



July 28, 2020

Mr. Terry Tanner
On-Scene Coordinator
U.S. Environmental Protection Agency, Region 4
61 Forsyth Street, SW, 11th Floor
Atlanta, Georgia 30303

**Subject: Emergency Response Letter Report
 Able Contracting Fire
 Ridgeland, Jasper County, South Carolina
 Contract Number (No.): 68HE0519D0006
 TO/TOLIN No.: 68HE0419F0082/82-001**

Dear Mr. Tanner:

The Tetra Tech, Inc. (Tetra Tech) Superfund Technical Assessment and Response Team (START) submits this emergency response (ER) letter report to summarize activities from July 25 through October 15, 2019, associated with the fire at the Able Contracting, Inc. Recycling Center in Ridgeland, Jasper County, South Carolina (the site). This report includes four enclosures and one attachment. Enclosure 1 contains figures showing locations of the site and sampling stations. Enclosure 2 contains the Viper air monitoring and laboratory analytical summary tables. Enclosure 3 is a photographic log of response activities. Enclosure 4 contains a copy of Tetra Tech START logbook notes. Attachment 1 includes the laboratory analytical data packages. This report covers work under both the START IV and START V contracts.

BACKGROUND

At the site, 472 Schinger Avenue in Ridgeland, South Carolina, are a construction debris recycling center and stockpiled material. Beginning in June 2019, local firefighters regularly responded to flareups of a smoldering fire at the stockpile. In the immediate vicinity of the site are undeveloped property to the north and west, industrial property to the south, and residential and commercial properties to the east (see Figures 1 and 2). Okatie Elementary is a school approximately 4,400 feet east of the site. Sun City Hilton Head is a residential community approximately 2,500 feet southwest of the site. Brook Mill Apartments is a residential apartment community approximately 1,200 feet northwest of the site.

The recycling center received construction and demolition debris, removed recyclable materials from the debris, and shipped unrecyclable material to landfills. The site encompasses approximately 4 acres and includes an estimated 115,136 tons of stockpiled material.

The stockpiled material ignited in early July 2019, and Able Contracting personnel and local fire departments worked to extinguish the fire throughout the month. On July 23, lightning damaged a large water supply pump used by the facility for firefighting. Smoke from the smoldering fire increased over the next several days. Because of concerns regarding potential health hazards associated with the smoke produced by the fire, the South Carolina Department of Health and Environmental Control (SCDHEC) requested assistance from the U.S. Environmental Protection Agency (EPA), which subsequently tasked Tetra Tech START to conduct air monitoring and air sampling.

RESPONSE ACTIVITIES

Tetra Tech START provided emergency response support including air monitoring, air sampling, surface water sampling, groundwater sampling, and documentation of response activities over several mobilization events. The following subsections discuss activities during each mobilization.

Initial Mobilization (July 25 to 28, 2019):

On July 25, 2019, EPA On-Scene Coordinator (OSC), Jordan Garrard and Tetra Tech START mobilized to the site to select potential air monitoring and sampling locations. EPA tasked Tetra Tech START to conduct air monitoring, air sampling, and documentation of site conditions and response activities.

From July 27 through 28, 2019, Tetra Tech START conducted an initial round of ambient air sampling that involved collections of 8-hour air samples initiated during early morning and afternoon hours. Tetra Tech START collected two samples at the southwest and southeast corners of the site, and one background sample at an off-site location (see Figure 3 in Enclosure 1). Tetra Tech START requested the following laboratory analyses of air samples:

- Formaldehyde via EPA Method Toxic Organics (TO) 11A (sample collection in silica gel sorbent tubes)
- Volatile organic compounds (VOC) via EPA Method TO-15 (sample collection in 6-liter Summa® canisters)
- Semivolatile organic compounds (SVOC) via EPA Method 8270D (sample collection in XAD-2 sorbent tubes)
- Target Analyte List (TAL) Metals via EPA Compendium Method IO-3.4 & 3.5 (sample collection in 37-millimeter filter cartridges)
- Phosgene via Occupational Safety and Health Administration (OSHA) Method 61 (sample collection in XAD-2 sorbent tubes)
- Asbestos via National Institute for Occupational Safety and Health (NIOSH) Method 7402 – Transmission Electron Microscopy (TEM) (sample collection in 0.45-micron MCE asbestos cassettes).

Laboratory analytical results indicated presence in all samples, including the background sample, of acrolein at concentrations above the EPA Residential Removal Management Level (RML) of 0.063 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) for residential air.

A summary of all other detected analytes is in Enclosure 2 (“Air Sample Results for July 27 and 28, 2019”). The laboratory data package is in Attachment 1.

On July 28, 2019, Tetra Tech START collected two surface water samples and one groundwater sample. Surface water sampling and analysis were to determine whether runoff from the Site was impacting a neighboring pond. Groundwater sampling and analysis were to determine if water from the fire was infiltrating into groundwater and possibly impacting drinking water supplies. Surface water samples were collected from an on-site ditch in the runoff pathway at the southwest corner of the property, and from a downstream, off-site pond to the north. One groundwater sample was collected from an on-site well at 472 Schinger Avenue.

Laboratory analyses were as follows:

- TAL Metals via EPA Method 6010D (sample collection in 250-milliliter [mL] plastic bottles preserved with nitric acid)
- Mercury via EPA Method 7470D (sample collection in 250-mL plastic bottles preserved with nitric acid)
- VOCs via EPA Method 8260B (sample collection in 40-mL glass vials preserved with hydrochloric acid)
- SVOCs via EPA Method 8270D (sample collection in 1-liter amber glass jars).

Laboratory analytical results from the surface water sample collected at the on-site ditch indicated concentrations of the following analytes exceeding SCDHEC or EPA exposure levels: aluminum, arsenic, cadmium, chromium, copper, iron, lead, magnesium, manganese, nickel, potassium, vanadium, zinc, 2,4-dimethylphenol, 2-methylphenol, and 3- & 4-methylphenol. Laboratory analytical results from the surface water sample collected at the off-site pond to the north indicated concentrations of the following analytes exceeding SCDHEC or EPA exposure levels: aluminum, arsenic, cadmium, chromium, copper, manganese, nickel, and potassium.

Sampling locations are depicted on Figure 3 of Enclosure 1. A summary of all other detected analytes is in Enclosure 2 ("Surface Water Results Summary Table"). The laboratory data package is in Attachment 1.

During the initial mobilization (July 25-29), EPA emplaced around the site four AreaRAE electrochemical detectors (monitoring for VOCs, carbon monoxide [CO], hydrogen sulfide [H₂S], oxygen [O₂], and lower explosive limit [LEL]) and three DustTraks monitoring for particulates (particulate matter [PM]_{2.5}). A summary of air monitoring data obtained during this period is in Enclosure 2 ("VIPER Air Monitoring Summary Tables").

Second Mobilization (August 2-3, 2019)

Based on the acrolein exceedance and quality control (QC) deficiencies in the phosgene results (phosgene had been detected in the media blanks) during the first round of air sampling, EPA and Tetra Tech START remobilized the following week. During August 2-3, 2019, Tetra Tech START collected three 24-hour ambient air samples at locations near those where sampling had occurred on July 27, 2019. Based on air sampling results obtained during the first sampling event, EPA requested reduction of the analytical suite to VOCs and phosgene.

EPA installed three Honeywell Single Point Monitors (SPM) around the site to monitor phosgene levels. The SPMs did not detect any phosgene. A summary of air monitoring data obtained during this period is in Enclosure 2 ("VIPER Air Monitoring Summary Tables").

Laboratory analyses were as follows:

- VOCs via EPA Method TO-15 (sample collection in 6-liter Summa canisters)
- Phosgene via OSHA Method 61 (sample collection in XAD-2 adsorbent tubes).

Laboratory analytical results indicated presence of acrolein at concentrations above the EPA Residential RML in all three samples. Based on these results, SCDHEC assumed responsibility for combatting the fire, and EPA requested 24-hour air monitoring.

Air sample locations are depicted on Figure 4 of Enclosure 1. A summary of all other detected analytes is in Table 3 in Enclosure 2. The laboratory data package is in Attachment 1.

Extended Response Activities (August 9 to October 14, 2019)

On August 9th, EPA and Tetra Tech START remobilized to the Site and began 24-hour air monitoring around the site while crews worked to extinguish the fire. Tetra Tech START deployed Viper, a remote telemetry system, with four AreaRAEs, three DustTrak DRX Aerosol Monitors (Model 8533), and three beta attenuation monitors (EBAM). AreaRAEs included sensors to detect CO, H₂S, LEL, O₂, and hydrogen cyanide (HCN), as well as a photoionization detector (PID) with a 10.6 electron volt (eV) bulb to detect VOCs. Additionally, Tetra Tech START deployed DustTraks and EBAMs to monitor for respirable PM_{2.5} and total particulates to help determine if the smoke was generating harmful conditions for nearby residents and businesses. Factors considered in selection of locations for monitoring stations were worker safety, sensitive receptors including surrounding neighborhoods, and prevailing wind conditions. Tetra Tech START moved monitoring stations to respond to changes in these factors.

Prior to deployment of air monitoring equipment, and throughout the response, Tetra Tech START calibrated and zeroed each instrument. Equipment used during this response was EPA-owned—maintained at the Region 4 Regional Readiness Center (RRC) and by the EPA Environmental Response Team (ERT). Tetra Tech START deployed the first station on the morning of August 16, 2019, and began receiving data shortly thereafter. Ten stations (four AreaRaes, three DustTraks, and three EBAMs) were deployed and operational by early afternoon on August 16, 2019. Four AreaRaes were deployed on the site, and six particulate monitors (DustTraks and EBAMs) were deployed in nearby commercial and residential areas. Twenty-four-hour air monitoring for chemicals of concern and for PM_{2.5} and total particulates occurred on site and throughout neighboring residential areas, continuing until September 1, 2019, when all site operations ceased due to the potential landfall of Hurricane Dorian.

During air monitoring operations from August 16 through September 1, 2019, Tetra Tech START did not identify any momentary or period average exceedances of LEL. However, Tetra Tech START detected momentary action level exceedances of VOCs, CO, H₂S, and HCN concentrations at several stations on different days. No period average exceedances of VOCs, CO, H₂S, or HCN concentrations, or LEL were detected at any of the stations during this time period. Tetra Tech START also documented elevated 24-hour period averages of PM_{2.5} and total particulates concentrations at each of the six monitoring stations. Detected PM_{2.5} concentrations met the Air Quality Index (AQI) Category of Moderate for PM_{2.5}.

On September 9, 2019, EPA and Tetra Tech Start remobilized to the site to resume 24-hour air monitoring activities. Tetra Tech START deployed Viper with four AreaRAEs and four DustTraks co-located at the northeast, east, south, and western edges of the site. Air monitoring for chemicals of concern, and for respirable PM_{2.5} and total particulates during this time period occurred around the perimeter of the smoldering debris. This remobilization continued through October 14, 2019, when SCDHEC officially took over operations at the site.

During on-site monitoring from September 9 through October 14, 2019, Tetra Tech START did not identify any momentary or period average exceedances of LEL. However, at several on-site locations, Tetra Tech START detected momentary action level exceedances of CO, VOCs, H₂S, and HCN concentrations during

different time periods. Tetra Tech START did not detect period average exceedances of VOCs, CO, H₂S, or HCN concentrations, or LEL at any of the four monitoring locations. Tetra Tech START also documented a 24-hour period average of PM_{2.5} as high as 99.3 micrograms per cubic meter (µg/m³), which qualifies as Unhealthy according to the AQI Category for respirable particulates (PM_{2.5}).

Tetra Tech START provided EPA with daily Viper Air Monitoring Summary Tables. These tables are in Enclosure 2.

Air Sampling (August 21-23, 2019)

From August 21 through 22, 2019, Tetra Tech START conducted two additional rounds of ambient air sampling around the smoldering debris pile. The sampling accorded with the Air Monitoring and Sampling Plan, Revision 1: Able Contracting Fire ER submitted by Tetra Tech START to EPA on August 22nd. Each round of sampling consisted of 24-hour air sampling at two predefined locations (Forrest Concrete and the residence at 352 Schinger Ave.), and at two upwind locations. Tetra Tech START collected samples in 6-liter Summa canisters. This additional sampling event also included placement by Tetra Tech START of two 8-hour samples within the cabs of excavators during active work on the stockpiled material.

Laboratory analyses were as follows:

- VOCs via EPA Method TO-15
- H₂S via modified EPA Method 16
- HCN via modified EPA Method 320
- Asbestos via TEM per NIOSH Method 7402.

Laboratory analytical results indicated detection of acrolein at concentrations exceeding the EPA Residential RML in all three samples.

Tetra Tech START collected two 8-hour air samples on August 23rd to determine if asbestos fibers were present in the smoke emanating from the smoldering debris pile. Asbestos samples were analyzed via NIOSH Methods 7400 and 7402. Laboratory analytical results did not indicate presence of respirable asbestos fibers in the samples.

Sampling locations are depicted on Figure 5 of Enclosure 1. A summary of all other detected analytes is in Table 4 of Enclosure 2. The laboratory data package is in Attachment 1.

Air Sampling (August 31, 2019)

Tetra Tech START conducted another round of 24-hour ambient air sampling beginning August 31, 2019. Samples were collected at seven predefined locations. Tetra Tech START placed two samples and a duplicate at residential locations 352 and 402 Schinger Avenue, and one at a commercial location (Forrest Concrete). Tetra Tech START determined ambient background levels of VOCs by collecting samples at the Sun City neighborhood, Riverbend neighborhood, Okatie Fire Department, and Heartstone neighborhood.

Laboratory analysis was as follows:

VOCs via EPA Method TO-15.

Laboratory analytical results indicated presence of acrolein at concentrations exceeding the EPA Regional Screening Level (RSL) in all seven samples.

Sampling locations are depicted on Figure 6 of Enclosure 1. A summary of all other detected analytes is in Table 5 in Enclosure 2. The laboratory data package is in Attachment 1.

SUMMARY

EPA tasked Tetra Tech START to assist with air monitoring, water sampling, air sampling, and documentation of site conditions and response activities. Laboratory analytical results from air sampling activities during July 25 to 28 and August 2 to August 3 indicated presence of acrolein at concentrations exceeding the EPA RML of $0.063 \mu\text{g}/\text{m}^3$. These elevated detections triggered an extended mobilization to conduct 24-hour air monitoring activities.

On several occasions during the response, air monitoring activities identified 24-hour period average elevated concentrations of $\text{PM}_{2.5}$ in residential neighborhoods, with the highest reaching the AQI of Unhealthy at $99.3 \mu\text{g}/\text{m}^3$. During on-site air monitoring activities, momentary exceedances of VOCs, CO, H_2S , and HCN concentrations, and LEL exceeded their respective exposure limits. Air monitoring data summary tables are in Enclosure 2.

EPA and Tetra Tech START demobilized from the site on the evening of October 14, 2019, when SCDHEC assumed responsibility for ongoing operations. At the time of departure, the landfill continued to smolder.

If you have any questions or need additional copies of this report, please contact me at (678) 775-3085.

Sincerely,



John Snyder, PG, PE
START V Site Manager



Andrew F. Johnson
START V Program Manager

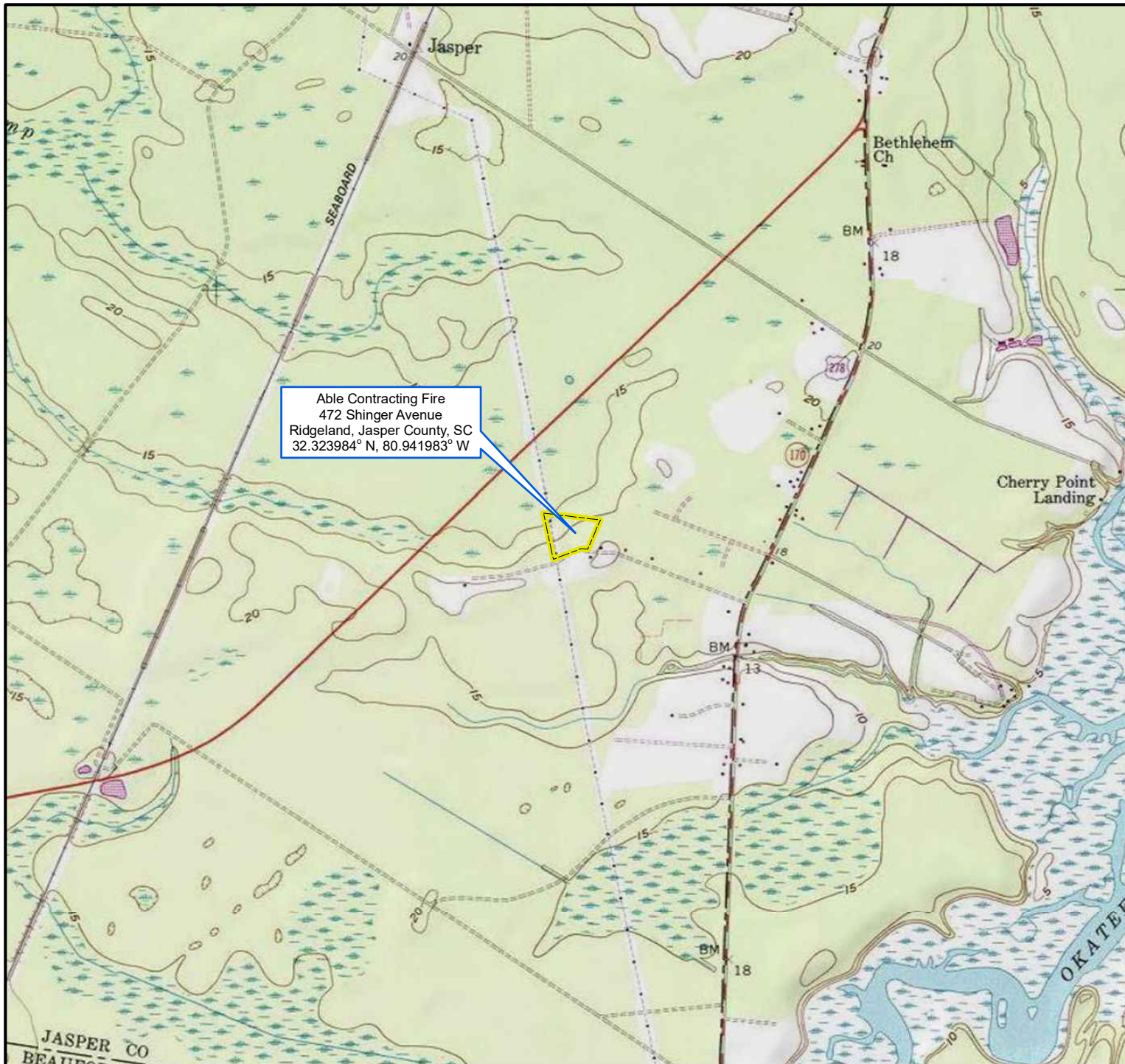
Enclosures (4)
Attachments (1)

cc: Katrina Jones, EPA Project Officer
Angel Reed, START IV Document Control Coordinator

ENCLOSURE 1

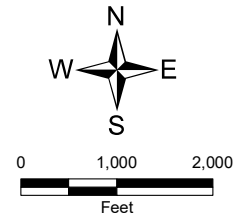
FIGURES

(Six Pages)

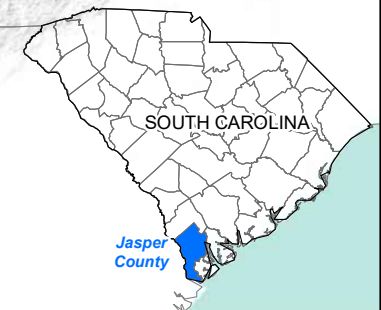


Legend

 Site Boundary



Map Source:
USGS Topographic Quadrangle, Jasper, SC.



United States
Environmental Protection Agency
Region 4

FIGURE 1

Site Location

Site Name: Able Contracting Fire

TOLIN No.: 82-001

City:	County:	State:
Ridgeland	Jasper	South Carolina



Date:
7/15/2020
Analyst:
dale.vonbusch



Legend

- Site Boundary
- Maintenance Shop
- Office Building
- Waste Piles



0 100 200
Feet

Map Source:
ESRI Aerial Imagery.



