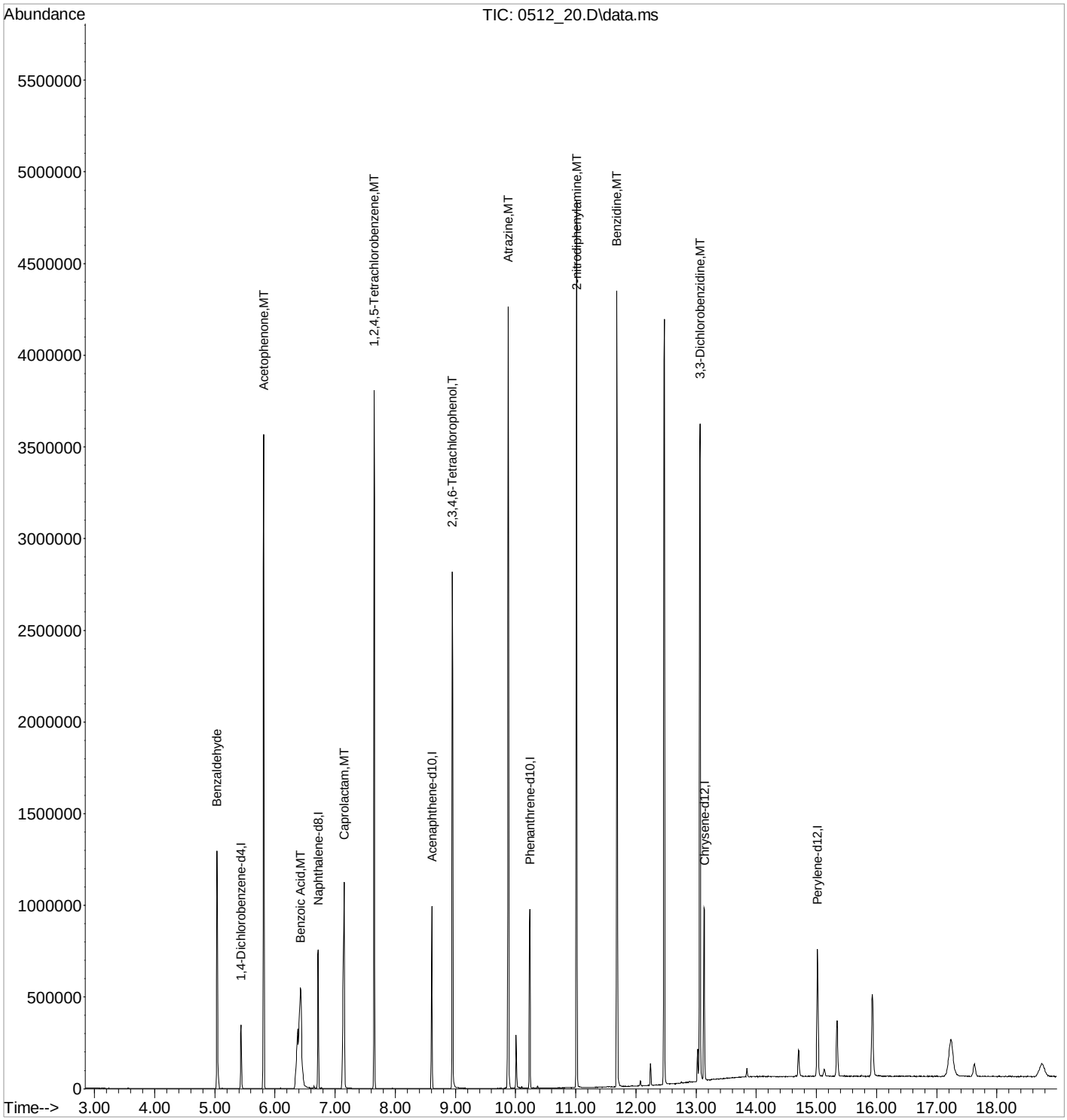
Quant Time: May 13 16:09:34 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:09:09 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	5.437	152	62701	8000.0000000	ppb	0.00
22) Naphthalene-d8	6.719	136	351231	8000.0000000	ppb	0.00
40) Acenaphthene-d10	8.607	164	207469	8000.0000000	ppb	0.00
64) Phenanthrene-d10	10.236	188	372713	8000.0000000	ppb	0.00
78) Chrysene-d12	13.136	240	349547	8000.0000000	ppb	0.00
88) Perylene-d12	15.019	264	339072	8000.0000000	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	0.000	112	0	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 87		Recovery =	0.00%#		
7) Phenol-d5	0.000	99	0	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 67		Recovery =	0.00%#		
23) Nitrobenzene-d5	0.000	82	0	0.0000000	ppb	
Spiked Amount 10.000	Range 12 - 120		Recovery =	0.00%#		
44) 2-Fluorobiphenyl	0.000	172	0	0.0000000	ppb	
Spiked Amount 10.000	Range 26 - 122		Recovery =	0.00%#		
67) 2,4,6-Tribromophenol	0.000	330	0	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 148		Recovery =	0.00%#		
81) p-Terphenyl-d14	0.000	244	0	0.0000000	ppb	
Spiked Amount 10.000	Range 34 - 149		Recovery =	0.00%#		
Target Compounds						Qvalue
9) Benzaldehyde	5.037	105	280207	52800.5916004	ppb	99
21) Acetophenone	5.813	105	1018516	51892.4656226	ppb	99
30) Benzoic Acid	6.425	105	601541	75933.9962098	ppb	95
35) Caprolactam	7.154	113	232162	55483.4062305	ppb	99
39) 1,2,4,5-Tetrachloroben...	7.648	216	624360	51656.2141608	ppb	99
56) 2,3,4,6-Tetrachlorophenol	8.948	232	307866	60941.9935640	ppb	98
63) Atrazine	9.878	200	452469	57242.1625895	ppb	99
76) 2-nitrodiphenylamine	11.013	167	715149	64116.6133193	ppb	94
79) Benzidine	11.683	184	1689441	68175.6568054	ppb	97
83) 3,3-Dichlorobenzidine	13.066	252	800879	53282.0721388	ppb	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\data\051216\
Data File : 0512 20.D
Acq On : 12 May 2016 6:30 pm
Operator : 377
Sample : STD TCL 50K1 PPB 16D25867
Misc : 8270 TCL CALIBRATION IS 16E12001
ALS Vial : 20 Sample Multiplier: 1
InstName : BNAMS23

Quant Time: May 13 16:09:34 2016
Quant Method : C:\msdchem\1\methods\S823E12P.M
Quant Title : 8270 BNA
QLast Update : Fri May 13 16:09:09 2016
Response via : Initial Calibration
DataAcq Meth:BNAMS23A.M



Company Name/Address:
Weston Solutions
1435 Garrison St., Ste. 100
Lakewood, CO 80215

Billing Information:

Report to: **Moira Pryhoda**

Email To: moira.pryhoda@WestonSolutions.com

Project Description: Cowboy Timber

City/State Collected: Henderson, WY

Phone: 303-729-6146
Fax:

Client Project # 20408.012.001.0345.00

Lab Project #

Collected by (print): Eric Sendusky

Site/Facility ID #

P.O. #

Collected by (signature): Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
X Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed: See Remarks

Email? ___No ✓Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

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Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L835137
J091

Acctnum: WESSOLLCO
Template:
Prelogin:
TSR:
PB:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOC's (1) 4 oz Soil Jar	VOC's (3) 40 mL vials	SVOC's (2) 1 L Amber Glass	Rem./Contaminant	Sample # (lab only)
CTSO-01-20160511	Grab	SS	0-1	5/11/16	RH	1	X				-01
CTSO-02-20160511	Grab	SS	0-1			1	X				02
CTSO-03-20160511	Grab	SS	0-1			1	X				03
CTSO-04-20160511	Grab	SS	0-1			1	X				04
CTSO-05-20160511	Grab	SS	0-1			0	X				
		~~SS~~									
~~CTSO~~ CTSOES											
CTGW-01-20160511	Grab	GW				4		X	X		

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other_____

Remarks: Need Soil data on Friday 5/13, Water data on 5/18

pH _____ Temp _____

Flow _____ Other _____

6711 0332 9042

Hold #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	5/12/16		FedEx
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☒ FedEx ☐ Courier ☐ _____

Temp: 2.4 °C Bottles Received: 8

Date: 5-13-16 Time: 0930

Condition: N (lab use only) TDH

COC Seal Intact: ___Y ___N ✓NA

pH Checked: NCF:

Andy Vann

ESC Lab Sciences
Non-Conformance Form

Login #:L835437	Client: WESSOLLCO	Date:05/13/16	Evaluated by:Richard Hughes

Non-Conformance (check applicable items)

	Sample Integrity		Chain of Custody Clarification		
	Parameter(s) past holding time		Login Clarification Needed		**If Broken Container:**
	Improper temperature		Chain of custody is incomplete		Insufficient packing material around container
	Improper container type		Please specify Metals requested.	x	Insufficient packing material inside cooler
	Improper preservation		Please specify TCLP requested.		Improper handling by carrier (FedEx / UPS / Cour
	Insufficient sample volume.		Received additional samples not listed on coc.		Sample was frozen
	Sample is biphasic.		Sample ids on containers do not match ids on coc		Container lid not intact
	Vials received with headspace.		Trip Blank not received.		**If no Chain of Custody:**
x	Broken container		Client did not "X" analysis.		Received by:
	Broken container:		Chain of Custody is missing		Date/Time:
	Sufficient sample remains				Temp./Cont. Rec./pH:
					Carrier:
					Tracking#

Login Comments:The 4oz container from CTSO-05-20160511 received broken, and not salvagable. The amber liter for CTGW-01-20160511 received broken.

Client informed by:		Call		Email		Voice Mail		Date:	Time:
TSR Initials: CSG	Client Contact: Moira Pryhoda								

Login Instructions:

1) Client notified,
2) Please proceed with remaining samples

690 of 691

ESC Lab Sciences

Login Confirmation Report

May 16, 2016 - 17:46

YOUR LAB OF CHOICE

Account: WESSOLLCO - Weston Solutions - CO

Login #	**L835437**	Receive Date: 05/13/2016	TSR: Shane Gambill
Template #		Entered: 05/13/2016	By: Andy Vann
Report to:	Moira Pryhoda	Lab Project Number: WESSOLLCO-COWBOY	**Report MDL: N**
	1435 Garrison St.	Client Project # 20408.012.001.0345.0	**HDC: N**
	Lakewood, CO 80215	Project Description: Cowboy Timber	PO #
		Collected By: Eric Sandusky	PO Req: N
Phone:	(303) 729-6146 FAX:	Reg. State: CO	Terms: 45
Email:	moira.pryhoda@westonsolutions.com		Quote #

Login Comments: WESSOLLCO-REG8 - Level 4 dp @ 20%

Matrix	Test	Sample ID	Collection Date	Design ID	Method	Unit Price
L835437-01		**CTDO-01-20160511**	**05/11/2016 00:00** Sample Description: Cowboy Timber	**Site:**	**Est. Due Date*: 05/16/2016 - R2**	
SS	V8260	Volatiles		DEFAULT	8260B	$ 170.00
Misc	DISPOSAL	Sample Disposal Charge				$ 5.00
Misc	ENERGY	Energy Surcharge				$ 12.00
Misc	HARDCOPY	Hardcopy Report Charge				$ 0.00
Misc	SHIPPING	Inbound Transport Charge				$ 0.00
L835437-02		**CTDO-02-20160511**	**05/11/2016 00:00** Sample Description: Cowboy Timber	**Site:**	**Est. Due Date*: 05/16/2016 - R2**	
SS	V8260	Volatiles		DEFAULT	8260B	$ 170.00
L835437-03		**CTDO-03-20160511**	**05/11/2016 00:00** Sample Description: Cowboy Timber	**Site:**	**Est. Due Date*: 05/16/2016 - R2**	
SS	V8260	Volatiles		DEFAULT	8260B	$ 170.00
L835437-04		**CTDO-04-20160511**	**05/11/2016 00:00** Sample Description: Cowboy Timber	**Site:**	**Est. Due Date*: 05/16/2016 - R2**	
SS	V8260	Volatiles		DEFAULT	8260B	$ 170.00
L835437-05		**CTGW-01-20160511**	**05/11/2016 00:00** Sample Description: Cowboy Timber	**Site:**	**Est. Due Date*: 05/18/2016 - R4**	
GW	SV8270	SVOCs		DEFAULT	8270C	$ 250.00
GW	V8260	Volatiles		DEFAULT	8260B	$ 106.25

Information Only - Not An Invoice - Do Not Pay! Total: $ 1,053.25

*** Due Date listed is an estimate based on average workloads. Please communicate required dates to your TSR.**

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Mt. Juliet, TN 37122
(615) 758-5858
(800) 767-5859
Fax (615) 758-5859
Tax I.D 62-0814289
Est. 1970

Quality Control Summary
SDG: L836976

For: Weston Solutions - CO
Cowboy Timber

L836976

Lab SampleID.	Client ID
L836976-01	CTSO-06-20160518
L836976-02	CTSO-E3D01-20160517
L836976-03	CTSO-D8D23-20160518
L836976-04	CTSO-C6D12-20160519
L836976-05	CTSO-C7D12-20160519

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Fax (615) 758-5859
Tax I.D 62-0814289
Est. 1970

Quality Control Summary
SDG: L836976

For: Weston Solutions - CO
Project: Cowboy Timber
October 27, 2016

Sample Receiving and Handling

All sample aliquots were received at the correct temperature, in the proper containers, and with the appropriate preservatives. All method specified holding times were met.

Volatile Organic Compounds by Method 8260B

Laboratory Control Sample

Sample L836976-01 was analyzed in analytical batch WG875350. The laboratory control sample associated with this sample had all target analytes within method limits except for 2-Chloroethyl vinyl ether, Bromomethane, Chloroethane, and Vinyl chloride. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

Matrix Spike/Matrix Spike Duplicate

For analytical batch WG875350 matrix spike/matrix spike duplicate analysis was performed on sample L836804-06. The matrix spike recoveries were above laboratory control limits for 2-Chloroethyl vinyl ether. The spike recoveries were within limits for the remaining target compounds reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

Blank Analysis

The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

Calibration Summary

Instrument VOCMS30 was calibrated on 4/26/2016. The initial calibration and continuing calibration verification standards were within method limits.

Surrogate Summary

The surrogate recoveries were within method limits for all samples.

Internal Standards

The internal standard responses and retention times were within method limits for all samples and quality control samples.

Semi-Volatiles by Method 8270C

Laboratory Control Sample

Samples L836976-01, -03, -04, -05, and -02 were analyzed in analytical batch WG874391. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference exceeded laboratory limits for Benzidine.

Matrix Spike/Matrix Spike Duplicate

For analytical batch WG874391 matrix spike/matrix spike duplicate analysis was performed on sample L836976-01. The matrix spike recoveries and relative percent differences were within laboratory control limits for all target analytes reported from this batch.

Blank Analysis

The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

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Est. 1970

Quality Control Summary
SDG: L836976

For: Weston Solutions - CO
Project: Cowboy Timber
October 27, 2016

Calibration Summary
Instrument BNAMS4 was calibrated on 4/25/2016. The initial calibration and continuing calibration verification standards were within method limits.

Surrogate Summary
Surrogate recovery in samples L836976-04 20x and L836976-05 50x could not be evaluated due to sample dilution. The surrogate recoveries for the remaining samples were within method limits.

Internal Standards
The internal standard responses were outside the limits for L836976-03 and L836976-05. The internal standard responses and retention times for the remaining samples were within method limits.

Nancy F. McLain
ESC Representative
ESC Lab Sciences

ANALYTICAL REPORT

October 27, 2016

Weston Solutions - CO

Sample Delivery Group:	L836976
Samples Received:	05/21/2016
Project Number:	0263
Description:	Cowboy Timber

Report To: Moira Pryhonda
1435 Garrison St., Ste 100
Denver, CO 80215

Entire Report Reviewed By:

Shane Gambill
Technical Service Representative

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.esclabsciences.com

CTSO-06-20160518 L836976-01 Solid

Collected by: Eric Sandusky
Collected date/time: 05/18/16 16:50
Received date/time: 05/21/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG874391	1	05/23/16 09:15	05/24/16 13:12	ADF
Volatile Organic Compounds (GC/MS) by Method 8260B	WG875350	5	05/25/16 15:46	05/26/16 03:39	CMJ

CTSO-E3D01-20160517 L836976-02 Solid

Collected by: Eric Sandusky
Collected date/time: 05/17/16 12:59
Received date/time: 05/21/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG874391	10	05/23/16 09:15	05/25/16 11:00	ADF

CTSO-D8D23-20160518 L836976-03 Solid

Collected by: Eric Sandusky
Collected date/time: 05/18/16 13:52
Received date/time: 05/21/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG874391	1	05/23/16 09:15	05/24/16 14:22	ADF
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG874391	10	05/23/16 09:15	05/25/16 18:35	ADF

CTSO-C6D12-20160519 L836976-04 Solid

Collected by: Eric Sandusky
Collected date/time: 05/19/16 07:15
Received date/time: 05/21/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG874391	1	05/23/16 09:15	05/24/16 14:45	ADF
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG874391	20	05/23/16 09:15	05/25/16 18:58	ADF

CTSO-C7D12-20160519 L836976-05 Solid

Collected by: Eric Sandusky
Collected date/time: 05/19/16 07:22
Received date/time: 05/21/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG874391	1	05/23/16 09:15	05/24/16 15:09	ADF
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG874391	50	05/23/16 09:15	05/25/16 19:21	ADF

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. All MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Shane Gambill
Technical Service Representative

Project Narrative

Report revised to report in MDL

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/kg	Qualifier	MDL ug/kg	RDL ug/kg	Dilution	Analysis date / time	Batch
Acetone	U		50.0	250	5	05/26/2016 03:39	WG875350
Acrylonitrile	U		8.95	50.0	5	05/26/2016 03:39	WG875350
Benzene	U		1.35	5.00	5	05/26/2016 03:39	WG875350
Bromobenzene	U		1.42	5.00	5	05/26/2016 03:39	WG875350
Bromodichloromethane	U		1.27	5.00	5	05/26/2016 03:39	WG875350
Bromoform	U		2.12	5.00	5	05/26/2016 03:39	WG875350
Bromomethane	U	J4	6.70	25.0	5	05/26/2016 03:39	WG875350
n-Butylbenzene	U		1.29	5.00	5	05/26/2016 03:39	WG875350
sec-Butylbenzene	U		1.00	5.00	5	05/26/2016 03:39	WG875350
tert-Butylbenzene	U		1.03	5.00	5	05/26/2016 03:39	WG875350
Carbon tetrachloride	U		1.64	5.00	5	05/26/2016 03:39	WG875350
Chlorobenzene	U		1.06	5.00	5	05/26/2016 03:39	WG875350
Chlorodibromomethane	U		1.86	5.00	5	05/26/2016 03:39	WG875350
Chloroethane	U	J4	4.73	25.0	5	05/26/2016 03:39	WG875350
2-Chloroethyl vinyl ether	U	J4	11.7	250	5	05/26/2016 03:39	WG875350
Chloroform	U		1.14	25.0	5	05/26/2016 03:39	WG875350
Chloromethane	U		1.88	12.5	5	05/26/2016 03:39	WG875350
2-Chlorotoluene	U		1.50	5.00	5	05/26/2016 03:39	WG875350
4-Chlorotoluene	U		1.20	5.00	5	05/26/2016 03:39	WG875350
1,2-Dibromo-3-Chloropropane	U		5.25	25.0	5	05/26/2016 03:39	WG875350
1,2-Dibromoethane	U		1.72	5.00	5	05/26/2016 03:39	WG875350
Dibromomethane	U		1.91	5.00	5	05/26/2016 03:39	WG875350
1,2-Dichlorobenzene	U		1.52	5.00	5	05/26/2016 03:39	WG875350
1,3-Dichlorobenzene	U		1.20	5.00	5	05/26/2016 03:39	WG875350
1,4-Dichlorobenzene	U		1.13	5.00	5	05/26/2016 03:39	WG875350
Dichlorodifluoromethane	U		3.56	25.0	5	05/26/2016 03:39	WG875350
1,1-Dichloroethane	U		0.995	5.00	5	05/26/2016 03:39	WG875350
1,2-Dichloroethane	U		1.32	5.00	5	05/26/2016 03:39	WG875350
1,1-Dichloroethene	U		1.52	5.00	5	05/26/2016 03:39	WG875350
cis-1,2-Dichloroethene	U		1.18	5.00	5	05/26/2016 03:39	WG875350
trans-1,2-Dichloroethene	U		1.32	5.00	5	05/26/2016 03:39	WG875350
1,2-Dichloropropane	U		1.79	5.00	5	05/26/2016 03:39	WG875350
1,1-Dichloropropene	U		1.58	5.00	5	05/26/2016 03:39	WG875350
1,3-Dichloropropane	U		1.04	5.00	5	05/26/2016 03:39	WG875350
cis-1,3-Dichloropropene	U		1.31	5.00	5	05/26/2016 03:39	WG875350
trans-1,3-Dichloropropene	U		1.34	5.00	5	05/26/2016 03:39	WG875350
2,2-Dichloropropane	U		1.40	5.00	5	05/26/2016 03:39	WG875350
Di-isopropyl ether	U		1.24	5.00	5	05/26/2016 03:39	WG875350
Ethylbenzene	U		1.48	5.00	5	05/26/2016 03:39	WG875350
Hexachloro-1,3-butadiene	U		1.71	5.00	5	05/26/2016 03:39	WG875350
Isopropylbenzene	U		1.22	5.00	5	05/26/2016 03:39	WG875350
p-Isopropyltoluene	U		1.02	5.00	5	05/26/2016 03:39	WG875350
2-Butanone (MEK)	U		23.4	50.0	5	05/26/2016 03:39	WG875350
Methylene Chloride	U		5.00	25.0	5	05/26/2016 03:39	WG875350
4-Methyl-2-pentanone (MIBK)	U		9.40	50.0	5	05/26/2016 03:39	WG875350
Methyl tert-butyl ether	U		1.06	5.00	5	05/26/2016 03:39	WG875350
Naphthalene	12.2	J	5.00	25.0	5	05/26/2016 03:39	WG875350
n-Propylbenzene	U		1.03	5.00	5	05/26/2016 03:39	WG875350
Styrene	U		1.17	5.00	5	05/26/2016 03:39	WG875350
1,1,1,2-Tetrachloroethane	U		1.32	5.00	5	05/26/2016 03:39	WG875350
1,1,2,2-Tetrachloroethane	U		1.82	5.00	5	05/26/2016 03:39	WG875350
1,1,2-Trichlorotrifluoroethane	U		1.82	5.00	5	05/26/2016 03:39	WG875350
Tetrachloroethene	U		1.38	5.00	5	05/26/2016 03:39	WG875350
Toluene	U		2.17	25.0	5	05/26/2016 03:39	WG875350
1,2,3-Trichlorobenzene	U		1.53	5.00	5	05/26/2016 03:39	WG875350
1,2,4-Trichlorobenzene	U		1.94	5.00	5	05/26/2016 03:39	WG875350

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/kg	Qualifier	MDL ug/kg	RDL ug/kg	Dilution	Analysis date / time	Batch
1,1,1-Trichloroethane	U		1.43	5.00	5	05/26/2016 03:39	WG875350
1,1,2-Trichloroethane	U		1.38	5.00	5	05/26/2016 03:39	WG875350
Trichloroethene	U		1.40	5.00	5	05/26/2016 03:39	WG875350
Trichlorofluoromethane	U		1.91	25.0	5	05/26/2016 03:39	WG875350
1,2,3-Trichloropropane	U		3.70	12.5	5	05/26/2016 03:39	WG875350
1,2,4-Trimethylbenzene	1.74	J	1.06	5.00	5	05/26/2016 03:39	WG875350
1,2,3-Trimethylbenzene	U		1.44	5.00	5	05/26/2016 03:39	WG875350
1,3,5-Trimethylbenzene	U		1.33	5.00	5	05/26/2016 03:39	WG875350
Vinyl chloride	U	J4	1.46	5.00	5	05/26/2016 03:39	WG875350
Xylenes, Total	U		3.49	15.0	5	05/26/2016 03:39	WG875350
(S) Toluene-d8	*107*			*88.7-115*		*05/26/2016 03:39*	WG875350
(S) Dibromofluoromethane	*121*			*76.3-123*		*05/26/2016 03:39*	WG875350
(S) 4-Bromofluorobenzene	*98.2*			*69.7-129*		*05/26/2016 03:39*	WG875350

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result ug/kg	Qualifier	MDL ug/kg	RDL ug/kg	Dilution	Analysis date / time	Batch
Acenaphthene	27.5	J	6.42	33.0	1	05/24/2016 13:12	WG874391
Acenaphthylene	U		6.71	33.0	1	05/24/2016 13:12	WG874391
Anthracene	11.1	J	6.32	33.0	1	05/24/2016 13:12	WG874391
Benzidine	U		63.7	333	1	05/24/2016 13:12	WG874391
Benzo(a)anthracene	U		4.28	33.0	1	05/24/2016 13:12	WG874391
Benzo(b)fluoranthene	U		6.95	33.0	1	05/24/2016 13:12	WG874391
Benzo(k)fluoranthene	U		5.82	33.0	1	05/24/2016 13:12	WG874391
Benzo(g,h,i)perylene	U		7.21	33.0	1	05/24/2016 13:12	WG874391
Benzo(a)pyrene	U		5.48	33.0	1	05/24/2016 13:12	WG874391
Bis(2-chlorethoxy)methane	U		7.70	333	1	05/24/2016 13:12	WG874391
Bis(2-chloroethyl)ether	U		8.96	333	1	05/24/2016 13:12	WG874391
Bis(2-chloroisopropyl)ether	U		7.60	333	1	05/24/2016 13:12	WG874391
4-Bromophenyl-phenylether	U		11.4	333	1	05/24/2016 13:12	WG874391
2-Chloronaphthalene	U		6.39	33.0	1	05/24/2016 13:12	WG874391
4-Chlorophenyl-phenylether	U		6.27	333	1	05/24/2016 13:12	WG874391
Chrysene	U		5.55	33.0	1	05/24/2016 13:12	WG874391
Dibenz(a,h)anthracene	U		8.21	33.0	1	05/24/2016 13:12	WG874391
3,3-Dichlorobenzidine	U		79.4	333	1	05/24/2016 13:12	WG874391
2,4-Dinitrotoluene	U		6.07	333	1	05/24/2016 13:12	WG874391
2,6-Dinitrotoluene	U		7.37	333	1	05/24/2016 13:12	WG874391
Fluoranthene	25.3	J	4.96	33.0	1	05/24/2016 13:12	WG874391
Fluorene	29.7	J	6.82	33.0	1	05/24/2016 13:12	WG874391
Hexachlorobenzene	U		8.56	333	1	05/24/2016 13:12	WG874391
Hexachloro-1,3-butadiene	U		10.0	333	1	05/24/2016 13:12	WG874391
Hexachlorocyclopentadiene	U		58.7	333	1	05/24/2016 13:12	WG874391
Hexachloroethane	U		13.4	333	1	05/24/2016 13:12	WG874391
Indeno(1,2,3-cd)pyrene	U		7.72	33.0	1	05/24/2016 13:12	WG874391
Isophorone	U		5.22	333	1	05/24/2016 13:12	WG874391
Naphthalene	U		8.89	33.0	1	05/24/2016 13:12	WG874391
Nitrobenzene	U		6.95	333	1	05/24/2016 13:12	WG874391
n-Nitrosodimethylamine	U		64.7	333	1	05/24/2016 13:12	WG874391
n-Nitrosodiphenylamine	U		5.94	333	1	05/24/2016 13:12	WG874391
n-Nitrosodi-n-propylamine	U		9.06	333	1	05/24/2016 13:12	WG874391
Phenanthrene	60.1		5.28	33.0	1	05/24/2016 13:12	WG874391
Benzylbutyl phthalate	U		10.3	333	1	05/24/2016 13:12	WG874391
Bis(2-ethylhexyl)phthalate	U		12.0	333	1	05/24/2016 13:12	WG874391
Di-n-butyl phthalate	U		10.9	333	1	05/24/2016 13:12	WG874391
Diethyl phthalate	U		6.91	333	1	05/24/2016 13:12	WG874391
Dimethyl phthalate	U		5.40	333	1	05/24/2016 13:12	WG874391

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result ug/kg	Qualifier	MDL ug/kg	RDL ug/kg	Dilution	Analysis date / time	Batch
Di-n-octyl phthalate	U		9.07	333	1	05/24/2016 13:12	WG874391
Pyrene	16.5	J	12.3	33.0	1	05/24/2016 13:12	WG874391
1,2,4-Trichlorobenzene	U		8.76	333	1	05/24/2016 13:12	WG874391
4-Chloro-3-methylphenol	U		4.77	333	1	05/24/2016 13:12	WG874391
2-Chlorophenol	U		8.31	333	1	05/24/2016 13:12	WG874391
2,4-Dichlorophenol	U		7.46	333	1	05/24/2016 13:12	WG874391
2,4-Dimethylphenol	U		47.1	333	1	05/24/2016 13:12	WG874391
4,6-Dinitro-2-methylphenol	U		124	333	1	05/24/2016 13:12	WG874391
2,4-Dinitrophenol	U		98.0	333	1	05/24/2016 13:12	WG874391
2-Nitrophenol	U		13.0	333	1	05/24/2016 13:12	WG874391
4-Nitrophenol	U		52.5	333	1	05/24/2016 13:12	WG874391
Pentachlorophenol	U		48.0	333	1	05/24/2016 13:12	WG874391
Phenol	U		6.95	333	1	05/24/2016 13:12	WG874391
2,4,6-Trichlorophenol	U		7.79	333	1	05/24/2016 13:12	WG874391
(S) 2-Fluorophenol	*82.9*			*21.1-116*		*05/24/2016 13:12*	WG874391
(S) Phenol-d5	*76.8*			*26.3-121*		*05/24/2016 13:12*	WG874391
(S) Nitrobenzene-d5	*83.3*			*21.9-129*		*05/24/2016 13:12*	WG874391
(S) 2-Fluorobiphenyl	*82.2*			*34.9-129*		*05/24/2016 13:12*	WG874391
(S) 2,4,6-Tribromophenol	*87.5*			*21.6-142*		*05/24/2016 13:12*	WG874391
(S) p-Terphenyl-d14	*82.4*			*21.5-128*		*05/24/2016 13:12*	WG874391

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/kg		ug/kg	ug/kg		date / time	
Acenaphthene	U		64.2	330	10	05/25/2016 11:00	WG874391
Acenaphthylene	U		67.1	330	10	05/25/2016 11:00	WG874391
Anthracene	U		63.2	330	10	05/25/2016 11:00	WG874391
Benzidine	U	J3	637	3330	10	05/25/2016 11:00	WG874391
Benzo(a)anthracene	U		42.8	330	10	05/25/2016 11:00	WG874391
Benzo(b)fluoranthene	U		69.5	330	10	05/25/2016 11:00	WG874391
Benzo(k)fluoranthene	U		58.2	330	10	05/25/2016 11:00	WG874391
Benzo(g,h,i)perylene	U		72.1	330	10	05/25/2016 11:00	WG874391
Benzo(a)pyrene	U		54.8	330	10	05/25/2016 11:00	WG874391
Bis(2-chlorethoxy)methane	U		77.0	3330	10	05/25/2016 11:00	WG874391
Bis(2-chloroethyl)ether	U		89.6	3330	10	05/25/2016 11:00	WG874391
Bis(2-chloroisopropyl)ether	U		76.0	3330	10	05/25/2016 11:00	WG874391
4-Bromophenyl-phenylether	U		114	3330	10	05/25/2016 11:00	WG874391
2-Chloronaphthalene	U		63.9	330	10	05/25/2016 11:00	WG874391
4-Chlorophenyl-phenylether	U		62.7	3330	10	05/25/2016 11:00	WG874391
Chrysene	U		55.5	330	10	05/25/2016 11:00	WG874391
Dibenz(a,h)anthracene	U		82.1	330	10	05/25/2016 11:00	WG874391
3,3-Dichlorobenzidine	U		794	3330	10	05/25/2016 11:00	WG874391
2,4-Dinitrotoluene	U		60.7	3330	10	05/25/2016 11:00	WG874391
2,6-Dinitrotoluene	U		73.7	3330	10	05/25/2016 11:00	WG874391
Fluoranthene	156	J	49.6	330	10	05/25/2016 11:00	WG874391
Fluorene	U		68.2	330	10	05/25/2016 11:00	WG874391
Hexachlorobenzene	U		85.6	3330	10	05/25/2016 11:00	WG874391
Hexachloro-1,3-butadiene	U		100	3330	10	05/25/2016 11:00	WG874391
Hexachlorocyclopentadiene	U		587	3330	10	05/25/2016 11:00	WG874391
Hexachloroethane	U		134	3330	10	05/25/2016 11:00	WG874391
Indeno(1,2,3-cd)pyrene	U		77.2	330	10	05/25/2016 11:00	WG874391
Isophorone	U		52.2	3330	10	05/25/2016 11:00	WG874391
Naphthalene	U		88.9	330	10	05/25/2016 11:00	WG874391
Nitrobenzene	U		69.5	3330	10	05/25/2016 11:00	WG874391
n-Nitrosodimethylamine	U		647	3330	10	05/25/2016 11:00	WG874391
n-Nitrosodiphenylamine	U		59.4	3330	10	05/25/2016 11:00	WG874391
n-Nitrosodi-n-propylamine	U		90.6	3330	10	05/25/2016 11:00	WG874391
Phenanthrene	82.8	J	52.8	330	10	05/25/2016 11:00	WG874391
Benzylbutyl phthalate	U		103	3330	10	05/25/2016 11:00	WG874391
Bis(2-ethylhexyl)phthalate	998	J	120	3330	10	05/25/2016 11:00	WG874391
Di-n-butyl phthalate	U		109	3330	10	05/25/2016 11:00	WG874391
Diethyl phthalate	U		69.1	3330	10	05/25/2016 11:00	WG874391
Dimethyl phthalate	U		54.0	3330	10	05/25/2016 11:00	WG874391
Di-n-octyl phthalate	307	J	90.7	3330	10	05/25/2016 11:00	WG874391
Pyrene	192	J	123	330	10	05/25/2016 11:00	WG874391
1,2,4-Trichlorobenzene	U		87.6	3330	10	05/25/2016 11:00	WG874391
4-Chloro-3-methylphenol	U		47.7	3330	10	05/25/2016 11:00	WG874391
2-Chlorophenol	U		83.1	3330	10	05/25/2016 11:00	WG874391
2,4-Dichlorophenol	U		74.6	3330	10	05/25/2016 11:00	WG874391
2,4-Dimethylphenol	U		471	3330	10	05/25/2016 11:00	WG874391
4,6-Dinitro-2-methylphenol	U		1240	3330	10	05/25/2016 11:00	WG874391
2,4-Dinitrophenol	U		980	3330	10	05/25/2016 11:00	WG874391
2-Nitrophenol	U		130	3330	10	05/25/2016 11:00	WG874391
4-Nitrophenol	U		525	3330	10	05/25/2016 11:00	WG874391
Pentachlorophenol	2210	J	480	3330	10	05/25/2016 11:00	WG874391
Phenol	U		69.5	3330	10	05/25/2016 11:00	WG874391
2,4,6-Trichlorophenol	U		77.9	3330	10	05/25/2016 11:00	WG874391
(S) 2-Fluorophenol	*83.0*			*21.1-116*		*05/25/2016 11:00*	WG874391
(S) Phenol-d5	*73.0*			*26.3-121*		*05/25/2016 11:00*	WG874391
(S) Nitrobenzene-d5	*86.9*			*21.9-129*		*05/25/2016 11:00*	WG874391

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/kg		ug/kg	ug/kg		date / time	
(S) 2-Fluorobiphenyl	*84.4*			*34.9-129*		*05/25/2016 11:00*	WG874391
(S) 2,4,6-Tribromophenol	*80.2*			*21.6-142*		*05/25/2016 11:00*	WG874391
(S) p-Terphenyl-d14	*86.3*			*21.5-128*		*05/25/2016 11:00*	WG874391

Sample Narrative:

8270C L836976-02 WG874391: Dilution due to matrix

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/kg		ug/kg	ug/kg		date / time	
Acenaphthene	U		6.42	33.0	1	05/24/2016 14:22	WG874391
Acenaphthylene	U		6.71	33.0	1	05/24/2016 14:22	WG874391
Anthracene	22.8	J	6.32	33.0	1	05/24/2016 14:22	WG874391
Benzidine	U	J3	637	3330	10	05/25/2016 18:35	WG874391
Benzo(a)anthracene	U		42.8	330	10	05/25/2016 18:35	WG874391
Benzo(b)fluoranthene	U		69.5	330	10	05/25/2016 18:35	WG874391
Benzo(k)fluoranthene	U		58.2	330	10	05/25/2016 18:35	WG874391
Benzo(g,h,i)perylene	U		72.1	330	10	05/25/2016 18:35	WG874391
Benzo(a)pyrene	U		54.8	330	10	05/25/2016 18:35	WG874391
Bis(2-chlorethoxy)methane	U		7.70	333	1	05/24/2016 14:22	WG874391
Bis(2-chloroethyl)ether	U		8.96	333	1	05/24/2016 14:22	WG874391
Bis(2-chloroisopropyl)ether	U		7.60	333	1	05/24/2016 14:22	WG874391
4-Bromophenyl-phenylether	U		11.4	333	1	05/24/2016 14:22	WG874391
2-Chloronaphthalene	U		6.39	33.0	1	05/24/2016 14:22	WG874391
4-Chlorophenyl-phenylether	U		6.27	333	1	05/24/2016 14:22	WG874391
Chrysene	U		55.5	330	10	05/25/2016 18:35	WG874391
Dibenz(a,h)anthracene	U		82.1	330	10	05/25/2016 18:35	WG874391
3,3-Dichlorobenzidine	U		794	3330	10	05/25/2016 18:35	WG874391
2,4-Dinitrotoluene	U		6.07	333	1	05/24/2016 14:22	WG874391
2,6-Dinitrotoluene	U		7.37	333	1	05/24/2016 14:22	WG874391
Fluoranthene	56.3		4.96	33.0	1	05/24/2016 14:22	WG874391
Fluorene	U		6.82	33.0	1	05/24/2016 14:22	WG874391
Hexachlorobenzene	U		8.56	333	1	05/24/2016 14:22	WG874391
Hexachloro-1,3-butadiene	U		10.0	333	1	05/24/2016 14:22	WG874391
Hexachlorocyclopentadiene	U		58.7	333	1	05/24/2016 14:22	WG874391
Hexachloroethane	U		13.4	333	1	05/24/2016 14:22	WG874391
Indeno(1,2,3-cd)pyrene	U		77.2	330	10	05/25/2016 18:35	WG874391
Isophorone	U		5.22	333	1	05/24/2016 14:22	WG874391
Naphthalene	U		8.89	33.0	1	05/24/2016 14:22	WG874391
Nitrobenzene	U		6.95	333	1	05/24/2016 14:22	WG874391
n-Nitrosodimethylamine	U		64.7	333	1	05/24/2016 14:22	WG874391
n-Nitrosodiphenylamine	U		5.94	333	1	05/24/2016 14:22	WG874391
n-Nitrosodi-n-propylamine	U		9.06	333	1	05/24/2016 14:22	WG874391
Phenanthrene	173		5.28	33.0	1	05/24/2016 14:22	WG874391
Benzylbutyl phthalate	U		103	3330	10	05/25/2016 18:35	WG874391
Bis(2-ethylhexyl)phthalate	U		120	3330	10	05/25/2016 18:35	WG874391
Di-n-butyl phthalate	U		10.9	333	1	05/24/2016 14:22	WG874391
Diethyl phthalate	U		6.91	333	1	05/24/2016 14:22	WG874391
Dimethyl phthalate	U		5.40	333	1	05/24/2016 14:22	WG874391
Di-n-octyl phthalate	U		90.7	3330	10	05/25/2016 18:35	WG874391
Pyrene	168	J	123	330	10	05/25/2016 18:35	WG874391
1,2,4-Trichlorobenzene	U		8.76	333	1	05/24/2016 14:22	WG874391
4-Chloro-3-methylphenol	U		4.77	333	1	05/24/2016 14:22	WG874391
2-Chlorophenol	U		8.31	333	1	05/24/2016 14:22	WG874391
2,4-Dichlorophenol	U		7.46	333	1	05/24/2016 14:22	WG874391
2,4-Dimethylphenol	U		47.1	333	1	05/24/2016 14:22	WG874391
4,6-Dinitro-2-methylphenol	U		124	333	1	05/24/2016 14:22	WG874391
2,4-Dinitrophenol	U		98.0	333	1	05/24/2016 14:22	WG874391
2-Nitrophenol	U		13.0	333	1	05/24/2016 14:22	WG874391
4-Nitrophenol	U		52.5	333	1	05/24/2016 14:22	WG874391
Pentachlorophenol	8840		480	3330	10	05/25/2016 18:35	WG874391
Phenol	U		6.95	333	1	05/24/2016 14:22	WG874391
2,4,6-Trichlorophenol	U		7.79	333	1	05/24/2016 14:22	WG874391
(S) 2-Fluorophenol	*64.8*			*21.1-116*		*05/24/2016 14:22*	WG874391
(S) 2-Fluorophenol	*56.1*			*21.1-116*		*05/25/2016 18:35*	WG874391
(S) Phenol-d5	*55.1*			*26.3-121*		*05/25/2016 18:35*	WG874391

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result ug/kg	Qualifier	MDL ug/kg	RDL ug/kg	Dilution	Analysis date / time	Batch
(S) Phenol-d5	*64.7*			*26.3-121*		*05/24/2016 14:22*	WG874391
(S) Nitrobenzene-d5	*75.5*			*21.9-129*		*05/24/2016 14:22*	WG874391
(S) Nitrobenzene-d5	*62.4*			*21.9-129*		*05/25/2016 18:35*	WG874391
(S) 2-Fluorobiphenyl	*66.8*			*34.9-129*		*05/25/2016 18:35*	WG874391
(S) 2-Fluorobiphenyl	*71.6*			*34.9-129*		*05/24/2016 14:22*	WG874391
(S) 2,4,6-Tribromophenol	*84.5*			*21.6-142*		*05/24/2016 14:22*	WG874391
(S) 2,4,6-Tribromophenol	*63.2*			*21.6-142*		*05/25/2016 18:35*	WG874391
(S) p-Terphenyl-d14	*70.4*			*21.5-128*		*05/25/2016 18:35*	WG874391
(S) p-Terphenyl-d14	*113*			*21.5-128*		*05/24/2016 14:22*	WG874391

Sample Narrative:

8270C L836976-03 WG874391: IS/SURR failed on lower dilution.

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result ug/kg	Qualifier	MDL ug/kg	RDL ug/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		6.42	33.0	1	05/24/2016 14:45	WG874391
Acenaphthylene	U		6.71	33.0	1	05/24/2016 14:45	WG874391
Anthracene	20.0	J	6.32	33.0	1	05/24/2016 14:45	WG874391
Benzidine	U	J3	63.7	333	1	05/24/2016 14:45	WG874391
Benzo(a)anthracene	15.5	J	4.28	33.0	1	05/24/2016 14:45	WG874391
Benzo(b)fluoranthene	U		139	660	20	05/25/2016 18:58	WG874391
Benzo(k)fluoranthene	U		116	660	20	05/25/2016 18:58	WG874391
Benzo(g,h,i)perylene	U		144	660	20	05/25/2016 18:58	WG874391
Benzo(a)pyrene	U		110	660	20	05/25/2016 18:58	WG874391
Bis(2-chlorethoxy)methane	U		7.70	333	1	05/24/2016 14:45	WG874391
Bis(2-chloroethyl)ether	U		8.96	333	1	05/24/2016 14:45	WG874391
Bis(2-chloroisopropyl)ether	U		7.60	333	1	05/24/2016 14:45	WG874391
4-Bromophenyl-phenylether	U		11.4	333	1	05/24/2016 14:45	WG874391
2-Chloronaphthalene	U		6.39	33.0	1	05/24/2016 14:45	WG874391
4-Chlorophenyl-phenylether	U		6.27	333	1	05/24/2016 14:45	WG874391
Chrysene	52.0		5.55	33.0	1	05/24/2016 14:45	WG874391
Dibenz(a,h)anthracene	U		164	660	20	05/25/2016 18:58	WG874391
3,3-Dichlorobenzidine	U		79.4	333	1	05/24/2016 14:45	WG874391
2,4-Dinitrotoluene	U		6.07	333	1	05/24/2016 14:45	WG874391
2,6-Dinitrotoluene	U		7.37	333	1	05/24/2016 14:45	WG874391
Fluoranthene	U		4.96	33.0	1	05/24/2016 14:45	WG874391
Fluorene	U		6.82	33.0	1	05/24/2016 14:45	WG874391
Hexachlorobenzene	U		8.56	333	1	05/24/2016 14:45	WG874391
Hexachloro-1,3-butadiene	U		10.0	333	1	05/24/2016 14:45	WG874391
Hexachlorocyclopentadiene	U		58.7	333	1	05/24/2016 14:45	WG874391
Hexachloroethane	U		13.4	333	1	05/24/2016 14:45	WG874391
Indeno(1,2,3-cd)pyrene	U		154	660	20	05/25/2016 18:58	WG874391
Isophorone	U		5.22	333	1	05/24/2016 14:45	WG874391
Naphthalene	U		8.89	33.0	1	05/24/2016 14:45	WG874391
Nitrobenzene	U		6.95	333	1	05/24/2016 14:45	WG874391
n-Nitrosodimethylamine	U		64.7	333	1	05/24/2016 14:45	WG874391
n-Nitrosodiphenylamine	U		5.94	333	1	05/24/2016 14:45	WG874391
n-Nitrosodi-n-propylamine	U		9.06	333	1	05/24/2016 14:45	WG874391
Phenanthrene	152		5.28	33.0	1	05/24/2016 14:45	WG874391
Benzylbutyl phthalate	U		10.3	333	1	05/24/2016 14:45	WG874391
Bis(2-ethylhexyl)phthalate	17.4	J	12.0	333	1	05/24/2016 14:45	WG874391
Di-n-butyl phthalate	U		10.9	333	1	05/24/2016 14:45	WG874391
Diethyl phthalate	U		6.91	333	1	05/24/2016 14:45	WG874391
Dimethyl phthalate	U		5.40	333	1	05/24/2016 14:45	WG874391
Di-n-octyl phthalate	U		9.07	333	1	05/24/2016 14:45	WG874391
Pyrene	232		12.3	33.0	1	05/24/2016 14:45	WG874391
1,2,4-Trichlorobenzene	U		8.76	333	1	05/24/2016 14:45	WG874391
4-Chloro-3-methylphenol	U		4.77	333	1	05/24/2016 14:45	WG874391
2-Chlorophenol	U		8.31	333	1	05/24/2016 14:45	WG874391
2,4-Dichlorophenol	U		7.46	333	1	05/24/2016 14:45	WG874391
2,4-Dimethylphenol	U		47.1	333	1	05/24/2016 14:45	WG874391
4,6-Dinitro-2-methylphenol	U		124	333	1	05/24/2016 14:45	WG874391
2,4-Dinitrophenol	U		98.0	333	1	05/24/2016 14:45	WG874391
2-Nitrophenol	U		13.0	333	1	05/24/2016 14:45	WG874391
4-Nitrophenol	U		52.5	333	1	05/24/2016 14:45	WG874391
Pentachlorophenol	17200		960	6660	20	05/25/2016 18:58	WG874391
Phenol	U		6.95	333	1	05/24/2016 14:45	WG874391
2,4,6-Trichlorophenol	U		7.79	333	1	05/24/2016 14:45	WG874391
(S) 2-Fluorophenol	*72.8*			*21.1-116*		*05/24/2016 14:45*	WG874391
(S) 2-Fluorophenol	*71.4*	J7		*21.1-116*		*05/25/2016 18:58*	WG874391
(S) Phenol-d5	*69.9*	J7		*26.3-121*		*05/25/2016 18:58*	WG874391

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result ug/kg	Qualifier	MDL ug/kg	RDL ug/kg	Dilution	Analysis date / time	Batch
(S) Phenol-d5	*68.6*			*26.3-121*		*05/24/2016 14:45*	WG874391
(S) Nitrobenzene-d5	*78.6*			*21.9-129*		*05/24/2016 14:45*	WG874391
(S) Nitrobenzene-d5	*72.0*	J7		*21.9-129*		*05/25/2016 18:58*	WG874391
(S) 2-Fluorobiphenyl	*74.0*	J7		*34.9-129*		*05/25/2016 18:58*	WG874391
(S) 2-Fluorobiphenyl	*76.0*			*34.9-129*		*05/24/2016 14:45*	WG874391
(S) 2,4,6-Tribromophenol	*88.7*			*21.6-142*		*05/24/2016 14:45*	WG874391
(S) 2,4,6-Tribromophenol	*78.4*	J7		*21.6-142*		*05/25/2016 18:58*	WG874391
(S) p-Terphenyl-d14	*71.5*	J7		*21.5-128*		*05/25/2016 18:58*	WG874391
(S) p-Terphenyl-d14	*102*			*21.5-128*		*05/24/2016 14:45*	WG874391

Sample Narrative:

8270C L836976-04 WG874391: IS/SURR failed on lower dilution.

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result ug/kg	Qualifier	MDL ug/kg	RDL ug/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		6.42	33.0	1	05/24/2016 15:09	WG874391
Acenaphthylene	U		6.71	33.0	1	05/24/2016 15:09	WG874391
Anthracene	U		6.32	33.0	1	05/24/2016 15:09	WG874391
Benzidine	U	J3	3180	16700	50	05/25/2016 19:21	WG874391
Benzo(a)anthracene	U		214	1650	50	05/25/2016 19:21	WG874391
Benzo(b)fluoranthene	U		348	1650	50	05/25/2016 19:21	WG874391
Benzo(k)fluoranthene	U		291	1650	50	05/25/2016 19:21	WG874391
Benzo(g,h,i)perylene	U		360	1650	50	05/25/2016 19:21	WG874391
Benzo(a)pyrene	U		274	1650	50	05/25/2016 19:21	WG874391
Bis(2-chlorethoxy)methane	U		7.70	333	1	05/24/2016 15:09	WG874391
Bis(2-chloroethyl)ether	U		8.96	333	1	05/24/2016 15:09	WG874391
Bis(2-chloroisopropyl)ether	U		7.60	333	1	05/24/2016 15:09	WG874391
4-Bromophenyl-phenylether	U		11.4	333	1	05/24/2016 15:09	WG874391
2-Chloronaphthalene	U		6.39	33.0	1	05/24/2016 15:09	WG874391
4-Chlorophenyl-phenylether	U		6.27	333	1	05/24/2016 15:09	WG874391
Chrysene	U		278	1650	50	05/25/2016 19:21	WG874391
Dibenz(a,h)anthracene	U		410	1650	50	05/25/2016 19:21	WG874391
3,3-Dichlorobenzidine	U		3970	16700	50	05/25/2016 19:21	WG874391
2,4-Dinitrotoluene	U		6.07	333	1	05/24/2016 15:09	WG874391
2,6-Dinitrotoluene	U		7.37	333	1	05/24/2016 15:09	WG874391
Fluoranthene	214		4.96	33.0	1	05/24/2016 15:09	WG874391
Fluorene	174		6.82	33.0	1	05/24/2016 15:09	WG874391
Hexachlorobenzene	U		8.56	333	1	05/24/2016 15:09	WG874391
Hexachloro-1,3-butadiene	U		10.0	333	1	05/24/2016 15:09	WG874391
Hexachlorocyclopentadiene	U		58.7	333	1	05/24/2016 15:09	WG874391
Hexachloroethane	U		13.4	333	1	05/24/2016 15:09	WG874391
Indeno(1,2,3-cd)pyrene	U		386	1650	50	05/25/2016 19:21	WG874391
Isophorone	U		5.22	333	1	05/24/2016 15:09	WG874391
Naphthalene	U		8.89	33.0	1	05/24/2016 15:09	WG874391
Nitrobenzene	U		6.95	333	1	05/24/2016 15:09	WG874391
n-Nitrosodimethylamine	U		64.7	333	1	05/24/2016 15:09	WG874391
n-Nitrosodiphenylamine	U		5.94	333	1	05/24/2016 15:09	WG874391
n-Nitrosodi-n-propylamine	U		9.06	333	1	05/24/2016 15:09	WG874391
Phenanthrene	1280		5.28	33.0	1	05/24/2016 15:09	WG874391
Benzylbutyl phthalate	U		515	16700	50	05/25/2016 19:21	WG874391
Bis(2-ethylhexyl)phthalate	U		600	16700	50	05/25/2016 19:21	WG874391
Di-n-butyl phthalate	U		10.9	333	1	05/24/2016 15:09	WG874391
Diethyl phthalate	U		6.91	333	1	05/24/2016 15:09	WG874391
Dimethyl phthalate	U		5.40	333	1	05/24/2016 15:09	WG874391
Di-n-octyl phthalate	U		454	16700	50	05/25/2016 19:21	WG874391
Pyrene	U		615	1650	50	05/25/2016 19:21	WG874391
1,2,4-Trichlorobenzene	U		8.76	333	1	05/24/2016 15:09	WG874391
4-Chloro-3-methylphenol	U		4.77	333	1	05/24/2016 15:09	WG874391
2-Chlorophenol	U		8.31	333	1	05/24/2016 15:09	WG874391
2,4-Dichlorophenol	U		7.46	333	1	05/24/2016 15:09	WG874391
2,4-Dimethylphenol	U		47.1	333	1	05/24/2016 15:09	WG874391
4,6-Dinitro-2-methylphenol	U		124	333	1	05/24/2016 15:09	WG874391
2,4-Dinitrophenol	U		98.0	333	1	05/24/2016 15:09	WG874391
2-Nitrophenol	U		13.0	333	1	05/24/2016 15:09	WG874391
4-Nitrophenol	U		52.5	333	1	05/24/2016 15:09	WG874391
Pentachlorophenol	53500		2400	16700	50	05/25/2016 19:21	WG874391
Phenol	U		6.95	333	1	05/24/2016 15:09	WG874391
2,4,6-Trichlorophenol	U		7.79	333	1	05/24/2016 15:09	WG874391
(S) 2-Fluorophenol	*70.6*			*21.1-116*		*05/24/2016 15:09*	WG874391
(S) 2-Fluorophenol	*47.0*	J7		*21.1-116*		*05/25/2016 19:21*	WG874391
(S) Phenol-d5	*44.9*	J7		*26.3-121*		*05/25/2016 19:21*	WG874391

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result ug/kg	Qualifier	MDL ug/kg	RDL ug/kg	Dilution	Analysis date / time	Batch
(S) Phenol-d5	*66.3*			*26.3-121*		*05/24/2016 15:09*	WG874391
(S) Nitrobenzene-d5	*75.4*			*21.9-129*		*05/24/2016 15:09*	WG874391
(S) Nitrobenzene-d5	*51.2*	J7		*21.9-129*		*05/25/2016 19:21*	WG874391
(S) 2-Fluorobiphenyl	*63.2*	J7		*34.9-129*		*05/25/2016 19:21*	WG874391
(S) 2-Fluorobiphenyl	*63.3*			*34.9-129*		*05/24/2016 15:09*	WG874391
(S) 2,4,6-Tribromophenol	*79.6*			*21.6-142*		*05/24/2016 15:09*	WG874391
(S) 2,4,6-Tribromophenol	*45.3*	J7		*21.6-142*		*05/25/2016 19:21*	WG874391
(S) p-Terphenyl-d14	*54.0*	J7		*21.5-128*		*05/25/2016 19:21*	WG874391
(S) p-Terphenyl-d14	*83.5*			*21.5-128*		*05/24/2016 15:09*	WG874391

Sample Narrative:

8270C L836976-05 WG874391: IS/SURR failed on lower dilution.

Method Blank (MB)

(MB) R3139813-3 05/25/16 20:06

Analyte	MB Result ug/kg	MB Qualifier	MB MDL ug/kg	MB RDL ug/kg
Acetone	U		10.0	50.0
Acrylonitrile	U		1.79	10.0
Benzene	U		0.270	1.00
Bromobenzene	U		0.284	1.00
Bromodichloromethane	U		0.254	1.00
Bromoform	U		0.424	1.00
Bromomethane	U		1.34	5.00
n-Butylbenzene	U		0.258	1.00
sec-Butylbenzene	U		0.201	1.00
tert-Butylbenzene	U		0.206	1.00
Carbon tetrachloride	U		0.328	1.00
Chlorobenzene	U		0.212	1.00
Chlorodibromomethane	U		0.373	1.00
Chloroethane	U		0.946	5.00
2-Chloroethyl vinyl ether	U		2.34	50.0
Chloroform	U		0.229	5.00
Chloromethane	U		0.375	2.50
2-Chlorotoluene	U		0.301	1.00
4-Chlorotoluene	U		0.240	1.00
1,2-Dibromo-3-Chloropropane	U		1.05	5.00
1,2-Dibromoethane	U		0.343	1.00
Dibromomethane	U		0.382	1.00
1,2-Dichlorobenzene	U		0.305	1.00
1,3-Dichlorobenzene	U		0.239	1.00
1,4-Dichlorobenzene	U		0.226	1.00
Dichlorodifluoromethane	U		0.713	5.00
1,1-Dichloroethane	U		0.199	1.00
1,2-Dichloroethane	U		0.265	1.00
1,1-Dichloroethene	U		0.303	1.00
cis-1,2-Dichloroethene	U		0.235	1.00
trans-1,2-Dichloroethene	U		0.264	1.00
1,2-Dichloropropane	U		0.358	1.00
1,1-Dichloropropene	U		0.317	1.00
1,3-Dichloropropane	U		0.207	1.00
cis-1,3-Dichloropropene	U		0.262	1.00
trans-1,3-Dichloropropene	U		0.267	1.00
2,2-Dichloropropane	U		0.279	1.00
Di-isopropyl ether	U		0.248	1.00
Ethylbenzene	U		0.297	1.00
Hexachloro-1,3-butadiene	U		0.342	1.00

Method Blank (MB)

(MB) R3139813-3 05/25/16 20:06

Analyte	MB Result ug/kg	MB Qualifier	MB MDL ug/kg	MB RDL ug/kg
Isopropylbenzene	U		0.243	1.00
p-Isopropyltoluene	U		0.204	1.00
2-Butanone (MEK)	U		4.68	10.0
Methylene Chloride	U		1.00	5.00
4-Methyl-2-pentanone (MIBK)	U		1.88	10.0
Methyl tert-butyl ether	U		0.212	1.00
Naphthalene	U		1.00	5.00
n-Propylbenzene	U		0.206	1.00
Styrene	U		0.234	1.00
1,1,1,2-Tetrachloroethane	U		0.264	1.00
1,1,2,2-Tetrachloroethane	U		0.365	1.00
Tetrachloroethene	U		0.276	1.00
Toluene	U		0.434	5.00
1,1,2-Trichlorotrifluoroethane	U		0.365	1.00
1,2,3-Trichlorobenzene	U		0.306	1.00
1,2,4-Trichlorobenzene	U		0.388	1.00
1,1,1-Trichloroethane	U		0.286	1.00
1,1,2-Trichloroethane	U		0.277	1.00
Trichloroethene	U		0.279	1.00
Trichlorofluoromethane	U		0.382	5.00
1,2,3-Trichloropropane	U		0.741	2.50
1,2,3-Trimethylbenzene	U		0.287	1.00
1,2,4-Trimethylbenzene	U		0.211	1.00
1,3,5-Trimethylbenzene	U		0.266	1.00
Vinyl chloride	U		0.291	1.00
Xylenes, Total	U		0.698	3.00
(S) Toluene-d8	*107*			*88.7-115*
(S) Dibromofluoromethane	*122*			*76.3-123*
(S) 4-Bromofluorobenzene	*96.8*			*69.7-129*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3139813-1 05/25/16 18:35 • (LCSD) R3139813-2 05/25/16 18:58

Analyte	Spike Amount ug/kg	LCS Result ug/kg	LCSD Result ug/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	125	144	147	115	117	25.3-178			1.76	22.9
Acrylonitrile	125	162	165	130	132	57.8-143			1.76	20
Benzene	25.0	28.3	29.2	113	117	72.6-120			3.26	20
Bromobenzene	25.0	23.5	23.8	94.1	95.3	80.3-115			1.32	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3139813-1 05/25/16 18:35 • (LCSD) R3139813-2 05/25/16 18:58

Analyte	Spike Amount ug/kg	LCS Result ug/kg	LCSD Result ug/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Bromodichloromethane	25.0	24.4	24.8	97.4	99.2	75.3-119			1.85	20
Bromoform	25.0	19.9	19.8	79.7	79.1	69.1-135			0.740	20
Bromomethane	25.0	52.2	49.9	209	200	23.0-191	J4	J4	4.58	20
n-Butylbenzene	25.0	24.6	25.7	98.3	103	74.2-134			4.27	20
sec-Butylbenzene	25.0	22.5	23.4	89.9	93.5	77.8-129			3.88	20
tert-Butylbenzene	25.0	21.9	22.1	87.7	88.3	77.2-129			0.590	20
Carbon tetrachloride	25.0	23.1	24.0	92.5	96.1	69.4-129			3.85	20
Chlorobenzene	25.0	22.6	22.8	90.5	91.2	78.9-122			0.780	20
Chlorodibromomethane	25.0	22.2	22.0	88.7	88.1	76.4-126			0.670	20
Chloroethane	25.0	36.0	37.6	144	150	47.2-147		J4	4.32	20
2-Chloroethyl vinyl ether	125	234	224	187	179	16.7-162	J4	J4	4.41	23.7
Chloroform	25.0	27.4	28.7	110	115	73.3-122			4.50	20
Chloromethane	25.0	31.8	32.6	127	130	53.1-135			2.44	20
2-Chlorotoluene	25.0	21.7	22.4	86.8	89.4	74.6-127			3.01	20
4-Chlorotoluene	25.0	22.8	23.2	91.2	92.9	79.5-123			1.84	20
1,2-Dibromo-3-Chloropropane	25.0	21.5	22.0	86.1	87.8	64.9-131			1.94	20
1,2-Dibromoethane	25.0	23.0	23.3	92.1	93.1	78.7-123			1.16	20
Dibromomethane	25.0	24.4	24.8	97.5	99.3	78.5-117			1.83	20
1,2-Dichlorobenzene	25.0	23.8	24.6	95.3	98.3	83.6-119			3.05	20
1,3-Dichlorobenzene	25.0	20.8	21.1	83.2	84.4	75.9-129			1.39	20
1,4-Dichlorobenzene	25.0	23.1	23.1	92.4	92.5	81.0-115			0.170	20
Dichlorodifluoromethane	25.0	26.8	28.8	107	115	50.9-139			7.09	20
1,1-Dichloroethane	25.0	29.8	30.8	119	123	71.7-125			3.27	20
1,2-Dichloroethane	25.0	26.1	27.3	105	109	67.2-121			4.19	20
1,1-Dichloroethene	25.0	28.7	29.6	115	118	60.6-133			2.89	20
cis-1,2-Dichloroethene	25.0	28.4	29.9	114	119	76.1-121			5.00	20
trans-1,2-Dichloroethene	25.0	27.9	28.9	111	116	70.7-124			3.62	20
1,2-Dichloropropane	25.0	27.7	28.2	111	113	76.9-123			1.87	20
1,1-Dichloropropene	25.0	28.3	29.9	113	119	71.2-126			5.44	20
1,3-Dichloropropane	25.0	25.8	25.3	103	101	80.3-114			1.98	20
cis-1,3-Dichloropropene	25.0	26.3	27.4	105	109	77.3-123			4.03	20
trans-1,3-Dichloropropene	25.0	24.9	25.7	99.6	103	73.0-127			3.12	20
2,2-Dichloropropane	25.0	25.2	25.6	101	103	61.9-132			1.84	20
Di-isopropyl ether	25.0	31.7	32.7	127	131	67.2-131			3.06	20
Ethylbenzene	25.0	22.4	22.9	89.7	91.6	78.6-124			2.08	20
Hexachloro-1,3-butadiene	25.0	20.4	22.1	81.8	88.5	69.2-136			7.93	20
Isopropylbenzene	25.0	21.6	22.2	86.4	88.8	79.4-126			2.75	20
p-Isopropyltoluene	25.0	22.9	23.2	91.5	92.9	75.4-132			1.53	20
2-Butanone (MEK)	125	159	161	127	129	44.5-154			1.13	21.3
Methylene Chloride	25.0	27.2	28.0	109	112	68.2-119			3.02	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3139813-1 05/25/16 18:35 • (LCSD) R3139813-2 05/25/16 18:58

Analyte	Spike Amount ug/kg	LCS Result ug/kg	LCSD Result ug/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
4-Methyl-2-pentanone (MIBK)	125	139	143	111	115	61.1-138			3.45	20
Methyl tert-butyl ether	25.0	27.9	28.2	111	113	70.2-122			1.37	20
Naphthalene	25.0	25.2	25.7	101	103	69.9-132			1.99	20
n-Propylbenzene	25.0	23.6	24.1	94.3	96.4	80.2-124			2.18	20
Styrene	25.0	23.9	23.7	95.6	94.8	79.4-124			0.870	20
1,1,1,2-Tetrachloroethane	25.0	21.2	20.9	84.8	83.8	76.7-127			1.21	20
1,1,2,2-Tetrachloroethane	25.0	22.3	22.5	89.4	89.9	78.8-124			0.640	20
Tetrachloroethene	25.0	19.5	19.6	78.0	78.5	71.1-133			0.670	20
Toluene	25.0	23.0	23.9	92.1	95.5	76.7-116			3.57	20
1,1,2-Trichlorotrifluoroethane	25.0	26.7	27.9	107	112	62.6-138			4.57	20
1,2,3-Trichlorobenzene	25.0	23.0	23.8	92.1	95.2	72.5-137			3.36	20
1,2,4-Trichlorobenzene	25.0	22.8	23.4	91.1	93.7	74.0-137			2.89	20
1,1,1-Trichloroethane	25.0	26.3	27.4	105	110	69.9-127			4.06	20
1,1,2-Trichloroethane	25.0	23.9	23.7	95.7	94.8	81.9-119			0.950	20
Trichloroethene	25.0	24.3	25.0	97.1	99.9	77.2-122			2.84	20
Trichlorofluoromethane	25.0	26.8	27.8	107	111	51.5-151			3.67	20
1,2,3-Trichloropropane	25.0	22.8	21.6	91.2	86.6	74.0-124			5.19	20
1,2,3-Trimethylbenzene	25.0	24.3	25.3	97.2	101	79.4-118			3.84	20
1,2,4-Trimethylbenzene	25.0	22.4	22.6	89.6	90.4	77.1-124			0.920	20
1,3,5-Trimethylbenzene	25.0	22.1	22.5	88.4	89.9	79.0-125			1.69	20
Vinyl chloride	25.0	34.2	34.8	137	139	58.4-134	J4	J4	1.80	20
Xylenes, Total	75.0	67.4	68.3	89.8	91.0	78.1-123			1.34	20
(S) Toluene-d8				*110*	*110*	*88.7-115*				
(S) Dibromofluoromethane				*120*	*121*	*76.3-123*				
(S) 4-Bromofluorobenzene				*100*	*99.4*	*69.7-129*				

L836804-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L836804-06 05/25/16 21:59 • (MS) R3139813-4 05/25/16 20:51 • (MSD) R3139813-5 05/25/16 21:14

Analyte	Spike Amount ug/kg	Original Result ug/kg	MS Result ug/kg	MSD Result ug/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acetone	125	ND	676	702	108	112	5	10.0-130			3.84	31.5
Acrylonitrile	125	ND	763	796	122	127	5	39.3-152			4.15	27.2
Benzene	25.0	ND	121	124	96.8	99.5	5	47.8-131			2.77	22.8
Bromobenzene	25.0	ND	106	108	84.7	86.2	5	40.0-130			1.76	27.4
Bromodichloromethane	25.0	ND	110	115	88.4	92.0	5	50.6-128			4.04	22.8
Bromoform	25.0	ND	88.5	90.0	70.8	72.0	5	43.3-139			1.79	25.9
Bromomethane	25.0	ND	157	168	125	135	5	5.00-189			7.19	26.7
n-Butylbenzene	25.0	ND	115	114	92.0	91.3	5	23.6-146			0.790	39.2

L836804-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L836804-06 05/25/16 21:59 • (MS) R3139813-4 05/25/16 20:51 • (MSD) R3139813-5 05/25/16 21:14

Analyte	Spike Amount ug/kg	Original Result ug/kg	MS Result ug/kg	MSD Result ug/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
sec-Butylbenzene	25.0	ND	102	103	81.8	82.4	5	31.0-142			0.690	34.7
tert-Butylbenzene	25.0	ND	103	103	82.0	82.6	5	36.9-142			0.710	31.7
Carbon tetrachloride	25.0	ND	103	105	82.8	84.2	5	46.0-140			1.74	27.2
Chlorobenzene	25.0	ND	103	104	82.1	82.8	5	44.1-134			0.930	25.7
Chlorodibromomethane	25.0	ND	99.8	103	79.8	82.8	5	49.7-134			3.63	24
Chloroethane	25.0	ND	128	129	103	103	5	5.00-164			0.340	28.4
2-Chloroethyl vinyl ether	125	ND	998	1020	160	163	5	5.00-159	J5	J5	2.26	40
Chloroform	25.0	ND	128	133	102	106	5	51.2-133			3.59	22.8
Chloromethane	25.0	ND	94.3	96.7	75.5	77.4	5	31.4-141			2.51	24.6
2-Chlorotoluene	25.0	ND	100	99.8	80.1	79.8	5	36.1-137			0.380	28.9
4-Chlorotoluene	25.0	ND	105	105	83.8	83.8	5	35.4-137			0.0600	29.8
1,2-Dibromo-3-Chloropropane	25.0	ND	98.6	101	78.8	81.0	5	40.4-138			2.72	30.8
1,2-Dibromoethane	25.0	ND	100	102	80.0	81.3	5	50.2-133			1.64	23.6
Dibromomethane	25.0	ND	103	106	82.4	84.8	5	52.4-128			2.81	23
1,2-Dichlorobenzene	25.0	ND	109	113	87.4	90.1	5	34.6-139			3.12	29.9
1,3-Dichlorobenzene	25.0	ND	93.5	93.8	74.8	75.0	5	28.4-142			0.320	31.2
1,4-Dichlorobenzene	25.0	ND	106	109	84.7	87.2	5	35.0-133			2.91	31.1
Dichlorodifluoromethane	25.0	ND	112	113	89.9	90.7	5	31.2-144			0.880	30.2
1,1-Dichloroethane	25.0	ND	136	140	109	112	5	49.1-136			3.01	22.9
1,2-Dichloroethane	25.0	ND	118	121	94.1	97.1	5	47.1-129			3.14	22.7
1,1-Dichloroethene	25.0	ND	108	109	86.4	87.6	5	36.1-142			1.31	25.6
cis-1,2-Dichloroethene	25.0	ND	123	129	98.2	103	5	50.6-133			4.74	23
trans-1,2-Dichloroethene	25.0	ND	103	105	82.7	84.0	5	43.8-135			1.59	24.8
1,2-Dichloropropane	25.0	13.9	126	124	89.6	88.2	5	50.3-134			1.38	22.7
1,1-Dichloropropene	25.0	ND	114	116	90.9	92.9	5	43.0-137			2.27	26.4
1,3-Dichloropropane	25.0	ND	114	117	91.2	93.3	5	51.4-127			2.27	23.1
cis-1,3-Dichloropropene	25.0	ND	116	120	93.1	95.8	5	48.4-134			2.88	23.6
trans-1,3-Dichloropropene	25.0	5.40	111	114	84.6	87.1	5	46.6-135			2.79	25.3
2,2-Dichloropropane	25.0	ND	122	122	97.5	97.7	5	45.2-141			0.200	26.6
Di-isopropyl ether	25.0	ND	148	154	118	123	5	46.7-140			4.28	23.5
Ethylbenzene	25.0	ND	102	100	81.2	80.4	5	44.8-135			1.00	26.9
Hexachloro-1,3-butadiene	25.0	ND	81.4	82.4	65.2	65.9	5	10.0-149			1.21	40
Isopropylbenzene	25.0	ND	99.0	99.1	79.2	79.2	5	41.9-139			0.0700	29.3
p-Isopropyltoluene	25.0	ND	103	102	82.1	81.4	5	27.3-146			0.800	35.1
2-Butanone (MEK)	125	ND	741	765	119	122	5	23.9-170			3.10	28.3
Methylene Chloride	25.0	ND	115	118	91.8	94.2	5	46.7-125			2.67	22.2
4-Methyl-2-pentanone (MIBK)	125	ND	660	672	106	107	5	42.4-146			1.77	26.7
Methyl tert-butyl ether	25.0	ND	130	136	104	109	5	50.4-131			3.94	24.8
Naphthalene	25.0	ND	108	119	86.0	95.1	5	18.4-145			9.99	34
n-Propylbenzene	25.0	ND	105	107	84.4	85.2	5	35.2-139			0.960	31.9

L836804-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L836804-06 05/25/16 21:59 • (MS) R3139813-4 05/25/16 20:51 • (MSD) R3139813-5 05/25/16 21:14

Analyte	Spike Amount ug/kg	Original Result ug/kg	MS Result ug/kg	MSD Result ug/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Styrene	25.0	ND	108	108	86.8	86.3	5	39.7-137			0.510	28.2
1,1,1,2-Tetrachloroethane	25.0	ND	96.8	98.9	77.4	79.1	5	48.8-136			2.18	25.5
1,1,2,2-Tetrachloroethane	25.0	ND	110	113	88.0	90.4	5	45.7-140			2.65	26.4
Tetrachloroethene	25.0	ND	78.6	78.2	62.9	62.6	5	37.7-140			0.570	29.2
Toluene	25.0	ND	98.4	99.9	78.7	79.9	5	47.8-127			1.56	24.3
1,1,2-Trichlorotrifluoroethane	25.0	ND	114	113	90.9	90.2	5	35.7-146			0.800	28.8
1,2,3-Trichlorobenzene	25.0	ND	100	104	80.3	83.1	5	10.0-150			3.44	38.5
1,2,4-Trichlorobenzene	25.0	ND	98.4	106	78.7	84.6	5	10.0-153			7.20	39.3
1,1,1-Trichloroethane	25.0	ND	122	126	97.5	100	5	49.0-138			2.92	25.3
1,1,2-Trichloroethane	25.0	ND	110	112	87.9	89.8	5	52.3-132			2.09	23.4
Trichloroethene	25.0	ND	97.1	99.2	77.7	79.4	5	48.0-132			2.10	24.8
Trichlorofluoromethane	25.0	ND	101	102	80.8	81.4	5	12.8-169			0.770	29.7
1,2,3-Trichloropropane	25.0	ND	105	106	83.9	84.9	5	44.4-138			1.23	26.3
1,2,3-Trimethylbenzene	25.0	ND	113	116	90.4	93.0	5	41.0-133			2.89	27.6
1,2,4-Trimethylbenzene	25.0	ND	100	100	80.4	80.0	5	32.9-139			0.490	30.6
1,3,5-Trimethylbenzene	25.0	ND	100	102	80.4	81.5	5	37.1-138			1.43	30.6
Vinyl chloride	25.0	ND	112	113	89.4	90.4	5	32.0-146			1.12	26.3
Xylenes, Total	75.0	ND	291	296	77.7	78.9	5	42.7-135			1.46	26.6
(S) Toluene-d8					*109*	*109*		*88.7-115*				
(S) Dibromofluoromethane					*121*	*122*		*76.3-123*				
(S) 4-Bromofluorobenzene					*99.7*	*100*		*69.7-129*				

Method Blank (MB)

(MB) R3139324-3 05/24/16 10:51

Analyte	MB Result ug/kg	MB Qualifier	MB MDL ug/kg	MB RDL ug/kg
Acenaphthene	U		6.42	33.0
Acenaphthylene	U		6.71	33.0
Anthracene	U		6.32	33.0
Benzidine	U		63.7	333
Benzo(a)anthracene	U		4.28	33.0
Benzo(b)fluoranthene	U		6.95	33.0
Benzo(k)fluoranthene	U		5.82	33.0
Benzo(g,h,i)perylene	U		7.21	33.0
Benzo(a)pyrene	U		5.48	33.0
Bis(2-chlorethoxy)methane	U		7.70	333
Bis(2-chloroethyl)ether	U		8.96	333
Bis(2-chloroisopropyl)ether	U		7.60	333
4-Bromophenyl-phenylether	U		11.4	333
2-Chloronaphthalene	U		6.39	33.0
4-Chlorophenyl-phenylether	U		6.27	333
Chrysene	U		5.55	33.0
Dibenz(a,h)anthracene	U		8.21	33.0
3,3-Dichlorobenzidine	U		79.4	333
2,4-Dinitrotoluene	U		6.07	333
2,6-Dinitrotoluene	U		7.37	333
Fluoranthene	U		4.96	33.0
Fluorene	U		6.82	33.0
Hexachlorobenzene	U		8.56	333
Hexachloro-1,3-butadiene	U		10.0	333
Hexachlorocyclopentadiene	U		58.7	333
Hexachloroethane	U		13.4	333
Indeno(1,2,3-cd)pyrene	U		7.72	33.0
Isophorone	U		5.22	333
Naphthalene	U		8.89	33.0
Nitrobenzene	U		6.95	333
n-Nitrosodimethylamine	U		64.7	333
n-Nitrosodiphenylamine	U		5.94	333
n-Nitrosodi-n-propylamine	U		9.06	333
Phenanthrene	U		5.28	33.0
Benzylbutyl phthalate	U		10.3	333
Bis(2-ethylhexyl)phthalate	U		12.0	333
Di-n-butyl phthalate	U		10.9	333
Diethyl phthalate	U		6.91	333
Dimethyl phthalate	U		5.40	333
Di-n-octyl phthalate	U		9.07	333

Method Blank (MB)

(MB) R3139324-3 05/24/16 10:51

Analyte	MB Result ug/kg	MB Qualifier	MB MDL ug/kg	MB RDL ug/kg
Pyrene	U		12.3	33.0
1,2,4-Trichlorobenzene	U		8.76	333
4-Chloro-3-methylphenol	U		4.77	333
2-Chlorophenol	U		8.31	333
2,4-Dichlorophenol	U		7.46	333
2,4-Dimethylphenol	U		47.1	333
4,6-Dinitro-2-methylphenol	U		124	333
2,4-Dinitrophenol	U		98.0	333
2-Nitrophenol	U		13.0	333
4-Nitrophenol	U		52.5	333
Pentachlorophenol	U		48.0	333
Phenol	U		6.95	333
2,4,6-Trichlorophenol	U		7.79	333
(S) Nitrobenzene-d5	*75.0*			*21.9-129*
(S) 2-Fluorobiphenyl	*71.8*			*34.9-129*
(S) p-Terphenyl-d14	*72.6*			*21.5-128*
(S) Phenol-d5	*63.2*			*26.3-121*
(S) 2-Fluorophenol	*67.8*			*21.1-116*
(S) 2,4,6-Tribromophenol	*74.7*			*21.6-142*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3139324-1 05/24/16 09:56 • (LCSD) R3139324-2 05/24/16 10:19

Analyte	Spike Amount ug/kg	LCS Result ug/kg	LCSD Result ug/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acenaphthene	667	500	501	74.9	75.2	48.9-107			0.300	20
Acenaphthylene	667	526	532	78.8	79.8	49.2-111			1.31	20
Anthracene	667	515	517	77.2	77.5	52.0-112			0.420	20
Benzidine	667	ND	68.5	0.000	10.3	0.000-48.0		J3	200	40
Benzo(a)anthracene	667	474	484	71.1	72.5	52.3-106			2.00	20
Benzo(b)fluoranthene	667	459	466	68.9	69.9	51.3-106			1.42	20
Benzo(k)fluoranthene	667	496	495	74.4	74.1	52.9-107			0.390	20
Benzo(g,h,i)perylene	667	484	489	72.5	73.3	45.8-108			1.10	20
Benzo(a)pyrene	667	491	501	73.6	75.1	51.9-106			2.01	20
Bis(2-chlorethoxy)methane	667	483	469	72.4	70.4	44.9-108			2.89	20
Bis(2-chloroethyl)ether	667	447	425	67.0	63.7	32.5-112			5.06	26
Bis(2-chloroisopropyl)ether	667	483	459	72.4	68.8	40.4-99.0			5.13	20.7
4-Bromophenyl-phenylether	667	525	536	78.7	80.4	51.4-110			2.09	20
2-Chloronaphthalene	667	481	478	72.2	71.7	47.1-105			0.610	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3139324-1 05/24/16 09:56 • (LCSD) R3139324-2 05/24/16 10:19

Analyte	Spike Amount ug/kg	LCS Result ug/kg	LCSD Result ug/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
4-Chlorophenyl-phenylether	667	520	526	78.0	78.9	48.1-108			1.15	20
Chrysene	667	481	487	72.1	73.0	54.4-110			1.26	20
Dibenz(a,h)anthracene	667	475	484	71.3	72.5	45.7-111			1.74	20
3,3-Dichlorobenzidine	667	637	659	95.5	98.8	21.0-101			3.32	22
2,4-Dinitrotoluene	667	545	557	81.7	83.5	53.0-112			2.20	20
2,6-Dinitrotoluene	667	512	508	76.7	76.1	51.6-110			0.720	20
Fluoranthene	667	528	523	79.2	78.5	53.7-110			0.930	20
Fluorene	667	512	508	76.8	76.1	51.1-109			0.860	20
Hexachlorobenzene	667	521	508	78.1	76.1	43.2-104			2.59	20.1
Hexachloro-1,3-butadiene	667	551	539	82.6	80.8	41.5-112			2.18	20
Hexachlorocyclopentadiene	667	569	583	85.3	87.5	13.5-123			2.55	20.7
Hexachloroethane	667	448	445	67.2	66.7	36.2-103			0.740	22.7
Indeno(1,2,3-cd)pyrene	667	487	488	73.0	73.2	47.5-109			0.280	20
Isophorone	667	524	512	78.6	76.8	28.8-104			2.33	20
Naphthalene	667	479	476	71.8	71.4	43.4-103			0.630	20
Nitrobenzene	667	492	482	73.7	72.2	40.7-109			2.07	21
n-Nitrosodimethylamine	667	438	433	65.6	65.0	18.1-122			1.03	23.5
n-Nitrosodiphenylamine	667	488	490	73.2	73.4	48.8-107			0.370	20
n-Nitrosodi-n-propylamine	667	487	465	73.0	69.8	43.3-109			4.48	20
Phenanthrene	667	488	484	73.2	72.5	51.6-107			0.950	20
Benzylbutyl phthalate	667	495	506	74.3	75.8	47.5-115			2.05	20
Bis(2-ethylhexyl)phthalate	667	489	497	73.3	74.4	48.1-116			1.50	20.5
Di-n-butyl phthalate	667	521	521	78.1	78.1	49.7-113			0.0100	20
Diethyl phthalate	667	544	545	81.5	81.7	52.0-112			0.220	20
Dimethyl phthalate	667	525	529	78.7	79.3	51.4-108			0.700	20
Di-n-octyl phthalate	667	494	500	74.0	74.9	49.6-112			1.15	22
Pyrene	667	458	468	68.7	70.1	47.1-108			2.09	20
1,2,4-Trichlorobenzene	667	512	497	76.7	74.6	39.8-100			2.84	20
4-Chloro-3-methylphenol	667	545	539	81.8	80.8	51.1-113			1.24	20
2-Chlorophenol	667	457	441	68.4	66.1	40.8-103			3.55	20
2,4-Dichlorophenol	667	527	526	79.0	78.8	46.2-109			0.150	20
2,4-Dimethylphenol	667	515	496	77.2	74.3	42.2-110			3.84	20
4,6-Dinitro-2-methylphenol	667	438	449	65.6	67.3	23.1-119			2.60	23.7
2,4-Dinitrophenol	667	293	306	43.9	45.8	10.0-105			4.35	36.5
2-Nitrophenol	667	499	514	74.8	77.1	44.2-113			3.07	20.9
4-Nitrophenol	667	468	483	70.2	72.5	34.8-109			3.23	20
Pentachlorophenol	667	515	532	77.3	79.7	16.2-102			3.13	22.9
Phenol	667	456	429	68.4	64.3	41.5-106			6.19	20
2,4,6-Trichlorophenol	667	548	543	82.1	81.5	44.4-108			0.770	20
(S) Nitrobenzene-d5				*77.1*	*74.6*	*21.9-129*				

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3139324-1 05/24/16 09:56 • (LCSD) R3139324-2 05/24/16 10:19

Analyte	Spike Amount ug/kg	LCS Result ug/kg	LCSD Result ug/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
(S) 2-Fluorobiphenyl				*75.0*	*74.2*	*34.9-129*				
(S) p-Terphenyl-d14				*75.4*	*74.4*	*21.5-128*				
(S) Phenol-d5				*66.9*	*63.3*	*26.3-121*				
(S) 2-Fluorophenol				*69.2*	*66.4*	*21.1-116*				
(S) 2,4,6-Tribromophenol				*83.5*	*80.9*	*21.6-142*				

L836976-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L836976-01 05/24/16 13:12 • (MS) R3139324-4 05/24/16 13:35 • (MSD) R3139324-5 05/24/16 13:58

Analyte	Spike Amount ug/kg	Original Result ug/kg	MS Result ug/kg	MSD Result ug/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acenaphthene	667	27.5	529	531	75.2	75.5	1	32.2-134			0.430	27.3
Acenaphthylene	667	U	537	534	80.5	80.1	1	38.7-129			0.530	25.9
Anthracene	667	11.1	531	518	78.0	76.0	1	32.3-137			2.52	28.4
Benzidine	667	U	ND	ND	0.000	0.000	1	0.000-49.9			0.000	40
Benzo(a)anthracene	667	U	480	461	71.9	69.1	1	33.3-124			3.99	29
Benzo(b)fluoranthene	667	U	504	519	75.5	77.8	1	23.3-133			3.01	30.3
Benzo(k)fluoranthene	667	U	548	484	82.2	72.6	1	31.0-129			12.4	26.7
Benzo(g,h,i)perylene	667	U	313	291	46.9	43.7	1	10.0-127			7.16	31.9
Benzo(a)pyrene	667	U	512	494	76.7	74.1	1	28.2-128			3.46	28.4
Bis(2-chlorethoxy)methane	667	U	498	468	74.7	70.2	1	35.0-132			6.16	26.1
Bis(2-chloroethyl)ether	667	U	459	435	68.8	65.2	1	28.8-128			5.32	33.6
Bis(2-chloroisopropyl)ether	667	U	494	470	74.1	70.5	1	31.8-118			5.04	31.7
4-Bromophenyl-phenylether	667	U	538	522	80.7	78.3	1	39.0-130			3.00	26
2-Chloronaphthalene	667	U	498	497	74.7	74.6	1	37.5-123			0.140	26.5
4-Chlorophenyl-phenylether	667	U	540	531	81.0	79.7	1	37.9-123			1.71	25.9
Chrysene	667	U	492	476	73.8	71.4	1	36.3-129			3.35	28
Dibenz(a,h)anthracene	667	U	359	337	53.7	50.5	1	10.5-128			6.32	29.5
3,3-Dichlorobenzidine	667	U	548	492	82.1	73.7	1	10.0-129			10.8	40
2,4-Dinitrotoluene	667	U	559	553	83.9	82.9	1	27.8-147			1.13	29.7
2,6-Dinitrotoluene	667	U	518	510	77.7	76.4	1	36.5-137			1.68	29.7
Fluoranthene	667	25.3	574	546	82.3	78.1	1	27.9-138			4.93	26.9
Fluorene	667	29.7	540	542	76.4	76.8	1	34.0-133			0.500	27.1
Hexachlorobenzene	667	U	531	511	79.6	76.6	1	34.4-116			3.86	25.4
Hexachloro-1,3-butadiene	667	U	580	551	87.0	82.6	1	36.5-125			5.26	29.7
Hexachlorocyclopentadiene	667	U	478	472	71.7	70.8	1	10.0-124			1.31	37.5
Hexachloroethane	667	U	474	440	71.1	65.9	1	11.3-143			7.56	31.9
Indeno(1,2,3-cd)pyrene	667	U	355	337	53.2	50.5	1	10.0-128			5.18	31.5
Isophorone	667	U	536	502	80.4	75.2	1	25.7-116			6.69	27.7

L836976-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L836976-01 05/24/16 13:12 • (MS) R3139324-4 05/24/16 13:35 • (MSD) R3139324-5 05/24/16 13:58

Analyte	Spike Amount ug/kg	Original Result ug/kg	MS Result ug/kg	MSD Result ug/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Naphthalene	667	U	504	475	75.6	71.2	1	36.4-121			6.05	27.2
Nitrobenzene	667	U	516	490	77.3	73.4	1	30.9-134			5.19	27.8
n-Nitrosodimethylamine	667	U	450	426	67.4	63.9	1	19.2-127			5.44	32
n-Nitrosodiphenylamine	667	U	473	450	70.9	67.5	1	26.8-133			4.96	25.9
n-Nitrosodi-n-propylamine	667	U	500	463	74.9	69.4	1	33.0-134			7.59	28.2
Phenanthrene	667	60.1	533	538	70.9	71.6	1	30.8-137			0.940	26.5
Benzylbutyl phthalate	667	U	489	463	73.3	69.4	1	33.4-128			5.52	28.5
Bis(2-ethylhexyl)phthalate	667	U	474	454	71.1	68.0	1	21.8-141			4.40	35.2
Di-n-butyl phthalate	667	U	528	502	79.2	75.3	1	32.2-133			5.07	25.9
Diethyl phthalate	667	U	556	542	83.3	81.3	1	39.4-136			2.51	25.5
Dimethyl phthalate	667	U	540	530	81.0	79.4	1	35.8-137			1.95	25.4
Di-n-octyl phthalate	667	U	473	456	70.9	68.4	1	28.5-128			3.65	32.5
Pyrene	667	16.5	469	454	67.8	65.6	1	24.1-130			3.21	29.9
1,2,4-Trichlorobenzene	667	U	536	515	80.4	77.1	1	36.5-114			4.13	28.4
4-Chloro-3-methylphenol	667	U	575	524	86.2	78.5	1	27.0-154			9.34	26.6
2-Chlorophenol	667	U	475	444	71.2	66.5	1	33.2-121			6.78	29.3
2,4-Dichlorophenol	667	U	555	520	83.2	78.0	1	34.8-134			6.46	27.3
2,4-Dimethylphenol	667	U	512	469	76.8	70.2	1	12.3-149			8.93	32.3
4,6-Dinitro-2-methylphenol	667	U	514	464	77.0	69.6	1	10.0-144			10.1	32.7
2,4-Dinitrophenol	667	U	342	271	51.3	40.7	1	10.0-121			23.2	39.4
2-Nitrophenol	667	U	551	522	82.7	78.3	1	29.5-144			5.50	29.9
4-Nitrophenol	667	U	510	493	76.5	73.9	1	20.0-133			3.44	30.2
Pentachlorophenol	667	U	597	574	89.6	86.0	1	10.0-139			4.06	28.3
Phenol	667	U	465	427	69.7	64.1	1	25.1-130			8.48	29.6
2,4,6-Trichlorophenol	667	U	563	555	84.4	83.1	1	33.8-133			1.50	28.1
(S) Nitrobenzene-d5					*79.4*	*73.2*		*21.9-129*				
(S) 2-Fluorobiphenyl					*76.9*	*74.0*		*34.9-129*				
(S) p-Terphenyl-d14					*73.8*	*70.8*		*21.5-128*				
(S) Phenol-d5					*69.5*	*62.9*		*26.3-121*				
(S) 2-Fluorophenol					*72.4*	*67.2*		*21.1-116*				
(S) 2,4,6-Tribromophenol					*85.9*	*82.8*		*21.6-142*				

Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
Rec.	Recovery.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J7	Surrogate recovery cannot be used for control limit evaluation due to dilution.

ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our "one location" design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be **YOUR LAB OF CHOICE.**
***** Not all certifications held by the laboratory are applicable to the results reported in the attached report.

State Accreditations

Alabama	40660	Nevada	TN-03-2002-34
Alaska	UST-080	New Hampshire	2975
Arizona	AZ0612	New Jersey–NELAP	TN002
Arkansas	88-0469	New Mexico	TN00003
California	01157CA	New York	11742
Colorado	TN00003	North Carolina	Env375
Conneticut	PH-0197	North Carolina [1]	DW21704
Florida	E87487	North Carolina [2]	41
Georgia	NELAP	North Dakota	R-140
Georgia [1]	923	Ohio–VAP	CL0069
Idaho	TN00003	Oklahoma	9915
Illinois	200008	Oregon	TN200002
Indiana	C-TN-01	Pennsylvania	68-02979
Iowa	364	Rhode Island	221
Kansas	E-10277	South Carolina	84004
Kentucky [1]	90010	South Dakota	n/a
Kentucky [2]	16	Tennessee [14]	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	6157585858
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	109
Minnesota	047-999-395	Washington	C1915
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA
Nebraska	NE-OS-15-05		

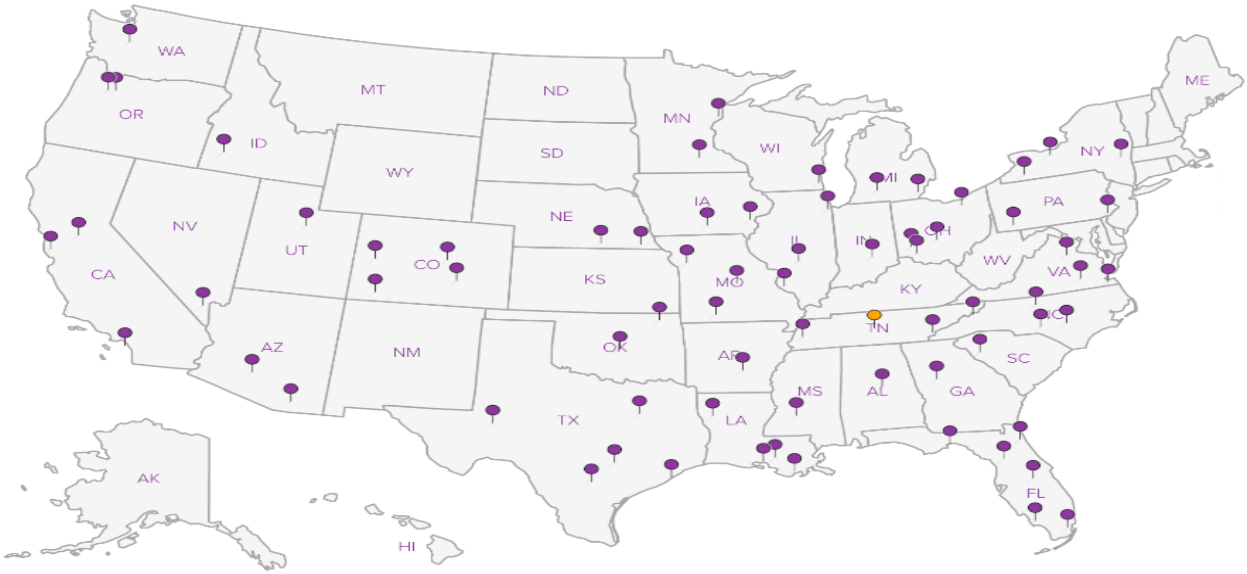
Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	S-67674
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [n/a] Accreditation not applicable

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. **ESC Lab Sciences performs all testing at our central laboratory.**



Company Name/Address:
Weston Solutions
1435 Garrison St., Ste. 100
Lakewood, CO 80215

Billing Information:

Report to: **Moira Pryhoda**

Email To: **moira.pryhoda@WestonSolutions.**

Project Description: Cowboy Timber

City/State Collected: Manderson, WY

Phone: **303-729-6146**
Fax:

Client Project # 0263

Lab Project #

Collected by (print): Eric Sandusky

Site/Facility ID #

P.O. #

Collected by (signature):
Immediately Packed on Ice N ____ Y X

Rush? (Lab MUST Be Notified)
____ Same Day 200%
____ Next Day 100%
____ Two Day 50%
X Three Day 25%

Date Results Needed

Email? ___No ✓ Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOC's (1) 4 oz Soil Jar	SVOC (1)4oz. Soil Jar								Rem./Contaminant	Sample # (lab only)
CTSO-06-20160518	Grab	SS		5/18/16	16:50	2	X	X									01
CTSO-E3D01-20160517	Comp	SS		5/17/16	12:59	1		X									02
CTSO-D8D23-20160518	Comp	SS		5/18/16	13:52	1		X									03
CTSO-C6D12-20160519	Comp	SS		5/19/16	7:15	1		X									04
CTSO-C7D12-20160519	Comp	SS		5/19/16	7:22	1		X									05
		SS															

Chain of Custody Page ___ of ___

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Fax: 615-758-5859

L # 876976

C058

Acctnum: WESSOLLCO
Template:
Prelogin:
TSR:
PB:
Shipped Via:

* Matrix: **SS** - Soil **GW** - Groundwater **WW** - WasteWater **DW** - Drinking Water **OT** - Other_____

pH _____ Temp _____

Flow _____ Other _____

6711 0333 1167

Remarks:

Hold #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ☐ _____

Temp: 1.8 °C Bottles Received: 6 = 40Z

Date: 5-21-16 Time: 0900

Condition: DRY (lab use only) CE

COC Seal Intact: ____ Y ____ N ____ NA

pH Checked: NCF:

Volatile Organic Compounds by Method 8260B

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Fax (615) 758-5859
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Est. 1970

Quality Control Summary
SDG: L836976

Volatile Organic Compounds by Method 8260B
Weston Solutions - CO

Project: Cowboy Timber
Project No: 0263

Login No: L836976

Lab SampleID.	Client ID
L836976-01	CTSO-06-20160518
L836976-02	CTSO-E3D01-20160517
L836976-03	CTSO-D8D23-20160518
L836976-04	CTSO-C6D12-20160519
L836976-05	CTSO-C7D12-20160519

I certify that this data package accurately represents the information in the raw data found herein, both technically and for completeness. Release of the data contained in this data package has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: _____ Name: ESC Lab Sciences

Date: _____ Title: Quality Control

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Quality Control Summary
SDG: L836976
Weston Solutions - CO

Test:	Volatile Organic Compounds by Method 8260B		
Project No:	0263	Matrix:	Soil - mg/kg
Project:	Cowboy Timber	EPA ID:	TN00003
Collection Date:	5/18/2016	**Analytic Batch:**	**WG875350**
Analysis Date:	5/25/2016	Analyst:	559
Instrument ID:	VOCMS30		
Sample Numbers:	L836976-01		

Method Blank Summary

Instrument	Client Sample ID	Lab Sample ID	File Name	Analysis Date	Analysis Time
VOCMS30	LCS WG875350	LCS WG875350	0525A_02.D	5/25/2016	6:35 PM
VOCMS30	LCSD WG875350	LCSD WG875350	0525A_03.D	5/25/2016	6:58 PM
VOCMS30	Blank WG875350	Blank WG875350	0525A_06.D	5/25/2016	8:06 PM
VOCMS30	MS WG875350	MS WG875350	0525A_08.D	5/25/2016	8:51 PM
VOCMS30	MSD WG875350	MSD WG875350	0525A_09.D	5/25/2016	9:14 PM
VOCMS30	CTSO-06-20160518	L836976-01	0525A_26.D	5/26/2016	3:39 AM

Parameters in bold text are reported in this SDG

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Mt. Juliet, TN 37122
(615) 758-5858
(800) 767-5859
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Quality Control Summary
SDG: L836976
Weston Solutions - CO

Test:	Volatile Organic Compounds by Method 8260B		
Project No:	0263	Matrix:	Soil - mg/kg
Project:	Cowboy Timber	EPA ID:	TN00003
Collection Date:	5/18/2016	**Analytic Batch:**	**WG875350**
Analysis Date:	5/25/2016	Analyst:	559
Instrument ID:	VOCMS30		
Sample Numbers:	L836976-01		

Internal Standard Response and Retention Time Summary

File ID: 0525a_01
Analyzed: 05/25/16 172700

	IS1		IS2		IS3		DCB	
	Response	**RT**	**Response**	**RT**	**Response**	**RT**	**Response**	**RT**
12 Hr. Std	550783	4.35	939691	4.68	152515	5.85	411603	8.23
Upper Limit	1100000	4.85	1880000	5.18	305000	6.35	823000	8.73
Lower Limit	275000	3.85	470000	4.18	76300	5.35	206000	7.73
Sample ID	**Response**	**RT**	**Response**	**RT**	**Response**	**RT**	**Response**	**RT**
L836976-01	575893	4.35	996581	4.68	159080	5.84	409116	8.23
MSD WG875350	521615	4.35	931145	4.68	148302	5.84	385539	8.23
MS WG875350	516283	4.35	908916	4.68	144849	5.84	378620	8.23
LCSD WG875350	549775	4.35	947545	4.68	156192	5.84	412288	8.23
LCS WG875350	554446	4.35	956206	4.68	154260	5.85	416619	8.23
BLANK WG875350	572138	4.35	981997	4.68	159064	5.84	409100	8.23

Legend:
IS1 -- PENTAFLUOROBENZENE
IS2 -- 1,4-DIFLUOROBENZENE
IS3 -- 2-BROMO-1-CHLOROPROPANE
DCB -- 1,4-DICHLOROBENZENE-D4

Parameters in bold text are reported in this SDG

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Quality Control Summary
SDG: L836976
Weston Solutions - CO

Test:	Volatile Organic Compounds by Method 8260B		
Project No:	0263	Matrix:	Soil - mg/kg
Project:	Cowboy Timber	EPA ID:	TN00003
Collection Date:	5/18/2016	**Analytic Batch:**	**WG875350**
Analysis Date:	5/25/2016	Analyst:	559
Instrument ID:	VOCMS30		
Sample Numbers:	L836976-01		

Surrogate Summary

			BFB		DFM		TD8		TFT	
Laboratory Sample ID	Instrument	File ID	ppm	% Rec	ppm	% Rec	ppm	% Rec	ppm	% Rec
L836976-01	VOCMS30	0525A_26	0.0393	98.2	0.0486	121	0.0430	107		
LCS WG875350	VOCMS30	0525A_02	0.0401	100	0.0478	120	0.0440	110	0.0394	98.5
LCSD WG875350	VOCMS30	0525A_03	0.0398	99.4	0.0486	121	0.0441	110	0.0396	98.9
BLANK WG875350	VOCMS30	0525A_06	0.0387	96.8	0.0490	122	0.0430	107	0.0389	97.1
MS WG875350	VOCMS30	0525A_08	0.0399	99.7	0.0484	121	0.0435	109	0.0389	97.2
MSD WG875350	VOCMS30	0525A_09	0.0401	100	0.0488	122	0.0436	109	0.0387	96.7

BFB --4-BROMOFLUOROBENZENE	True Value: 0.04 ppm	Limits: 69.7 - 129
DFM --DIBROMOFLUOROMETHANE	True Value: 0.04 ppm	Limits: 76.3 - 123
TD8 --TOLUENE-D8	True Value: 0.04 ppm	Limits: 88.70 - 115
TFT --A,A,A-TRIFLUOROTOLUENE	True Value: 0.04 ppm	Limits: 87.2 - 117

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Quality Control Summary
SDG: L836976
Weston Solutions - CO

Test: Volatile Organic Compounds by Method 8260B
Project No: 0263
Project: Cowboy Timber EPA ID: TN00003
Collection Date: 5/18/2016
Instrument ID: VOCMS30

Instrument Performance Summary

FileID: 0525a_01.D Date: 5/25/2016 Time: 5:27 PM

m/e	Ion Abundance Criteria	% Relative Abundance
50	15 - 40% of mass 95	17.5
75	30 - 60% of mass 95	46.5
95	100 - 100% of mass 95	100
96	5 - 9% of mass 95	6.6
173	0 - 2% of mass 174	0
174	50 - 150% of mass 95	77.1
175	5 - 9% of mass 174	7.6
176	95 - 101% of mass 174	96.6
177	5 - 9% of mass 176	6.4

This Check applies to the following samples and quality control samples

Client Sample ID	Laboratory Sample ID	Lab Filename	Date Analyzed	Time Analyzed
LCS WG875350	LCS WG875350	0525A_02.D	5/25/2016	6:35 PM
LCSD WG875350	LCSD WG875350	0525A_03.D	5/25/2016	6:58 PM
Blank WG875350	Blank WG875350	0525A_06.D	5/25/2016	8:06 PM
MS WG875350	MS WG875350	0525A_08.D	5/25/2016	8:51 PM
MSD WG875350	MSD WG875350	0525A_09.D	5/25/2016	9:14 PM
CTSO-06-20160518	L836976-01	0525A_26.D	5/26/2016	3:39 AM

*** - calibrated by linear regression*

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(800) 767-5859
Fax (615) 758-5859
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Est. 1970

Quality Control Summary
SDG: L836976
Weston Solutions - CO

Test: Volatile Organic Compounds by Method 8260B
Project: Cowboy Timber
Instrument ID: VOCMS30
Method Name : V830D26P.M

Relative Response Factor Summary

Compound Name	Level .25	Level .5	Level 1	Level 2	Level 5.0	Level 10	Level 25	Level 40	Level 75	Average RRF	%RSD
TPH (GC/MS) LOW FRACTION										0.000000	0.00
PROPENE				0.113	0.100	0.090	0.085	0.085	0.087	0.092664	10.32
DICHLORODIFLUOROMETHANE	0.282	0.316	0.325	0.316	0.301	0.304	0.297	0.310	0.319	0.311343	4.63
CHLOROMETHANE	0.407	0.371	0.369	0.366	0.335	0.347	0.339	0.349	0.356	0.361743	5.58
VINYL CHLORIDE	0.317	0.338	0.392	0.377	0.376	0.398	0.386	0.398	0.399	0.379347	7.23
1,3-BUTADIENE		0.453	0.369	0.338	0.320	0.313	0.302	0.308	0.304	0.329766	14.87
BROMOMETHANE					0.185	0.182	0.157	0.150	0.155	0.164004	8.31
CHLOROETHANE	0.244	0.233	0.230	0.248	0.222	0.222	0.206	0.200	0.173	0.212815	14.65
TRICHLOROFLUOROMETHANE	0.472	0.503	0.561	0.529	0.536	0.547	0.533	0.543	0.548	0.530022	4.66
DICHLOROFLUOROMETHANE	0.724	0.644	0.565	0.587	0.592	0.606	0.589	0.607	0.615	0.614029	6.82
ETHYL ETHER	0.235	0.208	0.235	0.217	0.213	0.228	0.226	0.226	0.226	0.225569	4.29
ACROLEIN	0.056	0.056	0.051	0.046	0.045	0.047	0.047	0.046	0.048	0.049226	7.87
1,1-DICHLOROETHENE	0.408	0.428	0.491	0.485	0.456	0.490	0.469	0.481	0.485	0.469704	5.95
1,1,2-TRICHLOROTRIFLUOROETHANE	0.255	0.287	0.334	0.326	0.312	0.331	0.314	0.326	0.324	0.314330	7.44
ACETONE			0.164	0.143	0.135	0.142	0.137	0.131	0.131	0.137373	8.45
IODOMETHANE		0.599	0.564	0.519	0.485	0.505	0.487	0.493	0.482	0.503962	9.36
CARBON DISULFIDE		1.326	1.215	1.122	1.059	1.090	1.008	1.038	1.035	1.096294	9.17
METHYLENE CHLORIDE	0.343	0.356	0.329	0.319	0.304	0.317	0.303	0.316	0.312	0.320591	5.03
ACRYLONITRILE	0.076	0.072	0.078	0.079	0.074	0.088	0.082	0.082	0.084	0.080277	6.28
n-Hexane		0.367	0.351	0.314	0.292	0.300	0.287	0.293	0.294	0.308627	8.97
TRANS-1,2-DICHLOROETHENE	0.261	0.280	0.296	0.337	0.308	0.324	0.315	0.326	0.323	0.310395	7.32
METHYL TERT-BUTYL ETHER	0.744	0.835	0.819	0.825	0.798	0.845	0.827	0.819	0.816	0.814915	3.26
1,1-DICHLOROETHANE	0.495	0.510	0.570	0.565	0.548	0.576	0.564	0.576	0.576	0.557577	5.13
VINYL ACETATE	0.456	0.495	0.521	0.532	0.491	0.530	0.519	0.495	0.470	0.495519	5.52
DI-ISOPROPYL ETHER	0.861	0.877	0.912	0.891	0.887	0.929	0.927	0.942	0.933	0.912679	3.19
2,2-Dichloropropane	0.551	0.545	0.564	0.542	0.523	0.544	0.528	0.542	0.546	0.542495	1.97
CIS-1,2-DICHLOROETHENE	0.275	0.328	0.334	0.348	0.345	0.353	0.344	0.352	0.354	0.340104	6.86
2-BUTANONE (MEK)	0.188	0.147	0.151	0.141	0.132	0.150	0.147	0.142	0.143	0.147246	9.83

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Quality Control Summary
SDG: L836976
Weston Solutions - CO

Test: Volatile Organic Compounds by Method 8260B
Project: Cowboy Timber
Instrument ID: VOCMS30
Method Name : V830D26P.M

Relative Response Factor Summary

Compound Name	Level .25	Level .5	Level 1	Level 2	Level 5.0	Level 10	Level 25	Level 40	Level 75	Average RRF	%RSD
BROMOCHLOROMETHANE	0.161	0.195	0.226	0.204	0.200	0.213	0.206	0.210	0.207	0.202534	7.88
TETRAHYDROFURAN				0.086	0.066	0.077	0.071	0.068	0.069	0.071527	9.50
CHLOROFORM	0.577	0.572	0.596	0.603	0.568	0.596	0.570	0.573	0.570	0.577676	2.37
DIBROMOFLUOROMETHANE	0.469	0.469	0.460	0.454	0.448	0.443	0.437	0.431	0.424	0.442919	4.25
1,1,1-TRICHLOROETHANE	0.449	0.471	0.508	0.512	0.491	0.500	0.498	0.516	0.515	0.499002	4.26
CARBON TETRACHLORIDE	0.661	0.569	0.594	0.546	0.532	0.535	0.521	0.538	0.541	0.555656	7.23
1,1-Dichloropropene	0.363	0.437	0.454	0.451	0.438	0.444	0.440	0.448	0.449	0.437261	5.79
2,2,4-TRIMETHYLPENTANE	0.317	0.379	0.375	0.339	0.371	0.361	0.338	0.349	0.338	0.349104	5.59
HEPTANE	0.425	0.510	0.483	0.508	0.488	0.499	0.490	0.496	0.497	0.489724	4.67
BENZENE	1.251	1.234	1.247	1.262	1.183	1.234	1.204	1.227	1.239	1.232632	1.80
1,2-DICHLOROETHANE	0.387	0.340	0.393	0.398	0.390	0.412	0.406	0.402	0.402	0.394577	4.98
TRICHLOROETHENE	0.206	0.211	0.227	0.233	0.222	0.236	0.227	0.234	0.233	0.225792	4.29
1,2-DICHLOROPROPANE	0.152	0.140	0.138	0.145	0.141	0.142	0.142	0.145	0.143	0.142850	2.67
DIBROMOMETHANE	0.112	0.108	0.131	0.121	0.116	0.125	0.125	0.127	0.126	0.122176	5.74
BROMODICHLOROMETHANE	0.268	0.315	0.308	0.284	0.275	0.281	0.276	0.286	0.279	0.284509	5.06
a,a,a-Trifluorotoluene	0.571	0.564	0.559	0.551	0.550	0.541	0.532	0.536	0.531	0.545789	2.67
2-CHLOROETHYL VINYL ETHER		0.023	0.024	0.026	0.026	0.029	0.029	0.029	0.029	0.026904	8.10
CIS-1,3-DICHLOROPROPENE	0.263	0.315	0.335	0.330	0.313	0.333	0.339	0.341	0.340	0.326556	7.19
4-METHYL-2-PENTANONE (MIBK)	0.136	0.171	0.160	0.156	0.151	0.169	0.168	0.164	0.166	0.160977	6.30
TOLUENE-D8	1.194	1.195	1.170	1.147	1.136	1.120	1.119	1.114	1.102	1.139563	2.99
TOLUENE	1.056	1.007	0.985	0.947	0.888	0.913	0.891	0.912	0.908	0.936310	6.00
TRANS-1,3-DICHLOROPROPENE	0.259	0.268	0.285	0.288	0.286	0.298	0.297	0.303	0.300	0.289443	5.05
1,1,2-TRICHLOROETHANE	0.936	1.082	1.100	1.123	1.060	1.138	1.124	1.128	1.104	1.087675	5.16
TETRACHLOROETHENE	1.139	1.231	1.256	1.282	1.203	1.277	1.201	1.244	1.211	1.213506	4.38
1,3-Dichloropropane	1.779	1.653	1.858	1.884	1.773	1.937	1.883	1.909	1.847	1.830926	4.37
2-HEXANONE	0.416	0.463	0.486	0.504	0.459	0.534	0.510	0.517	0.517	0.490659	6.83
CHLORODIBROMOMETHANE	1.385	1.233	1.323	1.336	1.268	1.417	1.405	1.408	1.398	1.358721	4.53
1,2-DIBROMOETHANE	0.947	1.120	1.208	1.159	1.115	1.205	1.186	1.206	1.174	1.151202	6.50
CHLOROBENZENE	3.156	3.819	3.959	4.069	3.862	4.098	3.863	3.926	3.770	3.792748	7.15

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Quality Control Summary
SDG: L836976
Weston Solutions - CO

Test: Volatile Organic Compounds by Method 8260B
Project: Cowboy Timber
Instrument ID: VOCMS30
Method Name : V830D26P.M

Relative Response Factor Summary

Compound Name	Level .25	Level .5	Level 1	Level 2	Level 5.0	Level 10	Level 25	Level 40	Level 75	Average RRF	%RSD
1,1,1,2-TETRACHLOROETHANE	1.187	1.280	1.382	1.280	1.284	1.381	1.294	1.323	1.280	1.291987	4.37
ETHYLBENZENE	2.027	2.010	2.231	2.255	2.114	2.282	2.207	2.254	2.204	2.163492	4.57
M&P-XYLENE	2.460	2.608	2.745	2.754	2.641	2.780	2.636	2.680	2.585	2.621690	4.65
O-XYLENE	2.401	2.376	2.637	2.606	2.516	2.700	2.598	2.667	2.596	2.562053	4.11
STYRENE	3.540	3.986	4.034	4.029	3.976	4.333	4.162	4.321	4.171	4.062575	5.34
Bromoform	0.697	0.739	0.849	0.877	0.834	0.916	0.887	0.918	0.902	0.856069	8.61
Isopropylbenzene		7.811	7.161	7.031	6.755	7.161	6.871	7.076	6.769	6.955433	5.95
4-BROMOFLUOROBENZENE	2.753	2.749	2.742	2.724	2.712	2.755	2.762	2.788	2.748	2.750282	0.98
Bromobenzene	2.735	2.632	2.839	2.664	2.565	2.744	2.672	2.735	2.628	2.662469	3.80
1,1,2,2-TETRACHLOROETHANE	1.569	1.397	1.407	1.324	1.337	1.495	1.439	1.435	1.396	1.410052	5.20
1,2,3-TRICHLOROPROPANE		0.397	0.389	0.373	0.361	0.432	0.407	0.406	0.397	0.393973	4.92
TRANS-1,4-DICHLORO-2-BUTENE		0.450	0.429	0.380	0.372	0.400	0.403	0.401	0.406	0.402793	5.67
n-Propylbenzene	6.949	7.171	7.547	7.364	7.322	7.940	7.636	7.885	7.611	7.450496	4.42
4-ETHYLTOLUENE	6.716	6.290	6.689	6.548	6.479	7.060	6.695	6.897	6.612	6.595694	4.19
2-Chlorotoluene	1.327	1.399	1.532	1.423	1.495	1.561	1.468	1.494	1.441	1.444149	5.28
4-Chlorotoluene	4.494	4.517	4.785	4.611	4.500	4.844	4.675	4.838	4.595	4.607890	3.69
1,3,5-Trimethylbenzene	5.171	4.996	5.417	5.419	5.416	5.772	5.498	5.614	5.337	5.338264	5.08
tert-Butylbenzene	4.405	4.686	4.725	4.817	4.654	5.057	4.806	4.948	4.720	4.711609	4.40
1,2,4-Trimethylbenzene	5.100	5.352	5.595	5.573	5.329	5.757	5.549	5.650	5.362	5.404089	4.78
sec-Butylbenzene	6.318	7.144	7.423	7.170	7.089	7.669	7.332	7.440	7.124	7.109379	5.66
1,3-DICHLOROBENZENE	2.836	3.170	2.995	3.039	3.023	3.271	3.147	3.249	3.088	3.058405	4.91
p-Isopropyltoluene	5.221	5.263	5.924	5.880	5.887	6.365	6.112	6.211	5.876	5.799162	6.75
DICYCLOPENTADIENE	4.886	5.288	5.948	5.982	5.899	6.392	6.168	6.258	5.960	5.831157	7.65
1,4-DICHLOROBENZENE	1.015	1.047	1.031	0.987	0.980	1.018	0.994	1.009	0.988	1.000675	2.56
1,2,3-TRIMETHYLBENZENE	1.862	1.937	1.876	1.840	1.763	1.856	1.793	1.832	1.792	1.822550	3.31
1,2-DICHLOROBENZENE	0.773	0.902	1.005	0.963	0.917	1.000	0.983	0.994	0.981	0.950746	7.08
n-Butylbenzene	1.825	1.792	1.937	1.843	1.868	1.951	1.895	1.932	1.884	1.879034	2.59
1,2-Dibromo-3-chloropropane			0.098	0.097	0.093	0.108	0.107	0.113	0.119	0.108165	9.70
1,2,4-Trichlorobenzene	0.598	0.524	0.568	0.583	0.573	0.640	0.624	0.637	0.610	0.598313	5.74

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Quality Control Summary
SDG: L836976
Weston Solutions - CO

Test: Volatile Organic Compounds by Method 8260B
Project: Cowboy Timber
Instrument ID: VOCMS30
Method Name : V830D26P.M

Relative Response Factor Summary

Compound Name	Level .25	Level .5	Level 1	Level 2	Level 5.0	Level 10	Level 25	Level 40	Level 75	Average RRF	%RSD
HEXACHLORO-1,3-BUTADIENE	0.304	0.317	0.317	0.288	0.294	0.324	0.300	0.317	0.317	0.312204	4.65
Naphthalene		1.290	1.317	1.281	1.232	1.441	1.447	1.505	1.526	1.411195	8.45
1,2,3-Trichlorobenzene	0.468	0.493	0.523	0.501	0.493	0.553	0.536	0.575	0.563	0.529816	6.84
1-Methylnaphthalene					0.522	0.633	0.681	0.759	0.765	0.709426	14.75
2-Methylnaphthalene		0.625	0.569	0.483	0.471	0.533	0.588	0.629	0.647	0.587466	12.35
ETHANOL										0.003432	3.80
Bromoethane										0.332119	0.77
2-PROPANOL										0.016833	12.54
Methyl Acetate										0.185810	2.63
ACETONITRILE										0.031051	3.28
ALLYL CHLORIDE										0.172247	1.82
tert-BUTYL ALCOHOL										0.080897	2.91
chloroprene										0.531168	1.95
ETHYL TERT-BUTYL ETHER										0.865944	2.41
PROPIONITRILE										0.037339	2.85
Ethyl Acetate										0.249500	2.55
METHACRYLONITRILE										0.112322	2.49
Cyclohexane										0.876632	1.42
tert-butyl formate										0.000000	0.00
ISOBUTANOL										0.016233	2.48
t-Amyl Alcohol										0.026473	5.51
TERT-AMYL METHYL ETHER										0.990164	3.20
N-BUTANOL										0.005373	4.42
Methyl Cyclohexane										0.684952	20.06
2-nitropropane										0.061917	3.61
METHYL METHACRYLATE										0.158305	1.88
1,4-DIOXANE										0.002370	4.90
n-octane										0.244386	4.37
3,3-DIMETHYL-1-BUTANOL										0.023674	3.81

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Quality Control Summary
SDG: L836976
Weston Solutions - CO

Test: Volatile Organic Compounds by Method 8260B
Project: Cowboy Timber
Instrument ID: VOCMS30
Method Name : V830D26P.M

Relative Response Factor Summary

Compound Name	Level .25	Level .5	Level 1	Level 2	Level 5.0	Level 10	Level 25	Level 40	Level 75	Average RRF	%RSD
ETHYL METHACRYLATE										1.408158	2.34
CIS-1,4-DICHLORO-2-BUTENE										0.408343	3.34
Cyclohexanone										0.276754	7.13
PENTACHLOROETHANE										0.930346	1.49
Hexachloroethane										1.195389	2.71

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Fax (615) 758-5859
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Quality Control Summary
SDG: L836976
Weston Solutions - CO

Test: Volatile Organic Compounds by Method 8260B
Project No: 0263
Project: Cowboy Timber EPA ID: TN00003
Collection Date: 5/18/2016
Instrument ID: VOCMS30

Method Name : V830D26P.M
FileName : 0525a_01.D

Date : 5/25/2016
Time : 5:27 PM

Continuing Calibration Verification

Compound Name	Average RRF	CCC RRF	%D		
Dichlorodifluoromethane	0.3113	0.3049	5.41		**
Chloromethane	0.3617	0.3480	3.81	>0.1	
Vinyl chloride	0.3793	0.4211	11		
Bromomethane	0.1640	0.2793	70.3		
Chloroethane	0.2128	0.2618	23		
Trichlorofluoromethane	0.5300	0.5122	3.36		
1,1-Dichloroethene	0.4697	0.4744	0.99		
1,1,2-Trichlorotrifluoroethane	0.3143	0.3299	4.96		
Acetone	0.1374	0.1493	8.7		
Methylene Chloride	0.3206	0.3322	3.62		
Acrylonitrile	0.0803	0.0969	20.7		
trans-1,2-Dichloroethene	0.3104	0.3010	3.04		
Methyl tert-butyl ether	0.8149	0.8872	8.87		
1,1-Dichloroethane	0.5576	0.6442	15.5	>0.1	
Di-isopropyl ether	0.9127	1.1742	28.7		
2,2-Dichloropropane	0.5425	0.5552	2.34		
cis-1,2-Dichloroethene	0.3401	0.3668	7.84		
2-Butanone (MEK)	0.1472	0.1706	15.9		
Chloroform	0.5777	0.6309	9.21		
1,1,1-Trichloroethane	0.4990	0.5204	4.28		
Carbon tetrachloride	0.5557	0.5029	9.5		
1,1-Dichloropropene	0.4373	0.4438	1.49		
Benzene	1.2326	1.3263	7.6		
1,2-Dichloroethane	0.3946	0.3945	0.02		
Trichloroethene	0.2258	0.1988	11.9		
1,2-Dichloropropane	0.1429	0.1536	7.53		
Dibromomethane	0.1222	0.1113	8.86		
Bromodichloromethane	0.2845	0.2764	2.84		
2-Chloroethyl vinyl ether	0.0269	0.0476	76.9		
cis-1,3-Dichloropropene	0.3266	0.3376	3.39		
4-Methyl-2-pentanone (MIBK)	0.1610	0.1700	5.59		

** - *calibrated by linear regression*

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Quality Control Summary
SDG: L836976
Weston Solutions - CO

Test: Volatile Organic Compounds by Method 8260B
Project No: 0263
Project: Cowboy Timber EPA ID: TN00003
Collection Date: 5/18/2016
Instrument ID: VOCMS30

Method Name : V830D26P.M
FileName : 0525a_01.D

Date : 5/25/2016
Time : 5:27 PM

Continuing Calibration Verification

Compound Name	Average RRF	CCC RRF	%D	
Toluene	0.9363	0.8543	8.76	
trans-1,3-Dichloropropene	0.2894	0.2871	0.83	
1,1,2-Trichloroethane	1.0877	1.0209	6.14	
Tetrachloroethene	1.2135	0.9267	23.6	
1,3-Dichloropropane	1.8309	1.7586	3.95	
Chlorodibromomethane	1.3587	1.1651	14.2	
1,2-Dibromoethane	1.1512	1.0271	10.8	
Chlorobenzene	3.7927	3.4145	9.97	>0.3
1,1,1,2-Tetrachloroethane	1.2920	1.0798	16.4	
Ethylbenzene	2.1635	1.9734	8.79	
Styrene	4.0626	3.9081	3.8	
Bromoform	0.8561	0.6730	21.4	>0.1
Isopropylbenzene	6.9554	6.2294	10.4	
Bromobenzene	2.6625	2.4920	6.4	
1,1,2,2-Tetrachloroethane	1.4101	1.3585	3.65	>0.3
1,2,3-Trichloropropane	0.3940	0.3297	16.3	
n-Propylbenzene	7.4505	7.1989	3.38	
2-Chlorotoluene	1.4441	1.2786	11.5	
4-Chlorotoluene	4.6079	4.2880	6.94	
1,3,5-Trimethylbenzene	5.3383	4.9028	8.16	
tert-Butylbenzene	4.7116	4.2638	9.5	
1,2,4-Trimethylbenzene	5.4041	4.9258	8.85	
sec-Butylbenzene	7.1094	6.7106	5.61	
1,3-Dichlorobenzene	3.0584	2.7298	10.7	
p-Isopropyltoluene	5.7992	5.4775	5.55	
1,4-Dichlorobenzene	1.0007	0.9746	2.61	
1,2,3-Trimethylbenzene	1.8226	1.8077	0.82	
1,2-Dichlorobenzene	0.9507	0.9346	1.7	
n-Butylbenzene	1.8790	2.0189	7.44	
1,2-Dibromo-3-Chloropropane	0.1082	0.0852	21.3	
1,2,4-Trichlorobenzene	0.5983	0.5986	0.05	

*** - calibrated by linear regression*

ESC LAB SCIENCES
YOUR LAB OF CHOICE

12065 Lebanon Rd
Mt. Juliet, TN 37122
(615) 758-5858
(800) 767-5859
Fax (615) 758-5859
Tax I.D 62-0814289
Est. 1970

Quality Control Summary
SDG: L836976
Weston Solutions - CO

Test: Volatile Organic Compounds by Method 8260B
Project No: 0263
Project: Cowboy Timber EPA ID: TN00003
Collection Date: 5/18/2016
Instrument ID: VOCMS30

Method Name : V830D26P.M
FileName : 0525a_01.D

Date : 5/25/2016
Time : 5:27 PM

Continuing Calibration Verification

Compound Name	Average RRF	CCC RRF	%D
Hexachloro-1,3-butadiene	0.3122	0.2849	8.75
Naphthalene	1.4112	1.3874	1.69
1,2,3-Trichlorobenzene	0.5298	0.5131	3.16

*** - calibrated by linear regression*

Raw Data

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

Injection Log

Instrument ID : VOCMS30
Computer Name : VOCCOMPAS
Released By : Josh Escue
Date Released : 9/21/2016 10:50:28 AM
Run ID : 052516a
Signature : _____

#	File ID	Sample ID	Method	WG	Product	Matrix	Account #	State	Dil.	Mult.	Injected	Misc.
1	0525a_01	ICV VMS 25 PPB	V830D26P						1	1	05/25/16 1727	"SOIL"
2	0525a_01T	ICV VMS 25 ppb	V830D26P							1	05/25/16 1727	
3	0525A_02	LCS	V830D26P	WG875350	V8260	SS			1	1	05/25/16 1835	"SOIL"
4	0525A_03	LCSD	V830D26P	WG875350	V8260	SS			1	1	05/25/16 1858	"SOIL"
5	0525A_04	1	V830D26P						1	1	05/25/16 1920	"SOIL"
6	0525A_05	INSTBLK	V830D26P						1	1	05/25/16 1943	"SOIL"
7	0525A_06	BLANK	V830D26P	WG875350	V8260	SS			1	1	05/25/16 2006	"soil"
8	0525A_07	MB	V830D26P						1	1	05/25/16 2028	"soil"
9	0525A_08	MS	V830D26P	WG875350	V8260	SS			5	5	05/25/16 2051	"soil"
10	0525A_09	MSD	V830D26P	WG875350	V8260	SS			5	5	05/25/16 2114	"soil"
11	0525A_10	INSTBLK	V830D26P						1	1	05/25/16 2136	"soil"
12	0525A_11	L836804-06	V830D26P	WG875350	V8260BTEXN	SS	TERRAFCO	WY	5	5	05/25/16 2159	"soil"
13	0525A_12	L837253-02	V830D26P	WG875350	V8260	SS	CIRASSRTX	TX	1	0.71	05/25/16 2222	"soil"
14	0525A_13	DNR L836054-01	V830D26P	WG875350					500	500	05/25/16 2244	"soil"
15	0525A_14	DNR L836054-02	V830D26P	WG875350					500	500	05/25/16 2307	"soil"
16	0525A_15	DNR L836054-03	V830D26P	WG875350					500	500	05/25/16 2330	"soil"
17	0525A_16	DNR L836054-04	V830D26P	WG875350					500	500	05/25/16 2352	"soil"
18	0525A_17	DNR L836054-05	V830D26P	WG875350					500	500	05/26/16 0015	"soil"
19	0525A_18	L836804-01	V830D26P	WG875350	V8260BTEXN	SS	TERRAFCO	WY	5	5	05/26/16 0038	"soil"
20	0525A_19	L836804-02	V830D26P	WG875350	V8260BTEXN	SS	TERRAFCO	WY	5	5	05/26/16 0101	"soil"
21	0525A_20	L836804-03	V830D26P	WG875350	V8260BTEXN	SS	TERRAFCO	WY	5	5	05/26/16 0123	"soil"
22	0525A_21	L836804-04	V830D26P	WG875350	V8260BTEXN	SS	TERRAFCO	WY	5	5	05/26/16 0146	"soil"

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

Injection Log

Instrument ID : VOCMS30
Computer Name : VOCCOMPAS
Released By : Josh Escue
Date Released : 9/21/2016 10:50:28 AM
Run ID : 052516a
Signature : _____

#	File ID	Sample ID	Method	WG	Product	Matrix	Account #	State	Dil.	Mult.	Injected	Misc.
23	0525A_22	L836804-05	V830D26P	WG875350	V8260BTEXN	SS	TERRAFCO	WY	5	5	05/26/16 0209	"soil"
24	0525A_23	L836953-01	V830D26P	WG875350	V8260	SS	BNSF1KEN	MT	100	100	05/26/16 0231	"soil"
25	0525A_24	L836953-02	V830D26P	WG875350	V8260	SS	BNSF1KEN	MT	100	100	05/26/16 0254	"soil"
26	0525A_25	DNR L836953-04	V830D26P	WG875350					100	100	05/26/16 0317	"soil"
27	0525A_26	L836976-01	V830D26P	WG875350	V8260	SS	WESSOLLCO	WY	5	5	05/26/16 0339	"soil"
28	0525A_27	L837056-01	V830D26P	WG875350	V8260	SS	NOVCONCMN	TX	1.01	1.01	05/26/16 0402	"soil"
29	0525A_28	L837056-02	V830D26P	WG875350	V8260	SS	NOVCONCMN	TX	1	0.95	05/26/16 0425	"soil"
30	0525A_29	L837056-03	V830D26P	WG875350	V8260	SS	NOVCONCMN	TX	1	0.88	05/26/16 0447	"soil"
31	0525A_30	L837056-04	V830D26P	WG875350	V8260	SS	NOVCONCMN	TX	1.16	1.16	05/26/16 0510	"soil"

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\052516a\
Data File : 0525a 01.D
Acq On : 25 May 2016 5:27 pm
Operator : 605
Sample : ICV VMS 25 ppb
Misc : SOIL
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 26 08:02:29 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 09:17:18 2016
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards								
1)	8260-PENTAFLUOROBENZENE	4.347	168	550783	40.0000000	ppb		0.00
41)	8260-1,4-DIFLUOROBENZENE	4.675	114	939691	40.0000000	ppb		0.00
53)	8260-2-BROMO-1-CHLOROP...	5.849	79	152515	40.0000000	ppb		0.00
84)	8260-1,4-DICHLOROBENZE...	8.234	152	411603	40.0000000	ppb		0.00
96)	AP9-PENTAFLUOROBENZENE	4.347	168	550783	40.0000000	ppb		0.00
114)	AP9-1,4-DIFLUOROBENZENE	4.675	114	939691	40.0000000	ppb		0.00
122)	AP9-2-BROMO-1-CHLOROPR...	5.849	79	152515	40.0000000	ppb	#	0.00
128)	AP9-1,4-DICHLOROBENZEN...	8.234	152	411603	40.0000000	ppb		0.00
System Monitoring Compounds								
33)	DIBROMOFLUOROMETHANE	4.110	111	288903	47.3704492	ppb		0.00
	Spiked Amount 40.000	Range 76 - 123			Recovery = 118.43%			
46)	a,a,a-Trifluorotoluene	5.046	146	503240	39.2486944	ppb		0.00
	Spiked Amount 40.000	Range 87 - 117			Recovery = 98.12%			
50)	TOLUENE-D8	5.509	98	1167853	43.6239109	ppb		0.00
	Spiked Amount 40.000	Range 89 - 115			Recovery = 109.06%			
68)	4-BROMOFLUOROBENZENE	7.389	95	418318	39.8911693	ppb		0.00
	Spiked Amount 40.000	Range 70 - 129			Recovery = 99.73%			
Target Compounds								Qvalue
3)	PROPENE	1.658	41	16541	12.9637004	ppb		97
4)	DICHLORODIFLUOROMETHANE	1.700	85	104956	23.6477406	ppb		99
5)	CHLOROMETHANE	1.871	50	119779	24.0469434	ppb		98
6)	VINYL CHLORIDE	1.938	62	144944	27.7487185	ppb		99
7)	1,3-BUTADIENE	1.950	39	103810	22.8618954	ppb		95
8)	BROMOMETHANE	2.199	94	96140	42.5725947	ppb		96
9)	CHLOROETHANE	2.291	64	90132	30.7578142	ppb		97
10)	TRICHLOROFLUOROMETHANE	2.394	101	176329	24.1606780	ppb		100
11)	DICHLOROFLUOROMETHANE	2.431	67	234506	27.7360430	ppb		98
12)	ETHYL ETHER	2.595	59	84890	27.3310840	ppb		95
13)	ACROLEIN	2.954	56	108432	159.9720249	ppb		98
14)	1,1-DICHLOROETHENE	2.747	61	163293	25.2477773	ppb		100
15)	1,1,2-TRICHLOROTRIFLUO...	2.759	101	113571	26.2398303	ppb		94
16)	ACETONE	3.124	43	257015	135.8741083	ppb		96
17)	IODOMETHANE	2.850	142	720170	103.7806758	ppb		100
18)	CARBON DISULFIDE	2.783	76	248295	16.4482795	ppb	#	95
19)	METHYLENE CHLORIDE	3.106	84	114354	25.9047418	ppb		98
20)	ACRYLONITRILE	3.586	53	166774	150.8745222	ppb		94
21)	n-Hexane	3.227	56	83888	19.7399367	ppb		92
22)	TRANS-1,2-DICHLOROETHENE	3.197	96	103601	24.2398152	ppb		93
23)	METHYL TERT-BUTYL ETHER	3.246	73	305419	27.2184286	ppb		86
24)	1,1-DICHLOROETHANE	3.556	63	221758	28.8837578	ppb		100
25)	VINYL ACETATE	3.665	43	1152367	168.8924088	ppb		98
26)	DI-ISOPROPYL ETHER	3.446	45	404214	32.1641999	ppb		97
27)	2,2-Dichloropropane	3.927	77	191111	25.5840708	ppb		98
28)	CIS-1,2-DICHLOROETHENE	3.866	96	126253	26.9593735	ppb		96
29)	2-BUTANONE (MEK)	4.170	43	293692	144.8533179	ppb		95
30)	BROMOCHLOROMETHANE	3.982	130	69299	24.8489561	ppb		83
31)	TETRAHYDROFURAN	4.110	42	27844	28.2710672	ppb		93
32)	CHLOROFORM	4.006	83	217173	27.3024283	ppb		99
34)	1,1,1-TRICHLOROETHANE	4.140	97	179126	26.0696763	ppb		99
35)	CARBON TETRACHLORIDE	4.104	117	173105	22.6247167	ppb		100
36)	1,1-Dichloropropene	4.201	75	152761	25.3718151	ppb		97

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\052516a\
Data File : 0525a 01.D
Acq On : 25 May 2016 5:27 pm
Operator : 605
Sample : ICV VMS 25 ppb
Misc : SOIL
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 26 08:02:29 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 09:17:18 2016
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
37)	2,2,4-TRIMETHYLPENTANE	4.243	41	114985	23.9202778 ppb		84
38)	HEPTANE	4.280	43	153330	22.7381758 ppb	#	69
39)	BENZENE	4.347	78	456564	26.8997229 ppb		99
40)	1,2-DICHLOROETHANE	4.462	62	135795	24.9937399 ppb		97
42)	TRICHLOROETHENE	4.675	130	116763	22.0125656 ppb		99
43)	1,2-DICHLOROPROPANE	4.992	62	90217	26.8832698 ppb		97
44)	DIBROMOMETHANE	4.937	93	65394	22.7838008 ppb		95
45)	BROMODICHLOROMETHANE	5.016	83	162349	24.2900590 ppb		99
47)	2-CHLOROETHYL VINYL ETHER	5.326	63	139763	221.1272914 ppb		99
48)	CIS-1,3-DICHLOROPROPENE	5.393	75	198291	25.8475859 ppb		99
49)	4-METHYL-2-PENTANONE (...	5.752	43	499146	131.9891687 ppb		100
51)	TOLUENE	5.539	91	501718	22.8094481 ppb		99
52)	TRANS-1,3-DICHLOROPROPENE	5.795	75	168587	24.7934122 ppb		98
54)	1,1,2-TRICHLOROETHANE	5.904	97	97318	23.4661373 ppb		97
55)	TETRACHLOROETHENE	5.795	164	88334	19.0912075 ppb		98
56)	1,3-Dichloropropane	6.093	76	167632	24.0122851 ppb		100
57)	2-HEXANONE	6.294	58	244003	130.4256282 ppb		99
58)	CHLORODIBROMOMETHANE	6.032	129	111061	21.4377225 ppb		99
59)	1,2-DIBROMOETHANE	6.208	107	97908	22.3056056 ppb		97
60)	CHLOROBENZENE	6.549	112	325472	22.5064521 ppb		97
61)	1,1,1,2-TETRACHLOROETHANE	6.580	133	102933	20.8950770 ppb	#	95
62)	ETHYLBENZENE	6.543	106	188109	22.8035107 ppb		95
63)	M&P-XYLENE	6.634	106	445248	44.5418246 ppb		98
64)	O-XYLENE	6.945	106	220770	22.5995312 ppb		99
65)	STYRENE	6.981	104	372524	24.0491794 ppb		98
66)	Bromoform	7.030	173	64153	19.6542114 ppb		99
67)	Isopropylbenzene	7.157	105	593799	22.3904452 ppb		99
69)	Bromobenzene	7.480	77	237546	23.3997203 ppb		91
70)	1,1,2,2-TETRACHLOROETHANE	7.516	83	129497	24.0864098 ppb		100
71)	1,2,3-TRICHLOROPROPANE	7.632	110	31430	20.9230556 ppb		96
72)	TRANS-1,4-DICHLORO-2-B...	7.650	53	31504	20.5130876 ppb		92
73)	n-Propylbenzene	7.462	91	686217	24.1559280 ppb		97
74)	4-ETHYLTOLUENE	7.535	105	562061	22.3496314 ppb		98
75)	2-Chlorotoluene	7.602	126	121879	22.1342229 ppb		92
76)	4-Chlorotoluene	7.723	91	408739	23.2643771 ppb		96
77)	1,3,5-Trimethylbenzene	7.595	105	467340	22.9604455 ppb		98
78)	tert-Butylbenzene	7.845	119	406436	22.6240504 ppb		99
79)	1,2,4-Trimethylbenzene	7.900	105	469534	22.7872547 ppb		99
80)	sec-Butylbenzene	7.979	105	639665	23.5976286 ppb		98
81)	1,3-DICHLOROBENZENE	8.179	146	260213	22.3142043 ppb		99
82)	p-Isopropyltoluene	8.082	119	522126	23.6133465 ppb		98
83)	DICYCLOPENTADIENE	8.094	66	535340	24.0781084 ppb		95
85)	1,4-DICHLOROBENZENE	8.246	146	250714	24.3482076 ppb		99
86)	1,2,3-TRIMETHYLBENZENE	8.240	105	465032	24.7961896 ppb		100
87)	1,2-DICHLOROBENZENE	8.581	146	240418	24.5744449 ppb		98
88)	n-Butylbenzene	8.411	91	519371	26.8611388 ppb		98
89)	1,2-Dibromo-3-chloropr...	9.220	157	21908	19.6832054 ppb		94
90)	1,2,4-Trichlorobenzene	9.767	180	153995	25.0126448 ppb		100
91)	HEXACHLORO-1,3-BUTADIENE	9.725	225	73287	22.8123357 ppb		97
92)	Naphthalene	10.041	128	356905	24.5780282 ppb		99
93)	1,2,3-Trichlorobenzene	10.199	180	131984	24.2090234 ppb		99
94)	1-Methylnaphthalene	10.911	142	166576	22.8184779 ppb		98
95)	2-Methylnaphthalene	11.045	142	138881	22.9742585 ppb		99
97)	ETHANOL	2.686	45	7254	153.4985864 ppb	#	84

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\052516a\
Data File : 0525a 01.D
Acq On : 25 May 2016 5:27 pm
Operator : 605
Sample : ICV VMS 25 ppb
Misc : SOIL
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 26 08:02:29 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 09:17:18 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
100) Methyl Acetate	3.185	43	313701	122.6099422 ppb	#	94
101) ACETONITRILE	3.446	41	63336	148.1318119 ppb	#	39
102) ALLYL CHLORIDE	3.039	76	329928	139.1064979 ppb		86
103) tert-BUTYL ALCOHOL	3.282	59	11435	10.2655410 ppb	#	63
104) chloroprene	3.586	53	166774	22.8021675 ppb	#	20
105) ETHYL TERT-BUTYL ETHER	3.653	59	342416	28.7172944 ppb		98
106) PROPIONITRILE	4.371	54	550	1.0697302 ppb	#	1
107) Ethyl Acetate	4.043	43	4098	1.1928363 ppb	#	84
108) METHACRYLONITRILE	4.347	67	2279	1.4735318 ppb	#	1
109) Cyclohexane	3.988	56	183527	15.2041467 ppb		94
111) ISOBUTANOL	4.377	43	95998	429.4827780 ppb	#	71
112) t-Amyl Alcohol	4.468	59	41486	113.8088003 ppb		100
113) TERT-AMYL METHYL ETHER	4.377	73	311805	22.8694278 ppb	#	61
116) Methyl Cyclohexane	4.675	83	209316	14.5299121 ppb		99
117) 2-nitropropane	5.673	43	770	0.5293667 ppb	#	15
118) METHYL METHACRYLATE	5.119	41	742	0.1995195 ppb	#	13
119) 1,4-DIOXANE	5.046	88	5981	107.4315984 ppb	#	55
120) n-octane	5.393	85	2953	0.5143536 ppb	#	36
121) 3,3-DIMETHYL-1-BUTANOL	6.300	57	81931	147.3182028 ppb	#	41
123) ETHYL METHACRYLATE	5.752	69	3641	0.6781357 ppb	#	1
124) CIS-1,4-DICHLORO-2-BUTENE	7.419	53	1444	0.9274485 ppb	#	8
125) Cyclohexanone	7.650	55	714	0.6766314 ppb	#	1
126) PENTACHLOROETHANE	7.900	117	16276	4.5882888 ppb	#	13
127) Hexachloroethane	8.563	117	794	0.1742042 ppb	#	17

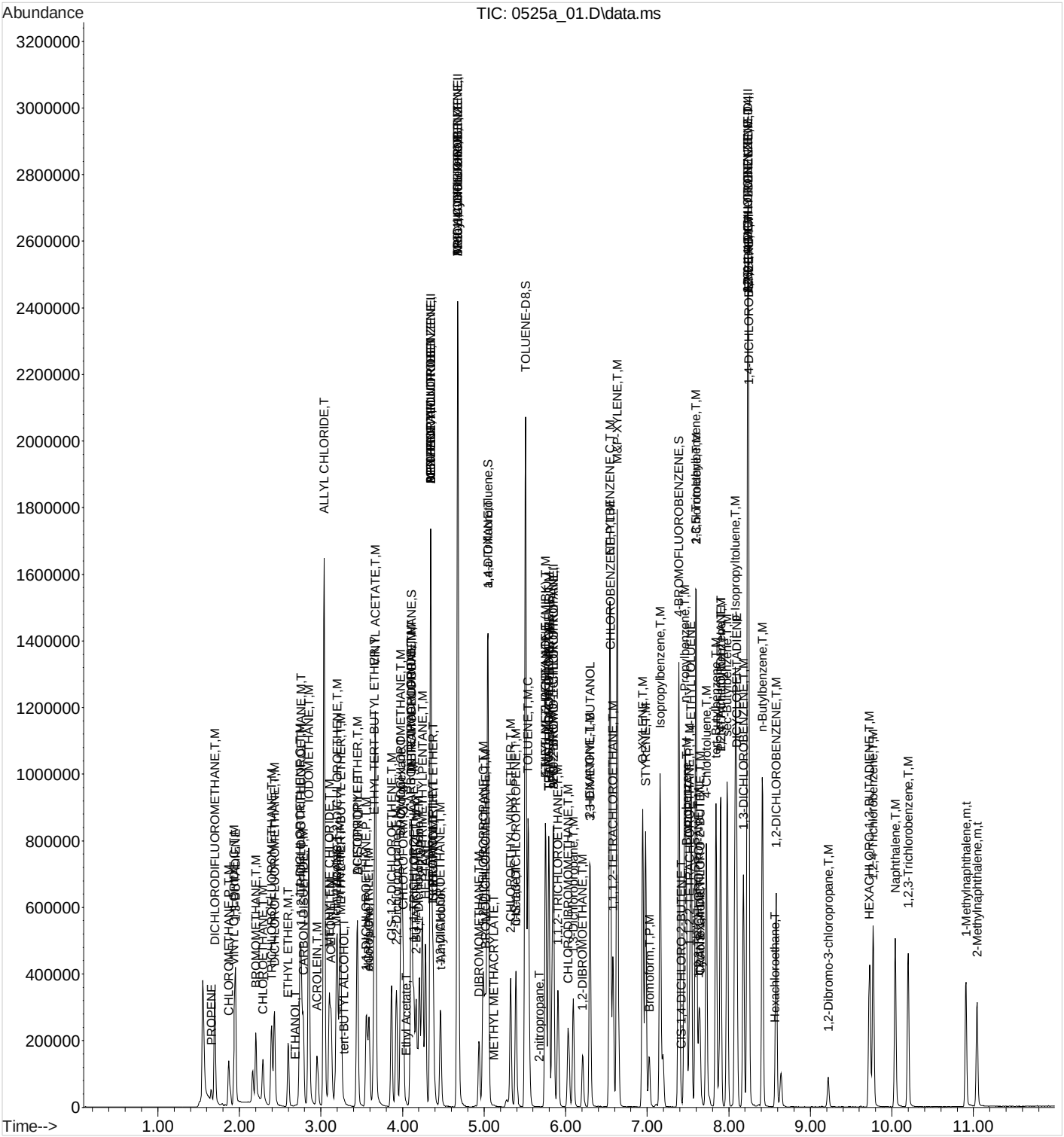
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\052516a\
Data File : 0525a 01.D
Acq On : 25 May 2016 5:27 pm
Operator : 605
Sample : ICV VMS 25 ppb
Misc : SOIL
ALS Vial : 1 Sample Multiplier: 1

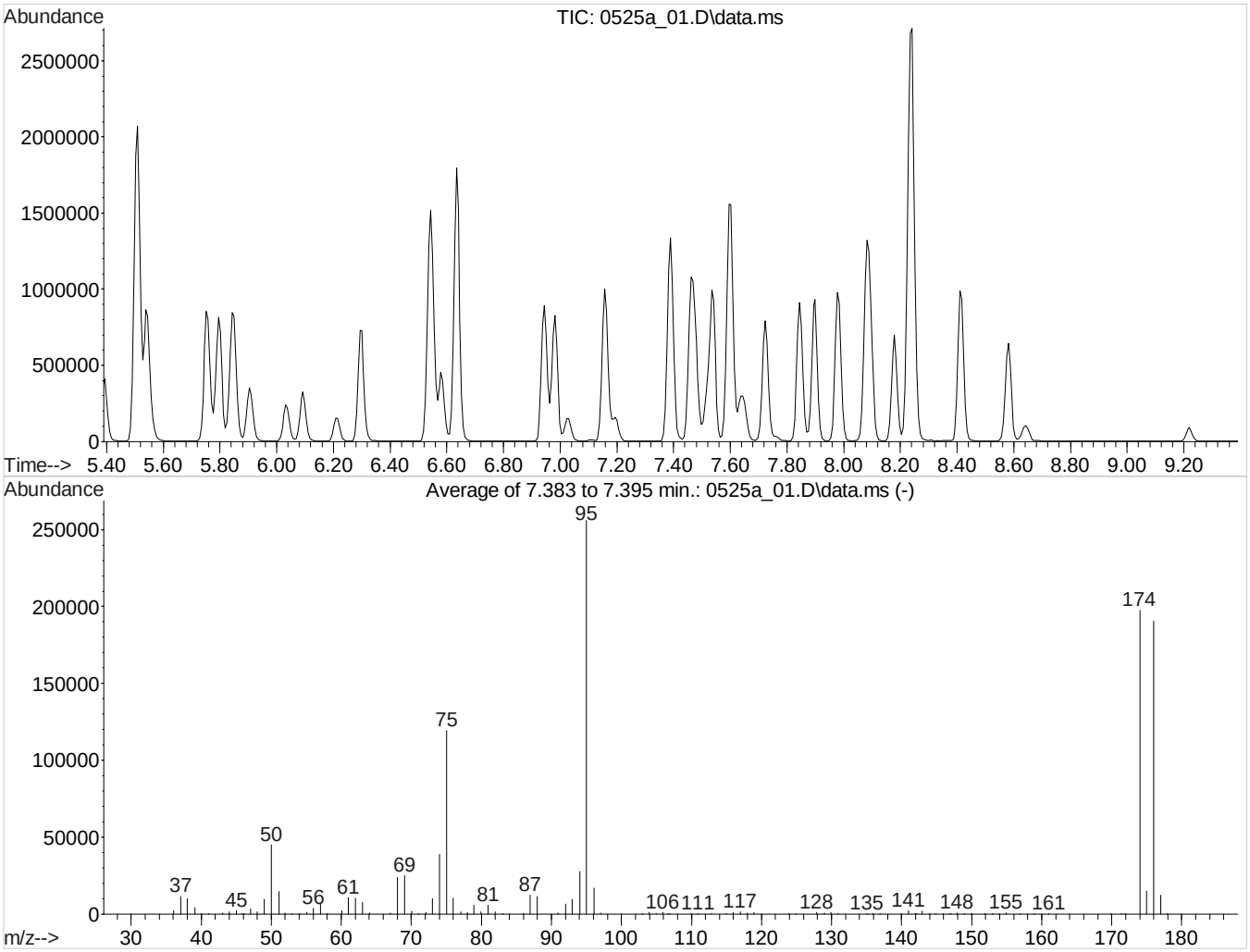
Quant Time: May 26 08:02:29 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 09:17:18 2016
Response via : Initial Calibration



Data Path : C:\msdchem\1\data\052516a\
Data File : 0525a 01.D
Acq On : 25 May 2016 5:27 pm
Operator : 605
Sample : ICV VMS 25 ppb
Misc : water
ALS Vial : 1 Sample Multiplier: 1

Integration File: RTEINT.P

Method : C:\msdchem\1\methods\V830D26P.M
Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
Last Update : Wed Apr 27 09:17:18 2016



AutoFind: Scans 1200, 1201, 1202; Background Corrected with Scan 1193

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.5	44813	PASS
75	95	30	60	46.5	119208	PASS
95	95	100	100	100.0	256149	PASS
96	95	5	9	6.6	16904	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	150	77.1	197397	PASS
175	174	5	9	7.6	14949	PASS
176	174	95	101	96.6	190677	PASS
177	176	5	9	6.4	12200	PASS

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\052516a\
Data File : 0525A 02.D
Acq On : 25 May 2016 6:35 pm
Operator : 605
Sample : LCS 1x WG875350
Misc : SOIL
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 26 08:02:35 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 09:17:18 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 8260-PENTAFLUOROBENZENE	4.347	168	554446	40.0000000	ppb	0.00
41) 8260-1,4-DIFLUOROBENZENE	4.675	114	956206	40.0000000	ppb	0.00
53) 8260-2-BROMO-1-CHLOROP...	5.850	79	154260	40.0000000	ppb	0.00
84) 8260-1,4-DICHLOROBENZE...	8.234	152	416619	40.0000000	ppb	0.00
96) AP9-PENTAFLUOROBENZENE	4.347	168	554446	40.0000000	ppb	0.00
114) AP9-1,4-DIFLUOROBENZENE	4.675	114	956206	40.0000000	ppb	0.00
122) AP9-2-BROMO-1-CHLOROPR...	5.850	79	154260	40.0000000	ppb	# 0.00
128) AP9-1,4-DICHLOROBENZEN...	8.234	152	416619	40.0000000	ppb	0.00
System Monitoring Compounds						
33) DIBROMOFLUOROMETHANE	4.110	111	293505	47.8070810	ppb	0.00
Spiked Amount 40.000	Range 76 - 123			Recovery = 119.52%		
46) a,a,a-Trifluorotoluene	5.047	146	513821	39.3817957	ppb	0.00
Spiked Amount 40.000	Range 87 - 117			Recovery = 98.45%		
50) TOLUENE-D8	5.509	98	1199429	44.0295822	ppb	0.00
Spiked Amount 40.000	Range 89 - 115			Recovery = 110.07%		
68) 4-BROMOFLUOROBENZENE	7.389	95	425279	40.0962156	ppb	0.00
Spiked Amount 40.000	Range 70 - 129			Recovery = 100.24%		
Target Compounds						Qvalue
3) PROPENE	1.658	41	33557	26.1259219	ppb	97
4) DICHLORODIFLUOROMETHANE	1.695	85	119759	26.7980304	ppb	98
5) CHLOROMETHANE	1.871	50	159293	31.7685331	ppb	99
6) VINYL CHLORIDE	1.938	62	179905	34.2142634	ppb	100
7) 1,3-BUTADIENE	1.950	39	123468	27.0115017	ppb	94
8) BROMOMETHANE	2.199	94	118712	52.2206047	ppb	96
9) CHLOROETHANE	2.291	64	106221	36.0087561	ppb	98
10) TRICHLOROFLUOROMETHANE	2.394	101	196547	26.7530354	ppb	100
11) DICHLOROFLUOROMETHANE	2.425	67	247349	29.0617642	ppb	100
12) ETHYL ETHER	2.595	59	93529	29.9135452	ppb	94
13) ACROLEIN	2.954	56	101774	149.1573607	ppb	96
14) 1,1-DICHLOROETHENE	2.747	61	187157	28.7463647	ppb	99
15) 1,1,2-TRICHLOROTRIFLUO...	2.759	101	116232	26.6772191	ppb	93
16) ACETONE	3.124	43	274707	144.2677422	ppb	96
17) IODOMETHANE	2.850	142	824863	118.0822348	ppb	100
18) CARBON DISULFIDE	2.783	76	383427	25.2322784	ppb	96
19) METHYLENE CHLORIDE	3.106	84	120652	27.1508672	ppb	97
20) ACRYLONITRILE	3.587	53	180468	162.1843858	ppb	98
21) n-Hexane	3.228	56	103363	24.1619673	ppb	94
22) TRANS-1,2-DICHLOROETHENE	3.197	96	119852	27.8568442	ppb	96
23) METHYL TERT-BUTYL ETHER	3.246	73	314686	27.8590108	ppb	99
24) 1,1-DICHLOROETHANE	3.556	63	230258	29.7927368	ppb	99
25) VINYL ACETATE	3.666	43	777256	113.1630574	ppb	97
26) DI-ISOPROPYL ETHER	3.447	45	401604	31.7453927	ppb	97
27) 2,2-Dichloropropane	3.927	77	189190	25.1595815	ppb	100
28) CIS-1,2-DICHLOROETHENE	3.866	96	133939	28.4116472	ppb	96
29) 2-BUTANONE (MEK)	4.171	43	324296	158.8909622	ppb	93
30) BROMOCHLOROMETHANE	3.982	130	73667	26.2407013	ppb	79
31) TETRAHYDROFURAN	4.110	42	30877	31.1434663	ppb	92
32) CHLOROFORM	4.006	83	219395	27.3995509	ppb	100
34) 1,1,1-TRICHLOROETHANE	4.140	97	182146	26.3340661	ppb	100
35) CARBON TETRACHLORIDE	4.104	117	178133	23.1280593	ppb	100
36) 1,1-Dichloropropene	4.201	75	171443	28.2865561	ppb	98

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\052516a\
Data File : 0525A 02.D
Acq On : 25 May 2016 6:35 pm
Operator : 605
Sample : LCS 1x WG875350
Misc : SOIL
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 26 08:02:35 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 09:17:18 2016
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
37)	2,2,4-TRIMETHYLPENTANE	4.244	41	125117	25.8560765	ppb		81
38)	HEPTANE	4.280	43	206440	30.4119037	ppb	#	67
39)	BENZENE	4.347	78	483330	28.2885812	ppb		99
40)	1,2-DICHLOROETHANE	4.463	62	142967	26.1399374	ppb		97
42)	TRICHLOROETHENE	4.675	130	131094	24.2874453	ppb		98
43)	1,2-DICHLOROPROPANE	4.992	62	94547	27.6869467	ppb		99
44)	DIBROMOMETHANE	4.937	93	71155	24.3628055	ppb		94
45)	BROMODICHLOROMETHANE	5.016	83	165614	24.3505963	ppb		99
47)	2-CHLOROETHYL VINYL ETHER	5.326	63	150694	234.3039963	ppb		99
48)	CIS-1,3-DICHLOROPROPENE	5.393	75	205135	26.2778817	ppb		98
49)	4-METHYL-2-PENTANONE (...	5.752	43	533440	138.6212720	ppb		100
51)	TOLUENE	5.539	91	515500	23.0312425	ppb		99
52)	TRANS-1,3-DICHLOROPROPENE	5.795	75	172242	24.8934380	ppb		97
54)	1,1,2-TRICHLOROETHANE	5.904	97	100339	23.9208955	ppb		98
55)	TETRACHLOROETHENE	5.795	164	91259	19.5002617	ppb		97
56)	1,3-Dichloropropane	6.093	76	182132	25.7941994	ppb		98
57)	2-HEXANONE	6.294	58	254803	134.6578078	ppb		98
58)	CHLORODIBROMOMETHANE	6.032	129	116215	22.1788224	ppb		99
59)	1,2-DIBROMOETHANE	6.209	107	102173	23.0139528	ppb		99
60)	CHLOROBENZENE	6.549	112	330992	22.6292487	ppb		98
61)	1,1,1,2-TETRACHLOROETHANE	6.580	133	105647	21.2034118	ppb	#	97
62)	ETHYLBENZENE	6.537	106	187043	22.4177918	ppb		95
63)	M&P-XYLENE	6.634	106	451006	44.6074685	ppb		98
64)	O-XYLENE	6.945	106	224960	22.7679489	ppb		99
65)	STYRENE	6.981	104	374401	23.8969369	ppb		99
66)	Bromoform	7.030	173	65764	19.9198519	ppb		99
67)	Isopropylbenzene	7.158	105	579336	21.5979740	ppb		98
69)	Bromobenzene	7.474	77	241487	23.5188419	ppb		90
70)	1,1,2,2-TETRACHLOROETHANE	7.516	83	121477	22.3390990	ppb		100
71)	1,2,3-TRICHLOROPROPANE	7.632	110	34636	22.7964746	ppb		94
72)	TRANS-1,4-DICHLORO-2-B...	7.650	53	31686	20.3982066	ppb		94
73)	n-Propylbenzene	7.462	91	677484	23.5787365	ppb		97
74)	4-ETHYLTOLUENE	7.535	105	569245	22.3792419	ppb		99
75)	2-Chlorotoluene	7.602	126	120855	21.6999759	ppb		92
76)	4-Chlorotoluene	7.723	91	405280	22.8065585	ppb		97
77)	1,3,5-Trimethylbenzene	7.596	105	455141	22.1081574	ppb		99
78)	tert-Butylbenzene	7.845	119	398516	21.9322499	ppb		99
79)	1,2,4-Trimethylbenzene	7.900	105	466934	22.4047288	ppb		99
80)	sec-Butylbenzene	7.979	105	616263	22.4771425	ppb		97
81)	1,3-DICHLOROBENZENE	8.180	146	245384	20.8045291	ppb		99
82)	p-Isopropyltoluene	8.082	119	511683	22.8792846	ppb		98
83)	DICYCLOPENTADIENE	8.094	66	577401	25.6761222	ppb		95
85)	1,4-DICHLOROBENZENE	8.247	146	240688	23.0931038	ppb		91
86)	1,2,3-TRIMETHYLBENZENE	8.240	105	461437	24.3082662	ppb		99
87)	1,2-DICHLOROBENZENE	8.581	146	236043	23.8367654	ppb		98
88)	n-Butylbenzene	8.411	91	481102	24.5823470	ppb		98
89)	1,2-Dibromo-3-chloropr...	9.220	157	24254	21.5286067	ppb		94
90)	1,2,4-Trichlorobenzene	9.767	180	141878	22.7670894	ppb		99
91)	HEXACHLORO-1,3-BUTADIENE	9.731	225	66465	20.4397358	ppb		98
92)	Naphthalene	10.041	128	370201	25.1867107	ppb		100
93)	1,2,3-Trichlorobenzene	10.199	180	126997	23.0138302	ppb		98
94)	1-Methylnaphthalene	10.911	142	167780	22.7066932	ppb		98
95)	2-Methylnaphthalene	11.045	142	141463	23.1196360	ppb		99
97)	ETHANOL	2.686	45	8097	170.2049714	ppb	#	84

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\052516a\
Data File : 0525A 02.D
Acq On : 25 May 2016 6:35 pm
Operator : 605
Sample : LCS 1x WG875350
Misc : SOIL
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 26 08:02:35 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 09:17:18 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
100) Methyl Acetate	3.185	43	370490	143.8492320	ppb	#	93
101) ACETONITRILE	3.441	41	61237	142.2764047	ppb	#	38
102) ALLYL CHLORIDE	3.039	76	364515	152.6739423	ppb		86
103) tert-BUTYL ALCOHOL	3.276	59	11807	10.5294699	ppb	#	63
104) chloroprene	3.587	53	180468	24.5114648	ppb	#	20
105) ETHYL TERT-BUTYL ETHER	3.653	59	372184	31.0076207	ppb		98
106) PROPIONITRILE	4.377	54	1350	2.6083545	ppb	#	1
107) Ethyl Acetate	4.043	43	753	0.2177335	ppb	#	67
108) METHACRYLONITRILE	4.347	67	2461	1.5806950	ppb	#	1
109) Cyclohexane	3.988	56	221070	18.1933707	ppb		93
111) ISOBUTANOL	4.377	43	101090	449.2758117	ppb	#	71
112) t-Amyl Alcohol	4.469	59	48936	133.3595196	ppb		96
113) TERT-AMYL METHYL ETHER	4.377	73	326145	23.7631616	ppb	#	62
116) Methyl Cyclohexane	4.675	83	246534	16.9366880	ppb		98
117) 2-nitropropane	5.752	43	533440	360.4002402	ppb	#	39
118) METHYL METHACRYLATE	5.120	41	845	0.2232913	ppb	#	13
119) 1,4-DIOXANE	5.040	88	5924	104.5699470	ppb	#	83
120) n-octane	5.387	85	2851	0.4880105	ppb	#	31
121) 3,3-DIMETHYL-1-BUTANOL	6.294	57	86669	153.1459602	ppb	#	41
123) ETHYL METHACRYLATE	5.752	69	3543	0.6524186	ppb	#	1
124) CIS-1,4-DICHLORO-2-BUTENE	7.419	53	863	0.5480153	ppb	#	8
125) Cyclohexanone	7.650	55	769	0.7205091	ppb	#	1
126) PENTACHLOROETHANE	7.900	117	15853	4.4184888	ppb	#	9
127) Hexachloroethane	8.551	117	894	0.1939255	ppb	#	82

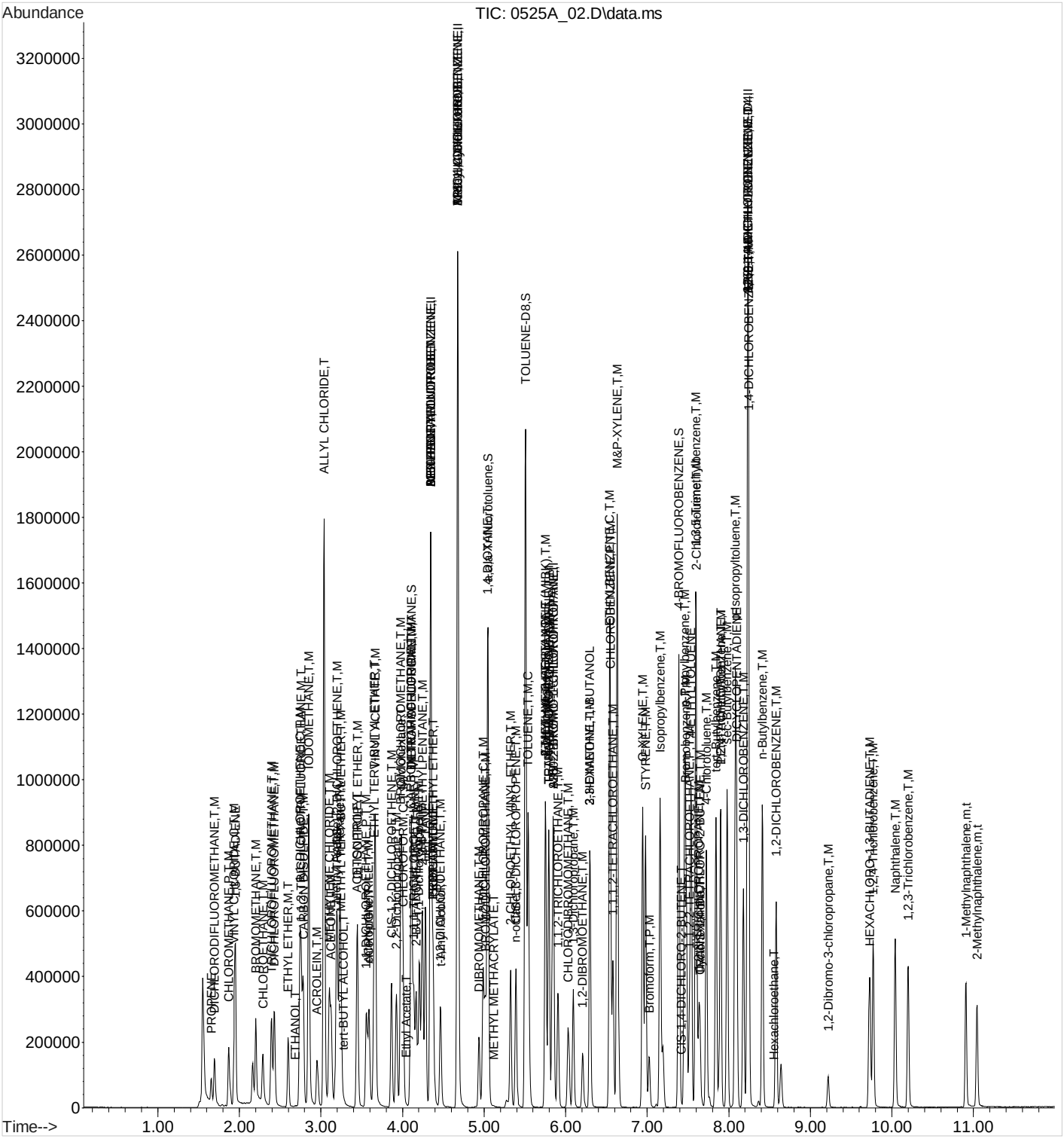
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\052516a\
Data File : 0525A 02.D
Acq On : 25 May 2016 6:35 pm
Operator : 605
Sample : LCS 1x WG875350
Misc : SOIL
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 26 08:02:35 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 09:17:18 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\052516a\
Data File : 0525A 03.D
Acq On : 25 May 2016 6:58 pm
Operator : 605
Sample : LCSD 1x WG875350
Misc : SOIL
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 26 08:02:40 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 09:17:18 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 8260-PENTAFLUOROBENZENE	4.347	168	549775	40.0000000	ppb		0.00
41) 8260-1,4-DIFLUOROBENZENE	4.675	114	947545	40.0000000	ppb		0.00
53) 8260-2-BROMO-1-CHLOROP...	5.844	79	156192	40.0000000	ppb		0.00
84) 8260-1,4-DICHLOROBENZE...	8.234	152	412288	40.0000000	ppb		0.00
96) AP9-PENTAFLUOROBENZENE	4.347	168	549775	40.0000000	ppb		0.00
114) AP9-1,4-DIFLUOROBENZENE	4.675	114	947545	40.0000000	ppb		0.00
122) AP9-2-BROMO-1-CHLOROPR...	5.844	79	156192	40.0000000	ppb	#	0.00
128) AP9-1,4-DICHLOROBENZEN...	8.234	152	412288	40.0000000	ppb		0.00
System Monitoring Compounds							
33) DIBROMOFLUOROMETHANE	4.110	111	295788	48.5882818	ppb		0.00
Spiked Amount 40.000	Range 76 - 123		Recovery = 121.47%				
46) a,a,a-Trifluorotoluene	5.047	146	511449	39.5582999	ppb		0.00
Spiked Amount 40.000	Range 87 - 117		Recovery = 98.90%				
50) TOLUENE-D8	5.509	98	1189895	44.0788524	ppb		0.00
Spiked Amount 40.000	Range 89 - 115		Recovery = 110.20%				
68) 4-BROMOFLUOROBENZENE	7.389	95	427177	39.7769838	ppb		0.00
Spiked Amount 40.000	Range 70 - 129		Recovery = 99.44%				
Target Compounds							Qvalue
3) PROPENE	1.658	41	33323	26.1641637	ppb		99
4) DICHLORODIFLUOROMETHANE	1.695	85	127494	28.7675418	ppb		97
5) CHLOROMETHANE	1.871	50	161851	32.5529330	ppb		99
6) VINYL CHLORIDE	1.938	62	181621	34.8340757	ppb		99
7) 1,3-BUTADIENE	1.950	39	129112	28.4862441	ppb		96
8) BROMOMETHANE	2.199	94	112444	49.8836047	ppb		97
9) CHLOROETHANE	2.291	64	109978	37.5991320	ppb		97
10) TRICHLOROFLUOROMETHANE	2.394	101	202181	27.7537232	ppb		100
11) DICHLOROFLUOROMETHANE	2.431	67	254452	30.1503219	ppb		100
12) ETHYL ETHER	2.595	59	95206	30.7086116	ppb		96
13) ACROLEIN	2.954	56	102238	151.1104361	ppb		96
14) 1,1-DICHLOROETHENE	2.747	61	191027	29.5900622	ppb		100
15) 1,1,2-TRICHLOROTRIFLUO...	2.759	101	120640	27.9241807	ppb		92
16) ACETONE	3.124	43	277238	146.8339674	ppb		96
17) IODOMETHANE	2.850	142	859995	124.1574929	ppb		99
18) CARBON DISULFIDE	2.783	76	395632	26.2566584	ppb		97
19) METHYLENE CHLORIDE	3.106	84	123301	27.9827277	ppb		97
20) ACRYLONITRILE	3.587	53	182120	165.0595832	ppb		97
21) n-Hexane	3.228	56	111786	26.3529277	ppb		99
22) TRANS-1,2-DICHLOROETHENE	3.197	96	123219	28.8827524	ppb		95
23) METHYL TERT-BUTYL ETHER	3.246	73	316343	28.2436464	ppb		96
24) 1,1-DICHLOROETHANE	3.562	63	235911	30.7835095	ppb		99
25) VINYL ACETATE	3.666	43	810958	119.0729791	ppb		97
26) DI-ISOPROPYL ETHER	3.447	45	410591	32.7315345	ppb		96
27) 2,2-Dichloropropane	3.927	77	191082	25.6270893	ppb		99
28) CIS-1,2-DICHLOROETHENE	3.866	96	139623	29.8689939	ppb		96
29) 2-BUTANONE (MEK)	4.171	43	325206	160.6905807	ppb		97
30) BROMOCHLOROMETHANE	3.982	130	74384	26.7212179	ppb		78
31) TETRAHYDROFURAN	4.110	42	30198	30.7173891	ppb	#	92
32) CHLOROFORM	4.006	83	227561	28.6608337	ppb		100
34) 1,1,1-TRICHLOROETHANE	4.140	97	188095	27.4251999	ppb		99
35) CARBON TETRACHLORIDE	4.104	117	183574	24.0369992	ppb		98
36) 1,1-Dichloropropene	4.207	75	179505	29.8683434	ppb		98

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\052516a\
Data File : 0525A 03.D
Acq On : 25 May 2016 6:58 pm
Operator : 605
Sample : LCSD 1x WG875350
Misc : SOIL
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 26 08:02:40 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 09:17:18 2016
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
37)	2,2,4-TRIMETHYLPENTANE	4.244	41	131011	27.3041292 ppb		83
38)	HEPTANE	4.280	43	201913	29.9977240 ppb	#	69
39)	BENZENE	4.347	78	495127	29.2252538 ppb		99
40)	1,2-DICHLOROETHANE	4.463	62	147836	27.2598342 ppb		98
42)	TRICHLOROETHENE	4.675	130	133648	24.9869418 ppb		98
43)	1,2-DICHLOROPROPANE	4.992	62	95461	28.2101185 ppb		99
44)	DIBROMOMETHANE	4.937	93	71814	24.8131907 ppb		94
45)	BROMODICHLOROMETHANE	5.016	83	167171	24.8041937 ppb		99
47)	2-CHLOROETHYL VINYL ETHER	5.326	63	142886	224.1945412 ppb		99
48)	CIS-1,3-DICHLOROPROPENE	5.393	75	211636	27.3584666 ppb		100
49)	4-METHYL-2-PENTANONE (...	5.752	43	547165	143.4875536 ppb		99
51)	TOLUENE	5.539	91	529422	23.8694440 ppb		99
52)	TRANS-1,3-DICHLOROPROPENE	5.795	75	176086	25.6816114 ppb		97
54)	1,1,2-TRICHLOROETHANE	5.904	97	100637	23.6951732 ppb		96
55)	TETRACHLOROETHENE	5.795	164	93025	19.6317472 ppb		97
56)	1,3-Dichloropropane	6.093	76	180806	25.2896708 ppb		99
57)	2-HEXANONE	6.294	58	258110	134.7182321 ppb		99
58)	CHLORODIBROMOMETHANE	6.032	129	116880	22.0298247 ppb		99
59)	1,2-DIBROMOETHANE	6.209	107	104663	23.2832066 ppb		100
60)	CHLOROBENZENE	6.549	112	337763	22.8065321 ppb		96
61)	1,1,1,2-TETRACHLOROETHANE	6.580	133	105682	20.9480761 ppb	#	94
62)	ETHYLBENZENE	6.537	106	193373	22.8897868 ppb		94
63)	M&P-XYLENE	6.634	106	463292	45.2558368 ppb		98
64)	O-XYLENE	6.945	106	230395	23.0295894 ppb		98
65)	STYRENE	6.981	104	375818	23.6906707 ppb		100
66)	Bromoform	7.024	173	66094	19.7721758 ppb		99
67)	Isopropylbenzene	7.158	105	602921	22.1992065 ppb		98
69)	Bromobenzene	7.474	77	247754	23.8307326 ppb		89
70)	1,1,2,2-TETRACHLOROETHANE	7.517	83	123791	22.4830490 ppb		99
71)	1,2,3-TRICHLOROPROPANE	7.632	110	33295	21.6428037 ppb		94
72)	TRANS-1,4-DICHLORO-2-B...	7.650	53	32056	20.3811384 ppb		93
73)	n-Propylbenzene	7.462	91	701099	24.0987977 ppb		97
74)	4-ETHYLTOLUENE	7.535	105	583870	22.6702781 ppb		98
75)	2-Chlorotoluene	7.602	126	126102	22.3620258 ppb		94
76)	4-Chlorotoluene	7.723	91	417963	23.2293449 ppb		96
77)	1,3,5-Trimethylbenzene	7.596	105	468689	22.4846375 ppb		99
78)	tert-Butylbenzene	7.845	119	405912	22.0629639 ppb		98
79)	1,2,4-Trimethylbenzene	7.894	105	477144	22.6114389 ppb		99
80)	sec-Butylbenzene	7.979	105	648690	23.3672039 ppb		97
81)	1,3-DICHLOROBENZENE	8.180	146	251944	21.0964902 ppb		98
82)	p-Isopropyltoluene	8.082	119	526054	23.2309152 ppb		99
83)	DICYCLOPENTADIENE	8.094	66	597535	26.2427771 ppb		95
85)	1,4-DICHLOROBENZENE	8.247	146	238582	23.1315067 ppb		91
86)	1,2,3-TRIMETHYLBENZENE	8.240	105	474542	25.2612364 ppb		99
87)	1,2-DICHLOROBENZENE	8.581	146	240830	24.5756583 ppb		99
88)	n-Butylbenzene	8.411	91	496895	25.6560142 ppb		98
89)	1,2-Dibromo-3-chloropr...	9.220	157	24472	21.9502966 ppb		95
90)	1,2,4-Trichlorobenzene	9.767	180	144516	23.4340183 ppb		100
91)	HEXACHLORO-1,3-BUTADIENE	9.725	225	71207	22.1280598 ppb		98
92)	Naphthalene	10.041	128	373717	25.6930166 ppb		99
93)	1,2,3-Trichlorobenzene	10.199	180	129968	23.7996328 ppb		98
94)	1-Methylnaphthalene	10.905	142	171906	23.5094850 ppb		99
95)	2-Methylnaphthalene	11.039	142	142073	23.4632440 ppb		98
97)	ETHANOL	2.686	45	7437	157.6595021 ppb	#	87

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\052516a\
Data File : 0525A 03.D
Acq On : 25 May 2016 6:58 pm
Operator : 605
Sample : LCSD 1x WG875350
Misc : SOIL
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 26 08:02:40 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 09:17:18 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
100) Methyl Acetate	3.185	43	371053	145.2918561 ppb	#	95
101) ACETONITRILE	3.447	41	61097	143.1571781 ppb	#	37
102) ALLYL CHLORIDE	3.039	76	371304	156.8387639 ppb		89
103) tert-BUTYL ALCOHOL	3.282	59	12881	11.5848601 ppb	#	63
104) chloroprene	3.587	53	182120	24.9460029 ppb	#	20
105) ETHYL TERT-BUTYL ETHER	3.653	59	376626	31.6442866 ppb		98
106) PROPIONITRILE	4.377	54	1201	2.3401846 ppb	#	1
107) Ethyl Acetate	4.037	43	730	0.2128763 ppb	#	67
108) METHACRYLONITRILE	4.341	67	1783	1.1549471 ppb	#	1
109) Cyclohexane	3.988	56	230260	19.1106793 ppb		92
111) ISOBUTANOL	4.377	43	103175	462.4380764 ppb	#	71
112) t-Amyl Alcohol	4.469	59	49326	135.5644202 ppb		87
113) TERT-AMYL METHYL ETHER	4.377	73	332688	24.4458364 ppb	#	62
116) Methyl Cyclohexane	4.675	83	254476	17.6735207 ppb		96
117) 2-nitropropane	5.752	43	547165	373.0520435 ppb	#	39
118) METHYL METHACRYLATE	5.120	41	520	0.1386660 ppb	#	13
119) 1,4-DIOXANE	5.047	88	5853	104.2610231 ppb	#	79
120) n-octane	5.393	85	2782	0.4805523 ppb	#	33
121) 3,3-DIMETHYL-1-BUTANOL	6.294	57	86412	154.0875098 ppb	#	41
123) ETHYL METHACRYLATE	5.752	69	3744	0.6809035 ppb	#	1
124) CIS-1,4-DICHLORO-2-BUTENE	7.425	53	798	0.5004714 ppb	#	8
125) Cyclohexanone	7.644	55	671	0.6209122 ppb	#	1
126) PENTACHLOROETHANE	7.900	117	15979	4.3985186 ppb	#	9
127) Hexachloroethane	8.557	117	681	0.1458945 ppb	#	7

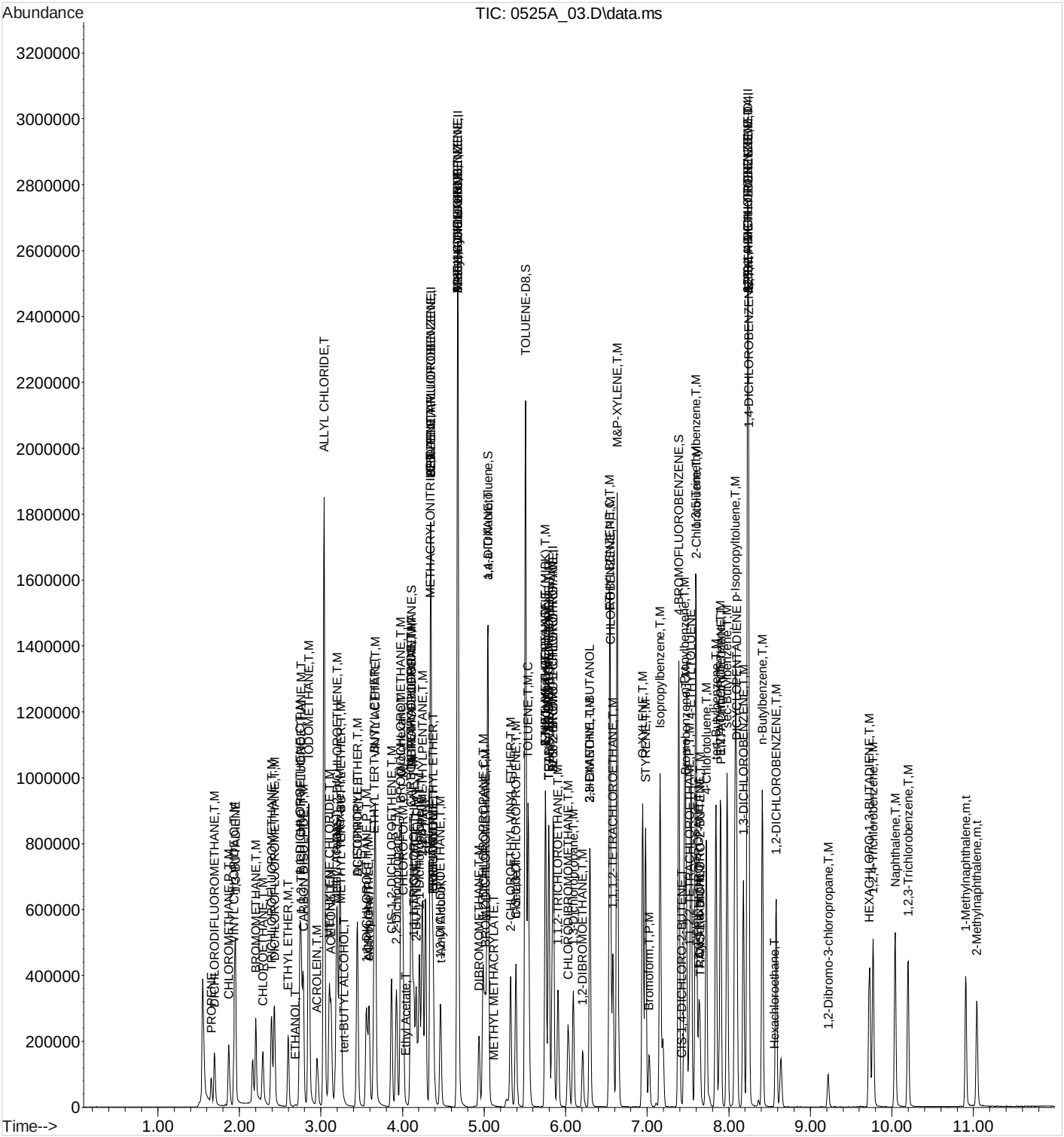
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\052516a\
Data File : 0525A 03.D
Acq On : 25 May 2016 6:58 pm
Operator : 605
Sample : LCSD 1x WG875350
Misc : SOIL
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 26 08:02:40 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 09:17:18 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\052516a\
Data File : 0525A 06.D
Acq On : 25 May 2016 8:06 pm
Operator : 605
Sample : BLANK 1x WG875350
Misc : soil
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Sep 21 10:32:06 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 09:17:18 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 8260-PENTAFLUOROBENZENE	4.347	168	572138	40.0000000	ppb		0.00
41) 8260-1,4-DIFLUOROBENZENE	4.675	114	981997	40.0000000	ppb		0.00
53) 8260-2-BROMO-1-CHLOROP...	5.843	79	159064	40.0000000	ppb		0.00
84) 8260-1,4-DICHLOROBENZE...	8.234	152	409100	40.0000000	ppb		0.00
96) AP9-PENTAFLUOROBENZENE	4.347	168	572138	40.0000000	ppb		0.00
114) AP9-1,4-DIFLUOROBENZENE	4.675	114	981997	40.0000000	ppb		0.00
122) AP9-2-BROMO-1-CHLOROPR...	5.843	79	159064	40.0000000	ppb	#	0.00
128) AP9-1,4-DICHLOROBENZEN...	8.234	152	409100	40.0000000	ppb		0.00
System Monitoring Compounds							
33) DIBROMOFLUOROMETHANE	4.110	111	310305	48.9805839	ppb		0.00
Spiked Amount 40.000	Range 76 - 123		Recovery = 122.45%				
46) a,a,a-Trifluorotoluene	5.047	146	520683	38.8596036	ppb		0.00
Spiked Amount 40.000	Range 87 - 117		Recovery = 97.15%				
50) TOLUENE-D8	5.509	98	1201648	42.9525143	ppb		0.00
Spiked Amount 40.000	Range 89 - 115		Recovery = 107.38%				
68) 4-BROMOFLUOROBENZENE	7.389	95	423662	38.7373926	ppb		0.00
Spiked Amount 40.000	Range 70 - 129		Recovery = 96.84%				
Target Compounds							Qvalue

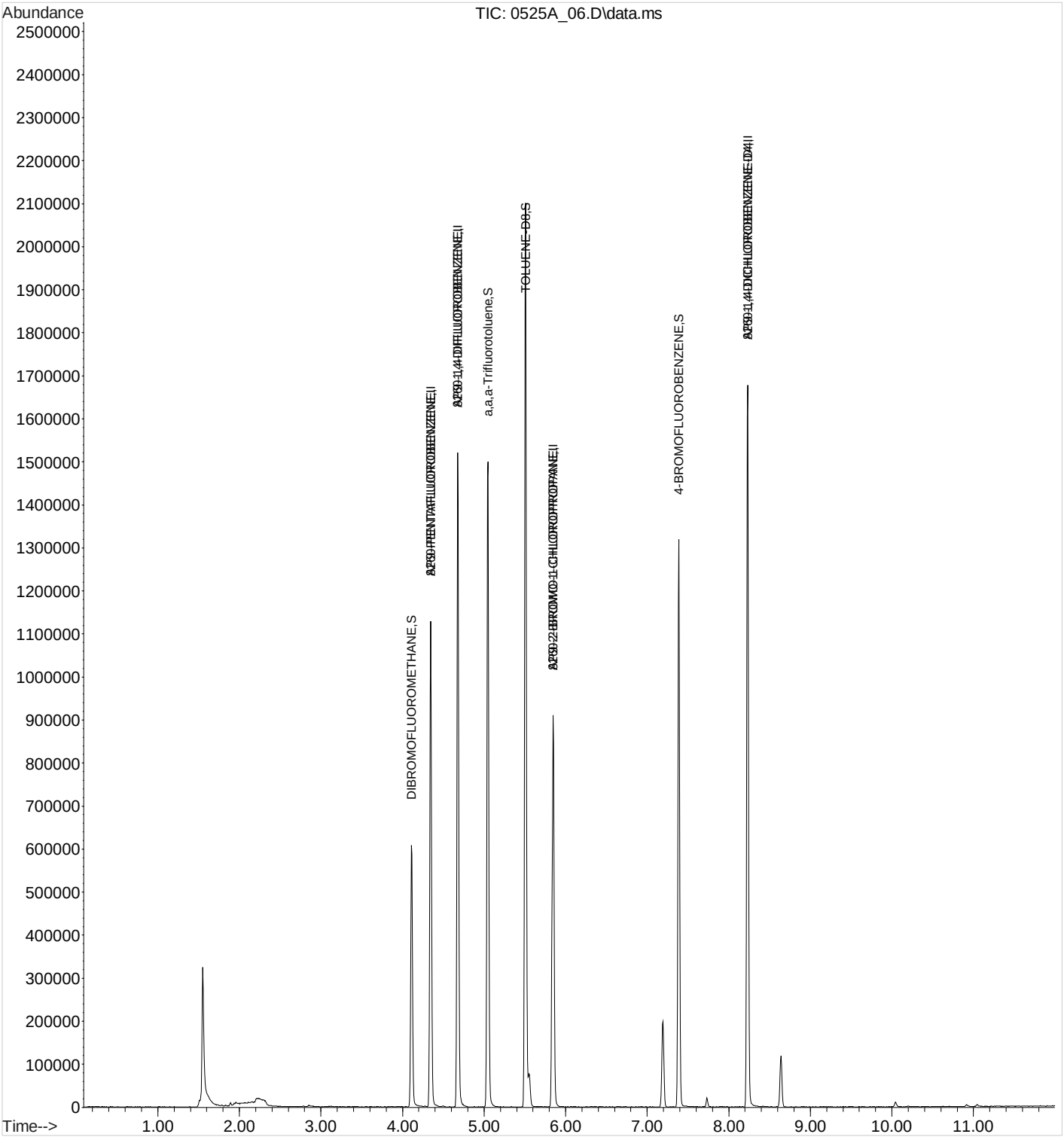
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\052516a\
Data File : 0525A 06.D
Acq On : 25 May 2016 8:06 pm
Operator : 605
Sample : BLANK 1x WG875350
Misc : soil
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Sep 21 10:32:06 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 09:17:18 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\052516a\
Data File : 0525A 08.D
Acq On : 25 May 2016 8:51 pm
Operator : 605
Sample : MS 5x WG875350 L836804-06
Misc : soil
ALS Vial : 8 Sample Multiplier: 5

Quant Time: May 26 08:03:07 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 09:17:18 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 8260-PENTAFLUOROBENZENE	4.347	168	516283	40.0000000	ppb		0.00
41) 8260-1,4-DIFLUOROBENZENE	4.675	114	908916	40.0000000	ppb		0.00
53) 8260-2-BROMO-1-CHLOROP...	5.843	79	144849	40.0000000	ppb		0.00
84) 8260-1,4-DICHLOROBENZE...	8.234	152	378620	40.0000000	ppb		0.00
96) AP9-PENTAFLUOROBENZENE	4.347	168	516283	40.0000000	ppb		0.00
114) AP9-1,4-DIFLUOROBENZENE	4.675	114	908916	40.0000000	ppb		0.00
122) AP9-2-BROMO-1-CHLOROPR...	5.843	79	144849	40.0000000	ppb	#	0.00
128) AP9-1,4-DICHLOROBENZEN...	8.234	152	378620	40.0000000	ppb		0.00
System Monitoring Compounds							
33) DIBROMOFLUOROMETHANE	4.110	111	276746	48.4093784	ppb		0.00
Spiked Amount 40.000	Range 76 - 123		Recovery = 121.02%				
46) a,a,a-Trifluorotoluene	5.046	146	482301	38.8892478	ppb		0.00
Spiked Amount 40.000	Range 87 - 117		Recovery = 97.22%				
50) TOLUENE-D8	5.509	98	1126591	43.5074884	ppb		0.00
Spiked Amount 40.000	Range 89 - 115		Recovery = 108.77%				
68) 4-BROMOFLUOROBENZENE	7.389	95	397224	39.8843714	ppb		0.00
Spiked Amount 40.000	Range 70 - 129		Recovery = 99.71%				
Target Compounds							Qvalue
3) PROPENE	1.658	41	14487	60.5631409	ppb		97
4) DICHLORODIFLUOROMETHANE	1.694	85	93501	112.3853282	ppb		99
5) CHLOROMETHANE	1.871	50	88071	94.3137107	ppb		99
6) VINYL CHLORIDE	1.938	62	109469	111.7883500	ppb		99
7) 1,3-BUTADIENE	1.950	39	69673	81.8465280	ppb		97
8) BROMOMETHANE	2.199	94	66375	156.7809325	ppb		93
9) CHLOROETHANE	2.291	64	70536	128.3955569	ppb		97
10) TRICHLOROFLUOROMETHANE	2.394	101	138155	100.9751918	ppb		98
11) DICHLOROFLUOROMETHANE	2.431	67	210982	133.1063135	ppb		100
12) ETHYL ETHER	2.595	59	71379	122.5839153	ppb		93
13) ACROLEIN	2.954	56	86401	679.9360208	ppb		100
14) 1,1-DICHLOROETHENE	2.747	61	130973	108.0189783	ppb		98
15) 1,1,2-TRICHLOROTRIFLUO...	2.759	101	92221	113.6543612	ppb		93
16) ACETONE	3.124	43	239648	675.7946539	ppb		96
17) IODOMETHANE	2.850	142	560153	430.5770133	ppb		99
18) CARBON DISULFIDE	2.783	76	129977	45.9284425	ppb		97
19) METHYLENE CHLORIDE	3.106	84	94927	114.7044772	ppb		96
20) ACRYLONITRILE	3.586	53	158206	763.4370265	ppb		97
21) n-Hexane	3.227	56	46458	58.3135029	ppb	#	72
22) TRANS-1,2-DICHLOROETHENE	3.203	96	82797	103.3338631	ppb		95
23) METHYL TERT-BUTYL ETHER	3.246	73	274288	130.3876660	ppb	#	62
24) 1,1-DICHLOROETHANE	3.562	63	195525	135.8436681	ppb		99
25) VINYL ACETATE	3.666	43	872221	681.8809572	ppb		97
26) DI-ISOPROPYL ETHER	3.446	45	347687	147.5749213	ppb		96
27) 2,2-Dichloropropane	3.927	77	170715	121.9041112	ppb		100
28) CIS-1,2-DICHLOROETHENE	3.866	96	107714	122.6882436	ppb		94
29) 2-BUTANONE (MEK)	4.170	43	281831	741.4601229	ppb		94
30) BROMOCHLOROMETHANE	3.982	130	57506	109.9909738	ppb	#	71
31) TETRAHYDROFURAN	4.110	42	27017	146.3222626	ppb	#	91
32) CHLOROFORM	4.006	83	191057	128.1212320	ppb		98
34) 1,1,1-TRICHLOROETHANE	4.140	97	157044	121.9161011	ppb		99
35) CARBON TETRACHLORIDE	4.104	117	148413	103.4685084	ppb		98
36) 1,1-Dichloropropene	4.207	75	128187	113.5653217	ppb		97

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\052516a\
Data File : 0525A 08.D
Acq On : 25 May 2016 8:51 pm
Operator : 605
Sample : MS 5x WG875350 L836804-06
Misc : soil
ALS Vial : 8 Sample Multiplier: 5

Quant Time: May 26 08:03:07 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 09:17:18 2016
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
37)	2,2,4-TRIMETHYLPENTANE	4.243	41	73350	81.3931495 ppb		79
38)	HEPTANE	4.280	43	75823	59.9780241 ppb	#	66
39)	BENZENE	4.347	78	385109	121.0298560 ppb		100
40)	1,2-DICHLOROETHANE	4.462	62	119829	117.6446300 ppb		99
42)	TRICHLOROETHENE	4.675	130	99663	97.1249251 ppb		99
43)	1,2-DICHLOROPROPANE	4.992	62	81727	125.8898132 ppb		100
44)	DIBROMOMETHANE	4.937	93	57200	103.0185955 ppb		93
45)	BROMODICHLOROMETHANE	5.016	83	142855	110.4856105 ppb		99
47)	2-CHLOROETHYL VINYL ETHER	5.326	63	122013	997.9012367 ppb		99
48)	CIS-1,3-DICHLOROPROPENE	5.393	75	172640	116.3294663 ppb		99
49)	4-METHYL-2-PENTANONE (...	5.752	43	482761	659.8940307 ppb		100
51)	TOLUENE	5.539	91	418660	98.3893038 ppb		99
52)	TRANS-1,3-DICHLOROPROPENE	5.795	75	146209	111.1520940 ppb		97
54)	1,1,2-TRICHLOROETHANE	5.904	97	86567	109.8924516 ppb		95
55)	TETRACHLOROETHENE	5.795	164	69117	78.6425240 ppb		98
56)	1,3-Dichloropropane	6.093	76	151218	114.0373500 ppb		100
57)	2-HEXANONE	6.294	58	227566	640.3865606 ppb		100
58)	CHLORODIBROMOMETHANE	6.032	129	98212	99.8041689 ppb		99
59)	1,2-DIBROMOETHANE	6.208	107	83393	100.0213011 ppb		99
60)	CHLOROBENZENE	6.549	112	281754	102.5724099 ppb		97
61)	1,1,1,2-TETRACHLOROETHANE	6.580	133	90554	96.7751932 ppb	#	95
62)	ETHYLBENZENE	6.543	106	159043	101.5018040 ppb		95
63)	M&P-XYLENE	6.634	106	362898	191.1250722 ppb		95
64)	O-XYLENE	6.945	106	186190	100.3420076 ppb		97
65)	STYRENE	6.981	104	319176	108.4784060 ppb		97
66)	Bromoform	7.030	173	54840	88.4510844 ppb		99
67)	Isopropylbenzene	7.157	105	498641	98.9870344 ppb		98
69)	Bromobenzene	7.474	77	204206	105.9006207 ppb		90
70)	1,1,2,2-TETRACHLOROETHANE	7.516	83	112373	110.0376738 ppb		99
71)	1,2,3-TRICHLOROPROPANE	7.632	110	29923	104.8703995 ppb		96
72)	TRANS-1,4-DICHLORO-2-B...	7.650	53	28481	97.6309761 ppb		94
73)	n-Propylbenzene	7.462	91	569233	105.4919660 ppb		97
74)	4-ETHYLTOLUENE	7.535	105	475129	99.4639069 ppb		99
75)	2-Chlorotoluene	7.602	126	104756	100.1570133 ppb		92
76)	4-Chlorotoluene	7.723	91	349780	104.8111261 ppb		96
77)	1,3,5-Trimethylbenzene	7.596	105	388483	100.4815758 ppb		98
78)	tert-Butylbenzene	7.845	119	349886	102.5349250 ppb		98
79)	1,2,4-Trimethylbenzene	7.900	105	393283	100.4840653 ppb		100
80)	sec-Butylbenzene	7.979	105	526760	102.3047089 ppb		98
81)	1,3-DICHLOROBENZENE	8.180	146	207116	93.5046325 ppb		98
82)	p-Isopropyltoluene	8.082	119	430847	102.5822819 ppb		98
83)	DICYCLOPENTADIENE	8.094	66	493852	116.9382390 ppb		95
85)	1,4-DICHLOROBENZENE	8.246	146	200543	105.8621970 ppb		82
86)	1,2,3-TRIMETHYLBENZENE	8.240	105	389815	112.9810590 ppb		99
87)	1,2-DICHLOROBENZENE	8.581	146	196535	109.1947164 ppb		98
88)	n-Butylbenzene	8.411	91	409058	114.9943756 ppb		98
89)	1,2-Dibromo-3-chloropr...	9.220	157	20181	98.5554758 ppb		94
90)	1,2,4-Trichlorobenzene	9.767	180	111417	98.3670032 ppb		97
91)	HEXACHLORO-1,3-BUTADIENE	9.725	225	48133	81.4386799 ppb		99
92)	Naphthalene	10.041	128	287328	107.5517154 ppb		99
93)	1,2,3-Trichlorobenzene	10.199	180	100706	100.4052251 ppb		98
94)	1-Methylnaphthalene	10.905	142	110300	82.1286606 ppb		99
95)	2-Methylnaphthalene	11.039	142	93848	84.3856645 ppb		98
97)	ETHANOL	2.692	45	5694	642.6980741 ppb	#	94

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\052516a\
Data File : 0525A 08.D
Acq On : 25 May 2016 8:51 pm
Operator : 605
Sample : MS 5x WG875350 L836804-06
Misc : soil
ALS Vial : 8 Sample Multiplier: 5

Quant Time: May 26 08:03:07 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 09:17:18 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
100) Methyl Acetate	3.185	43	318119	663.2268498 ppb	#	93
101) ACETONITRILE	3.446	41	53487	667.2808315 ppb	#	37
102) ALLYL CHLORIDE	3.039	76	273728	615.6163898 ppb		83
103) tert-BUTYL ALCOHOL	3.282	59	11656	55.8158981 ppb	#	63
104) chloroprene	3.586	53	158206	115.3807728 ppb	#	20
105) ETHYL TERT-BUTYL ETHER	3.653	59	320394	143.3298190 ppb		98
106) PROPIONITRILE	4.377	54	1014	10.5199151 ppb	#	1
107) Ethyl Acetate	4.049	43	730	1.1334294 ppb	#	67
108) METHACRYLONITRILE	4.341	67	1348	4.6490882 ppb	#	1
109) Cyclohexane	3.988	56	133856	59.1510740 ppb		95
111) ISOBUTANOL	4.377	43	87331	2084.0815464 ppb	#	71
112) t-Amyl Alcohol	4.469	59	42672	624.4245757 ppb		90
113) TERT-AMYL METHYL ETHER	4.377	73	281224	110.0239701 ppb	#	63
116) Methyl Cyclohexane	4.675	83	152419	53.7603802 ppb		96
117) 2-nitropropane	5.752	43	482761	1715.6527553 ppb	#	39
118) METHYL METHACRYLATE	4.992	41	57561	80.0094178 ppb	#	13
119) 1,4-DIOXANE	5.046	88	5944	551.9101218 ppb	#	82
120) n-octane	5.393	85	2565	2.3094950 ppb	#	31
121) 3,3-DIMETHYL-1-BUTANOL	6.294	57	76205	708.3093050 ppb	#	40
123) ETHYL METHACRYLATE	5.752	69	3583	3.5132561 ppb	#	1
124) CIS-1,4-DICHLORO-2-BUTENE	7.419	53	684	2.3128410 ppb	#	8
125) Cyclohexanone	7.656	55	687	3.4275019 ppb	#	19
126) PENTACHLOROETHANE	7.900	117	13283	19.7136162 ppb	#	9
127) Hexachloroethane	8.417	117	3573	4.1270350 ppb	#	71

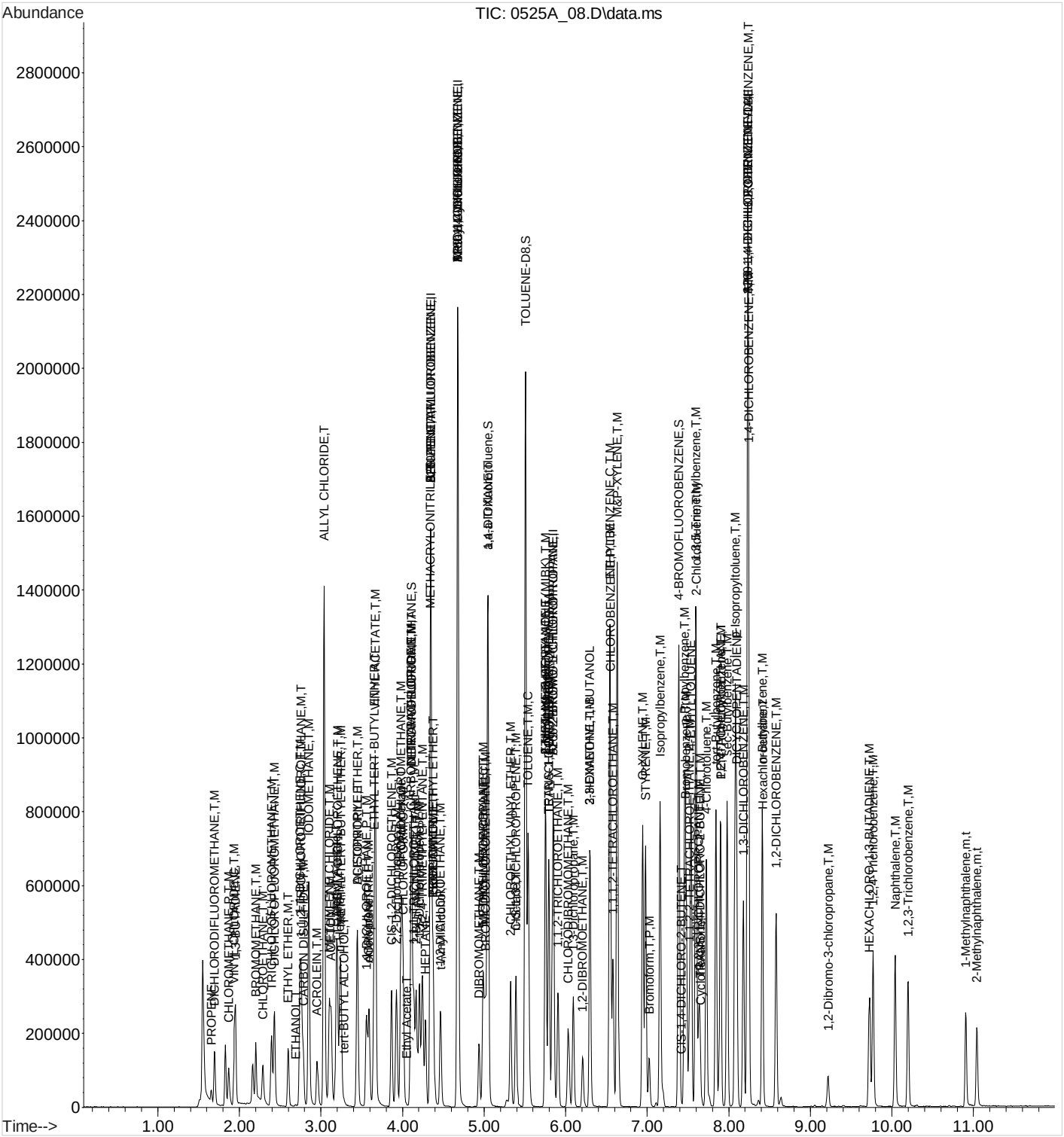
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\052516a\
Data File : 0525A 08.D
Acq On : 25 May 2016 8:51 pm
Operator : 605
Sample : MS 5x WG875350 L836804-06
Misc : soil
ALS Vial : 8 Sample Multiplier: 5

Quant Time: May 26 08:03:07 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 09:17:18 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\052516a\
Data File : 0525A 09.D
Acq On : 25 May 2016 9:14 pm
Operator : 605
Sample : MSD 5x WG875350 L836804-06
Misc : soil
ALS Vial : 9 Sample Multiplier: 5

Quant Time: May 26 08:03:13 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 09:17:18 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 8260-PENTAFLUOROBENZENE	4.347	168	521615	40.0000000	ppb		0.00
41) 8260-1,4-DIFLUOROBENZENE	4.675	114	931145	40.0000000	ppb		0.00
53) 8260-2-BROMO-1-CHLOROP...	5.844	79	148302	40.0000000	ppb		0.00
84) 8260-1,4-DICHLOROBENZE...	8.234	152	385539	40.0000000	ppb		0.00
96) AP9-PENTAFLUOROBENZENE	4.347	168	521615	40.0000000	ppb		0.00
114) AP9-1,4-DIFLUOROBENZENE	4.675	114	931145	40.0000000	ppb		0.00
122) AP9-2-BROMO-1-CHLOROPR...	5.844	79	148302	40.0000000	ppb	#	0.00
128) AP9-1,4-DICHLOROBENZEN...	8.234	152	385539	40.0000000	ppb		0.00
System Monitoring Compounds							
33) DIBROMOFLUOROMETHANE	4.110	111	281899	48.8066997	ppb		0.00
Spiked Amount 40.000	Range 76 - 123		Recovery = 122.02%				
46) a,a,a-Trifluorotoluene	5.047	146	491607	38.6933090	ppb		0.00
Spiked Amount 40.000	Range 87 - 117		Recovery = 96.73%				
50) TOLUENE-D8	5.509	98	1157619	43.6385001	ppb		0.00
Spiked Amount 40.000	Range 89 - 115		Recovery = 109.10%				
68) 4-BROMOFLUOROBENZENE	7.389	95	409215	40.1316771	ppb		0.00
Spiked Amount 40.000	Range 70 - 129		Recovery = 100.33%				
Target Compounds							Qvalue
3) PROPENE	1.652	41	15149	62.6832707	ppb		97
4) DICHLORODIFLUOROMETHANE	1.695	85	95302	113.3769061	ppb		99
5) CHLOROMETHANE	1.871	50	91242	96.7106838	ppb		99
6) VINYL CHLORIDE	1.938	62	111842	113.0441448	ppb		99
7) 1,3-BUTADIENE	1.950	39	71368	82.9806876	ppb		97
8) BROMOMETHANE	2.199	94	72062	168.4739559	ppb		97
9) CHLOROETHANE	2.291	64	71508	128.8343149	ppb		98
10) TRICHLOROFLUOROMETHANE	2.394	101	140662	101.7566078	ppb		99
11) DICHLOROFLUOROMETHANE	2.425	67	217479	135.8026770	ppb		100
12) ETHYL ETHER	2.595	59	74206	126.1362178	ppb		95
13) ACROLEIN	2.954	56	84131	655.3044007	ppb		95
14) 1,1-DICHLOROETHENE	2.747	61	134075	109.4469967	ppb		98
15) 1,1,2-TRICHLOROTRIFLUO...	2.759	101	92430	112.7475165	ppb		92
16) ACETONE	3.124	43	251594	702.2293481	ppb		97
17) IODOMETHANE	2.850	142	575443	437.8085506	ppb		98
18) CARBON DISULFIDE	2.784	76	137425	48.0638669	ppb		97
19) METHYLENE CHLORIDE	3.106	84	98502	117.8076290	ppb		97
20) ACRYLONITRILE	3.587	53	166616	795.8014503	ppb		96
21) n-Hexane	3.228	56	45949	57.0850569	ppb	#	65
22) TRANS-1,2-DICHLOROETHENE	3.197	96	84995	104.9927221	ppb		93
23) METHYL TERT-BUTYL ETHER	3.246	73	288261	135.6292454	ppb	#	61
24) 1,1-DICHLOROETHANE	3.556	63	203574	139.9900500	ppb		100
25) VINYL ACETATE	3.666	43	895101	692.6148820	ppb		97
26) DI-ISOPROPYL ETHER	3.447	45	366631	154.0249385	ppb		97
27) 2,2-Dichloropropane	3.927	77	172826	122.1500085	ppb		99
28) CIS-1,2-DICHLOROETHENE	3.866	96	114112	128.6470600	ppb		94
29) 2-BUTANONE (MEK)	4.171	43	293707	764.8056500	ppb		94
30) BROMOCHLOROMETHANE	3.982	130	61182	115.8258004	ppb	#	75
31) TETRAHYDROFURAN	4.110	42	27477	147.2924045	ppb	#	90
32) CHLOROFORM	4.006	83	200085	132.8037800	ppb		100
34) 1,1,1-TRICHLOROETHANE	4.140	97	163366	125.5275769	ppb		100
35) CARBON TETRACHLORIDE	4.104	117	152581	105.2869280	ppb		100
36) 1,1-Dichloropropene	4.201	75	132488	116.1759009	ppb		97

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\052516a\
Data File : 0525A 09.D
Acq On : 25 May 2016 9:14 pm
Operator : 605
Sample : MSD 5x WG875350 L836804-06
Misc : soil
ALS Vial : 9 Sample Multiplier: 5

Quant Time: May 26 08:03:13 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 09:17:18 2016
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
37)	2,2,4-TRIMETHYLPENTANE	4.244	41	71651	78.6951097	ppb		82
38)	HEPTANE	4.280	43	73965	57.9102187	ppb	#	68
39)	BENZENE	4.347	78	400000	124.4246973	ppb		100
40)	1,2-DICHLOROETHANE	4.463	62	124927	121.3959609	ppb		99
42)	TRICHLOROETHENE	4.675	130	104271	99.1897310	ppb		98
43)	1,2-DICHLOROPROPANE	4.992	62	82580	124.1670443	ppb		97
44)	DIBROMOMETHANE	4.937	93	60272	105.9599225	ppb		93
45)	BROMODICHLOROMETHANE	5.016	83	152381	115.0396434	ppb		99
47)	2-CHLOROETHYL VINYL ETHER	5.326	63	127855	1020.7176038	ppb		100
48)	CIS-1,3-DICHLOROPROPENE	5.393	75	182023	119.7239423	ppb		99
49)	4-METHYL-2-PENTANONE (...	5.752	43	503380	671.6521527	ppb		100
51)	TOLUENE	5.539	91	435623	99.9317869	ppb		99
52)	TRANS-1,3-DICHLOROPROPENE	5.795	75	154027	114.3001582	ppb	#	96
54)	1,1,2-TRICHLOROETHANE	5.904	97	90499	112.2090198	ppb		95
55)	TETRACHLOROETHENE	5.795	164	70363	78.1961561	ppb		97
56)	1,3-Dichloropropane	6.093	76	158371	116.6508155	ppb		98
57)	2-HEXANONE	6.300	58	239214	657.4911624	ppb		98
58)	CHLORODIBROMOMETHANE	6.032	129	104276	103.4991978	ppb		98
59)	1,2-DIBROMOETHANE	6.209	107	86789	101.6707623	ppb		99
60)	CHLOROBENZENE	6.549	112	291177	103.5347238	ppb		96
61)	1,1,1,2-TETRACHLOROETHANE	6.580	133	94756	98.9080457	ppb	#	93
62)	ETHYLBENZENE	6.537	106	161211	100.4898892	ppb		93
63)	M&P-XYLENE	6.634	106	375817	193.3205413	ppb		96
64)	O-XYLENE	6.945	106	194585	102.4246022	ppb		99
65)	STYRENE	6.981	104	325132	107.9297761	ppb		99
66)	Bromoform	7.030	173	57161	90.0479907	ppb		97
67)	Isopropylbenzene	7.158	105	510871	99.0535562	ppb		99
69)	Bromobenzene	7.474	77	212791	107.7833694	ppb		89
70)	1,1,2,2-TETRACHLOROETHANE	7.517	83	118143	112.9941380	ppb		99
71)	1,2,3-TRICHLOROPROPANE	7.638	110	31017	106.1734852	ppb		94
72)	TRANS-1,4-DICHLORO-2-B...	7.650	53	29562	98.9770951	ppb		94
73)	n-Propylbenzene	7.462	91	588418	106.5083752	ppb		97
74)	4-ETHYLTOLUENE	7.535	105	480136	98.1717966	ppb		99
75)	2-Chlorotoluene	7.602	126	106842	99.7729838	ppb		92
76)	4-Chlorotoluene	7.723	91	357893	104.7451954	ppb		97
77)	1,3,5-Trimethylbenzene	7.596	105	403483	101.9314384	ppb		97
78)	tert-Butylbenzene	7.845	119	360783	103.2665841	ppb		99
79)	1,2,4-Trimethylbenzene	7.894	105	400686	99.9918687	ppb		98
80)	sec-Butylbenzene	7.979	105	543045	103.0118407	ppb		97
81)	1,3-DICHLOROBENZENE	8.180	146	212734	93.8047601	ppb		98
82)	p-Isopropyltoluene	8.082	119	437605	101.7653782	ppb		99
83)	DICYCLOPENTADIENE	8.094	66	505480	116.9047621	ppb		94
85)	1,4-DICHLOROBENZENE	8.247	146	210228	108.9831079	ppb		83
86)	1,2,3-TRIMETHYLBENZENE	8.240	105	408563	116.2897302	ppb		98
87)	1,2-DICHLOROBENZENE	8.581	146	206462	112.6515278	ppb		98
88)	n-Butylbenzene	8.411	91	413261	114.0909944	ppb		98
89)	1,2-Dibromo-3-chloropr...	9.220	157	21117	101.2757646	ppb		93
90)	1,2,4-Trichlorobenzene	9.767	180	121921	105.7089431	ppb		98
91)	HEXACHLORO-1,3-BUTADIENE	9.725	225	49611	82.4329819	ppb		99
92)	Naphthalene	10.041	128	323355	118.8650581	ppb		100
93)	1,2,3-Trichlorobenzene	10.199	180	106138	103.9219057	ppb		99
94)	1-Methylnaphthalene	10.905	142	135395	99.0049910	ppb		97
95)	2-Methylnaphthalene	11.039	142	113638	100.3465554	ppb		99
97)	ETHANOL	2.692	45	5655	631.7713074	ppb	#	90

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\052516a\
Data File : 0525A 09.D
Acq On : 25 May 2016 9:14 pm
Operator : 605
Sample : MSD 5x WG875350 L836804-06
Misc : soil
ALS Vial : 9 Sample Multiplier: 5

Quant Time: May 26 08:03:13 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 09:17:18 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
100) Methyl Acetate	3.185	43	325489	671.6554766	ppb	#	93
101) ACETONITRILE	3.447	41	56974	703.5174499	ppb	#	37
102) ALLYL CHLORIDE	3.039	76	285195	634.8492485	ppb		85
103) tert-BUTYL ALCOHOL	3.282	59	11327	53.6859982	ppb	#	63
104) chloroprene	3.587	53	166616	120.2721156	ppb	#	20
105) ETHYL TERT-BUTYL ETHER	3.653	59	341188	151.0718958	ppb		98
106) PROPIONITRILE	4.377	54	1134	11.6446138	ppb	#	1
107) Ethyl Acetate	4.043	43	823	1.2647631	ppb	#	67
108) METHACRYLONITRILE	4.347	67	2099	7.1651962	ppb	#	1
109) Cyclohexane	3.988	56	139589	61.0539464	ppb		94
111) ISOBUTANOL	4.377	43	92302	2180.1939971	ppb	#	71
112) t-Amyl Alcohol	4.469	59	45530	659.4356052	ppb		91
113) TERT-AMYL METHYL ETHER	4.377	73	297968	115.3831283	ppb	#	62
116) Methyl Cyclohexane	4.675	83	152797	52.5261801	ppb		96
117) 2-nitropropane	5.752	43	503380	1746.2225944	ppb	#	39
118) METHYL METHACRYLATE	4.992	41	61319	83.1982663	ppb	#	13
119) 1,4-DIOXANE	5.040	88	5994	543.2662551	ppb	#	84
120) n-octane	5.393	85	2418	2.1251636	ppb	#	33
121) 3,3-DIMETHYL-1-BUTANOL	6.300	57	79625	722.4293107	ppb	#	40
123) ETHYL METHACRYLATE	5.752	69	3711	3.5540411	ppb	#	1
124) CIS-1,4-DICHLORO-2-BUTENE	7.419	53	841	2.7775007	ppb	#	8
125) Cyclohexanone	7.650	55	630	3.0699409	ppb	#	1
126) PENTACHLOROETHANE	7.894	117	13585	19.6923824	ppb	#	9
127) Hexachloroethane	8.563	117	612	0.6904386	ppb	#	1

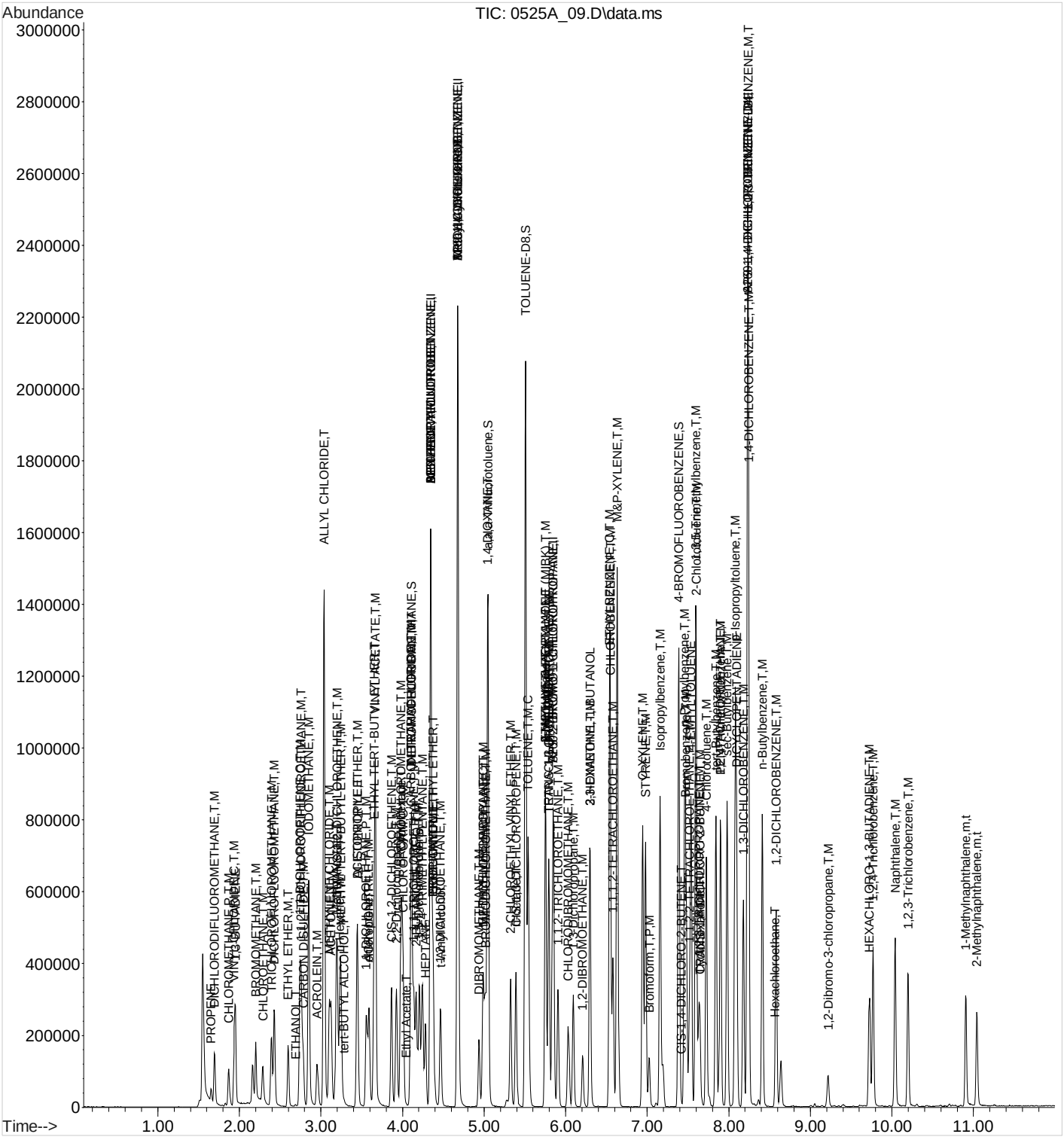
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\052516a\
Data File : 0525A 09.D
Acq On : 25 May 2016 9:14 pm
Operator : 605
Sample : MSD 5x WG875350 L836804-06
Misc : soil
ALS Vial : 9 Sample Multiplier: 5

Quant Time: May 26 08:03:13 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 09:17:18 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\052516a\
Data File : 0525A 26.D
Acq On : 26 May 2016 3:39 am
Operator : 605
Sample : L836976-01 5x WG875350 V8260
Misc : soil
ALS Vial : 26 Sample Multiplier: 5

Quant Time: Sep 21 10:31:39 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 09:17:18 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 8260-PENTAFLUOROBENZENE	4.347	168	575893	40.0000000	ppb		0.00
41) 8260-1,4-DIFLUOROBENZENE	4.676	114	996581	40.0000000	ppb		0.00
53) 8260-2-BROMO-1-CHLOROP...	5.844	79	159080	40.0000000	ppb		0.00
84) 8260-1,4-DICHLOROBENZE...	8.234	152	409116	40.0000000	ppb		0.00
96) AP9-PENTAFLUOROBENZENE	4.347	168	575893	40.0000000	ppb		0.00
114) AP9-1,4-DIFLUOROBENZENE	4.676	114	996581	40.0000000	ppb		0.00
122) AP9-2-BROMO-1-CHLOROPR...	5.844	79	159080	40.0000000	ppb	#	0.00
128) AP9-1,4-DICHLOROBENZEN...	8.234	152	409116	40.0000000	ppb		0.00
System Monitoring Compounds							
33) DIBROMOFLUOROMETHANE	4.110	111	309889	48.5959794	ppb		0.00
Spiked Amount 40.000	Range 76 - 123			Recovery = 121.49%			
46) a,a,a-Trifluorotoluene	5.047	146	528063	38.8336547	ppb		0.00
Spiked Amount 40.000	Range 87 - 117			Recovery = 97.08%			
50) TOLUENE-D8	5.509	98	1219472	42.9517353	ppb		0.00
Spiked Amount 40.000	Range 89 - 115			Recovery = 107.38%			
68) 4-BROMOFLUOROBENZENE	7.389	95	429708	39.2862549	ppb		0.00
Spiked Amount 40.000	Range 70 - 129			Recovery = 98.22%			
Target Compounds							Qvalue
3) PROPENE	1.652	41	1405	5.2656535	ppb	#	88
16) ACETONE	3.124	43	4764	12.0436665	ppb		91
18) CARBON DISULFIDE	2.784	76	2002	0.6341986	ppb	#	60
19) METHYLENE CHLORIDE	3.100	84	515	0.5578840	ppb	#	59
42) TRICHLOROETHENE	4.676	130	1202	1.0683470	ppb		89
74) 4-ETHYLTOLUENE	7.529	105	3135	0.5975737	ppb		90
79) 1,2,4-Trimethylbenzene	7.894	105	7481	1.7404101	ppb		99
92) Naphthalene	10.041	128	35270	12.2180511	ppb		94

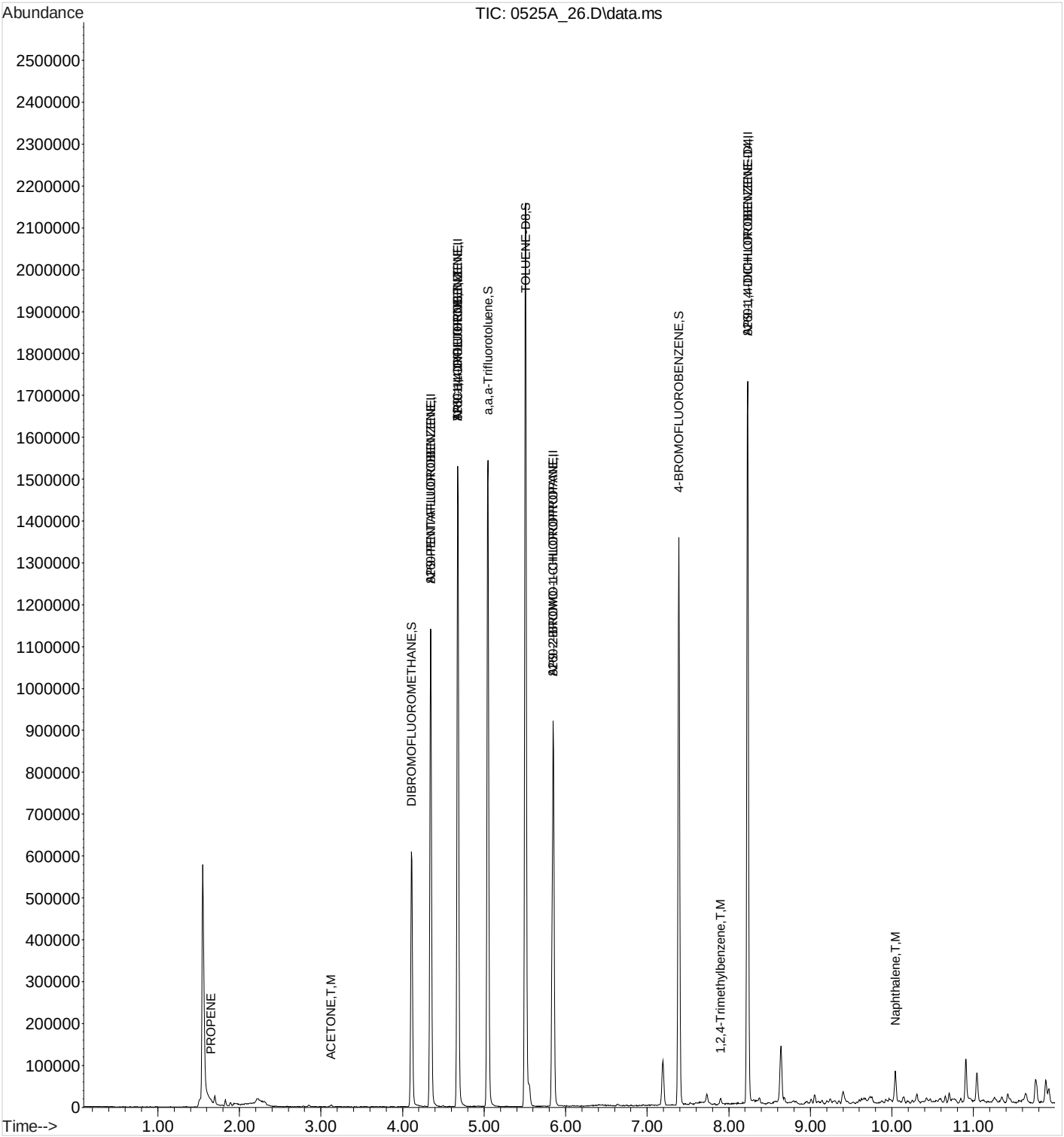
(#) = qualifier out of range (m) = manual integration (+) = signals summed

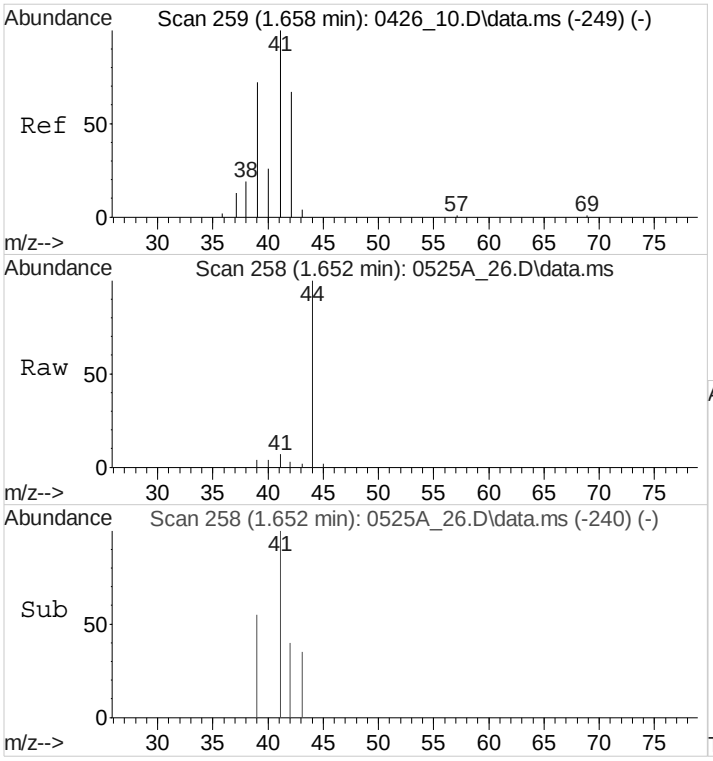
Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\052516a\
Data File : 0525A 26.D
Acq On : 26 May 2016 3:39 am
Operator : 605
Sample : L836976-01 5x WG875350 V8260
Misc : soil
ALS Vial : 26 Sample Multiplier: 5

Quant Time: Sep 21 10:31:39 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 09:17:18 2016
Response via : Initial Calibration

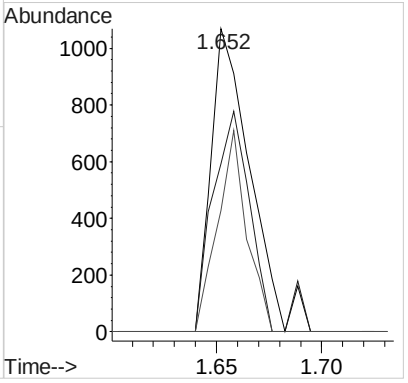


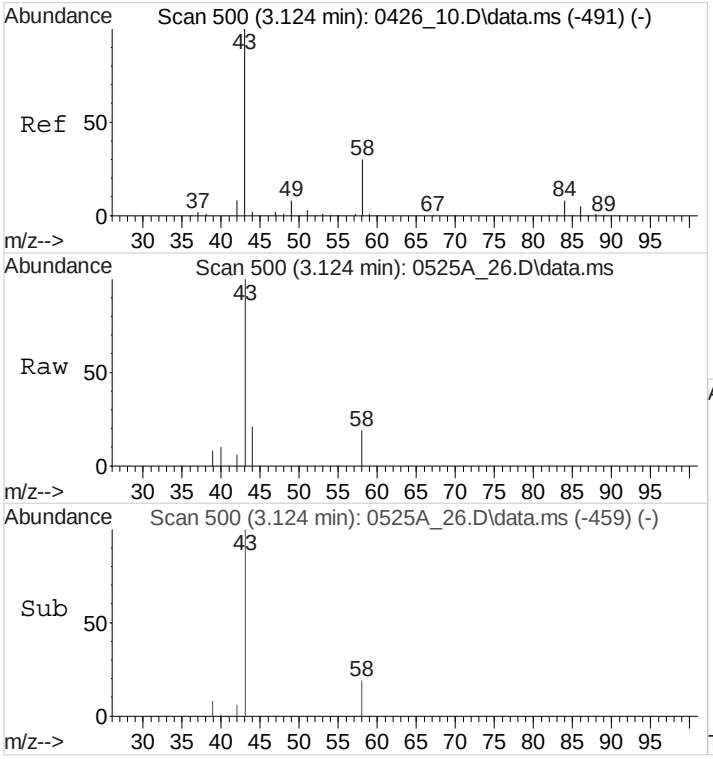


#3
PROPENE
Concen: 5.2656535 ppb
RT: 1.652 min Scan# 258
Delta R.T. -0.006 min
Lab File: 0525A 26.D
Acq: 26 May 2016 3:39 am

Tgt Ion: 41 Resp: 1405

Ion	Ratio	Lower	Upper
41	100		
39	66.5	57.5	86.3
42	48.9	50.9	76.3#

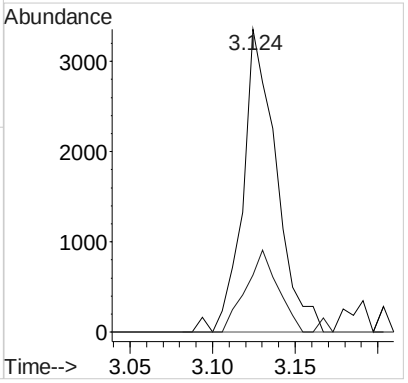


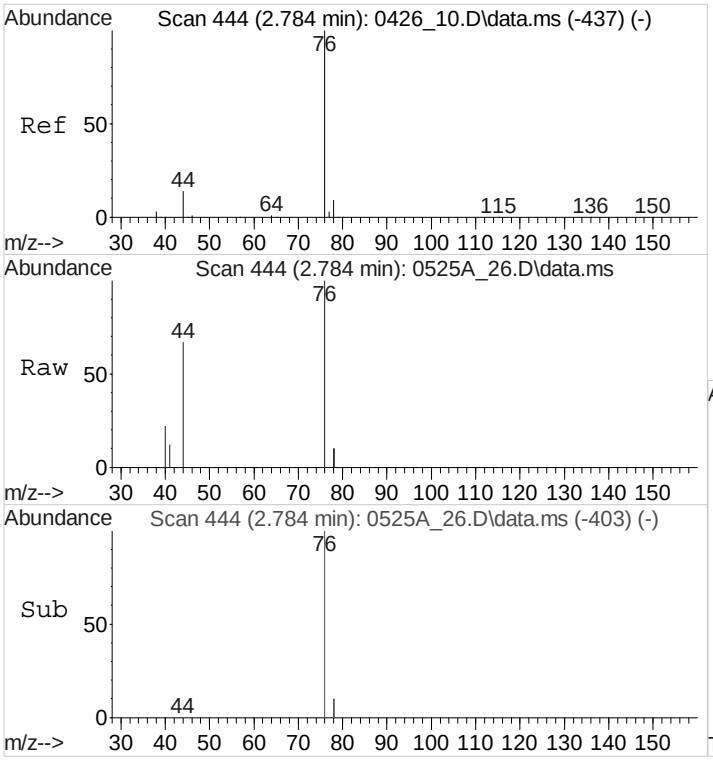


#16
ACETONE
Concen: 12.0436665 ppb
RT: 3.124 min Scan# 500
Delta R.T. 0.000 min
Lab File: 0525A_26.D
Acq: 26 May 2016 3:39 am

Tgt Ion: 43 Resp: 4764

Ion	Ratio	Lower	Upper
43	100		
58	26.0	25.0	37.4

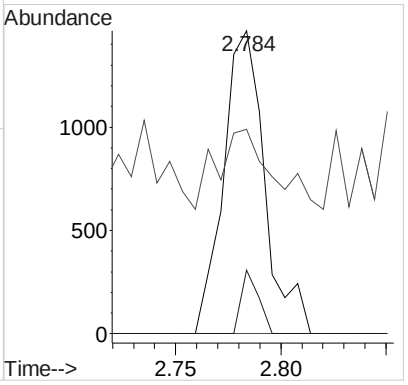


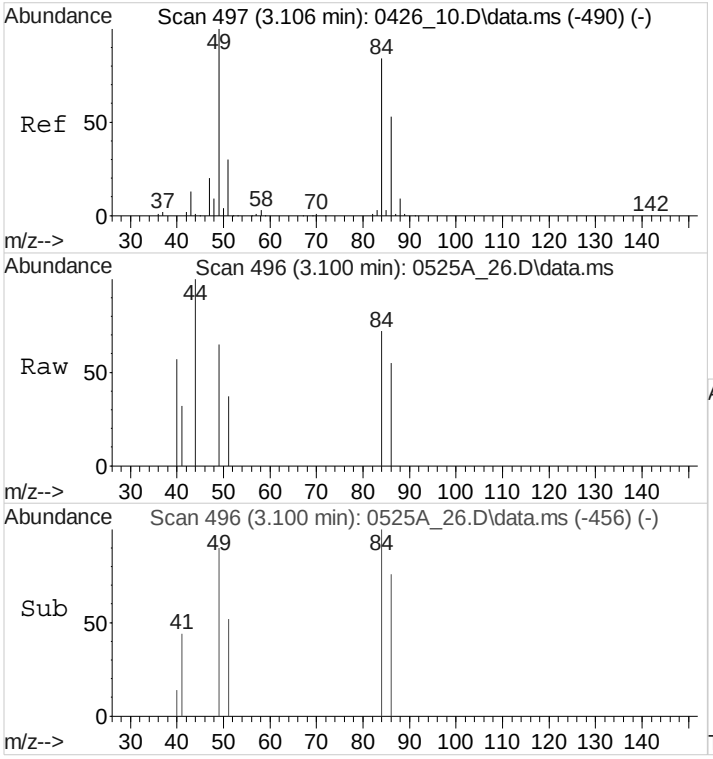


#18
CARBON DISULFIDE
Concen: 0.6341986 ppb
RT: 2.784 min Scan# 444
Delta R.T. 0.001 min
Lab File: 0525A_26.D
Acq: 26 May 2016 3:39 am

Tgt Ion: 76 Resp: 2002

Ion	Ratio	Lower	Upper
76	100		
78	0.0	8.1	12.1#
44	34.6	11.7	17.5#

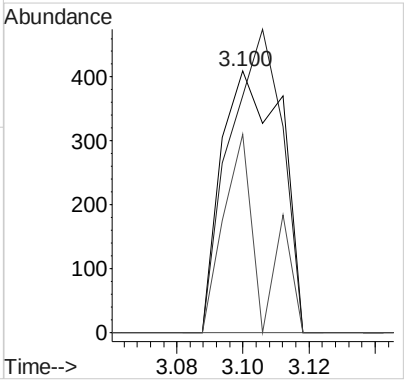


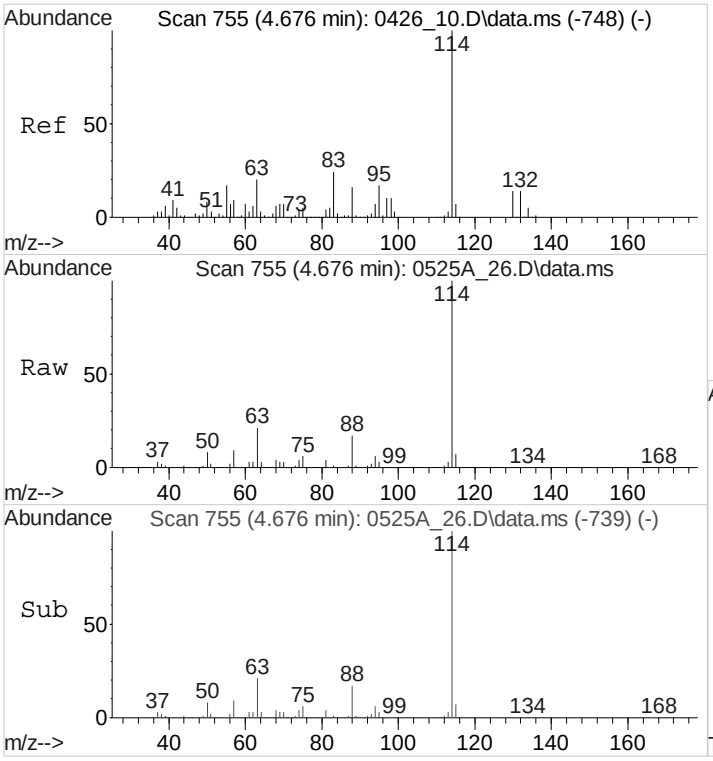


#19
METHYLENE CHLORIDE
Concen: 0.5578840 ppb
RT: 3.100 min Scan# 496
Delta R.T. -0.006 min
Lab File: 0525A_26.D
Acq: 26 May 2016 3:39 am

Tgt Ion: 84 Resp: 515

Ion	Ratio	Lower	Upper
84	100		
49	101.6	98.6	147.8
86	0.0	51.7	77.5#

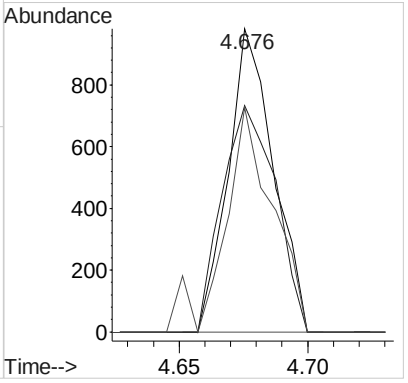


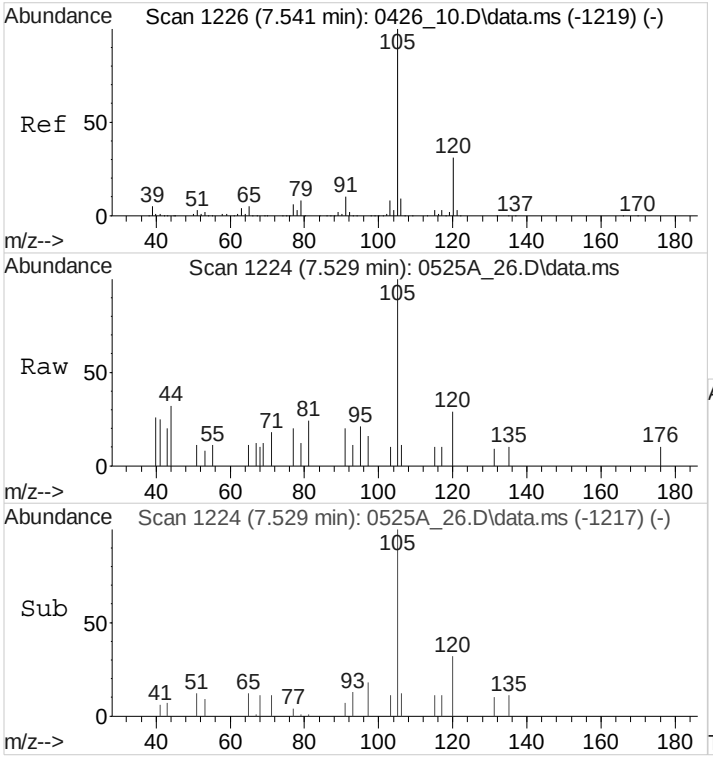


#42
TRICHLOROETHENE
Concen: 1.0683470 ppb
RT: 4.676 min Scan# 755
Delta R.T. -0.000 min
Lab File: 0525A 26.D
Acq: 26 May 2016 3:39 am

Tgt Ion:130 Resp: 1202

Ion	Ratio	Lower	Upper
130	100		
132	87.8	77.4	116.2
97	78.3	53.3	79.9

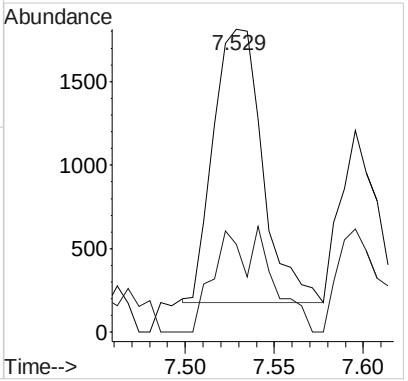


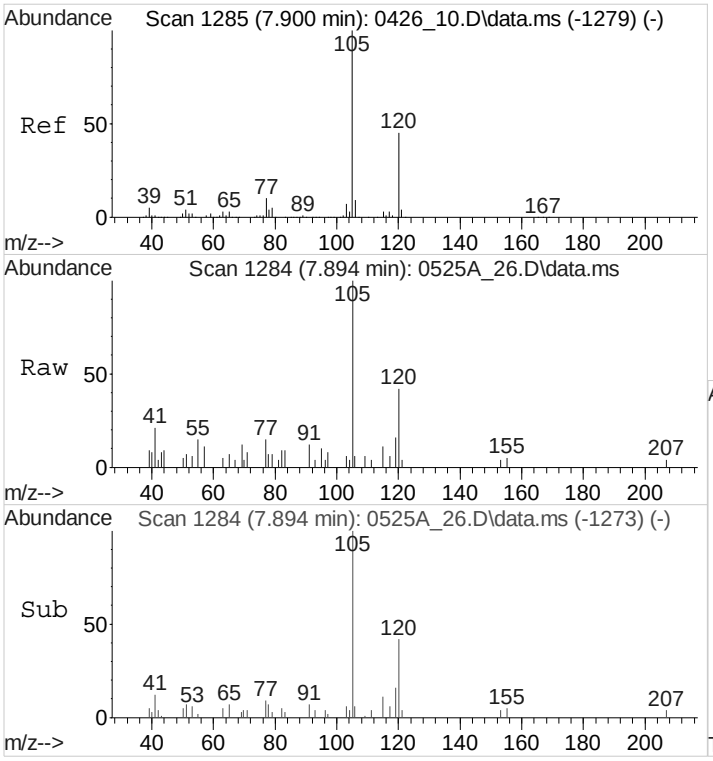


#74
4-ETHYLTOLUENE
Concen: 0.5975737 ppb
RT: 7.529 min Scan# 1224
Delta R.T. -0.012 min
Lab File: 0525A_26.D
Acq: 26 May 2016 3:39 am

Tgt Ion:105 Resp: 3135

Ion	Ratio	Lower	Upper
105	100		
120	24.1	23.8	35.6

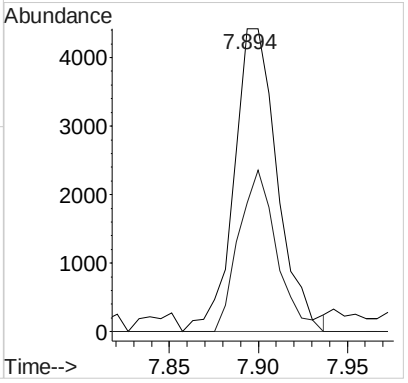


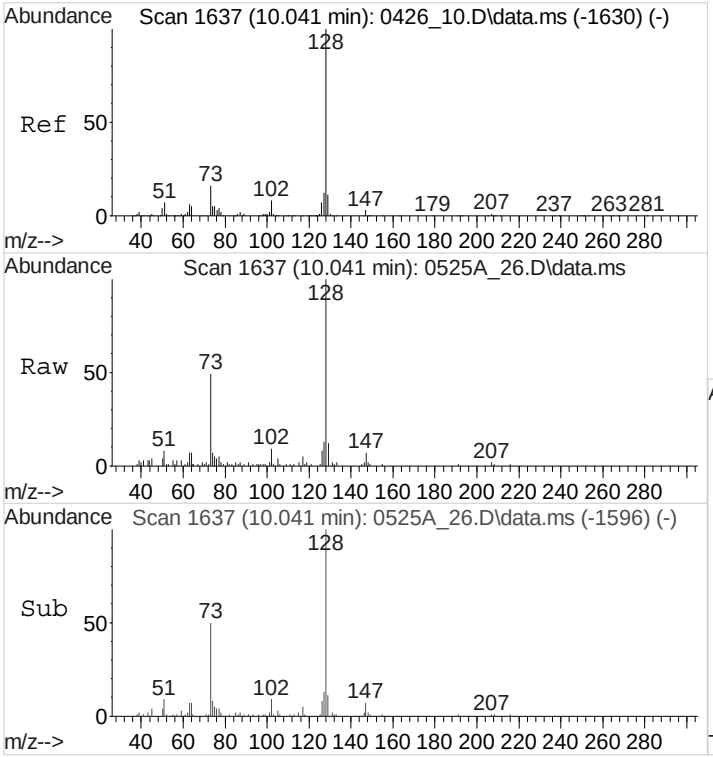


#79
1,2,4-Trimethylbenzene
Concen: 1.7404101 ppb
RT: 7.894 min Scan# 1284
Delta R.T. -0.006 min
Lab File: 0525A 26.D
Acq: 26 May 2016 3:39 am

Tgt Ion:105 Resp: 7481

Ion	Ratio	Lower	Upper
105	100		
120	46.4	37.4	56.2

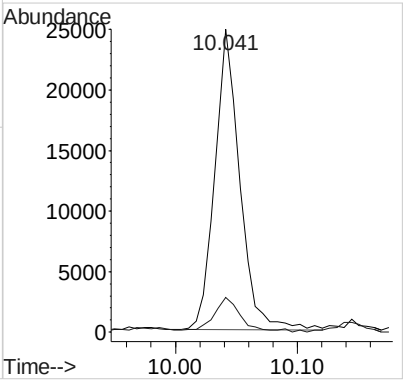




#92
Naphthalene
Concen: 12.2180511 ppb
RT: 10.041 min Scan# 1637
Delta R.T. 0.000 min
Lab File: 0525A_26.D
Acq: 26 May 2016 3:39 am

Tgt Ion:128 Resp: 35270

Ion	Ratio	Lower	Upper
128	100		
129	13.0	8.7	13.1



Calibration

Instrument: VOCMS30
Method: V830D26P

Initial Calibration Run Log

File ID	Level ID	Date Analyzed
0426_04.D	.25	4/26/2016 12:13:00 PM
0426_05.D	.5	4/26/2016 12:35:00 PM
0426_06.D	1	4/26/2016 12:58:00 PM
0426_07.D	2	4/26/2016 1:21:00 PM
0426_08.D	5.0	4/26/2016 1:43:00 PM
0426_09.D	10	4/26/2016 2:06:00 PM
0426_10.D	25	4/26/2016 2:29:00 PM
0426_11.D	40	4/26/2016 2:51:00 PM
0426_12.D	75	4/26/2016 3:14:00 PM
0426_13.D	100	4/26/2016 3:36:00 PM
0426_14.D	200	4/26/2016 3:59:00 PM
0426_19.D	1A	4/26/2016 5:52:00 PM
0426_20.D	2.5A	4/26/2016 6:15:00 PM
0426_21.D	5A	4/26/2016 6:37:00 PM
0426_22.D	7.5A	4/26/2016 7:00:00 PM
0426_23.D	10A	4/26/2016 7:22:00 PM
0426_24.D	12A	4/26/2016 7:45:00 PM
0426_25.D	15A	4/26/2016 8:08:00 PM
0426_26.D	17A	4/26/2016 8:30:00 PM
0426_27.D	20A	4/26/2016 8:53:00 PM

Mint Miner 2.6.4 Directory Scan: y:\042616

27 Apr 2016 11:20

Level	Status	Code	Operator	Instrument	Sample ID
Scan File Path: y:\042616\0426_01.D					
Original Path: 0426_01.D					
0	Scanned		605	VOCMS30	INSTBLK (water)
Scan File Path: y:\042616\0426_02.D					
Original Path: y:\042616\0426_02.D					
0	No Audit				
Scan File Path: y:\042616\0426_03.D					
Original Path: y:\042616\0426_03.D					
0	No Audit				
Scan File Path: y:\042616\0426_04.D					
Original Path: C:\msdchem\1\data\042616\0426_04.D					
28	Scanned	D(24), MZ(4)	605	VOCMS30	STD VMS .25 ppb 16D26894 (water IS/SURR16
Scan File Path: y:\042616\0426_05.D					
Original Path: C:\msdchem\1\data\042616\0426_05.D					
30	Scanned	D(26), MZ(4)	605	VOCMS30	STD VMS .5 ppb 16D26894 (water IS/SURR16I
Scan File Path: y:\042616\0426_06.D					
Original Path: C:\msdchem\1\data\042616\0426_06.D					
28	Scanned	D(27), ENR(1)	605	VOCMS30	STD VMS 1 ppb 16D26894 (water IS/SURR16D
Scan File Path: y:\042616\0426_06A.D					
Original Path: C:\msdchem\1\data\042616\0426_06.D					
28	Scanned	D(27), ENR(1)	605	VOCMS30	STD VMS 1 ppb 16D26894 (water IS/SURR16D
Scan File Path: y:\042616\0426_07.D					
Original Path: C:\msdchem\1\data\042616\0426_07.D					
28	Scanned	D(27), ENR(1)	605	VOCMS30	STD VMS 2 ppb 16D26894 (water IS/SURR16D
Scan File Path: y:\042616\0426_08.D					
Original Path: C:\msdchem\1\data\042616\0426_08.D					
30	Scanned	D(29), ENR(1)	605	VOCMS30	STD VMS 5.0 ppb 16D26894 (water IS/SURR16
Scan File Path: y:\042616\0426_09.D					
Original Path: C:\msdchem\1\data\042616\0426_09.D					
32	Scanned	D(31), ENR(1)	605	VOCMS30	STD VMS 10 ppb 16D26894 (water IS/SURR16I
Scan File Path: y:\042616\0426_10.D					
Original Path: C:\msdchem\1\data\042616\0426_10.D					
64	Scanned	D(63), ENR(1)	605	VOCMS30	MSTD VMS 25 ppb 16D26894 (water IS/SURR1

Level	Status	Code	Operator	Instrument	Sample ID
Scan File Path: y:\042616\0426_11.D					
Original Path: C:\msdchem\1\data\042616\0426_11.D					
33	Scanned	D(32), ENR(1)	605	VOCMS30	STD VMS 40 ppb 16D26894 (water IS/SURR16I
Scan File Path: y:\042616\0426_12.D					
Original Path: C:\msdchem\1\data\042616\0426_12.D					
34	Scanned	D(33), ENR(1)	605	VOCMS30	STD VMS 75 ppb 16D26894 (water IS/SURR16I
Scan File Path: y:\042616\0426_13.D					
Original Path: C:\msdchem\1\data\042616\0426_13.D					
35	Scanned	D(34), ENR(1)	605	VOCMS30	STD VMS 100 ppb 16D26894 (water IS/SURR16
Scan File Path: y:\042616\0426_14.D					
Original Path: C:\msdchem\1\data\042616\0426_14.D					
35	Scanned	D(34), ENR(1)	605	VOCMS30	STD VMS 200 ppb 16D26894 (water IS/SURR16
Scan File Path: y:\042616\0426_15.D					
Original Path: y:\042616\0426_15.D					
0	No Audit				
Scan File Path: y:\042616\0426_16.D					
Original Path: C:\msdchem\1\data\042616\0426_16.D\data.ms					
4	Scanned	QM(2)	605	VOCMS30	SSCV VMS 25 ppb 16D26896 (water IS/SURR1
Scan File Path: y:\042616\0426_17.D					
Original Path: y:\042616\0426_17.D					
0	No Audit				
Scan File Path: y:\042616\0426_18.D					
Original Path: C:\msdchem\1\data\042616\0426_18.D\data.ms					
0	Scanned		605	VOCMS30	LOD VMS 0.5 ppb 16D26918 (water IS/SURR16
Scan File Path: y:\042616\0426_19.D					
Original Path: C:\msdchem\1\data\042616\0426_19.D					
76	Scanned	D(51), DK(4), DC(4), DS(2), DB(2), DP(1), MZ(4)	605	VOCMS30	STD VMS 1a ppb 16D26918 (water IS/SURR16I
Scan File Path: y:\042616\0426_19A.D					
Original Path: C:\msdchem\1\data\042616\0426_19.D					
76	Scanned	D(51), DK(4), DC(4), DS(2), DB(2), DP(1), MZ(4)	605	VOCMS30	STD VMS 1a ppb 16D26918 (water IS/SURR16I
Scan File Path: y:\042616\0426_20.D					
Original Path: C:\msdchem\1\data\042616\0426_20.D					
71	Scanned	D(49), DC(4), DK(4), DS(2), DB(2), DP(1), ENR(1)	605	VOCMS30	STD VMS 2.5 ppb 16D26918 (water IS/SURR16

Level	Status	Code	Operator	Instrument	Sample ID
Scan File Path: y:\042616\0426_21.D					
Original Path: C:\msdchem\1\data\042616\0426_21.D					
74	Scanned	D(52), DK(4), DC(4), DS(2), DB(2), DP(1), ENR(1)	605	VOCMS30	STD VMS 5 ppb 16D26918 (water IS/SURR16D
Scan File Path: y:\042616\0426_22.D					
Original Path: C:\msdchem\1\data\042616\0426_22.D					
73	Scanned	D(51), DC(4), DK(3), DS(2), DP(2), DB(2), ENR(1)	605	VOCMS30	STD VMS 7.5 ppb 16D26918 (water IS/SURR16
Scan File Path: y:\042616\0426_23.D					
Original Path: C:\msdchem\1\data\042616\0426_23.D					
69	Scanned	D(50), DS(2), DC(3), DK(2), DP(1), DB(2), ENR(1)	605	VOCMS30	MSTD VMS 10a ppb 16D26918 (water IS/SURR
Scan File Path: y:\042616\0426_24.D					
Original Path: C:\msdchem\1\data\042616\0426_24.D					
66	Scanned	D(47), DS(2), DC(3), DK(2), DP(1), DB(2), ENR(1)	605	VOCMS30	STD VMS 12.5 ppb 16D26918 (water IS/SURR1
Scan File Path: y:\042616\0426_25.D					
Original Path: C:\msdchem\1\data\042616\0426_25.D					
78	Scanned	D(52), DP(3), DS(2), DC(3), DK(2), DB(3), ENR(1)	605	VOCMS30	STD VMS 15 ppb 16D26918 (water IS/SURR16I
Scan File Path: y:\042616\0426_26.D					
Original Path: C:\msdchem\1\data\042616\0426_26.D					
72	Scanned	D(52), DP(2), DS(2), DC(3), DK(2), DB(2), ENR(1)	605	VOCMS30	STD VMS 17.5 ppb 16D26918 (water IS/SURR1
Scan File Path: y:\042616\0426_27.D					
Original Path: C:\msdchem\1\data\042616\0426_27.D					
144	Scanned	D(102), DP(4), DS(4), DC(6), DK(6), DB(4), M(1), ENR(1)	605	VOCMS30	STD VMS 20 ppb 16D26918 (water IS/SURR16I
Scan File Path: y:\042616\0426_28.D					
Original Path: y:\042616\0426_28.D					
0	No Audit				
Scan File Path: y:\042616\0426_29.D					
Original Path: C:\msdchem\1\data\042616\0426_29.D\data.ms					
0	Scanned		605	VOCMS30	SSCV VMS 10a ppb 16C24928 (water IS/SURR1

D = Deletion of any analyte
DB = Deletion of a common contaminant
DC = Deletion of a CCC
DK = Deletion of a spike compound
DP = Deletion of an SPCC
DS = Deletion of a surrogate
ENR = Quant report set to not reviewed (Disables MZ code)
M = Manual integration (non-specific)
MZ = Manual integrated but indicator missing from either the quant report or audit file
QM = Processed >3 times using the same method

Level	Status	Code	Operator	Instrument	Sample ID

ScanSummary.rpt

Total Files Scanned	31	Beginning Analyzed Date	4/26/2016 11:05:00AM
Methods	0	Ending Analyzed Date	4/26/2016 9:38:00PM
Samples	30	Analyzed Range	10 hours, 33 minutes
Tunes	1	Greatest Time Between Tunes	N/A
CCCs	0	Greatest Time Between CCCs	N/A

Distinct Method Last Updated count 0
Operators 1 Intruments 1

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

Injection Log

Instrument ID : VOCMS30
Computer Name : VOCCOMPAS
Released By : John Heath
Date Released : 4/27/2016 9:26:31 AM
Run ID : 042616
Signature : _____

#	File ID	Sample ID	Method	WG	Product	Matrix	Account #	State	Dil.	Mult.	Injected	Misc.
1	0426_01	INSTBLK	V830D26P						1	1	04/26/16 1105	"water "
2	0426_01	INSTBLK								1	04/26/16 1105	
3	0426_04	STD VMS .25 PPB 16D26894	V830D26P						1	1	04/26/16 1213	"water IS/SURR16D21640 "
4	0426_05	STD VMS .5 PPB 16D26894	V830D26P						1	1	04/26/16 1235	"water IS/SURR16D21640 "
5	0426_06	STD VMS 1 PPB 16D26894	V830D26P						1	1	04/26/16 1258	"water IS/SURR16D21640 "
6	0426_06A	RL VMS 1 PPB 16D26894	V830D26P						1	1	04/26/16 1258	"water IS/SURR16D21640 "
7	0426_07	STD VMS 2 PPB 16D26894	V830D26P						1	1	04/26/16 1321	"water IS/SURR16D21640 "
8	0426_08	STD VMS 5.0 PPB 16D26894	V830D26P						1	1	04/26/16 1343	"water IS/SURR16D21640 "
9	0426_09	STD VMS 10 PPB 16D26894	V830D26P						1	1	04/26/16 1406	"water IS/SURR16D21640 "
10	0426_10	MSTD VMS 25 PPB 16D26894	V830D26P						1	1	04/26/16 1429	"water IS/SURR16D21640 "
11	0426_11	STD VMS 40 PPB 16D26894	V830D26P						1	1	04/26/16 1451	"water IS/SURR16D21640 "
12	0426_12	STD VMS 75 PPB 16D26894	V830D26P						1	1	04/26/16 1514	"water IS/SURR16D21640 "
13	0426_13	STD VMS 100 PPB 16D26894	V830D26P						1	1	04/26/16 1536	"water IS/SURR16D21640 "
14	0426_14	STD VMS 200 PPB 16D26894	V830D26P						1	1	04/26/16 1559	"water IS/SURR16D21640 "

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

Injection Log

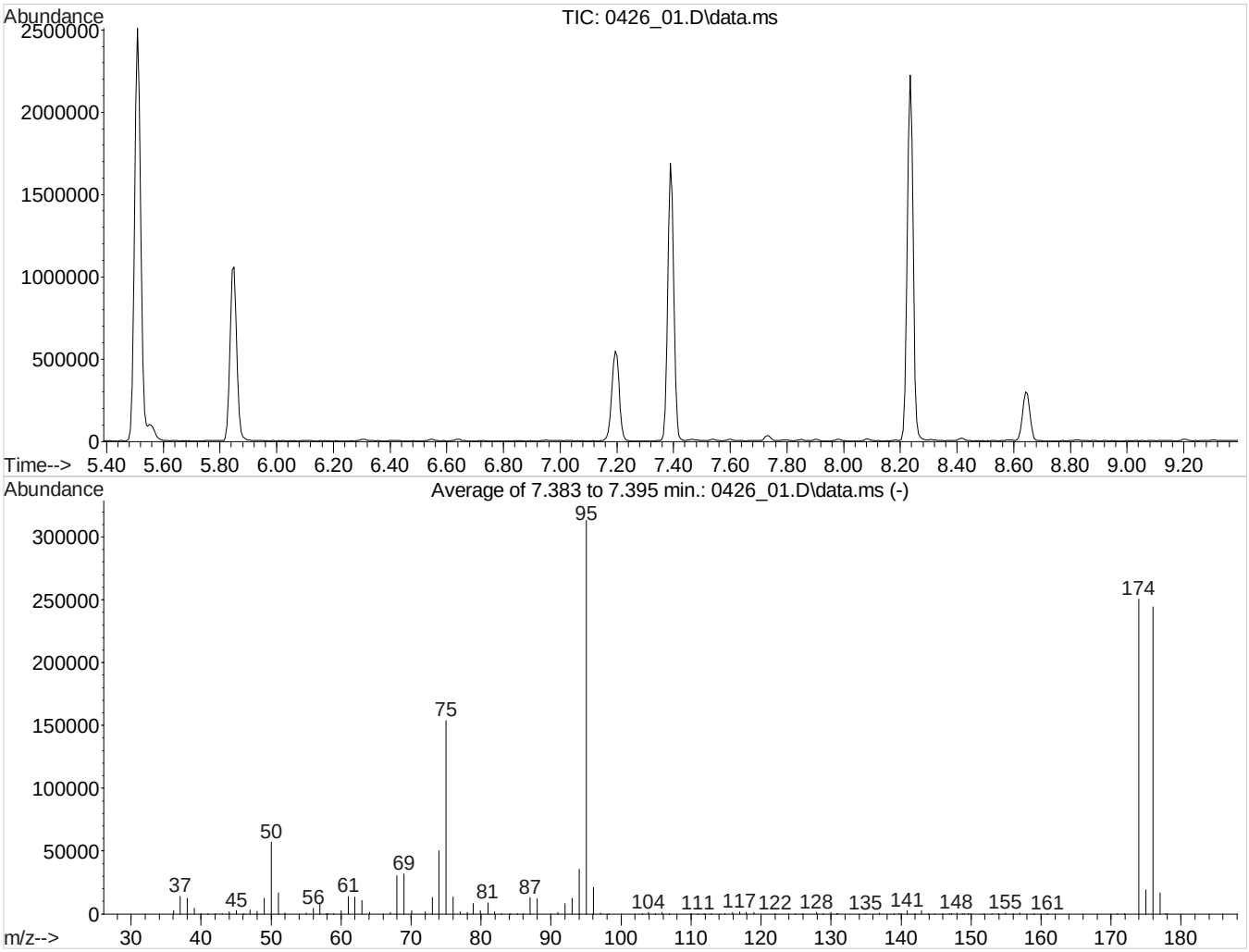
Instrument ID : VOCMS30
Computer Name : VOCCOMPAS
Released By : John Heath
Date Released : 4/27/2016 9:26:31 AM
Run ID : 042616
Signature : _____

#	File ID	Sample ID	Method	WG	Product	Matrix	Account #	State	Dil.	Mult.	Injected	Misc.
15	0426_16	SSCV VMS 25 PPB 16D26896	V830D26P						1	1	04/26/16 1644	"water IS/SURR16D21640 "
16	0426_19	STD VMS 1A PPB 16D26918	V830D26P						1	1	04/26/16 1752	"water IS/SURR16D21640 "
17	0426_19A	RL VMS 1A PPB 16D26918	V830D26P						1	1	04/26/16 1752	"water IS/SURR16D21640 "
18	0426_20	STD VMS 2.5 PPB 16D26918	V830D26P						1	1	04/26/16 1815	"water IS/SURR16D21640 "
19	0426_21	STD VMS 5 PPB 16D26918	V830D26P						1	1	04/26/16 1837	"water IS/SURR16D21640 "
20	0426_22	STD VMS 7.5 PPB 16D26918	V830D26P						1	1	04/26/16 1900	"water IS/SURR16D21640 "
21	0426_23	MSTD VMS 10A PPB 16D26918	V830D26P						1	1	04/26/16 1922	"water IS/SURR16D21640 "
22	0426_24	STD VMS 12.5 PPB 16D26918	V830D26P						1	1	04/26/16 1945	"water IS/SURR16D21640 "
23	0426_25	STD VMS 15 PPB 16D26918	V830D26P						1	1	04/26/16 2008	"water IS/SURR16D21640 "
24	0426_26	STD VMS 17.5 PPB 16D26918	V830D26P						1	1	04/26/16 2030	"water IS/SURR16D21640 "
25	0426_27	STD VMS 20 PPB 16D26918	V830D26P						1	1	04/26/16 2053	"water IS/SURR16D21640 "
26	0426_29	SSCV VMS 10A PPB 16C24928	V830D26P						1	1	04/26/16 2138	"water IS/SURR16D21640 "

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 01.D
Acq On : 26 Apr 2016 11:05 am
Operator : 605
Sample : INSTBLK
Misc : water
ALS Vial : 1 Sample Multiplier: 1

Integration File: RTEINT.P

Method : C:\msdchem\1\methods\V830D26P.M
Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
Last Update : Wed Apr 27 09:06:24 2016



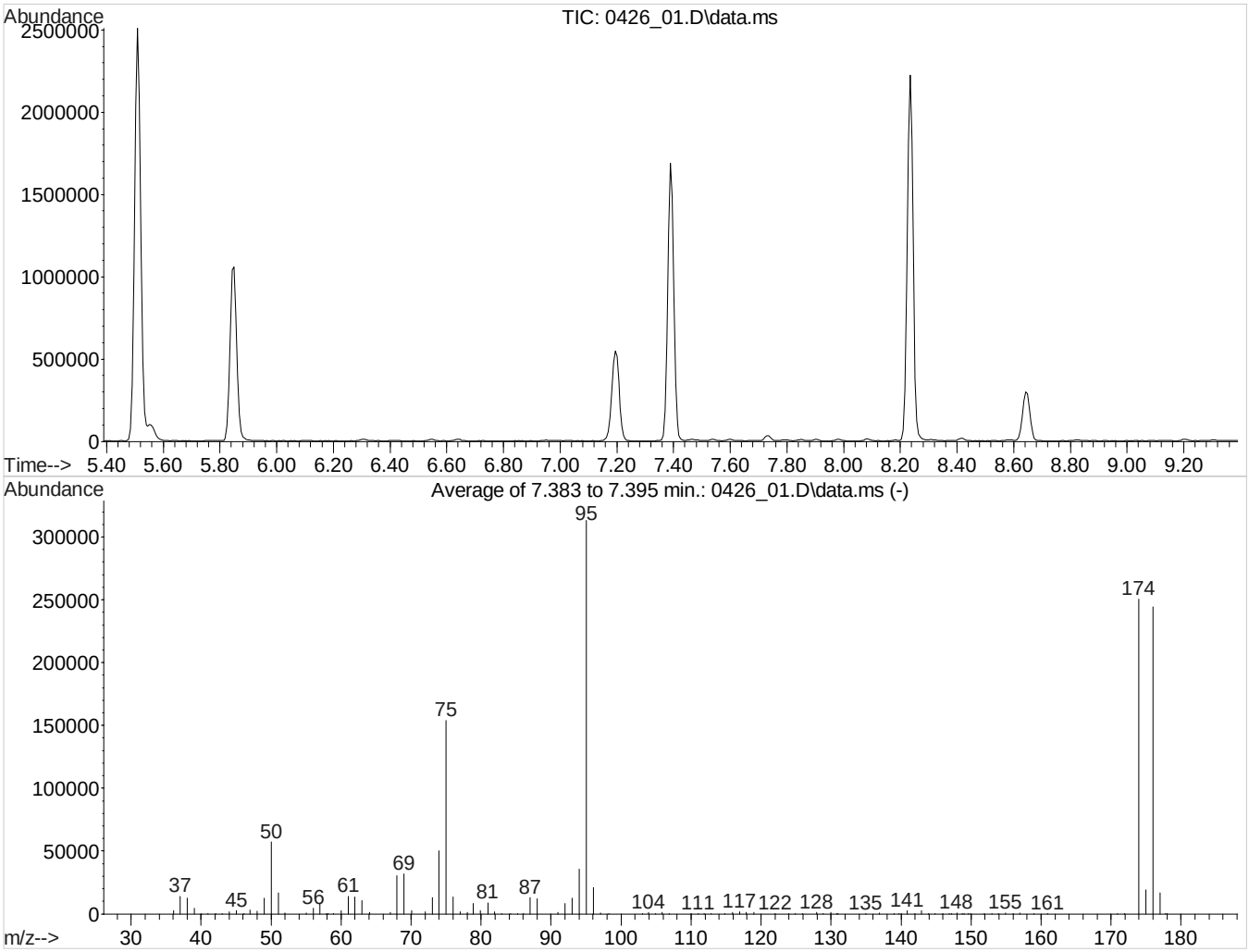
AutoFind: Scans 1200, 1201, 1202; Background Corrected with Scan 1189

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.3	57224	PASS
75	95	30	60	49.1	153835	PASS
95	95	100	100	100.0	313301	PASS
96	95	5	9	6.7	21136	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	150	80.0	250539	PASS
175	174	5	9	7.7	19220	PASS
176	174	95	101	97.5	244395	PASS
177	176	5	9	6.8	16520	PASS

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 01.D
Acq On : 26 Apr 2016 11:05 am
Operator : 605
Sample : INSTBLK
Misc : water
ALS Vial : 1 Sample Multiplier: 1

Integration File: RTEINT.P

Method : C:\msdchem\1\methods\V830D26P.M
Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
Last Update : Wed Apr 27 09:06:24 2016



AutoFind: Scans 1200, 1201, 1202; Background Corrected with Scan 1189

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.3	57224	PASS
75	95	30	60	49.1	153835	PASS
95	95	100	100	100.0	313301	PASS
96	95	5	9	6.7	21136	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	150	80.0	250539	PASS
175	174	5	9	7.7	19220	PASS
176	174	95	101	97.5	244395	PASS
177	176	5	9	6.8	16520	PASS

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS30
Method : V830D26P
Review Method : 8260B
Review Protocol : SW846
Released By : John Heath
Released On : 4/27/2016 9:26:31 AM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V830D26P -- ICal Updated Time: Wed Apr 27 09:17:18 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
8260-PENTAFLUOROBENZENE																								
TPH (GC/MS) LOW FRACTION																					0	0	0	1
PROPENE				0.113	0.1	0.09	0.085	0.085	0.087	0.089	0.092										0.092664	10.32	0.103	1
DICHLORODIFLUOROMETHANE	0.282	0.316	0.325	0.316	0.301	0.304	0.297	0.31	0.319	0.324	0.33										0.311343	4.63	0.999	0
CHLOROMETHANE	0.407	0.371	0.369	0.366	0.335	0.347	0.339	0.349	0.356	0.363	0.377										0.361743	5.58	0.056	1
VINYL CHLORIDE	0.317	0.338	0.392	0.377	0.376	0.398	0.386	0.398	0.399	0.392	0.401										0.379347	7.23	0.072	1
1,3-BUTADIENE		0.453	0.369	0.338	0.32	0.313	0.302	0.308	0.304	0.297	0.293										0.329766	14.87	0.149	1
BROMOMETHANE					0.185	0.182	0.157	0.15	0.155	0.158	0.162										0.164004	8.31	0.083	1
CHLOROETHANE	0.244	0.233	0.23	0.248	0.222	0.222	0.206	0.2	0.173	0.151											0.212815	14.65	0.146	1
TRICHLOROFLUOROMETHANE	0.472	0.503	0.561	0.529	0.536	0.547	0.533	0.543	0.548	0.539	0.518										0.530022	4.66	0.047	1
DICHLOROFLUOROMETHANE	0.724	0.644	0.565	0.587	0.592	0.606	0.589	0.607	0.615	0.608	0.618										0.614029	6.82	0.068	1
ETHYL ETHER	0.235	0.208	0.235	0.217	0.213	0.228	0.226	0.226	0.226	0.23	0.238										0.225569	4.29	0.043	1
ACROLEIN	0.056	0.056	0.051	0.046	0.045	0.047	0.047	0.046	0.048	0.048	0.05										0.049226	7.87	0.079	1
1,1-DICHLOROETHENE	0.408	0.428	0.491	0.485	0.456	0.49	0.469	0.481	0.485	0.486	0.488										0.469704	5.95	0.059	1
1,1,2 -TRICHLOROTRIFLUOROETHANE	0.255	0.287	0.334	0.326	0.312	0.331	0.314	0.326	0.324	0.324	0.324										0.31433	7.44	0.074	1
ACETONE			0.164	0.143	0.135	0.142	0.137	0.131	0.131	0.127	0.126										0.137373	8.45	0.085	1
IODOMETHANE		0.599	0.564	0.519	0.485	0.505	0.487	0.493	0.482	0.469	0.436										0.503962	9.36	0.094	1
CARBON DISULFIDE		1.326	1.215	1.122	1.059	1.09	1.008	1.038	1.035	1.033	1.04										1.096294	9.17	0.092	1
METHYLENE CHLORIDE	0.343	0.356	0.329	0.319	0.304	0.317	0.303	0.316	0.312	0.311	0.318										0.320591	5.03	0.05	1
ACRYLONITRILE	0.076	0.072	0.078	0.079	0.074	0.088	0.082	0.082	0.084	0.083	0.085										0.080277	6.28	0.063	1
n-Hexane		0.367	0.351	0.314	0.292	0.3	0.287	0.293	0.294	0.291	0.297										0.308627	8.97	0.09	1
TRANS-1,2-DICHLOROETHENE	0.261	0.28	0.296	0.337	0.308	0.324	0.315	0.326	0.323	0.322	0.323										0.310395	7.32	0.073	1

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS30
Method : V830D26P
Review Method : 8260B
Review Protocol : SW846
Released By : John Heath
Released On : 4/27/2016 9:26:31 AM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V830D26P -- ICal Updated Time: Wed Apr 27 09:17:18 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
METHYL TERT-BUTYL ETHER	0.744	0.835	0.819	0.825	0.798	0.845	0.827	0.819	0.816	0.812	0.824										0.814915	3.26	0.033	1
1,1-DICHLOROETHANE	0.495	0.51	0.57	0.565	0.548	0.576	0.564	0.576	0.576	0.576	0.577										0.557577	5.13	0.051	1
VINYL ACETATE	0.456	0.495	0.521	0.532	0.491	0.53	0.519	0.495	0.47	0.483	0.459										0.495519	5.52	0.055	1
DI-ISOPROPYL ETHER	0.861	0.877	0.912	0.891	0.887	0.929	0.927	0.942	0.933	0.935	0.946										0.912679	3.19	0.032	1
2,2-Dichloropropane	0.551	0.545	0.564	0.542	0.523	0.544	0.528	0.542	0.546	0.542	0.54										0.542495	1.97	0.02	1
CIS-1,2-DICHLOROETHENE	0.275	0.328	0.334	0.348	0.345	0.353	0.344	0.352	0.354	0.352	0.357										0.340104	6.86	0.069	1
2-BUTANONE (MEK)	0.188	0.147	0.151	0.141	0.132	0.15	0.147	0.142	0.143	0.139	0.14										0.147246	9.83	0.098	1
BROMOCHLOROMETHANE	0.161	0.195	0.226	0.204	0.2	0.213	0.206	0.21	0.207	0.204	0.202										0.202534	7.88	0.079	1
TETRAHYDROFURAN				0.086	0.066	0.077	0.071	0.068	0.069	0.067	0.068										0.071527	9.5	0.095	1
CHLOROFORM	0.577	0.572	0.596	0.603	0.568	0.596	0.57	0.573	0.57	0.564	0.567										0.577676	2.37	0.024	1
DIBROMOFLUOROMETHANE	0.469	0.469	0.46	0.454	0.448	0.443	0.437	0.431	0.424	0.42	0.417										0.442919	4.25	0.043	1
1,1,1-TRICHLOROETHANE	0.449	0.471	0.508	0.512	0.491	0.5	0.498	0.516	0.515	0.514	0.514										0.499002	4.26	0.043	1
CARBON TETRACHLORIDE	0.661	0.569	0.594	0.546	0.532	0.535	0.521	0.538	0.541	0.537	0.54										0.555656	7.23	0.072	1
1,1-Dichloropropene	0.363	0.437	0.454	0.451	0.438	0.444	0.44	0.448	0.449	0.442	0.445										0.437261	5.79	0.058	1
2,2,4-TRIMETHYLPENTANE	0.317	0.379	0.375	0.339	0.371	0.361	0.338	0.349	0.338	0.337	0.335										0.349104	5.59	0.056	1
HEPTANE	0.425	0.51	0.483	0.508	0.488	0.499	0.49	0.496	0.497	0.497	0.496										0.489724	4.67	0.047	1
BENZENE	1.251	1.234	1.247	1.262	1.183	1.234	1.204	1.227	1.239	1.235	1.243										1.232632	1.8	0.018	1
1,2-DICHLOROETHANE	0.387	0.34	0.393	0.398	0.39	0.412	0.406	0.402	0.402	0.403	0.407										0.394577	4.98	0.05	1
8260-1,4-DIFLUOROBENZENE																								
TRICHLOROETHENE	0.206	0.211	0.227	0.233	0.222	0.236	0.227	0.234	0.233	0.227	0.228										0.225792	4.29	0.043	1
1,2-DICHLOROPROPANE	0.152	0.14	0.138	0.145	0.141	0.142	0.142	0.145	0.143	0.14	0.145										0.14285	2.67	0.027	1
DIBROMOMETHANE	0.112	0.108	0.131	0.121	0.116	0.125	0.125	0.127	0.126	0.124	0.128										0.122176	5.74	0.057	1

Environmental Science Corporation
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INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS30
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Review Protocol : SW846
Released By : John Heath
Released On : 4/27/2016 9:26:31 AM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V830D26P -- ICal Updated Time: Wed Apr 27 09:17:18 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
BROMODICHLOROMETHANE	0.268	0.315	0.308	0.284	0.275	0.281	0.276	0.286	0.279	0.275	0.284										0.284509	5.06	0.051	1
a,a,a-Trifluorotoluene	0.571	0.564	0.559	0.551	0.55	0.541	0.532	0.536	0.531	0.526	0.542										0.545789	2.67	0.027	1
2-CHLOROETHYL VINYL ETHER		0.023	0.024	0.026	0.026	0.029	0.029	0.029	0.029	0.027	0.026										0.026904	8.1	0.081	1
CIS-1,3-DICHLOROPROPENE	0.263	0.315	0.335	0.33	0.313	0.333	0.339	0.341	0.34	0.336	0.346										0.326556	7.19	0.072	1
4-METHYL-2-PENTANONE (MIBK)	0.136	0.171	0.16	0.156	0.151	0.169	0.168	0.164	0.166	0.162	0.167										0.160977	6.3	0.063	1
TOLUENE-D8	1.194	1.195	1.17	1.147	1.136	1.12	1.119	1.114	1.102	1.098	1.139										1.139563	2.99	0.03	1
TOLUENE	1.056	1.007	0.985	0.947	0.888	0.913	0.891	0.912	0.908	0.892	0.899										0.93631	6	0.06	1
TRANS-1,3-DICHLOROPROPENE	0.259	0.268	0.285	0.288	0.286	0.298	0.297	0.303	0.3	0.297	0.303										0.289443	5.05	0.051	1
8260-2-BROMO-1 -CHLOROPROPANE																								
1,1,2-TRICHLOROETHANE	0.936	1.082	1.1	1.123	1.06	1.138	1.124	1.128	1.104	1.099	1.07										1.087675	5.16	0.052	1
TETRACHLOROETHENE	1.139	1.231	1.256	1.282	1.203	1.277	1.201	1.244	1.211	1.194	1.112										1.213506	4.38	0.044	1
1,3-Dichloropropane	1.779	1.653	1.858	1.884	1.773	1.937	1.883	1.909	1.847	1.833	1.785										1.830926	4.37	0.044	1
2-HEXANONE	0.416	0.463	0.486	0.504	0.459	0.534	0.51	0.517	0.517	0.501	0.49										0.490659	6.83	0.068	1
CHLORODIBROMOMETHANE	1.385	1.233	1.323	1.336	1.268	1.417	1.405	1.408	1.398	1.402	1.371										1.358721	4.53	0.045	1
1,2-DIBROMOETHANE	0.947	1.12	1.208	1.159	1.115	1.205	1.186	1.206	1.174	1.182	1.161										1.151202	6.5	0.065	1
CHLOROBENZENE	3.156	3.819	3.959	4.069	3.862	4.098	3.863	3.926	3.77	3.721	3.478										3.792748	7.15	0.071	1
1,1,1,2-TETRACHLOROETHANE	1.187	1.28	1.382	1.28	1.284	1.381	1.294	1.323	1.28	1.284	1.236										1.291987	4.37	0.044	1
ETHYLBENZENE	2.027	2.01	2.231	2.255	2.114	2.282	2.207	2.254	2.204	2.17	2.043										2.163492	4.57	0.046	1
M&P-XYLENE	2.46	2.608	2.745	2.754	2.641	2.78	2.636	2.68	2.585	2.563	2.386										2.62169	4.65	0.046	1
O-XYLENE	2.401	2.376	2.637	2.606	2.516	2.7	2.598	2.667	2.596	2.605	2.481										2.562053	4.11	0.041	1
STYRENE	3.54	3.986	4.034	4.029	3.976	4.333	4.162	4.321	4.171	4.169	3.967										4.062575	5.34	0.053	1
Bromoform	0.697	0.739	0.849	0.877	0.834	0.916	0.887	0.918	0.902	0.905	0.894										0.856069	8.61	0.086	1

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INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS30
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Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
Isopropylbenzene		7.811	7.161	7.031	6.755	7.161	6.871	7.076	6.769	6.715	6.204										6.955433	5.95	0.06	1
4-BROMOFLUOROBENZENE	2.753	2.749	2.742	2.724	2.712	2.755	2.762	2.788	2.748	2.801	2.719										2.750282	0.98	0.01	1
Bromobenzene	2.735	2.632	2.839	2.664	2.565	2.744	2.672	2.735	2.628	2.608	2.465										2.662469	3.8	0.038	1
1,1,2,2-TETRACHLOROETHANE	1.569	1.397	1.407	1.324	1.337	1.495	1.439	1.435	1.396	1.379	1.334										1.410052	5.2	0.052	1
1,2,3-TRICHLOROPROPANE		0.397	0.389	0.373	0.361	0.432	0.407	0.406	0.397	0.394	0.385										0.393973	4.92	0.049	1
TRANS-1,4-DICHLORO-2-BUTENE		0.45	0.429	0.38	0.372	0.4	0.403	0.401	0.406	0.4	0.386										0.402793	5.67	0.057	1
n-Propylbenzene	6.949	7.171	7.547	7.364	7.322	7.94	7.636	7.885	7.611	7.553	6.978										7.450496	4.42	0.044	1
4-ETHYLTOLUENE	6.716	6.29	6.689	6.548	6.479	7.06	6.695	6.897	6.612	6.529	6.038										6.595694	4.19	0.042	1
2-Chlorotoluene	1.327	1.399	1.532	1.423	1.495	1.561	1.468	1.494	1.441	1.422	1.324										1.444149	5.28	0.053	1
4-Chlorotoluene	4.494	4.517	4.785	4.611	4.5	4.844	4.675	4.838	4.595	4.55	4.279										4.60789	3.69	0.037	1
1,3,5-Trimethylbenzene	5.171	4.996	5.417	5.419	5.416	5.772	5.498	5.614	5.337	5.268	4.812										5.338264	5.08	0.051	1
tert-Butylbenzene	4.405	4.686	4.725	4.817	4.654	5.057	4.806	4.948	4.72	4.665	4.346										4.711609	4.4	0.044	1
1,2,4-Trimethylbenzene	5.1	5.352	5.595	5.573	5.329	5.757	5.549	5.65	5.362	5.308	4.87										5.404089	4.78	0.048	1
sec-Butylbenzene	6.318	7.144	7.423	7.17	7.089	7.669	7.332	7.44	7.124	7.025	6.47										7.109379	5.66	0.057	1
1,3-DICHLOROBENZENE	2.836	3.17	2.995	3.039	3.023	3.271	3.147	3.249	3.088	3.021	2.802										3.058405	4.91	0.049	1
p-Isopropyltoluene	5.221	5.263	5.924	5.88	5.887	6.365	6.112	6.211	5.876	5.785	5.266										5.799162	6.75	0.067	1
DICYCLOPENTADIENE	4.886	5.288	5.948	5.982	5.899	6.392	6.168	6.258	5.96	5.891	5.471										5.831157	7.65	0.077	1
8260-1,4-DICHLOROBENZENE-D4																								
1,4-DICHLOROBENZENE	1.015	1.047	1.031	0.987	0.98	1.018	0.994	1.009	0.988	0.977	0.961										1.000675	2.56	0.026	1
1,2,3-TRIMETHYLBENZENE	1.862	1.937	1.876	1.84	1.763	1.856	1.793	1.832	1.792	1.773	1.724										1.82255	3.31	0.033	1
1,2-DICHLOROBENZENE	0.773	0.902	1.005	0.963	0.917	1	0.983	0.994	0.981	0.971	0.969										0.950746	7.08	0.071	1
n-Butylbenzene	1.825	1.792	1.937	1.843	1.868	1.951	1.895	1.932	1.884	1.872	1.87										1.879034	2.59	0.026	1

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INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS30
Method : V830D26P
Review Method : 8260B
Review Protocol : SW846
Released By : John Heath
Released On : 4/27/2016 9:26:31 AM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V830D26P -- ICal Updated Time: Wed Apr 27 09:17:18 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
1,2-Dibromo-3-chloropropane			0.098	0.097	0.093	0.108	0.107	0.113	0.119	0.117	0.122										0.108165	9.7	0.097	1
1,2,4-Trichlorobenzene	0.598	0.524	0.568	0.583	0.573	0.64	0.624	0.637	0.61	0.603	0.62										0.598313	5.74	0.057	1
HEXACHLORO-1,3-BUTADIENE	0.304	0.317	0.317	0.288	0.294	0.324	0.3	0.317	0.317	0.318	0.339										0.312204	4.65	0.046	1
Naphthalene		1.29	1.317	1.281	1.232	1.441	1.447	1.505	1.526	1.535	1.537										1.411195	8.45	0.084	1
1,2,3-Trichlorobenzene	0.468	0.493	0.523	0.501	0.493	0.553	0.536	0.575	0.563	0.56	0.563										0.529816	6.84	0.068	1
1-Methylnaphthalene					0.522	0.633	0.681	0.759	0.765	0.778	0.827										0.709426	14.75	0.147	1
2-Methylnaphthalene		0.625	0.569	0.483	0.471	0.533	0.588	0.629	0.647	0.645	0.685										0.587466	12.35	0.124	1
AP9-PENTAFLUOROBENZENE																								
ETHANOL												0.003	0.004	0.003	0.003	0.003	0.003	0.004	0.004	0.004	0.003432	3.8	0.038	1
Bromoethane												0.332	0.335	0.331	0.335	0.333	0.33	0.329	0.328	0.335	0.332119	0.77	0.008	1
2-PROPANOL												0.022	0.017	0.016	0.015	0.015	0.016	0.016	0.016	0.017	0.016833	12.54	0.125	1
Methyl Acetate												0.19	0.196	0.185	0.183	0.181	0.182	0.185	0.188	0.184	0.18581	2.63	0.026	1
ACETONITRILE												0.032	0.033	0.03	0.03	0.03	0.031	0.031	0.031	0.032	0.031051	3.28	0.033	1
ALLYL CHLORIDE												0.17	0.18	0.171	0.171	0.172	0.17	0.174	0.169	0.173	0.172247	1.82	0.018	1
tert-BUTYL ALCOHOL												0.082	0.084	0.079	0.079	0.079	0.077	0.083	0.083	0.082	0.080897	2.91	0.029	1
chloroprene												0.517	0.551	0.541	0.526	0.526	0.528	0.534	0.524	0.534	0.531168	1.95	0.019	1
ETHYL TERT-BUTYL ETHER												0.887	0.905	0.84	0.847	0.856	0.849	0.874	0.87	0.866	0.865944	2.41	0.024	1
PROPIONITRILE												0.038	0.039	0.037	0.036	0.036	0.037	0.038	0.038	0.038	0.037339	2.85	0.029	1
Ethyl Acetate												0.256	0.261	0.25	0.244	0.242	0.243	0.25	0.252	0.247	0.2495	2.55	0.026	1
METHACRYLONITRILE												0.114	0.117	0.109	0.11	0.11	0.111	0.113	0.115	0.113	0.112322	2.49	0.025	1
Cyclohexane												0.86	0.88	0.872	0.867	0.868	0.881	0.902	0.874	0.886	0.876632	1.42	0.014	1
tert-butyl formate																					0	0	0	1
ISOBUTANOL												0.017	0.016	0.016	0.016	0.016	0.016	0.016	0.017	0.016	0.016233	2.48	0.025	1

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

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Review Protocol : SW846
Released By : John Heath
Released On : 4/27/2016 9:26:31 AM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V830D26P -- ICal Updated Time: Wed Apr 27 09:17:18 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
Amyl Alcohol												0.024	0.027	0.026	0.024	0.026	0.027	0.027	0.028	0.028	0.026473	5.51	0.055	1
TERT-AMYL METHYL ETHER												1.064	1	0.957	0.957	0.985	0.981	0.995	0.992	0.981	0.990164	3.2	0.032	1
AP9-1,4-DIFLUOROBENZENE																								
N-BUTANOL												0.005	0.006	0.005	0.005	0.005	0.005	0.006	0.006	0.006	0.005373	4.42	0.044	1
Methyl Cyclohexane												1.023	0.774	0.666	0.635	0.622	0.607	0.621	0.596	0.619	0.684952	20.06	0.999	0
2-nitropropane												0.064	0.066	0.059	0.06	0.06	0.061	0.062	0.063	0.062	0.061917	3.61	0.036	1
METHYL METHACRYLATE												0.163	0.161	0.155	0.155	0.156	0.156	0.159	0.16	0.159	0.158305	1.88	0.019	1
1,4-DIOXANE												0.003	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.003	0.00237	4.9	0.049	1
n-octane												0.22	0.251	0.239	0.241	0.243	0.25	0.253	0.248	0.255	0.244386	4.37	0.044	1
3,3-DIMETHYL-1-BUTANOL												0.023	0.024	0.022	0.023	0.024	0.024	0.024	0.025	0.025	0.023674	3.81	0.038	1
AP9-2-BROMO-1 -CHLOROPROPANE																								
ETHYL METHACRYLATE												1.426	1.466	1.377	1.365	1.386	1.392	1.425	1.44	1.397	1.408158	2.34	0.023	1
CIS-1,4-DICHLORO-2-BUTENE												0.407	0.437	0.392	0.394	0.406	0.411	0.412	0.417	0.4	0.408343	3.34	0.033	1
Cyclohexanone												0.308	0.293	0.265	0.264	0.288	0.247	0.261	0.293	0.272	0.276754	7.13	0.071	1
PENTACHLOROETHANE												0.91	0.956	0.933	0.917	0.924	0.943	0.936	0.926	0.927	0.930346	1.49	0.015	1
Hexachloroethane												1.177	1.209	1.154	1.135	1.213	1.221	1.227	1.202	1.22	1.195389	2.71	0.027	1
AP9-1,4-DICHLOROBENZENE-D4																								

Environmental Science Corporation
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INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS30
Method : V830D26P
Review Method : 601-602
Review Protocol : EPA
Released By : John Heath
Released On : 4/27/2016 9:23:39 AM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V830D26P -- ICal Updated Time: Wed Apr 27 09:17:18 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
8260-PENTAFLUOROBENZENE																								
TPH (GC/MS) LOW FRACTION																					0	0	0	1
PROPENE				0.113	0.1	0.09	0.085	0.085	0.087	0.089	0.092										0.092664	10.32	0.103	1
DICHLORODIFLUOROMETHANE	0.282	0.316	0.325	0.316	0.301	0.304	0.297	0.31	0.319	0.324	0.33										0.311343	4.63	0.999	0
CHLOROMETHANE	0.407	0.371	0.369	0.366	0.335	0.347	0.339	0.349	0.356	0.363	0.377										0.361743	5.58	0.056	1
VINYL CHLORIDE	0.317	0.338	0.392	0.377	0.376	0.398	0.386	0.398	0.399	0.392	0.401										0.379347	7.23	0.072	1
1,3-BUTADIENE		0.453	0.369	0.338	0.32	0.313	0.302	0.308	0.304	0.297	0.293										0.329766	14.87	0.149	1
BROMOMETHANE					0.185	0.182	0.157	0.15	0.155	0.158	0.162										0.164004	8.31	0.083	1
CHLOROETHANE	0.244	0.233	0.23	0.248	0.222	0.222	0.206	0.2	0.173	0.151											0.212815	14.65	0.146	1
TRICHLOROFLUOROMETHANE	0.472	0.503	0.561	0.529	0.536	0.547	0.533	0.543	0.548	0.539	0.518										0.530022	4.66	0.047	1
DICHLOROFLUOROMETHANE	0.724	0.644	0.565	0.587	0.592	0.606	0.589	0.607	0.615	0.608	0.618										0.614029	6.82	0.068	1
ETHYL ETHER	0.235	0.208	0.235	0.217	0.213	0.228	0.226	0.226	0.226	0.23	0.238										0.225569	4.29	0.043	1
ACROLEIN	0.056	0.056	0.051	0.046	0.045	0.047	0.047	0.046	0.048	0.048	0.05										0.049226	7.87	0.079	1
1,1-DICHLOROETHENE	0.408	0.428	0.491	0.485	0.456	0.49	0.469	0.481	0.485	0.486	0.488										0.469704	5.95	0.059	1
1,1,2 -TRICHLOROTRIFLUOROETHANE	0.255	0.287	0.334	0.326	0.312	0.331	0.314	0.326	0.324	0.324	0.324										0.31433	7.44	0.074	1
ACETONE			0.164	0.143	0.135	0.142	0.137	0.131	0.131	0.127	0.126										0.137373	8.45	0.085	1
IODOMETHANE		0.599	0.564	0.519	0.485	0.505	0.487	0.493	0.482	0.469	0.436										0.503962	9.36	0.094	1
CARBON DISULFIDE		1.326	1.215	1.122	1.059	1.09	1.008	1.038	1.035	1.033	1.04										1.096294	9.17	0.092	1
METHYLENE CHLORIDE	0.343	0.356	0.329	0.319	0.304	0.317	0.303	0.316	0.312	0.311	0.318										0.320591	5.03	0.05	1
ACRYLONITRILE	0.076	0.072	0.078	0.079	0.074	0.088	0.082	0.082	0.084	0.083	0.085										0.080277	6.28	0.063	1
n-Hexane		0.367	0.351	0.314	0.292	0.3	0.287	0.293	0.294	0.291	0.297										0.308627	8.97	0.09	1
TRANS-1,2-DICHLOROETHENE	0.261	0.28	0.296	0.337	0.308	0.324	0.315	0.326	0.323	0.322	0.323										0.310395	7.32	0.073	1

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Instrument ID : VOCMS30
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Released On : 4/27/2016 9:23:39 AM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V830D26P -- ICal Updated Time: Wed Apr 27 09:17:18 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
METHYL TERT-BUTYL ETHER	0.744	0.835	0.819	0.825	0.798	0.845	0.827	0.819	0.816	0.812	0.824										0.814915	3.26	0.033	1
1,1-DICHLOROETHANE	0.495	0.51	0.57	0.565	0.548	0.576	0.564	0.576	0.576	0.576	0.577										0.557577	5.13	0.051	1
VINYL ACETATE	0.456	0.495	0.521	0.532	0.491	0.53	0.519	0.495	0.47	0.483	0.459										0.495519	5.52	0.055	1
DI-ISOPROPYL ETHER	0.861	0.877	0.912	0.891	0.887	0.929	0.927	0.942	0.933	0.935	0.946										0.912679	3.19	0.032	1
2,2-Dichloropropane	0.551	0.545	0.564	0.542	0.523	0.544	0.528	0.542	0.546	0.542	0.54										0.542495	1.97	0.02	1
CIS-1,2-DICHLOROETHENE	0.275	0.328	0.334	0.348	0.345	0.353	0.344	0.352	0.354	0.352	0.357										0.340104	6.86	0.069	1
2-BUTANONE (MEK)	0.188	0.147	0.151	0.141	0.132	0.15	0.147	0.142	0.143	0.139	0.14										0.147246	9.83	0.098	1
BROMOCHLOROMETHANE	0.161	0.195	0.226	0.204	0.2	0.213	0.206	0.21	0.207	0.204	0.202										0.202534	7.88	0.079	1
TETRAHYDROFURAN				0.086	0.066	0.077	0.071	0.068	0.069	0.067	0.068										0.071527	9.5	0.095	1
CHLOROFORM	0.577	0.572	0.596	0.603	0.568	0.596	0.57	0.573	0.57	0.564	0.567										0.577676	2.37	0.024	1
DIBROMOFLUOROMETHANE	0.469	0.469	0.46	0.454	0.448	0.443	0.437	0.431	0.424	0.42	0.417										0.442919	4.25	0.043	1
1,1,1-TRICHLOROETHANE	0.449	0.471	0.508	0.512	0.491	0.5	0.498	0.516	0.515	0.514	0.514										0.499002	4.26	0.043	1
CARBON TETRACHLORIDE	0.661	0.569	0.594	0.546	0.532	0.535	0.521	0.538	0.541	0.537	0.54										0.555656	7.23	0.072	1
1,1-Dichloropropene	0.363	0.437	0.454	0.451	0.438	0.444	0.44	0.448	0.449	0.442	0.445										0.437261	5.79	0.058	1
2,2,4-TRIMETHYLPENTANE	0.317	0.379	0.375	0.339	0.371	0.361	0.338	0.349	0.338	0.337	0.335										0.349104	5.59	0.056	1
HEPTANE	0.425	0.51	0.483	0.508	0.488	0.499	0.49	0.496	0.497	0.497	0.496										0.489724	4.67	0.047	1
BENZENE	1.251	1.234	1.247	1.262	1.183	1.234	1.204	1.227	1.239	1.235	1.243										1.232632	1.8	0.018	1
1,2-DICHLOROETHANE	0.387	0.34	0.393	0.398	0.39	0.412	0.406	0.402	0.402	0.403	0.407										0.394577	4.98	0.05	1
8260-1,4-DIFLUOROBENZENE																								
TRICHLOROETHENE	0.206	0.211	0.227	0.233	0.222	0.236	0.227	0.234	0.233	0.227	0.228										0.225792	4.29	0.043	1
1,2-DICHLOROPROPANE	0.152	0.14	0.138	0.145	0.141	0.142	0.142	0.145	0.143	0.14	0.145										0.14285	2.67	0.027	1
DIBROMOMETHANE	0.112	0.108	0.131	0.121	0.116	0.125	0.125	0.127	0.126	0.124	0.128										0.122176	5.74	0.057	1

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BROMODICHLOROMETHANE	0.268	0.315	0.308	0.284	0.275	0.281	0.276	0.286	0.279	0.275	0.284										0.284509	5.06	0.051	1
a,a,a-Trifluorotoluene	0.571	0.564	0.559	0.551	0.55	0.541	0.532	0.536	0.531	0.526	0.542										0.545789	2.67	0.027	1
-CHLOROETHYL VINYL ETHER		0.023	0.024	0.026	0.026	0.029	0.029	0.029	0.029	0.027	0.026										0.026904	8.1	0.081	1
CIS-1,3-DICHLOROPROPENE	0.263	0.315	0.335	0.33	0.313	0.333	0.339	0.341	0.34	0.336	0.346										0.326556	7.19	0.072	1
4-METHYL-2-PENTANONE (MIBK)	0.136	0.171	0.16	0.156	0.151	0.169	0.168	0.164	0.166	0.162	0.167										0.160977	6.3	0.063	1
TOLUENE-D8	1.194	1.195	1.17	1.147	1.136	1.12	1.119	1.114	1.102	1.098	1.139										1.139563	2.99	0.03	1
TOLUENE	1.056	1.007	0.985	0.947	0.888	0.913	0.891	0.912	0.908	0.892	0.899										0.93631	6	0.06	1
TRANS-1,3-DICHLOROPROPENE	0.259	0.268	0.285	0.288	0.286	0.298	0.297	0.303	0.3	0.297	0.303										0.289443	5.05	0.051	1
8260-2-BROMO-1 -CHLOROPROPANE																								
1,1,2-TRICHLOROETHANE	0.936	1.082	1.1	1.123	1.06	1.138	1.124	1.128	1.104	1.099	1.07										1.087675	5.16	0.052	1
TETRACHLOROETHENE	1.139	1.231	1.256	1.282	1.203	1.277	1.201	1.244	1.211	1.194	1.112										1.213506	4.38	0.044	1
1,3-Dichloropropane	1.779	1.653	1.858	1.884	1.773	1.937	1.883	1.909	1.847	1.833	1.785										1.830926	4.37	0.044	1
2-HEXANONE	0.416	0.463	0.486	0.504	0.459	0.534	0.51	0.517	0.517	0.501	0.49										0.490659	6.83	0.068	1
CHLORODIBROMOMETHANE	1.385	1.233	1.323	1.336	1.268	1.417	1.405	1.408	1.398	1.402	1.371										1.358721	4.53	0.045	1
1,2-DIBROMOETHANE	0.947	1.12	1.208	1.159	1.115	1.205	1.186	1.206	1.174	1.182	1.161										1.151202	6.5	0.065	1
CHLOROBENZENE	3.156	3.819	3.959	4.069	3.862	4.098	3.863	3.926	3.77	3.721	3.478										3.792748	7.15	0.071	1
1,1,1,2-TETRACHLOROETHANE	1.187	1.28	1.382	1.28	1.284	1.381	1.294	1.323	1.28	1.284	1.236										1.291987	4.37	0.044	1
ETHYLBENZENE	2.027	2.01	2.231	2.255	2.114	2.282	2.207	2.254	2.204	2.17	2.043										2.163492	4.57	0.046	1
M&P-XYLENE	2.46	2.608	2.745	2.754	2.641	2.78	2.636	2.68	2.585	2.563	2.386										2.62169	4.65	0.046	1
O-XYLENE	2.401	2.376	2.637	2.606	2.516	2.7	2.598	2.667	2.596	2.605	2.481										2.562053	4.11	0.041	1
STYRENE	3.54	3.986	4.034	4.029	3.976	4.333	4.162	4.321	4.171	4.169	3.967										4.062575	5.34	0.053	1
Bromoform	0.697	0.739	0.849	0.877	0.834	0.916	0.887	0.918	0.902	0.905	0.894										0.856069	8.61	0.086	1

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INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V830D26P -- ICal Updated Time: Wed Apr 27 09:17:18 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
Isopropylbenzene		7.811	7.161	7.031	6.755	7.161	6.871	7.076	6.769	6.715	6.204										6.955433	5.95	0.06	1
4-BROMOFLUOROBENZENE	2.753	2.749	2.742	2.724	2.712	2.755	2.762	2.788	2.748	2.801	2.719										2.750282	0.98	0.01	1
Bromobenzene	2.735	2.632	2.839	2.664	2.565	2.744	2.672	2.735	2.628	2.608	2.465										2.662469	3.8	0.038	1
1,1,2,2-TETRACHLOROETHANE	1.569	1.397	1.407	1.324	1.337	1.495	1.439	1.435	1.396	1.379	1.334										1.410052	5.2	0.052	1
1,2,3-TRICHLOROPROPANE		0.397	0.389	0.373	0.361	0.432	0.407	0.406	0.397	0.394	0.385										0.393973	4.92	0.049	1
TRANS-1,4-DICHLORO-2-BUTENE		0.45	0.429	0.38	0.372	0.4	0.403	0.401	0.406	0.4	0.386										0.402793	5.67	0.057	1
n-Propylbenzene	6.949	7.171	7.547	7.364	7.322	7.94	7.636	7.885	7.611	7.553	6.978										7.450496	4.42	0.044	1
4-ETHYLTOLUENE	6.716	6.29	6.689	6.548	6.479	7.06	6.695	6.897	6.612	6.529	6.038										6.595694	4.19	0.042	1
2-Chlorotoluene	1.327	1.399	1.532	1.423	1.495	1.561	1.468	1.494	1.441	1.422	1.324										1.444149	5.28	0.053	1
4-Chlorotoluene	4.494	4.517	4.785	4.611	4.5	4.844	4.675	4.838	4.595	4.55	4.279										4.60789	3.69	0.037	1
1,3,5-Trimethylbenzene	5.171	4.996	5.417	5.419	5.416	5.772	5.498	5.614	5.337	5.268	4.812										5.338264	5.08	0.051	1
tert-Butylbenzene	4.405	4.686	4.725	4.817	4.654	5.057	4.806	4.948	4.72	4.665	4.346										4.711609	4.4	0.044	1
1,2,4-Trimethylbenzene	5.1	5.352	5.595	5.573	5.329	5.757	5.549	5.65	5.362	5.308	4.87										5.404089	4.78	0.048	1
sec-Butylbenzene	6.318	7.144	7.423	7.17	7.089	7.669	7.332	7.44	7.124	7.025	6.47										7.109379	5.66	0.057	1
1,3-DICHLOROBENZENE	2.836	3.17	2.995	3.039	3.023	3.271	3.147	3.249	3.088	3.021	2.802										3.058405	4.91	0.049	1
p-Isopropyltoluene	5.221	5.263	5.924	5.88	5.887	6.365	6.112	6.211	5.876	5.785	5.266										5.799162	6.75	0.067	1
DICYCLOPENTADIENE	4.886	5.288	5.948	5.982	5.899	6.392	6.168	6.258	5.96	5.891	5.471										5.831157	7.65	0.077	1
8260-1,4-DICHLOROBENZENE-D4																								
1,4-DICHLOROBENZENE	1.015	1.047	1.031	0.987	0.98	1.018	0.994	1.009	0.988	0.977	0.961										1.000675	2.56	0.026	1
1,2,3-TRIMETHYLBENZENE	1.862	1.937	1.876	1.84	1.763	1.856	1.793	1.832	1.792	1.773	1.724										1.82255	3.31	0.033	1
1,2-DICHLOROBENZENE	0.773	0.902	1.005	0.963	0.917	1	0.983	0.994	0.981	0.971	0.969										0.950746	7.08	0.071	1
n-Butylbenzene	1.825	1.792	1.937	1.843	1.868	1.951	1.895	1.932	1.884	1.872	1.87										1.879034	2.59	0.026	1

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS30
Method : V830D26P
Review Method : 601-602
Review Protocol : EPA
Released By : John Heath
Released On : 4/27/2016 9:23:39 AM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V830D26P -- ICal Updated Time: Wed Apr 27 09:17:18 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
1,2-Dibromo-3-chloropropane			0.098	0.097	0.093	0.108	0.107	0.113	0.119	0.117	0.122										0.108165	9.7	0.097	1
1,2,4-Trichlorobenzene	0.598	0.524	0.568	0.583	0.573	0.64	0.624	0.637	0.61	0.603	0.62										0.598313	5.74	0.057	1
HEXACHLORO-1,3-BUTADIENE	0.304	0.317	0.317	0.288	0.294	0.324	0.3	0.317	0.317	0.318	0.339										0.312204	4.65	0.046	1
Naphthalene		1.29	1.317	1.281	1.232	1.441	1.447	1.505	1.526	1.535	1.537										1.411195	8.45	0.084	1
1,2,3-Trichlorobenzene	0.468	0.493	0.523	0.501	0.493	0.553	0.536	0.575	0.563	0.56	0.563										0.529816	6.84	0.068	1
1-Methylnaphthalene					0.522	0.633	0.681	0.759	0.765	0.778	0.827										0.709426	14.75	0.147	1
2-Methylnaphthalene		0.625	0.569	0.483	0.471	0.533	0.588	0.629	0.647	0.645	0.685										0.587466	12.35	0.124	1
AP9-PENTAFLUOROBENZENE																								
ETHANOL												0.003	0.004	0.003	0.003	0.003	0.003	0.004	0.004	0.004	0.003432	3.8	0.038	1
Bromoethane												0.332	0.335	0.331	0.335	0.333	0.33	0.329	0.328	0.335	0.332119	0.77	0.008	1
2-PROPANOL												0.022	0.017	0.016	0.015	0.015	0.016	0.016	0.016	0.017	0.016833	12.54	0.125	1
Methyl Acetate												0.19	0.196	0.185	0.183	0.181	0.182	0.185	0.188	0.184	0.18581	2.63	0.026	1
ACETONITRILE												0.032	0.033	0.03	0.03	0.03	0.031	0.031	0.031	0.032	0.031051	3.28	0.033	1
ALLYL CHLORIDE												0.17	0.18	0.171	0.171	0.172	0.17	0.174	0.169	0.173	0.172247	1.82	0.018	1
tert-BUTYL ALCOHOL												0.082	0.084	0.079	0.079	0.079	0.077	0.083	0.083	0.082	0.080897	2.91	0.029	1
chloroprene												0.517	0.551	0.541	0.526	0.526	0.528	0.534	0.524	0.534	0.531168	1.95	0.019	1
ETHYL TERT-BUTYL ETHER												0.887	0.905	0.84	0.847	0.856	0.849	0.874	0.87	0.866	0.865944	2.41	0.024	1
PROPIONITRILE												0.038	0.039	0.037	0.036	0.036	0.037	0.038	0.038	0.038	0.037339	2.85	0.029	1
Ethyl Acetate												0.256	0.261	0.25	0.244	0.242	0.243	0.25	0.252	0.247	0.2495	2.55	0.026	1
METHACRYLONITRILE												0.114	0.117	0.109	0.11	0.11	0.111	0.113	0.115	0.113	0.112322	2.49	0.025	1
Cyclohexane												0.86	0.88	0.872	0.867	0.868	0.881	0.902	0.874	0.886	0.876632	1.42	0.014	1
tert-butyl formate																					0	0	0	1
ISOBUTANOL												0.017	0.016	0.016	0.016	0.016	0.016	0.016	0.017	0.016	0.016233	2.48	0.025	1

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS30
Method : V830D26P
Review Method : 601-602
Review Protocol : EPA
Released By : John Heath
Released On : 4/27/2016 9:23:39 AM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V830D26P -- ICal Updated Time: Wed Apr 27 09:17:18 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
Amyl Alcohol												0.024	0.027	0.026	0.024	0.026	0.027	0.027	0.028	0.028	0.026473	5.51	0.055	1
TERT-AMYL METHYL ETHER												1.064	1	0.957	0.957	0.985	0.981	0.995	0.992	0.981	0.990164	3.2	0.032	1
AP9-1,4-DIFLUOROBENZENE																								
N-BUTANOL												0.005	0.006	0.005	0.005	0.005	0.005	0.006	0.006	0.006	0.005373	4.42	0.044	1
Methyl Cyclohexane												1.023	0.774	0.666	0.635	0.622	0.607	0.621	0.596	0.619	0.684952	20.06	0.999	0
2-nitropropane												0.064	0.066	0.059	0.06	0.06	0.061	0.062	0.063	0.062	0.061917	3.61	0.036	1
METHYL METHACRYLATE												0.163	0.161	0.155	0.155	0.156	0.156	0.159	0.16	0.159	0.158305	1.88	0.019	1
1,4-DIOXANE												0.003	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.003	0.00237	4.9	0.049	1
n-octane												0.22	0.251	0.239	0.241	0.243	0.25	0.253	0.248	0.255	0.244386	4.37	0.044	1
3,3-DIMETHYL-1-BUTANOL												0.023	0.024	0.022	0.023	0.024	0.024	0.024	0.025	0.025	0.023674	3.81	0.038	1
AP9-2-BROMO-1 -CHLOROPROPANE																								
ETHYL METHACRYLATE												1.426	1.466	1.377	1.365	1.386	1.392	1.425	1.44	1.397	1.408158	2.34	0.023	1
CIS-1,4-DICHLORO-2-BUTENE												0.407	0.437	0.392	0.394	0.406	0.411	0.412	0.417	0.4	0.408343	3.34	0.033	1
Cyclohexanone												0.308	0.293	0.265	0.264	0.288	0.247	0.261	0.293	0.272	0.276754	7.13	0.071	1
PENTACHLOROETHANE												0.91	0.956	0.933	0.917	0.924	0.943	0.936	0.926	0.927	0.930346	1.49	0.015	1
Hexachloroethane												1.177	1.209	1.154	1.135	1.213	1.221	1.227	1.202	1.22	1.195389	2.71	0.027	1
AP9-1,4-DICHLOROBENZENE-D4																								

Environmental Science Corporation
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INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS30
Method : V830D26P
Review Method : 624
Review Protocol : EPA
Released By : John Heath
Released On : 4/27/2016 9:24:16 AM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V830D26P -- ICal Updated Time: Wed Apr 27 09:17:18 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
8260-PENTAFLUOROBENZENE																								
TPH (GC/MS) LOW FRACTION																					0	0	0	1
PROPENE				0.113	0.1	0.09	0.085	0.085	0.087	0.089	0.092										0.092664	10.32	0.103	1
DICHLORODIFLUOROMETHANE	0.282	0.316	0.325	0.316	0.301	0.304	0.297	0.31	0.319	0.324	0.33										0.311343	4.63	0.999	0
CHLOROMETHANE	0.407	0.371	0.369	0.366	0.335	0.347	0.339	0.349	0.356	0.363	0.377										0.361743	5.58	0.056	1
VINYL CHLORIDE	0.317	0.338	0.392	0.377	0.376	0.398	0.386	0.398	0.399	0.392	0.401										0.379347	7.23	0.072	1
1,3-BUTADIENE		0.453	0.369	0.338	0.32	0.313	0.302	0.308	0.304	0.297	0.293										0.329766	14.87	0.149	1
BROMOMETHANE					0.185	0.182	0.157	0.15	0.155	0.158	0.162										0.164004	8.31	0.083	1
CHLOROETHANE	0.244	0.233	0.23	0.248	0.222	0.222	0.206	0.2	0.173	0.151											0.212815	14.65	0.146	1
TRICHLOROFLUOROMETHANE	0.472	0.503	0.561	0.529	0.536	0.547	0.533	0.543	0.548	0.539	0.518										0.530022	4.66	0.047	1
DICHLOROFLUOROMETHANE	0.724	0.644	0.565	0.587	0.592	0.606	0.589	0.607	0.615	0.608	0.618										0.614029	6.82	0.068	1
ETHYL ETHER	0.235	0.208	0.235	0.217	0.213	0.228	0.226	0.226	0.226	0.23	0.238										0.225569	4.29	0.043	1
ACROLEIN	0.056	0.056	0.051	0.046	0.045	0.047	0.047	0.046	0.048	0.048	0.05										0.049226	7.87	0.079	1
1,1-DICHLOROETHENE	0.408	0.428	0.491	0.485	0.456	0.49	0.469	0.481	0.485	0.486	0.488										0.469704	5.95	0.059	1
1,1,2 -TRICHLOROTRIFLUOROETHANE	0.255	0.287	0.334	0.326	0.312	0.331	0.314	0.326	0.324	0.324	0.324										0.31433	7.44	0.074	1
ACETONE			0.164	0.143	0.135	0.142	0.137	0.131	0.131	0.127	0.126										0.137373	8.45	0.085	1
IODOMETHANE		0.599	0.564	0.519	0.485	0.505	0.487	0.493	0.482	0.469	0.436										0.503962	9.36	0.094	1
CARBON DISULFIDE		1.326	1.215	1.122	1.059	1.09	1.008	1.038	1.035	1.033	1.04										1.096294	9.17	0.092	1
METHYLENE CHLORIDE	0.343	0.356	0.329	0.319	0.304	0.317	0.303	0.316	0.312	0.311	0.318										0.320591	5.03	0.05	1
ACRYLONITRILE	0.076	0.072	0.078	0.079	0.074	0.088	0.082	0.082	0.084	0.083	0.085										0.080277	6.28	0.063	1
n-Hexane		0.367	0.351	0.314	0.292	0.3	0.287	0.293	0.294	0.291	0.297										0.308627	8.97	0.09	1
TRANS-1,2-DICHLOROETHENE	0.261	0.28	0.296	0.337	0.308	0.324	0.315	0.326	0.323	0.322	0.323										0.310395	7.32	0.073	1

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS30
Method : V830D26P
Review Method : 624
Review Protocol : EPA
Released By : John Heath
Released On : 4/27/2016 9:24:16 AM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V830D26P -- ICal Updated Time: Wed Apr 27 09:17:18 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
METHYL TERT-BUTYL ETHER	0.744	0.835	0.819	0.825	0.798	0.845	0.827	0.819	0.816	0.812	0.824										0.814915	3.26	0.033	1
1,1-DICHLOROETHANE	0.495	0.51	0.57	0.565	0.548	0.576	0.564	0.576	0.576	0.576	0.577										0.557577	5.13	0.051	1
VINYL ACETATE	0.456	0.495	0.521	0.532	0.491	0.53	0.519	0.495	0.47	0.483	0.459										0.495519	5.52	0.055	1
DI-ISOPROPYL ETHER	0.861	0.877	0.912	0.891	0.887	0.929	0.927	0.942	0.933	0.935	0.946										0.912679	3.19	0.032	1
2,2-Dichloropropane	0.551	0.545	0.564	0.542	0.523	0.544	0.528	0.542	0.546	0.542	0.54										0.542495	1.97	0.02	1
CIS-1,2-DICHLOROETHENE	0.275	0.328	0.334	0.348	0.345	0.353	0.344	0.352	0.354	0.352	0.357										0.340104	6.86	0.069	1
2-BUTANONE (MEK)	0.188	0.147	0.151	0.141	0.132	0.15	0.147	0.142	0.143	0.139	0.14										0.147246	9.83	0.098	1
BROMOCHLOROMETHANE	0.161	0.195	0.226	0.204	0.2	0.213	0.206	0.21	0.207	0.204	0.202										0.202534	7.88	0.079	1
TETRAHYDROFURAN				0.086	0.066	0.077	0.071	0.068	0.069	0.067	0.068										0.071527	9.5	0.095	1
CHLOROFORM	0.577	0.572	0.596	0.603	0.568	0.596	0.57	0.573	0.57	0.564	0.567										0.577676	2.37	0.024	1
DIBROMOFLUOROMETHANE	0.469	0.469	0.46	0.454	0.448	0.443	0.437	0.431	0.424	0.42	0.417										0.442919	4.25	0.043	1
1,1,1-TRICHLOROETHANE	0.449	0.471	0.508	0.512	0.491	0.5	0.498	0.516	0.515	0.514	0.514										0.499002	4.26	0.043	1
CARBON TETRACHLORIDE	0.661	0.569	0.594	0.546	0.532	0.535	0.521	0.538	0.541	0.537	0.54										0.555656	7.23	0.072	1
1,1-Dichloropropene	0.363	0.437	0.454	0.451	0.438	0.444	0.44	0.448	0.449	0.442	0.445										0.437261	5.79	0.058	1
2,2,4-TRIMETHYLPENTANE	0.317	0.379	0.375	0.339	0.371	0.361	0.338	0.349	0.338	0.337	0.335										0.349104	5.59	0.056	1
HEPTANE	0.425	0.51	0.483	0.508	0.488	0.499	0.49	0.496	0.497	0.497	0.496										0.489724	4.67	0.047	1
BENZENE	1.251	1.234	1.247	1.262	1.183	1.234	1.204	1.227	1.239	1.235	1.243										1.232632	1.8	0.018	1
1,2-DICHLOROETHANE	0.387	0.34	0.393	0.398	0.39	0.412	0.406	0.402	0.402	0.403	0.407										0.394577	4.98	0.05	1
8260-1,4-DIFLUOROBENZENE																								
TRICHLOROETHENE	0.206	0.211	0.227	0.233	0.222	0.236	0.227	0.234	0.233	0.227	0.228										0.225792	4.29	0.043	1
1,2-DICHLOROPROPANE	0.152	0.14	0.138	0.145	0.141	0.142	0.142	0.145	0.143	0.14	0.145										0.14285	2.67	0.027	1
DIBROMOMETHANE	0.112	0.108	0.131	0.121	0.116	0.125	0.125	0.127	0.126	0.124	0.128										0.122176	5.74	0.057	1

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Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
BROMODICHLOROMETHANE	0.268	0.315	0.308	0.284	0.275	0.281	0.276	0.286	0.279	0.275	0.284										0.284509	5.06	0.051	1
a,a,a-Trifluorotoluene	0.571	0.564	0.559	0.551	0.55	0.541	0.532	0.536	0.531	0.526	0.542										0.545789	2.67	0.027	1
-CHLOROETHYL VINYL ETHER		0.023	0.024	0.026	0.026	0.029	0.029	0.029	0.029	0.027	0.026										0.026904	8.1	0.081	1
CIS-1,3-DICHLOROPROPENE	0.263	0.315	0.335	0.33	0.313	0.333	0.339	0.341	0.34	0.336	0.346										0.326556	7.19	0.072	1
4-METHYL-2-PENTANONE (MIBK)	0.136	0.171	0.16	0.156	0.151	0.169	0.168	0.164	0.166	0.162	0.167										0.160977	6.3	0.063	1
TOLUENE-D8	1.194	1.195	1.17	1.147	1.136	1.12	1.119	1.114	1.102	1.098	1.139										1.139563	2.99	0.03	1
TOLUENE	1.056	1.007	0.985	0.947	0.888	0.913	0.891	0.912	0.908	0.892	0.899										0.93631	6	0.06	1
TRANS-1,3-DICHLOROPROPENE	0.259	0.268	0.285	0.288	0.286	0.298	0.297	0.303	0.3	0.297	0.303										0.289443	5.05	0.051	1
8260-2-BROMO-1 -CHLOROPROPANE																								
1,1,2-TRICHLOROETHANE	0.936	1.082	1.1	1.123	1.06	1.138	1.124	1.128	1.104	1.099	1.07										1.087675	5.16	0.052	1
TETRACHLOROETHENE	1.139	1.231	1.256	1.282	1.203	1.277	1.201	1.244	1.211	1.194	1.112										1.213506	4.38	0.044	1
1,3-Dichloropropane	1.779	1.653	1.858	1.884	1.773	1.937	1.883	1.909	1.847	1.833	1.785										1.830926	4.37	0.044	1
2-HEXANONE	0.416	0.463	0.486	0.504	0.459	0.534	0.51	0.517	0.517	0.501	0.49										0.490659	6.83	0.068	1
CHLORODIBROMOMETHANE	1.385	1.233	1.323	1.336	1.268	1.417	1.405	1.408	1.398	1.402	1.371										1.358721	4.53	0.045	1
1,2-DIBROMOETHANE	0.947	1.12	1.208	1.159	1.115	1.205	1.186	1.206	1.174	1.182	1.161										1.151202	6.5	0.065	1
CHLOROBENZENE	3.156	3.819	3.959	4.069	3.862	4.098	3.863	3.926	3.77	3.721	3.478										3.792748	7.15	0.071	1
1,1,1,2-TETRACHLOROETHANE	1.187	1.28	1.382	1.28	1.284	1.381	1.294	1.323	1.28	1.284	1.236										1.291987	4.37	0.044	1
ETHYLBENZENE	2.027	2.01	2.231	2.255	2.114	2.282	2.207	2.254	2.204	2.17	2.043										2.163492	4.57	0.046	1
M&P-XYLENE	2.46	2.608	2.745	2.754	2.641	2.78	2.636	2.68	2.585	2.563	2.386										2.62169	4.65	0.046	1
O-XYLENE	2.401	2.376	2.637	2.606	2.516	2.7	2.598	2.667	2.596	2.605	2.481										2.562053	4.11	0.041	1
STYRENE	3.54	3.986	4.034	4.029	3.976	4.333	4.162	4.321	4.171	4.169	3.967										4.062575	5.34	0.053	1
Bromoform	0.697	0.739	0.849	0.877	0.834	0.916	0.887	0.918	0.902	0.905	0.894										0.856069	8.61	0.086	1

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS30
Method : V830D26P
Review Method : 624
Review Protocol : EPA
Released By : John Heath
Released On : 4/27/2016 9:24:16 AM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V830D26P -- ICal Updated Time: Wed Apr 27 09:17:18 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
Isopropylbenzene		7.811	7.161	7.031	6.755	7.161	6.871	7.076	6.769	6.715	6.204										6.955433	5.95	0.06	1
4-BROMOFLUOROBENZENE	2.753	2.749	2.742	2.724	2.712	2.755	2.762	2.788	2.748	2.801	2.719										2.750282	0.98	0.01	1
Bromobenzene	2.735	2.632	2.839	2.664	2.565	2.744	2.672	2.735	2.628	2.608	2.465										2.662469	3.8	0.038	1
1,1,2,2-TETRACHLOROETHANE	1.569	1.397	1.407	1.324	1.337	1.495	1.439	1.435	1.396	1.379	1.334										1.410052	5.2	0.052	1
1,2,3-TRICHLOROPROPANE		0.397	0.389	0.373	0.361	0.432	0.407	0.406	0.397	0.394	0.385										0.393973	4.92	0.049	1
TRANS-1,4-DICHLORO-2-BUTENE		0.45	0.429	0.38	0.372	0.4	0.403	0.401	0.406	0.4	0.386										0.402793	5.67	0.057	1
n-Propylbenzene	6.949	7.171	7.547	7.364	7.322	7.94	7.636	7.885	7.611	7.553	6.978										7.450496	4.42	0.044	1
4-ETHYLTOLUENE	6.716	6.29	6.689	6.548	6.479	7.06	6.695	6.897	6.612	6.529	6.038										6.595694	4.19	0.042	1
2-Chlorotoluene	1.327	1.399	1.532	1.423	1.495	1.561	1.468	1.494	1.441	1.422	1.324										1.444149	5.28	0.053	1
4-Chlorotoluene	4.494	4.517	4.785	4.611	4.5	4.844	4.675	4.838	4.595	4.55	4.279										4.60789	3.69	0.037	1
1,3,5-Trimethylbenzene	5.171	4.996	5.417	5.419	5.416	5.772	5.498	5.614	5.337	5.268	4.812										5.338264	5.08	0.051	1
tert-Butylbenzene	4.405	4.686	4.725	4.817	4.654	5.057	4.806	4.948	4.72	4.665	4.346										4.711609	4.4	0.044	1
1,2,4-Trimethylbenzene	5.1	5.352	5.595	5.573	5.329	5.757	5.549	5.65	5.362	5.308	4.87										5.404089	4.78	0.048	1
sec-Butylbenzene	6.318	7.144	7.423	7.17	7.089	7.669	7.332	7.44	7.124	7.025	6.47										7.109379	5.66	0.057	1
1,3-DICHLOROBENZENE	2.836	3.17	2.995	3.039	3.023	3.271	3.147	3.249	3.088	3.021	2.802										3.058405	4.91	0.049	1
p-Isopropyltoluene	5.221	5.263	5.924	5.88	5.887	6.365	6.112	6.211	5.876	5.785	5.266										5.799162	6.75	0.067	1
DICYCLOPENTADIENE	4.886	5.288	5.948	5.982	5.899	6.392	6.168	6.258	5.96	5.891	5.471										5.831157	7.65	0.077	1
8260-1,4-DICHLOROBENZENE-D4																								
1,4-DICHLOROBENZENE	1.015	1.047	1.031	0.987	0.98	1.018	0.994	1.009	0.988	0.977	0.961										1.000675	2.56	0.026	1
1,2,3-TRIMETHYLBENZENE	1.862	1.937	1.876	1.84	1.763	1.856	1.793	1.832	1.792	1.773	1.724										1.82255	3.31	0.033	1
1,2-DICHLOROBENZENE	0.773	0.902	1.005	0.963	0.917	1	0.983	0.994	0.981	0.971	0.969										0.950746	7.08	0.071	1
n-Butylbenzene	1.825	1.792	1.937	1.843	1.868	1.951	1.895	1.932	1.884	1.872	1.87										1.879034	2.59	0.026	1

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS30
Method : V830D26P
Review Method : 624
Review Protocol : EPA
Released By : John Heath
Released On : 4/27/2016 9:24:16 AM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V830D26P -- ICal Updated Time: Wed Apr 27 09:17:18 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
1,2-Dibromo-3-chloropropane			0.098	0.097	0.093	0.108	0.107	0.113	0.119	0.117	0.122										0.108165	9.7	0.097	1
1,2,4-Trichlorobenzene	0.598	0.524	0.568	0.583	0.573	0.64	0.624	0.637	0.61	0.603	0.62										0.598313	5.74	0.057	1
HEXACHLORO-1,3-BUTADIENE	0.304	0.317	0.317	0.288	0.294	0.324	0.3	0.317	0.317	0.318	0.339										0.312204	4.65	0.046	1
Naphthalene		1.29	1.317	1.281	1.232	1.441	1.447	1.505	1.526	1.535	1.537										1.411195	8.45	0.084	1
1,2,3-Trichlorobenzene	0.468	0.493	0.523	0.501	0.493	0.553	0.536	0.575	0.563	0.56	0.563										0.529816	6.84	0.068	1
1-Methylnaphthalene					0.522	0.633	0.681	0.759	0.765	0.778	0.827										0.709426	14.75	0.147	1
2-Methylnaphthalene		0.625	0.569	0.483	0.471	0.533	0.588	0.629	0.647	0.645	0.685										0.587466	12.35	0.124	1
AP9-PENTAFLUOROBENZENE																								
ETHANOL												0.003	0.004	0.003	0.003	0.003	0.003	0.004	0.004	0.004	0.003432	3.8	0.038	1
Bromoethane												0.332	0.335	0.331	0.335	0.333	0.33	0.329	0.328	0.335	0.332119	0.77	0.008	1
2-PROPANOL												0.022	0.017	0.016	0.015	0.015	0.016	0.016	0.016	0.017	0.016833	12.54	0.125	1
Methyl Acetate												0.19	0.196	0.185	0.183	0.181	0.182	0.185	0.188	0.184	0.18581	2.63	0.026	1
ACETONITRILE												0.032	0.033	0.03	0.03	0.03	0.031	0.031	0.031	0.032	0.031051	3.28	0.033	1
ALLYL CHLORIDE												0.17	0.18	0.171	0.171	0.172	0.17	0.174	0.169	0.173	0.172247	1.82	0.018	1
tert-BUTYL ALCOHOL												0.082	0.084	0.079	0.079	0.079	0.077	0.083	0.083	0.082	0.080897	2.91	0.029	1
chloroprene												0.517	0.551	0.541	0.526	0.526	0.528	0.534	0.524	0.534	0.531168	1.95	0.019	1
ETHYL TERT-BUTYL ETHER												0.887	0.905	0.84	0.847	0.856	0.849	0.874	0.87	0.866	0.865944	2.41	0.024	1
PROPIONITRILE												0.038	0.039	0.037	0.036	0.036	0.037	0.038	0.038	0.038	0.037339	2.85	0.029	1
Ethyl Acetate												0.256	0.261	0.25	0.244	0.242	0.243	0.25	0.252	0.247	0.2495	2.55	0.026	1
METHACRYLONITRILE												0.114	0.117	0.109	0.11	0.11	0.111	0.113	0.115	0.113	0.112322	2.49	0.025	1
Cyclohexane												0.86	0.88	0.872	0.867	0.868	0.881	0.902	0.874	0.886	0.876632	1.42	0.014	1
tert-butyl formate																					0	0	0	1
ISOBUTANOL												0.017	0.016	0.016	0.016	0.016	0.016	0.016	0.017	0.016	0.016233	2.48	0.025	1

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS30
Method : V830D26P
Review Method : 624
Review Protocol : EPA
Released By : John Heath
Released On : 4/27/2016 9:24:16 AM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V830D26P -- ICal Updated Time: Wed Apr 27 09:17:18 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
Amyl Alcohol												0.024	0.027	0.026	0.024	0.026	0.027	0.027	0.028	0.028	0.026473	5.51	0.055	1
TERT-AMYL METHYL ETHER												1.064	1	0.957	0.957	0.985	0.981	0.995	0.992	0.981	0.990164	3.2	0.032	1
AP9-1,4-DIFLUOROBENZENE																								
N-BUTANOL												0.005	0.006	0.005	0.005	0.005	0.005	0.006	0.006	0.006	0.005373	4.42	0.044	1
Methyl Cyclohexane												1.023	0.774	0.666	0.635	0.622	0.607	0.621	0.596	0.619	0.684952	20.06	0.999	0
2-nitropropane												0.064	0.066	0.059	0.06	0.06	0.061	0.062	0.063	0.062	0.061917	3.61	0.036	1
METHYL METHACRYLATE												0.163	0.161	0.155	0.155	0.156	0.156	0.159	0.16	0.159	0.158305	1.88	0.019	1
1,4-DIOXANE												0.003	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.003	0.00237	4.9	0.049	1
n-octane												0.22	0.251	0.239	0.241	0.243	0.25	0.253	0.248	0.255	0.244386	4.37	0.044	1
3,3-DIMETHYL-1-BUTANOL												0.023	0.024	0.022	0.023	0.024	0.024	0.024	0.025	0.025	0.023674	3.81	0.038	1
AP9-2-BROMO-1 -CHLOROPROPANE																								
ETHYL METHACRYLATE												1.426	1.466	1.377	1.365	1.386	1.392	1.425	1.44	1.397	1.408158	2.34	0.023	1
CIS-1,4-DICHLORO-2-BUTENE												0.407	0.437	0.392	0.394	0.406	0.411	0.412	0.417	0.4	0.408343	3.34	0.033	1
Cyclohexanone												0.308	0.293	0.265	0.264	0.288	0.247	0.261	0.293	0.272	0.276754	7.13	0.071	1
PENTACHLOROETHANE												0.91	0.956	0.933	0.917	0.924	0.943	0.936	0.926	0.927	0.930346	1.49	0.015	1
Hexachloroethane												1.177	1.209	1.154	1.135	1.213	1.221	1.227	1.202	1.22	1.195389	2.71	0.027	1
AP9-1,4-DICHLOROBENZENE-D4																								

Environmental Science Corporation
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INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS30
Method : V830D26P
Review Method : 8260SC
Review Protocol : SC
Released By : John Heath
Released On : 4/27/2016 9:24:48 AM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V830D26P -- ICal Updated Time: Wed Apr 27 09:17:18 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
8260-PENTAFLUOROBENZENE																								
TPH (GC/MS) LOW FRACTION																					0	0	0	1
PROPENE				0.113	0.1	0.09	0.085	0.085	0.087	0.089	0.092										0.092664	10.32	0.103	1
DICHLORODIFLUOROMETHANE	0.282	0.316	0.325	0.316	0.301	0.304	0.297	0.31	0.319	0.324	0.33										0.311343	4.63	0.999	0
CHLOROMETHANE	0.407	0.371	0.369	0.366	0.335	0.347	0.339	0.349	0.356	0.363	0.377										0.361743	5.58	0.056	1
VINYL CHLORIDE	0.317	0.338	0.392	0.377	0.376	0.398	0.386	0.398	0.399	0.392	0.401										0.379347	7.23	0.072	1
1,3-BUTADIENE		0.453	0.369	0.338	0.32	0.313	0.302	0.308	0.304	0.297	0.293										0.329766	14.87	0.149	1
BROMOMETHANE					0.185	0.182	0.157	0.15	0.155	0.158	0.162										0.164004	8.31	0.083	1
CHLOROETHANE	0.244	0.233	0.23	0.248	0.222	0.222	0.206	0.2	0.173	0.151											0.212815	14.65	0.146	1
TRICHLOROFLUOROMETHANE	0.472	0.503	0.561	0.529	0.536	0.547	0.533	0.543	0.548	0.539	0.518										0.530022	4.66	0.047	1
DICHLOROFLUOROMETHANE	0.724	0.644	0.565	0.587	0.592	0.606	0.589	0.607	0.615	0.608	0.618										0.614029	6.82	0.068	1
ETHYL ETHER	0.235	0.208	0.235	0.217	0.213	0.228	0.226	0.226	0.226	0.23	0.238										0.225569	4.29	0.043	1
ACROLEIN	0.056	0.056	0.051	0.046	0.045	0.047	0.047	0.046	0.048	0.048	0.05										0.049226	7.87	0.079	1
1,1-DICHLOROETHENE	0.408	0.428	0.491	0.485	0.456	0.49	0.469	0.481	0.485	0.486	0.488										0.469704	5.95	0.059	1
1,1,2 -TRICHLOROTRIFLUOROETHANE	0.255	0.287	0.334	0.326	0.312	0.331	0.314	0.326	0.324	0.324	0.324										0.31433	7.44	0.074	1
ACETONE			0.164	0.143	0.135	0.142	0.137	0.131	0.131	0.127	0.126										0.137373	8.45	0.085	1
IODOMETHANE		0.599	0.564	0.519	0.485	0.505	0.487	0.493	0.482	0.469	0.436										0.503962	9.36	0.094	1
CARBON DISULFIDE		1.326	1.215	1.122	1.059	1.09	1.008	1.038	1.035	1.033	1.04										1.096294	9.17	0.092	1
METHYLENE CHLORIDE	0.343	0.356	0.329	0.319	0.304	0.317	0.303	0.316	0.312	0.311	0.318										0.320591	5.03	0.05	1
ACRYLONITRILE	0.076	0.072	0.078	0.079	0.074	0.088	0.082	0.082	0.084	0.083	0.085										0.080277	6.28	0.063	1
n-Hexane		0.367	0.351	0.314	0.292	0.3	0.287	0.293	0.294	0.291	0.297										0.308627	8.97	0.09	1
TRANS-1,2-DICHLOROETHENE	0.261	0.28	0.296	0.337	0.308	0.324	0.315	0.326	0.323	0.322	0.323										0.310395	7.32	0.073	1

Environmental Science Corporation
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INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS30
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Review Method : 8260SC
Review Protocol : SC
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Released On : 4/27/2016 9:24:48 AM

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Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
METHYL TERT-BUTYL ETHER	0.744	0.835	0.819	0.825	0.798	0.845	0.827	0.819	0.816	0.812	0.824										0.814915	3.26	0.033	1
1,1-DICHLOROETHANE	0.495	0.51	0.57	0.565	0.548	0.576	0.564	0.576	0.576	0.576	0.577										0.557577	5.13	0.051	1
VINYL ACETATE	0.456	0.495	0.521	0.532	0.491	0.53	0.519	0.495	0.47	0.483	0.459										0.495519	5.52	0.055	1
DI-ISOPROPYL ETHER	0.861	0.877	0.912	0.891	0.887	0.929	0.927	0.942	0.933	0.935	0.946										0.912679	3.19	0.032	1
2,2-Dichloropropane	0.551	0.545	0.564	0.542	0.523	0.544	0.528	0.542	0.546	0.542	0.54										0.542495	1.97	0.02	1
CIS-1,2-DICHLOROETHENE	0.275	0.328	0.334	0.348	0.345	0.353	0.344	0.352	0.354	0.352	0.357										0.340104	6.86	0.069	1
2-BUTANONE (MEK)	0.188	0.147	0.151	0.141	0.132	0.15	0.147	0.142	0.143	0.139	0.14										0.147246	9.83	0.098	1
BROMOCHLOROMETHANE	0.161	0.195	0.226	0.204	0.2	0.213	0.206	0.21	0.207	0.204	0.202										0.202534	7.88	0.079	1
TETRAHYDROFURAN				0.086	0.066	0.077	0.071	0.068	0.069	0.067	0.068										0.071527	9.5	0.095	1
CHLOROFORM	0.577	0.572	0.596	0.603	0.568	0.596	0.57	0.573	0.57	0.564	0.567										0.577676	2.37	0.024	1
DIBROMOFLUOROMETHANE	0.469	0.469	0.46	0.454	0.448	0.443	0.437	0.431	0.424	0.42	0.417										0.442919	4.25	0.043	1
1,1,1-TRICHLOROETHANE	0.449	0.471	0.508	0.512	0.491	0.5	0.498	0.516	0.515	0.514	0.514										0.499002	4.26	0.043	1
CARBON TETRACHLORIDE	0.661	0.569	0.594	0.546	0.532	0.535	0.521	0.538	0.541	0.537	0.54										0.555656	7.23	0.072	1
1,1-Dichloropropene	0.363	0.437	0.454	0.451	0.438	0.444	0.44	0.448	0.449	0.442	0.445										0.437261	5.79	0.058	1
2,2,4-TRIMETHYLPENTANE	0.317	0.379	0.375	0.339	0.371	0.361	0.338	0.349	0.338	0.337	0.335										0.349104	5.59	0.056	1
HEPTANE	0.425	0.51	0.483	0.508	0.488	0.499	0.49	0.496	0.497	0.497	0.496										0.489724	4.67	0.047	1
BENZENE	1.251	1.234	1.247	1.262	1.183	1.234	1.204	1.227	1.239	1.235	1.243										1.232632	1.8	0.018	1
1,2-DICHLOROETHANE	0.387	0.34	0.393	0.398	0.39	0.412	0.406	0.402	0.402	0.403	0.407										0.394577	4.98	0.05	1
8260-1,4-DIFLUOROBENZENE																								
TRICHLOROETHENE	0.206	0.211	0.227	0.233	0.222	0.236	0.227	0.234	0.233	0.227	0.228										0.225792	4.29	0.043	1
1,2-DICHLOROPROPANE	0.152	0.14	0.138	0.145	0.141	0.142	0.142	0.145	0.143	0.14	0.145										0.14285	2.67	0.027	1
DIBROMOMETHANE	0.112	0.108	0.131	0.121	0.116	0.125	0.125	0.127	0.126	0.124	0.128										0.122176	5.74	0.057	1

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS30
Method : V830D26P
Review Method : 8260SC
Review Protocol : SC
Released By : John Heath
Released On : 4/27/2016 9:24:48 AM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V830D26P -- ICal Updated Time: Wed Apr 27 09:17:18 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
BROMODICHLOROMETHANE	0.268	0.315	0.308	0.284	0.275	0.281	0.276	0.286	0.279	0.275	0.284										0.284509	5.06	0.051	1
a,a,a-Trifluorotoluene	0.571	0.564	0.559	0.551	0.55	0.541	0.532	0.536	0.531	0.526	0.542										0.545789	2.67	0.027	1
2-CHLOROETHYL VINYL ETHER		0.023	0.024	0.026	0.026	0.029	0.029	0.029	0.029	0.027	0.026										0.026904	8.1	0.081	1
CIS-1,3-DICHLOROPROPENE	0.263	0.315	0.335	0.33	0.313	0.333	0.339	0.341	0.34	0.336	0.346										0.326556	7.19	0.072	1
4-METHYL-2-PENTANONE (MIBK)	0.136	0.171	0.16	0.156	0.151	0.169	0.168	0.164	0.166	0.162	0.167										0.160977	6.3	0.063	1
TOLUENE-D8	1.194	1.195	1.17	1.147	1.136	1.12	1.119	1.114	1.102	1.098	1.139										1.139563	2.99	0.03	1
TOLUENE	1.056	1.007	0.985	0.947	0.888	0.913	0.891	0.912	0.908	0.892	0.899										0.93631	6	0.06	1
TRANS-1,3-DICHLOROPROPENE	0.259	0.268	0.285	0.288	0.286	0.298	0.297	0.303	0.3	0.297	0.303										0.289443	5.05	0.051	1
8260-2-BROMO-1 -CHLOROPROPANE																								
1,1,2-TRICHLOROETHANE	0.936	1.082	1.1	1.123	1.06	1.138	1.124	1.128	1.104	1.099	1.07										1.087675	5.16	0.052	1
TETRACHLOROETHENE	1.139	1.231	1.256	1.282	1.203	1.277	1.201	1.244	1.211	1.194	1.112										1.213506	4.38	0.044	1
1,3-Dichloropropane	1.779	1.653	1.858	1.884	1.773	1.937	1.883	1.909	1.847	1.833	1.785										1.830926	4.37	0.044	1
2-HEXANONE	0.416	0.463	0.486	0.504	0.459	0.534	0.51	0.517	0.517	0.501	0.49										0.490659	6.83	0.068	1
CHLORODIBROMOMETHANE	1.385	1.233	1.323	1.336	1.268	1.417	1.405	1.408	1.398	1.402	1.371										1.358721	4.53	0.045	1
1,2-DIBROMOETHANE	0.947	1.12	1.208	1.159	1.115	1.205	1.186	1.206	1.174	1.182	1.161										1.151202	6.5	0.065	1
CHLOROBENZENE	3.156	3.819	3.959	4.069	3.862	4.098	3.863	3.926	3.77	3.721	3.478										3.792748	7.15	0.071	1
1,1,1,2-TETRACHLOROETHANE	1.187	1.28	1.382	1.28	1.284	1.381	1.294	1.323	1.28	1.284	1.236										1.291987	4.37	0.044	1
ETHYLBENZENE	2.027	2.01	2.231	2.255	2.114	2.282	2.207	2.254	2.204	2.17	2.043										2.163492	4.57	0.046	1
M&P-XYLENE	2.46	2.608	2.745	2.754	2.641	2.78	2.636	2.68	2.585	2.563	2.386										2.62169	4.65	0.046	1
O-XYLENE	2.401	2.376	2.637	2.606	2.516	2.7	2.598	2.667	2.596	2.605	2.481										2.562053	4.11	0.041	1
STYRENE	3.54	3.986	4.034	4.029	3.976	4.333	4.162	4.321	4.171	4.169	3.967										4.062575	5.34	0.053	1
Bromoform	0.697	0.739	0.849	0.877	0.834	0.916	0.887	0.918	0.902	0.905	0.894										0.856069	8.61	0.086	1