United States
Environmental Protection Agency
Region 4

FIGURE 2

Site Layout

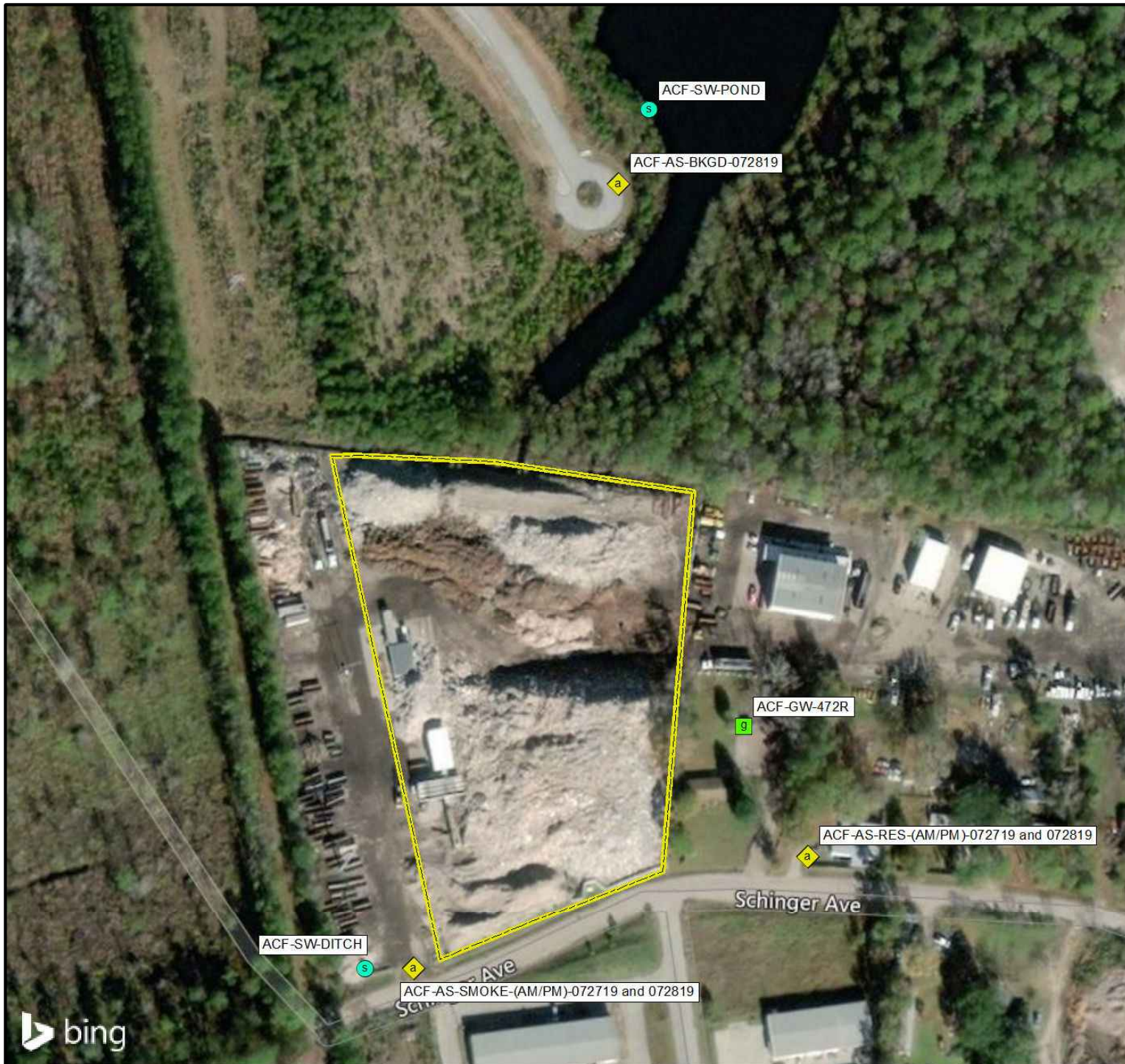
Site Name: Able Contracting Fire

TOLIN No.: 82-001

City: Ridgeland **County:** Jasper **State:** South Carolina



Date:
7/15/2020
Analyst:
dale.vonbusch



Legend

- ◆ a Air Sample
- s Surface Water Sample
- g Groundwater Sample
- Site Location



0 100 200
Feet

Map Source:
Bing Maps Arial Imagery2018.



United States
Environmental Protection Agency
Region 4

FIGURE 3

Air and Water Sampling
July 27-28, 2019

TDD Name: Able Contracting Fire

TDD No.: TT-01-128

City: Ridgeland **County:** Jasper **State:** South Carolina



Date:
4/2/2020
Analyst:
dale.vonbusch



Legend

- Air Sample
- Site Location



0 150 300
Feet

Map Source:
Bing Maps Aerial Imagery2018.



United States
Environmental Protection Agency
Region 4

FIGURE 4

Air Sampling
August 2-3, 2019

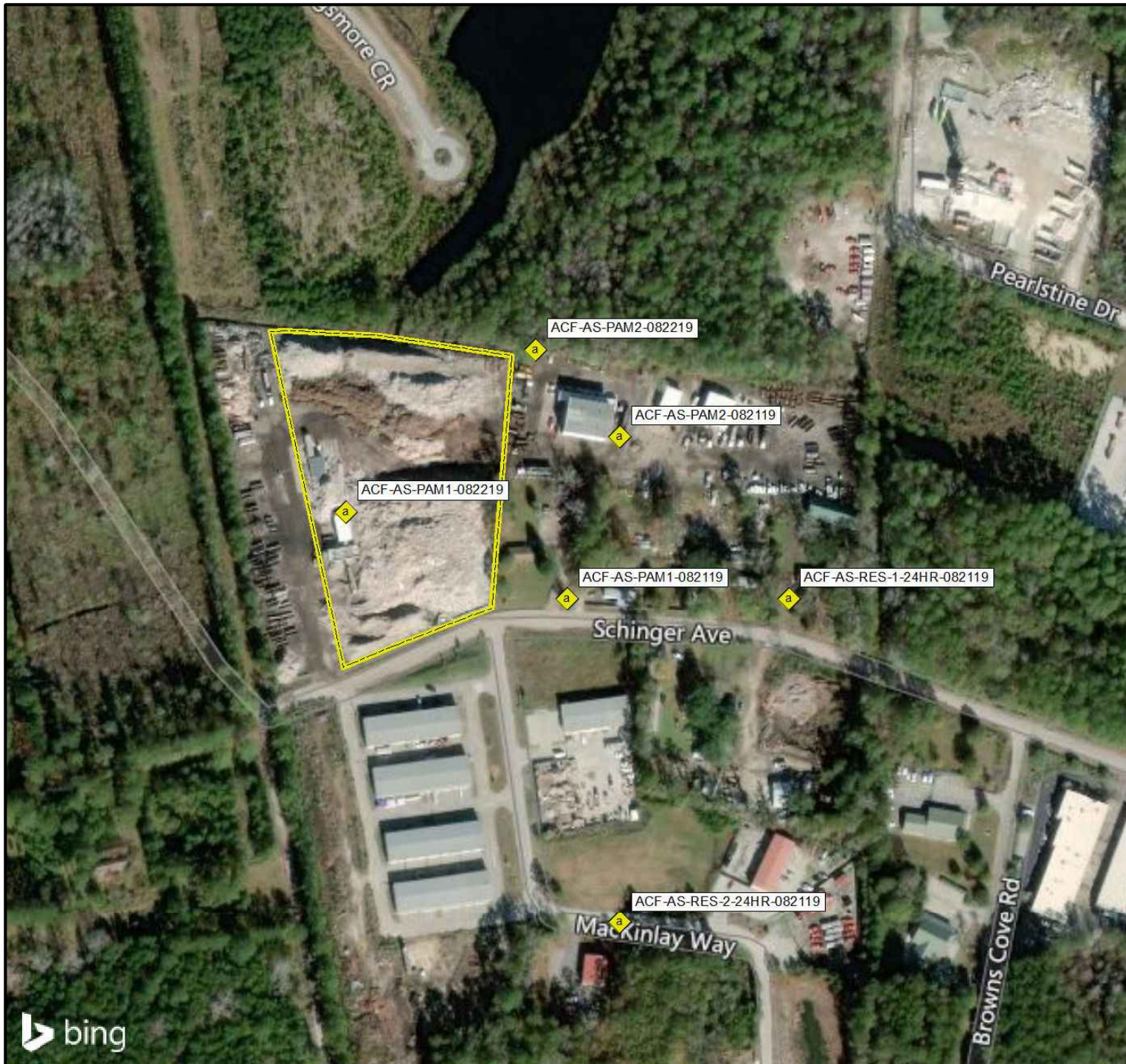
TDD Name: Able Contracting Fire

TDD No.: TT-01-128

City:	County:	State:
Ridgeland	Jasper	South Carolina



Date:
4/2/2020
Analyst:
dale.vonbusch



Legend

- ◆ a Air Sample
- Site Location



0 150 300
Feet

Map Source:
Bing Maps Arial Imagery2018.



United States
Environmental Protection Agency
Region 4

FIGURE 5

Air Sampling
August 21-22, 2019

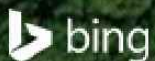
TDD Name: Able Contracting Fire

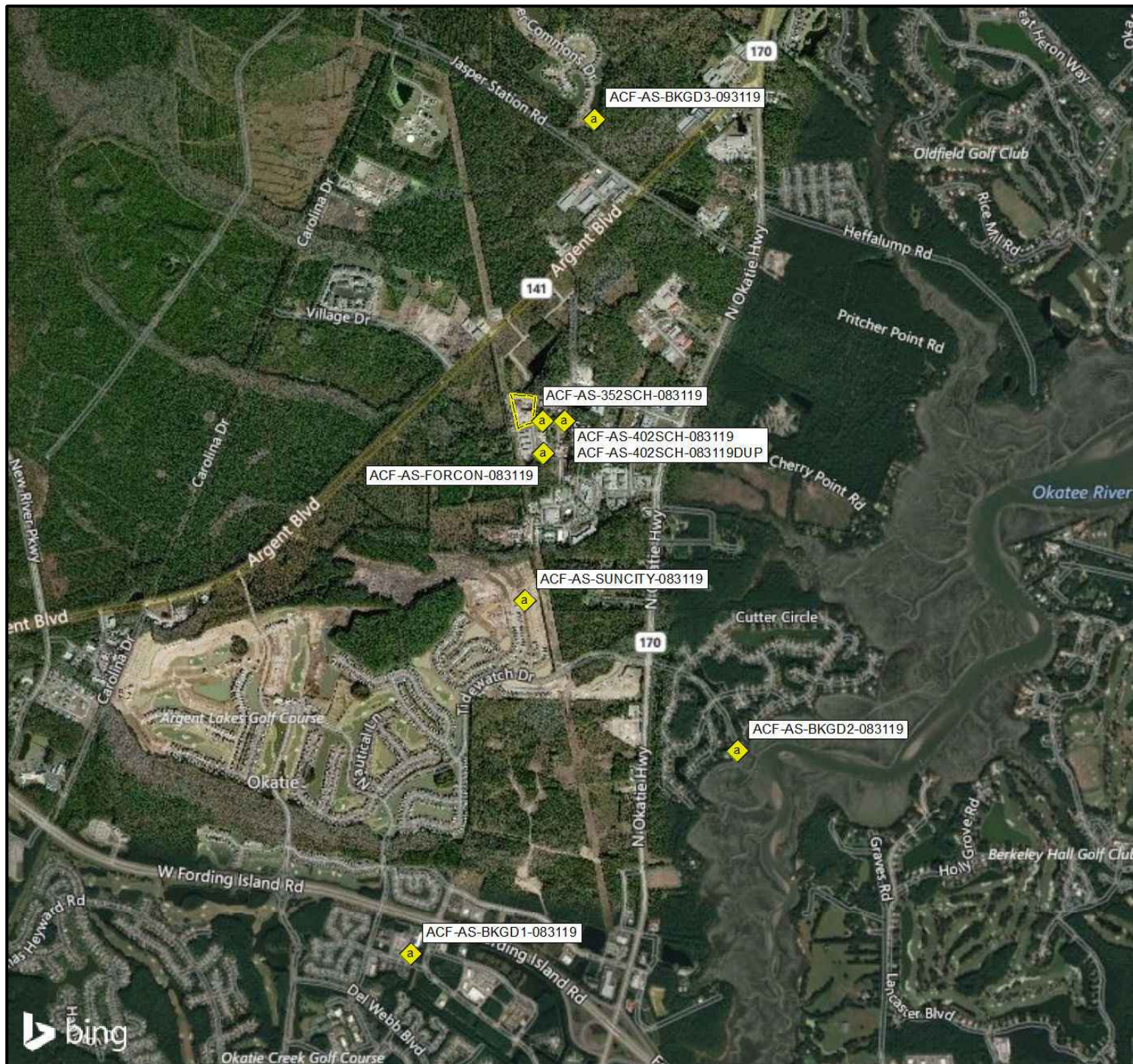
TDD No.: TT-01-128

City:	County:	State:
Ridgeland	Jasper	South Carolina



Date:
4/2/2020
Analyst:
dale.vonbusch





Legend

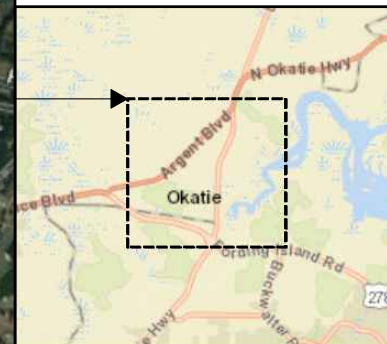
- ◆ a Air Sample
- Site Location

Notes:
 ACF: Able Contracting Fire
 AS: Air Sample
 Dup: Duplicate Sample



0 1,500 3,000
 Feet

Map Source:
 Bing Maps Aerial Imagery 2018.



United States
 Environmental Protection Agency
 Region 4

FIGURE 6

Air Sampling Locations
 August 31 – September 1, 2019

Site Name: Able Contracting Fire

TOLIN: 0082-001

City: Ridgeland **County:** Jasper **State:** South Carolina



Date:
 4/2/2020
 Analyst:
 dale.vonbusch

ENCLOSURE 2

AIR MONITORING AND LABORATORY ANALYTICAL DATA SUMMARY TABLES

(254 Pages)

VIPER Air Monitoring Summary Tables

Air Monitoring Summary Tables

The table below summarize monitoring data collected on using EPA's Viper wireless remote monitoring system.

Project Name: Able Contracting Fire

From: 7/25/19
19:51

To: 7/26/19
7:00



Station 155							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 1	VOC	No	7,362	5,396	0 - 30,618 ppb	49.5 ppb	1,000 ppb
	CO	No	7,362	662	0 - 36 ppm	0.5 ppm	83 ppm
	H ₂ S	No	7,362	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	7,362	7,362	20.9 - 20.9%	20.9%	<19.5 or >23%
	LEL	No	7,362	0	0 - 0%	0%	10%
DustTrak 1	PM-2.5	Moderate	11,564	11,564	2 - 652 µg/m ³	13.8 µg/m ³	See SOG #: T106

Station 156							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 2	VOC	No	6,209	315	0 - 1,349 ppb	7.4 ppb	1,000 ppb
	CO	No	6,209	2,943	0 - 41 ppm	5.1 ppm	83 ppm
	H ₂ S	No	6,209	202	0 - 2.3 ppm	0 ppm	0.5 ppm
	O ₂	No	6,209	6,209	20.9 - 20.9%	20.9%	<19.5 or >23%
	LEL	No	6,209	0	0 - 0 %	0%	10%
DustTrak 2	PM-2.5	Moderate	14,670	14,670	9 - 438 µg/m ³	33.8 µg/m ³	See SOG #: T106

Station 157							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 3	VOC	No	6,741	0	0 - 0 ppb	0 ppb	1,000 ppb
	CO	No	6,741	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	6,741	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	6,741	6,741	20.9 - 20.9%	20.9%	<19.5 or >23%
	LEL	No	6,741	0	0 - 0%	0%	10%
DustTrak 3	PM-2.5	Moderate	8,281	8,281	11 - 216 µg/m ³	23.3 µg/m ³	See SOG #: T106

Command Post							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 4	VOC	No	6,476	15	0 - 698 ppb	0.4 ppb	1,000 ppb
	CO	No	6,476	26	0 - 10 ppm	0 ppm	83 ppm
	H ₂ S	No	6,476	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	6,476	6,476	20.9 - 20.9%	20.9%	<19.5 or >23%
	LEL	No	6,476	0	0 - 0%	0%	10%

Notes:

% Percent
< Less than
> Greater than
AEGL Acute Exposure Guideline levels for airborne chemicals
CO Carbon monoxide
H₂S Hydrogen Sulfide
LEL Lower Explosive Level
min Minute
O₂ Oxygen

PEL Permissible exposure limit
ppb Parts per billion
ppm Parts per million
PM Particulate matter
SOG Standard Operating Guidelines
TLV Threshold limit value
µg/m³ Micrograms per cubic meter
VOC Volatile organic compound

Air Monitoring Summary Tables

The table below summarize monitoring data collected on using EPA's Viper wireless remote monitoring system.

Project Name: ABLE CONTRACTING FIRE

From: 8/2/19
20:59

To: 8/3/19
8:59



Location 1 (Southeast Corner; Residential Property Line)

Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL / RML / 60 min AEGL)
SPM Flex 1	Phosgene (COCl ₂)	0	2192	0	0 - 0 ppb	0 ppb	100 ppb / 0.23ppb / 40 ppb

Location 2 (West Side of Pile)

Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL / RML / 60 min AEGL)
SPM Flex 2	Phosgene (COCl ₂)	0	1337	0	0 - 0 ppb	0 ppb	100 ppb / 0.23ppb / 40 ppb

Location 3 (Upwind; North)

Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL / RML / 60 min AEGL)
SPM Flex 3	Phosgene (COCl ₂)	0	1844	0	0 - 0 ppb	0 ppb	100 ppb / 0.23ppb / 40 ppb

Notes:

- AEGL Acute Exposure Guideline levels for airborne chemicals (8 hour exposure)
- min Minute
- PEL Permissible exposure limit
- ppb Parts per billion
- RML Removal Management Level
- TLV Threshold limit value

Air Monitoring Summary Tables

The table below summarize monitoring data collected on using EPA's Viper wireless remote monitoring system.

Project Name:

From: 8/16/19
7:00

To: 8/16/19
18:58



On Site, Southwest Corner of Pile							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 1	VOC	No	606	1	0 - 1444 ppb	2.4 ppb	1,000 ppb
	CO	No	606	1	0 - 9 ppm	0 ppm	83 ppm
	H ₂ S	No	606	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	606	606	20.9 - 20.9%	20.9%	<19.5 or >23%
	LEL	No	606	0	0 - 0%	0%	10%
	HCN	No	606	606	0.1 - 1.3 ppm	0.4 ppm	7.1 ppm%

Peacock Collision							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
DustTrak 1	PM-2.5	Good	13,831	13,372	0 - 53 µg/m ³	7.1 µg/m ³	See SOG #: T106

On Site, Northwest Corner of Pile							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 2	VOC	No	603	5	0 - 1108 ppb	2.4 ppb	1,000 ppb
	CO	No	603	42	0 - 10 ppm	0.3 ppm	83 ppm
	H ₂ S	No	603	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	603	603	20.4 - 20.9%	20.6%	<19.5 or >23%
	LEL	No	603	0	0 - 0 %	0%	10%
	HCN	No	603	219	0 - 1.1 ppm	0.1 ppm	7.1 ppm

Able Contracting Workshop, Northeast of Pile							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 3	VOC	No	607	1	0 - 93 ppb	0.2 ppb	1,000 ppb
	CO	No	607	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	607	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	607	607	20.9 - 21.3%	21.1%	<19.5 or >23%
	LEL	No	607	0	0 - 0%	0%	10%
	HCN	No	607	605	0 - 0.6 ppm	0.3 ppm	7.1 ppm

Grace Costal Church							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
DustTrak 3	PM-2.5	Moderate	693	693	3 - 20 µg/m ³	9.2 µg/m ³	See SOG #: T106

Forrest Concrete							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 4	VOC	No	606	0	0 - 0 ppb	0 ppb	1,000 ppb
	CO	No	606	1	0 - 4 ppm	0 ppm	83 ppm
	H ₂ S	No	606	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	606	606	20.4 - 20.9%	20.7%	<19.5 or >23%
	LEL	No	606	0	0 - 0%	0%	10%
	HCN	No	606	0	0 - 0.1 ppm	0 ppm	7.1 ppm

Sun City							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
EBAM 1	PM-2.5	Moderate	664	418	0 - 104 µg/m ³	12.9 µg/m ³	See SOG #: T106

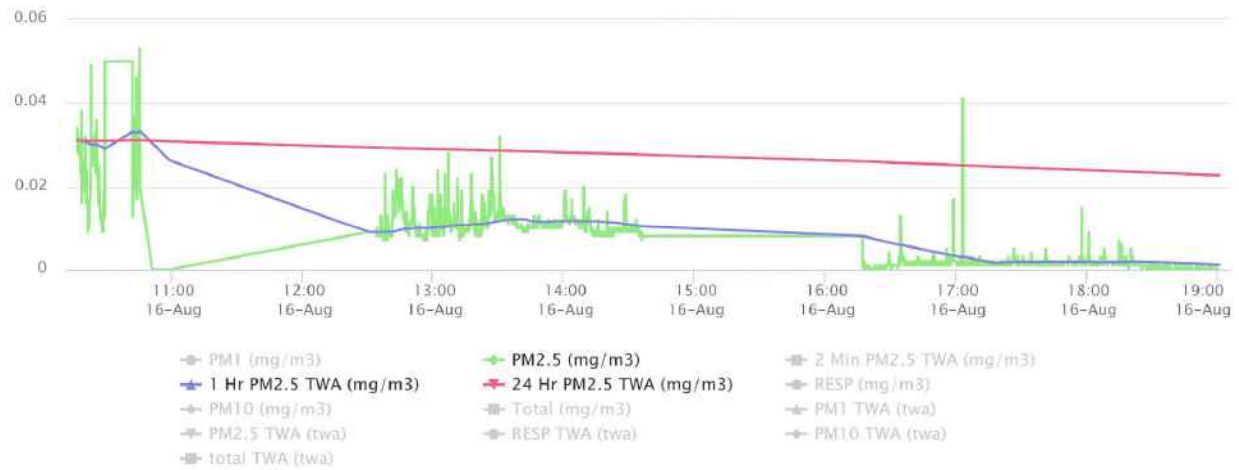
Brooke Mill Apartments							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
EBAM 2	PM-2.5	Good	650	368	0 - 90 µg/m ³	7.6 µg/m ³	See SOG #: T106

EPA Mobile Command Post							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
EBAM 3	PM-2.5	Moderate	739	452	0 - 135 µg/m ³	14.4 µg/m ³	See SOG #: T106

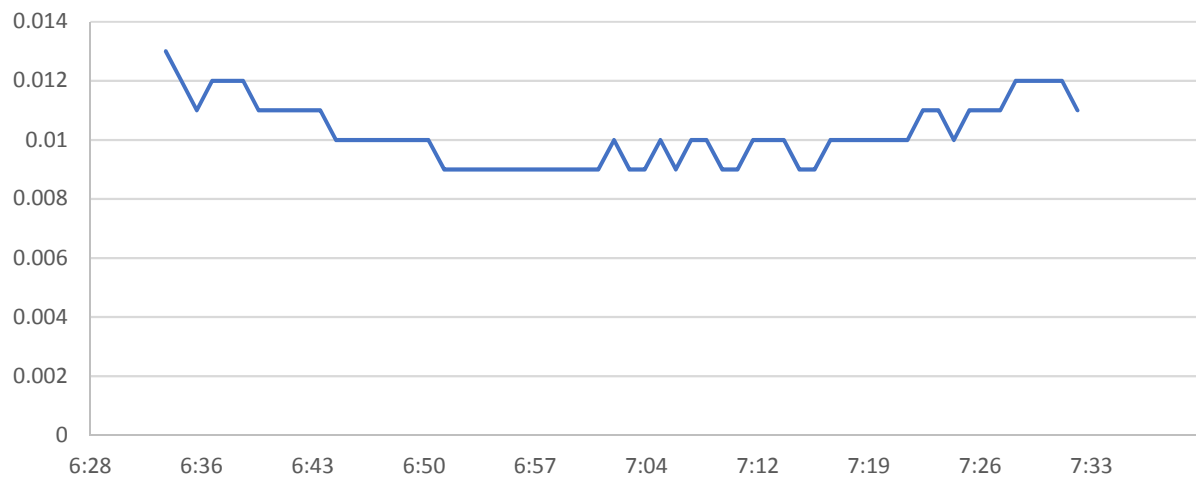
Notes:

%	Percent	O ₂	Oxygen
<	Less than	PEL	Permissible exposure limit
>	Greater than	ppb	Parts per billion
AEGL	Acute Exposure Guideline Levels for Airborne Chemicals	ppm	Parts per million
CO	Carbon monoxide	PM	Particulate matter
H ₂ S	Hydrogen Sulfide	SOG	Standard Operating Guidelines
HCN	Hydrogen Cyanide	TLV	Threshold limit value
LEL	Lower Explosive Level	µg/m ³	Micrograms per cubic meter
min	Minute	VOC	Volatile organic compound

8/16/19 DAY Data for DustTrak 1 (PM_{2.5}) - Peacock Collision



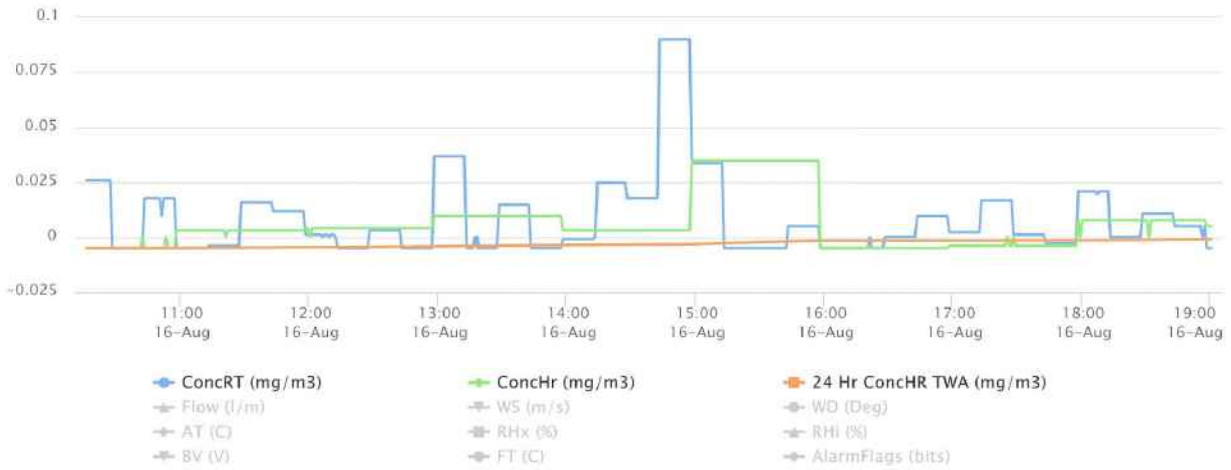
8/16/19 DAY Data for DustTrak 3 (PM_{2.5}) – Grace Costal Church



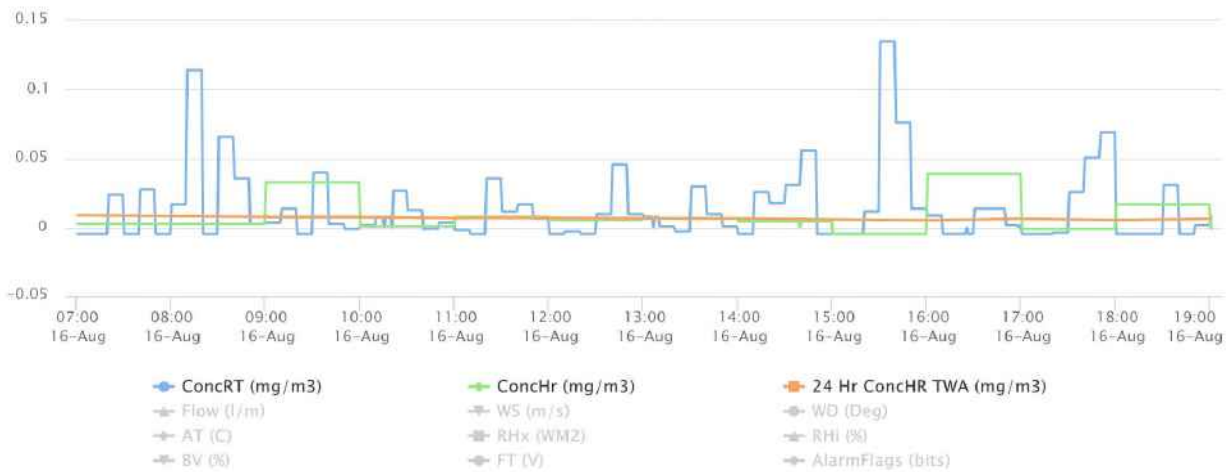
8/16/19 DAY Data for EBAM 1 (ConcRT) – Sun City



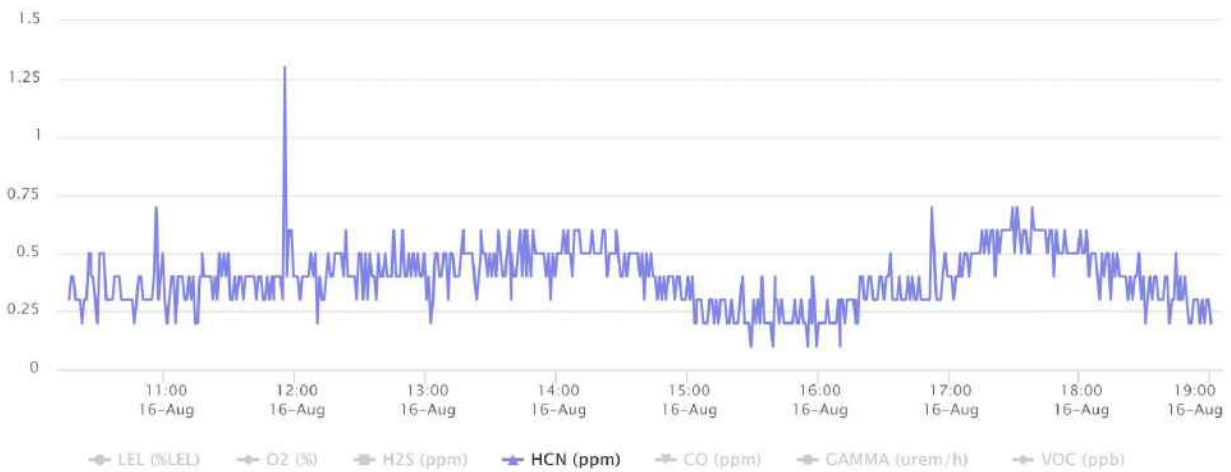
8/16/19 DAY Data for EBAM 2 (ConcRT) – Brooke Mill Apartments



8/16/19 DAY Data for EBAM 3 (ConcRT) – EPA Mobile Command Post



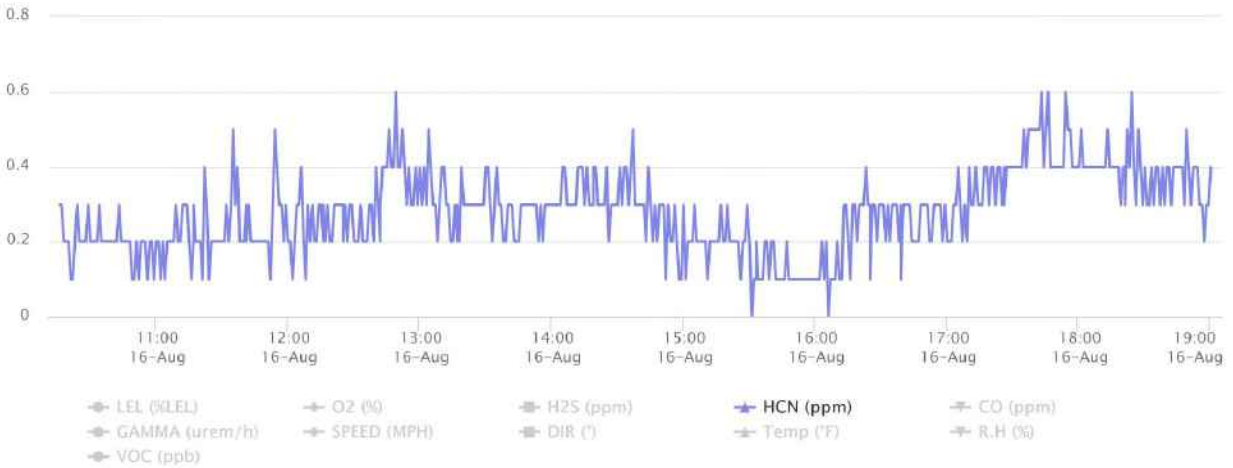
8/16/19 DAY Data for AREARAE PRO 1 (HCn) – Southwest of Pile



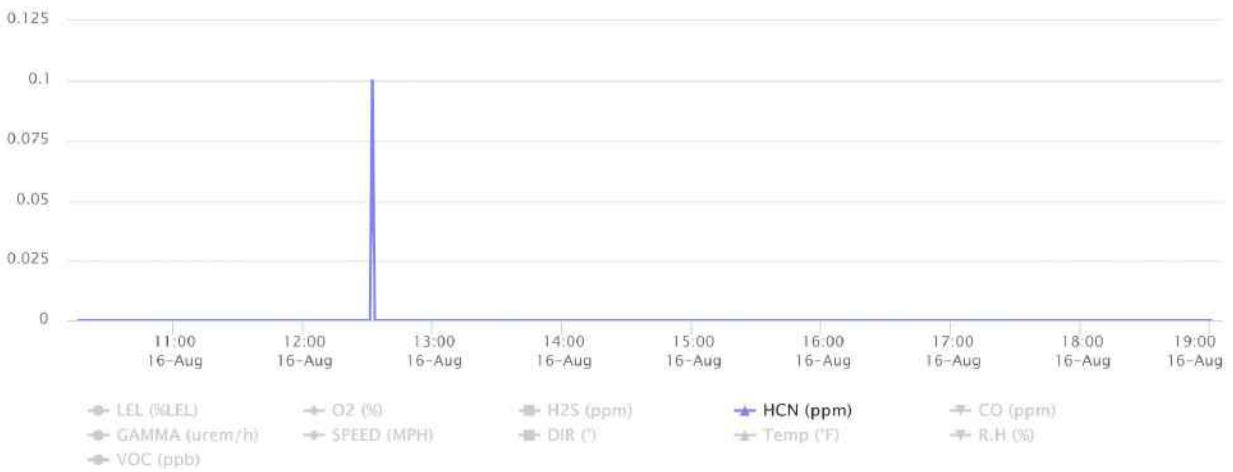
8/16/19 DAY Data for AREARAE PRO 2 (HCn) – Northwest of Pile



8/16/19 DAY Data for AREARAE PRO 3 (HCn) – Northeast of Pile



8/16/19 DAY Data for AREARAE PRO 4 (HCn) – Forrest Concrete



Air Monitoring Summary Tables

The table below summarize monitoring data collected on using EPA's Viper wireless remote monitoring system.

Project Name:

From: 8/16/19
19:00

To: 8/17/19
6:59



On Site, Southwest Corner of Pile							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 1	VOC	No	5,334	5	0 - 285 ppb	0.1 ppb	1,000 ppb
	CO	No	5,334	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	5,334	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	5,334	5,334	20.9 - 20.9%	20.9%	<19.5 or >23%
	LEL	No	5,334	0	0 - 0%	0%	10%
	HCN	No	5,334	5,188	0 - 0.7 ppm	0.2 ppm	7.1 ppm%

Peacock Collision							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
DustTrak 1	PM-2.5	Good	552	552	2 - 24 µg/m ³	4.9 µg/m ³	See SOG #: T106

On Site, Northwest Corner of Pile							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 2	VOC	No	2,609	1	0 - 14 ppb	0 ppb	1,000 ppb
	CO	No	2,609	82	0 - 20 ppm	0.2 ppm	83 ppm
	H ₂ S	No	2,609	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	2,609	2,609	20.9 - 20.9%	20.9%	<19.5 or >23%
	LEL	No	2,609	0	0 - 0%	0%	10%
	HCN	No	2,609	1,824	0 - 1.6 ppm	0.1 ppm	7.1 ppm

Short Cut Road							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
DustTrak 2	PM-2.5	Good	462	424	0 - 21 µg/m ³	6.2 µg/m ³	See SOG #: T106

Able Contracting Workshop, Northeast of Pile							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 3	VOC	No	4,141	40	0 - 157 ppb	0.3 ppb	1,000 ppb
	CO	No	4,141	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	4,141	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	4,141	4,141	20.9 - 21.3%	20.9%	<19.5 or >23%
	LEL	No	4,141	0	0 - 0%	0%	10%
	HCN	No	4,141	3,713	0 - 0.7 ppm	0.1 ppm	7.1 ppm

Grace Costal Church							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
DustTrak 3	PM-2.5	Good	509	509	3 - 8 µg/m ³	5.3 µg/m ³	See SOG #: T106

Forrest Concrete							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 4	VOC	No	2,870	0	0 - 0 ppb	0 ppb	1,000 ppb
	CO	No	2,870	51	0 - 5 ppm	0.1 ppm	83 ppm
	H ₂ S	No	2,870	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	2,870	2,870	20.1 - 20.6%	20.1%	<19.5 or >23%
	LEL	No	2,870	0	0 - 0%	0%	10%
	HCN	No	2,870	0	0 - 0 ppm	0 ppm	7.1 ppm

Sun City							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
EBAM 1	PM-2.5	Good	751	468	0 - 59 µg/m ³	10.4 µg/m ³	See SOG #: T106

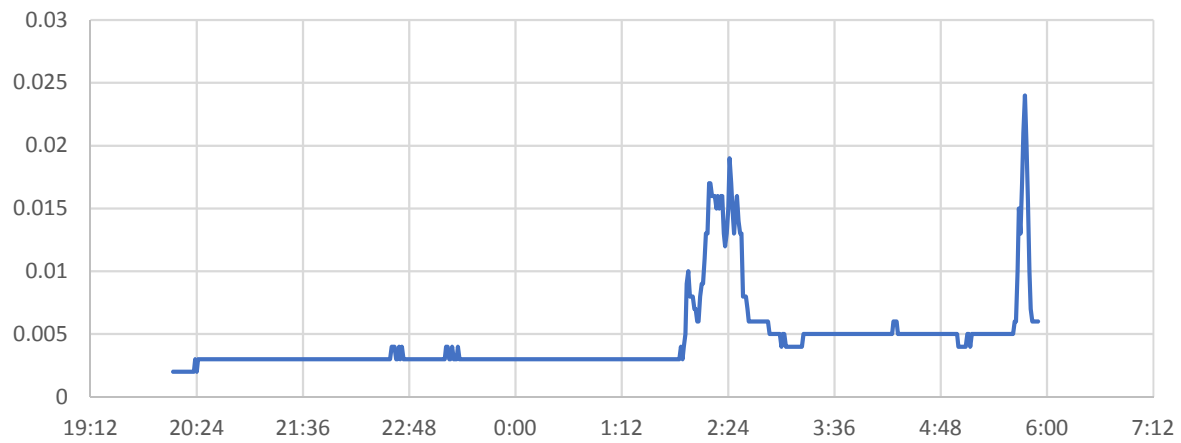
Brooke Mill Apartments							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
EBAM 2	PM-2.5	Good	752	498	0 - 142 µg/m ³	9.7 µg/m ³	See SOG #: T106

EPA Mobile Command Post							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
EBAM 3	PM-2.5	Good	739	390	0 - 65 µg/m ³	9.8 µg/m ³	See SOG #: T106

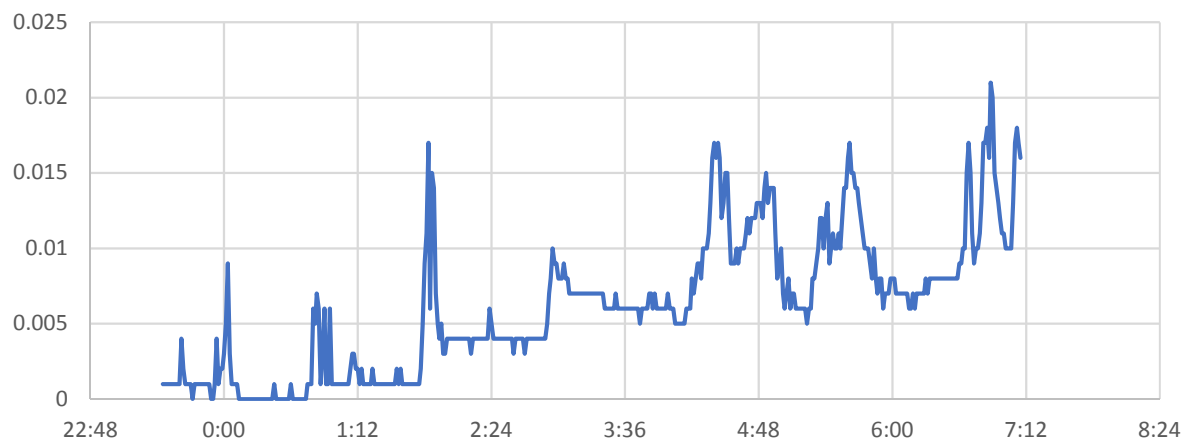
Notes:

%	Percent	O ₂	Oxygen
<	Less than	PEL	Permissible exposure limit
>	Greater than	ppb	Parts per billion
AEGL	Acute Exposure Guideline Levels for Airborne Chemicals	ppm	Parts per million
CO	Carbon monoxide	PM	Particulate matter
H ₂ S	Hydrogen Sulfide	SOG	Standard Operating Guidelines
HCN	Hydrogen Cyanide	TLV	Threshold limit value
LEL	Lower Explosive Level	µg/m ³	Micrograms per cubic meter
min	Minute	VOC	Volatile organic compound

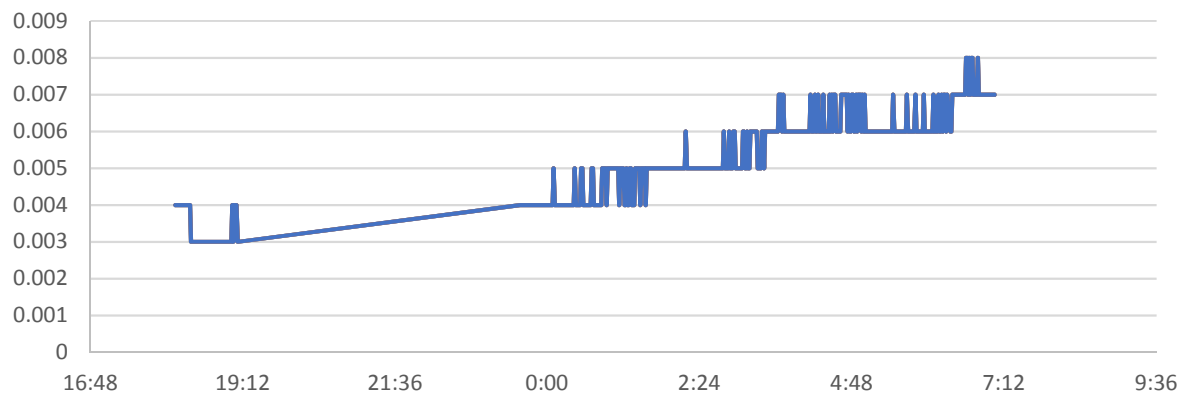
8/16/19 NIGHT Data for DustTrak 1 (PM_{2.5}) - Peacock Collision