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Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
Isopropylbenzene		7.811	7.161	7.031	6.755	7.161	6.871	7.076	6.769	6.715	6.204										6.955433	5.95	0.06	1
4-BROMOFLUOROBENZENE	2.753	2.749	2.742	2.724	2.712	2.755	2.762	2.788	2.748	2.801	2.719										2.750282	0.98	0.01	1
Bromobenzene	2.735	2.632	2.839	2.664	2.565	2.744	2.672	2.735	2.628	2.608	2.465										2.662469	3.8	0.038	1
1,1,2,2-TETRACHLOROETHANE	1.569	1.397	1.407	1.324	1.337	1.495	1.439	1.435	1.396	1.379	1.334										1.410052	5.2	0.052	1
1,2,3-TRICHLOROPROPANE		0.397	0.389	0.373	0.361	0.432	0.407	0.406	0.397	0.394	0.385										0.393973	4.92	0.049	1
TRANS-1,4-DICHLORO-2-BUTENE		0.45	0.429	0.38	0.372	0.4	0.403	0.401	0.406	0.4	0.386										0.402793	5.67	0.057	1
n-Propylbenzene	6.949	7.171	7.547	7.364	7.322	7.94	7.636	7.885	7.611	7.553	6.978										7.450496	4.42	0.044	1
4-ETHYLTOLUENE	6.716	6.29	6.689	6.548	6.479	7.06	6.695	6.897	6.612	6.529	6.038										6.595694	4.19	0.042	1
2-Chlorotoluene	1.327	1.399	1.532	1.423	1.495	1.561	1.468	1.494	1.441	1.422	1.324										1.444149	5.28	0.053	1
4-Chlorotoluene	4.494	4.517	4.785	4.611	4.5	4.844	4.675	4.838	4.595	4.55	4.279										4.60789	3.69	0.037	1
1,3,5-Trimethylbenzene	5.171	4.996	5.417	5.419	5.416	5.772	5.498	5.614	5.337	5.268	4.812										5.338264	5.08	0.051	1
tert-Butylbenzene	4.405	4.686	4.725	4.817	4.654	5.057	4.806	4.948	4.72	4.665	4.346										4.711609	4.4	0.044	1
1,2,4-Trimethylbenzene	5.1	5.352	5.595	5.573	5.329	5.757	5.549	5.65	5.362	5.308	4.87										5.404089	4.78	0.048	1
sec-Butylbenzene	6.318	7.144	7.423	7.17	7.089	7.669	7.332	7.44	7.124	7.025	6.47										7.109379	5.66	0.057	1
1,3-DICHLOROBENZENE	2.836	3.17	2.995	3.039	3.023	3.271	3.147	3.249	3.088	3.021	2.802										3.058405	4.91	0.049	1
p-Isopropyltoluene	5.221	5.263	5.924	5.88	5.887	6.365	6.112	6.211	5.876	5.785	5.266										5.799162	6.75	0.067	1
DICYCLOPENTADIENE	4.886	5.288	5.948	5.982	5.899	6.392	6.168	6.258	5.96	5.891	5.471										5.831157	7.65	0.077	1
8260-1,4-DICHLOROBENZENE-D4																								
1,4-DICHLOROBENZENE	1.015	1.047	1.031	0.987	0.98	1.018	0.994	1.009	0.988	0.977	0.961										1.000675	2.56	0.026	1
1,2,3-TRIMETHYLBENZENE	1.862	1.937	1.876	1.84	1.763	1.856	1.793	1.832	1.792	1.773	1.724										1.82255	3.31	0.033	1
1,2-DICHLOROBENZENE	0.773	0.902	1.005	0.963	0.917	1	0.983	0.994	0.981	0.971	0.969										0.950746	7.08	0.071	1
n-Butylbenzene	1.825	1.792	1.937	1.843	1.868	1.951	1.895	1.932	1.884	1.872	1.87										1.879034	2.59	0.026	1

Environmental Science Corporation
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INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS30
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Review Protocol : SC
Released By : John Heath
Released On : 4/27/2016 9:24:48 AM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V830D26P -- ICal Updated Time: Wed Apr 27 09:17:18 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
1,2-Dibromo-3-chloropropane			0.098	0.097	0.093	0.108	0.107	0.113	0.119	0.117	0.122										0.108165	9.7	0.097	1
1,2,4-Trichlorobenzene	0.598	0.524	0.568	0.583	0.573	0.64	0.624	0.637	0.61	0.603	0.62										0.598313	5.74	0.057	1
HEXACHLORO-1,3-BUTADIENE	0.304	0.317	0.317	0.288	0.294	0.324	0.3	0.317	0.317	0.318	0.339										0.312204	4.65	0.046	1
Naphthalene		1.29	1.317	1.281	1.232	1.441	1.447	1.505	1.526	1.535	1.537										1.411195	8.45	0.084	1
1,2,3-Trichlorobenzene	0.468	0.493	0.523	0.501	0.493	0.553	0.536	0.575	0.563	0.56	0.563										0.529816	6.84	0.068	1
1-Methylnaphthalene					0.522	0.633	0.681	0.759	0.765	0.778	0.827										0.709426	14.75	0.147	1
2-Methylnaphthalene		0.625	0.569	0.483	0.471	0.533	0.588	0.629	0.647	0.645	0.685										0.587466	12.35	0.124	1
AP9-PENTAFLUOROBENZENE																								
ETHANOL												0.003	0.004	0.003	0.003	0.003	0.003	0.004	0.004	0.004	0.003432	3.8	0.038	1
Bromoethane												0.332	0.335	0.331	0.335	0.333	0.33	0.329	0.328	0.335	0.332119	0.77	0.008	1
2-PROPANOL												0.022	0.017	0.016	0.015	0.015	0.016	0.016	0.016	0.017	0.016833	12.54	0.125	1
Methyl Acetate												0.19	0.196	0.185	0.183	0.181	0.182	0.185	0.188	0.184	0.18581	2.63	0.026	1
ACETONITRILE												0.032	0.033	0.03	0.03	0.03	0.031	0.031	0.031	0.032	0.031051	3.28	0.033	1
ALLYL CHLORIDE												0.17	0.18	0.171	0.171	0.172	0.17	0.174	0.169	0.173	0.172247	1.82	0.018	1
tert-BUTYL ALCOHOL												0.082	0.084	0.079	0.079	0.079	0.077	0.083	0.083	0.082	0.080897	2.91	0.029	1
chloroprene												0.517	0.551	0.541	0.526	0.526	0.528	0.534	0.524	0.534	0.531168	1.95	0.019	1
ETHYL TERT-BUTYL ETHER												0.887	0.905	0.84	0.847	0.856	0.849	0.874	0.87	0.866	0.865944	2.41	0.024	1
PROPIONITRILE												0.038	0.039	0.037	0.036	0.036	0.037	0.038	0.038	0.038	0.037339	2.85	0.029	1
Ethyl Acetate												0.256	0.261	0.25	0.244	0.242	0.243	0.25	0.252	0.247	0.2495	2.55	0.026	1
METHACRYLONITRILE												0.114	0.117	0.109	0.11	0.11	0.111	0.113	0.115	0.113	0.112322	2.49	0.025	1
Cyclohexane												0.86	0.88	0.872	0.867	0.868	0.881	0.902	0.874	0.886	0.876632	1.42	0.014	1
tert-butyl formate																					0	0	0	1
ISOBUTANOL												0.017	0.016	0.016	0.016	0.016	0.016	0.016	0.017	0.016	0.016233	2.48	0.025	1

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INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V830D26P -- ICal Updated Time: Wed Apr 27 09:17:18 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
Amyl Alcohol												0.024	0.027	0.026	0.024	0.026	0.027	0.027	0.028	0.028	0.026473	5.51	0.055	1
TERT-AMYL METHYL ETHER												1.064	1	0.957	0.957	0.985	0.981	0.995	0.992	0.981	0.990164	3.2	0.032	1
AP9-1,4-DIFLUOROBENZENE																								
N-BUTANOL												0.005	0.006	0.005	0.005	0.005	0.005	0.006	0.006	0.006	0.005373	4.42	0.044	1
Methyl Cyclohexane												1.023	0.774	0.666	0.635	0.622	0.607	0.621	0.596	0.619	0.684952	20.06	0.999	0
2-nitropropane												0.064	0.066	0.059	0.06	0.06	0.061	0.062	0.063	0.062	0.061917	3.61	0.036	1
METHYL METHACRYLATE												0.163	0.161	0.155	0.155	0.156	0.156	0.159	0.16	0.159	0.158305	1.88	0.019	1
1,4-DIOXANE												0.003	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.003	0.00237	4.9	0.049	1
n-octane												0.22	0.251	0.239	0.241	0.243	0.25	0.253	0.248	0.255	0.244386	4.37	0.044	1
3,3-DIMETHYL-1-BUTANOL												0.023	0.024	0.022	0.023	0.024	0.024	0.024	0.025	0.025	0.023674	3.81	0.038	1
AP9-2-BROMO-1 -CHLOROPROPANE																								
ETHYL METHACRYLATE												1.426	1.466	1.377	1.365	1.386	1.392	1.425	1.44	1.397	1.408158	2.34	0.023	1
CIS-1,4-DICHLORO-2-BUTENE												0.407	0.437	0.392	0.394	0.406	0.411	0.412	0.417	0.4	0.408343	3.34	0.033	1
Cyclohexanone												0.308	0.293	0.265	0.264	0.288	0.247	0.261	0.293	0.272	0.276754	7.13	0.071	1
PENTACHLOROETHANE												0.91	0.956	0.933	0.917	0.924	0.943	0.936	0.926	0.927	0.930346	1.49	0.015	1
Hexachloroethane												1.177	1.209	1.154	1.135	1.213	1.221	1.227	1.202	1.22	1.195389	2.71	0.027	1
AP9-1,4-DICHLOROBENZENE-D4																								

Environmental Science Corporation
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INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS30
Method : V830D26P
Review Method : 6200
Review Protocol : SM 20th
Released By : John Heath
Released On : 4/27/2016 9:25:22 AM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V830D26P -- ICal Updated Time: Wed Apr 27 09:17:18 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
8260-PENTAFLUOROBENZENE																								
TPH (GC/MS) LOW FRACTION																					0	0	0	1
PROPENE				0.113	0.1	0.09	0.085	0.085	0.087	0.089	0.092										0.092664	10.32	0.103	1
DICHLORODIFLUOROMETHANE	0.282	0.316	0.325	0.316	0.301	0.304	0.297	0.31	0.319	0.324	0.33										0.311343	4.63	0.999	0
CHLOROMETHANE	0.407	0.371	0.369	0.366	0.335	0.347	0.339	0.349	0.356	0.363	0.377										0.361743	5.58	0.056	1
VINYL CHLORIDE	0.317	0.338	0.392	0.377	0.376	0.398	0.386	0.398	0.399	0.392	0.401										0.379347	7.23	0.072	1
1,3-BUTADIENE		0.453	0.369	0.338	0.32	0.313	0.302	0.308	0.304	0.297	0.293										0.329766	14.87	0.149	1
BROMOMETHANE					0.185	0.182	0.157	0.15	0.155	0.158	0.162										0.164004	8.31	0.083	1
CHLOROETHANE	0.244	0.233	0.23	0.248	0.222	0.222	0.206	0.2	0.173	0.151											0.212815	14.65	0.146	1
TRICHLOROFLUOROMETHANE	0.472	0.503	0.561	0.529	0.536	0.547	0.533	0.543	0.548	0.539	0.518										0.530022	4.66	0.047	1
DICHLOROFLUOROMETHANE	0.724	0.644	0.565	0.587	0.592	0.606	0.589	0.607	0.615	0.608	0.618										0.614029	6.82	0.068	1
ETHYL ETHER	0.235	0.208	0.235	0.217	0.213	0.228	0.226	0.226	0.226	0.23	0.238										0.225569	4.29	0.043	1
ACROLEIN	0.056	0.056	0.051	0.046	0.045	0.047	0.047	0.046	0.048	0.048	0.05										0.049226	7.87	0.079	1
1,1-DICHLOROETHENE	0.408	0.428	0.491	0.485	0.456	0.49	0.469	0.481	0.485	0.486	0.488										0.469704	5.95	0.059	1
1,1,2 -TRICHLOROTRIFLUOROETHANE	0.255	0.287	0.334	0.326	0.312	0.331	0.314	0.326	0.324	0.324	0.324										0.31433	7.44	0.074	1
ACETONE			0.164	0.143	0.135	0.142	0.137	0.131	0.131	0.127	0.126										0.137373	8.45	0.085	1
IODOMETHANE		0.599	0.564	0.519	0.485	0.505	0.487	0.493	0.482	0.469	0.436										0.503962	9.36	0.094	1
CARBON DISULFIDE		1.326	1.215	1.122	1.059	1.09	1.008	1.038	1.035	1.033	1.04										1.096294	9.17	0.092	1
METHYLENE CHLORIDE	0.343	0.356	0.329	0.319	0.304	0.317	0.303	0.316	0.312	0.311	0.318										0.320591	5.03	0.05	1
ACRYLONITRILE	0.076	0.072	0.078	0.079	0.074	0.088	0.082	0.082	0.084	0.083	0.085										0.080277	6.28	0.063	1
n-Hexane		0.367	0.351	0.314	0.292	0.3	0.287	0.293	0.294	0.291	0.297										0.308627	8.97	0.09	1
TRANS-1,2-DICHLOROETHENE	0.261	0.28	0.296	0.337	0.308	0.324	0.315	0.326	0.323	0.322	0.323										0.310395	7.32	0.073	1

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS30
Method : V830D26P
Review Method : 6200
Review Protocol : SM 20th
Released By : John Heath
Released On : 4/27/2016 9:25:22 AM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V830D26P -- ICal Updated Time: Wed Apr 27 09:17:18 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
METHYL TERT-BUTYL ETHER	0.744	0.835	0.819	0.825	0.798	0.845	0.827	0.819	0.816	0.812	0.824										0.814915	3.26	0.033	1
1,1-DICHLOROETHANE	0.495	0.51	0.57	0.565	0.548	0.576	0.564	0.576	0.576	0.576	0.577										0.557577	5.13	0.051	1
VINYL ACETATE	0.456	0.495	0.521	0.532	0.491	0.53	0.519	0.495	0.47	0.483	0.459										0.495519	5.52	0.055	1
DI-ISOPROPYL ETHER	0.861	0.877	0.912	0.891	0.887	0.929	0.927	0.942	0.933	0.935	0.946										0.912679	3.19	0.032	1
2,2-Dichloropropane	0.551	0.545	0.564	0.542	0.523	0.544	0.528	0.542	0.546	0.542	0.54										0.542495	1.97	0.02	1
CIS-1,2-DICHLOROETHENE	0.275	0.328	0.334	0.348	0.345	0.353	0.344	0.352	0.354	0.352	0.357										0.340104	6.86	0.069	1
2-BUTANONE (MEK)	0.188	0.147	0.151	0.141	0.132	0.15	0.147	0.142	0.143	0.139	0.14										0.147246	9.83	0.098	1
BROMOCHLOROMETHANE	0.161	0.195	0.226	0.204	0.2	0.213	0.206	0.21	0.207	0.204	0.202										0.202534	7.88	0.079	1
TETRAHYDROFURAN				0.086	0.066	0.077	0.071	0.068	0.069	0.067	0.068										0.071527	9.5	0.095	1
CHLOROFORM	0.577	0.572	0.596	0.603	0.568	0.596	0.57	0.573	0.57	0.564	0.567										0.577676	2.37	0.024	1
DIBROMOFLUOROMETHANE	0.469	0.469	0.46	0.454	0.448	0.443	0.437	0.431	0.424	0.42	0.417										0.442919	4.25	0.043	1
1,1,1-TRICHLOROETHANE	0.449	0.471	0.508	0.512	0.491	0.5	0.498	0.516	0.515	0.514	0.514										0.499002	4.26	0.043	1
CARBON TETRACHLORIDE	0.661	0.569	0.594	0.546	0.532	0.535	0.521	0.538	0.541	0.537	0.54										0.555656	7.23	0.072	1
1,1-Dichloropropene	0.363	0.437	0.454	0.451	0.438	0.444	0.44	0.448	0.449	0.442	0.445										0.437261	5.79	0.058	1
2,2,4-TRIMETHYLPENTANE	0.317	0.379	0.375	0.339	0.371	0.361	0.338	0.349	0.338	0.337	0.335										0.349104	5.59	0.056	1
HEPTANE	0.425	0.51	0.483	0.508	0.488	0.499	0.49	0.496	0.497	0.497	0.496										0.489724	4.67	0.047	1
BENZENE	1.251	1.234	1.247	1.262	1.183	1.234	1.204	1.227	1.239	1.235	1.243										1.232632	1.8	0.018	1
1,2-DICHLOROETHANE	0.387	0.34	0.393	0.398	0.39	0.412	0.406	0.402	0.402	0.403	0.407										0.394577	4.98	0.05	1
8260-1,4-DIFLUOROBENZENE																								
TRICHLOROETHENE	0.206	0.211	0.227	0.233	0.222	0.236	0.227	0.234	0.233	0.227	0.228										0.225792	4.29	0.043	1
1,2-DICHLOROPROPANE	0.152	0.14	0.138	0.145	0.141	0.142	0.142	0.145	0.143	0.14	0.145										0.14285	2.67	0.027	1
DIBROMOMETHANE	0.112	0.108	0.131	0.121	0.116	0.125	0.125	0.127	0.126	0.124	0.128										0.122176	5.74	0.057	1

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BROMODICHLOROMETHANE	0.268	0.315	0.308	0.284	0.275	0.281	0.276	0.286	0.279	0.275	0.284										0.284509	5.06	0.051	1
a,a,a-Trifluorotoluene	0.571	0.564	0.559	0.551	0.55	0.541	0.532	0.536	0.531	0.526	0.542										0.545789	2.67	0.027	1
2-CHLOROETHYL VINYL ETHER		0.023	0.024	0.026	0.026	0.029	0.029	0.029	0.029	0.027	0.026										0.026904	8.1	0.081	1
CIS-1,3-DICHLOROPROPENE	0.263	0.315	0.335	0.33	0.313	0.333	0.339	0.341	0.34	0.336	0.346										0.326556	7.19	0.072	1
4-METHYL-2-PENTANONE (MIBK)	0.136	0.171	0.16	0.156	0.151	0.169	0.168	0.164	0.166	0.162	0.167										0.160977	6.3	0.063	1
TOLUENE-D8	1.194	1.195	1.17	1.147	1.136	1.12	1.119	1.114	1.102	1.098	1.139										1.139563	2.99	0.03	1
TOLUENE	1.056	1.007	0.985	0.947	0.888	0.913	0.891	0.912	0.908	0.892	0.899										0.93631	6	0.06	1
TRANS-1,3-DICHLOROPROPENE	0.259	0.268	0.285	0.288	0.286	0.298	0.297	0.303	0.3	0.297	0.303										0.289443	5.05	0.051	1
8260-2-BROMO-1 -CHLOROPROPANE																								
1,1,2-TRICHLOROETHANE	0.936	1.082	1.1	1.123	1.06	1.138	1.124	1.128	1.104	1.099	1.07										1.087675	5.16	0.052	1
TETRACHLOROETHENE	1.139	1.231	1.256	1.282	1.203	1.277	1.201	1.244	1.211	1.194	1.112										1.213506	4.38	0.044	1
1,3-Dichloropropane	1.779	1.653	1.858	1.884	1.773	1.937	1.883	1.909	1.847	1.833	1.785										1.830926	4.37	0.044	1
2-HEXANONE	0.416	0.463	0.486	0.504	0.459	0.534	0.51	0.517	0.517	0.501	0.49										0.490659	6.83	0.068	1
CHLORODIBROMOMETHANE	1.385	1.233	1.323	1.336	1.268	1.417	1.405	1.408	1.398	1.402	1.371										1.358721	4.53	0.045	1
1,2-DIBROMOETHANE	0.947	1.12	1.208	1.159	1.115	1.205	1.186	1.206	1.174	1.182	1.161										1.151202	6.5	0.065	1
CHLOROBENZENE	3.156	3.819	3.959	4.069	3.862	4.098	3.863	3.926	3.77	3.721	3.478										3.792748	7.15	0.071	1
1,1,1,2-TETRACHLOROETHANE	1.187	1.28	1.382	1.28	1.284	1.381	1.294	1.323	1.28	1.284	1.236										1.291987	4.37	0.044	1
ETHYLBENZENE	2.027	2.01	2.231	2.255	2.114	2.282	2.207	2.254	2.204	2.17	2.043										2.163492	4.57	0.046	1
M&P-XYLENE	2.46	2.608	2.745	2.754	2.641	2.78	2.636	2.68	2.585	2.563	2.386										2.62169	4.65	0.046	1
O-XYLENE	2.401	2.376	2.637	2.606	2.516	2.7	2.598	2.667	2.596	2.605	2.481										2.562053	4.11	0.041	1
STYRENE	3.54	3.986	4.034	4.029	3.976	4.333	4.162	4.321	4.171	4.169	3.967										4.062575	5.34	0.053	1
Bromoform	0.697	0.739	0.849	0.877	0.834	0.916	0.887	0.918	0.902	0.905	0.894										0.856069	8.61	0.086	1

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Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
Isopropylbenzene		7.811	7.161	7.031	6.755	7.161	6.871	7.076	6.769	6.715	6.204										6.955433	5.95	0.06	1
4-BROMOFLUOROBENZENE	2.753	2.749	2.742	2.724	2.712	2.755	2.762	2.788	2.748	2.801	2.719										2.750282	0.98	0.01	1
Bromobenzene	2.735	2.632	2.839	2.664	2.565	2.744	2.672	2.735	2.628	2.608	2.465										2.662469	3.8	0.038	1
1,1,2,2-TETRACHLOROETHANE	1.569	1.397	1.407	1.324	1.337	1.495	1.439	1.435	1.396	1.379	1.334										1.410052	5.2	0.052	1
1,2,3-TRICHLOROPROPANE		0.397	0.389	0.373	0.361	0.432	0.407	0.406	0.397	0.394	0.385										0.393973	4.92	0.049	1
TRANS-1,4-DICHLORO-2-BUTENE		0.45	0.429	0.38	0.372	0.4	0.403	0.401	0.406	0.4	0.386										0.402793	5.67	0.057	1
n-Propylbenzene	6.949	7.171	7.547	7.364	7.322	7.94	7.636	7.885	7.611	7.553	6.978										7.450496	4.42	0.044	1
4-ETHYLTOLUENE	6.716	6.29	6.689	6.548	6.479	7.06	6.695	6.897	6.612	6.529	6.038										6.595694	4.19	0.042	1
2-Chlorotoluene	1.327	1.399	1.532	1.423	1.495	1.561	1.468	1.494	1.441	1.422	1.324										1.444149	5.28	0.053	1
4-Chlorotoluene	4.494	4.517	4.785	4.611	4.5	4.844	4.675	4.838	4.595	4.55	4.279										4.60789	3.69	0.037	1
1,3,5-Trimethylbenzene	5.171	4.996	5.417	5.419	5.416	5.772	5.498	5.614	5.337	5.268	4.812										5.338264	5.08	0.051	1
tert-Butylbenzene	4.405	4.686	4.725	4.817	4.654	5.057	4.806	4.948	4.72	4.665	4.346										4.711609	4.4	0.044	1
1,2,4-Trimethylbenzene	5.1	5.352	5.595	5.573	5.329	5.757	5.549	5.65	5.362	5.308	4.87										5.404089	4.78	0.048	1
sec-Butylbenzene	6.318	7.144	7.423	7.17	7.089	7.669	7.332	7.44	7.124	7.025	6.47										7.109379	5.66	0.057	1
1,3-DICHLOROBENZENE	2.836	3.17	2.995	3.039	3.023	3.271	3.147	3.249	3.088	3.021	2.802										3.058405	4.91	0.049	1
p-Isopropyltoluene	5.221	5.263	5.924	5.88	5.887	6.365	6.112	6.211	5.876	5.785	5.266										5.799162	6.75	0.067	1
DICYCLOPENTADIENE	4.886	5.288	5.948	5.982	5.899	6.392	6.168	6.258	5.96	5.891	5.471										5.831157	7.65	0.077	1
8260-1,4-DICHLOROBENZENE-D4																								
1,4-DICHLOROBENZENE	1.015	1.047	1.031	0.987	0.98	1.018	0.994	1.009	0.988	0.977	0.961										1.000675	2.56	0.026	1
1,2,3-TRIMETHYLBENZENE	1.862	1.937	1.876	1.84	1.763	1.856	1.793	1.832	1.792	1.773	1.724										1.82255	3.31	0.033	1
1,2-DICHLOROBENZENE	0.773	0.902	1.005	0.963	0.917	1	0.983	0.994	0.981	0.971	0.969										0.950746	7.08	0.071	1
sec-Butylbenzene	1.825	1.792	1.937	1.843	1.868	1.951	1.895	1.932	1.884	1.872	1.87										1.879034	2.59	0.026	1

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1,2-Dibromo-3-chloropropane			0.098	0.097	0.093	0.108	0.107	0.113	0.119	0.117	0.122										0.108165	9.7	0.097	1
1,2,4-Trichlorobenzene	0.598	0.524	0.568	0.583	0.573	0.64	0.624	0.637	0.61	0.603	0.62										0.598313	5.74	0.057	1
HEXACHLORO-1,3-BUTADIENE	0.304	0.317	0.317	0.288	0.294	0.324	0.3	0.317	0.317	0.318	0.339										0.312204	4.65	0.046	1
Naphthalene		1.29	1.317	1.281	1.232	1.441	1.447	1.505	1.526	1.535	1.537										1.411195	8.45	0.084	1
1,2,3-Trichlorobenzene	0.468	0.493	0.523	0.501	0.493	0.553	0.536	0.575	0.563	0.56	0.563										0.529816	6.84	0.068	1
1-Methylnaphthalene					0.522	0.633	0.681	0.759	0.765	0.778	0.827										0.709426	14.75	0.147	1
2-Methylnaphthalene		0.625	0.569	0.483	0.471	0.533	0.588	0.629	0.647	0.645	0.685										0.587466	12.35	0.124	1
AP9-PENTAFLUOROBENZENE																								
ETHANOL												0.003	0.004	0.003	0.003	0.003	0.003	0.004	0.004	0.004	0.003432	3.8	0.038	1
Bromoethane												0.332	0.335	0.331	0.335	0.333	0.33	0.329	0.328	0.335	0.332119	0.77	0.008	1
2-PROPANOL												0.022	0.017	0.016	0.015	0.015	0.016	0.016	0.016	0.017	0.016833	12.54	0.125	1
Methyl Acetate												0.19	0.196	0.185	0.183	0.181	0.182	0.185	0.188	0.184	0.18581	2.63	0.026	1
ACETONITRILE												0.032	0.033	0.03	0.03	0.03	0.031	0.031	0.031	0.032	0.031051	3.28	0.033	1
ALLYL CHLORIDE												0.17	0.18	0.171	0.171	0.172	0.17	0.174	0.169	0.173	0.172247	1.82	0.018	1
tert-BUTYL ALCOHOL												0.082	0.084	0.079	0.079	0.079	0.077	0.083	0.083	0.082	0.080897	2.91	0.029	1
chloroprene												0.517	0.551	0.541	0.526	0.526	0.528	0.534	0.524	0.534	0.531168	1.95	0.019	1
ETHYL TERT-BUTYL ETHER												0.887	0.905	0.84	0.847	0.856	0.849	0.874	0.87	0.866	0.865944	2.41	0.024	1
PROPIONITRILE												0.038	0.039	0.037	0.036	0.036	0.037	0.038	0.038	0.038	0.037339	2.85	0.029	1
Ethyl Acetate												0.256	0.261	0.25	0.244	0.242	0.243	0.25	0.252	0.247	0.2495	2.55	0.026	1
METHACRYLONITRILE												0.114	0.117	0.109	0.11	0.11	0.111	0.113	0.115	0.113	0.112322	2.49	0.025	1
Cyclohexane												0.86	0.88	0.872	0.867	0.868	0.881	0.902	0.874	0.886	0.876632	1.42	0.014	1
tert-butyl formate																					0	0	0	1
ISOBUTANOL												0.017	0.016	0.016	0.016	0.016	0.016	0.016	0.017	0.016	0.016233	2.48	0.025	1

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS30
Method : V830D26P
Review Method : 6200
Review Protocol : SM 20th
Released By : John Heath
Released On : 4/27/2016 9:25:22 AM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V830D26P -- ICal Updated Time: Wed Apr 27 09:17:18 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur
Amyl Alcohol												0.024	0.027	0.026	0.024	0.026	0.027	0.027	0.028	0.028	0.026473	5.51	0.055	1
TERT-AMYL METHYL ETHER												1.064	1	0.957	0.957	0.985	0.981	0.995	0.992	0.981	0.990164	3.2	0.032	1
AP9-1,4-DIFLUOROBENZENE																								
N-BUTANOL												0.005	0.006	0.005	0.005	0.005	0.005	0.006	0.006	0.006	0.005373	4.42	0.044	1
Methyl Cyclohexane												1.023	0.774	0.666	0.635	0.622	0.607	0.621	0.596	0.619	0.684952	20.06	0.999	0
2-nitropropane												0.064	0.066	0.059	0.06	0.06	0.061	0.062	0.063	0.062	0.061917	3.61	0.036	1
METHYL METHACRYLATE												0.163	0.161	0.155	0.155	0.156	0.156	0.159	0.16	0.159	0.158305	1.88	0.019	1
1,4-DIOXANE												0.003	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.003	0.00237	4.9	0.049	1
n-octane												0.22	0.251	0.239	0.241	0.243	0.25	0.253	0.248	0.255	0.244386	4.37	0.044	1
3,3-DIMETHYL-1-BUTANOL												0.023	0.024	0.022	0.023	0.024	0.024	0.024	0.025	0.025	0.023674	3.81	0.038	1
AP9-2-BROMO-1 -CHLOROPROPANE																								
ETHYL METHACRYLATE												1.426	1.466	1.377	1.365	1.386	1.392	1.425	1.44	1.397	1.408158	2.34	0.023	1
CIS-1,4-DICHLORO-2-BUTENE												0.407	0.437	0.392	0.394	0.406	0.411	0.412	0.417	0.4	0.408343	3.34	0.033	1
Cyclohexanone												0.308	0.293	0.265	0.264	0.288	0.247	0.261	0.293	0.272	0.276754	7.13	0.071	1
PENTACHLOROETHANE												0.91	0.956	0.933	0.917	0.924	0.943	0.936	0.926	0.927	0.930346	1.49	0.015	1
Hexachloroethane												1.177	1.209	1.154	1.135	1.213	1.221	1.227	1.202	1.22	1.195389	2.71	0.027	1
AP9-1,4-DICHLOROBENZENE-D4																								

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID	: VOCMS30	Review Method	: 8260C	Released By	: John Heath
Method	: V830D26P	Review Protocol	: SW846	Released On	: 4/27/2016 9:25:56 AM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V830D26P -- ICal Updated Time: Wed Apr 27 09:17:18 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur	RF
8260-PENTAFLUOROBENZENE																									
TPH (GC/MS) LOW FRACTION																					0	0	0	1	
PROPENE				0.113	0.1	0.09	0.085	0.085	0.087	0.089	0.092										0.092664	10.32	0.103	1	
DICHLORODIFLUOROMETHANE	0.282	0.316	0.325	0.316	0.301	0.304	0.297	0.31	0.319	0.324	0.33										0.311343	4.63	0.999	0	0.1
CHLOROMETHANE	0.407	0.371	0.369	0.366	0.335	0.347	0.339	0.349	0.356	0.363	0.377										0.361743	5.58	0.056	1	0.1
VINYL CHLORIDE	0.317	0.338	0.392	0.377	0.376	0.398	0.386	0.398	0.399	0.392	0.401										0.379347	7.23	0.072	1	0.1
1,3-BUTADIENE		0.453	0.369	0.338	0.32	0.313	0.302	0.308	0.304	0.297	0.293										0.329766	14.87	0.149	1	
BROMOMETHANE					0.185	0.182	0.157	0.15	0.155	0.158	0.162										0.164004	8.31	0.083	1	0.1
CHLOROETHANE	0.244	0.233	0.23	0.248	0.222	0.222	0.206	0.2	0.173	0.151											0.212815	14.65	0.146	1	0.1
TRICHLOROFLUOROMETHANE	0.472	0.503	0.561	0.529	0.536	0.547	0.533	0.543	0.548	0.539	0.518										0.530022	4.66	0.047	1	0.1
DICHLOROFLUOROMETHANE	0.724	0.644	0.565	0.587	0.592	0.606	0.589	0.607	0.615	0.608	0.618										0.614029	6.82	0.068	1	
ETHYL ETHER	0.235	0.208	0.235	0.217	0.213	0.228	0.226	0.226	0.226	0.23	0.238										0.225569	4.29	0.043	1	
ACROLEIN	0.056	0.056	0.051	0.046	0.045	0.047	0.047	0.046	0.048	0.048	0.05										0.049226	7.87	0.079	1	
1,1-DICHLOROETHENE	0.408	0.428	0.491	0.485	0.456	0.49	0.469	0.481	0.485	0.486	0.488										0.469704	5.95	0.059	1	0.1
1,1,2 -TRICHLOROTRIFLUOROETHANE	0.255	0.287	0.334	0.326	0.312	0.331	0.314	0.326	0.324	0.324	0.324										0.31433	7.44	0.074	1	0.1
ACETONE			0.164	0.143	0.135	0.142	0.137	0.131	0.131	0.127	0.126										0.137373	8.45	0.085	1	0.1
IODOMETHANE		0.599	0.564	0.519	0.485	0.505	0.487	0.493	0.482	0.469	0.436										0.503962	9.36	0.094	1	
CARBON DISULFIDE		1.326	1.215	1.122	1.059	1.09	1.008	1.038	1.035	1.033	1.04										1.096294	9.17	0.092	1	0.1
METHYLENE CHLORIDE	0.343	0.356	0.329	0.319	0.304	0.317	0.303	0.316	0.312	0.311	0.318										0.320591	5.03	0.05	1	0.1
ACRYLONITRILE	0.076	0.072	0.078	0.079	0.074	0.088	0.082	0.082	0.084	0.083	0.085										0.080277	6.28	0.063	1	
n-Hexane		0.367	0.351	0.314	0.292	0.3	0.287	0.293	0.294	0.291	0.297										0.308627	8.97	0.09	1	
TRANS-1,2-DICHLOROETHENE	0.261	0.28	0.296	0.337	0.308	0.324	0.315	0.326	0.323	0.322	0.323										0.310395	7.32	0.073	1	0.1

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS30
Method : V830D26P
Review Method : 8260C
Review Protocol : SW846
Released By : John Heath
Released On : 4/27/2016 9:25:56 AM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V830D26P -- ICal Updated Time: Wed Apr 27 09:17:18 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur	RF
METHYL TERT-BUTYL ETHER	0.744	0.835	0.819	0.825	0.798	0.845	0.827	0.819	0.816	0.812	0.824										0.814915	3.26	0.033	1	0.1
1,1-DICHLOROETHANE	0.495	0.51	0.57	0.565	0.548	0.576	0.564	0.576	0.576	0.576	0.577										0.557577	5.13	0.051	1	0.2
VINYL ACETATE	0.456	0.495	0.521	0.532	0.491	0.53	0.519	0.495	0.47	0.483	0.459										0.495519	5.52	0.055	1	
DI-ISOPROPYL ETHER	0.861	0.877	0.912	0.891	0.887	0.929	0.927	0.942	0.933	0.935	0.946										0.912679	3.19	0.032	1	
2,2-Dichloropropane	0.551	0.545	0.564	0.542	0.523	0.544	0.528	0.542	0.546	0.542	0.54										0.542495	1.97	0.02	1	
CIS-1,2-DICHLOROETHENE	0.275	0.328	0.334	0.348	0.345	0.353	0.344	0.352	0.354	0.352	0.357										0.340104	6.86	0.069	1	0.1
2-BUTANONE (MEK)	0.188	0.147	0.151	0.141	0.132	0.15	0.147	0.142	0.143	0.139	0.14										0.147246	9.83	0.098	1	0.1
BROMOCHLOROMETHANE	0.161	0.195	0.226	0.204	0.2	0.213	0.206	0.21	0.207	0.204	0.202										0.202534	7.88	0.079	1	
TETRAHYDROFURAN				0.086	0.066	0.077	0.071	0.068	0.069	0.067	0.068										0.071527	9.5	0.095	1	
CHLOROFORM	0.577	0.572	0.596	0.603	0.568	0.596	0.57	0.573	0.57	0.564	0.567										0.577676	2.37	0.024	1	0.2
DIBROMOFLUOROMETHANE	0.469	0.469	0.46	0.454	0.448	0.443	0.437	0.431	0.424	0.42	0.417										0.442919	4.25	0.043	1	
1,1,1-TRICHLOROETHANE	0.449	0.471	0.508	0.512	0.491	0.5	0.498	0.516	0.515	0.514	0.514										0.499002	4.26	0.043	1	0.1
CARBON TETRACHLORIDE	0.661	0.569	0.594	0.546	0.532	0.535	0.521	0.538	0.541	0.537	0.54										0.555656	7.23	0.072	1	0.1
1,1-Dichloropropene	0.363	0.437	0.454	0.451	0.438	0.444	0.44	0.448	0.449	0.442	0.445										0.437261	5.79	0.058	1	
2,2,4-TRIMETHYLPENTANE	0.317	0.379	0.375	0.339	0.371	0.361	0.338	0.349	0.338	0.337	0.335										0.349104	5.59	0.056	1	
HEPTANE	0.425	0.51	0.483	0.508	0.488	0.499	0.49	0.496	0.497	0.497	0.496										0.489724	4.67	0.047	1	
BENZENE	1.251	1.234	1.247	1.262	1.183	1.234	1.204	1.227	1.239	1.235	1.243										1.232632	1.8	0.018	1	0.5
1,2-DICHLOROETHANE	0.387	0.34	0.393	0.398	0.39	0.412	0.406	0.402	0.402	0.403	0.407										0.394577	4.98	0.05	1	0.1
8260-1,4-DIFLUOROBENZENE																									
TRICHLOROETHENE	0.206	0.211	0.227	0.233	0.222	0.236	0.227	0.234	0.233	0.227	0.228										0.225792	4.29	0.043	1	0.2
1,2-DICHLOROPROPANE	0.152	0.14	0.138	0.145	0.141	0.142	0.142	0.145	0.143	0.14	0.145										0.14285	2.67	0.027	1	0.1
DIBROMOMETHANE	0.112	0.108	0.131	0.121	0.116	0.125	0.125	0.127	0.126	0.124	0.128										0.122176	5.74	0.057	1	

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS30
Method : V830D26P
Review Method : 8260C
Review Protocol : SW846
Released By : John Heath
Released On : 4/27/2016 9:25:56 AM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V830D26P -- ICal Updated Time: Wed Apr 27 09:17:18 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur	RF
BROMODICHLOROMETHANE	0.268	0.315	0.308	0.284	0.275	0.281	0.276	0.286	0.279	0.275	0.284										0.284509	5.06	0.051	1	0.2
a,a,a-Trifluorotoluene	0.571	0.564	0.559	0.551	0.55	0.541	0.532	0.536	0.531	0.526	0.542										0.545789	2.67	0.027	1	
-CHLOROETHYL VINYL ETHER		0.023	0.024	0.026	0.026	0.029	0.029	0.029	0.029	0.027	0.026										0.026904	8.1	0.081	1	
CIS-1,3-DICHLOROPROPENE	0.263	0.315	0.335	0.33	0.313	0.333	0.339	0.341	0.34	0.336	0.346										0.326556	7.19	0.072	1	0.2
4-METHYL-2-PENTANONE (MIBK)	0.136	0.171	0.16	0.156	0.151	0.169	0.168	0.164	0.166	0.162	0.167										0.160977	6.3	0.063	1	0.1
TOLUENE-D8	1.194	1.195	1.17	1.147	1.136	1.12	1.119	1.114	1.102	1.098	1.139										1.139563	2.99	0.03	1	
TOLUENE	1.056	1.007	0.985	0.947	0.888	0.913	0.891	0.912	0.908	0.892	0.899										0.93631	6	0.06	1	0.4
TRANS-1,3-DICHLOROPROPENE	0.259	0.268	0.285	0.288	0.286	0.298	0.297	0.303	0.3	0.297	0.303										0.289443	5.05	0.051	1	0.1
8260-2-BROMO-1 -CHLOROPROPANE																									
1,1,2-TRICHLOROETHANE	0.936	1.082	1.1	1.123	1.06	1.138	1.124	1.128	1.104	1.099	1.07										1.087675	5.16	0.052	1	0.1
TETRACHLOROETHENE	1.139	1.231	1.256	1.282	1.203	1.277	1.201	1.244	1.211	1.194	1.112										1.213506	4.38	0.044	1	0.2
1,3-Dichloropropane	1.779	1.653	1.858	1.884	1.773	1.937	1.883	1.909	1.847	1.833	1.785										1.830926	4.37	0.044	1	
2-HEXANONE	0.416	0.463	0.486	0.504	0.459	0.534	0.51	0.517	0.517	0.501	0.49										0.490659	6.83	0.068	1	0.1
CHLORODIBROMOMETHANE	1.385	1.233	1.323	1.336	1.268	1.417	1.405	1.408	1.398	1.402	1.371										1.358721	4.53	0.045	1	0.1
1,2-DIBROMOETHANE	0.947	1.12	1.208	1.159	1.115	1.205	1.186	1.206	1.174	1.182	1.161										1.151202	6.5	0.065	1	0.1
CHLOROBENZENE	3.156	3.819	3.959	4.069	3.862	4.098	3.863	3.926	3.77	3.721	3.478										3.792748	7.15	0.071	1	0.5
1,1,1,2-TETRACHLOROETHANE	1.187	1.28	1.382	1.28	1.284	1.381	1.294	1.323	1.28	1.284	1.236										1.291987	4.37	0.044	1	
ETHYLBENZENE	2.027	2.01	2.231	2.255	2.114	2.282	2.207	2.254	2.204	2.17	2.043										2.163492	4.57	0.046	1	0.1
M&P-XYLENE	2.46	2.608	2.745	2.754	2.641	2.78	2.636	2.68	2.585	2.563	2.386										2.62169	4.65	0.046	1	0.1
O-XYLENE	2.401	2.376	2.637	2.606	2.516	2.7	2.598	2.667	2.596	2.605	2.481										2.562053	4.11	0.041	1	0.3
STYRENE	3.54	3.986	4.034	4.029	3.976	4.333	4.162	4.321	4.171	4.169	3.967										4.062575	5.34	0.053	1	0.3
Bromoform	0.697	0.739	0.849	0.877	0.834	0.916	0.887	0.918	0.902	0.905	0.894										0.856069	8.61	0.086	1	0.1

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS30
Method : V830D26P
Review Method : 8260C
Review Protocol : SW846
Released By : John Heath
Released On : 4/27/2016 9:25:56 AM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V830D26P -- ICal Updated Time: Wed Apr 27 09:17:18 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur	RF
Isopropylbenzene		7.811	7.161	7.031	6.755	7.161	6.871	7.076	6.769	6.715	6.204										6.955433	5.95	0.06	1	0.1
4-BROMOFLUOROBENZENE	2.753	2.749	2.742	2.724	2.712	2.755	2.762	2.788	2.748	2.801	2.719										2.750282	0.98	0.01	1	
Bromobenzene	2.735	2.632	2.839	2.664	2.565	2.744	2.672	2.735	2.628	2.608	2.465										2.662469	3.8	0.038	1	
1,1,2,2-TETRACHLOROETHANE	1.569	1.397	1.407	1.324	1.337	1.495	1.439	1.435	1.396	1.379	1.334										1.410052	5.2	0.052	1	0.3
1,2,3-TRICHLOROPROPANE		0.397	0.389	0.373	0.361	0.432	0.407	0.406	0.397	0.394	0.385										0.393973	4.92	0.049	1	
TRANS-1,4-DICHLORO-2-BUTENE		0.45	0.429	0.38	0.372	0.4	0.403	0.401	0.406	0.4	0.386										0.402793	5.67	0.057	1	
n-Propylbenzene	6.949	7.171	7.547	7.364	7.322	7.94	7.636	7.885	7.611	7.553	6.978										7.450496	4.42	0.044	1	
4-ETHYLTOLUENE	6.716	6.29	6.689	6.548	6.479	7.06	6.695	6.897	6.612	6.529	6.038										6.595694	4.19	0.042	1	
2-Chlorotoluene	1.327	1.399	1.532	1.423	1.495	1.561	1.468	1.494	1.441	1.422	1.324										1.444149	5.28	0.053	1	
4-Chlorotoluene	4.494	4.517	4.785	4.611	4.5	4.844	4.675	4.838	4.595	4.55	4.279										4.60789	3.69	0.037	1	
1,3,5-Trimethylbenzene	5.171	4.996	5.417	5.419	5.416	5.772	5.498	5.614	5.337	5.268	4.812										5.338264	5.08	0.051	1	
tert-Butylbenzene	4.405	4.686	4.725	4.817	4.654	5.057	4.806	4.948	4.72	4.665	4.346										4.711609	4.4	0.044	1	
1,2,4-Trimethylbenzene	5.1	5.352	5.595	5.573	5.329	5.757	5.549	5.65	5.362	5.308	4.87										5.404089	4.78	0.048	1	
sec-Butylbenzene	6.318	7.144	7.423	7.17	7.089	7.669	7.332	7.44	7.124	7.025	6.47										7.109379	5.66	0.057	1	
1,3-DICHLOROBENZENE	2.836	3.17	2.995	3.039	3.023	3.271	3.147	3.249	3.088	3.021	2.802										3.058405	4.91	0.049	1	0.6
p-Isopropyltoluene	5.221	5.263	5.924	5.88	5.887	6.365	6.112	6.211	5.876	5.785	5.266										5.799162	6.75	0.067	1	
DICYCLOPENTADIENE	4.886	5.288	5.948	5.982	5.899	6.392	6.168	6.258	5.96	5.891	5.471										5.831157	7.65	0.077	1	
8260-1,4-DICHLOROBENZENE-D4																									
1,4-DICHLOROBENZENE	1.015	1.047	1.031	0.987	0.98	1.018	0.994	1.009	0.988	0.977	0.961										1.000675	2.56	0.026	1	
1,2,3-TRIMETHYLBENZENE	1.862	1.937	1.876	1.84	1.763	1.856	1.793	1.832	1.792	1.773	1.724										1.82255	3.31	0.033	1	
1,2-DICHLOROBENZENE	0.773	0.902	1.005	0.963	0.917	1	0.983	0.994	0.981	0.971	0.969										0.950746	7.08	0.071	1	0.4
n-Butylbenzene	1.825	1.792	1.937	1.843	1.868	1.951	1.895	1.932	1.884	1.872	1.87										1.879034	2.59	0.026	1	

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID : VOCMS30
Method : V830D26P
Review Method : 8260C
Review Protocol : SW846
Released By : John Heath
Released On : 4/27/2016 9:25:56 AM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V830D26P -- ICal Updated Time: Wed Apr 27 09:17:18 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur	RF
1,2-Dibromo-3-chloropropane			0.098	0.097	0.093	0.108	0.107	0.113	0.119	0.117	0.122										0.108165	9.7	0.097	1	0.05
1,2,4-Trichlorobenzene	0.598	0.524	0.568	0.583	0.573	0.64	0.624	0.637	0.61	0.603	0.62										0.598313	5.74	0.057	1	0.2
HEXACHLORO-1,3-BUTADIENE	0.304	0.317	0.317	0.288	0.294	0.324	0.3	0.317	0.317	0.318	0.339										0.312204	4.65	0.046	1	
Naphthalene		1.29	1.317	1.281	1.232	1.441	1.447	1.505	1.526	1.535	1.537										1.411195	8.45	0.084	1	
1,2,3-Trichlorobenzene	0.468	0.493	0.523	0.501	0.493	0.553	0.536	0.575	0.563	0.56	0.563										0.529816	6.84	0.068	1	
1-Methylnaphthalene					0.522	0.633	0.681	0.759	0.765	0.778	0.827										0.709426	14.75	0.147	1	
2-Methylnaphthalene		0.625	0.569	0.483	0.471	0.533	0.588	0.629	0.647	0.645	0.685										0.587466	12.35	0.124	1	
AP9-PENTAFLUOROBENZENE																									
ETHANOL												0.003	0.004	0.003	0.003	0.003	0.003	0.004	0.004	0.004	0.003432	3.8	0.038	1	
Bromoethane												0.332	0.335	0.331	0.335	0.333	0.33	0.329	0.328	0.335	0.332119	0.77	0.008	1	
2-PROPANOL												0.022	0.017	0.016	0.015	0.015	0.016	0.016	0.016	0.017	0.016833	12.54	0.125	1	
Methyl Acetate												0.19	0.196	0.185	0.183	0.181	0.182	0.185	0.188	0.184	0.18581	2.63	0.026	1	0.1
ACETONITRILE												0.032	0.033	0.03	0.03	0.03	0.031	0.031	0.031	0.032	0.031051	3.28	0.033	1	
ALLYL CHLORIDE												0.17	0.18	0.171	0.171	0.172	0.17	0.174	0.169	0.173	0.172247	1.82	0.018	1	
tert-BUTYL ALCOHOL												0.082	0.084	0.079	0.079	0.079	0.077	0.083	0.083	0.082	0.080897	2.91	0.029	1	
chloroprene												0.517	0.551	0.541	0.526	0.526	0.528	0.534	0.524	0.534	0.531168	1.95	0.019	1	
ETHYL TERT-BUTYL ETHER												0.887	0.905	0.84	0.847	0.856	0.849	0.874	0.87	0.866	0.865944	2.41	0.024	1	
PROPIONITRILE												0.038	0.039	0.037	0.036	0.036	0.037	0.038	0.038	0.038	0.037339	2.85	0.029	1	
Ethyl Acetate												0.256	0.261	0.25	0.244	0.242	0.243	0.25	0.252	0.247	0.2495	2.55	0.026	1	
METHACRYLONITRILE												0.114	0.117	0.109	0.11	0.11	0.111	0.113	0.115	0.113	0.112322	2.49	0.025	1	
Cyclohexane												0.86	0.88	0.872	0.867	0.868	0.881	0.902	0.874	0.886	0.876632	1.42	0.014	1	0.1
tert-butyl formate																					0	0	0	1	
ISOBUTANOL												0.017	0.016	0.016	0.016	0.016	0.016	0.016	0.017	0.016	0.016233	2.48	0.025	1	

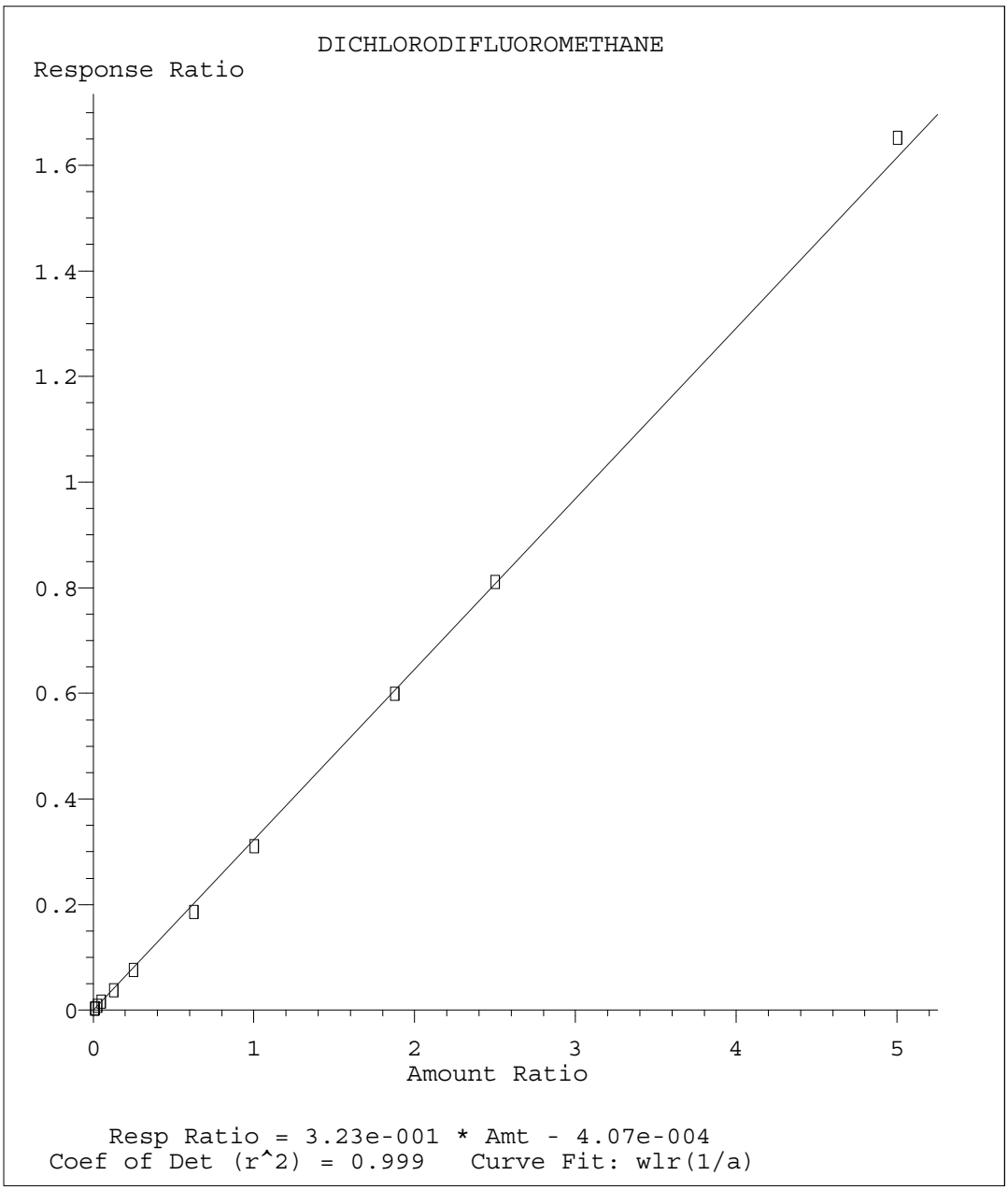
Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

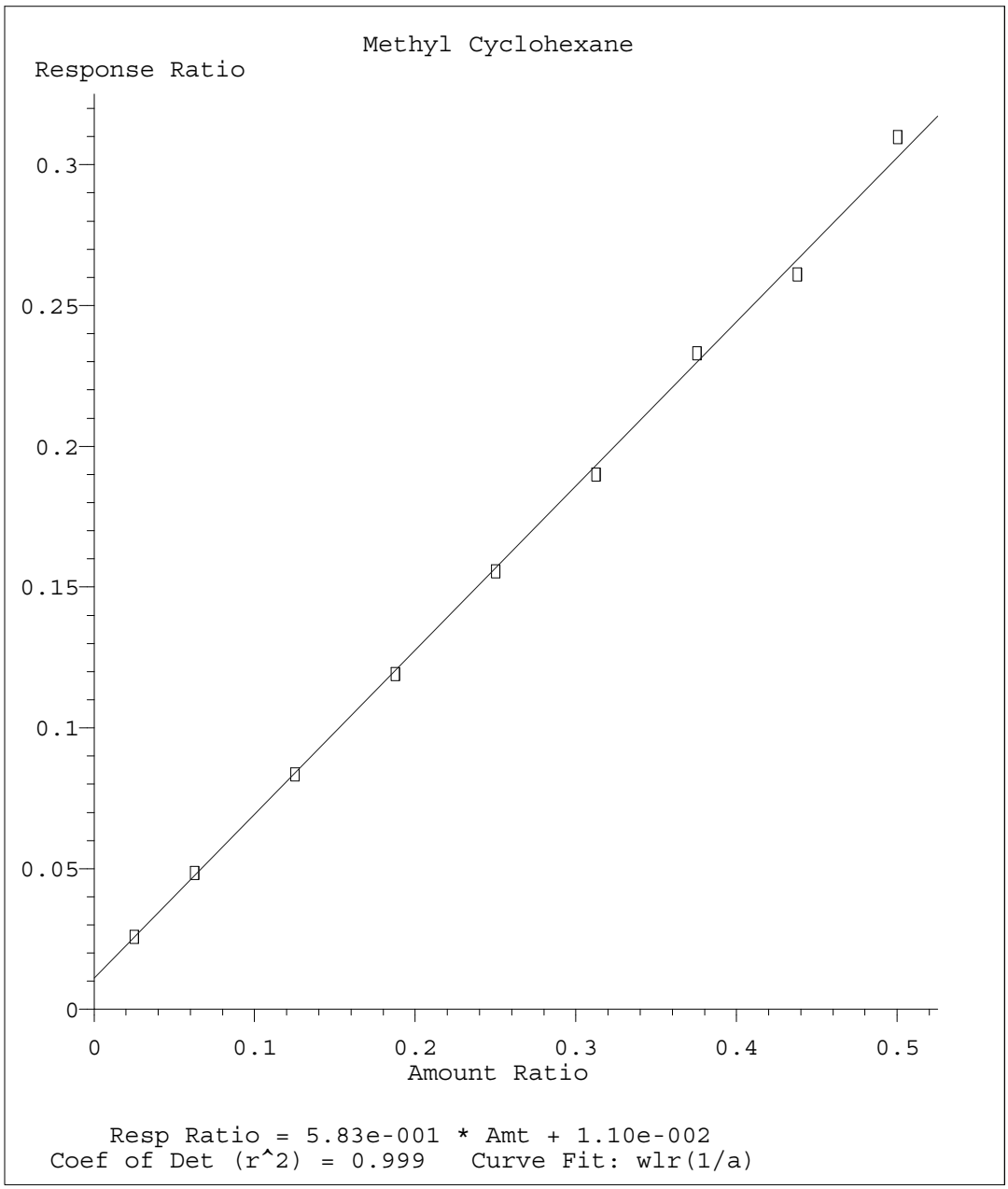
Instrument ID : VOCMS30
Method : V830D26P
Review Method : 8260C
Review Protocol : SW846
Released By : John Heath
Released On : 4/27/2016 9:25:56 AM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- V830D26P -- ICal Updated Time: Wed Apr 27 09:17:18 2016

Parameter	.25	.5	1	2	5.0	10	25	40	75	100	200	1A	2.5A	5A	7.5A	10A	12A	15A	17A	20A	AvgRF	%RSD	COD	Cur	RF
Amyl Alcohol												0.024	0.027	0.026	0.024	0.026	0.027	0.027	0.028	0.028	0.026473	5.51	0.055	1	
TERT-AMYL METHYL ETHER												1.064	1	0.957	0.957	0.985	0.981	0.995	0.992	0.981	0.990164	3.2	0.032	1	
AP9-1,4-DIFLUOROBENZENE																									
N-BUTANOL												0.005	0.006	0.005	0.005	0.005	0.005	0.006	0.006	0.006	0.005373	4.42	0.044	1	
Methyl Cyclohexane												1.023	0.774	0.666	0.635	0.622	0.607	0.621	0.596	0.619	0.684952	20.06	0.999	0	0.1
2-nitropropane												0.064	0.066	0.059	0.06	0.06	0.061	0.062	0.063	0.062	0.061917	3.61	0.036	1	
METHYL METHACRYLATE												0.163	0.161	0.155	0.155	0.156	0.156	0.159	0.16	0.159	0.158305	1.88	0.019	1	
1,4-DIOXANE												0.003	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.003	0.00237	4.9	0.049	1	
n-octane												0.22	0.251	0.239	0.241	0.243	0.25	0.253	0.248	0.255	0.244386	4.37	0.044	1	
3,3-DIMETHYL-1-BUTANOL												0.023	0.024	0.022	0.023	0.024	0.024	0.024	0.025	0.025	0.023674	3.81	0.038	1	
AP9-2-BROMO-1 -CHLOROPROPANE																									
ETHYL METHACRYLATE												1.426	1.466	1.377	1.365	1.386	1.392	1.425	1.44	1.397	1.408158	2.34	0.023	1	
CIS-1,4-DICHLORO-2-BUTENE												0.407	0.437	0.392	0.394	0.406	0.411	0.412	0.417	0.4	0.408343	3.34	0.033	1	
Cyclohexanone												0.308	0.293	0.265	0.264	0.288	0.247	0.261	0.293	0.272	0.276754	7.13	0.071	1	
PENTACHLOROETHANE												0.91	0.956	0.933	0.917	0.924	0.943	0.936	0.926	0.927	0.930346	1.49	0.015	1	
Hexachloroethane												1.177	1.209	1.154	1.135	1.213	1.221	1.227	1.202	1.22	1.195389	2.71	0.027	1	
AP9-1,4-DICHLOROBENZENE-D4																									



Method Name: C:\msdchem\1\methods\V830D26P.M



Method Name: C:\msdchem\1\methods\V830D26P.M

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 01.D
Acq On : 26 Apr 2016 11:05 am
Operator : 605
Sample : INSTBLK
Misc : water
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 27 09:08:34 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 09:06:24 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 8260-PENTAFLUOROBENZENE	4.347	168	791272	40.0000000	ppb		0.00
41) 8260-1,4-DIFLUOROBENZENE	4.682	114	1203570	40.0000000	ppb		0.00
53) 8260-2-BROMO-1-CHLOROP...	5.850	79	186577	40.0000000	ppb		0.00
84) 8260-1,4-DICHLOROBENZE...	8.234	152	534776	40.0000000	ppb		0.00
96) AP9-PENTAFLUOROBENZENE	4.347	168	791272	40.0000000	ppb		0.00
114) AP9-1,4-DIFLUOROBENZENE	4.682	114	1203570	40.0000000	ppb		0.00
122) AP9-2-BROMO-1-CHLOROPR...	5.850	79	186577	40.0000000	ppb	#	0.00
128) AP9-1,4-DICHLOROBENZEN...	8.234	152	534776	40.0000000	ppb		0.00
System Monitoring Compounds							
33) DIBROMOFLUOROMETHANE	4.116	111	385975	44.0523779	ppb		0.00
Spiked Amount 40.000	Range 79 - 121		Recovery = 110.13%				
46) a,a,a-Trifluorotoluene	5.047	146	669913	40.7926745	ppb		0.00
Spiked Amount 40.000	Range 90 - 116		Recovery = 101.98%				
50) TOLUENE-D8	5.509	98	1419257	41.3915009	ppb		0.00
Spiked Amount 40.000	Range 90 - 115		Recovery = 103.48%				
68) 4-BROMOFLUOROBENZENE	7.389	95	510445	39.7899709	ppb		0.00
Spiked Amount 40.000	Range 80 - 120		Recovery = 99.47%				
Target Compounds							Qvalue
3) PROPENE	1.664	41	4176	2.2781507	ppb	#	74
5) CHLOROMETHANE	1.895	50	30751	4.2972752	ppb	#	75
8) BROMOMETHANE	2.206	94	2275	0.7012327	ppb	#	90
13) ACROLEIN	2.960	56	6251	6.4193463	ppb		97
16) ACETONE	3.130	43	13226	4.8670015	ppb		99
17) IODOMETHANE	2.857	142	20055	2.0116798	ppb	#	98
18) CARBON DISULFIDE	2.790	76	5833	0.2689671	ppb	#	83
19) METHYLENE CHLORIDE	3.106	84	1423	0.2243818	ppb	#	77
20) ACRYLONITRILE	3.587	53	537	0.3381556	ppb	#	15
21) n-Hexane	3.222	56	1267	0.2075283	ppb	#	1
29) 2-BUTANONE (MEK)	4.177	43	2915	1.0007593	ppb	#	86
31) TETRAHYDROFURAN	4.110	42	17488	12.3596295	ppb		96
32) CHLOROFORM	4.012	83	1530	0.1338880	ppb	#	66
39) BENZENE	4.353	78	3512	0.1440308	ppb	#	1
43) 1,2-DICHLOROPROPANE	5.047	62	11381	2.6478163	ppb	#	53
45) BROMODICHLOROMETHANE	5.047	83	1353	0.1580485	ppb	#	1
49) 4-METHYL-2-PENTANONE (...	5.752	43	1801	0.3718246	ppb		92
51) TOLUENE	5.545	91	6220	0.2207797	ppb		96
52) TRANS-1,3-DICHLOROPROPENE	5.850	75	9665	1.1097567	ppb	#	1
57) 2-HEXANONE	6.300	58	1471	0.6427394	ppb	#	1
63) M&P-XYLENE	6.641	106	3117	0.2548926	ppb		89
67) Isopropylbenzene	7.158	105	5390	0.1661370	ppb	#	91
69) Bromobenzene	7.486	77	1810	0.1457458	ppb	#	74
70) 1,1,2,2-TETRACHLOROETHANE	7.523	83	952	0.1447451	ppb	#	26
73) n-Propylbenzene	7.462	91	6236	0.1794415	ppb	#	86
74) 4-ETHYLTOLUENE	7.541	105	5820	0.1891753	ppb		96
76) 4-Chlorotoluene	7.729	91	3080	0.1433014	ppb	#	88
77) 1,3,5-Trimethylbenzene	7.596	105	3690	0.1481932	ppb		89
78) tert-Butylbenzene	7.845	119	3997	0.1818724	ppb	#	82
79) 1,2,4-Trimethylbenzene	7.906	105	5250	0.2082758	ppb		92
80) sec-Butylbenzene	7.979	105	7410	0.2234542	ppb		99
81) 1,3-DICHLOROBENZENE	8.186	146	2115	0.1482577	ppb		86
82) p-Isopropyltoluene	8.082	119	6487	0.2398173	ppb		93

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 01.D
Acq On : 26 Apr 2016 11:05 am
Operator : 605
Sample : INSTBLK
Misc : water
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 27 09:08:34 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 09:06:24 2016
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
85)	1,4-DICHLOROBENZENE	8.247	146	2454	0.1834297 ppb	#	1
86)	1,2,3-TRIMETHYLBENZENE	8.247	105	6584	0.2702082 ppb		87
87)	1,2-DICHLOROBENZENE	8.581	146	2450	0.1927478 ppb	#	88
88)	n-Butylbenzene	8.417	91	8289	0.3299556 ppb		92
90)	1,2,4-Trichlorobenzene	9.774	180	5187	0.6484491 ppb		94
91)	HEXACHLORO-1,3-BUTADIENE	9.725	225	2841	0.6806450 ppb		98
92)	Naphthalene	10.047	128	18291	0.9694792 ppb		98
93)	1,2,3-Trichlorobenzene	10.206	180	5798	0.8185417 ppb		95
94)	1-Methylnaphthalene	10.911	142	19065	2.0101001 ppb		96
95)	2-Methylnaphthalene	11.045	142	16777	2.1360902 ppb		98
97)	ETHANOL	2.692	45	2403	35.3944631 ppb	#	40
99)	2-PROPANOL	3.027	45	3345	10.0457231 ppb	#	86
100)	Methyl Acetate	3.185	43	3292	0.8956211 ppb	#	50
101)	ACETONITRILE	3.422	41	510	0.8302762 ppb	#	34
103)	tert-BUTYL ALCOHOL	3.282	59	10136	6.3338388 ppb	#	88
108)	METHACRYLONITRILE	4.347	67	2826	1.2718681 ppb	#	13
111)	ISOBUTANOL	4.347	43	1491	4.6431845 ppb	#	1
115)	N-BUTANOL	4.803	56	846	5.2326020 ppb	#	20
117)	2-nitropropane	5.752	43	1801	0.9667036 ppb	#	19
119)	1,4-DIOXANE	5.047	88	8317	116.6376202 ppb	#	86
121)	3,3-DIMETHYL-1-BUTANOL	6.312	57	2354	3.3046718 ppb	#	38
125)	Cyclohexanone	7.687	55	1024	0.7932468 ppb		90
126)	PENTACHLOROETHANE	7.796	117	1834	0.4226266 ppb	#	9

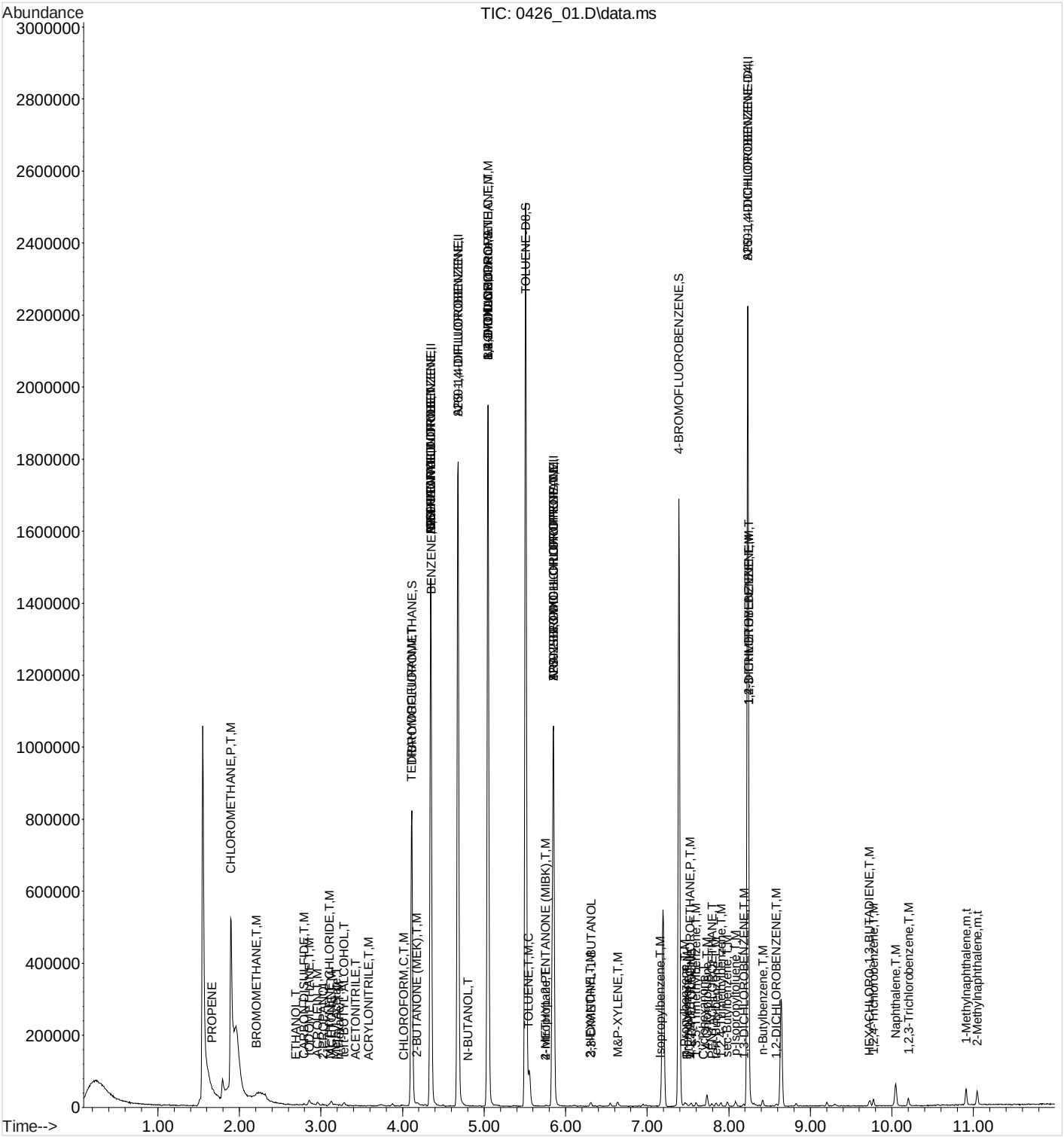
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 01.D
Acq On : 26 Apr 2016 11:05 am
Operator : 605
Sample : INSTBLK
Misc : water
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 27 09:08:34 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 09:06:24 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 01.D
Acq On : 26 Apr 2016 11:05 am
Operator : 605
Sample : INSTBLK
Misc : water
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 27 09:08:34 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 09:06:24 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 8260-PENTAFLUOROBENZENE	4.347	168	791272	40.0000000	ppb		0.00
41) 8260-1,4-DIFLUOROBENZENE	4.682	114	1203570	40.0000000	ppb		0.00
53) 8260-2-BROMO-1-CHLOROP...	5.850	79	186577	40.0000000	ppb		0.00
84) 8260-1,4-DICHLOROBENZE...	8.234	152	534776	40.0000000	ppb		0.00
96) AP9-PENTAFLUOROBENZENE	4.347	168	791272	40.0000000	ppb		0.00
114) AP9-1,4-DIFLUOROBENZENE	4.682	114	1203570	40.0000000	ppb		0.00
122) AP9-2-BROMO-1-CHLOROPR...	5.850	79	186577	40.0000000	ppb	#	0.00
128) AP9-1,4-DICHLOROBENZEN...	8.234	152	534776	40.0000000	ppb		0.00
System Monitoring Compounds							
33) DIBROMOFLUOROMETHANE	4.116	111	385975	44.0523779	ppb		0.00
Spiked Amount 40.000	Range 79 - 121		Recovery = 110.13%				
46) a,a,a-Trifluorotoluene	5.047	146	669913	40.7926745	ppb		0.00
Spiked Amount 40.000	Range 90 - 116		Recovery = 101.98%				
50) TOLUENE-D8	5.509	98	1419257	41.3915009	ppb		0.00
Spiked Amount 40.000	Range 90 - 115		Recovery = 103.48%				
68) 4-BROMOFLUOROBENZENE	7.389	95	510445	39.7899709	ppb		0.00
Spiked Amount 40.000	Range 80 - 120		Recovery = 99.47%				
Target Compounds							Qvalue
3) PROPENE	1.664	41	4176	2.2781507	ppb	#	74
5) CHLOROMETHANE	1.895	50	30751	4.2972752	ppb	#	75
8) BROMOMETHANE	2.206	94	2275	0.7012327	ppb	#	90
13) ACROLEIN	2.960	56	6251	6.4193463	ppb		97
16) ACETONE	3.130	43	13226	4.8670015	ppb		99
17) IODOMETHANE	2.857	142	20055	2.0116798	ppb	#	98
18) CARBON DISULFIDE	2.790	76	5833	0.2689671	ppb	#	83
19) METHYLENE CHLORIDE	3.106	84	1423	0.2243818	ppb	#	77
20) ACRYLONITRILE	3.587	53	537	0.3381556	ppb	#	15
21) n-Hexane	3.222	56	1267	0.2075283	ppb	#	1
29) 2-BUTANONE (MEK)	4.177	43	2915	1.0007593	ppb	#	86
31) TETRAHYDROFURAN	4.110	42	17488	12.3596295	ppb		96
32) CHLOROFORM	4.012	83	1530	0.1338880	ppb	#	66
39) BENZENE	4.353	78	3512	0.1440308	ppb	#	1
43) 1,2-DICHLOROPROPANE	5.047	62	11381	2.6478163	ppb	#	53
45) BROMODICHLOROMETHANE	5.047	83	1353	0.1580485	ppb	#	1
49) 4-METHYL-2-PENTANONE (...	5.752	43	1801	0.3718246	ppb		92
51) TOLUENE	5.545	91	6220	0.2207797	ppb		96
52) TRANS-1,3-DICHLOROPROPENE	5.850	75	9665	1.1097567	ppb	#	1
57) 2-HEXANONE	6.300	58	1471	0.6427394	ppb	#	1
63) M&P-XYLENE	6.641	106	3117	0.2548926	ppb		89
67) Isopropylbenzene	7.158	105	5390	0.1661370	ppb	#	91
69) Bromobenzene	7.486	77	1810	0.1457458	ppb	#	74
70) 1,1,2,2-TETRACHLOROETHANE	7.523	83	952	0.1447451	ppb	#	26
73) n-Propylbenzene	7.462	91	6236	0.1794415	ppb	#	86
74) 4-ETHYLTOLUENE	7.541	105	5820	0.1891753	ppb		96
76) 4-Chlorotoluene	7.729	91	3080	0.1433014	ppb	#	88
77) 1,3,5-Trimethylbenzene	7.596	105	3690	0.1481932	ppb		89
78) tert-Butylbenzene	7.845	119	3997	0.1818724	ppb	#	82
79) 1,2,4-Trimethylbenzene	7.906	105	5250	0.2082758	ppb		92
80) sec-Butylbenzene	7.979	105	7410	0.2234542	ppb		99
81) 1,3-DICHLOROBENZENE	8.186	146	2115	0.1482577	ppb		86
82) p-Isopropyltoluene	8.082	119	6487	0.2398173	ppb		93

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 01.D
Acq On : 26 Apr 2016 11:05 am
Operator : 605
Sample : INSTBLK
Misc : water
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 27 09:08:34 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 09:06:24 2016
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
85)	1,4-DICHLOROBENZENE	8.247	146	2454	0.1834297	ppb	#	1
86)	1,2,3-TRIMETHYLBENZENE	8.247	105	6584	0.2702082	ppb		87
87)	1,2-DICHLOROBENZENE	8.581	146	2450	0.1927478	ppb	#	88
88)	n-Butylbenzene	8.417	91	8289	0.3299556	ppb		92
90)	1,2,4-Trichlorobenzene	9.774	180	5187	0.6484491	ppb		94
91)	HEXACHLORO-1,3-BUTADIENE	9.725	225	2841	0.6806450	ppb		98
92)	Naphthalene	10.047	128	18291	0.9694792	ppb		98
93)	1,2,3-Trichlorobenzene	10.206	180	5798	0.8185417	ppb		95
94)	1-Methylnaphthalene	10.911	142	19065	2.0101001	ppb		96
95)	2-Methylnaphthalene	11.045	142	16777	2.1360902	ppb		98
97)	ETHANOL	2.692	45	2403	35.3944631	ppb	#	40
99)	2-PROPANOL	3.027	45	3345	10.0457231	ppb	#	86
100)	Methyl Acetate	3.185	43	3292	0.8956211	ppb	#	50
101)	ACETONITRILE	3.422	41	510	0.8302762	ppb	#	34
103)	tert-BUTYL ALCOHOL	3.282	59	10136	6.3338388	ppb	#	88
108)	METHACRYLONITRILE	4.347	67	2826	1.2718681	ppb	#	13
111)	ISOBUTANOL	4.347	43	1491	4.6431845	ppb	#	1
115)	N-BUTANOL	4.803	56	846	5.2326020	ppb	#	20
117)	2-nitropropane	5.752	43	1801	0.9667036	ppb	#	19
119)	1,4-DIOXANE	5.047	88	8317	116.6376202	ppb	#	86
121)	3,3-DIMETHYL-1-BUTANOL	6.312	57	2354	3.3046718	ppb	#	38
125)	Cyclohexanone	7.687	55	1024	0.7932468	ppb		90
126)	PENTACHLOROETHANE	7.796	117	1834	0.4226266	ppb	#	9

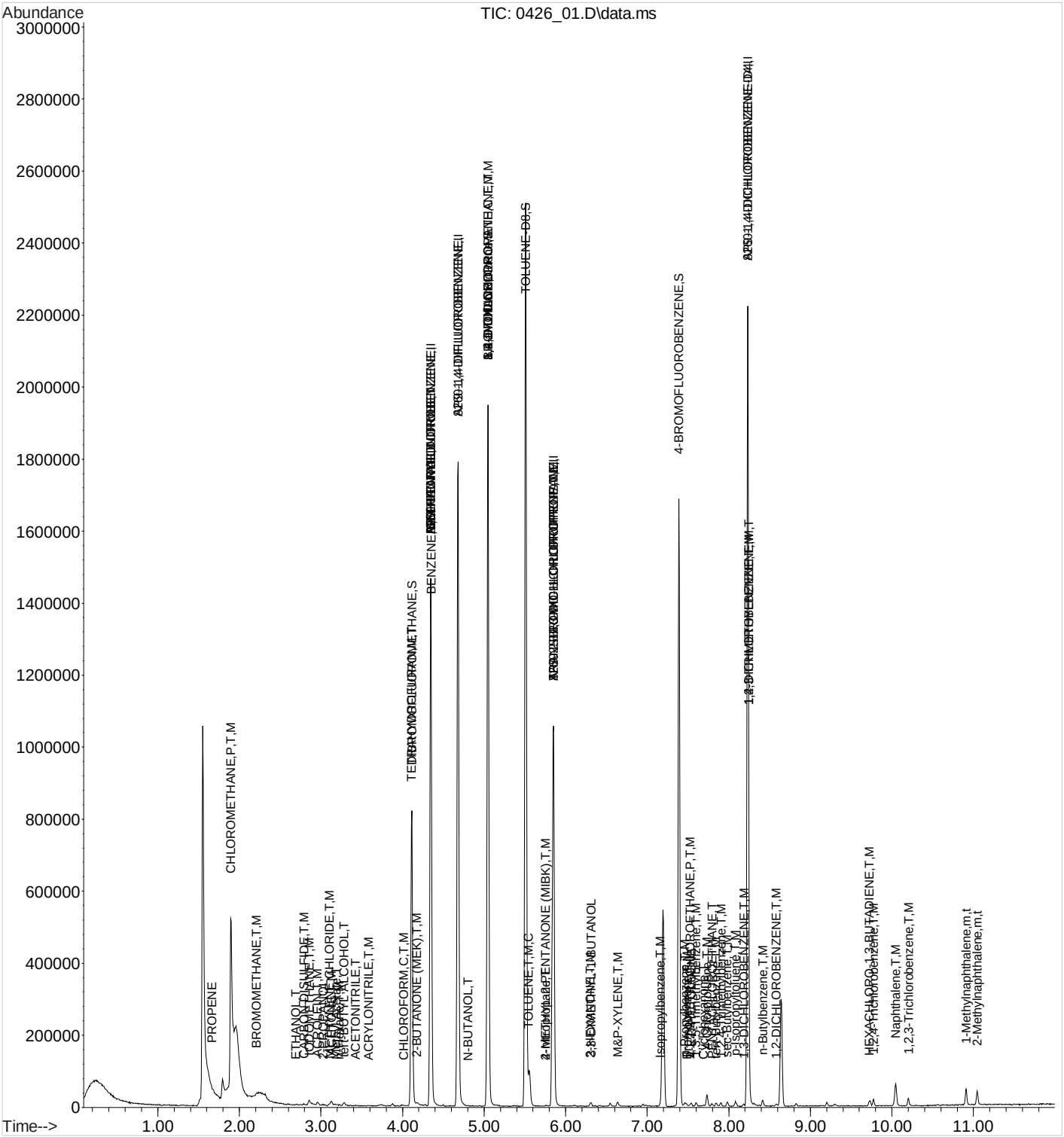
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 01.D
Acq On : 26 Apr 2016 11:05 am
Operator : 605
Sample : INSTBLK
Misc : water
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 27 09:08:34 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 09:06:24 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 06A.D
Acq On : 26 Apr 2016 12:58 pm
Operator : 605
Sample : RL VMS 1 ppb 16D26894
Misc : water IS/SURR16D21640
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 27 09:19:01 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 09:17:18 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 8260-PENTAFLUOROBENZENE	4.347	168	731067	40.0000000	ppb		0.00
41) 8260-1,4-DIFLUOROBENZENE	4.682	114	1096486	40.0000000	ppb		0.00
53) 8260-2-BROMO-1-CHLOROP...	5.850	79	165962	40.0000000	ppb		0.00
84) 8260-1,4-DICHLOROBENZE...	8.235	152	484935	40.0000000	ppb		0.00
96) AP9-PENTAFLUOROBENZENE	4.347	168	731067	40.0000000	ppb		0.00
114) AP9-1,4-DIFLUOROBENZENE	4.682	114	1096486	40.0000000	ppb		0.00
122) AP9-2-BROMO-1-CHLOROPR...	5.850	79	165962	40.0000000	ppb	#	0.00
128) AP9-1,4-DICHLOROBENZEN...	8.235	152	484935	40.0000000	ppb		0.00
System Monitoring Compounds							
33) DIBROMOFLUOROMETHANE	4.116	111	344929	42.6097030	ppb		0.00
Spiked Amount 40.000	Range 79 - 121		Recovery = 106.52%				
46) a,a,a-Trifluorotoluene	5.047	146	628545	42.0115218	ppb		0.00
Spiked Amount 40.000	Range 90 - 116		Recovery = 105.03%				
50) TOLUENE-D8	5.509	98	1314829	42.0908472	ppb		0.00
Spiked Amount 40.000	Range 90 - 115		Recovery = 105.23%				
68) 4-BROMOFLUOROBENZENE	7.389	95	466526	40.8836786	ppb		0.00
Spiked Amount 40.000	Range 80 - 120		Recovery = 102.21%				
Target Compounds							Qvalue
3) PROPENE	1.658	41	3507	2.0707436	ppb	#	86
4) DICHLORODIFLUOROMETHANE	1.701	85	5946	1.0575334	ppb		95
5) CHLOROMETHANE	1.871	50	6742	1.0197443	ppb		97
6) VINYL CHLORIDE	1.938	62	7169	1.0340097	ppb	#	88
7) 1,3-BUTADIENE	1.950	39	6747	1.1194562	ppb		87
8) BROMOMETHANE	2.200	94	4354	1.4525724	ppb	#	69
9) CHLOROETHANE	2.291	64	4202	1.0803286	ppb	#	67
10) TRICHLOROFLUOROMETHANE	2.394	101	10261	1.0592498	ppb	#	96
11) DICHLOROFLUOROMETHANE	2.431	67	10320	0.9195886	ppb		100
12) ETHYL ETHER	2.595	59	4299	1.0427762	ppb		94
13) ACROLEIN	2.960	56	4630	5.1462504	ppb	#	82
14) 1,1-DICHLOROETHENE	2.747	61	8967	1.0445425	ppb		97
15) 1,1,2-TRICHLOROTRIFLUO...	2.765	101	6107	1.0630283	ppb		98
16) ACETONE	3.130	43	14968	5.9616347	ppb		97
17) IODOMETHANE	2.851	142	51539	5.5955245	ppb		99
18) CARBON DISULFIDE	2.784	76	22198	1.1078723	ppb		98
19) METHYLENE CHLORIDE	3.106	84	6008	1.0253713	ppb		96
20) ACRYLONITRILE	3.587	53	7084	4.8282468	ppb		99
21) n-Hexane	3.234	56	6415	1.1372761	ppb		79
22) TRANS-1,2-DICHLOROETHENE	3.203	96	5418	0.9550535	ppb		89
23) METHYL TERT-BUTYL ETHER	3.246	73	14961	1.0045024	ppb		95
24) 1,1-DICHLOROETHANE	3.562	63	10417	1.0222107	ppb		100
25) VINYL ACETATE	3.672	43	47635	5.2597952	ppb		99
26) DI-ISOPROPYL ETHER	3.447	45	16670	0.9993563	ppb		94
27) 2,2-Dichloropropane	3.927	77	10301	1.0389310	ppb		99
28) CIS-1,2-DICHLOROETHENE	3.866	96	6110	0.9829528	ppb		95
29) 2-BUTANONE (MEK)	4.177	43	13786	5.1226885	ppb		96
30) BROMOCHLOROMETHANE	3.982	130	4137	1.1176094	ppb		92
31) TETRAHYDROFURAN	4.116	42	1926	1.4732967	ppb	#	67
32) CHLOROFORM	4.006	83	10890	1.0314464	ppb		98
34) 1,1,1-TRICHLOROETHANE	4.146	97	9289	1.0185194	ppb		98
35) CARBON TETRACHLORIDE	4.104	117	10856	1.0689730	ppb		82
36) 1,1-Dichloropropene	4.207	75	8303	1.0389567	ppb		95

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 06A.D
Acq On : 26 Apr 2016 12:58 pm
Operator : 605
Sample : RL VMS 1 ppb 16D26894
Misc : water IS/SURR16D21640
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 27 09:19:01 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 09:17:18 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
37) 2,2,4-TRIMETHYLPENTANE	4.250	41	6856	1.0745316 ppb		93
38) HEPTANE	4.280	43	8828	0.9863116 ppb	#	69
39) BENZENE	4.347	78	22799	1.0120111 ppb	#	56
40) 1,2-DICHLOROETHANE	4.469	62	7176	0.9950691 ppb		99
42) TRICHLOROETHENE	4.676	130	6212	1.0036420 ppb		97
43) 1,2-DICHLOROPROPANE	4.998	62	3779	0.9650561 ppb		89
44) DIBROMOMETHANE	4.943	93	3582	1.0695370 ppb		91
45) BROMODICHLOROMETHANE	5.016	83	8436	1.0816768 ppb	#	74
47) 2-CHLOROETHYL VINYL ETHER	5.327	63	3339	4.5273965 ppb	#	90
48) CIS-1,3-DICHLOROPROPENE	5.393	75	9182	1.0257375 ppb	#	96
49) 4-METHYL-2-PENTANONE (...	5.758	43	21867	4.9554361 ppb		100
51) TOLUENE	5.546	91	27013	1.0524704 ppb		97
52) TRANS-1,3-DICHLOROPROPENE	5.801	75	7800	0.9830799 ppb		95
54) 1,1,2-TRICHLOROETHANE	5.904	97	4564	1.0113418 ppb		96
55) TETRACHLOROETHENE	5.801	164	5210	1.0347779 ppb		97
56) 1,3-Dichloropropane	6.093	76	7707	1.0145322 ppb		99
57) 2-HEXANONE	6.300	58	10086	4.9543951 ppb		93
58) CHLORODIBROMOMETHANE	6.038	129	5488	0.9734980 ppb		99
59) 1,2-DIBROMOETHANE	6.215	107	5014	1.0497456 ppb		95
60) CHLOROBENZENE	6.549	112	16426	1.0438284 ppb		98
61) 1,1,1,2-TETRACHLOROETHANE	6.586	133	5736	1.0700459 ppb	#	97
62) ETHYLBENZENE	6.543	106	9258	1.0313670 ppb		99
63) M&P-XYLENE	6.635	106	22775	2.0937668 ppb		96
64) O-XYLENE	6.945	106	10942	1.0293427 ppb		94
65) STYRENE	6.987	104	16738	0.9930096 ppb		97
66) Bromoform	7.030	173	3521	0.9913079 ppb		96
67) Isopropylbenzene	7.164	105	29710	1.0295082 ppb		96
69) Bromobenzene	7.480	77	11781	1.0664709 ppb		96
70) 1,1,2,2-TETRACHLOROETHANE	7.517	83	5838	0.9978847 ppb		93
71) 1,2,3-TRICHLOROPROPANE	7.638	110	1612	0.9861652 ppb		97
72) TRANS-1,4-DICHLORO-2-B...	7.657	53	1780	1.0650972 ppb	#	88
73) n-Propylbenzene	7.462	91	31311	1.0128919 ppb		99
74) 4-ETHYLTOLUENE	7.541	105	27755	1.0142197 ppb		99
75) 2-Chlorotoluene	7.608	126	6356	1.0607748 ppb	#	88
76) 4-Chlorotoluene	7.723	91	19854	1.0384779 ppb		100
77) 1,3,5-Trimethylbenzene	7.596	105	22477	1.0148214 ppb		98
78) tert-Butylbenzene	7.845	119	19605	1.0028799 ppb		97
79) 1,2,4-Trimethylbenzene	7.900	105	23212	1.0352409 ppb		100
80) sec-Butylbenzene	7.979	105	30798	1.0441002 ppb		100
81) 1,3-DICHLOROBENZENE	8.186	146	12428	0.9793943 ppb		97
82) p-Isopropyltoluene	8.082	119	24581	1.0216112 ppb		97
83) DICYCLOPENTADIENE	8.095	66	24678	1.0200149 ppb		98
85) 1,4-DICHLOROBENZENE	8.247	146	12496	1.0300408 ppb	#	1
86) 1,2,3-TRIMETHYLBENZENE	8.247	105	22741	1.0292163 ppb		96
87) 1,2-DICHLOROBENZENE	8.581	146	12183	1.0569781 ppb		97
88) n-Butylbenzene	8.417	91	23486	1.0309813 ppb		97
89) 1,2-Dibromo-3-chloropr...	9.226	157	1185	0.9036629 ppb		93
90) 1,2,4-Trichlorobenzene	9.774	180	6892	0.9501524 ppb		93
91) HEXACHLORO-1,3-BUTADIENE	9.725	225	3843	1.0153323 ppb		98
92) Naphthalene	10.047	128	15971	0.9335155 ppb		99
93) 1,2,3-Trichlorobenzene	10.200	180	6335	0.9862740 ppb		98
94) 1-Methylnaphthalene	10.917	142	6563	0.7630828 ppb		94
95) 2-Methylnaphthalene	11.045	142	6895	0.9681172 ppb		95
97) ETHANOL	2.692	45	626	9.9798614 ppb	#	21

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 06A.D
Acq On : 26 Apr 2016 12:58 pm
Operator : 605
Sample : RL VMS 1 ppb 16D26894
Misc : water IS/SURR16D21640
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 27 09:19:01 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 09:17:18 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
100) Methyl Acetate	3.191	43	15294	4.5035420	ppb	#	97
101) ACETONITRILE	3.447	41	3673	6.4720517	ppb	#	14
102) ALLYL CHLORIDE	3.045	76	16490	5.2380814	ppb		96
103) tert-BUTYL ALCOHOL	3.282	59	779	0.5268736	ppb	#	63
104) chloroprene	3.587	53	7084	0.7297090	ppb	#	20
105) ETHYL TERT-BUTYL ETHER	3.660	59	15815	0.9992681	ppb		98
107) Ethyl Acetate	3.994	43	1069	0.2344283	ppb	#	67
108) METHACRYLONITRILE	4.347	67	2205	1.0741060	ppb	#	1
109) Cyclohexane	3.988	56	10549	0.6584105	ppb		98
111) ISOBUTANOL	4.378	43	5817	19.6067666	ppb	#	71
112) t-Amyl Alcohol	4.463	59	2080	4.2989358	ppb		100
113) TERT-AMYL METHYL ETHER	4.378	73	15908	0.8790451	ppb	#	26
115) N-BUTANOL	4.876	56	516	3.5032030	ppb	#	20
116) Methyl Cyclohexane	4.682	83	23814	0.7356944	ppb	#	75
117) 2-nitropropane	5.661	43	549	0.3234597	ppb	#	15
118) METHYL METHACRYLATE	4.992	41	4667	1.0754773	ppb	#	13
119) 1,4-DIOXANE	5.047	88	7719	118.8232023	ppb	#	86
121) 3,3-DIMETHYL-1-BUTANOL	6.306	57	4251	6.5506024	ppb	#	26
125) Cyclohexanone	7.705	55	502	0.4371812	ppb	#	19
126) PENTACHLOROETHANE	7.906	117	845	0.2189090	ppb	#	9
127) Hexachloroethane	8.630	117	895	0.1804534	ppb	#	1

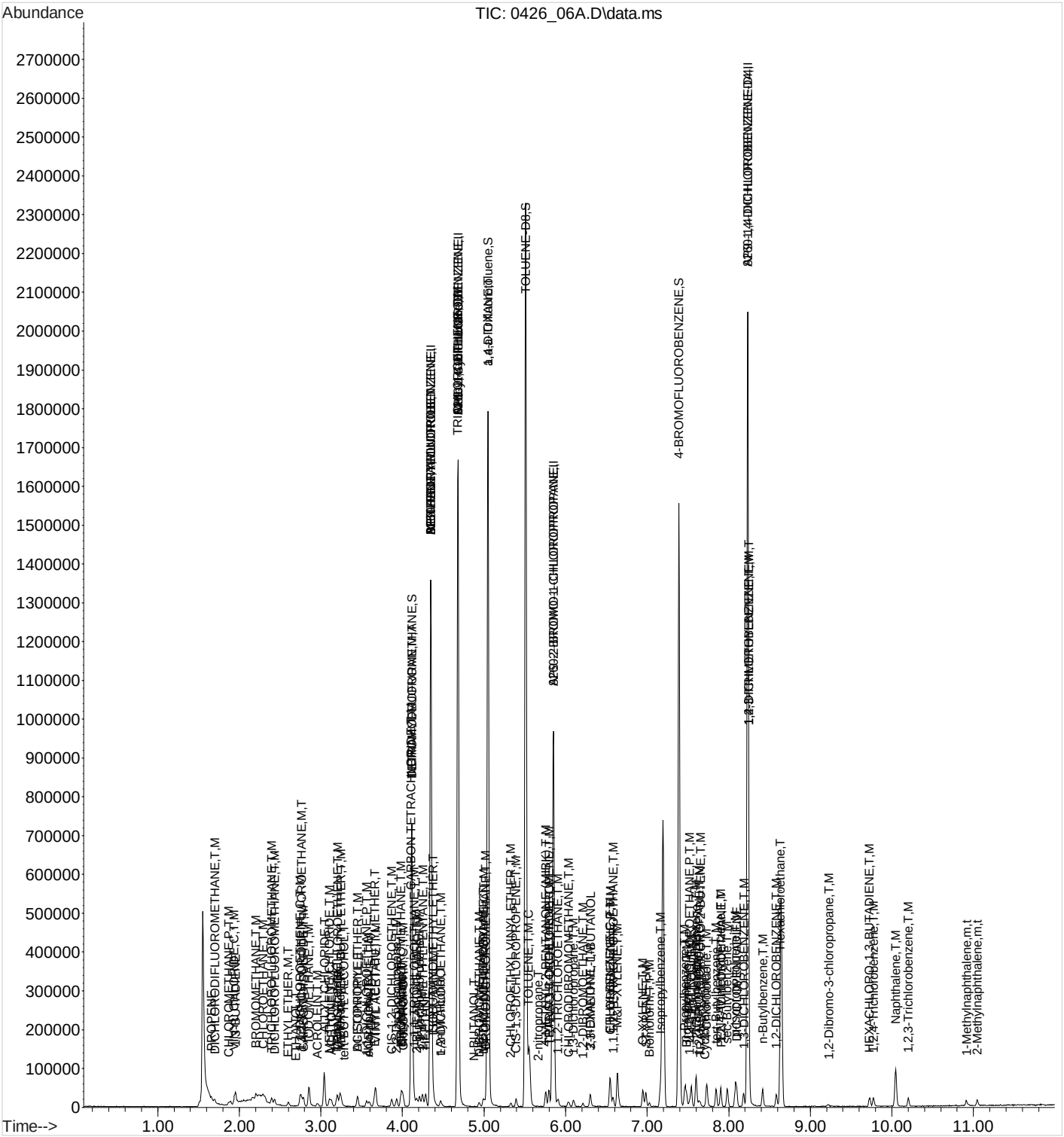
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 06A.D
Acq On : 26 Apr 2016 12:58 pm
Operator : 605
Sample : RL VMS 1 ppb 16D26894
Misc : water IS/SURR16D21640
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 27 09:19:01 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 09:17:18 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 19A.D
Acq On : 26 Apr 2016 5:52 pm
Operator : 605
Sample : RL VMS 1a ppb 16D26918
Misc : water IS/SURR16D21640
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Apr 27 09:07:42 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 09:06:24 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 8260-PENTAFLUOROBENZENE	4.347	168	622342	40.0000000	ppb		0.00
41) 8260-1,4-DIFLUOROBENZENE	4.681	114	936518	40.0000000	ppb		0.00
53) 8260-2-BROMO-1-CHLOROP...	5.849	79	136855	40.0000000	ppb		0.00
84) 8260-1,4-DICHLOROBENZE...	8.234	152	406142	40.0000000	ppb		0.00
96) AP9-PENTAFLUOROBENZENE	4.347	168	622342	40.0000000	ppb		0.00
114) AP9-1,4-DIFLUOROBENZENE	4.681	114	936518	40.0000000	ppb		0.00
122) AP9-2-BROMO-1-CHLOROPR...	5.849	79	136855	40.0000000	ppb	#	0.00
128) AP9-1,4-DICHLOROBENZEN...	8.234	152	406142	40.0000000	ppb		0.00
System Monitoring Compounds							
33) DIBROMOFLUOROMETHANE	4.116	111	289734	42.0442229	ppb		0.00
Spiked Amount 40.000	Range 79 - 121		Recovery = 105.11%				
46) a,a,a-Trifluorotoluene	5.046	146	536215	41.9621719	ppb		0.00
Spiked Amount 40.000	Range 90 - 116		Recovery = 104.91%				
50) TOLUENE-D8	5.509	98	1109515	41.5851750	ppb		0.00
Spiked Amount 40.000	Range 90 - 115		Recovery = 103.96%				
68) 4-BROMOFLUOROBENZENE	7.389	95	389114	41.3522325	ppb		0.00
Spiked Amount 40.000	Range 80 - 120		Recovery = 103.38%				
Target Compounds							Qvalue
3) PROPENE	1.664	41	944	0.6547728	ppb	#	80
7) 1,3-BUTADIENE	1.962	39	1371	0.2672157	ppb	#	1
8) BROMOMETHANE	2.205	94	2097	0.8218184	ppb	#	84
16) ACETONE	3.136	43	3055	1.4293575	ppb		89
17) IODOMETHANE	2.862	142	14310	1.8250405	ppb	#	95
18) CARBON DISULFIDE	2.783	76	2633	0.1543671	ppb	#	58
20) ACRYLONITRILE	3.544	53	40189	32.1770465	ppb	#	50
25) VINYL ACETATE	3.653	43	2320	0.3009253	ppb	#	73
29) 2-BUTANONE (MEK)	4.183	43	997	0.4351940	ppb	#	44
31) TETRAHYDROFURAN	4.110	42	572	0.5139940	ppb	#	1
37) 2,2,4-TRIMETHYLPENTANE	4.225	41	765	0.1408438	ppb	#	1
43) 1,2-DICHLOROPROPANE	5.046	62	9134	2.7310123	ppb	#	44
49) 4-METHYL-2-PENTANONE (...	5.758	43	733	0.1944839	ppb	#	34
52) TRANS-1,3-DICHLOROPROPENE	5.849	75	7892	1.1645771	ppb	#	1
55) TETRACHLOROETHENE	5.801	164	684	0.1647455	ppb	#	86
69) Bromobenzene	7.425	77	2349	0.2578682	ppb	#	21
78) tert-Butylbenzene	7.888	119	15658	0.9713290	ppb	#	33
90) 1,2,4-Trichlorobenzene	9.773	180	1442	0.2373662	ppb	#	84
91) HEXACHLORO-1,3-BUTADIENE	9.731	225	514	0.1621461	ppb	#	19
92) Naphthalene	10.041	128	4367	0.3047742	ppb	#	71
93) 1,2,3-Trichlorobenzene	10.205	180	1350	0.2509518	ppb	#	79
94) 1-Methylnaphthalene	10.911	142	7197	0.9991401	ppb		94
95) 2-Methylnaphthalene	11.045	142	6415	1.0754642	ppb		97
97) ETHANOL	2.686	45	5378	100.7161331	ppb	#	83
98) Bromoethane	2.917	108	5172	1.0009126	ppb		97
99) 2-PROPANOL	3.027	45	1724	6.5829268	ppb	#	82
100) Methyl Acetate	3.191	43	59067	20.4317758	ppb	#	99
101) ACETONITRILE	3.416	41	24806	51.3459104	ppb		96
102) ALLYL CHLORIDE	3.039	76	13255	4.9460601	ppb		93
103) tert-BUTYL ALCOHOL	3.282	59	6402	5.0864263	ppb	#	81
104) chloroprene	3.544	53	40189	4.8630239	ppb		98
105) ETHYL TERT-BUTYL ETHER	3.653	59	13800	1.0242830	ppb		98
106) PROPIONITRILE	4.359	54	29185	50.2368834	ppb	#	68

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 19A.D
Acq On : 26 Apr 2016 5:52 pm
Operator : 605
Sample : RL VMS 1a ppb 16D26918
Misc : water IS/SURR16D21640
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Apr 27 09:07:42 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 09:06:24 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
107) Ethyl Acetate	4.043	43	39880	10.2734302	ppb		98
108) METHACRYLONITRILE	4.365	67	88826	50.8284320	ppb		98
109) Cyclohexane	3.994	56	13381	0.9810747	ppb		95
111) ISOBUTANOL	4.402	43	26137	103.4881736	ppb	#	98
112) t-Amyl Alcohol	4.475	59	1899	4.6105280	ppb	#	83
113) TERT-AMYL METHYL ETHER	4.377	73	16561	1.0750043	ppb	#	26
115) N-BUTANOL	4.803	56	23242	184.7464320	ppb		92
116) Methyl Cyclohexane	4.681	83	23943	0.9996998	ppb	#	81
117) 2-nitropropane	5.691	43	7495	5.1701896	ppb		93
118) METHYL METHACRYLATE	5.065	41	19106	5.1548991	ppb	#	1
119) 1,4-DIOXANE	5.126	88	5955	107.3269874	ppb	#	1
120) n-octane	5.381	85	5150	0.9000663	ppb		96
121) 3,3-DIMETHYL-1-BUTANOL	6.257	57	5360	9.6703431	ppb	#	83
123) ETHYL METHACRYLATE	5.856	69	24388	5.0620218	ppb	#	1
124) CIS-1,4-DICHLORO-2-BUTENE	7.419	53	6965	4.9853497	ppb	#	32
125) Cyclohexanone	7.687	55	10535	11.1260329	ppb		95
126) PENTACHLOROETHANE	7.888	117	15572	4.8921453	ppb		96
127) Hexachloroethane	8.557	117	4027	0.9846267	ppb		97

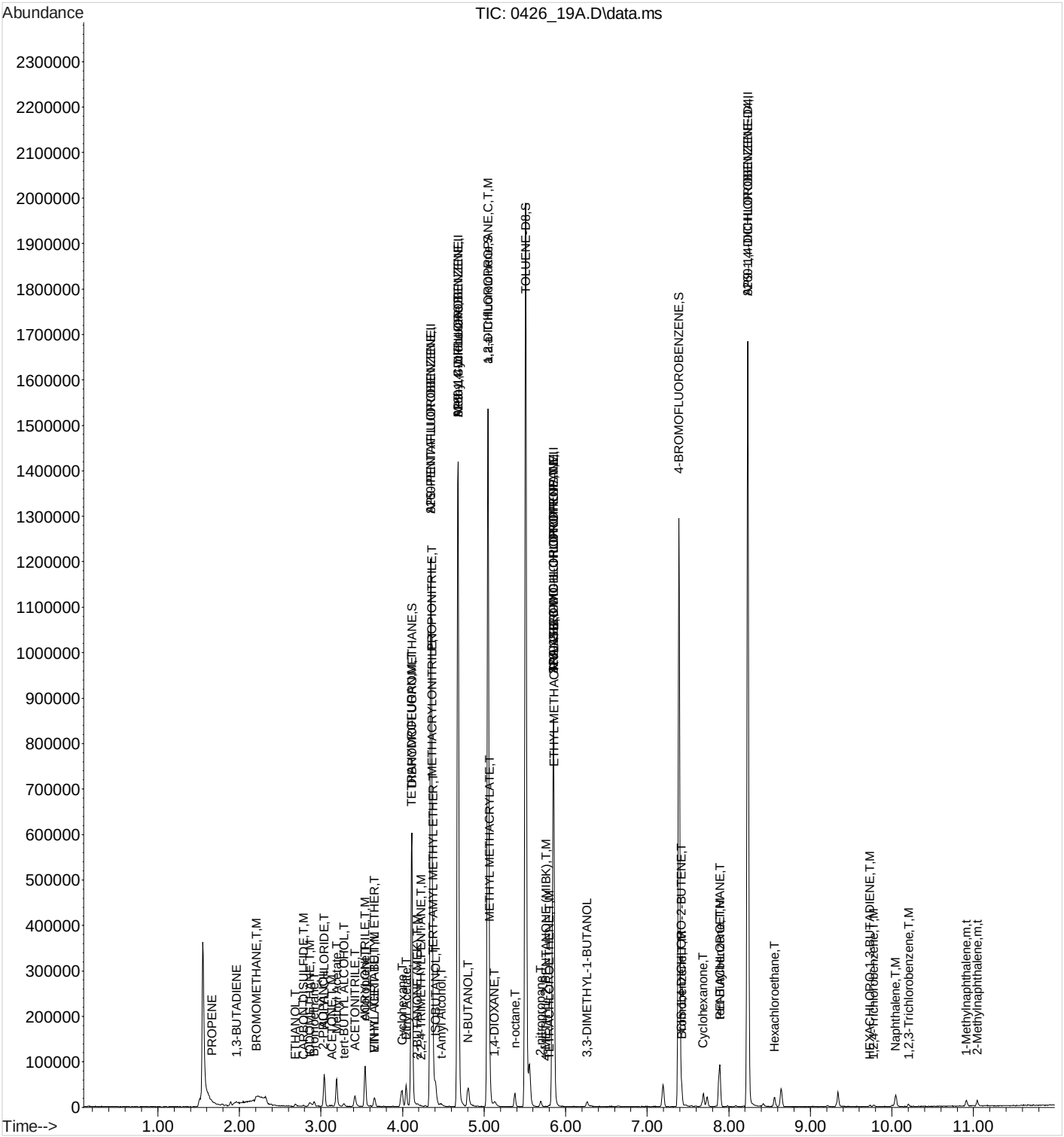
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 19A.D
Acq On : 26 Apr 2016 5:52 pm
Operator : 605
Sample : RL VMS 1a ppb 16D26918
Misc : water IS/SURR16D21640
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Apr 27 09:07:42 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 09:06:24 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 16.D
Acq On : 26 Apr 2016 4:44 pm
Operator : 605
Sample : SSCV VMS 25 ppb 16D26896
Misc : water IS/SURR16D21640
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Apr 27 09:18:12 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 09:17:18 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 8260-PENTAFLUOROBENZENE	4.347	168	698149	40.0000000	ppb	0.00
41) 8260-1,4-DIFLUOROBENZENE	4.682	114	1071268	40.0000000	ppb	0.00
53) 8260-2-BROMO-1-CHLOROP...	5.850	79	161809	40.0000000	ppb	0.00
84) 8260-1,4-DICHLOROBENZE...	8.234	152	479776	40.0000000	ppb	0.00
96) AP9-PENTAFLUOROBENZENE	4.347	168	698149	40.0000000	ppb	0.00
114) AP9-1,4-DIFLUOROBENZENE	4.682	114	1071268	40.0000000	ppb	0.00
122) AP9-2-BROMO-1-CHLOROPR...	5.850	79	161809	40.0000000	ppb	# 0.00
128) AP9-1,4-DICHLOROBENZEN...	8.234	152	479776	40.0000000	ppb	0.00
System Monitoring Compounds						
33) DIBROMOFLUOROMETHANE	4.116	111	327314	42.3401546	ppb	0.00
Spiked Amount 40.000	Range 79 - 121		Recovery = 105.85%			
46) a,a,a-Trifluorotoluene	5.047	146	612999	41.9369424	ppb	0.00
Spiked Amount 40.000	Range 90 - 116		Recovery = 104.84%			
50) TOLUENE-D8	5.509	98	1295468	42.4472972	ppb	0.00
Spiked Amount 40.000	Range 90 - 115		Recovery = 106.12%			
68) 4-BROMOFLUOROBENZENE	7.389	95	464200	41.7239326	ppb	0.00
Spiked Amount 40.000	Range 80 - 120		Recovery = 104.31%			
Target Compounds						Qvalue
3) PROPENE	1.658	41	24654	15.2435817	ppb	98
4) DICHLORODIFLUOROMETHANE	1.694	85	185842	33.0138215	ppb	98
5) CHLOROMETHANE	1.871	50	171859	27.2197345	ppb	99
6) VINYL CHLORIDE	1.938	62	185310	27.9881344	ppb	100
7) 1,3-BUTADIENE	1.950	39	137667	23.9185748	ppb	99
8) BROMOMETHANE	2.199	94	107265	37.4728260	ppb	97
9) CHLOROETHANE	2.291	64	103252	27.7976025	ppb	98
10) TRICHLOROFLUOROMETHANE	2.394	101	231171	24.9891297	ppb	99
11) DICHLOROFLUOROMETHANE	2.431	67	260996	24.3532430	ppb	100
12) ETHYL ETHER	2.595	59	92626	23.5269505	ppb	97
13) ACROLEIN	2.960	56	108111	125.8313526	ppb	99
14) 1,1-DICHLOROETHENE	2.747	61	211276	25.7714086	ppb	99
15) 1,1,2-TRICHLOROTRIFLUO...	2.759	101	142331	25.9433156	ppb	97
16) ACETONE	3.124	43	269812	112.5309291	ppb	99
17) IODOMETHANE	2.850	142	1038956	118.1166254	ppb	100
18) CARBON DISULFIDE	2.783	76	443556	23.1810641	ppb	99
19) METHYLENE CHLORIDE	3.106	84	133510	23.8602017	ppb	98
20) ACRYLONITRILE	3.587	53	188195	134.3160929	ppb	94
21) n-Hexane	3.228	56	119741	22.2290653	ppb	98
22) TRANS-1,2-DICHLOROETHENE	3.203	96	140882	26.0047853	ppb	99
23) METHYL TERT-BUTYL ETHER	3.246	73	343142	24.1253311	ppb	97
24) 1,1-DICHLOROETHANE	3.562	63	243281	24.9985603	ppb	99
25) VINYL ACETATE	3.666	43	1023168	118.3037940	ppb	100
26) DI-ISOPROPYL ETHER	3.447	45	383376	24.0668211	ppb	99
27) 2,2-Dichloropropane	3.927	77	229345	24.2217572	ppb	99
28) CIS-1,2-DICHLOROETHENE	3.866	96	151617	25.5416174	ppb	99
29) 2-BUTANONE (MEK)	4.171	43	303732	118.1841640	ppb	100
30) BROMOCHLOROMETHANE	3.982	130	90531	25.6100782	ppb	100
31) TETRAHYDROFURAN	4.110	42	29419	23.5651871	ppb	98
32) CHLOROFORM	4.006	83	250433	24.8381593	ppb	99
34) 1,1,1-TRICHLOROETHANE	4.140	97	221938	25.4824444	ppb	100
35) CARBON TETRACHLORIDE	4.104	117	229664	23.6809363	ppb	100
36) 1,1-Dichloropropene	4.207	75	198199	25.9700575	ppb	100

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 16.D
Acq On : 26 Apr 2016 4:44 pm
Operator : 605
Sample : SSCV VMS 25 ppb 16D26896
Misc : water IS/SURR16D21640
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Apr 27 09:18:12 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 09:17:18 2016
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
37)	2,2,4-TRIMETHYLPENTANE	4.244	41	146074	23.9734401	ppb		99
38)	HEPTANE	4.286	43	209746	24.5388710	ppb		99
39)	BENZENE	4.353	78	527017	24.4964512	ppb		99
40)	1,2-DICHLOROETHANE	4.469	62	175918	25.5440733	ppb		99
42)	TRICHLOROETHENE	4.682	130	158656	26.2366785	ppb		97
43)	1,2-DICHLOROPROPANE	4.992	62	95818	25.0453869	ppb		99
44)	DIBROMOMETHANE	4.937	93	83280	25.4516489	ppb		99
45)	BROMODICHLOROMETHANE	5.016	83	189754	24.9032957	ppb		100
47)	2-CHLOROETHYL VINYL ETHER	5.326	63	96459	133.8689394	ppb		99
48)	CIS-1,3-DICHLOROPROPENE	5.393	75	230264	26.3287333	ppb		100
49)	4-METHYL-2-PENTANONE (...	5.752	43	538474	124.8999809	ppb		99
51)	TOLUENE	5.545	91	597211	23.8160552	ppb		100
52)	TRANS-1,3-DICHLOROPROPENE	5.795	75	199984	25.7984970	ppb		98
54)	1,1,2-TRICHLOROETHANE	5.910	97	111176	25.2679124	ppb		99
55)	TETRACHLOROETHENE	5.801	164	124342	25.3298860	ppb		100
56)	1,3-Dichloropropane	6.093	76	190617	25.7364167	ppb		100
57)	2-HEXANONE	6.300	58	255168	128.5594086	ppb		99
58)	CHLORODIBROMOMETHANE	6.038	129	141455	25.7362492	ppb		100
59)	1,2-DIBROMOETHANE	6.215	107	119522	25.6657274	ppb		100
60)	CHLOROBENZENE	6.549	112	399394	26.0318377	ppb		100
61)	1,1,1,2-TETRACHLOROETHANE	6.586	133	133701	25.5819642	ppb	#	98
62)	ETHYLBENZENE	6.543	106	227548	26.0001018	ppb		100
63)	M&P-XYLENE	6.634	106	534987	50.4451177	ppb		99
64)	O-XYLENE	6.945	106	268126	25.8707004	ppb		98
65)	STYRENE	6.981	104	440823	26.8237897	ppb		99
66)	Bromoform	7.030	173	88186	25.4652640	ppb		99
67)	Isopropylbenzene	7.158	105	703893	25.0172632	ppb		100
69)	Bromobenzene	7.480	77	273289	25.3743533	ppb		99
70)	1,1,2,2-TETRACHLOROETHANE	7.516	83	135297	23.7197668	ppb		99
71)	1,2,3-TRICHLOROPROPANE	7.638	110	39022	24.4850016	ppb		94
72)	TRANS-1,4-DICHLORO-2-B...	7.650	53	40964	25.1407123	ppb		99
73)	n-Propylbenzene	7.462	91	790814	26.2389522	ppb		100
74)	4-ETHYLTOLUENE	7.541	105	679914	25.4830134	ppb		99
75)	2-Chlorotoluene	7.602	126	152329	26.0752135	ppb		99
76)	4-Chlorotoluene	7.723	91	477980	25.6427714	ppb		99
77)	1,3,5-Trimethylbenzene	7.596	105	555626	25.7300009	ppb		100
78)	tert-Butylbenzene	7.845	119	497626	26.1090542	ppb		99
79)	1,2,4-Trimethylbenzene	7.900	105	566701	25.9232128	ppb		99
80)	sec-Butylbenzene	7.985	105	744439	25.8853937	ppb		100
81)	1,3-DICHLOROBENZENE	8.180	146	314511	25.4213225	ppb		99
82)	p-Isopropyltoluene	8.082	119	636278	27.1230805	ppb		100
83)	DICYCLOPENTADIENE	8.094	66	603304	25.5763614	ppb		100
85)	1,4-DICHLOROBENZENE	8.247	146	297668	24.8005078	ppb		100
86)	1,2,3-TRIMETHYLBENZENE	8.240	105	545439	24.9510203	ppb		100
87)	1,2-DICHLOROBENZENE	8.581	146	297549	26.0924731	ppb		99
88)	n-Butylbenzene	8.417	91	567264	25.1693476	ppb		100
89)	1,2-Dibromo-3-chloropr...	9.220	157	31150	24.0099444	ppb		97
90)	1,2,4-Trichlorobenzene	9.767	180	184906	25.7658225	ppb		99
91)	HEXACHLORO-1,3-BUTADIENE	9.725	225	95352	25.4631793	ppb		99
92)	Naphthalene	10.041	128	420066	24.8171526	ppb		100
93)	1,2,3-Trichlorobenzene	10.199	180	161389	25.3962694	ppb		100
94)	1-Methylnaphthalene	10.911	142	224402	26.3718732	ppb		99
95)	2-Methylnaphthalene	11.045	142	185252	26.2906659	ppb		98
97)	ETHANOL	2.692	45	7607	126.9909150	ppb	#	83

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 16.D
Acq On : 26 Apr 2016 4:44 pm
Operator : 605
Sample : SSCV VMS 25 ppb 16D26896
Misc : water IS/SURR16D21640
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Apr 27 09:18:12 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 09:17:18 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
100) Methyl Acetate	3.185	43	362382	111.7400365 ppb	#	98
101) ACETONITRILE	3.447	41	65797	121.4048963 ppb	#	35
102) ALLYL CHLORIDE	3.039	76	397554	132.2381538 ppb		100
103) tert-BUTYL ALCOHOL	3.276	59	15384	10.8955046 ppb	#	63
104) chloroprene	3.587	53	188195	20.2996371 ppb	#	20
105) ETHYL TERT-BUTYL ETHER	3.653	59	392967	26.0002761 ppb		99
106) PROPIONITRILE	4.365	54	584	0.8961007 ppb	#	1
107) Ethyl Acetate	4.055	43	828	0.1901392 ppb	#	67
108) METHACRYLONITRILE	4.347	67	2929	1.4940563 ppb	#	1
109) Cyclohexane	3.988	56	237110	15.4968833 ppb		99
111) ISOBUTANOL	4.377	43	109853	387.7286535 ppb	#	71
112) t-Amyl Alcohol	4.469	59	54257	117.4255130 ppb		95
113) TERT-AMYL METHYL ETHER	4.377	73	352249	20.3823568 ppb	#	62
116) Methyl Cyclohexane	4.675	83	282038	17.3106332 ppb		100
117) 2-nitropropane	5.752	43	538474	324.7263749 ppb	#	42
118) METHYL METHACRYLATE	5.126	41	557	0.1313783 ppb	#	13
119) 1,4-DIOXANE	5.047	88	7538	118.7685087 ppb	#	67
120) n-octane	5.393	85	3433	0.5245164 ppb	#	32
121) 3,3-DIMETHYL-1-BUTANOL	6.300	57	91312	144.0200465 ppb	#	40
123) ETHYL METHACRYLATE	5.752	69	4528	0.7948995 ppb	#	1
124) CIS-1,4-DICHLORO-2-BUTENE	7.431	53	981	0.5938838 ppb	#	8
125) Cyclohexanone	7.650	55	998	0.8914446 ppb	#	1
126) PENTACHLOROETHANE	7.900	117	19435	5.1641339 ppb	#	9
127) Hexachloroethane	8.563	117	1155	0.2388526 ppb	#	33

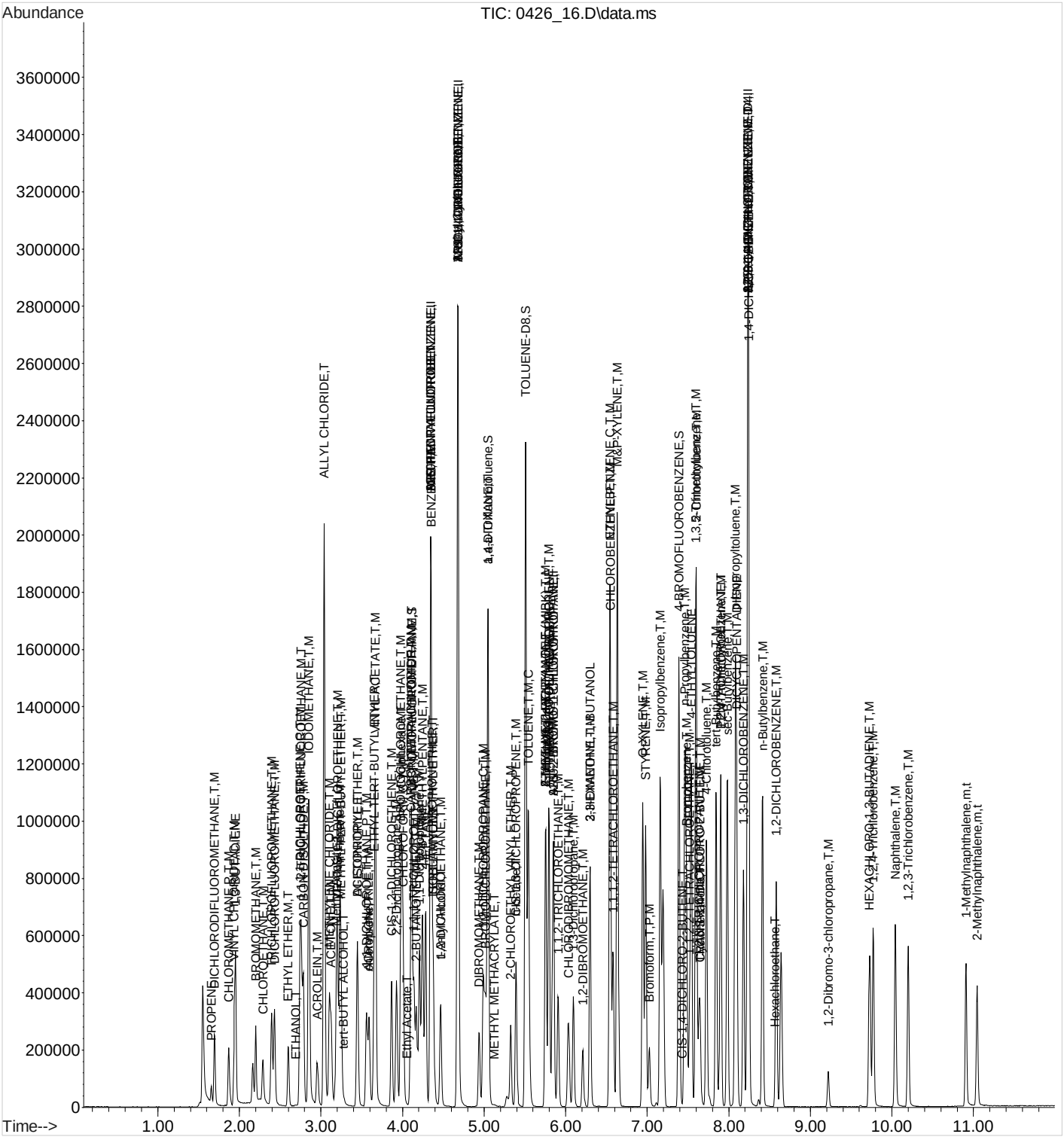
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 16.D
Acq On : 26 Apr 2016 4:44 pm
Operator : 605
Sample : SSCV VMS 25 ppb 16D26896
Misc : water IS/SURR16D21640
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Apr 27 09:18:12 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 09:17:18 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 29.D
Acq On : 26 Apr 2016 9:38 pm
Operator : 605
Sample : SSCV VMS 10a ppb 16C24928
Misc : water IS/SURR16D21640
ALS Vial : 29 Sample Multiplier: 1

Quant Time: Apr 27 09:06:33 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 09:06:24 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 8260-PENTAFLUOROBENZENE	4.347	168	587925	40.0000000	ppb		0.00
41) 8260-1,4-DIFLUOROBENZENE	4.681	114	902539	40.0000000	ppb		0.00
53) 8260-2-BROMO-1-CHLOROP...	5.850	79	133099	40.0000000	ppb	#	0.00
84) 8260-1,4-DICHLOROBENZE...	8.234	152	391952	40.0000000	ppb		0.00
96) AP9-PENTAFLUOROBENZENE	4.347	168	587925	40.0000000	ppb		0.00
114) AP9-1,4-DIFLUOROBENZENE	4.681	114	902539	40.0000000	ppb		0.00
122) AP9-2-BROMO-1-CHLOROPR...	5.850	79	133099	40.0000000	ppb	#	0.00
128) AP9-1,4-DICHLOROBENZEN...	8.234	152	391952	40.0000000	ppb		0.00
System Monitoring Compounds							
33) DIBROMOFLUOROMETHANE	4.116	111	267434	41.0800223	ppb		0.00
Spiked Amount 40.000	Range 79 - 121		Recovery = 102.70%				
46) a,a,a-Trifluorotoluene	5.046	146	523466	42.5067235	ppb		0.00
Spiked Amount 40.000	Range 90 - 116		Recovery = 106.27%				
50) TOLUENE-D8	5.509	98	1067625	41.5216154	ppb		0.00
Spiked Amount 40.000	Range 90 - 115		Recovery = 103.80%				
68) 4-BROMOFLUOROBENZENE	7.389	95	374418	40.9133178	ppb		0.00
Spiked Amount 40.000	Range 80 - 120		Recovery = 102.28%				
Target Compounds							Qvalue
3) PROPENE	1.652	41	944	0.6931031	ppb	#	50
5) CHLOROMETHANE	1.895	50	2264	0.4258084	ppb	#	47
7) 1,3-BUTADIENE	1.950	39	965	0.1990944	ppb		87
8) BROMOMETHANE	2.199	94	2260	0.9375470	ppb	#	78
16) ACETONE	3.130	43	2920	1.4461711	ppb		100
17) IODOMETHANE	2.856	142	8998	1.2147476	ppb	#	84
18) CARBON DISULFIDE	2.783	76	2517	0.1562048	ppb	#	70
19) METHYLENE CHLORIDE	3.106	84	2888	0.6128916	ppb		94
20) ACRYLONITRILE	3.544	53	387600	328.4958825	ppb	#	51
21) n-Hexane	3.276	56	879	0.1937731	ppb	#	1
24) 1,1-DICHLOROETHANE	3.544	63	6611	0.8066779	ppb	#	43
25) VINYL ACETATE	3.653	43	15139	2.0786200	ppb	#	73
27) 2,2-Dichloropropane	3.988	77	1770	0.2219810	ppb	#	57
29) 2-BUTANONE (MEK)	4.170	43	768	0.3548593	ppb	#	44
31) TETRAHYDROFURAN	4.110	42	965	0.9179024	ppb	#	29
32) CHLOROFORM	3.994	83	7354	0.8661192	ppb	#	57
37) 2,2,4-TRIMETHYLPENTANE	4.250	41	260690	50.8051807	ppb	#	1
38) HEPTANE	4.250	43	85958	11.9418988	ppb	#	1
42) TRICHLOROETHENE	4.675	130	4395	0.8626674	ppb	#	62
43) 1,2-DICHLOROPROPANE	5.046	62	8507	2.6393029	ppb	#	50
49) 4-METHYL-2-PENTANONE (...	5.691	43	65381	18.0003665	ppb	#	34
52) TRANS-1,3-DICHLOROPROPENE	5.843	75	7337	1.1234399	ppb	#	1
54) 1,1,2-TRICHLOROETHANE	5.850	97	1170	0.3232750	ppb	#	1
55) TETRACHLOROETHENE	5.801	164	9281	2.2984658	ppb		98
57) 2-HEXANONE	6.263	58	1417	0.8679114	ppb	#	1
61) 1,1,1,2-TETRACHLOROETHANE	6.586	133	2382	0.5540754	ppb	#	89
69) Bromobenzene	7.419	77	26295	2.9680683	ppb	#	21
72) TRANS-1,4-DICHLORO-2-B...	7.650	53	2164	1.6145829	ppb		93
73) n-Propylbenzene	7.425	91	12308	0.4964637	ppb	#	63
78) tert-Butylbenzene	7.888	119	140062	8.9338011	ppb	#	33
95) 2-Methylnaphthalene	11.045	142	792	0.1375845	ppb	#	70
97) ETHANOL	2.692	45	52271	1036.2063209	ppb	#	97
98) Bromoethane	2.917	108	47108	9.6502704	ppb		99

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 29.D
Acq On : 26 Apr 2016 9:38 pm
Operator : 605
Sample : SSCV VMS 10a ppb 16C24928
Misc : water IS/SURR16D21640
ALS Vial : 29 Sample Multiplier: 1

Quant Time: Apr 27 09:06:33 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 09:06:24 2016
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
99)	2-PROPANOL	3.027	45	15476	62.5529321 ppb		94
100)	Methyl Acetate	3.185	43	537460	196.7952137 ppb	#	100
101)	ACETONITRILE	3.410	41	223806	490.3746688 ppb		99
102)	ALLYL CHLORIDE	3.039	76	123677	48.8512616 ppb		100
103)	tert-BUTYL ALCOHOL	3.282	59	30241	25.4331656 ppb		100
104)	chloroprene	3.544	53	387600	49.6466735 ppb		100
105)	ETHYL TERT-BUTYL ETHER	3.653	59	123617	9.7123935 ppb		99
106)	PROPIONITRILE	4.359	54	268458	489.1550313 ppb		96
107)	Ethyl Acetate	4.043	43	358341	97.7156236 ppb		99
108)	METHACRYLONITRILE	4.365	67	801092	485.2395429 ppb		98
109)	Cyclohexane	3.988	56	125770	9.7610772 ppb		98
111)	ISOBUTANOL	4.402	43	226032	947.3535690 ppb	#	97
112)	t-Amyl Alcohol	4.469	59	19820	50.9373717 ppb		98
113)	TERT-AMYL METHYL ETHER	4.377	73	143319	9.8476951 ppb	#	97
115)	N-BUTANOL	4.803	56	249404	2057.1034325 ppb		99
116)	Methyl Cyclohexane	4.675	83	138458	9.7719660 ppb		99
117)	2-nitropropane	5.691	43	65381	46.7989964 ppb		99
118)	METHYL METHACRYLATE	5.065	41	176184	49.3249908 ppb		90
119)	1,4-DIOXANE	5.132	88	51322	959.8003352 ppb	#	1
120)	n-octane	5.381	85	54899	9.9559303 ppb		100
121)	3,3-DIMETHYL-1-BUTANOL	6.257	57	35501	66.4611471 ppb		98
123)	ETHYL METHACRYLATE	5.856	69	230708	49.2375413 ppb	#	59
124)	CIS-1,4-DICHLORO-2-BUTENE	7.419	53	67134	49.4086411 ppb		88
125)	Cyclohexanone	7.687	55	89078	96.7302109 ppb		99
126)	PENTACHLOROETHANE	7.888	117	147396	47.6131075 ppb		99
127)	Hexachloroethane	8.563	117	37794	9.5016428 ppb		98

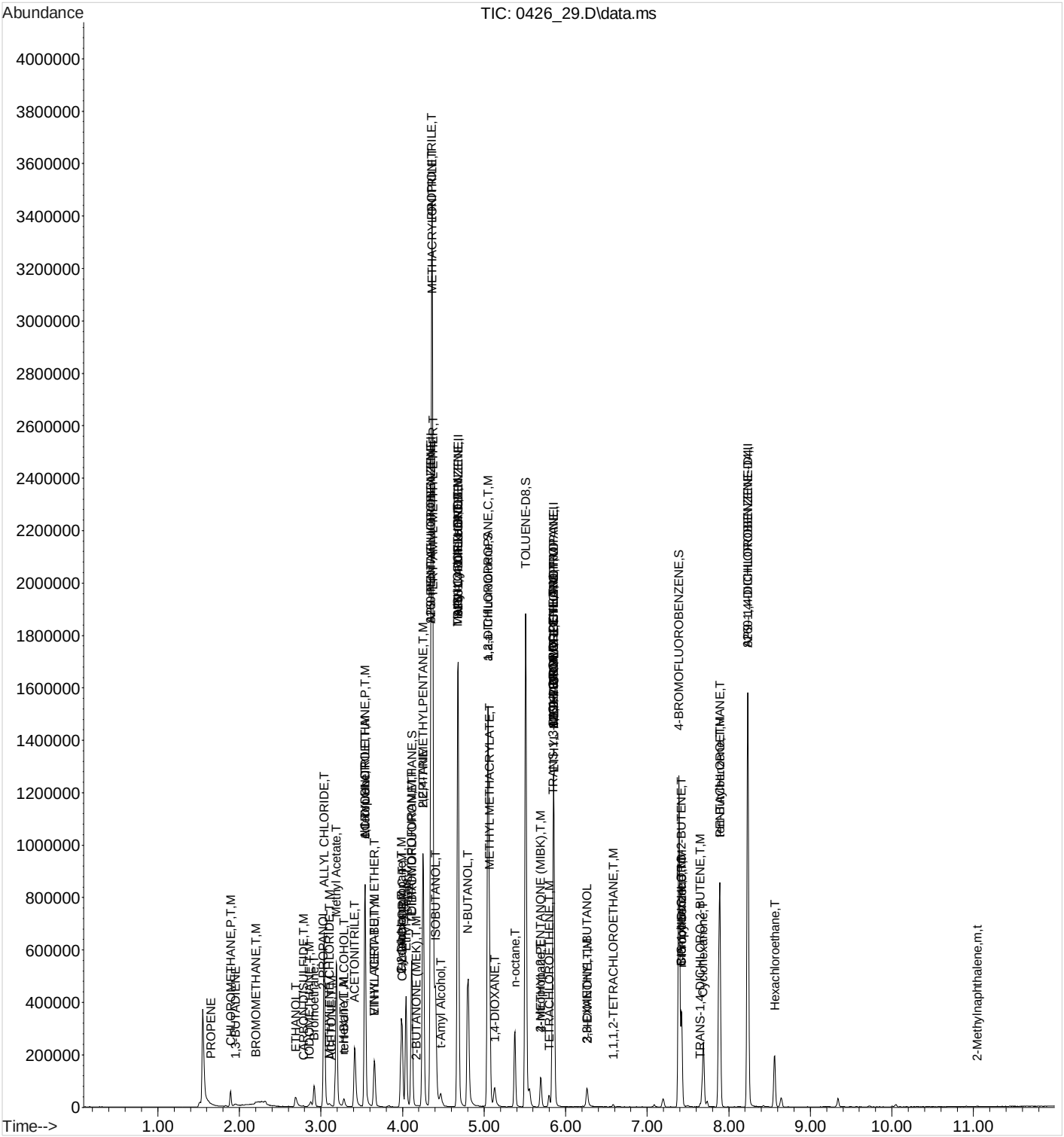
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 29.D
Acq On : 26 Apr 2016 9:38 pm
Operator : 605
Sample : SSCV VMS 10a ppb 16C24928
Misc : water IS/SURR16D21640
ALS Vial : 29 Sample Multiplier: 1

Quant Time: Apr 27 09:06:33 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 09:06:24 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 04.D
Acq On : 26 Apr 2016 12:13 pm
Operator : 605
Sample : STD VMS .25 ppb 16D26894
Misc : water IS/SURR16D21640
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 27 08:45:05 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 08:42:40 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 8260-PENTAFLUOROBENZENE	4.347	168	742819	40.0000000	ppb		0.00
41) 8260-1,4-DIFLUOROBENZENE	4.682	114	1106953	40.0000000	ppb		0.00
53) 8260-2-BROMO-1-CHLOROP...	5.850	79	167775	40.0000000	ppb		0.00
84) 8260-1,4-DICHLOROBENZE...	8.234	152	484610	40.0000000	ppb		0.00
96) AP9-PENTAFLUOROBENZENE	0.000	168	0m	40.0000000	ppb		-4.36
114) AP9-1,4-DIFLUOROBENZENE	0.000	114	0m	40.0000000	ppb		-4.69
122) AP9-2-BROMO-1-CHLOROPR...	0.000	79	0m	40.0000000	ppb		-5.86
128) AP9-1,4-DICHLOROBENZEN...	0.000	152	0m	40.0000000	ppb		-8.25
System Monitoring Compounds							
33) DIBROMOFLUOROMETHANE	4.116	111	348507	42.9732354	ppb		0.00
Spiked Amount 40.000	Range 79 - 121		Recovery = 107.43%				
46) a,a,a-Trifluorotoluene	5.047	146	631998	42.9181517	ppb		0.00
Spiked Amount 40.000	Range 90 - 116		Recovery = 107.30%				
50) TOLUENE-D8	5.509	98	1321720	42.6760029	ppb		0.00
Spiked Amount 40.000	Range 90 - 115		Recovery = 106.69%				
68) 4-BROMOFLUOROBENZENE	7.389	95	461883	39.8689605	ppb		0.00
Spiked Amount 40.000	Range 80 - 120		Recovery = 99.67%				
Target Compounds							Qvalue
3) PROPENE	1.658	41	1576	1.0011423	ppb		88
4) DICHLORODIFLUOROMETHANE	1.701	85	1309	0.2372470	ppb	#	43
5) CHLOROMETHANE	1.865	50	1890	0.3000260	ppb	#	49
6) VINYL CHLORIDE	1.938	62	1471	0.2051150	ppb	#	61
7) 1,3-BUTADIENE	1.956	39	2665	0.4755014	ppb	#	79
8) BROMOMETHANE	2.200	94	1731	0.5939026	ppb	#	57
9) CHLOROETHANE	2.297	64	1134	0.2961765	ppb	#	43
10) TRICHLOROFLUOROMETHANE	2.394	101	2192	0.2213350	ppb	#	86
11) DICHLOROFLUOROMETHANE	2.431	67	3363	0.3075638	ppb		96
12) ETHYL ETHER	2.601	59	1091	0.2598728	ppb	#	81
13) ACROLEIN	2.960	56	1310	1.4936457	ppb	#	79
14) 1,1-DICHLOROETHENE	2.747	61	1894	0.2173578	ppb		96
15) 1,1,2-TRICHLOROTRIFLUO...	2.753	101	1184	0.2033147	ppb	#	92
16) ACETONE	3.130	43	6518	2.5533133	ppb		100
17) IODOMETHANE	2.851	142	18756	2.0750683	ppb		96
18) CARBON DISULFIDE	2.784	76	7127	0.3809017	ppb	#	88
19) METHYLENE CHLORIDE	3.106	84	1592	0.2826180	ppb		94
20) ACRYLONITRILE	3.593	53	1756	1.1497651	ppb	#	79
21) n-Hexane	3.228	56	1837	0.3441674	ppb	#	71
22) TRANS-1,2-DICHLOROETHENE	3.203	96	1210	0.2069480	ppb		88
23) METHYL TERT-BUTYL ETHER	3.246	73	3452	0.2247223	ppb	#	78
24) 1,1-DICHLOROETHANE	3.562	63	2300	0.2196017	ppb		98
25) VINYL ACETATE	3.672	43	10582	1.0980039	ppb		96
26) DI-ISOPROPYL ETHER	3.447	45	3996	0.2320994	ppb	#	77
27) 2,2-Dichloropropane	3.933	77	2559	0.2609881	ppb	#	89
28) CIS-1,2-DICHLOROETHENE	3.873	96	1276	0.2000048	ppb		91
29) 2-BUTANONE (MEK)	4.171	43	4356	1.5995108	ppb	#	80
30) BROMOCHLOROMETHANE	3.982	130	748	0.1953402	ppb	#	73
31) TETRAHYDROFURAN	4.110	42	1187	0.9036099	ppb	#	83
32) CHLOROFORM	4.006	83	2679	0.2532562	ppb	#	96
34) 1,1,1-TRICHLOROETHANE	4.140	97	2086	0.2255969	ppb		91
35) CARBON TETRACHLORIDE	4.104	117	3068	0.3170328	ppb	#	74
36) 1,1-Dichloropropene	4.213	75	1684	0.2063177	ppb	#	71

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 04.D
Acq On : 26 Apr 2016 12:13 pm
Operator : 605
Sample : STD VMS .25 ppb 16D26894
Misc : water IS/SURR16D21640
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 27 08:45:05 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 08:42:40 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
37) 2,2,4-TRIMETHYLPENTANE	4.244	41	1474	0.2347571 ppb		79
38) HEPTANE	4.280	43	1973	0.2169926 ppb	#	66
39) BENZENE	4.347	78	5807	0.2600456 ppb	#	1
40) 1,2-DICHLOROETHANE	4.469	62	1797	0.2381753 ppb	#	76
42) TRICHLOROETHENE	4.682	130	1423	0.2260356 ppb		85
43) 1,2-DICHLOROPROPANE	4.986	62	1051	0.2679977 ppb	#	76
44) DIBROMOMETHANE	4.937	93	776	0.2251490 ppb	#	81
45) BROMODICHLOROMETHANE	5.022	83	1853	0.2424082 ppb	#	81
47) 2-CHLOROETHYL VINYL ETHER	5.327	63	648	0.8037170 ppb	#	49
48) CIS-1,3-DICHLOROPROPENE	5.400	75	1818	0.1935729 ppb	#	65
49) 4-METHYL-2-PENTANONE (...	5.758	43	4712	1.0120972 ppb		92
51) TOLUENE	5.546	91	7307	0.2962514 ppb		96
52) TRANS-1,3-DICHLOROPROPENE	5.795	75	1790	0.2181080 ppb	#	49
54) 1,1,2-TRICHLOROETHANE	5.911	97	981	0.2080872 ppb		88
55) TETRACHLOROETHENE	5.795	164	1194	0.2369863 ppb		98
56) 1,3-Dichloropropane	6.093	76	1865	0.2360738 ppb	#	87
57) 2-HEXANONE	6.306	58	2182	1.0202931 ppb	#	33
58) CHLORODIBROMOMETHANE	6.044	129	1452	0.2463581 ppb	#	77
59) 1,2-DIBROMOETHANE	6.221	107	993	0.1996839 ppb		95
60) CHLOROBENZENE	6.555	112	3309	0.2042417 ppb	#	86
61) 1,1,1,2-TETRACHLOROETHANE	6.592	133	1245	0.2293035 ppb	#	99
62) ETHYLBENZENE	6.549	106	2126	0.2296442 ppb		97
63) M&P-XYLENE	6.641	106	5159	0.4665656 ppb		84
64) O-XYLENE	6.951	106	2518	0.2310733 ppb		97
65) STYRENE	6.987	104	3712	0.2126217 ppb		96
66) Bromoform	7.036	173	731	0.1965285 ppb	#	27
67) Isopropylbenzene	7.164	105	9904	0.3436644 ppb	#	78
69) Bromobenzene	7.474	77	2868	0.2558815 ppb		89
70) 1,1,2,2-TETRACHLOROETHANE	7.517	83	1645	0.2725863 ppb	#	87
73) n-Propylbenzene	7.468	91	7287	0.2275179 ppb		94
74) 4-ETHYLTOLUENE	7.541	105	7042	0.2507863 ppb		94
75) 2-Chlorotoluene	7.602	126	1391	0.2258426 ppb		95
76) 4-Chlorotoluene	7.730	91	4712	0.2403202 ppb	#	86
77) 1,3,5-Trimethylbenzene	7.602	105	5422	0.2351286 ppb		88
78) tert-Butylbenzene	7.845	119	4619	0.2291570 ppb		98
79) 1,2,4-Trimethylbenzene	7.900	105	5348	0.2297605 ppb		92
80) sec-Butylbenzene	7.985	105	6625	0.2154355 ppb		98
81) 1,3-DICHLOROBENZENE	8.180	146	2974	0.2253092 ppb		99
82) p-Isopropyltoluene	8.082	119	5475	0.2135668 ppb	#	92
83) DICYCLOPENTADIENE	8.095	66	5123	0.1980231 ppb		95
85) 1,4-DICHLOROBENZENE	8.247	146	3073	0.2551990 ppb	#	1
86) 1,2,3-TRIMETHYLBENZENE	8.247	105	5640	0.2596502 ppb	#	85
87) 1,2-DICHLOROBENZENE	8.581	146	2340	0.1964230 ppb		95
88) n-Butylbenzene	8.417	91	5527	0.2407988 ppb		90
90) 1,2,4-Trichlorobenzene	9.780	180	1811	0.2395019 ppb	#	85
91) HEXACHLORO-1,3-BUTADIENE	9.725	225	921	0.2531910 ppb	#	88
92) Naphthalene	10.047	128	5242	0.2989716 ppb	#	71
93) 1,2,3-Trichlorobenzene	10.199	180	1418	0.2182779 ppb	#	85
94) 1-Methylnaphthalene	10.911	142	2898	0.3510513 ppb		95
95) 2-Methylnaphthalene	11.045	142	2396	0.3364852 ppb	#	82

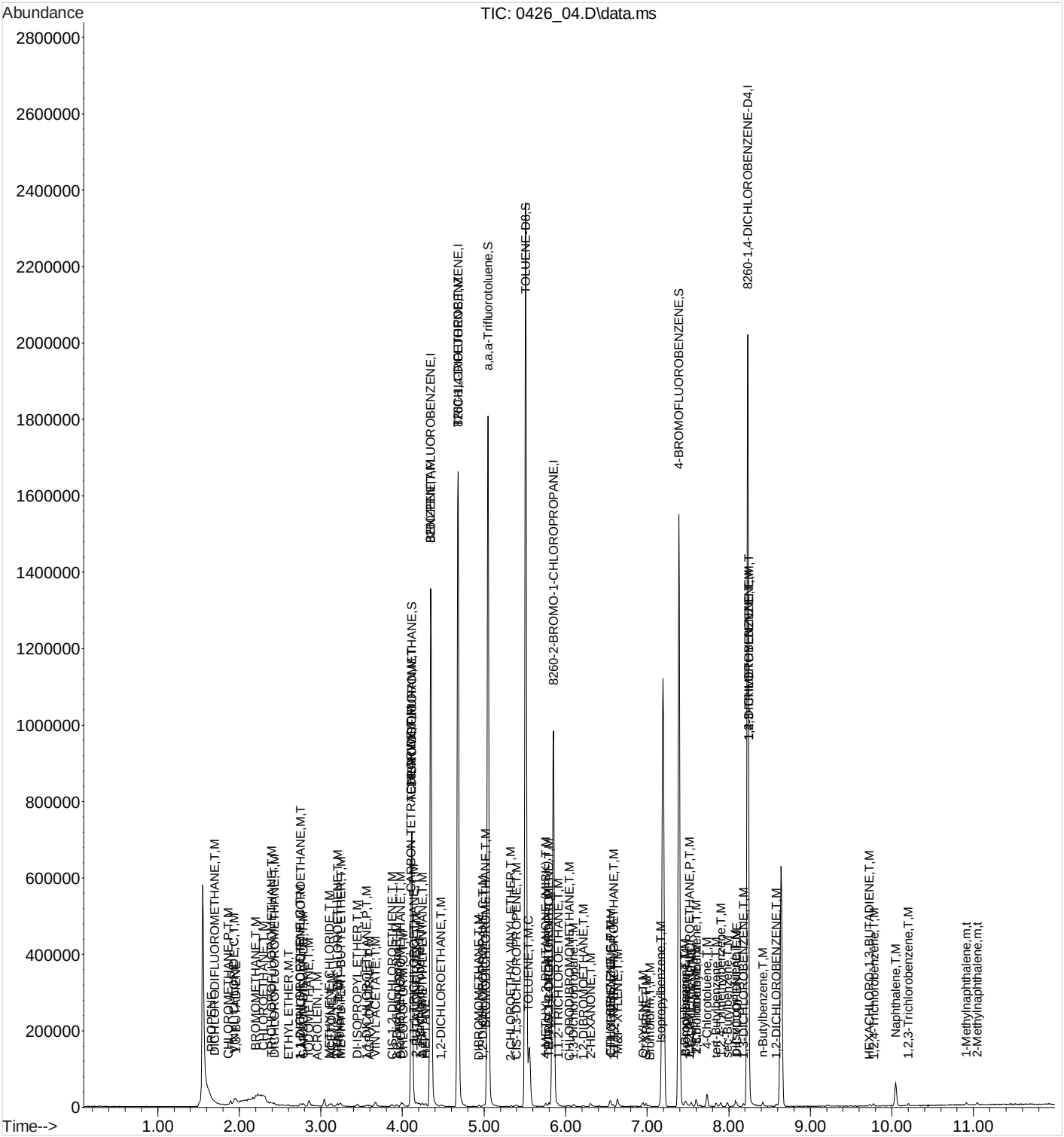
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 04.D
Acq On : 26 Apr 2016 12:13 pm
Operator : 605
Sample : STD VMS .25 ppb 16D26894
Misc : water IS/SURR16D21640
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 27 08:45:05 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 08:42:40 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 05.D
Acq On : 26 Apr 2016 12:35 pm
Operator : 605
Sample : STD VMS .5 ppb 16D26894
Misc : water IS/SURR16D21640
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 27 08:45:25 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 08:42:40 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 8260-PENTAFLUOROBENZENE	4.347	168	767220	40.0000000	ppb		0.00
41) 8260-1,4-DIFLUOROBENZENE	4.682	114	1138528	40.0000000	ppb		0.00
53) 8260-2-BROMO-1-CHLOROP...	5.850	79	174947	40.0000000	ppb		0.00
84) 8260-1,4-DICHLOROBENZE...	8.235	152	504880	40.0000000	ppb		0.00
96) AP9-PENTAFLUOROBENZENE	0.000	168	0m	40.0000000	ppb		-4.36
114) AP9-1,4-DIFLUOROBENZENE	0.000	114	0m	40.0000000	ppb		-4.69
122) AP9-2-BROMO-1-CHLOROPR...	0.000	79	0m	40.0000000	ppb		-5.86
128) AP9-1,4-DICHLOROBENZEN...	0.000	152	0m	40.0000000	ppb		-8.25
System Monitoring Compounds							
33) DIBROMOFLUOROMETHANE	4.116	111	359807	42.9555460	ppb		0.00
Spiked Amount 40.000	Range 79 - 121		Recovery = 107.39%				
46) a,a,a-Trifluorotoluene	5.047	146	642011	42.3890069	ppb		0.00
Spiked Amount 40.000	Range 90 - 116		Recovery = 105.97%				
50) TOLUENE-D8	5.509	98	1360754	42.7178474	ppb		0.00
Spiked Amount 40.000	Range 90 - 115		Recovery = 106.79%				
68) 4-BROMOFLUOROBENZENE	7.389	95	480845	39.8041897	ppb		0.00
Spiked Amount 40.000	Range 80 - 120		Recovery = 99.51%				
Target Compounds							Qvalue
3) PROPENE	1.658	41	2084	1.2817413	ppb	#	79
4) DICHLORODIFLUOROMETHANE	1.701	85	3031	0.5318757	ppb		94
5) CHLOROMETHANE	1.877	50	3562	0.5474622	ppb	#	93
6) VINYL CHLORIDE	1.938	62	3241	0.4375491	ppb	#	63
7) 1,3-BUTADIENE	1.950	39	4348	0.7511163	ppb	#	69
8) BROMOMETHANE	2.200	94	3226	1.0716319	ppb	#	73
9) CHLOROETHANE	2.291	64	2231	0.5641573	ppb	#	51
10) TRICHLOROFLUOROMETHANE	2.394	101	4825	0.4717045	ppb	#	97
11) DICHLOROFLUOROMETHANE	2.425	67	6178	0.5470404	ppb	#	86
12) ETHYL ETHER	2.601	59	1990	0.4589361	ppb		94
13) ACROLEIN	2.960	56	2705	2.9861158	ppb	#	51
14) 1,1-DICHLOROETHENE	2.747	61	4103	0.4558898	ppb		91
15) 1,1,2-TRICHLOROTRIFLUO...	2.753	101	2756	0.4582046	ppb		93
16) ACETONE	3.130	43	8733	3.3121981	ppb		97
17) IODOMETHANE	2.857	142	28739	3.0784133	ppb		97
18) CARBON DISULFIDE	2.784	76	12712	0.6577838	ppb	#	91
19) METHYLENE CHLORIDE	3.106	84	3412	0.5864471	ppb		94
20) ACRYLONITRILE	3.593	53	3440	2.1807513	ppb		97
21) n-Hexane	3.228	56	3517	0.6379639	ppb	#	76
22) TRANS-1,2-DICHLOROETHENE	3.203	96	2689	0.4452765	ppb		94
23) METHYL TERT-BUTYL ETHER	3.252	73	8009	0.5047969	ppb		91
24) 1,1-DICHLOROETHANE	3.562	63	4894	0.4524127	ppb		98
25) VINYL ACETATE	3.672	43	23714	2.3823415	ppb		98
26) DI-ISOPROPYL ETHER	3.447	45	8409	0.4728856	ppb	#	75
27) 2,2-Dichloropropane	3.927	77	5229	0.5163357	ppb		99
28) CIS-1,2-DICHLOROETHENE	3.866	96	3149	0.4778874	ppb		92
29) 2-BUTANONE (MEK)	4.177	43	7055	2.5081842	ppb		98
30) BROMOCHLOROMETHANE	3.982	130	1873	0.4735772	ppb		96
31) TETRAHYDROFURAN	4.110	42	1473	1.0856657	ppb	#	81
32) CHLOROFORM	4.013	83	5482	0.5017524	ppb	#	95
34) 1,1,1-TRICHLOROETHANE	4.140	97	4521	0.4733870	ppb		97
35) CARBON TETRACHLORIDE	4.104	117	5453	0.5455662	ppb		96
36) 1,1-Dichloropropene	4.207	75	4194	0.4974918	ppb	#	92

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 05.D
Acq On : 26 Apr 2016 12:35 pm
Operator : 605
Sample : STD VMS .5 ppb 16D26894
Misc : water IS/SURR16D21640
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 27 08:45:25 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 08:42:40 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
37) 2,2,4-TRIMETHYLPENTANE	4.244	41	3632	0.5600544	ppb		84
38) HEPTANE	4.280	43	4888	0.5204897	ppb	#	72
39) BENZENE	4.347	78	11833	0.5130452	ppb	#	12
40) 1,2-DICHLOROETHANE	4.469	62	3260	0.4183400	ppb	#	76
42) TRICHLOROETHENE	4.682	130	2998	0.4630086	ppb		95
43) 1,2-DICHLOROPROPANE	4.992	62	1987	0.4926195	ppb		89
44) DIBROMOMETHANE	4.943	93	1540	0.4344248	ppb		99
45) BROMODICHLOROMETHANE	5.022	83	4485	0.5704529	ppb	#	95
47) 2-CHLOROETHYL VINYL ETHER	5.333	63	1644	1.9825102	ppb	#	49
48) CIS-1,3-DICHLOROPROPENE	5.393	75	4489	0.4647141	ppb	#	91
49) 4-METHYL-2-PENTANONE (...	5.758	43	12184	2.5444405	ppb		89
51) TOLUENE	5.546	91	14334	0.5650335	ppb		92
52) TRANS-1,3-DICHLOROPROPENE	5.795	75	3810	0.4513662	ppb	#	93
54) 1,1,2-TRICHLOROETHANE	5.911	97	2367	0.4814990	ppb		92
55) TETRACHLOROETHENE	5.801	164	2691	0.5122163	ppb		96
56) 1,3-Dichloropropane	6.099	76	3614	0.4387103	ppb	#	86
57) 2-HEXANONE	6.300	58	5064	2.2708301	ppb		97
58) CHLORODIBROMOMETHANE	6.038	129	2697	0.4388357	ppb		97
59) 1,2-DIBROMOETHANE	6.215	107	2449	0.4722842	ppb		96
60) CHLOROBENZENE	6.549	112	8351	0.4943184	ppb		94
61) 1,1,1,2-TETRACHLOROETHANE	6.586	133	2799	0.4943847	ppb	#	94
62) ETHYLBENZENE	6.537	106	4395	0.4552729	ppb		83
63) M&P-XYLENE	6.641	106	11407	0.9893260	ppb		97
64) O-XYLENE	6.945	106	5196	0.4572818	ppb		93
65) STYRENE	6.987	104	8717	0.4788366	ppb		98
66) Bromoform	7.024	173	1615	0.4163912	ppb		99
67) Isopropylbenzene	7.164	105	17082	0.5684383	ppb		96
69) Bromobenzene	7.480	77	5755	0.4924089	ppb		96
70) 1,1,2,2-TETRACHLOROETHANE	7.517	83	3054	0.4853196	ppb	#	94
71) 1,2,3-TRICHLOROPROPANE	7.632	110	868	0.4879319	ppb	#	23
72) TRANS-1,4-DICHLORO-2-B...	7.657	53	984	0.5581422	ppb	#	18
73) n-Propylbenzene	7.462	91	15682	0.4695577	ppb		98
74) 4-ETHYLTOLUENE	7.541	105	13755	0.4697742	ppb		100
75) 2-Chlorotoluene	7.608	126	3060	0.4764538	ppb	#	96
76) 4-Chlorotoluene	7.723	91	9878	0.4831420	ppb		100
77) 1,3,5-Trimethylbenzene	7.602	105	10926	0.4543890	ppb		95
78) tert-Butylbenzene	7.845	119	10247	0.4875314	ppb		96
79) 1,2,4-Trimethylbenzene	7.900	105	11704	0.4822130	ppb		93
80) sec-Butylbenzene	7.979	105	15622	0.4871792	ppb		96
81) 1,3-DICHLOROBENZENE	8.186	146	6933	0.5037092	ppb		89
82) p-Isopropyltoluene	8.082	119	11509	0.4305345	ppb		96
83) DICYCLOPENTADIENE	8.095	66	11563	0.4286302	ppb		99
85) 1,4-DICHLOROBENZENE	8.247	146	6610	0.5268925	ppb	#	1
86) 1,2,3-TRIMETHYLBENZENE	8.247	105	12222	0.5400775	ppb		98
87) 1,2-DICHLOROBENZENE	8.581	146	5695	0.4588538	ppb		97
88) n-Butylbenzene	8.417	91	11310	0.4729679	ppb		97
89) 1,2-Dibromo-3-chloropr...	9.232	157	548	0.4046234	ppb	#	8
90) 1,2,4-Trichlorobenzene	9.774	180	3309	0.4200409	ppb		99
91) HEXACHLORO-1,3-BUTADIENE	9.725	225	2000	0.5277434	ppb	#	83
92) Naphthalene	10.041	128	8140	0.4456168	ppb	#	93
93) 1,2,3-Trichlorobenzene	10.206	180	3109	0.4593656	ppb		97
94) 1-Methylnaphthalene	10.917	142	4260	0.4953202	ppb		99
95) 2-Methylnaphthalene	11.051	142	3942	0.5313736	ppb		96

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 05.D
Acq On : 26 Apr 2016 12:35 pm
Operator : 605
Sample : STD VMS .5 ppb 16D26894
Misc : water IS/SURR16D21640
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 27 08:45:25 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 08:42:40 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

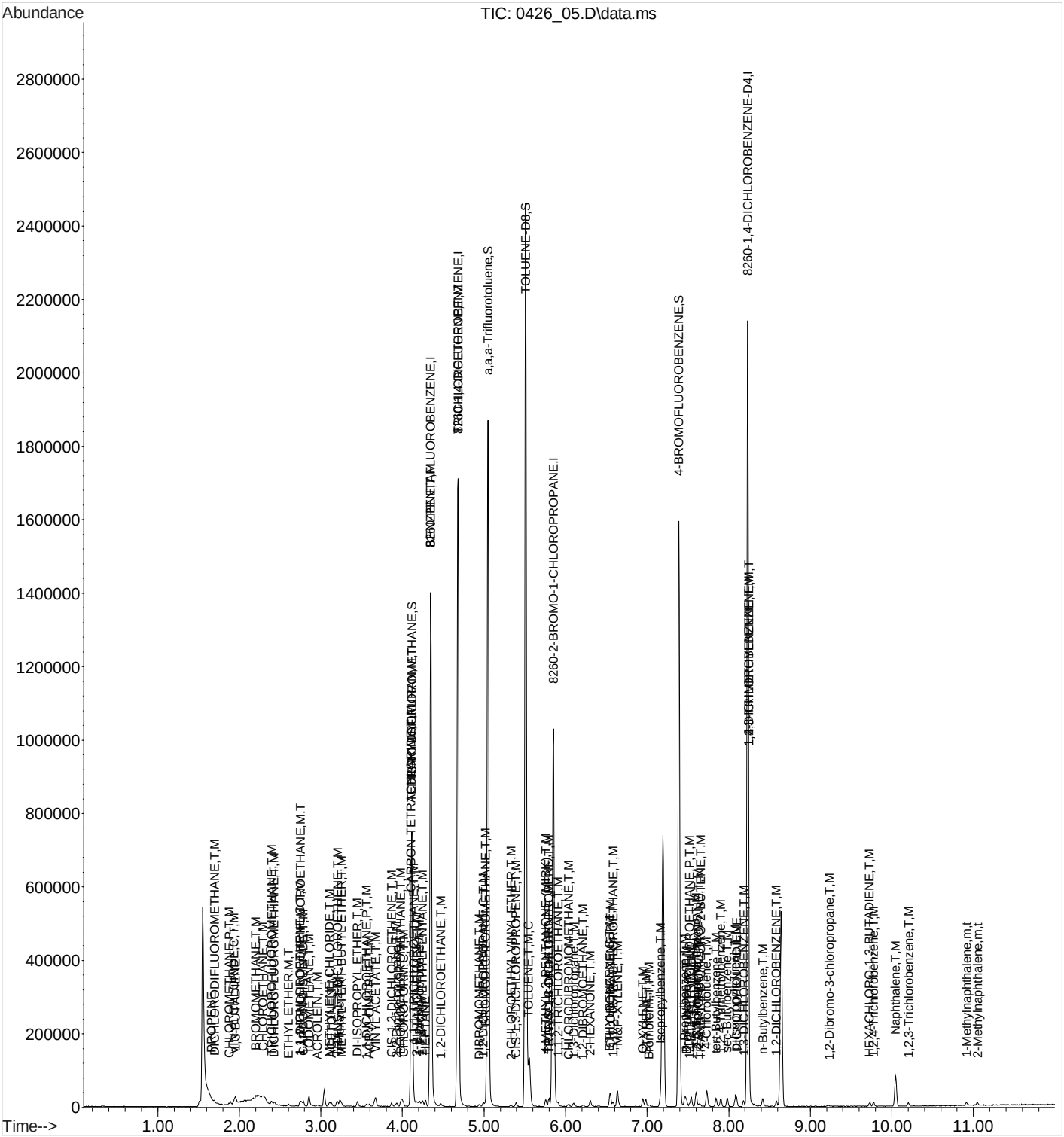
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 05.D
Acq On : 26 Apr 2016 12:35 pm
Operator : 605
Sample : STD VMS .5 ppb 16D26894
Misc : water IS/SURR16D21640
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 27 08:45:25 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 08:42:40 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 06.D
Acq On : 26 Apr 2016 12:58 pm
Operator : 605
Sample : STD VMS 1 ppb 16D26894
Misc : water IS/SURR16D21640
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 27 08:45:51 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 08:42:40 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 8260-PENTAFLUOROBENZENE	4.347	168	731067	40.0000000	ppb		0.00
41) 8260-1,4-DIFLUOROBENZENE	4.682	114	1096486	40.0000000	ppb		0.00
53) 8260-2-BROMO-1-CHLOROP...	5.850	79	165962	40.0000000	ppb		0.00
84) 8260-1,4-DICHLOROBENZE...	8.235	152	484935	40.0000000	ppb		0.00
96) AP9-PENTAFLUOROBENZENE	0.000	168	0m	40.0000000	ppb		-4.36
114) AP9-1,4-DIFLUOROBENZENE	0.000	114	0m	40.0000000	ppb		-4.69
122) AP9-2-BROMO-1-CHLOROPR...	0.000	79	0m	40.0000000	ppb		-5.86
128) AP9-1,4-DICHLOROBENZEN...	0.000	152	0m	40.0000000	ppb		-8.25
System Monitoring Compounds							
33) DIBROMOFLUOROMETHANE	4.116	111	344929	43.2157525	ppb		0.00
Spiked Amount 40.000	Range 79 - 121		Recovery = 108.04%				
46) a,a,a-Trifluorotoluene	5.047	146	628545	43.0911191	ppb		0.00
Spiked Amount 40.000	Range 90 - 116		Recovery = 107.73%				
50) TOLUENE-D8	5.509	98	1314829	42.8587637	ppb		0.00
Spiked Amount 40.000	Range 90 - 115		Recovery = 107.15%				
68) 4-BROMOFLUOROBENZENE	7.389	95	466526	40.7096506	ppb		0.00
Spiked Amount 40.000	Range 80 - 120		Recovery = 101.77%				
Target Compounds							Qvalue
3) PROPENE	1.658	41	3507	2.2636078	ppb	#	86
4) DICHLORODIFLUOROMETHANE	1.701	85	5946	1.0949943	ppb		95
5) CHLOROMETHANE	1.871	50	6742	1.0874560	ppb		97
6) VINYL CHLORIDE	1.938	62	7169	1.0157085	ppb	#	88
7) 1,3-BUTADIENE	1.950	39	6747	1.2231821	ppb		87
8) BROMOMETHANE	2.200	94	4354	1.5178625	ppb	#	69
9) CHLOROETHANE	2.291	64	4202	1.1151144	ppb	#	67
10) TRICHLOROFLUOROMETHANE	2.394	101	10261	1.0527496	ppb	#	96
11) DICHLOROFLUOROMETHANE	2.431	67	10320	0.9589896	ppb		100
12) ETHYL ETHER	2.595	59	4299	1.0404695	ppb		94
13) ACROLEIN	2.960	56	4630	5.3639301	ppb	#	82
14) 1,1-DICHLOROETHENE	2.747	61	8967	1.0456066	ppb		97
15) 1,1,2-TRICHLOROTRIFLUO...	2.765	101	6107	1.0655427	ppb		98
16) ACETONE	3.130	43	14968	5.9577099	ppb		97
17) IODOMETHANE	2.851	142	51539	5.7936732	ppb		99
18) CARBON DISULFIDE	2.784	76	22198	1.2054408	ppb		98
19) METHYLENE CHLORIDE	3.106	84	6008	1.0837084	ppb		96
20) ACRYLONITRILE	3.587	53	7084	4.7129082	ppb		99
21) n-Hexane	3.234	56	6415	1.2211897	ppb		79
22) TRANS-1,2-DICHLOROETHENE	3.203	96	5418	0.9415442	ppb		89
23) METHYL TERT-BUTYL ETHER	3.246	73	14961	0.9896047	ppb		95
24) 1,1-DICHLOROETHANE	3.562	63	10417	1.0105929	ppb		100
25) VINYL ACETATE	3.672	43	47635	5.0221318	ppb		99
26) DI-ISOPROPYL ETHER	3.447	45	16670	0.9838073	ppb		94
27) 2,2-Dichloropropane	3.927	77	10301	1.0674700	ppb		99
28) CIS-1,2-DICHLOROETHENE	3.866	96	6110	0.9730986	ppb		95
29) 2-BUTANONE (MEK)	4.177	43	13786	5.1435553	ppb		96
30) BROMOCHLOROMETHANE	3.982	130	4137	1.0977445	ppb		92
31) TETRAHYDROFURAN	4.116	42	1926	1.4897465	ppb	#	67
32) CHLOROFORM	4.006	83	10890	1.0460226	ppb		98
34) 1,1,1-TRICHLOROETHANE	4.146	97	9289	1.0207363	ppb		98
35) CARBON TETRACHLORIDE	4.104	117	10856	1.1398417	ppb		82
36) 1,1-Dichloropropene	4.207	75	8303	1.0336067	ppb		95

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 06.D
Acq On : 26 Apr 2016 12:58 pm
Operator : 605
Sample : STD VMS 1 ppb 16D26894
Misc : water IS/SURR16D21640
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 27 08:45:51 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 08:42:40 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
37) 2,2,4-TRIMETHYLPENTANE	4.250	41	6856	1.1094759	ppb		93
38) HEPTANE	4.280	43	8828	0.9865202	ppb	#	69
39) BENZENE	4.347	78	22799	1.0373834	ppb	#	56
40) 1,2-DICHLOROETHANE	4.469	62	7176	0.9664001	ppb		99
42) TRICHLOROETHENE	4.676	130	6212	0.9961609	ppb		97
43) 1,2-DICHLOROPROPANE	4.998	62	3779	0.9728173	ppb		89
44) DIBROMOMETHANE	4.943	93	3582	1.0492043	ppb		91
45) BROMODICHLOROMETHANE	5.016	83	8436	1.1141265	ppb	#	74
47) 2-CHLOROETHYL VINYL ETHER	5.327	63	3339	4.1809085	ppb	#	90
48) CIS-1,3-DICHLOROPROPENE	5.393	75	9182	0.9869931	ppb	#	96
49) 4-METHYL-2-PENTANONE (...	5.758	43	21867	4.7416801	ppb		100
51) TOLUENE	5.546	91	27013	1.1056565	ppb		97
52) TRANS-1,3-DICHLOROPROPENE	5.801	75	7800	0.9594875	ppb		95
54) 1,1,2-TRICHLOROETHANE	5.904	97	4564	0.9786797	ppb		96
55) TETRACHLOROETHENE	5.801	164	5210	1.0453826	ppb		97
56) 1,3-Dichloropropane	6.093	76	7707	0.9862179	ppb		99
57) 2-HEXANONE	6.300	58	10086	4.7676872	ppb		93
58) CHLORODIBROMOMETHANE	6.038	129	5488	0.9413105	ppb		99
59) 1,2-DIBROMOETHANE	6.215	107	5014	1.0192878	ppb		95
60) CHLOROBENZENE	6.549	112	16426	1.0249389	ppb		98
61) 1,1,1,2-TETRACHLOROETHANE	6.586	133	5736	1.0679947	ppb	#	97
62) ETHYLBENZENE	6.543	106	9258	1.0109460	ppb		99
63) M&P-XYLENE	6.635	106	22775	2.0822085	ppb		96
64) O-XYLENE	6.945	106	10942	1.0151012	ppb		94
65) STYRENE	6.987	104	16738	0.9692185	ppb		97
66) Bromoform	7.030	173	3521	0.9569579	ppb		96
67) Isopropylbenzene	7.164	105	29710	1.0421858	ppb		96
69) Bromobenzene	7.480	77	11781	1.0625774	ppb		96
70) 1,1,2,2-TETRACHLOROETHANE	7.517	83	5838	0.9779593	ppb		93
71) 1,2,3-TRICHLOROPROPANE	7.638	110	1612	0.9552177	ppb		97
72) TRANS-1,4-DICHLORO-2-B...	7.657	53	1780	1.0643087	ppb	#	88
73) n-Propylbenzene	7.462	91	31311	0.9882853	ppb		99
74) 4-ETHYLTOLUENE	7.541	105	27755	0.9992350	ppb		99
75) 2-Chlorotoluene	7.608	126	6356	1.0432326	ppb	#	88
76) 4-Chlorotoluene	7.723	91	19854	1.0236503	ppb		100
77) 1,3,5-Trimethylbenzene	7.596	105	22477	0.9853779	ppb		98
78) tert-Butylbenzene	7.845	119	19605	0.9832650	ppb		97
79) 1,2,4-Trimethylbenzene	7.900	105	23212	1.0081265	ppb		100
80) sec-Butylbenzene	7.979	105	30798	1.0124473	ppb		100
81) 1,3-DICHLOROBENZENE	8.186	146	12428	0.9518264	ppb		97
82) p-Isopropyltoluene	8.082	119	24581	0.9693213	ppb		97
83) DICYCLOPENTADIENE	8.095	66	24678	0.9643174	ppb		98
85) 1,4-DICHLOROBENZENE	8.247	146	12496	1.0370416	ppb	#	1
86) 1,2,3-TRIMETHYLBENZENE	8.247	105	22741	1.0462319	ppb		96
87) 1,2-DICHLOROBENZENE	8.581	146	12183	1.0219732	ppb		97
88) n-Butylbenzene	8.417	91	23486	1.0225457	ppb		97
89) 1,2-Dibromo-3-chloropr...	9.226	157	1185	0.9109476	ppb		93
90) 1,2,4-Trichlorobenzene	9.774	180	6892	0.9108454	ppb		93
91) HEXACHLORO-1,3-BUTADIENE	9.725	225	3843	1.0557664	ppb		98
92) Naphthalene	10.047	128	15971	0.9102777	ppb		99
93) 1,2,3-Trichlorobenzene	10.200	180	6335	0.9745161	ppb		98
94) 1-Methylnaphthalene	10.917	142	6563	0.7944810	ppb		94
95) 2-Methylnaphthalene	11.045	142	6895	0.9676589	ppb		95

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 06.D
Acq On : 26 Apr 2016 12:58 pm
Operator : 605
Sample : STD VMS 1 ppb 16D26894
Misc : water IS/SURR16D21640
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 27 08:45:51 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 08:42:40 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

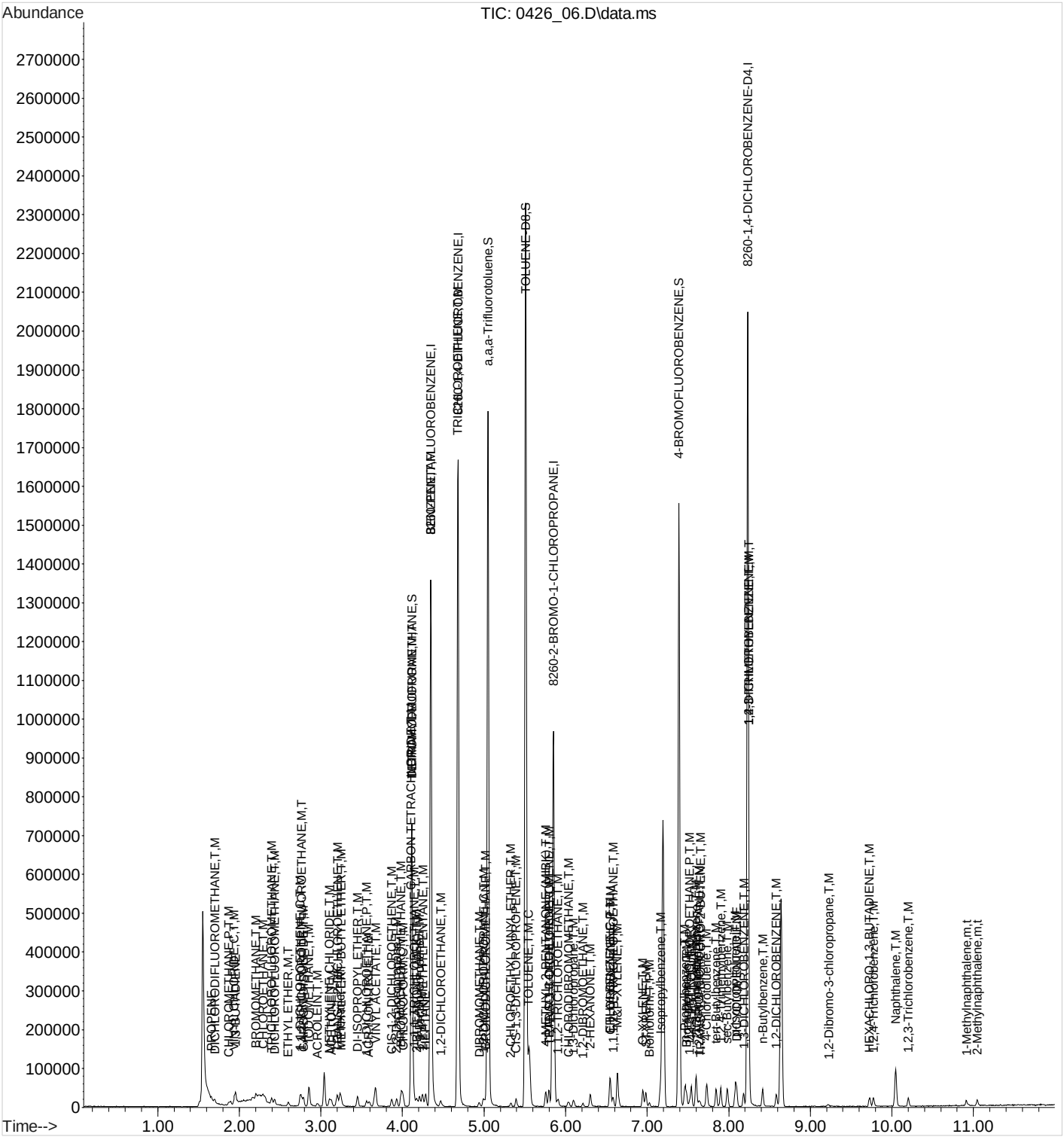
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 06.D
Acq On : 26 Apr 2016 12:58 pm
Operator : 605
Sample : STD VMS 1 ppb 16D26894
Misc : water IS/SURR16D21640
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 27 08:45:51 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 08:42:40 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 07.D
Acq On : 26 Apr 2016 1:21 pm
Operator : 605
Sample : STD VMS 2 ppb 16D26894
Misc : water IS/SURR16D21640
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 27 08:46:11 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 08:42:40 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 8260-PENTAFLUOROBENZENE	4.347	168	725066	40.0000000	ppb		0.00
41) 8260-1,4-DIFLUOROBENZENE	4.681	114	1098082	40.0000000	ppb		0.00
53) 8260-2-BROMO-1-CHLOROP...	5.843	79	164706	40.0000000	ppb		0.00
84) 8260-1,4-DICHLOROBENZE...	8.234	152	484803	40.0000000	ppb		0.00
96) AP9-PENTAFLUOROBENZENE	0.000	168	0m	40.0000000	ppb		-4.36
114) AP9-1,4-DIFLUOROBENZENE	0.000	114	0m	40.0000000	ppb		-4.69
122) AP9-2-BROMO-1-CHLOROPR...	0.000	79	0m	40.0000000	ppb		-5.86
128) AP9-1,4-DICHLOROBENZEN...	0.000	152	0m	40.0000000	ppb		-8.25
System Monitoring Compounds							
33) DIBROMOFLUOROMETHANE	4.116	111	345616	43.6602129	ppb		0.00
Spiked Amount 40.000	Range 79 - 121		Recovery = 109.15%				
46) a,a,a-Trifluorotoluene	5.046	146	635633	43.5137139	ppb		0.00
Spiked Amount 40.000	Range 90 - 116		Recovery = 108.78%				
50) TOLUENE-D8	5.509	98	1322223	43.0371388	ppb		0.00
Spiked Amount 40.000	Range 90 - 115		Recovery = 107.59%				
68) 4-BROMOFLUOROBENZENE	7.389	95	471105	41.4227069	ppb		0.00
Spiked Amount 40.000	Range 80 - 120		Recovery = 103.56%				
Target Compounds							Qvalue
3) PROPENE	1.658	41	4102	2.6695663	ppb		93
4) DICHLORODIFLUOROMETHANE	1.700	85	11458	2.1275287	ppb		95
5) CHLOROMETHANE	1.871	50	13260	2.1564834	ppb		98
6) VINYL CHLORIDE	1.938	62	13653	1.9503755	ppb		95
7) 1,3-BUTADIENE	1.950	39	12269	2.2426898	ppb		90
8) BROMOMETHANE	2.199	94	7951	2.7947657	ppb	#	90
9) CHLOROETHANE	2.291	64	8992	2.4060205	ppb	#	88
10) TRICHLOROFLUOROMETHANE	2.394	101	19175	1.9835831	ppb	#	96
11) DICHLOROFLUOROMETHANE	2.431	67	21283	1.9940988	ppb		100
12) ETHYL ETHER	2.601	59	7876	1.9219729	ppb		93
13) ACROLEIN	2.954	56	8320	9.7186308	ppb		97
14) 1,1-DICHLOROETHENE	2.747	61	17576	2.0664305	ppb		99
15) 1,1,2-TRICHLOROTRIFLUO...	2.759	101	11823	2.0799374	ppb		98
16) ACETONE	3.130	43	25998	10.4336234	ppb		98
17) IODOMETHANE	2.850	142	94166	10.6731292	ppb		100
18) CARBON DISULFIDE	2.783	76	40674	2.2270427	ppb		98
19) METHYLENE CHLORIDE	3.106	84	11551	2.1007857	ppb		95
20) ACRYLONITRILE	3.586	53	14327	9.6104854	ppb		96
21) n-Hexane	3.227	56	11392	2.1865835	ppb		97
22) TRANS-1,2-DICHLOROETHENE	3.203	96	12222	2.1415273	ppb		97
23) METHYL TERT-BUTYL ETHER	3.246	73	29906	1.9945233	ppb		92
24) 1,1-DICHLOROETHANE	3.562	63	20497	2.0049499	ppb		100
25) VINYL ACETATE	3.672	43	96376	10.2449650	ppb		98
26) DI-ISOPROPYL ETHER	3.446	45	32296	1.9217762	ppb		96
27) 2,2-Dichloropropane	3.927	77	19665	2.0547068	ppb		100
28) CIS-1,2-DICHLOROETHENE	3.866	96	12615	2.0257346	ppb		98
29) 2-BUTANONE (MEK)	4.170	43	25603	9.6315378	ppb		100
30) BROMOCHLOROMETHANE	3.982	130	7382	1.9750106	ppb		92
31) TETRAHYDROFURAN	4.110	42	3114	2.4285908	ppb		89
32) CHLOROFORM	4.006	83	21857	2.1168173	ppb		98
34) 1,1,1-TRICHLOROETHANE	4.140	97	18563	2.0567068	ppb		96
35) CARBON TETRACHLORIDE	4.104	117	19778	2.0938073	ppb		94
36) 1,1-Dichloropropene	4.207	75	16345	2.0515629	ppb		98

Quantitation Report (QT Reviewed)

InstName : VOCMS30

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Data File : 0426 07.D
Acq On : 26 Apr 2016 1:21 pm
Operator : 605
Sample : STD VMS 2 ppb 16D26894
Misc : water IS/SURR16D21640
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 27 08:46:11 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 08:42:40 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
37) 2,2,4-TRIMETHYLPENTANE	4.237	41	12289	2.0051334	ppb		97
38) HEPTANE	4.280	43	18410	2.0743263	ppb	#	72
39) BENZENE	4.353	78	45740	2.0984533	ppb	#	80
40) 1,2-DICHLOROETHANE	4.469	62	14428	1.9591167	ppb		98
42) TRICHLOROETHENE	4.675	130	12795	2.0488333	ppb		98
43) 1,2-DICHLOROPROPANE	4.992	62	7952	2.0440856	ppb		95
44) DIBROMOMETHANE	4.943	93	6669	1.9505789	ppb		95
45) BROMODICHLOROMETHANE	5.016	83	15598	2.0570042	ppb	#	83
47) 2-CHLOROETHYL VINYL ETHER	5.332	63	7041	8.8035312	ppb		96
48) CIS-1,3-DICHLOROPROPENE	5.393	75	18108	1.9436391	ppb		98
49) 4-METHYL-2-PENTANONE (...	5.758	43	42773	9.2614945	ppb		97
51) TOLUENE	5.545	91	52013	2.1258256	ppb		97
52) TRANS-1,3-DICHLOROPROPENE	5.795	75	15836	1.9451743	ppb	#	97
54) 1,1,2-TRICHLOROETHANE	5.910	97	9245	1.9975658	ppb		99
55) TETRACHLOROETHENE	5.801	164	10560	2.1350138	ppb		96
56) 1,3-Dichloropropane	6.093	76	15512	2.0001131	ppb		99
57) 2-HEXANONE	6.300	58	20748	9.8824420	ppb		99
58) CHLORODIBROMOMETHANE	6.038	129	11004	1.9018166	ppb		98
59) 1,2-DIBROMOETHANE	6.208	107	9543	1.9547744	ppb		97
60) CHLOROBENZENE	6.549	112	33506	2.1066287	ppb		100
61) 1,1,1,2-TETRACHLOROETHANE	6.580	133	10543	1.9779868	ppb	#	99
62) ETHYLBENZENE	6.543	106	18569	2.0431419	ppb		98
63) M&P-XYLENE	6.640	106	45366	4.1792230	ppb		98
64) O-XYLENE	6.945	106	21459	2.0059558	ppb		98
65) STYRENE	6.981	104	33181	1.9360066	ppb		98
66) Bromoform	7.030	173	7220	1.9772577	ppb		93
67) Isopropylbenzene	7.164	105	57904	2.0466816	ppb		98
69) Bromobenzene	7.480	77	21941	1.9940409	ppb		100
70) 1,1,2,2-TETRACHLOROETHANE	7.522	83	10901	1.8400188	ppb		96
71) 1,2,3-TRICHLOROPROPANE	7.638	110	3068	1.8318584	ppb		93
72) TRANS-1,4-DICHLORO-2-B...	7.650	53	3132	1.8869856	ppb		93
73) n-Propylbenzene	7.462	91	60642	1.9286710	ppb		99
74) 4-ETHYLTOLUENE	7.541	105	53923	1.9561390	ppb		98
75) 2-Chlorotoluene	7.602	126	11717	1.9378177	ppb	#	91
76) 4-Chlorotoluene	7.723	91	37971	1.9726719	ppb		99
77) 1,3,5-Trimethylbenzene	7.595	105	44631	1.9715161	ppb		98
78) tert-Butylbenzene	7.845	119	39667	2.0046212	ppb		99
79) 1,2,4-Trimethylbenzene	7.900	105	45897	2.0085656	ppb		98
80) sec-Butylbenzene	7.985	105	59049	1.9559678	ppb		100
81) 1,3-DICHLOROBENZENE	8.180	146	25026	1.9312886	ppb		98
82) p-Isopropyltoluene	8.082	119	48425	1.9241418	ppb		98
83) DICYCLOPENTADIENE	8.094	66	49266	1.9397983	ppb		98
85) 1,4-DICHLOROBENZENE	8.246	146	23927	1.9862397	ppb	#	1
86) 1,2,3-TRIMETHYLBENZENE	8.240	105	44603	2.0525830	ppb		98
87) 1,2-DICHLOROBENZENE	8.587	146	23332	1.9577419	ppb		98
88) n-Butylbenzene	8.411	91	44684	1.9460049	ppb		98
89) 1,2-Dibromo-3-chloropr...	9.220	157	2352	1.8085503	ppb		91
90) 1,2,4-Trichlorobenzene	9.773	180	14129	1.8677944	ppb		99
91) HEXACHLORO-1,3-BUTADIENE	9.731	225	6984	1.9191985	ppb		96
92) Naphthalene	10.041	128	31049	1.7701401	ppb		99
93) 1,2,3-Trichlorobenzene	10.199	180	12142	1.8683183	ppb		99
94) 1-Methylnaphthalene	10.917	142	12311	1.4907083	ppb		94
95) 2-Methylnaphthalene	11.045	142	11713	1.6442748	ppb		93

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 07.D
Acq On : 26 Apr 2016 1:21 pm
Operator : 605
Sample : STD VMS 2 ppb 16D26894
Misc : water IS/SURR16D21640
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 27 08:46:11 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 08:42:40 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 07.D
Acq On : 26 Apr 2016 1:21 pm
Operator : 605
Sample : STD VMS 2 ppb 16D26894
Misc : water IS/SURR16D21640
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Quant Time: Apr 27 08:46:11 2016
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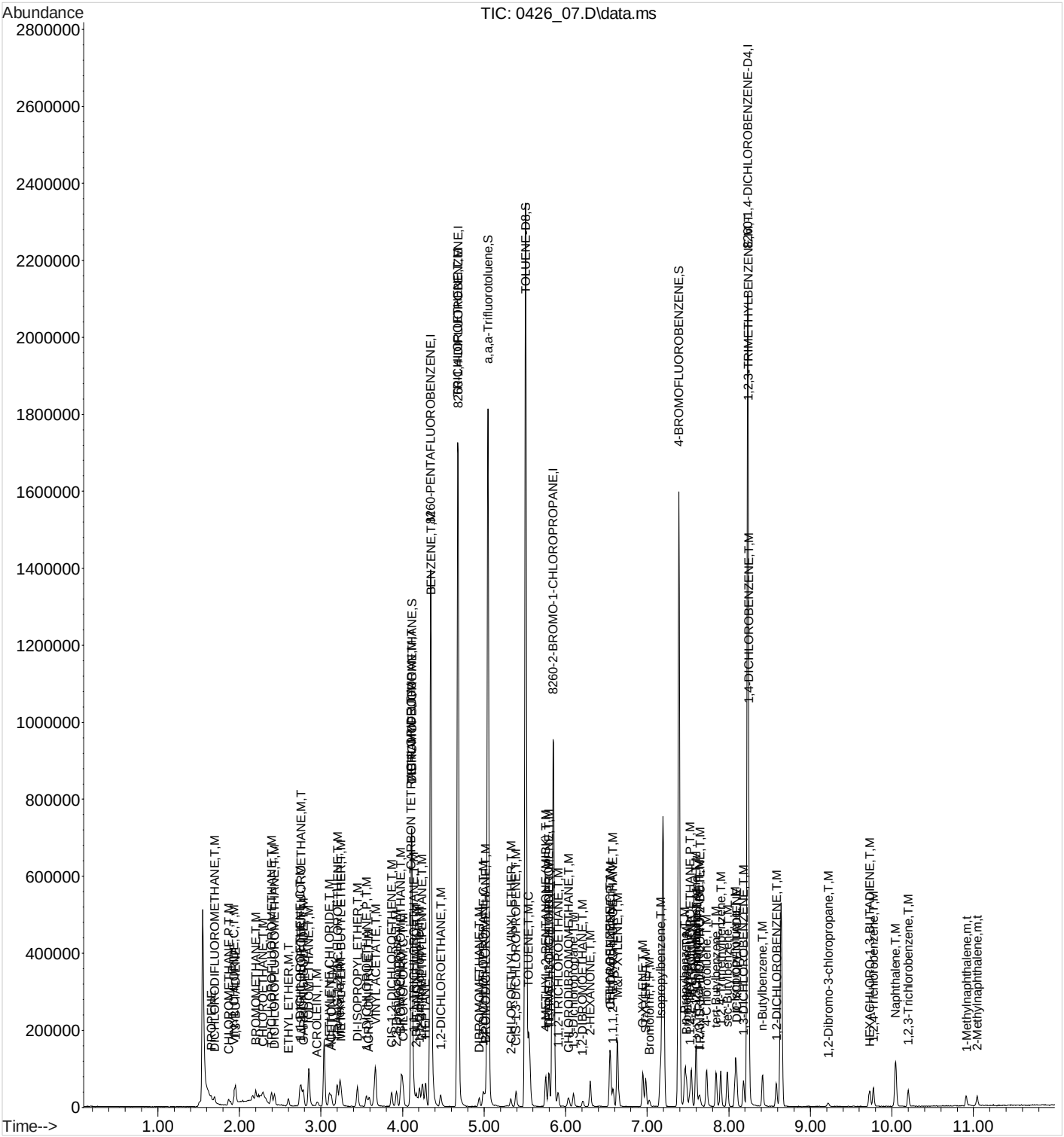
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 08:42:40 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 08.D
Acq On : 26 Apr 2016 1:43 pm
Operator : 605
Sample : STD VMS 5.0 ppb 16D26894
Misc : water IS/SURR16D21640
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 27 08:46:32 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 08:42:40 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 8260-PENTAFLUOROBENZENE	4.347	168	716494	40.0000000	ppb		0.00
41) 8260-1,4-DIFLUOROBENZENE	4.682	114	1084669	40.0000000	ppb		0.00
53) 8260-2-BROMO-1-CHLOROP...	5.850	79	164940	40.0000000	ppb		0.00
84) 8260-1,4-DICHLOROBENZE...	8.234	152	488158	40.0000000	ppb		0.00
96) AP9-PENTAFLUOROBENZENE	0.000	168	0m	40.0000000	ppb		-4.36
114) AP9-1,4-DIFLUOROBENZENE	0.000	114	0m	40.0000000	ppb		-4.69
122) AP9-2-BROMO-1-CHLOROPR...	0.000	79	0m	40.0000000	ppb		-5.86
128) AP9-1,4-DICHLOROBENZEN...	0.000	152	0m	40.0000000	ppb		-8.25
System Monitoring Compounds							
33) DIBROMOFLUOROMETHANE	4.116	111	344828	44.0818199	ppb		0.00
Spiked Amount 40.000	Range 79 - 121		Recovery = 110.20%				
46) a,a,a-Trifluorotoluene	5.047	146	641104	44.4309651	ppb		0.00
Spiked Amount 40.000	Range 90 - 116		Recovery = 111.08%				
50) TOLUENE-D8	5.509	98	1325121	43.6648290	ppb		0.00
Spiked Amount 40.000	Range 90 - 115		Recovery = 109.16%				
68) 4-BROMOFLUOROBENZENE	7.389	95	480906	42.2244875	ppb		0.00
Spiked Amount 40.000	Range 80 - 120		Recovery = 105.56%				
Target Compounds							Qvalue
3) PROPENE	1.658	41	8937	5.8857498	ppb		93
4) DICHLORODIFLUOROMETHANE	1.701	85	26925	5.0592635	ppb		98
5) CHLOROMETHANE	1.871	50	30044	4.9445336	ppb		100
6) VINYL CHLORIDE	1.938	62	33689	4.8701602	ppb		98
7) 1,3-BUTADIENE	1.950	39	28651	5.2998649	ppb		96
8) BROMOMETHANE	2.199	94	16546	5.8854767	ppb		94
9) CHLOROETHANE	2.291	64	19841	5.3724399	ppb		91
10) TRICHLOROFLUOROMETHANE	2.394	101	48005	5.0253520	ppb		98
11) DICHLOROFLUOROMETHANE	2.431	67	53041	5.0291029	ppb		98
12) ETHYL ETHER	2.601	59	19034	4.7004194	ppb		97
13) ACROLEIN	2.954	56	20312	24.0104017	ppb		97
14) 1,1-DICHLOROETHENE	2.747	61	40849	4.8601221	ppb		97
15) 1,1,2-TRICHLOROTRIFLUO...	2.759	101	27953	4.9764080	ppb		99
16) ACETONE	3.130	43	60270	24.4771806	ppb		100
17) IODOMETHANE	2.850	142	217386	24.9341287	ppb		100
18) CARBON DISULFIDE	2.783	76	94831	5.2544465	ppb		100
19) METHYLENE CHLORIDE	3.106	84	27228	5.0112134	ppb		99
20) ACRYLONITRILE	3.593	53	33295	22.6013336	ppb		95
21) n-Hexane	3.234	56	26137	5.0767621	ppb		95
22) TRANS-1,2-DICHLOROETHENE	3.203	96	27581	4.8905345	ppb		99
23) METHYL TERT-BUTYL ETHER	3.246	73	71504	4.8258753	ppb		93
24) 1,1-DICHLOROETHANE	3.562	63	49037	4.8540260	ppb		100
25) VINYL ACETATE	3.672	43	220015	23.6678525	ppb		99
26) DI-ISOPROPYL ETHER	3.447	45	79462	4.7849626	ppb		99
27) 2,2-Dichloropropane	3.927	77	46834	4.9520172	ppb		100
28) CIS-1,2-DICHLOROETHENE	3.866	96	30863	5.0153173	ppb		96
29) 2-BUTANONE (MEK)	4.171	43	58978	22.4522465	ppb		98
30) BROMOCHLOROMETHANE	3.982	130	17874	4.8392953	ppb		92
31) TETRAHYDROFURAN	4.110	42	5871	4.6335387	ppb	#	72
32) CHLOROFORM	4.006	83	50838	4.9824880	ppb		98
34) 1,1,1-TRICHLOROETHANE	4.140	97	44003	4.9336858	ppb		99
35) CARBON TETRACHLORIDE	4.104	117	47627	5.1023771	ppb		95
36) 1,1-Dichloropropene	4.207	75	39209	4.9802444	ppb		98

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 08.D
Acq On : 26 Apr 2016 1:43 pm
Operator : 605
Sample : STD VMS 5.0 ppb 16D26894
Misc : water IS/SURR16D21640
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 27 08:46:32 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 08:42:40 2016
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
37)	2,2,4-TRIMETHYLPENTANE	4.244	41	33194	5.4808926	ppb		90
38)	HEPTANE	4.286	43	43669	4.9792224	ppb		98
39)	BENZENE	4.353	78	105938	4.9183553	ppb	#	92
40)	1,2-DICHLOROETHANE	4.469	62	34929	4.7996030	ppb		99
42)	TRICHLOROETHENE	4.682	130	30107	4.8805793	ppb		100
43)	1,2-DICHLOROPROPANE	4.992	62	19061	4.9602770	ppb		98
44)	DIBROMOMETHANE	4.937	93	15794	4.6766242	ppb		99
45)	BROMODICHLOROMETHANE	5.016	83	37248	4.9728660	ppb	#	97
47)	2-CHLOROETHYL VINYL ETHER	5.326	63	17768	22.4904762	ppb		100
48)	CIS-1,3-DICHLOROPROPENE	5.393	75	42502	4.6184055	ppb		99
49)	4-METHYL-2-PENTANONE (...	5.758	43	102672	22.5061354	ppb		99
51)	TOLUENE	5.545	91	120379	4.9808563	ppb		100
52)	TRANS-1,3-DICHLOROPROPENE	5.795	75	38773	4.8214757	ppb		98
54)	1,1,2-TRICHLOROETHANE	5.910	97	21860	4.7165861	ppb		97
55)	TETRACHLOROETHENE	5.801	164	24812	5.0093568	ppb		98
56)	1,3-Dichloropropane	6.099	76	36560	4.7073488	ppb		99
57)	2-HEXANONE	6.300	58	47304	22.4993167	ppb		94
58)	CHLORODIBROMOMETHANE	6.038	129	26152	4.5134267	ppb		96
59)	1,2-DIBROMOETHANE	6.215	107	22994	4.7033758	ppb		99
60)	CHLOROBENZENE	6.549	112	79629	4.9994255	ppb		99
61)	1,1,1,2-TETRACHLOROETHANE	6.586	133	26466	4.9582785	ppb	#	100
62)	ETHYLBENZENE	6.543	106	43581	4.7884024	ppb		97
63)	M&P-XYLENE	6.634	106	108907	10.0185365	ppb		99
64)	O-XYLENE	6.945	106	51871	4.8419459	ppb		100
65)	STYRENE	6.981	104	81976	4.7762552	ppb		100
66)	Bromoform	7.030	173	17190	4.7009472	ppb		96
67)	Isopropylbenzene	7.158	105	139278	4.9159524	ppb		99
69)	Bromobenzene	7.480	77	52879	4.7989289	ppb		100
70)	1,1,2,2-TETRACHLOROETHANE	7.516	83	27570	4.6470368	ppb		97
71)	1,2,3-TRICHLOROPROPANE	7.638	110	7445	4.4389953	ppb		96
72)	TRANS-1,4-DICHLORO-2-B...	7.650	53	7669	4.6139089	ppb		94
73)	n-Propylbenzene	7.462	91	150953	4.7941300	ppb		99
74)	4-ETHYLTOLUENE	7.541	105	133583	4.8390519	ppb		100
75)	2-Chlorotoluene	7.602	126	30833	5.0920857	ppb		96
76)	4-Chlorotoluene	7.723	91	92771	4.8128075	ppb		100
77)	1,3,5-Trimethylbenzene	7.596	105	111667	4.9257458	ppb		100
78)	tert-Butylbenzene	7.845	119	95956	4.8423763	ppb		99
79)	1,2,4-Trimethylbenzene	7.900	105	109872	4.8014474	ppb		100
80)	sec-Butylbenzene	7.979	105	146156	4.8344739	ppb		100
81)	1,3-DICHLOROBENZENE	8.180	146	62326	4.8029539	ppb		99
82)	p-Isopropyltoluene	8.082	119	121369	4.8156914	ppb		99
83)	DICYCLOPENTADIENE	8.094	66	121615	4.7816727	ppb		99
85)	1,4-DICHLOROBENZENE	8.247	146	59806	4.9305237	ppb	#	1
86)	1,2,3-TRIMETHYLBENZENE	8.240	105	107557	4.9156416	ppb		98
87)	1,2-DICHLOROBENZENE	8.581	146	55967	4.6638051	ppb		99
88)	n-Butylbenzene	8.417	91	113973	4.9294533	ppb		99
89)	1,2-Dibromo-3-chloropr...	9.220	157	5665	4.3261153	ppb		98
90)	1,2,4-Trichlorobenzene	9.774	180	34968	4.5908524	ppb		98
91)	HEXACHLORO-1,3-BUTADIENE	9.731	225	17923	4.8913784	ppb		99
92)	Naphthalene	10.041	128	75197	4.2576056	ppb		100
93)	1,2,3-Trichlorobenzene	10.199	180	30110	4.6012548	ppb		99
94)	1-Methylnaphthalene	10.911	142	31876	3.8332579	ppb		99
95)	2-Methylnaphthalene	11.045	142	28710	4.0026197	ppb		97

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 08.D
Acq On : 26 Apr 2016 1:43 pm
Operator : 605
Sample : STD VMS 5.0 ppb 16D26894
Misc : water IS/SURR16D21640
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 27 08:46:32 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 08:42:40 2016
Response via : Initial Calibration

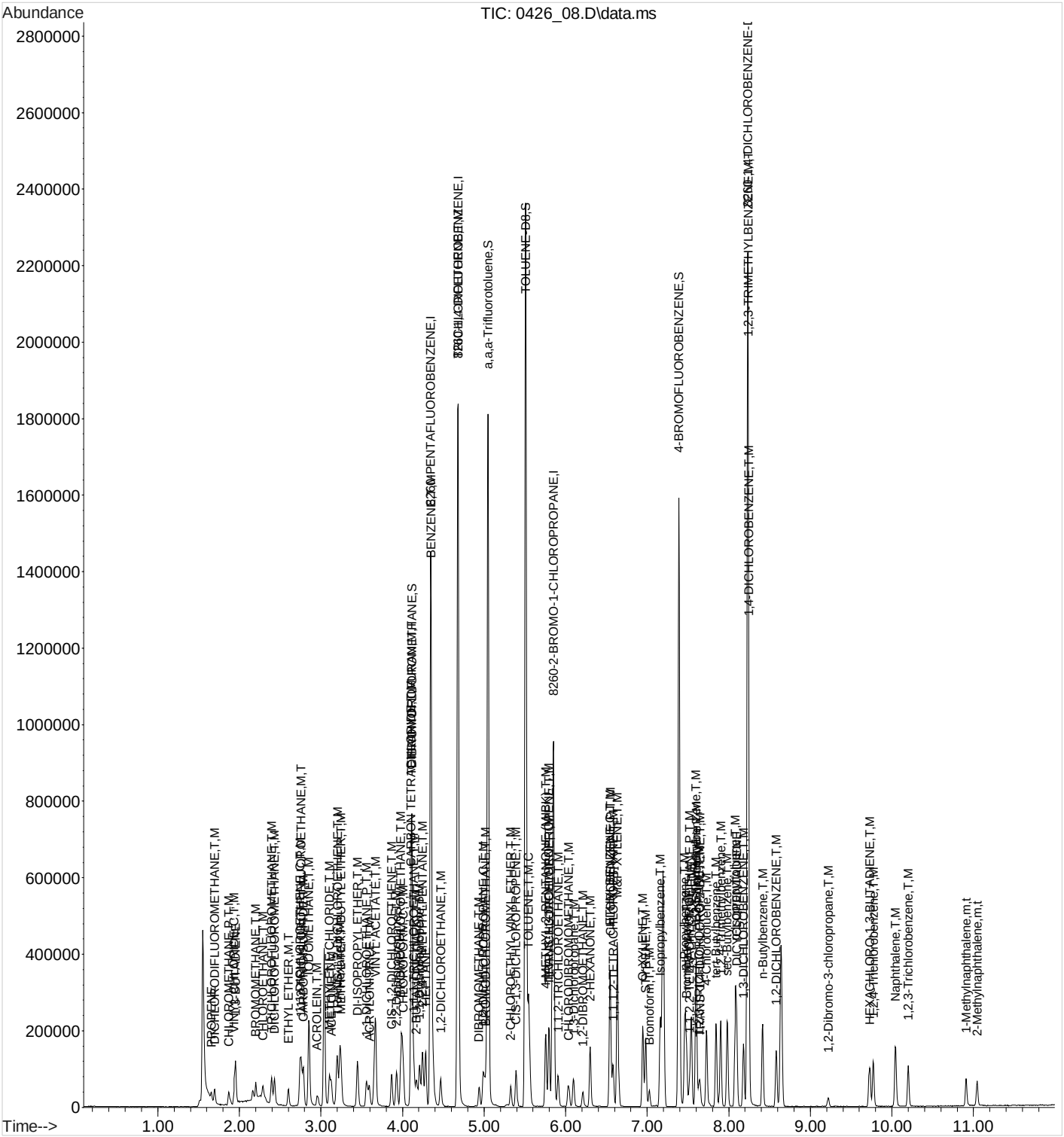
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 08.D
Acq On : 26 Apr 2016 1:43 pm
Operator : 605
Sample : STD VMS 5.0 ppb 16D26894
Misc : water IS/SURR16D21640
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 27 08:46:32 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 08:42:40 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 09.D
Acq On : 26 Apr 2016 2:06 pm
Operator : 605
Sample : STD VMS 10 ppb 16D26894
Misc : water IS/SURR16D21640
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 27 08:46:54 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 08:42:40 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 8260-PENTAFLUOROBENZENE	4.347	168	699493	40.0000000	ppb	0.00
41) 8260-1,4-DIFLUOROBENZENE	4.682	114	1072962	40.0000000	ppb	0.00
53) 8260-2-BROMO-1-CHLOROP...	5.850	79	160181	40.0000000	ppb	0.00
84) 8260-1,4-DICHLOROBENZE...	8.234	152	484251	40.0000000	ppb	0.00
96) AP9-PENTAFLUOROBENZENE	0.000	168	0m	40.0000000	ppb	-4.36
114) AP9-1,4-DIFLUOROBENZENE	0.000	114	0m	40.0000000	ppb	-4.69
122) AP9-2-BROMO-1-CHLOROPR...	0.000	79	0m	40.0000000	ppb	-5.86
128) AP9-1,4-DICHLOROBENZEN...	0.000	152	0m	40.0000000	ppb	-8.25
System Monitoring Compounds						
33) DIBROMOFLUOROMETHANE	4.116	111	341003	44.6523559	ppb	0.00
Spiked Amount 40.000	Range 79 - 121		Recovery = 111.63%			
46) a,a,a-Trifluorotoluene	5.047	146	638735	44.7497755	ppb	0.00
Spiked Amount 40.000	Range 90 - 116		Recovery = 111.87%			
50) TOLUENE-D8	5.509	98	1322456	44.0524783	ppb	0.00
Spiked Amount 40.000	Range 90 - 115		Recovery = 110.13%			
68) 4-BROMOFLUOROBENZENE	7.389	95	485406	43.8858305	ppb	0.00
Spiked Amount 40.000	Range 80 - 120		Recovery = 109.71%			
Target Compounds						Qvalue
3) PROPENE	1.658	41	15715	10.6011653	ppb	97
4) DICHLORODIFLUOROMETHANE	1.701	85	53113	10.2226055	ppb	99
5) CHLOROMETHANE	1.871	50	60612	10.2177525	ppb	98
6) VINYL CHLORIDE	1.938	62	69577	10.3026752	ppb	98
7) 1,3-BUTADIENE	1.950	39	54755	10.3747582	ppb	98
8) BROMOMETHANE	2.199	94	31795	11.5844826	ppb	98
9) CHLOROETHANE	2.291	64	38883	10.7844241	ppb	95
10) TRICHLOROFLUOROMETHANE	2.394	101	95742	10.2662467	ppb	98
11) DICHLOROFLUOROMETHANE	2.431	67	105952	10.2900424	ppb	97
12) ETHYL ETHER	2.601	59	39908	10.0947529	ppb	99
13) ACROLEIN	2.960	56	41405	50.1335793	ppb	97
14) 1,1-DICHLOROETHENE	2.747	61	85761	10.4516480	ppb	99
15) 1,1,2-TRICHLOROTRIFLUO...	2.759	101	57808	10.5415551	ppb	99
16) ACETONE	3.130	43	124053	51.6055794	ppb	99
17) IODOMETHANE	2.850	142	441215	51.8372651	ppb	99
18) CARBON DISULFIDE	2.783	76	190556	10.8150482	ppb	99
19) METHYLENE CHLORIDE	3.106	84	55439	10.4513340	ppb	97
20) ACRYLONITRILE	3.587	53	76889	53.4623992	ppb	95
21) n-Hexane	3.228	56	52386	10.4225863	ppb	98
22) TRANS-1,2-DICHLOROETHENE	3.203	96	56603	10.2805169	ppb	99
23) METHYL TERT-BUTYL ETHER	3.246	73	147826	10.2194087	ppb	98
24) 1,1-DICHLOROETHANE	3.562	63	100783	10.2186771	ppb	99
25) VINYL ACETATE	3.672	43	463825	51.1081194	ppb	100
26) DI-ISOPROPYL ETHER	3.447	45	162445	10.0196970	ppb	98
27) 2,2-Dichloropropane	3.927	77	95167	10.3070993	ppb	99
28) CIS-1,2-DICHLOROETHENE	3.866	96	61681	10.2669362	ppb	98
29) 2-BUTANONE (MEK)	4.171	43	131289	51.1949693	ppb	99
30) BROMOCHLOROMETHANE	3.982	130	37327	10.3517229	ppb	99
31) TETRAHYDROFURAN	4.110	42	13516	10.9264248	ppb	97
32) CHLOROFORM	4.006	83	104194	10.4599521	ppb	100
34) 1,1,1-TRICHLOROETHANE	4.140	97	87480	10.0467863	ppb	98
35) CARBON TETRACHLORIDE	4.104	117	93538	10.2644715	ppb	99
36) 1,1-Dichloropropene	4.207	75	77633	10.1004434	ppb	99

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 09.D
Acq On : 26 Apr 2016 2:06 pm
Operator : 605
Sample : STD VMS 10 ppb 16D26894
Misc : water IS/SURR16D21640
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 27 08:46:54 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 08:42:40 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
37) 2,2,4-TRIMETHYLPENTANE	4.244	41	63044	10.6626375	ppb		96
38) HEPTANE	4.280	43	87188	10.1829633	ppb		98
39) BENZENE	4.353	78	215842	10.2643930	ppb		98
40) 1,2-DICHLOROETHANE	4.469	62	72073	10.1442734	ppb		99
42) TRICHLOROETHENE	4.682	130	63350	10.3815785	ppb		99
43) 1,2-DICHLOROPROPANE	4.992	62	38095	10.0216934	ppb		95
44) DIBROMOMETHANE	4.937	93	33534	10.0378011	ppb		99
45) BROMODICHLOROMETHANE	5.016	83	75257	10.1569564	ppb	#	96
47) 2-CHLOROETHYL VINYL ETHER	5.326	63	39423	50.4455269	ppb		99
48) CIS-1,3-DICHLOROPROPENE	5.393	75	89324	9.8121402	ppb		99
49) 4-METHYL-2-PENTANONE (...	5.758	43	226638	50.2220598	ppb		99
51) TOLUENE	5.545	91	244847	10.2414383	ppb		100
52) TRANS-1,3-DICHLOROPROPENE	5.795	75	79871	10.0404362	ppb		98
54) 1,1,2-TRICHLOROETHANE	5.910	97	45587	10.1282313	ppb		98
55) TETRACHLOROETHENE	5.801	164	51118	10.6269598	ppb		99
56) 1,3-Dichloropropane	6.093	76	77576	10.2851958	ppb		99
57) 2-HEXANONE	6.300	58	106843	52.3278060	ppb		96
58) CHLORODIBROMOMETHANE	6.038	129	56757	10.0863935	ppb		99
59) 1,2-DIBROMOETHANE	6.215	107	48256	10.1639253	ppb		99
60) CHLOROBENZENE	6.549	112	164092	10.6084330	ppb		99
61) 1,1,1,2-TETRACHLOROETHANE	6.580	133	55312	10.6703082	ppb	#	98
62) ETHYLBENZENE	6.543	106	91388	10.3394541	ppb		98
63) M&P-XYLENE	6.634	106	222628	21.0883822	ppb		100
64) O-XYLENE	6.945	106	108110	10.3914503	ppb		99
65) STYRENE	6.981	104	173521	10.4104100	ppb		99
66) Bromoform	7.030	173	36693	10.3325546	ppb		95
67) Isopropylbenzene	7.158	105	286749	10.4217836	ppb		99
69) Bromobenzene	7.480	77	109902	10.2702653	ppb		99
70) 1,1,2,2-TETRACHLOROETHANE	7.516	83	59849	10.3875047	ppb		100
71) 1,2,3-TRICHLOROPROPANE	7.638	110	17284	10.6115600	ppb		98
72) TRANS-1,4-DICHLORO-2-B...	7.650	53	16002	9.9133292	ppb		99
73) n-Propylbenzene	7.462	91	317960	10.3981370	ppb		99
74) 4-ETHYLTOLUENE	7.541	105	282703	10.5451921	ppb		100
75) 2-Chlorotoluene	7.602	126	62497	10.6280620	ppb		98
76) 4-Chlorotoluene	7.723	91	193991	10.3629362	ppb		100
77) 1,3,5-Trimethylbenzene	7.596	105	231123	10.4979693	ppb		100
78) tert-Butylbenzene	7.845	119	202518	10.5236166	ppb		99
79) 1,2,4-Trimethylbenzene	7.900	105	230549	10.3744093	ppb		100
80) sec-Butylbenzene	7.985	105	307103	10.4599985	ppb		100
81) 1,3-DICHLOROBENZENE	8.180	146	131005	10.3954196	ppb		98
82) p-Isopropyltoluene	8.082	119	254900	10.4144347	ppb		99
83) DICYCLOPENTADIENE	8.094	66	255981	10.3637141	ppb		98
85) 1,4-DICHLOROBENZENE	8.247	146	123236	10.2417877	ppb	#	1
86) 1,2,3-TRIMETHYLBENZENE	8.240	105	224711	10.3527506	ppb		100
87) 1,2-DICHLOROBENZENE	8.581	146	121064	10.1698200	ppb		99
88) n-Butylbenzene	8.417	91	236197	10.2981932	ppb		99
89) 1,2-Dibromo-3-chloropr...	9.220	157	13037	10.0361172	ppb		97
90) 1,2,4-Trichlorobenzene	9.774	180	77458	10.2512943	ppb		99
91) HEXACHLORO-1,3-BUTADIENE	9.731	225	39205	10.7857885	ppb		98
92) Naphthalene	10.041	128	174426	9.9555675	ppb		99
93) 1,2,3-Trichlorobenzene	10.199	180	66922	10.3091849	ppb		100
94) 1-Methylnaphthalene	10.911	142	76643	9.2910887	ppb		99
95) 2-Methylnaphthalene	11.045	142	64564	9.0738470	ppb		96

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 09.D
Acq On : 26 Apr 2016 2:06 pm
Operator : 605
Sample : STD VMS 10 ppb 16D26894
Misc : water IS/SURR16D21640
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 27 08:46:54 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 08:42:40 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

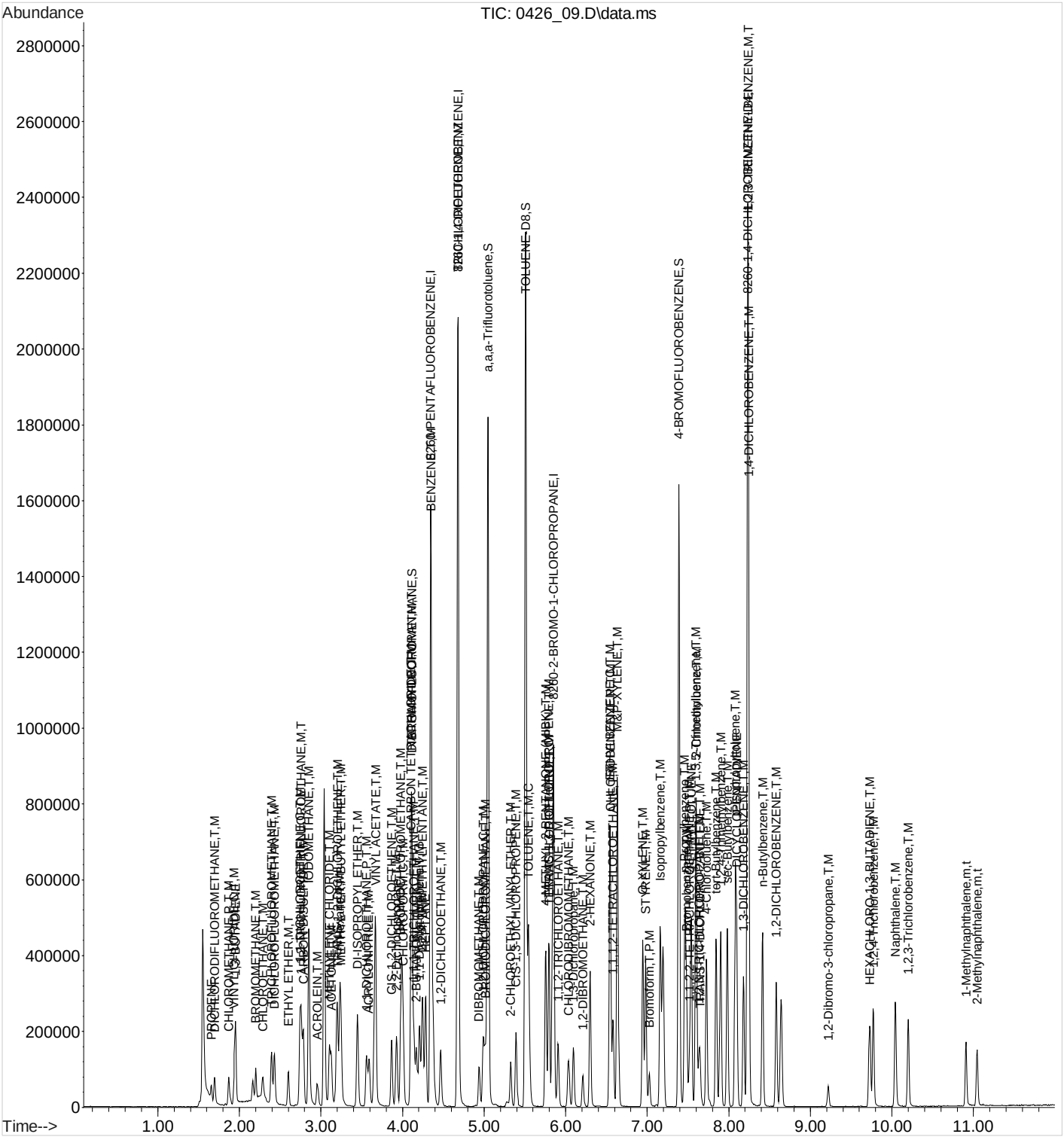
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 09.D
Acq On : 26 Apr 2016 2:06 pm
Operator : 605
Sample : STD VMS 10 ppb 16D26894
Misc : water IS/SURR16D21640
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Apr 27 08:46:54 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 08:42:40 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 10.D
Acq On : 26 Apr 2016 2:29 pm
Operator : 605
Sample : MSTD VMS 25 ppb 16D26894
Misc : water IS/SURR16D21640
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 27 08:47:13 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 08:42:40 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 8260-PENTAFLUOROBENZENE	4.347	168	707409	40.0000000	ppb	0.00
41) 8260-1,4-DIFLUOROBENZENE	4.682	114	1079947	40.0000000	ppb	0.00
53) 8260-2-BROMO-1-CHLOROP...	5.850	79	164576	40.0000000	ppb	0.00
84) 8260-1,4-DICHLOROBENZE...	8.234	152	496684	40.0000000	ppb	0.00
96) AP9-PENTAFLUOROBENZENE	0.000	168	0m	40.0000000	ppb	-4.36
114) AP9-1,4-DIFLUOROBENZENE	0.000	114	0m	40.0000000	ppb	-4.69
122) AP9-2-BROMO-1-CHLOROPR...	0.000	79	0m	40.0000000	ppb	-5.86
128) AP9-1,4-DICHLOROBENZEN...	0.000	152	0m	40.0000000	ppb	-8.25
System Monitoring Compounds						
33) DIBROMOFLUOROMETHANE	4.110	111	347547	45.0000000	ppb	0.00
Spiked Amount 40.000	Range 79 - 121			Recovery = 112.50%		
46) a,a,a-Trifluorotoluene	5.047	146	646488	45.0000000	ppb	0.00
Spiked Amount 40.000	Range 90 - 116			Recovery = 112.50%		
50) TOLUENE-D8	5.509	98	1359695	45.0000000	ppb	0.00
Spiked Amount 40.000	Range 90 - 115			Recovery = 112.50%		
68) 4-BROMOFLUOROBENZENE	7.389	95	511386	45.0000000	ppb	0.00
Spiked Amount 40.000	Range 80 - 120			Recovery = 112.50%		
Target Compounds						Qvalue
3) PROPENE	1.658	41	37479	25.0000000	ppb	100
4) DICHLORODIFLUOROMETHANE	1.695	85	131361	25.0000000	ppb	100
5) CHLOROMETHANE	1.871	50	149979	25.0000000	ppb	100
6) VINYL CHLORIDE	1.938	62	170743	25.0000000	ppb	100
7) 1,3-BUTADIENE	1.950	39	133436	25.0000000	ppb	100
8) BROMOMETHANE	2.200	94	69392	25.0000000	ppb	100
9) CHLOROETHANE	2.285	64	91157	25.0000000	ppb	100
10) TRICHLOROFLUOROMETHANE	2.388	101	235786	25.0000000	ppb	100
11) DICHLOROFLUOROMETHANE	2.425	67	260327	25.0000000	ppb	100
12) ETHYL ETHER	2.595	59	99952	25.0000000	ppb	100
13) ACROLEIN	2.954	56	104405	125.0000000	ppb	100
14) 1,1-DICHLOROETHENE	2.747	61	207459	25.0000000	ppb	100
15) 1,1,2-TRICHLOROTRIFLUO...	2.759	101	138647	25.0000000	ppb	100
16) ACETONE	3.124	43	303884	125.0000000	ppb	100
17) IODOMETHANE	2.850	142	1075983	125.0000000	ppb	100
18) CARBON DISULFIDE	2.784	76	445473	25.0000000	ppb	100
19) METHYLENE CHLORIDE	3.106	84	134113	25.0000000	ppb	100
20) ACRYLONITRILE	3.587	53	181808	125.0000000	ppb	100
21) n-Hexane	3.228	56	127077	25.0000000	ppb	100
22) TRANS-1,2-DICHLOROETHENE	3.203	96	139204	25.0000000	ppb	100
23) METHYL TERT-BUTYL ETHER	3.246	73	365723	25.0000000	ppb	100
24) 1,1-DICHLOROETHANE	3.562	63	249356	25.0000000	ppb	100
25) VINYL ACETATE	3.666	43	1147259	125.0000000	ppb	100
26) DI-ISOPROPYL ETHER	3.447	45	409901	25.0000000	ppb	100
27) 2,2-Dichloropropane	3.927	77	233441	25.0000000	ppb	100
28) CIS-1,2-DICHLOROETHENE	3.866	96	151893	25.0000000	ppb	100
29) 2-BUTANONE (MEK)	4.171	43	324189	125.0000000	ppb	100
30) BROMOCHLOROMETHANE	3.982	130	91167	25.0000000	ppb	100
31) TETRAHYDROFURAN	4.110	42	31275	25.0000000	ppb	100
32) CHLOROFORM	4.006	83	251849	25.0000000	ppb	100
34) 1,1,1-TRICHLOROETHANE	4.140	97	220145	25.0000000	ppb	100
35) CARBON TETRACHLORIDE	4.104	117	230398	25.0000000	ppb	100
36) 1,1-Dichloropropene	4.207	75	194327	25.0000000	ppb	100

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 10.D
Acq On : 26 Apr 2016 2:29 pm
Operator : 605
Sample : MSTD VMS 25 ppb 16D26894
Misc : water IS/SURR16D21640
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 27 08:47:13 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 08:42:40 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
37) 2,2,4-TRIMETHYLPENTANE	4.244	41	149488	25.0000000	ppb		100
38) HEPTANE	4.280	43	216476	25.0000000	ppb		100
39) BENZENE	4.353	78	532112	25.0214895	ppb		100
40) 1,2-DICHLOROETHANE	4.469	62	179630	25.0000000	ppb		100
42) TRICHLOROETHENE	4.676	130	153547	25.0000000	ppb		100
43) 1,2-DICHLOROPROPANE	4.992	62	95650	25.0000000	ppb		100
44) DIBROMOMETHANE	4.937	93	84063	25.0000000	ppb		100
45) BROMODICHLOROMETHANE	5.016	83	186441	25.0000000	ppb		100
47) 2-CHLOROETHYL VINYL ETHER	5.326	63	98323	125.0000000	ppb		100
48) CIS-1,3-DICHLOROPROPENE	5.393	75	229067	25.0000000	ppb		100
49) 4-METHYL-2-PENTANONE (...	5.752	43	567762	125.0000000	ppb		100
51) TOLUENE	5.539	91	601578	25.0000000	ppb		100
52) TRANS-1,3-DICHLOROPROPENE	5.795	75	200168	25.0000000	ppb		100
54) 1,1,2-TRICHLOROETHANE	5.904	97	115612	25.0000000	ppb		100
55) TETRACHLOROETHENE	5.801	164	123555	25.0000000	ppb		100
56) 1,3-Dichloropropane	6.093	76	193736	25.0000000	ppb		100
57) 2-HEXANONE	6.300	58	262228	125.0000000	ppb		100
58) CHLORODIBROMOMETHANE	6.038	129	144537	25.0000000	ppb		100
59) 1,2-DIBROMOETHANE	6.215	107	121951	25.0000000	ppb		100
60) CHLOROBENZENE	6.549	112	397312	25.0000000	ppb		100
61) 1,1,1,2-TETRACHLOROETHANE	6.580	133	133149	25.0000000	ppb	#	100
62) ETHYLBENZENE	6.543	106	227032	25.0000000	ppb		100
63) M&P-XYLENE	6.634	106	542328	50.0000000	ppb		100
64) O-XYLENE	6.945	106	267230	25.0000000	ppb		100
65) STYRENE	6.981	104	428134	25.0000000	ppb		100
66) Bromoform	7.030	173	91216	25.0000000	ppb		100
67) Isopropylbenzene	7.158	105	706733	25.0000000	ppb		100
69) Bromobenzene	7.480	77	274865	25.0000000	ppb		100
70) 1,1,2,2-TETRACHLOROETHANE	7.517	83	147993	25.0000000	ppb		100
71) 1,2,3-TRICHLOROPROPANE	7.638	110	41837	25.0000000	ppb		100
72) TRANS-1,4-DICHLORO-2-B...	7.650	53	41462	25.0000000	ppb		100
73) n-Propylbenzene	7.462	91	785439	25.0000000	ppb		100
74) 4-ETHYLTOLUENE	7.541	105	688607	25.0000000	ppb		100
75) 2-Chlorotoluene	7.602	126	151043	25.0000000	ppb		100
76) 4-Chlorotoluene	7.723	91	480833	25.0000000	ppb		100
77) 1,3,5-Trimethylbenzene	7.596	105	565501	25.0000000	ppb		100
78) tert-Butylbenzene	7.845	119	494304	25.0000000	ppb		100
79) 1,2,4-Trimethylbenzene	7.900	105	570815	25.0000000	ppb		100
80) sec-Butylbenzene	7.979	105	754133	25.0000000	ppb		100
81) 1,3-DICHLOROBENZENE	8.180	146	323699	25.0000000	ppb		100
82) p-Isopropyltoluene	8.082	119	628680	25.0000000	ppb		100
83) DICYCLOPENTADIENE	8.095	66	634436	25.0000000	ppb		100
85) 1,4-DICHLOROBENZENE	8.247	146	308540	25.0000000	ppb		100
86) 1,2,3-TRIMETHYLBENZENE	8.241	105	556568	25.0000000	ppb		100
87) 1,2-DICHLOROBENZENE	8.581	146	305247	25.0000000	ppb		100
88) n-Butylbenzene	8.411	91	588116	25.0000000	ppb		100
89) 1,2-Dibromo-3-chloropr...	9.220	157	33309	25.0000000	ppb		100
90) 1,2,4-Trichlorobenzene	9.774	180	193748	25.0000000	ppb		100
91) HEXACHLORO-1,3-BUTADIENE	9.725	225	93205	25.0000000	ppb		100
92) Naphthalene	10.041	128	449257	25.0000000	ppb		100
93) 1,2,3-Trichlorobenzene	10.199	180	166454	25.0000000	ppb		100
94) 1-Methylnaphthalene	10.911	142	211522	25.0000000	ppb		100
95) 2-Methylnaphthalene	11.045	142	182452	25.0000000	ppb		100

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 10.D
Acq On : 26 Apr 2016 2:29 pm
Operator : 605
Sample : MSTD VMS 25 ppb 16D26894
Misc : water IS/SURR16D21640
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 27 08:47:13 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 08:42:40 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

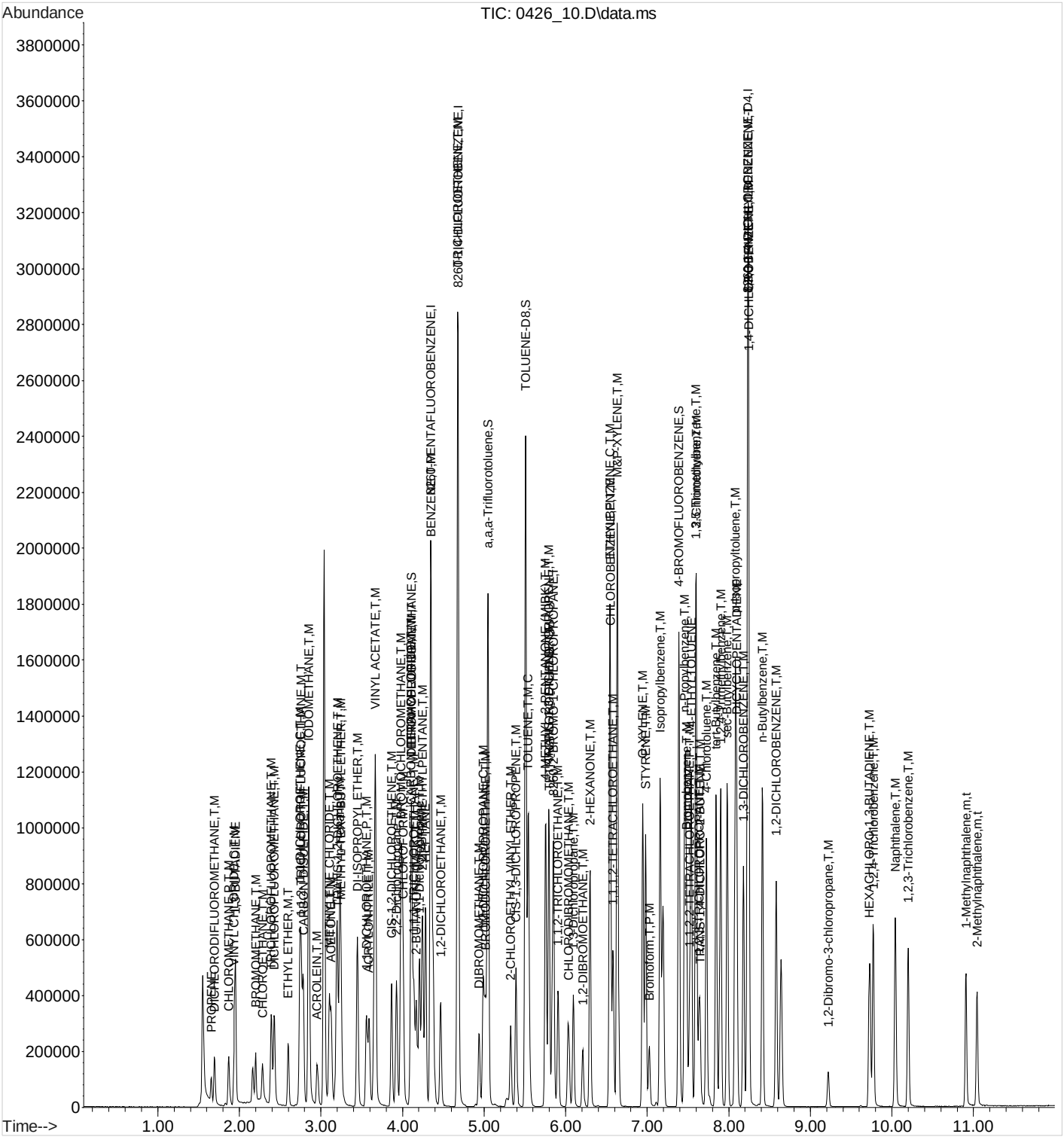
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 10.D
Acq On : 26 Apr 2016 2:29 pm
Operator : 605
Sample : MSTD VMS 25 ppb 16D26894
Misc : water IS/SURR16D21640
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 27 08:47:13 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 08:42:40 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 11.D
Acq On : 26 Apr 2016 2:51 pm
Operator : 605
Sample : STD VMS 40 ppb 16D26894
Misc : water IS/SURR16D21640
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 27 08:47:33 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 08:42:40 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 8260-PENTAFLUOROBENZENE	4.347	168	684139	40.0000000	ppb	0.00
41) 8260-1,4-DIFLUOROBENZENE	4.676	114	1042252	40.0000000	ppb	0.00
53) 8260-2-BROMO-1-CHLOROP...	5.850	79	158949	40.0000000	ppb	0.00
84) 8260-1,4-DICHLOROBENZE...	8.235	152	477963	40.0000000	ppb	0.00
96) AP9-PENTAFLUOROBENZENE	0.000	168	0m	40.0000000	ppb	-4.36
114) AP9-1,4-DIFLUOROBENZENE	0.000	114	0m	40.0000000	ppb	-4.69
122) AP9-2-BROMO-1-CHLOROPR...	0.000	79	0m	40.0000000	ppb	-5.86
128) AP9-1,4-DICHLOROBENZEN...	0.000	152	0m	40.0000000	ppb	-8.25
System Monitoring Compounds						
33) DIBROMOFLUOROMETHANE	4.110	111	339040	45.3916679	ppb	0.00
Spiked Amount 40.000	Range 79 - 121		Recovery = 113.48%			
46) a,a,a-Trifluorotoluene	5.047	146	642193	46.3177355	ppb	0.00
Spiked Amount 40.000	Range 90 - 116		Recovery = 115.79%			
50) TOLUENE-D8	5.509	98	1334889	45.7768466	ppb	0.00
Spiked Amount 40.000	Range 90 - 115		Recovery = 114.44%			
68) 4-BROMOFLUOROBENZENE	7.389	95	509662	46.4359822	ppb	0.00
Spiked Amount 40.000	Range 80 - 120		Recovery = 116.09%			
Target Compounds						Qvalue
3) PROPENE	1.658	41	58312	40.2194552	ppb	97
4) DICHLORODIFLUOROMETHANE	1.695	85	212058	41.7305834	ppb	99
5) CHLOROMETHANE	1.871	50	238861	41.1700158	ppb	100
6) VINYL CHLORIDE	1.938	62	272025	41.1843439	ppb	99
7) 1,3-BUTADIENE	1.950	39	210540	40.7875712	ppb	100
8) BROMOMETHANE	2.200	94	102862	38.3187912	ppb	95
9) CHLOROETHANE	2.285	64	136580	38.7314116	ppb	100
10) TRICHLOROFLUOROMETHANE	2.388	101	371385	40.7167012	ppb	98
11) DICHLOROFLUOROMETHANE	2.425	67	415425	41.2514915	ppb	100
12) ETHYL ETHER	2.595	59	154320	39.9114005	ppb	99
13) ACROLEIN	2.954	56	159041	196.8901752	ppb	98
14) 1,1-DICHLOROETHENE	2.741	61	328788	40.9684864	ppb	99
15) 1,1,2-TRICHLOROTRIFLUO...	2.759	101	223051	41.5872247	ppb	99
16) ACETONE	3.124	43	447708	190.4246937	ppb	99
17) IODOMETHANE	2.851	142	1687052	202.6559245	ppb	100
18) CARBON DISULFIDE	2.784	76	710071	41.2046880	ppb	100
19) METHYLENE CHLORIDE	3.106	84	215847	41.6046028	ppb	98
20) ACRYLONITRILE	3.587	53	279770	198.8952442	ppb	99
21) n-Hexane	3.228	56	200409	40.7677280	ppb	97
22) TRANS-1,2-DICHLOROETHENE	3.197	96	222760	41.3667818	ppb	100
23) METHYL TERT-BUTYL ETHER	3.246	73	560031	39.5845794	ppb	97
24) 1,1-DICHLOROETHANE	3.556	63	393755	40.8199530	ppb	100
25) VINYL ACETATE	3.666	43	1692766	190.7092242	ppb	100
26) DI-ISOPROPYL ETHER	3.447	45	644223	40.6278171	ppb	100
27) 2,2-Dichloropropane	3.927	77	370787	41.0594951	ppb	99
28) CIS-1,2-DICHLOROETHENE	3.866	96	241010	41.0169671	ppb	99
29) 2-BUTANONE (MEK)	4.171	43	487390	194.3186949	ppb	100
30) BROMOCHLOROMETHANE	3.982	130	143421	40.6669239	ppb	99
31) TETRAHYDROFURAN	4.110	42	46340	38.3023087	ppb	99
32) CHLOROFORM	4.006	83	391745	40.2095740	ppb	99
34) 1,1,1-TRICHLOROETHANE	4.140	97	352724	41.4183149	ppb	99
35) CARBON TETRACHLORIDE	4.104	117	367813	41.2681130	ppb	99
36) 1,1-Dichloropropene	4.207	75	306796	40.8115217	ppb	100

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 11.D
Acq On : 26 Apr 2016 2:51 pm
Operator : 605
Sample : STD VMS 40 ppb 16D26894
Misc : water IS/SURR16D21640
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 27 08:47:33 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 08:42:40 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
37) 2,2,4-TRIMETHYLPENTANE	4.244	41	239074	41.3420737	ppb		100
38) HEPTANE	4.280	43	339110	40.4945972	ppb	#	72
39) BENZENE	4.347	78	839212	40.8044965	ppb		99
40) 1,2-DICHLOROETHANE	4.463	62	275317	39.6205409	ppb		99
42) TRICHLOROETHENE	4.676	130	243950	41.1556249	ppb		99
43) 1,2-DICHLOROPROPANE	4.992	62	151135	40.9307582	ppb		97
44) DIBROMOMETHANE	4.937	93	132706	40.8936041	ppb		98
45) BROMODICHLOROMETHANE	5.016	83	298282	41.4433961	ppb		99
47) 2-CHLOROETHYL VINYL ETHER	5.327	63	151590	199.6894634	ppb		98
48) CIS-1,3-DICHLOROPROPENE	5.393	75	355763	40.2316611	ppb		100
49) 4-METHYL-2-PENTANONE (...	5.752	43	856640	195.4212314	ppb		99
51) TOLUENE	5.539	91	951002	40.9504990	ppb		100
52) TRANS-1,3-DICHLOROPROPENE	5.795	75	316049	40.9005817	ppb		99
54) 1,1,2-TRICHLOROETHANE	5.904	97	179349	40.1554740	ppb		99
55) TETRACHLOROETHENE	5.795	164	197662	41.4106046	ppb		99
56) 1,3-Dichloropropane	6.093	76	303452	40.5441674	ppb		100
57) 2-HEXANONE	6.300	58	411193	202.9482757	ppb		99
58) CHLORODIBROMOMETHANE	6.032	129	223764	40.0737415	ppb		98
59) 1,2-DIBROMOETHANE	6.215	107	191742	40.6987057	ppb		99
60) CHLOROBENZENE	6.549	112	623991	40.6532579	ppb		100
61) 1,1,1,2-TETRACHLOROETHANE	6.580	133	210264	40.8766903	ppb	#	99
62) ETHYLBENZENE	6.543	106	358231	40.8436741	ppb		99
63) M&P-XYLENE	6.635	106	852042	81.3350397	ppb		100
64) O-XYLENE	6.945	106	423852	41.0561042	ppb		100
65) STYRENE	6.981	104	686849	41.5269718	ppb		99
66) Bromoform	7.030	173	145855	41.3903415	ppb		98
67) Isopropylbenzene	7.158	105	1124795	41.1971068	ppb		100
69) Bromobenzene	7.480	77	434652	40.9327527	ppb		100
70) 1,1,2,2-TETRACHLOROETHANE	7.517	83	228113	39.8985923	ppb		99
71) 1,2,3-TRICHLOROPROPANE	7.638	110	64498	39.9056532	ppb		100
72) TRANS-1,4-DICHLORO-2-B...	7.650	53	63787	39.8226944	ppb		97
73) n-Propylbenzene	7.462	91	1253295	41.3037570	ppb		100
74) 4-ETHYLTOLUENE	7.541	105	1096305	41.2105749	ppb		99
75) 2-Chlorotoluene	7.602	126	237460	40.6947675	ppb		99
76) 4-Chlorotoluene	7.723	91	768983	41.3972207	ppb		99
77) 1,3,5-Trimethylbenzene	7.596	105	892355	40.8463257	ppb		100
78) tert-Butylbenzene	7.845	119	786474	41.1849892	ppb		100
79) 1,2,4-Trimethylbenzene	7.900	105	898014	40.7226884	ppb		99
80) sec-Butylbenzene	7.979	105	1182580	40.5911444	ppb		100
81) 1,3-DICHLOROBENZENE	8.180	146	516483	41.3012680	ppb		99
82) p-Isopropyltoluene	8.082	119	987277	40.6497694	ppb		100
83) DICYCLOPENTADIENE	8.095	66	994708	40.5841546	ppb		100
85) 1,4-DICHLOROBENZENE	8.247	146	482212	40.6024686	ppb	#	57
86) 1,2,3-TRIMETHYLBENZENE	8.241	105	875564	40.8691461	ppb		99
87) 1,2-DICHLOROBENZENE	8.581	146	475303	40.4524706	ppb		99
88) n-Butylbenzene	8.411	91	923546	40.7963620	ppb		99
89) 1,2-Dibromo-3-chloropr...	9.220	157	53851	42.0008499	ppb		99
90) 1,2,4-Trichlorobenzene	9.768	180	304696	40.8559605	ppb		99
91) HEXACHLORO-1,3-BUTADIENE	9.725	225	151279	42.1662845	ppb		98
92) Naphthalene	10.041	128	719555	41.6097439	ppb		99
93) 1,2,3-Trichlorobenzene	10.200	180	275023	42.9240487	ppb		99
94) 1-Methylnaphthalene	10.911	142	362745	44.5524705	ppb		99
95) 2-Methylnaphthalene	11.045	142	300669	42.8120403	ppb		99

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 11.D
Acq On : 26 Apr 2016 2:51 pm
Operator : 605
Sample : STD VMS 40 ppb 16D26894
Misc : water IS/SURR16D21640
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 27 08:47:33 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 08:42:40 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

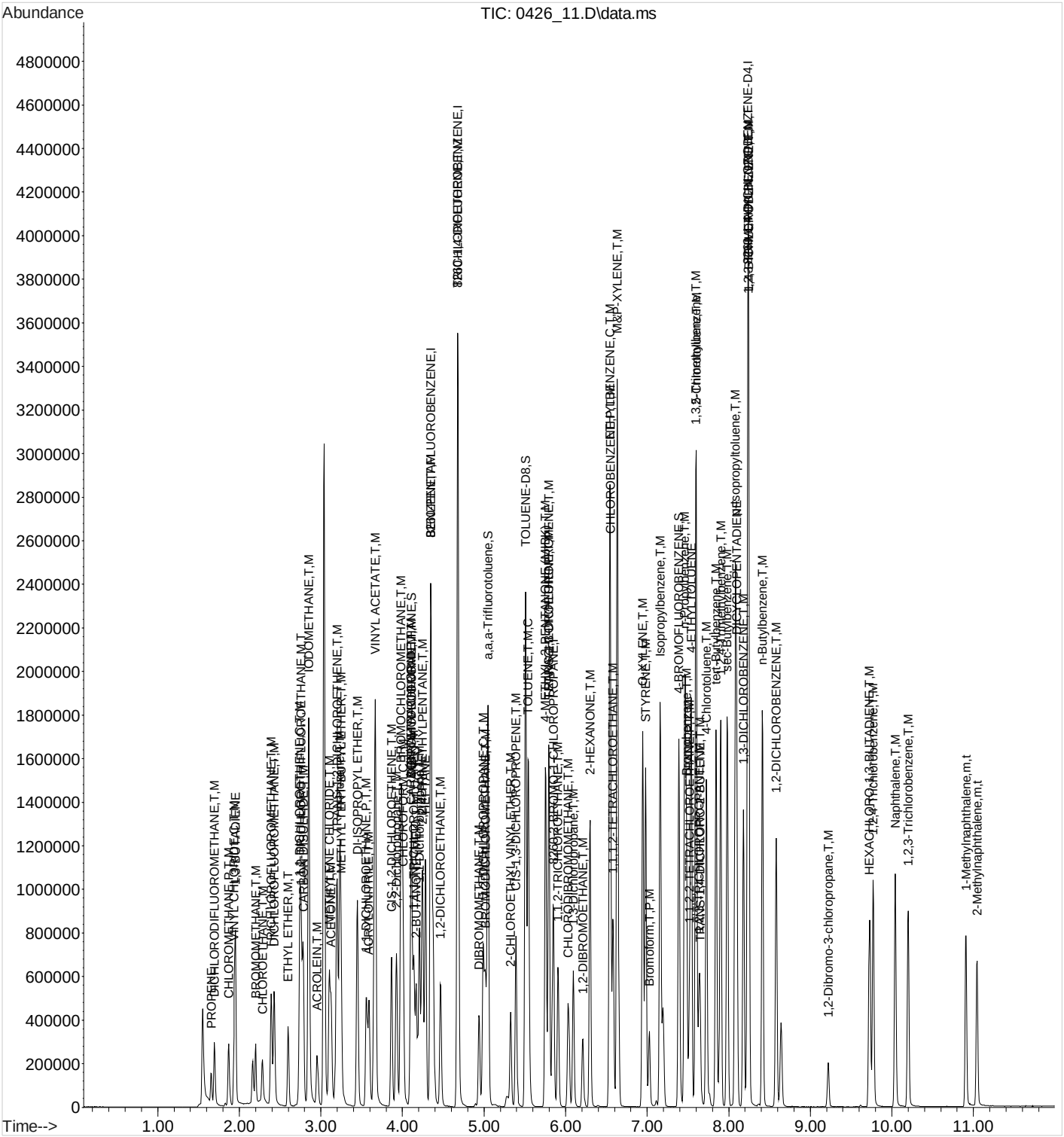
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 11.D
Acq On : 26 Apr 2016 2:51 pm
Operator : 605
Sample : STD VMS 40 ppb 16D26894
Misc : water IS/SURR16D21640
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 27 08:47:33 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 08:42:40 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 12.D
Acq On : 26 Apr 2016 3:14 pm
Operator : 605
Sample : STD VMS 75 ppb 16D26894
Misc : water IS/SURR16D21640
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Apr 27 08:47:51 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 08:42:40 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 8260-PENTAFLUOROBENZENE	4.347	168	663836	40.0000000	ppb	0.00
41) 8260-1,4-DIFLUOROBENZENE	4.682	114	1014264	40.0000000	ppb	0.00
53) 8260-2-BROMO-1-CHLOROP...	5.850	79	158179	40.0000000	ppb	0.00
84) 8260-1,4-DICHLOROBENZE...	8.234	152	459611	40.0000000	ppb	0.00
96) AP9-PENTAFLUOROBENZENE	0.000	168	0m	40.0000000	ppb	-4.36
114) AP9-1,4-DIFLUOROBENZENE	0.000	114	0m	40.0000000	ppb	-4.69
122) AP9-2-BROMO-1-CHLOROPR...	0.000	79	0m	40.0000000	ppb	-5.86
128) AP9-1,4-DICHLOROBENZEN...	0.000	152	0m	40.0000000	ppb	-8.25
System Monitoring Compounds						
33) DIBROMOFLUOROMETHANE	4.116	111	331090	45.6830208	ppb	0.00
Spiked Amount 40.000	Range 79 - 121		Recovery = 114.21%			
46) a,a,a-Trifluorotoluene	5.047	146	633217	46.9305931	ppb	0.00
Spiked Amount 40.000	Range 90 - 116		Recovery = 117.33%#			
50) TOLUENE-D8	5.509	98	1313790	46.2965252	ppb	0.00
Spiked Amount 40.000	Range 90 - 115		Recovery = 115.74%#			
68) 4-BROMOFLUOROBENZENE	7.389	95	510768	46.7632877	ppb	0.00
Spiked Amount 40.000	Range 80 - 120		Recovery = 116.91%			
Target Compounds						Qvalue
3) PROPENE	1.658	41	108414	77.0632219	ppb	97
4) DICHLORODIFLUOROMETHANE	1.695	85	397426	80.6008494	ppb	98
5) CHLOROMETHANE	1.871	50	442606	78.6206504	ppb	100
6) VINYL CHLORIDE	1.938	62	496431	77.4579100	ppb	100
7) 1,3-BUTADIENE	1.950	39	378620	75.5927814	ppb	99
8) BROMOMETHANE	2.199	94	192589	73.9387088	ppb	95
9) CHLOROETHANE	2.279	64	215186	62.8888680	ppb	99
10) TRICHLOROFLUOROMETHANE	2.388	101	681473	76.9981743	ppb	99
11) DICHLOROFLUOROMETHANE	2.425	67	765078	78.2954076	ppb	99
12) ETHYL ETHER	2.595	59	280853	74.8578531	ppb	98
13) ACROLEIN	2.954	56	298344	380.6412086	ppb	98
14) 1,1-DICHLOROETHENE	2.741	61	603998	77.5627162	ppb	99
15) 1,1,2-TRICHLOROTRIFLUO...	2.759	101	403707	77.5721077	ppb	99
16) ACETONE	3.124	43	818082	358.5987703	ppb	99
17) IODOMETHANE	2.850	142	2997547	371.0909685	ppb	99
18) CARBON DISULFIDE	2.784	76	1287674	77.0077313	ppb	100
19) METHYLENE CHLORIDE	3.106	84	388313	77.1366620	ppb	98
20) ACRYLONITRILE	3.587	53	525335	384.8957717	ppb	98
21) n-Hexane	3.228	56	366292	76.7909904	ppb	97
22) TRANS-1,2-DICHLOROETHENE	3.197	96	401707	76.8789554	ppb	99
23) METHYL TERT-BUTYL ETHER	3.246	73	1016059	74.0144374	ppb	96
24) 1,1-DICHLOROETHANE	3.562	63	717450	76.6516673	ppb	100
25) VINYL ACETATE	3.666	43	2925370	339.6558690	ppb	100
26) DI-ISOPROPYL ETHER	3.447	45	1161343	75.4799003	ppb	99
27) 2,2-Dichloropropane	3.927	77	679249	77.5178398	ppb	100
28) CIS-1,2-DICHLOROETHENE	3.866	96	440362	77.2363718	ppb	99
29) 2-BUTANONE (MEK)	4.171	43	889168	365.3468296	ppb	100
30) BROMOCHLOROMETHANE	3.982	130	257052	75.1161140	ppb	98
31) TETRAHYDROFURAN	4.110	42	86398	73.5963303	ppb	98
32) CHLOROFORM	4.006	83	709040	75.0032866	ppb	100
34) 1,1,1-TRICHLOROETHANE	4.140	97	640781	77.5444265	ppb	99
35) CARBON TETRACHLORIDE	4.104	117	673974	77.9317138	ppb	100
36) 1,1-Dichloropropene	4.207	75	558582	76.5779224	ppb	99

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 12.D
Acq On : 26 Apr 2016 3:14 pm
Operator : 605
Sample : STD VMS 75 ppb 16D26894
Misc : water IS/SURR16D21640
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Apr 27 08:47:51 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 08:42:40 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
37) 2,2,4-TRIMETHYLPENTANE	4.244	41	421079	75.0424562	ppb		96
38) HEPTANE	4.280	43	618626	76.1321690	ppb	#	72
39) BENZENE	4.347	78	1542505	77.2941217	ppb		98
40) 1,2-DICHLOROETHANE	4.463	62	500427	74.2184111	ppb		100
42) TRICHLOROETHENE	4.675	130	442963	76.7922789	ppb		99
43) 1,2-DICHLOROPROPANE	4.992	62	272605	75.8647940	ppb		97
44) DIBROMOMETHANE	4.937	93	239689	75.8987562	ppb		99
45) BROMODICHLOROMETHANE	5.016	83	529669	75.6231167	ppb		99
47) 2-CHLOROETHYL VINYL ETHER	5.326	63	273953	370.8364235	ppb		99
48) CIS-1,3-DICHLOROPROPENE	5.393	75	645905	75.0580986	ppb		99
49) 4-METHYL-2-PENTANONE (...	5.752	43	1580684	370.5443363	ppb		98
51) TOLUENE	5.545	91	1727213	76.4267501	ppb		100
52) TRANS-1,3-DICHLOROPROPENE	5.795	75	571448	75.9929856	ppb		98
54) 1,1,2-TRICHLOROETHANE	5.904	97	327336	73.6458947	ppb		99
55) TETRACHLOROETHENE	5.801	164	359169	75.6129542	ppb		98
56) 1,3-Dichloropropane	6.093	76	547933	73.5656055	ppb		99
57) 2-HEXANONE	6.300	58	766703	380.2557501	ppb		97
58) CHLORODIBROMOMETHANE	6.038	129	414500	74.5938777	ppb		99
59) 1,2-DIBROMOETHANE	6.215	107	348190	74.2657573	ppb		99
60) CHLOROBENZENE	6.549	112	1118249	73.2090080	ppb		100
61) 1,1,1,2-TETRACHLOROETHANE	6.586	133	379659	74.1674720	ppb	#	100
62) ETHYLBENZENE	6.543	106	653780	74.9035224	ppb		98
63) M&P-XYLENE	6.634	106	1533488	147.0977520	ppb		99
64) O-XYLENE	6.945	106	770027	74.9511719	ppb		99
65) STYRENE	6.981	104	1236989	75.1525645	ppb		99
66) Bromoform	7.030	173	267432	76.2605678	ppb		99
67) Isopropylbenzene	7.158	105	2007705	73.8928157	ppb		99
69) Bromobenzene	7.480	77	779436	73.7596257	ppb		99
70) 1,1,2,2-TETRACHLOROETHANE	7.517	83	413970	72.7587754	ppb		99
71) 1,2,3-TRICHLOROPROPANE	7.638	110	117691	73.1712381	ppb		99
72) TRANS-1,4-DICHLORO-2-B...	7.650	53	120552	75.6278681	ppb		98
73) n-Propylbenzene	7.462	91	2257377	74.7565619	ppb		100
74) 4-ETHYLTOLUENE	7.541	105	1961028	74.0747249	ppb		98
75) 2-Chlorotoluene	7.602	126	427267	73.5794325	ppb		99
76) 4-Chlorotoluene	7.723	91	1362893	73.7267654	ppb		100
77) 1,3,5-Trimethylbenzene	7.596	105	1582918	72.8086077	ppb		99
78) tert-Butylbenzene	7.845	119	1399841	73.6617904	ppb		100
79) 1,2,4-Trimethylbenzene	7.900	105	1590281	72.4663152	ppb		99
80) sec-Butylbenzene	7.985	105	2112747	72.8714203	ppb		99
81) 1,3-DICHLOROBENZENE	8.180	146	915806	73.5901711	ppb		99
82) p-Isopropyltoluene	8.082	119	1742858	72.1090951	ppb		100
83) DICYCLOPENTADIENE	8.094	66	1767760	72.4758254	ppb		100
85) 1,4-DICHLOROBENZENE	8.247	146	851795	74.5853232	ppb	#	26
86) 1,2,3-TRIMETHYLBENZENE	8.240	105	1544506	74.9723513	ppb		99
87) 1,2-DICHLOROBENZENE	8.581	146	845205	74.8066864	ppb		99
88) n-Butylbenzene	8.417	91	1623913	74.5984027	ppb		99
89) 1,2-Dibromo-3-chloropr...	9.220	157	102906	83.4658590	ppb		100
90) 1,2,4-Trichlorobenzene	9.767	180	525764	73.3134036	ppb		99
91) HEXACHLORO-1,3-BUTADIENE	9.725	225	272786	79.0701625	ppb		99
92) Naphthalene	10.041	128	1314850	79.0698878	ppb		100
93) 1,2,3-Trichlorobenzene	10.199	180	485392	78.7822070	ppb		99
94) 1-Methylnaphthalene	10.911	142	659375	84.2183439	ppb		99
95) 2-Methylnaphthalene	11.045	142	557580	82.5635434	ppb		98

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 12.D
Acq On : 26 Apr 2016 3:14 pm
Operator : 605
Sample : STD VMS 75 ppb 16D26894
Misc : water IS/SURR16D21640
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Apr 27 08:47:51 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 08:42:40 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

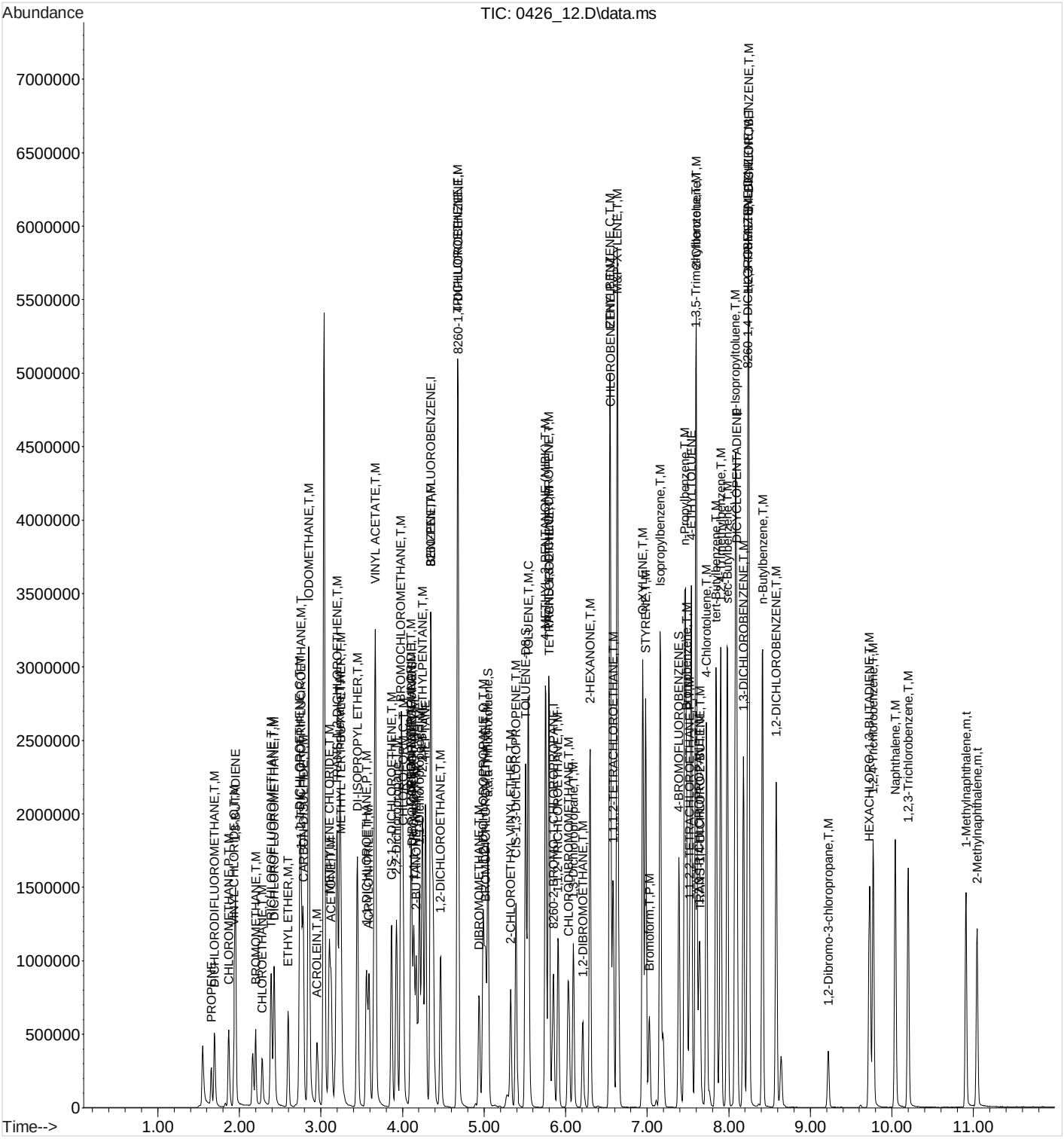
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 12.D
Acq On : 26 Apr 2016 3:14 pm
Operator : 605
Sample : STD VMS 75 ppb 16D26894
Misc : water IS/SURR16D21640
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Apr 27 08:47:51 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 08:42:40 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 13.D
Acq On : 26 Apr 2016 3:36 pm
Operator : 605
Sample : STD VMS 100 ppb 16D26894
Misc : water IS/SURR16D21640
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 27 08:48:12 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 08:42:40 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 8260-PENTAFLUOROBENZENE	4.347	168	658841	40.0000000	ppb	0.00
41) 8260-1,4-DIFLUOROBENZENE	4.675	114	1016684	40.0000000	ppb	0.00
53) 8260-2-BROMO-1-CHLOROP...	5.850	79	156857	40.0000000	ppb	0.00
84) 8260-1,4-DICHLOROBENZE...	8.234	152	453573	40.0000000	ppb	# 0.00
96) AP9-PENTAFLUOROBENZENE	0.000	168	0m	40.0000000	ppb	-4.36
114) AP9-1,4-DIFLUOROBENZENE	0.000	114	0m	40.0000000	ppb	-4.69
122) AP9-2-BROMO-1-CHLOROPR...	0.000	79	0m	40.0000000	ppb	-5.86
128) AP9-1,4-DICHLOROBENZEN...	0.000	152	0m	40.0000000	ppb	-8.25
System Monitoring Compounds						
33) DIBROMOFLUOROMETHANE	4.116	111	331692	46.1130587	ppb	0.00
Spiked Amount 40.000	Range 79 - 121		Recovery = 115.28%			
46) a,a,a-Trifluorotoluene	5.047	146	641442	47.4270260	ppb	0.00
Spiked Amount 40.000	Range 90 - 116		Recovery = 118.57%#			
50) TOLUENE-D8	5.509	98	1339612	47.0940994	ppb	0.00
Spiked Amount 40.000	Range 90 - 115		Recovery = 117.74%#			
68) 4-BROMOFLUOROBENZENE	7.389	95	527139	48.6688883	ppb	0.00
Spiked Amount 40.000	Range 80 - 120		Recovery = 121.67%#			
Target Compounds						Qvalue
3) PROPENE	1.658	41	146636	105.0225557	ppb	97
4) DICHLORODIFLUOROMETHANE	1.694	85	534105	109.1415631	ppb	99
5) CHLOROMETHANE	1.871	50	598115	107.0493938	ppb	100
6) VINYL CHLORIDE	1.938	62	645244	101.4404200	ppb	99
7) 1,3-BUTADIENE	1.950	39	488447	98.2594669	ppb	98
8) BROMOMETHANE	2.199	94	259658	100.4436011	ppb	96
9) CHLOROETHANE	2.279	64	248282	73.1114139	ppb	98
10) TRICHLOROFLUOROMETHANE	2.388	101	888049	101.0994718	ppb	100
11) DICHLOROFLUOROMETHANE	2.425	67	1000771	103.1918671	ppb	100
12) ETHYL ETHER	2.595	59	379019	101.7886758	ppb	99
13) ACROLEIN	2.954	56	395108	507.9190498	ppb	97
14) 1,1-DICHLOROETHENE	2.741	61	799845	103.4912246	ppb	99
15) 1,1,2-TRICHLOROTRIFLUO...	2.759	101	533914	103.3691164	ppb	99
16) ACETONE	3.124	43	1042030	460.2272867	ppb	99
17) IODOMETHANE	2.850	142	3864927	482.0985906	ppb	99
18) CARBON DISULFIDE	2.777	76	1701324	102.5169350	ppb	99
19) METHYLENE CHLORIDE	3.106	84	511515	102.3805523	ppb	98
20) ACRYLONITRILE	3.587	53	682865	504.1059697	ppb	98
21) n-Hexane	3.228	56	480010	101.3942444	ppb	97
22) TRANS-1,2-DICHLOROETHENE	3.197	96	529778	102.1579517	ppb	99
23) METHYL TERT-BUTYL ETHER	3.246	73	1337585	98.1745881	ppb	96
24) 1,1-DICHLOROETHANE	3.562	63	948468	102.1016668	ppb	100
25) VINYL ACETATE	3.666	43	3976109	465.1540261	ppb	100
26) DI-ISOPROPYL ETHER	3.447	45	1539547	100.8193622	ppb	100
27) 2,2-Dichloropropane	3.927	77	892591	102.6373287	ppb	99
28) CIS-1,2-DICHLOROETHENE	3.866	96	579667	102.4402876	ppb	100
29) 2-BUTANONE (MEK)	4.171	43	1143661	473.4771369	ppb	100
30) BROMOCHLOROMETHANE	3.982	130	335787	98.8680996	ppb	99
31) TETRAHYDROFURAN	4.110	42	110607	94.9325762	ppb	98
32) CHLOROFORM	4.006	83	929607	99.0807137	ppb	99
34) 1,1,1-TRICHLOROETHANE	4.140	97	846740	103.2455214	ppb	99
35) CARBON TETRACHLORIDE	4.104	117	883953	102.9865337	ppb	99
36) 1,1-Dichloropropene	4.207	75	727334	100.4686844	ppb	99

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 13.D
Acq On : 26 Apr 2016 3:36 pm
Operator : 605
Sample : STD VMS 100 ppb 16D26894
Misc : water IS/SURR16D21640
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 27 08:48:12 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 08:42:40 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
37) 2,2,4-TRIMETHYLPENTANE	4.244	41	555797	99.8021365	ppb		97
38) HEPTANE	4.280	43	817924	101.4222332	ppb	#	72
39) BENZENE	4.347	78	2034674	102.7294362	ppb		97
40) 1,2-DICHLOROETHANE	4.463	62	663390	99.1334048	ppb		99
42) TRICHLOROETHENE	4.675	130	575932	99.6061918	ppb		100
43) 1,2-DICHLOROPROPANE	4.992	62	355558	98.7147255	ppb		98
44) DIBROMOMETHANE	4.937	93	315425	99.6432052	ppb		98
45) BROMODICHLOROMETHANE	5.016	83	697703	99.3769420	ppb		99
47) 2-CHLOROETHYL VINYL ETHER	5.326	63	341207	460.7753924	ppb		99
48) CIS-1,3-DICHLOROPROPENE	5.393	75	854559	99.0685910	ppb		99
49) 4-METHYL-2-PENTANONE (...	5.752	43	2057993	481.2868963	ppb		98
51) TOLUENE	5.545	91	2265940	100.0260048	ppb		100
52) TRANS-1,3-DICHLOROPROPENE	5.795	75	754960	100.1580255	ppb		98
54) 1,1,2-TRICHLOROETHANE	5.904	97	431032	97.7933236	ppb		99
55) TETRACHLOROETHENE	5.801	164	468042	99.3635520	ppb		99
56) 1,3-Dichloropropane	6.093	76	718692	97.3049847	ppb		100
57) 2-HEXANONE	6.300	58	982307	491.2932387	ppb		97
58) CHLORODIBROMOMETHANE	6.032	129	549759	99.7690687	ppb		99
59) 1,2-DIBROMOETHANE	6.215	107	463630	99.7214927	ppb		99
60) CHLOROBENZENE	6.549	112	1459315	96.3429568	ppb		99
61) 1,1,1,2-TETRACHLOROETHANE	6.580	133	503492	99.1875749	ppb	#	99
62) ETHYLBENZENE	6.543	106	851106	98.3329762	ppb		97
63) M&P-XYLENE	6.634	106	2010023	194.4337274	ppb		98
64) O-XYLENE	6.945	106	1021557	100.2720743	ppb		97
65) STYRENE	6.981	104	1634717	100.1533470	ppb		100
66) Bromoform	7.030	173	355000	102.0845306	ppb		99
67) Isopropylbenzene	7.158	105	2633052	97.7252235	ppb		99
69) Bromobenzene	7.480	77	1022605	97.5867998	ppb		99
70) 1,1,2,2-TETRACHLOROETHANE	7.516	83	540707	95.8348406	ppb		98
71) 1,2,3-TRICHLOROPROPANE	7.638	110	154653	96.9617445	ppb		98
72) TRANS-1,4-DICHLORO-2-B...	7.650	53	156998	99.3222340	ppb		98
73) n-Propylbenzene	7.462	91	2961841	98.9126610	ppb		99
74) 4-ETHYLTOLUENE	7.541	105	2560255	97.5246491	ppb		99
75) 2-Chlorotoluene	7.602	126	557481	96.8126425	ppb		99
76) 4-Chlorotoluene	7.723	91	1784179	97.3300091	ppb		100
77) 1,3,5-Trimethylbenzene	7.596	105	2065831	95.8217327	ppb		99
78) tert-Butylbenzene	7.845	119	1829251	97.0692743	ppb		100
79) 1,2,4-Trimethylbenzene	7.900	105	2081329	95.6418494	ppb		98
80) sec-Butylbenzene	7.985	105	2754968	95.8233214	ppb		100
81) 1,3-DICHLOROBENZENE	8.180	146	1184630	95.9939750	ppb		100
82) p-Isopropyltoluene	8.082	119	2268364	94.6423921	ppb		100
83) DICYCLOPENTADIENE	8.094	66	2310158	95.5116774	ppb		100
85) 1,4-DICHLOROBENZENE	8.247	146	1108031	98.3135595	ppb	#	17
86) 1,2,3-TRIMETHYLBENZENE	8.240	105	2011022	98.9171451	ppb		99
87) 1,2-DICHLOROBENZENE	8.581	146	1101503	98.7886986	ppb		99
88) n-Butylbenzene	8.417	91	2122995	98.8232110	ppb		98
89) 1,2-Dibromo-3-chloropr...	9.220	157	132462	108.8686150	ppb		99
90) 1,2,4-Trichlorobenzene	9.767	180	684125	96.6654367	ppb		99
91) HEXACHLORO-1,3-BUTADIENE	9.725	225	360815	105.9786438	ppb		99
92) Naphthalene	10.041	128	1740618	106.0673216	ppb		99
93) 1,2,3-Trichlorobenzene	10.199	180	634543	104.3613782	ppb		100
94) 1-Methylnaphthalene	10.911	142	882096	114.1650820	ppb		100
95) 2-Methylnaphthalene	11.045	142	731482	109.7559314	ppb		99

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 13.D
Acq On : 26 Apr 2016 3:36 pm
Operator : 605
Sample : STD VMS 100 ppb 16D26894
Misc : water IS/SURR16D21640
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 27 08:48:12 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 08:42:40 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

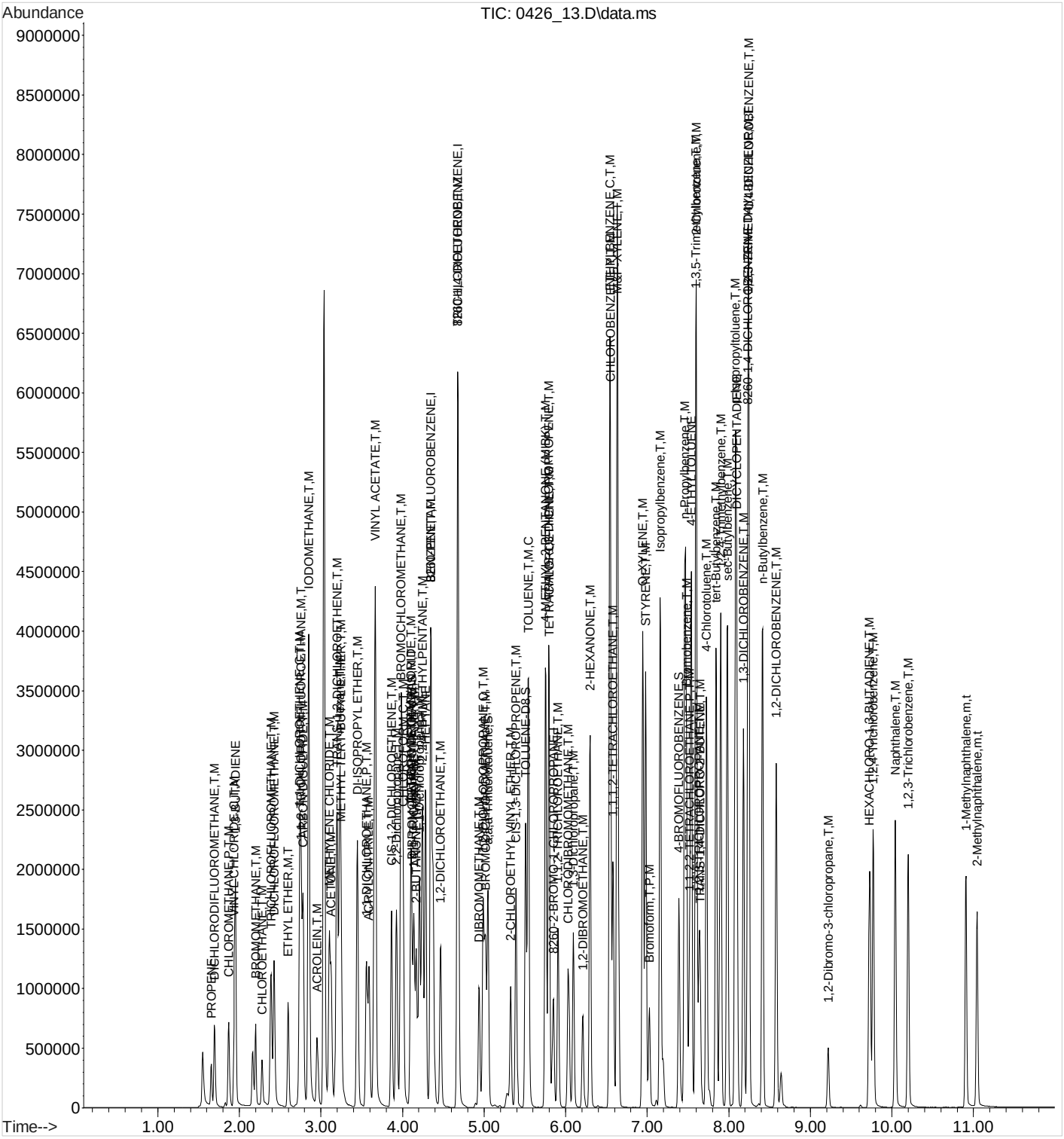
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 13.D
Acq On : 26 Apr 2016 3:36 pm
Operator : 605
Sample : STD VMS 100 ppb 16D26894
Misc : water IS/SURR16D21640
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 27 08:48:12 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 08:42:40 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 14.D
Acq On : 26 Apr 2016 3:59 pm
Operator : 605
Sample : STD VMS 200 ppb 16D26894
Misc : water IS/SURR16D21640
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 27 08:48:33 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 08:42:40 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 8260-PENTAFLUOROBENZENE	4.347	168	630424	40.0000000	ppb	0.00
41) 8260-1,4-DIFLUOROBENZENE	4.676	114	954873	40.0000000	ppb	0.00
53) 8260-2-BROMO-1-CHLOROP...	5.850	79	157338	40.0000000	ppb	0.00
84) 8260-1,4-DICHLOROBENZE...	8.235	152	421999	40.0000000	ppb	# 0.00
96) AP9-PENTAFLUOROBENZENE	0.000	168	0m	40.0000000	ppb	-4.36
114) AP9-1,4-DIFLUOROBENZENE	0.000	114	0m	40.0000000	ppb	-4.69
122) AP9-2-BROMO-1-CHLOROPR...	0.000	79	0m	40.0000000	ppb	-5.86
128) AP9-1,4-DICHLOROBENZEN...	0.000	152	0m	40.0000000	ppb	-8.25
System Monitoring Compounds						
33) DIBROMOFLUOROMETHANE	4.116	111	322159	46.8065984	ppb	0.00
Spiked Amount 40.000	Range 79 - 121			Recovery = 117.02%		
46) a,a,a-Trifluorotoluene	5.047	146	634338	49.9378227	ppb	0.00
Spiked Amount 40.000	Range 90 - 116			Recovery = 124.84%#		
50) TOLUENE-D8	5.509	98	1332452	49.8745988	ppb	0.00
Spiked Amount 40.000	Range 90 - 115			Recovery = 124.69%#		
68) 4-BROMOFLUOROBENZENE	7.389	95	524063	48.2369739	ppb	0.00
Spiked Amount 40.000	Range 80 - 120			Recovery = 120.59%#		
Target Compounds						Qvalue
3) PROPENE	1.652	41	291205	217.9659648	ppb	97
4) DICHLORODIFLUOROMETHANE	1.695	85	1041421	222.4015124	ppb	98
5) CHLOROMETHANE	1.871	50	1187924	222.1959068	ppb	100
6) VINYL CHLORIDE	1.938	62	1263269	207.5538446	ppb	99
7) 1,3-BUTADIENE	1.950	39	924849	194.4355478	ppb	97
8) BROMOMETHANE	2.200	94	509978	206.1673496	ppb	96
9) CHLOROETHANE	2.279	64	303553	93.4162343	ppb	95
10) TRICHLOROFLUOROMETHANE	2.382	101	1633869	194.3914097	ppb	99
11) DICHLOROFLUOROMETHANE	2.419	67	1946849	209.7929578	ppb	100
12) ETHYL ETHER	2.595	59	750729	210.7024353	ppb	99
13) ACROLEIN	2.954	56	783685	1052.8538564	ppb	97
14) 1,1-DICHLOROETHENE	2.741	61	1539238	208.1379859	ppb	99
15) 1,1,2-TRICHLOROTRIFLUO...	2.753	101	1021814	206.7470032	ppb	99
16) ACETONE	3.124	43	1991302	919.1304437	ppb	97
17) IODOMETHANE	2.851	142	6869805	895.5438496	ppb	99
18) CARBON DISULFIDE	2.778	76	3276637	206.3406506	ppb	99
19) METHYLENE CHLORIDE	3.106	84	1002590	209.7154093	ppb	97
20) ACRYLONITRILE	3.587	53	1346870	1039.1076589	ppb	97
21) n-Hexane	3.228	56	935707	206.5621647	ppb	94
22) TRANS-1,2-DICHLOROETHENE	3.197	96	1019027	205.3580953	ppb	99
23) METHYL TERT-BUTYL ETHER	3.246	73	2597409	199.2351305	ppb	95
24) 1,1-DICHLOROETHANE	3.556	63	1817703	204.4941801	ppb	99
25) VINYL ACETATE	3.666	43	7232290	884.2238287	ppb	100
26) DI-ISOPROPYL ETHER	3.447	45	2982942	204.1473198	ppb	99
27) 2,2-Dichloropropane	3.927	77	1702857	204.6345191	ppb	99
28) CIS-1,2-DICHLOROETHENE	3.866	96	1124663	207.7124360	ppb	99
29) 2-BUTANONE (MEK)	4.171	43	2207874	955.2650003	ppb	99
30) BROMOCHLOROMETHANE	3.982	130	637474	196.1564819	ppb	99
31) TETRAHYDROFURAN	4.110	42	215727	193.5018123	ppb	97
32) CHLOROFORM	4.006	83	1788177	199.1810994	ppb	99
34) 1,1,1-TRICHLOROETHANE	4.140	97	1620407	206.4872003	ppb	99
35) CARBON TETRACHLORIDE	4.104	117	1701184	207.1335440	ppb	99
36) 1,1-Dichloropropene	4.207	75	1401513	202.3214066	ppb	100

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 14.D
Acq On : 26 Apr 2016 3:59 pm
Operator : 605
Sample : STD VMS 200 ppb 16D26894
Misc : water IS/SURR16D21640
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 27 08:48:33 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 08:42:40 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
37) 2,2,4-TRIMETHYLPENTANE	4.244	41	1057194	198.3929382	ppb		95
38) HEPTANE	4.280	43	1564746	202.7738499	ppb	#	72
39) BENZENE	4.347	78	3919000	206.7869902	ppb		97
40) 1,2-DICHLOROETHANE	4.463	62	1283167	200.3928230	ppb		99
42) TRICHLOROETHENE	4.676	130	1090614	200.8290669	ppb		99
43) 1,2-DICHLOROPROPANE	4.992	62	690247	204.0405056	ppb		98
44) DIBROMOMETHANE	4.937	93	610721	205.4162547	ppb		98
45) BROMODICHLOROMETHANE	5.016	83	1356235	205.6791941	ppb		99
47) 2-CHLOROETHYL VINYL ETHER	5.327	63	631308	907.7223183	ppb		99
48) CIS-1,3-DICHLOROPROPENE	5.393	75	1652424	203.9650723	ppb		99
49) 4-METHYL-2-PENTANONE (...	5.752	43	3980244	991.0834324	ppb		97
51) TOLUENE	5.539	91	4293025	201.7754431	ppb		98
52) TRANS-1,3-DICHLOROPROPENE	5.795	75	1448598	204.6209370	ppb		99
54) 1,1,2-TRICHLOROETHANE	5.904	97	841804	190.4061435	ppb		98
55) TETRACHLOROETHENE	5.795	164	874874	185.1646468	ppb		99
56) 1,3-Dichloropropane	6.093	76	1403928	189.4992053	ppb		100
57) 2-HEXANONE	6.300	58	1927830	961.2416095	ppb		95
58) CHLORODIBROMOMETHANE	6.032	129	1078395	195.1064897	ppb		99
59) 1,2-DIBROMOETHANE	6.215	107	913022	195.7801976	ppb		99
60) CHLOROBENZENE	6.549	112	2736275	180.0947058	ppb		99
61) 1,1,1,2-TETRACHLOROETHANE	6.586	133	972075	190.9126697	ppb	#	99
62) ETHYLBENZENE	6.543	106	1607539	185.1600669	ppb		96
63) M&P-XYLENE	6.641	106	3754300	362.0510637	ppb		95
64) O-XYLENE	6.945	106	1951575	190.9734177	ppb		95
65) STYRENE	6.981	104	3120669	190.6078902	ppb		100
66) Bromoform	7.030	173	703563	201.6995152	ppb		98
67) Isopropylbenzene	7.158	105	4880645	180.5904313	ppb		99
69) Bromobenzene	7.480	77	1939161	184.4876555	ppb		99
70) 1,1,2,2-TETRACHLOROETHANE	7.517	83	1049604	185.4629610	ppb		99
71) 1,2,3-TRICHLOROPROPANE	7.638	110	303127	189.4684805	ppb		99
72) TRANS-1,4-DICHLORO-2-B...	7.650	53	303547	191.4470081	ppb		98
73) n-Propylbenzene	7.462	91	5489649	182.7700377	ppb		99
74) 4-ETHYLTOLUENE	7.541	105	4750337	180.3955721	ppb		97
75) 2-Chlorotoluene	7.602	126	1041869	180.3787609	ppb		98
76) 4-Chlorotoluene	7.723	91	3365928	183.0557781	ppb		99
77) 1,3,5-Trimethylbenzene	7.596	105	3785801	175.0641786	ppb		99
78) tert-Butylbenzene	7.845	119	3418636	180.8554592	ppb		100
79) 1,2,4-Trimethylbenzene	7.900	105	3831256	175.5167954	ppb		97
80) sec-Butylbenzene	7.985	105	5089835	176.4934710	ppb		98
81) 1,3-DICHLOROBENZENE	8.180	146	2204467	178.0881942	ppb		100
82) p-Isopropyltoluene	8.082	119	4142522	172.3090409	ppb		99
83) DICYCLOPENTADIENE	8.095	66	4304006	177.4017647	ppb		100
85) 1,4-DICHLOROBENZENE	8.247	146	2028104	193.4138203	ppb	#	3
86) 1,2,3-TRIMETHYLBENZENE	8.241	105	3637927	192.3288807	ppb		98
87) 1,2-DICHLOROBENZENE	8.581	146	2043858	197.0189825	ppb		98
88) n-Butylbenzene	8.417	91	3944779	197.3642278	ppb		97
89) 1,2-Dibromo-3-chloropr...	9.220	157	257400	227.3818025	ppb		99
90) 1,2,4-Trichlorobenzene	9.768	180	1308018	198.6484813	ppb		99
91) HEXACHLORO-1,3-BUTADIENE	9.725	225	715482	225.8750483	ppb		99
92) Naphthalene	10.041	128	3243659	212.4462627	ppb		99
93) 1,2,3-Trichlorobenzene	10.200	180	1188003	210.0061718	ppb		99
94) 1-Methylnaphthalene	10.911	142	1745246	242.7782988	ppb		98
95) 2-Methylnaphthalene	11.045	142	1446132	233.2212210	ppb		98

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 14.D
Acq On : 26 Apr 2016 3:59 pm
Operator : 605
Sample : STD VMS 200 ppb 16D26894
Misc : water IS/SURR16D21640
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 27 08:48:33 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 08:42:40 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

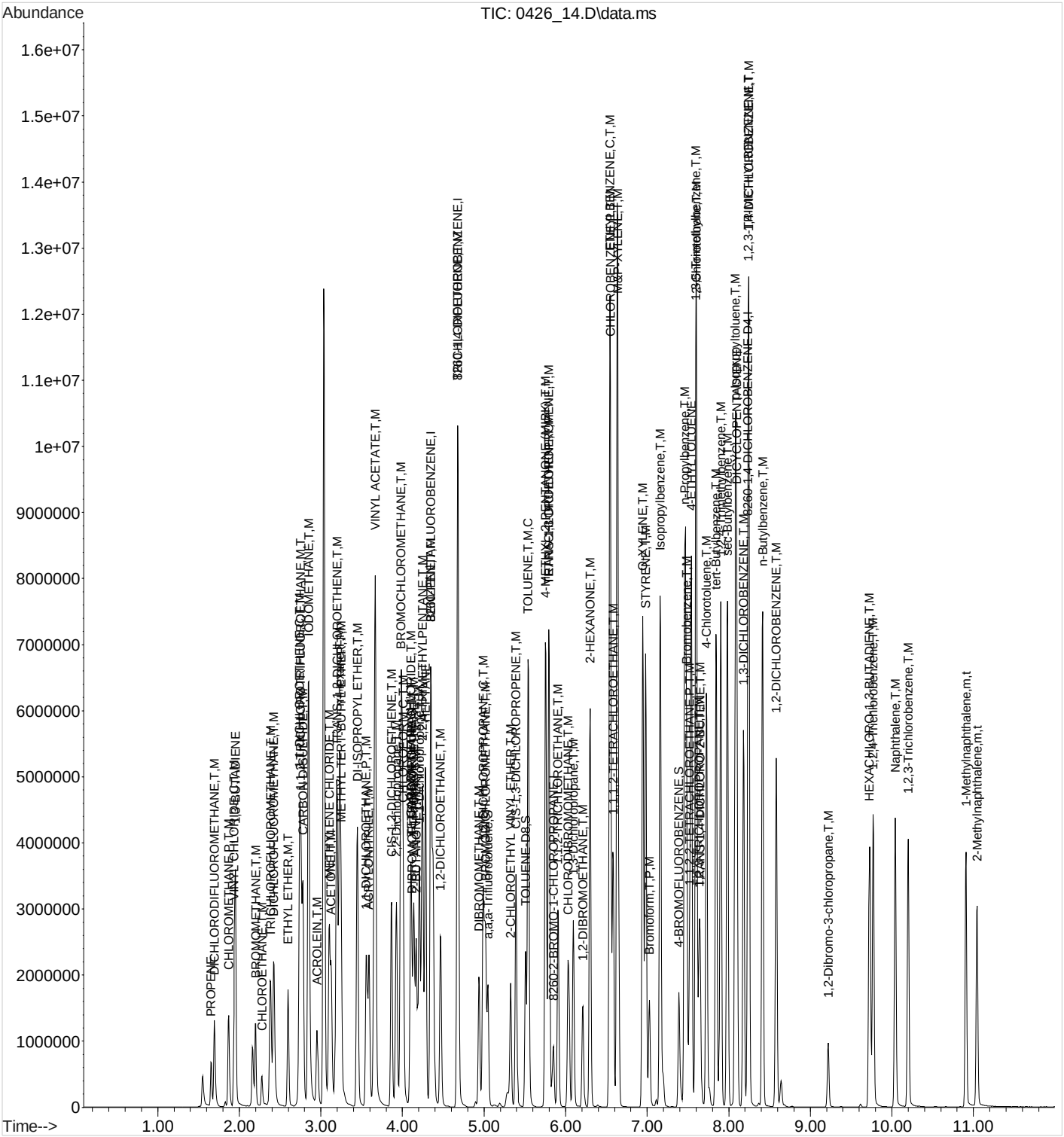
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 14.D
Acq On : 26 Apr 2016 3:59 pm
Operator : 605
Sample : STD VMS 200 ppb 16D26894
Misc : water IS/SURR16D21640
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Apr 27 08:48:33 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 08:42:40 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 19.D
Acq On : 26 Apr 2016 5:52 pm
Operator : 605
Sample : STD VMS 1a ppb 16D26918
Misc : water IS/SURR16D21640
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Apr 27 09:02:01 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 09:00:24 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 8260-PENTAFLUOROBENZENE	0.000	168	0m	40.0000000	ppb		-4.35
41) 8260-1,4-DIFLUOROBENZENE	0.000	114	0m	40.0000000	ppb		-4.68
53) 8260-2-BROMO-1-CHLOROP...	0.000	79	0m	40.0000000	ppb		-5.85
84) 8260-1,4-DICHLOROBENZE...	0.000	152	0m	40.0000000	ppb		-8.23
96) AP9-PENTAFLUOROBENZENE	4.347	168	622342	40.0000000	ppb		0.00
114) AP9-1,4-DIFLUOROBENZENE	4.681	114	936518	40.0000000	ppb		0.00
122) AP9-2-BROMO-1-CHLOROPR...	5.849	79	136855	40.0000000	ppb	#	0.00
128) AP9-1,4-DICHLOROBENZEN...	8.234	152	406142	40.0000000	ppb		0.00
System Monitoring Compounds							
33) DIBROMOFLUOROMETHANE	0.000	111	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 79 - 121		Recovery =	0.00%#			
46) a,a,a-Trifluorotoluene	0.000	146	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 90 - 116		Recovery =	0.00%#			
50) TOLUENE-D8	0.000	98	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 90 - 115		Recovery =	0.00%#			
68) 4-BROMOFLUOROBENZENE	0.000	95	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 80 - 120		Recovery =	0.00%#			
Target Compounds							Qvalue
97) ETHANOL	2.686	45	5378	95.5049002	ppb	#	83
98) Bromoethane	2.917	108	5172	0.9926753	ppb		97
99) 2-PROPANOL	3.027	45	1724	6.6523278	ppb	#	82
100) Methyl Acetate	3.191	43	59067	20.6121749	ppb	#	99
101) ACETONITRILE	3.416	41	24806	50.5311919	ppb		96
102) ALLYL CHLORIDE	3.039	76	13255	4.9376589	ppb		93
103) tert-BUTYL ALCOHOL	3.282	59	6402	5.0247749	ppb	#	81
104) chloroprene	3.544	53	40189	4.8403911	ppb		98
105) ETHYL TERT-BUTYL ETHER	3.653	59	13800	1.0240178	ppb		98
106) PROPIONITRILE	4.359	54	29185	49.0107084	ppb	#	68
107) Ethyl Acetate	4.043	43	39880	10.3686453	ppb		98
108) METHACRYLONITRILE	4.365	67	88826	50.4315696	ppb		98
109) Cyclohexane	3.994	56	13381	0.9704493	ppb		95
111) ISOBUTANOL	4.402	43	26137	102.3482920	ppb	#	98
112) t-Amyl Alcohol	4.475	59	1899	4.3194870	ppb	#	83
113) TERT-AMYL METHYL ETHER	4.377	73	16561	1.0855583	ppb	#	26
115) N-BUTANOL	4.803	56	23242	174.9821450	ppb		92
116) Methyl Cyclohexane	4.681	83	23943	1.6510946	ppb	#	81
117) 2-nitropropane	5.691	43	7495	5.1548374	ppb		93
118) METHYL METHACRYLATE	5.065	41	19106	5.1300211	ppb	#	1
119) 1,4-DIOXANE	5.126	88	5955	101.4059483	ppb	#	1
120) n-octane	5.381	85	5150	0.8614487	ppb		96
121) 3,3-DIMETHYL-1-BUTANOL	6.257	57	5360	9.2006438	ppb	#	83
123) ETHYL METHACRYLATE	5.856	69	24388	5.1027789	ppb	#	1
124) CIS-1,4-DICHLORO-2-BUTENE	7.419	53	6965	5.0860353	ppb	#	32
125) Cyclohexanone	7.687	55	10535	11.3210674	ppb		95
126) PENTACHLOROETHANE	7.888	117	15572	4.9123070	ppb		96
127) Hexachloroethane	8.557	117	4027	0.9645667	ppb		97

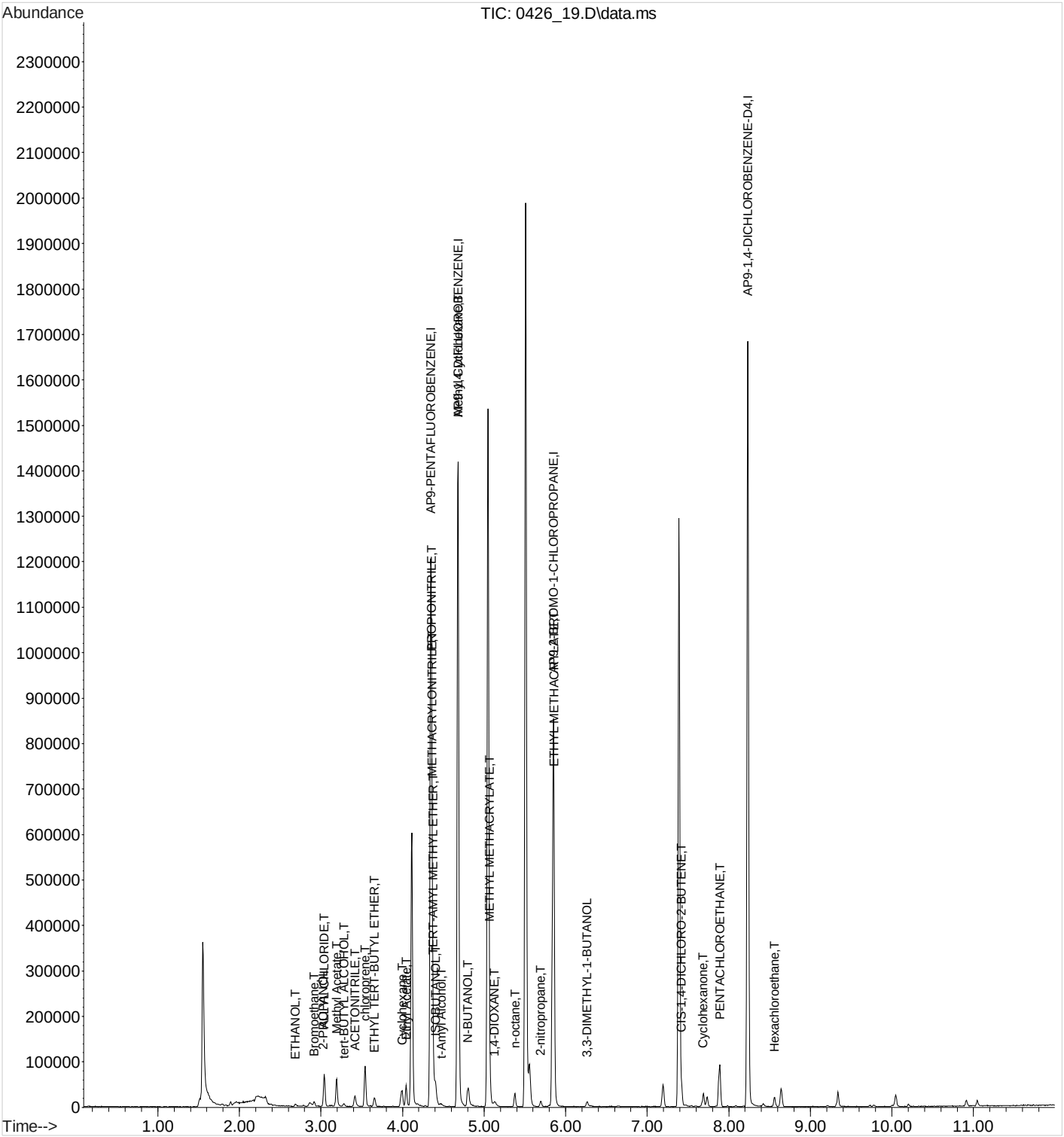
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 19.D
Acq On : 26 Apr 2016 5:52 pm
Operator : 605
Sample : STD VMS 1a ppb 16D26918
Misc : water IS/SURR16D21640
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Apr 27 09:02:01 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 09:00:24 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 20.D
Acq On : 26 Apr 2016 6:15 pm
Operator : 605
Sample : STD VMS 2.5 ppb 16D26918
Misc : water IS/SURR16D21640
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Apr 27 09:02:48 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 09:00:24 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 8260-PENTAFLUOROBENZENE	0.000	168	0m	40.0000000	ppb		-4.35
41) 8260-1,4-DIFLUOROBENZENE	0.000	114	0m	40.0000000	ppb		-4.68
53) 8260-2-BROMO-1-CHLOROP...	0.000	79	0m	40.0000000	ppb		-5.85
84) 8260-1,4-DICHLOROBENZE...	0.000	152	0m	40.0000000	ppb		-8.23
96) AP9-PENTAFLUOROBENZENE	4.347	168	571777	40.0000000	ppb		0.00
114) AP9-1,4-DIFLUOROBENZENE	4.682	114	869091	40.0000000	ppb		0.00
122) AP9-2-BROMO-1-CHLOROPR...	5.850	79	126426	40.0000000	ppb	#	0.00
128) AP9-1,4-DICHLOROBENZEN...	8.234	152	369696	40.0000000	ppb		0.00
System Monitoring Compounds							
33) DIBROMOFLUOROMETHANE	0.000	111	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 79 - 121		Recovery = 0.00%#				
46) a,a,a-Trifluorotoluene	0.000	146	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 90 - 116		Recovery = 0.00%#				
50) TOLUENE-D8	0.000	98	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 90 - 115		Recovery = 0.00%#				
68) 4-BROMOFLUOROBENZENE	0.000	95	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 80 - 120		Recovery = 0.00%#				
Target Compounds							Qvalue
97) ETHANOL	2.692	45	12541	242.4038171	ppb	#	95
98) Bromoethane	2.917	108	11972	2.5010238	ppb		97
99) 2-PROPANOL	3.021	45	3058	12.8432901	ppb	#	60
100) Methyl Acetate	3.191	43	140375	53.3176628	ppb	#	99
101) ACETONITRILE	3.410	41	58800	130.3714689	ppb		99
102) ALLYL CHLORIDE	3.039	76	32108	13.0183827	ppb		97
103) tert-BUTYL ALCOHOL	3.282	59	14994	12.8091666	ppb	#	89
104) chloroprene	3.544	53	98480	12.9099251	ppb		98
105) ETHYL TERT-BUTYL ETHER	3.654	59	32356	2.6132784	ppb		99
106) PROPIONITRILE	4.359	54	69141	126.3773861	ppb	#	86
107) Ethyl Acetate	4.043	43	93302	26.4034241	ppb		99
108) METHACRYLONITRILE	4.365	67	208853	129.0641208	ppb		98
109) Cyclohexane	3.988	56	31461	2.4834717	ppb		97
111) ISOBUTANOL	4.402	43	58263	248.3248226	ppb	#	98
112) t-Amyl Alcohol	4.469	59	4913	12.1634396	ppb		90
113) TERT-AMYL METHYL ETHER	4.377	73	35731	2.5492603	ppb	#	37
115) N-BUTANOL	4.803	56	60027	486.9874334	ppb		99
116) Methyl Cyclohexane	4.676	83	42044	3.1242681	ppb		89
117) 2-nitropropane	5.692	43	17894	13.2617746	ppb		97
118) METHYL METHACRYLATE	5.065	41	43836	12.6832681	ppb	#	27
119) 1,4-DIOXANE	5.132	88	13329	244.5851636	ppb	#	1
120) n-octane	5.381	85	13625	2.4558939	ppb		97
121) 3,3-DIMETHYL-1-BUTANOL	6.257	57	12963	23.9778272	ppb		96
123) ETHYL METHACRYLATE	5.856	69	57918	13.1180230	ppb	#	1
124) CIS-1,4-DICHLORO-2-BUTENE	7.419	53	17269	13.6505362	ppb	#	29
125) Cyclohexanone	7.687	55	23121	26.8957539	ppb		98
126) PENTACHLOROETHANE	7.888	117	37783	12.9021418	ppb		99
127) Hexachloroethane	8.557	117	9552	2.4766762	ppb		96

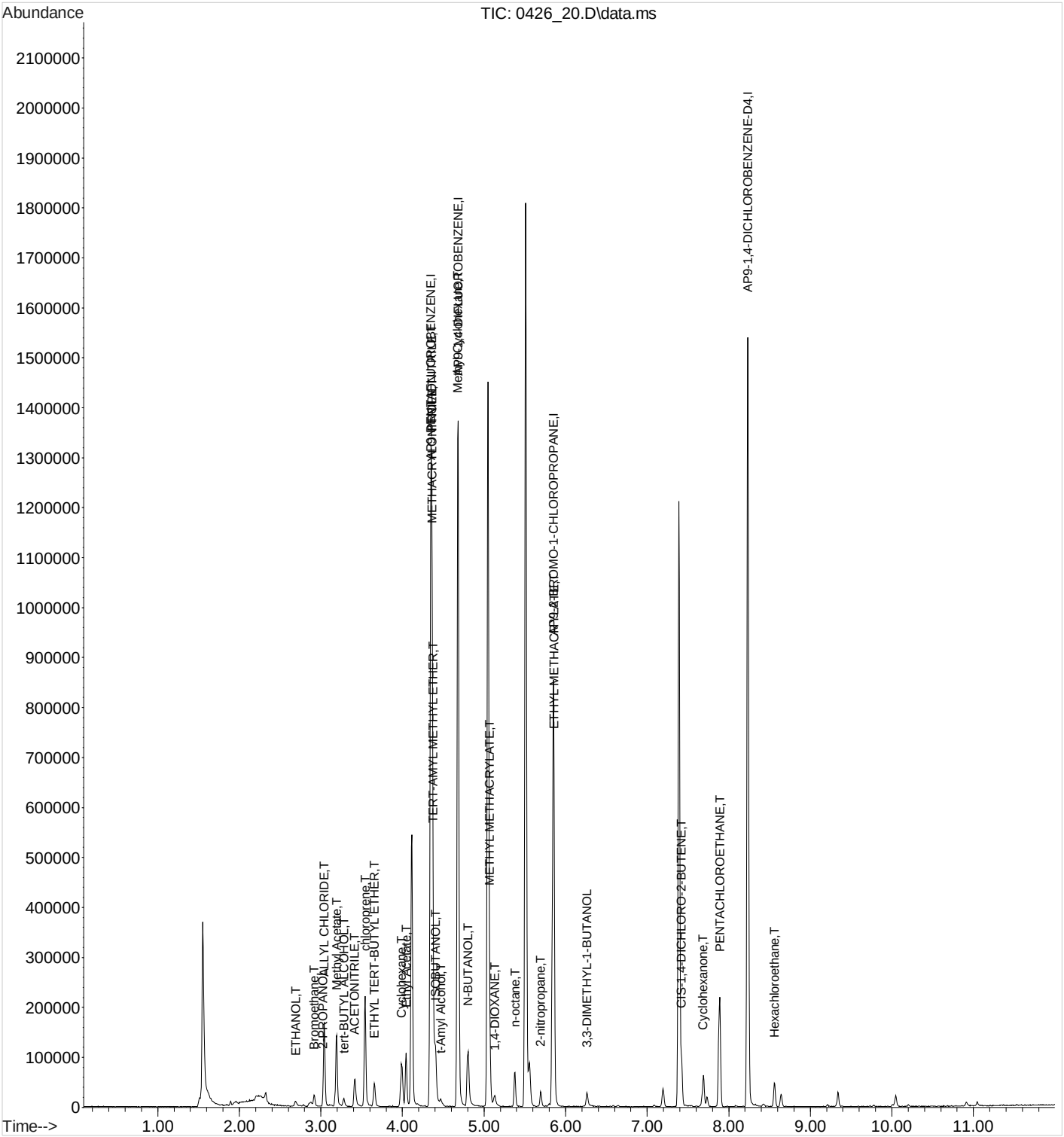
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 20.D
Acq On : 26 Apr 2016 6:15 pm
Operator : 605
Sample : STD VMS 2.5 ppb 16D26918
Misc : water IS/SURR16D21640
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Apr 27 09:02:48 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 09:00:24 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 21.D
Acq On : 26 Apr 2016 6:37 pm
Operator : 605
Sample : STD VMS 5 ppb 16D26918
Misc : water IS/SURR16D21640
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Apr 27 09:03:07 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 09:00:24 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 8260-PENTAFLUOROBENZENE	0.000	168	0m	40.0000000	ppb		-4.35
41) 8260-1,4-DIFLUOROBENZENE	0.000	114	0m	40.0000000	ppb		-4.68
53) 8260-2-BROMO-1-CHLOROP...	0.000	79	0m	40.0000000	ppb		-5.85
84) 8260-1,4-DICHLOROBENZE...	0.000	152	0m	40.0000000	ppb		-8.23
96) AP9-PENTAFLUOROBENZENE	4.347	168	579622	40.0000000	ppb		0.00
114) AP9-1,4-DIFLUOROBENZENE	4.682	114	890011	40.0000000	ppb		0.00
122) AP9-2-BROMO-1-CHLOROPR...	5.850	79	127973	40.0000000	ppb	#	0.00
128) AP9-1,4-DICHLOROBENZEN...	8.234	152	382896	40.0000000	ppb		0.00
System Monitoring Compounds							
33) DIBROMOFLUOROMETHANE	0.000	111	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 79 - 121		Recovery = 0.00%#				
46) a,a,a-Trifluorotoluene	0.000	146	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 90 - 116		Recovery = 0.00%#				
50) TOLUENE-D8	0.000	98	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 90 - 115		Recovery = 0.00%#				
68) 4-BROMOFLUOROBENZENE	0.000	95	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 80 - 120		Recovery = 0.00%#				
Target Compounds							Qvalue
97) ETHANOL	2.686	45	23920	456.0897188	ppb	#	98
98) Bromoethane	2.917	108	24016	4.9491841	ppb		98
99) 2-PROPANOL	3.027	45	5936	24.5931707	ppb	#	88
100) Methyl Acetate	3.185	43	267445	100.2069026	ppb	#	98
101) ACETONITRILE	3.410	41	110266	241.1729933	ppb		99
102) ALLYL CHLORIDE	3.039	76	61966	24.7844374	ppb		99
103) tert-BUTYL ALCOHOL	3.282	59	28569	24.0757722	ppb	#	93
104) chloroprene	3.544	53	196161	25.3670619	ppb		98
105) ETHYL TERT-BUTYL ETHER	3.654	59	60862	4.8490750	ppb		99
106) PROPIONITRILE	4.359	54	132241	238.4413968	ppb		91
107) Ethyl Acetate	4.043	43	181020	50.5333023	ppb		99
108) METHACRYLONITRILE	4.365	67	393583	239.9291203	ppb		96
109) Cyclohexane	3.988	56	63200	4.9213652	ppb		96
111) ISOBUTANOL	4.402	43	112423	472.6767946	ppb	#	96
112) t-Amyl Alcohol	4.469	59	9558	23.3430976	ppb		95
113) TERT-AMYL METHYL ETHER	4.377	73	69302	4.8774924	ppb	#	40
115) N-BUTANOL	4.803	56	115255	913.0630517	ppb		99
116) Methyl Cyclohexane	4.676	83	74144	5.3800977	ppb		97
117) 2-nitropropane	5.698	43	32653	23.6312761	ppb		95
118) METHYL METHACRYLATE	5.065	41	86221	24.3603312	ppb	#	69
119) 1,4-DIOXANE	5.126	88	25393	455.0052758	ppb	#	8
120) n-octane	5.381	85	26577	4.6778783	ppb		98
121) 3,3-DIMETHYL-1-BUTANOL	6.263	57	24610	44.4514362	ppb		91
123) ETHYL METHACRYLATE	5.856	69	110131	24.6423693	ppb	#	1
124) CIS-1,4-DICHLORO-2-BUTENE	7.419	53	31315	24.4541731	ppb	#	31
125) Cyclohexanone	7.687	55	42471	48.8076212	ppb		99
126) PENTACHLOROETHANE	7.888	117	74630	25.1765873	ppb		99
127) Hexachloroethane	8.557	117	18468	4.7305630	ppb		99

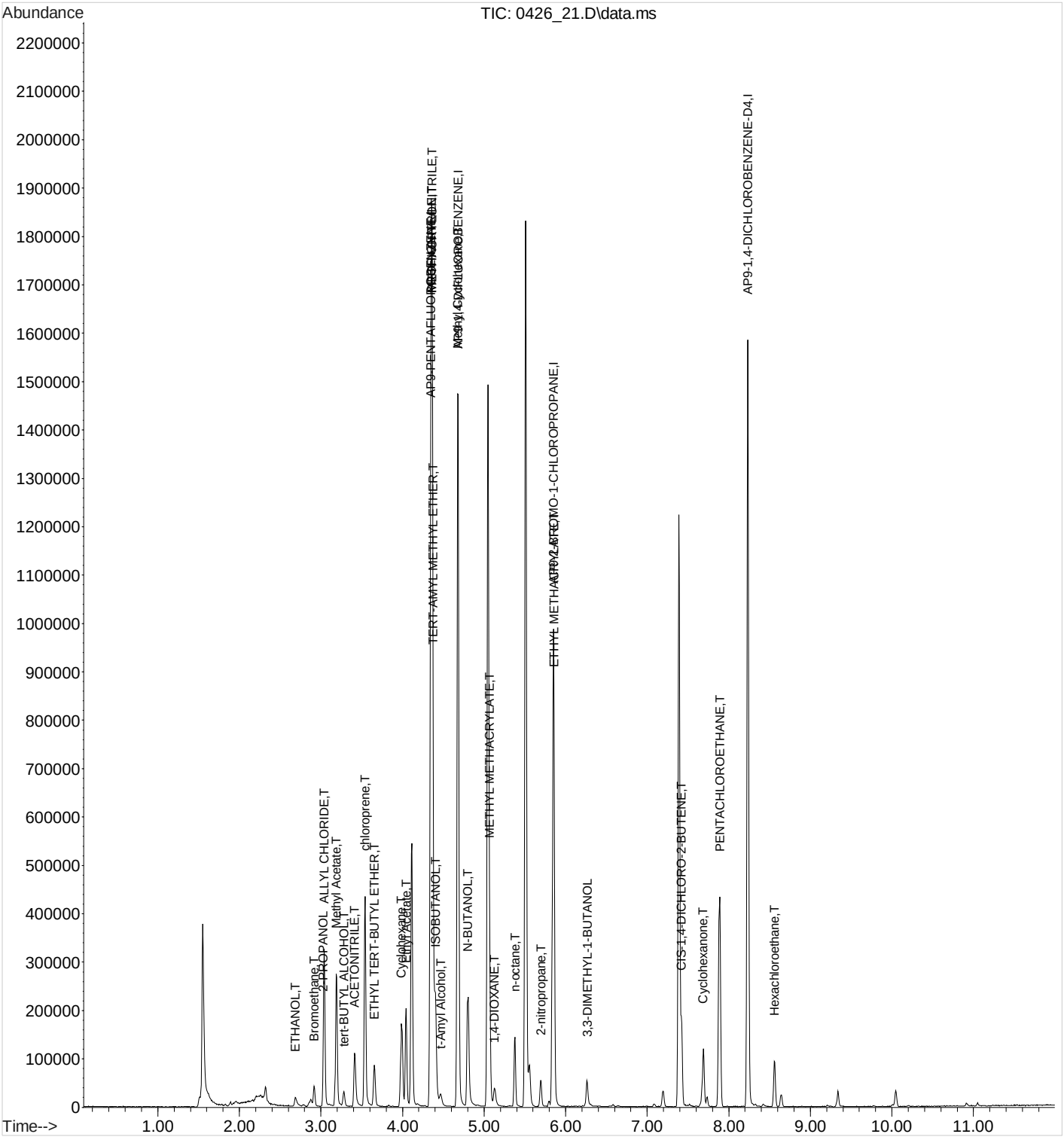
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 21.D
Acq On : 26 Apr 2016 6:37 pm
Operator : 605
Sample : STD VMS 5 ppb 16D26918
Misc : water IS/SURR16D21640
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Apr 27 09:03:07 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 09:00:24 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 22.D
Acq On : 26 Apr 2016 7:00 pm
Operator : 605
Sample : STD VMS 7.5 ppb 16D26918
Misc : water IS/SURR16D21640
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Apr 27 09:03:30 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 09:00:24 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 8260-PENTAFLUOROBENZENE	0.000	168	0m	40.0000000	ppb		-4.35
41) 8260-1,4-DIFLUOROBENZENE	0.000	114	0m	40.0000000	ppb		-4.68
53) 8260-2-BROMO-1-CHLOROP...	0.000	79	0m	40.0000000	ppb		-5.85
84) 8260-1,4-DICHLOROBENZE...	0.000	152	0m	40.0000000	ppb		-8.23
96) AP9-PENTAFLUOROBENZENE	4.347	168	585757	40.0000000	ppb		0.00
114) AP9-1,4-DIFLUOROBENZENE	4.682	114	898627	40.0000000	ppb		0.00
122) AP9-2-BROMO-1-CHLOROPR...	5.850	79	131783	40.0000000	ppb	#	0.00
128) AP9-1,4-DICHLOROBENZEN...	8.234	152	386068	40.0000000	ppb		0.00
System Monitoring Compounds							
33) DIBROMOFLUOROMETHANE	0.000	111	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 79 - 121		Recovery = 0.00%#				
46) a,a,a-Trifluorotoluene	0.000	146	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 90 - 116		Recovery = 0.00%#				
50) TOLUENE-D8	0.000	98	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 90 - 115		Recovery = 0.00%#				
68) 4-BROMOFLUOROBENZENE	0.000	95	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 80 - 120		Recovery = 0.00%#				
Target Compounds							Qvalue
97) ETHANOL	2.686	45	35846	676.3277100	ppb	#	99
98) Bromoethane	2.917	108	36792	7.5026330	ppb		98
99) 2-PROPANOL	3.027	45	8318	34.1009849	ppb		93
100) Methyl Acetate	3.185	43	401004	148.6754404	ppb	#	100
101) ACETONITRILE	3.410	41	163389	353.6203436	ppb		97
102) ALLYL CHLORIDE	3.039	76	93877	37.1545648	ppb		100
103) tert-BUTYL ALCOHOL	3.282	59	43202	36.0260306	ppb		100
104) chloroprene	3.544	53	288592	36.9291375	ppb		100
105) ETHYL TERT-BUTYL ETHER	3.653	59	93026	7.3340590	ppb		100
106) PROPIONITRILE	4.359	54	197213	351.8669253	ppb		93
107) Ethyl Acetate	4.043	43	267948	74.0165798	ppb		99
108) METHACRYLONITRILE	4.365	67	602981	363.7287512	ppb		98
109) Cyclohexane	3.988	56	95205	7.3359379	ppb		98
111) ISOBUTANOL	4.402	43	174496	725.9754948	ppb	#	96
112) t-Amyl Alcohol	4.469	59	13366	32.3013215	ppb		89
113) TERT-AMYL METHYL ETHER	4.377	73	105132	7.3217203	ppb	#	93
115) N-BUTANOL	4.803	56	172870	1356.3648821	ppb		98
116) Methyl Cyclohexane	4.682	83	107026	7.6916472	ppb		98
117) 2-nitropropane	5.691	43	50427	36.1445756	ppb		99
118) METHYL METHACRYLATE	5.065	41	130164	36.4231020	ppb	#	83
119) 1,4-DIOXANE	5.126	88	37616	667.5609785	ppb	#	1
120) n-octane	5.381	85	40647	7.0857753	ppb		99
121) 3,3-DIMETHYL-1-BUTANOL	6.257	57	38427	68.7426982	ppb		99
123) ETHYL METHACRYLATE	5.856	69	168630	36.6409462	ppb	#	28
124) CIS-1,4-DICHLORO-2-BUTENE	7.419	53	48640	36.8852808	ppb	#	31
125) Cyclohexanone	7.687	55	65112	72.6633057	ppb		97
126) PENTACHLOROETHANE	7.888	117	113318	37.1228475	ppb		99
127) Hexachloroethane	8.557	117	28051	6.9775069	ppb		98

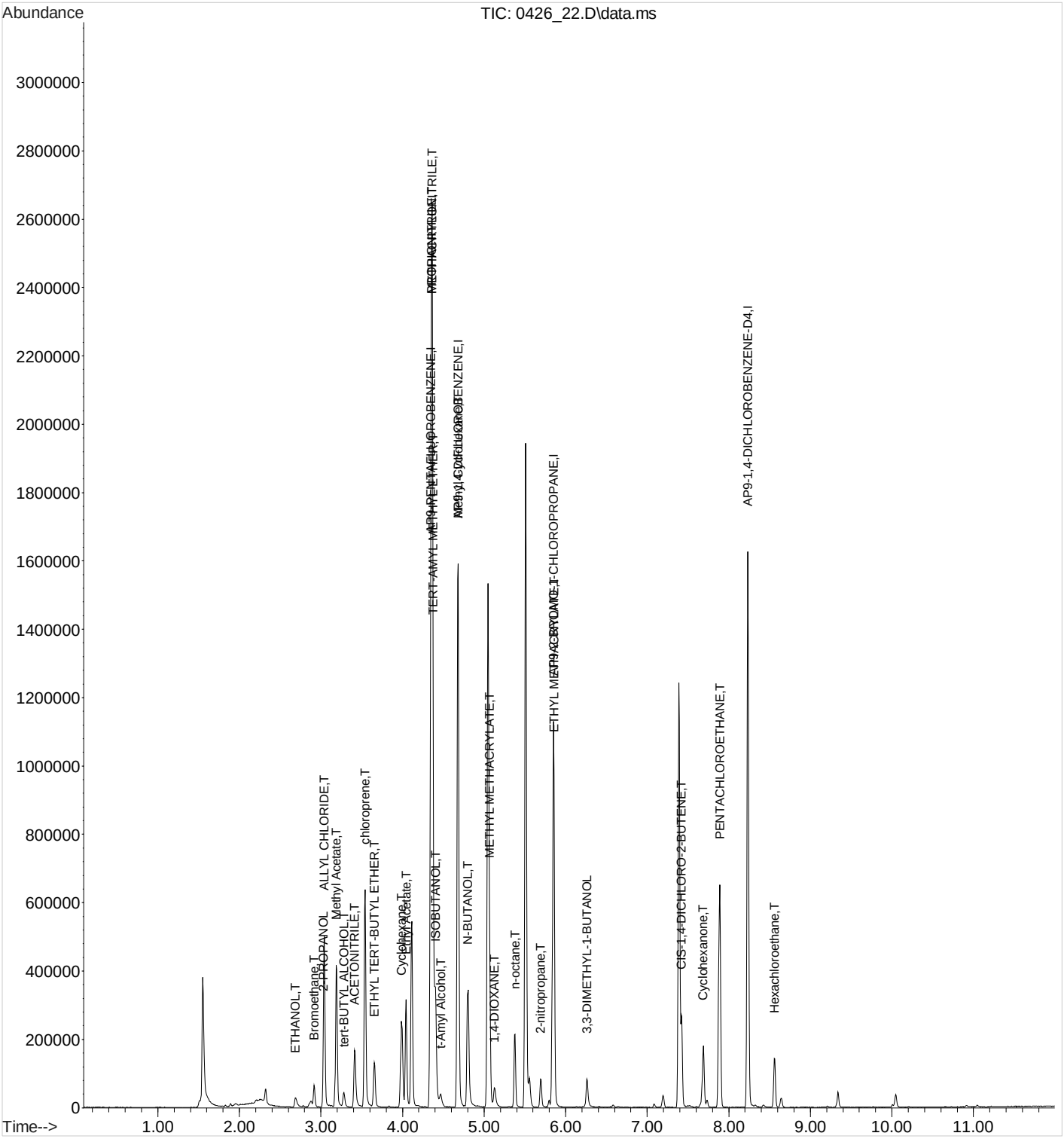
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 22.D
Acq On : 26 Apr 2016 7:00 pm
Operator : 605
Sample : STD VMS 7.5 ppb 16D26918
Misc : water IS/SURR16D21640
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Apr 27 09:03:30 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 09:00:24 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 23.D
Acq On : 26 Apr 2016 7:22 pm
Operator : 605
Sample : MSTD VMS 10a ppb 16D26918
Misc : water IS/SURR16D21640
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Apr 27 09:03:51 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 09:00:24 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 8260-PENTAFLUOROBENZENE	0.000	168	0m	40.0000000	ppb		-4.35
41) 8260-1,4-DIFLUOROBENZENE	0.000	114	0m	40.0000000	ppb		-4.68
53) 8260-2-BROMO-1-CHLOROP...	0.000	79	0m	40.0000000	ppb		-5.85
84) 8260-1,4-DICHLOROBENZE...	0.000	152	0m	40.0000000	ppb		-8.23
96) AP9-PENTAFLUOROBENZENE	4.347	168	586340	40.0000000	ppb		0.00
114) AP9-1,4-DIFLUOROBENZENE	4.682	114	896686	40.0000000	ppb		0.00
122) AP9-2-BROMO-1-CHLOROPR...	5.850	79	128911	40.0000000	ppb	#	0.00
128) AP9-1,4-DICHLOROBENZEN...	8.234	152	388941	40.0000000	ppb		0.00
System Monitoring Compounds							
33) DIBROMOFLUOROMETHANE	0.000	111	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 79 - 121		Recovery =	0.00%#			
46) a,a,a-Trifluorotoluene	0.000	146	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 90 - 116		Recovery =	0.00%#			
50) TOLUENE-D8	0.000	98	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 90 - 115		Recovery =	0.00%#			
68) 4-BROMOFLUOROBENZENE	0.000	95	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 80 - 120		Recovery =	0.00%#			
Target Compounds							Qvalue
97) ETHANOL	2.692	45	48109	906.7984627	ppb		99
98) Bromoethane	2.917	108	48760	9.9332638	ppb		99
99) 2-PROPANOL	3.027	45	10997	45.0391511	ppb	#	80
100) Methyl Acetate	3.185	43	529284	196.0411580	ppb	#	100
101) ACETONITRILE	3.410	41	218602	472.6465831	ppb		99
102) ALLYL CHLORIDE	3.039	76	125962	49.8035715	ppb		100
103) tert-BUTYL ALCOHOL	3.282	59	58123	48.4204195	ppb		98
104) chloroprene	3.544	53	385798	49.3188354	ppb		100
105) ETHYL TERT-BUTYL ETHER	3.653	59	125426	9.8786043	ppb		99
106) PROPIONITRILE	4.359	54	263736	470.0892134	ppb		95
107) Ethyl Acetate	4.043	43	354291	97.7702168	ppb		100
108) METHACRYLONITRILE	4.365	67	802982	483.8912605	ppb		98
109) Cyclohexane	3.988	56	127196	9.7912313	ppb		99
111) ISOBUTANOL	4.402	43	234740	975.6443867	ppb	#	98
112) t-Amyl Alcohol	4.469	59	18701	45.1493632	ppb		100
113) TERT-AMYL METHYL ETHER	4.377	73	144318	10.0407620	ppb	#	99
115) N-BUTANOL	4.803	56	238967	1879.0308497	ppb		99
116) Methyl Cyclohexane	4.682	83	139450	10.0435595	ppb		99
117) 2-nitropropane	5.697	43	67384	48.4033989	ppb		98
118) METHYL METHACRYLATE	5.065	41	175398	49.1869342	ppb		90
119) 1,4-DIOXANE	5.132	88	50075	890.5911247	ppb	#	1
120) n-octane	5.381	85	54397	9.5032663	ppb		100
121) 3,3-DIMETHYL-1-BUTANOL	6.257	57	53765	96.3892983	ppb		97
123) ETHYL METHACRYLATE	5.856	69	223334	49.6085002	ppb	#	55
124) CIS-1,4-DICHLORO-2-BUTENE	7.419	53	65405	50.7037278	ppb		90
125) Cyclohexanone	7.687	55	92867	105.9460928	ppb		99
126) PENTACHLOROETHANE	7.888	117	148915	49.8712483	ppb		99
127) Hexachloroethane	8.557	117	39107	9.9443371	ppb		99

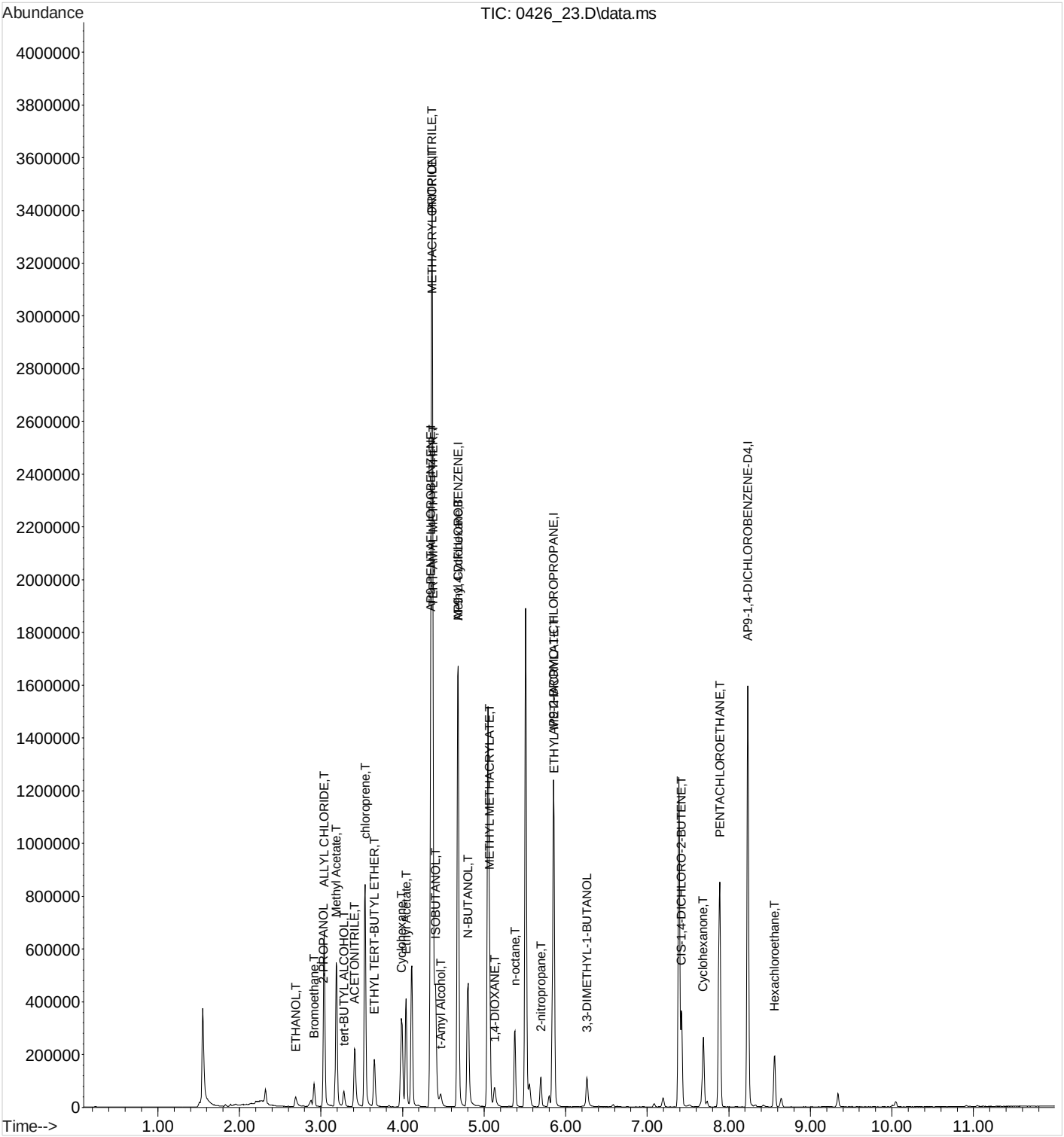
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 23.D
Acq On : 26 Apr 2016 7:22 pm
Operator : 605
Sample : MSTD VMS 10a ppb 16D26918
Misc : water IS/SURR16D21640
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Apr 27 09:03:51 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 09:00:24 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 24.D
Acq On : 26 Apr 2016 7:45 pm
Operator : 605
Sample : STD VMS 12.5 ppb 16D26918
Misc : water IS/SURR16D21640
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Apr 27 09:04:14 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 09:00:24 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 8260-PENTAFLUOROBENZENE	0.000	168	0m	40.0000000	ppb		-4.35
41) 8260-1,4-DIFLUOROBENZENE	0.000	114	0m	40.0000000	ppb		-4.68
53) 8260-2-BROMO-1-CHLOROP...	0.000	79	0m	40.0000000	ppb		-5.85
84) 8260-1,4-DICHLOROBENZE...	0.000	152	0m	40.0000000	ppb		-8.23
96) AP9-PENTAFLUOROBENZENE	4.347	168	576082	40.0000000	ppb		0.00
114) AP9-1,4-DIFLUOROBENZENE	4.681	114	882909	40.0000000	ppb		0.00
122) AP9-2-BROMO-1-CHLOROPR...	5.849	79	128618	40.0000000	ppb		0.00
128) AP9-1,4-DICHLOROBENZEN...	8.234	152	383762	40.0000000	ppb		0.00
System Monitoring Compounds							
33) DIBROMOFLUOROMETHANE	0.000	111	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 79 - 121		Recovery =	0.00%#			
46) a,a,a-Trifluorotoluene	0.000	146	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 90 - 116		Recovery =	0.00%#			
50) TOLUENE-D8	0.000	98	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 90 - 115		Recovery =	0.00%#			
68) 4-BROMOFLUOROBENZENE	0.000	95	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 80 - 120		Recovery =	0.00%#			
Target Compounds							Qvalue
97) ETHANOL	2.692	45	60777	1165.9741489	ppb	#	99
98) Bromoethane	2.917	108	59444	12.3254139	ppb		99
99) 2-PROPANOL	3.027	45	14693	61.2479654	ppb	#	89
100) Methyl Acetate	3.185	43	654280	246.6535416	ppb	#	99
101) ACETONITRILE	3.410	41	275084	605.3589106	ppb		100
102) ALLYL CHLORIDE	3.039	76	153401	61.7325687	ppb		98
103) tert-BUTYL ALCOHOL	3.282	59	69633	59.0419712	ppb		99
104) chloroprene	3.544	53	475052	61.8100662	ppb		100
105) ETHYL TERT-BUTYL ETHER	3.653	59	152845	12.2524932	ppb		99
106) PROPIONITRILE	4.359	54	331351	601.1244235	ppb		96
107) Ethyl Acetate	4.043	43	437902	122.9953248	ppb		99
108) METHACRYLONITRILE	4.365	67	995227	610.4208160	ppb		98
109) Cyclohexane	3.988	56	158524	12.4200714	ppb		97
111) ISOBUTANOL	4.402	43	289268	1223.6861930	ppb	#	100
112) t-Amyl Alcohol	4.469	59	24153	59.3503244	ppb		98
113) TERT-AMYL METHYL ETHER	4.377	73	176688	12.5117611	ppb	#	98
115) N-BUTANOL	4.803	56	300522	2399.9196113	ppb		99
116) Methyl Cyclohexane	4.681	83	167554	12.2559895	ppb		100
117) 2-nitropropane	5.697	43	84621	61.7336094	ppb		97
118) METHYL METHACRYLATE	5.065	41	215539	61.3868610	ppb		93
119) 1,4-DIOXANE	5.132	88	63477	1146.5638464	ppb	#	2
120) n-octane	5.381	85	68902	12.2251508	ppb		100
121) 3,3-DIMETHYL-1-BUTANOL	6.257	57	65336	118.9614246	ppb		98
123) ETHYL METHACRYLATE	5.856	69	279757	62.2831315	ppb	#	75
124) CIS-1,4-DICHLORO-2-BUTENE	7.419	53	82571	64.1570978	ppb	#	86
125) Cyclohexanone	7.687	55	99080	113.2916108	ppb		98
126) PENTACHLOROETHANE	7.888	117	189559	63.6274367	ppb		99
127) Hexachloroethane	8.557	117	49060	12.5036586	ppb		97

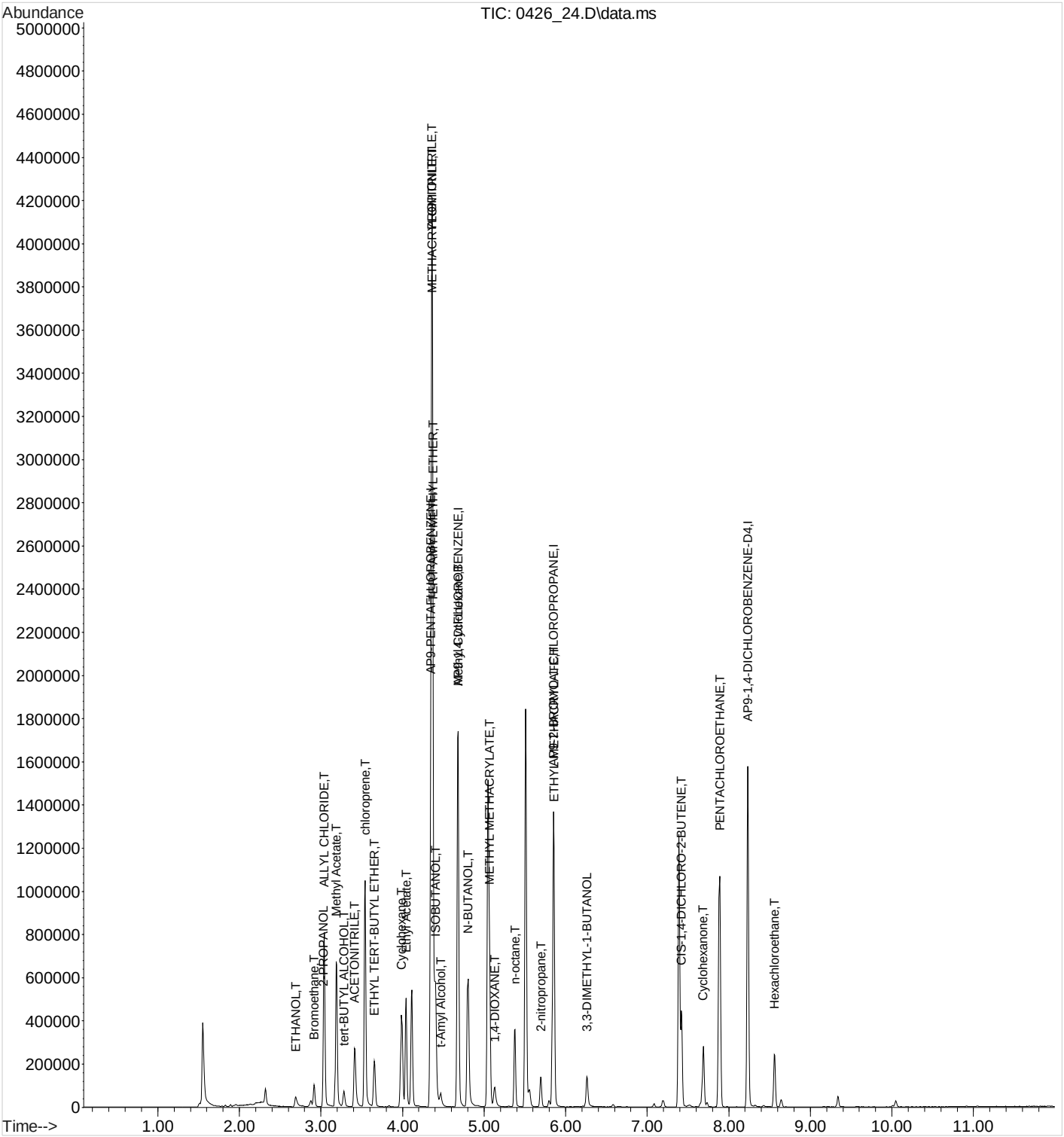
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 24.D
Acq On : 26 Apr 2016 7:45 pm
Operator : 605
Sample : STD VMS 12.5 ppb 16D26918
Misc : water IS/SURR16D21640
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Apr 27 09:04:14 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 09:00:24 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 25.D
Acq On : 26 Apr 2016 8:08 pm
Operator : 605
Sample : STD VMS 15 ppb 16D26918
Misc : water IS/SURR16D21640
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Apr 27 09:04:36 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 09:00:24 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 8260-PENTAFLUOROBENZENE	0.000	168	0m	40.0000000	ppb		-4.35
41) 8260-1,4-DIFLUOROBENZENE	0.000	114	0m	40.0000000	ppb		-4.68
53) 8260-2-BROMO-1-CHLOROP...	0.000	79	0m	40.0000000	ppb		-5.85
84) 8260-1,4-DICHLOROBENZE...	0.000	152	0m	40.0000000	ppb		-8.23
96) AP9-PENTAFLUOROBENZENE	4.347	168	573009	40.0000000	ppb		0.00
114) AP9-1,4-DIFLUOROBENZENE	4.681	114	883622	40.0000000	ppb		0.00
122) AP9-2-BROMO-1-CHLOROPR...	5.850	79	128279	40.0000000	ppb		0.00
128) AP9-1,4-DICHLOROBENZEN...	8.234	152	383377	40.0000000	ppb		0.00
System Monitoring Compounds							
33) DIBROMOFLUOROMETHANE	0.000	111	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 79 - 121		Recovery =	0.00%#			
46) a,a,a-Trifluorotoluene	0.000	146	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 90 - 116		Recovery =	0.00%#			
50) TOLUENE-D8	0.000	98	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 90 - 115		Recovery =	0.00%#			
68) 4-BROMOFLUOROBENZENE	0.000	95	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 80 - 120		Recovery =	0.00%#			
Target Compounds							Qvalue
97) ETHANOL	2.692	45	75820	1462.3667537	ppb	#	99
98) Bromoethane	2.917	108	70726	14.7433253	ppb		98
99) 2-PROPANOL	3.027	45	17620	73.8431058	ppb	#	89
100) Methyl Acetate	3.185	43	795020	301.3176885	ppb	#	100
101) ACETONITRILE	3.410	41	335846	743.0373607	ppb		99
102) ALLYL CHLORIDE	3.039	76	187054	75.6791106	ppb		98
103) tert-BUTYL ALCOHOL	3.282	59	88726	75.6344247	ppb		98
104) chloroprene	3.544	53	573934	75.0763021	ppb		100
105) ETHYL TERT-BUTYL ETHER	3.653	59	187725	15.1292782	ppb		99
106) PROPIONITRILE	4.359	54	407906	743.9762023	ppb		98
107) Ethyl Acetate	4.043	43	536763	151.5713465	ppb		99
108) METHACRYLONITRILE	4.365	67	1217679	750.8667341	ppb		99
109) Cyclohexane	3.988	56	193837	15.2682272	ppb		97
110) tert-butyl formate	4.201	59	530	135.5195553	ppb	#	93
111) ISOBUTANOL	4.402	43	352723	1500.1210630	ppb	#	99
112) t-Amyl Alcohol	4.469	59	28894	71.3809866	ppb		97
113) TERT-AMYL METHYL ETHER	4.377	73	213857	15.2250147	ppb	#	100
115) N-BUTANOL	4.803	56	369422	2947.7632696	ppb		99
116) Methyl Cyclohexane	4.681	83	205844	15.0446198	ppb		99
117) 2-nitropropane	5.697	43	102817	74.9476238	ppb		99
118) METHYL METHACRYLATE	5.065	41	262706	74.7599459	ppb		97
119) 1,4-DIOXANE	5.132	88	79885	1441.7717553	ppb	#	1
120) n-octane	5.381	85	83732	14.8444218	ppb		98
121) 3,3-DIMETHYL-1-BUTANOL	6.257	57	80444	146.3513371	ppb		98
123) ETHYL METHACRYLATE	5.856	69	342699	76.4977218	ppb		87
124) CIS-1,4-DICHLORO-2-BUTENE	7.419	53	99117	77.2167468	ppb		97
125) Cyclohexanone	7.687	55	125617	144.0145453	ppb		100
126) PENTACHLOROETHANE	7.888	117	225225	75.7988821	ppb		99
127) Hexachloroethane	8.557	117	59013	15.0800729	ppb		98

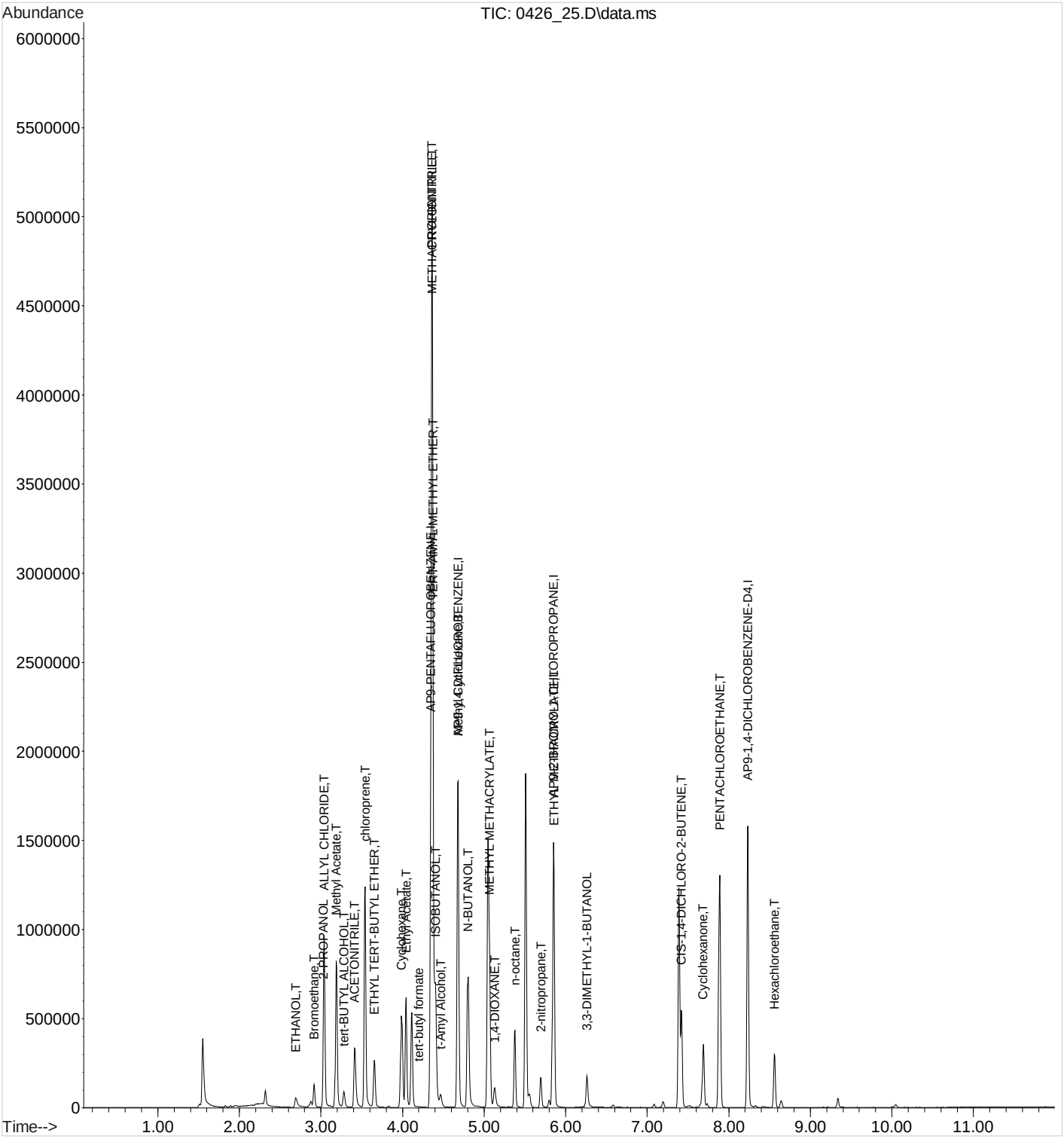
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 25.D
Acq On : 26 Apr 2016 8:08 pm
Operator : 605
Sample : STD VMS 15 ppb 16D26918
Misc : water IS/SURR16D21640
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Apr 27 09:04:36 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 09:00:24 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 26.D
Acq On : 26 Apr 2016 8:30 pm
Operator : 605
Sample : STD VMS 17.5 ppb 16D26918
Misc : water IS/SURR16D21640
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Apr 27 09:04:57 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 09:00:24 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 8260-PENTAFLUOROBENZENE	0.000	168	0m	40.0000000	ppb		-4.35
41) 8260-1,4-DIFLUOROBENZENE	0.000	114	0m	40.0000000	ppb		-4.68
53) 8260-2-BROMO-1-CHLOROP...	0.000	79	0m	40.0000000	ppb		-5.85
84) 8260-1,4-DICHLOROBENZE...	0.000	152	0m	40.0000000	ppb		-8.23
96) AP9-PENTAFLUOROBENZENE	4.347	168	581066	40.0000000	ppb		0.00
114) AP9-1,4-DIFLUOROBENZENE	4.682	114	899356	40.0000000	ppb		0.00
122) AP9-2-BROMO-1-CHLOROPR...	5.850	79	130378	40.0000000	ppb		0.00
128) AP9-1,4-DICHLOROBENZEN...	8.234	152	392376	40.0000000	ppb		0.00
System Monitoring Compounds							
33) DIBROMOFLUOROMETHANE	0.000	111	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 79 - 121		Recovery = 0.00%#				
46) a,a,a-Trifluorotoluene	0.000	146	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 90 - 116		Recovery = 0.00%#				
50) TOLUENE-D8	0.000	98	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 90 - 115		Recovery = 0.00%#				
68) 4-BROMOFLUOROBENZENE	0.000	95	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 80 - 120		Recovery = 0.00%#				
Target Compounds							Qvalue
97) ETHANOL	2.692	45	90281	1717.1366781	ppb	#	100
98) Bromoethane	2.917	108	83463	17.1571963	ppb		98
99) 2-PROPANOL	3.027	45	20718	85.6224910	ppb	#	89
100) Methyl Acetate	3.185	43	953356	356.3179132	ppb	#	99
101) ACETONITRILE	3.410	41	397578	867.4187283	ppb		100
102) ALLYL CHLORIDE	3.039	76	215079	85.8110088	ppb		99
103) tert-BUTYL ALCOHOL	3.282	59	105750	88.8965609	ppb		99
104) chloroprene	3.544	53	665716	85.8748308	ppb		100
105) ETHYL TERT-BUTYL ETHER	3.653	59	221069	17.5695210	ppb		99
106) PROPIONITRILE	4.359	54	487984	877.6887102	ppb		99
107) Ethyl Acetate	4.043	43	641465	178.6255099	ppb		100
108) METHACRYLONITRILE	4.365	67	1458095	886.6492428	ppb		100
109) Cyclohexane	3.988	56	222068	17.2493961	ppb		98
110) tert-butyl formate	4.207	59	633	159.6120911	ppb	#	69
111) ISOBUTANOL	4.402	43	423977	1778.1598748	ppb	#	100
112) t-Amyl Alcohol	4.469	59	35754	87.1034773	ppb		99
113) TERT-AMYL METHYL ETHER	4.377	73	252098	17.6986292	ppb	#	100
115) N-BUTANOL	4.803	56	435755	3416.2300673	ppb		98
116) Methyl Cyclohexane	4.682	83	234630	16.8485073	ppb		99
117) 2-nitropropane	5.691	43	124270	89.0008434	ppb		99
118) METHYL METHACRYLATE	5.065	41	315289	88.1541352	ppb		98
119) 1,4-DIOXANE	5.132	88	92961	1648.4164677	ppb	#	5
120) n-octane	5.381	85	97629	17.0053488	ppb		99
121) 3,3-DIMETHYL-1-BUTANOL	6.257	57	96614	172.6942924	ppb		97
123) ETHYL METHACRYLATE	5.856	69	410756	90.2133544	ppb		94
124) CIS-1,4-DICHLORO-2-BUTENE	7.419	53	118789	91.0522808	ppb		98
125) Cyclohexanone	7.687	55	167389	188.8148319	ppb		99
126) PENTACHLOROETHANE	7.888	117	264072	87.4419453	ppb		99
127) Hexachloroethane	8.557	117	68552	17.2356287	ppb		99