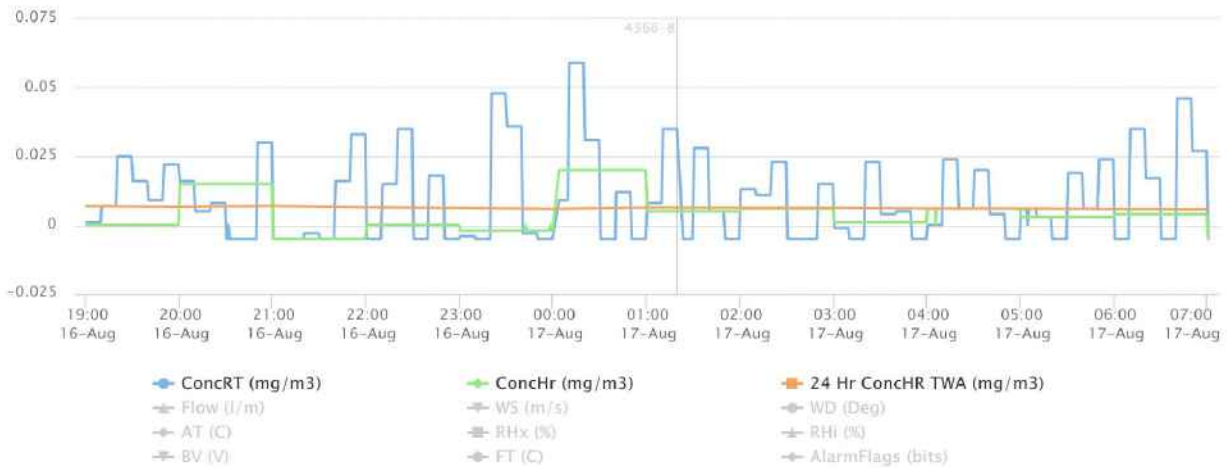
8/16/19 NIGHT Data for DustTrak 2 (PM_{2.5}) - Short Cut Road



8/16/19 NIGHT Data for DustTrak 3 (PM_{2.5}) - Grace Coastal Church



8/16/19 NIGHT Data for EBAM 1 (ConcRT) – Sun City

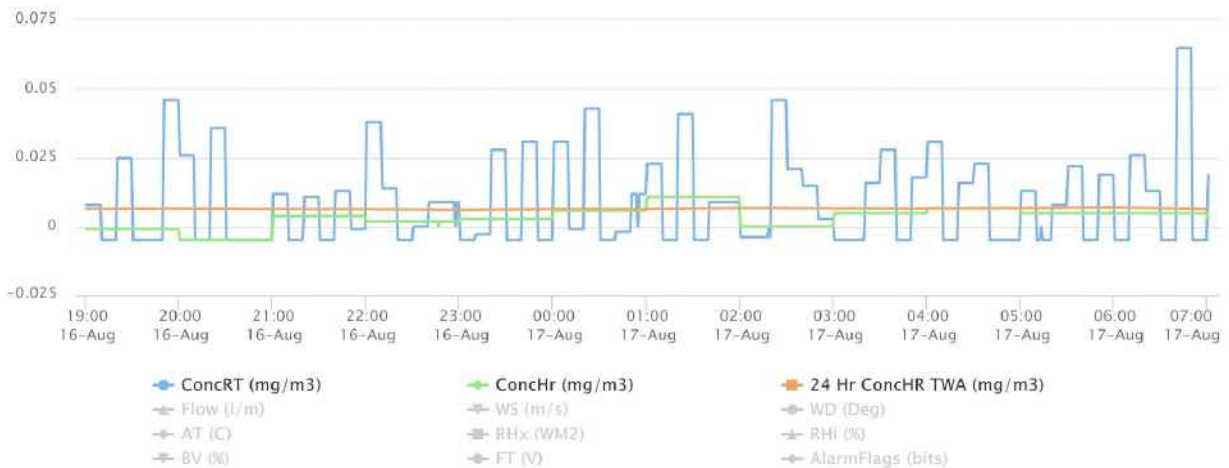


8/16/19 NIGHT Data for EBAM 2 (ConcRT) – Brooke Mill Apartments

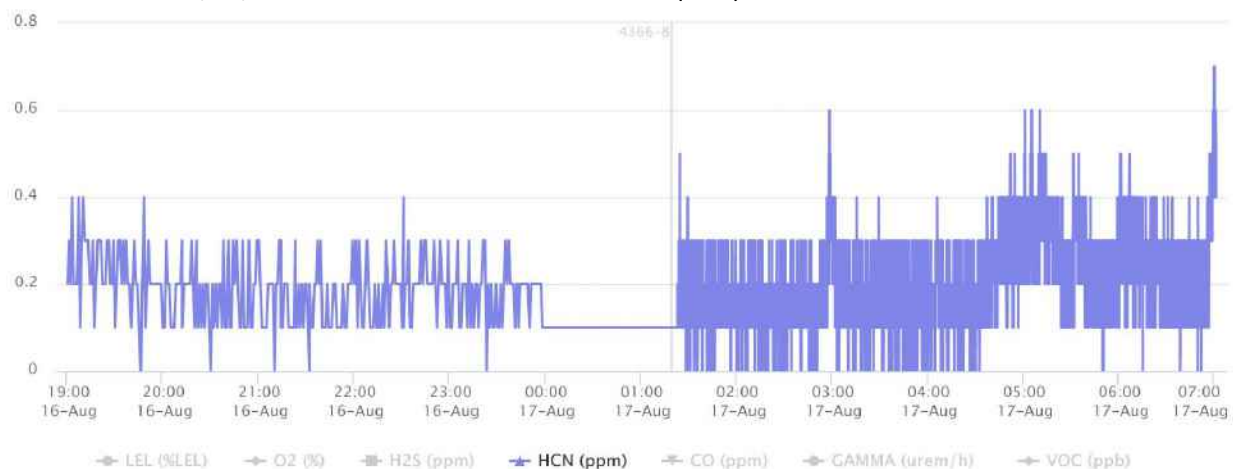


8/16/19 NIGHT Data for EBAM 3 (ConcRT) – EPA Mobile Command Post

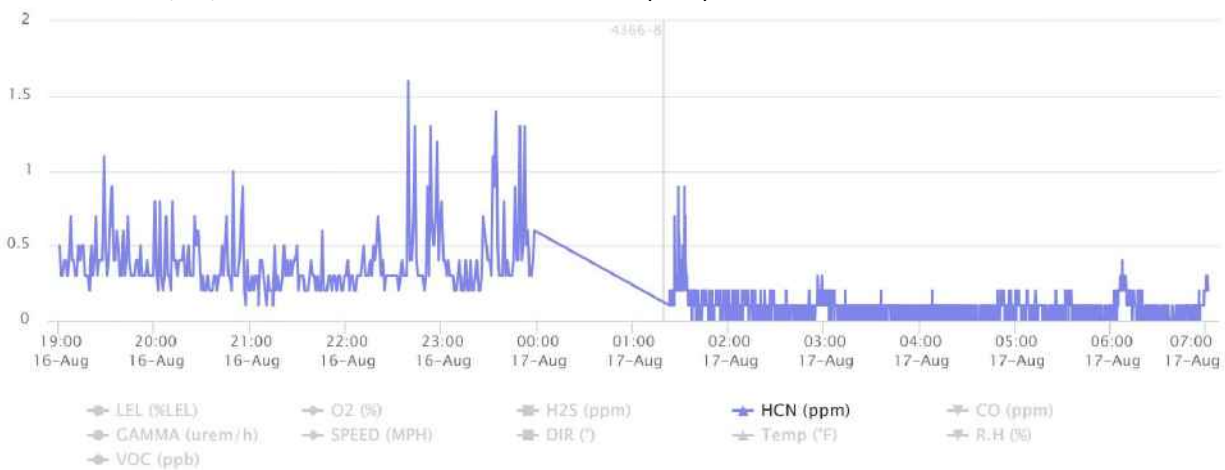
(.132) EBAM



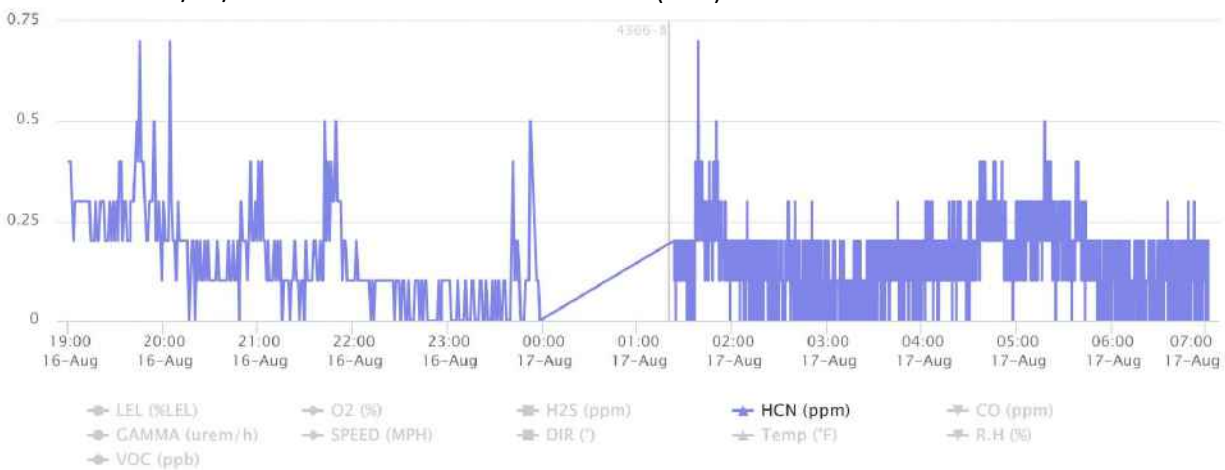
8/16/19 NIGHT Data for AREARAE PRO 1 (HCn) – Southwest of Pile



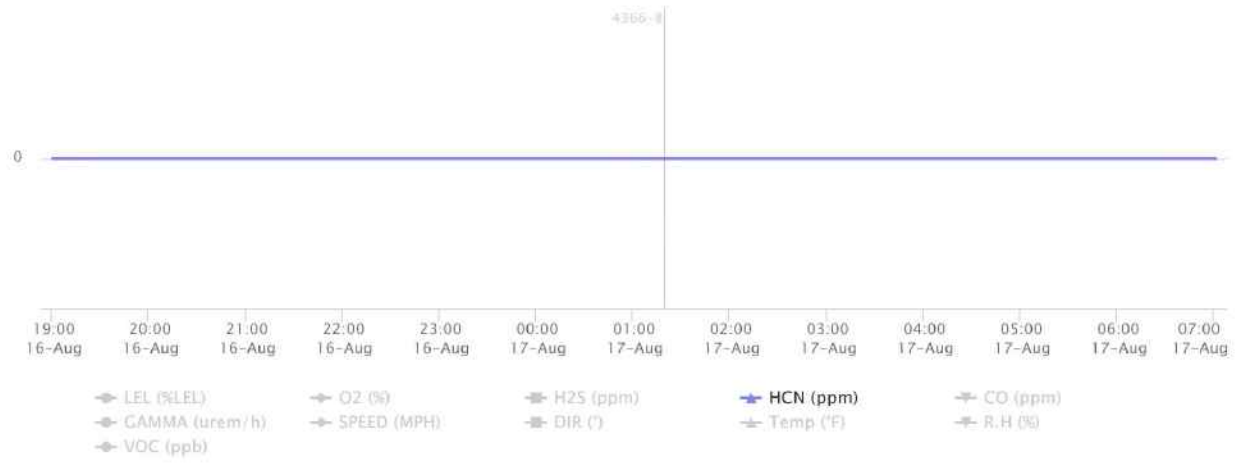
8/16/19 NIGHT Data for AREARAE PRO 2 (HCn) – Northwest of Pile



8/16/19 NIGHT Data for AREARAE PRO 3 (HCn) – Northeast of Pile



8/16/19 NIGHT Data for AREARAE PRO 4 (HCN) – Forrest Concrete



Air Monitoring Summary Tables

The table below summarize monitoring data collected on using EPA's Viper wireless remote monitoring system.

Project Name:

From: 8/17/19
7:00

To: 8/17/19
18:59



On Site, Southwest Corner of Pile							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 1	VOC	No	3,569	89	0 - 683 ppb	4 ppb	1,000 ppb
	CO	No	3,569	70	0 - 5 ppm	0.1 ppm	83 ppm
	H ₂ S	No	3,569	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	3,569	3,569	20.9 - 20.9%	20.9%	<19.5 or >23%
	LEL	No	3,570	0	0 - 0%	0%	10%
	HCN	No	3,569	3,560	0 - 1.1 ppm	0.3 ppm	7.1 ppm%

Peacock Collision							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
DustTrak 1	PM-2.5	Moderate	735	735	6 - 42 µg/m ³	12.5 µg/m ³	See SOG #: T106

On Site, Northwest Corner of Pile							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 2	VOC	No	3,569	89	0 - 683 ppb	4 ppb	1,000 ppb
	CO	No	3,569	70	0 - 5 ppm	0.1 ppm	83 ppm
	H ₂ S	No	3,569	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	3,569	3,569	20.9 - 20.9%	20.9%	<19.5 or >23%
	LEL	No	3,570	0	0 - 0%	0%	10%
	HCN	No	3,569	3,560	0 - 1.1 ppm	0.3 ppm	7.1 ppm

Short Cut Road							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
DustTrak 2	PM-2.5	Good	335	335	3 - 62 µg/m ³	11.8 µg/m ³	See SOG #: T106

Able Contracting Workshop, Northeast of Pile							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 3	VOC	No	3,043	7	0 - 117 ppb	0.1 ppb	1,000 ppb
	CO	No	3,043	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	3,043	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	3,043	3,043	20.9 - 21.4%	20.9%	<19.5 or >23%
	LEL	No	3,043	0	0 - 0%	0%	10%
	HCN	No	3,043	1,910	0 - 0.9 ppm	0.1 ppm	7.1 ppm

Grace Costal Church							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
DustTrak 3	PM-2.5	Good	303	303	6 - 18 µg/m ³	11.2 µg/m ³	See SOG #: T106

Forrest Concrete							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 4	VOC	No	2,711	0	0 - 0 ppb	0 ppb	1,000 ppb
	CO	No	2,711	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	2,711	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	2,711	2,711	20.1 - 20.9%	20.3%	<19.5 or >23%
	LEL	No	2,711	0	0 - 0%	0%	10%
	HCN	No	2,711	0	0 - 0 ppm	0 ppm	7.1 ppm

Sun City							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
EBAM 1	PM-2.5	Moderate	725	501	0 - 64 µg/m ³	12.1 µg/m ³	See SOG #: T106

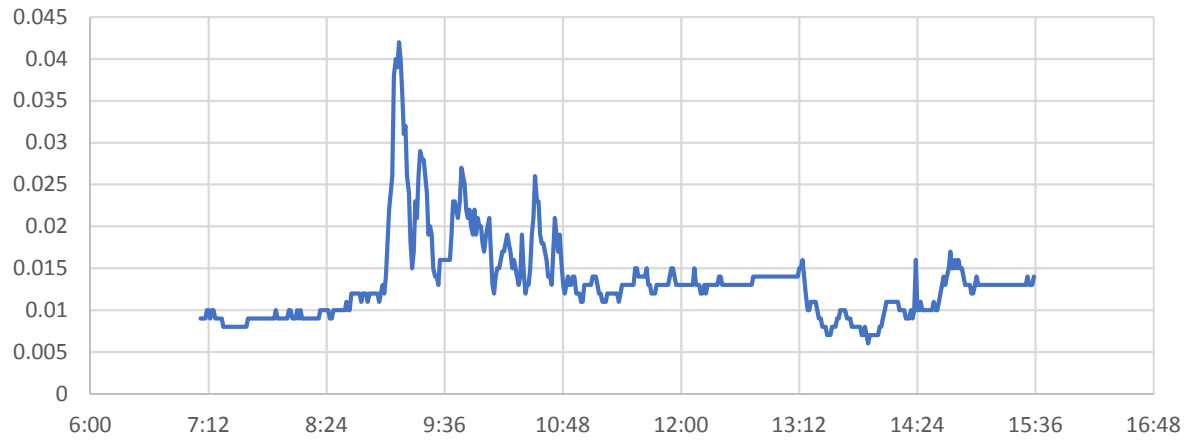
Brooke Mill Apartments							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
EBAM 2	PM-2.5	Good	721	439	0 - 46 µg/m ³	7.1 µg/m ³	See SOG #: T106

EPA Mobile Command Post							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
EBAM 3	PM-2.5	Moderate	742	535	0 - 78 µg/m ³	13.8 µg/m ³	See SOG #: T106

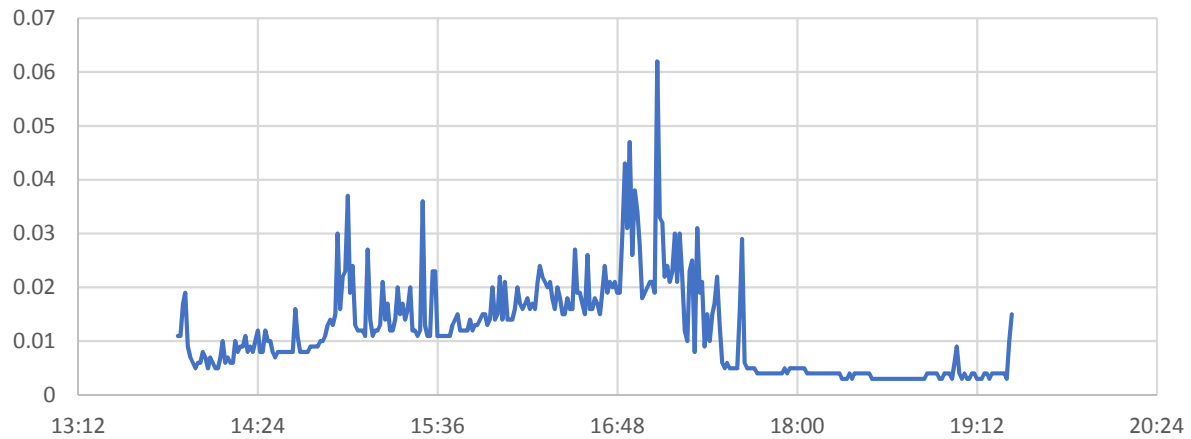
Notes:

%	Percent	O ₂	Oxygen
<	Less than	PEL	Permissible exposure limit
>	Greater than	ppb	Parts per billion
AEGL	Acute Exposure Guideline Levels for Airborne Chemicals	ppm	Parts per million
CO	Carbon monoxide	PM	Particulate matter
H ₂ S	Hydrogen Sulfide	SOG	Standard Operating Guidelines
HCN	Hydrogen Cyanide	TLV	Threshold limit value
LEL	Lower Explosive Level	µg/m ³	Micrograms per cubic meter
min	Minute	VOC	Volatile organic compound

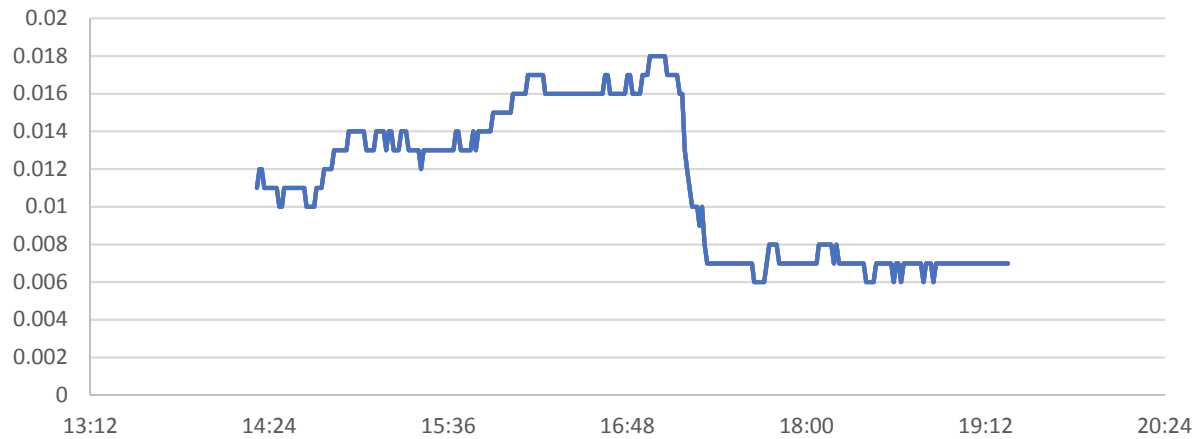
8/17/19 DAY Data for DustTrak 1 (PM_{2.5}) - Peacock Collision



8/17/19 DAY Data for DustTrak 2 (PM_{2.5}) - Short Cut Road



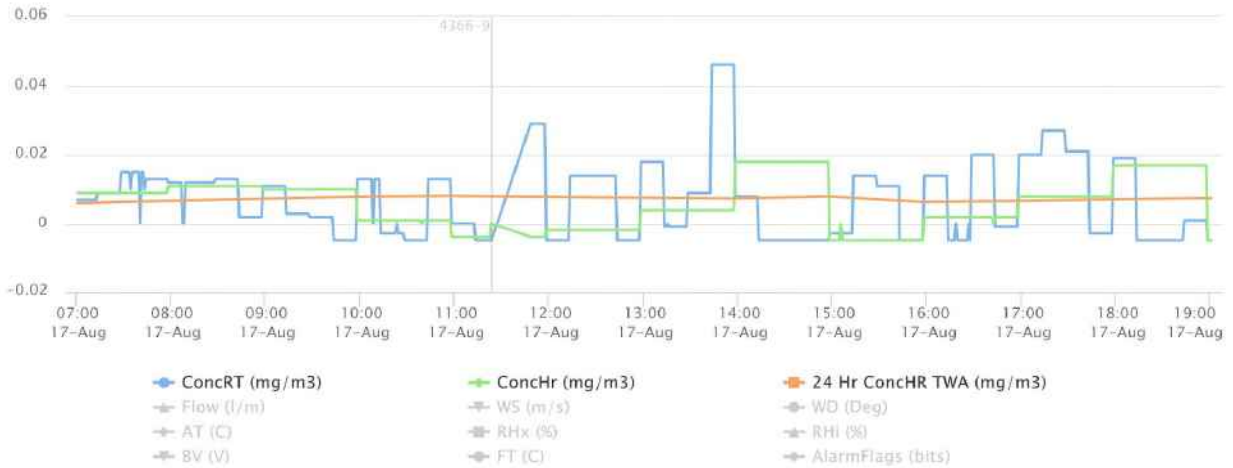
8/17/19 DAY Data for DustTrak 3 (PM_{2.5}) - Grace Coastal Church