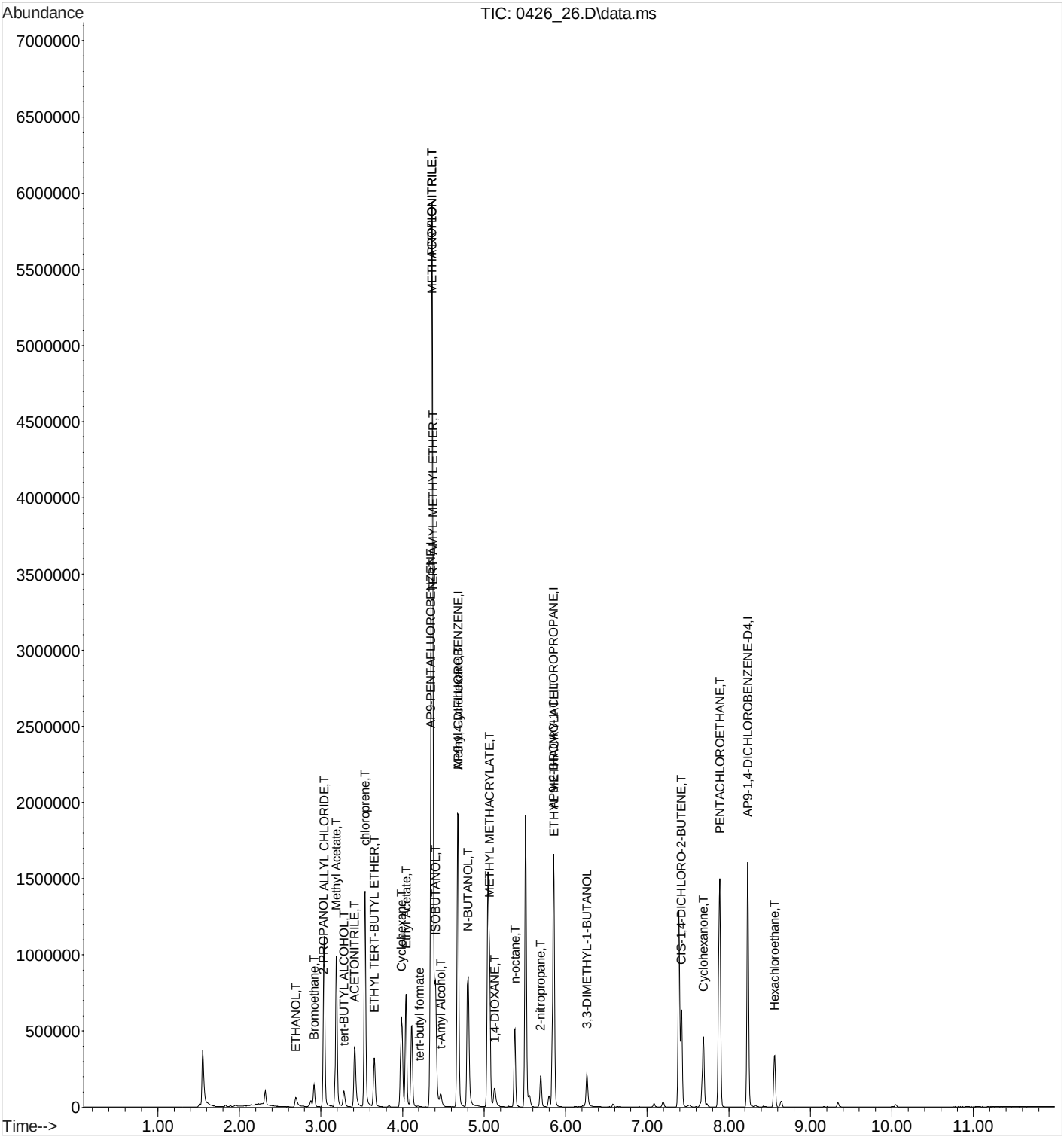
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 26.D
Acq On : 26 Apr 2016 8:30 pm
Operator : 605
Sample : STD VMS 17.5 ppb 16D26918
Misc : water IS/SURR16D21640
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Apr 27 09:04:57 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 09:00:24 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 27.D
Acq On : 26 Apr 2016 8:53 pm
Operator : 605
Sample : STD VMS 20 ppb 16D26918
Misc : water IS/SURR16D21640
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Apr 27 09:05:20 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 09:00:24 2016
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 8260-PENTAFLUOROBENZENE	0.000	168	0m	40.0000000	ppb		-4.35
41) 8260-1,4-DIFLUOROBENZENE	0.000	114	0m	40.0000000	ppb		-4.68
53) 8260-2-BROMO-1-CHLOROP...	0.000	79	0m	40.0000000	ppb		-5.85
84) 8260-1,4-DICHLOROBENZE...	0.000	152	0m	40.0000000	ppb		-8.23
96) AP9-PENTAFLUOROBENZENE	4.347	168	565555	40.0000000	ppb		0.00
114) AP9-1,4-DIFLUOROBENZENE	4.682	114	868272	40.0000000	ppb		0.00
122) AP9-2-BROMO-1-CHLOROPR...	5.850	79	128200	40.0000000	ppb		0.00
128) AP9-1,4-DICHLOROBENZEN...	8.234	152	383644	40.0000000	ppb		0.00
System Monitoring Compounds							
33) DIBROMOFLUOROMETHANE	0.000	111	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 79 - 121		Recovery =	0.00%#			
46) a,a,a-Trifluorotoluene	0.000	146	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 90 - 116		Recovery =	0.00%#			
50) TOLUENE-D8	0.000	98	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 90 - 115		Recovery =	0.00%#			
68) 4-BROMOFLUOROBENZENE	0.000	95	0d	0.0000000	ppb		
Spiked Amount 40.000	Range 80 - 120		Recovery =	0.00%#			
Target Compounds							Qvalue
97) ETHANOL	2.692	45	102346	2000.0000000	ppb		100
98) Bromoethane	2.917	108	94695	20.0000000	ppb		100
99) 2-PROPANOL	3.027	45	23551	100.0000000	ppb		100
100) Methyl Acetate	3.185	43	1041662	400.0000000	ppb	#	100
101) ACETONITRILE	3.416	41	446111	1000.0000000	ppb		100
102) ALLYL CHLORIDE	3.039	76	243952	100.0000000	ppb		100
103) tert-BUTYL ALCOHOL	3.282	59	115783	100.0000000	ppb		100
104) chloroprene	3.544	53	754523	100.0000000	ppb		100
105) ETHYL TERT-BUTYL ETHER	3.654	59	244933	20.0000000	ppb		100
106) PROPIONITRILE	4.359	54	541146	1000.0000000	ppb		100
107) Ethyl Acetate	4.043	43	699051	200.0000000	ppb		100
108) METHACRYLONITRILE	4.365	67	1600602	1000.0000000	ppb		100
109) Cyclohexane	3.988	56	250606	20.0000000	ppb		100
110) tert-butyl formate	4.201	59	772	200.0000000	ppb	#	100
111) ISOBUTANOL	4.402	43	464142	2000.0000000	ppb	#	100
112) t-Amyl Alcohol	4.469	59	39952	100.0000000	ppb		100
113) TERT-AMYL METHYL ETHER	4.377	73	277274	20.0000000	ppb	#	100
115) N-BUTANOL	4.803	56	492583	4000.0000000	ppb		100
116) Methyl Cyclohexane	4.676	83	268891	20.0000000	ppb		100
117) 2-nitropropane	5.691	43	134802	100.0000000	ppb		100
118) METHYL METHACRYLATE	5.065	41	345295	100.0000000	ppb		100
119) 1,4-DIOXANE	5.132	88	108892	2000.0367343	ppb	#	1
120) n-octane	5.381	85	110853	20.0000000	ppb		100
121) 3,3-DIMETHYL-1-BUTANOL	6.257	57	108023	200.0000000	ppb		100
123) ETHYL METHACRYLATE	5.856	69	447710	100.0000000	ppb		100
124) CIS-1,4-DICHLORO-2-BUTENE	7.419	53	128283	100.0000000	ppb		100
125) Cyclohexanone	7.687	55	174343	200.0000000	ppb		100
126) PENTACHLOROETHANE	7.888	117	296952	100.0000000	ppb		100
127) Hexachloroethane	8.563	117	78218	20.0000000	ppb		100

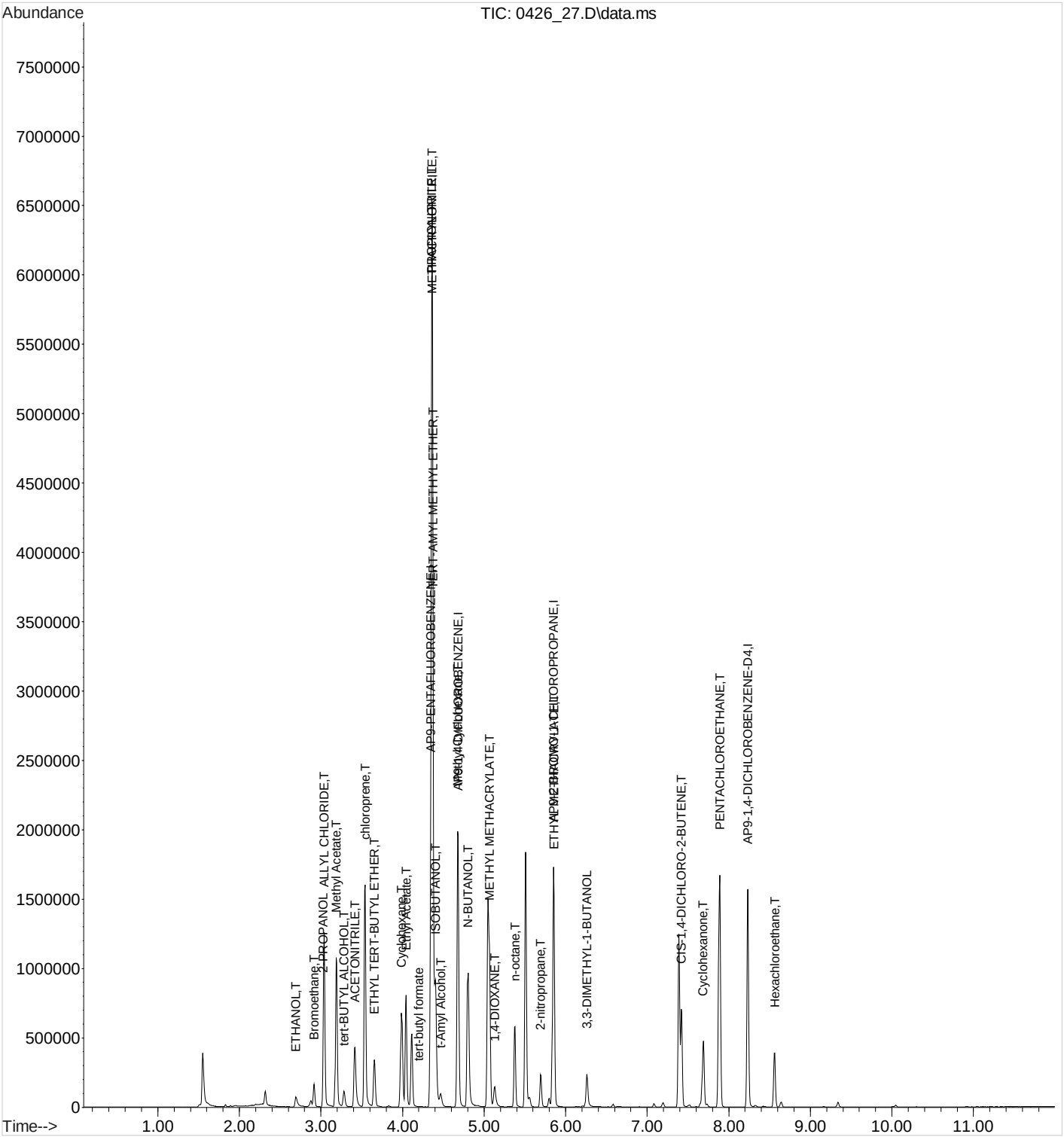
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

InstName : VOCMS30

Data Path : C:\msdchem\1\data\042616\
Data File : 0426 27.D
Acq On : 26 Apr 2016 8:53 pm
Operator : 605
Sample : STD VMS 20 ppb 16D26918
Misc : water IS/SURR16D21640
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Apr 27 09:05:20 2016
Quant Method : C:\msdchem\1\methods\V830D26P.M
Quant Title : Env. Science Corp. 8260B/6210D/624 - VOCMS30
QLast Update : Wed Apr 27 09:00:24 2016
Response via : Initial Calibration



Semi-Volatiles by Method 8270C

ESC LAB SCIENCES
YOUR LAB OF CHOICE

12065 Lebanon Rd
Mt. Juliet, TN 37122
(615) 758-5858
(800) 767-5859
Fax (615) 758-5859
Tax I.D 62-0814289
Est. 1970

Quality Control Summary
SDG: L836976

Semi-Volatiles by Method 8270C
Weston Solutions - CO

Project: Cowboy Timber
Project No: 0263

Login No: L836976

Lab SampleID.	Client ID
L836976-01	CTSO-06-20160518
L836976-02	CTSO-E3D01-20160517
L836976-03	CTSO-D8D23-20160518
L836976-04	CTSO-C6D12-20160519
L836976-05	CTSO-C7D12-20160519

I certify that this data package accurately represents the information in the raw data found herein, both technically and for completeness. Release of the data contained in this data package has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: _____ Name: ESC Lab Sciences

Date: _____ Title: Quality Control

ESC LAB SCIENCES
YOUR LAB OF CHOICE

12065 Lebanon Rd
Mt. Juliet, TN 37122
(615) 758-5858
(800) 767-5859
Fax (615) 758-5859
Tax I.D 62-0814289
Est. 1970

Quality Control Summary
SDG: L836976
Weston Solutions - CO

Test:	Semi-Volatiles by Method 8270C		
Project No:	0263	Matrix:	Soil - ug/kg
Project:	Cowboy Timber	EPA ID:	TN00003
Collection Date:	5/18/2016	**Analytic Batch:**	**WG874391**
Analysis Date:	5/24/2016	Analyst:	543
Instrument ID:	BNAMS4	Prep Date:	5/21/2016
Sample Numbers:	L836976-01, -03, -04, -05, -02		

Method Blank Summary

Instrument	Client Sample ID	Lab Sample ID	File Name	Analysis Date	Analysis Time
BNAMS4	LCS WG874391	LCS WG874391	0524_04.D	5/24/2016	9:56 AM
BNAMS4	LCSD WG874391	LCSD WG874391	0524_05.D	5/24/2016	10:19 AM
BNAMS4	Blank WG874391	Blank WG874391	0524_06.D	5/24/2016	10:51 AM
BNAMS4	CTSO-06-20160518	L836976-01	0524_12.D	5/24/2016	1:12 PM
BNAMS4	MS WG874391	MS WG874391	0524_13.D	5/24/2016	1:35 PM
BNAMS4	MSD WG874391	MSD WG874391	0524_14.D	5/24/2016	1:58 PM
BNAMS4	CTSO-D8D23-20160518	L836976-03	0524_15.D	5/24/2016	2:22 PM
BNAMS4	CTSO-C6D12-20160519	L836976-04	0524_16.D	5/24/2016	2:45 PM
BNAMS4	CTSO-C7D12-20160519	L836976-05	0524_17.D	5/24/2016	3:09 PM
BNAMS4	CTSO-E3D01-20160517	L836976-02	0525_07.D	5/25/2016	11:00 AM
BNAMS4	CTSO-D8D23-20160518	L836976-03	0525A_11.D	5/25/2016	6:35 PM
BNAMS4	CTSO-C6D12-20160519	L836976-04	0525A_12.D	5/25/2016	6:58 PM
BNAMS4	CTSO-C7D12-20160519	L836976-05	0525A_13.D	5/25/2016	7:21 PM

Parameters in bold text are reported in this SDG

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12065 Lebanon Rd
Mt. Juliet, TN 37122
(615) 758-5858
(800) 767-5859
Fax (615) 758-5859
Tax I.D 62-0814289
Est. 1970

Quality Control Summary
SDG: L836976
Weston Solutions - CO

Test:	Semi-Volatiles by Method 8270C		
Project No:	0263	Matrix:	Soil - ug/kg
Project:	Cowboy Timber	EPA ID:	TN00003
Collection Date:	5/18/2016	**Analytic Batch:**	**WG874391**
Analysis Date:	5/24/2016	Analyst:	543
Instrument ID:	BNAMS4	Prep Date:	5/21/2016
Sample Numbers:	L836976-01, -03, -04, -05, -02		

Internal Standard Response and Retention Time Summary

File ID: 0524_02
Analyzed: 05/24/16 090900

	DCB		NAP		ACE		PHEN	
	Response	**RT**	**Response**	**RT**	**Response**	**RT**	**Response**	**RT**
12 Hr. Std	79155	5.29	448022	6.56	271716	8.44	467111	10.06
Upper Limit	158000	5.79	896000	7.06	543000	8.94	934000	10.56
Lower Limit	39600	4.79	224000	6.06	136000	7.94	234000	9.56
Sample ID	**Response**	**RT**	**Response**	**RT**	**Response**	**RT**	**Response**	**RT**
L836976-01	43814	5.29	253068	6.56	150767	8.43	265392	10.05
L836976-03	46620	5.29	260112	6.56	178462	8.43	317581	10.06
L836976-04	50080	5.29	283592	6.56	189894	8.44	334011	10.08
L836976-05	49955	5.29	284059	6.56	221282	8.44	327955	10.11
MSD WG874391	55646	5.29	314531	6.56	192492	8.44	343431	10.06
MS WG874391	51879	5.29	296038	6.56	191680	8.44	337125	10.06
LCSD WG874391	51992	5.29	289989	6.56	180391	8.44	314947	10.06
LCS WG874391	47565	5.29	276355	6.56	177515	8.44	311110	10.06
BLANK WG874391	52042	5.29	286480	6.56	172233	8.44	305903	10.06

Legend:
DCB -- 1,4-Dichlorobenzene-d4
NAP -- Naphthalene-d8
ACE -- Acenaphthene-d10
PHEN -- Phenanthrene-d10
CHR -- Chrysene-d12
PER -- Perylene-d12

Parameters in bold text are reported in this SDG

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Quality Control Summary
SDG: L836976
Weston Solutions - CO

Test:	Semi-Volatiles by Method 8270C		
Project No:	0263	Matrix:	Soil - ug/kg
Project:	Cowboy Timber	EPA ID:	TN00003
Collection Date:	5/18/2016	**Analytic Batch:**	**WG874391**
Analysis Date:	5/24/2016	Analyst:	543
Instrument ID:	BNAMS4	Prep Date:	5/21/2016
Sample Numbers:	L836976-01, -03, -04, -05, -02		

Internal Standard Response and Retention Time Summary

File ID: 0524_02
Analyzed: 05/24/16 090900

	DCB		CHR			PER	
	Response	**RT**	**Response**	**RT**		**Response**	**RT**
12 Hr. Std	79155	5.29	483745	12.94		489602	14.74
Upper Limit	158000	5.79	967000	13.44		979000	15.24
Lower Limit	39600	4.79	242000	12.44		245000	14.24
Sample ID	**Response**	**RT**	**Response**	**RT**		**Response**	**RT**
L836976-01	43814	5.29	256750	12.93		251023	14.74
L836976-03	46620	5.29	222439	12.95	*		
L836976-04	50080	5.29	247241	12.96			
L836976-05	49955	5.29	183525	12.97	*		
MSD WG874391	55646	5.29	361192	12.94		324705	14.74
MS WG874391	51879	5.29	358849	12.94		320222	14.74
LCSD WG874391	51992	5.29	315442	12.94		326323	14.74
LCS WG874391	47565	5.29	316662	12.94		326254	14.75
BLANK WG874391	52042	5.29	298323	12.94		298333	14.74

Legend:
DCB -- 1,4-Dichlorobenzene-d4
NAP -- Naphthalene-d8
ACE -- Acenaphthene-d10
PHEN -- Phenanthrene-d10
CHR -- Chrysene-d12
PER -- Perylene-d12

Parameters in bold text are reported in this SDG

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Quality Control Summary
SDG: L836976
Weston Solutions - CO

Test:	Semi-Volatiles by Method 8270C		
Project No:	0263	Matrix:	Soil - ug/kg
Project:	Cowboy Timber	EPA ID:	TN00003
Collection Date:	5/18/2016	**Analytic Batch:**	**WG874391**
Analysis Date:	5/24/2016	Analyst:	543
Instrument ID:	BNAMS4	Prep Date:	5/21/2016
Sample Numbers:	L836976-01, -03, -04, -05, -02		

Internal Standard Response and Retention Time Summary

File ID: 0525_02
Analyzed: 05/25/16 094500

	DCB		NAP		ACE		PHEN	
	Response	**RT**	**Response**	**RT**	**Response**	**RT**	**Response**	**RT**
12 Hr. Std	80935	5.29	464025	6.56	284711	8.44	501194	10.06
Upper Limit	162000	5.79	928000	7.06	569000	8.94	1000000	10.56
Lower Limit	40500	4.79	232000	6.06	142000	7.94	251000	9.56
Sample ID	**Response**	**RT**	**Response**	**RT**	**Response**	**RT**	**Response**	**RT**
L836976-02 10X	54805	5.29	316250	6.56	195387	8.43	353363	10.06

Legend:
DCB -- 1,4-Dichlorobenzene-d4
NAP -- Naphthalene-d8
ACE -- Acenaphthene-d10
PHEN -- Phenanthrene-d10
CHR -- Chrysene-d12
PER -- Perylene-d12

Parameters in bold text are reported in this SDG

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Quality Control Summary
SDG: L836976
Weston Solutions - CO

Test:	Semi-Volatiles by Method 8270C		
Project No:	0263	Matrix:	Soil - ug/kg
Project:	Cowboy Timber	EPA ID:	TN00003
Collection Date:	5/18/2016	**Analytic Batch:**	**WG874391**
Analysis Date:	5/24/2016	Analyst:	543
Instrument ID:	BNAMS4	Prep Date:	5/21/2016
Sample Numbers:	L836976-01, -03, -04, -05, -02		

Internal Standard Response and Retention Time Summary

File ID: 0525_02
Analyzed: 05/25/16 094500

	DCB		CHR		PER	
	Response	**RT**	**Response**	**RT**	**Response**	**RT**
12 Hr. Std	80935	5.29	483823	12.94	489577	14.74
Upper Limit	162000	5.79	968000	13.44	979000	15.24
Lower Limit	40500	4.79	242000	12.44	245000	14.24
Sample ID	**Response**	**RT**	**Response**	**RT**	**Response**	**RT**
L836976-02 10X	54805	5.29	382021	12.95	343959	14.77

Legend:
DCB -- 1,4-Dichlorobenzene-d4
NAP -- Naphthalene-d8
ACE -- Acenaphthene-d10
PHEN -- Phenanthrene-d10
CHR -- Chrysene-d12
PER -- Perylene-d12

Parameters in bold text are reported in this SDG

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Quality Control Summary
SDG: L836976
Weston Solutions - CO

Test:	Semi-Volatiles by Method 8270C		
Project No:	0263	Matrix:	Soil - ug/kg
Project:	Cowboy Timber	EPA ID:	TN00003
Collection Date:	5/18/2016	**Analytic Batch:**	**WG874391**
Analysis Date:	5/24/2016	Analyst:	543
Instrument ID:	BNAMS4	Prep Date:	5/21/2016
Sample Numbers:	L836976-01, -03, -04, -05, -02		

Internal Standard Response and Retention Time Summary

File ID: 0525A_02
Analyzed: 05/25/16 150400

	DCB		NAP		ACE		PHEN	
	Response	**RT**	**Response**	**RT**	**Response**	**RT**	**Response**	**RT**
12 Hr. Std	82558	5.29	469342	6.56	289117	8.44	496031	10.06
Upper Limit	165000	5.79	939000	7.06	578000	8.94	992000	10.56
Lower Limit	41300	4.79	235000	6.06	145000	7.94	248000	9.56
Sample ID	**Response**	**RT**	**Response**	**RT**	**Response**	**RT**	**Response**	**RT**
L836976-03 10X	61415	5.29	347719	6.56	213830	8.43	393746	10.06
L836976-04 20X	64363	5.29	376589	6.56	236846	8.43	437963	10.06
L836976-05 50X	65512	5.29	369589	6.56	228067	8.43	418047	10.06

Legend:
DCB -- 1,4-Dichlorobenzene-d4
NAP -- Naphthalene-d8
ACE -- Acenaphthene-d10
PHEN -- Phenanthrene-d10
CHR -- Chrysene-d12
PER -- Perylene-d12

Parameters in bold text are reported in this SDG

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Quality Control Summary
SDG: L836976
Weston Solutions - CO

Test:	Semi-Volatiles by Method 8270C		
Project No:	0263	Matrix:	Soil - ug/kg
Project:	Cowboy Timber	EPA ID:	TN00003
Collection Date:	5/18/2016	**Analytic Batch:**	**WG874391**
Analysis Date:	5/24/2016	Analyst:	543
Instrument ID:	BNAMS4	Prep Date:	5/21/2016
Sample Numbers:	L836976-01, -03, -04, -05, -02		

Internal Standard Response and Retention Time Summary

File ID: 0525A_02
Analyzed: 05/25/16 150400

	DCB		CHR		PER	
	Response	**RT**	**Response**	**RT**	**Response**	**RT**
12 Hr. Std	82558	5.29	501790	12.94	514074	14.75
Upper Limit	165000	5.79	1000000	13.44	1030000	15.25
Lower Limit	41300	4.79	251000	12.44	257000	14.25
Sample ID	**Response**	**RT**	**Response**	**RT**	**Response**	**RT**
L836976-03 10X	61415	5.29	391900	12.94	424586	14.74
L836976-04 20X	64363	5.29	445673	12.94	464391	14.74
L836976-05 50X	65512	5.29	424588	12.94	438665	14.74

Legend:
DCB -- 1,4-Dichlorobenzene-d4
NAP -- Naphthalene-d8
ACE -- Acenaphthene-d10
PHEN -- Phenanthrene-d10
CHR -- Chrysene-d12
PER -- Perylene-d12

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Quality Control Summary
SDG: L836976
Weston Solutions - CO

Test:	Semi-Volatiles by Method 8270C		
Project No:	0263	Matrix:	Soil - ug/kg
Project:	Cowboy Timber	EPA ID:	TN00003
Collection Date:	5/18/2016	**Analytic Batch:**	**WG874391**
Analysis Date:	5/24/2016	Analyst:	543
Instrument ID:	BNAMS4	Prep Date:	5/21/2016
Sample Numbers:	L836976-01, -03, -04, -05, -02		

Surrogate Summary

			TBP		FBP		2FP		NBZ	
Laboratory Sample ID	Instrument	File ID	ppm	% Rec	ppm	% Rec	ppm	% Rec	ppm	% Rec
L836976-01	BNAMS4	0524_12	0.583	87.5	0.274	82.2	0.552	82.9	0.277	83.3
L836976-02 10x	BNAMS4	0525_07	0.534	80.2	0.281	84.4	0.553	83.0	0.289	86.9
L836976-03 10x	BNAMS4	0525A_11	0.421	63.2	0.222	66.8	0.374	56.1	0.208	62.4
L836976-03	BNAMS4	0524_15	0.563	84.5	0.239	71.6	0.432	64.8	0.251	75.5
L836976-04	BNAMS4	0524_16	0.591	88.7	0.253	76.0	0.485	72.8	0.262	78.6
L836976-04 20x	BNAMS4	0525A_12	0.522	78.4 J7	0.246	74.0 J7	0.476	71.4 J7	0.240	72.0 J7
L836976-05 50x	BNAMS4	0525A_13	0.301	45.3 J7	0.210	63.2 J7	0.313	47.0 J7	0.170	51.2 J7
L836976-05	BNAMS4	0524_17	0.530	79.6	0.211	63.3	0.470	70.6	0.251	75.4
LCS WG874391	BNAMS4	0524_04	0.556	83.5	0.250	75.0	0.461	69.2	0.257	77.1
LCSD WG874391	BNAMS4	0524_05	0.539	80.9	0.247	74.2	0.442	66.4	0.248	74.6
BLANK WG874391	BNAMS4	0524_06	0.497	74.7	0.239	71.8	0.452	67.8	0.250	75.0
MS WG874391	BNAMS4	0524_13	0.572	85.9	0.256	76.9	0.482	72.4	0.264	79.4
MSD WG874391	BNAMS4	0524_14	0.551	82.8	0.247	74.0	0.448	67.2	0.244	73.2

TBP --2,4,6-TRIBROMOPHENOL	True Value: 0.666 ppm	Limits: 21.6 - 142
FBP --2-FLUOROBIPHENYL	True Value: 0.333 ppm	Limits: 34.9 - 129
2FP --2-FLUOROPHENOL	True Value: 0.666 ppm	Limits: 21.10 - 116
NBZ --NITROBENZENE-D5	True Value: 0.333 ppm	Limits: 21.9 - 129
TPH --P-TERPHENYL-D14	True Value: 0.333 ppm	Limits: 21.5 - 128
PHL --PHENOL-D5	True Value: 0.666 ppm	Limits: 26.3 - 121

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Quality Control Summary
SDG: L836976
Weston Solutions - CO

Test:	Semi-Volatiles by Method 8270C		
Project No:	0263	Matrix:	Soil - ug/kg
Project:	Cowboy Timber	EPA ID:	TN00003
Collection Date:	5/18/2016	**Analytic Batch:**	**WG874391**
Analysis Date:	5/24/2016	Analyst:	543
Instrument ID:	BNAMS4	Prep Date:	5/21/2016
Sample Numbers:	L836976-01, -03, -04, -05, -02		

Surrogate Summary

			TPH		PHL	
Laboratory Sample ID	Instrument	File ID	ppm	% Rec	ppm	% Rec
L836976-01	BNAMS4	0524_12	0.274	82.4	0.512	76.8
L836976-02 10x	BNAMS4	0525_07	0.287	86.3	0.486	73.0
L836976-03 10x	BNAMS4	0525A_11	0.234	70.4	0.367	55.1
L836976-03	BNAMS4	0524_15	0.377	113	0.431	64.7
L836976-04	BNAMS4	0524_16	0.341	102	0.457	68.6
L836976-04 20x	BNAMS4	0525A_12	0.238	71.5 J7	0.465	69.9 J7
L836976-05 50x	BNAMS4	0525A_13	0.180	54.0 J7	0.299	44.9 J7
L836976-05	BNAMS4	0524_17	0.278	83.5	0.441	66.3
LCS WG874391	BNAMS4	0524_04	0.251	75.4	0.446	66.9
LCSD WG874391	BNAMS4	0524_05	0.248	74.4	0.421	63.3
BLANK WG874391	BNAMS4	0524_06	0.242	72.6	0.421	63.2
MS WG874391	BNAMS4	0524_13	0.246	73.8	0.463	69.5
MSD WG874391	BNAMS4	0524_14	0.236	70.8	0.419	62.9

TBP --2,4,6-TRIBROMOPHENOL	True Value: 0.666 ppm	Limits: 21.6 - 142
FBP --2-FLUOROBIPHENYL	True Value: 0.333 ppm	Limits: 34.9 - 129
2FP --2-FLUOROPHENOL	True Value: 0.666 ppm	Limits: 21.10 - 116
NBZ --NITROBENZENE-D5	True Value: 0.333 ppm	Limits: 21.9 - 129
TPH --P-TERPHENYL-D14	True Value: 0.333 ppm	Limits: 21.5 - 128
PHL --PHENOL-D5	True Value: 0.666 ppm	Limits: 26.3 - 121

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Quality Control Summary
SDG: L836976
Weston Solutions - CO

Test:	Semi-Volatiles by Method 8270C		
Project No:	0263	Matrix:	Soil - mg/kg
Project:	Cowboy Timber	EPA ID:	TN00003
Collection Date:	5/18/2016	**Analytic Batch:**	**WG874391**
Analysis Date:	5/24/2016	Analyst:	543
Instrument ID:	BNAMS4	Prep Date:	5/21/2016
Sample Numbers:	L836976-01, -03, -04, -05, -02		

Instrument Performance Summary

FileID:0524_01.D Date:5/24/2016 Time: 8:46 AM

m/e	Ion Abundance Criteria	% Relative Abundance
51	10 - 80% of mass 198	36.1
68	Less than 2% of mass 69	0.0
69	Base Peak, 100% relative abundance	100.0
70	Less than 2% of mass 69	0.5
127	10 - 80% of mass 198	59.4
197	Less than 2% of mass 198	0.0
198	50 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.4
275	10 - 60% of mass 198	21.6
365	1 - 100% of mass 198	2.5
441	Present, but less than mass 442	14.7
442	50 - 100% of mass 198	84.7
443	15 - 24% of mass 442	19.5

This Check applies to the following samples and quality control samples

Client Sample ID	Laboratory Sample ID	Lab Filename	Date Analyzed	Time Analyzed
LCS WG874391	LCS WG874391	0524_04.D	5/24/2016	9:56 AM
LCSD WG874391	LCSD WG874391	0524_05.D	5/24/2016	10:19 AM
Blank WG874391	Blank WG874391	0524_06.D	5/24/2016	10:51 AM
CTSO-06-20160518	L836976-01	0524_12.D	5/24/2016	1:12 PM
MS WG874391	MS WG874391	0524_13.D	5/24/2016	1:35 PM
MSD WG874391	MSD WG874391	0524_14.D	5/24/2016	1:58 PM
CTSO-D8D23-	L836976-03	0524_15.D	5/24/2016	2:22 PM
CTSO-C6D12-	L836976-04	0524_16.D	5/24/2016	2:45 PM
CTSO-C7D12-	L836976-05	0524_17.D	5/24/2016	3:09 PM

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Quality Control Summary
SDG: L836976
Weston Solutions - CO

Test:	Semi-Volatiles by Method 8270C		
Project No:	0263	Matrix:	Soil - mg/kg
Project:	Cowboy Timber	EPA ID:	TN00003
Collection Date:	5/18/2016	**Analytic Batch:**	**WG874391**
Analysis Date:	5/24/2016	Analyst:	543
Instrument ID:	BNAMS4	Prep Date:	5/21/2016
Sample Numbers:	L836976-01, -03, -04, -05, -02		

Instrument Performance Summary

FileID:0525_01.D Date:5/25/2016 Time: 9:22 AM

m/e	Ion Abundance Criteria	% Relative Abundance
51	30 - 60% of mass 198	34.4
68	Less than 2% of mass 69	0.2
69	Less than 100% of mass 198	38.8
70	Less than 2% of mass 69	0.5
127	40 - 60% of mass 198	57.3
197	Less than 1% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5 - 9% of mass 198	6.6
275	10 - 30% of mass 198	23.2
365	1 - 100% of mass 198	2.6
441	Present, but less than mass 443	78.4
442	40 - 100% of mass 198	92.0
443	17 - 23% of mass 442	19.3

This Check applies to the following samples and quality control samples

Client Sample ID	Laboratory Sample ID	Lab Filename	Date Analyzed	Time Analyzed
CTSO-E3D01-	L836976-02	0525_07.D	5/25/2016	11:00 AM

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(800) 767-5859
Fax (615) 758-5859
Tax I.D 62-0814289
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Quality Control Summary
SDG: L836976
Weston Solutions - CO

Test:	Semi-Volatiles by Method 8270C		
Project No:	0263	Matrix:	Soil - mg/kg
Project:	Cowboy Timber	EPA ID:	TN00003
Collection Date:	5/18/2016	**Analytic Batch:**	**WG874391**
Analysis Date:	5/24/2016	Analyst:	543
Instrument ID:	BNAMS4	Prep Date:	5/21/2016
Sample Numbers:	L836976-01, -03, -04, -05, -02		

Instrument Performance Summary

FileID:0525A_01.D Date:5/25/2016 Time: 2:41 PM

m/e	Ion Abundance Criteria	% Relative Abundance
51	30 - 60% of mass 198	33.0
68	Less than 2% of mass 69	0.0
69	Less than 100% of mass 198	38.5
70	Less than 2% of mass 69	0.5
127	40 - 60% of mass 198	57.2
197	Less than 1% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5 - 9% of mass 198	6.7
275	10 - 30% of mass 198	22.0
365	1 - 100% of mass 198	2.5
441	Present, but less than mass 443	77.2
442	40 - 100% of mass 198	89.3
443	17 - 23% of mass 442	19.0

This Check applies to the following samples and quality control samples

Client Sample ID	Laboratory Sample ID	Lab Filename	Date Analyzed	Time Analyzed
CTSO-D8D23-	L836976-03	0525A_11.D	5/25/2016	6:35 PM
CTSO-C6D12-	L836976-04	0525A_12.D	5/25/2016	6:58 PM
CTSO-C7D12-	L836976-05	0525A_13.D	5/25/2016	7:21 PM

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Mt. Juliet, TN 37122
(615) 758-5858
(800) 767-5859
Fax (615) 758-5859
Tax I.D 62-0814289
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Quality Control Summary
SDG: L836976
Weston Solutions - CO

Test: Semi-Volatiles by Method 8270C
Project: Cowboy Timber
Instrument ID: BNAMS4
Method Name : S804D25P.M

Relative Response Factor Summary

Compound Name	Level 500	Level 1K	Level 4K	Level 10K	Level 20K	Level 30K	Level 40K	Level 50K	Level 1K1	Average RRF	%RSD
Pyridine	2.553	2.964	2.889	2.731	2.863	2.944	2.939	2.870		2.844143	4.86
N-Nitrosodimethylamine	0.944	1.169	1.158	1.049	1.110	1.125	1.090	1.047		1.086465	6.71
2-Fluorophenol	1.737	1.997	1.873	1.757	1.850	1.898	1.916	1.872		1.862512	4.52
Aniline	1.317	1.268	1.226	1.123	1.152	1.178	1.181	1.119		1.195484	5.88
bis(2-Chloroethyl)ether	1.799	1.897	1.848	1.716	1.703	1.717	1.709	1.576		1.745554	5.73
Phenol-d5	2.367	2.508	2.490	2.317	2.413	2.471	2.491	2.401		2.432199	2.82
Phenol	2.522	2.657	2.608	2.442	2.521	2.543	2.541	2.396		2.528718	3.28
Benzaldehyde									1.308	1.342175	3.69
2-Chlorophenol	2.297	2.289	2.260	2.099	2.177	2.204	2.194	2.085		2.200607	3.65
n-Decane	0.995	0.991	0.947	0.848	0.820	0.789	0.753	0.677		0.852409	13.61
1,3-Dichlorobenzene	2.293	2.283	2.314	2.164	2.198	2.230	2.237	2.155		2.234125	2.67
1,4-Dichlorobenzene	2.294	2.463	2.334	2.195	2.237	2.269	2.297	2.184		2.284186	3.88
Benzyl Alcohol	1.575	1.644	1.629	1.513	1.579	1.599	1.607	1.546		1.586458	2.70
1,2-Dichlorobenzene	2.279	2.358	2.281	2.120	2.159	2.185	2.198	2.129		2.213684	3.80
bis(2-Chloroisopropyl)ether	0.692	0.735	0.696	0.649	0.675	0.683	0.684	0.655		0.683693	3.91
2-Methylphenol	1.884	2.050	2.014	1.888	1.941	1.975	1.975	1.893		1.952429	3.17
Hexachloroethane	0.995	0.999	0.983	0.921	0.925	0.942	0.943	0.903		0.951390	3.84
N-Nitrosodi-n-propylamine	1.403	1.493	1.459	1.369	1.399	1.406	1.399	1.350		1.409490	3.27
3&4-Methyl phenol	2.260	2.363	2.330	2.172	2.273	2.313	2.334	2.243		2.285916	2.70
Acetophenone									2.668	2.542437	3.91
Nitrobenzene-d5	0.352	0.365	0.351	0.341	0.347	0.348	0.346	0.338		0.348494	2.30
Nitrobenzene	0.356	0.356	0.355	0.342	0.345	0.342	0.339	0.329		0.345565	2.81
Isophorone	0.618	0.638	0.652	0.619	0.643	0.640	0.633	0.612		0.631902	2.24
2-Nitrophenol	0.172	0.185	0.195	0.194	0.201	0.208	0.209	0.206		0.196141	6.44
2,4-Dimethylphenol	0.355	0.372	0.358	0.344	0.346	0.344	0.340	0.331		0.348846	3.62
bis(2-Chlorethoxy)methane	0.443	0.475	0.467	0.440	0.446	0.445	0.441	0.427		0.447890	3.44
2,4-Dichlorophenol	0.264	0.301	0.294	0.283	0.293	0.294	0.294	0.288		0.288900	3.89
Benzoic Acid									0.025	0.138472	55.71

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Quality Control Summary
SDG: L836976
Weston Solutions - CO

Test: Semi-Volatiles by Method 8270C
Project: Cowboy Timber
Instrument ID: BNAMS4
Method Name : S804D25P.M

Relative Response Factor Summary

Compound Name	Level 500	Level 1K	Level 4K	Level 10K	Level 20K	Level 30K	Level 40K	Level 50K	Level 1K1	Average RRF	%RSD
1,2,4-Trichlorobenzene	0.295	0.296	0.297	0.282	0.285	0.288	0.284	0.277		0.288034	2.57
Naphthalene	1.269	1.282	1.220	1.149	1.157	1.160	1.132	1.092		1.182562	5.69
4-Chloroaniline	0.145	0.147	0.142	0.136	0.134	0.133	0.129	0.123		0.136044	5.88
Hexachloro-1,3-butadiene	0.131	0.133	0.132	0.120	0.123	0.124	0.121	0.119		0.125393	4.60
Caprolactam									0.095	0.104770	6.24
4-Chloro-3-methylphenol	0.297	0.323	0.322	0.313	0.323	0.326	0.329	0.315		0.318631	3.18
2-Methylnaphthalene	0.756	0.817	0.804	0.764	0.784	0.777	0.764	0.743		0.776127	3.20
1-Methylnaphthalene	0.718	0.742	0.713	0.684	0.692	0.688	0.682	0.661		0.697457	3.66
1,2,4,5-Tetrachlorobenzene									0.257	0.240673	4.21
Hexachlorocyclopentadiene		0.167	0.195	0.216	0.231	0.232	0.238	0.230		0.215708	11.99
2,4,6-Trichlorophenol	0.261	0.285	0.309	0.309	0.320	0.326	0.329	0.321		0.307518	7.57
2,4,5-Trichlorophenol	0.281	0.303	0.338	0.335	0.345	0.348	0.350	0.341		0.330293	7.50
2-Fluorobiphenyl	1.373	1.389	1.344	1.278	1.320	1.304	1.292	1.226		1.315822	4.03
Biphenyl	1.535	1.646	1.595	1.524	1.544	1.541	1.530	1.469		1.547924	3.38
2-Chloronaphthalene	1.232	1.264	1.238	1.203	1.232	1.212	1.191	1.157		1.216121	2.72
2-Nitroaniline	0.358	0.382	0.429	0.429	0.452	0.460	0.466	0.457		0.428783	9.18
Acenaphthylene	1.924	2.011	1.937	1.882	1.966	1.961	1.949	1.884		1.939170	2.22
Dimethyl phthalate	1.212	1.279	1.291	1.225	1.283	1.294	1.307	1.290		1.272658	2.72
2,6-Dinitrotoluene	0.285	0.303	0.311	0.311	0.326	0.324	0.332	0.325		0.314781	4.90
3-Nitroaniline	0.333	0.386	0.382	0.367	0.388	0.395	0.400	0.392		0.380502	5.69
Acenaphthene	1.285	1.353	1.297	1.246	1.271	1.266	1.251	1.199		1.271093	3.49
2,4-Dinitrophenol			0.103	0.145	0.166	0.183	0.198	0.201		0.166225	22.47
Dibenzofuran	1.729	1.891	1.753	1.692	1.748	1.733	1.727	1.665		1.742194	3.83
2,4-Dinitrotoluene	0.344	0.403	0.407	0.418	0.436	0.439	0.458	0.447		0.418968	8.54
2,3,4,6-Tetrachlorophenol									0.146	0.180186	12.34
4-Nitrophenol	0.224	0.267	0.289	0.302	0.319	0.330	0.336	0.326		0.299210	12.76
Fluorene	1.392	1.534	1.465	1.404	1.439	1.434	1.429	1.384		1.435214	3.35
4-Chlorophenyl-phenylether	0.544	0.589	0.565	0.543	0.555	0.556	0.553	0.528		0.554083	3.27
Diethyl phthalate	1.237	1.375	1.361	1.325	1.368	1.375	1.373	1.294		1.338573	3.75

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Fax (615) 758-5859
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Quality Control Summary
SDG: L836976
Weston Solutions - CO

Test: Semi-Volatiles by Method 8270C
Project: Cowboy Timber
Instrument ID: BNAMS4
Method Name : S804D25P.M

Relative Response Factor Summary

Compound Name	Level 500	Level 1K	Level 4K	Level 10K	Level 20K	Level 30K	Level 40K	Level 50K	Level 1K1	Average RRF	%RSD
4-Nitroaniline	0.334	0.393	0.392	0.383	0.405	0.376	0.376	0.374		0.379185	5.62
Azobenzene	1.348	1.516	1.504	1.404	1.436	1.404	1.407	1.349		1.420820	4.41
Atrazine									0.277	0.281614	4.98
4,6-Dinitro-2-methylphenol			0.106	0.119	0.133	0.141	0.145	0.147		0.131962	12.23
N-Nitrosodiphenylamine	0.654	0.730	0.738	0.695	0.724	0.741	0.761	0.749		0.723975	4.74
2,4,6-Tribromophenol	0.075	0.071	0.083	0.081	0.087	0.089	0.094	0.094		0.084168	9.98
4-Bromophenyl-phenylether	0.167	0.174	0.171	0.166	0.175	0.180	0.183	0.183		0.174934	3.79
Hexachlorobenzene	0.179	0.195	0.192	0.179	0.186	0.189	0.193	0.194		0.188349	3.35
n-octadecane	0.148	0.156	0.157	0.140	0.141	0.133	0.126	0.116		0.139583	10.16
Pentachlorophenol			0.085	0.102	0.114	0.121	0.126	0.127		0.112489	14.64
Phenanthrene	1.200	1.231	1.202	1.150	1.213	1.211	1.206	1.185		1.199695	2.00
Anthracene	1.113	1.217	1.214	1.171	1.229	1.235	1.245	1.204		1.203520	3.57
Carbazole	1.142	1.276	1.239	1.205	1.252	1.258	1.265	1.241		1.234823	3.49
Di-n-butyl phthalate	1.309	1.404	1.526	1.511	1.586	1.607	1.615	1.605		1.520259	7.29
2-nitrodiphenylamine										0.250773	10.43
Fluoranthene	1.067	1.172	1.163	1.164	1.254	1.292	1.302	1.297		1.213999	7.02
Benzidine									0.762	0.891972	9.31
Pyrene	1.364	1.451	1.401	1.429	1.431	1.502	1.479	1.457		1.439097	3.03
p-Terphenyl-d14	0.971	0.924	0.986	1.017	1.015	1.056	1.034	1.022		1.003167	4.13
Benzylbutyl phthalate	0.685	0.756	0.765	0.793	0.808	0.845	0.830	0.808		0.786259	6.44
3,3-Dichlorobenzidine									0.308	0.336827	7.94
Benzo(a)anthracene	1.224	1.294	1.230	1.237	1.248	1.308	1.295	1.277		1.264149	2.63
Chrysene	1.201	1.256	1.174	1.157	1.193	1.246	1.225	1.198		1.206418	2.84
bis(2-Ethylhexyl)phthalate	1.187	1.178	1.165	1.178	1.219	1.279	1.234	1.209		1.206271	3.12
Di-n-octyl phthalate	1.883	2.031	2.103	2.096	2.213	2.302	2.229	2.201		2.132236	6.24
Benzo(b)fluoranthene	1.181	1.275	1.223	1.273	1.320	1.404	1.382	1.378		1.304516	6.17
Benzo(k)fluoranthene	1.079	1.227	1.161	1.208	1.239	1.237	1.333	1.278		1.220033	6.22
Benzo(a)pyrene	1.053	1.151	1.159	1.166	1.251	1.295	1.336	1.317		1.216011	8.13
Indeno(1,2,3-cd)pyrene	1.284	1.362	1.363	1.344	1.385	1.343	1.370	1.324		1.346962	2.33

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Quality Control Summary
SDG: L836976
Weston Solutions - CO

Test: Semi-Volatiles by Method 8270C
Project: Cowboy Timber
Instrument ID: BNAMS4
Method Name : S804D25P.M

Relative Response Factor Summary

Compound Name	Level 500	Level 1K	Level 4K	Level 10K	Level 20K	Level 30K	Level 40K	Level 50K	Level 1K1	Average RRF	%RSD
Dibenz(a,h)anthracene	1.065	1.168	1.178	1.164	1.209	1.189	1.204	1.162		1.167280	3.86
Benzo(g,h,i)perylene	1.107	1.174	1.148	1.128	1.126	1.073	1.086	1.048		1.111262	3.72

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Fax (615) 758-5859
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Quality Control Summary
SDG: L836976
Weston Solutions - CO

Test: Semi-Volatiles by Method 8270C
Project No: 0263
Project: Cowboy Timber EPA ID: TN00003
Collection Date: 5/18/2016
Instrument ID: BNAMS4

Method Name : S804D25P.M
FileName : 0524_02.D

Date : 5/24/2016
Time : 9:09 AM

Continuing Calibration Verification

Compound Name	Average RRF	CCC RRF	%D		
n-Nitrosodimethylamine	1.0865	1.0454	3.78		
Bis(2-chloroethyl)ether	1.7456	1.6015	8.25		
Phenol	2.5287	2.2385	11.5		
2-Chlorophenol	2.2006	2.0620	6.3		
1,4-Dichlorobenzene	2.2842	2.1757	4.75		
Bis(2-chloroisopropyl)ether	0.6837	0.6338	7.29		
Hexachloroethane	0.9514	0.9356	1.66		
n-Nitrosodi-n-propylamine	1.4095	1.3214	6.25	>0.05	
Nitrobenzene	0.3456	0.3495	1.14		
Isophorone	0.6319	0.6185	2.12		
2-Nitrophenol	0.1961	0.2067	5.39		
2,4-Dimethylphenol	0.3488	0.3573	2.43		
Bis(2-chlorethoxy)methane	0.4479	0.4037	9.86		
2,4-Dichlorophenol	0.2889	0.2992	3.55		
1,2,4-Trichlorobenzene	0.2880	0.2987	3.7		
Naphthalene	1.1826	1.1344	4.07		
Hexachloro-1,3-butadiene	0.1254	0.1421	13.3		
4-Chloro-3-methylphenol	0.3186	0.3296	3.45		
Hexachlorocyclopentadiene	0.2157	0.2259	4.71	>0.05	
2,4,6-Trichlorophenol	0.3075	0.3250	5.69		
2-Chloronaphthalene	1.2161	1.1757	3.32		
Acenaphthylene	1.9392	1.8578	4.19		
Dimethyl phthalate	1.2727	1.2791	0.5		
2,6-Dinitrotoluene	0.3148	0.3136	0.37		
Acenaphthene	1.2711	1.2239	3.72		
2,4-Dinitrophenol	0.1662	0.1678	0.94	>0.05	**
2,4-Dinitrotoluene	0.4190	0.4306	2.78		
4-Nitrophenol	0.2992	0.2810	6.1	>0.05	
Fluorene	1.4352	1.4062	2.02		
4-Chlorophenyl-phenylether	0.5541	0.5618	1.38		
Diethyl phthalate	1.3386	1.3896	3.81		

*** - calibrated by linear regression*

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Quality Control Summary
SDG: L836976
Weston Solutions - CO

Test: Semi-Volatiles by Method 8270C
Project No: 0263
Project: Cowboy Timber EPA ID: TN00003
Collection Date: 5/18/2016
Instrument ID: BNAMS4

Method Name : S804D25P.M
FileName : 0524_02.D

Date : 5/24/2016
Time : 9:09 AM

Continuing Calibration Verification

Compound Name	Average RRF	CCC RRF	%D
4,6-Dinitro-2-methylphenol	0.1320	0.1286	2.53
n-Nitrosodiphenylamine	0.7240	0.7016	3.09
4-Bromophenyl-phenylether	0.1749	0.1778	1.64
Hexachlorobenzene	0.1883	0.1938	2.88
Pentachlorophenol	0.1125	0.1071	4.82
Phenanthrene	1.1997	1.1488	4.24
Anthracene	1.2035	1.1793	2.01
Di-n-butyl phthalate	1.5203	1.5096	0.7
Fluoranthene	1.2140	1.2319	1.47
Pyrene	1.4391	1.2488	13.2
Benzylbutyl phthalate	0.7863	0.7200	8.42
Benzo(a)anthracene	1.2641	1.1258	10.9
Chrysene	1.2064	1.0834	10.2
Bis(2-ethylhexyl)phthalate	1.2063	1.0944	9.28
Di-n-octyl phthalate	2.1322	2.0102	5.72
Benzo(b)fluoranthene	1.3045	1.1592	11.1
Benzo(k)fluoranthene	1.2200	1.1528	5.51
Benzo(a)pyrene	1.2160	1.1456	5.79
Indeno(1,2,3-cd)pyrene	1.3470	1.2372	8.15
Dibenz(a,h)anthracene	1.1673	1.0611	9.1
Benzo(g,h,i)perylene	1.1113	1.0237	7.88

*** - calibrated by linear regression*

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Quality Control Summary
SDG: L836976
Weston Solutions - CO

Test: Semi-Volatiles by Method 8270C
Project No: 0263
Project: Cowboy Timber EPA ID: TN00003
Collection Date: 5/18/2016
Instrument ID: BNAMS4

Method Name : S804D25P.M
FileName : 0524_03.D

Date : 5/24/2016
Time : 9:32 AM

Continuing Calibration Verification

Compound Name	Average RRF	CCC RRF	%D
Benzidine	0.8920	0.8559	4.04

** - *calibrated by linear regression*

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Quality Control Summary
SDG: L836976
Weston Solutions - CO

Test: Semi-Volatiles by Method 8270C
Project No: 0263
Project: Cowboy Timber EPA ID: TN00003
Collection Date: 5/18/2016
Instrument ID: BNAMS4

Method Name : S804D25P.M
FileName : 0525_02.D

Date : 5/25/2016
Time : 9:45 AM

Continuing Calibration Verification

Compound Name	Average RRF	CCC RRF	%D		
n-Nitrosodimethylamine	1.0865	1.0086	7.16		
Bis(2-chloroethyl)ether	1.7456	1.5997	8.36		
Phenol	2.5287	2.2653	10.4		
2-Chlorophenol	2.2006	2.0797	5.49		
1,4-Dichlorobenzene	2.2842	2.2318	2.3		
Bis(2-chloroisopropyl)ether	0.6837	0.6436	5.86		
Hexachloroethane	0.9514	0.9484	0.31		
n-Nitrosodi-n-propylamine	1.4095	1.3036	7.51	>0.05	
Nitrobenzene	0.3456	0.3479	0.68		
Isophorone	0.6319	0.6171	2.35		
2-Nitrophenol	0.1961	0.2082	6.13		
2,4-Dimethylphenol	0.3488	0.3527	1.1		
Bis(2-chlorethoxy)methane	0.4479	0.4077	8.98		
2,4-Dichlorophenol	0.2889	0.3021	4.58		
1,2,4-Trichlorobenzene	0.2880	0.2979	3.43		
Naphthalene	1.1826	1.1355	3.98		
Hexachloro-1,3-butadiene	0.1254	0.1436	14.5		
4-Chloro-3-methylphenol	0.3186	0.3282	2.99		
Hexachlorocyclopentadiene	0.2157	0.2141	0.74	>0.05	
2,4,6-Trichlorophenol	0.3075	0.3255	5.85		
2-Chloronaphthalene	1.2161	1.1681	3.95		
Acenaphthylene	1.9392	1.8453	4.84		
Dimethyl phthalate	1.2727	1.2627	0.78		
2,6-Dinitrotoluene	0.3148	0.3109	1.22		
Acenaphthene	1.2711	1.2124	4.62		
2,4-Dinitrophenol	0.1662	0.1688	1.52	>0.05	**
2,4-Dinitrotoluene	0.4190	0.4277	2.08		
4-Nitrophenol	0.2992	0.2813	6	>0.05	
Fluorene	1.4352	1.3913	3.06		
4-Chlorophenyl-phenylether	0.5541	0.5635	1.69		
Diethyl phthalate	1.3386	1.3496	0.82		

*** - calibrated by linear regression*

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Quality Control Summary
SDG: L836976
Weston Solutions - CO

Test: Semi-Volatiles by Method 8270C
Project No: 0263
Project: Cowboy Timber EPA ID: TN00003
Collection Date: 5/18/2016
Instrument ID: BNAMS4

Method Name : S804D25P.M
FileName : 0525_02.D

Date : 5/25/2016
Time : 9:45 AM

Continuing Calibration Verification

Compound Name	Average RRF	CCC RRF	%D
4,6-Dinitro-2-methylphenol	0.1320	0.1245	5.63
n-Nitrosodiphenylamine	0.7240	0.6777	6.4
4-Bromophenyl-phenylether	0.1749	0.1721	1.6
Hexachlorobenzene	0.1883	0.1896	0.64
Pentachlorophenol	0.1125	0.1083	3.74
Phenanthrene	1.1997	1.1301	5.8
Anthracene	1.2035	1.1613	3.51
Di-n-butyl phthalate	1.5203	1.4895	2.02
Fluoranthene	1.2140	1.1884	2.11
Pyrene	1.4391	1.3044	9.36
Benzylbutyl phthalate	0.7863	0.7286	7.33
Benzo(a)anthracene	1.2641	1.1466	9.3
Chrysene	1.2064	1.1062	8.31
Bis(2-ethylhexyl)phthalate	1.2063	1.0961	9.14
Di-n-octyl phthalate	2.1322	1.9788	7.2
Benzo(b)fluoranthene	1.3045	1.1555	11.4
Benzo(k)fluoranthene	1.2200	1.1506	5.69
Benzo(a)pyrene	1.2160	1.1343	6.72
Indeno(1,2,3-cd)pyrene	1.3470	1.3144	2.42
Dibenz(a,h)anthracene	1.1673	1.1259	3.55
Benzo(g,h,i)perylene	1.1113	1.0964	1.34

*** - calibrated by linear regression*

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(800) 767-5859
Fax (615) 758-5859
Tax I.D 62-0814289
Est. 1970

Quality Control Summary
SDG: L836976
Weston Solutions - CO

Test: Semi-Volatiles by Method 8270C
Project No: 0263
Project: Cowboy Timber EPA ID: TN00003
Collection Date: 5/18/2016
Instrument ID: BNAMS4

Method Name : S804D25P.M
FileName : 0525_03.D

Date : 5/25/2016
Time : 10:08 AM

Continuing Calibration Verification

Compound Name	Average RRF	CCC RRF	%D
Benzidine	0.8920	0.8404	5.78

** - *calibrated by linear regression*

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Est. 1970

Quality Control Summary
SDG: L836976
Weston Solutions - CO

Test: Semi-Volatiles by Method 8270C
Project No: 0263
Project: Cowboy Timber EPA ID: TN00003
Collection Date: 5/18/2016
Instrument ID: BNAMS4

Method Name : S804D25P.M
FileName : 0525A_02.D

Date : 5/25/2016
Time : 3:04 PM

Continuing Calibration Verification

Compound Name	Average RRF	CCC RRF	%D		
n-Nitrosodimethylamine	1.0865	0.9742	10.3		
Bis(2-chloroethyl)ether	1.7456	1.5666	10.3		
Phenol	2.5287	2.2729	10.1		
2-Chlorophenol	2.2006	2.0761	5.66		
1,4-Dichlorobenzene	2.2842	2.2073	3.37		
Bis(2-chloroisopropyl)ether	0.6837	0.6532	4.46		
Hexachloroethane	0.9514	0.9204	3.26		
n-Nitrosodi-n-propylamine	1.4095	1.2935	8.23	>0.05	
Nitrobenzene	0.3456	0.3373	2.39		
Isophorone	0.6319	0.6135	2.91		
2-Nitrophenol	0.1961	0.2070	5.54		
2,4-Dimethylphenol	0.3488	0.3520	0.91		
Bis(2-chlorethoxy)methane	0.4479	0.4097	8.53		
2,4-Dichlorophenol	0.2889	0.2967	2.71		
1,2,4-Trichlorobenzene	0.2880	0.3020	4.84		
Naphthalene	1.1826	1.1369	3.86		
Hexachloro-1,3-butadiene	0.1254	0.1433	14.3		
4-Chloro-3-methylphenol	0.3186	0.3303	3.67		
Hexachlorocyclopentadiene	0.2157	0.2153	0.2	>0.05	
2,4,6-Trichlorophenol	0.3075	0.3185	3.57		
2-Chloronaphthalene	1.2161	1.1696	3.82		
Acenaphthylene	1.9392	1.8448	4.87		
Dimethyl phthalate	1.2727	1.2514	1.67		
2,6-Dinitrotoluene	0.3148	0.3112	1.15		
Acenaphthene	1.2711	1.2028	5.37		
2,4-Dinitrophenol	0.1662	0.1730	4.08	>0.05	**
2,4-Dinitrotoluene	0.4190	0.4227	0.88		
4-Nitrophenol	0.2992	0.2780	7.1	>0.05	
Fluorene	1.4352	1.3801	3.84		
4-Chlorophenyl-phenylether	0.5541	0.5599	1.05		
Diethyl phthalate	1.3386	1.3363	0.17		

*** - calibrated by linear regression*

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Quality Control Summary
SDG: L836976
Weston Solutions - CO

Test: Semi-Volatiles by Method 8270C
Project No: 0263
Project: Cowboy Timber EPA ID: TN00003
Collection Date: 5/18/2016
Instrument ID: BNAMS4

Method Name : S804D25P.M
FileName : 0525A_02.D

Date : 5/25/2016
Time : 3:04 PM

Continuing Calibration Verification

Compound Name	Average RRF	CCC RRF	%D
4,6-Dinitro-2-methylphenol	0.1320	0.1323	0.27
n-Nitrosodiphenylamine	0.7240	0.6808	5.96
4-Bromophenyl-phenylether	0.1749	0.1772	1.3
Hexachlorobenzene	0.1883	0.1904	1.1
Pentachlorophenol	0.1125	0.1119	0.55
Phenanthrene	1.1997	1.1551	3.71
Anthracene	1.2035	1.1767	2.23
Di-n-butyl phthalate	1.5203	1.4890	2.06
Fluoranthene	1.2140	1.2211	0.58
Pyrene	1.4391	1.2617	12.3
Benzylbutyl phthalate	0.7863	0.7107	9.61
Benzo(a)anthracene	1.2641	1.1311	10.5
Chrysene	1.2064	1.0850	10.1
Bis(2-ethylhexyl)phthalate	1.2063	1.0866	9.92
Di-n-octyl phthalate	2.1322	1.9909	6.63
Benzo(b)fluoranthene	1.3045	1.1257	13.7
Benzo(k)fluoranthene	1.2200	1.1233	7.93
Benzo(a)pyrene	1.2160	1.1146	8.34
Indeno(1,2,3-cd)pyrene	1.3470	1.2975	3.67
Dibenz(a,h)anthracene	1.1673	1.1069	5.17
Benzo(g,h,i)perylene	1.1113	1.0728	3.46

*** - calibrated by linear regression*

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Quality Control Summary
SDG: L836976
Weston Solutions - CO

Test: Semi-Volatiles by Method 8270C
Project No: 0263
Project: Cowboy Timber EPA ID: TN00003
Collection Date: 5/18/2016
Instrument ID: BNAMS4

Method Name : S804D25P.M
FileName : 0525A_03.D

Date : 5/25/2016
Time : 3:28 PM

Continuing Calibration Verification

Compound Name	Average RRF	CCC RRF	%D
Benzidine	0.8920	0.8339	6.51

*** - calibrated by linear regression*

Raw Data

View as PDF (CreatePDF?batchnum=WG874391)

BNA SS Extractions Benchsheet

Batch #: WG874391

Analyst: TH784 **Prep Start Date/Time:** 05/23/16 09:15 **Prep End Date/Time:** 05/23/16 13:15 **SOP:** 330707 **Method:** 3546 **Balance ID:** 4 **Syringe Lot#:**

Na2SO4: 16D27005 Exp. Date:10/27/16 **MeCl2:** 16E05591 Exp. Date:11/05/16 **Surrogate:** 16E03367 Amt. Used: 0.50 mL Exp. Date:09/30/16 **LCS/MS Spike:** 16E17342 Amt. Used: 0.50 mL Exp. Date:08/31/16

Sample Number	Qualifiers	Initial Sample Wt (g)	Soil Description	Solvent Volume (mL)	Final Volume (mL)	Extract Color	Sample Comments
BLANK		15	Sand	25	0.5	Colorless	
LCS		15	Sand	25	0.5	Yellow	
LCSD		15	Sand	25	0.5	Yellow	
MS(L836976-01)		15	Dirt	25	0.5	Yellow	
MSD(L836976-01)		15	Dirt	25	0.5	Yellow	
1. L836857-01		15	Dirt	25	5	Dark-brown	
2. L836857-02		15	Dirt	25	5	Dark-brown	
3. L836857-03		15	Dirt	25	5	Dark-brown	
4. L836857-04		15	Dirt	25	5	Dark-brown	
5. L836857-05		15	Dirt	25	5	Brown	
6. L836857-06		15	Dirt	25	5	Dark-brown	
7. L836857-07		15	Dirt	25	5	Dark-brown	
8. L836857-08		15	Dirt	25	5	Dark-brown	
9. L836857-09		15	Dirt	25	5	Dark-brown	
10. L836857-10		15	Dirt	25	5	Dark-brown	
11. L836901-01		15	Mud	25	0.5	Brown	
12. L836903-02		15	Mud	25	0.5	Colorless	
13. L836964-01		15	Dirt	25	5	Yellow	
14. L836976-01		15	Dirt	25	0.5	Orange	
15. L836976-02		15	Dirt	25	5	Brown	
16. L836976-03		15	Dirt	25	0.5	Dark-brown	
17. L836976-04		15	Dirt	25	0.5	Brown	
18. L836976-05		15	Dirt	25	0.5	Dark-brown	

Comments:

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

Injection Log

Instrument ID : BNAMS4
Computer Name : SVCOMPH
Released By : Nic Rasnake
Date Released : 5/24/2016 3:48:09 PM
Run ID : 052416
Signature : _____

#	File ID	Sample ID	Method	WG	Product	Matrix	Account #	State	Dil.	Mult.	Injected	Misc.
1	0524_00	INSTBLK	S804D25P						1	1	05/24/16 0822	"Instrument Blank"
2	0524_01	TUNE 50 PPM 16E09755	TUNEC						1	1	05/24/16 0846	"DFTPP"
3	0524_01T	TUNE 50 PPM 16E09755								1	05/24/16 0846	
4	0524_02	ICVRL SVMS 10K PPB 16D25863	S804D25P						1	1	05/24/16 0909	"8270 calibration ISTD 16D22768"
4	0524_02-1	ICVRL SVMS 10K PPB 16D25863	S804D25P						1	1	05/24/16 0909	"8270 calibration ISTD 16D22768"
4	0524_02 RL	ICVRL SVMS 10K PPB 16D25863	S804D25P						1	1	05/24/16 0909	"8270 calibration ISTD 16D22768"
4	0524_02 RL-1	ICVRL SVMS 10K PPB 16D25863	S804D25P						1	1	05/24/16 0909	"8270 calibration ISTD 16D22768"
5	0524_03	ICVRL TCL 10K1 PPB 16D25867	S804D25P						1	1	05/24/16 0932	"8270 TCL calibration ISTD 16D22768"
5	0524_03-1	ICVRL TCL 10K1 PPB 16D25867	S804D25P						1	1	05/24/16 0932	"8270 TCL calibration ISTD 16D22768"
5	0524_03 RL	ICVRL TCL 10K1 PPB 16D25867	S804D25P						1	1	05/24/16 0932	"8270 TCL calibration ISTD 16D22768"
5	0524_03 RL-1	ICVRL TCL 10K1 PPB 16D25867	S804D25P						1	1	05/24/16 0932	"8270 TCL calibration ISTD 16D22768"
6	0524_04	LCS	S804D25P	WG874391	SV8270D	SS			1	0.0333	05/24/16 0956	"soil ISTD 16E03322"
6	0524_04-2	LCS	S804D25P	WG874391	SV8270	SS	ENVIRTAZ		1	0.0333	05/24/16 0956	"soil ISTD 16E03322"
7	0524_05	LCSD	S804D25P	WG874391	SV8270D	SS			1	0.0333	05/24/16 1019	"soil ISTD 16E03322"
7	0524_05-2	LCSD	S804D25P	WG874391	SV8270	SS	ENVIRTAZ		1	0.0333	05/24/16 1019	"soil ISTD 16E03322"
8	0524_06	BLANK	S804D25P	WG874391	SV8270D	SS			1	0.0333	05/24/16 1051	"soil ISTD 16E03322"

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

Injection Log

Instrument ID : BNAMS4
Computer Name : SVCOMPH
Released By : Nic Rasnake
Date Released : 5/24/2016 3:48:09 PM
Run ID : 052416
Signature : _____

#	File ID	Sample ID	Method	WG	Product	Matrix	Account #	State	Dil.	Mult.	Injected	Misc.
8	0524_06-2	BLANK	S804D25P	WG874391	SV8270	SS	ENVIRTAZ		1	0.0333	05/24/16 1051	"soil ISTD 16E03322"
9	0524_07	BLANK	S804D25P	WG874590	SV8270	SS			300	10	05/24/16 1114	"soil ISTD 16E03322"
10	0524_08	LCS	S804D25P	WG874590	SV8270	SS			300	10	05/24/16 1138	"soil ISTD 16E03322"
11	0524_09	LCSD	S804D25P	WG874590	SV8270	SS			300	10	05/24/16 1201	"soil ISTD 16E03322"
12	0524_10	L836901-01	S804D25P	WG874391	SV8270	SS	GEOSOLHAL	AL	1	0.0333	05/24/16 1225	"soil ISTD 16E03322"
13	0524_11	L836903-02	S804D25P	WG874391	SV8270D	SS	SMECNC	NC	1	0.0333	05/24/16 1248	"soil ISTD 16E03322"
14	0524_12	L836976-01	S804D25P	WG874391	SV8270	SS	WESSOLLCO	WY	1	0.0333	05/24/16 1312	"soil ISTD 16E03322"
15	0524_13	MS	S804D25P	WG874391	SV8270D	SS			1	0.0333	05/24/16 1335	"soil ISTD 16E03322"
15	0524_13-2	MS	S804D25P	WG874391	SV8270	SS	ENVIRTAZ		1	0.0333	05/24/16 1335	"soil ISTD 16E03322"
16	0524_14	MSD	S804D25P	WG874391	SV8270D	SS			1	0.0333	05/24/16 1358	"soil ISTD 16E03322"
16	0524_14-2	MSD	S804D25P	WG874391	SV8270	SS	ENVIRTAZ		1	0.0333	05/24/16 1358	"soil ISTD 16E03322"
17	0524_15	L836976-03	S804D25P	WG874391	SV8270	SS	WESSOLLCO	WY	1	0.0333	05/24/16 1422	"soil ISTD 16E03322"
18	0524_16	L836976-04	S804D25P	WG874391	SV8270	SS	WESSOLLCO	WY	1	0.0333	05/24/16 1445	"soil ISTD 16E03322"
19	0524_17	L836976-05	S804D25P	WG874391	SV8270	SS	WESSOLLCO	WY	1	0.0333	05/24/16 1509	"soil ISTD 16E03322"

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052416\0524 01.D Vial: 1
Acq On : 24 May 2016 8:46 am Operator: 280
Sample : TUNE 50 PPM 16E09755 Inst : BNAMS4
Misc : DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 24 9:16 2016 Quant Results File: TUNEC.RES

Quant Method : C:\MSDCHEM\1\METHODS\TUNEC.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed Sep 17 10:33:01 2014
Response via : Initial Calibration
DataAcq Meth : BNA4E

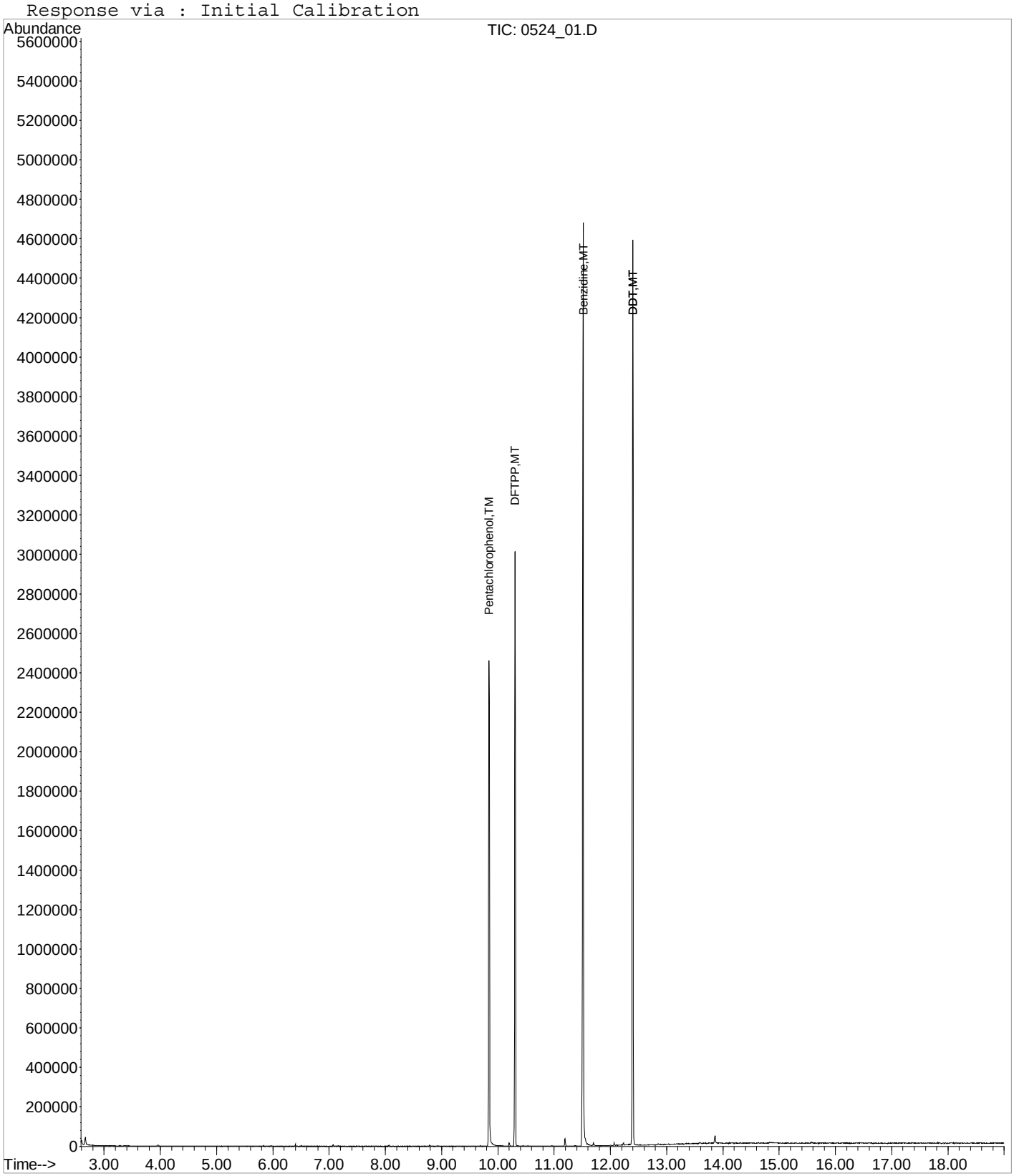
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
Target Compounds						Qvalue
1) Pentachlorophenol	9.85	264	172077	12.3984252	ug/mL	100
2) DFTPP	10.31	198	325219	13.6229365	ug/mL	100
3) Benzidine	11.52	184	2125696	14.4572086	ug/mL	100
4) DDT	12.40	TIC	4617824	70.4987619	ug/ml	100
5) DDT	12.40	235	861627	64.0318752	ug/mL	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

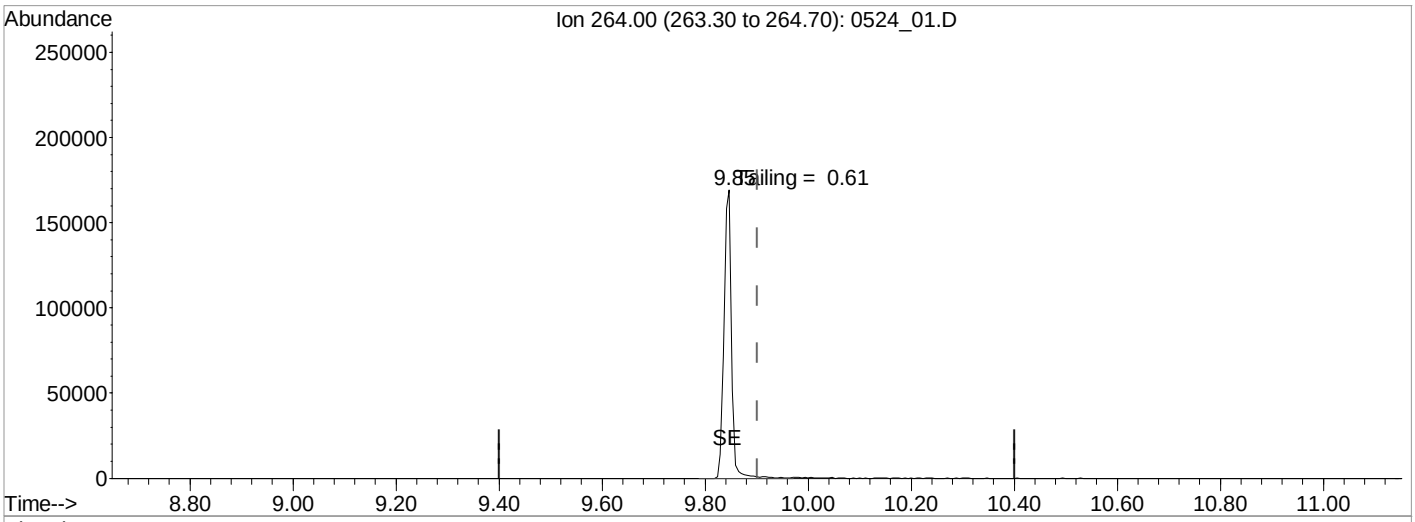
Data File : C:\MSDCHEM\1\DATA\052416\0524 01.D Vial: 1
Acq On : 24 May 2016 8:46 am Operator: 280
Sample : TUNE 50 PPM 16E09755 Inst : BNAMS4
Misc : DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 24 9:16 2016 Quant Results File: TUNEC.RES

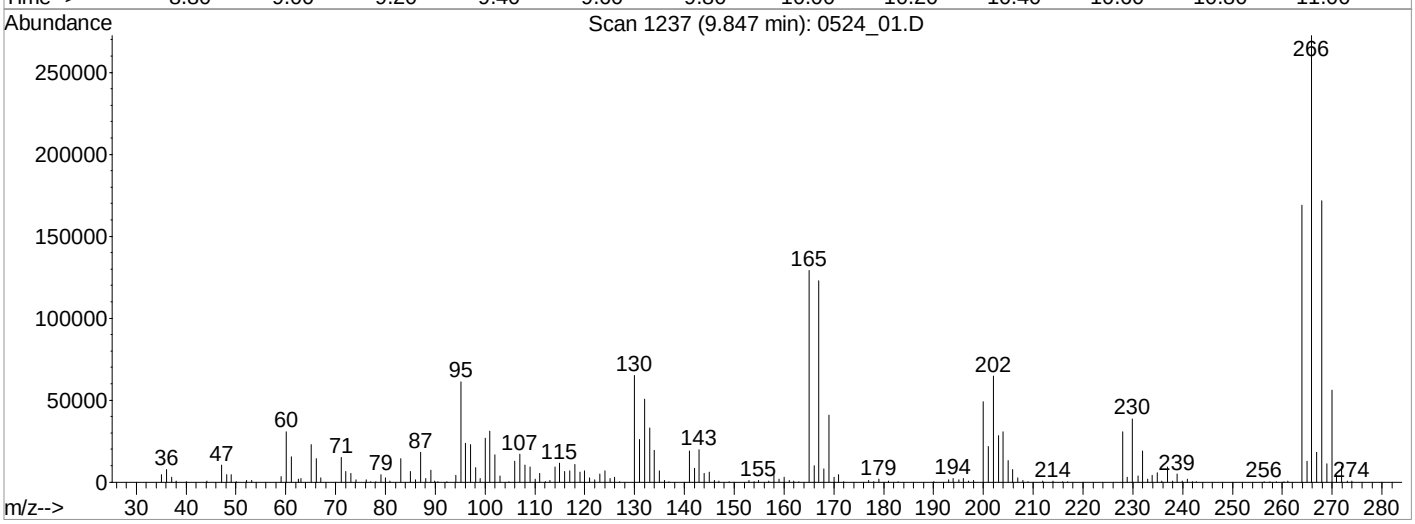
Method : C:\MSDCHEM\1\METHODS\TUNEC.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed Sep 17 10:33:01 2014
Response via : Initial Calibration



Data File : C:\MSDCHEM\1\DATA\052416\0524 01.D Vial: 1
Acq On : 24 May 2016 8:46 am Operator: 280
Sample : TUNE 50 PPM 16E09755 Inst : BNAMS4
Misc : DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 24 9:16 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\TUNEC.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed Sep 17 10:33:01 2014
Response via : Single Level Calibration





TIC: 0524_01.D

(1) Pentachlorophenol (TM)

9.85min (-0.054) 12.3984252 ug/mL

Qvalue = 100

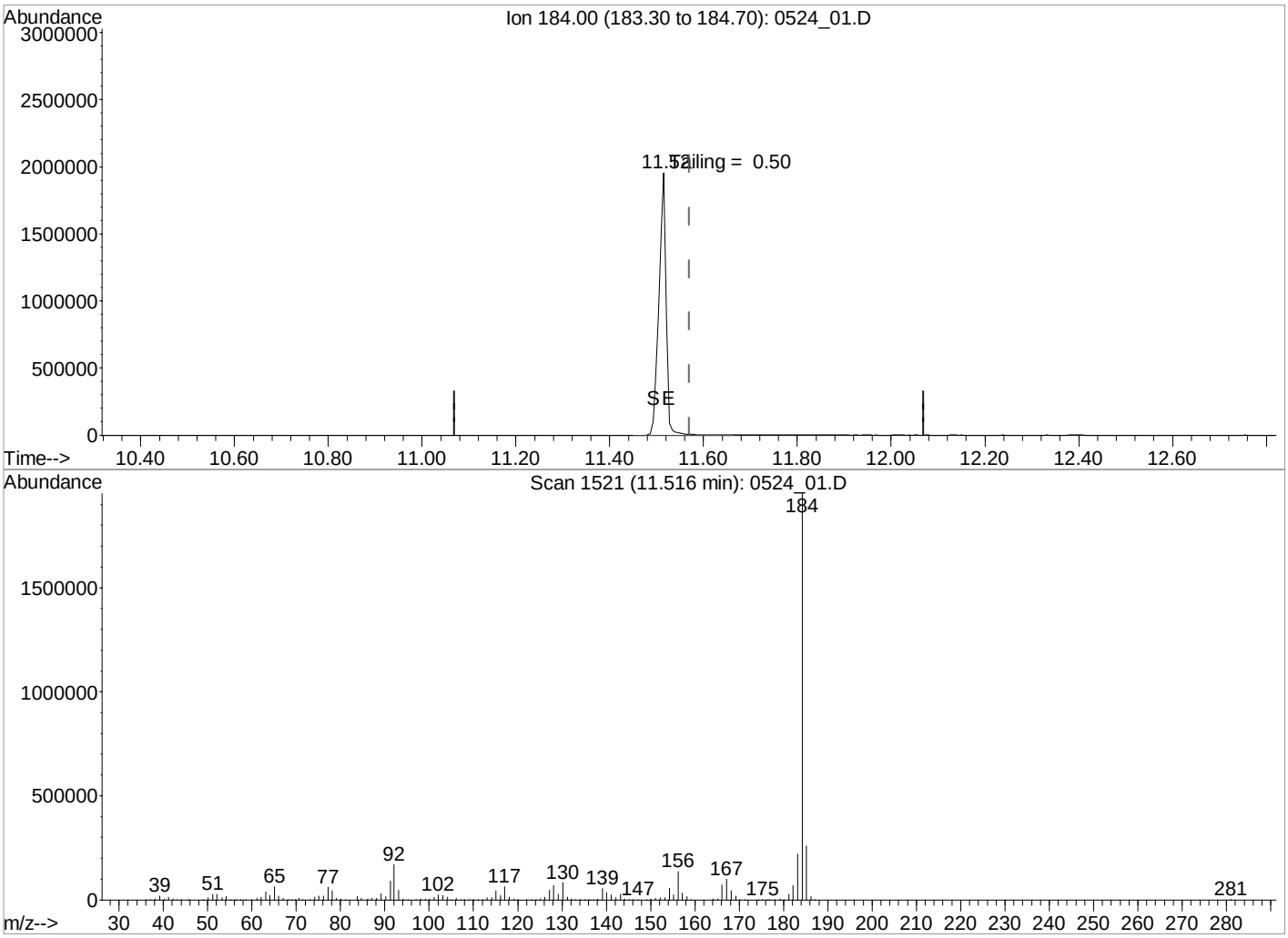
response 172077

Ion	Exp%	Act%
264.00	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\052416\0524 01.D Vial: 1
Acq On : 24 May 2016 8:46 am Operator: 280
Sample : TUNE 50 PPM 16E09755 Inst : BNAMS4
Misc : DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 24 9:16 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\TUNEC.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed Sep 17 10:33:01 2014
Response via : Single Level Calibration



TIC: 0524_01.D

(3) Benzidine (MT)

11.52min (-0.054) 14.4572086 ug/mL

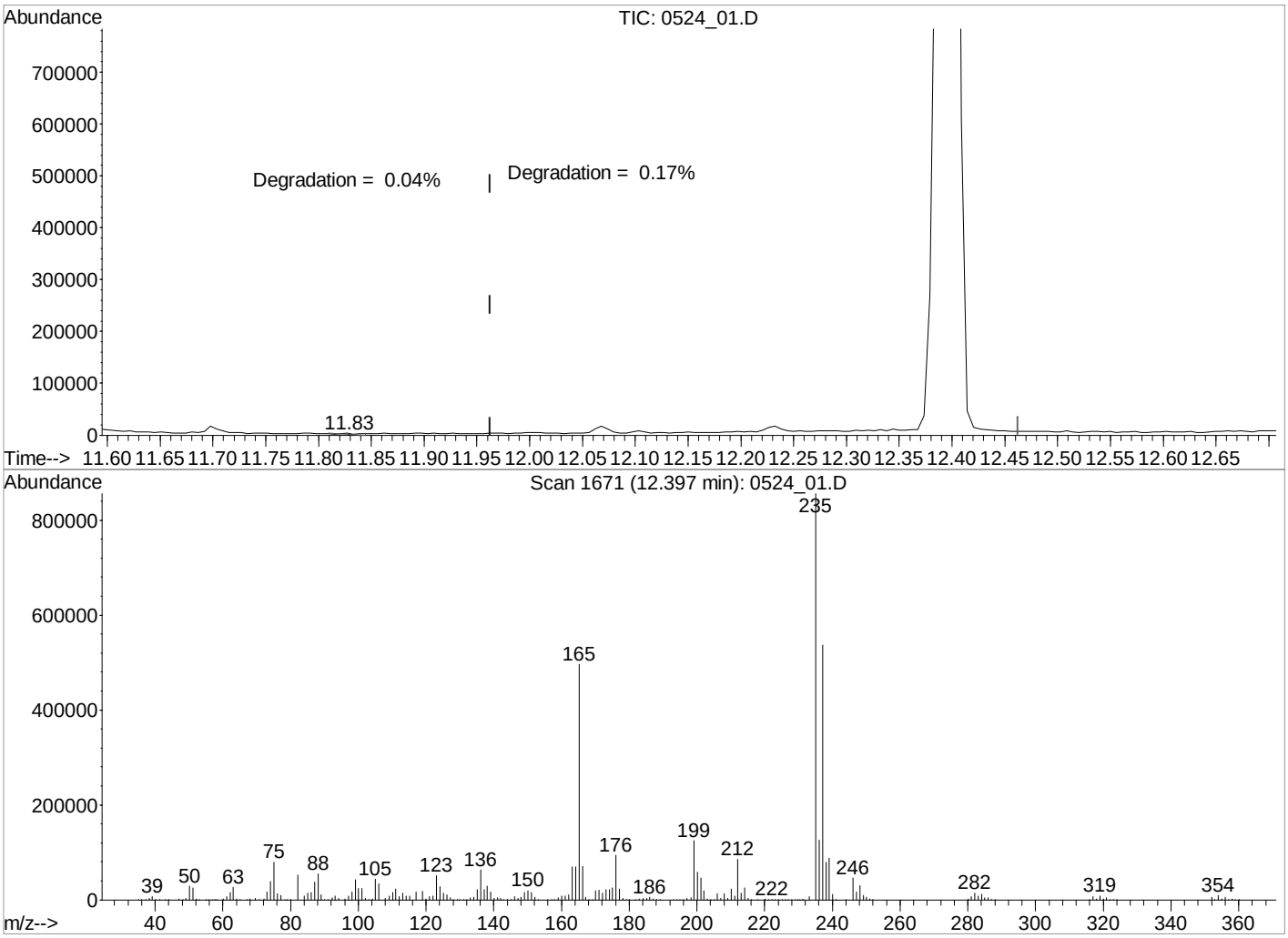
Qvalue = 100

response 2125696

Ion	Exp%	Act%
184.00	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Data File : C:\MSDCHEM\1\DATA\052416\0524 01.D Vial: 1
Acq On : 24 May 2016 8:46 am Operator: 280
Sample : TUNE 50 PPM 16E09755 Inst : BNAMS4
Misc : DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 24 9:16 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\TUNEC.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed Sep 17 10:33:01 2014
Response via : Single Level Calibration



TIC: 0524_01.D

(4) DDT (MT)

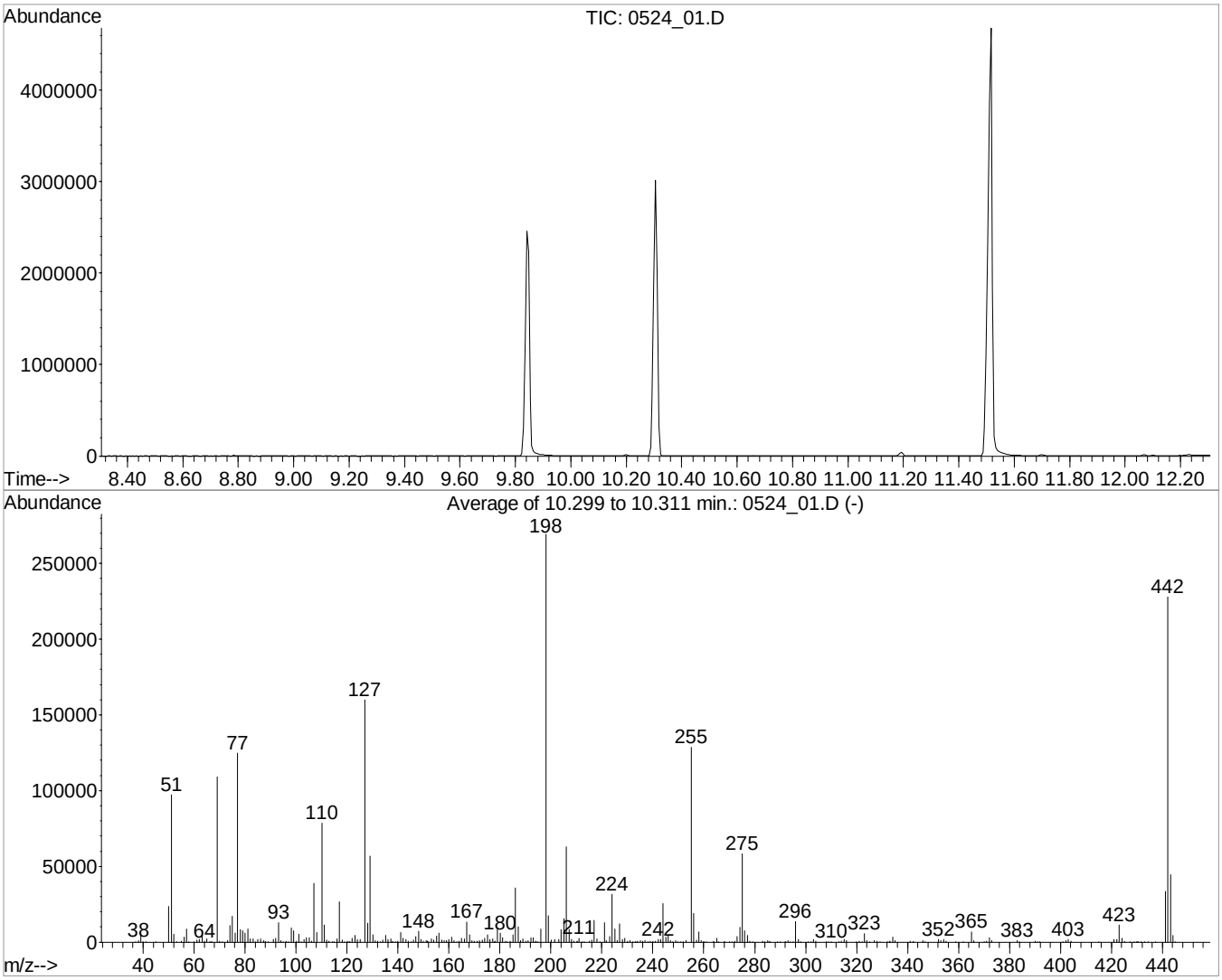
12.40min (-0.065) 70.4987619 ug/ml

Qvalue = 100

response 4617824

Signal	Exp%	Act%
TIC	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

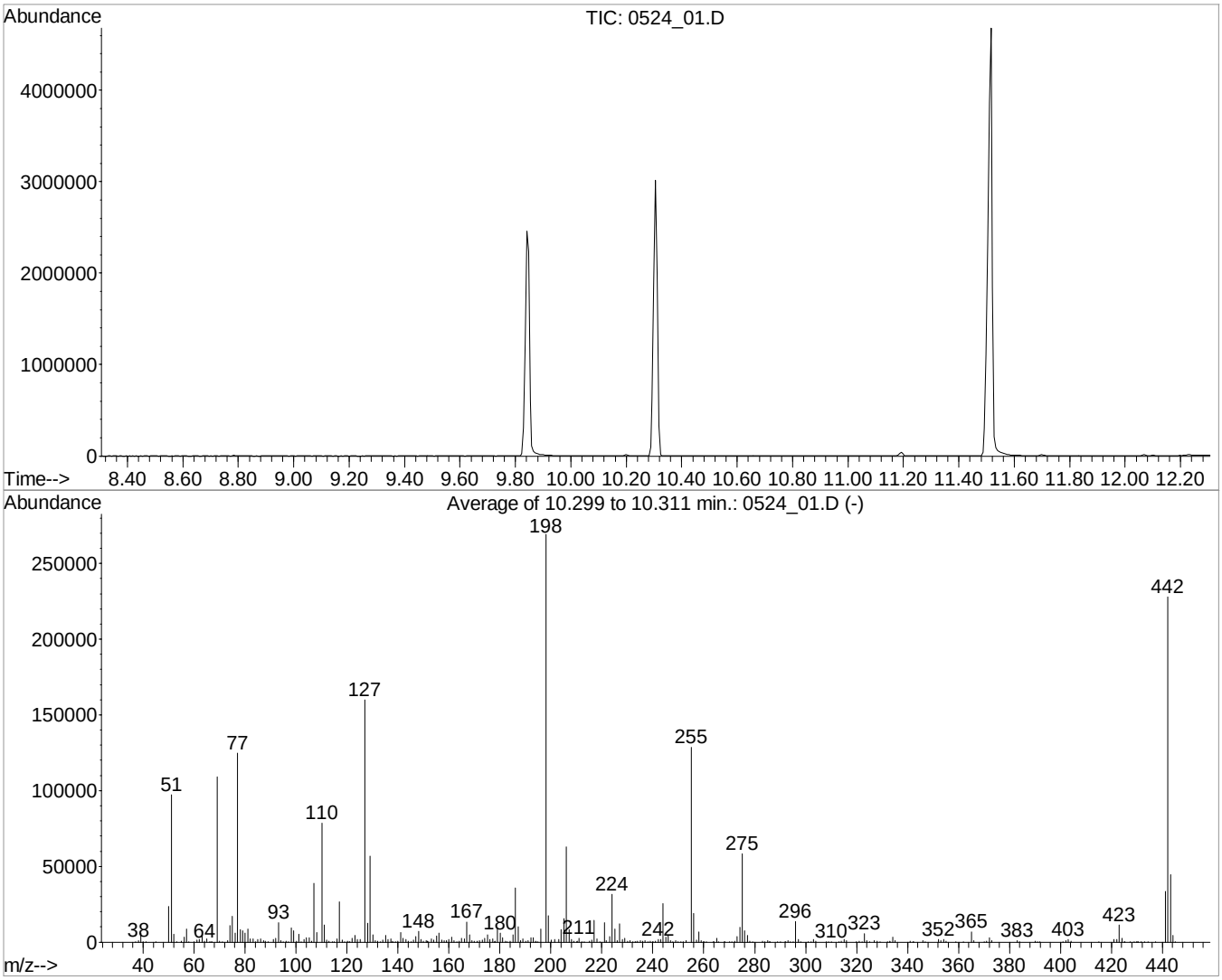
Data File : C:\MSDCHEM\1\DATA\052416\0524 01.D Vial: 1
Acq On : 24 May 2016 8:46 am Operator: 280
Sample : TUNE 50 PPM 16E09755 Inst : BNAMS4
Misc : DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\TUNEC.M (RTE Integrator)
Title : 8270 BNA



AutoFind: Scans 1314, 1315, 1316; Background Corrected with Scan 1308

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	36.1	97344	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	40.5	108952	PASS
70	69	0.00	2	0.5	568	PASS
127	198	40	60	59.4	159837	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	269312	PASS
199	198	5	9	6.4	17226	PASS
275	198	10	30	21.6	58197	PASS
365	198	1	100	2.5	6747	PASS
441	443	0.01	100	75.3	33440	PASS
442	198	40	100	84.7	228122	PASS
443	442	17	23	19.5	44405	PASS

Data File : C:\MSDCHEM\1\DATA\052416\0524 01.D Vial: 1
Acq On : 24 May 2016 8:46 am Operator: 280
Sample : TUNE 50 PPM 16E09755 Inst : BNAMS4
Misc : DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\TUNED.M (RTE Integrator)
Title : 8270 BNA



Spectrum Information: Average of 10.299 to 10.311 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	36.1	97344	PASS
68	69	0.00	2	0.0	0	PASS
69	69	100	100	100.0	108952	PASS
70	69	0.00	2	0.5	568	PASS
127	198	10	80	59.4	159837	PASS
197	198	0.00	2	0.0	0	PASS
198	198	50	100	100.0	269312	PASS
199	198	5	9	6.4	17226	PASS
275	198	10	60	21.6	58197	PASS
365	198	1	100	2.5	6747	PASS
441	442	0.01	24	14.7	33440	PASS
442	198	50	100	84.7	228122	PASS
443	442	15	24	19.5	44405	PASS

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052416\0524 02.D Vial: 2
Acq On : 24 May 2016 9:09 am Operator: 280
Sample : ICVRL SVMS 10K PPB 16D25863 Inst : BNAMS4
Misc : 8270 calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 24 9:50 2016 Quant Results File: S804D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Initial Calibration
DataAcq Meth : BNA4E

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.29	152	79155	8000.00	ppb	0.00
22) Naphthalene-d8	6.56	136	448022	8000.00	ppb	0.00
40) Acenaphthene-d10	8.44	164	271716	8000.00	ppb	0.00
64) Phenanthrene-d10	10.06	188	467111	8000.00	ppb	0.00
78) Chrysene-d12	12.94	240	483745	8000.00	ppb	0.00
88) Perylene-d12	14.74	264	489602	8000.00	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	4.19	112	170625	9258.8111711	ppb	0.00
Spiked Amount 20.000	Range 10 - 74		Recovery = 46294.06%#			
7) Phenol-d5	4.92	99	216563	8999.0542236	ppb	0.00
Spiked Amount 20.000	Range 10 - 63		Recovery = 44995.27%#			
23) Nitrobenzene-d5	5.82	82	195933	10039.2817525	ppb	0.00
Spiked Amount 10.000	Range 28 - 123		Recovery = 100392.82%#			
44) 2-Fluorobiphenyl	7.69	172	434341	9718.7042805	ppb	0.00
Spiked Amount 10.000	Range 35 - 133		Recovery = 97187.04%#			
67) 2,4,6-Tribromophenol	9.29	330	53756	10938.2679646	ppb	0.00
Spiked Amount 20.000	Range 22 - 154		Recovery = 54691.34%#			
81) p-Terphenyl-d14	11.77	244	552972	9115.9768737	ppb	0.00
Spiked Amount 10.000	Range 30 - 148		Recovery = 91159.77%#			
Target Compounds						Qvalue
2) Pyridine	3.24	79	199615	7093.3827501	ppb #	76
3) N-Nitrosodimethylamine	3.22	42	103439	9622.3279122	ppb #	79
5) Aniline	4.99	66	107456	9084.4443106	ppb	94
6) bis(2-Chloroethyl)ether	5.03	63	158458	9174.7146859	ppb	98
8) Phenol	4.93	94	221489	8852.4472305	ppb	87
10) 2-Chlorophenol	5.09	128	204020	9370.0515412	ppb	98
11) n-Decane	5.11	41	90458	10725.3289449	ppb	96
12) 1,3-Dichlorobenzene	5.24	146	212662	9620.4224040	ppb	98
13) 1,4-Dichlorobenzene	5.31	146	215267	9524.8382315	ppb	98
14) Benzyl Alcohol	5.40	79	153431	9774.5384593	ppb	99
15) 1,2-Dichlorobenzene	5.45	146	210495	9610.3203295	ppb	100
16) bis(2-Chloroisopropyl)ethe	5.53	121	62714	9270.7552959	ppb	93
17) 2-Methylphenol	5.49	108	179907	9312.8893012	ppb	95
18) Hexachloroethane	5.78	117	92568	9833.6351200	ppb	96
19) N-Nitrosodi-n-propylamine	5.66	70	130746	9375.1456733	ppb	95
20) 3&4-Methyl phenol	5.64	107	205055	9066.1260876	ppb	94
24) Nitrobenzene	5.84	77	195729	10113.8495180	ppb	98
25) Isophorone	6.07	82	346388	9788.2168371	ppb	100
26) 2-Nitrophenol	6.16	139	115766	10539.0873192	ppb	96
27) 2,4-Dimethylphenol	6.17	107	200117	10243.3119022	ppb	93
28) bis(2-Chlorethoxy)methane	6.27	93	226109	9014.4064871	ppb	94
29) 2,4-Dichlorophenol	6.40	162	167536	10355.0165137	ppb	98
31) 1,2,4-Trichlorobenzene	6.49	180	167276	10370.0540642	ppb	99
32) Naphthalene	6.58	128	635284	9592.5652416	ppb	99
33) 4-Chloroaniline	6.62	65	77354	10153.0002404	ppb	96
34) Hexachloro-1,3-butadiene	6.69	225	79590	11333.8080019	ppb	96
36) 4-Chloro-3-methylphenol	7.12	107	184590	10344.5449484	ppb	98
37) 2-Methylnaphthalene	7.31	142	428344	9854.8677937	ppb	97
38) 1-Methylnaphthalene	7.41	142	375495	9613.4087211	ppb	96
41) Hexachlorocyclopentadiene	7.47	237	76717	10471.2965118	ppb	95
42) 2,4,6-Trichlorophenol	7.60	196	110388	10568.8248408	ppb	96
43) 2,4,5-Trichlorophenol	7.64	196	117631	10485.6882826	ppb	96
45) Biphenyl	7.80	154	505716	9619.0426667	ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052416\0524 02.D Vial: 2
Acq On : 24 May 2016 9:09 am Operator: 280
Sample : ICVRL SVMS 10K PPB 16D25863 Inst : BNAMS4
Misc : 8270 calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 24 9:50 2016 Quant Results File: S804D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Initial Calibration
DataAcq Meth : BNA4E

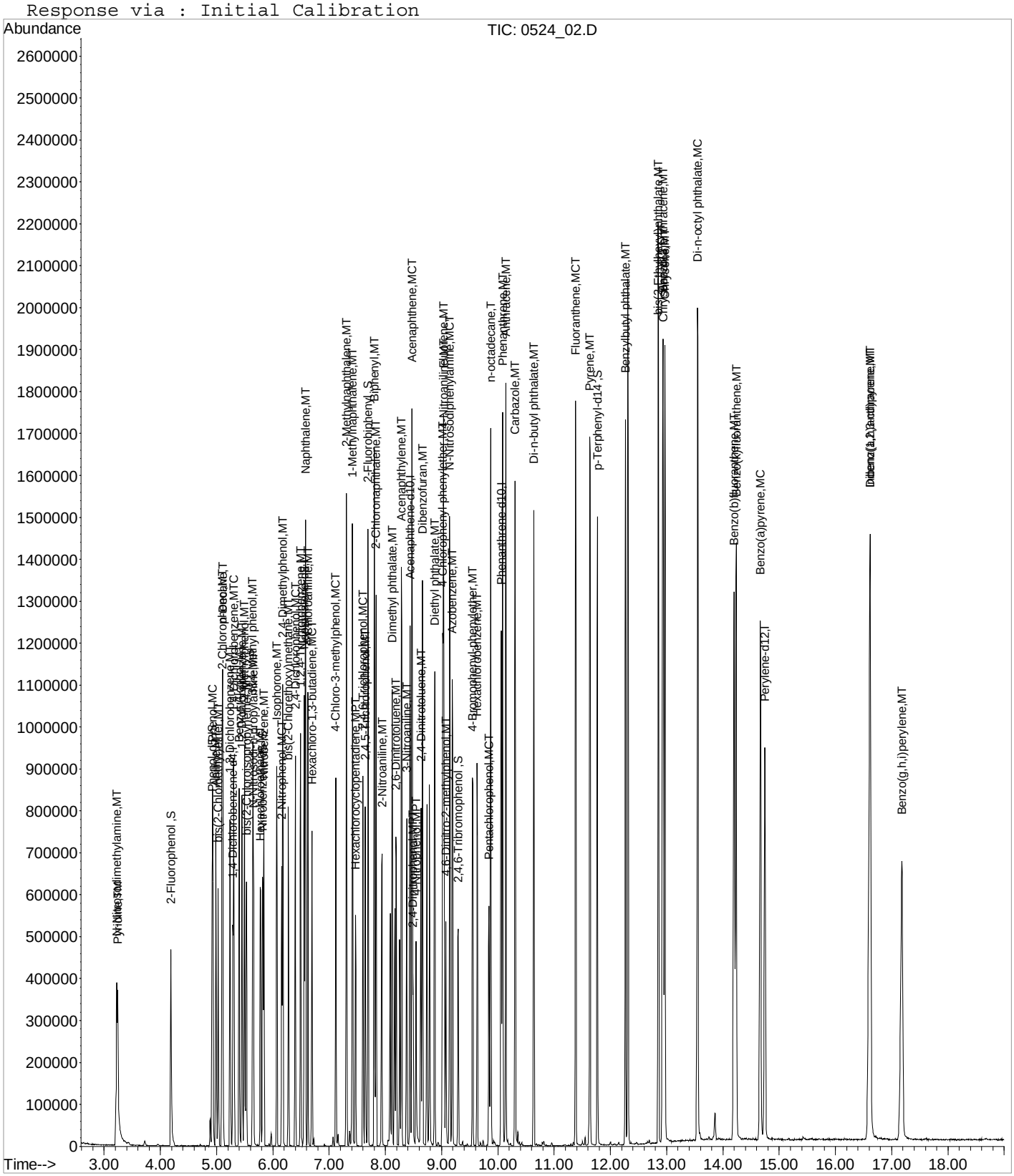
	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
46)	2-Chloronaphthalene	7.83	162	399318	9667.5630773 ppb		97
47)	2-Nitroaniline	7.94	138	144732	9938.0749630 ppb	#	98
48)	Acenaphthylene	8.28	152	631005	9580.5796654 ppb		99
49)	Dimethyl phthalate	8.12	163	434431	10050.4087286 ppb		98
50)	2,6-Dinitrotoluene	8.20	165	106520	9963.1767334 ppb		91
51)	3-Nitroaniline	8.38	138	120883	9353.7033442 ppb		93
52)	Acenaphthene	8.47	153	415681	9628.4747905 ppb		98
53)	2,4-Dinitrophenol	8.50	184	56990	10561.5755668 ppb	#	73
54)	Dibenzofuran	8.66	168	577200	9754.4915991 ppb		96
55)	2,4-Dinitrotoluene	8.63	165	146258	10278.1155342 ppb		93
57)	4-Nitrophenol	8.55	139	95426	9390.0066242 ppb		94
58)	Fluorene	9.03	166	477599	9797.6428915 ppb		99
59)	4-Chlorophenyl-phenylether	9.02	204	190796	10138.3900155 ppb		95
60)	Diethyl phthalate	8.88	149	471964	10381.0590005 ppb		99
61)	4-Nitroaniline	9.04	138	133056	10331.3757531 ppb	#	89
62)	Azobenzene	9.19	77	440544	9129.0366265 ppb		96
65)	4,6-Dinitro-2-methylphenol	9.08	198	75099	9746.6717101 ppb		94
66)	N-Nitrosodiphenylamine	9.14	169	409675	9691.3858358 ppb		99
68)	4-Bromophenyl-phenylether	9.55	248	103816	10163.8998068 ppb	#	91
69)	Hexachlorobenzene	9.63	284	113138	10287.6157203 ppb		98
70)	n-octadecane	9.87	55	79891	9802.4918579 ppb		97
71)	Pentachlorophenol	9.84	266	62513	9517.6350180 ppb		95
72)	Phenanthrene	10.08	178	670796	9576.1159934 ppb		96
73)	Anthracene	10.14	178	688607	9799.1443517 ppb		99
74)	Carbazole	10.31	167	691893	9596.3078924 ppb		99
75)	Di-n-butyl phthalate	10.64	149	881449	9930.0064688 ppb		99
77)	Fluoranthene	11.38	202	719281	10147.2900906 ppb		99
80)	Pyrene	11.64	202	755138	8677.8013602 ppb		99
82)	Benzylbutyl phthalate	12.27	149	435393	9157.7663293 ppb		98
84)	Benzo(a)anthracene	12.93	228	680748	8905.5671356 ppb		92
85)	Chrysene	12.97	228	655123	8980.4602239 ppb		96
86)	bis(2-Ethylhexyl)phthalate	12.85	149	661746	9072.3496055 ppb		99
87)	Di-n-octyl phthalate	13.55	149	1215523	9427.6045510 ppb		99
89)	Benzo(b)fluoranthene	14.19	252	709451m	8886.2778125 ppb		
90)	Benzo(k)fluoranthene	14.24	252	705517	9448.9310810 ppb		91
91)	Benzo(a)pyrene	14.66	252	701108	9420.9409641 ppb		93
92)	Indeno(1,2,3-cd)pyrene	16.62	276	757187	9185.3272306 ppb		91
93)	Dibenz(a,h)anthracene	16.62	278	649400	9090.4233011 ppb		88
94)	Benzo(g,h,i)perylene	17.18	276	626502	9211.9726576 ppb		83

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

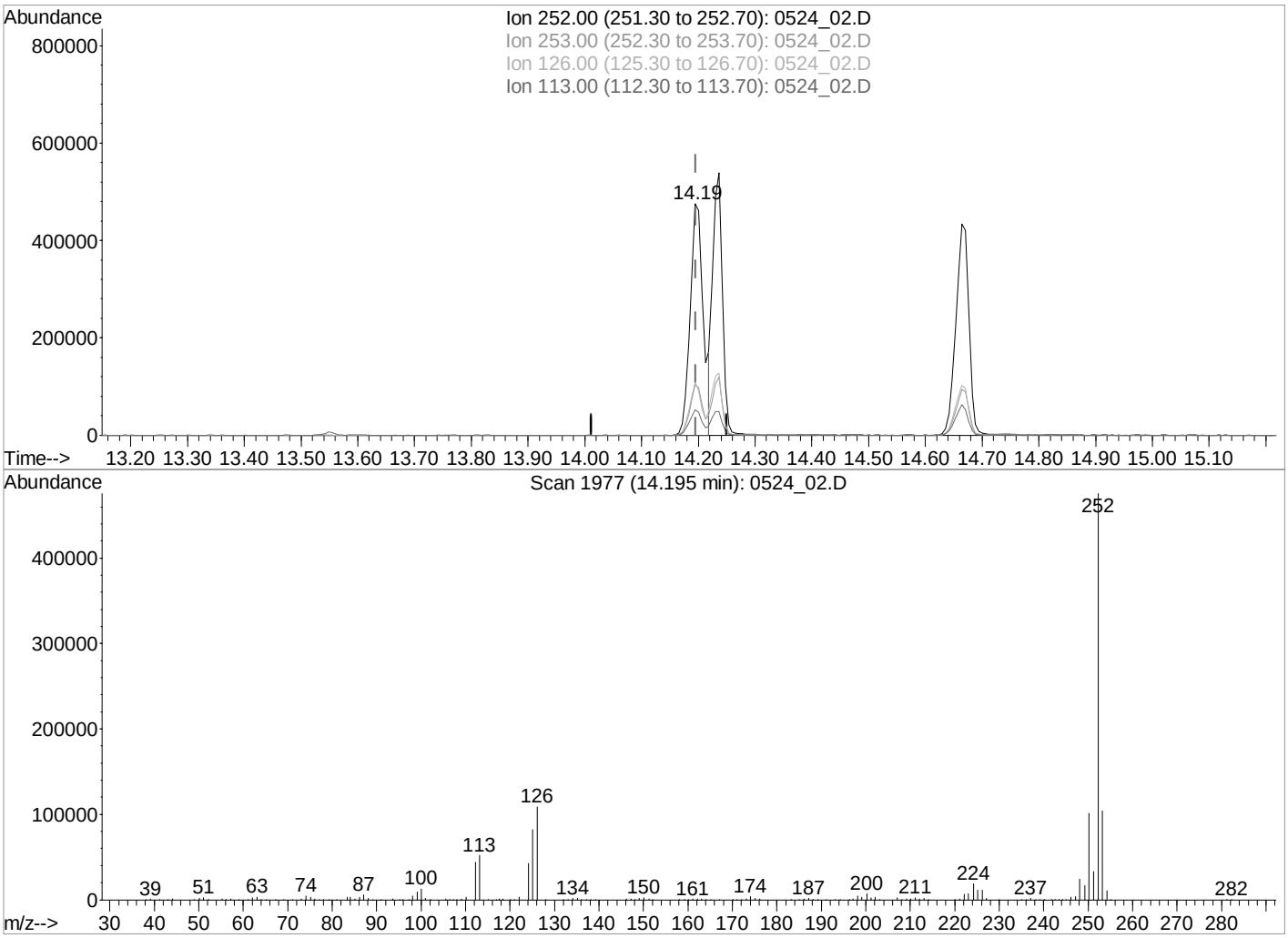
Data File : C:\MSDCHEM\1\DATA\052416\0524 02.D Vial: 2
Acq On : 24 May 2016 9:09 am Operator: 280
Sample : ICVRL SVMS 10K PPB 16D25863 Inst : BNAMS4
Misc : 8270 calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 24 9:50 2016 Quant Results File: S804D25P.RES

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Initial Calibration



Data File : C:\MSDCHEM\1\DATA\052416\0524 02.D Vial: 2
Acq On : 24 May 2016 9:09 am Operator: 280
Sample : ICV SVMS 10K PPB 16D25863 Inst : BNAMS4
Misc : 8270 calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 24 9:50 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Multiple Level Calibration



TIC: 0524_02.D

(89) Benzo(b)fluoranthene (MT)

14.19min (-0.000) 9637.1105511 ppb

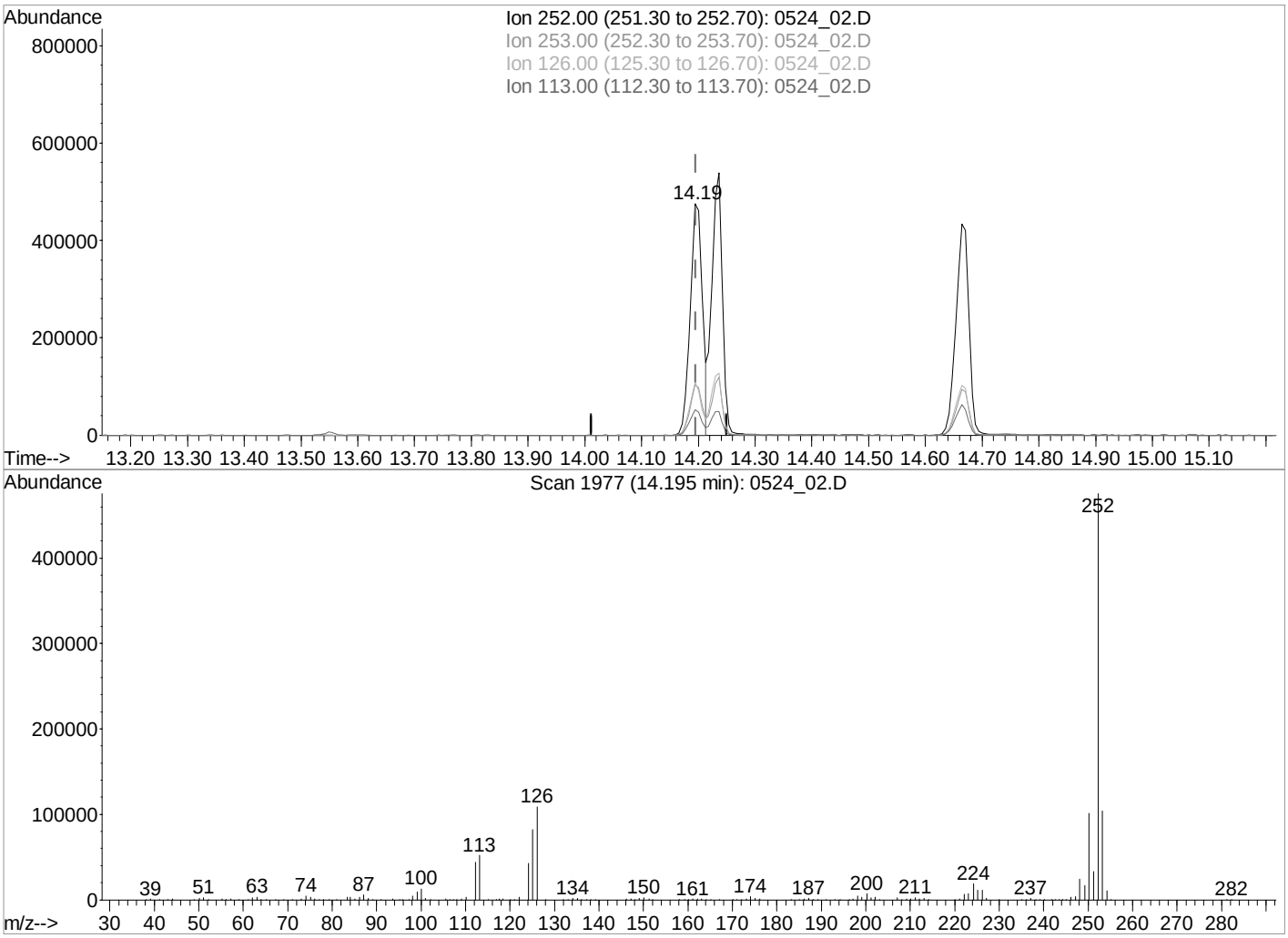
Qvalue = 96

response 769395

Ion	Exp%	Act%
252.00	100	100
253.00	21.50	21.42
126.00	25.80	21.66
113.00	12.80	11.09

Data File : C:\MSDCHEM\1\DATA\052416\0524 02.D Vial: 2
Acq On : 24 May 2016 9:09 am Operator: 280
Sample : ICV SVMS 10K PPB 16D25863 Inst : BNAMS4
Misc : 8270 calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 24 9:50 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Multiple Level Calibration



TIC: 0524_02.D

(89) Benzo(b)fluoranthene (MT)

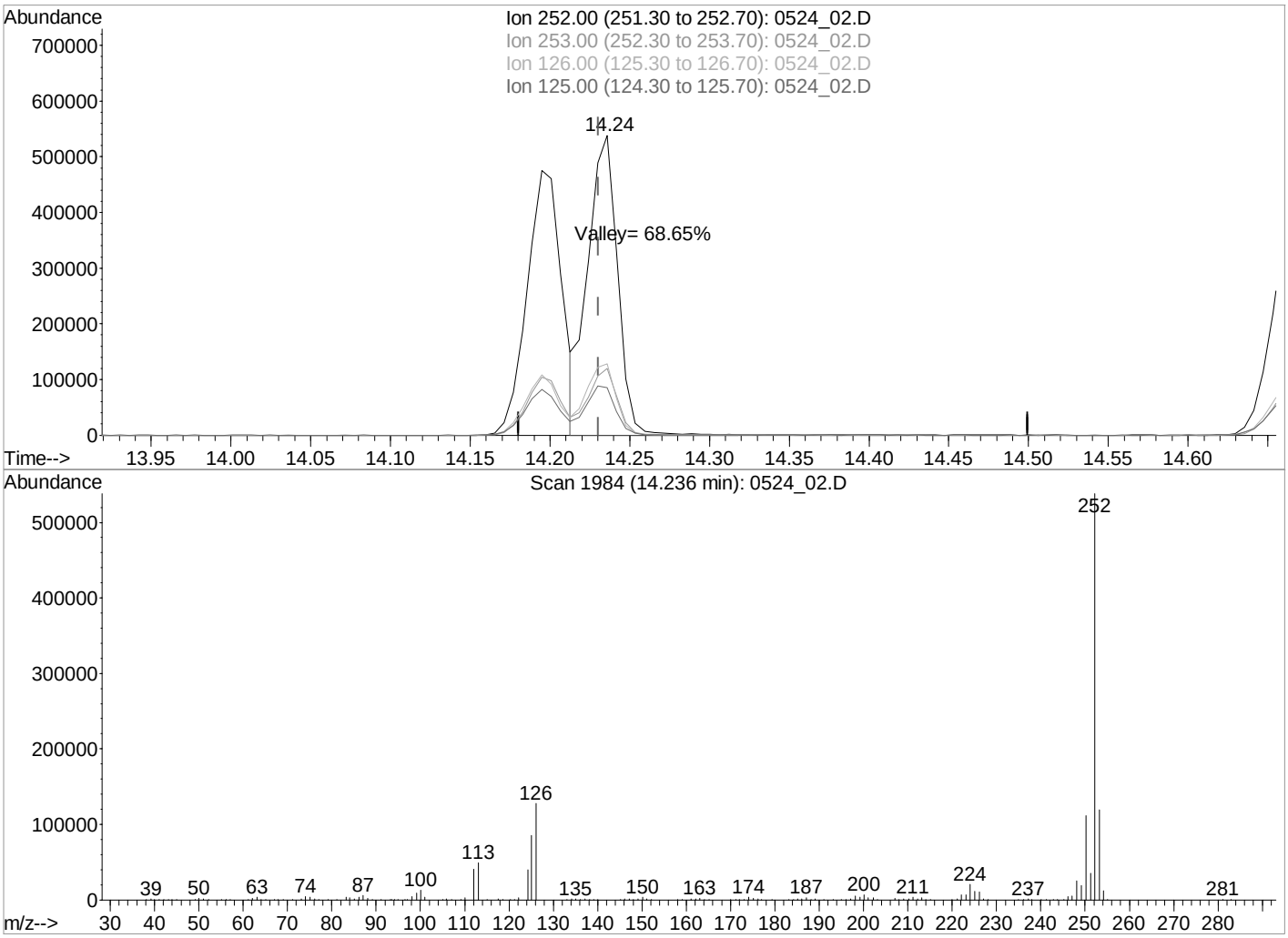
14.19min (-0.000) 8886.2778125 ppb m

response 709451

Ion	Exp%	Act%
252.00	100	100
253.00	21.50	21.78
126.00	25.80	22.81
113.00	12.80	11.02

Data File : C:\MSDCHEM\1\DATA\052416\0524 02.D Vial: 2
Acq On : 24 May 2016 9:09 am Operator: 280
Sample : ICV SVMS 10K PPB 16D25863 Inst : BNAMS4
Misc : 8270 calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 24 9:50 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Multiple Level Calibration



TIC: 0524_02.D

(90) Benzo(k)fluoranthene (MT)

14.24min (+0.005) 9448.9310810 ppb

Qvalue = 91

response 705517

Ion	Exp%	Act%
252.00	100	100
253.00	21.60	22.16
126.00	30.50	23.77
125.00	21.30	15.90

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052416\0524 03.D Vial: 3
Acq On : 24 May 2016 9:32 am Operator: 280
Sample : ICVRL TCL 10K1 PPB 16D25867 Inst : BNAMS4
Misc : 8270 TCL calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 24 9:52 2016 Quant Results File: S804D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Initial Calibration
DataAcq Meth : BNA4E

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.29	152	70915	8000.00	ppb	0.00
22) Naphthalene-d8	6.56	136	396675	8000.00	ppb	0.00
40) Acenaphthene-d10	8.43	164	237198	8000.00	ppb	0.00
64) Phenanthrene-d10	10.05	188	411314	8000.00	ppb	0.00
78) Chrysene-d12	12.94	240	403169	8000.00	ppb	0.00
88) Perylene-d12	14.74	264	420100	8000.00	ppb	0.00

System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 74		Recovery =	0.00%#		
7) Phenol-d5	0.00	99	0d	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 63		Recovery =	0.00%#		
23) Nitrobenzene-d5	0.00	82	0d	0.0000000	ppb	
Spiked Amount 10.000	Range 28 - 123		Recovery =	0.00%#		
44) 2-Fluorobiphenyl	0.00	172	0d	0.0000000	ppb	
Spiked Amount 10.000	Range 35 - 133		Recovery =	0.00%#		
67) 2,4,6-Tribromophenol	0.00	330	0	0.0000000	ppb	
Spiked Amount 20.000	Range 22 - 154		Recovery =	0.00%#		
81) p-Terphenyl-d14	0.00	244	0d	0.0000000	ppb	
Spiked Amount 10.000	Range 30 - 148		Recovery =	0.00%#		

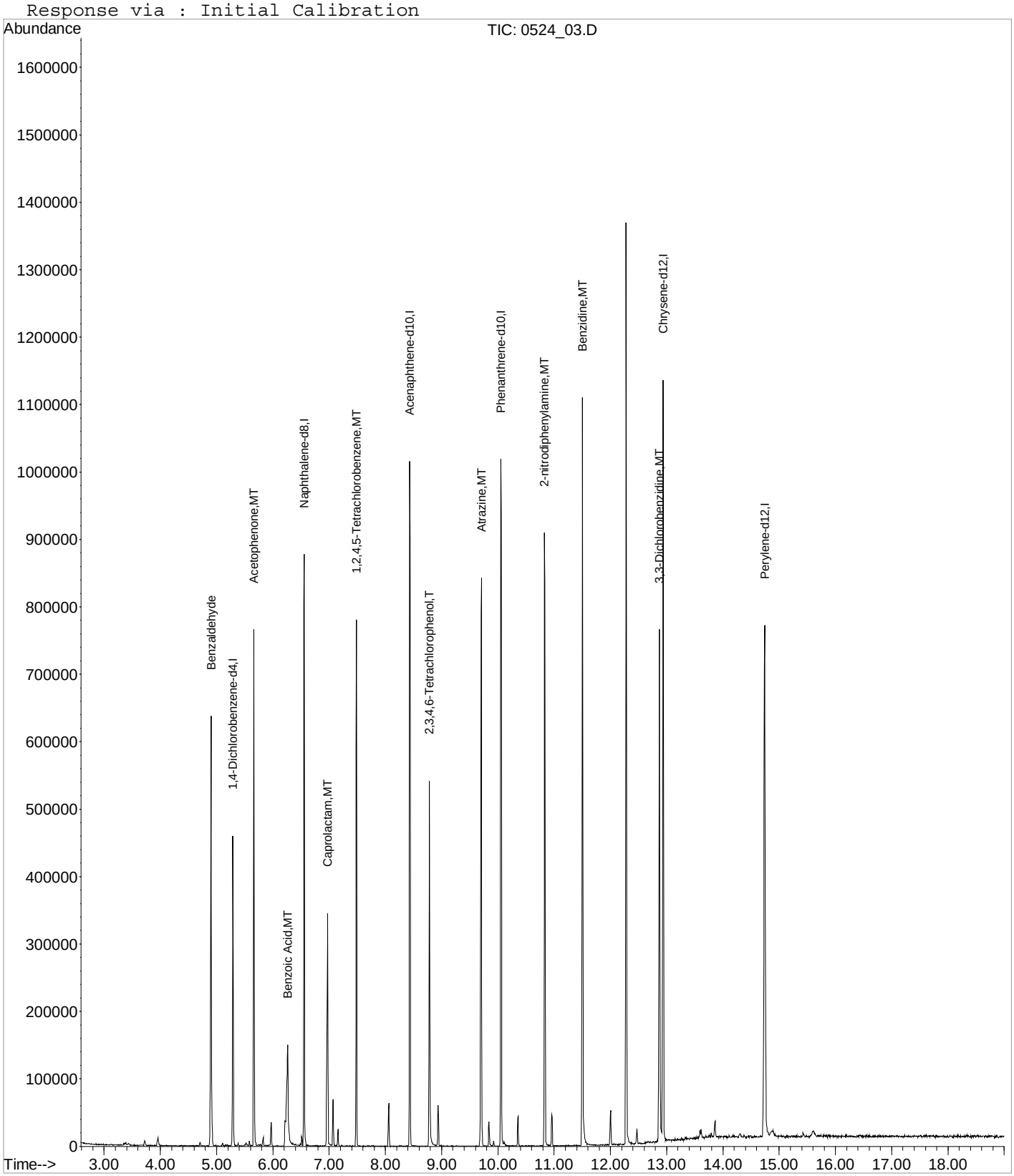
Target Compounds					Qvalue
9) Benzaldehyde	4.90	105	115677	9722.7676504 ppb	97
21) Acetophenone	5.66	105	221313	9819.9355251 ppb	98
30) Benzoic Acid	6.26	105	92452	12747.5098295 ppb	99
35) Caprolactam	6.97	113	48762	9386.4328375 ppb	87
39) 1,2,4,5-Tetrachlorobenzene	7.49	216	127787	10708.1483967 ppb	99
56) 2,3,4,6-Tetrachlorophenol	8.78	232	59349	11108.9001071 ppb	97
63) Atrazine	9.71	200	90687	10861.0117528 ppb	93
76) 2-nitrodiphenylamine	10.83	167	142461	11049.2210437 ppb	98
79) Benzidine	11.50	184	431341	9595.6102995 ppb	99
83) 3,3-Dichlorobenzidine	12.87	252	174525	10281.4193541 ppb	92

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052416\0524 03.D Vial: 3
Acq On : 24 May 2016 9:32 am Operator: 280
Sample : ICVRL TCL 10K1 PPB 16D25867 Inst : BNAMS4
Misc : 8270 TCL calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 24 9:52 2016 Quant Results File: S804D25P.RES

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052416\0524 04.D Vial: 4
Acq On : 24 May 2016 9:56 am Operator: 280
Sample : LCS 1x WG874391 15-0.5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 24 10:50 2016 Quant Results File: S804D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Initial Calibration
DataAcq Meth : BNA4E

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.29	152	47565	8000.00	ppb	0.00
22) Naphthalene-d8	6.56	136	276355	8000.00	ppb	0.00
40) Acenaphthene-d10	8.44	164	177515	8000.00	ppb	0.00
64) Phenanthrene-d10	10.06	188	311110	8000.00	ppb	0.00
78) Chrysene-d12	12.94	240	316662	8000.00	ppb	0.00
88) Perylene-d12	14.75	264	326254	8000.00	ppb	0.01
System Monitoring Compounds						
4) 2-Fluorophenol	4.19	112	153290	460.9581229	ppb	0.00
Spiked Amount 666.000	Range 21 - 116		Recovery = 69.21%			
7) Phenol-d5	4.92	99	193511	445.6083832	ppb	0.00
Spiked Amount 666.000	Range 26 - 121		Recovery = 66.91%			
23) Nitrobenzene-d5	5.82	82	92779	256.6380161	ppb	0.00
Spiked Amount 333.000	Range 22 - 129		Recovery = 77.07%			
44) 2-Fluorobiphenyl	7.69	172	218996	249.7687570	ppb	0.00
Spiked Amount 333.000	Range 35 - 129		Recovery = 75.01%			
67) 2,4,6-Tribromophenol	9.29	330	54641	555.8922372	ppb	0.00
Spiked Amount 666.000	Range 22 - 142		Recovery = 83.47%			
81) p-Terphenyl-d14	11.77	244	299500	251.1664762	ppb	0.00
Spiked Amount 333.000	Range 22 - 128		Recovery = 75.43%			
Target Compounds						Qvalue
2) Pyridine	3.24	79	69364	136.5933123	ppb #	82
3) N-Nitrosodimethylamine	3.23	42	84935	437.8421989	ppb #	78
5) Aniline	4.99	66	92612	433.8804137	ppb	94
6) bis(2-Chloroethyl)ether	5.03	63	139203	446.6445901	ppb	99
8) Phenol	4.94	94	205990	456.2390009	ppb	92
9) Benzaldehyde	4.90	105	30491	127.2358214	ppb	96
10) 2-Chlorophenol	5.09	128	179382	456.5445724	ppb	97
11) n-Decane	5.11	41	72144	474.0224854	ppb	95
12) 1,3-Dichlorobenzene	5.24	146	172241	431.7932719	ppb	97
13) 1,4-Dichlorobenzene	5.31	146	184187	451.6210851	ppb	98
14) Benzyl Alcohol	5.40	79	145239	512.7450540	ppb	98
15) 1,2-Dichlorobenzene	5.45	146	176034	445.3769354	ppb	99
16) bis(2-Chloroisopropyl)ethe	5.53	121	58941	482.8399561	ppb	94
17) 2-Methylphenol	5.49	108	165576	474.9729220	ppb	95
18) Hexachloroethane	5.78	117	76100	447.9947777	ppb	92
19) N-Nitrosodi-n-propylamine	5.66	70	122512	486.8143022	ppb	86
20) 3&4-Methyl phenol	5.64	107	218067	534.2892373	ppb	88
21) Acetophenone	5.66	105	239497	527.5900888	ppb	97
24) Nitrobenzene	5.84	77	176281	491.7485219	ppb	98
25) Isophorone	6.07	82	343614	524.1889250	ppb	99
26) 2-Nitrophenol	6.16	139	101507	498.8778423	ppb	95
27) 2,4-Dimethylphenol	6.17	107	186385	515.0431538	ppb	95
28) bis(2-Chlorethoxy)methane	6.27	93	224501	483.1854141	ppb	95
29) 2,4-Dichlorophenol	6.40	162	157822	526.6067768	ppb	97
30) Benzoic Acid	6.22	105	5050m	70.4100472	ppb	
31) 1,2,4-Trichlorobenzene	6.49	180	152912	511.7586615	ppb	99
32) Naphthalene	6.58	128	587563	478.9581097	ppb	99
33) 4-Chloroaniline	6.62	65	71660	507.7672328	ppb	97
34) Hexachloro-1,3-butadiene	6.70	225	71691	551.1353051	ppb	98
35) Caprolactam	6.97	113	63735	586.4200281	ppb	89
36) 4-Chloro-3-methylphenol	7.12	107	180251	545.3271891	ppb	95
37) 2-Methylnaphthalene	7.31	142	406422	504.7909621	ppb	97
38) 1-Methylnaphthalene	7.41	142	380690	526.1637994	ppb	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052416\0524 04.D Vial: 4
Acq On : 24 May 2016 9:56 am Operator: 280
Sample : LCS 1x WG874391 15-0.5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 24 10:50 2016 Quant Results File: S804D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Initial Calibration
DataAcq Meth : BNA4E

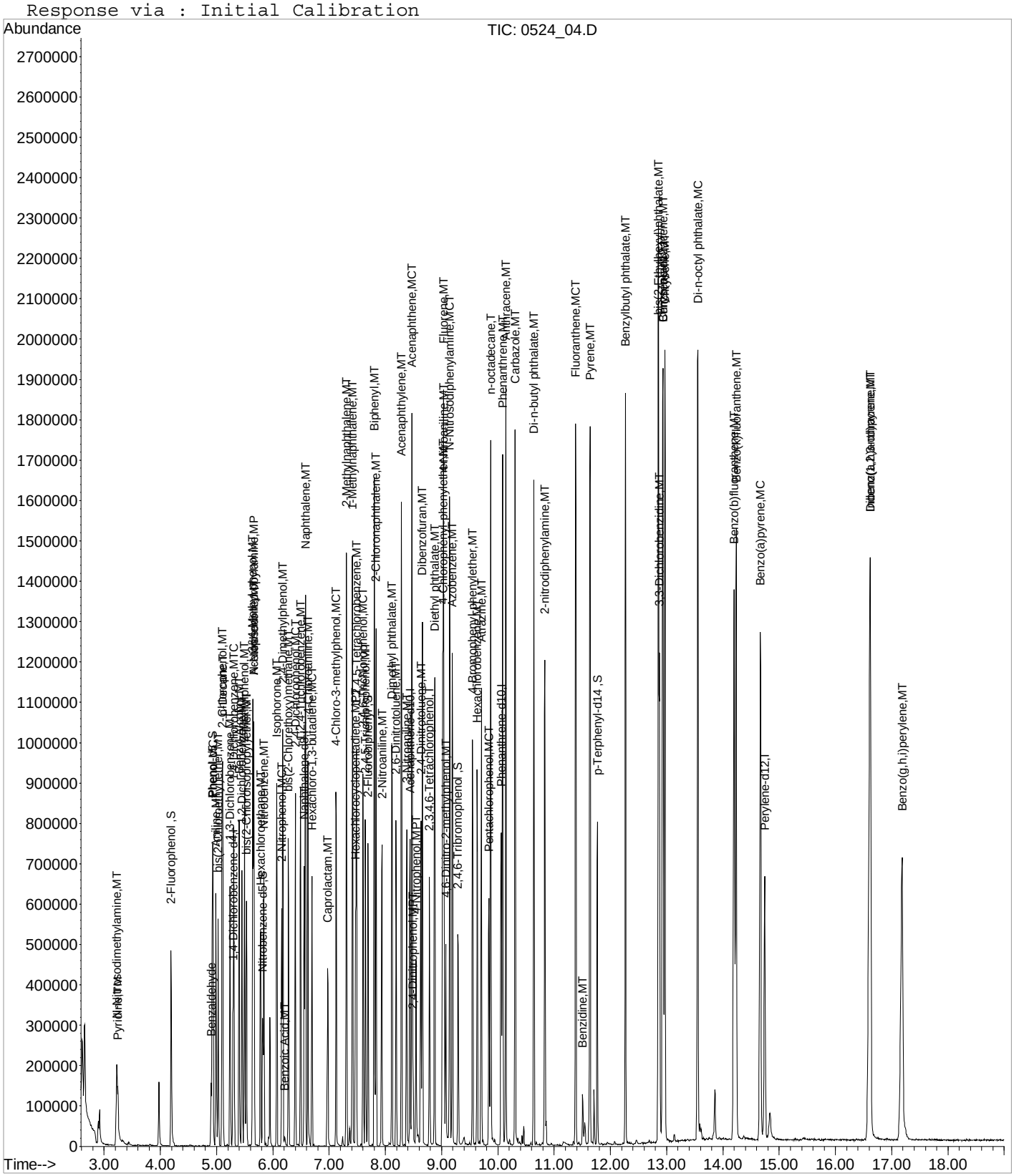
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	1,2,4,5-Tetrachlorobenzene	7.49	216	147861	592.2336544	ppb		100
41)	Hexachlorocyclopentadiene	7.47	237	81735	568.6451014	ppb		99
42)	2,4,6-Trichlorophenol	7.60	196	112211	547.6015358	ppb		97
43)	2,4,5-Trichlorophenol	7.64	196	111869	508.2873474	ppb		99
45)	Biphenyl	7.80	154	499611	484.3747972	ppb		100
46)	2-Chloronaphthalene	7.83	162	390082	481.3693421	ppb		96
47)	2-Nitroaniline	7.94	138	152728	534.5406763	ppb		98
48)	Acenaphthylene	8.28	152	679064	525.5258492	ppb		99
49)	Dimethyl phthalate	8.11	163	445263	525.0539299	ppb		98
50)	2,6-Dinitrotoluene	8.19	165	107295	511.5293413	ppb		96
51)	3-Nitroaniline	8.38	138	126345	498.3113872	ppb		93
52)	Acenaphthene	8.47	153	423337	499.8134521	ppb		100
53)	2,4-Dinitrophenol	8.49	184	29149	292.6459915	ppb		94
54)	Dibenzofuran	8.65	168	566926	488.3476259	ppb		95
55)	2,4-Dinitrotoluene	8.63	165	152062	544.6768942	ppb		92
56)	2,3,4,6-Tetrachlorophenol	8.78	232	70796	589.6395091	ppb		97
57)	4-Nitrophenol	8.55	139	93291	467.9110663	ppb		95
58)	Fluorene	9.03	166	489630	511.9771826	ppb		99
59)	4-Chlorophenyl-phenylether	9.02	204	192044	520.1455185	ppb		92
60)	Diethyl phthalate	8.88	149	484881	543.6161396	ppb		99
61)	4-Nitroaniline	9.04	138	132271	523.4952195	ppb	#	91
62)	Azobenzene	9.19	77	449416	474.6883554	ppb		97
63)	Atrazine	9.71	200	114622	610.8202549	ppb		93
65)	4,6-Dinitro-2-methylphenol	9.08	198	67431	437.5544870	ppb		91
66)	N-Nitrosodiphenylamine	9.14	169	412527	487.9206035	ppb		100
68)	4-Bromophenyl-phenylether	9.55	248	107271	525.0839820	ppb		93
69)	Hexachlorobenzene	9.63	284	114585	520.9359899	ppb		98
70)	n-octadecane	9.87	55	82918	508.6719720	ppb		98
71)	Pentachlorophenol	9.84	266	67708	515.4054993	ppb		96
72)	Phenanthrene	10.08	178	684199	488.3506005	ppb		97
73)	Anthracene	10.14	178	723857	515.0149760	ppb		99
74)	Carbazole	10.31	167	721406	500.2594994	ppb		99
75)	Di-n-butyl phthalate	10.64	149	924587	520.7754251	ppb		100
76)	2-nitrodiphenylamine	10.83	167	186311	636.1769429	ppb		98
77)	Fluoranthene	11.38	202	748871	528.2127231	ppb		100
79)	Benzidine	11.50	184	67507	63.6701809	ppb		98
80)	Pyrene	11.64	202	783523	458.0363035	ppb		100
82)	Benzylbutyl phthalate	12.27	149	462946	495.3397991	ppb		97
83)	3,3-Dichlorobenzidine	12.87	252	255132	637.2293560	ppb		94
84)	Benzo(a)anthracene	12.93	228	712746	474.3236386	ppb		92
85)	Chrysene	12.97	228	689906	481.0945543	ppb		96
86)	bis(2-Ethylhexyl)phthalate	12.86	149	701340	489.1272222	ppb		97
87)	Di-n-octyl phthalate	13.55	149	1251790	493.8947692	ppb		99
89)	Benzo(b)fluoranthene	14.19	252	734079m	459.4855449	ppb		
90)	Benzo(k)fluoranthene	14.24	252	741726	496.4211461	ppb		92
91)	Benzo(a)pyrene	14.67	252	731211	491.0024368	ppb		93
92)	Indeno(1,2,3-cd)pyrene	16.62	276	803093	486.8429619	ppb		92
93)	Dibenz(a,h)anthracene	16.62	278	679542	475.3567863	ppb		90
94)	Benzo(g,h,i)perylene	17.19	276	658489	483.8494756	ppb		84

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

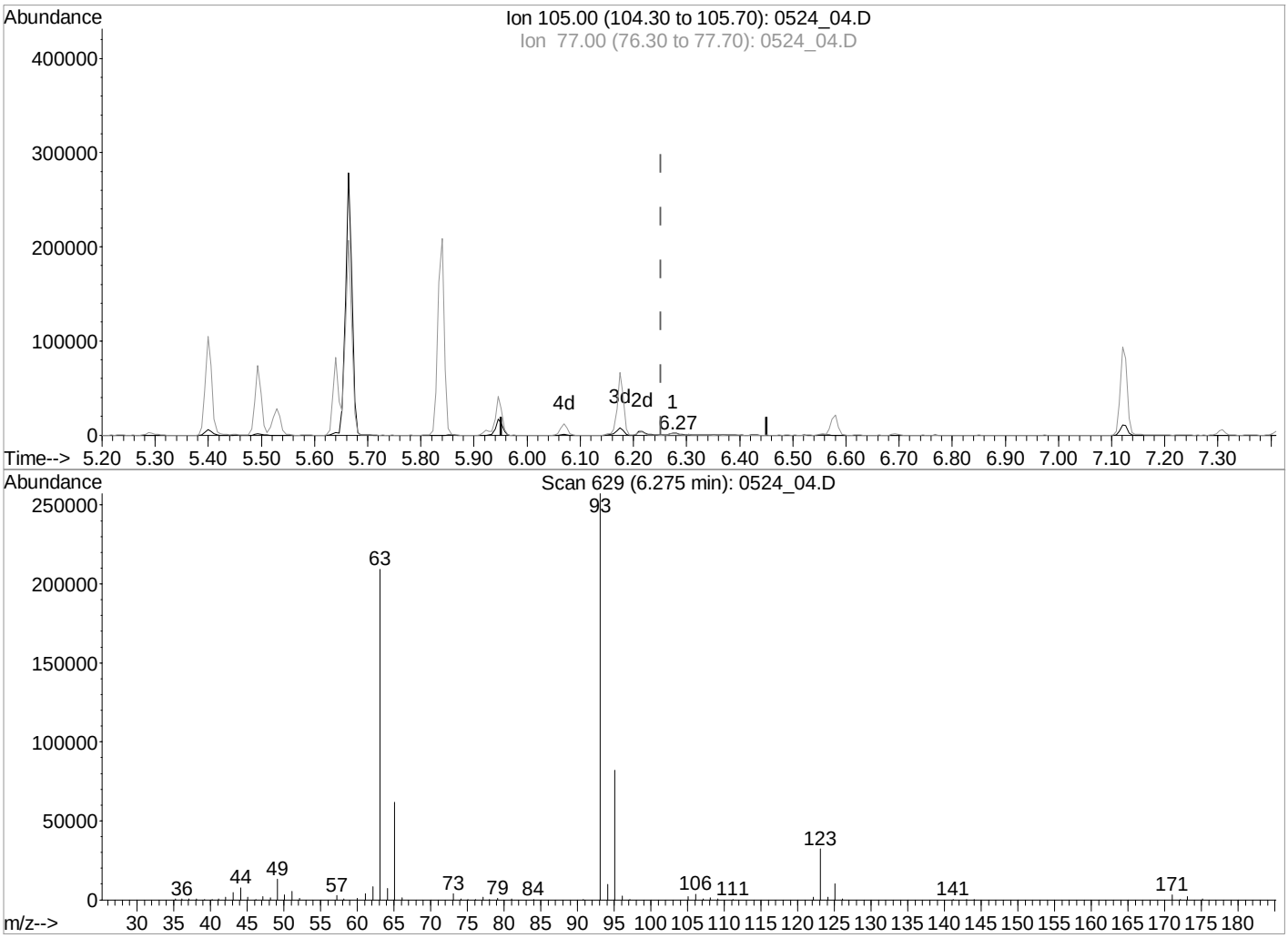
Data File : C:\MSDCHEM\1\DATA\052416\0524 04.D Vial: 4
Acq On : 24 May 2016 9:56 am Operator: 280
Sample : LCS 1x WG874391 15-0.5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 24 10:50 2016 Quant Results File: S804D25P.RES

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Initial Calibration



Data File : C:\MSDCHEM\1\DATA\052416\0524 04.D Vial: 4
Acq On : 24 May 2016 9:56 am Operator: 280
Sample : LCS 1x WG874391 15-0.5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 24 10:49 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Single Level Calibration



TIC: 0524_04.D

(30) Benzoic Acid (MT)

6.27min (+0.024) 69.3397612 ppb

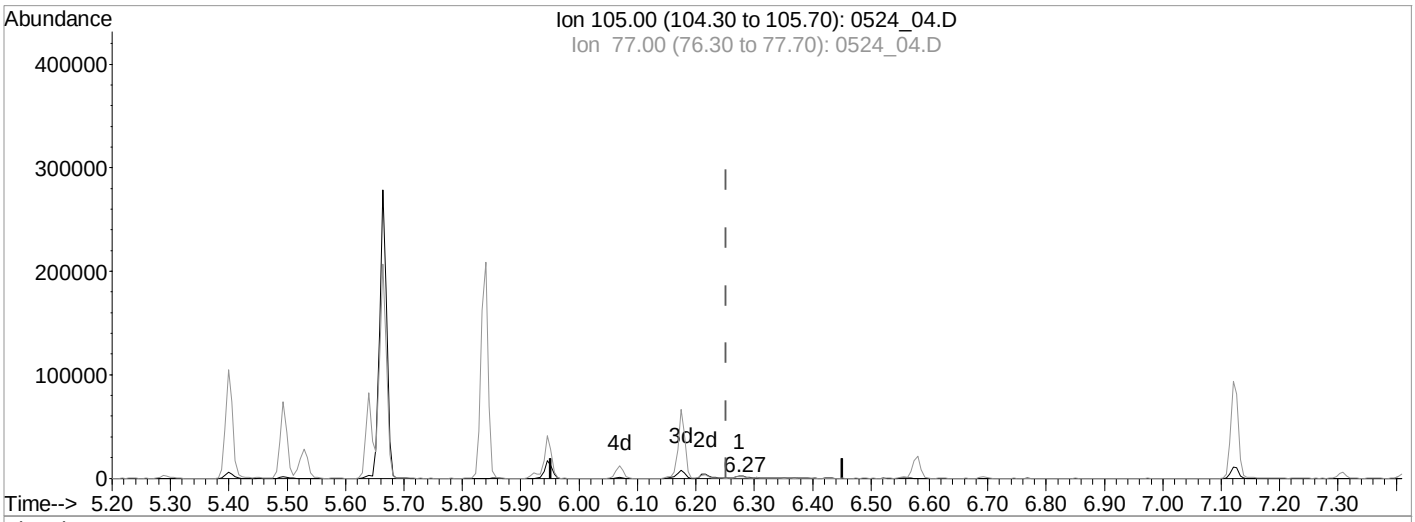
Qvalue = 92

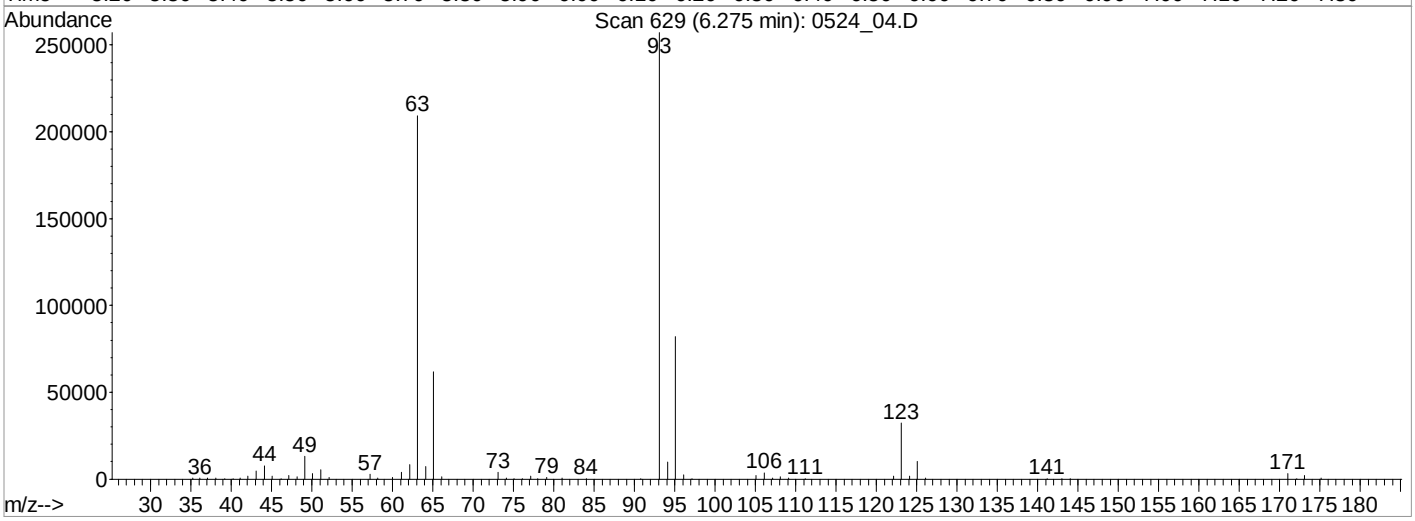
response 4902

Ion	Exp%	Act%
105.00	100	100
77.00	66.30	72.91
0.00	0.00	0.00
0.00	0.00	0.00

Data File : C:\MSDCHEM\1\DATA\052416\0524 04.D Vial: 4
Acq On : 24 May 2016 9:56 am Operator: 280
Sample : LCS 1x WG874391 15-0.5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 24 10:49 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Single Level Calibration





TIC: 0524_04.D

(30) Benzoic Acid (MT)

6.27min (+0.024) 69.3397612 ppb

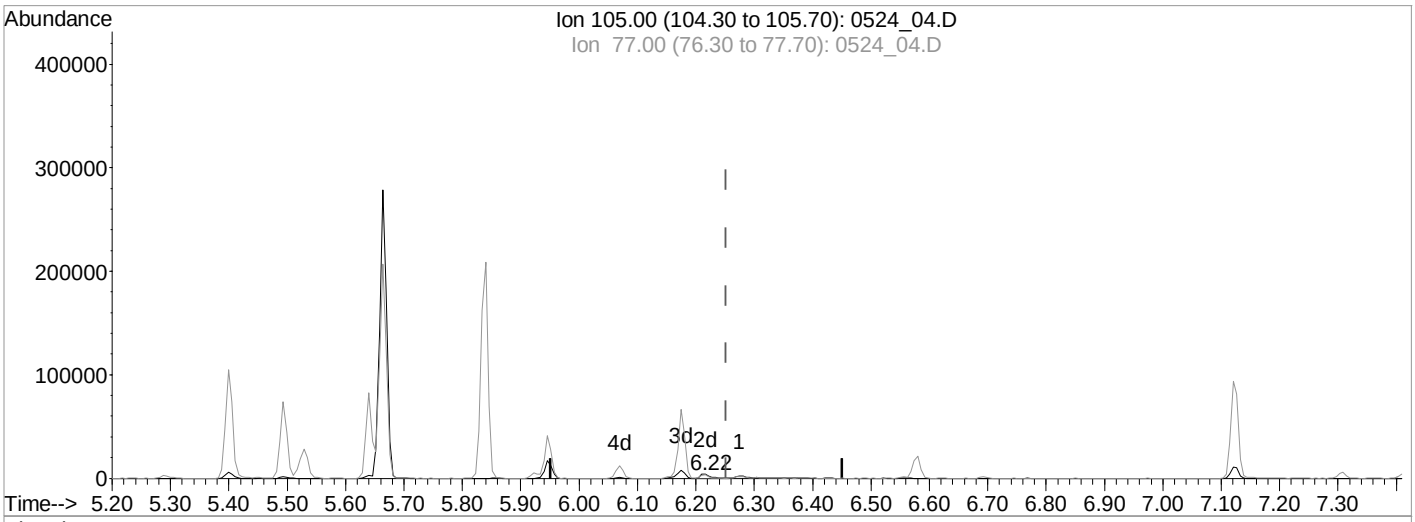
Qvalue = 92

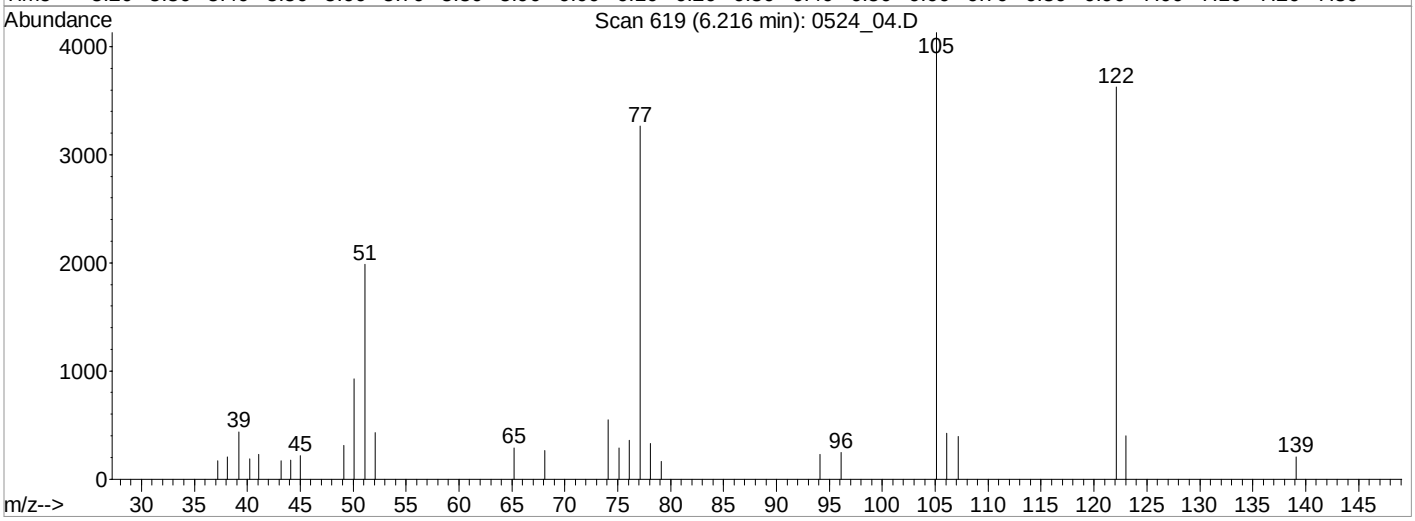
response 4902

Ion	Exp%	Act%
105.00	100	100
77.00	66.30	72.91
0.00	0.00	0.00
0.00	0.00	0.00

Data File : C:\MSDCHEM\1\DATA\052416\0524 04.D Vial: 4
Acq On : 24 May 2016 9:56 am Operator: 280
Sample : LCS 1x WG874391 15-0.5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 24 10:49 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Single Level Calibration





TIC: 0524_04.D

(30) Benzoic Acid (MT)

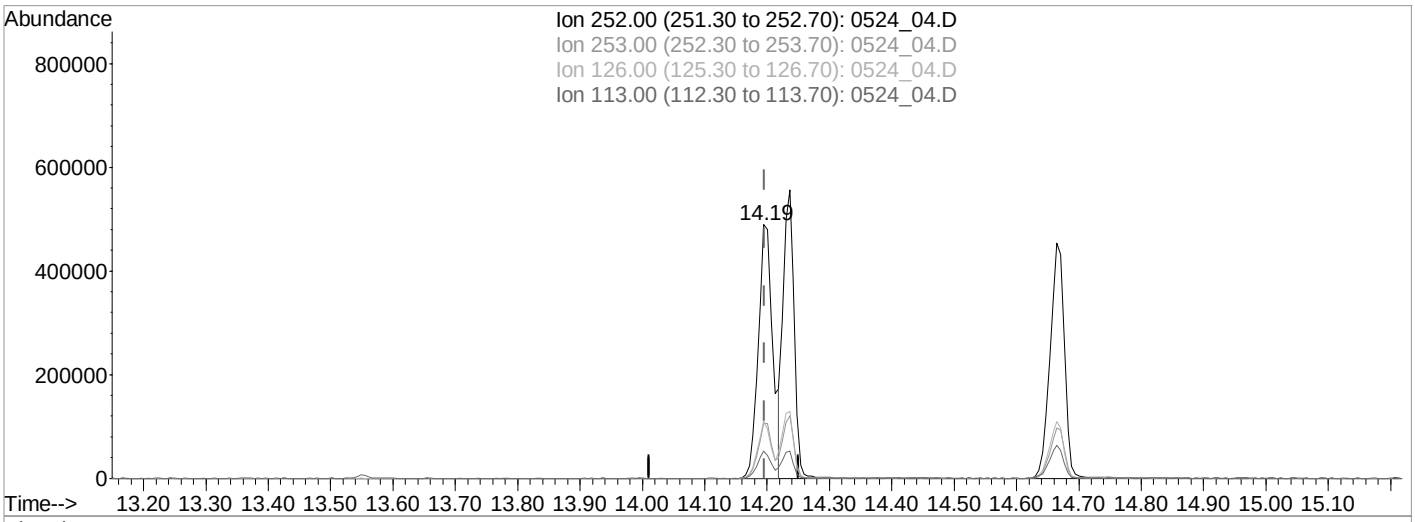
6.22min (-0.035) 70.4100472 ppb m

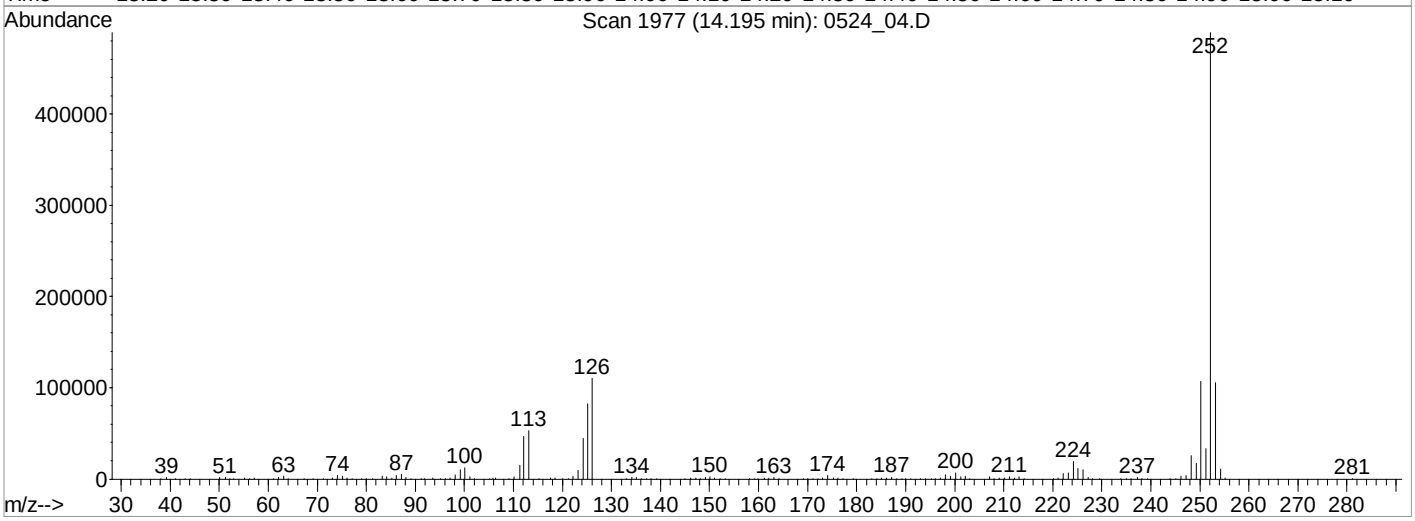
response 5050

Ion	Exp%	Act%
105.00	100	100
77.00	66.30	70.77
0.00	0.00	0.00
0.00	0.00	0.00

Data File : C:\MSDCHEM\1\DATA\052416\0524 04.D Vial: 4
Acq On : 24 May 2016 9:56 am Operator: 280
Sample : LCS 1x WG874391 15-0.5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 24 10:49 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Multiple Level Calibration





TIC: 0524_04.D

(89) Benzo(b)fluoranthene (MT)

14.19min (-0.000) 497.5110801 ppb

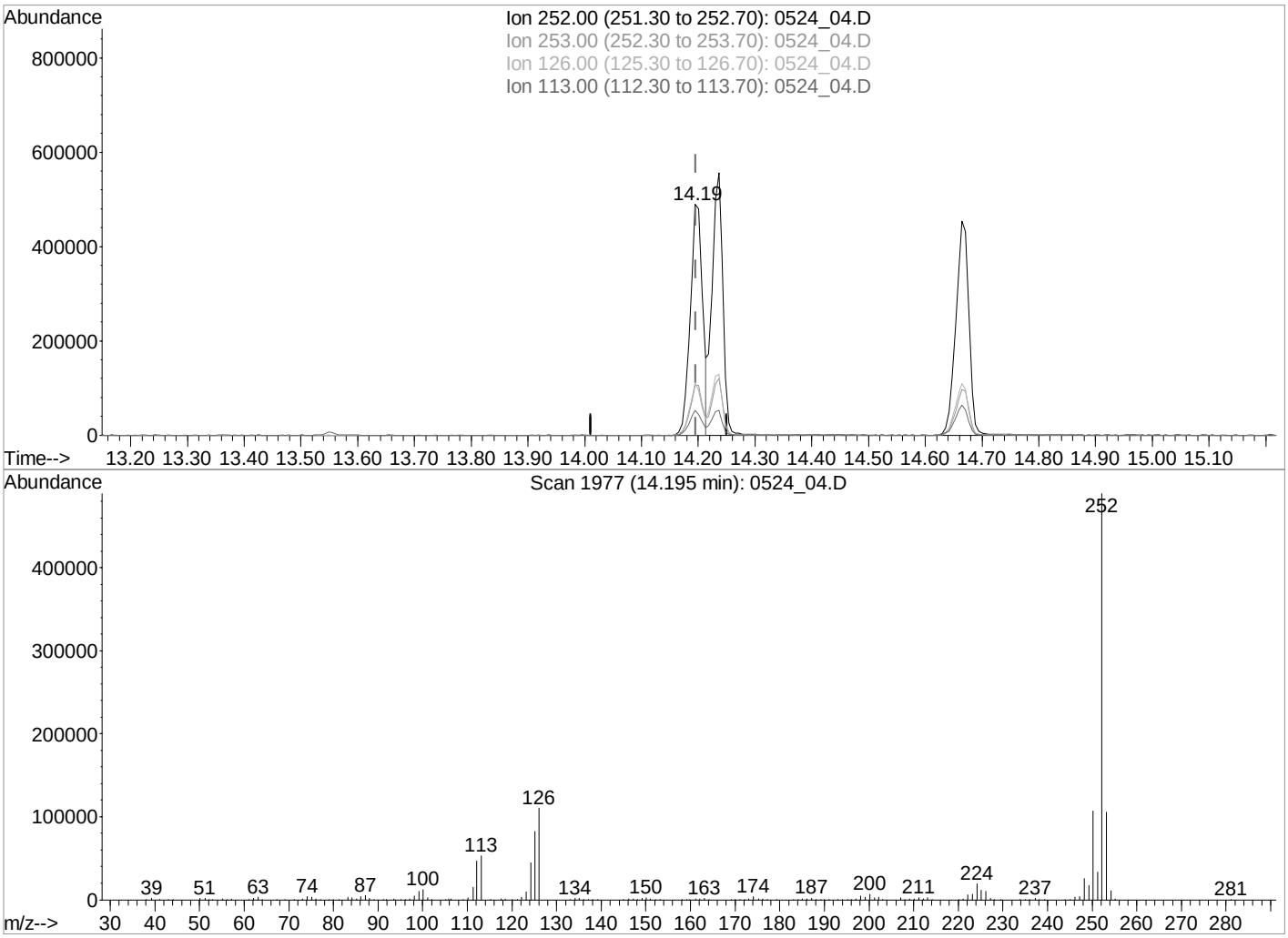
Qvalue = 95

response 794829

Ion	Exp%	Act%
252.00	100	100
253.00	21.50	21.30
126.00	25.80	21.38
113.00	12.80	10.67

Data File : C:\MSDCHEM\1\DATA\052416\0524 04.D Vial: 4
Acq On : 24 May 2016 9:56 am Operator: 280
Sample : LCS 1x WG874391 15-0.5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 24 10:50 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Multiple Level Calibration



TIC: 0524_04.D

(89) Benzo(b)fluoranthene (MT)

14.19min (-0.000) 459.4855449 ppb m

response 734079

Ion	Exp%	Act%
252.00	100	100
253.00	21.50	21.51
126.00	25.80	22.59
113.00	12.80	10.83

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052416\0524 05.D Vial: 5
Acq On : 24 May 2016 10:19 am Operator: 280
Sample : LCSD 1x WG874391 15-0.5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 24 10:50 2016 Quant Results File: S804D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Initial Calibration
DataAcq Meth : BNA4E

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.29	152	51992	8000.00	ppb	0.00
22) Naphthalene-d8	6.56	136	289989	8000.00	ppb	0.00
40) Acenaphthene-d10	8.44	164	180391	8000.00	ppb	0.00
64) Phenanthrene-d10	10.06	188	314947	8000.00	ppb	0.00
78) Chrysene-d12	12.94	240	315442	8000.00	ppb	0.00
88) Perylene-d12	14.74	264	326323	8000.00	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	4.19	112	160697	442.0856260	ppb	0.00
Spiked Amount 666.000	Range 21 - 116		Recovery = 66.38%			
7) Phenol-d5	4.92	99	199979	421.2918569	ppb	0.00
Spiked Amount 666.000	Range 26 - 121		Recovery = 63.26%			
23) Nitrobenzene-d5	5.82	82	94182	248.2704395	ppb	0.00
Spiked Amount 333.000	Range 22 - 129		Recovery = 74.56%			
44) 2-Fluorobiphenyl	7.69	172	220181	247.1166231	ppb	0.00
Spiked Amount 333.000	Range 35 - 129		Recovery = 74.21%			
67) 2,4,6-Tribromophenol	9.29	330	53601	538.6682243	ppb	0.00
Spiked Amount 666.000	Range 22 - 142		Recovery = 80.88%			
81) p-Terphenyl-d14	11.77	244	294299	247.7593569	ppb	0.00
Spiked Amount 333.000	Range 22 - 128		Recovery = 74.40%			
Target Compounds						Qvalue
2) Pyridine	3.24	79	92902	167.3675843	ppb #	85
3) N-Nitrosodimethylamine	3.22	42	91889	433.3566123	ppb #	79
5) Aniline	4.99	66	97179	416.5107217	ppb	94
6) bis(2-Chloroethyl)ether	5.03	63	144646	424.5911019	ppb	97
8) Phenol	4.94	94	211640	428.8397162	ppb	92
9) Benzaldehyde	4.90	105	33720	128.7289637	ppb	95
10) 2-Chlorophenol	5.09	128	189237	440.6171062	ppb	96
11) n-Decane	5.11	41	76444	459.5080309	ppb	97
12) 1,3-Dichlorobenzene	5.24	146	185973	426.5207918	ppb	99
13) 1,4-Dichlorobenzene	5.31	146	193822	434.7797249	ppb	98
14) Benzyl Alcohol	5.40	79	149931	484.2399818	ppb	99
15) 1,2-Dichlorobenzene	5.45	146	186736	432.2253095	ppb	99
16) bis(2-Chloroisopropyl)ethe	5.53	121	61207	458.7095401	ppb	97
17) 2-Methylphenol	5.49	108	172807	453.5067678	ppb	96
18) Hexachloroethane	5.78	117	82568	444.6835222	ppb	96
19) N-Nitrosodi-n-propylamine	5.66	70	128046	465.4807148	ppb	89
20) 3&4-Methyl phenol	5.64	107	223474	500.9154841	ppb	88
21) Acetophenone	5.66	105	247304	498.4007288	ppb	96
24) Nitrobenzene	5.84	77	181187	481.6708831	ppb	97
25) Isophorone	6.07	82	352277	512.1380956	ppb	97
26) 2-Nitrophenol	6.16	139	109834	514.4235298	ppb	97
27) 2,4-Dimethylphenol	6.17	107	188211	495.6367095	ppb	95
28) bis(2-Chlorethoxy)methane	6.27	93	228859	469.4067540	ppb	95
29) 2,4-Dichlorophenol	6.40	162	165359	525.8144785	ppb	99
30) Benzoic Acid	6.22	105	5074m	68.8579962	ppb	
31) 1,2,4-Trichlorobenzene	6.49	180	155958	497.4129554	ppb	99
32) Naphthalene	6.58	128	612657	475.9335205	ppb	99
33) 4-Chloroaniline	6.62	65	71742	484.4479802	ppb	98
34) Hexachloro-1,3-butadiene	6.69	225	73603	539.2310756	ppb	98
35) Caprolactam	6.97	113	65883	577.6835131	ppb	91
36) 4-Chloro-3-methylphenol	7.12	107	186816	538.6161109	ppb	97
37) 2-Methylnaphthalene	7.31	142	414535	490.6608071	ppb	98
38) 1-Methylnaphthalene	7.41	142	385691	508.0129732	ppb	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052416\0524 05.D Vial: 5
Acq On : 24 May 2016 10:19 am Operator: 280
Sample : LCSD 1x WG874391 15-0.5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 24 10:50 2016 Quant Results File: S804D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Initial Calibration
DataAcq Meth : BNA4E

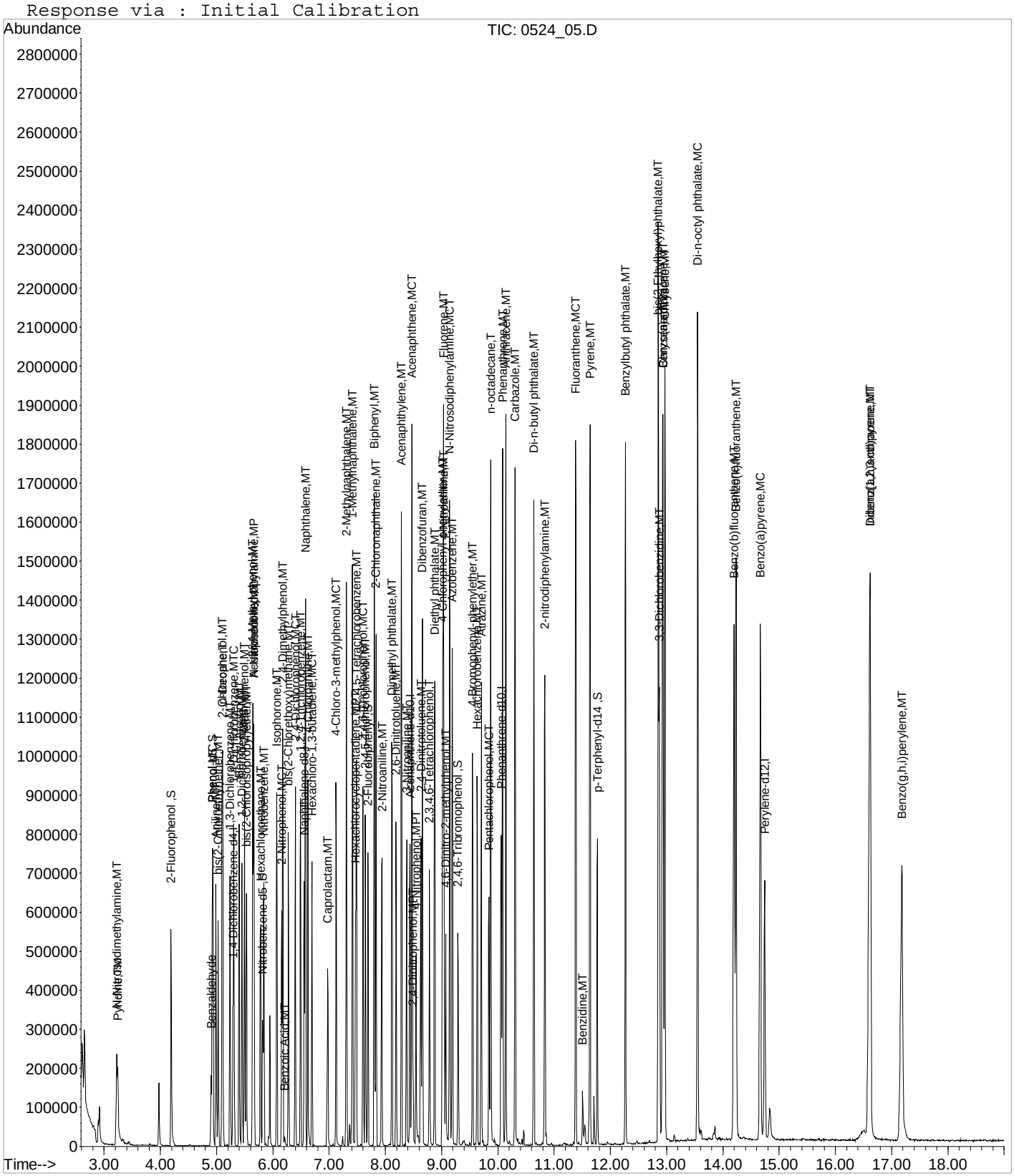
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	1,2,4,5-Tetrachlorobenzene	7.49	216	153280	585.0739177	ppb		99
41)	Hexachlorocyclopentadiene	7.47	237	85202	583.3150952	ppb		97
42)	2,4,6-Trichlorophenol	7.60	196	113153	543.3948126	ppb		97
43)	2,4,5-Trichlorophenol	7.64	196	114059	509.9754778	ppb		99
45)	Biphenyl	7.80	154	503195	480.0716434	ppb		100
46)	2-Chloronaphthalene	7.83	162	394001	478.4538254	ppb		97
47)	2-Nitroaniline	7.94	138	155116	534.2430509	ppb		98
48)	Acenaphthylene	8.28	152	699184	532.4698814	ppb		99
49)	Dimethyl phthalate	8.11	163	455658	528.7452704	ppb		99
50)	2,6-Dinitrotoluene	8.19	165	108255	507.8777896	ppb		99
51)	3-Nitroaniline	8.38	138	128141	497.3373219	ppb		96
52)	Acenaphthene	8.47	153	431467	501.2905164	ppb		99
53)	2,4-Dinitrophenol	8.49	184	31432	305.6640927	ppb		92
54)	Dibenzofuran	8.65	168	582758	493.9820189	ppb		96
55)	2,4-Dinitrotoluene	8.63	165	157966	556.8036403	ppb		97
56)	2,3,4,6-Tetrachlorophenol	8.78	232	73191	599.8680441	ppb		99
57)	4-Nitrophenol	8.55	139	97910	483.2488280	ppb		94
58)	Fluorene	9.03	166	493319	507.6105267	ppb		99
59)	4-Chlorophenyl-phenylether	9.01	204	197412	526.1600341	ppb		96
60)	Diethyl phthalate	8.88	149	493802	544.7913592	ppb		99
61)	4-Nitroaniline	9.04	138	134950	525.5828224	ppb	#	90
62)	Azobenzene	9.19	77	456854	474.8513429	ppb		97
63)	Atrazine	9.71	200	118747	622.7135058	ppb		91
65)	4,6-Dinitro-2-methylphenol	9.07	198	70060	449.0753008	ppb		94
66)	N-Nitrosodiphenylamine	9.14	169	419162	489.7282735	ppb		99
68)	4-Bromophenyl-phenylether	9.55	248	110890	536.1858137	ppb		93
69)	Hexachlorobenzene	9.63	284	113029	507.6015899	ppb		97
70)	n-octadecane	9.87	55	85651	519.0365280	ppb		97
71)	Pentachlorophenol	9.84	266	70723	531.7974276	ppb		96
72)	Phenanthrene	10.08	178	686058	483.7117297	ppb		96
73)	Anthracene	10.14	178	735872	517.1849193	ppb		99
74)	Carbazole	10.31	167	717748	491.6590980	ppb		99
75)	Di-n-butyl phthalate	10.64	149	936053	520.8103829	ppb		99
76)	2-nitrodiphenylamine	10.83	167	191311	645.2913815	ppb		98
77)	Fluoranthene	11.38	202	751128	523.3500760	ppb		100
79)	Benzidine	11.50	184	72353	68.5046815	ppb		100
80)	Pyrene	11.64	202	796990	467.7108627	ppb		99
82)	Benzylbutyl phthalate	12.27	149	470728	505.6143047	ppb		98
83)	3,3-Dichlorobenzidine	12.87	252	262717	658.7118103	ppb		93
84)	Benzo(a)anthracene	12.93	228	724341	483.9043000	ppb		93
85)	Chrysene	12.97	228	695981	487.2079155	ppb		97
86)	bis(2-Ethylhexyl)phthalate	12.85	149	709218	496.5344747	ppb		99
87)	Di-n-octyl phthalate	13.55	149	1261411	499.6156058	ppb		100
89)	Benzo(b)fluoranthene	14.20	252	744720m	466.0475512	ppb		
90)	Benzo(k)fluoranthene	14.24	252	739029	494.5115174	ppb		91
91)	Benzo(a)pyrene	14.67	252	746217	500.9728962	ppb		91
92)	Indeno(1,2,3-cd)pyrene	16.62	276	805499	488.1982532	ppb		92
93)	Dibenz(a,h)anthracene	16.62	278	691629	483.7096474	ppb		90
94)	Benzo(g,h,i)perylene	17.18	276	665912	489.2003414	ppb		82

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

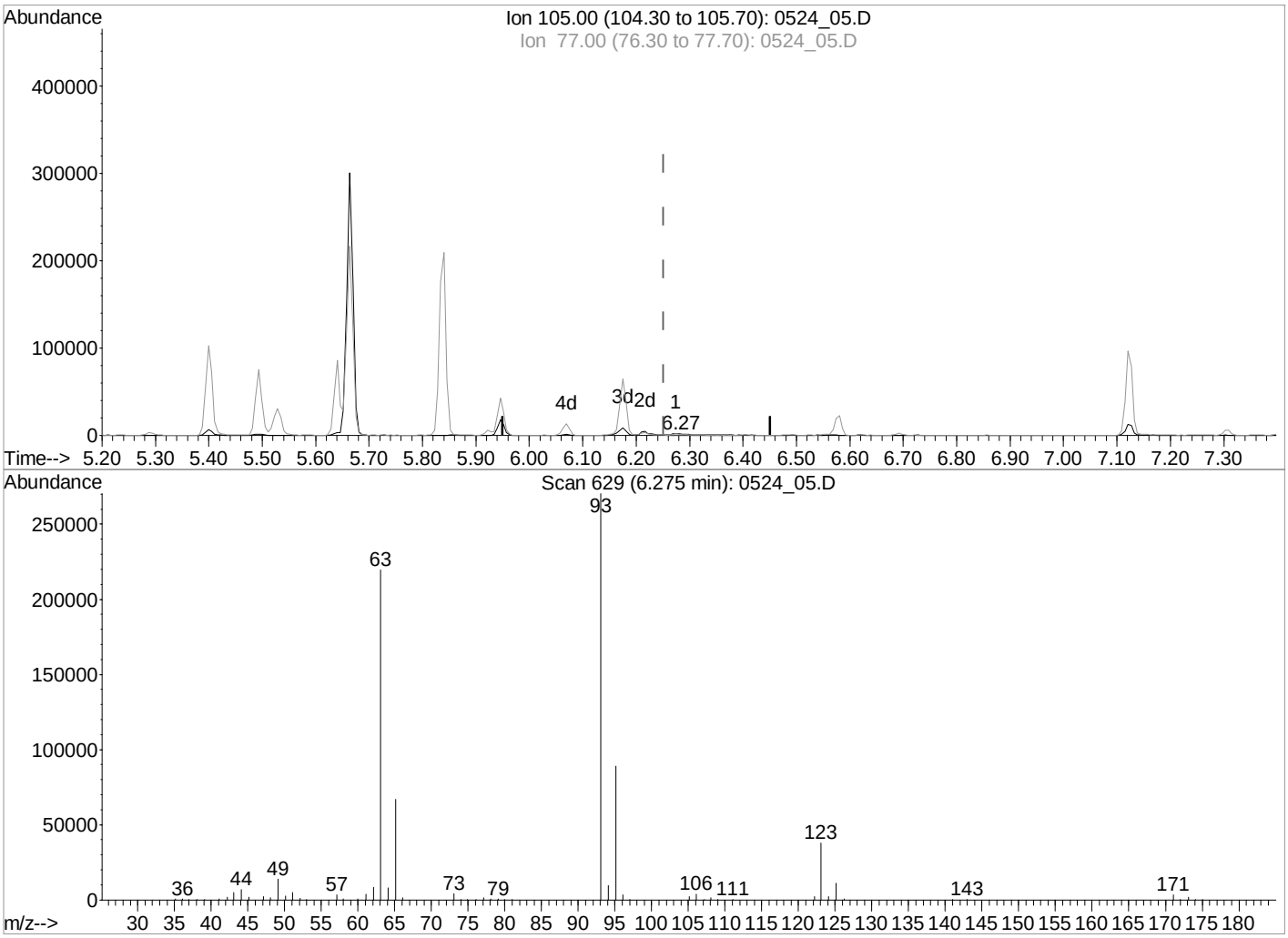
Data File : C:\MSDCHEM\1\DATA\052416\0524 05.D Vial: 5
Acq On : 24 May 2016 10:19 am Operator: 280
Sample : LCSD 1x WG874391 15-0.5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 24 10:50 2016 Quant Results File: S804D25P.RES

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Initial Calibration



Data File : C:\MSDCHEM\1\DATA\052416\0524 05.D Vial: 5
Acq On : 24 May 2016 10:19 am Operator: 280
Sample : LCSD 1x WG874391 15-0.5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 24 10:50 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Single Level Calibration



TIC: 0524_05.D

(30) Benzoic Acid (MT)

6.27min (+0.024) 68.4922133 ppb

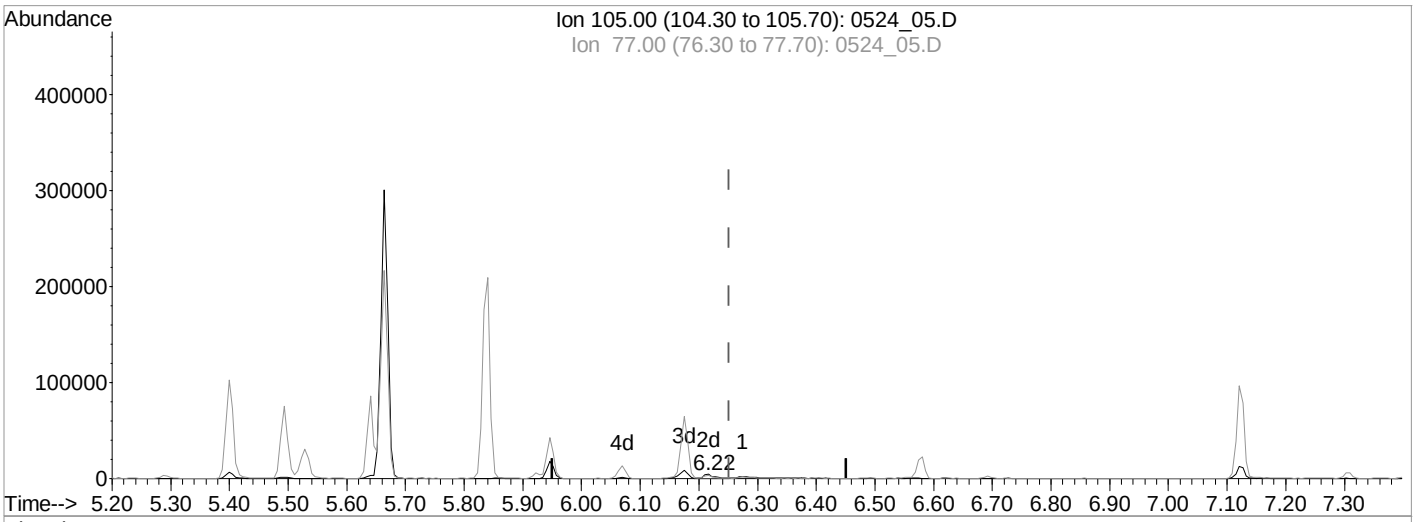
Qvalue = 85

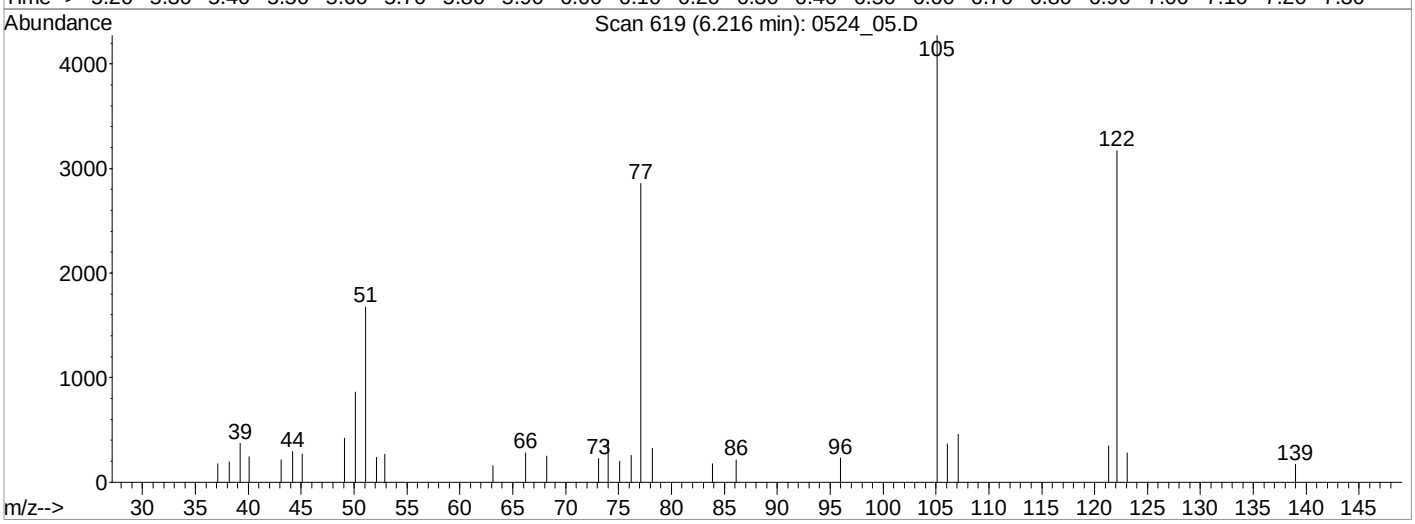
response 5021

Ion	Exp%	Act%
105.00	100	100
77.00	66.30	53.97
0.00	0.00	0.00
0.00	0.00	0.00

Data File : C:\MSDCHEM\1\DATA\052416\0524 05.D Vial: 5
Acq On : 24 May 2016 10:19 am Operator: 280
Sample : LCSD 1x WG874391 15-0.5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 24 10:50 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Single Level Calibration





TIC: 0524_05.D

(30) Benzoic Acid (MT)

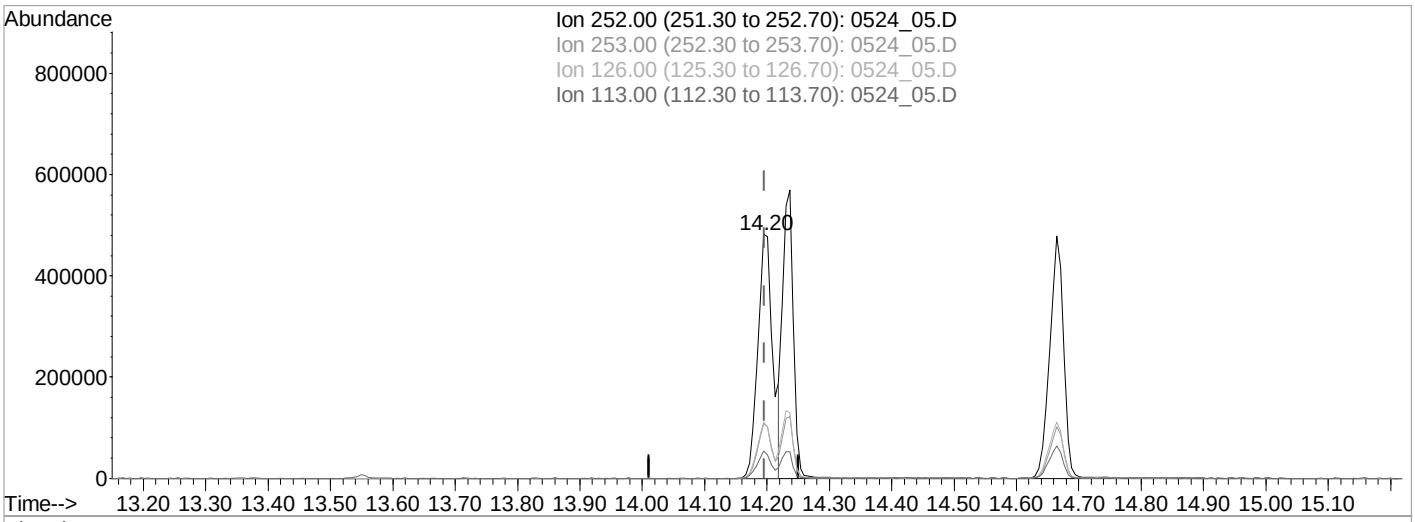
6.22min (-0.035) 68.8579962 ppb m

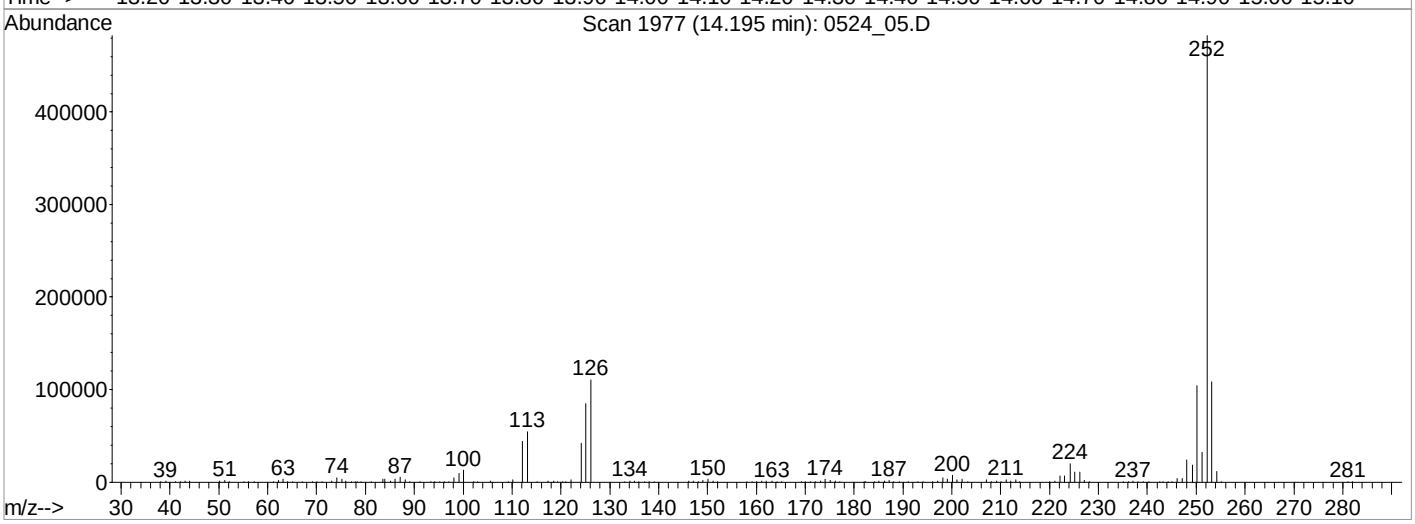
response 5074

Ion	Exp%	Act%
105.00	100	100
77.00	66.30	53.41
0.00	0.00	0.00
0.00	0.00	0.00

Data File : C:\MSDCHEM\1\DATA\052416\0524 05.D Vial: 5
Acq On : 24 May 2016 10:19 am Operator: 280
Sample : LCSD 1x WG874391 15-0.5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 24 10:50 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Multiple Level Calibration





TIC: 0524_05.D

(89) Benzo(b)fluoranthene (MT)

14.20min (-0.000) 507.5651588 ppb

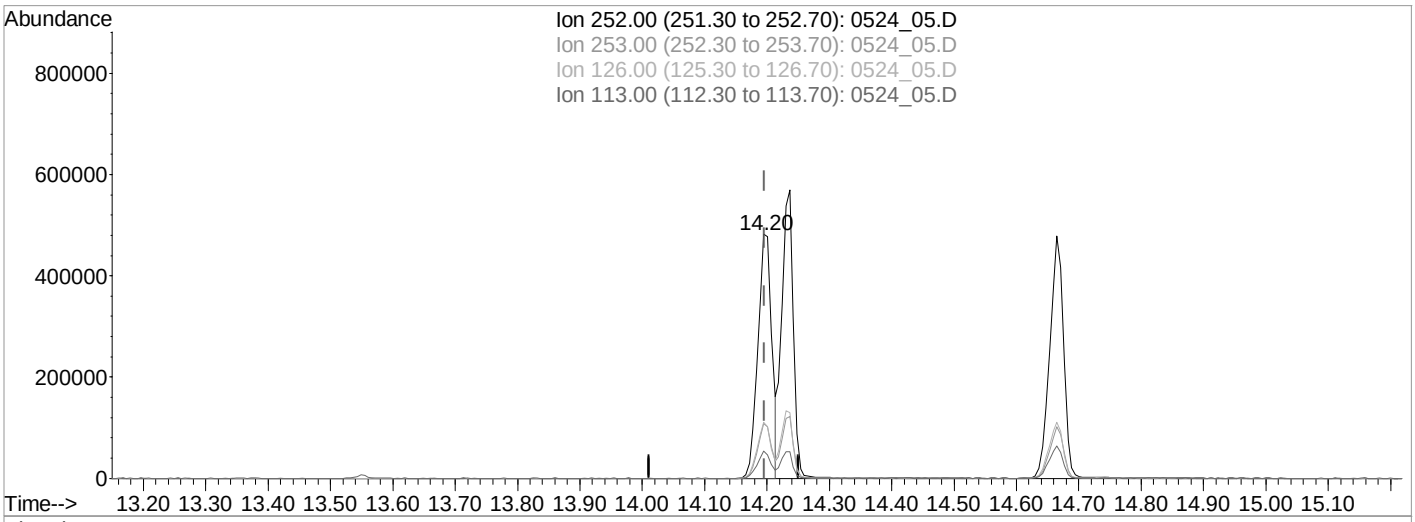
Qvalue = 95

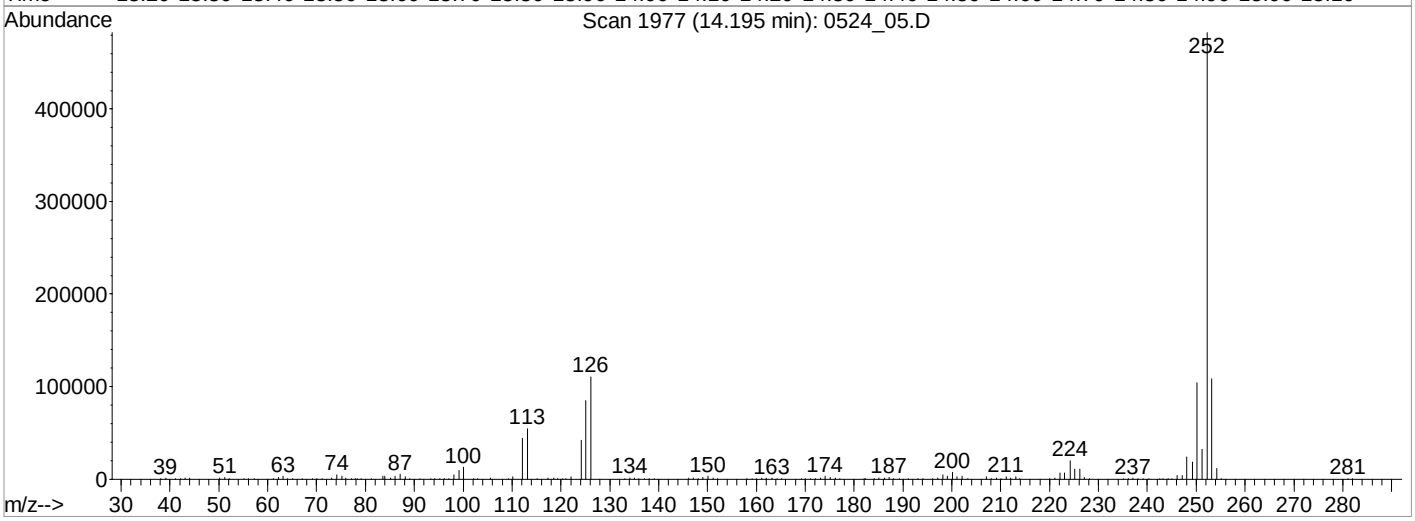
response 811063

Ion	Exp%	Act%
252.00	100	100
253.00	21.50	22.48
126.00	25.80	21.61
113.00	12.80	11.19

Data File : C:\MSDCHEM\1\DATA\052416\0524 05.D Vial: 5
Acq On : 24 May 2016 10:19 am Operator: 280
Sample : LCSD 1x WG874391 15-0.5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 24 10:50 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Multiple Level Calibration





TIC: 0524_05.D

(89) Benzo(b)fluoranthene (MT)

14.20min (-0.000) 466.0475512 ppb m

response 744720

Ion	Exp%	Act%
252.00	100	100
253.00	21.50	22.45
126.00	25.80	22.86
113.00	12.80	11.22

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052416\0524 06.D Vial: 6
Acq On : 24 May 2016 10:51 am Operator: 280
Sample : Blank 1x WG874391 15-0.5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 24 12:28 2016 Quant Results File: S804D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Initial Calibration
DataAcq Meth : BNA4E

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.29	152	52042	8000.00	ppb	0.00
22) Naphthalene-d8	6.56	136	286480	8000.00	ppb	0.00
40) Acenaphthene-d10	8.44	164	172233	8000.00	ppb	0.00
64) Phenanthrene-d10	10.06	188	305903	8000.00	ppb	0.00
78) Chrysene-d12	12.94	240	298323	8000.00	ppb	0.00
88) Perylene-d12	14.74	264	298333	8000.00	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	4.19	112	164376	451.7722790	ppb	0.00
Spiked Amount 666.000	Range 21 - 116		Recovery = 67.83%			
7) Phenol-d5	4.92	99	199906	420.7334556	ppb	0.00
Spiked Amount 666.000	Range 26 - 121		Recovery = 63.17%			
23) Nitrobenzene-d5	5.82	82	93590	249.7317543	ppb	0.00
Spiked Amount 333.000	Range 22 - 129		Recovery = 74.99%			
44) 2-Fluorobiphenyl	7.69	172	203275	238.9486550	ppb	0.00
Spiked Amount 333.000	Range 35 - 129		Recovery = 71.76%			
67) 2,4,6-Tribromophenol	9.29	330	48081	497.4800815	ppb	0.00
Spiked Amount 666.000	Range 22 - 142		Recovery = 74.70%			
81) p-Terphenyl-d14	11.77	244	271515	241.6951223	ppb	0.00
Spiked Amount 333.000	Range 22 - 128		Recovery = 72.58%			

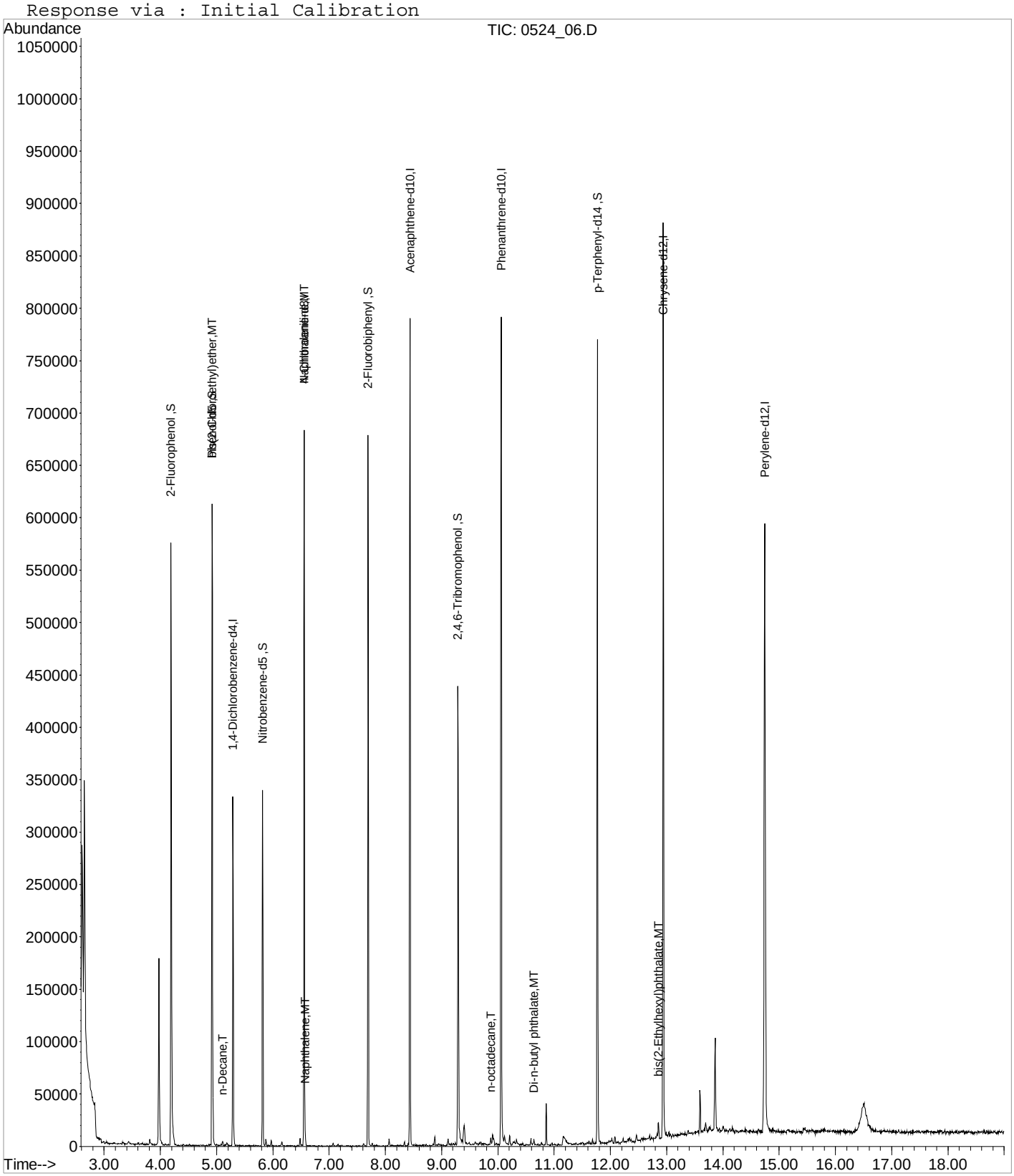
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052416\0524 06.D Vial: 6
Acq On : 24 May 2016 10:51 am Operator: 280
Sample : Blank 1x WG874391 15-0.5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 24 12:28 2016 Quant Results File: S804D25P.RES

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052416\0524 12.D Vial: 12
Acq On : 24 May 2016 1:12 pm Operator: 280
Sample : L836976-01 1x WG874391 15-0.5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 24 14:31 2016 Quant Results File: S804D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Initial Calibration
DataAcq Meth : BNA4E

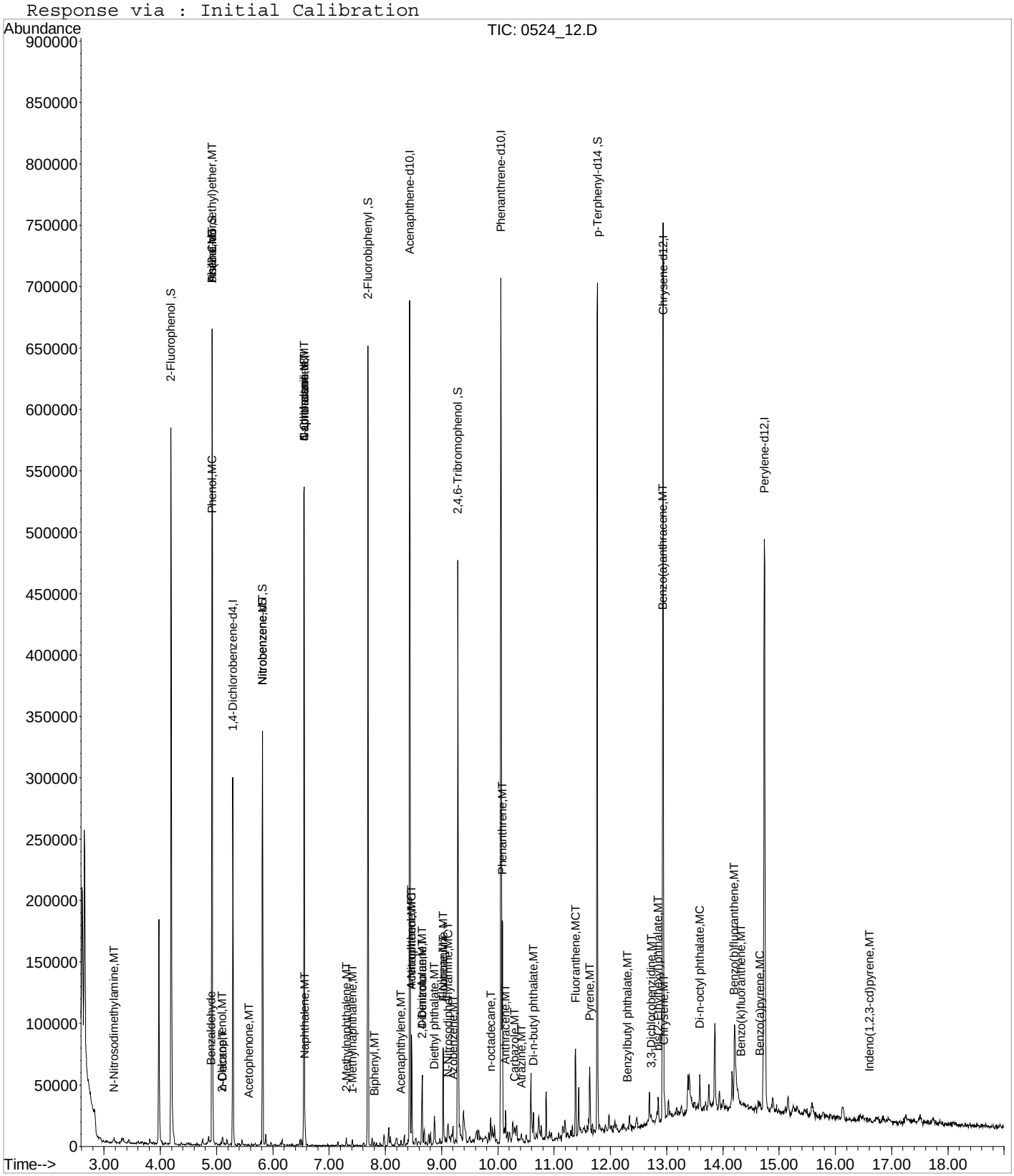
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.29	152	43814	8000.00	ppb	0.00
22) Naphthalene-d8	6.56	136	253068	8000.00	ppb	0.00
40) Acenaphthene-d10	8.43	164	150767	8000.00	ppb	0.00
64) Phenanthrene-d10	10.05	188	265392	8000.00	ppb	0.00
78) Chrysene-d12	12.93	240	256750	8000.00	ppb	0.00
88) Perylene-d12	14.74	264	251023	8000.00	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	4.19	112	169076	551.9556841	ppb	0.00
Spiked Amount 666.000	Range 21 - 116		Recovery = 82.88%			
7) Phenol-d5	4.92	99	204619	511.5266329	ppb	0.00
Spiked Amount 666.000	Range 26 - 121		Recovery = 76.81%			
23) Nitrobenzene-d5	5.82	82	91795	277.2811981	ppb	0.00
Spiked Amount 333.000	Range 22 - 129		Recovery = 83.27%			
44) 2-Fluorobiphenyl	7.69	172	203758	273.6184402	ppb	0.00
Spiked Amount 333.000	Range 35 - 129		Recovery = 82.17%			
67) 2,4,6-Tribromophenol	9.29	330	48877	582.9115433	ppb	0.00
Spiked Amount 666.000	Range 22 - 142		Recovery = 87.52%			
81) p-Terphenyl-d14	11.77	244	265275	274.3763454	ppb	0.00
Spiked Amount 333.000	Range 22 - 128		Recovery = 82.40%			
Target Compounds						Qvalue
5) Aniline	4.92	66	9863	50.1633363	ppb #	1
11) n-Decane	5.11	41	1135	8.0959755	ppb #	75
33) 4-Chloroaniline	6.56	65	798	6.1747710	ppb #	1
52) Acenaphthene	8.47	153	19801	27.5256511	ppb	96
54) Dibenzofuran	8.65	168	21493	21.7985953	ppb	94
58) Fluorene	9.02	166	24122	29.6978263	ppb	97
70) n-octadecane	9.86	55	2051	14.7496187	ppb #	41
72) Phenanthrene	10.08	178	71867	60.1319033	ppb	96
73) Anthracene	10.13	178	13292	11.0862216	ppb	93
77) Fluoranthene	11.38	202	30618	25.3165666	ppb	98
80) Pyrene	11.63	202	22854	16.4776727	ppb	97
86) bis(2-Ethylhexyl)phthalate	12.85	149	5920	5.0921411	ppb	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052416\0524 12.D Vial: 12
Acq On : 24 May 2016 1:12 pm Operator: 280
Sample : L836976-01 1x WG874391 15-0.5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 24 14:31 2016 Quant Results File: S804D25P.RES

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052416\0524 13.D Vial: 13
Acq On : 24 May 2016 1:35 pm Operator: 280
Sample : MS 1x WG874391 L836976-01 15-0.5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 24 14:32 2016 Quant Results File: S804D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Initial Calibration
DataAcq Meth : BNA4E

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.29	152	51879	8000.00	ppb		0.00
22) Naphthalene-d8	6.56	136	296038	8000.00	ppb		0.00
40) Acenaphthene-d10	8.44	164	191680	8000.00	ppb		0.00
64) Phenanthrene-d10	10.06	188	337125	8000.00	ppb		0.00
78) Chrysene-d12	12.94	240	358849	8000.00	ppb		0.00
88) Perylene-d12	14.74	264	320222	8000.00	ppb		0.00
System Monitoring Compounds							
4) 2-Fluorophenol	4.19	112	174786	481.8925328	ppb		0.00
Spiked Amount 666.000	Range 21 - 116		Recovery = 72.36%				
7) Phenol-d5	4.92	99	219189	462.7669720	ppb		0.00
Spiked Amount 666.000	Range 26 - 121		Recovery = 69.48%				
23) Nitrobenzene-d5	5.82	82	102420	264.4697098	ppb		0.00
Spiked Amount 333.000	Range 22 - 129		Recovery = 79.42%				
44) 2-Fluorobiphenyl	7.69	172	242535	256.1737385	ppb		0.00
Spiked Amount 333.000	Range 35 - 129		Recovery = 76.93%				
67) 2,4,6-Tribromophenol	9.29	330	60940	572.1335713	ppb		0.00
Spiked Amount 666.000	Range 22 - 142		Recovery = 85.91%				
81) p-Terphenyl-d14	11.77	244	332176	245.8200525	ppb		0.00
Spiked Amount 333.000	Range 22 - 128		Recovery = 73.82%				
Target Compounds							Qvalue
2) Pyridine	3.24	79	177508	320.4860590	ppb	#	84
3) N-Nitrosodimethylamine	3.22	42	95170	449.8077142	ppb	#	81
5) Aniline	4.99	66	100438	431.4164924	ppb		92
6) bis(2-Chloroethyl)ether	5.03	63	155968	458.8226946	ppb		99
8) Phenol	4.94	94	229055	465.1381392	ppb		94
9) Benzaldehyde	4.90	105	24263	92.8278161	ppb		94
10) 2-Chlorophenol	5.09	128	203571	475.0246396	ppb		98
11) n-Decane	5.11	41	77860	469.0390800	ppb	#	97
12) 1,3-Dichlorobenzene	5.24	146	202038	464.3744304	ppb		99
13) 1,4-Dichlorobenzene	5.31	146	206213	463.5826577	ppb		98
14) Benzyl Alcohol	5.40	79	161390	522.3850702	ppb		99
15) 1,2-Dichlorobenzene	5.45	146	204518	474.4152131	ppb		98
16) bis(2-Chloroisopropyl)ethe	5.53	121	65826	494.4006946	ppb		97
17) 2-Methylphenol	5.49	108	183171	481.7526208	ppb		97
18) Hexachloroethane	5.78	117	87824	474.0208154	ppb		96
19) N-Nitrosodi-n-propylamine	5.66	70	137156	499.6839673	ppb		89
20) 3&4-Methyl phenol	5.64	107	239353	537.6767497	ppb		87
21) Acetophenone	5.66	105	265933	537.1117936	ppb		96
24) Nitrobenzene	5.84	77	198061	515.7703712	ppb		99
25) Isophorone	6.07	82	376707	536.4639540	ppb		99
26) 2-Nitrophenol	6.16	139	120193	551.4387269	ppb		97
27) 2,4-Dimethylphenol	6.17	107	198613	512.3422805	ppb		96
28) bis(2-Chlorethoxy)methane	6.27	93	247900	498.0717706	ppb		93
29) 2,4-Dichlorophenol	6.40	162	178213	555.1088447	ppb		99
30) Benzoic Acid	6.22	105	20180m	164.7416391	ppb		
31) 1,2,4-Trichlorobenzene	6.49	180	171648	536.2684483	ppb		97
32) Naphthalene	6.58	128	662622	504.2301467	ppb		99
33) 4-Chloroaniline	6.62	65	78469	519.0460028	ppb		97
34) Hexachloro-1,3-butadiene	6.69	225	80871	580.3717603	ppb		97
35) Caprolactam	6.98	113	74221	637.4960097	ppb		92
36) 4-Chloro-3-methylphenol	7.12	107	203661	575.1845415	ppb		95
37) 2-Methylnaphthalene	7.31	142	459181	532.4001099	ppb		97
38) 1-Methylnaphthalene	7.41	142	420271	542.2490308	ppb		97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052416\0524 13.D Vial: 13
Acq On : 24 May 2016 1:35 pm Operator: 280
Sample : MS 1x WG874391 L836976-01 15-0.5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 24 14:32 2016 Quant Results File: S804D25P.RES

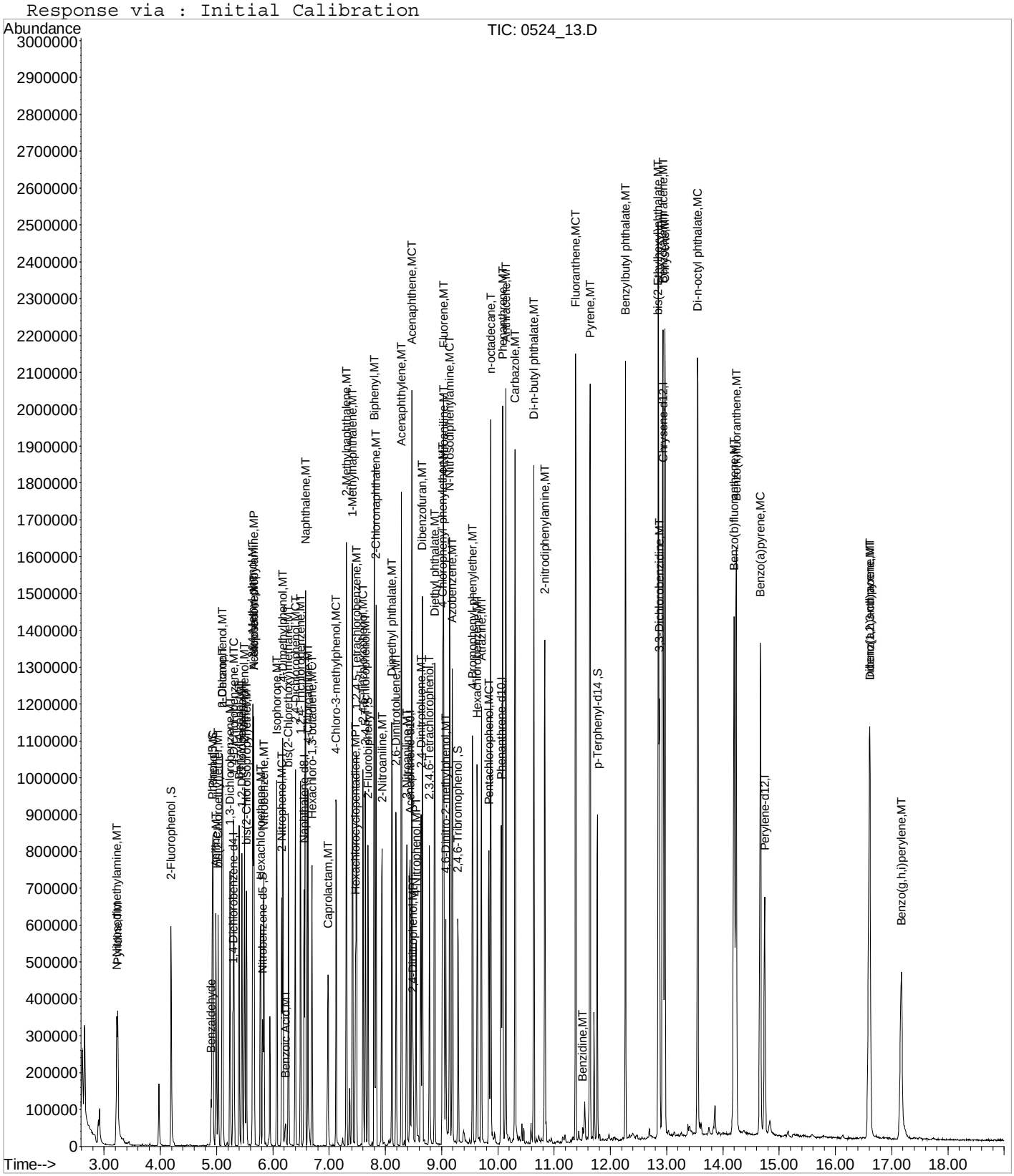
Quant Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Initial Calibration
DataAcq Meth : BNA4E

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	1,2,4,5-Tetrachlorobenzene	7.49	216	167347	625.7159711	ppb		99
41)	Hexachlorocyclopentadiene	7.47	237	74235	478.2998055	ppb		99
42)	2,4,6-Trichlorophenol	7.60	196	124556	562.9270702	ppb		97
43)	2,4,5-Trichlorophenol	7.64	196	132030	555.5593007	ppb		99
45)	Biphenyl	7.80	154	550829	494.5663902	ppb		99
46)	2-Chloronaphthalene	7.83	162	435816	498.0626132	ppb		98
47)	2-Nitroaniline	7.94	138	165421	536.1804713	ppb		98
48)	Acenaphthylene	8.28	152	749422	537.1159750	ppb		100
49)	Dimethyl phthalate	8.11	163	494452	539.9700841	ppb		99
50)	2,6-Dinitrotoluene	8.19	165	117392	518.3078943	ppb		98
51)	3-Nitroaniline	8.38	138	134142	489.9658204	ppb		95
52)	Acenaphthene	8.47	153	483644	528.8174447	ppb		99
53)	2,4-Dinitrophenol	8.49	184	38836	342.4502986	ppb		91
54)	Dibenzofuran	8.65	168	644147	513.8613464	ppb		95
55)	2,4-Dinitrotoluene	8.63	165	168656	559.4719356	ppb		94
56)	2,3,4,6-Tetrachlorophenol	8.78	232	81641	629.7155635	ppb		99
57)	4-Nitrophenol	8.55	139	109857	510.2811896	ppb		92
58)	Fluorene	9.03	166	557129	539.5064086	ppb		99
59)	4-Chlorophenyl-phenylether	9.01	204	215465	540.4544632	ppb		98
60)	Diethyl phthalate	8.88	149	535259	555.7499214	ppb		98
61)	4-Nitroaniline	9.04	138	127498	467.3149894	ppb	#	89
62)	Azobenzene	9.19	77	493343	482.5777282	ppb		97
63)	Atrazine	9.71	200	128073	632.0643367	ppb		91
65)	4,6-Dinitro-2-methylphenol	9.08	198	85776	513.6429632	ppb		90
66)	N-Nitrosodiphenylamine	9.14	169	433248	472.8858914	ppb		99
68)	4-Bromophenyl-phenylether	9.55	248	119101	538.0032017	ppb		93
69)	Hexachlorobenzene	9.63	284	126621	531.2333651	ppb		96
70)	n-octadecane	9.87	55	88517	501.1164831	ppb		98
71)	Pentachlorophenol	9.84	266	85045	597.4215158	ppb		95
72)	Phenanthrene	10.08	178	809042	532.8971164	ppb		97
73)	Anthracene	10.14	178	808928	531.1289317	ppb		100
74)	Carbazole	10.31	167	796114	509.4644289	ppb		99
75)	Di-n-butyl phthalate	10.64	149	1016725	528.4807992	ppb		100
76)	2-nitrodiphenylamine	10.83	167	210826	664.3341966	ppb		98
77)	Fluoranthene	11.38	202	881821	573.9912783	ppb		99
79)	Benzidine	11.51	184	24179	20.1237921	ppb		97
80)	Pyrene	11.64	202	908652	468.7377688	ppb		100
82)	Benzylbutyl phthalate	12.27	149	517953	489.0434546	ppb		97
83)	3,3-Dichlorobenzidine	12.87	252	248507	547.7137930	ppb		93
84)	Benzo(a)anthracene	12.93	228	816790	479.6612140	ppb		90
85)	Chrysene	12.97	228	799778	492.1462527	ppb		96
86)	bis(2-Ethylhexyl)phthalate	12.85	149	770676	474.2957899	ppb		99
87)	Di-n-octyl phthalate	13.55	149	1358474	472.9753308	ppb		100
89)	Benzo(b)fluoranthene	14.20	252	790007m	503.8075504	ppb		
90)	Benzo(k)fluoranthene	14.24	252	803668	548.0095485	ppb		92
91)	Benzo(a)pyrene	14.67	252	748123	511.8216086	ppb		93
92)	Indeno(1,2,3-cd)pyrene	16.60	276	574378	354.7525549	ppb		92
93)	Dibenz(a,h)anthracene	16.61	278	503023	358.5055775	ppb		94
94)	Benzo(g,h,i)perylene	17.17	276	417887	312.8421706	ppb		82

(#) = qualifier out of range (m) = manual integration

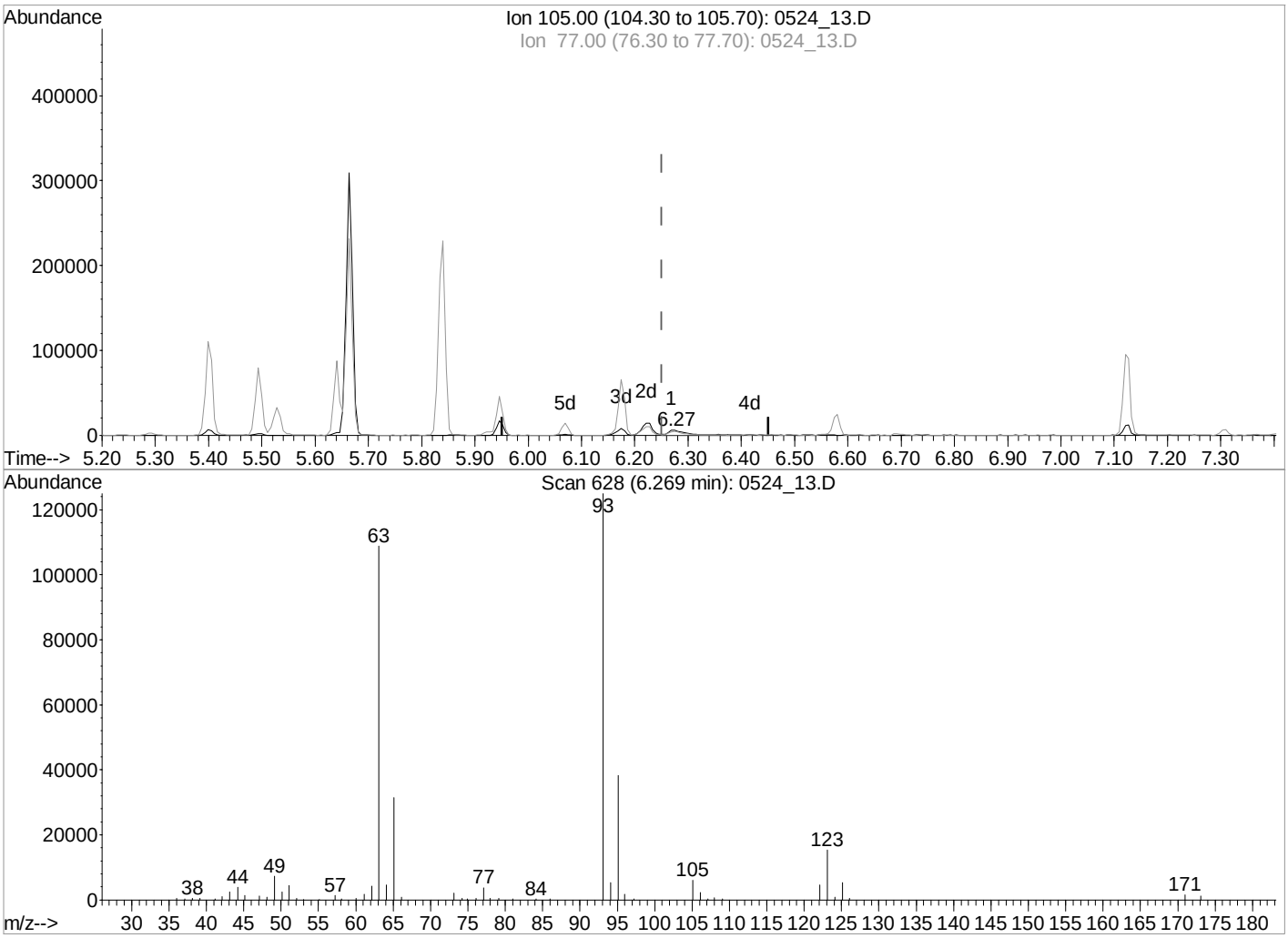
Data File : C:\MSDCHEM\1\DATA\052416\0524 13.D Vial: 13
Acq On : 24 May 2016 1:35 pm Operator: 280
Sample : MS 1x WG874391 L836976-01 15-0.5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 24 14:32 2016 Quant Results File: S804D25P.RES

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Initial Calibration



Data File : C:\MSDCHEM\1\DATA\052416\0524 13.D Vial: 13
Acq On : 24 May 2016 1:35 pm Operator: 280
Sample : MS 1x WG874391 L836976-01 15-0.5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 24 14:31 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Single Level Calibration



TIC: 0524_13.D

(30) Benzoic Acid (MT)

6.27min (+0.018) 126.1571944 ppb

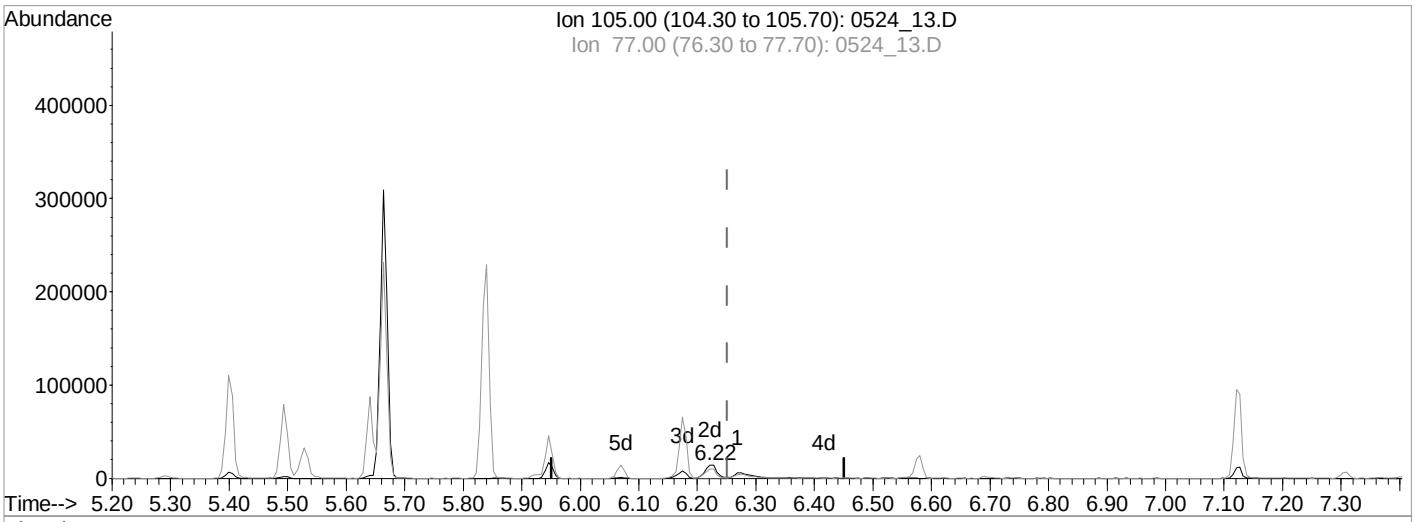
Qvalue = 97

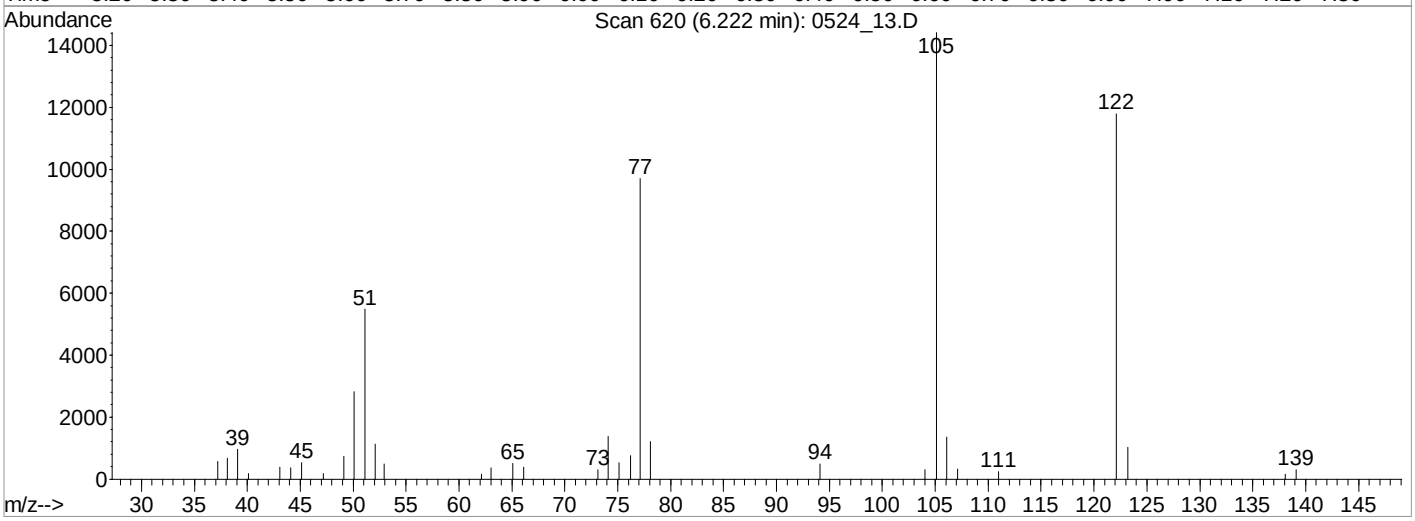
response 13948

Ion	Exp%	Act%
105.00	100	100
77.00	66.30	68.86
0.00	0.00	0.00
0.00	0.00	0.00

Data File : C:\MSDCHEM\1\DATA\052416\0524 13.D Vial: 13
Acq On : 24 May 2016 1:35 pm Operator: 280
Sample : MS 1x WG874391 L836976-01 15-0.5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 24 14:31 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Single Level Calibration





TIC: 0524_13.D

(30) Benzoic Acid (MT)

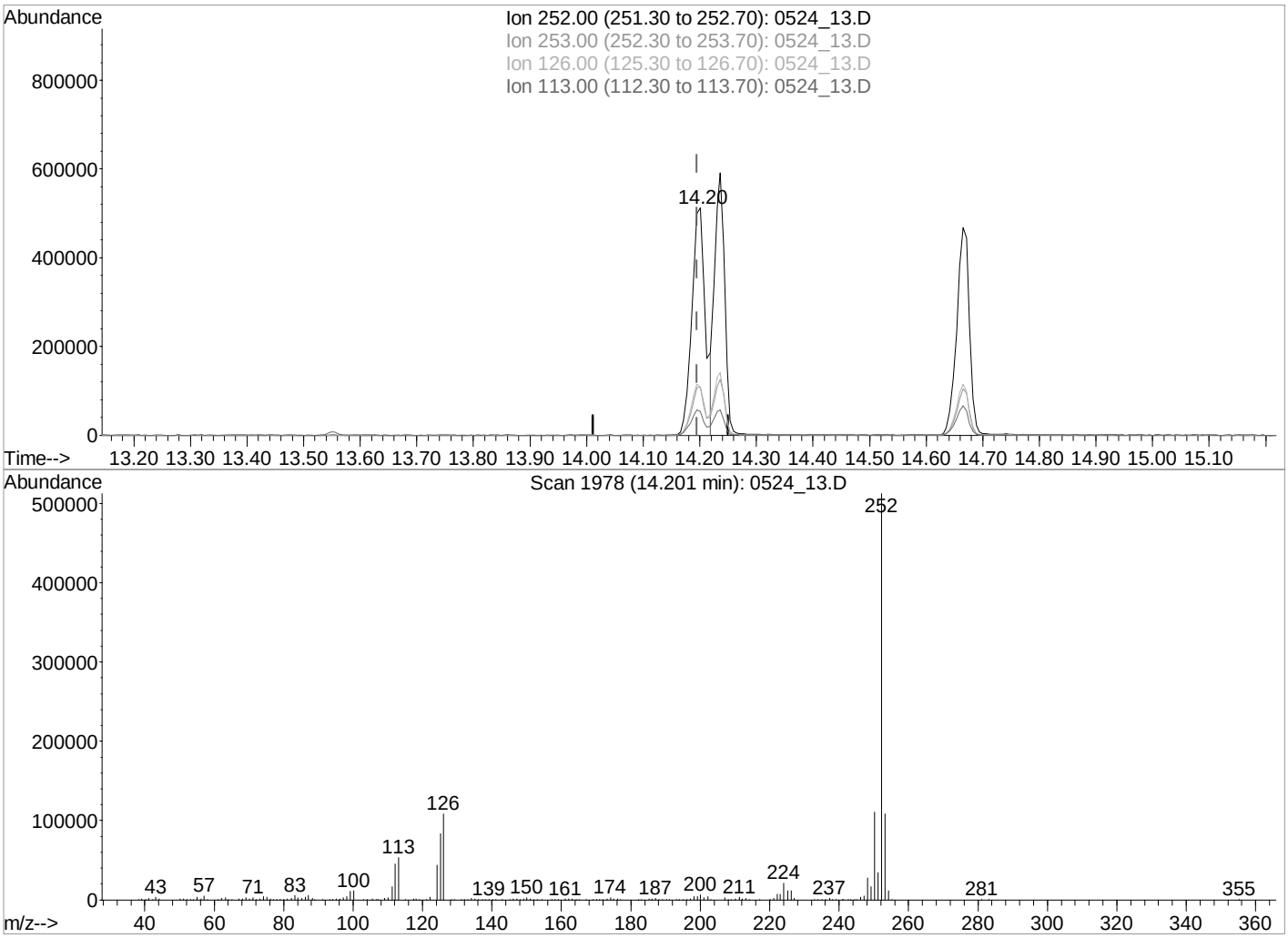
6.22min (-0.029) 164.7416391 ppb m

response 20180

Ion	Exp%	Act%
105.00	100	100
77.00	66.30	47.59
0.00	0.00	0.00
0.00	0.00	0.00

Data File : C:\MSDCHEM\1\DATA\052416\0524 13.D Vial: 13
Acq On : 24 May 2016 1:35 pm Operator: 280
Sample : MS 1x WG874391 L836976-01 15-0.5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 24 14:31 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Multiple Level Calibration



TIC: 0524_13.D

(89) Benzo(b)fluoranthene (MT)

14.20min (+0.006) 545.5957843 ppb

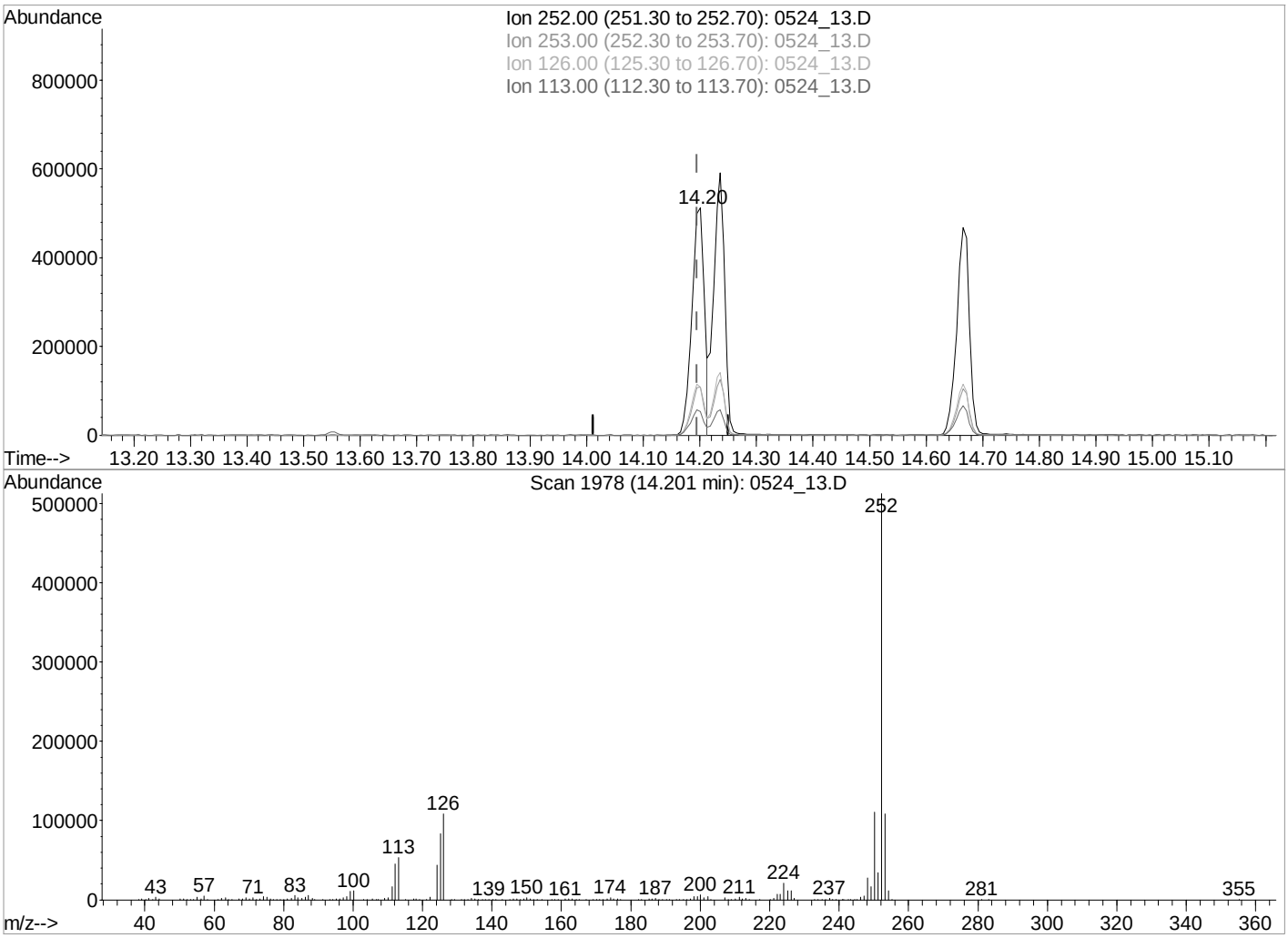
Qvalue = 93

response 855534

Ion	Exp%	Act%
252.00	100	100
253.00	21.50	20.82
126.00	25.80	19.98
113.00	12.80	10.14

Data File : C:\MSDCHEM\1\DATA\052416\0524 13.D Vial: 13
Acq On : 24 May 2016 1:35 pm Operator: 280
Sample : MS 1x WG874391 L836976-01 15-0.5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 24 14:32 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Multiple Level Calibration



TIC: 0524_13.D

(89) Benzo(b)fluoranthene (MT)

14.20min (+0.006) 503.8075504 ppb m

response 790007

Ion	Exp%	Act%
252.00	100	100
253.00	21.50	21.14
126.00	25.80	21.12
113.00	12.80	10.35

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052416\0524 14.D Vial: 14
Acq On : 24 May 2016 1:58 pm Operator: 280
Sample : MSD 1x WG874391 L836976-01 15-0.5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 24 14:32 2016 Quant Results File: S804D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Initial Calibration
DataAcq Meth : BNA4E

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.29	152	55646	8000.00	ppb	0.00
22) Naphthalene-d8	6.56	136	314531	8000.00	ppb	0.00
40) Acenaphthene-d10	8.44	164	192492	8000.00	ppb	0.00
64) Phenanthrene-d10	10.06	188	343431	8000.00	ppb	0.00
78) Chrysene-d12	12.94	240	361192	8000.00	ppb	0.00
88) Perylene-d12	14.74	264	324705	8000.00	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	4.19	112	174102	447.5122809	ppb	0.00
Spiked Amount 666.000	Range 21 - 116		Recovery = 67.19%			
7) Phenol-d5	4.92	99	212661	418.5902388	ppb	0.00
Spiked Amount 666.000	Range 26 - 121		Recovery = 62.85%			
23) Nitrobenzene-d5	5.82	82	100265	243.6826064	ppb	0.00
Spiked Amount 333.000	Range 22 - 129		Recovery = 73.18%			
44) 2-Fluorobiphenyl	7.69	172	234371	246.5063863	ppb	0.00
Spiked Amount 333.000	Range 35 - 129		Recovery = 74.03%			
67) 2,4,6-Tribromophenol	9.29	330	59838	551.4720629	ppb	0.00
Spiked Amount 666.000	Range 22 - 142		Recovery = 82.80%			
81) p-Terphenyl-d14	11.77	244	320813	235.8710455	ppb	0.00
Spiked Amount 333.000	Range 22 - 128		Recovery = 70.83%			
Target Compounds						Qvalue
2) Pyridine	3.24	79	181915	306.2085884	ppb #	87
3) N-Nitrosodimethylamine	3.22	42	96676	425.9936720	ppb #	82
5) Aniline	4.99	66	97177	389.1524955	ppb	95
6) bis(2-Chloroethyl)ether	5.03	63	158626	435.0522366	ppb	98
8) Phenol	4.94	94	225707	427.3117627	ppb	91
9) Benzaldehyde	4.90	105	29240	104.2962391	ppb	95
10) 2-Chlorophenol	5.09	128	204039	443.8856019	ppb	98
11) n-Decane	5.11	41	77591	435.7763168	ppb	97
12) 1,3-Dichlorobenzene	5.24	146	203552	436.1825191	ppb	99
13) 1,4-Dichlorobenzene	5.31	146	213278	447.0075359	ppb	97
14) Benzyl Alcohol	5.40	79	161112	486.1828872	ppb	99
15) 1,2-Dichlorobenzene	5.45	146	204340	441.9143495	ppb	99
16) bis(2-Chloroisopropyl)ethe	5.53	121	67133	470.0838237	ppb	99
17) 2-Methylphenol	5.49	108	181519	445.0892496	ppb	96
18) Hexachloroethane	5.78	117	87341	439.5011385	ppb	91
19) N-Nitrosodi-n-propylamine	5.66	70	136361	463.1572070	ppb	88
20) 3&4-Methyl phenol	5.64	107	232995	487.9627025	ppb	88
21) Acetophenone	5.66	105	268682	505.9279501	ppb	95
24) Nitrobenzene	5.84	77	199793	489.6905201	ppb	99
25) Isophorone	6.07	82	374328	501.7335882	ppb	98
26) 2-Nitrophenol	6.16	139	120869	521.9357230	ppb	96
27) 2,4-Dimethylphenol	6.17	107	192990	468.5666100	ppb	96
28) bis(2-Chlorethoxy)methane	6.27	93	247657	468.3278822	ppb	95
29) 2,4-Dichlorophenol	6.40	162	177492	520.3571842	ppb	97
30) Benzoic Acid	6.22	105	11283m	104.8502805	ppb	
31) 1,2,4-Trichlorobenzene	6.49	180	174988	514.5597023	ppb	96
32) Naphthalene	6.58	128	662640	474.5965870	ppb	99
33) 4-Chloroaniline	6.62	65	75439	469.6644206	ppb	98
34) Hexachloro-1,3-butadiene	6.69	225	81519	550.6254850	ppb	95
35) Caprolactam	6.98	113	72523	586.2872315	ppb	94
36) 4-Chloro-3-methylphenol	7.13	107	197072	523.8515865	ppb	98
37) 2-Methylnaphthalene	7.31	142	453304	494.6839092	ppb	98
38) 1-Methylnaphthalene	7.41	142	419246	509.1225047	ppb	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052416\0524 14.D Vial: 14
Acq On : 24 May 2016 1:58 pm Operator: 280
Sample : MSD 1x WG874391 L836976-01 15-0.5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 24 14:32 2016 Quant Results File: S804D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Initial Calibration
DataAcq Meth : BNA4E

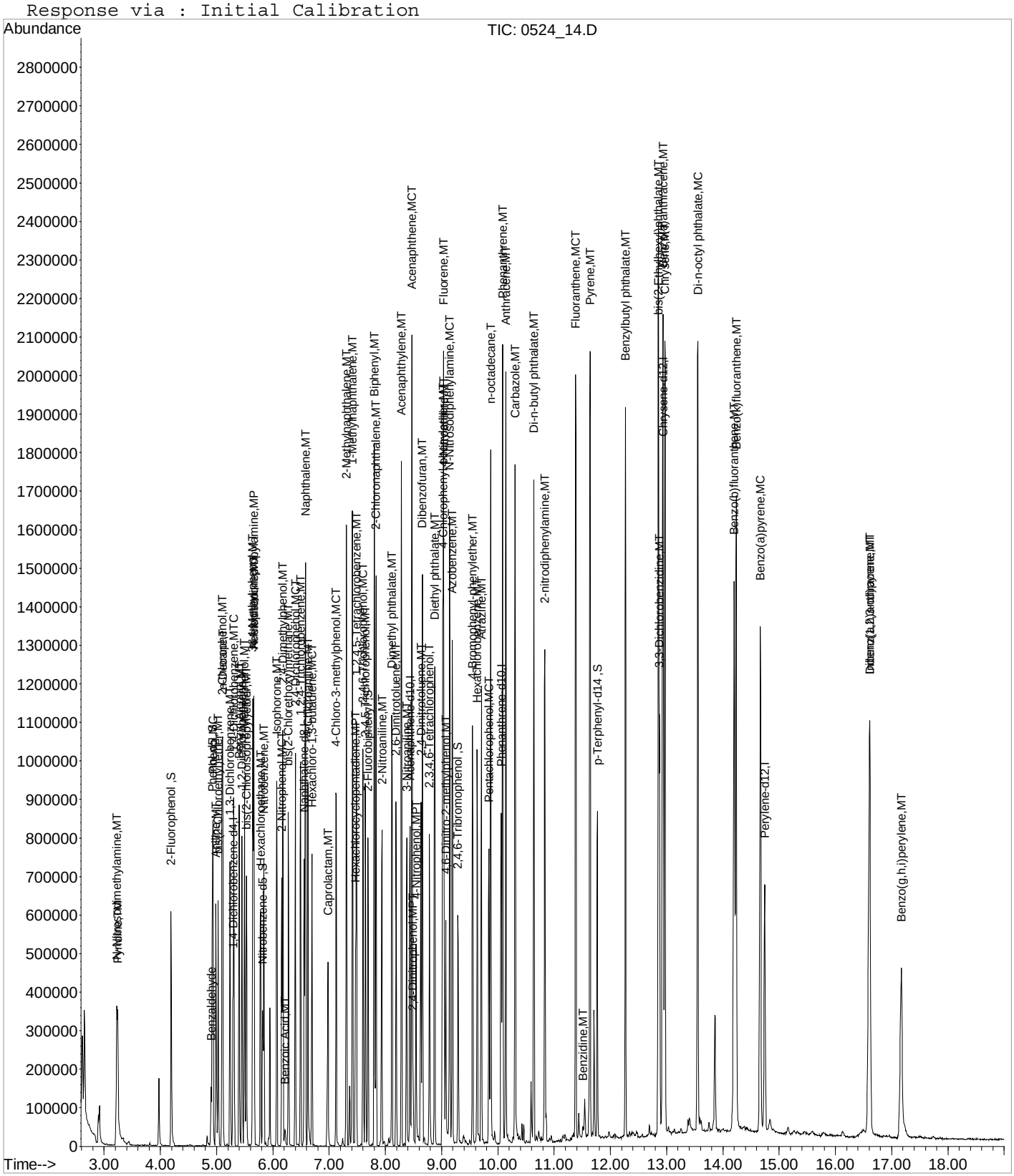
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	1,2,4,5-Tetrachlorobenzene	7.49	216	166483	585.8861181	ppb		99
41)	Hexachlorocyclopentadiene	7.47	237	73577	472.0605232	ppb		97
42)	2,4,6-Trichlorophenol	7.60	196	123222	554.5489025	ppb		99
43)	2,4,5-Trichlorophenol	7.64	196	131052	549.1178587	ppb		98
45)	Biphenyl	7.80	154	552167	493.6763993	ppb		100
46)	2-Chloronaphthalene	7.83	162	437071	497.3898058	ppb		96
47)	2-Nitroaniline	7.94	138	166423	537.1527612	ppb	#	97
48)	Acenaphthylene	8.28	152	748603	534.2657211	ppb		99
49)	Dimethyl phthalate	8.11	163	486947	529.5309780	ppb		99
50)	2,6-Dinitrotoluene	8.19	165	115922	509.6585368	ppb		98
51)	3-Nitroaniline	8.38	138	132116	480.5300373	ppb		94
52)	Acenaphthene	8.47	153	487803	531.1149810	ppb		99
53)	2,4-Dinitrophenol	8.49	184	28420	271.1650441	ppb		96
54)	Dibenzofuran	8.65	168	640480	508.7807259	ppb		96
55)	2,4-Dinitrotoluene	8.63	165	167459	553.1579004	ppb		93
56)	2,3,4,6-Tetrachlorophenol	8.78	232	80631	619.3017017	ppb		98
57)	4-Nitrophenol	8.55	139	106593	493.0314524	ppb		95
58)	Fluorene	9.03	166	562283	542.2004976	ppb		99
59)	4-Chlorophenyl-phenylether	9.02	204	212717	531.3108554	ppb		92
60)	Diethyl phthalate	8.88	149	524179	541.9499310	ppb		99
61)	4-Nitroaniline	9.04	138	124580	454.6935375	ppb		92
62)	Azobenzene	9.19	77	486655	474.0275791	ppb		97
63)	Atrazine	9.71	200	125911	618.7731964	ppb		90
65)	4,6-Dinitro-2-methylphenol	9.08	198	78969	464.1984184	ppb		92
66)	N-Nitrosodiphenylamine	9.14	169	419979	449.9858222	ppb		99
68)	4-Bromophenyl-phenylether	9.55	248	117745	522.1116590	ppb		93
69)	Hexachlorobenzene	9.63	284	124101	511.1005531	ppb		98
70)	n-octadecane	9.87	55	86759	482.1453740	ppb		98
71)	Pentachlorophenol	9.84	266	83187	573.6394377	ppb		94
72)	Phenanthrene	10.08	178	831976	537.9409007	ppb		97
73)	Anthracene	10.14	178	803591	517.9366220	ppb		99
74)	Carbazole	10.31	167	785372	493.3617595	ppb		99
75)	Di-n-butyl phthalate	10.64	149	984505	502.3369239	ppb		99
76)	2-nitrodiphenylamine	10.83	167	204374	632.1782492	ppb		98
77)	Fluoranthene	11.38	202	855134	546.3997546	ppb		99
79)	Benzidine	11.51	184	19641	16.2408479	ppb		97
80)	Pyrene	11.64	202	885731	453.9497950	ppb		98
82)	Benzylbutyl phthalate	12.27	149	493307	462.7516688	ppb		98
83)	3,3-Dichlorobenzidine	12.87	252	224518	491.6316500	ppb		95
84)	Benzo(a)anthracene	12.93	228	789959	460.8953848	ppb		91
85)	Chrysene	12.97	228	778492	475.9403228	ppb		93
86)	bis(2-Ethylhexyl)phthalate	12.86	149	742289	453.8622665	ppb		97
87)	Di-n-octyl phthalate	13.55	149	1318377	456.0373301	ppb		99
89)	Benzo(b)fluoranthene	14.20	252	825512	519.1816240	ppb		93
90)	Benzo(k)fluoranthene	14.24	252	719614	483.9196338	ppb		92
91)	Benzo(a)pyrene	14.67	252	732784	494.4060520	ppb		92
92)	Indeno(1,2,3-cd)pyrene	16.60	276	552999	336.8327184	ppb		90
93)	Dibenz(a,h)anthracene	16.61	278	478796	336.5276685	ppb		94
94)	Benzo(g,h,i)perylene	17.17	276	394461	291.2277067	ppb		84

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

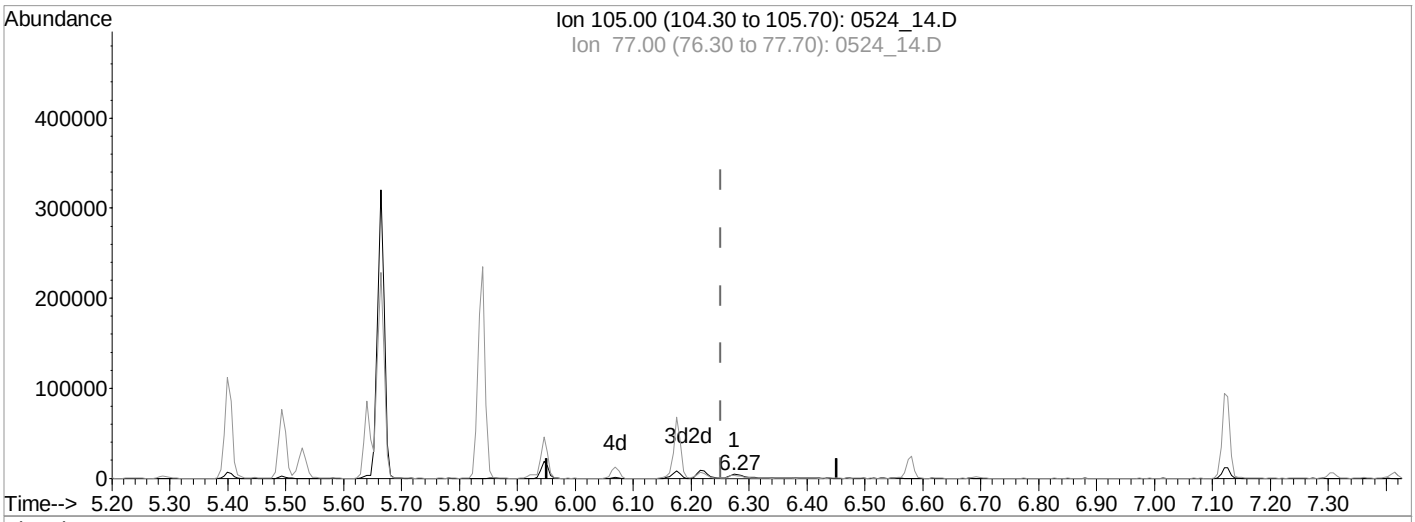
Data File : C:\MSDCHEM\1\DATA\052416\0524 14.D Vial: 14
Acq On : 24 May 2016 1:58 pm Operator: 280
Sample : MSD 1x WG874391 L836976-01 15-0.5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 24 14:32 2016 Quant Results File: S804D25P.RES

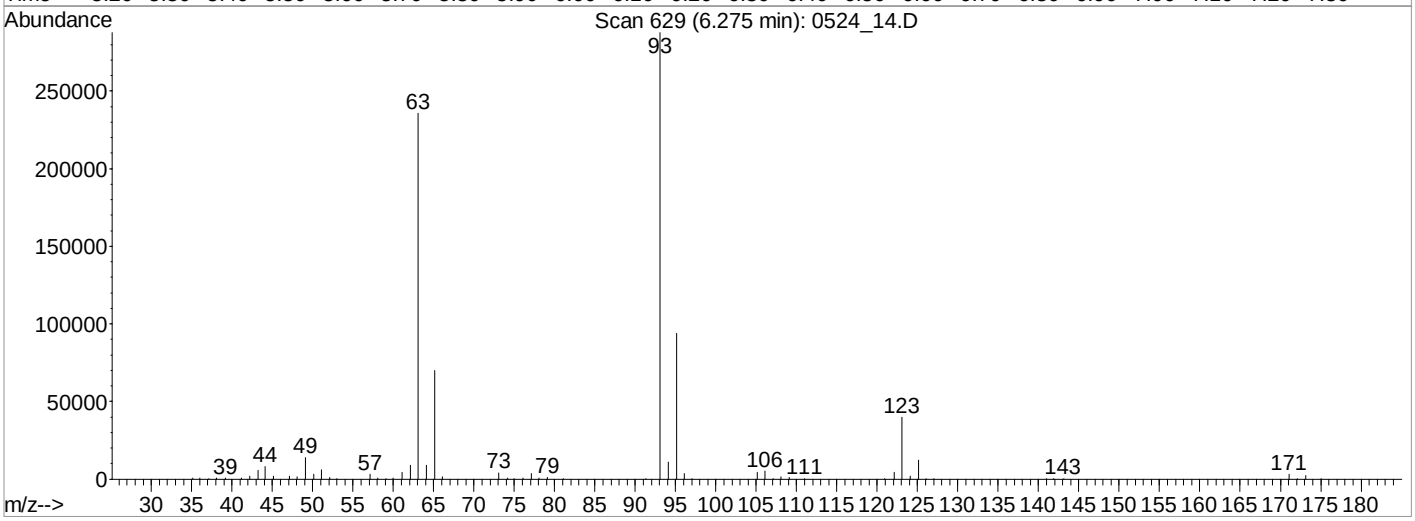
Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Initial Calibration



Data File : C:\MSDCHEM\1\DATA\052416\0524 14.D Vial: 14
Acq On : 24 May 2016 1:58 pm Operator: 280
Sample : MSD 1x WG874391 L836976-01 15-0.5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 24 14:32 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Single Level Calibration





TIC: 0524_14.D

(30) Benzoic Acid (MT)

6.27min (+0.024) 95.3452021 ppb

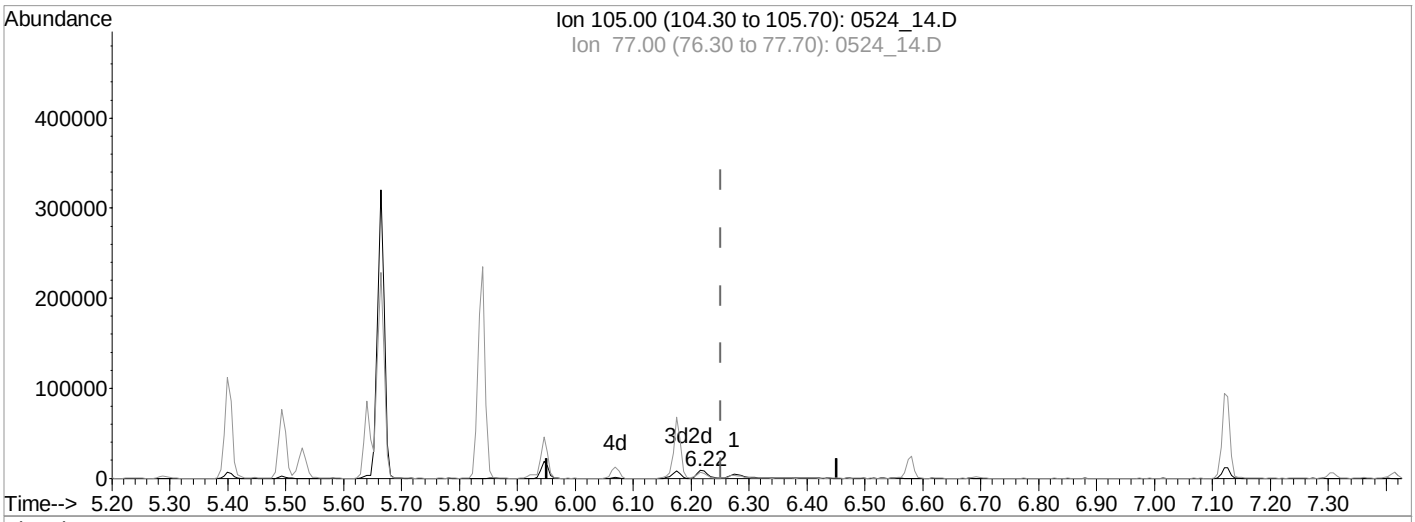
Qvalue = 99

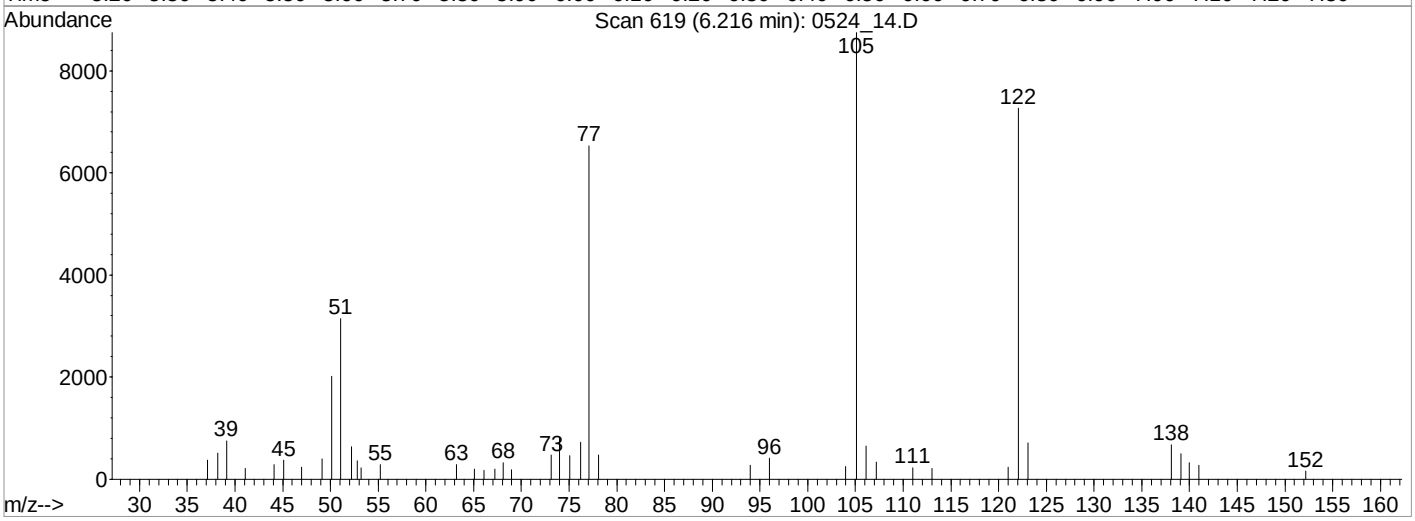
response 9733

Ion	Exp%	Act%
105.00	100	100
77.00	66.30	66.95
0.00	0.00	0.00
0.00	0.00	0.00

Data File : C:\MSDCHEM\1\DATA\052416\0524 14.D Vial: 14
Acq On : 24 May 2016 1:58 pm Operator: 280
Sample : MSD 1x WG874391 L836976-01 15-0.5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 24 14:32 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Single Level Calibration





TIC: 0524_14.D

(30) Benzoic Acid (MT)

6.22min (-0.035) 104.8502805 ppb m

response 11283

Ion	Exp%	Act%
105.00	100	100
77.00	66.30	57.75
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052416\0524 15.D Vial: 15
Acq On : 24 May 2016 2:22 pm Operator: 280
Sample : L836976-03 1x WG874391 15-0.5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 24 15:25 2016 Quant Results File: S804D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Initial Calibration
DataAcq Meth : BNA4E

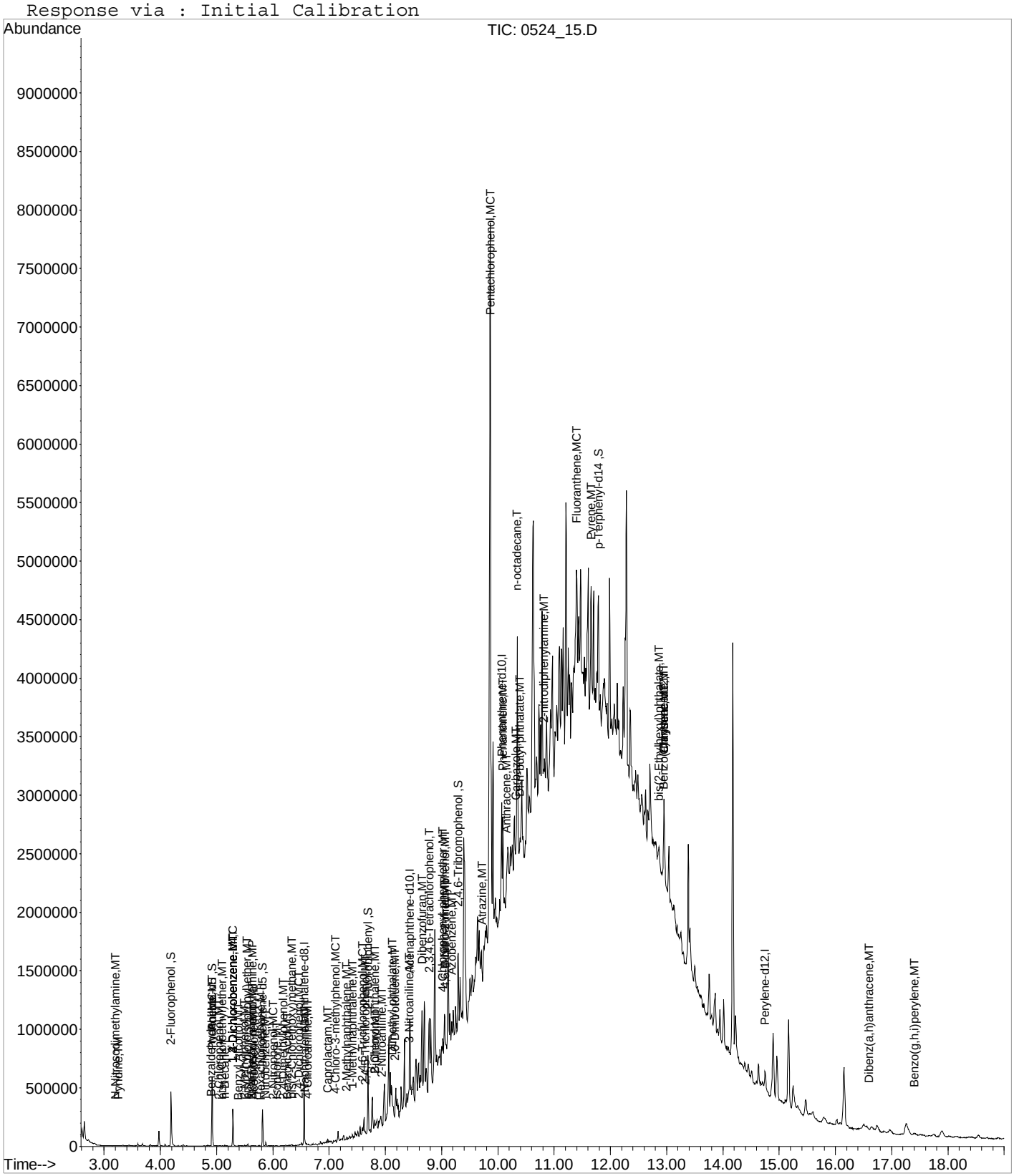
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.29	152	46620	8000.00 ppb	0.00
22) Naphthalene-d8	6.56	136	260112	8000.00 ppb	0.00
40) Acenaphthene-d10	8.43	164	178462	8000.00 ppb	0.00
64) Phenanthrene-d10	10.06	188	317581	8000.00 ppb	0.00
78) Chrysene-d12	12.95	240	222439m	8000.00 ppb	0.01
88) Perylene-d12	14.75	264	80331	8000.00 ppb	0.01
System Monitoring Compounds					
4) 2-Fluorophenol	4.19	112	140676	431.6014461 ppb	0.00
Spiked Amount 666.000	Range 21 - 116		Recovery = 64.81%		
7) Phenol-d5	4.92	99	183372	430.8200919 ppb	0.00
Spiked Amount 666.000	Range 26 - 121		Recovery = 64.69%		
23) Nitrobenzene-d5	5.82	82	85512	251.3074158 ppb	0.00
Spiked Amount 333.000	Range 22 - 129		Recovery = 75.47%		
44) 2-Fluorobiphenyl	7.69	172	210309	238.5882707 ppb	0.00
Spiked Amount 333.000	Range 35 - 129		Recovery = 71.65%		
67) 2,4,6-Tribromophenol	9.29	330	56468	562.7737545 ppb	0.00
Spiked Amount 666.000	Range 22 - 142		Recovery = 84.50%		
81) p-Terphenyl-d14	11.79	244	315717	376.9188260 ppb	0.02
Spiked Amount 333.000	Range 22 - 128		Recovery = 113.19%		
Target Compounds					Qvalue
5) Aniline	4.92	66	9039	43.2054369 ppb #	1
9) Benzaldehyde	4.90	105	1470	6.2585006 ppb #	48
11) n-Decane	5.15	41	1694	11.3560518 ppb #	77
30) Benzoic Acid	6.25	105	295	35.4482859 ppb	78
35) Caprolactam	6.98	113	1189	11.6230364 ppb #	16
37) 2-Methylnaphthalene	7.30	142	4499	5.9368666 ppb #	85
38) 1-Methylnaphthalene	7.41	142	7389	10.8503089 ppb #	76
51) 3-Nitroaniline	8.41	138	5411	21.2280248 ppb #	72
54) Dibenzofuran	8.65	168	11264	9.6512741 ppb #	1
56) 2,3,4,6-Tetrachlorophenol	8.78	232	27647	229.0420220 ppb	94
61) 4-Nitroaniline	9.05	138	2545	10.0190183 ppb #	1
62) Azobenzene	9.18	77	4942	5.1922081 ppb #	1
63) Atrazine	9.72	200	7877	41.7537604 ppb #	1
70) n-octadecane	10.34	55	3319275	19947.6474565 ppb #	28
71) Pentachlorophenol	9.86	266	1179362	8794.5910976 ppb	97
72) Phenanthrene	10.09	178	247911	173.3422970 ppb	97
73) Anthracene	10.15	178	32664	22.7664809 ppb	93
74) Carbazole	10.31	167	44704	30.3683669 ppb #	71
76) 2-nitrodiphenylamine	10.82	167	7358	24.6126667 ppb #	36
77) Fluoranthene	11.40	202	81537	56.3398949 ppb	98
80) Pyrene	11.66	202	320658	266.8549404 ppb	93
84) Benzo(a)anthracene	12.94	228	21520m	20.3876544 ppb	
85) Chrysene	12.96	228	117717m	116.8596876 ppb	
86) bis(2-Ethylhexyl)phthalate	12.86	149	25143m	24.9629172 ppb	

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

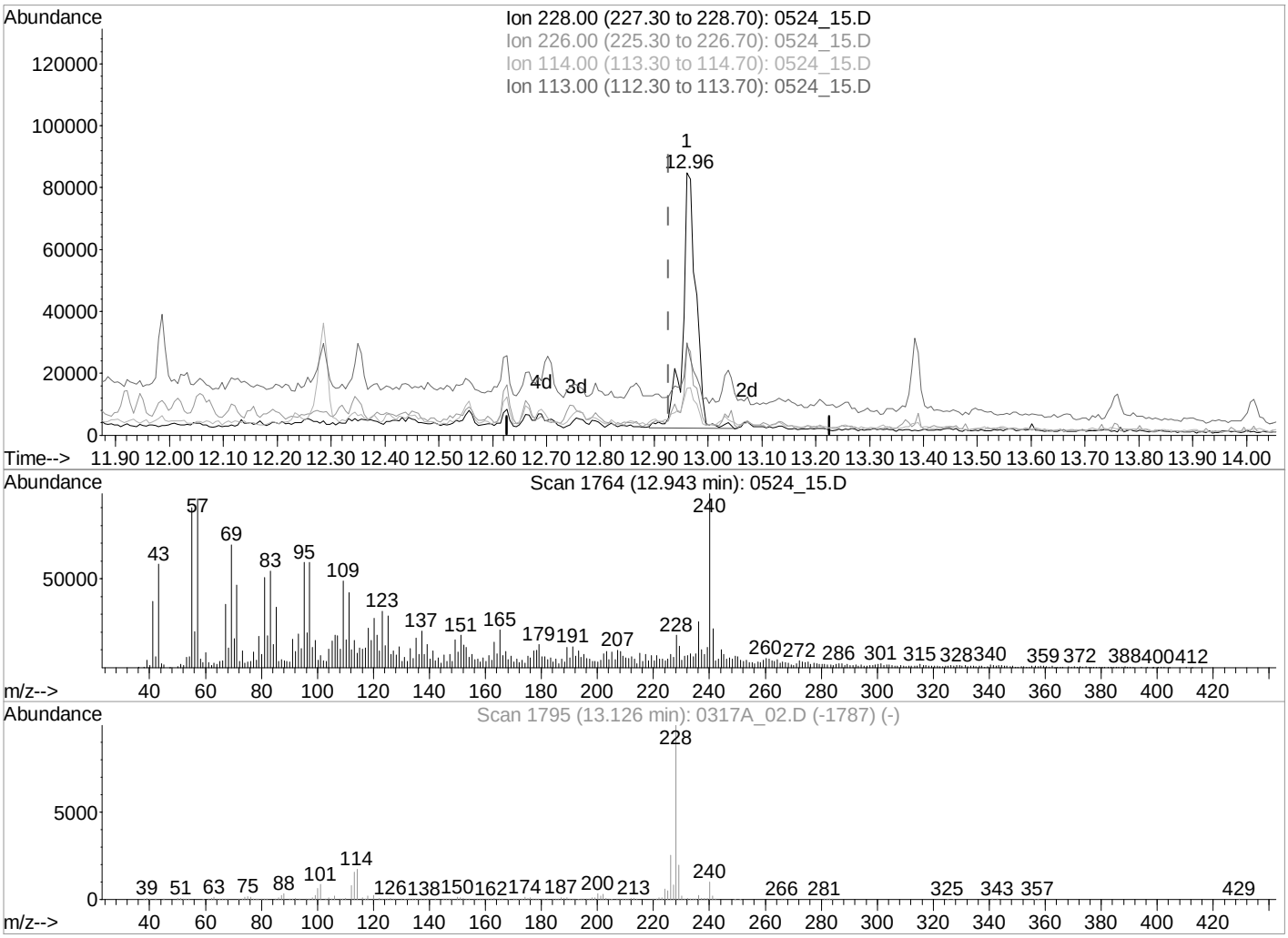
Data File : C:\MSDCHEM\1\DATA\052416\0524 15.D Vial: 15
Acq On : 24 May 2016 2:22 pm Operator: 280
Sample : L836976-03 1x WG874391 15-0.5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 24 15:25 2016 Quant Results File: S804D25P.RES

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Initial Calibration



Data File : C:\MSDCHEM\1\DATA\052416\0524 15.D Vial: 15
Acq On : 24 May 2016 2:22 pm Operator: 280
Sample : L836976-03 1x WG874391 15-0.5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 24 15:19 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Multiple Level Calibration



TIC: 0524_15.D

(84) Benzo(a)anthracene (MT)

12.96min (+0.035) 127.4022165 ppb

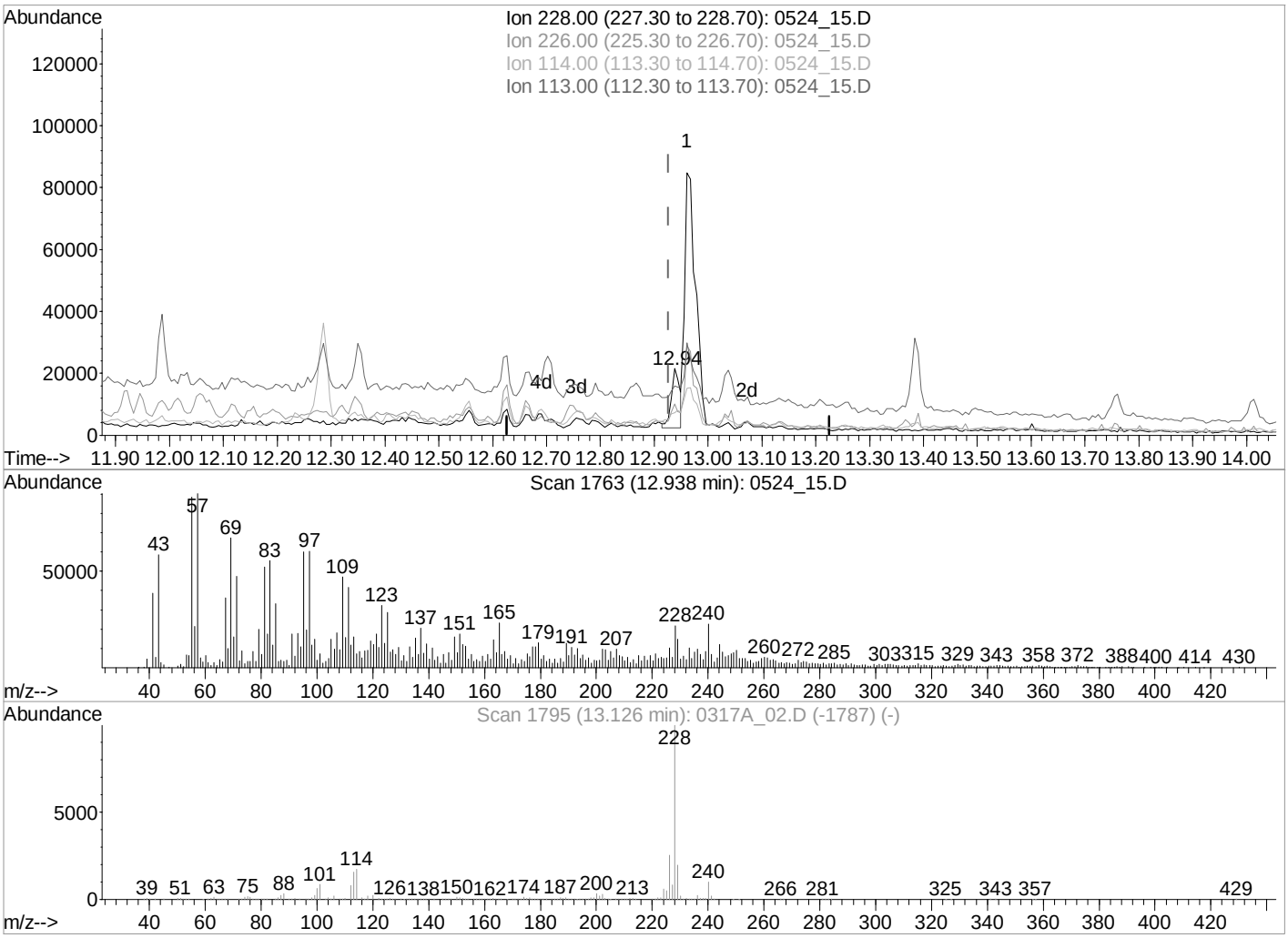
Qvalue = 88

response 143326 Limit = 33.0000000

Ion	Exp%	Act%
228.00	100	100
226.00	25.40	31.91
114.00	23.40	14.38
113.00	20.50	22.53

Data File : C:\MSDCHEM\1\DATA\052416\0524 15.D Vial: 15
Acq On : 24 May 2016 2:22 pm Operator: 280
Sample : L836976-03 1x WG874391 15-0.5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 24 15:19 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Multiple Level Calibration



TIC: 0524_15.D

(84) Benzo(a)anthracene (MT)

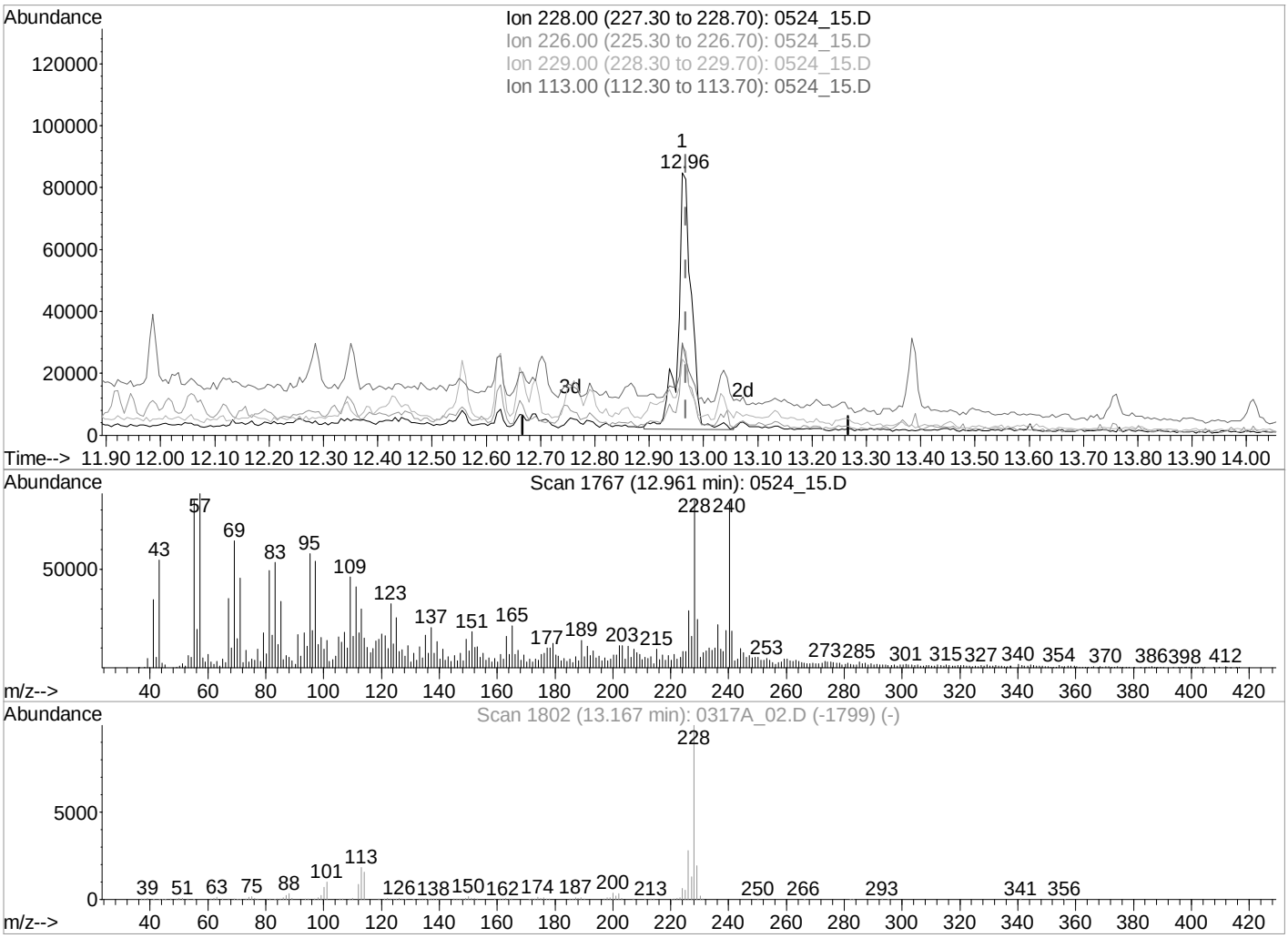
12.94min (+0.011) 19.1290882 ppb m

response 21520 Limit = 33.0000000

Ion	Exp%	Act%
228.00	100	100
226.00	25.40	46.88#
114.00	23.40	33.56
113.00	20.50	73.45#

Data File : C:\MSDCHEM\1\DATA\052416\0524 15.D Vial: 15
Acq On : 24 May 2016 2:22 pm Operator: 280
Sample : L836976-03 1x WG874391 15-0.5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 24 15:19 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Multiple Level Calibration



TIC: 0524_15.D

(85) Chrysene (MT)

12.96min (-0.006) 136.5465047 ppb

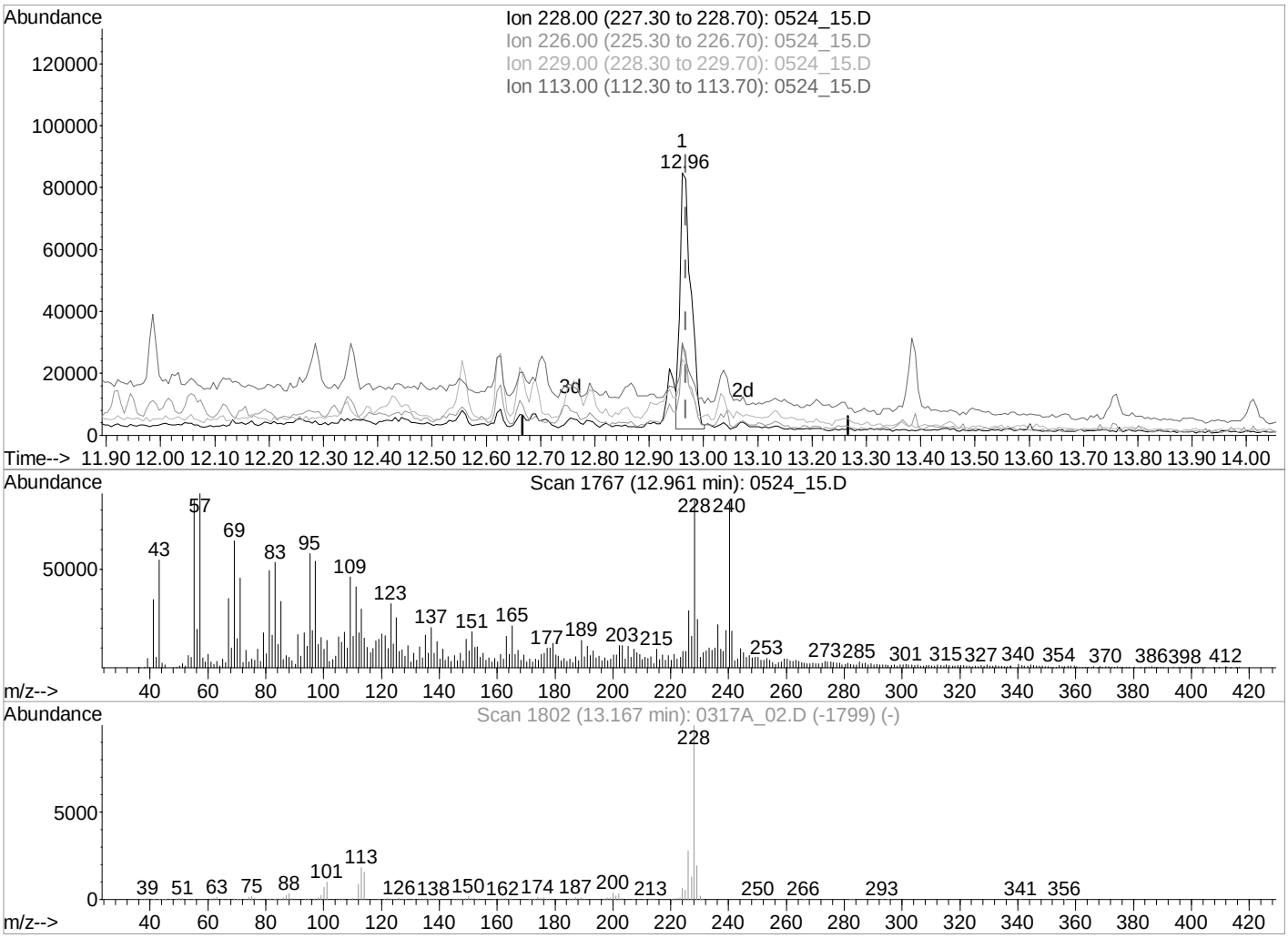
Qvalue = 95

response 146598 Limit = 33.0000000

Ion	Exp%	Act%
228.00	100	100
226.00	28.50	31.91
229.00	19.90	23.17
113.00	23.10	22.53

Data File : C:\MSDCHEM\1\DATA\052416\0524 15.D Vial: 15
Acq On : 24 May 2016 2:22 pm Operator: 280
Sample : L836976-03 1x WG874391 15-0.5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 24 15:19 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Multiple Level Calibration



TIC: 0524_15.D

(85) Chrysene (MT)

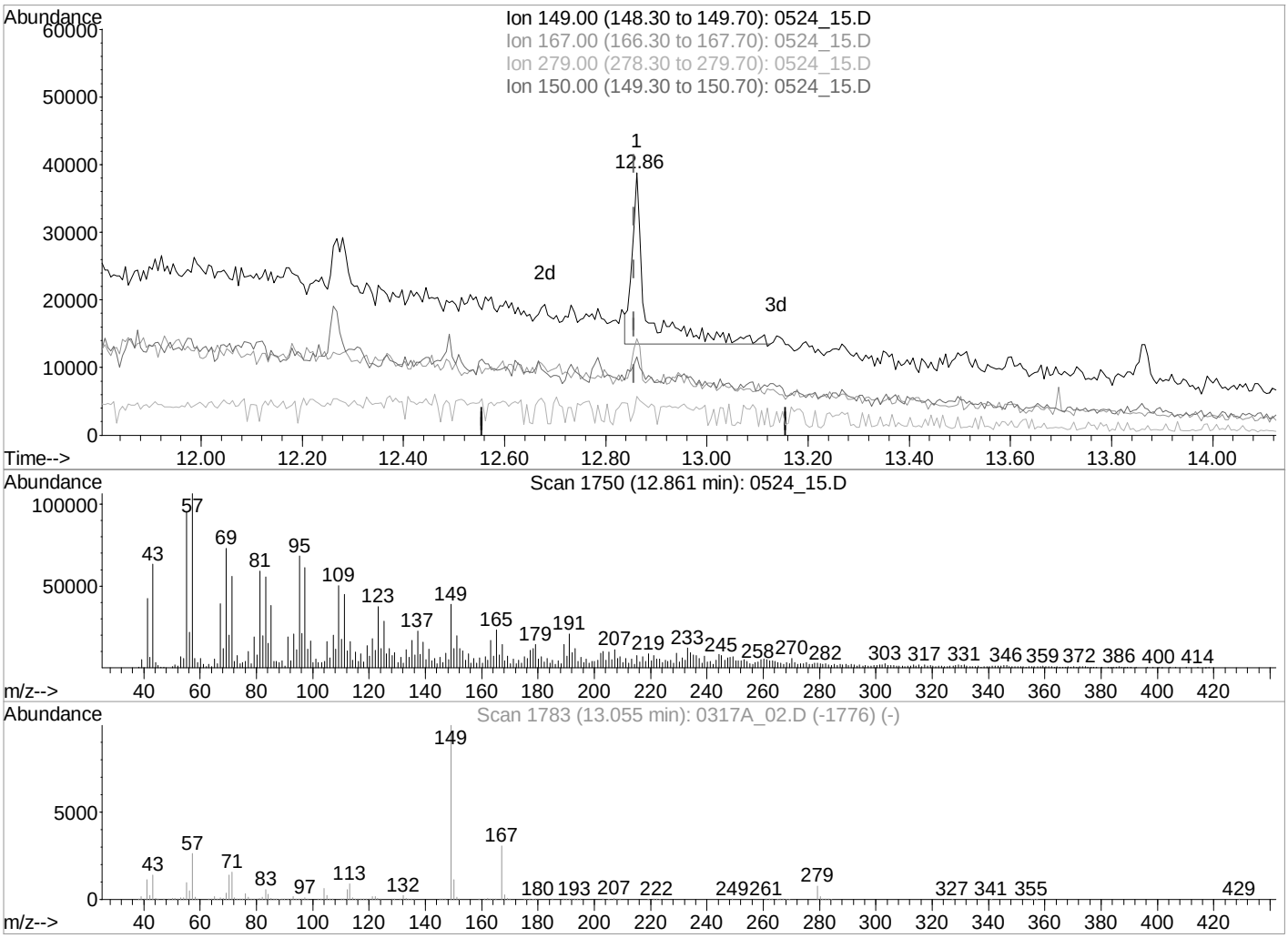
12.96min (-0.006) 109.6457311 ppb m

response 117717 Limit = 33.0000000

Ion	Exp%	Act%
228.00	100	100
226.00	28.50	34.03
229.00	19.90	29.08
113.00	23.10	35.20

Data File : C:\MSDCHEM\1\DATA\052416\0524 15.D Vial: 15
Acq On : 24 May 2016 2:22 pm Operator: 280
Sample : L836976-03 1x WG874391 15-0.5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 24 15:19 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Multiple Level Calibration



TIC: 0524_15.D

(86) bis(2-Ethylhexyl)phthalate (MT)

12.86min (+0.006) 47.1689341 ppb

Qvalue = 93

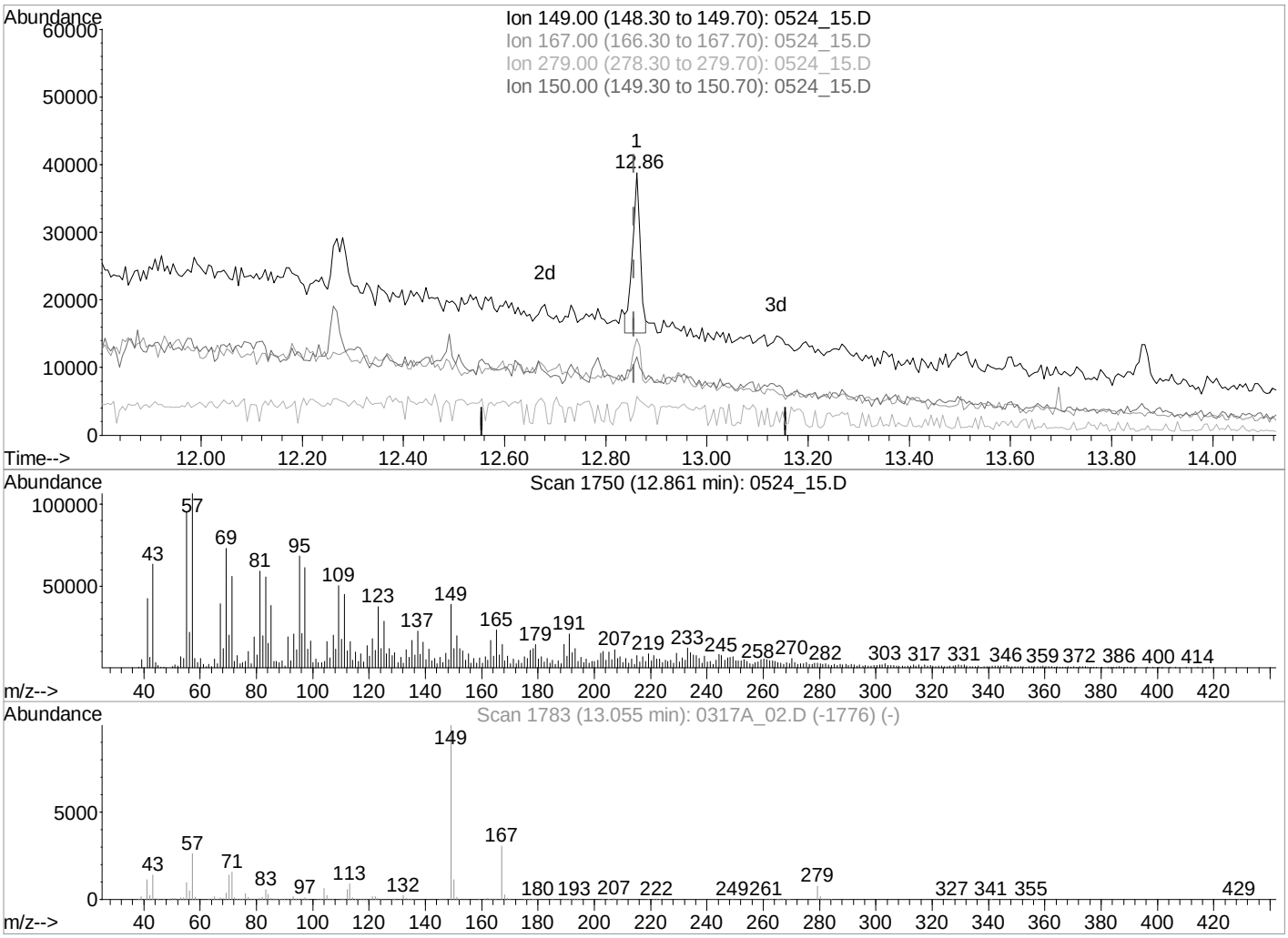
response 50635 Limit = 333.0000000

Ion	Exp%	Act%
149.00	100	100
167.00	29.60	30.18
279.00	4.80	17.90
150.00	11.60	15.53

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\052416\0524 15.D Vial: 15
Acq On : 24 May 2016 2:22 pm Operator: 280
Sample : L836976-03 1x WG874391 15-0.5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 24 15:19 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Multiple Level Calibration



TIC: 0524_15.D

(86) bis(2-Ethylhexyl)phthalate (MT)

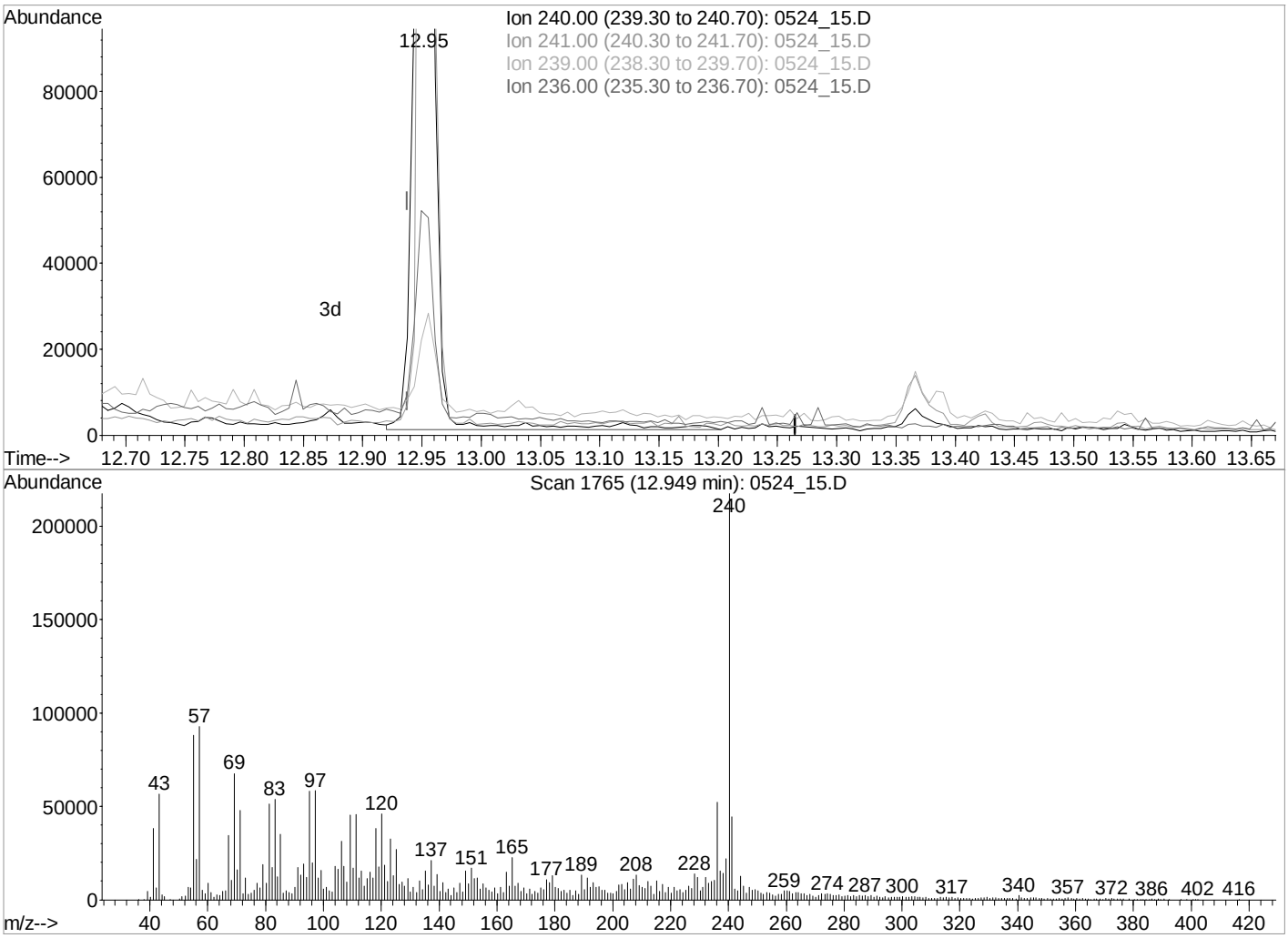
12.86min (+0.006) 23.4219119 ppb m

response 25143 Limit = 333.0000000

Ion	Exp%	Act%
149.00	100	100
167.00	29.60	36.79
279.00	4.80	7.46
150.00	11.60	29.88

Data File : C:\MSDCHEM\1\DATA\052416\0524 15.D Vial: 15
Acq On : 24 May 2016 2:22 pm Operator: 280
Sample : L836976-03 1x WG874391 15-0.5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 24 15:19 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Multiple Level Calibration



TIC: 0524_15.D

(78) Chrysene-d12 (I)

12.95min (+0.011) 8000.0000000 ppb

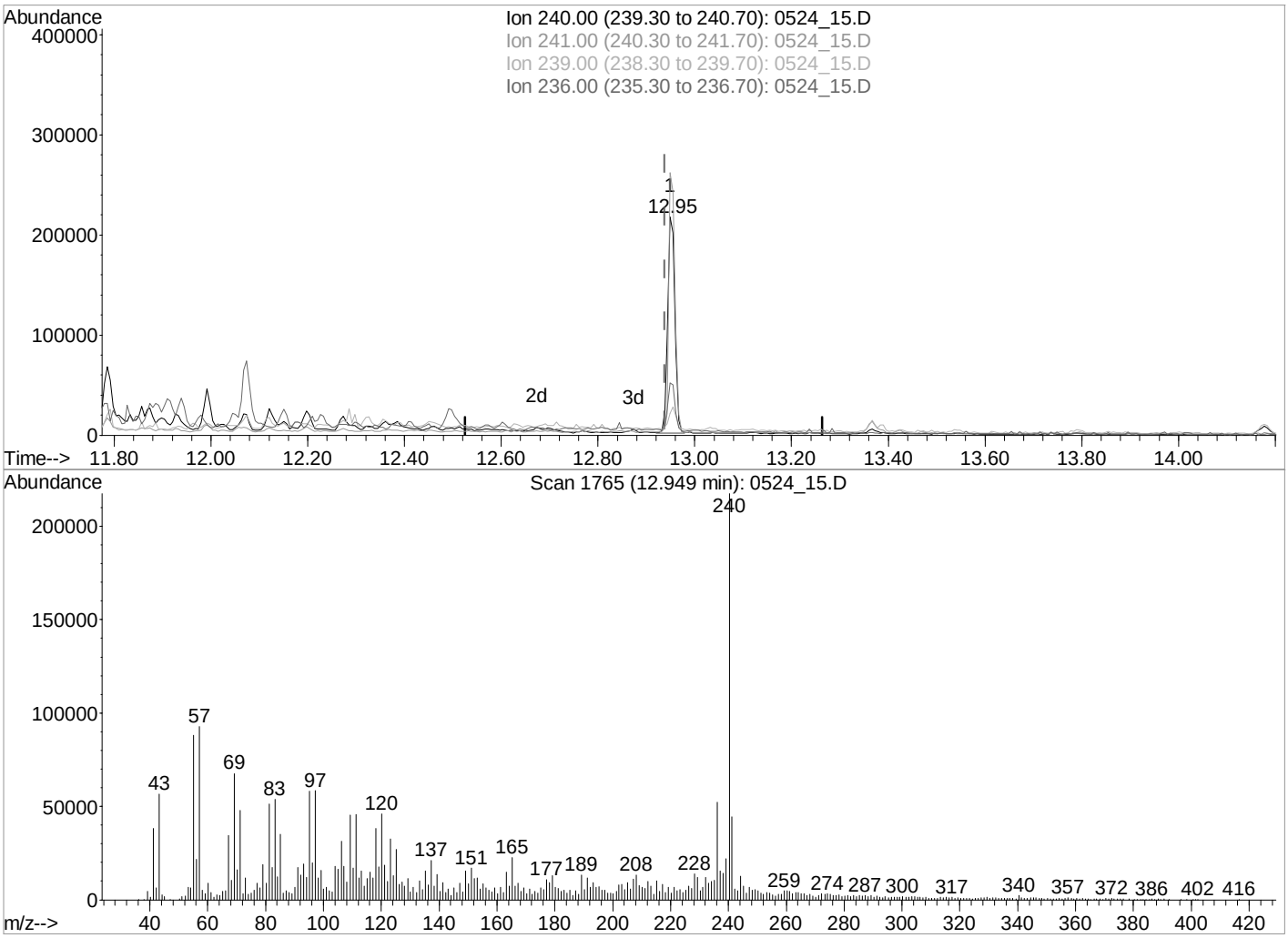
Qvalue = 89

response 237074

Ion	Exp%	Act%
240.00	100	100
241.00	108.00	120.06
239.00	14.30	8.27
236.00	21.40	22.70

Data File : C:\MSDCHEM\1\DATA\052416\0524 15.D Vial: 15
Acq On : 24 May 2016 2:22 pm Operator: 280
Sample : L836976-03 1x WG874391 15-0.5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 24 15:25 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Multiple Level Calibration



TIC: 0524_15.D

(78) Chrysene-d12 (I)

12.95min (+0.011) 8000.0000000 ppb m

response 222439

Ion	Exp%	Act%
240.00	100	100
241.00	108.00	20.37#
239.00	14.30	10.13
236.00	21.40	24.01

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052416\0524 16.D Vial: 16
Acq On : 24 May 2016 2:45 pm Operator: 280
Sample : L836976-04 1x WG874391 15-0.5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 24 15:23 2016 Quant Results File: S804D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Initial Calibration
DataAcq Meth : BNA4E

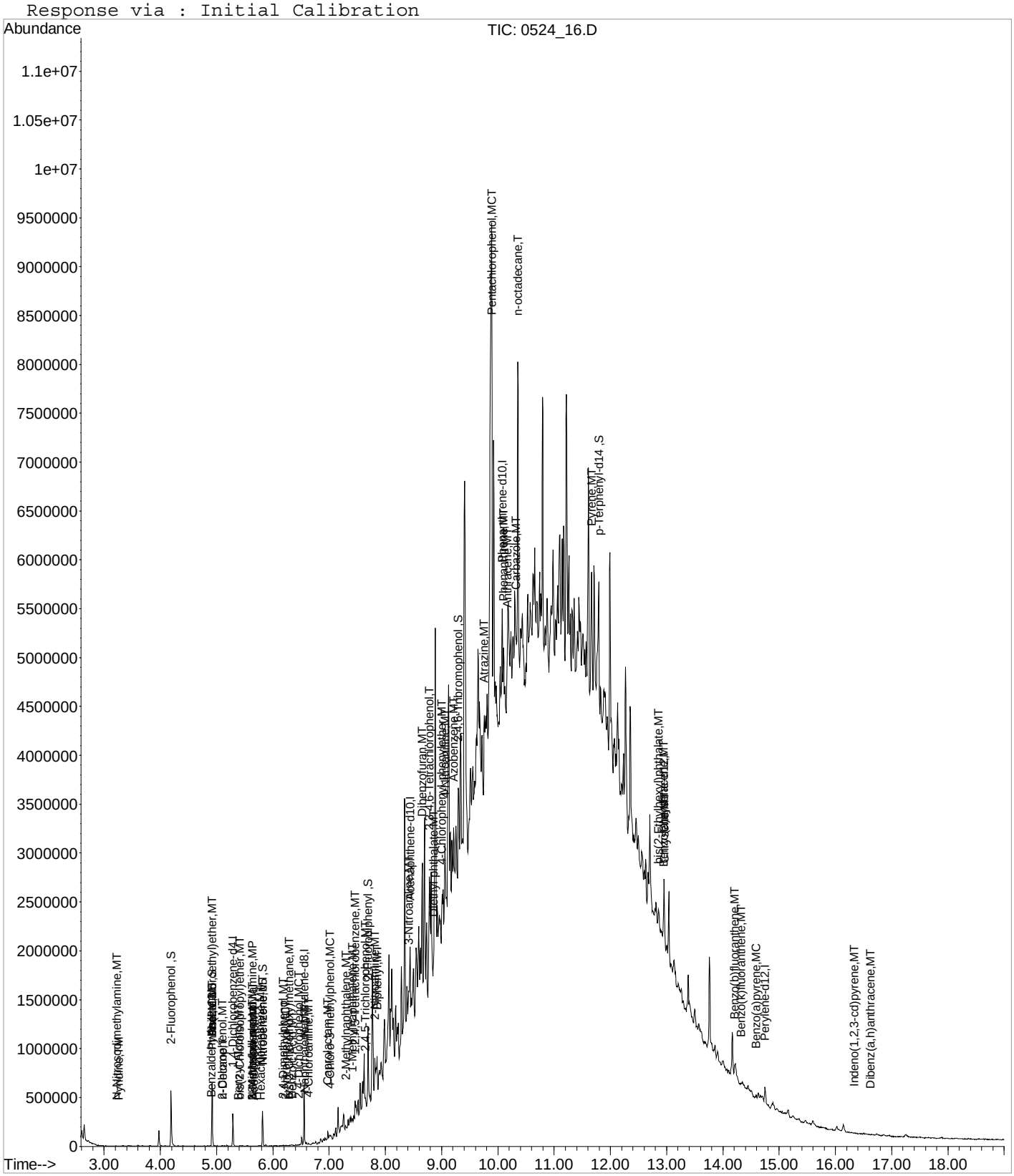
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.29	152	50080	8000.00	ppb	0.00
22) Naphthalene-d8	6.56	136	283592	8000.00	ppb	0.00
40) Acenaphthene-d10	8.44	164	189894	8000.00	ppb	0.00
64) Phenanthrene-d10	10.08	188	334011	8000.00	ppb	0.02
78) Chrysene-d12	12.96	240	247241	8000.00	ppb	0.02
88) Perylene-d12	14.75	264	95478	8000.00	ppb	0.01
System Monitoring Compounds						
4) 2-Fluorophenol	4.19	112	169743	484.8001021	ppb	0.00
Spiked Amount 666.000	Range 21 - 116		Recovery = 72.79%			
7) Phenol-d5	4.92	99	209008	457.1237499	ppb	0.00
Spiked Amount 666.000	Range 26 - 121		Recovery = 68.64%			
23) Nitrobenzene-d5	5.82	82	97159	261.8952909	ppb	0.00
Spiked Amount 333.000	Range 22 - 129		Recovery = 78.65%			
44) 2-Fluorobiphenyl	7.69	172	237328	253.0315778	ppb	0.00
Spiked Amount 333.000	Range 35 - 129		Recovery = 75.99%			
67) 2,4,6-Tribromophenol	9.30	330	62344	590.7719067	ppb	0.00
Spiked Amount 666.000	Range 22 - 142		Recovery = 88.70%			
81) p-Terphenyl-d14	11.79	244	317040	340.5292047	ppb	0.02
Spiked Amount 333.000	Range 22 - 128		Recovery = 102.26%			
Target Compounds						Qvalue
5) Aniline	4.92	66	9759	43.4241455	ppb #	1
9) Benzaldehyde	4.90	105	1931	7.6532021	ppb #	22
11) n-Decane	5.11	41	1203	7.5073650	ppb #	77
30) Benzoic Acid	6.35	105	754	38.6197965	ppb	83
35) Caprolactam	6.98	113	2733	24.5043839	ppb #	1
37) 2-Methylnaphthalene	7.30	142	7203	8.7180856	ppb #	86
38) 1-Methylnaphthalene	7.41	142	7290	9.8186183	ppb #	45
43) 2,4,5-Trichlorophenol	7.64	196	5555	23.5943176	ppb #	12
51) 3-Nitroaniline	8.41	138	13665	50.3820926	ppb #	72
54) Dibenzofuran	8.66	168	12001	9.6637115	ppb #	1
56) 2,3,4,6-Tetrachlorophenol	8.79	232	70617	549.8078459	ppb	100
61) 4-Nitroaniline	9.05	138	11652	43.1094392	ppb #	8
62) Azobenzene	9.21	77	14390	14.2083830	ppb #	1
63) Atrazine	9.75	200	10109	50.3590419	ppb #	12
70) n-octadecane	10.35	55	5831070	33318.8839929	ppb #	32
71) Pentachlorophenol	9.88	266	1729680	12263.8838150	ppb	97
72) Phenanthrene	10.10	178	227943	151.5405126	ppb	95
73) Anthracene	10.16	178	30184	20.0030893	ppb	80
74) Carbazole	10.32	167	26612	17.1888297	ppb #	1
80) Pyrene	11.66	202	310391	232.3981843	ppb	91
84) Benzo(a)anthracene	12.94	228	18237	15.5442165	ppb	89
85) Chrysene	12.97	228	58224	52.0017568	ppb	91
86) bis(2-Ethylhexyl)phthalate	12.86	149	19451m	17.3744321	ppb	
89) Benzo(b)fluoranthene	14.20	252	19602	41.9258590	ppb	83
91) Benzo(a)pyrene	14.59	252	14833	34.0347418	ppb	84

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052416\0524 16.D Vial: 16
Acq On : 24 May 2016 2:45 pm Operator: 280
Sample : L836976-04 1x WG874391 15-0.5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 24 15:23 2016 Quant Results File: S804D25P.RES

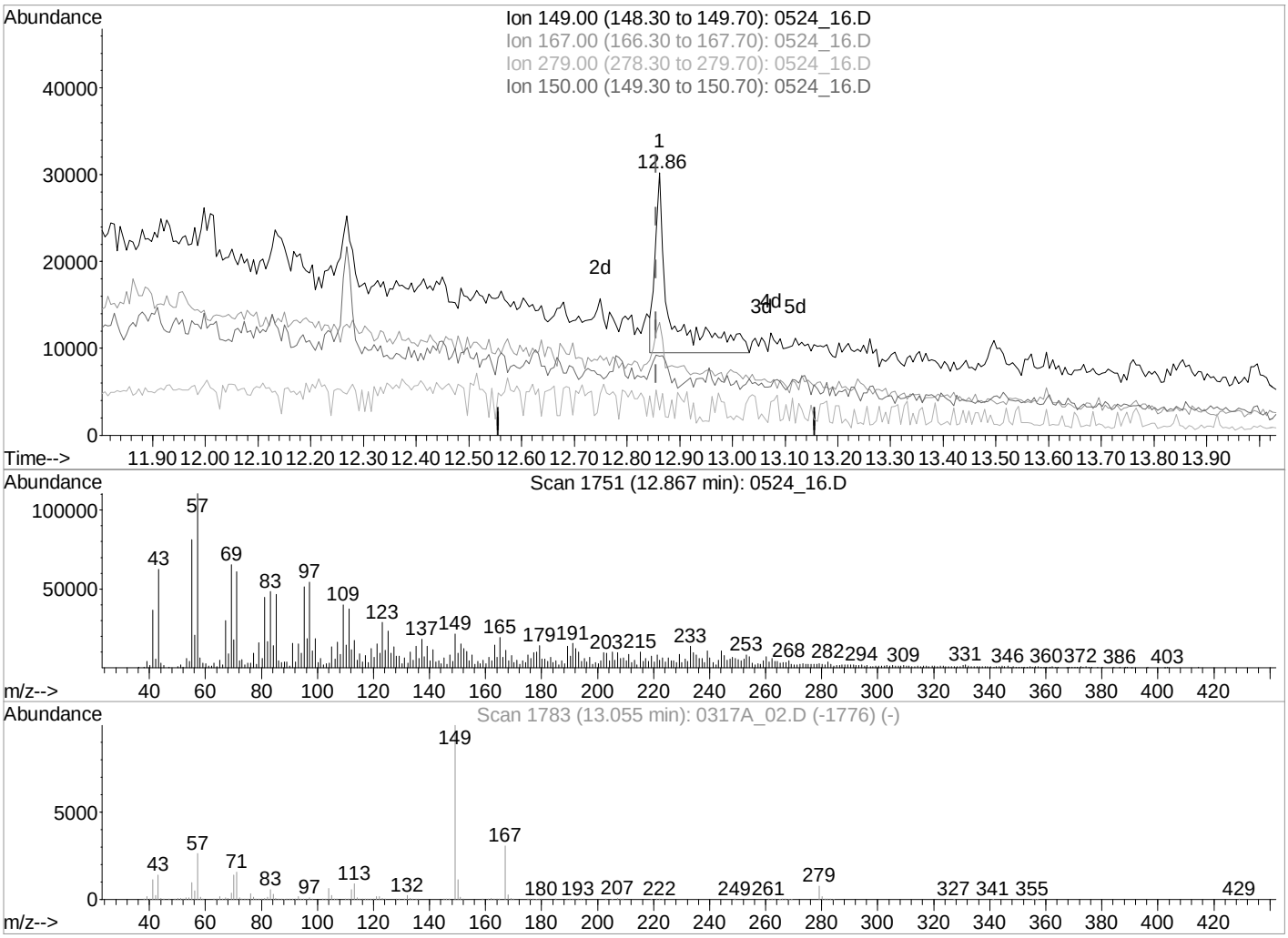
Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Initial Calibration



Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\052416\0524 16.D Vial: 16
Acq On : 24 May 2016 2:45 pm Operator: 280
Sample : L836976-04 1x WG874391 15-0.5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 24 15:22 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Multiple Level Calibration



TIC: 0524_16.D

(86) bis(2-Ethylhexyl)phthalate (MT)

12.86min (+0.006) 36.4174385 ppb

Qvalue = 95

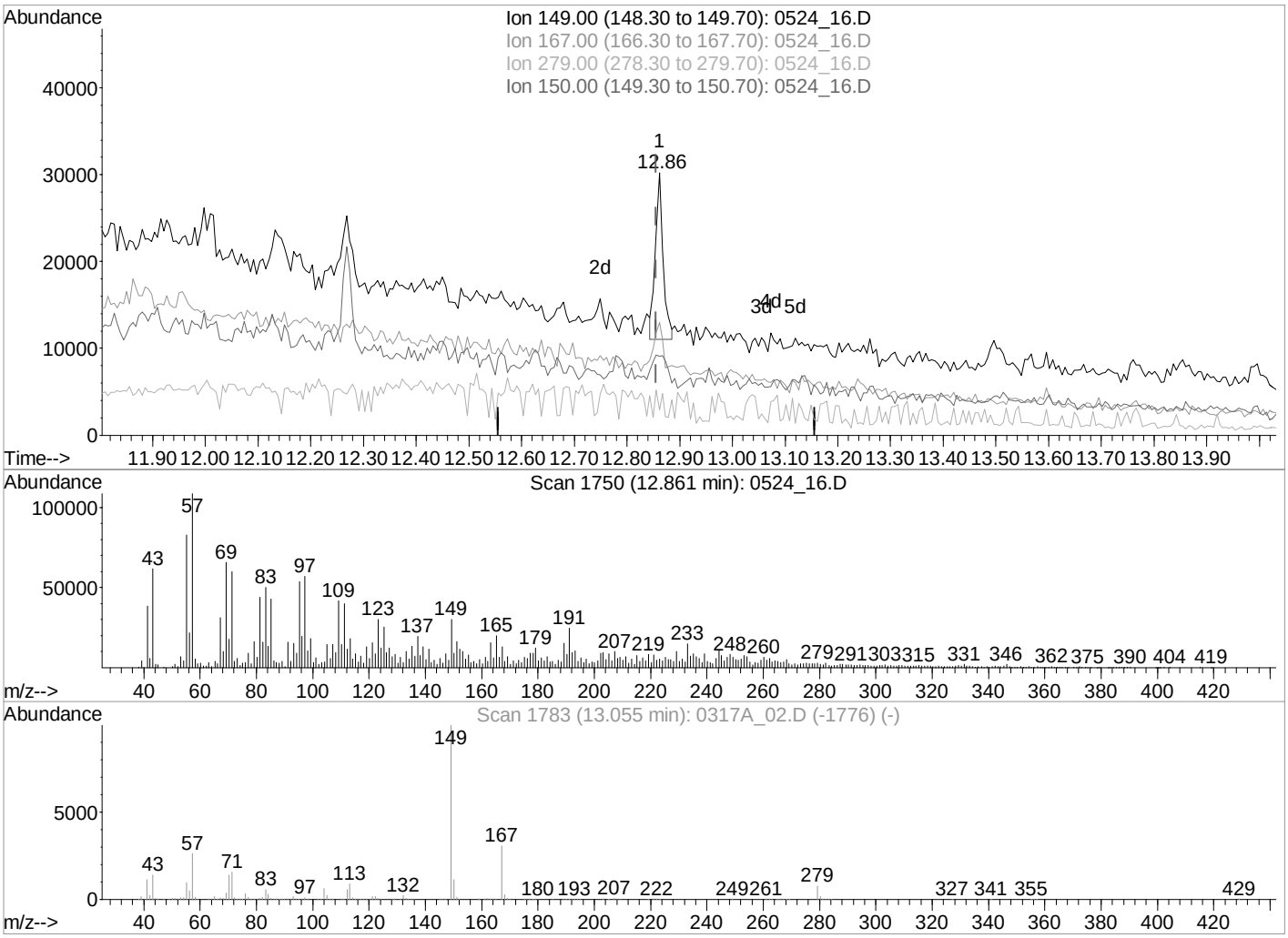
response 40770 Limit = 333.0000000

Ion	Exp%	Act%
149.00	100	100
167.00	29.60	31.54
279.00	4.80	0.00
150.00	11.60	12.94

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\052416\0524 16.D Vial: 16
Acq On : 24 May 2016 2:45 pm Operator: 280
Sample : L836976-04 1x WG874391 15-0.5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 24 15:22 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Multiple Level Calibration



TIC: 0524_16.D

(86) bis(2-Ethylhexyl)phthalate (MT)

12.86min (+0.006) 17.3744321 ppb m

response 19451 Limit = 333.0000000

Ion	Exp%	Act%
149.00	100	100
167.00	29.60	43.05
279.00	4.80	9.58
150.00	11.60	30.19

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052416\0524 17.D Vial: 17
Acq On : 24 May 2016 3:09 pm Operator: 280
Sample : L836976-05 1x WG874391 15-0.5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 24 15:43 2016 Quant Results File: S804D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Initial Calibration
DataAcq Meth : BNA4E

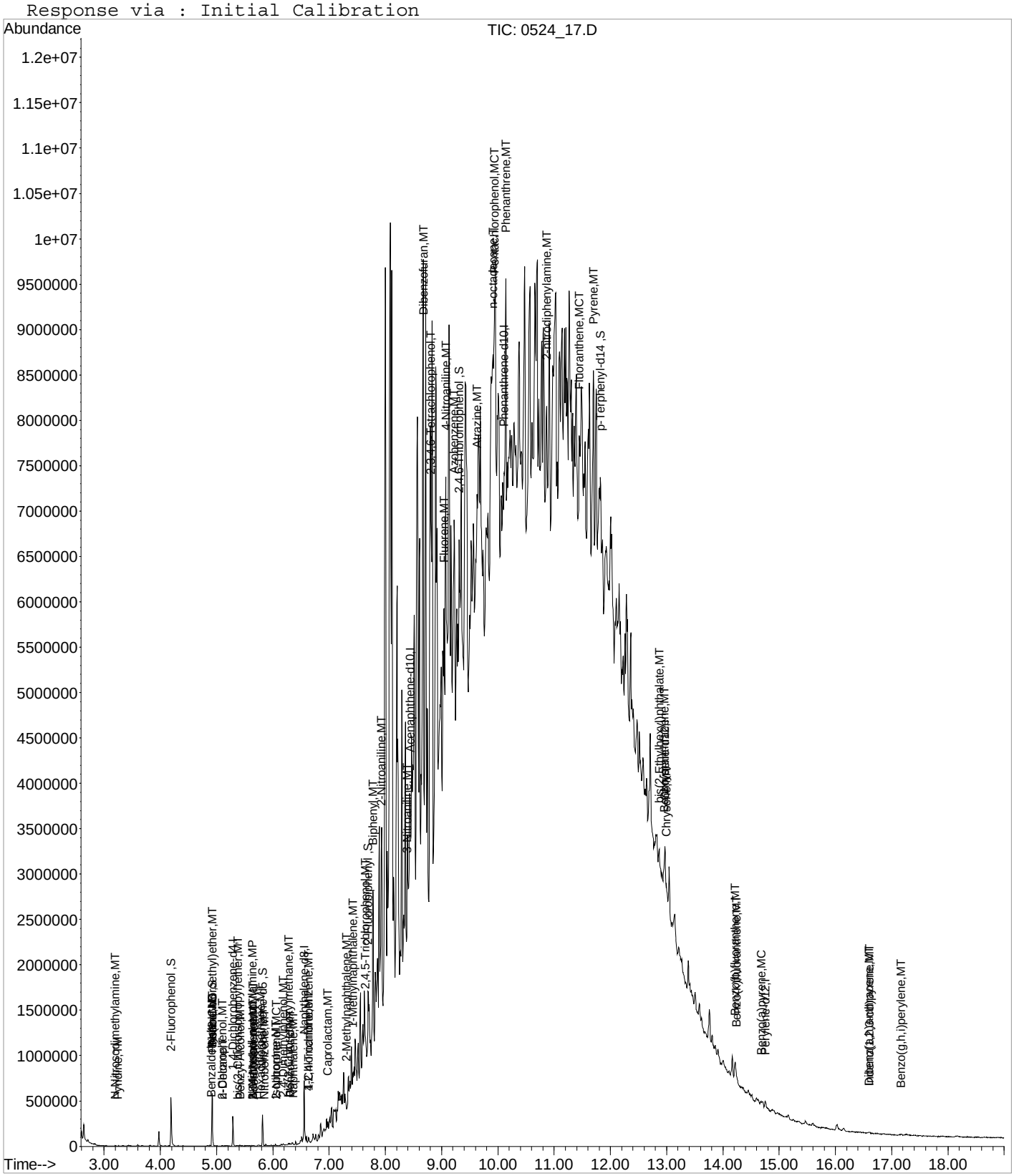
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.29	152	49955	8000.00	ppb	0.00
22) Naphthalene-d8	6.56	136	284059	8000.00	ppb	0.00
40) Acenaphthene-d10	8.44	164	221282	8000.00	ppb	0.00
64) Phenanthrene-d10	10.11	188	327955	8000.00	ppb	0.05
78) Chrysene-d12	12.97	240	183525	8000.00	ppb	0.03
88) Perylene-d12	14.75	264	38709	8000.00	ppb	0.02
System Monitoring Compounds						
4) 2-Fluorophenol	4.19	112	164173	470.0650049	ppb	0.00
Spiked Amount 666.000	Range 21 - 116		Recovery = 70.58%			
7) Phenol-d5	4.92	99	201249	441.2553298	ppb	0.00
Spiked Amount 666.000	Range 26 - 121		Recovery = 66.25%			
23) Nitrobenzene-d5	5.82	82	93257	250.9640506	ppb	0.00
Spiked Amount 333.000	Range 22 - 129		Recovery = 75.36%			
44) 2-Fluorobiphenyl	7.70	172	230313	210.7217436	ppb	0.00
Spiked Amount 333.000	Range 35 - 129		Recovery = 63.28%			
67) 2,4,6-Tribromophenol	9.32	330	54920	530.0321501	ppb	0.02
Spiked Amount 666.000	Range 22 - 142		Recovery = 79.58%			
81) p-Terphenyl-d14	11.82	244	192047	277.8901101	ppb	0.05
Spiked Amount 333.000	Range 22 - 128		Recovery = 83.45%			
Target Compounds						Qvalue
5) Aniline	4.92	66	9339	41.6592739	ppb #	1
9) Benzaldehyde	4.90	105	2958	11.7528837	ppb #	41
11) n-Decane	5.11	41	818	5.1175320	ppb #	1
30) Benzoic Acid	6.30	105	1724	45.6692774	ppb	94
33) 4-Chloroaniline	6.63	65	1388	9.5683291	ppb #	1
35) Caprolactam	6.98	113	6018	53.8693531	ppb #	1
37) 2-Methylnaphthalene	7.31	142	11836	14.3020434	ppb #	42
38) 1-Methylnaphthalene	7.41	142	26658	35.8455982	ppb #	3
43) 2,4,5-Trichlorophenol	7.65	196	3939	14.3573568	ppb #	3
45) Biphenyl	7.77	154	12616	9.8120600	ppb #	41
47) 2-Nitroaniline	7.92	138	3358	9.4282644	ppb #	1
51) 3-Nitroaniline	8.38	138	4813	15.2281653	ppb #	73
54) Dibenzofuran	8.67	168	175833	121.5044155	ppb #	1
56) 2,3,4,6-Tetrachlorophenol	8.81	232	382714	2557.0615007	ppb	96
58) Fluorene	9.05	166	207370	173.9472163	ppb	97
61) 4-Nitroaniline	9.07	138	13944	44.2715193	ppb #	1
62) Azobenzene	9.22	77	54753	46.3934785	ppb #	1
63) Atrazine	9.63	200	15729	67.2412114	ppb #	12
70) n-octadecane	9.91	55	45799	266.5291413	ppb #	79
71) Pentachlorophenol	9.93	266	3932917	28400.3412238	ppb	96
72) Phenanthrene	10.14	178	1886549m	1277.3711261	ppb	
76) 2-nitrodiphenylamine	10.86	167	12707	41.1606450	ppb #	55
77) Fluoranthene	11.45	202	319879	214.0362281	ppb	97
80) Pyrene	11.70	202	782288m	789.0700101	ppb	
84) Benzo(a)anthracene	12.96	228	54701	62.8110370	ppb	88
85) Chrysene	13.00	228	175391	211.0321099	ppb	96
86) bis(2-Ethylhexyl)phthalate	12.87	149	36503m	43.9260853	ppb	
89) Benzo(b)fluoranthene	14.21	252	58192	306.9984832	ppb	93
90) Benzo(k)fluoranthene	14.24	252	13193m	74.4207814	ppb	
91) Benzo(a)pyrene	14.67	252	8097	45.8256848	ppb	87
92) Indeno(1,2,3-cd)pyrene	16.60	276	10603	54.1745996	ppb	82
93) Dibenz(a,h)anthracene	16.59	278	2366	13.9496088	ppb #	39
94) Benzo(g,h,i)perylene	17.16	276	11882	73.5859992	ppb #	73

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

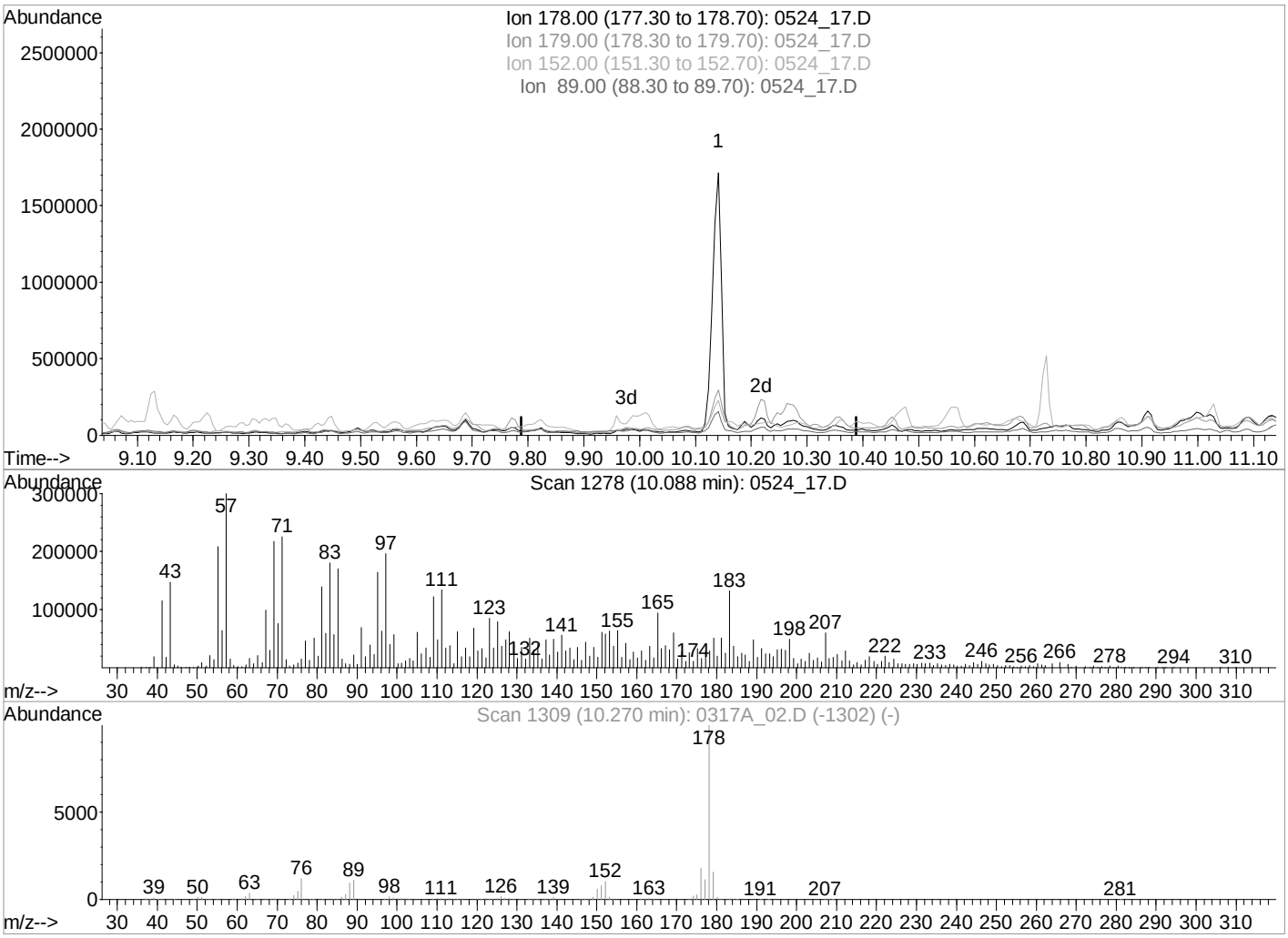
Data File : C:\MSDCHEM\1\DATA\052416\0524 17.D Vial: 17
Acq On : 24 May 2016 3:09 pm Operator: 280
Sample : L836976-05 1x WG874391 15-0.5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 24 15:43 2016 Quant Results File: S804D25P.RES

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Initial Calibration



Data File : C:\MSDCHEM\1\DATA\052416\0524 17.D Vial: 17
Acq On : 24 May 2016 3:09 pm Operator: 280
Sample : L836976-05 1x WG874391 15-0.5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 24 15:42 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Multiple Level Calibration



TIC: 0524_17.D

(72) Phenanthrene (MT)

10.09min (-10.088) 0.0000000 ppb d

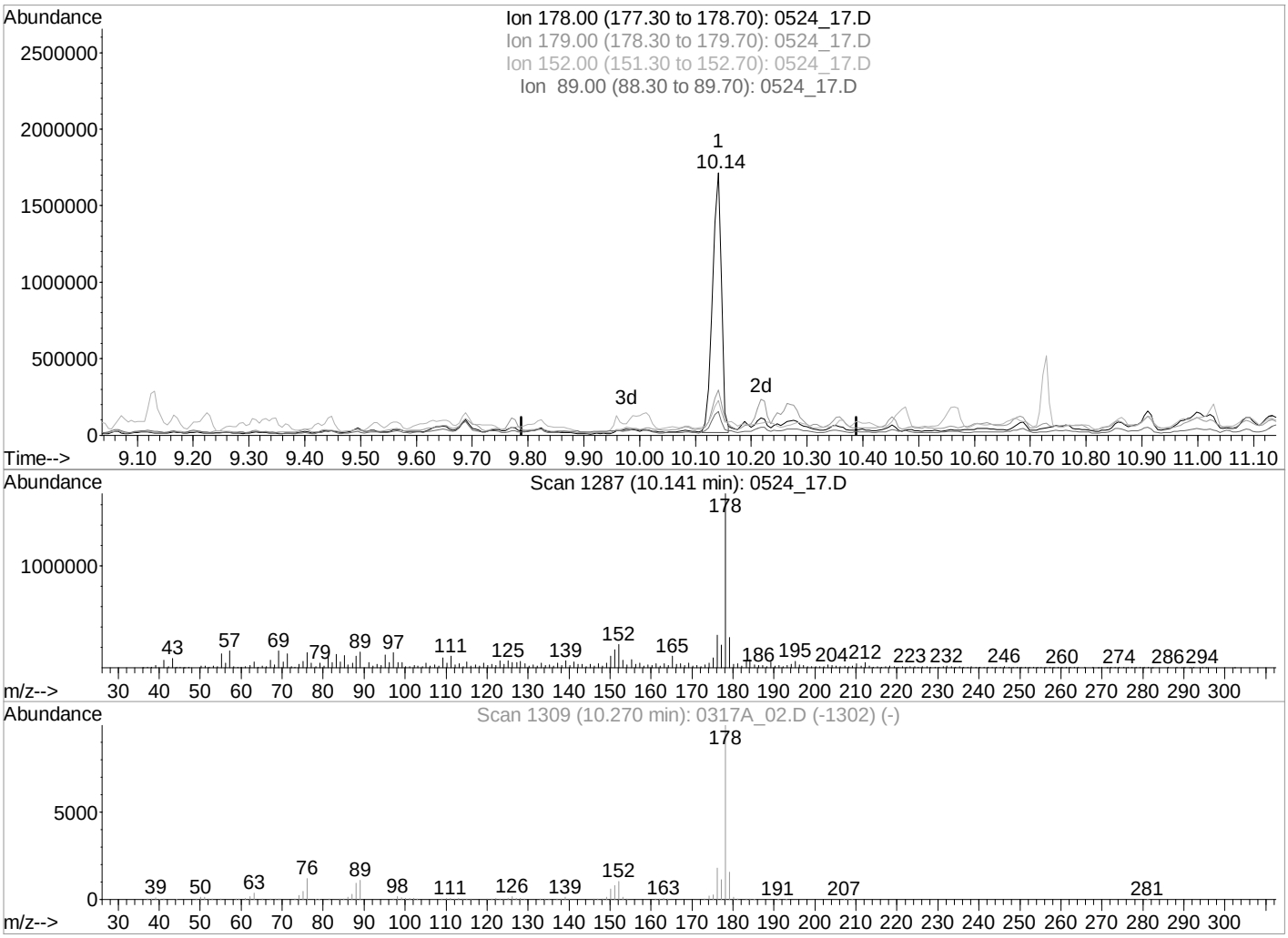
response 0 Limit = 33.0000000

Ion	Exp%	Act%
178.00	100	0.00
179.00	14.50	0.00
152.00	9.20	0.00
89.00	10.90	0.00

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\052416\0524 17.D Vial: 17
Acq On : 24 May 2016 3:09 pm Operator: 280
Sample : L836976-05 1x WG874391 15-0.5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 24 15:42 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Multiple Level Calibration



TIC: 0524_17.D

(72) Phenanthrene (MT)

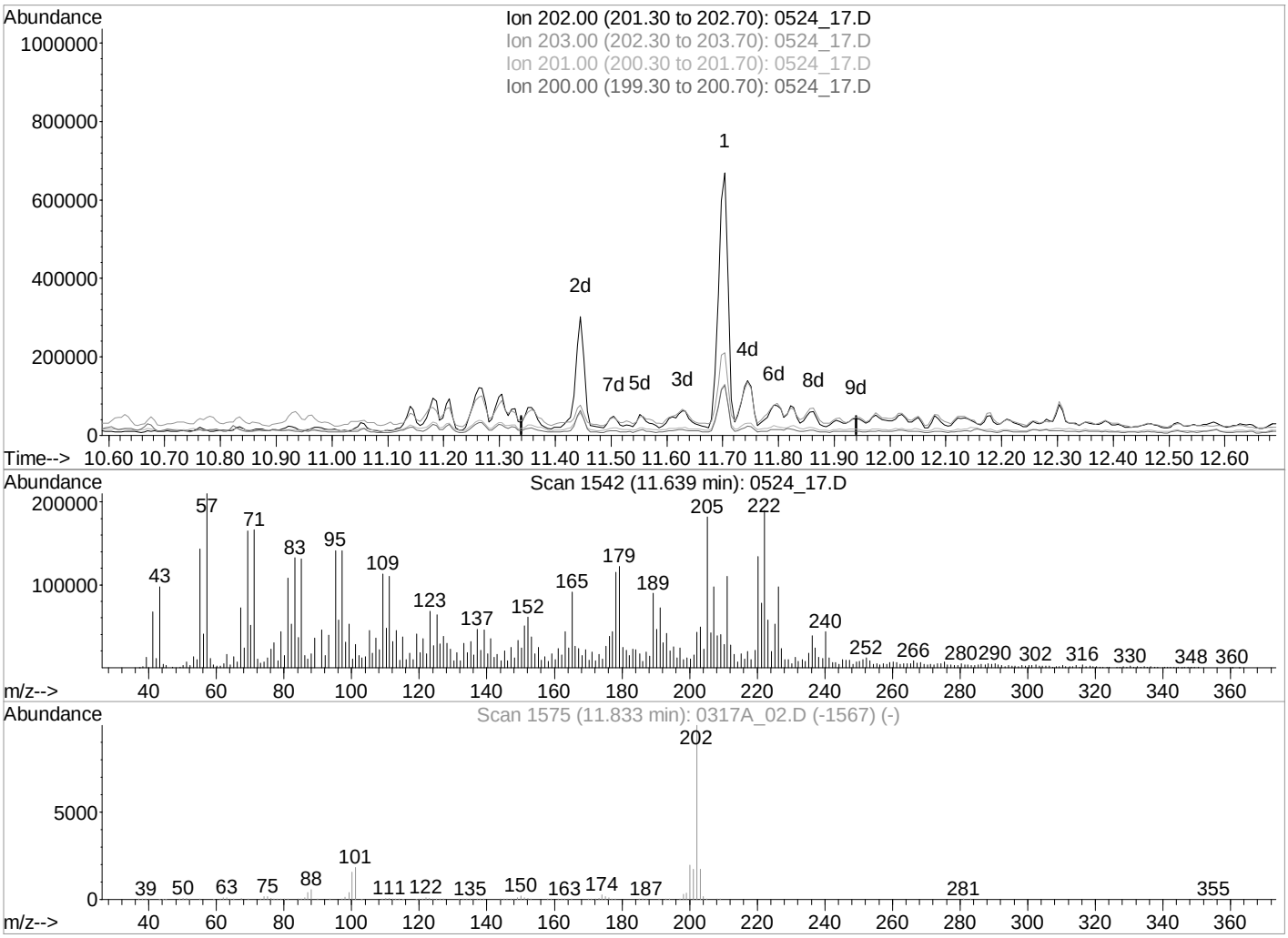
10.14min (+0.053) 1277.3711261 ppb m

response 1886549 Limit = 33.0000000

Ion	Exp%	Act%
178.00	100	100
179.00	14.50	17.31
152.00	9.20	13.19
89.00	10.90	9.01