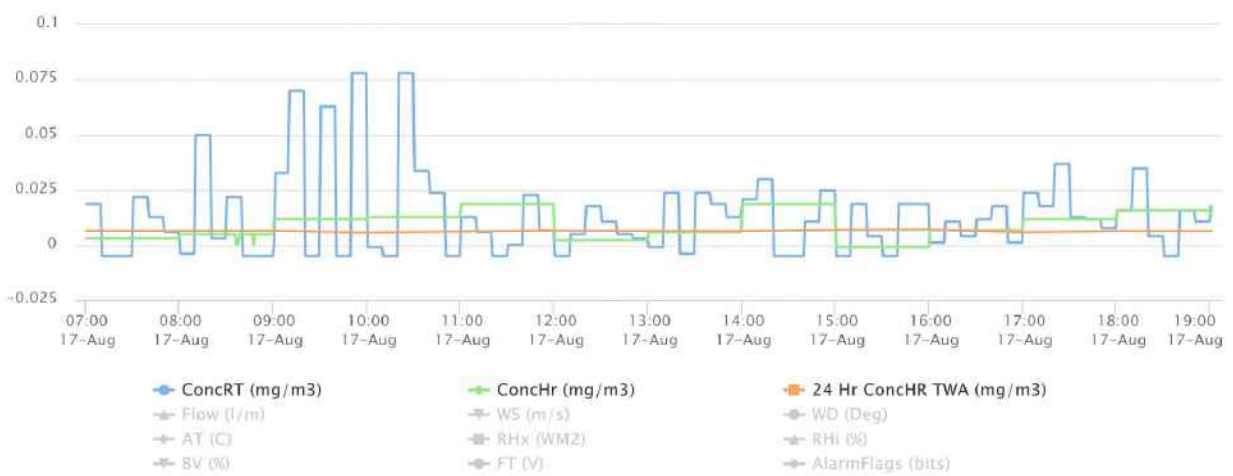
8/17/19 DAY Data for EBAM 1 (ConcRT) – Sun City



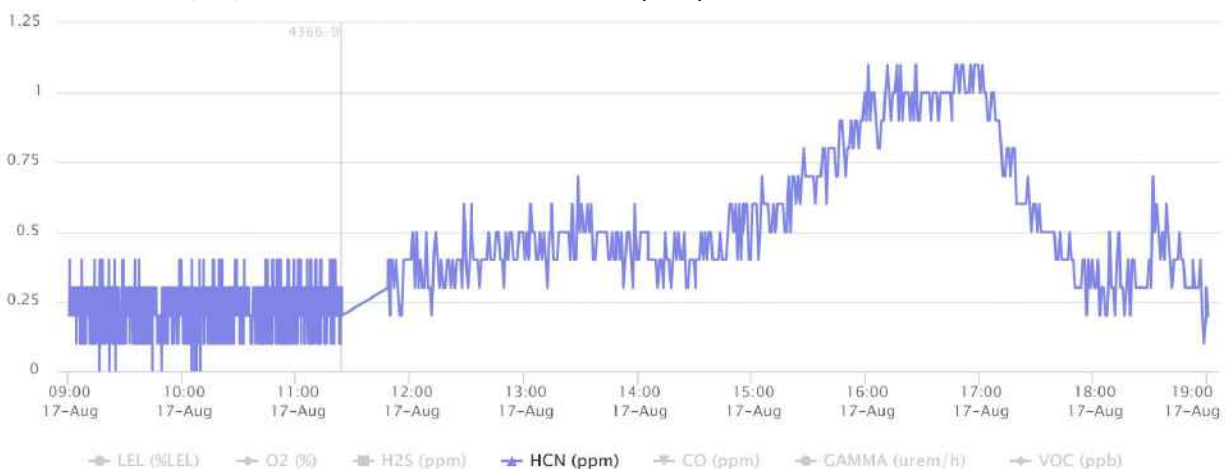
8/17/19 DAY Data for EBAM 2 (ConcRT) – Brooke Mill Apartments



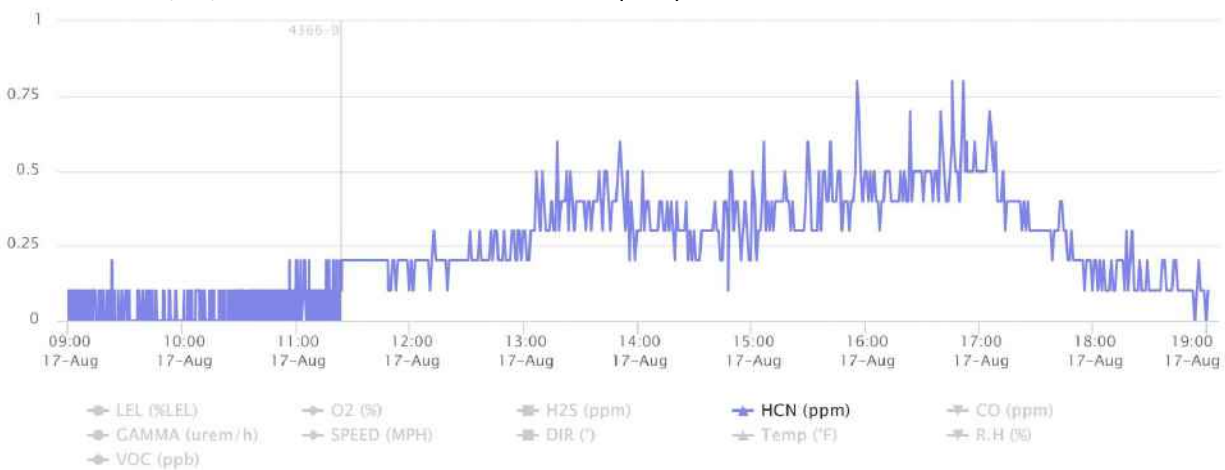
8/17/19 DAY Data for EBAM 3 (ConcRT) – EPA Mobile Command Post



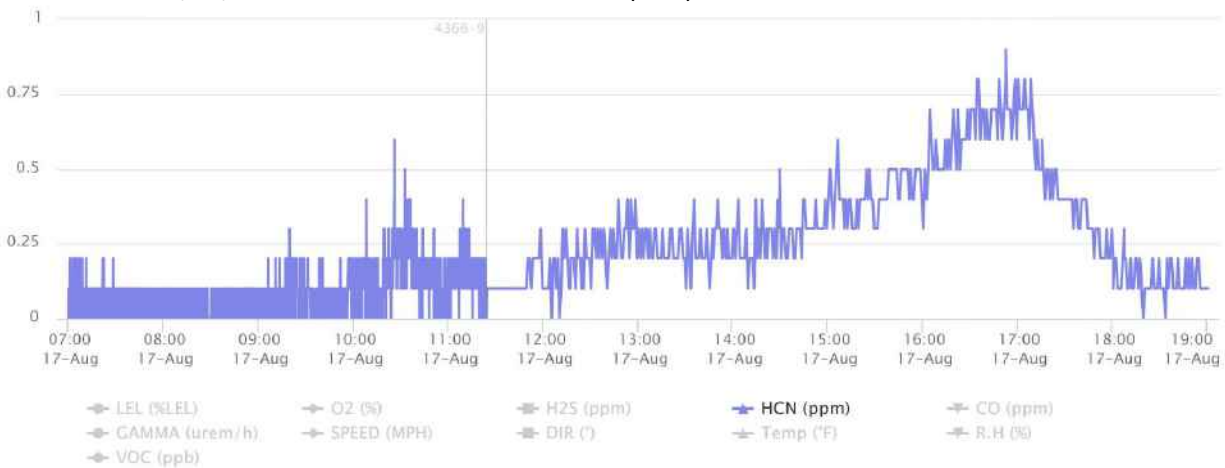
8/17/19 DAY Data for AREARAE PRO 1 (HCn) – Southwest of Pile



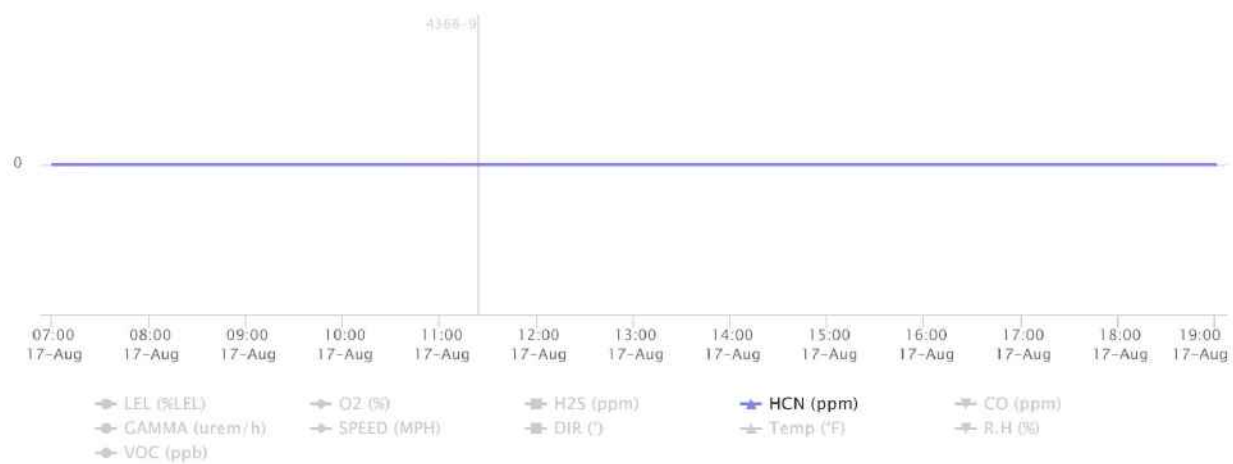
8/17/19 DAY Data for AREARAE PRO 2 (HCn) – Northwest of Pile



8/17/19 DAY Data for AREARAE PRO 3 (HCn) – Northeast of Pile



8/17/19 DAY Data for AREARAE PRO 4 (HCN) – Forrest Concrete



Air Monitoring Summary Tables

The table below summarize monitoring data collected on using EPA's Viper wireless remote monitoring system.



Project Name:

From: 8/17/19
19:00

To: 8/18/19
7:00

On Site, Southwest Corner of Pile							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 1	VOC	No	3,633	188	0 - 54 ppb	1.01 ppb	1,000 ppb
	CO	No	3,633	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	3,633	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	3,633	3,633	20.9% - 20.9%	20.9%	<19.5 or >23%
	LEL	No	3,633	0	0 - 0%	0%	10%
	HCN	No	3,633	3,579	0 - 0.5 ppm	0.21 ppm	7.1 ppm%

Peacock Collision							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
DustTrak 1	PM-2.5	Moderate	529	523	0 - 13 µg/m ³	5.89 µg/m ³	See SOG #: T106

On Site, Northwest Corner of Pile							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 2	VOC	No	4,450	2	0 - 94 ppb	0.02 ppb	1,000 ppb
	CO	No	4,450	22	0 - 9 ppm	0.01 ppm	83 ppm
	H ₂ S	No	4,450	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	4,450	4,450	20.9% - 20.9%	20.9%	<19.5 or >23%
	LEL	No	4,450	0	0 - 0%	0%	10%
	HCN	No	4,450	225	0 - 0.7 ppm	0.01 ppm	7.1 ppm

Short Cut Road							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
DustTrak 2	PM-2.5	Good	527	523	0 - 26 µg/m ³	4.37 µg/m ³	See SOG #: T106

Able Contracting Workshop, Northeast of Pile							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 3	VOC	No	4,816	267	0 - 228 ppb	1.38 ppb	1,000 ppb
	CO	No	4,816	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	4,816	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	4,816	4,816	21.1% - 21.2%	21.1%	<19.5 or >23%
	LEL	No	4,816	0	0 - 0%	0%	10%
	HCN	No	4,816	4,658	0 - 0.6 ppm	0.19 ppm	7.1 ppm

Grace Costal Church							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
DustTrak 3	PM-2.5	Good	648	648	4 - 9 µg/m ³	4.40 µg/m ³	See SOG #: T106

Forrest Concrete							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 4	VOC	No	4,717	0	0 - 0 ppb	0 ppb	1,000 ppb
	CO	No	4,717	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	4,717	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	4,717	4,717	20.1% - 20.5%	21.10%	<19.5 or >23%
	LEL	No	4,717	0	0 - 0%	0%	10%
	HCN	No	4,717	0	0 - 0 ppm	0 ppm	7.1 ppm

Sun City							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
EBAM 1	PM-2.5	Moderate	743	185	0 - 63	10.96 µg/m ³	See SOG #: T106

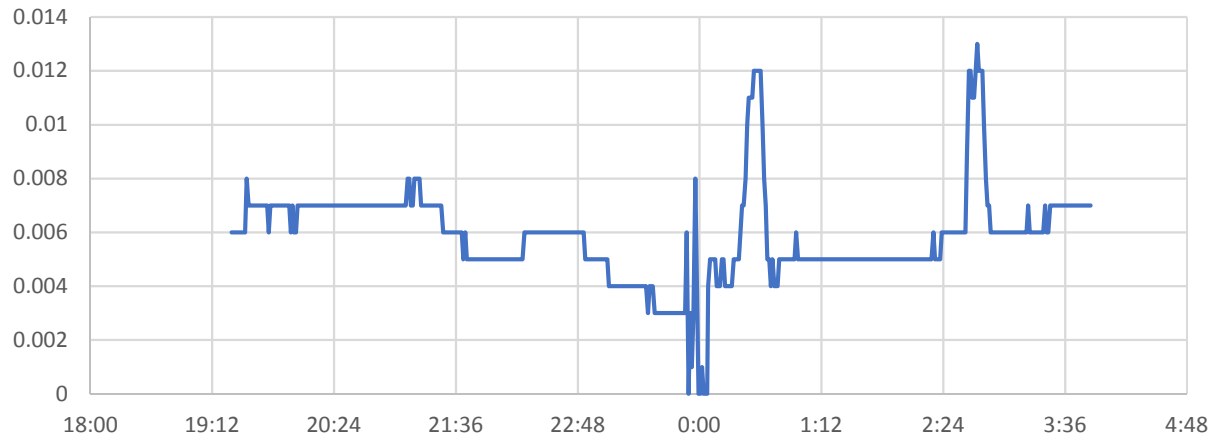
Brooke Mill Apartments							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
EBAM 2	PM-2.5	Good	752	466	0 - 39	8.57 µg/m ³	See SOG #: T106

EPA Mobile Command Post							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
EBAM 3	PM-2.5	Moderate	738	107	0 - 69	8.55 µg/m ³	See SOG #: T106

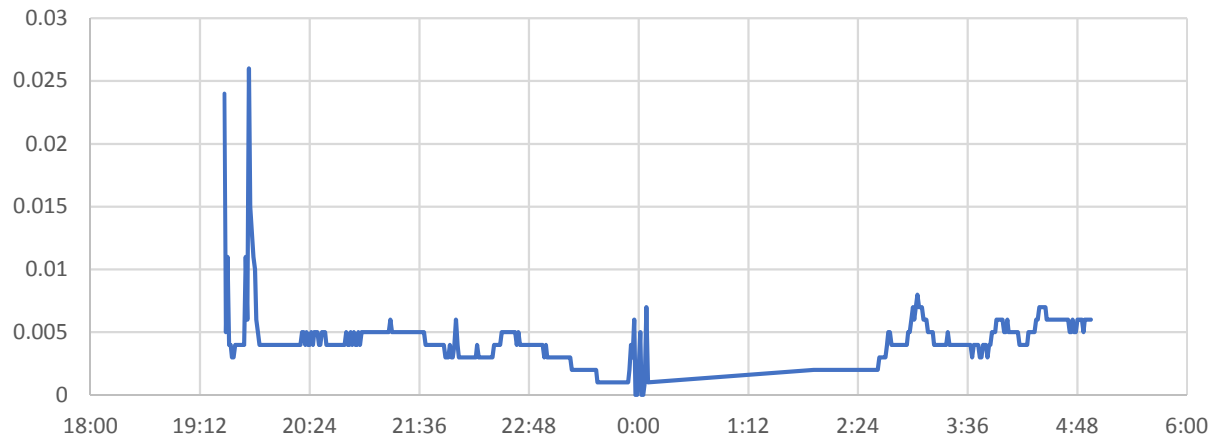
Notes:

%	Percent	O ₂	Oxygen
<	Less than	PEL	Permissible exposure limit
>	Greater than	ppb	Parts per billion
AEGL	Acute Exposure Guideline Levels for Airborne Chemicals	ppm	Parts per million
CO	Carbon monoxide	PM	Particulate matter
H ₂ S	Hydrogen Sulfide	SOG	Standard Operating Guidelines
HCN	Hydrogen Cyanide	TLV	Threshold limit value
LEL	Lower Explosive Level	µg/m ³	Micrograms per cubic meter
min	Minute	VOC	Volatile organic compound

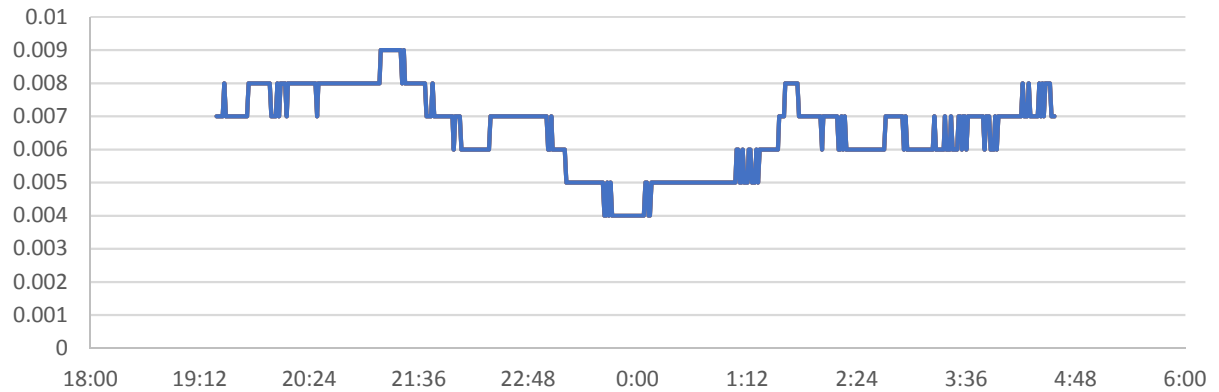
8/17/19 NIGHT Data for DustTrak 1 (PM_{2.5}) - Peacock Collision



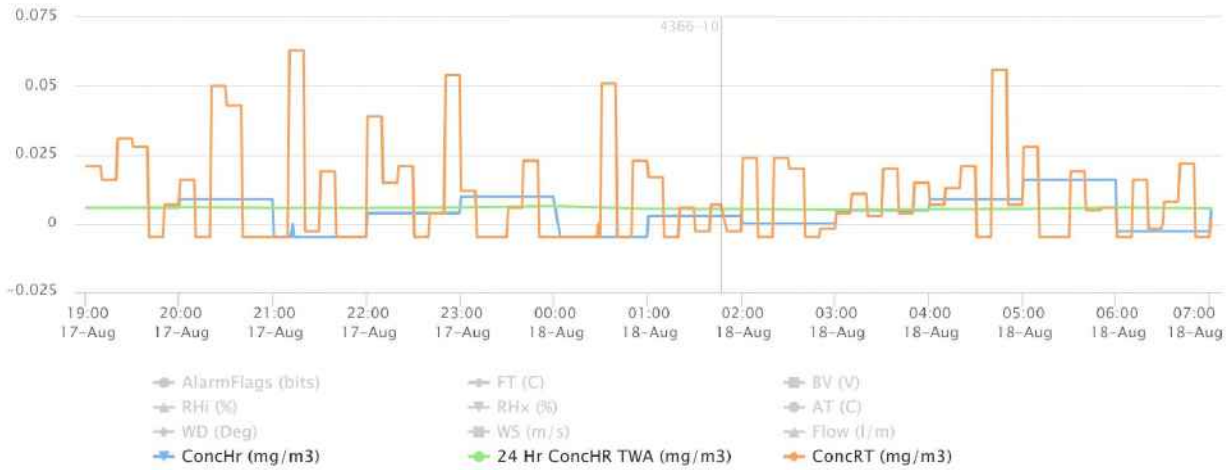
8/17/19 NIGHT Data for DustTrak 2 (PM_{2.5}) - Short Cut Road



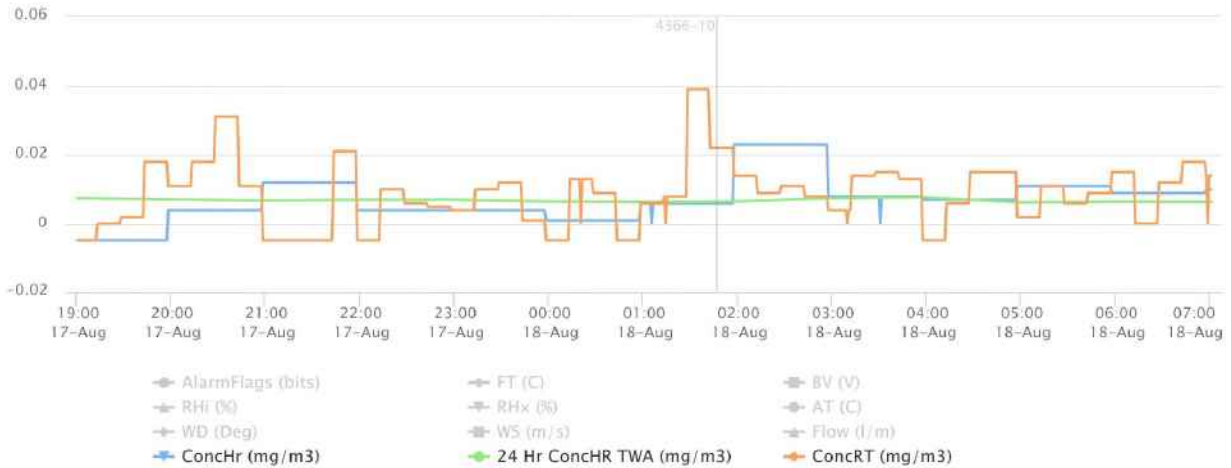
8/17/19 NIGHT Data for DustTrak 3 (PM_{2.5}) - Grace Coastal Church