Data File : C:\MSDCHEM\1\DATA\052416\0524 17.D Vial: 17
Acq On : 24 May 2016 3:09 pm Operator: 280
Sample : L836976-05 1x WG874391 15-0.5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 24 15:42 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Multiple Level Calibration



TIC: 0524_17.D

(80) Pyrene (MT)

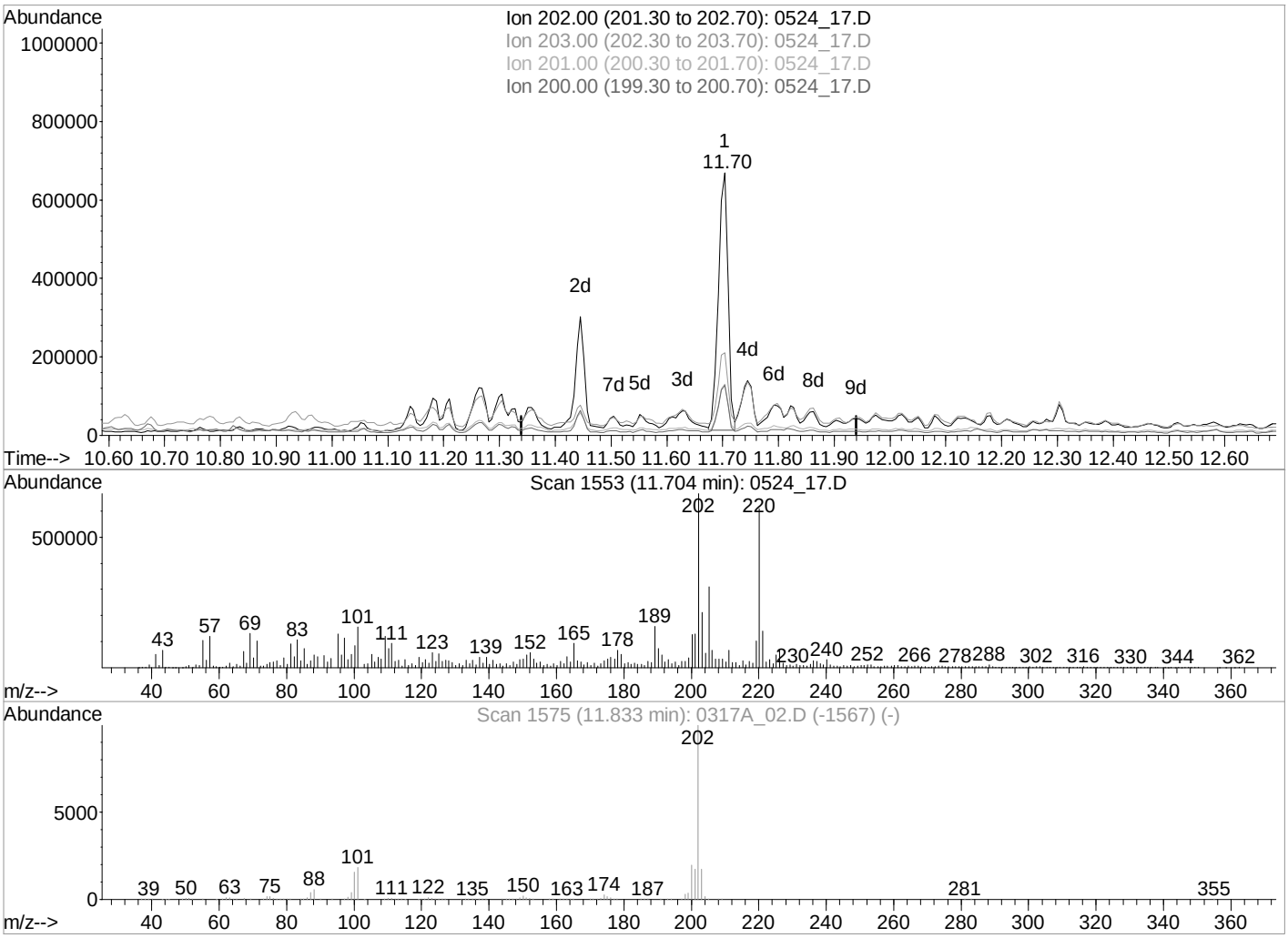
11.64min (-11.639) 0.0000000 ppb d

response 0 Limit = 33.0000000

Ion	Exp%	Act%
202.00	100	0.00
203.00	16.60	0.00
201.00	16.50	0.00
200.00	19.20	0.00

Data File : C:\MSDCHEM\1\DATA\052416\0524 17.D Vial: 17
Acq On : 24 May 2016 3:09 pm Operator: 280
Sample : L836976-05 1x WG874391 15-0.5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 24 15:43 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Multiple Level Calibration



TIC: 0524_17.D

(80) Pyrene (MT)

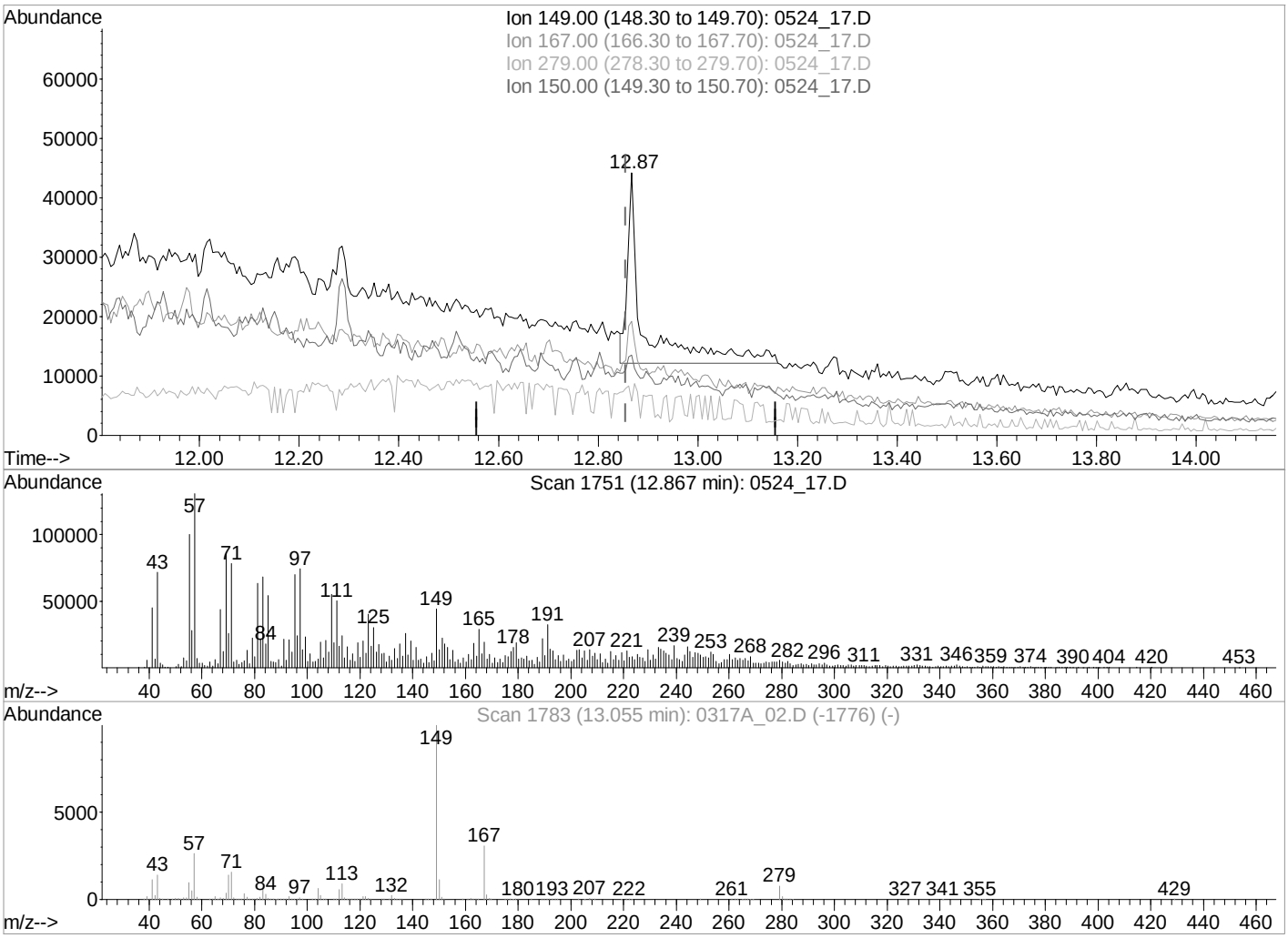
11.70min (+0.064) 789.0700101 ppb m

response 782288 Limit = 33.0000000

Ion	Exp%	Act%
202.00	100	100
203.00	16.60	31.53
201.00	16.50	19.34
200.00	19.20	19.10

Data File : C:\MSDCHEM\1\DATA\052416\0524 17.D Vial: 17
Acq On : 24 May 2016 3:09 pm Operator: 280
Sample : L836976-05 1x WG874391 15-0.5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 24 15:43 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Multiple Level Calibration



TIC: 0524_17.D

(86) bis(2-Ethylhexyl)phthalate (MT)

12.87min (+0.012) 87.3214909 ppb

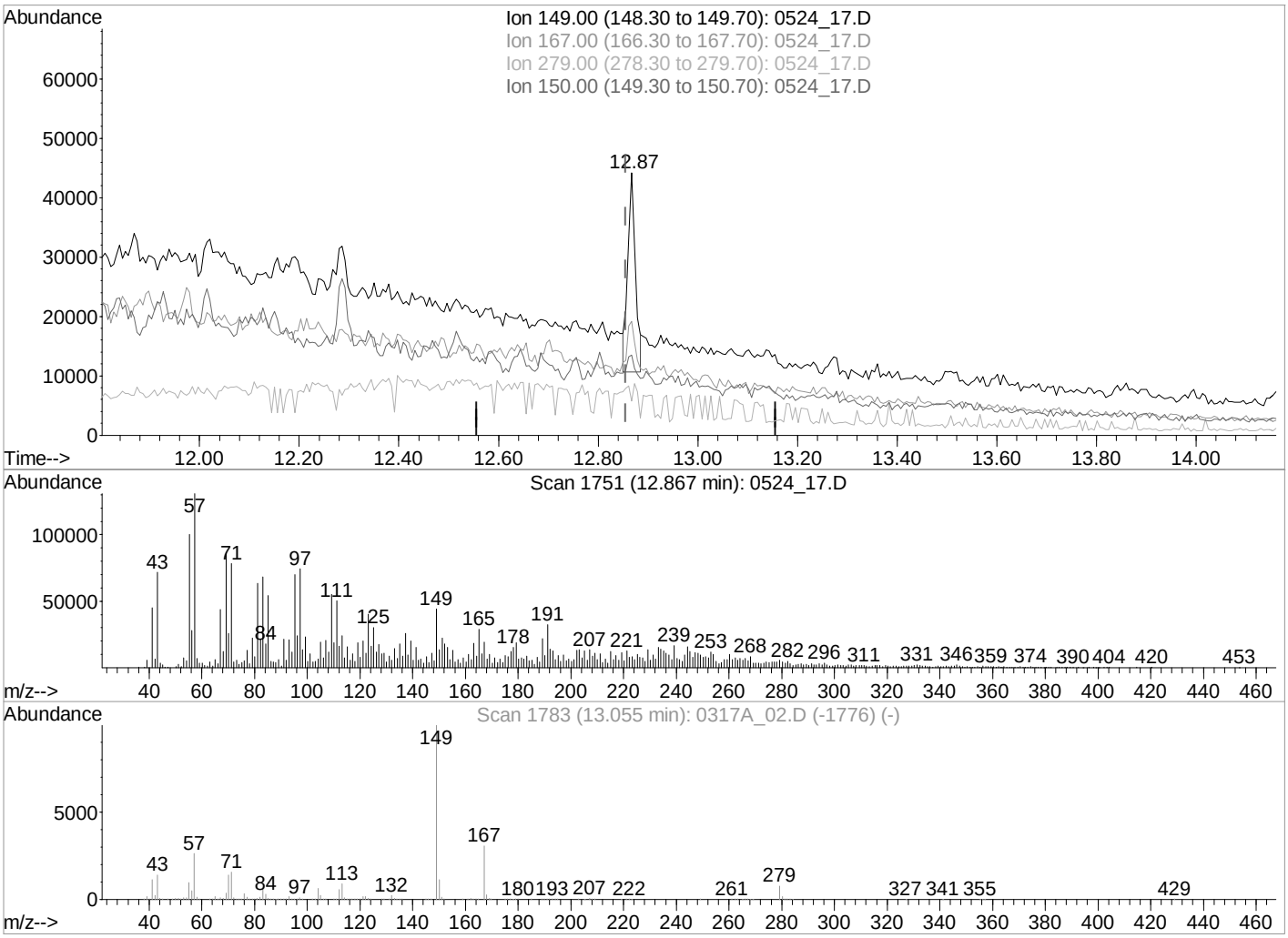
Qvalue = 87

response 72565 Limit = 333.0000000

Ion	Exp%	Act%
149.00	100	100
167.00	29.60	34.36
279.00	4.80	9.91
150.00	11.60	20.81

Data File : C:\MSDCHEM\1\DATA\052416\0524 17.D Vial: 17
Acq On : 24 May 2016 3:09 pm Operator: 280
Sample : L836976-05 1x WG874391 15-0.5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 24 15:43 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Multiple Level Calibration



TIC: 0524_17.D

(86) bis(2-Ethylhexyl)phthalate (MT)

12.87min (+0.012) 43.9260853 ppb m

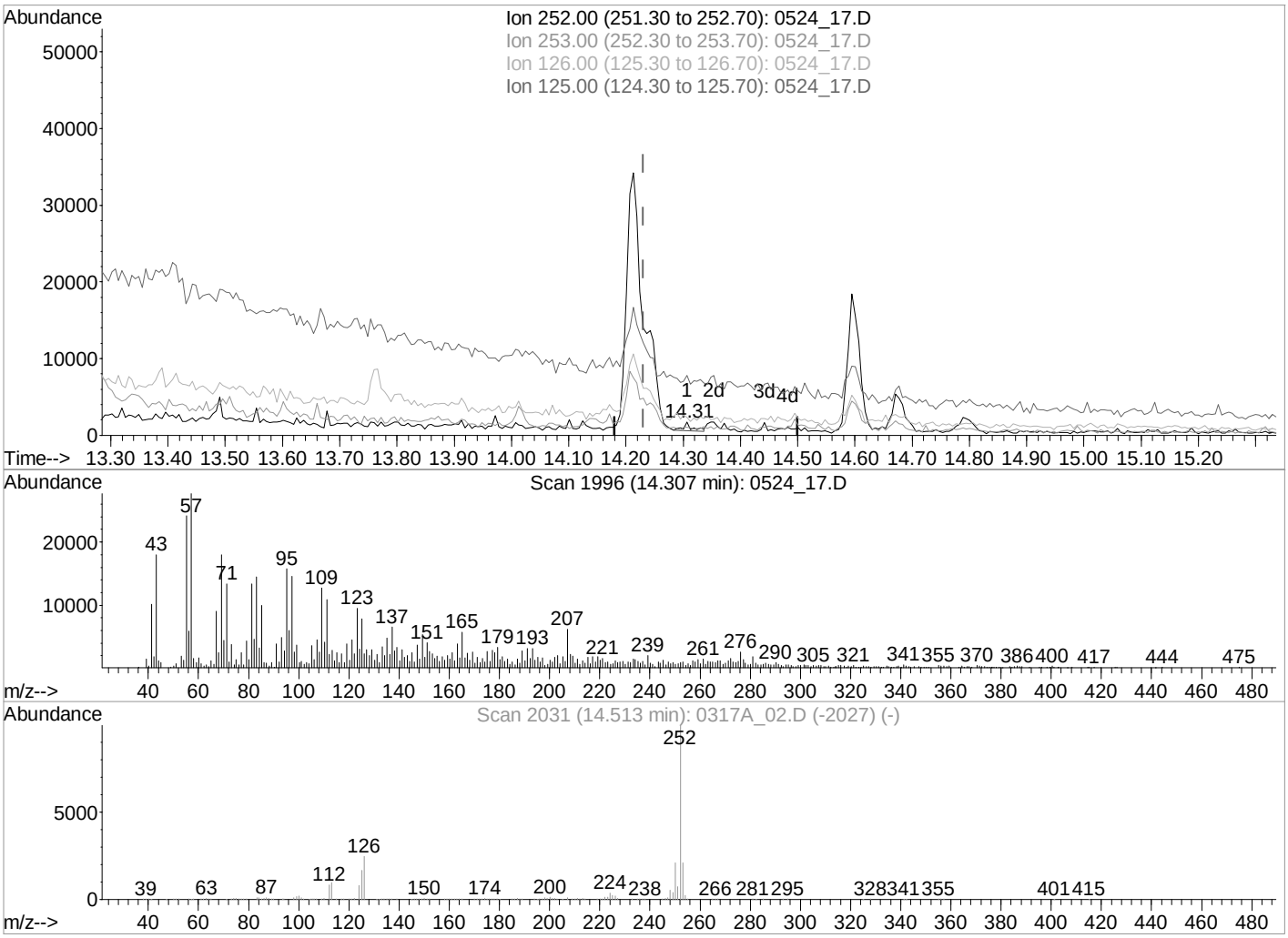
response 36503 Limit = 333.0000000

Ion	Exp%	Act%
149.00	100	100
167.00	29.60	43.32
279.00	4.80	12.93
150.00	11.60	30.61

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\052416\0524 17.D Vial: 17
Acq On : 24 May 2016 3:09 pm Operator: 280
Sample : L836976-05 1x WG874391 15-0.5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 24 15:43 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Multiple Level Calibration



TIC: 0524_17.D

(90) Benzo(k)fluoranthene (MT)

14.31min (+0.076) 6.5434781 ppb

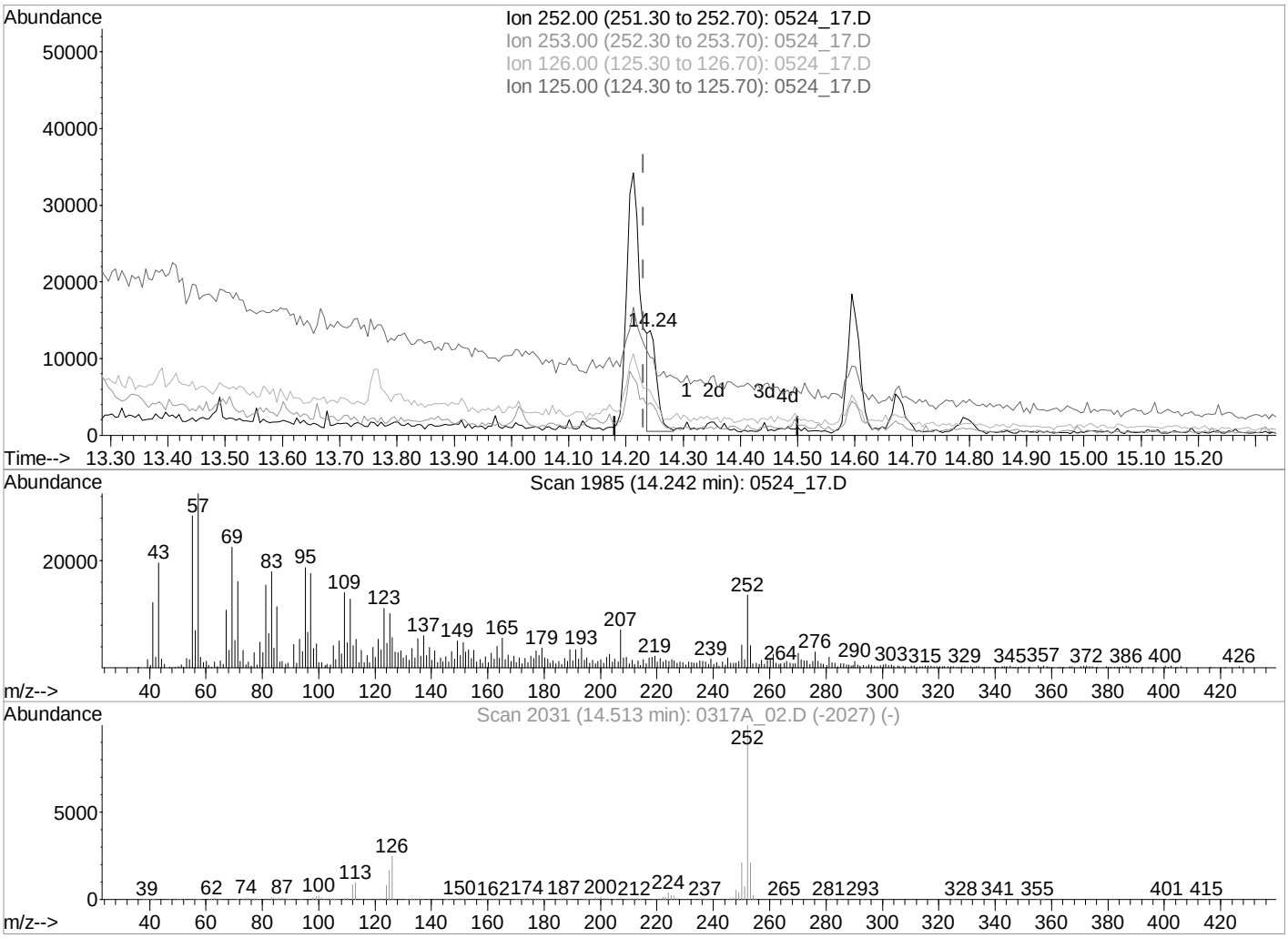
Qvalue = 30

response 1160 Limit = 33.0000000

Ion	Exp%	Act%
252.00	100	100
253.00	21.60	0.00#
126.00	30.50	13.47
125.00	21.30	92.56#

Data File : C:\MSDCHEM\1\DATA\052416\0524 17.D Vial: 17
Acq On : 24 May 2016 3:09 pm Operator: 280
Sample : L836976-05 1x WG874391 15-0.5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 24 15:43 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Multiple Level Calibration



TIC: 0524_17.D

(90) Benzo(k)fluoranthene (MT)

14.24min (+0.012) 74.4207814 ppb m

response 13193 Limit = 33.0000000

Ion	Exp%	Act%
252.00	100	100
253.00	21.60	30.95
126.00	30.50	41.99
125.00	21.30	74.53#

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

Injection Log

Instrument ID : BNAMS4
Computer Name : SVCOMPH
Released By : Allen Fuller
Date Released : 9/20/2016 6:03:15 PM
Run ID : 052516
Signature : _____

#	File ID	Sample ID	Method	WG	Product	Matrix	Account #	State	Dil.	Mult.	Injected	Misc.
1	0525_00	INSTBLK	S804D25P						1	1	05/25/16 0858	"Instrument Blank"
2	0525_01	TUNE 50 PPM 16E09755	TUNEC						1	1	05/25/16 0922	"DFTPP"
3	0525_01T	TUNE 50 PPM 16E09755								1	05/25/16 0922	
4	0525_02	ICV SVMS 10K PPB 16D25863	S804D25P						1	1	05/25/16 0945	"8270 calibration ISTD 16D22768"
5	0525_03	ICV TCL 10K1 PPB 16D25867	S804D25P						1	1	05/25/16 1008	"8270 TCL calibration ISTD 16D22768"
6	0525_04	DNR BLANK	S804D25P	WG874391					1	0.0333	05/25/16 1037	"soil ISTD 16E03322"
7	0525_07	L836976-02	S804D25P	WG874391	SV8270	SS	WESSOLLCO	WY	10	0.333	05/25/16 1100	"soil ISTD 16E03322"
8	0525_08	L836857-01	S804D25P	WG874391	SV8270	SS	ENVIRTAZ	NH	40	1.332	05/25/16 1124	"soil ISTD 16E03322"
9	0525_21	BNA SPIKE TEST	S804D25P						1	5	05/25/16 1147	"soil ISTD 16E03322"
10	0525_09	L836857-02	S804D25P	WG874391	SV8270	SS	ENVIRTAZ	NH	40	1.332	05/25/16 1211	"soil ISTD 16E03322"
11	0525_10	L836857-03	S804D25P	WG874391	SV8270	SS	ENVIRTAZ	NH	40	1.332	05/25/16 1234	"soil ISTD 16E03322"
12	0525_11	L836857-04	S804D25P	WG874391	SV8270	SS	ENVIRTAZ	NH	40	1.332	05/25/16 1257	"soil ISTD 16E03322"
13	0525_12	L836857-06	S804D25P	WG874391	SV8270	SS	ENVIRTAZ	NH	40	1.332	05/25/16 1321	"soil ISTD 16E03322"
14	0525_13	RR L836857-09	S804D25P	WG874391					40	1.332	05/25/16 1344	"soil ISTD 16E03322"

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052516\0525 01.D Vial: 1
Acq On : 25 May 2016 9:22 am Operator: 280
Sample : TUNE 50 PPM 16E09755 Inst : BNAMS4
Misc : DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 9:41 2016 Quant Results File: TUNEC.RES

Quant Method : C:\MSDCHEM\1\METHODS\TUNEC.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed Sep 17 10:33:01 2014
Response via : Initial Calibration
DataAcq Meth : BNA4E

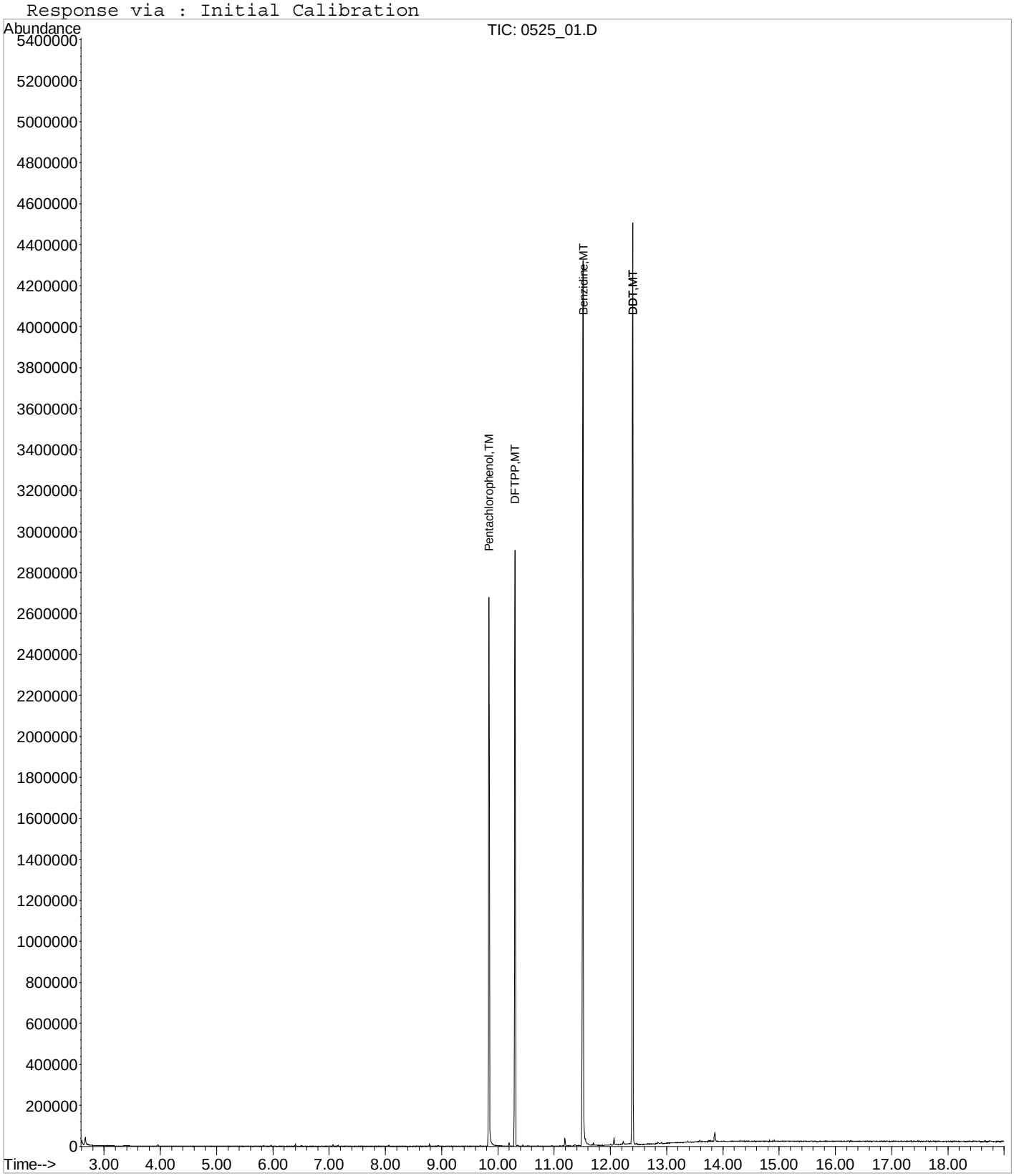
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
Target Compounds						Qvalue
1) Pentachlorophenol	9.84	264	183258	13.2040343	ug/mL	100
2) DFTPP	10.31	198	316980	13.2778171	ug/mL	100
3) Benzidine	11.52	184	2139680	14.5523161	ug/mL	100
4) DDT	12.40	TIC	4559007	69.6008226	ug/ml	100
5) DDT	12.40	235	846207	62.8859368	ug/mL	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

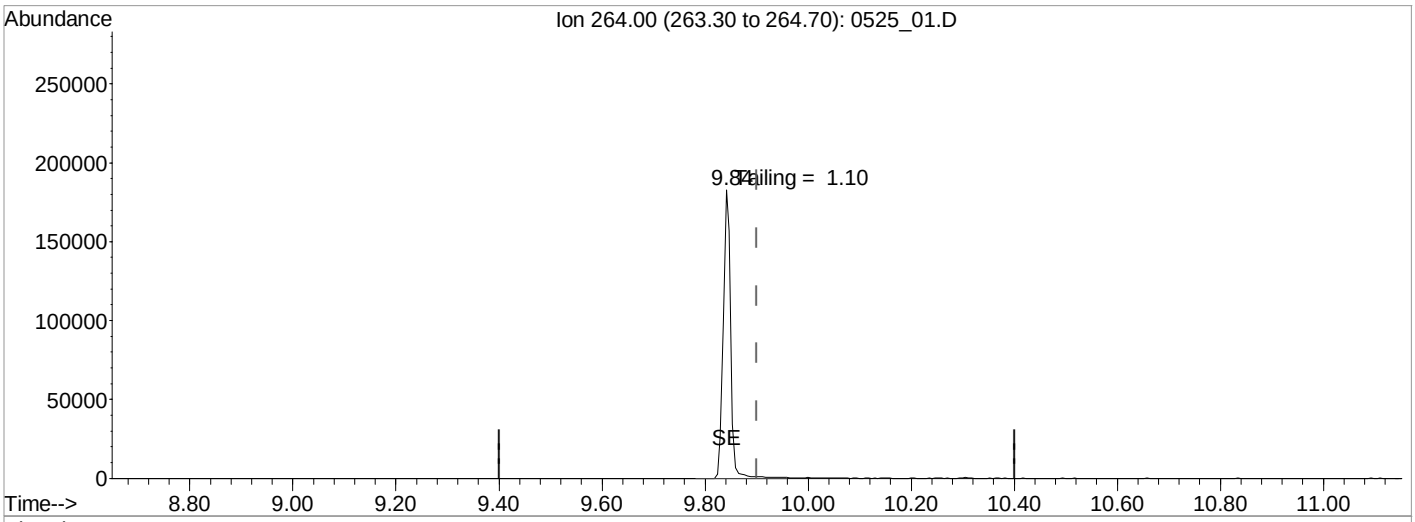
Data File : C:\MSDCHEM\1\DATA\052516\0525 01.D Vial: 1
Acq On : 25 May 2016 9:22 am Operator: 280
Sample : TUNE 50 PPM 16E09755 Inst : BNAMS4
Misc : DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 9:41 2016 Quant Results File: TUNEC.RES

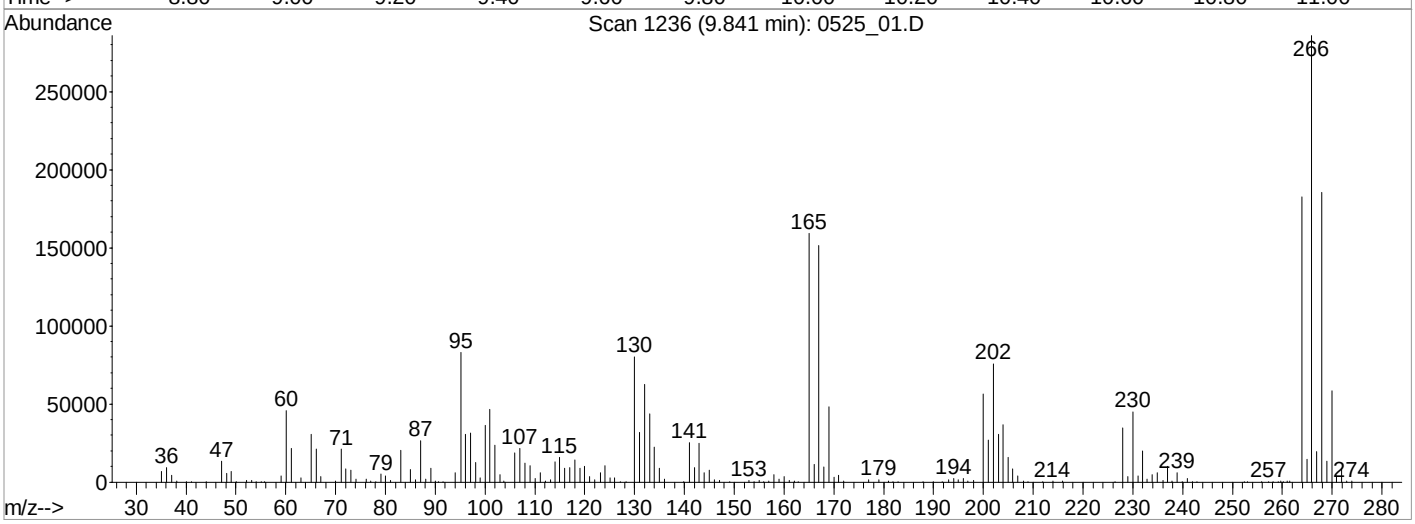
Method : C:\MSDCHEM\1\METHODS\TUNEC.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed Sep 17 10:33:01 2014
Response via : Initial Calibration



Data File : C:\MSDCHEM\1\DATA\052516\0525 01.D Vial: 1
Acq On : 25 May 2016 9:22 am Operator: 280
Sample : TUNE 50 PPM 16E09755 Inst : BNAMS4
Misc : DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 9:41 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\TUNEC.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed Sep 17 10:33:01 2014
Response via : Single Level Calibration





TIC: 0525_01.D

(1) Pentachlorophenol (TM)

9.84min (-0.059) 13.2040343 ug/mL

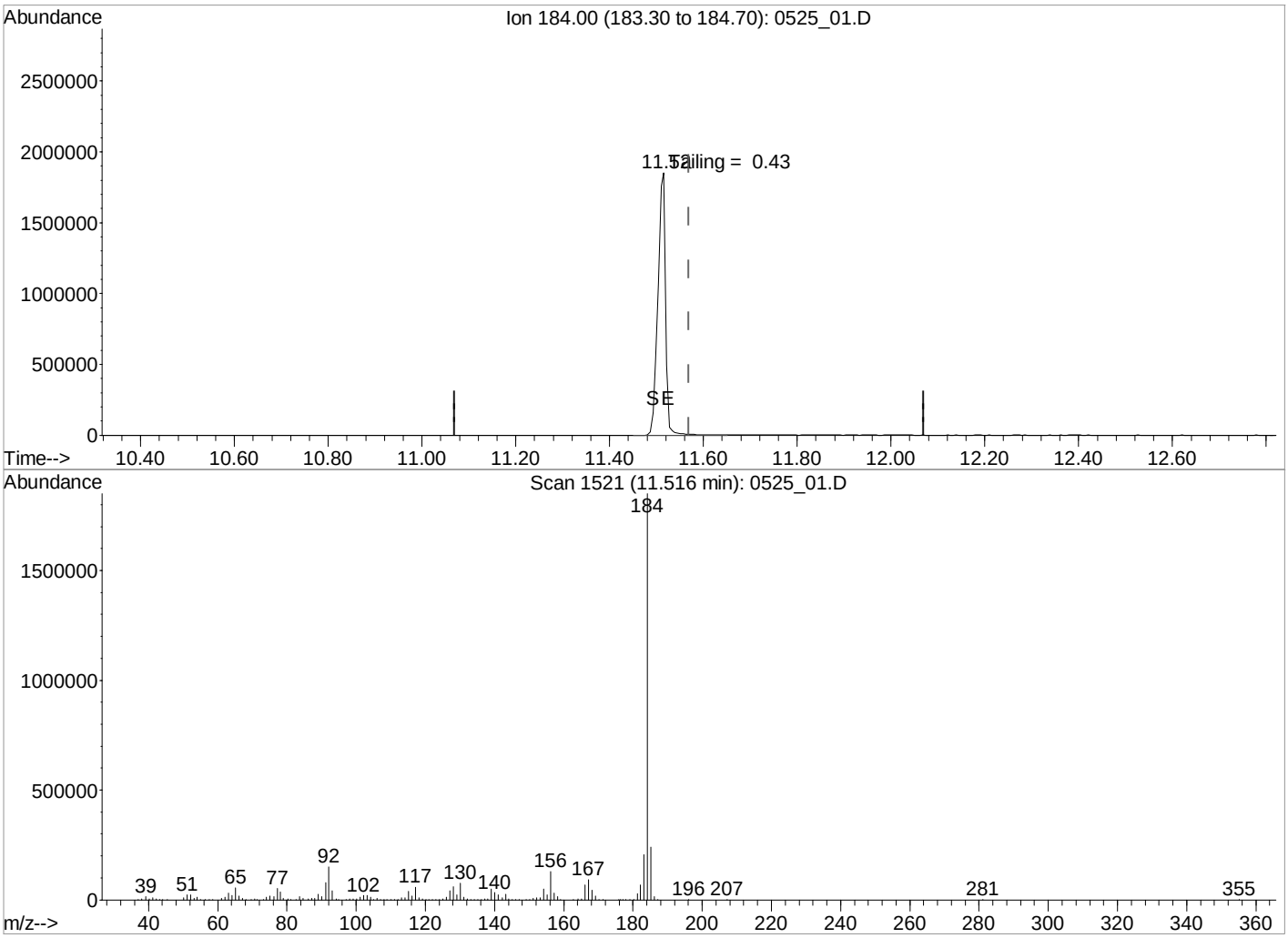
Qvalue = 100

response 183258

Ion	Exp%	Act%
264.00	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Data File : C:\MSDCHEM\1\DATA\052516\0525 01.D Vial: 1
Acq On : 25 May 2016 9:22 am Operator: 280
Sample : TUNE 50 PPM 16E09755 Inst : BNAMS4
Misc : DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 9:41 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\TUNEC.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed Sep 17 10:33:01 2014
Response via : Single Level Calibration



TIC: 0525_01.D

(3) Benzidine (MT)

11.52min (-0.053) 14.5523161 ug/mL

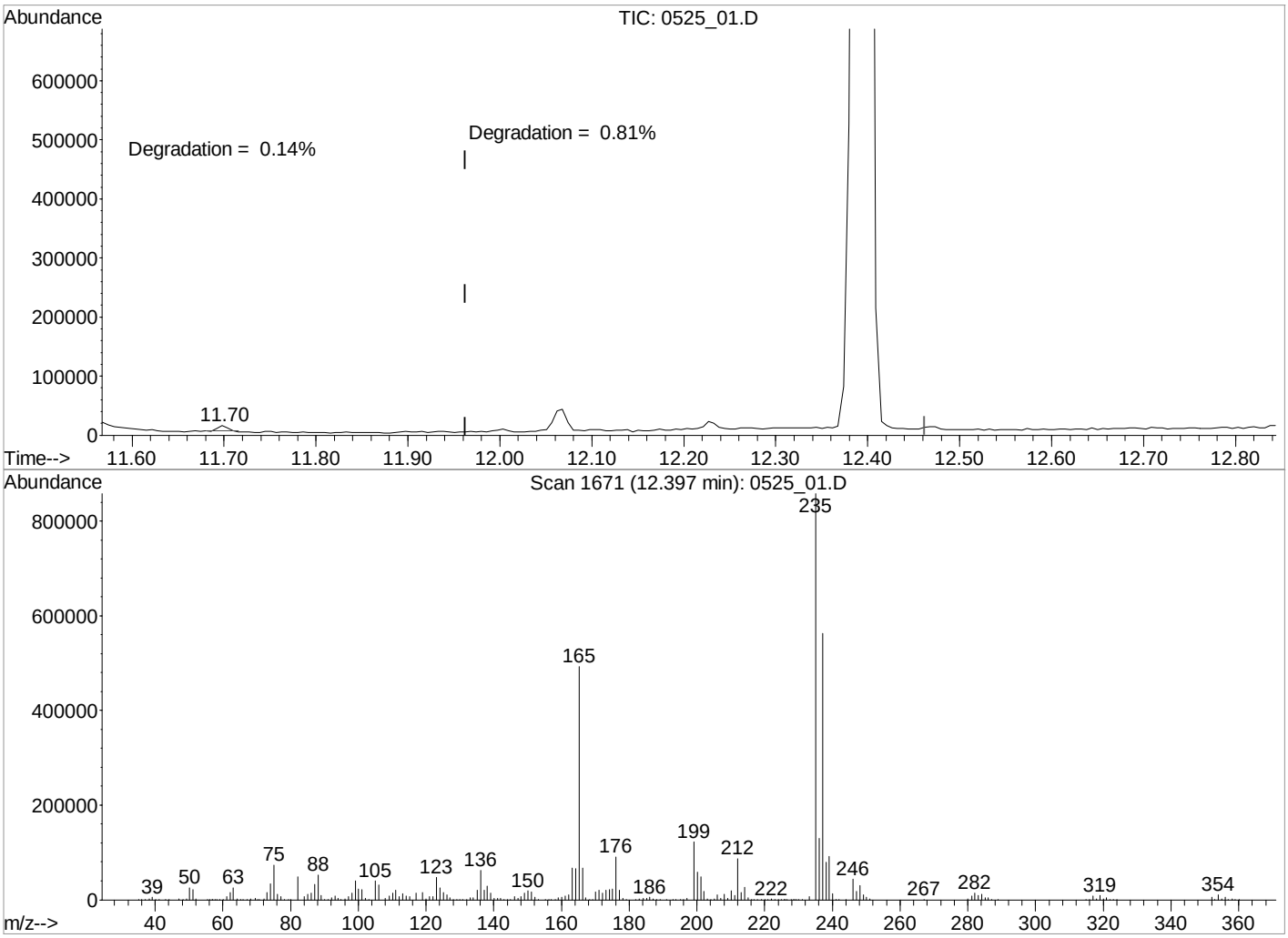
Qvalue = 100

response 2139680

Ion	Exp%	Act%
184.00	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Data File : C:\MSDCHEM\1\DATA\052516\0525 01.D Vial: 1
Acq On : 25 May 2016 9:22 am Operator: 280
Sample : TUNE 50 PPM 16E09755 Inst : BNAMS4
Misc : DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 9:41 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\TUNEC.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed Sep 17 10:33:01 2014
Response via : Single Level Calibration



TIC: 0525_01.D

(4) DDT (MT)

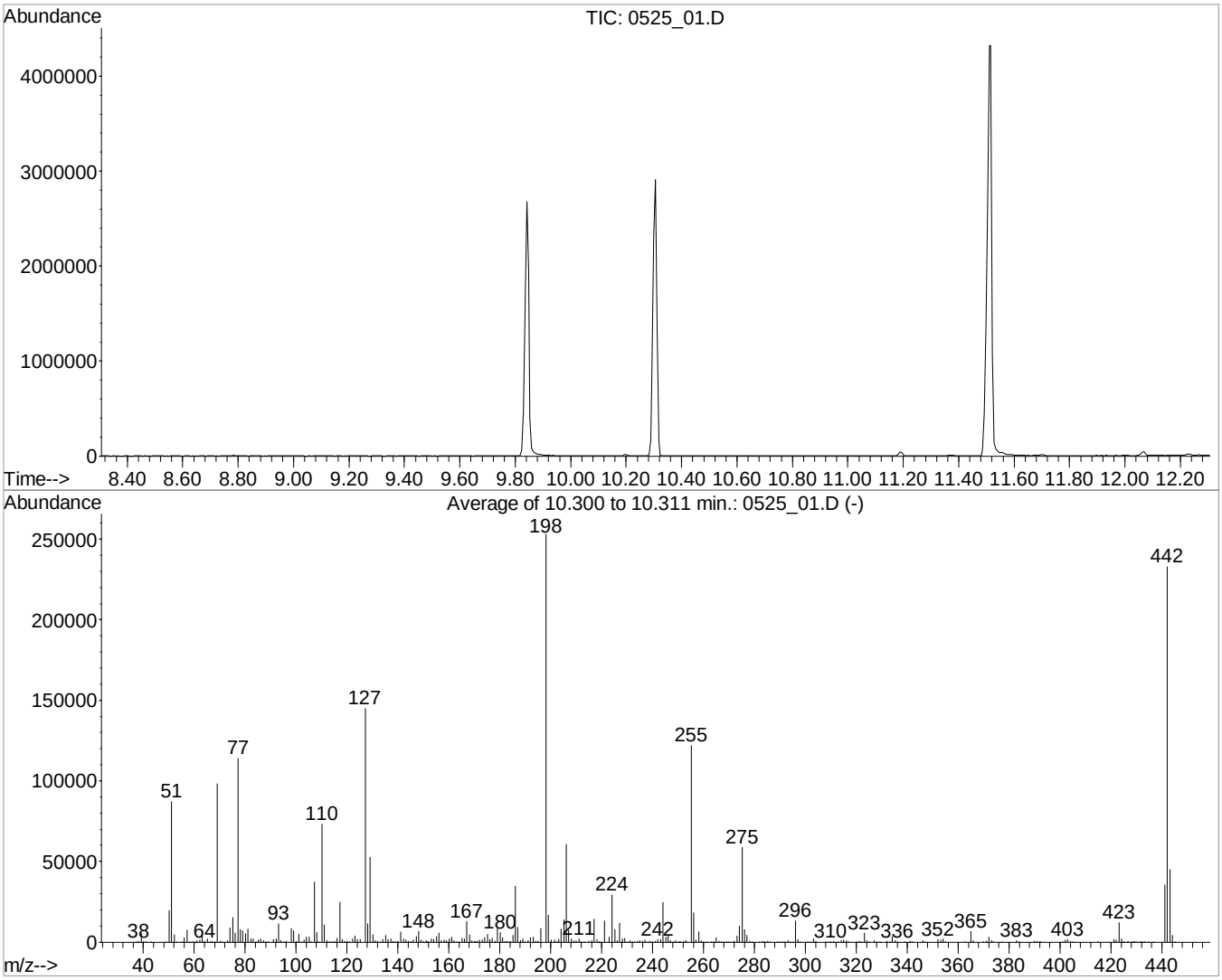
12.40min (-0.065) 69.6008226 ug/ml

Qvalue = 100

response 4559007

Signal	Exp%	Act%
TIC	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Data File : C:\MSDCHEM\1\DATA\052516\0525 01.D Vial: 1
Acq On : 25 May 2016 9:22 am Operator: 280
Sample : TUNE 50 PPM 16E09755 Inst : BNAMS4
Misc : DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\TUNEC.M (RTE Integrator)
Title : 8270 BNA



AutoFind: Scans 1314, 1315, 1316; Background Corrected with Scan 1308

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	34.4	87045	PASS
68	69	0.00	2	0.2	222	PASS
69	198	0.00	100	38.8	98166	PASS
70	69	0.00	2	0.5	493	PASS
127	198	40	60	57.3	145024	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	253013	PASS
199	198	5	9	6.6	16644	PASS
275	198	10	30	23.2	58781	PASS
365	198	1	100	2.6	6515	PASS
441	443	0.01	100	78.4	35245	PASS
442	198	40	100	92.0	232661	PASS
443	442	17	23	19.3	44949	PASS

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052516\0525 02.D Vial: 2
Acq On : 25 May 2016 9:45 am Operator: 280
Sample : ICV SVMS 10K PPB 16D25863 Inst : BNAMS4
Misc : 8270 calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 11:08 2016 Quant Results File: S804D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Initial Calibration
DataAcq Meth : BNA4E

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.29	152	80935	8000.00 ppb	0.00
22) Naphthalene-d8	6.56	136	464025	8000.00 ppb	0.00
40) Acenaphthene-d10	8.44	164	284711	8000.00 ppb	0.00
64) Phenanthrene-d10	10.06	188	501194	8000.00 ppb	0.00
78) Chrysene-d12	12.94	240	483823	8000.00 ppb	0.00
88) Perylene-d12	14.74	264	489577	8000.00 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol	4.18	112	179759	9539.9300033 ppb	0.00
Spiked Amount 20.000	Range 10 - 74		Recovery = 47699.65%#		
7) Phenol-d5	4.92	99	222065	9024.7401478 ppb	0.00
Spiked Amount 20.000	Range 10 - 63		Recovery = 45123.70%#		
23) Nitrobenzene-d5	5.82	82	202307	10008.3832117 ppb	0.00
Spiked Amount 10.000	Range 28 - 123		Recovery = 100083.83%#		
44) 2-Fluorobiphenyl	7.69	172	452740	9668.0162824 ppb	0.00
Spiked Amount 10.000	Range 35 - 133		Recovery = 96680.16%#		
67) 2,4,6-Tribromophenol	9.29	330	56709	10754.4408097 ppb	0.00
Spiked Amount 20.000	Range 22 - 154		Recovery = 53772.20%#		
81) p-Terphenyl-d14	11.77	244	569790	9391.7143653 ppb	0.00
Spiked Amount 10.000	Range 30 - 148		Recovery = 93917.14%#		
Target Compounds					Qvalue
2) Pyridine	3.24	79	207346	7206.0598557 ppb #	85
3) N-Nitrosodimethylamine	3.22	42	102042	9283.6077789 ppb #	82
5) Aniline	4.99	66	110422	9129.8845959 ppb	94
6) bis(2-Chloroethyl)ether	5.03	63	161837	9164.2768119 ppb	98
8) Phenol	4.93	94	229176	8958.2319152 ppb	86
10) 2-Chlorophenol	5.09	128	210399	9450.5022551 ppb	98
11) n-Decane	5.11	41	89872	10421.4950877 ppb	96
12) 1,3-Dichlorobenzene	5.23	146	220212	9742.8767927 ppb	96
13) 1,4-Dichlorobenzene	5.31	146	225784	9770.4663850 ppb	97
14) Benzyl Alcohol	5.40	79	158804	9894.3339331 ppb	98
15) 1,2-Dichlorobenzene	5.45	146	219867	9817.4367583 ppb	96
16) bis(2-Chloroisopropyl)ethe	5.53	121	65116	9414.1326386 ppb	96
17) 2-Methylphenol	5.49	108	185980	9415.5263825 ppb	96
18) Hexachloroethane	5.78	117	95948	9968.5299423 ppb	96
19) N-Nitrosodi-n-propylamine	5.66	70	131888	9249.0446970 ppb	94
20) 3&4-Methyl phenol	5.64	107	211537	9147.0218054 ppb	95
24) Nitrobenzene	5.84	77	201805	10068.1851537 ppb	99
25) Isophorone	6.07	82	357924	9765.3884783 ppb	99
26) 2-Nitrophenol	6.16	139	120737	10612.5638642 ppb	97
27) 2,4-Dimethylphenol	6.17	107	204570	10110.1202107 ppb	94
28) bis(2-Chlorethoxy)methane	6.27	93	236451	9101.6138233 ppb	95
29) 2,4-Dichlorophenol	6.40	162	175254	10458.4796018 ppb	97
31) 1,2,4-Trichlorobenzene	6.49	180	172793	10342.6419840 ppb	97
32) Naphthalene	6.58	128	658628	9602.0728127 ppb	98
33) 4-Chloroaniline	6.62	65	80350	10182.5244710 ppb	97
34) Hexachloro-1,3-butadiene	6.69	225	83309	11454.2650672 ppb	97
36) 4-Chloro-3-methylphenol	7.12	107	190346	10299.2342743 ppb	98
37) 2-Methylnaphthalene	7.31	142	446052	9908.3551892 ppb	98
38) 1-Methylnaphthalene	7.41	142	392850	9710.8661296 ppb	97
41) Hexachlorocyclopentadiene	7.47	237	76200	9926.0117103 ppb	97
42) 2,4,6-Trichlorophenol	7.60	196	115843	10584.8716754 ppb	97
43) 2,4,5-Trichlorophenol	7.64	196	125322	10661.3803395 ppb	95
45) Biphenyl	7.80	154	522475	9484.2203919 ppb	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052516\0525 02.D Vial: 2
Acq On : 25 May 2016 9:45 am Operator: 280
Sample : ICV SVMS 10K PPB 16D25863 Inst : BNAMS4
Misc : 8270 calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 11:08 2016 Quant Results File: S804D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Initial Calibration
DataAcq Meth : BNA4E

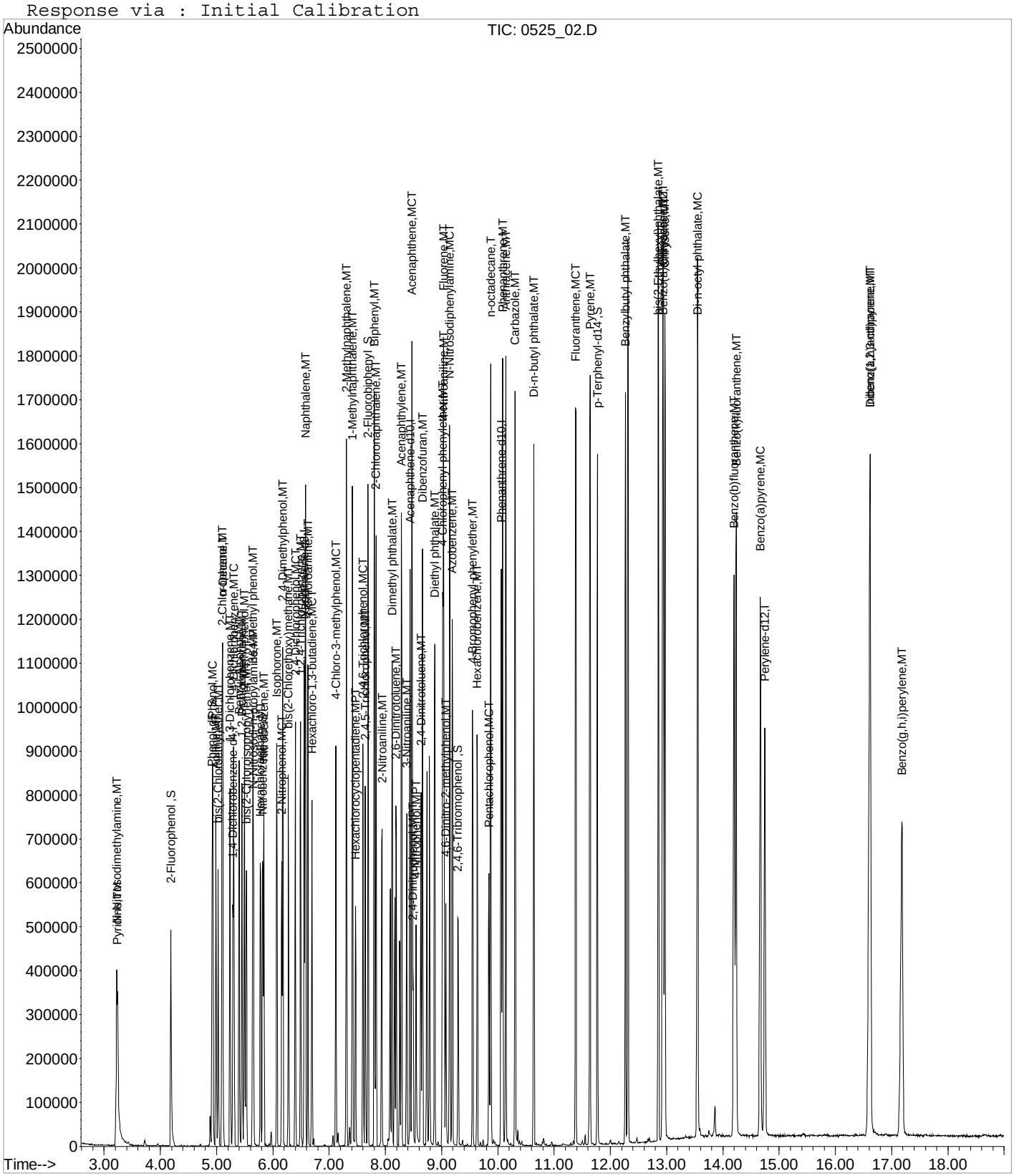
	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
46)	2-Chloronaphthalene	7.83	162	415703	9604.8868196 ppb		98
47)	2-Nitroaniline	7.94	138	150413	9856.7568660 ppb	#	96
48)	Acenaphthylene	8.28	152	656728	9516.0230415 ppb		100
49)	Dimethyl phthalate	8.12	163	449384	9921.8232809 ppb		98
50)	2,6-Dinitrotoluene	8.20	165	110659	9877.8945039 ppb		89
51)	3-Nitroaniline	8.38	138	124731	9210.9353179 ppb		95
52)	Acenaphthene	8.47	153	431476	9538.1672474 ppb		99
53)	2,4-Dinitrophenol	8.50	184	60059	10608.5515905 ppb	#	73
54)	Dibenzofuran	8.66	168	600620	9686.9949233 ppb		96
55)	2,4-Dinitrotoluene	8.63	165	152206	10207.9046199 ppb		94
57)	4-Nitrophenol	8.55	139	100099	9400.2603848 ppb		93
58)	Fluorene	9.03	166	495154	9694.1437393 ppb		99
59)	4-Chlorophenyl-phenylether	9.02	204	200526	10169.0734749 ppb		91
60)	Diethyl phthalate	8.88	149	480290	10082.0140056 ppb		98
61)	4-Nitroaniline	9.04	138	140470	10409.2213099 ppb	#	91
62)	Azobenzene	9.19	77	449260	8884.7329245 ppb		97
65)	4,6-Dinitro-2-methylphenol	9.08	198	78021	9437.3036296 ppb		92
66)	N-Nitrosodiphenylamine	9.14	169	424556	9360.4264694 ppb		99
68)	4-Bromophenyl-phenylether	9.55	248	107843	9840.1626185 ppb	#	89
69)	Hexachlorobenzene	9.63	284	118754	10063.9556555 ppb		98
70)	n-octadecane	9.87	55	80559	9212.2757867 ppb		99
71)	Pentachlorophenol	9.84	266	67841	9626.4282367 ppb		94
72)	Phenanthrene	10.08	178	707992	9419.7963882 ppb		97
73)	Anthracene	10.14	178	727518	9648.8309268 ppb		99
74)	Carbazole	10.31	167	731764	9459.1150606 ppb		99
75)	Di-n-butyl phthalate	10.64	149	933190	9797.9822796 ppb		99
77)	Fluoranthene	11.39	202	744524	9789.1373267 ppb		99
80)	Pyrene	11.64	202	788864	9063.9081482 ppb		99
82)	Benzylbutyl phthalate	12.27	149	440666	9267.1808402 ppb		97
84)	Benzo(a)anthracene	12.93	228	693428	9069.9848393 ppb		91
85)	Chrysene	12.97	228	668988	9169.0439317 ppb		96
86)	bis(2-Ethylhexyl)phthalate	12.85	149	662872	9086.3216491 ppb		98
87)	Di-n-octyl phthalate	13.55	149	1196732	9280.3650444 ppb		99
89)	Benzo(b)fluoranthene	14.19	252	707119m	8857.5204661 ppb		
90)	Benzo(k)fluoranthene	14.24	252	704105	9430.5018204 ppb		90
91)	Benzo(a)pyrene	14.66	252	694144	9327.8404757 ppb		91
92)	Indeno(1,2,3-cd)pyrene	16.62	276	804368	9758.1714660 ppb		90
93)	Dibenz(a,h)anthracene	16.62	278	688994	9645.1600577 ppb		93
94)	Benzo(g,h,i)perylene	17.18	276	670952	9866.0612377 ppb		84

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

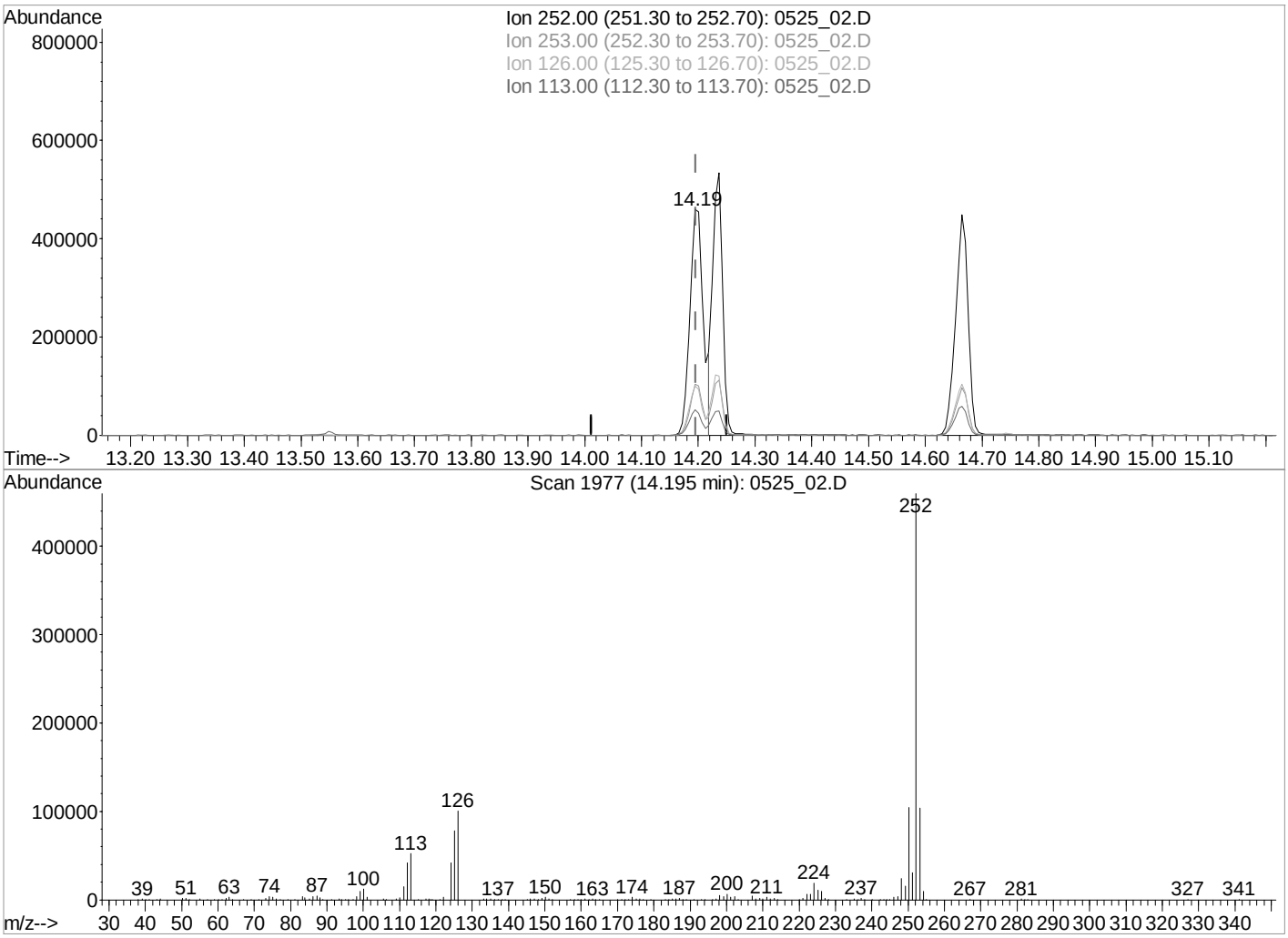
Data File : C:\MSDCHEM\1\DATA\052516\0525 02.D Vial: 2
Acq On : 25 May 2016 9:45 am Operator: 280
Sample : ICV SVMS 10K PPB 16D25863 Inst : BNAMS4
Misc : 8270 calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 11:08 2016 Quant Results File: S804D25P.RES

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Initial Calibration



Data File : C:\MSDCHEM\1\DATA\052516\0525 02.D Vial: 2
Acq On : 25 May 2016 9:45 am Operator: 280
Sample : ICV SVMS 10K PPB 16D25863 Inst : BNAMS4
Misc : 8270 calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 11:08 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Multiple Level Calibration



TIC: 0525_02.D

(89) Benzo(b)fluoranthene (MT)

14.19min (-0.000) 9601.3142374 ppb

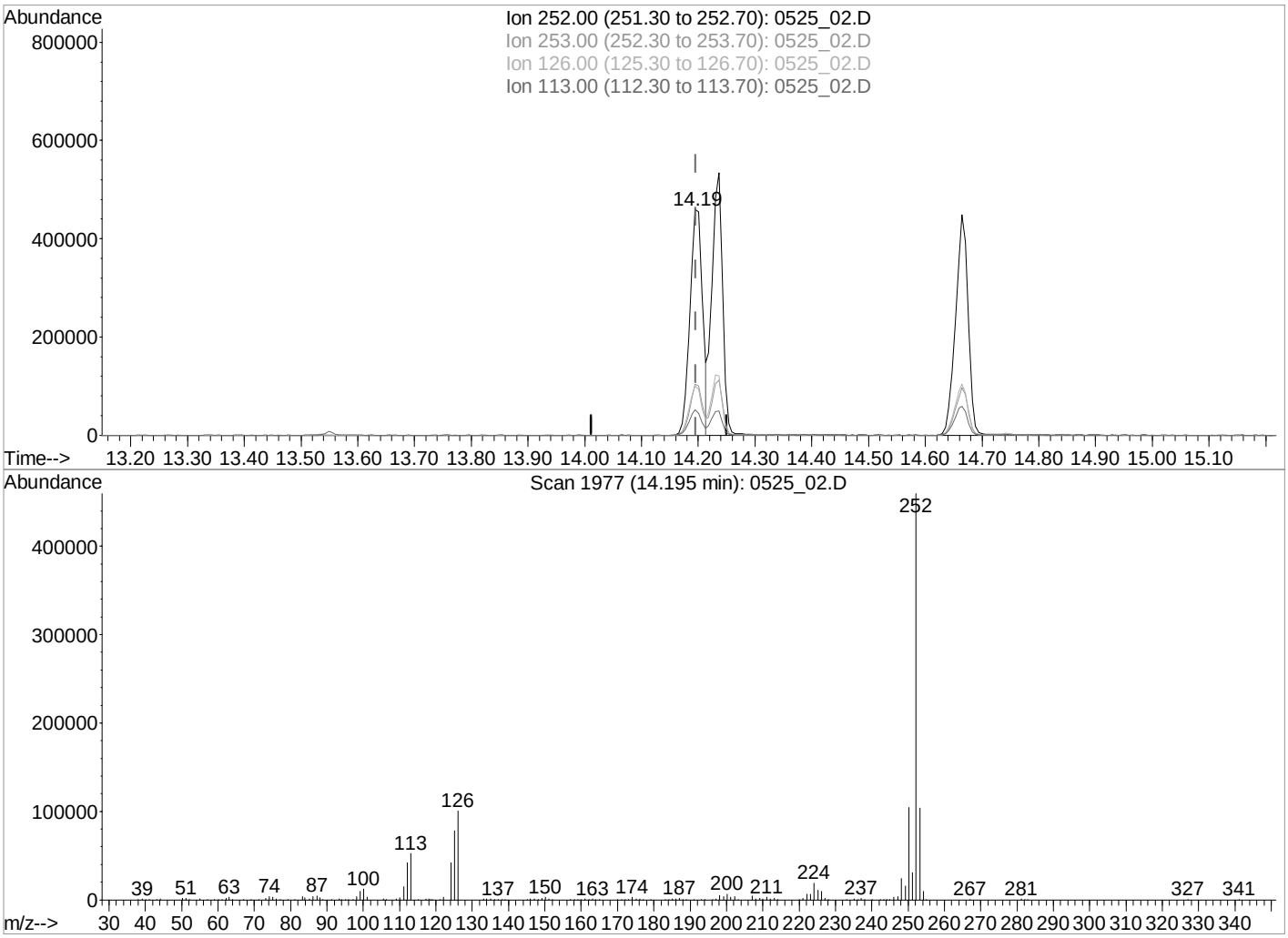
Qvalue = 94

response 766498

Ion	Exp%	Act%
252.00	100	100
253.00	21.50	22.77
126.00	25.80	20.74
113.00	12.80	11.30

Data File : C:\MSDCHEM\1\DATA\052516\0525 02.D Vial: 2
Acq On : 25 May 2016 9:45 am Operator: 280
Sample : ICV SVMS 10K PPB 16D25863 Inst : BNAMS4
Misc : 8270 calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 11:08 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Multiple Level Calibration



TIC: 0525_02.D

(89) Benzo(b)fluoranthene (MT)

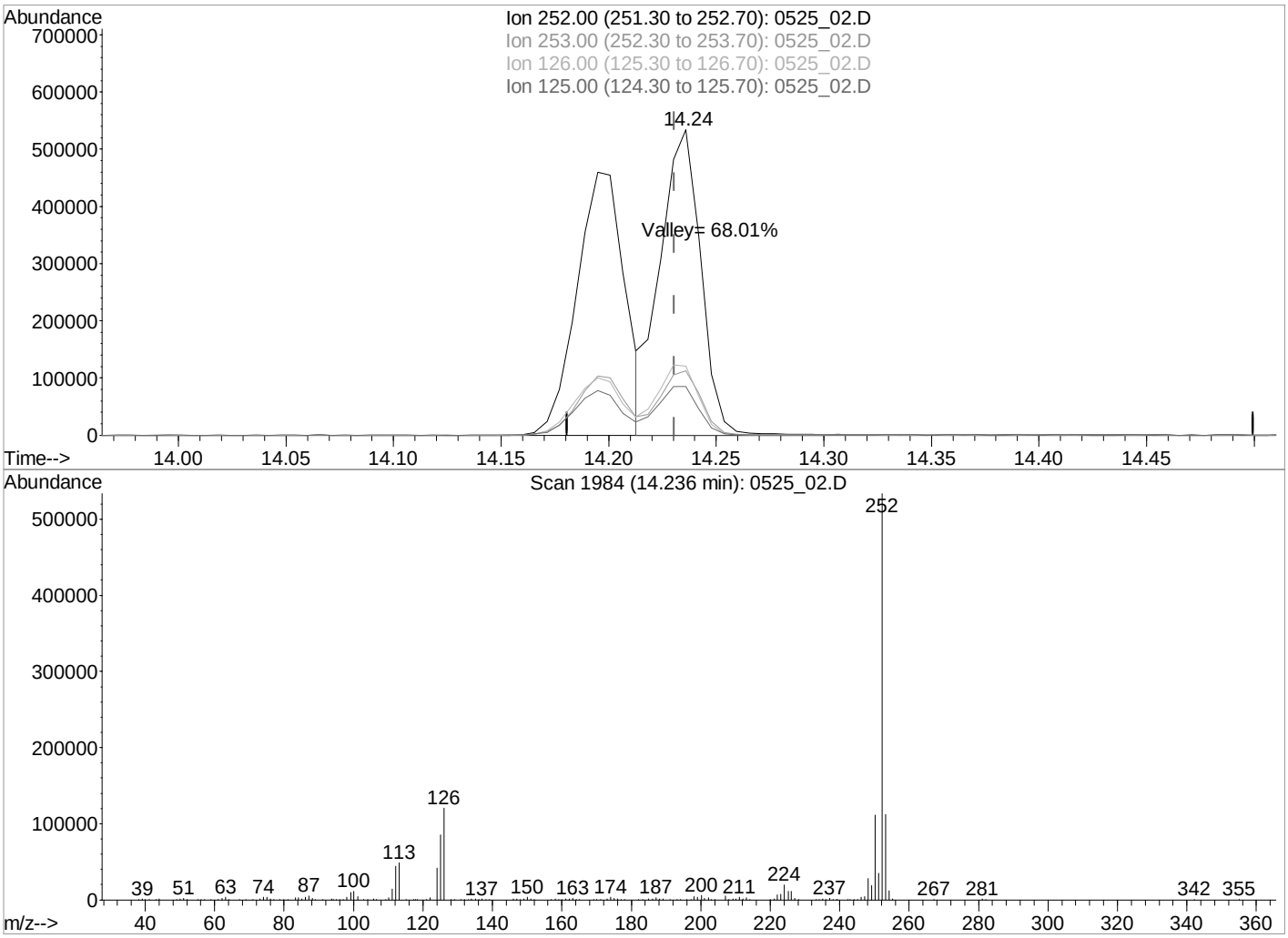
14.19min (-0.000) 8857.5204661 ppb m

response 707119

Ion	Exp%	Act%
252.00	100	100
253.00	21.50	22.54
126.00	25.80	21.90
113.00	12.80	11.32

Data File : C:\MSDCHEM\1\DATA\052516\0525 02.D Vial: 2
Acq On : 25 May 2016 9:45 am Operator: 280
Sample : ICV SVMS 10K PPB 16D25863 Inst : BNAMS4
Misc : 8270 calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 11:08 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Multiple Level Calibration



TIC: 0525_02.D

(90) Benzo(k)fluoranthene (MT)

14.24min (+0.005) 9430.5018204 ppb

Qvalue = 90

response 704105

Ion	Exp%	Act%
252.00	100	100
253.00	21.60	20.96
126.00	30.50	22.56
125.00	21.30	15.86

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052516\0525 03.D Vial: 3
Acq On : 25 May 2016 10:08 am Operator: 280
Sample : ICV TCL 10K1 PPB 16D25867 Inst : BNAMS4
Misc : 8270 TCL calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 11:09 2016 Quant Results File: S804D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Initial Calibration
DataAcq Meth : BNA4E

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.29	152	71362	8000.00	ppb	0.00
22) Naphthalene-d8	6.56	136	398935	8000.00	ppb	0.00
40) Acenaphthene-d10	8.43	164	242008	8000.00	ppb	0.00
64) Phenanthrene-d10	10.05	188	425792	8000.00	ppb	0.00
78) Chrysene-d12	12.94	240	399582	8000.00	ppb	0.00
88) Perylene-d12	14.74	264	409044	8000.00	ppb	0.00

System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 74		Recovery =	0.00%#		
7) Phenol-d5	0.00	99	0	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 63		Recovery =	0.00%#		
23) Nitrobenzene-d5	0.00	82	0d	0.0000000	ppb	
Spiked Amount 10.000	Range 28 - 123		Recovery =	0.00%#		
44) 2-Fluorobiphenyl	0.00	172	0d	0.0000000	ppb	
Spiked Amount 10.000	Range 35 - 133		Recovery =	0.00%#		
67) 2,4,6-Tribromophenol	0.00	330	0	0.0000000	ppb	
Spiked Amount 20.000	Range 22 - 154		Recovery =	0.00%#		
81) p-Terphenyl-d14	0.00	244	0d	0.0000000	ppb	
Spiked Amount 10.000	Range 30 - 148		Recovery =	0.00%#		

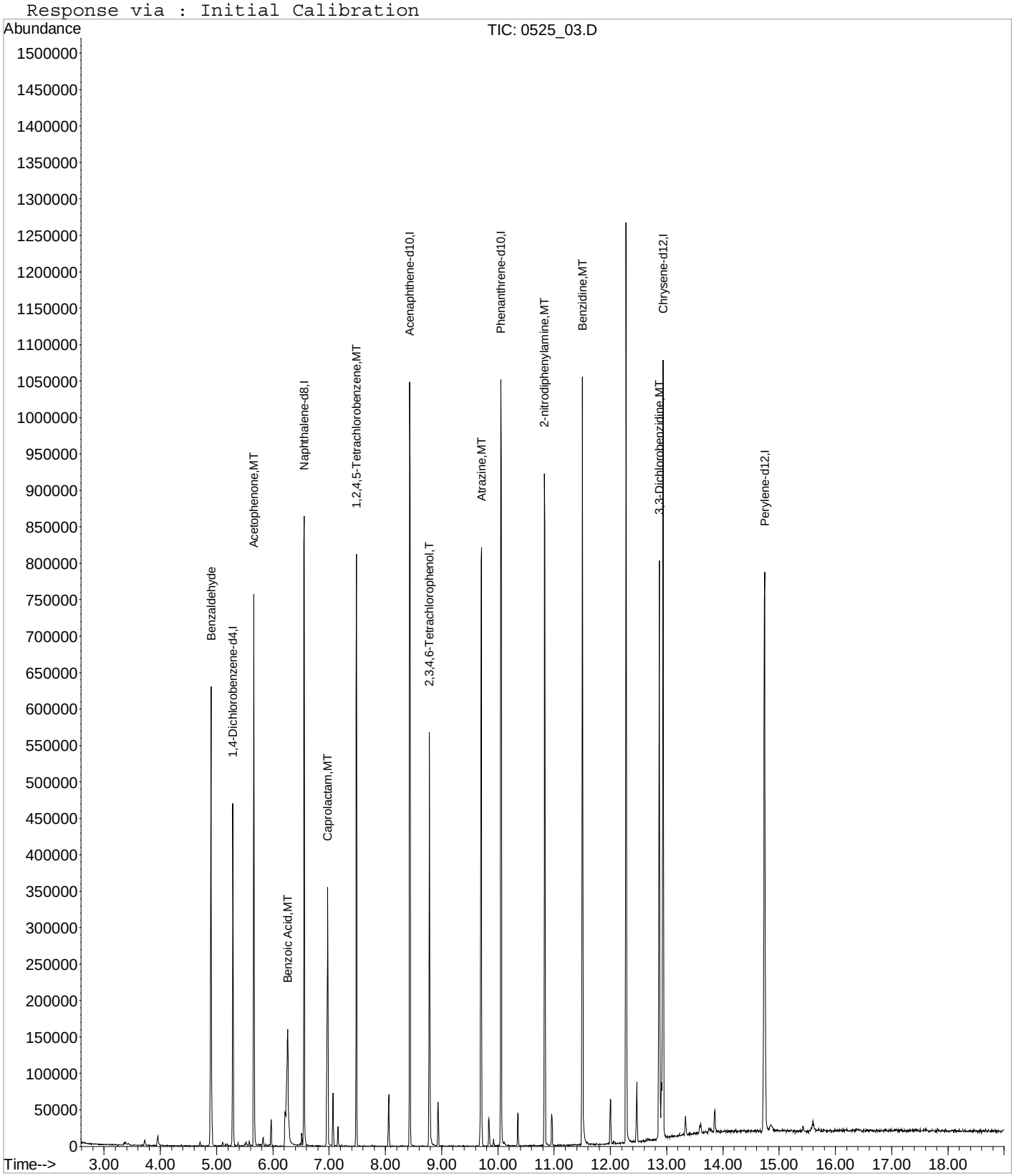
Target Compounds						Qvalue
9) Benzaldehyde	4.90	105	117185	9787.8207849	ppb	99
21) Acetophenone	5.66	105	224494	9898.6858933	ppb	99
30) Benzoic Acid	6.26	105	106326	14130.7969737	ppb	98
35) Caprolactam	6.97	113	52490	10046.8132540	ppb	94
39) 1,2,4,5-Tetrachlorobenzene	7.49	216	133980	11163.4998350	ppb	98
56) 2,3,4,6-Tetrachlorophenol	8.78	232	62416	11450.7752080	ppb	97
63) Atrazine	9.71	200	94067	11041.9008279	ppb	90
76) 2-nitrodiphenylamine	10.83	167	144965	10861.1253941	ppb	98
79) Benzidine	11.50	184	419783	9422.3215956	ppb	99
83) 3,3-Dichlorobenzidine	12.87	252	169968	10102.8476970	ppb	94

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052516\0525 03.D Vial: 3
Acq On : 25 May 2016 10:08 am Operator: 280
Sample : ICV TCL 10K1 PPB 16D25867 Inst : BNAMS4
Misc : 8270 TCL calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 11:09 2016 Quant Results File: S804D25P.RES

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052516\0525 07.D Vial: 20
Acq On : 25 May 2016 11:00 am Operator: 280
Sample : L836976-02 10x WG874391 15-5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 0.33
MS Integration Params: RTEINT.P
Quant Time: Sep 20 18:01 2016 Quant Results File: S804D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Initial Calibration
DataAcq Meth : BNA4E

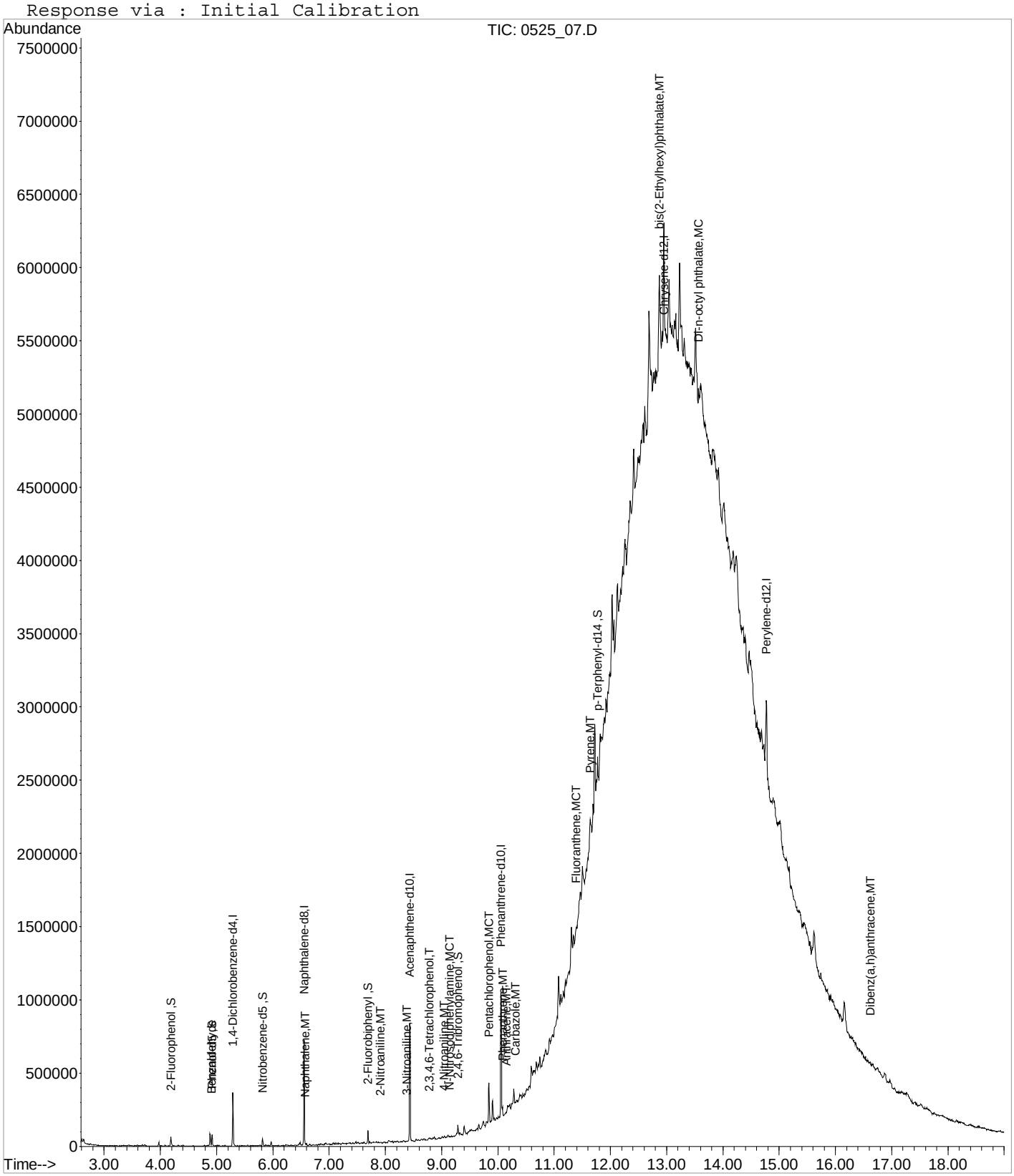
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.29	152	54805	8000.00	ppb	0.00
22) Naphthalene-d8	6.56	136	316250	8000.00	ppb	0.00
40) Acenaphthene-d10	8.43	164	195387	8000.00	ppb	0.00
64) Phenanthrene-d10	10.06	188	353363	8000.00	ppb	0.00
78) Chrysene-d12	12.95	240	382021	8000.00	ppb	0.01
88) Perylene-d12	14.77	264	343959	8000.00	ppb	0.03
System Monitoring Compounds						
4) 2-Fluorophenol	4.19	112	21191	553.0525750	ppb	0.00
Spiked Amount 666.000	Range 21 - 116		Recovery = 83.04%			
7) Phenol-d5	4.92	99	24334	486.3271529	ppb	0.00
Spiked Amount 666.000	Range 26 - 121		Recovery = 73.02%			
23) Nitrobenzene-d5	5.82	82	11969	289.3116762	ppb	0.00
Spiked Amount 333.000	Range 22 - 129		Recovery = 86.88%			
44) 2-Fluorobiphenyl	7.69	172	27111	280.9227164	ppb	0.00
Spiked Amount 333.000	Range 35 - 129		Recovery = 84.36%			
67) 2,4,6-Tribromophenol	9.29	330	5966	534.3774423	ppb	0.00
Spiked Amount 666.000	Range 22 - 142		Recovery = 80.24%			
81) p-Terphenyl-d14	11.77	244	41356	287.4829455	ppb	0.00
Spiked Amount 333.000	Range 22 - 128		Recovery = 86.33%			
Target Compounds						Qvalue
71) Pentachlorophenol	9.84	266	32941	2207.6932971	ppb	95
72) Phenanthrene	10.08	178	13169	82.7551416	ppb	94
77) Fluoranthene	11.38	202	25104	155.8969680	ppb	97
80) Pyrene	11.64	202	39695	192.3502128	ppb	96
86) bis(2-Ethylhexyl)phthalate	12.86	149	172631m	997.9774416	ppb	
87) Di-n-octyl phthalate	13.57	149	93970m	307.3271219	ppb	

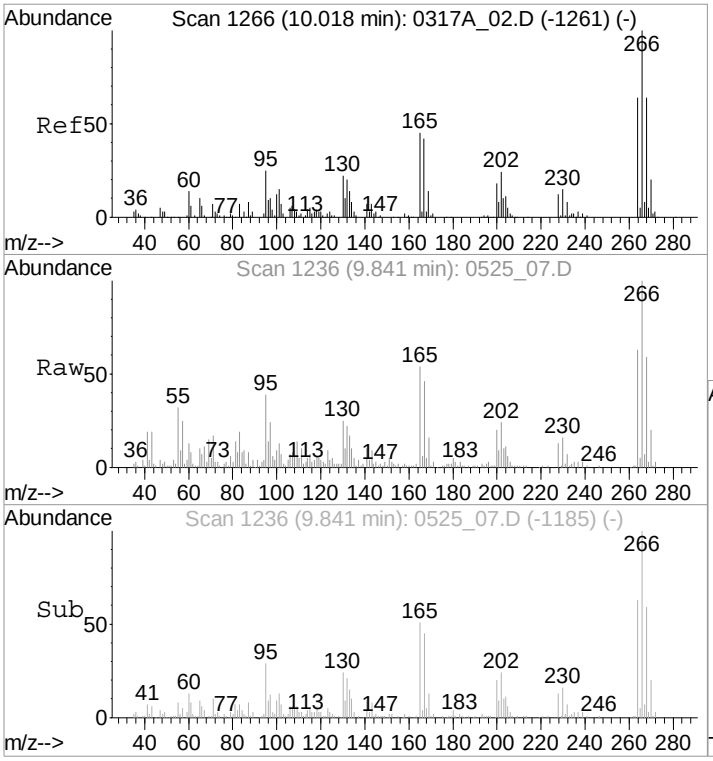
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052516\0525 07.D Vial: 20
Acq On : 25 May 2016 11:00 am Operator: 280
Sample : L836976-02 10x WG874391 15-5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 0.33
MS Integration Params: RTEINT.P
Quant Time: Sep 20 18:01 2016 Quant Results File: S804D25P.RES

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Initial Calibration

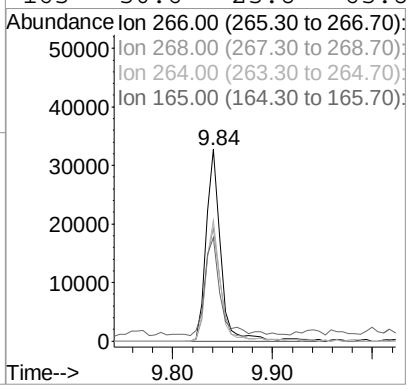


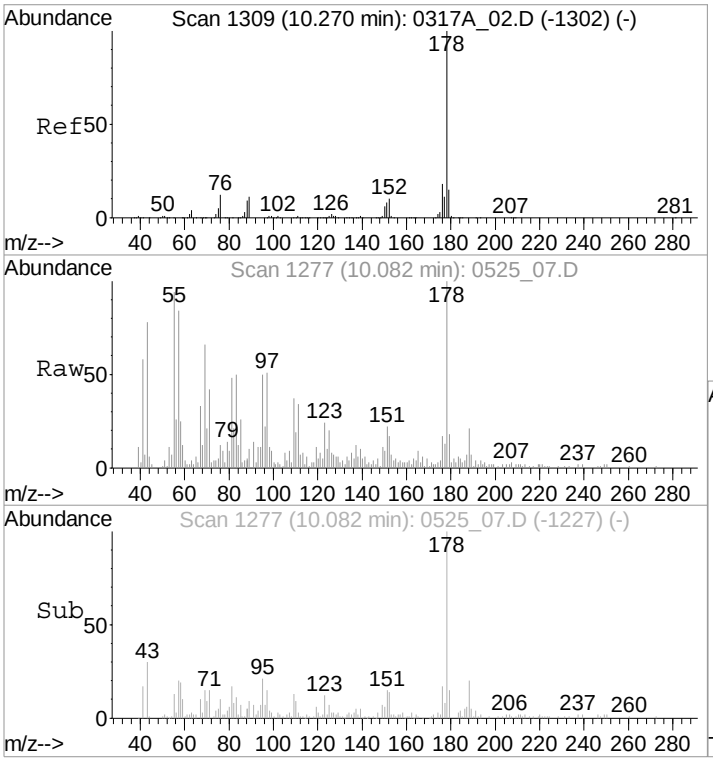


#71
Pentachlorophenol
Concen: 2207.6932971 ppb
RT: 9.84 min Scan# 1236
Delta R.T. 0.00 min
Lab File: 0525_07.D
Acq: 25 May 2016 11:00 am

Tgt Ion:266 Resp: 32941

Ion	Ratio	Lower	Upper
266	100		
268	59.0	42.4	82.4
264	63.0	45.7	85.7
165	50.6	25.8	65.8

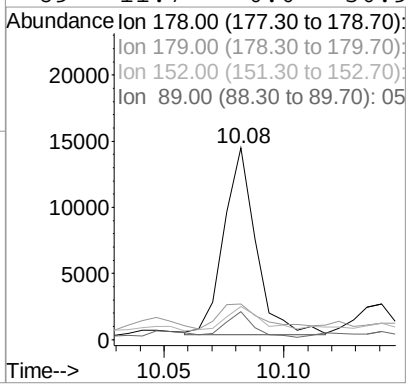


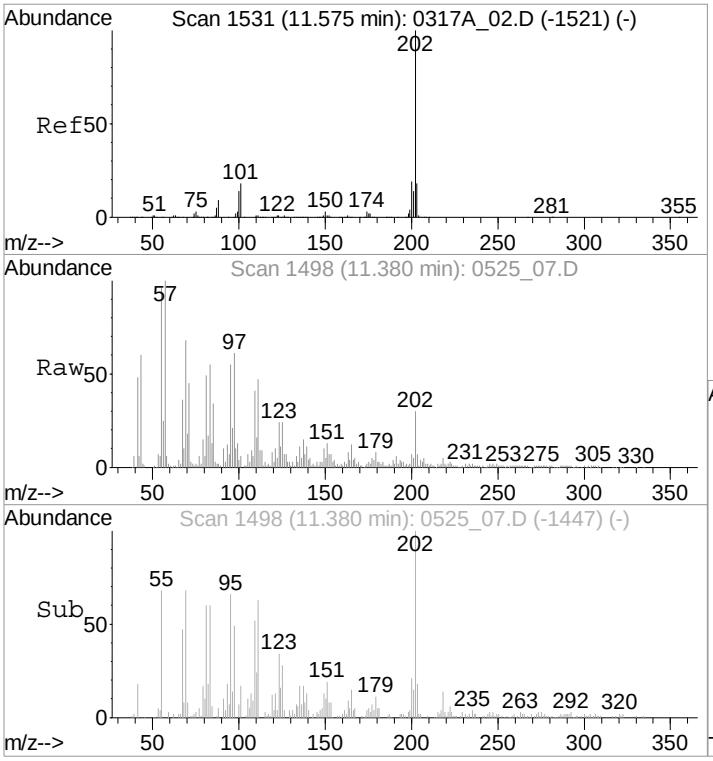


#72
Phenanthrene
Concen: 82.7551416 ppb
RT: 10.08 min Scan# 1277
Delta R.T. -0.01 min
Lab File: 0525_07.D
Acq: 25 May 2016 11:00 am

Tgt Ion:178 Resp: 13169

Ion	Ratio	Lower	Upper
178	100		
179	11.6	0.0	34.5
152	13.0	0.0	29.2
89	11.7	0.0	30.9

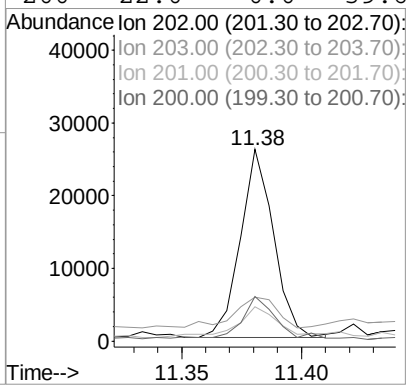


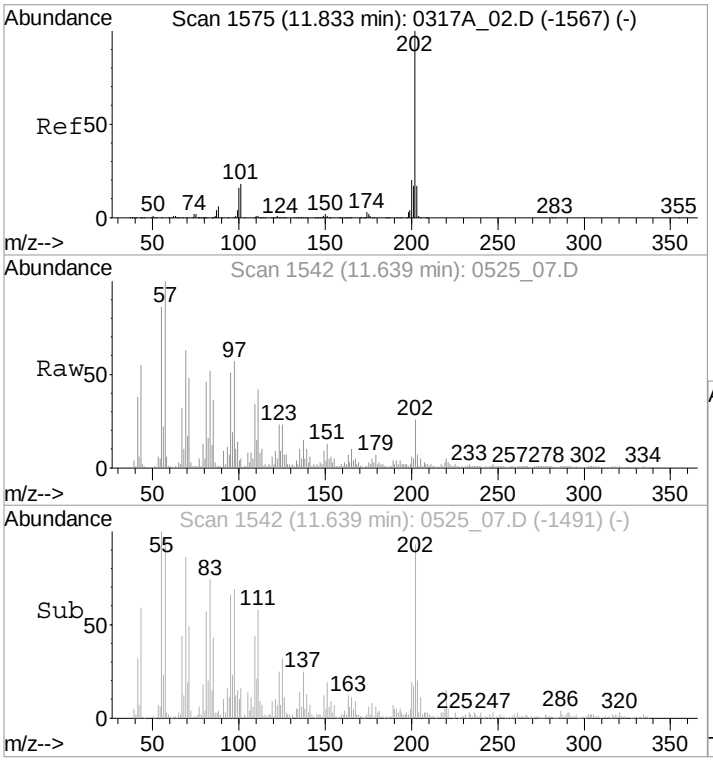


#77
Fluoranthene
Concen: 155.8969680 ppb
RT: 11.38 min Scan# 1498
Delta R.T. -0.00 min
Lab File: 0525_07.D
Acq: 25 May 2016 11:00 am

Tgt Ion:202 Resp: 25104

Ion	Ratio	Lower	Upper
202	100		
203	16.0	0.0	37.1
201	14.5	0.0	34.1
200	22.0	0.0	39.6

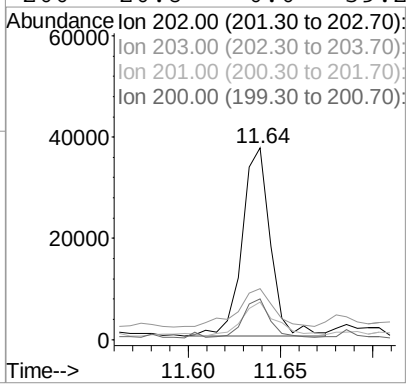


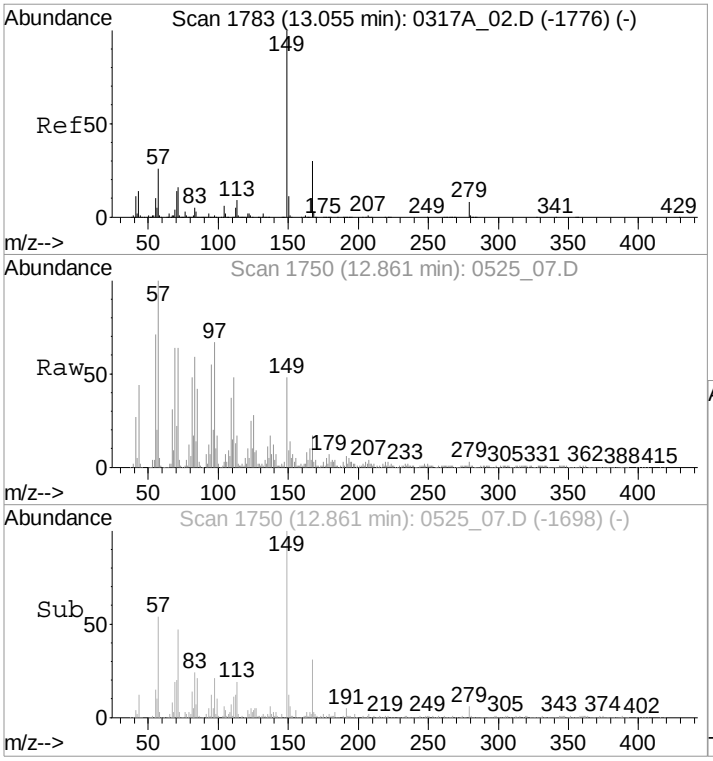


#80
Pyrene
Concen: 192.3502128 ppb
RT: 11.64 min Scan# 1542
Delta R.T. -0.00 min
Lab File: 0525_07.D
Acq: 25 May 2016 11:00 am

Tgt Ion:202 Resp: 39695

Ion	Ratio	Lower	Upper
202	100		
203	20.0	0.0	36.6
201	17.2	0.0	36.5
200	20.8	0.0	39.2

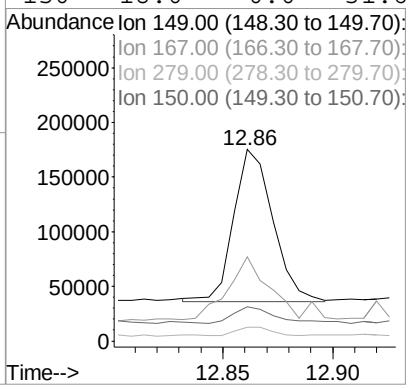


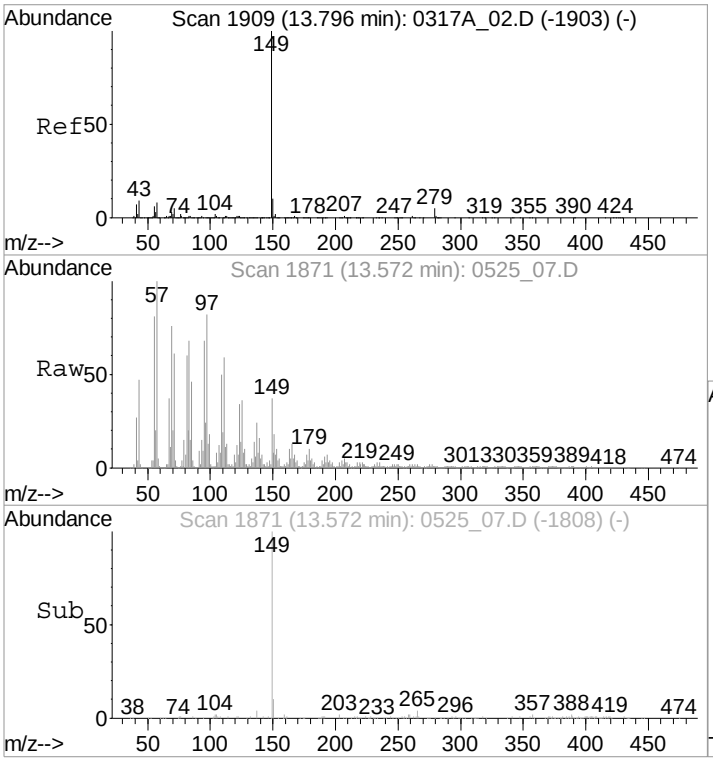


#86
bis(2-Ethylhexyl)phthalate
Concen: 997.9774416 ppb m
RT: 12.86 min Scan# 1750
Delta R.T. 0.01 min
Lab File: 0525_07.D
Acq: 25 May 2016 11:00 am

Tgt Ion:149 Resp: 172631

Ion	Ratio	Lower	Upper
149	100		
167	35.3	9.6	49.6
279	5.3	0.0	24.8
150	18.0	0.0	31.6

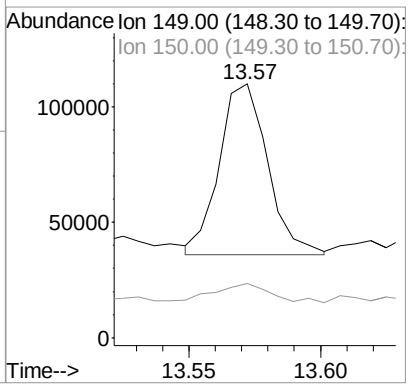




#87
Di-n-octyl phthalate
Concen: 307.3271219 ppb m
RT: 13.57 min Scan# 1871
Delta R.T. 0.02 min
Lab File: 0525_07.D
Acq: 25 May 2016 11:00 am

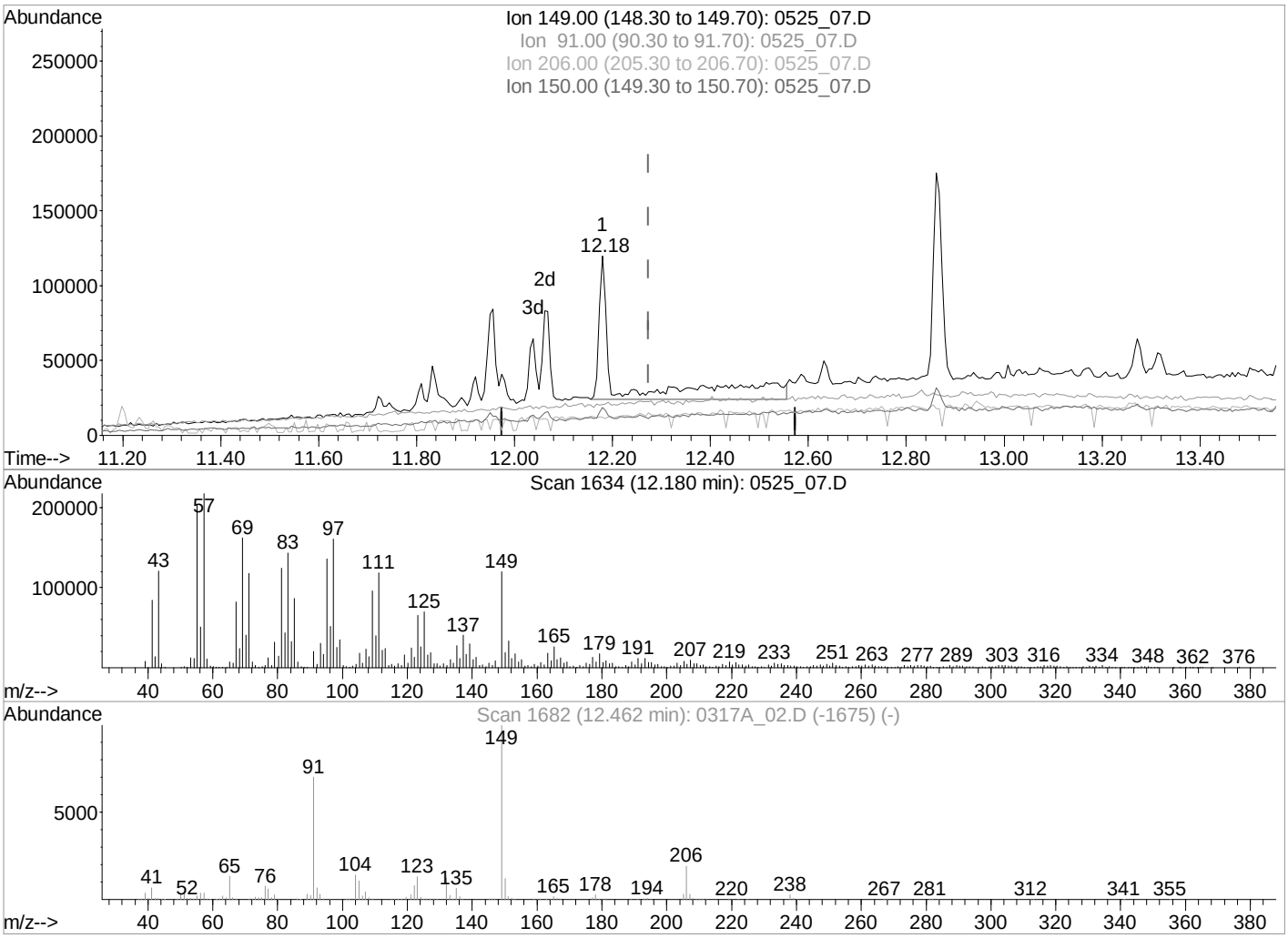
Tgt Ion:149 Resp: 93970

Ion	Ratio	Lower	Upper
149	100		
150	22.8	0.0	29.6



Data File : C:\MSDCHEM\1\DATA\052516\0525 07.D Vial: 20
Acq On : 25 May 2016 11:00 am Operator: 280
Sample : L836976-02 10x WG874391 15-5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 0.33
MS Integration Params: RTEINT.P
Quant Time: May 25 12:51 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Multiple Level Calibration



TIC: 0525_07.D

(82) Benzylbutyl phthalate (MT)

12.18min (-0.094) 2135.4410219 ppb

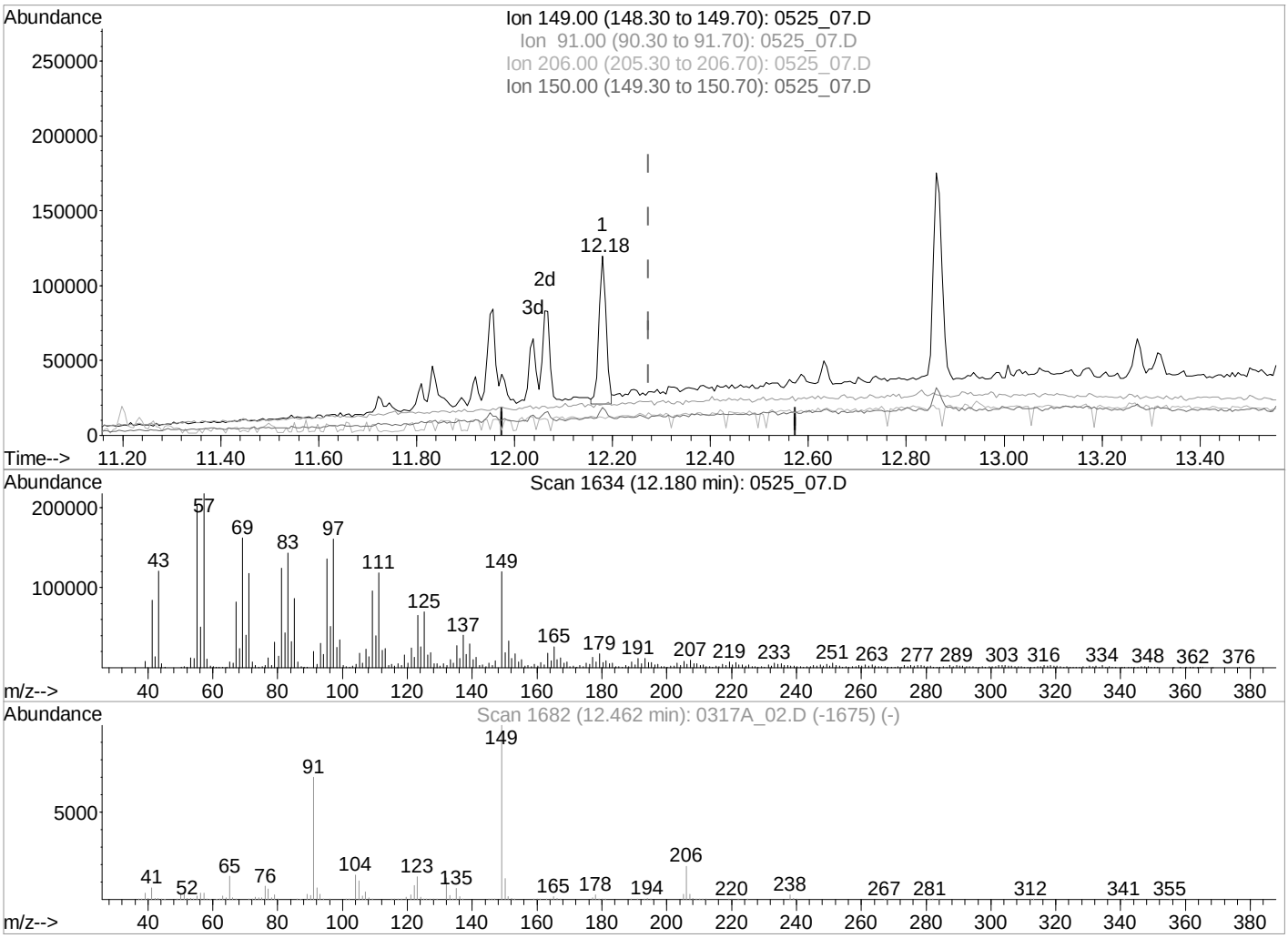
Qvalue = 34

response 240772 Limit = 3330.0000000

Ion	Exp%	Act%
149.00	100	100
91.00	65.90	0.29#
206.00	18.40	0.00
150.00	11.30	6.90

Data File : C:\MSDCHEM\1\DATA\052516\0525 07.D Vial: 20
Acq On : 25 May 2016 11:00 am Operator: 280
Sample : L836976-02 10x WG874391 15-5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 0.33
MS Integration Params: RTEINT.P
Quant Time: May 25 12:51 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Multiple Level Calibration



TIC: 0525_07.D

(82) Benzylbutyl phthalate (MT)

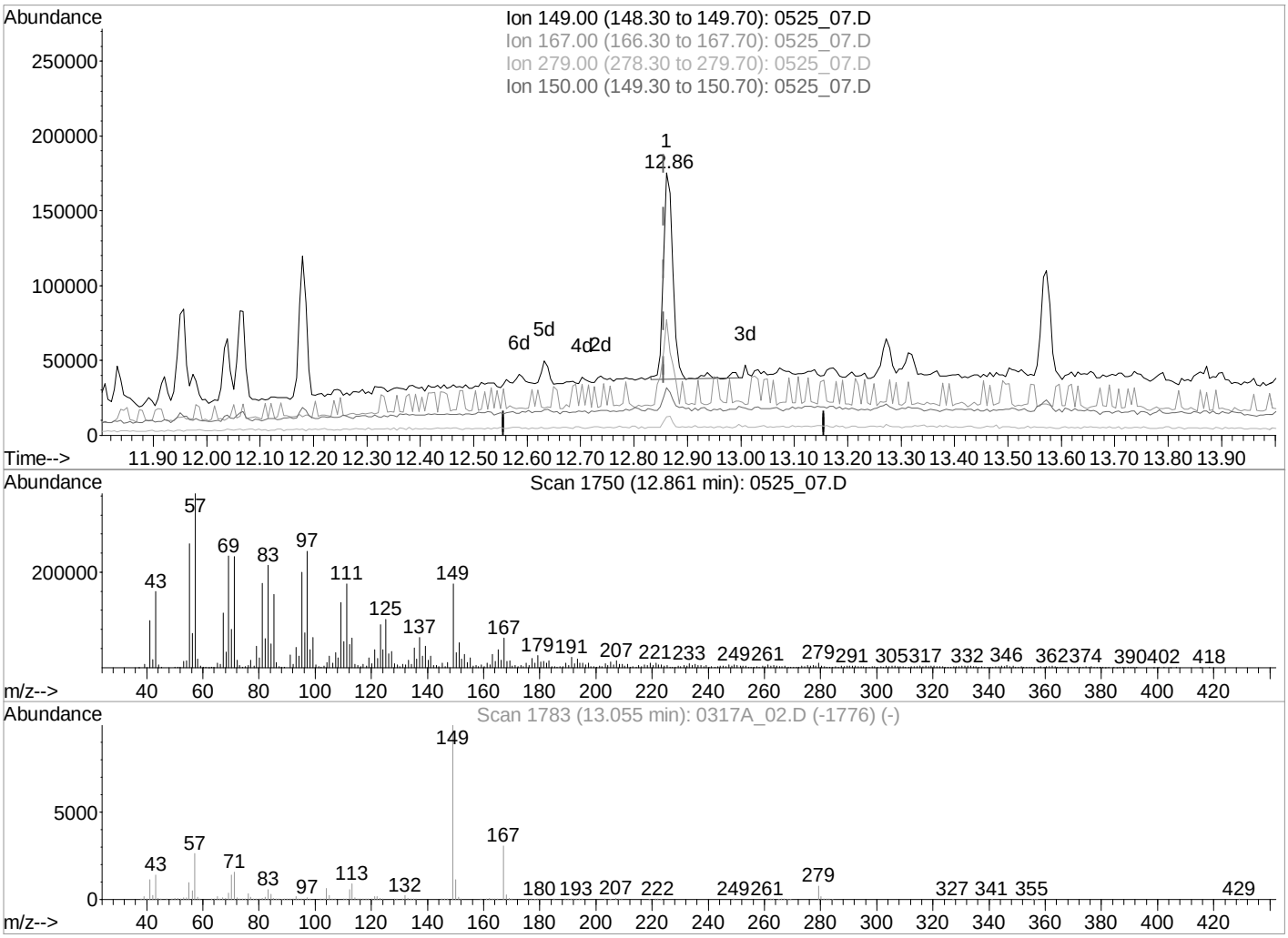
12.18min (-0.094) 888.5194999 ppb m

response 100181 Limit = 3330.0000000

Ion	Exp%	Act%
149.00	100	100
91.00	65.90	17.00#
206.00	18.40	3.31
150.00	11.30	15.38

Data File : C:\MSDCHEM\1\DATA\052516\0525 07.D Vial: 20
Acq On : 25 May 2016 11:00 am Operator: 280
Sample : L836976-02 10x WG874391 15-5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 0.33
MS Integration Params: RTEINT.P
Quant Time: May 25 12:51 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Multiple Level Calibration



TIC: 0525_07.D

(86) bis(2-Ethylhexyl)phthalate (MT)

12.86min (+0.005) 1006.5217393 ppb

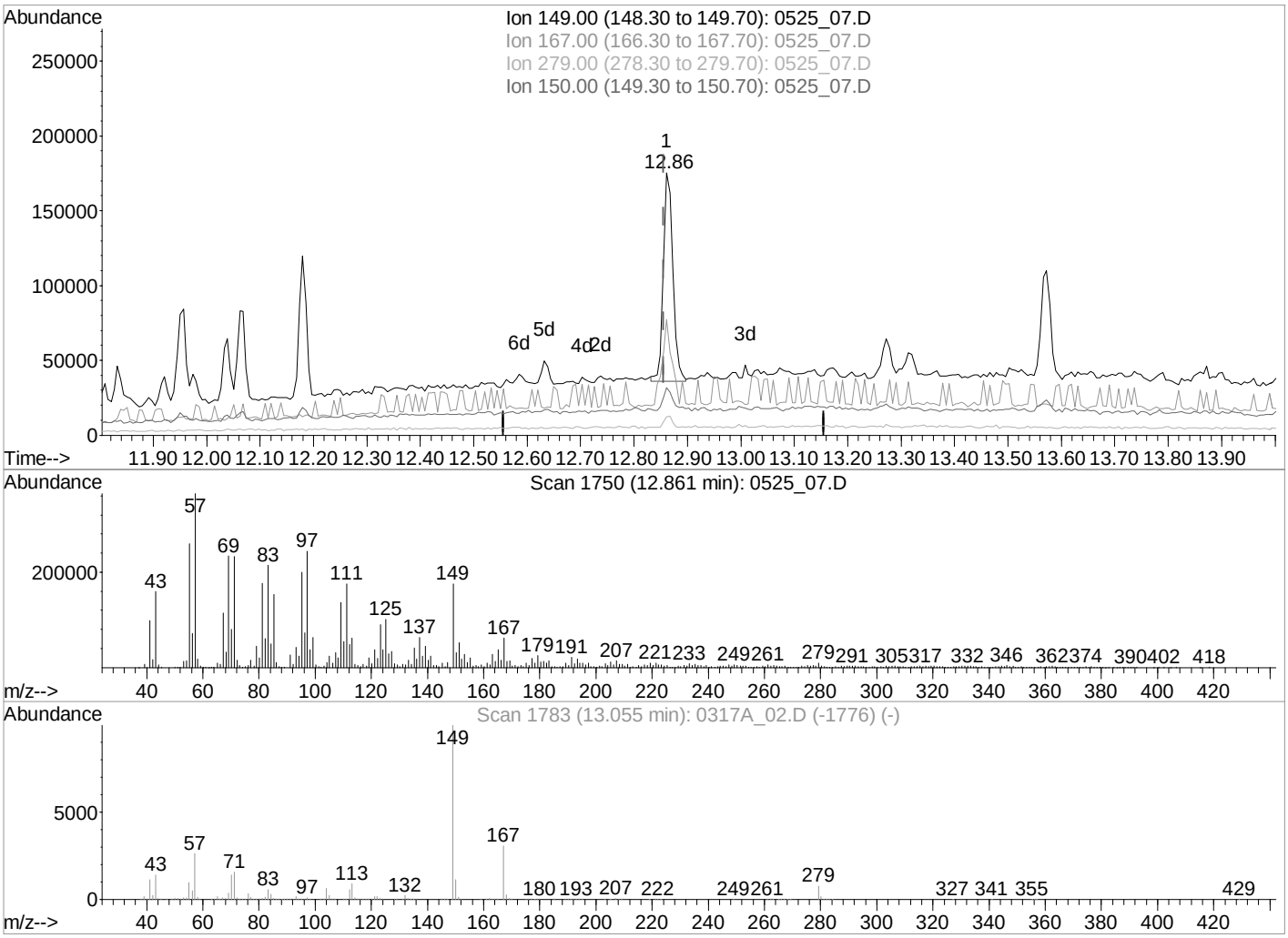
Qvalue = 84

response 174109 Limit = 3330.0000000

Ion	Exp%	Act%
149.00	100	100
167.00	29.60	41.94
279.00	4.80	5.11
150.00	11.60	10.47

Data File : C:\MSDCHEM\1\DATA\052516\0525 07.D Vial: 20
Acq On : 25 May 2016 11:00 am Operator: 280
Sample : L836976-02 10x WG874391 15-5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 0.33
MS Integration Params: RTEINT.P
Quant Time: May 25 12:51 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Multiple Level Calibration



TIC: 0525_07.D

(86) bis(2-Ethylhexyl)phthalate (MT)

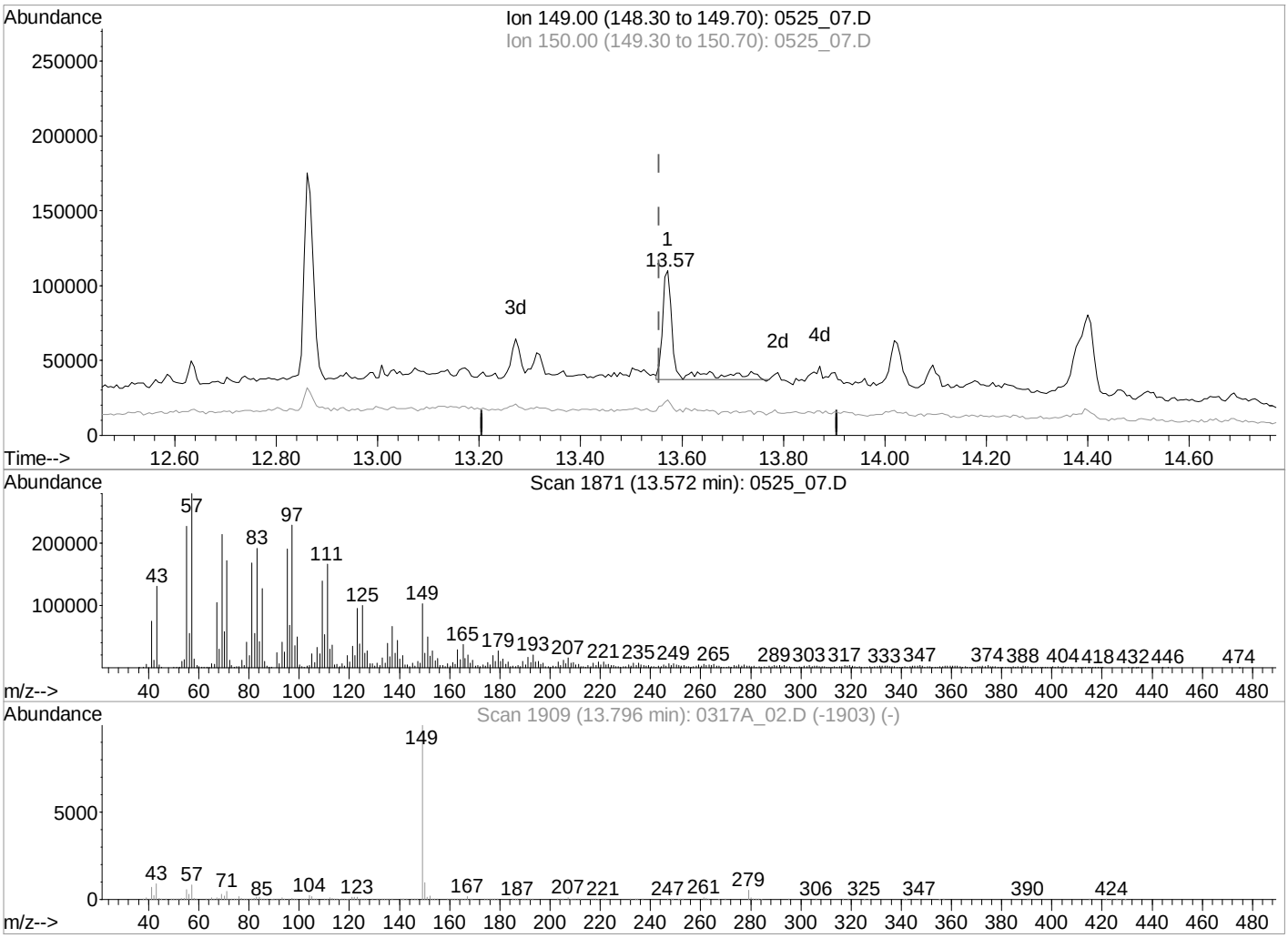
12.86min (+0.005) 997.9774416 ppb m

response 172631 Limit = 3330.0000000

Ion	Exp%	Act%
149.00	100	100
167.00	29.60	35.29
279.00	4.80	5.32
150.00	11.60	18.01

Data File : C:\MSDCHEM\1\DATA\052516\0525 07.D Vial: 20
Acq On : 25 May 2016 11:00 am Operator: 280
Sample : L836976-02 10x WG874391 15-5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 0.33
MS Integration Params: RTEINT.P
Quant Time: May 25 12:51 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Multiple Level Calibration



TIC: 0525_07.D

(87) Di-n-octyl phthalate (MC)

13.57min (+0.017) 398.4819750 ppb

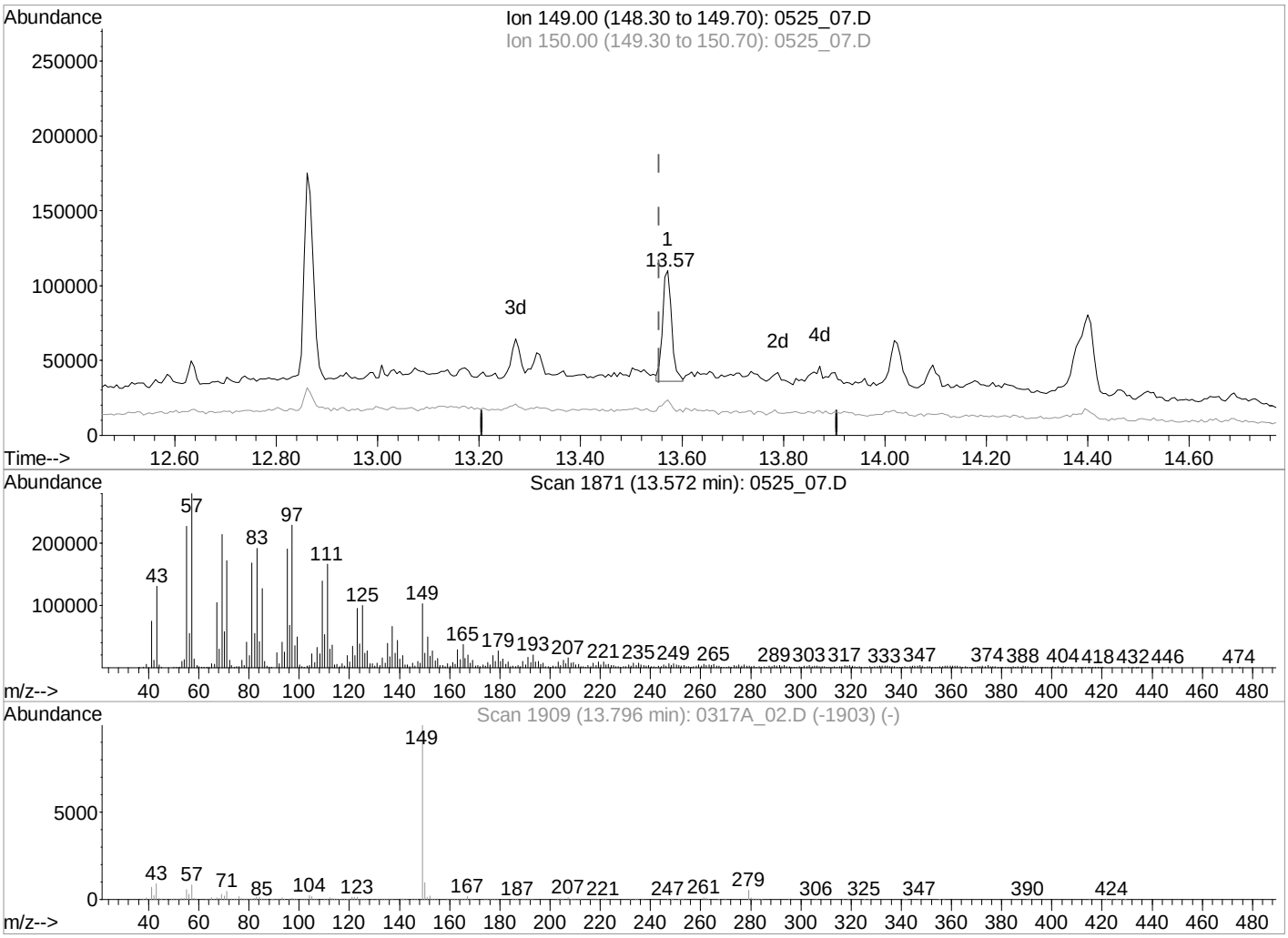
Qvalue = 92

response 121842 Limit = 3330.0000000

Ion	Exp%	Act%
149.00	100	100
150.00	9.60	12.52
0.00	0.00	0.00
0.00	0.00	0.00

Data File : C:\MSDCHEM\1\DATA\052516\0525 07.D Vial: 20
Acq On : 25 May 2016 11:00 am Operator: 280
Sample : L836976-02 10x WG874391 15-5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 0.33
MS Integration Params: RTEINT.P
Quant Time: May 25 12:52 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Multiple Level Calibration



TIC: 0525_07.D

(87) Di-n-octyl phthalate (MC)

13.57min (+0.017) 307.3271219 ppb m

response 93970 Limit = 3330.0000000

Ion	Exp%	Act%
149.00	100	100
150.00	9.60	22.83
0.00	0.00	0.00
0.00	0.00	0.00

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

Injection Log

Instrument ID : BNAMS4
Computer Name : SVCOMPH
Released By : Allen Fuller
Date Released : 9/20/2016 6:13:26 PM
Run ID : 052516A
Signature : _____

#	File ID	Sample ID	Method	WG	Product	Matrix	Account #	State	Dil.	Mult.	Injected	Misc.
1	0525A_00	INSTBLK	S804D25P						1	1	05/25/16 1417	"Instrument Blank"
2	0525A_01	TUNE 50 PPM 16E09755	TUNEC						1	1	05/25/16 1441	"DFTPP"
3	0525A_01 T	TUNE 50 PPM 16E09755								1	05/25/16 1441	
4	0525A_02	ICV SVMS 10K PPB 16D25863	S804D25P						1	1	05/25/16 1504	"8270 calibration ISTD 16D22768"
5	0525A_03	ICV TCL 10K1 PPB 16D25867	S804D25P						1	1	05/25/16 1528	"8270 TCL calibration ISTD 16D22768"
6	0525A_04	LCS	S804D25P	WG875165	SV8270	SS			300	10	05/25/16 1551	"soil ISTD 16E03322"
7	0525A_05	LCSD	S804D25P	WG875165	SV8270	SS			300	10	05/25/16 1614	"soil ISTD 16E03322"
8	0525A_06	BLANK	S804D25P	WG875165	SV8270	SS			300	10	05/25/16 1638	"soil ISTD 16E03322"
9	0525A_07	L836669-02	S804D25P	WG875165	SV8270	SS	EFFENVPTX	TX	6000	200	05/25/16 1701	"soil ISTD 16E03322"
10	0525A_08	L836669-01	S804D25P	WG874590	SV8270	SS	EFFENVPTX	TX	6000	200	05/25/16 1725	"soil ISTD 16E03322"
11	0525A_09	L837038-01	S804D25P	WG874590	SV8270	SS	EFFENVPTX	TX	6000	200	05/25/16 1748	"soil ISTD 16E03322"
12	0525A_10	L836953-01	S804D25P	WG874590	SV8270	SS	BNSF1KEN	MT	6000	200	05/25/16 1811	"soil ISTD 16E03322"
13	0525A_11	L836976-03	S804D25P	WG874391	SV8270	SS	WESSOLLCO	WY	10	0.333	05/25/16 1835	"soil ISTD 16E03322"
14	0525A_12	L836976-04	S804D25P	WG874391	SV8270	SS	WESSOLLCO	WY	20	0.666	05/25/16 1858	"soil ISTD 16E03322"
15	0525A_13	L836976-05	S804D25P	WG874391	SV8270	SS	WESSOLLCO	WY	50	1.67	05/25/16 1921	"soil ISTD 16E03322"
16	0525A_14	L836857-08	S804D25P	WG874391	SV8270	SS	ENVIRTAZ	NH	20	0.666	05/25/16 1945	"soil ISTD 16E03322"
17	0525A_15	RR L837136-09	S804D25P	WG874444					200	6.66	05/25/16 2008	"soil ISTD 16E03322"
18	0525A_16	RR L837136-10	S804D25P	WG874444					200	6.66	05/25/16 2032	"soil ISTD 16E03322"
19	0525A_17	RR L837136-01	S804D25P	WG874444					500	16.67	05/25/16 2055	"soil ISTD 16E03322"
20	0525A_18	RR L837136-04	S804D25P	WG874444					500	16.67	05/25/16 2118	"soil ISTD 16E03322"

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

Injection Log

Instrument ID : BNAMS4
Computer Name : SVCOMPH
Released By : Allen Fuller
Date Released : 9/20/2016 6:13:26 PM
Run ID : 052516A
Signature : _____

#	File ID	Sample ID	Method	WG	Product	Matrix	Account #	State	Dil.	Mult.	Injected	Misc.
21	0525A_19	RR L837136-03	S804D25P	WG874444					2000	66.66	05/25/16 2142	"soil ISTD 16E03322"

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052516A\0525A 01.D Vial: 1
Acq On : 25 May 2016 2:41 pm Operator: 280
Sample : TUNE 50 PPM 16E09755 Inst : BNAMS4
Misc : DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 15:00 2016 Quant Results File: TUNEC.RES

Quant Method : C:\MSDCHEM\1\METHODS\TUNEC.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed Sep 17 10:33:01 2014
Response via : Initial Calibration
DataAcq Meth : BNA4E

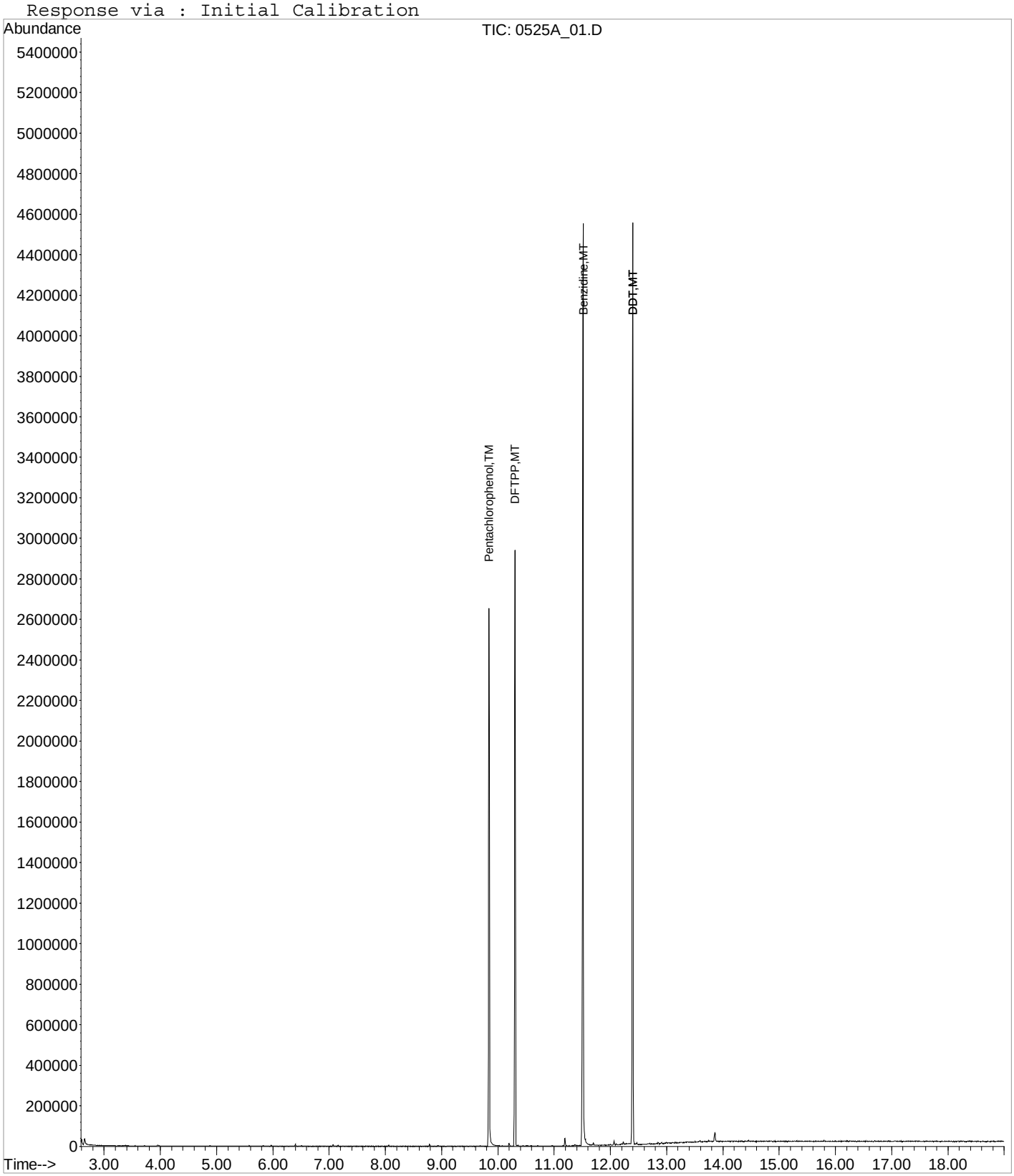
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
Target Compounds						Qvalue
1) Pentachlorophenol	9.84	264	186092	13.4082286	ug/mL	100
2) DFTPP	10.31	198	324106	13.5763146	ug/mL	100
3) Benzidine	11.52	184	2132038	14.5003416	ug/mL	100
4) DDT	12.40	TIC	4594176	70.1377358	ug/ml	100
5) DDT	12.40	235	865205	64.2977746	ug/mL	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

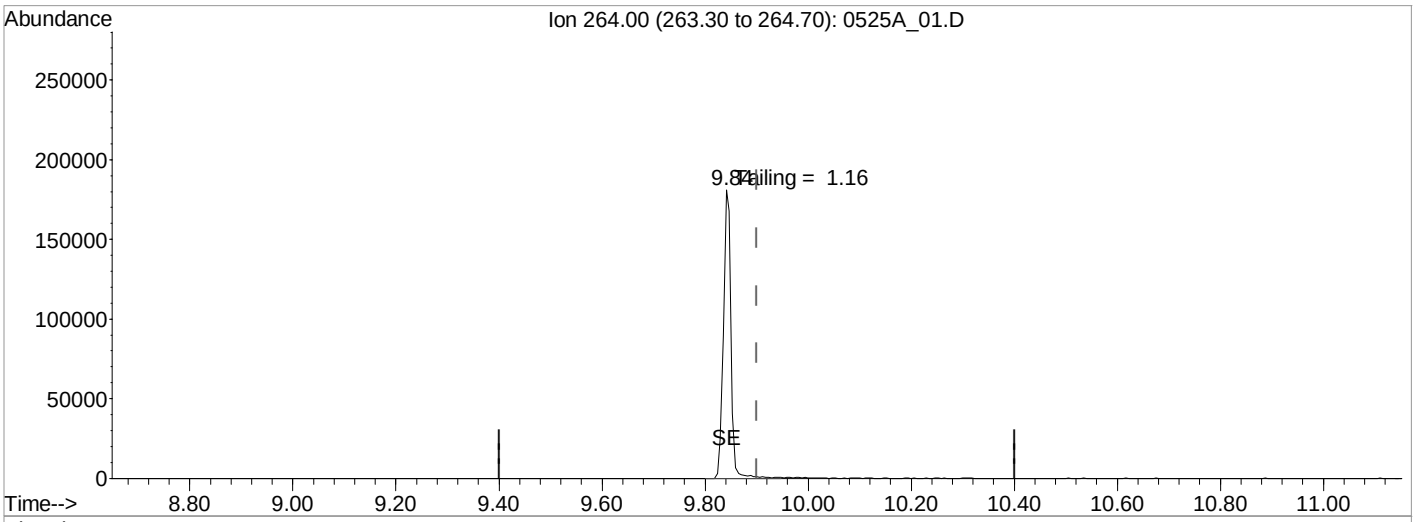
Data File : C:\MSDCHEM\1\DATA\052516A\0525A 01.D Vial: 1
Acq On : 25 May 2016 2:41 pm Operator: 280
Sample : TUNE 50 PPM 16E09755 Inst : BNAMS4
Misc : DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 15:00 2016 Quant Results File: TUNEC.RES

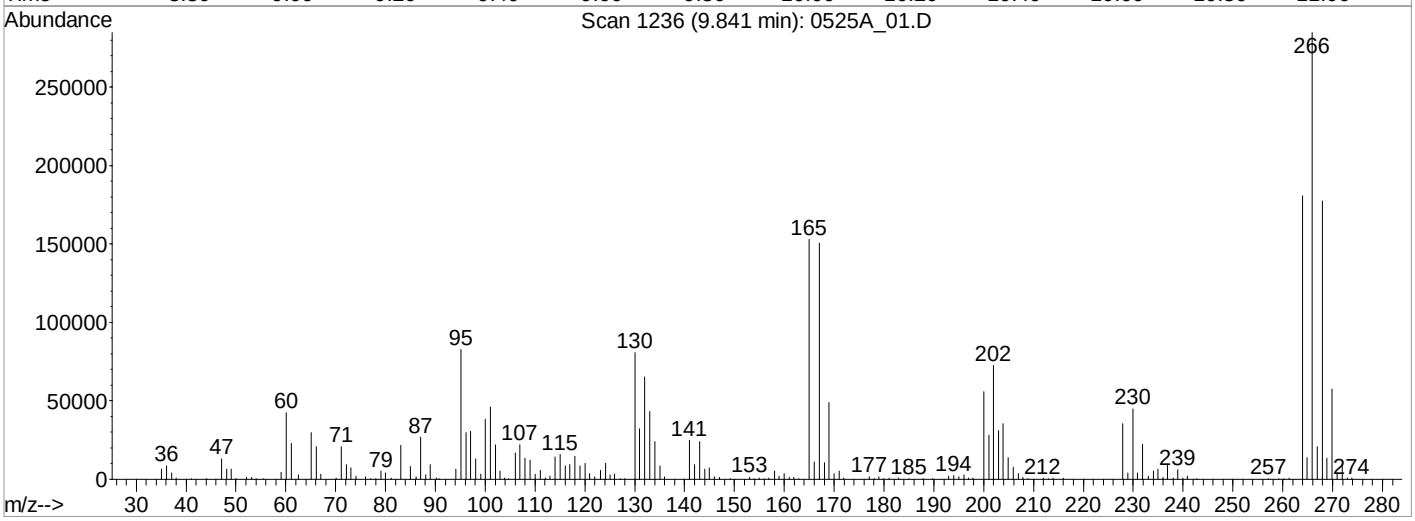
Method : C:\MSDCHEM\1\METHODS\TUNEC.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed Sep 17 10:33:01 2014
Response via : Initial Calibration



Data File : C:\MSDCHEM\1\DATA\052516A\0525A 01.D Vial: 1
Acq On : 25 May 2016 2:41 pm Operator: 280
Sample : TUNE 50 PPM 16E09755 Inst : BNAMS4
Misc : DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 15:00 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\TUNEC.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed Sep 17 10:33:01 2014
Response via : Single Level Calibration





TIC: 0525A_01.D

(1) Pentachlorophenol (TM)

9.84min (-0.059) 13.4082286 ug/mL

Qvalue = 100

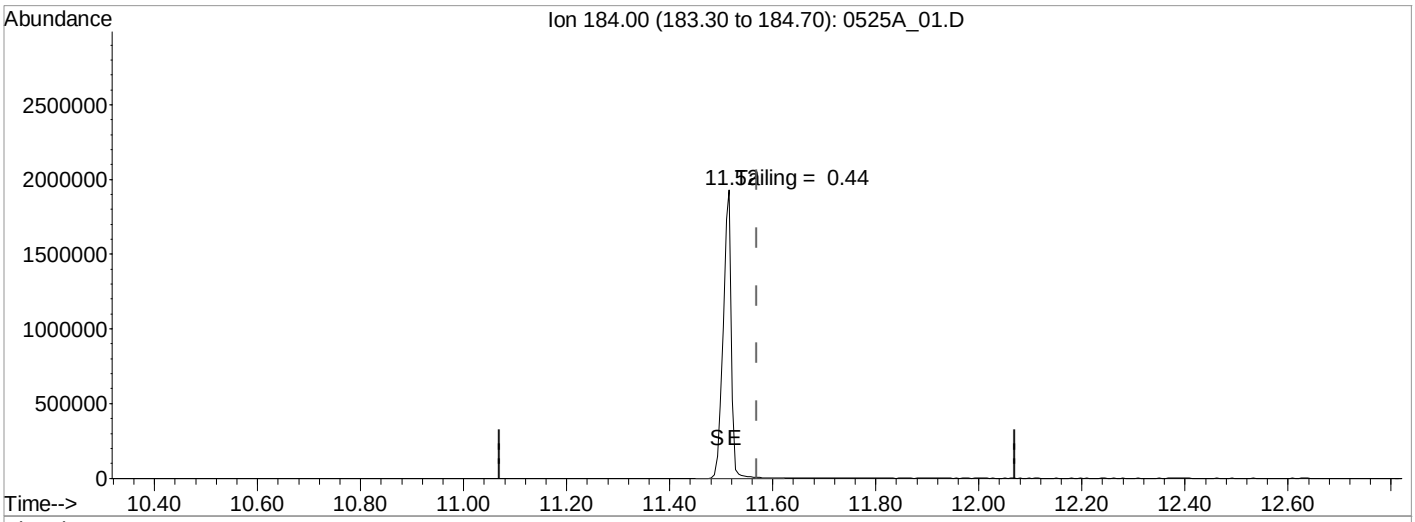
response 186092

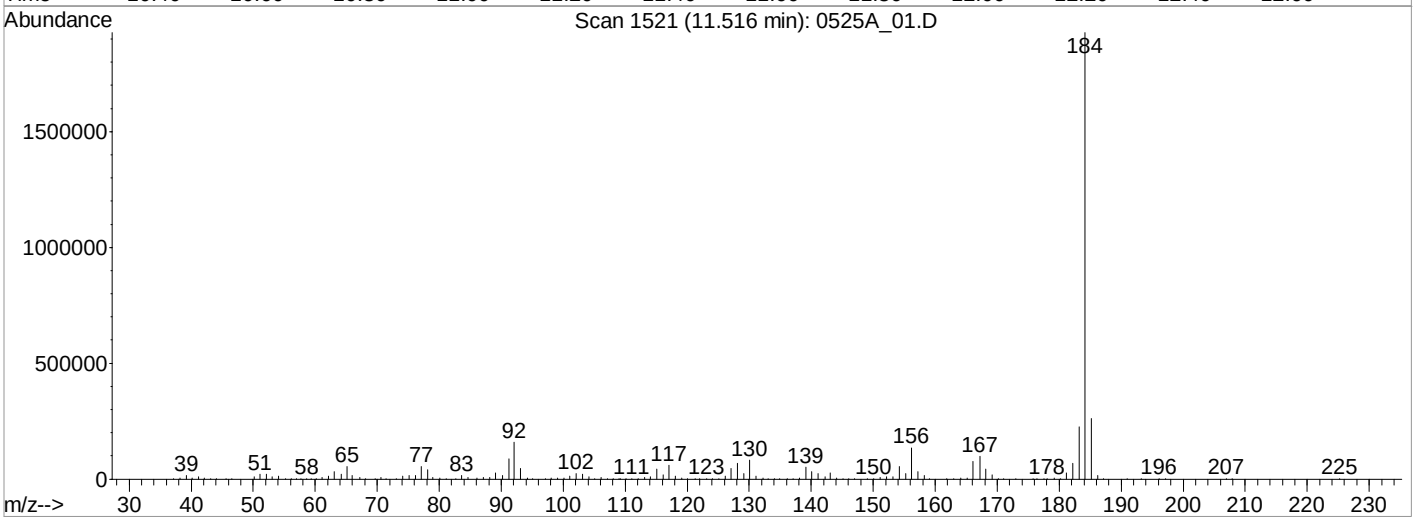
Ion	Exp%	Act%
264.00	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\052516A\0525A 01.D Vial: 1
Acq On : 25 May 2016 2:41 pm Operator: 280
Sample : TUNE 50 PPM 16E09755 Inst : BNAMS4
Misc : DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 15:00 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\TUNEC.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed Sep 17 10:33:01 2014
Response via : Single Level Calibration





TIC: 0525A_01.D

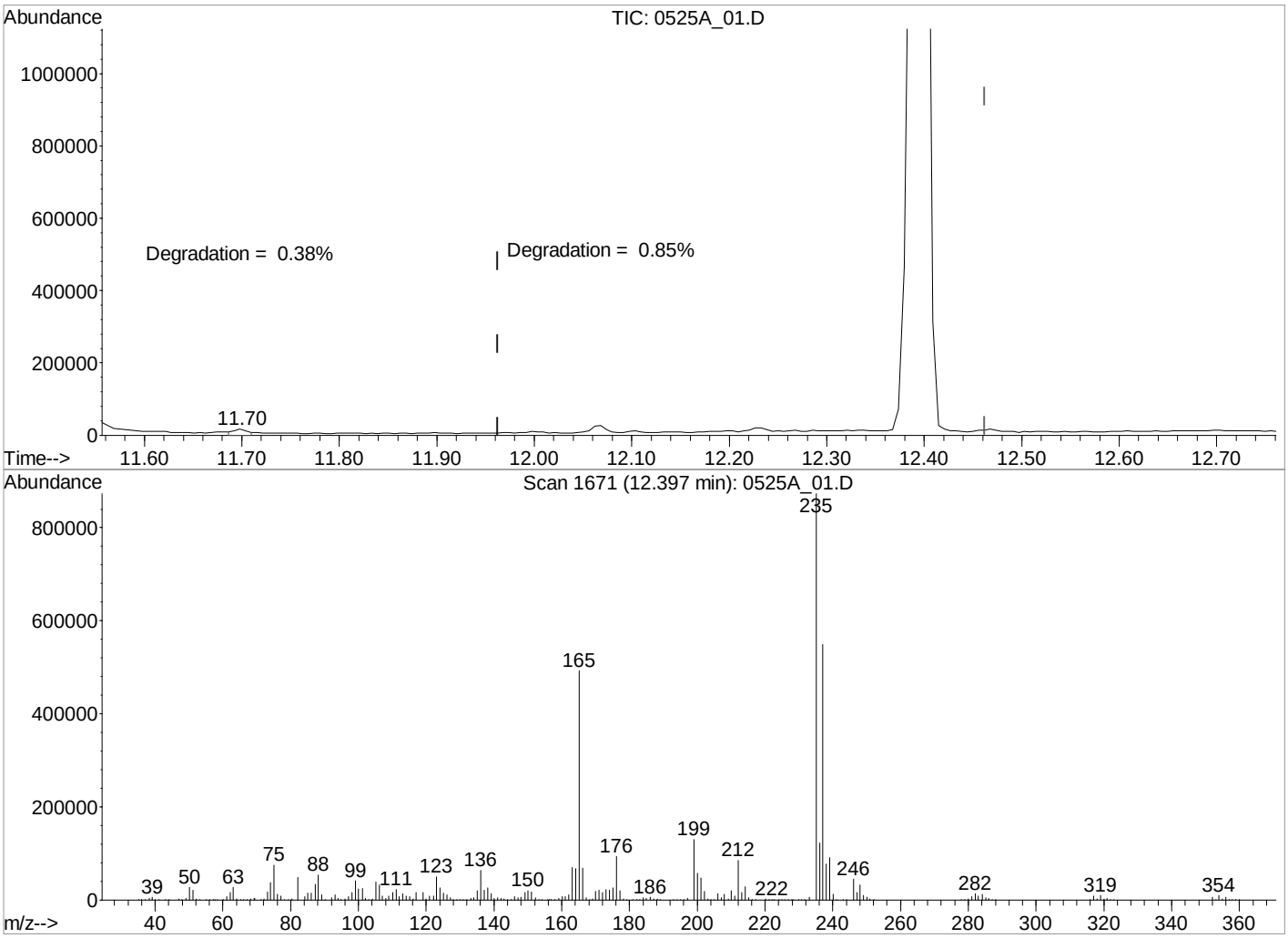
(3) Benzidine (MT)

11.52min (-0.053) 14.5003416 ug/mL
Qvalue = 100
response 2132038

Ion	Exp%	Act%
184.00	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Data File : C:\MSDCHEM\1\DATA\052516A\0525A 01.D Vial: 1
Acq On : 25 May 2016 2:41 pm Operator: 280
Sample : TUNE 50 PPM 16E09755 Inst : BNAMS4
Misc : DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 15:00 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\TUNEC.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed Sep 17 10:33:01 2014
Response via : Single Level Calibration



TIC: 0525A_01.D

(4) DDT (MT)

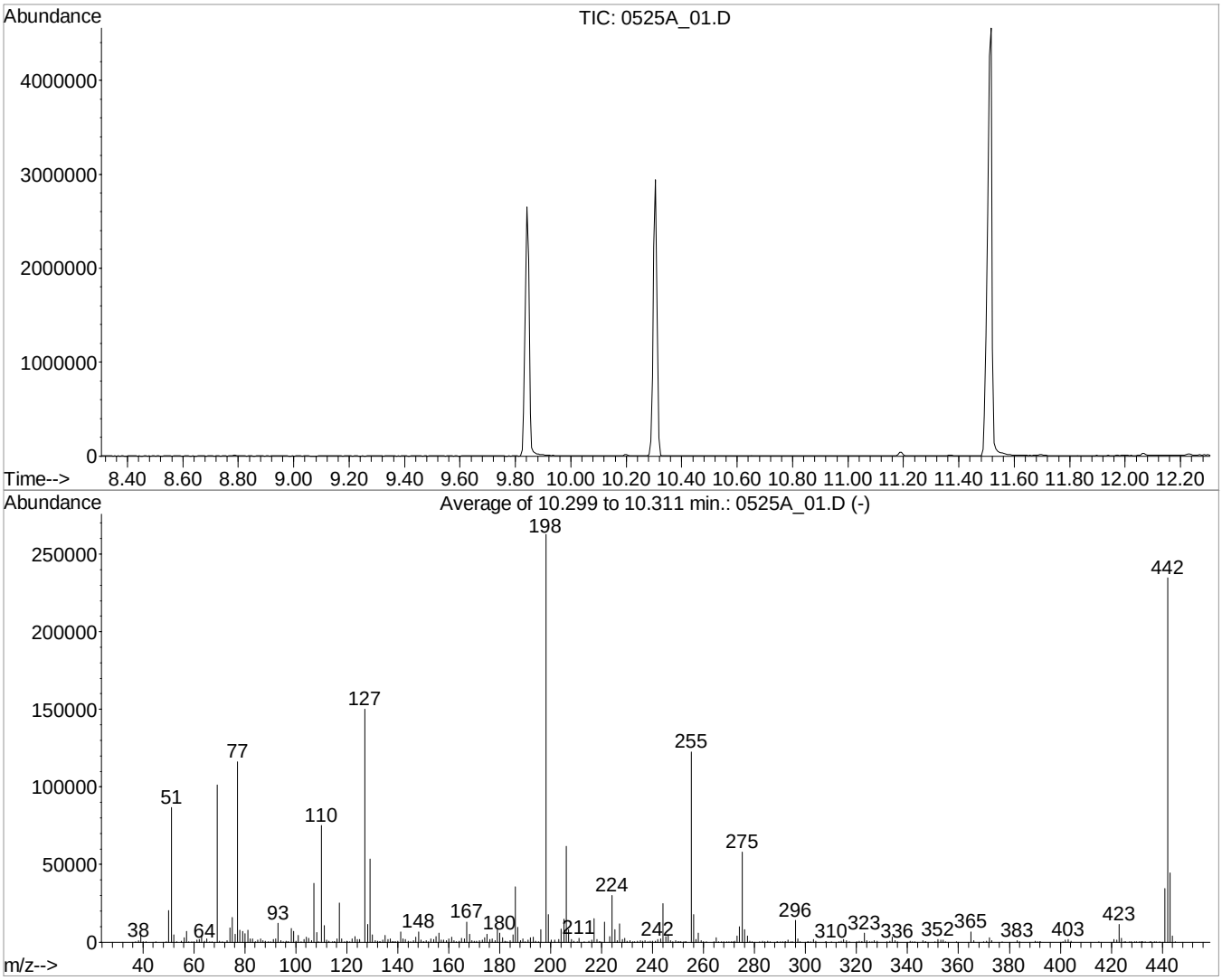
12.40min (-0.065) 70.1377358 ug/ml

Qvalue = 100

response 4594176

Signal	Exp%	Act%
TIC	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Data File : C:\MSDCHEM\1\DATA\052516A\0525A 01.D Vial: 1
Acq On : 25 May 2016 2:41 pm Operator: 280
Sample : TUNE 50 PPM 16E09755 Inst : BNAMS4
Misc : DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\TUNEC.M (RTE Integrator)
Title : 8270 BNA



AutoFind: Scans 1314, 1315, 1316; Background Corrected with Scan 1308

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	33.0	86704	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	38.5	101090	PASS
70	69	0.00	2	0.5	517	PASS
127	198	40	60	57.2	150197	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	262784	PASS
199	198	5	9	6.7	17573	PASS
275	198	10	30	22.0	57896	PASS
365	198	1	100	2.5	6459	PASS
441	443	0.01	100	77.2	34416	PASS
442	198	40	100	89.3	234602	PASS
443	442	17	23	19.0	44578	PASS

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052516A\0525A 02.D Vial: 2
Acq On : 25 May 2016 3:04 pm Operator: 280
Sample : ICV SVMS 10K PPB 16D25863 Inst : BNAMS4
Misc : 8270 calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 15:26 2016 Quant Results File: S804D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Initial Calibration
DataAcq Meth : BNA4E

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.29	152	82558	8000.00 ppb	0.00
22) Naphthalene-d8	6.56	136	469342	8000.00 ppb	0.00
40) Acenaphthene-d10	8.44	164	289117	8000.00 ppb	0.00
64) Phenanthrene-d10	10.06	188	496031	8000.00 ppb	0.00
78) Chrysene-d12	12.94	240	501790	8000.00 ppb	0.00
88) Perylene-d12	14.75	264	514074	8000.00 ppb	0.01
System Monitoring Compounds					
4) 2-Fluorophenol	4.19	112	181903	9463.9320620 ppb	0.00
Spiked Amount 20.000	Range 10 - 74		Recovery = 47319.66%#		
7) Phenol-d5	4.92	99	225826	8997.1661677 ppb	0.00
Spiked Amount 20.000	Range 10 - 63		Recovery = 44985.83%#		
23) Nitrobenzene-d5	5.82	82	203513	9953.9884343 ppb	0.00
Spiked Amount 10.000	Range 28 - 123		Recovery = 99539.88%#		
44) 2-Fluorobiphenyl	7.69	172	457228	9615.0587602 ppb	0.00
Spiked Amount 10.000	Range 35 - 133		Recovery = 96150.59%#		
67) 2,4,6-Tribromophenol	9.29	330	57210	10962.3796000 ppb	0.00
Spiked Amount 20.000	Range 22 - 154		Recovery = 54811.90%#		
81) p-Terphenyl-d14	11.77	244	581457	9240.8551733 ppb	0.00
Spiked Amount 10.000	Range 30 - 148		Recovery = 92408.55%#		
Target Compounds					Qvalue
2) Pyridine	3.24	79	210087	7157.7840339 ppb	88
3) N-Nitrosodimethylamine	3.22	42	100531	8966.3364640 ppb #	82
5) Aniline	4.99	66	111271	9019.2178648 ppb	95
6) bis(2-Chloroethyl)ether	5.03	63	161668	8974.7353918 ppb	99
8) Phenol	4.93	94	234557	8988.3251058 ppb	89
10) 2-Chlorophenol	5.09	128	214249	9434.2467277 ppb	98
11) n-Decane	5.11	41	86123	9790.4347832 ppb	98
12) 1,3-Dichlorobenzene	5.24	146	222756	9661.6844110 ppb	99
13) 1,4-Dichlorobenzene	5.31	146	227787	9663.3625706 ppb	98
14) Benzyl Alcohol	5.40	79	159399	9736.1650244 ppb	98
15) 1,2-Dichlorobenzene	5.45	146	220994	9673.7698758 ppb	99
16) bis(2-Chloroisopropyl)ethe	5.53	121	67412	9554.4791741 ppb	94
17) 2-Methylphenol	5.49	108	186511	9256.7816454 ppb	96
18) Hexachloroethane	5.78	117	94985	9674.4754277 ppb	96
19) N-Nitrosodi-n-propylamine	5.66	70	133482	9176.8051085 ppb	98
20) 3&4-Methyl phenol	5.64	107	213330	9043.2078831 ppb	93
24) Nitrobenzene	5.84	77	197896	9761.3131875 ppb	99
25) Isophorone	6.07	82	359928	9708.8166013 ppb	99
26) 2-Nitrophenol	6.16	139	121450	10554.2995260 ppb	96
27) 2,4-Dimethylphenol	6.17	107	206524	10091.0617092 ppb	94
28) bis(2-Chlorethoxy)methane	6.27	93	240354	9147.0396883 ppb	95
29) 2,4-Dichlorophenol	6.40	162	174080	10270.7333077 ppb	99
31) 1,2,4-Trichlorobenzene	6.49	180	177168	10484.3760361 ppb	96
32) Naphthalene	6.58	128	667018	9614.2258218 ppb	99
33) 4-Chloroaniline	6.62	65	79022	9900.7833730 ppb	99
34) Hexachloro-1,3-butadiene	6.69	225	84075	11428.6292269 ppb	96
36) 4-Chloro-3-methylphenol	7.12	107	193791	10366.8483547 ppb	99
37) 2-Methylnaphthalene	7.31	142	451722	9920.6305742 ppb	97
38) 1-Methylnaphthalene	7.41	142	398440	9737.4692863 ppb	98
41) Hexachlorocyclopentadiene	7.47	237	77801	9980.1164544 ppb	97
42) 2,4,6-Trichlorophenol	7.60	196	115103	10356.9782033 ppb	98
43) 2,4,5-Trichlorophenol	7.64	196	123966	10385.3066774 ppb	92
45) Biphenyl	7.80	154	532196	9513.4567201 ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052516A\0525A 02.D Vial: 2
Acq On : 25 May 2016 3:04 pm Operator: 280
Sample : ICV SVMS 10K PPB 16D25863 Inst : BNAMS4
Misc : 8270 calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 15:26 2016 Quant Results File: S804D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Initial Calibration
DataAcq Meth : BNA4E

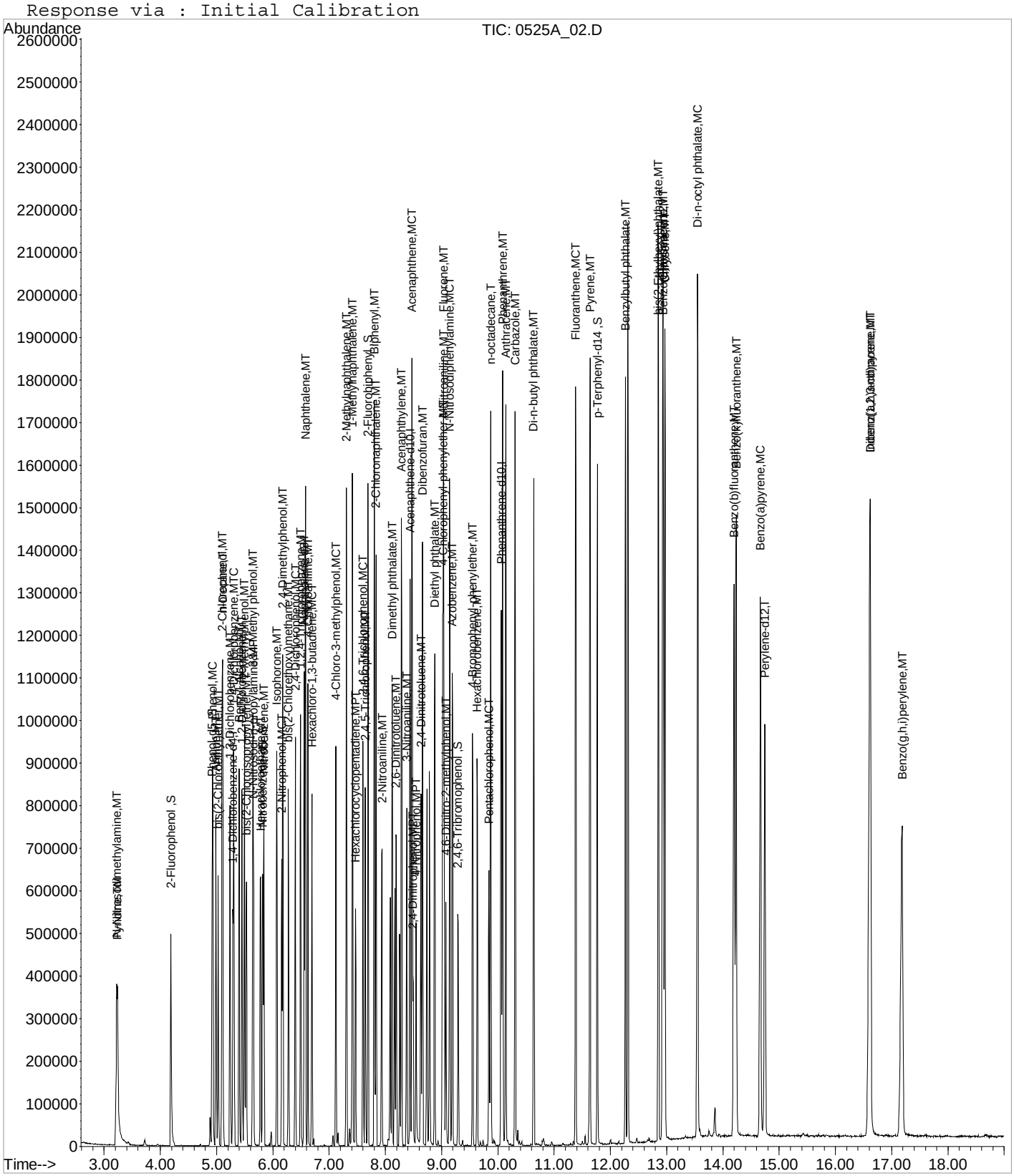
	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
46)	2-Chloronaphthalene	7.83	162	422701	9617.7389746 ppb		97
47)	2-Nitroaniline	7.94	138	150796	9731.2607623 ppb	#	95
48)	Acenaphthylene	8.28	152	666694	9513.2107162 ppb		99
49)	Dimethyl phthalate	8.12	163	452240	9832.7154724 ppb		97
50)	2,6-Dinitrotoluene	8.20	165	112455	9885.2357268 ppb		91
51)	3-Nitroaniline	8.38	138	129148	9391.7739559 ppb		95
52)	Acenaphthene	8.47	153	434699	9462.9718550 ppb		99
53)	2,4-Dinitrophenol	8.50	184	62525	10815.5366222 ppb	#	70
54)	Dibenzofuran	8.66	168	605689	9619.8784993 ppb		97
55)	2,4-Dinitrotoluene	8.63	165	152750	10088.2693133 ppb		91
57)	4-Nitrophenol	8.55	139	100459	9290.2973275 ppb		93
58)	Fluorene	9.03	166	498775	9616.2215011 ppb		98
59)	4-Chlorophenyl-phenylether	9.02	204	202340	10104.6914804 ppb		92
60)	Diethyl phthalate	8.88	149	482944	9983.2315630 ppb		99
61)	4-Nitroaniline	9.04	138	137743	10051.5911478 ppb	#	89
62)	Azobenzene	9.19	77	448304	8730.7159013 ppb		97
65)	4,6-Dinitro-2-methylphenol	9.08	198	82040	10026.7251762 ppb		92
66)	N-Nitrosodiphenylamine	9.14	169	422146	9404.1679331 ppb		99
68)	4-Bromophenyl-phenylether	9.55	248	109876	10130.0175988 ppb	#	89
69)	Hexachlorobenzene	9.64	284	118064	10109.6240296 ppb		98
70)	n-octadecane	9.87	55	78407	9059.5107732 ppb		99
71)	Pentachlorophenol	9.84	266	69364	9944.9844957 ppb		93
72)	Phenanthrene	10.08	178	716227	9628.5501801 ppb		97
73)	Anthracene	10.14	178	729621	9777.4436820 ppb		99
74)	Carbazole	10.31	167	734306	9590.7724977 ppb		99
75)	Di-n-butyl phthalate	10.63	149	923226	9794.2603502 ppb		100
77)	Fluoranthene	11.38	202	757122	10058.3936672 ppb		99
80)	Pyrene	11.64	202	791390	8767.3516198 ppb		99
82)	Benzylbutyl phthalate	12.27	149	445770	9038.8554220 ppb		99
84)	Benzo(a)anthracene	12.93	228	709452	8947.3146875 ppb		90
85)	Chrysene	12.97	228	680572	8993.8224801 ppb		96
86)	bis(2-Ethylhexyl)phthalate	12.85	149	681538	9007.6813650 ppb		99
87)	Di-n-octyl phthalate	13.55	149	1248780	9337.2416387 ppb		100
89)	Benzo(b)fluoranthene	14.19	252	723377m	8629.3825318 ppb		
90)	Benzo(k)fluoranthene	14.24	252	721828	9207.1764616 ppb		91
91)	Benzo(a)pyrene	14.66	252	716205	9165.6707428 ppb		93
92)	Indeno(1,2,3-cd)pyrene	16.61	276	833745	9632.5721369 ppb		90
93)	Dibenz(a,h)anthracene	16.62	278	711315	9483.1219064 ppb		90
94)	Benzo(g,h,i)perylene	17.19	276	689382	9654.0081692 ppb		85

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

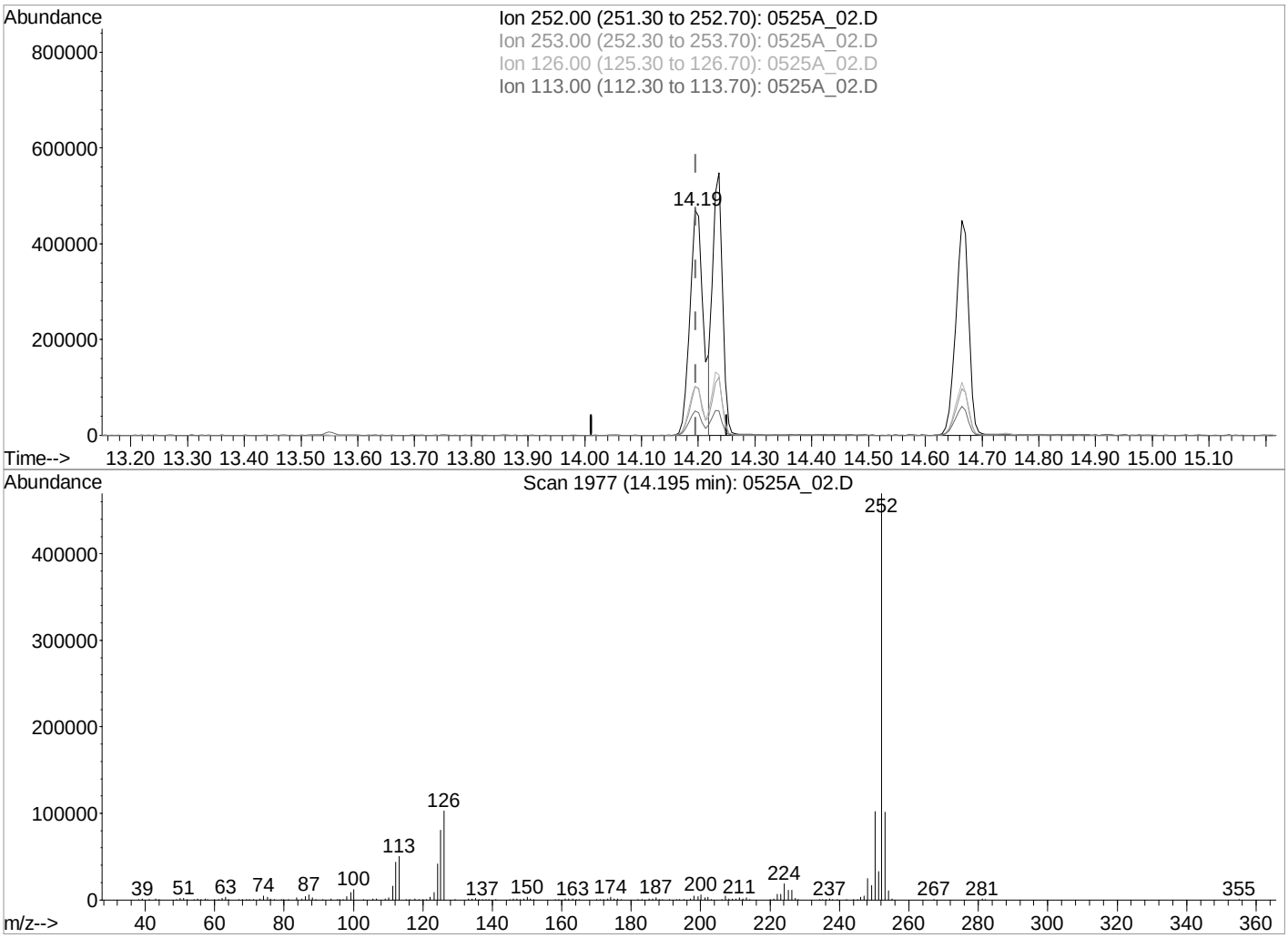
Data File : C:\MSDCHEM\1\DATA\052516A\0525A 02.D Vial: 2
Acq On : 25 May 2016 3:04 pm Operator: 280
Sample : ICV SVMS 10K PPB 16D25863 Inst : BNAMS4
Misc : 8270 calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 15:26 2016 Quant Results File: S804D25P.RES

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Initial Calibration



Data File : C:\MSDCHEM\1\DATA\052516A\0525A 02.D Vial: 2
Acq On : 25 May 2016 3:04 pm Operator: 280
Sample : ICV SVMS 10K PPB 16D25863 Inst : BNAMS4
Misc : 8270 calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 15:26 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Multiple Level Calibration



TIC: 0525A_02.D

(89) Benzo(b)fluoranthene (MT)

14.19min (-0.000) 9337.6848249 ppb

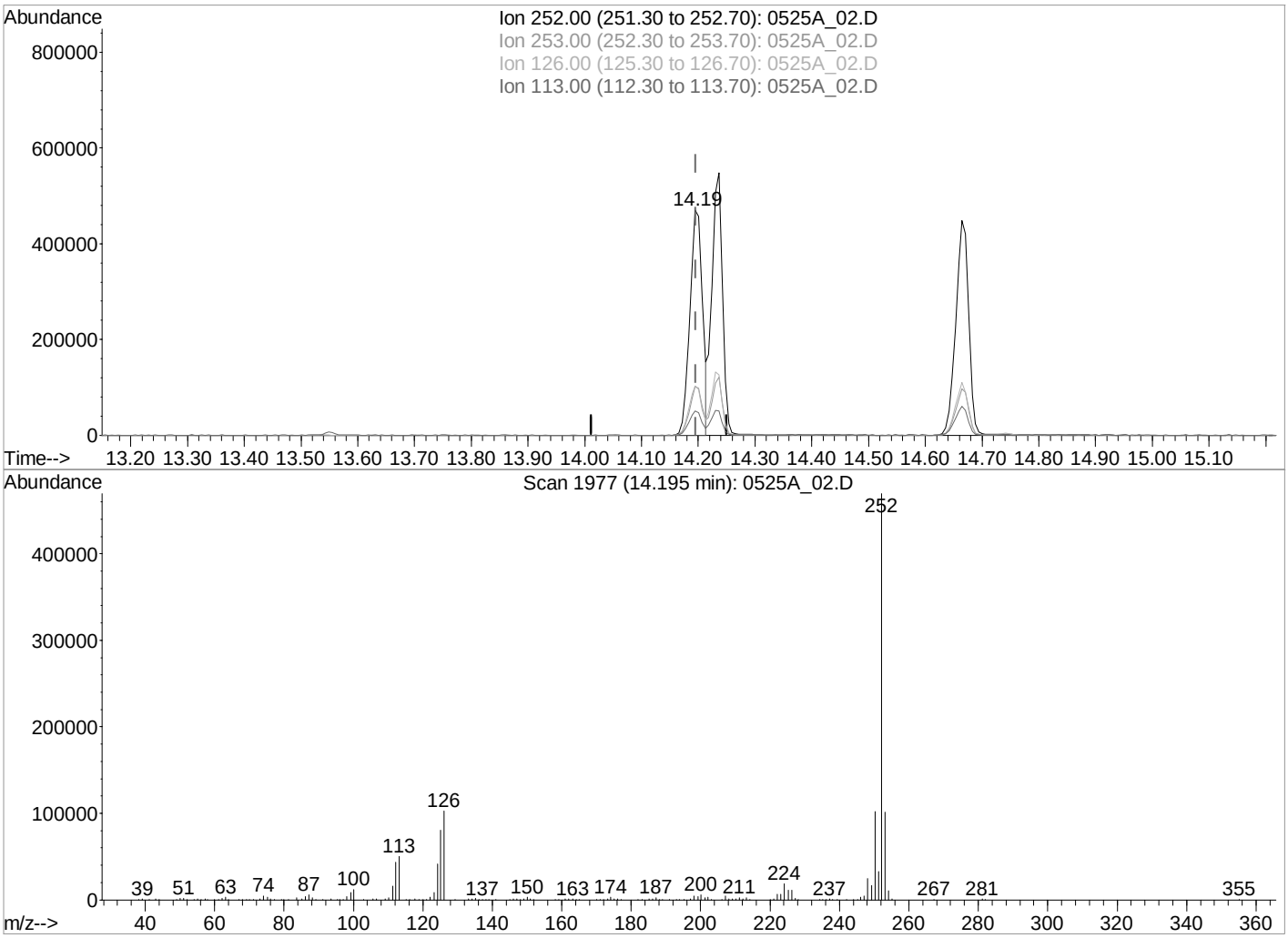
Qvalue = 94

response 782752

Ion	Exp%	Act%
252.00	100	100
253.00	21.50	21.52
126.00	25.80	20.38
113.00	12.80	10.23

Data File : C:\MSDCHEM\1\DATA\052516A\0525A 02.D Vial: 2
Acq On : 25 May 2016 3:04 pm Operator: 280
Sample : ICV SVMS 10K PPB 16D25863 Inst : BNAMS4
Misc : 8270 calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 15:26 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Multiple Level Calibration



TIC: 0525A_02.D

(89) Benzo(b)fluoranthene (MT)

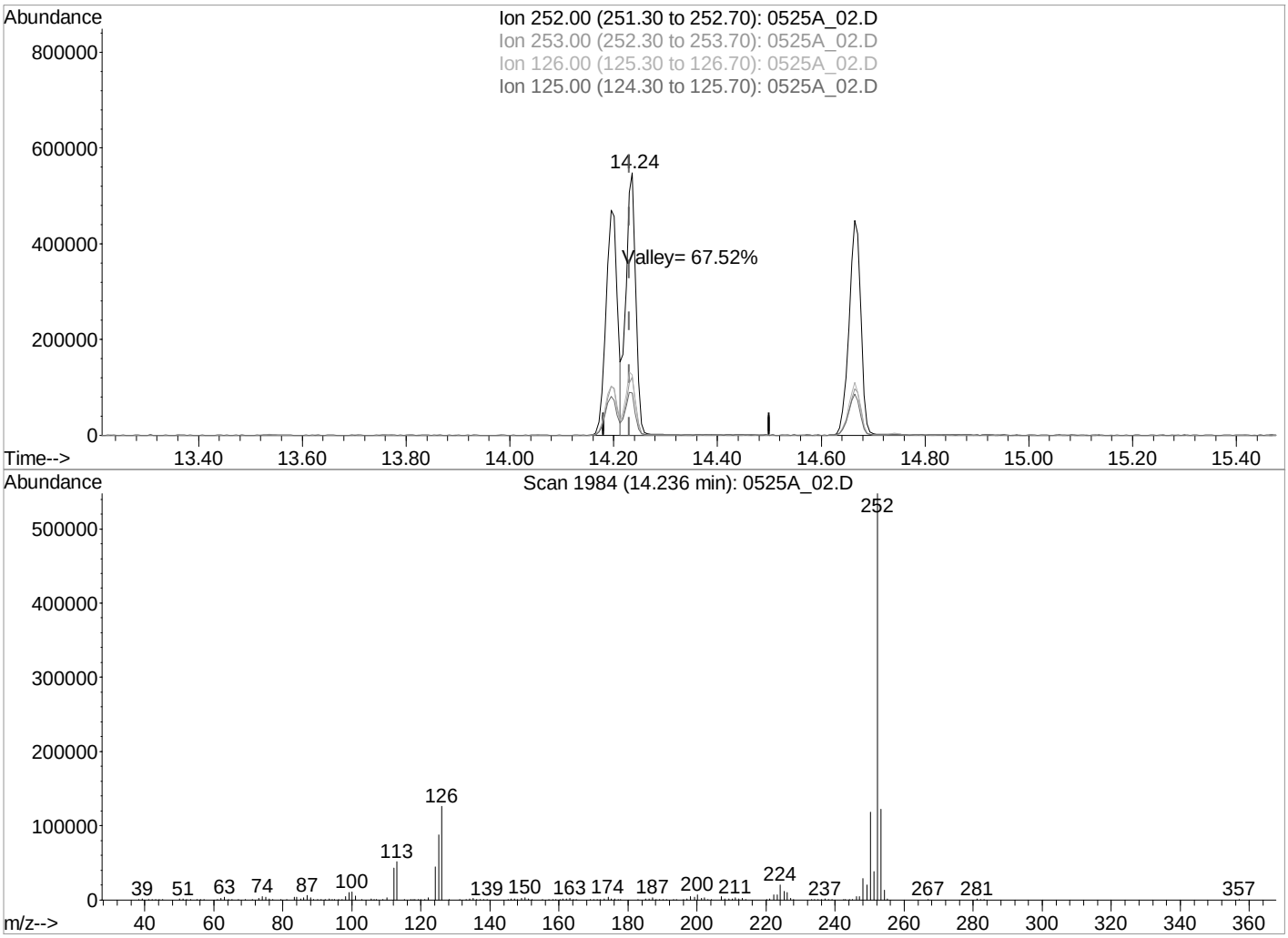
14.19min (-0.000) 8629.3825318 ppb m

response 723377

Ion	Exp%	Act%
252.00	100	100
253.00	21.50	21.54
126.00	25.80	21.79
113.00	12.80	10.68

Data File : C:\MSDCHEM\1\DATA\052516A\0525A 02.D Vial: 2
Acq On : 25 May 2016 3:04 pm Operator: 280
Sample : ICV SVMS 10K PPB 16D25863 Inst : BNAMS4
Misc : 8270 calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 15:26 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Multiple Level Calibration



TIC: 0525A_02.D

(90) Benzo(k)fluoranthene (MT)

14.24min (+0.005) 9207.1764616 ppb

Qvalue = 91

response 721828

Ion	Exp%	Act%
252.00	100	100
253.00	21.60	22.18
126.00	30.50	22.90
125.00	21.30	15.97

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052516A\0525A 03.D Vial: 3
Acq On : 25 May 2016 3:28 pm Operator: 280
Sample : ICV TCL 10K1 PPB 16D25867 Inst : BNAMS4
Misc : 8270 TCL calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 15:47 2016 Quant Results File: S804D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Initial Calibration
DataAcq Meth : BNA4E

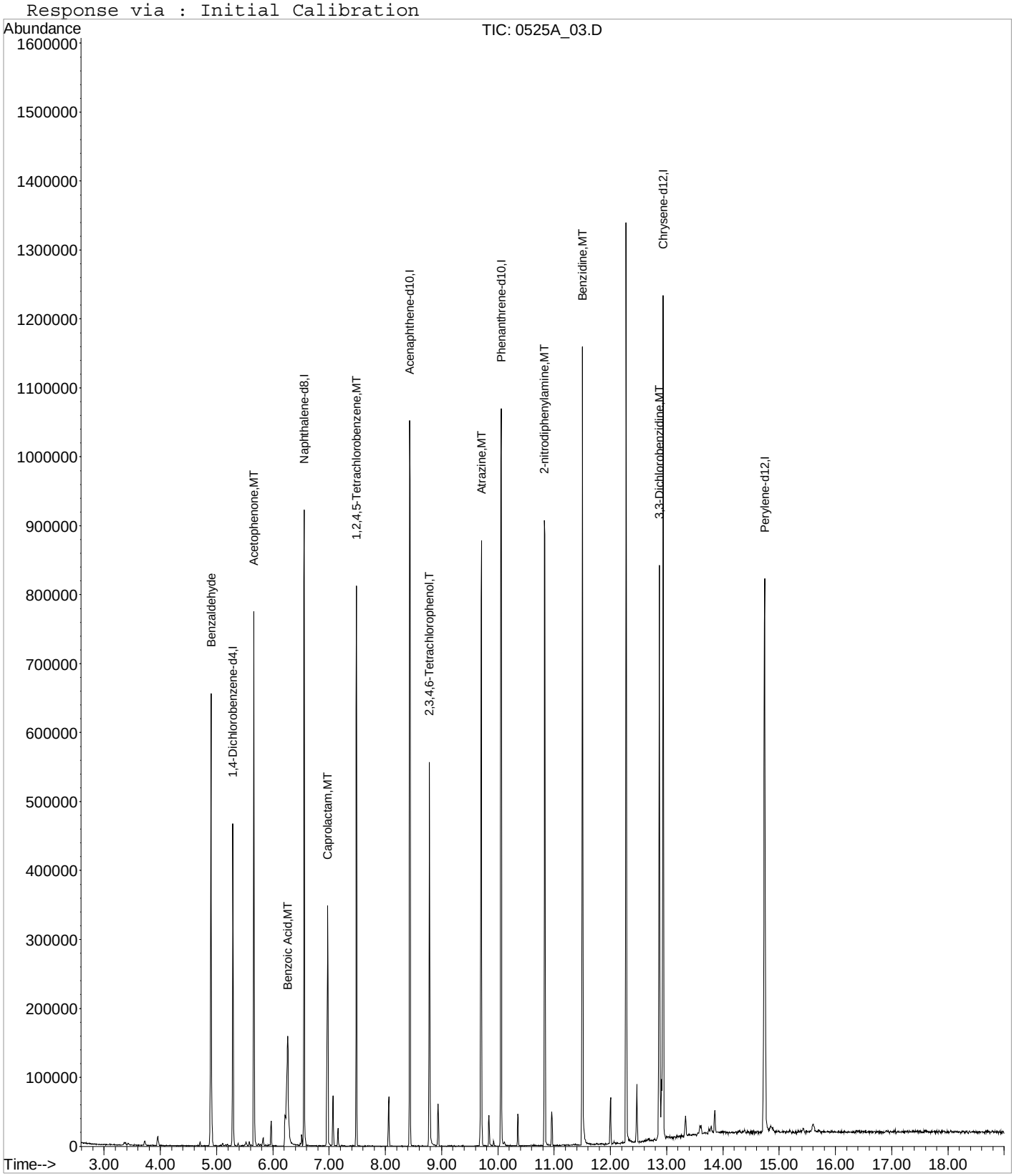
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.29	152	73019	8000.00	ppb	0.00
22) Naphthalene-d8	6.56	136	412746	8000.00	ppb	0.00
40) Acenaphthene-d10	8.43	164	250415	8000.00	ppb	0.00
64) Phenanthrene-d10	10.06	188	437658	8000.00	ppb	0.00
78) Chrysene-d12	12.94	240	423835	8000.00	ppb	0.00
88) Perylene-d12	14.74	264	440411	8000.00	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 74		Recovery =	0.00%#		
7) Phenol-d5	0.00	99	0	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 63		Recovery =	0.00%#		
23) Nitrobenzene-d5	0.00	82	0d	0.0000000	ppb	
Spiked Amount 10.000	Range 28 - 123		Recovery =	0.00%#		
44) 2-Fluorobiphenyl	0.00	172	0d	0.0000000	ppb	
Spiked Amount 10.000	Range 35 - 133		Recovery =	0.00%#		
67) 2,4,6-Tribromophenol	0.00	330	0	0.0000000	ppb	
Spiked Amount 20.000	Range 22 - 154		Recovery =	0.00%#		
81) p-Terphenyl-d14	11.77	244	202	3.8007658	ppb	0.00
Spiked Amount 10.000	Range 30 - 148		Recovery =	38.01%		
Target Compounds						Qvalue
9) Benzaldehyde	4.90	105	120000	9795.4944450	ppb	98
21) Acetophenone	5.66	105	226165	9746.0656883	ppb	99
30) Benzoic Acid	6.26	105	110041	14134.1419982	ppb	97
35) Caprolactam	6.97	113	52435	9700.4592697	ppb	92
39) 1,2,4,5-Tetrachlorobenzene	7.49	216	133470	10748.8827203	ppb	99
56) 2,3,4,6-Tetrachlorophenol	8.78	232	63235	11211.5552580	ppb	98
63) Atrazine	9.71	200	92951	10544.5972801	ppb	92
76) 2-nitrodiphenylamine	10.83	167	147244	10732.7719310	ppb	98
79) Benzidine	11.50	184	441798	9349.0163749	ppb	99
83) 3,3-Dichlorobenzidine	12.87	252	179625	10065.8979160	ppb	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052516A\0525A 03.D Vial: 3
Acq On : 25 May 2016 3:28 pm Operator: 280
Sample : ICV TCL 10K1 PPB 16D25867 Inst : BNAMS4
Misc : 8270 TCL calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 15:47 2016 Quant Results File: S804D25P.RES

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052516A\0525A 11.D Vial: 33
Acq On : 25 May 2016 6:35 pm Operator: 280
Sample : L836976-03 10x WG874391 15-0.5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 0.33
MS Integration Params: RTEINT.P
Quant Time: Sep 20 18:06 2016 Quant Results File: S804D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Initial Calibration
DataAcq Meth : BNA4E

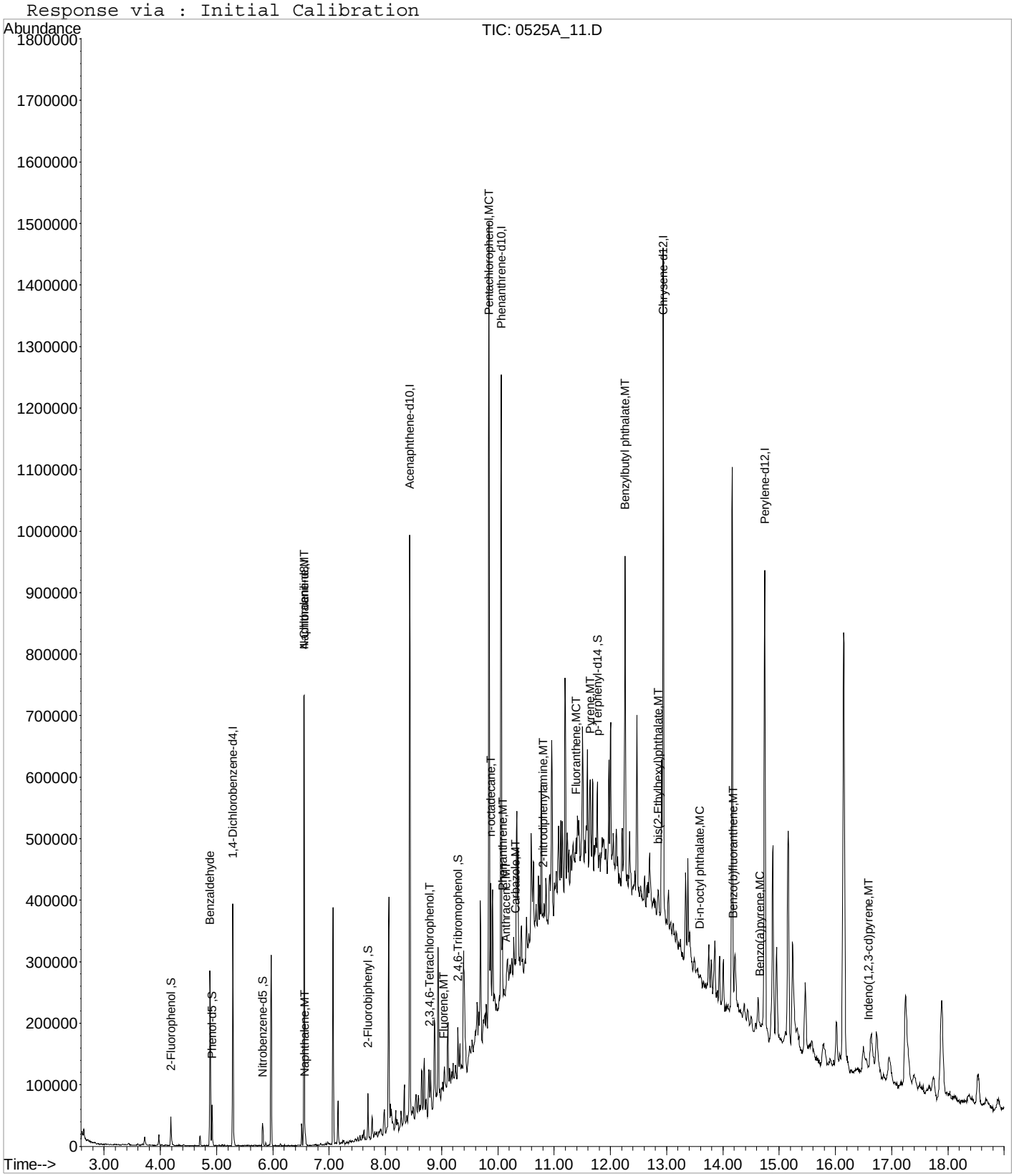
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.29	152	61415	8000.00	ppb		0.00
22) Naphthalene-d8	6.56	136	347719	8000.00	ppb		0.00
40) Acenaphthene-d10	8.43	164	213830	8000.00	ppb		0.00
64) Phenanthrene-d10	10.06	188	393746	8000.00	ppb		0.00
78) Chrysene-d12	12.94	240	391900	8000.00	ppb		0.00
88) Perylene-d12	14.74	264	424586	8000.00	ppb		0.00
System Monitoring Compounds							
4) 2-Fluorophenol	4.19	112	16038	373.5174554	ppb		0.00
Spiked Amount 666.000	Range 21 - 116		Recovery = 56.08%				
7) Phenol-d5	4.92	99	20569	366.8376633	ppb		0.00
Spiked Amount 666.000	Range 26 - 121		Recovery = 55.08%				
23) Nitrobenzene-d5	5.82	82	9457	207.9043593	ppb		0.00
Spiked Amount 333.000	Range 22 - 129		Recovery = 62.43%				
44) 2-Fluorobiphenyl	7.69	172	23487	222.3800885	ppb		0.00
Spiked Amount 333.000	Range 35 - 129		Recovery = 66.78%				
67) 2,4,6-Tribromophenol	9.29	330	5238	421.0515598	ppb		0.00
Spiked Amount 666.000	Range 22 - 142		Recovery = 63.22%				
81) p-Terphenyl-d14	11.77	244	34596	234.4290465	ppb		0.00
Spiked Amount 333.000	Range 22 - 128		Recovery = 70.40%				
Target Compounds							Qvalue
56) 2,3,4,6-Tetrachlorophenol	8.78	232	2663	184.1261374	ppb		91
70) n-octadecane	9.87	55	6639	321.8025453	ppb	#	72
71) Pentachlorophenol	9.84	266	147014	8842.3066610	ppb		92
72) Phenanthrene	10.08	178	25225	142.2585186	ppb		94
77) Fluoranthene	11.38	202	9227	51.4233282	ppb		93
80) Pyrene	11.64	202	35532	167.8373029	ppb		91
86) bis(2-Ethylhexyl)phthalate	12.85	149	9361	52.7516632	ppb		93

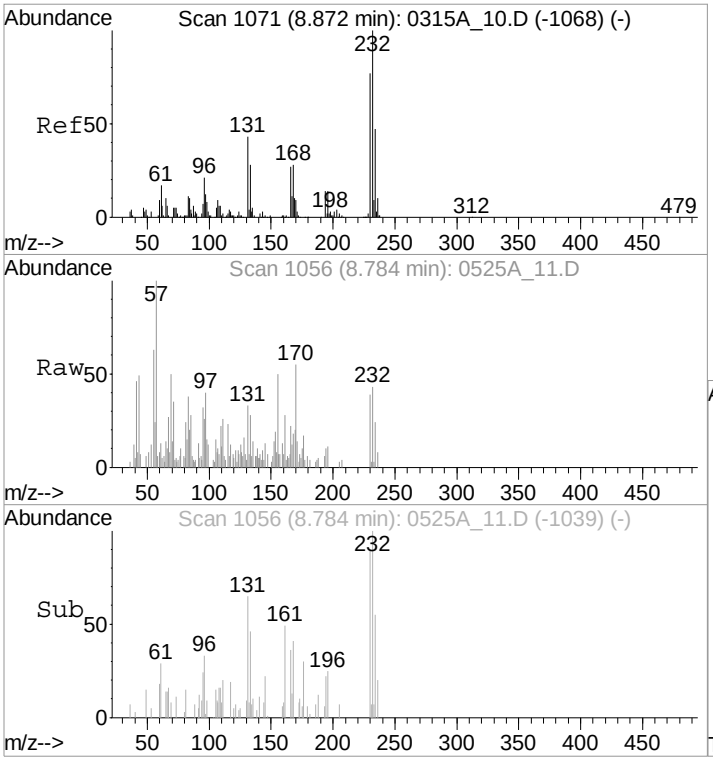
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052516A\0525A 11.D Vial: 33
Acq On : 25 May 2016 6:35 pm Operator: 280
Sample : L836976-03 10x WG874391 15-0.5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 0.33
MS Integration Params: RTEINT.P
Quant Time: Sep 20 18:06 2016 Quant Results File: S804D25P.RES

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Initial Calibration

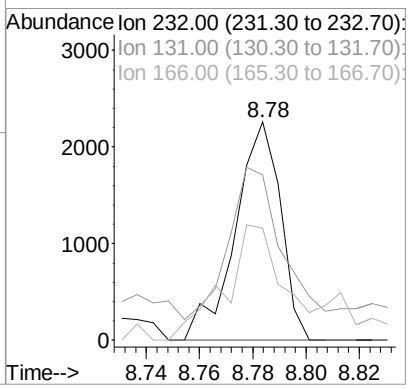


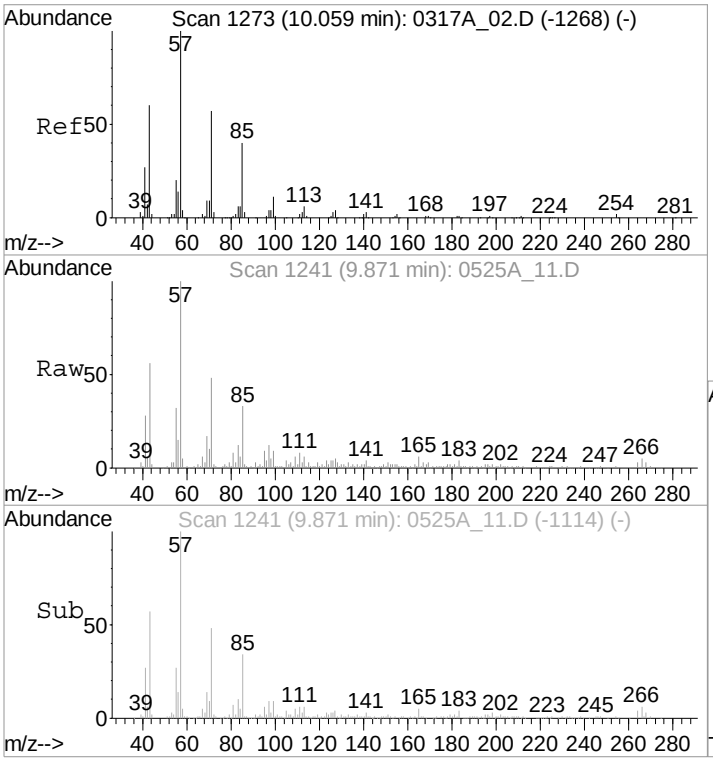


#56
2,3,4,6-Tetrachlorophenol
Concen: 184.1261374 ppb
RT: 8.78 min Scan# 1056
Delta R.T. -0.00 min
Lab File: 0525A_11.D
Acq: 25 May 2016 6:35 pm

Tgt Ion:232 Resp: 2663

Ion	Ratio	Lower	Upper
232	100		
131	66.2	38.2	78.2
166	43.2	19.9	59.9

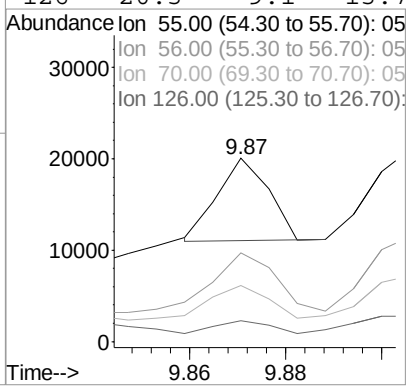


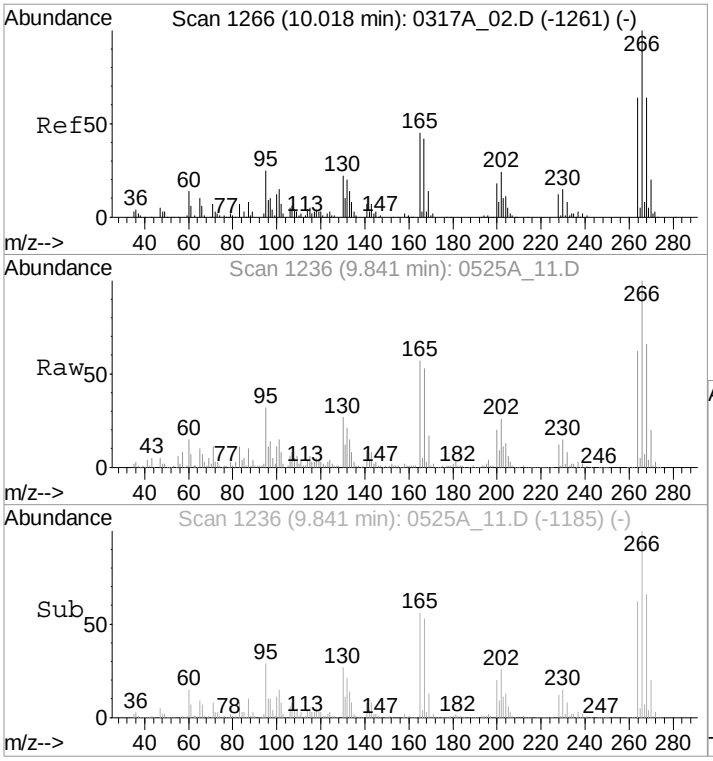


#70
n-octadecane
Concen: 321.8025453 ppb
RT: 9.87 min Scan# 1241
Delta R.T. -0.01 min
Lab File: 0525A_11.D
Acq: 25 May 2016 6:35 pm

Tgt Ion: 55 Resp: 6639

Ion	Ratio	Lower	Upper
55	100		
56	92.8	56.0	84.0#
70	59.9	33.7	50.5#
126	20.3	9.1	13.7#

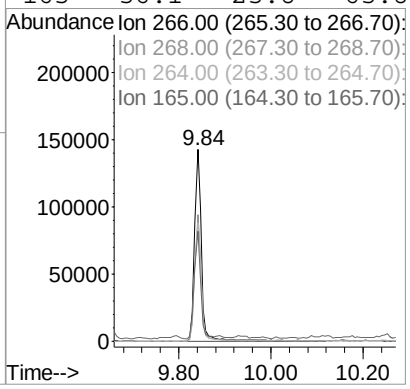


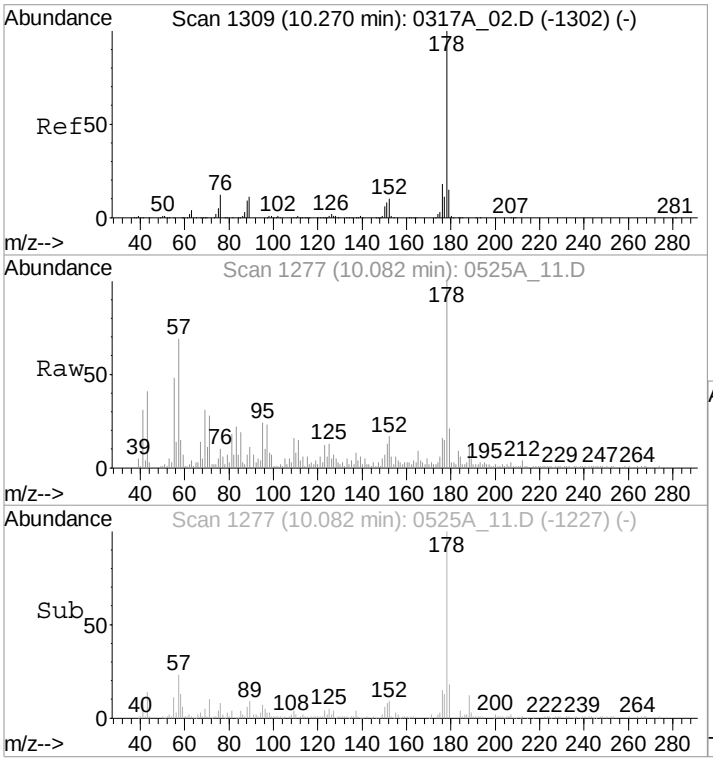


#71
Pentachlorophenol
Concen: 8842.3066610 ppb
RT: 9.84 min Scan# 1236
Delta R.T. 0.00 min
Lab File: 0525A_11.D
Acq: 25 May 2016 6:35 pm

Tgt Ion:266 Resp: 147014

Ion	Ratio	Lower	Upper
266	100		
268	66.0	42.4	82.4
264	61.7	45.7	85.7
165	56.1	25.8	65.8

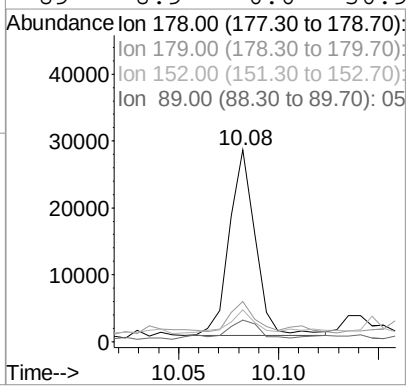


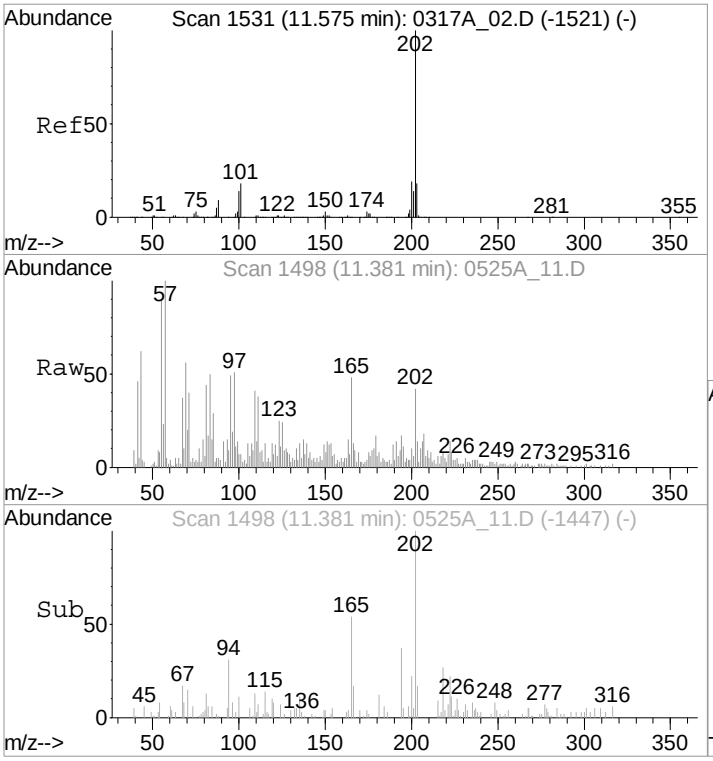


#72
Phenanthrene
Concen: 142.2585186 ppb
RT: 10.08 min Scan# 1277
Delta R.T. -0.01 min
Lab File: 0525A_11.D
Acq: 25 May 2016 6:35 pm

Tgt Ion:178 Resp: 25225

Ion	Ratio	Lower	Upper
178	100		
179	16.2	0.0	34.5
152	12.6	0.0	29.2
89	8.9	0.0	30.9

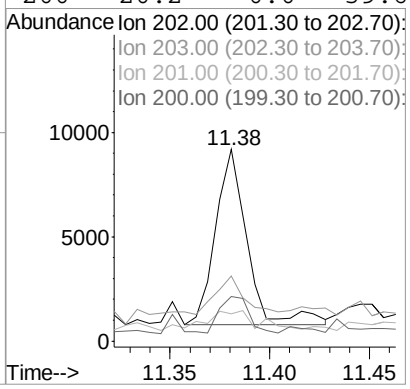


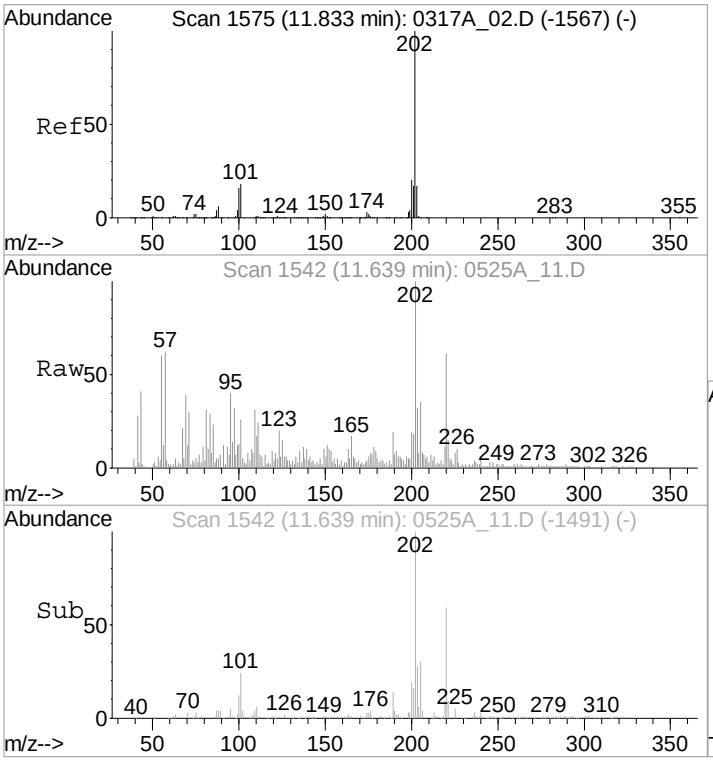


#77
Fluoranthene
Concen: 51.4233282 ppb
RT: 11.38 min Scan# 1498
Delta R.T. -0.00 min
Lab File: 0525A_11.D
Acq: 25 May 2016 6:35 pm

Tgt Ion:202 Resp: 9227

Ion	Ratio	Lower	Upper
202	100		
203	20.7	0.0	37.1
201	8.2	0.0	34.1
200	20.2	0.0	39.6

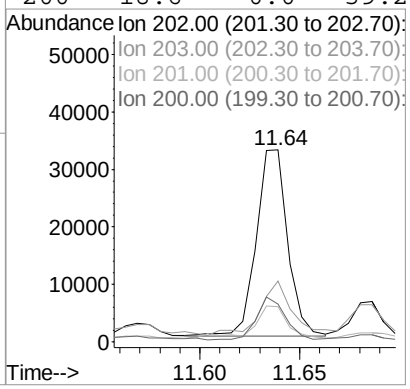


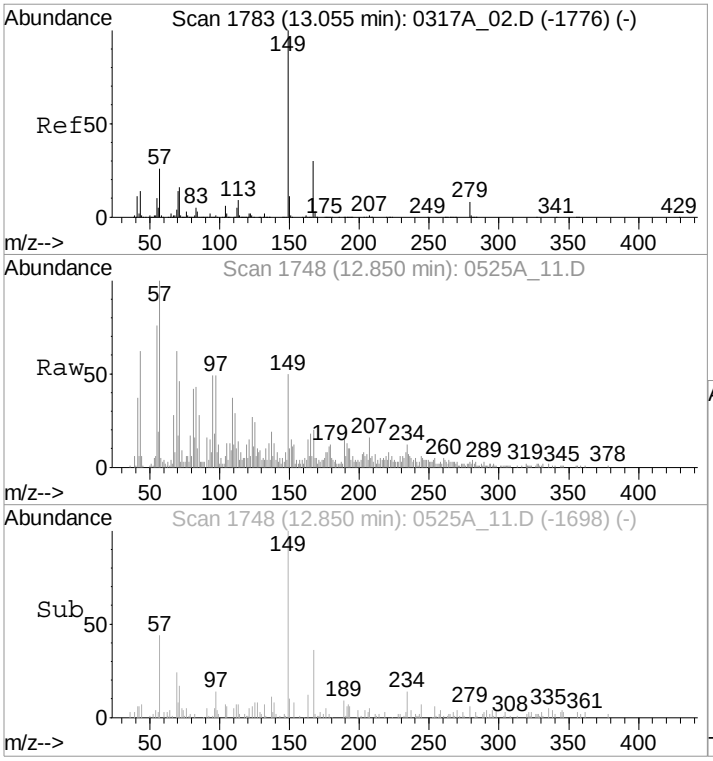


#80
Pyrene
Concen: 167.8373029 ppb
RT: 11.64 min Scan# 1542
Delta R.T. -0.00 min
Lab File: 0525A_11.D
Acq: 25 May 2016 6:35 pm

Tgt Ion:202 Resp: 35532

Ion	Ratio	Lower	Upper
202	100		
203	27.2	0.0	36.6
201	16.7	0.0	36.5
200	18.6	0.0	39.2

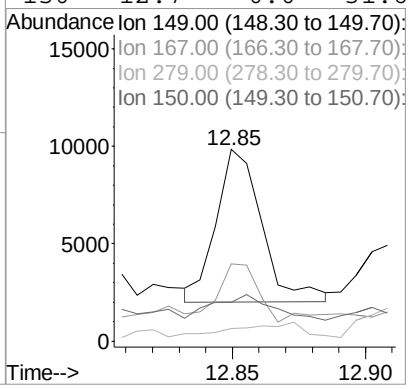




#86
bis(2-Ethylhexyl)phthalate
Concen: 52.7516632 ppb
RT: 12.85 min Scan# 1748
Delta R.T. -0.01 min
Lab File: 0525A_11.D
Acq: 25 May 2016 6:35 pm

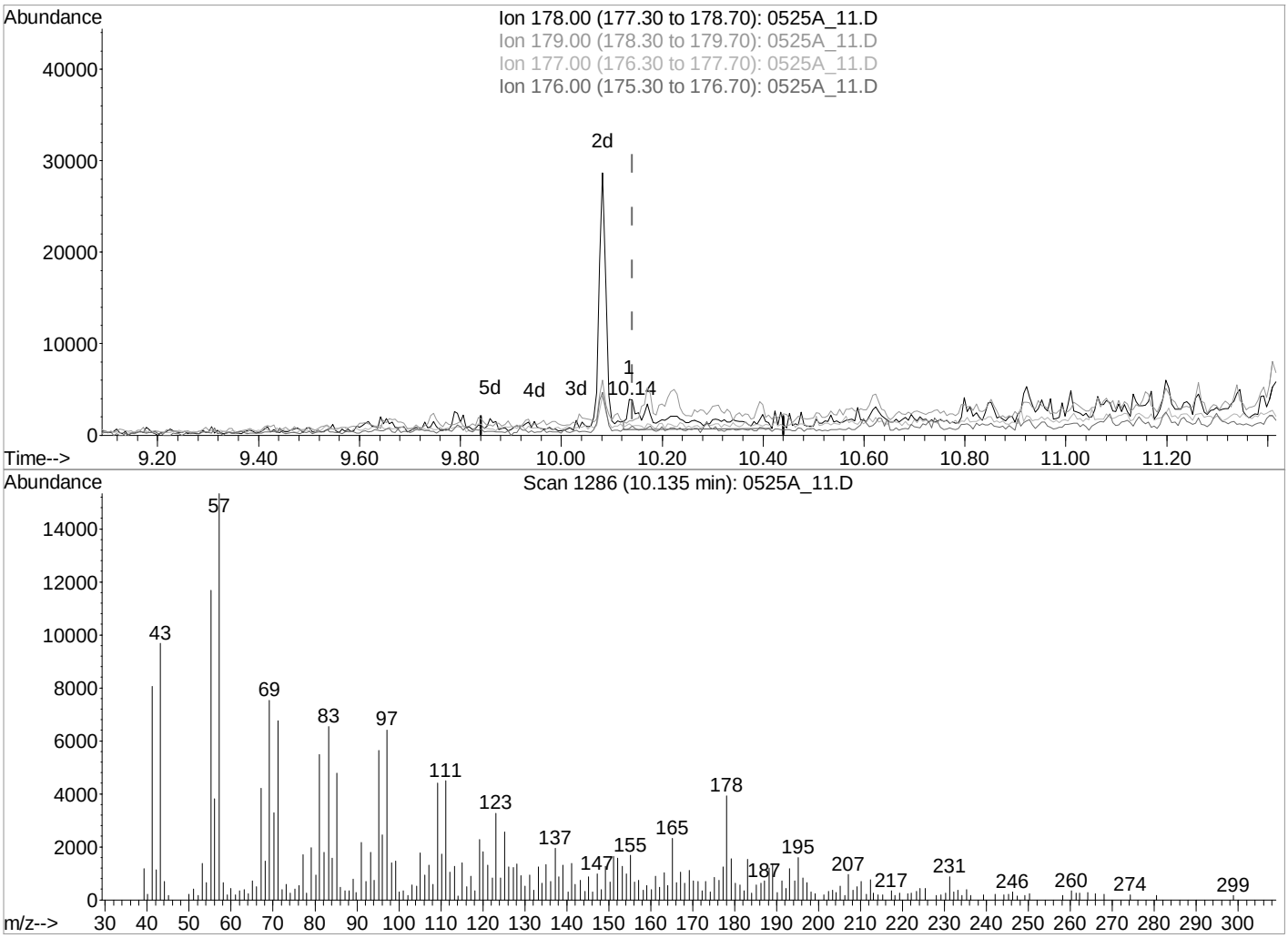
Tgt Ion:149 Resp: 9361

Ion	Ratio	Lower	Upper
149	100		
167	35.0	9.6	49.6
279	4.9	0.0	24.8
150	12.7	0.0	31.6



Data File : C:\MSDCHEM\1\DATA\052516A\0525A 11.D Vial: 33
Acq On : 25 May 2016 6:35 pm Operator: 280
Sample : L836976-03 10x WG874391 15-0.5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 0.33
MS Integration Params: RTEINT.P
Quant Time: Sep 20 18:05 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Multiple Level Calibration



TIC: 0525A_11.D

(73) Anthracene (MT)

10.14min (-0.006) 103.7927850 ppb

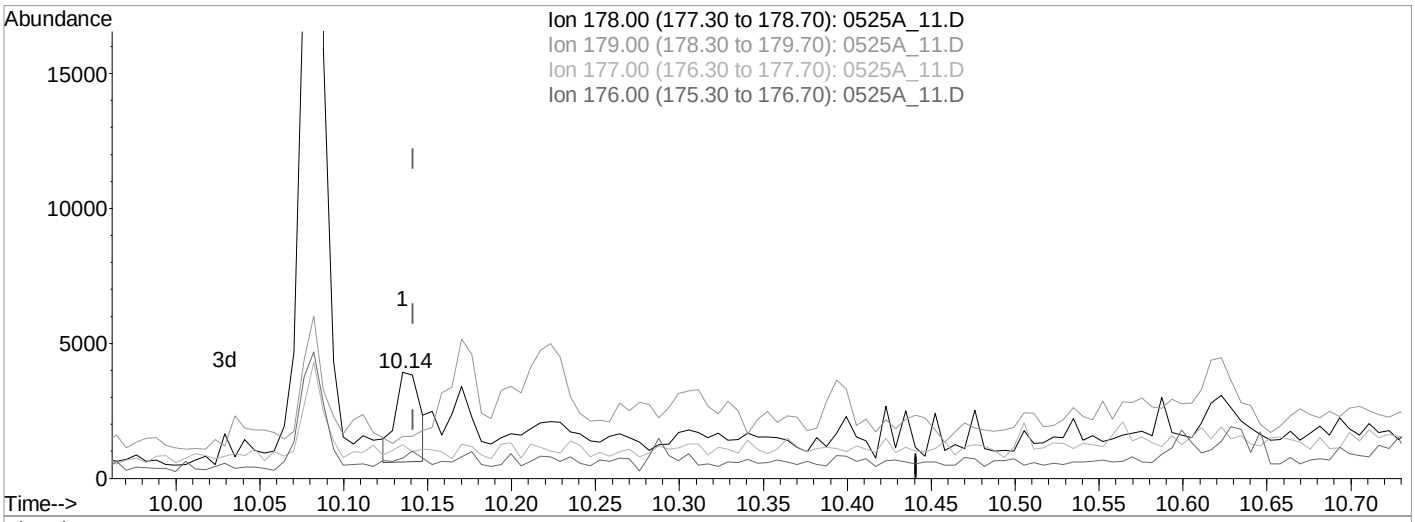
Qvalue = 79

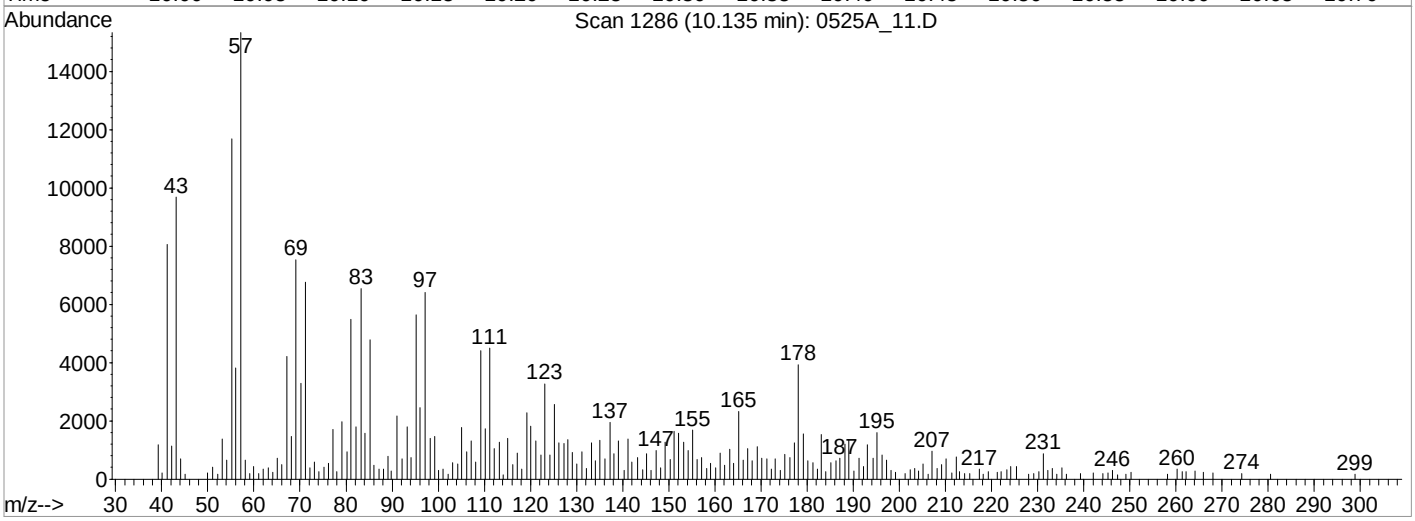
response 18463

Ion	Exp%	Act%
178.00	100	100
179.00	14.70	1.23
177.00	9.10	12.04
176.00	17.00	9.68

Data File : C:\MSDCHEM\1\DATA\052516A\0525A 11.D Vial: 33
Acq On : 25 May 2016 6:35 pm Operator: 280
Sample : L836976-03 10x WG874391 15-0.5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 0.33
MS Integration Params: RTEINT.P
Quant Time: Sep 20 18:06 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Multiple Level Calibration





TIC: 0525A_11.D

(73) Anthracene (MT)

10.14min (-0.006) 18.6189516 ppb m

response 3312

Ion	Exp%	Act%
178.00	100	100
179.00	14.70	39.67#
177.00	9.10	31.71#
176.00	17.00	18.94

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052516A\0525A 12.D Vial: 34
Acq On : 25 May 2016 6:58 pm Operator: 280
Sample : L836976-04 20x WG874391 15-0.5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 0.67
MS Integration Params: RTEINT.P
Quant Time: Sep 20 18:06 2016 Quant Results File: S804D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Initial Calibration
DataAcq Meth : BNA4E

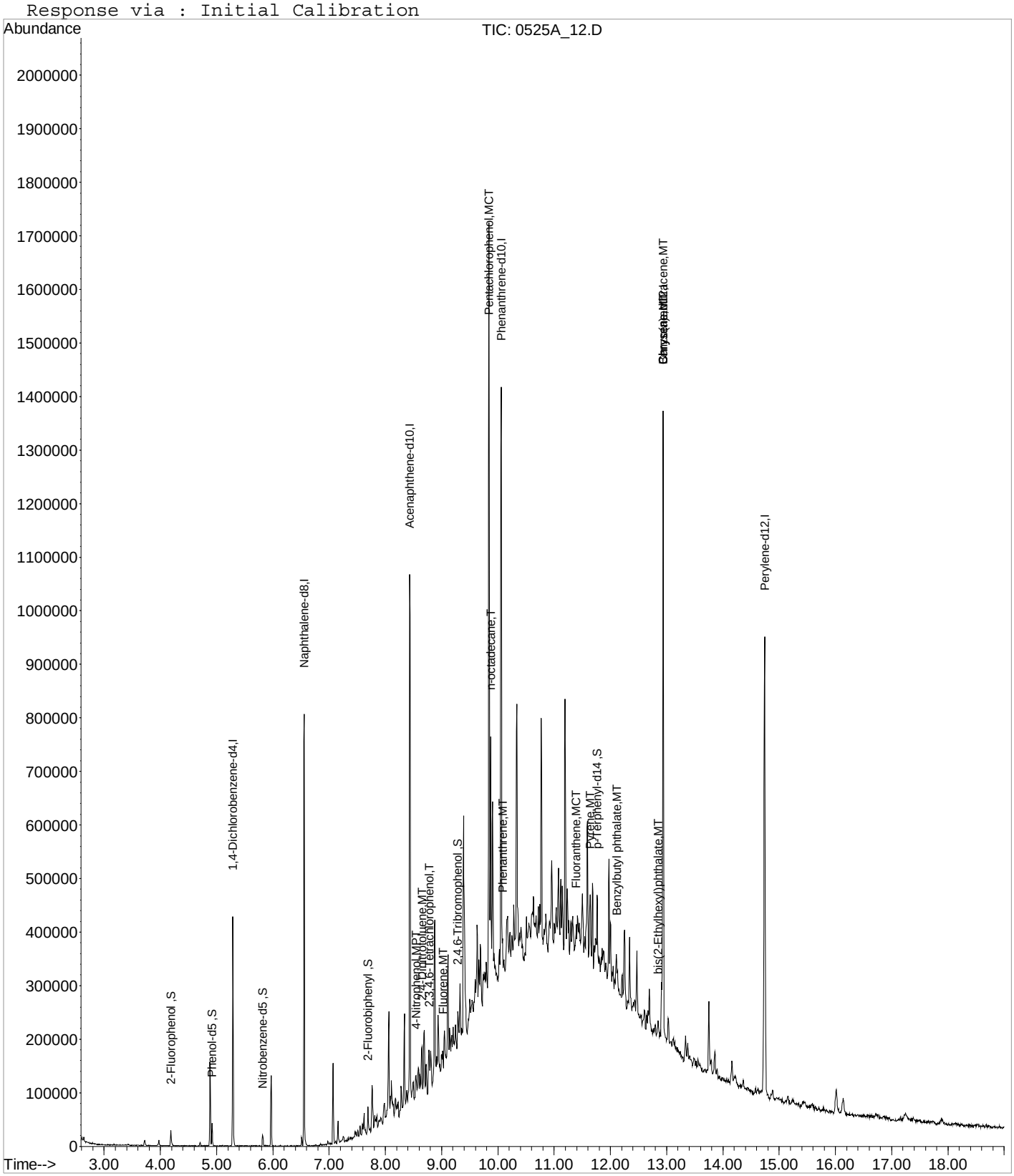
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.29	152	64363	8000.00	ppb	0.00
22) Naphthalene-d8	6.56	136	376589	8000.00	ppb	0.00
40) Acenaphthene-d10	8.43	164	236846	8000.00	ppb	0.00
64) Phenanthrene-d10	10.06	188	437963	8000.00	ppb	0.00
78) Chrysene-d12	12.94	240	445673	8000.00	ppb	0.00
88) Perylene-d12	14.74	264	464391	8000.00	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	4.18	112	10706	475.8346954	ppb	0.00
Spiked Amount 666.000	Range 21 - 116		Recovery = 71.45%			
7) Phenol-d5	4.92	99	13672	465.3299042	ppb	0.00
Spiked Amount 666.000	Range 26 - 121		Recovery = 69.87%			
23) Nitrobenzene-d5	5.82	82	5902	239.6073849	ppb	0.00
Spiked Amount 333.000	Range 22 - 129		Recovery = 71.95%			
44) 2-Fluorobiphenyl	7.69	172	14415	246.4424824	ppb	0.00
Spiked Amount 333.000	Range 35 - 129		Recovery = 74.01%			
67) 2,4,6-Tribromophenol	9.29	330	3614	522.3560910	ppb	0.00
Spiked Amount 666.000	Range 22 - 142		Recovery = 78.43%			
81) p-Terphenyl-d14	11.77	244	19977	238.0700358	ppb	0.00
Spiked Amount 333.000	Range 22 - 128		Recovery = 71.49%			
Target Compounds						Qvalue
56) 2,3,4,6-Tetrachlorophenol	8.78	232	3965	495.0169215	ppb	88
70) n-octadecane	9.87	55	23442	2043.1026936	ppb #	91
71) Pentachlorophenol	9.84	266	158934	17188.2800389	ppb	95
72) Phenanthrene	10.08	178	14085	142.8277803	ppb	93
80) Pyrene	11.63	202	20842	173.1399011	ppb	92

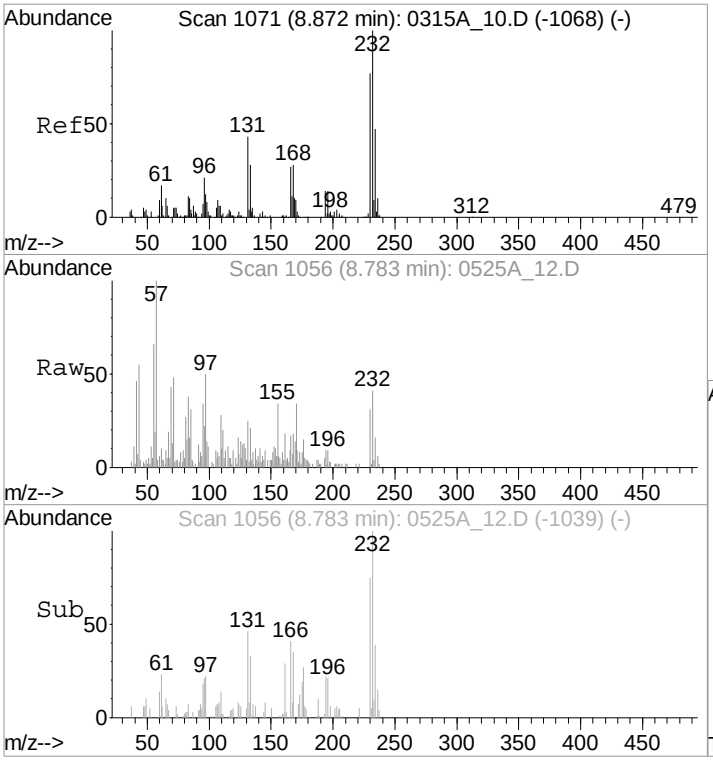
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052516A\0525A 12.D Vial: 34
Acq On : 25 May 2016 6:58 pm Operator: 280
Sample : L836976-04 20x WG874391 15-0.5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 0.67
MS Integration Params: RTEINT.P
Quant Time: Sep 20 18:06 2016 Quant Results File: S804D25P.RES

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Initial Calibration

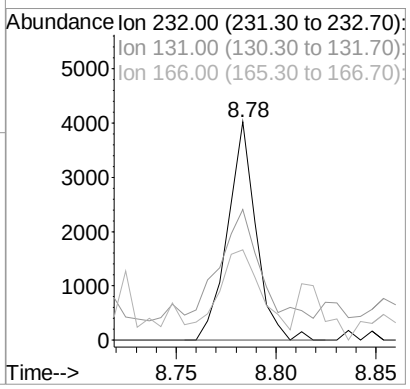


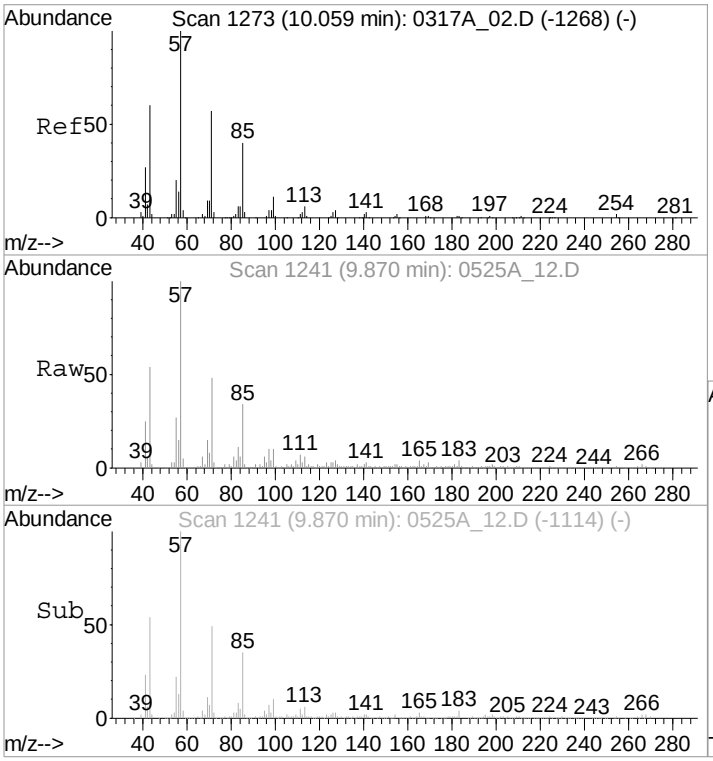


#56
2,3,4,6-Tetrachlorophenol
Concen: 495.0169215 ppb
RT: 8.78 min Scan# 1056
Delta R.T. -0.00 min
Lab File: 0525A_12.D
Acq: 25 May 2016 6:58 pm

Tgt Ion:232 Resp: 3965

Ion	Ratio	Lower	Upper
232	100		
131	48.5	38.2	78.2
166	34.1	19.9	59.9

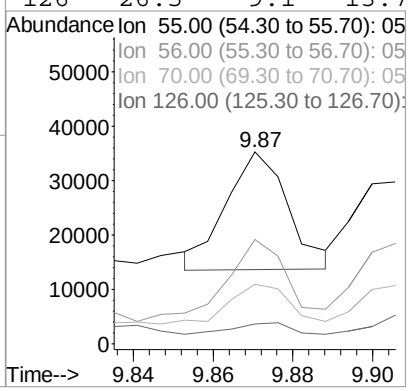


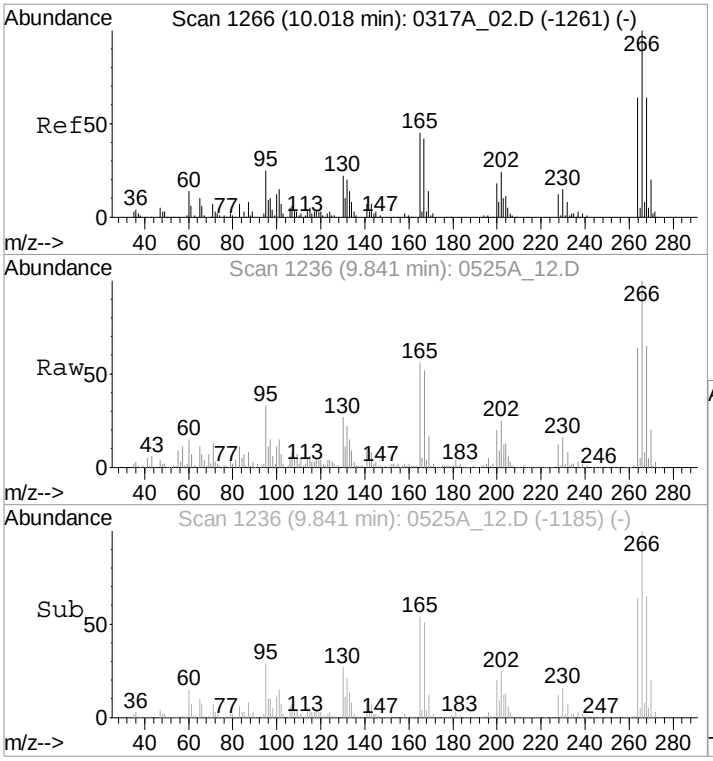


#70
n-octadecane
Concen: 2043.1026936 ppb
RT: 9.87 min Scan# 1241
Delta R.T. -0.01 min
Lab File: 0525A_12.D
Acq: 25 May 2016 6:58 pm

Tgt Ion: 55 Resp: 23442

Ion	Ratio	Lower	Upper
55	100		
56	70.9	56.0	84.0
70	33.9	33.7	50.5
126	26.5	9.1	13.7#

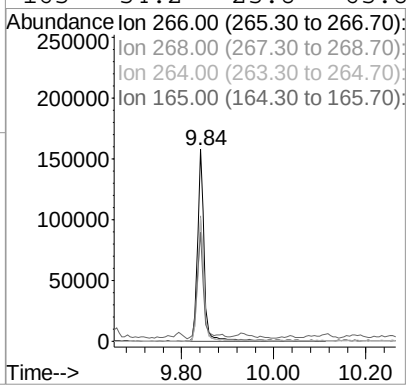


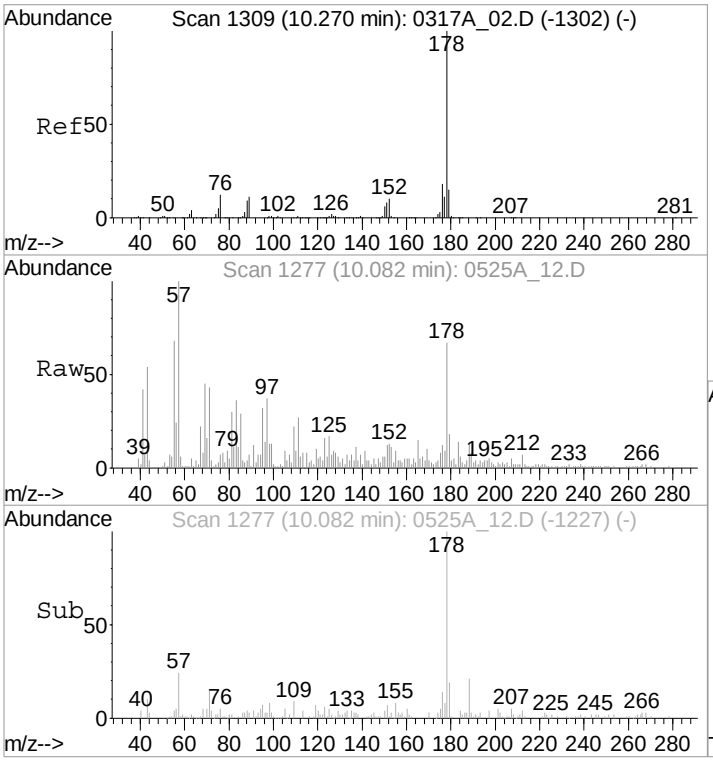


#71
Pentachlorophenol
Concen: 17188.2800389 ppb
RT: 9.84 min Scan# 1236
Delta R.T. 0.00 min
Lab File: 0525A_12.D
Acq: 25 May 2016 6:58 pm

Tgt Ion:266 Resp: 158934

Ion	Ratio	Lower	Upper
266	100		
268	65.3	42.4	82.4
264	64.1	45.7	85.7
165	54.2	25.8	65.8

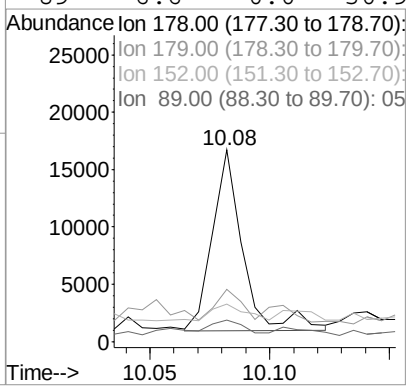


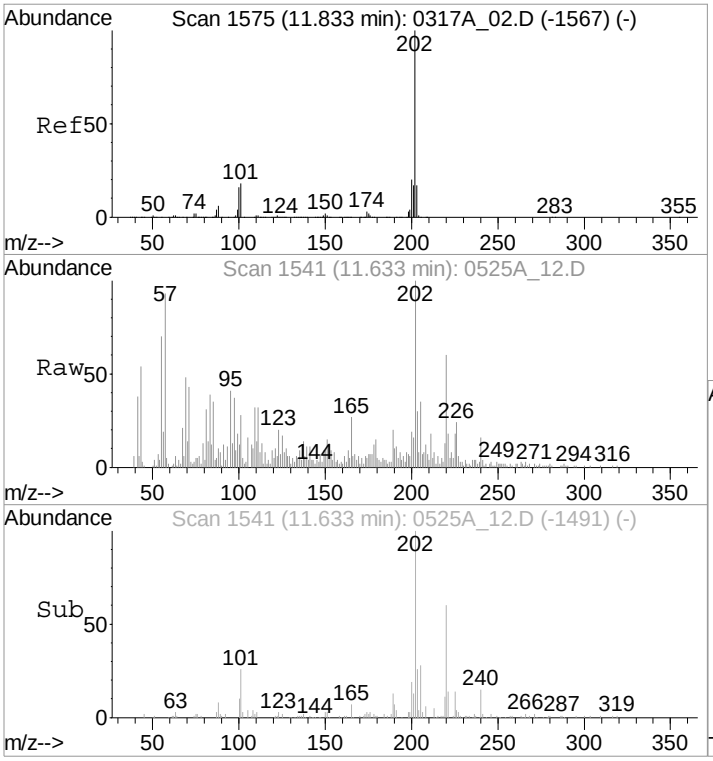


#72
Phenanthrene
Concen: 142.8277803 ppb
RT: 10.08 min Scan# 1277
Delta R.T. -0.01 min
Lab File: 0525A_12.D
Acq: 25 May 2016 6:58 pm

Tgt Ion:178 Resp: 14085

Ion	Ratio	Lower	Upper
178	100		
179	17.8	0.0	34.5
152	9.1	0.0	29.2
89	6.6	0.0	30.9

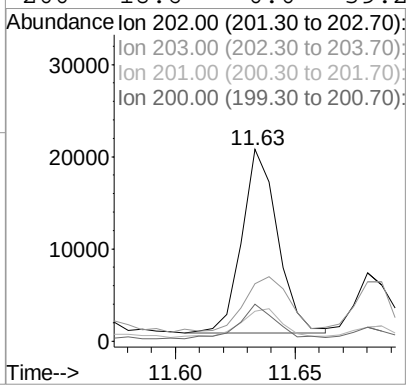




#80
Pyrene
Concen: 173.1399011 ppb
RT: 11.63 min Scan# 1541
Delta R.T. -0.01 min
Lab File: 0525A_12.D
Acq: 25 May 2016 6:58 pm

Tgt Ion:202 Resp: 20842

Ion	Ratio	Lower	Upper
202	100		
203	24.5	0.0	36.6
201	13.7	0.0	36.5
200	18.6	0.0	39.2



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052516A\0525A 13.D Vial: 35
Acq On : 25 May 2016 7:21 pm Operator: 280
Sample : L836976-05 50x WG874391 15-0.5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 1.67
MS Integration Params: RTEINT.P
Quant Time: Sep 20 18:07 2016 Quant Results File: S804D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Initial Calibration
DataAcq Meth : BNA4E

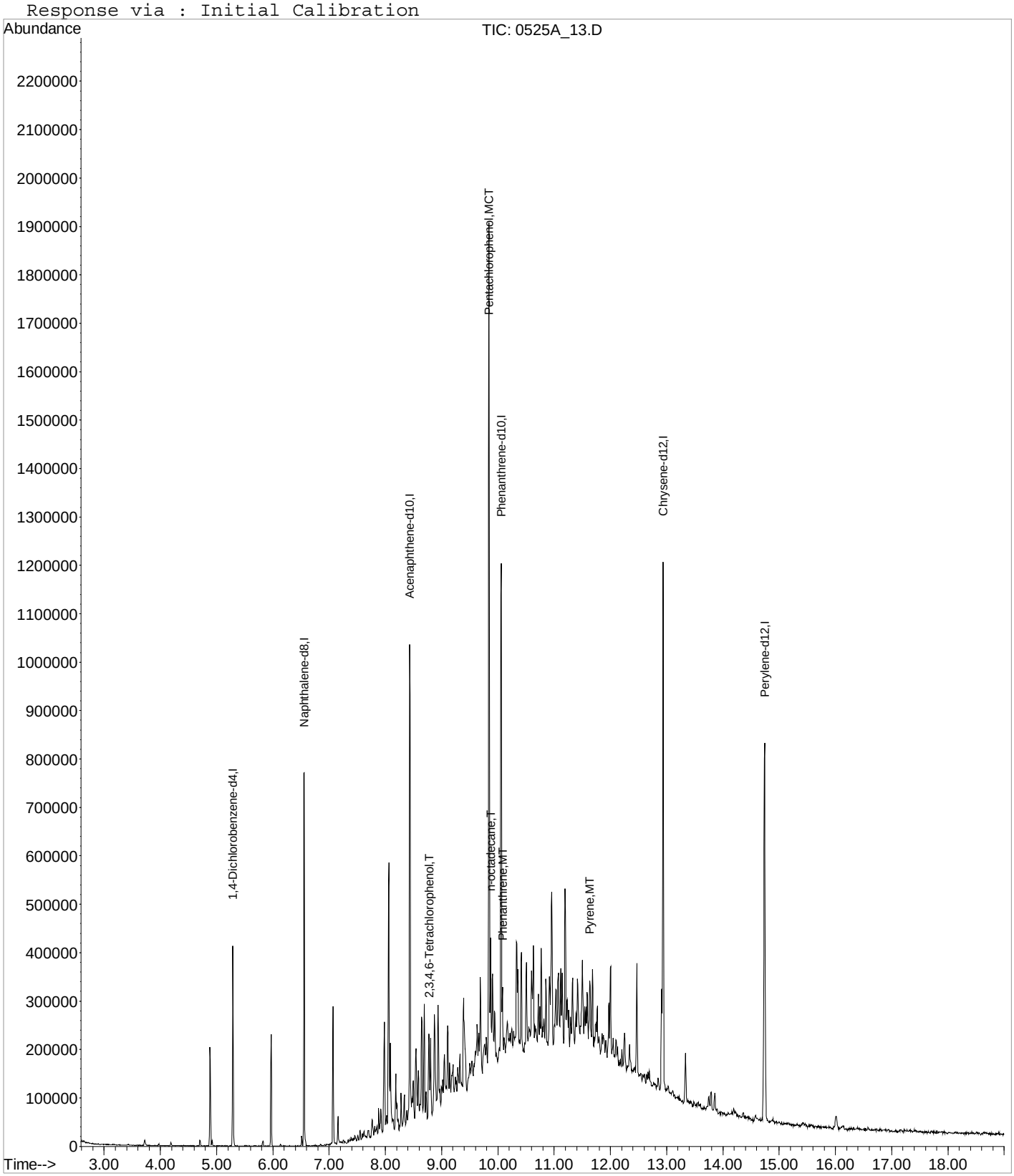
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.29	152	65512	8000.00	ppb	0.00
22) Naphthalene-d8	6.56	136	369589	8000.00	ppb	0.00
40) Acenaphthene-d10	8.43	164	228067	8000.00	ppb	0.00
64) Phenanthrene-d10	10.06	188	418047	8000.00	ppb	0.00
78) Chrysene-d12	12.94	240	424588	8000.00	ppb	0.00
88) Perylene-d12	14.74	264	438665	8000.00	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	4.18	112	2857	312.8216261	ppb	0.00
Spiked Amount 666.000	Range 21 - 116		Recovery = 46.97%			
7) Phenol-d5	4.92	99	3568	299.1654399	ppb	0.00
Spiked Amount 666.000	Range 26 - 121		Recovery = 44.92%			
23) Nitrobenzene-d5	5.82	82	1643	170.4234657	ppb	0.00
Spiked Amount 333.000	Range 22 - 129		Recovery = 51.18%			
44) 2-Fluorobiphenyl	7.69	172	4726	210.3974597	ppb	0.00
Spiked Amount 333.000	Range 35 - 129		Recovery = 63.18%			
67) 2,4,6-Tribromophenol	9.29	330	794	301.4765733	ppb	0.00
Spiked Amount 666.000	Range 22 - 142		Recovery = 45.27%			
81) p-Terphenyl-d14	11.76	244	5729	179.6983711	ppb	0.00
Spiked Amount 333.000	Range 22 - 128		Recovery = 53.96%			
Target Compounds						Qvalue
56) 2,3,4,6-Tetrachlorophenol	8.78	232	6424	2088.4699568	ppb	93
70) n-octadecane	9.87	55	12946	2964.0511249	ppb	90
71) Pentachlorophenol	9.84	266	188461	53541.6377070	ppb	95
72) Phenanthrene	10.08	178	47448	1263.9453583	ppb	95
77) Fluoranthene	11.38	202	9241	243.2662792	ppb	96
80) Pyrene	11.63	202	26256	574.0863062	ppb	96

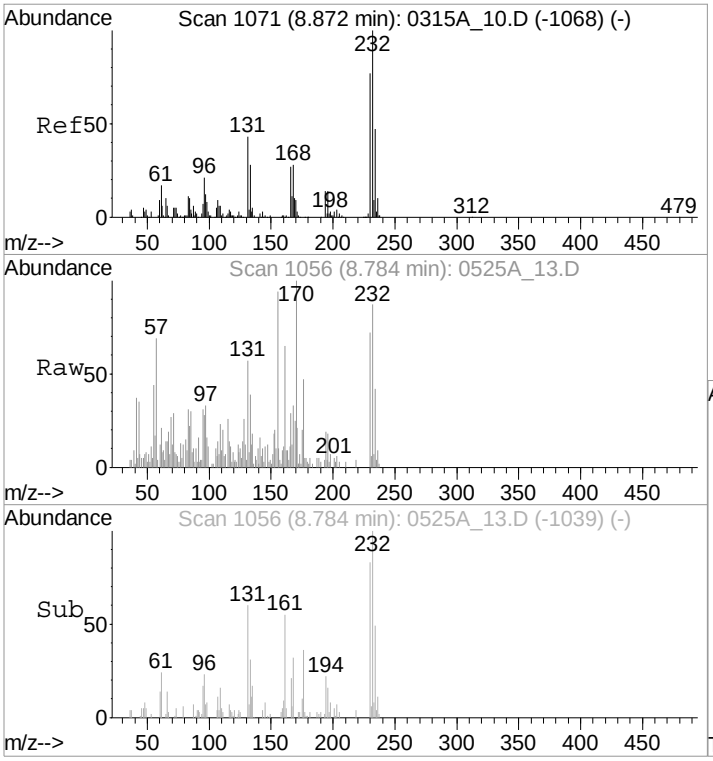
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052516A\0525A 13.D Vial: 35
Acq On : 25 May 2016 7:21 pm Operator: 280
Sample : L836976-05 50x WG874391 15-0.5 Inst : BNAMS4
Misc : soil ISTD 16E03322 Multiplr: 1.67
MS Integration Params: RTEINT.P
Quant Time: Sep 20 18:07 2016 Quant Results File: S804D25P.RES

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Initial Calibration

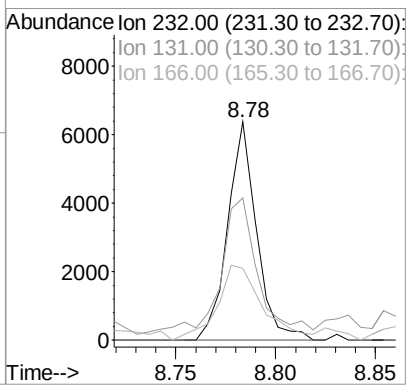


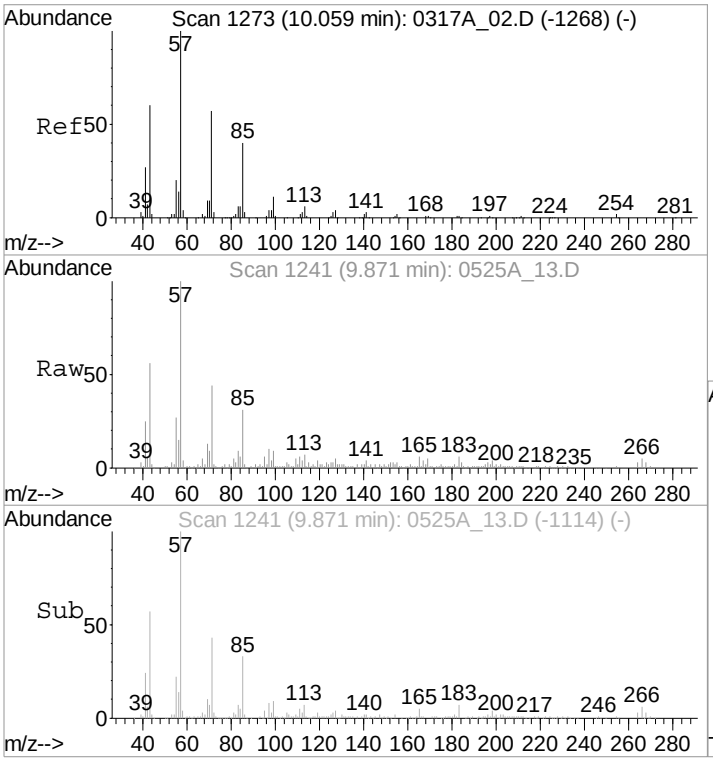


#56
2,3,4,6-Tetrachlorophenol
Concen: 2088.4699568 ppb
RT: 8.78 min Scan# 1056
Delta R.T. -0.00 min
Lab File: 0525A_13.D
Acq: 25 May 2016 7:21 pm

Tgt Ion:232 Resp: 6424

Ion	Ratio	Lower	Upper
232	100		
131	57.0	38.2	78.2
166	30.3	19.9	59.9

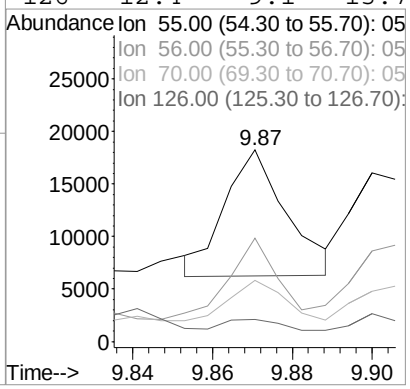


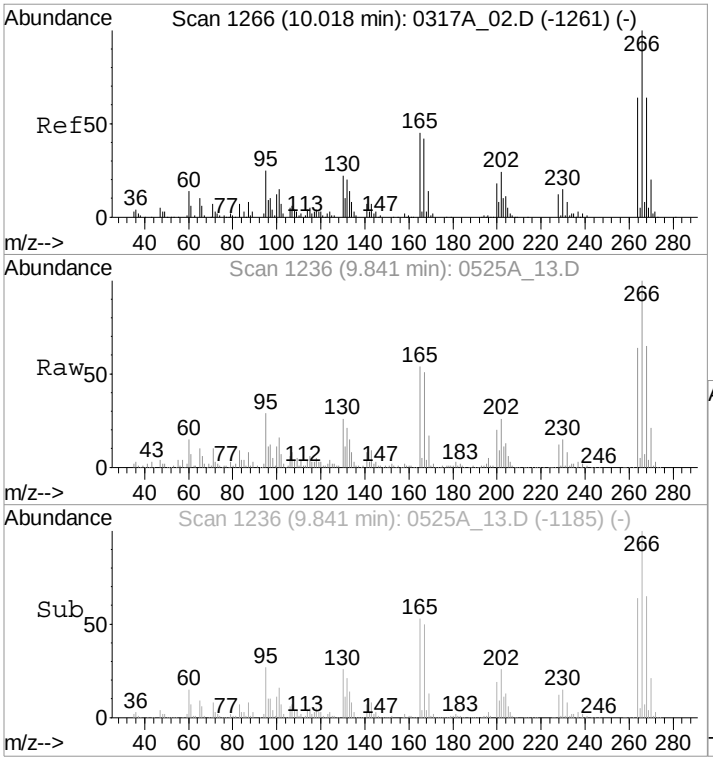


#70
n-octadecane
Concen: 2964.0511249 ppb
RT: 9.87 min Scan# 1241
Delta R.T. -0.01 min
Lab File: 0525A_13.D
Acq: 25 May 2016 7:21 pm

Tgt Ion: 55 Resp: 12946

Ion	Ratio	Lower	Upper
55	100		
56	60.5	56.0	84.0
70	36.3	33.7	50.5
126	12.4	9.1	13.7

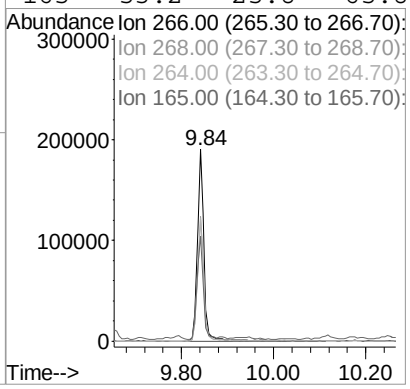


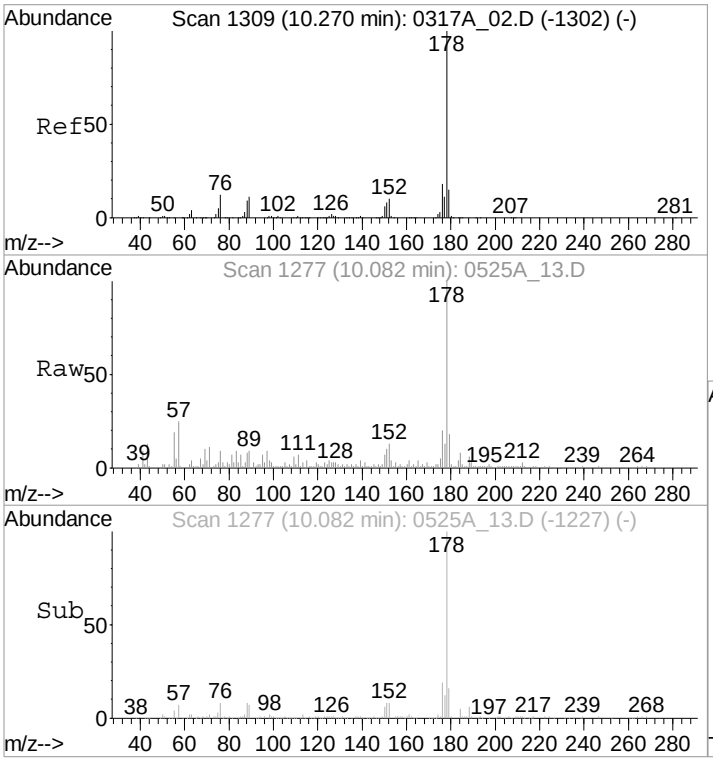


#71
Pentachlorophenol
Concen: 53541.6377070 ppb
RT: 9.84 min Scan# 1236
Delta R.T. 0.00 min
Lab File: 0525A_13.D
Acq: 25 May 2016 7:21 pm

Tgt Ion:266 Resp: 188461

Ion	Ratio	Lower	Upper
266	100		
268	65.0	42.4	82.4
264	64.2	45.7	85.7
165	53.2	25.8	65.8

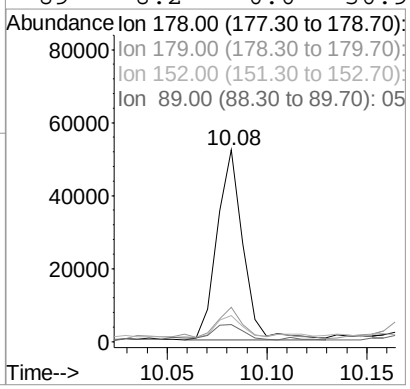


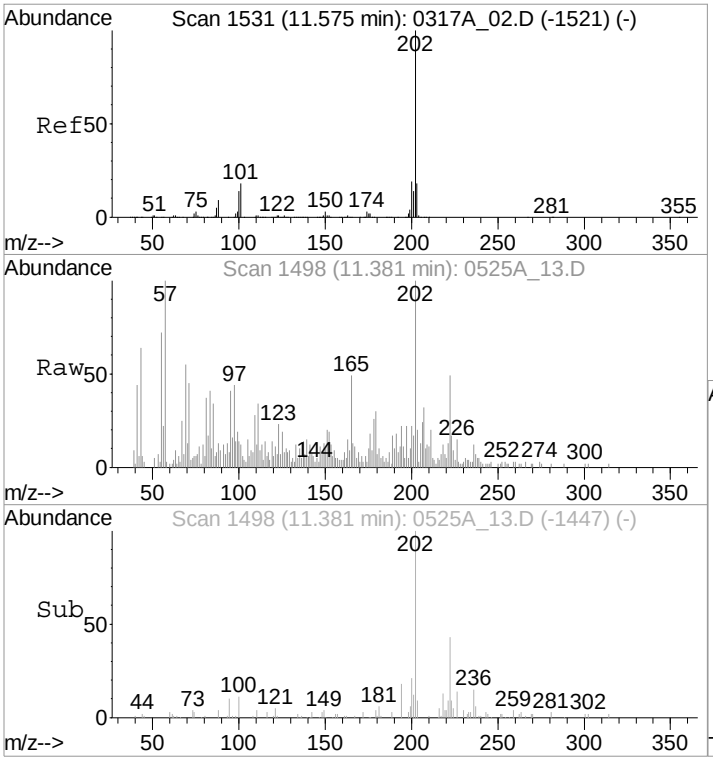


#72
Phenanthrene
Concen: 1263.9453583 ppb
RT: 10.08 min Scan# 1277
Delta R.T. -0.01 min
Lab File: 0525A_13.D
Acq: 25 May 2016 7:21 pm

Tgt Ion:178 Resp: 47448

Ion	Ratio	Lower	Upper
178	100		
179	16.4	0.0	34.5
152	10.9	0.0	29.2
89	8.2	0.0	30.9

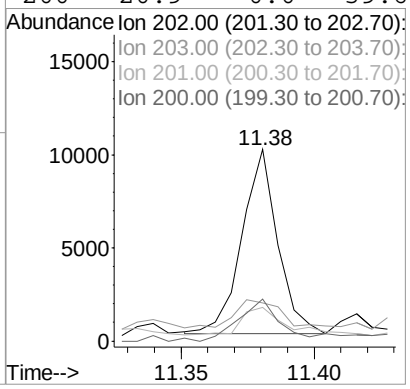


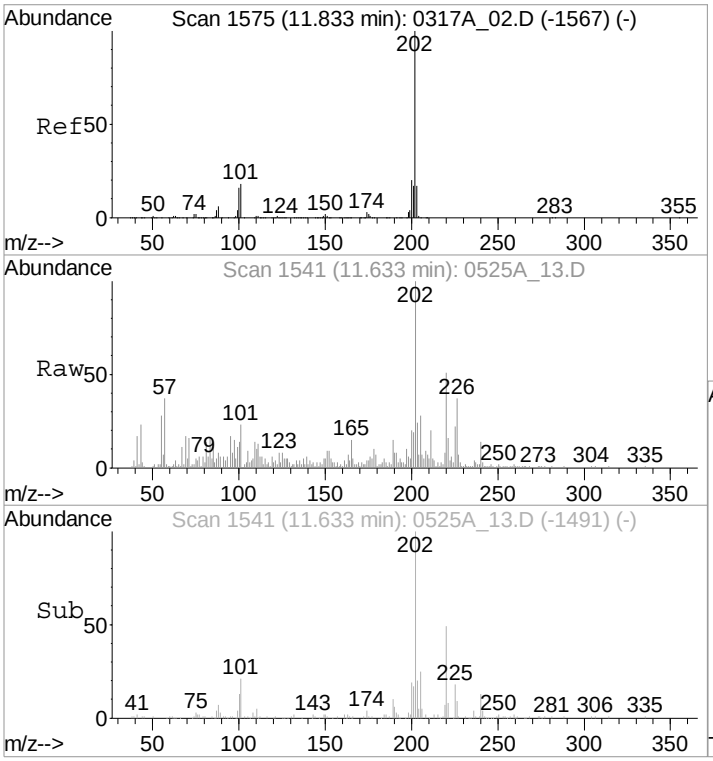


#77
Fluoranthene
Concen: 243.2662792 ppb
RT: 11.38 min Scan# 1498
Delta R.T. -0.00 min
Lab File: 0525A_13.D
Acq: 25 May 2016 7:21 pm

Tgt Ion:202 Resp: 9241

Ion	Ratio	Lower	Upper
202	100		
203	13.5	0.0	37.1
201	14.8	0.0	34.1
200	20.9	0.0	39.6

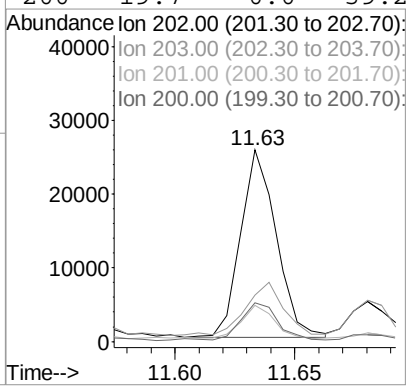




#80
Pyrene
Concen: 574.0863062 ppb
RT: 11.63 min Scan# 1541
Delta R.T. -0.01 min
Lab File: 0525A_13.D
Acq: 25 May 2016 7:21 pm

Tgt Ion:202 Resp: 26256

Ion	Ratio	Lower	Upper
202	100		
203	21.2	0.0	36.6
201	17.3	0.0	36.5
200	19.7	0.0	39.2



Calibration

Instrument: BNAMS4
Method: S804D25P

Initial Calibration Run Log

File ID	Level ID	Date Analyzed
0425B_03.D	500	4/25/2016 4:18:00 PM
0425B_04.D	1000	4/25/2016 4:41:00 PM
0425B_05.D	4000	4/25/2016 5:05:00 PM
0425B_02.D	10000	4/25/2016 3:54:00 PM
0425B_06.D	20000	4/25/2016 5:28:00 PM
0425B_07.D	30000	4/25/2016 5:51:00 PM
0425B_08.D	40000	4/25/2016 6:15:00 PM
0425B_09.D	50000	4/25/2016 6:38:00 PM
0425B_11.D	1K1	4/25/2016 7:25:00 PM
0425B_12.D	4K1	4/25/2016 7:48:00 PM
0425B_10.D	10K1	4/25/2016 7:02:00 PM
0425B_13.D	20K1	4/25/2016 8:12:00 PM
0425B_14.D	30K1	4/25/2016 8:35:00 PM
0425B_15.D	40K1	4/25/2016 8:58:00 PM
0425B_16.D	50K1	4/25/2016 9:22:00 PM

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

Injection Log

Instrument ID : BNAMS4
Computer Name : SVCOMPH
Released By : Allen Fuller
Date Released : 4/26/2016 11:30:55 AM
Run ID : 042516B
Signature : _____

#	File ID	Sample ID	Method	WG	Product	Matrix	Account #	State	Dil.	Mult.	Injected	Misc.
1	0425B_01	TUNE 50 PPM 16D04430								1	04/25/16 1531	
2	0425B_02	MSTD SVMS 10K PPB 16D25863	S804D25P						1	1	04/25/16 1554	"8270 calibration ISTD 16D22768"
3	0425B_03	STD SVMS 500 PPB 16D25863	S804D25P						1	1	04/25/16 1618	"8270 calibration ISTD 16D22768"
4	0425B_04	STD SVMS 1K PPB 16D25863	S804D25P						1	1	04/25/16 1641	"8270 calibration ISTD 16D22768"
5	0425B_04 MRL	MRL SVMS 1K PPB 16D25863	S804D25P						1	1	04/25/16 1641	"8270 calibration ISTD 16D22768"
6	0425B_05	STD SVMS 4K PPB 16D25863	S804D25P						1	1	04/25/16 1705	"8270 calibration ISTD 16D22768"
7	0425B_05 MRL	MRL SVMS 4K PPB 16D25863	S804D25P						1	1	04/25/16 1705	"8270 calibration ISTD 16D22768"
8	0425B_06	STD SVMS 20K PPB 16D25863	S804D25P						1	1	04/25/16 1728	"8270 calibration ISTD 16D22768"
9	0425B_07	STD SVMS 30K PPB 16D25863	S804D25P						1	1	04/25/16 1751	"8270 calibration ISTD 16D22768"
10	0425B_08	STD SVMS 40K PPB 16D25863	S804D25P						1	1	04/25/16 1815	"8270 calibration ISTD 16D22768"
11	0425B_09	STD SVMS 50K PPB 16D25863	S804D25P						1	1	04/25/16 1838	"8270 calibration ISTD 16D22768"
12	0425B_10	MSTD TCL 10K1 PPB 16D25867	S804D25P						1	1	04/25/16 1902	"8270 TCL calibration ISTD 16D22768"
13	0425B_11	STD TCL 1K1 PPB 16D25867	S804D25P						1	1	04/25/16 1925	"8270 TCL calibration ISTD 16D22768"

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

Injection Log

Instrument ID : BNAMS4
Computer Name : SVCOMPH
Released By : Allen Fuller
Date Released : 4/26/2016 11:30:55 AM
Run ID : 042516B
Signature : _____

#	File ID	Sample ID	Method	WG	Product	Matrix	Account #	State	Dil.	Mult.	Injected	Misc.
14	0425B_12	STD TCL 4K1 PPB 16D25867	S804D25P						1	1	04/25/16 1948	"8270 TCL calibration ISTD 16D22768"
15	0425B_12 MRL	MRL TCL 4K1 PPB 16D25867	S804D25P						1	1	04/25/16 1948	"8270 TCL calibration ISTD 16D22768"
16	0425B_13	STD TCL 20K1 PPB 16D25867	S804D25P						1	1	04/25/16 2012	"8270 TCL calibration ISTD 16D22768"
17	0425B_14	STD TCL 30K1 PPB 16D25867	S804D25P						1	1	04/25/16 2035	"8270 TCL calibration ISTD 16D22768"
18	0425B_15	STD TCL 40K1 PPB 16D25867	S804D25P						1	1	04/25/16 2058	"8270 TCL calibration ISTD 16D22768"
19	0425B_16	STD TCL 50K1 PPB 16D25867	S804D25P						1	1	04/25/16 2122	"8270 TCL calibration ISTD 16D22768"
20	0425B_17	SSCV SVMS 10K PPB 16A25209	S804D25P						1	1	04/25/16 2145	"8270 SSCV ISTD 16D22768"

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516B\0425B 01.D Vial: 1
Acq On : 25 Apr 2016 3:31 pm Operator: 280
Sample : TUNE 50 PPM 16D04430 Inst : BNAMS4
Misc : DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:20 2016 Quant Results File: TUNEC.RES

Quant Method : C:\MSDCHEM\1\METHODS\TUNEC.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed Sep 17 10:33:01 2014
Response via : Initial Calibration
DataAcq Meth : BNA4E

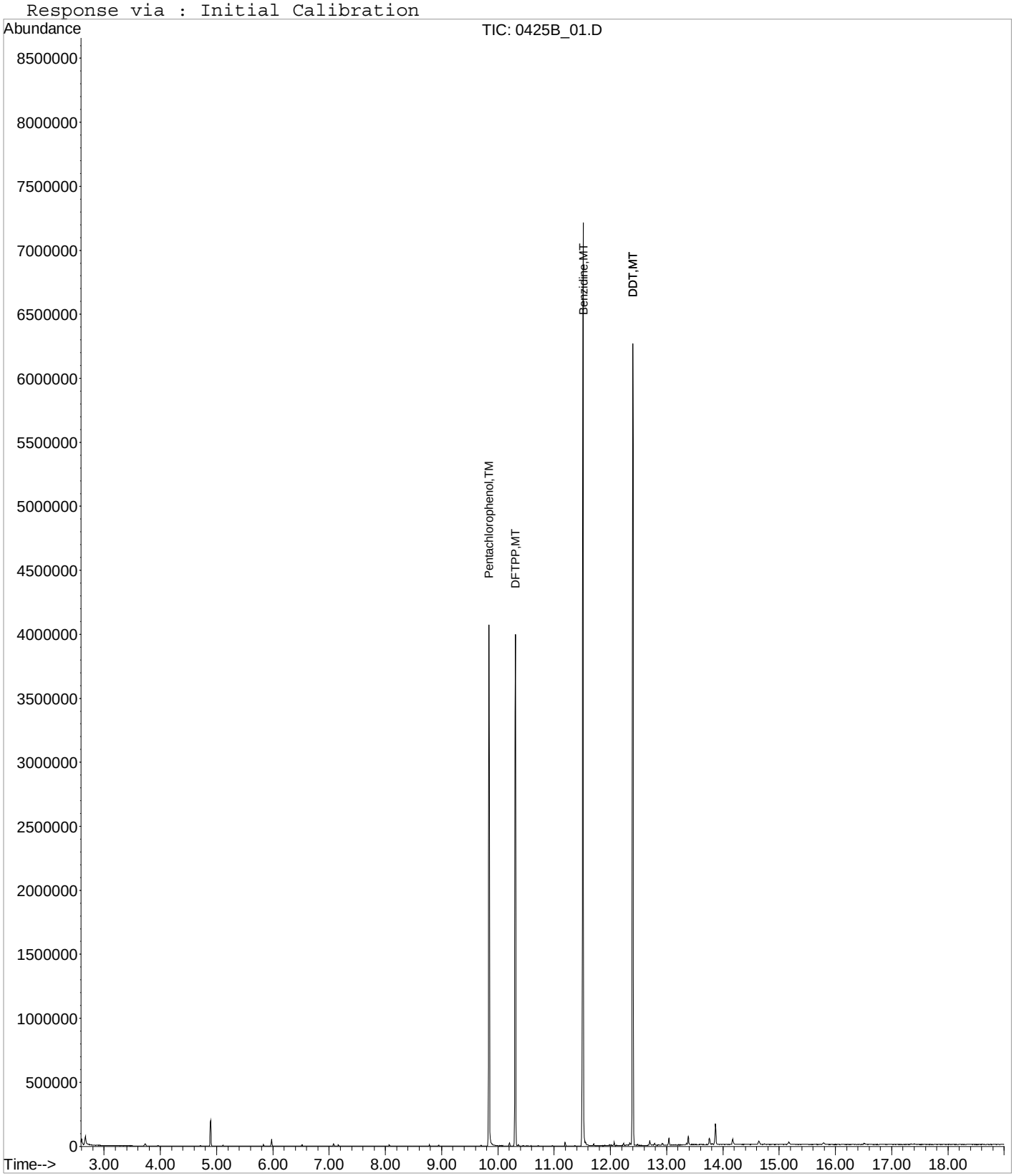
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
Target Compounds						Qvalue
1) Pentachlorophenol	9.84	264	272568	19.6389638	ug/mL	100
2) DFTPP	10.31	198	463277	19.4059792	ug/mL	100
3) Benzidine	11.52	184	3288754	22.3673576	ug/mL	100
4) DDT	12.40	TIC	6659995	101.6758979	ug/ml	100
5) DDT	12.40	235	1259514	93.6008775	ug/mL	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

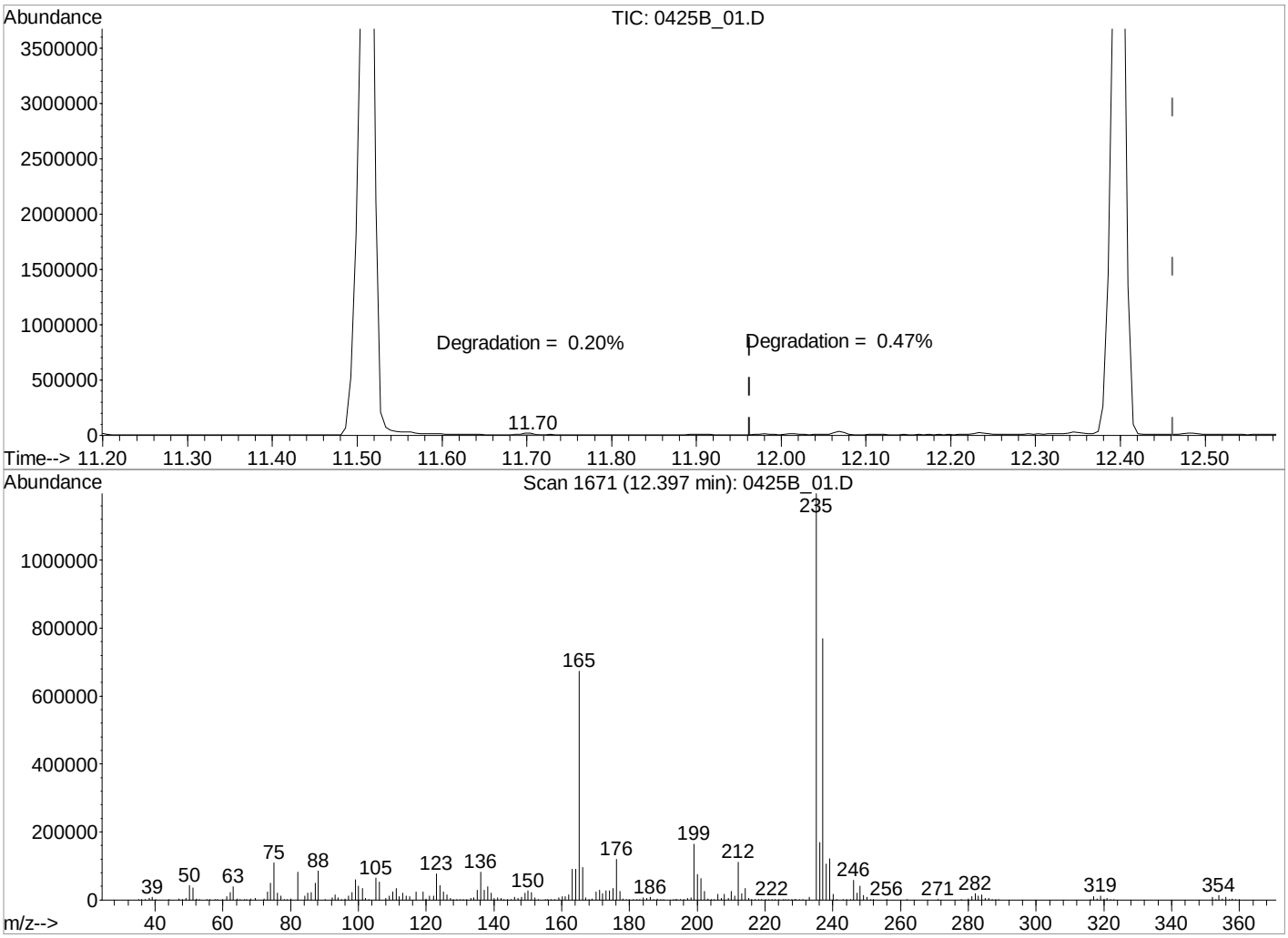
Data File : C:\MSDCHEM\1\DATA\042516B\0425B 01.D Vial: 1
Acq On : 25 Apr 2016 3:31 pm Operator: 280
Sample : TUNE 50 PPM 16D04430 Inst : BNAMS4
Misc : DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:20 2016 Quant Results File: TUNEC.RES

Method : C:\MSDCHEM\1\METHODS\TUNEC.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed Sep 17 10:33:01 2014
Response via : Initial Calibration



Data File : C:\MSDCHEM\1\DATA\042516B\0425B 01.D Vial: 1
Acq On : 25 Apr 2016 3:31 pm Operator: 280
Sample : TUNE 50 PPM 16D04430 Inst : BNAMS4
Misc : DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:20 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\TUNEC.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed Sep 17 10:33:01 2014
Response via : Single Level Calibration



TIC: 0425B_01.D

(4) DDT (MT)

12.40min (-0.065) 101.6758979 ug/ml

Qvalue = 100

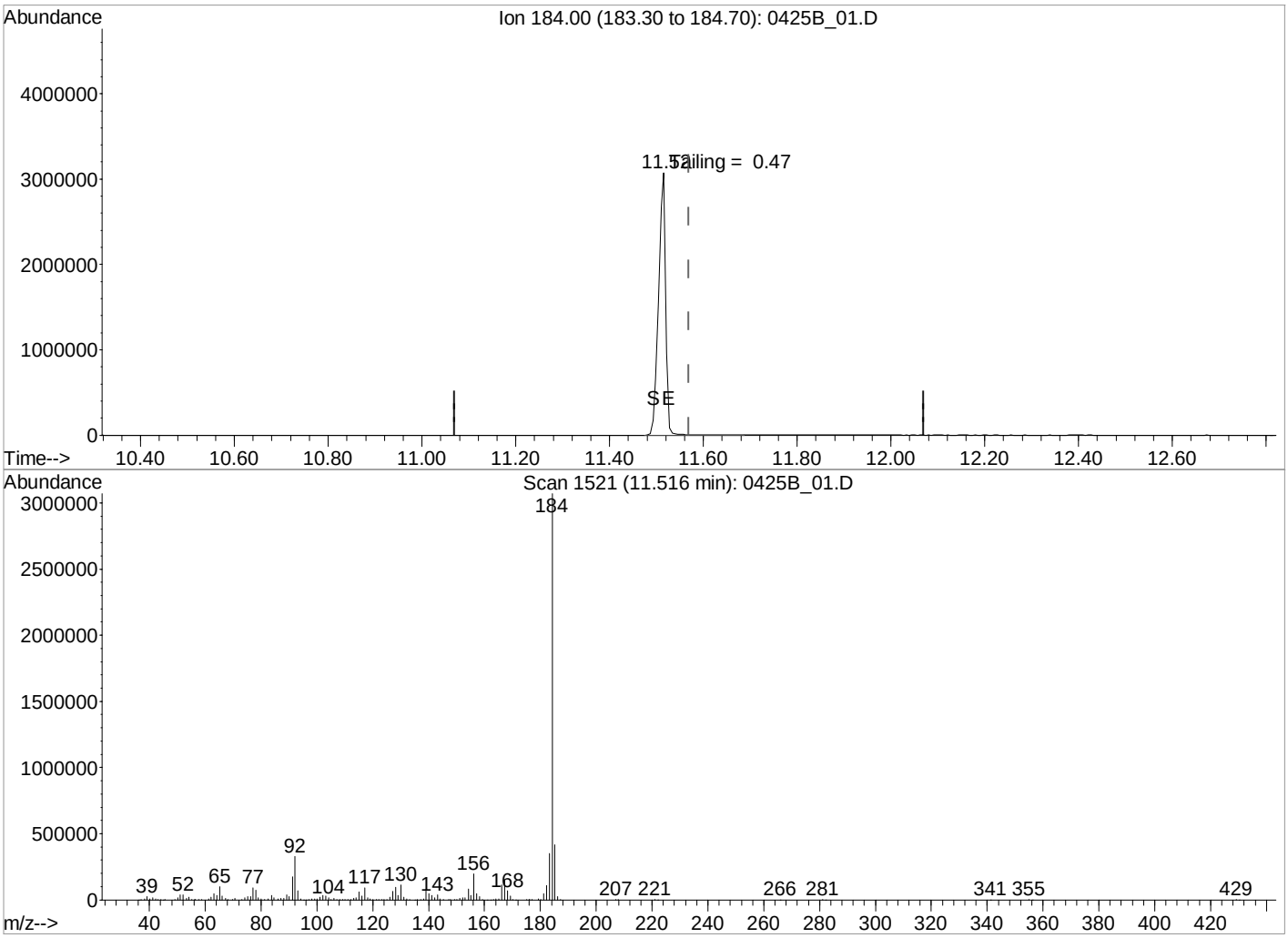
response 6659995

Signal	Exp%	Act%
TIC	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\042516B\0425B 01.D Vial: 1
Acq On : 25 Apr 2016 3:31 pm Operator: 280
Sample : TUNE 50 PPM 16D04430 Inst : BNAMS4
Misc : DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:20 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\TUNEC.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed Sep 17 10:33:01 2014
Response via : Single Level Calibration



TIC: 0425B_01.D

(3) Benzidine (MT)

11.52min (-0.053) 22.3673576 ug/mL

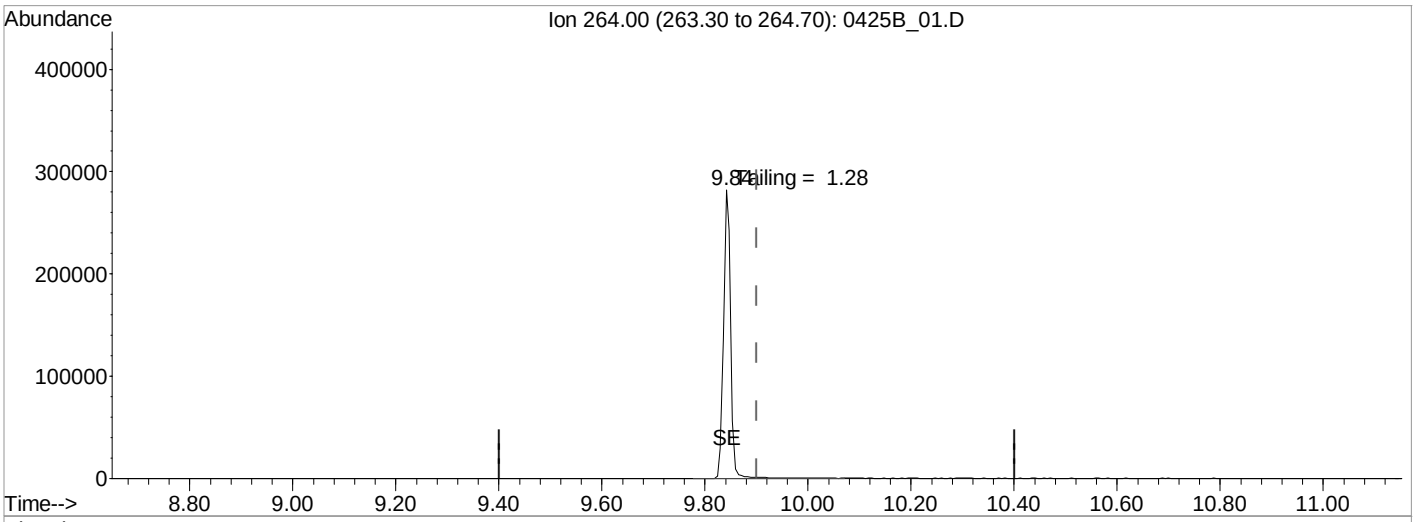
Qvalue = 100

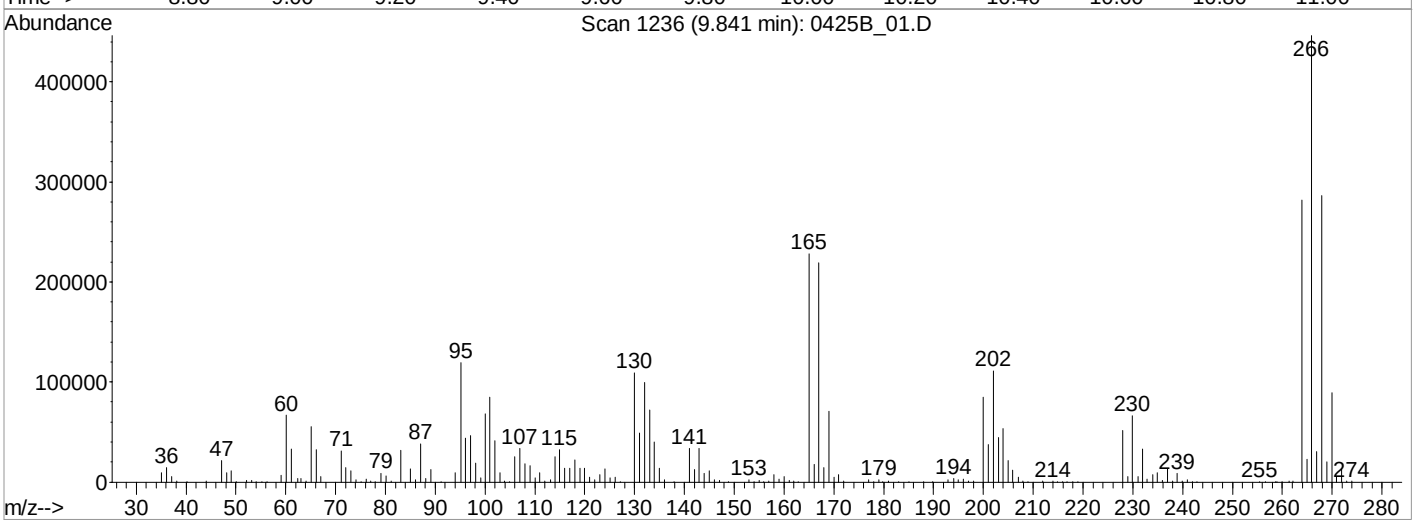
response 3288754

Ion	Exp%	Act%
184.00	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Data File : C:\MSDCHEM\1\DATA\042516B\0425B 01.D Vial: 1
Acq On : 25 Apr 2016 3:31 pm Operator: 280
Sample : TUNE 50 PPM 16D04430 Inst : BNAMS4
Misc : DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:20 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\TUNEC.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed Sep 17 10:33:01 2014
Response via : Single Level Calibration





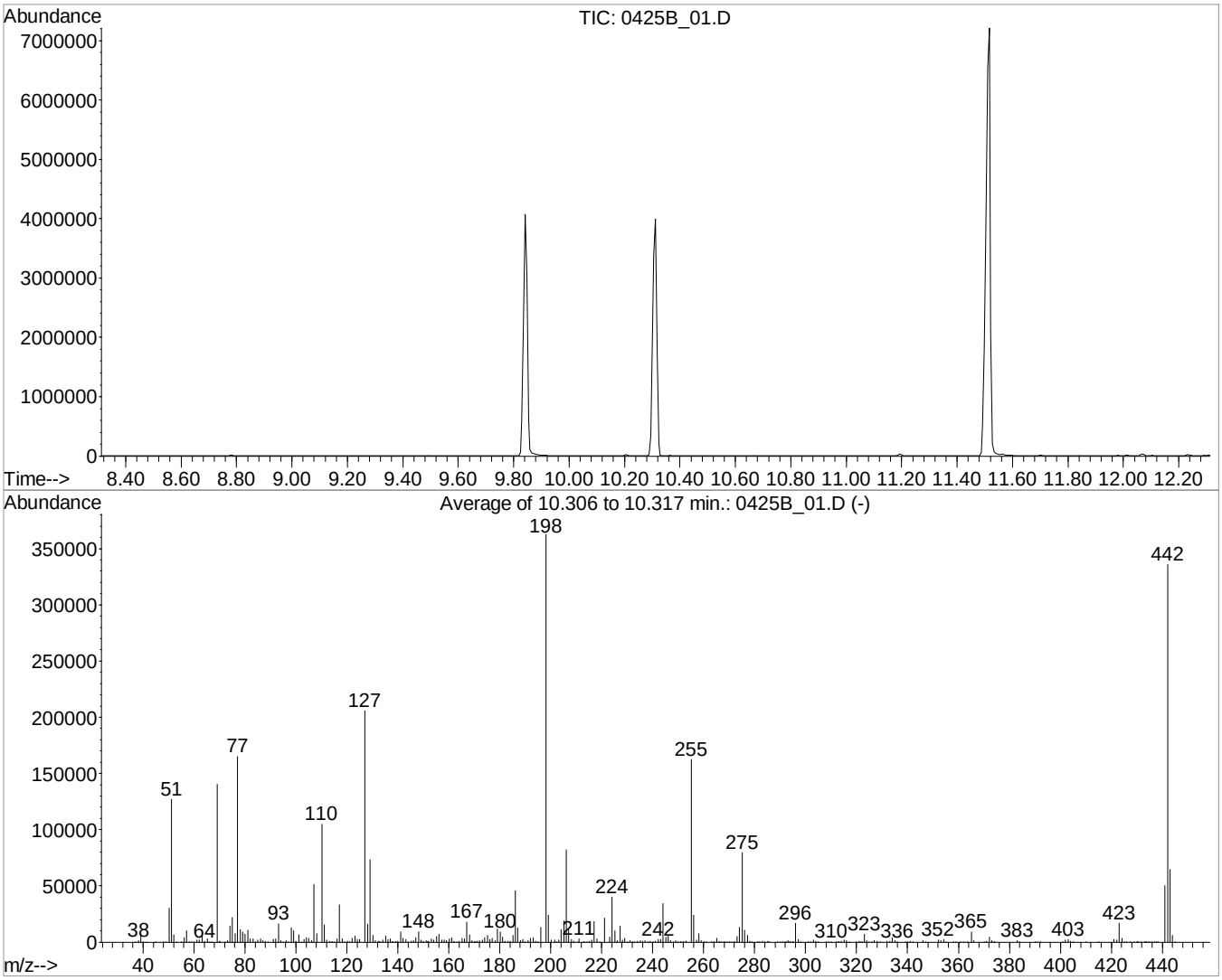
TIC: 0425B_01.D

(1) Pentachlorophenol (TM)

9.84min (-0.059) 19.6389638 ug/mL
Qvalue = 100
response 272568

Ion	Exp%	Act%
264.00	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

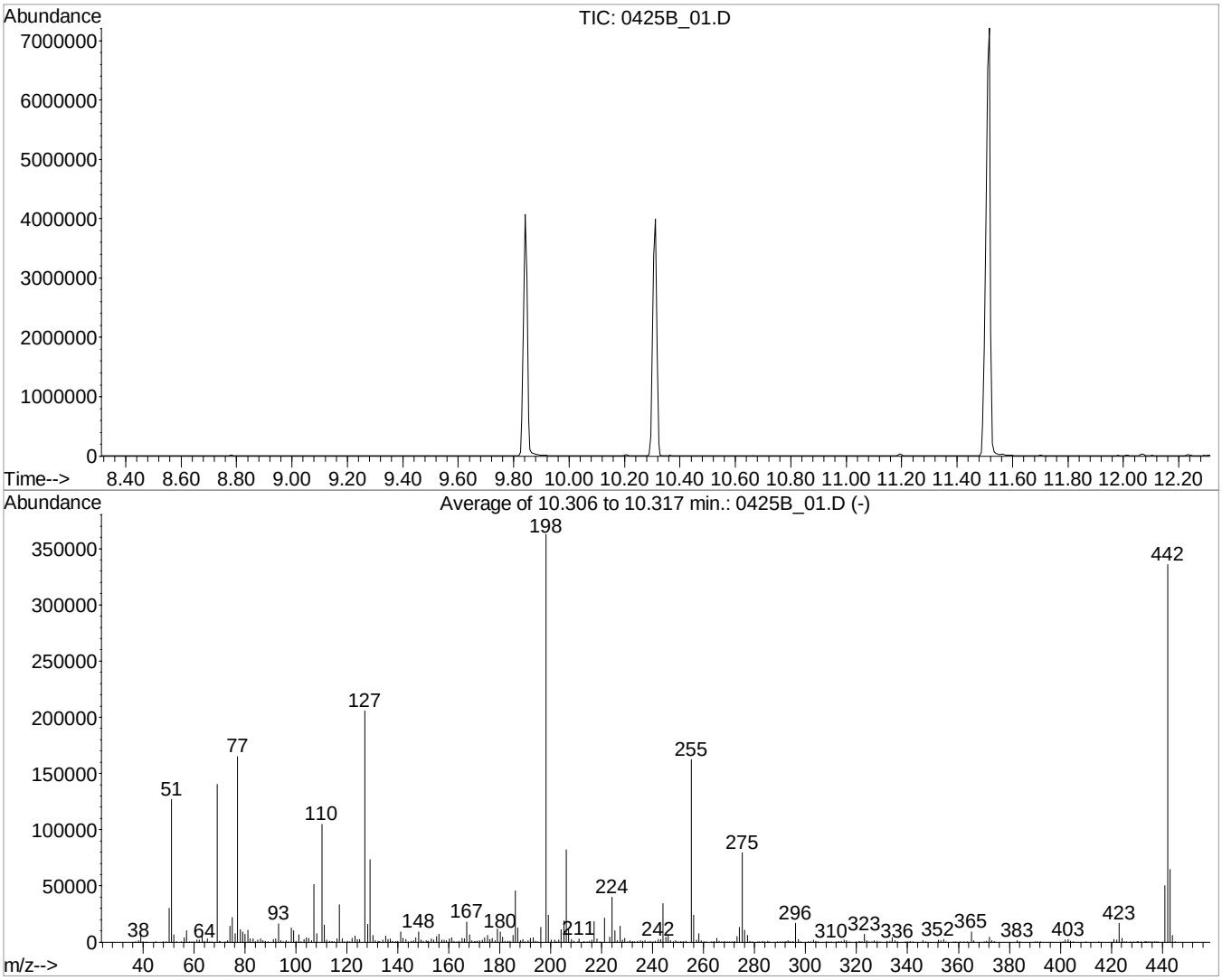
Data File : C:\MSDCHEM\1\DATA\042516B\0425B 01.D Vial: 1
Acq On : 25 Apr 2016 3:31 pm Operator: 280
Sample : TUNE 50 PPM 16D04430 Inst : BNAMS4
Misc : DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\TUNEC.M (RTE Integrator)
Title : 8270 BNA



AutoFind: Scans 1315, 1316, 1317; Background Corrected with Scan 1309

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	35.0	127005	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	38.7	140533	PASS
70	69	0.00	2	0.4	595	PASS
127	198	40	60	56.7	205573	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	362816	PASS
199	198	5	9	6.6	23851	PASS
275	198	10	30	21.9	79461	PASS
365	198	1	100	2.4	8775	PASS
441	443	0.01	100	78.1	50474	PASS
442	198	40	100	92.6	335978	PASS
443	442	17	23	19.2	64600	PASS

Data File : C:\MSDCHEM\1\DATA\042516B\0425B 01.D Vial: 1
Acq On : 25 Apr 2016 3:31 pm Operator: 280
Sample : TUNE 50 PPM 16D04430 Inst : BNAMS4
Misc : DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\TUNED.M (RTE Integrator)
Title : 8270 BNA



Spectrum Information: Average of 10.306 to 10.317 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	35.0	127005	PASS
68	69	0.00	2	0.0	0	PASS
69	69	100	100	100.0	140533	PASS
70	69	0.00	2	0.4	595	PASS
127	198	10	80	56.7	205573	PASS
197	198	0.00	2	0.0	0	PASS
198	198	50	100	100.0	362816	PASS
199	198	5	9	6.6	23851	PASS
275	198	10	60	21.9	79461	PASS
365	198	1	100	2.4	8775	PASS
441	442	0.01	24	15.0	50474	PASS
442	198	50	100	92.6	335978	PASS
443	442	15	24	19.2	64600	PASS

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID : BNAMS4
Method : S804D25P
Review Method : 8270D
Review Protocol : SW846
Released By : Allen Fuller
Released On : 4/26/2016 11:30:56 AM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- S804D25P -- ICal Updated Time: Tue Apr 26 11:20:01 2016

Parameter	500	1000	4000	10000	20000	30000	40000	50000	1K1	4K1	10K1	20K1	30K1	40K1	50K1	AvgRF	%RSD	COD	Cur	RF
1,4-Dichlorobenzene-d4																				
Pyridine	2.553	2.964	2.889	2.731	2.863	2.944	2.939	2.87								2.844143	4.86	0.049	1	
N-Nitrosodimethylamine	0.944	1.169	1.158	1.049	1.11	1.125	1.09	1.047								1.086465	6.71	0.067	1	
2-Fluorophenol	1.737	1.997	1.873	1.757	1.85	1.898	1.916	1.872								1.862512	4.52	0.045	1	
Aniline	1.317	1.268	1.226	1.123	1.152	1.178	1.181	1.119								1.195484	5.88	0.059	1	
bis(2-Chloroethyl)ether	1.799	1.897	1.848	1.716	1.703	1.717	1.709	1.576								1.745554	5.73	0.057	1	0.7
Phenol-d5	2.367	2.508	2.49	2.317	2.413	2.471	2.491	2.401								2.432199	2.82	0.028	1	
Phenol	2.522	2.657	2.608	2.442	2.521	2.543	2.541	2.396								2.528718	3.28	0.033	1	0.8
Benzaldehyde									1.308	1.301	1.407	1.358	1.358	1.39	1.273	1.342175	3.69	0.037	1	0.01
2-Chlorophenol	2.297	2.289	2.26	2.099	2.177	2.204	2.194	2.085								2.200607	3.65	0.037	1	0.8
n-Decane	0.995	0.991	0.947	0.848	0.82	0.789	0.753	0.677								0.852409	13.61	0.136	1	
1,3-Dichlorobenzene	2.293	2.283	2.314	2.164	2.198	2.23	2.237	2.155								2.234125	2.67	0.027	1	
1,4-Dichlorobenzene	2.294	2.463	2.334	2.195	2.237	2.269	2.297	2.184								2.284186	3.88	0.039	1	
Benzyl Alcohol	1.575	1.644	1.629	1.513	1.579	1.599	1.607	1.546								1.586458	2.7	0.027	1	
1,2-Dichlorobenzene	2.279	2.358	2.281	2.12	2.159	2.185	2.198	2.129								2.213684	3.8	0.038	1	
bis(2-Chloroisopropyl)ether	0.692	0.735	0.696	0.649	0.675	0.683	0.684	0.655								0.683693	3.91	0.039	1	
2-Methylphenol	1.884	2.05	2.014	1.888	1.941	1.975	1.975	1.893								1.952429	3.17	0.032	1	0.7
Hexachloroethane	0.995	0.999	0.983	0.921	0.925	0.942	0.943	0.903								0.95139	3.84	0.038	1	0.3
N-Nitrosodi-n-propylamine	1.403	1.493	1.459	1.369	1.399	1.406	1.399	1.35								1.40949	3.27	0.033	1	0.5
3&4-Methyl phenol	2.26	2.363	2.33	2.172	2.273	2.313	2.334	2.243								2.285916	2.7	0.027	1	0.6
Acetophenone									2.668	2.426	2.569	2.557	2.565	2.62	2.392	2.542437	3.91	0.039	1	0.01
Naphthalene-d8																				

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID : BNAMS4
Method : S804D25P
Review Method : 8270D
Review Protocol : SW846
Released By : Allen Fuller
Released On : 4/26/2016 11:30:56 AM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- S804D25P -- ICal Updated Time: Tue Apr 26 11:20:01 2016

Parameter	500	1000	4000	10000	20000	30000	40000	50000	1K1	4K1	10K1	20K1	30K1	40K1	50K1	AvgRF	%RSD	COD	Cur	RF
Nitrobenzene-d5	0.352	0.365	0.351	0.341	0.347	0.348	0.346	0.338								0.348494	2.3	0.023	1	
Nitrobenzene	0.356	0.356	0.355	0.342	0.345	0.342	0.339	0.329								0.345565	2.81	0.028	1	0.2
Isophorone	0.618	0.638	0.652	0.619	0.643	0.64	0.633	0.612								0.631902	2.24	0.022	1	0.4
2-Nitrophenol	0.172	0.185	0.195	0.194	0.201	0.208	0.209	0.206								0.196141	6.44	0.064	1	0.1
2,4-Dimethylphenol	0.355	0.372	0.358	0.344	0.346	0.344	0.34	0.331								0.348846	3.62	0.036	1	0.2
Bis(2-Chlorethoxy)methane	0.443	0.475	0.467	0.44	0.446	0.445	0.441	0.427								0.44789	3.44	0.034	1	0.3
2,4-Dichlorophenol	0.264	0.301	0.294	0.283	0.293	0.294	0.294	0.288								0.2889	3.89	0.039	1	0.2
Benzoic Acid									0.025	0.07	0.139	0.171	0.204	0.221		0.138472	55.71	0.998	3	
1,2,4-Trichlorobenzene	0.295	0.296	0.297	0.282	0.285	0.288	0.284	0.277								0.288034	2.57	0.026	1	
Naphthalene	1.269	1.282	1.22	1.149	1.157	1.16	1.132	1.092								1.182562	5.69	0.057	1	0.7
4-Chloroaniline	0.145	0.147	0.142	0.136	0.134	0.133	0.129	0.123								0.136044	5.88	0.059	1	0.01
Hexachloro-1,3-butadiene	0.131	0.133	0.132	0.12	0.123	0.124	0.121	0.119								0.125393	4.6	0.046	1	0.01
Caprolactam									0.095	0.097	0.108	0.105	0.11	0.112	0.106	0.10477	6.24	0.062	1	0.01
4-Chloro-3-methylphenol	0.297	0.323	0.322	0.313	0.323	0.326	0.329	0.315								0.318631	3.18	0.032	1	0.2
2-Methylnaphthalene	0.756	0.817	0.804	0.764	0.784	0.777	0.764	0.743								0.776127	3.2	0.032	1	0.4
1-Methylnaphthalene	0.718	0.742	0.713	0.684	0.692	0.688	0.682	0.661								0.697457	3.66	0.037	1	
1,2,4,5-Tetrachlorobenzene									0.257	0.24	0.24	0.242	0.244	0.239	0.223	0.240673	4.21	0.042	1	0.01
Acenaphthene-d10																				
Hexachlorocyclopentadiene		0.167	0.195	0.216	0.231	0.232	0.238	0.23								0.215708	11.99	0.12	1	0.05
2,4,6-Trichlorophenol	0.261	0.285	0.309	0.309	0.32	0.326	0.329	0.321								0.307518	7.57	0.076	1	0.2
2,4,5-Trichlorophenol	0.281	0.303	0.338	0.335	0.345	0.348	0.35	0.341								0.330293	7.5	0.075	1	0.2
2-Fluorobiphenyl	1.373	1.389	1.344	1.278	1.32	1.304	1.292	1.226								1.315822	4.03	0.04	1	

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID : BNAMS4
Method : S804D25P
Review Method : 8270D
Review Protocol : SW846
Released By : Allen Fuller
Released On : 4/26/2016 11:30:56 AM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- S804D25P -- ICal Updated Time: Tue Apr 26 11:20:01 2016

Parameter	500	1000	4000	10000	20000	30000	40000	50000	1K1	4K1	10K1	20K1	30K1	40K1	50K1	AvgRF	%RSD	COD	Cur	RF
Biphenyl	1.535	1.646	1.595	1.524	1.544	1.541	1.53	1.469								1.547924	3.38	0.034	1	0.01
2-Chloronaphthalene	1.232	1.264	1.238	1.203	1.232	1.212	1.191	1.157								1.216121	2.72	0.027	1	0.8
2-Nitroaniline	0.358	0.382	0.429	0.429	0.452	0.46	0.466	0.457								0.428783	9.18	0.092	1	0.01
Acenaphthylene	1.924	2.011	1.937	1.882	1.966	1.961	1.949	1.884								1.93917	2.22	0.022	1	0.9
Dimethyl phthalate	1.212	1.279	1.291	1.225	1.283	1.294	1.307	1.29								1.272658	2.72	0.027	1	0.01
2,6-Dinitrotoluene	0.285	0.303	0.311	0.311	0.326	0.324	0.332	0.325								0.314781	4.9	0.049	1	0.2
3-Nitroaniline	0.333	0.386	0.382	0.367	0.388	0.395	0.4	0.392								0.380502	5.69	0.057	1	0.01
Acenaphthene	1.285	1.353	1.297	1.246	1.271	1.266	1.251	1.199								1.271093	3.49	0.035	1	0.9
2,4-Dinitrophenol			0.103	0.145	0.166	0.183	0.198	0.201								0.166225	22.47	0.997	0	0.01
Dibenzofuran	1.729	1.891	1.753	1.692	1.748	1.733	1.727	1.665								1.742194	3.83	0.038	1	0.8
2,4-Dinitrotoluene	0.344	0.403	0.407	0.418	0.436	0.439	0.458	0.447								0.418968	8.54	0.085	1	0.2
2,3,4,6-Tetrachlorophenol									0.146	0.15	0.187	0.192	0.197	0.198	0.191	0.180186	12.34	0.123	1	0.01
4-Nitrophenol	0.224	0.267	0.289	0.302	0.319	0.33	0.336	0.326								0.29921	12.76	0.128	1	0.01
Fluorene	1.392	1.534	1.465	1.404	1.439	1.434	1.429	1.384								1.435214	3.35	0.034	1	0.9
4-Chlorophenyl-phenylether	0.544	0.589	0.565	0.543	0.555	0.556	0.553	0.528								0.554083	3.27	0.033	1	0.4
Diethyl phthalate	1.237	1.375	1.361	1.325	1.368	1.375	1.373	1.294								1.338573	3.75	0.037	1	0.01
4-Nitroaniline	0.334	0.393	0.392	0.383	0.405	0.376	0.376	0.374								0.379185	5.62	0.056	1	0.01
Azobenzene	1.348	1.516	1.504	1.404	1.436	1.404	1.407	1.349								1.42082	4.41	0.044	1	
Atrazine									0.277	0.253	0.286	0.291	0.295	0.291	0.279	0.281614	4.98	0.05	1	0.01
Phenanthrene-d10																				
4,6-Dinitro-2-methylphenol			0.106	0.119	0.133	0.141	0.145	0.147								0.131962	12.23	0.122	1	0.01
N-Nitrosodiphenylamine	0.654	0.73	0.738	0.695	0.724	0.741	0.761	0.749								0.723975	4.74	0.047	1	0.01

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID : BNAMS4
Method : S804D25P
Review Method : 8270D
Review Protocol : SW846
Released By : Allen Fuller
Released On : 4/26/2016 11:30:56 AM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- S804D25P -- ICal Updated Time: Tue Apr 26 11:20:01 2016

Parameter	500	1000	4000	10000	20000	30000	40000	50000	1K1	4K1	10K1	20K1	30K1	40K1	50K1	AvgRF	%RSD	COD	Cur	RF
2,4,6-Tribromophenol	0.075	0.071	0.083	0.081	0.087	0.089	0.094	0.094								0.084168	9.98	0.1	1	
4-Bromophenyl-phenylether	0.167	0.174	0.171	0.166	0.175	0.18	0.183	0.183								0.174934	3.79	0.038	1	0.1
Hexachlorobenzene	0.179	0.195	0.192	0.179	0.186	0.189	0.193	0.194								0.188349	3.35	0.034	1	0.1
n-octadecane	0.148	0.156	0.157	0.14	0.141	0.133	0.126	0.116								0.139583	10.16	0.102	1	
Pentachlorophenol			0.085	0.102	0.114	0.121	0.126	0.127								0.112489	14.64	0.146	1	0.05
Phenanthrene	1.2	1.231	1.202	1.15	1.213	1.211	1.206	1.185								1.199695	2	0.02	1	0.7
Anthracene	1.113	1.217	1.214	1.171	1.229	1.235	1.245	1.204								1.20352	3.57	0.036	1	0.7
Carbazole	1.142	1.276	1.239	1.205	1.252	1.258	1.265	1.241								1.234823	3.49	0.035	1	0.01
Di-n-butyl phthalate	1.309	1.404	1.526	1.511	1.586	1.607	1.615	1.605								1.520259	7.29	0.073	1	0.01
2-nitrodiphenylamine										0.201	0.244	0.256	0.269	0.272	0.261	0.250773	10.43	0.104	1	
Fluoranthene	1.067	1.172	1.163	1.164	1.254	1.292	1.302	1.297								1.213999	7.02	0.07	1	0.6
Chrysene-d12																				
Benzidine									0.762	0.811	0.864	0.936	0.951	0.993	0.929	0.891972	9.31	0.093	1	
Pyrene	1.364	1.451	1.401	1.429	1.431	1.502	1.479	1.457								1.439097	3.03	0.03	1	0.6
p-Terphenyl-d14	0.971	0.924	0.986	1.017	1.015	1.056	1.034	1.022								1.003167	4.13	0.041	1	
Benzylbutyl phthalate	0.685	0.756	0.765	0.793	0.808	0.845	0.83	0.808								0.786259	6.44	0.064	1	0.01
3,3-Dichlorobenzidine									0.308	0.306	0.319	0.346	0.356	0.377	0.346	0.336827	7.94	0.079	1	0.01
Benzo(a)anthracene	1.224	1.294	1.23	1.237	1.248	1.308	1.295	1.277								1.264149	2.63	0.026	1	0.8
Chrysene	1.201	1.256	1.174	1.157	1.193	1.246	1.225	1.198								1.206418	2.84	0.028	1	0.7
bis(2-Ethylhexyl)phthalate	1.187	1.178	1.165	1.178	1.219	1.279	1.234	1.209								1.206271	3.12	0.031	1	0.01
Di-n-octyl phthalate	1.883	2.031	2.103	2.096	2.213	2.302	2.229	2.201								2.132236	6.24	0.062	1	0.01
Perylene-d12																				

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID	: BNAMS4	Review Method	: 8270D	Released By	: Allen Fuller
Method	: S804D25P	Review Protocol	: SW846	Released On	: 4/26/2016 11:30:56 AM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- S804D25P -- ICal Updated Time: Tue Apr 26 11:20:01 2016

Parameter	500	1000	4000	10000	20000	30000	40000	50000	1K1	4K1	10K1	20K1	30K1	40K1	50K1	AvgRF	%RSD	COD	Cur	RF
Benzo(b)fluoranthene	1.181	1.275	1.223	1.273	1.32	1.404	1.382	1.378								1.304516	6.17	0.062	1	0.7
Benzo(k)fluoranthene	1.079	1.227	1.161	1.208	1.239	1.237	1.333	1.278								1.220033	6.22	0.062	1	0.7
Benzo(a)pyrene	1.053	1.151	1.159	1.166	1.251	1.295	1.336	1.317								1.216011	8.13	0.081	1	0.7
Indeno(1,2,3-cd)pyrene	1.284	1.362	1.363	1.344	1.385	1.343	1.37	1.324								1.346962	2.33	0.023	1	0.5
Dibenz(a,h)anthracene	1.065	1.168	1.178	1.164	1.209	1.189	1.204	1.162								1.16728	3.86	0.039	1	0.4
Benzo(g,h,i)perylene	1.107	1.174	1.148	1.128	1.126	1.073	1.086	1.048								1.111262	3.72	0.037	1	0.5

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID : BNAMS4
Method : S804D25P
Review Method : 8270C
Review Protocol : SW846
Released By : Allen Fuller
Released On : 4/26/2016 11:30:35 AM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- S804D25P -- ICal Updated Time: Tue Apr 26 11:20:01 2016

Parameter	500	1000	4000	10000	20000	30000	40000	50000	1K1	4K1	10K1	20K1	30K1	40K1	50K1	AvgRF	%RSD	COD	Cur
1,4-Dichlorobenzene-d4																			
Pyridine	2.553	2.964	2.889	2.731	2.863	2.944	2.939	2.87								2.844143	4.86	0.049	1
N-Nitrosodimethylamine	0.944	1.169	1.158	1.049	1.11	1.125	1.09	1.047								1.086465	6.71	0.067	1
2-Fluorophenol	1.737	1.997	1.873	1.757	1.85	1.898	1.916	1.872								1.862512	4.52	0.045	1
Aniline	1.317	1.268	1.226	1.123	1.152	1.178	1.181	1.119								1.195484	5.88	0.059	1
bis(2-Chloroethyl)ether	1.799	1.897	1.848	1.716	1.703	1.717	1.709	1.576								1.745554	5.73	0.057	1
Phenol-d5	2.367	2.508	2.49	2.317	2.413	2.471	2.491	2.401								2.432199	2.82	0.028	1
Phenol	2.522	2.657	2.608	2.442	2.521	2.543	2.541	2.396								2.528718	3.28	0.033	1
Benzaldehyde									1.308	1.301	1.407	1.358	1.358	1.39	1.273	1.342175	3.69	0.037	1
2-Chlorophenol	2.297	2.289	2.26	2.099	2.177	2.204	2.194	2.085								2.200607	3.65	0.037	1
n-Decane	0.995	0.991	0.947	0.848	0.82	0.789	0.753	0.677								0.852409	13.61	0.136	1
1,3-Dichlorobenzene	2.293	2.283	2.314	2.164	2.198	2.23	2.237	2.155								2.234125	2.67	0.027	1
1,4-Dichlorobenzene	2.294	2.463	2.334	2.195	2.237	2.269	2.297	2.184								2.284186	3.88	0.039	1
Benzyl Alcohol	1.575	1.644	1.629	1.513	1.579	1.599	1.607	1.546								1.586458	2.7	0.027	1
1,2-Dichlorobenzene	2.279	2.358	2.281	2.12	2.159	2.185	2.198	2.129								2.213684	3.8	0.038	1
bis(2-Chloroisopropyl)ether	0.692	0.735	0.696	0.649	0.675	0.683	0.684	0.655								0.683693	3.91	0.039	1
2-Methylphenol	1.884	2.05	2.014	1.888	1.941	1.975	1.975	1.893								1.952429	3.17	0.032	1
Hexachloroethane	0.995	0.999	0.983	0.921	0.925	0.942	0.943	0.903								0.95139	3.84	0.038	1
N-Nitrosodi-n-propylamine	1.403	1.493	1.459	1.369	1.399	1.406	1.399	1.35								1.40949	3.27	0.033	1
3&4-Methyl phenol	2.26	2.363	2.33	2.172	2.273	2.313	2.334	2.243								2.285916	2.7	0.027	1
Acetophenone									2.668	2.426	2.569	2.557	2.565	2.62	2.392	2.542437	3.91	0.039	1
Naphthalene-d8																			

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID : BNAMS4
Method : S804D25P
Review Method : 8270C
Review Protocol : SW846
Released By : Allen Fuller
Released On : 4/26/2016 11:30:35 AM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- S804D25P -- ICal Updated Time: Tue Apr 26 11:20:01 2016

Parameter	500	1000	4000	10000	20000	30000	40000	50000	1K1	4K1	10K1	20K1	30K1	40K1	50K1	AvgRF	%RSD	COD	Cur
Nitrobenzene-d5	0.352	0.365	0.351	0.341	0.347	0.348	0.346	0.338								0.348494	2.3	0.023	1
Nitrobenzene	0.356	0.356	0.355	0.342	0.345	0.342	0.339	0.329								0.345565	2.81	0.028	1
Isophorone	0.618	0.638	0.652	0.619	0.643	0.64	0.633	0.612								0.631902	2.24	0.022	1
2-Nitrophenol	0.172	0.185	0.195	0.194	0.201	0.208	0.209	0.206								0.196141	6.44	0.064	1
2,4-Dimethylphenol	0.355	0.372	0.358	0.344	0.346	0.344	0.34	0.331								0.348846	3.62	0.036	1
bis(2-Chlorethoxy)methane	0.443	0.475	0.467	0.44	0.446	0.445	0.441	0.427								0.44789	3.44	0.034	1
2,4-Dichlorophenol	0.264	0.301	0.294	0.283	0.293	0.294	0.294	0.288								0.2889	3.89	0.039	1
Benzoic Acid									0.025	0.07	0.139	0.171	0.204	0.221		0.138472	55.71	0.998	3
1,2,4-Trichlorobenzene	0.295	0.296	0.297	0.282	0.285	0.288	0.284	0.277								0.288034	2.57	0.026	1
Naphthalene	1.269	1.282	1.22	1.149	1.157	1.16	1.132	1.092								1.182562	5.69	0.057	1
4-Chloroaniline	0.145	0.147	0.142	0.136	0.134	0.133	0.129	0.123								0.136044	5.88	0.059	1
Hexachloro-1,3-butadiene	0.131	0.133	0.132	0.12	0.123	0.124	0.121	0.119								0.125393	4.6	0.046	1
Caprolactam									0.095	0.097	0.108	0.105	0.11	0.112	0.106	0.10477	6.24	0.062	1
4-Chloro-3-methylphenol	0.297	0.323	0.322	0.313	0.323	0.326	0.329	0.315								0.318631	3.18	0.032	1
2-Methylnaphthalene	0.756	0.817	0.804	0.764	0.784	0.777	0.764	0.743								0.776127	3.2	0.032	1
1-Methylnaphthalene	0.718	0.742	0.713	0.684	0.692	0.688	0.682	0.661								0.697457	3.66	0.037	1
1,2,4,5-Tetrachlorobenzene									0.257	0.24	0.24	0.242	0.244	0.239	0.223	0.240673	4.21	0.042	1
Acenaphthene-d10																			
Hexachlorocyclopentadiene		0.167	0.195	0.216	0.231	0.232	0.238	0.23								0.215708	11.99	0.12	1
2,4,6-Trichlorophenol	0.261	0.285	0.309	0.309	0.32	0.326	0.329	0.321								0.307518	7.57	0.076	1
2,4,5-Trichlorophenol	0.281	0.303	0.338	0.335	0.345	0.348	0.35	0.341								0.330293	7.5	0.075	1
2-Fluorobiphenyl	1.373	1.389	1.344	1.278	1.32	1.304	1.292	1.226								1.315822	4.03	0.04	1

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID : BNAMS4
Method : S804D25P
Review Method : 8270C
Review Protocol : SW846
Released By : Allen Fuller
Released On : 4/26/2016 11:30:35 AM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- S804D25P -- ICal Updated Time: Tue Apr 26 11:20:01 2016

Parameter	500	1000	4000	10000	20000	30000	40000	50000	1K1	4K1	10K1	20K1	30K1	40K1	50K1	AvgRF	%RSD	COD	Cur
Biphenyl	1.535	1.646	1.595	1.524	1.544	1.541	1.53	1.469								1.547924	3.38	0.034	1
2-Chloronaphthalene	1.232	1.264	1.238	1.203	1.232	1.212	1.191	1.157								1.216121	2.72	0.027	1
2-Nitroaniline	0.358	0.382	0.429	0.429	0.452	0.46	0.466	0.457								0.428783	9.18	0.092	1
Acenaphthylene	1.924	2.011	1.937	1.882	1.966	1.961	1.949	1.884								1.93917	2.22	0.022	1
Dimethyl phthalate	1.212	1.279	1.291	1.225	1.283	1.294	1.307	1.29								1.272658	2.72	0.027	1
2,6-Dinitrotoluene	0.285	0.303	0.311	0.311	0.326	0.324	0.332	0.325								0.314781	4.9	0.049	1
3-Nitroaniline	0.333	0.386	0.382	0.367	0.388	0.395	0.4	0.392								0.380502	5.69	0.057	1
Acenaphthene	1.285	1.353	1.297	1.246	1.271	1.266	1.251	1.199								1.271093	3.49	0.035	1
2,4-Dinitrophenol			0.103	0.145	0.166	0.183	0.198	0.201								0.166225	22.47	0.997	0
Dibenzofuran	1.729	1.891	1.753	1.692	1.748	1.733	1.727	1.665								1.742194	3.83	0.038	1
2,4-Dinitrotoluene	0.344	0.403	0.407	0.418	0.436	0.439	0.458	0.447								0.418968	8.54	0.085	1
2,3,4,6-Tetrachlorophenol									0.146	0.15	0.187	0.192	0.197	0.198	0.191	0.180186	12.34	0.123	1
4-Nitrophenol	0.224	0.267	0.289	0.302	0.319	0.33	0.336	0.326								0.29921	12.76	0.128	1
Fluorene	1.392	1.534	1.465	1.404	1.439	1.434	1.429	1.384								1.435214	3.35	0.034	1
4-Chlorophenyl-phenylether	0.544	0.589	0.565	0.543	0.555	0.556	0.553	0.528								0.554083	3.27	0.033	1
Diethyl phthalate	1.237	1.375	1.361	1.325	1.368	1.375	1.373	1.294								1.338573	3.75	0.037	1
4-Nitroaniline	0.334	0.393	0.392	0.383	0.405	0.376	0.376	0.374								0.379185	5.62	0.056	1
Azobenzene	1.348	1.516	1.504	1.404	1.436	1.404	1.407	1.349								1.42082	4.41	0.044	1
Atrazine									0.277	0.253	0.286	0.291	0.295	0.291	0.279	0.281614	4.98	0.05	1
Phenanthrene-d10																			
4,6-Dinitro-2-methylphenol			0.106	0.119	0.133	0.141	0.145	0.147								0.131962	12.23	0.122	1
N-Nitrosodiphenylamine	0.654	0.73	0.738	0.695	0.724	0.741	0.761	0.749								0.723975	4.74	0.047	1

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID : BNAMS4
Method : S804D25P
Review Method : 8270C
Review Protocol : SW846
Released By : Allen Fuller
Released On : 4/26/2016 11:30:35 AM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- S804D25P -- ICal Updated Time: Tue Apr 26 11:20:01 2016

Parameter	500	1000	4000	10000	20000	30000	40000	50000	1K1	4K1	10K1	20K1	30K1	40K1	50K1	AvgRF	%RSD	COD	Cur
2,4,6-Tribromophenol	0.075	0.071	0.083	0.081	0.087	0.089	0.094	0.094								0.084168	9.98	0.1	1
4-Bromophenyl-phenylether	0.167	0.174	0.171	0.166	0.175	0.18	0.183	0.183								0.174934	3.79	0.038	1
Hexachlorobenzene	0.179	0.195	0.192	0.179	0.186	0.189	0.193	0.194								0.188349	3.35	0.034	1
n-octadecane	0.148	0.156	0.157	0.14	0.141	0.133	0.126	0.116								0.139583	10.16	0.102	1
Pentachlorophenol			0.085	0.102	0.114	0.121	0.126	0.127								0.112489	14.64	0.146	1
Phenanthrene	1.2	1.231	1.202	1.15	1.213	1.211	1.206	1.185								1.199695	2	0.02	1
Anthracene	1.113	1.217	1.214	1.171	1.229	1.235	1.245	1.204								1.20352	3.57	0.036	1
Carbazole	1.142	1.276	1.239	1.205	1.252	1.258	1.265	1.241								1.234823	3.49	0.035	1
Di-n-butyl phthalate	1.309	1.404	1.526	1.511	1.586	1.607	1.615	1.605								1.520259	7.29	0.073	1
2-nitrodiphenylamine										0.201	0.244	0.256	0.269	0.272	0.261	0.250773	10.43	0.104	1
Fluoranthene	1.067	1.172	1.163	1.164	1.254	1.292	1.302	1.297								1.213999	7.02	0.07	1
Chrysene-d12																			
Benzidine									0.762	0.811	0.864	0.936	0.951	0.993	0.929	0.891972	9.31	0.093	1
Pyrene	1.364	1.451	1.401	1.429	1.431	1.502	1.479	1.457								1.439097	3.03	0.03	1
p-Terphenyl-d14	0.971	0.924	0.986	1.017	1.015	1.056	1.034	1.022								1.003167	4.13	0.041	1
Benzylbutyl phthalate	0.685	0.756	0.765	0.793	0.808	0.845	0.83	0.808								0.786259	6.44	0.064	1
3,3-Dichlorobenzidine									0.308	0.306	0.319	0.346	0.356	0.377	0.346	0.336827	7.94	0.079	1
Benzo(a)anthracene	1.224	1.294	1.23	1.237	1.248	1.308	1.295	1.277								1.264149	2.63	0.026	1
Chrysene	1.201	1.256	1.174	1.157	1.193	1.246	1.225	1.198								1.206418	2.84	0.028	1
bis(2-Ethylhexyl)phthalate	1.187	1.178	1.165	1.178	1.219	1.279	1.234	1.209								1.206271	3.12	0.031	1
Di-n-octyl phthalate	1.883	2.031	2.103	2.096	2.213	2.302	2.229	2.201								2.132236	6.24	0.062	1
Perylene-d12																			

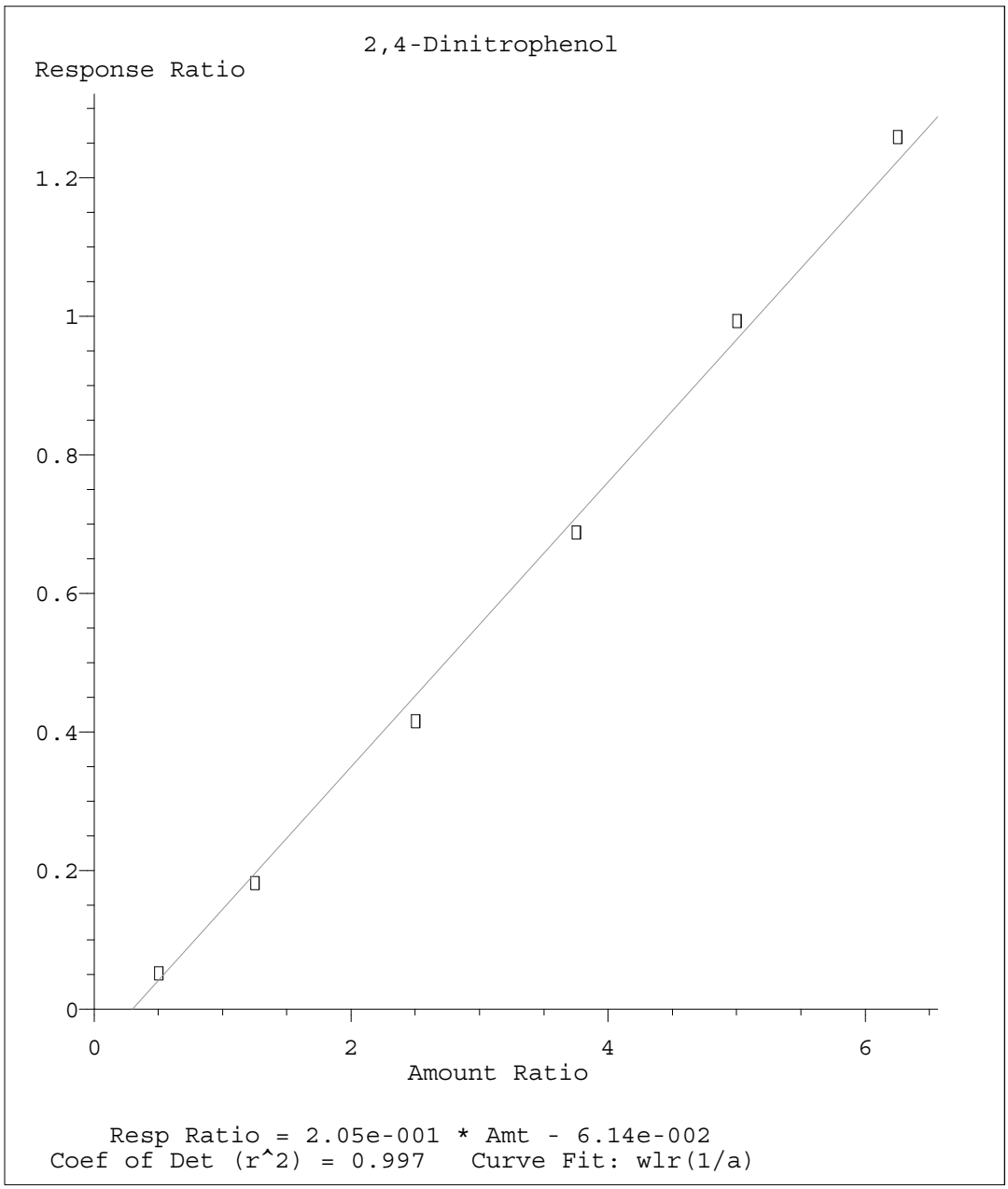
Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

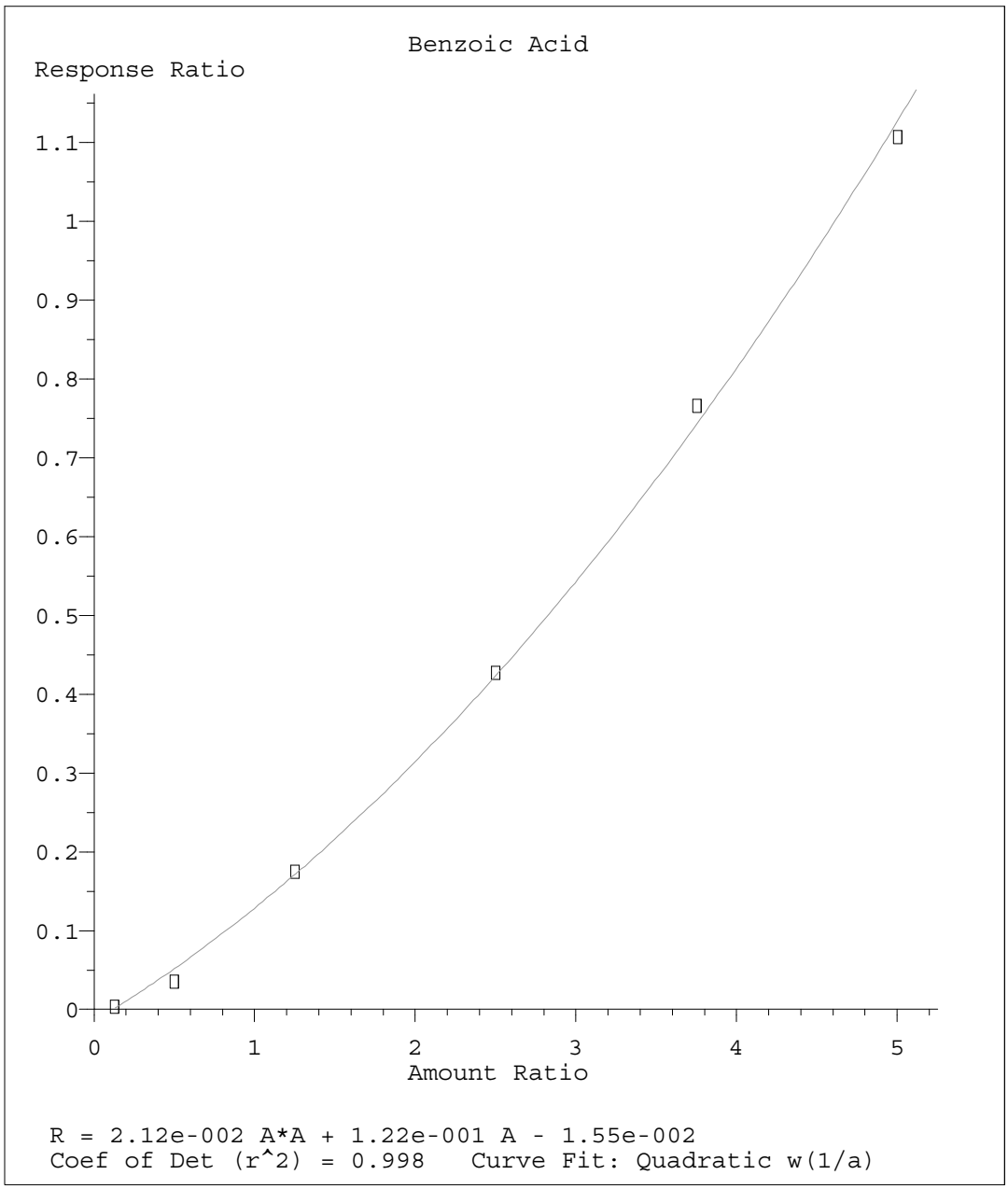
Instrument ID	: BNAMS4	Review Method	: 8270C	Released By	: Allen Fuller
Method	: S804D25P	Review Protocol	: SW846	Released On	: 4/26/2016 11:30:35 AM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- S804D25P -- ICal Updated Time: Tue Apr 26 11:20:01 2016

Parameter	500	1000	4000	10000	20000	30000	40000	50000	1K1	4K1	10K1	20K1	30K1	40K1	50K1	AvgRF	%RSD	COD	Cur
Benzo(b)fluoranthene	1.181	1.275	1.223	1.273	1.32	1.404	1.382	1.378								1.304516	6.17	0.062	1
Benzo(k)fluoranthene	1.079	1.227	1.161	1.208	1.239	1.237	1.333	1.278								1.220033	6.22	0.062	1
Benzo(a)pyrene	1.053	1.151	1.159	1.166	1.251	1.295	1.336	1.317								1.216011	8.13	0.081	1
Indeno(1,2,3-cd)pyrene	1.284	1.362	1.363	1.344	1.385	1.343	1.37	1.324								1.346962	2.33	0.023	1
Dibenz(a,h)anthracene	1.065	1.168	1.178	1.164	1.209	1.189	1.204	1.162								1.16728	3.86	0.039	1
Benzo(g,h,i)perylene	1.107	1.174	1.148	1.128	1.126	1.073	1.086	1.048								1.111262	3.72	0.037	1



Method Name: C:\MSDCHEM\1\METHODS\S804D25P.M



Method Name: C:\MSDCHEM\1\METHODS\S804D25P.M

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516B\0425B 04MRL.D Vial: 4
Acq On : 25 Apr 2016 4:41 pm Operator: 280
Sample : MRL SVMS 1K PPB 16D25863 Inst : BNAMS4
Misc : 8270 calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 11:25 2016 Quant Results File: S804D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Initial Calibration
DataAcq Meth : BNA4E

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.29	152	87639	8000.00	ppb	0.00
22) Naphthalene-d8	6.56	136	523144	8000.00	ppb	0.00
40) Acenaphthene-d10	8.44	164	301783	8000.00	ppb	0.00
64) Phenanthrene-d10	10.06	188	509074	8000.00	ppb	0.00
78) Chrysene-d12	12.94	240	425124	8000.00	ppb	0.00
88) Perylene-d12	14.74	264	435106	8000.00	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	4.18	112	21880	1072.3605284	ppb	0.00
Spiked Amount 20.000	Range 10 - 74		Recovery = 5361.80%#			
7) Phenol-d5	4.91	99	27472	1031.0597355	ppb	0.00
Spiked Amount 20.000	Range 10 - 63		Recovery = 5155.30%#			
23) Nitrobenzene-d5	5.82	82	23856	1046.8170138	ppb	0.00
Spiked Amount 10.000	Range 28 - 123		Recovery = 10468.17%#			
44) 2-Fluorobiphenyl	7.69	172	52409	1055.8539646	ppb	0.00
Spiked Amount 10.000	Range 35 - 133		Recovery = 10558.54%#			
67) 2,4,6-Tribromophenol	9.29	330	4513	842.6090600	ppb	0.00
Spiked Amount 20.000	Range 22 - 154		Recovery = 4213.05%#			
81) p-Terphenyl-d14	11.77	244	49103	921.1046315	ppb	0.00
Spiked Amount 10.000	Range 30 - 148		Recovery = 9211.05%#			
Target Compounds						Qvalue
2) Pyridine	3.25	79	32467	1042.0374374	ppb	97
3) N-Nitrosodimethylamine	3.23	42	12805	1075.8614892	ppb	97
5) Aniline	4.99	66	13893	1060.8272627	ppb	96
6) bis(2-Chloroethyl)ether	5.03	63	20779	1086.6357279	ppb	93
8) Phenol	4.92	94	29103	1050.5818253	ppb	95
10) 2-Chlorophenol	5.09	128	25073	1040.0554092	ppb	96
11) n-Decane	5.11	41	10860	1162.9857798	ppb	99
12) 1,3-Dichlorobenzene	5.24	146	25010	1021.8775984	ppb	98
13) 1,4-Dichlorobenzene	5.31	146	26980	1078.2092047	ppb	97
14) Benzyl Alcohol	5.40	79	18005	1035.9939272	ppb	97
15) 1,2-Dichlorobenzene	5.45	146	25837	1065.4157300	ppb	98
16) bis(2-Chloroisopropyl)ethe	5.53	121	8055	1075.4670295	ppb	92
17) 2-Methylphenol	5.49	108	22457	1049.9510637	ppb	96
18) Hexachloroethane	5.78	117	10949	1050.5303521	ppb	93
19) N-Nitrosodi-n-propylamine	5.65	70	16351	1058.9485790	ppb	94
20) 3&4-Methyl phenol	5.63	107	25890	1033.8663054	ppb	98
24) Nitrobenzene	5.83	77	23310	1031.5295546	ppb	90
25) Isophorone	6.07	82	41743	1010.1886694	ppb	99
26) 2-Nitrophenol	6.16	139	12095	942.9875081	ppb	97
27) 2,4-Dimethylphenol	6.18	107	24326	1066.3633428	ppb	98
28) bis(2-Chlorethoxy)methane	6.27	93	31049	1060.0955163	ppb	96
29) 2,4-Dichlorophenol	6.40	162	19703	1042.9250590	ppb	95
31) 1,2,4-Trichlorobenzene	6.49	180	19377	1028.7551368	ppb	96
32) Naphthalene	6.58	128	83805	1083.7144552	ppb	98
33) 4-Chloroaniline	6.62	65	9613	1080.5594216	ppb	96
34) Hexachloro-1,3-butadiene	6.70	225	8686	1059.2909534	ppb	94
36) 4-Chloro-3-methylphenol	7.12	107	21130	1014.1000637	ppb	94
37) 2-Methylnaphthalene	7.31	142	53397	1052.0904150	ppb	99
38) 1-Methylnaphthalene	7.41	142	48532	1064.0928604	ppb	99
41) Hexachlorocyclopentadiene	7.47	237	6297	773.8610360	ppb	99
42) 2,4,6-Trichlorophenol	7.60	196	10740	925.8263943	ppb	96
43) 2,4,5-Trichlorophenol	7.64	196	11446	918.6484287	ppb	96
45) Biphenyl	7.80	154	62077	1063.1053864	ppb	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516B\0425B 04MRL.D Vial: 4
Acq On : 25 Apr 2016 4:41 pm Operator: 280
Sample : MRL SVMS 1K PPB 16D25863 Inst : BNAMS4
Misc : 8270 calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 11:25 2016 Quant Results File: S804D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Initial Calibration
DataAcq Meth : BNA4E

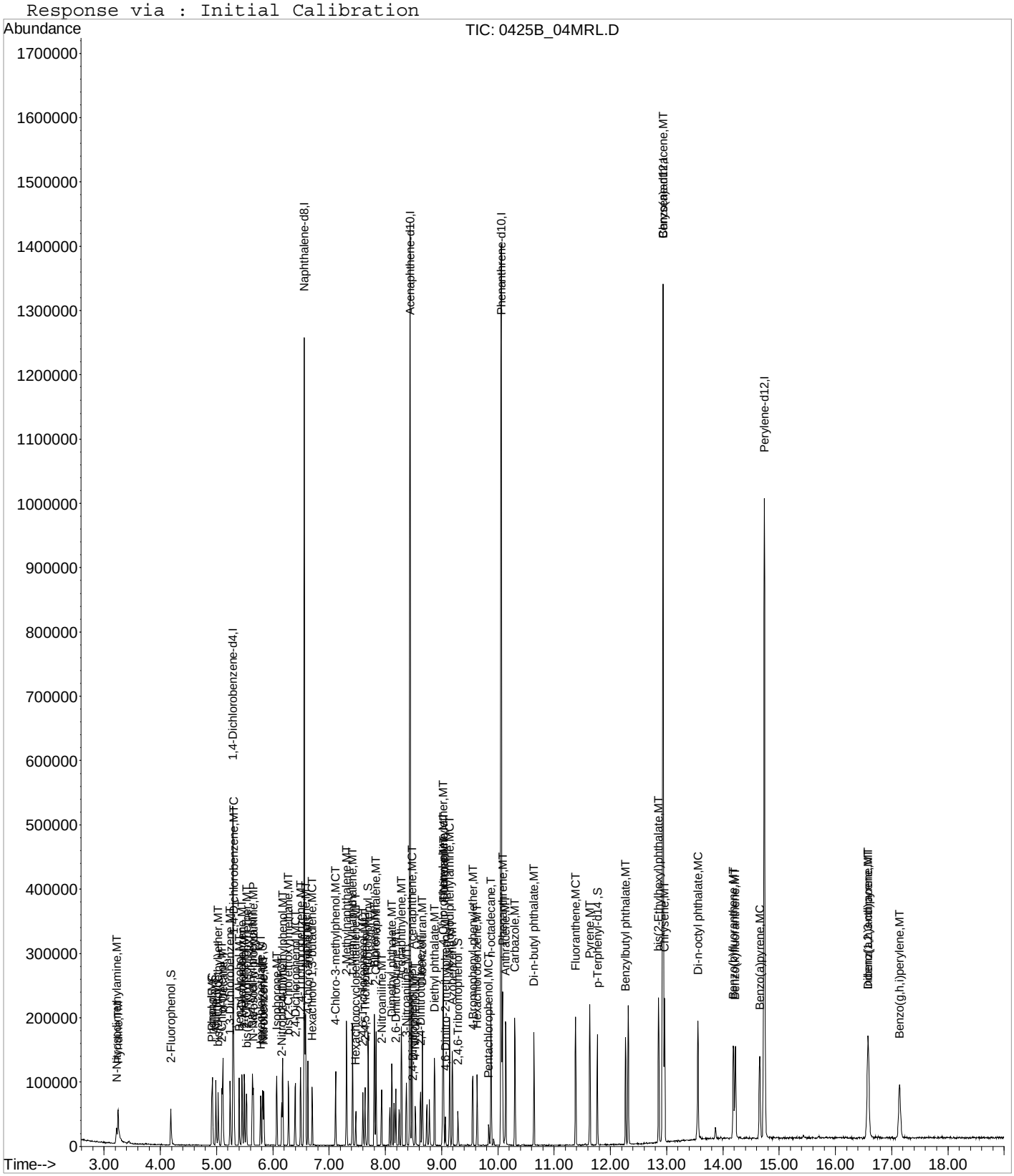
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
46)	2-Chloronaphthalene	7.83	162	47698	1039.7256005	ppb		96
47)	2-Nitroaniline	7.93	138	14402	890.3913915	ppb		93
48)	Acenaphthylene	8.28	152	75859	1037.0185868	ppb		98
49)	Dimethyl phthalate	8.11	163	48257	1005.1796245	ppb		98
50)	2,6-Dinitrotoluene	8.19	165	11438	963.2459900	ppb		91
51)	3-Nitroaniline	8.37	138	14556	1014.1001583	ppb		90
52)	Acenaphthene	8.47	153	51028	1064.2074906	ppb		98
53)	2,4-Dinitrophenol	8.49	184	1317	2562.9934809	ppb	#	70
54)	Dibenzofuran	8.65	168	71335	1085.4290065	ppb		98
55)	2,4-Dinitrotoluene	8.63	165	15202	961.8670199	ppb		95
57)	4-Nitrophenol	8.53	139	10069	892.0844328	ppb		88
58)	Fluorene	9.03	166	57878	1069.0355654	ppb		100
59)	4-Chlorophenyl-phenylether	9.02	204	22234	1063.7455860	ppb		92
60)	Diethyl phthalate	8.87	149	51877	1027.3728403	ppb		98
61)	4-Nitroaniline	9.03	138	14816	1035.7980863	ppb		99
62)	Azobenzene	9.19	77	57182	1066.8796739	ppb		98
65)	4,6-Dinitro-2-methylphenol	9.07	198	4936	587.8093813	ppb		81
66)	N-Nitrosodiphenylamine	9.14	169	46437	1007.9749855	ppb		99
68)	4-Bromophenyl-phenylether	9.55	248	11096	996.7854947	ppb		96
69)	Hexachlorobenzene	9.63	284	12390	1033.7528511	ppb		96
70)	n-octadecane	9.88	55	9931	1118.0746288	ppb		99
71)	Pentachlorophenol	9.84	266	3521	491.8853728	ppb		91
72)	Phenanthrene	10.08	178	78323	1025.9529046	ppb		97
73)	Anthracene	10.14	178	77422	1010.9281407	ppb		98
74)	Carbazole	10.30	167	81208	1033.4827434	ppb		99
75)	Di-n-butyl phthalate	10.64	149	89321	923.3048065	ppb		99
77)	Fluoranthene	11.38	202	74588	965.5163392	ppb		98
80)	Pyrene	11.63	202	77081	1007.9328167	ppb		97
82)	Benzylbutyl phthalate	12.27	149	40186	961.7977596	ppb		93
84)	Benzo(a)anthracene	12.93	228	68773	1023.7503026	ppb		97
85)	Chrysene	12.96	228	66762	1041.3721310	ppb		97
86)	bis(2-Ethylhexyl)phthalate	12.86	149	62606	976.6642148	ppb		98
87)	Di-n-octyl phthalate	13.55	149	107942	952.6415133	ppb		98
89)	Benzo(b)fluoranthene	14.19	252	69360	977.5853324	ppb		97
90)	Benzo(k)fluoranthene	14.22	252	66728	1005.6142473	ppb		99
91)	Benzo(a)pyrene	14.65	252	62619	946.8116620	ppb		97
92)	Indeno(1,2,3-cd)pyrene	16.57	276	74081	1011.2218172	ppb		97
93)	Dibenz(a,h)anthracene	16.59	278	63501	1000.2314324	ppb		95
94)	Benzo(g,h,i)perylene	17.14	276	63833	1056.1449950	ppb		95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516B\0425B 04MRL.D Vial: 4
Acq On : 25 Apr 2016 4:41 pm Operator: 280
Sample : MRL SVMS 1K PPB 16D25863 Inst : BNAMS4
Misc : 8270 calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 11:25 2016 Quant Results File: S804D25P.RES