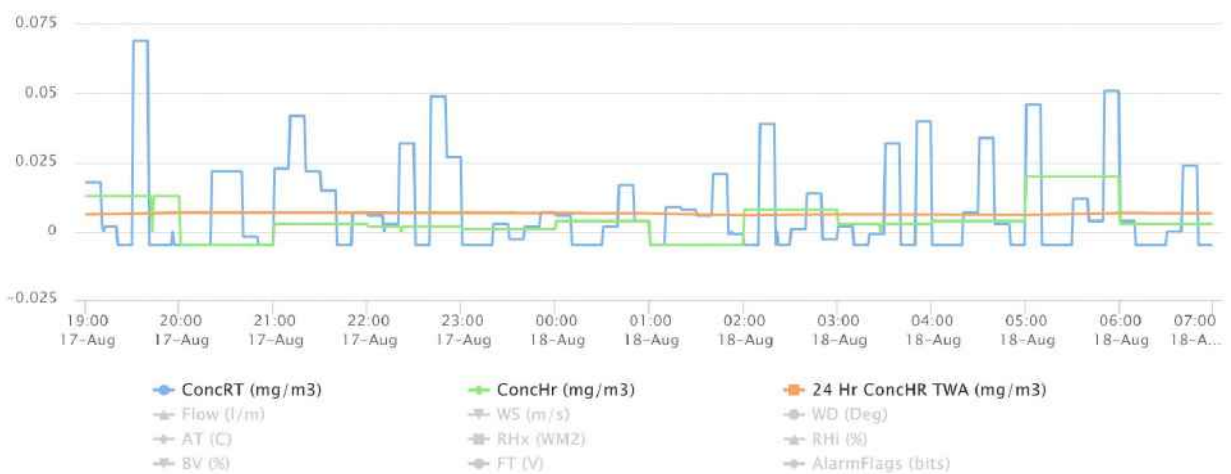
8/17/19 NIGHT Data for EBAM 1 (ConcRT) – Sun City



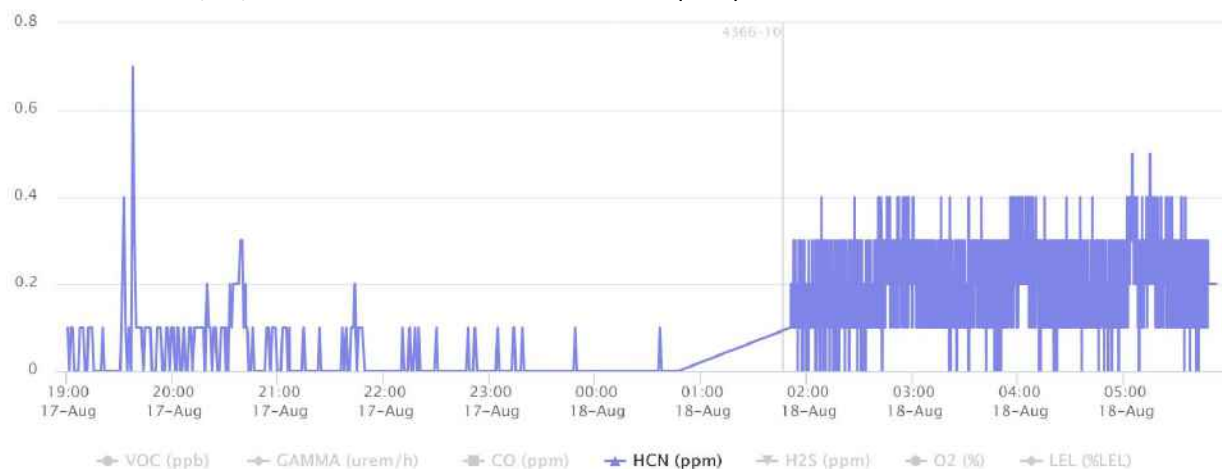
8/17/19 NIGHT Data for EBAM 2 (ConcRT) – Brooke Mill Apartments



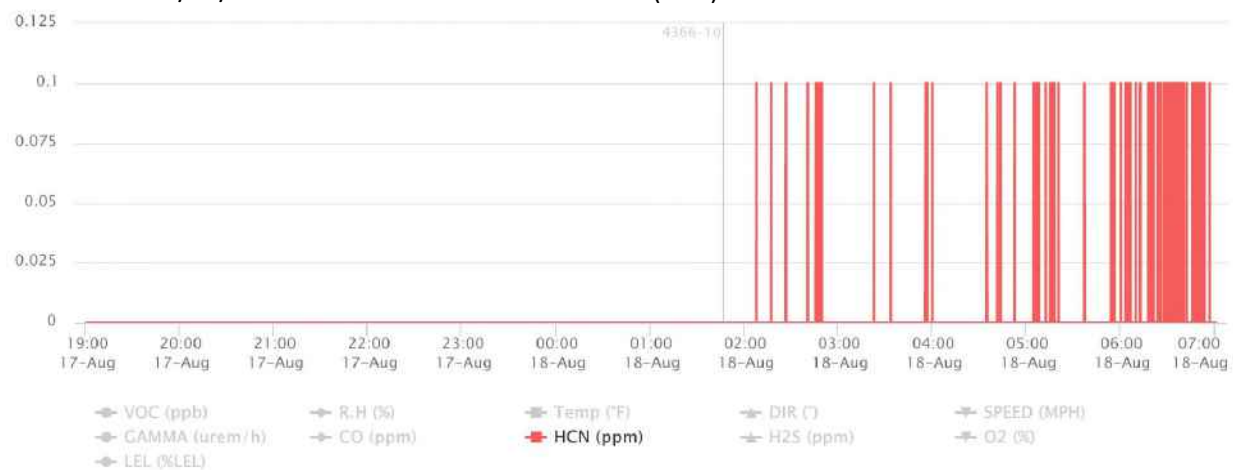
8/17/19 NIGHT Data for EBAM 3 (ConcRT) – EPA Mobile Command Post



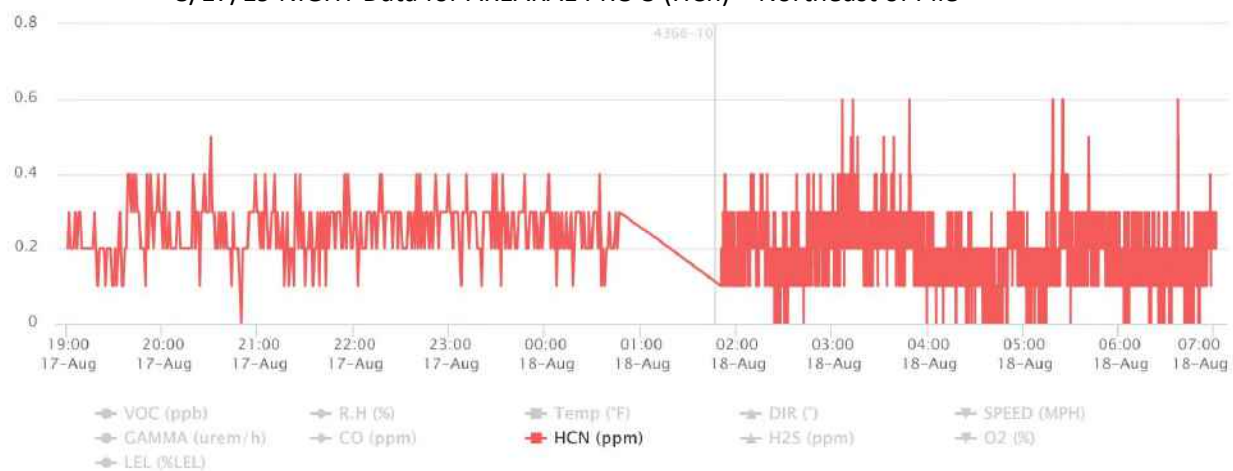
8/17/19 NIGHT Data for AREARAE PRO 1 (HCn) – Southwest of Pile



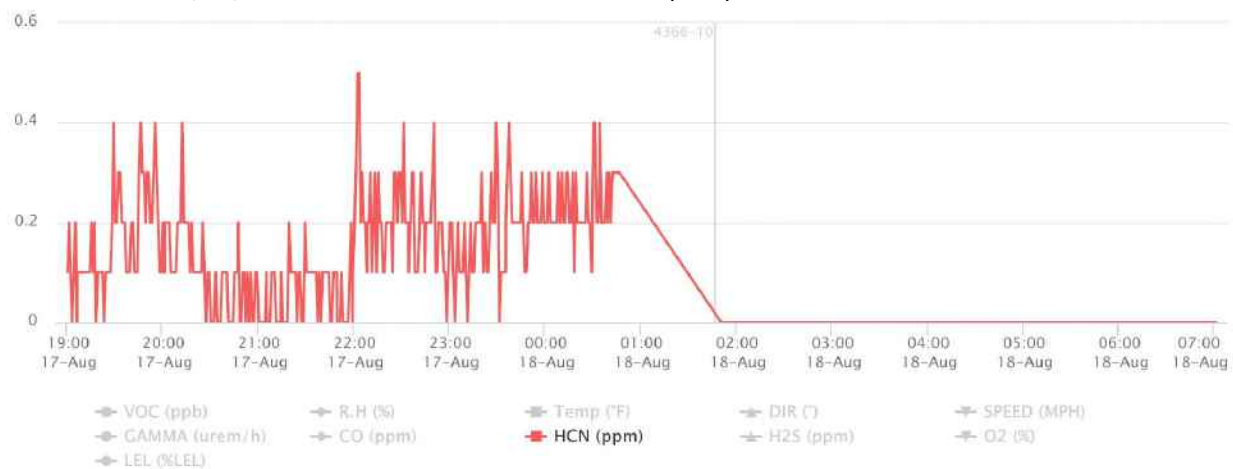
8/17/19 NIGHT Data for AREARAE PRO 2 (HCn) – Northwest of Pile



8/17/19 NIGHT Data for AREARAE PRO 3 (HCn) – Northeast of Pile



8/17/19 NIGHT Data for AREARAE PRO 4 (HCN) – Forrest Concrete



Air Monitoring Summary Tables

The table below summarize monitoring data collected on using EPA's Viper wireless remote monitoring system.

Project Name: Able Contracting Fire Site

From: 8/18/19
7:00

To: 8/18/19
19:00



On Site, Southwest Corner of Pile							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 1	VOC	No	10,626	91	0 - 951 ppb	3.9 ppb	1,000 ppb
	CO	No	10,626	137	0 - 61 ppm	0.08 ppm	83 ppm
	H ₂ S	Yes	10,626	7	0 - 0.9 ppm	0 ppm	0.5 ppm
	O ₂	Yes	10,626	10,564	0 - 21.2 %	20.8 %	<19.5 or >23%
	LEL	No	10,626	0	0 - 0 %	0 %	10%
	HCN	Yes	10,626	10,600	0 - 10.1 ppm	0.45 ppm	7.1 ppm

Oxygen sensor reading of 0% likely caused by instrument failures observed during operational period

Peacock Collision							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
DustTrak 1	PM-2.5	Good	776	776	5 - 15 µg/m ³	#DIV/0!	See SOG #: T106

On Site, Northwest Corner of Pile							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 2	VOC	Yes	12,317	32	0 - 4013 ppb	2.25 ppb	1,000 ppb
	CO	No	12,317	1,693	0 - 18 ppm	0.57 ppm	83 ppm
	H ₂ S	Yes	12,317	25	0 - 1.5 ppm	0.002 ppm	0.5 ppm
	O ₂	No	12,317	12,317	20.9 - 20.9 %	20.9 %	<19.5 or >23%
	LEL	No	12,317	0	0 - 0 %	0 %	10%
	HCN	No	12,317	9,332	0 - 3.4 ppm	0.28 ppm	7.1 ppm

Able Contracting Workshop, Northeast of Pile							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 3	VOC	No	12,389	55	0 - 82 ppb	0.11 ppb	1,000 ppb
	CO	No	12,389	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	12,389	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	12,389	12,389	20.9 - 21.4 %	21.1 %	<19.5 or >23%
	LEL	No	12,389	0	0 - 0 %	0 %	10%
	HCN	No	12,389	12,324	0 - 0.9 ppm	0.3 ppm	7.1 ppm

Grace Costal Church							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
DustTrak 3	PM-2.5	Moderate	764	764	6 - 11 µg/m ³	#DIV/0!	See SOG #: T106

Forrest Concrete							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 4	VOC	No	12,370	0	0 - 0 ppb	0 ppb	1,000 ppb
	CO	No	12,370	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	12,370	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	12,370	12,370	20.1 - 20.9 %	20.6 %	<19.5 or >23%
	LEL	No	12,370	0	0 - 0 %	0 %	10%
	HCN	No	12,370	0	0 - 0 ppm	0 ppm	7.1 ppm

Sun City							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
EBAM 1	PM-2.5	Good	736	245	0 - 86 ug/m ³	10.6 ug/m ³	See SOG #: T106

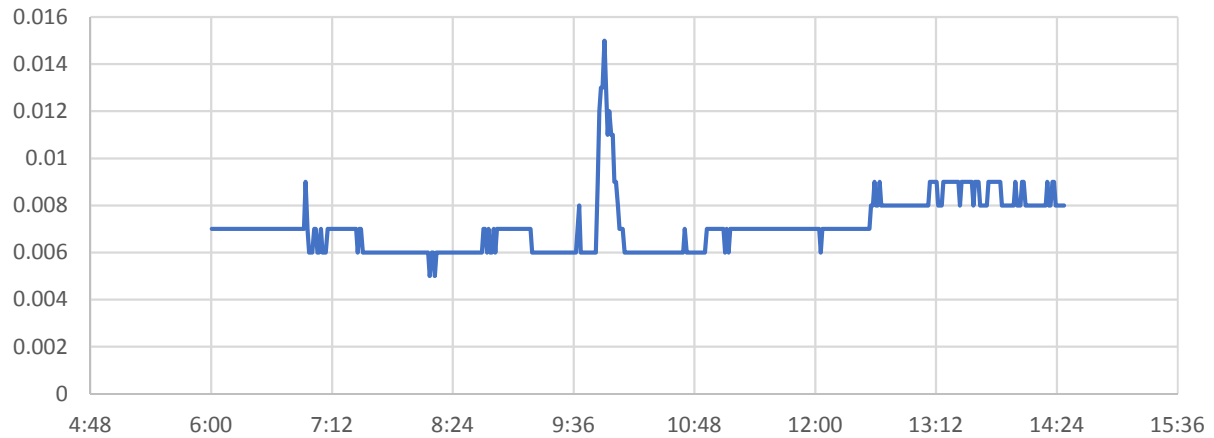
Brooke Mill Apartments							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
EBAM 2	PM-2.5	Good	744	202	0 - 40 ug/m ³	5.8 ug/m ³	See SOG #: T106

EPA Mobile Command Post							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
EBAM 3	PM-2.5	Moderate	700	211	0 - 126 ug/m ³	13.2 ug/m ³	See SOG #: T106

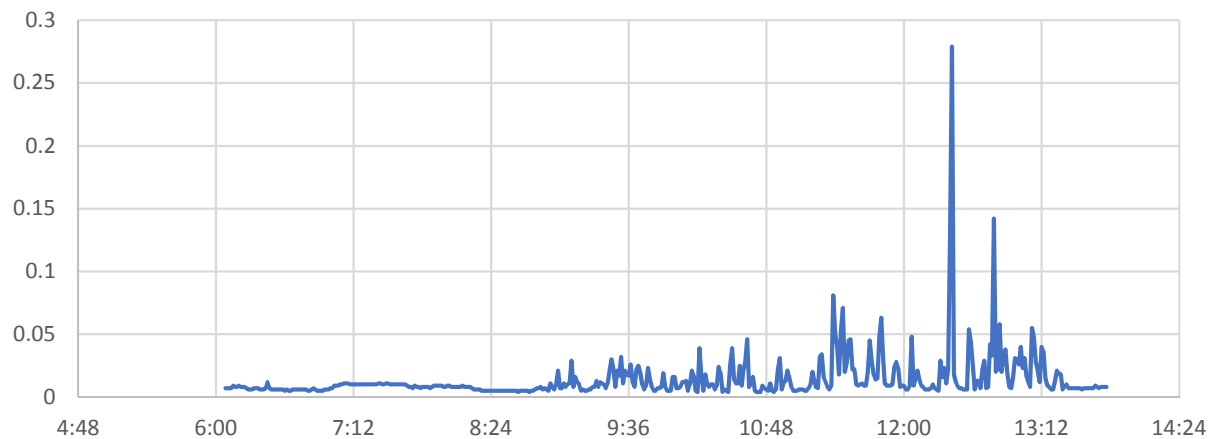
Notes:

%	Percent	O ₂	Oxygen
<	Less than	PEL	Permissible exposure limit
>	Greater than	ppb	Parts per billion
AEGL	Acute Exposure Guideline Levels for Airborne Chemicals	ppm	Parts per million
CO	Carbon monoxide	PM	Particulate matter
H ₂ S	Hydrogen Sulfide	SOG	Standard Operating Guidelines
HCN	Hydrogen Cyanide	TLV	Threshold limit value
LEL	Lower Explosive Level	µg/m ³	Micrograms per cubic meter
min	Minute	VOC	Volatile organic compound

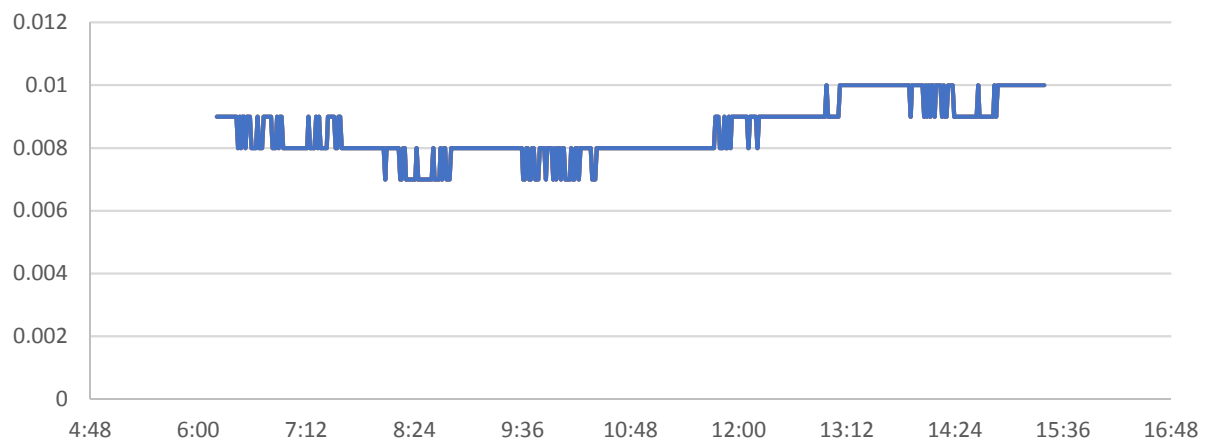
8/18/19 DAY Data for DustTrak 1 (PM_{2.5}) - Sun



8/18/19 DAY Data for DustTrak 2 (PM_{2.5}) - Short Cut



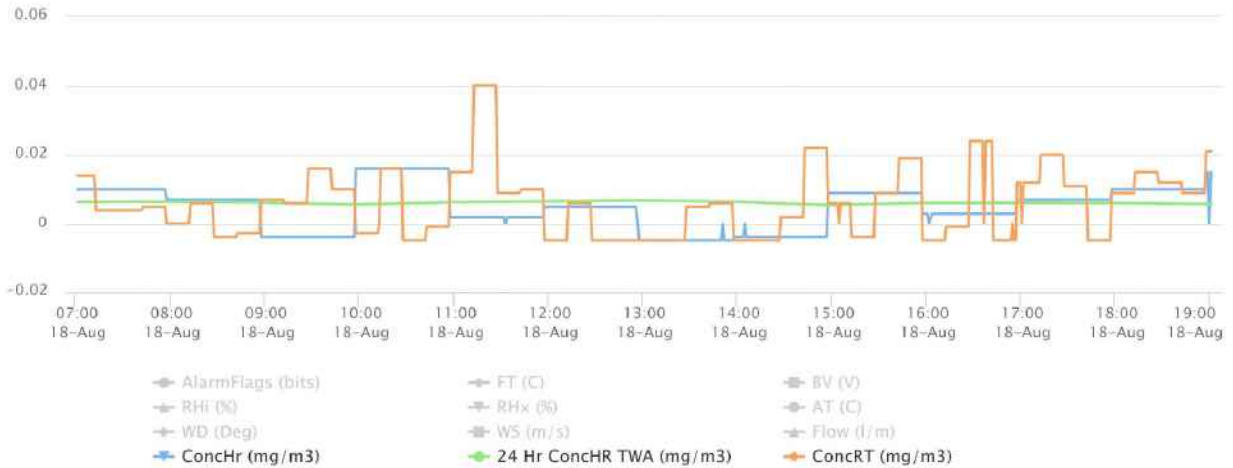
8/18/19 DAY Data for DustTrak 3 (PM_{2.5}) - Church



8/18/19 DAY Data for EBAM 1 (ConcRT) – Sun City



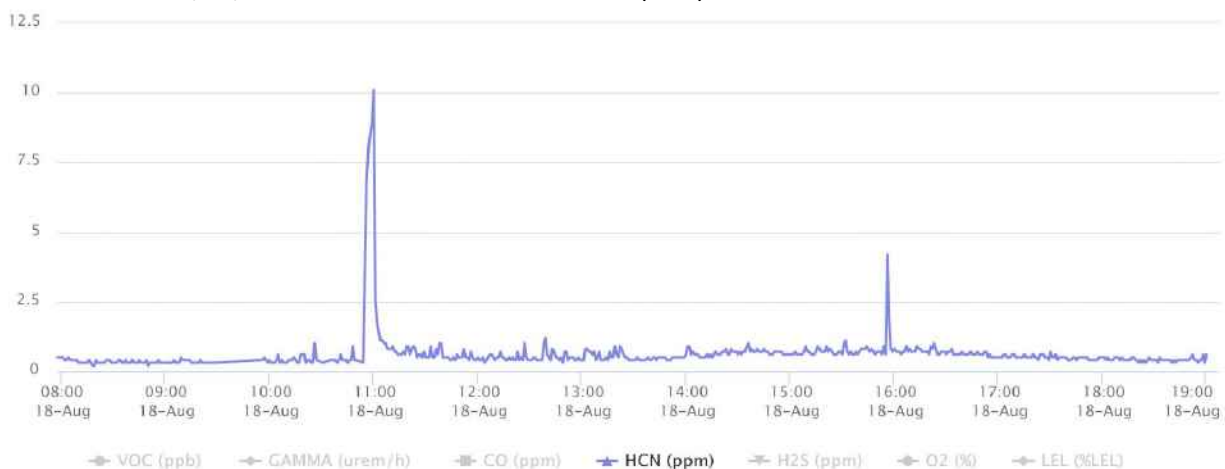
8/18/19 DAY Data for EBAM 2 (ConcRT) – Brooke Mill Apartments



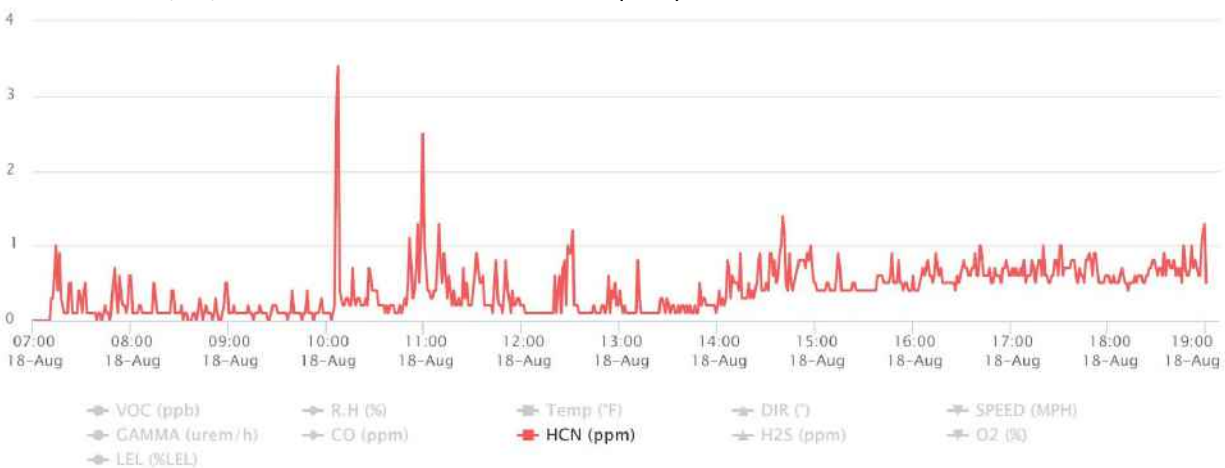
8/18/19 DAY Data for EBAM 3 (ConcRT) – EPA Mobile Command Post



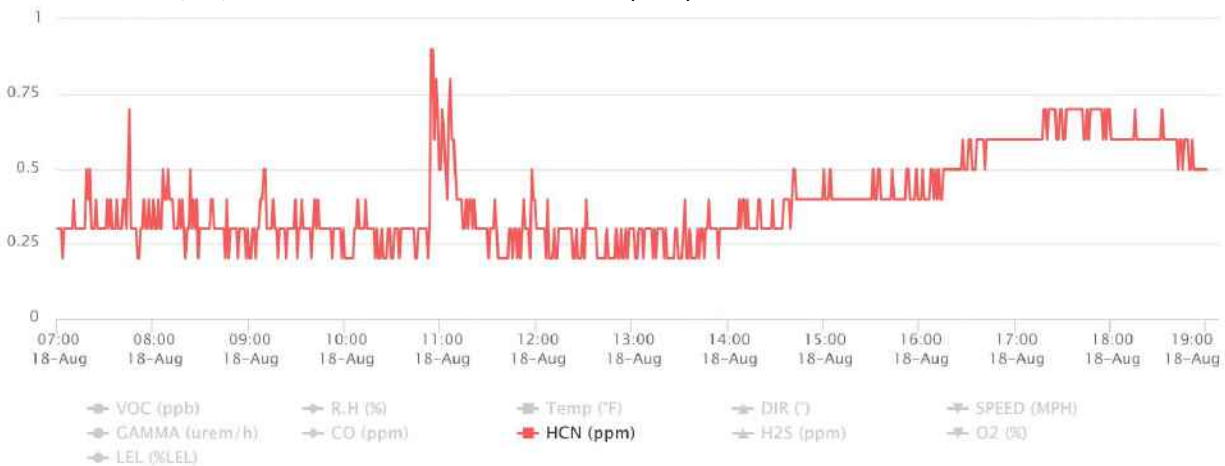
8/18/19 DAY Data for AREARAE PRO 1 (HCn) – Southwest of Pile



8/18/19 DAY Data for AREARAE PRO 2 (HCn) – Northwest of Pile



8/18/19 DAY Data for AREARAE PRO 3 (HCn) – Northeast of Pile



8/18/19 DAY Data for AREARAE PRO 4 (HCN) – Forrest Concrete



Air Monitoring Summary Tables

The table below summarizes monitoring data collected on using EPA's Viper wireless remote monitoring system.

Project Name: Able Contracting Fire Site

From: 8/18/19
19:00

To: 8/19/19
7:00



On Site, Southwest Corner of Pile							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEG)
AreaRAE 1	VOC	No	13,060	569	0 - 272 ppb	2.35 ppb	1,000 ppb
	CO	No	13,060	266	0 - 6 ppm	0.07 ppm	83 ppm
	H ₂ S	No	13,060	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	13,060	13,060	20.9 - 20.9 %	20.9 %	<19.5 or >23%
	LEL	No	13,060	0	0 - 0 %	0 %	10%
	HCN	No	13,060	13,055	0 - 1.4 ppm	0.39 ppm	7.1 ppm

Peacock Collision							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEG)
DustTrak 1	PM-2.5	Good	681	681	3 - 13 µg/m ³	4.2 ug/m3	See SOG #: T106

On Site, Northwest Corner of Pile							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEG)
AreaRAE 2	VOC	No	12,794	4	0 - 152 ppb	0.02 ppb	1,000 ppb
	CO	No	12,794	2,800	0 - 22 ppm	1.12 ppm	83 ppm
	H ₂ S	No	12,794	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	12,794	12,794	20.9 - 20.9 %	20.9 %	<19.5 or >23%
	LEL	No	12,794	0	0 - 0 %	0 %	10%
	HCN	No	12,794	10,538	0 - 1.6 ppm	0.25 ppm	7.1 ppm

Short Cut Road							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEG)
DustTrak 2	PM-2.5	Good	615	606	0 - 28 µg/m ³	4.8 ug/m3	See SOG #: T106

Able Contracting Workshop, Northeast of Pile							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEG)
AreaRAE 3	VOC	No	12,871	1,251	0 - 156 ppb	3.27 ppb	1,000 ppb
	CO	No	12,871	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	12,871	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	12,871	12,871	21.1 - 21.3 %	21.1 %	<19.5 or >23%
	LEL	No	12,871	0	0 - 0 %	0 %	10%
	HCN	No	12,871	11,266	0 - 0.8 ppm	0.16 ppm	7.1 ppm

Grace Costal Church							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEG)
DustTrak 3	PM-2.5	Good	681	681	4 - 19 µg/m ³	5.8 ug/m3	See SOG #: T106

Forrest Concrete							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEG)
AreaRAE 4	VOC	No	12,813	0	0 - 0 ppb	0 ppb	1,000 ppb
	CO	No	12,813	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	12,813	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	12,813	12,813	20.1 - 20.9 %	20.2 %	<19.5 or >23%
	LEL	No	12,813	0	0 - 0 %	0 %	10%
	HCN	No	12,813	0	0 - 0 ppm	0 ppm	7.1 ppm

Sun City							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEG)
EBAM 1	PM-2.5	Good	748	264	0 - 57 ug/m3	10.1 ug/m3	See SOG #: T106

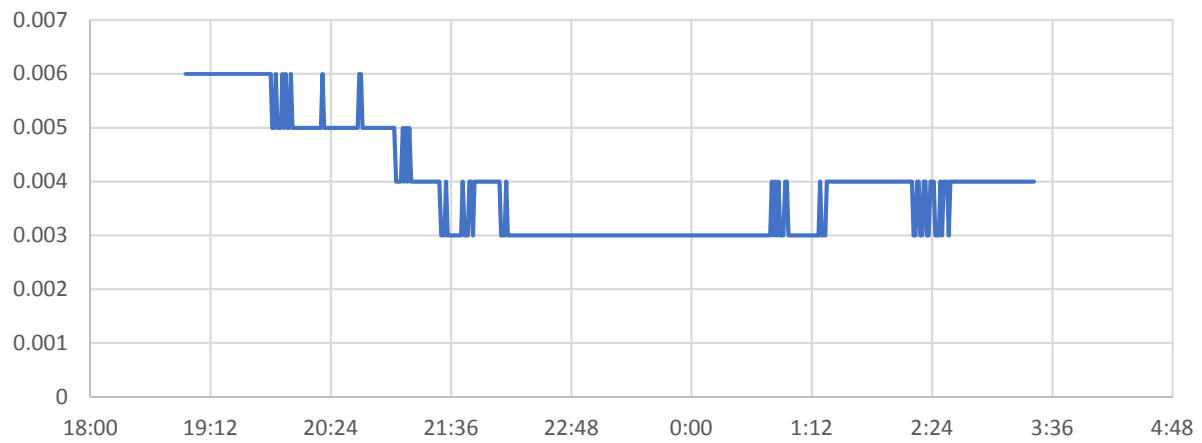
Brooke Mill Apartments							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEG)
EBAM 2	PM-2.5	Good	751	484	0 - 35 ug/m3	10 ug/m3	See SOG #: T106

EPA Mobile Command Post							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEG)
EBAM 3	PM-2.5	Moderate	737	126	0 - 82 ug/m3	13 ug/m3	See SOG #: T106

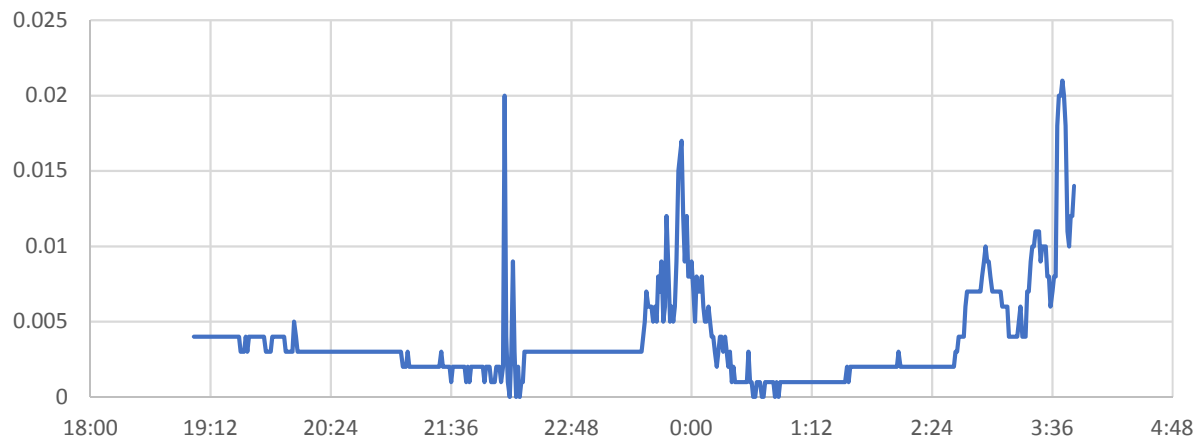
Notes:

%	Percent	O ₂	Oxygen
<	Less than	PEL	Permissible exposure limit
>	Greater than	ppb	Parts per billion
AEG	Acute Exposure Guideline Levels for Airborne Chemicals	ppm	Parts per million
CO	Carbon monoxide	PM	Particulate matter
H ₂ S	Hydrogen Sulfide	SOG	Standard Operating Guidelines
HCN	Hydrogen Cyanide	TLV	Threshold limit value
LEL	Lower Explosive Level	µg/m ³	Micrograms per cubic meter
min	Minute	VOC	Volatile organic compound

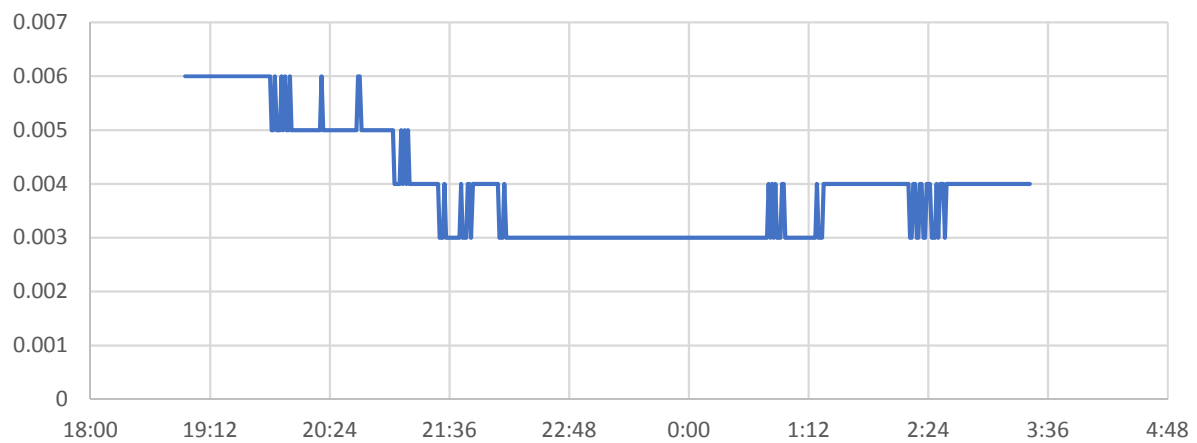
8/18/19 NIGHT Data for DustTrak 1 (PM_{2.5}) - Sun



8/18/19 NIGHT Data for DustTrak 2 (PM_{2.5}) - Short Cut



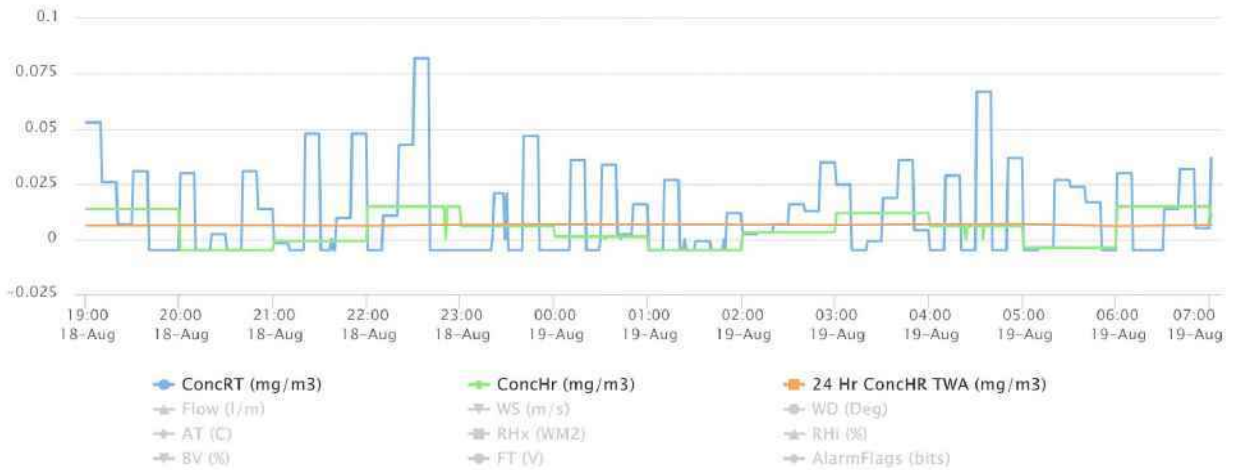
8/18/19 NIGHT Data for DustTrak 1 (PM_{2.5}) - Sun



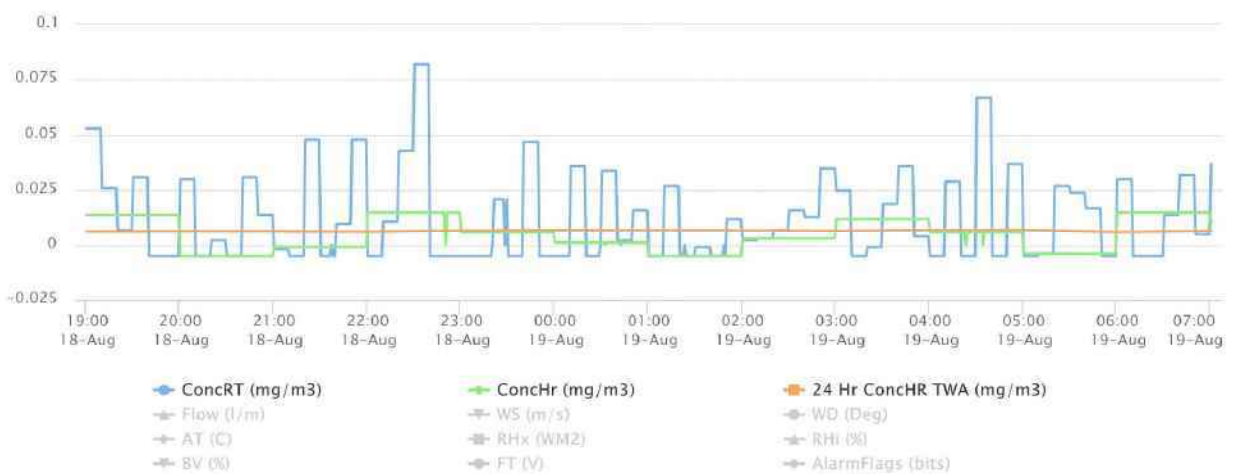
8/18/19 NIGHT Data for EBAM 1 (ConcRT) – Sun City



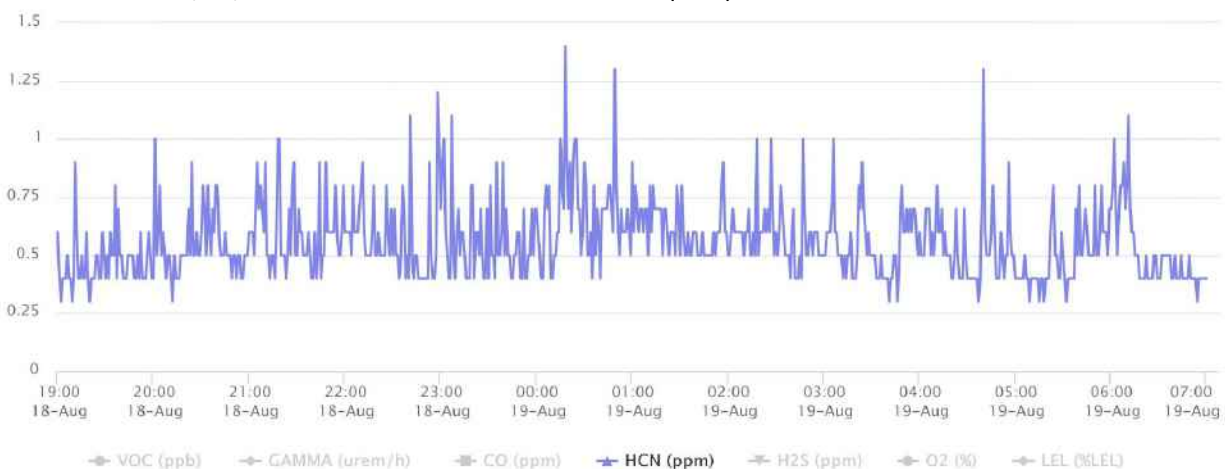
8/18/19 NIGHT Data for EBAM 2 (ConcRT) – Brooke Mill Apartments