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516B\0425B 05MRL.D Vial: 5
Acq On : 25 Apr 2016 5:05 pm Operator: 280
Sample : MRL SVMS 4K PPB 16D25863 Inst : BNAMS4
Misc : 8270 calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 11:25 2016 Quant Results File: S804D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Initial Calibration
DataAcq Meth : BNA4E

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.29	152	89785	8000.00	ppb	0.00
22) Naphthalene-d8	6.56	136	539350	8000.00	ppb	0.00
40) Acenaphthene-d10	8.44	164	313325	8000.00	ppb	0.00
64) Phenanthrene-d10	10.06	188	524265	8000.00	ppb	0.00
78) Chrysene-d12	12.94	240	466856	8000.00	ppb	0.00
88) Perylene-d12	14.74	264	459863	8000.00	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	4.19	112	84105	4023.5457511	ppb	0.00
Spiked Amount 20.000	Range 10 - 74		Recovery = 20117.73%#			
7) Phenol-d5	4.92	99	111789	4095.3049578	ppb	0.00
Spiked Amount 20.000	Range 10 - 63		Recovery = 20476.52%#			
23) Nitrobenzene-d5	5.82	82	94638	4027.9981812	ppb	0.00
Spiked Amount 10.000	Range 28 - 123		Recovery = 40279.98%#			
44) 2-Fluorobiphenyl	7.69	172	210597	4086.4847759	ppb	0.00
Spiked Amount 10.000	Range 35 - 133		Recovery = 40864.85%#			
67) 2,4,6-Tribromophenol	9.29	330	21759	3944.8434667	ppb	0.00
Spiked Amount 20.000	Range 22 - 154		Recovery = 19724.22%#			
81) p-Terphenyl-d14	11.77	244	230053	3929.7192032	ppb	0.00
Spiked Amount 10.000	Range 30 - 148		Recovery = 39297.19%#			
Target Compounds						Qvalue
2) Pyridine	3.24	79	129678	4062.5721920	ppb	97
3) N-Nitrosodimethylamine	3.23	42	51988	4263.5711614	ppb	96
5) Aniline	4.99	66	55030	4101.4911226	ppb	97
6) bis(2-Chloroethyl)ether	5.03	63	82968	4235.0991755	ppb	99
8) Phenol	4.93	94	117077	4125.3170902	ppb	98
10) 2-Chlorophenol	5.09	128	101479	4108.8471123	ppb	98
11) n-Decane	5.11	41	42498	4442.2878650	ppb	97
12) 1,3-Dichlorobenzene	5.24	146	103871	4142.6011947	ppb	99
13) 1,4-Dichlorobenzene	5.31	146	104777	4087.1509307	ppb	99
14) Benzyl Alcohol	5.40	79	73129	4107.2141270	ppb	96
15) 1,2-Dichlorobenzene	5.45	146	102389	4121.2024290	ppb	98
16) bis(2-Chloroisopropyl)ethe	5.53	121	31232	4070.2864905	ppb	97
17) 2-Methylphenol	5.49	108	90413	4126.1197219	ppb	99
18) Hexachloroethane	5.78	117	44128	4132.7774560	ppb	98
19) N-Nitrosodi-n-propylamine	5.65	70	65488	4139.8624070	ppb	96
20) 3&4-Methyl phenol	5.63	107	104596	4077.0030272	ppb	94
24) Nitrobenzene	5.84	77	95692	4107.3867641	ppb	100
25) Isophorone	6.07	82	175917	4129.3073666	ppb	99
26) 2-Nitrophenol	6.16	139	52515	3971.3119476	ppb	97
27) 2,4-Dimethylphenol	6.17	107	96626	4108.4600863	ppb	99
28) bis(2-Chlorethoxy)methane	6.28	93	125817	4166.6524026	ppb	99
29) 2,4-Dichlorophenol	6.40	162	79152	4063.8082154	ppb	96
31) 1,2,4-Trichlorobenzene	6.49	180	80101	4124.9052872	ppb	97
32) Naphthalene	6.58	128	329031	4126.9795691	ppb	99
33) 4-Chloroaniline	6.62	65	38189	4163.6916927	ppb	99
34) Hexachloro-1,3-butadiene	6.70	225	35632	4214.8895995	ppb	96
36) 4-Chloro-3-methylphenol	7.12	107	86951	4047.6826912	ppb	99
37) 2-Methylnaphthalene	7.31	142	216891	4145.0359640	ppb	100
38) 1-Methylnaphthalene	7.41	142	192389	4091.4961162	ppb	99
41) Hexachlorocyclopentadiene	7.47	237	30593	3621.1880372	ppb	97
42) 2,4,6-Trichlorophenol	7.60	196	48375	4016.4834122	ppb	95
43) 2,4,5-Trichlorophenol	7.64	196	53029	4099.2910615	ppb	97
45) Biphenyl	7.80	154	249919	4122.3474725	ppb	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516B\0425B 05MRL.D Vial: 5
Acq On : 25 Apr 2016 5:05 pm Operator: 280
Sample : MRL SVMS 4K PPB 16D25863 Inst : BNAMS4
Misc : 8270 calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 11:25 2016 Quant Results File: S804D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Initial Calibration
DataAcq Meth : BNA4E

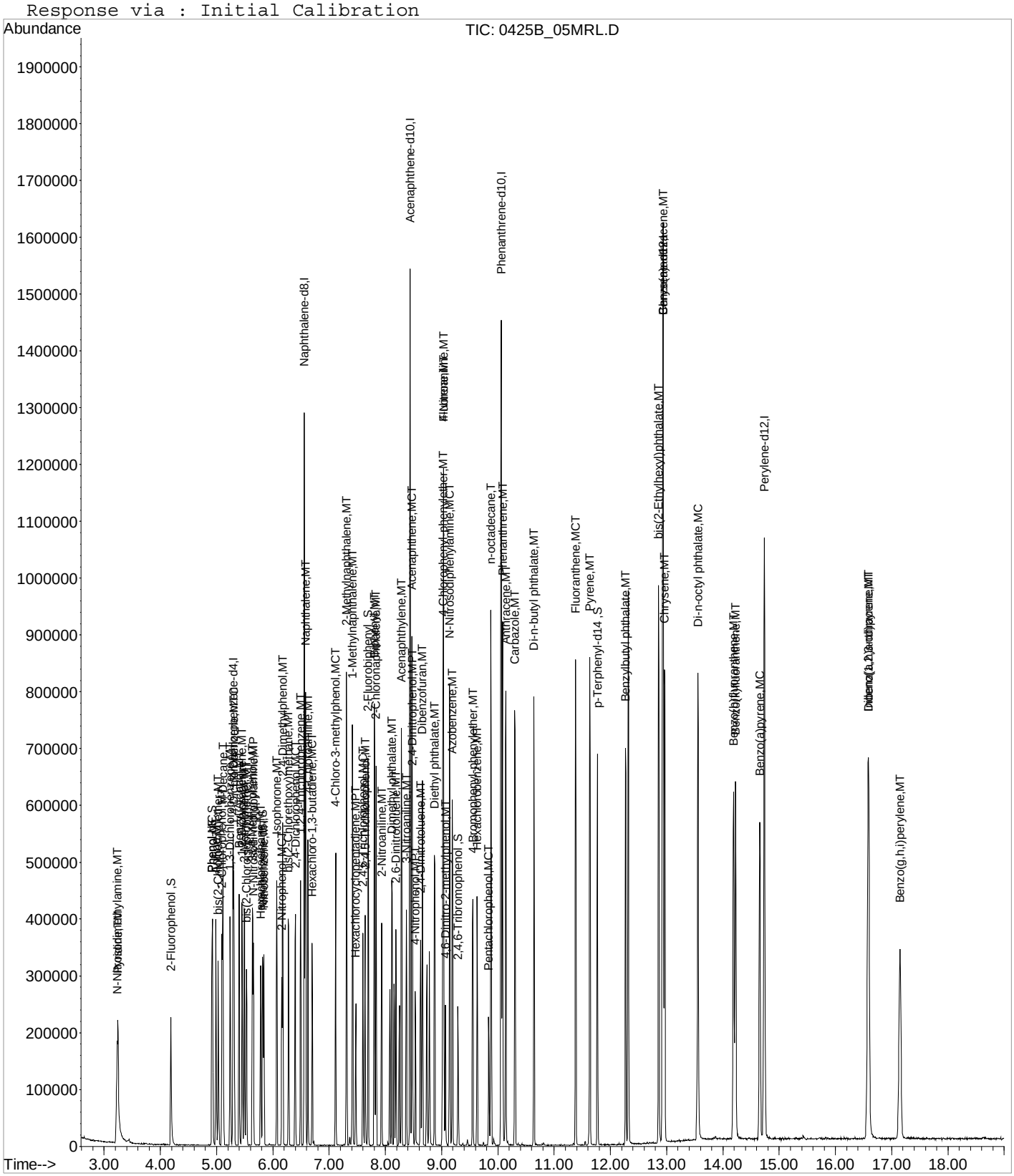
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
46)	2-Chloronaphthalene	7.83	162	193935	4071.6879421	ppb		98
47)	2-Nitroaniline	7.93	138	67135	3997.6692749	ppb		99
48)	Acenaphthylene	8.28	152	303406	3994.8761075	ppb		99
49)	Dimethyl phthalate	8.12	163	202289	4058.4046580	ppb		98
50)	2,6-Dinitrotoluene	8.19	165	48651	3946.1956373	ppb		95
51)	3-Nitroaniline	8.37	138	59922	4020.9143941	ppb		94
52)	Acenaphthene	8.47	153	203241	4082.5246048	ppb		100
53)	2,4-Dinitrophenol	8.48	184	16166	4402.4421973	ppb	#	8
54)	Dibenzofuran	8.65	168	274563	4023.8380435	ppb		98
55)	2,4-Dinitrotoluene	8.63	165	63716	3882.9565662	ppb		87
57)	4-Nitrophenol	8.53	139	45347	3869.6163028	ppb		89
58)	Fluorene	9.03	166	229462	4082.1516652	ppb		97
59)	4-Chlorophenyl-phenylether	9.02	204	88592	4082.3891307	ppb		99
60)	Diethyl phthalate	8.87	149	213269	4067.9975528	ppb		99
61)	4-Nitroaniline	9.04	138	61481	4139.8516715	ppb		98
62)	Azobenzene	9.19	77	235600	4233.8075121	ppb		98
65)	4,6-Dinitro-2-methylphenol	9.07	198	27809	3215.7093307	ppb		84
66)	N-Nitrosodiphenylamine	9.14	169	193346	4075.2179725	ppb		100
68)	4-Bromophenyl-phenylether	9.55	248	44760	3904.4097710	ppb		94
69)	Hexachlorobenzene	9.63	284	50255	4071.5028488	ppb		97
70)	n-octadecane	9.88	55	41038	4486.3592743	ppb		99
71)	Pentachlorophenol	9.84	266	22275	3021.6603613	ppb		93
72)	Phenanthrene	10.08	178	314989	4006.4852748	ppb		98
73)	Anthracene	10.14	178	318164	4034.0101782	ppb		100
74)	Carbazole	10.31	167	324871	4014.6289458	ppb		99
75)	Di-n-butyl phthalate	10.64	149	399889	4013.8489905	ppb		99
77)	Fluoranthene	11.38	202	304916	3832.6656210	ppb		100
80)	Pyrene	11.63	202	326941	3893.0170917	ppb		99
82)	Benzylbutyl phthalate	12.27	149	178570	3891.7968167	ppb		99
84)	Benzo(a)anthracene	12.93	228	287072	3891.3436653	ppb		97
85)	Chrysene	12.97	228	274061	3892.7501427	ppb		98
86)	bis(2-Ethylhexyl)phthalate	12.86	149	271881	3862.2542148	ppb		99
87)	Di-n-octyl phthalate	13.55	149	490853	3944.7834782	ppb		99
89)	Benzo(b)fluoranthene	14.19	252	281186	3749.7808782	ppb		99
90)	Benzo(k)fluoranthene	14.22	252	266901	3805.7487589	ppb		98
91)	Benzo(a)pyrene	14.65	252	266528	3813.0009641	ppb		97
92)	Indeno(1,2,3-cd)pyrene	16.58	276	313373	4047.3221522	ppb		98
93)	Dibenz(a,h)anthracene	16.59	278	270758	4035.2257388	ppb		96
94)	Benzo(g,h,i)perylene	17.15	276	264063	4133.8284180	ppb		97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516B\0425B 05MRL.D Vial: 5
Acq On : 25 Apr 2016 5:05 pm Operator: 280
Sample : MRL SVMS 4K PPB 16D25863 Inst : BNAMS4
Misc : 8270 calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 11:25 2016 Quant Results File: S804D25P.RES

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516B\0425B 12MRL.D Vial: 12
Acq On : 25 Apr 2016 7:48 pm Operator: 280
Sample : MRL TCL 4K1 PPB 16D25867 Inst : BNAMS4
Misc : 8270 TCL calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 11:26 2016 Quant Results File: S804D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Initial Calibration
DataAcq Meth : BNA4E

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.29	152	91497	8000.00	ppb	0.00
22) Naphthalene-d8	6.56	136	530254	8000.00	ppb	0.00
40) Acenaphthene-d10	8.44	164	318303	8000.00	ppb	0.00
64) Phenanthrene-d10	10.06	188	534948	8000.00	ppb	0.00
78) Chrysene-d12	12.94	240	463487	8000.00	ppb	0.00
88) Perylene-d12	14.74	264	464490	8000.00	ppb	0.00

System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 74		Recovery =	0.00%#		
7) Phenol-d5	0.00	99	0	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 63		Recovery =	0.00%#		
23) Nitrobenzene-d5	0.00	82	0d	0.0000000	ppb	
Spiked Amount 10.000	Range 28 - 123		Recovery =	0.00%#		
44) 2-Fluorobiphenyl	0.00	172	0	0.0000000	ppb	
Spiked Amount 10.000	Range 35 - 133		Recovery =	0.00%#		
67) 2,4,6-Tribromophenol	0.00	330	0	0.0000000	ppb	
Spiked Amount 20.000	Range 22 - 154		Recovery =	0.00%#		
81) p-Terphenyl-d14	0.00	244	0	0.0000000	ppb	
Spiked Amount 10.000	Range 30 - 148		Recovery =	0.00%#		

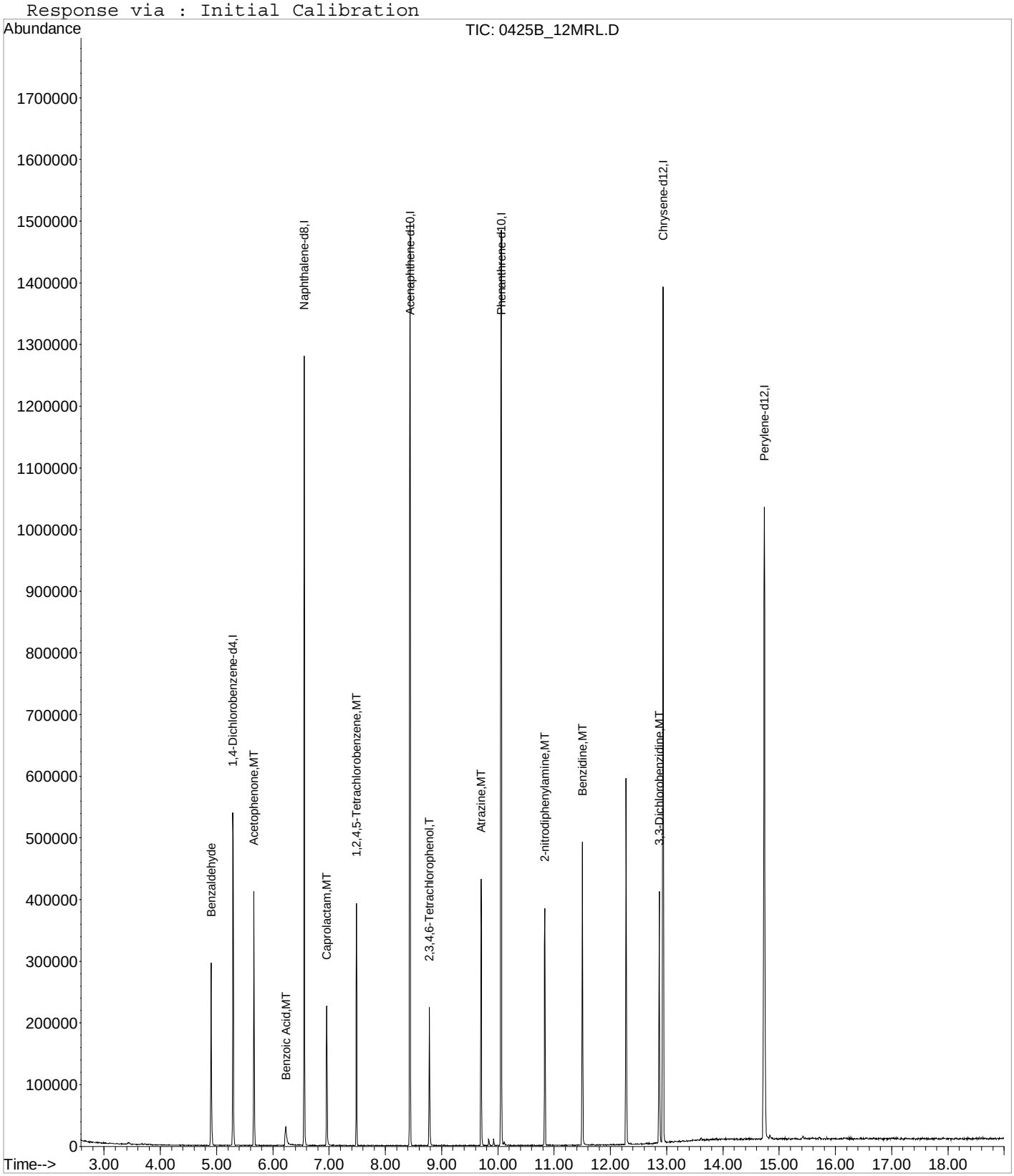
Target Compounds						Qvalue
9) Benzaldehyde	4.90	105	59505	3876.3912309	ppb	99
21) Acetophenone	5.66	105	110984	3816.7466835	ppb	98
30) Benzoic Acid	6.23	105	18634	3106.5241798	ppb	100
35) Caprolactam	6.96	113	25741	3706.7676021	ppb	96
39) 1,2,4,5-Tetrachlorobenzene	7.49	216	63548	3983.6435414	ppb	95
56) 2,3,4,6-Tetrachlorophenol	8.78	232	23897	3333.2764224	ppb	98
63) Atrazine	9.70	200	40297	3596.4021998	ppb	97
76) 2-nitrodiphenylamine	10.83	167	53886	3213.4647767	ppb	96
79) Benzidine	11.50	184	187832	3634.7204789	ppb	99
83) 3,3-Dichlorobenzidine	12.87	252	70884	3632.3962409	ppb	94

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516B\0425B 12MRL.D Vial: 12
Acq On : 25 Apr 2016 7:48 pm Operator: 280
Sample : MRL TCL 4K1 PPB 16D25867 Inst : BNAMS4
Misc : 8270 TCL calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 11:26 2016 Quant Results File: S804D25P.RES

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516B\0425B 17.D Vial: 17
Acq On : 25 Apr 2016 9:45 pm Operator: 280
Sample : SSCV SVMS 10K PPB 16A25209 Inst : BNAMS4
Misc : 8270 SSCV ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 11:27 2016 Quant Results File: S804D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Initial Calibration
DataAcq Meth : BNA4E

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.29	152	91495	8000.00 ppb	0.00
22) Naphthalene-d8	6.56	136	547827	8000.00 ppb	0.00
40) Acenaphthene-d10	8.44	164	320630	8000.00 ppb	0.00
64) Phenanthrene-d10	10.06	188	539889	8000.00 ppb	0.00
78) Chrysene-d12	12.94	240	497569	8000.00 ppb	0.00
88) Perylene-d12	14.74	264	479561	8000.00 ppb	0.00

System Monitoring Compounds					
4) 2-Fluorophenol	0.00	112	0	0.0000000 ppb	
Spiked Amount 20.000	Range 10 - 74		Recovery =	0.00%#	
7) Phenol-d5	0.00	99	0d	0.0000000 ppb	
Spiked Amount 20.000	Range 10 - 63		Recovery =	0.00%#	
23) Nitrobenzene-d5	0.00	82	0d	0.0000000 ppb	
Spiked Amount 10.000	Range 28 - 123		Recovery =	0.00%#	
44) 2-Fluorobiphenyl	0.00	172	0d	0.0000000 ppb	
Spiked Amount 10.000	Range 35 - 133		Recovery =	0.00%#	
67) 2,4,6-Tribromophenol	0.00	330	0	0.0000000 ppb	
Spiked Amount 20.000	Range 22 - 154		Recovery =	0.00%#	
81) p-Terphenyl-d14	0.00	244	0	0.0000000 ppb	
Spiked Amount 10.000	Range 30 - 148		Recovery =	0.00%#	

Target Compounds					Qvalue
2) Pyridine	3.24	79	305364	9387.6966812 ppb	100
3) N-Nitrosodimethylamine	3.22	42	115679	9309.6071937 ppb	96
5) Aniline	4.99	66	125502	9179.0838133 ppb	99
6) bis(2-Chloroethyl)ether	5.03	63	196359	9835.8115860 ppb	98
8) Phenol	4.93	94	276625	9564.9697956 ppb	99
10) 2-Chlorophenol	5.09	128	247570	9836.6732395 ppb	97
12) 1,3-Dichlorobenzene	5.24	146	248865	9739.7780712 ppb	99
13) 1,4-Dichlorobenzene	5.31	146	257969	9874.8080378 ppb	99
14) Benzyl Alcohol	5.40	79	175776	9687.7676285 ppb	97
15) 1,2-Dichlorobenzene	5.45	146	244060	9639.9255131 ppb	99
16) bis(2-Chloroisopropyl)ethe	5.53	121	90458	11568.5409811 ppb	99
17) 2-Methylphenol	5.49	108	217181	9726.1104987 ppb	99
18) Hexachloroethane	5.78	117	109155	10031.7761978 ppb	98
19) N-Nitrosodi-n-propylamine	5.66	70	156285	9695.0019862 ppb	98
20) 3&4-Methyl phenol	5.64	107	249501	9543.4339839 ppb	97
24) Nitrobenzene	5.84	77	228491	9655.7567459 ppb	99
25) Isophorone	6.07	82	433090	10008.6339743 ppb	98
26) 2-Nitrophenol	6.16	139	130681	9729.4957302 ppb	98
27) 2,4-Dimethylphenol	6.18	107	228970	9584.9732440 ppb	99
28) bis(2-Chlorethoxy)methane	6.28	93	310304	10117.2520583 ppb	98
29) 2,4-Dichlorophenol	6.40	162	188658	9536.1656655 ppb	99
31) 1,2,4-Trichlorobenzene	6.49	180	193451	9807.8603235 ppb	96
32) Naphthalene	6.58	128	800471	9884.8106437 ppb	100
33) 4-Chloroaniline	6.62	65	87818	9426.5129817 ppb	97
34) Hexachloro-1,3-butadiene	6.70	225	94358	10988.8433186 ppb	99
36) 4-Chloro-3-methylphenol	7.12	107	213730	9795.4550147 ppb	99
37) 2-Methylnaphthalene	7.31	142	505774	9516.3525337 ppb	99
38) 1-Methylnaphthalene	7.41	142	484269	10139.4833208 ppb	99
41) Hexachlorocyclopentadiene	7.47	237	73214	8468.6471563 ppb	97
42) 2,4,6-Trichlorophenol	7.60	196	121434	9852.7211985 ppb	97
43) 2,4,5-Trichlorophenol	7.64	196	130780	9879.3311836 ppb	98
46) 2-Chloronaphthalene	7.84	162	476495	9776.1427059 ppb	99
47) 2-Nitroaniline	7.93	138	171921	10004.0923235 ppb	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516B\0425B 17.D Vial: 17
Acq On : 25 Apr 2016 9:45 pm Operator: 280
Sample : SSCV SVMS 10K PPB 16A25209 Inst : BNAMS4
Misc : 8270 SSCV ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 11:27 2016 Quant Results File: S804D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Initial Calibration
DataAcq Meth : BNA4E

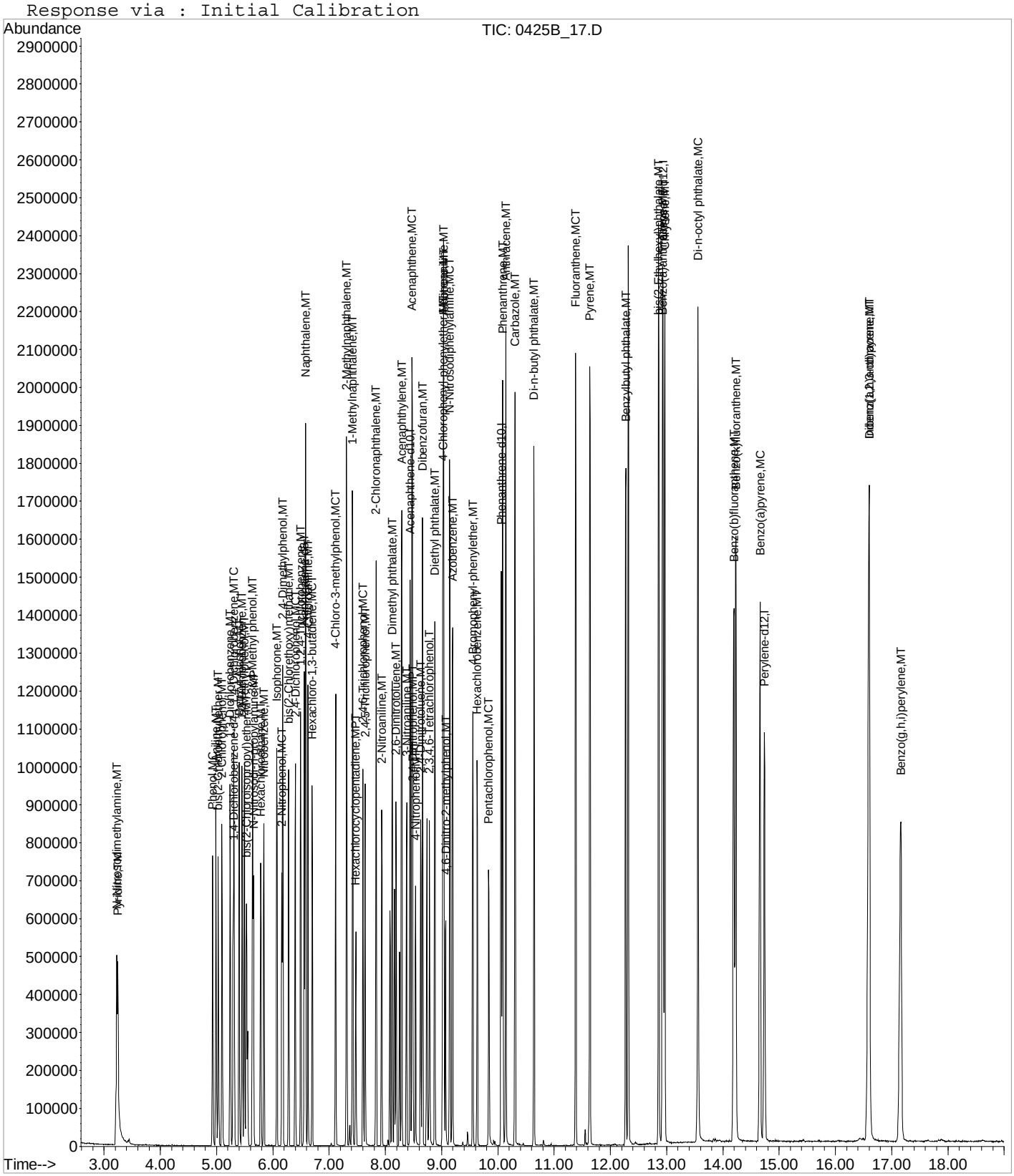
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
48)	Acenaphthylene	8.29	152	760217	9781.5486801 ppb	99
49)	Dimethyl phthalate	8.12	163	490124	9609.0387068 ppb	99
50)	2,6-Dinitrotoluene	8.19	165	125434	9942.4406185 ppb	97
51)	3-Nitroaniline	8.38	138	144509	9475.9839354 ppb	99
52)	Acenaphthene	8.47	153	512735	10064.7118360 ppb	99
53)	2,4-Dinitrophenol	8.49	184	57041	9321.6107026 ppb	99
54)	Dibenzofuran	8.66	168	657949	9422.8354117 ppb	99
55)	2,4-Dinitrotoluene	8.63	165	160974	9586.5128390 ppb	84
56)	2,3,4,6-Tetrachlorophenol	8.78	232	86641	11997.4232367 ppb	98
57)	4-Nitrophenol	8.54	139	116951	9752.4599636 ppb	97
58)	Fluorene	9.03	166	567478	9865.4814498 ppb	99
59)	4-Chlorophenyl-phenylether	9.02	204	215300	9695.1563238 ppb	99
60)	Diethyl phthalate	8.88	149	520323	9698.7746194 ppb	100
61)	4-Nitroaniline	9.04	138	150977	9934.4892205 ppb	99
62)	Azobenzene	9.20	77	565702	9934.2350286 ppb	99
65)	4,6-Dinitro-2-methylphenol	9.07	198	81863	9192.3268023 ppb	97
66)	N-Nitrosodiphenylamine	9.14	169	469541	9610.2693055 ppb	99
68)	4-Bromophenyl-phenylether	9.55	248	113356	9601.8786226 ppb	98
69)	Hexachlorobenzene	9.63	284	121971	9595.7392085 ppb	98
71)	Pentachlorophenol	9.84	266	80443	10596.5033425 ppb	98
72)	Phenanthrene	10.08	178	782902	9669.8993085 ppb	97
73)	Anthracene	10.14	178	808999	9960.4812559 ppb	99
74)	Carbazole	10.31	167	810092	9721.0951897 ppb	100
75)	Di-n-butyl phthalate	10.64	149	992519	9674.0156790 ppb	100
77)	Fluoranthene	11.38	202	792966	9678.8034316 ppb	99
80)	Pyrene	11.63	202	843301	9421.6977764 ppb	99
82)	Benzylbutyl phthalate	12.27	149	475648	9726.5083695 ppb	100
84)	Benzo(a)anthracene	12.93	228	729626	9279.8014439 ppb	98
85)	Chrysene	12.97	228	711488	9482.1430055 ppb	97
86)	bis(2-Ethylhexyl)phthalate	12.86	149	707820	9434.4037238 ppb	98
87)	Di-n-octyl phthalate	13.55	149	1270610	9581.0613245 ppb	100
89)	Benzo(b)fluoranthene	14.20	252	760106	9720.1052628 ppb	100
90)	Benzo(k)fluoranthene	14.23	252	680299	9301.9576321 ppb	99
91)	Benzo(a)pyrene	14.66	252	688304	9442.5431723 ppb	99
92)	Indeno(1,2,3-cd)pyrene	16.59	276	799781	9905.1690610 ppb	96
93)	Dibenz(a,h)anthracene	16.60	278	709020	10132.8038240 ppb	98
94)	Benzo(g,h,i)perylene	17.16	276	693784	10414.8683489 ppb	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

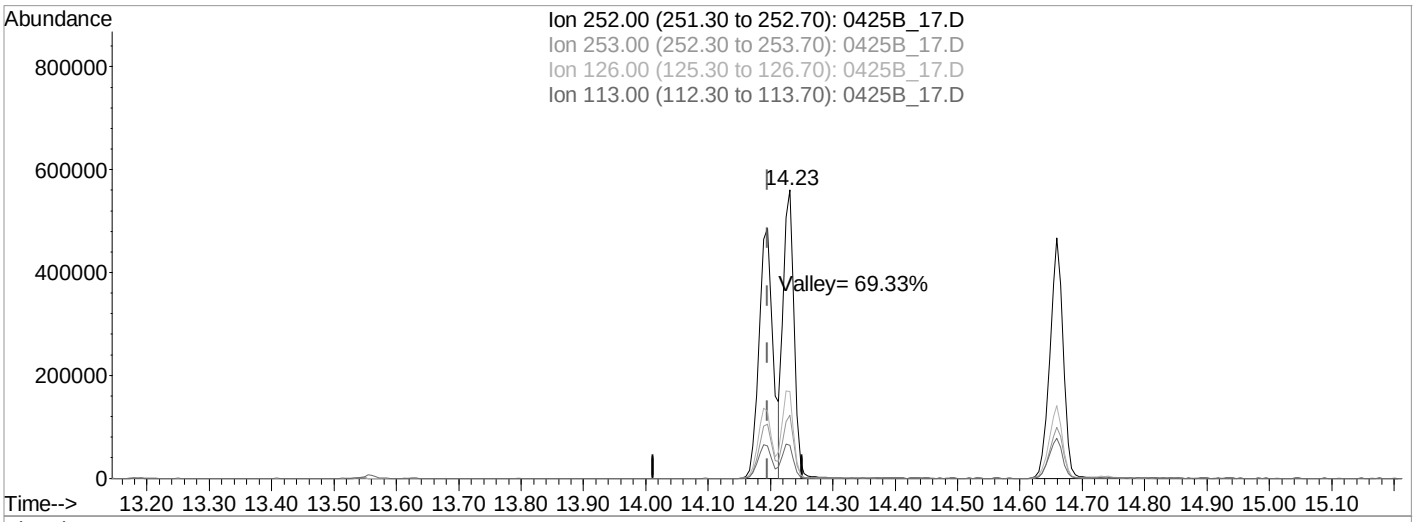
Data File : C:\MSDCHEM\1\DATA\042516B\0425B 17.D Vial: 17
Acq On : 25 Apr 2016 9:45 pm Operator: 280
Sample : SSCV SVMS 10K PPB 16A25209 Inst : BNAMS4
Misc : 8270 SSCV ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 11:27 2016 Quant Results File: S804D25P.RES

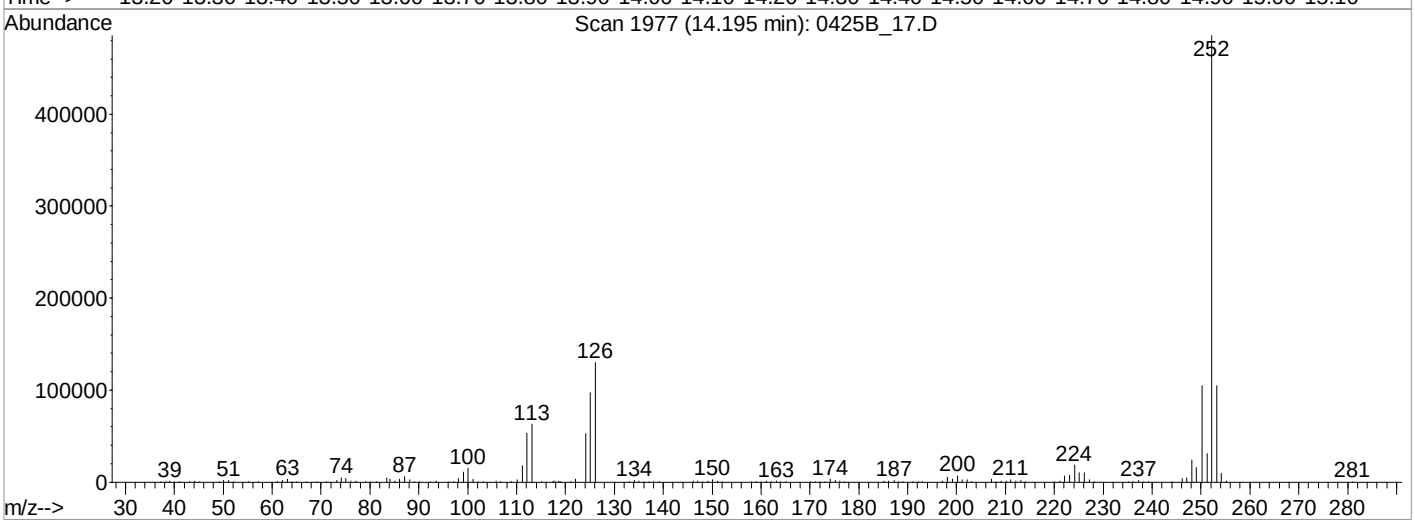
Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Initial Calibration



Data File : C:\MSDCHEM\1\DATA\042516B\0425B 17.D Vial: 17
Acq On : 25 Apr 2016 9:45 pm Operator: 280
Sample : SSCV SVMS 10K PPB 16A25209 Inst : BNAMS4
Misc : 8270 SSCV ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 11:27 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:20:01 2016
Response via : Multiple Level Calibration





TIC: 0425B_17.D

(89) Benzo(b)fluoranthene (MT)

14.20min (+0.000) 9720.1052628 ppb

Qvalue = 100

response 760106

Ion	Exp%	Act%
252.00	100	100
253.00	21.50	21.43
126.00	25.80	25.52
113.00	12.80	12.61

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516B\0425B 02.D Vial: 2
Acq On : 25 Apr 2016 3:54 pm Operator: 280
Sample : MSTD SVMS 10K PPB 16D25863 Inst : BNAMS4
Misc : 8270 calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:32 2016 Quant Results File: S804D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:26:56 2016
Response via : Initial Calibration
DataAcq Meth : BNA4E

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.29	152	95957	8000.00	ppb	0.00
22) Naphthalene-d8	6.56	136	566711	8000.00	ppb	0.00
40) Acenaphthene-d10	8.44	164	329784	8000.00	ppb	0.00
64) Phenanthrene-d10	10.06	188	564268	8000.00	ppb	0.00
78) Chrysene-d12	12.94	240	489009	8000.00	ppb	0.00
88) Perylene-d12	14.74	264	488818	8000.00	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	4.18	112	210752	10000.0000000	ppb	0.00
Spiked Amount 20.000	Range 10 - 74		Recovery = 50000.00%#			
7) Phenol-d5	4.92	99	277885	10000.0000000	ppb	0.00
Spiked Amount 20.000	Range 10 - 63		Recovery = 50000.00%#			
23) Nitrobenzene-d5	5.82	82	241759	10000.0000000	ppb	0.00
Spiked Amount 10.000	Range 28 - 123		Recovery = 100000.00%#			
44) 2-Fluorobiphenyl	7.70	172	526896	10000.0000000	ppb	0.00
Spiked Amount 10.000	Range 35 - 133		Recovery = 100000.00%#			
67) 2,4,6-Tribromophenol	9.29	330	57456	10000.0000000	ppb	0.00
Spiked Amount 20.000	Range 22 - 154		Recovery = 50000.00%#			
81) p-Terphenyl-d14	11.77	244	621731	10000.0000000	ppb	0.00
Spiked Amount 10.000	Range 30 - 148		Recovery = 100000.00%#			
Target Compounds						Qvalue
2) Pyridine	3.24	79	327622	10000.0000000	ppb	100
3) N-Nitrosodimethylamine	3.22	42	125826	10000.0000000	ppb	100
5) Aniline	4.99	66	134695	10000.0000000	ppb	100
6) bis(2-Chloroethyl)ether	5.03	63	205864	10000.0000000	ppb	100
8) Phenol	4.93	94	292875	10000.0000000	ppb	100
10) 2-Chlorophenol	5.09	128	251748	10000.0000000	ppb	100
11) n-Decane	5.11	41	101672	10000.0000000	ppb	100
12) 1,3-Dichlorobenzene	5.24	146	259521	10000.0000000	ppb	100
13) 1,4-Dichlorobenzene	5.31	146	263337	10000.0000000	ppb	100
14) Benzyl Alcohol	5.40	79	181442	10000.0000000	ppb	100
15) 1,2-Dichlorobenzene	5.45	146	254323	10000.0000000	ppb	100
16) bis(2-Chloroisopropyl)ethe	5.53	121	77797	10000.0000000	ppb	100
17) 2-Methylphenol	5.49	108	226453	10000.0000000	ppb	100
18) Hexachloroethane	5.78	117	110458	10000.0000000	ppb	100
19) N-Nitrosodi-n-propylamine	5.66	70	164149	10000.0000000	ppb	100
20) 3&4-Methyl phenol	5.64	107	260484	10000.0000000	ppb	100
24) Nitrobenzene	5.84	77	242039	10000.0000000	ppb	100
25) Isophorone	6.07	82	438368	10000.0000000	ppb	100
26) 2-Nitrophenol	6.16	139	137563	10000.0000000	ppb	100
27) 2,4-Dimethylphenol	6.18	107	243435	10000.0000000	ppb	100
28) bis(2-Chlorethoxy)methane	6.28	93	311543	10000.0000000	ppb	100
29) 2,4-Dichlorophenol	6.40	162	200563	10000.0000000	ppb	100
31) 1,2,4-Trichlorobenzene	6.49	180	199853	10000.0000000	ppb	100
32) Naphthalene	6.58	128	814208	10000.0000000	ppb	100
33) 4-Chloroaniline	6.62	65	96053	10000.0000000	ppb	100
34) Hexachloro-1,3-butadiene	6.70	225	84927	10000.0000000	ppb	100
36) 4-Chloro-3-methylphenol	7.12	107	221923	10000.0000000	ppb	100
37) 2-Methylnaphthalene	7.31	142	541208	10000.0000000	ppb	100
38) 1-Methylnaphthalene	7.42	142	484399	10000.0000000	ppb	100
41) Hexachlorocyclopentadiene	7.47	237	89152	10000.0000000	ppb	100
42) 2,4,6-Trichlorophenol	7.60	196	127459	10000.0000000	ppb	100
43) 2,4,5-Trichlorophenol	7.64	196	138175	10000.0000000	ppb	100
45) Biphenyl	7.81	154	628127	10000.0000000	ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516B\0425B 02.D Vial: 2
Acq On : 25 Apr 2016 3:54 pm Operator: 280
Sample : MSTD SVMS 10K PPB 16D25863 Inst : BNAMS4
Misc : 8270 calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:32 2016 Quant Results File: S804D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:26:56 2016
Response via : Initial Calibration
DataAcq Meth : BNA4E

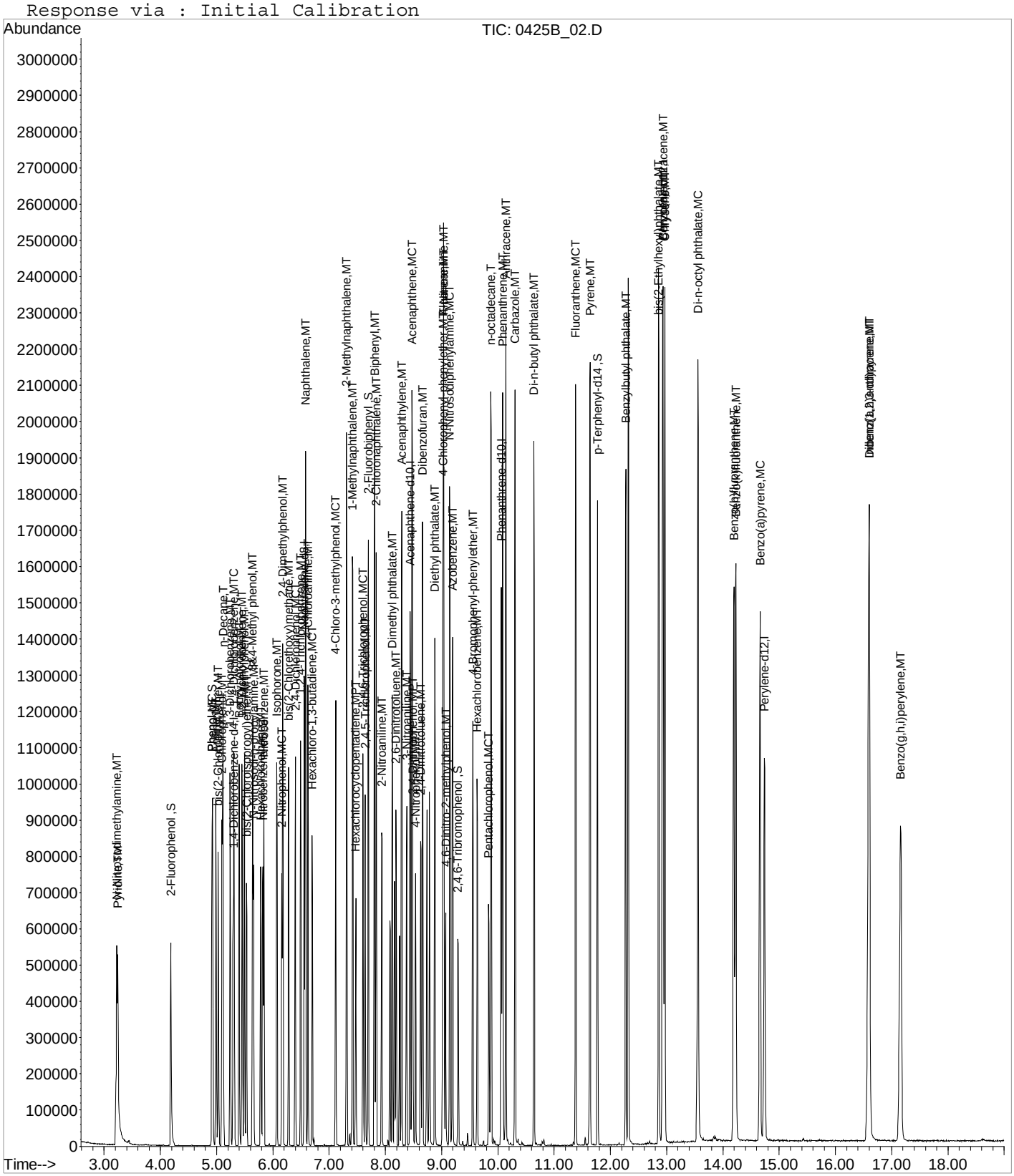
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46)	2-Chloronaphthalene	7.84	162	495786	10000.0000000	ppb	100
47)	2-Nitroaniline	7.94	138	176668	10000.0000000	ppb	100
48)	Acenaphthylene	8.29	152	775681	10000.0000000	ppb	100
49)	Dimethyl phthalate	8.12	163	504822	10000.0000000	ppb	100
50)	2,6-Dinitrotoluene	8.19	165	128261	10000.0000000	ppb	100
51)	3-Nitroaniline	8.38	138	151358	10000.0000000	ppb	100
52)	Acenaphthene	8.47	153	513674	10000.0000000	ppb	100
53)	2,4-Dinitrophenol	8.49	184	59819	10000.0000000	ppb	100
54)	Dibenzofuran	8.66	168	697596	10000.0000000	ppb	100
55)	2,4-Dinitrotoluene	8.63	165	172284	10000.0000000	ppb	100
57)	4-Nitrophenol	8.54	139	124363	10000.0000000	ppb	100
58)	Fluorene	9.04	166	578888	10000.0000000	ppb	100
59)	4-Chlorophenyl-phenylether	9.02	204	223657	10000.0000000	ppb	100
60)	Diethyl phthalate	8.88	149	546309	10000.0000000	ppb	100
61)	4-Nitroaniline	9.04	138	157990	10000.0000000	ppb	100
62)	Azobenzene	9.20	77	578637	10000.0000000	ppb	100
65)	4,6-Dinitro-2-methylphenol	9.07	198	84258	10000.0000000	ppb	100
66)	N-Nitrosodiphenylamine	9.14	169	490311	10000.0000000	ppb	100
68)	4-Bromophenyl-phenylether	9.55	248	117336	10000.0000000	ppb	100
69)	Hexachlorobenzene	9.64	284	126155	10000.0000000	ppb	100
70)	n-octadecane	9.88	55	98647	10000.0000000	ppb	100
71)	Pentachlorophenol	9.84	266	71751	10000.0000000	ppb	100
72)	Phenanthrene	10.09	178	811269	10000.0000000	ppb	100
73)	Anthracene	10.14	178	825847	10000.0000000	ppb	100
74)	Carbazole	10.31	167	849618	10000.0000000	ppb	100
75)	Di-n-butyl phthalate	10.64	149	1066056	10000.0000000	ppb	100
77)	Fluoranthene	11.38	202	821160	10000.0000000	ppb	100
80)	Pyrene	11.64	202	873722	10000.0000000	ppb	100
82)	Benzylbutyl phthalate	12.27	149	485003	10000.0000000	ppb	100
84)	Benzo(a)anthracene	12.93	228	756278	10000.0000000	ppb	100
85)	Chrysene	12.97	228	707225	10000.0000000	ppb	100
86)	bis(2-Ethylhexyl)phthalate	12.86	149	720334	10000.0000000	ppb	100
87)	Di-n-octyl phthalate	13.55	149	1281232	10000.0000000	ppb	100
89)	Benzo(b)fluoranthene	14.20	252	777708	10000.0000000	ppb	100
90)	Benzo(k)fluoranthene	14.23	252	737836	10000.0000000	ppb	100
91)	Benzo(a)pyrene	14.66	252	712624	10000.0000000	ppb	100
92)	Indeno(1,2,3-cd)pyrene	16.59	276	821484	10000.0000000	ppb	100
93)	Dibenz(a,h)anthracene	16.60	278	711059	10000.0000000	ppb	100
94)	Benzo(g,h,i)perylene	17.16	276	689370	10000.0000000	ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

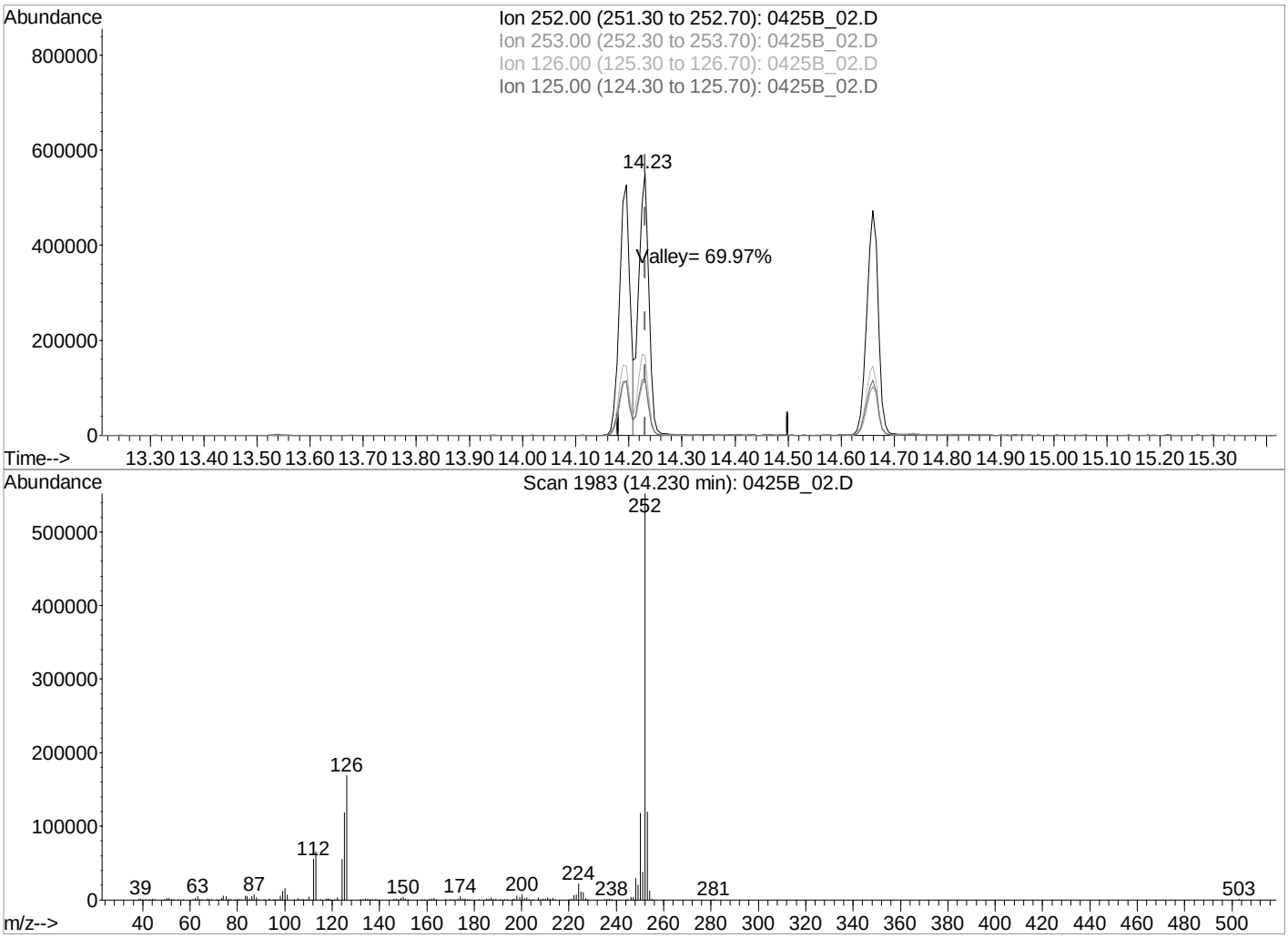
Data File : C:\MSDCHEM\1\DATA\042516B\0425B 02.D Vial: 2
Acq On : 25 Apr 2016 3:54 pm Operator: 280
Sample : MSTD SVMS 10K PPB 16D25863 Inst : BNAMS4
Misc : 8270 calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:32 2016 Quant Results File: S804D25P.RES

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:26:56 2016
Response via : Initial Calibration



Data File : C:\MSDCHEM\1\DATA\042516B\0425B 02.D Vial: 2
Acq On : 25 Apr 2016 3:54 pm Operator: 280
Sample : MSTD SVMS 10K PPB 16D25863 Inst : BNAMS4
Misc : 8270 calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:32 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:26:56 2016
Response via : Multiple Level Calibration



TIC: 0425B_02.D

(90) Benzo(k)fluoranthene (MT)

14.23min (0.000) 10000.0000000 ppb

Qvalue = 100

response 737836

Ion	Exp%	Act%
252.00	100	100
253.00	21.60	21.59
126.00	30.50	30.48
125.00	21.30	21.32

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516B\0425B 03.D Vial: 3
Acq On : 25 Apr 2016 4:18 pm Operator: 280
Sample : STD SVMS 500 PPB 16D25863 Inst : BNAMS4
Misc : 8270 calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:33 2016 Quant Results File: S804D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:26:56 2016
Response via : Initial Calibration
DataAcq Meth : BNA4E

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.29	152	92157	8000.00 ppb		0.00
22) Naphthalene-d8	6.56	136	548573	8000.00 ppb		0.00
40) Acenaphthene-d10	8.44	164	313606	8000.00 ppb		0.00
64) Phenanthrene-d10	10.06	188	531974	8000.00 ppb		0.00
78) Chrysene-d12	12.94	240	434475	8000.00 ppb		0.00
88) Perylene-d12	14.74	264	442968	8000.00 ppb		0.00
System Monitoring Compounds						
4) 2-Fluorophenol	4.19	112	10004	494.2541351 ppb		0.00
Spiked Amount 20.000	Range 10 - 74		Recovery = 2471.27%#			
7) Phenol-d5	4.92	99	13632	510.7904936 ppb		0.00
Spiked Amount 20.000	Range 10 - 63		Recovery = 2553.95%#			
23) Nitrobenzene-d5	5.82	82	12073	515.8931532 ppb		0.00
Spiked Amount 10.000	Range 28 - 123		Recovery = 5158.93%#			
44) 2-Fluorobiphenyl	7.69	172	26913	537.1337333 ppb		0.00
Spiked Amount 10.000	Range 35 - 133		Recovery = 5371.34%#			
67) 2,4,6-Tribromophenol	9.29	330	2479	457.6528318 ppb		0.00
Spiked Amount 20.000	Range 22 - 154		Recovery = 2288.26%#			
81) p-Terphenyl-d14	11.77	244	26377	477.5017169 ppb		0.00
Spiked Amount 10.000	Range 30 - 148		Recovery = 4775.02%#			
Target Compounds						Qvalue
2) Pyridine	3.25	79	14706	467.3796914 ppb	#	88
3) N-Nitrosodimethylamine	3.23	42	5438	450.0047994 ppb		93
5) Aniline	4.99	66	7587	586.4985497 ppb		89
6) bis(2-Chloroethyl)ether	5.03	63	10361	524.0462285 ppb		90
8) Phenol	4.93	94	14526	516.4307233 ppb		98
10) 2-Chlorophenol	5.09	128	13233	547.3191156 ppb		95
11) n-Decane	5.11	41	5730	586.8155158 ppb	#	91
12) 1,3-Dichlorobenzene	5.24	146	13209	529.9632653 ppb		95
13) 1,4-Dichlorobenzene	5.31	146	13212	522.4022207 ppb		96
14) Benzyl Alcohol	5.40	79	9074	520.7260251 ppb		96
15) 1,2-Dichlorobenzene	5.45	146	13125	537.3558822 ppb		96
16) bis(2-Chloroisopropyl)ethe	5.53	121	3988	533.7533731 ppb		96
17) 2-Methylphenol	5.49	108	10852	498.9764394 ppb		97
18) Hexachloroethane	5.78	117	5731	540.2335680 ppb	#	86
19) N-Nitrosodi-n-propylamine	5.65	70	8081	512.5959830 ppb		87
20) 3&4-Methyl phenol	5.63	107	13016	520.2892116 ppb		89
24) Nitrobenzene	5.83	77	12215	521.3571518 ppb		96
25) Isophorone	6.07	82	21204	499.6963367 ppb		96
26) 2-Nitrophenol	6.16	139	5897	442.8500555 ppb		93
27) 2,4-Dimethylphenol	6.17	107	12180	516.8820888 ppb		97
28) bis(2-Chlorethoxy)methane	6.27	93	15200	504.0258427 ppb		87
29) 2,4-Dichlorophenol	6.40	162	9063	466.8188420 ppb		95
31) 1,2,4-Trichlorobenzene	6.49	180	10127	523.4766955 ppb		97
32) Naphthalene	6.58	128	43499	551.9136331 ppb		98
33) 4-Chloroaniline	6.62	65	4955	532.9174477 ppb		90
34) Hexachloro-1,3-butadiene	6.70	225	4500	547.3863265 ppb		96
36) 4-Chloro-3-methylphenol	7.12	107	10191	474.3967455 ppb		96
37) 2-Methylnaphthalene	7.31	142	25924	494.8402518 ppb		96
38) 1-Methylnaphthalene	7.41	142	24606	524.7651624 ppb		98
41) Hexachlorocyclopentadiene	7.47	237	3042	358.8172699 ppb		95
42) 2,4,6-Trichlorophenol	7.60	196	5123	422.6677065 ppb		97
43) 2,4,5-Trichlorophenol	7.64	196	5506	419.0365949 ppb		98
45) Biphenyl	7.80	154	30087	503.7054412 ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516B\0425B 03.D Vial: 3
Acq On : 25 Apr 2016 4:18 pm Operator: 280
Sample : STD SVMS 500 PPB 16D25863 Inst : BNAMS4
Misc : 8270 calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:33 2016 Quant Results File: S804D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:26:56 2016
Response via : Initial Calibration
DataAcq Meth : BNA4E

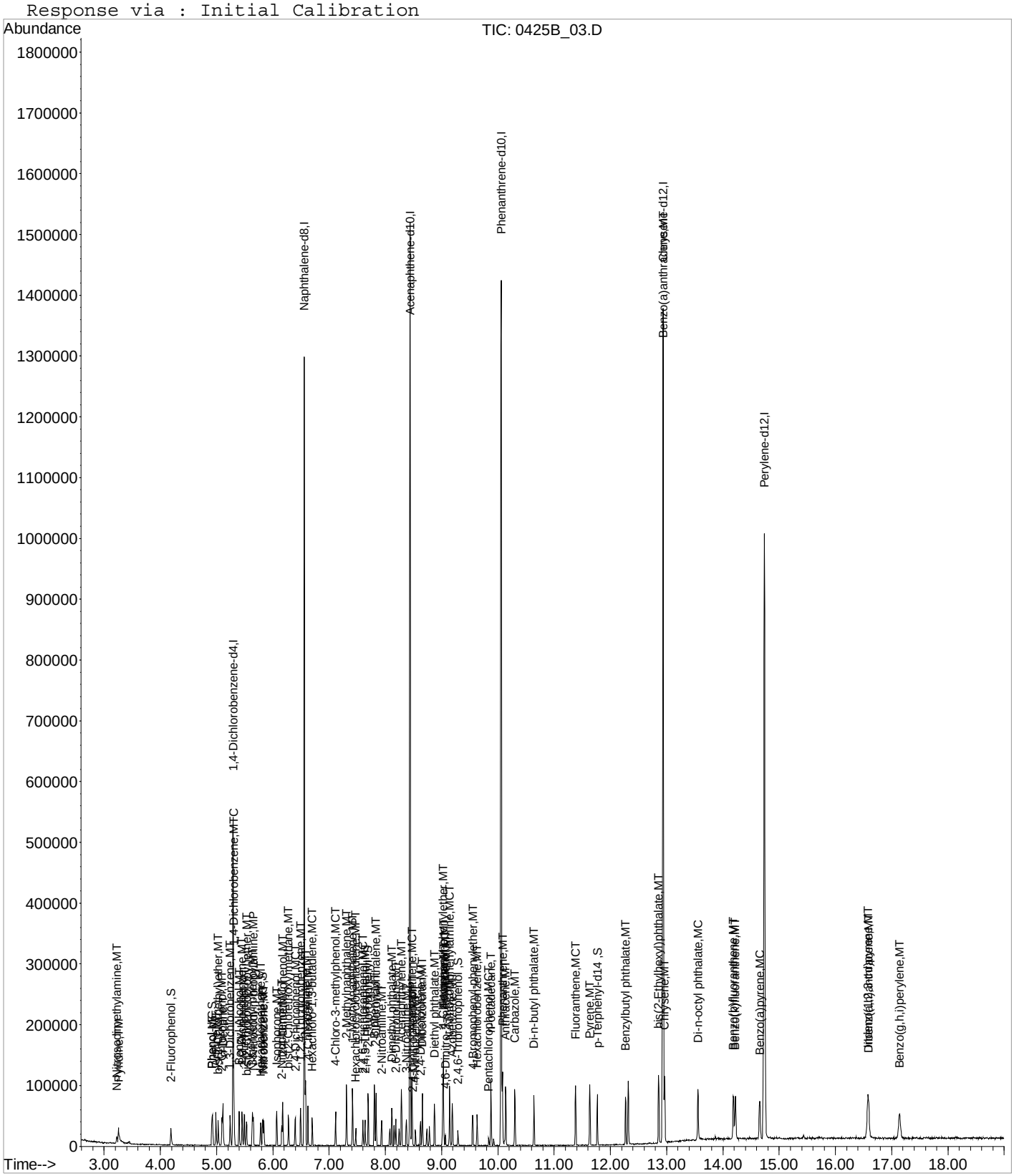
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
46)	2-Chloronaphthalene	7.83	162	24151	512.2548478	ppb		96
47)	2-Nitroaniline	7.93	138	7013	417.4372152	ppb		97
48)	Acenaphthylene	8.28	152	37705	511.1648823	ppb		99
49)	Dimethyl phthalate	8.11	163	23757	494.8784504	ppb		93
50)	2,6-Dinitrotoluene	8.18	165	5593	458.5592051	ppb		96
51)	3-Nitroaniline	8.37	138	6522	453.1277214	ppb		95
52)	Acenaphthene	8.47	153	25189	515.6660747	ppb		98
53)	2,4-Dinitrophenol	8.49	184	479	84.2057179	ppb	#	79
54)	Dibenzofuran	8.65	168	33883	510.7673081	ppb		98
55)	2,4-Dinitrotoluene	8.63	165	6747	411.8233641	ppb		94
57)	4-Nitrophenol	8.53	139	4394	371.5472753	ppb		88
58)	Fluorene	9.03	166	27276	495.4859601	ppb		96
59)	4-Chlorophenyl-phenylether	9.02	204	10659	501.1632133	ppb		95
60)	Diethyl phthalate	8.87	149	24252	466.8253404	ppb		98
61)	4-Nitroaniline	9.03	138	6537	435.1050301	ppb		95
62)	Azobenzene	9.19	77	26417	480.0898386	ppb		96
65)	4,6-Dinitro-2-methylphenol	9.07	198	2364	297.5989133	ppb		88
66)	N-Nitrosodiphenylamine	9.14	169	21742	470.3518643	ppb		96
68)	4-Bromophenyl-phenylether	9.55	248	5551	501.8049758	ppb		95
69)	Hexachlorobenzene	9.63	284	5957	500.8620736	ppb		98
70)	n-octadecane	9.88	55	4933	530.4228787	ppb	#	92
71)	Pentachlorophenol	9.84	266	1270	187.7460366	ppb	#	74
72)	Phenanthrene	10.08	178	39883	521.4563403	ppb		97
73)	Anthracene	10.14	178	37012	475.3767892	ppb		98
74)	Carbazole	10.30	167	37978	474.1365119	ppb		99
75)	Di-n-butyl phthalate	10.64	149	43532	433.1353369	ppb		98
77)	Fluoranthene	11.38	202	35474	458.2235342	ppb		95
80)	Pyrene	11.63	202	37033	477.0541566	ppb		96
82)	Benzylbutyl phthalate	12.27	149	18597	431.5692833	ppb		86
84)	Benzo(a)anthracene	12.93	228	33238	494.6585006	ppb		98
85)	Chrysene	12.96	228	32610	518.9735866	ppb		97
86)	bis(2-Ethylhexyl)phthalate	12.86	149	32242	503.7790694	ppb		96
87)	Di-n-octyl phthalate	13.55	149	51130	449.1589687	ppb		97
89)	Benzo(b)fluoranthene	14.18	252	32694	463.9020885	ppb		91
90)	Benzo(k)fluoranthene	14.22	252	29869	446.7202889	ppb		90
91)	Benzo(a)pyrene	14.65	252	29155	451.4684824	ppb		99
92)	Indeno(1,2,3-cd)pyrene	16.57	276	35562	477.7073291	ppb		93
93)	Dibenz(a,h)anthracene	16.59	278	29478	457.4748386	ppb		95
94)	Benzo(g,h,i)perylene	17.14	276	30661	490.8047658	ppb		93

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516B\0425B 03.D Vial: 3
Acq On : 25 Apr 2016 4:18 pm Operator: 280
Sample : STD SVMS 500 PPB 16D25863 Inst : BNAMS4
Misc : 8270 calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:33 2016 Quant Results File: S804D25P.RES

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:26:56 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516B\0425B 04.D Vial: 4
Acq On : 25 Apr 2016 4:41 pm Operator: 280
Sample : STD SVMS 1K PPB 16D25863 Inst : BNAMS4
Misc : 8270 calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:35 2016 Quant Results File: S804D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:26:56 2016
Response via : Initial Calibration
DataAcq Meth : BNA4E

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.29	152	87639	8000.00	ppb	0.00
22) Naphthalene-d8	6.56	136	523144	8000.00	ppb	0.00
40) Acenaphthene-d10	8.44	164	301783	8000.00	ppb	0.00
64) Phenanthrene-d10	10.06	188	509074	8000.00	ppb	0.00
78) Chrysene-d12	12.94	240	425124	8000.00	ppb	0.00
88) Perylene-d12	14.74	264	435106	8000.00	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	4.18	112	21880	1136.7235597	ppb	0.00
Spiked Amount 20.000	Range 10 - 74		Recovery = 5683.62%#			
7) Phenol-d5	4.91	99	27472	1082.4414679	ppb	0.00
Spiked Amount 20.000	Range 10 - 63		Recovery = 5412.21%#			
23) Nitrobenzene-d5	5.82	82	23856	1068.9450223	ppb	0.00
Spiked Amount 10.000	Range 28 - 123		Recovery = 10689.45%#			
44) 2-Fluorobiphenyl	7.69	172	52409	1086.9655537	ppb	0.00
Spiked Amount 10.000	Range 35 - 133		Recovery = 10869.66%#			
67) 2,4,6-Tribromophenol	9.29	330	4513	870.6316496	ppb	0.00
Spiked Amount 20.000	Range 22 - 154		Recovery = 4353.16%#			
81) p-Terphenyl-d14	11.77	244	49103	908.4619316	ppb	0.00
Spiked Amount 10.000	Range 30 - 148		Recovery = 9084.62%#			
Target Compounds						Qvalue
2) Pyridine	3.25	79	32467	1085.0465043	ppb	97
3) N-Nitrosodimethylamine	3.23	42	12805	1114.2648750	ppb	97
5) Aniline	4.99	66	13893	1129.3376564	ppb	96
6) bis(2-Chloroethyl)ether	5.03	63	20779	1105.1557418	ppb	93
8) Phenol	4.92	94	29103	1088.0145570	ppb	95
10) 2-Chlorophenol	5.09	128	25073	1090.4845578	ppb	96
11) n-Decane	5.11	41	10860	1169.5201448	ppb	99
12) 1,3-Dichlorobenzene	5.24	146	25010	1055.1651382	ppb	98
13) 1,4-Dichlorobenzene	5.31	146	26980	1121.7841772	ppb	97
14) Benzyl Alcohol	5.40	79	18005	1086.5120560	ppb	97
15) 1,2-Dichlorobenzene	5.45	146	25837	1112.3352381	ppb	98
16) bis(2-Chloroisopropyl)ethe	5.53	121	8055	1133.6577021	ppb	92
17) 2-Methylphenol	5.49	108	22457	1085.8076792	ppb	96
18) Hexachloroethane	5.78	117	10949	1085.3168074	ppb	93
19) N-Nitrosodi-n-propylamine	5.65	70	16351	1090.6498036	ppb	94
20) 3&4-Methyl phenol	5.63	107	25890	1088.2539356	ppb	98
24) Nitrobenzene	5.83	77	23310	1043.2714371	ppb	90
25) Isophorone	6.07	82	41743	1031.5379440	ppb	99
26) 2-Nitrophenol	6.16	139	12095	952.4553554	ppb	97
27) 2,4-Dimethylphenol	6.18	107	24326	1082.5004283	ppb	98
28) bis(2-Chlorethoxy)methane	6.27	93	31049	1079.6177433	ppb	96
29) 2,4-Dichlorophenol	6.40	162	19703	1064.1967640	ppb	95
31) 1,2,4-Trichlorobenzene	6.49	180	19377	1050.3070030	ppb	96
32) Naphthalene	6.58	128	83805	1115.0002351	ppb	98
33) 4-Chloroaniline	6.62	65	9613	1084.1475744	ppb	96
34) Hexachloro-1,3-butadiene	6.70	225	8686	1107.9353918	ppb	94
36) 4-Chloro-3-methylphenol	7.12	107	21130	1031.4248157	ppb	94
37) 2-Methylnaphthalene	7.31	142	53397	1068.7916297	ppb	99
38) 1-Methylnaphthalene	7.41	142	48532	1085.3388395	ppb	99
41) Hexachlorocyclopentadiene	7.47	237	6297	771.8580052	ppb	99
42) 2,4,6-Trichlorophenol	7.60	196	10740	920.8069411	ppb	96
43) 2,4,5-Trichlorophenol	7.64	196	11446	905.2302913	ppb	96
45) Biphenyl	7.80	154	62077	1079.9858577	ppb	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516B\0425B 04.D Vial: 4
Acq On : 25 Apr 2016 4:41 pm Operator: 280
Sample : STD SVMS 1K PPB 16D25863 Inst : BNAMS4
Misc : 8270 calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:35 2016 Quant Results File: S804D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:26:56 2016
Response via : Initial Calibration
DataAcq Meth : BNA4E

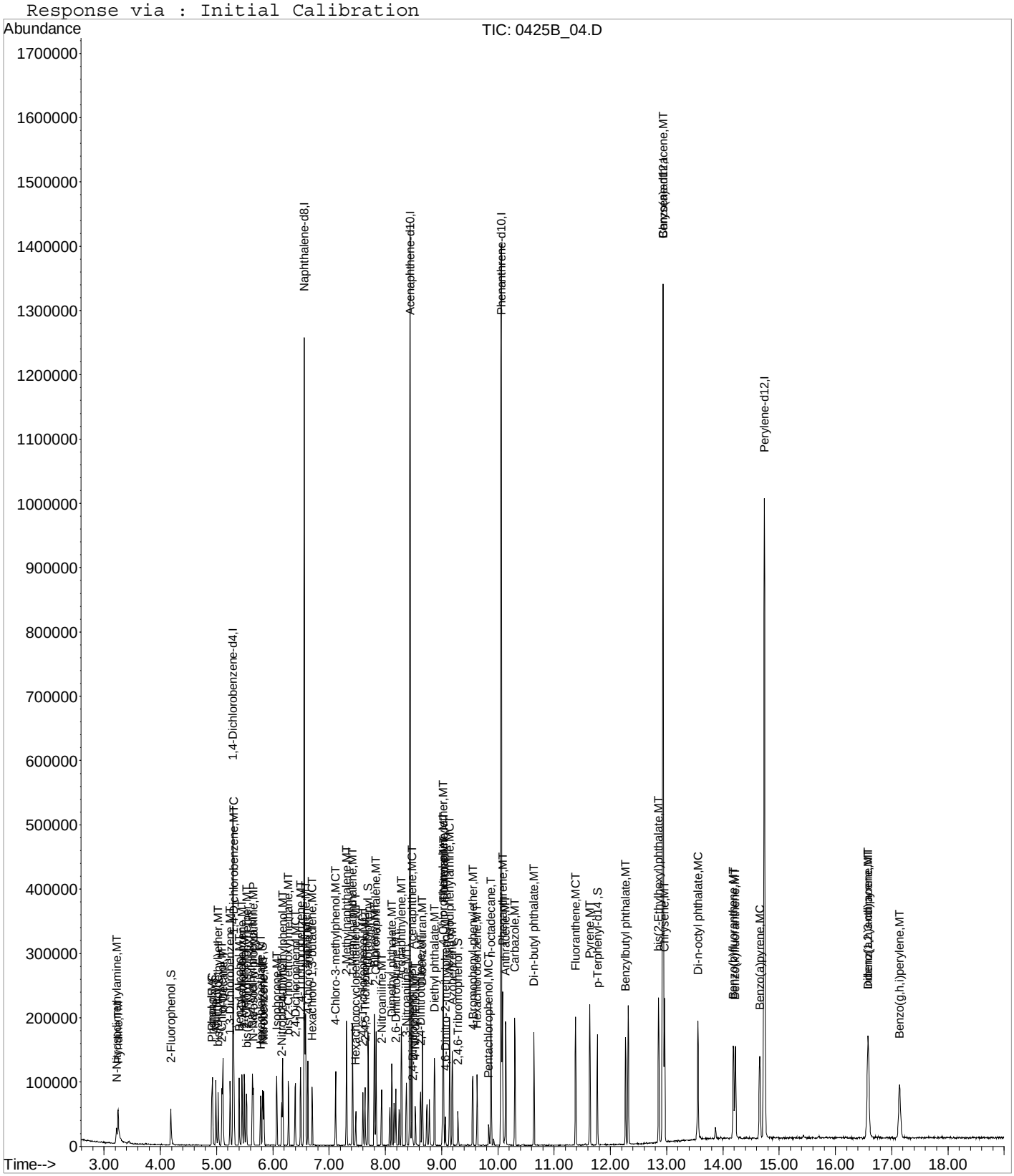
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
46)	2-Chloronaphthalene	7.83	162	47698	1051.3340252	ppb		96
47)	2-Nitroaniline	7.93	138	14402	890.8400299	ppb		93
48)	Acenaphthylene	8.28	152	75859	1068.7072842	ppb		98
49)	Dimethyl phthalate	8.11	163	48257	1044.6164397	ppb		98
50)	2,6-Dinitrotoluene	8.19	165	11438	974.5189316	ppb		91
51)	3-Nitroaniline	8.37	138	14556	1050.9244020	ppb		90
52)	Acenaphthene	8.47	153	51028	1085.5648497	ppb		98
53)	2,4-Dinitrophenol	8.49	184	1317	240.5921406	ppb	#	70
54)	Dibenzofuran	8.65	168	71335	1117.4638786	ppb		98
55)	2,4-Dinitrotoluene	8.63	165	15202	964.2520960	ppb		95
57)	4-Nitrophenol	8.53	139	10069	884.7691284	ppb		88
58)	Fluorene	9.03	166	57878	1092.5813382	ppb		100
59)	4-Chlorophenyl-phenylether	9.02	204	22234	1086.3503682	ppb		92
60)	Diethyl phthalate	8.87	149	51877	1037.6987841	ppb		98
61)	4-Nitroaniline	9.03	138	14816	1024.7930704	ppb		99
62)	Azobenzene	9.19	77	57182	1079.9109643	ppb		98
65)	4,6-Dinitro-2-methylphenol	9.07	198	4937	649.4660981	ppb		84
66)	N-Nitrosodiphenylamine	9.14	169	46437	1049.7769274	ppb		99
68)	4-Bromophenyl-phenylether	9.55	248	11096	1048.1891842	ppb		96
69)	Hexachlorobenzene	9.63	284	12390	1088.6075536	ppb		96
70)	n-octadecane	9.88	55	9931	1115.8700074	ppb		99
71)	Pentachlorophenol	9.84	266	3521	543.9294480	ppb		91
72)	Phenanthrene	10.08	178	78323	1070.1112696	ppb		97
73)	Anthracene	10.14	178	77422	1039.1285939	ppb		98
74)	Carbazole	10.30	167	81208	1059.4479257	ppb		99
75)	Di-n-butyl phthalate	10.64	149	89321	928.7055968	ppb		99
77)	Fluoranthene	11.38	202	74588	1006.8057359	ppb		98
80)	Pyrene	11.63	202	77081	1014.7879413	ppb		97
82)	Benzylbutyl phthalate	12.27	149	40186	953.0848887	ppb		93
84)	Benzo(a)anthracene	12.93	228	68773	1046.0145637	ppb		97
85)	Chrysene	12.96	228	66762	1085.8578189	ppb		97
86)	bis(2-Ethylhexyl)phthalate	12.86	149	62606	999.7312591	ppb		98
87)	Di-n-octyl phthalate	13.55	149	107942	969.0895543	ppb		98
89)	Benzo(b)fluoranthene	14.19	252	69360	1001.9467380	ppb		97
90)	Benzo(k)fluoranthene	14.22	252	66728	1016.0156197	ppb		99
91)	Benzo(a)pyrene	14.65	252	62619	987.1833023	ppb		97
92)	Indeno(1,2,3-cd)pyrene	16.57	276	74081	1013.1175641	ppb		97
93)	Dibenz(a,h)anthracene	16.59	278	63501	1003.2912957	ppb		95
94)	Benzo(g,h,i)perylene	17.14	276	63833	1040.2674114	ppb		95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516B\0425B 04.D Vial: 4
Acq On : 25 Apr 2016 4:41 pm Operator: 280
Sample : STD SVMS 1K PPB 16D25863 Inst : BNAMS4
Misc : 8270 calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:35 2016 Quant Results File: S804D25P.RES

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:34:03 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516B\0425B 05.D Vial: 5
Acq On : 25 Apr 2016 5:05 pm Operator: 280
Sample : STD SVMS 4K PPB 16D25863 Inst : BNAMS4
Misc : 8270 calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:35 2016 Quant Results File: S804D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:26:56 2016
Response via : Initial Calibration
DataAcq Meth : BNA4E

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.29	152	89785	8000.00 ppb	0.00
22) Naphthalene-d8	6.56	136	539350	8000.00 ppb	0.00
40) Acenaphthene-d10	8.44	164	313325	8000.00 ppb	0.00
64) Phenanthrene-d10	10.06	188	524265	8000.00 ppb	0.00
78) Chrysene-d12	12.94	240	466856	8000.00 ppb	0.00
88) Perylene-d12	14.74	264	459863	8000.00 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol	4.19	112	84105	4265.0387882 ppb	0.00
Spiked Amount 20.000	Range 10 - 74		Recovery = 21325.19%#		
7) Phenol-d5	4.92	99	111789	4299.3899942 ppb	0.00
Spiked Amount 20.000	Range 10 - 63		Recovery = 21496.95%#		
23) Nitrobenzene-d5	5.82	82	94638	4113.1435095 ppb	0.00
Spiked Amount 10.000	Range 28 - 123		Recovery = 41131.44%#		
44) 2-Fluorobiphenyl	7.69	172	210597	4206.8963473 ppb	0.00
Spiked Amount 10.000	Range 35 - 133		Recovery = 42068.96%#		
67) 2,4,6-Tribromophenol	9.29	330	21759	4076.0368450 ppb	0.00
Spiked Amount 20.000	Range 22 - 154		Recovery = 20380.18%#		
81) p-Terphenyl-d14	11.77	244	230053	3875.7815086 ppb	0.00
Spiked Amount 10.000	Range 30 - 148		Recovery = 38757.82%#		
Target Compounds					Qvalue
2) Pyridine	3.24	79	129678	4230.2508500 ppb	97
3) N-Nitrosodimethylamine	3.23	42	51988	4415.7613549 ppb	96
5) Aniline	4.99	66	55030	4366.3738054 ppb	97
6) bis(2-Chloroethyl)ether	5.03	63	82968	4307.2798460 ppb	99
8) Phenol	4.93	94	117077	4272.3041066 ppb	98
10) 2-Chlorophenol	5.09	128	101479	4308.0727111 ppb	98
11) n-Decane	5.11	41	42498	4467.2473536 ppb	97
12) 1,3-Dichlorobenzene	5.24	146	103871	4277.5459303 ppb	99
13) 1,4-Dichlorobenzene	5.31	146	104777	4252.3299037 ppb	99
14) Benzyl Alcohol	5.40	79	73129	4307.4940386 ppb	96
15) 1,2-Dichlorobenzene	5.45	146	102389	4302.6947662 ppb	98
16) bis(2-Chloroisopropyl)ethe	5.53	121	31232	4290.5189121 ppb	97
17) 2-Methylphenol	5.49	108	90413	4267.0298019 ppb	99
18) Hexachloroethane	5.78	117	44128	4269.6270750 ppb	98
19) N-Nitrosodi-n-propylamine	5.65	70	65488	4263.7954391 ppb	96
20) 3&4-Methyl phenol	5.63	107	104596	4291.4780825 ppb	94
24) Nitrobenzene	5.84	77	95692	4154.1410744 ppb	100
25) Isophorone	6.07	82	175917	4216.5759330 ppb	99
26) 2-Nitrophenol	6.16	139	52515	4011.1849839 ppb	97
27) 2,4-Dimethylphenol	6.17	107	96626	4170.6326774 ppb	99
28) bis(2-Chlorethoxy)methane	6.28	93	125817	4243.3835396 ppb	99
29) 2,4-Dichlorophenol	6.40	162	79152	4146.6944485 ppb	96
31) 1,2,4-Trichlorobenzene	6.49	180	80101	4211.3198321 ppb	97
32) Naphthalene	6.58	128	329031	4246.1214464 ppb	99
33) 4-Chloroaniline	6.62	65	38189	4177.5178290 ppb	99
34) Hexachloro-1,3-butadiene	6.70	225	35632	4408.4444832 ppb	96
36) 4-Chloro-3-methylphenol	7.12	107	86951	4116.8327698 ppb	99
37) 2-Methylnaphthalene	7.31	142	216891	4210.8355706 ppb	100
38) 1-Methylnaphthalene	7.41	142	192389	4173.1880853 ppb	99
41) Hexachlorocyclopentadiene	7.47	237	30593	3611.8150996 ppb	97
42) 2,4,6-Trichlorophenol	7.60	196	48375	3994.7076768 ppb	95
43) 2,4,5-Trichlorophenol	7.64	196	53029	4039.4152169 ppb	97
45) Biphenyl	7.80	154	249919	4187.8039820 ppb	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516B\0425B 05.D Vial: 5
Acq On : 25 Apr 2016 5:05 pm Operator: 280
Sample : STD SVMS 4K PPB 16D25863 Inst : BNAMS4
Misc : 8270 calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:35 2016 Quant Results File: S804D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:26:56 2016
Response via : Initial Calibration
DataAcq Meth : BNA4E

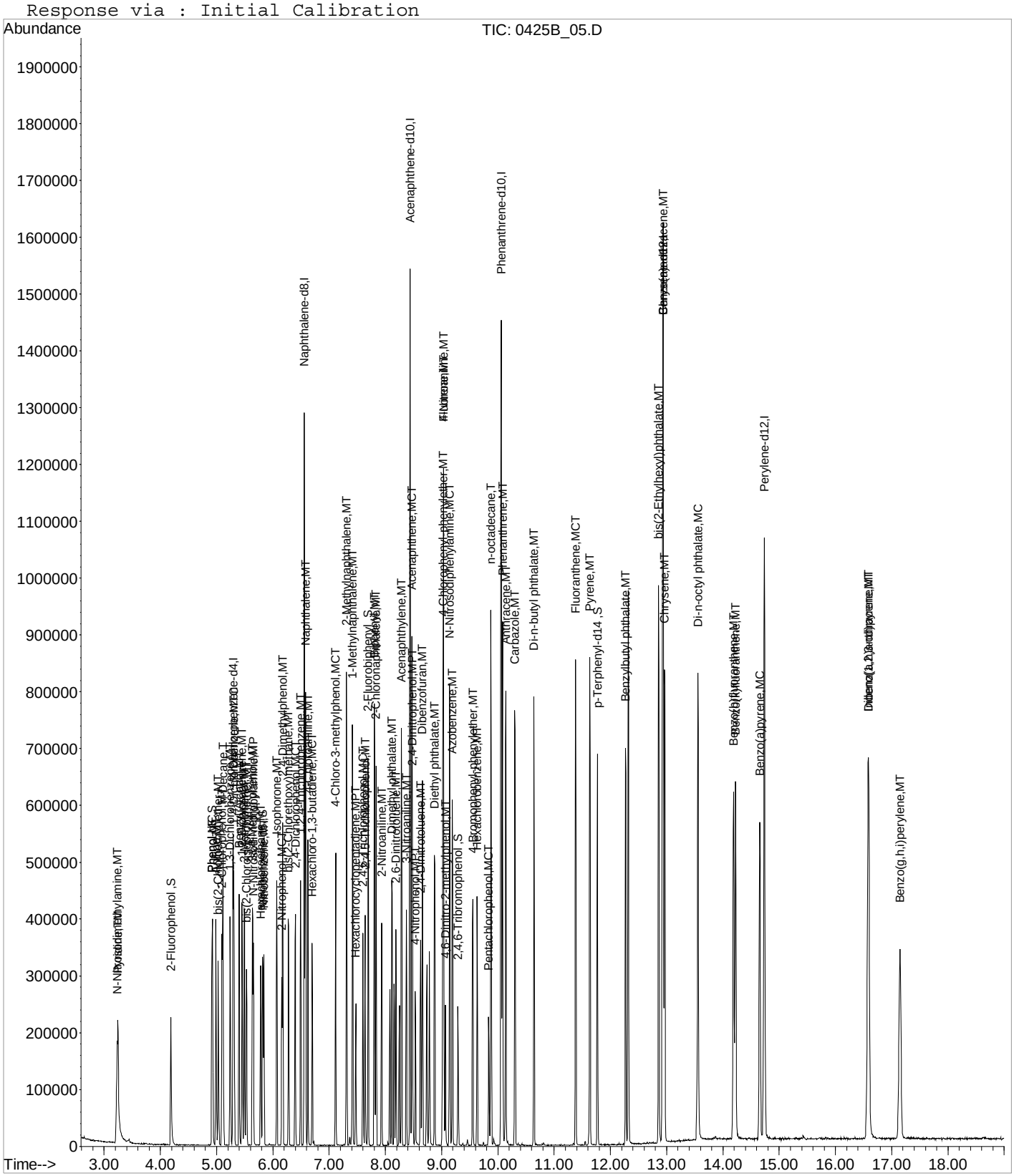
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
46)	2-Chloronaphthalene	7.83	162	193935	4117.1479008	ppb		98
47)	2-Nitroaniline	7.93	138	67135	3999.6835668	ppb		99
48)	Acenaphthylene	8.28	152	303406	4116.9495416	ppb		99
49)	Dimethyl phthalate	8.12	163	202289	4217.6304825	ppb		98
50)	2,6-Dinitrotoluene	8.19	165	48651	3992.3782671	ppb		95
51)	3-Nitroaniline	8.37	138	59922	4166.9227844	ppb		94
52)	Acenaphthene	8.47	153	203241	4164.4559432	ppb		100
53)	2,4-Dinitrophenol	8.48	184	16166	2844.4477386	ppb	#	8
54)	Dibenzofuran	8.65	168	274563	4142.5958215	ppb		98
55)	2,4-Dinitrotoluene	8.63	165	63716	3892.5848690	ppb		87
57)	4-Nitrophenol	8.53	139	45347	3837.8845294	ppb		89
58)	Fluorene	9.03	166	229462	4172.0620657	ppb		97
59)	4-Chlorophenyl-phenylether	9.02	204	88592	4169.1406231	ppb		99
60)	Diethyl phthalate	8.87	149	213269	4108.8842810	ppb		99
61)	4-Nitroaniline	9.04	138	61481	4095.8671015	ppb		98
62)	Azobenzene	9.19	77	235600	4285.5209118	ppb		98
65)	4,6-Dinitro-2-methylphenol	9.07	198	27812	3552.6762378	ppb		84
66)	N-Nitrosodiphenylamine	9.14	169	193346	4244.2221912	ppb		100
68)	4-Bromophenyl-phenylether	9.55	248	44760	4105.7580741	ppb		94
69)	Hexachlorobenzene	9.63	284	50255	4287.5516629	ppb		97
70)	n-octadecane	9.88	55	41038	4477.5130635	ppb		99
71)	Pentachlorophenol	9.84	266	22275	3341.3680161	ppb		93
72)	Phenanthrene	10.08	178	314989	4178.9296805	ppb		98
73)	Anthracene	10.14	178	318164	4146.5413372	ppb		100
74)	Carbazole	10.31	167	324871	4115.4923352	ppb		99
75)	Di-n-butyl phthalate	10.64	149	399889	4037.3276474	ppb		99
77)	Fluoranthene	11.38	202	304916	3996.5659558	ppb		100
80)	Pyrene	11.63	202	326941	3919.4941711	ppb		99
82)	Benzylbutyl phthalate	12.27	149	178570	3856.5412517	ppb		99
84)	Benzo(a)anthracene	12.93	228	287072	3975.9716170	ppb		97
85)	Chrysene	12.97	228	274061	4059.0419637	ppb		98
86)	bis(2-Ethylhexyl)phthalate	12.86	149	271881	3953.4736815	ppb		99
87)	Di-n-octyl phthalate	13.55	149	490853	4012.8930026	ppb		99
89)	Benzo(b)fluoranthene	14.19	252	281186	3843.2253375	ppb		99
90)	Benzo(k)fluoranthene	14.22	252	266901	3845.1127697	ppb		98
91)	Benzo(a)pyrene	14.65	252	266528	3975.5856782	ppb		97
92)	Indeno(1,2,3-cd)pyrene	16.58	276	313373	4054.9097045	ppb		98
93)	Dibenz(a,h)anthracene	16.59	278	270758	4047.5701210	ppb		96
94)	Benzo(g,h,i)perylene	17.15	276	264063	4071.6823995	ppb		97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516B\0425B 05.D Vial: 5
Acq On : 25 Apr 2016 5:05 pm Operator: 280
Sample : STD SVMS 4K PPB 16D25863 Inst : BNAMS4
Misc : 8270 calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:35 2016 Quant Results File: S804D25P.RES

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:35:12 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516B\0425B 06.D Vial: 6
Acq On : 25 Apr 2016 5:28 pm Operator: 280
Sample : STD SVMS 20K PPB 16D25863 Inst : BNAMS4
Misc : 8270 calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:37 2016 Quant Results File: S804D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:26:56 2016
Response via : Initial Calibration
DataAcq Meth : BNA4E

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.29	152	92611	8000.00 ppb	0.00
22) Naphthalene-d8	6.56	136	549524	8000.00 ppb	0.00
40) Acenaphthene-d10	8.44	164	317113	8000.00 ppb	0.00
64) Phenanthrene-d10	10.06	188	534754	8000.00 ppb	0.00
78) Chrysene-d12	12.94	240	489130	8000.00 ppb	0.00
88) Perylene-d12	14.74	264	468564	8000.00 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol	4.18	112	428240	21053.7573721 ppb	0.00
Spiked Amount 20.000	Range 10 - 74		Recovery = 105268.79%#		
7) Phenol-d5	4.92	99	558704	20831.9902758 ppb	0.00
Spiked Amount 20.000	Range 10 - 63		Recovery = 104159.95%#		
23) Nitrobenzene-d5	5.82	82	476347	20319.6284115 ppb	0.00
Spiked Amount 10.000	Range 28 - 123		Recovery = 203196.28%#		
44) 2-Fluorobiphenyl	7.70	172	1046264	20650.5639236 ppb	0.00
Spiked Amount 10.000	Range 35 - 133		Recovery = 206505.64%#		
67) 2,4,6-Tribromophenol	9.30	330	115691	21246.8996771 ppb	0.00
Spiked Amount 20.000	Range 22 - 154		Recovery = 106234.50%#		
81) p-Terphenyl-d14	11.77	244	1241629	19965.5775296 ppb	0.00
Spiked Amount 10.000	Range 30 - 148		Recovery = 199655.78%#		
Target Compounds					Qvalue
2) Pyridine	3.24	79	662756	20960.1650906 ppb	99
3) N-Nitrosodimethylamine	3.22	42	256969	21160.4272298 ppb	100
5) Aniline	4.99	66	266684	20514.4356431 ppb	99
6) bis(2-Chloroethyl)ether	5.03	63	394226	19841.7029962 ppb	99
8) Phenol	4.93	94	583756	20652.0488589 ppb	99
10) 2-Chlorophenol	5.09	128	504037	20744.8585086 ppb	99
11) n-Decane	5.11	41	189798	19342.1324582 ppb	100
12) 1,3-Dichlorobenzene	5.24	146	508841	20315.3205584 ppb	99
13) 1,4-Dichlorobenzene	5.31	146	517980	20380.5169512 ppb	98
14) Benzyl Alcohol	5.41	79	365493	20871.5800236 ppb	96
15) 1,2-Dichlorobenzene	5.45	146	499951	20368.3519919 ppb	99
16) bis(2-Chloroisopropyl)ethe	5.53	121	156348	20823.0128959 ppb	97
17) 2-Methylphenol	5.49	108	449385	20561.4899396 ppb	99
18) Hexachloroethane	5.78	117	214109	20084.0750565 ppb	99
19) N-Nitrosodi-n-propylamine	5.66	70	323912	20445.7423829 ppb	97
20) 3&4-Methyl phenol	5.65	107	526270	20933.4904933 ppb	99
24) Nitrobenzene	5.84	77	473406	20170.8121968 ppb	99
25) Isophorone	6.08	82	882763	20767.3104777 ppb	99
26) 2-Nitrophenol	6.16	139	276650	20739.7737319 ppb	96
27) 2,4-Dimethylphenol	6.18	107	475243	20132.9626238 ppb	98
28) bis(2-Chlorethoxy)methane	6.28	93	613120	20295.6265622 ppb	98
29) 2,4-Dichlorophenol	6.40	162	402563	20699.4123740 ppb	98
31) 1,2,4-Trichlorobenzene	6.49	180	390963	20174.3692090 ppb	97
32) Naphthalene	6.58	128	1589763	20135.9441367 ppb	100
33) 4-Chloroaniline	6.62	65	184293	19786.6778936 ppb	94
34) Hexachloro-1,3-butadiene	6.70	225	168546	20466.6915699 ppb	97
36) 4-Chloro-3-methylphenol	7.12	107	443716	20619.4820802 ppb	100
37) 2-Methylnaphthalene	7.31	142	1077679	20535.2592674 ppb	99
38) 1-Methylnaphthalene	7.42	142	950007	20225.4664024 ppb	99
41) Hexachlorocyclopentadiene	7.47	237	183300	21381.9303066 ppb	98
42) 2,4,6-Trichlorophenol	7.60	196	253924	20718.0453354 ppb	98
43) 2,4,5-Trichlorophenol	7.64	196	273903	20614.9768224 ppb	93
45) Biphenyl	7.81	154	1223718	20260.4655940 ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516B\0425B 06.D Vial: 6
Acq On : 25 Apr 2016 5:28 pm Operator: 280
Sample : STD SVMS 20K PPB 16D25863 Inst : BNAMS4
Misc : 8270 calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:37 2016 Quant Results File: S804D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:26:56 2016
Response via : Initial Calibration
DataAcq Meth : BNA4E

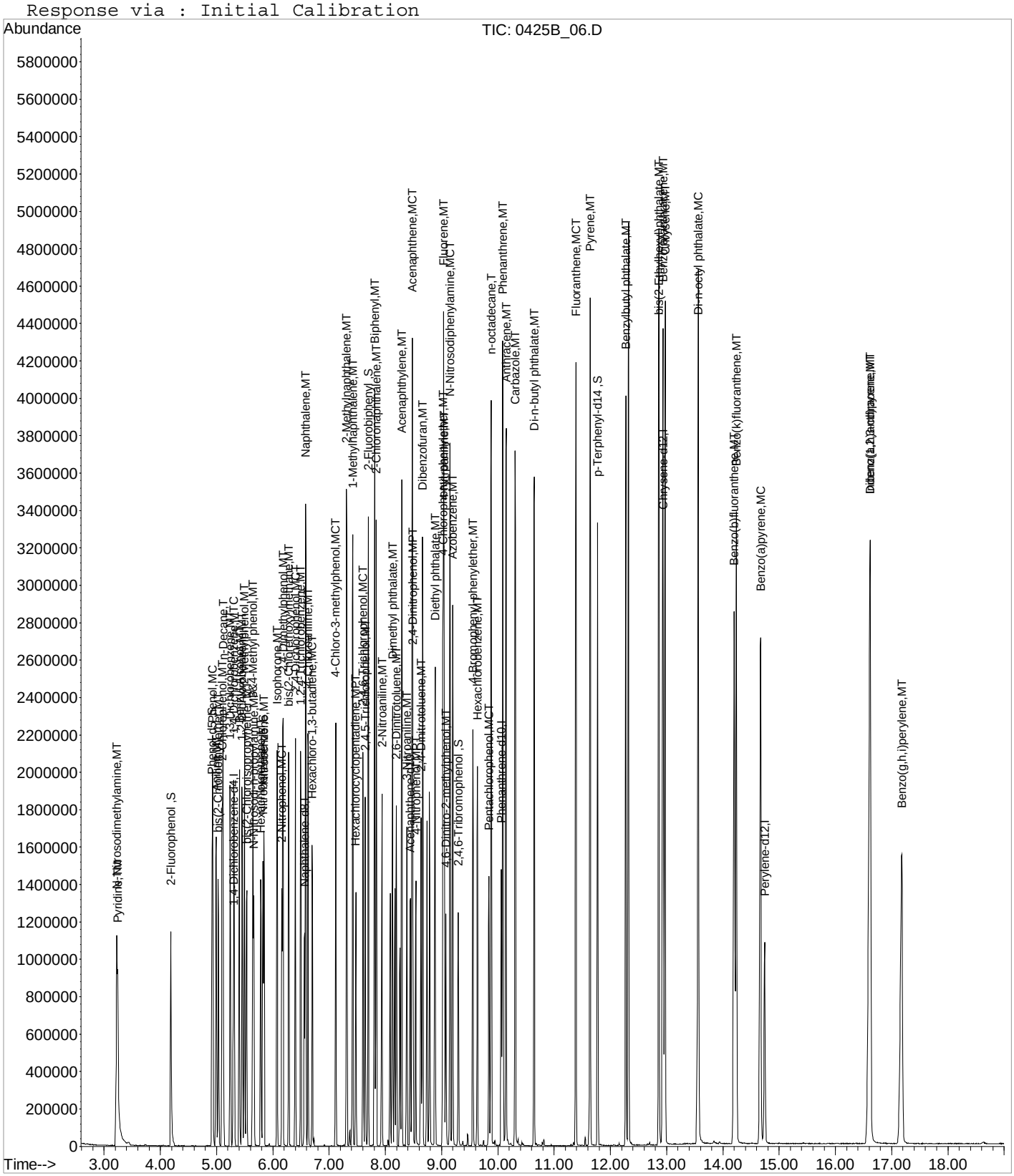
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
46)	2-Chloronaphthalene	7.84	162	976557	20484.1936811	ppb		99
47)	2-Nitroaniline	7.94	138	358173	21083.8776361	ppb		97
48)	Acenaphthylene	8.29	152	1558711	20897.6755253	ppb		99
49)	Dimethyl phthalate	8.13	163	1017489	20960.7580438	ppb		98
50)	2,6-Dinitrotoluene	8.20	165	258758	20980.4451817	ppb		92
51)	3-Nitroaniline	8.38	138	307951	21158.8360456	ppb		99
52)	Acenaphthene	8.48	153	1008010	20407.6403293	ppb		99
53)	2,4-Dinitrophenol	8.49	184	131593	22877.5321519	ppb	#	77
54)	Dibenzofuran	8.66	168	1385718	20657.9114617	ppb		100
55)	2,4-Dinitrotoluene	8.63	165	345648	20864.3393130	ppb		91
57)	4-Nitrophenol	8.54	139	253063	21161.8190900	ppb		96
58)	Fluorene	9.04	166	1141167	20500.7709047	ppb		99
59)	4-Chlorophenyl-phenylether	9.02	204	439656	20443.0666343	ppb		99
60)	Diethyl phthalate	8.88	149	1084564	20645.8308393	ppb		99
61)	4-Nitroaniline	9.05	138	321226	21144.4613358	ppb		99
62)	Azobenzene	9.20	77	1138508	20461.8747179	ppb		98
65)	4,6-Dinitro-2-methylphenol	9.08	198	178107	22304.9483720	ppb		94
66)	N-Nitrosodiphenylamine	9.15	169	968141	20835.2327319	ppb		99
68)	4-Bromophenyl-phenylether	9.55	248	234439	21082.8811872	ppb		96
69)	Hexachlorobenzene	9.64	284	249218	20845.2121057	ppb		99
70)	n-octadecane	9.88	55	188060	20116.1066542	ppb		99
71)	Pentachlorophenol	9.84	266	151977	22350.1935875	ppb		97
72)	Phenanthrene	10.09	178	1622004	21096.8890926	ppb		99
73)	Anthracene	10.15	178	1642489	20986.2215928	ppb		100
74)	Carbazole	10.31	167	1674417	20795.5925608	ppb		100
75)	Di-n-butyl phthalate	10.65	149	2119812	20982.0881638	ppb		99
77)	Fluoranthene	11.39	202	1676521	21543.3179823	ppb		99
80)	Pyrene	11.64	202	1749481	20018.3607245	ppb		100
82)	Benzylbutyl phthalate	12.27	149	987607	20357.8676371	ppb		97
84)	Benzo(a)anthracene	12.93	228	1525925	20171.7823304	ppb		96
85)	Chrysene	12.97	228	1459128	20626.6328797	ppb		97
86)	bis(2-Ethylhexyl)phthalate	12.86	149	1490872	20691.8344972	ppb		98
87)	Di-n-octyl phthalate	13.56	149	2706608	21119.8162763	ppb		99
89)	Benzo(b)fluoranthene	14.20	252	1546807	20749.0316749	ppb		99
90)	Benzo(k)fluoranthene	14.24	252	1450941	20514.8423096	ppb		98
91)	Benzo(a)pyrene	14.67	252	1465225	21449.7456544	ppb		98
92)	Indeno(1,2,3-cd)pyrene	16.61	276	1622170	20600.3940417	ppb		95
93)	Dibenz(a,h)anthracene	16.62	278	1416133	20776.7051592	ppb		97
94)	Benzo(g,h,i)perylene	17.18	276	1318808	19957.5609551	ppb		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516B\0425B 06.D Vial: 6
Acq On : 25 Apr 2016 5:28 pm Operator: 280
Sample : STD SVMS 20K PPB 16D25863 Inst : BNAMS4
Misc : 8270 calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:37 2016 Quant Results File: S804D25P.RES

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:35:55 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516B\0425B 07.D Vial: 7
Acq On : 25 Apr 2016 5:51 pm Operator: 280
Sample : STD SVMS 30K PPB 16D25863 Inst : BNAMS4
Misc : 8270 calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:38 2016 Quant Results File: S804D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:26:56 2016
Response via : Initial Calibration
DataAcq Meth : BNA4E

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.29	152	91502	8000.00 ppb	0.00
22) Naphthalene-d8	6.56	136	550495	8000.00 ppb	0.00
40) Acenaphthene-d10	8.44	164	321406	8000.00 ppb	0.00
64) Phenanthrene-d10	10.06	188	532552	8000.00 ppb	0.00
78) Chrysene-d12	12.94	240	474343	8000.00 ppb	0.00
88) Perylene-d12	14.74	264	467146	8000.00 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol	4.19	112	651162	32401.3733715 ppb	0.00
Spiked Amount 20.000	Range 10 - 74		Recovery = 162006.87%#		
7) Phenol-d5	4.92	99	848047	32003.7517216 ppb	0.00
Spiked Amount 20.000	Range 10 - 63		Recovery = 160018.76%#		
23) Nitrobenzene-d5	5.83	82	718071	30576.8681692 ppb	0.00
Spiked Amount 10.000	Range 28 - 123		Recovery = 305768.68%#		
44) 2-Fluorobiphenyl	7.70	172	1571407	30601.2652451 ppb	0.00
Spiked Amount 10.000	Range 35 - 133		Recovery = 306012.65%#		
67) 2,4,6-Tribromophenol	9.30	330	178272	32875.4079614 ppb	0.00
Spiked Amount 20.000	Range 22 - 154		Recovery = 164377.04%#		
81) p-Terphenyl-d14	11.77	244	1878685	31151.2732189 ppb	0.00
Spiked Amount 10.000	Range 30 - 148		Recovery = 311512.73%#		
Target Compounds					Qvalue
2) Pyridine	3.24	79	1010330	32339.7208322 ppb	99
3) N-Nitrosodimethylamine	3.23	42	386016	32172.2170861 ppb	97
5) Aniline	4.99	66	404094	31461.3245196 ppb	98
6) bis(2-Chloroethyl)ether	5.04	63	589088	30008.6075595 ppb	95
8) Phenol	4.94	94	872689	31248.0754969 ppb	99
10) 2-Chlorophenol	5.10	128	756277	31503.6547054 ppb	96
11) n-Decane	5.11	41	270709	27922.0565852 ppb	100
12) 1,3-Dichlorobenzene	5.24	146	765161	30919.0680475 ppb	98
13) 1,4-Dichlorobenzene	5.31	146	778582	31005.4865165 ppb	97
14) Benzyl Alcohol	5.41	79	548682	31712.3892560 ppb	98
15) 1,2-Dichlorobenzene	5.45	146	749815	30918.2255678 ppb	99
16) bis(2-Chloroisopropyl)ethe	5.53	121	234238	31574.7976587 ppb	97
17) 2-Methylphenol	5.49	108	677716	31384.5376701 ppb	99
18) Hexachloroethane	5.78	117	323357	30699.4904061 ppb	98
19) N-Nitrosodi-n-propylamine	5.67	70	482303	30812.5610394 ppb	96
20) 3&4-Methyl phenol	5.65	107	793589	31949.2495892 ppb	95
24) Nitrobenzene	5.85	77	706688	30057.3459946 ppb	97
25) Isophorone	6.08	82	1321997	31045.5879721 ppb	97
26) 2-Nitrophenol	6.16	139	428823	32091.1068160 ppb	95
27) 2,4-Dimethylphenol	6.18	107	710839	30060.5201899 ppb	98
28) bis(2-Chlorethoxy)methane	6.29	93	918082	30336.9376359 ppb	99
29) 2,4-Dichlorophenol	6.40	162	607687	31191.5812932 ppb	94
31) 1,2,4-Trichlorobenzene	6.50	180	594166	30605.9164538 ppb	95
32) Naphthalene	6.59	128	2393704	30265.1857735 ppb	99
33) 4-Chloroaniline	6.63	65	274607	29431.2653131 ppb	91
34) Hexachloro-1,3-butadiene	6.70	225	256641	31109.1768230 ppb	97
36) 4-Chloro-3-methylphenol	7.12	107	672240	31183.8907043 ppb	96
37) 2-Methylnaphthalene	7.31	142	1604076	30511.8820705 ppb	99
38) 1-Methylnaphthalene	7.42	142	1420432	30187.3836013 ppb	100
41) Hexachlorocyclopentadiene	7.47	237	279761	32198.2065991 ppb	98
42) 2,4,6-Trichlorophenol	7.60	196	392345	31584.4426054 ppb	97
43) 2,4,5-Trichlorophenol	7.64	196	419784	31172.5269923 ppb	95
45) Biphenyl	7.81	154	1857133	30336.8962759 ppb	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516B\0425B 07.D Vial: 7
Acq On : 25 Apr 2016 5:51 pm Operator: 280
Sample : STD SVMS 30K PPB 16D25863 Inst : BNAMS4
Misc : 8270 calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:38 2016 Quant Results File: S804D25P.RES

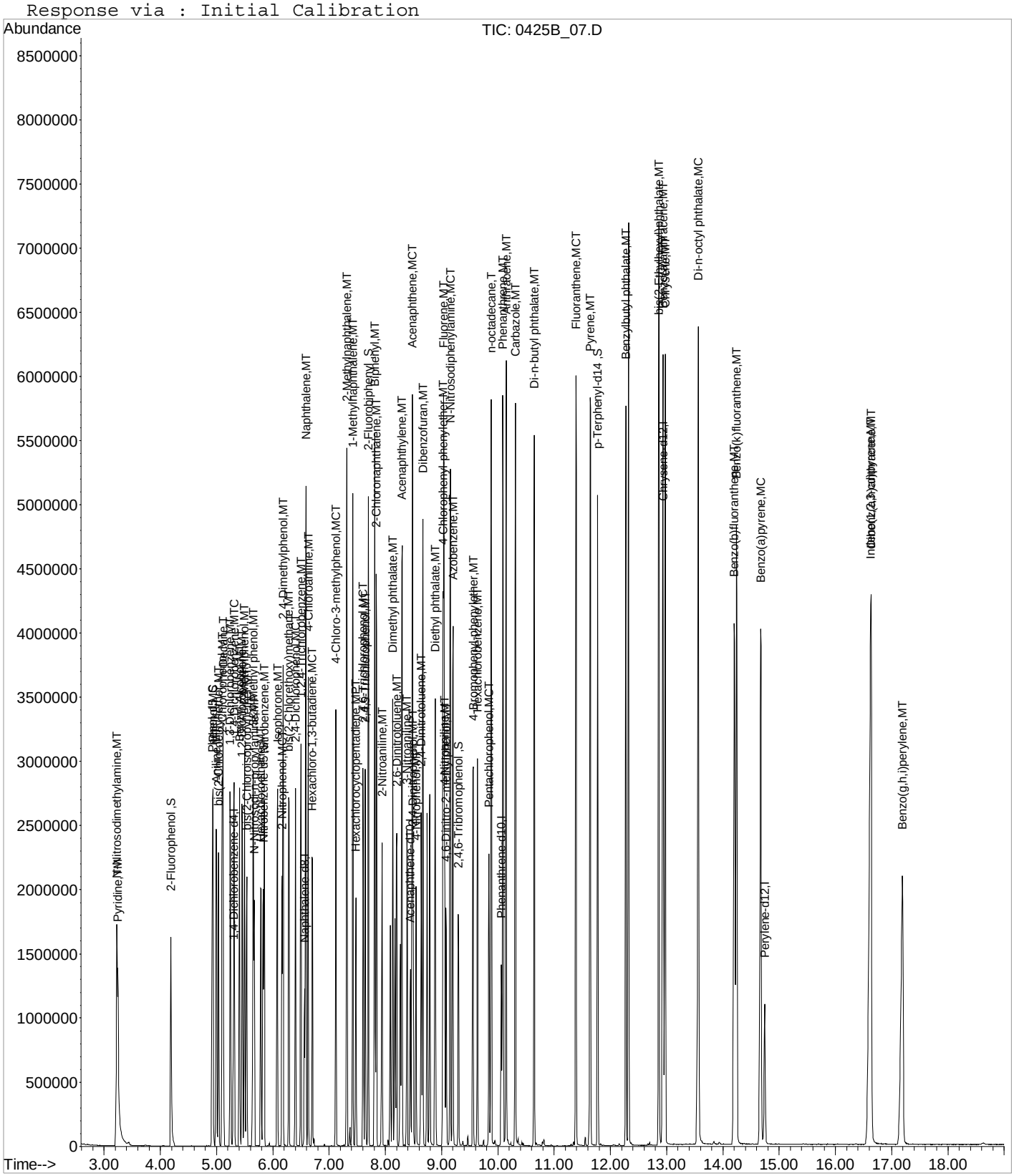
Quant Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:26:56 2016
Response via : Initial Calibration
DataAcq Meth : BNA4E

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46)	2-Chloronaphthalene	7.84	162	1460959	30235.6542588	ppb	99
47)	2-Nitroaniline	7.94	138	554065	32179.4358264	ppb	96
48)	Acenaphthylene	8.30	152	2362972	31257.2684900	ppb	99
49)	Dimethyl phthalate	8.13	163	1559713	31701.6612002	ppb	96
50)	2,6-Dinitrotoluene	8.20	165	390489	31238.4721133	ppb	87
51)	3-Nitroaniline	8.38	138	476487	32301.3948984	ppb	94
52)	Acenaphthene	8.48	153	1526262	30487.1697460	ppb	99
53)	2,4-Dinitrophenol	8.50	184	221050	37916.3891594	ppb	91
54)	Dibenzofuran	8.67	168	2088619	30720.6813873	ppb	99
55)	2,4-Dinitrotoluene	8.64	165	529575	31539.7415257	ppb	94
57)	4-Nitrophenol	8.55	139	397772	32818.4919220	ppb	92
58)	Fluorene	9.04	166	1728682	30640.5223211	ppb	100
59)	4-Chlorophenyl-phenylether	9.02	204	669617	30719.8843950	ppb	91
60)	Diethyl phthalate	8.88	149	1656897	31119.5105534	ppb	99
61)	4-Nitroaniline	9.05	138	452943	29416.4021814	ppb	99
62)	Azobenzene	9.20	77	1691699	29998.0133151	ppb	97
65)	4,6-Dinitro-2-methylphenol	9.08	198	281672	35420.6015922	ppb	90
66)	N-Nitrosodiphenylamine	9.15	169	1480163	31986.1013526	ppb	98
68)	4-Bromophenyl-phenylether	9.56	248	359152	32431.7521262	ppb	89
69)	Hexachlorobenzene	9.64	284	378392	31780.5112832	ppb	98
70)	n-octadecane	9.88	55	265320	28497.6801789	ppb	98
71)	Pentachlorophenol	9.84	266	241607	35678.3660059	ppb	96
72)	Phenanthrene	10.09	178	2419182	31595.6331829	ppb	98
73)	Anthracene	10.15	178	2467144	31653.2497965	ppb	100
74)	Carbazole	10.31	167	2512776	31336.7153323	ppb	100
75)	Di-n-butyl phthalate	10.65	149	3208979	31894.0931315	ppb	99
77)	Fluoranthene	11.39	202	2580780	33300.1814723	ppb	99
80)	Pyrene	11.65	202	2671339	31519.5558889	ppb	100
82)	Benzylbutyl phthalate	12.27	149	1502953	31946.6505273	ppb	98
84)	Benzo(a)anthracene	12.93	228	2326491	31713.5066640	ppb	96
85)	Chrysene	12.97	228	2217044	32317.7460670	ppb	98
86)	bis(2-Ethylhexyl)phthalate	12.86	149	2275183	32561.6779171	ppb	99
87)	Di-n-octyl phthalate	13.56	149	4093901	32940.7827940	ppb	100
89)	Benzo(b)fluoranthene	14.20	252	2459294	33089.3654706	ppb	98
90)	Benzo(k)fluoranthene	14.24	252	2167105	30733.6872997	ppb	99
91)	Benzo(a)pyrene	14.68	252	2267743	33298.7511424	ppb	96
92)	Indeno(1,2,3-cd)pyrene	16.62	276	2352332	29963.6049609	ppb	93
93)	Dibenz(a,h)anthracene	16.63	278	2082813	30650.6152993	ppb	96
94)	Benzo(g,h,i)perylene	17.19	276	1879693	28531.7953000	ppb	98

(#) = qualifier out of range (m) = manual integration

Data File : C:\MSDCHEM\1\DATA\042516B\0425B 07.D Vial: 7
Acq On : 25 Apr 2016 5:51 pm Operator: 280
Sample : STD SVMS 30K PPB 16D25863 Inst : BNAMS4
Misc : 8270 calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:38 2016 Quant Results File: S804D25P.RES

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:37:31 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516B\0425B 08.D Vial: 8
Acq On : 25 Apr 2016 6:15 pm Operator: 280
Sample : STD SVMS 40K PPB 16D25863 Inst : BNAMS4
Misc : 8270 calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:39 2016 Quant Results File: S804D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:26:56 2016
Response via : Initial Calibration
DataAcq Meth : BNA4E

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.29	152	88961	8000.00 ppb	0.00
22) Naphthalene-d8	6.56	136	542981	8000.00 ppb	0.00
40) Acenaphthene-d10	8.44	164	316316	8000.00 ppb	0.00
64) Phenanthrene-d10	10.06	188	518220	8000.00 ppb	0.00
78) Chrysene-d12	12.94	240	482279	8000.00 ppb	0.00
88) Perylene-d12	14.75	264	455611	8000.00 ppb	0.01
System Monitoring Compounds					
4) 2-Fluorophenol	4.19	112	852190	43615.5882843 ppb	0.00
Spiked Amount 20.000	Range 10 - 74		Recovery = 218077.94%#		
7) Phenol-d5	4.92	99	1107793	43000.2041653 ppb	0.00
Spiked Amount 20.000	Range 10 - 63		Recovery = 215001.02%#		
23) Nitrobenzene-d5	5.83	82	939136	40543.6503259 ppb	0.00
Spiked Amount 10.000	Range 28 - 123		Recovery = 405436.50%#		
44) 2-Fluorobiphenyl	7.70	172	2043369	40432.4743818 ppb	0.00
Spiked Amount 10.000	Range 35 - 133		Recovery = 404324.74%#		
67) 2,4,6-Tribromophenol	9.30	330	242565	45968.8882204 ppb	0.00
Spiked Amount 20.000	Range 22 - 154		Recovery = 229844.44%#		
81) p-Terphenyl-d14	11.77	244	2492657	40651.6801789 ppb	0.00
Spiked Amount 10.000	Range 30 - 148		Recovery = 406516.80%#		
Target Compounds					Qvalue
2) Pyridine	3.25	79	1307215	43037.8899859 ppb	97
3) N-Nitrosodimethylamine	3.23	42	484872	41565.5680903 ppb	96
5) Aniline	5.00	66	525496	42081.8617808 ppb	98
6) bis(2-Chloroethyl)ether	5.04	63	760206	39831.6128053 ppb	93
8) Phenol	4.94	94	1130182	41623.9307324 ppb	99
10) 2-Chlorophenol	5.10	128	975780	41808.3366066 ppb	97
11) n-Decane	5.11	41	335006	35540.8838841 ppb	100
12) 1,3-Dichlorobenzene	5.25	146	994919	41351.5910611 ppb	99
13) 1,4-Dichlorobenzene	5.31	146	1021763	41851.9110801 ppb	95
14) Benzyl Alcohol	5.41	79	714822	42494.9273888 ppb	98
15) 1,2-Dichlorobenzene	5.46	146	977554	41460.2698890 ppb	98
16) bis(2-Chloroisopropyl)ethe	5.53	121	304467	42213.7937129 ppb	98
17) 2-Methylphenol	5.50	108	878351	41837.6254103 ppb	98
18) Hexachloroethane	5.79	117	419322	40947.5082150 ppb	95
19) N-Nitrosodi-n-propylamine	5.68	70	622139	40881.4405798 ppb	94
20) 3&4-Methyl phenol	5.65	107	1038094	42986.5542715 ppb	96
24) Nitrobenzene	5.85	77	921151	39721.2116271 ppb	98
25) Isophorone	6.08	82	1717225	40885.1285843 ppb	100
26) 2-Nitrophenol	6.16	139	566070	42948.2537366 ppb	96
27) 2,4-Dimethylphenol	6.18	107	924373	39631.5667743 ppb	99
28) bis(2-Chlorethoxy)methane	6.29	93	1196620	40088.0811711 ppb	99
29) 2,4-Dichlorophenol	6.40	162	797753	41514.0054882 ppb	96
31) 1,2,4-Trichlorobenzene	6.50	180	770397	40232.8613481 ppb	95
32) Naphthalene	6.59	128	3073169	39393.8192510 ppb	100
33) 4-Chloroaniline	6.63	65	351097	38149.8815997 ppb	88
34) Hexachloro-1,3-butadiene	6.70	225	328402	40358.6861549 ppb	99
36) 4-Chloro-3-methylphenol	7.12	107	894253	42056.6910950 ppb	98
37) 2-Methylnaphthalene	7.32	142	2073803	39992.6608554 ppb	99
38) 1-Methylnaphthalene	7.42	142	1852856	39922.2895100 ppb	100
41) Hexachlorocyclopentadiene	7.47	237	376407	44018.4780036 ppb	99
42) 2,4,6-Trichlorophenol	7.61	196	520342	42562.4673675 ppb	94
43) 2,4,5-Trichlorophenol	7.64	196	553489	41762.6397705 ppb	96
45) Biphenyl	7.81	154	2420137	40169.9148074 ppb	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516B\0425B 08.D Vial: 8
Acq On : 25 Apr 2016 6:15 pm Operator: 280
Sample : STD SVMS 40K PPB 16D25863 Inst : BNAMS4
Misc : 8270 calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:39 2016 Quant Results File: S804D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:26:56 2016
Response via : Initial Calibration
DataAcq Meth : BNA4E

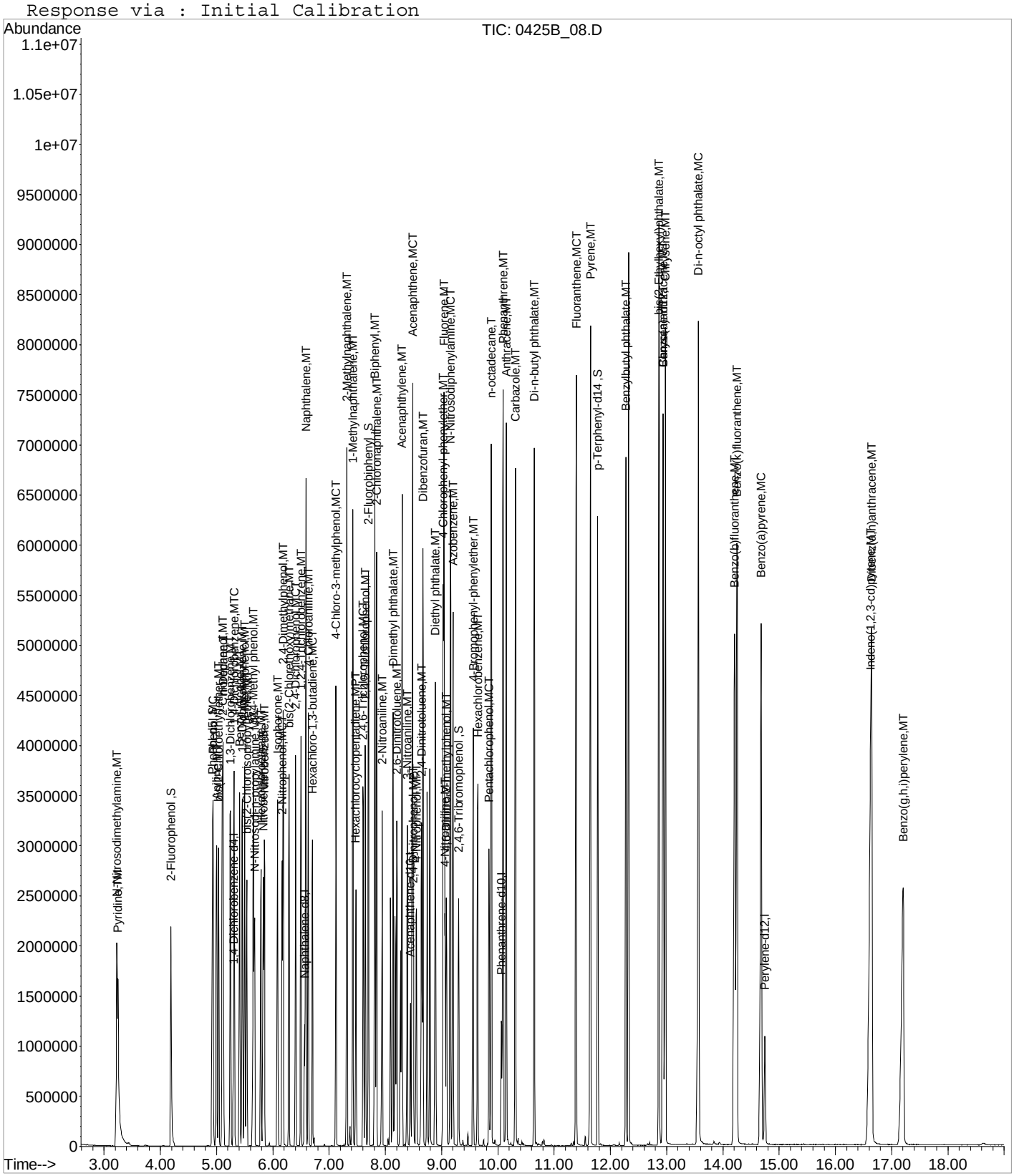
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46)	2-Chloronaphthalene	7.84	162	1883956	39617.3039820	ppb	99
47)	2-Nitroaniline	7.94	138	736346	43454.2702151	ppb	95
48)	Acenaphthylene	8.30	152	3083060	41438.8070379	ppb	99
49)	Dimethyl phthalate	8.14	163	2066501	42678.1679280	ppb	96
50)	2,6-Dinitrotoluene	8.20	165	525556	42720.1528773	ppb	91
51)	3-Nitroaniline	8.39	138	632352	43557.3988987	ppb	95
52)	Acenaphthene	8.48	153	1977934	40145.1082202	ppb	100
53)	2,4-Dinitrophenol	8.50	184	313840	54698.7709048	ppb	84
54)	Dibenzofuran	8.67	168	2731054	40816.4027740	ppb	99
55)	2,4-Dinitrotoluene	8.64	165	723587	43787.9113832	ppb	97
57)	4-Nitrophenol	8.55	139	531319	44542.2937661	ppb	90
58)	Fluorene	9.04	166	2259877	40700.3998969	ppb	99
59)	4-Chlorophenyl-phenylether	9.02	204	874917	40784.2782522	ppb	93
60)	Diethyl phthalate	8.89	149	2171251	41436.2168751	ppb	99
61)	4-Nitroaniline	9.06	138	595441	39293.2143598	ppb	99
62)	Azobenzene	9.20	77	2225515	40098.9265371	ppb	97
65)	4,6-Dinitro-2-methylphenol	9.08	198	376257	48623.3295073	ppb	98
66)	N-Nitrosodiphenylamine	9.15	169	1971171	43774.7743831	ppb	100
68)	4-Bromophenyl-phenylether	9.56	248	474831	44063.5047753	ppb	94
69)	Hexachlorobenzene	9.64	284	499465	43109.3867027	ppb	97
70)	n-octadecane	9.88	55	326304	36017.1850528	ppb	97
71)	Pentachlorophenol	9.84	266	327433	49689.6274740	ppb	96
72)	Phenanthrene	10.09	178	3125309	41946.8480958	ppb	99
73)	Anthracene	10.15	178	3227058	42547.9291545	ppb	100
74)	Carbazole	10.31	167	3277507	42004.0507945	ppb	100
75)	Di-n-butyl phthalate	10.65	149	4184927	42744.3896177	ppb	99
77)	Fluoranthene	11.39	202	3373885	44737.7091001	ppb	98
80)	Pyrene	11.65	202	3567202	41397.3872595	ppb	100
82)	Benzylbutyl phthalate	12.27	149	2000671	41826.3293184	ppb	98
84)	Benzo(a)anthracene	12.94	228	3123264	41874.1234255	ppb	94
85)	Chrysene	12.98	228	2954805	42363.2939633	ppb	97
86)	bis(2-Ethylhexyl)phthalate	12.86	149	2976210	41893.6459346	ppb	98
87)	Di-n-octyl phthalate	13.57	149	5374979	42537.0624880	ppb	100
89)	Benzo(b)fluoranthene	14.21	252	3148087m	43429.3319039	ppb	
90)	Benzo(k)fluoranthene	14.25	252	3036372	44151.7707023	ppb	97
91)	Benzo(a)pyrene	14.68	252	3044343	45833.8275373	ppb	97
92)	Indeno(1,2,3-cd)pyrene	16.62	276	3120944	40760.5331382	ppb	99
93)	Dibenz(a,h)anthracene	16.65	278	2743549	41396.1614711	ppb	95
94)	Benzo(g,h,i)perylene	17.20	276	2473460	38495.1042884	ppb	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

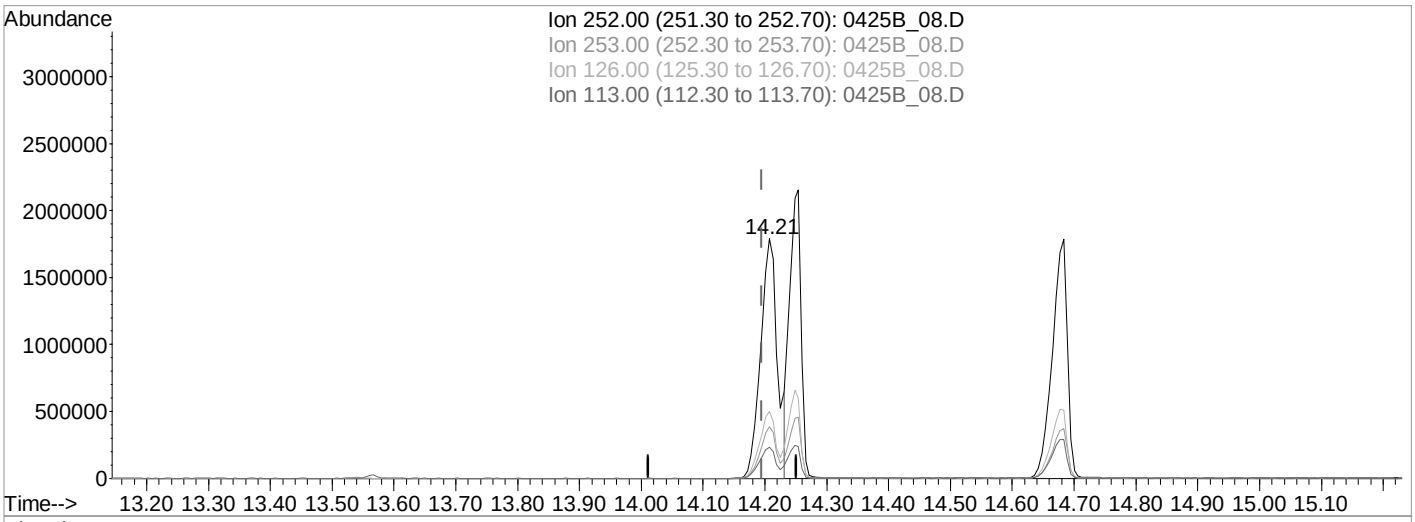
Data File : C:\MSDCHEM\1\DATA\042516B\0425B 08.D Vial: 8
Acq On : 25 Apr 2016 6:15 pm Operator: 280
Sample : STD SVMS 40K PPB 16D25863 Inst : BNAMS4
Misc : 8270 calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:39 2016 Quant Results File: S804D25P.RES

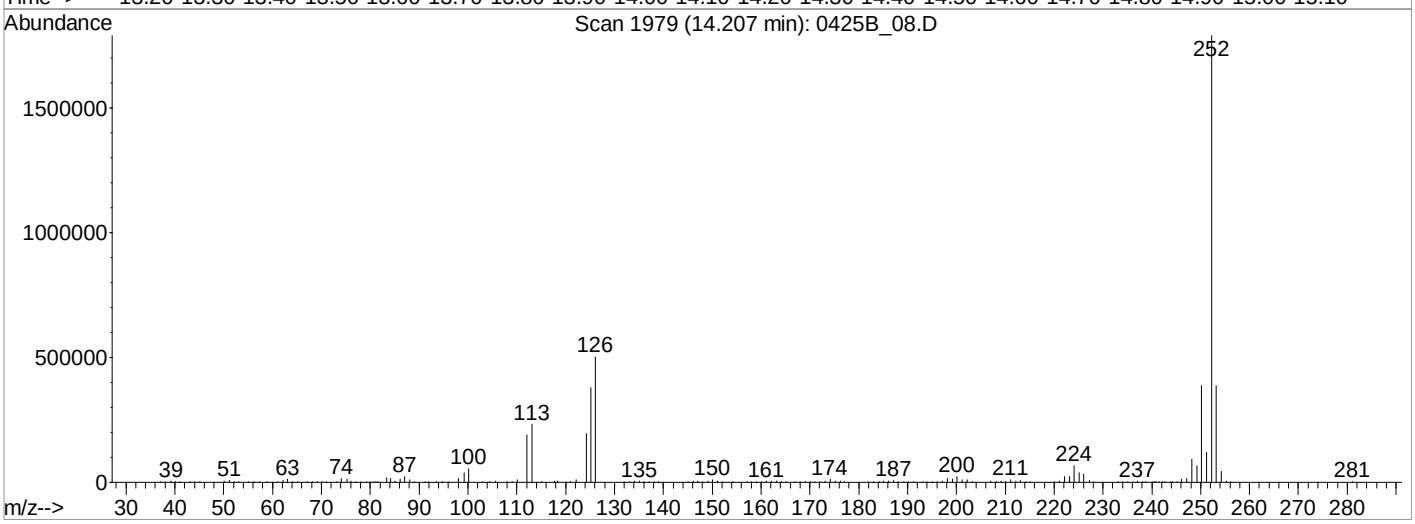
Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:38:16 2016
Response via : Initial Calibration



Data File : C:\MSDCHEM\1\DATA\042516B\0425B 08.D Vial: 8
Acq On : 25 Apr 2016 6:15 pm Operator: 280
Sample : STD SVMS 40K PPB 16D25863 Inst : BNAMS4
Misc : 8270 calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:27 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:38:16 2016
Response via : Multiple Level Calibration





TIC: 0425B_08.D

(89) Benzo(b)fluoranthene (MT)

14.21min (+0.012) 46581.2651370 ppb

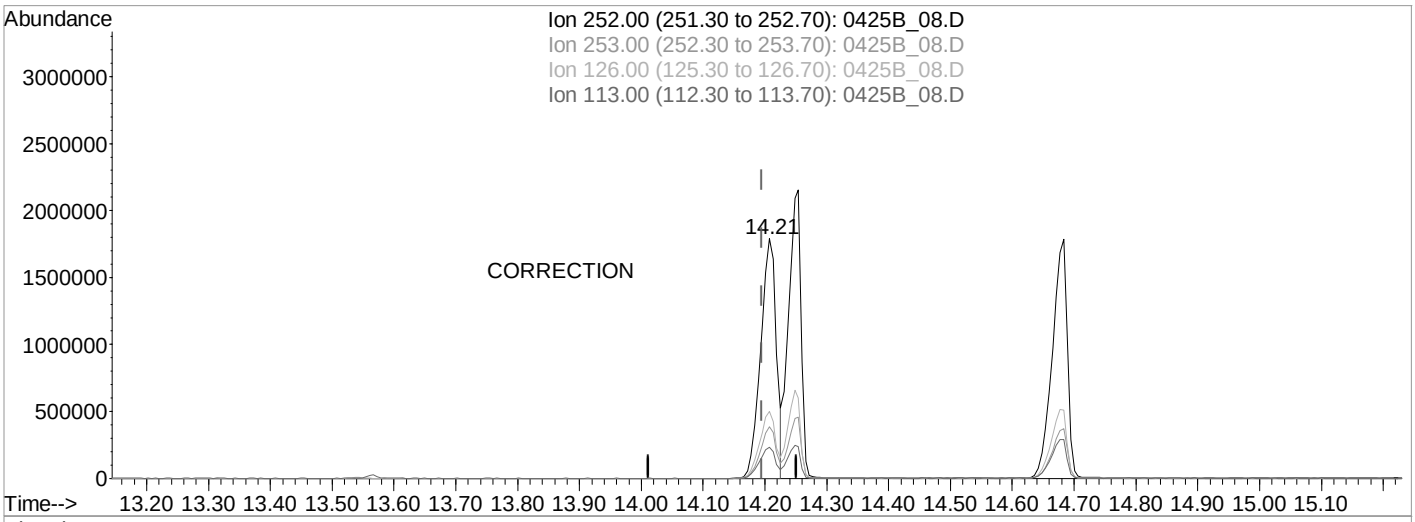
Qvalue = 99

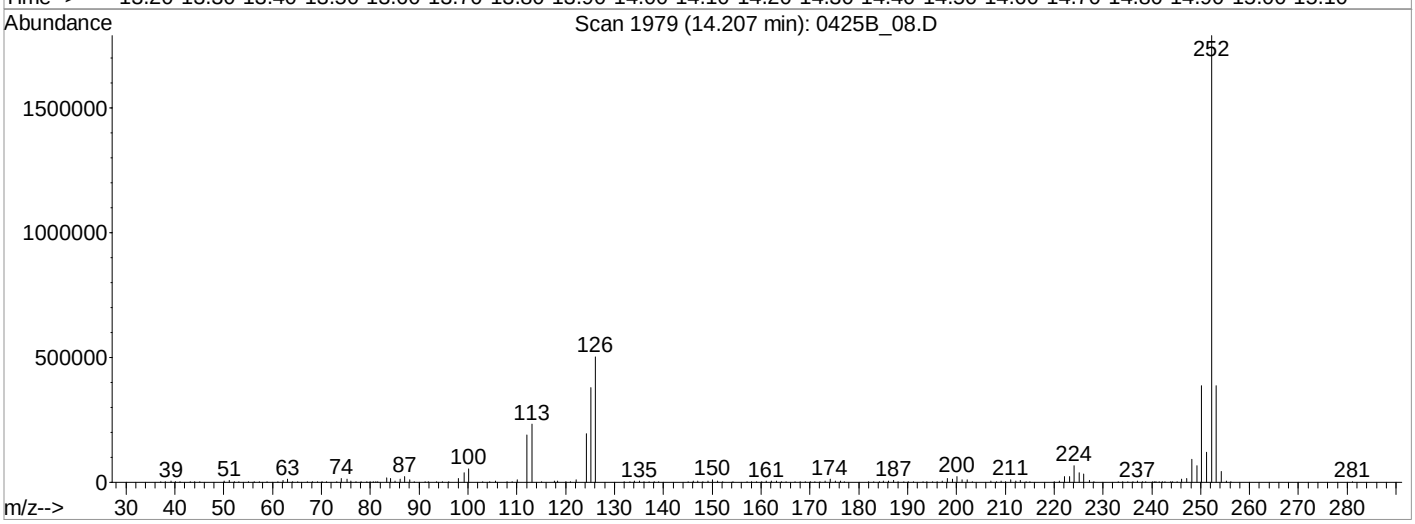
response 3376563

Ion	Exp%	Act%
252.00	100	100
253.00	21.50	21.37
126.00	25.80	26.54
113.00	12.80	12.69

Data File : C:\MSDCHEM\1\DATA\042516B\0425B 08.D Vial: 8
Acq On : 25 Apr 2016 6:15 pm Operator: 280
Sample : STD SVMS 40K PPB 16D25863 Inst : BNAMS4
Misc : 8270 calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:38 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:38:16 2016
Response via : Multiple Level Calibration





TIC: 0425B_08.D

(89) Benzo(b)fluoranthene (MT)

14.21min (+0.012) 43429.3319039 ppb m

response 3148087

Ion	Exp%	Act%
252.00	100	100
253.00	21.50	21.58
126.00	25.80	28.04
113.00	12.80	12.99

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516B\0425B 09.D Vial: 9
Acq On : 25 Apr 2016 6:38 pm Operator: 280
Sample : STD SVMS 50K PPB 16D25863 Inst : BNAMS4
Misc : 8270 calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:39 2016 Quant Results File: S804D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:26:56 2016
Response via : Initial Calibration
DataAcq Meth : BNA4E

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.29	152	90815	8000.00 ppb	0.00
22) Naphthalene-d8	6.56	136	543881	8000.00 ppb	0.00
40) Acenaphthene-d10	8.44	164	321265	8000.00 ppb	0.00
64) Phenanthrene-d10	10.06	188	513856	8000.00 ppb	0.00
78) Chrysene-d12	12.95	240	485256	8000.00 ppb	0.01
88) Perylene-d12	14.75	264	470923	8000.00 ppb	0.01
System Monitoring Compounds					
4) 2-Fluorophenol	4.19	112	1062660	53277.2381408 ppb	0.00
Spiked Amount 20.000	Range 10 - 74		Recovery = 266386.19%#		
7) Phenol-d5	4.93	99	1362842	51820.2470415 ppb	0.01
Spiked Amount 20.000	Range 10 - 63		Recovery = 259101.24%#		
23) Nitrobenzene-d5	5.83	82	1149992	49564.4080399 ppb	0.00
Spiked Amount 10.000	Range 28 - 123		Recovery = 495644.08%#		
44) 2-Fluorobiphenyl	7.70	172	2462196	47969.3558865 ppb	0.00
Spiked Amount 10.000	Range 35 - 133		Recovery = 479693.56%#		
67) 2,4,6-Tribromophenol	9.31	330	301823	57684.7392270 ppb	0.01
Spiked Amount 20.000	Range 22 - 154		Recovery = 288423.70%#		
81) p-Terphenyl-d14	11.78	244	3099721	50241.8961651 ppb	0.01
Spiked Amount 10.000	Range 30 - 148		Recovery = 502418.96%#		
Target Compounds					Qvalue
2) Pyridine	3.25	79	1629206	52543.8653396 ppb	95
3) N-Nitrosodimethylamine	3.23	42	594096	49889.0589670 ppb	94
5) Aniline	5.00	66	634995	49812.4503042 ppb	96
6) bis(2-Chloroethyl)ether	5.04	63	894395	45905.8496685 ppb	95
8) Phenol	4.94	94	1359972	49064.4279567 ppb	98
10) 2-Chlorophenol	5.10	128	1183166	49659.0865297 ppb	97
11) n-Decane	5.12	41	384232	39931.0967889 ppb	99
12) 1,3-Dichlorobenzene	5.25	146	1223072	49796.4740165 ppb	99
13) 1,4-Dichlorobenzene	5.31	146	1239652	49740.1368935 ppb	96
14) Benzyl Alcohol	5.41	79	877686	51111.7111788 ppb	96
15) 1,2-Dichlorobenzene	5.46	146	1208356	50202.8461657 ppb	97
16) bis(2-Chloroisopropyl)ethe	5.53	121	371850	50503.7946160 ppb	96
17) 2-Methylphenol	5.50	108	1074293	50126.0798811 ppb	98
18) Hexachloroethane	5.79	117	512506	49025.3669643 ppb	95
19) N-Nitrosodi-n-propylamine	5.68	70	766117	49314.6474234 ppb	92
20) 3&4-Methyl phenol	5.66	107	1273099	51641.6606086 ppb	97
24) Nitrobenzene	5.85	77	1118539	48153.0207217 ppb	93
25) Isophorone	6.09	82	2079667	49432.5155475 ppb	98
26) 2-Nitrophenol	6.16	139	699034	52948.5920573 ppb	96
27) 2,4-Dimethylphenol	6.19	107	1124552	48134.2576252 ppb	99
28) bis(2-Chlorethoxy)methane	6.29	93	1451002	48529.7180934 ppb	99
29) 2,4-Dichlorophenol	6.40	162	977932	50806.0691948 ppb	97
31) 1,2,4-Trichlorobenzene	6.50	180	942484	49138.4065794 ppb	96
32) Naphthalene	6.59	128	3712124	47505.6062590 ppb	100
33) 4-Chloroaniline	6.63	65	418550	45404.0055135 ppb	87
34) Hexachloro-1,3-butadiene	6.70	225	404790	49664.0059233 ppb	98
36) 4-Chloro-3-methylphenol	7.12	107	1070654	50269.5021689 ppb	99
37) 2-Methylnaphthalene	7.31	142	2524755	48608.5636815 ppb	99
38) 1-Methylnaphthalene	7.43	142	2245365	48299.3699901 ppb	100
41) Hexachlorocyclopentadiene	7.48	237	462140	53211.8841292 ppb	96
42) 2,4,6-Trichlorophenol	7.61	196	645063	51951.4642110 ppb	94
43) 2,4,5-Trichlorophenol	7.64	196	683859	50804.6262458 ppb	97
45) Biphenyl	7.81	154	2949911	48208.9440011 ppb	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516B\0425B 09.D Vial: 9
Acq On : 25 Apr 2016 6:38 pm Operator: 280
Sample : STD SVMS 50K PPB 16D25863 Inst : BNAMS4
Misc : 8270 calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:39 2016 Quant Results File: S804D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:26:56 2016
Response via : Initial Calibration
DataAcq Meth : BNA4E

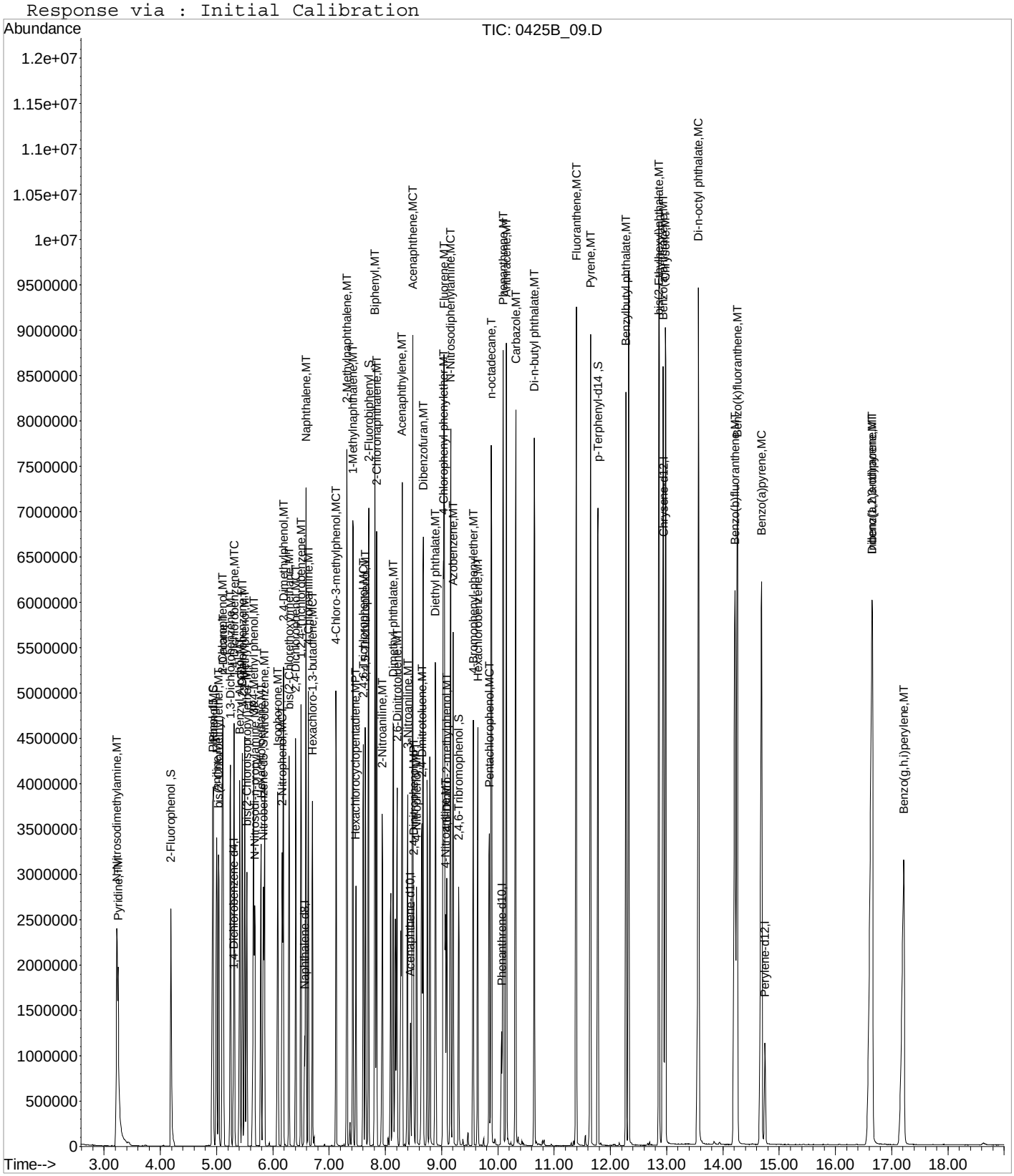
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46)	2-Chloronaphthalene	7.84	162	2322382	48084.5509780	ppb	99
47)	2-Nitroaniline	7.94	138	916625	53259.8541197	ppb	94
48)	Acenaphthylene	8.30	152	3783593	50071.1339321	ppb	100
49)	Dimethyl phthalate	8.14	163	2590148	52668.6848726	ppb	94
50)	2,6-Dinitrotoluene	8.21	165	653217	52279.2109613	ppb	88
51)	3-Nitroaniline	8.40	138	787371	53399.8702420	ppb	99
52)	Acenaphthene	8.48	153	2407674	48114.5320053	ppb	99
53)	2,4-Dinitrophenol	8.50	184	404039	69334.6465637	ppb	92
54)	Dibenzofuran	8.67	168	3343963	49206.6329704	ppb	99
55)	2,4-Dinitrotoluene	8.65	165	897534	53477.6272761	ppb	98
57)	4-Nitrophenol	8.55	139	655100	54073.2628930	ppb	95
58)	Fluorene	9.04	166	2779445	49286.6958971	ppb	99
59)	4-Chlorophenyl-phenylether	9.02	204	1060292	48664.1516140	ppb	95
60)	Diethyl phthalate	8.89	149	2597977	48816.1038067	ppb	99
61)	4-Nitroaniline	9.07	138	751023	48796.6272728	ppb	98
62)	Azobenzene	9.20	77	2707806	48037.1809358	ppb	96
65)	4,6-Dinitro-2-methylphenol	9.09	198	471249	61416.2485743	ppb	96
66)	N-Nitrosodiphenylamine	9.16	169	2406444	53894.9549251	ppb	100
68)	4-Bromophenyl-phenylether	9.56	248	586371	54876.3470928	ppb	97
69)	Hexachlorobenzene	9.64	284	622066	54147.1979023	ppb	97
70)	n-octadecane	9.88	55	373697	41598.6962046	ppb	96
71)	Pentachlorophenol	9.85	266	408530	62523.0255418	ppb	98
72)	Phenanthrene	10.09	178	3804290	51493.5370842	ppb	100
73)	Anthracene	10.15	178	3867608	51426.4853590	ppb	100
74)	Carbazole	10.32	167	3984464	51497.9797866	ppb	100
75)	Di-n-butyl phthalate	10.65	149	5153258	53081.8263936	ppb	99
77)	Fluoranthene	11.39	202	4165617	55705.1747466	ppb	99
80)	Pyrene	11.65	202	4418034	50956.7499613	ppb	99
82)	Benzylbutyl phthalate	12.28	149	2451475	50936.4861597	ppb	97
84)	Benzo(a)anthracene	12.94	228	3872814	51604.9201970	ppb	95
85)	Chrysene	12.98	228	3633587	51775.4517617	ppb	96
86)	bis(2-Ethylhexyl)phthalate	12.86	149	3666830	51298.2795570	ppb	99
87)	Di-n-octyl phthalate	13.57	149	6675172	52502.5771620	ppb	100
89)	Benzo(b)fluoranthene	14.21	252	4055766	54131.9424602	ppb	99
90)	Benzo(k)fluoranthene	14.25	252	3760332	52900.9702035	ppb	99
91)	Benzo(a)pyrene	14.69	252	3874837	56440.4257661	ppb	97
92)	Indeno(1,2,3-cd)pyrene	16.65	276	3897373	49245.9081561	ppb	91
93)	Dibenz(a,h)anthracene	16.66	278	3421418	49945.6633889	ppb	96
94)	Benzo(g,h,i)perylene	17.22	276	3083632	46430.9373985	ppb	99

(#) = qualifier out of range (m) = manual integration
0425B_09.D S804D25P.M Tue Apr 26 10:39:56 2016 Page 2

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516B\0425B 09.D Vial: 9
Acq On : 25 Apr 2016 6:38 pm Operator: 280
Sample : STD SVMS 50K PPB 16D25863 Inst : BNAMS4
Misc : 8270 calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:39 2016 Quant Results File: S804D25P.RES

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:39:17 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516B\0425B 10.D Vial: 10
Acq On : 25 Apr 2016 7:02 pm Operator: 280
Sample : MSTD TCL 10K1 PPB 16D25867 Inst : BNAMS4
Misc : 8270 TCL calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:42 2016 Quant Results File: S804D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:26:56 2016
Response via : Initial Calibration
DataAcq Meth : BNA4E

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.29	152	91428	8000.00	ppb	0.00
22) Naphthalene-d8	6.56	136	547353	8000.00	ppb	0.00
40) Acenaphthene-d10	8.44	164	318302	8000.00	ppb	0.00
64) Phenanthrene-d10	10.06	188	542888	8000.00	ppb	0.00
78) Chrysene-d12	12.94	240	503166	8000.00	ppb	0.00
88) Perylene-d12	14.74	264	473314	8000.00	ppb	0.00

System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0d	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 74		Recovery =	0.00%#		
7) Phenol-d5	0.00	99	0d	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 63		Recovery =	0.00%#		
23) Nitrobenzene-d5	0.00	82	0d	0.0000000	ppb	
Spiked Amount 10.000	Range 28 - 123		Recovery =	0.00%#		
44) 2-Fluorobiphenyl	0.00	172	0d	0.0000000	ppb	
Spiked Amount 10.000	Range 35 - 133		Recovery =	0.00%#		
67) 2,4,6-Tribromophenol	0.00	330	0	0.0000000	ppb	
Spiked Amount 20.000	Range 22 - 154		Recovery =	0.00%#		
81) p-Terphenyl-d14	0.00	244	0d	0.0000000	ppb	
Spiked Amount 10.000	Range 30 - 148		Recovery =	0.00%#		

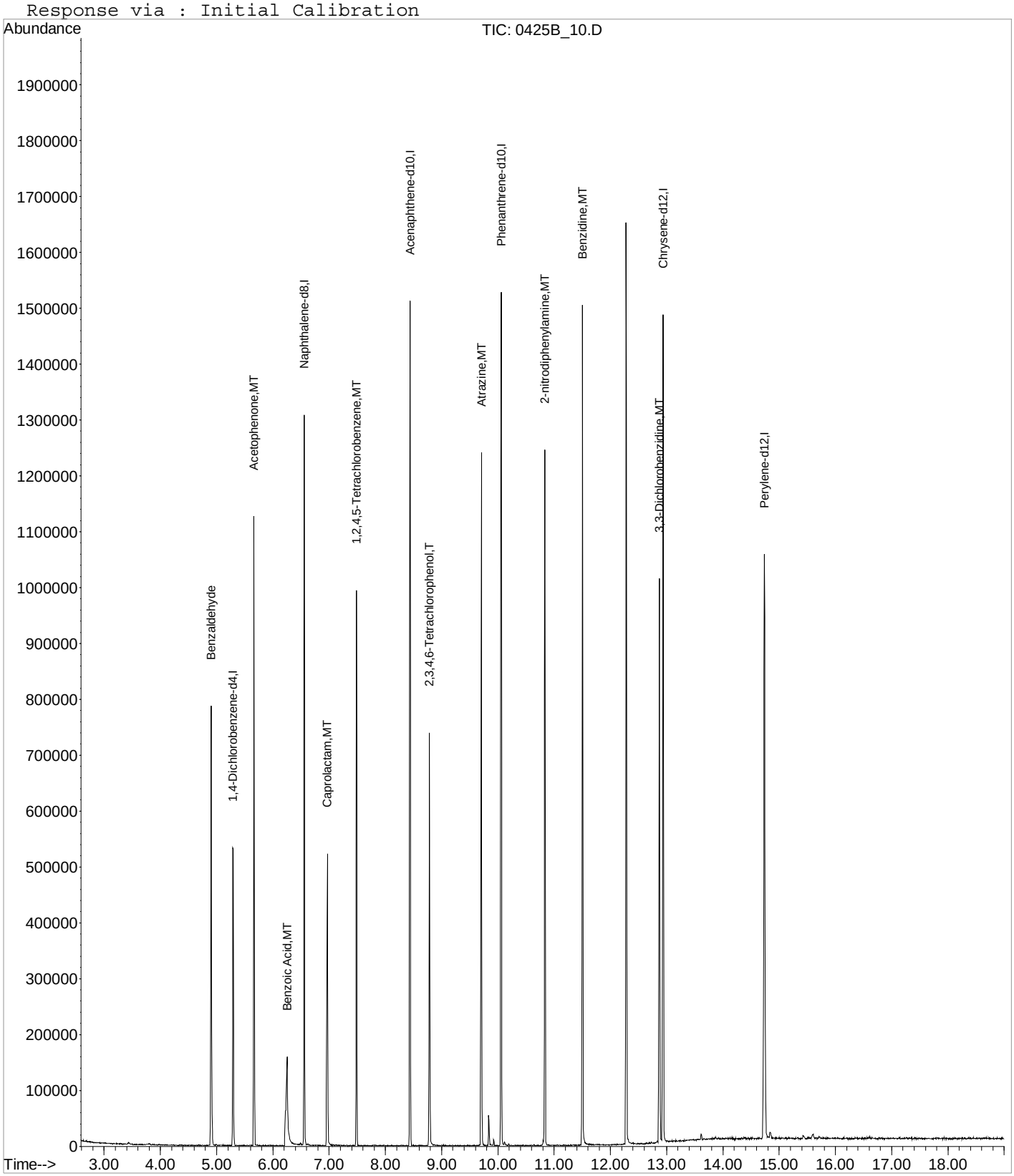
Target Compounds					Qvalue
9) Benzaldehyde	4.90	105	160848	10000.0000000 ppb	100
21) Acetophenone	5.66	105	293604	10000.0000000 ppb	100
30) Benzoic Acid	6.25	105	96386	10099.0140506 ppb	100
35) Caprolactam	6.97	113	74075	10000.0000000 ppb	100
39) 1,2,4,5-Tetrachlorobenzene	7.49	216	164076	10000.0000000 ppb	100
56) 2,3,4,6-Tetrachlorophenol	8.78	232	74783	10032.7345416 ppb	100
63) Atrazine	9.71	200	113608	10000.0000000 ppb	100
76) 2-nitrodiphenylamine	10.83	167	165766	9998.4317699 ppb	100
79) Benzidine	11.50	184	543732	10010.7889960 ppb	100
83) 3,3-Dichlorobenzidine	12.87	252	200863	10000.0000000 ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516B\0425B 10.D Vial: 10
Acq On : 25 Apr 2016 7:02 pm Operator: 280
Sample : MSTD TCL 10K1 PPB 16D25867 Inst : BNAMS4
Misc : 8270 TCL calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:42 2016 Quant Results File: S804D25P.RES

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:41:33 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516B\0425B 11.D Vial: 11
Acq On : 25 Apr 2016 7:25 pm Operator: 280
Sample : STD TCL 1K1 PPB 16D25867 Inst : BNAMS4
Misc : 8270 TCL calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 11:01 2016 Quant Results File: S804D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:26:56 2016
Response via : Initial Calibration
DataAcq Meth : BNA4E

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.29	152	86332	8000.00	ppb	0.00
22) Naphthalene-d8	6.56	136	507382	8000.00	ppb	0.00
40) Acenaphthene-d10	8.44	164	296492	8000.00	ppb	0.00
64) Phenanthrene-d10	10.06	188	506537	8000.00	ppb	0.00
78) Chrysene-d12	12.94	240	436269	8000.00	ppb	0.00
88) Perylene-d12	14.74	264	443664	8000.00	ppb	0.00

System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0d	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 74		Recovery =	0.00%#		
7) Phenol-d5	0.00	99	0d	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 63		Recovery =	0.00%#		
23) Nitrobenzene-d5	0.00	82	0d	0.0000000	ppb	
Spiked Amount 10.000	Range 28 - 123		Recovery =	0.00%#		
44) 2-Fluorobiphenyl	0.00	172	0d	0.0000000	ppb	
Spiked Amount 10.000	Range 35 - 133		Recovery =	0.00%#		
67) 2,4,6-Tribromophenol	0.00	330	0	0.0000000	ppb	
Spiked Amount 20.000	Range 22 - 154		Recovery =	0.00%#		
81) p-Terphenyl-d14	0.00	244	0d	0.0000000	ppb	
Spiked Amount 10.000	Range 30 - 148		Recovery =	0.00%#		

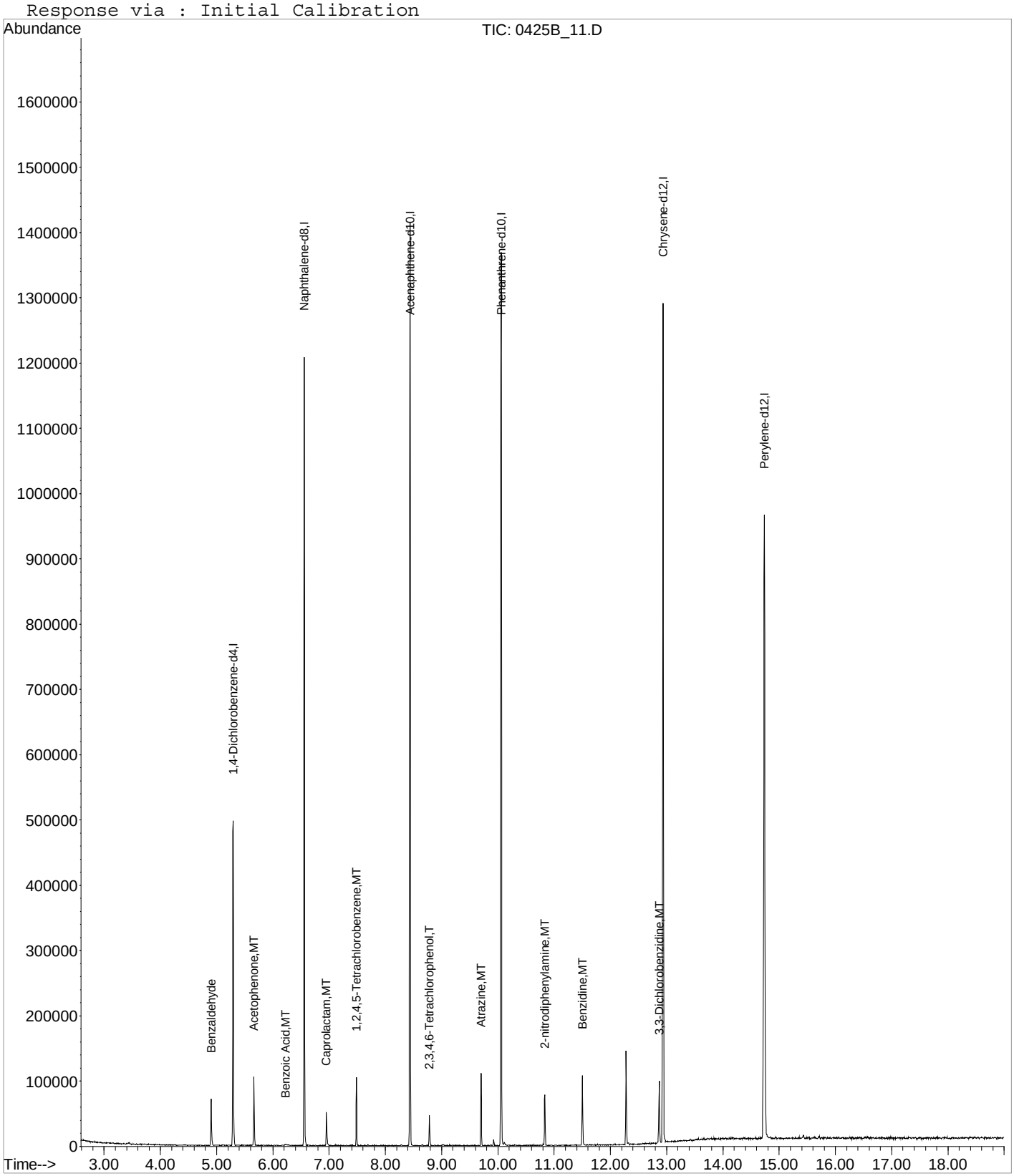
Target Compounds						Qvalue
9) Benzaldehyde	4.90	105	14113	929.2040497	ppb #	88
21) Acetophenone	5.66	105	28787	1038.3454336	ppb	98
30) Benzoic Acid	6.23	105	1580	178.5889371	ppb	88
35) Caprolactam	6.95	113	6000	873.7999931	ppb	95
39) 1,2,4,5-Tetrachlorobenzene	7.49	216	16306	1072.0988369	ppb	99
56) 2,3,4,6-Tetrachlorophenol	8.78	232	5413	779.6161962	ppb	93
63) Atrazine	9.70	200	10269	970.3884690	ppb	96
76) 2-nitrodiphenylamine	10.83	167	10866	702.4334722	ppb	91
79) Benzidine	11.50	184	41537	882.0139902	ppb	98
83) 3,3-Dichlorobenzidine	12.87	252	16772	963.0344912	ppb	97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516B\0425B 11.D Vial: 11
Acq On : 25 Apr 2016 7:25 pm Operator: 280
Sample : STD TCL 1K1 PPB 16D25867 Inst : BNAMS4
Misc : 8270 TCL calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 11:01 2016 Quant Results File: S804D25P.RES

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:41:33 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516B\0425B 12.D Vial: 12
Acq On : 25 Apr 2016 7:48 pm Operator: 280
Sample : STD TCL 4K1 PPB 16D25867 Inst : BNAMS4
Misc : 8270 TCL calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 11:02 2016 Quant Results File: S804D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:26:56 2016
Response via : Initial Calibration
DataAcq Meth : BNA4E

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.29	152	91497	8000.00	ppb	0.00
22) Naphthalene-d8	6.56	136	530254	8000.00	ppb	0.00
40) Acenaphthene-d10	8.44	164	318303	8000.00	ppb	0.00
64) Phenanthrene-d10	10.06	188	534948	8000.00	ppb	0.00
78) Chrysene-d12	12.94	240	463487	8000.00	ppb	0.00
88) Perylene-d12	14.74	264	464490	8000.00	ppb	0.00

System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 74		Recovery =	0.00%#		
7) Phenol-d5	0.00	99	0	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 63		Recovery =	0.00%#		
23) Nitrobenzene-d5	0.00	82	0d	0.0000000	ppb	
Spiked Amount 10.000	Range 28 - 123		Recovery =	0.00%#		
44) 2-Fluorobiphenyl	0.00	172	0	0.0000000	ppb	
Spiked Amount 10.000	Range 35 - 133		Recovery =	0.00%#		
67) 2,4,6-Tribromophenol	0.00	330	0	0.0000000	ppb	
Spiked Amount 20.000	Range 22 - 154		Recovery =	0.00%#		
81) p-Terphenyl-d14	0.00	244	0	0.0000000	ppb	
Spiked Amount 10.000	Range 30 - 148		Recovery =	0.00%#		

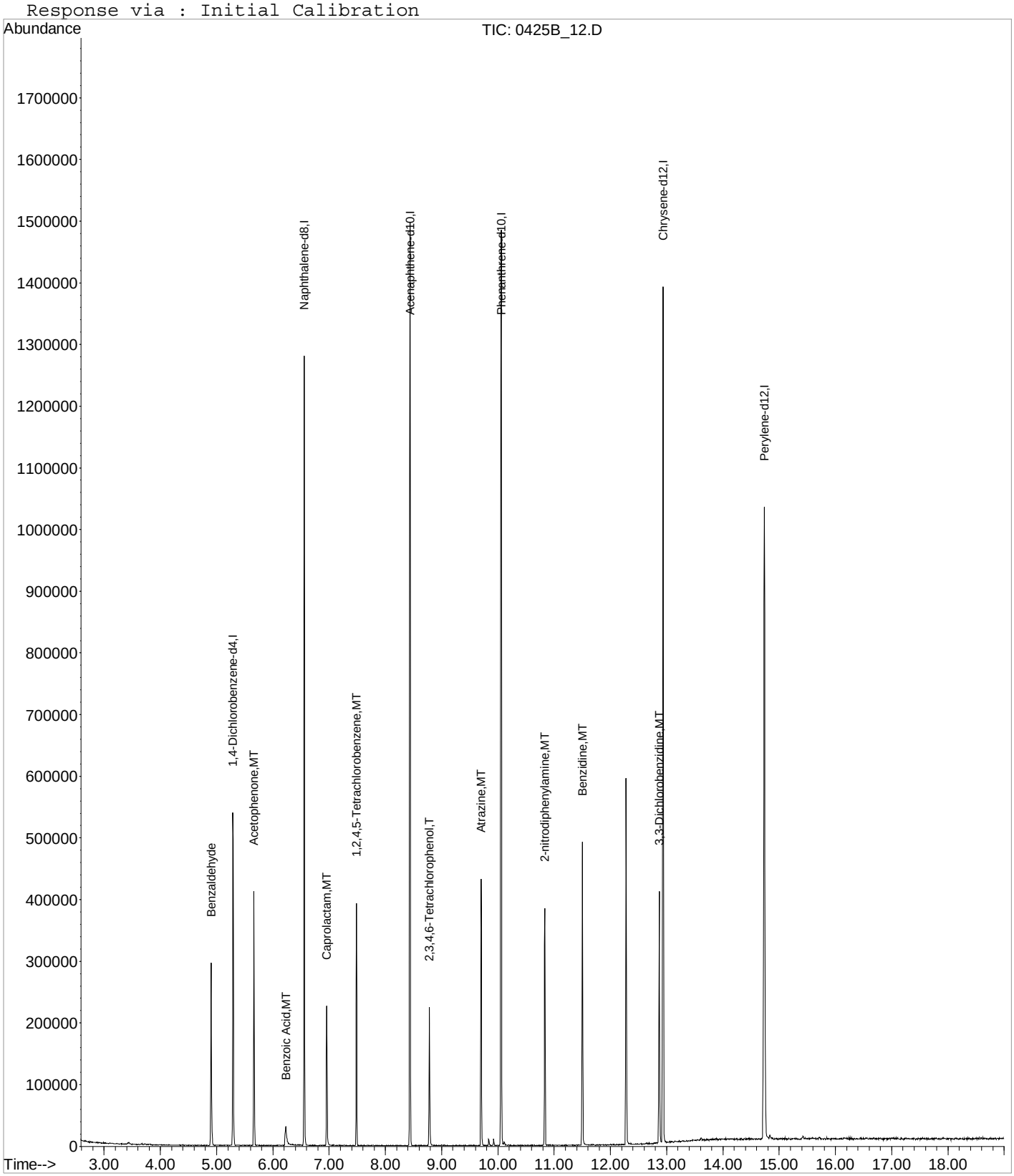
Target Compounds						Qvalue
9) Benzaldehyde	4.90	105	59505	3696.6655417	ppb	99
21) Acetophenone	5.66	105	110984	3777.2068638	ppb	98
30) Benzoic Acid	6.23	105	18634	2015.3693966	ppb	100
35) Caprolactam	6.96	113	25741	3587.0489553	ppb	96
39) 1,2,4,5-Tetrachlorobenzene	7.49	216	63548	3997.9777837	ppb	95
56) 2,3,4,6-Tetrachlorophenol	8.78	232	23897	3205.9626402	ppb	98
63) Atrazine	9.70	200	40297	3547.0101930	ppb	97
76) 2-nitrodiphenylamine	10.83	167	53886	3298.4586959	ppb	96
79) Benzidine	11.50	184	187832	3754.2805811	ppb	99
83) 3,3-Dichlorobenzidine	12.87	252	70884	3831.0868886	ppb	94

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516B\0425B 12.D Vial: 12
Acq On : 25 Apr 2016 7:48 pm Operator: 280
Sample : STD TCL 4K1 PPB 16D25867 Inst : BNAMS4
Misc : 8270 TCL calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 11:02 2016 Quant Results File: S804D25P.RES

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:01:50 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516B\0425B 13.D Vial: 13
Acq On : 25 Apr 2016 8:12 pm Operator: 280
Sample : STD TCL 20K1 PPB 16D25867 Inst : BNAMS4
Misc : 8270 TCL calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 11:03 2016 Quant Results File: S804D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:26:56 2016
Response via : Initial Calibration
DataAcq Meth : BNA4E

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.29	152	90490	8000.00	ppb	0.00
22) Naphthalene-d8	6.56	136	540759	8000.00	ppb	0.00
40) Acenaphthene-d10	8.44	164	313686	8000.00	ppb	0.00
64) Phenanthrene-d10	10.06	188	538958	8000.00	ppb	0.00
78) Chrysene-d12	12.94	240	483711	8000.00	ppb	0.00
88) Perylene-d12	14.74	264	476001	8000.00	ppb	0.00

System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 74		Recovery =	0.00%#		
7) Phenol-d5	0.00	99	0d	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 63		Recovery =	0.00%#		
23) Nitrobenzene-d5	0.00	82	0d	0.0000000	ppb	
Spiked Amount 10.000	Range 28 - 123		Recovery =	0.00%#		
44) 2-Fluorobiphenyl	0.00	172	0	0.0000000	ppb	
Spiked Amount 10.000	Range 35 - 133		Recovery =	0.00%#		
67) 2,4,6-Tribromophenol	0.00	330	0	0.0000000	ppb	
Spiked Amount 20.000	Range 22 - 154		Recovery =	0.00%#		
81) p-Terphenyl-d14	0.00	244	0	0.0000000	ppb	
Spiked Amount 10.000	Range 30 - 148		Recovery =	0.00%#		

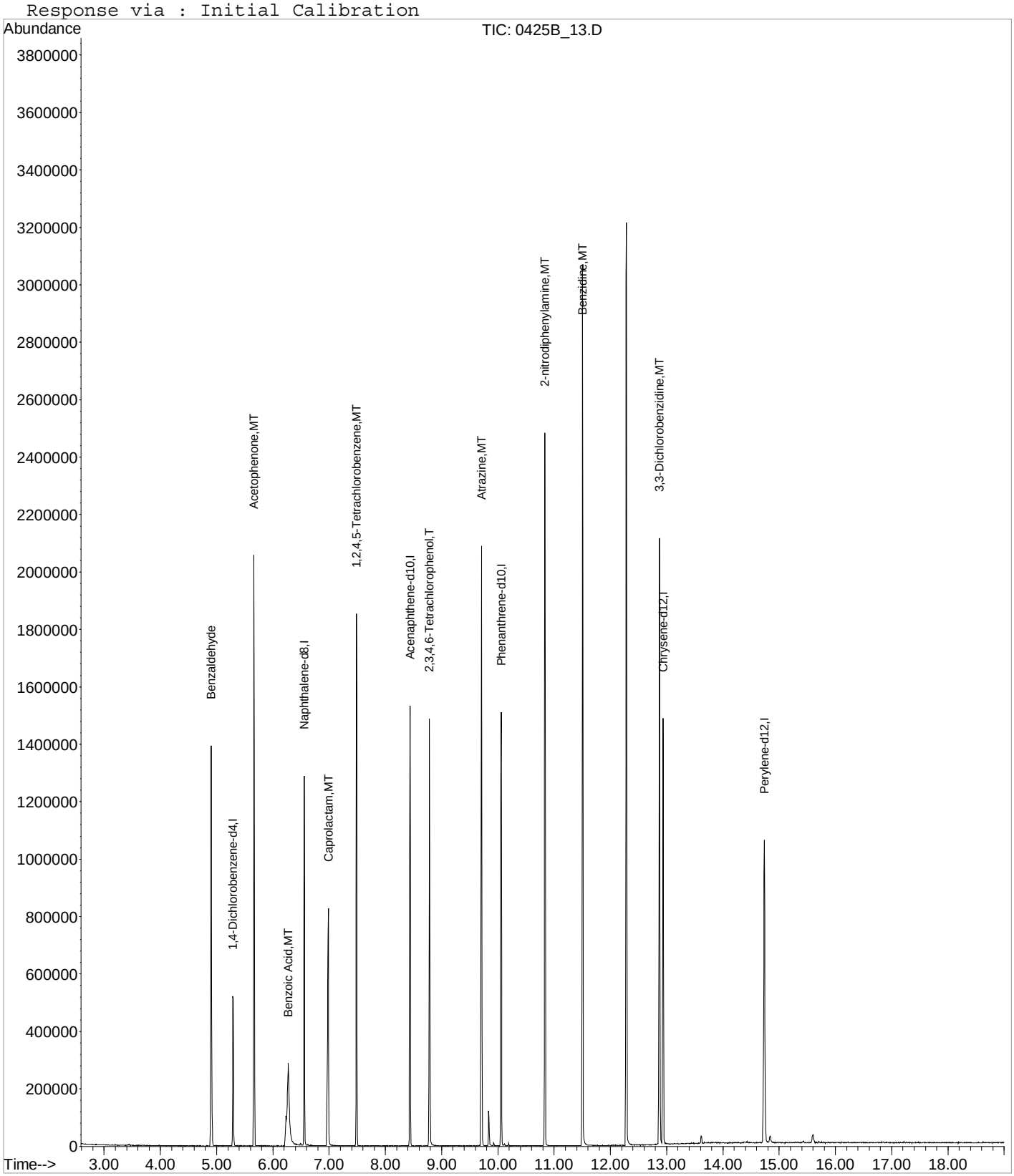
Target Compounds						Qvalue
9) Benzaldehyde	4.91	105	307153	19293.7980175	ppb	100
21) Acetophenone	5.66	105	578496	19907.5137225	ppb	99
30) Benzoic Acid	6.27	105	230836	24481.1776570	ppb	98
35) Caprolactam	6.99	113	142550	19478.6703586	ppb	97
39) 1,2,4,5-Tetrachlorobenzene	7.49	216	327675	20214.4530408	ppb	98
56) 2,3,4,6-Tetrachlorophenol	8.78	232	150312	20462.2941057	ppb	99
63) Atrazine	9.71	200	227985	20362.9920070	ppb	99
76) 2-nitrodiphenylamine	10.83	167	344741	20945.2083991	ppb	99
79) Benzidine	11.50	184	1131374	21667.8056748	ppb	100
83) 3,3-Dichlorobenzidine	12.87	252	418013	21647.8697888	ppb	94

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516B\0425B 13.D Vial: 13
Acq On : 25 Apr 2016 8:12 pm Operator: 280
Sample : STD TCL 20K1 PPB 16D25867 Inst : BNAMS4
Misc : 8270 TCL calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 11:03 2016 Quant Results File: S804D25P.RES

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:02:41 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516B\0425B 14.D Vial: 14
Acq On : 25 Apr 2016 8:35 pm Operator: 280
Sample : STD TCL 30K1 PPB 16D25867 Inst : BNAMS4
Misc : 8270 TCL calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 11:04 2016 Quant Results File: S804D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:26:56 2016
Response via : Initial Calibration
DataAcq Meth : BNA4E

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.29	152	92857	8000.00	ppb	0.00
22) Naphthalene-d8	6.56	136	547122	8000.00	ppb	0.00
40) Acenaphthene-d10	8.44	164	318383	8000.00	ppb	0.00
64) Phenanthrene-d10	10.06	188	546687	8000.00	ppb	0.00
78) Chrysene-d12	12.94	240	490863	8000.00	ppb	0.00
88) Perylene-d12	14.74	264	476174	8000.00	ppb	0.00

System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 74		Recovery =	0.00%#		
7) Phenol-d5	0.00	99	0	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 63		Recovery =	0.00%#		
23) Nitrobenzene-d5	0.00	82	0d	0.0000000	ppb	
Spiked Amount 10.000	Range 28 - 123		Recovery =	0.00%#		
44) 2-Fluorobiphenyl	0.00	172	0	0.0000000	ppb	
Spiked Amount 10.000	Range 35 - 133		Recovery =	0.00%#		
67) 2,4,6-Tribromophenol	0.00	330	0	0.0000000	ppb	
Spiked Amount 20.000	Range 22 - 154		Recovery =	0.00%#		
81) p-Terphenyl-d14	0.00	244	0	0.0000000	ppb	
Spiked Amount 10.000	Range 30 - 148		Recovery =	0.00%#		

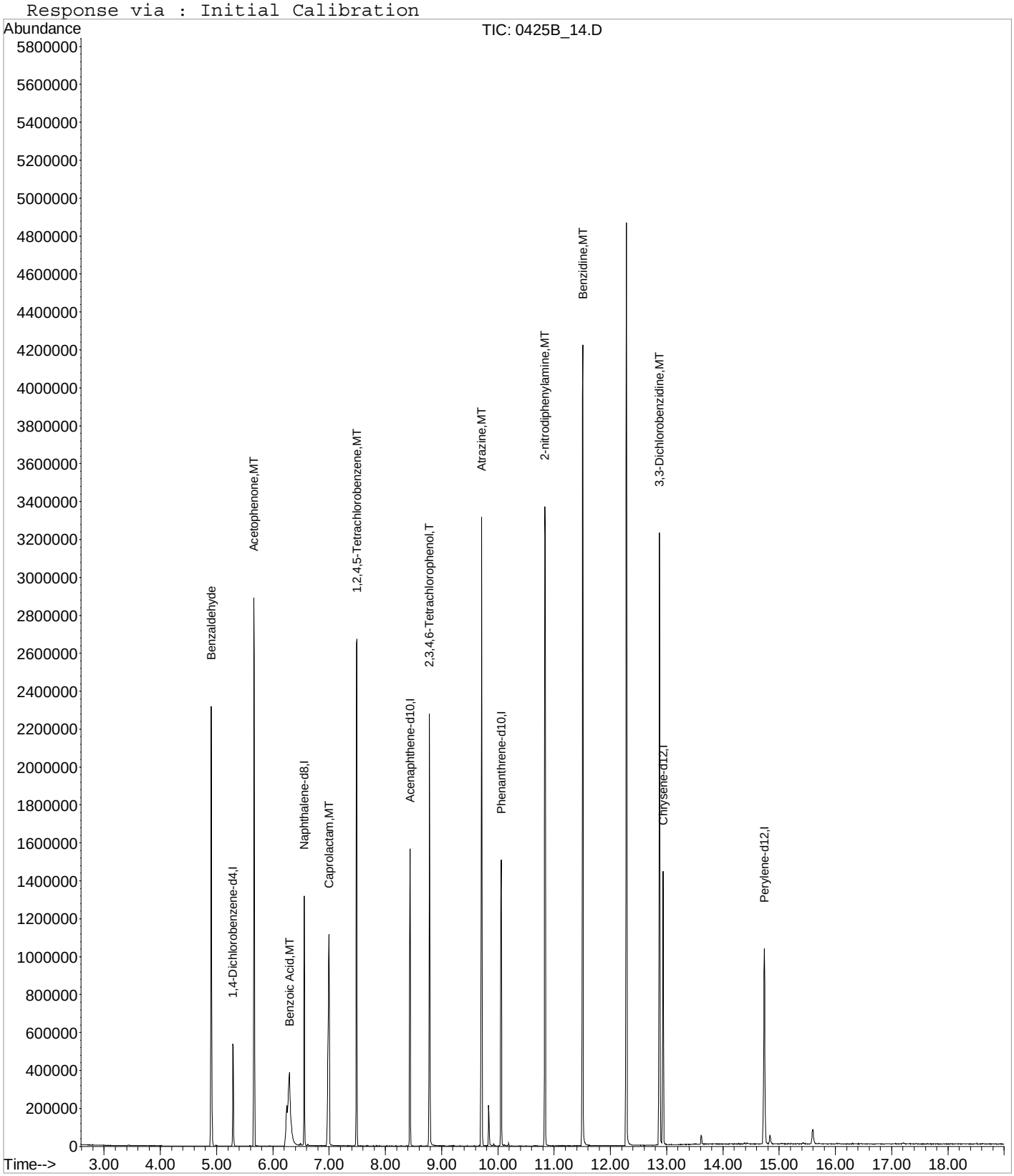
Target Compounds						Qvalue
9) Benzaldehyde	4.91	105	472970	28952.2620316	ppb	99
21) Acetophenone	5.66	105	893152	29952.1483568	ppb	98
30) Benzoic Acid	6.29	105	418891	43908.5780407	ppb	99
35) Caprolactam	7.00	113	226692	30615.9583492	ppb	99
39) 1,2,4,5-Tetrachlorobenzene	7.49	216	501642	30586.6670275	ppb	99
56) 2,3,4,6-Tetrachlorophenol	8.78	232	235076	31529.2926094	ppb	99
63) Atrazine	9.71	200	351748	30953.6750573	ppb	96
76) 2-nitrodiphenylamine	10.84	167	552280	33080.1325460	ppb	99
79) Benzidine	11.51	184	1749728	33022.1196034	ppb	99
83) 3,3-Dichlorobenzidine	12.87	252	654410	33396.5013598	ppb	94

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516B\0425B 14.D Vial: 14
Acq On : 25 Apr 2016 8:35 pm Operator: 280
Sample : STD TCL 30K1 PPB 16D25867 Inst : BNAMS4
Misc : 8270 TCL calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 11:04 2016 Quant Results File: S804D25P.RES

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:03:21 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516B\0425B 15.D Vial: 15
Acq On : 25 Apr 2016 8:58 pm Operator: 280
Sample : STD TCL 40K1 PPB 16D25867 Inst : BNAMS4
Misc : 8270 TCL calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 11:05 2016 Quant Results File: S804D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:26:56 2016
Response via : Initial Calibration
DataAcq Meth : BNA4E

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.29	152	86082	8000.00	ppb	0.00
22) Naphthalene-d8	6.56	136	524753	8000.00	ppb	0.00
40) Acenaphthene-d10	8.44	164	308781	8000.00	ppb	0.00
64) Phenanthrene-d10	10.06	188	524991	8000.00	ppb	0.00
78) Chrysene-d12	12.94	240	449660	8000.00	ppb	0.00
88) Perylene-d12	14.74	264	458311	8000.00	ppb	0.00

System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 74		Recovery =	0.00%#		
7) Phenol-d5	0.00	99	0	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 63		Recovery =	0.00%#		
23) Nitrobenzene-d5	0.00	82	0d	0.0000000	ppb	
Spiked Amount 10.000	Range 28 - 123		Recovery =	0.00%#		
44) 2-Fluorobiphenyl	0.00	172	0	0.0000000	ppb	
Spiked Amount 10.000	Range 35 - 133		Recovery =	0.00%#		
67) 2,4,6-Tribromophenol	0.00	330	0	0.0000000	ppb	
Spiked Amount 20.000	Range 22 - 154		Recovery =	0.00%#		
81) p-Terphenyl-d14	0.00	244	0	0.0000000	ppb	
Spiked Amount 10.000	Range 30 - 148		Recovery =	0.00%#		

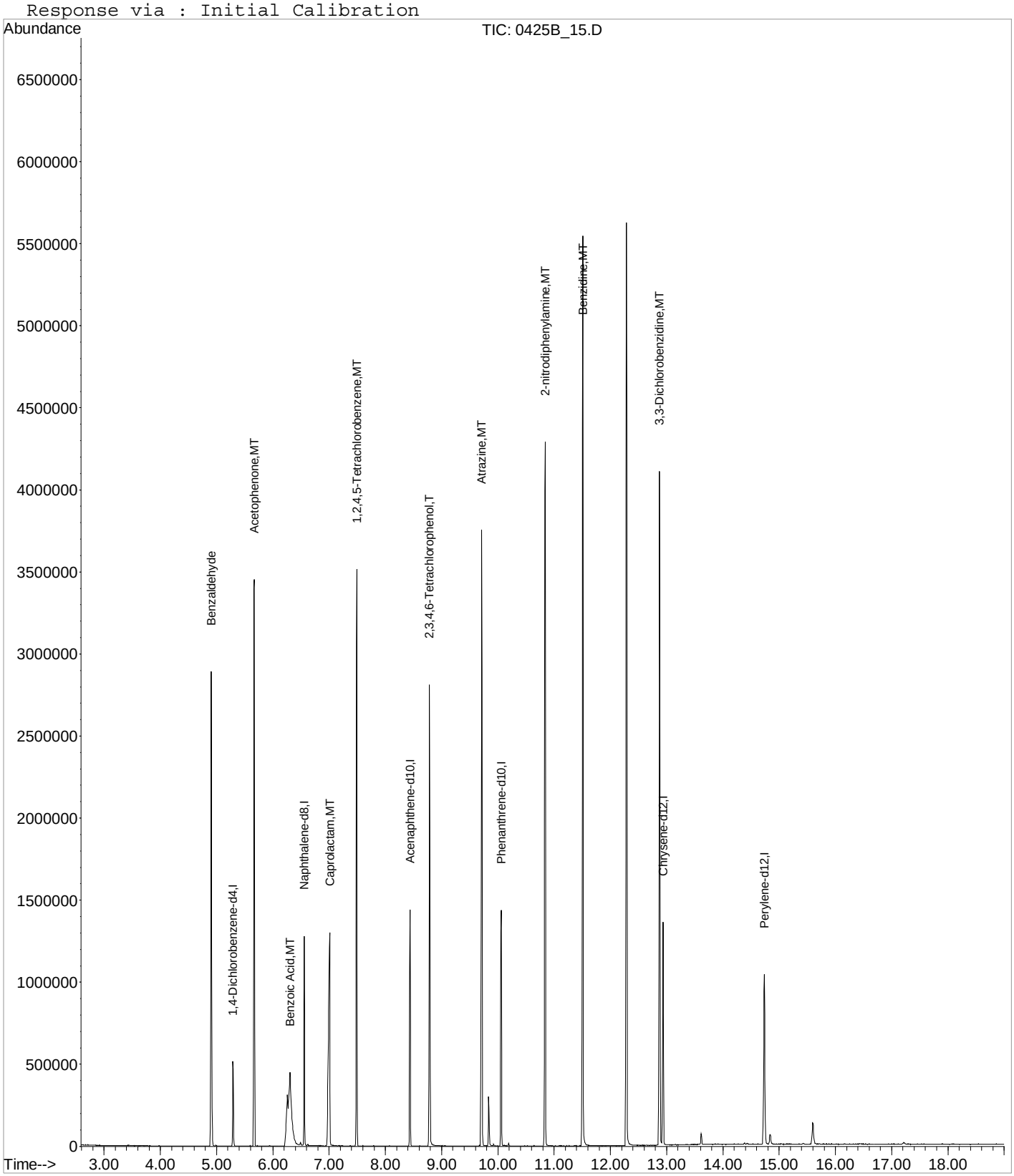
Target Compounds						Qvalue
9) Benzaldehyde	4.91	105	598378	39511.8007931	ppb	98
21) Acetophenone	5.67	105	1127720	40794.9293723	ppb	97
30) Benzoic Acid	6.30	105	580439	63435.7642991	ppb	99
35) Caprolactam	7.01	113	292999	41257.8935133	ppb	98
39) 1,2,4,5-Tetrachlorobenzene	7.49	216	625778	39782.1090668	ppb	99
56) 2,3,4,6-Tetrachlorophenol	8.78	232	305633	42267.3947990	ppb	99
63) Atrazine	9.71	200	448742	40717.0779010	ppb	95
76) 2-nitrodiphenylamine	10.84	167	715026	44598.1298081	ppb	99
79) Benzidine	11.51	184	2233386	46012.3309646	ppb	100
83) 3,3-Dichlorobenzidine	12.87	252	848645	47277.3519237	ppb	95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516B\0425B 15.D Vial: 15
Acq On : 25 Apr 2016 8:58 pm Operator: 280
Sample : STD TCL 40K1 PPB 16D25867 Inst : BNAMS4
Misc : 8270 TCL calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 11:05 2016 Quant Results File: S804D25P.RES

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:04:58 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516B\0425B 16.D Vial: 16
Acq On : 25 Apr 2016 9:22 pm Operator: 280
Sample : STD TCL 50K1 PPB 16D25867 Inst : BNAMS4
Misc : 8270 TCL calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 11:07 2016 Quant Results File: S804D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:26:56 2016
Response via : Initial Calibration
DataAcq Meth : BNA4E

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.29	152	93388	8000.00	ppb	0.00
22) Naphthalene-d8	6.56	136	563259	8000.00	ppb	0.00
40) Acenaphthene-d10	8.44	164	324528	8000.00	ppb	0.00
64) Phenanthrene-d10	10.06	188	560025	8000.00	ppb	0.00
78) Chrysene-d12	12.94	240	491027	8000.00	ppb	0.00
88) Perylene-d12	14.74	264	486836	8000.00	ppb	0.00

System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 74		Recovery =	0.00%#		
7) Phenol-d5	0.00	99	0	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 63		Recovery =	0.00%#		
23) Nitrobenzene-d5	0.00	82	0d	0.0000000	ppb	
Spiked Amount 10.000	Range 28 - 123		Recovery =	0.00%#		
44) 2-Fluorobiphenyl	0.00	172	0	0.0000000	ppb	
Spiked Amount 10.000	Range 35 - 133		Recovery =	0.00%#		
67) 2,4,6-Tribromophenol	0.00	330	0	0.0000000	ppb	
Spiked Amount 20.000	Range 22 - 154		Recovery =	0.00%#		
81) p-Terphenyl-d14	0.00	244	0	0.0000000	ppb	
Spiked Amount 10.000	Range 30 - 148		Recovery =	0.00%#		

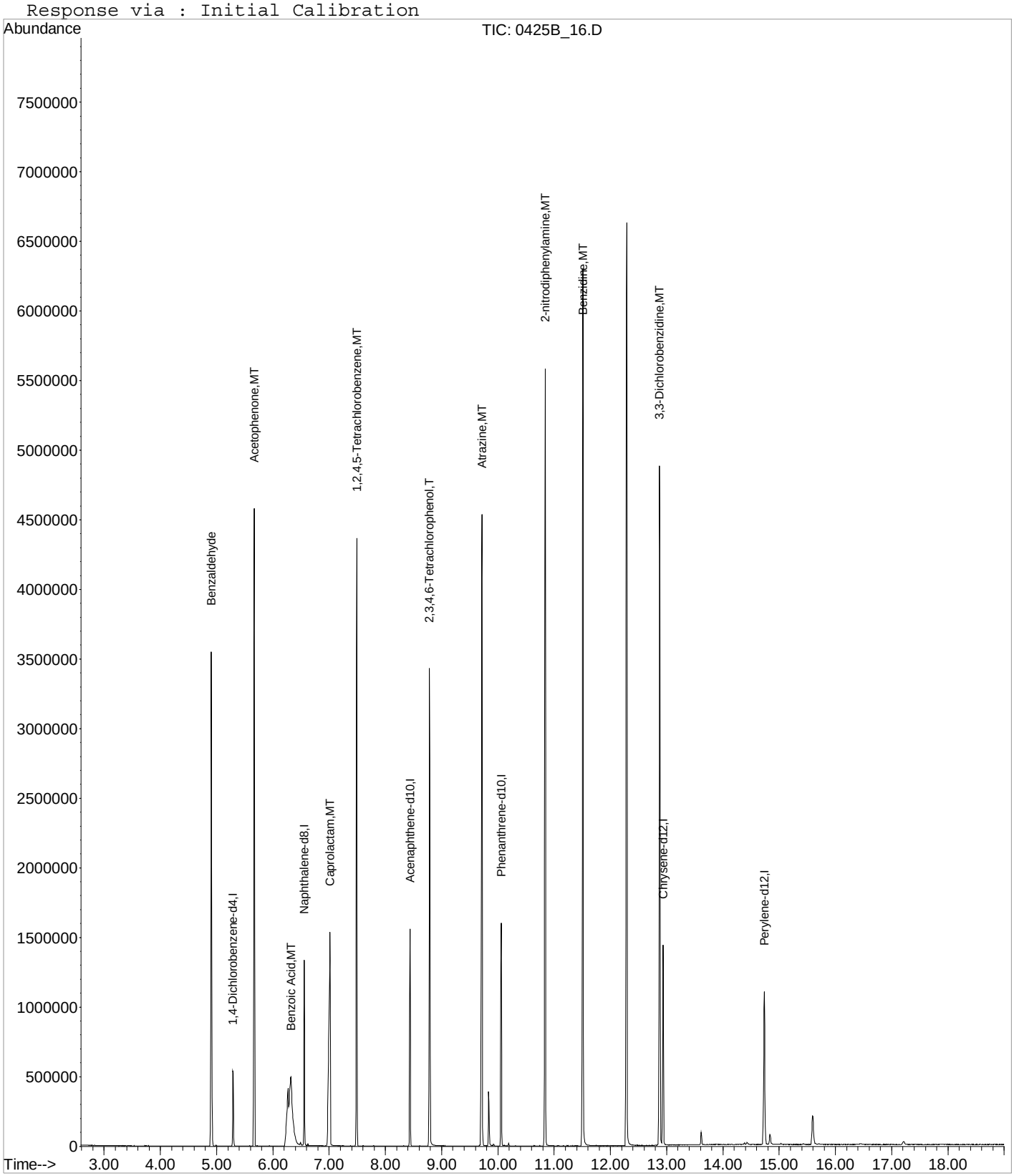
Target Compounds						Qvalue
9) Benzaldehyde	4.91	105	743046	45226.0002061	ppb	98
21) Acetophenone	5.67	105	1396299	46559.1029218	ppb	97
30) Benzoic Acid	6.32	105	768190	78215.5369831	ppb	100
35) Caprolactam	7.02	113	372541	48872.1875551	ppb	96
39) 1,2,4,5-Tetrachlorobenzene	7.49	216	784081	46438.1845565	ppb	99
56) 2,3,4,6-Tetrachlorophenol	8.78	232	387871	51037.6820383	ppb	98
63) Atrazine	9.72	200	566906	48942.8587874	ppb	93
76) 2-nitrodiphenylamine	10.84	167	914299	53459.8211577	ppb	99
79) Benzidine	11.51	184	2849607	53761.8614630	ppb	100
83) 3,3-Dichlorobenzidine	12.87	252	1062949	54227.3518899	ppb	95

(#) = qualifier out of range (m) = manual integration
0425B_16.D S804D25P.M Tue Apr 26 11:07:44 2016 444 of 447 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516B\0425B 16.D Vial: 16
Acq On : 25 Apr 2016 9:22 pm Operator: 280
Sample : STD TCL 50K1 PPB 16D25867 Inst : BNAMS4
Misc : 8270 TCL calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 11:07 2016 Quant Results File: S804D25P.RES

Method : C:\MSDCHEM\1\METHODS\S804D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 11:06:16 2016
Response via : Initial Calibration



Company Name/Address:
Weston Solutions
1435 Garrison St., Ste. 100
Lakewood, CO 80215

Billing Information:

Report to: **Moira Pryhoda**

Email To: **moira.pryhoda@WestonSolutions.com**

Project Description: Cowboy Timber

City/State Collected: Manderson, WY

Phone: **303-729-6146**
Fax:

Client Project # 0263

Lab Project #

Collected by (print): Eric Sandusky

Site/Facility ID #

P.O. #

Collected by (signature):
Immediately Packed on Ice N ____ Y X

Rush? (Lab MUST Be Notified)
____ Same Day 200%
____ Next Day 100%
____ Two Day 50%
X Three Day 25%

Date Results Needed

Email? ___No ✓ Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOC's (1) 4 oz Soil Jar	SVOC (1)4oz. Soil Jar								Rem./Contaminant	Sample # (lab only)
CTSO-06-20160518	Grab	SS		5/18/16	16:50	2	X	X									01
CTSO-E3D01-20160517	Comp	SS		5/17/16	12:59	1		X									02
CTSO-D8D23-20160518	Comp	SS		5/18/16	13:52	1		X									03
CTSO-C6D12-20160519	Comp	SS		5/19/16	7:15	1		X									04
CTSO-C7D12-20160519	Comp	SS		5/19/16	7:22	1		X									05
		SS															

Chain of Custody Page ___ of ___

ESC LAB SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L # 876976
C058

Acctnum: WESSOLLCO
Template:
Prelogin:
TSR:
PB:
Shipped Via:

* Matrix: **SS** - Soil **GW** - Groundwater **WW** - WasteWater **DW** - Drinking Water **OT** - Other_____

pH _____ Temp _____

6711 0333 1167

Remarks:

Flow _____ Other _____

Hold #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ☐ _____

Temp: 1.8 °C Bottles Received: 6 = 40Z

Date: 5-21-16 Time: 0900

Condition: DRY (lab use only) CE

COC Seal Intact: ____Y ____N ____NA

pH Checked: NCF:

ESC Lab Sciences

Login Confirmation Report

May 22, 2016 - 22:28

YOUR LAB OF CHOICE

Account: WESSOLLCO - Weston Solutions - CO

Login #	**L836976**	Receive Date: 05/21/2016	TSR: Shane Gambill
Template #		Entered: 05/21/2016	By: Matt Shacklock
Report to:	Moira Pryhonda 1435 Garrison St., Ste 100 Denver, CO 80215	Lab Project Number: WESSOLLCO-0263 Client Project # 0263 Project Description: Cowboy Timber Collected By: Eric Sandusky	**Report MDL: N** **HDC: N** PO # PO Req: N
Phone:	(303) 729-6146 FAX:	Reg. State: WY	Terms: 45
Email:	moira.pryhoda@westonsolutions.com		Quote #

Login Comments: WESSOLLCO-REG8 - Level 4 dp @ 20%

Matrix	Test	Sample ID	Collection Date	Design ID	Method	Unit Price
L836976-01		**CTSO-06-20160518**	**05/18/2016 16:50** Sample Description: Cowboy Timber	**Site:**	**Est. Due Date*: 05/26/2016 - R4**	
SS	SV8270	SVOCs		DEFAULT	8270C	$ 250.00
SS	V8260	Volatiles		DEFAULT	8260B	$ 106.25
Misc	DISPOSAL	Sample Disposal Charge				$ 5.00
Misc	ENERGY	Energy Surcharge				$ 12.00
Misc	HARDCOPY	Hardcopy Report Charge				$ 0.00
Misc	SHIPPING	Inbound Transport Charge				$ 0.00
L836976-02		**CTSO-E3D01-20160517**	**05/17/2016 12:59** Sample Description: Cowboy Timber	**Site:**	**Est. Due Date*: 05/26/2016 - R4**	
SS	SV8270	SVOCs		DEFAULT	8270C	$ 250.00
L836976-03		**CTSO-D8D23-20160518**	**05/18/2016 13:52** Sample Description: Cowboy Timber	**Site:**	**Est. Due Date*: 05/26/2016 - R4**	
SS	SV8270	SVOCs		DEFAULT	8270C	$ 250.00
L836976-04		**CTSO-C6D12-20160519**	**05/19/2016 07:15** Sample Description: Cowboy Timber	**Site:**	**Est. Due Date*: 05/26/2016 - R4**	
SS	SV8270	SVOCs		DEFAULT	8270C	$ 250.00
L836976-05		**CTSO-C7D12-20160519**	**05/19/2016 07:22** Sample Description: Cowboy Timber	**Site:**	**Est. Due Date*: 05/26/2016 - R4**	
SS	SV8270	SVOCs		DEFAULT	8270C	$ 250.00

Information Only - Not An Invoice - Do Not Pay! Total: $ 1,373.25

*** Due Date listed is an estimate based on average workloads. Please communicate required dates to your TSR.**

ESC LAB SCIENCES
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12065 Lebanon Rd
Mt. Juliet, TN 37122
(615) 758-5858
(800) 767-5859
Fax (615) 758-5859
Tax I.D 62-0814289
Est. 1970

Quality Control Summary
SDG: L838049

For: Weston Solutions - CO
Cowboy Timber

L838049

Lab SampleID.	Client ID
L838049-01	CTSO-E5D3-20160523
L838049-02	CTSO-C5D4-20160525
L838049-03	CTSO-B4D4-20160525
L838049-04	CTSO-B5D4-20160525
L838049-05	CTSO-DPILE3-20160524
L838049-06	CTSO-C404-20160525

ESC
L·A·B S·C·I·E·N·C·E·S
YOUR LAB OF CHOICE

12065 Lebanon Rd
Mt. Juliet, TN 37122
(615) 758-5858
(800) 767-5859
Fax (615) 758-5859
Tax I.D 62-0814289
Est. 1970

Quality Control Summary
SDG: L838049

For: Weston Solutions - CO
Project: Cowboy Timber
October 25, 2016

Sample Receiving and Handling

All sample aliquots were received at the correct temperature, in the proper containers, and with the appropriate preservatives. All method specified holding times were met.

Semi-Volatiles by Method 8270C

Laboratory Control Sample

Samples L838049-01, -02, -03, -04, -05, and -06 were analyzed in analytical batch WG876258. The laboratory control sample associated with these samples was within the laboratory control limits for all target analytes reported from this batch. The relative percent difference was within laboratory limits for all target analytes reported from this batch.

Matrix Spike/Matrix Spike Duplicate

For analytical batch WG876258 matrix spike/matrix spike duplicate analysis was performed on sample L838049-01. The matrix spike recoveries and relative percent differences were within laboratory control limits for all target analytes reported from this batch.

Blank Analysis

The method blank, the initial, and all continuing calibration blanks contained no analytes at concentrations above the method reporting limit.

Calibration Summary

Instrument BNAMS11 was calibrated on 5/27/2016. The initial calibration and continuing calibration verification standards were within method limits.

Instrument BNAMS2 was calibrated on 5/24/2016. The initial calibration and continuing calibration verification standards were within method limits.

Surrogate Summary

Surrogate recovery in samples L838049-02 100x, L838049-03 50x, L838049-05 20x, and L838049-06 50x could not be evaluated due to sample dilution. The surrogate recoveries for the remaining samples were within method limits.

Internal Standards

The internal standard responses and retention times were within method limits for all samples and quality control samples.

Nancy F. McLain
ESC Representative
ESC Lab Sciences

ANALYTICAL REPORT

October 25, 2016

Weston Solutions - CO

Sample Delivery Group:	L838049
Samples Received:	05/27/2016
Project Number:	20408.012.001.0345.0
Description:	Cowboy Timber

Report To: Moira Pryhoda
1435 Garrison St., Ste 100
Denver, CO 80215

Entire Report Reviewed By:

Shane Gambill
Technical Service Representative

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.esclabsciences.com

CTSO-E5D3-20160523 L838049-01 Solid

Collected by: Eric Sandusky
Collected date/time: 05/23/16 14:42
Received date/time: 05/27/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG876258	1	05/30/16 20:01	05/31/16 07:13	SNR

CTSO-C5D4-20160525 L838049-02 Solid

Collected by: Eric Sandusky
Collected date/time: 05/25/16 16:40
Received date/time: 05/27/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG876258	100	05/30/16 20:01	06/01/16 17:38	SNR
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG876258	5	05/30/16 20:01	05/31/16 09:34	SNR

CTSO-B4D4-20160525 L838049-03 Solid

Collected by: Eric Sandusky
Collected date/time: 05/25/16 10:46
Received date/time: 05/27/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG876258	10	05/30/16 20:01	05/31/16 10:44	SNR
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG876258	50	05/30/16 20:01	06/01/16 18:28	SNR

CTSO-B5D4-20160525 L838049-04 Solid

Collected by: Eric Sandusky
Collected date/time: 05/25/16 13:10
Received date/time: 05/27/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG876258	1	05/30/16 20:01	05/31/16 08:23	SNR
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG876258	5	05/30/16 20:01	06/01/16 17:13	SNR

CTSO-DPILE3-20160524 L838049-05 Solid

Collected by: Eric Sandusky
Collected date/time: 05/24/16 07:30
Received date/time: 05/27/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG876258	20	05/30/16 20:01	06/01/16 18:03	SNR
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG876258	5	05/30/16 20:01	05/31/16 09:57	SNR

CTSO-C404-20160525 L838049-06 Solid

Collected by: Eric Sandusky
Collected date/time: 05/25/16 10:43
Received date/time: 05/27/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG876258	10	05/30/16 20:01	05/31/16 11:07	SNR
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG876258	50	05/30/16 20:01	06/01/16 18:53	SNR

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. All MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Shane Gambill
Technical Service Representative

Project Narrative

Report revised to report in MDL/RDL

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result ug/kg	Qualifier	MDL ug/kg	RDL ug/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		6.42	33.0	1	05/31/2016 07:13	WG876258
Acenaphthylene	U		6.71	33.0	1	05/31/2016 07:13	WG876258
Anthracene	U		6.32	33.0	1	05/31/2016 07:13	WG876258
Benzidine	U		63.7	333	1	05/31/2016 07:13	WG876258
Benzo(a)anthracene	U		4.28	33.0	1	05/31/2016 07:13	WG876258
Benzo(b)fluoranthene	U		6.95	33.0	1	05/31/2016 07:13	WG876258
Benzo(k)fluoranthene	U		5.82	33.0	1	05/31/2016 07:13	WG876258
Benzo(g,h,i)perylene	U		7.21	33.0	1	05/31/2016 07:13	WG876258
Benzo(a)pyrene	U		5.48	33.0	1	05/31/2016 07:13	WG876258
Bis(2-chlorethoxy)methane	U		7.70	333	1	05/31/2016 07:13	WG876258
Bis(2-chloroethyl)ether	U		8.96	333	1	05/31/2016 07:13	WG876258
Bis(2-chloroisopropyl)ether	U		7.60	333	1	05/31/2016 07:13	WG876258
4-Bromophenyl-phenylether	U		11.4	333	1	05/31/2016 07:13	WG876258
2-Chloronaphthalene	U		6.39	33.0	1	05/31/2016 07:13	WG876258
4-Chlorophenyl-phenylether	U		6.27	333	1	05/31/2016 07:13	WG876258
Chrysene	U		5.55	33.0	1	05/31/2016 07:13	WG876258
Dibenz(a,h)anthracene	U		8.21	33.0	1	05/31/2016 07:13	WG876258
3,3-Dichlorobenzidine	U		79.4	333	1	05/31/2016 07:13	WG876258
2,4-Dinitrotoluene	U		6.07	333	1	05/31/2016 07:13	WG876258
2,6-Dinitrotoluene	U		7.37	333	1	05/31/2016 07:13	WG876258
Fluoranthene	U		4.96	33.0	1	05/31/2016 07:13	WG876258
Fluorene	U		6.82	33.0	1	05/31/2016 07:13	WG876258
Hexachlorobenzene	U		8.56	333	1	05/31/2016 07:13	WG876258
Hexachloro-1,3-butadiene	U		10.0	333	1	05/31/2016 07:13	WG876258
Hexachlorocyclopentadiene	U		58.7	333	1	05/31/2016 07:13	WG876258
Hexachloroethane	U		13.4	333	1	05/31/2016 07:13	WG876258
Indeno(1,2,3-cd)pyrene	U		7.72	33.0	1	05/31/2016 07:13	WG876258
Isophorone	U		5.22	333	1	05/31/2016 07:13	WG876258
Naphthalene	U		8.89	33.0	1	05/31/2016 07:13	WG876258
Nitrobenzene	U		6.95	333	1	05/31/2016 07:13	WG876258
n-Nitrosodimethylamine	U		64.7	333	1	05/31/2016 07:13	WG876258
n-Nitrosodiphenylamine	U		5.94	333	1	05/31/2016 07:13	WG876258
n-Nitrosodi-n-propylamine	U		9.06	333	1	05/31/2016 07:13	WG876258
Phenanthrene	U		5.28	33.0	1	05/31/2016 07:13	WG876258
Benzylbutyl phthalate	U		10.3	333	1	05/31/2016 07:13	WG876258
Bis(2-ethylhexyl)phthalate	22.1	J	12.0	333	1	05/31/2016 07:13	WG876258
Di-n-butyl phthalate	U		10.9	333	1	05/31/2016 07:13	WG876258
Diethyl phthalate	U		6.91	333	1	05/31/2016 07:13	WG876258
Dimethyl phthalate	U		5.40	333	1	05/31/2016 07:13	WG876258
Di-n-octyl phthalate	U		9.07	333	1	05/31/2016 07:13	WG876258
Pyrene	U		12.3	33.0	1	05/31/2016 07:13	WG876258
1,2,4-Trichlorobenzene	U		8.76	333	1	05/31/2016 07:13	WG876258
4-Chloro-3-methylphenol	U		4.77	333	1	05/31/2016 07:13	WG876258
2-Chlorophenol	U		8.31	333	1	05/31/2016 07:13	WG876258
2,4-Dichlorophenol	U		7.46	333	1	05/31/2016 07:13	WG876258
2,4-Dimethylphenol	U		47.1	333	1	05/31/2016 07:13	WG876258
4,6-Dinitro-2-methylphenol	U		124	333	1	05/31/2016 07:13	WG876258
2,4-Dinitrophenol	U		98.0	333	1	05/31/2016 07:13	WG876258
2-Nitrophenol	U		13.0	333	1	05/31/2016 07:13	WG876258
4-Nitrophenol	U		52.5	333	1	05/31/2016 07:13	WG876258
Pentachlorophenol	176	J	48.0	333	1	05/31/2016 07:13	WG876258
Phenol	U		6.95	333	1	05/31/2016 07:13	WG876258
2,4,6-Trichlorophenol	U		7.79	333	1	05/31/2016 07:13	WG876258
(S) 2-Fluorophenol	*58.6*			*21.1-116*		*05/31/2016 07:13*	WG876258
(S) Phenol-d5	*54.0*			*26.3-121*		*05/31/2016 07:13*	WG876258
(S) Nitrobenzene-d5	*67.3*			*21.9-129*		*05/31/2016 07:13*	WG876258

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/kg		ug/kg	ug/kg		date / time	
(S) 2-Fluorobiphenyl	*64.1*			*34.9-129*		*05/31/2016 07:13*	WG876258
(S) 2,4,6-Tribromophenol	*61.9*			*21.6-142*		*05/31/2016 07:13*	WG876258
(S) p-Terphenyl-d14	*61.7*			*21.5-128*		*05/31/2016 07:13*	WG876258

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result ug/kg	Qualifier	MDL ug/kg	RDL ug/kg	Dilution	Analysis date / time	Batch
Acenaphthene	701		32.1	165	5	05/31/2016 09:34	WG876258
Acenaphthylene	176		33.6	165	5	05/31/2016 09:34	WG876258
Anthracene	U		31.6	165	5	05/31/2016 09:34	WG876258
Benzidine	U		318	1670	5	05/31/2016 09:34	WG876258
Benzo(a)anthracene	39.4	J	21.4	165	5	05/31/2016 09:34	WG876258
Benzo(b)fluoranthene	37.1	J	34.8	165	5	05/31/2016 09:34	WG876258
Benzo(k)fluoranthene	U		29.1	165	5	05/31/2016 09:34	WG876258
Benzo(g,h,i)perylene	U		36.0	165	5	05/31/2016 09:34	WG876258
Benzo(a)pyrene	U		27.4	165	5	05/31/2016 09:34	WG876258
Bis(2-chlorethoxy)methane	U		38.5	1670	5	05/31/2016 09:34	WG876258
Bis(2-chloroethyl)ether	U		44.8	1670	5	05/31/2016 09:34	WG876258
Bis(2-chloroisopropyl)ether	U		38.0	1670	5	05/31/2016 09:34	WG876258
4-Bromophenyl-phenylether	U		57.0	1670	5	05/31/2016 09:34	WG876258
2-Chloronaphthalene	U		32.0	165	5	05/31/2016 09:34	WG876258
4-Chlorophenyl-phenylether	U		31.4	1670	5	05/31/2016 09:34	WG876258
Chrysene	87.3	J	27.8	165	5	05/31/2016 09:34	WG876258
Dibenz(a,h)anthracene	U		41.0	165	5	05/31/2016 09:34	WG876258
3,3-Dichlorobenzidine	U		397	1670	5	05/31/2016 09:34	WG876258
2,4-Dinitrotoluene	U		30.4	1670	5	05/31/2016 09:34	WG876258
2,6-Dinitrotoluene	U		36.8	1670	5	05/31/2016 09:34	WG876258
Fluoranthene	278		24.8	165	5	05/31/2016 09:34	WG876258
Fluorene	589		34.1	165	5	05/31/2016 09:34	WG876258
Hexachlorobenzene	U		42.8	1670	5	05/31/2016 09:34	WG876258
Hexachloro-1,3-butadiene	U		50.0	1670	5	05/31/2016 09:34	WG876258
Hexachlorocyclopentadiene	U		294	1670	5	05/31/2016 09:34	WG876258
Hexachloroethane	U		67.0	1670	5	05/31/2016 09:34	WG876258
Indeno(1,2,3-cd)pyrene	U		38.6	165	5	05/31/2016 09:34	WG876258
Isophorone	U		26.1	1670	5	05/31/2016 09:34	WG876258
Naphthalene	56.9	J	44.4	165	5	05/31/2016 09:34	WG876258
Nitrobenzene	U		34.8	1670	5	05/31/2016 09:34	WG876258
n-Nitrosodimethylamine	U		324	1670	5	05/31/2016 09:34	WG876258
n-Nitrosodiphenylamine	U		29.7	1670	5	05/31/2016 09:34	WG876258
n-Nitrosodi-n-propylamine	U		45.3	1670	5	05/31/2016 09:34	WG876258
Phenanthrene	4550		26.4	165	5	05/31/2016 09:34	WG876258
Benzylbutyl phthalate	U		51.5	1670	5	05/31/2016 09:34	WG876258
Bis(2-ethylhexyl)phthalate	U		60.0	1670	5	05/31/2016 09:34	WG876258
Di-n-butyl phthalate	U		54.5	1670	5	05/31/2016 09:34	WG876258
Diethyl phthalate	U		34.6	1670	5	05/31/2016 09:34	WG876258
Dimethyl phthalate	U		27.0	1670	5	05/31/2016 09:34	WG876258
Di-n-octyl phthalate	U		45.4	1670	5	05/31/2016 09:34	WG876258
Pyrene	829		61.5	165	5	05/31/2016 09:34	WG876258
1,2,4-Trichlorobenzene	U		43.8	1670	5	05/31/2016 09:34	WG876258
4-Chloro-3-methylphenol	U		23.8	1670	5	05/31/2016 09:34	WG876258
2-Chlorophenol	U		41.6	1670	5	05/31/2016 09:34	WG876258
2,4-Dichlorophenol	U		37.3	1670	5	05/31/2016 09:34	WG876258
2,4-Dimethylphenol	U		236	1670	5	05/31/2016 09:34	WG876258
4,6-Dinitro-2-methylphenol	U		620	1670	5	05/31/2016 09:34	WG876258
2,4-Dinitrophenol	U		490	1670	5	05/31/2016 09:34	WG876258
2-Nitrophenol	U		65.0	1670	5	05/31/2016 09:34	WG876258
4-Nitrophenol	U		262	1670	5	05/31/2016 09:34	WG876258
Pentachlorophenol	83400		4800	33300	100	06/01/2016 17:38	WG876258
Phenol	U		34.8	1670	5	05/31/2016 09:34	WG876258
2,4,6-Trichlorophenol	U		39.0	1670	5	05/31/2016 09:34	WG876258
(S) 2-Fluorophenol	*60.5*			*21.1-116*		*05/31/2016 09:34*	WG876258
(S) 2-Fluorophenol	*58.7*	J7		*21.1-116*		*06/01/2016 17:38*	WG876258
(S) Phenol-d5	*66.5*	J7		*26.3-121*		*06/01/2016 17:38*	WG876258

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result ug/kg	Qualifier	MDL ug/kg	RDL ug/kg	Dilution	Analysis date / time	Batch
(S) Phenol-d5	*62.8*			*26.3-121*		*05/31/2016 09:34*	WG876258
(S) Nitrobenzene-d5	*79.9*			*21.9-129*		*05/31/2016 09:34*	WG876258
(S) Nitrobenzene-d5	*73.1*	J7		*21.9-129*		*06/01/2016 17:38*	WG876258
(S) 2-Fluorobiphenyl	*77.8*	J7		*34.9-129*		*06/01/2016 17:38*	WG876258
(S) 2-Fluorobiphenyl	*60.6*			*34.9-129*		*05/31/2016 09:34*	WG876258
(S) 2,4,6-Tribromophenol	*70.5*			*21.6-142*		*05/31/2016 09:34*	WG876258
(S) 2,4,6-Tribromophenol	*51.5*	J7		*21.6-142*		*06/01/2016 17:38*	WG876258
(S) p-Terphenyl-d14	*63.1*	J7		*21.5-128*		*06/01/2016 17:38*	WG876258
(S) p-Terphenyl-d14	*72.5*			*21.5-128*		*05/31/2016 09:34*	WG876258

Sample Narrative:

8270C L838049-02 WG876258: Dilution due to matrix

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result ug/kg	Qualifier	MDL ug/kg	RDL ug/kg	Dilution	Analysis date / time	Batch
Acenaphthene	93.3	J	64.2	330	10	05/31/2016 10:44	WG876258
Acenaphthylene	U		67.1	330	10	05/31/2016 10:44	WG876258
Anthracene	U		63.2	330	10	05/31/2016 10:44	WG876258
Benzidine	U		637	3330	10	05/31/2016 10:44	WG876258
Benzo(a)anthracene	U		42.8	330	10	05/31/2016 10:44	WG876258
Benzo(b)fluoranthene	U		69.5	330	10	05/31/2016 10:44	WG876258
Benzo(k)fluoranthene	U		58.2	330	10	05/31/2016 10:44	WG876258
Benzo(g,h,i)perylene	U		72.1	330	10	05/31/2016 10:44	WG876258
Benzo(a)pyrene	U		54.8	330	10	05/31/2016 10:44	WG876258
Bis(2-chlorethoxy)methane	U		77.0	3330	10	05/31/2016 10:44	WG876258
Bis(2-chloroethyl)ether	U		89.6	3330	10	05/31/2016 10:44	WG876258
Bis(2-chloroisopropyl)ether	U		76.0	3330	10	05/31/2016 10:44	WG876258
4-Bromophenyl-phenylether	U		114	3330	10	05/31/2016 10:44	WG876258
2-Chloronaphthalene	U		63.9	330	10	05/31/2016 10:44	WG876258
4-Chlorophenyl-phenylether	U		62.7	3330	10	05/31/2016 10:44	WG876258
Chrysene	U		55.5	330	10	05/31/2016 10:44	WG876258
Dibenz(a,h)anthracene	U		82.1	330	10	05/31/2016 10:44	WG876258
3,3-Dichlorobenzidine	U		794	3330	10	05/31/2016 10:44	WG876258
2,4-Dinitrotoluene	U		60.7	3330	10	05/31/2016 10:44	WG876258
2,6-Dinitrotoluene	U		73.7	3330	10	05/31/2016 10:44	WG876258
Fluoranthene	U		49.6	330	10	05/31/2016 10:44	WG876258
Fluorene	U		68.2	330	10	05/31/2016 10:44	WG876258
Hexachlorobenzene	U		85.6	3330	10	05/31/2016 10:44	WG876258
Hexachloro-1,3-butadiene	U		100	3330	10	05/31/2016 10:44	WG876258
Hexachlorocyclopentadiene	U		587	3330	10	05/31/2016 10:44	WG876258
Hexachloroethane	U		134	3330	10	05/31/2016 10:44	WG876258
Indeno(1,2,3-cd)pyrene	U		77.2	330	10	05/31/2016 10:44	WG876258
Isophorone	U		52.2	3330	10	05/31/2016 10:44	WG876258
Naphthalene	U		88.9	330	10	05/31/2016 10:44	WG876258
Nitrobenzene	U		69.5	3330	10	05/31/2016 10:44	WG876258
n-Nitrosodimethylamine	U		647	3330	10	05/31/2016 10:44	WG876258
n-Nitrosodiphenylamine	U		59.4	3330	10	05/31/2016 10:44	WG876258
n-Nitrosodi-n-propylamine	U		90.6	3330	10	05/31/2016 10:44	WG876258
Phenanthrene	187	J	52.8	330	10	05/31/2016 10:44	WG876258
Benzylbutyl phthalate	U		103	3330	10	05/31/2016 10:44	WG876258
Bis(2-ethylhexyl)phthalate	U		120	3330	10	05/31/2016 10:44	WG876258
Di-n-butyl phthalate	U		109	3330	10	05/31/2016 10:44	WG876258
Diethyl phthalate	U		69.1	3330	10	05/31/2016 10:44	WG876258
Dimethyl phthalate	U		54.0	3330	10	05/31/2016 10:44	WG876258
Di-n-octyl phthalate	U		90.7	3330	10	05/31/2016 10:44	WG876258
Pyrene	226	J	123	330	10	05/31/2016 10:44	WG876258
1,2,4-Trichlorobenzene	U		87.6	3330	10	05/31/2016 10:44	WG876258
4-Chloro-3-methylphenol	U		47.7	3330	10	05/31/2016 10:44	WG876258
2-Chlorophenol	U		83.1	3330	10	05/31/2016 10:44	WG876258
2,4-Dichlorophenol	U		74.6	3330	10	05/31/2016 10:44	WG876258
2,4-Dimethylphenol	U		471	3330	10	05/31/2016 10:44	WG876258
4,6-Dinitro-2-methylphenol	U		1240	3330	10	05/31/2016 10:44	WG876258
2,4-Dinitrophenol	U		980	3330	10	05/31/2016 10:44	WG876258
2-Nitrophenol	U		130	3330	10	05/31/2016 10:44	WG876258
4-Nitrophenol	U		525	3330	10	05/31/2016 10:44	WG876258
Pentachlorophenol	46900		2400	16700	50	06/01/2016 18:28	WG876258
Phenol	U		69.5	3330	10	05/31/2016 10:44	WG876258
2,4,6-Trichlorophenol	U		77.9	3330	10	05/31/2016 10:44	WG876258
(S) 2-Fluorophenol	*63.4*			*21.1-116*		*05/31/2016 10:44*	WG876258
(S) 2-Fluorophenol	*62.4*	J7		*21.1-116*		*06/01/2016 18:28*	WG876258
(S) Phenol-d5	*66.2*	J7		*26.3-121*		*06/01/2016 18:28*	WG876258

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result ug/kg	Qualifier	MDL ug/kg	RDL ug/kg	Dilution	Analysis date / time	Batch
(S) Phenol-d5	*65.9*			*26.3-121*		*05/31/2016 10:44*	WG876258
(S) Nitrobenzene-d5	*65.0*			*21.9-129*		*05/31/2016 10:44*	WG876258
(S) Nitrobenzene-d5	*67.4*	J7		*21.9-129*		*06/01/2016 18:28*	WG876258
(S) 2-Fluorobiphenyl	*75.8*	J7		*34.9-129*		*06/01/2016 18:28*	WG876258
(S) 2-Fluorobiphenyl	*65.9*			*34.9-129*		*05/31/2016 10:44*	WG876258
(S) 2,4,6-Tribromophenol	*65.0*			*21.6-142*		*05/31/2016 10:44*	WG876258
(S) 2,4,6-Tribromophenol	*55.8*	J7		*21.6-142*		*06/01/2016 18:28*	WG876258
(S) p-Terphenyl-d14	*72.4*	J7		*21.5-128*		*06/01/2016 18:28*	WG876258
(S) p-Terphenyl-d14	*67.7*			*21.5-128*		*05/31/2016 10:44*	WG876258

Sample Narrative:

8270C L838049-03 WG876258: Dilution due to matrix

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result ug/kg	Qualifier	MDL ug/kg	RDL ug/kg	Dilution	Analysis date / time	Batch
Acenaphthene	7.80	J	6.42	33.0	1	05/31/2016 08:23	WG876258
Acenaphthylene	U		6.71	33.0	1	05/31/2016 08:23	WG876258
Anthracene	U		6.32	33.0	1	05/31/2016 08:23	WG876258
Benzidine	U		63.7	333	1	05/31/2016 08:23	WG876258
Benzo(a)anthracene	U		4.28	33.0	1	05/31/2016 08:23	WG876258
Benzo(b)fluoranthene	U		6.95	33.0	1	05/31/2016 08:23	WG876258
Benzo(k)fluoranthene	U		5.82	33.0	1	05/31/2016 08:23	WG876258
Benzo(g,h,i)perylene	U		7.21	33.0	1	05/31/2016 08:23	WG876258
Benzo(a)pyrene	U		5.48	33.0	1	05/31/2016 08:23	WG876258
Bis(2-chlorethoxy)methane	U		7.70	333	1	05/31/2016 08:23	WG876258
Bis(2-chloroethyl)ether	U		8.96	333	1	05/31/2016 08:23	WG876258
Bis(2-chloroisopropyl)ether	U		7.60	333	1	05/31/2016 08:23	WG876258
4-Bromophenyl-phenylether	U		11.4	333	1	05/31/2016 08:23	WG876258
2-Chloronaphthalene	U		6.39	33.0	1	05/31/2016 08:23	WG876258
4-Chlorophenyl-phenylether	U		6.27	333	1	05/31/2016 08:23	WG876258
Chrysene	U		5.55	33.0	1	05/31/2016 08:23	WG876258
Dibenz(a,h)anthracene	U		8.21	33.0	1	05/31/2016 08:23	WG876258
3,3-Dichlorobenzidine	U		79.4	333	1	05/31/2016 08:23	WG876258
2,4-Dinitrotoluene	U		6.07	333	1	05/31/2016 08:23	WG876258
2,6-Dinitrotoluene	U		7.37	333	1	05/31/2016 08:23	WG876258
Fluoranthene	U		4.96	33.0	1	05/31/2016 08:23	WG876258
Fluorene	9.63	J	6.82	33.0	1	05/31/2016 08:23	WG876258
Hexachlorobenzene	U		8.56	333	1	05/31/2016 08:23	WG876258
Hexachloro-1,3-butadiene	U		10.0	333	1	05/31/2016 08:23	WG876258
Hexachlorocyclopentadiene	U		58.7	333	1	05/31/2016 08:23	WG876258
Hexachloroethane	U		13.4	333	1	05/31/2016 08:23	WG876258
Indeno(1,2,3-cd)pyrene	U		7.72	33.0	1	05/31/2016 08:23	WG876258
Isophorone	U		5.22	333	1	05/31/2016 08:23	WG876258
Naphthalene	U		8.89	33.0	1	05/31/2016 08:23	WG876258
Nitrobenzene	U		6.95	333	1	05/31/2016 08:23	WG876258
n-Nitrosodimethylamine	U		64.7	333	1	05/31/2016 08:23	WG876258
n-Nitrosodiphenylamine	U		5.94	333	1	05/31/2016 08:23	WG876258
n-Nitrosodi-n-propylamine	U		9.06	333	1	05/31/2016 08:23	WG876258
Phenanthrene	29.8	J	5.28	33.0	1	05/31/2016 08:23	WG876258
Benzylbutyl phthalate	U		10.3	333	1	05/31/2016 08:23	WG876258
Bis(2-ethylhexyl)phthalate	U		12.0	333	1	05/31/2016 08:23	WG876258
Di-n-butyl phthalate	U		10.9	333	1	05/31/2016 08:23	WG876258
Diethyl phthalate	U		6.91	333	1	05/31/2016 08:23	WG876258
Dimethyl phthalate	U		5.40	333	1	05/31/2016 08:23	WG876258
Di-n-octyl phthalate	U		9.07	333	1	05/31/2016 08:23	WG876258
Pyrene	19.6	J	12.3	33.0	1	05/31/2016 08:23	WG876258
1,2,4-Trichlorobenzene	U		8.76	333	1	05/31/2016 08:23	WG876258
4-Chloro-3-methylphenol	U		4.77	333	1	05/31/2016 08:23	WG876258
2-Chlorophenol	U		8.31	333	1	05/31/2016 08:23	WG876258
2,4-Dichlorophenol	U		7.46	333	1	05/31/2016 08:23	WG876258
2,4-Dimethylphenol	U		47.1	333	1	05/31/2016 08:23	WG876258
4,6-Dinitro-2-methylphenol	U		124	333	1	05/31/2016 08:23	WG876258
2,4-Dinitrophenol	U		98.0	333	1	05/31/2016 08:23	WG876258
2-Nitrophenol	U		13.0	333	1	05/31/2016 08:23	WG876258
4-Nitrophenol	U		52.5	333	1	05/31/2016 08:23	WG876258
Pentachlorophenol	2850		240	1670	5	06/01/2016 17:13	WG876258
Phenol	U		6.95	333	1	05/31/2016 08:23	WG876258
2,4,6-Trichlorophenol	U		7.79	333	1	05/31/2016 08:23	WG876258
(S) 2-Fluorophenol	*58.8*			*21.1-116*		*05/31/2016 08:23*	WG876258
(S) 2-Fluorophenol	*53.0*			*21.1-116*		*06/01/2016 17:13*	WG876258
(S) Phenol-d5	*53.7*			*26.3-121*		*06/01/2016 17:13*	WG876258

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/kg		ug/kg	ug/kg		date / time	
(S) Phenol-d5	*60.4*			*26.3-121*		*05/31/2016 08:23*	WG876258
(S) Nitrobenzene-d5	*63.4*			*21.9-129*		*05/31/2016 08:23*	WG876258
(S) Nitrobenzene-d5	*58.1*			*21.9-129*		*06/01/2016 17:13*	WG876258
(S) 2-Fluorobiphenyl	*61.8*			*34.9-129*		*06/01/2016 17:13*	WG876258
(S) 2-Fluorobiphenyl	*61.4*			*34.9-129*		*05/31/2016 08:23*	WG876258
(S) 2,4,6-Tribromophenol	*57.6*			*21.6-142*		*05/31/2016 08:23*	WG876258
(S) 2,4,6-Tribromophenol	*61.9*			*21.6-142*		*06/01/2016 17:13*	WG876258
(S) p-Terphenyl-d14	*54.6*			*21.5-128*		*06/01/2016 17:13*	WG876258
(S) p-Terphenyl-d14	*60.4*			*21.5-128*		*05/31/2016 08:23*	WG876258

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result ug/kg	Qualifier	MDL ug/kg	RDL ug/kg	Dilution	Analysis date / time	Batch
Acenaphthene	147	J	32.1	165	5	05/31/2016 09:57	WG876258
Acenaphthylene	43.5	J	33.6	165	5	05/31/2016 09:57	WG876258
Anthracene	U		31.6	165	5	05/31/2016 09:57	WG876258
Benzidine	U		318	1670	5	05/31/2016 09:57	WG876258
Benzo(a)anthracene	U		21.4	165	5	05/31/2016 09:57	WG876258
Benzo(b)fluoranthene	U		34.8	165	5	05/31/2016 09:57	WG876258
Benzo(k)fluoranthene	U		29.1	165	5	05/31/2016 09:57	WG876258
Benzo(g,h,i)perylene	U		36.0	165	5	05/31/2016 09:57	WG876258
Benzo(a)pyrene	U		27.4	165	5	05/31/2016 09:57	WG876258
Bis(2-chlorethoxy)methane	U		38.5	1670	5	05/31/2016 09:57	WG876258
Bis(2-chloroethyl)ether	U		44.8	1670	5	05/31/2016 09:57	WG876258
Bis(2-chloroisopropyl)ether	U		38.0	1670	5	05/31/2016 09:57	WG876258
4-Bromophenyl-phenylether	U		57.0	1670	5	05/31/2016 09:57	WG876258
2-Chloronaphthalene	U		32.0	165	5	05/31/2016 09:57	WG876258
4-Chlorophenyl-phenylether	U		31.4	1670	5	05/31/2016 09:57	WG876258
Chrysene	U		27.8	165	5	05/31/2016 09:57	WG876258
Dibenz(a,h)anthracene	U		41.0	165	5	05/31/2016 09:57	WG876258
3,3-Dichlorobenzidine	U		397	1670	5	05/31/2016 09:57	WG876258
2,4-Dinitrotoluene	U		30.4	1670	5	05/31/2016 09:57	WG876258
2,6-Dinitrotoluene	U		36.8	1670	5	05/31/2016 09:57	WG876258
Fluoranthene	74.5	J	24.8	165	5	05/31/2016 09:57	WG876258
Fluorene	108	J	34.1	165	5	05/31/2016 09:57	WG876258
Hexachlorobenzene	U		42.8	1670	5	05/31/2016 09:57	WG876258
Hexachloro-1,3-butadiene	U		50.0	1670	5	05/31/2016 09:57	WG876258
Hexachlorocyclopentadiene	U		294	1670	5	05/31/2016 09:57	WG876258
Hexachloroethane	U		67.0	1670	5	05/31/2016 09:57	WG876258
Indeno(1,2,3-cd)pyrene	U		38.6	165	5	05/31/2016 09:57	WG876258
Isophorone	U		26.1	1670	5	05/31/2016 09:57	WG876258
Naphthalene	U		44.4	165	5	05/31/2016 09:57	WG876258
Nitrobenzene	U		34.8	1670	5	05/31/2016 09:57	WG876258
n-Nitrosodimethylamine	U		324	1670	5	05/31/2016 09:57	WG876258
n-Nitrosodiphenylamine	U		29.7	1670	5	05/31/2016 09:57	WG876258
n-Nitrosodi-n-propylamine	U		45.3	1670	5	05/31/2016 09:57	WG876258
Phenanthrene	478		26.4	165	5	05/31/2016 09:57	WG876258
Benzylbutyl phthalate	U		51.5	1670	5	05/31/2016 09:57	WG876258
Bis(2-ethylhexyl)phthalate	U		60.0	1670	5	05/31/2016 09:57	WG876258
Di-n-butyl phthalate	U		54.5	1670	5	05/31/2016 09:57	WG876258
Diethyl phthalate	U		34.6	1670	5	05/31/2016 09:57	WG876258
Dimethyl phthalate	U		27.0	1670	5	05/31/2016 09:57	WG876258
Di-n-octyl phthalate	U		45.4	1670	5	05/31/2016 09:57	WG876258
Pyrene	266		61.5	165	5	05/31/2016 09:57	WG876258
1,2,4-Trichlorobenzene	U		43.8	1670	5	05/31/2016 09:57	WG876258
4-Chloro-3-methylphenol	U		23.8	1670	5	05/31/2016 09:57	WG876258
2-Chlorophenol	U		41.6	1670	5	05/31/2016 09:57	WG876258
2,4-Dichlorophenol	U		37.3	1670	5	05/31/2016 09:57	WG876258
2,4-Dimethylphenol	U		236	1670	5	05/31/2016 09:57	WG876258
4,6-Dinitro-2-methylphenol	U		620	1670	5	05/31/2016 09:57	WG876258
2,4-Dinitrophenol	U		490	1670	5	05/31/2016 09:57	WG876258
2-Nitrophenol	U		65.0	1670	5	05/31/2016 09:57	WG876258
4-Nitrophenol	U		262	1670	5	05/31/2016 09:57	WG876258
Pentachlorophenol	22500		960	6660	20	06/01/2016 18:03	WG876258
Phenol	U		34.8	1670	5	05/31/2016 09:57	WG876258
2,4,6-Trichlorophenol	U		39.0	1670	5	05/31/2016 09:57	WG876258
(S) 2-Fluorophenol	*55.6*			*21.1-116*		*05/31/2016 09:57*	WG876258
(S) 2-Fluorophenol	*48.7*	J7		*21.1-116*		*06/01/2016 18:03*	WG876258
(S) Phenol-d5	*44.8*	J7		*26.3-121*		*06/01/2016 18:03*	WG876258

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result ug/kg	Qualifier	MDL ug/kg	RDL ug/kg	Dilution	Analysis date / time	Batch
(S) Phenol-d5	*55.1*			*26.3-121*		*05/31/2016 09:57*	WG876258
(S) Nitrobenzene-d5	*63.1*			*21.9-129*		*05/31/2016 09:57*	WG876258
(S) Nitrobenzene-d5	*50.9*	J7		*21.9-129*		*06/01/2016 18:03*	WG876258
(S) 2-Fluorobiphenyl	*57.5*	J7		*34.9-129*		*06/01/2016 18:03*	WG876258
(S) 2-Fluorobiphenyl	*61.7*			*34.9-129*		*05/31/2016 09:57*	WG876258
(S) 2,4,6-Tribromophenol	*61.0*			*21.6-142*		*05/31/2016 09:57*	WG876258
(S) 2,4,6-Tribromophenol	*50.3*	J7		*21.6-142*		*06/01/2016 18:03*	WG876258
(S) p-Terphenyl-d14	*52.3*	J7		*21.5-128*		*06/01/2016 18:03*	WG876258
(S) p-Terphenyl-d14	*61.1*			*21.5-128*		*05/31/2016 09:57*	WG876258

Sample Narrative:

8270C L838049-05 WG876258: Dilution due to matrix

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result ug/kg	Qualifier	MDL ug/kg	RDL ug/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		64.2	330	10	05/31/2016 11:07	WG876258
Acenaphthylene	U		67.1	330	10	05/31/2016 11:07	WG876258
Anthracene	U		63.2	330	10	05/31/2016 11:07	WG876258
Benzidine	U		637	3330	10	05/31/2016 11:07	WG876258
Benzo(a)anthracene	U		42.8	330	10	05/31/2016 11:07	WG876258
Benzo(b)fluoranthene	U		69.5	330	10	05/31/2016 11:07	WG876258
Benzo(k)fluoranthene	U		58.2	330	10	05/31/2016 11:07	WG876258
Benzo(g,h,i)perylene	U		72.1	330	10	05/31/2016 11:07	WG876258
Benzo(a)pyrene	U		54.8	330	10	05/31/2016 11:07	WG876258
Bis(2-chlorethoxy)methane	U		77.0	3330	10	05/31/2016 11:07	WG876258
Bis(2-chloroethyl)ether	U		89.6	3330	10	05/31/2016 11:07	WG876258
Bis(2-chloroisopropyl)ether	U		76.0	3330	10	05/31/2016 11:07	WG876258
4-Bromophenyl-phenylether	U		114	3330	10	05/31/2016 11:07	WG876258
2-Chloronaphthalene	U		63.9	330	10	05/31/2016 11:07	WG876258
4-Chlorophenyl-phenylether	U		62.7	3330	10	05/31/2016 11:07	WG876258
Chrysene	85.0	J	55.5	330	10	05/31/2016 11:07	WG876258
Dibenz(a,h)anthracene	U		82.1	330	10	05/31/2016 11:07	WG876258
3,3-Dichlorobenzidine	U		794	3330	10	05/31/2016 11:07	WG876258
2,4-Dinitrotoluene	U		60.7	3330	10	05/31/2016 11:07	WG876258
2,6-Dinitrotoluene	U		73.7	3330	10	05/31/2016 11:07	WG876258
Fluoranthene	65.6	J	49.6	330	10	05/31/2016 11:07	WG876258
Fluorene	U		68.2	330	10	05/31/2016 11:07	WG876258
Hexachlorobenzene	U		85.6	3330	10	05/31/2016 11:07	WG876258
Hexachloro-1,3-butadiene	U		100	3330	10	05/31/2016 11:07	WG876258
Hexachlorocyclopentadiene	U		587	3330	10	05/31/2016 11:07	WG876258
Hexachloroethane	U		134	3330	10	05/31/2016 11:07	WG876258
Indeno(1,2,3-cd)pyrene	U		77.2	330	10	05/31/2016 11:07	WG876258
Isophorone	U		52.2	3330	10	05/31/2016 11:07	WG876258
Naphthalene	U		88.9	330	10	05/31/2016 11:07	WG876258
Nitrobenzene	U		69.5	3330	10	05/31/2016 11:07	WG876258
n-Nitrosodimethylamine	U		647	3330	10	05/31/2016 11:07	WG876258
n-Nitrosodiphenylamine	U		59.4	3330	10	05/31/2016 11:07	WG876258
n-Nitrosodi-n-propylamine	U		90.6	3330	10	05/31/2016 11:07	WG876258
Phenanthrene	129	J	52.8	330	10	05/31/2016 11:07	WG876258
Benzylbutyl phthalate	U		103	3330	10	05/31/2016 11:07	WG876258
Bis(2-ethylhexyl)phthalate	U		120	3330	10	05/31/2016 11:07	WG876258
Di-n-butyl phthalate	U		109	3330	10	05/31/2016 11:07	WG876258
Diethyl phthalate	U		69.1	3330	10	05/31/2016 11:07	WG876258
Dimethyl phthalate	U		54.0	3330	10	05/31/2016 11:07	WG876258
Di-n-octyl phthalate	U		90.7	3330	10	05/31/2016 11:07	WG876258
Pyrene	363		123	330	10	05/31/2016 11:07	WG876258
1,2,4-Trichlorobenzene	U		87.6	3330	10	05/31/2016 11:07	WG876258
4-Chloro-3-methylphenol	U		47.7	3330	10	05/31/2016 11:07	WG876258
2-Chlorophenol	U		83.1	3330	10	05/31/2016 11:07	WG876258
2,4-Dichlorophenol	U		74.6	3330	10	05/31/2016 11:07	WG876258
2,4-Dimethylphenol	U		471	3330	10	05/31/2016 11:07	WG876258
4,6-Dinitro-2-methylphenol	U		1240	3330	10	05/31/2016 11:07	WG876258
2,4-Dinitrophenol	U		980	3330	10	05/31/2016 11:07	WG876258
2-Nitrophenol	U		130	3330	10	05/31/2016 11:07	WG876258
4-Nitrophenol	U		525	3330	10	05/31/2016 11:07	WG876258
Pentachlorophenol	66200		2400	16700	50	06/01/2016 18:53	WG876258
Phenol	U		69.5	3330	10	05/31/2016 11:07	WG876258
2,4,6-Trichlorophenol	U		77.9	3330	10	05/31/2016 11:07	WG876258
(S) 2-Fluorophenol	*63.8*			*21.1-116*		*05/31/2016 11:07*	WG876258
(S) 2-Fluorophenol	*68.2*	J7		*21.1-116*		*06/01/2016 18:53*	WG876258
(S) Phenol-d5	*65.3*	J7		*26.3-121*		*06/01/2016 18:53*	WG876258

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result ug/kg	Qualifier	MDL ug/kg	RDL ug/kg	Dilution	Analysis date / time	Batch
(S) Phenol-d5	*63.8*			*26.3-121*		*05/31/2016 11:07*	WG876258
(S) Nitrobenzene-d5	*70.8*			*21.9-129*		*05/31/2016 11:07*	WG876258
(S) Nitrobenzene-d5	*64.2*	J7		*21.9-129*		*06/01/2016 18:53*	WG876258
(S) 2-Fluorobiphenyl	*76.5*	J7		*34.9-129*		*06/01/2016 18:53*	WG876258
(S) 2-Fluorobiphenyl	*69.8*			*34.9-129*		*05/31/2016 11:07*	WG876258
(S) 2,4,6-Tribromophenol	*63.0*			*21.6-142*		*05/31/2016 11:07*	WG876258
(S) 2,4,6-Tribromophenol	*65.7*	J7		*21.6-142*		*06/01/2016 18:53*	WG876258
(S) p-Terphenyl-d14	*72.7*	J7		*21.5-128*		*06/01/2016 18:53*	WG876258
(S) p-Terphenyl-d14	*64.1*			*21.5-128*		*05/31/2016 11:07*	WG876258

Sample Narrative:

8270C L838049-06 WG876258: Dilution due to matrix

Method Blank (MB)

(MB) R3140642-3 05/31/16 04:06

Analyte	MB Result ug/kg	MB Qualifier	MB MDL ug/kg	MB RDL ug/kg
Acenaphthene	U		6.42	33.0
Acenaphthylene	U		6.71	33.0
Anthracene	U		6.32	33.0
Benzidine	U		63.7	333
Benzo(a)anthracene	U		4.28	33.0
Benzo(b)fluoranthene	U		6.95	33.0
Benzo(k)fluoranthene	U		5.82	33.0
Benzo(g,h,i)perylene	U		7.21	33.0
Benzo(a)pyrene	U		5.48	33.0
Bis(2-chlorethoxy)methane	U		7.70	333
Bis(2-chloroethyl)ether	U		8.96	333
Bis(2-chloroisopropyl)ether	U		7.60	333
4-Bromophenyl-phenylether	U		11.4	333
2-Chloronaphthalene	U		6.39	33.0
4-Chlorophenyl-phenylether	U		6.27	333
Chrysene	U		5.55	33.0
Dibenz(a,h)anthracene	U		8.21	33.0
3,3-Dichlorobenzidine	U		79.4	333
2,4-Dinitrotoluene	U		6.07	333
2,6-Dinitrotoluene	U		7.37	333
Fluoranthene	U		4.96	33.0
Fluorene	U		6.82	33.0
Hexachlorobenzene	U		8.56	333
Hexachloro-1,3-butadiene	U		10.0	333
Hexachlorocyclopentadiene	U		58.7	333
Hexachloroethane	U		13.4	333
Indeno(1,2,3-cd)pyrene	U		7.72	33.0
Isophorone	U		5.22	333
Naphthalene	U		8.89	33.0
Nitrobenzene	U		6.95	333
n-Nitrosodimethylamine	U		64.7	333
n-Nitrosodiphenylamine	U		5.94	333
n-Nitrosodi-n-propylamine	U		9.06	333
Phenanthrene	U		5.28	33.0
Benzylbutyl phthalate	U		10.3	333
Bis(2-ethylhexyl)phthalate	U		12.0	333
Di-n-butyl phthalate	U		10.9	333
Diethyl phthalate	U		6.91	333
Dimethyl phthalate	U		5.40	333
Di-n-octyl phthalate	U		9.07	333

Method Blank (MB)

(MB) R3140642-3 05/31/16 04:06

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/kg		ug/kg	ug/kg
Pyrene	U		12.3	33.0
1,2,4-Trichlorobenzene	U		8.76	333
4-Chloro-3-methylphenol	U		4.77	333
2-Chlorophenol	U		8.31	333
2,4-Dichlorophenol	U		7.46	333
2,4-Dimethylphenol	U		47.1	333
4,6-Dinitro-2-methylphenol	U		124	333
2,4-Dinitrophenol	U		98.0	333
2-Nitrophenol	U		13.0	333
4-Nitrophenol	U		52.5	333
Pentachlorophenol	U		48.0	333
Phenol	U		6.95	333
2,4,6-Trichlorophenol	U		7.79	333
(S) Nitrobenzene-d5	*64.1*			*21.9-129*
(S) 2-Fluorobiphenyl	*66.5*			*34.9-129*
(S) p-Terphenyl-d14	*69.1*			*21.5-128*
(S) Phenol-d5	*58.4*			*26.3-121*
(S) 2-Fluorophenol	*62.1*			*21.1-116*
(S) 2,4,6-Tribromophenol	*58.2*			*21.6-142*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3140642-1 05/31/16 03:19 • (LCSD) R3140642-2 05/31/16 03:43

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/kg	ug/kg	ug/kg	%	%	%			%	%
Acenaphthene	667	471	504	70.7	75.6	48.9-107			6.72	20
Acenaphthylene	667	504	513	75.6	76.9	49.2-111			1.73	20
Anthracene	667	456	476	68.3	71.4	52.0-112			4.31	20
Benzidine	667	128	126	19.2	18.9	0.000-48.0			1.61	40
Benzo(a)anthracene	667	483	504	72.4	75.6	52.3-106			4.32	20
Benzo(b)fluoranthene	667	520	537	77.9	80.6	51.3-106			3.35	20
Benzo(k)fluoranthene	667	506	474	75.9	71.1	52.9-107			6.54	20
Benzo(g,h,i)perylene	667	460	490	68.9	73.4	45.8-108			6.35	20
Benzo(a)pyrene	667	498	510	74.7	76.5	51.9-106			2.32	20
Bis(2-chlorethoxy)methane	667	446	448	66.8	67.1	44.9-108			0.390	20
Bis(2-chloroethyl)ether	667	423	397	63.4	59.5	32.5-112			6.29	26
Bis(2-chloroisopropyl)ether	667	493	450	74.0	67.5	40.4-99.0			9.12	20.7
4-Bromophenyl-phenylether	667	433	454	64.9	68.1	51.4-110			4.82	20
2-Chloronaphthalene	667	449	454	67.3	68.1	47.1-105			1.27	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3140642-1 05/31/16 03:19 • (LCSD) R3140642-2 05/31/16 03:43

Analyte	Spike Amount ug/kg	LCS Result ug/kg	LCSD Result ug/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
4-Chlorophenyl-phenylether	667	454	497	68.1	74.5	48.1-108			8.96	20
Chrysene	667	470	513	70.5	76.9	54.4-110			8.61	20
Dibenz(a,h)anthracene	667	475	494	71.3	74.0	45.7-111			3.80	20
3,3-Dichlorobenzidine	667	473	505	70.9	75.8	21.0-101			6.71	22
2,4-Dinitrotoluene	667	523	518	78.4	77.7	53.0-112			0.920	20
2,6-Dinitrotoluene	667	487	482	73.1	72.3	51.6-110			1.02	20
Fluoranthene	667	469	504	70.3	75.5	53.7-110			7.16	20
Fluorene	667	468	472	70.2	70.7	51.1-109			0.800	20
Hexachlorobenzene	667	427	466	64.0	69.9	43.2-104			8.67	20.1
Hexachloro-1,3-butadiene	667	465	516	69.7	77.3	41.5-112			10.4	20
Hexachlorocyclopentadiene	667	374	381	56.1	57.1	13.5-123			1.68	20.7
Hexachloroethane	667	411	378	61.6	56.7	36.2-103			8.41	22.7
Indeno(1,2,3-cd)pyrene	667	481	499	72.1	74.8	47.5-109			3.68	20
Isophorone	667	468	487	70.2	73.0	28.8-104			3.90	20
Naphthalene	667	427	455	64.0	68.2	43.4-103			6.42	20
Nitrobenzene	667	492	472	73.7	70.8	40.7-109			4.00	21
n-Nitrosodimethylamine	667	397	356	59.6	53.3	18.1-122			11.0	23.5
n-Nitrosodiphenylamine	667	432	459	64.8	68.9	48.8-107			6.07	20
n-Nitrosodi-n-propylamine	667	516	467	77.3	69.9	43.3-109			10.0	20
Phenanthrene	667	434	454	65.1	68.1	51.6-107			4.52	20
Benzylbutyl phthalate	667	425	468	63.7	70.1	47.5-115			9.65	20
Bis(2-ethylhexyl)phthalate	667	445	447	66.7	67.0	48.1-116			0.510	20.5
Di-n-butyl phthalate	667	433	468	65.0	70.2	49.7-113			7.76	20
Diethyl phthalate	667	473	482	70.9	72.3	52.0-112			1.91	20
Dimethyl phthalate	667	496	476	74.3	71.4	51.4-108			4.07	20
Di-n-octyl phthalate	667	424	438	63.5	65.6	49.6-112			3.24	22
Pyrene	667	473	487	70.9	73.0	47.1-108			2.80	20
1,2,4-Trichlorobenzene	667	444	484	66.5	72.6	39.8-100			8.71	20
4-Chloro-3-methylphenol	667	486	494	72.9	74.0	51.1-113			1.53	20
2-Chlorophenol	667	425	407	63.7	61.0	40.8-103			4.31	20
2,4-Dichlorophenol	667	475	501	71.2	75.2	46.2-109			5.50	20
2,4-Dimethylphenol	667	509	516	76.4	77.3	42.2-110			1.28	20
4,6-Dinitro-2-methylphenol	667	483	504	72.5	75.5	23.1-119			4.13	23.7
2,4-Dinitrophenol	667	392	408	58.8	61.1	10.0-105			3.90	36.5
2-Nitrophenol	667	474	492	71.1	73.8	44.2-113			3.82	20.9
4-Nitrophenol	667	477	484	71.6	72.5	34.8-109			1.32	20
Pentachlorophenol	667	456	475	68.4	71.2	16.2-102			4.08	22.9
Phenol	667	467	436	70.0	65.4	41.5-106			6.77	20
2,4,6-Trichlorophenol	667	507	507	76.0	76.0	44.4-108			0.0900	20
(S) Nitrobenzene-d5				*73.4*	*71.0*	*21.9-129*				

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3140642-1 05/31/16 03:19 • (LCSD) R3140642-2 05/31/16 03:43

Analyte	Spike Amount ug/kg	LCS Result ug/kg	LCSD Result ug/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
(S) 2-Fluorobiphenyl				*70.8*	*72.0*	*34.9-129*				
(S) p-Terphenyl-d14				*70.8*	*69.2*	*21.5-128*				
(S) Phenol-d5				*67.5*	*58.2*	*26.3-121*				
(S) 2-Fluorophenol				*68.8*	*61.8*	*21.1-116*				
(S) 2,4,6-Tribromophenol				*63.3*	*65.5*	*21.6-142*				

L838049-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L838049-01 05/31/16 07:13 • (MS) R3140642-4 05/31/16 07:36 • (MSD) R3140642-5 05/31/16 08:00

Analyte	Spike Amount ug/kg	Original Result ug/kg	MS Result ug/kg	MSD Result ug/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acenaphthene	667	U	481	529	72.1	79.3	1	32.2-134			9.51	27.3
Acenaphthylene	667	U	506	531	75.8	79.7	1	38.7-129			4.96	25.9
Anthracene	667	U	459	481	68.8	72.1	1	32.3-137			4.74	28.4
Benzidine	667	U	ND	ND	0.000	0.000	1	0.000-49.9			0.000	40
Benzo(a)anthracene	667	U	454	512	68.1	76.7	1	33.3-124			11.9	29
Benzo(b)fluoranthene	667	U	512	570	76.8	85.5	1	23.3-133			10.7	30.3
Benzo(k)fluoranthene	667	U	531	505	79.6	75.7	1	31.0-129			5.05	26.7
Benzo(g,h,i)perylene	667	U	437	452	65.6	67.8	1	10.0-127			3.32	31.9
Benzo(a)pyrene	667	U	509	541	76.3	81.1	1	28.2-128			6.02	28.4
Bis(2-chlorethoxy)methane	667	U	428	496	64.1	74.3	1	35.0-132			14.8	26.1
Bis(2-chloroethyl)ether	667	U	387	447	58.0	67.1	1	28.8-128			14.5	33.6
Bis(2-chloroisopropyl)ether	667	U	455	527	68.1	79.1	1	31.8-118			14.8	31.7
4-Bromophenyl-phenylether	667	U	427	461	63.9	69.2	1	39.0-130			7.82	26
2-Chloronaphthalene	667	U	455	470	68.2	70.4	1	37.5-123			3.21	26.5
4-Chlorophenyl-phenylether	667	U	465	503	69.7	75.4	1	37.9-123			7.91	25.9
Chrysene	667	U	475	496	71.2	74.3	1	36.3-129			4.23	28
Dibenz(a,h)anthracene	667	U	452	465	67.8	69.7	1	10.5-128			2.78	29.5
3,3-Dichlorobenzidine	667	U	403	462	60.4	69.3	1	10.0-129			13.7	40
2,4-Dinitrotoluene	667	U	509	563	76.4	84.4	1	27.8-147			10.0	29.7
2,6-Dinitrotoluene	667	U	462	505	69.3	75.7	1	36.5-137			8.80	29.7
Fluoranthene	667	U	473	516	70.9	77.3	1	27.9-138			8.64	26.9
Fluorene	667	U	462	487	69.3	73.0	1	34.0-133			5.25	27.1
Hexachlorobenzene	667	U	443	466	66.4	69.8	1	34.4-116			4.97	25.4
Hexachloro-1,3-butadiene	667	U	470	522	70.5	78.2	1	36.5-125			10.4	29.7
Hexachlorocyclopentadiene	667	U	312	279	46.7	41.8	1	10.0-124			11.0	37.5
Hexachloroethane	667	U	386	422	57.8	63.2	1	11.3-143			8.96	31.9
Indeno(1,2,3-cd)pyrene	667	U	468	482	70.2	72.3	1	10.0-128			2.89	31.5
Isophorone	667	U	449	515	67.4	77.3	1	25.7-116			13.7	27.7

L838049-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L838049-01 05/31/16 07:13 • (MS) R3140642-4 05/31/16 07:36 • (MSD) R3140642-5 05/31/16 08:00

Analyte	Spike Amount ug/kg	Original Result ug/kg	MS Result ug/kg	MSD Result ug/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Naphthalene	667	U	410	474	61.5	71.1	1	36.4-121			14.5	27.2
Nitrobenzene	667	U	437	501	65.5	75.2	1	30.9-134			13.8	27.8
n-Nitrosodimethylamine	667	U	359	396	53.8	59.4	1	19.2-127			9.79	32
n-Nitrosodiphenylamine	667	U	437	476	65.5	71.3	1	26.8-133			8.50	25.9
n-Nitrosodi-n-propylamine	667	U	479	532	71.8	79.8	1	33.0-134			10.5	28.2
Phenanthrene	667	U	422	457	63.2	68.4	1	30.8-137			7.97	26.5
Benzylbutyl phthalate	667	U	401	459	60.1	68.8	1	33.4-128			13.6	28.5
Bis(2-ethylhexyl)phthalate	667	22.1	417	465	59.2	66.4	1	21.8-141			10.9	35.2
Di-n-butyl phthalate	667	U	461	480	69.1	72.0	1	32.2-133			4.12	25.9
Diethyl phthalate	667	U	471	518	70.7	77.6	1	39.4-136			9.33	25.5
Dimethyl phthalate	667	U	486	521	72.8	78.1	1	35.8-137			7.03	25.4
Di-n-octyl phthalate	667	U	385	457	57.8	68.5	1	28.5-128			17.1	32.5
Pyrene	667	U	476	506	71.3	75.9	1	24.1-130			6.30	29.9
1,2,4-Trichlorobenzene	667	U	430	514	64.4	77.1	1	36.5-114			18.0	28.4
4-Chloro-3-methylphenol	667	U	485	512	72.7	76.8	1	27.0-154			5.48	26.6
2-Chlorophenol	667	U	407	457	61.0	68.5	1	33.2-121			11.5	29.3
2,4-Dichlorophenol	667	U	460	526	68.9	78.8	1	34.8-134			13.4	27.3
2,4-Dimethylphenol	667	U	483	535	72.4	80.1	1	12.3-149			10.2	32.3
4,6-Dinitro-2-methylphenol	667	U	414	427	62.1	64.1	1	10.0-144			3.05	32.7
2,4-Dinitrophenol	667	U	156	195	23.4	29.2	1	10.0-121			22.0	39.4
2-Nitrophenol	667	U	467	530	70.0	79.5	1	29.5-144			12.7	29.9
4-Nitrophenol	667	U	457	507	68.5	76.1	1	20.0-133			10.5	30.2
Pentachlorophenol	667	176	620	724	66.5	82.2	1	10.0-139			15.6	28.3
Phenol	667	U	451	510	67.6	76.5	1	25.1-130			12.3	29.6
2,4,6-Trichlorophenol	667	U	469	529	70.3	79.3	1	33.8-133			12.0	28.1
(S) Nitrobenzene-d5					*68.3*	*77.3*		*21.9-129*				
(S) 2-Fluorobiphenyl					*72.0*	*78.6*		*34.9-129*				
(S) p-Terphenyl-d14					*65.9*	*71.8*		*21.5-128*				
(S) Phenol-d5					*64.5*	*69.5*		*26.3-121*				
(S) 2-Fluorophenol					*63.0*	*71.4*		*21.1-116*				
(S) 2,4,6-Tribromophenol					*63.9*	*69.5*		*21.6-142*				

Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
Rec.	Recovery.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J7	Surrogate recovery cannot be used for control limit evaluation due to dilution.

ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our "one location" design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be **YOUR LAB OF CHOICE.**
***** Not all certifications held by the laboratory are applicable to the results reported in the attached report.

State Accreditations

Alabama	40660	Nevada	TN-03-2002-34
Alaska	UST-080	New Hampshire	2975
Arizona	AZ0612	New Jersey–NELAP	TN002
Arkansas	88-0469	New Mexico	TN00003
California	01157CA	New York	11742
Colorado	TN00003	North Carolina	Env375
Conneticut	PH-0197	North Carolina [1]	DW21704
Florida	E87487	North Carolina [2]	41
Georgia	NELAP	North Dakota	R-140
Georgia [1]	923	Ohio–VAP	CL0069
Idaho	TN00003	Oklahoma	9915
Illinois	200008	Oregon	TN200002
Indiana	C-TN-01	Pennsylvania	68-02979
Iowa	364	Rhode Island	221
Kansas	E-10277	South Carolina	84004
Kentucky [1]	90010	South Dakota	n/a
Kentucky [2]	16	Tennessee [1 4]	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	6157585858
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	109
Minnesota	047-999-395	Washington	C1915
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA
Nebraska	NE-OS-15-05		

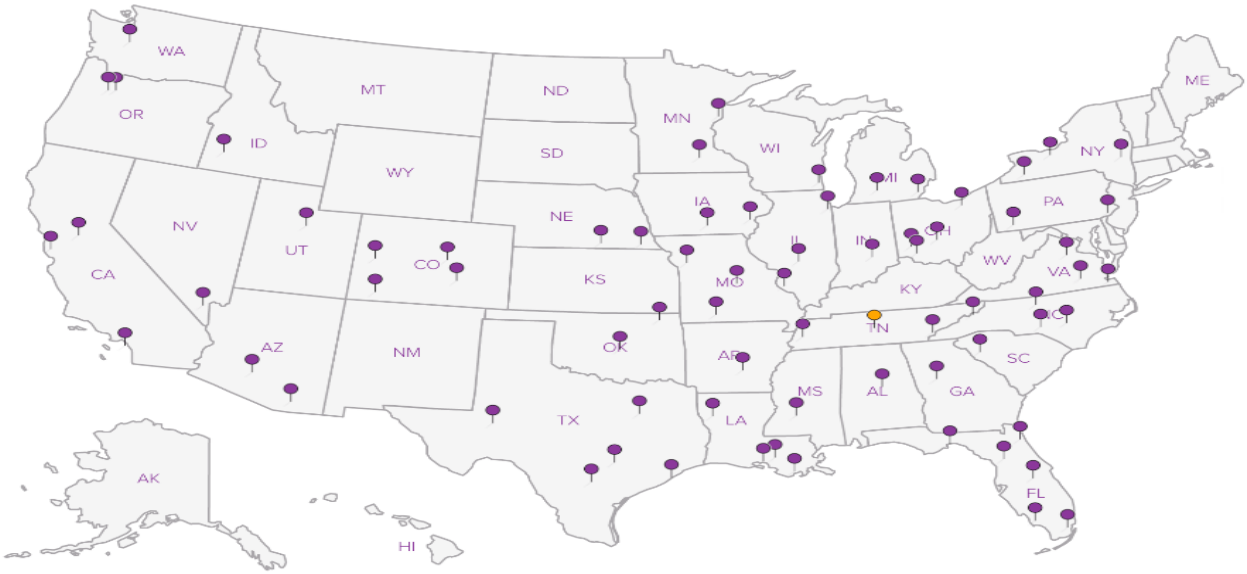
Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	S-67674
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [n/a] Accreditation not applicable

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. **ESC Lab Sciences performs all testing at our central laboratory.**



Company Name/Address:
Weston Solutions
1435 Garrison St., Ste. 100
Lakewood, CO 80215

Billing Information:

Report to: Moira Pryhoda

Email To: moira.pryhoda@WestonSolutions.

Project Description: Cowboy Timber

City/State Collected: Manderson, WY

Phone: 303-729-6146
Fax:

Client Project # 20108.016.001.0345.00

Lab Project #

Collected by (print): Eric Sandusky

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
X Three Day 25%

Date Results Needed

Email? ___No ✓Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOC's (1) 4 oz Soil Jar	SVOC (1)4oz. Soil Jar	Rem./Contaminant	Sample # (lab only)
CTSO-E5D3-20160523 ~~20160525~~	Comp	SS		5/23/16	1442	1		X		-01
CTSO-C5D4-20160525		SS		5/25/16	1640	1		X		02
CTSO-B4D4-20160525		SS		5/23/16	1046	1		X		03
CTSO-D5D4-20160525		SS		5/25/16	1310	1		X		04
CTSO-DP.le3-20160524		SS		5/24/16	0730	1		X		05
CTSO-C4D4-20160525		SS		5/25/16	1043	1		X		06

Chain of Custody Page ___ of ___

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Phone: 800-767-5859
Fax: 615-758-5859

L# L838049

C131

Acctnum: WESSOLLCO
Template:
Prelogin:
TSR:
PB:
Shipped Via:

* Matrix: **SS** - Soil **GW** - Groundwater **WW** - WasteWater **DW** - Drinking Water **OT** - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

6711 0332 9941

Hold #

Condition: (lab use only) TW7
R

COC Seal Intact: ___Y ___N ___NA

pH Checked: NCF:

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	5/26	PM	FedEx
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ☐ _____

Temp: 2.7 °C Bottles Received: 6=402

Date: 5-27-16 Time: 9:00

Semi-Volatiles by Method 8270C

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(800) 767-5859
Fax (615) 758-5859
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Est. 1970

Quality Control Summary
SDG: L838049

Semi-Volatiles by Method 8270C
Weston Solutions - CO

Project: Cowboy Timber
Project No: 20408.012.001.0345.0

Login No: L838049

Lab SampleID.	Client ID
L838049-01	CTSO-E5D3-20160523
L838049-02	CTSO-C5D4-20160525
L838049-03	CTSO-B4D4-20160525
L838049-04	CTSO-B5D4-20160525
L838049-05	CTSO-DPILE3-20160524
L838049-06	CTSO-C404-20160525

I certify that this data package accurately represents the information in the raw data found herein, both technically and for completeness. Release of the data contained in this data package has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: _____ Name: ESC Lab Sciences

Date: _____ Title: Quality Control

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Mt. Juliet, TN 37122
(615) 758-5858
(800) 767-5859
Fax (615) 758-5859
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Est. 1970

Quality Control Summary
SDG: L838049
Weston Solutions - CO

Test:	Semi-Volatiles by Method 8270C		
Project No:	20408.012.001.0345.0	Matrix:	Soil - ug/kg
Project:	Cowboy Timber	EPA ID:	TN00003
Collection Date:	5/23/2016	**Analytic Batch:**	**WG876258**
Analysis Date:	5/31/2016	Analyst:	377
Instrument ID:	BNAMS11	Prep Date:	5/29/2016
Sample Numbers:	L838049-01, -02, -03, -04, -05, -06		

Method Blank Summary

Instrument	Client Sample ID	Lab Sample ID	File Name	Analysis Date	Analysis Time
BNAMS11	LCS WG876258	LCS WG876258	0530_06.D	5/31/2016	3:19 AM
BNAMS11	LCSD WG876258	LCSD WG876258	0530_07.D	5/31/2016	3:43 AM
BNAMS11	Blank WG876258	Blank WG876258	0530_08.D	5/31/2016	4:06 AM
BNAMS11	CTSO-E5D3-20160523	L838049-01	0530_16.D	5/31/2016	7:13 AM
BNAMS11	MS WG876258	MS WG876258	0530_17.D	5/31/2016	7:36 AM
BNAMS11	MSD WG876258	MSD WG876258	0530_18.D	5/31/2016	8:00 AM
BNAMS11	CTSO-B5D4-20160525	L838049-04	0530_19.D	5/31/2016	8:23 AM
BNAMS11	CTSO-C5D4-20160525	L838049-02	0530_22.D	5/31/2016	9:34 AM
BNAMS11	CTSO-DPILE3-20160524	L838049-05	0530_23.D	5/31/2016	9:57 AM
BNAMS11	CTSO-B4D4-20160525	L838049-03	0530_25.D	5/31/2016	10:44 AM
BNAMS11	CTSO-C404-20160525	L838049-06	0530_26.D	5/31/2016	11:07 AM

Method Blank Summary

Instrument	Client Sample ID	Lab Sample ID	File Name	Analysis Date	Analysis Time
BNAMS2	CTSO-B5D4-20160525	L838049-04	0601_18.D	6/1/2016	5:13 PM
BNAMS2	CTSO-C5D4-20160525	L838049-02	0601_19.D	6/1/2016	5:38 PM
BNAMS2	CTSO-DPILE3-20160524	L838049-05	0601_20.D	6/1/2016	6:03 PM
BNAMS2	CTSO-B4D4-20160525	L838049-03	0601_21.D	6/1/2016	6:28 PM
BNAMS2	CTSO-C404-20160525	L838049-06	0601_22.D	6/1/2016	6:53 PM

Parameters in bold text are reported in this SDG

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Tax I.D 62-0814289
Est. 1970

Quality Control Summary
SDG: L838049
Weston Solutions - CO

Test:	Semi-Volatiles by Method 8270C		
Project No:	20408.012.001.0345.0	Matrix:	Soil - ug/kg
Project:	Cowboy Timber	EPA ID:	TN00003
Collection Date:	5/23/2016	**Analytic Batch:**	**WG876258**
Analysis Date:	5/31/2016	Analyst:	377
Instrument ID:	BNAMS11	Prep Date:	5/29/2016
Sample Numbers:	L838049-01, -02, -03, -04, -05, -06		

Internal Standard Response and Retention Time Summary

File ID: 0530_04
Analyzed: 05/31/16 014200

	DCB		NAP		ACE		PHEN	
	Response	**RT**	**Response**	**RT**	**Response**	**RT**	**Response**	**RT**
12 Hr. Std	55258	5.22	277639	6.48	178793	8.35	363945	9.95
Upper Limit	111000	5.72	555000	6.98	358000	8.85	728000	10.45
Lower Limit	27600	4.72	139000	5.98	89400	7.85	182000	9.45
Sample ID	**Response**	**RT**	**Response**	**RT**	**Response**	**RT**	**Response**	**RT**
L838049-01	56993	5.23	265345	6.48	175319	8.34	350875	9.95
L838049-04	55358	5.23	281006	6.48	191577	8.34	396261	9.95
L838049-02 5X	64324	5.23	338052	6.48	252821	8.35	472523	9.97
L838049-05 5X	57860	5.23	296910	6.48	211919	8.35	410561	9.96
L838049-03 10X	54640	5.23	296942	6.48	193716	8.35	373546	9.95
L838049-06 10X	48978	5.23	253305	6.48	162354	8.34	329630	9.95
MSD WG876258	51585	5.23	263841	6.48	166687	8.34	347650	9.95
MS WG876258	56724	5.23	299961	6.48	188341	8.35	394363	9.95
LCSD WG876258	62253	5.23	295218	6.48	186258	8.35	374489	9.95
LCS WG876258	57517	5.23	296362	6.48	186014	8.35	394649	9.95
BLANK WG876258	57678	5.23	300102	6.48	179627	8.34	367588	9.95

Legend:
DCB -- 1,4-Dichlorobenzene-d4
NAP -- Naphthalene-d8
ACE -- Acenaphthene-d10
PHEN -- Phenanthrene-d10
CHR -- Chrysene-d12
PER -- Perylene-d12

Parameters in bold text are reported in this SDG

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Est. 1970

Quality Control Summary
SDG: L838049
Weston Solutions - CO

Test:	Semi-Volatiles by Method 8270C		
Project No:	20408.012.001.0345.0	Matrix:	Soil - ug/kg
Project:	Cowboy Timber	EPA ID:	TN00003
Collection Date:	5/23/2016	**Analytic Batch:**	**WG876258**
Analysis Date:	5/31/2016	Analyst:	377
Instrument ID:	BNAMS11	Prep Date:	5/29/2016
Sample Numbers:	L838049-01, -02, -03, -04, -05, -06		

Internal Standard Response and Retention Time Summary

File ID: 0530_04
Analyzed: 05/31/16 014200

	DCB		CHR		PER	
	Response	**RT**	**Response**	**RT**	**Response**	**RT**
12 Hr. Std	55258	5.22	452380	12.81	457196	14.52
Upper Limit	111000	5.72	905000	13.31	914000	15.02
Lower Limit	27600	4.72	226000	12.31	229000	14.02
Sample ID	**Response**	**RT**	**Response**	**RT**	**Response**	**RT**
L838049-01	56993	5.23	438346	12.81	443460	14.52
L838049-04	55358	5.23	503062	12.81	495249	14.52
L838049-02 5X	64324	5.23	550236	12.82	484778	14.52
L838049-05 5X	57860	5.23	505551	12.81	461578	14.52
L838049-03 10X	54640	5.23	475047	12.81	439352	14.52
L838049-06 10X	48978	5.23	396475	12.81	425586	14.52
MSD WG876258	51585	5.23	442745	12.81	433337	14.52
MS WG876258	56724	5.23	496823	12.81	459984	14.52
LCSD WG876258	62253	5.23	459327	12.81	497050	14.52
LCS WG876258	57517	5.23	476573	12.81	454376	14.52
BLANK WG876258	57678	5.23	455282	12.80	464035	14.52

Legend:
DCB -- 1,4-Dichlorobenzene-d4
NAP -- Naphthalene-d8
ACE -- Acenaphthene-d10
PHEN -- Phenanthrene-d10
CHR -- Chrysene-d12
PER -- Perylene-d12

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(800) 767-5859
Fax (615) 758-5859
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Quality Control Summary
SDG: L838049
Weston Solutions - CO

Test:	Semi-Volatiles by Method 8270C		
Project No:	20408.012.001.0345.0	Matrix:	Soil - ug/kg
Project:	Cowboy Timber	EPA ID:	TN00003
Collection Date:	5/23/2016	**Analytic Batch:**	**WG876258**
Analysis Date:	5/31/2016	Analyst:	377
Instrument ID:	BNAMS2	Prep Date:	5/29/2016
Sample Numbers:	L838049-01, -02, -03, -04, -05, -06		

Internal Standard Response and Retention Time Summary

File ID: 0601_02
Analyzed: 06/01/16 101100

	DCB		NAP		ACE		PHEN	
	Response	**RT**	**Response**	**RT**	**Response**	**RT**	**Response**	**RT**
12 Hr. Std	73773	5.26	405605	6.52	238420	8.39	465396	9.99
Upper Limit	148000	5.76	811000	7.02	477000	8.89	931000	10.49
Lower Limit	36900	4.76	203000	6.02	119000	7.89	233000	9.49
Sample ID	**Response**	**RT**	**Response**	**RT**	**Response**	**RT**	**Response**	**RT**
L838049-04 5X	70476	5.26	368563	6.52	229745	8.38	409009	9.99
L838049-02 100X	68001	5.26	371169	6.52	224356	8.38	412443	9.99
L838049-05 20X	65805	5.26	357284	6.52	211201	8.38	398059	9.99
L838049-03 50X	63513	5.26	343652	6.52	204652	8.38	390901	9.99
L838049-06 50X	67247	5.26	359016	6.52	219170	8.38	412603	9.99

Legend:
DCB -- 1,4-Dichlorobenzene-d4
NAP -- Naphthalene-d8
ACE -- Acenaphthene-d10
PHEN -- Phenanthrene-d10
CHR -- Chrysene-d12
PER -- Perylene-d12

Parameters in bold text are reported in this SDG

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Mt. Juliet, TN 37122
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(800) 767-5859
Fax (615) 758-5859
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Est. 1970

Quality Control Summary
SDG: L838049
Weston Solutions - CO

Test:	Semi-Volatiles by Method 8270C		
Project No:	20408.012.001.0345.0	Matrix:	Soil - ug/kg
Project:	Cowboy Timber	EPA ID:	TN00003
Collection Date:	5/23/2016	**Analytic Batch:**	**WG876258**
Analysis Date:	5/31/2016	Analyst:	377
Instrument ID:	BNAMS2	Prep Date:	5/29/2016
Sample Numbers:	L838049-01, -02, -03, -04, -05, -06		

Internal Standard Response and Retention Time Summary

File ID: 0601_02
Analyzed: 06/01/16 101100

	DCB		CHR		PER	
	Response	**RT**	**Response**	**RT**	**Response**	**RT**
12 Hr. Std	73773	5.26	557010	12.86	573038	14.62
Upper Limit	148000	5.76	1110000	13.36	1150000	15.12
Lower Limit	36900	4.76	279000	12.36	287000	14.12
Sample ID	**Response**	**RT**	**Response**	**RT**	**Response**	**RT**
L838049-04 5X	70476	5.26	566550	12.86	427284	14.61
L838049-02 100X	68001	5.26	605106	12.86	449280	14.60
L838049-05 20X	65805	5.26	570559	12.86	421782	14.60
L838049-03 50X	63513	5.26	530678	12.86	404388	14.60
L838049-06 50X	67247	5.26	543722	12.86	422796	14.60

Legend:
DCB -- 1,4-Dichlorobenzene-d4
NAP -- Naphthalene-d8
ACE -- Acenaphthene-d10
PHEN -- Phenanthrene-d10
CHR -- Chrysene-d12
PER -- Perylene-d12

Parameters in bold text are reported in this SDG

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12065 Lebanon Rd
Mt. Juliet, TN 37122
(615) 758-5858
(800) 767-5859
Fax (615) 758-5859
Tax I.D 62-0814289
Est. 1970

Quality Control Summary
SDG: L838049
Weston Solutions - CO

Test:	Semi-Volatiles by Method 8270C		
Project No:	20408.012.001.0345.0	Matrix:	Soil - ug/kg
Project:	Cowboy Timber	EPA ID:	TN00003
Collection Date:	5/23/2016	**Analytic Batch:**	**WG876258**
Analysis Date:	5/31/2016	Analyst:	377
Instrument ID:	BNAMS2	Prep Date:	5/29/2016
Sample Numbers:	L838049-01, -02, -03, -04, -05, -06		

Surrogate Summary

			TBP		FBP		2FP		NBZ	
Laboratory Sample ID	Instrument	File ID	ppm	% Rec	ppm	% Rec	ppm	% Rec	ppm	% Rec
L838049-01	BNAMS11	0530_16	0.412	61.9	0.213	64.1	0.390	58.6	0.224	67.3
L838049-02 100x	BNAMS2	0601_19	0.343	51.5 J7	0.259	77.8 J7	0.391	58.7 J7	0.244	73.1 J7
L838049-02 5x	BNAMS11	0530_22	0.470	70.5	0.202	60.6	0.403	60.5	0.266	79.9
L838049-03 10x	BNAMS11	0530_25	0.433	65.0	0.219	65.9	0.422	63.4	0.217	65.0
L838049-03 50x	BNAMS2	0601_21	0.372	55.8 J7	0.253	75.8 J7	0.416	62.4 J7	0.224	67.4 J7
L838049-04 5x	BNAMS2	0601_18	0.412	61.9	0.206	61.8	0.353	53.0	0.193	58.1
L838049-04	BNAMS11	0530_19	0.384	57.6	0.204	61.4	0.392	58.8	0.211	63.4
L838049-05 20x	BNAMS2	0601_20	0.335	50.3 J7	0.191	57.5 J7	0.325	48.7 J7	0.170	50.9 J7
L838049-05 5x	BNAMS11	0530_23	0.406	61.0	0.206	61.7	0.370	55.6	0.210	63.1
L838049-06 50x	BNAMS2	0601_22	0.438	65.7 J7	0.255	76.5 J7	0.454	68.2 J7	0.214	64.2 J7
L838049-06 10x	BNAMS11	0530_26	0.420	63.0	0.232	69.8	0.425	63.8	0.236	70.8
LCS WG876258	BNAMS11	0530_06	0.421	63.3	0.236	70.8	0.458	68.8	0.244	73.4
LCSD WG876258	BNAMS11	0530_07	0.436	65.5	0.240	72.0	0.411	61.8	0.236	71.0
BLANK WG876258	BNAMS11	0530_08	0.388	58.2	0.222	66.5	0.414	62.1	0.213	64.1
MS WG876258	BNAMS11	0530_17	0.425	63.9	0.240	72.0	0.420	63.0	0.228	68.3
MSD WG876258	BNAMS11	0530_18	0.463	69.5	0.262	78.6	0.475	71.4	0.257	77.3

TBP --2,4,6-TRIBROMOPHENOL	True Value: 0.666 ppm	Limits: 21.6 - 142
FBP --2-FLUOROBIPHENYL	True Value: 0.333 ppm	Limits: 34.9 - 129
2FP --2-FLUOROPHENOL	True Value: 0.666 ppm	Limits: 21.10 - 116
NBZ --NITROBENZENE-D5	True Value: 0.333 ppm	Limits: 21.9 - 129
TPH --P-TERPHENYL-D14	True Value: 0.333 ppm	Limits: 21.5 - 128
PHL --PHENOL-D5	True Value: 0.666 ppm	Limits: 26.3 - 121

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Quality Control Summary
SDG: L838049
Weston Solutions - CO

Test:	Semi-Volatiles by Method 8270C		
Project No:	20408.012.001.0345.0	Matrix:	Soil - ug/kg
Project:	Cowboy Timber	EPA ID:	TN00003
Collection Date:	5/23/2016	**Analytic Batch:**	**WG876258**
Analysis Date:	5/31/2016	Analyst:	377
Instrument ID:	BNAMS2	Prep Date:	5/29/2016
Sample Numbers:	L838049-01, -02, -03, -04, -05, -06		

Surrogate Summary

			TPH		PHL	
Laboratory Sample ID	Instrument	File ID	ppm	% Rec	ppm	% Rec
L838049-01	BNAMS11	0530_16	0.206	61.7	0.359	54.0
L838049-02 100x	BNAMS2	0601_19	0.210	63.1 J7	0.443	66.5 J7
L838049-02 5x	BNAMS11	0530_22	0.241	72.5	0.418	62.8
L838049-03 10x	BNAMS11	0530_25	0.225	67.7	0.439	65.9
L838049-03 50x	BNAMS2	0601_21	0.241	72.4 J7	0.441	66.2 J7
L838049-04 5x	BNAMS2	0601_18	0.182	54.6	0.358	53.7
L838049-04	BNAMS11	0530_19	0.201	60.4	0.403	60.4
L838049-05 20x	BNAMS2	0601_20	0.174	52.3 J7	0.298	44.8 J7
L838049-05 5x	BNAMS11	0530_23	0.204	61.1	0.367	55.1
L838049-06 50x	BNAMS2	0601_22	0.242	72.7 J7	0.435	65.3 J7
L838049-06 10x	BNAMS11	0530_26	0.213	64.1	0.425	63.8
LCS WG876258	BNAMS11	0530_06	0.236	70.8	0.449	67.5
LCSD WG876258	BNAMS11	0530_07	0.230	69.2	0.388	58.2
BLANK WG876258	BNAMS11	0530_08	0.230	69.1	0.389	58.4
MS WG876258	BNAMS11	0530_17	0.219	65.9	0.430	64.5
MSD WG876258	BNAMS11	0530_18	0.239	71.8	0.463	69.5

TBP --2,4,6-TRIBROMOPHENOL	True Value: 0.666 ppm	Limits: 21.6 - 142
FBP --2-FLUOROBIPHENYL	True Value: 0.333 ppm	Limits: 34.9 - 129
2FP --2-FLUOROPHENOL	True Value: 0.666 ppm	Limits: 21.10 - 116
NBZ --NITROBENZENE-D5	True Value: 0.333 ppm	Limits: 21.9 - 129
TPH --P-TERPHENYL-D14	True Value: 0.333 ppm	Limits: 21.5 - 128
PHL --PHENOL-D5	True Value: 0.666 ppm	Limits: 26.3 - 121

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Quality Control Summary
SDG: L838049
Weston Solutions - CO

Test:	Semi-Volatiles by Method 8270C		
Project No:	20408.012.001.0345.0	Matrix:	Soil - mg/kg
Project:	Cowboy Timber	EPA ID:	TN00003
Collection Date:	5/23/2016	**Analytic Batch:**	**WG876258**
Analysis Date:	5/31/2016	Analyst:	377
Instrument ID:	BNAMS11	Prep Date:	5/29/2016
Sample Numbers:	L838049-01, -02, -03, -04, -05, -06		

Instrument Performance Summary

FileID:0530_03.D Date:5/31/2016 Time: 1:06 AM

m/e	Ion Abundance Criteria	% Relative Abundance
51	30 - 60% of mass 198	39.1
68	Less than 2% of mass 69	0.0
69	Less than 100% of mass 198	52.7
70	Less than 2% of mass 69	0.7
127	40 - 60% of mass 198	48.6
197	Less than 1% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5 - 9% of mass 198	6.8
275	10 - 30% of mass 198	30.0
365	1 - 100% of mass 198	4.0
441	Present, but less than mass 443	88.6
442	40 - 100% of mass 198	44.3
443	17 - 23% of mass 442	19.6

This Check applies to the following samples and quality control samples

Client Sample ID	Laboratory Sample ID	Lab Filename	Date Analyzed	Time Analyzed
LCS WG876258	LCS WG876258	0530_06.D	5/31/2016	3:19 AM
LCSD WG876258	LCSD WG876258	0530_07.D	5/31/2016	3:43 AM
Blank WG876258	Blank WG876258	0530_08.D	5/31/2016	4:06 AM
CTSO-E5D3-20160523	L838049-01	0530_16.D	5/31/2016	7:13 AM
MS WG876258	MS WG876258	0530_17.D	5/31/2016	7:36 AM
MSD WG876258	MSD WG876258	0530_18.D	5/31/2016	8:00 AM
CTSO-B5D4-20160525	L838049-04	0530_19.D	5/31/2016	8:23 AM
CTSO-C5D4-20160525	L838049-02	0530_22.D	5/31/2016	9:34 AM
CTSO-DPILE3-	L838049-05	0530_23.D	5/31/2016	9:57 AM
CTSO-B4D4-20160525	L838049-03	0530_25.D	5/31/2016	10:44 AM
CTSO-C404-20160525	L838049-06	0530_26.D	5/31/2016	11:07 AM

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Quality Control Summary
SDG: L838049
Weston Solutions - CO

Test:	Semi-Volatiles by Method 8270C		
Project No:	20408.012.001.0345.0	Matrix:	Soil - mg/kg
Project:	Cowboy Timber	EPA ID:	TN00003
Collection Date:	5/23/2016	**Analytic Batch:**	**WG876258**
Analysis Date:	5/31/2016	Analyst:	377
Instrument ID:	BNAMS2	Prep Date:	5/29/2016
Sample Numbers:	L838049-01, -02, -03, -04, -05, -06		

Instrument Performance Summary

FileID:0601_01.D Date:6/1/2016 Time: 9:52 AM

m/e	Ion Abundance Criteria	% Relative Abundance
51	10 - 80% of mass 198	34.1
68	Less than 2% of mass 69	0.0
69	Base Peak, 100% relative abundance	100.0
70	Less than 2% of mass 69	0.6
127	10 - 80% of mass 198	49.8
197	Less than 2% of mass 198	0.0
198	50 - 100% of mass 198	100.0
199	5 - 9% of mass 198	6.4
275	10 - 60% of mass 198	28.9
365	1 - 100% of mass 198	4.9
441	Present, but less than mass 442	13.9
442	50 - 100% of mass 198	99.8
443	15 - 24% of mass 442	18.9

This Check applies to the following samples and quality control samples

Client Sample ID	Laboratory Sample ID	Lab Filename	Date Analyzed	Time Analyzed
CTSO-B5D4-20160525	L838049-04	0601_18.D	6/1/2016	5:13 PM
CTSO-C5D4-20160525	L838049-02	0601_19.D	6/1/2016	5:38 PM
CTSO-DPILE3-	L838049-05	0601_20.D	6/1/2016	6:03 PM
CTSO-B4D4-20160525	L838049-03	0601_21.D	6/1/2016	6:28 PM
CTSO-C404-20160525	L838049-06	0601_22.D	6/1/2016	6:53 PM

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Quality Control Summary
SDG: L838049
Weston Solutions - CO

Test: Semi-Volatiles by Method 8270C
Project: Cowboy Timber
Instrument ID: BNAMS2
Method Name : S802E24P.M

Relative Response Factor Summary

Compound Name	Level 500	Level 1K	Level 4K	Level 10K	Level 20K	Level 30K	Level 40K	Level 50K	Level 1K1	Average RRF	%RSD
Pyridine	2.511	2.357	1.993	2.132	2.107	2.083	2.124	2.088		2.174177	7.85
N-Nitrosodimethylamine	1.517	1.249	1.160	1.260	1.178	1.135	1.159	1.149		1.226018	10.31
2-Fluorophenol	1.795	1.716	1.562	1.649	1.646	1.612	1.673	1.637		1.661222	4.21
Aniline	1.257	1.158	1.039	1.051	1.070	1.044	1.076	1.056		1.093927	6.95
bis(2-Chloroethyl)ether	1.395	1.383	1.170	1.243	1.202	1.200	1.209	1.194		1.249547	7.06
Phenol-d5	2.428	2.290	2.087	2.214	2.188	2.197	2.225	2.209		2.229824	4.39
Phenol	2.563	2.320	2.048	2.265	2.204	2.171	2.233	2.228		2.253887	6.56
Benzaldehyde									1.310	1.127141	15.21
2-Chlorophenol	2.151	1.947	1.857	1.996	1.941	1.954	1.955	1.974		1.971963	4.21
n-Decane	1.175	1.163	1.003	1.064	1.059	1.025	1.011	1.039		1.067467	6.19
1,3-Dichlorobenzene	2.460	2.259	2.032	2.223	2.146	2.131	2.190	2.201		2.205291	5.62
1,4-Dichlorobenzene	2.559	2.373	2.100	2.233	2.188	2.180	2.251	2.245		2.266090	6.25
Benzyl Alcohol	2.019	1.867	1.634	1.807	1.724	1.711	1.727	1.729		1.777258	6.73
1,2-Dichlorobenzene	2.469	2.208	2.000	2.117	2.089	2.073	2.147	2.145		2.155928	6.52
bis(2-Chloroisopropyl)ether	0.677	0.644	0.527	0.581	0.555	0.547	0.555	0.558		0.580513	9.01
2-Methylphenol	1.924	1.785	1.606	1.677	1.672	1.645	1.686	1.670		1.708191	5.91
Hexachloroethane	1.077	1.039	0.882	0.930	0.939	0.924	0.938	0.943		0.958926	6.77
N-Nitrosodi-n-propylamine	1.628	1.494	1.320	1.436	1.370	1.357	1.379	1.361		1.418017	7.07
3&4-Methyl phenol	2.231	2.123	1.844	2.006	1.959	1.960	1.982	1.974		2.009859	5.83
Acetophenone									2.509	2.536188	3.64
Nitrobenzene-d5	0.455	0.418	0.373	0.407	0.389	0.397	0.398	0.388		0.403172	6.19
Nitrobenzene	0.463	0.408	0.373	0.411	0.380	0.385	0.384	0.383		0.398414	7.34
Isophorone	0.789	0.713	0.646	0.696	0.671	0.679	0.674	0.649		0.689738	6.66
2-Nitrophenol	0.187	0.178	0.172	0.195	0.195	0.197	0.201	0.202		0.190956	5.63
2,4-Dimethylphenol	0.408	0.395	0.356	0.389	0.371	0.380	0.373	0.370		0.380223	4.36
bis(2-Chlorethoxy)methane	0.485	0.434	0.395	0.420	0.403	0.402	0.402	0.390		0.416202	7.46
2,4-Dichlorophenol	0.348	0.314	0.296	0.330	0.310	0.316	0.315	0.314		0.317811	4.83
Benzoic Acid									0.134	0.202442	20.97

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Quality Control Summary
SDG: L838049
Weston Solutions - CO

Test: Semi-Volatiles by Method 8270C
Project: Cowboy Timber
Instrument ID: BNAMS2
Method Name : S802E24P.M

Relative Response Factor Summary

Compound Name	Level 500	Level 1K	Level 4K	Level 10K	Level 20K	Level 30K	Level 40K	Level 50K	Level 1K1	Average RRF	%RSD
1,2,4-Trichlorobenzene	0.411	0.384	0.345	0.377	0.365	0.365	0.366	0.364		0.372225	5.23
Naphthalene	1.324	1.173	1.019	1.127	1.075	1.093	1.098	1.081		1.123721	8.19
4-Chloroaniline	0.150	0.137	0.132	0.148	0.135	0.137	0.137	0.133		0.138860	4.87
Hexachloro-1,3-butadiene	0.277	0.261	0.229	0.252	0.233	0.241	0.241	0.239		0.246524	6.51
Caprolactam									0.106	0.096682	6.43
4-Chloro-3-methylphenol	0.345	0.339	0.309	0.339	0.331	0.338	0.334	0.329		0.333025	3.26
2-Methylnaphthalene	0.855	0.781	0.713	0.815	0.748	0.763	0.761	0.750		0.773101	5.70
1-Methylnaphthalene	0.824	0.742	0.660	0.712	0.699	0.724	0.725	0.714		0.725189	6.44
1,2,4,5-Tetrachlorobenzene									0.386	0.363751	4.22
Hexachlorocyclopentadiene		0.165	0.249	0.298	0.367	0.386	0.417	0.428		0.330183	29.35
2,4,6-Trichlorophenol	0.377	0.350	0.327	0.381	0.364	0.375	0.376	0.379		0.366033	5.15
2,4,5-Trichlorophenol	0.388	0.373	0.347	0.406	0.389	0.382	0.399	0.395		0.384900	4.79
2-Fluorobiphenyl	1.607	1.419	1.255	1.447	1.363	1.334	1.374	1.352		1.393923	7.41
Biphenyl	1.754	1.570	1.399	1.525	1.492	1.469	1.492	1.482		1.523112	6.91
2-Chloronaphthalene	1.351	1.285	1.101	1.246	1.181	1.173	1.193	1.174		1.212839	6.41
2-Nitroaniline	0.406	0.369	0.347	0.398	0.381	0.385	0.397	0.383		0.383192	4.86
Acenaphthylene	2.084	1.874	1.723	1.919	1.860	1.834	1.880	1.851		1.878163	5.37
Dimethyl phthalate	1.602	1.388	1.256	1.387	1.312	1.304	1.331	1.292		1.359046	7.96
2,6-Dinitrotoluene	0.316	0.306	0.283	0.328	0.317	0.303	0.312	0.305		0.308746	4.24
3-Nitroaniline	0.355	0.324	0.309	0.331	0.324	0.331	0.340	0.329		0.330318	4.01
Acenaphthene	1.396	1.278	1.129	1.268	1.201	1.189	1.236	1.215		1.239249	6.36
2,4-Dinitrophenol			0.096	0.123	0.145	0.158	0.171	0.173		0.144682	20.74
Dibenzofuran	2.019	1.793	1.560	1.806	1.700	1.679	1.722	1.704		1.748001	7.61
2,4-Dinitrotoluene	0.415	0.378	0.376	0.420	0.422	0.425	0.425	0.429		0.411138	5.25
2,3,4,6-Tetrachlorophenol									0.236	0.269702	8.53
4-Nitrophenol	0.225	0.197	0.206	0.238	0.244	0.253	0.258	0.252		0.234135	9.70
Fluorene	1.583	1.482	1.298	1.466	1.392	1.382	1.431	1.403		1.429673	5.86
4-Chlorophenyl-phenylether	0.774	0.750	0.635	0.720	0.684	0.677	0.694	0.690		0.703100	6.22
Diethyl phthalate	1.593	1.449	1.294	1.425	1.391	1.376	1.389	1.382		1.412325	6.08

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Quality Control Summary
SDG: L838049
Weston Solutions - CO

Test: Semi-Volatiles by Method 8270C
Project: Cowboy Timber
Instrument ID: BNAMS2
Method Name : S802E24P.M

Relative Response Factor Summary

Compound Name	Level 500	Level 1K	Level 4K	Level 10K	Level 20K	Level 30K	Level 40K	Level 50K	Level 1K1	Average RRF	%RSD
4-Nitroaniline	0.364	0.329	0.317	0.346	0.341	0.332	0.337	0.297		0.332666	5.96
Azobenzene	1.572	1.400	1.268	1.415	1.334	1.320	1.324	1.318		1.368952	6.90
Atrazine									0.397	0.395383	3.88
4,6-Dinitro-2-methylphenol	0.074	0.078	0.078	0.102	0.113	0.118	0.122	0.125		0.101368	20.99
N-Nitrosodiphenylamine	0.679	0.618	0.565	0.633	0.600	0.604	0.617	0.623		0.617266	5.22
2,4,6-Tribromophenol	0.105	0.106	0.093	0.110	0.109	0.112	0.117	0.119		0.108930	7.24
4-Bromophenyl-phenylether	0.255	0.225	0.201	0.223	0.218	0.217	0.226	0.224		0.223763	6.71
Hexachlorobenzene	0.279	0.257	0.222	0.259	0.243	0.246	0.251	0.257		0.252000	6.44
n-octadecane	0.130	0.132	0.106	0.114	0.108	0.104	0.106	0.104		0.113065	10.30
Pentachlorophenol	0.083	0.082	0.089	0.121	0.124	0.130	0.135	0.140		0.113116	21.43
Phenanthrene	1.288	1.199	1.009	1.147	1.082	1.094	1.123	1.108		1.131169	7.36
Anthracene	1.296	1.166	1.038	1.167	1.109	1.121	1.164	1.137		1.149803	6.34
Carbazole	1.159	1.070	0.954	1.090	1.032	1.032	1.026	1.006		1.046187	5.85
Di-n-butyl phthalate	1.373	1.274	1.183	1.343	1.318	1.302	1.295	1.272		1.295127	4.37
2-nitrodiphenylamine									0.222	0.266791	12.00
Fluoranthene	1.406	1.312	1.166	1.310	1.264	1.272	1.272	1.243		1.280737	5.34
Benzidine									0.685	0.682699	7.80
Pyrene	1.256	1.140	1.062	1.256	1.113	1.127	1.150	1.194		1.162268	5.90
p-Terphenyl-d14	0.993	0.914	0.906	0.944	0.927	0.939	0.977	1.028		0.953501	4.40
Benzylbutyl phthalate	0.565	0.515	0.497	0.551	0.519	0.529	0.510	0.532		0.527230	4.24
3,3-Dichlorobenzidine									0.339	0.342055	5.05
Benzo(a)anthracene	1.398	1.222	1.115	1.232	1.148	1.190	1.168	1.200		1.209147	7.07
Chrysene	1.296	1.148	1.060	1.134	1.084	1.116	1.091	1.126		1.131980	6.39
bis(2-Ethylhexyl)phthalate	0.887	0.735	0.695	0.758	0.728	0.749	0.718	0.737		0.750817	7.78
Di-n-octyl phthalate	1.436	1.335	1.212	1.276	1.292	1.323	1.267	1.267		1.300960	5.11
Benzo(b)fluoranthene	1.413	1.230	1.108	1.263	1.191	1.226	1.226	1.210		1.233364	6.95
Benzo(k)fluoranthene	1.178	1.108	1.000	1.199	1.130	1.084	1.109	1.096		1.112912	5.45
Benzo(a)pyrene	1.264	1.162	1.040	1.201	1.135	1.139	1.154	1.142		1.154624	5.49
Indeno(1,2,3-cd)pyrene	1.473	1.325	1.205	1.343	1.279	1.274	1.275	1.277		1.306425	6.01

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Quality Control Summary
SDG: L838049
Weston Solutions - CO

Test: Semi-Volatiles by Method 8270C
Project: Cowboy Timber
Instrument ID: BNAMS2

Method Name : S802E24P.M

Relative Response Factor Summary

Compound Name	Level 500	Level 1K	Level 4K	Level 10K	Level 20K	Level 30K	Level 40K	Level 50K	Level 1K1	Average RRF	%RSD
Dibenz(a,h)anthracene	1.239	1.115	1.037	1.150	1.119	1.128	1.131	1.136		1.131841	4.86
Benzo(g,h,i)perylene	1.252	1.125	1.013	1.120	1.065	1.044	1.039	1.012		1.083682	7.43

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Est. 1970

Quality Control Summary
SDG: L838049
Weston Solutions - CO

Test: Semi-Volatiles by Method 8270C
Project: Cowboy Timber
Instrument ID: BNAMS11

Method Name : S811E27P.M

Relative Response Factor Summary

Compound Name	Level 500	Level 1K	Level 4K	Level 10K	Level 20K	Level 30K	Level 40K	Level 50K	Level 1K1	Average RRF	%RSD
Pyridine	2.417	2.135	1.999	2.257	2.267	2.337	2.257	2.198		2.233367	5.68
N-Nitrosodimethylamine	1.133	0.953	0.933	1.079	1.067	1.116	1.066	1.032		1.047397	6.85
2-Fluorophenol	1.989	2.012	1.777	1.969	1.933	1.980	1.979	1.871		1.938869	4.05
Aniline	1.575	1.198	1.186	1.280	1.287	1.350	1.314	1.262		1.306503	9.30
bis(2-Chloroethyl)ether	1.531	1.405	1.196	1.308	1.320	1.359	1.321	1.300		1.342436	7.18
Phenol-d5	2.673	2.484	2.269	2.421	2.560	2.660	2.498	2.450		2.501933	5.26
Phenol	2.495	2.514	2.271	2.592	2.556	2.662	2.682	2.591		2.545327	5.05
Benzaldehyde									1.692	1.558153	5.43
2-Chlorophenol	2.135	1.873	1.804	1.915	2.000	2.142	2.002	1.973		1.980614	5.97
n-Decane	1.166	1.084	1.034	1.147	1.145	1.177	1.178	1.153		1.135532	4.44
1,3-Dichlorobenzene	2.365	2.183	2.091	2.220	2.308	2.357	2.232	2.258		2.251616	4.08
1,4-Dichlorobenzene	2.347	2.361	2.093	2.221	2.262	2.337	2.298	2.239		2.269620	3.88
Benzyl Alcohol	2.105	1.890	1.835	2.068	2.131	2.128	2.102	2.015		2.034170	5.57
1,2-Dichlorobenzene	2.261	2.090	2.001	2.054	2.224	2.238	2.123	2.101		2.136671	4.40
bis(2-Chloroisopropyl)ether	0.614	0.551	0.534	0.555	0.554	0.584	0.573	0.566		0.566362	4.35
2-Methylphenol	2.038	1.690	1.732	1.826	1.828	1.948	1.851	1.889		1.850255	6.03
Hexachloroethane	1.096	0.941	0.890	0.943	0.989	1.011	0.970	0.967		0.975819	6.20
N-Nitrosodi-n-propylamine	1.801	1.501	1.391	1.571	1.636	1.641	1.549	1.527		1.577236	7.63
3&4-Methyl phenol	2.590	2.218	2.107	2.300	2.218	2.303	2.196	2.136		2.258420	6.68
Acetophenone									3.353	2.990007	6.20
Nitrobenzene-d5	0.466	0.485	0.455	0.452	0.466	0.483	0.482	0.462		0.468909	2.74
Nitrobenzene	0.462	0.477	0.411	0.436	0.456	0.495	0.460	0.476		0.459020	5.67
Isophorone	0.812	0.851	0.756	0.762	0.824	0.840	0.794	0.813		0.806661	4.24
2-Nitrophenol	0.188	0.180	0.182	0.184	0.206	0.211	0.208	0.206		0.195567	6.81
2,4-Dimethylphenol	0.402	0.452	0.403	0.443	0.450	0.448	0.441	0.426		0.433066	4.72
bis(2-Chlorethoxy)methane	0.467	0.458	0.416	0.443	0.464	0.462	0.489	0.462		0.457711	4.62
2,4-Dichlorophenol	0.353	0.331	0.289	0.305	0.324	0.326	0.327	0.328		0.322892	5.89
Benzoic Acid									0.136	0.237923	25.90

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Quality Control Summary
SDG: L838049
Weston Solutions - CO

Test: Semi-Volatiles by Method 8270C
Project: Cowboy Timber
Instrument ID: BNAMS11
Method Name : S811E27P.M

Relative Response Factor Summary

Compound Name	Level 500	Level 1K	Level 4K	Level 10K	Level 20K	Level 30K	Level 40K	Level 50K	Level 1K1	Average RRF	%RSD
1,2,4-Trichlorobenzene	0.407	0.419	0.349	0.351	0.374	0.384	0.382	0.383		0.380913	6.41
Naphthalene	1.165	1.185	1.080	1.044	1.177	1.144	1.156	1.146		1.137137	4.35
4-Chloroaniline	0.177	0.184	0.141	0.162	0.162	0.177	0.169	0.168		0.167563	7.85
Hexachloro-1,3-butadiene	0.266	0.279	0.237	0.245	0.262	0.264	0.274	0.270		0.262054	5.51
Caprolactam									0.113	0.100012	7.22
4-Chloro-3-methylphenol	0.377	0.384	0.334	0.370	0.390	0.416	0.387	0.387		0.380668	6.03
2-Methylnaphthalene	0.702	0.797	0.655	0.684	0.731	0.789	0.767	0.757		0.735462	6.96
1-Methylnaphthalene	0.734	0.704	0.618	0.633	0.700	0.724	0.695	0.713		0.690352	6.11
1,2,4,5-Tetrachlorobenzene									0.431	0.405491	6.08
Hexachlorocyclopentadiene	0.280	0.357	0.426	0.450	0.504	0.531	0.493	0.520		0.445303	19.74
2,4,6-Trichlorophenol	0.393	0.390	0.376	0.393	0.432	0.437	0.432	0.450		0.412902	6.70
2,4,5-Trichlorophenol	0.359	0.439	0.419	0.439	0.440	0.437	0.449	0.464		0.430657	7.35
2-Fluorobiphenyl	1.373	1.500	1.372	1.370	1.398	1.405	1.469	1.500		1.423434	4.01
Biphenyl	1.439	1.533	1.469	1.485	1.506	1.572	1.613	1.670		1.535890	5.09
2-Chloronaphthalene	1.234	1.269	1.154	1.193	1.225	1.287	1.255	1.268		1.235645	3.60
2-Nitroaniline	0.354	0.385	0.378	0.381	0.371	0.390	0.390	0.410		0.382158	4.26
Acenaphthylene	1.793	1.971	1.725	1.884	1.927	1.895	1.842	1.926		1.870423	4.29
Dimethyl phthalate	1.283	1.498	1.421	1.334	1.411	1.352	1.444	1.486		1.403641	5.37
2,6-Dinitrotoluene	0.274	0.332	0.317	0.331	0.331	0.311	0.318	0.323		0.317023	5.97
3-Nitroaniline	0.273	0.320	0.325	0.310	0.300	0.335	0.311	0.330		0.312979	6.34
Acenaphthene	1.236	1.294	1.166	1.192	1.236	1.273	1.259	1.305		1.245174	3.87
2,4-Dinitrophenol		0.084	0.130	0.170	0.194	0.210	0.211	0.221		0.174044	28.98
Dibenzofuran	1.816	1.777	1.683	1.707	1.746	1.734	1.809	1.849		1.765096	3.25
2,4-Dinitrotoluene	0.416	0.385	0.395	0.417	0.431	0.438	0.443	0.471		0.424527	6.45
2,3,4,6-Tetrachlorophenol									0.329	0.324664	8.10
4-Nitrophenol	0.192	0.248	0.226	0.249	0.258	0.260	0.260	0.261		0.244245	9.87
Fluorene	1.424	1.496	1.367	1.363	1.448	1.499	1.444	1.582		1.452731	5.02
4-Chlorophenyl-phenylether	0.683	0.799	0.697	0.711	0.755	0.750	0.757	0.816		0.746118	6.30
Diethyl phthalate	1.335	1.572	1.343	1.468	1.471	1.502	1.446	1.479		1.452199	5.44

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Quality Control Summary
SDG: L838049
Weston Solutions - CO

Test: Semi-Volatiles by Method 8270C
Project: Cowboy Timber
Instrument ID: BNAMS11
Method Name : S811E27P.M

Relative Response Factor Summary

Compound Name	Level 500	Level 1K	Level 4K	Level 10K	Level 20K	Level 30K	Level 40K	Level 50K	Level 1K1	Average RRF	%RSD
4-Nitroaniline	0.322	0.365	0.313	0.290	0.319	0.316	0.299	0.325		0.318565	6.93
Azobenzene	1.505	1.531	1.451	1.590	1.533	1.504	1.634	1.611		1.544874	4.00
Atrazine									0.499	0.448554	6.70
4,6-Dinitro-2-methylphenol	0.097	0.086	0.103	0.125	0.140	0.145	0.153	0.143		0.124000	20.46
N-Nitrosodiphenylamine	0.604	0.631	0.548	0.585	0.607	0.653	0.688	0.674		0.623800	7.51
2,4,6-Tribromophenol	0.095	0.100	0.094	0.112	0.117	0.120	0.126	0.122		0.110831	11.38
4-Bromophenyl-phenylether	0.268	0.263	0.226	0.240	0.246	0.261	0.271	0.267		0.255198	6.33
Hexachlorobenzene	0.263	0.241	0.231	0.250	0.267	0.267	0.275	0.275		0.258623	6.25
n-octadecane	0.118	0.115	0.097	0.123	0.119	0.126	0.128	0.116		0.117673	8.00
Pentachlorophenol	0.104	0.094	0.106	0.140	0.159	0.159	0.172	0.175		0.138651	23.59
Phenanthrene	1.200	1.143	1.001	1.121	1.143	1.160	1.206	1.168		1.142816	5.63
Anthracene	1.105	1.131	1.008	1.102	1.164	1.140	1.223	1.185		1.132369	5.69
Carbazole	0.932	0.988	0.870	0.990	0.990	1.021	1.085	1.045		0.990122	6.71
Di-n-butyl phthalate	1.225	1.206	1.124	1.282	1.341	1.442	1.446	1.400		1.308108	9.06
2-nitrodiphenylamine									0.272	0.296233	7.77
Fluoranthene	1.270	1.249	1.119	1.303	1.376	1.369	1.505	1.453		1.330489	9.20
Benzidine									0.676	0.710173	6.14
Pyrene	1.148	1.114	1.045	1.077	1.139	1.196	1.165	1.247		1.141518	5.63
p-Terphenyl-d14	0.900	0.953	0.854	0.842	0.892	0.909	1.009	0.995		0.919365	6.68
Benzylbutyl phthalate	0.480	0.496	0.455	0.511	0.516	0.540	0.549	0.539		0.510820	6.35
3,3-Dichlorobenzidine									0.354	0.362657	4.82
Benzo(a)anthracene	1.222	1.249	1.095	1.140	1.251	1.186	1.241	1.291		1.209285	5.38
Chrysene	1.173	1.155	1.060	1.063	1.125	1.166	1.212	1.216		1.146149	5.23
bis(2-Ethylhexyl)phthalate	0.776	0.789	0.658	0.729	0.739	0.800	0.830	0.837		0.769738	7.69
Di-n-octyl phthalate	1.269	1.249	1.200	1.340	1.397	1.408	1.459	1.415		1.342218	6.93
Benzo(b)fluoranthene	1.189	1.179	1.014	1.123	1.167	1.249	1.179	1.214		1.164385	6.08
Benzo(k)fluoranthene	1.031	1.116	1.034	1.055	1.139	1.123	1.149	1.104		1.093863	4.29
Benzo(a)pyrene	1.073	1.163	1.036	1.098	1.148	1.189	1.148	1.170		1.128068	4.71
Indeno(1,2,3-cd)pyrene	1.289	1.419	1.258	1.317	1.368	1.344	1.274	1.239		1.313555	4.64

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Quality Control Summary
SDG: L838049
Weston Solutions - CO

Test: Semi-Volatiles by Method 8270C
Project: Cowboy Timber
Instrument ID: BNAMS11
Method Name : S811E27P.M

Relative Response Factor Summary

Compound Name	Level 500	Level 1K	Level 4K	Level 10K	Level 20K	Level 30K	Level 40K	Level 50K	Level 1K1	Average RRF	%RSD
Dibenz(a,h)anthracene	1.165	1.203	1.042	1.159	1.173	1.183	1.136	1.090		1.143900	4.66
Benzo(g,h,i)perylene	1.200	1.188	1.066	1.125	1.127	1.091	1.008	0.957		1.095139	7.64

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Quality Control Summary
SDG: L838049
Weston Solutions - CO

Test: Semi-Volatiles by Method 8270C
Project No: 20408.012.001.0345.0
Project: Cowboy Timber EPA ID: TN00003
Collection Date: 5/23/2016
Instrument ID: BNAMS11

Method Name : S811E27P.M Date : 5/31/2016
FileName : 0530_04.D Time : 1:42 AM

Continuing Calibration Verification

Compound Name	Average RRF	CCC RRF	%D		
n-Nitrosodimethylamine	1.0474	0.9508	9.22		
Bis(2-chloroethyl)ether	1.3424	1.1773	12.3		
Phenol	2.5453	2.3728	6.78		
2-Chlorophenol	1.9806	1.8206	8.08		
1,4-Dichlorobenzene	2.2696	2.1272	6.27		
Bis(2-chloroisopropyl)ether	0.5664	0.5544	2.12		
Hexachloroethane	0.9758	0.9355	4.13		
n-Nitrosodi-n-propylamine	1.5772	1.5204	3.61	>0.05	
Nitrobenzene	0.4590	0.4458	2.87		
Isophorone	0.8067	0.8055	0.14		
2-Nitrophenol	0.1956	0.1924	1.63		
2,4-Dimethylphenol	0.4331	0.4177	3.55		
Bis(2-chlorethoxy)methane	0.4577	0.4074	11		
2,4-Dichlorophenol	0.3229	0.3140	2.76		
1,2,4-Trichlorobenzene	0.3809	0.3594	5.65		
Naphthalene	1.1371	1.0314	9.3		
Hexachloro-1,3-butadiene	0.2621	0.2808	7.16		
4-Chloro-3-methylphenol	0.3807	0.3594	5.6		
Hexachlorocyclopentadiene	0.4453	0.3221	27.7	>0.05	**
2,4,6-Trichlorophenol	0.4129	0.3863	6.45		
2-Chloronaphthalene	1.2356	1.1205	9.32		
Acenaphthylene	1.8704	1.6604	11.2		
Dimethyl phthalate	1.4036	1.2195	13.1		
2,6-Dinitrotoluene	0.3170	0.2756	13.1		
Acenaphthene	1.2452	1.1577	7.03		
2,4-Dinitrophenol	0.1740	0.1527	12.3	>0.05	**
2,4-Dinitrotoluene	0.4245	0.3866	8.93		
4-Nitrophenol	0.2442	0.2179	10.8	>0.05	
Fluorene	1.4527	1.2242	15.7		
4-Chlorophenyl-phenylether	0.7461	0.6668	10.6		
Diethyl phthalate	1.4522	1.3124	9.63		

*** - calibrated by linear regression*

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Quality Control Summary
SDG: L838049
Weston Solutions - CO

Test: Semi-Volatiles by Method 8270C
Project No: 20408.012.001.0345.0
Project: Cowboy Timber EPA ID: TN00003
Collection Date: 5/23/2016
Instrument ID: BNAMS11

Method Name : S811E27P.M Date : 5/31/2016
FileName : 0530_04.D Time : 1:42 AM

Continuing Calibration Verification

Compound Name	Average RRF	CCC RRF	%D	
4,6-Dinitro-2-methylphenol	0.1240	0.1287	3.76	**
n-Nitrosodiphenylamine	0.6238	0.5327	14.6	
4-Bromophenyl-phenylether	0.2552	0.2274	10.9	
Hexachlorobenzene	0.2586	0.2231	13.7	
Pentachlorophenol	0.1387	0.1220	12	**
Phenanthrene	1.1428	1.0037	12.2	
Anthracene	1.1324	1.0276	9.25	
Di-n-butyl phthalate	1.3081	1.1639	11	
Fluoranthene	1.3305	1.2513	5.95	
Pyrene	1.1415	1.0220	10.5	
Benzylbutyl phthalate	0.5108	0.4197	17.8	
Benzo(a)anthracene	1.2093	1.1413	5.62	
Chrysene	1.1461	1.0027	12.5	
Bis(2-ethylhexyl)phthalate	0.7697	0.6318	17.9	
Di-n-octyl phthalate	1.3422	1.0893	18.8	
Benzo(b)fluoranthene	1.1644	1.1319	2.79	
Benzo(k)fluoranthene	1.0939	1.0289	5.93	
Benzo(a)pyrene	1.1281	1.0697	5.17	
Indeno(1,2,3-cd)pyrene	1.3136	1.2076	8.06	
Dibenz(a,h)anthracene	1.1439	1.0259	10.3	
Benzo(g,h,i)perylene	1.0951	1.0064	8.1	

*** - calibrated by linear regression*

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Quality Control Summary
SDG: L838049
Weston Solutions - CO

Test: Semi-Volatiles by Method 8270C
Project No: 20408.012.001.0345.0
Project: Cowboy Timber EPA ID: TN00003
Collection Date: 5/23/2016
Instrument ID: BNAMS11

Method Name : S811E27P.M
FileName : 0530_05.D

Date : 5/31/2016
Time : 2:06 AM

Continuing Calibration Verification

Compound Name	Average RRF	CCC RRF	%D
Benzidine	0.7102	0.6943	2.24

*** - calibrated by linear regression*

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Fax (615) 758-5859
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Quality Control Summary
SDG: L838049
Weston Solutions - CO

Test: Semi-Volatiles by Method 8270C
Project No: 20408.012.001.0345.0
Project: Cowboy Timber EPA ID: TN00003
Collection Date: 5/23/2016
Instrument ID: BNAMS2

Method Name : S802E24P.M
FileName : 0601_02.D

Date : 6/1/2016
Time : 10:11 AM

Continuing Calibration Verification

Compound Name	Average RRF	CCC RRF	%D		
n-Nitrosodimethylamine	1.2260	1.2064	1.6		
Bis(2-chloroethyl)ether	1.2495	1.2836	2.73		
Phenol	2.2539	2.3394	3.79		
2-Chlorophenol	1.9720	2.0304	2.96		
1,4-Dichlorobenzene	2.2661	2.2842	0.8		
Bis(2-chloroisopropyl)ether	0.5805	0.6066	4.5		
Hexachloroethane	0.9589	0.9840	2.62		
n-Nitrosodi-n-propylamine	1.4180	1.4581	2.82	>0.05	
Nitrobenzene	0.3984	0.4075	2.27		
Isophorone	0.6897	0.6746	2.19		
2-Nitrophenol	0.1910	0.2043	7.01		
2,4-Dimethylphenol	0.3802	0.3827	0.65		
Bis(2-chlorethoxy)methane	0.4162	0.4197	0.84		
2,4-Dichlorophenol	0.3178	0.3179	0.03		
1,2,4-Trichlorobenzene	0.3722	0.3613	2.95		
Naphthalene	1.1237	1.1075	1.44		
Hexachloro-1,3-butadiene	0.2465	0.2386	3.21		
4-Chloro-3-methylphenol	0.3330	0.3362	0.94		
Hexachlorocyclopentadiene	0.3302	0.2787	15.6	>0.05	**
2,4,6-Trichlorophenol	0.3660	0.4047	10.6		
2-Chloronaphthalene	1.2128	1.2737	5.02		
Acenaphthylene	1.8782	1.9157	2		
Dimethyl phthalate	1.3590	1.3567	0.17		
2,6-Dinitrotoluene	0.3087	0.3260	5.58		
Acenaphthene	1.2392	1.2804	3.32		
2,4-Dinitrophenol	0.1447	0.1488	2.81	>0.05	**
2,4-Dinitrotoluene	0.4111	0.4375	6.41		
4-Nitrophenol	0.2341	0.2661	13.7	>0.05	
Fluorene	1.4297	1.4601	2.13		
4-Chlorophenyl-phenylether	0.7031	0.6948	1.18		
Diethyl phthalate	1.4123	1.4281	1.12		

** - *calibrated by linear regression*

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Tax I.D 62-0814289
Est. 1970

Quality Control Summary
SDG: L838049
Weston Solutions - CO

Test: Semi-Volatiles by Method 8270C
Project No: 20408.012.001.0345.0
Project: Cowboy Timber EPA ID: TN00003
Collection Date: 5/23/2016
Instrument ID: BNAMS2

Method Name : S802E24P.M Date : 6/1/2016
FileName : 0601_02.D Time : 10:11 AM

Continuing Calibration Verification

Compound Name	Average RRF	CCC RRF	%D	
4,6-Dinitro-2-methylphenol	0.1014	0.1164	14.8	**
n-Nitrosodiphenylamine	0.6173	0.6396	3.62	
4-Bromophenyl-phenylether	0.2238	0.2181	2.55	
Hexachlorobenzene	0.2520	0.2491	1.15	
Pentachlorophenol	0.1131	0.1293	14.4	**
Phenanthrene	1.1312	1.1544	2.06	
Anthracene	1.1498	1.1832	2.9	
Di-n-butyl phthalate	1.2951	1.4134	9.13	
Fluoranthene	1.2807	1.3355	4.27	
Pyrene	1.1623	1.1601	0.19	
Benzylbutyl phthalate	0.5272	0.5634	6.85	
Benzo(a)anthracene	1.2091	1.1956	1.12	
Chrysene	1.1320	1.1339	0.17	
Bis(2-ethylhexyl)phthalate	0.7508	0.8490	13.1	
Di-n-octyl phthalate	1.3010	1.5445	18.7	
Benzo(b)fluoranthene	1.2334	1.2290	0.35	
Benzo(k)fluoranthene	1.1129	1.1605	4.28	
Benzo(a)pyrene	1.1546	1.2069	4.52	
Indeno(1,2,3-cd)pyrene	1.3064	1.4797	13.3	
Dibenz(a,h)anthracene	1.1318	1.2805	13.1	
Benzo(g,h,i)perylene	1.0837	1.2437	14.8	

*** - calibrated by linear regression*

ESC LAB SCIENCES
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12065 Lebanon Rd
Mt. Juliet, TN 37122
(615) 758-5858
(800) 767-5859
Fax (615) 758-5859
Tax I.D 62-0814289
Est. 1970

Quality Control Summary
SDG: L838049
Weston Solutions - CO

Test: Semi-Volatiles by Method 8270C
Project No: 20408.012.001.0345.0
Project: Cowboy Timber EPA ID: TN00003
Collection Date: 5/23/2016
Instrument ID: BNAMS2

Method Name : S802E24P.M
FileName : 0601_03.D

Date : 6/1/2016
Time : 10:36 AM

Continuing Calibration Verification

Compound Name	Average RRF	CCC RRF	%D
Benzidine	0.6827	0.5767	15.5

** - *calibrated by linear regression*

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Est. 1970

Quality Control Summary
SDG: L838049
Weston Solutions - CO

Test: Semi-Volatiles by Method 8270C
Project No: 20408.012.001.0345.0
Project: Cowboy Timber EPA ID: TN00003
Collection Date: 5/23/2016
Instrument ID: BNAMS2

Method Name : S802E24P.M Date : 6/1/2016
FileName : 0601_32.D Time : 11:24 PM

Continuing Calibration Verification

Compound Name	Average RRF	CCC RRF	%D		
n-Nitrosodimethylamine	1.2260	1.1514	6.09		
Bis(2-chloroethyl)ether	1.2495	1.2197	2.38		
Phenol	2.2539	2.2577	0.17		
2-Chlorophenol	1.9720	2.0095	1.9		
1,4-Dichlorobenzene	2.2661	2.2725	0.28		
Bis(2-chloroisopropyl)ether	0.5805	0.5976	2.94		
Hexachloroethane	0.9589	0.9833	2.54		
n-Nitrosodi-n-propylamine	1.4180	1.4120	0.43	>0.05	
Nitrobenzene	0.3984	0.4098	2.87		
Isophorone	0.6897	0.6697	2.91		
2-Nitrophenol	0.1910	0.2136	11.8		
2,4-Dimethylphenol	0.3802	0.3940	3.62		
Bis(2-chlorethoxy)methane	0.4162	0.4214	1.26		
2,4-Dichlorophenol	0.3178	0.3326	4.66		
1,2,4-Trichlorobenzene	0.3722	0.3780	1.54		
Naphthalene	1.1237	1.1366	1.15		
Hexachloro-1,3-butadiene	0.2465	0.2513	1.94		
4-Chloro-3-methylphenol	0.3330	0.3525	5.86		
Hexachlorocyclopentadiene	0.3302	0.2684	18.7	>0.05	**
2,4,6-Trichlorophenol	0.3660	0.4019	9.79		
2-Chloronaphthalene	1.2128	1.2519	3.22		
Acenaphthylene	1.8782	1.9135	1.88		
Dimethyl phthalate	1.3590	1.3577	0.1		
2,6-Dinitrotoluene	0.3087	0.3284	6.35		
Acenaphthene	1.2392	1.2850	3.69		
2,4-Dinitrophenol	0.1447	0.1644	13.7	>0.05	**
2,4-Dinitrotoluene	0.4111	0.4370	6.28		
4-Nitrophenol	0.2341	0.2665	13.8	>0.05	
Fluorene	1.4297	1.4828	3.71		
4-Chlorophenyl-phenylether	0.7031	0.7194	2.32		
Diethyl phthalate	1.4123	1.4172	0.34		

*** - calibrated by linear regression*

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Quality Control Summary
SDG: L838049
Weston Solutions - CO

Test: Semi-Volatiles by Method 8270C
Project No: 20408.012.001.0345.0
Project: Cowboy Timber EPA ID: TN00003
Collection Date: 5/23/2016
Instrument ID: BNAMS2

Method Name : S802E24P.M Date : 6/1/2016
FileName : 0601_32.D Time : 11:24 PM

Continuing Calibration Verification

Compound Name	Average RRF	CCC RRF	%D	
4,6-Dinitro-2-methylphenol	0.1014	0.1192	17.6	**
n-Nitrosodiphenylamine	0.6173	0.6383	3.4	
4-Bromophenyl-phenylether	0.2238	0.2174	2.86	
Hexachlorobenzene	0.2520	0.2505	0.61	
Pentachlorophenol	0.1131	0.1342	18.6	**
Phenanthrene	1.1312	1.1469	1.39	
Anthracene	1.1498	1.1874	3.27	
Di-n-butyl phthalate	1.2951	1.3613	5.11	
Fluoranthene	1.2807	1.3375	4.43	
Pyrene	1.1623	1.1474	1.28	
Benzylbutyl phthalate	0.5272	0.5301	0.54	
Benzo(a)anthracene	1.2091	1.1838	2.1	
Chrysene	1.1320	1.0893	3.77	
Bis(2-ethylhexyl)phthalate	0.7508	0.8351	11.2	
Di-n-octyl phthalate	1.3010	1.4058	8.06	
Benzo(b)fluoranthene	1.2334	1.2245	0.72	
Benzo(k)fluoranthene	1.1129	1.1841	6.39	
Benzo(a)pyrene	1.1546	1.2077	4.6	
Indeno(1,2,3-cd)pyrene	1.3064	1.4580	11.6	
Dibenz(a,h)anthracene	1.1318	1.2626	11.6	
Benzo(g,h,i)perylene	1.0837	1.2151	12.1	

*** - calibrated by linear regression*

Raw Data

View as PDF (CreatePDF?batchnum=WG876258)

BNA SS Extractions Benchsheet

Batch #: WG876258

Analyst: NCC250 **Prep Start Date/Time:** 05/30/16 20:01 **Prep End Date/Time:** 05/31/16 02:50 **SOP:** 330707 **Method:** 3546 **Balance ID:** 2 **Syringe Lot#:**

Na2SO4: 16E18484 Exp. Date:11/18/16 **MeCl2:** 16E05591 Exp. Date:11/05/16 **Surrogate:** 16E03367 Amt. Used: 0.50 mL Exp. Date:09/30/16 **LCS/MS Spike:** 16E25857 Amt. Used: 0.50 mL Exp. Date:08/31/16

Sample Number	Qualifiers	Initial Sample Wt (g)	Soil Description	Solvent Volume (mL)	Final Volume (mL)	Extract Color	Sample Comments
BLANK		15	Sand	25	0.5	Colorless	
LCS		15	Sand	25	0.5	Yellow	
LCSD		15	Sand	25	0.5	Yellow	
MS(L838049-01)		15	Dirt	25	0.5	Brown	
MSD(L838049-01)		15	Dirt	25	0.5	Brown	
1. L838049-01		15	Dirt	25	0.5	Brown	
2. L838049-02		15	Dirt	25	0.5	Dark-brown	
3. L838049-03		15	Dirt	25	5	Brown	
4. L838049-04		15	Dirt	25	0.5	Brown	
5. L838049-05		15	Dirt	25	0.5	Black	
6. L838049-06		15	Dirt	25	5	Black	
7. L838356-01		15	Dirt	25	5	Black	
8. L838356-02		15	Sand	25	0.5	Tan	
9. L838356-03		15	Dirt	25	5	Black	
10. L838356-04		15	Dirt	25	5	Black	
11. L838356-05		15	Dirt	25	0.5	Yellow	
12. L838356-06		15	Dirt	25	0.5	Yellow	
13. L838358-01		15	Dirt	25	0.5	Yellow	
14. L838358-02		15	Dirt	25	0.5	Black	
15. L838358-03		15	Dirt	25	0.5	Brown	
16. L838358-04		15	Dirt	25	5	Black	
17. L838377-01		15	Clay	25	0.5	Colorless	
18. L838377-02		15	Dirt	25	0.5	Colorless	
19. L838377-03		15	Dirt	25	0.5	Colorless	

Sample Number	Qualifiers	Initial Sample Wt (g)	Soil Description	Solvent Volume (mL)	Final Volume (mL)	Extract Color	Sample Comments
20. L838377-04		15	Dirt	25	0.5	Colorless	

Comments:

Reviewed By:ADF377 on 05/31/16 12:15:45

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

Injection Log

Instrument ID : BNAMS11
Computer Name : SVCOMPAC
Released By : Allen Fuller
Date Released : 5/31/2016 2:35:48 PM
Run ID : 053016
Signature : _____

#	File ID	Sample ID	Method	WG	Product	Matrix	Account #	State	Dil.	Mult.	Injected	Misc.
1	0530_01	INSTBLK	S811E24P						1	1	05/31/16 0016	"BLANK"
2	0530_02	DNR TUNE 50 PPM 16E09755	TUNEC						1	1	05/31/16 0039	"DFTPP"
3	0530_02T	TUNE 50 PPM 16E09755								1	05/31/16 0039	
4	0530_03	TUNE 50 PPM 16E09755	TUNEC						1	1	05/31/16 0106	"DFTPP"
5	0530_03T	TUNE 50 PPM 16E09755	TUNEC							1	05/31/16 0106	
6	0530_04	ICV SVMS 10K PPB 16D25863	S811E27P						1	1	05/31/16 0142	"8270 Primary Calibration ISTD 16D22768"
7	0530_05	ICV TCL 10K1 PPB 16D25867	S811E27P						1	1	05/31/16 0206	"8270 TCL Calibration 16D22768"
8	0530_06	LCS	S811E27P	WG876258	SV8270	SS			1	0.0333	05/31/16 0319	"SOIL IS 16E03322"
9	0530_07	LCSD	S811E27P	WG876258	SV8270	SS			1	0.0333	05/31/16 0343	"SOIL IS 16E03322"
10	0530_08	BLANK	S811E27P	WG876258	SV8270	SS			1	0.0333	05/31/16 0406	"SOIL IS 16E03322"
11	0530_09	L838356-02	S811E27P	WG876258	SV8270	SS	VERTEXDCO	CO	1	0.0333	05/31/16 0429	"SOIL IS 16E03322"
12	0530_10	L838356-06	S811E27P	WG876258	SV8270	SS	VERTEXDCO	CO	1	0.0333	05/31/16 0453	"SOIL IS 16E03322"
13	0530_11	L838377-01	S811E27P	WG876258	SV8270PP	SS	TRILEAF	KY	1	0.0333	05/31/16 0516	"SOIL IS 16E03322"
14	0530_12	L838377-02	S811E27P	WG876258	SV8270PP	SS	TRILEAF	KY	1	0.0333	05/31/16 0540	"SOIL IS 16E03322"
15	0530_13	L838377-03	S811E27P	WG876258	SV8270PP	SS	TRILEAF	KY	1	0.0333	05/31/16 0603	"SOIL IS 16E03322"
16	0530_14	L838377-04	S811E27P	WG876258	SV8270PP	SS	TRILEAF	KY	1	0.0333	05/31/16 0626	"SOIL IS 16E03322"
17	0530_15	L838358-01	S811E27P	WG876258	SV8270	SS	GEOSERSTN	TN	1	0.0333	05/31/16 0650	"SOIL IS 16E03322"
18	0530_16	L838049-01	S811E27P	WG876258	SV8270	SS	WESSOLLCO	WY	1	0.0333	05/31/16 0713	"SOIL IS 16E03322"
19	0530_17	MS	S811E27P	WG876258	SV8270	SS			1	0.0333	05/31/16 0736	"SOIL IS 16E03322"

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

Injection Log

Instrument ID : BNAMS11
Computer Name : SVCOMPAC
Released By : Allen Fuller
Date Released : 5/31/2016 2:35:48 PM
Run ID : 053016
Signature : _____

#	File ID	Sample ID	Method	WG	Product	Matrix	Account #	State	Dil.	Mult.	Injected	Misc.
20	0530_18	MSD	S811E27P	WG876258	SV8270	SS			1	0.0333	05/31/16 0800	"SOIL IS 16E03322"
21	0530_19	L838049-04	S811E27P	WG876258	SV8270	SS	WESSOLLCO	WY	1	0.0333	05/31/16 0823	"SOIL IS 16E03322"
22	0530_20	L838356-05	S811E27P	WG876258	SV8270	SS	VERTEXDCO	CO	1	0.0333	05/31/16 0847	"SOIL IS 16E03322"
23	0530_21	L838358-03	S811E27P	WG876258	SV8270	SS	GEOSERSTN	TN	1	0.0333	05/31/16 0910	"SOIL IS 16E03322"
24	0530_22	L838049-02	S811E27P	WG876258	SV8270	SS	WESSOLLCO	WY	5	0.167	05/31/16 0934	"SOIL IS 16E03322"
25	0530_23	L838049-05	S811E27P	WG876258	SV8270	SS	WESSOLLCO	WY	5	0.167	05/31/16 0957	"SOIL IS 16E03322"
26	0530_24	L838358-02	S811E27P	WG876258	SV8270	SS	GEOSERSTN	TN	5	0.167	05/31/16 1020	"SOIL IS 16E03322"
27	0530_25	L838049-03	S811E27P	WG876258	SV8270	SS	WESSOLLCO	WY	10	0.333	05/31/16 1044	"SOIL IS 16E03322"
28	0530_26	L838049-06	S811E27P	WG876258	SV8270	SS	WESSOLLCO	WY	10	0.333	05/31/16 1107	"SOIL IS 16E03322"
29	0530_27	L836953-04	S811E27P	WG875080	SV8270	SS	BNSF1KEN	MT	1500	50	05/31/16 1131	"SOIL IS 16E03322"
30	0530_28	L837086-03	S811E27P	WG875159	SV8270	SS	CRANE	IN	10	0.333	05/31/16 1159	"SOIL IS 16E03322"
31	0530_29	L838356-04	S811E27P	WG876258	SV8270	SS	VERTEXDCO	CO	10	0.333	05/31/16 1223	"SOIL IS 16E03322"
32	0530_30	L838358-04	S811E27P	WG876258	SV8270	SS	GEOSERSTN	TN	10	0.333	05/31/16 1246	"SOIL IS 16E03322"
33	0530_31	DNR L838356-01	S811E27P	WG876258					10	0.333	05/31/16 1310	"SOIL IS 16E03322"
34	0530_32	DNR L838356-03	S811E27P	WG876258					20	0.666	05/31/16 1333	"SOIL IS 16E03322"

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\053016\0530 03.D Vial: 1
Acq On : 31 May 2016 1:06 am Operator: 280
Sample : TUNE 50 PPM 16E09755 Inst : BNAMS11
Misc : DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 31 1:40 2016 Quant Results File: TUNEC.RES

Quant Method : C:\MSDCHEM\1\METHODS\TUNEC.M (RTE Integrator)
Title : 8270 BNA
Last Update : Mon Sep 15 15:56:23 2014
Response via : Initial Calibration
DataAcq Meth : BNA11C

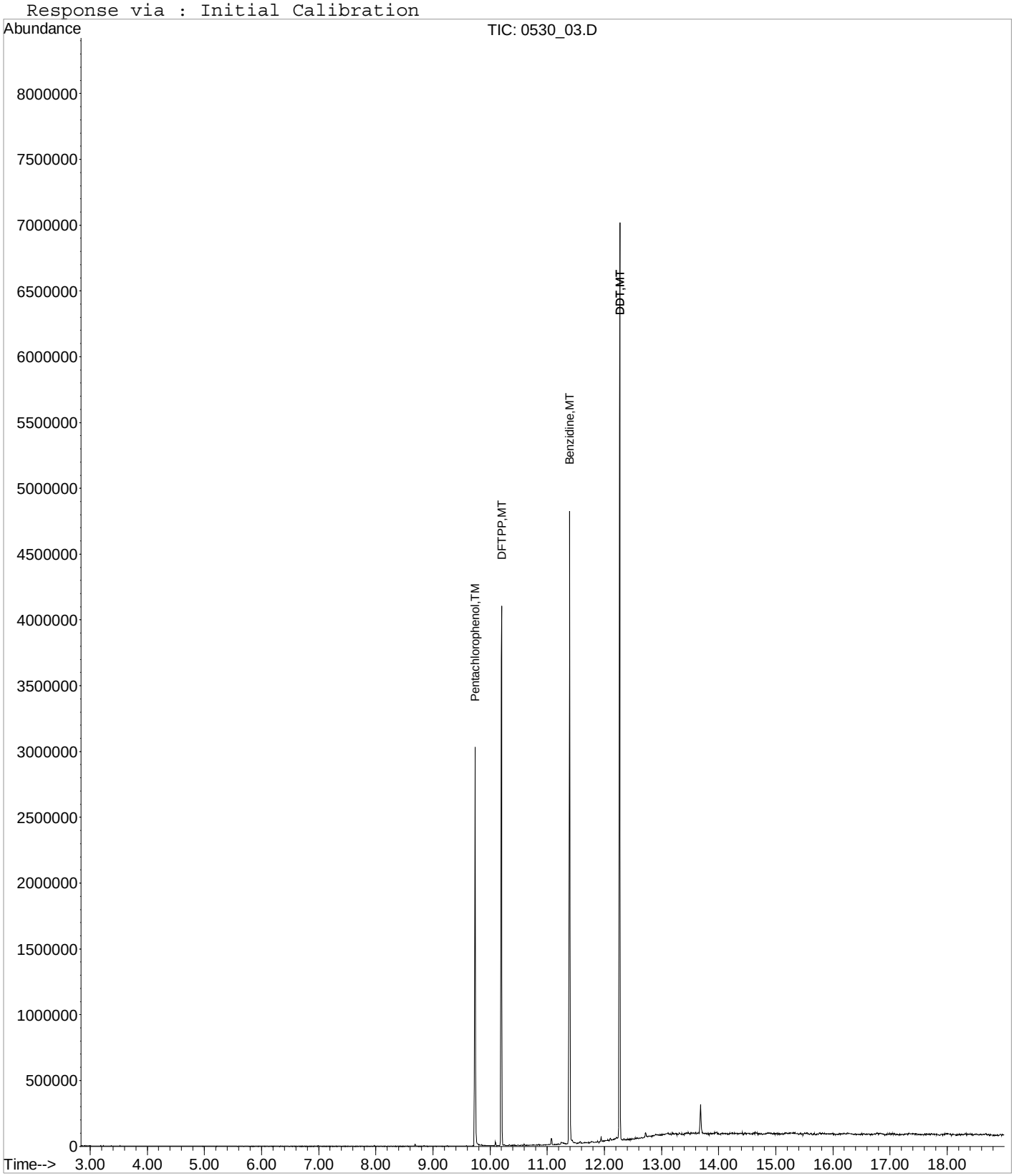
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
Target Compounds						Qvalue
1) Pentachlorophenol	9.74	264	200769	44.9250164	ug/mL	100
2) DFTPP	10.20	198	393687	53.2052599	ug/mL	100
3) Benzidine	11.40	184	1796220	48.5752640	ug/mL	100
4) DDT	12.27	TIC	6353811	323.8208016	ug/ml	100
5) DDT	12.27	235	1121125	83.3164886	ug/mL	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

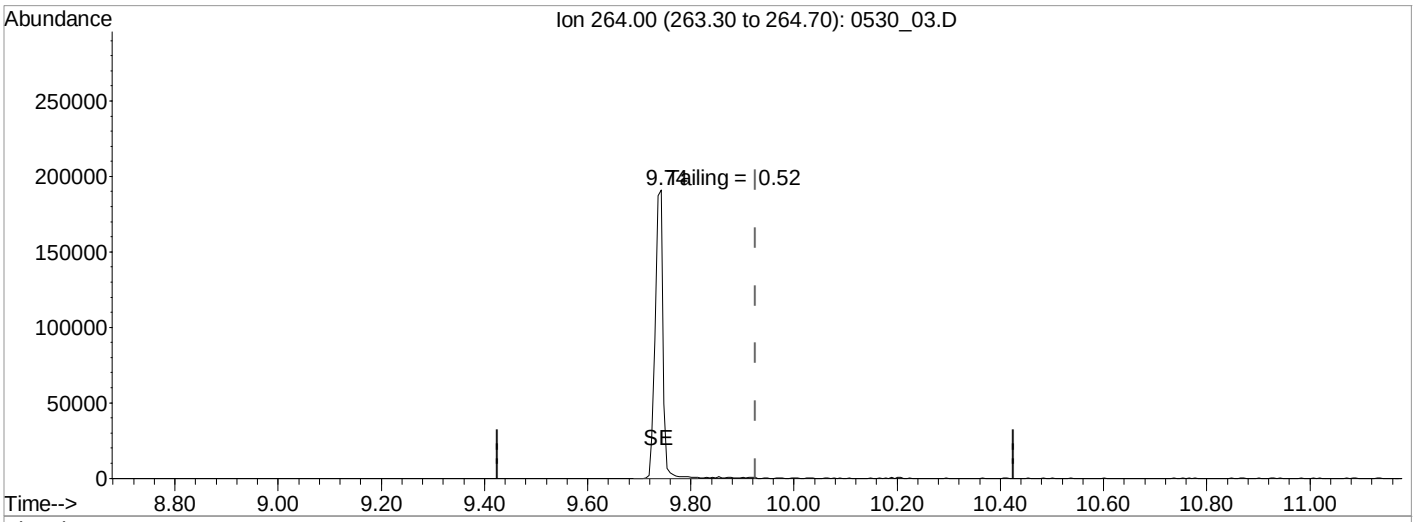
Data File : C:\MSDCHEM\1\DATA\053016\0530 03.D Vial: 1
Acq On : 31 May 2016 1:06 am Operator: 280
Sample : TUNE 50 PPM 16E09755 Inst : BNAMS11
Misc : DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 31 1:40 2016 Quant Results File: TUNEC.RES

Method : C:\MSDCHEM\1\METHODS\TUNEC.M (RTE Integrator)
Title : 8270 BNA
Last Update : Mon Sep 15 15:56:23 2014
Response via : Initial Calibration



Data File : C:\MSDCHEM\1\DATA\053016\0530 03.D Vial: 1
Acq On : 31 May 2016 1:06 am Operator: 280
Sample : TUNE 50 PPM 16E09755 Inst : BNAMS11
Misc : DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 31 1:40 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\TUNEC.M (RTE Integrator)
Title : 8270 BNA
Last Update : Mon Sep 15 15:56:23 2014
Response via : Single Level Calibration



TIC: 0530_03.D

(1) Pentachlorophenol (TM)

9.74min (-0.183) 44.9250164 ug/mL

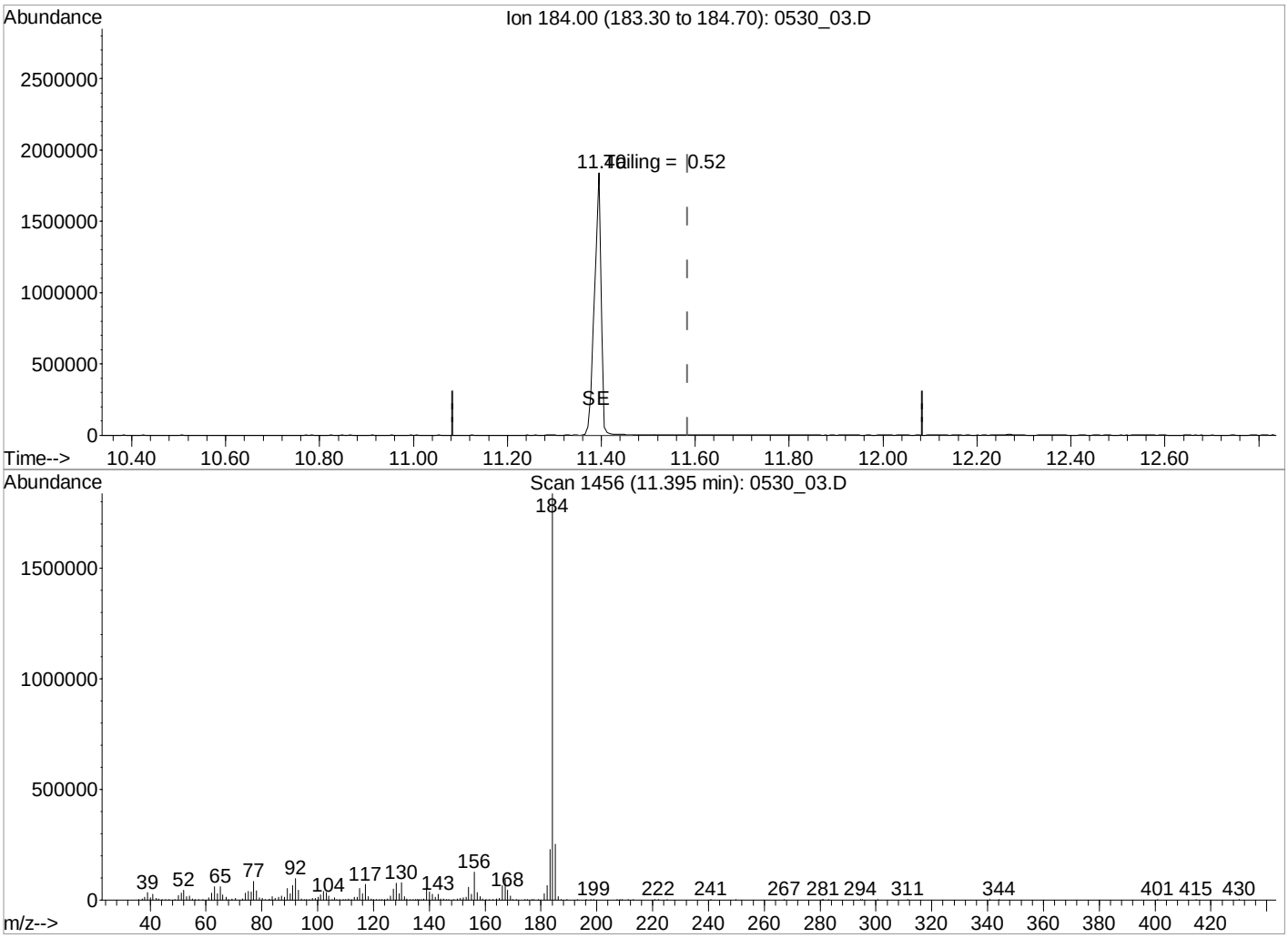
Qvalue = 100

response 200769

Ion	Exp%	Act%
264.00	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Data File : C:\MSDCHEM\1\DATA\053016\0530 03.D Vial: 1
Acq On : 31 May 2016 1:06 am Operator: 280
Sample : TUNE 50 PPM 16E09755 Inst : BNAMS11
Misc : DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 31 1:40 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\TUNEC.M (RTE Integrator)
Title : 8270 BNA
Last Update : Mon Sep 15 15:56:23 2014
Response via : Single Level Calibration



TIC: 0530_03.D

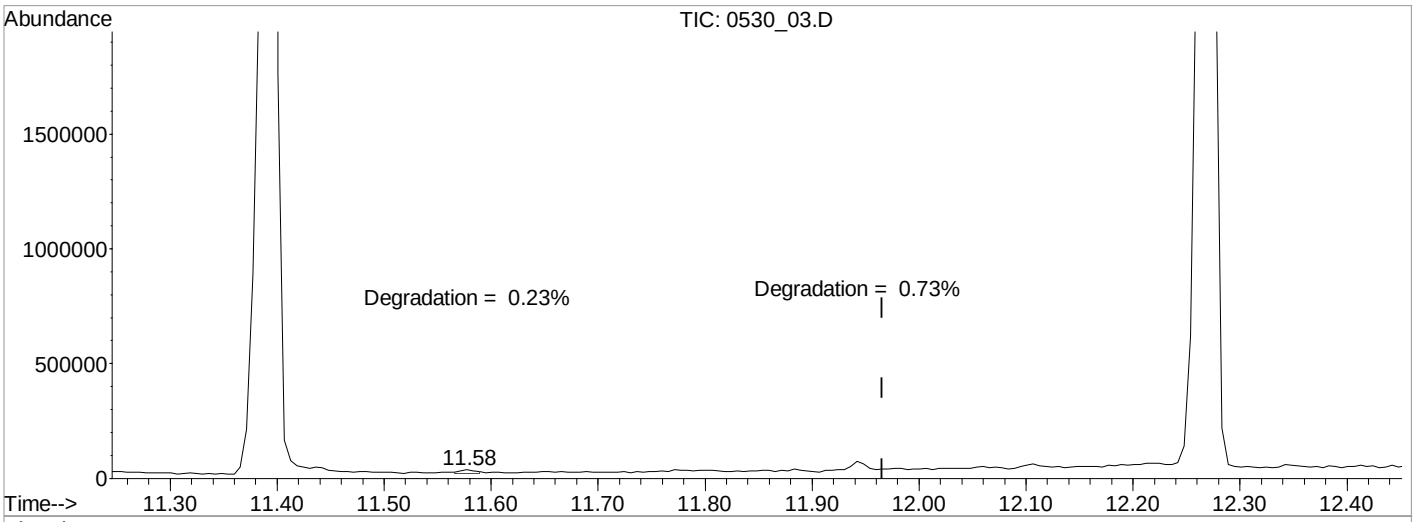
(3) Benzidine (MT)

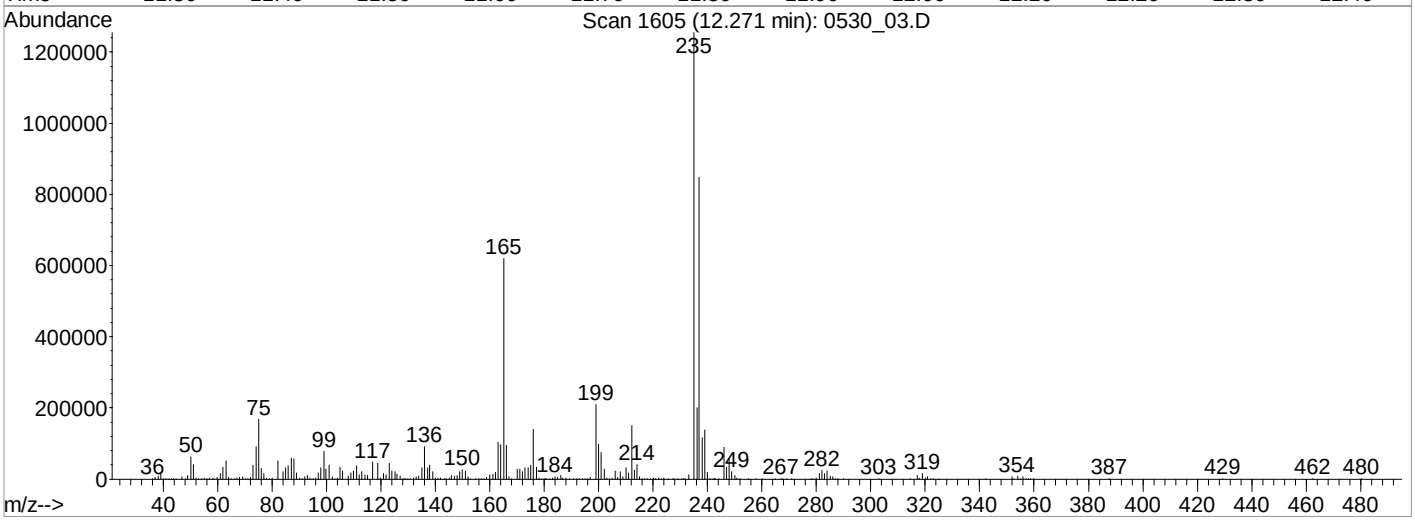
11.40min (-0.188) 48.5752640 ug/mL
Qvalue = 100
response 1796220

Ion	Exp%	Act%
184.00	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Data File : C:\MSDCHEM\1\DATA\053016\0530 03.D Vial: 1
Acq On : 31 May 2016 1:06 am Operator: 280
Sample : TUNE 50 PPM 16E09755 Inst : BNAMS11
Misc : DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 31 1:40 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S811E27P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue May 31 10:22:11 2016
Response via : Single Level Calibration





TIC: 0530_03.D

(4) DDT (MT)

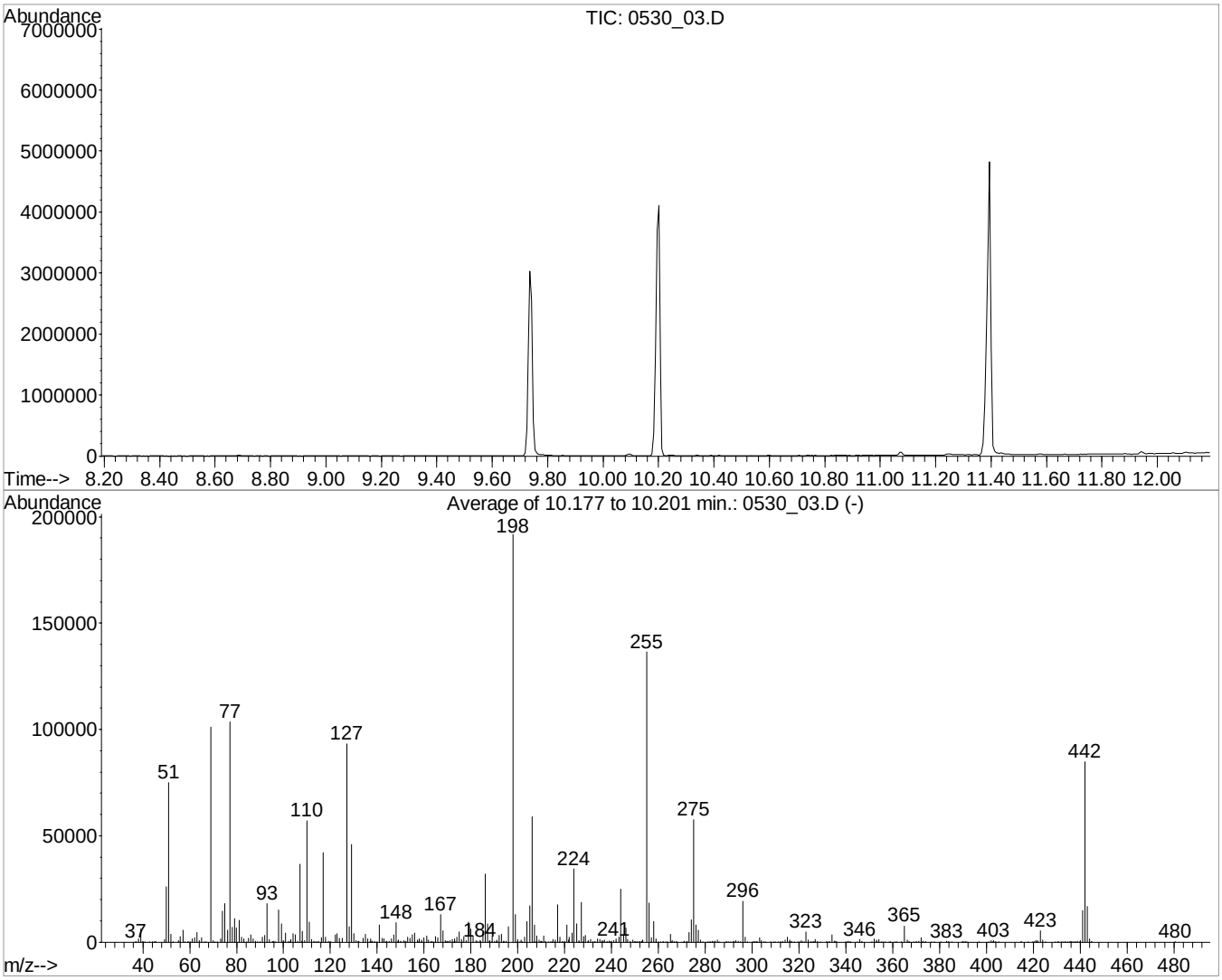
12.27min (-0.194) 323.8208016 ug/ml

Qvalue = 100

response 6353811

Signal	Exp%	Act%
TIC	100	100
0.00	6.60	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Data File : C:\MSDCHEM\1\DATA\053016\0530 03.D Vial: 1
Acq On : 31 May 2016 1:06 am Operator: 280
Sample : TUNE 50 PPM 16E09755 Inst : BNAMS11
Misc : DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\TUNEC.M (RTE Integrator)
Title : 8270 BNA



Spectrum Information: Average of 10.177 to 10.201 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	39.1	74888	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	52.7	101107	PASS
70	69	0.00	2	0.7	694	PASS
127	198	40	60	48.6	93198	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	191766	PASS
199	198	5	9	6.8	12946	PASS
275	198	10	30	30.0	57458	PASS
365	198	1	100	4.0	7628	PASS
441	443	0.01	100	88.6	14768	PASS
442	198	40	100	44.3	84883	PASS
443	442	17	23	19.6	16659	PASS

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\053016\0530 04.D Vial: 2
Acq On : 31 May 2016 1:42 am Operator: 280
Sample : ICV SVMS 10K PPB 16D25863 Inst : BNAMS11
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 31 10:38 2016 Quant Results File: S811E27P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S811E27P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue May 31 10:22:11 2016
Response via : Initial Calibration
DataAcq Meth : BNA11C

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.22	152	55258	8000.00	ppb		0.00
22) Naphthalene-d8	6.48	136	277639	8000.00	ppb		0.00
40) Acenaphthene-d10	8.35	164	178793	8000.00	ppb		0.00
64) Phenanthrene-d10	9.95	188	363945	8000.00	ppb		0.00
78) Chrysene-d12	12.81	240	452380	8000.00	ppb		0.00
88) Perylene-d12	14.52	264	457196	8000.00	ppb		0.01
System Monitoring Compounds							
4) 2-Fluorophenol	4.14	112	131179	9795.1384425	ppb		0.00
Spiked Amount 20.000	Range 10 - 74		Recovery = 48975.69%#				
7) Phenol-d5	4.86	99	161368	9337.6296352	ppb		0.00
Spiked Amount 20.000	Range 10 - 63		Recovery = 46688.15%#				
23) Nitrobenzene-d5	5.75	82	167450	10289.7815447	ppb		0.00
Spiked Amount 10.000	Range 28 - 123		Recovery = 102897.82%#				
44) 2-Fluorobiphenyl	7.61	172	303354	9535.6845905	ppb		0.00
Spiked Amount 10.000	Range 35 - 133		Recovery = 95356.85%#				
67) 2,4,6-Tribromophenol	9.20	330	41952	8320.4239304	ppb		0.00
Spiked Amount 20.000	Range 22 - 154		Recovery = 41602.12%#				
81) p-Terphenyl-d14	11.65	244	437132	8408.3593907	ppb		0.00
Spiked Amount 10.000	Range 30 - 148		Recovery = 84083.59%#				
Target Compounds							Qvalue
2) Pyridine	3.19	79	131609	8531.3988355	ppb	#	88
3) N-Nitrosodimethylamine	3.17	42	65673	9077.5815787	ppb		96
5) Aniline	4.93	66	85037	9423.0677468	ppb		97
6) bis(2-Chloroethyl)ether	4.97	63	81317	8769.6582486	ppb		92
8) Phenol	4.87	94	163893	9322.0554444	ppb		98
9) Benzaldehyde	4.91	105	126	11.7072572	ppb	#	1
10) 2-Chlorophenol	5.04	128	125752	9191.9960739	ppb		92
11) n-Decane	5.05	41	64324	8201.0316429	ppb	#	92
12) 1,3-Dichlorobenzene	5.18	146	138526	8907.0069109	ppb		91
13) 1,4-Dichlorobenzene	5.24	146	146934	9372.6857128	ppb		95
14) Benzyl Alcohol	5.34	79	140166	9975.8569640	ppb		97
15) 1,2-Dichlorobenzene	5.39	146	134635	9122.5268624	ppb		97
16) bis(2-Chloroisopropyl)ethe	5.47	121	38292	9788.3364979	ppb		99
17) 2-Methylphenol	5.42	108	117280	9176.7118227	ppb		93
18) Hexachloroethane	5.71	117	64616	9586.6187330	ppb		94
19) N-Nitrosodi-n-propylamine	5.59	70	105016	9639.4801074	ppb		87
20) 3&4-Methyl phenol	5.57	107	143376	9191.0815592	ppb		93
21) Acetophenone	5.58	105	1521	73.6464638	ppb	#	1
24) Nitrobenzene	5.77	77	154728	9712.8436549	ppb		92
25) Isophorone	6.00	82	279553	9985.7993040	ppb		99
26) 2-Nitrophenol	6.09	139	66767	9837.2917408	ppb		93
27) 2,4-Dimethylphenol	6.11	107	144962	9645.1563367	ppb		89
28) bis(2-Chlorethoxy)methane	6.21	93	141390	8900.9661595	ppb		91
29) 2,4-Dichlorophenol	6.32	162	108972	9724.4999541	ppb		92
30) Benzoic Acid	6.11	105	4977	1151.3145611	ppb	#	1
31) 1,2,4-Trichlorobenzene	6.42	180	124732	9435.4303979	ppb		93
32) Naphthalene	6.51	128	357942	9070.0461983	ppb		98
33) 4-Chloroaniline	6.55	65	58924	10132.6647581	ppb		84
34) Hexachloro-1,3-butadiene	6.62	225	97459	10716.1870170	ppb		93
35) Caprolactam	7.04	113	4082	1176.0610754	ppb	#	44
36) 4-Chloro-3-methylphenol	7.04	107	124713	9440.0555717	ppb		86
37) 2-Methylnaphthalene	7.22	142	233837	9161.4171100	ppb	#	1
38) 1-Methylnaphthalene	7.33	142	238694	9962.7718996	ppb	#	1

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\053016\0530 04.D Vial: 2
Acq On : 31 May 2016 1:42 am Operator: 280
Sample : ICV SVMS 10K PPB 16D25863 Inst : BNAMS11
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 31 10:38 2016 Quant Results File: S811E27P.RES

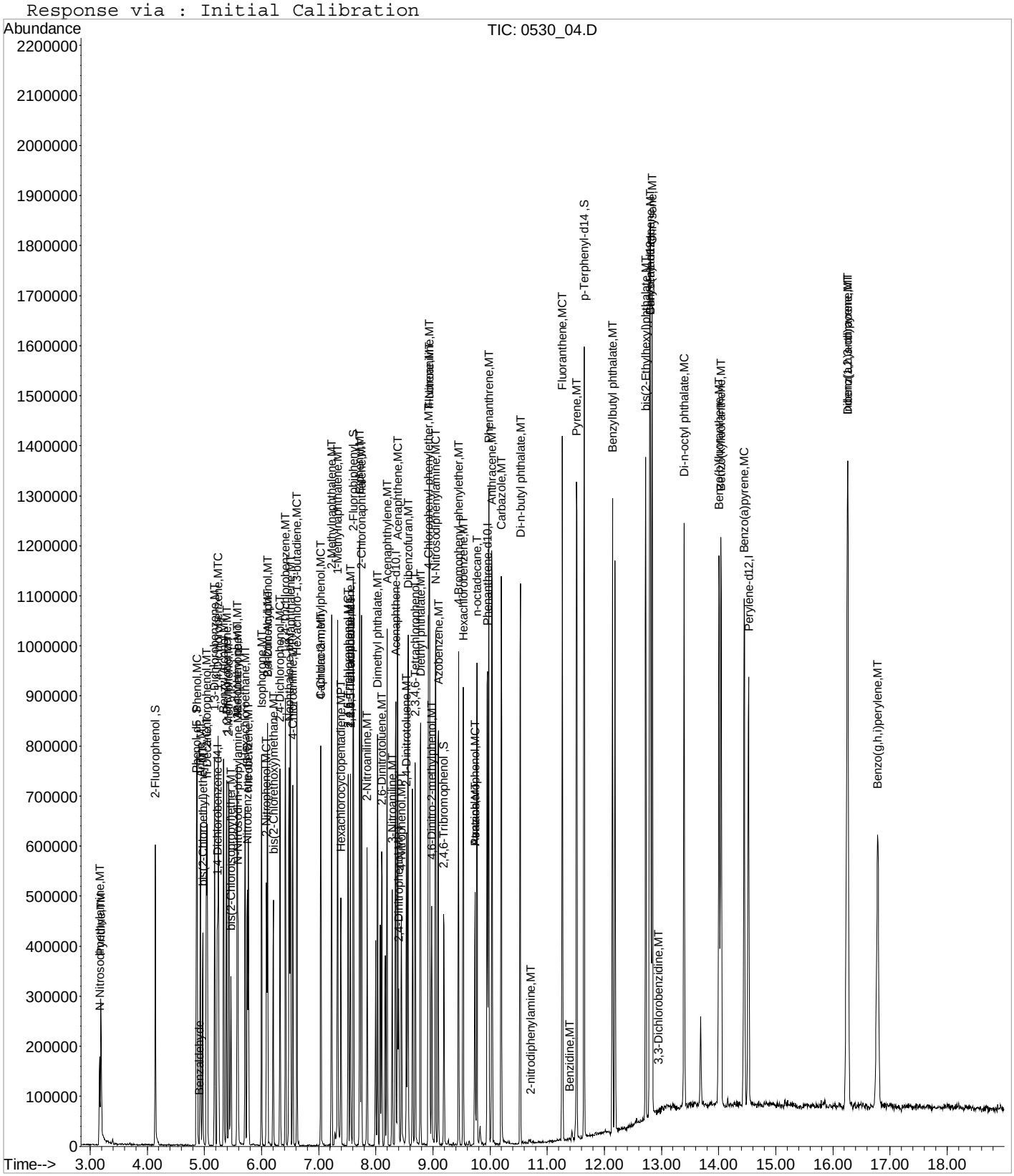
Quant Method : C:\MSDCHEM\1\METHODS\S811E27P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue May 31 10:22:11 2016
Response via : Initial Calibration
DataAcq Meth : BNA11C

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	1,2,4,5-Tetrachlorobenzene	7.55	216	69	4.9031791	ppb	#	16
41)	Hexachlorocyclopentadiene	7.39	237	71994	6587.3816204	ppb		89
42)	2,4,6-Trichlorophenol	7.52	196	86325	9354.6867389	ppb		85
43)	2,4,5-Trichlorophenol	7.55	196	87782	9120.3870771	ppb		96
45)	Biphenyl	7.72	154	311849	9084.9744916	ppb		98
46)	2-Chloronaphthalene	7.75	162	250428	9068.3590343	ppb		99
47)	2-Nitroaniline	7.85	138	75182	8802.5819044	ppb		98
48)	Acenaphthylene	8.20	152	371079	8876.9949607	ppb		97
49)	Dimethyl phthalate	8.03	163	272540	8687.8799823	ppb		87
50)	2,6-Dinitrotoluene	8.11	165	61597	8693.7772647	ppb		97
51)	3-Nitroaniline	8.29	138	59846	8555.7865462	ppb		92
52)	Acenaphthene	8.38	153	258734	9297.4296086	ppb		97
53)	2,4-Dinitrophenol	8.40	184	34128	8599.7854244	ppb	#	50
54)	Dibenzofuran	8.57	168	347616	8811.9249810	ppb	#	71
55)	2,4-Dinitrotoluene	8.54	165	86401	9106.5402260	ppb		84
56)	2,3,4,6-Tetrachlorophenol	8.69	232	78129	10767.5681363	ppb		97
57)	4-Nitrophenol	8.45	139	48689	8919.5938863	ppb		90
58)	Fluorene	8.94	166	273604	8427.0703521	ppb		88
59)	4-Chlorophenyl-phenylether	8.92	204	149033	8937.4611814	ppb		96
60)	Diethyl phthalate	8.78	149	293307	9037.2380347	ppb		97
61)	4-Nitroaniline	8.94	138	63158	8870.9395674	ppb	#	86
62)	Azobenzene	9.10	77	311341	9017.4284739	ppb	#	44
63)	Atrazine	9.74	200	9958	993.3368399	ppb	#	39
65)	4,6-Dinitro-2-methylphenol	8.98	198	58532	9420.5019543	ppb		94
66)	N-Nitrosodiphenylamine	9.05	169	242325	8538.9993539	ppb		96
68)	4-Bromophenyl-phenylether	9.45	248	103452	8910.7770910	ppb		94
69)	Hexachlorobenzene	9.53	284	101515	8628.1407457	ppb		93
70)	n-octadecane	9.77	55	43304	8089.1933270	ppb		94
71)	Pentachlorophenol	9.74	266	55495	8214.1912741	ppb		91
72)	Phenanthrene	9.98	178	456615	8782.6972123	ppb		98
73)	Anthracene	10.04	178	467490	9074.8351760	ppb		98
74)	Carbazole	10.20	167	422692	9384.0381545	ppb		99
75)	Di-n-butyl phthalate	10.53	149	529494	8897.5731118	ppb		98
76)	2-nitrodiphenylamine	10.72	167	206	15.2857705	ppb	#	1
77)	Fluoranthene	11.27	202	569268	9405.0223893	ppb		97
79)	Benzidine	11.39	184	775	19.2985294	ppb	#	67
80)	Pyrene	11.51	202	577900	8952.7529549	ppb		98
82)	Benzylbutyl phthalate	12.14	149	237324	8215.9971475	ppb	#	79
83)	3,3-Dichlorobenzidine	12.95	252	106	5.1688825	ppb		85
84)	Benzo(a)anthracene	12.79	228	645366	9437.6567647	ppb		98
85)	Chrysene	12.84	228	566974	8747.9946394	ppb		96
86)	bis(2-Ethylhexyl)phthalate	12.72	149	357287	8208.4433217	ppb		97
87)	Di-n-octyl phthalate	13.40	149	615983	8115.8173105	ppb		96
89)	Benzo(b)fluoranthene	14.01	252	646862	9720.8130196	ppb		96
90)	Benzo(k)fluoranthene	14.04	252	588038	9406.5468123	ppb		96
91)	Benzo(a)pyrene	14.45	252	611325	9482.5365040	ppb		96
92)	Indeno(1,2,3-cd)pyrene	16.26	276	690161	9193.6890912	ppb		93
93)	Dibenz(a,h)anthracene	16.26	278	586271	8968.0508154	ppb		93
94)	Benzo(g,h,i)perylene	16.78	276	575170	9189.9833772	ppb		92

(#) = qualifier out of range (m) = manual integration

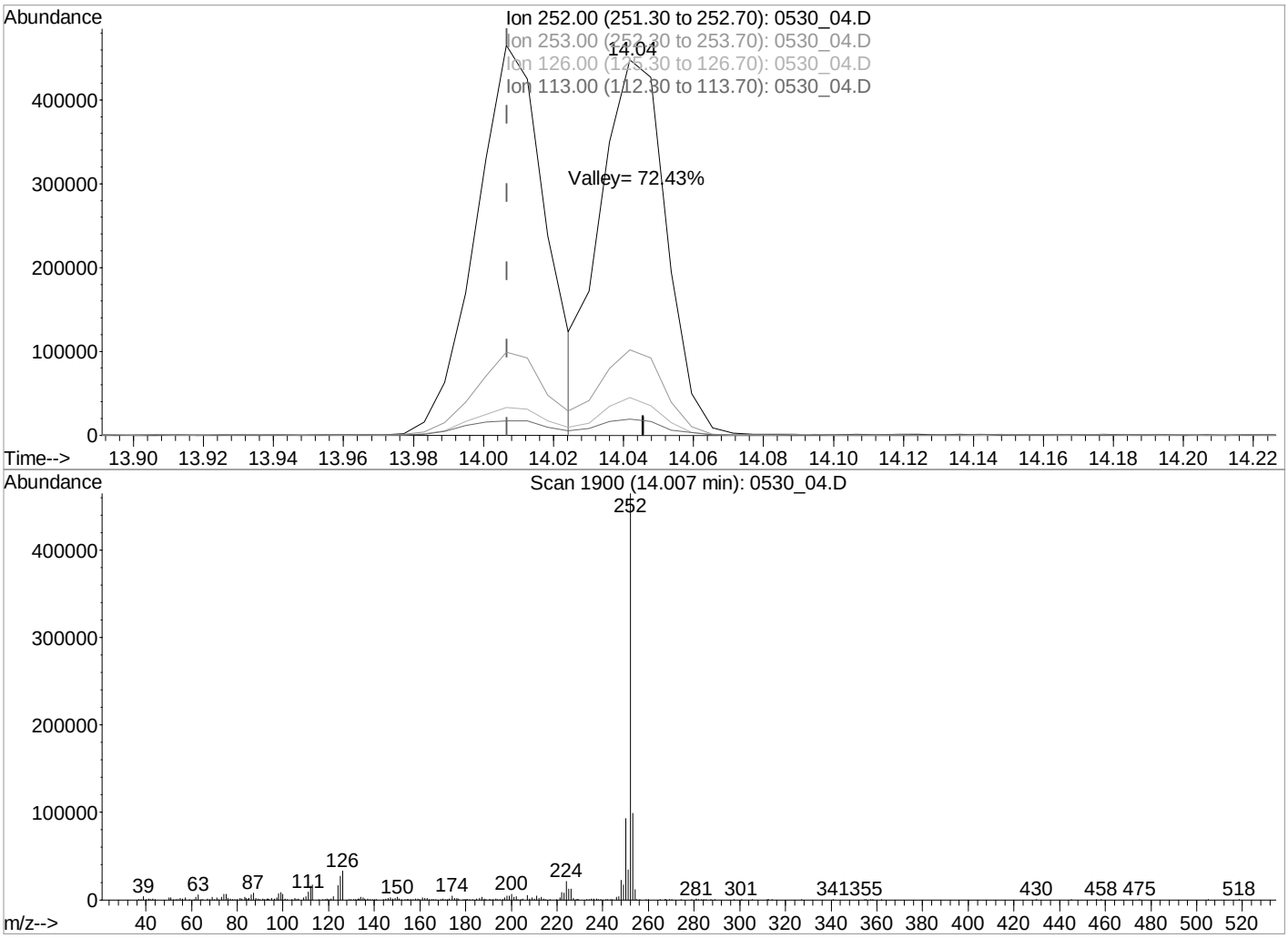
Data File : C:\MSDCHEM\1\DATA\053016\0530 04.D Vial: 2
Acq On : 31 May 2016 1:42 am Operator: 280
Sample : ICV SVMS 10K PPB 16D25863 Inst : BNAMS11
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 31 10:38 2016 Quant Results File: S811E27P.RES

Method : C:\MSDCHEM\1\METHODS\S811E27P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue May 31 10:22:11 2016
Response via : Initial Calibration



Data File : C:\MSDCHEM\1\DATA\053016\0530 04.D Vial: 2
Acq On : 31 May 2016 1:42 am Operator: 280
Sample : ICV SVMS 10K PPB 16D25863 Inst : BNAMS11
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 31 2:19 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S811E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue May 24 12:03:00 2016
Response via : Multiple Level Calibration



TIC: 0530_04.D

(89) Benzo(b)fluoranthene (MT)

14.01min (-0.000) 9720.8130196 ppb

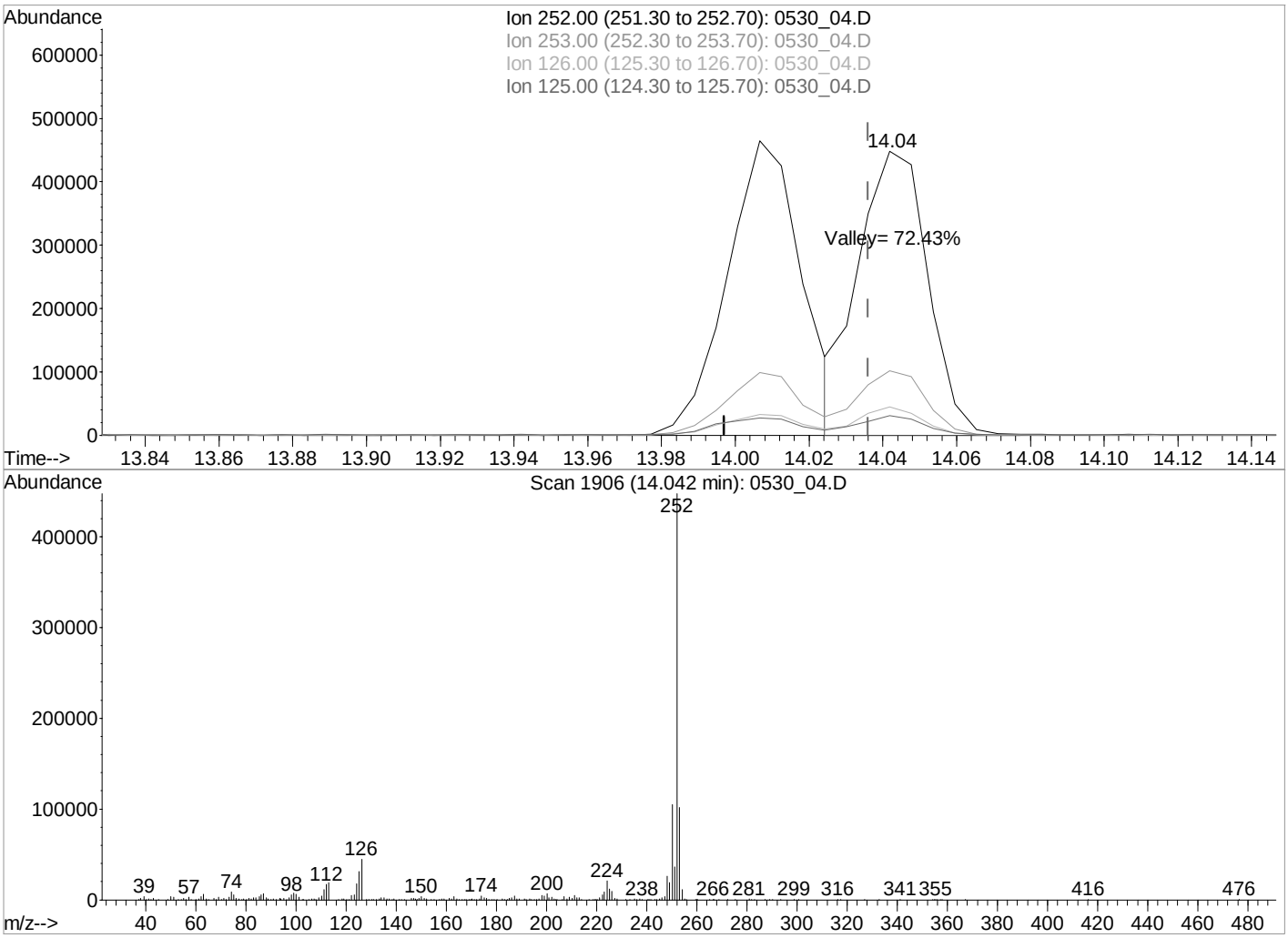
Qvalue = 96

response 646862

Ion	Exp%	Act%
252.00	100	100
253.00	20.90	20.94
126.00	10.20	6.91
113.00	6.90	3.54

Data File : C:\MSDCHEM\1\DATA\053016\0530 04.D Vial: 2
Acq On : 31 May 2016 1:42 am Operator: 280
Sample : ICV SVMS 10K PPB 16D25863 Inst : BNAMS11
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 31 10:38 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S811E27P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue May 31 10:22:11 2016
Response via : Multiple Level Calibration



TIC: 0530_04.D

(90) Benzo(k)fluoranthene (MT)

14.04min (+0.006) 9406.5468123 ppb

Qvalue = 96

response 588038

Ion	Exp%	Act%
252.00	100	100
253.00	20.50	22.67
126.00	10.80	9.98
125.00	7.90	6.72

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\053016\0530 05.D Vial: 3
Acq On : 31 May 2016 2:06 am Operator: 280
Sample : ICV TCL 10K1 PPB 16D25867 Inst : BNAMS11
Misc : 8270 TCL Calibration 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 31 10:38 2016 Quant Results File: S811E27P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S811E27P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue May 31 10:22:11 2016
Response via : Initial Calibration
DataAcq Meth : BNA11C

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.23	152	61633	8000.00 ppb	0.00
22) Naphthalene-d8	6.48	136	303458	8000.00 ppb	0.00
40) Acenaphthene-d10	8.34	164	196508	8000.00 ppb	0.00
64) Phenanthrene-d10	9.95	188	380025	8000.00 ppb	0.00
78) Chrysene-d12	12.81	240	447509	8000.00 ppb	0.00
88) Perylene-d12	14.52	264	464916	8000.00 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol	4.25	112	54	3.6151130 ppb	0.11
Spiked Amount 20.000	Range 10 - 74		Recovery = 18.08%		
7) Phenol-d5	4.86	99	55	2.8534073 ppb	0.00
Spiked Amount 20.000	Range 10 - 63		Recovery = 14.27%		
23) Nitrobenzene-d5	5.74	82	105	5.9032637 ppb	-0.01
Spiked Amount 10.000	Range 28 - 123		Recovery = 59.03%		
44) 2-Fluorobiphenyl	0.00	172	0	0.0000000 ppb	
Spiked Amount 10.000	Range 35 - 133		Recovery = 0.00%#		
67) 2,4,6-Tribromophenol	9.44	330	61	11.5863384 ppb	0.25
Spiked Amount 20.000	Range 22 - 154		Recovery = 57.93%		
81) p-Terphenyl-d14	11.81	244	199	3.8694868 ppb	0.16
Spiked Amount 10.000	Range 30 - 148		Recovery = 38.69%		
Target Compounds					Qvalue
2) Pyridine	3.20	79	71	4.1264336 ppb #	1
3) N-Nitrosodimethylamine	3.18	42	78	9.6662887 ppb #	1
5) Aniline	4.92	66	148	14.7037447 ppb #	64
6) bis(2-Chloroethyl)ether	4.85	63	5714	552.4887153 ppb #	2
8) Phenol	4.88	94	213	10.8620734 ppb #	60
9) Benzaldehyde	4.85	105	123395	10279.3115849 ppb	94
11) n-Decane	5.05	41	570	65.1556609 ppb #	65
14) Benzyl Alcohol	5.41	79	96	6.1257691 ppb #	17
16) bis(2-Chloroisopropyl)ethe	5.60	121	3984	913.0656923 ppb #	1
18) Hexachloroethane	5.81	117	56	7.4489536 ppb #	4
19) N-Nitrosodi-n-propylamine	5.55	70	64	5.2669594 ppb #	33
20) 3&4-Methyl phenol	5.60	107	1104	63.4513823 ppb #	1
21) Acetophenone	5.60	105	222602	9663.4810922 ppb	98
24) Nitrobenzene	5.60	77	168424	9673.0480232 ppb #	57
26) 2-Nitrophenol	6.12	139	61	8.2229075 ppb #	22
27) 2,4-Dimethylphenol	6.16	107	157	9.5573311 ppb #	1
28) bis(2-Chlorethoxy)methane	6.21	93	215	12.3833685 ppb #	8
29) 2,4-Dichlorophenol	6.32	162	76	6.2050863 ppb #	23
30) Benzoic Acid	6.20	105	99349	10983.2798046 ppb	94
31) 1,2,4-Trichlorobenzene	6.42	180	547	37.8575963 ppb #	72
32) Naphthalene	6.50	128	3843	89.0941325 ppb	84
33) 4-Chloroaniline	6.54	65	94	14.7890810 ppb #	1
35) Caprolactam	6.90	113	37262	9822.1128051 ppb	91
36) 4-Chloro-3-methylphenol	7.11	107	162	11.2191439 ppb #	20
37) 2-Methylnaphthalene	7.05	142	129	4.6240340 ppb #	1
38) 1-Methylnaphthalene	7.41	142	740	28.2587069 ppb #	1
39) 1,2,4,5-Tetrachlorobenzene	7.40	216	167356	10880.5746501 ppb	96
41) Hexachlorocyclopentadiene	7.58	237	112	310.3252521 ppb #	19
47) 2-Nitroaniline	7.72	138	59	6.2851911 ppb #	1
50) 2,6-Dinitrotoluene	8.14	165	78	10.0164500 ppb #	19
54) Dibenzofuran	8.69	168	24121	556.3353010 ppb #	15
55) 2,4-Dinitrotoluene	8.52	165	95	9.1102128 ppb #	20
56) 2,3,4,6-Tetrachlorophenol	8.69	232	82014	10284.0370561 ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\053016\0530 05.D Vial: 3
Acq On : 31 May 2016 2:06 am Operator: 280
Sample : ICV TCL 10K1 PPB 16D25867 Inst : BNAMS11
Misc : 8270 TCL Calibration 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 31 10:38 2016 Quant Results File: S811E27P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S811E27P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue May 31 10:22:11 2016
Response via : Initial Calibration
DataAcq Meth : BNA11C

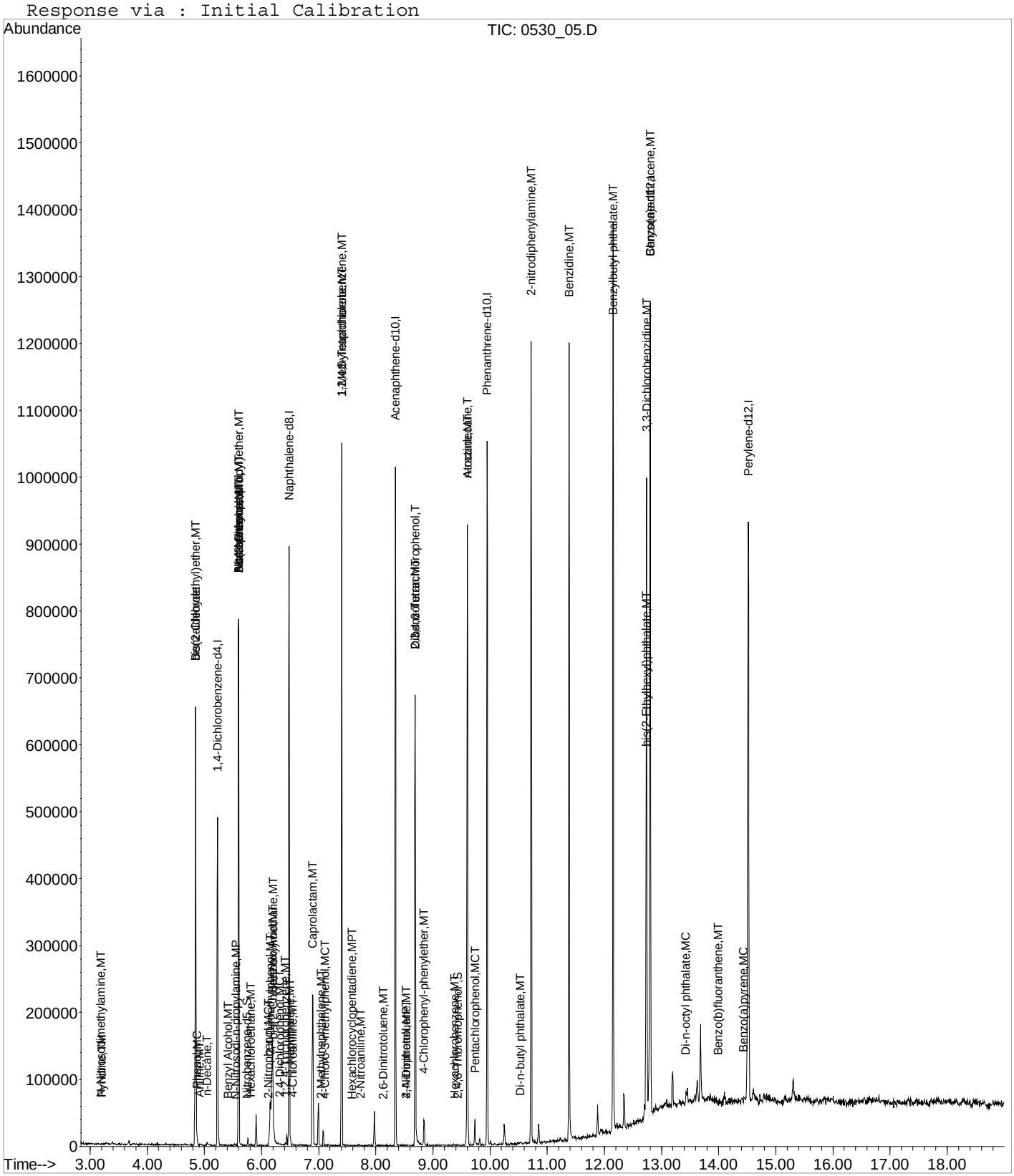
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
57)	4-Nitrophenol	8.52	139	55	9.1674213	ppb	#	3
59)	4-Chlorophenyl-phenylether	8.85	204	84	4.5833317	ppb	#	21
63)	Atrazine	9.60	200	119922	10884.1259652	ppb	#	93
69)	Hexachlorobenzene	9.38	284	59	4.8024472	ppb	#	21
70)	n-octadecane	9.60	55	10435	1866.7804490	ppb	#	61
71)	Pentachlorophenol	9.74	266	4082	1766.9180938	ppb		91
75)	Di-n-butyl phthalate	10.53	149	356	5.7290697	ppb		77
76)	2-nitrodiphenylamine	10.72	167	151679	10778.7689358	ppb		98
79)	Benzidine	11.38	184	388378	9776.3953907	ppb		99
82)	Benzylbutyl phthalate	12.15	149	905	31.6715138	ppb	#	1
83)	3,3-Dichlorobenzidine	12.74	252	204052	10058.5012754	ppb		93
84)	Benzo(a)anthracene	12.80	228	1661	24.5544014	ppb	#	1
86)	bis(2-Ethylhexyl)phthalate	12.72	149	6931	160.9685791	ppb		83
87)	Di-n-octyl phthalate	13.41	149	1032	13.7450035	ppb		77
89)	Benzo(b)fluoranthene	13.98	252	500	7.3890547	ppb	#	1
91)	Benzo(a)pyrene	14.43	252	465	7.0930537	ppb	#	43

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\053016\0530 05.D Vial: 3
Acq On : 31 May 2016 2:06 am Operator: 280
Sample : ICV TCL 10K1 PPB 16D25867 Inst : BNAMS11
Misc : 8270 TCL Calibration 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 31 10:38 2016 Quant Results File: S811E27P.RES

Method : C:\MSDCHEM\1\METHODS\S811E27P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue May 31 10:22:11 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\053016\0530 06.D Vial: 6
Acq On : 31 May 2016 3:19 am Operator: 280
Sample : LCS 1x WG876258 15-0.5 Inst : BNAMS11
Misc : SOIL IS 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 31 10:38 2016 Quant Results File: S811E27P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S811E27P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue May 31 10:22:11 2016
Response via : Initial Calibration
DataAcq Meth : BNA11C

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.23	152	57517	8000.00	ppb	0.00
22) Naphthalene-d8	6.48	136	296362	8000.00	ppb	0.00
40) Acenaphthene-d10	8.35	164	186014	8000.00	ppb	0.00
64) Phenanthrene-d10	9.95	188	394649	8000.00	ppb	0.00
78) Chrysene-d12	12.81	240	476573	8000.00	ppb	0.00
88) Perylene-d12	14.52	264	454376	8000.00	ppb	0.01
System Monitoring Compounds						
4) 2-Fluorophenol	4.14	112	191837	458.2703999	ppb	0.00
Spiked Amount 666.000	Range 21 - 116		Recovery = 68.81%			
7) Phenol-d5	4.86	99	242717	449.3270798	ppb	0.00
Spiked Amount 666.000	Range 26 - 121		Recovery = 67.47%			
23) Nitrobenzene-d5	5.75	82	127451	244.3241734	ppb	0.00
Spiked Amount 333.000	Range 22 - 129		Recovery = 73.37%			
44) 2-Fluorobiphenyl	7.61	172	234411	235.8464006	ppb	0.00
Spiked Amount 333.000	Range 35 - 129		Recovery = 70.82%			
67) 2,4,6-Tribromophenol	9.20	330	69175	421.3188948	ppb	0.00
Spiked Amount 666.000	Range 22 - 142		Recovery = 63.26%			
81) p-Terphenyl-d14	11.65	244	387695	235.7257694	ppb	0.00
Spiked Amount 333.000	Range 22 - 128		Recovery = 70.79%			
Target Compounds						Qvalue
2) Pyridine	3.19	79	151737	314.6801287	ppb #	90
3) N-Nitrosodimethylamine	3.17	42	89825	397.2132257	ppb	95
5) Aniline	4.93	66	126136	447.1637684	ppb	95
6) bis(2-Chloroethyl)ether	4.97	63	122560	422.8567265	ppb	94
8) Phenol	4.87	94	256582	466.8965153	ppb	96
9) Benzaldehyde	4.84	105	34390	102.2256685	ppb	91
10) 2-Chlorophenol	5.04	128	181628	424.7377868	ppb	91
11) n-Decane	5.05	41	90117	367.5744700	ppb #	93
12) 1,3-Dichlorobenzene	5.18	146	195886	402.9461987	ppb	92
13) 1,4-Dichlorobenzene	5.24	146	194701	397.3315987	ppb	93
14) Benzyl Alcohol	5.34	79	227337	517.6316562	ppb	99
15) 1,2-Dichlorobenzene	5.39	146	185486	402.0790839	ppb	94
16) bis(2-Chloroisopropyl)ethe	5.47	121	60326	493.3425112	ppb	94
17) 2-Methylphenol	5.43	108	186166	466.0222729	ppb	99
18) Hexachloroethane	5.71	117	86605	411.0659663	ppb	93
19) N-Nitrosodi-n-propylamine	5.59	70	175597	515.6540117	ppb	93
20) 3&4-Methyl phenol	5.58	107	249075	510.8147964	ppb	93
21) Acetophenone	5.60	105	304074	471.0262836	ppb	94
24) Nitrobenzene	5.77	77	250993	491.5201015	ppb	86
25) Isophorone	6.00	82	419953	467.9738138	ppb	97
26) 2-Nitrophenol	6.09	139	103117	473.9648622	ppb	90
27) 2,4-Dimethylphenol	6.11	107	245359	509.2831180	ppb	98
28) bis(2-Chlorethoxy)methane	6.21	93	227042	445.8890911	ppb	90
29) 2,4-Dichlorophenol	6.32	162	170493	474.6364615	ppb	89
30) Benzoic Acid	6.18	105	102224	383.3265673	ppb	89
31) 1,2,4-Trichlorobenzene	6.42	180	187958	443.5543395	ppb	97
32) Naphthalene	6.51	128	539626	426.5715562	ppb	97
33) 4-Chloroaniline	6.55	65	92641	496.9776701	ppb	81
34) Hexachloro-1,3-butadiene	6.62	225	135504	464.8069754	ppb	94
35) Caprolactam	6.91	113	59091	531.1050165	ppb	87
36) 4-Chloro-3-methylphenol	7.04	107	205973	486.3795506	ppb	94
37) 2-Methylnaphthalene	7.22	142	391646	478.6800297	ppb #	1
38) 1-Methylnaphthalene	7.34	142	364481	474.5869224	ppb #	1

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\053016\0530 06.D Vial: 6
Acq On : 31 May 2016 3:19 am Operator: 280
Sample : LCS 1x WG876258 15-0.5 Inst : BNAMS11
Misc : SOIL IS 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 31 10:38 2016 Quant Results File: S811E27P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S811E27P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue May 31 10:22:11 2016
Response via : Initial Calibration
DataAcq Meth : BNA11C

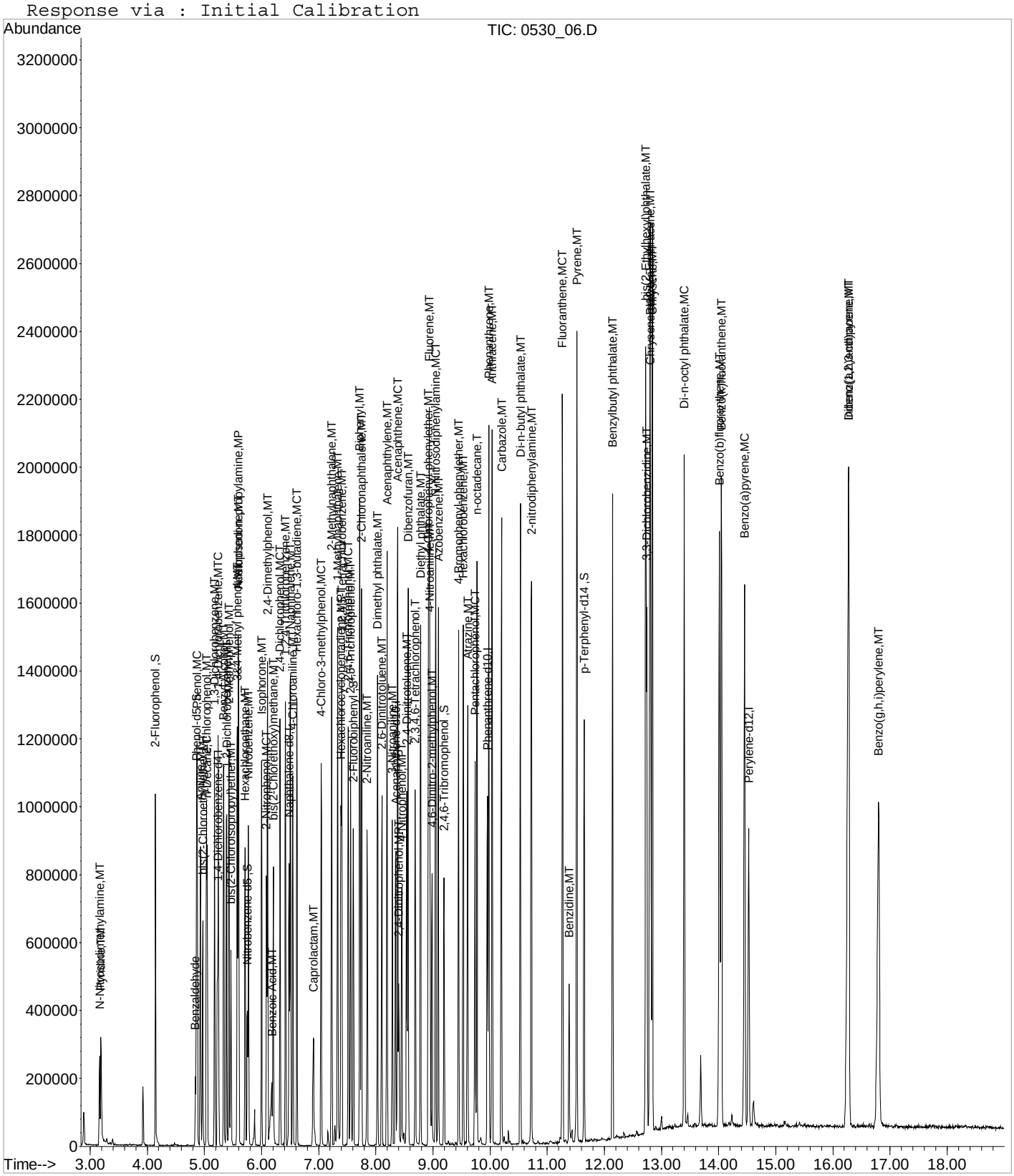
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	1,2,4,5-Tetrachlorobenzene	7.41	216	223730	495.9696211	ppb		94
41)	Hexachlorocyclopentadiene	7.39	237	130343	374.2977332	ppb		95
42)	2,4,6-Trichlorophenol	7.52	196	146213	507.1398795	ppb		89
43)	2,4,5-Trichlorophenol	7.56	196	143605	477.5583837	ppb		89
45)	Biphenyl	7.72	154	486410	453.5560503	ppb		99
46)	2-Chloronaphthalene	7.75	162	387149	448.7175713	ppb		98
47)	2-Nitroaniline	7.85	138	125927	471.9154223	ppb	#	92
48)	Acenaphthylene	8.20	152	658279	504.0326962	ppb		97
49)	Dimethyl phthalate	8.03	163	486025	495.8967744	ppb		88
50)	2,6-Dinitrotoluene	8.11	165	107866	487.2845432	ppb		96
51)	3-Nitroaniline	8.29	138	106334	486.5708388	ppb		90
52)	Acenaphthene	8.38	153	409874	471.4209510	ppb		98
53)	2,4-Dinitrophenol	8.41	184	52035	392.0645489	ppb	#	41
54)	Dibenzofuran	8.57	168	535204	434.2496701	ppb	#	66
55)	2,4-Dinitrotoluene	8.54	165	154979	522.8253163	ppb		89
56)	2,3,4,6-Tetrachlorophenol	8.69	232	113672	501.4273025	ppb		99
57)	4-Nitrophenol	8.45	139	81410	477.3545806	ppb	#	78
58)	Fluorene	8.94	166	474770	468.0438674	ppb		99
59)	4-Chlorophenyl-phenylether	8.92	204	236598	454.1422498	ppb		98
60)	Diethyl phthalate	8.78	149	479819	473.1946743	ppb		95
61)	4-Nitroaniline	8.95	138	110972	498.8888276	ppb		88
62)	Azobenzene	9.10	77	514823	477.2582500	ppb	#	40
63)	Atrazine	9.61	200	164761	526.0511241	ppb	#	95
65)	4,6-Dinitro-2-methylphenol	8.98	198	100833	483.2442790	ppb		94
66)	N-Nitrosodiphenylamine	9.05	169	399394	432.1945436	ppb		96
68)	4-Bromophenyl-phenylether	9.45	248	163554	432.6202487	ppb		93
69)	Hexachlorobenzene	9.53	284	163661	427.1704345	ppb		95
70)	n-octadecane	9.77	55	75183	431.2864721	ppb		99
71)	Pentachlorophenol	9.74	266	107768	456.1920346	ppb		97
72)	Phenanthrene	9.98	178	735401	434.3811158	ppb		98
73)	Anthracene	10.04	178	764661	455.8315119	ppb		98
74)	Carbazole	10.20	167	677806	462.1044275	ppb		99
75)	Di-n-butyl phthalate	10.53	149	839989	433.4640705	ppb		99
76)	2-nitrodiphenylamine	10.72	167	232084	528.8521823	ppb		97
77)	Fluoranthene	11.27	202	924354	468.9757332	ppb		98
79)	Benzidine	11.38	184	162943	128.2556240	ppb		96
80)	Pyrene	11.52	202	966282	473.1795767	ppb		99
82)	Benzylbutyl phthalate	12.14	149	388145	424.7474811	ppb		86
83)	3,3-Dichlorobenzidine	12.74	252	306648	472.6603035	ppb		94
84)	Benzo(a)anthracene	12.80	228	1044937	483.0214308	ppb		97
85)	Chrysene	12.84	228	964254	470.2783756	ppb		97
86)	bis(2-Ethylhexyl)phthalate	12.72	149	612474	444.7842930	ppb		97
87)	Di-n-octyl phthalate	13.40	149	1017414	423.7204657	ppb		95
89)	Benzo(b)fluoranthene	14.01	252	1031974	519.6261248	ppb		94
90)	Benzo(k)fluoranthene	14.05	252	944079	506.0162202	ppb		97
91)	Benzo(a)pyrene	14.45	252	959107	498.4833983	ppb		95
92)	Indeno(1,2,3-cd)pyrene	16.28	276	1077897	481.1139321	ppb		94
93)	Dibenz(a,h)anthracene	16.28	278	927694	475.4837372	ppb		93
94)	Benzo(g,h,i)perylene	16.80	276	858577	459.6518600	ppb		93

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\053016\0530 06.D Vial: 6
Acq On : 31 May 2016 3:19 am Operator: 280
Sample : LCS 1x WG876258 15-0.5 Inst : BNAMS11
Misc : SOIL IS 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 31 10:38 2016 Quant Results File: S811E27P.RES

Method : C:\MSDCHEM\1\METHODS\S811E27P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue May 31 10:22:11 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\053016\0530 07.D Vial: 7
Acq On : 31 May 2016 3:43 am Operator: 280
Sample : LCSD 1x WG876258 15-0.5 Inst : BNAMS11
Misc : SOIL IS 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 31 10:38 2016 Quant Results File: S811E27P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S811E27P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue May 31 10:22:11 2016
Response via : Initial Calibration
DataAcq Meth : BNA11C

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.23	152	62253	8000.00	ppb		0.00
22) Naphthalene-d8	6.48	136	295218	8000.00	ppb		0.00
40) Acenaphthene-d10	8.35	164	186258	8000.00	ppb		0.00
64) Phenanthrene-d10	9.95	188	374489	8000.00	ppb		0.00
78) Chrysene-d12	12.81	240	459327	8000.00	ppb		0.00
88) Perylene-d12	14.52	264	497050	8000.00	ppb		0.01
System Monitoring Compounds							
4) 2-Fluorophenol	4.14	112	186372	411.3448259	ppb		0.00
Spiked Amount 666.000	Range 21 - 116		Recovery = 61.76%				
7) Phenol-d5	4.87	99	226558	387.5053836	ppb		0.00
Spiked Amount 666.000	Range 26 - 121		Recovery = 58.18%				
23) Nitrobenzene-d5	5.75	82	122874	236.4628232	ppb		0.00
Spiked Amount 333.000	Range 22 - 129		Recovery = 71.01%				
44) 2-Fluorobiphenyl	7.61	172	238634	239.7807324	ppb		0.00
Spiked Amount 333.000	Range 35 - 129		Recovery = 72.01%				
67) 2,4,6-Tribromophenol	9.20	330	67953	436.1564953	ppb		0.00
Spiked Amount 666.000	Range 22 - 142		Recovery = 65.49%				
81) p-Terphenyl-d14	11.65	244	365220	230.3980894	ppb		0.00
Spiked Amount 333.000	Range 22 - 128		Recovery = 69.19%				
Target Compounds							Qvalue
2) Pyridine	3.20	79	147525	282.6697858	ppb	#	90
3) N-Nitrosodimethylamine	3.17	42	87093	355.8325442	ppb		93
5) Aniline	4.93	66	125017	409.4798793	ppb		93
6) bis(2-Chloroethyl)ether	4.97	63	124566	397.0817714	ppb		96
8) Phenol	4.88	94	259520	436.3160810	ppb		97
9) Benzaldehyde	4.85	105	35428	97.2994444	ppb		94
10) 2-Chlorophenol	5.04	128	188289	406.8169024	ppb		88
11) n-Decane	5.05	41	92072	346.9781537	ppb	#	95
12) 1,3-Dichlorobenzene	5.18	146	204156	388.0089594	ppb		91
13) 1,4-Dichlorobenzene	5.25	146	209868	395.7009447	ppb		94
14) Benzyl Alcohol	5.34	79	223752	470.7101575	ppb		95
15) 1,2-Dichlorobenzene	5.39	146	194857	390.2584349	ppb		95
16) bis(2-Chloroisopropyl)ethe	5.47	121	59598	450.3100472	ppb		88
17) 2-Methylphenol	5.43	108	192624	445.5050630	ppb		96
18) Hexachloroethane	5.71	117	86174	377.9033558	ppb		94
19) N-Nitrosodi-n-propylamine	5.60	70	171953	466.5379824	ppb		99
20) 3&4-Methyl phenol	5.58	107	257925	488.7229230	ppb		88
21) Acetophenone	5.60	105	315278	451.2273985	ppb		96
24) Nitrobenzene	5.77	77	240218	472.2423205	ppb		90
25) Isophorone	6.00	82	434988	486.6064078	ppb		97
26) 2-Nitrophenol	6.09	139	106721	492.4310687	ppb		88
27) 2,4-Dimethylphenol	6.11	107	247564	515.8512196	ppb		95
28) bis(2-Chlorethoxy)methane	6.21	93	227054	447.6406152	ppb		92
29) 2,4-Dichlorophenol	6.32	162	179434	501.4630835	ppb		96
30) Benzoic Acid	6.18	105	103871	390.2335480	ppb		95
31) 1,2,4-Trichlorobenzene	6.42	180	204277	483.9329260	ppb		96
32) Naphthalene	6.51	128	573176	454.8484377	ppb		98
33) 4-Chloroaniline	6.55	65	88032	474.0824661	ppb		89
34) Hexachloro-1,3-butadiene	6.62	225	149821	515.9087528	ppb		94
35) Caprolactam	6.91	113	57067	514.9010643	ppb		88
36) 4-Chloro-3-methylphenol	7.04	107	208334	493.8611327	ppb		82
37) 2-Methylnaphthalene	7.23	142	395570	485.3495648	ppb	#	1
38) 1-Methylnaphthalene	7.34	142	383096	500.7583197	ppb	#	1

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\053016\0530 07.D Vial: 7
Acq On : 31 May 2016 3:43 am Operator: 280
Sample : LCSD 1x WG876258 15-0.5 Inst : BNAMS11
Misc : SOIL IS 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 31 10:38 2016 Quant Results File: S811E27P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S811E27P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue May 31 10:22:11 2016
Response via : Initial Calibration
DataAcq Meth : BNA11C

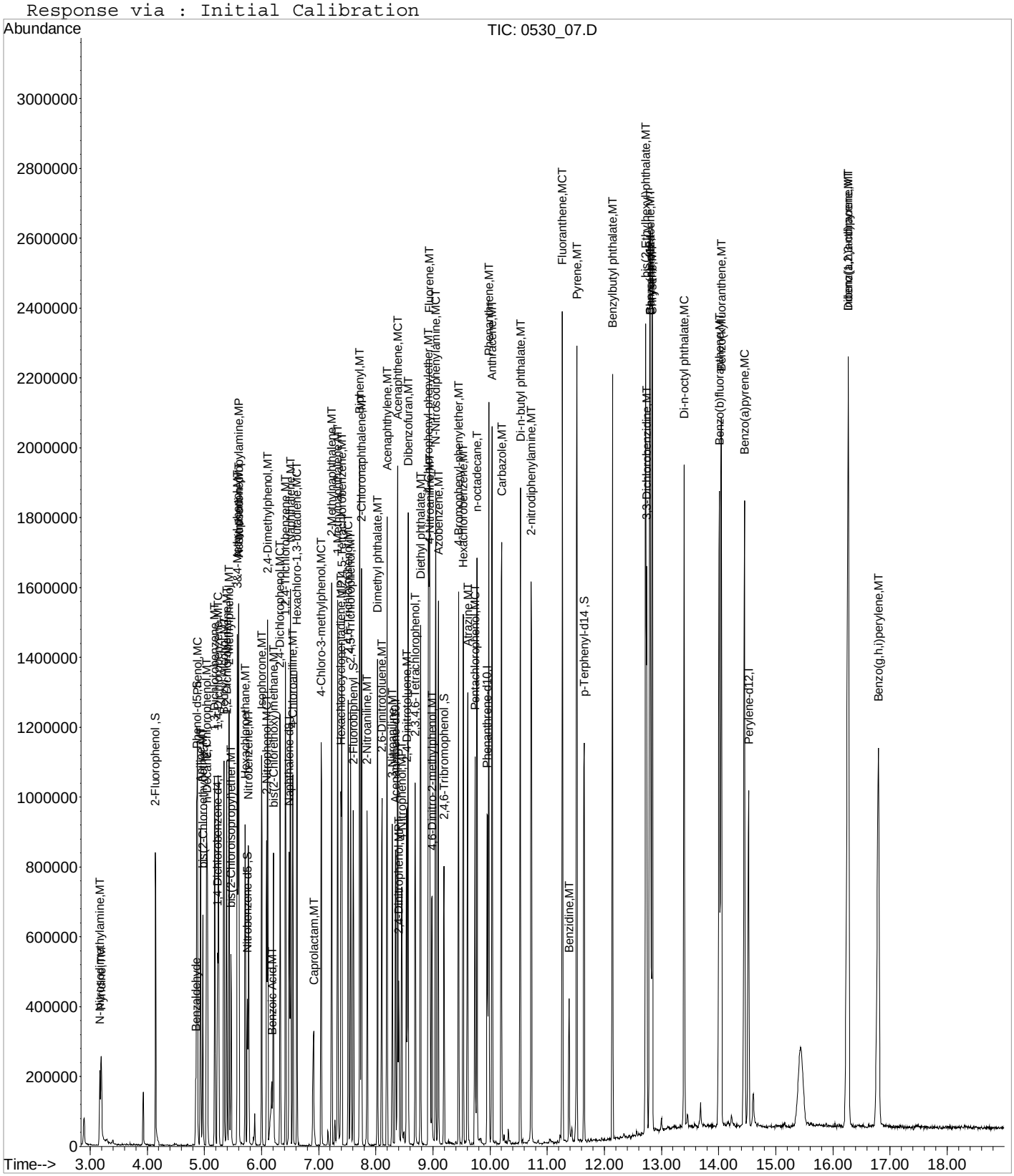
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	1,2,4,5-Tetrachlorobenzene	7.41	216	238226	530.1511349	ppb		94
41)	Hexachlorocyclopentadiene	7.39	237	132790	380.6500445	ppb		93
42)	2,4,6-Trichlorophenol	7.52	196	146270	506.6729663	ppb		91
43)	2,4,5-Trichlorophenol	7.56	196	154457	512.9738236	ppb		94
45)	Biphenyl	7.72	154	512676	477.4216985	ppb		99
46)	2-Chloronaphthalene	7.75	162	392629	454.4729140	ppb		99
47)	2-Nitroaniline	7.85	138	128508	480.9569163	ppb	#	97
48)	Acenaphthylene	8.20	152	670633	512.8192576	ppb		98
49)	Dimethyl phthalate	8.03	163	467243	476.1087627	ppb		90
50)	2,6-Dinitrotoluene	8.11	165	106911	482.3376354	ppb		93
51)	3-Nitroaniline	8.29	138	104014	475.3313084	ppb		91
52)	Acenaphthene	8.38	153	438930	504.1786732	ppb		99
53)	2,4-Dinitrophenol	8.40	184	54546	407.6640965	ppb	#	49
54)	Dibenzofuran	8.57	168	561115	454.6767235	ppb	#	68
55)	2,4-Dinitrotoluene	8.54	165	153759	518.0301022	ppb		96
56)	2,3,4,6-Tetrachlorophenol	8.69	232	113179	498.5985660	ppb		97
57)	4-Nitrophenol	8.45	139	82599	483.6919121	ppb		85
58)	Fluorene	8.94	166	479191	471.7833824	ppb		86
59)	4-Chlorophenyl-phenylether	8.92	204	259134	496.7477783	ppb		94
60)	Diethyl phthalate	8.78	149	489719	482.3253158	ppb		94
61)	4-Nitroaniline	8.95	138	112148	503.5152104	ppb		87
62)	Azobenzene	9.10	77	545252	504.8047900	ppb	#	46
63)	Atrazine	9.61	200	169601	540.7949642	ppb	#	94
65)	4,6-Dinitro-2-methylphenol	8.98	198	99947	503.6388388	ppb		95
66)	N-Nitrosodiphenylamine	9.05	169	402716	459.2493699	ppb		96
68)	4-Bromophenyl-phenylether	9.45	248	162870	454.0029869	ppb		95
69)	Hexachlorobenzene	9.53	284	169383	465.9054039	ppb		93
70)	n-octadecane	9.77	55	77165	466.4858627	ppb		95
71)	Pentachlorophenol	9.74	266	106957	475.1785239	ppb		97
72)	Phenanthrene	9.98	178	730125	454.4811559	ppb		99
73)	Anthracene	10.04	178	757581	475.9227000	ppb		98
74)	Carbazole	10.20	167	677893	487.0435667	ppb		99
75)	Di-n-butyl phthalate	10.53	149	861399	468.4419828	ppb		98
76)	2-nitrodiphenylamine	10.72	167	229538	551.2081550	ppb		97
77)	Fluoranthene	11.27	202	942241	503.7858732	ppb		98
79)	Benzidine	11.38	184	154545	126.2127206	ppb		98
80)	Pyrene	11.52	202	957754	486.6128079	ppb		99
82)	Benzylbutyl phthalate	12.14	149	412037	467.8218389	ppb		88
83)	3,3-Dichlorobenzidine	12.74	252	316074	505.4814526	ppb		93
84)	Benzo(a)anthracene	12.79	228	1051607	504.3560332	ppb		97
85)	Chrysene	12.84	228	1013000	512.6021990	ppb		98
86)	bis(2-Ethylhexyl)phthalate	12.72	149	593338	447.0657583	ppb		98
87)	Di-n-octyl phthalate	13.40	149	1012917	437.6863986	ppb		96
89)	Benzo(b)fluoranthene	14.01	252	1167329	537.3172739	ppb		95
90)	Benzo(k)fluoranthene	14.05	252	967371	473.9848611	ppb		98
91)	Benzo(a)pyrene	14.45	252	1073818	510.1872767	ppb		97
92)	Indeno(1,2,3-cd)pyrene	16.27	276	1223364	499.1621796	ppb		96
93)	Dibenz(a,h)anthracene	16.27	278	1054116	493.8950016	ppb		93
94)	Benzo(g,h,i)perylene	16.80	276	1000781	489.7834760	ppb		91

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\053016\0530 07.D Vial: 7
Acq On : 31 May 2016 3:43 am Operator: 280
Sample : LCSD 1x WG876258 15-0.5 Inst : BNAMS11
Misc : SOIL IS 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 31 10:38 2016 Quant Results File: S811E27P.RES

Method : C:\MSDCHEM\1\METHODS\S811E27P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue May 31 10:22:11 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\053016\0530 08.D Vial: 8
Acq On : 31 May 2016 4:06 am Operator: 280
Sample : BLANK 1x WG876258 15-0.5 Inst : BNAMS11
Misc : SOIL IS 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 31 14:36 2016 Quant Results File: S811E27P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S811E27P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue May 31 10:22:11 2016
Response via : Initial Calibration
DataAcq Meth : BNA11C

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.23	152	57678	8000.00	ppb	0.00
22) Naphthalene-d8	6.48	136	300102	8000.00	ppb	0.00
40) Acenaphthene-d10	8.34	164	179627	8000.00	ppb	0.00
64) Phenanthrene-d10	9.95	188	367588	8000.00	ppb	0.00
78) Chrysene-d12	12.80	240	455282	8000.00	ppb	0.00
88) Perylene-d12	14.52	264	464035	8000.00	ppb	0.00

System Monitoring Compounds						
4) 2-Fluorophenol	4.14	112	173751	413.9070068	ppb	0.00
Spiked Amount 666.000	Range 21 - 116		Recovery = 62.15%			
7) Phenol-d5	4.86	99	210804	389.1591786	ppb	0.00
Spiked Amount 666.000	Range 26 - 121		Recovery = 58.43%			
23) Nitrobenzene-d5	5.75	82	112731	213.4126593	ppb	0.00
Spiked Amount 333.000	Range 22 - 129		Recovery = 64.09%			
44) 2-Fluorobiphenyl	7.61	172	212679	221.5898634	ppb	0.00
Spiked Amount 333.000	Range 35 - 129		Recovery = 66.54%			
67) 2,4,6-Tribromophenol	9.19	330	59301	387.7693395	ppb	0.00
Spiked Amount 666.000	Range 22 - 142		Recovery = 58.22%			
81) p-Terphenyl-d14	11.64	244	361681	230.1926806	ppb	0.00
Spiked Amount 333.000	Range 22 - 128		Recovery = 69.13%			

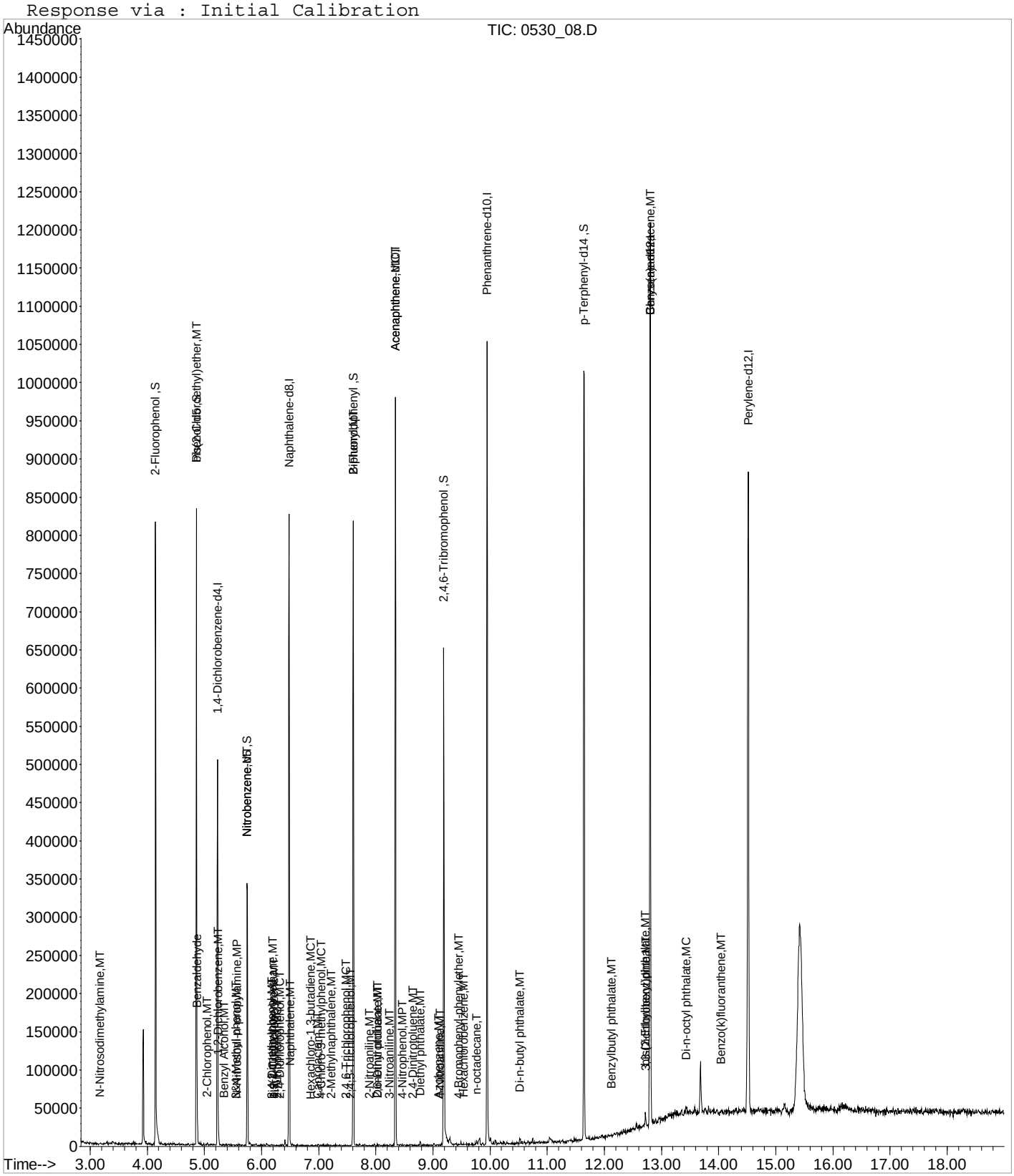
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\053016\0530 08.D Vial: 8
Acq On : 31 May 2016 4:06 am Operator: 280
Sample : BLANK 1x WG876258 15-0.5 Inst : BNAMS11
Misc : SOIL IS 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 31 14:36 2016 Quant Results File: S811E27P.RES

Method : C:\MSDCHEM\1\METHODS\S811E27P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue May 31 10:22:11 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\053016\0530 16.D Vial: 16
Acq On : 31 May 2016 7:13 am Operator: 280
Sample : L838049-01 1x WG876258 15-0.5 Inst : BNAMS11
Misc : SOIL IS 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 31 14:09 2016 Quant Results File: S811E27P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S811E27P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue May 31 10:22:11 2016
Response via : Initial Calibration
DataAcq Meth : BNA11C

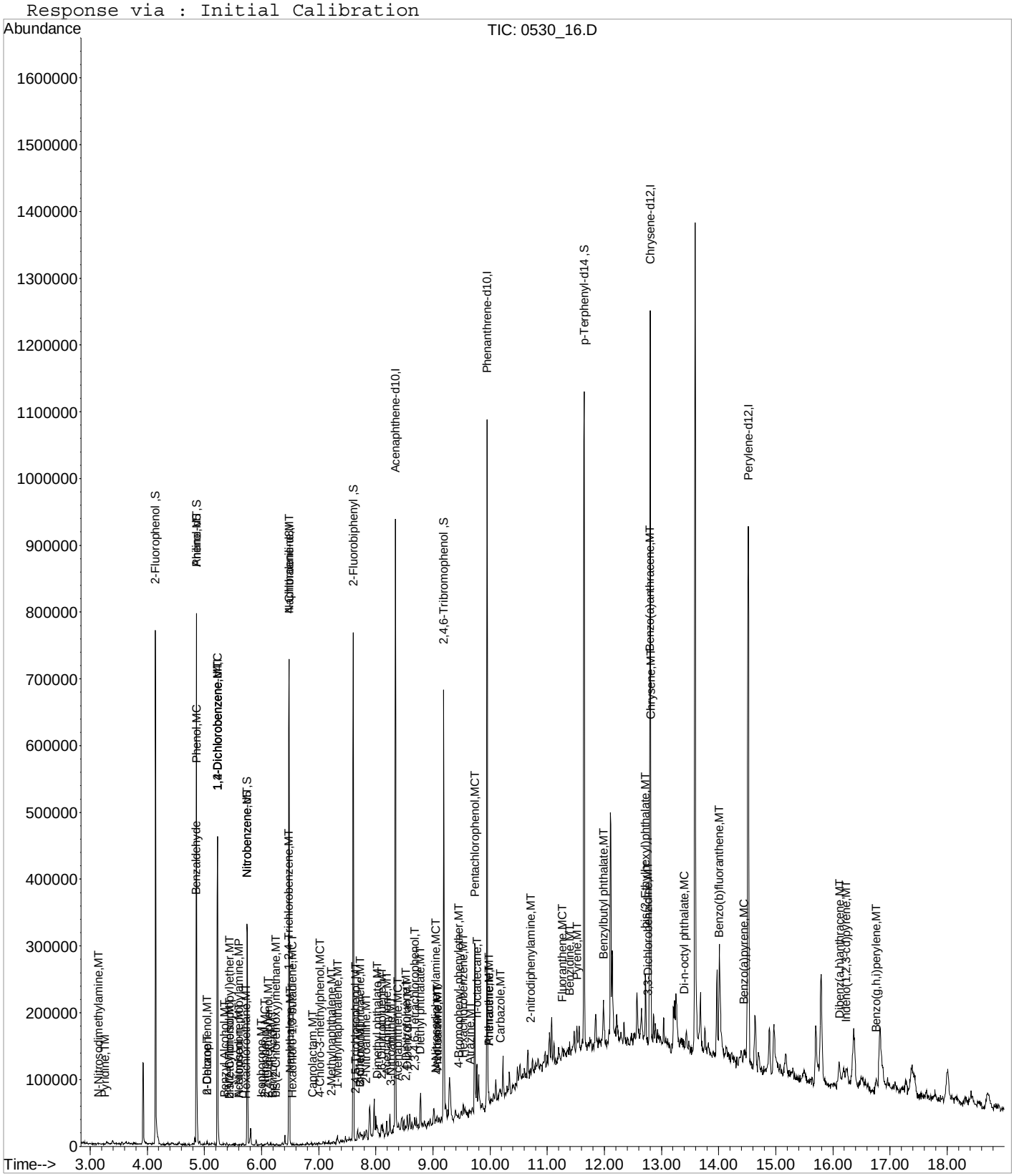
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.23	152	56993	8000.00	ppb	0.00
22) Naphthalene-d8	6.48	136	265345	8000.00	ppb	0.00
40) Acenaphthene-d10	8.34	164	175319	8000.00	ppb	0.00
64) Phenanthrene-d10	9.95	188	350875	8000.00	ppb	0.00
78) Chrysene-d12	12.81	240	438346	8000.00	ppb	0.00
88) Perylene-d12	14.52	264	443460	8000.00	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	4.14	112	161842	390.1713506	ppb	0.00
Spiked Amount 666.000	Range 21 - 116		Recovery = 58.58%			
7) Phenol-d5	4.86	99	192339	359.3390863	ppb	0.00
Spiked Amount 666.000	Range 26 - 121		Recovery = 53.95%			
23) Nitrobenzene-d5	5.75	82	104701	224.1742002	ppb	0.00
Spiked Amount 333.000	Range 22 - 129		Recovery = 67.32%			
44) 2-Fluorobiphenyl	7.61	172	199989	213.4882714	ppb	0.00
Spiked Amount 333.000	Range 35 - 129		Recovery = 64.11%			
67) 2,4,6-Tribromophenol	9.19	330	60196	412.3708738	ppb	0.00
Spiked Amount 666.000	Range 22 - 142		Recovery = 61.92%			
81) p-Terphenyl-d14	11.65	244	310932	205.5392031	ppb	0.00
Spiked Amount 333.000	Range 22 - 128		Recovery = 61.72%			
Target Compounds						Qvalue
5) Aniline	4.86	66	15282	54.6742024	ppb #	1
30) Benzoic Acid	6.20	105	68	18.5414859	ppb #	52
33) 4-Chloroaniline	6.48	65	2257	13.5231171	ppb #	1
56) 2,3,4,6-Tetrachlorophenol	8.69	232	1028	4.8113199	ppb #	20
70) n-octadecane	9.77	55	11339	73.1609812	ppb #	70
71) Pentachlorophenol	9.74	266	30914	176.0216825	ppb	94
77) Fluoranthene	11.26	202	7318	4.1760244	ppb	88
80) Pyrene	11.51	202	9304	4.9534090	ppb	91
85) Chrysene	12.82	228	9666	5.1253407	ppb	87
86) bis(2-Ethylhexyl)phthalate	12.72	149	27980	22.0913309	ppb	93
94) Benzo(g,h,i)perylene	16.76	276	8260	4.5309654	ppb	84

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\053016\0530 16.D Vial: 16
Acq On : 31 May 2016 7:13 am Operator: 280
Sample : L838049-01 1x WG876258 15-0.5 Inst : BNAMS11
Misc : SOIL IS 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 31 14:09 2016 Quant Results File: S811E27P.RES

Method : C:\MSDCHEM\1\METHODS\S811E27P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue May 31 10:22:11 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\053016\0530 17.D Vial: 17
Acq On : 31 May 2016 7:36 am Operator: 280
Sample : MS 1x WG876258 L838049-01 15-0.5 Inst : BNAMS11
Misc : SOIL IS 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 31 10:38 2016 Quant Results File: S811E27P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S811E27P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue May 31 10:22:11 2016
Response via : Initial Calibration
DataAcq Meth : BNA11C

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.23	152	56724	8000.00	ppb		0.00
22) Naphthalene-d8	6.48	136	299961	8000.00	ppb		0.00
40) Acenaphthene-d10	8.35	164	188341	8000.00	ppb		0.00
64) Phenanthrene-d10	9.95	188	394363	8000.00	ppb		0.00
78) Chrysene-d12	12.81	240	496823	8000.00	ppb		0.00
88) Perylene-d12	14.52	264	459984	8000.00	ppb		0.01
System Monitoring Compounds							
4) 2-Fluorophenol	4.15	112	173282	419.7321751	ppb		0.00
Spiked Amount 666.000	Range 21 - 116		Recovery = 63.02%				
7) Phenol-d5	4.87	99	229009	429.8771148	ppb		0.00
Spiked Amount 666.000	Range 26 - 121		Recovery = 64.55%				
23) Nitrobenzene-d5	5.75	82	120133	227.5323947	ppb		0.00
Spiked Amount 333.000	Range 22 - 129		Recovery = 68.33%				
44) 2-Fluorobiphenyl	7.61	172	241282	239.7601209	ppb		0.00
Spiked Amount 333.000	Range 35 - 129		Recovery = 72.00%				
67) 2,4,6-Tribromophenol	9.20	330	69782	425.3241335	ppb		0.00
Spiked Amount 666.000	Range 22 - 142		Recovery = 63.86%				
81) p-Terphenyl-d14	11.65	244	376090	219.3493687	ppb		0.00
Spiked Amount 333.000	Range 22 - 128		Recovery = 65.87%				
Target Compounds							Qvalue
2) Pyridine	3.20	79	149775	314.9535672	ppb	#	91
3) N-Nitrosodimethylamine	3.17	42	80079	359.0661733	ppb		100
5) Aniline	4.93	66	117688	423.0474804	ppb		97
6) bis(2-Chloroethyl)ether	4.97	63	110624	387.0109263	ppb		93
8) Phenol	4.88	94	244392	450.9317443	ppb		96
9) Benzaldehyde	4.84	105	29832	89.9165285	ppb		91
10) 2-Chlorophenol	5.04	128	171686	407.1011778	ppb		88
11) n-Decane	5.05	41	85661	354.2836673	ppb		94
12) 1,3-Dichlorobenzene	5.18	146	183960	383.7041032	ppb		89
13) 1,4-Dichlorobenzene	5.25	146	196927	407.4924484	ppb		99
14) Benzyl Alcohol	5.34	79	204737	472.6900017	ppb		95
15) 1,2-Dichlorobenzene	5.39	146	179972	395.5803099	ppb		98
16) bis(2-Chloroisopropyl)ethe	5.47	121	54812	454.5158545	ppb		100
17) 2-Methylphenol	5.43	108	174461	442.8269474	ppb		91
18) Hexachloroethane	5.71	117	80103	385.5198234	ppb		91
19) N-Nitrosodi-n-propylamine	5.60	70	160892	479.0767964	ppb		96
20) 3&4-Methyl phenol	5.58	107	242771	504.8466914	ppb		91
21) Acetophenone	5.60	105	283783	445.7399988	ppb		97
24) Nitrobenzene	5.77	77	225640	436.5695986	ppb		91
25) Isophorone	6.00	82	408113	449.3233801	ppb		96
26) 2-Nitrophenol	6.09	139	102819	466.9248376	ppb		88
27) 2,4-Dimethylphenol	6.11	107	235357	482.6609142	ppb		98
28) bis(2-Chlorethoxy)methane	6.21	93	220324	427.5039928	ppb		95
29) 2,4-Dichlorophenol	6.32	162	167131	459.6944716	ppb		96
30) Benzoic Acid	6.14	105	7737	47.1105736	ppb		97
31) 1,2,4-Trichlorobenzene	6.42	180	184275	429.6453951	ppb		97
32) Naphthalene	6.51	128	525138	410.1381771	ppb		98
33) 4-Chloroaniline	6.55	65	79363	420.6389084	ppb		89
34) Hexachloro-1,3-butadiene	6.62	225	138811	470.4377113	ppb		95
35) Caprolactam	6.91	113	55819	495.6770825	ppb	#	85
36) 4-Chloro-3-methylphenol	7.04	107	207945	485.1446193	ppb		92
37) 2-Methylnaphthalene	7.23	142	395715	477.8502870	ppb	#	1
38) 1-Methylnaphthalene	7.34	142	357027	459.3033972	ppb	#	1

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\053016\0530 17.D Vial: 17
Acq On : 31 May 2016 7:36 am Operator: 280
Sample : MS 1x WG876258 L838049-01 15-0.5 Inst : BNAMS11
Misc : SOIL IS 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 31 10:38 2016 Quant Results File: S811E27P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S811E27P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue May 31 10:22:11 2016
Response via : Initial Calibration
DataAcq Meth : BNA11C

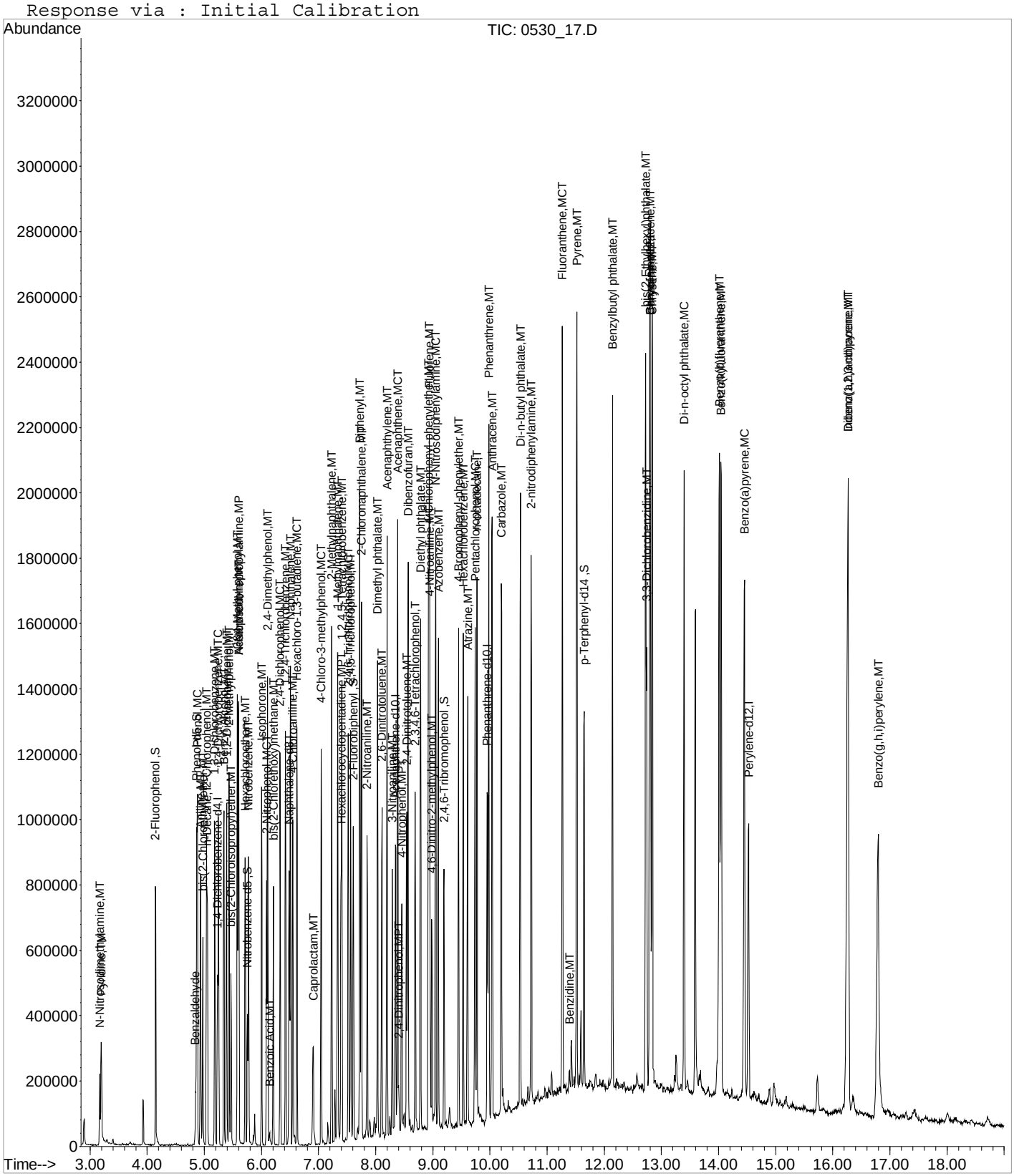
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	1,2,4,5-Tetrachlorobenzene	7.41	216	222912	488.2272619	ppb		97
41)	Hexachlorocyclopentadiene	7.39	237	109270	311.6336292	ppb		90
42)	2,4,6-Trichlorophenol	7.52	196	136966	469.1970874	ppb		93
43)	2,4,5-Trichlorophenol	7.56	196	150598	494.6259262	ppb		92
45)	Biphenyl	7.72	154	496377	457.1312167	ppb		98
46)	2-Chloronaphthalene	7.75	162	397182	454.6584350	ppb		95
47)	2-Nitroaniline	7.85	138	126477	468.1204661	ppb	#	95
48)	Acenaphthylene	8.20	152	668509	505.5414006	ppb		98
49)	Dimethyl phthalate	8.03	163	481805	485.5173308	ppb		93
50)	2,6-Dinitrotoluene	8.11	165	103633	462.3777123	ppb		91
51)	3-Nitroaniline	8.29	138	91409	413.1080365	ppb	#	85
52)	Acenaphthene	8.38	153	423163	480.6920690	ppb		94
53)	2,4-Dinitrophenol	8.40	184	15350	156.2713545	ppb	#	45
54)	Dibenzofuran	8.57	168	582875	467.0854456	ppb	#	67
55)	2,4-Dinitrotoluene	8.54	165	152895	509.4221186	ppb		95
56)	2,3,4,6-Tetrachlorophenol	8.69	232	110343	480.7286697	ppb		96
57)	4-Nitrophenol	8.45	139	78906	456.9557300	ppb	#	82
58)	Fluorene	8.94	166	474716	462.2084915	ppb		94
59)	4-Chlorophenyl-phenylether	8.92	204	245240	464.9143007	ppb		96
60)	Diethyl phthalate	8.78	149	484060	471.4790102	ppb		93
61)	4-Nitroaniline	8.95	138	99032	439.7103363	ppb		85
62)	Azobenzene	9.10	77	506397	463.6469289	ppb	#	41
63)	Atrazine	9.61	200	165327	521.3364361	ppb	#	94
65)	4,6-Dinitro-2-methylphenol	8.98	198	85615	414.4714854	ppb		91
66)	N-Nitrosodiphenylamine	9.05	169	403300	436.7378284	ppb		96
68)	4-Bromophenyl-phenylether	9.45	248	161132	426.5228625	ppb		92
69)	Hexachlorobenzene	9.53	284	169652	443.1286347	ppb		94
70)	n-octadecane	9.77	55	81319	466.8238750	ppb		96
71)	Pentachlorophenol	9.74	266	150229	619.5794777	ppb		97
72)	Phenanthrene	9.98	178	713179	421.5606952	ppb		97
73)	Anthracene	10.04	178	769043	458.7761927	ppb		98
74)	Carbazole	10.20	167	669356	456.6744626	ppb		98
75)	Di-n-butyl phthalate	10.53	149	892063	460.6699437	ppb		99
76)	2-nitrodiphenylamine	10.72	167	225466	514.1442756	ppb		99
77)	Fluoranthene	11.27	202	931812	473.1024425	ppb		95
79)	Benzidine	11.38	184	21047	15.8912717	ppb		77
80)	Pyrene	11.52	202	1012387	475.5502373	ppb		99
82)	Benzylbutyl phthalate	12.14	149	381571	400.5344883	ppb		83
83)	3,3-Dichlorobenzidine	12.74	252	272689	403.1849879	ppb		95
84)	Benzo(a)anthracene	12.80	228	1024556	454.2968597	ppb		95
85)	Chrysene	12.84	228	1015233	474.9599906	ppb		97
86)	bis(2-Ethylhexyl)phthalate	12.72	149	598327	416.8004002	ppb		98
87)	Di-n-octyl phthalate	13.40	149	964295	385.2293674	ppb		94
89)	Benzo(b)fluoranthene	14.01	252	1029946	512.2822823	ppb		96
90)	Benzo(k)fluoranthene	14.05	252	1003044	531.0663008	ppb		96
91)	Benzo(a)pyrene	14.45	252	991573	509.0740851	ppb		94
92)	Indeno(1,2,3-cd)pyrene	16.27	276	1062243	468.3464217	ppb		92
93)	Dibenz(a,h)anthracene	16.27	278	893286	452.2661727	ppb		93
94)	Benzo(g,h,i)perylene	16.79	276	827084	437.3932228	ppb		92

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\053016\0530 17.D Vial: 17
Acq On : 31 May 2016 7:36 am Operator: 280
Sample : MS 1x WG876258 L838049-01 15-0.5 Inst : BNAMS11
Misc : SOIL IS 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 31 10:38 2016 Quant Results File: S811E27P.RES

Method : C:\MSDCHEM\1\METHODS\S811E27P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue May 31 10:22:11 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\053016\0530 18.D Vial: 18
Acq On : 31 May 2016 8:00 am Operator: 280
Sample : MSD 1x WG876258 L838049-01 15-0.5 Inst : BNAMS11
Misc : SOIL IS 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 31 10:38 2016 Quant Results File: S811E27P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S811E27P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue May 31 10:22:11 2016
Response via : Initial Calibration
DataAcq Meth : BNA11C

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.23	152	51585	8000.00	ppb		0.00
22) Naphthalene-d8	6.48	136	263841	8000.00	ppb		0.00
40) Acenaphthene-d10	8.34	164	166687	8000.00	ppb		0.00
64) Phenanthrene-d10	9.95	188	347650	8000.00	ppb		0.00
78) Chrysene-d12	12.81	240	442745	8000.00	ppb		0.00
88) Perylene-d12	14.52	264	433337	8000.00	ppb		0.01
System Monitoring Compounds							
4) 2-Fluorophenol	4.15	112	178484	475.4025575	ppb		0.00
Spiked Amount 666.000	Range 21 - 116		Recovery = 71.38%				
7) Phenol-d5	4.87	99	224335	463.0546232	ppb		0.00
Spiked Amount 666.000	Range 26 - 121		Recovery = 69.53%				
23) Nitrobenzene-d5	5.75	82	119528	257.3789804	ppb		0.00
Spiked Amount 333.000	Range 22 - 129		Recovery = 77.29%				
44) 2-Fluorobiphenyl	7.61	172	233070	261.6866350	ppb		0.00
Spiked Amount 333.000	Range 35 - 129		Recovery = 78.58%				
67) 2,4,6-Tribromophenol	9.20	330	66904	462.5754982	ppb		0.00
Spiked Amount 666.000	Range 22 - 142		Recovery = 69.46%				
81) p-Terphenyl-d14	11.65	244	365552	239.2444076	ppb		0.00
Spiked Amount 333.000	Range 22 - 128		Recovery = 71.85%				
Target Compounds							Qvalue
2) Pyridine	3.20	79	146606	339.0020788	ppb	#	87
3) N-Nitrosodimethylamine	3.17	42	80319	396.0204001	ppb		99
5) Aniline	4.93	66	114818	453.8478908	ppb		96
6) bis(2-Chloroethyl)ether	4.97	63	116301	447.4048947	ppb		96
8) Phenol	4.88	94	251439	510.1523343	ppb		96
9) Benzaldehyde	4.85	105	30659	101.6151728	ppb		95
10) 2-Chlorophenol	5.04	128	175263	456.9841436	ppb		90
11) n-Decane	5.05	41	87093	396.0907091	ppb	#	94
12) 1,3-Dichlorobenzene	5.18	146	185943	426.4776629	ppb		95
13) 1,4-Dichlorobenzene	5.25	146	185620	422.3597089	ppb		95
14) Benzyl Alcohol	5.34	79	214837	545.4219022	ppb		96
15) 1,2-Dichlorobenzene	5.39	146	180741	436.8474628	ppb		97
16) bis(2-Chloroisopropyl)ethe	5.47	121	57826	527.2783665	ppb		86
17) 2-Methylphenol	5.43	108	180371	503.4377876	ppb		95
18) Hexachloroethane	5.71	117	79681	421.6927381	ppb		91
19) N-Nitrosodi-n-propylamine	5.60	70	162609	532.4252935	ppb		97
20) 3&4-Methyl phenol	5.58	107	234105	535.3241179	ppb		91
21) Acetophenone	5.60	105	299562	517.3987402	ppb		95
24) Nitrobenzene	5.77	77	227881	501.2657405	ppb		91
25) Isophorone	6.00	82	411812	515.4660827	ppb		99
26) 2-Nitrophenol	6.09	139	102657	530.0107492	ppb		88
27) 2,4-Dimethylphenol	6.11	107	229260	534.5222747	ppb		97
28) bis(2-Chlorethoxy)methane	6.21	93	224787	495.8748331	ppb		93
29) 2,4-Dichlorophenol	6.32	162	168092	525.6320306	ppb		91
30) Benzoic Acid	6.14	105	10301	61.8246665	ppb		95
31) 1,2,4-Trichlorobenzene	6.42	180	194065	514.4148137	ppb		96
32) Naphthalene	6.51	128	534001	474.1560865	ppb		99
33) 4-Chloroaniline	6.55	65	81242	489.5470977	ppb		81
34) Hexachloro-1,3-butadiene	6.62	225	135439	521.8485638	ppb		95
35) Caprolactam	6.91	113	50494	509.7756325	ppb		92
36) 4-Chloro-3-methylphenol	7.04	107	193218	512.4987702	ppb		87
37) 2-Methylnaphthalene	7.22	142	396505	544.3528673	ppb	#	1
38) 1-Methylnaphthalene	7.34	142	356823	521.8839559	ppb	#	1

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\053016\0530 18.D Vial: 18
Acq On : 31 May 2016 8:00 am Operator: 280
Sample : MSD 1x WG876258 L838049-01 15-0.5 Inst : BNAMS11
Misc : SOIL IS 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 31 10:38 2016 Quant Results File: S811E27P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S811E27P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue May 31 10:22:11 2016
Response via : Initial Calibration
DataAcq Meth : BNA11C

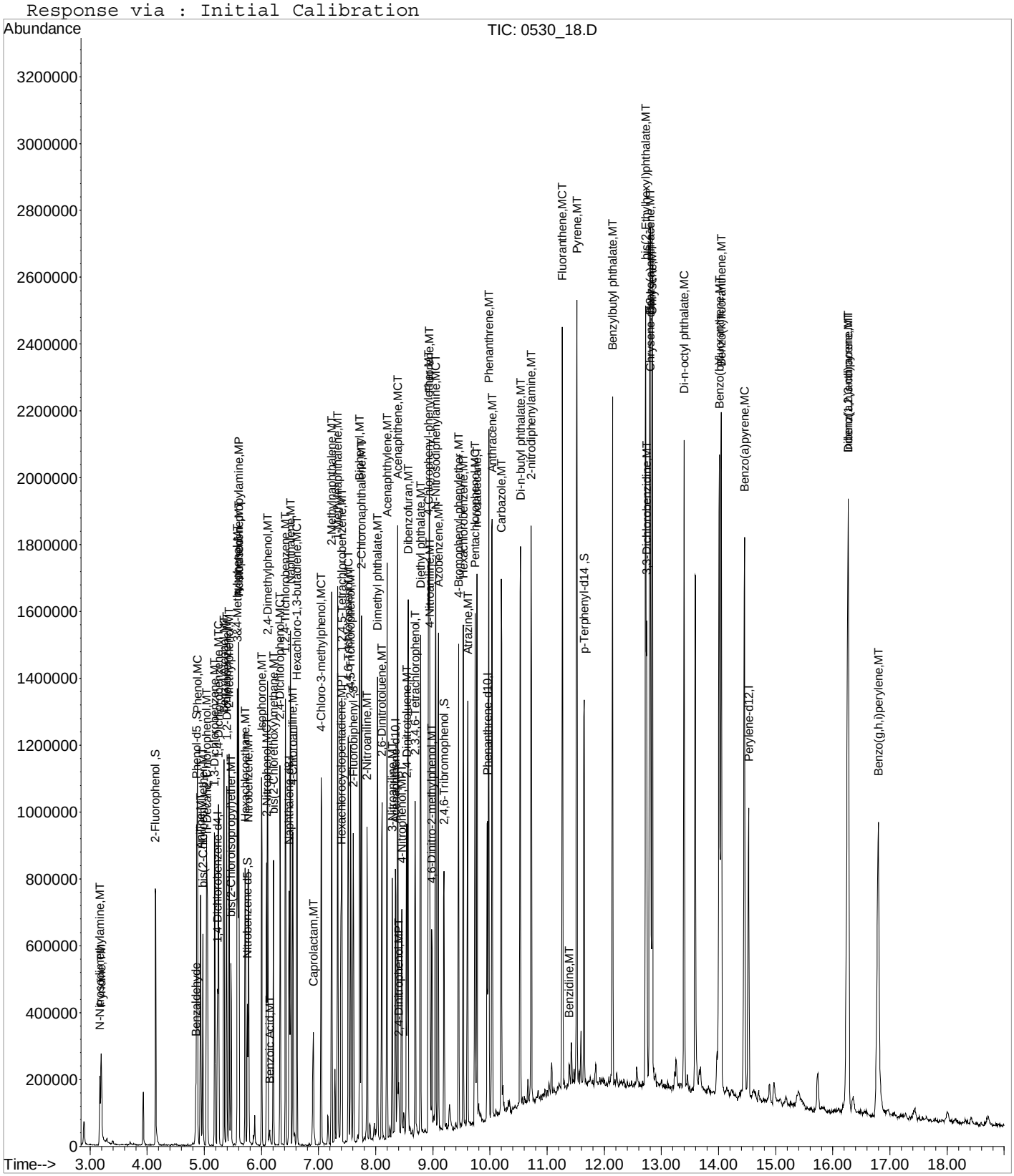
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
39)	1,2,4,5-Tetrachlorobenzene	7.41	216	210894	525.1402544	ppb		98
41)	Hexachlorocyclopentadiene	7.39	237	86266	279.0717865	ppb		93
42)	2,4,6-Trichlorophenol	7.52	196	136646	528.9110006	ppb		87
43)	2,4,5-Trichlorophenol	7.56	196	143795	533.6353596	ppb		89
45)	Biphenyl	7.72	154	460183	478.8538045	ppb		98
46)	2-Chloronaphthalene	7.75	162	363002	469.5132510	ppb		99
47)	2-Nitroaniline	7.85	138	122531	512.4307613	ppb	#	98
48)	Acenaphthylene	8.20	152	621772	531.2803719	ppb		99
49)	Dimethyl phthalate	8.03	163	457476	520.8886460	ppb		90
50)	2,6-Dinitrotoluene	8.11	165	100165	504.9611410	ppb		86
51)	3-Nitroaniline	8.29	138	87088	444.7092312	ppb	#	90
52)	Acenaphthene	8.38	153	411903	528.6854594	ppb		96
53)	2,4-Dinitrophenol	8.40	184	19001	194.9180037	ppb	#	49
54)	Dibenzofuran	8.57	168	520841	471.5950220	ppb	#	68
55)	2,4-Dinitrotoluene	8.54	165	149589	563.1541839	ppb		92
56)	2,3,4,6-Tetrachlorophenol	8.69	232	109388	538.4781180	ppb		93
57)	4-Nitrophenol	8.45	139	77543	507.3992724	ppb		91
58)	Fluorene	8.94	166	442792	487.1323345	ppb		97
59)	4-Chlorophenyl-phenylether	8.92	204	234917	503.1983235	ppb		94
60)	Diethyl phthalate	8.78	149	470334	517.6219481	ppb		94
61)	4-Nitroaniline	8.95	138	95913	481.1846245	ppb		89
62)	Azobenzene	9.10	77	525376	543.5126225	ppb	#	44
63)	Atrazine	9.61	200	161087	573.9551126	ppb	#	94
65)	4,6-Dinitro-2-methylphenol	8.98	198	77963	427.2939588	ppb		94
66)	N-Nitrosodiphenylamine	9.05	169	387106	475.5283559	ppb		96
68)	4-Bromophenyl-phenylether	9.45	248	153613	461.2564120	ppb		91
69)	Hexachlorobenzene	9.53	284	157181	465.7199117	ppb		92
70)	n-octadecane	9.77	55	91760	597.5418988	ppb		93
71)	Pentachlorophenol	9.74	266	156454	724.2333692	ppb		92
72)	Phenanthrene	9.98	178	680889	456.5536419	ppb		98
73)	Anthracene	10.04	178	710860	481.0478242	ppb		98
74)	Carbazole	10.20	167	644982	499.1730020	ppb		99
75)	Di-n-butyl phthalate	10.53	149	819502	480.0630687	ppb		96
76)	2-nitrodiphenylamine	10.72	167	218286	564.6557506	ppb		99
77)	Fluoranthene	11.27	202	895612	515.8230238	ppb		96
79)	Benzidine	11.38	184	29893	25.3271301	ppb		93
80)	Pyrene	11.52	202	960842	506.4654792	ppb		98
82)	Benzylbutyl phthalate	12.14	149	389629	458.9483983	ppb	#	79
83)	3,3-Dichlorobenzidine	12.74	252	278615	462.2631302	ppb		93
84)	Benzo(a)anthracene	12.80	228	1028474	511.7353029	ppb		98
85)	Chrysene	12.84	228	943860	495.5037099	ppb		96
86)	bis(2-Ethylhexyl)phthalate	12.72	149	594573	464.7749763	ppb		99
87)	Di-n-octyl phthalate	13.39	149	1019814	457.1707854	ppb		95
89)	Benzo(b)fluoranthene	14.01	252	1079691	570.0478537	ppb		96
90)	Benzo(k)fluoranthene	14.05	252	898415	504.9201550	ppb		95
91)	Benzo(a)pyrene	14.45	252	992132	540.6829908	ppb		95
92)	Indeno(1,2,3-cd)pyrene	16.27	276	1030046	482.0775440	ppb		96
93)	Dibenz(a,h)anthracene	16.27	278	865290	465.0313332	ppb		92
94)	Benzo(g,h,i)perylene	16.79	276	805451	452.1458076	ppb		89

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\053016\0530 18.D Vial: 18
Acq On : 31 May 2016 8:00 am Operator: 280
Sample : MSD 1x WG876258 L838049-01 15-0.5 Inst : BNAMS11
Misc : SOIL IS 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 31 10:38 2016 Quant Results File: S811E27P.RES

Method : C:\MSDCHEM\1\METHODS\S811E27P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue May 31 10:22:11 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\053016\0530 19.D Vial: 19
Acq On : 31 May 2016 8:23 am Operator: 280
Sample : L838049-04 1x WG876258 15-0.5 Inst : BNAMS11
Misc : SOIL IS 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 31 14:11 2016 Quant Results File: S811E27P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S811E27P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue May 31 10:22:11 2016
Response via : Initial Calibration
DataAcq Meth : BNA11C

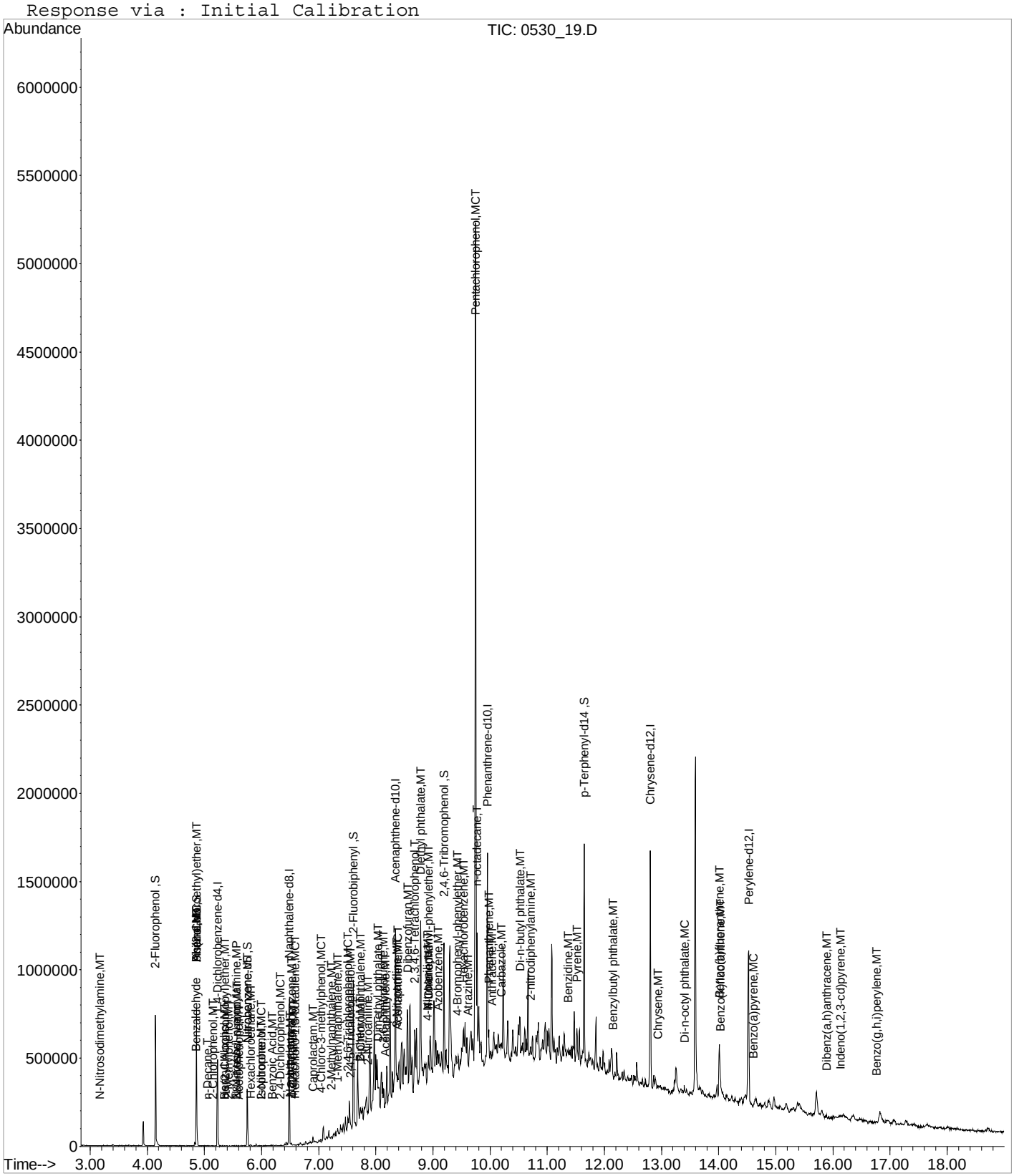
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.23	152	55358	8000.00	ppb	0.00
22) Naphthalene-d8	6.48	136	281006	8000.00	ppb	0.00
40) Acenaphthene-d10	8.34	164	191577	8000.00	ppb	0.00
64) Phenanthrene-d10	9.95	188	396261	8000.00	ppb	0.00
78) Chrysene-d12	12.81	240	503062	8000.00	ppb	0.00
88) Perylene-d12	14.52	264	495249	8000.00	ppb	0.01
System Monitoring Compounds						
4) 2-Fluorophenol	4.14	112	157893	391.8935751	ppb	0.00
Spiked Amount 666.000	Range 21 - 116		Recovery = 58.84%			
7) Phenol-d5	4.86	99	209286	402.5486826	ppb	0.00
Spiked Amount 666.000	Range 26 - 121		Recovery = 60.44%			
23) Nitrobenzene-d5	5.75	82	104369	211.0093196	ppb	0.00
Spiked Amount 333.000	Range 22 - 129		Recovery = 63.37%			
44) 2-Fluorobiphenyl	7.61	172	209164	204.3339202	ppb	0.00
Spiked Amount 333.000	Range 35 - 129		Recovery = 61.36%			
67) 2,4,6-Tribromophenol	9.20	330	63285	383.8771205	ppb	0.00
Spiked Amount 666.000	Range 22 - 142		Recovery = 57.64%			
81) p-Terphenyl-d14	11.65	244	349054	201.0561685	ppb	0.00
Spiked Amount 333.000	Range 22 - 128		Recovery = 60.38%			
Target Compounds						Qvalue
5) Aniline	4.86	66	17050	62.8011752	ppb #	1
30) Benzoic Acid	6.18	105	186	18.9974596	ppb	88
35) Caprolactam	6.91	113	893	8.4648145	ppb #	1
38) 1-Methylnaphthalene	7.33	142	7155	9.8255628	ppb #	1
47) 2-Nitroaniline	7.86	138	1203	4.3773695	ppb #	1
52) Acenaphthene	8.38	153	6981	7.7961181	ppb #	65
54) Dibenzofuran	8.57	168	11362	8.9511162	ppb #	1
56) 2,3,4,6-Tetrachlorophenol	8.69	232	13971	59.8389870	ppb	80
58) Fluorene	8.93	166	10059	9.6285383	ppb	89
61) 4-Nitroaniline	8.90	138	3255	14.2083492	ppb #	26
63) Atrazine	9.62	200	5463	16.9358500	ppb #	34
70) n-octadecane	9.77	55	36717	209.7698414	ppb #	76
71) Pentachlorophenol	9.75	266	554609	2162.5501861	ppb	93
72) Phenanthrene	9.98	178	50608	29.7711472	ppb	96
76) 2-nitrodiphenylamine	10.71	167	4331	9.8289462	ppb #	40
80) Pyrene	11.52	202	42173	19.5643092	ppb	87

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\053016\0530 19.D Vial: 19
Acq On : 31 May 2016 8:23 am Operator: 280
Sample : L838049-04 1x WG876258 15-0.5 Inst : BNAMS11
Misc : SOIL IS 16E03322 Multiplr: 0.03
MS Integration Params: RTEINT.P
Quant Time: May 31 14:11 2016 Quant Results File: S811E27P.RES

Method : C:\MSDCHEM\1\METHODS\S811E27P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue May 31 10:22:11 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\053016\0530 22.D Vial: 22
Acq On : 31 May 2016 9:34 am Operator: 280
Sample : L838049-02 5x WG876258 15-0.5 Inst : BNAMS11
Misc : SOIL IS 16E03322 Multiplr: 0.17
MS Integration Params: RTEINT.P
Quant Time: May 31 14:16 2016 Quant Results File: S811E27P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S811E27P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue May 31 10:22:11 2016
Response via : Initial Calibration
DataAcq Meth : BNA11C

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.23	152	64324	8000.00 ppb	0.00
22) Naphthalene-d8	6.48	136	338052	8000.00 ppb	0.00
40) Acenaphthene-d10	8.35	164	252821	8000.00 ppb	0.01
64) Phenanthrene-d10	9.97	188	472523	8000.00 ppb	0.02
78) Chrysene-d12	12.82	240	550236	8000.00 ppb	0.01
88) Perylene-d12	14.52	264	484778	8000.00 ppb	0.01
System Monitoring Compounds					
4) 2-Fluorophenol	4.14	112	37607	402.8594382 ppb	0.00
Spiked Amount 666.000	Range 21 - 116		Recovery = 60.49%		
7) Phenol-d5	4.86	99	50344	417.9319146 ppb	0.00
Spiked Amount 666.000	Range 26 - 121		Recovery = 62.75%		
23) Nitrobenzene-d5	5.75	82	31573	266.1033153 ppb	0.00
Spiked Amount 333.000	Range 22 - 129		Recovery = 79.91%		
44) 2-Fluorobiphenyl	7.61	172	54341	201.7360977 ppb	0.00
Spiked Amount 333.000	Range 35 - 129		Recovery = 60.58%		
67) 2,4,6-Tribromophenol	9.21	330	18413	469.7281780 ppb	0.01
Spiked Amount 666.000	Range 22 - 142		Recovery = 70.53%		
81) p-Terphenyl-d14	11.67	244	91424	241.4514128 ppb	0.02
Spiked Amount 333.000	Range 22 - 128		Recovery = 72.51%		
Target Compounds					Qvalue
5) Aniline	4.86	66	3717	59.0902101 ppb #	1
9) Benzaldehyde	4.84	105	2480	33.0578713 ppb #	31
11) n-Decane	5.05	41	3484	63.7253428 ppb #	72
21) Acetophenone	5.58	105	8785	61.0243329 ppb #	48
30) Benzoic Acid	6.23	105	31323	605.0086765 ppb	81
32) Naphthalene	6.50	128	16385	56.9451469 ppb #	49
33) 4-Chloroaniline	6.57	65	4865	114.7434043 ppb #	1
35) Caprolactam	6.91	113	11890	469.8423536 ppb #	1
37) 2-Methylnaphthalene	7.23	142	34063	183.0398931 ppb #	1
38) 1-Methylnaphthalene	7.34	142	254726	1458.2278676 ppb #	1
43) 2,4,5-Trichlorophenol	7.56	196	2340	28.7129288 ppb #	24
45) Biphenyl	7.70	154	14788	50.8794767 ppb #	70
47) 2-Nitroaniline	7.84	138	4963	68.6268892 ppb #	1
48) Acenaphthylene	8.20	152	62170	175.6443972 ppb #	30
51) 3-Nitroaniline	8.27	138	3973	67.0806428 ppb #	1
52) Acenaphthene	8.39	153	165067	700.5247640 ppb #	78
54) Dibenzofuran	8.57	168	136773	409.4729753 ppb #	1
56) 2,3,4,6-Tetrachlorophenol	8.71	232	132857	2162.4378900 ppb	97
58) Fluorene	8.95	166	161965	589.1544882 ppb #	79
61) 4-Nitroaniline	8.97	138	16016	265.6740582 ppb #	22
62) Azobenzene	9.11	77	53684	183.6306180 ppb #	1
63) Atrazine	9.80	200	1315986	15503.4919293 ppb #	51
68) 4-Bromophenyl-phenylether	9.47	248	2620	29.0273411 ppb #	11
70) n-octadecane	9.79	55	1298289	31194.4874439 ppb #	88
71) Pentachlorophenol	9.79	266	7413248	119388.2631408 ppb	92
72) Phenanthrene	10.00	178	1839354	4550.6384634 ppb	96
73) Anthracene	10.05	178	44933m	112.1917990 ppb	
74) Carbazole	10.25	167	30031	85.7560574 ppb #	1
76) 2-nitrodiphenylamine	10.72	167	23886	227.9779371 ppb #	37
77) Fluoranthene	11.29	202	130739	277.8289494 ppb	96
80) Pyrene	11.54	202	389524	828.5314408 ppb	88
84) Benzo(a)anthracene	12.81	228	19638m	39.4299493 ppb	
85) Chrysene	12.84	228	41211m	87.3030434 ppb	

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\053016\0530 22.D Vial: 22
Acq On : 31 May 2016 9:34 am Operator: 280
Sample : L838049-02 5x WG876258 15-0.5 Inst : BNAMS11
Misc : SOIL IS 16E03322 Multiplr: 0.17
MS Integration Params: RTEINT.P
Quant Time: May 31 14:16 2016 Quant Results File: S811E27P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S811E27P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue May 31 10:22:11 2016
Response via : Initial Calibration
DataAcq Meth : BNA11C

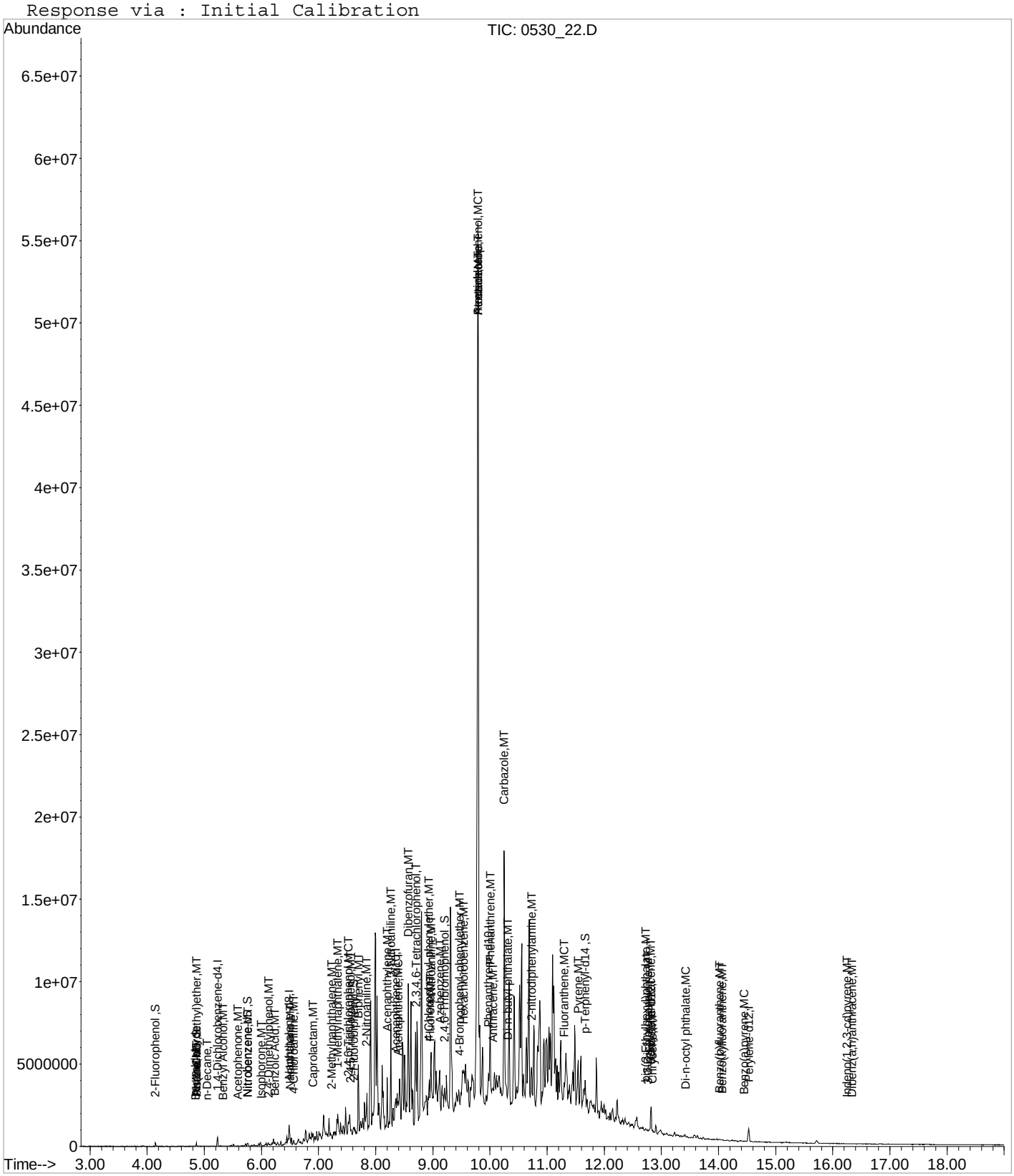
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
89) Benzo(b)fluoranthene	14.01	252	14909	35.2870584	ppb	77

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

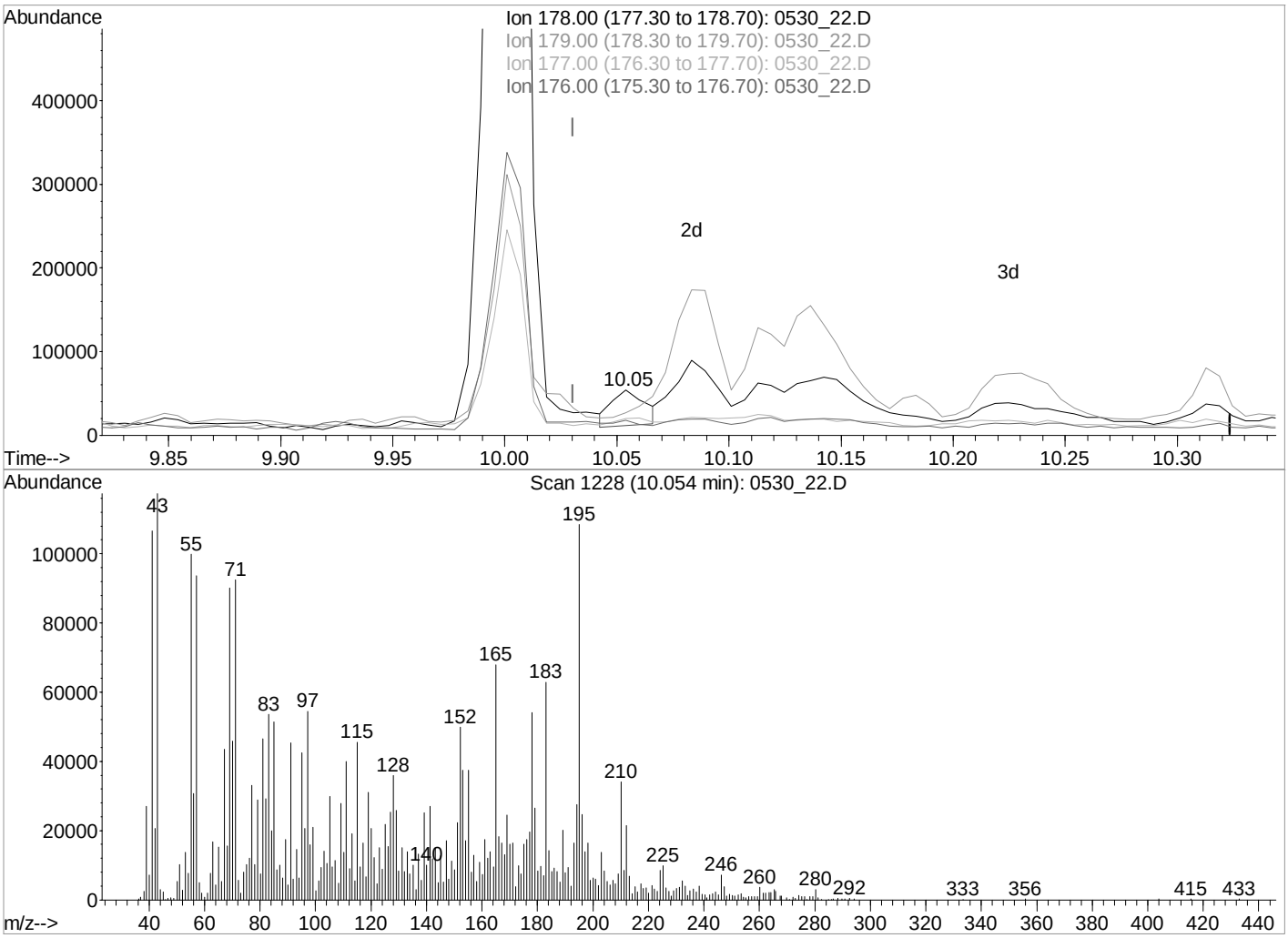
Data File : C:\MSDCHEM\1\DATA\053016\0530 22.D Vial: 22
Acq On : 31 May 2016 9:34 am Operator: 280
Sample : L838049-02 5x WG876258 15-0.5 Inst : BNAMS11
Misc : SOIL IS 16E03322 Multiplr: 0.17
MS Integration Params: RTEINT.P
Quant Time: May 31 14:16 2016 Quant Results File: S811E27P.RES

Method : C:\MSDCHEM\1\METHODS\S811E27P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue May 31 10:22:11 2016
Response via : Initial Calibration



Data File : C:\MSDCHEM\1\DATA\053016\0530 22.D Vial: 22
Acq On : 31 May 2016 9:34 am Operator: 280
Sample : L838049-02 5x WG876258 15-0.5 Inst : BNAMS11
Misc : SOIL IS 16E03322 Multiplr: 0.17
MS Integration Params: RTEINT.P
Quant Time: May 31 14:16 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S811E27P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue May 31 10:22:11 2016
Response via : Multiple Level Calibration



TIC: 0530_22.D

(73) Anthracene (MT)

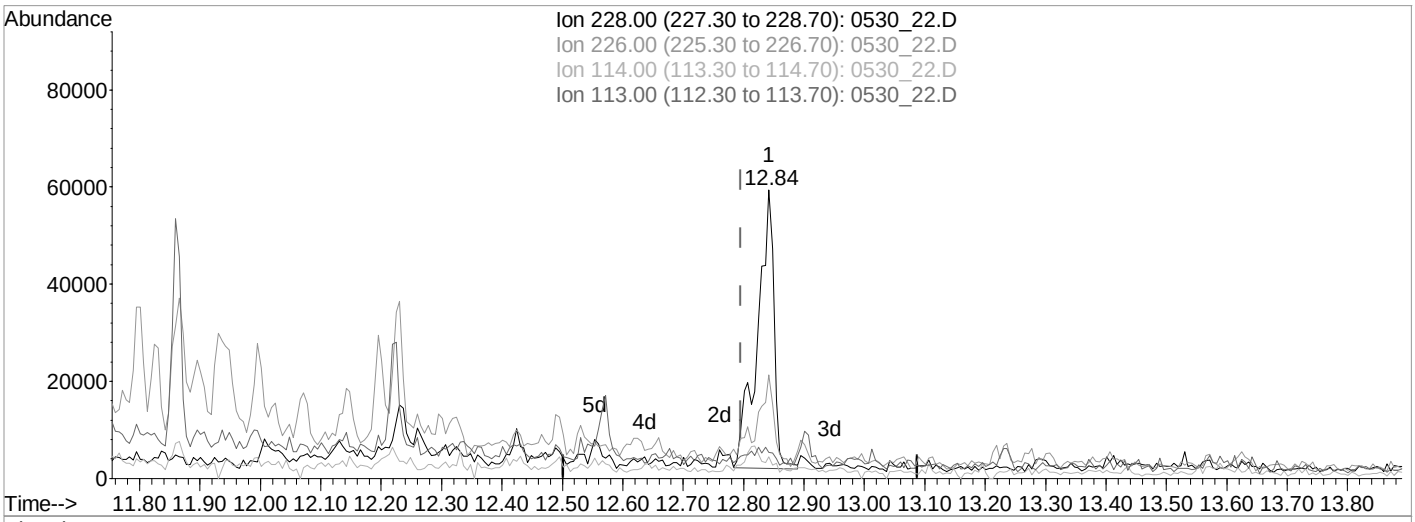
10.05min (+0.024) 112.1917990 ppb m

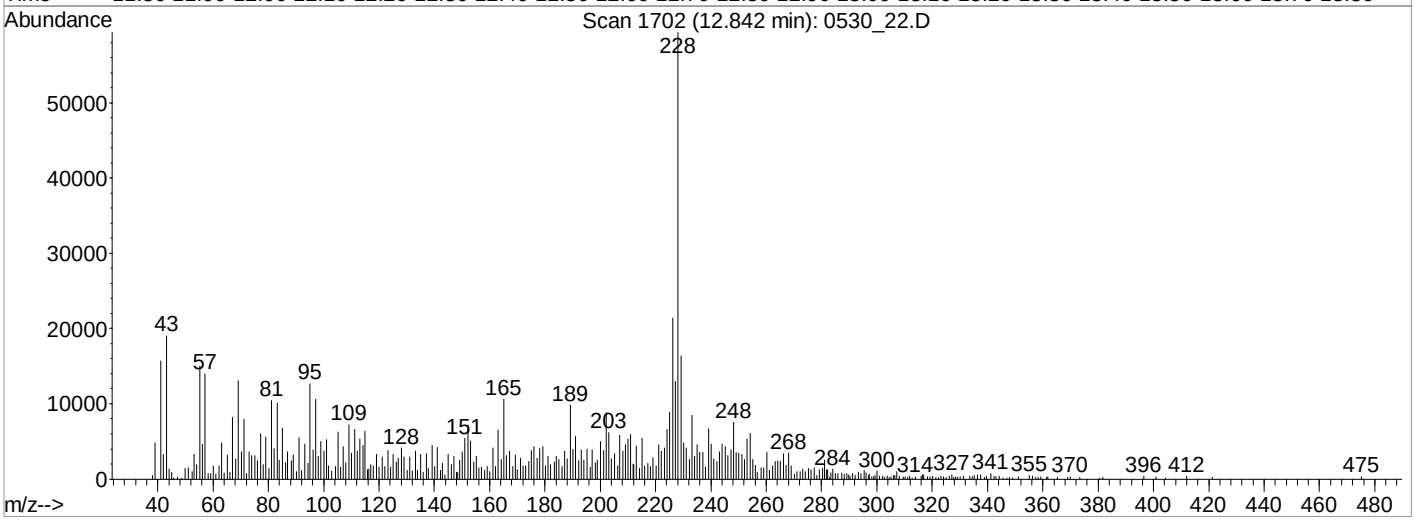
response 44933 Limit = 165.0000000

Ion	Exp%	Act%
178.00	100	100
179.00	14.70	49.19#
177.00	10.90	36.29#
176.00	16.80	32.40

Data File : C:\MSDCHEM\1\DATA\053016\0530 22.D Vial: 22
Acq On : 31 May 2016 9:34 am Operator: 280
Sample : L838049-02 5x WG876258 15-0.5 Inst : BNAMS11
Misc : SOIL IS 16E03322 Multiplr: 0.17
MS Integration Params: RTEINT.P
Quant Time: May 31 14:16 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S811E27P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue May 31 10:22:11 2016
Response via : Multiple Level Calibration





TIC: 0530_22.D

(84) Benzo(a)anthracene (MT)

12.84min (+0.047) 220.0150211 ppb

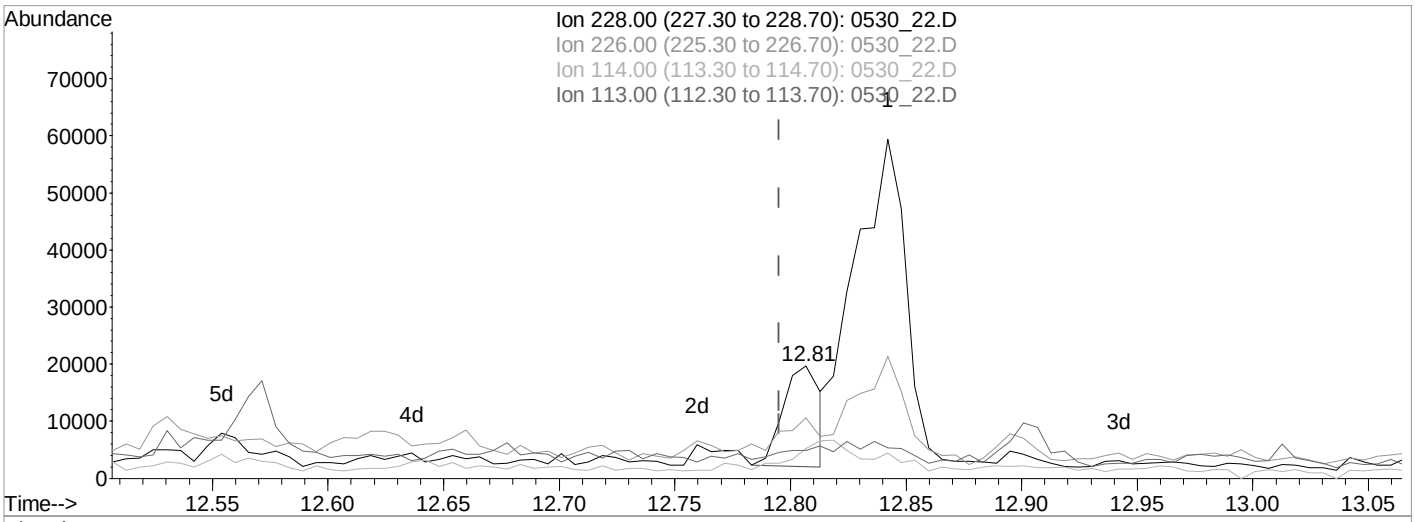
Qvalue = 92

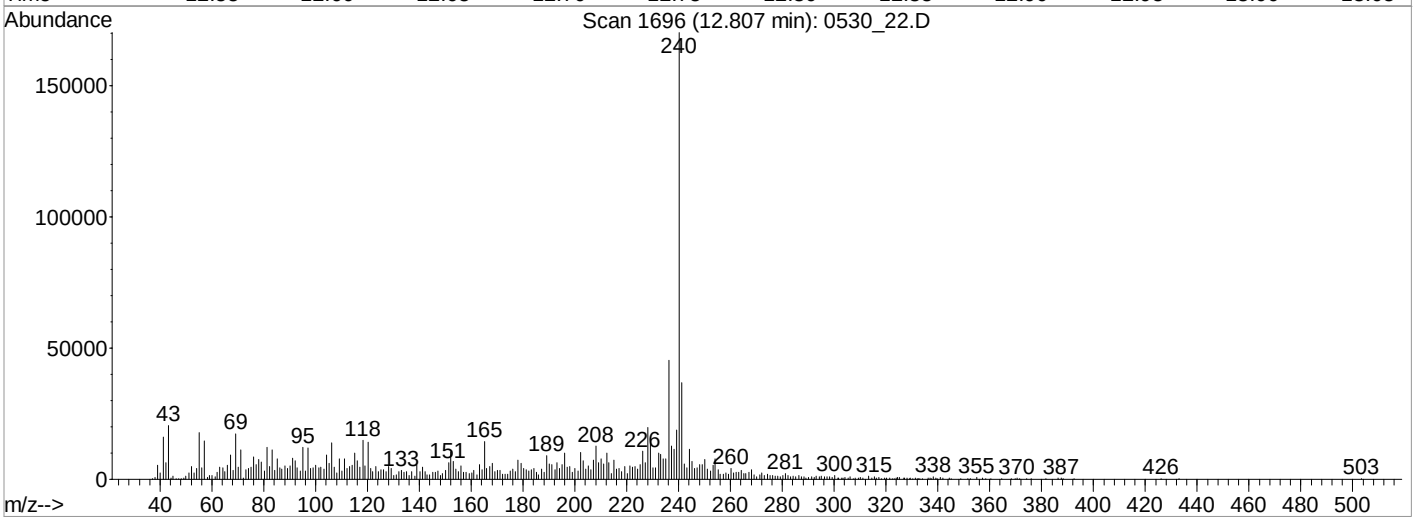
response 109578 Limit = 165.0000000

Ion	Exp%	Act%
228.00	100	100
226.00	25.00	27.63
114.00	8.40	5.19
113.00	8.20	3.56

Data File : C:\MSDCHEM\1\DATA\053016\0530 22.D Vial: 22
Acq On : 31 May 2016 9:34 am Operator: 280
Sample : L838049-02 5x WG876258 15-0.5 Inst : BNAMS11
Misc : SOIL IS 16E03322 Multiplr: 0.17
MS Integration Params: RTEINT.P
Quant Time: May 31 14:16 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S811E27P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue May 31 10:22:11 2016
Response via : Multiple Level Calibration





TIC: 0530_22.D

(84) Benzo(a)anthracene (MT)

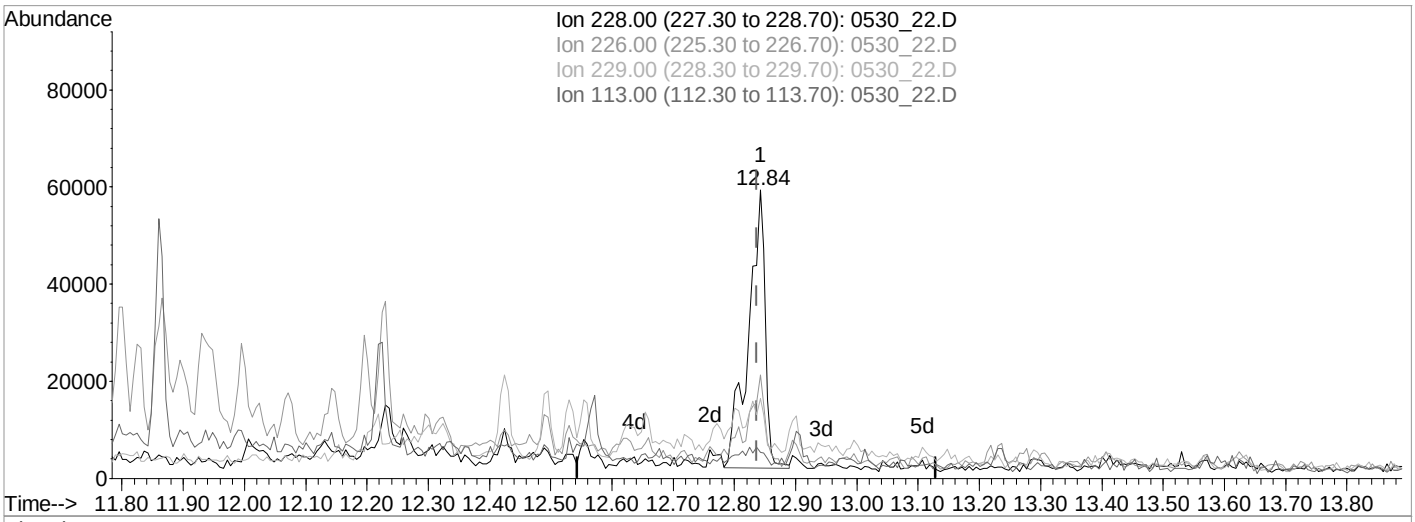
12.81min (+0.012) 39.4299493 ppb m

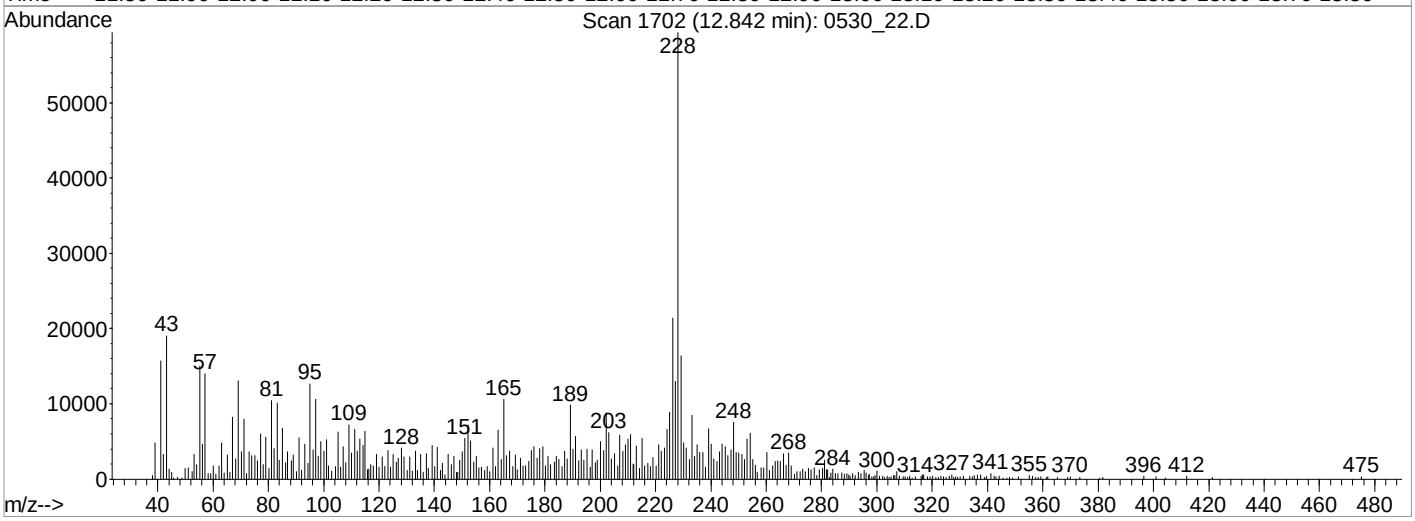
response 19638 Limit = 165.0000000

Ion	Exp%	Act%
228.00	100	100
226.00	25.00	53.85#
114.00	8.40	26.29
113.00	8.20	24.70

Data File : C:\MSDCHEM\1\DATA\053016\0530 22.D Vial: 22
Acq On : 31 May 2016 9:34 am Operator: 280
Sample : L838049-02 5x WG876258 15-0.5 Inst : BNAMS11
Misc : SOIL IS 16E03322 Multiplr: 0.17
MS Integration Params: RTEINT.P
Quant Time: May 31 14:16 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S811E27P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue May 31 10:22:11 2016
Response via : Multiple Level Calibration





TIC: 0530_22.D

(85) Chrysene (MT)

12.84min (+0.006) 231.2319962 ppb

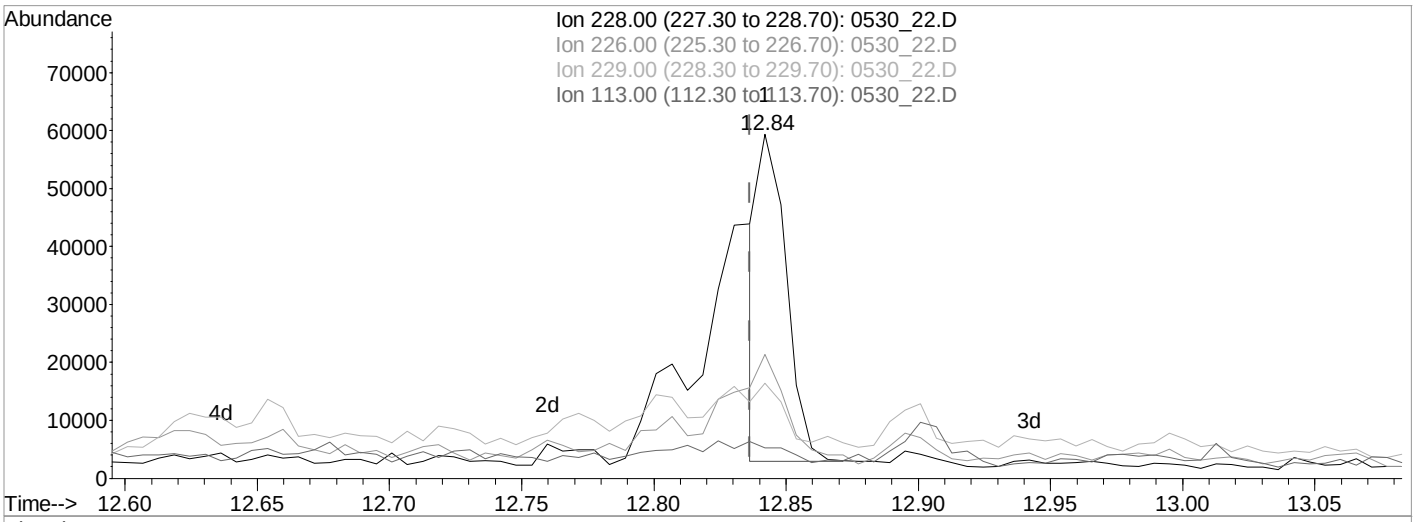
Qvalue = 94

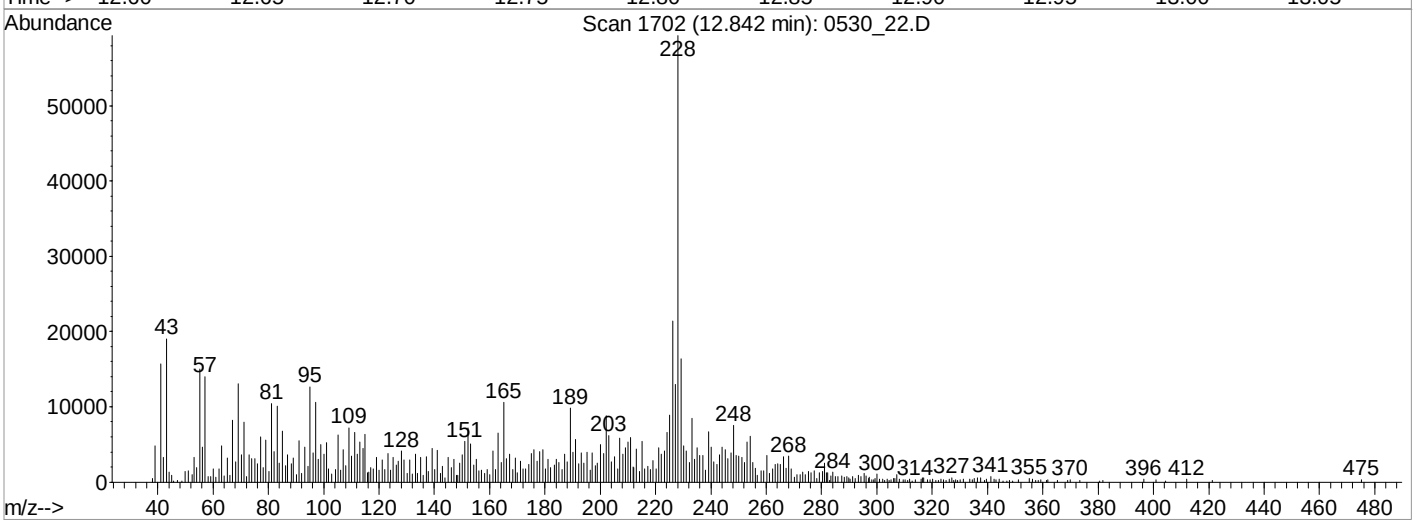
response 109152 Limit = 165.0000000

Ion	Exp%	Act%
228.00	100	100
226.00	27.20	27.63
229.00	18.50	14.45
113.00	9.80	3.56

Data File : C:\MSDCHEM\1\DATA\053016\0530 22.D Vial: 22
Acq On : 31 May 2016 9:34 am Operator: 280
Sample : L838049-02 5x WG876258 15-0.5 Inst : BNAMS11
Misc : SOIL IS 16E03322 Multiplr: 0.17
MS Integration Params: RTEINT.P
Quant Time: May 31 14:16 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S811E27P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue May 31 10:22:11 2016
Response via : Multiple Level Calibration





TIC: 0530_22.D

(85) Chrysene (MT)

12.84min (+0.006) 87.3030434 ppb m

response 41211 Limit = 165.0000000

Ion	Exp%	Act%
228.00	100	100
226.00	27.20	35.97
229.00	18.50	27.62
113.00	9.80	8.92

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\053016\0530 23.D Vial: 23
Acq On : 31 May 2016 9:57 am Operator: 280
Sample : L838049-05 5x WG876258 15-0.5 Inst : BNAMS11
Misc : SOIL IS 16E03322 Multiplr: 0.17
MS Integration Params: RTEINT.P
Quant Time: May 31 14:19 2016 Quant Results File: S811E27P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S811E27P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue May 31 10:22:11 2016
Response via : Initial Calibration
DataAcq Meth : BNA11C

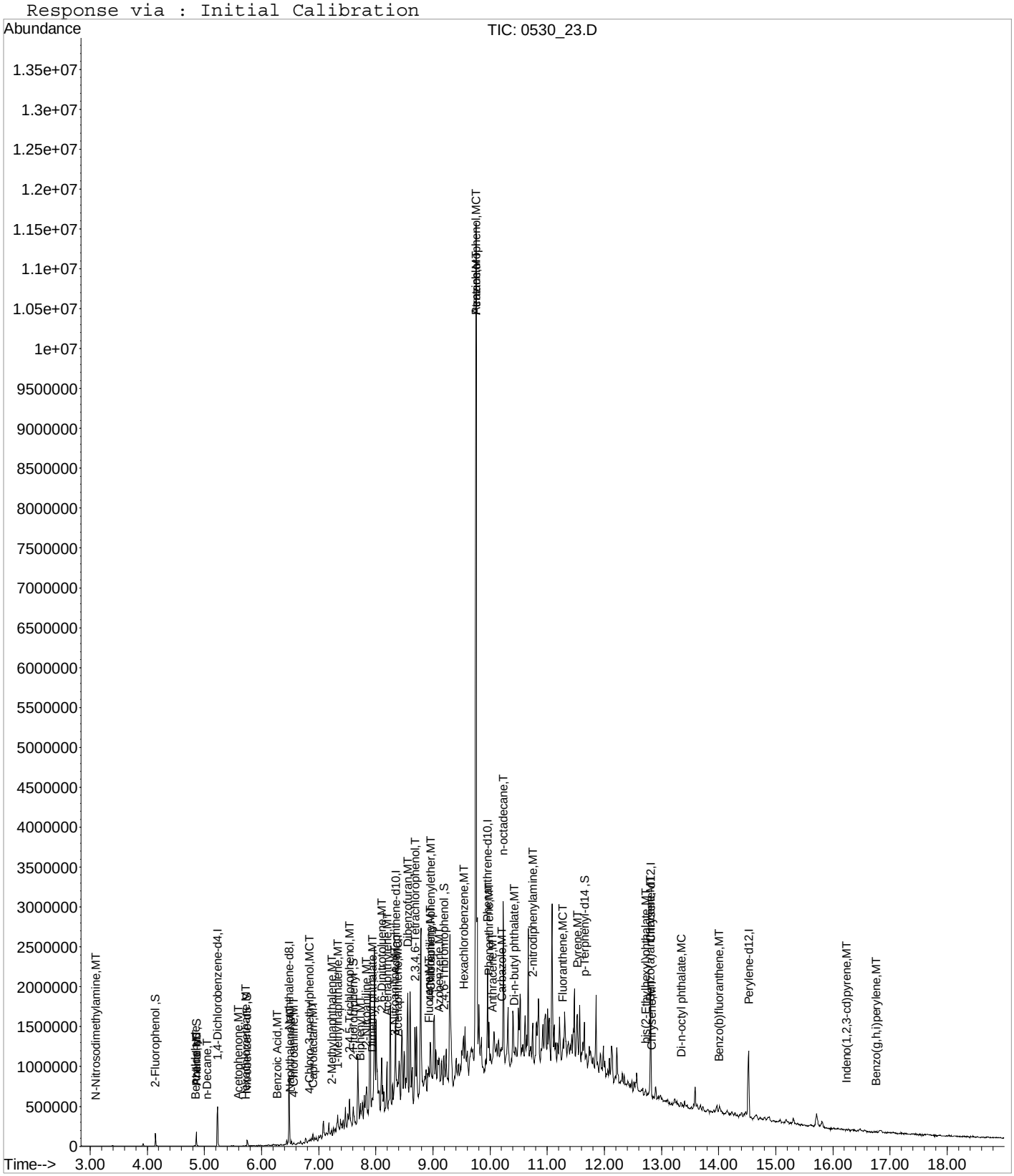
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.23	152	57860	8000.00 ppb	0.00
22) Naphthalene-d8	6.48	136	296910	8000.00 ppb	0.00
40) Acenaphthene-d10	8.35	164	211919	8000.00 ppb	0.00
64) Phenanthrene-d10	9.96	188	410561	8000.00 ppb	0.01
78) Chrysene-d12	12.81	240	505551	8000.00 ppb	0.00
88) Perylene-d12	14.52	264	461578	8000.00 ppb	0.01
System Monitoring Compounds					
4) 2-Fluorophenol	4.14	112	31095	370.3139118 ppb	0.00
Spiked Amount 666.000	Range 21 - 116		Recovery = 55.60%		
7) Phenol-d5	4.86	99	39788	367.2015798 ppb	0.00
Spiked Amount 666.000	Range 26 - 121		Recovery = 55.14%		
23) Nitrobenzene-d5	5.75	82	21901	210.1633902 ppb	0.00
Spiked Amount 333.000	Range 22 - 129		Recovery = 63.11%		
44) 2-Fluorobiphenyl	7.61	172	46413	205.5601279 ppb	0.00
Spiked Amount 333.000	Range 35 - 129		Recovery = 61.73%		
67) 2,4,6-Tribromophenol	9.20	330	13837	406.2648616 ppb	0.00
Spiked Amount 666.000	Range 22 - 142		Recovery = 61.00%		
81) p-Terphenyl-d14	11.65	244	70806	203.5277448 ppb	0.00
Spiked Amount 333.000	Range 22 - 128		Recovery = 61.12%		
Target Compounds					Qvalue
5) Aniline	4.86	66	3536	62.4927798 ppb	# 1
30) Benzoic Acid	6.28	105	1838	126.4033110 ppb	82
35) Caprolactam	6.90	113	3921	176.4110707 ppb	# 19
37) 2-Methylnaphthalene	7.22	142	16762	102.5527664 ppb	# 1
38) 1-Methylnaphthalene	7.33	142	46392	302.3805817 ppb	# 1
43) 2,4,5-Trichlorophenol	7.54	196	1561	22.8511357 ppb	# 1
47) 2-Nitroaniline	7.82	138	10090	166.4502505 ppb	# 63
48) Acenaphthylene	8.20	152	12915	43.5302431 ppb	# 28
51) 3-Nitroaniline	8.32	138	4346	87.5410238 ppb	# 69
52) Acenaphthene	8.38	153	29078	147.2214244 ppb	# 76
54) Dibenzofuran	8.57	168	27044	96.5915305 ppb	# 1
56) 2,3,4,6-Tetrachlorophenol	8.70	232	35809	695.3358845 ppb	92
58) Fluorene	8.94	166	24782m	107.5443544 ppb	
61) 4-Nitroaniline	8.96	138	1871	37.0264543 ppb	# 1
62) Azobenzene	9.11	77	8574	34.9886315 ppb	# 1
63) Atrazine	9.75	200	269496	3787.6847972 ppb	# 39
70) n-octadecane	10.23	55	135525	3747.7546589 ppb	92
71) Pentachlorophenol	9.75	266	1365889	25485.3002068 ppb	96
72) Phenanthrene	9.98	178	167942	478.2022257 ppb	95
73) Anthracene	10.04	178	9297	26.7167599 ppb	88
74) Carbazole	10.20	167	11798	38.7747195 ppb	# 28
76) 2-nitrodiphenylamine	10.75	167	7528	82.6940499 ppb	# 81
77) Fluoranthene	11.27	202	30449	74.4715910 ppb	95
80) Pyrene	11.52	202	115008	266.2483045 ppb	96
86) bis(2-Ethylhexyl)phthalate	12.72	149	11327	38.8878008 ppb	92
89) Benzo(b)fluoranthene	14.00	252	8214	20.4182934 ppb	85

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

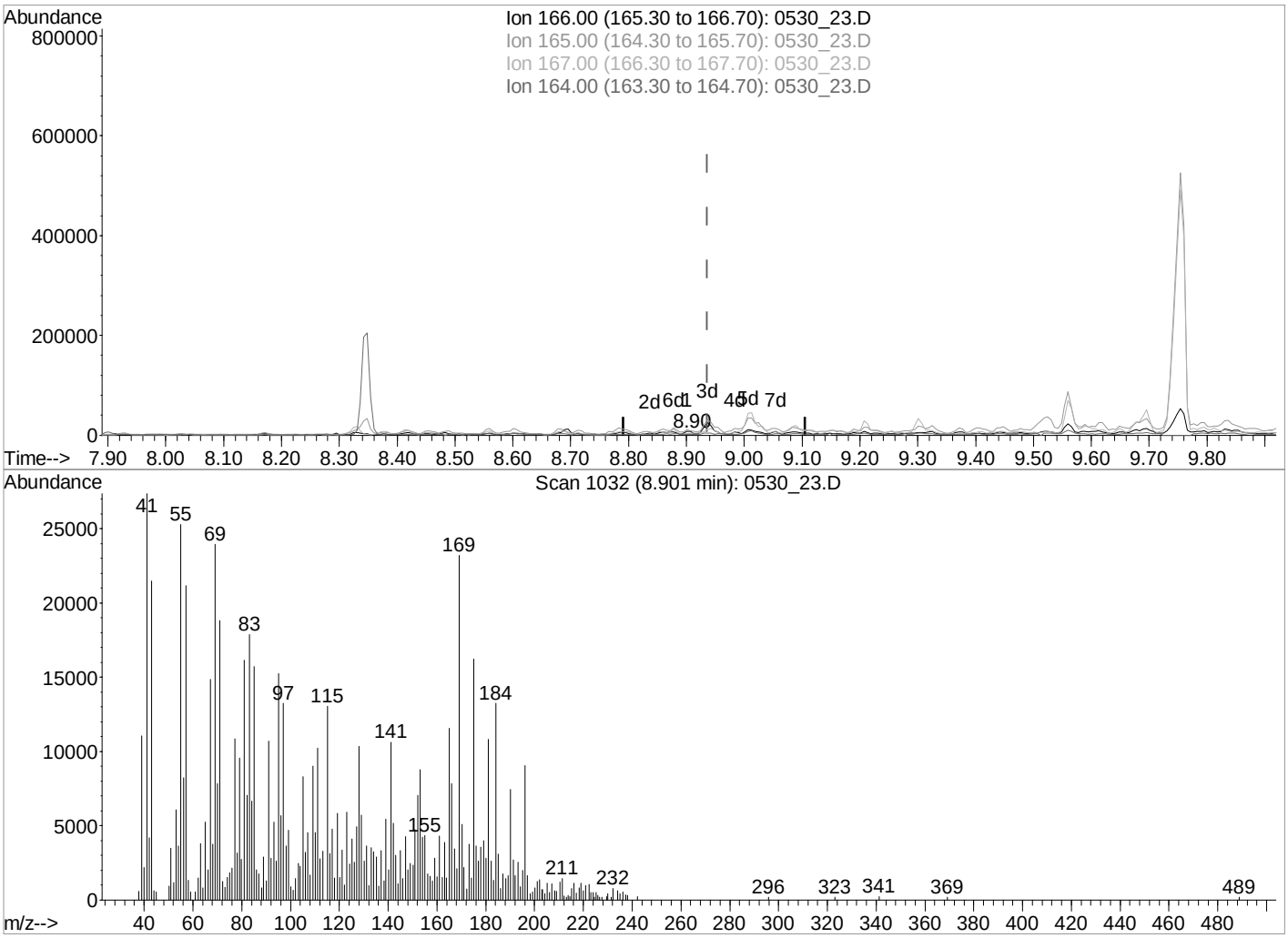
Data File : C:\MSDCHEM\1\DATA\053016\0530 23.D Vial: 23
Acq On : 31 May 2016 9:57 am Operator: 280
Sample : L838049-05 5x WG876258 15-0.5 Inst : BNAMS11
Misc : SOIL IS 16E03322 Multiplr: 0.17
MS Integration Params: RTEINT.P
Quant Time: May 31 14:19 2016 Quant Results File: S811E27P.RES

Method : C:\MSDCHEM\1\METHODS\S811E27P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue May 31 10:22:11 2016
Response via : Initial Calibration



Data File : C:\MSDCHEM\1\DATA\053016\0530 23.D Vial: 23
Acq On : 31 May 2016 9:57 am Operator: 280
Sample : L838049-05 5x WG876258 15-0.5 Inst : BNAMS11
Misc : SOIL IS 16E03322 Multiplr: 0.17
MS Integration Params: RTEINT.P
Quant Time: May 31 14:17 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S811E27P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue May 31 10:22:11 2016
Response via : Multiple Level Calibration



TIC: 0530_23.D

(58) Fluorene (MT)

8.90min (-0.035) 25.9595807 ppb

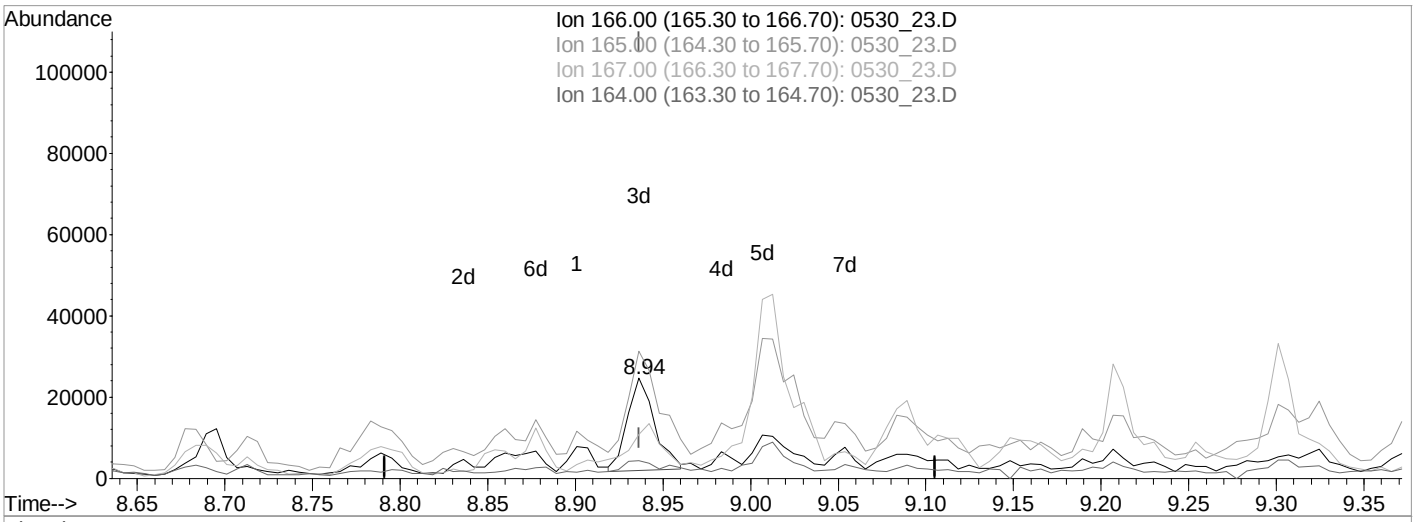
Qvalue = 95

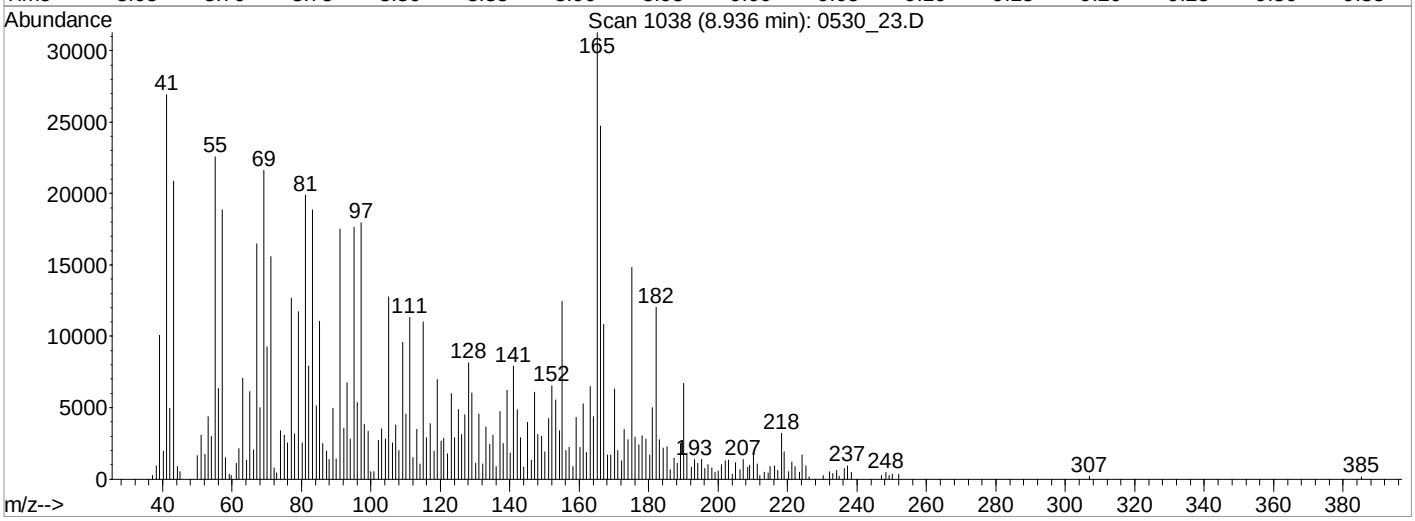
response 5982 Limit = 165.0000000

Ion	Exp%	Act%
166.00	100	100
165.00	89.90	91.52
167.00	14.00	11.13
164.00	13.30	3.95

Data File : C:\MSDCHEM\1\DATA\053016\0530 23.D Vial: 23
Acq On : 31 May 2016 9:57 am Operator: 280
Sample : L838049-05 5x WG876258 15-0.5 Inst : BNAMS11
Misc : SOIL IS 16E03322 Multiplr: 0.17
MS Integration Params: RTEINT.P
Quant Time: May 31 14:17 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S811E27P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue May 31 10:22:11 2016
Response via : Multiple Level Calibration





TIC: 0530_23.D

(58) Fluorene (MT)

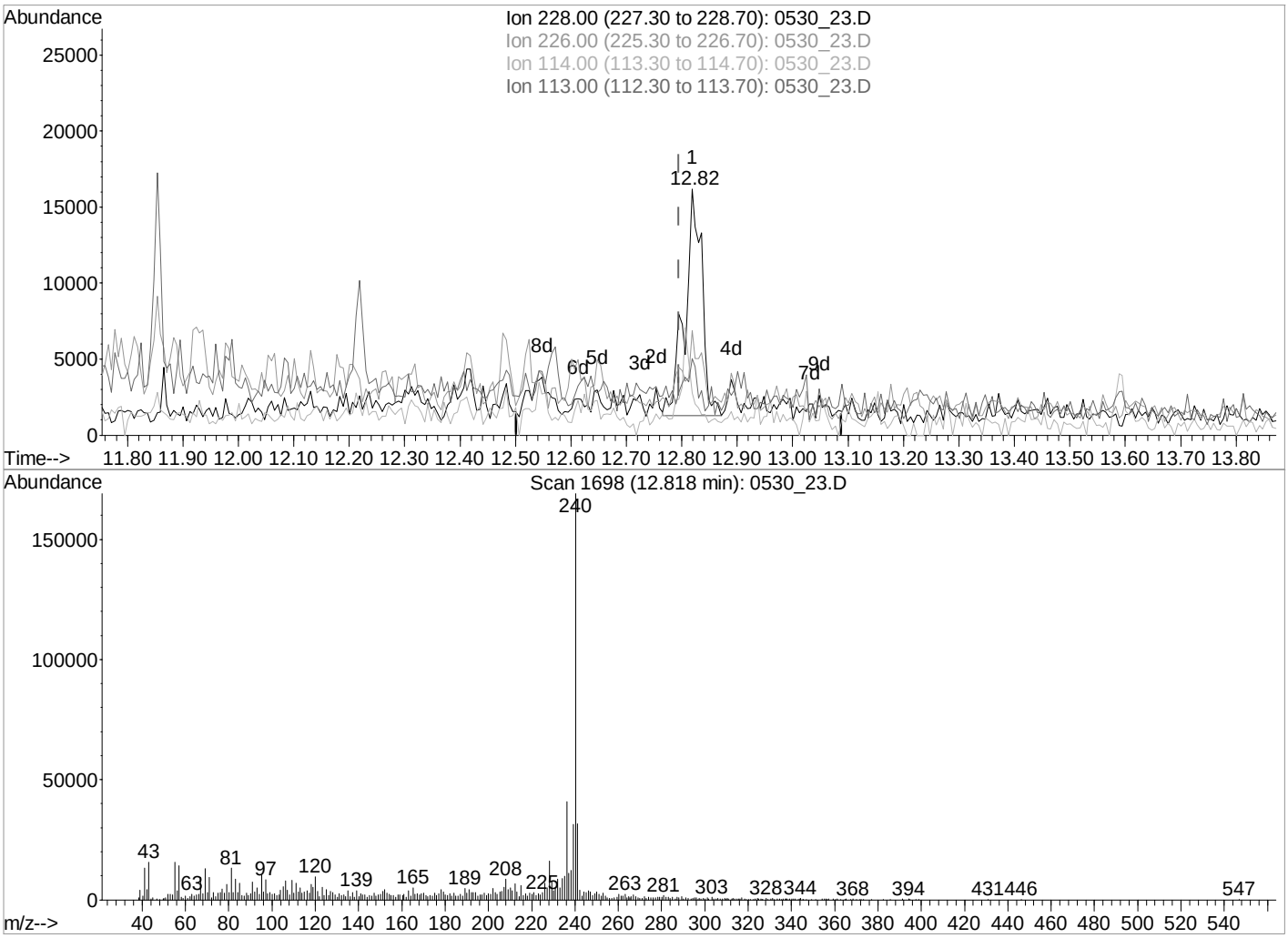
8.94min (-0.000) 107.5443544 ppb m

response 24782 Limit = 165.0000000

Ion	Exp%	Act%
166.00	100	100
165.00	89.90	126.57#
167.00	14.00	43.77#
164.00	13.30	17.63

Data File : C:\MSDCHEM\1\DATA\053016\0530 23.D Vial: 23
Acq On : 31 May 2016 9:57 am Operator: 280
Sample : L838049-05 5x WG876258 15-0.5 Inst : BNAMS11
Misc : SOIL IS 16E03322 Multiplr: 0.17
MS Integration Params: RTEINT.P
Quant Time: May 31 14:19 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S811E27P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue May 31 10:22:11 2016
Response via : Multiple Level Calibration



TIC: 0530_23.D

(84) Benzo(a)anthracene (MT)

12.82min (+0.023) 70.1178466 ppb

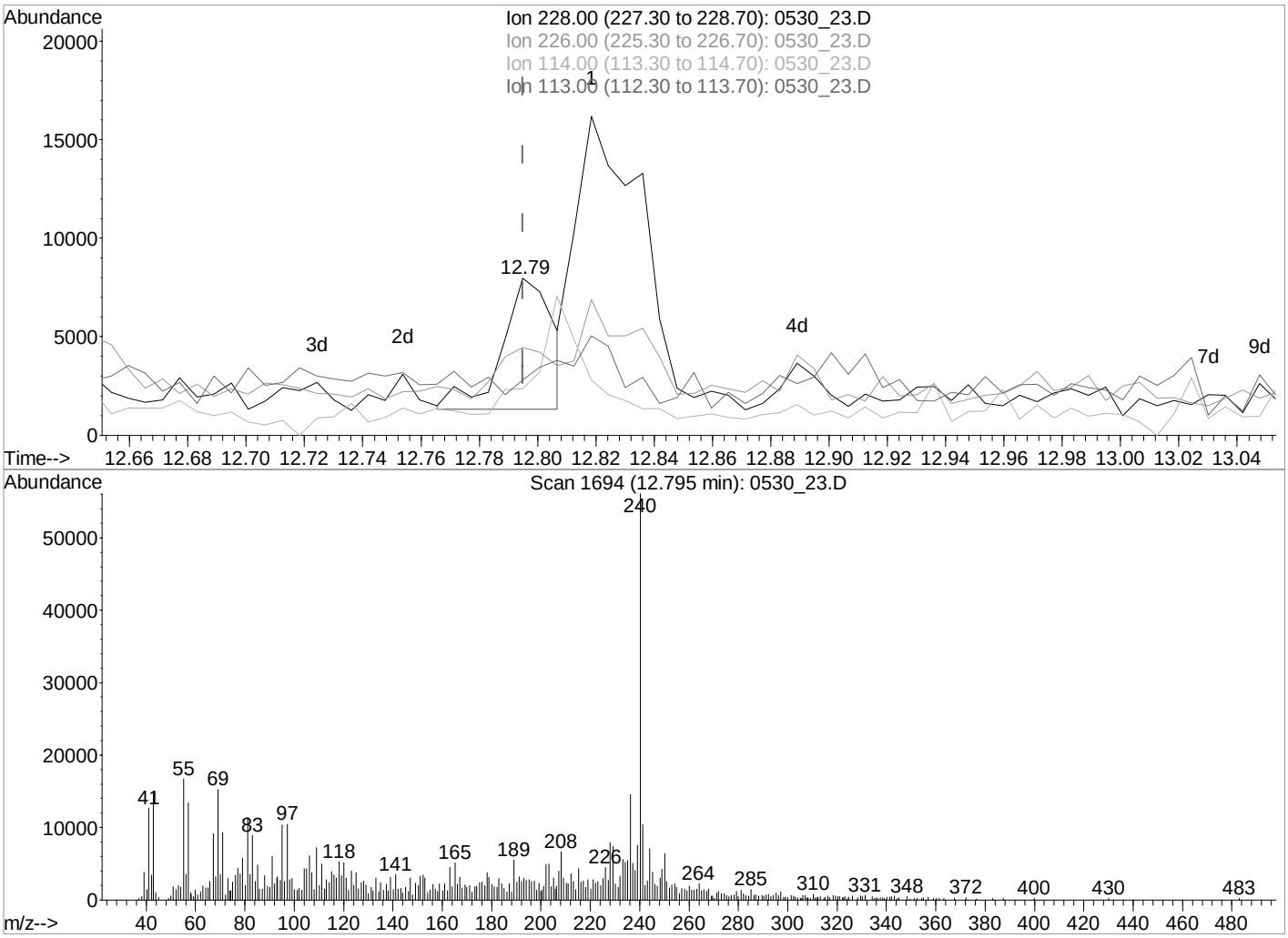
Qvalue = 81

response 32086 Limit = 165.0000000

Ion	Exp%	Act%
228.00	100	100
226.00	25.00	31.53
114.00	8.40	13.27
113.00	8.20	23.03

Data File : C:\MSDCHEM\1\DATA\053016\0530 23.D Vial: 23
Acq On : 31 May 2016 9:57 am Operator: 280
Sample : L838049-05 5x WG876258 15-0.5 Inst : BNAMS11
Misc : SOIL IS 16E03322 Multiplr: 0.17
MS Integration Params: RTEINT.P
Quant Time: May 31 14:19 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S811E27P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue May 31 10:22:11 2016
Response via : Multiple Level Calibration



TIC: 0530_23.D

(84) Benzo(a)anthracene (MT)

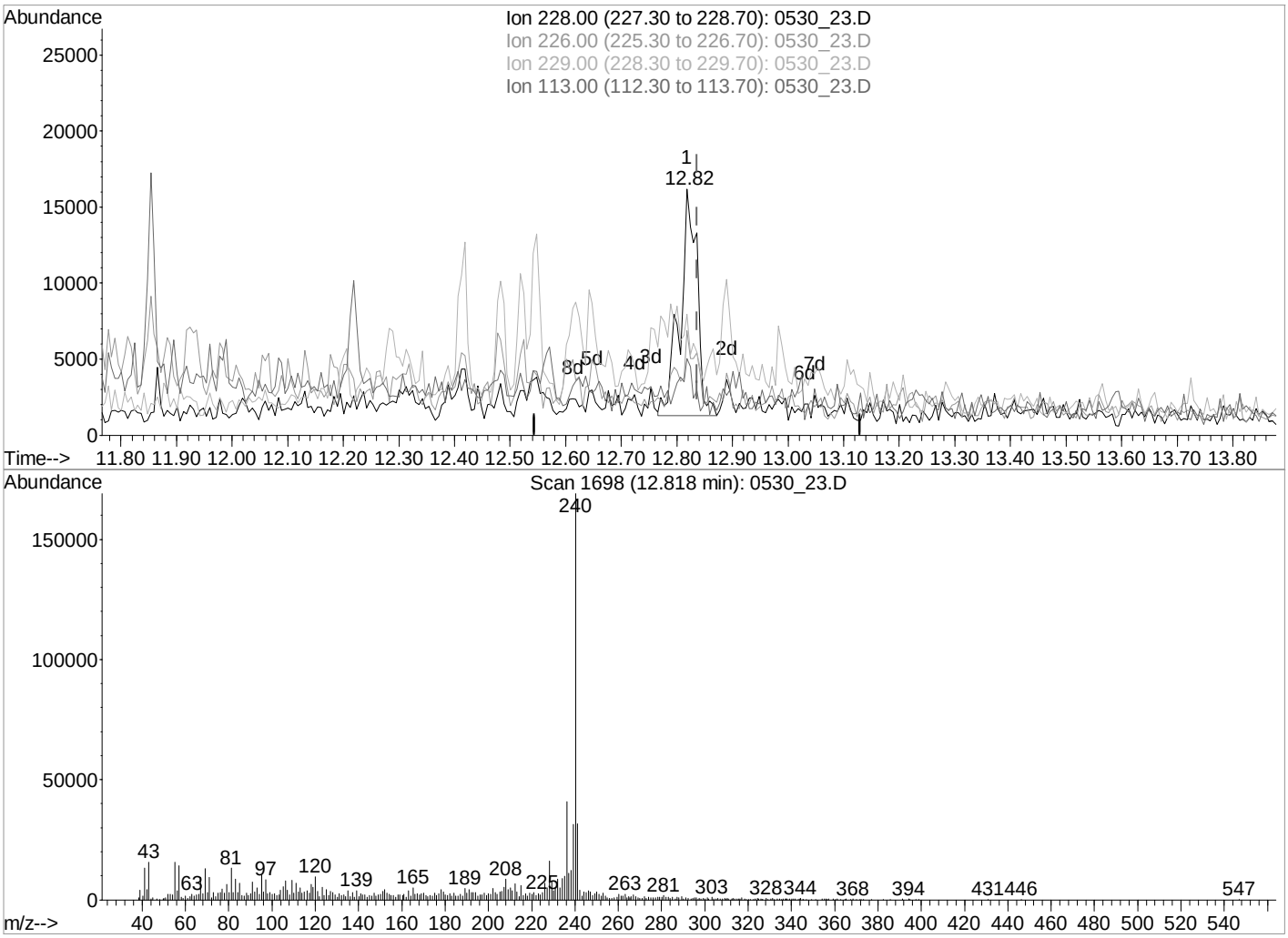
12.79min (-0.000) 17.6594876 ppb m

response 8081 Limit = 165.0000000

Ion	Exp%	Act%
228.00	100	100
226.00	25.00	55.84#
114.00	8.40	29.61#
113.00	8.20	35.26#

Data File : C:\MSDCHEM\1\DATA\053016\0530 23.D Vial: 23
Acq On : 31 May 2016 9:57 am Operator: 280
Sample : L838049-05 5x WG876258 15-0.5 Inst : BNAMS11
Misc : SOIL IS 16E03322 Multiplr: 0.17
MS Integration Params: RTEINT.P
Quant Time: May 31 14:19 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S811E27P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue May 31 10:22:11 2016
Response via : Multiple Level Calibration



TIC: 0530_23.D

(85) Chrysene (MT)

12.82min (-0.018) 73.9802573 ppb

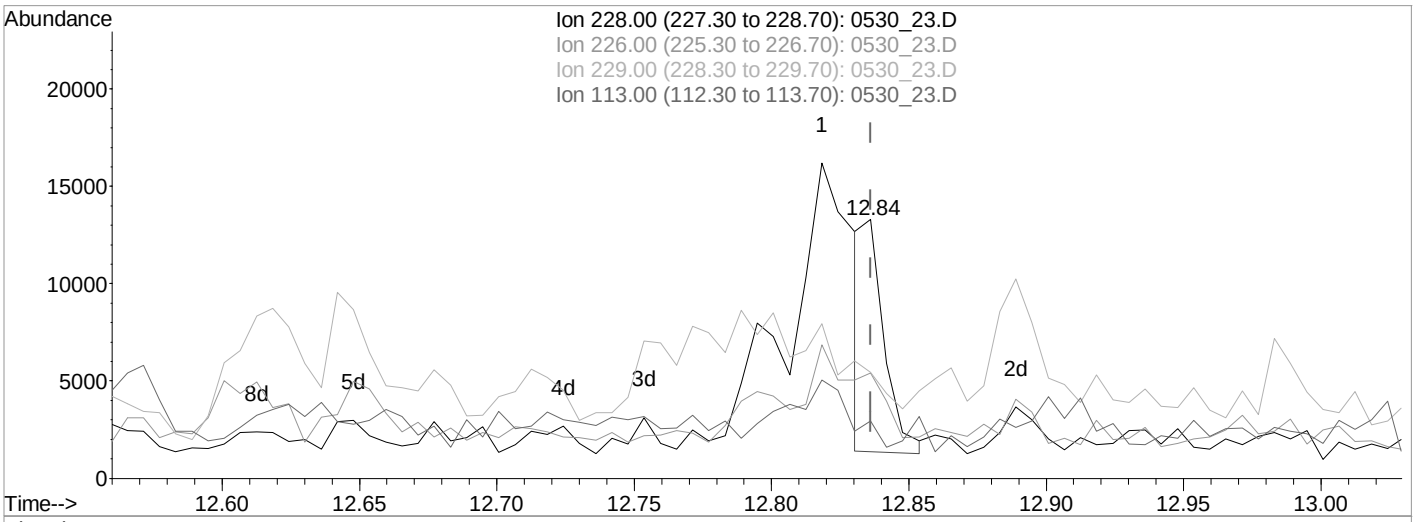
Qvalue = 83

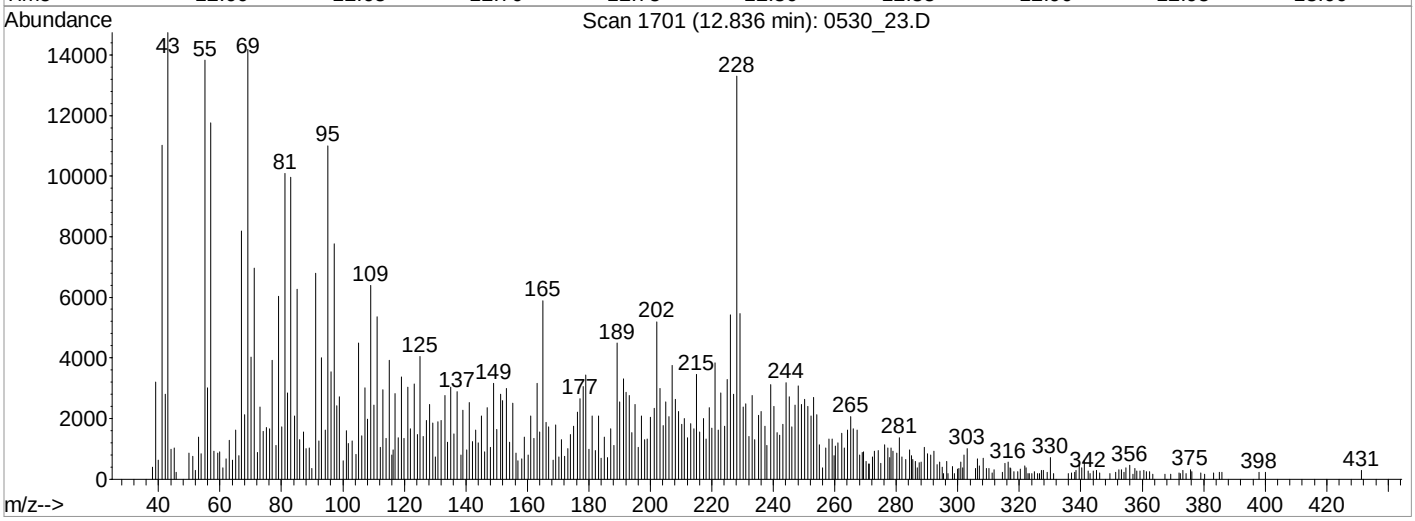
response 32086 Limit = 165.0000000

Ion	Exp%	Act%
228.00	100	100
226.00	27.20	31.53
229.00	18.50	26.69
113.00	9.80	23.03

Data File : C:\MSDCHEM\1\DATA\053016\0530 23.D Vial: 23
Acq On : 31 May 2016 9:57 am Operator: 280
Sample : L838049-05 5x WG876258 15-0.5 Inst : BNAMS11
Misc : SOIL IS 16E03322 Multiplr: 0.17
MS Integration Params: RTEINT.P
Quant Time: May 31 14:19 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S811E27P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue May 31 10:22:11 2016
Response via : Multiple Level Calibration





TIC: 0530_23.D

(85) Chrysene (MT)

12.84min (-0.000) 14.7886733 ppb m

response 6414 Limit = 165.0000000

Ion	Exp%	Act%
228.00	100	100
226.00	27.20	40.79
229.00	18.50	41.00#
113.00	9.80	22.16

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\053016\0530 25.D Vial: 25
Acq On : 31 May 2016 10:44 am Operator: 280
Sample : L838049-03 10x WG876258 15-5.0 Inst : BNAMS11
Misc : SOIL IS 16E03322 Multiplr: 0.33
MS Integration Params: RTEINT.P
Quant Time: May 31 14:24 2016 Quant Results File: S811E27P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S811E27P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue May 31 10:22:11 2016
Response via : Initial Calibration
DataAcq Meth : BNA11C

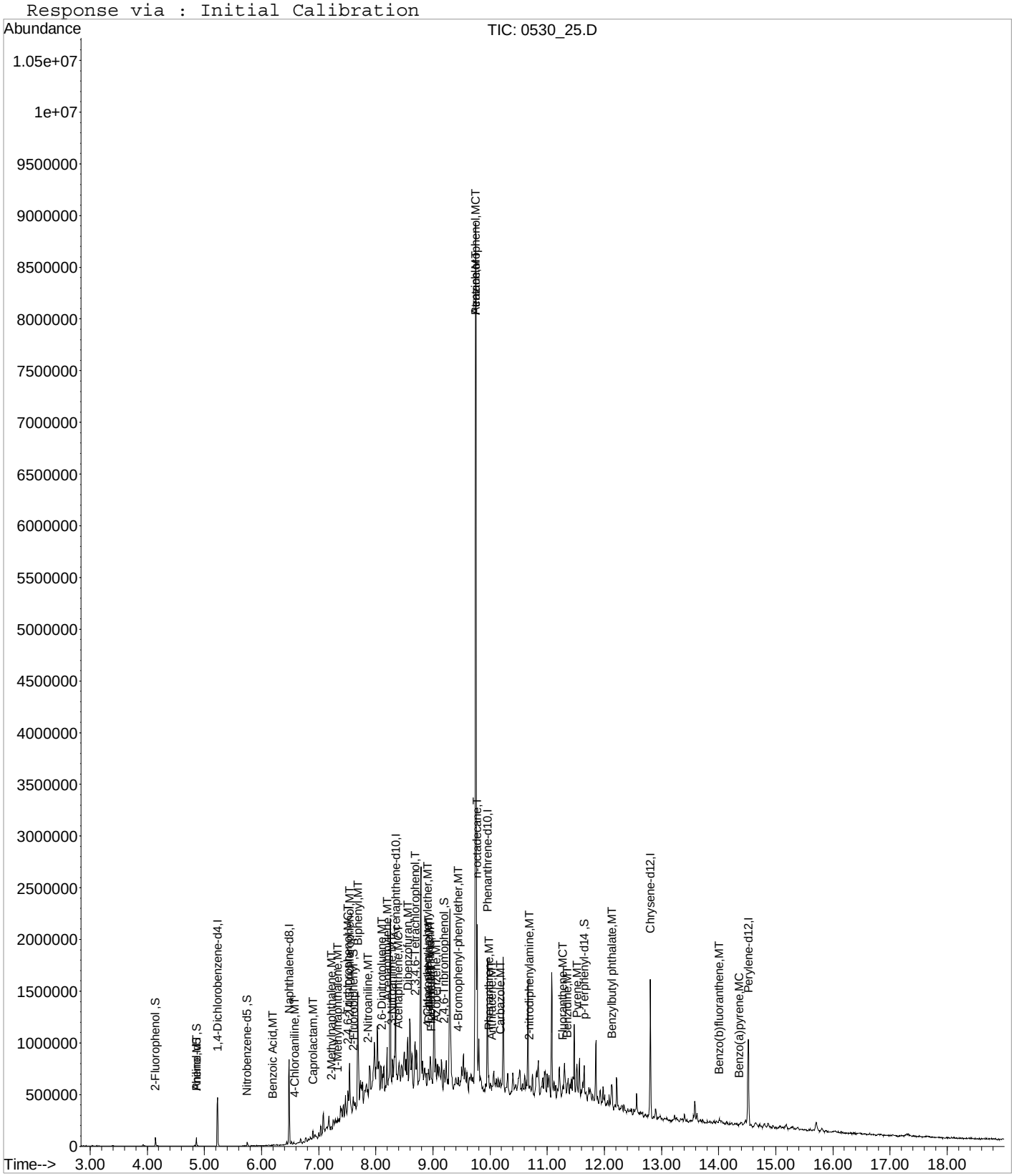
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.23	152	54640	8000.00	ppb	0.00
22) Naphthalene-d8	6.48	136	296942	8000.00	ppb	0.00
40) Acenaphthene-d10	8.35	164	193716	8000.00	ppb	0.00
64) Phenanthrene-d10	9.95	188	373546	8000.00	ppb	0.00
78) Chrysene-d12	12.81	240	475047	8000.00	ppb	0.00
88) Perylene-d12	14.52	264	439352	8000.00	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	4.14	112	16781	421.9809107	ppb	0.00
Spiked Amount 666.000	Range 21 - 116		Recovery = 63.36%			
7) Phenol-d5	4.86	99	22517	438.7917571	ppb	0.00
Spiked Amount 666.000	Range 26 - 121		Recovery = 65.88%			
23) Nitrobenzene-d5	5.75	82	11318	216.5428099	ppb	0.00
Spiked Amount 333.000	Range 22 - 129		Recovery = 65.03%			
44) 2-Fluorobiphenyl	7.61	172	22714	219.4446642	ppb	0.00
Spiked Amount 333.000	Range 35 - 129		Recovery = 65.90%			
67) 2,4,6-Tribromophenol	9.20	330	6728	432.9269958	ppb	0.00
Spiked Amount 666.000	Range 22 - 142		Recovery = 65.00%			
81) p-Terphenyl-d14	11.65	244	36947	225.3662595	ppb	0.00
Spiked Amount 333.000	Range 22 - 128		Recovery = 67.68%			
Target Compounds						Qvalue
5) Aniline	4.86	66	2075	77.4339099	ppb #	1
30) Benzoic Acid	6.19	105	377	196.8043826	ppb	88
33) 4-Chloroaniline	6.58	65	874	46.7946240	ppb #	1
35) Caprolactam	6.90	113	4088	366.7083834	ppb #	13
38) 1-Methylnaphthalene	7.34	142	4317	56.1014142	ppb #	1
45) Biphenyl	7.69	154	9567	85.6612451	ppb #	81
51) 3-Nitroaniline	8.28	138	1691	74.3015156	ppb #	49
52) Acenaphthene	8.38	153	8450	93.3244324	ppb #	68
54) Dibenzofuran	8.56	168	6432	50.1125291	ppb #	1
56) 2,3,4,6-Tetrachlorophenol	8.70	232	29774	1261.1646794	ppb	87
61) 4-Nitroaniline	8.95	138	1019	43.9890606	ppb #	1
62) Azobenzene	9.06	77	19049	169.5695330	ppb #	91
63) Atrazine	9.75	200	208423	6389.9773022	ppb #	39
70) n-octadecane	9.77	55	65346	3960.3366948	ppb #	74
71) Pentachlorophenol	9.75	266	1016427	41641.0017893	ppb	93
72) Phenanthrene	9.98	178	29895	186.5572772	ppb	94
74) Carbazole	10.19	167	9118	65.6751729	ppb #	67
76) 2-nitrodiphenylamine	10.68	167	2383	57.3693671	ppb #	20
77) Fluoranthene	11.27	202	8226	44.0927989	ppb	75
80) Pyrene	11.52	202	45945	225.7112531	ppb	88

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\053016\0530 25.D Vial: 25
Acq On : 31 May 2016 10:44 am Operator: 280
Sample : L838049-03 10x WG876258 15-5.0 Inst : BNAMS11
Misc : SOIL IS 16E03322 Multiplr: 0.33
MS Integration Params: RTEINT.P
Quant Time: May 31 14:24 2016 Quant Results File: S811E27P.RES

Method : C:\MSDCHEM\1\METHODS\S811E27P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue May 31 10:22:11 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\053016\0530 26.D Vial: 26
Acq On : 31 May 2016 11:07 am Operator: 280
Sample : L838049-06 10x WG876258 15-5.0 Inst : BNAMS11
Misc : SOIL IS 16E03322 Multiplr: 0.33
MS Integration Params: RTEINT.P
Quant Time: May 31 14:29 2016 Quant Results File: S811E27P.RES

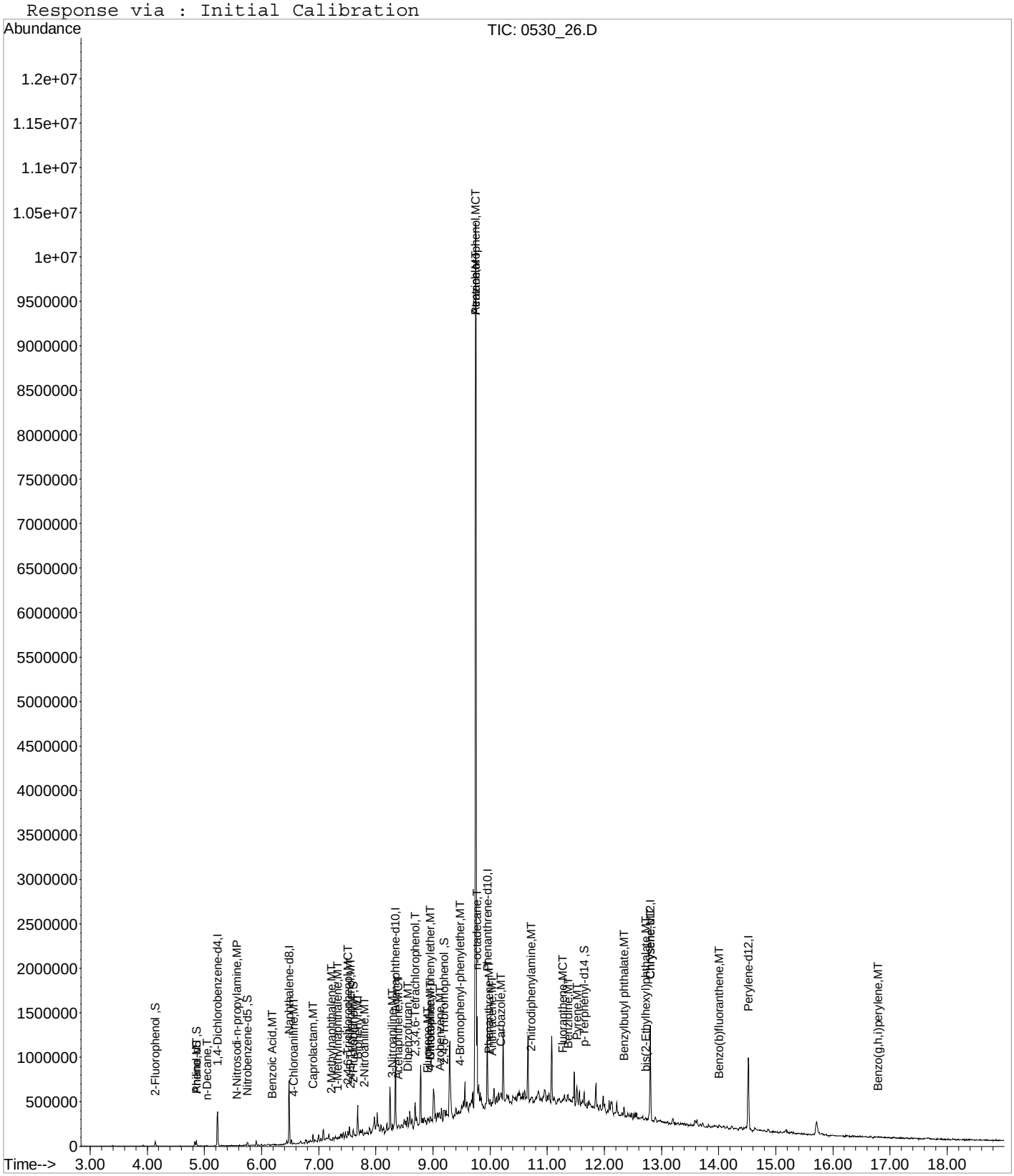
Quant Method : C:\MSDCHEM\1\METHODS\S811E27P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue May 31 10:22:11 2016
Response via : Initial Calibration
DataAcq Meth : BNA11C

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.23	152	48978	8000.00	ppb	0.00
22) Naphthalene-d8	6.48	136	253305	8000.00	ppb	0.00
40) Acenaphthene-d10	8.34	164	162354	8000.00	ppb	0.00
64) Phenanthrene-d10	9.95	188	329630	8000.00	ppb	0.00
78) Chrysene-d12	12.81	240	396475	8000.00	ppb	0.00
88) Perylene-d12	14.52	264	425586	8000.00	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	4.14	112	15138	424.6714962	ppb	0.00
Spiked Amount 666.000	Range 21 - 116		Recovery = 63.76%			
7) Phenol-d5	4.86	99	19534	424.6672403	ppb	0.00
Spiked Amount 666.000	Range 26 - 121		Recovery = 63.76%			
23) Nitrobenzene-d5	5.75	82	10513	235.7917522	ppb	0.00
Spiked Amount 333.000	Range 22 - 129		Recovery = 70.81%			
44) 2-Fluorobiphenyl	7.61	172	20154	232.3245785	ppb	0.00
Spiked Amount 333.000	Range 35 - 129		Recovery = 69.77%			
67) 2,4,6-Tribromophenol	9.20	330	5757	419.7998453	ppb	0.00
Spiked Amount 666.000	Range 22 - 142		Recovery = 63.03%			
81) p-Terphenyl-d14	11.65	244	29193	213.3581394	ppb	0.00
Spiked Amount 333.000	Range 22 - 128		Recovery = 64.07%			
Target Compounds						Qvalue
5) Aniline	4.86	66	1302	54.2042970	ppb #	1
11) n-Decane	5.05	41	1806	86.5070573	ppb #	59
30) Benzoic Acid	6.18	105	601	209.1969342	ppb #	1
35) Caprolactam	6.90	113	2110	221.8810813	ppb #	1
38) 1-Methylnaphthalene	7.34	142	3593	54.7364774	ppb #	1
47) 2-Nitroaniline	7.80	138	1498	64.3190714	ppb #	33
51) 3-Nitroaniline	8.29	138	976	51.1689355	ppb #	64
52) Acenaphthene	8.38	153	4622	60.9075443	ppb #	54
56) 2,3,4,6-Tetrachlorophenol	8.69	232	26694	1349.1205921	ppb	92
61) 4-Nitroaniline	8.95	138	914	47.0781295	ppb #	1
63) Atrazine	9.75	200	261098	9551.2391136	ppb #	36
70) n-octadecane	9.77	55	125885	8645.7852774	ppb #	27
71) Pentachlorophenol	9.75	266	1197952	55473.3914917	ppb	93
72) Phenanthrene	9.98	178	18201	128.7141362	ppb	74
76) 2-nitrodiphenylamine	10.71	167	4336	118.2939816	ppb #	33
77) Fluoranthene	11.27	202	10798	65.5903043	ppb	94
80) Pyrene	11.52	202	61737	363.3969266	ppb	95
85) Chrysene	12.81	228	14497m	84.9875531	ppb	
86) bis(2-Ethylhexyl)phthalate	12.72	149	5145	44.9118340	ppb	78

(#) = qualifier out of range (m) = manual integration

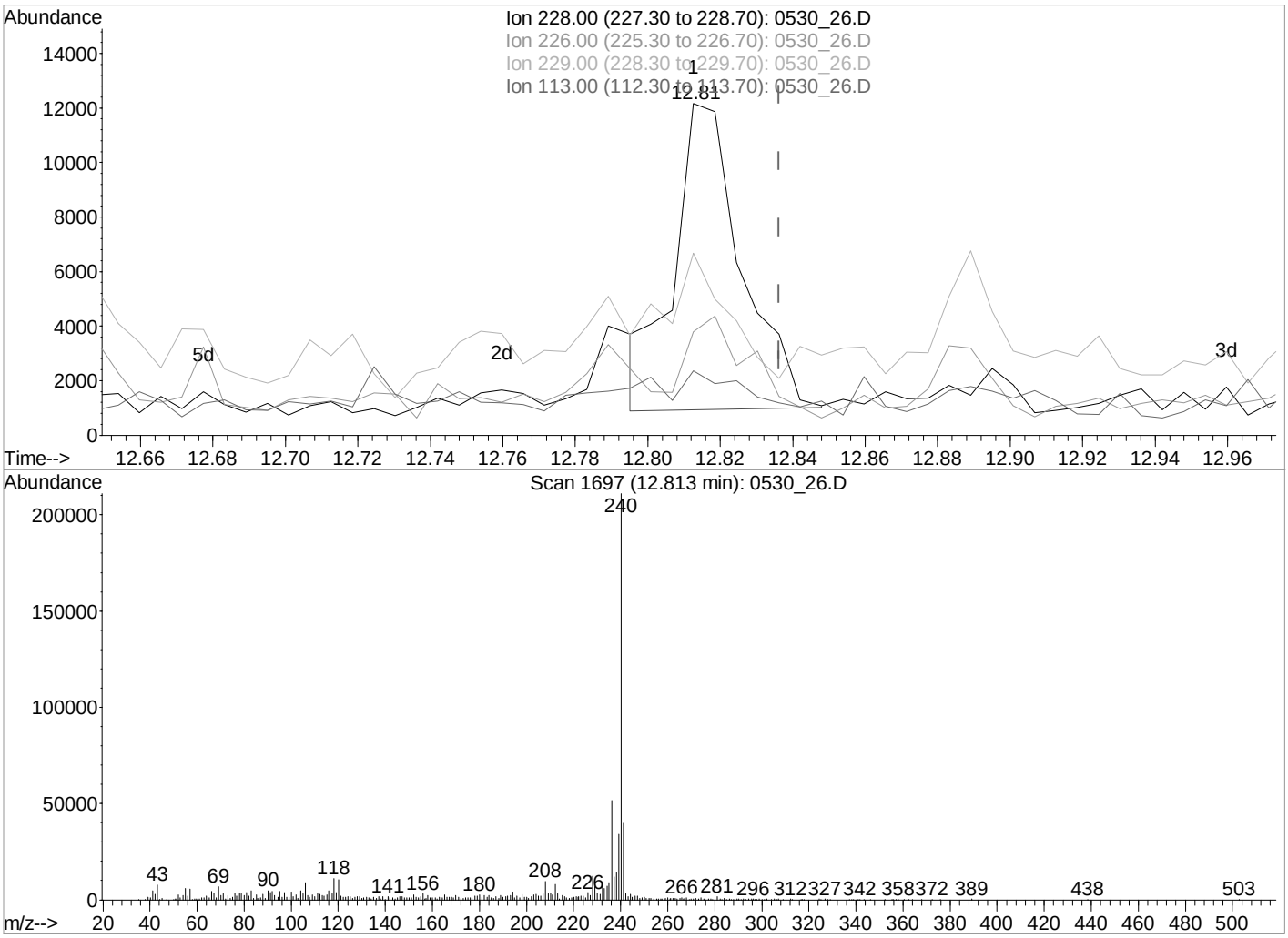
Data File : C:\MSDCHEM\1\DATA\053016\0530 26.D Vial: 26
Acq On : 31 May 2016 11:07 am Operator: 280
Sample : L838049-06 10x WG876258 15-5.0 Inst : BNAMS11
Misc : SOIL IS 16E03322 Multiplr: 0.33
MS Integration Params: RTEINT.P
Quant Time: May 31 14:29 2016 Quant Results File: S811E27P.RES

Method : C:\MSDCHEM\1\METHODS\S811E27P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue May 31 10:22:11 2016
Response via : Initial Calibration



Data File : C:\MSDCHEM\1\DATA\053016\0530 26.D Vial: 26
Acq On : 31 May 2016 11:07 am Operator: 280
Sample : L838049-06 10x WG876258 15-5.0 Inst : BNAMS11
Misc : SOIL IS 16E03322 Multiplr: 0.33
MS Integration Params: RTEINT.P
Quant Time: May 31 14:28 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S811E27P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue May 31 10:22:11 2016
Response via : Multiple Level Calibration



TIC: 0530_26.D

(85) Chrysene (MT)

12.81min (-0.023) 84.9875531 ppb m

response 14497 Limit = 330.0000000

Ion	Exp%	Act%
228.00	100	100
226.00	27.20	31.15
229.00	18.50	54.87#
113.00	9.80	19.41

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

Injection Log

Instrument ID : BNAMS2
Computer Name : SVCOMPAC
Released By : Allen Fuller
Date Released : 6/1/2016 5:11:33 PM
Run ID : 060116
Signature : _____

#	File ID	Sample ID	Method	WG	Product	Matrix	Account #	State	Dil.	Mult.	Injected	Misc.
1	0601_00	INSTBLK	S802E24P						1	1	06/01/16 0927	"DFTPP"
2	0601_01	TUNE 50 PPM 16E09755	TUNEC						1	1	06/01/16 0952	"DFTPP"
3	0601_01T	TUNE 50 PPM 16E09755	TUNEC							1	06/1/16 0952	
4	0601_02	ICV SVMS 10K PPB 16D25863	S802E24P						1	1	06/01/16 1011	"8270 Primary Calibration ISTD 16D22768"
4	0601_02-1	ICV SVMS 10K PPB 16D25863	S802E24P						1	1	06/01/16 1011	"8270 Primary Calibration ISTD 16D22768"
5	0601_03	ICVRL TCL 10K1 PPB 16D25867	S802E24P						1	1	06/01/16 1036	"8270 TCL Calibration ISTD 16D22768"
5	0601_03-1	ICVRL TCL 10K1 PPB 16D25867	S802E24P						1	1	06/01/16 1036	"8270 TCL Calibration ISTD 16D22768"
5	0601_03 RL	ICVRL TCL 10K1 PPB 16D25867	S802E24P						1	1	06/01/16 1036	"8270 TCL Calibration ISTD 16D22768"
5	0601_03 RL-1	ICVRL TCL 10K1 PPB 16D25867	S802E24P						1	1	06/01/16 1036	"8270 TCL Calibration ISTD 16D22768"
6	0601_04	LCS	S802E24P	WG876565	SV8270OH	SS			1	0.0333	06/01/16 1101	"Soil ISTD 16E19543"
6	0601_04-2	LCS	S802E24P	WG876565	SV8270D	SS	GEODESPOR		1	0.0333	06/01/16 1101	"Soil ISTD 16E19543"
6	0601_04-3	LCS	S802E24P	WG876565	SV8270	SS	ALCOACAZ		1	0.0333	06/01/16 1101	"Soil ISTD 16E19543"
7	0601_05	LCSD	S802E24P	WG876565	SV8270OH	SS			1	0.0333	06/01/16 1126	"Soil ISTD 16E19543"
7	0601_05-2	LCSD	S802E24P	WG876565	SV8270D	SS	GEODESPOR		1	0.0333	06/01/16 1126	"Soil ISTD 16E19543"
7	0601_05-3	LCSD	S802E24P	WG876565	SV8270	SS	ALCOACAZ		1	0.0333	06/01/16 1126	"Soil ISTD 16E19543"
8	0601_06	BLANK	S802E24P	WG876565	SV8270OH	SS			1	0.0333	06/01/16 1151	"Soil ISTD 16E19543"
8	0601_06-2	BLANK	S802E24P	WG876565	SV8270D	SS	GEODESPOR		1	0.0333	06/01/16 1151	"Soil ISTD 16E19543"
8	0601_06-3	BLANK	S802E24P	WG876565	SV8270	SS	ALCOACAZ		1	0.0333	06/01/16 1151	"Soil ISTD 16E19543"

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

Injection Log

Instrument ID : BNAMS2
Computer Name : SVCOMPAC
Released By : Allen Fuller
Date Released : 6/1/2016 5:11:33 PM
Run ID : 060116
Signature : _____

#	File ID	Sample ID	Method	WG	Product	Matrix	Account #	State	Dil.	Mult.	Injected	Misc.
9	0601_07	L837081-13	S802E24P	WG876565	SV8270OH	SS	BRORESAOH	OH	1	0.0333	06/01/16 1216	"Soil ISTD 16E19543"
10	0601_08	L837081-15	S802E24P	WG876565	SV8270OH	SS	BRORESAOH	OH	1	0.0333	06/01/16 1241	"Soil ISTD 16E19543"
11	0601_09	L837081-05	S802E24P	WG876565	SV8270OH	SS	BRORESAOH	OH	1	0.0333	06/01/16 1306	"Soil ISTD 16E19543"
12	0601_10	L838101-10	S802E24P	WG876072	SV8270	SS	ETECHOTX	TX	1	0.0333	06/01/16 1331	"Soil ISTD 16E19543"
13	0601_11	L837155-07	S802E24P	WG874445	SV8270TCLD	SS	LABRNY	NY	1	0.0333	06/01/16 1356	"Soil ISTD 16E19543"
14	0601_12	L837133-09	S802E24P	WG874744	SV8270	SS	SHIELDKY	KY	50	1.67	06/01/16 1421	"Soil ISTD 16E19543"
15	0601_13	L837155-22	S802E24P	WG874744	SV8270TCLD	SS	LABRNY	NY	50	1.67	06/01/16 1446	"Soil ISTD 16E19543"
16	0601_15	L837075-13	S802E24P	WG874744	SV8270	SS	BLASSOCRPA	PA	5	0.165	06/01/16 1600	"Soil ISTD 16D22768"
17	0601_16	L837075-12	S802E24P	WG874744	SV8270	SS	BLASSOCRPA	PA	20	0.666	06/01/16 1625	"Soil ISTD 16D22768"
18	0601_17	L837075-04	S802E24P	WG874744	SV8270	SS	BLASSOCRPA	PA	20	0.666	06/01/16 1650	"Soil ISTD 16D22768"

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\060116\0601 01.D Vial: 1
Acq On : 1 Jun 2016 9:52 am Operator: 280
Sample : TUNE 50 PPM 16E09755 Inst : BNAMS2
Misc : DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jun 1 10:35 2016 Quant Results File: TUNEC.RES

Quant Method : C:\MSDCHEM\1\METHODS\TUNEC.M (RTE Integrator)
Title : 8270 BNA
Last Update : Thu Sep 04 15:13:47 2014
Response via : Initial Calibration
DataAcq Meth : BNA2D

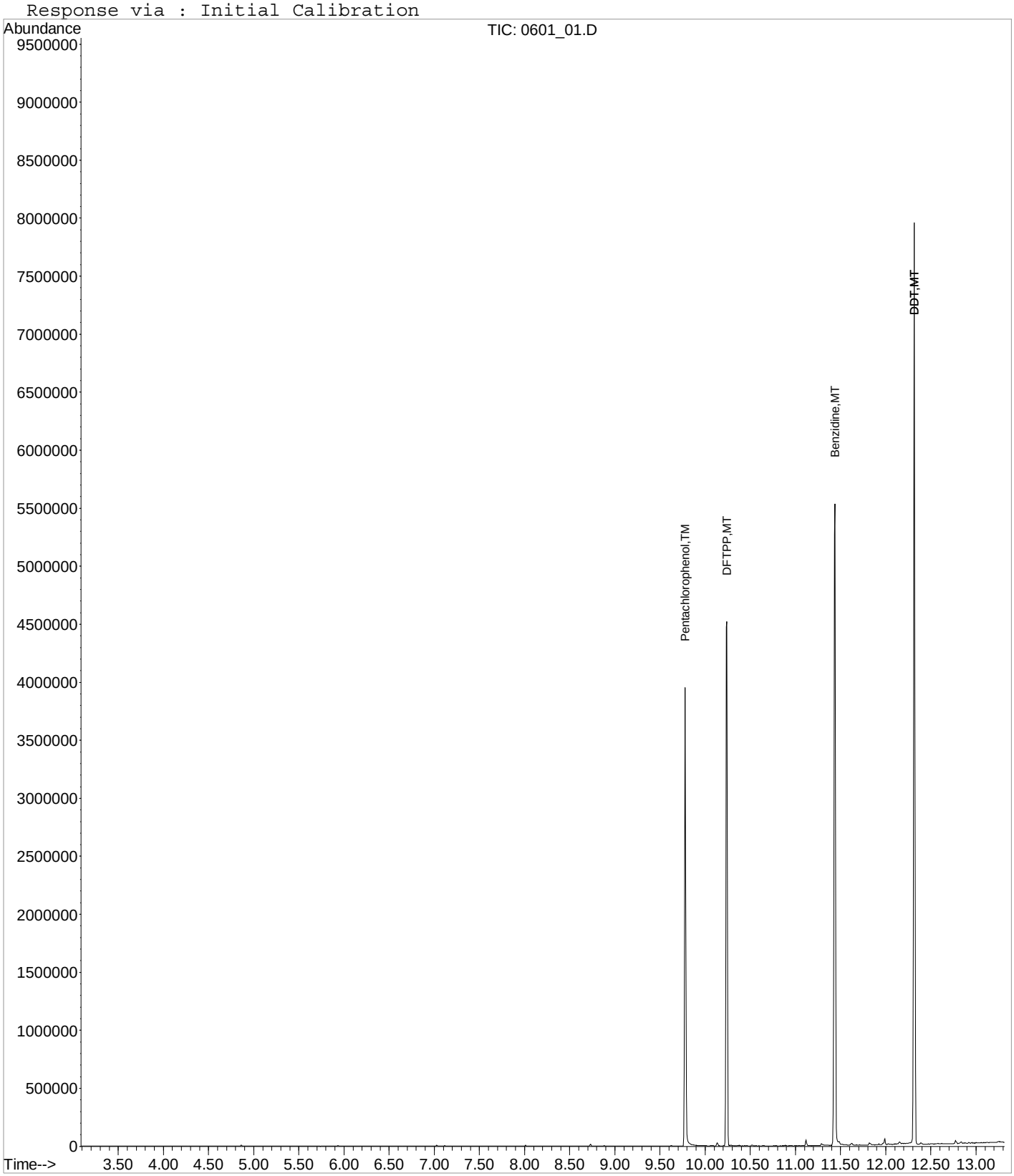
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
Target Compounds						Qvalue
1) Pentachlorophenol	9.78	264	271019	75.5041148	ug/mL	100
2) DFTPP	10.24	198	469030	65.6932364	ug/mL	100
3) Benzidine	11.44	184	2473702	56.0278406	ug/mL	100
4) DDT	12.32	TIC	7287080	384.2111868	ug/ml	100
5) DDT	12.32	235	1402688	104.2408641	ug/mL	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

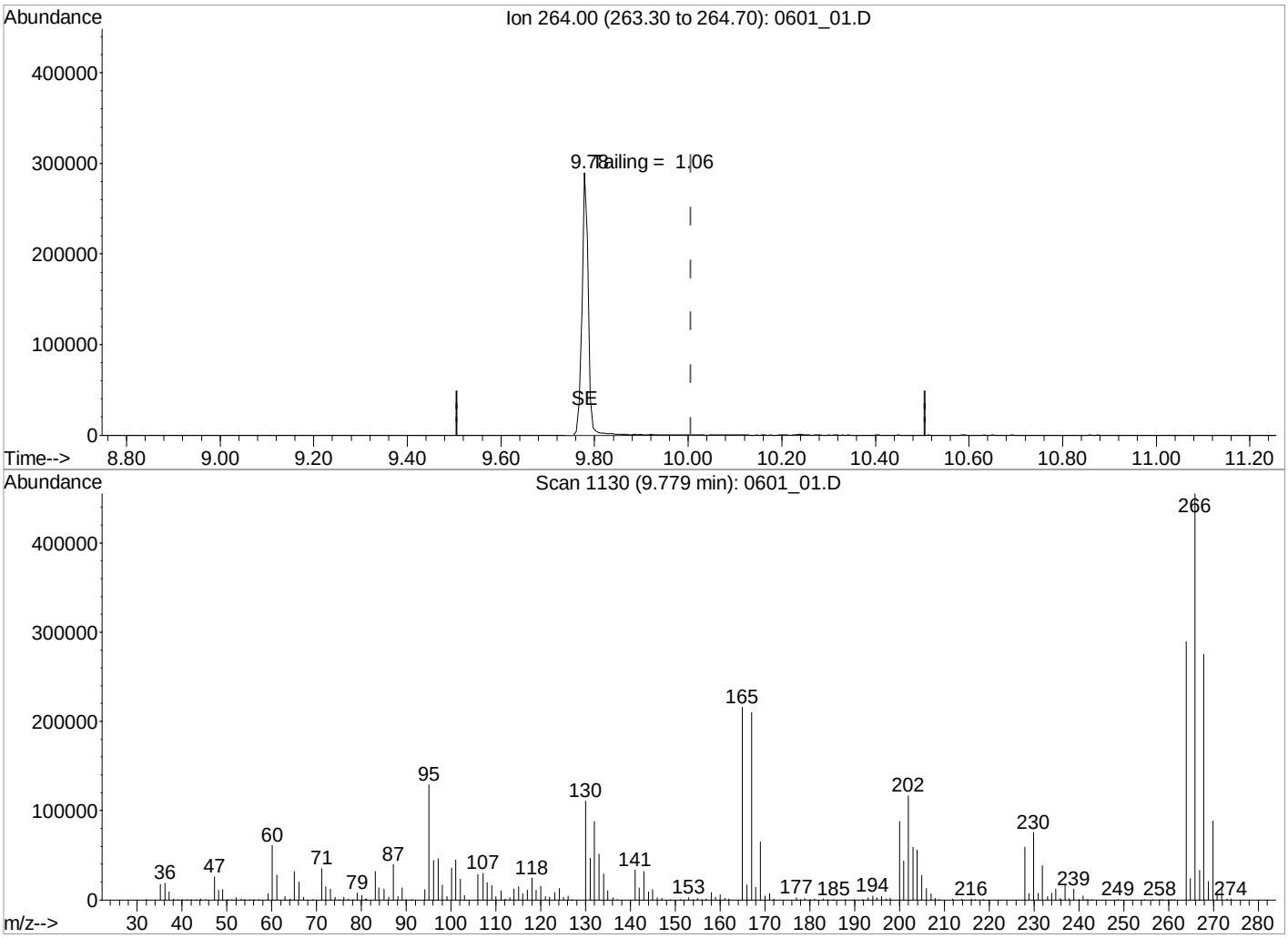
Data File : C:\MSDCHEM\1\DATA\060116\0601 01.D Vial: 1
Acq On : 1 Jun 2016 9:52 am Operator: 280
Sample : TUNE 50 PPM 16E09755 Inst : BNAMS2
Misc : DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jun 1 10:35 2016 Quant Results File: TUNEC.RES

Method : C:\MSDCHEM\1\METHODS\TUNEC.M (RTE Integrator)
Title : 8270 BNA
Last Update : Thu Sep 04 15:13:47 2014
Response via : Initial Calibration



Data File : C:\MSDCHEM\1\DATA\060116\0601 01.D Vial: 1
Acq On : 1 Jun 2016 9:52 am Operator: 280
Sample : TUNE 50 PPM 16E09755 Inst : BNAMS2
Misc : DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jun 1 10:35 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\TUNEC.M (RTE Integrator)
Title : 8270 BNA
Last Update : Thu Sep 04 15:13:47 2014
Response via : Single Level Calibration



TIC: 0601_01.D

(1) Pentachlorophenol (TM)

9.78min (-0.228) 75.5041148 ug/mL

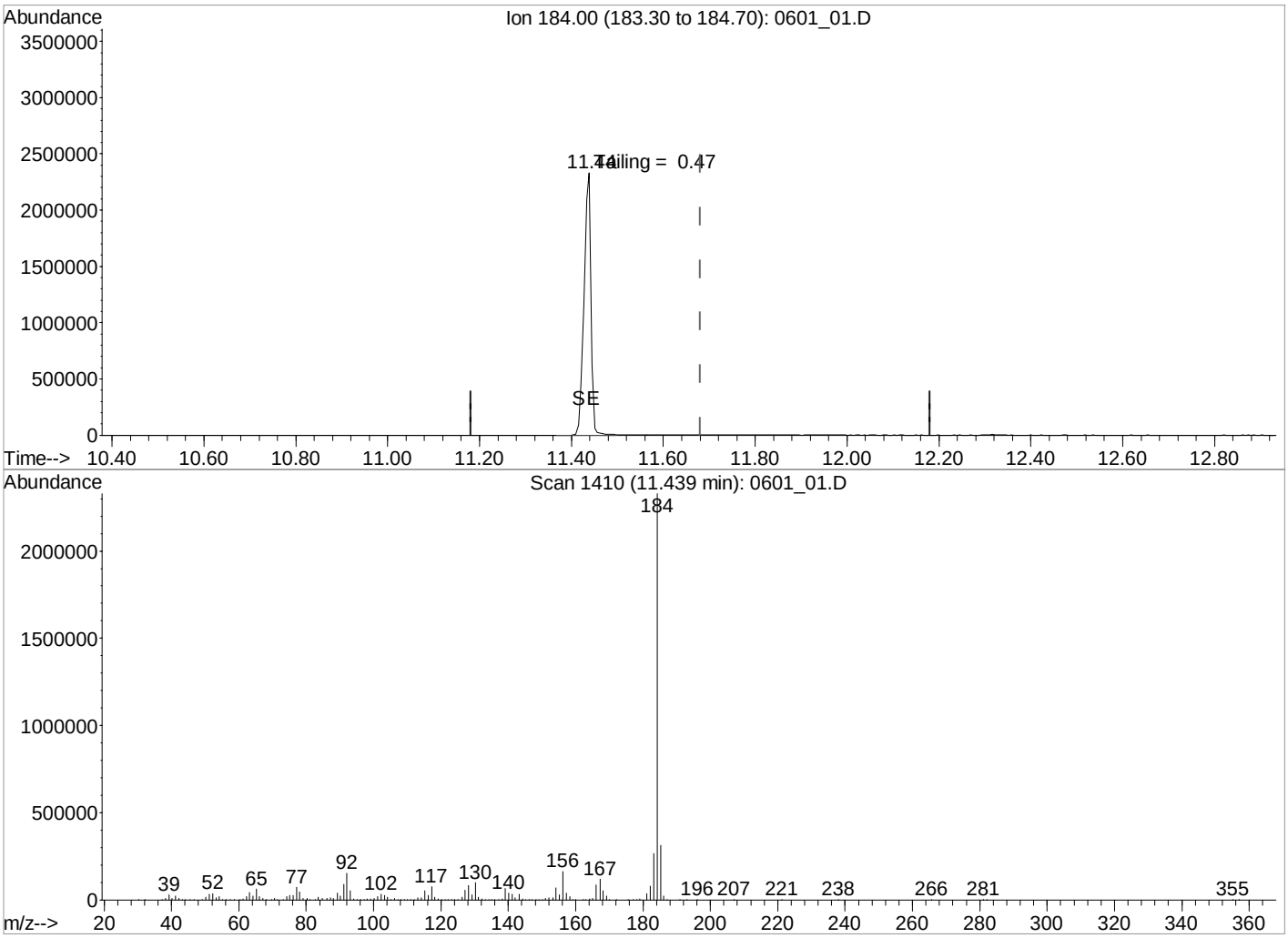
Qvalue = 100

response 271019

Ion	Exp%	Act%
264.00	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Data File : C:\MSDCHEM\1\DATA\060116\0601 01.D Vial: 1
Acq On : 1 Jun 2016 9:52 am Operator: 280
Sample : TUNE 50 PPM 16E09755 Inst : BNAMS2
Misc : DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jun 1 10:35 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\TUNEC.M (RTE Integrator)
Title : 8270 BNA
Last Update : Thu Sep 04 15:13:47 2014
Response via : Single Level Calibration



TIC: 0601_01.D

(3) Benzidine (MT)

11.44min (-0.242) 56.0278406 ug/mL

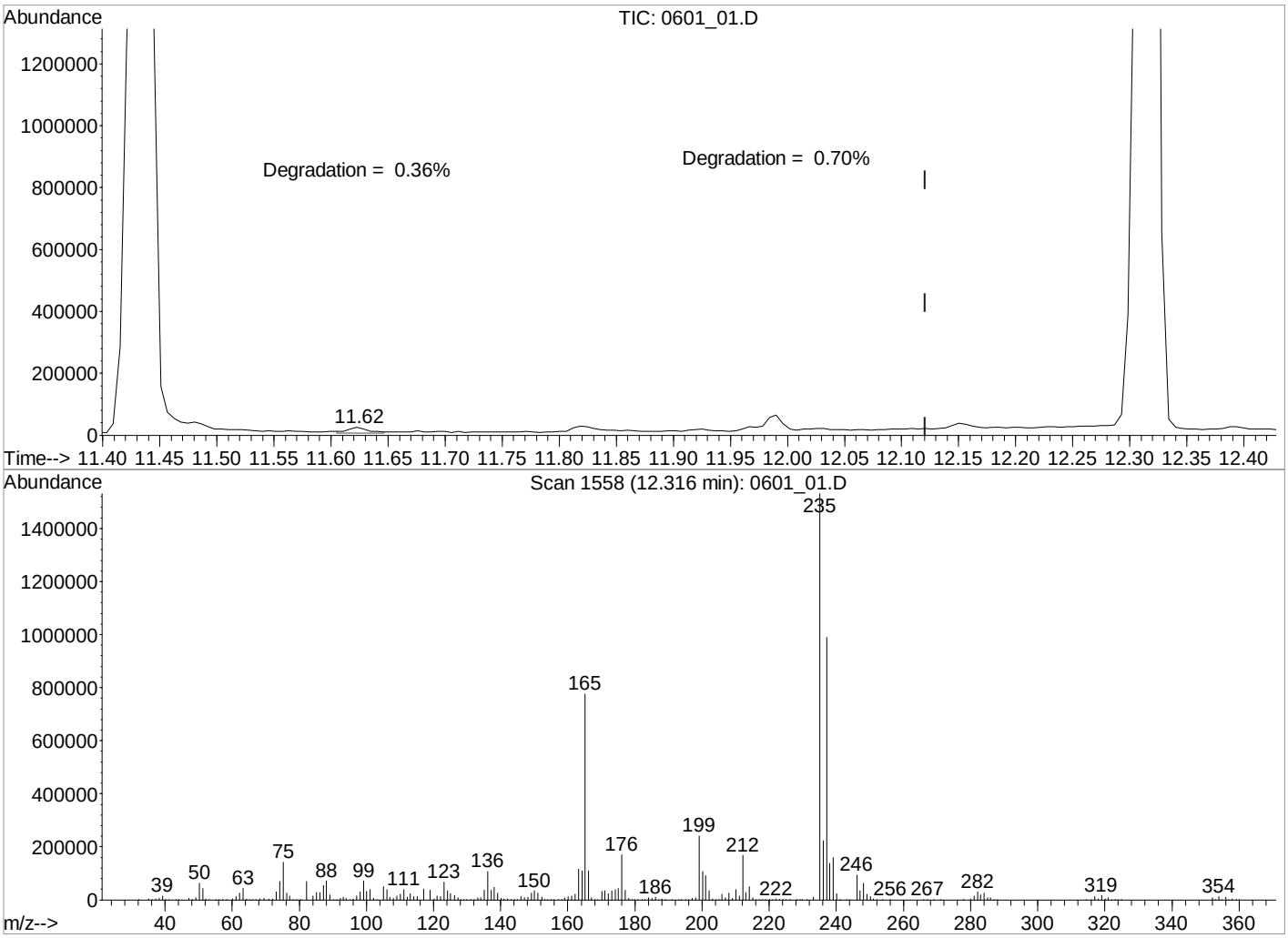
Qvalue = 100

response 2473702

Ion	Exp%	Act%
184.00	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Data File : C:\MSDCHEM\1\DATA\060116\0601 01.D Vial: 1
Acq On : 1 Jun 2016 9:52 am Operator: 280
Sample : TUNE 50 PPM 16E09755 Inst : BNAMS2
Misc : DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jun 1 10:35 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\TUNEC.M (RTE Integrator)
Title : 8270 BNA
Last Update : Thu Sep 04 15:13:47 2014
Response via : Single Level Calibration



TIC: 0601_01.D

(4) DDT (MT)

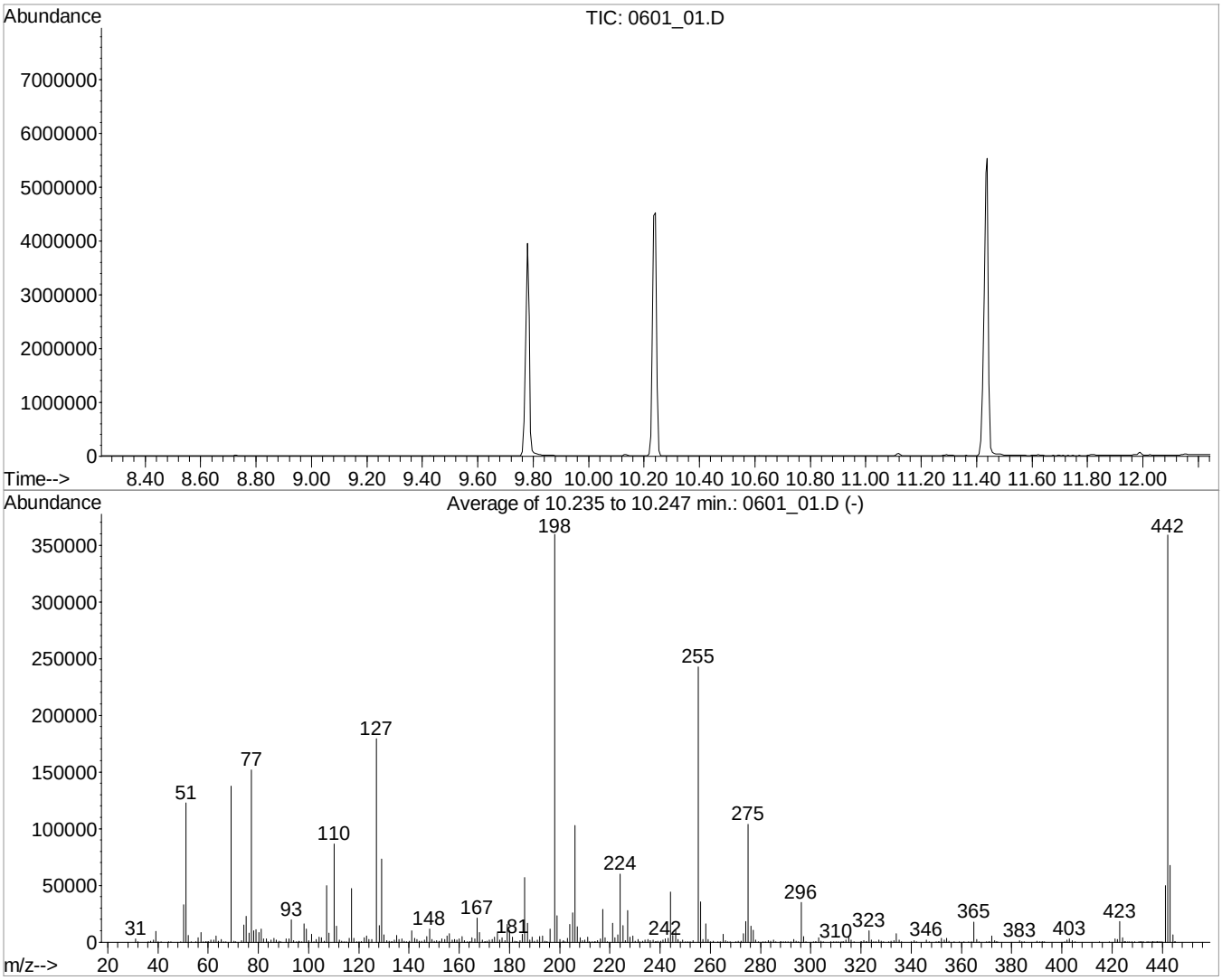
12.32min (-0.305) 384.2111868 ug/ml

Qvalue = 100

response 7287080

Signal	Exp%	Act%
TIC	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

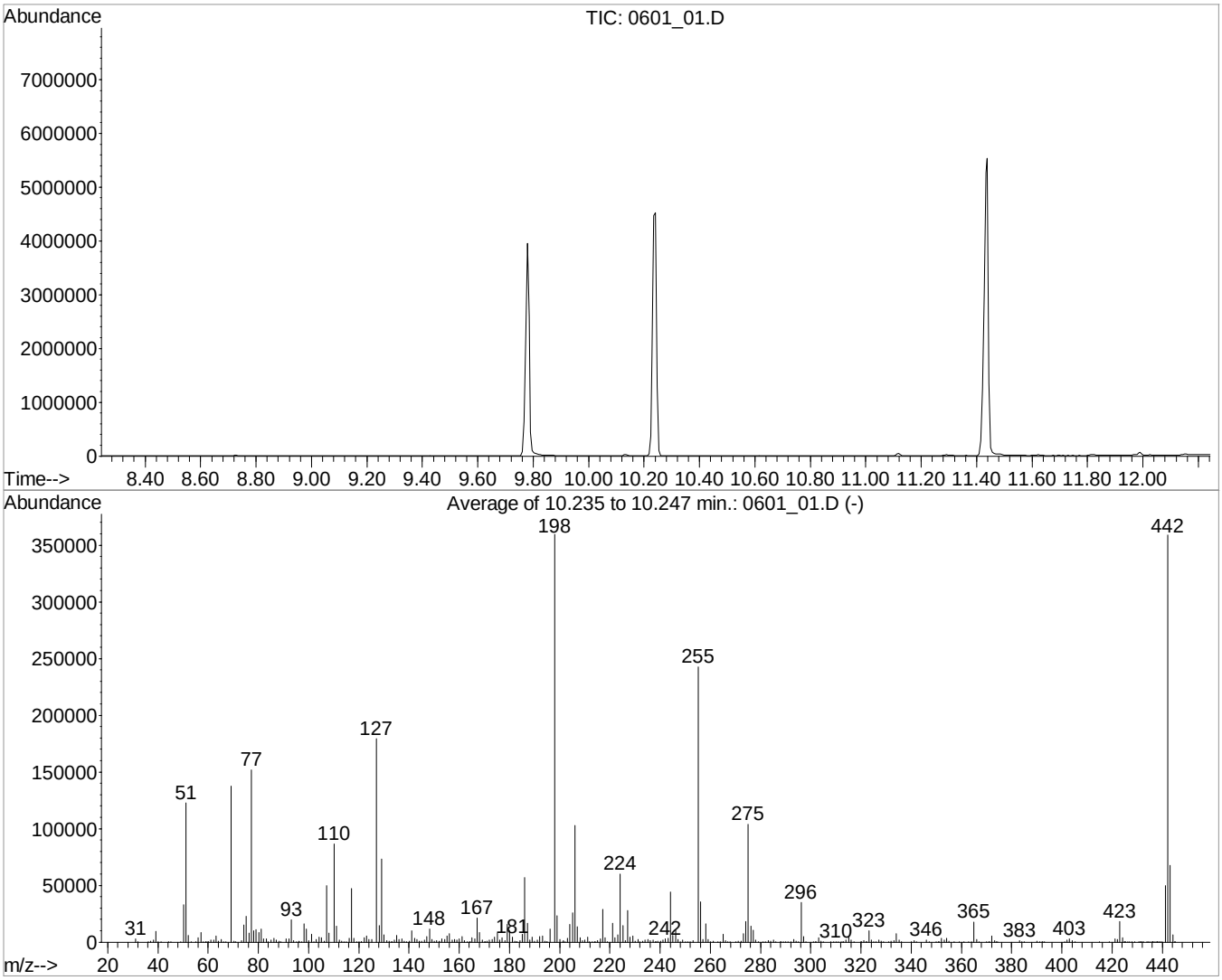
Data File : C:\MSDCHEM\1\DATA\060116\0601 01.D Vial: 1
Acq On : 1 Jun 2016 9:52 am Operator: 280
Sample : TUNE 50 PPM 16E09755 Inst : BNAMS2
Misc : DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\TUNEC.M (RTE Integrator)
Title : 8270 BNA



Spectrum Information: Average of 10.235 to 10.247 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	34.1	122781	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	38.2	137408	PASS
70	69	0.00	2	0.6	814	PASS
127	198	40	60	49.8	179138	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	359605	PASS
199	198	5	9	6.4	23041	PASS
275	198	10	30	28.9	103784	PASS
365	198	1	100	4.9	17482	PASS
441	443	0.01	100	73.8	50018	PASS
442	198	40	100	99.8	358784	PASS
443	442	17	23	18.9	67757	PASS

Data File : C:\MSDCHEM\1\DATA\060116\0601 01.D Vial: 1
Acq On : 1 Jun 2016 9:52 am Operator: 280
Sample : TUNE 50 PPM 16E09755 Inst : BNAMS2
Misc : DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\TUNED.M (RTE Integrator)
Title : 8270 BNA



Spectrum Information: Average of 10.235 to 10.247 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	34.1	122781	PASS
68	69	0.00	2	0.0	0	PASS
69	69	100	100	100.0	137408	PASS
70	69	0.00	2	0.6	814	PASS
127	198	10	80	49.8	179138	PASS
197	198	0.00	2	0.0	0	PASS
198	198	50	100	100.0	359605	PASS
199	198	5	9	6.4	23041	PASS
275	198	10	60	28.9	103784	PASS
365	198	1	100	4.9	17482	PASS
441	442	0.01	24	13.9	50018	PASS
442	198	50	100	99.8	358784	PASS
443	442	15	24	18.9	67757	PASS

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\060116\0601 02.D Vial: 2
Acq On : 1 Jun 2016 10:11 am Operator: 280
Sample : ICV SVMS 10K PPB 16D25863 Inst : BNAMS2
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jun 1 10:36 2016 Quant Results File: S802E24P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:26:43 2016
Response via : Initial Calibration
DataAcq Meth : BNA2D

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.26	152	73773	8000.00 ppb	0.00
22) Naphthalene-d8	6.52	136	405605	8000.00 ppb	0.00
40) Acenaphthene-d10	8.39	164	238420	8000.00 ppb	0.00
64) Phenanthrene-d10	9.99	188	465396	8000.00 ppb	0.00
78) Chrysene-d12	12.86	240	557010	8000.00 ppb	0.00
88) Perylene-d12	14.62	264	573038	8000.00 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol	4.17	112	158064	10318.0533501 ppb	0.00
Spiked Amount 20.000	Range 10 - 74		Recovery = 51590.27%#		
7) Phenol-d5	4.89	99	211804	10300.4464315 ppb	0.00
Spiked Amount 20.000	Range 10 - 63		Recovery = 51502.23%#		
23) Nitrobenzene-d5	5.79	82	210383	10292.1614627 ppb	0.00
Spiked Amount 10.000	Range 28 - 123		Recovery = 102921.61%#		
44) 2-Fluorobiphenyl	7.64	172	428780	10321.5084703 ppb	0.00
Spiked Amount 10.000	Range 35 - 133		Recovery = 103215.08%#		
67) 2,4,6-Tribromophenol	9.23	330	63528	10025.0323200 ppb	-0.01
Spiked Amount 20.000	Range 22 - 154		Recovery = 50125.16%#		
81) p-Terphenyl-d14	11.69	244	667971	10061.5119015 ppb	0.00
Spiked Amount 10.000	Range 30 - 148		Recovery = 100615.12%#		
Target Compounds					Qvalue
2) Pyridine	3.20	79	208475	10398.0430356 ppb	99
3) N-Nitrosodimethylamine	3.18	42	111249	9839.9272567 ppb	93
5) Aniline	4.96	66	99995	9912.4871288 ppb	100
6) bis(2-Chloroethyl)ether	5.00	63	118373	10272.8916360 ppb	91
8) Phenol	4.91	94	215731	10379.4181902 ppb	97
9) Benzaldehyde	5.10	105	234	22.5128347 ppb #	1
10) 2-Chlorophenol	5.07	128	187235	10296.2893732 ppb	97
11) n-Decane	5.08	41	97232	9877.5076105 ppb	98
12) 1,3-Dichlorobenzene	5.21	146	206927	10175.2199672 ppb	97
13) 1,4-Dichlorobenzene	5.28	146	210640	10079.8998151 ppb	97
14) Benzyl Alcohol	5.37	79	166375	10151.4983042 ppb	97
15) 1,2-Dichlorobenzene	5.42	146	204370	10279.5819894 ppb	97
16) bis(2-Chloroisopropyl)ethe	5.50	121	55941	10449.8701146 ppb	96
17) 2-Methylphenol	5.46	108	160558	10192.6735702 ppb	98
18) Hexachloroethane	5.75	117	90745	10261.9537663 ppb	96
19) N-Nitrosodi-n-propylamine	5.62	70	134457	10282.3982726 ppb	99
20) 3&4-Methyl phenol	5.61	107	187726	10128.6450718 ppb	99
21) Acetophenone	5.61	105	1971	84.2747994 ppb #	1
24) Nitrobenzene	5.81	77	206583	10226.9539267 ppb	99
25) Isophorone	6.03	82	342031	9780.6499936 ppb	99
26) 2-Nitrophenol	6.12	139	103600	10700.7209519 ppb	97
27) 2,4-Dimethylphenol	6.14	107	194027	10064.9238433 ppb	98
28) bis(2-Chlorethoxy)methane	6.24	93	212785	10083.7745704 ppb	96
29) 2,4-Dichlorophenol	6.36	162	161184	10003.2029211 ppb	96
30) Benzoic Acid	6.14	105	6200	1103.3372581 ppb #	1
31) 1,2,4-Trichlorobenzene	6.45	180	183160	9705.3587296 ppb	99
32) Naphthalene	6.54	128	561513	9855.7149158 ppb	99
33) 4-Chloroaniline	6.58	65	72424	10287.0801165 ppb	97
34) Hexachloro-1,3-butadiene	6.65	225	120971	9678.5246918 ppb	97
35) Caprolactam	7.08	113	5685	1159.7746597 ppb #	37
36) 4-Chloro-3-methylphenol	7.08	107	170432	10093.9609528 ppb	96
37) 2-Methylnaphthalene	7.26	142	404283	10314.2103374 ppb	100
38) 1-Methylnaphthalene	7.37	142	356337	9691.6191295 ppb	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\060116\0601 02.D Vial: 2
Acq On : 1 Jun 2016 10:11 am Operator: 280
Sample : ICV SVMS 10K PPB 16D25863 Inst : BNAMS2
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jun 1 10:36 2016 Quant Results File: S802E24P.RES

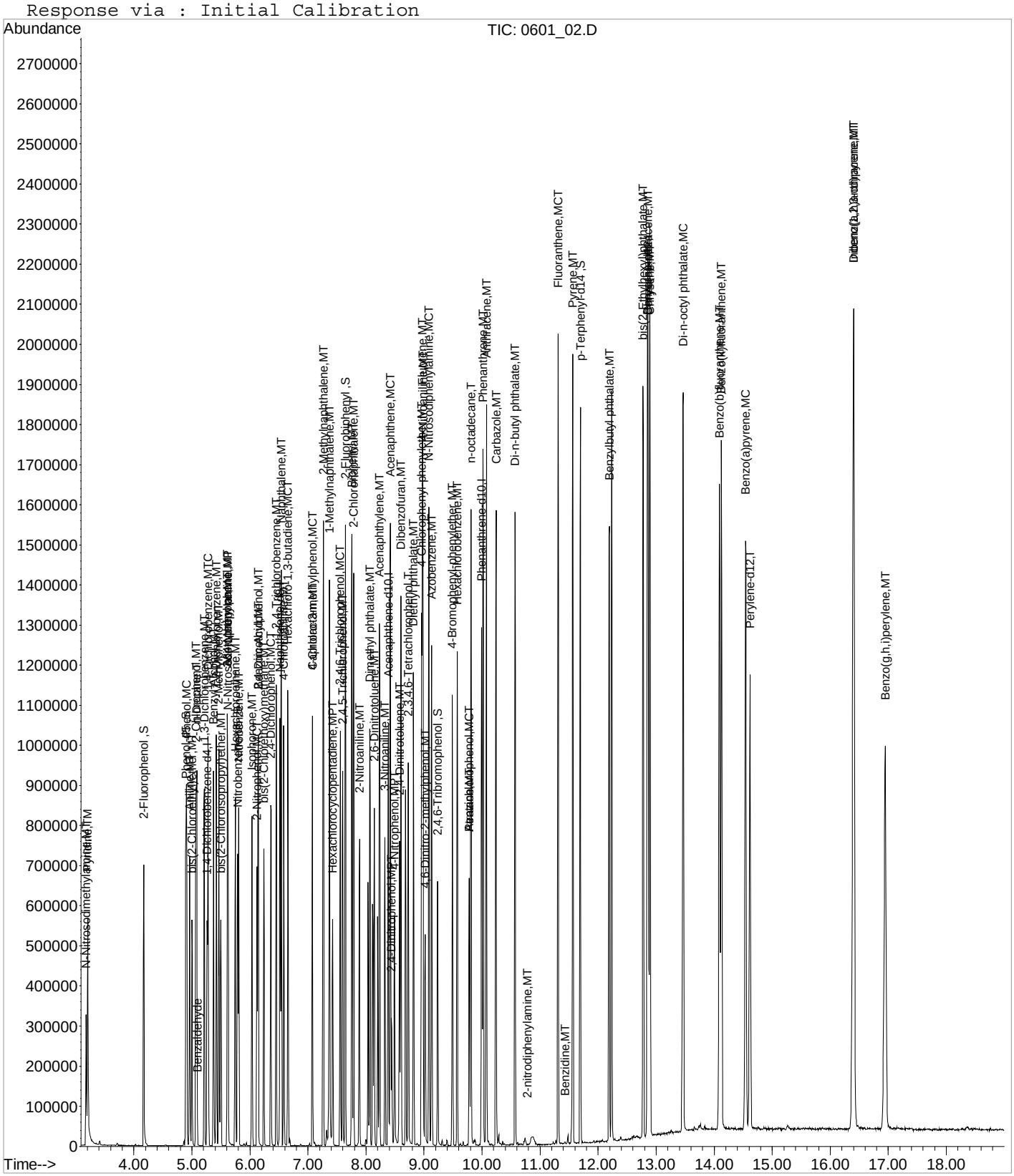
Quant Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:26:43 2016
Response via : Initial Calibration
DataAcq Meth : BNA2D

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
41)	Hexachlorocyclopentadiene	7.42	237	83049	8535.7892729 ppb		98
42)	2,4,6-Trichlorophenol	7.56	196	120608	11056.1382467 ppb		93
43)	2,4,5-Trichlorophenol	7.60	196	131762	11486.5344168 ppb		94
45)	Biphenyl	7.76	154	467686	10303.1479020 ppb		100
46)	2-Chloronaphthalene	7.79	162	379603	10502.0440248 ppb		98
47)	2-Nitroaniline	7.89	138	125262	10968.5717429 ppb		98
48)	Acenaphthylene	8.23	152	570913	10199.6199903 ppb		99
49)	Dimethyl phthalate	8.07	163	404325	9982.6017068 ppb		97
50)	2,6-Dinitrotoluene	8.14	165	97152	10558.3921713 ppb		94
51)	3-Nitroaniline	8.33	138	100478	10206.7107420 ppb		93
52)	Acenaphthene	8.42	153	381600	10332.2994838 ppb		98
53)	2,4-Dinitrophenol	8.44	184	44332	11185.5074103 ppb		92
54)	Dibenzofuran	8.60	168	536912	10306.4406410 ppb		99
55)	2,4-Dinitrotoluene	8.58	165	130388	10641.3744332 ppb		90
56)	2,3,4,6-Tetrachlorophenol	8.73	232	106153	13206.7499215 ppb		96
57)	4-Nitrophenol	8.49	139	79303	11365.0349457 ppb		92
58)	Fluorene	8.97	166	435148	10212.8631804 ppb		100
59)	4-Chlorophenyl-phenylether	8.96	204	207078	9882.4449247 ppb		99
60)	Diethyl phthalate	8.82	149	425615	10111.8226152 ppb		99
61)	4-Nitroaniline	8.98	138	110869	11182.7638065 ppb		99
62)	Azobenzene	9.13	77	440692	10801.7568199 ppb		98
63)	Atrazine	9.78	200	13947	1183.6135278 ppb	#	31
65)	4,6-Dinitro-2-methylphenol	9.02	198	67710	10420.8078979 ppb		93
66)	N-Nitrosodiphenylamine	9.09	169	372087	10361.9057873 ppb		98
68)	4-Bromophenyl-phenylether	9.49	248	126854	9745.0408302 ppb		89
69)	Hexachlorobenzene	9.57	284	144914	9885.0113971 ppb		98
70)	n-octadecane	9.81	55	67066	10196.3150706 ppb	#	95
71)	Pentachlorophenol	9.78	266	75248	10371.2496443 ppb		98
72)	Phenanthrene	10.02	178	671582	10205.6042585 ppb		99
73)	Anthracene	10.08	178	688312	10290.3281755 ppb		99
74)	Carbazole	10.24	167	650379	10686.2350304 ppb		99
75)	Di-n-butyl phthalate	10.57	149	822258	10913.4796017 ppb		100
76)	2-nitrodiphenylamine	10.77	167	63	383.3898432 ppb	#	100
77)	Fluoranthene	11.31	202	776913	10427.4909004 ppb		100
79)	Benzidine	11.42	184	1070	22.5103260 ppb	#	64
80)	Pyrene	11.56	202	807717	9981.1315840 ppb		99
82)	Benzylbutyl phthalate	12.19	149	392241	10685.1264115 ppb		94
84)	Benzo(a)anthracene	12.85	228	832444	9887.8699324 ppb		98
85)	Chrysene	12.89	228	789459	10016.5443571 ppb		100
86)	bis(2-Ethylhexyl)phthalate	12.77	149	591120	11307.5548162 ppb		97
87)	Di-n-octyl phthalate	13.47	149	1075385	11872.0890527 ppb		100
89)	Benzo(b)fluoranthene	14.09	252	880353	9964.8853862 ppb		99
90)	Benzo(k)fluoranthene	14.12	252	831260	10427.5539934 ppb		97
91)	Benzo(a)pyrene	14.55	252	864467	10452.3592409 ppb		99
92)	Indeno(1,2,3-cd)pyrene	16.40	276	1059876	11326.0139544 ppb		96
93)	Dibenz(a,h)anthracene	16.41	278	917232	11313.5868087 ppb		99
94)	Benzo(g,h,i)perylene	16.95	276	890826	11476.1844613 ppb		96

(#) = qualifier out of range (m) = manual integration

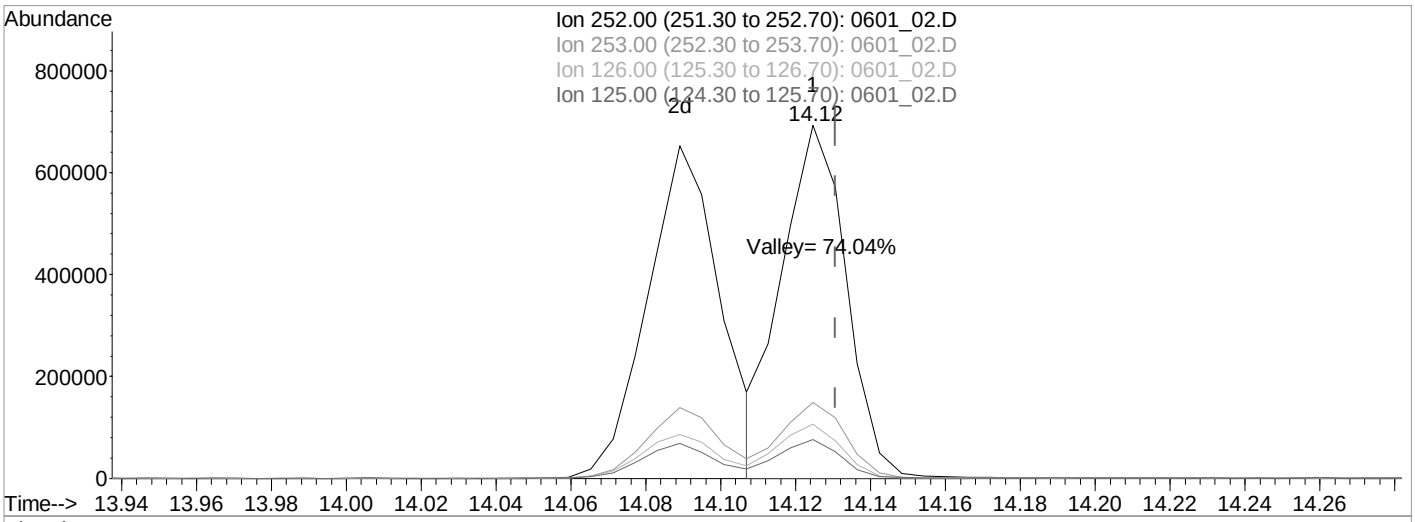
Data File : C:\MSDCHEM\1\DATA\060116\0601 02.D Vial: 2
Acq On : 1 Jun 2016 10:11 am Operator: 280
Sample : ICV SVMS 10K PPB 16D25863 Inst : BNAMS2
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jun 1 10:36 2016 Quant Results File: S802E24P.RES

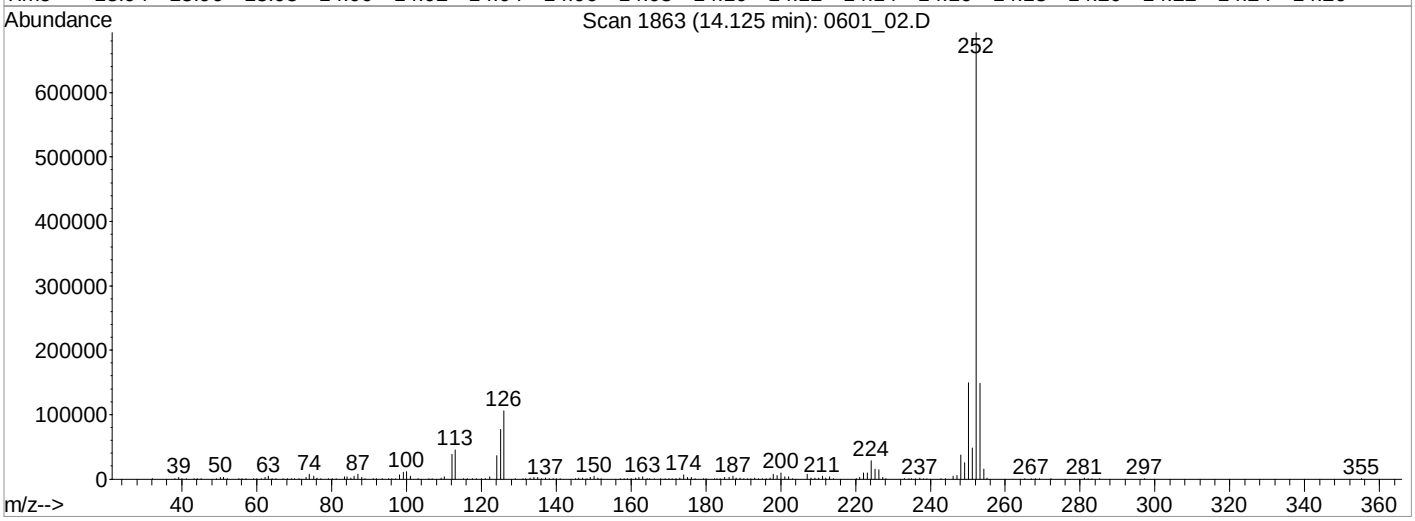
Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:26:43 2016
Response via : Initial Calibration



Data File : C:\MSDCHEM\1\DATA\060116\0601 02.D Vial: 2
Acq On : 1 Jun 2016 10:11 am Operator: 280
Sample : ICV SVMS 10K PPB 16D25863 Inst : BNAMS2
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jun 1 10:36 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:26:43 2016
Response via : Multiple Level Calibration





TIC: 0601_02.D

(90) Benzo(k)fluoranthene (MT)

14.12min (-0.006) 10427.5539934 ppb

Qvalue = 97

response 831260

Ion	Exp%	Act%
252.00	100	100
253.00	22.20	21.38
126.00	13.40	15.28
125.00	9.60	11.01

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\060116\0601 03.D Vial: 3
Acq On : 1 Jun 2016 10:36 am Operator: 280
Sample : ICVRL TCL 10K1 PPB 16D25867 Inst : BNAMS2
Misc : 8270 TCL Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jun 1 11:29 2016 Quant Results File: S802E24P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:26:43 2016
Response via : Initial Calibration
DataAcq Meth : BNA2D

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.26	152	70213	8000.00	ppb	0.00
22) Naphthalene-d8	6.52	136	381290	8000.00	ppb	0.00
40) Acenaphthene-d10	8.38	164	232876	8000.00	ppb	-0.01
64) Phenanthrene-d10	9.99	188	454547	8000.00	ppb	0.00
78) Chrysene-d12	12.86	240	524140	8000.00	ppb	0.00
88) Perylene-d12	14.61	264	517349	8000.00	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 74		Recovery =	0.00%#		
7) Phenol-d5	0.00	99	0	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 63		Recovery =	0.00%#		
23) Nitrobenzene-d5	5.90	82	274	14.2591749	ppb	0.11
Spiked Amount 10.000	Range 28 - 123		Recovery =	142.59%#		
44) 2-Fluorobiphenyl	0.00	172	0	0.0000000	ppb	
Spiked Amount 10.000	Range 35 - 133		Recovery =	0.00%#		
67) 2,4,6-Tribromophenol	0.00	330	0	0.0000000	ppb	
Spiked Amount 20.000	Range 22 - 154		Recovery =	0.00%#		
81) p-Terphenyl-d14	0.00	244	0	0.0000000	ppb	
Spiked Amount 10.000	Range 30 - 148		Recovery =	0.00%#		
Target Compounds						Qvalue
3) N-Nitrosodimethylamine	3.22	42	55	5.1113824	ppb #	1
8) Phenol	4.92	94	184	9.3016114	ppb #	39
9) Benzaldehyde	4.88	105	71093	7186.5604049	ppb	99
11) n-Decane	5.08	41	131	13.9826461	ppb #	1
16) bis(2-Chloroisopropyl)ethe	5.63	121	4967	974.8880386	ppb #	1
20) 3&4-Methyl phenol	5.63	107	986	55.8963895	ppb #	1
21) Acetophenone	5.63	105	231512	10400.7468237	ppb	99
24) Nitrobenzene	5.63	77	187970	9898.9275487	ppb #	63
28) bis(2-Chlorethoxy)methane	6.21	93	447	22.5339604	ppb #	1
30) Benzoic Acid	6.22	105	104668	10426.2755300	ppb	98
31) 1,2,4-Trichlorobenzene	6.45	180	571	32.1858476	ppb	92
32) Naphthalene	6.54	128	1822	34.0192375	ppb	93
33) 4-Chloroaniline	6.51	65	683	103.1996450	ppb #	1
35) Caprolactam	6.93	113	46268	10040.8795677	ppb	100
38) 1-Methylnaphthalene	7.44	142	1558	45.0765591	ppb #	38
39) 1,2,4,5-Tetrachlorobenzene	7.44	216	174052	10039.4402320	ppb	99
42) 2,4,6-Trichlorophenol	7.56	196	62	5.8188476	ppb #	17
51) 3-Nitroaniline	8.38	138	199	20.6959732	ppb #	1
54) Dibenzofuran	8.73	168	27788	546.1108899	ppb #	43
56) 2,3,4,6-Tetrachlorophenol	8.73	232	89104	11349.5549875	ppb	93
63) Atrazine	9.64	200	112845	9804.5889510	ppb	97
70) n-octadecane	9.64	55	9632	1499.3435880	ppb #	66
71) Pentachlorophenol	9.78	266	7299	2041.5274443	ppb	94
72) Phenanthrene	9.99	178	283	4.4032157	ppb #	1
73) Anthracene	9.99	178	283	4.3318576	ppb #	1
76) 2-nitrodiphenylamine	10.76	167	163608	10375.6762272	ppb #	100
79) Benzidine	11.43	184	377828	8447.1038658	ppb	100
82) Benzylbutyl phthalate	12.19	149	341	9.8718090	ppb #	1
83) 3,3-Dichlorobenzidine	12.79	252	215229	9603.8979155	ppb	98
84) Benzo(a)anthracene	12.86	228	1507	19.0228971	ppb #	1
85) Chrysene	12.86	228	1507	20.3196994	ppb #	55
86) bis(2-Ethylhexyl)phthalate	12.77	149	7308	148.5618417	ppb	93
87) Di-n-octyl phthalate	13.49	149	3512	41.2034296	ppb	74

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\060116\0601 03.D Vial: 3
Acq On : 1 Jun 2016 10:36 am Operator: 280
Sample : ICVRL TCL 10K1 PPB 16D25867 Inst : BNAMS2
Misc : 8270 TCL Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jun 1 11:29 2016 Quant Results File: S802E24P.RES

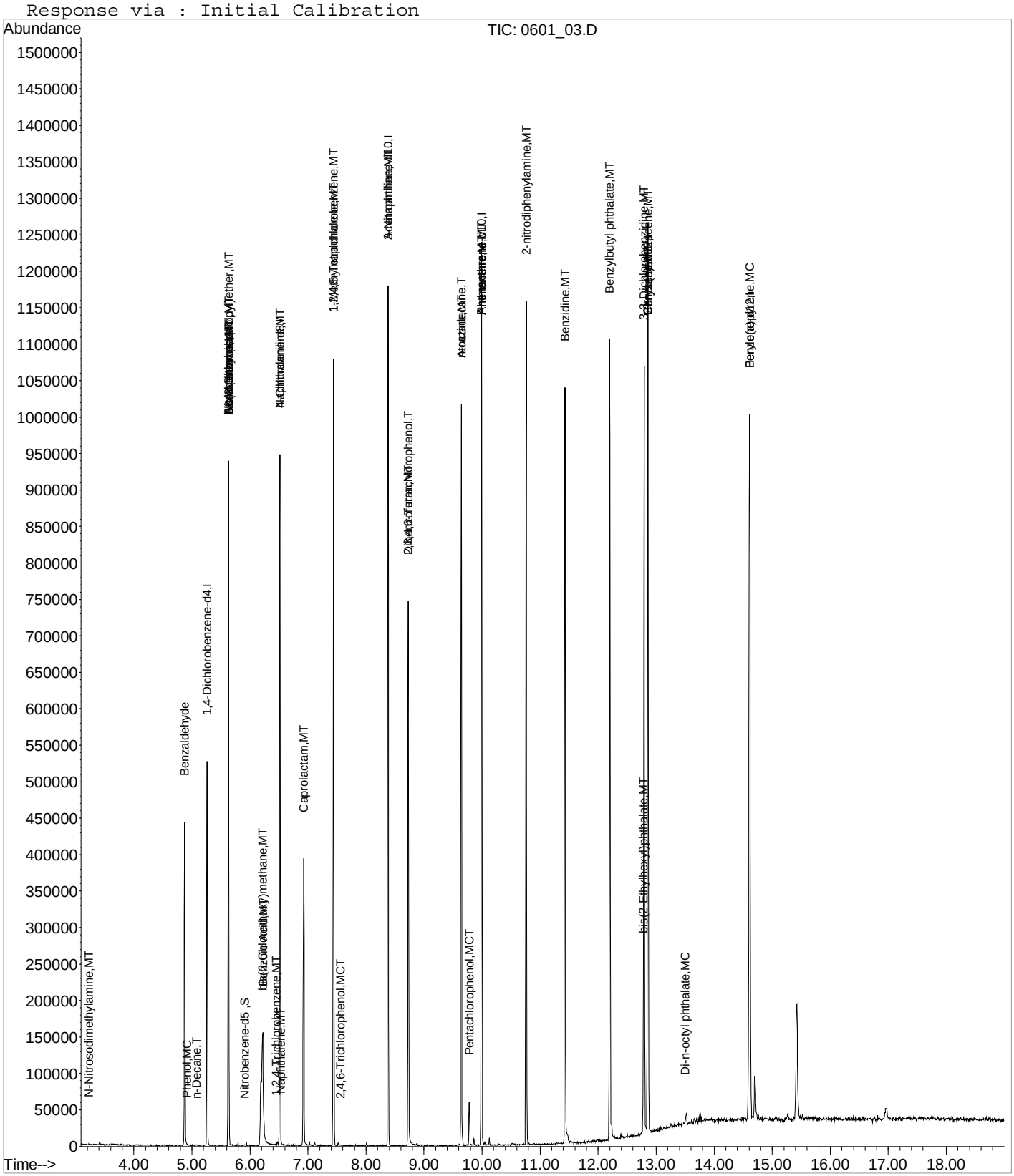
Quant Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:26:43 2016
Response via : Initial Calibration
DataAcq Meth : BNA2D

Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
91) Benzo(a)pyrene	14.61	252	1649	22.0844391	ppb	#	1

(#) = qualifier out of range (m) = manual integration

Data File : C:\MSDCHEM\1\DATA\060116\0601 03.D Vial: 3
Acq On : 1 Jun 2016 10:36 am Operator: 280
Sample : ICVRL TCL 10K1 PPB 16D25867 Inst : BNAMS2
Misc : 8270 TCL Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jun 1 11:29 2016 Quant Results File: S802E24P.RES

Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:26:43 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\060116\0601 03.D Vial: 3
Acq On : 1 Jun 2016 10:36 am Operator: 280
Sample : ICVRL TCL 10K1 PPB 16D25867 Inst : BNAMS2
Misc : 8270 TCL Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jun 1 11:29 2016 Quant Results File: S802E24P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:26:43 2016
Response via : Initial Calibration
DataAcq Meth : BNA2D

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.26	152	70213	8000.00	ppb	0.00
22) Naphthalene-d8	6.52	136	381290	8000.00	ppb	0.00
40) Acenaphthene-d10	8.38	164	232876	8000.00	ppb	-0.01
64) Phenanthrene-d10	9.99	188	454547	8000.00	ppb	0.00
78) Chrysene-d12	12.86	240	524140	8000.00	ppb	0.00
88) Perylene-d12	14.61	264	517349	8000.00	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 74		Recovery =	0.00%#		
7) Phenol-d5	0.00	99	0	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 63		Recovery =	0.00%#		
23) Nitrobenzene-d5	5.90	82	274	14.2591749	ppb	0.11
Spiked Amount 10.000	Range 28 - 123		Recovery =	142.59%#		
44) 2-Fluorobiphenyl	0.00	172	0	0.0000000	ppb	
Spiked Amount 10.000	Range 35 - 133		Recovery =	0.00%#		
67) 2,4,6-Tribromophenol	0.00	330	0	0.0000000	ppb	
Spiked Amount 20.000	Range 22 - 154		Recovery =	0.00%#		
81) p-Terphenyl-d14	0.00	244	0	0.0000000	ppb	
Spiked Amount 10.000	Range 30 - 148		Recovery =	0.00%#		
Target Compounds						Qvalue
3) N-Nitrosodimethylamine	3.22	42	55	5.1113824	ppb #	1
8) Phenol	4.92	94	184	9.3016114	ppb #	39
9) Benzaldehyde	4.88	105	71093	7186.5604049	ppb	99
11) n-Decane	5.08	41	131	13.9826461	ppb #	1
16) bis(2-Chloroisopropyl)ethe	5.63	121	4967	974.8880386	ppb #	1
20) 3&4-Methyl phenol	5.63	107	986	55.8963895	ppb #	1
21) Acetophenone	5.63	105	231512	10400.7468237	ppb	99
24) Nitrobenzene	5.63	77	187970	9898.9275487	ppb #	63
28) bis(2-Chlorethoxy)methane	6.21	93	447	22.5339604	ppb #	1
30) Benzoic Acid	6.22	105	104668	10426.2755300	ppb	98
31) 1,2,4-Trichlorobenzene	6.45	180	571	32.1858476	ppb	92
32) Naphthalene	6.54	128	1822	34.0192375	ppb	93
33) 4-Chloroaniline	6.51	65	683	103.1996450	ppb #	1
35) Caprolactam	6.93	113	46268	10040.8795677	ppb	100
38) 1-Methylnaphthalene	7.44	142	1558	45.0765591	ppb #	38
39) 1,2,4,5-Tetrachlorobenzene	7.44	216	174052	10039.4402320	ppb	99
42) 2,4,6-Trichlorophenol	7.56	196	62	5.8188476	ppb #	17
51) 3-Nitroaniline	8.38	138	199	20.6959732	ppb #	1
54) Dibenzofuran	8.73	168	27788	546.1108899	ppb #	43
56) 2,3,4,6-Tetrachlorophenol	8.73	232	89104	11349.5549875	ppb	93
63) Atrazine	9.64	200	112845	9804.5889510	ppb	97
70) n-octadecane	9.64	55	9632	1499.3435880	ppb #	66
71) Pentachlorophenol	9.78	266	7299	2041.5274443	ppb	94
72) Phenanthrene	9.99	178	283	4.4032157	ppb #	1
73) Anthracene	9.99	178	283	4.3318576	ppb #	1
76) 2-nitrodiphenylamine	10.76	167	163608	10375.6762272	ppb #	100
79) Benzidine	11.43	184	377828	8447.1038658	ppb	100
82) Benzylbutyl phthalate	12.19	149	341	9.8718090	ppb #	1
83) 3,3-Dichlorobenzidine	12.79	252	215229	9603.8979155	ppb	98
84) Benzo(a)anthracene	12.86	228	1507	19.0228971	ppb #	1
85) Chrysene	12.86	228	1507	20.3196994	ppb #	55
86) bis(2-Ethylhexyl)phthalate	12.77	149	7308	148.5618417	ppb	93
87) Di-n-octyl phthalate	13.49	149	3512	41.2034296	ppb	74

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\060116\0601 03.D Vial: 3
Acq On : 1 Jun 2016 10:36 am Operator: 280
Sample : ICVRL TCL 10K1 PPB 16D25867 Inst : BNAMS2
Misc : 8270 TCL Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jun 1 11:29 2016 Quant Results File: S802E24P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:26:43 2016
Response via : Initial Calibration
DataAcq Meth : BNA2D

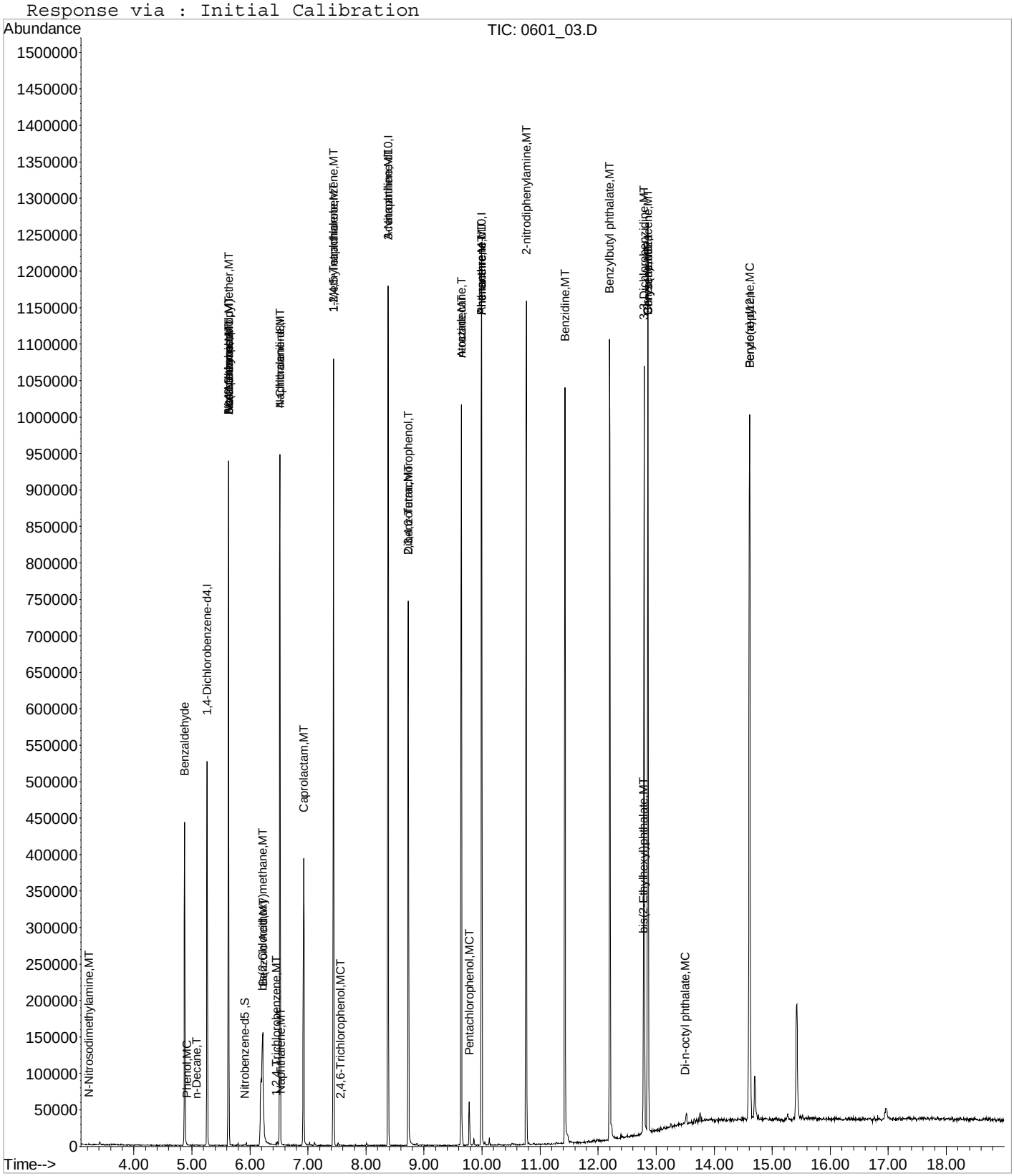
Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
91) Benzo(a)pyrene	14.61	252	1649	22.0844391	ppb	#	1

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\060116\0601 03.D Vial: 3
Acq On : 1 Jun 2016 10:36 am Operator: 280
Sample : ICVRL TCL 10K1 PPB 16D25867 Inst : BNAMS2
Misc : 8270 TCL Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jun 1 11:29 2016 Quant Results File: S802E24P.RES

Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:26:43 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\060116\0601 18.D Vial: 19
Acq On : 1 Jun 2016 5:13 pm Operator: 280
Sample : L838049-04 5x WG876258 15-0.5 Inst : BNAMS2
Misc : Soil ISTD 16D22768 Multiplr: 0.17
MS Integration Params: RTEINT.P
Quant Time: Jun 2 9:58 2016 Quant Results File: S802E24P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:26:43 2016
Response via : Initial Calibration
DataAcq Meth : BNA2D

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.26	152	70476	8000.00	ppb		0.00
22) Naphthalene-d8	6.52	136	368563	8000.00	ppb		0.00
40) Acenaphthene-d10	8.38	164	229745	8000.00	ppb		-0.01
64) Phenanthrene-d10	9.99	188	409009	8000.00	ppb		0.00
78) Chrysene-d12	12.86	240	566550	8000.00	ppb		-0.01
88) Perylene-d12	14.61	264	427284	8000.00	ppb		0.00
System Monitoring Compounds							
4) 2-Fluorophenol	4.17	112	31322	353.1461111	ppb		0.00
Spiked Amount 666.000	Range 21 - 116		Recovery = 53.02%				
7) Phenol-d5	4.89	99	42617	357.9685780	ppb		0.00
Spiked Amount 666.000	Range 26 - 121		Recovery = 53.75%				
23) Nitrobenzene-d5	5.78	82	21765	193.3437459	ppb		0.00
Spiked Amount 333.000	Range 22 - 129		Recovery = 58.06%				
44) 2-Fluorobiphenyl	7.64	172	49907	205.7077610	ppb		0.00
Spiked Amount 333.000	Range 35 - 129		Recovery = 61.77%				
67) 2,4,6-Tribromophenol	9.23	330	13905	411.9697402	ppb		-0.01
Spiked Amount 666.000	Range 22 - 142		Recovery = 61.86%				
81) p-Terphenyl-d14	11.69	244	74395	181.7850139	ppb		0.00
Spiked Amount 333.000	Range 22 - 128		Recovery = 54.59%				
Target Compounds						Qvalue	
5) Aniline	4.89	66	2372	40.6124489	ppb	#	1
11) n-Decane	5.06	41	497	8.7203654	ppb	#	44
30) Benzoic Acid	6.23	105	74	90.6642389	ppb		97
35) Caprolactam	6.93	113	190	7.0383727	ppb	#	1
38) 1-Methylnaphthalene	7.37	142	1887	9.3192901	ppb	#	40
49) Dimethyl phthalate	8.04	163	3034	12.8265330	ppb	#	1
50) 2,6-Dinitrotoluene	8.14	165	789	14.6826216	ppb	#	1
51) 3-Nitroaniline	8.33	138	385	6.6966271	ppb	#	31
52) Acenaphthene	8.42	153	2606	12.0821324	ppb	#	83
53) 2,4-Dinitrophenol	8.43	184	76	504.3391877	ppb	#	30
54) Dibenzofuran	8.60	168	2446	8.0397512	ppb	#	1
55) 2,4-Dinitrotoluene	8.59	165	1381	19.2989792	ppb	#	58
56) 2,3,4,6-Tetrachlorophenol	8.73	232	3054	65.0598824	ppb		93
57) 4-Nitrophenol	8.49	139	2246	55.1152104	ppb	#	33
58) Fluorene	8.97	166	3570	14.3469405	ppb	#	65
61) 4-Nitroaniline	8.96	138	1358	23.4541312	ppb	#	1
62) Azobenzene	9.09	77	2727	11.4452406	ppb	#	1
63) Atrazine	9.64	200	1789	25.9968076	ppb	#	65
65) 4,6-Dinitro-2-methylphenol	9.01	198	82	192.9582510	ppb	#	33
66) N-Nitrosodiphenylamine	9.06	169	2870	15.0055102	ppb	#	47
70) n-octadecane	9.81	55	7615	217.3624277	ppb	#	63
71) Pentachlorophenol	9.78	266	115318	2846.2311525	ppb		99
72) Phenanthrene	10.02	178	12628	36.0286488	ppb		86
73) Anthracene	10.02	178	12628	35.4447717	ppb		88
75) Di-n-butyl phthalate	10.57	149	1731	4.3134615	ppb		61
76) 2-nitrodiphenylamine	10.73	167	863	72.3076378	ppb	#	100
77) Fluoranthene	11.31	202	3179	8.0107225	ppb		97
80) Pyrene	11.56	202	9286	18.6147809	ppb		85
83) 3,3-Dichlorobenzidine	12.92	252	5397	36.7614108	ppb	#	45
85) Chrysene	12.86	228	7177	14.7720231	ppb		70
86) bis(2-Ethylhexyl)phthalate	12.77	149	4693	14.5630485	ppb		96
89) Benzo(b)fluoranthene	14.11	252	2277	5.7033395	ppb	#	53
90) Benzo(k)fluoranthene	14.11	252	2277	6.3206149	ppb	#	60

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\060116\0601 18.D Vial: 19
Acq On : 1 Jun 2016 5:13 pm Operator: 280
Sample : L838049-04 5x WG876258 15-0.5 Inst : BNAMS2
Misc : Soil ISTD 16D22768 Multiplr: 0.17
MS Integration Params: RTEINT.P
Quant Time: Jun 2 9:58 2016 Quant Results File: S802E24P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:26:43 2016
Response via : Initial Calibration
DataAcq Meth : BNA2D

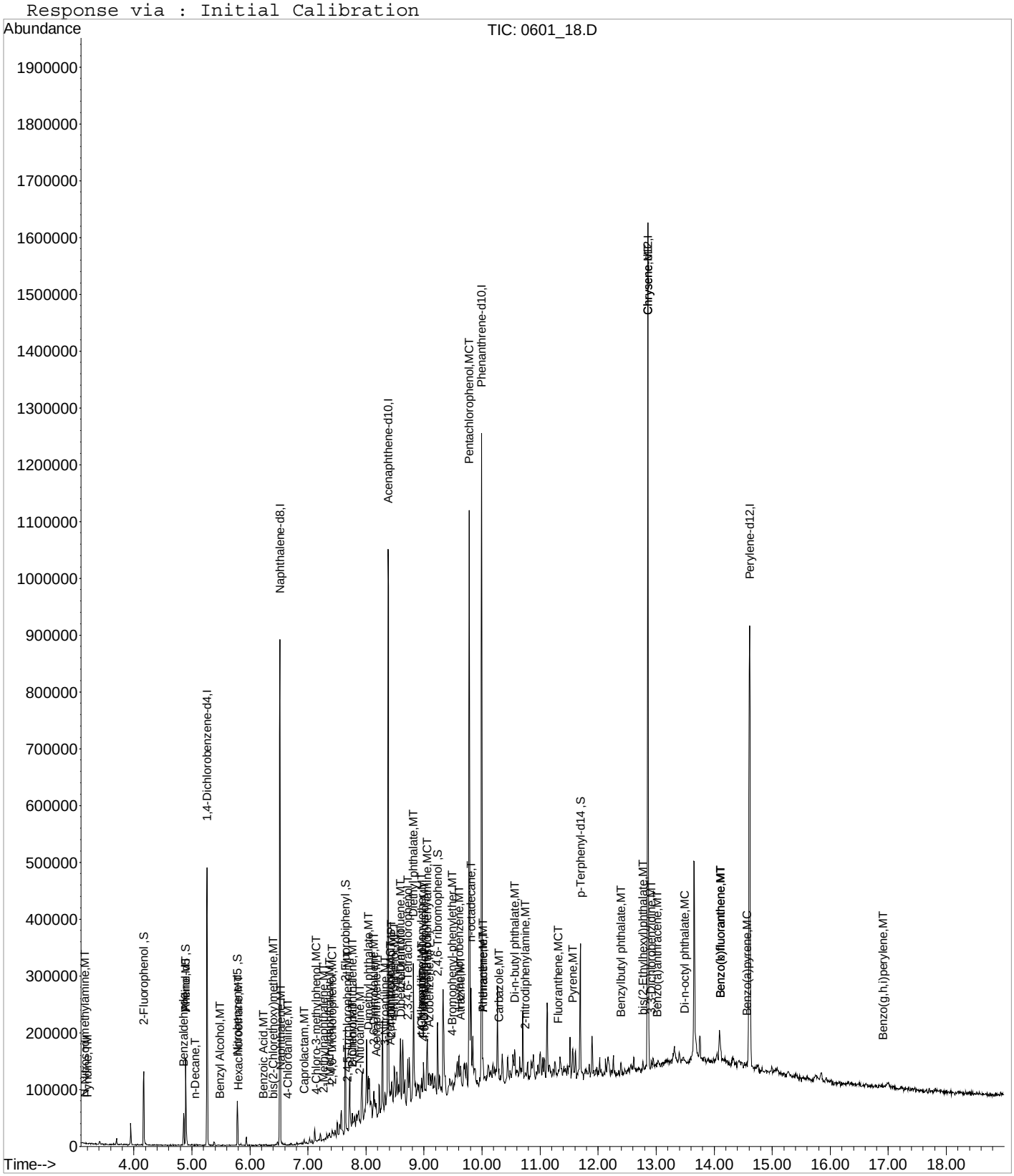
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
91) Benzo(a)pyrene	14.56	252	2110	5.6454569	ppb	89

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\060116\0601 18.D Vial: 19
Acq On : 1 Jun 2016 5:13 pm Operator: 280
Sample : L838049-04 5x WG876258 15-0.5 Inst : BNAMS2
Misc : Soil ISTD 16D22768 Multiplr: 0.17
MS Integration Params: RTEINT.P
Quant Time: Jun 2 9:58 2016 Quant Results File: S802E24P.RES

Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:26:43 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\060116\0601 19.D Vial: 20
Acq On : 1 Jun 2016 5:38 pm Operator: 280
Sample : L838049-02 100x WG876258 15-0.5 Inst : BNAMS2
Misc : Soil ISTD 16D22768 Multiplr: 3.33
MS Integration Params: RTEINT.P
Quant Time: Jun 2 9:58 2016 Quant Results File: S802E24P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:26:43 2016
Response via : Initial Calibration
DataAcq Meth : BNA2D

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.26	152	68001	8000.00	ppb	0.00
22) Naphthalene-d8	6.52	136	371169	8000.00	ppb	0.00
40) Acenaphthene-d10	8.38	164	224356	8000.00	ppb	-0.01
64) Phenanthrene-d10	9.99	188	412443	8000.00	ppb	0.00
78) Chrysene-d12	12.86	240	605106	8000.00	ppb	-0.01
88) Perylene-d12	14.60	264	449280	8000.00	ppb	-0.01
System Monitoring Compounds						
4) 2-Fluorophenol	4.17	112	1657	390.7632276	ppb	0.00
Spiked Amount 666.000	Range 21 - 116		Recovery = 58.67%			
7) Phenol-d5	4.90	99	2519	442.5643594	ppb	0.00
Spiked Amount 666.000	Range 26 - 121		Recovery = 66.45%			
23) Nitrobenzene-d5	5.79	82	1368	243.5330350	ppb	0.00
Spiked Amount 333.000	Range 22 - 129		Recovery = 73.13%			
44) 2-Fluorobiphenyl	7.64	172	3041	259.0444561	ppb	0.00
Spiked Amount 333.000	Range 35 - 129		Recovery = 77.79%			
67) 2,4,6-Tribromophenol	9.23	330	579	343.3223723	ppb	-0.01
Spiked Amount 666.000	Range 22 - 142		Recovery = 51.55%			
81) p-Terphenyl-d14	11.69	244	4550	210.0839142	ppb	0.00
Spiked Amount 333.000	Range 22 - 128		Recovery = 63.09%			
Target Compounds						Qvalue
2) Pyridine	3.19	79	55	9.9102976	ppb	# 30
3) N-Nitrosodimethylamine	3.15	42	169	54.0018770	ppb	# 1
5) Aniline	4.90	66	81	29.0078639	ppb	# 1
9) Benzaldehyde	4.91	105	188	65.3429221	ppb	# 32
11) n-Decane	5.08	41	736	270.1110474	ppb	# 71
14) Benzyl Alcohol	5.39	79	398	87.7306867	ppb	# 1
16) bis(2-Chloroisopropyl)ethe	5.39	121	68	45.8897782	ppb	# 1
18) Hexachloroethane	5.76	117	460	187.9280291	ppb	# 23
19) N-Nitrosodi-n-propylamine	5.60	70	61	16.8526118	ppb	# 22
21) Acetophenone	5.62	105	515	79.5508292	ppb	# 34
24) Nitrobenzene	5.78	77	61	10.9889802	ppb	# 34
25) Isophorone	5.95	82	121	12.5910937	ppb	60
27) 2,4-Dimethylphenol	6.14	107	145	27.3710945	ppb	# 20
28) bis(2-Chlorethoxy)methane	6.25	93	71	12.2438022	ppb	# 1
29) 2,4-Dichlorophenol	6.46	162	141	31.8428623	ppb	# 26
30) Benzoic Acid	6.26	105	1551	2316.5407064	ppb	81
32) Naphthalene	6.54	128	2204	140.7718261	ppb	76
33) 4-Chloroaniline	6.59	65	154	79.5987362	ppb	# 1
35) Caprolactam	6.93	113	564	418.6953013	ppb	# 1
36) 4-Chloro-3-methylphenol	7.09	107	56	12.0690849	ppb	# 13
37) 2-Methylnaphthalene	7.26	142	2011	186.6974608	ppb	# 56
38) 1-Methylnaphthalene	7.37	142	13926	1378.2806108	ppb	# 78
42) 2,4,6-Trichlorophenol	7.54	196	64	20.7613958	ppb	# 30
43) 2,4,5-Trichlorophenol	7.64	196	62	19.1266873	ppb	# 1
45) Biphenyl	7.76	154	540	42.0977178	ppb	# 40
46) 2-Chloronaphthalene	7.76	162	3916	383.3858769	ppb	# 51
47) 2-Nitroaniline	7.88	138	100	30.9870310	ppb	# 1
48) Acenaphthylene	8.36	152	1975	124.8620290	ppb	75
49) Dimethyl phthalate	7.96	163	1012	88.4184484	ppb	80
50) 2,6-Dinitrotoluene	8.15	165	722	277.6722438	ppb	# 1
51) 3-Nitroaniline	8.32	138	303	108.9197617	ppb	# 17
52) Acenaphthene	8.42	153	8418	806.5787387	ppb	85
53) 2,4-Dinitrophenol	8.44	184	102	10196.5415341	ppb	# 1

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\060116\0601 19.D Vial: 20
Acq On : 1 Jun 2016 5:38 pm Operator: 280
Sample : L838049-02 100x WG876258 15-0.5 Inst : BNAMS2
Misc : Soil ISTD 16D22768 Multiplr: 3.33
MS Integration Params: RTEINT.P
Quant Time: Jun 2 9:58 2016 Quant Results File: S802E24P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:26:43 2016
Response via : Initial Calibration
DataAcq Meth : BNA2D

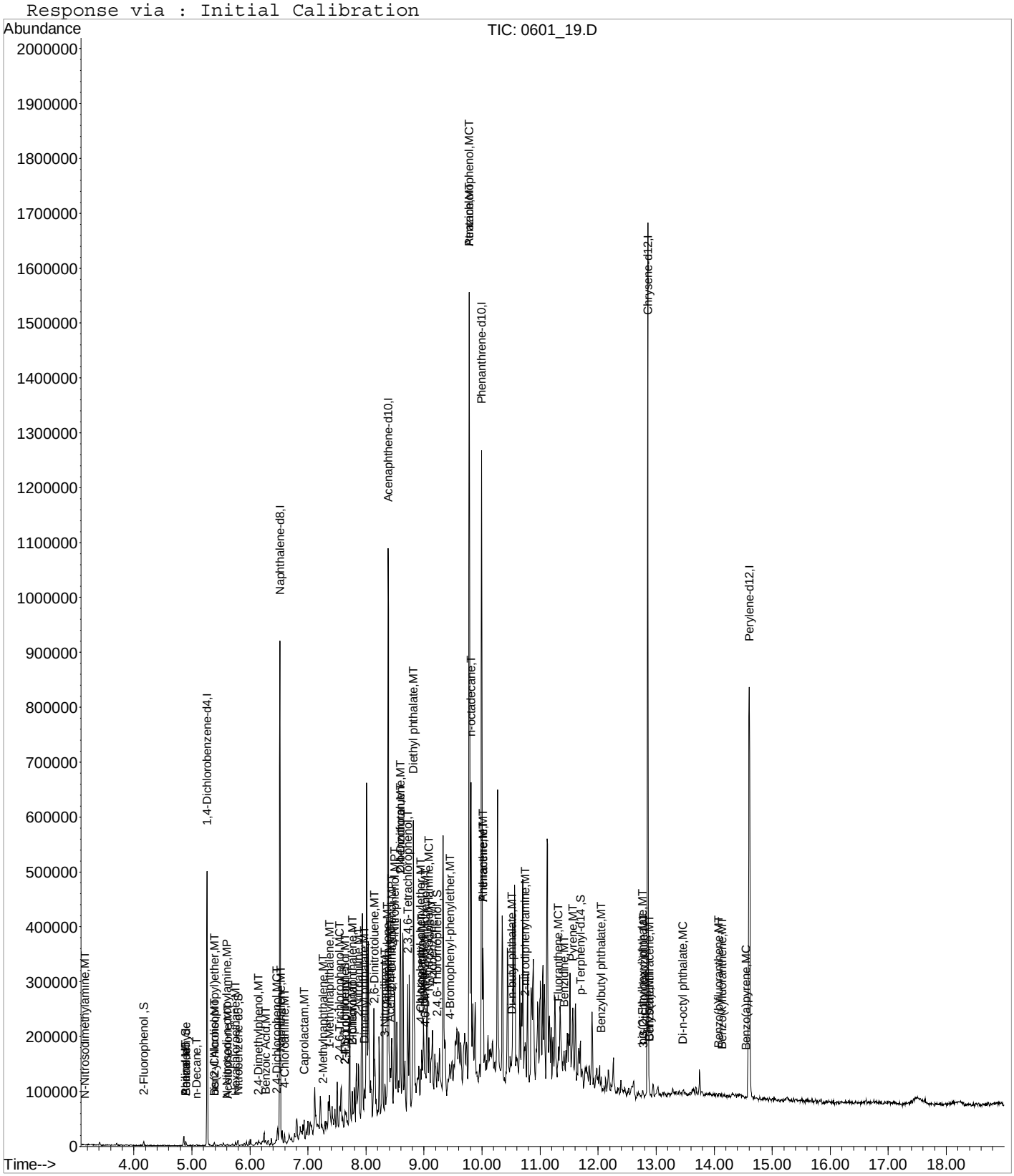
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
54)	Dibenzofuran	8.60	168	6827	463.7508593	ppb	#	1
55)	2,4-Dinitrotoluene	8.59	165	3872	1118.2648608	ppb	#	60
56)	2,3,4,6-Tetrachlorophenol	8.73	232	5364	2361.5746583	ppb		92
57)	4-Nitrophenol	8.49	139	6683	3389.2362941	ppb	#	28
58)	Fluorene	8.97	166	7879	654.3812563	ppb		95
59)	4-Chlorophenyl-phenylether	8.94	204	118	19.9279065	ppb	#	1
60)	Diethyl phthalate	8.82	149	852	71.6310538	ppb	#	1
61)	4-Nitroaniline	8.97	138	1193	425.8225871	ppb	#	46
62)	Azobenzene	9.14	77	2487	215.7169360	ppb	#	1
63)	Atrazine	9.78	200	32063	9629.0291842	ppb	#	32
65)	4,6-Dinitro-2-methylphenol	9.03	198	123	3914.9728404	ppb	#	1
66)	N-Nitrosodiphenylamine	9.09	169	14938	1563.1135943	ppb	#	38
68)	4-Bromophenyl-phenylether	9.45	248	57	16.4534621	ppb	#	1
70)	n-octadecane	9.81	55	23787	13588.8735544	ppb		100
71)	Pentachlorophenol	9.78	266	172574	83436.5058235	ppb		96
72)	Phenanthrene	10.02	178	82103	4688.1515810	ppb		97
73)	Anthracene	10.02	178	82103	4612.1758051	ppb		98
74)	Carbazole	10.22	167	125	7.7174028	ppb	#	1
75)	Di-n-butyl phthalate	10.51	149	1260	62.8389068	ppb		78
76)	2-nitrodiphenylamine	10.74	167	1264	1547.5889138	ppb	#	100
77)	Fluoranthene	11.31	202	7457	376.0750455	ppb		93
79)	Benzidine	11.42	184	1127	72.6771167	ppb	#	76
80)	Pyrene	11.56	202	17977	680.9473628	ppb		86
82)	Benzylbutyl phthalate	12.04	149	627	52.3564250	ppb		84
83)	3,3-Dichlorobenzidine	12.78	252	658	84.6901144	ppb		93
84)	Benzo(a)anthracene	12.89	228	7507	273.3316354	ppb		82
85)	Chrysene	12.89	228	7507	291.9648173	ppb		86
86)	bis(2-Ethylhexyl)phthalate	12.77	149	3679	215.7240685	ppb		91
87)	Di-n-octyl phthalate	13.45	149	3454	116.8856700	ppb		74
89)	Benzo(b)fluoranthene	14.07	252	1482	71.2482551	ppb	#	43
90)	Benzo(k)fluoranthene	14.14	252	297	15.8238655	ppb	#	23
91)	Benzo(a)pyrene	14.55	252	312	16.0225292	ppb	#	64

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\060116\0601 19.D Vial: 20
Acq On : 1 Jun 2016 5:38 pm Operator: 280
Sample : L838049-02 100x WG876258 15-0.5 Inst : BNAMS2
Misc : Soil ISTD 16D22768 Multiplr: 3.33
MS Integration Params: RTEINT.P
Quant Time: Jun 2 9:58 2016 Quant Results File: S802E24P.RES

Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:26:43 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\060116\0601 20.D Vial: 21
Acq On : 1 Jun 2016 6:03 pm Operator: 280
Sample : L838049-05 20x WG876258 15-0.5 Inst : BNAMS2
Misc : Soil ISTD 16D22768 Multiplr: 0.67
MS Integration Params: RTEINT.P
Quant Time: Jun 2 9:58 2016 Quant Results File: S802E24P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:26:43 2016
Response via : Initial Calibration
DataAcq Meth : BNA2D

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.26	152	65805	8000.00	ppb	0.00
22) Naphthalene-d8	6.52	136	357284	8000.00	ppb	0.00
40) Acenaphthene-d10	8.38	164	211201	8000.00	ppb	-0.01
64) Phenanthrene-d10	9.99	188	398059	8000.00	ppb	0.00
78) Chrysene-d12	12.86	240	570559	8000.00	ppb	-0.01
88) Perylene-d12	14.60	264	421782	8000.00	ppb	-0.01
System Monitoring Compounds						
4) 2-Fluorophenol	4.17	112	6659	324.5537236	ppb	0.00
Spiked Amount 666.000	Range 21 - 116		Recovery = 48.73%			
7) Phenol-d5	4.90	99	8215	298.2924342	ppb	0.00
Spiked Amount 666.000	Range 26 - 121		Recovery = 44.79%			
23) Nitrobenzene-d5	5.79	82	4585	169.5896127	ppb	0.00
Spiked Amount 333.000	Range 22 - 129		Recovery = 50.93%			
44) 2-Fluorobiphenyl	7.64	172	10581	191.4945024	ppb	0.00
Spiked Amount 333.000	Range 35 - 129		Recovery = 57.51%			
67) 2,4,6-Tribromophenol	9.23	330	2728	335.2080134	ppb	-0.01
Spiked Amount 666.000	Range 22 - 142		Recovery = 50.33%			
81) p-Terphenyl-d14	11.69	244	17789	174.2183248	ppb	0.00
Spiked Amount 333.000	Range 22 - 128		Recovery = 52.32%			
Target Compounds						Qvalue
3) N-Nitrosodimethylamine	3.13	42	138	9.1135512	ppb	# 27
5) Aniline	4.89	66	247	18.2815951	ppb	# 1
9) Benzaldehyde	4.85	105	67	4.8128454	ppb	# 1
11) n-Decane	5.08	41	263	19.9483364	ppb	# 69
14) Benzyl Alcohol	5.39	79	235	10.7058886	ppb	# 1
16) bis(2-Chloroisopropyl)ethe	5.39	121	117	16.3184652	ppb	# 1
19) N-Nitrosodi-n-propylamine	5.62	70	84	4.7962639	ppb	# 45
30) Benzoic Acid	6.22	105	180	373.3720147	ppb	# 45
32) Naphthalene	6.54	128	1483	19.6803777	ppb	77
33) 4-Chloroaniline	6.52	65	1250	134.2405087	ppb	# 1
35) Caprolactam	6.94	113	584	90.0782530	ppb	# 1
36) 4-Chloro-3-methylphenol	7.10	107	135	6.0451657	ppb	# 37
37) 2-Methylnaphthalene	7.26	142	4154	80.1273828	ppb	88
38) 1-Methylnaphthalene	7.37	142	11501	236.5020905	ppb	# 86
42) 2,4,6-Trichlorophenol	7.48	196	114	7.8569346	ppb	# 1
43) 2,4,5-Trichlorophenol	7.60	196	462	30.2804105	ppb	# 18
45) Biphenyl	7.72	154	1024	16.9604146	ppb	94
46) 2-Chloronaphthalene	7.76	162	2025	42.1201752	ppb	# 60
47) 2-Nitroaniline	7.87	138	731	48.1248134	ppb	# 1
48) Acenaphthylene	8.28	152	971	13.0423014	ppb	63
49) Dimethyl phthalate	8.09	163	686	12.7338053	ppb	81
50) 2,6-Dinitrotoluene	8.14	165	499	40.7725179	ppb	# 1
51) 3-Nitroaniline	8.39	138	802	61.2505702	ppb	92
52) Acenaphthene	8.42	153	6095	124.0747110	ppb	# 56
53) 2,4-Dinitrophenol	8.44	184	84	2037.6483852	ppb	# 1
54) Dibenzofuran	8.60	168	5189	74.8876511	ppb	# 1
55) 2,4-Dinitrotoluene	8.59	165	2783	170.7631864	ppb	# 58
56) 2,3,4,6-Tetrachlorophenol	8.73	232	6624	619.5907827	ppb	95
57) 4-Nitrophenol	8.49	139	6376	686.9899909	ppb	# 24
58) Fluorene	8.97	166	5885	103.8431687	ppb	96
59) 4-Chlorophenyl-phenylether	8.95	204	218	7.8218211	ppb	# 1
60) Diethyl phthalate	8.82	149	3166	56.5515314	ppb	# 13
61) 4-Nitroaniline	9.00	138	874	66.2783056	ppb	# 1

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\060116\0601 20.D Vial: 21
Acq On : 1 Jun 2016 6:03 pm Operator: 280
Sample : L838049-05 20x WG876258 15-0.5 Inst : BNAMS2
Misc : Soil ISTD 16D22768 Multiplr: 0.67
MS Integration Params: RTEINT.P
Quant Time: Jun 2 9:58 2016 Quant Results File: S802E24P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:26:43 2016
Response via : Initial Calibration
DataAcq Meth : BNA2D

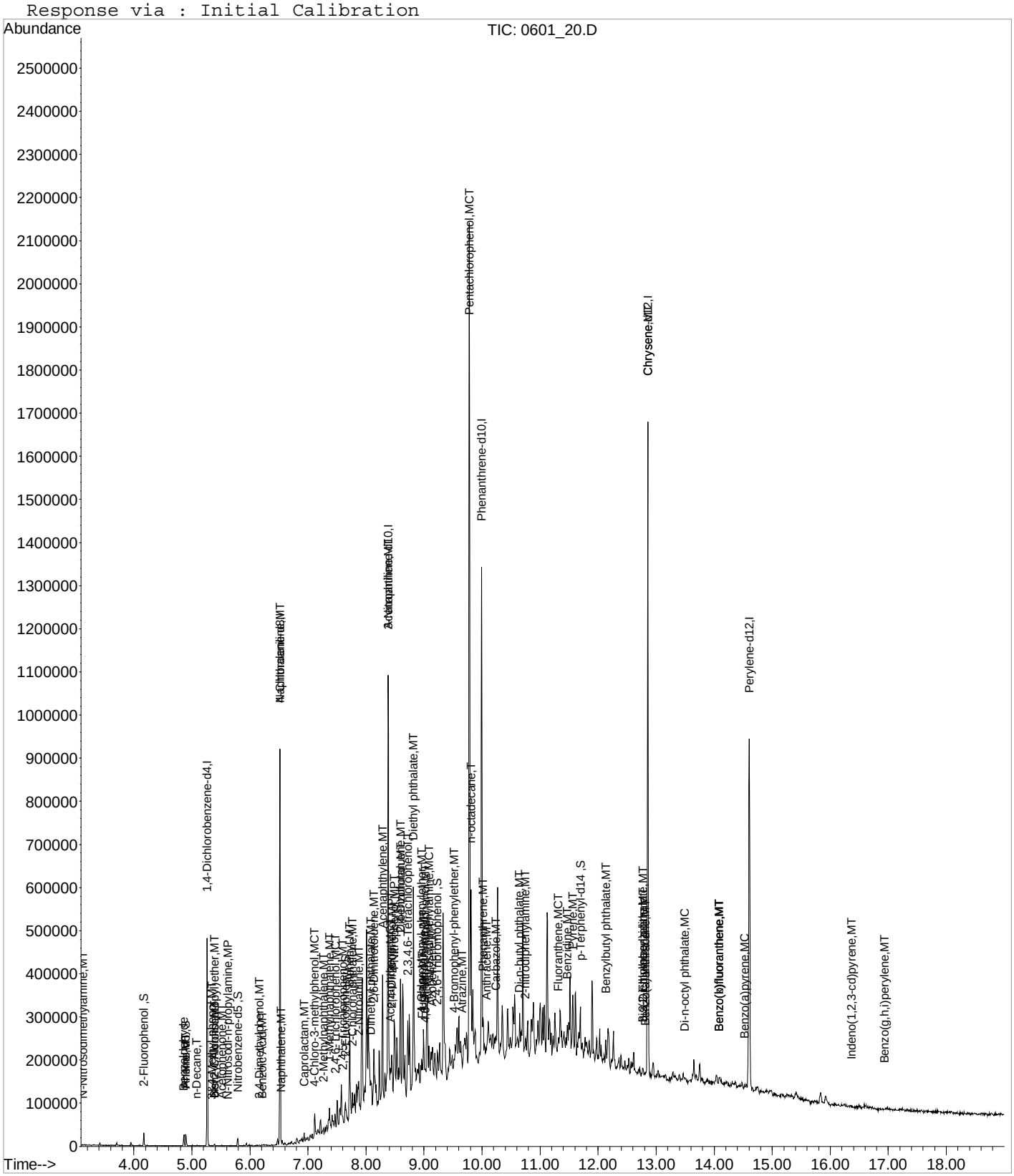
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
62)	Azobenzene	9.13	77	1399	25.7808888	ppb	#	1
63)	Atrazine	9.65	200	1690	107.8292952	ppb	#	1
65)	4,6-Dinitro-2-methylphenol	9.03	198	106	781.6404420	ppb	#	74
66)	N-Nitrosodiphenylamine	9.08	169	11932	258.7365690	ppb	#	33
68)	4-Bromophenyl-phenylether	9.51	248	248	14.8347628	ppb	#	1
70)	n-octadecane	9.81	55	19233	2276.8651077	ppb	#	95
71)	Pentachlorophenol	9.78	266	227285	22499.1158067	ppb		96
72)	Phenanthrene	10.02	178	33225	393.1462103	ppb		98
73)	Anthracene	10.08	178	4040	47.0299673	ppb		80
74)	Carbazole	10.24	167	1009	12.9091844	ppb	#	1
75)	Di-n-butyl phthalate	10.63	149	1992	20.5870394	ppb		72
76)	2-nitrodiphenylamine	10.73	167	1451	320.2550976	ppb	#	100
77)	Fluoranthene	11.31	202	5952	62.2042104	ppb		94
79)	Benzidine	11.46	184	957	13.0902098	ppb	#	1
80)	Pyrene	11.56	202	24388	195.9446476	ppb		92
82)	Benzylbutyl phthalate	12.14	149	1120	19.8372452	ppb	#	36
83)	3,3-Dichlorobenzidine	12.77	252	2067	56.4297592	ppb		78
84)	Benzo(a)anthracene	12.80	228	785	6.0625319	ppb		84
85)	Chrysene	12.86	228	8431	69.5511137	ppb		83
86)	bis(2-Ethylhexyl)phthalate	12.77	149	5354	66.5898560	ppb		77
87)	Di-n-octyl phthalate	13.49	149	970	6.9626019	ppb		57
89)	Benzo(b)fluoranthene	14.08	252	5536	56.6997509	ppb		77
90)	Benzo(k)fluoranthene	14.08	252	5536	62.8363942	ppb		77
91)	Benzo(a)pyrene	14.52	252	1069	11.6953500	ppb		80
92)	Indeno(1,2,3-cd)pyrene	16.37	276	595	5.7531886	ppb	#	43
94)	Benzo(g,h,i)perylene	16.93	276	511	5.9565549	ppb	#	23

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\060116\0601 20.D Vial: 21
Acq On : 1 Jun 2016 6:03 pm Operator: 280
Sample : L838049-05 20x WG876258 15-0.5 Inst : BNAMS2
Misc : Soil ISTD 16D22768 Multiplr: 0.67
MS Integration Params: RTEINT.P
Quant Time: Jun 2 9:58 2016 Quant Results File: S802E24P.RES

Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:26:43 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\060116\0601 21.D Vial: 22
Acq On : 1 Jun 2016 6:28 pm Operator: 280
Sample : L838049-03 50x WG876258 15-5 Inst : BNAMS2
Misc : Soil ISTD 16D22768 Multiplr: 1.65
MS Integration Params: RTEINT.P
Quant Time: Jun 2 9:58 2016 Quant Results File: S802E24P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:26:43 2016
Response via : Initial Calibration
DataAcq Meth : BNA2D

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.26	152	63513	8000.00	ppb	0.00
22) Naphthalene-d8	6.52	136	343652	8000.00	ppb	0.00
40) Acenaphthene-d10	8.38	164	204652	8000.00	ppb	-0.01
64) Phenanthrene-d10	9.99	188	390901	8000.00	ppb	0.00
78) Chrysene-d12	12.86	240	530678	8000.00	ppb	-0.01
88) Perylene-d12	14.60	264	404388	8000.00	ppb	-0.02
System Monitoring Compounds						
4) 2-Fluorophenol	4.17	112	3323	415.7324303	ppb	0.00
Spiked Amount 666.000	Range 21 - 116		Recovery = 62.42%			
7) Phenol-d5	4.89	99	4728	440.6747024	ppb	0.00
Spiked Amount 666.000	Range 26 - 121		Recovery = 66.17%			
23) Nitrobenzene-d5	5.78	82	2356	224.4603323	ppb	0.00
Spiked Amount 333.000	Range 22 - 129		Recovery = 67.41%			
44) 2-Fluorobiphenyl	7.64	172	5458	252.5531672	ppb	0.00
Spiked Amount 333.000	Range 35 - 129		Recovery = 75.84%			
67) 2,4,6-Tribromophenol	9.23	330	1199	371.6888991	ppb	-0.01
Spiked Amount 666.000	Range 22 - 142		Recovery = 55.81%			
81) p-Terphenyl-d14	11.69	244	9236	240.9380628	ppb	-0.01
Spiked Amount 333.000	Range 22 - 128		Recovery = 72.35%			
Target Compounds						Qvalue
2) Pyridine	3.20	79	68	6.5001788	ppb	# 30
3) N-Nitrosodimethylamine	3.20	42	261	44.2440670	ppb	# 1
5) Aniline	4.89	66	270	51.2963989	ppb	# 1
9) Benzaldehyde	4.91	105	54	9.9569619	ppb	# 1
11) n-Decane	5.09	41	81	15.7703719	ppb	# 27
14) Benzyl Alcohol	5.39	79	409	47.8282122	ppb	# 8
16) bis(2-Chloroisopropyl)ethe	5.66	121	61	21.8388248	ppb	# 20
18) Hexachloroethane	5.66	117	61	13.2207455	ppb	# 6
21) Acetophenone	5.28	105	61	4.9987302	ppb	# 9
24) Nitrobenzene	5.79	77	58	5.5917543	ppb	# 34
28) bis(2-Chlorethoxy)methane	6.43	93	59	5.4450579	ppb	# 34
30) Benzoic Acid	6.31	105	130	917.4085490	ppb	# 62
32) Naphthalene	6.54	128	1381	47.2052568	ppb	80
33) 4-Chloroaniline	6.59	65	58	16.0437534	ppb	# 1
35) Caprolactam	6.93	113	694	275.7217240	ppb	# 1
36) 4-Chloro-3-methylphenol	7.09	107	175	20.1844489	ppb	# 13
37) 2-Methylnaphthalene	7.26	142	807	40.0952021	ppb	# 81
38) 1-Methylnaphthalene	7.37	142	1086	57.5219517	ppb	# 50
42) 2,4,6-Trichlorophenol	7.54	196	454	80.0007083	ppb	# 1
43) 2,4,5-Trichlorophenol	7.59	196	390	65.3542871	ppb	# 33
45) Biphenyl	7.73	154	1180	49.9698685	ppb	# 60
46) 2-Chloronaphthalene	7.79	162	486	25.8458668	ppb	# 71
47) 2-Nitroaniline	7.89	138	317	53.3581343	ppb	# 1
48) Acenaphthylene	8.23	152	634	21.7727834	ppb	80
49) Dimethyl phthalate	8.05	163	573	27.1943326	ppb	# 22
50) 2,6-Dinitrotoluene	8.15	165	1098	229.3818326	ppb	# 28
51) 3-Nitroaniline	8.36	138	908	177.3010503	ppb	89
52) Acenaphthene	8.42	153	660	34.3513010	ppb	# 71
53) 2,4-Dinitrophenol	8.44	184	306	5127.5360915	ppb	# 66
54) Dibenzofuran	8.60	168	1528	56.3818841	ppb	# 1
55) 2,4-Dinitrotoluene	8.60	165	4790	751.4606590	ppb	# 52
56) 2,3,4,6-Tetrachlorophenol	8.73	232	5983	1430.8474024	ppb	84
57) 4-Nitrophenol	8.49	139	1990	548.2073698	ppb	# 23

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\060116\0601 21.D Vial: 22
Acq On : 1 Jun 2016 6:28 pm Operator: 280
Sample : L838049-03 50x WG876258 15-5 Inst : BNAMS2
Misc : Soil ISTD 16D22768 Multiplr: 1.65
MS Integration Params: RTEINT.P
Quant Time: Jun 2 9:58 2016 Quant Results File: S802E24P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:26:43 2016
Response via : Initial Calibration
DataAcq Meth : BNA2D

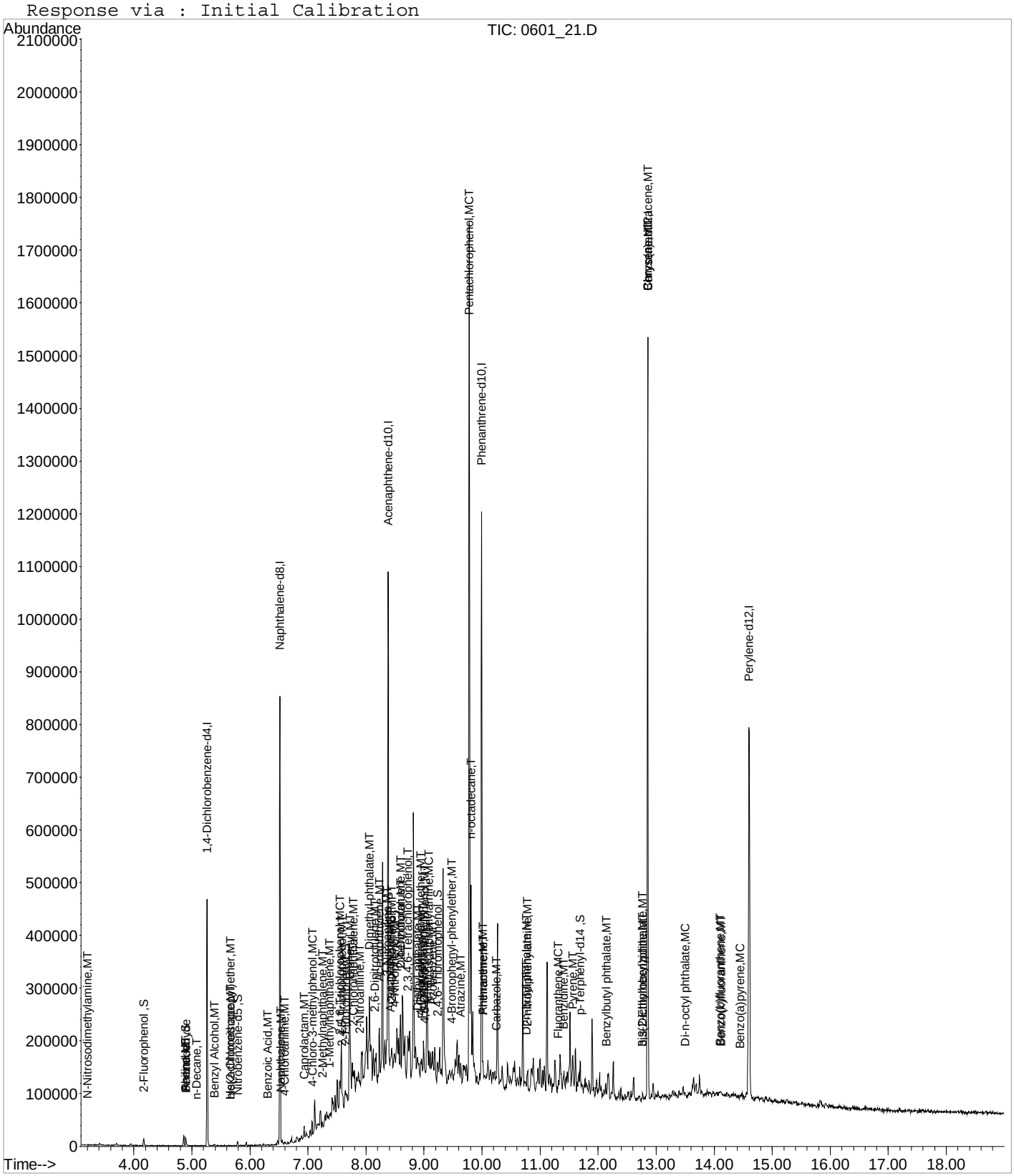
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
58)	Fluorene	8.97	166	1617	72.9509877	ppb	#	74
59)	4-Chlorophenyl-phenylether	8.94	204	559	51.2805747	ppb	#	56
60)	Diethyl phthalate	8.88	149	792	36.1699854	ppb		81
61)	4-Nitroaniline	9.00	138	595	115.3630215	ppb	#	1
62)	Azobenzene	9.15	77	499	23.5109625	ppb	#	1
63)	Atrazine	9.64	200	1512	246.6559209	ppb	#	37
65)	4,6-Dinitro-2-methylphenol	9.02	198	153	1949.6414165	ppb	#	49
66)	N-Nitrosodiphenylamine	9.09	169	11746	642.5766617	ppb	#	39
68)	4-Bromophenyl-phenylether	9.49	248	67	10.1110000	ppb	#	1
70)	n-octadecane	9.81	55	15393	4597.3113887	ppb		92
71)	Pentachlorophenol	9.78	266	186598	46904.5161850	ppb		97
72)	Phenanthrene	10.02	178	7641	228.1023108	ppb		90
73)	Anthracene	10.02	178	7994	234.7728312	ppb		84
74)	Carbazole	10.24	167	745	24.0466340	ppb	#	18
75)	Di-n-butyl phthalate	10.76	149	806	21.0150285	ppb		69
76)	2-nitrodiphenylamine	10.77	167	264	657.3375633	ppb	#	100
77)	Fluoranthene	11.30	202	1939	51.1240262	ppb		84
79)	Benzidine	11.40	184	937	34.1392087	ppb	#	1
80)	Pyrene	11.56	202	10412	222.8284142	ppb		83
82)	Benzylbutyl phthalate	12.14	149	2642	124.6451381	ppb	#	45
83)	3,3-Dichlorobenzidine	12.77	252	636	46.2491790	ppb	#	44
84)	Benzo(a)anthracene	12.86	228	5476	112.6489141	ppb	#	11
85)	Chrysene	12.86	228	5476	120.3282583	ppb	#	78
86)	bis(2-Ethylhexyl)phthalate	12.77	149	3143	104.1245846	ppb		78
87)	Di-n-octyl phthalate	13.50	149	3570	68.2570068	ppb		74
89)	Benzo(b)fluoranthene	14.10	252	1400	37.0520808	ppb	#	64
90)	Benzo(k)fluoranthene	14.13	252	251	7.3618742	ppb		86
91)	Benzo(a)pyrene	14.44	252	883	24.9629392	ppb		83

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\060116\0601 21.D Vial: 22
Acq On : 1 Jun 2016 6:28 pm Operator: 280
Sample : L838049-03 50x WG876258 15-5 Inst : BNAMS2
Misc : Soil ISTD 16D22768 Multiplr: 1.65
MS Integration Params: RTEINT.P
Quant Time: Jun 2 9:58 2016 Quant Results File: S802E24P.RES

Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:26:43 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\060116\0601 22.D Vial: 23
Acq On : 1 Jun 2016 6:53 pm Operator: 280
Sample : L838049-06 50x WG876258 15-5 Inst : BNAMS2
Misc : Soil ISTD 16D22768 Multiplr: 1.65
MS Integration Params: RTEINT.P
Quant Time: Jun 2 9:58 2016 Quant Results File: S802E24P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:26:43 2016
Response via : Initial Calibration
DataAcq Meth : BNA2D

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.26	152	67247	8000.00	ppb	0.00
22) Naphthalene-d8	6.52	136	359016	8000.00	ppb	0.00
40) Acenaphthene-d10	8.38	164	219170	8000.00	ppb	-0.01
64) Phenanthrene-d10	9.99	188	412603	8000.00	ppb	0.00
78) Chrysene-d12	12.86	240	543722	8000.00	ppb	-0.01
88) Perylene-d12	14.60	264	422796	8000.00	ppb	-0.02
System Monitoring Compounds						
4) 2-Fluorophenol	4.17	112	3843	454.0918002	ppb	0.00
Spiked Amount 666.000	Range 21 - 116		Recovery = 68.18%			
7) Phenol-d5	4.90	99	4941	434.9558921	ppb	0.00
Spiked Amount 666.000	Range 26 - 121		Recovery = 65.31%			
23) Nitrobenzene-d5	5.79	82	2344	213.7602726	ppb	0.00
Spiked Amount 333.000	Range 22 - 129		Recovery = 64.19%			
44) 2-Fluorobiphenyl	7.64	172	5896	254.7485076	ppb	0.00
Spiked Amount 333.000	Range 35 - 129		Recovery = 76.50%			
67) 2,4,6-Tribromophenol	9.23	330	1490	437.6037913	ppb	-0.01
Spiked Amount 666.000	Range 22 - 142		Recovery = 65.71%			
81) p-Terphenyl-d14	11.69	244	9509	242.1087666	ppb	0.00
Spiked Amount 333.000	Range 22 - 128		Recovery = 72.71%			
Target Compounds						Qvalue
2) Pyridine	3.19	79	63	5.6878306	ppb	# 46
3) N-Nitrosodimethylamine	3.12	42	243	38.9054569	ppb	# 24
5) Aniline	4.89	66	247	44.3210233	ppb	# 1
8) Phenol	5.13	94	54	4.7028669	ppb	# 41
9) Benzaldehyde	4.62	105	61	10.6231334	ppb	# 5
11) n-Decane	5.08	41	151	27.7666557	ppb	# 55
14) Benzyl Alcohol	5.39	79	414	45.7247030	ppb	# 22
19) N-Nitrosodi-n-propylamine	5.65	70	73	10.1051401	ppb	# 70
21) Acetophenone	6.31	105	197	15.2470493	ppb	# 15
24) Nitrobenzene	5.68	77	64	5.9061590	ppb	# 34
28) bis(2-Chlorethoxy)methane	6.25	93	57	5.0353587	ppb	# 30
30) Benzoic Acid	6.31	105	197	927.7451724	ppb	# 52
32) Naphthalene	6.54	128	1301	42.5675891	ppb	86
33) 4-Chloroaniline	6.59	65	58	15.3571649	ppb	# 1
35) Caprolactam	6.94	113	690	262.4011159	ppb	# 1
36) 4-Chloro-3-methylphenol	7.08	107	109	12.0340114	ppb	# 1
37) 2-Methylnaphthalene	7.26	142	412	19.5939123	ppb	# 63
38) 1-Methylnaphthalene	7.37	142	898	45.5286944	ppb	# 1
42) 2,4,6-Trichlorophenol	7.57	196	114	18.7576193	ppb	# 1
43) 2,4,5-Trichlorophenol	7.72	196	56	8.7625879	ppb	# 1
45) Biphenyl	7.72	154	393	15.5400938	ppb	# 78
47) 2-Nitroaniline	7.88	138	290	45.5799933	ppb	# 1
48) Acenaphthylene	8.28	152	155	4.9703993	ppb	70
49) Dimethyl phthalate	8.06	163	467	20.6954822	ppb	# 7
50) 2,6-Dinitrotoluene	8.13	165	190	37.0633921	ppb	# 15
51) 3-Nitroaniline	8.34	138	868	158.2632466	ppb	# 20
52) Acenaphthene	8.42	153	1735	84.3205866	ppb	# 58
53) 2,4-Dinitrophenol	8.40	184	69	5042.2373032	ppb	# 24
54) Dibenzofuran	8.60	168	499	17.1929999	ppb	# 1
55) 2,4-Dinitrotoluene	8.55	165	55	8.0569063	ppb	# 36
56) 2,3,4,6-Tetrachlorophenol	8.73	232	6543	1461.1207974	ppb	97
57) 4-Nitrophenol	8.50	139	1714	440.8973581	ppb	# 11
58) Fluorene	8.94	166	1641	69.1296922	ppb	# 48

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\060116\0601 22.D Vial: 23
Acq On : 1 Jun 2016 6:53 pm Operator: 280
Sample : L838049-06 50x WG876258 15-5 Inst : BNAMS2
Misc : Soil ISTD 16D22768 Multiplr: 1.65
MS Integration Params: RTEINT.P
Quant Time: Jun 2 9:58 2016 Quant Results File: S802E24P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:26:43 2016
Response via : Initial Calibration
DataAcq Meth : BNA2D

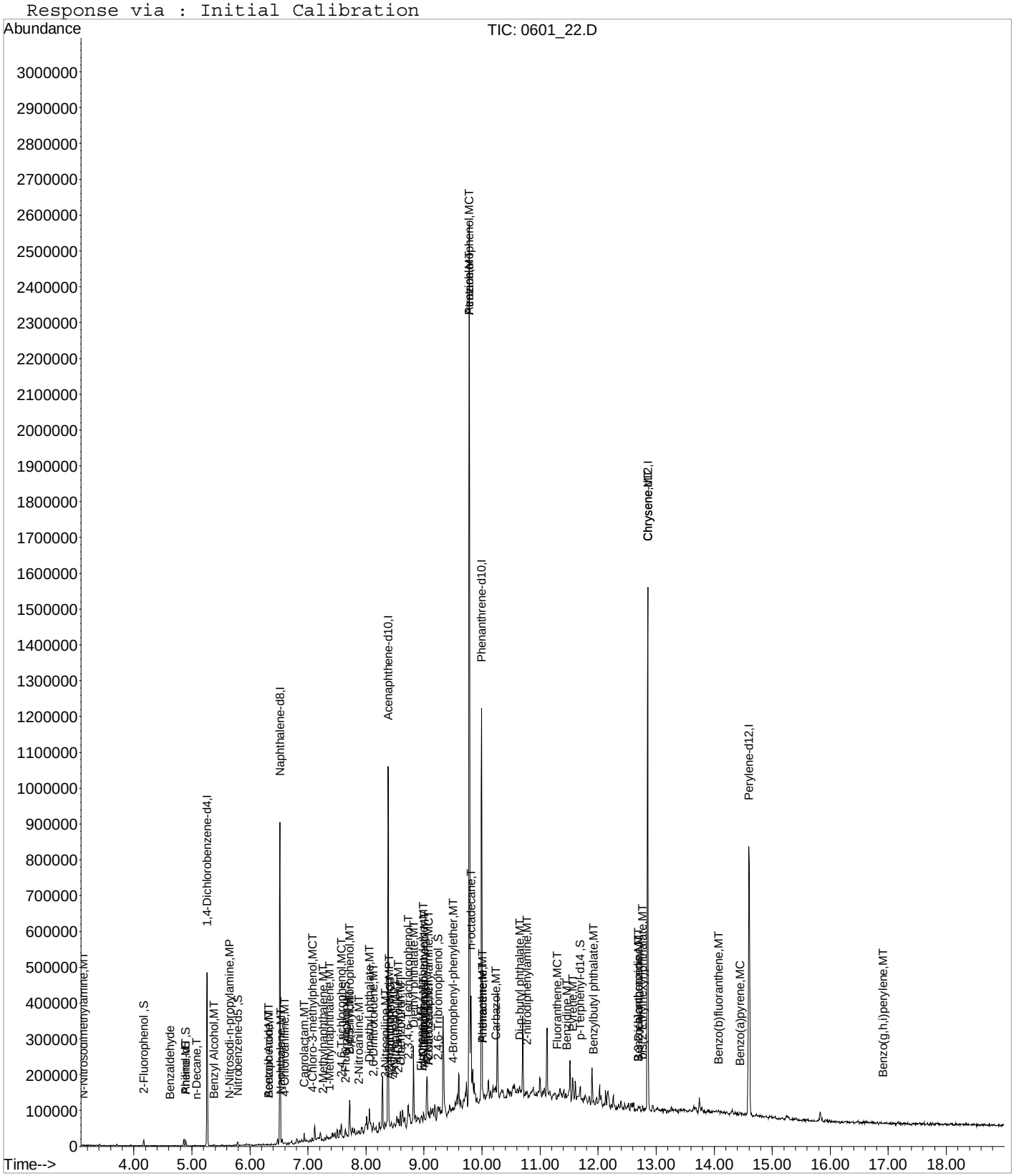
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
59)	4-Chlorophenyl-phenylether	8.99	204	252	21.5862152	ppb	#	1
60)	Diethyl phthalate	8.83	149	177	7.5479898	ppb	#	1
61)	4-Nitroaniline	8.99	138	992	179.5958157	ppb	#	1
62)	Azobenzene	9.09	77	797	35.0641302	ppb	#	1
63)	Atrazine	9.78	200	53814	8197.2827192	ppb	#	37
65)	4,6-Dinitro-2-methylphenol	9.01	198	54	1922.2691210	ppb	#	1
66)	N-Nitrosodiphenylamine	9.09	169	6610	342.5869464	ppb	#	35
68)	4-Bromophenyl-phenylether	9.50	248	289	41.3191662	ppb	#	20
70)	n-octadecane	9.81	55	33658	9523.6484886	ppb	#	67
71)	Pentachlorophenol	9.78	266	281141	66160.3967528	ppb		97
72)	Phenanthrene	10.02	178	8165	230.9245332	ppb		86
73)	Anthracene	10.02	178	8165	227.1821904	ppb		96
74)	Carbazole	10.23	167	2314	70.7612955	ppb	#	34
75)	Di-n-butyl phthalate	10.64	149	526	12.9931690	ppb		78
76)	2-nitrodiphenylamine	10.78	167	309	660.7074596	ppb	#	100
77)	Fluoranthene	11.30	202	2927	73.1146428	ppb		90
79)	Benzidine	11.46	184	1454	51.7049883	ppb	#	20
80)	Pyrene	11.56	202	20547	429.1795391	ppb		97
82)	Benzylbutyl phthalate	11.92	149	3957	182.2060352	ppb		87
83)	3,3-Dichlorobenzidine	12.70	252	6154	436.7758142	ppb	#	35
84)	Benzo(a)anthracene	12.70	228	1663	33.3895063	ppb		88
85)	Chrysene	12.86	228	9328	200.0538467	ppb		96
86)	bis(2-Ethylhexyl)phthalate	12.77	149	3468	112.1352531	ppb		92
87)	Di-n-octyl phthalate	13.45	149	288	5.3743468	ppb		74
89)	Benzo(b)fluoranthene	14.07	252	2840	71.8903000	ppb		81
90)	Benzo(k)fluoranthene	14.14	252	214	6.0033800	ppb	#	62
91)	Benzo(a)pyrene	14.44	252	3358	90.7994247	ppb		85
92)	Indeno(1,2,3-cd)pyrene	16.40	276	212	5.0663407	ppb	#	1
94)	Benzo(g,h,i)perylene	16.92	276	774	22.2988309	ppb	#	57

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\060116\0601 22.D Vial: 23
Acq On : 1 Jun 2016 6:53 pm Operator: 280
Sample : L838049-06 50x WG876258 15-5 Inst : BNAMS2
Misc : Soil ISTD 16D22768 Multiplr: 1.65
MS Integration Params: RTEINT.P
Quant Time: Jun 2 9:58 2016 Quant Results File: S802E24P.RES

Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:26:43 2016
Response via : Initial Calibration



Calibration

Instrument: BNAMS11
Method: S811E27P

Initial Calibration Run Log

File ID	Level ID	Date Analyzed
0425C_04.D	500	4/25/2016 3:59:00 PM
0425C_05.D	1000	4/25/2016 4:22:00 PM
0425C_06.D	4000	4/25/2016 4:45:00 PM
0527_03.D	10000	5/27/2016 7:06:00 AM
0425C_07.D	20000	4/25/2016 5:09:00 PM
0425C_08.D	30000	4/25/2016 5:32:00 PM
0425C_09.D	40000	4/25/2016 5:55:00 PM
0425C_10.D	50000	4/25/2016 6:19:00 PM
0425C_12.D	1K1	4/25/2016 7:05:00 PM
0425C_13.D	4K1	4/25/2016 7:29:00 PM
0524A_04.D	10K1	5/24/2016 11:09:00 AM
0425C_14.D	20K1	4/25/2016 7:52:00 PM
0425C_15.D	30K1	4/25/2016 8:16:00 PM
0425C_16.D	40K1	4/25/2016 8:39:00 PM
0425C_17.D	50K1	4/25/2016 9:02:00 PM

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

Injection Log

Instrument ID : BNAMS11
Computer Name : SVCOMPAC
Released By : Nic Rasnake
Date Released : 4/26/2016 10:59:13 AM
Run ID : 042516C
Signature : _____

#	File ID	Sample ID	Method	WG	Product	Matrix	Account #	State	Dil.	Mult.	Injected	Misc.
1	0425C_01	INSTBLK	S811C24P						1	1	04/25/16 1249	"BLANK"
2	0425C_02	TUNE 50 PPM 16D04430								1	04/25/16 1504	
3	0425C_03	MSTD SVMS 10K PPB 16D25863	S811D25P						1	1	04/25/16 1535	"8270 Primary Calibration ISTD 16D22768"
4	0425C_03 mrl	MRL SVMS 10K PPB 16D25863	S811D25P						1	1	04/25/16 1535	"8270 Primary Calibration ISTD 16D22768"
5	0425C_04	STD SVMS 500 PPB 16D25863	S811D25P						1	1	04/25/16 1559	"8270 Primary Calibration ISTD 16D22768"
6	0425C_05	STD SVMS 1K PPB 16D25863	S811D25P						1	1	04/25/16 1622	"8270 Primary Calibration ISTD 16D22768"
7	0425C_05 mrl	MRL SVMS 1K PPB 16D25863	S811D25P						1	1	04/25/16 1622	"8270 Primary Calibration ISTD 16D22768"
8	0425C_06	STD SVMS 4K PPB 16D25863	S811D25P						1	1	04/25/16 1645	"8270 Primary Calibration ISTD 16D22768"
9	0425C_07	STD SVMS 20K PPB 16D25863	S811D25P						1	1	04/25/16 1709	"8270 Primary Calibration ISTD 16D22768"
10	0425C_08	STD SVMS 30K PPB 16D25863	S811D25P						1	1	04/25/16 1732	"8270 Primary Calibration ISTD 16D22768"
11	0425C_09	STD SVMS 40K PPB 16D25863	S811D25P						1	1	04/25/16 1755	"8270 Primary Calibration ISTD 16D22768"
12	0425C_10	STD SVMS 50K PPB 16D25863	S811D25P						1	1	04/25/16 1819	"8270 Primary Calibration ISTD 16D22768"
13	0425C_11	MSTD TCL 10K1 PPB 16D25867	S811D25P						1	1	04/25/16 1842	"8270 TCL Calibration 16D22768"
14	0425C_11 mrl	MRL TCL 10K1 PPB 16D25867	S811D25P						1	1	04/25/16 1842	"8270 TCL Calibration 16D22768"

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

Injection Log

Instrument ID : BNAMS11
Computer Name : SVCOMPAC
Released By : Nic Rasnake
Date Released : 4/26/2016 10:59:13 AM
Run ID : 042516C
Signature : _____

#	File ID	Sample ID	Method	WG	Product	Matrix	Account #	State	Dil.	Mult.	Injected	Misc.
15	0425C_12	STD TCL 1K1 PPB 16D25867	S811D25P						1	1	04/25/16 1905	"8270 TCL Calibration 16D22768"
16	0425C_13	STD TCL 4K1 PPB 16D25867	S811D25P						1	1	04/25/16 1929	"8270 TCL Calibration 16D22768"
17	0425C_14	STD TCL 20K1 PPB 16D25867	S811D25P						1	1	04/25/16 1952	"8270 TCL Calibration 16D22768"
18	0425C_15	STD TCL 30K1 PPB 16D25867	S811D25P						1	1	04/25/16 2016	"8270 TCL Calibration 16D22768"
19	0425C_16	STD TCL 40K1 PPB 16D25867	S811D25P						1	1	04/25/16 2039	"8270 TCL Calibration 16D22768"
20	0425C_17	STD TCL 50K1 PPB 16D25867	S811D25P						1	1	04/25/16 2102	"8270 TCL Calibration 16D22768"
21	0425C_18	SSCV SVMS 10K PPB 16A25209	S811D25P						1	1	04/25/16 2126	"8270 SSCV 16D22768"

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516C\0425C 02.D Vial: 1
Acq On : 25 Apr 2016 3:04 pm Operator: 280
Sample : TUNE 50 PPM 16D04430 Inst : BNAMS11
Misc : DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 25 15:33 2016 Quant Results File: TUNEC.RES

Quant Method : C:\MSDCHEM\1\METHODS\TUNEC.M (RTE Integrator)
Title : 8270 BNA
Last Update : Mon Sep 15 15:56:23 2014
Response via : Initial Calibration
DataAcq Meth : BNA11C

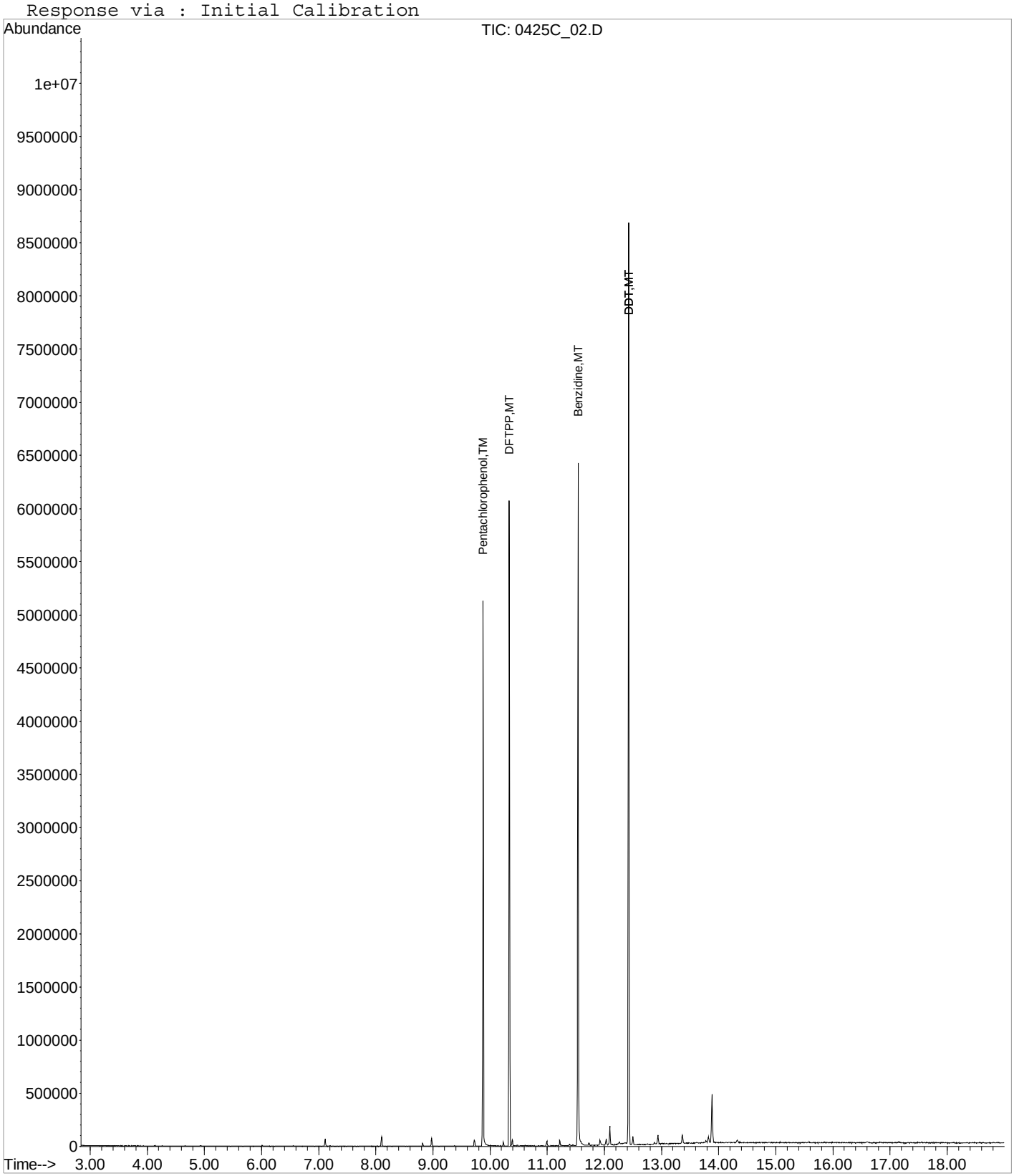
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
Target Compounds						Qvalue
1) Pentachlorophenol	9.88	264	349993	78.3160811	ug/mL	100
2) DFTPP	10.34	198	587500	79.3983296	ug/mL	100
3) Benzidine	11.54	184	2426570	65.6218495	ug/mL	100
4) DDT	12.42	TIC	8611099	438.8630667	ug/ml	100
5) DDT	12.43	235	1672759	124.3112107	ug/mL	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516C\0425C 02.D Vial: 1
Acq On : 25 Apr 2016 3:04 pm Operator: 280
Sample : TUNE 50 PPM 16D04430 Inst : BNAMS11
Misc : DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 25 15:33 2016 Quant Results File: TUNEC.RES

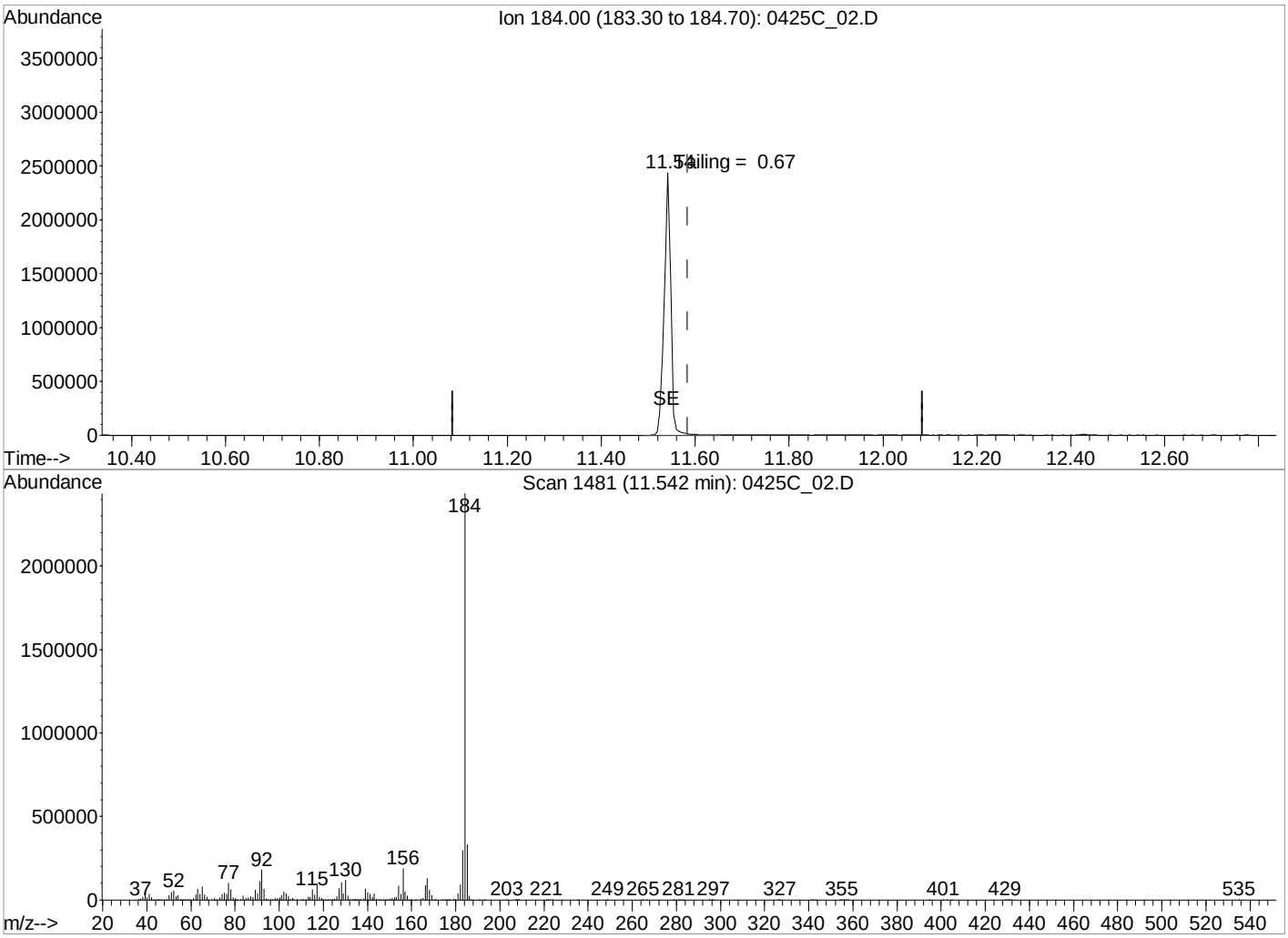
Method : C:\MSDCHEM\1\METHODS\TUNEC.M (RTE Integrator)
Title : 8270 BNA
Last Update : Mon Sep 15 15:56:23 2014
Response via : Initial Calibration



Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\042516C\0425C 02.D Vial: 1
Acq On : 25 Apr 2016 3:04 pm Operator: 280
Sample : TUNE 50 PPM 16D04430 Inst : BNAMS11
Misc : DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 25 15:33 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\TUNEC.M (RTE Integrator)
Title : 8270 BNA
Last Update : Mon Sep 15 15:56:23 2014
Response via : Single Level Calibration



TIC: 0425C_02.D

(3) Benzidine (MT)

11.54min (-0.041) 65.6218495 ug/mL

Qvalue = 100

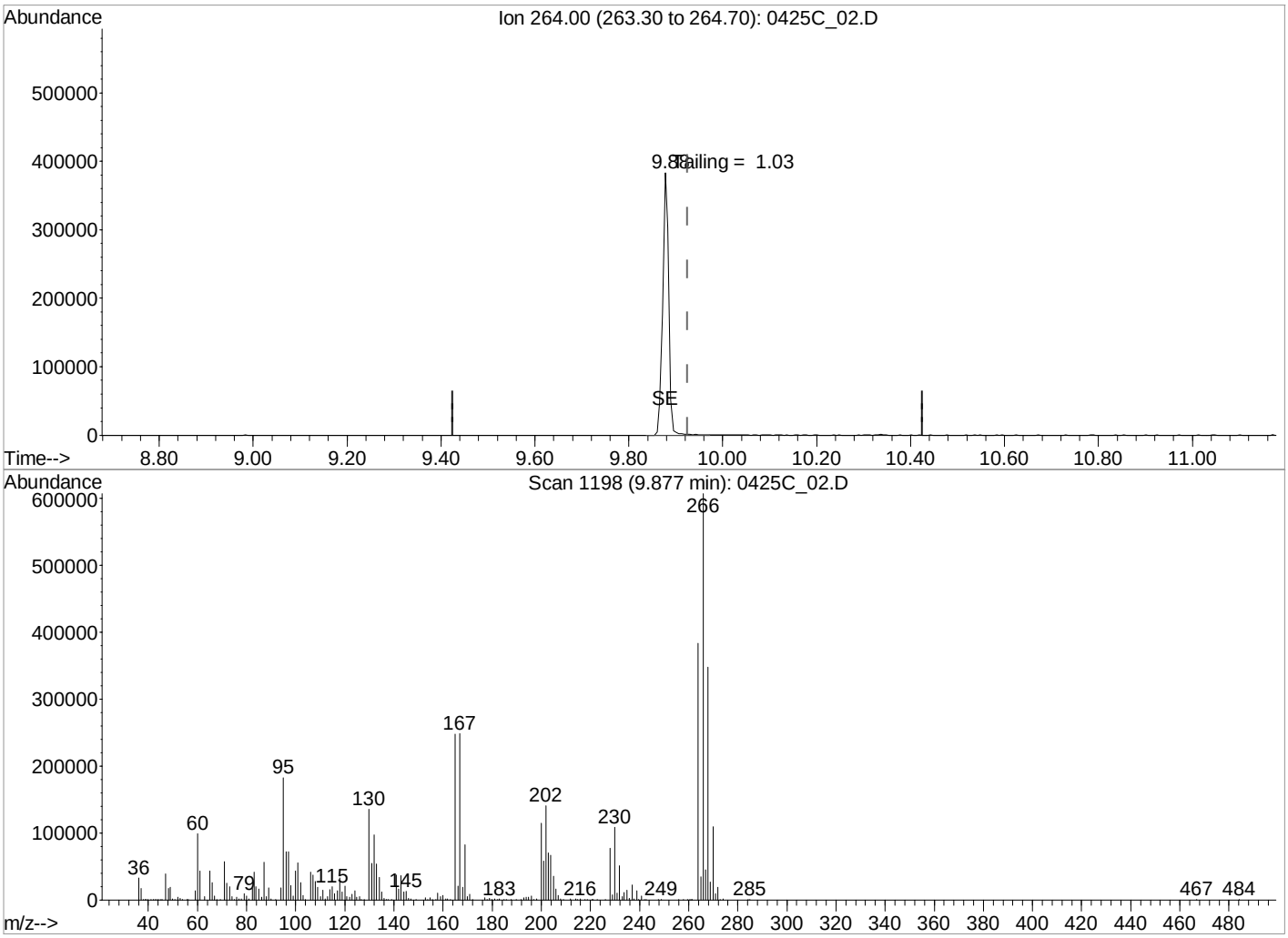
response 2426570

Ion	Exp%	Act%
184.00	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\042516C\0425C 02.D Vial: 1
Acq On : 25 Apr 2016 3:04 pm Operator: 280
Sample : TUNE 50 PPM 16D04430 Inst : BNAMS11
Misc : DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 25 15:33 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\TUNEC.M (RTE Integrator)
Title : 8270 BNA
Last Update : Mon Sep 15 15:56:23 2014
Response via : Single Level Calibration



TIC: 0425C_02.D

(1) Pentachlorophenol (TM)

9.88min (-0.047) 78.3160811 ug/mL

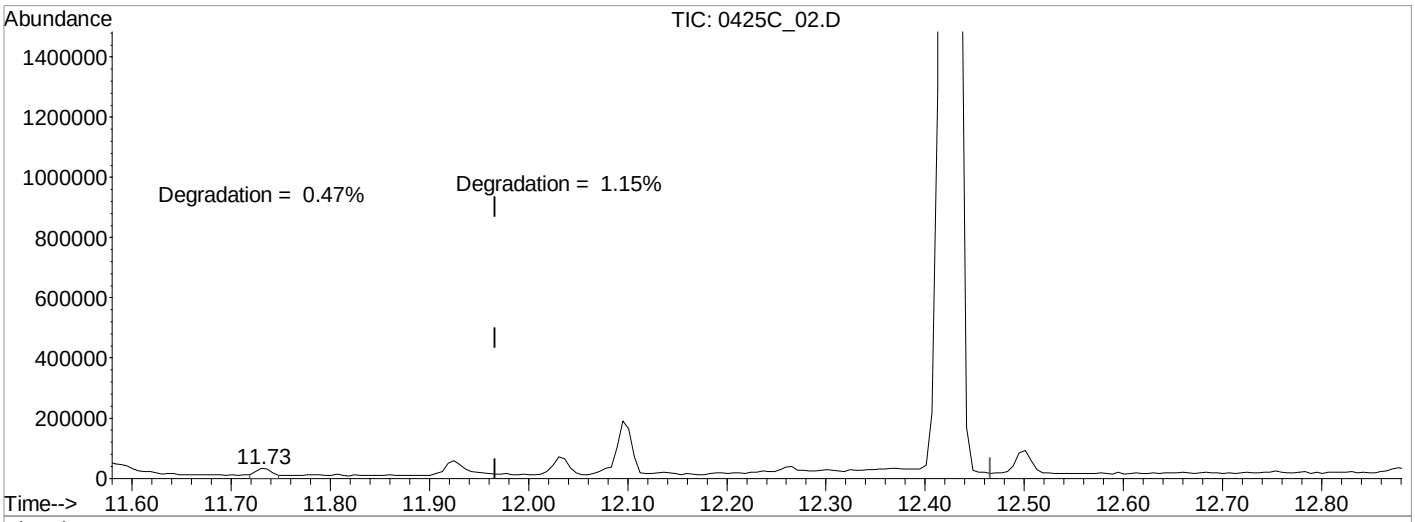
Qvalue = 100

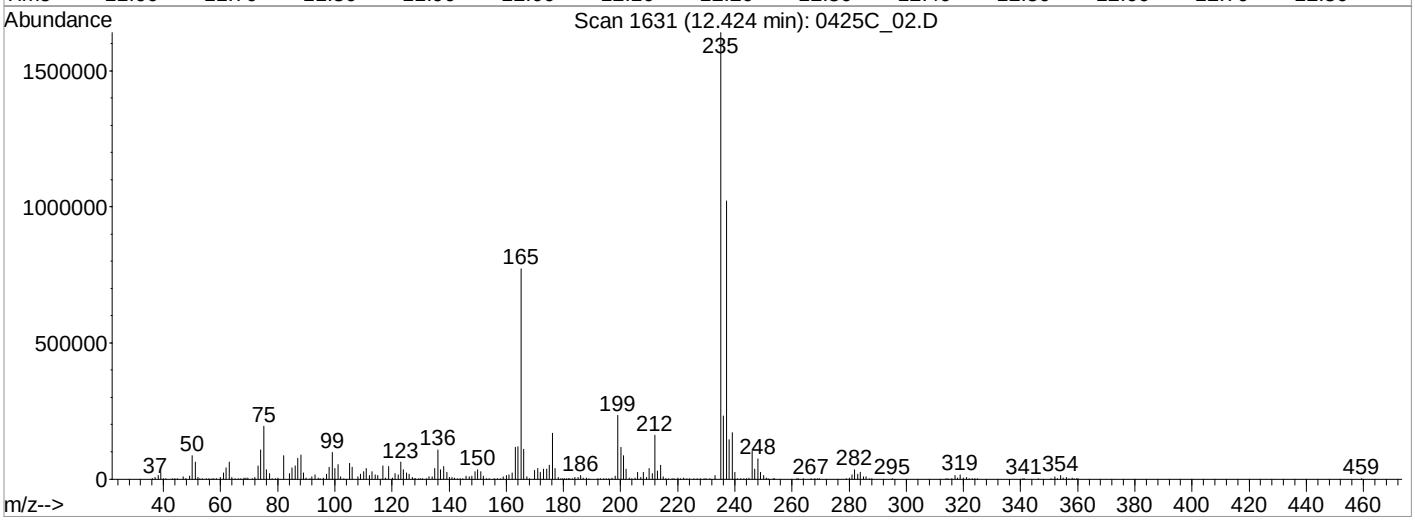
response 349993

Ion	Exp%	Act%
264.00	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Data File : C:\MSDCHEM\1\DATA\042516C\0425C 02.D Vial: 1
Acq On : 25 Apr 2016 3:04 pm Operator: 280
Sample : TUNE 50 PPM 16D04430 Inst : BNAMS11
Misc : DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 25 15:33 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\TUNEC.M (RTE Integrator)
Title : 8270 BNA
Last Update : Mon Sep 15 15:56:23 2014
Response via : Single Level Calibration





TIC: 0425C_02.D

(4) DDT (MT)

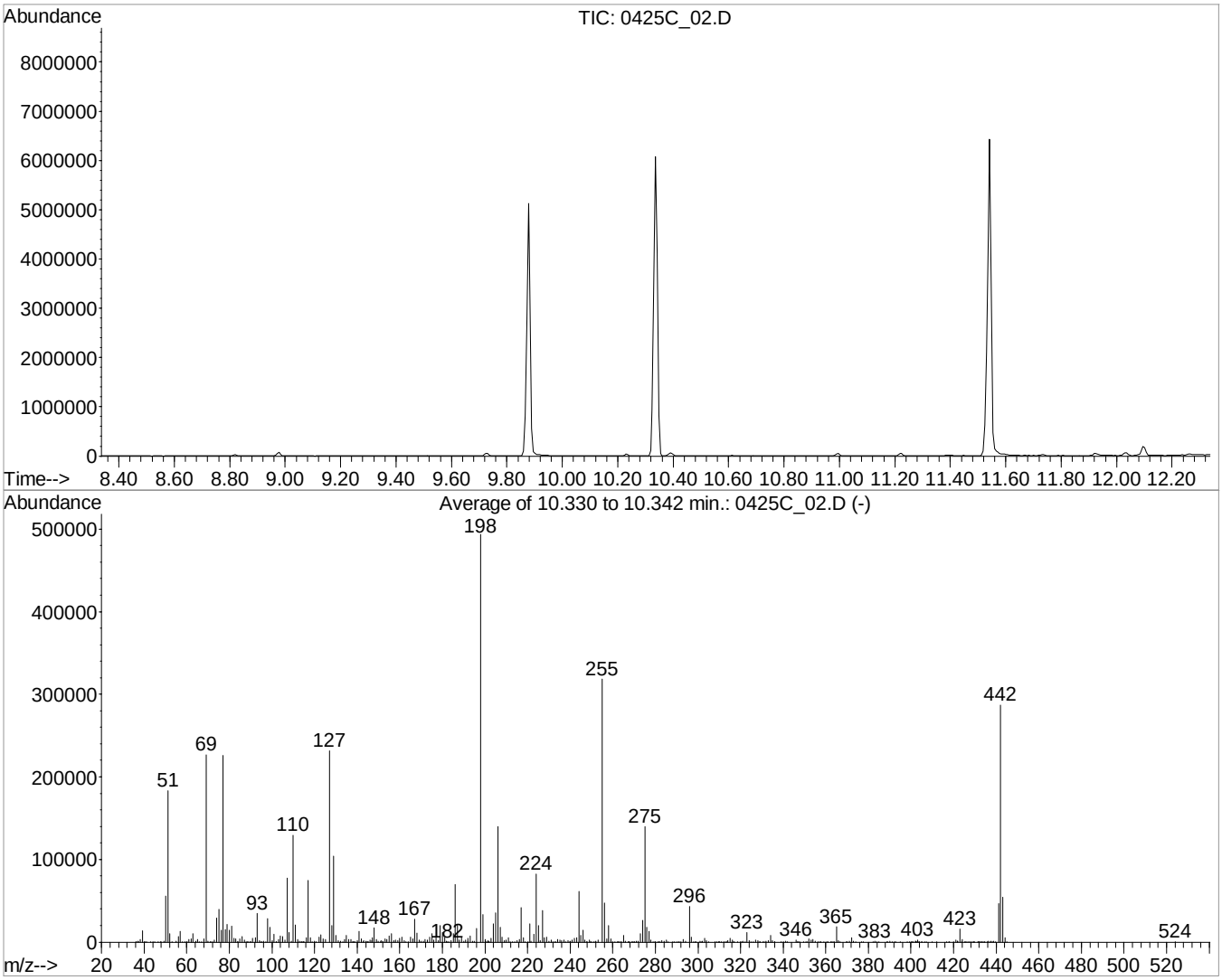
12.42min (-0.041) 438.8630667 ug/ml

Qvalue = 100

response 8611099

Signal	Exp%	Act%
TIC	100	100
0.00	6.60	0.00
0.00	0.00	0.00
0.00	0.00	0.00

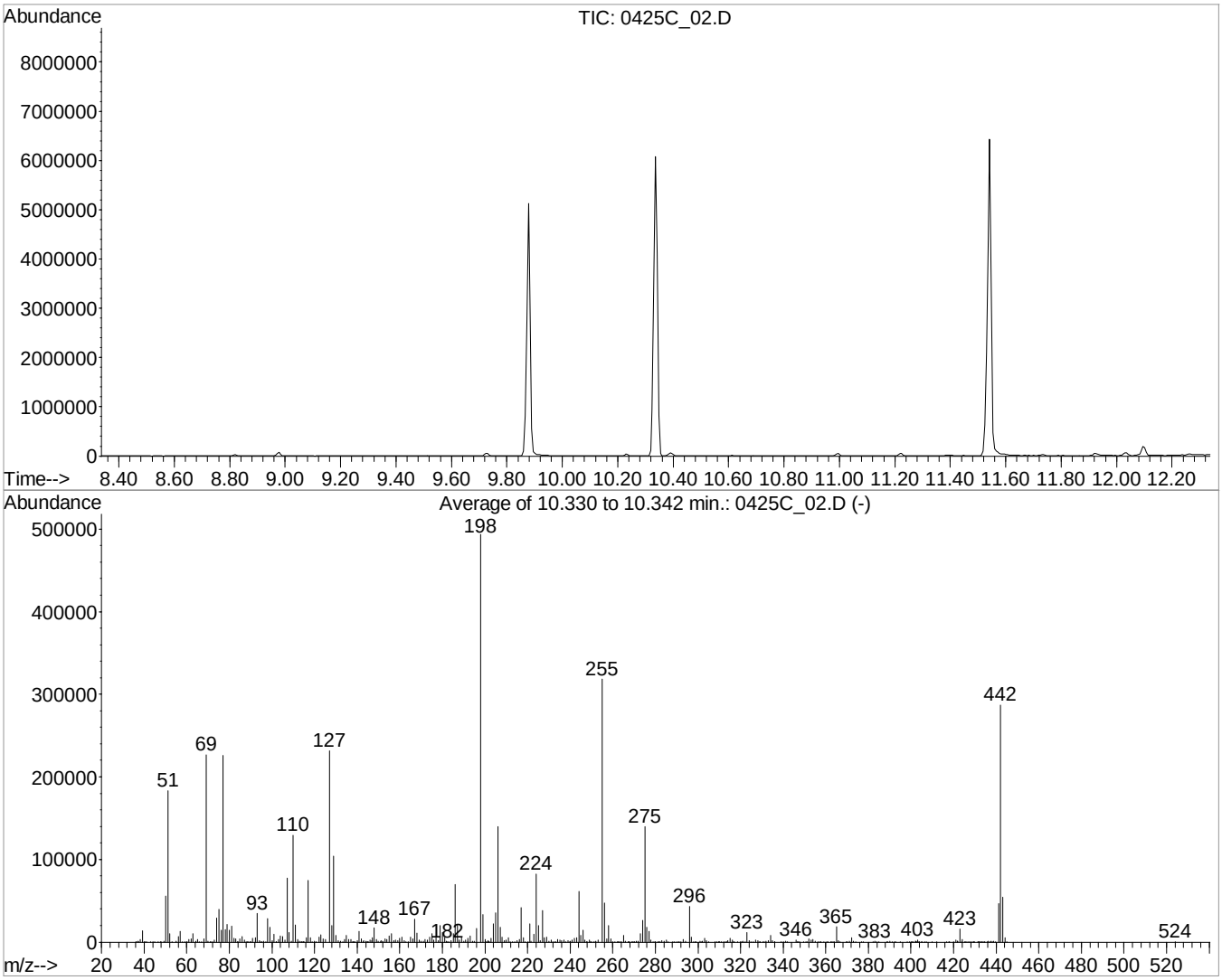
Data File : C:\MSDCHEM\1\DATA\042516C\0425C 02.D Vial: 1
Acq On : 25 Apr 2016 3:04 pm Operator: 280
Sample : TUNE 50 PPM 16D04430 Inst : BNAMS11
Misc : DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\TUNEC.M (RTE Integrator)
Title : 8270 BNA



AutoFind: Scans 1275, 1276, 1277; Background Corrected with Scan 1269

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	37.1	183064	PASS
68	69	0.00	2	1.7	3946	PASS
69	198	0.00	100	45.9	226709	PASS
70	69	0.00	2	0.5	1215	PASS
127	198	40	60	47.0	231872	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	493738	PASS
199	198	5	9	6.7	33258	PASS
275	198	10	30	28.3	139549	PASS
365	198	1	100	3.7	18349	PASS
441	443	0.01	100	85.6	46741	PASS
442	198	40	100	58.1	286784	PASS
443	442	17	23	19.0	54626	PASS

Data File : C:\MSDCHEM\1\DATA\042516C\0425C 02.D Vial: 1
Acq On : 25 Apr 2016 3:04 pm Operator: 280
Sample : TUNE 50 PPM 16D04430 Inst : BNAMS11
Misc : DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\TUNED.M (RTE Integrator)
Title : 8270 BNA



Spectrum Information: Average of 10.330 to 10.342 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	37.1	183064	PASS
68	69	0.00	2	1.7	3946	PASS
69	69	100	100	100.0	226709	PASS
70	69	0.00	2	0.5	1215	PASS
127	198	10	80	47.0	231872	PASS
197	198	0.00	2	0.0	0	PASS
198	198	50	100	100.0	493738	PASS
199	198	5	9	6.7	33258	PASS
275	198	10	60	28.3	139549	PASS
365	198	1	100	3.7	18349	PASS
441	442	0.01	24	16.3	46741	PASS
442	198	50	100	58.1	286784	PASS
443	442	15	24	19.0	54626	PASS

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID	: BNAMS11	Review Method	: 8270D	Released By	: Allen Fuller
Method	: S811E27P	Review Protocol	: SW846	Released On	: 5/31/2016 10:28:47 AM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- S811E27P -- ICal Updated Time: Tue May 31 10:22:11 2016

Parameter	500	1000	4000	10000	20000	30000	40000	50000	1K1	4K1	10K1	20K1	30K1	40K1	50K1	AvgRF	%RSD	COD	Cur	RF
1,4-Dichlorobenzene-d4																				
Pyridine	2.417	2.135	1.999	2.257	2.267	2.337	2.257	2.198								2.233367	5.68	0.057	1	
N-Nitrosodimethylamine	1.133	0.953	0.933	1.079	1.067	1.116	1.066	1.032								1.047397	6.85	0.068	1	
2-Fluorophenol	1.989	2.012	1.777	1.969	1.933	1.98	1.979	1.871								1.938869	4.05	0.04	1	
Aniline	1.575	1.198	1.186	1.28	1.287	1.35	1.314	1.262								1.306503	9.3	0.093	1	
bis(2-Chloroethyl)ether	1.531	1.405	1.196	1.308	1.32	1.359	1.321	1.3								1.342436	7.18	0.072	1	0.7
Phenol-d5	2.673	2.484	2.269	2.421	2.56	2.66	2.498	2.45								2.501933	5.26	0.053	1	
Phenol	2.495	2.514	2.271	2.592	2.556	2.662	2.682	2.591								2.545327	5.05	0.051	1	0.8
Benzaldehyde									1.692	1.584	1.495	1.605	1.428	1.576	1.528	1.558153	5.43	0.054	1	0.01
2-Chlorophenol	2.135	1.873	1.804	1.915	2	2.142	2.002	1.973								1.980614	5.97	0.06	1	0.8
n-Decane	1.166	1.084	1.034	1.147	1.145	1.177	1.178	1.153								1.135532	4.44	0.044	1	
1,3-Dichlorobenzene	2.365	2.183	2.091	2.22	2.308	2.357	2.232	2.258								2.251616	4.08	0.041	1	
1,4-Dichlorobenzene	2.347	2.361	2.093	2.221	2.262	2.337	2.298	2.239								2.26962	3.88	0.039	1	
Benzyl Alcohol	2.105	1.89	1.835	2.068	2.131	2.128	2.102	2.015								2.03417	5.57	0.056	1	
1,2-Dichlorobenzene	2.261	2.09	2.001	2.054	2.224	2.238	2.123	2.101								2.136671	4.4	0.044	1	
bis(2-Chloroisopropyl)ether	0.614	0.551	0.534	0.555	0.554	0.584	0.573	0.566								0.566362	4.35	0.043	1	
2-Methylphenol	2.038	1.69	1.732	1.826	1.828	1.948	1.851	1.889								1.850255	6.03	0.06	1	0.7
Hexachloroethane	1.096	0.941	0.89	0.943	0.989	1.011	0.97	0.967								0.975819	6.2	0.062	1	0.3
N-Nitrosodi-n-propylamine	1.801	1.501	1.391	1.571	1.636	1.641	1.549	1.527								1.577236	7.63	0.076	1	0.5
3&4-Methyl phenol	2.59	2.218	2.107	2.3	2.218	2.303	2.196	2.136								2.25842	6.68	0.067	1	0.6

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID	: BNAMS11	Review Method	: 8270D	Released By	: Allen Fuller
Method	: S811E27P	Review Protocol	: SW846	Released On	: 5/31/2016 10:28:47 AM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- S811E27P -- ICal Updated Time: Tue May 31 10:22:11 2016

Parameter	500	1000	4000	10000	20000	30000	40000	50000	1K1	4K1	10K1	20K1	30K1	40K1	50K1	AvgRF	%RSD	COD	Cur	RF
Acetophenone									3.353	2.812	2.955	3.067	2.814	3.005	2.925	2.990007	6.2	0.062	1	0.01
Naphthalene-d8																				
Nitrobenzene-d5	0.466	0.485	0.455	0.452	0.466	0.483	0.482	0.462								0.468909	2.74	0.027	1	
Nitrobenzene	0.462	0.477	0.411	0.436	0.456	0.495	0.46	0.476								0.45902	5.67	0.057	1	0.2
Isophorone	0.812	0.851	0.756	0.762	0.824	0.84	0.794	0.813								0.806661	4.24	0.042	1	0.4
2-Nitrophenol	0.188	0.18	0.182	0.184	0.206	0.211	0.208	0.206								0.195567	6.81	0.068	1	0.1
2,4-Dimethylphenol	0.402	0.452	0.403	0.443	0.45	0.448	0.441	0.426								0.433066	4.72	0.047	1	0.2
bis(2-Chlorethoxy)methane	0.467	0.458	0.416	0.443	0.464	0.462	0.489	0.462								0.457711	4.62	0.046	1	0.3
2,4-Dichlorophenol	0.353	0.331	0.289	0.305	0.324	0.326	0.327	0.328								0.322892	5.89	0.059	1	0.2
Benzoic Acid									0.136	0.174	0.233	0.269	0.26	0.299	0.294	0.237923	25.9	0.998	3	
1,2,4-Trichlorobenzene	0.407	0.419	0.349	0.351	0.374	0.384	0.382	0.383								0.380913	6.41	0.064	1	
Naphthalene	1.165	1.185	1.08	1.044	1.177	1.144	1.156	1.146								1.137137	4.35	0.043	1	0.7
4-Chloroaniline	0.177	0.184	0.141	0.162	0.162	0.177	0.169	0.168								0.167563	7.85	0.078	1	0.01
Hexachloro-1,3-butadiene	0.266	0.279	0.237	0.245	0.262	0.264	0.274	0.27								0.262054	5.51	0.055	1	0.01
Caprolactam									0.113	0.093	0.103	0.1	0.091	0.103	0.096	0.100012	7.22	0.072	1	0.01
4-Chloro-3-methylphenol	0.377	0.384	0.334	0.37	0.39	0.416	0.387	0.387								0.380668	6.03	0.06	1	0.2
2-Methylnaphthalene	0.702	0.797	0.655	0.684	0.731	0.789	0.767	0.757								0.735462	6.96	0.07	1	0.4
1-Methylnaphthalene	0.734	0.704	0.618	0.633	0.7	0.724	0.695	0.713								0.690352	6.11	0.061	1	
1,2,4,5-Tetrachlorobenzene									0.431	0.37	0.392	0.398	0.39	0.438	0.419	0.405491	6.08	0.061	1	0.01
Acenaphthene-d10																				

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID : BNAMS11
Method : S811E27P
Review Method : 8270D
Review Protocol : SW846
Released By : Allen Fuller
Released On : 5/31/2016 10:28:47 AM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- S811E27P -- ICal Updated Time: Tue May 31 10:22:11 2016

Parameter	500	1000	4000	10000	20000	30000	40000	50000	1K1	4K1	10K1	20K1	30K1	40K1	50K1	AvgRF	%RSD	COD	Cur	RF
Hexachlorocyclopentadiene	0.28	0.357	0.426	0.45	0.504	0.531	0.493	0.52								0.445303	19.74	0.998	0	0.05
2,4,6-Trichlorophenol	0.393	0.39	0.376	0.393	0.432	0.437	0.432	0.45								0.412902	6.7	0.067	1	0.2
2,4,5-Trichlorophenol	0.359	0.439	0.419	0.439	0.44	0.437	0.449	0.464								0.430657	7.35	0.073	1	0.2
2-Fluorobiphenyl	1.373	1.5	1.372	1.37	1.398	1.405	1.469	1.5								1.423434	4.01	0.04	1	
Biphenyl	1.439	1.533	1.469	1.485	1.506	1.572	1.613	1.67								1.53589	5.09	0.051	1	0.01
2-Chloronaphthalene	1.234	1.269	1.154	1.193	1.225	1.287	1.255	1.268								1.235645	3.6	0.036	1	0.8
2-Nitroaniline	0.354	0.385	0.378	0.381	0.371	0.39	0.39	0.41								0.382158	4.26	0.043	1	0.01
Acenaphthylene	1.793	1.971	1.725	1.884	1.927	1.895	1.842	1.926								1.870423	4.29	0.043	1	0.9
Dimethyl phthalate	1.283	1.498	1.421	1.334	1.411	1.352	1.444	1.486								1.403641	5.37	0.054	1	0.01
2,6-Dinitrotoluene	0.274	0.332	0.317	0.331	0.331	0.311	0.318	0.323								0.317023	5.97	0.06	1	0.2
3-Nitroaniline	0.273	0.32	0.325	0.31	0.3	0.335	0.311	0.33								0.312979	6.34	0.063	1	0.01
Acenaphthene	1.236	1.294	1.166	1.192	1.236	1.273	1.259	1.305								1.245174	3.87	0.039	1	0.9
2,4-Dinitrophenol		0.084	0.13	0.17	0.194	0.21	0.211	0.221								0.174044	28.98	0.998	0	0.01
Dibenzofuran	1.816	1.777	1.683	1.707	1.746	1.734	1.809	1.849								1.765096	3.25	0.033	1	0.8
2,4-Dinitrotoluene	0.416	0.385	0.395	0.417	0.431	0.438	0.443	0.471								0.424527	6.45	0.064	1	0.2
2,3,4,6-Tetrachlorophenol									0.329	0.277	0.311	0.342	0.315	0.356	0.342	0.324664	8.1	0.081	1	0.01
4-Nitrophenol	0.192	0.248	0.226	0.249	0.258	0.26	0.26	0.261								0.244245	9.87	0.099	1	0.01
Fluorene	1.424	1.496	1.367	1.363	1.448	1.499	1.444	1.582								1.452731	5.02	0.05	1	0.9
4-Chlorophenyl-phenylether	0.683	0.799	0.697	0.711	0.755	0.75	0.757	0.816								0.746118	6.3	0.063	1	0.4
Diethyl phthalate	1.335	1.572	1.343	1.468	1.471	1.502	1.446	1.479								1.452199	5.44	0.054	1	0.01

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID	: BNAMS11	Review Method	: 8270D	Released By	: Allen Fuller
Method	: S811E27P	Review Protocol	: SW846	Released On	: 5/31/2016 10:28:47 AM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- S811E27P -- ICal Updated Time: Tue May 31 10:22:11 2016

Parameter	500	1000	4000	10000	20000	30000	40000	50000	1K1	4K1	10K1	20K1	30K1	40K1	50K1	AvgRF	%RSD	COD	Cur	RF
4-Nitroaniline	0.322	0.365	0.313	0.29	0.319	0.316	0.299	0.325								0.318565	6.93	0.069	1	0.01
Azobenzene	1.505	1.531	1.451	1.59	1.533	1.504	1.634	1.611								1.544874	4	0.04	1	
Atrazine									0.499	0.425	0.435	0.473	0.418	0.462	0.428	0.448554	6.7	0.067	1	0.01
Phenanthrene-d10																				
4,6-Dinitro-2-methylphenol	0.097	0.086	0.103	0.125	0.14	0.145	0.153	0.143								0.124	20.46	0.998	0	0.01
N-Nitrosodiphenylamine	0.604	0.631	0.548	0.585	0.607	0.653	0.688	0.674								0.6238	7.51	0.075	1	0.01
2,4,6-Tribromophenol	0.095	0.1	0.094	0.112	0.117	0.12	0.126	0.122								0.110831	11.38	0.114	1	
4-Bromophenyl-phenylether	0.268	0.263	0.226	0.24	0.246	0.261	0.271	0.267								0.255198	6.33	0.063	1	0.1
Hexachlorobenzene	0.263	0.241	0.231	0.25	0.267	0.267	0.275	0.275								0.258623	6.25	0.063	1	0.1
n-octadecane	0.118	0.115	0.097	0.123	0.119	0.126	0.128	0.116								0.117673	8	0.08	1	
Pentachlorophenol	0.104	0.094	0.106	0.14	0.159	0.159	0.172	0.175								0.138651	23.59	0.997	0	0.05
Phenanthrene	1.2	1.143	1.001	1.121	1.143	1.16	1.206	1.168								1.142816	5.63	0.056	1	0.7
Anthracene	1.105	1.131	1.008	1.102	1.164	1.14	1.223	1.185								1.132369	5.69	0.057	1	0.7
Carbazole	0.932	0.988	0.87	0.99	0.99	1.021	1.085	1.045								0.990122	6.71	0.067	1	0.01
Di-n-butyl phthalate	1.225	1.206	1.124	1.282	1.341	1.442	1.446	1.4								1.308108	9.06	0.091	1	0.01
2-nitrodiphenylamine									0.272	0.258	0.294	0.315	0.309	0.315	0.312	0.296233	7.77	0.078	1	
Fluoranthene	1.27	1.249	1.119	1.303	1.376	1.369	1.505	1.453								1.330489	9.2	0.092	1	0.6
Chrysene-d12																				
Benzidine									0.676	0.658	0.687	0.701	0.713	0.759	0.777	0.710173	6.14	0.061	1	
Pyrene	1.148	1.114	1.045	1.077	1.139	1.196	1.165	1.247								1.141518	5.63	0.056	1	0.6
p-Terphenyl-d14	0.9	0.953	0.854	0.842	0.892	0.909	1.009	0.995								0.919365	6.68	0.067	1	

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID	: BNAMS11	Review Method	: 8270D	Released By	: Allen Fuller
Method	: S811E27P	Review Protocol	: SW846	Released On	: 5/31/2016 10:28:47 AM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- S811E27P -- ICal Updated Time: Tue May 31 10:22:11 2016

Parameter	500	1000	4000	10000	20000	30000	40000	50000	1K1	4K1	10K1	20K1	30K1	40K1	50K1	AvgRF	%RSD	COD	Cur	RF
Benzylbutyl phthalate	0.48	0.496	0.455	0.511	0.516	0.54	0.549	0.539								0.51082	6.35	0.063	1	0.01
3,3-Dichlorobenzidine									0.354	0.354	0.349	0.347	0.359	0.388	0.387	0.362657	4.82	0.048	1	0.01
Benzo(a)anthracene	1.222	1.249	1.095	1.14	1.251	1.186	1.241	1.291								1.209285	5.38	0.054	1	0.8
Chrysene	1.173	1.155	1.06	1.063	1.125	1.166	1.212	1.216								1.146149	5.23	0.052	1	0.7
bis(2-Ethylhexyl)phthalate	0.776	0.789	0.658	0.729	0.739	0.8	0.83	0.837								0.769738	7.69	0.077	1	0.01
Di-n-octyl phthalate	1.269	1.249	1.2	1.34	1.397	1.408	1.459	1.415								1.342218	6.93	0.069	1	0.01
Perylene-d12																				
Benzo(b)fluoranthene	1.189	1.179	1.014	1.123	1.167	1.249	1.179	1.214								1.164385	6.08	0.061	1	0.7
Benzo(k)fluoranthene	1.031	1.116	1.034	1.055	1.139	1.123	1.149	1.104								1.093863	4.29	0.043	1	0.7
Benzo(a)pyrene	1.073	1.163	1.036	1.098	1.148	1.189	1.148	1.17								1.128068	4.71	0.047	1	0.7
Indeno(1,2,3-cd)pyrene	1.289	1.419	1.258	1.317	1.368	1.344	1.274	1.239								1.313555	4.64	0.046	1	0.5
Dibenz(a,h)anthracene	1.165	1.203	1.042	1.159	1.173	1.183	1.136	1.09								1.1439	4.66	0.047	1	0.4
Benzo(g,h,i)perylene	1.2	1.188	1.066	1.125	1.127	1.091	1.008	0.957								1.095139	7.64	0.076	1	0.5

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID	: BNAMS11	Review Method	: 8270C	Released By	: Allen Fuller
Method	: S811E27P	Review Protocol	: SW846	Released On	: 5/31/2016 10:28:44 AM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- S811E27P -- ICal Updated Time: Tue May 31 10:22:11 2016

Parameter	500	1000	4000	10000	20000	30000	40000	50000	1K1	4K1	10K1	20K1	30K1	40K1	50K1	AvgRF	%RSD	COD	Cur
1,4-Dichlorobenzene-d4																			
Pyridine	2.417	2.135	1.999	2.257	2.267	2.337	2.257	2.198								2.233367	5.68	0.057	1
N-Nitrosodimethylamine	1.133	0.953	0.933	1.079	1.067	1.116	1.066	1.032								1.047397	6.85	0.068	1
2-Fluorophenol	1.989	2.012	1.777	1.969	1.933	1.98	1.979	1.871								1.938869	4.05	0.04	1
Aniline	1.575	1.198	1.186	1.28	1.287	1.35	1.314	1.262								1.306503	9.3	0.093	1
bis(2-Chloroethyl)ether	1.531	1.405	1.196	1.308	1.32	1.359	1.321	1.3								1.342436	7.18	0.072	1
Phenol-d5	2.673	2.484	2.269	2.421	2.56	2.66	2.498	2.45								2.501933	5.26	0.053	1
Phenol	2.495	2.514	2.271	2.592	2.556	2.662	2.682	2.591								2.545327	5.05	0.051	1
Benzaldehyde									1.692	1.584	1.495	1.605	1.428	1.576	1.528	1.558153	5.43	0.054	1
2-Chlorophenol	2.135	1.873	1.804	1.915	2	2.142	2.002	1.973								1.980614	5.97	0.06	1
n-Decane	1.166	1.084	1.034	1.147	1.145	1.177	1.178	1.153								1.135532	4.44	0.044	1
1,3-Dichlorobenzene	2.365	2.183	2.091	2.22	2.308	2.357	2.232	2.258								2.251616	4.08	0.041	1
1,4-Dichlorobenzene	2.347	2.361	2.093	2.221	2.262	2.337	2.298	2.239								2.26962	3.88	0.039	1
Benzyl Alcohol	2.105	1.89	1.835	2.068	2.131	2.128	2.102	2.015								2.03417	5.57	0.056	1
1,2-Dichlorobenzene	2.261	2.09	2.001	2.054	2.224	2.238	2.123	2.101								2.136671	4.4	0.044	1
bis(2-Chloroisopropyl)ether	0.614	0.551	0.534	0.555	0.554	0.584	0.573	0.566								0.566362	4.35	0.043	1
2-Methylphenol	2.038	1.69	1.732	1.826	1.828	1.948	1.851	1.889								1.850255	6.03	0.06	1
Hexachloroethane	1.096	0.941	0.89	0.943	0.989	1.011	0.97	0.967								0.975819	6.2	0.062	1
N-Nitrosodi-n-propylamine	1.801	1.501	1.391	1.571	1.636	1.641	1.549	1.527								1.577236	7.63	0.076	1
3&4-Methyl phenol	2.59	2.218	2.107	2.3	2.218	2.303	2.196	2.136								2.25842	6.68	0.067	1

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID	: BNAMS11	Review Method	: 8270C	Released By	: Allen Fuller
Method	: S811E27P	Review Protocol	: SW846	Released On	: 5/31/2016 10:28:44 AM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- S811E27P -- ICal Updated Time: Tue May 31 10:22:11 2016

Parameter	500	1000	4000	10000	20000	30000	40000	50000	1K1	4K1	10K1	20K1	30K1	40K1	50K1	AvgRF	%RSD	COD	Cur
Acetophenone									3.353	2.812	2.955	3.067	2.814	3.005	2.925	2.990007	6.2	0.062	1
Naphthalene-d8																			
Nitrobenzene-d5	0.466	0.485	0.455	0.452	0.466	0.483	0.482	0.462								0.468909	2.74	0.027	1
Nitrobenzene	0.462	0.477	0.411	0.436	0.456	0.495	0.46	0.476								0.45902	5.67	0.057	1
Isophorone	0.812	0.851	0.756	0.762	0.824	0.84	0.794	0.813								0.806661	4.24	0.042	1
2-Nitrophenol	0.188	0.18	0.182	0.184	0.206	0.211	0.208	0.206								0.195567	6.81	0.068	1
2,4-Dimethylphenol	0.402	0.452	0.403	0.443	0.45	0.448	0.441	0.426								0.433066	4.72	0.047	1
bis(2-Chlorethoxy)methane	0.467	0.458	0.416	0.443	0.464	0.462	0.489	0.462								0.457711	4.62	0.046	1
2,4-Dichlorophenol	0.353	0.331	0.289	0.305	0.324	0.326	0.327	0.328								0.322892	5.89	0.059	1
Benzoic Acid									0.136	0.174	0.233	0.269	0.26	0.299	0.294	0.237923	25.9	0.998	3
1,2,4-Trichlorobenzene	0.407	0.419	0.349	0.351	0.374	0.384	0.382	0.383								0.380913	6.41	0.064	1
Naphthalene	1.165	1.185	1.08	1.044	1.177	1.144	1.156	1.146								1.137137	4.35	0.043	1
4-Chloroaniline	0.177	0.184	0.141	0.162	0.162	0.177	0.169	0.168								0.167563	7.85	0.078	1
Hexachloro-1,3-butadiene	0.266	0.279	0.237	0.245	0.262	0.264	0.274	0.27								0.262054	5.51	0.055	1
Caprolactam									0.113	0.093	0.103	0.1	0.091	0.103	0.096	0.100012	7.22	0.072	1
4-Chloro-3-methylphenol	0.377	0.384	0.334	0.37	0.39	0.416	0.387	0.387								0.380668	6.03	0.06	1
2-Methylnaphthalene	0.702	0.797	0.655	0.684	0.731	0.789	0.767	0.757								0.735462	6.96	0.07	1
1-Methylnaphthalene	0.734	0.704	0.618	0.633	0.7	0.724	0.695	0.713								0.690352	6.11	0.061	1
1,2,4,5-Tetrachlorobenzene									0.431	0.37	0.392	0.398	0.39	0.438	0.419	0.405491	6.08	0.061	1
Acenaphthene-d10																			

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID	: BNAMS11	Review Method	: 8270C	Released By	: Allen Fuller
Method	: S811E27P	Review Protocol	: SW846	Released On	: 5/31/2016 10:28:44 AM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- S811E27P -- ICal Updated Time: Tue May 31 10:22:11 2016

Parameter	500	1000	4000	10000	20000	30000	40000	50000	1K1	4K1	10K1	20K1	30K1	40K1	50K1	AvgRF	%RSD	COD	Cur
Hexachlorocyclopentadiene	0.28	0.357	0.426	0.45	0.504	0.531	0.493	0.52								0.445303	19.74	0.998	0
2,4,6-Trichlorophenol	0.393	0.39	0.376	0.393	0.432	0.437	0.432	0.45								0.412902	6.7	0.067	1
2,4,5-Trichlorophenol	0.359	0.439	0.419	0.439	0.44	0.437	0.449	0.464								0.430657	7.35	0.073	1
2-Fluorobiphenyl	1.373	1.5	1.372	1.37	1.398	1.405	1.469	1.5								1.423434	4.01	0.04	1
Biphenyl	1.439	1.533	1.469	1.485	1.506	1.572	1.613	1.67								1.53589	5.09	0.051	1
2-Chloronaphthalene	1.234	1.269	1.154	1.193	1.225	1.287	1.255	1.268								1.235645	3.6	0.036	1
2-Nitroaniline	0.354	0.385	0.378	0.381	0.371	0.39	0.39	0.41								0.382158	4.26	0.043	1
Acenaphthylene	1.793	1.971	1.725	1.884	1.927	1.895	1.842	1.926								1.870423	4.29	0.043	1
Dimethyl phthalate	1.283	1.498	1.421	1.334	1.411	1.352	1.444	1.486								1.403641	5.37	0.054	1
2,6-Dinitrotoluene	0.274	0.332	0.317	0.331	0.331	0.311	0.318	0.323								0.317023	5.97	0.06	1
3-Nitroaniline	0.273	0.32	0.325	0.31	0.3	0.335	0.311	0.33								0.312979	6.34	0.063	1
Acenaphthene	1.236	1.294	1.166	1.192	1.236	1.273	1.259	1.305								1.245174	3.87	0.039	1
2,4-Dinitrophenol		0.084	0.13	0.17	0.194	0.21	0.211	0.221								0.174044	28.98	0.998	0
Dibenzofuran	1.816	1.777	1.683	1.707	1.746	1.734	1.809	1.849								1.765096	3.25	0.033	1
2,4-Dinitrotoluene	0.416	0.385	0.395	0.417	0.431	0.438	0.443	0.471								0.424527	6.45	0.064	1
2,3,4,6-Tetrachlorophenol									0.329	0.277	0.311	0.342	0.315	0.356	0.342	0.324664	8.1	0.081	1
4-Nitrophenol	0.192	0.248	0.226	0.249	0.258	0.26	0.26	0.261								0.244245	9.87	0.099	1
Fluorene	1.424	1.496	1.367	1.363	1.448	1.499	1.444	1.582								1.452731	5.02	0.05	1
4-Chlorophenyl-phenylether	0.683	0.799	0.697	0.711	0.755	0.75	0.757	0.816								0.746118	6.3	0.063	1
Diethyl phthalate	1.335	1.572	1.343	1.468	1.471	1.502	1.446	1.479								1.452199	5.44	0.054	1

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID	: BNAMS11	Review Method	: 8270C	Released By	: Allen Fuller
Method	: S811E27P	Review Protocol	: SW846	Released On	: 5/31/2016 10:28:44 AM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- S811E27P -- ICal Updated Time: Tue May 31 10:22:11 2016

Parameter	500	1000	4000	10000	20000	30000	40000	50000	1K1	4K1	10K1	20K1	30K1	40K1	50K1	AvgRF	%RSD	COD	Cur
4-Nitroaniline	0.322	0.365	0.313	0.29	0.319	0.316	0.299	0.325								0.318565	6.93	0.069	1
Azobenzene	1.505	1.531	1.451	1.59	1.533	1.504	1.634	1.611								1.544874	4	0.04	1
Atrazine									0.499	0.425	0.435	0.473	0.418	0.462	0.428	0.448554	6.7	0.067	1
Phenanthrene-d10																			
4,6-Dinitro-2-methylphenol	0.097	0.086	0.103	0.125	0.14	0.145	0.153	0.143								0.124	20.46	0.998	0
N-Nitrosodiphenylamine	0.604	0.631	0.548	0.585	0.607	0.653	0.688	0.674								0.6238	7.51	0.075	1
2,4,6-Tribromophenol	0.095	0.1	0.094	0.112	0.117	0.12	0.126	0.122								0.110831	11.38	0.114	1
4-Bromophenyl-phenylether	0.268	0.263	0.226	0.24	0.246	0.261	0.271	0.267								0.255198	6.33	0.063	1
Hexachlorobenzene	0.263	0.241	0.231	0.25	0.267	0.267	0.275	0.275								0.258623	6.25	0.063	1
n-octadecane	0.118	0.115	0.097	0.123	0.119	0.126	0.128	0.116								0.117673	8	0.08	1
Pentachlorophenol	0.104	0.094	0.106	0.14	0.159	0.159	0.172	0.175								0.138651	23.59	0.997	0
Phenanthrene	1.2	1.143	1.001	1.121	1.143	1.16	1.206	1.168								1.142816	5.63	0.056	1
Anthracene	1.105	1.131	1.008	1.102	1.164	1.14	1.223	1.185								1.132369	5.69	0.057	1
Carbazole	0.932	0.988	0.87	0.99	0.99	1.021	1.085	1.045								0.990122	6.71	0.067	1
Di-n-butyl phthalate	1.225	1.206	1.124	1.282	1.341	1.442	1.446	1.4								1.308108	9.06	0.091	1
2-nitrodiphenylamine									0.272	0.258	0.294	0.315	0.309	0.315	0.312	0.296233	7.77	0.078	1
Fluoranthene	1.27	1.249	1.119	1.303	1.376	1.369	1.505	1.453								1.330489	9.2	0.092	1
Chrysene-d12																			
Benzidine									0.676	0.658	0.687	0.701	0.713	0.759	0.777	0.710173	6.14	0.061	1
Pyrene	1.148	1.114	1.045	1.077	1.139	1.196	1.165	1.247								1.141518	5.63	0.056	1
p-Terphenyl-d14	0.9	0.953	0.854	0.842	0.892	0.909	1.009	0.995								0.919365	6.68	0.067	1

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID	: BNAMS11	Review Method	: 8270C	Released By	: Allen Fuller
Method	: S811E27P	Review Protocol	: SW846	Released On	: 5/31/2016 10:28:44 AM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- S811E27P -- ICal Updated Time: Tue May 31 10:22:11 2016

Parameter	500	1000	4000	10000	20000	30000	40000	50000	1K1	4K1	10K1	20K1	30K1	40K1	50K1	AvgRF	%RSD	COD	Cur
Benzylbutyl phthalate	0.48	0.496	0.455	0.511	0.516	0.54	0.549	0.539								0.51082	6.35	0.063	1
3,3-Dichlorobenzidine									0.354	0.354	0.349	0.347	0.359	0.388	0.387	0.362657	4.82	0.048	1
Benzo(a)anthracene	1.222	1.249	1.095	1.14	1.251	1.186	1.241	1.291								1.209285	5.38	0.054	1
Chrysene	1.173	1.155	1.06	1.063	1.125	1.166	1.212	1.216								1.146149	5.23	0.052	1
bis(2-Ethylhexyl)phthalate	0.776	0.789	0.658	0.729	0.739	0.8	0.83	0.837								0.769738	7.69	0.077	1
Di-n-octyl phthalate	1.269	1.249	1.2	1.34	1.397	1.408	1.459	1.415								1.342218	6.93	0.069	1
Perylene-d12																			
Benzo(b)fluoranthene	1.189	1.179	1.014	1.123	1.167	1.249	1.179	1.214								1.164385	6.08	0.061	1
Benzo(k)fluoranthene	1.031	1.116	1.034	1.055	1.139	1.123	1.149	1.104								1.093863	4.29	0.043	1
Benzo(a)pyrene	1.073	1.163	1.036	1.098	1.148	1.189	1.148	1.17								1.128068	4.71	0.047	1
Indeno(1,2,3-cd)pyrene	1.289	1.419	1.258	1.317	1.368	1.344	1.274	1.239								1.313555	4.64	0.046	1
Dibenz(a,h)anthracene	1.165	1.203	1.042	1.159	1.173	1.183	1.136	1.09								1.1439	4.66	0.047	1
Benzo(g,h,i)perylene	1.2	1.188	1.066	1.125	1.127	1.091	1.008	0.957								1.095139	7.64	0.076	1

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052716\0527 03.D Vial: 2
Acq On : 27 May 2016 7:06 am Operator: 280
Sample : ICVRL SVMS 10K PPB 16D25863 Inst : BNAMS11
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 31 10:25 2016 Quant Results File: S811E27P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S811E27P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue May 31 10:22:11 2016
Response via : Initial Calibration
DataAcq Meth : BNA11C

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.23	152	52454	8000.00 ppb	0.00
22) Naphthalene-d8	6.48	136	260357	8000.00 ppb	0.00
40) Acenaphthene-d10	8.34	164	168966	8000.00 ppb	0.00
64) Phenanthrene-d10	9.95	188	341060	8000.00 ppb	0.00
78) Chrysene-d12	12.81	240	421350	8000.00 ppb	0.00
88) Perylene-d12	14.51	264	432052	8000.00 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol	4.14	112	119488	9399.1180625 ppb	0.00
Spiked Amount 20.000	Range 10 - 74		Recovery = 46995.59%#		
7) Phenol-d5	4.86	99	158718	9675.2447577 ppb	0.00
Spiked Amount 20.000	Range 10 - 63		Recovery = 48376.22%#		
23) Nitrobenzene-d5	5.75	82	160667	10528.3157242 ppb	0.00
Spiked Amount 10.000	Range 28 - 123		Recovery = 105283.16%#		
44) 2-Fluorobiphenyl	7.61	172	283682	9435.9389070 ppb	0.00
Spiked Amount 10.000	Range 35 - 133		Recovery = 94359.39%#		
67) 2,4,6-Tribromophenol	9.20	330	41987	8886.1287023 ppb	0.00
Spiked Amount 20.000	Range 22 - 154		Recovery = 44430.64%#		
81) p-Terphenyl-d14	11.65	244	405992	8384.4878569 ppb	0.00
Spiked Amount 10.000	Range 30 - 148		Recovery = 83844.88%#		
Target Compounds					Qvalue
2) Pyridine	3.20	79	123903	8461.2207949 ppb #	81
3) N-Nitrosodimethylamine	3.17	42	57523	8376.0909184 ppb	90
5) Aniline	4.93	66	82952	9683.3982767 ppb	97
6) bis(2-Chloroethyl)ether	4.97	63	76906	8737.3170489 ppb	97
8) Phenol	4.87	94	161540	9679.3881440 ppb	98
10) 2-Chlorophenol	5.04	128	123843	9536.3667167 ppb	93
11) n-Decane	5.05	41	66764	8967.1481080 ppb	95
12) 1,3-Dichlorobenzene	5.18	146	137708	9327.7353657 ppb	91
13) 1,4-Dichlorobenzene	5.25	146	138456	9304.0081817 ppb	97
14) Benzyl Alcohol	5.34	79	135652	10170.6869029 ppb	98
15) 1,2-Dichlorobenzene	5.39	146	129695	9257.5690460 ppb	94
16) bis(2-Chloroisopropyl)ethe	5.47	121	33673	9067.7429660 ppb	93
17) 2-Methylphenol	5.43	108	116106	9570.4938805 ppb	96
18) Hexachloroethane	5.71	117	61235	9570.6549287 ppb	92
19) N-Nitrosodi-n-propylamine	5.59	70	101437	9808.6917344 ppb	88
20) 3&4-Methyl phenol	5.58	107	146594	9899.7198640 ppb	93
24) Nitrobenzene	5.77	77	152837	10230.9792393 ppb	87
25) Isophorone	6.00	82	260927	9939.1423322 ppb	93
26) 2-Nitrophenol	6.09	139	63730	10013.1061407 ppb	90
27) 2,4-Dimethylphenol	6.11	107	140907	9997.6719117 ppb	97
28) bis(2-Chlorethoxy)methane	6.21	93	137480	9229.3091096 ppb	94
29) 2,4-Dichlorophenol	6.32	162	101178	9628.3010302 ppb	89
31) 1,2,4-Trichlorobenzene	6.42	180	122786	9904.7585625 ppb	98
32) Naphthalene	6.51	128	354740	9585.5759643 ppb	99
33) 4-Chloroaniline	6.55	65	56941	10441.6169255 ppb	85
34) Hexachloro-1,3-butadiene	6.62	225	91666	10748.2516669 ppb	94
36) 4-Chloro-3-methylphenol	7.04	107	125158	10102.5882278 ppb	88
37) 2-Methylnaphthalene	7.22	142	229285	9579.3553204 ppb #	1
38) 1-Methylnaphthalene	7.33	142	223883	9964.8557280 ppb #	1
41) Hexachlorocyclopentadiene	7.39	237	82130	7889.4377770 ppb	89
42) 2,4,6-Trichlorophenol	7.52	196	84328	9669.7590098 ppb	92
43) 2,4,5-Trichlorophenol	7.55	196	83560	9186.6552538 ppb	95
45) Biphenyl	7.72	154	303630	9359.9865498 ppb	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052716\0527 03.D Vial: 2
Acq On : 27 May 2016 7:06 am Operator: 280
Sample : ICVRL SVMS 10K PPB 16D25863 Inst : BNAMS11
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 31 10:25 2016 Quant Results File: S811E27P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S811E27P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue May 31 10:22:11 2016
Response via : Initial Calibration
DataAcq Meth : BNA11C

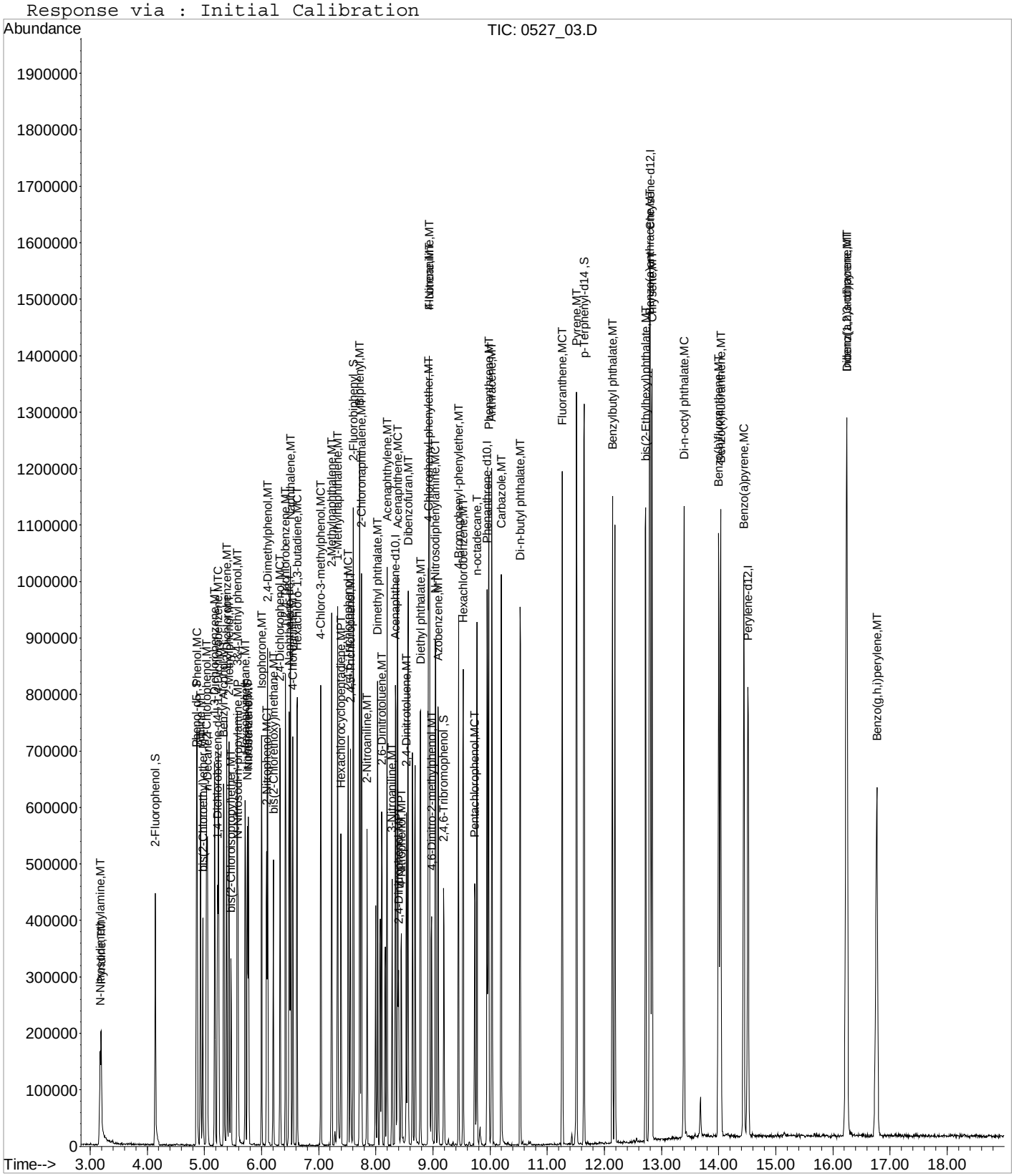
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
46)	2-Chloronaphthalene	7.75	162	237991	9119.2168621	ppb		97
47)	2-Nitroaniline	7.85	138	67827	8403.3024944	ppb	#	93
48)	Acenaphthylene	8.20	152	376474	9529.8435890	ppb		97
49)	Dimethyl phthalate	8.03	163	259368	8748.8534726	ppb		91
50)	2,6-Dinitrotoluene	8.10	165	59146	8833.3515718	ppb		80
51)	3-Nitroaniline	8.28	138	61542	9309.9555462	ppb		90
52)	Acenaphthene	8.38	153	244994	9315.7115637	ppb		95
53)	2,4-Dinitrophenol	8.40	184	35480	9282.1382043	ppb	#	50
54)	Dibenzofuran	8.57	168	324630	8707.8486832	ppb	#	68
55)	2,4-Dinitrotoluene	8.54	165	78564	8762.1244423	ppb		81
57)	4-Nitrophenol	8.45	139	45495	8819.1978209	ppb		85
58)	Fluorene	8.94	166	265806	8663.0365316	ppb		92
59)	4-Chlorophenyl-phenylether	8.92	204	146863	9319.5578539	ppb		89
60)	Diethyl phthalate	8.78	149	277543	9048.8785735	ppb		96
61)	4-Nitroaniline	8.94	138	61289	9109.0896369	ppb		89
62)	Azobenzene	9.09	77	291686	8939.4986604	ppb	#	42
65)	4,6-Dinitro-2-methylphenol	8.98	198	52119	8989.6495658	ppb		94
66)	N-Nitrosodiphenylamine	9.04	169	215917	8118.9630750	ppb		97
68)	4-Bromophenyl-phenylether	9.45	248	97310	8944.1511649	ppb		95
69)	Hexachlorobenzene	9.53	284	99540	9027.9596193	ppb		97
70)	n-octadecane	9.77	55	45255	9020.8765510	ppb		93
71)	Pentachlorophenol	9.74	266	52556	8287.6165687	ppb		89
72)	Phenanthrene	9.98	178	413969	8496.7047275	ppb		98
73)	Anthracene	10.03	178	433069	8970.7444911	ppb		97
74)	Carbazole	10.20	167	368482	8729.4520540	ppb		99
75)	Di-n-butyl phthalate	10.52	149	469972	8427.2810120	ppb		98
77)	Fluoranthene	11.27	202	530266	9348.4974345	ppb		99
80)	Pyrene	11.51	202	543376	9037.8422471	ppb		100
82)	Benzylbutyl phthalate	12.14	149	217871	8098.0125406	ppb	#	80
84)	Benzo(a)anthracene	12.79	228	569605	8943.1865056	ppb		96
85)	Chrysene	12.84	228	522440	8654.5040065	ppb		94
86)	bis(2-Ethylhexyl)phthalate	12.72	149	316383	7803.9975974	ppb		98
87)	Di-n-octyl phthalate	13.39	149	568498	8041.7927219	ppb		94
89)	Benzo(b)fluoranthene	14.00	252	578289	9196.0703290	ppb		95
90)	Benzo(k)fluoranthene	14.04	252	549076	9294.4499424	ppb		96
91)	Benzo(a)pyrene	14.44	252	566977	9306.4534763	ppb		96
92)	Indeno(1,2,3-cd)pyrene	16.24	276	690825	9738.0914013	ppb		93
93)	Dibenz(a,h)anthracene	16.25	278	568028	9194.6625393	ppb		96
94)	Benzo(g,h,i)perylene	16.77	276	575259	9726.3148560	ppb		92

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

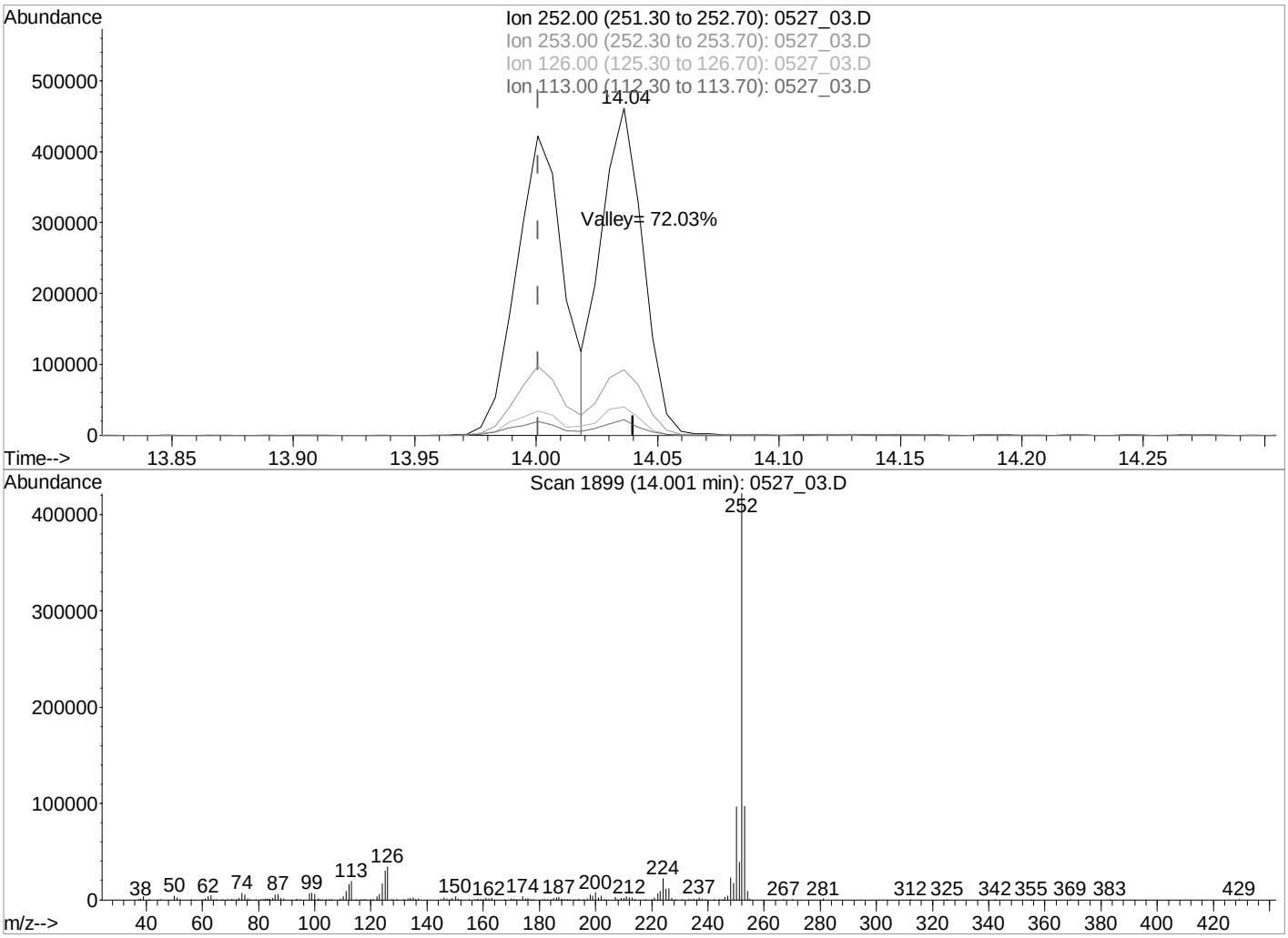
Data File : C:\MSDCHEM\1\DATA\052716\0527 03.D Vial: 2
Acq On : 27 May 2016 7:06 am Operator: 280
Sample : ICVRL SVMS 10K PPB 16D25863 Inst : BNAMS11
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 31 10:25 2016 Quant Results File: S811E27P.RES

Method : C:\MSDCHEM\1\METHODS\S811E27P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue May 31 10:22:11 2016
Response via : Initial Calibration



Data File : C:\MSDCHEM\1\DATA\052716\0527 03.D Vial: 2
Acq On : 27 May 2016 7:06 am Operator: 280
Sample : ICVRL SVMS 10K PPB 16D25863 Inst : BNAMS11
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 31 10:25 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S811E27P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue May 31 10:22:11 2016
Response via : Multiple Level Calibration



TIC: 0527_03.D

(89) Benzo(b)fluoranthene (MT)

14.00min (0.000) 9196.0703290 ppb

Qvalue = 95

response 578289

Ion	Exp%	Act%
252.00	100	100
253.00	20.90	22.84
126.00	10.20	7.75
113.00	6.90	4.39

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052416A\0524A 04.D Vial: 3
Acq On : 24 May 2016 11:09 am Operator: 280
Sample : ICV TCL 10K1 PPB 16D25867 Inst : BNAMS11
Misc : 8270 TCL Calibration 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 24 12:10 2016 Quant Results File: S811E24P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S811E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue May 24 12:03:00 2016
Response via : Initial Calibration
DataAcq Meth : BNA11C

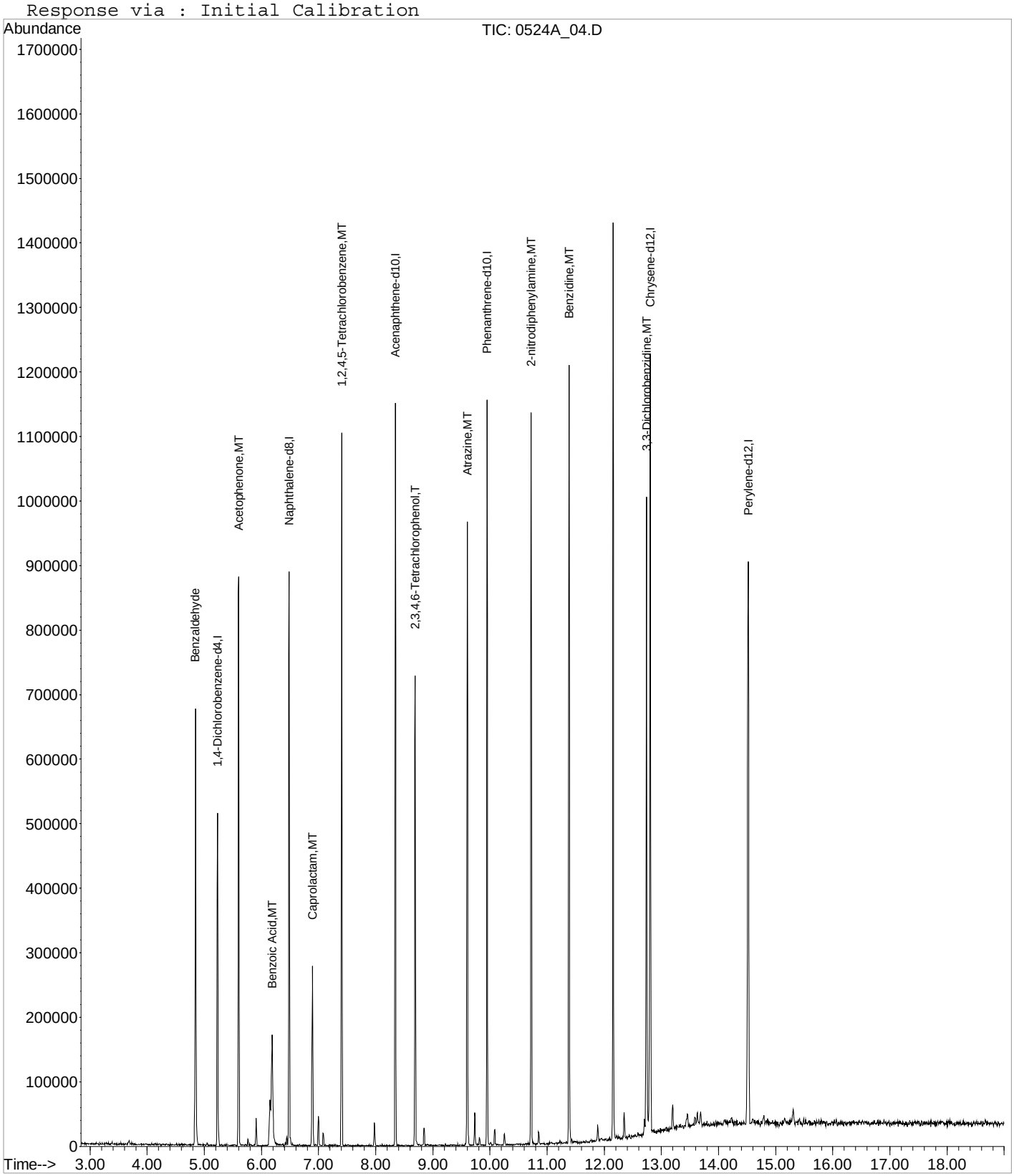
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.23	152	65507	8000.00	ppb	0.00
22) Naphthalene-d8	6.48	136	331973	8000.00	ppb	0.00
40) Acenaphthene-d10	8.34	164	216230	8000.00	ppb	0.00
64) Phenanthrene-d10	9.95	188	385704	8000.00	ppb	0.00
78) Chrysene-d12	12.81	240	456303	8000.00	ppb	0.00
88) Perylene-d12	14.52	264	461110	8000.00	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	4.10	112	55	3.4643073	ppb	-0.05
Spiked Amount 20.000	Range 10 - 74		Recovery = 17.32%			
7) Phenol-d5	4.71	99	146	7.1265533	ppb	-0.15
Spiked Amount 20.000	Range 10 - 63		Recovery = 35.63%			
23) Nitrobenzene-d5	5.80	82	54	2.7751884	ppb	0.04
Spiked Amount 10.000	Range 28 - 123		Recovery = 27.75%#			
44) 2-Fluorobiphenyl	0.00	172	0d	0.0000000	ppb	
Spiked Amount 10.000	Range 35 - 133		Recovery = 0.00%#			
67) 2,4,6-Tribromophenol	0.00	330	0d	0.0000000	ppb	
Spiked Amount 20.000	Range 22 - 154		Recovery = 0.00%#			
81) p-Terphenyl-d14	0.00	244	0	0.0000000	ppb	
Spiked Amount 10.000	Range 30 - 148		Recovery = 0.00%#			
Target Compounds						Qvalue
9) Benzaldehyde	4.85	105	131702	10322.4891555	ppb	96
21) Acetophenone	5.60	105	253303	10345.9522486	ppb	96
30) Benzoic Acid	6.19	105	102274	10398.6589877	ppb	84
35) Caprolactam	6.90	113	43117	10389.2242367	ppb	94
39) 1,2,4,5-Tetrachlorobenzene	7.40	216	174483	10369.5400560	ppb	98
56) 2,3,4,6-Tetrachlorophenol	8.69	232	79308	9037.6792518	ppb	94
63) Atrazine	9.60	200	118234	9752.1723124	ppb	96
76) 2-nitrodiphenylamine	10.72	167	144551	10120.9861521	ppb	98
79) Benzidine	11.38	184	397924	9823.6463626	ppb	99
83) 3,3-Dichlorobenzidine	12.74	252	192792	9320.2997101	ppb	94

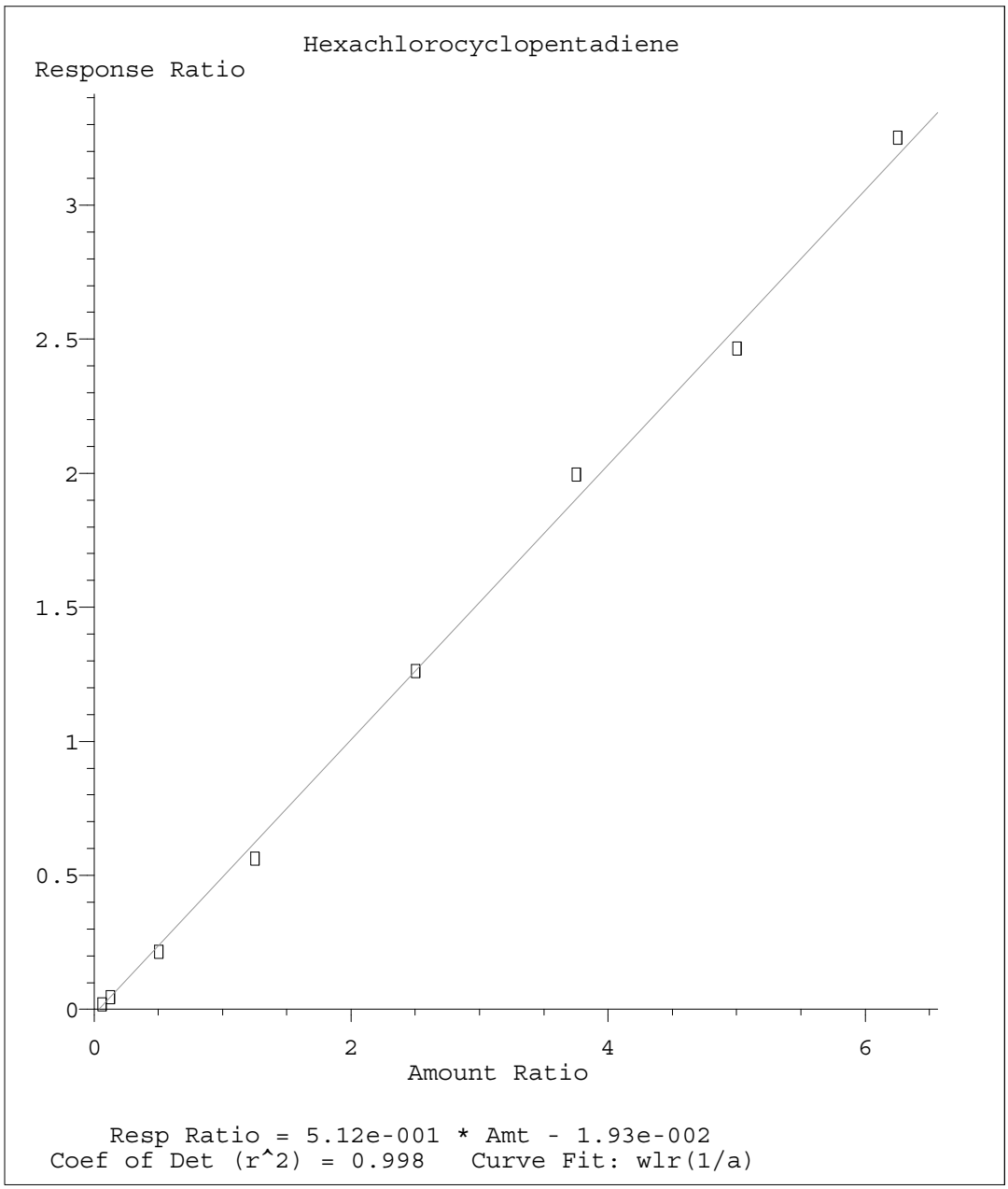
(#) = qualifier out of range (m) = manual integration
0524A_04.D S811E24P.M Tue May 24 12:10:43 2016 171 of 332 Page 1

Quantitation Report (QT Reviewed)

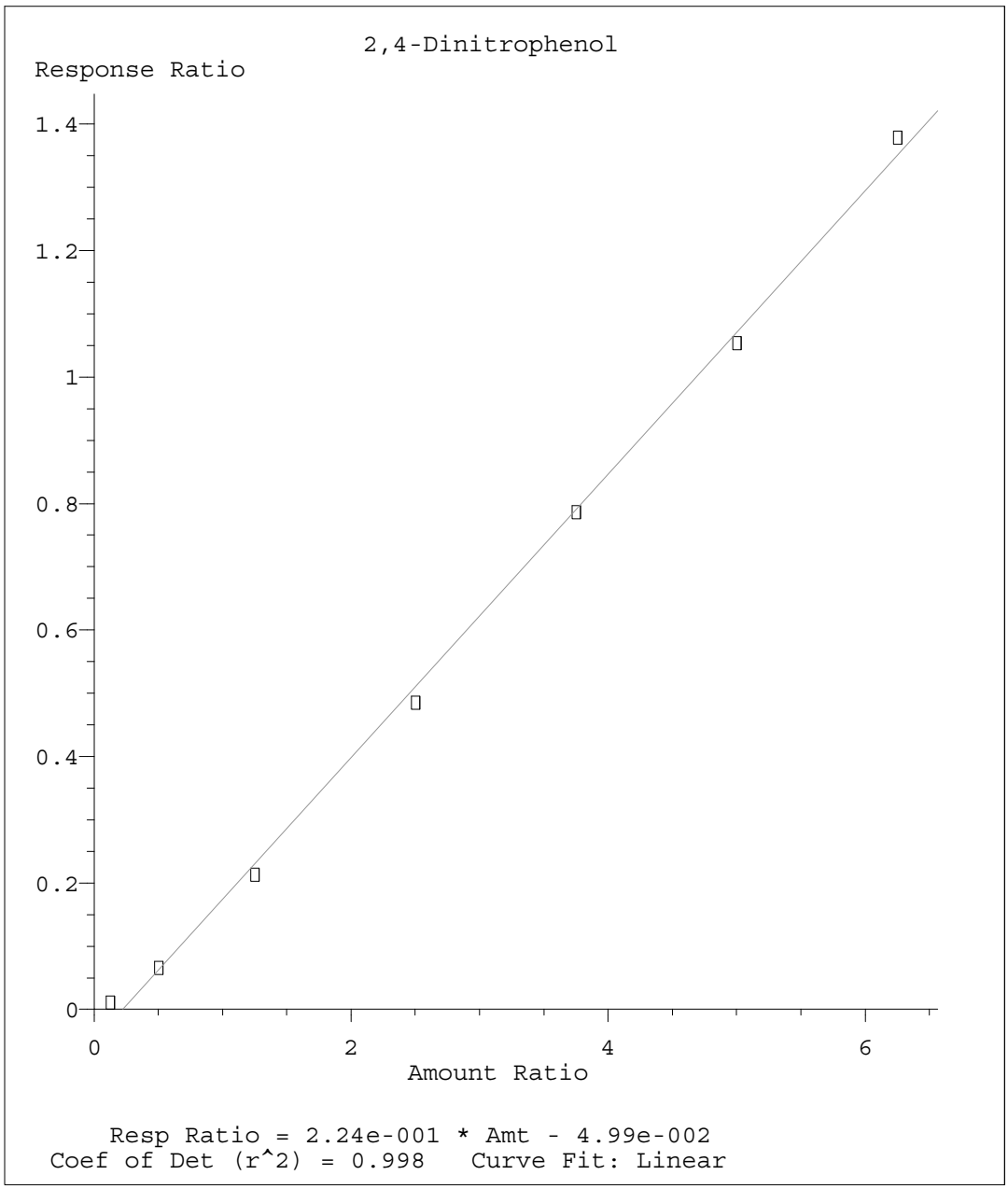
Data File : C:\MSDCHEM\1\DATA\052416A\0524A 04.D Vial: 3
Acq On : 24 May 2016 11:09 am Operator: 280
Sample : ICV TCL 10K1 PPB 16D25867 Inst : BNAMS11
Misc : 8270 TCL Calibration 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 24 12:10 2016 Quant Results File: S811E24P.RES

Method : C:\MSDCHEM\1\METHODS\S811E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue May 24 12:03:00 2016
Response via : Initial Calibration

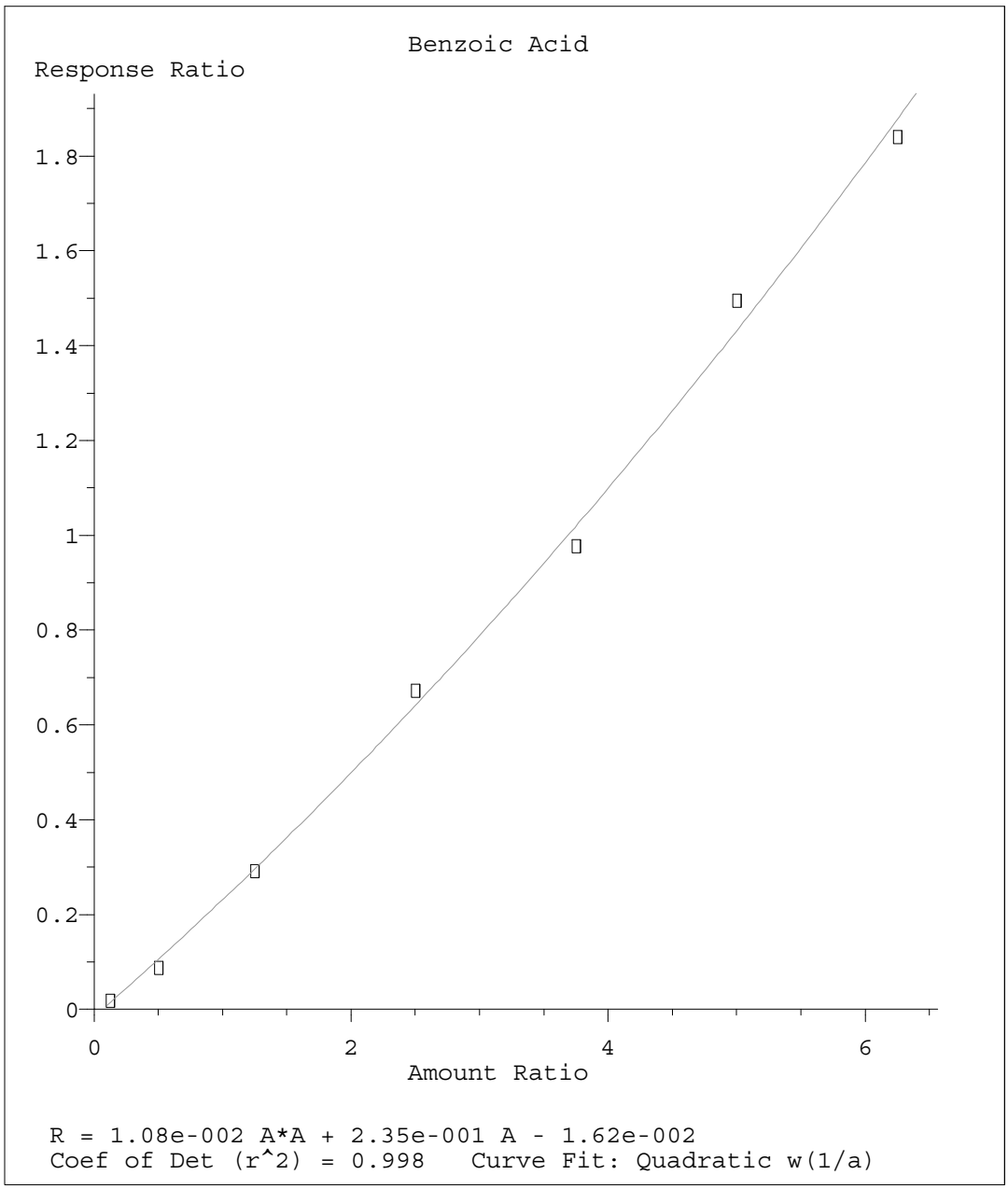




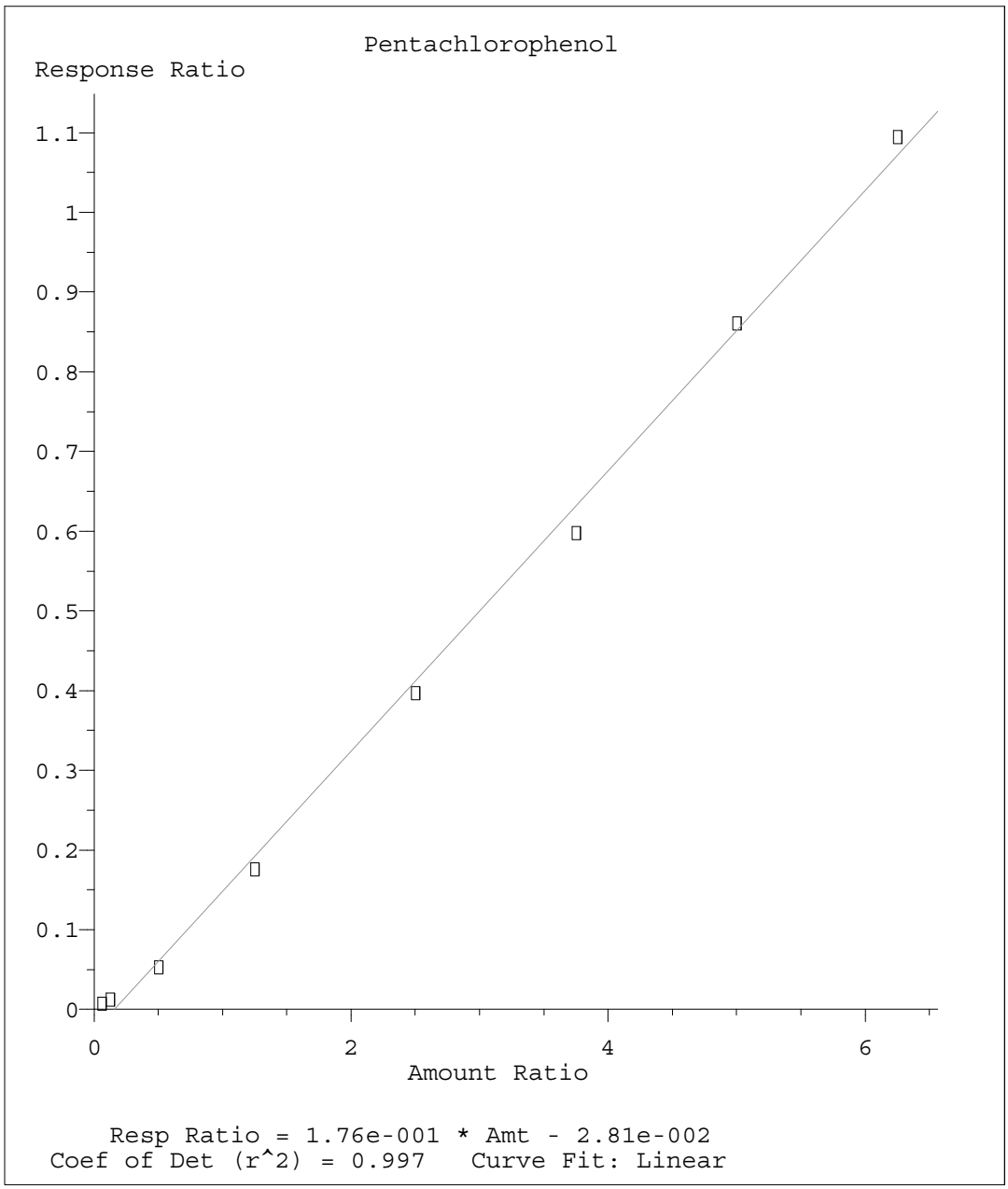
Method Name: C:\MSDCHEM\1\METHODS\S811D25P.M



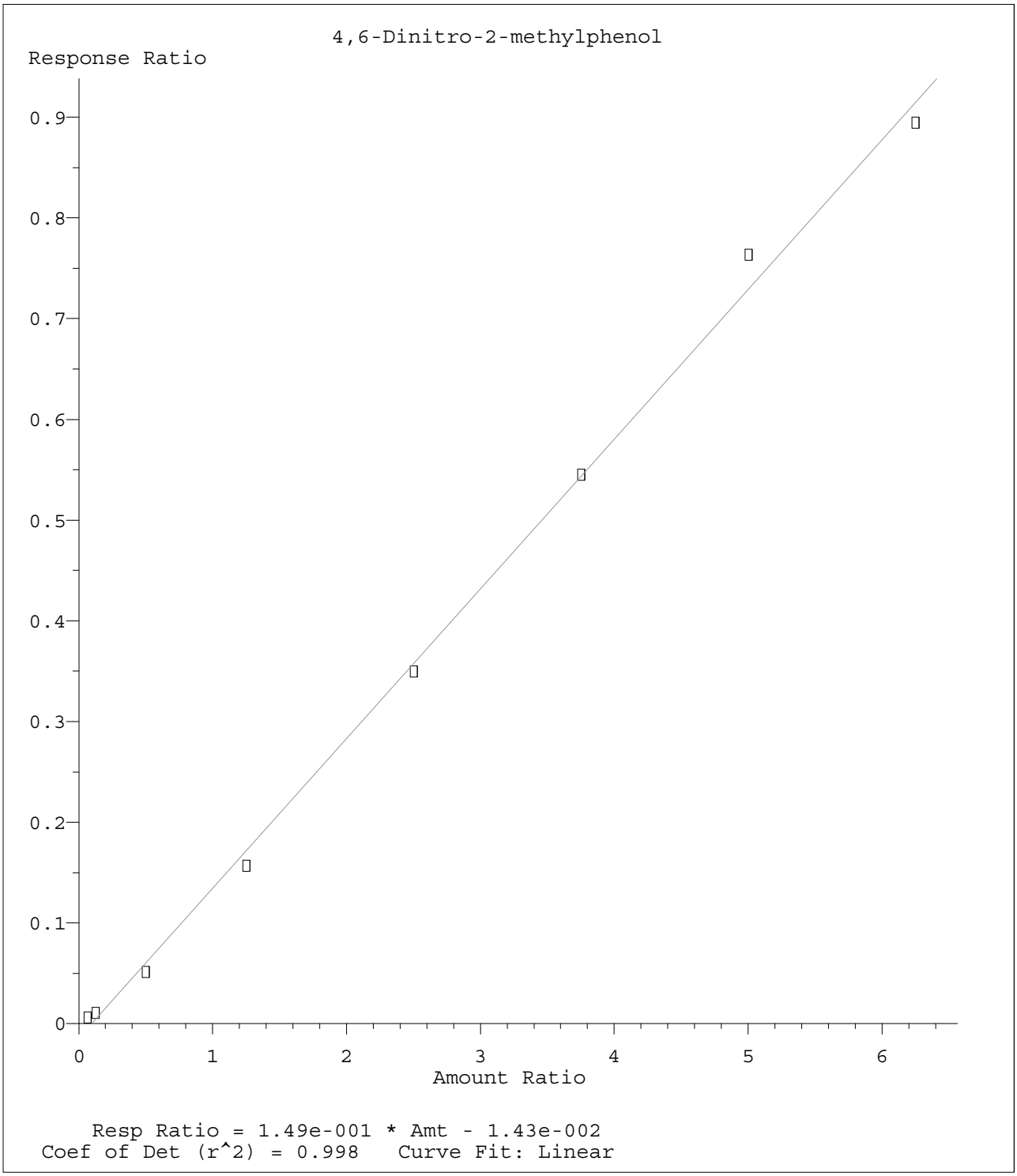
Method Name: C:\MSDCHEM\1\METHODS\S811D25P.M



Method Name: C:\MSDCHEM\1\METHODS\S811D25P.M



Method Name: C:\MSDCHEM\1\METHODS\S811D25P.M



Method Name: C:\MSDCHEM\1\METHODS\S811D25P.M
Calibration Table Last Updated: Tue Apr 26 10:47:37 2016

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516C\0425C 03MRL.D Vial: 2
Acq On : 25 Apr 2016 3:35 pm Operator: 280
Sample : MRL SVMS 10K PPB 16D25863 Inst : BNAMS11
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:54 2016 Quant Results File: S811D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:47:37 2016
Response via : Initial Calibration
DataAcq Meth : BNA11C

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.34	152	71542	8000.00 ppb	0.00
22) Naphthalene-d8	6.60	136	383240	8000.00 ppb	0.00
40) Acenaphthene-d10	8.48	164	220657	8000.00 ppb	0.00
64) Phenanthrene-d10	10.10	188	432570	8000.00 ppb	0.00
78) Chrysene-d12	12.97	240	533687	8000.00 ppb	0.00
88) Perylene-d12	14.77	264	547478	8000.00 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol	4.23	112	176091	10155.8787590 ppb	0.00
Spiked Amount 20.000	Range 10 - 74		Recovery = 50779.39%#		
7) Phenol-d5	4.95	99	216507	9676.6549505 ppb	0.00
Spiked Amount 20.000	Range 10 - 63		Recovery = 48383.27%#		
23) Nitrobenzene-d5	5.87	82	216724	9648.0079020 ppb	0.00
Spiked Amount 10.000	Range 28 - 123		Recovery = 96480.08%#		
44) 2-Fluorobiphenyl	7.74	172	377881	9624.7622387 ppb	0.00
Spiked Amount 10.000	Range 35 - 133		Recovery = 96247.62%#		
67) 2,4,6-Tribromophenol	9.33	330	60625	10116.3511720 ppb	0.00
Spiked Amount 20.000	Range 22 - 154		Recovery = 50581.76%#		
81) p-Terphenyl-d14	11.79	244	561513	9155.3563693 ppb	0.00
Spiked Amount 10.000	Range 30 - 148		Recovery = 91553.56%#		
Target Compounds					Qvalue
2) Pyridine	3.30	79	201820	10104.9214762 ppb	100
3) N-Nitrosodimethylamine	3.28	42	96480	10300.4141020 ppb	100
5) Aniline	5.03	66	114425	9793.5329602 ppb	100
6) bis(2-Chloroethyl)ether	5.07	63	116979	9744.1354193 ppb	100
8) Phenol	4.97	94	231827	10184.7266422 ppb	100
10) 2-Chlorophenol	5.14	128	171226	9667.1559718 ppb	100
11) n-Decane	5.15	41	102541	10097.8072826 ppb	100
12) 1,3-Dichlorobenzene	5.29	146	198538	9860.0296997 ppb	100
13) 1,4-Dichlorobenzene	5.35	146	198604	9785.0675728 ppb	100
14) Benzyl Alcohol	5.44	79	184973	10168.3376527 ppb	100
15) 1,2-Dichlorobenzene	5.50	146	183722	9615.0694569 ppb	100
16) bis(2-Chloroisopropyl)ethe	5.57	121	49645	9801.9039114 ppb	100
17) 2-Methylphenol	5.53	108	163299	9869.1726559 ppb	100
18) Hexachloroethane	5.83	117	84310	9661.3665633 ppb	100
19) N-Nitrosodi-n-propylamine	5.70	70	140524	9962.8301821 ppb	100
20) 3&4-Methyl phenol	5.68	107	205697	10184.7929105 ppb	100
24) Nitrobenzene	5.88	77	208983	9503.8174427 ppb	100
25) Isophorone	6.11	82	365271	9452.4308661 ppb	100
26) 2-Nitrophenol	6.20	139	88101	9403.8169427 ppb	100
27) 2,4-Dimethylphenol	6.22	107	212266	10231.6382130 ppb	100
28) bis(2-Chlorethoxy)methane	6.32	93	212219	9678.5959350 ppb	100
29) 2,4-Dichlorophenol	6.44	162	145874	9430.6122507 ppb	100
31) 1,2,4-Trichlorobenzene	6.54	180	167968	9204.9200418 ppb	100
32) Naphthalene	6.62	128	499924	9177.2056815 ppb	100
33) 4-Chloroaniline	6.67	65	77371	9638.7186443 ppb	100
34) Hexachloro-1,3-butadiene	6.74	225	117327	9346.0035023 ppb	100
36) 4-Chloro-3-methylphenol	7.15	107	177320	9723.6694561 ppb	100
37) 2-Methylnaphthalene	7.35	142	327851	9305.4114045 ppb #	1
38) 1-Methylnaphthalene	7.46	142	303309	9171.3574865 ppb #	1
41) Hexachlorocyclopentadiene	7.51	237	124092	9080.5575535 ppb	100
42) 2,4,6-Trichlorophenol	7.64	196	108498	9526.8032625 ppb	100
43) 2,4,5-Trichlorophenol	7.68	196	121075	10192.8369963 ppb	100
45) Biphenyl	7.85	154	409620	9669.2616406 ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516C\0425C 03MRL.D Vial: 2
Acq On : 25 Apr 2016 3:35 pm Operator: 280
Sample : MRL SVMS 10K PPB 16D25863 Inst : BNAMS11
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:54 2016 Quant Results File: S811D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:47:37 2016
Response via : Initial Calibration
DataAcq Meth : BNA11C

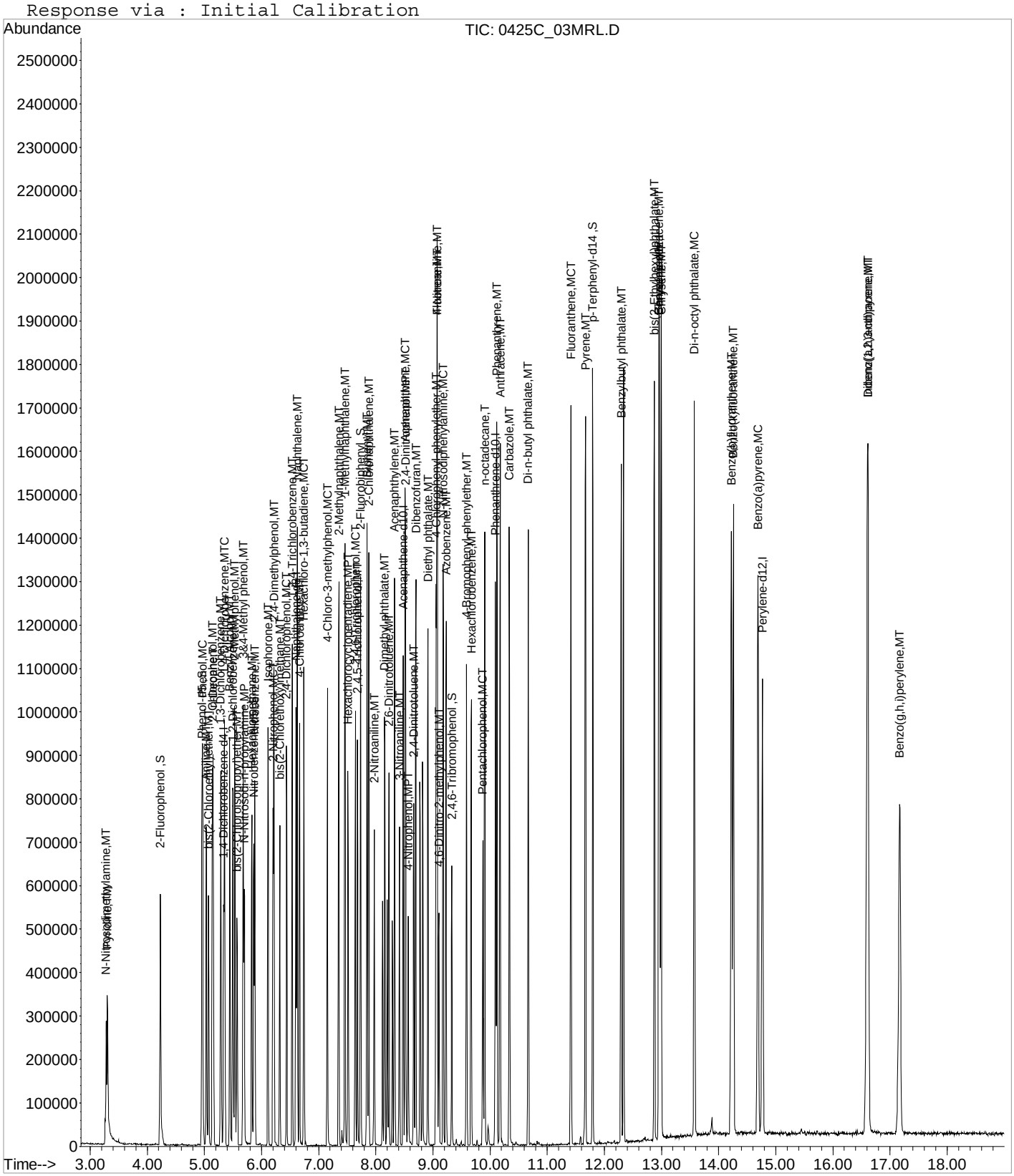
	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
46)	2-Chloronaphthalene	7.88	162	329027	9654.0637243 ppb		100
47)	2-Nitroaniline	7.98	138	104975	9958.9805812 ppb		100
48)	Acenaphthylene	8.33	152	519640	10072.4465648 ppb		100
49)	Dimethyl phthalate	8.16	163	368038	9506.2454910 ppb		100
50)	2,6-Dinitrotoluene	8.23	165	91335	10445.2534813 ppb		100
51)	3-Nitroaniline	8.41	138	85515	9906.0363001 ppb		100
52)	Acenaphthene	8.51	153	328708	9570.8932529 ppb		100
53)	2,4-Dinitrophenol	8.52	184	46820	9360.7727143 ppb		100
54)	Dibenzofuran	8.70	168	470947	9673.3270278 ppb	#	69
55)	2,4-Dinitrotoluene	8.67	165	115113	9830.8668927 ppb		100
57)	4-Nitrophenol	8.57	139	68736	10203.0798123 ppb		100
58)	Fluorene	9.07	166	375828	9379.4227817 ppb		100
59)	4-Chlorophenyl-phenylether	9.05	204	196238	9535.5914591 ppb		100
60)	Diethyl phthalate	8.91	149	404946	10109.8150171 ppb		100
61)	4-Nitroaniline	9.07	138	80049	9110.2430780 ppb		100
62)	Azobenzene	9.23	77	438422	10288.9612435 ppb	#	45
65)	4,6-Dinitro-2-methylphenol	9.11	198	68077	9235.0498006 ppb		100
66)	N-Nitrosodiphenylamine	9.18	169	316498	9383.3753683 ppb		100
68)	4-Bromophenyl-phenylether	9.59	248	129606	9392.4989788 ppb		100
69)	Hexachlorobenzene	9.67	284	134911	9647.4763822 ppb		100
70)	n-octadecane	9.91	55	66306	10420.9998791 ppb		100
71)	Pentachlorophenol	9.87	266	75756	9244.3784038 ppb		100
72)	Phenanthrene	10.12	178	606095	9808.3916371 ppb		100
73)	Anthracene	10.18	178	596092	9735.5182323 ppb		100
74)	Carbazole	10.34	167	535301	9998.6911123 ppb		100
75)	Di-n-butyl phthalate	10.67	149	693345	9802.5546188 ppb		100
77)	Fluoranthene	11.41	202	704480	9792.4438706 ppb		100
80)	Pyrene	11.67	202	718400	9433.8073251 ppb		100
82)	Benzylbutyl phthalate	12.29	149	340850	10002.2726975 ppb		100
84)	Benzo(a)anthracene	12.95	228	760247	9423.8764609 ppb		100
85)	Chrysene	12.99	228	708920	9271.6998859 ppb		100
86)	bis(2-Ethylhexyl)phthalate	12.88	149	486654	9477.2133784 ppb		100
87)	Di-n-octyl phthalate	13.58	149	893884	9983.0092089 ppb		100
89)	Benzo(b)fluoranthene	14.22	252	768753	9647.4719374 ppb		100
90)	Benzo(k)fluoranthene	14.26	252	722071	9645.8495205 ppb		100
91)	Benzo(a)pyrene	14.69	252	751584	9735.6654768 ppb		100
92)	Indeno(1,2,3-cd)pyrene	16.61	276	901565	10029.3362514 ppb		100
93)	Dibenz(a,h)anthracene	16.61	278	792964	10129.5200712 ppb		100
94)	Benzo(g,h,i)perylene	17.18	276	769603	10268.8308946 ppb		100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

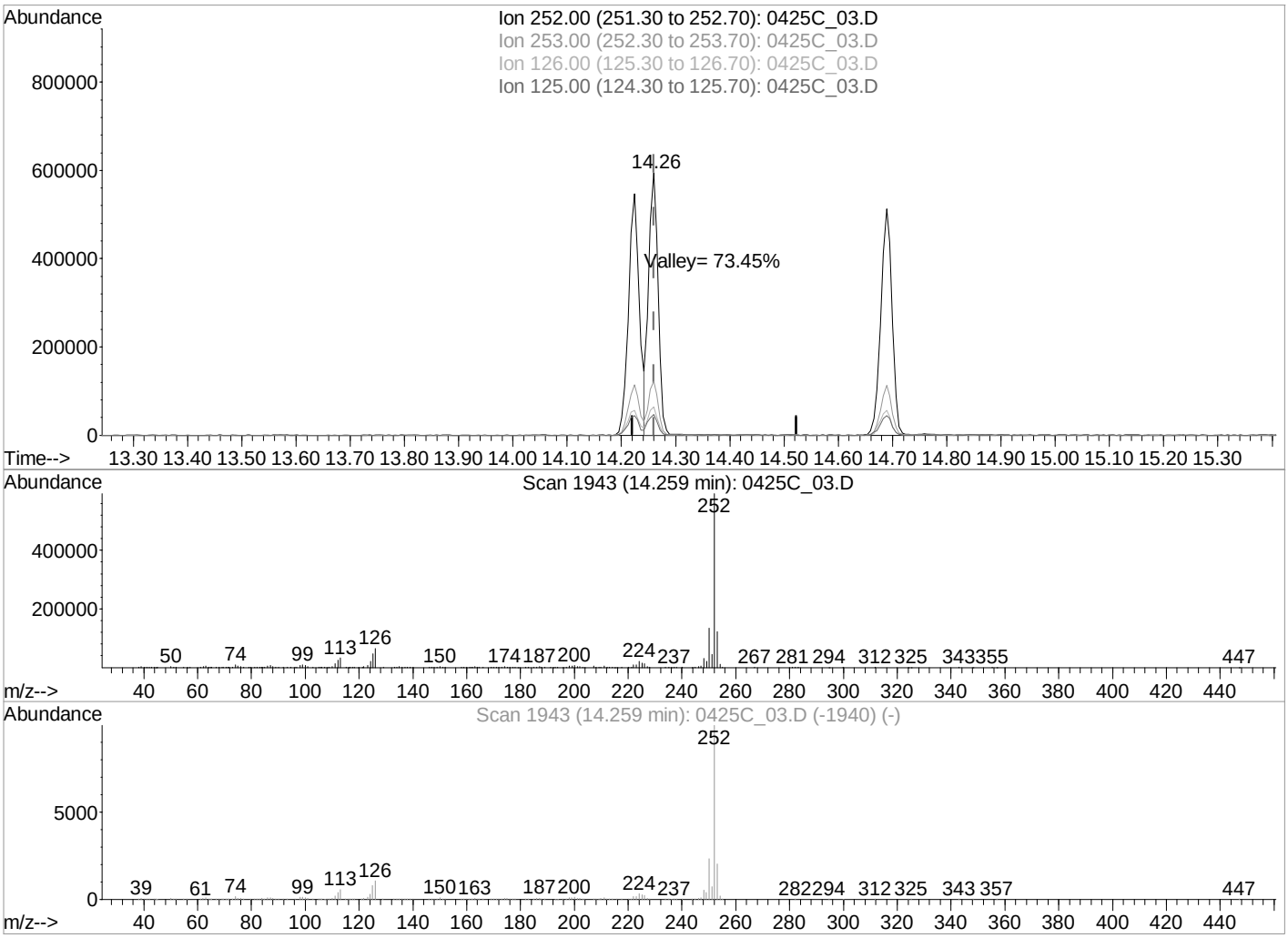
Data File : C:\MSDCHEM\1\DATA\042516C\0425C 03MRL.D Vial: 2
Acq On : 25 Apr 2016 3:35 pm Operator: 280
Sample : MRL SVMS 10K PPB 16D25863 Inst : BNAMS11
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:54 2016 Quant Results File: S811D25P.RES

Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:47:37 2016
Response via : Initial Calibration



Data File : C:\MSDCHEM\1\DATA\042516C\0425C 03.D Vial: 2
Acq On : 25 Apr 2016 3:35 pm Operator: 280
Sample : MSTD SVMS 10K PPB 16D25863 Inst : BNAMS11
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:22 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:19:55 2016
Response via : Multiple Level Calibration



TIC: 0425C_03.D

(90) Benzo(k)fluoranthene (MT)

14.26min (0.000) 9624.1836352 ppb

Qvalue = 100

response 722071

Ion	Exp%	Act%
252.00	100	100
253.00	20.50	20.51
126.00	10.80	10.79
125.00	7.90	7.87

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516C\0425C 05MRL.D Vial: 4
Acq On : 25 Apr 2016 4:22 pm Operator: 280
Sample : MRL SVMS 1K PPB 16D25863 Inst : BNAMS11
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:55 2016 Quant Results File: S811D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:47:37 2016
Response via : Initial Calibration
DataAcq Meth : BNA11C

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.34	152	79191	8000.00	ppb		0.00
22) Naphthalene-d8	6.60	136	391464	8000.00	ppb		0.00
40) Acenaphthene-d10	8.48	164	236898	8000.00	ppb		0.00
64) Phenanthrene-d10	10.09	188	489776	8000.00	ppb		0.00
78) Chrysene-d12	12.96	240	572062	8000.00	ppb		0.00
88) Perylene-d12	14.76	264	600627	8000.00	ppb		0.00
System Monitoring Compounds							
4) 2-Fluorophenol	4.23	112	19918	1037.7944067	ppb		0.00
Spiked Amount 20.000	Range 10 - 74		Recovery = 5188.97%#				
7) Phenol-d5	4.95	99	24588	992.7999971	ppb		0.00
Spiked Amount 20.000	Range 10 - 63		Recovery = 4964.00%#				
23) Nitrobenzene-d5	5.86	82	23722	1033.8581279	ppb		0.00
Spiked Amount 10.000	Range 28 - 123		Recovery = 10338.58%#				
44) 2-Fluorobiphenyl	7.73	172	44420	1053.8282177	ppb		0.00
Spiked Amount 10.000	Range 35 - 133		Recovery = 10538.28%#				
67) 2,4,6-Tribromophenol	9.32	330	6146	905.7818156	ppb		0.00
Spiked Amount 20.000	Range 22 - 154		Recovery = 4528.91%#				
81) p-Terphenyl-d14	11.80	244	68170	1036.9367254	ppb		0.00
Spiked Amount 10.000	Range 30 - 148		Recovery = 10369.37%#				
Target Compounds							Qvalue
2) Pyridine	3.31	79	21133	955.9059042	ppb	#	85
3) N-Nitrosodimethylamine	3.28	42	9431	909.6208041	ppb		95
5) Aniline	5.03	66	11859	916.9629474	ppb		85
6) bis(2-Chloroethyl)ether	5.07	63	13906	1046.4605997	ppb		92
8) Phenol	4.97	94	24882	987.5427328	ppb		95
10) 2-Chlorophenol	5.14	128	18543	945.7890084	ppb		89
11) n-Decane	5.15	41	10734	954.9406267	ppb		99
12) 1,3-Dichlorobenzene	5.28	146	21606	969.3803277	ppb		91
13) 1,4-Dichlorobenzene	5.35	146	23376	1040.4741295	ppb		94
14) Benzyl Alcohol	5.44	79	18708	929.0823930	ppb		99
15) 1,2-Dichlorobenzene	5.50	146	20689	978.1737651	ppb		97
16) bis(2-Chloroisopropyl)ethe	5.57	121	5458	973.5397910	ppb		99
17) 2-Methylphenol	5.53	108	16734	913.6550016	ppb		98
18) Hexachloroethane	5.83	117	9318	964.6447981	ppb		96
19) N-Nitrosodi-n-propylamine	5.69	70	14863	951.9715114	ppb		94
20) 3&4-Methyl phenol	5.68	107	21951	981.8921877	ppb		92
24) Nitrobenzene	5.88	77	23320	1038.2326308	ppb		90
25) Isophorone	6.11	82	41662	1055.4737403	ppb		92
26) 2-Nitrophenol	6.20	139	8793	918.8389645	ppb		87
27) 2,4-Dimethylphenol	6.21	107	22096	1042.6952678	ppb		94
28) bis(2-Chlorethoxy)methane	6.32	93	22396	999.9483228	ppb		88
29) 2,4-Dichlorophenol	6.44	162	16189	1024.6157373	ppb		96
31) 1,2,4-Trichlorobenzene	6.54	180	20526	1101.2268605	ppb		93
32) Naphthalene	6.62	128	57977	1041.9364231	ppb		97
33) 4-Chloroaniline	6.66	65	9015	1099.4761839	ppb		94
34) Hexachloro-1,3-butadiene	6.74	225	13661	1065.3430248	ppb		97
36) 4-Chloro-3-methylphenol	7.15	107	18788	1008.6303175	ppb		94
37) 2-Methylnaphthalene	7.35	142	39011	1083.9896888	ppb	#	1
38) 1-Methylnaphthalene	7.45	142	34453	1019.8924362	ppb	#	1
41) Hexachlorocyclopentadiene	7.51	237	10583	998.8131566	ppb		95
42) 2,4,6-Trichlorophenol	7.64	196	11550	944.6344141	ppb	#	85
43) 2,4,5-Trichlorophenol	7.68	196	12994	1018.9192772	ppb		96
45) Biphenyl	7.84	154	45388	997.9516947	ppb		96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516C\0425C 05MRL.D Vial: 4
Acq On : 25 Apr 2016 4:22 pm Operator: 280
Sample : MRL SVMS 1K PPB 16D25863 Inst : BNAMS11
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:55 2016 Quant Results File: S811D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:47:37 2016
Response via : Initial Calibration
DataAcq Meth : BNA11C

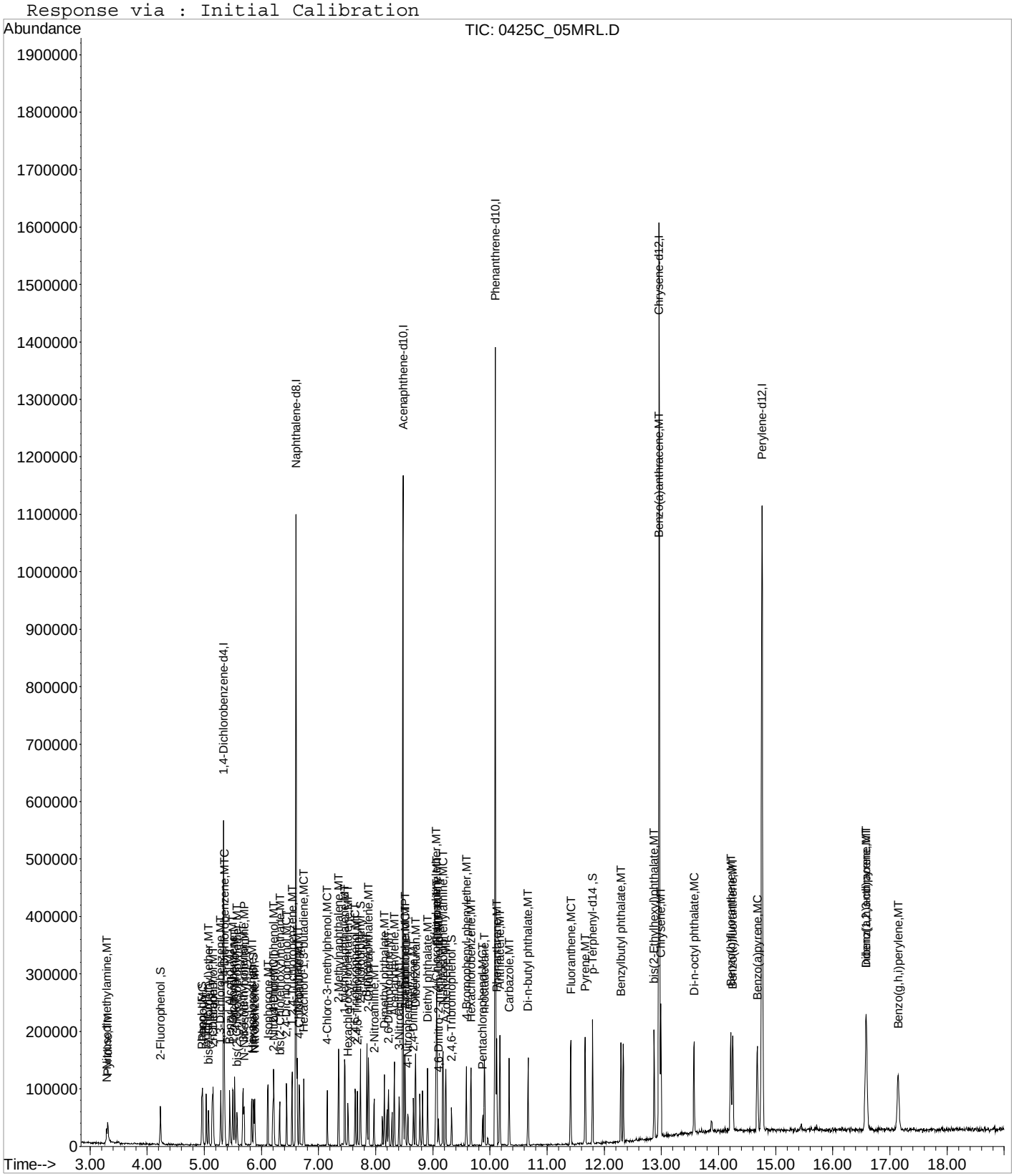
	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
46)	2-Chloronaphthalene	7.87	162	37583	1027.1322905 ppb		96
47)	2-Nitroaniline	7.97	138	11387	1006.2239219 ppb		91
48)	Acenaphthylene	8.32	152	58356	1053.5962803 ppb		95
49)	Dimethyl phthalate	8.15	163	44354	1067.1008618 ppb		94
50)	2,6-Dinitrotoluene	8.22	165	9818	1045.8299950 ppb		95
51)	3-Nitroaniline	8.41	138	9470	1021.7953198 ppb	#	80
52)	Acenaphthene	8.51	153	38331	1039.5578520 ppb		90
53)	2,4-Dinitrophenol	8.52	184	2482	2155.8946367 ppb	#	1
54)	Dibenzofuran	8.70	168	52613	1006.5914025 ppb	#	64
55)	2,4-Dinitrotoluene	8.66	165	11409	907.5516251 ppb		87
57)	4-Nitrophenol	8.56	139	7335	1014.1529582 ppb		87
58)	Fluorene	9.07	166	44288	1029.5071401 ppb		94
59)	4-Chlorophenyl-phenylether	9.05	204	23664	1071.0481581 ppb		88
60)	Diethyl phthalate	8.91	149	46553	1082.5552841 ppb		99
61)	4-Nitroaniline	9.07	138	10802	1145.0766058 ppb		87
62)	Azobenzene	9.22	77	45330	990.8803740 ppb	#	39
65)	4,6-Dinitro-2-methylphenol	9.10	198	5279	1351.2752068 ppb		89
66)	N-Nitrosodiphenylamine	9.18	169	38631	1011.5397809 ppb		93
68)	4-Bromophenyl-phenylether	9.58	248	16121	1031.8270850 ppb		94
69)	Hexachlorobenzene	9.67	284	14773	933.0264531 ppb		97
70)	n-octadecane	9.90	55	7061	980.1254575 ppb	#	97
71)	Pentachlorophenol	9.87	266	5773	1814.4797755 ppb	#	79
72)	Phenanthrene	10.12	178	69976	1000.1499259 ppb		97
73)	Anthracene	10.17	178	69260	999.0498637 ppb		97
74)	Carbazole	10.34	167	60516	998.3301980 ppb		99
75)	Di-n-butyl phthalate	10.67	149	73834	921.9453465 ppb		98
77)	Fluoranthene	11.41	202	76460	938.6757817 ppb		97
80)	Pyrene	11.67	202	79658	975.8736700 ppb		97
82)	Benzylbutyl phthalate	12.29	149	35464	970.8824141 ppb		84
84)	Benzo(a)anthracene	12.95	228	89317	1032.8863083 ppb		97
85)	Chrysene	12.99	228	82567	1007.4237053 ppb		97
86)	bis(2-Ethylhexyl)phthalate	12.87	149	56423	1025.0854263 ppb		95
87)	Di-n-octyl phthalate	13.57	149	89341	930.8391505 ppb		94
89)	Benzo(b)fluoranthene	14.21	252	88527	1012.6614286 ppb		97
90)	Benzo(k)fluoranthene	14.25	252	83761	1019.9156455 ppb		96
91)	Benzo(a)pyrene	14.68	252	87325	1031.0709049 ppb		98
92)	Indeno(1,2,3-cd)pyrene	16.58	276	106561	1080.5260881 ppb		96
93)	Dibenz(a,h)anthracene	16.59	278	90333	1051.8253965 ppb		97
94)	Benzo(g,h,i)perylene	17.14	276	89163	1084.4280520 ppb		96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516C\0425C 05MRL.D Vial: 4
Acq On : 25 Apr 2016 4:22 pm Operator: 280
Sample : MRL SVMS 1K PPB 16D25863 Inst : BNAMS11
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:55 2016 Quant Results File: S811D25P.RES

Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:47:37 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516C\0425C 11MRL.D Vial: 10
Acq On : 25 Apr 2016 6:42 pm Operator: 280
Sample : MRL TCL 10K1 PPB 16D25867 Inst : BNAMS11
Misc : 8270 TCL Calibration 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:55 2016 Quant Results File: S811D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:47:37 2016
Response via : Initial Calibration
DataAcq Meth : BNA11C

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.34	152	77497	8000.00	ppb	0.00
22) Naphthalene-d8	6.60	136	390384	8000.00	ppb	0.00
40) Acenaphthene-d10	8.48	164	247426	8000.00	ppb	0.00
64) Phenanthrene-d10	10.09	188	465239	8000.00	ppb	0.00
78) Chrysene-d12	12.96	240	573855	8000.00	ppb	0.00
88) Perylene-d12	14.76	264	592767	8000.00	ppb	0.00

System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0d	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 74		Recovery =	0.00%#		
7) Phenol-d5	0.00	99	0d	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 63		Recovery =	0.00%#		
23) Nitrobenzene-d5	0.00	82	0d	0.0000000	ppb	
Spiked Amount 10.000	Range 28 - 123		Recovery =	0.00%#		
44) 2-Fluorobiphenyl	0.00	172	0d	0.0000000	ppb	
Spiked Amount 10.000	Range 35 - 133		Recovery =	0.00%#		
67) 2,4,6-Tribromophenol	0.00	330	0d	0.0000000	ppb	
Spiked Amount 20.000	Range 22 - 154		Recovery =	0.00%#		
81) p-Terphenyl-d14	0.00	244	0d	0.0000000	ppb	
Spiked Amount 10.000	Range 30 - 148		Recovery =	0.00%#		

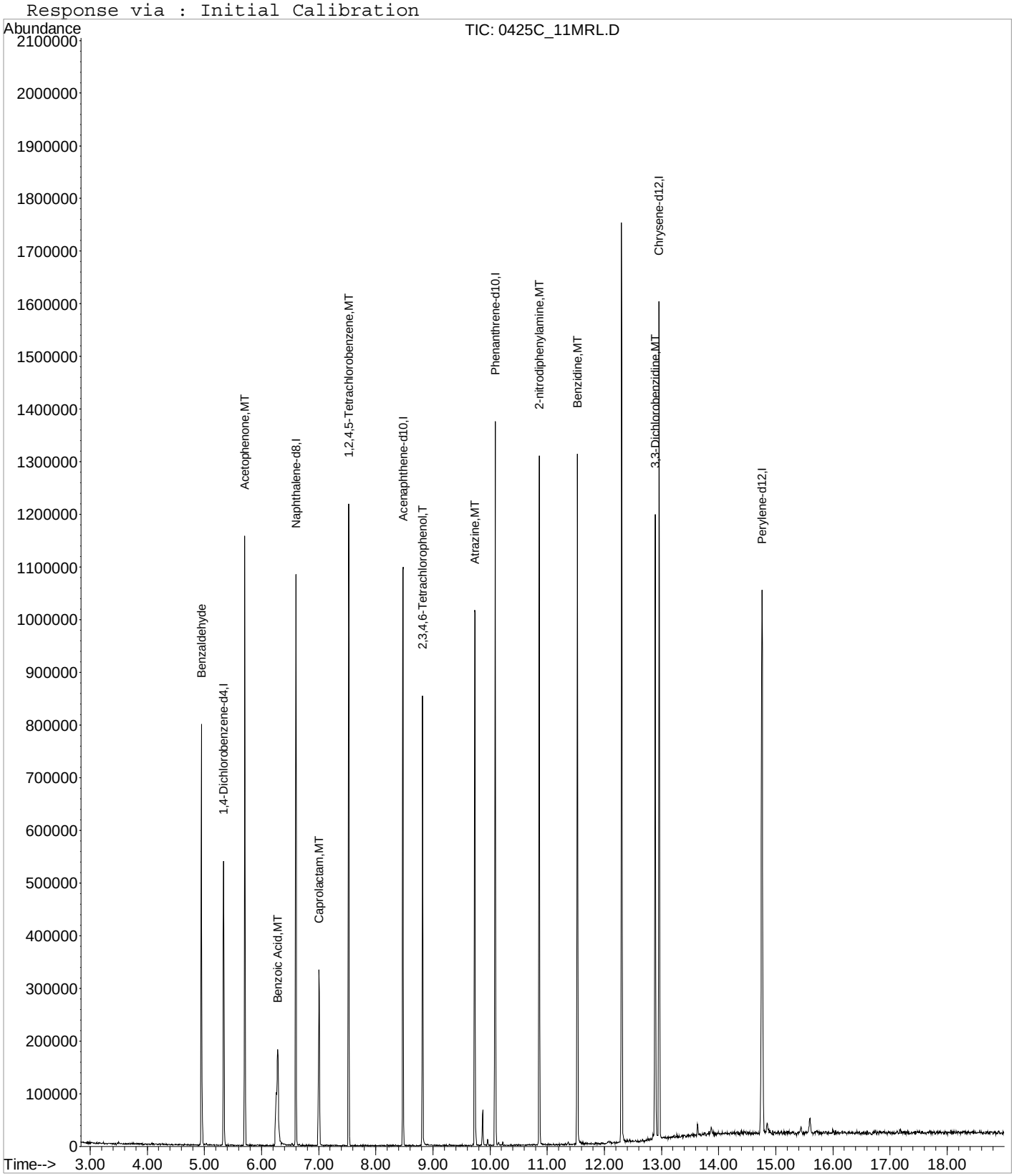
Target Compounds						Qvalue
9) Benzaldehyde	4.95	105	144800	9593.1988543	ppb	100
21) Acetophenone	5.71	105	286211	9881.4181390	ppb	100
30) Benzoic Acid	6.28	105	113788	9893.2231458	ppb	100
35) Caprolactam	7.01	113	50436	10334.4168114	ppb	100
39) 1,2,4,5-Tetrachlorobenzene	7.52	216	191527	9679.3709367	ppb	100
56) 2,3,4,6-Tetrachlorophenol	8.82	232	96303	9590.7011111	ppb	100
63) Atrazine	9.74	200	134620	9703.7407255	ppb	100
76) 2-nitrodiphenylamine	10.86	167	171082	9930.7963986	ppb	100
79) Benzidine	11.53	184	492548	9668.7938479	ppb	100
83) 3,3-Dichlorobenzidine	12.89	252	250380	9624.7987761	ppb	100

(#) = qualifier out of range (m) = manual integration
0425C_11MRL.D S811D25P.M Tue Apr 26 10:55:52 2016 185 of 332 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516C\0425C 11MRL.D Vial: 10
Acq On : 25 Apr 2016 6:42 pm Operator: 280
Sample : MRL TCL 10K1 PPB 16D25867 Inst : BNAMS11
Misc : 8270 TCL Calibration 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:55 2016 Quant Results File: S811D25P.RES

Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:47:37 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516C\0425C 18.D Vial: 17
Acq On : 25 Apr 2016 9:26 pm Operator: 280
Sample : SSCV SVMS 10K PPB 16A25209 Inst : BNAMS11
Misc : 8270 SSCV 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:57 2016 Quant Results File: S811D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:47:37 2016
Response via : Initial Calibration
DataAcq Meth : BNA11C

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.34	152	73685	8000.00	ppb	0.00
22) Naphthalene-d8	6.60	136	383341	8000.00	ppb	0.00
40) Acenaphthene-d10	8.48	164	241511	8000.00	ppb	0.00
64) Phenanthrene-d10	10.09	188	462196	8000.00	ppb	0.00
78) Chrysene-d12	12.96	240	538638	8000.00	ppb	0.00
88) Perylene-d12	14.76	264	572701	8000.00	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0d	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 74		Recovery =	0.00%#		
7) Phenol-d5	0.00	99	0d	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 63		Recovery =	0.00%#		
23) Nitrobenzene-d5	0.00	82	0d	0.0000000	ppb	
Spiked Amount 10.000	Range 28 - 123		Recovery =	0.00%#		
44) 2-Fluorobiphenyl	7.77	172	77	1.7918699	ppb	0.04
Spiked Amount 10.000	Range 35 - 133		Recovery =	17.92%#		
67) 2,4,6-Tribromophenol	0.00	330	0	0.0000000	ppb	
Spiked Amount 20.000	Range 22 - 154		Recovery =	0.00%#		
81) p-Terphenyl-d14	11.80	244	108	1.7447324	ppb	0.00
Spiked Amount 10.000	Range 30 - 148		Recovery =	17.45%#		
Target Compounds						Qvalue
2) Pyridine	3.31	79	197805m	9615.8569852	ppb	
3) N-Nitrosodimethylamine	3.28	42	99355	10298.8588676	ppb	99
5) Aniline	5.03	66	115467	9595.2951836	ppb	98
6) bis(2-Chloroethyl)ether	5.07	63	120225	9723.2663222	ppb	97
8) Phenol	4.97	94	231448	9872.3554427	ppb	89
10) 2-Chlorophenol	5.14	128	178160	9766.1009121	ppb	99
12) 1,3-Dichlorobenzene	5.28	146	202080	9744.0589511	ppb	94
13) 1,4-Dichlorobenzene	5.35	146	211761	10129.8684661	ppb	96
14) Benzyl Alcohol	5.44	79	194132	10361.4547977	ppb	99
15) 1,2-Dichlorobenzene	5.50	146	206118	10473.4356858	ppb	94
16) bis(2-Chloroisopropyl)ethe	5.57	121	67115	12865.7915096	ppb	80
17) 2-Methylphenol	5.53	108	166450	9767.0409850	ppb	95
18) Hexachloroethane	5.82	117	88211	9814.4101920	ppb #	88
19) N-Nitrosodi-n-propylamine	5.70	70	140286	9656.6956886	ppb	94
20) 3&4-Methyl phenol	5.68	107	205673	9887.4321667	ppb	96
24) Nitrobenzene	5.88	77	232398	10565.8653654	ppb	98
25) Isophorone	6.11	82	384083	9936.6263976	ppb	99
26) 2-Nitrophenol	6.20	139	95501	10191.0001433	ppb	93
27) 2,4-Dimethylphenol	6.21	107	199694	9623.1070173	ppb	94
28) bis(2-Chlorethoxy)methane	6.32	93	231003	10532.4953368	ppb	99
29) 2,4-Dichlorophenol	6.44	162	160084	10346.5481783	ppb	97
31) 1,2,4-Trichlorobenzene	6.54	180	184866	10128.2887370	ppb	95
32) Naphthalene	6.62	128	548821	10072.1633286	ppb	98
33) 4-Chloroaniline	6.66	65	79450	9895.1083697	ppb	95
34) Hexachloro-1,3-butadiene	6.74	225	141895	11300.0567810	ppb	95
36) 4-Chloro-3-methylphenol	7.15	107	179461	9838.4822850	ppb	89
37) 2-Methylnaphthalene	7.35	142	369334	10480.0635363	ppb #	1
38) 1-Methylnaphthalene	7.45	142	347321	10499.4107836	ppb #	1
41) Hexachlorocyclopentadiene	7.51	237	108605	7321.4469587	ppb	89
42) 2,4,6-Trichlorophenol	7.64	196	120333	9653.6378240	ppb	88
43) 2,4,5-Trichlorophenol	7.68	196	126619	9739.1324849	ppb	93
46) 2-Chloronaphthalene	7.88	162	357698	9589.0576255	ppb	96
47) 2-Nitroaniline	7.97	138	109626	9502.1824150	ppb	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516C\0425C 18.D Vial: 17
Acq On : 25 Apr 2016 9:26 pm Operator: 280
Sample : SSCV SVMS 10K PPB 16A25209 Inst : BNAMS11
Misc : 8270 SSCV 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:57 2016 Quant Results File: S811D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:47:37 2016
Response via : Initial Calibration
DataAcq Meth : BNA11C

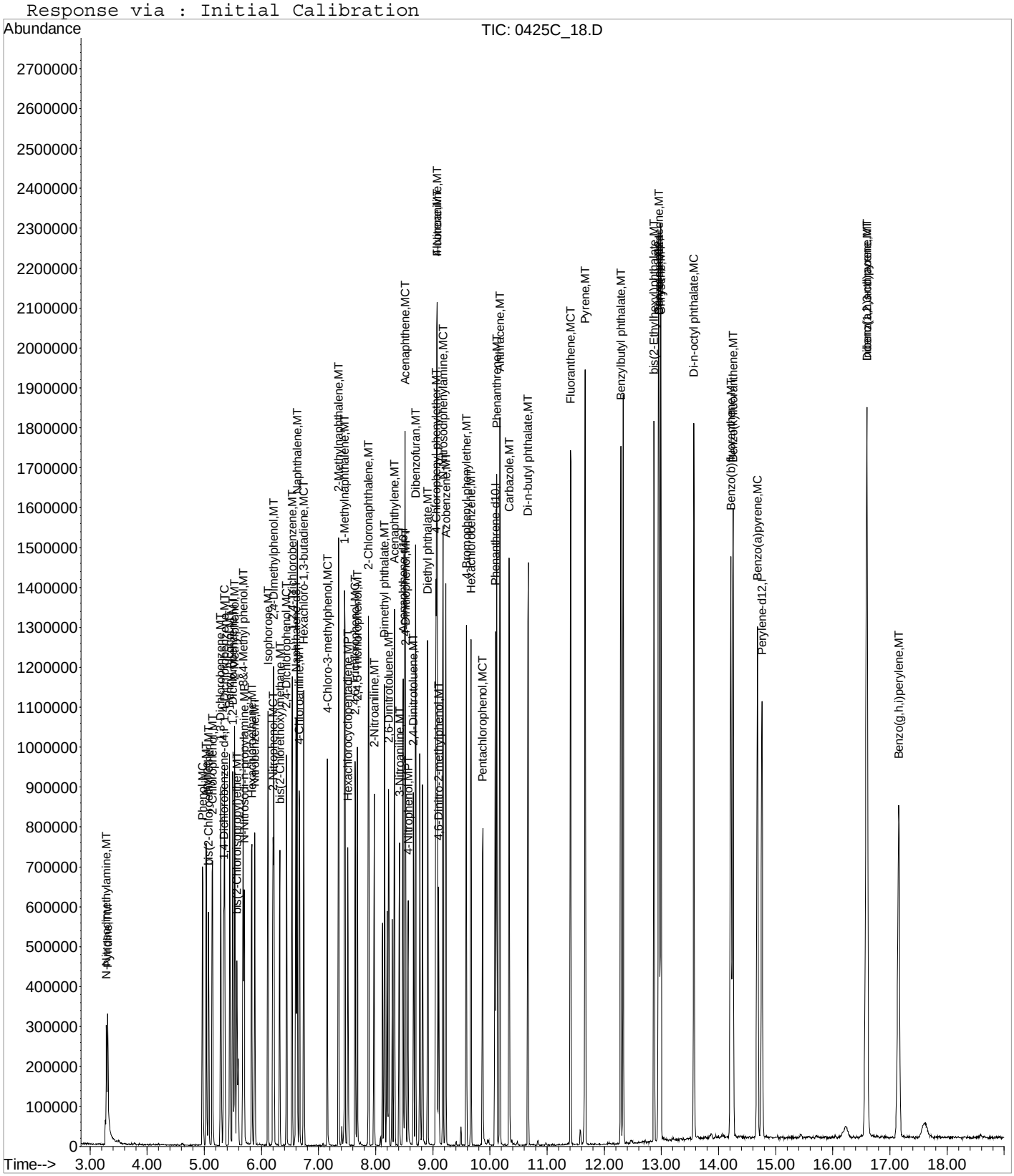
	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
48)	Acenaphthylene	8.32	152	530431	9393.8168549 ppb		95
49)	Dimethyl phthalate	8.15	163	403711	9527.2539043 ppb		93
50)	2,6-Dinitrotoluene	8.22	165	95501	9978.6195067 ppb		92
51)	3-Nitroaniline	8.41	138	87051	9213.2355065 ppb	#	89
52)	Acenaphthene	8.51	153	377141	10032.9059223 ppb		97
53)	2,4-Dinitrophenol	8.52	184	49656	9125.7751933 ppb	#	66
54)	Dibenzofuran	8.70	168	494201	9274.4518014 ppb	#	69
55)	2,4-Dinitrotoluene	8.66	165	125554	9796.6770143 ppb		91
57)	4-Nitrophenol	8.57	139	70853	9609.1741698 ppb		97
58)	Fluorene	9.07	166	434476	9906.8038464 ppb		95
59)	4-Chlorophenyl-phenylether	9.05	204	211673	9397.4664762 ppb		91
60)	Diethyl phthalate	8.91	149	419741	9574.3275641 ppb		96
61)	4-Nitroaniline	9.07	138	98608	10253.3786890 ppb		88
62)	Azobenzene	9.22	77	459532	9853.1647596 ppb	#	38
65)	4,6-Dinitro-2-methylphenol	9.10	198	75394	9543.9094302 ppb		87
66)	N-Nitrosodiphenylamine	9.18	169	356694	9897.2408277 ppb		96
68)	4-Bromophenyl-phenylether	9.58	248	145464	9866.0153964 ppb		95
69)	Hexachlorobenzene	9.67	284	150878	10097.7007282 ppb		97
71)	Pentachlorophenol	9.87	266	92431	10374.8184670 ppb		91
72)	Phenanthrene	10.12	178	634296	9606.8118179 ppb		96
73)	Anthracene	10.17	178	668089	10211.9884812 ppb		98
74)	Carbazole	10.34	167	584957	10225.8461325 ppb		99
75)	Di-n-butyl phthalate	10.67	149	744385	9849.5799524 ppb		98
77)	Fluoranthene	11.41	202	751844	9780.9350487 ppb		98
80)	Pyrene	11.67	202	793312	10321.7737956 ppb		98
82)	Benzylbutyl phthalate	12.29	149	359860	10463.0572878 ppb		88
84)	Benzo(a)anthracene	12.95	228	843991	10365.7879369 ppb		98
85)	Chrysene	12.99	228	797205	10330.5105553 ppb		99
86)	bis(2-Ethylhexyl)phthalate	12.87	149	519622	10026.2268535 ppb		97
87)	Di-n-octyl phthalate	13.57	149	928014	10268.9129218 ppb		95
89)	Benzo(b)fluoranthene	14.21	252	816249m	9792.3762795 ppb		
90)	Benzo(k)fluoranthene	14.25	252	800586	10223.6812608 ppb		97
91)	Benzo(a)pyrene	14.68	252	789046	9770.7785413 ppb		96
92)	Indeno(1,2,3-cd)pyrene	16.59	276	957190	10179.1621370 ppb		96
93)	Dibenz(a,h)anthracene	16.60	278	858697	10486.1019178 ppb		94
94)	Benzo(g,h,i)perylene	17.15	276	826984	10548.4849562 ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

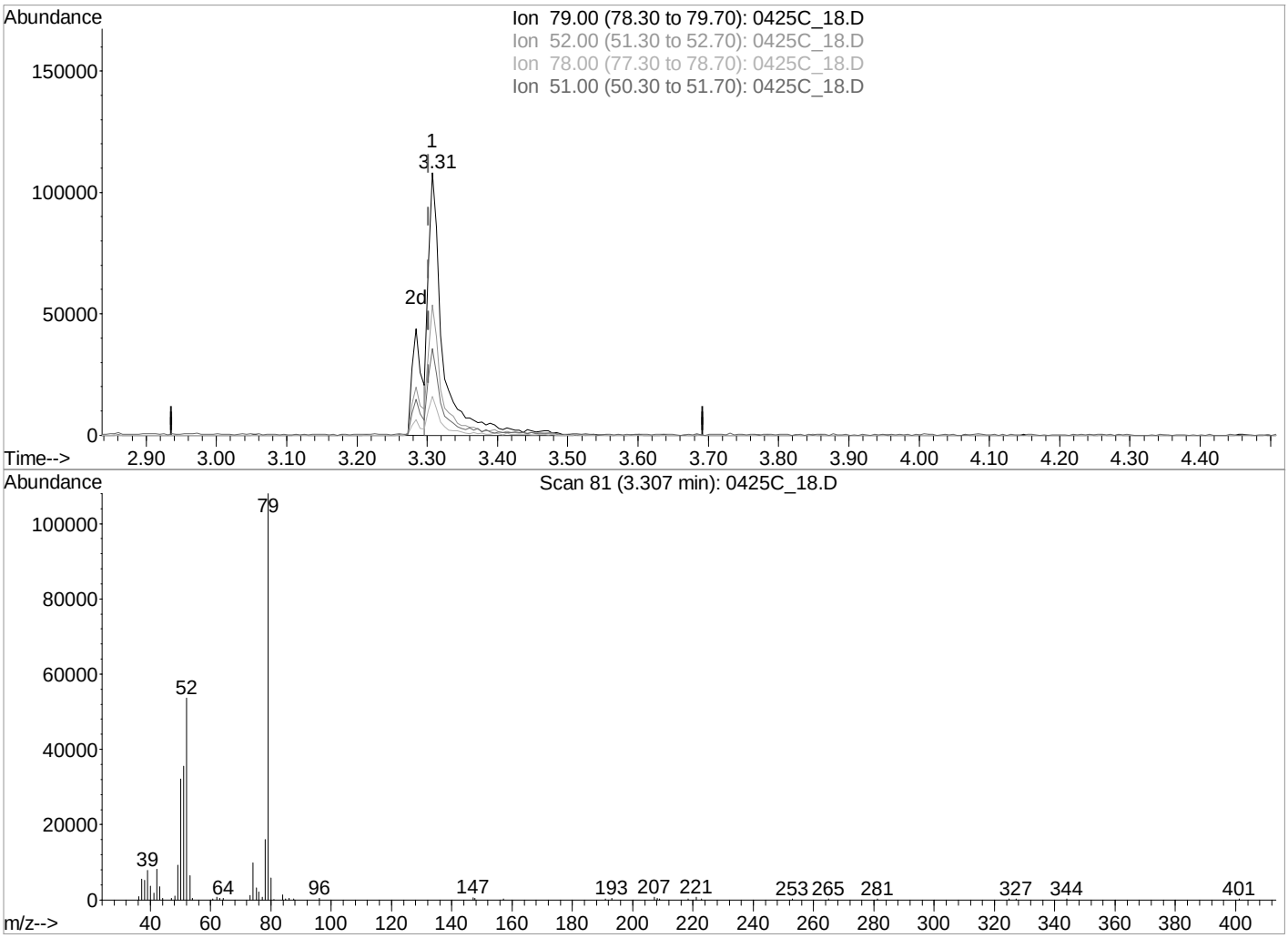
Data File : C:\MSDCHEM\1\DATA\042516C\0425C 18.D Vial: 17
Acq On : 25 Apr 2016 9:26 pm Operator: 280
Sample : SSCV SVMS 10K PPB 16A25209 Inst : BNAMS11
Misc : 8270 SSCV 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:57 2016 Quant Results File: S811D25P.RES

Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:47:37 2016
Response via : Initial Calibration



Data File : C:\MSDCHEM\1\DATA\042516C\0425C 18.D Vial: 17
Acq On : 25 Apr 2016 9:26 pm Operator: 280
Sample : SSCV SVMS 10K PPB 16A25209 Inst : BNAMS11
Misc : 8270 SSCV 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:49 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:47:37 2016
Response via : Multiple Level Calibration



TIC: 0425C_18.D

(2) Pyridine (TM)

3.31min (+0.006) 7775.1329148 ppb

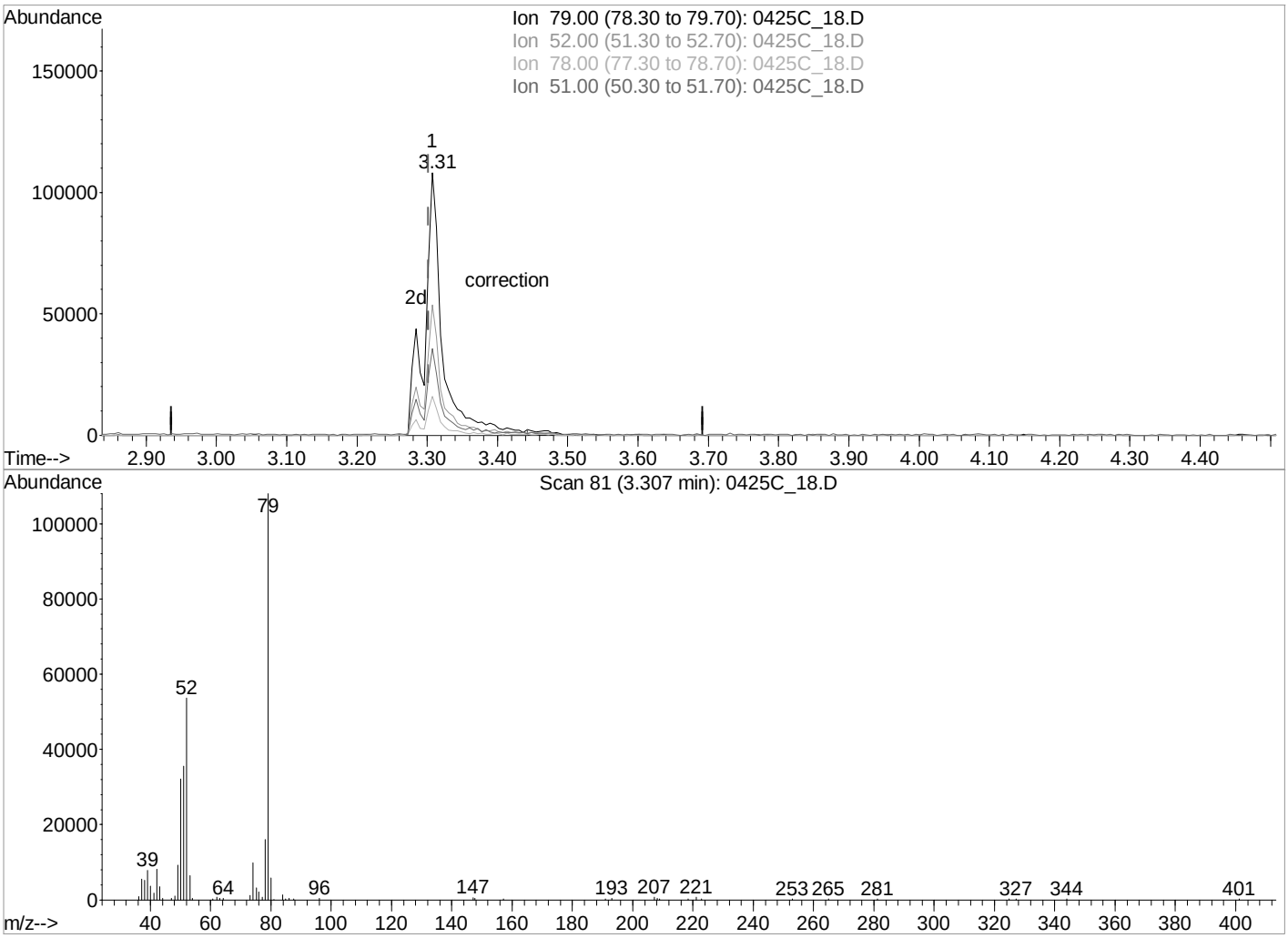
Qvalue = 98

response 159940

Ion	Exp%	Act%
79.00	100	100
52.00	49.90	49.28
78.00	15.70	14.80
51.00	29.80	32.35

Data File : C:\MSDCHEM\1\DATA\042516C\0425C 18.D Vial: 17
Acq On : 25 Apr 2016 9:26 pm Operator: 280
Sample : SSCV SVMS 10K PPB 16A25209 Inst : BNAMS11
Misc : 8270 SSCV 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:56 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:47:37 2016
Response via : Multiple Level Calibration



TIC: 0425C_18.D

(2) Pyridine (TM)

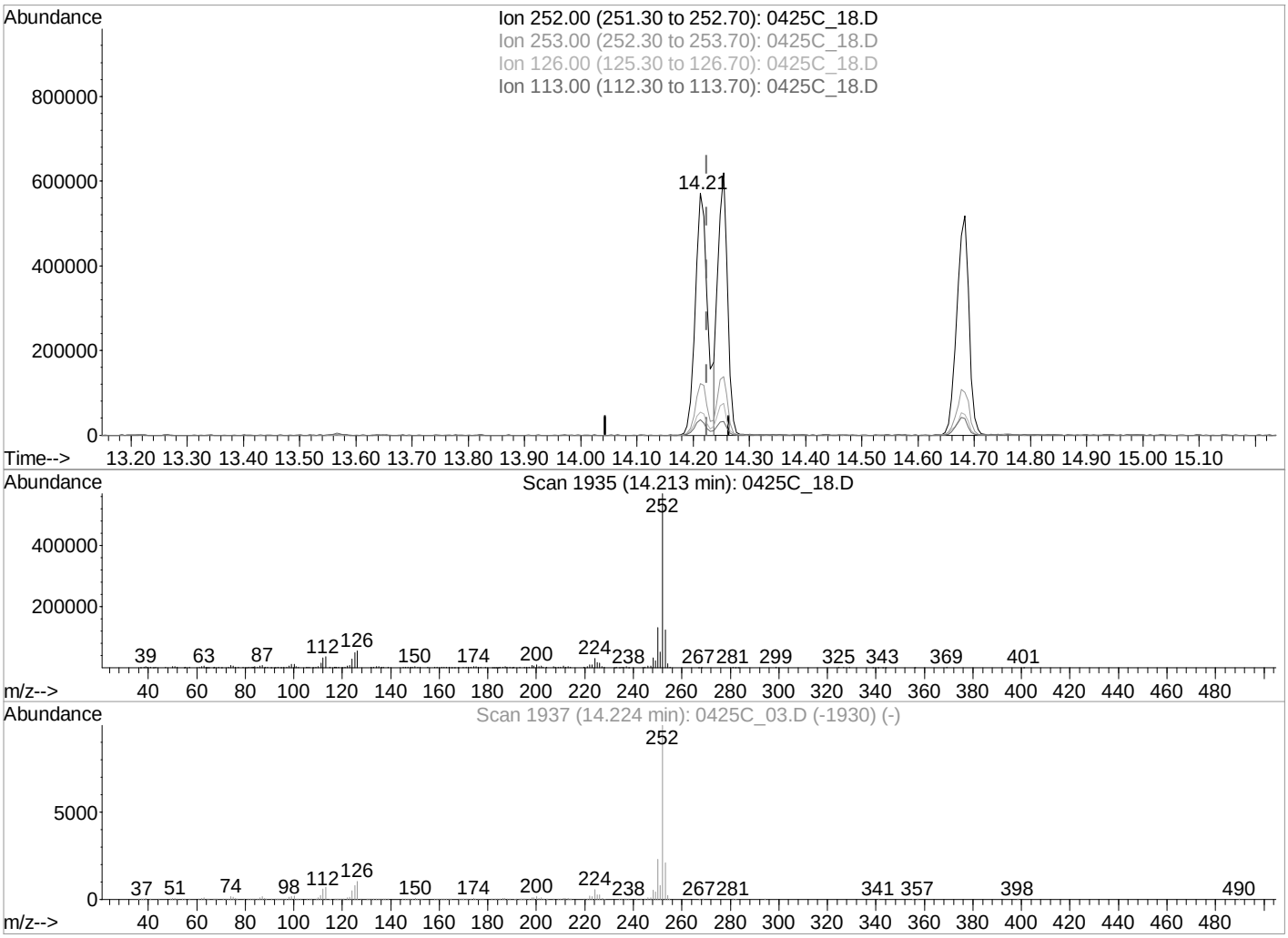
3.31min (+0.006) 9615.8569852 ppb m

response 197805

Ion	Exp%	Act%
79.00	100	100
52.00	49.90	49.59
78.00	15.70	14.80
51.00	29.80	32.89

Data File : C:\MSDCHEM\1\DATA\042516C\0425C 18.D Vial: 17
Acq On : 25 Apr 2016 9:26 pm Operator: 280
Sample : SSCV SVMS 10K PPB 16A25209 Inst : BNAMS11
Misc : 8270 SSCV 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:57 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:47:37 2016
Response via : Multiple Level Calibration



TIC: 0425C_18.D

(89) Benzo(b)fluoranthene (MT)

14.21min (-0.012) 10523.4612922 ppb

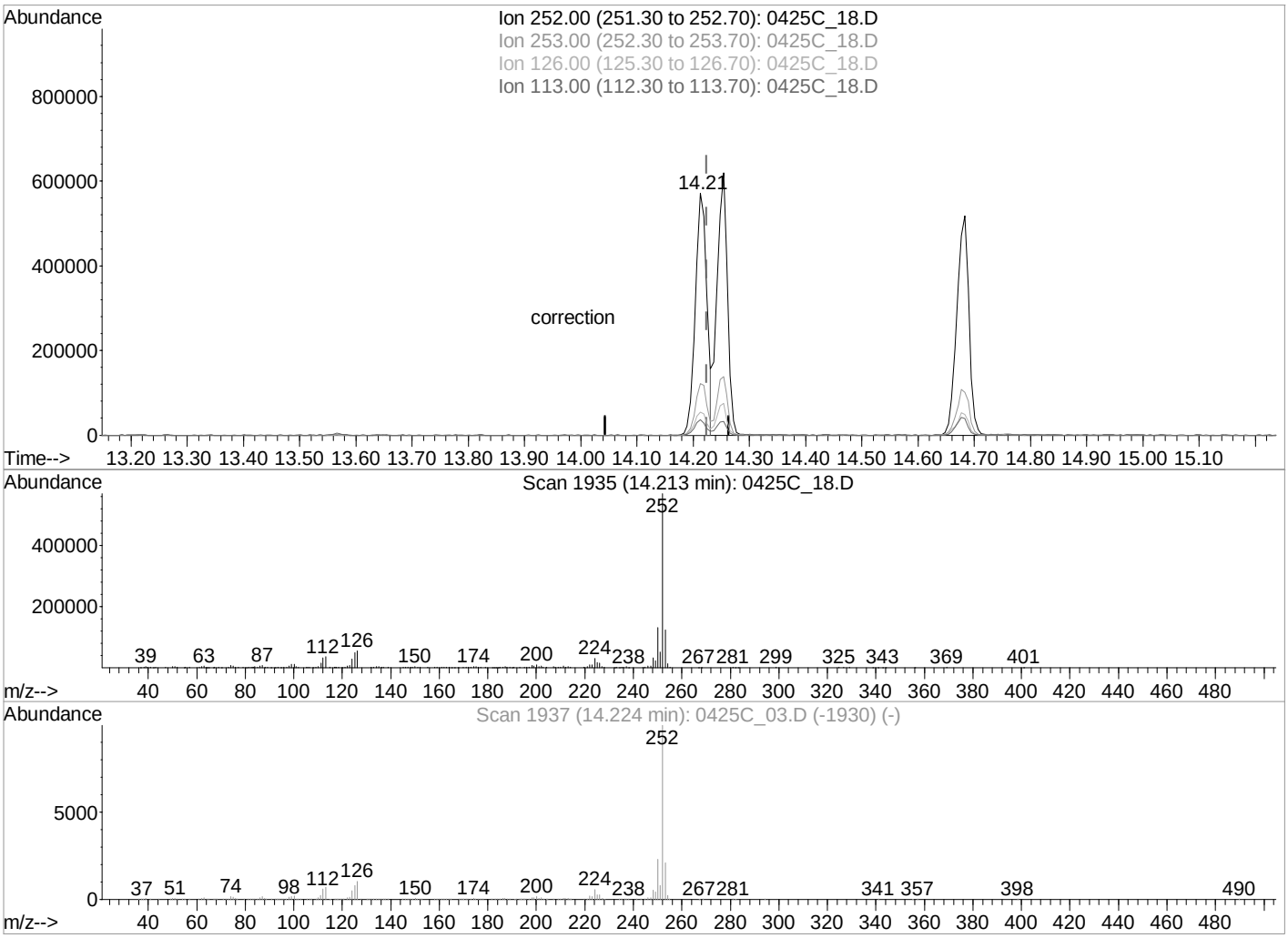
Qvalue = 98

response 877189

Ion	Exp%	Act%
252.00	100	100
253.00	20.90	21.59
126.00	10.20	8.96
113.00	6.90	6.36

Data File : C:\MSDCHEM\1\DATA\042516C\0425C 18.D Vial: 17
Acq On : 25 Apr 2016 9:26 pm Operator: 280
Sample : SSCV SVMS 10K PPB 16A25209 Inst : BNAMS11
Misc : 8270 SSCV 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:57 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:47:37 2016
Response via : Multiple Level Calibration



TIC: 0425C_18.D

(89) Benzo(b)fluoranthene (MT)

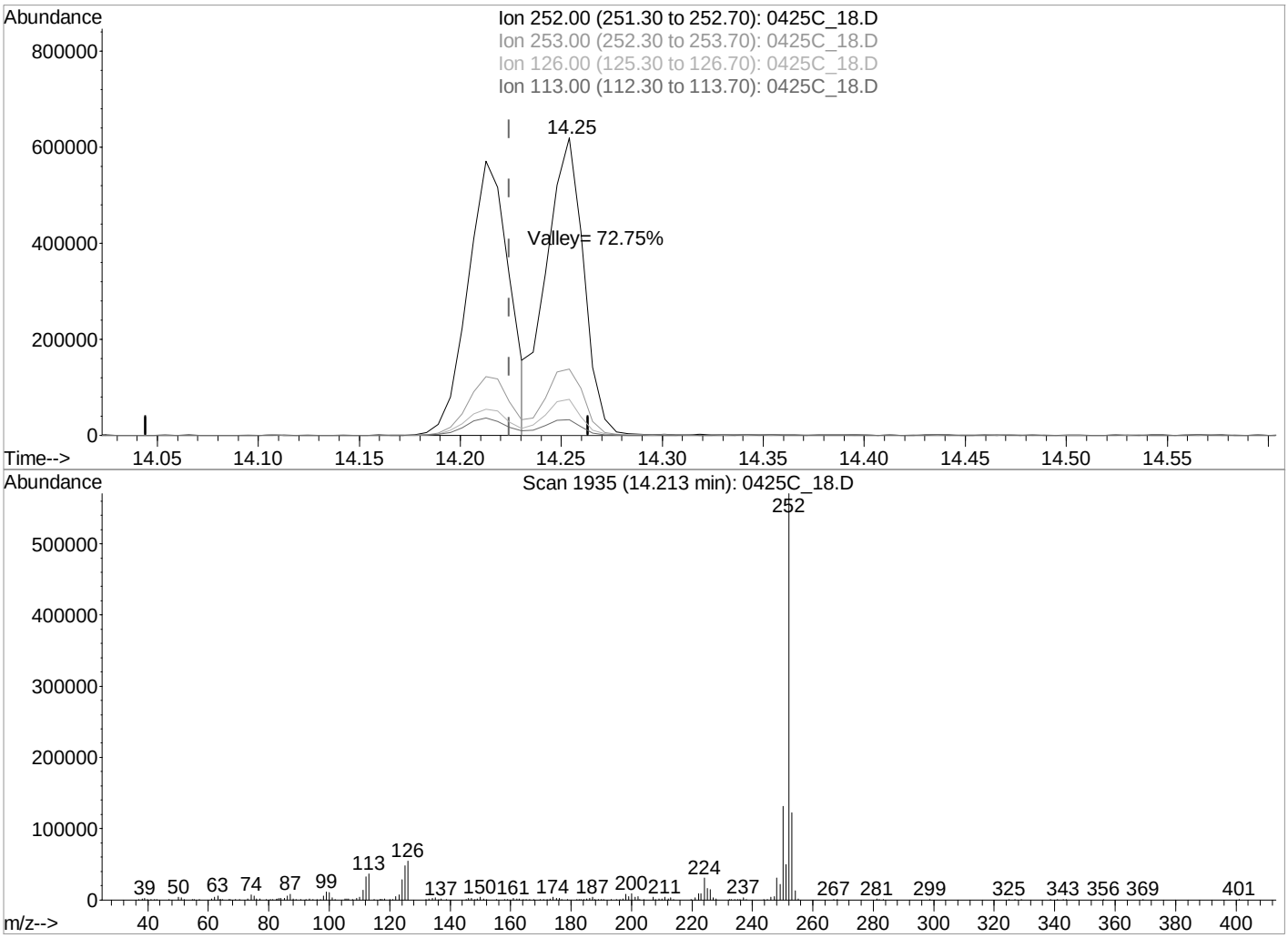
14.21min (-0.012) 9792.3762795 ppb m

response 816249

Ion	Exp%	Act%
252.00	100	100
253.00	20.90	21.45
126.00	10.20	9.51
113.00	6.90	6.33

Data File : C:\MSDCHEM\1\DATA\042516C\0425C 18.D Vial: 17
Acq On : 25 Apr 2016 9:26 pm Operator: 280
Sample : SSCV SVMS 10K PPB 16A25209 Inst : BNAMS11
Misc : 8270 SSCV 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:57 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:47:37 2016
Response via : Multiple Level Calibration



TIC: 0425C_18.D

(89) Benzo(b)fluoranthene (MT)

14.21min (-0.012) 9792.3762795 ppb m

response 816249

Ion	Exp%	Act%
252.00	100	100
253.00	20.90	21.45
126.00	10.20	9.51
113.00	6.90	6.33

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516C\0425C 03.D Vial: 2
Acq On : 25 Apr 2016 3:35 pm Operator: 280
Sample : MSTD SVMS 10K PPB 16D25863 Inst : BNAMS11
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:22 2016 Quant Results File: S811D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:19:55 2016
Response via : Initial Calibration
DataAcq Meth : BNA11C

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.34	152	71542	8000.00 ppb	0.00
22) Naphthalene-d8	6.60	136	383240	8000.00 ppb	0.00
40) Acenaphthene-d10	8.48	164	220657	8000.00 ppb	0.00
64) Phenanthrene-d10	10.10	188	432570	8000.00 ppb	0.00
78) Chrysene-d12	12.97	240	533687	8000.00 ppb	0.00
88) Perylene-d12	14.77	264	547478	8000.00 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol	4.23	112	176091	16326.6135946 ppb	0.00
Spiked Amount 20.000	Range 10 - 74		Recovery = 81633.07%#		
7) Phenol-d5	4.95	99	216507	15507.5618686 ppb	0.00
Spiked Amount 20.000	Range 10 - 63		Recovery = 77537.81%#		
23) Nitrobenzene-d5	5.87	82	216724	12607.9864289 ppb	0.00
Spiked Amount 10.000	Range 28 - 123		Recovery = 126079.86%#		
44) 2-Fluorobiphenyl	7.74	172	377881	10965.3977248 ppb	0.00
Spiked Amount 10.000	Range 35 - 133		Recovery = 109653.98%#		
67) 2,4,6-Tribromophenol	9.33	330	60625	10030.9687631 ppb	0.00
Spiked Amount 20.000	Range 22 - 154		Recovery = 50154.84%#		
81) p-Terphenyl-d14	11.79	244	561522	10170.8702822 ppb	0.00
Spiked Amount 10.000	Range 30 - 148		Recovery = 101708.70%#		
Target Compounds					Qvalue
2) Pyridine	3.30	79	201820	15229.2694180 ppb	100
3) N-Nitrosodimethylamine	3.28	42	96480	12412.9211667 ppb	100
5) Aniline	5.03	66	114425	16873.0543961 ppb	100
6) bis(2-Chloroethyl)ether	5.07	63	116979	14183.7931651 ppb	100
8) Phenol	4.97	94	231827	16101.4609681 ppb	100
10) 2-Chlorophenol	5.14	128	171226	13861.8429843 ppb	100
11) n-Decane	5.15	41	102541	13315.1050899 ppb	100
12) 1,3-Dichlorobenzene	5.29	146	198538	14186.2874631 ppb	100
13) 1,4-Dichlorobenzene	5.35	146	198604	14044.7360638 ppb	100
14) Benzyl Alcohol	5.44	79	184973	16867.6823886 ppb	100
15) 1,2-Dichlorobenzene	5.50	146	183722	13629.5012748 ppb	100
16) bis(2-Chloroisopropyl)ethe	5.57	121	49645	12990.8717638 ppb	100
17) 2-Methylphenol	5.53	108	163299	14696.5466309 ppb	100
18) Hexachloroethane	5.83	117	84310	14706.9606004 ppb	100
19) N-Nitrosodi-n-propylamine	5.70	70	140524	15818.8866374 ppb	100
20) 3&4-Methyl phenol	5.68	107	205697	15675.2639488 ppb	100
24) Nitrobenzene	5.88	77	208983	12029.7556623 ppb	100
25) Isophorone	6.11	82	365271	12479.6941933 ppb	100
26) 2-Nitrophenol	6.20	139	88101	10738.1665780 ppb	100
27) 2,4-Dimethylphenol	6.22	107	212266	12534.4458702 ppb	100
28) bis(2-Chlorethoxy)methane	6.32	93	212219	11565.2523943 ppb	100
29) 2,4-Dichlorophenol	6.44	162	145874	10551.5417039 ppb	100
31) 1,2,4-Trichlorobenzene	6.54	180	167968	10781.0751888 ppb	100
32) Naphthalene	6.62	128	499924	10044.1097208 ppb	100
33) 4-Chloroaniline	6.67	65	77371	12291.9187271 ppb	100
34) Hexachloro-1,3-butadiene	6.74	225	117327	12017.5841920 ppb	100
36) 4-Chloro-3-methylphenol	7.15	107	177320	11892.1559128 ppb	100
37) 2-Methylnaphthalene	7.35	142	327851	9390.4683515 ppb #	1
38) 1-Methylnaphthalene	7.46	142	303309	9703.9725432 ppb #	1
41) Hexachlorocyclopentadiene	7.51	237	124092	13132.9283714 ppb	100
42) 2,4,6-Trichlorophenol	7.64	196	108498	12021.2682117 ppb	100
43) 2,4,5-Trichlorophenol	7.68	196	121075	12353.2037597 ppb	100
45) Biphenyl	7.85	154	409620	10759.8159709 ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516C\0425C 03.D Vial: 2
Acq On : 25 Apr 2016 3:35 pm Operator: 280
Sample : MSTD SVMS 10K PPB 16D25863 Inst : BNAMS11
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:22 2016 Quant Results File: S811D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:19:55 2016
Response via : Initial Calibration
DataAcq Meth : BNA11C

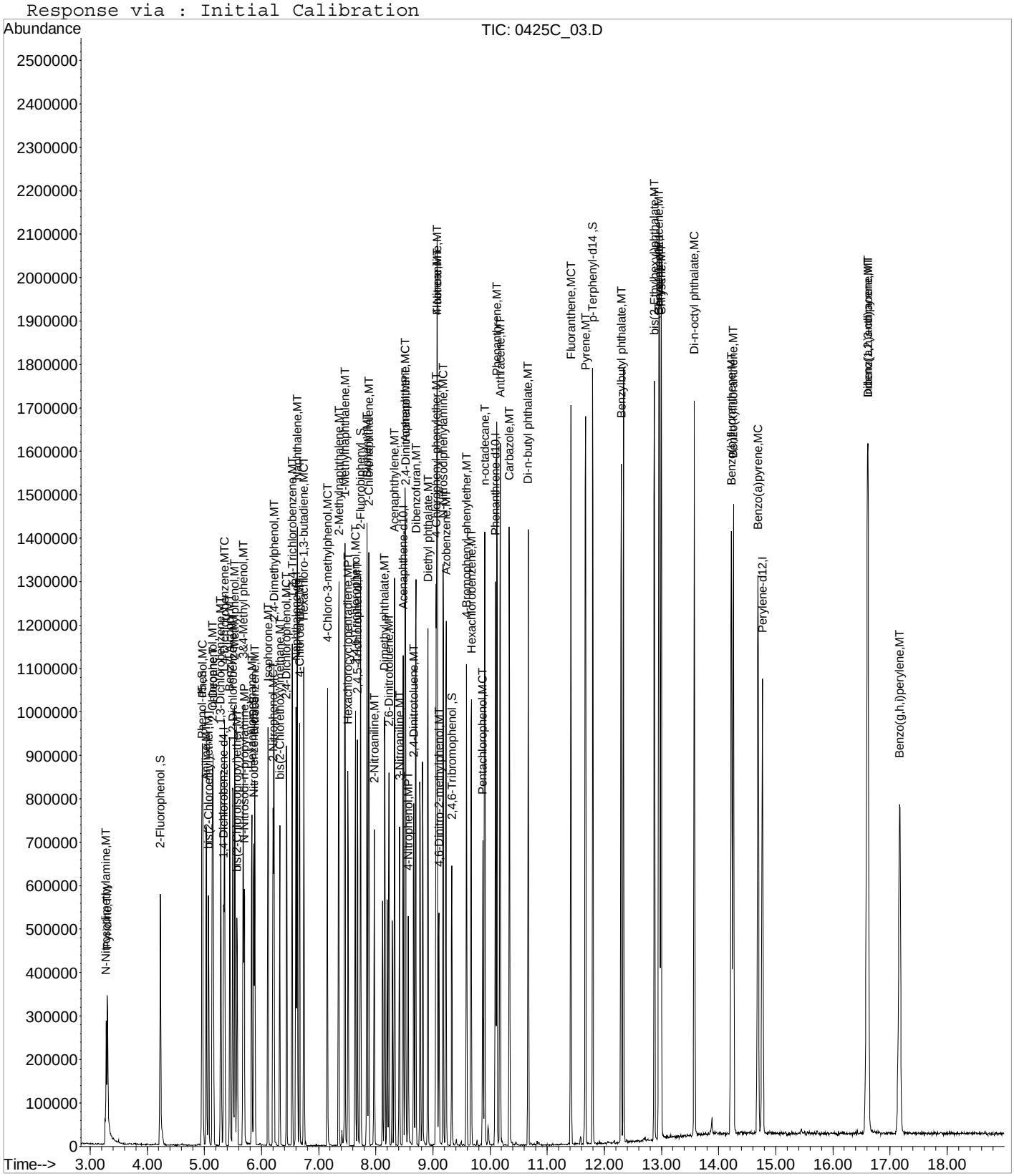
	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
46)	2-Chloronaphthalene	7.88	162	329027	11067.0713900 ppb		100
47)	2-Nitroaniline	7.98	138	104975	11225.8196219 ppb		100
48)	Acenaphthylene	8.33	152	519640	11190.9683076 ppb		100
49)	Dimethyl phthalate	8.16	163	368038	11251.2028852 ppb		100
50)	2,6-Dinitrotoluene	8.23	165	91335	11887.8600974 ppb		100
51)	3-Nitroaniline	8.41	138	85515	10694.4452636 ppb		100
52)	Acenaphthene	8.51	153	328708	10337.8591304 ppb		100
53)	2,4-Dinitrophenol	8.52	184	46820	11821.2959031 ppb		100
54)	Dibenzofuran	8.70	168	470947	10719.8252279 ppb	#	69
55)	2,4-Dinitrotoluene	8.67	165	115113	11423.4593795 ppb		100
57)	4-Nitrophenol	8.57	139	68736	10766.8030293 ppb		100
58)	Fluorene	9.07	166	375828	10458.7558181 ppb		100
59)	4-Chlorophenyl-phenylether	9.05	204	196238	11008.5075264 ppb		100
60)	Diethyl phthalate	8.91	149	404946	11572.7830668 ppb		100
61)	4-Nitroaniline	9.07	138	80049	10279.8397340 ppb		100
62)	Azobenzene	9.23	77	438422	12068.3679051 ppb	#	45
65)	4,6-Dinitro-2-methylphenol	9.11	198	67768	11082.2503765 ppb		100
66)	N-Nitrosodiphenylamine	9.18	169	316498	9724.9271008 ppb		100
68)	4-Bromophenyl-phenylether	9.59	248	129606	10870.8178735 ppb		100
69)	Hexachlorobenzene	9.67	284	134911	10089.2486221 ppb		100
70)	n-octadecane	9.91	55	66306	9727.1391233 ppb		100
71)	Pentachlorophenol	9.87	266	75756	10060.6623263 ppb		100
72)	Phenanthrene	10.12	178	606095	10265.7208241 ppb		100
73)	Anthracene	10.18	178	596092	10139.3810516 ppb		100
74)	Carbazole	10.34	167	535301	10010.4946563 ppb		100
75)	Di-n-butyl phthalate	10.67	149	693345	10138.1400576 ppb		100
77)	Fluoranthene	11.41	202	704480	10441.3848793 ppb		100
80)	Pyrene	11.67	202	718400	9426.6776254 ppb		100
82)	Benzylbutyl phthalate	12.29	149	340850	9678.4298173 ppb		100
84)	Benzo(a)anthracene	12.95	228	760247	9791.7095013 ppb		100
85)	Chrysene	12.99	228	708920	9653.9943907 ppb		100
86)	bis(2-Ethylhexyl)phthalate	12.88	149	486654	9349.1190638 ppb		100
87)	Di-n-octyl phthalate	13.58	149	893884	9778.6344658 ppb		100
89)	Benzo(b)fluoranthene	14.22	252	768753	9749.8269824 ppb		100
90)	Benzo(k)fluoranthene	14.26	252	722071	9624.1836352 ppb		100
91)	Benzo(a)pyrene	14.69	252	751584	9910.9021822 ppb		100
92)	Indeno(1,2,3-cd)pyrene	16.61	276	901565	10107.1446548 ppb		100
93)	Dibenz(a,h)anthracene	16.61	278	792964	10302.8948264 ppb		100
94)	Benzo(g,h,i)perylene	17.18	276	769603	10452.4809150 ppb		100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

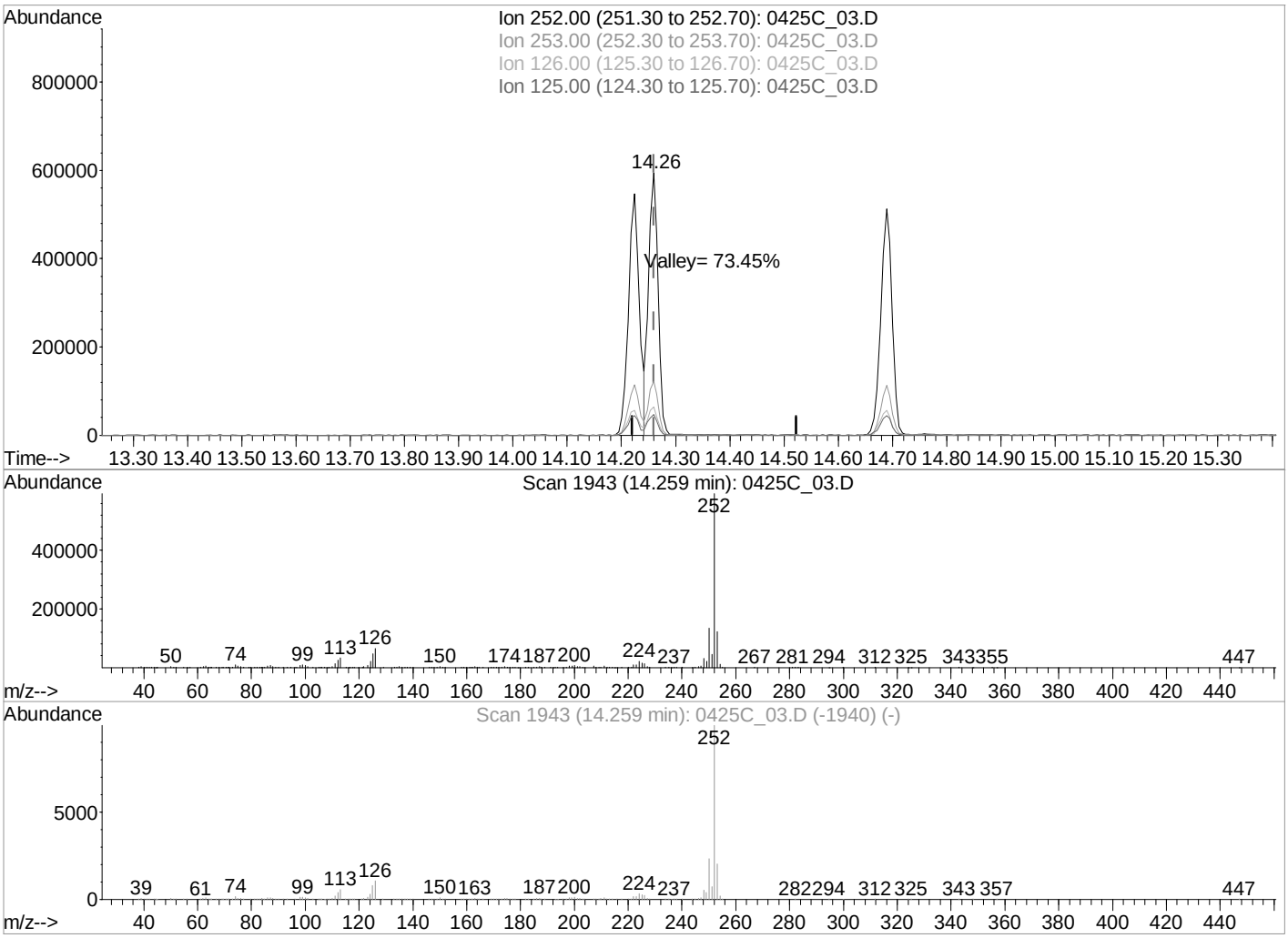
Data File : C:\MSDCHEM\1\DATA\042516C\0425C 03.D Vial: 2
Acq On : 25 Apr 2016 3:35 pm Operator: 280
Sample : MSTD SVMS 10K PPB 16D25863 Inst : BNAMS11
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:22 2016 Quant Results File: S811D25P.RES

Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:19:55 2016
Response via : Initial Calibration



Data File : C:\MSDCHEM\1\DATA\042516C\0425C 03.D Vial: 2
Acq On : 25 Apr 2016 3:35 pm Operator: 280
Sample : MSTD SVMS 10K PPB 16D25863 Inst : BNAMS11
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:22 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:19:55 2016
Response via : Multiple Level Calibration



TIC: 0425C_03.D

(90) Benzo(k)fluoranthene (MT)

14.26min (0.000) 9624.1836352 ppb

Qvalue = 100

response 722071

Ion	Exp%	Act%
252.00	100	100
253.00	20.50	20.51
126.00	10.80	10.79
125.00	7.90	7.87

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516C\0425C 04.D Vial: 3
Acq On : 25 Apr 2016 3:59 pm Operator: 280
Sample : STD SVMS 500 PPB 16D25863 Inst : BNAMS11
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:24 2016 Quant Results File: S811D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:19:55 2016
Response via : Initial Calibration
DataAcq Meth : BNA11C

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.34	152	70679	8000.00	ppb		0.00
22) Naphthalene-d8	6.60	136	374555	8000.00	ppb		0.00
40) Acenaphthene-d10	8.48	164	235166	8000.00	ppb		0.00
64) Phenanthrene-d10	10.09	188	446140	8000.00	ppb		0.00
78) Chrysene-d12	12.96	240	518126	8000.00	ppb		0.00
88) Perylene-d12	14.76	264	553927	8000.00	ppb		0.00
System Monitoring Compounds							
4) 2-Fluorophenol	4.23	112	8787	824.6511361	ppb		0.00
Spiked Amount 20.000	Range 10 - 74		Recovery = 4123.26%#				
7) Phenol-d5	4.95	99	11807	856.0158853	ppb		0.00
Spiked Amount 20.000	Range 10 - 63		Recovery = 4280.08%#				
23) Nitrobenzene-d5	5.86	82	10901	648.8738873	ppb		0.00
Spiked Amount 10.000	Range 28 - 123		Recovery = 6488.74%#				
44) 2-Fluorobiphenyl	7.73	172	20185	549.5930896	ppb		0.00
Spiked Amount 10.000	Range 35 - 133		Recovery = 5495.93%#				
67) 2,4,6-Tribromophenol	9.33	330	2659	891.3821974	ppb		0.00
Spiked Amount 20.000	Range 22 - 154		Recovery = 4456.91%#				
81) p-Terphenyl-d14	11.79	244	29149	543.8338516	ppb		0.00
Spiked Amount 10.000	Range 30 - 148		Recovery = 5438.34%#				
Target Compounds							Qvalue
2) Pyridine	3.31	79	10679	815.6730908	ppb	#	82
3) N-Nitrosodimethylamine	3.29	42	5007	652.0561186	ppb		91
5) Aniline	5.03	66	6957	1038.4018891	ppb		80
6) bis(2-Chloroethyl)ether	5.07	63	6761	829.7859971	ppb		87
8) Phenol	4.97	94	11023	774.9465631	ppb		92
10) 2-Chlorophenol	5.14	128	9431	772.8223786	ppb		92
11) n-Decane	5.15	41	5151	677.0321316	ppb	#	87
12) 1,3-Dichlorobenzene	5.28	146	10447	755.5920654	ppb		97
13) 1,4-Dichlorobenzene	5.35	146	10368	742.1492624	ppb		93
14) Benzyl Alcohol	5.44	79	9299	858.3294286	ppb		95
15) 1,2-Dichlorobenzene	5.50	146	9987	749.9365675	ppb		89
16) bis(2-Chloroisopropyl)ethe	5.57	121	2714	718.8583219	ppb		91
17) 2-Methylphenol	5.53	108	9004	820.2343234	ppb		90
18) Hexachloroethane	5.83	117	4841	854.7706529	ppb	#	81
19) N-Nitrosodi-n-propylamine	5.70	70	7955	906.4341829	ppb		94
20) 3&4-Methyl phenol	5.67	107	11443	882.6682058	ppb	#	84
24) Nitrobenzene	5.88	77	10816	637.0415484	ppb		95
25) Isophorone	6.11	82	18999	664.1630725	ppb		94
26) 2-Nitrophenol	6.20	139	4396	548.2292653	ppb		91
27) 2,4-Dimethylphenol	6.21	107	9421	569.2157909	ppb		88
28) bis(2-Chlorethoxy)methane	6.32	93	10939	609.9633012	ppb		81
29) 2,4-Dichlorophenol	6.44	162	8268	611.9187045	ppb		90
31) 1,2,4-Trichlorobenzene	6.54	180	9517	625.0155546	ppb		96
32) Naphthalene	6.62	128	27280	560.7987801	ppb		95
33) 4-Chloroaniline	6.67	65	4148	674.2725045	ppb		87
34) Hexachloro-1,3-butadiene	6.74	225	6217	651.5613391	ppb	#	83
36) 4-Chloro-3-methylphenol	7.15	107	8831	605.9935325	ppb		95
37) 2-Methylnaphthalene	7.35	142	16435	481.6545660	ppb	#	1
38) 1-Methylnaphthalene	7.46	142	17191	562.7566488	ppb	#	1
41) Hexachlorocyclopentadiene	7.51	237	4121	409.2263434	ppb		83
42) 2,4,6-Trichlorophenol	7.64	196	5782	601.1042779	ppb	#	78
43) 2,4,5-Trichlorophenol	7.68	196	5273	504.8078220	ppb		83
45) Biphenyl	7.84	154	21145	521.1641778	ppb		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516C\0425C 04.D Vial: 3
Acq On : 25 Apr 2016 3:59 pm Operator: 280
Sample : STD SVMS 500 PPB 16D25863 Inst : BNAMS11
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:24 2016 Quant Results File: S811D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:19:55 2016
Response via : Initial Calibration
DataAcq Meth : BNA11C

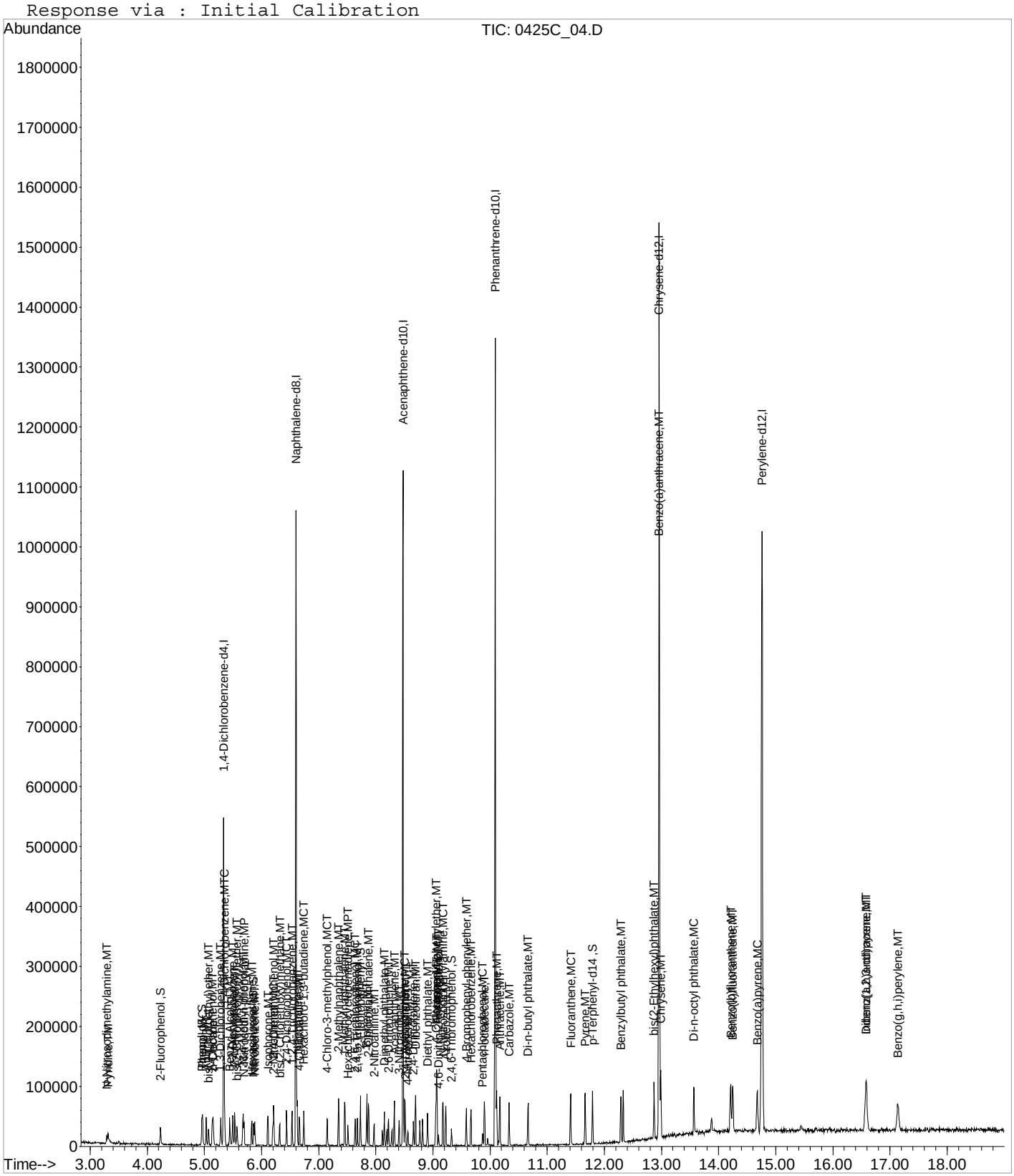
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
46)	2-Chloronaphthalene	7.87	162	18133	572.2871737	ppb		96
47)	2-Nitroaniline	7.97	138	5201	521.8698502	ppb		91
48)	Acenaphthylene	8.32	152	26357	532.6037813	ppb		92
49)	Dimethyl phthalate	8.15	163	18857	540.9063405	ppb		84
50)	2,6-Dinitrotoluene	8.22	165	4032	492.4137289	ppb		95
51)	3-Nitroaniline	8.41	138	4013	470.8995753	ppb		92
52)	Acenaphthene	8.51	153	18164	536.0126094	ppb		92
53)	2,4-Dinitrophenol	8.52	184	1310	1697.5891737	ppb	#	54
54)	Dibenzofuran	8.70	168	26691	570.0641007	ppb	#	63
55)	2,4-Dinitrotoluene	8.66	165	6119	569.7664853	ppb		89
57)	4-Nitrophenol	8.57	139	2826	415.3534741	ppb		90
58)	Fluorene	9.07	166	20926	546.4120759	ppb		95
59)	4-Chlorophenyl-phenylether	9.05	204	10044	528.6828419	ppb		95
60)	Diethyl phthalate	8.91	149	19629	526.3589974	ppb		98
61)	4-Nitroaniline	9.07	138	4733	570.3088547	ppb	#	83
62)	Azobenzene	9.22	77	22126	571.4816467	ppb	#	44
65)	4,6-Dinitro-2-methylphenol	9.10	198	2699	1103.3649535	ppb		88
66)	N-Nitrosodiphenylamine	9.18	169	16836	501.5792194	ppb		82
68)	4-Bromophenyl-phenylether	9.58	248	7467	607.2513618	ppb		94
69)	Hexachlorobenzene	9.67	284	7338	532.0768991	ppb		94
70)	n-octadecane	9.90	55	3277	466.1159595	ppb	#	85
71)	Pentachlorophenol	9.87	266	2911	708.3362720	ppb	#	83
72)	Phenanthrene	10.11	178	33467	549.6051145	ppb		96
73)	Anthracene	10.17	178	30811	508.1467813	ppb		96
74)	Carbazole	10.33	167	25974	470.9573220	ppb		94
75)	Di-n-butyl phthalate	10.67	149	34146	484.0987578	ppb		96
77)	Fluoranthene	11.41	202	35409	508.8483046	ppb		94
80)	Pyrene	11.67	202	37173	502.4249307	ppb		97
82)	Benzylbutyl phthalate	12.29	149	15558	455.0368956	ppb		90
84)	Benzo(a)anthracene	12.95	228	39566	524.9007459	ppb		93
85)	Chrysene	12.99	228	37985	532.8109996	ppb		95
86)	bis(2-Ethylhexyl)phthalate	12.87	149	25120	497.0742505	ppb		92
87)	Di-n-octyl phthalate	13.57	149	41104	463.1614162	ppb		95
89)	Benzo(b)fluoranthene	14.21	252	41175	516.1284879	ppb		94
90)	Benzo(k)fluoranthene	14.25	252	35710	470.4223918	ppb		95
91)	Benzo(a)pyrene	14.68	252	37140	484.0516454	ppb		98
92)	Indeno(1,2,3-cd)pyrene	16.58	276	44617	494.3629795	ppb		95
93)	Dibenz(a,h)anthracene	16.59	278	40349	518.1466669	ppb		92
94)	Benzo(g,h,i)perylene	17.14	276	41556	557.8282527	ppb		86

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516C\0425C 04.D Vial: 3
Acq On : 25 Apr 2016 3:59 pm Operator: 280
Sample : STD SVMS 500 PPB 16D25863 Inst : BNAMS11
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:24 2016 Quant Results File: S811D25P.RES

Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:22:52 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516C\0425C 05.D Vial: 4
Acq On : 25 Apr 2016 4:22 pm Operator: 280
Sample : STD SVMS 1K PPB 16D25863 Inst : BNAMS11
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:28 2016 Quant Results File: S811D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:27:45 2016
Response via : Initial Calibration
DataAcq Meth : BNA11C

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.34	152	79191	8000.00	ppb	0.00
22) Naphthalene-d8	6.60	136	391464	8000.00	ppb	0.00
40) Acenaphthene-d10	8.48	164	236898	8000.00	ppb	0.00
64) Phenanthrene-d10	10.09	188	489776	8000.00	ppb	0.00
78) Chrysene-d12	12.96	240	572062	8000.00	ppb	0.00
88) Perylene-d12	14.76	264	600627	8000.00	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	4.23	112	19918	1320.6576230	ppb	0.00
Spiked Amount 20.000	Range 10 - 74		Recovery = 6603.29%#			
7) Phenol-d5	4.95	99	24588	1273.3239726	ppb	0.00
Spiked Amount 20.000	Range 10 - 63		Recovery = 6366.62%#			
23) Nitrobenzene-d5	5.86	82	23722	1190.6281663	ppb	0.00
Spiked Amount 10.000	Range 28 - 123		Recovery = 11906.28%#			
44) 2-Fluorobiphenyl	7.73	172	44420	1147.4962331	ppb	0.00
Spiked Amount 10.000	Range 35 - 133		Recovery = 11474.96%#			
67) 2,4,6-Tribromophenol	9.32	330	6146	1046.9621359	ppb	0.00
Spiked Amount 20.000	Range 22 - 154		Recovery = 5234.81%#			
81) p-Terphenyl-d14	11.80	244	68170	1103.0764848	ppb	0.00
Spiked Amount 10.000	Range 30 - 148		Recovery = 11030.76%#			
Target Compounds						Qvalue
2) Pyridine	3.31	79	21133	1186.3087776	ppb #	85
3) N-Nitrosodimethylamine	3.28	42	9431	1041.6550263	ppb	95
5) Aniline	5.03	66	11859	1195.9731690	ppb	85
6) bis(2-Chloroethyl)ether	5.07	63	13906	1260.0204173	ppb	92
8) Phenol	4.97	94	24882	1272.7665880	ppb	95
10) 2-Chlorophenol	5.14	128	18543	1157.7672308	ppb	89
11) n-Decane	5.15	41	10734	1130.8226065	ppb	99
12) 1,3-Dichlorobenzene	5.28	146	21606	1185.0760253	ppb	91
13) 1,4-Dichlorobenzene	5.35	146	23376	1262.8097618	ppb	94
14) Benzyl Alcohol	5.44	79	18708	1215.8088128	ppb	99
15) 1,2-Dichlorobenzene	5.50	146	20689	1184.1467991	ppb	97
16) bis(2-Chloroisopropyl)ethe	5.57	121	5458	1144.1818429	ppb	99
17) 2-Methylphenol	5.53	108	16734	1132.0679644	ppb	98
18) Hexachloroethane	5.83	117	9318	1194.9504372	ppb	96
19) N-Nitrosodi-n-propylamine	5.69	70	14863	1201.9165228	ppb	94
20) 3&4-Methyl phenol	5.68	107	21951	1214.1563821	ppb	92
24) Nitrobenzene	5.88	77	23320	1190.1490155	ppb	90
25) Isophorone	6.11	82	41662	1218.9496878	ppb	92
26) 2-Nitrophenol	6.20	139	8793	985.2634783	ppb	87
27) 2,4-Dimethylphenol	6.21	107	22096	1176.3196028	ppb	94
28) bis(2-Chlorethoxy)methane	6.32	93	22396	1117.8665888	ppb	88
29) 2,4-Dichlorophenol	6.44	162	16189	1089.2256908	ppb	96
31) 1,2,4-Trichlorobenzene	6.54	180	20526	1200.7393811	ppb	93
32) Naphthalene	6.62	128	57977	1109.3346859	ppb	97
33) 4-Chloroaniline	6.66	65	9015	1239.0596150	ppb	94
34) Hexachloro-1,3-butadiene	6.74	225	13661	1237.8644006	ppb	97
36) 4-Chloro-3-methylphenol	7.15	107	18788	1135.3392052	ppb	94
37) 2-Methylnaphthalene	7.35	142	39011	1109.0631609	ppb #	1
38) 1-Methylnaphthalene	7.45	142	34453	1065.9754594	ppb #	1
41) Hexachlorocyclopentadiene	7.51	237	10583	999.2249807	ppb	95
42) 2,4,6-Trichlorophenol	7.64	196	11550	1083.7976068	ppb #	85
43) 2,4,5-Trichlorophenol	7.68	196	12994	1135.2247757	ppb	96
45) Biphenyl	7.84	154	45388	1087.0952812	ppb	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516C\0425C 05.D Vial: 4
Acq On : 25 Apr 2016 4:22 pm Operator: 280
Sample : STD SVMS 1K PPB 16D25863 Inst : BNAMS11
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:28 2016 Quant Results File: S811D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:27:45 2016
Response via : Initial Calibration
DataAcq Meth : BNA11C

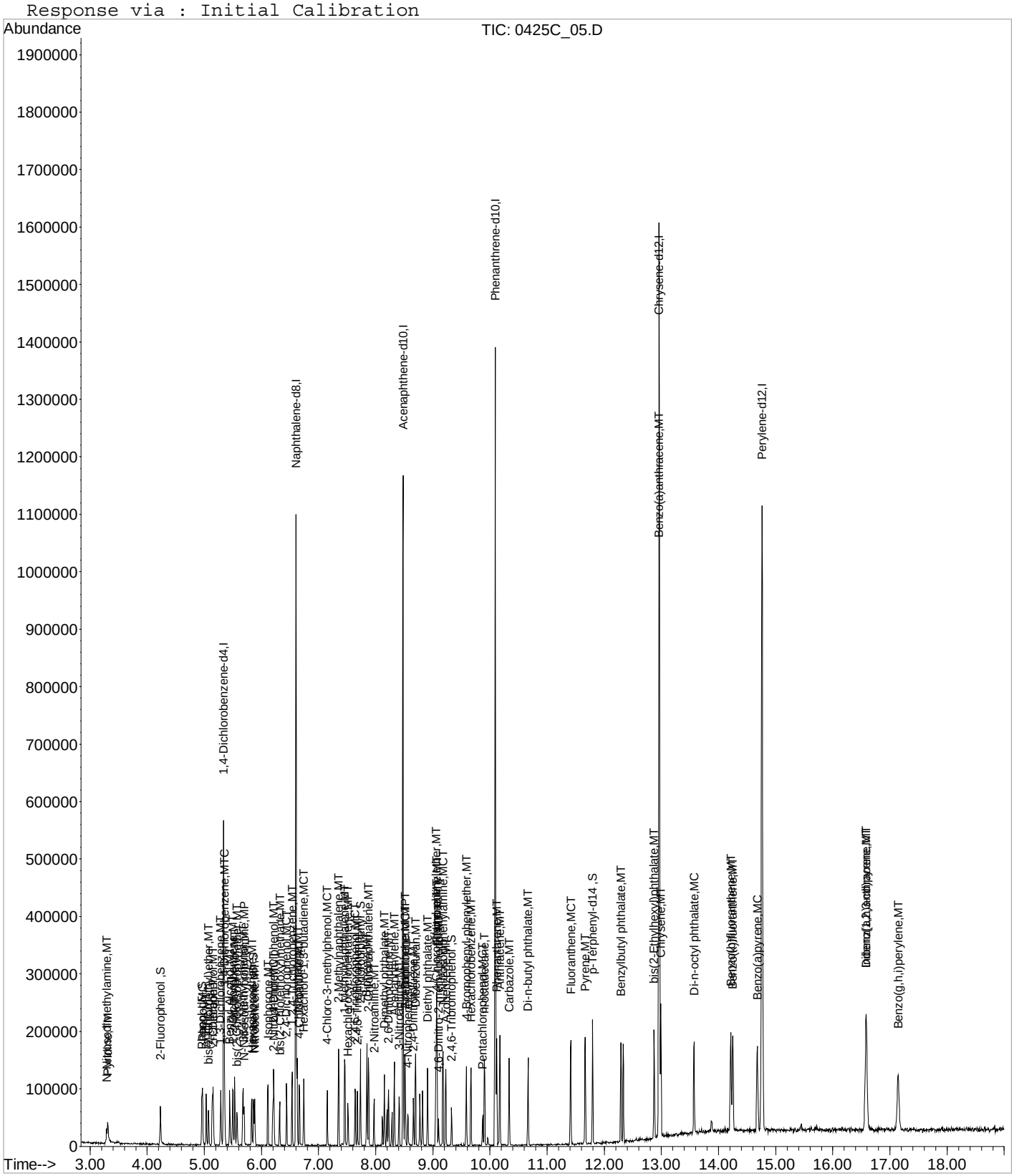
	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
46)	2-Chloronaphthalene	7.87	162	37583	1122.2361441 ppb		96
47)	2-Nitroaniline	7.97	138	11387	1048.6246832 ppb		91
48)	Acenaphthylene	8.32	152	58356	1123.6771319 ppb		95
49)	Dimethyl phthalate	8.15	163	44354	1170.9714570 ppb		94
50)	2,6-Dinitrotoluene	8.22	165	9818	1109.6052949 ppb		95
51)	3-Nitroaniline	8.41	138	9470	1044.3441871 ppb	#	80
52)	Acenaphthene	8.51	153	38331	1101.9725100 ppb		90
53)	2,4-Dinitrophenol	8.52	184	2482	864.5757235 ppb	#	1
54)	Dibenzofuran	8.70	168	52613	1073.9248430 ppb	#	64
55)	2,4-Dinitrotoluene	8.66	165	11409	966.8879187 ppb		87
57)	4-Nitrophenol	8.56	139	7335	1043.1568484 ppb		87
58)	Fluorene	9.07	166	44288	1107.3569679 ppb		94
59)	4-Chlorophenyl-phenylether	9.05	204	23664	1181.2846926 ppb		88
60)	Diethyl phthalate	8.91	149	46553	1169.9178102 ppb		99
61)	4-Nitroaniline	9.07	138	10802	1185.1335055 ppb		87
62)	Azobenzene	9.22	77	45330	1083.9655985 ppb	#	39
65)	4,6-Dinitro-2-methylphenol	9.10	198	5278	915.1919513 ppb		91
66)	N-Nitrosodiphenylamine	9.18	169	38631	1046.3070554 ppb		93
68)	4-Bromophenyl-phenylether	9.58	248	16121	1112.9597661 ppb		94
69)	Hexachlorobenzene	9.67	284	14773	966.2934174 ppb		97
70)	n-octadecane	9.90	55	7061	960.9251526 ppb	#	97
71)	Pentachlorophenol	9.87	266	5773	940.9907467 ppb	#	79
72)	Phenanthrene	10.12	178	69976	1038.1698409 ppb		97
73)	Anthracene	10.17	178	69260	1038.8369180 ppb		97
74)	Carbazole	10.34	167	60516	1027.7746472 ppb		99
75)	Di-n-butyl phthalate	10.67	149	73834	954.1764649 ppb		98
77)	Fluoranthene	11.41	202	76460	1000.2972602 ppb		97
80)	Pyrene	11.67	202	79658	981.8121832 ppb		97
82)	Benzylbutyl phthalate	12.29	149	35464	953.5546399 ppb		84
84)	Benzo(a)anthracene	12.95	228	89317	1064.7198564 ppb		97
85)	Chrysene	12.99	228	82567	1037.9443805 ppb		97
86)	bis(2-Ethylhexyl)phthalate	12.87	149	56423	1013.9320441 ppb		95
87)	Di-n-octyl phthalate	13.57	149	89341	928.2292669 ppb		94
89)	Benzo(b)fluoranthene	14.21	252	88527	1029.7247198 ppb		97
90)	Benzo(k)fluoranthene	14.25	252	83761	1019.6616176 ppb		96
91)	Benzo(a)pyrene	14.68	252	87325	1043.7091360 ppb		98
92)	Indeno(1,2,3-cd)pyrene	16.58	276	106561	1083.6740525 ppb		96
93)	Dibenz(a,h)anthracene	16.59	278	90333	1058.2474724 ppb		97
94)	Benzo(g,h,i)perylene	17.14	276	89163	1080.4845808 ppb		96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516C\0425C 05.D Vial: 4
Acq On : 25 Apr 2016 4:22 pm Operator: 280
Sample : STD SVMS 1K PPB 16D25863 Inst : BNAMS11
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:28 2016 Quant Results File: S811D25P.RES

Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:27:45 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516C\0425C 06.D Vial: 5
Acq On : 25 Apr 2016 4:45 pm Operator: 280
Sample : STD SVMS 4K PPB 16D25863 Inst : BNAMS11
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:27 2016 Quant Results File: S811D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:19:55 2016
Response via : Initial Calibration
DataAcq Meth : BNA11C

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.34	152	78173	8000.00	ppb		0.00
22) Naphthalene-d8	6.60	136	403197	8000.00	ppb		0.00
40) Acenaphthene-d10	8.48	164	234322	8000.00	ppb		0.00
64) Phenanthrene-d10	10.09	188	503100	8000.00	ppb		0.00
78) Chrysene-d12	12.97	240	567738	8000.00	ppb		0.00
88) Perylene-d12	14.77	264	606151	8000.00	ppb		0.00
System Monitoring Compounds							
4) 2-Fluorophenol	4.23	112	69453	5893.2418227	ppb		0.00
Spiked Amount 20.000	Range 10 - 74		Recovery = 29466.21%#				
7) Phenol-d5	4.95	99	88706	5814.7209053	ppb		0.00
Spiked Amount 20.000	Range 10 - 63		Recovery = 29073.60%#				
23) Nitrobenzene-d5	5.86	82	91806	5076.4876025	ppb		0.00
Spiked Amount 10.000	Range 28 - 123		Recovery = 50764.88%#				
44) 2-Fluorobiphenyl	7.73	172	160751	4392.6607109	ppb		0.00
Spiked Amount 10.000	Range 35 - 133		Recovery = 43926.61%#				
67) 2,4,6-Tribromophenol	9.32	330	23635	3685.1234585	ppb		0.00
Spiked Amount 20.000	Range 22 - 154		Recovery = 18425.62%#				
81) p-Terphenyl-d14	11.80	244	242546	4129.7533717	ppb		0.00
Spiked Amount 10.000	Range 30 - 148		Recovery = 41297.53%#				
Target Compounds							Qvalue
2) Pyridine	3.31	79	78130m	5395.5657630	ppb		
3) N-Nitrosodimethylamine	3.28	42	36481	4295.4407703	ppb		91
5) Aniline	5.03	66	46346	6254.4531082	ppb		96
6) bis(2-Chloroethyl)ether	5.07	63	46736	5186.0932651	ppb		99
8) Phenol	4.97	94	88746	5640.9773232	ppb		92
10) 2-Chlorophenol	5.14	128	70526	5225.2228185	ppb		96
11) n-Decane	5.15	41	40434	4805.0515889	ppb		96
12) 1,3-Dichlorobenzene	5.29	146	81725	5344.2201542	ppb		96
13) 1,4-Dichlorobenzene	5.35	146	81804	5294.2498012	ppb		96
14) Benzyl Alcohol	5.44	79	71709	5984.4609683	ppb		93
15) 1,2-Dichlorobenzene	5.50	146	78230	5311.2461384	ppb		93
16) bis(2-Chloroisopropyl)ethe	5.57	121	20853	4993.8514791	ppb		99
17) 2-Methylphenol	5.53	108	67693	5575.4487899	ppb		97
18) Hexachloroethane	5.83	117	34777	5551.8823320	ppb		94
19) N-Nitrosodi-n-propylamine	5.70	70	54368	5601.0966347	ppb		95
20) 3&4-Methyl phenol	5.68	107	82341	5742.5837774	ppb		96
24) Nitrobenzene	5.88	77	82805	4530.6023725	ppb		97
25) Isophorone	6.11	82	152406	4949.3065514	ppb		98
26) 2-Nitrophenol	6.20	139	36723	4254.4261646	ppb		91
27) 2,4-Dimethylphenol	6.21	107	81147	4554.6049228	ppb		92
28) bis(2-Chlorethoxy)methane	6.32	93	83871	4344.4640905	ppb		97
29) 2,4-Dichlorophenol	6.44	162	58254	4005.1364709	ppb		94
31) 1,2,4-Trichlorobenzene	6.54	180	70280	4287.6647032	ppb		96
32) Naphthalene	6.62	128	217806	4159.4014647	ppb		97
33) 4-Chloroaniline	6.66	65	28484	4301.2628845	ppb		97
34) Hexachloro-1,3-butadiene	6.74	225	47697	4643.6963196	ppb		95
36) 4-Chloro-3-methylphenol	7.15	107	67424	4298.0446729	ppb		84
37) 2-Methylnaphthalene	7.35	142	132101	3596.4198440	ppb	#	1
38) 1-Methylnaphthalene	7.46	142	124551	3787.6079553	ppb	#	1
41) Hexachlorocyclopentadiene	7.51	237	49903	4973.3507571	ppb		95
42) 2,4,6-Trichlorophenol	7.64	196	44016	4592.4429628	ppb		94
43) 2,4,5-Trichlorophenol	7.68	196	49123	4719.7028099	ppb		97
45) Biphenyl	7.84	154	172146	4258.1922964	ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516C\0425C 06.D Vial: 5
Acq On : 25 Apr 2016 4:45 pm Operator: 280
Sample : STD SVMS 4K PPB 16D25863 Inst : BNAMS11
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:27 2016 Quant Results File: S811D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:19:55 2016
Response via : Initial Calibration
DataAcq Meth : BNA11C

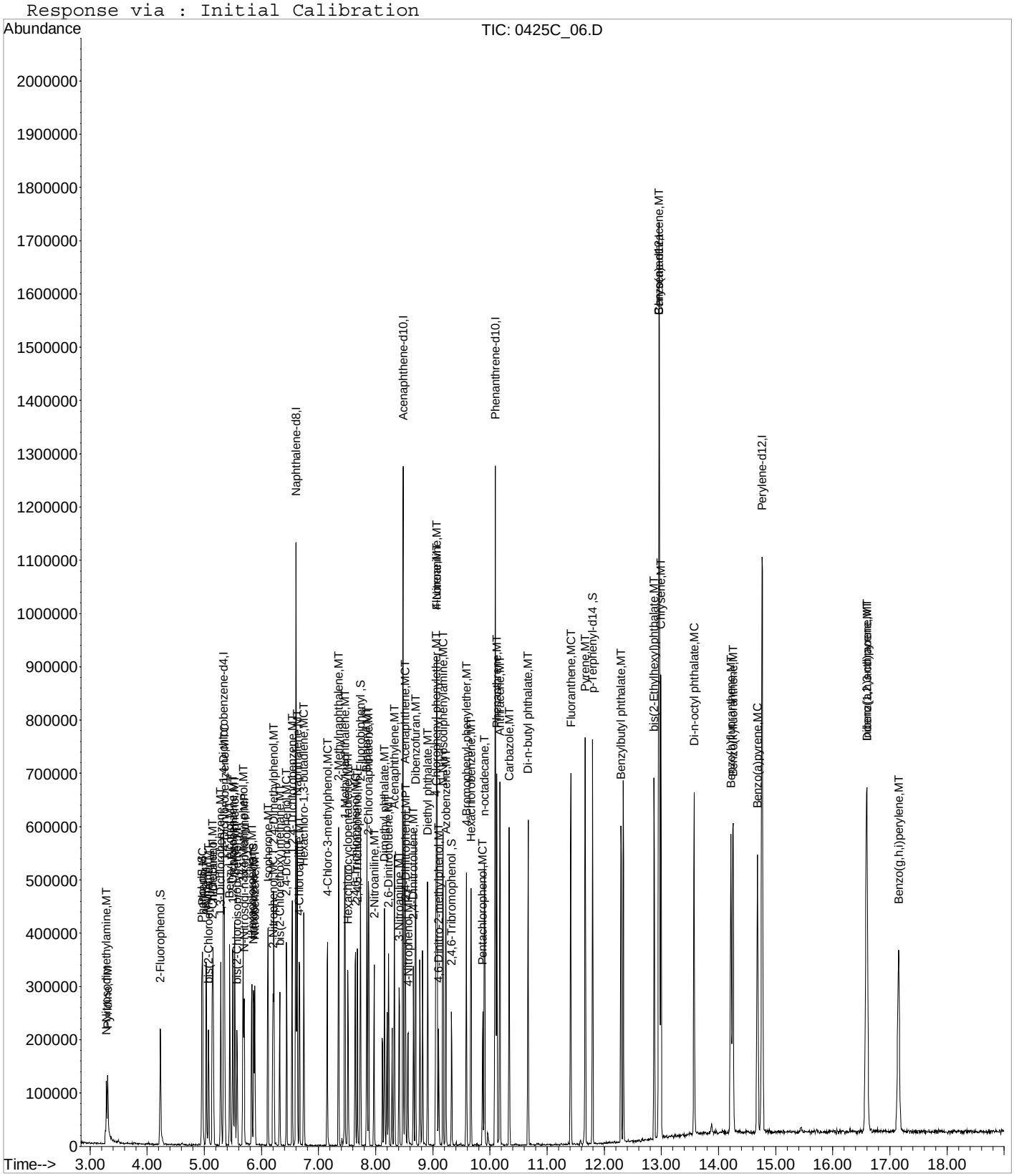
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
46)	2-Chloronaphthalene	7.88	162	135150	4280.7697359	ppb		94
47)	2-Nitroaniline	7.97	138	44234	4454.4391820	ppb		96
48)	Acenaphthylene	8.32	152	202098	4098.5642845	ppb		95
49)	Dimethyl phthalate	8.15	163	166507	4793.3973782	ppb		98
50)	2,6-Dinitrotoluene	8.22	165	37094	4546.4745438	ppb		93
51)	3-Nitroaniline	8.41	138	38072	4483.5941882	ppb	#	82
52)	Acenaphthene	8.51	153	136625	4046.2727550	ppb		95
53)	2,4-Dinitrophenol	8.52	184	15233	4609.9569689	ppb	#	55
54)	Dibenzofuran	8.70	168	197126	4225.3649300	ppb	#	66
55)	2,4-Dinitrotoluene	8.66	165	46251	4322.1420913	ppb		90
57)	4-Nitrophenol	8.57	139	26420	3897.0858202	ppb		98
58)	Fluorene	9.07	166	160121	4196.0806635	ppb		100
59)	4-Chlorophenyl-phenylether	9.05	204	81672	4314.4274385	ppb		87
60)	Diethyl phthalate	8.91	149	157373	4235.2160183	ppb		94
61)	4-Nitroaniline	9.07	138	36671	4434.6344855	ppb		93
62)	Azobenzene	9.22	77	170018	4407.1288615	ppb	#	43
65)	4,6-Dinitro-2-methylphenol	9.10	198	25872	4109.7048547	ppb		94
66)	N-Nitrosodiphenylamine	9.18	169	137952	3644.5630255	ppb		97
68)	4-Bromophenyl-phenylether	9.58	248	56782	4094.9620100	ppb		96
69)	Hexachlorobenzene	9.67	284	58135	3738.1026125	ppb		99
70)	n-octadecane	9.90	55	24507	3091.1816607	ppb	#	90
71)	Pentachlorophenol	9.87	266	26568	3275.6389363	ppb		89
72)	Phenanthrene	10.12	178	251686	3665.3030313	ppb		99
73)	Anthracene	10.17	178	253680	3710.1072115	ppb		96
74)	Carbazole	10.34	167	218803	3518.1377098	ppb		99
75)	Di-n-butyl phthalate	10.67	149	282751	3554.7996394	ppb		98
77)	Fluoranthene	11.41	202	281480	3587.0634437	ppb		93
80)	Pyrene	11.67	202	296771	3660.6014906	ppb		98
82)	Benzylbutyl phthalate	12.30	149	129229	3449.3737258	ppb		90
84)	Benzo(a)anthracene	12.95	228	310803	3762.9432444	ppb		97
85)	Chrysene	12.99	228	300851	3851.2342321	ppb		95
86)	bis(2-Ethylhexyl)phthalate	12.87	149	186684	3371.2903045	ppb		98
87)	Di-n-octyl phthalate	13.57	149	340558	3502.0859098	ppb		91
89)	Benzo(b)fluoranthene	14.21	252	307299m	3520.1168362	ppb		
90)	Benzo(k)fluoranthene	14.25	252	313407	3772.9281631	ppb		96
91)	Benzo(a)pyrene	14.68	252	314065	3740.5981115	ppb		97
92)	Indeno(1,2,3-cd)pyrene	16.59	276	381240	3860.2527847	ppb		93
93)	Dibenz(a,h)anthracene	16.60	278	315822	3706.2441135	ppb		98
94)	Benzo(g,h,i)perylene	17.15	276	323146	3964.0330052	ppb		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

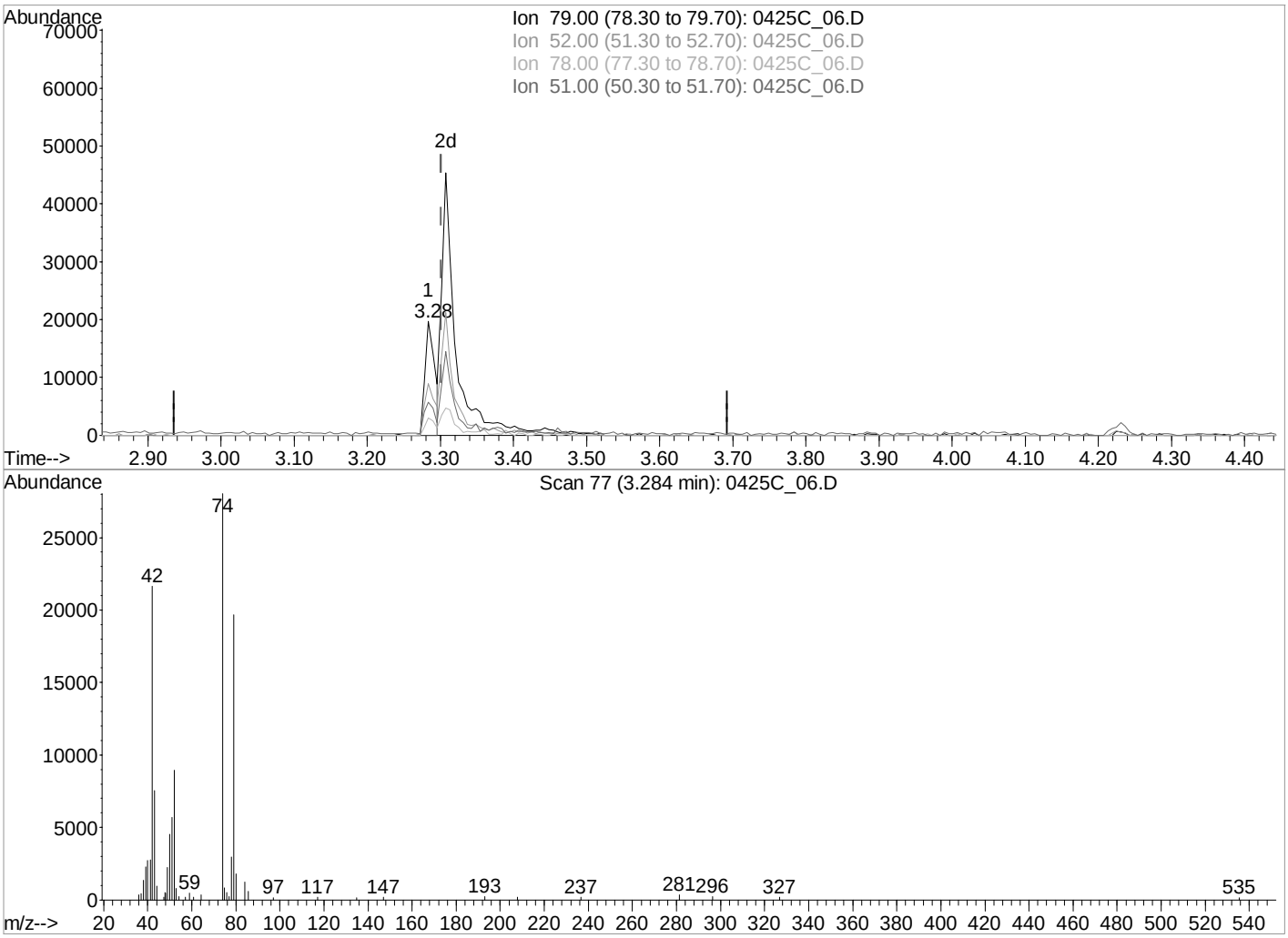
Data File : C:\MSDCHEM\1\DATA\042516C\0425C 06.D Vial: 5
Acq On : 25 Apr 2016 4:45 pm Operator: 280
Sample : STD SVMS 4K PPB 16D25863 Inst : BNAMS11
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:27 2016 Quant Results File: S811D25P.RES

Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:25:42 2016
Response via : Initial Calibration



Data File : C:\MSDCHEM\1\DATA\042516C\0425C 06.D Vial: 5
Acq On : 25 Apr 2016 4:45 pm Operator: 280
Sample : STD SVMS 4K PPB 16D25863 Inst : BNAMS11
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:20 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:25:42 2016
Response via : Multiple Level Calibration



TIC: 0425C_06.D

(2) Pyridine (TM)

3.28min (-0.017) 1258.4589133 ppb

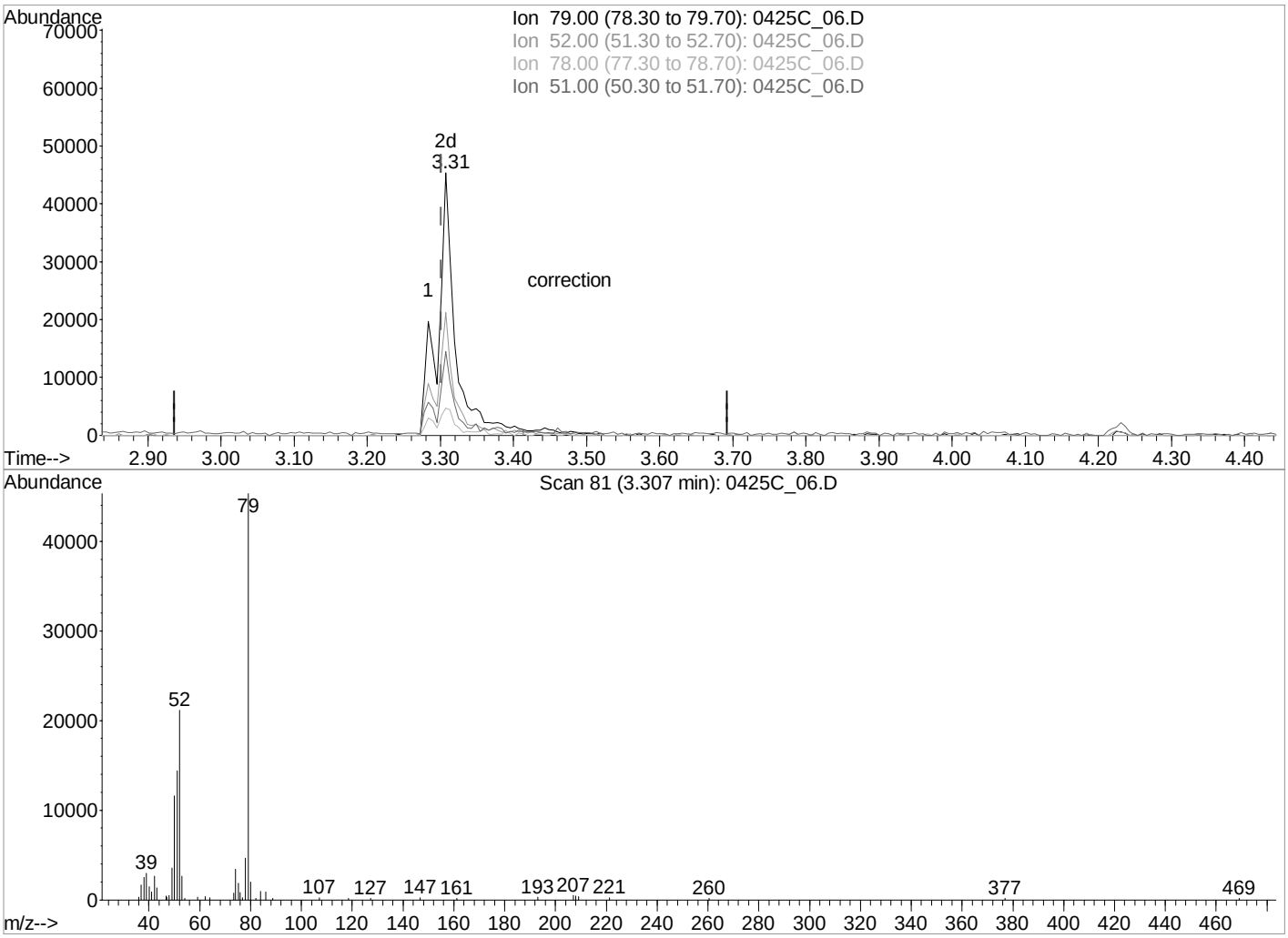
Qvalue = 95

response 18223

Ion	Exp%	Act%
79.00	100	100
52.00	49.90	45.49
78.00	15.70	15.07
51.00	29.80	27.17

Data File : C:\MSDCHEM\1\DATA\042516C\0425C 06.D Vial: 5
Acq On : 25 Apr 2016 4:45 pm Operator: 280
Sample : STD SVMS 4K PPB 16D25863 Inst : BNAMS11
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:26 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:25:42 2016
Response via : Multiple Level Calibration



TIC: 0425C_06.D

(2) Pyridine (TM)

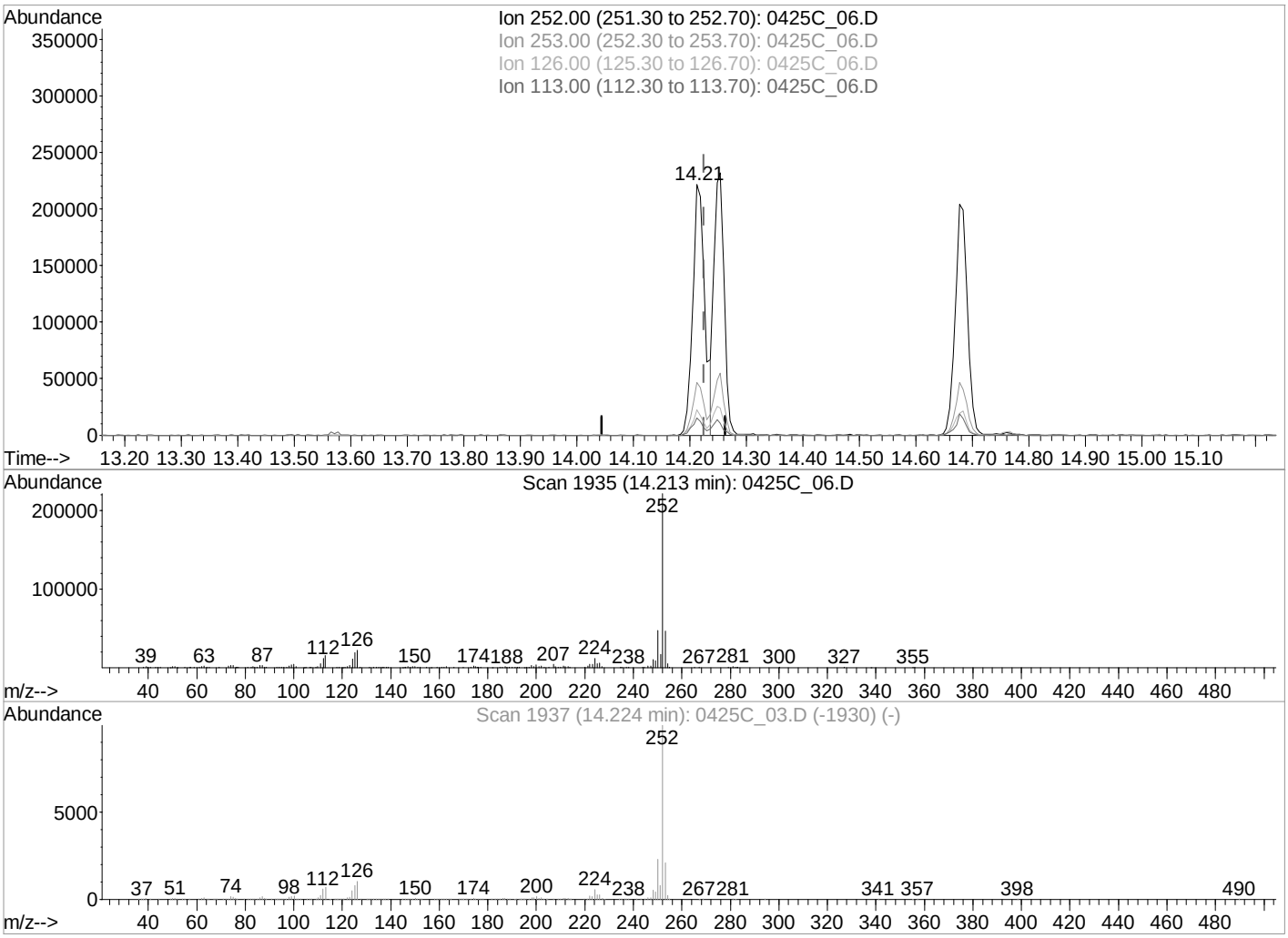
3.31min (+0.006) 5395.5657630 ppb m

response 78130

Ion	Exp%	Act%
79.00	100	100
52.00	49.90	46.68
78.00	15.70	10.27#
51.00	29.80	31.78

Data File : C:\MSDCHEM\1\DATA\042516C\0425C 06.D Vial: 5
Acq On : 25 Apr 2016 4:45 pm Operator: 280
Sample : STD SVMS 4K PPB 16D25863 Inst : BNAMS11
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:27 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:25:42 2016
Response via : Multiple Level Calibration



TIC: 0425C_06.D

(89) Benzo(b)fluoranthene (MT)

14.21min (-0.012) 3789.9857019 ppb

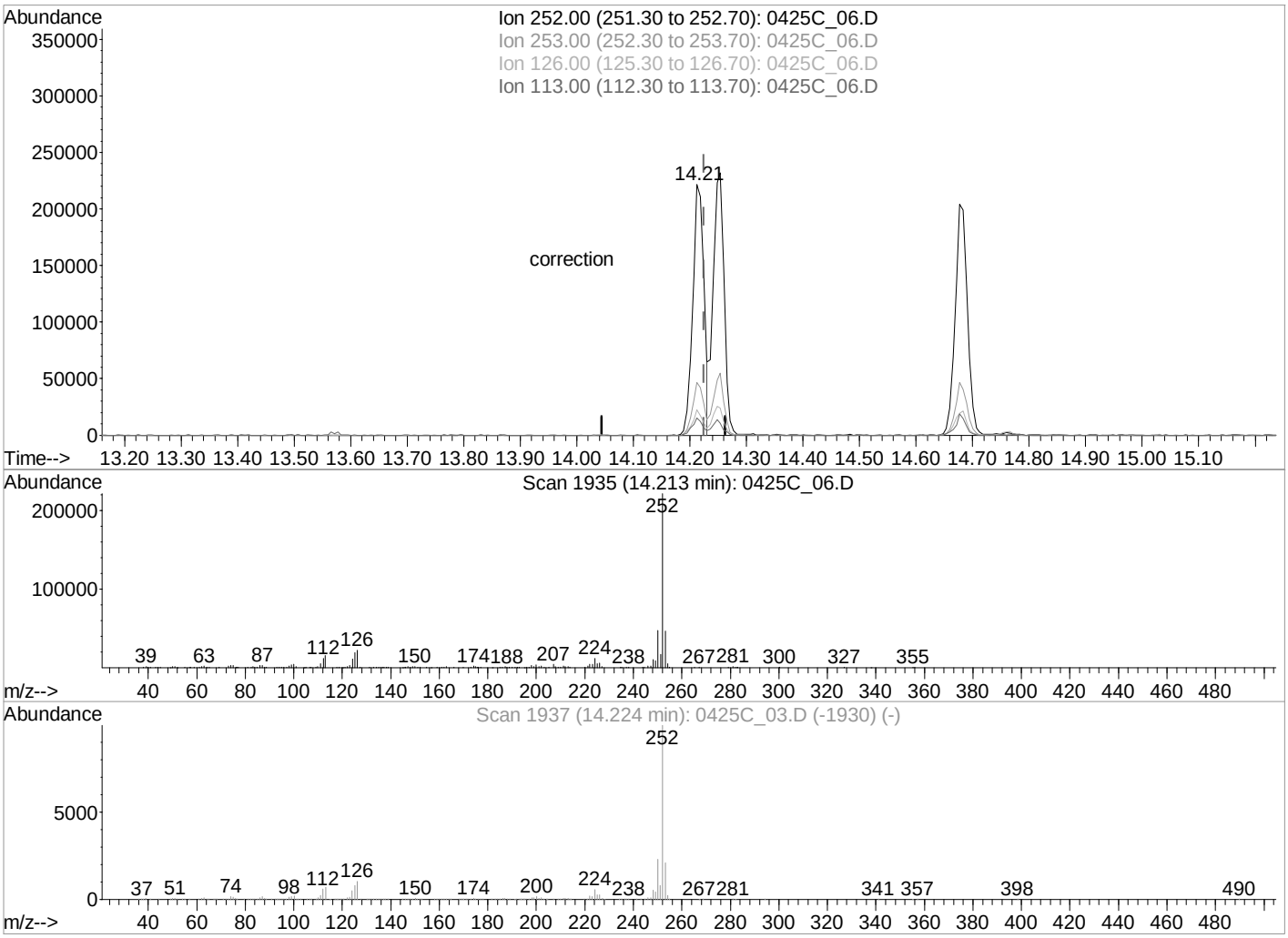
Qvalue = 98

response 330858

Ion	Exp%	Act%
252.00	100	100
253.00	20.90	19.91
126.00	10.20	9.37
113.00	6.90	6.66

Data File : C:\MSDCHEM\1\DATA\042516C\0425C 06.D Vial: 5
Acq On : 25 Apr 2016 4:45 pm Operator: 280
Sample : STD SVMS 4K PPB 16D25863 Inst : BNAMS11
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:27 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:25:42 2016
Response via : Multiple Level Calibration



TIC: 0425C_06.D

(89) Benzo(b)fluoranthene (MT)

14.21min (-0.012) 3520.1168362 ppb m

response 307299

Ion	Exp%	Act%
252.00	100	100
253.00	20.90	21.04
126.00	10.20	10.10
113.00	6.90	6.86

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516C\0425C 07.D Vial: 6
Acq On : 25 Apr 2016 5:09 pm Operator: 280
Sample : STD SVMS 20K PPB 16D25863 Inst : BNAMS11
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:30 2016 Quant Results File: S811D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:19:55 2016
Response via : Initial Calibration
DataAcq Meth : BNA11C

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.34	152	73079	8000.00 ppb	0.00
22) Naphthalene-d8	6.60	136	383970	8000.00 ppb	0.00
40) Acenaphthene-d10	8.48	164	233634	8000.00 ppb	0.00
64) Phenanthrene-d10	10.10	188	451239	8000.00 ppb	0.00
78) Chrysene-d12	12.97	240	535267	8000.00 ppb	0.00
88) Perylene-d12	14.77	264	555602	8000.00 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol	4.23	112	353241	32062.5855425 ppb	0.00
Spiked Amount 20.000	Range 10 - 74		Recovery = 160312.93%#		
7) Phenol-d5	4.96	99	467786	32801.0148806 ppb	0.00
Spiked Amount 20.000	Range 10 - 63		Recovery = 164005.07%#		
23) Nitrobenzene-d5	5.87	82	447647	25992.4933171 ppb	0.00
Spiked Amount 10.000	Range 28 - 123		Recovery = 259924.93%#		
44) 2-Fluorobiphenyl	7.74	172	816488	22376.9454746 ppb	0.00
Spiked Amount 10.000	Range 35 - 133		Recovery = 223769.45%#		
67) 2,4,6-Tribromophenol	9.33	330	131722	20367.2554218 ppb	0.00
Spiked Amount 20.000	Range 22 - 154		Recovery = 101836.28%#		
81) p-Terphenyl-d14	11.79	244	1194014	21563.3838013 ppb	0.00
Spiked Amount 10.000	Range 30 - 148		Recovery = 215633.84%#		
Target Compounds					Qvalue
2) Pyridine	3.30	79	414138m	30593.4483080 ppb	
3) N-Nitrosodimethylamine	3.28	42	194928	24551.5779795 ppb	95
5) Aniline	5.04	66	235212	33954.7659537 ppb	99
6) bis(2-Chloroethyl)ether	5.07	63	241216	28632.4873528 ppb	97
8) Phenol	4.97	94	466971	31751.1646538 ppb	99
10) 2-Chlorophenol	5.14	128	365331	28953.8466980 ppb	96
11) n-Decane	5.15	41	209101	26581.0199158 ppb	97
12) 1,3-Dichlorobenzene	5.29	146	421640	29494.1170167 ppb	98
13) 1,4-Dichlorobenzene	5.35	146	413237	28608.3804062 ppb	97
14) Benzyl Alcohol	5.45	79	389360	34758.9692135 ppb	99
15) 1,2-Dichlorobenzene	5.50	146	406392	29514.2961829 ppb	95
16) bis(2-Chloroisopropyl)ethe	5.58	121	101215	25928.4252679 ppb	94
17) 2-Methylphenol	5.54	108	333897	29417.9746768 ppb	95
18) Hexachloroethane	5.83	117	180606	30842.1393335 ppb	91
19) N-Nitrosodi-n-propylamine	5.70	70	298925	32942.4677388 ppb	97
20) 3&4-Methyl phenol	5.68	107	405185	30227.9534741 ppb	97
24) Nitrobenzene	5.88	77	437300	25124.5829894 ppb	95
25) Isophorone	6.12	82	790902	26970.2493236 ppb	99
26) 2-Nitrophenol	6.20	139	197713	24052.3803250 ppb	98
27) 2,4-Dimethylphenol	6.22	107	431642	25440.2829357 ppb	99
28) bis(2-Chlorethoxy)methane	6.32	93	445268	24219.5390803 ppb	95
29) 2,4-Dichlorophenol	6.44	162	311284	22473.3783877 ppb	96
31) 1,2,4-Trichlorobenzene	6.54	180	358756	22983.0803113 ppb	96
32) Naphthalene	6.62	128	1129653	22653.0174437 ppb	96
33) 4-Chloroaniline	6.67	65	155787	24702.8022570 ppb	99
34) Hexachloro-1,3-butadiene	6.74	225	251715	25733.6767560 ppb	94
36) 4-Chloro-3-methylphenol	7.15	107	374174	25046.6712887 ppb	99
37) 2-Methylnaphthalene	7.35	142	701850	20064.5111282 ppb #	1
38) 1-Methylnaphthalene	7.46	142	672271	21467.5348651 ppb #	1
41) Hexachlorocyclopentadiene	7.51	237	294602	29446.5993291 ppb	91
42) 2,4,6-Trichlorophenol	7.64	196	252131	26383.7464936 ppb	89
43) 2,4,5-Trichlorophenol	7.68	196	256751	24741.0960784 ppb	96
45) Biphenyl	7.85	154	879464	21818.4262411 ppb	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516C\0425C 07.D Vial: 6
Acq On : 25 Apr 2016 5:09 pm Operator: 280
Sample : STD SVMS 20K PPB 16D25863 Inst : BNAMS11
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:30 2016 Quant Results File: S811D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:19:55 2016
Response via : Initial Calibration
DataAcq Meth : BNA11C

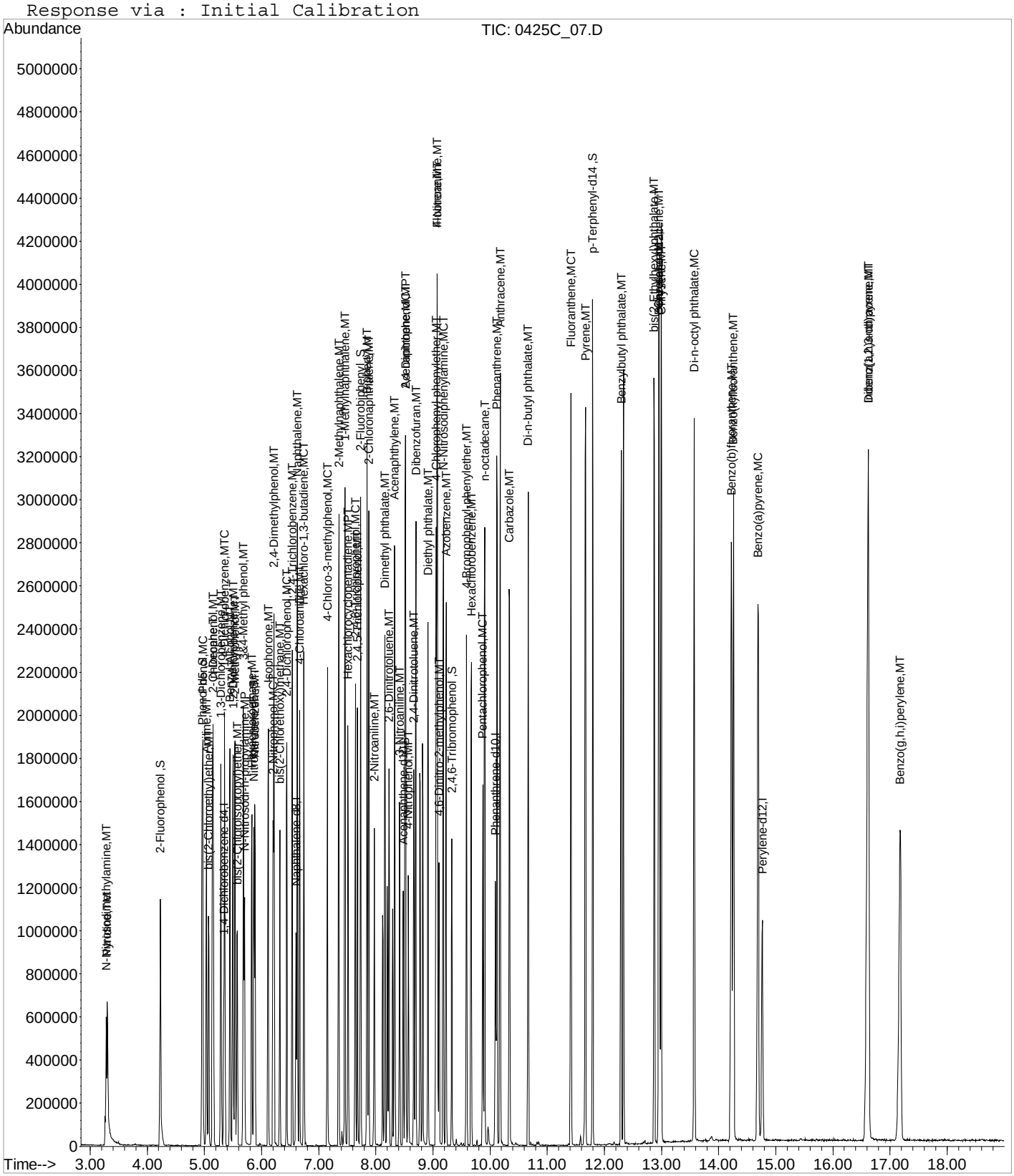
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
46)	2-Chloronaphthalene	7.88	162	715718	22736.5610935	ppb		96
47)	2-Nitroaniline	7.98	138	216641	21880.3614912	ppb		99
48)	Acenaphthylene	8.33	152	1125515	22892.7541259	ppb		97
49)	Dimethyl phthalate	8.16	163	824181	23796.3614726	ppb		94
50)	2,6-Dinitrotoluene	8.23	165	193325	23764.9079244	ppb		96
51)	3-Nitroaniline	8.42	138	175261	20700.5989792	ppb		93
52)	Acenaphthene	8.52	153	722000	21445.6492336	ppb		94
53)	2,4-Dinitrophenol	8.52	184	113239	25173.3418276	ppb		90
54)	Dibenzofuran	8.70	168	1019789	21923.3873928	ppb	#	69
55)	2,4-Dinitrotoluene	8.67	165	251732	23593.5537265	ppb		94
57)	4-Nitrophenol	8.57	139	150663	22289.0104760	ppb		97
58)	Fluorene	9.07	166	845680	22226.8856581	ppb		99
59)	4-Chlorophenyl-phenylether	9.05	204	440837	23356.3533931	ppb		89
60)	Diethyl phthalate	8.91	149	859460	23197.8658553	ppb		97
61)	4-Nitroaniline	9.08	138	186369	22604.0246757	ppb		93
62)	Azobenzene	9.23	77	895297	23275.8203412	ppb	#	42
65)	4,6-Dinitro-2-methylphenol	9.11	198	157668	23852.6873493	ppb		91
66)	N-Nitrosodiphenylamine	9.18	169	684688	20167.7695113	ppb		96
68)	4-Bromophenyl-phenylether	9.59	248	277956	22349.2489990	ppb		98
69)	Hexachlorobenzene	9.67	284	301283	21599.1101045	ppb		97
70)	n-octadecane	9.91	55	133916	18832.7844316	ppb		99
71)	Pentachlorophenol	9.87	266	178808	22326.4790085	ppb		94
72)	Phenanthrene	10.12	178	1289552	20938.1051252	ppb		98
73)	Anthracene	10.18	178	1312629	21403.7522229	ppb		98
74)	Carbazole	10.34	167	1117197	20027.9737131	ppb		98
75)	Di-n-butyl phthalate	10.67	149	1512216	21196.9070742	ppb		99
77)	Fluoranthene	11.42	202	1552794	22062.4149813	ppb		99
80)	Pyrene	11.67	202	1524513	19945.2561608	ppb		99
82)	Benzylbutyl phthalate	12.29	149	690817	19557.8350007	ppb		91
84)	Benzo(a)anthracene	12.95	228	1674512	21503.4540001	ppb		99
85)	Chrysene	12.99	228	1505974	20447.6518496	ppb		96
86)	bis(2-Ethylhexyl)phthalate	12.87	149	989534	18953.8425676	ppb		98
87)	Di-n-octyl phthalate	13.57	149	1869756	20393.7991887	ppb		96
89)	Benzo(b)fluoranthene	14.22	252	1621051	20258.6096046	ppb		98
90)	Benzo(k)fluoranthene	14.26	252	1581842	20775.4276395	ppb		97
91)	Benzo(a)pyrene	14.69	252	1594794	20722.5467666	ppb		98
92)	Indeno(1,2,3-cd)pyrene	16.62	276	1900134	20990.2948283	ppb		97
93)	Dibenz(a,h)anthracene	16.62	278	1629267	20859.3575419	ppb		95
94)	Benzo(g,h,i)perylene	17.18	276	1565083	20945.6034521	ppb		95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

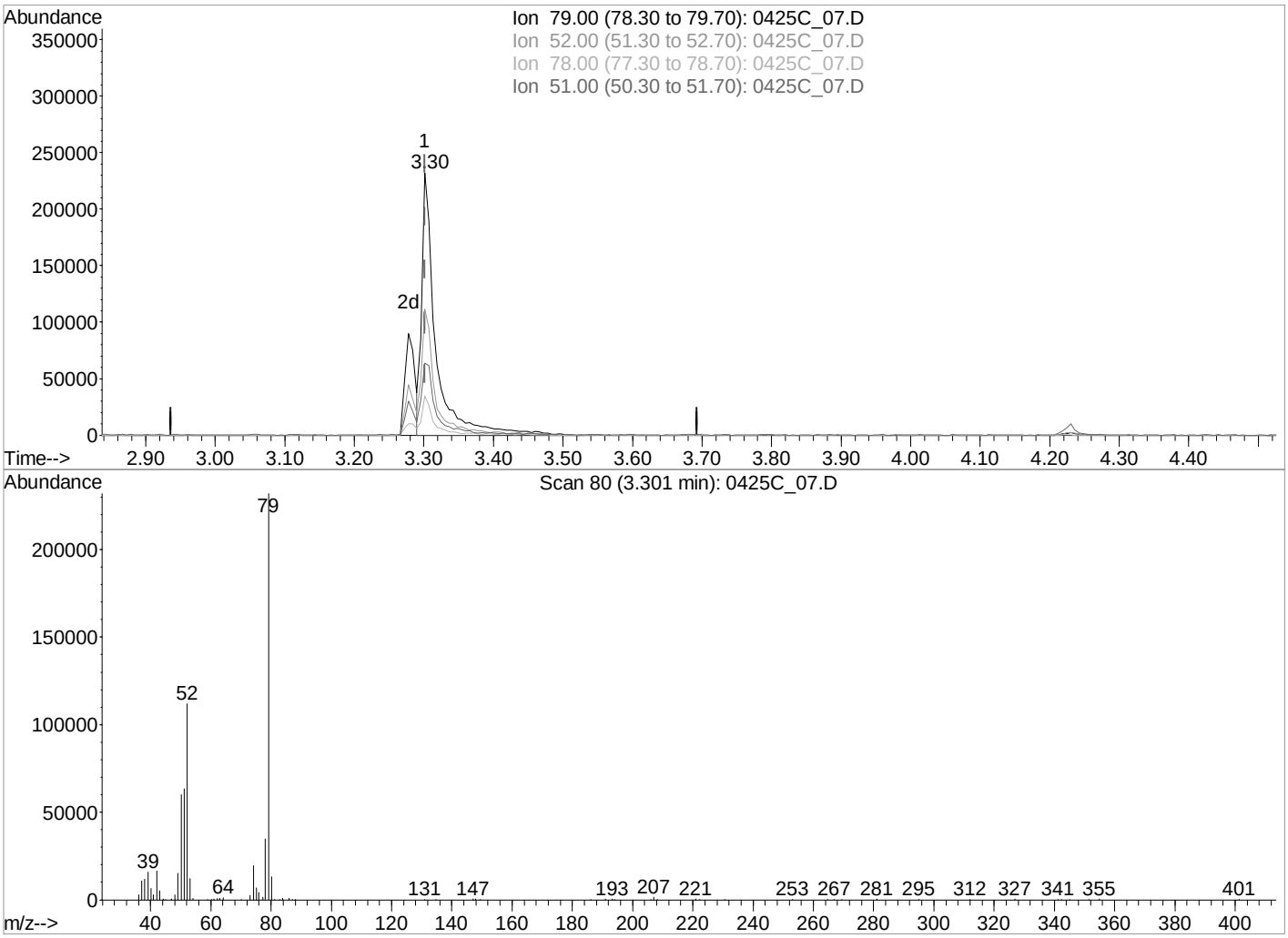
Data File : C:\MSDCHEM\1\DATA\042516C\0425C 07.D Vial: 6
Acq On : 25 Apr 2016 5:09 pm Operator: 280
Sample : STD SVMS 20K PPB 16D25863 Inst : BNAMS11
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:30 2016 Quant Results File: S811D25P.RES

Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:28:48 2016
Response via : Initial Calibration



Data File : C:\MSDCHEM\1\DATA\042516C\0425C 07.D Vial: 6
Acq On : 25 Apr 2016 5:09 pm Operator: 280
Sample : STD SVMS 20K PPB 16D25863 Inst : BNAMS11
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:20 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:28:48 2016
Response via : Multiple Level Calibration



TIC: 0425C_07.D

(2) Pyridine (TM)

3.30min (+0.000) 24157.0769434 ppb

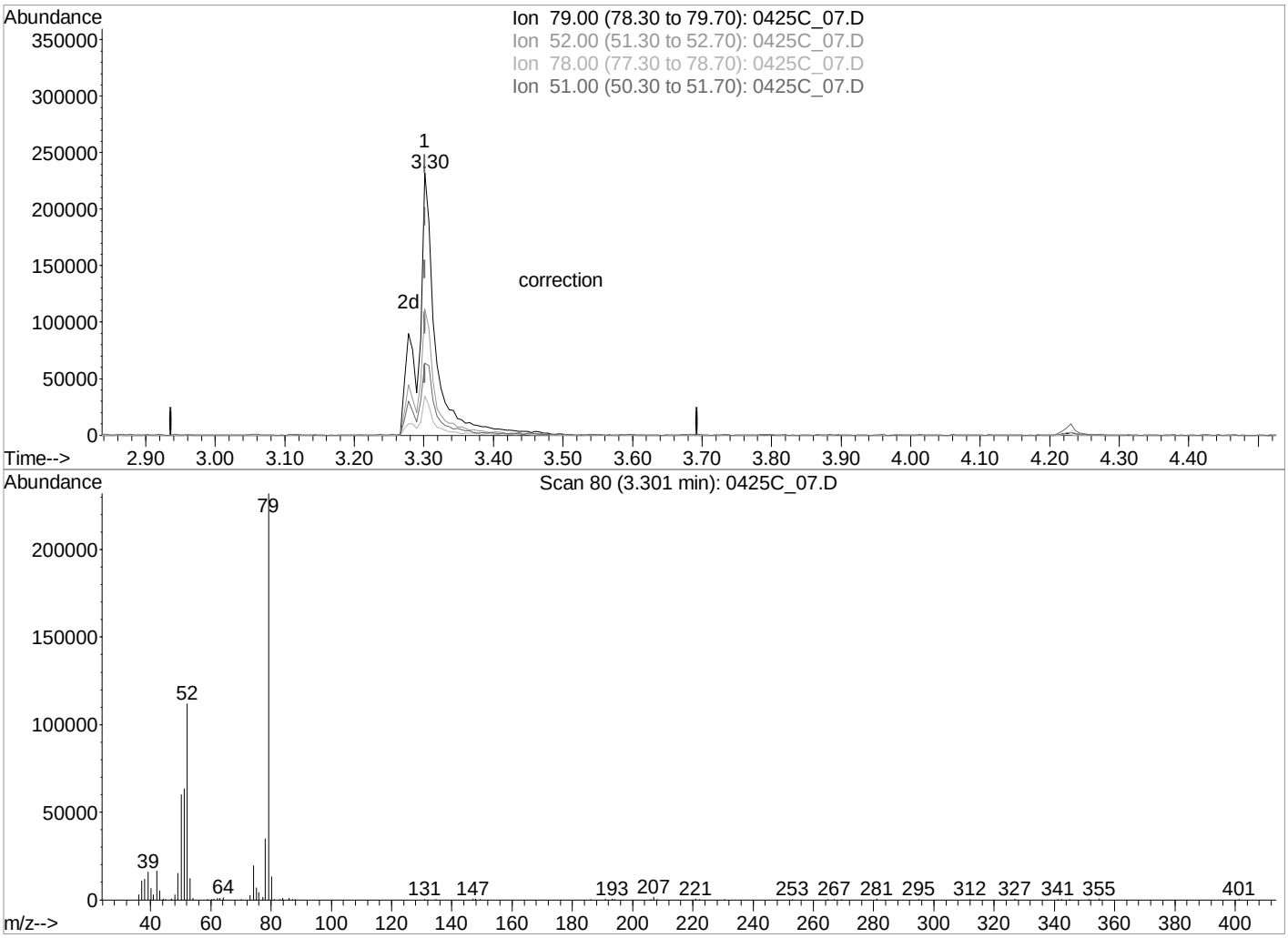
Qvalue = 97

response 327010

Ion	Exp%	Act%
79.00	100	100
52.00	49.90	48.06
78.00	15.70	14.83
51.00	29.80	27.18

Data File : C:\MSDCHEM\1\DATA\042516C\0425C 07.D Vial: 6
Acq On : 25 Apr 2016 5:09 pm Operator: 280
Sample : STD SVMS 20K PPB 16D25863 Inst : BNAMS11
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:29 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:28:48 2016
Response via : Multiple Level Calibration



TIC: 0425C_07.D

(2) Pyridine (TM)

3.30min (+0.000) 30593.4483080 ppb m

response 414138

Ion	Exp%	Act%
79.00	100	100
52.00	49.90	48.16
78.00	15.70	14.93
51.00	29.80	27.34

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516C\0425C 08.D Vial: 7
Acq On : 25 Apr 2016 5:32 pm Operator: 280
Sample : STD SVMS 30K PPB 16D25863 Inst : BNAMS11
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:31 2016 Quant Results File: S811D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:19:55 2016
Response via : Initial Calibration
DataAcq Meth : BNA11C

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.34	152	69907	8000.00 ppb	0.00
22) Naphthalene-d8	6.61	136	369889	8000.00 ppb	0.00
40) Acenaphthene-d10	8.48	164	226309	8000.00 ppb	0.00
64) Phenanthrene-d10	10.10	188	431142	8000.00 ppb	0.00
78) Chrysene-d12	12.97	240	524110	8000.00 ppb	0.00
88) Perylene-d12	14.77	264	535960	8000.00 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol	4.23	112	519177	49262.3143225 ppb	0.00
Spiked Amount 20.000	Range 10 - 74		Recovery = 246311.57%#		
7) Phenol-d5	4.96	99	697254	51109.6617060 ppb	0.00
Spiked Amount 20.000	Range 10 - 63		Recovery = 255548.31%#		
23) Nitrobenzene-d5	5.87	82	669576	40358.7790086 ppb	0.00
Spiked Amount 10.000	Range 28 - 123		Recovery = 403587.79%#		
44) 2-Fluorobiphenyl	7.74	172	1192506	33740.0552278 ppb	0.00
Spiked Amount 10.000	Range 35 - 133		Recovery = 337400.55%#		
67) 2,4,6-Tribromophenol	9.34	330	193305	31022.4852679 ppb	0.00
Spiked Amount 20.000	Range 22 - 154		Recovery = 155112.43%#		
81) p-Terphenyl-d14	11.80	244	1785736	32936.1453873 ppb	0.00
Spiked Amount 10.000	Range 30 - 148		Recovery = 329361.45%#		
Target Compounds					Qvalue
2) Pyridine	3.31	79	612620m	47309.2922138 ppb	
3) N-Nitrosodimethylamine	3.28	42	292503	38513.0079184 ppb	97
5) Aniline	5.04	66	353853	53399.3633560 ppb	99
6) bis(2-Chloroethyl)ether	5.08	63	356214	44201.3853467 ppb	95
8) Phenol	4.98	94	697906	49606.5029568 ppb	97
10) 2-Chlorophenol	5.14	128	561550	46524.3278331 ppb	93
11) n-Decane	5.15	41	308563	41004.4801303 ppb	97
12) 1,3-Dichlorobenzene	5.29	146	617840	45179.5131711 ppb	96
13) 1,4-Dichlorobenzene	5.35	146	612570	44332.4493528 ppb	95
14) Benzyl Alcohol	5.45	79	557780	52053.5585138 ppb	98
15) 1,2-Dichlorobenzene	5.50	146	586578	44533.3106630 ppb	93
16) bis(2-Chloroisopropyl)ethe	5.58	121	153116	41003.7680002 ppb	93
17) 2-Methylphenol	5.54	108	510548	47022.8299810 ppb	95
18) Hexachloroethane	5.83	117	265042	47315.0116671 ppb	90
19) N-Nitrosodi-n-propylamine	5.71	70	430192	49559.6410236 ppb	95
20) 3&4-Methyl phenol	5.69	107	603646	47077.0936794 ppb	89
24) Nitrobenzene	5.89	77	686165	40923.5993504 ppb	91
25) Isophorone	6.12	82	1165688	41263.9207608 ppb	99
26) 2-Nitrophenol	6.21	139	293291	37037.9934417 ppb	91
27) 2,4-Dimethylphenol	6.22	107	621728	38038.6018051 ppb	92
28) bis(2-Chlorethoxy)methane	6.32	93	641150	36201.7790314 ppb	93
29) 2,4-Dichlorophenol	6.44	162	451729	33854.4229343 ppb	93
31) 1,2,4-Trichlorobenzene	6.54	180	532405	35406.0162661 ppb	99
32) Naphthalene	6.63	128	1586841	33032.4122558 ppb	98
33) 4-Chloroaniline	6.67	65	244965	40322.2653458 ppb	92
34) Hexachloro-1,3-butadiene	6.74	225	365698	38809.7824044 ppb	94
36) 4-Chloro-3-methylphenol	7.15	107	577356	40118.6185965 ppb	97
37) 2-Methylnaphthalene	7.35	142	1094911	32492.9374780 ppb #	1
38) 1-Methylnaphthalene	7.46	142	1004721	33304.9784405 ppb #	1
41) Hexachlorocyclopentadiene	7.51	237	451062	46544.6658023 ppb	89
42) 2,4,6-Trichlorophenol	7.64	196	371257	40106.8994300 ppb	88
43) 2,4,5-Trichlorophenol	7.68	196	370656	36873.3032939 ppb	93
45) Biphenyl	7.85	154	1334181	34170.7354062 ppb	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516C\0425C 08.D Vial: 7
Acq On : 25 Apr 2016 5:32 pm Operator: 280
Sample : STD SVMS 30K PPB 16D25863 Inst : BNAMS11
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:31 2016 Quant Results File: S811D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:19:55 2016
Response via : Initial Calibration
DataAcq Meth : BNA11C

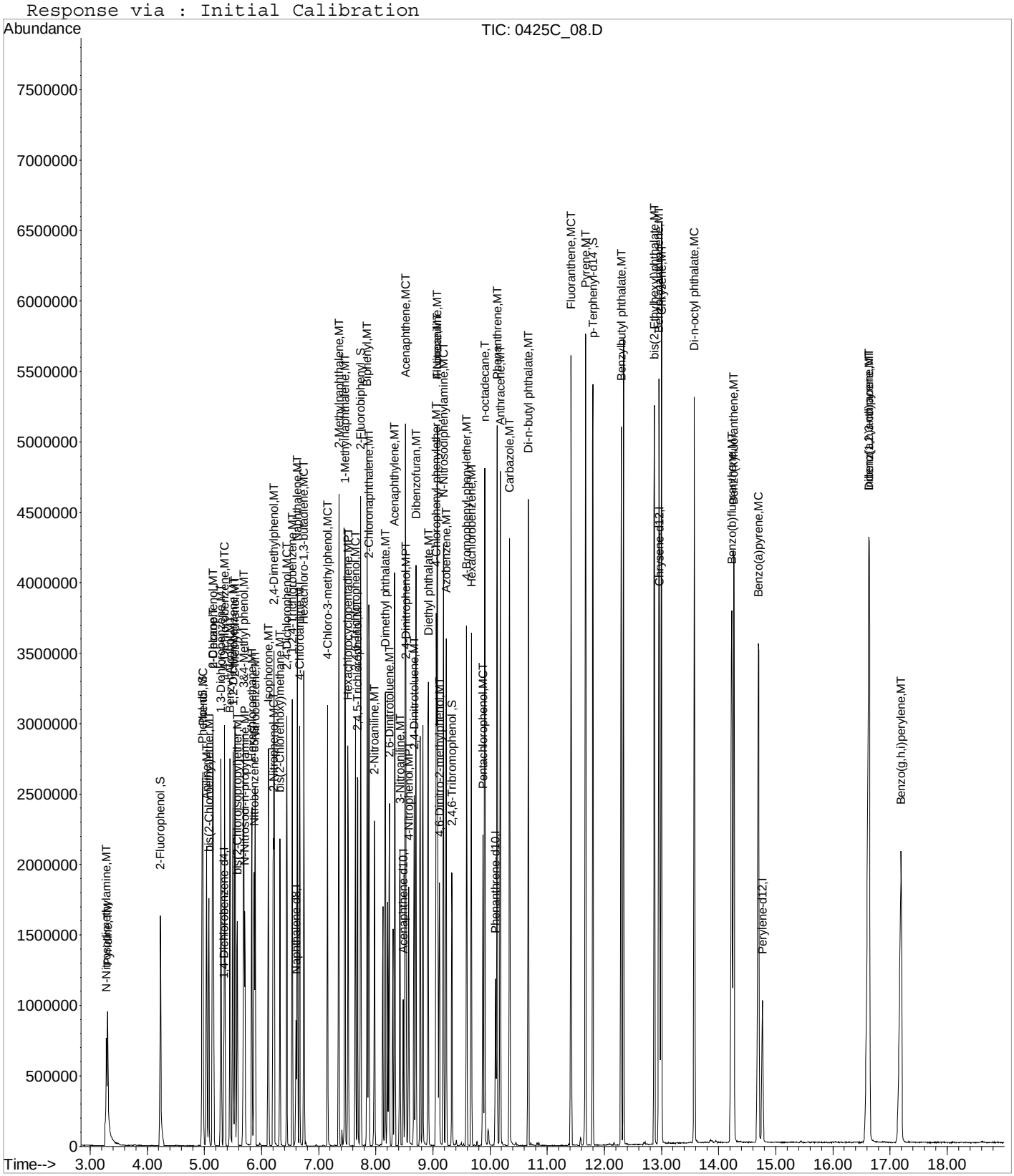
	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
46)	2-Chloronaphthalene	7.88	162	1092284	35822.2309541 ppb		93
47)	2-Nitroaniline	7.98	138	330965	34508.8215734 ppb		98
48)	Acenaphthylene	8.33	152	1608533	33776.2126787 ppb		97
49)	Dimethyl phthalate	8.17	163	1147076	34191.2021771 ppb		92
50)	2,6-Dinitrotoluene	8.24	165	263602	33452.6893097 ppb		98
51)	3-Nitroaniline	8.42	138	284653	34709.4403265 ppb	#	81
52)	Acenaphthene	8.52	153	1080137	33121.8863578 ppb		90
53)	2,4-Dinitrophenol	8.53	184	177938	39950.0039511 ppb	#	61
54)	Dibenzofuran	8.70	168	1471858	32666.1134886 ppb	#	70
55)	2,4-Dinitrotoluene	8.67	165	371712	35966.2977054 ppb		85
57)	4-Nitrophenol	8.58	139	220966	33747.6744047 ppb	#	83
58)	Fluorene	9.08	166	1272526	34528.1602777 ppb		98
59)	4-Chlorophenyl-phenylether	9.06	204	636400	34808.9873675 ppb		88
60)	Diethyl phthalate	8.92	149	1274806	35522.2675862 ppb		98
61)	4-Nitroaniline	9.08	138	268005	33557.4701985 ppb		86
62)	Azobenzene	9.23	77	1276310	34255.3380721 ppb	#	36
65)	4,6-Dinitro-2-methylphenol	9.11	198	234961	36809.6093171 ppb		95
66)	N-Nitrosodiphenylamine	9.18	169	1055685	32545.1142020 ppb		97
68)	4-Bromophenyl-phenylether	9.59	248	421786	35494.8493672 ppb		99
69)	Hexachlorobenzene	9.67	284	432053	32417.8756719 ppb		97
70)	n-octadecane	9.91	55	203823	30000.0205511 ppb		99
71)	Pentachlorophenol	9.88	266	257378	33459.5085814 ppb		92
72)	Phenanthrene	10.12	178	1875714	31875.0909495 ppb		99
73)	Anthracene	10.18	178	1843162	31455.5819290 ppb		97
74)	Carbazole	10.34	167	1651058	30978.1784958 ppb		99
75)	Di-n-butyl phthalate	10.67	149	2331793	34208.5729452 ppb		96
77)	Fluoranthene	11.42	202	2213597	32917.2888571 ppb		97
80)	Pyrene	11.67	202	2351018	31413.2205697 ppb		99
82)	Benzylbutyl phthalate	12.29	149	1060520	30663.7063928 ppb		99
84)	Benzo(a)anthracene	12.96	228	2330914	30569.9151732 ppb		99
85)	Chrysene	13.00	228	2292293	31786.6031194 ppb		99
86)	bis(2-Ethylhexyl)phthalate	12.88	149	1572134	30754.1785463 ppb		94
87)	Di-n-octyl phthalate	13.58	149	2766874	30821.2755830 ppb		94
89)	Benzo(b)fluoranthene	14.23	252	2510805m	32528.0001845 ppb		
90)	Benzo(k)fluoranthene	14.27	252	2257182	30731.5786315 ppb		100
91)	Benzo(a)pyrene	14.69	252	2388965	32179.5335334 ppb		97
92)	Indeno(1,2,3-cd)pyrene	16.63	276	2702141	30943.8066471 ppb		96
93)	Dibenz(a,h)anthracene	16.64	278	2376951	31547.1636005 ppb		94
94)	Benzo(g,h,i)perylene	17.19	276	2192114	30412.3556509 ppb		97

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

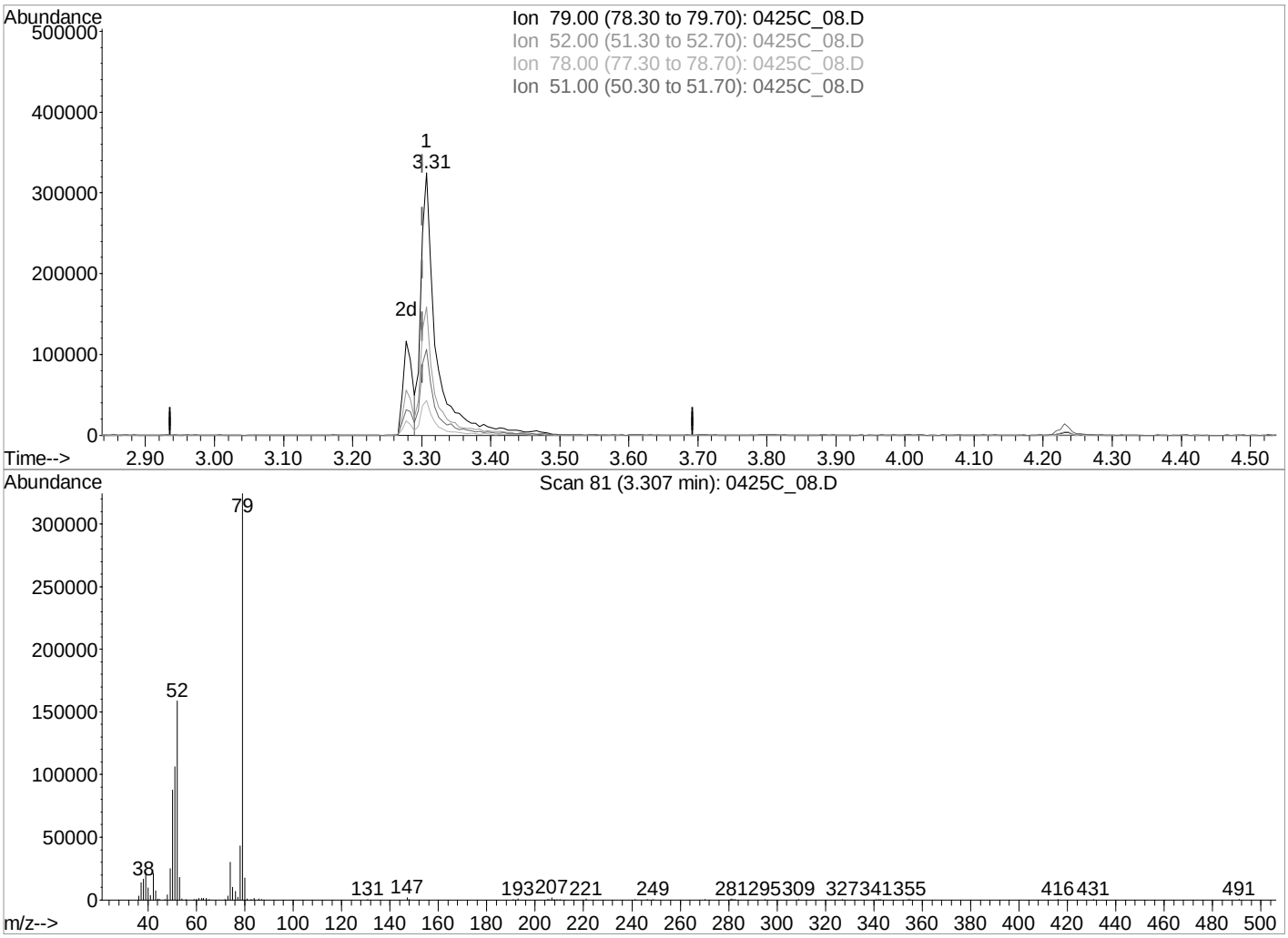
Data File : C:\MSDCHEM\1\DATA\042516C\0425C 08.D Vial: 7
Acq On : 25 Apr 2016 5:32 pm Operator: 280
Sample : STD SVMS 30K PPB 16D25863 Inst : BNAMS11
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:31 2016 Quant Results File: S811D25P.RES

Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:30:30 2016
Response via : Initial Calibration



Data File : C:\MSDCHEM\1\DATA\042516C\0425C 08.D Vial: 7
Acq On : 25 Apr 2016 5:32 pm Operator: 280
Sample : STD SVMS 30K PPB 16D25863 Inst : BNAMS11
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:20 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:30:30 2016
Response via : Multiple Level Calibration



TIC: 0425C_08.D

(2) Pyridine (TM)

3.31min (+0.006) 38963.1737957 ppb

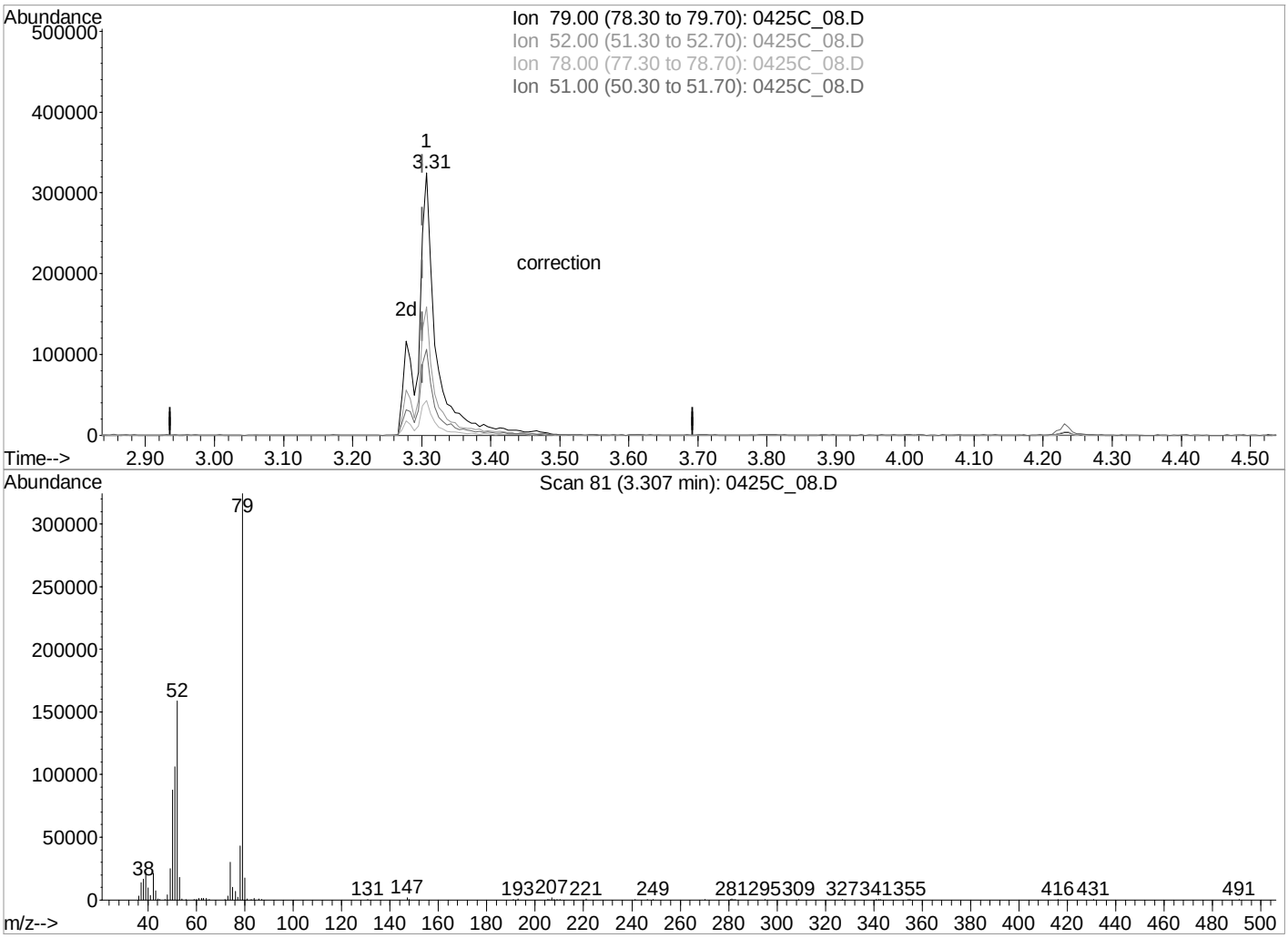
Qvalue = 97

response 504544

Ion	Exp%	Act%
79.00	100	100
52.00	49.90	48.93
78.00	15.70	13.28
51.00	29.80	32.59

Data File : C:\MSDCHEM\1\DATA\042516C\0425C 08.D Vial: 7
Acq On : 25 Apr 2016 5:32 pm Operator: 280
Sample : STD SVMS 30K PPB 16D25863 Inst : BNAMS11
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:30 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:30:30 2016
Response via : Multiple Level Calibration



TIC: 0425C_08.D

(2) Pyridine (TM)

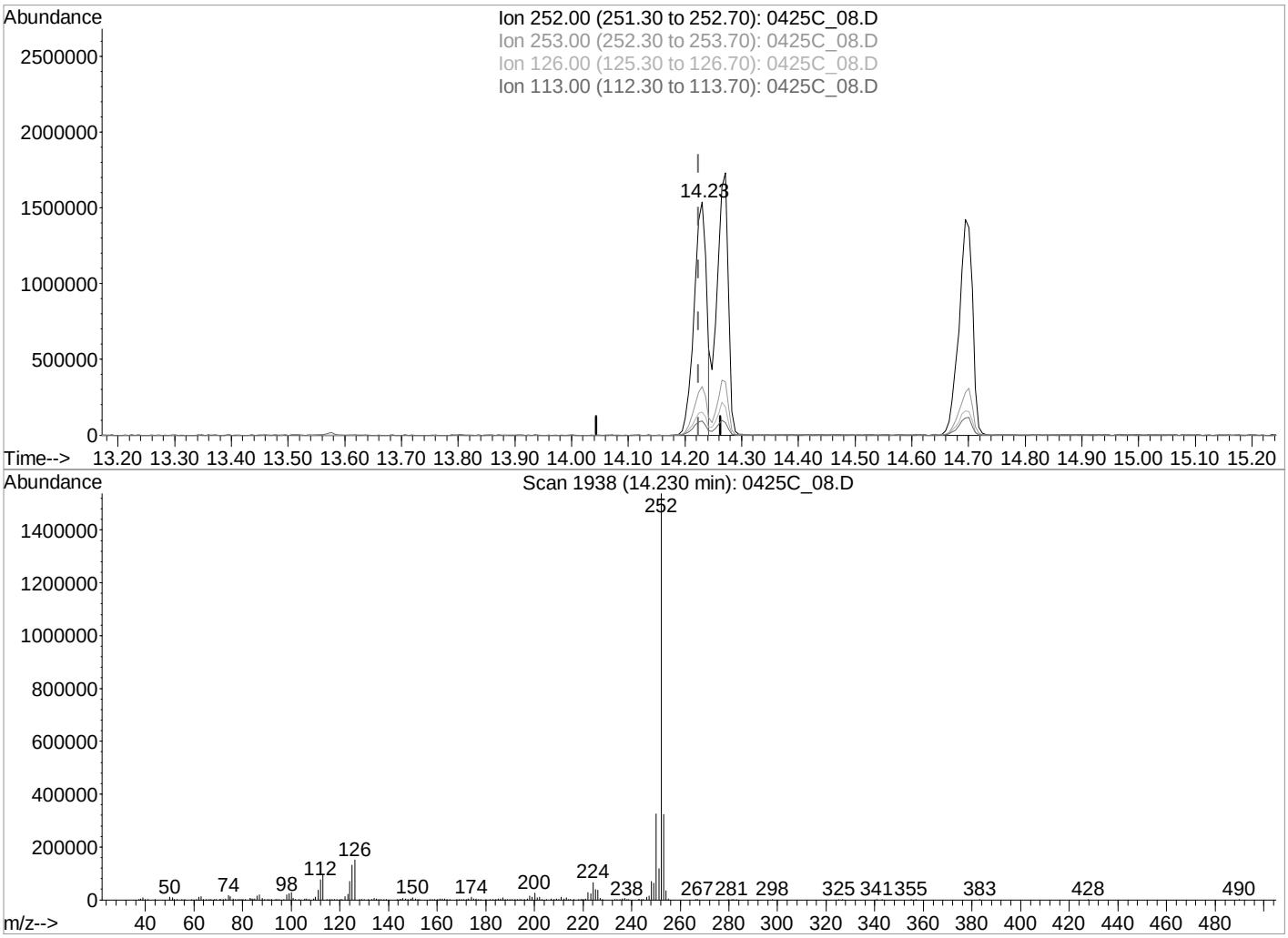
3.31min (+0.006) 47309.2922138 ppb m

response 612620

Ion	Exp%	Act%
79.00	100	100
52.00	49.90	48.93
78.00	15.70	13.28
51.00	29.80	32.71

Data File : C:\MSDCHEM\1\DATA\042516C\0425C 08.D Vial: 7
Acq On : 25 Apr 2016 5:32 pm Operator: 280
Sample : STD SVMS 30K PPB 16D25863 Inst : BNAMS11
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:31 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:30:30 2016
Response via : Multiple Level Calibration



TIC: 0425C_08.D

(89) Benzo(b)fluoranthene (MT)

14.23min (+0.006) 30545.2445168 ppb

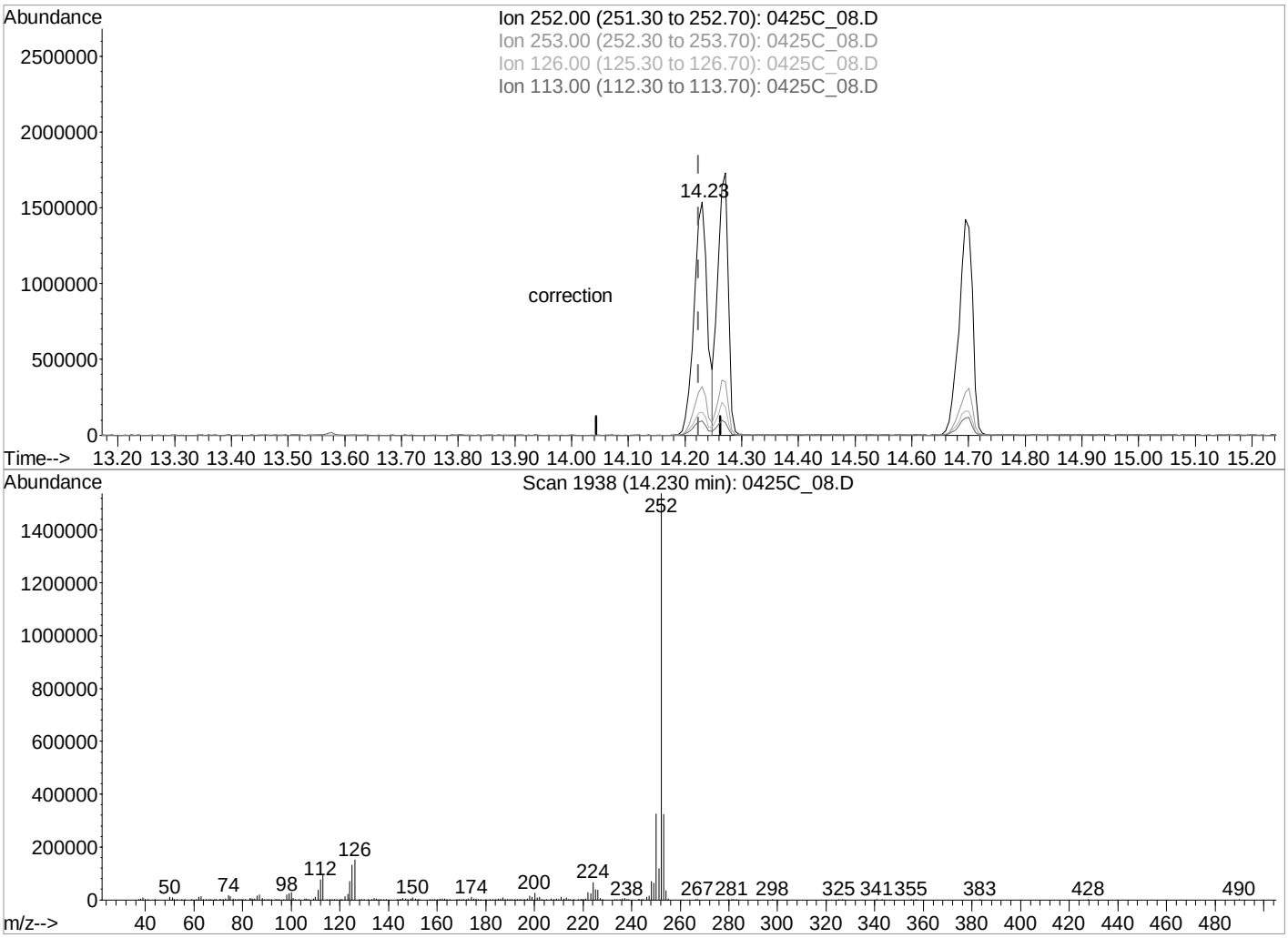
Qvalue = 100

response 2357758

Ion	Exp%	Act%
252.00	100	100
253.00	20.90	21.00
126.00	10.20	10.02
113.00	6.90	6.48

Data File : C:\MSDCHEM\1\DATA\042516C\0425C 08.D Vial: 7
Acq On : 25 Apr 2016 5:32 pm Operator: 280
Sample : STD SVMS 30K PPB 16D25863 Inst : BNAMS11
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:31 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:30:30 2016
Response via : Multiple Level Calibration



TIC: 0425C_08.D

(89) Benzo(b)fluoranthene (MT)

14.23min (+0.006) 32528.0001845 ppb m

response 2510805

Ion	Exp%	Act%
252.00	100	100
253.00	20.90	20.96
126.00	10.20	9.88
113.00	6.90	6.22

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516C\0425C 09.D Vial: 8
Acq On : 25 Apr 2016 5:55 pm Operator: 280
Sample : STD SVMS 40K PPB 16D25863 Inst : BNAMS11
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:33 2016 Quant Results File: S811D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:19:55 2016
Response via : Initial Calibration
DataAcq Meth : BNA11C

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.34	152	72023	8000.00 ppb	0.00
22) Naphthalene-d8	6.61	136	367654m	8000.00 ppb	0.00
40) Acenaphthene-d10	8.48	164	223079	8000.00 ppb	0.00
64) Phenanthrene-d10	10.10	188	404884	8000.00 ppb	0.00
78) Chrysene-d12	12.97	240	500131	8000.00 ppb	0.00
88) Perylene-d12	14.77	264	522734	8000.00 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol	4.23	112	712719	65639.7866594 ppb	0.00
Spiked Amount 20.000	Range 10 - 74		Recovery = 328198.93%#		
7) Phenol-d5	4.97	99	899556	64001.4265916 ppb	0.01
Spiked Amount 20.000	Range 10 - 63		Recovery = 320007.13%#		
23) Nitrobenzene-d5	5.87	82	886868	53781.0461693 ppb	0.00
Spiked Amount 10.000	Range 28 - 123		Recovery = 537810.46%#		
44) 2-Fluorobiphenyl	7.74	172	1638840	47039.7395367 ppb	0.00
Spiked Amount 10.000	Range 35 - 133		Recovery = 470397.40%#		
67) 2,4,6-Tribromophenol	9.34	330	255435	43454.3163824 ppb	0.00
Spiked Amount 20.000	Range 22 - 154		Recovery = 217271.58%#		
81) p-Terphenyl-d14	11.80	244	2523089	48767.0807221 ppb	0.00
Spiked Amount 10.000	Range 30 - 148		Recovery = 487670.81%#		
Target Compounds					Qvalue
2) Pyridine	3.30	79	812683m	60915.2334252 ppb	
3) N-Nitrosodimethylamine	3.28	42	383858	49056.5687531 ppb	86
5) Aniline	5.04	66	473355	69334.5376916 ppb	95
6) bis(2-Chloroethyl)ether	5.08	63	475647	57287.4006011 ppb	96
8) Phenol	4.98	94	965819	66632.6188937 ppb	95
10) 2-Chlorophenol	5.14	128	721117	57989.1666473 ppb	89
11) n-Decane	5.15	41	424274	54724.6935481 ppb	96
12) 1,3-Dichlorobenzene	5.29	146	803701	57043.9370137 ppb	98
13) 1,4-Dichlorobenzene	5.35	146	827370	58118.6115118 ppb	98
14) Benzyl Alcohol	5.45	79	756944	68564.7181576 ppb	99
15) 1,2-Dichlorobenzene	5.50	146	764701	56350.8313881 ppb	95
16) bis(2-Chloroisopropyl)ethe	5.58	121	206271	53615.5572902 ppb	100
17) 2-Methylphenol	5.54	108	666472	59580.4185622 ppb	97
18) Hexachloroethane	5.83	117	349415	60544.5776819 ppb	90
19) N-Nitrosodi-n-propylamine	5.71	70	557917	62385.6744841 ppb	96
20) 3&4-Methyl phenol	5.69	107	790811	59861.7592592 ppb	94
24) Nitrobenzene	5.89	77	846400	50787.0559271 ppb	97
25) Isophorone	6.12	82	1460370	52009.5610796 ppb	98
26) 2-Nitrophenol	6.21	139	382328	48575.4620070 ppb	90
27) 2,4-Dimethylphenol	6.22	107	810096	49864.6444873 ppb	94
28) bis(2-Chlorethoxy)methane	6.32	93	899719	51110.3999340 ppb	97
29) 2,4-Dichlorophenol	6.44	162	601732	45370.4066529 ppb	94
31) 1,2,4-Trichlorobenzene	6.54	180	701497	46934.5737447 ppb	96
32) Naphthalene	6.63	128	2125852	44521.7292099 ppb	97
33) 4-Chloroaniline	6.67	65	310963	51496.9755795 ppb	97
34) Hexachloro-1,3-butadiene	6.74	225	503355	53743.3990559 ppb	89
36) 4-Chloro-3-methylphenol	7.16	107	711120	49713.8389540 ppb	90
37) 2-Methylnaphthalene	7.35	142	1409581	42085.4828230 ppb #	1
38) 1-Methylnaphthalene	7.46	142	1278332	42632.3682468 ppb #	1
41) Hexachlorocyclopentadiene	7.51	237	549577	57531.4554063 ppb	95
42) 2,4,6-Trichlorophenol	7.64	196	481300	52747.6889238 ppb	92
43) 2,4,5-Trichlorophenol	7.68	196	500742	50535.6861987 ppb	92
45) Biphenyl	7.85	154	1799486	46755.3360464 ppb	95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516C\0425C 09.D Vial: 8
Acq On : 25 Apr 2016 5:55 pm Operator: 280
Sample : STD SVMS 40K PPB 16D25863 Inst : BNAMS11
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:33 2016 Quant Results File: S811D25P.RES

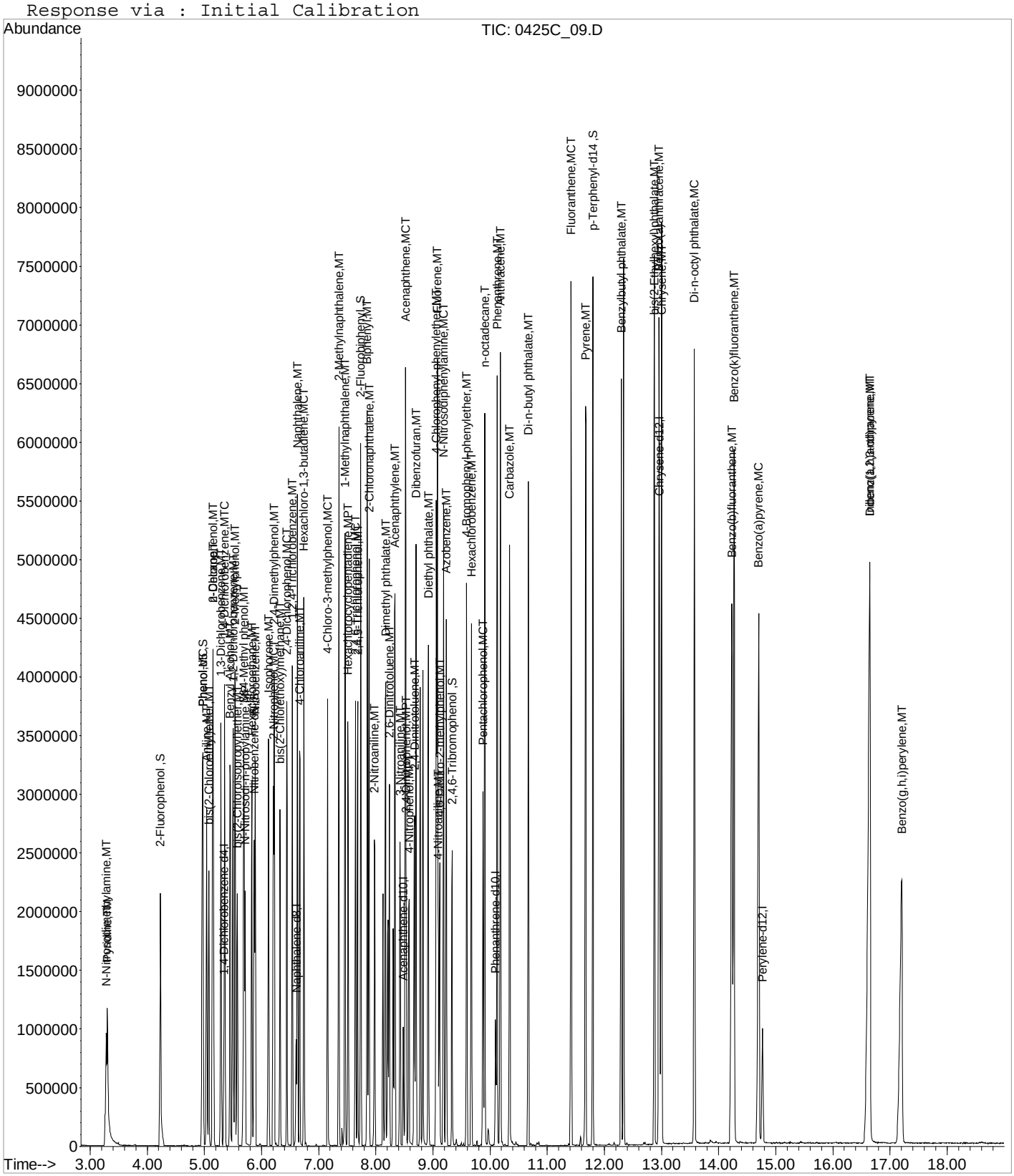
Quant Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:19:55 2016
Response via : Initial Calibration
DataAcq Meth : BNA11C

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
46)	2-Chloronaphthalene	7.88	162	1400076	46581.3214905	ppb		94
47)	2-Nitroaniline	7.98	138	434699	45981.1509397	ppb		98
48)	Acenaphthylene	8.34	152	2054393	43763.0557211	ppb		97
49)	Dimethyl phthalate	8.17	163	1610203	48690.6918895	ppb		98
50)	2,6-Dinitrotoluene	8.24	165	354218	45603.2819921	ppb		95
51)	3-Nitroaniline	8.42	138	346367	42846.1190644	ppb		95
52)	Acenaphthene	8.52	153	1404317	43686.2241273	ppb		95
53)	2,4-Dinitrophenol	8.54	184	234937	53027.3596864	ppb	#	46
54)	Dibenzofuran	8.71	168	2017912	45433.5752320	ppb	#	71
55)	2,4-Dinitrotoluene	8.68	165	493739	48465.1680300	ppb		96
57)	4-Nitrophenol	8.58	139	289511	44856.6258423	ppb		92
58)	Fluorene	9.08	166	1610407	44328.7577200	ppb		95
59)	4-Chlorophenyl-phenylether	9.06	204	844652	46868.6203638	ppb		89
60)	Diethyl phthalate	8.92	149	1612796	45591.0040567	ppb		96
61)	4-Nitroaniline	9.10	138	333423	42353.0809282	ppb		91
62)	Azobenzene	9.24	77	1822562	49624.6587960	ppb	#	46
65)	4,6-Dinitro-2-methylphenol	9.12	198	309065	51277.5504511	ppb		99
66)	N-Nitrosodiphenylamine	9.19	169	1392090	45699.1876305	ppb		97
68)	4-Bromophenyl-phenylether	9.59	248	548183	49123.4044355	ppb		96
69)	Hexachlorobenzene	9.67	284	556633	44474.0002673	ppb		95
70)	n-octadecane	9.91	55	258926	40582.0276142	ppb		95
71)	Pentachlorophenol	9.88	266	348290	48061.8707235	ppb		93
72)	Phenanthrene	10.12	178	2442018	44189.9378359	ppb		98
73)	Anthracene	10.18	178	2476829	45011.1342572	ppb		98
74)	Carbazole	10.34	167	2196661	43888.0519825	ppb		98
75)	Di-n-butyl phthalate	10.67	149	2926684	45720.4518295	ppb		98
77)	Fluoranthene	11.42	202	3046125	48235.0728830	ppb		98
80)	Pyrene	11.68	202	2913491	40795.1807714	ppb		98
82)	Benzylbutyl phthalate	12.29	149	1373417	41614.7102356	ppb		95
84)	Benzo(a)anthracene	12.96	228	3103533	42654.3199645	ppb		97
85)	Chrysene	13.00	228	3030167	44033.0964935	ppb		97
86)	bis(2-Ethylhexyl)phthalate	12.88	149	2075773	42553.2859171	ppb		95
87)	Di-n-octyl phthalate	13.58	149	3648572	42591.4885544	ppb		94
89)	Benzo(b)fluoranthene	14.23	252	3082024	40938.5093375	ppb		96
90)	Benzo(k)fluoranthene	14.27	252	3002252	41909.9424148	ppb		98
91)	Benzo(a)pyrene	14.70	252	2999774	41429.5411865	ppb		97
92)	Indeno(1,2,3-cd)pyrene	16.64	276	3329936	39097.8834793	ppb		96
93)	Dibenz(a,h)anthracene	16.65	278	2968551	40395.8018592	ppb		95
94)	Benzo(g,h,i)perylene	17.21	276	2633405	37459.0026874	ppb		96

(#) = qualifier out of range (m) = manual integration

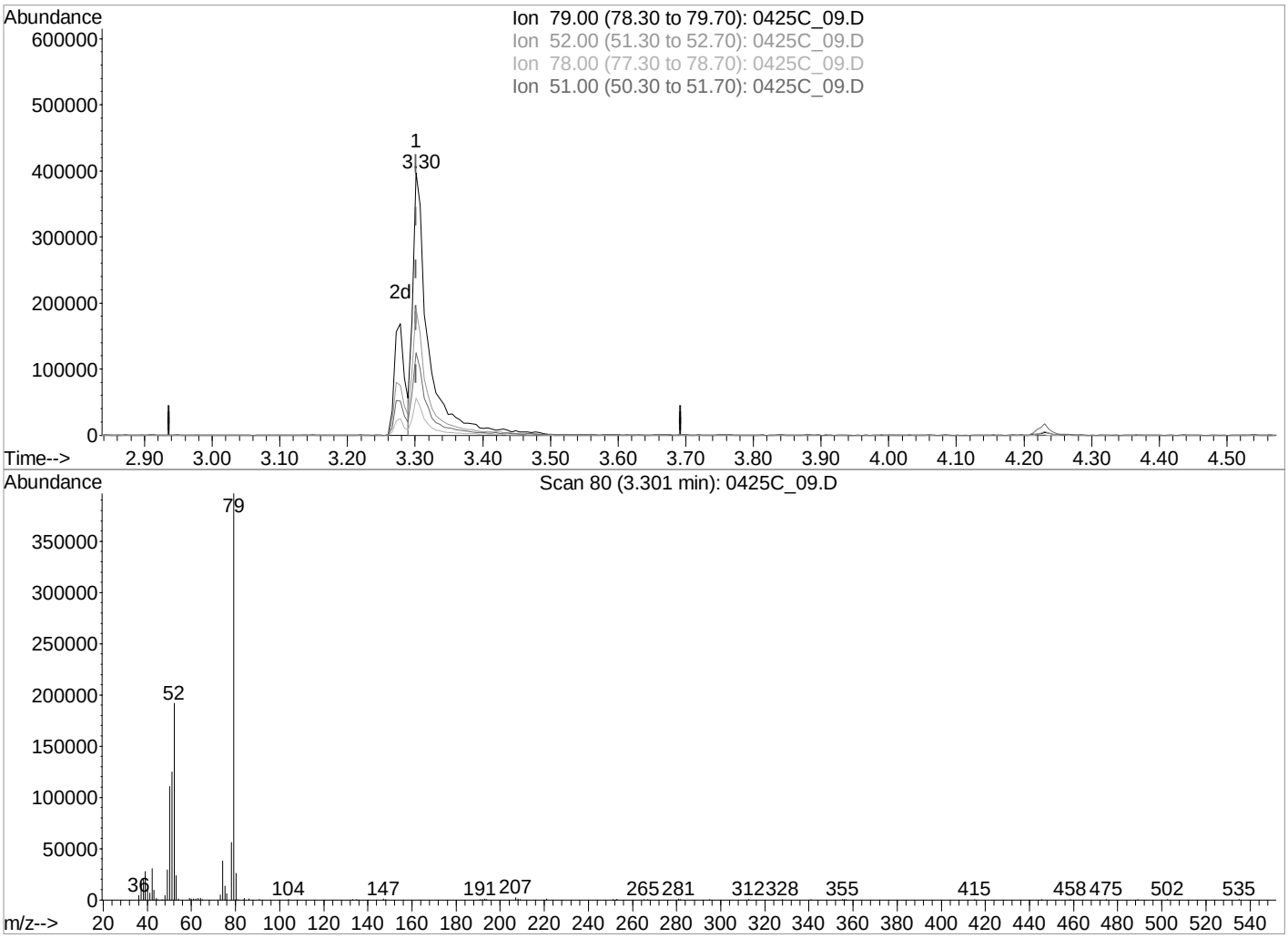
Data File : C:\MSDCHEM\1\DATA\042516C\0425C 09.D Vial: 8
Acq On : 25 Apr 2016 5:55 pm Operator: 280
Sample : STD SVMS 40K PPB 16D25863 Inst : BNAMS11
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:33 2016 Quant Results File: S811D25P.RES

Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:32:06 2016
Response via : Initial Calibration



Data File : C:\MSDCHEM\1\DATA\042516C\0425C 09.D Vial: 8
Acq On : 25 Apr 2016 5:55 pm Operator: 280
Sample : STD SVMS 40K PPB 16D25863 Inst : BNAMS11
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:20 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:32:06 2016
Response via : Multiple Level Calibration



TIC: 0425C_09.D

(2) Pyridine (TM)

3.30min (+0.000) 47661.1895355 ppb

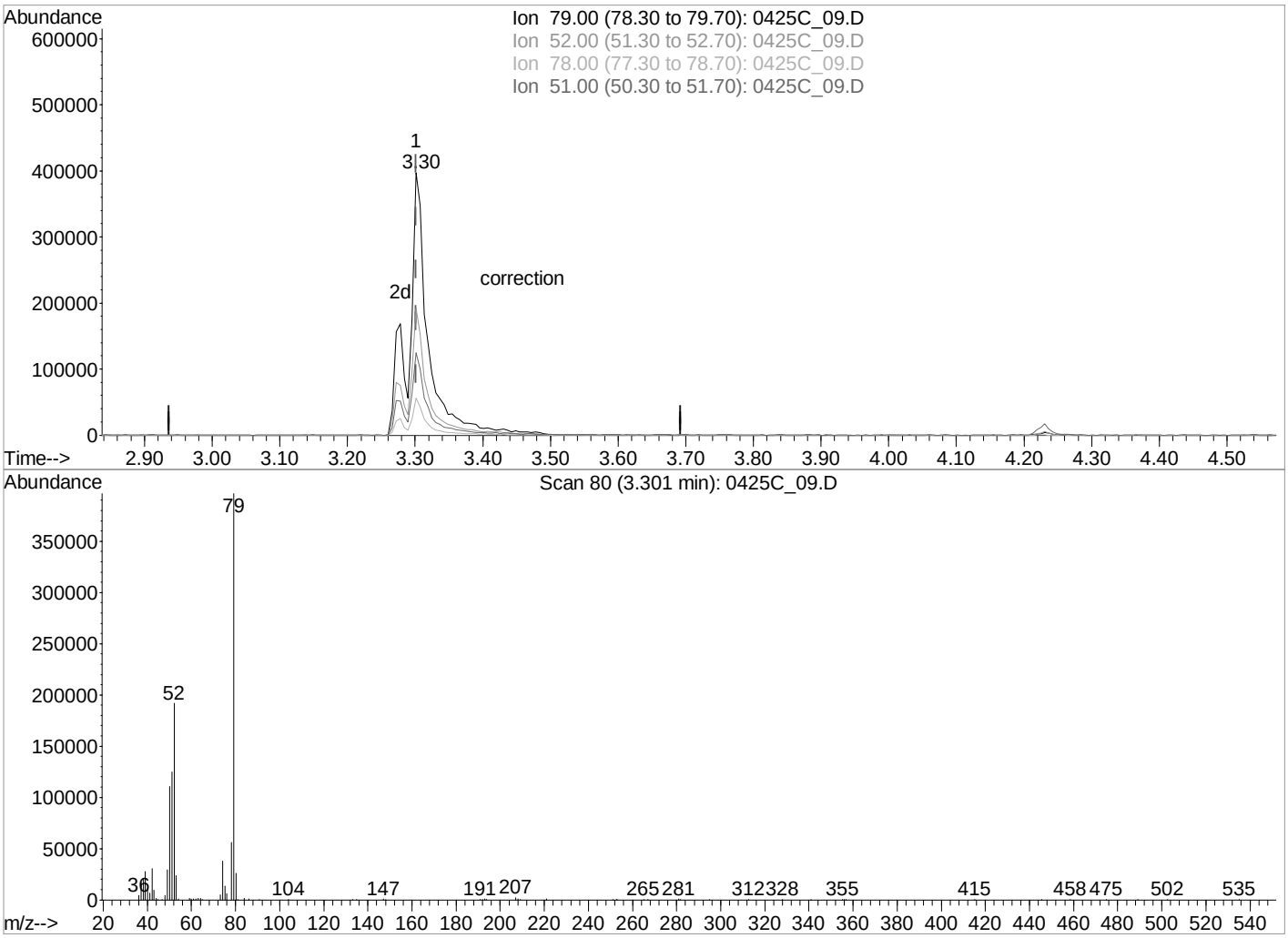
Qvalue = 97

response 635858

Ion	Exp%	Act%
79.00	100	100
52.00	49.90	48.32
78.00	15.70	14.15
51.00	29.80	31.31

Data File : C:\MSDCHEM\1\DATA\042516C\0425C 09.D Vial: 8
Acq On : 25 Apr 2016 5:55 pm Operator: 280
Sample : STD SVMS 40K PPB 16D25863 Inst : BNAMS11
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:32 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:32:06 2016
Response via : Multiple Level Calibration



TIC: 0425C_09.D

(2) Pyridine (TM)

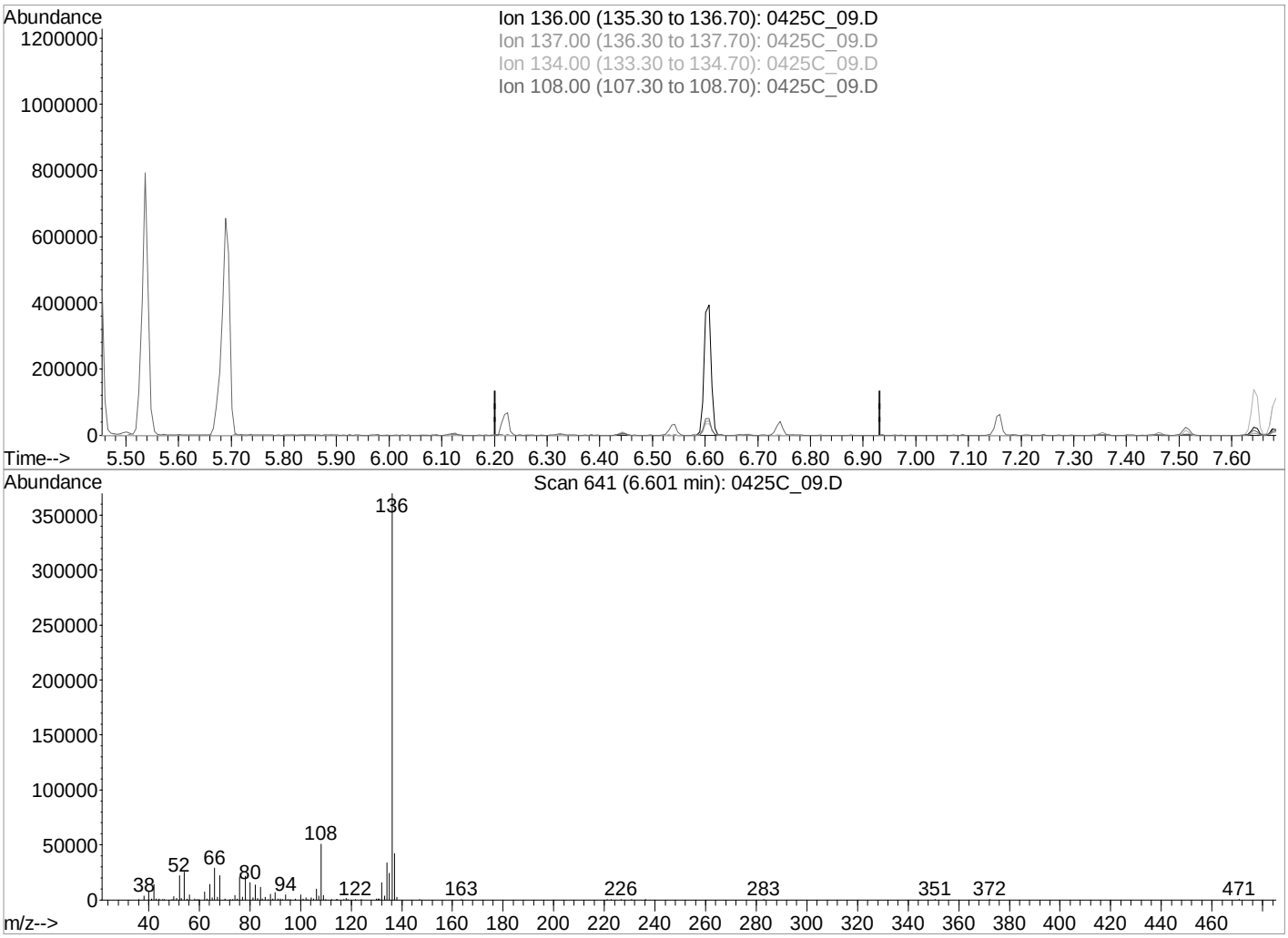
3.30min (+0.000) 60915.2334252 ppb m

response 812683

Ion	Exp%	Act%
79.00	100	100
52.00	49.90	48.32
78.00	15.70	14.15
51.00	29.80	31.38

Data File : C:\MSDCHEM\1\DATA\042516C\0425C 09.D Vial: 8
Acq On : 25 Apr 2016 5:55 pm Operator: 280
Sample : STD SVMS 40K PPB 16D25863 Inst : BNAMS11
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:32 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:32:06 2016
Response via : Multiple Level Calibration



TIC: 0425C_09.D

(22) Naphthalene-d8 (I)

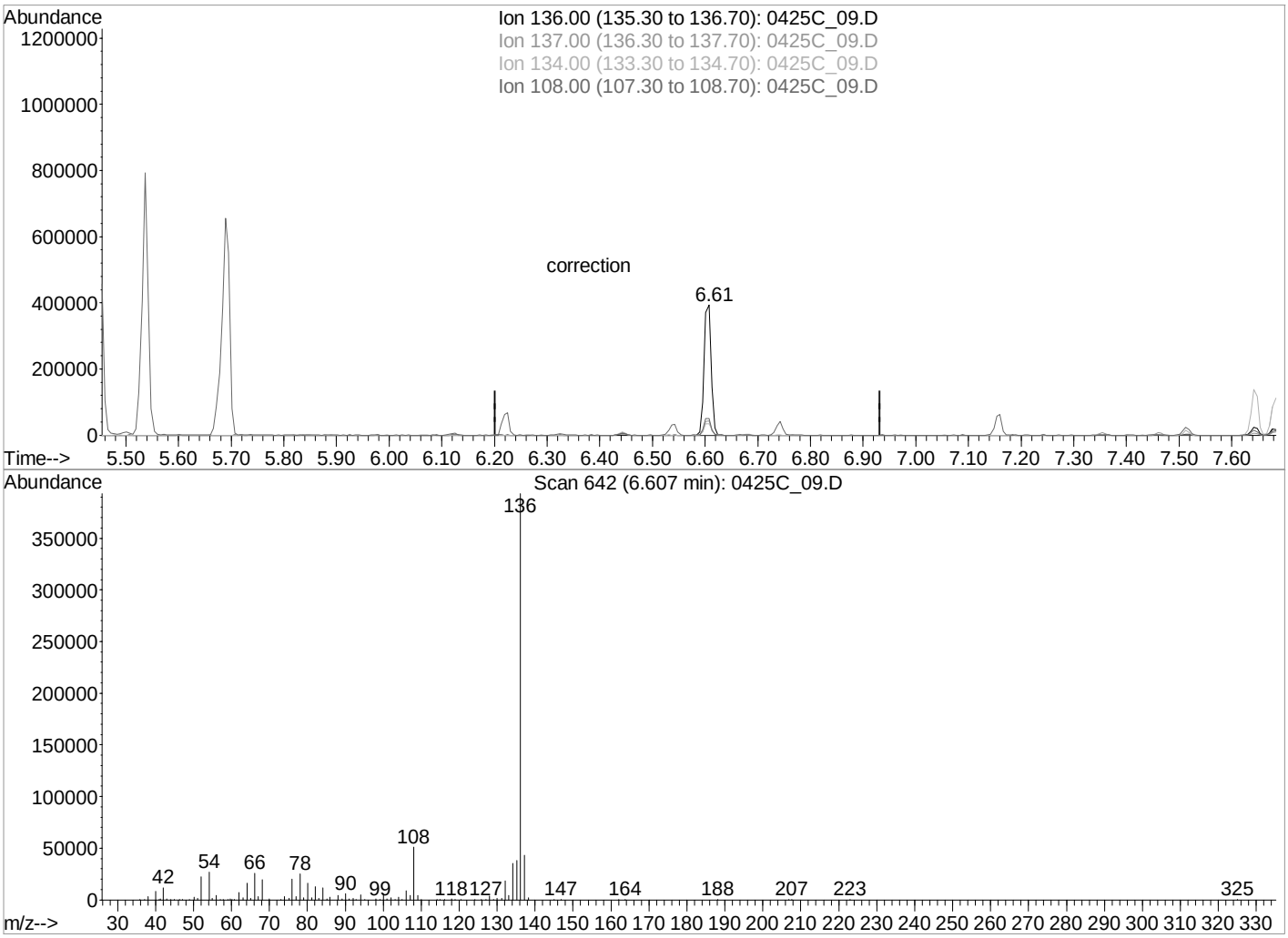
6.60min (-6.601) 0.0000000 ppb d

response 0

Ion	Exp%	Act%
136.00	100	0.00
137.00	11.20	0.00
134.00	10.20	0.00
108.00	13.20	0.00

Data File : C:\MSDCHEM\1\DATA\042516C\0425C 09.D Vial: 8
Acq On : 25 Apr 2016 5:55 pm Operator: 280
Sample : STD SVMS 40K PPB 16D25863 Inst : BNAMS11
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:32 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:32:06 2016
Response via : Multiple Level Calibration



TIC: 0425C_09.D

(22) Naphthalene-d8 (I)

6.61min (+0.006) 8000.0000000 ppb m

response 367654

Ion	Exp%	Act%
136.00	100	100
137.00	11.20	11.03
134.00	10.20	8.89
108.00	13.20	12.90

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516C\0425C 10.D Vial: 9
Acq On : 25 Apr 2016 6:19 pm Operator: 280
Sample : STD SVMS 50K PPB 16D25863 Inst : BNAMS11
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:36 2016 Quant Results File: S811D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:19:55 2016
Response via : Initial Calibration
DataAcq Meth : BNA11C

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.34	152	77750	8000.00 ppb	0.00
22) Naphthalene-d8	6.61	136	404566	8000.00 ppb	0.00
40) Acenaphthene-d10	8.48	164	240891	8000.00 ppb	0.00
64) Phenanthrene-d10	10.10	188	468577	8000.00 ppb	0.00
78) Chrysene-d12	12.97	240	556854	8000.00 ppb	0.00
88) Perylene-d12	14.77	264	608143	8000.00 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol	4.23	112	908986	77549.1118254 ppb	0.00
Spiked Amount 20.000	Range 10 - 74		Recovery = 387745.56%#		
7) Phenol-d5	4.97	99	1190578	78467.5535839 ppb	0.01
Spiked Amount 20.000	Range 10 - 63		Recovery = 392337.77%#		
23) Nitrobenzene-d5	5.87	82	1166985	64311.0275471 ppb	0.00
Spiked Amount 10.000	Range 28 - 123		Recovery = 643110.28%#		
44) 2-Fluorobiphenyl	7.74	172	2257851	60015.2674745 ppb	0.00
Spiked Amount 10.000	Range 35 - 133		Recovery = 600152.67%#		
67) 2,4,6-Tribromophenol	9.34	330	358222	52553.9887161 ppb	0.00
Spiked Amount 20.000	Range 22 - 154		Recovery = 262769.94%#		
81) p-Terphenyl-d14	11.80	244	3464600	60143.6416290 ppb	0.00
Spiked Amount 10.000	Range 30 - 148		Recovery = 601436.42%#		
Target Compounds					Qvalue
2) Pyridine	3.30	79	1068315m	74177.9579529 ppb	
3) N-Nitrosodimethylamine	3.29	42	501548	59375.8561204 ppb	95
5) Aniline	5.04	66	613330	83219.9925834 ppb	95
6) bis(2-Chloroethyl)ether	5.08	63	631926	70503.6155108 ppb	96
8) Phenol	4.98	94	1258884	80454.0037666 ppb	89
10) 2-Chlorophenol	5.15	128	958987	71437.2393435 ppb	91
11) n-Decane	5.15	41	560282	66944.4225120 ppb	96
12) 1,3-Dichlorobenzene	5.29	146	1097188	72138.4558041 ppb	96
13) 1,4-Dichlorobenzene	5.35	146	1087817	70785.1426647 ppb	94
14) Benzyl Alcohol	5.45	79	978931	82140.9715743 ppb	99
15) 1,2-Dichlorobenzene	5.50	146	1021048	69698.8541445 ppb	98
16) bis(2-Chloroisopropyl)ethe	5.58	121	274853	66179.5700888 ppb	98
17) 2-Methylphenol	5.54	108	918174	76035.6812903 ppb	96
18) Hexachloroethane	5.83	117	469885	75421.6623401 ppb	96
19) N-Nitrosodi-n-propylamine	5.72	70	741925	76850.3933917 ppb	97
20) 3&4-Methyl phenol	5.70	107	1038049	72788.9472770 ppb	95
24) Nitrobenzene	5.90	77	1203343	65617.0547563 ppb	93
25) Isophorone	6.12	82	2055893	66538.1478235 ppb	99
26) 2-Nitrophenol	6.21	139	519857	60022.5780433 ppb	92
27) 2,4-Dimethylphenol	6.22	107	1078031	60302.7895635 ppb	95
28) bis(2-Chlorethoxy)methane	6.32	93	1168589	60327.3287024 ppb	98
29) 2,4-Dichlorophenol	6.45	162	830263	56889.8989305 ppb	95
31) 1,2,4-Trichlorobenzene	6.54	180	968123	58863.6938377 ppb	95
32) Naphthalene	6.63	128	2896954	55135.3976081 ppb	98
33) 4-Chloroaniline	6.67	65	425363	64015.1297792 ppb	96
34) Hexachloro-1,3-butadiene	6.74	225	683928	66360.7126532 ppb	93
36) 4-Chloro-3-methylphenol	7.16	107	977748	62117.1122907 ppb	100
37) 2-Methylnaphthalene	7.35	142	1915230	51965.2626205 ppb #	1
38) 1-Methylnaphthalene	7.47	142	1803704	54665.2048853 ppb #	1
41) Hexachlorocyclopentadiene	7.52	237	783223	75927.7199633 ppb	92
42) 2,4,6-Trichlorophenol	7.65	196	677647	68774.7798918 ppb	86
43) 2,4,5-Trichlorophenol	7.68	196	698860	65314.9270195 ppb	93
45) Biphenyl	7.85	154	2514592	60504.5944954 ppb	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516C\0425C 10.D Vial: 9
Acq On : 25 Apr 2016 6:19 pm Operator: 280
Sample : STD SVMS 50K PPB 16D25863 Inst : BNAMS11
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:36 2016 Quant Results File: S811D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:19:55 2016
Response via : Initial Calibration
DataAcq Meth : BNA11C

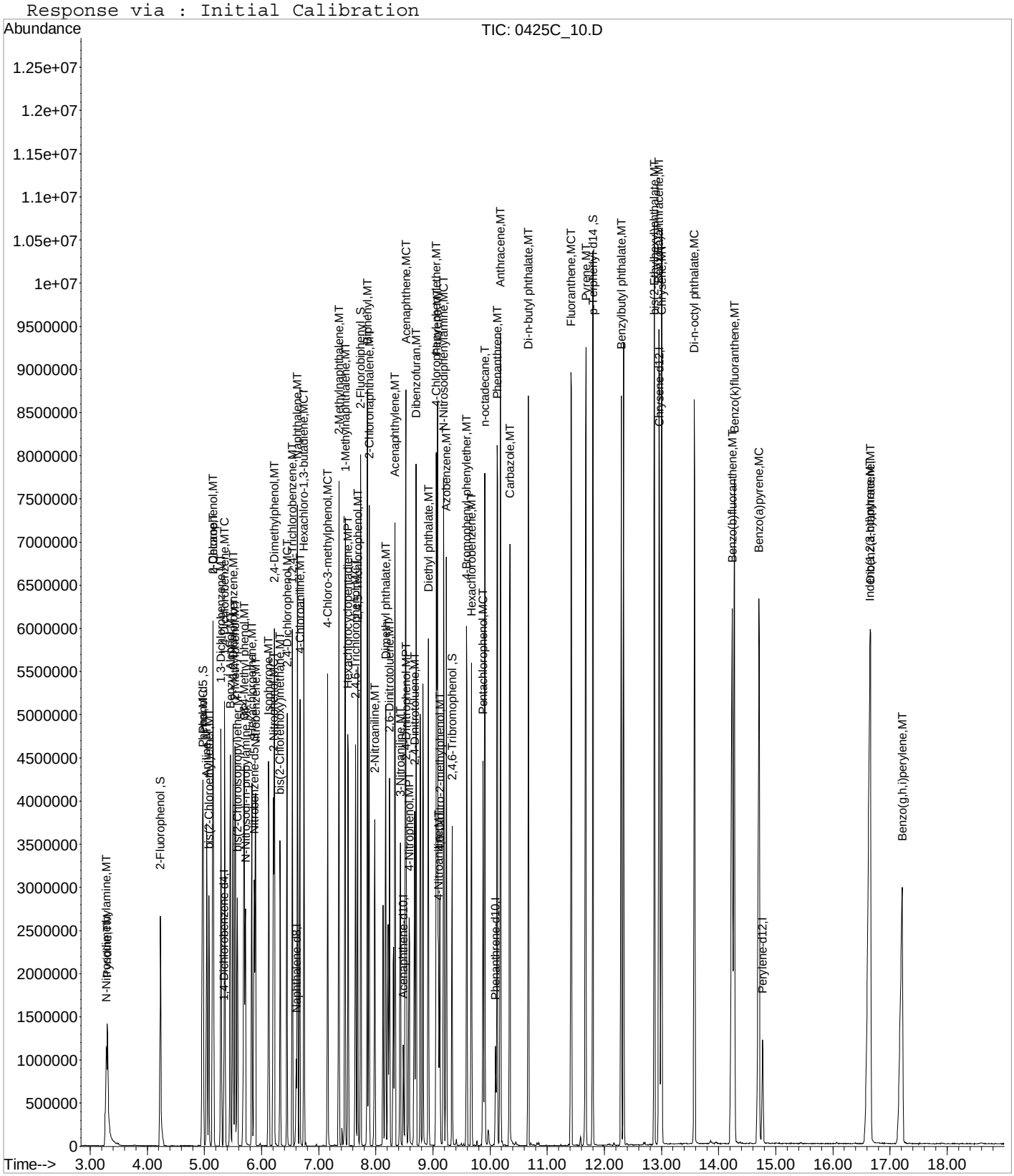
	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
46)	2-Chloronaphthalene	7.88	162	1909311	58826.7672887 ppb		99
47)	2-Nitroaniline	7.98	138	617449	60482.5931173 ppb		91
48)	Acenaphthylene	8.34	152	2900211	57212.6181073 ppb		97
49)	Dimethyl phthalate	8.17	163	2238018	62671.0547758 ppb		92
50)	2,6-Dinitrotoluene	8.24	165	486886	58048.4829251 ppb		95
51)	3-Nitroaniline	8.43	138	496830	56914.2357736 ppb		93
52)	Acenaphthene	8.52	153	1965300	56616.9311082 ppb		93
53)	2,4-Dinitrophenol	8.54	184	332055	68965.9227912 ppb	#	53
54)	Dibenzofuran	8.71	168	2783294	58032.5812767 ppb	#	71
55)	2,4-Dinitrotoluene	8.68	165	708912	64441.0683806 ppb		96
57)	4-Nitrophenol	8.58	139	393556	56468.4913992 ppb		95
58)	Fluorene	9.08	166	2382006	60719.8760919 ppb		99
59)	4-Chlorophenyl-phenylether	9.06	204	1228529	63128.8506044 ppb		87
60)	Diethyl phthalate	8.92	149	2226878	58295.3962226 ppb		97
61)	4-Nitroaniline	9.10	138	488855	57505.2676712 ppb		85
62)	Azobenzene	9.24	77	2426098	61173.2672850 ppb	#	47
65)	4,6-Dinitro-2-methylphenol	9.12	198	418958	59941.3441201 ppb		93
66)	N-Nitrosodiphenylamine	9.19	169	1974828	56017.0313863 ppb		96
68)	4-Bromophenyl-phenylether	9.60	248	781916	60544.2134463 ppb		89
69)	Hexachlorobenzene	9.68	284	804324	55528.7528407 ppb		96
70)	n-octadecane	9.91	55	339125	45926.9424903 ppb	#	96
71)	Pentachlorophenol	9.88	266	512656	61033.1498900 ppb		91
72)	Phenanthrene	10.13	178	3421483	53498.1253112 ppb		97
73)	Anthracene	10.18	178	3469568	54481.4909540 ppb		99
74)	Carbazole	10.35	167	3059116	52811.5431785 ppb		98
75)	Di-n-butyl phthalate	10.67	149	4098668	55325.7192668 ppb		98
77)	Fluoranthene	11.42	202	4255199	58221.6810403 ppb		99
80)	Pyrene	11.68	202	4341255	54595.0048011 ppb		97
82)	Benzylbutyl phthalate	12.29	149	1875700	51044.6541468 ppb		84
84)	Benzo(a)anthracene	12.96	228	4491395	55440.9083166 ppb		97
85)	Chrysene	13.01	228	4230614	55215.1804651 ppb		97
86)	bis(2-Ethylhexyl)phthalate	12.88	149	2911438	53604.7431991 ppb		98
87)	Di-n-octyl phthalate	13.58	149	4925801	51643.9190050 ppb		95
89)	Benzo(b)fluoranthene	14.24	252	4613716m	52677.1054518 ppb		
90)	Benzo(k)fluoranthene	14.28	252	4196205	50350.2527181 ppb		98
91)	Benzo(a)pyrene	14.71	252	4445638	52775.3010764 ppb		96
92)	Indeno(1,2,3-cd)pyrene	16.64	276	4707674	47511.5040351 ppb		98
93)	Dibenz(a,h)anthracene	16.66	278	4144381	48475.9612091 ppb		95
94)	Benzo(g,h,i)perylene	17.21	276	3638878	44491.9137335 ppb		96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

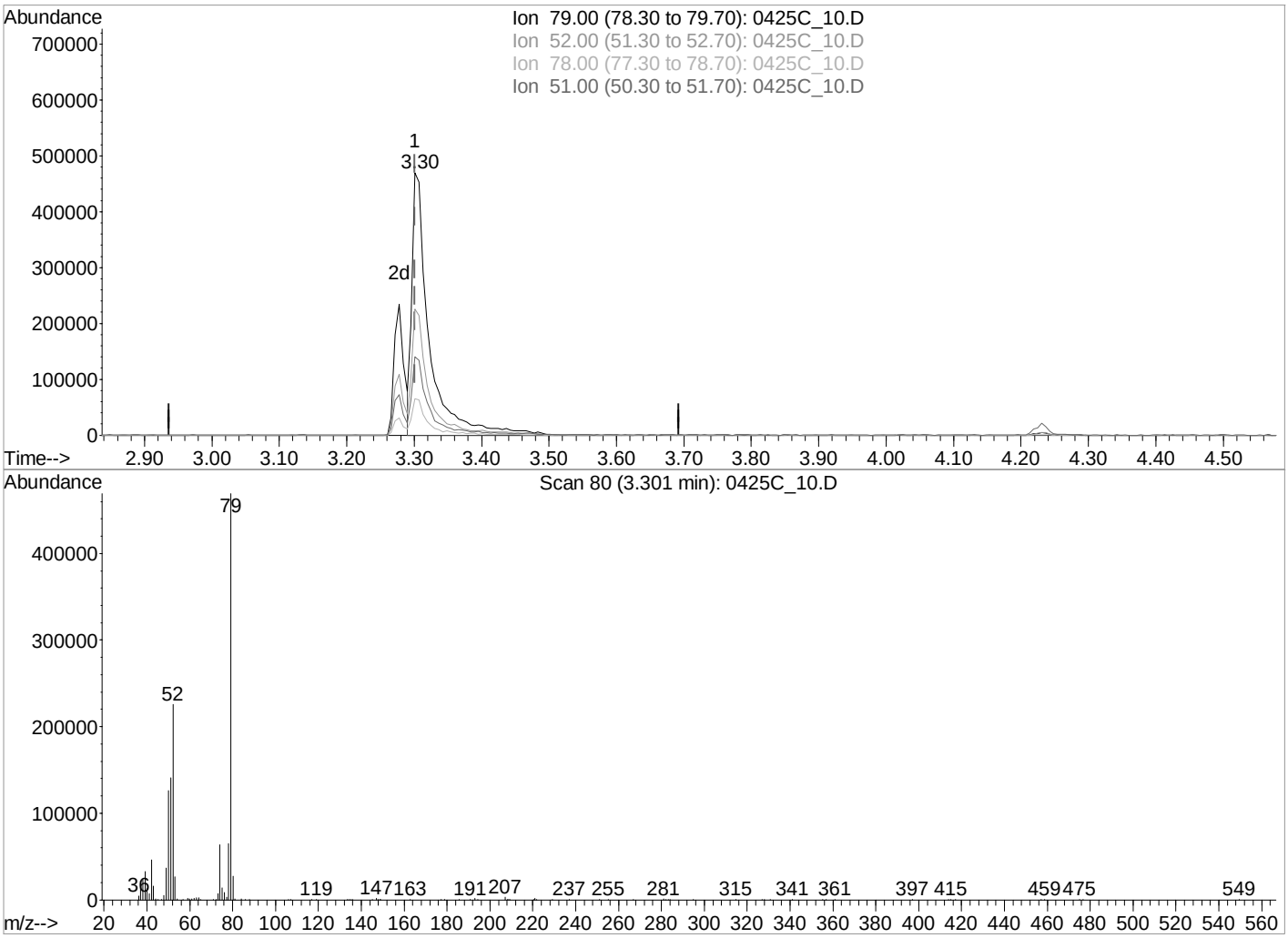
Data File : C:\MSDCHEM\1\DATA\042516C\0425C 10.D Vial: 9
Acq On : 25 Apr 2016 6:19 pm Operator: 280
Sample : STD SVMS 50K PPB 16D25863 Inst : BNAMS11
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:36 2016 Quant Results File: S811D25P.RES

Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:34:04 2016
Response via : Initial Calibration



Data File : C:\MSDCHEM\1\DATA\042516C\0425C 10.D Vial: 9
Acq On : 25 Apr 2016 6:19 pm Operator: 280
Sample : STD SVMS 50K PPB 16D25863 Inst : BNAMS11
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:20 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:34:04 2016
Response via : Multiple Level Calibration



TIC: 0425C_10.D

(2) Pyridine (TM)

3.30min (-0.000) 58268.7001086 ppb

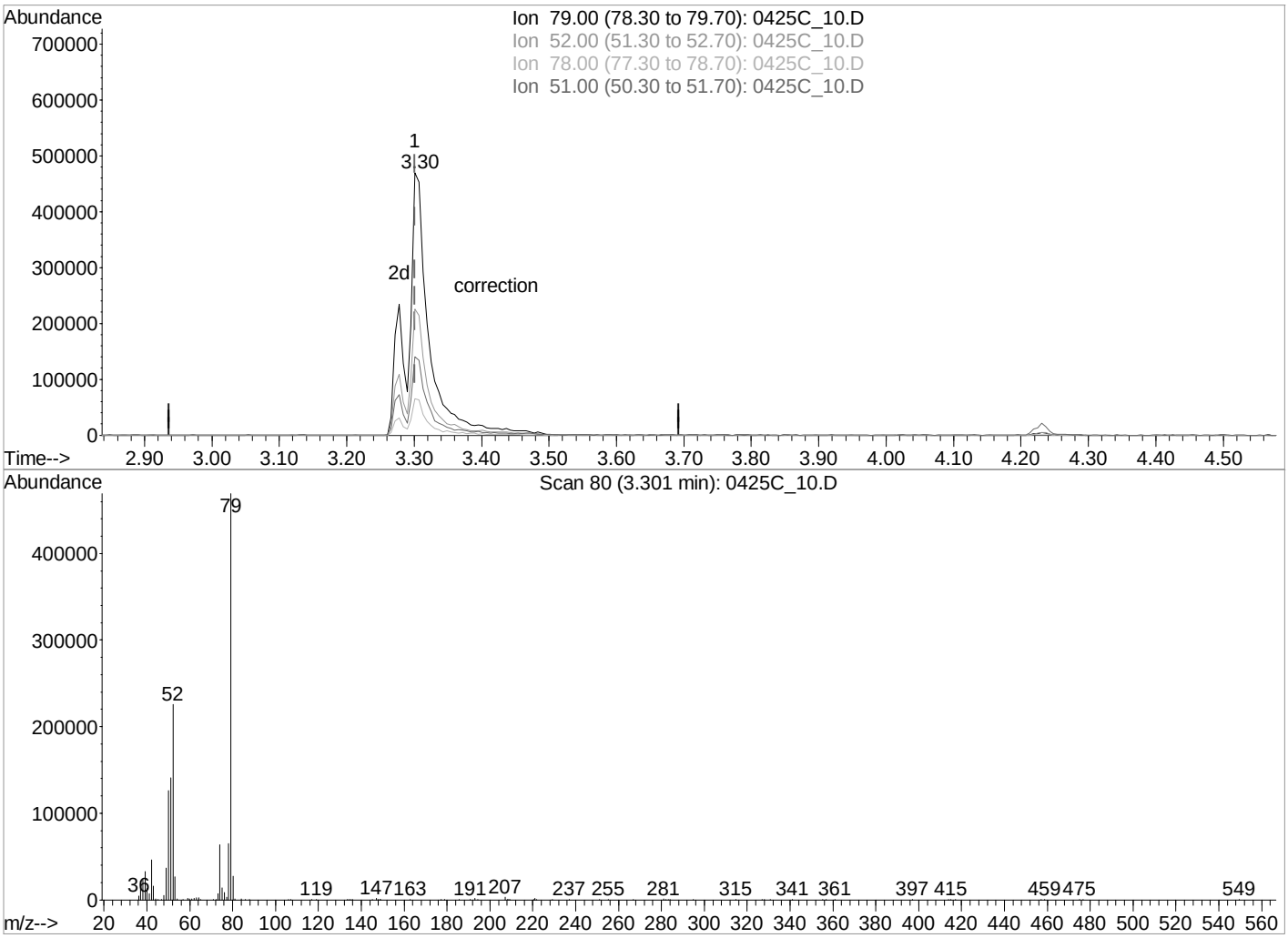
Qvalue = 98

response 839189

Ion	Exp%	Act%
79.00	100	100
52.00	49.90	48.03
78.00	15.70	13.82
51.00	29.80	29.90

Data File : C:\MSDCHEM\1\DATA\042516C\0425C 10.D Vial: 9
Acq On : 25 Apr 2016 6:19 pm Operator: 280
Sample : STD SVMS 50K PPB 16D25863 Inst : BNAMS11
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:34 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:34:04 2016
Response via : Multiple Level Calibration



TIC: 0425C_10.D

(2) Pyridine (TM)

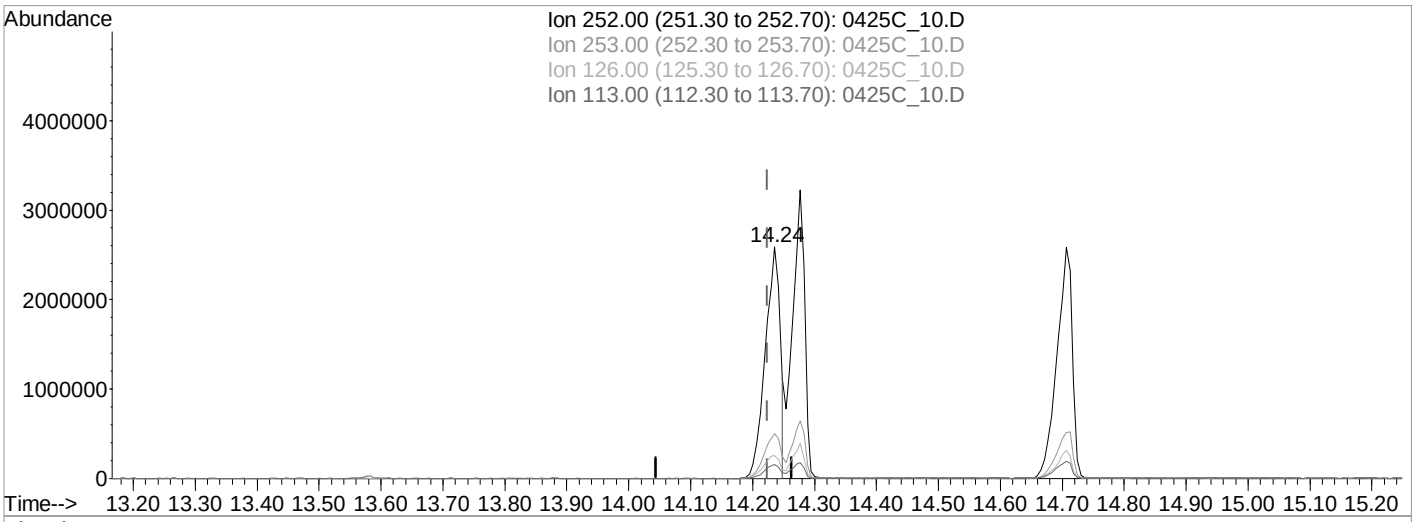
3.30min (-0.000) 74177.9579529 ppb m

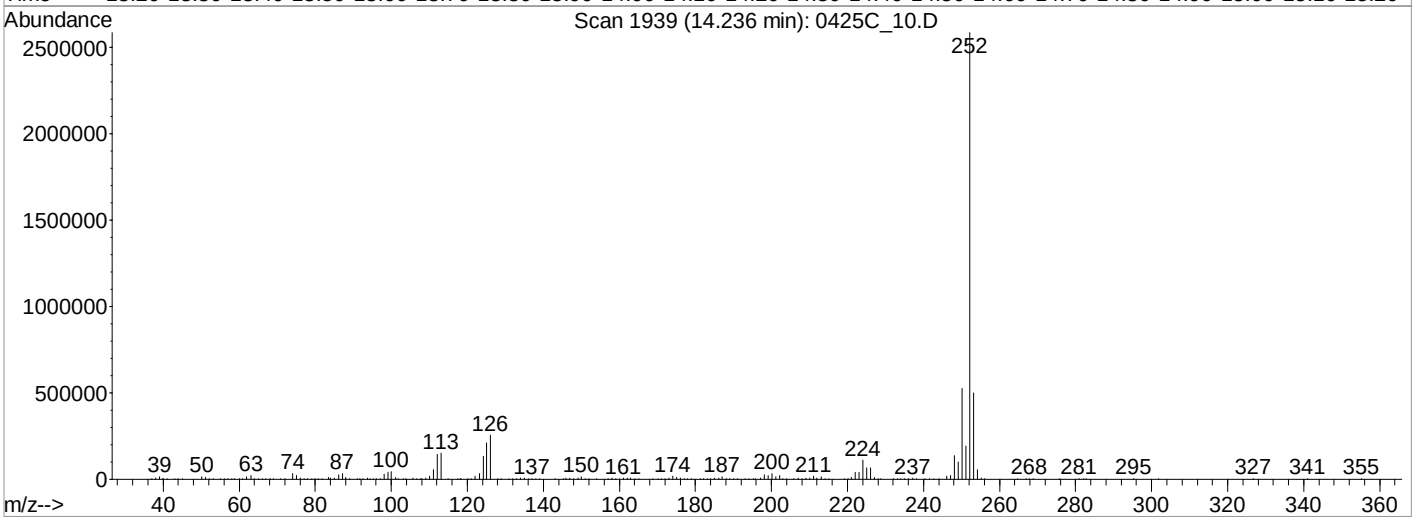
response 1068315

Ion	Exp%	Act%
79.00	100	100
52.00	49.90	48.03
78.00	15.70	13.82
51.00	29.80	29.97

Data File : C:\MSDCHEM\1\DATA\042516C\0425C 10.D Vial: 9
Acq On : 25 Apr 2016 6:19 pm Operator: 280
Sample : STD SVMS 50K PPB 16D25863 Inst : BNAMS11
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:35 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:34:04 2016
Response via : Multiple Level Calibration





TIC: 0425C_10.D

(89) Benzo(b)fluoranthene (MT)

14.24min (+0.012) 49592.4963873 ppb

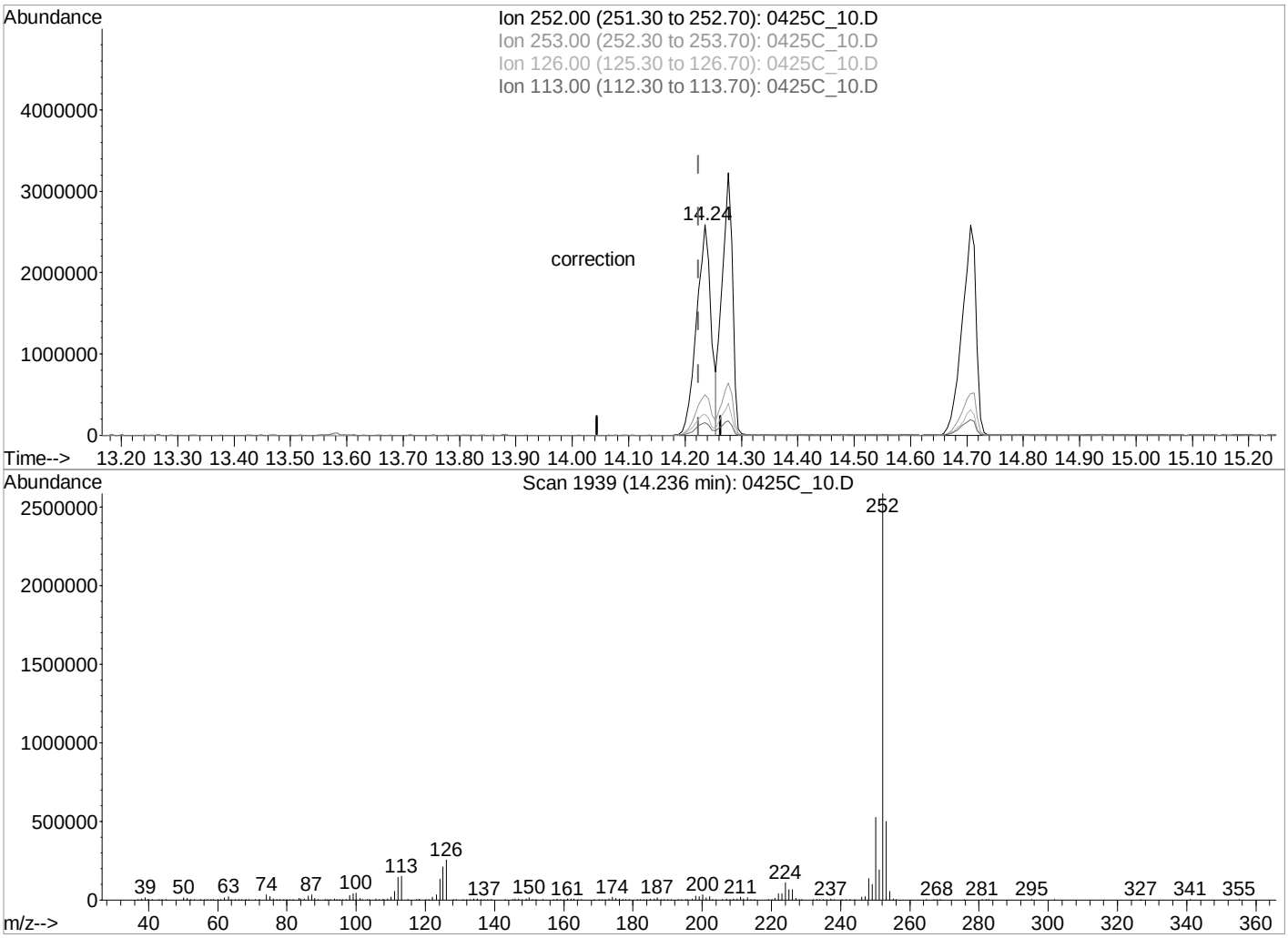
Qvalue = 97

response 4343551

Ion	Exp%	Act%
252.00	100	100
253.00	20.90	18.44
126.00	10.20	10.14
113.00	6.90	5.92

Data File : C:\MSDCHEM\1\DATA\042516C\0425C 10.D Vial: 9
Acq On : 25 Apr 2016 6:19 pm Operator: 280
Sample : STD SVMS 50K PPB 16D25863 Inst : BNAMS11
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:36 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:34:04 2016
Response via : Multiple Level Calibration



TIC: 0425C_10.D

(89) Benzo(b)fluoranthene (MT)

14.24min (+0.012) 52677.1054518 ppb m

response 4613716

Ion	Exp%	Act%
252.00	100	100
253.00	20.90	19.26
126.00	10.20	9.85
113.00	6.90	5.84

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516C\0425C 11.D Vial: 10
Acq On : 25 Apr 2016 6:42 pm Operator: 280
Sample : MSTD TCL 10K1 PPB 16D25867 Inst : BNAMS11
Misc : 8270 TCL Calibration 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:38 2016 Quant Results File: S811D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:37:46 2016
Response via : Initial Calibration
DataAcq Meth : BNA11C

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.34	152	77497	8000.00	ppb	0.00
22) Naphthalene-d8	6.60	136	390384	8000.00	ppb	0.00
40) Acenaphthene-d10	8.48	164	247426	8000.00	ppb	0.00
64) Phenanthrene-d10	10.09	188	465239	8000.00	ppb	0.00
78) Chrysene-d12	12.96	240	573855	8000.00	ppb	0.00
88) Perylene-d12	14.76	264	592767	8000.00	ppb	0.00

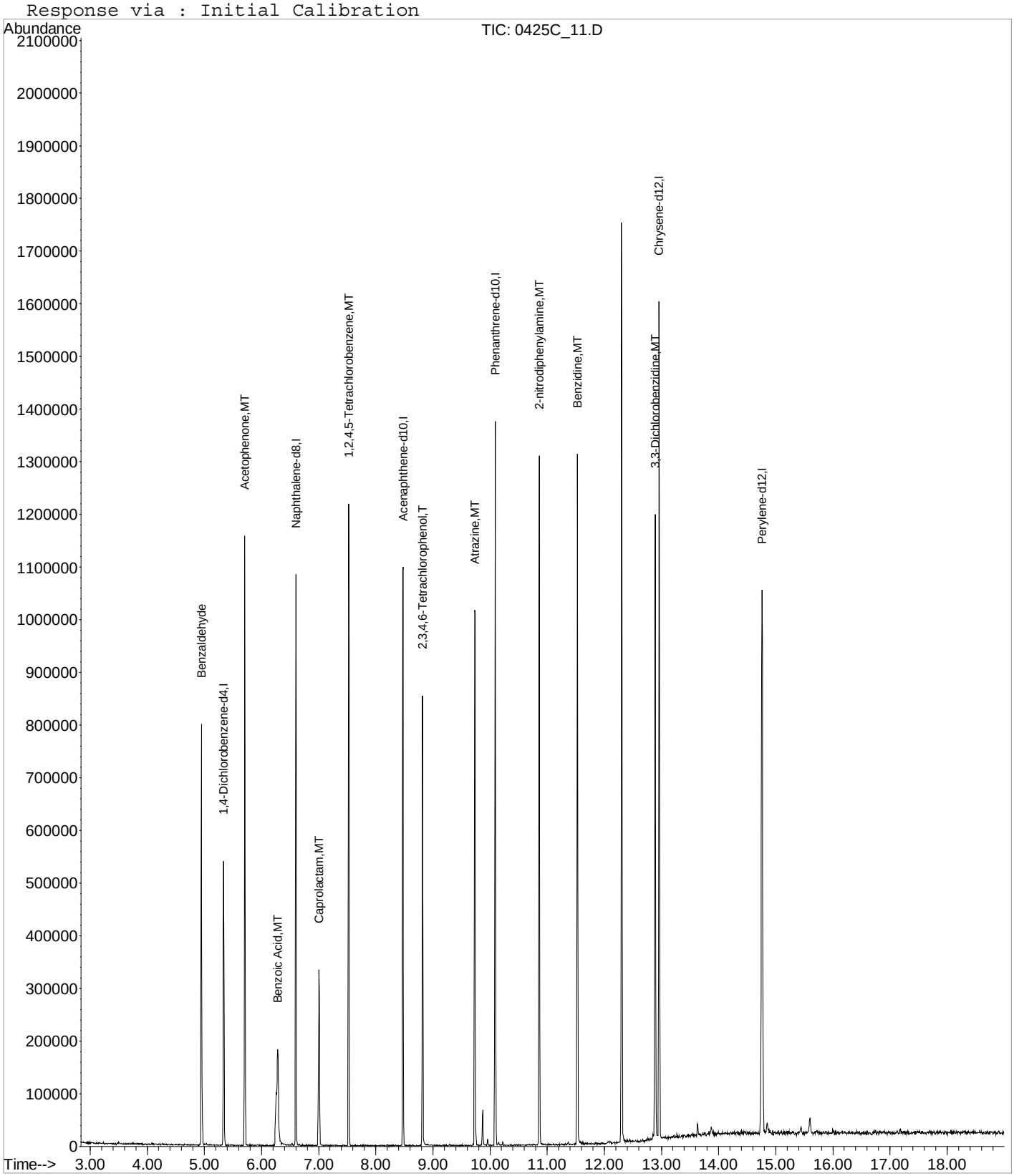
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0d	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 74		Recovery =	0.00%#		
7) Phenol-d5	0.00	99	0d	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 63		Recovery =	0.00%#		
23) Nitrobenzene-d5	0.00	82	0d	0.0000000	ppb	
Spiked Amount 10.000	Range 28 - 123		Recovery =	0.00%#		
44) 2-Fluorobiphenyl	0.00	172	0d	0.0000000	ppb	
Spiked Amount 10.000	Range 35 - 133		Recovery =	0.00%#		
67) 2,4,6-Tribromophenol	0.00	330	0d	0.0000000	ppb	
Spiked Amount 20.000	Range 22 - 154		Recovery =	0.00%#		
81) p-Terphenyl-d14	0.00	244	0d	0.0000000	ppb	
Spiked Amount 10.000	Range 30 - 148		Recovery =	0.00%#		

Target Compounds						Qvalue
9) Benzaldehyde	4.95	105	144800	16220.9046311	ppb	100
21) Acetophenone	5.71	105	286211	15659.8008693	ppb	100
30) Benzoic Acid	6.28	105	113788	11368.4955200	ppb	100
35) Caprolactam	7.01	113	50436	11901.1802602	ppb	100
39) 1,2,4,5-Tetrachlorobenzene	7.52	216	191527	11412.9671358	ppb	100
56) 2,3,4,6-Tetrachlorophenol	8.82	232	96303	12143.8060725	ppb	100
63) Atrazine	9.74	200	134620	11393.2201634	ppb	100
76) 2-nitrodiphenylamine	10.86	167	171082	10699.7523877	ppb	100
79) Benzidine	11.53	184	492548	9789.5977715	ppb	100
83) 3,3-Dichlorobenzidine	12.89	252	250380	10392.4181321	ppb	100

(#) = qualifier out of range (m) = manual integration

Data File : C:\MSDCHEM\1\DATA\042516C\0425C 11.D Vial: 10
Acq On : 25 Apr 2016 6:42 pm Operator: 280
Sample : MSTD TCL 10K1 PPB 16D25867 Inst : BNAMS11
Misc : 8270 TCL Calibration 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:38 2016 Quant Results File: S811D25P.RES

Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:37:46 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516C\0425C 12.D Vial: 11
Acq On : 25 Apr 2016 7:05 pm Operator: 280
Sample : STD TCL 1K1 PPB 16D25867 Inst : BNAMS11
Misc : 8270 TCL Calibration 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:39 2016 Quant Results File: S811D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:37:46 2016
Response via : Initial Calibration
DataAcq Meth : BNA11C

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.34	152	72561	8000.00	ppb	0.00
22) Naphthalene-d8	6.60	136	377099	8000.00	ppb	0.00
40) Acenaphthene-d10	8.48	164	224606	8000.00	ppb	0.00
64) Phenanthrene-d10	10.09	188	442510	8000.00	ppb	0.00
78) Chrysene-d12	12.96	240	522494	8000.00	ppb	0.00
88) Perylene-d12	14.76	264	552922	8000.00	ppb	0.00

System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0d	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 74		Recovery =	0.00%#		
7) Phenol-d5	0.00	99	0d	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 63		Recovery =	0.00%#		
23) Nitrobenzene-d5	0.00	82	0d	0.0000000	ppb	
Spiked Amount 10.000	Range 28 - 123		Recovery =	0.00%#		
44) 2-Fluorobiphenyl	0.00	172	0d	0.0000000	ppb	
Spiked Amount 10.000	Range 35 - 133		Recovery =	0.00%#		
67) 2,4,6-Tribromophenol	0.00	330	0	0.0000000	ppb	
Spiked Amount 20.000	Range 22 - 154		Recovery =	0.00%#		
81) p-Terphenyl-d14	0.00	244	0d	0.0000000	ppb	
Spiked Amount 10.000	Range 30 - 148		Recovery =	0.00%#		

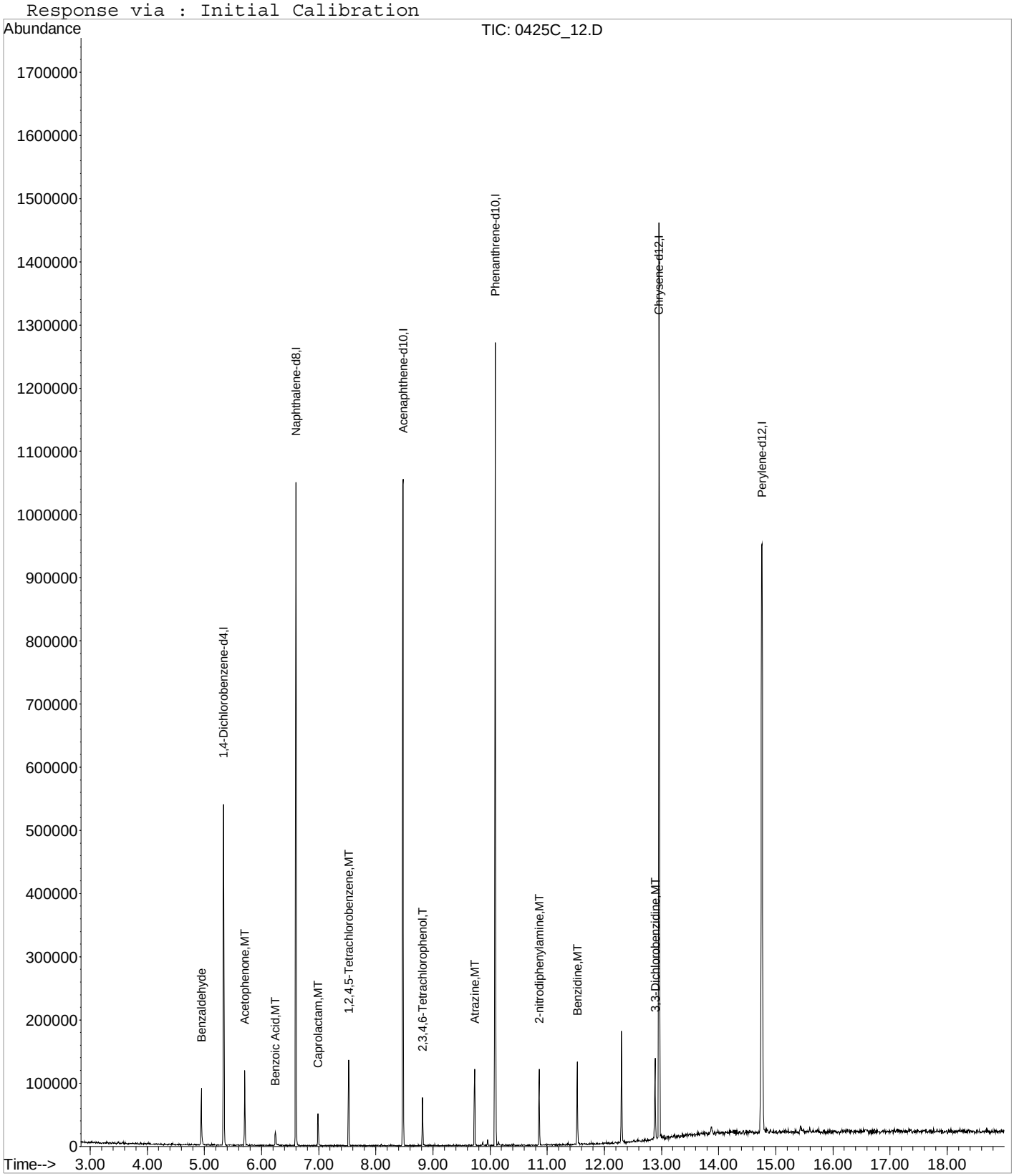
Target Compounds						Qvalue
9) Benzaldehyde	4.95	105	15345	1835.9254125	ppb	97
21) Acetophenone	5.71	105	30412	1777.1599910	ppb	97
30) Benzoic Acid	6.24	105	6429	1275.3449845	ppb	89
35) Caprolactam	6.99	113	5311	1297.3654484	ppb	94
39) 1,2,4,5-Tetrachlorobenzene	7.52	216	20324	1253.7599012	ppb	96
56) 2,3,4,6-Tetrachlorophenol	8.82	232	9230	1282.1554671	ppb	92
63) Atrazine	9.73	200	14006	1305.7950147	ppb	99
76) 2-nitrodiphenylamine	10.86	167	15025	1488.7592401	ppb	95
79) Benzidine	11.52	184	44153	963.8231822	ppb	100
83) 3,3-Dichlorobenzidine	12.89	252	23132	1054.5107778	ppb	93

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516C\0425C 12.D Vial: 11
Acq On : 25 Apr 2016 7:05 pm Operator: 280
Sample : STD TCL 1K1 PPB 16D25867 Inst : BNAMS11
Misc : 8270 TCL Calibration 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:39 2016 Quant Results File: S811D25P.RES

Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:39:07 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516C\0425C 13.D Vial: 12
Acq On : 25 Apr 2016 7:29 pm Operator: 280
Sample : STD TCL 4K1 PPB 16D25867 Inst : BNAMS11
Misc : 8270 TCL Calibration 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:40 2016 Quant Results File: S811D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:37:46 2016
Response via : Initial Calibration
DataAcq Meth : BNA11C

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.34	152	72247	8000.00	ppb	0.00
22) Naphthalene-d8	6.60	136	374156	8000.00	ppb	0.00
40) Acenaphthene-d10	8.48	164	226574	8000.00	ppb	0.00
64) Phenanthrene-d10	10.09	188	435896	8000.00	ppb	0.00
78) Chrysene-d12	12.96	240	501199	8000.00	ppb	0.00
88) Perylene-d12	14.76	264	548849	8000.00	ppb	0.00

System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0d	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 74		Recovery =	0.00%#		
7) Phenol-d5	0.00	99	0	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 63		Recovery =	0.00%#		
23) Nitrobenzene-d5	0.00	82	0d	0.0000000	ppb	
Spiked Amount 10.000	Range 28 - 123		Recovery =	0.00%#		
44) 2-Fluorobiphenyl	0.00	172	0d	0.0000000	ppb	
Spiked Amount 10.000	Range 35 - 133		Recovery =	0.00%#		
67) 2,4,6-Tribromophenol	0.00	330	0d	0.0000000	ppb	
Spiked Amount 20.000	Range 22 - 154		Recovery =	0.00%#		
81) p-Terphenyl-d14	0.00	244	0	0.0000000	ppb	
Spiked Amount 10.000	Range 30 - 148		Recovery =	0.00%#		

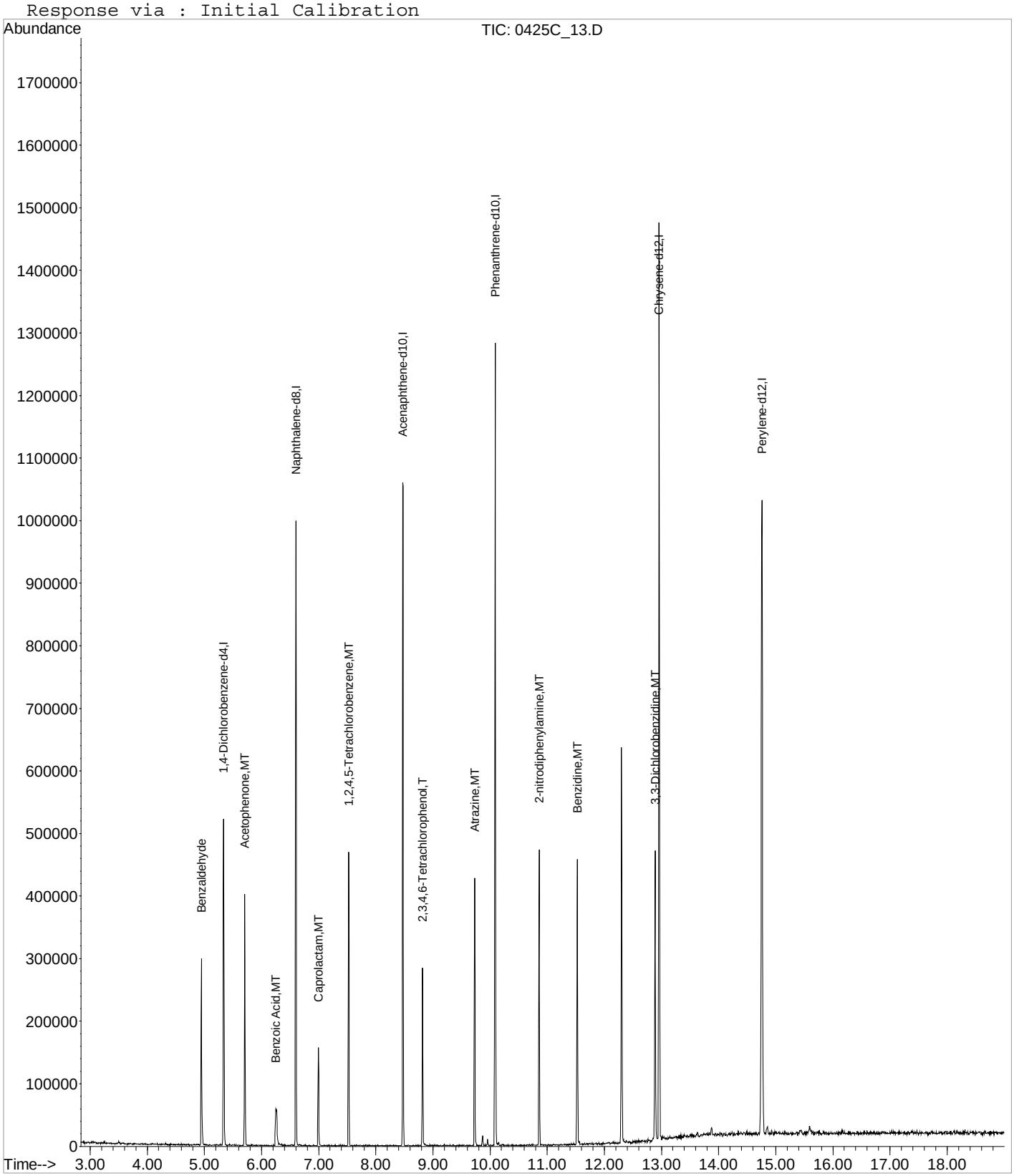
Target Compounds						Qvalue
9) Benzaldehyde	4.95	105	57211	6874.6583628	ppb	94
21) Acetophenone	5.71	105	101565	5960.8618925	ppb	98
30) Benzoic Acid	6.25	105	32500	3897.0481192	ppb	96
35) Caprolactam	7.00	113	17474	4302.1051821	ppb	97
39) 1,2,4,5-Tetrachlorobenzene	7.52	216	69165	4300.2552777	ppb	95
56) 2,3,4,6-Tetrachlorophenol	8.82	232	31396	4323.3917514	ppb	94
63) Atrazine	9.73	200	48184	4453.2288714	ppb	97
76) 2-nitrodiphenylamine	10.86	167	56170	4107.8496280	ppb	99
79) Benzidine	11.52	184	164978	3754.3460189	ppb	99
83) 3,3-Dichlorobenzidine	12.89	252	88758	4218.0959907	ppb	93

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516C\0425C 13.D Vial: 12
Acq On : 25 Apr 2016 7:29 pm Operator: 280
Sample : STD TCL 4K1 PPB 16D25867 Inst : BNAMS11
Misc : 8270 TCL Calibration 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:40 2016 Quant Results File: S811D25P.RES

Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:40:00 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516C\0425C 14.D Vial: 13
Acq On : 25 Apr 2016 7:52 pm Operator: 280
Sample : STD TCL 20K1 PPB 16D25867 Inst : BNAMS11
Misc : 8270 TCL Calibration 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:41 2016 Quant Results File: S811D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:37:46 2016
Response via : Initial Calibration
DataAcq Meth : BNA11C

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.34	152	69489	8000.00	ppb	0.00
22) Naphthalene-d8	6.60	136	373901	8000.00	ppb	0.00
40) Acenaphthene-d10	8.47	164	218752	8000.00	ppb	0.00
64) Phenanthrene-d10	10.09	188	419386	8000.00	ppb	0.00
78) Chrysene-d12	12.96	240	522612	8000.00	ppb	0.00
88) Perylene-d12	14.75	264	553599	8000.00	ppb	0.00

System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 74		Recovery =	0.00%#		
7) Phenol-d5	0.00	99	0	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 63		Recovery =	0.00%#		
23) Nitrobenzene-d5	0.00	82	0d	0.0000000	ppb	
Spiked Amount 10.000	Range 28 - 123		Recovery =	0.00%#		
44) 2-Fluorobiphenyl	0.00	172	0d	0.0000000	ppb	
Spiked Amount 10.000	Range 35 - 133		Recovery =	0.00%#		
67) 2,4,6-Tribromophenol	0.00	330	0	0.0000000	ppb	
Spiked Amount 20.000	Range 22 - 154		Recovery =	0.00%#		
81) p-Terphenyl-d14	0.00	244	0d	0.0000000	ppb	
Spiked Amount 10.000	Range 30 - 148		Recovery =	0.00%#		

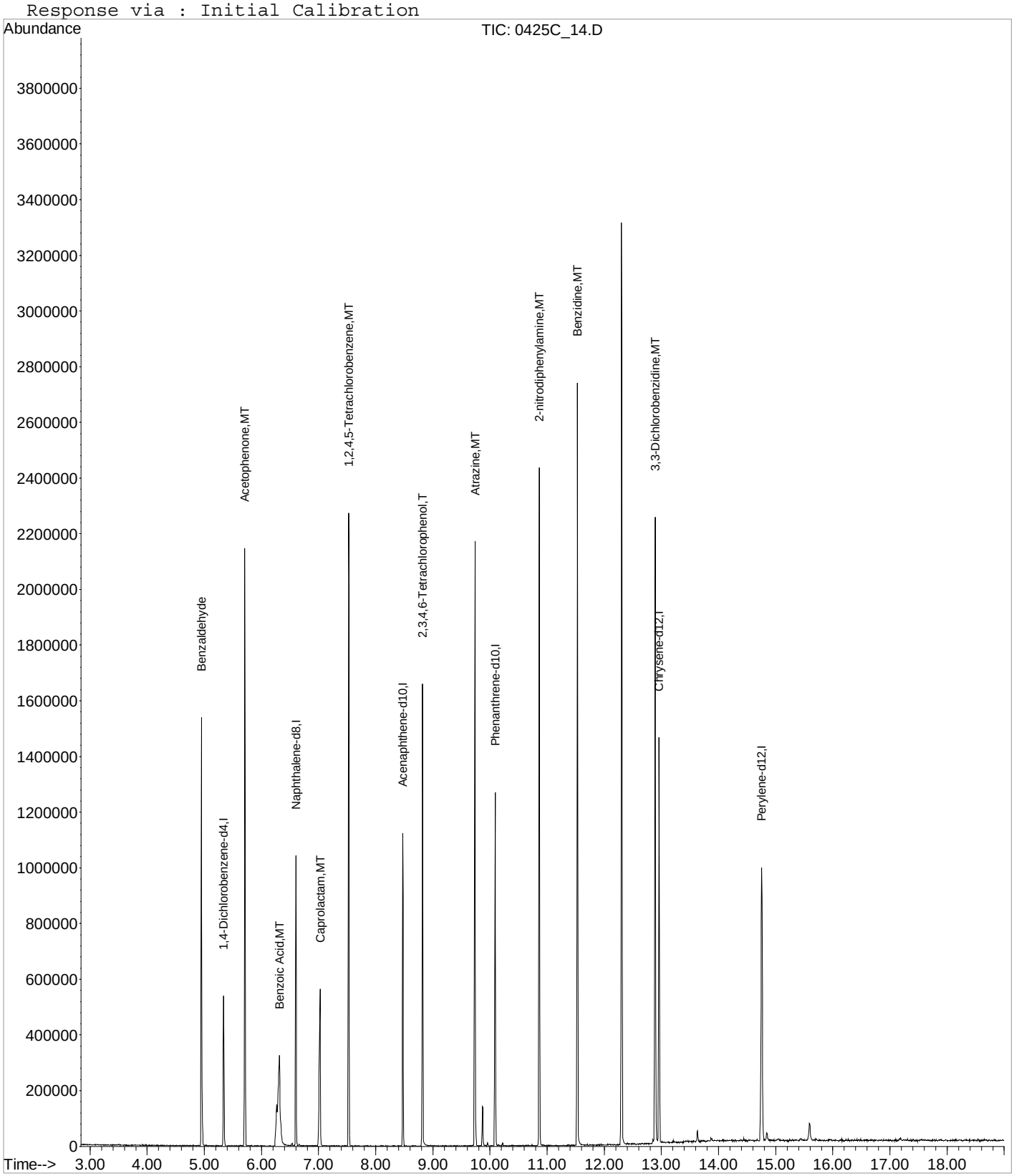
Target Compounds						Qvalue
9) Benzaldehyde	4.95	105	278812	34832.6727552	ppb	97
21) Acetophenone	5.71	105	532798	32511.0749276	ppb	99
30) Benzoic Acid	6.31	105	251126	24508.0987351	ppb	100
35) Caprolactam	7.02	113	93474	23029.0280035	ppb	98
39) 1,2,4,5-Tetrachlorobenzene	7.53	216	372396	23169.0886385	ppb	98
56) 2,3,4,6-Tetrachlorophenol	8.82	232	187231	26704.5992876	ppb	96
63) Atrazine	9.74	200	258778	24771.7995694	ppb	98
76) 2-nitrodiphenylamine	10.86	167	330031	22268.4161708	ppb	99
79) Benzidine	11.53	184	915778	19986.1566364	ppb	98
83) 3,3-Dichlorobenzidine	12.89	252	453257	20657.8105023	ppb	90

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516C\0425C 14.D Vial: 13
Acq On : 25 Apr 2016 7:52 pm Operator: 280
Sample : STD TCL 20K1 PPB 16D25867 Inst : BNAMS11
Misc : 8270 TCL Calibration 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:41 2016 Quant Results File: S811D25P.RES

Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:40:43 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516C\0425C 15.D Vial: 14
Acq On : 25 Apr 2016 8:16 pm Operator: 280
Sample : STD TCL 30K1 PPB 16D25867 Inst : BNAMS11
Misc : 8270 TCL Calibration 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:45 2016 Quant Results File: S811D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:43:16 2016
Response via : Initial Calibration
DataAcq Meth : BNA11C

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.34	152	79364	8000.00	ppb	0.00
22) Naphthalene-d8	6.60	136	418774	8000.00	ppb	0.00
40) Acenaphthene-d10	8.47	164	260596	8000.00	ppb	0.00
64) Phenanthrene-d10	10.09	188	491534	8000.00	ppb	0.00
78) Chrysene-d12	12.96	240	562522	8000.00	ppb	0.00
88) Perylene-d12	14.75	264	614733	8000.00	ppb	0.00

System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0d	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 74		Recovery =	0.00%#		
7) Phenol-d5	0.00	99	0	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 63		Recovery =	0.00%#		
23) Nitrobenzene-d5	0.00	82	0d	0.0000000	ppb	
Spiked Amount 10.000	Range 28 - 123		Recovery =	0.00%#		
44) 2-Fluorobiphenyl	0.00	172	0	0.0000000	ppb	
Spiked Amount 10.000	Range 35 - 133		Recovery =	0.00%#		
67) 2,4,6-Tribromophenol	0.00	330	0d	0.0000000	ppb	
Spiked Amount 20.000	Range 22 - 154		Recovery =	0.00%#		
81) p-Terphenyl-d14	0.00	244	0d	0.0000000	ppb	
Spiked Amount 10.000	Range 30 - 148		Recovery =	0.00%#		

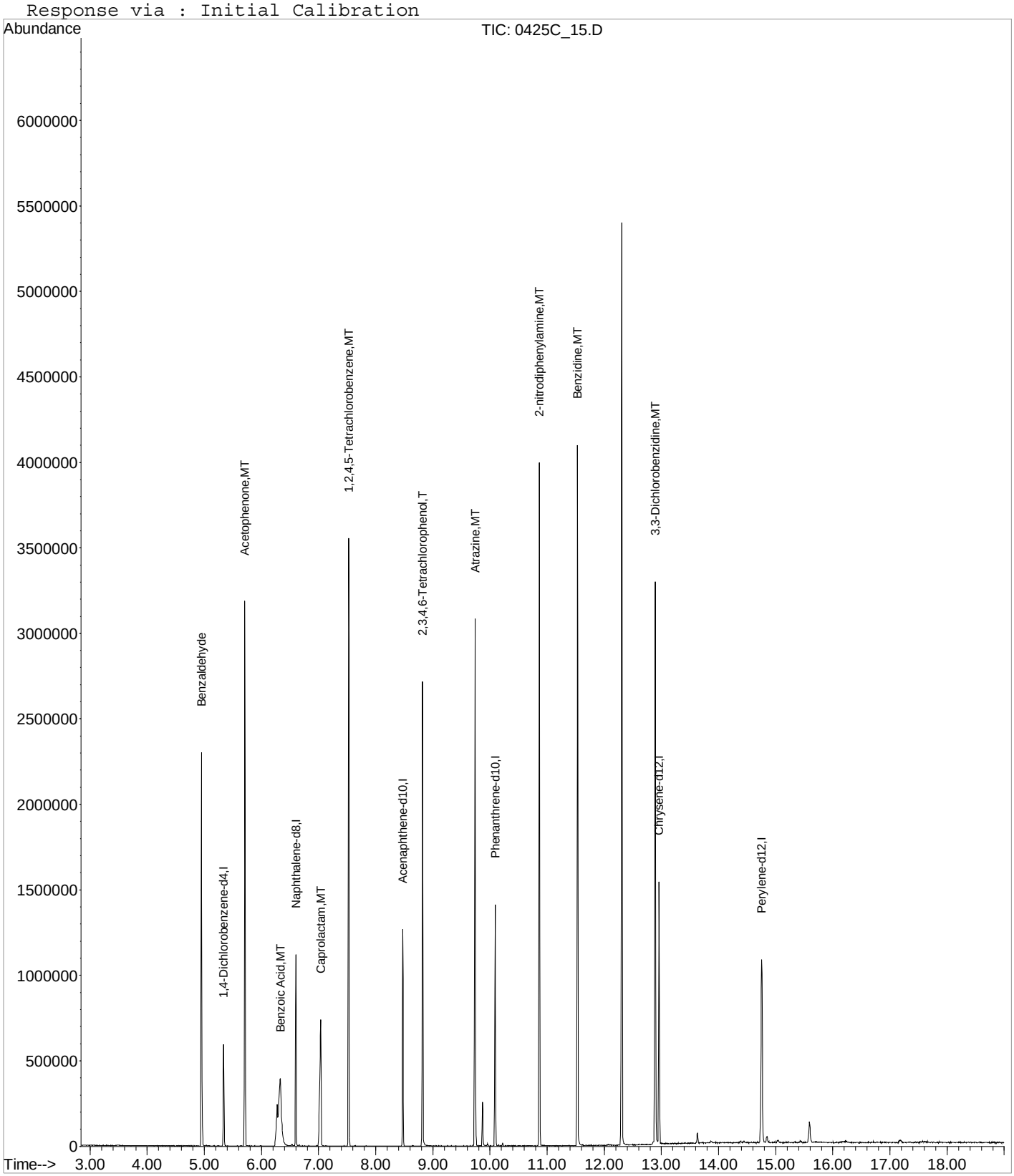
Target Compounds						Qvalue
9) Benzaldehyde	4.95	105	424871	27486.1122827	ppb	99
21) Acetophenone	5.71	105	837519	28235.0763654	ppb	97
30) Benzoic Acid	6.32	105	408888	28937.0707282	ppb	97
35) Caprolactam	7.04	113	143375	27386.1553867	ppb	98
39) 1,2,4,5-Tetrachlorobenzene	7.52	216	611859	30236.1435618	ppb	94
56) 2,3,4,6-Tetrachlorophenol	8.82	232	307638	29088.9542450	ppb	97
63) Atrazine	9.74	200	408275	27942.1599446	ppb	100
76) 2-nitrodiphenylamine	10.87	167	569255	29837.8644340	ppb	98
79) Benzidine	11.53	184	1503754	30113.6358244	ppb	98
83) 3,3-Dichlorobenzidine	12.90	252	757500	29705.5308943	ppb	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516C\0425C 15.D Vial: 14
Acq On : 25 Apr 2016 8:16 pm Operator: 280
Sample : STD TCL 30K1 PPB 16D25867 Inst : BNAMS11
Misc : 8270 TCL Calibration 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:45 2016 Quant Results File: S811D25P.RES

Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:43:16 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516C\0425C 16.D Vial: 15
Acq On : 25 Apr 2016 8:39 pm Operator: 280
Sample : STD TCL 40K1 PPB 16D25867 Inst : BNAMS11
Misc : 8270 TCL Calibration 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:42 2016 Quant Results File: S811D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:37:46 2016
Response via : Initial Calibration
DataAcq Meth : BNA11C

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.34	152	74889	8000.00	ppb	0.00
22) Naphthalene-d8	6.60	136	392845	8000.00	ppb	0.00
40) Acenaphthene-d10	8.47	164	243413	8000.00	ppb	0.00
64) Phenanthrene-d10	10.09	188	499277	8000.00	ppb	0.00
78) Chrysene-d12	12.96	240	546686	8000.00	ppb	0.00
88) Perylene-d12	14.76	264	597698	8000.00	ppb	0.00

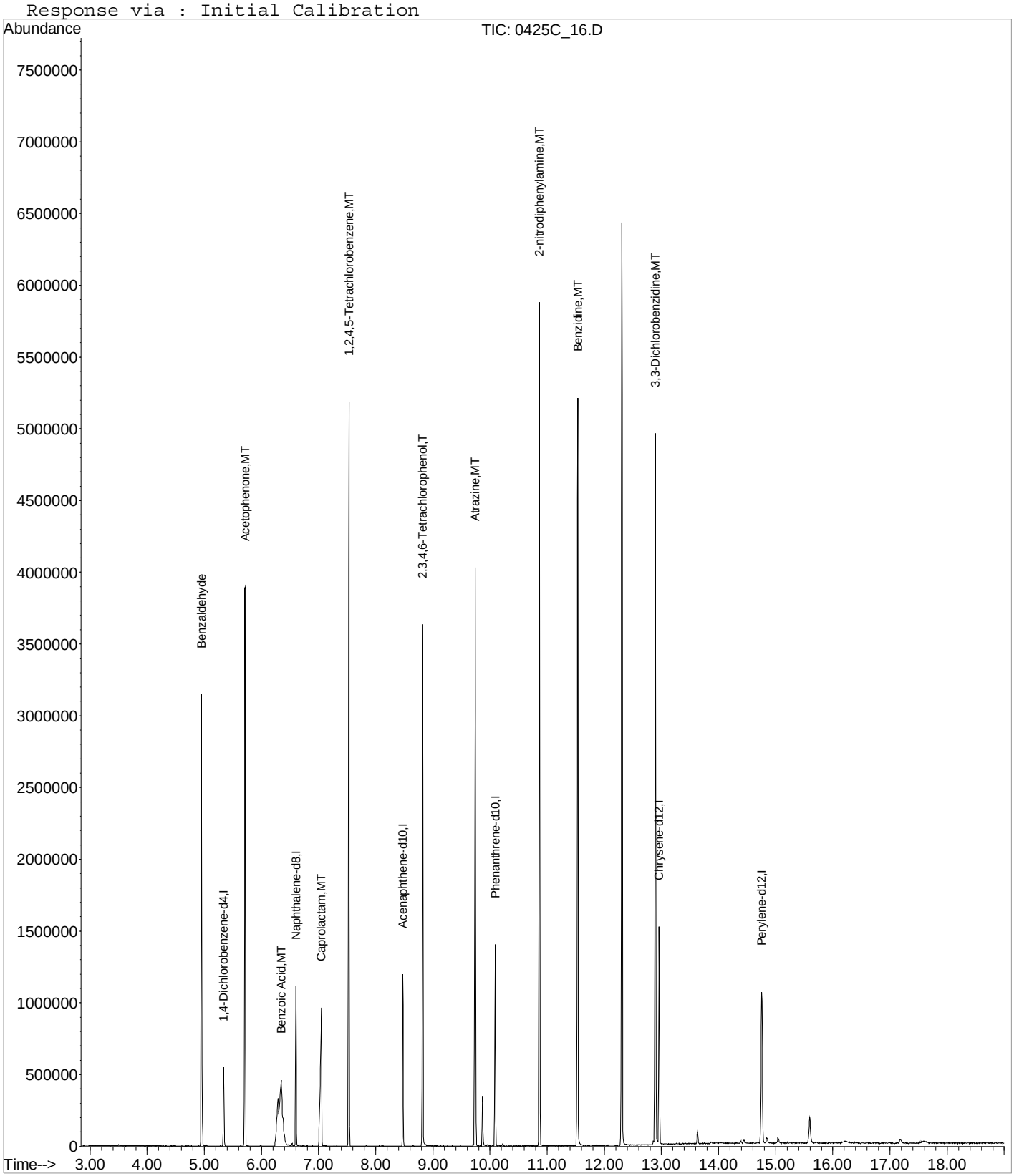
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0d	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 74		Recovery =	0.00%#		
7) Phenol-d5	0.00	99	0d	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 63		Recovery =	0.00%#		
23) Nitrobenzene-d5	0.00	82	0d	0.0000000	ppb	
Spiked Amount 10.000	Range 28 - 123		Recovery =	0.00%#		
44) 2-Fluorobiphenyl	0.00	172	0d	0.0000000	ppb	
Spiked Amount 10.000	Range 35 - 133		Recovery =	0.00%#		
67) 2,4,6-Tribromophenol	0.00	330	0	0.0000000	ppb	
Spiked Amount 20.000	Range 22 - 154		Recovery =	0.00%#		
81) p-Terphenyl-d14	0.00	244	0d	0.0000000	ppb	
Spiked Amount 10.000	Range 30 - 148		Recovery =	0.00%#		

Target Compounds						Qvalue
9) Benzaldehyde	4.95	105	590187	68416.8393917	ppb	97
21) Acetophenone	5.71	105	1125198	63708.2572531	ppb	98
30) Benzoic Acid	6.35	105	587115	50339.5178961	ppb	97
35) Caprolactam	7.05	113	202241	47423.0389560	ppb	98
39) 1,2,4,5-Tetrachlorobenzene	7.53	216	859991	50925.2590152	ppb	92
56) 2,3,4,6-Tetrachlorophenol	8.82	232	433067	55510.0557628	ppb	98
63) Atrazine	9.74	200	562165	48361.7794393	ppb	98
76) 2-nitrodiphenylamine	10.87	167	785186	43951.1108057	ppb	98
79) Benzidine	11.54	184	2075543	43302.4273024	ppb	99
83) 3,3-Dichlorobenzidine	12.90	252	1061891	46265.9127609	ppb	99

(#) = qualifier out of range (m) = manual integration
0425C_16.D S811D25P.M Tue Apr 26 10:42:29 2016 248 of 332 Page 1

Data File : C:\MSDCHEM\1\DATA\042516C\0425C 16.D Vial: 15
Acq On : 25 Apr 2016 8:39 pm Operator: 280
Sample : STD TCL 40K1 PPB 16D25867 Inst : BNAMS11
Misc : 8270 TCL Calibration 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:42 2016 Quant Results File: S811D25P.RES

Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:41:54 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516C\0425C 17.D Vial: 16
Acq On : 25 Apr 2016 9:02 pm Operator: 280
Sample : STD TCL 50K1 PPB 16D25867 Inst : BNAMS11
Misc : 8270 TCL Calibration 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:43 2016 Quant Results File: S811D25P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:37:46 2016
Response via : Initial Calibration
DataAcq Meth : BNA11C

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.34	152	75478	8000.00	ppb	0.00
22) Naphthalene-d8	6.60	136	397969	8000.00	ppb	0.00
40) Acenaphthene-d10	8.47	164	242261	8000.00	ppb	0.00
64) Phenanthrene-d10	10.09	188	481000	8000.00	ppb	0.00
78) Chrysene-d12	12.96	240	527038	8000.00	ppb	0.00
88) Perylene-d12	14.75	264	586785	8000.00	ppb	0.00

System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0d	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 74		Recovery =	0.00%#		
7) Phenol-d5	0.00	99	0d	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 63		Recovery =	0.00%#		
23) Nitrobenzene-d5	0.00	82	0d	0.0000000	ppb	
Spiked Amount 10.000	Range 28 - 123		Recovery =	0.00%#		
44) 2-Fluorobiphenyl	0.00	172	0d	0.0000000	ppb	
Spiked Amount 10.000	Range 35 - 133		Recovery =	0.00%#		
67) 2,4,6-Tribromophenol	0.00	330	0	0.0000000	ppb	
Spiked Amount 20.000	Range 22 - 154		Recovery =	0.00%#		
81) p-Terphenyl-d14	0.00	244	0d	0.0000000	ppb	
Spiked Amount 10.000	Range 30 - 148		Recovery =	0.00%#		

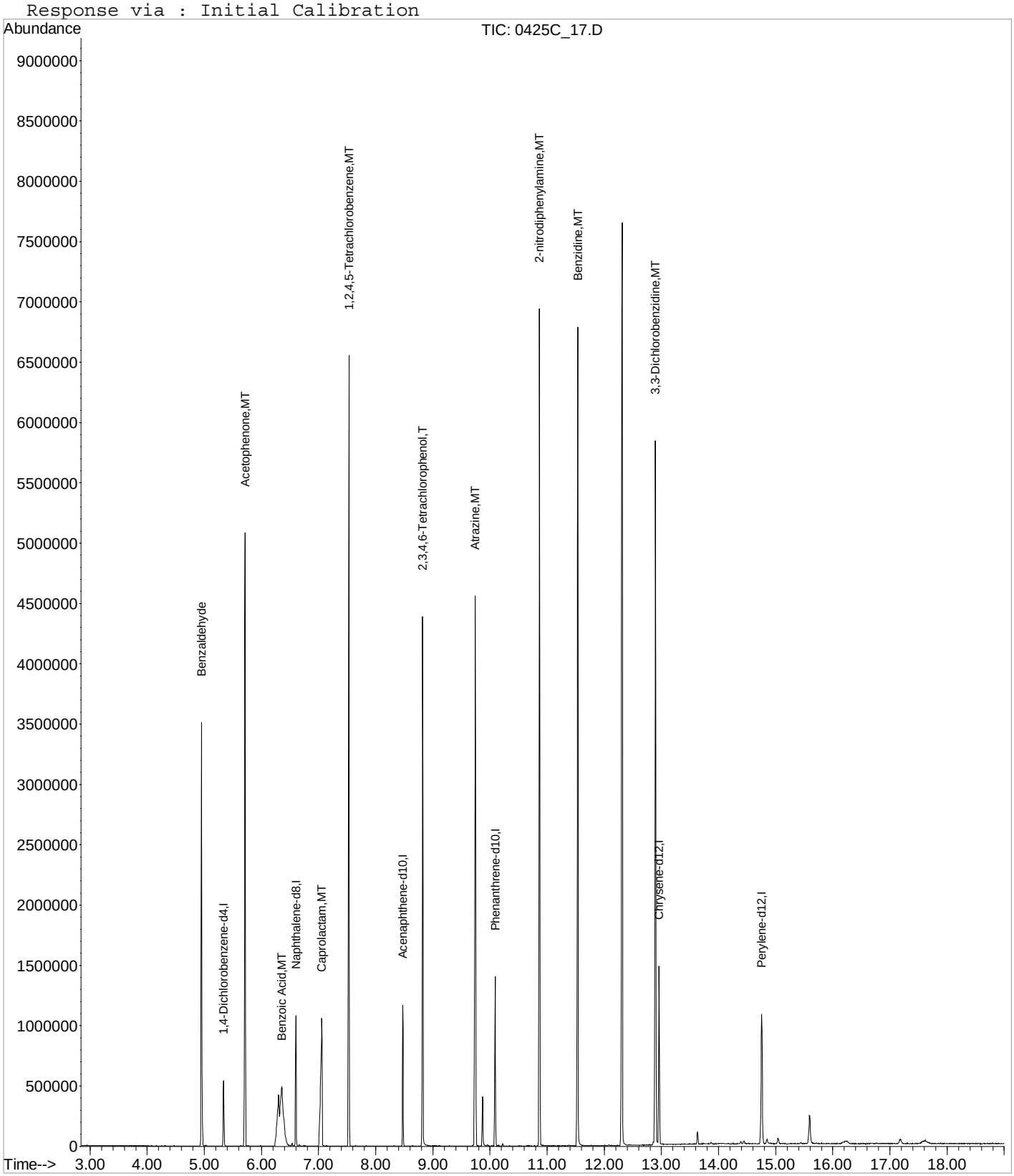
Target Compounds						Qvalue
9) Benzaldehyde	4.95	105	720838	82910.3386548	ppb	95
21) Acetophenone	5.71	105	1379775	77512.6692973	ppb	98
30) Benzoic Acid	6.35	105	731862	60312.1247664	ppb	99
35) Caprolactam	7.05	113	239760	55496.9215260	ppb	99
39) 1,2,4,5-Tetrachlorobenzene	7.53	216	1042757	60952.9094330	ppb	96
56) 2,3,4,6-Tetrachlorophenol	8.82	232	518418	66766.2382425	ppb	95
63) Atrazine	9.74	200	647360	55955.7335261	ppb	94
76) 2-nitrodiphenylamine	10.87	167	937830	54357.8345793	ppb	99
79) Benzidine	11.54	184	2559711	55394.6041891	ppb	100
83) 3,3-Dichlorobenzidine	12.90	252	1273752	57565.4755022	ppb	98

(#) = qualifier out of range (m) = manual integration
0425C_17.D S811D25P.M Tue Apr 26 10:43:04 2016 250 of 332 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\042516C\0425C 17.D Vial: 16
Acq On : 25 Apr 2016 9:02 pm Operator: 280
Sample : STD TCL 50K1 PPB 16D25867 Inst : BNAMS11
Misc : 8270 TCL Calibration 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 10:43 2016 Quant Results File: S811D25P.RES

Method : C:\MSDCHEM\1\METHODS\S811D25P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Tue Apr 26 10:42:33 2016
Response via : Initial Calibration



Instrument: BNAMS2
Method: S802E24P

Initial Calibration Run Log

File ID	Level ID	Date Analyzed
0524_03.D	500	5/24/2016 11:43:00 AM
0524_04.D	1000	5/24/2016 12:08:00 PM
0524_05.D	4000	5/24/2016 12:33:00 PM
0524_02.D	10000	5/24/2016 11:18:00 AM
0524_06.D	20000	5/24/2016 12:58:00 PM
0524_07.D	30000	5/24/2016 1:23:00 PM
0524_08.D	40000	5/24/2016 1:48:00 PM
0524_09.D	50000	5/24/2016 2:13:00 PM
0524_11.D	1K1	5/24/2016 3:03:00 PM
0524_12.D	4K1	5/24/2016 3:28:00 PM
0524_10.D	10K1	5/24/2016 2:38:00 PM
0524_13.D	20K1	5/24/2016 3:53:00 PM
0524_14.D	30K1	5/24/2016 4:18:00 PM
0524_15.D	40K1	5/24/2016 4:43:00 PM
0524_16.D	50K1	5/24/2016 5:08:00 PM

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

Injection Log

Instrument ID : BNAMS2
Computer Name : SVCOMPC
Released By : Nic Rasnake
Date Released : 5/25/2016 1:55:05 PM
Run ID : 052416
Signature : _____

#	File ID	Sample ID	Method	WG	Product	Matrix	Account #	State	Dil.	Mult.	Injected	Misc.
1	0524_00	INSTBLK	S802D25P						1	1	05/24/16 1025	"DFTPP"
2	0524_01	TUNE 50 PPM 16E09755								1	05/24/16 1050	
3	0524_02	MSTD SVMS 10K PPB 16D25863	S802E24P						1	1	05/24/16 1118	"8270 Primary Calibration ISTD 16D22768"
4	0524_02 mrl	MRL SVMS 10K PPB 16D25863	S802E24P						1	1	05/24/16 1118	"8270 Primary Calibration ISTD 16D22768"
5	0524_03	STD SVMS 500 PPB 16D25863	S802E24P						1	1	05/24/16 1143	"8270 Primary Calibration ISTD 16D22768"
6	0524_04	STD SVMS 1K PPB 16D25863	S802E24P						1	1	05/24/16 1208	"8270 Primary Calibration ISTD 16D22768"
7	0524_04 mrl	MRL SVMS 1K PPB 16D25863	S802E24P						1	1	05/24/16 1208	"8270 Primary Calibration ISTD 16D22768"
8	0524_05	STD SVMS 4K PPB 16D25863	S802E24P						1	1	05/24/16 1233	"8270 Primary Calibration ISTD 16D22768"
9	0524_06	STD SVMS 20K PPB 16D25863	S802E24P						1	1	05/24/16 1258	"8270 Primary Calibration ISTD 16D22768"
10	0524_07	STD SVMS 30K PPB 16D25863	S802E24P						1	1	05/24/16 1323	"8270 Primary Calibration ISTD 16D22768"
11	0524_08	STD SVMS 40K PPB 16D25863	S802E24P						1	1	05/24/16 1348	"8270 Primary Calibration ISTD 16D22768"
12	0524_09	STD SVMS 50K PPB 16D25863	S802E24P						1	1	05/24/16 1413	"8270 Primary Calibration ISTD 16D22768"
13	0524_10	MSTD TCL 10K1 PPB 16D25867	S802E24P						1	1	05/24/16 1438	"8270 TCL Calibration ISTD 16D22768"
14	0524_10 mrl	MRL TCL 10K1 PPB 16D25867	S802E24P						1	1	05/24/16 1438	"8270 TCL Calibration ISTD 16D22768"

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

Injection Log

Instrument ID : BNAMS2
Computer Name : SVCOMPC
Released By : Nic Rasnake
Date Released : 5/25/2016 1:55:05 PM
Run ID : 052416
Signature : _____

#	File ID	Sample ID	Method	WG	Product	Matrix	Account #	State	Dil.	Mult.	Injected	Misc.
15	0524_11	STD TCL 1K1 PPB 16D25867	S802E24P						1	1	05/24/16 1503	"8270 TCL Calibration ISTD 16D22768"
16	0524_12	STD TCL 4K1 PPB 16D25867	S802E24P						1	1	05/24/16 1528	"8270 TCL Calibration ISTD 16D22768"
17	0524_13	STD TCL 20K1 PPB 16D25867	S802E24P						1	1	05/24/16 1553	"8270 TCL Calibration ISTD 16D22768"
18	0524_14	STD TCL 30K1 PPB 16D25867	S802E24P						1	1	05/24/16 1618	"8270 TCL Calibration ISTD 16D22768"
19	0524_15	STD TCL 40K1 PPB 16D25867	S802E24P						1	1	05/24/16 1643	"8270 TCL Calibration ISTD 16D22768"
20	0524_16	STD TCL 50K1 PPB 16D25867	S802E24P						1	1	05/24/16 1708	"8270 TCL Calibration ISTD 16D22768"
21	0524_17	SSCV SVMS 10K PPB 16A25209	S802E24P						1	1	05/24/16 1733	"8270 SSCV ISTD 16D22768"

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052416\0524 01.D Vial: 1
Acq On : 24 May 2016 10:50 am Operator: 280
Sample : TUNE 50 PPM 16E09755 Inst : BNAMS2
Misc : DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 24 11:16 2016 Quant Results File: TUNEC.RES

Quant Method : C:\MSDCHEM\1\METHODS\TUNEC.M (RTE Integrator)
Title : 8270 BNA
Last Update : Thu Sep 04 15:13:47 2014
Response via : Initial Calibration
DataAcq Meth : BNA2D

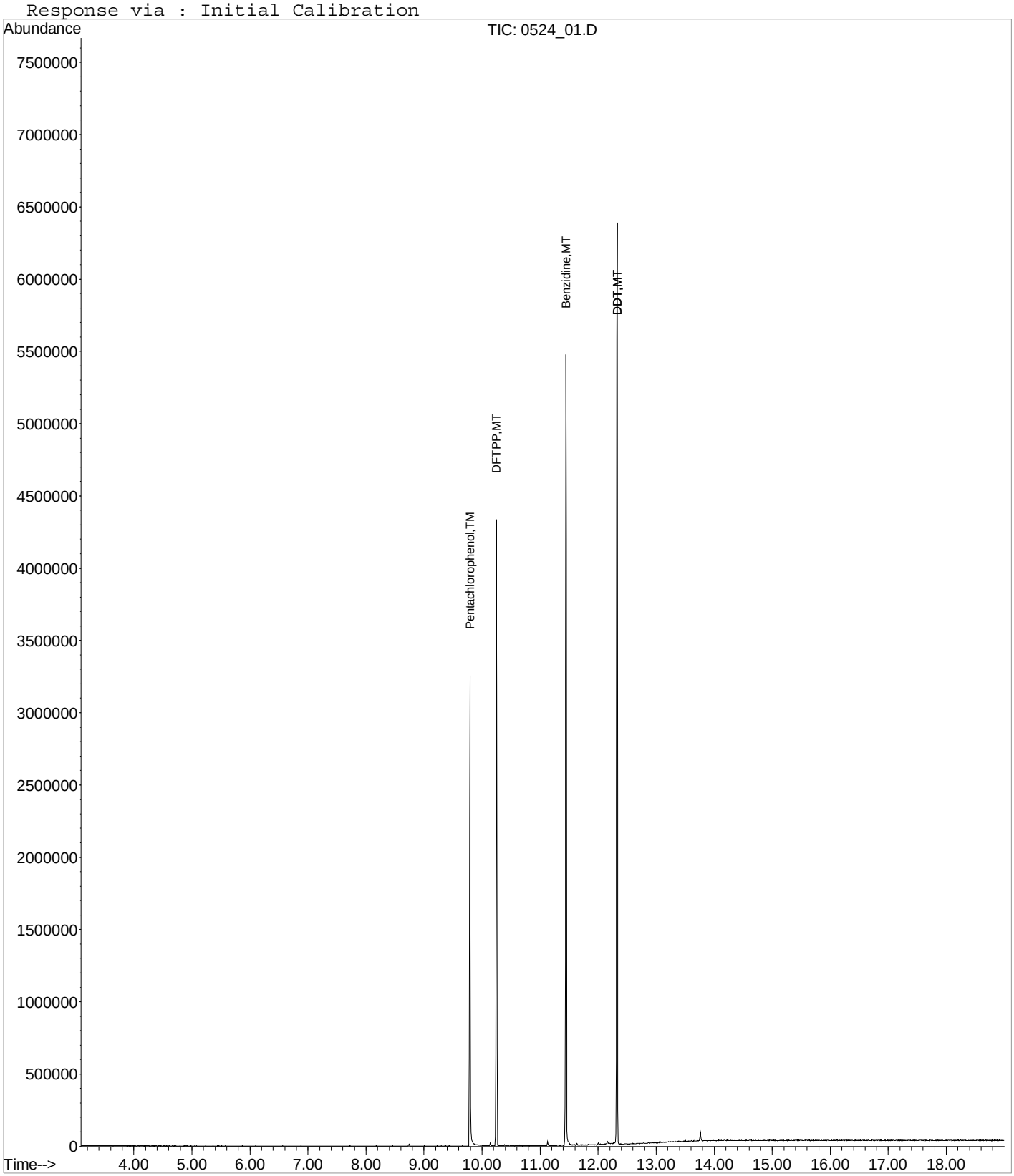
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
Target Compounds						Qvalue
1) Pentachlorophenol	9.79	264	222931	62.1071136	ug/mL	100
2) DFTPP	10.25	198	418779	58.6549855	ug/mL	100
3) Benzidine	11.44	184	2236623	50.6581460	ug/mL	100
4) DDT	12.33	TIC	6276185	330.9117626	ug/ml	100
5) DDT	12.33	235	1233383	91.6589503	ug/mL	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052416\0524 01.D Vial: 1
Acq On : 24 May 2016 10:50 am Operator: 280
Sample : TUNE 50 PPM 16E09755 Inst : BNAMS2
Misc : DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 24 11:16 2016 Quant Results File: TUNEC.RES

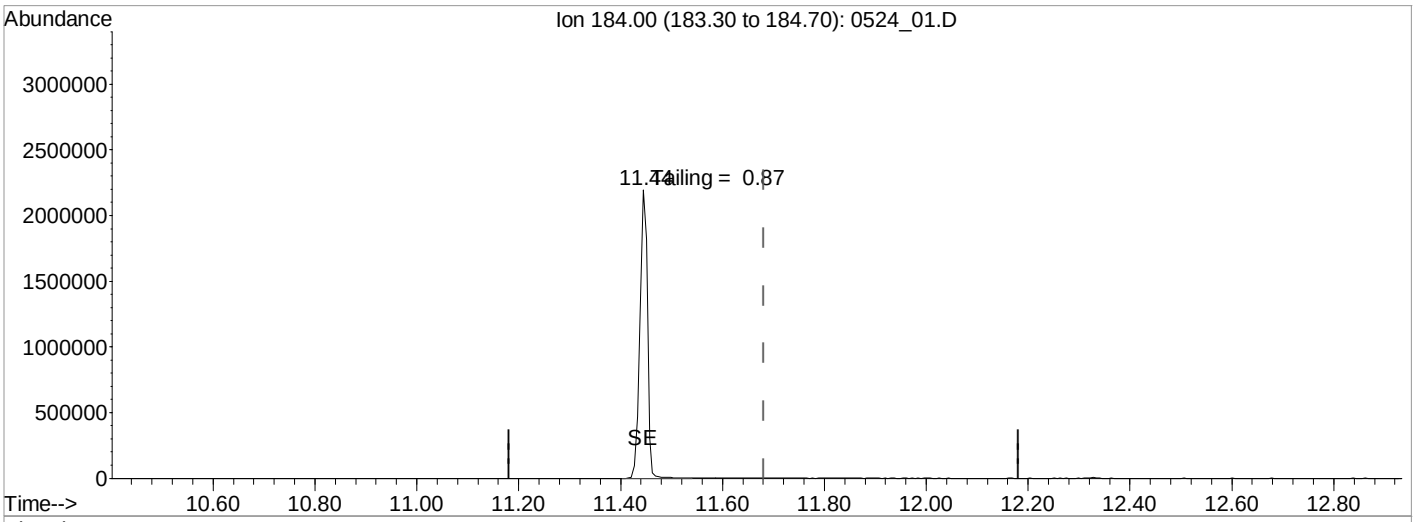
Method : C:\MSDCHEM\1\METHODS\TUNEC.M (RTE Integrator)
Title : 8270 BNA
Last Update : Thu Sep 04 15:13:47 2014
Response via : Initial Calibration

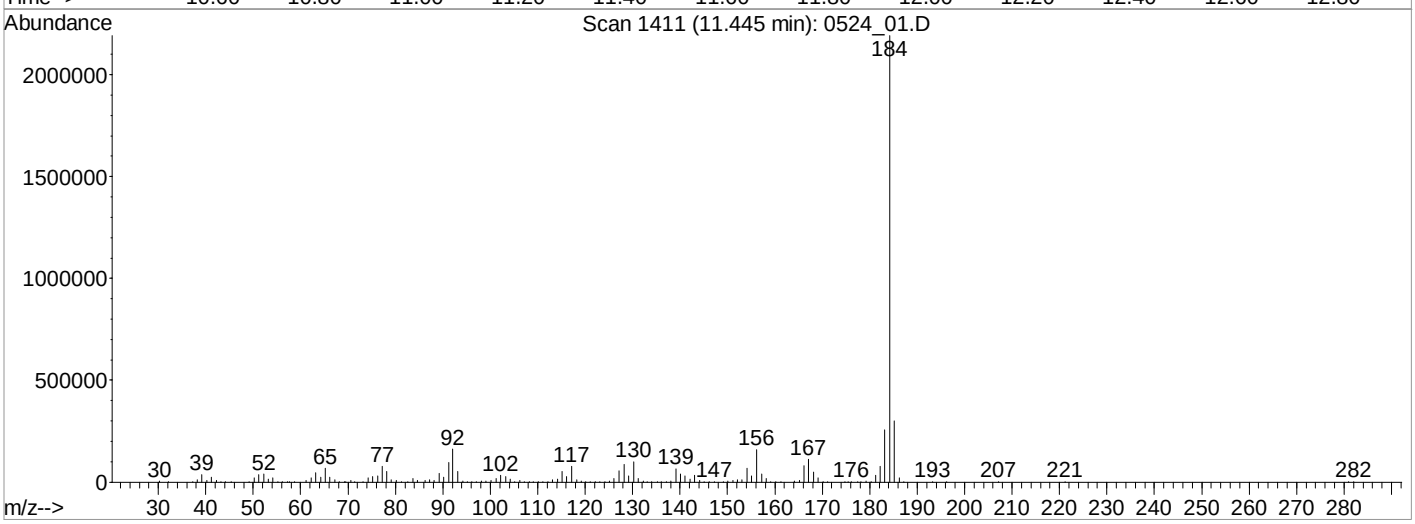


Quantitation Report (Qedit)

Data File : C:\MSDCHEM\1\DATA\052416\0524 01.D Vial: 1
Acq On : 24 May 2016 10:50 am Operator: 280
Sample : TUNE 50 PPM 16E09755 Inst : BNAMS2
Misc : DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 24 11:16 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\TUNEC.M (RTE Integrator)
Title : 8270 BNA
Last Update : Thu Sep 04 15:13:47 2014
Response via : Single Level Calibration





TIC: 0524_01.D

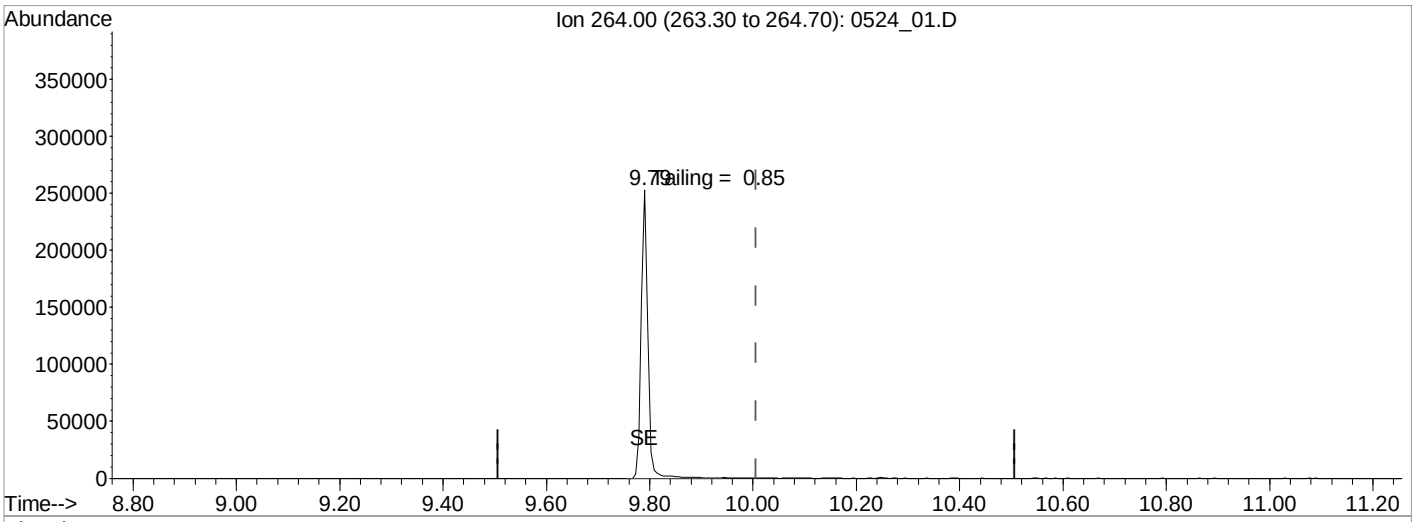
(3) Benzidine (MT)

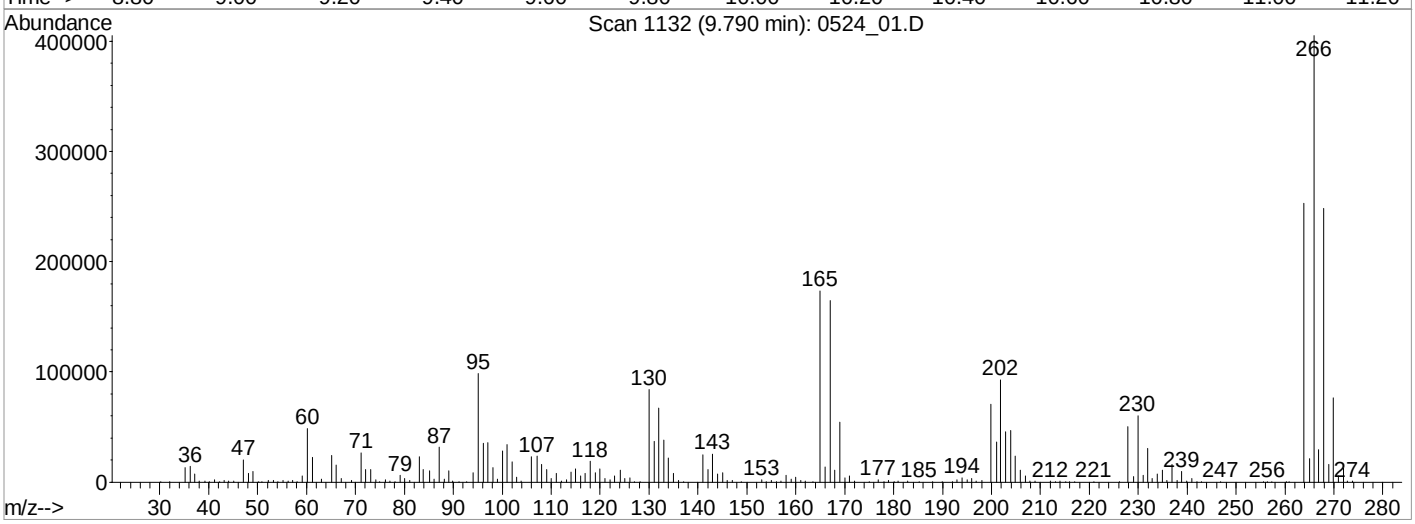
11.44min (-0.236) 50.6581460 ug/mL
Qvalue = 100
response 2236623

Ion	Exp%	Act%
184.00	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Data File : C:\MSDCHEM\1\DATA\052416\0524 01.D Vial: 1
Acq On : 24 May 2016 10:50 am Operator: 280
Sample : TUNE 50 PPM 16E09755 Inst : BNAMS2
Misc : DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 24 11:16 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\TUNEC.M (RTE Integrator)
Title : 8270 BNA
Last Update : Thu Sep 04 15:13:47 2014
Response via : Single Level Calibration





TIC: 0524_01.D

(1) Pentachlorophenol (TM)

9.79min (-0.216) 62.1071136 ug/mL

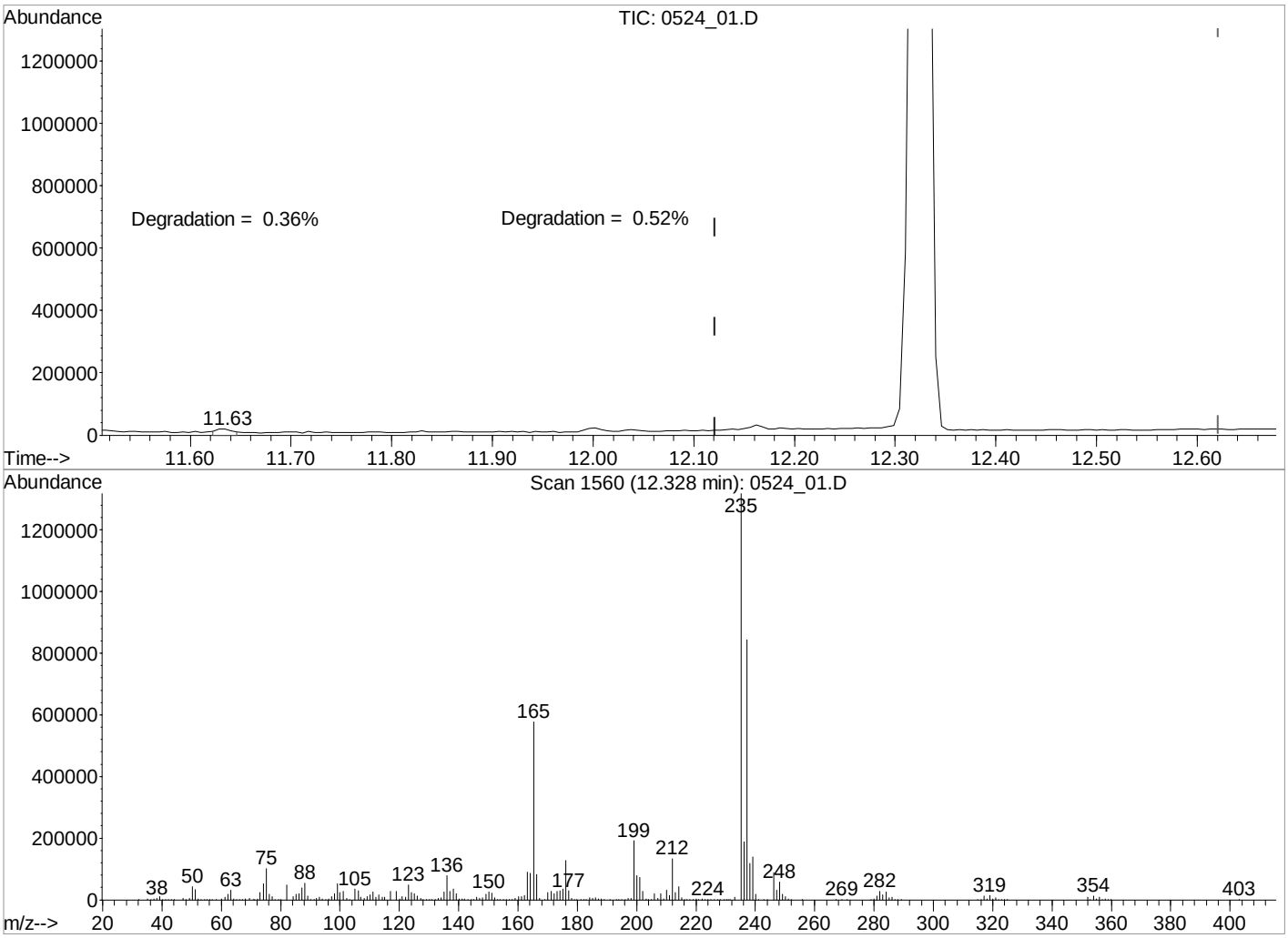
Qvalue = 100

response 222931

Ion	Exp%	Act%
264.00	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Data File : C:\MSDCHEM\1\DATA\052416\0524 01.D Vial: 1
Acq On : 24 May 2016 10:50 am Operator: 280
Sample : TUNE 50 PPM 16E09755 Inst : BNAMS2
Misc : DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 24 11:16 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\TUNEC.M (RTE Integrator)
Title : 8270 BNA
Last Update : Thu Sep 04 15:13:47 2014
Response via : Single Level Calibration



TIC: 0524_01.D

(4) DDT (MT)

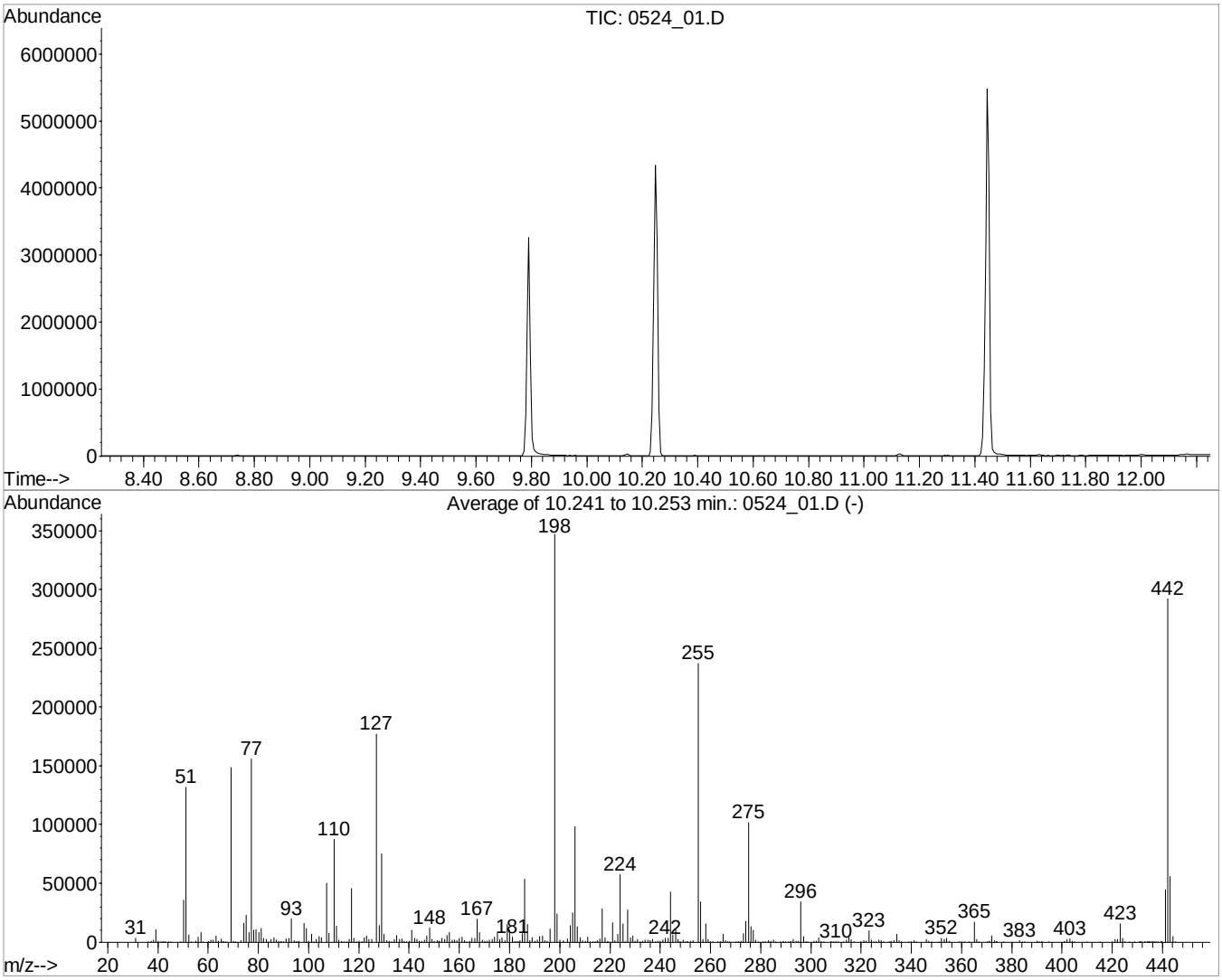
12.33min (-0.293) 330.9117626 ug/ml

Qvalue = 100

response 6276185

Signal	Exp%	Act%
TIC	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

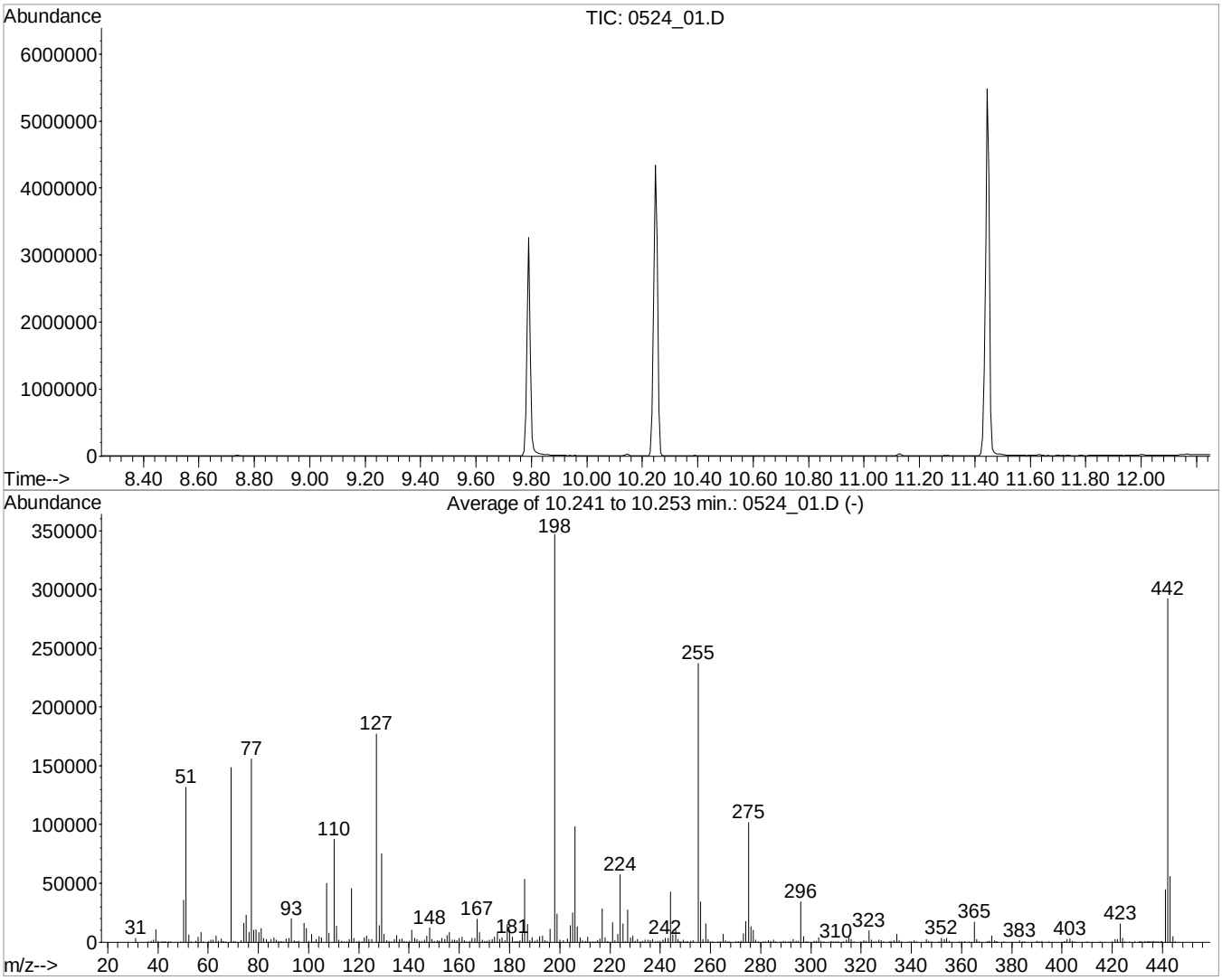
Data File : C:\MSDCHEM\1\DATA\052416\0524 01.D Vial: 1
Acq On : 24 May 2016 10:50 am Operator: 280
Sample : TUNE 50 PPM 16E09755 Inst : BNAMS2
Misc : DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\TUNEC.M (RTE Integrator)
Title : 8270 BNA



Spectrum Information: Average of 10.241 to 10.253 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	38.0	131722	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	42.8	148514	PASS
70	69	0.00	2	0.6	934	PASS
127	198	40	60	51.1	177237	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	347050	PASS
199	198	5	9	6.8	23728	PASS
275	198	10	30	29.2	101509	PASS
365	198	1	100	4.8	16803	PASS
441	443	0.01	100	79.3	44424	PASS
442	198	40	100	84.3	292490	PASS
443	442	17	23	19.2	56021	PASS

Data File : C:\MSDCHEM\1\DATA\052416\0524 01.D Vial: 1
Acq On : 24 May 2016 10:50 am Operator: 280
Sample : TUNE 50 PPM 16E09755 Inst : BNAMS2
Misc : DFTPP Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\TUNED.M (RTE Integrator)
Title : 8270 BNA



Spectrum Information: Average of 10.241 to 10.253 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	38.0	131722	PASS
68	69	0.00	2	0.0	0	PASS
69	69	100	100	100.0	148514	PASS
70	69	0.00	2	0.6	934	PASS
127	198	10	80	51.1	177237	PASS
197	198	0.00	2	0.0	0	PASS
198	198	50	100	100.0	347050	PASS
199	198	5	9	6.8	23728	PASS
275	198	10	60	29.2	101509	PASS
365	198	1	100	4.8	16803	PASS
441	442	0.01	24	15.2	44424	PASS
442	198	50	100	84.3	292490	PASS
443	442	15	24	19.2	56021	PASS

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID	: BNAMS2	Review Method	: 8270C	Released By	: Nic Rasnake
Method	: S802E24P	Review Protocol	: SW846	Released On	: 5/25/2016 1:55:05 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- S802E24P -- ICal Updated Time: Wed May 25 13:26:43 2016

Parameter	500	1000	4000	10000	20000	30000	40000	50000	1K1	4K1	10K1	20K1	30K1	40K1	50K1	AvgRF	%RSD	COD	Cur
1,4-Dichlorobenzene-d4																			
Pyridine	2.511	2.357	1.993	2.132	2.107	2.083	2.124	2.088								2.174177	7.85	0.079	1
N-Nitrosodimethylamine	1.517	1.249	1.16	1.26	1.178	1.135	1.159	1.149								1.226018	10.31	0.103	1
2-Fluorophenol	1.795	1.716	1.562	1.649	1.646	1.612	1.673	1.637								1.661222	4.21	0.042	1
Aniline	1.257	1.158	1.039	1.051	1.07	1.044	1.076	1.056								1.093927	6.95	0.07	1
bis(2-Chloroethyl)ether	1.395	1.383	1.17	1.243	1.202	1.2	1.209	1.194								1.249547	7.06	0.071	1
Phenol-d5	2.428	2.29	2.087	2.214	2.188	2.197	2.225	2.209								2.229824	4.39	0.044	1
Phenol	2.563	2.32	2.048	2.265	2.204	2.171	2.233	2.228								2.253887	6.56	0.066	1
Benzaldehyde									1.31	1.182	0.798	1.257	1.175	1.147	1.02	1.127141	15.21	0.152	1
2-Chlorophenol	2.151	1.947	1.857	1.996	1.941	1.954	1.955	1.974								1.971963	4.21	0.042	1
n-Decane	1.175	1.163	1.003	1.064	1.059	1.025	1.011	1.039								1.067467	6.19	0.062	1
1,3-Dichlorobenzene	2.46	2.259	2.032	2.223	2.146	2.131	2.19	2.201								2.205291	5.62	0.056	1
1,4-Dichlorobenzene	2.559	2.373	2.1	2.233	2.188	2.18	2.251	2.245								2.26609	6.25	0.063	1
Benzyl Alcohol	2.019	1.867	1.634	1.807	1.724	1.711	1.727	1.729								1.777258	6.73	0.067	1
1,2-Dichlorobenzene	2.469	2.208	2	2.117	2.089	2.073	2.147	2.145								2.155928	6.52	0.065	1
bis(2-Chloroisopropyl)ether	0.677	0.644	0.527	0.581	0.555	0.547	0.555	0.558								0.580513	9.01	0.09	1
2-Methylphenol	1.924	1.785	1.606	1.677	1.672	1.645	1.686	1.67								1.708191	5.91	0.059	1
Hexachloroethane	1.077	1.039	0.882	0.93	0.939	0.924	0.938	0.943								0.958926	6.77	0.068	1
N-Nitrosodi-n-propylamine	1.628	1.494	1.32	1.436	1.37	1.357	1.379	1.361								1.418017	7.07	0.071	1
3&4-Methyl phenol	2.231	2.123	1.844	2.006	1.959	1.96	1.982	1.974								2.009859	5.83	0.058	1

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INITIAL CALIBRATION SUMMARY

Instrument ID	: BNAMS2	Review Method	: 8270C	Released By	: Nic Rasnake
Method	: S802E24P	Review Protocol	: SW846	Released On	: 5/25/2016 1:55:05 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- S802E24P -- ICal Updated Time: Wed May 25 13:26:43 2016

Parameter	500	1000	4000	10000	20000	30000	40000	50000	1K1	4K1	10K1	20K1	30K1	40K1	50K1	AvgRF	%RSD	COD	Cur
Acetophenone									2.509	2.364	2.599	2.557	2.58	2.649	2.495	2.536188	3.64	0.036	1
Naphthalene-d8																			
Nitrobenzene-d5	0.455	0.418	0.373	0.407	0.389	0.397	0.398	0.388								0.403172	6.19	0.062	1
Nitrobenzene	0.463	0.408	0.373	0.411	0.38	0.385	0.384	0.383								0.398414	7.34	0.073	1
Isophorone	0.789	0.713	0.646	0.696	0.671	0.679	0.674	0.649								0.689738	6.66	0.067	1
2-Nitrophenol	0.187	0.178	0.172	0.195	0.195	0.197	0.201	0.202								0.190956	5.63	0.056	1
2,4-Dimethylphenol	0.408	0.395	0.356	0.389	0.371	0.38	0.373	0.37								0.380223	4.36	0.044	1
bis(2-Chlorethoxy)methane	0.485	0.434	0.395	0.42	0.403	0.402	0.402	0.39								0.416202	7.46	0.075	1
2,4-Dichlorophenol	0.348	0.314	0.296	0.33	0.31	0.316	0.315	0.314								0.317811	4.83	0.048	1
Benzoic Acid									0.134	0.152	0.207	0.216	0.238	0.238	0.231	0.202442	20.97	0.998	3
1,2,4-Trichlorobenzene	0.411	0.384	0.345	0.377	0.365	0.365	0.366	0.364								0.372225	5.23	0.052	1
Naphthalene	1.324	1.173	1.019	1.127	1.075	1.093	1.098	1.081								1.123721	8.19	0.082	1
4-Chloroaniline	0.15	0.137	0.132	0.148	0.135	0.137	0.137	0.133								0.13886	4.87	0.049	1
Hexachloro-1,3-butadiene	0.277	0.261	0.229	0.252	0.233	0.241	0.241	0.239								0.246524	6.51	0.065	1
Caprolactam									0.106	0.089	0.103	0.097	0.099	0.093	0.09	0.096682	6.43	0.064	1
4-Chloro-3-methylphenol	0.345	0.339	0.309	0.339	0.331	0.338	0.334	0.329								0.333025	3.26	0.033	1
2-Methylnaphthalene	0.855	0.781	0.713	0.815	0.748	0.763	0.761	0.75								0.773101	5.7	0.057	1
1-Methylnaphthalene	0.824	0.742	0.66	0.712	0.699	0.724	0.725	0.714								0.725189	6.44	0.064	1
1,2,4,5-Tetrachlorobenzene									0.386	0.338	0.369	0.356	0.369	0.372	0.357	0.363751	4.22	0.042	1
Acenaphthene-d10																			

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID : BNAMS2
Method : S802E24P
Review Method : 8270C
Review Protocol : SW846
Released By : Nic Rasnake
Released On : 5/25/2016 1:55:05 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- S802E24P -- ICal Updated Time: Wed May 25 13:26:43 2016

Parameter	500	1000	4000	10000	20000	30000	40000	50000	1K1	4K1	10K1	20K1	30K1	40K1	50K1	AvgRF	%RSD	COD	Cur
Hexachlorocyclopentadiene		0.165	0.249	0.298	0.367	0.386	0.417	0.428								0.330183	29.35	0.996	0
2,4,6-Trichlorophenol	0.377	0.35	0.327	0.381	0.364	0.375	0.376	0.379								0.366033	5.15	0.052	1
2,4,5-Trichlorophenol	0.388	0.373	0.347	0.406	0.389	0.382	0.399	0.395								0.3849	4.79	0.048	1
2-Fluorobiphenyl	1.607	1.419	1.255	1.447	1.363	1.334	1.374	1.352								1.393923	7.41	0.074	1
Biphenyl	1.754	1.57	1.399	1.525	1.492	1.469	1.492	1.482								1.523112	6.91	0.069	1
2-Chloronaphthalene	1.351	1.285	1.101	1.246	1.181	1.173	1.193	1.174								1.212839	6.41	0.064	1
2-Nitroaniline	0.406	0.369	0.347	0.398	0.381	0.385	0.397	0.383								0.383192	4.86	0.049	1
Acenaphthylene	2.084	1.874	1.723	1.919	1.86	1.834	1.88	1.851								1.878163	5.37	0.054	1
Dimethyl phthalate	1.602	1.388	1.256	1.387	1.312	1.304	1.331	1.292								1.359046	7.96	0.08	1
2,6-Dinitrotoluene	0.316	0.306	0.283	0.328	0.317	0.303	0.312	0.305								0.308746	4.24	0.042	1
3-Nitroaniline	0.355	0.324	0.309	0.331	0.324	0.331	0.34	0.329								0.330318	4.01	0.04	1
Acenaphthene	1.396	1.278	1.129	1.268	1.201	1.189	1.236	1.215								1.239249	6.36	0.064	1
2,4-Dinitrophenol			0.096	0.123	0.145	0.158	0.171	0.173								0.144682	20.74	0.997	0
Dibenzofuran	2.019	1.793	1.56	1.806	1.7	1.679	1.722	1.704								1.748001	7.61	0.076	1
2,4-Dinitrotoluene	0.415	0.378	0.376	0.42	0.422	0.425	0.425	0.429								0.411138	5.25	0.052	1
2,3,4,6-Tetrachlorophenol									0.236	0.237	0.29	0.278	0.286	0.284	0.278	0.269702	8.53	0.085	1
4-Nitrophenol	0.225	0.197	0.206	0.238	0.244	0.253	0.258	0.252								0.234135	9.7	0.097	1
Fluorene	1.583	1.482	1.298	1.466	1.392	1.382	1.431	1.403								1.429673	5.86	0.059	1
4-Chlorophenyl-phenylether	0.774	0.75	0.635	0.72	0.684	0.677	0.694	0.69								0.7031	6.22	0.062	1
Diethyl phthalate	1.593	1.449	1.294	1.425	1.391	1.376	1.389	1.382								1.412325	6.08	0.061	1

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID	: BNAMS2	Review Method	: 8270C	Released By	: Nic Rasnake
Method	: S802E24P	Review Protocol	: SW846	Released On	: 5/25/2016 1:55:05 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- S802E24P -- ICal Updated Time: Wed May 25 13:26:43 2016

Parameter	500	1000	4000	10000	20000	30000	40000	50000	1K1	4K1	10K1	20K1	30K1	40K1	50K1	AvgRF	%RSD	COD	Cur
4-Nitroaniline	0.364	0.329	0.317	0.346	0.341	0.332	0.337	0.297								0.332666	5.96	0.06	1
Azobenzene	1.572	1.4	1.268	1.415	1.334	1.32	1.324	1.318								1.368952	6.9	0.069	1
Atrazine									0.397	0.362	0.406	0.398	0.403	0.406	0.395	0.395383	3.88	0.039	1
Phenanthrene-d10																			
4,6-Dinitro-2-methylphenol	0.074	0.078	0.078	0.102	0.113	0.118	0.122	0.125								0.101368	20.99	0.998	0
N-Nitrosodiphenylamine	0.679	0.618	0.565	0.633	0.6	0.604	0.617	0.623								0.617266	5.22	0.052	1
2,4,6-Tribromophenol	0.105	0.106	0.093	0.11	0.109	0.112	0.117	0.119								0.10893	7.24	0.072	1
4-Bromophenyl-phenylether	0.255	0.225	0.201	0.223	0.218	0.217	0.226	0.224								0.223763	6.71	0.067	1
Hexachlorobenzene	0.279	0.257	0.222	0.259	0.243	0.246	0.251	0.257								0.252	6.44	0.064	1
n-octadecane	0.13	0.132	0.106	0.114	0.108	0.104	0.106	0.104								0.113065	10.3	0.103	1
Pentachlorophenol	0.083	0.082	0.089	0.121	0.124	0.13	0.135	0.14								0.113116	21.43	0.998	0
Phenanthrene	1.288	1.199	1.009	1.147	1.082	1.094	1.123	1.108								1.131169	7.36	0.074	1
Anthracene	1.296	1.166	1.038	1.167	1.109	1.121	1.164	1.137								1.149803	6.34	0.063	1
Carbazole	1.159	1.07	0.954	1.09	1.032	1.032	1.026	1.006								1.046187	5.85	0.059	1
Di-n-butyl phthalate	1.373	1.274	1.183	1.343	1.318	1.302	1.295	1.272								1.295127	4.37	0.044	1
2-nitrodiphenylamine									0.222	0.222	0.289	0.27	0.289	0.297	0.279	0.266791	12	0.997	0
Fluoranthene	1.406	1.312	1.166	1.31	1.264	1.272	1.272	1.243								1.280737	5.34	0.053	1
Chrysene-d12																			
Benzidine									0.685	0.632	0.591	0.742	0.724	0.711	0.693	0.682699	7.8	0.078	1
Pyrene	1.256	1.14	1.062	1.256	1.113	1.127	1.15	1.194								1.162268	5.9	0.059	1
p-Terphenyl-d14	0.993	0.914	0.906	0.944	0.927	0.939	0.977	1.028								0.953501	4.4	0.044	1

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID	: BNAMS2	Review Method	: 8270C	Released By	: Nic Rasnake
Method	: S802E24P	Review Protocol	: SW846	Released On	: 5/25/2016 1:55:05 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- S802E24P -- ICal Updated Time: Wed May 25 13:26:43 2016

Parameter	500	1000	4000	10000	20000	30000	40000	50000	1K1	4K1	10K1	20K1	30K1	40K1	50K1	AvgRF	%RSD	COD	Cur
Benzylbutyl phthalate	0.565	0.515	0.497	0.551	0.519	0.529	0.51	0.532								0.52723	4.24	0.042	1
3,3-Dichlorobenzidine									0.339	0.305	0.351	0.344	0.348	0.359	0.348	0.342055	5.05	0.05	1
Benzo(a)anthracene	1.398	1.222	1.115	1.232	1.148	1.19	1.168	1.2								1.209147	7.07	0.071	1
Chrysene	1.296	1.148	1.06	1.134	1.084	1.116	1.091	1.126								1.13198	6.39	0.064	1
bis(2-Ethylhexyl)phthalate	0.887	0.735	0.695	0.758	0.728	0.749	0.718	0.737								0.750817	7.78	0.078	1
Di-n-octyl phthalate	1.436	1.335	1.212	1.276	1.292	1.323	1.267	1.267								1.30096	5.11	0.051	1
Perylene-d12																			
Benzo(b)fluoranthene	1.413	1.23	1.108	1.263	1.191	1.226	1.226	1.21								1.233364	6.95	0.069	1
Benzo(k)fluoranthene	1.178	1.108	1	1.199	1.13	1.084	1.109	1.096								1.112912	5.45	0.055	1
Benzo(a)pyrene	1.264	1.162	1.04	1.201	1.135	1.139	1.154	1.142								1.154624	5.49	0.055	1
Indeno(1,2,3-cd)pyrene	1.473	1.325	1.205	1.343	1.279	1.274	1.275	1.277								1.306425	6.01	0.06	1
Dibenz(a,h)anthracene	1.239	1.115	1.037	1.15	1.119	1.128	1.131	1.136								1.131841	4.86	0.049	1
Benzo(g,h,i)perylene	1.252	1.125	1.013	1.12	1.065	1.044	1.039	1.012								1.083682	7.43	0.074	1

Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

Instrument ID	: BNAMS2	Review Method	: 8270D	Released By	: Nic Rasnake
Method	: S802E24P	Review Protocol	: SW846	Released On	: 5/25/2016 1:54:41 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- S802E24P -- ICal Updated Time: Wed May 25 13:26:43 2016

Parameter	500	1000	4000	10000	20000	30000	40000	50000	1K1	4K1	10K1	20K1	30K1	40K1	50K1	AvgRF	%RSD	COD	Cur	RF
1,4-Dichlorobenzene-d4																				
Pyridine	2.511	2.357	1.993	2.132	2.107	2.083	2.124	2.088								2.174177	7.85	0.079	1	
N-Nitrosodimethylamine	1.517	1.249	1.16	1.26	1.178	1.135	1.159	1.149								1.226018	10.31	0.103	1	
2-Fluorophenol	1.795	1.716	1.562	1.649	1.646	1.612	1.673	1.637								1.661222	4.21	0.042	1	
Aniline	1.257	1.158	1.039	1.051	1.07	1.044	1.076	1.056								1.093927	6.95	0.07	1	
bis(2-Chloroethyl)ether	1.395	1.383	1.17	1.243	1.202	1.2	1.209	1.194								1.249547	7.06	0.071	1	0.7
Phenol-d5	2.428	2.29	2.087	2.214	2.188	2.197	2.225	2.209								2.229824	4.39	0.044	1	
Phenol	2.563	2.32	2.048	2.265	2.204	2.171	2.233	2.228								2.253887	6.56	0.066	1	0.8
Benzaldehyde									1.31	1.182	0.798	1.257	1.175	1.147	1.02	1.127141	15.21	0.152	1	0.01
2-Chlorophenol	2.151	1.947	1.857	1.996	1.941	1.954	1.955	1.974								1.971963	4.21	0.042	1	0.8
n-Decane	1.175	1.163	1.003	1.064	1.059	1.025	1.011	1.039								1.067467	6.19	0.062	1	
1,3-Dichlorobenzene	2.46	2.259	2.032	2.223	2.146	2.131	2.19	2.201								2.205291	5.62	0.056	1	
1,4-Dichlorobenzene	2.559	2.373	2.1	2.233	2.188	2.18	2.251	2.245								2.26609	6.25	0.063	1	
Benzyl Alcohol	2.019	1.867	1.634	1.807	1.724	1.711	1.727	1.729								1.777258	6.73	0.067	1	
1,2-Dichlorobenzene	2.469	2.208	2	2.117	2.089	2.073	2.147	2.145								2.155928	6.52	0.065	1	
bis(2-Chloroisopropyl)ether	0.677	0.644	0.527	0.581	0.555	0.547	0.555	0.558								0.580513	9.01	0.09	1	
2-Methylphenol	1.924	1.785	1.606	1.677	1.672	1.645	1.686	1.67								1.708191	5.91	0.059	1	0.7
Hexachloroethane	1.077	1.039	0.882	0.93	0.939	0.924	0.938	0.943								0.958926	6.77	0.068	1	0.3
N-Nitrosodi-n-propylamine	1.628	1.494	1.32	1.436	1.37	1.357	1.379	1.361								1.418017	7.07	0.071	1	0.5
3&4-Methyl phenol	2.231	2.123	1.844	2.006	1.959	1.96	1.982	1.974								2.009859	5.83	0.058	1	0.6

INITIAL CALIBRATION SUMMARY

Instrument ID	: BNAMS2	Review Method	: 8270D	Released By	: Nic Rasnake
Method	: S802E24P	Review Protocol	: SW846	Released On	: 5/25/2016 1:54:41 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- S802E24P -- ICal Updated Time: Wed May 25 13:26:43 2016

Parameter	500	1000	4000	10000	20000	30000	40000	50000	1K1	4K1	10K1	20K1	30K1	40K1	50K1	AvgRF	%RSD	COD	Cur	RF
Acetophenone									2.509	2.364	2.599	2.557	2.58	2.649	2.495	2.536188	3.64	0.036	1	0.01
Naphthalene-d8																				
Nitrobenzene-d5	0.455	0.418	0.373	0.407	0.389	0.397	0.398	0.388								0.403172	6.19	0.062	1	
Nitrobenzene	0.463	0.408	0.373	0.411	0.38	0.385	0.384	0.383								0.398414	7.34	0.073	1	0.2
Isophorone	0.789	0.713	0.646	0.696	0.671	0.679	0.674	0.649								0.689738	6.66	0.067	1	0.4
2-Nitrophenol	0.187	0.178	0.172	0.195	0.195	0.197	0.201	0.202								0.190956	5.63	0.056	1	0.1
2,4-Dimethylphenol	0.408	0.395	0.356	0.389	0.371	0.38	0.373	0.37								0.380223	4.36	0.044	1	0.2
bis(2-Chlorethoxy)methane	0.485	0.434	0.395	0.42	0.403	0.402	0.402	0.39								0.416202	7.46	0.075	1	0.3
2,4-Dichlorophenol	0.348	0.314	0.296	0.33	0.31	0.316	0.315	0.314								0.317811	4.83	0.048	1	0.2
Benzoic Acid									0.134	0.152	0.207	0.216	0.238	0.238	0.231	0.202442	20.97	0.998	3	
1,2,4-Trichlorobenzene	0.411	0.384	0.345	0.377	0.365	0.365	0.366	0.364								0.372225	5.23	0.052	1	
Naphthalene	1.324	1.173	1.019	1.127	1.075	1.093	1.098	1.081								1.123721	8.19	0.082	1	0.7
4-Chloroaniline	0.15	0.137	0.132	0.148	0.135	0.137	0.137	0.133								0.13886	4.87	0.049	1	0.01
Hexachloro-1,3-butadiene	0.277	0.261	0.229	0.252	0.233	0.241	0.241	0.239								0.246524	6.51	0.065	1	0.01
Caprolactam									0.106	0.089	0.103	0.097	0.099	0.093	0.09	0.096682	6.43	0.064	1	0.01
4-Chloro-3-methylphenol	0.345	0.339	0.309	0.339	0.331	0.338	0.334	0.329								0.333025	3.26	0.033	1	0.2
2-Methylnaphthalene	0.855	0.781	0.713	0.815	0.748	0.763	0.761	0.75								0.773101	5.7	0.057	1	0.4
1-Methylnaphthalene	0.824	0.742	0.66	0.712	0.699	0.724	0.725	0.714								0.725189	6.44	0.064	1	
1,2,4,5-Tetrachlorobenzene									0.386	0.338	0.369	0.356	0.369	0.372	0.357	0.363751	4.22	0.042	1	0.01
Acenaphthene-d10																				

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INITIAL CALIBRATION SUMMARY

Instrument ID : BNAMS2
Method : S802E24P
Review Method : 8270D
Review Protocol : SW846
Released By : Nic Rasnake
Released On : 5/25/2016 1:54:41 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- S802E24P -- ICal Updated Time: Wed May 25 13:26:43 2016

Parameter	500	1000	4000	10000	20000	30000	40000	50000	1K1	4K1	10K1	20K1	30K1	40K1	50K1	AvgRF	%RSD	COD	Cur	RF
Hexachlorocyclopentadiene		0.165	0.249	0.298	0.367	0.386	0.417	0.428								0.330183	29.35	0.996	0	0.05
2,4,6-Trichlorophenol	0.377	0.35	0.327	0.381	0.364	0.375	0.376	0.379								0.366033	5.15	0.052	1	0.2
2,4,5-Trichlorophenol	0.388	0.373	0.347	0.406	0.389	0.382	0.399	0.395								0.3849	4.79	0.048	1	0.2
2-Fluorobiphenyl	1.607	1.419	1.255	1.447	1.363	1.334	1.374	1.352								1.393923	7.41	0.074	1	
Biphenyl	1.754	1.57	1.399	1.525	1.492	1.469	1.492	1.482								1.523112	6.91	0.069	1	0.01
2-Chloronaphthalene	1.351	1.285	1.101	1.246	1.181	1.173	1.193	1.174								1.212839	6.41	0.064	1	0.8
2-Nitroaniline	0.406	0.369	0.347	0.398	0.381	0.385	0.397	0.383								0.383192	4.86	0.049	1	0.01
Acenaphthylene	2.084	1.874	1.723	1.919	1.86	1.834	1.88	1.851								1.878163	5.37	0.054	1	0.9
Dimethyl phthalate	1.602	1.388	1.256	1.387	1.312	1.304	1.331	1.292								1.359046	7.96	0.08	1	0.01
2,6-Dinitrotoluene	0.316	0.306	0.283	0.328	0.317	0.303	0.312	0.305								0.308746	4.24	0.042	1	0.2
3-Nitroaniline	0.355	0.324	0.309	0.331	0.324	0.331	0.34	0.329								0.330318	4.01	0.04	1	0.01
Acenaphthene	1.396	1.278	1.129	1.268	1.201	1.189	1.236	1.215								1.239249	6.36	0.064	1	0.9
2,4-Dinitrophenol			0.096	0.123	0.145	0.158	0.171	0.173								0.144682	20.74	0.997	0	0.01
Dibenzofuran	2.019	1.793	1.56	1.806	1.7	1.679	1.722	1.704								1.748001	7.61	0.076	1	0.8
2,4-Dinitrotoluene	0.415	0.378	0.376	0.42	0.422	0.425	0.425	0.429								0.411138	5.25	0.052	1	0.2
2,3,4,6-Tetrachlorophenol									0.236	0.237	0.29	0.278	0.286	0.284	0.278	0.269702	8.53	0.085	1	0.01
4-Nitrophenol	0.225	0.197	0.206	0.238	0.244	0.253	0.258	0.252								0.234135	9.7	0.097	1	0.01
Fluorene	1.583	1.482	1.298	1.466	1.392	1.382	1.431	1.403								1.429673	5.86	0.059	1	0.9
4-Chlorophenyl-phenylether	0.774	0.75	0.635	0.72	0.684	0.677	0.694	0.69								0.7031	6.22	0.062	1	0.4
Diethyl phthalate	1.593	1.449	1.294	1.425	1.391	1.376	1.389	1.382								1.412325	6.08	0.061	1	0.01

Environmental Science Corporation
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INITIAL CALIBRATION SUMMARY

Instrument ID : BNAMS2
Method : S802E24P
Review Method : 8270D
Review Protocol : SW846
Released By : Nic Rasnake
Released On : 5/25/2016 1:54:41 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- S802E24P -- ICal Updated Time: Wed May 25 13:26:43 2016

Parameter	500	1000	4000	10000	20000	30000	40000	50000	1K1	4K1	10K1	20K1	30K1	40K1	50K1	AvgRF	%RSD	COD	Cur	RF
4-Nitroaniline	0.364	0.329	0.317	0.346	0.341	0.332	0.337	0.297								0.332666	5.96	0.06	1	0.01
Azobenzene	1.572	1.4	1.268	1.415	1.334	1.32	1.324	1.318								1.368952	6.9	0.069	1	
Atrazine									0.397	0.362	0.406	0.398	0.403	0.406	0.395	0.395383	3.88	0.039	1	0.01
Phenanthrene-d10																				
4,6-Dinitro-2-methylphenol	0.074	0.078	0.078	0.102	0.113	0.118	0.122	0.125								0.101368	20.99	0.998	0	0.01
N-Nitrosodiphenylamine	0.679	0.618	0.565	0.633	0.6	0.604	0.617	0.623								0.617266	5.22	0.052	1	0.01
2,4,6-Tribromophenol	0.105	0.106	0.093	0.11	0.109	0.112	0.117	0.119								0.10893	7.24	0.072	1	
4-Bromophenyl-phenylether	0.255	0.225	0.201	0.223	0.218	0.217	0.226	0.224								0.223763	6.71	0.067	1	0.1
Hexachlorobenzene	0.279	0.257	0.222	0.259	0.243	0.246	0.251	0.257								0.252	6.44	0.064	1	0.1
n-octadecane	0.13	0.132	0.106	0.114	0.108	0.104	0.106	0.104								0.113065	10.3	0.103	1	
Pentachlorophenol	0.083	0.082	0.089	0.121	0.124	0.13	0.135	0.14								0.113116	21.43	0.998	0	0.05
Phenanthrene	1.288	1.199	1.009	1.147	1.082	1.094	1.123	1.108								1.131169	7.36	0.074	1	0.7
Anthracene	1.296	1.166	1.038	1.167	1.109	1.121	1.164	1.137								1.149803	6.34	0.063	1	0.7
Carbazole	1.159	1.07	0.954	1.09	1.032	1.032	1.026	1.006								1.046187	5.85	0.059	1	0.01
Di-n-butyl phthalate	1.373	1.274	1.183	1.343	1.318	1.302	1.295	1.272								1.295127	4.37	0.044	1	0.01
2-nitrodiphenylamine									0.222	0.222	0.289	0.27	0.289	0.297	0.279	0.266791	12	0.997	0	
Fluoranthene	1.406	1.312	1.166	1.31	1.264	1.272	1.272	1.243								1.280737	5.34	0.053	1	0.6
Chrysene-d12																				
Benzidine									0.685	0.632	0.591	0.742	0.724	0.711	0.693	0.682699	7.8	0.078	1	
Pyrene	1.256	1.14	1.062	1.256	1.113	1.127	1.15	1.194								1.162268	5.9	0.059	1	0.6
p-Terphenyl-d14	0.993	0.914	0.906	0.944	0.927	0.939	0.977	1.028								0.953501	4.4	0.044	1	

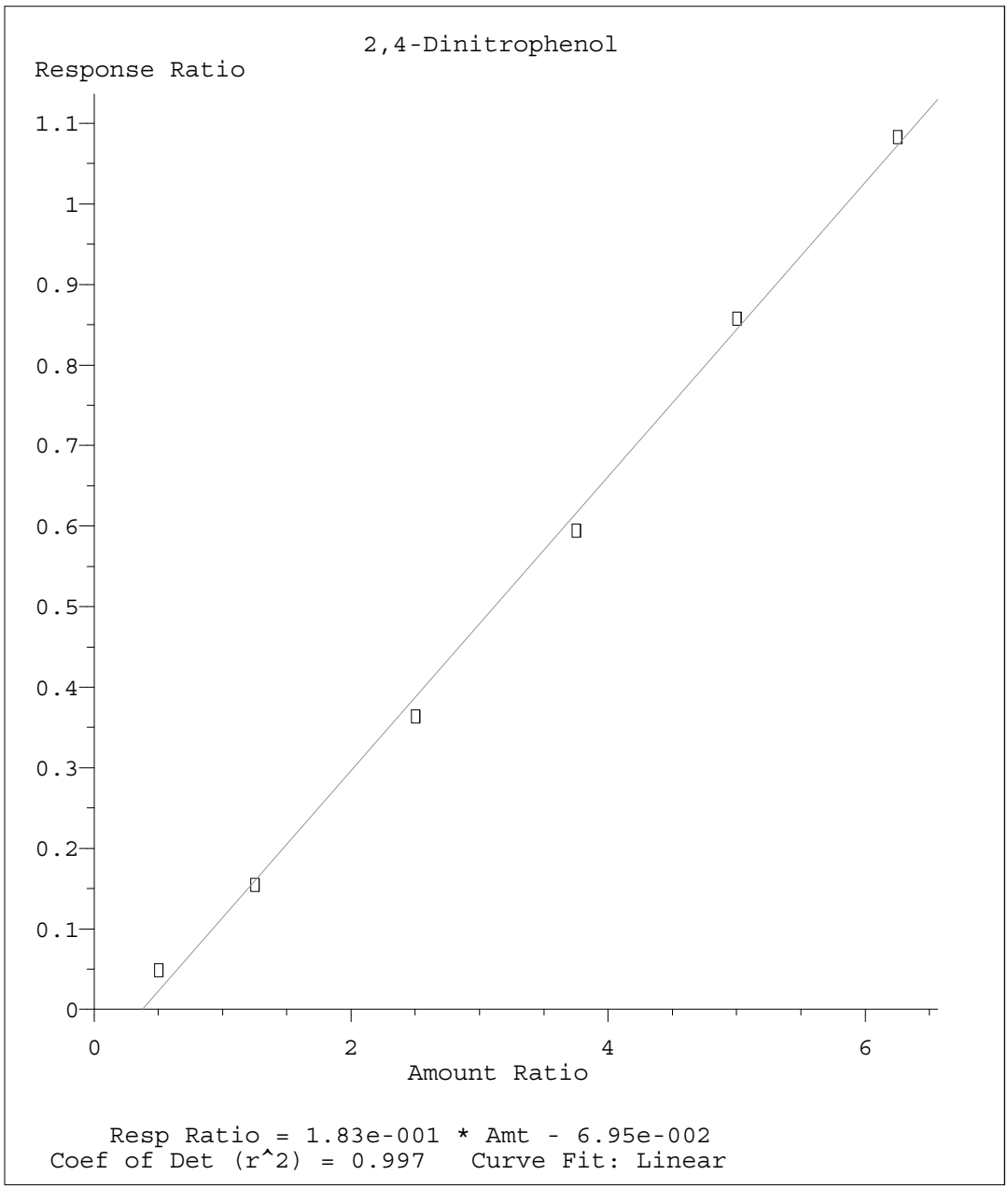
Environmental Science Corporation
12065 Lebanon Rd., Mt. Juliet, TN 37122

INITIAL CALIBRATION SUMMARY

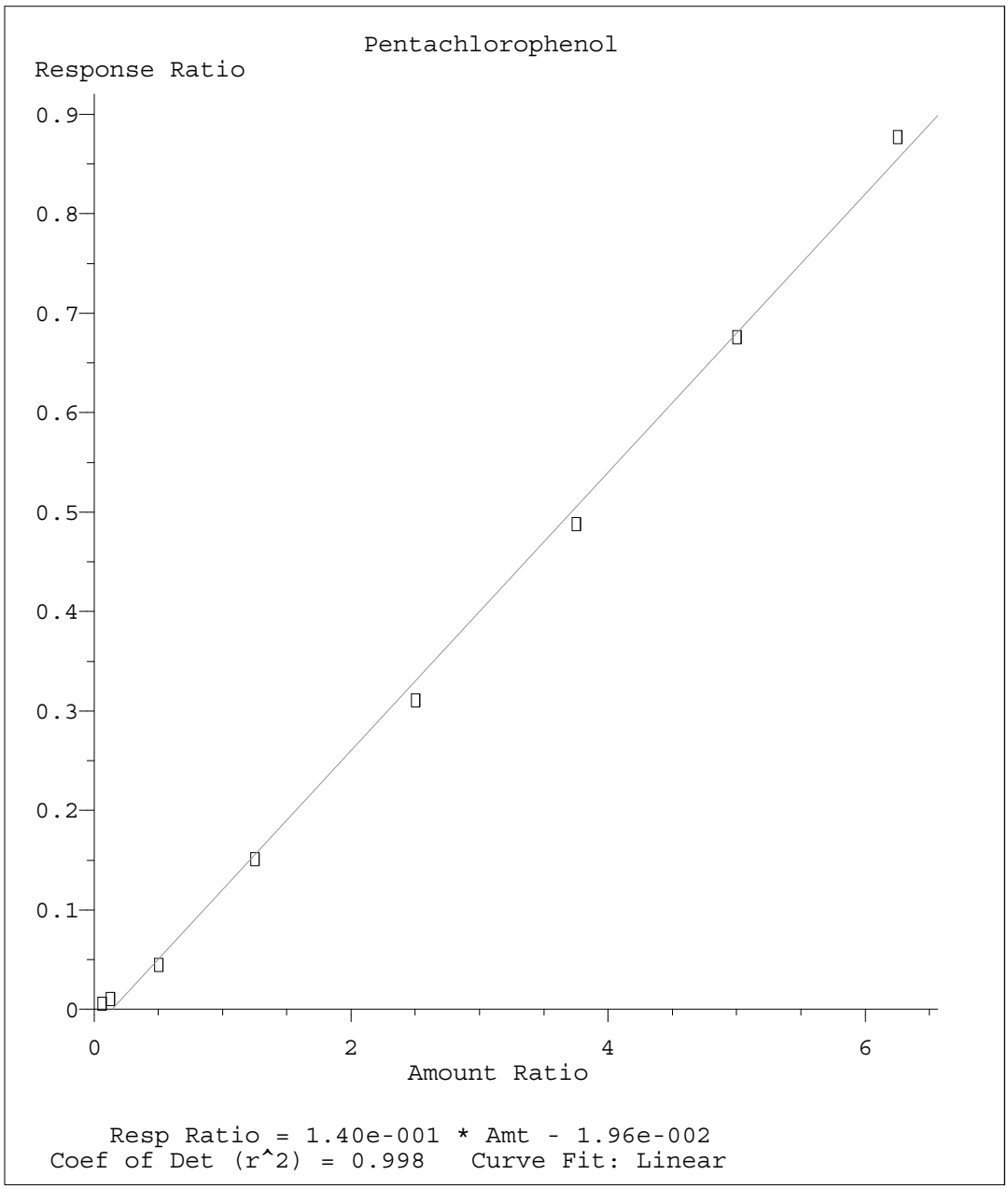
Instrument ID	: BNAMS2	Review Method	: 8270D	Released By	: Nic Rasnake
Method	: S802E24P	Review Protocol	: SW846	Released On	: 5/25/2016 1:54:41 PM

INITIAL CALIBRATION SUMMARY(C = 1 --> Average Response, C = 0 --> Linear Regression, C = 3 --> Quadratic) -- S802E24P -- ICal Updated Time: Wed May 25 13:26:43 2016

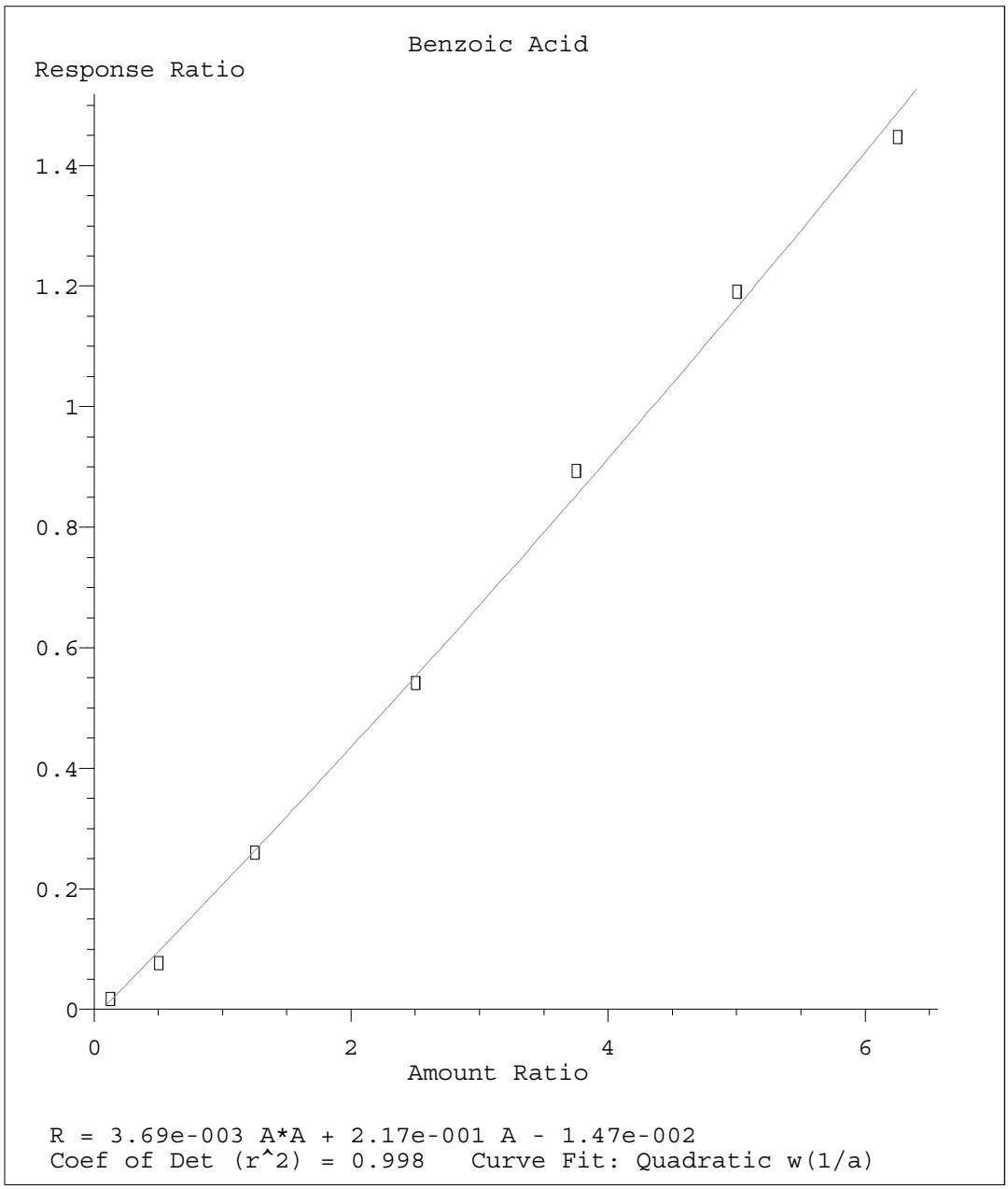
Parameter	500	1000	4000	10000	20000	30000	40000	50000	1K1	4K1	10K1	20K1	30K1	40K1	50K1	AvgRF	%RSD	COD	Cur	RF
Benzylbutyl phthalate	0.565	0.515	0.497	0.551	0.519	0.529	0.51	0.532								0.52723	4.24	0.042	1	0.01
3,3-Dichlorobenzidine									0.339	0.305	0.351	0.344	0.348	0.359	0.348	0.342055	5.05	0.05	1	0.01
Benzo(a)anthracene	1.398	1.222	1.115	1.232	1.148	1.19	1.168	1.2								1.209147	7.07	0.071	1	0.8
Chrysene	1.296	1.148	1.06	1.134	1.084	1.116	1.091	1.126								1.13198	6.39	0.064	1	0.7
bis(2-Ethylhexyl)phthalate	0.887	0.735	0.695	0.758	0.728	0.749	0.718	0.737								0.750817	7.78	0.078	1	0.01
Di-n-octyl phthalate	1.436	1.335	1.212	1.276	1.292	1.323	1.267	1.267								1.30096	5.11	0.051	1	0.01
Perylene-d12																				
Benzo(b)fluoranthene	1.413	1.23	1.108	1.263	1.191	1.226	1.226	1.21								1.233364	6.95	0.069	1	0.7
Benzo(k)fluoranthene	1.178	1.108	1	1.199	1.13	1.084	1.109	1.096								1.112912	5.45	0.055	1	0.7
Benzo(a)pyrene	1.264	1.162	1.04	1.201	1.135	1.139	1.154	1.142								1.154624	5.49	0.055	1	0.7
Indeno(1,2,3-cd)pyrene	1.473	1.325	1.205	1.343	1.279	1.274	1.275	1.277								1.306425	6.01	0.06	1	0.5
Dibenz(a,h)anthracene	1.239	1.115	1.037	1.15	1.119	1.128	1.131	1.136								1.131841	4.86	0.049	1	0.4
Benzo(g,h,i)perylene	1.252	1.125	1.013	1.12	1.065	1.044	1.039	1.012								1.083682	7.43	0.074	1	0.5



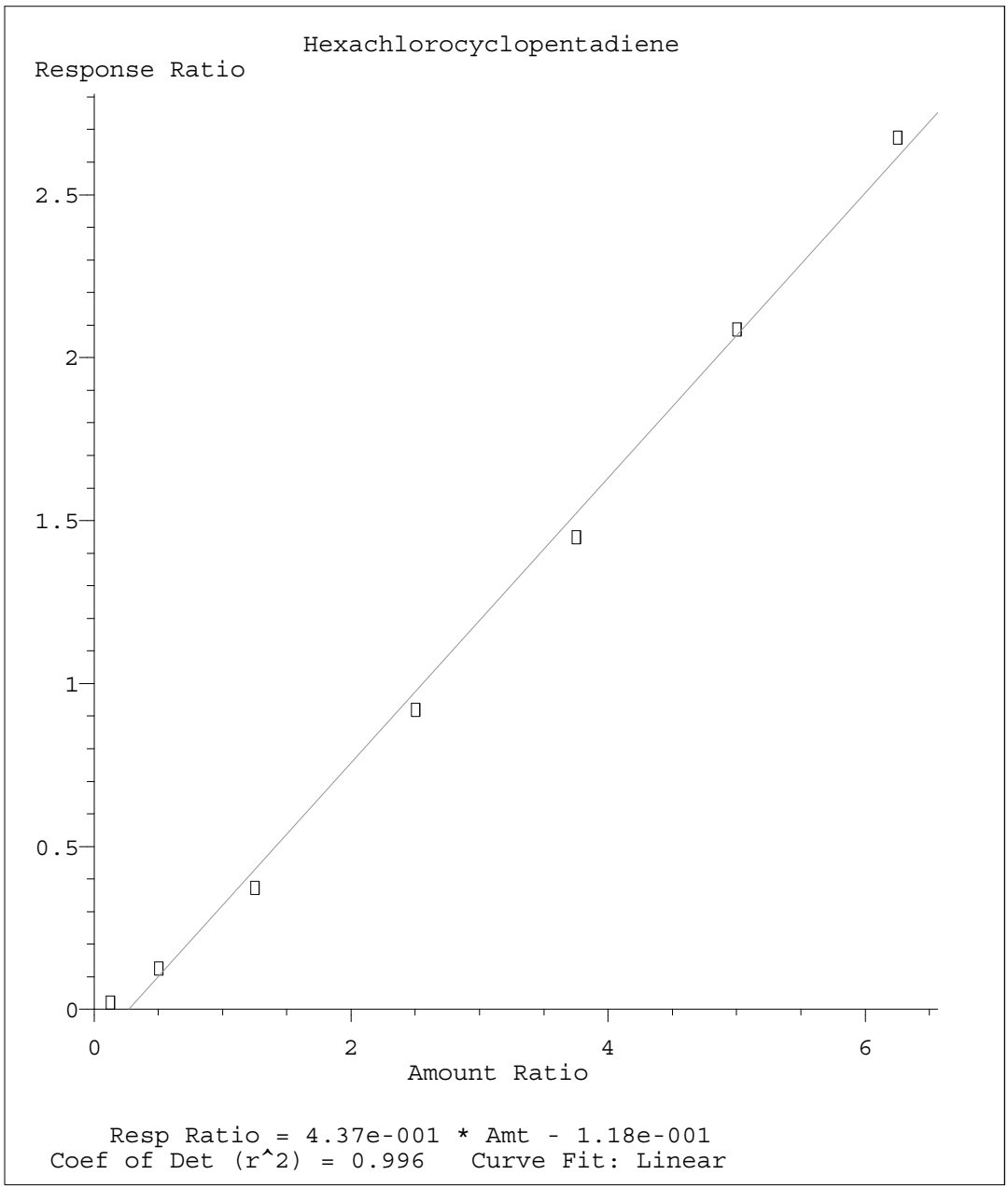
Method Name: C:\MSDCHEM\1\METHODS\S802E24P.M



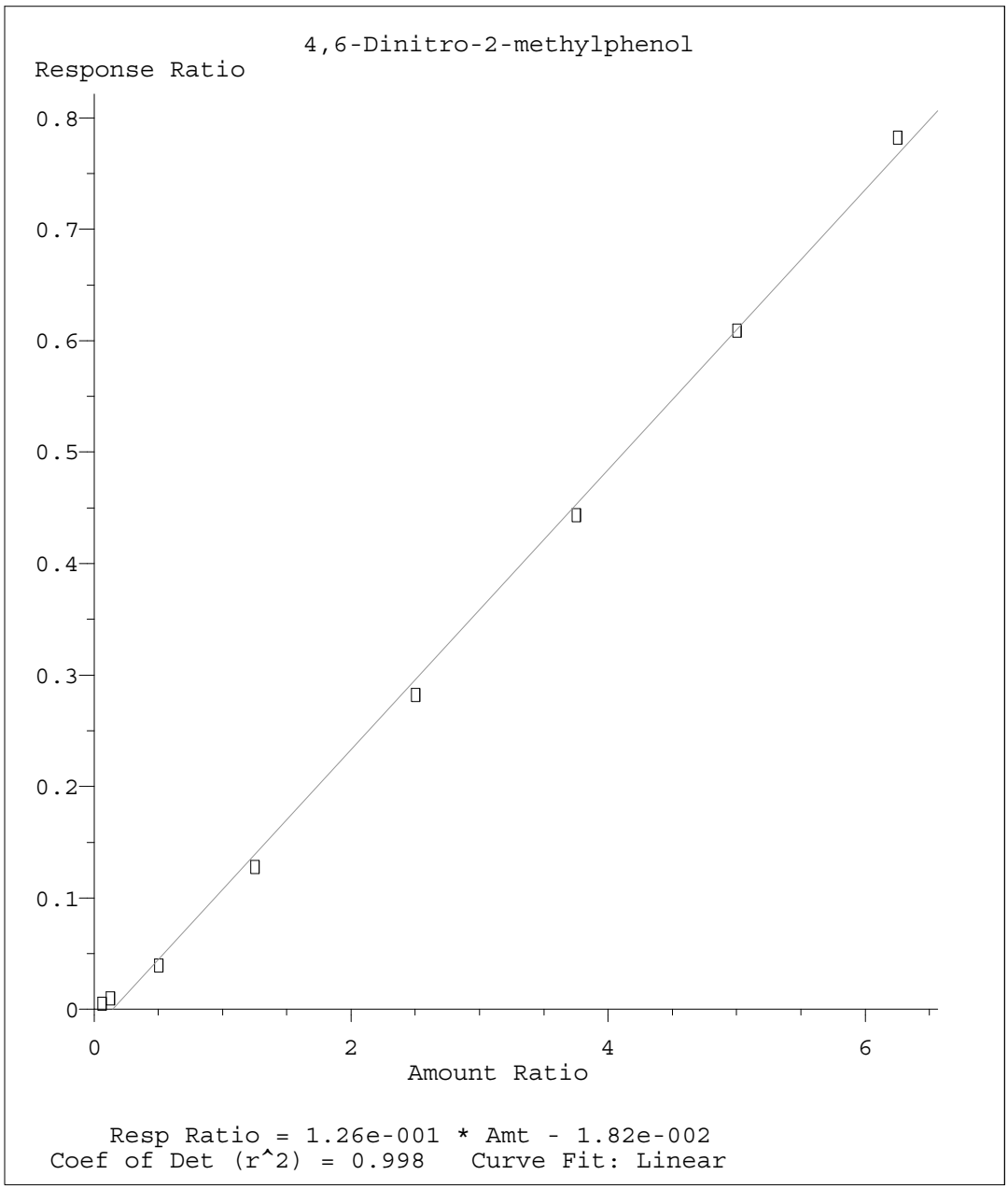
Method Name: C:\MSDCHEM\1\METHODS\S802E24P.M



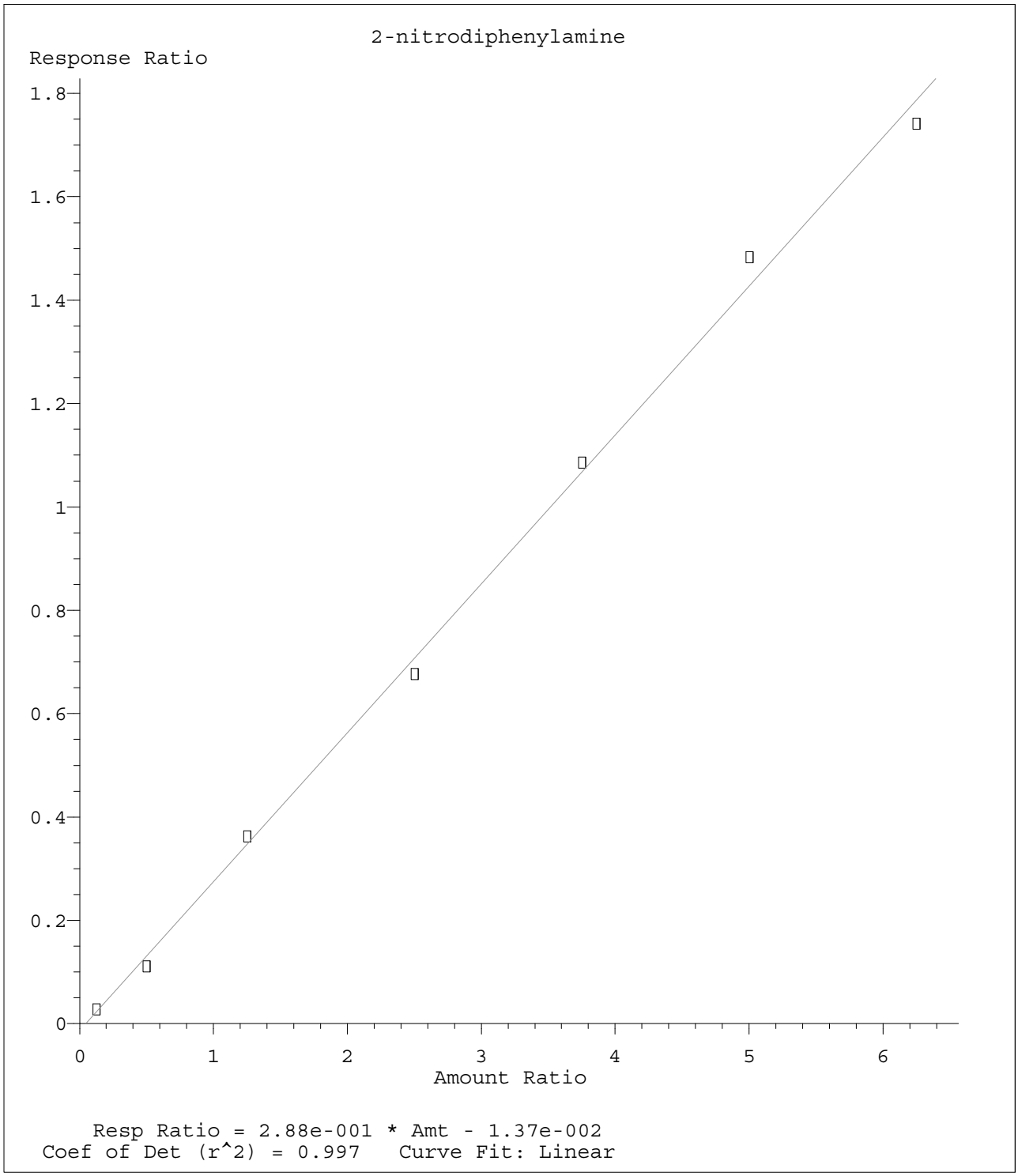
Method Name: C:\MSDCHEM\1\METHODS\S802E24P.M



Method Name: C:\MSDCHEM\1\METHODS\S802E24P.M



Method Name: C:\MSDCHEM\1\METHODS\S802E24P.M



Method Name: C:\MSDCHEM\1\METHODS\S802E24P.M
Calibration Table Last Updated: Wed May 25 13:26:43 2016

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052416\0524 02MRL.D Vial: 2
Acq On : 24 May 2016 11:18 am Operator: 280
Sample : MRL SVMS 10K PPB 16D25863 Inst : BNAMS2
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 13:46 2016 Quant Results File: S802E24P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:26:43 2016
Response via : Initial Calibration
DataAcq Meth : BNA2D

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.27	152	70475	8000.00 ppb	0.00
22) Naphthalene-d8	6.52	136	376732	8000.00 ppb	0.00
40) Acenaphthene-d10	8.39	164	238593	8000.00 ppb	0.00
64) Phenanthrene-d10	10.00	188	464548	8000.00 ppb	0.00
78) Chrysene-d12	12.87	240	512708	8000.00 ppb	0.00
88) Perylene-d12	14.62	264	463331	8000.00 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol	4.17	112	145228	9923.7889042 ppb	0.00
Spiked Amount 20.000	Range 10 - 74		Recovery = 49618.94%#		
7) Phenol-d5	4.90	99	195052	9929.6663980 ppb	0.00
Spiked Amount 20.000	Range 10 - 63		Recovery = 49648.33%#		
23) Nitrobenzene-d5	5.79	82	191666	10095.1276596 ppb	0.00
Spiked Amount 10.000	Range 28 - 123		Recovery = 100951.28%#		
44) 2-Fluorobiphenyl	7.65	172	431695	10384.1429406 ppb	0.00
Spiked Amount 10.000	Range 35 - 133		Recovery = 103841.43%#		
67) 2,4,6-Tribromophenol	9.25	330	63669	10065.6234314 ppb	0.00
Spiked Amount 20.000	Range 22 - 154		Recovery = 50328.12%#		
81) p-Terphenyl-d14	11.70	244	605170	9903.2085780 ppb	0.00
Spiked Amount 10.000	Range 30 - 148		Recovery = 99032.09%#		
Target Compounds					Qvalue
2) Pyridine	3.20	79	187808	9805.5978051 ppb	100
3) N-Nitrosodimethylamine	3.17	42	110998	10277.1639676 ppb	100
5) Aniline	4.96	66	92591	9608.0551278 ppb	100
6) bis(2-Chloroethyl)ether	5.01	63	109511	9948.5584839 ppb	100
8) Phenol	4.91	94	199491	10047.2248342 ppb	100
10) 2-Chlorophenol	5.07	128	175876	10124.2449584 ppb	100
11) n-Decane	5.08	41	93771	9971.6967213 ppb	100
12) 1,3-Dichlorobenzene	5.21	146	195811	10079.2006382 ppb	100
13) 1,4-Dichlorobenzene	5.28	146	196745	9855.5628927 ppb	100
14) Benzyl Alcohol	5.37	79	159209	10168.8549476 ppb	100
15) 1,2-Dichlorobenzene	5.43	146	186529	9821.2560071 ppb	100
16) bis(2-Chloroisopropyl)ethe	5.50	121	51199	10011.6234181 ppb	100
17) 2-Methylphenol	5.47	108	147721	9816.5925400 ppb	100
18) Hexachloroethane	5.75	117	81886	9693.4721241 ppb	100
19) N-Nitrosodi-n-propylamine	5.63	70	126500	10126.6054630 ppb	100
20) 3&4-Methyl phenol	5.62	107	176690	9979.3270782 ppb	100
24) Nitrobenzene	5.81	77	193702	10324.2048519 ppb	100
25) Isophorone	6.04	82	327646	10087.3689752 ppb	100
26) 2-Nitrophenol	6.13	139	92044	10235.7473135 ppb	100
27) 2,4-Dimethylphenol	6.15	107	182989	10219.8400092 ppb	100
28) bis(2-Chlorethoxy)methane	6.25	93	197875	10095.8719869 ppb	100
29) 2,4-Dichlorophenol	6.37	162	155259	10373.9636783 ppb	100
31) 1,2,4-Trichlorobenzene	6.46	180	177466	10124.3443272 ppb	100
32) Naphthalene	6.55	128	530549	10025.9285769 ppb	100
33) 4-Chloroaniline	6.59	65	69745	10665.8011422 ppb	100
34) Hexachloro-1,3-butadiene	6.66	225	118705	10225.1030322 ppb	100
36) 4-Chloro-3-methylphenol	7.09	107	159515	10171.4483242 ppb	100
37) 2-Methylnaphthalene	7.27	142	383573	10535.8437691 ppb	100
38) 1-Methylnaphthalene	7.38	142	335453	9822.8585032 ppb	100
41) Hexachlorocyclopentadiene	7.43	237	88821	8973.7412018 ppb	100
42) 2,4,6-Trichlorophenol	7.57	196	113666	10412.2097342 ppb	100
43) 2,4,5-Trichlorophenol	7.60	196	121191	10557.3323762 ppb	100
45) Biphenyl	7.76	154	454926	10014.7775856 ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052416\0524 02MRL.D Vial: 2
Acq On : 24 May 2016 11:18 am Operator: 280
Sample : MRL SVMS 10K PPB 16D25863 Inst : BNAMS2
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 13:46 2016 Quant Results File: S802E24P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:26:43 2016
Response via : Initial Calibration
DataAcq Meth : BNA2D

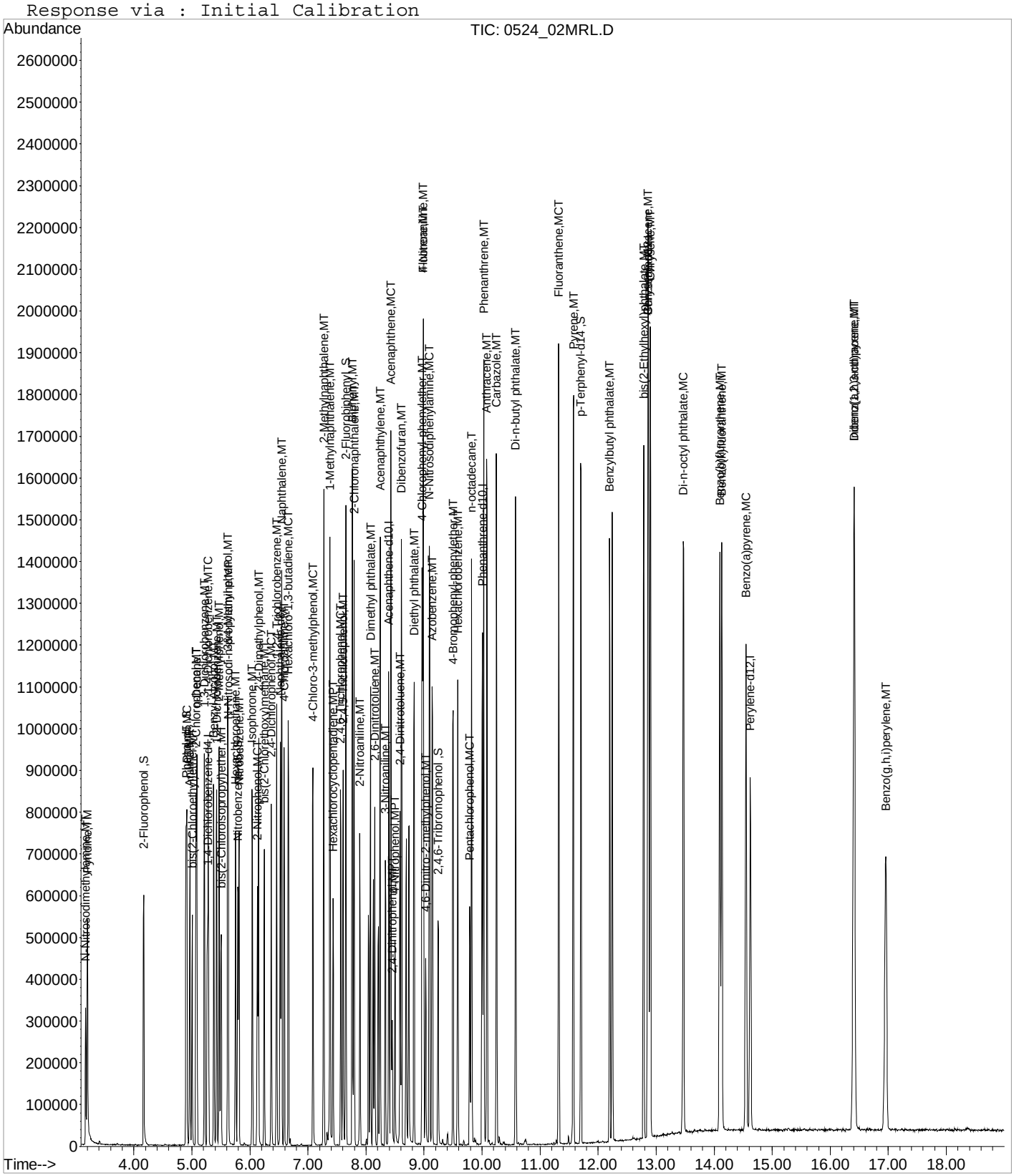
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
46)	2-Chloronaphthalene	7.79	162	371528	10271.1893127 ppb	100
47)	2-Nitroaniline	7.89	138	118762	10391.8585591 ppb	100
48)	Acenaphthylene	8.24	152	572348	10217.8427453 ppb	100
49)	Dimethyl phthalate	8.08	163	413624	10204.7851217 ppb	100
50)	2,6-Dinitrotoluene	8.15	165	97711	10611.4440169 ppb	100
51)	3-Nitroaniline	8.33	138	98569	10005.5314512 ppb	100
52)	Acenaphthene	8.43	153	378282	10235.0338190 ppb	100
53)	2,4-Dinitrophenol	8.45	184	36770	9791.5378451 ppb	100
54)	Dibenzofuran	8.61	168	538487	10329.1790244 ppb	100
55)	2,4-Dinitrotoluene	8.59	165	125143	10205.9079888 ppb	100
57)	4-Nitrophenol	8.50	139	70841	10144.9714106 ppb	100
58)	Fluorene	8.98	166	437108	10251.4255688 ppb	100
59)	4-Chlorophenyl-phenylether	8.97	204	214743	10240.8131581 ppb	100
60)	Diethyl phthalate	8.83	149	425126	10092.8813842 ppb	100
61)	4-Nitroaniline	8.99	138	103212	10402.8946704 ppb	100
62)	Azobenzene	9.14	77	421893	10333.4783636 ppb	100
65)	4,6-Dinitro-2-methylphenol	9.03	198	59178	9268.2337382 ppb	100
66)	N-Nitrosodiphenylamine	9.09	169	367361	10248.9704883 ppb	100
68)	4-Bromophenyl-phenylether	9.50	248	129760	9986.4788251 ppb	100
69)	Hexachlorobenzene	9.58	284	150361	10275.2899832 ppb	100
70)	n-octadecane	9.82	55	66126	10071.7548577 ppb	100
71)	Pentachlorophenol	9.78	266	70094	9753.5334360 ppb	100
72)	Phenanthrene	10.03	178	666074	10140.3795158 ppb	100
73)	Anthracene	10.08	178	677484	10146.9373492 ppb	100
74)	Carbazole	10.25	167	632769	10415.8677702 ppb	100
75)	Di-n-butyl phthalate	10.58	149	779824	10369.1649238 ppb	100
77)	Fluoranthene	11.32	202	760949	10231.8704631 ppb	100
80)	Pyrene	11.58	202	805057	10807.8693524 ppb	100
82)	Benzylbutyl phthalate	12.20	149	352907	10444.3122666 ppb	100
84)	Benzo(a)anthracene	12.86	228	789602	10189.4057241 ppb	100
85)	Chrysene	12.90	228	726929	10020.1271258 ppb	100
86)	bis(2-Ethylhexyl)phthalate	12.78	149	485580	10091.2911665 ppb	100
87)	Di-n-octyl phthalate	13.47	149	817610	9806.2342613 ppb	100
89)	Benzo(b)fluoranthene	14.10	252	731444	10239.7323516 ppb	100
90)	Benzo(k)fluoranthene	14.13	252	694620	10776.6781344 ppb	100
91)	Benzo(a)pyrene	14.55	252	695829	10405.4411490 ppb	100
92)	Indeno(1,2,3-cd)pyrene	16.41	276	777783	10279.5131120 ppb	100
93)	Dibenz(a,h)anthracene	16.41	278	666127	10161.7900276 ppb	100
94)	Benzo(g,h,i)perylene	16.96	276	648639	10334.7448171 ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

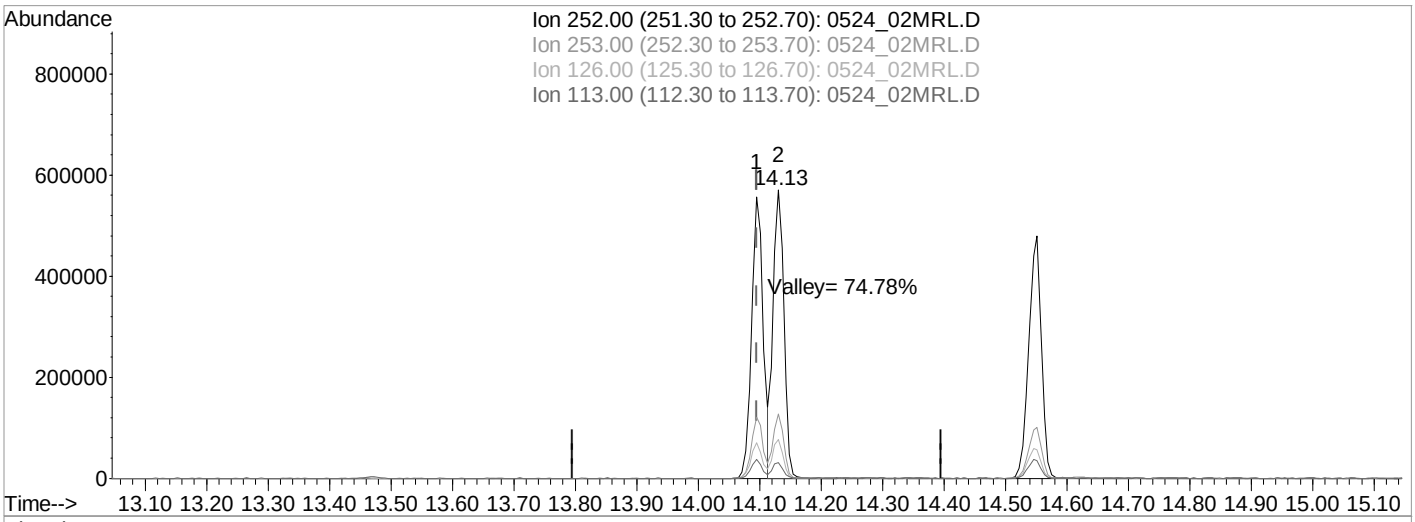
Data File : C:\MSDCHEM\1\DATA\052416\0524 02MRL.D Vial: 2
Acq On : 24 May 2016 11:18 am Operator: 280
Sample : MRL SVMS 10K PPB 16D25863 Inst : BNAMS2
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 13:46 2016 Quant Results File: S802E24P.RES

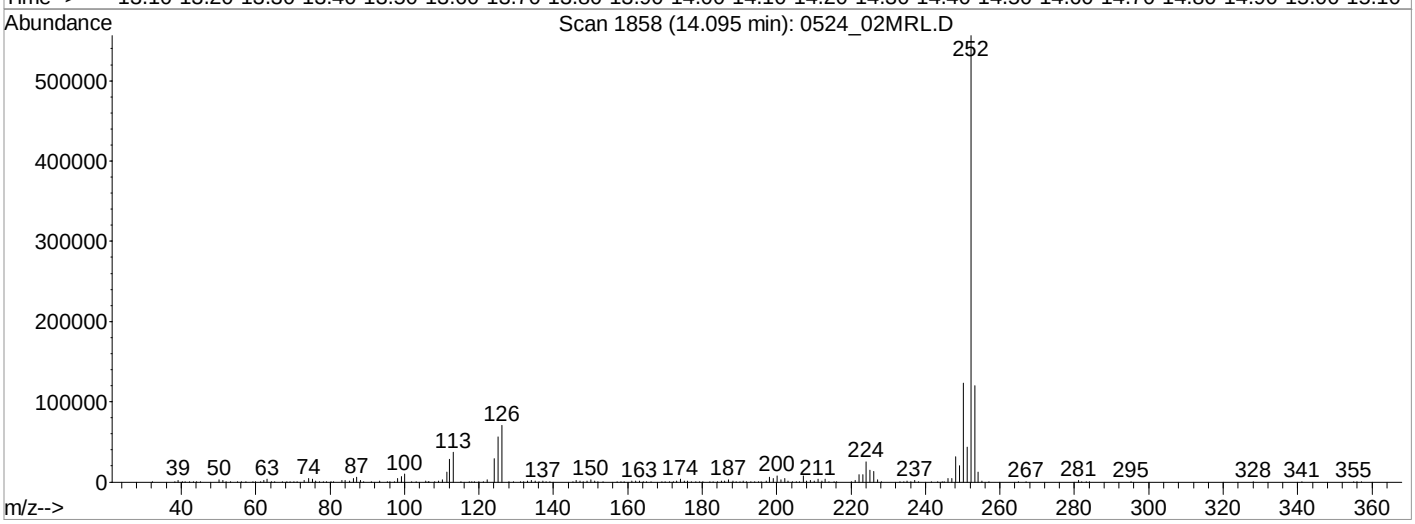
Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:26:43 2016
Response via : Initial Calibration



Data File : C:\MSDCHEM\1\DATA\052416\0524 02MRL.D Vial: 2
Acq On : 24 May 2016 11:18 am Operator: 280
Sample : MRL SVMS 10K PPB 16D25863 Inst : BNAMS2
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 13:46 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:26:43 2016
Response via : Multiple Level Calibration





TIC: 0524_02MRL.D

(89) Benzo(b)fluoranthene (MT)

14.10min (0.000) 10239.7323516 ppb

Qvalue = 100

response 731444

Ion	Exp%	Act%
252.00	100	100
253.00	21.70	21.75
126.00	12.60	12.63
113.00	6.90	6.91

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052416\0524 04MRL.D Vial: 4
Acq On : 24 May 2016 12:08 pm Operator: 280
Sample : MRL SVMS 1K PPB 16D25863 Inst : BNAMS2
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 13:46 2016 Quant Results File: S802E24P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:26:43 2016
Response via : Initial Calibration
DataAcq Meth : BNA2D

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.27	152	65928	8000.00	ppb	0.00
22) Naphthalene-d8	6.52	136	364621	8000.00	ppb	0.00
40) Acenaphthene-d10	8.39	164	228168	8000.00	ppb	0.00
64) Phenanthrene-d10	10.00	188	445278	8000.00	ppb	0.00
78) Chrysene-d12	12.87	240	515361	8000.00	ppb	0.00
88) Perylene-d12	14.62	264	502653	8000.00	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	4.17	112	14141	1032.9337474	ppb	0.00
Spiked Amount 20.000	Range 10 - 74		Recovery = 5164.67%#			
7) Phenol-d5	4.90	99	18875	1027.1559681	ppb	0.00
Spiked Amount 20.000	Range 10 - 63		Recovery = 5135.78%#			
23) Nitrobenzene-d5	5.79	82	19066	1037.5694069	ppb	0.00
Spiked Amount 10.000	Range 28 - 123		Recovery = 10375.69%#			
44) 2-Fluorobiphenyl	7.65	172	40469	1017.9327200	ppb	0.00
Spiked Amount 10.000	Range 35 - 133		Recovery = 10179.33%#			
67) 2,4,6-Tribromophenol	9.25	330	5913	975.2588171	ppb	0.00
Spiked Amount 20.000	Range 22 - 154		Recovery = 4876.29%#			
81) p-Terphenyl-d14	11.70	244	58902	958.9304746	ppb	0.00
Spiked Amount 10.000	Range 30 - 148		Recovery = 9589.30%#			
Target Compounds						Qvalue
2) Pyridine	3.20	79	19420	1083.8630151	ppb	96
3) N-Nitrosodimethylamine	3.17	42	10293	1018.7445260	ppb #	84
5) Aniline	4.96	66	9547	1059.0069679	ppb	98
6) bis(2-Chloroethyl)ether	5.01	63	11394	1106.4806186	ppb	91
8) Phenol	4.91	94	19117	1029.2188629	ppb	97
10) 2-Chlorophenol	5.07	128	16045	987.3268997	ppb	99
11) n-Decane	5.08	41	9584	1089.4630425	ppb	95
12) 1,3-Dichlorobenzene	5.21	146	18617	1024.3865962	ppb	97
13) 1,4-Dichlorobenzene	5.28	146	19555	1047.1303159	ppb	98
14) Benzyl Alcohol	5.37	79	15382	1050.2251841	ppb	97
15) 1,2-Dichlorobenzene	5.43	146	18193	1023.9769314	ppb	97
16) bis(2-Chloroisopropyl)ethe	5.50	121	5306	1109.1121323	ppb	95
17) 2-Methylphenol	5.47	108	14711	1045.0231346	ppb	98
18) Hexachloroethane	5.75	117	8562	1083.4530977	ppb	95
19) N-Nitrosodi-n-propylamine	5.62	70	12310	1053.4079723	ppb	99
20) 3&4-Methyl phenol	5.61	107	17495	1056.2541216	ppb	90
24) Nitrobenzene	5.81	77	18609	1024.7935364	ppb	94
25) Isophorone	6.04	82	32502	1033.8890977	ppb	95
26) 2-Nitrophenol	6.13	139	8123	933.3216903	ppb	99
27) 2,4-Dimethylphenol	6.14	107	18001	1038.7393366	ppb	96
28) bis(2-Chlorethoxy)methane	6.25	93	19777	1042.5674321	ppb	96
29) 2,4-Dichlorophenol	6.37	162	14322	988.7407675	ppb	95
31) 1,2,4-Trichlorobenzene	6.46	180	17511	1032.1754560	ppb	96
32) Naphthalene	6.55	128	53460	1043.8038489	ppb	98
33) 4-Chloroaniline	6.59	65	6266	990.0602573	ppb	92
34) Hexachloro-1,3-butadiene	6.66	225	11901	1059.1877981	ppb	93
36) 4-Chloro-3-methylphenol	7.09	107	15469	1019.1411597	ppb	96
37) 2-Methylnaphthalene	7.27	142	35574	1009.5895041	ppb	98
38) 1-Methylnaphthalene	7.38	142	33819	1023.1935719	ppb	97
41) Hexachlorocyclopentadiene	7.43	237	4719	2541.6883509	ppb	97
42) 2,4,6-Trichlorophenol	7.56	196	9972	955.2071455	ppb	90
43) 2,4,5-Trichlorophenol	7.60	196	10642	969.4156855	ppb	97
45) Biphenyl	7.76	154	44791	1031.0845305	ppb	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052416\0524 04MRL.D Vial: 4
Acq On : 24 May 2016 12:08 pm Operator: 280
Sample : MRL SVMS 1K PPB 16D25863 Inst : BNAMS2
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 13:46 2016 Quant Results File: S802E24P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:26:43 2016
Response via : Initial Calibration
DataAcq Meth : BNA2D

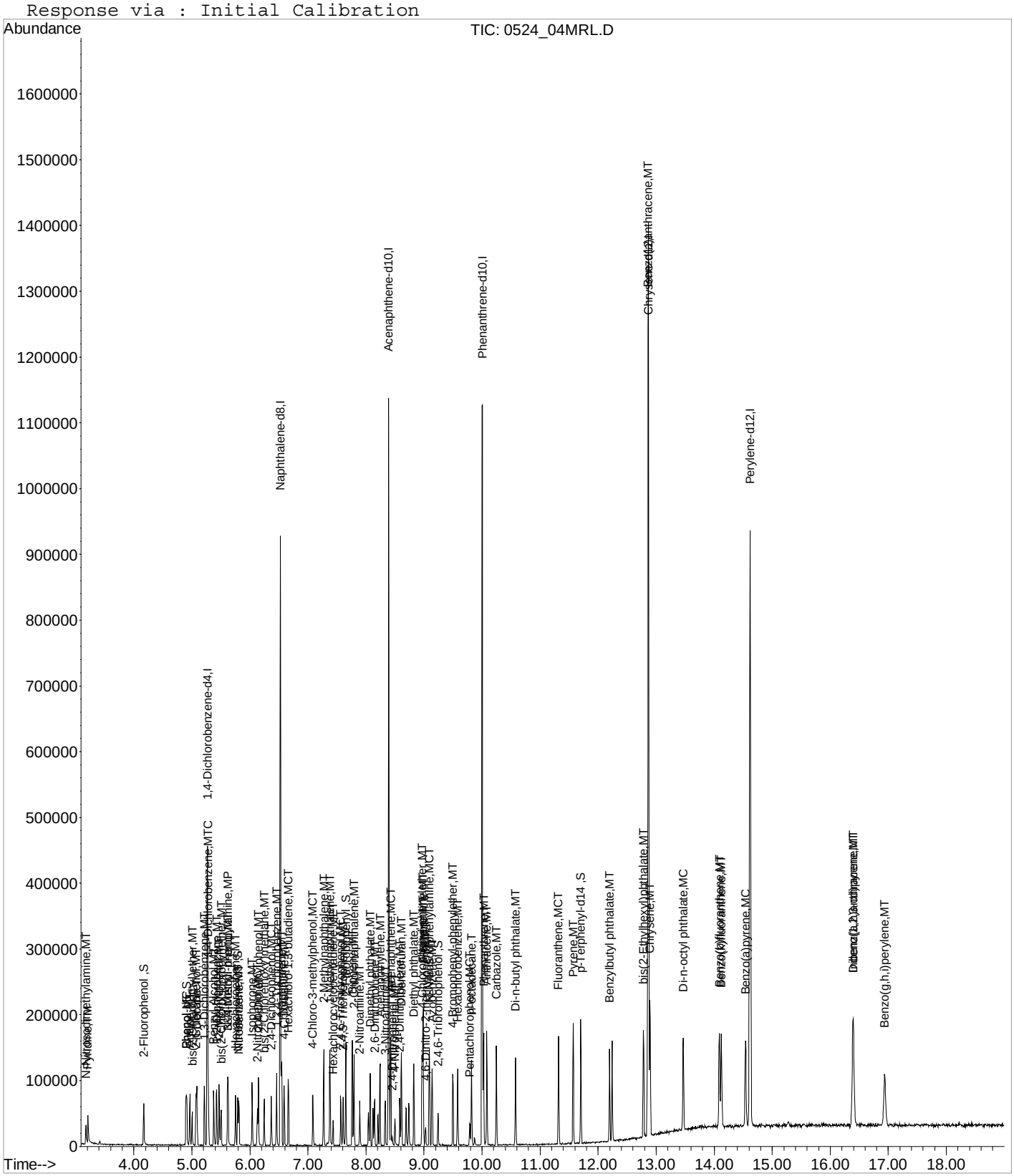
	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
46)	2-Chloronaphthalene	7.79	162	36636	1059.1078741 ppb		96
47)	2-Nitroaniline	7.89	138	10529	963.3981596 ppb		99
48)	Acenaphthylene	8.24	152	53449	997.7956160 ppb		97
49)	Dimethyl phthalate	8.07	163	39601	1021.6620209 ppb		94
50)	2,6-Dinitrotoluene	8.15	165	8735	991.9662604 ppb		87
51)	3-Nitroaniline	8.33	138	9242	980.9993900 ppb		92
52)	Acenaphthene	8.43	153	36449	1031.2457826 ppb		98
53)	2,4-Dinitrophenol	8.45	184	1886	3404.1211315 ppb	#	62
54)	Dibenzofuran	8.61	168	51141	1025.8001533 ppb		99
55)	2,4-Dinitrotoluene	8.58	165	10775	918.8938139 ppb		94
57)	4-Nitrophenol	8.50	139	5630	843.0969176 ppb		97
58)	Fluorene	8.98	166	42275	1036.7691987 ppb		98
59)	4-Chlorophenyl-phenylether	8.97	204	21384	1066.3685660 ppb		97
60)	Diethyl phthalate	8.82	149	41332	1026.0933801 ppb		99
61)	4-Nitroaniline	8.98	138	9371	987.6723770 ppb		94
62)	Azobenzene	9.14	77	39933	1022.7726717 ppb		99
65)	4,6-Dinitro-2-methylphenol	9.03	198	4369	1781.4552793 ppb		87
66)	N-Nitrosodiphenylamine	9.09	169	34411	1001.5758492 ppb		96
68)	4-Bromophenyl-phenylether	9.50	248	12550	1007.6614190 ppb		97
69)	Hexachlorobenzene	9.58	284	14317	1020.7285518 ppb		98
70)	n-octadecane	9.82	55	7371	1171.2744276 ppb		93
71)	Pentachlorophenol	9.78	266	4580	1711.3753652 ppb		97
72)	Phenanthrene	10.03	178	66719	1059.6943348 ppb		99
73)	Anthracene	10.08	178	64887	1013.8950145 ppb		99
74)	Carbazole	10.25	167	59574	1023.0724287 ppb		99
75)	Di-n-butyl phthalate	10.58	149	70936	984.0410980 ppb		99
77)	Fluoranthene	11.32	202	73045	1024.6825311 ppb		99
80)	Pyrene	11.57	202	73462	981.1485069 ppb		99
82)	Benzylbutyl phthalate	12.20	149	33170	976.6154500 ppb		97
84)	Benzo(a)anthracene	12.86	228	78718	1010.5858450 ppb		98
85)	Chrysene	12.89	228	73958	1014.2031117 ppb		99
86)	bis(2-Ethylhexyl)phthalate	12.78	149	47324	978.4213839 ppb		97
87)	Di-n-octyl phthalate	13.47	149	86021	1026.4058061 ppb		95
89)	Benzo(b)fluoranthene	14.09	252	77295	997.4290306 ppb		97
90)	Benzo(k)fluoranthene	14.12	252	69598	995.3079376 ppb		96
91)	Benzo(a)pyrene	14.54	252	72995	1006.1764885 ppb		97
92)	Indeno(1,2,3-cd)pyrene	16.40	276	83234	1013.9999742 ppb		96
93)	Dibenz(a,h)anthracene	16.40	278	70055	985.0888346 ppb		92
94)	Benzo(g,h,i)perylene	16.94	276	70703	1038.3831243 ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052416\0524 04MRL.D Vial: 4
Acq On : 24 May 2016 12:08 pm Operator: 280
Sample : MRL SVMS 1K PPB 16D25863 Inst : BNAMS2
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 13:46 2016 Quant Results File: S802E24P.RES

Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:26:43 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052416\0524 10MRL.D Vial: 10
Acq On : 24 May 2016 2:38 pm Operator: 280
Sample : MRL TCL 10K1 PPB 16D25867 Inst : BNAMS2
Misc : 8270 TCL Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 13:47 2016 Quant Results File: S802E24P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:26:43 2016
Response via : Initial Calibration
DataAcq Meth : BNA2D

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.27	152	66465	8000.00	ppb	0.00
22) Naphthalene-d8	6.52	136	362783	8000.00	ppb	0.00
40) Acenaphthene-d10	8.39	164	224397	8000.00	ppb	0.00
64) Phenanthrene-d10	10.00	188	444549	8000.00	ppb	0.00
78) Chrysene-d12	12.87	240	493460	8000.00	ppb	0.00
88) Perylene-d12	14.62	264	483691	8000.00	ppb	0.00

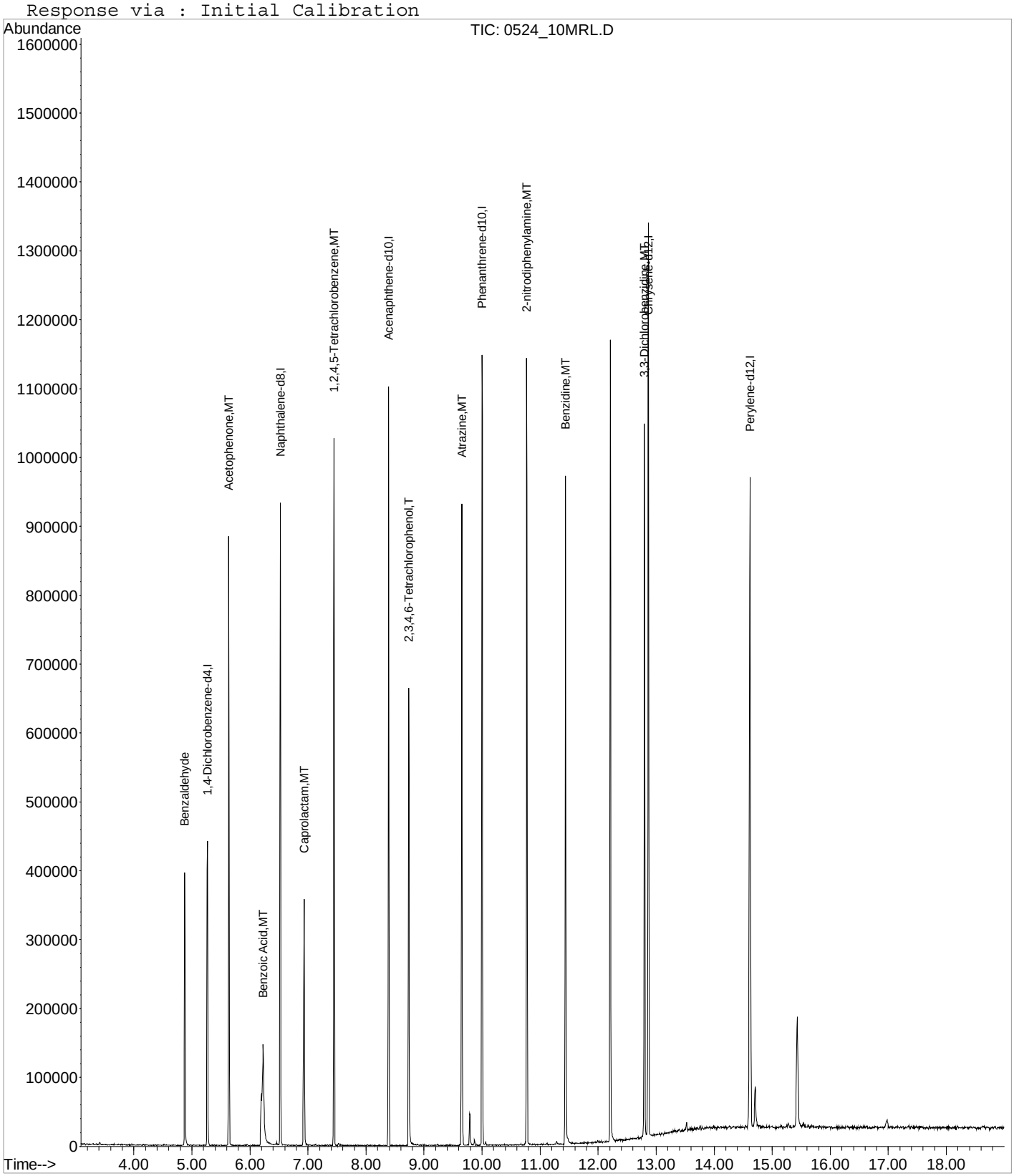
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 74		Recovery =	0.00%#		
7) Phenol-d5	0.00	99	0	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 63		Recovery =	0.00%#		
23) Nitrobenzene-d5	0.00	82	0d	0.0000000	ppb	
Spiked Amount 10.000	Range 28 - 123		Recovery =	0.00%#		
44) 2-Fluorobiphenyl	0.00	172	0	0.0000000	ppb	
Spiked Amount 10.000	Range 35 - 133		Recovery =	0.00%#		
67) 2,4,6-Tribromophenol	0.00	330	0	0.0000000	ppb	
Spiked Amount 20.000	Range 22 - 154		Recovery =	0.00%#		
81) p-Terphenyl-d14	0.00	244	0	0.0000000	ppb	
Spiked Amount 10.000	Range 30 - 148		Recovery =	0.00%#		

Target Compounds						Qvalue
9) Benzaldehyde	4.88	105	66261	7075.8194971	ppb	100
21) Acetophenone	5.63	105	215921	10247.3229033	ppb	100
30) Benzoic Acid	6.23	105	94037	9885.8379139	ppb	100
35) Caprolactam	6.93	113	46618	10632.9349305	ppb	100
39) 1,2,4,5-Tetrachlorobenzene	7.45	216	167212	10136.9291109	ppb	100
56) 2,3,4,6-Tetrachlorophenol	8.74	232	81237	10738.4894821	ppb	100
63) Atrazine	9.65	200	113985	10277.8543762	ppb	100
76) 2-nitrodiphenylamine	10.77	167	160787	10424.2569110	ppb #	100
79) Benzidine	11.44	184	364836	8663.7663298	ppb	100
83) 3,3-Dichlorobenzidine	12.80	252	216472	10259.9165122	ppb	100

(#) = qualifier out of range (m) = manual integration
0524_10MRL.D S802E24P.M Wed May 25 13:50:11 2016 285 of 332 Page 1

Data File : C:\MSDCHEM\1\DATA\052416\0524 10MRL.D Vial: 10
Acq On : 24 May 2016 2:38 pm Operator: 280
Sample : MRL TCL 10K1 PPB 16D25867 Inst : BNAMS2
Misc : 8270 TCL Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 13:47 2016 Quant Results File: S802E24P.RES

Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:26:43 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052416\0524 17.D Vial: 17
Acq On : 24 May 2016 5:33 pm Operator: 280
Sample : SSCV SVMS 10K PPB 16A25209 Inst : BNAMS2
Misc : 8270 SSCV ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 13:51 2016 Quant Results File: S802E24P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:26:43 2016
Response via : Initial Calibration
DataAcq Meth : BNA2D

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.27	152	65161	8000.00	ppb	0.00
22) Naphthalene-d8	6.52	136	356013	8000.00	ppb	0.00
40) Acenaphthene-d10	8.39	164	216886	8000.00	ppb	0.00
64) Phenanthrene-d10	10.00	188	425736	8000.00	ppb	0.00
78) Chrysene-d12	12.87	240	465500	8000.00	ppb	0.00
88) Perylene-d12	14.62	264	459089	8000.00	ppb	0.00

System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 74		Recovery =	0.00%#		
7) Phenol-d5	0.00	99	0d	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 63		Recovery =	0.00%#		
23) Nitrobenzene-d5	0.00	82	0d	0.0000000	ppb	
Spiked Amount 10.000	Range 28 - 123		Recovery =	0.00%#		
44) 2-Fluorobiphenyl	0.00	172	0d	0.0000000	ppb	
Spiked Amount 10.000	Range 35 - 133		Recovery =	0.00%#		
67) 2,4,6-Tribromophenol	0.00	330	0	0.0000000	ppb	
Spiked Amount 20.000	Range 22 - 154		Recovery =	0.00%#		
81) p-Terphenyl-d14	0.00	244	0	0.0000000	ppb	
Spiked Amount 10.000	Range 30 - 148		Recovery =	0.00%#		

Target Compounds						Qvalue
2) Pyridine	3.20	79	178733	10092.8095193	ppb	99
3) N-Nitrosodimethylamine	3.17	42	96046	9617.9996850	ppb	93
5) Aniline	4.96	66	86171	9671.0847349	ppb	98
6) bis(2-Chloroethyl)ether	5.01	63	104719	10289.0491742	ppb	96
8) Phenol	4.91	94	186661	10167.7239228	ppb	98
9) Benzaldehyde	4.88	105	184	20.0420366	ppb #	1
10) 2-Chlorophenol	5.07	128	164022	10211.8755089	ppb	100
12) 1,3-Dichlorobenzene	5.21	146	181877	10125.4452812	ppb	98
13) 1,4-Dichlorobenzene	5.28	146	189976	10292.5696054	ppb	98
14) Benzyl Alcohol	5.37	79	147231	10170.7046680	ppb	99
15) 1,2-Dichlorobenzene	5.43	146	180585	10283.7068317	ppb	96
16) bis(2-Chloroisopropyl)ethe	5.50	121	58371	12344.8979580	ppb	94
17) 2-Methylphenol	5.47	108	143860	10339.6520926	ppb	97
18) Hexachloroethane	5.75	117	80394	10292.9695998	ppb	94
19) N-Nitrosodi-n-propylamine	5.63	70	116609	10096.0799117	ppb	97
20) 3&4-Methyl phenol	5.62	107	163647	9996.4242286	ppb	99
24) Nitrobenzene	5.81	77	185428	10458.3814250	ppb	99
25) Isophorone	6.04	82	308472	10049.7542069	ppb	100
26) 2-Nitrophenol	6.13	139	89420	10522.6564684	ppb	98
27) 2,4-Dimethylphenol	6.14	107	168016	9929.7064281	ppb	96
28) bis(2-Chlorethoxy)methane	6.25	93	196573	10613.1286200	ppb	96
29) 2,4-Dichlorophenol	6.37	162	144263	10200.2203142	ppb	97
31) 1,2,4-Trichlorobenzene	6.46	180	166937	10077.9222947	ppb	98
32) Naphthalene	6.55	128	517616	10350.7889353	ppb	100
33) 4-Chloroaniline	6.59	65	63143	10218.1499116	ppb	99
34) Hexachloro-1,3-butadiene	6.66	225	123752	11280.2197794	ppb	97
36) 4-Chloro-3-methylphenol	7.08	107	152319	10277.8435625	ppb	96
37) 2-Methylnaphthalene	7.27	142	342901	9966.8219251	ppb	100
38) 1-Methylnaphthalene	7.38	142	329883	10221.9275350	ppb	99
41) Hexachlorocyclopentadiene	7.43	237	73756	8384.6303708	ppb	99
42) 2,4,6-Trichlorophenol	7.56	196	106941	10776.6244863	ppb	91
43) 2,4,5-Trichlorophenol	7.60	196	112394	10770.9282272	ppb	98
46) 2-Chloronaphthalene	7.79	162	347356	10564.0431867	ppb	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052416\0524 17.D Vial: 17
Acq On : 24 May 2016 5:33 pm Operator: 280
Sample : SSCV SVMS 10K PPB 16A25209 Inst : BNAMS2
Misc : 8270 SSCV ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 13:51 2016 Quant Results File: S802E24P.RES

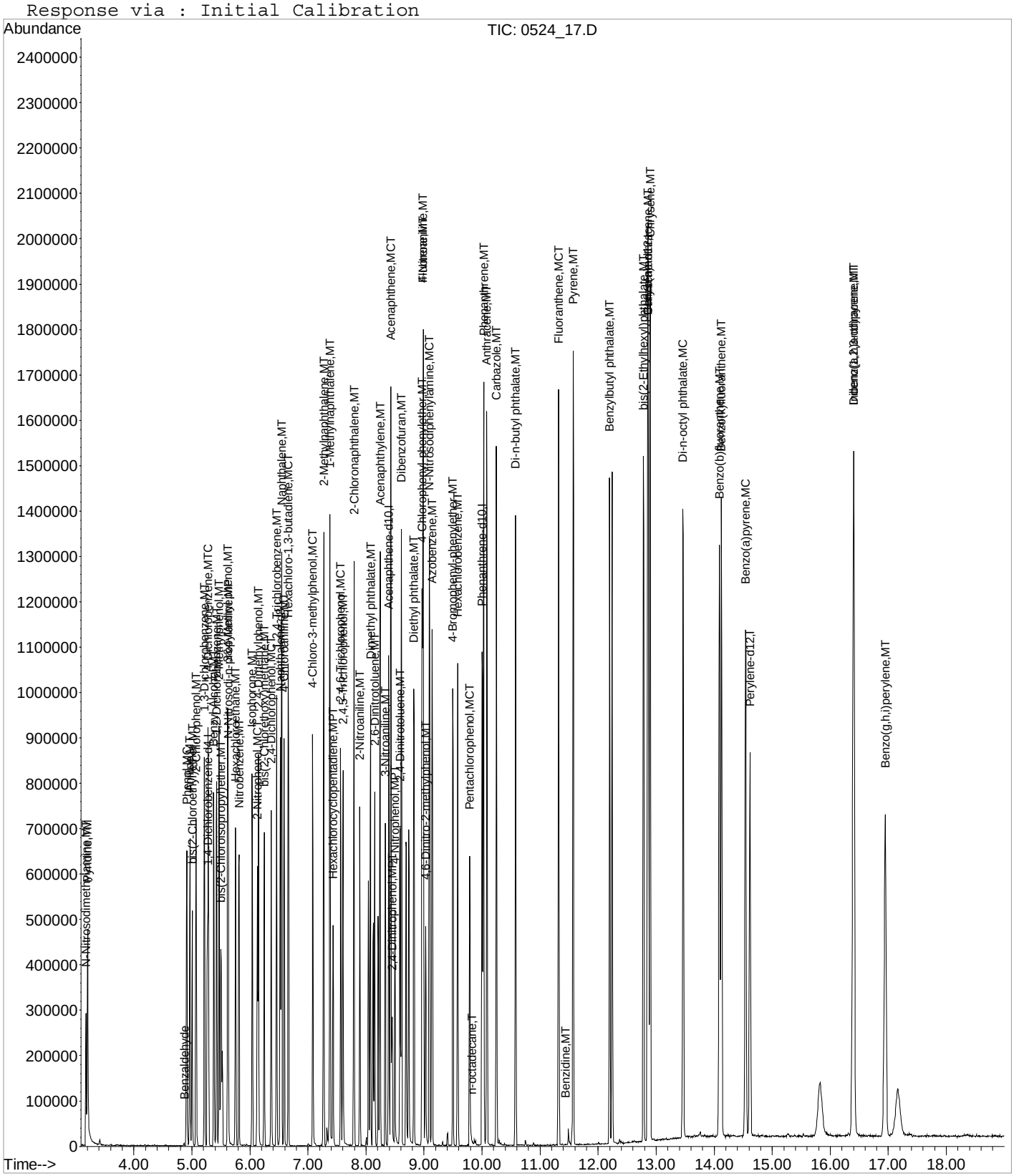
Quant Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:26:43 2016
Response via : Initial Calibration
DataAcq Meth : BNA2D

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
47)	2-Nitroaniline	7.89	138	113714	10946.0099754 ppb		98
48)	Acenaphthylene	8.24	152	532493	10457.7709783 ppb		100
49)	Dimethyl phthalate	8.08	163	373168	10128.1169569 ppb		98
50)	2,6-Dinitrotoluene	8.15	165	93829	11209.7078919 ppb		93
51)	3-Nitroaniline	8.33	138	94101	10508.0039709 ppb		93
52)	Acenaphthene	8.43	153	369831	11007.8650322 ppb		99
53)	2,4-Dinitrophenol	8.45	184	38652	10847.0837783 ppb		96
54)	Dibenzofuran	8.61	168	491087	10362.7542213 ppb		100
55)	2,4-Dinitrotoluene	8.59	165	120724	10830.9083799 ppb		95
57)	4-Nitrophenol	8.50	139	69792	10995.0691987 ppb		89
58)	Fluorene	8.98	166	413452	10667.1102446 ppb		100
59)	4-Chlorophenyl-phenylether	8.97	204	199583	10470.4452852 ppb		97
60)	Diethyl phthalate	8.82	149	396609	10358.2466124 ppb		98
61)	4-Nitroaniline	8.99	138	98611	10933.9113703 ppb		98
62)	Azobenzene	9.14	77	400367	10787.6952030 ppb		99
65)	4,6-Dinitro-2-methylphenol	9.03	198	63508	10655.3420810 ppb		95
66)	N-Nitrosodiphenylamine	9.09	169	335718	10220.0269360 ppb		99
68)	4-Bromophenyl-phenylether	9.50	248	119798	10060.3093554 ppb		97
69)	Hexachlorobenzene	9.58	284	137645	10263.8321480 ppb		97
70)	n-octadecane	9.83	55	283	47.0337437 ppb	#	32
71)	Pentachlorophenol	9.78	266	75419	11255.7523362 ppb		97
72)	Phenanthrene	10.03	178	624684	10377.2511971 ppb		99
73)	Anthracene	10.08	178	642034	10492.6257457 ppb		99
74)	Carbazole	10.25	167	583785	10485.6030922 ppb		100
75)	Di-n-butyl phthalate	10.58	149	706403	10249.1993247 ppb		99
77)	Fluoranthene	11.32	202	708007	10387.8878779 ppb		98
79)	Benzidine	11.44	184	762	19.1821059 ppb	#	80
80)	Pyrene	11.57	202	747055	11046.2900119 ppb		99
82)	Benzylbutyl phthalate	12.20	149	336561	10970.6857040 ppb		99
84)	Benzo(a)anthracene	12.86	228	743422	10566.3850641 ppb		100
85)	Chrysene	12.90	228	703158	10675.4100962 ppb		99
86)	bis(2-Ethylhexyl)phthalate	12.78	149	470356	10766.2148773 ppb		98
87)	Di-n-octyl phthalate	13.47	149	812959	10739.2789035 ppb		100
89)	Benzo(b)fluoranthene	14.09	252	730380	10319.3149425 ppb		98
90)	Benzo(k)fluoranthene	14.12	252	688535	10780.9770434 ppb		98
91)	Benzo(a)pyrene	14.54	252	666777	10063.1293395 ppb		97
92)	Indeno(1,2,3-cd)pyrene	16.40	276	790913	10549.6313490 ppb		98
93)	Dibenz(a,h)anthracene	16.41	278	692173	10656.6893419 ppb		98
94)	Benzo(g,h,i)perylene	16.95	276	673363	10827.8048698 ppb		98

(#) = qualifier out of range (m) = manual integration

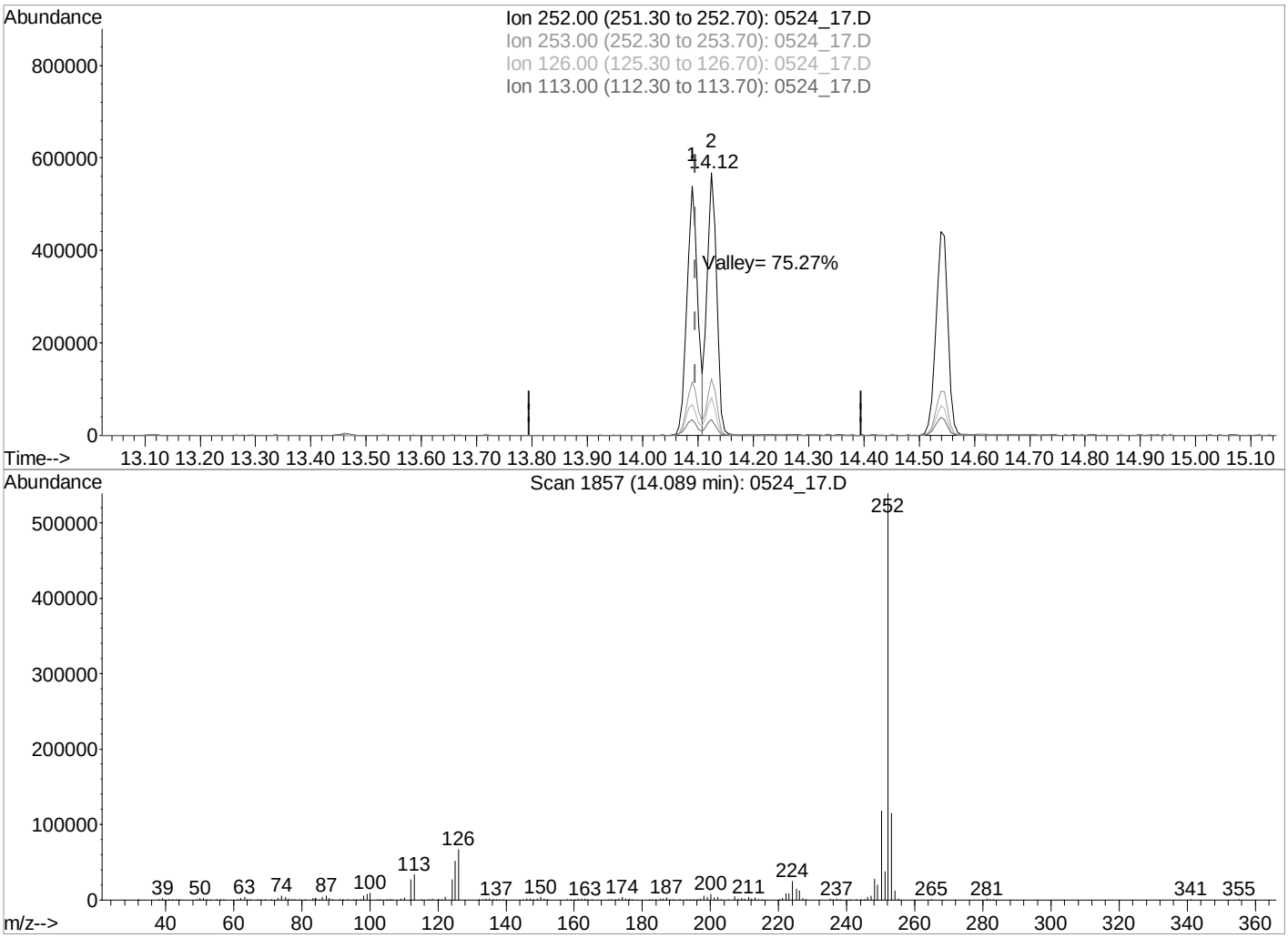
Data File : C:\MSDCHEM\1\DATA\052416\0524 17.D Vial: 17
Acq On : 24 May 2016 5:33 pm Operator: 280
Sample : SSCV SVMS 10K PPB 16A25209 Inst : BNAMS2
Misc : 8270 SSCV ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 13:51 2016 Quant Results File: S802E24P.RES

Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:26:43 2016
Response via : Initial Calibration



Data File : C:\MSDCHEM\1\DATA\052416\0524 17.D Vial: 17
Acq On : 24 May 2016 5:33 pm Operator: 280
Sample : SSCV SVMS 10K PPB 16A25209 Inst : BNAMS2
Misc : 8270 SSCV ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 13:51 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:26:43 2016
Response via : Multiple Level Calibration



TIC: 0524_17.D

(89) Benzo(b)fluoranthene (MT)

14.09min (-0.006) 10319.3149425 ppb

Qvalue = 98

response 730380

Ion	Exp%	Act%
252.00	100	100
253.00	21.70	21.06
126.00	12.60	11.97
113.00	6.90	6.15

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052416\0524 02.D Vial: 2
Acq On : 24 May 2016 11:18 am Operator: 280
Sample : MSTD SVMS 10K PPB 16D25863 Inst : BNAMS2
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 13:08 2016 Quant Results File: S802E24P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:04:56 2016
Response via : Initial Calibration
DataAcq Meth : BNA2D

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.27	152	70475	8000.00 ppb	0.00
22) Naphthalene-d8	6.52	136	376732	8000.00 ppb	0.00
40) Acenaphthene-d10	8.39	164	238593	8000.00 ppb	0.00
64) Phenanthrene-d10	10.00	188	464548	8000.00 ppb	0.00
78) Chrysene-d12	12.87	240	512708	8000.00 ppb	0.00
88) Perylene-d12	14.62	264	463331	8000.00 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol	4.17	112	145228	8767.7639381 ppb	0.00
Spiked Amount 20.000	Range 10 - 74		Recovery = 43838.82%#		
7) Phenol-d5	4.90	99	195052	8745.6358126 ppb	0.00
Spiked Amount 20.000	Range 10 - 63		Recovery = 43728.18%#		
23) Nitrobenzene-d5	5.79	82	191666	8876.1466964 ppb	0.00
Spiked Amount 10.000	Range 28 - 123		Recovery = 88761.47%#		
44) 2-Fluorobiphenyl	7.65	172	431695	10255.8562364 ppb	0.00
Spiked Amount 10.000	Range 35 - 133		Recovery = 102558.56%#		
67) 2,4,6-Tribromophenol	9.25	330	63669	11110.4886210 ppb	0.00
Spiked Amount 20.000	Range 22 - 154		Recovery = 55552.44%#		
81) p-Terphenyl-d14	11.70	244	605170	10551.8268511 ppb	0.00
Spiked Amount 10.000	Range 30 - 148		Recovery = 105518.27%#		
Target Compounds					Qvalue
2) Pyridine	3.20	79	187808	9725.4293592 ppb	100
3) N-Nitrosodimethylamine	3.17	42	110998	9288.6801419 ppb	100
5) Aniline	4.96	66	92591	7780.5487015 ppb	100
6) bis(2-Chloroethyl)ether	5.01	63	109511	7046.2710179 ppb	100
8) Phenol	4.91	94	199491	8801.2231187 ppb	100
10) 2-Chlorophenol	5.07	128	175876	8895.7918888 ppb	100
11) n-Decane	5.08	41	93771	7751.4140734 ppb	100
12) 1,3-Dichlorobenzene	5.21	146	195811	9695.7365358 ppb	100
13) 1,4-Dichlorobenzene	5.28	146	196745	9501.5244840 ppb	100
14) Benzyl Alcohol	5.37	79	159209	8984.3431189 ppb	100
15) 1,2-Dichlorobenzene	5.43	146	186529	9501.2535746 ppb	100
16) bis(2-Chloroisopropyl)ethe	5.50	121	51199	8738.6995756 ppb	100
17) 2-Methylphenol	5.47	108	147721	8248.9801928 ppb	100
18) Hexachloroethane	5.75	117	81886	8722.6569379 ppb	100
19) N-Nitrosodi-n-propylamine	5.63	70	126500	8943.1317600 ppb	100
20) 3&4-Methyl phenol	5.62	107	176690	8667.6765676 ppb	100
24) Nitrobenzene	5.81	77	193702	9092.1165704 ppb	100
25) Isophorone	6.04	82	327646	8860.4763697 ppb	100
26) 2-Nitrophenol	6.13	139	92044	9569.1804674 ppb	100
27) 2,4-Dimethylphenol	6.15	107	182989	9258.6181063 ppb	100
28) bis(2-Chlorethoxy)methane	6.25	93	197875	9009.5428463 ppb	100
29) 2,4-Dichlorophenol	6.37	162	155259	10570.6713068 ppb	100
31) 1,2,4-Trichlorobenzene	6.46	180	177466	10549.4298743 ppb	100
32) Naphthalene	6.55	128	530549	9179.2270480 ppb	100
33) 4-Chloroaniline	6.59	65	69745	8675.9446723 ppb	100
34) Hexachloro-1,3-butadiene	6.66	225	118705	12328.1638681 ppb	100
36) 4-Chloro-3-methylphenol	7.09	107	159515	8970.5344328 ppb	100
37) 2-Methylnaphthalene	7.27	142	383573	10244.7004953 ppb	100
38) 1-Methylnaphthalene	7.38	142	335453	9653.1920338 ppb	100
41) Hexachlorocyclopentadiene	7.43	237	88821	8767.0721000 ppb	100
42) 2,4,6-Trichlorophenol	7.57	196	113666	10208.1402982 ppb	100
43) 2,4,5-Trichlorophenol	7.60	196	121191	10395.0806409 ppb	100
45) Biphenyl	7.76	154	454926	9595.8247144 ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052416\0524 02.D Vial: 2
Acq On : 24 May 2016 11:18 am Operator: 280
Sample : MSTD SVMS 10K PPB 16D25863 Inst : BNAMS2
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 13:08 2016 Quant Results File: S802E24P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:04:56 2016
Response via : Initial Calibration
DataAcq Meth : BNA2D

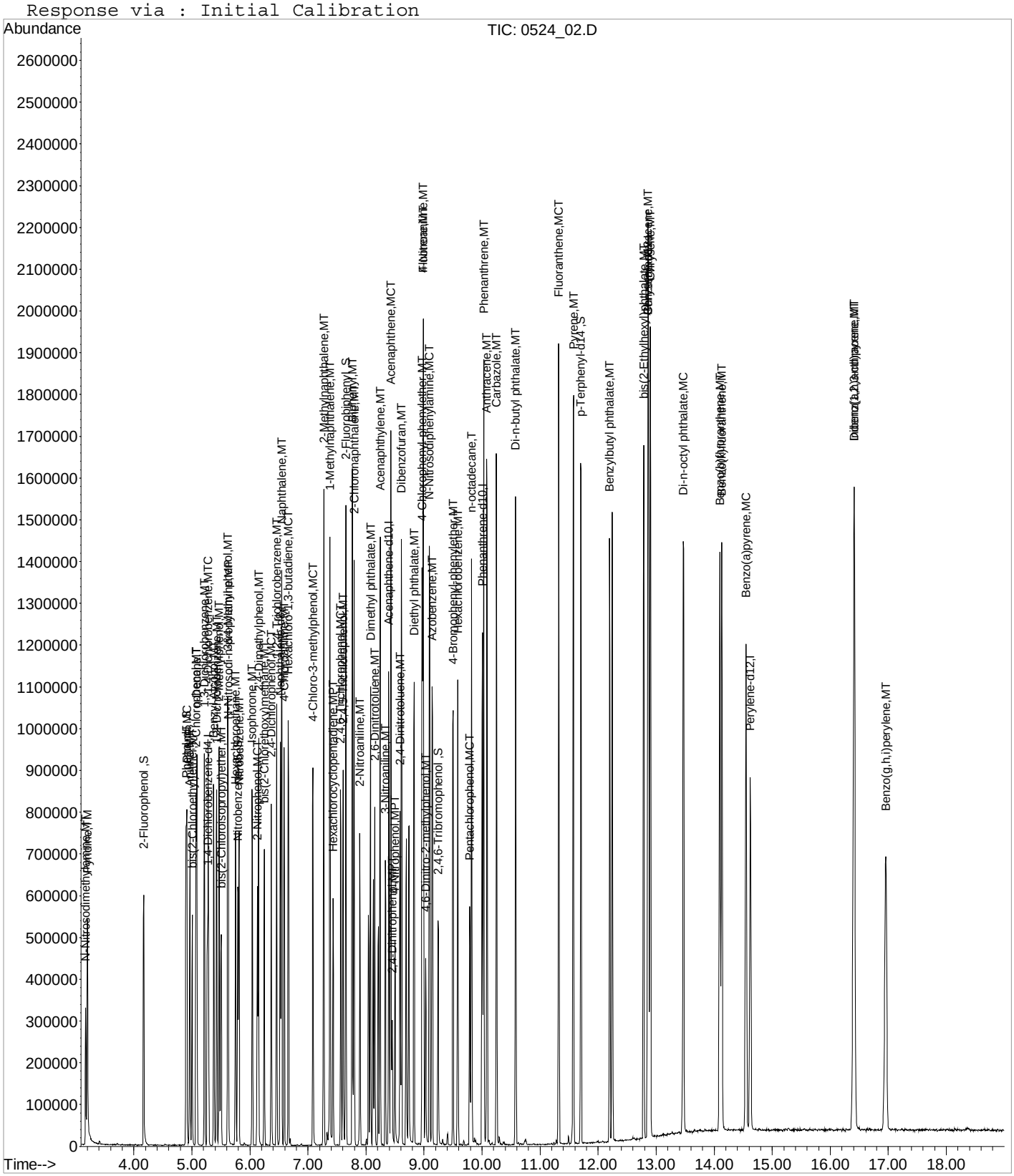
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
46)	2-Chloronaphthalene	7.79	162	371528	10108.2096175 ppb	100
47)	2-Nitroaniline	7.89	138	118762	9387.0144708 ppb	100
48)	Acenaphthylene	8.24	152	572348	9817.3084021 ppb	100
49)	Dimethyl phthalate	8.08	163	413624	10301.4413774 ppb	100
50)	2,6-Dinitrotoluene	8.15	165	97711	10579.0778098 ppb	100
51)	3-Nitroaniline	8.33	138	98569	9277.6729253 ppb	100
52)	Acenaphthene	8.43	153	378282	9689.0284671 ppb	100
53)	2,4-Dinitrophenol	8.45	184	36770	7736.9804131 ppb	100
54)	Dibenzofuran	8.61	168	538487	10109.3590963 ppb	100
55)	2,4-Dinitrotoluene	8.59	165	125143	9889.5267531 ppb	100
57)	4-Nitrophenol	8.50	139	70841	8583.1971915 ppb	100
58)	Fluorene	8.98	166	437108	9890.6042631 ppb	100
59)	4-Chlorophenyl-phenylether	8.97	204	214743	11085.1891710 ppb	100
60)	Diethyl phthalate	8.83	149	425126	9784.2816645 ppb	100
61)	4-Nitroaniline	8.99	138	103212	9868.9947185 ppb	100
62)	Azobenzene	9.14	77	421893	8849.7092648 ppb	100
65)	4,6-Dinitro-2-methylphenol	9.03	198	59178	8548.4863897 ppb	100
66)	N-Nitrosodiphenylamine	9.09	169	367361	9668.9112651 ppb	100
68)	4-Bromophenyl-phenylether	9.50	248	129760	11196.0595728 ppb	100
69)	Hexachlorobenzene	9.58	284	150361	11115.7674331 ppb	100
70)	n-octadecane	9.82	55	66126	7463.9594855 ppb	100
71)	Pentachlorophenol	9.78	266	70094	9657.0544754 ppb	100
72)	Phenanthrene	10.03	178	666074	9602.0353593 ppb	100
73)	Anthracene	10.08	178	677484	9653.2759207 ppb	100
74)	Carbazole	10.25	167	632769	9575.9959494 ppb	100
75)	Di-n-butyl phthalate	10.58	149	779824	9307.7972766 ppb	100
77)	Fluoranthene	11.32	202	760949	9852.8775029 ppb	100
80)	Pyrene	11.58	202	805057	9192.6443688 ppb	100
82)	Benzylbutyl phthalate	12.20	149	352907	7808.7112080 ppb	100
84)	Benzo(a)anthracene	12.86	228	789602	9567.3407562 ppb	100
85)	Chrysene	12.90	228	726929	9321.8165555 ppb	100
86)	bis(2-Ethylhexyl)phthalate	12.78	149	485580	7471.6144696 ppb	100
87)	Di-n-octyl phthalate	13.47	149	817610	7229.8411777 ppb	100
89)	Benzo(b)fluoranthene	14.10	252	731444	9803.6250170 ppb	100
90)	Benzo(k)fluoranthene	14.13	252	694620	9860.1710123 ppb	100
91)	Benzo(a)pyrene	14.55	252	695829	9681.6880450 ppb	100
92)	Indeno(1,2,3-cd)pyrene	16.41	276	777783	9641.0083218 ppb	100
93)	Dibenz(a,h)anthracene	16.41	278	666127	9401.6359712 ppb	100
94)	Benzo(g,h,i)perylene	16.96	276	648639	9778.6039138 ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

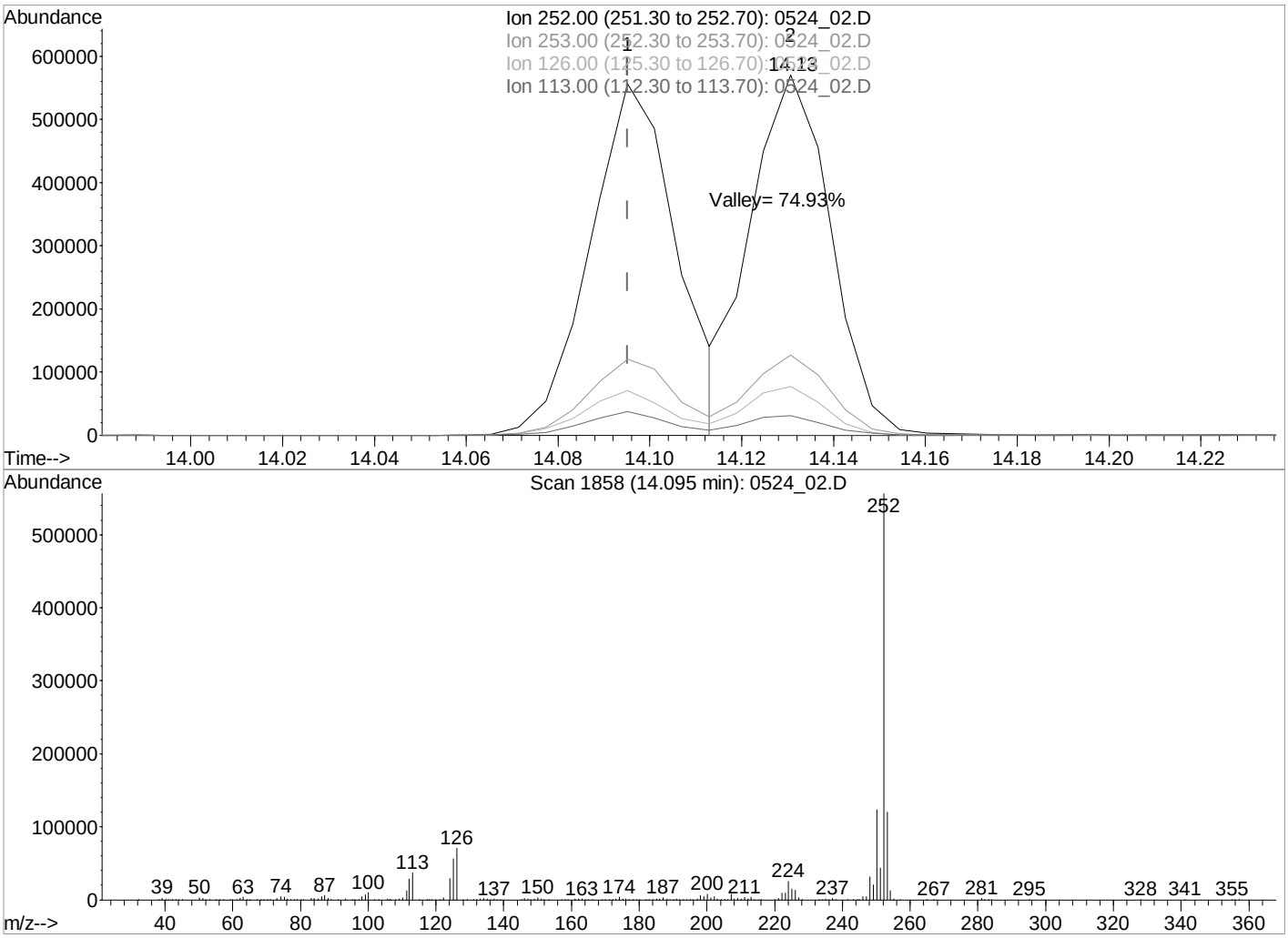
Data File : C:\MSDCHEM\1\DATA\052416\0524 02.D Vial: 2
Acq On : 24 May 2016 11:18 am Operator: 280
Sample : MSTD SVMS 10K PPB 16D25863 Inst : BNAMS2
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 13:08 2016 Quant Results File: S802E24P.RES

Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:04:56 2016
Response via : Initial Calibration



Data File : C:\MSDCHEM\1\DATA\052416\0524 02.D Vial: 2
Acq On : 24 May 2016 11:18 am Operator: 280
Sample : MSTD SVMS 10K PPB 16D25863 Inst : BNAMS2
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 13:08 2016 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:26:43 2016
Response via : Multiple Level Calibration



TIC: 0524_02.D

(89) Benzo(b)fluoranthene (MT)

14.10min (0.000) 9803.6250170 ppb

Qvalue = 100

response 731444

Ion	Exp%	Act%
252.00	100	100
253.00	21.70	21.75
126.00	12.60	12.63
113.00	6.90	6.91

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052416\0524 03.D Vial: 3
Acq On : 24 May 2016 11:43 am Operator: 280
Sample : STD SVMS 500 PPB 16D25863 Inst : BNAMS2
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 13:10 2016 Quant Results File: S802E24P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:04:56 2016
Response via : Initial Calibration
DataAcq Meth : BNA2D

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.27	152	77054	8000.00	ppb		0.00
22) Naphthalene-d8	6.52	136	419754	8000.00	ppb		0.00
40) Acenaphthene-d10	8.39	164	261536	8000.00	ppb		0.00
64) Phenanthrene-d10	10.00	188	520272	8000.00	ppb		0.00
78) Chrysene-d12	12.87	240	587668	8000.00	ppb		0.00
88) Perylene-d12	14.62	264	589626	8000.00	ppb		0.00
System Monitoring Compounds							
4) 2-Fluorophenol	4.17	112	8645	477.3570989	ppb		0.00
Spiked Amount 20.000	Range 10 - 74		Recovery = 2386.79%#				
7) Phenol-d5	4.90	99	11695	479.6021295	ppb		0.00
Spiked Amount 20.000	Range 10 - 63		Recovery = 2398.01%#				
23) Nitrobenzene-d5	5.79	82	11945	496.4816639	ppb		0.00
Spiked Amount 10.000	Range 28 - 123		Recovery = 4964.82%#				
44) 2-Fluorobiphenyl	7.65	172	26262	569.1790723	ppb		0.00
Spiked Amount 10.000	Range 35 - 133		Recovery = 5691.79%#				
67) 2,4,6-Tribromophenol	9.24	330	3406	530.7010107	ppb		0.00
Spiked Amount 20.000	Range 22 - 154		Recovery = 2653.51%#				
81) p-Terphenyl-d14	11.70	244	36462	554.6624980	ppb		0.00
Spiked Amount 10.000	Range 30 - 148		Recovery = 5546.62%#				
Target Compounds							Qvalue
2) Pyridine	3.22	79	12091	572.6599526	ppb		93
3) N-Nitrosodimethylamine	3.18	42	7308	559.3418174	ppb	#	59
5) Aniline	4.96	66	6054	465.2900479	ppb		94
6) bis(2-Chloroethyl)ether	5.01	63	6717	395.2909239	ppb		97
8) Phenol	4.91	94	12345	498.1391940	ppb		96
10) 2-Chlorophenol	5.07	128	10361	479.3134371	ppb		92
11) n-Decane	5.08	41	5657	427.6992260	ppb	#	81
12) 1,3-Dichlorobenzene	5.21	146	11849	536.6180984	ppb		98
13) 1,4-Dichlorobenzene	5.28	146	12326	544.4420330	ppb		96
14) Benzyl Alcohol	5.37	79	9725	501.9358563	ppb		96
15) 1,2-Dichlorobenzene	5.43	146	11892	554.0249759	ppb		98
16) bis(2-Chloroisopropyl)ethe	5.50	121	3261	509.0682663	ppb		80
17) 2-Methylphenol	5.47	108	9267	473.3006281	ppb		93
18) Hexachloroethane	5.75	117	5187	505.3535012	ppb		96
19) N-Nitrosodi-n-propylamine	5.62	70	7839	506.8735909	ppb		89
20) 3&4-Methyl phenol	5.62	107	10743	482.0101664	ppb		96
24) Nitrobenzene	5.81	77	12135	511.2205918	ppb		95
25) Isophorone	6.04	82	20708	502.6064128	ppb		97
26) 2-Nitrophenol	6.13	139	4906	457.7669910	ppb		92
27) 2,4-Dimethylphenol	6.15	107	10710	486.3493343	ppb		92
28) bis(2-Chlorethoxy)methane	6.25	93	12712	519.4734777	ppb		97
29) 2,4-Dichlorophenol	6.37	162	9137	558.3250029	ppb		93
31) 1,2,4-Trichlorobenzene	6.46	180	10794	575.8825387	ppb		89
32) Naphthalene	6.55	128	34730	539.2908640	ppb		98
33) 4-Chloroaniline	6.59	65	3946	440.5532850	ppb		94
34) Hexachloro-1,3-butadiene	6.66	225	7266	677.2709492	ppb		99
36) 4-Chloro-3-methylphenol	7.09	107	9043	456.4224396	ppb		88
37) 2-Methylnaphthalene	7.27	142	22436	537.8167651	ppb		99
38) 1-Methylnaphthalene	7.38	142	21623	558.4610413	ppb		99
41) Hexachlorocyclopentadiene	7.43	237	2186	1622.2100001	ppb		80
42) 2,4,6-Trichlorophenol	7.57	196	6160	504.6880086	ppb		95
43) 2,4,5-Trichlorophenol	7.60	196	6336	495.7912787	ppb		93
45) Biphenyl	7.76	154	28674	551.7674150	ppb		96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052416\0524 03.D Vial: 3
Acq On : 24 May 2016 11:43 am Operator: 280
Sample : STD SVMS 500 PPB 16D25863 Inst : BNAMS2
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 13:10 2016 Quant Results File: S802E24P.RES

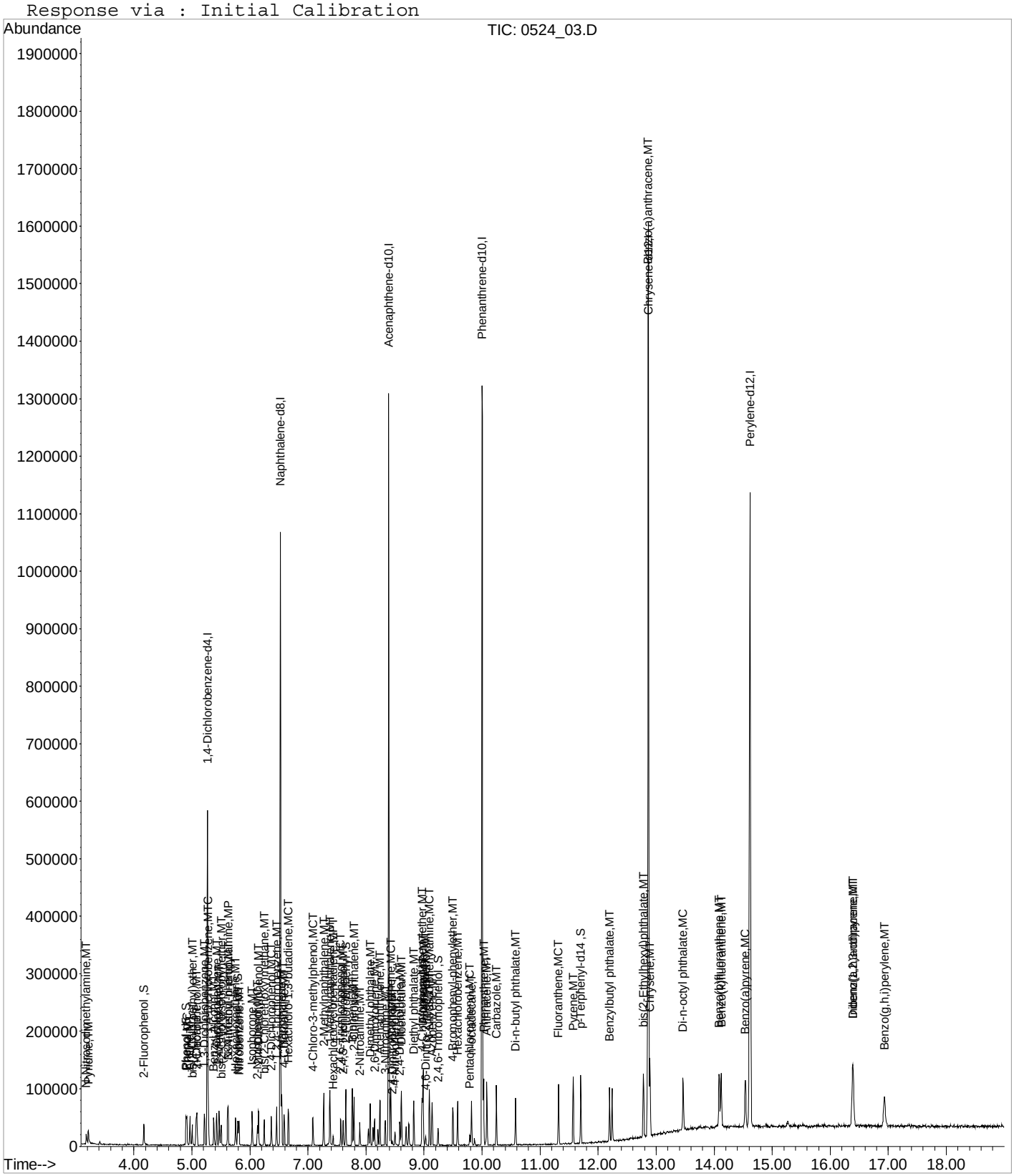
Quant Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:04:56 2016
Response via : Initial Calibration
DataAcq Meth : BNA2D

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
46)	2-Chloronaphthalene	7.79	162	22082	548.0842422	ppb		96
47)	2-Nitroaniline	7.89	138	6632	478.2122786	ppb		96
48)	Acenaphthylene	8.24	152	34063	533.0173918	ppb		98
49)	Dimethyl phthalate	8.07	163	26186	594.9598369	ppb		96
50)	2,6-Dinitrotoluene	8.15	165	5167	510.3510770	ppb		90
51)	3-Nitroaniline	8.33	138	5803	498.2846384	ppb		94
52)	Acenaphthene	8.43	153	22821	533.2433486	ppb		97
53)	2,4-Dinitrophenol	8.45	184	1011	1736.2739004	ppb	#	78
54)	Dibenzofuran	8.61	168	33008	565.3193248	ppb		99
55)	2,4-Dinitrotoluene	8.58	165	6781	488.8649634	ppb		97
57)	4-Nitrophenol	8.50	139	3671	405.7654006	ppb		88
58)	Fluorene	8.98	166	25873	534.0809403	ppb		99
59)	4-Chlorophenyl-phenylether	8.97	204	12649	595.6710671	ppb		94
60)	Diethyl phthalate	8.82	149	26045	546.8419992	ppb		99
61)	4-Nitroaniline	8.98	138	5946	518.6732477	ppb		99
62)	Azobenzene	9.14	77	25692	491.6440840	ppb		98
65)	4,6-Dinitro-2-methylphenol	9.03	198	2416	1280.4987177	ppb		92
66)	N-Nitrosodiphenylamine	9.09	169	22063	518.5005626	ppb		97
68)	4-Bromophenyl-phenylether	9.49	248	8287	638.4425795	ppb		87
69)	Hexachlorobenzene	9.58	284	9084	599.6274596	ppb		94
70)	n-octadecane	9.81	55	4227	1597.6519436	ppb		96
71)	Pentachlorophenol	9.79	266	2699	1151.0389246	ppb		82
72)	Phenanthrene	10.03	178	41869	538.9314757	ppb		100
73)	Anthracene	10.08	178	42145	536.1939087	ppb		97
74)	Carbazole	10.25	167	37698	509.3979705	ppb		99
75)	Di-n-butyl phthalate	10.58	149	44644	475.7880821	ppb		99
77)	Fluoranthene	11.32	202	45733	528.7341541	ppb		99
80)	Pyrene	11.57	202	46137	459.6224477	ppb		98
82)	Benzylbutyl phthalate	12.20	149	20767	400.8952427	ppb		92
84)	Benzo(a)anthracene	12.86	228	51351	542.8376467	ppb		96
85)	Chrysene	12.89	228	47611	532.6646937	ppb		97
86)	bis(2-Ethylhexyl)phthalate	12.78	149	32591	437.5114275	ppb		99
87)	Di-n-octyl phthalate	13.46	149	52749	406.9441824	ppb		98
89)	Benzo(b)fluoranthene	14.08	252	52067	548.3816291	ppb		97
90)	Benzo(k)fluoranthene	14.12	252	43393	484.0292117	ppb		98
91)	Benzo(a)pyrene	14.53	252	46579	509.2762851	ppb		97
92)	Indeno(1,2,3-cd)pyrene	16.38	276	54277	528.6820668	ppb		96
93)	Dibenz(a,h)anthracene	16.39	278	45642	506.2042574	ppb		97
94)	Benzo(g,h,i)perylene	16.93	276	46123	546.3941966	ppb		94

(#) = qualifier out of range (m) = manual integration

Data File : C:\MSDCHEM\1\DATA\052416\0524 03.D Vial: 3
Acq On : 24 May 2016 11:43 am Operator: 280
Sample : STD SVMS 500 PPB 16D25863 Inst : BNAMS2
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 13:10 2016 Quant Results File: S802E24P.RES

Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:08:49 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052416\0524 04.D Vial: 4
Acq On : 24 May 2016 12:08 pm Operator: 280
Sample : STD SVMS 1K PPB 16D25863 Inst : BNAMS2
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 13:11 2016 Quant Results File: S802E24P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:04:56 2016
Response via : Initial Calibration
DataAcq Meth : BNA2D

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.27	152	65928	8000.00	ppb	0.00
22) Naphthalene-d8	6.52	136	364621	8000.00	ppb	0.00
40) Acenaphthene-d10	8.39	164	228168	8000.00	ppb	0.00
64) Phenanthrene-d10	10.00	188	445278	8000.00	ppb	0.00
78) Chrysene-d12	12.87	240	515361	8000.00	ppb	0.00
88) Perylene-d12	14.62	264	502653	8000.00	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	4.17	112	14141	912.6070041	ppb	0.00
Spiked Amount 20.000	Range 10 - 74		Recovery = 4563.04%#			
7) Phenol-d5	4.90	99	18875	904.6761150	ppb	0.00
Spiked Amount 20.000	Range 10 - 63		Recovery = 4523.38%#			
23) Nitrobenzene-d5	5.79	82	19066	912.2834870	ppb	0.00
Spiked Amount 10.000	Range 28 - 123		Recovery = 9122.83%#			
44) 2-Fluorobiphenyl	7.65	172	40469	1005.3570809	ppb	0.00
Spiked Amount 10.000	Range 35 - 133		Recovery = 10053.57%#			
67) 2,4,6-Tribromophenol	9.25	330	5913	1076.4958638	ppb	0.00
Spiked Amount 20.000	Range 22 - 154		Recovery = 5382.48%#			
81) p-Terphenyl-d14	11.70	244	58902	1021.7363645	ppb	0.00
Spiked Amount 10.000	Range 30 - 148		Recovery = 10217.36%#			
Target Compounds						Qvalue
2) Pyridine	3.20	79	19420	1075.0015857	ppb	96
3) N-Nitrosodimethylamine	3.17	42	10293	920.7590808	ppb #	84
5) Aniline	4.96	66	9547	857.5778531	ppb	98
6) bis(2-Chloroethyl)ether	5.01	63	11394	783.6876395	ppb	91
8) Phenol	4.91	94	19117	901.5807848	ppb	97
10) 2-Chlorophenol	5.07	128	16045	867.5268785	ppb	99
11) n-Decane	5.08	41	9584	846.8848779	ppb	95
12) 1,3-Dichlorobenzene	5.21	146	18617	985.4137153	ppb	97
13) 1,4-Dichlorobenzene	5.28	146	19555	1009.5145699	ppb	98
14) Benzyl Alcohol	5.37	79	15382	927.8904513	ppb	97
15) 1,2-Dichlorobenzene	5.43	146	18193	990.6130614	ppb	97
16) bis(2-Chloroisopropyl)ethe	5.50	121	5306	968.0945153	ppb	95
17) 2-Methylphenol	5.47	108	14711	878.1433174	ppb	98
18) Hexachloroethane	5.75	117	8562	974.9437104	ppb	95
19) N-Nitrosodi-n-propylamine	5.62	70	12310	930.2985416	ppb	99
20) 3&4-Methyl phenol	5.61	107	17495	917.4234923	ppb	90
24) Nitrobenzene	5.81	77	18609	902.4949066	ppb	94
25) Isophorone	6.04	82	32502	908.1406600	ppb	95
26) 2-Nitrophenol	6.13	139	8123	872.5424158	ppb	99
27) 2,4-Dimethylphenol	6.14	107	18001	941.0412316	ppb	96
28) bis(2-Chlorethoxy)methane	6.25	93	19777	930.3858014	ppb	96
29) 2,4-Dichlorophenol	6.37	162	14322	1007.4889391	ppb	95
31) 1,2,4-Trichlorobenzene	6.46	180	17511	1075.5128667	ppb	96
32) Naphthalene	6.55	128	53460	955.6533791	ppb	98
33) 4-Chloroaniline	6.59	65	6266	805.3504749	ppb	92
34) Hexachloro-1,3-butadiene	6.66	225	11901	1277.0375713	ppb	93
36) 4-Chloro-3-methylphenol	7.09	107	15469	898.8140699	ppb	96
37) 2-Methylnaphthalene	7.27	142	35574	981.6909134	ppb	98
38) 1-Methylnaphthalene	7.38	142	33819	1005.5203415	ppb	97
41) Hexachlorocyclopentadiene	7.43	237	4719	1864.1697349	ppb	97
42) 2,4,6-Trichlorophenol	7.56	196	9972	936.4859914	ppb	90
43) 2,4,5-Trichlorophenol	7.60	196	10642	954.5170945	ppb	97
45) Biphenyl	7.76	154	44791	987.9506894	ppb	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052416\0524 04.D Vial: 4
Acq On : 24 May 2016 12:08 pm Operator: 280
Sample : STD SVMS 1K PPB 16D25863 Inst : BNAMS2
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 13:11 2016 Quant Results File: S802E24P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:04:56 2016
Response via : Initial Calibration
DataAcq Meth : BNA2D

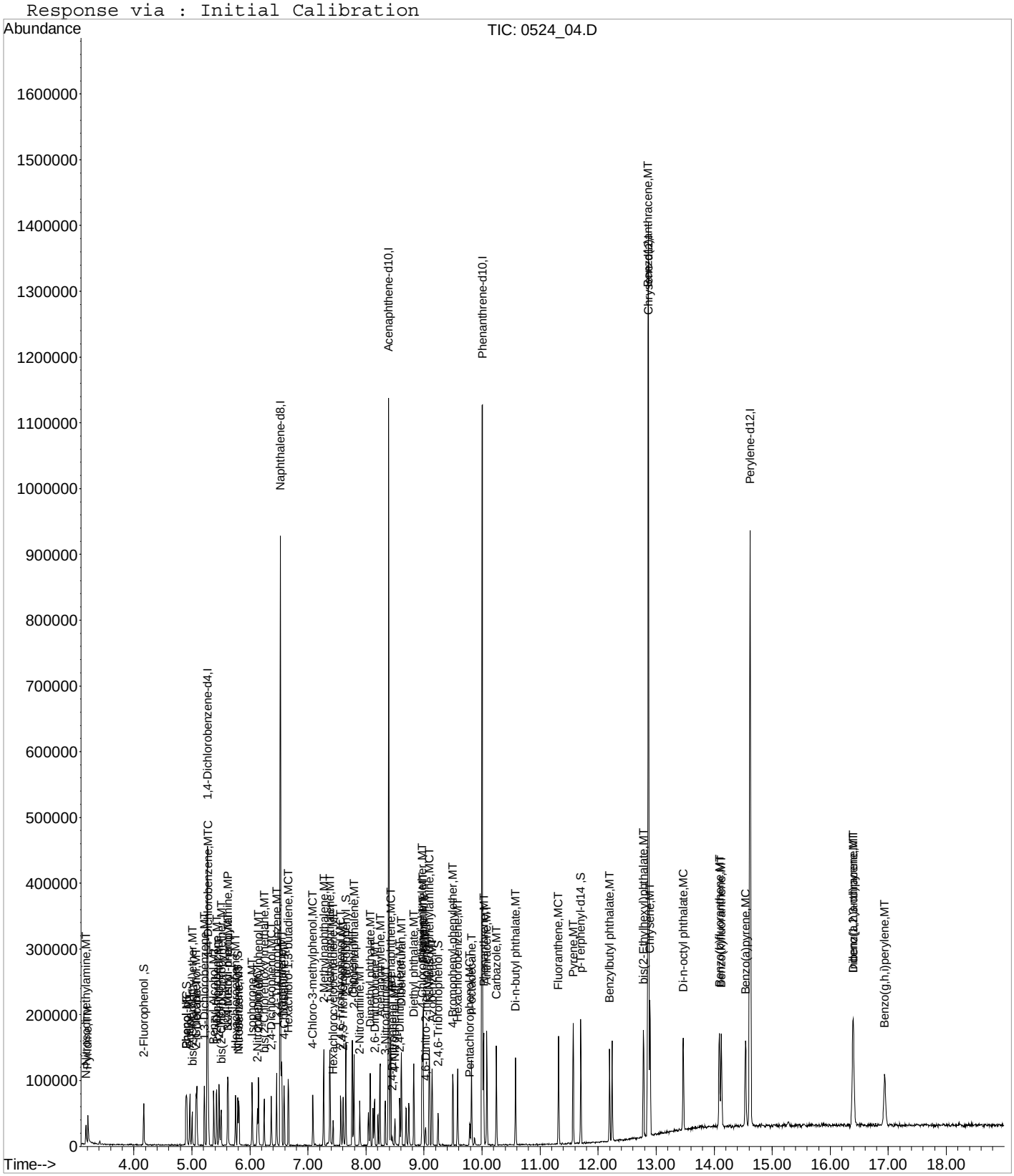
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
46)	2-Chloronaphthalene	7.79	162	36636	1042.3023151	ppb		96
47)	2-Nitroaniline	7.89	138	10529	870.2420663	ppb		99
48)	Acenaphthylene	8.24	152	53449	958.6825251	ppb		97
49)	Dimethyl phthalate	8.07	163	39601	1031.3388562	ppb		94
50)	2,6-Dinitrotoluene	8.15	165	8735	988.9406415	ppb		87
51)	3-Nitroaniline	8.33	138	9242	909.6359873	ppb		92
52)	Acenaphthene	8.43	153	36449	976.2322158	ppb		98
53)	2,4-Dinitrophenol	8.45	184	1886	1912.0147726	ppb	#	62
54)	Dibenzofuran	8.61	168	51141	1003.9696366	ppb		99
55)	2,4-Dinitrotoluene	8.58	165	10775	890.4082778	ppb		94
57)	4-Nitrophenol	8.50	139	5630	713.3058145	ppb		97
58)	Fluorene	8.98	166	42275	1000.2778431	ppb		98
59)	4-Chlorophenyl-phenylether	8.97	204	21384	1154.2928376	ppb		97
60)	Diethyl phthalate	8.82	149	41332	994.7195715	ppb		99
61)	4-Nitroaniline	8.98	138	9371	936.9828093	ppb		94
62)	Azobenzene	9.14	77	39933	875.9142343	ppb		99
65)	4,6-Dinitro-2-methylphenol	9.03	198	4369	1586.5150239	ppb		87
66)	N-Nitrosodiphenylamine	9.09	169	34411	944.8898328	ppb		96
68)	4-Bromophenyl-phenylether	9.50	248	12550	1129.7112300	ppb		97
69)	Hexachlorobenzene	9.58	284	14317	1104.2200476	ppb		98
70)	n-octadecane	9.82	55	7371	1966.0594364	ppb		93
71)	Pentachlorophenol	9.78	266	4580	1448.6666100	ppb		97
72)	Phenanthrene	10.03	178	66719	1003.4360604	ppb		99
73)	Anthracene	10.08	178	64887	964.5677304	ppb		99
74)	Carbazole	10.25	167	59574	940.5781304	ppb		99
75)	Di-n-butyl phthalate	10.58	149	70936	883.3165563	ppb		99
77)	Fluoranthene	11.32	202	73045	986.7278417	ppb		99
80)	Pyrene	11.57	202	73462	834.5168694	ppb		99
82)	Benzylbutyl phthalate	12.20	149	33170	730.1685181	ppb		97
84)	Benzo(a)anthracene	12.86	228	78718	948.8894058	ppb		98
85)	Chrysene	12.89	228	73958	943.5224961	ppb		99
86)	bis(2-Ethylhexyl)phthalate	12.78	149	47324	724.4253732	ppb		97
87)	Di-n-octyl phthalate	13.47	149	86021	756.7380877	ppb		95
89)	Benzo(b)fluoranthene	14.09	252	77295	954.9488073	ppb		97
90)	Benzo(k)fluoranthene	14.12	252	69598	910.6615557	ppb		96
91)	Benzo(a)pyrene	14.54	252	72995	936.1916271	ppb		97
92)	Indeno(1,2,3-cd)pyrene	16.40	276	83234	951.0160728	ppb		96
93)	Dibenz(a,h)anthracene	16.40	278	70055	911.3991331	ppb		92
94)	Benzo(g,h,i)perylene	16.94	276	70703	982.5048865	ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052416\0524 04.D Vial: 4
Acq On : 24 May 2016 12:08 pm Operator: 280
Sample : STD SVMS 1K PPB 16D25863 Inst : BNAMS2
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 13:11 2016 Quant Results File: S802E24P.RES

Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:10:25 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052416\0524 05.D Vial: 5
Acq On : 24 May 2016 12:33 pm Operator: 280
Sample : STD SVMS 4K PPB 16D25863 Inst : BNAMS2
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 13:11 2016 Quant Results File: S802E24P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:04:56 2016
Response via : Initial Calibration
DataAcq Meth : BNA2D

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.27	152	65592	8000.00	ppb		0.00
22) Naphthalene-d8	6.52	136	356294	8000.00	ppb		0.00
40) Acenaphthene-d10	8.39	164	228421	8000.00	ppb		0.00
64) Phenanthrene-d10	10.00	188	447134	8000.00	ppb		0.00
78) Chrysene-d12	12.87	240	500796	8000.00	ppb		0.00
88) Perylene-d12	14.62	264	506433	8000.00	ppb		0.00
System Monitoring Compounds							
4) 2-Fluorophenol	4.17	112	51241	3323.8414524	ppb		0.00
Spiked Amount 20.000	Range 10 - 74		Recovery = 16619.21%#				
7) Phenol-d5	4.90	99	68460	3298.0868397	ppb		0.00
Spiked Amount 20.000	Range 10 - 63		Recovery = 16490.43%#				
23) Nitrobenzene-d5	5.79	82	66524	3257.4799331	ppb		0.00
Spiked Amount 10.000	Range 28 - 123		Recovery = 32574.80%#				
44) 2-Fluorobiphenyl	7.65	172	143358	3557.4475748	ppb		0.00
Spiked Amount 10.000	Range 35 - 133		Recovery = 35574.48%#				
67) 2,4,6-Tribromophenol	9.24	330	20899	3788.9906708	ppb		0.00
Spiked Amount 20.000	Range 22 - 154		Recovery = 18944.95%#				
81) p-Terphenyl-d14	11.70	244	226965	4051.5238364	ppb		0.00
Spiked Amount 10.000	Range 30 - 148		Recovery = 40515.24%#				
Target Compounds							Qvalue
2) Pyridine	3.20	79	65360	3636.5616168	ppb		99
3) N-Nitrosodimethylamine	3.17	42	38042	3420.4748923	ppb		95
5) Aniline	4.96	66	34091	3077.9772300	ppb		97
6) bis(2-Chloroethyl)ether	5.01	63	38380	2653.3270225	ppb		95
8) Phenol	4.91	94	67157	3183.4293941	ppb		99
10) 2-Chlorophenol	5.07	128	60905	3309.9024413	ppb		99
11) n-Decane	5.08	41	32905	2922.5267564	ppb	#	95
12) 1,3-Dichlorobenzene	5.21	146	66650	3545.9130775	ppb		97
13) 1,4-Dichlorobenzene	5.28	146	68857	3572.9085134	ppb		97
14) Benzyl Alcohol	5.37	79	53595	3249.5797631	ppb		96
15) 1,2-Dichlorobenzene	5.43	146	65608	3590.6705277	ppb		99
16) bis(2-Chloroisopropyl)ethe	5.50	121	17294	3171.5020493	ppb		93
17) 2-Methylphenol	5.47	108	52675	3160.4343781	ppb		98
18) Hexachloroethane	5.75	117	28918	3309.7226306	ppb		97
19) N-Nitrosodi-n-propylamine	5.62	70	43304	3289.3594099	ppb		98
20) 3&4-Methyl phenol	5.62	107	60486	3188.0843462	ppb		96
24) Nitrobenzene	5.81	77	66360	3293.5273175	ppb		95
25) Isophorone	6.04	82	115076	3290.4929240	ppb		99
26) 2-Nitrophenol	6.13	139	30718	3376.7289384	ppb		99
27) 2,4-Dimethylphenol	6.15	107	63341	3388.6764539	ppb		98
28) bis(2-Chlorethoxy)methane	6.25	93	70300	3384.4737841	ppb		98
29) 2,4-Dichlorophenol	6.37	162	52752	3797.5956061	ppb		99
31) 1,2,4-Trichlorobenzene	6.46	180	61441	3861.8562752	ppb		99
32) Naphthalene	6.55	128	181505	3320.4214252	ppb		99
33) 4-Chloroaniline	6.59	65	23453	3084.7935279	ppb		98
34) Hexachloro-1,3-butadiene	6.66	225	40762	4476.1937146	ppb		97
36) 4-Chloro-3-methylphenol	7.08	107	55072	3274.7009084	ppb		98
37) 2-Methylnaphthalene	7.27	142	126939	3584.8444179	ppb		99
38) 1-Methylnaphthalene	7.38	142	117573	3577.4277195	ppb		99
41) Hexachlorocyclopentadiene	7.43	237	28490	3906.9127955	ppb		92
42) 2,4,6-Trichlorophenol	7.56	196	37324	3501.2724244	ppb		93
43) 2,4,5-Trichlorophenol	7.60	196	39645	3551.9560656	ppb		98
45) Biphenyl	7.76	154	159770	3520.1279729	ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052416\0524 05.D Vial: 5
Acq On : 24 May 2016 12:33 pm Operator: 280
Sample : STD SVMS 4K PPB 16D25863 Inst : BNAMS2
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 13:11 2016 Quant Results File: S802E24P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:04:56 2016
Response via : Initial Calibration
DataAcq Meth : BNA2D

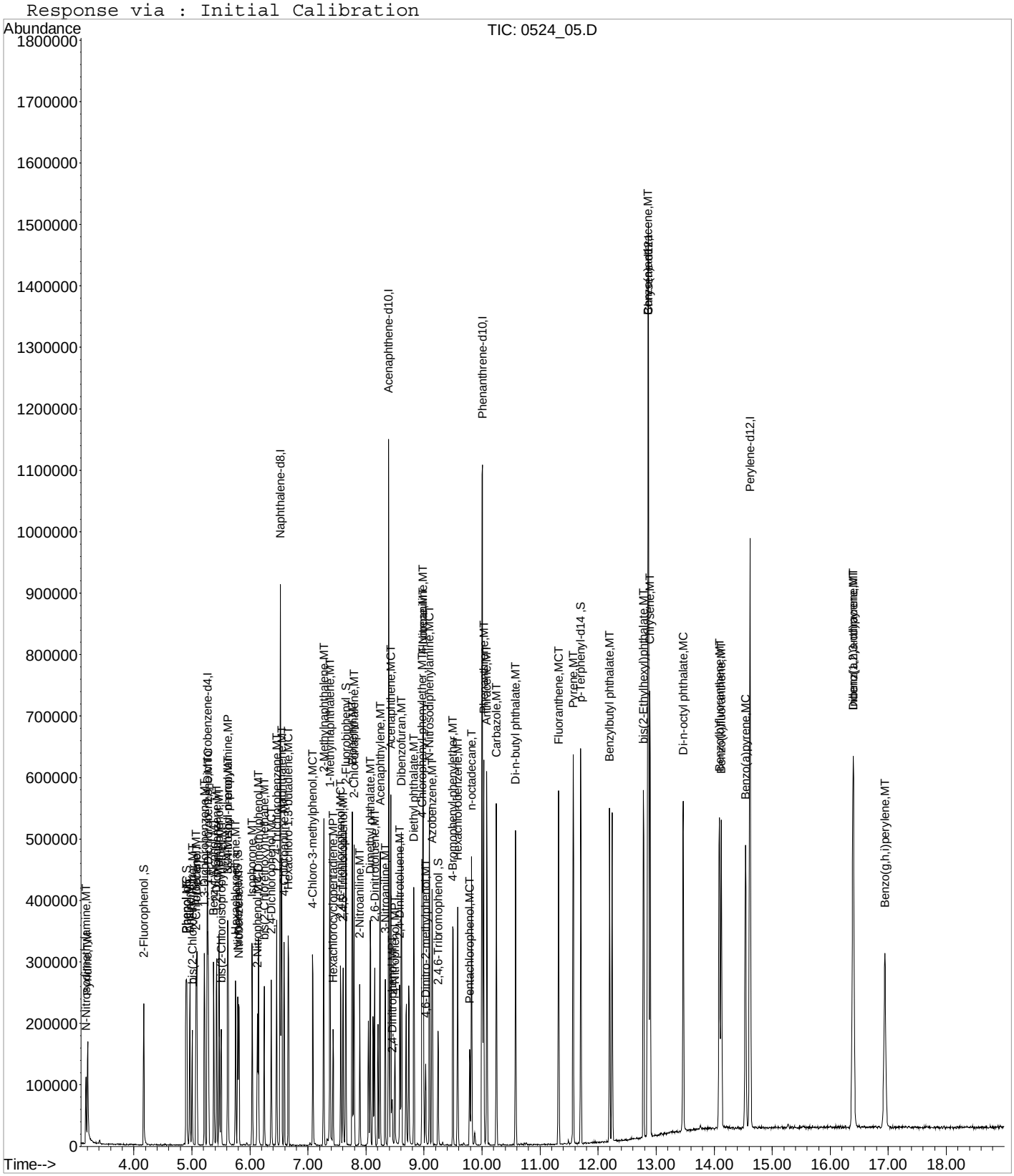
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46)	2-Chloronaphthalene	7.79	162	125705	3572.3739315	ppb	99
47)	2-Nitroaniline	7.89	138	39640	3272.6932438	ppb	99
48)	Acenaphthylene	8.24	152	196740	3524.8983795	ppb	99
49)	Dimethyl phthalate	8.07	163	143399	3730.4399843	ppb	93
50)	2,6-Dinitrotoluene	8.15	165	32307	3653.6139307	ppb	96
51)	3-Nitroaniline	8.33	138	35324	3472.8838030	ppb	88
52)	Acenaphthene	8.43	153	128994	3451.0856263	ppb	99
53)	2,4-Dinitrophenol	8.45	184	11019	3508.5440780	ppb	88
54)	Dibenzofuran	8.61	168	178204	3494.5198986	ppb	98
55)	2,4-Dinitrotoluene	8.59	165	42923	3543.0777727	ppb	92
57)	4-Nitrophenol	8.50	139	23534	2978.3917867	ppb	90
58)	Fluorene	8.98	166	148295	3504.9533998	ppb	99
59)	4-Chlorophenyl-phenylether	8.97	204	72519	3910.1873738	ppb	99
60)	Diethyl phthalate	8.82	149	147754	3551.9937774	ppb	98
61)	4-Nitroaniline	8.99	138	36177	3613.2411043	ppb	98
62)	Azobenzene	9.14	77	144836	3173.4004224	ppb	99
65)	4,6-Dinitro-2-methylphenol	9.03	198	17550	3329.6136242	ppb	98
66)	N-Nitrosodiphenylamine	9.09	169	126229	3451.7280163	ppb	99
68)	4-Bromophenyl-phenylether	9.50	248	44896	4024.6202957	ppb	98
69)	Hexachlorobenzene	9.58	284	49693	3816.7381196	ppb	99
70)	n-octadecane	9.82	55	23720	3561.1431007	ppb	99
71)	Pentachlorophenol	9.79	266	19963	3454.6821959	ppb	94
72)	Phenanthrene	10.03	178	225664	3379.8389091	ppb	100
73)	Anthracene	10.08	178	232127	3436.3250286	ppb	99
74)	Carbazole	10.25	167	213194	3352.0202769	ppb	100
75)	Di-n-butyl phthalate	10.58	149	264481	3279.7270139	ppb	99
77)	Fluoranthene	11.32	202	260717	3507.2747030	ppb	99
80)	Pyrene	11.57	202	265996	3109.5545289	ppb	98
82)	Benzylbutyl phthalate	12.20	149	124369	2817.3478645	ppb	98
84)	Benzo(a)anthracene	12.86	228	279221	3463.7004288	ppb	99
85)	Chrysene	12.89	228	265514	3485.8221511	ppb	99
86)	bis(2-Ethylhexyl)phthalate	12.78	149	174084	2742.3429365	ppb	99
87)	Di-n-octyl phthalate	13.47	149	303398	2746.6575697	ppb	99
89)	Benzo(b)fluoranthene	14.09	252	280496	3439.5501276	ppb	99
90)	Benzo(k)fluoranthene	14.12	252	253317	3289.8103371	ppb	98
91)	Benzo(a)pyrene	14.54	252	263319	3351.9699649	ppb	97
92)	Indeno(1,2,3-cd)pyrene	16.40	276	305182	3460.9257903	ppb	97
93)	Dibenz(a,h)anthracene	16.40	278	262564	3390.3999687	ppb	98
94)	Benzo(g,h,i)perylene	16.94	276	256481	3537.5155470	ppb	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052416\0524 05.D Vial: 5
Acq On : 24 May 2016 12:33 pm Operator: 280
Sample : STD SVMS 4K PPB 16D25863 Inst : BNAMS2
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 13:11 2016 Quant Results File: S802E24P.RES

Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:11:20 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052416\0524 06.D Vial: 6
Acq On : 24 May 2016 12:58 pm Operator: 280
Sample : STD SVMS 20K PPB 16D25863 Inst : BNAMS2
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 13:12 2016 Quant Results File: S802E24P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:04:56 2016
Response via : Initial Calibration
DataAcq Meth : BNA2D

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.27	152	65902	8000.00	ppb	0.00
22) Naphthalene-d8	6.52	136	363042	8000.00	ppb	0.00
40) Acenaphthene-d10	8.40	164	230263	8000.00	ppb	0.00
64) Phenanthrene-d10	10.00	188	453237	8000.00	ppb	0.00
78) Chrysene-d12	12.87	240	530792	8000.00	ppb	0.00
88) Perylene-d12	14.62	264	505774	8000.00	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	4.17	112	271251	17512.4266617	ppb	0.00
Spiked Amount 20.000	Range 10 - 74		Recovery = 87562.13%#			
7) Phenol-d5	4.91	99	360529	17286.9220756	ppb	0.00
Spiked Amount 20.000	Range 10 - 63		Recovery = 86434.61%#			
23) Nitrobenzene-d5	5.79	82	352845	16956.6087514	ppb	0.00
Spiked Amount 10.000	Range 28 - 123		Recovery = 169566.09%#			
44) 2-Fluorobiphenyl	7.66	172	784484	19311.3455691	ppb	0.00
Spiked Amount 10.000	Range 35 - 133		Recovery = 193113.46%#			
67) 2,4,6-Tribromophenol	9.25	330	124073	22191.5507474	ppb	0.00
Spiked Amount 20.000	Range 22 - 154		Recovery = 110957.75%#			
81) p-Terphenyl-d14	11.71	244	1230141	20718.1457675	ppb	0.00
Spiked Amount 10.000	Range 30 - 148		Recovery = 207181.46%#			
Target Compounds						Qvalue
2) Pyridine	3.20	79	347075	19220.0502127	ppb	99
3) N-Nitrosodimethylamine	3.18	42	194119	17371.7427564	ppb	96
5) Aniline	4.97	66	176332	15845.6140644	ppb	99
6) bis(2-Chloroethyl)ether	5.01	63	197968	13621.7555965	ppb	91
8) Phenol	4.92	94	363173	17134.4341504	ppb	98
10) 2-Chlorophenol	5.08	128	319730	17294.0978533	ppb	97
11) n-Decane	5.09	41	174464	15422.4973705	ppb	99
12) 1,3-Dichlorobenzene	5.22	146	353594	18723.4164568	ppb	98
13) 1,4-Dichlorobenzene	5.28	146	360510	18618.4444459	ppb	96
14) Benzyl Alcohol	5.38	79	284056	17141.9084746	ppb	97
15) 1,2-Dichlorobenzene	5.43	146	344133	18745.5141722	ppb	98
16) bis(2-Chloroisopropyl)ethe	5.50	121	91487	16698.6440353	ppb	96
17) 2-Methylphenol	5.47	108	275509	16452.4394830	ppb	99
18) Hexachloroethane	5.75	117	154761	17629.3845846	ppb	96
19) N-Nitrosodi-n-propylamine	5.63	70	225755	17067.6202490	ppb	98
20) 3&4-Methyl phenol	5.62	107	322739	16930.8462300	ppb	97
24) Nitrobenzene	5.81	77	345333	16820.7211753	ppb	98
25) Isophorone	6.04	82	609051	17091.5520549	ppb	99
26) 2-Nitrophenol	6.13	139	177053	19101.0917800	ppb	95
27) 2,4-Dimethylphenol	6.15	107	336537	17669.7191305	ppb	98
28) bis(2-Chlorethoxy)methane	6.25	93	365368	17263.0677564	ppb	97
29) 2,4-Dichlorophenol	6.37	162	281304	19874.5512697	ppb	95
31) 1,2,4-Trichlorobenzene	6.46	180	331382	20441.7646464	ppb	97
32) Naphthalene	6.55	128	975234	17509.1509121	ppb	100
33) 4-Chloroaniline	6.60	65	122754	15845.8298424	ppb	97
34) Hexachloro-1,3-butadiene	6.67	225	211090	22749.5434859	ppb	97
36) 4-Chloro-3-methylphenol	7.09	107	300274	17523.0685033	ppb	100
37) 2-Methylnaphthalene	7.27	142	679023	18819.6421931	ppb	100
38) 1-Methylnaphthalene	7.38	142	634864	18958.1347946	ppb	99
41) Hexachlorocyclopentadiene	7.43	237	211409	19484.0188170	ppb	99
42) 2,4,6-Trichlorophenol	7.57	196	209791	19522.5455844	ppb	94
43) 2,4,5-Trichlorophenol	7.60	196	223814	19891.9922805	ppb	97
45) Biphenyl	7.77	154	859018	18774.8878414	ppb	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052416\0524 06.D Vial: 6
Acq On : 24 May 2016 12:58 pm Operator: 280
Sample : STD SVMS 20K PPB 16D25863 Inst : BNAMS2
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 13:12 2016 Quant Results File: S802E24P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:04:56 2016
Response via : Initial Calibration
DataAcq Meth : BNA2D

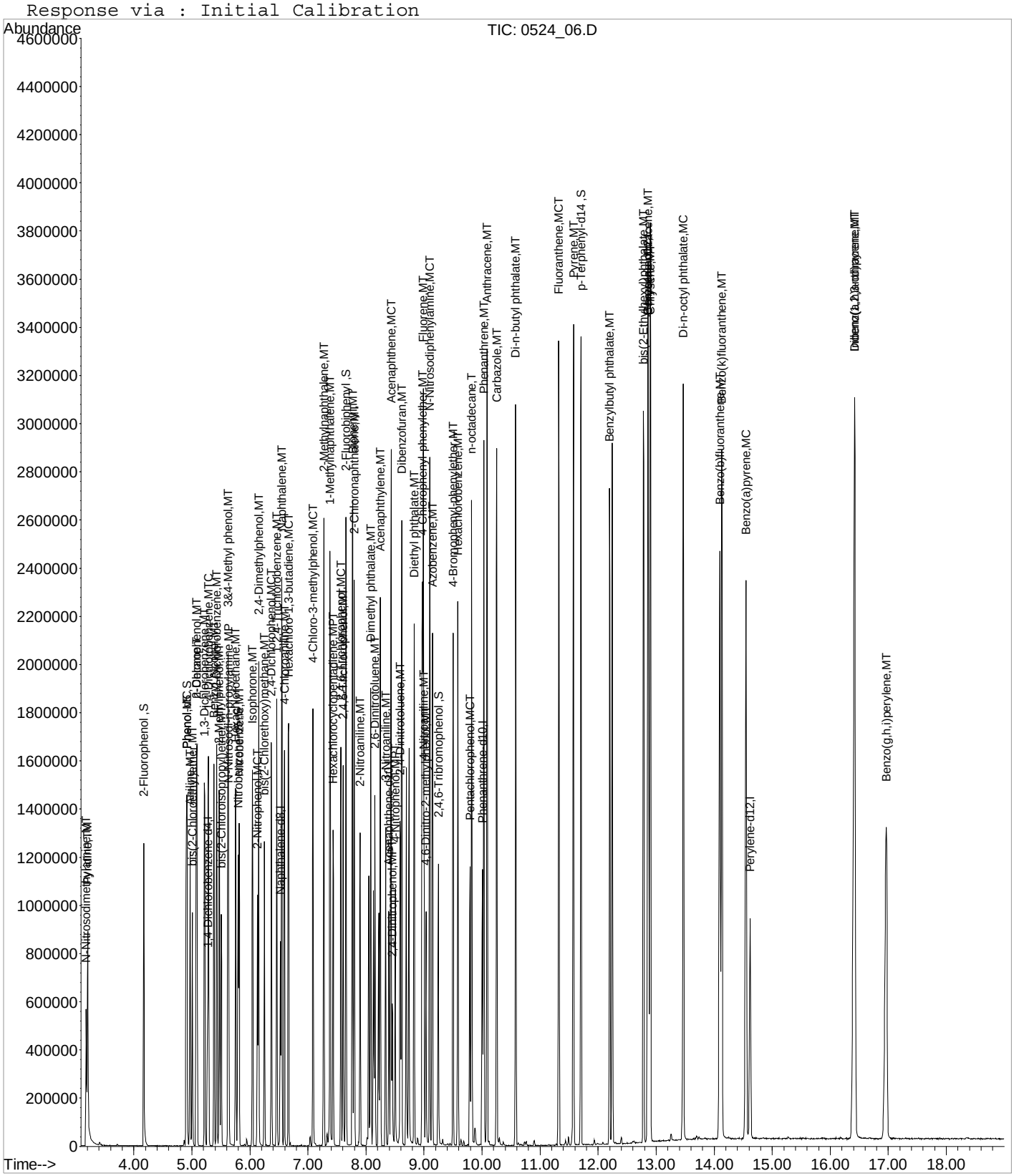
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
46)	2-Chloronaphthalene	7.80	162	679570	19158.0114070	ppb		99
47)	2-Nitroaniline	7.90	138	219296	17960.3267769	ppb		99
48)	Acenaphthylene	8.25	152	1070620	19028.3510923	ppb		100
49)	Dimethyl phthalate	8.08	163	755308	19491.7076618	ppb		97
50)	2,6-Dinitrotoluene	8.15	165	182405	20463.2510118	ppb		93
51)	3-Nitroaniline	8.34	138	186668	18205.4794573	ppb		97
52)	Acenaphthene	8.43	153	691597	18354.8650336	ppb		99
53)	2,4-Dinitrophenol	8.46	184	83580	16078.8503944	ppb	#	66
54)	Dibenzofuran	8.62	168	978736	19039.1476783	ppb		100
55)	2,4-Dinitrotoluene	8.59	165	243193	19913.7732274	ppb		91
57)	4-Nitrophenol	8.50	139	140282	17611.6438888	ppb		94
58)	Fluorene	8.98	166	801547	18793.0211578	ppb		99
59)	4-Chlorophenyl-phenylether	8.97	204	393891	21068.5035586	ppb		94
60)	Diethyl phthalate	8.83	149	800634	19093.2055614	ppb		99
61)	4-Nitroaniline	9.00	138	196059	19425.0902541	ppb		99
62)	Azobenzene	9.14	77	768211	16697.0883208	ppb		99
65)	4,6-Dinitro-2-methylphenol	9.03	198	127660	17683.4271074	ppb		96
66)	N-Nitrosodiphenylamine	9.10	169	679756	18337.6134640	ppb		98
68)	4-Bromophenyl-phenylether	9.50	248	247300	21870.2485401	ppb		94
69)	Hexachlorobenzene	9.58	284	275744	20893.7096896	ppb		97
70)	n-octadecane	9.82	55	122509	13056.3509527	ppb		99
71)	Pentachlorophenol	9.79	266	140754	18978.5055330	ppb		98
72)	Phenanthrene	10.03	178	1225828	18112.3830814	ppb		99
73)	Anthracene	10.09	178	1257002	18357.6414789	ppb		99
74)	Carbazole	10.25	167	1169581	18141.5463248	ppb		99
75)	Di-n-butyl phthalate	10.58	149	1493590	18272.0365145	ppb		100
77)	Fluoranthene	11.32	202	1431964	19003.9934025	ppb		99
80)	Pyrene	11.58	202	1476720	16287.6230851	ppb		99
82)	Benzylbutyl phthalate	12.20	149	689151	14729.2015412	ppb		99
84)	Benzo(a)anthracene	12.86	228	1522866	17823.3944490	ppb		98
85)	Chrysene	12.90	228	1438811	17822.0653604	ppb		99
86)	bis(2-Ethylhexyl)phthalate	12.78	149	966032	14357.8992583	ppb		98
87)	Di-n-octyl phthalate	13.47	149	1714170	14641.3855805	ppb		100
89)	Benzo(b)fluoranthene	14.10	252	1505463	18484.6211615	ppb		99
90)	Benzo(k)fluoranthene	14.13	252	1428668	18578.1873975	ppb		99
91)	Benzo(a)pyrene	14.55	252	1434634	18286.2451499	ppb		99
92)	Indeno(1,2,3-cd)pyrene	16.42	276	1617582	18368.1397558	ppb		96
93)	Dibenz(a,h)anthracene	16.42	278	1414769	18292.2356558	ppb		97
94)	Benzo(g,h,i)perylene	16.96	276	1346191	18591.5388656	ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052416\0524 06.D Vial: 6
Acq On : 24 May 2016 12:58 pm Operator: 280
Sample : STD SVMS 20K PPB 16D25863 Inst : BNAMS2
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 13:12 2016 Quant Results File: S802E24P.RES

Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:12:06 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052416\0524 07.D Vial: 7
Acq On : 24 May 2016 1:23 pm Operator: 280
Sample : STD SVMS 30K PPB 16D25863 Inst : BNAMS2
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 13:13 2016 Quant Results File: S802E24P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:04:56 2016
Response via : Initial Calibration
DataAcq Meth : BNA2D

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.27	152	65071	8000.00	ppb	0.00
22) Naphthalene-d8	6.53	136	351657	8000.00	ppb	0.00
40) Acenaphthene-d10	8.40	164	229804	8000.00	ppb	0.00
64) Phenanthrene-d10	10.00	188	449040	8000.00	ppb	0.00
78) Chrysene-d12	12.87	240	522665	8000.00	ppb	0.00
88) Perylene-d12	14.62	264	516343	8000.00	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	4.17	112	393316	25717.4384583	ppb	0.00
Spiked Amount 20.000	Range 10 - 74		Recovery = 128587.19%#			
7) Phenol-d5	4.91	99	536004	26028.9479474	ppb	0.00
Spiked Amount 20.000	Range 10 - 63		Recovery = 130144.74%#			
23) Nitrobenzene-d5	5.79	82	523932	25993.6675841	ppb	0.00
Spiked Amount 10.000	Range 28 - 123		Recovery = 259936.68%#			
44) 2-Fluorobiphenyl	7.66	172	1149942	28364.2272469	ppb	0.00
Spiked Amount 10.000	Range 35 - 133		Recovery = 283642.27%#			
67) 2,4,6-Tribromophenol	9.25	330	188776	34079.8343471	ppb	0.00
Spiked Amount 20.000	Range 22 - 154		Recovery = 170399.17%#			
81) p-Terphenyl-d14	11.71	244	1840330	31476.9501623	ppb	0.00
Spiked Amount 10.000	Range 30 - 148		Recovery = 314769.50%#			
Target Compounds						Qvalue
2) Pyridine	3.20	79	508319	28508.7806557	ppb	98
3) N-Nitrosodimethylamine	3.18	42	277048	25109.6973098	ppb	94
5) Aniline	4.97	66	254674	23177.8775444	ppb	98
6) bis(2-Chloroethyl)ether	5.01	63	292923	20412.8044654	ppb	97
8) Phenol	4.92	94	529717	25311.1127210	ppb	99
10) 2-Chlorophenol	5.08	128	476921	26125.9495605	ppb	98
11) n-Decane	5.09	41	250135	22394.1435428	ppb	99
12) 1,3-Dichlorobenzene	5.22	146	520027	27887.9901910	ppb	98
13) 1,4-Dichlorobenzene	5.28	146	531851	27818.0812566	ppb	96
14) Benzyl Alcohol	5.38	79	417499	25516.5384622	ppb	99
15) 1,2-Dichlorobenzene	5.43	146	505745	27900.6132085	ppb	98
16) bis(2-Chloroisopropyl)ethe	5.51	121	133364	24653.1005502	ppb	93
17) 2-Methylphenol	5.47	108	401342	24272.8200379	ppb	98
18) Hexachloroethane	5.75	117	225430	26007.4905644	ppb	97
19) N-Nitrosodi-n-propylamine	5.63	70	331064	25348.8735741	ppb	99
20) 3&4-Methyl phenol	5.62	107	478246	25409.1230562	ppb	99
24) Nitrobenzene	5.82	77	507997	25544.9632507	ppb	99
25) Isophorone	6.05	82	895721	25950.0501820	ppb	95
26) 2-Nitrophenol	6.13	139	259629	28916.4987188	ppb	98
27) 2,4-Dimethylphenol	6.15	107	501531	27185.1800538	ppb	96
28) bis(2-Chlorethoxy)methane	6.25	93	529466	25826.3568997	ppb	97
29) 2,4-Dichlorophenol	6.37	162	416613	30387.2812898	ppb	94
31) 1,2,4-Trichlorobenzene	6.46	180	481482	30662.4694979	ppb	99
32) Naphthalene	6.55	128	1441533	26718.8920414	ppb	99
33) 4-Chloroaniline	6.59	65	181070	24130.3399968	ppb	93
34) Hexachloro-1,3-butadiene	6.67	225	318168	35399.6630711	ppb	97
36) 4-Chloro-3-methylphenol	7.09	107	445307	26828.0777193	ppb	98
37) 2-Methylnaphthalene	7.28	142	1005923	28782.5468101	ppb	99
38) 1-Methylnaphthalene	7.38	142	955284	29449.9806562	ppb	99
41) Hexachlorocyclopentadiene	7.44	237	332648	29878.1847671	ppb	97
42) 2,4,6-Trichlorophenol	7.57	196	323046	30121.7732676	ppb	97
43) 2,4,5-Trichlorophenol	7.61	196	328781	29279.5447506	ppb	96
45) Biphenyl	7.77	154	1266118	27727.8275875	ppb	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052416\0524 07.D Vial: 7
Acq On : 24 May 2016 1:23 pm Operator: 280
Sample : STD SVMS 30K PPB 16D25863 Inst : BNAMS2
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 13:13 2016 Quant Results File: S802E24P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:04:56 2016
Response via : Initial Calibration
DataAcq Meth : BNA2D

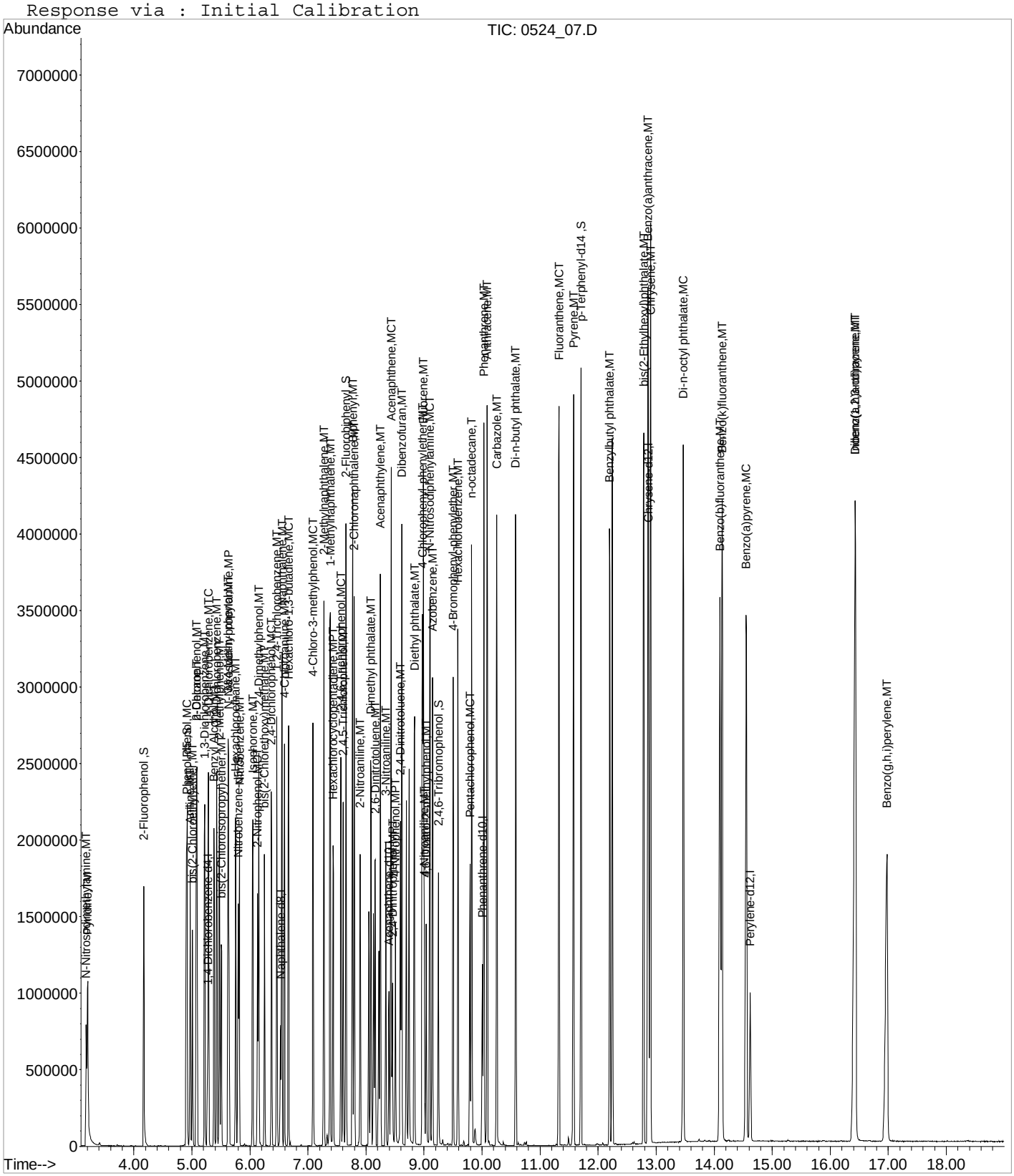
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
46)	2-Chloronaphthalene	7.80	162	1011242	28565.2416763	ppb		99
47)	2-Nitroaniline	7.90	138	331524	27206.0237291	ppb		99
48)	Acenaphthylene	8.25	152	1580814	28152.2527011	ppb		99
49)	Dimethyl phthalate	8.09	163	1124130	29067.5827468	ppb		97
50)	2,6-Dinitrotoluene	8.16	165	261317	29374.6114833	ppb		89
51)	3-Nitroaniline	8.34	138	284891	27840.5333548	ppb		91
52)	Acenaphthene	8.43	153	1024981	27257.1525291	ppb		100
53)	2,4-Dinitrophenol	8.46	184	136502	25305.4709297	ppb	#	78
54)	Dibenzofuran	8.62	168	1446957	28203.5735646	ppb		99
55)	2,4-Dinitrotoluene	8.59	165	366400	30062.4607583	ppb		97
57)	4-Nitrophenol	8.51	139	218421	27476.3419262	ppb		87
58)	Fluorene	8.99	166	1191367	27988.5081871	ppb		99
59)	4-Chlorophenyl-phenylether	8.97	204	583806	31289.0776479	ppb		95
60)	Diethyl phthalate	8.84	149	1185627	28330.8415301	ppb		99
61)	4-Nitroaniline	9.01	138	286009	28393.7357670	ppb		97
62)	Azobenzene	9.14	77	1137607	24775.3074969	ppb		99
65)	4,6-Dinitro-2-methylphenol	9.04	198	199097	27259.2870886	ppb		93
66)	N-Nitrosodiphenylamine	9.10	169	1017039	27692.8528760	ppb		99
68)	4-Bromophenyl-phenylether	9.50	248	365123	32591.8580623	ppb		93
69)	Hexachlorobenzene	9.58	284	414806	31724.5040509	ppb		98
70)	n-octadecane	9.82	55	174682	18244.9448237	ppb		97
71)	Pentachlorophenol	9.79	266	218917	29310.1322302	ppb		98
72)	Phenanthrene	10.03	178	1841555	27464.4609202	ppb		99
73)	Anthracene	10.09	178	1888067	27831.6301115	ppb		98
74)	Carbazole	10.25	167	1737857	27208.1092154	ppb		100
75)	Di-n-butyl phthalate	10.58	149	2192734	27075.8335133	ppb		100
77)	Fluoranthene	11.33	202	2142202	28695.4816456	ppb		99
80)	Pyrene	11.58	202	2207994	24731.9518703	ppb		99
82)	Benzylbutyl phthalate	12.20	149	1037603	22521.4828964	ppb		100
84)	Benzo(a)anthracene	12.86	228	2333079	27730.5908097	ppb		99
85)	Chrysene	12.90	228	2187208	27513.4669047	ppb		98
86)	bis(2-Ethylhexyl)phthalate	12.78	149	1468648	22167.5683969	ppb		99
87)	Di-n-octyl phthalate	13.47	149	2593618	22497.5512174	ppb		100
89)	Benzo(b)fluoranthene	14.10	252	2374646	28559.9570990	ppb		98
90)	Benzo(k)fluoranthene	14.14	252	2098339	26727.9641984	ppb		99
91)	Benzo(a)pyrene	14.55	252	2205969	27542.3523574	ppb		98
92)	Indeno(1,2,3-cd)pyrene	16.43	276	2467043	27440.6121279	ppb		97
93)	Dibenz(a,h)anthracene	16.43	278	2184151	27661.9071161	ppb		94
94)	Benzo(g,h,i)perylene	16.98	276	2021563	27347.2803425	ppb		99

(#) = qualifier out of range (m) = manual integration
0524_07.D S802E24P.M Wed May 25 13:13:13 2016 308 of 332 Page 2

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052416\0524 07.D Vial: 7
Acq On : 24 May 2016 1:23 pm Operator: 280
Sample : STD SVMS 30K PPB 16D25863 Inst : BNAMS2
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 13:13 2016 Quant Results File: S802E24P.RES

Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:12:43 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052416\0524 08.D Vial: 8
Acq On : 24 May 2016 1:48 pm Operator: 280
Sample : STD SVMS 40K PPB 16D25863 Inst : BNAMS2
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 13:13 2016 Quant Results File: S802E24P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:04:56 2016
Response via : Initial Calibration
DataAcq Meth : BNA2D

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.27	152	64542	8000.00	ppb	0.00
22) Naphthalene-d8	6.53	136	355480	8000.00	ppb	0.00
40) Acenaphthene-d10	8.40	164	227557	8000.00	ppb	0.00
64) Phenanthrene-d10	10.00	188	442078	8000.00	ppb	0.00
78) Chrysene-d12	12.87	240	511451	8000.00	ppb	0.00
88) Perylene-d12	14.62	264	487226	8000.00	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	4.17	112	539843	35587.5943684	ppb	0.00
Spiked Amount 20.000	Range 10 - 74		Recovery = 177937.97%#			
7) Phenol-d5	4.91	99	717957	35150.5464014	ppb	0.00
Spiked Amount 20.000	Range 10 - 63		Recovery = 175752.73%#			
23) Nitrobenzene-d5	5.80	82	706579	34678.2726884	ppb	0.01
Spiked Amount 10.000	Range 28 - 123		Recovery = 346782.73%#			
44) 2-Fluorobiphenyl	7.66	172	1562977	38932.7419582	ppb	0.00
Spiked Amount 10.000	Range 35 - 133		Recovery = 389327.42%#			
67) 2,4,6-Tribromophenol	9.25	330	259083	47508.9835951	ppb	0.00
Spiked Amount 20.000	Range 22 - 154		Recovery = 237544.92%#			
81) p-Terphenyl-d14	11.71	244	2497245	43649.3197204	ppb	0.00
Spiked Amount 10.000	Range 30 - 148		Recovery = 436493.20%#			
Target Compounds						Qvalue
2) Pyridine	3.20	79	685307	38750.0733837	ppb	100
3) N-Nitrosodimethylamine	3.19	42	373908	34166.1684134	ppb	94
5) Aniline	4.97	66	347171	31854.9961421	ppb	99
6) bis(2-Chloroethyl)ether	5.01	63	390263	27419.0019696	ppb	95
8) Phenol	4.92	94	720569	34712.6654899	ppb	98
10) 2-Chlorophenol	5.08	128	630844	34841.1656912	ppb	99
11) n-Decane	5.09	41	326391	29460.7114234	ppb	98
12) 1,3-Dichlorobenzene	5.22	146	706643	38206.4289431	ppb	99
13) 1,4-Dichlorobenzene	5.28	146	726328	38301.4344877	ppb	96
14) Benzyl Alcohol	5.39	79	557312	34340.7499265	ppb	98
15) 1,2-Dichlorobenzene	5.43	146	692705	38527.9174700	ppb	97
16) bis(2-Chloroisopropyl)ethe	5.51	121	179105	33379.9518707	ppb	93
17) 2-Methylphenol	5.47	108	544244	33185.1921953	ppb	99
18) Hexachloroethane	5.75	117	302822	35222.4226398	ppb	96
19) N-Nitrosodi-n-propylamine	5.64	70	444891	34343.5661740	ppb	98
20) 3&4-Methyl phenol	5.63	107	639744	34268.0674917	ppb	98
24) Nitrobenzene	5.82	77	682940	33972.7560223	ppb	98
25) Isophorone	6.05	82	1198182	34339.3706987	ppb	98
26) 2-Nitrophenol	6.13	139	356522	39281.0361658	ppb	98
27) 2,4-Dimethylphenol	6.16	107	663219	35562.7622440	ppb	98
28) bis(2-Chlorethoxy)methane	6.25	93	714952	34498.9638993	ppb	97
29) 2,4-Dichlorophenol	6.38	162	559474	40368.5390562	ppb	99
31) 1,2,4-Trichlorobenzene	6.46	180	650414	40975.1969215	ppb	99
32) Naphthalene	6.55	128	1952414	35798.9150524	ppb	99
33) 4-Chloroaniline	6.59	65	244024	32170.1863492	ppb	94
34) Hexachloro-1,3-butadiene	6.67	225	427942	47101.1637783	ppb	97
36) 4-Chloro-3-methylphenol	7.09	107	594536	35433.3558614	ppb	96
37) 2-Methylnaphthalene	7.28	142	1352987	38296.7747562	ppb	99
38) 1-Methylnaphthalene	7.38	142	1287914	39277.4667336	ppb	99
41) Hexachlorocyclopentadiene	7.44	237	474800	42423.6239783	ppb	98
42) 2,4,6-Trichlorophenol	7.57	196	427666	40270.6163033	ppb	94
43) 2,4,5-Trichlorophenol	7.61	196	454251	40852.7112169	ppb	97
45) Biphenyl	7.77	154	1697864	37550.1733356	ppb	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052416\0524 08.D Vial: 8
Acq On : 24 May 2016 1:48 pm Operator: 280
Sample : STD SVMS 40K PPB 16D25863 Inst : BNAMS2
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 13:13 2016 Quant Results File: S802E24P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:04:56 2016
Response via : Initial Calibration
DataAcq Meth : BNA2D

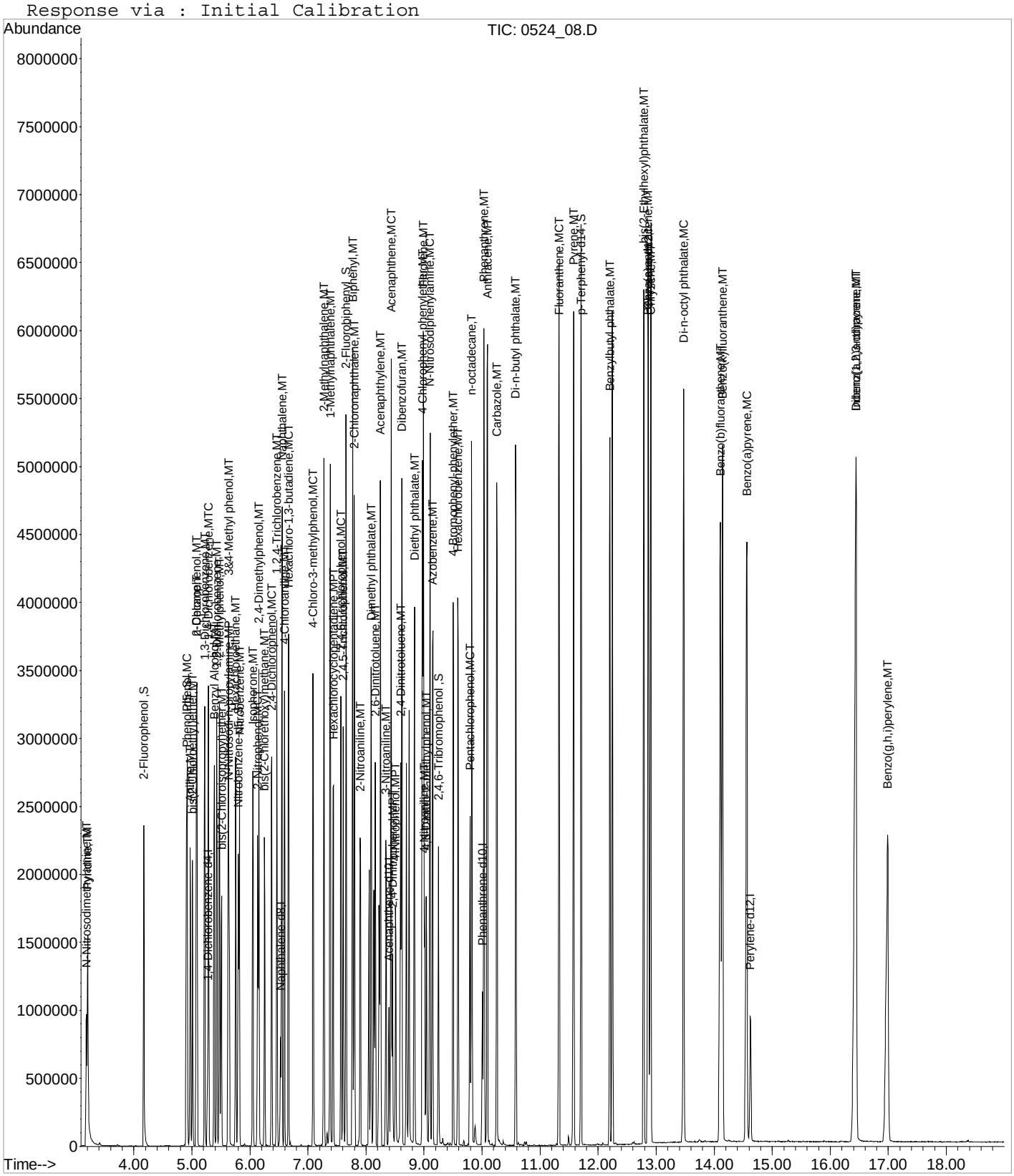
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
46)	2-Chloronaphthalene	7.80	162	1357045	38711.8955474	ppb		99
47)	2-Nitroaniline	7.90	138	451512	37418.5350055	ppb		99
48)	Acenaphthylene	8.25	152	2139517	38478.2670582	ppb		100
49)	Dimethyl phthalate	8.09	163	1514191	39540.3422423	ppb		98
50)	2,6-Dinitrotoluene	8.16	165	354552	40248.6938529	ppb		96
51)	3-Nitroaniline	8.35	138	387136	38205.8410082	ppb	#	81
52)	Acenaphthene	8.43	153	1406705	37777.6627118	ppb		99
53)	2,4-Dinitrophenol	8.46	184	195106	35825.4786717	ppb	#	71
54)	Dibenzofuran	8.62	168	1959487	38570.7678911	ppb		99
55)	2,4-Dinitrotoluene	8.60	165	483372	40051.4216001	ppb		97
57)	4-Nitrophenol	8.52	139	293718	37313.1975699	ppb	#	82
58)	Fluorene	8.99	166	1627777	38618.5956197	ppb		99
59)	4-Chlorophenyl-phenylether	8.97	204	790174	42767.5455527	ppb		96
60)	Diethyl phthalate	8.84	149	1579834	38123.2778534	ppb		99
61)	4-Nitroaniline	9.01	138	382915	38389.5127980	ppb		98
62)	Azobenzene	9.14	77	1506333	33129.5221951	ppb		99
65)	4,6-Dinitro-2-methylphenol	9.04	198	269064	37044.1749150	ppb		86
66)	N-Nitrosodiphenylamine	9.10	169	1363635	37715.0213129	ppb		98
68)	4-Bromophenyl-phenylether	9.50	248	499805	45316.5304836	ppb		93
69)	Hexachlorobenzene	9.59	284	555645	43165.1593932	ppb		98
70)	n-octadecane	9.82	55	234086	24385.7540288	ppb		97
71)	Pentachlorophenol	9.79	266	298605	40281.9597235	ppb		97
72)	Phenanthrene	10.03	178	2481795	37595.7208798	ppb		99
73)	Anthracene	10.09	178	2572065	38511.4001437	ppb		98
74)	Carbazole	10.25	167	2268902	36081.6333492	ppb		99
75)	Di-n-butyl phthalate	10.58	149	2862383	35901.2652617	ppb		100
77)	Fluoranthene	11.33	202	2810906	38245.9582987	ppb		100
80)	Pyrene	11.58	202	2941161	33666.5558074	ppb		98
82)	Benzylbutyl phthalate	12.20	149	1303096	28904.2405062	ppb		95
84)	Benzo(a)anthracene	12.86	228	2988051	36294.1868104	ppb		99
85)	Chrysene	12.91	228	2789946	35864.9654394	ppb		99
86)	bis(2-Ethylhexyl)phthalate	12.78	149	1835313	28309.3479550	ppb		98
87)	Di-n-octyl phthalate	13.47	149	3239525	28716.3977512	ppb		100
89)	Benzo(b)fluoranthene	14.11	252	2986637	38067.0264156	ppb		98
90)	Benzo(k)fluoranthene	14.14	252	2701264	36464.0662729	ppb		99
91)	Benzo(a)pyrene	14.56	252	2810405	37185.9064562	ppb		100
92)	Indeno(1,2,3-cd)pyrene	16.44	276	3106634	36619.7187923	ppb		95
93)	Dibenz(a,h)anthracene	16.44	278	2754849	36974.7372177	ppb		95
94)	Benzo(g,h,i)perylene	16.99	276	2531954	36298.6532179	ppb		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052416\0524 08.D Vial: 8
Acq On : 24 May 2016 1:48 pm Operator: 280
Sample : STD SVMS 40K PPB 16D25863 Inst : BNAMS2
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 13:13 2016 Quant Results File: S802E24P.RES

Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:13:31 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052416\0524 09.D Vial: 9
Acq On : 24 May 2016 2:13 pm Operator: 280
Sample : STD SVMS 50K PPB 16D25863 Inst : BNAMS2
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 13:16 2016 Quant Results File: S802E24P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:04:56 2016
Response via : Initial Calibration
DataAcq Meth : BNA2D

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.27	152	69405	8000.00 ppb	0.00
22) Naphthalene-d8	6.53	136	389949	8000.00 ppb	0.00
40) Acenaphthene-d10	8.40	164	252342	8000.00 ppb	0.00
64) Phenanthrene-d10	10.00	188	485204	8000.00 ppb	0.00
78) Chrysene-d12	12.87	240	519582	8000.00 ppb	0.00
88) Perylene-d12	14.62	264	507754	8000.00 ppb	0.00
System Monitoring Compounds					
4) 2-Fluorophenol	4.17	112	709964	43523.0322926 ppb	0.00
Spiked Amount 20.000	Range 10 - 74		Recovery = 217615.16%#		
7) Phenol-d5	4.91	99	958032	43617.9572151 ppb	0.01
Spiked Amount 20.000	Range 10 - 63		Recovery = 218089.79%#		
23) Nitrobenzene-d5	5.80	82	944920	42276.5104875 ppb	0.01
Spiked Amount 10.000	Range 28 - 123		Recovery = 422765.10%#		
44) 2-Fluorobiphenyl	7.66	172	2132740	47907.2207945 ppb	0.00
Spiked Amount 10.000	Range 35 - 133		Recovery = 479072.21%#		
67) 2,4,6-Tribromophenol	9.25	330	359405	60047.5741271 ppb	0.00
Spiked Amount 20.000	Range 22 - 154		Recovery = 300237.87%#		
81) p-Terphenyl-d14	11.71	244	3337514	57423.4601652 ppb	0.00
Spiked Amount 10.000	Range 30 - 148		Recovery = 574234.60%#		
Target Compounds					Qvalue
2) Pyridine	3.20	79	905764	47627.0933167 ppb	99
3) N-Nitrosodimethylamine	3.18	42	498614	42368.9448840 ppb	95
5) Aniline	4.98	66	457884	39069.8051200 ppb	98
6) bis(2-Chloroethyl)ether	5.01	63	518058	33847.3216958 ppb	91
8) Phenol	4.92	94	966329	43290.1472087 ppb	98
10) 2-Chlorophenol	5.08	128	856207	43974.5227355 ppb	99
11) n-Decane	5.09	41	450669	37828.0889068 ppb	100
12) 1,3-Dichlorobenzene	5.22	146	954676	48000.3110009 ppb	98
13) 1,4-Dichlorobenzene	5.28	146	973847	47755.6372144 ppb	97
14) Benzyl Alcohol	5.39	79	749871	42968.4412648 ppb	99
15) 1,2-Dichlorobenzene	5.43	146	930340	48119.4402593 ppb	97
16) bis(2-Chloroisopropyl)ethe	5.51	121	241952	41933.2837581 ppb	92
17) 2-Methylphenol	5.47	108	724291	41069.1237201 ppb	100
18) Hexachloroethane	5.75	117	408867	44224.7636561 ppb	94
19) N-Nitrosodi-n-propylamine	5.65	70	590240	42371.3272007 ppb	100
20) 3&4-Methyl phenol	5.63	107	856276	42652.9255102 ppb	97
24) Nitrobenzene	5.82	77	932680	42294.9245508 ppb	98
25) Isophorone	6.06	82	1582507	41344.9566884 ppb	98
26) 2-Nitrophenol	6.13	139	492281	49444.3914123 ppb	98
27) 2,4-Dimethylphenol	6.16	107	902246	44103.2762610 ppb	99
28) bis(2-Chlorethoxy)methane	6.26	93	950570	41813.8956583 ppb	96
29) 2,4-Dichlorophenol	6.38	162	764132	50261.8965103 ppb	96
31) 1,2,4-Trichlorobenzene	6.46	180	887739	50982.8170667 ppb	98
32) Naphthalene	6.55	128	2635565	44053.3605656 ppb	99
33) 4-Chloroaniline	6.60	65	325076	39067.2914633 ppb	93
34) Hexachloro-1,3-butadiene	6.67	225	581535	58348.5333979 ppb	98
36) 4-Chloro-3-methylphenol	7.09	107	802333	43590.9310060 ppb	99
37) 2-Methylnaphthalene	7.28	142	1827488	47155.2955477 ppb	100
38) 1-Methylnaphthalene	7.38	142	1741274	48409.5539722 ppb	99
41) Hexachlorocyclopentadiene	7.44	237	675012	53977.5222557 ppb	98
42) 2,4,6-Trichlorophenol	7.57	196	597222	50713.0823419 ppb	93
43) 2,4,5-Trichlorophenol	7.61	196	623638	50577.6004009 ppb	99
45) Biphenyl	7.77	154	2337741	46623.6316023 ppb	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052416\0524 09.D Vial: 9
Acq On : 24 May 2016 2:13 pm Operator: 280
Sample : STD SVMS 50K PPB 16D25863 Inst : BNAMS2
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 13:16 2016 Quant Results File: S802E24P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:04:56 2016
Response via : Initial Calibration
DataAcq Meth : BNA2D

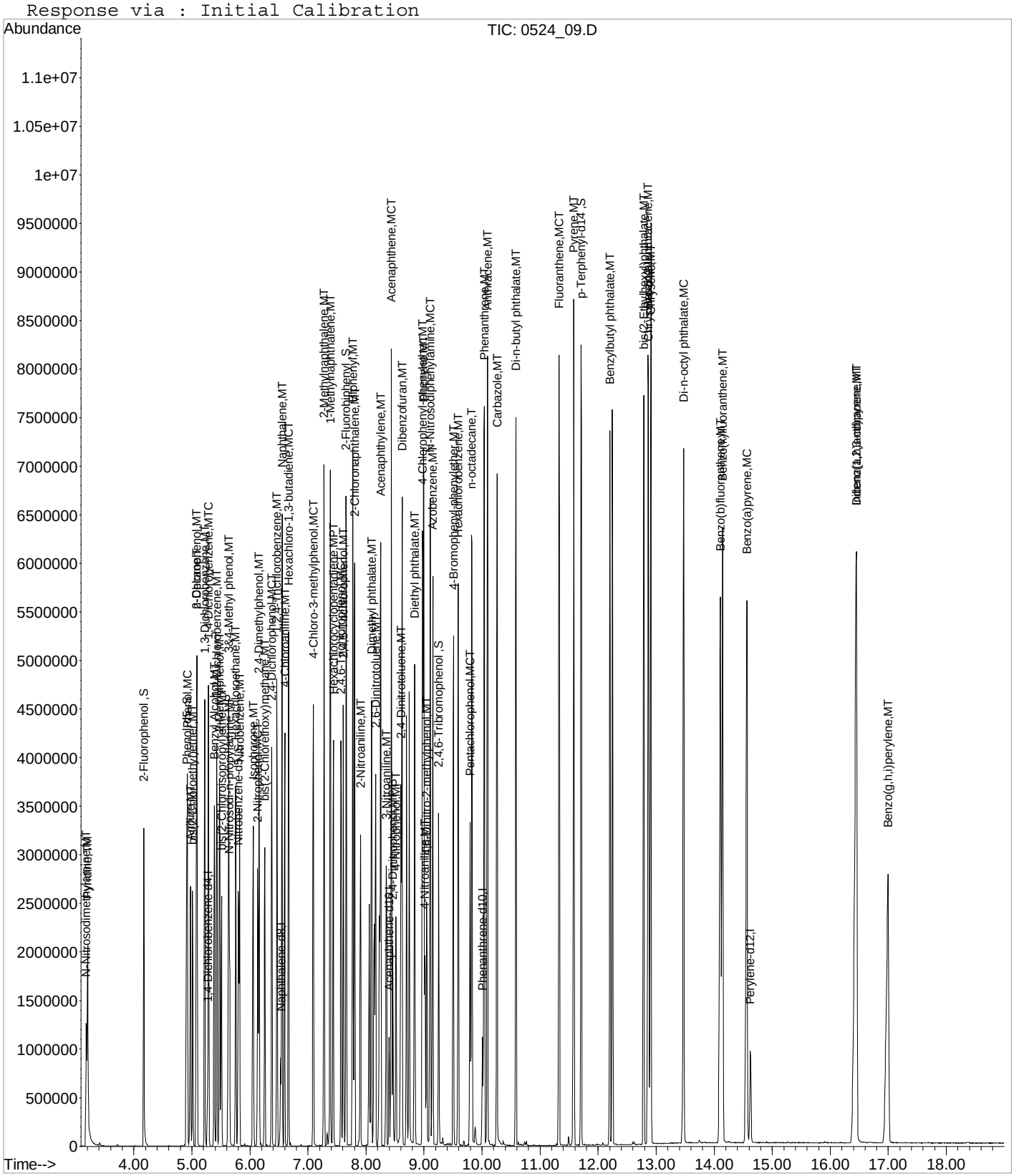
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46)	2-Chloronaphthalene	7.80	162	1851916	47640.0414523	ppb	99
47)	2-Nitroaniline	7.91	138	603841	45127.4443626	ppb	98
48)	Acenaphthylene	8.26	152	2919416	47347.4294435	ppb	99
49)	Dimethyl phthalate	8.09	163	2037823	47987.3626307	ppb	96
50)	2,6-Dinitrotoluene	8.17	165	481641	49305.5672792	ppb	90
51)	3-Nitroaniline	8.35	138	518232	46120.1903205	ppb	92
52)	Acenaphthene	8.44	153	1916113	46403.8302925	ppb	99
53)	2,4-Dinitrophenol	8.46	184	273248	44829.9183158	ppb	90
54)	Dibenzofuran	8.62	168	2687855	47711.4256514	ppb	99
55)	2,4-Dinitrotoluene	8.60	165	675913	50504.2474509	ppb	95
57)	4-Nitrophenol	8.52	139	397779	45569.5159829	ppb	96
58)	Fluorene	8.99	166	2212292	47330.8905886	ppb	100
59)	4-Chlorophenyl-phenylether	8.97	204	1088274	53116.6287956	ppb	97
60)	Diethyl phthalate	8.84	149	2179259	47422.9193089	ppb	99
61)	4-Nitroaniline	9.02	138	468667	42371.6381456	ppb	96
62)	Azobenzene	9.15	77	2079413	41241.6085145	ppb	98
65)	4,6-Dinitro-2-methylphenol	9.04	198	379411	47307.2685233	ppb	95
66)	N-Nitrosodiphenylamine	9.11	169	1890241	47632.9991413	ppb	99
68)	4-Bromophenyl-phenylether	9.51	248	680185	56189.8193953	ppb	98
69)	Hexachlorobenzene	9.59	284	779764	55191.6845125	ppb	98
70)	n-octadecane	9.82	55	316478	29750.5064386	ppb	97
71)	Pentachlorophenol	9.80	266	425518	52047.4537974	ppb	97
72)	Phenanthrene	10.04	178	3361178	46391.5148385	ppb	99
73)	Anthracene	10.09	178	3449014	47051.8665093	ppb	98
74)	Carbazole	10.26	167	3050182	44194.7554629	ppb	100
75)	Di-n-butyl phthalate	10.59	149	3858496	44093.5022590	ppb	99
77)	Fluoranthene	11.33	202	3769119	46725.4620113	ppb	100
80)	Pyrene	11.58	202	3876394	43677.4965323	ppb	99
82)	Benzylbutyl phthalate	12.20	149	1727269	37713.3458654	ppb	98
84)	Benzo(a)anthracene	12.86	228	3895405	46574.8662804	ppb	99
85)	Chrysene	12.91	228	3655558	46257.0819848	ppb	99
86)	bis(2-Ethylhexyl)phthalate	12.78	149	2392329	36323.7405727	ppb	99
87)	Di-n-octyl phthalate	13.47	149	4114222	35899.3248720	ppb	100
89)	Benzo(b)fluoranthene	14.11	252	3840465	46970.7425817	ppb	98
90)	Benzo(k)fluoranthene	14.15	252	3477935	45050.1902918	ppb	98
91)	Benzo(a)pyrene	14.56	252	3625443	46030.7071389	ppb	99
92)	Indeno(1,2,3-cd)pyrene	16.44	276	4052621	45839.3031411	ppb	98
93)	Dibenz(a,h)anthracene	16.45	278	3606410	46447.1956729	ppb	95
94)	Benzo(g,h,i)perylene	16.99	276	3210622	44167.3131121	ppb	100

(#) = qualifier out of range (m) = manual integration
0524_09.D S802E24P.M Wed May 25 13:16:46 2016 314 of 332 Page 2

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052416\0524 09.D Vial: 9
Acq On : 24 May 2016 2:13 pm Operator: 280
Sample : STD SVMS 50K PPB 16D25863 Inst : BNAMS2
Misc : 8270 Primary Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 13:16 2016 Quant Results File: S802E24P.RES

Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:14:05 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052416\0524 10.D Vial: 10
Acq On : 24 May 2016 2:38 pm Operator: 280
Sample : MSTD TCL 10K1 PPB 16D25867 Inst : BNAMS2
Misc : 8270 TCL Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 13:17 2016 Quant Results File: S802E24P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:04:56 2016
Response via : Initial Calibration
DataAcq Meth : BNA2D

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.27	152	66465	8000.00	ppb	0.00
22) Naphthalene-d8	6.52	136	362783	8000.00	ppb	0.00
40) Acenaphthene-d10	8.39	164	224397	8000.00	ppb	0.00
64) Phenanthrene-d10	10.00	188	444549	8000.00	ppb	0.00
78) Chrysene-d12	12.87	240	493460	8000.00	ppb	0.00
88) Perylene-d12	14.62	264	483691	8000.00	ppb	0.00

System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 74		Recovery =	0.00%#		
7) Phenol-d5	0.00	99	0	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 63		Recovery =	0.00%#		
23) Nitrobenzene-d5	0.00	82	0d	0.0000000	ppb	
Spiked Amount 10.000	Range 28 - 123		Recovery =	0.00%#		
44) 2-Fluorobiphenyl	0.00	172	0	0.0000000	ppb	
Spiked Amount 10.000	Range 35 - 133		Recovery =	0.00%#		
67) 2,4,6-Tribromophenol	0.00	330	0	0.0000000	ppb	
Spiked Amount 20.000	Range 22 - 154		Recovery =	0.00%#		
81) p-Terphenyl-d14	0.00	244	0	0.0000000	ppb	
Spiked Amount 10.000	Range 30 - 148		Recovery =	0.00%#		

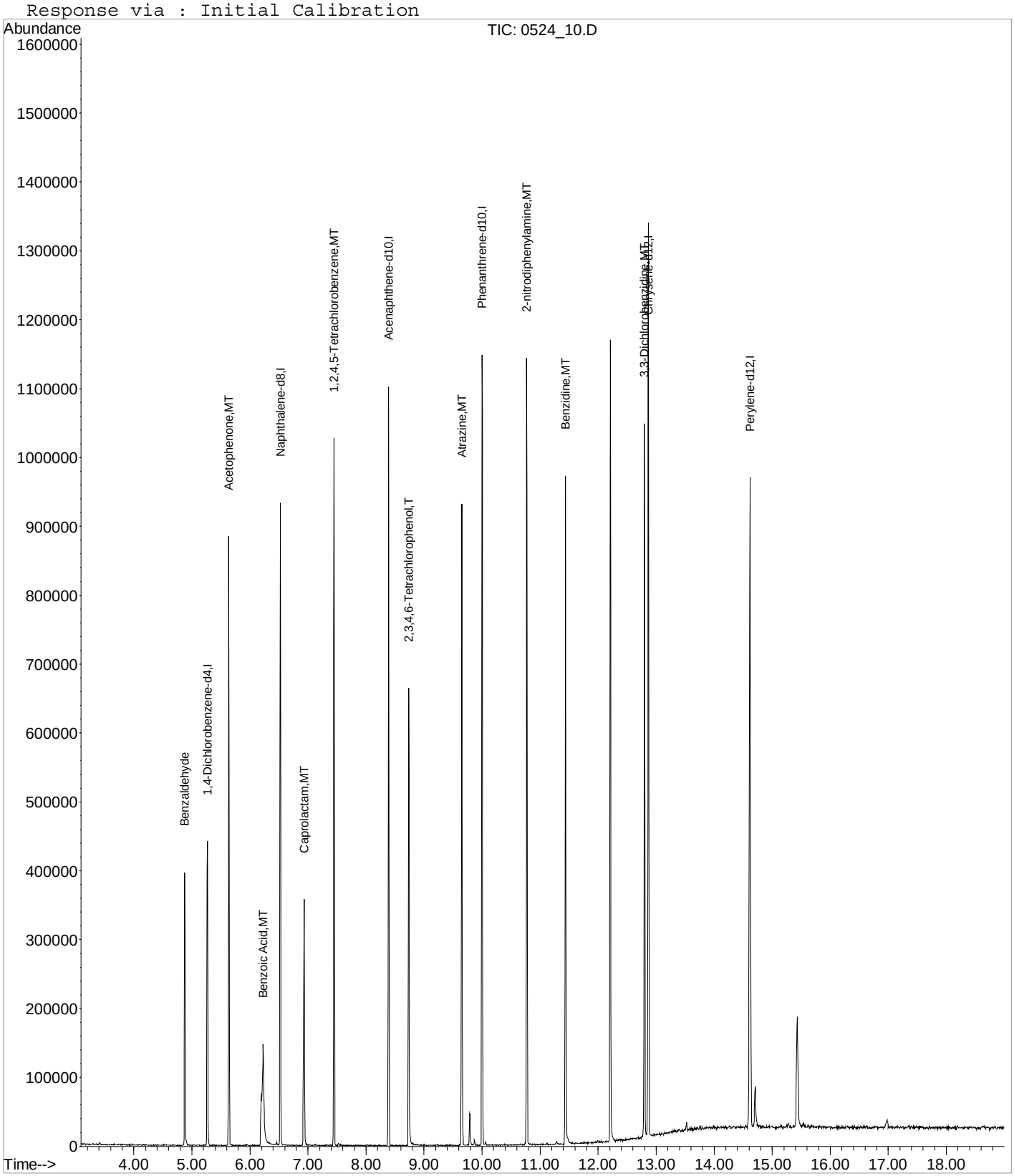
Target Compounds						Qvalue
9) Benzaldehyde	4.88	105	66261	5824.2280715	ppb	100
21) Acetophenone	5.63	105	215921	8709.1717284	ppb	100
30) Benzoic Acid	6.23	105	94037	8481.6297051	ppb	100
35) Caprolactam	6.93	113	46618	10260.6054763	ppb	100
39) 1,2,4,5-Tetrachlorobenzene	7.45	216	167212	11484.2382683	ppb	100
56) 2,3,4,6-Tetrachlorophenol	8.74	232	81237	11818.8705262	ppb	100
63) Atrazine	9.65	200	113985	10473.2732654	ppb	100
76) 2-nitrodiphenylamine	10.77	167	160787	9047.2607512	ppb #	100
79) Benzidine	11.44	184	364836	6534.3330200	ppb	100
83) 3,3-Dichlorobenzidine	12.80	252	216472	9110.9125357	ppb	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052416\0524 10.D Vial: 10
Acq On : 24 May 2016 2:38 pm Operator: 280
Sample : MSTD TCL 10K1 PPB 16D25867 Inst : BNAMS2
Misc : 8270 TCL Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 13:17 2016 Quant Results File: S802E24P.RES

Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:16:53 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052416\0524 11.D Vial: 11
Acq On : 24 May 2016 3:03 pm Operator: 280
Sample : STD TCL 1K1 PPB 16D25867 Inst : BNAMS2
Misc : 8270 TCL Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 13:18 2016 Quant Results File: S802E24P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:04:56 2016
Response via : Initial Calibration
DataAcq Meth : BNA2D

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.27	152	65335	8000.00	ppb	0.00
22) Naphthalene-d8	6.52	136	357421	8000.00	ppb	0.00
40) Acenaphthene-d10	8.39	164	226138	8000.00	ppb	0.00
64) Phenanthrene-d10	10.00	188	448846	8000.00	ppb	0.00
78) Chrysene-d12	12.86	240	496489	8000.00	ppb	0.00
88) Perylene-d12	14.62	264	486605	8000.00	ppb	0.00

System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0d	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 74		Recovery =	0.00%#		
7) Phenol-d5	0.00	99	0d	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 63		Recovery =	0.00%#		
23) Nitrobenzene-d5	0.00	82	0d	0.0000000	ppb	
Spiked Amount 10.000	Range 28 - 123		Recovery =	0.00%#		
44) 2-Fluorobiphenyl	0.00	172	0d	0.0000000	ppb	
Spiked Amount 10.000	Range 35 - 133		Recovery =	0.00%#		
67) 2,4,6-Tribromophenol	0.00	330	0	0.0000000	ppb	
Spiked Amount 20.000	Range 22 - 154		Recovery =	0.00%#		
81) p-Terphenyl-d14	0.00	244	0d	0.0000000	ppb	
Spiked Amount 10.000	Range 30 - 148		Recovery =	0.00%#		

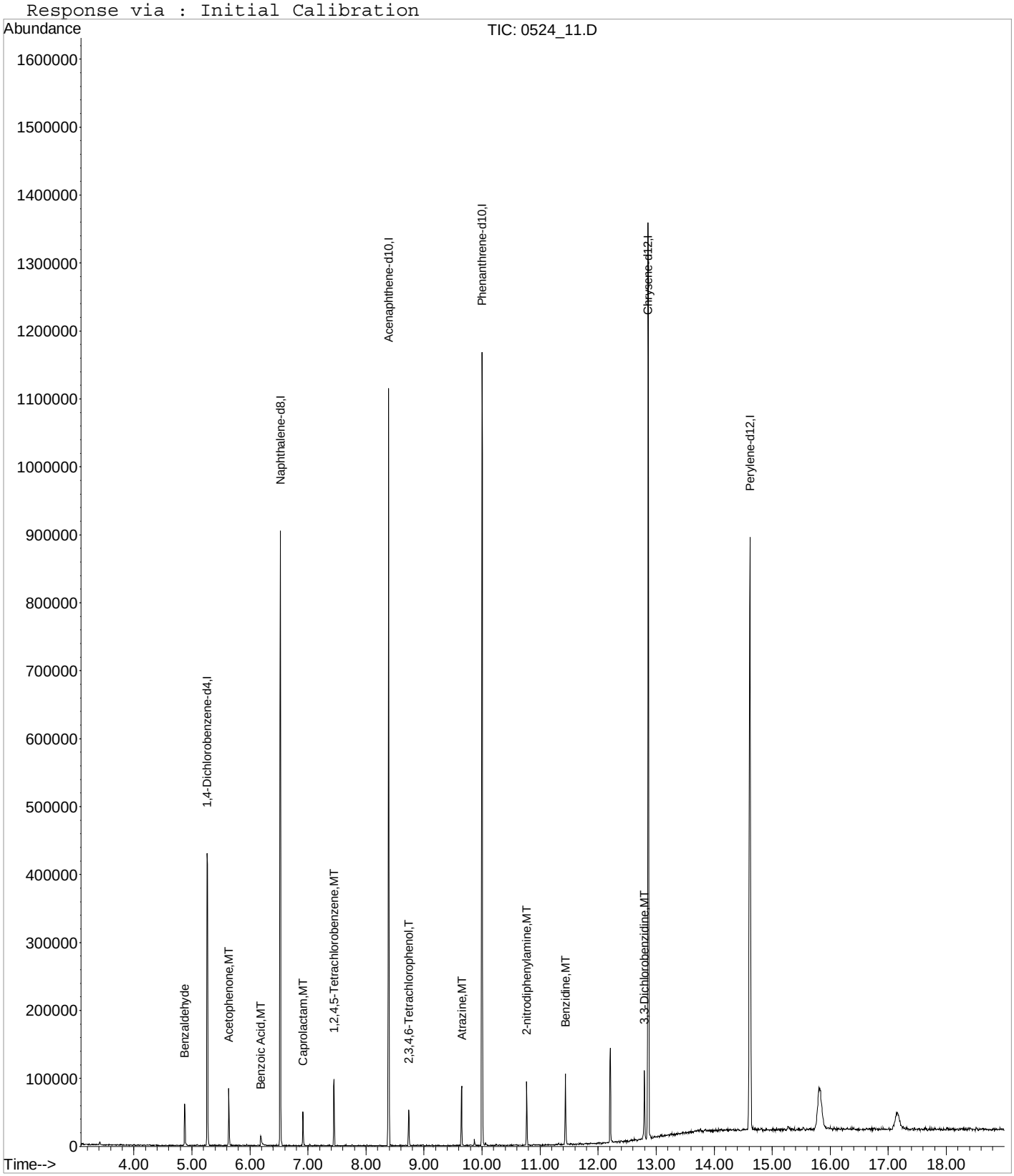
Target Compounds						Qvalue
9) Benzaldehyde	4.88	105	10702	956.9570529	ppb	96
21) Acetophenone	5.63	105	20493	840.8811652	ppb	97
30) Benzoic Acid	6.19	105	5995	858.2063916	ppb	95
35) Caprolactam	6.92	113	4724	1055.3489997	ppb	97
39) 1,2,4,5-Tetrachlorobenzene	7.45	216	17248	1202.3761656	ppb	96
56) 2,3,4,6-Tetrachlorophenol	8.74	232	6668	962.6339823	ppb	93
63) Atrazine	9.65	200	11231	1023.9922233	ppb	96
76) 2-nitrodiphenylamine	10.77	167	12436	693.0573394	ppb #	100
79) Benzidine	11.44	184	42515	756.8121327	ppb	99
83) 3,3-Dichlorobenzidine	12.80	252	21041	880.1746327	ppb	97

(#) = qualifier out of range (m) = manual integration
0524_11.D S802E24P.M Wed May 25 13:18:26 2016 318 of 332 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052416\0524 11.D Vial: 11
Acq On : 24 May 2016 3:03 pm Operator: 280
Sample : STD TCL 1K1 PPB 16D25867 Inst : BNAMS2
Misc : 8270 TCL Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 13:18 2016 Quant Results File: S802E24P.RES

Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:17:46 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052416\0524 12.D Vial: 12
Acq On : 24 May 2016 3:28 pm Operator: 280
Sample : STD TCL 4K1 PPB 16D25867 Inst : BNAMS2
Misc : 8270 TCL Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 13:19 2016 Quant Results File: S802E24P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:04:56 2016
Response via : Initial Calibration
DataAcq Meth : BNA2D

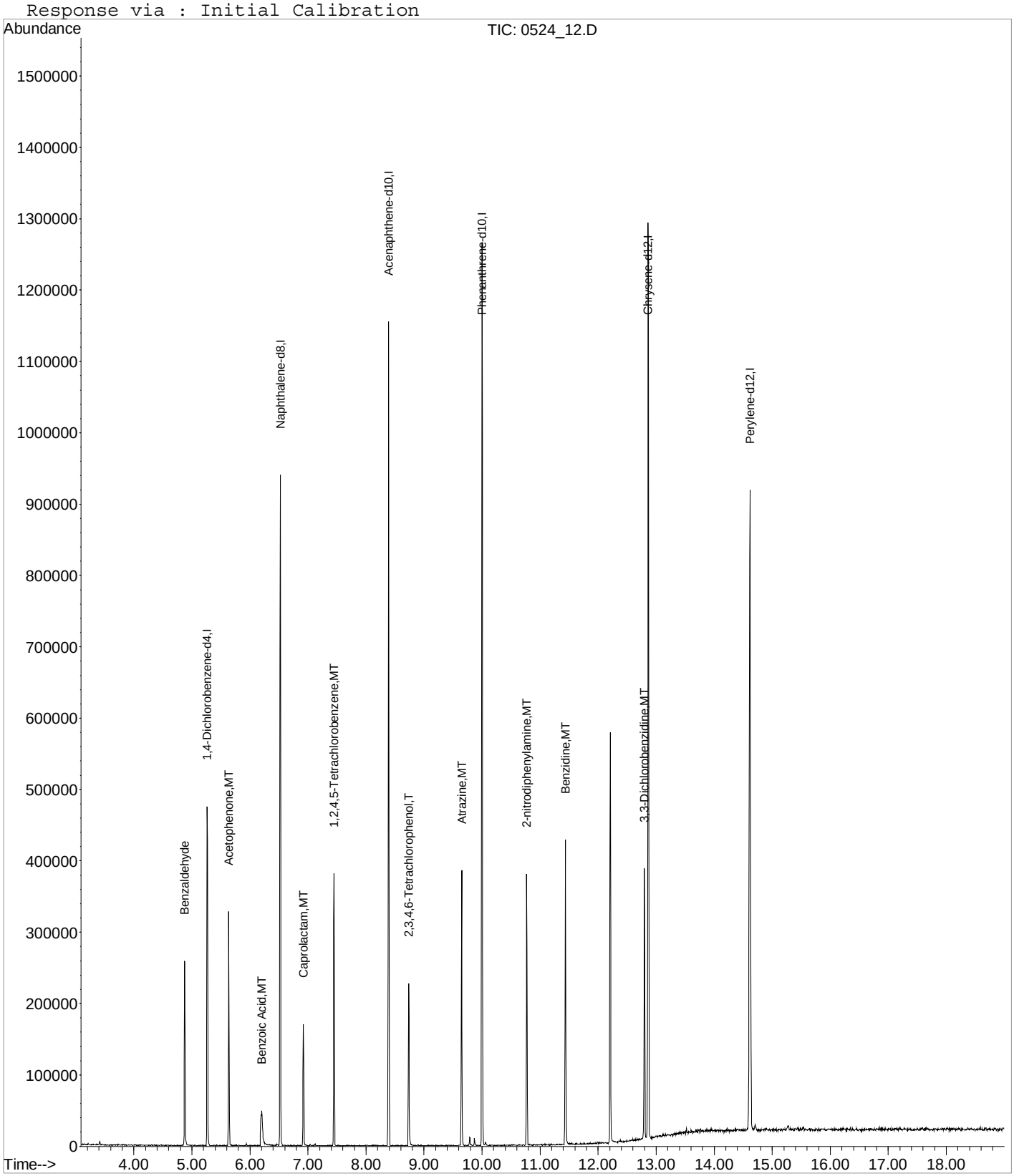
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.26	152	68628	8000.00	ppb	0.00
22) Naphthalene-d8	6.52	136	375756	8000.00	ppb	0.00
40) Acenaphthene-d10	8.39	164	241029	8000.00	ppb	0.00
64) Phenanthrene-d10	10.00	188	465195	8000.00	ppb	0.00
78) Chrysene-d12	12.87	240	526426	8000.00	ppb	0.00
88) Perylene-d12	14.62	264	491387	8000.00	ppb	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 74		Recovery =	0.00%#		
7) Phenol-d5	0.00	99	0	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 63		Recovery =	0.00%#		
23) Nitrobenzene-d5	0.00	82	0d	0.0000000	ppb	
Spiked Amount 10.000	Range 28 - 123		Recovery =	0.00%#		
44) 2-Fluorobiphenyl	0.00	172	0	0.0000000	ppb	
Spiked Amount 10.000	Range 35 - 133		Recovery =	0.00%#		
67) 2,4,6-Tribromophenol	0.00	330	0	0.0000000	ppb	
Spiked Amount 20.000	Range 22 - 154		Recovery =	0.00%#		
81) p-Terphenyl-d14	0.00	244	0	0.0000000	ppb	
Spiked Amount 10.000	Range 30 - 148		Recovery =	0.00%#		
Target Compounds						Qvalue
9) Benzaldehyde	4.88	105	40565	3453.2143273	ppb	97
21) Acetophenone	5.63	105	81119	3168.8101896	ppb	97
30) Benzoic Acid	6.20	105	28520	2787.7115137	ppb	98
35) Caprolactam	6.92	113	16806	3571.2866854	ppb	97
39) 1,2,4,5-Tetrachlorobenzene	7.45	216	63428	4205.8790007	ppb	99
56) 2,3,4,6-Tetrachlorophenol	8.74	232	28592	3872.7046838	ppb	97
63) Atrazine	9.65	200	43647	3733.6781456	ppb	97
76) 2-nitrodiphenylamine	10.77	167	51524	2770.5139815	ppb #	100
79) Benzidine	11.43	184	166462	2794.6878750	ppb	100
83) 3,3-Dichlorobenzidine	12.80	252	80397	3171.8644167	ppb	98

(#) = qualifier out of range (m) = manual integration
0524_12.D S802E24P.M Wed May 25 13:19:07 2016 320 of 332 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052416\0524 12.D Vial: 12
Acq On : 24 May 2016 3:28 pm Operator: 280
Sample : STD TCL 4K1 PPB 16D25867 Inst : BNAMS2
Misc : 8270 TCL Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 13:19 2016 Quant Results File: S802E24P.RES

Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:18:33 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052416\0524 13.D Vial: 13
Acq On : 24 May 2016 3:53 pm Operator: 280
Sample : STD TCL 20K1 PPB 16D25867 Inst : BNAMS2
Misc : 8270 TCL Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 13:19 2016 Quant Results File: S802E24P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:04:56 2016
Response via : Initial Calibration
DataAcq Meth : BNA2D

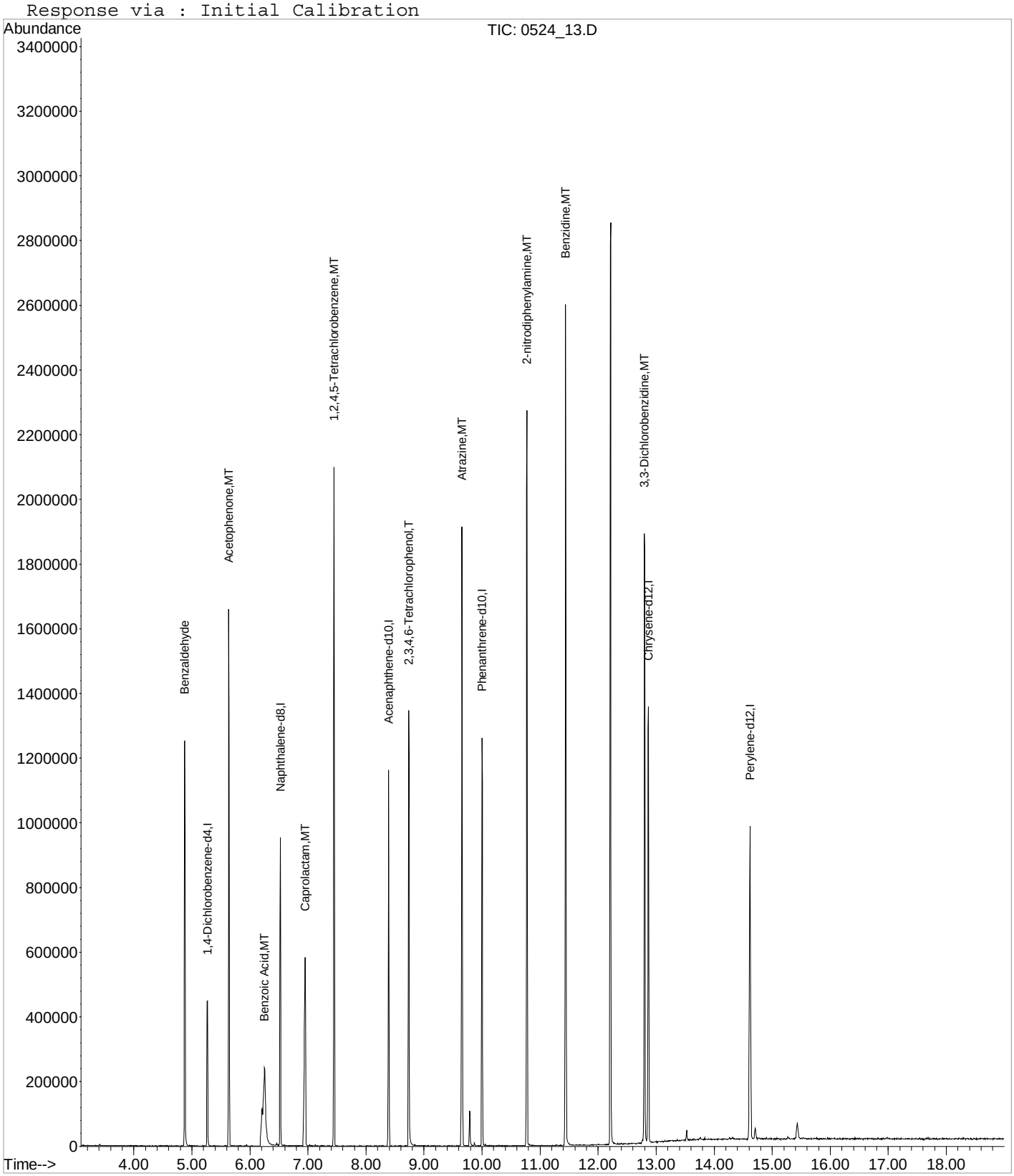
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.27	152	67521	8000.00	ppb		0.00
22) Naphthalene-d8	6.52	136	373930	8000.00	ppb		0.00
40) Acenaphthene-d10	8.39	164	239941	8000.00	ppb		0.00
64) Phenanthrene-d10	10.00	188	486491	8000.00	ppb		0.00
78) Chrysene-d12	12.87	240	523844	8000.00	ppb		0.00
88) Perylene-d12	14.62	264	508129	8000.00	ppb		0.00
System Monitoring Compounds							
4) 2-Fluorophenol	0.00	112	0	0.0000000	ppb		
Spiked Amount 20.000	Range 10 - 74		Recovery =	0.00%#			
7) Phenol-d5	0.00	99	0d	0.0000000	ppb		
Spiked Amount 20.000	Range 10 - 63		Recovery =	0.00%#			
23) Nitrobenzene-d5	0.00	82	0d	0.0000000	ppb		
Spiked Amount 10.000	Range 28 - 123		Recovery =	0.00%#			
44) 2-Fluorobiphenyl	0.00	172	0	0.0000000	ppb		
Spiked Amount 10.000	Range 35 - 133		Recovery =	0.00%#			
67) 2,4,6-Tribromophenol	0.00	330	0	0.0000000	ppb		
Spiked Amount 20.000	Range 22 - 154		Recovery =	0.00%#			
81) p-Terphenyl-d14	0.00	244	0	0.0000000	ppb		
Spiked Amount 10.000	Range 30 - 148		Recovery =	0.00%#			
Target Compounds							Qvalue
9) Benzaldehyde	4.88	105	212208	18360.9979887	ppb		99
21) Acetophenone	5.63	105	431671	17139.1384889	ppb		99
30) Benzoic Acid	6.25	105	202245	16531.4838469	ppb		100
35) Caprolactam	6.95	113	90871	19404.4473039	ppb		100
39) 1,2,4,5-Tetrachlorobenzene	7.45	216	332674	22167.1689520	ppb		99
56) 2,3,4,6-Tetrachlorophenol	8.74	232	166575	22664.4143823	ppb		87
63) Atrazine	9.65	200	238507	20495.0245707	ppb		98
76) 2-nitrodiphenylamine	10.77	167	328906	16911.5260381	ppb	#	100
79) Benzidine	11.44	184	971660	16393.3565186	ppb		100
83) 3,3-Dichlorobenzidine	12.80	252	450442	17858.6656453	ppb		99

(#) = qualifier out of range (m) = manual integration
0524_13.D S802E24P.M Wed May 25 13:19:47 2016 322 of 332 Page 1

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052416\0524 13.D Vial: 13
Acq On : 24 May 2016 3:53 pm Operator: 280
Sample : STD TCL 20K1 PPB 16D25867 Inst : BNAMS2
Misc : 8270 TCL Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 13:19 2016 Quant Results File: S802E24P.RES

Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:19:12 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052416\0524 14.D Vial: 14
Acq On : 24 May 2016 4:18 pm Operator: 280
Sample : STD TCL 30K1 PPB 16D25867 Inst : BNAMS2
Misc : 8270 TCL Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 13:20 2016 Quant Results File: S802E24P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:04:56 2016
Response via : Initial Calibration
DataAcq Meth : BNA2D

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.27	152	69421	8000.00	ppb	0.00
22) Naphthalene-d8	6.52	136	376006	8000.00	ppb	0.00
40) Acenaphthene-d10	8.39	164	242511	8000.00	ppb	0.00
64) Phenanthrene-d10	10.00	188	474208	8000.00	ppb	0.00
78) Chrysene-d12	12.87	240	526507	8000.00	ppb	0.00
88) Perylene-d12	14.62	264	500772	8000.00	ppb	0.00

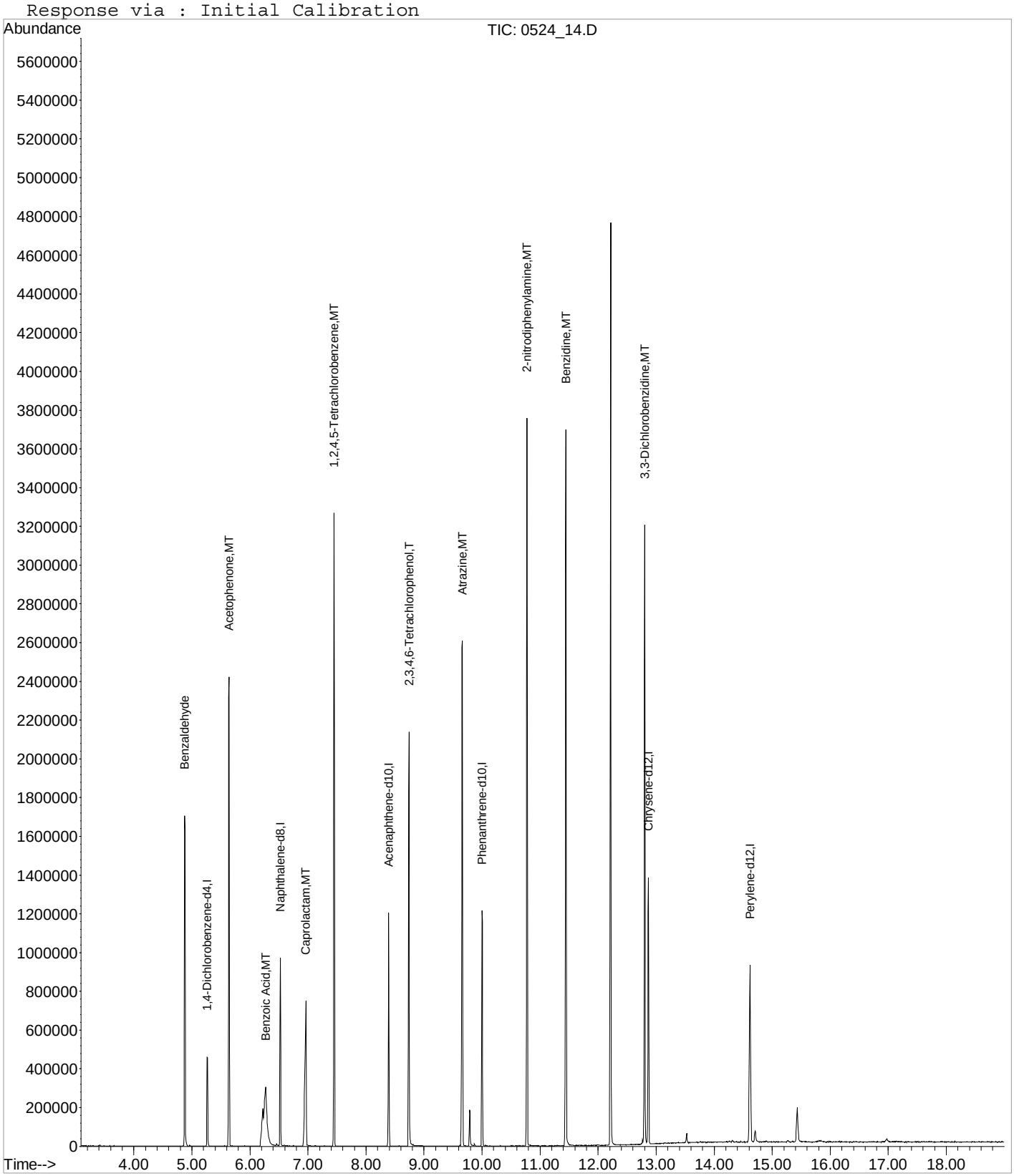
System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 74		Recovery =	0.00%#		
7) Phenol-d5	0.00	99	0	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 63		Recovery =	0.00%#		
23) Nitrobenzene-d5	0.00	82	0d	0.0000000	ppb	
Spiked Amount 10.000	Range 28 - 123		Recovery =	0.00%#		
44) 2-Fluorobiphenyl	0.00	172	0	0.0000000	ppb	
Spiked Amount 10.000	Range 35 - 133		Recovery =	0.00%#		
67) 2,4,6-Tribromophenol	0.00	330	0	0.0000000	ppb	
Spiked Amount 20.000	Range 22 - 154		Recovery =	0.00%#		
81) p-Terphenyl-d14	0.00	244	0d	0.0000000	ppb	
Spiked Amount 10.000	Range 30 - 148		Recovery =	0.00%#		

Target Compounds						Qvalue
9) Benzaldehyde	4.88	105	305996	25751.2479451	ppb	99
21) Acetophenone	5.64	105	671580	25934.7382450	ppb	99
30) Benzoic Acid	6.27	105	335664	25674.0167516	ppb	99
35) Caprolactam	6.97	113	139049	29528.3632135	ppb	99
39) 1,2,4,5-Tetrachlorobenzene	7.45	216	519935	34453.7072417	ppb	99
56) 2,3,4,6-Tetrachlorophenol	8.74	232	259807	34975.0666055	ppb	89
63) Atrazine	9.66	200	366717	31178.2244189	ppb	99
76) 2-nitrodiphenylamine	10.77	167	514800	27155.3543775	ppb #	100
79) Benzidine	11.44	184	1429515	23996.0689102	ppb	99
83) 3,3-Dichlorobenzidine	12.80	252	686662	27086.3799870	ppb	99

(#) = qualifier out of range (m) = manual integration
0524_14.D S802E24P.M Wed May 25 13:20:26 2016 324 of 332 Page 1

Data File : C:\MSDCHEM\1\DATA\052416\0524 14.D Vial: 14
Acq On : 24 May 2016 4:18 pm Operator: 280
Sample : STD TCL 30K1 PPB 16D25867 Inst : BNAMS2
Misc : 8270 TCL Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 13:20 2016 Quant Results File: S802E24P.RES

Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:19:51 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052416\0524 15.D Vial: 15
Acq On : 24 May 2016 4:43 pm Operator: 280
Sample : STD TCL 40K1 PPB 16D25867 Inst : BNAMS2
Misc : 8270 TCL Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 13:21 2016 Quant Results File: S802E24P.RES

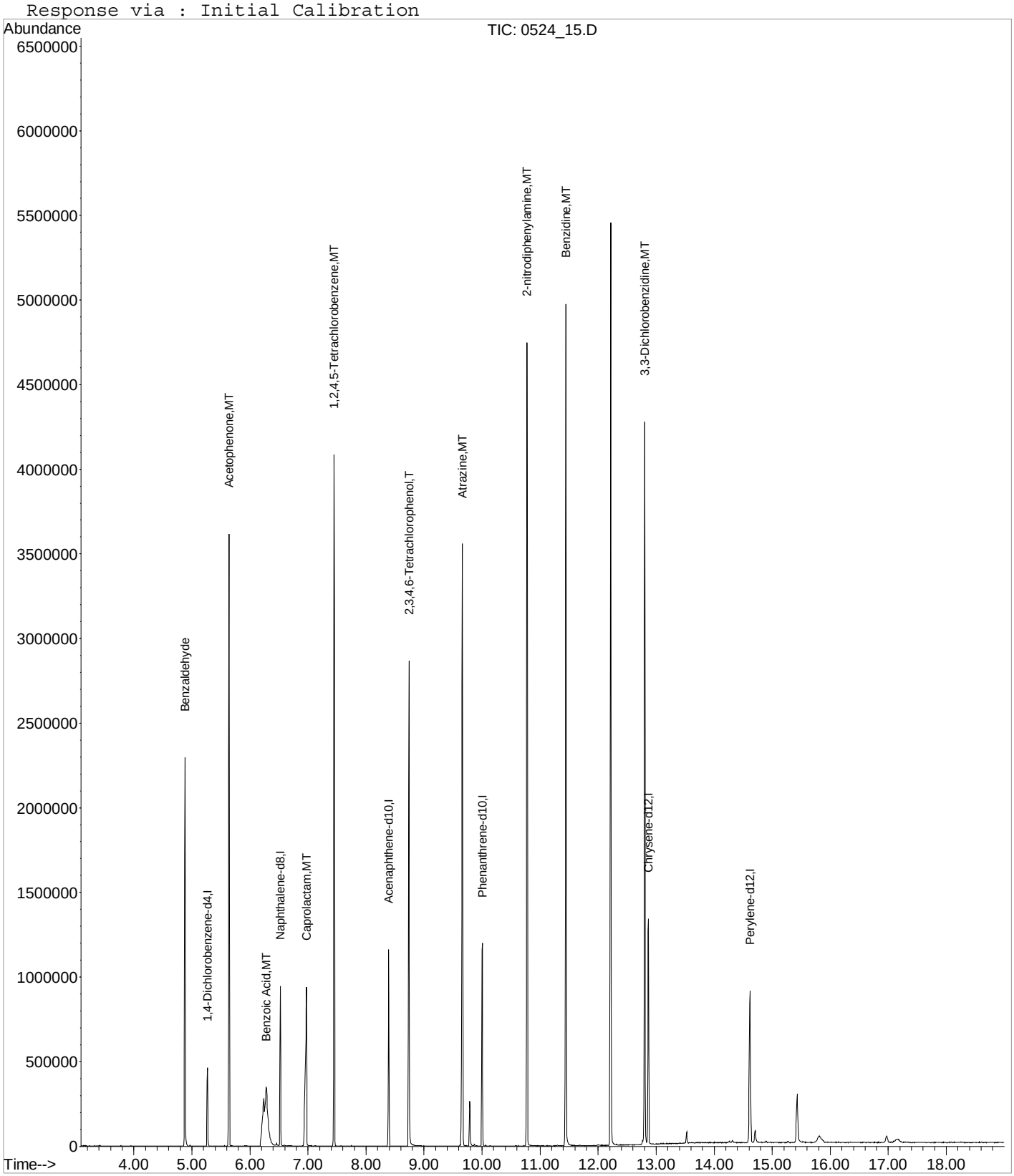
Quant Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:04:56 2016
Response via : Initial Calibration
DataAcq Meth : BNA2D

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.27	152	66625	8000.00	ppb		0.00
22) Naphthalene-d8	6.52	136	372171	8000.00	ppb		0.00
40) Acenaphthene-d10	8.39	164	237899	8000.00	ppb		0.00
64) Phenanthrene-d10	10.00	188	472014	8000.00	ppb		0.00
78) Chrysene-d12	12.87	240	523643	8000.00	ppb		0.00
88) Perylene-d12	14.62	264	509804	8000.00	ppb		0.00
System Monitoring Compounds							
4) 2-Fluorophenol	0.00	112	0	0.0000000	ppb		
Spiked Amount 20.000	Range 10 - 74		Recovery =	0.00%#			
7) Phenol-d5	0.00	99	0	0.0000000	ppb		
Spiked Amount 20.000	Range 10 - 63		Recovery =	0.00%#			
23) Nitrobenzene-d5	0.00	82	0d	0.0000000	ppb		
Spiked Amount 10.000	Range 28 - 123		Recovery =	0.00%#			
44) 2-Fluorobiphenyl	0.00	172	0	0.0000000	ppb		
Spiked Amount 10.000	Range 35 - 133		Recovery =	0.00%#			
67) 2,4,6-Tribromophenol	0.00	330	0	0.0000000	ppb		
Spiked Amount 20.000	Range 22 - 154		Recovery =	0.00%#			
81) p-Terphenyl-d14	0.00	244	0d	0.0000000	ppb		
Spiked Amount 10.000	Range 30 - 148		Recovery =	0.00%#			
Target Compounds							Qvalue
9) Benzaldehyde	4.88	105	382081	33503.6108898	ppb		99
21) Acetophenone	5.64	105	882483	35509.4631290	ppb		99
30) Benzoic Acid	6.29	105	442741	32779.0684531	ppb		100
35) Caprolactam	6.97	113	172137	36931.5878198	ppb		99
39) 1,2,4,5-Tetrachlorobenzene	7.45	216	692834	46384.0155322	ppb		98
56) 2,3,4,6-Tetrachlorophenol	8.74	232	337467	46310.3260620	ppb		92
63) Atrazine	9.66	200	483205	41878.4482490	ppb		98
76) 2-nitrodiphenylamine	10.77	167	699796	37085.3505480	ppb	#	100
79) Benzidine	11.44	184	1862773	31439.8282809	ppb		99
83) 3,3-Dichlorobenzidine	12.80	252	939739	37272.1161434	ppb		99

(#) = qualifier out of range (m) = manual integration
0524_15.D S802E24P.M Wed May 25 13:21:06 2016 326 of 332 Page 1

Data File : C:\MSDCHEM\1\DATA\052416\0524 15.D Vial: 15
Acq On : 24 May 2016 4:43 pm Operator: 280
Sample : STD TCL 40K1 PPB 16D25867 Inst : BNAMS2
Misc : 8270 TCL Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 13:21 2016 Quant Results File: S802E24P.RES

Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:20:31 2016
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052416\0524 16.D Vial: 16
Acq On : 24 May 2016 5:08 pm Operator: 280
Sample : STD TCL 50K1 PPB 16D25867 Inst : BNAMS2
Misc : 8270 TCL Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 13:21 2016 Quant Results File: S802E24P.RES

Quant Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:04:56 2016
Response via : Initial Calibration
DataAcq Meth : BNA2D

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	5.27	152	68843	8000.00	ppb	0.00
22) Naphthalene-d8	6.52	136	371314	8000.00	ppb	0.00
40) Acenaphthene-d10	8.39	164	234180	8000.00	ppb	0.00
64) Phenanthrene-d10	10.00	188	477920	8000.00	ppb	0.00
78) Chrysene-d12	12.87	240	498959	8000.00	ppb	0.00
88) Perylene-d12	14.62	264	513136	8000.00	ppb	0.00

System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0d	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 74		Recovery =	0.00%#		
7) Phenol-d5	0.00	99	0	0.0000000	ppb	
Spiked Amount 20.000	Range 10 - 63		Recovery =	0.00%#		
23) Nitrobenzene-d5	0.00	82	0d	0.0000000	ppb	
Spiked Amount 10.000	Range 28 - 123		Recovery =	0.00%#		
44) 2-Fluorobiphenyl	0.00	172	0d	0.0000000	ppb	
Spiked Amount 10.000	Range 35 - 133		Recovery =	0.00%#		
67) 2,4,6-Tribromophenol	0.00	330	0	0.0000000	ppb	
Spiked Amount 20.000	Range 22 - 154		Recovery =	0.00%#		
81) p-Terphenyl-d14	0.00	244	0	0.0000000	ppb	
Spiked Amount 10.000	Range 30 - 148		Recovery =	0.00%#		

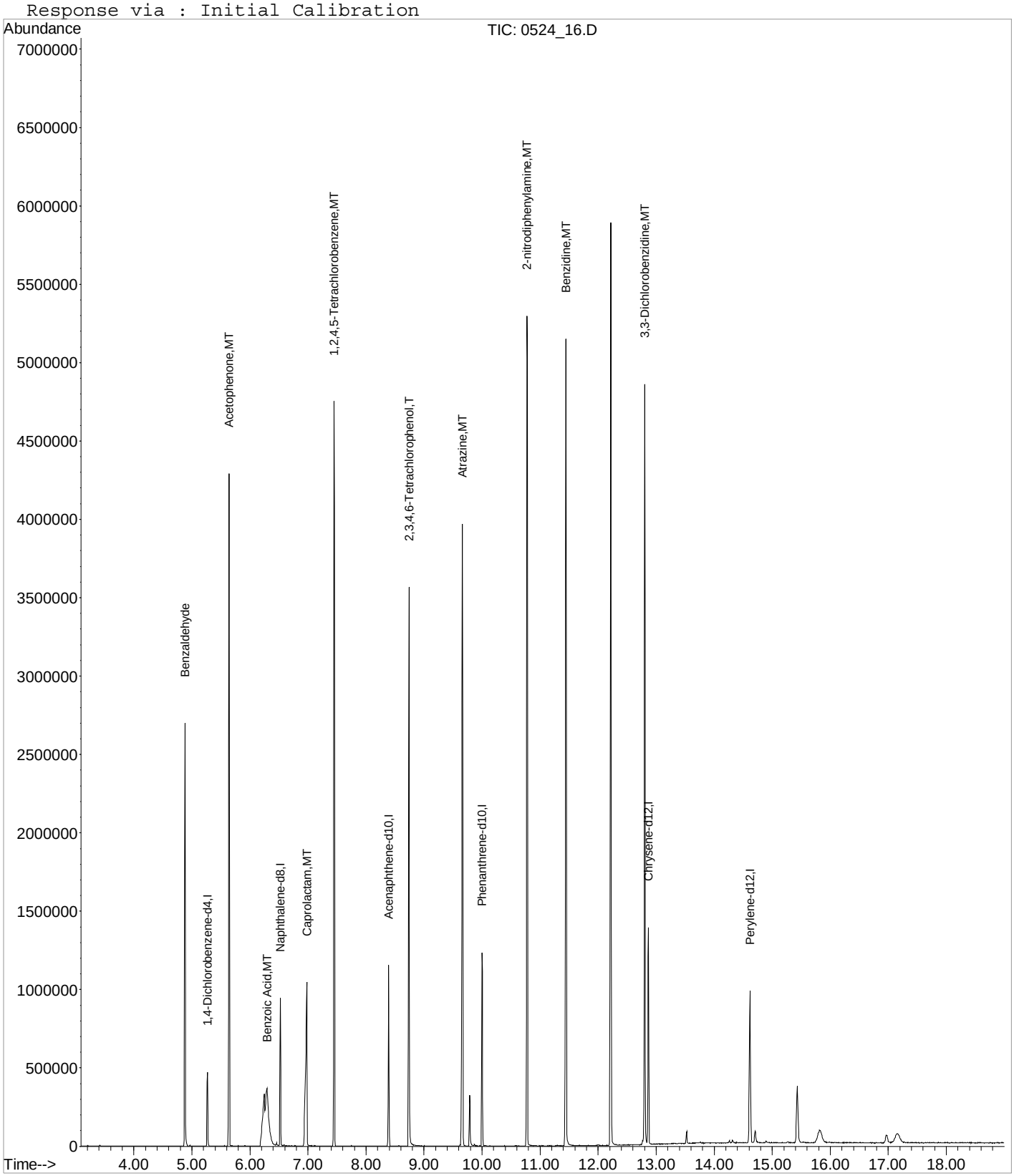
Target Compounds						Qvalue
9) Benzaldehyde	4.88	105	439019	37256.0600635	ppb	99
21) Acetophenone	5.64	105	1073521	41804.7602612	ppb	99
30) Benzoic Acid	6.29	105	537052	38560.3417535	ppb	98
35) Caprolactam	6.98	113	209926	45143.0799375	ppb	98
39) 1,2,4,5-Tetrachlorobenzene	7.45	216	828350	55584.5678130	ppb	99
56) 2,3,4,6-Tetrachlorophenol	8.74	232	406986	56737.3193501	ppb	93
63) Atrazine	9.66	200	577759	50868.4723995	ppb	98
76) 2-nitrodiphenylamine	10.77	167	832121	43552.9011814	ppb #	100
79) Benzidine	11.44	184	2159572	38252.3711163	ppb	99
83) 3,3-Dichlorobenzidine	12.80	252	1086174	45211.2635106	ppb	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\052416\0524 16.D Vial: 16
Acq On : 24 May 2016 5:08 pm Operator: 280
Sample : STD TCL 50K1 PPB 16D25867 Inst : BNAMS2
Misc : 8270 TCL Calibration ISTD 16D22768 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: May 25 13:21 2016 Quant Results File: S802E24P.RES

Method : C:\MSDCHEM\1\METHODS\S802E24P.M (RTE Integrator)
Title : 8270 BNA
Last Update : Wed May 25 13:21:12 2016
Response via : Initial Calibration



Company Name/Address:
Weston Solutions
1435 Garrison St., Ste. 100
Lakewood, CO 80215

Billing Information:

Report to: Moira Pryhoda

Email To: moira.pryhoda@WestonSolutions.

Project Description: Cowboy Timber

City/State Collected: Manderson, WY

Phone: 303-729-6146
Fax:

Client Project # 20108.016.001.0345.00

Lab Project #

Collected by (print): Eric Sandusky

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
X Three Day 25%

Date Results Needed

Email? ___No ✓Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOC's (1) 4 oz Soil Jar	SVOC (1)4oz. Soil Jar	Rem./Contaminant	Sample # (lab only)
CTSO-E5D3-~~20160523~~ 20160525	Comp	SS		5/23/16	1442	1		X		-01
CTSO-C5D4-20160525		SS		5/25/16	1640	1		X		02
CTSO-B4D4-20160525		SS		5/25/16	1046	1		X		03
CTSO-D5D4-20160525		SS		5/25/16	1310	1		X		04
CTSO-DP1e3-20160524		SS		5/24/16	0730	1		X		05
CTSO-C4D4-20160525		SS		5/25/16	1043	1		X		06

Chain of Custody Page ___ of ___

ESC LAB SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L838049

C131

Acctnum: WESSOLLCO
Template:
Prelogin:
TSR:
PB:
Shipped Via:

* Matrix: **SS** - Soil **GW** - Groundwater **WW** - WasteWater **DW** - Drinking Water **OT** - Other_____

Remarks:

pH _____ Temp _____
Flow _____ Other _____

6711 0332 9941

Hold #

Condition: (lab use only) TW7
OK

COC Seal Intact: ___Y ___N ___NA

pH Checked: NCF:

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	5/26	PM	FedEx
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ☐ _____

Temp: 2.7 °C Bottles Received: 6=402

Date: 5-27-16 Time: 9:00

ESC Lab Sciences

Login Confirmation Report

May 27, 2016 - 11:23

YOUR LAB OF CHOICE

Account: WESSOLLCO - Weston Solutions - CO

Login #	**L838049**	Receive Date: 05/27/2016	TSR: Shane Gambill
Template #		Entered: 05/27/2016	By: Andy Vann
Report to:	Moira Pryhoda	Lab Project Number: WESSOLLCO-COWBOY	**Report MDL: N**
	1435 Garrison St., Ste 100	Client Project # 20408.012.001.0345.0	**HDC: N**
	Denver, CO 80215	Project Description: Cowboy Timber	PO #
		Collected By: Eric Sandusky	PO Req: N
Phone:	(303) 729-6146 FAX:	Reg. State: WY	Terms: 45
Email:	moira.pryhoda@westonsolutions.com		Quote #

Login Comments: WESSOLLCO-REG8 - Level 4 dp @ 20%

Matrix	Test	Sample ID	Collection Date	Design ID	Method	Unit Price
L838049-01		**CTSO-E5D3-20160523**	**05/23/2016 14:42** Sample Description: Cowboy Timber	**Site:**	**Est. Due Date*: 06/02/2016 - R4**	
SS	SV8270	SVOCs		DEFAULT	8270C	$ 250.00
Misc	DISPOSAL	Sample Disposal Charge				$ 5.00
Misc	ENERGY	Energy Surcharge				$ 12.00
Misc	HARDCOPY	Hardcopy Report Charge				$ 0.00
Misc	SHIPPING	Inbound Transport Charge				$ 0.00
L838049-02		**CTSO-C5D4-20160525**	**05/25/2016 16:40** Sample Description: Cowboy Timber	**Site:**	**Est. Due Date*: 06/02/2016 - R4**	
SS	SV8270	SVOCs		DEFAULT	8270C	$ 250.00
L838049-03		**CTSO-B4D4-20160525**	**05/25/2016 10:46** Sample Description: Cowboy Timber	**Site:**	**Est. Due Date*: 06/02/2016 - R4**	
SS	SV8270	SVOCs		DEFAULT	8270C	$ 250.00
L838049-04		**CTSO-B5D4-20160525**	**05/25/2016 13:10** Sample Description: Cowboy Timber	**Site:**	**Est. Due Date*: 06/02/2016 - R4**	
SS	SV8270	SVOCs		DEFAULT	8270C	$ 250.00
L838049-05		**CTSO-DPILE3-20160524**	**05/24/2016 07:30** Sample Description: Cowboy Timber	**Site:**	**Est. Due Date*: 06/02/2016 - R4**	
SS	SV8270	SVOCs		DEFAULT	8270C	$ 250.00
L838049-06		**CTSO-C404-20160525**	**05/25/2016 10:43** Sample Description: Cowboy Timber	**Site:**	**Est. Due Date*: 06/02/2016 - R4**	
SS	SV8270	SVOCs		DEFAULT	8270C	$ 250.00

Information Only - Not An Invoice - Do Not Pay! Total: $ 1,517.00

*** Due Date listed is an estimate based on average workloads. Please communicate required dates to your TSR.**