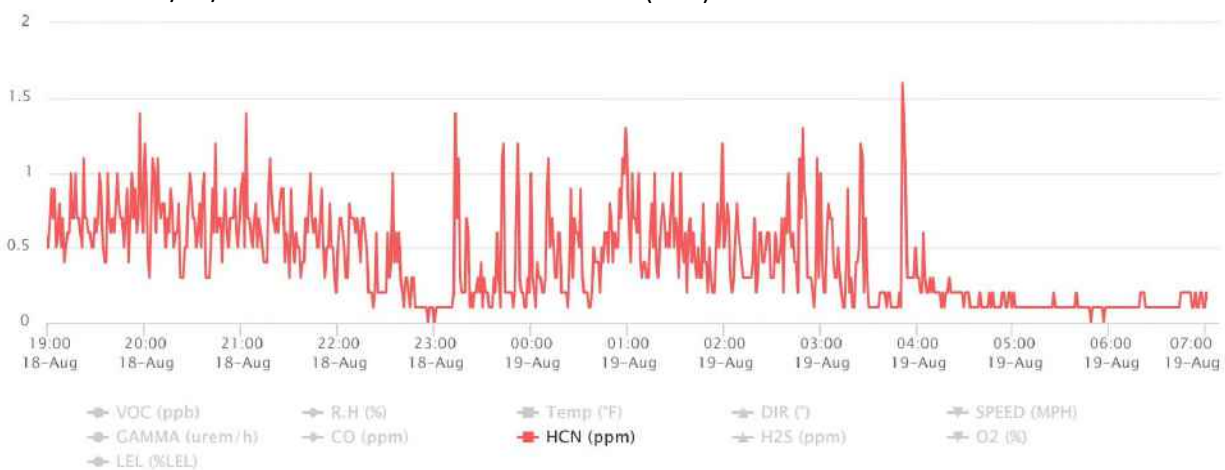
8/18/19 NIGHT Data for EBAM 3 (ConcRT) – EPA Mobile Command Post



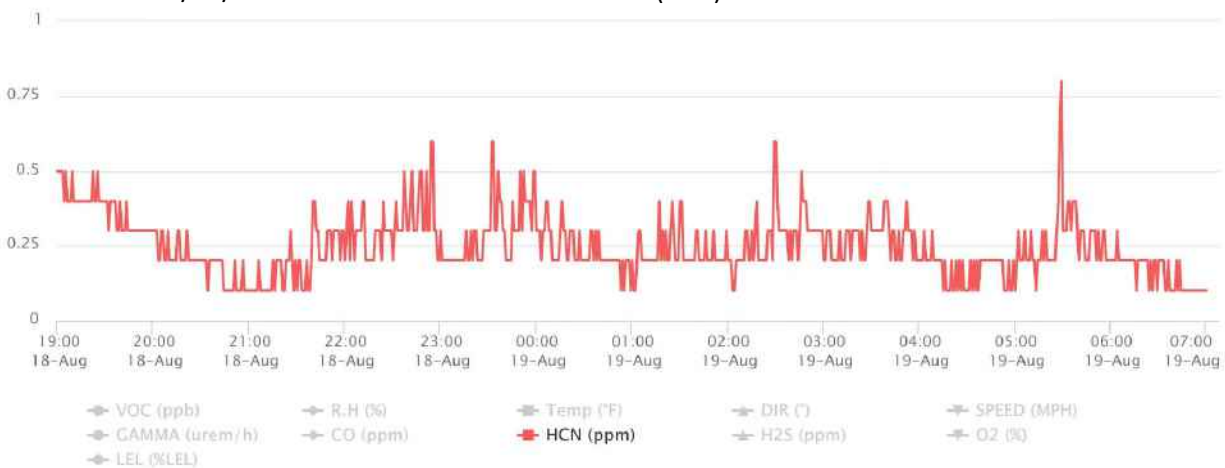
8/18/19 NIGHT Data for AREARAE PRO 1 (HCn) – Southwest of Pile



8/18/19 NIGHT Data for AREARAE PRO 2 (HCn) – Northwest of Pile



8/18/19 NIGHT Data for AREARAE PRO 3 (HCn) – Northeast of Pile



8/18/19 NIGHT Data for AREARAE PRO 4 (HCN) – Forrest Concrete



Air Monitoring Summary Tables

The table below summarizes monitoring data collected on using EPA's Viper wireless remote monitoring system.

Project Name: Able Contracting Fire Site

From: 8/19/19
7:00

To: 8/19/19
19:00



On Site, Southwest Corner of Pile							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 1	VOC	Yes	4,617	117	0 - 10213 ppb	28.08 ppb	1,000 ppb
	CO	No	4,617	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	4,617	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	4,617	4,617	20.9 - 20.9 %	20.9 %	<19.5 or >23%
	LEL	No	4,617	0	0 - 0 %	0 %	10%
	HCN	No	4,617	4,612	0 - 0.8 ppm	0.33 ppm	7.1 ppm

Peacock Collision							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
DustTrak 1	PM-2.5	Good	133	132	0 - 16 µg/m ³	6.6 ug/m3	See SOG #: T106

On Site, Northwest Corner of Pile							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 2	VOC	No	4,213	7	0 - 645 ppb	0.37 ppb	1,000 ppb
	CO	No	4,213	181	0 - 8 ppm	0.14 ppm	83 ppm
	H ₂ S	No	4,213	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	4,213	4,213	20.9 - 20.9 %	20.9 %	<19.5 or >23%
	LEL	No	4,213	0	0 - 0 %	0 %	10%
	HCN	No	4,213	2,703	0 - 1.4 ppm	0.17 ppm	7.1 ppm

Short Cut Road							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
DustTrak 2	PM-2.5	Good	480	480	4 - 58 µg/m ³	9.3 ug/m3	See SOG #: T106

Able Contracting Workshop, Northeast of Pile							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 3	VOC	Yes	4,332	485	0 - 14223 ppb	48.96 ppb	1,000 ppb
	CO	Yes	4,332	535	0 - 500 ppm	8.42 ppm	83 ppm
	H ₂ S	Yes	4,332	376	0 - 7.6 ppm	0.132 ppm	0.5 ppm
	O ₂	No	4,332	4,332	20.9 - 21.3 %	21.1 %	<19.5 or >23%
	LEL	No	4,332	1,647	0 - 5 %	0.8 %	10%
	HCN	Yes	4,332	3,934	0 - 38.4 ppm	1.06 ppm	7.1 ppm

Grace Costal Church							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
DustTrak 3	PM-2.5	Good	753	753	7 - 76 µg/m ³	10.8 ug/m3	See SOG #: T106

Forrest Concrete							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 4	VOC	No	4,237	0	0 - 0 ppb	0 ppb	1,000 ppb
	CO	No	4,237	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	4,237	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	4,237	4,237	20.1 - 20.9 %	20.4 %	<19.5 or >23%
	LEL	No	4,237	0	0 - 0 %	0 %	10%
	HCN	No	4,237	1	0 - 0.1 ppm	0 ppm	7.1 ppm

Sun City							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
EBAM 1	PM-2.5	Moderate	710	391	0 - 76 ug/m3	13 ug/m3	See SOG #: T106

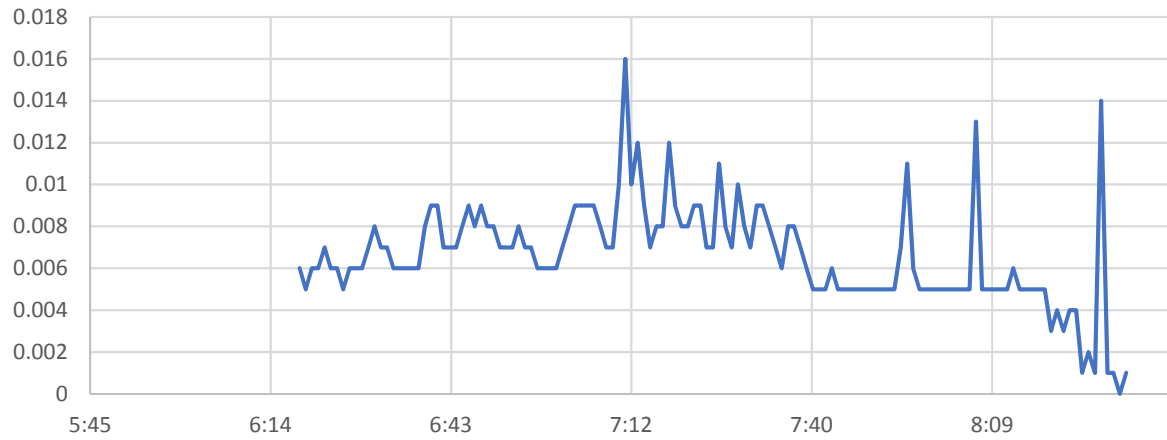
Brooke Mill Apartments							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
EBAM 2	PM-2.5	Good	566	226	0 - 34 ug/m3	9.6 ug/m3	See SOG #: T106

EPA Mobile Command Post							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
EBAM 3	PM-2.5	Moderate	583	267	0 - 109 ug/m3	15.6 ug/m3	See SOG #: T106

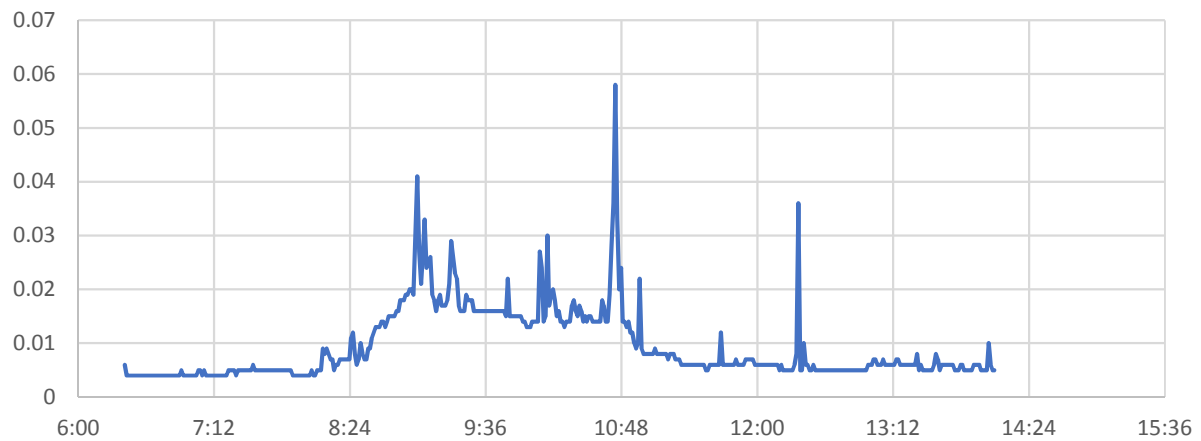
Notes:

%	Percent	O ₂	Oxygen
<	Less than	PEL	Permissible exposure limit
>	Greater than	ppb	Parts per billion
AEGL	Acute Exposure Guideline Levels for Airborne Chemicals	ppm	Parts per million
CO	Carbon monoxide	PM	Particulate matter
H ₂ S	Hydrogen Sulfide	SOG	Standard Operating Guidelines
HCN	Hydrogen Cyanide	TLV	Threshold limit value
LEL	Lower Explosive Level	µg/m ³	Micrograms per cubic meter
min	Minute	VOC	Volatile organic compound

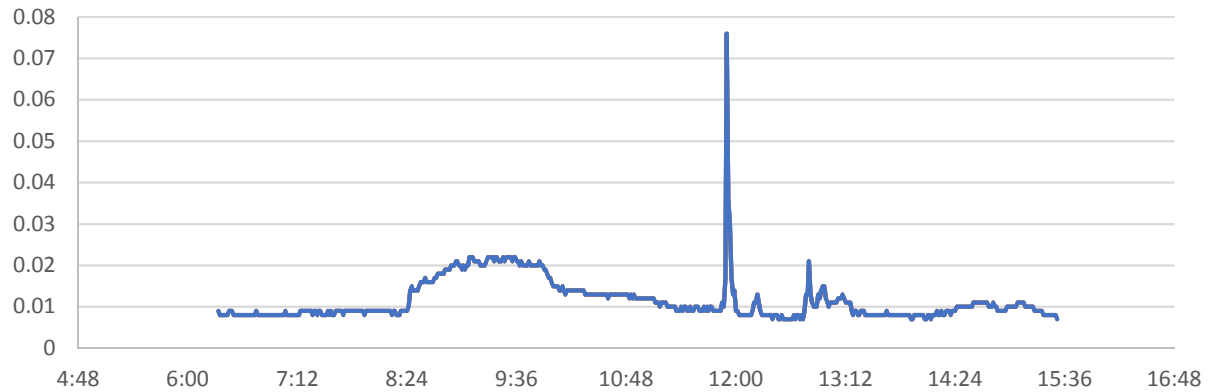
8/19/19 DAY Data for DustTrak 1 (PM_{2.5}) - Peacock Collision



8/19/19 DAY Data for DustTrak 2 (PM_{2.5}) - Short Cut Road



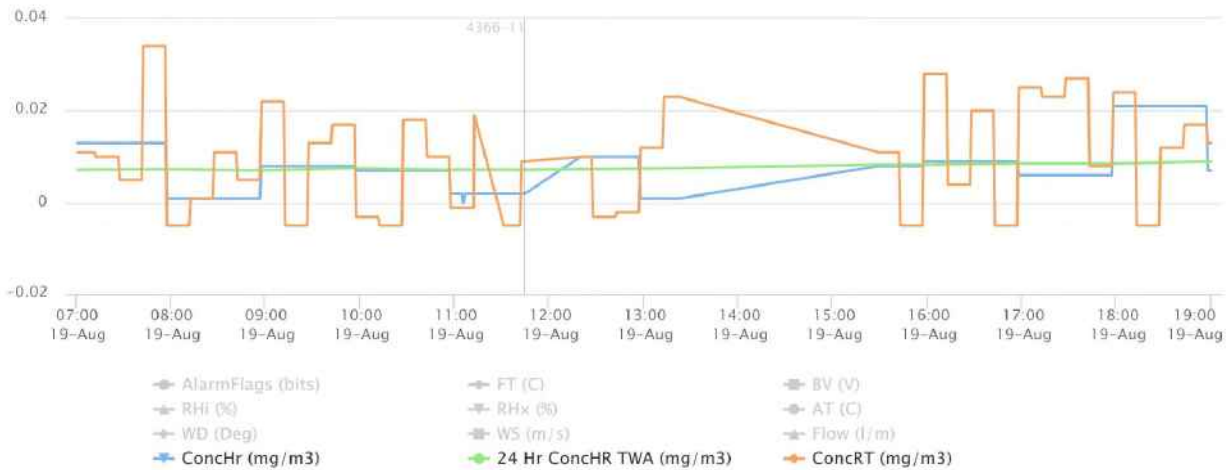
8/19/19 DAY Data for DustTrak 3 (PM_{2.5}) - Grace Costal Church



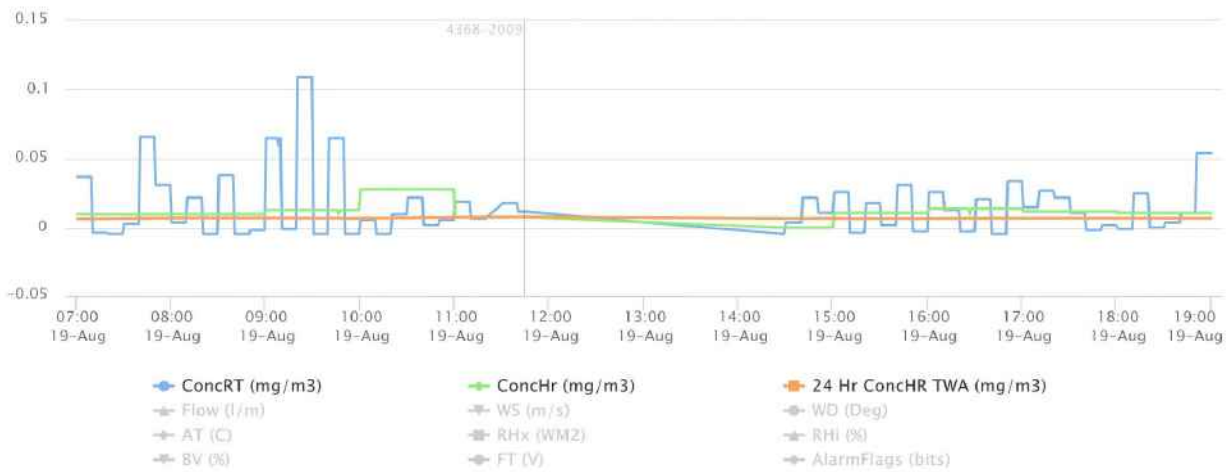
8/19/19 DAY Data for EBAM 1 (ConcRT) – Sun City



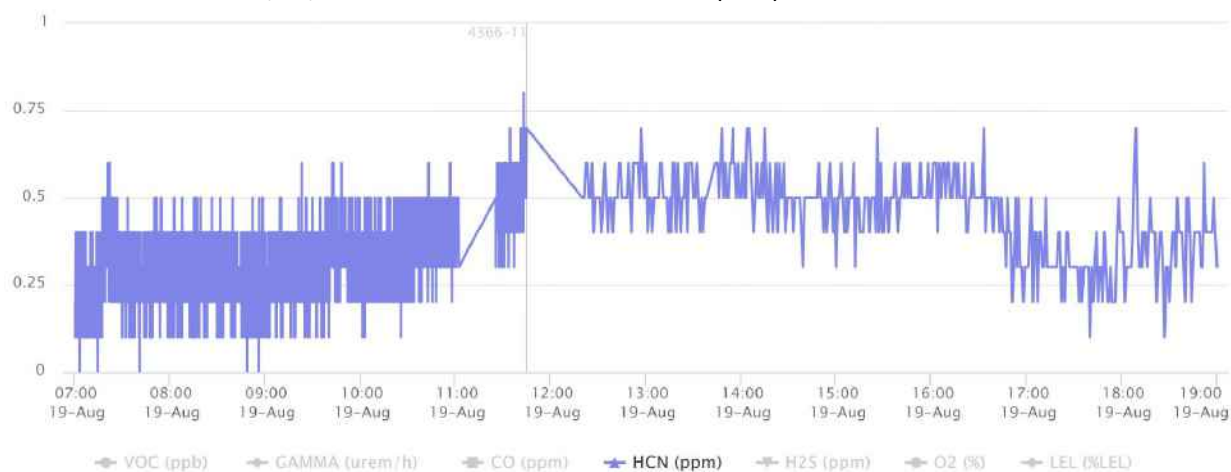
8/19/19 DAY Data for EBAM 2 (ConcRT) – Brooke Mill Apartments



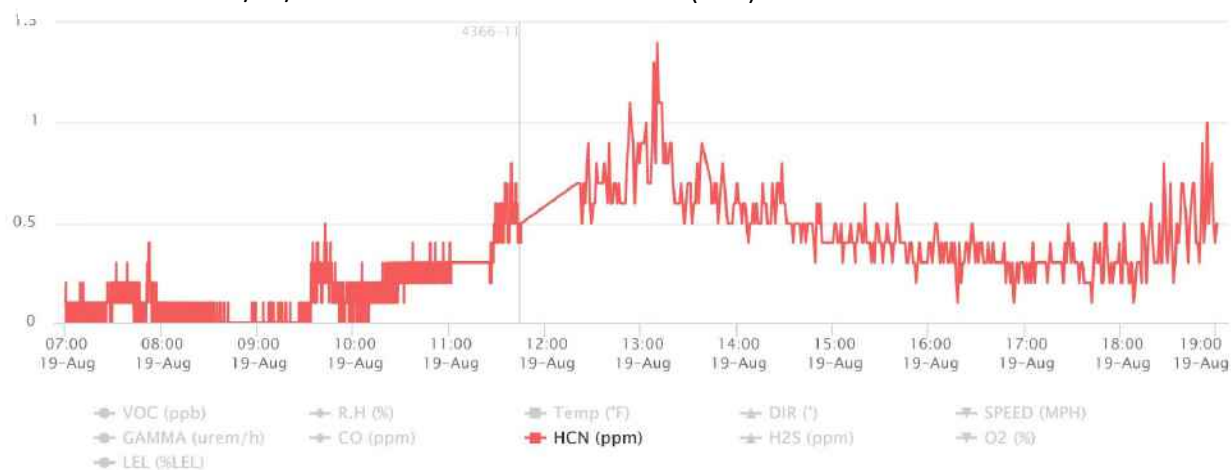
8/19/19 DAY Data for EBAM 3 (ConcRT) – EPA Mobile Command Post



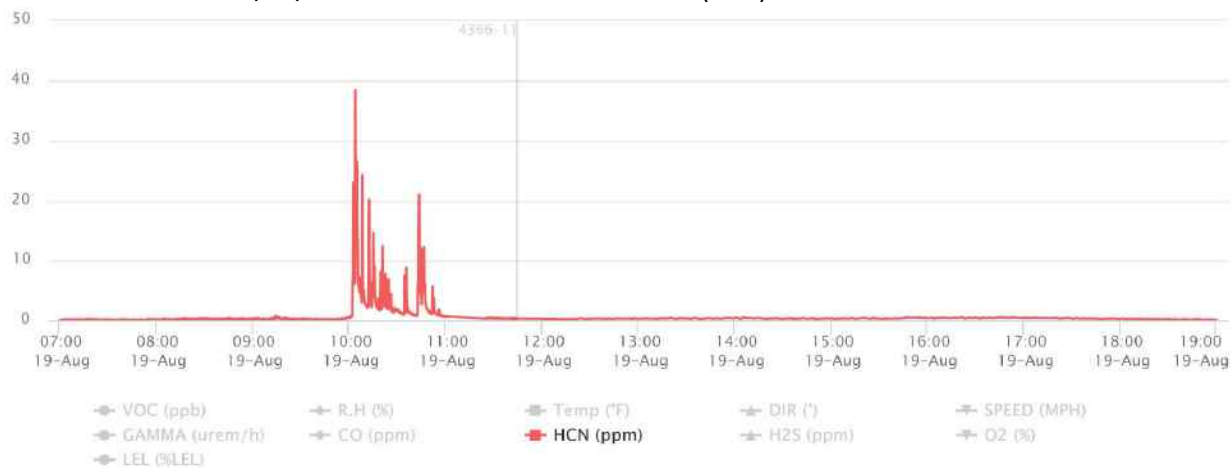
8/19/19 DAY Data for AREARAE PRO 1 (HCn) – Southwest of Pile



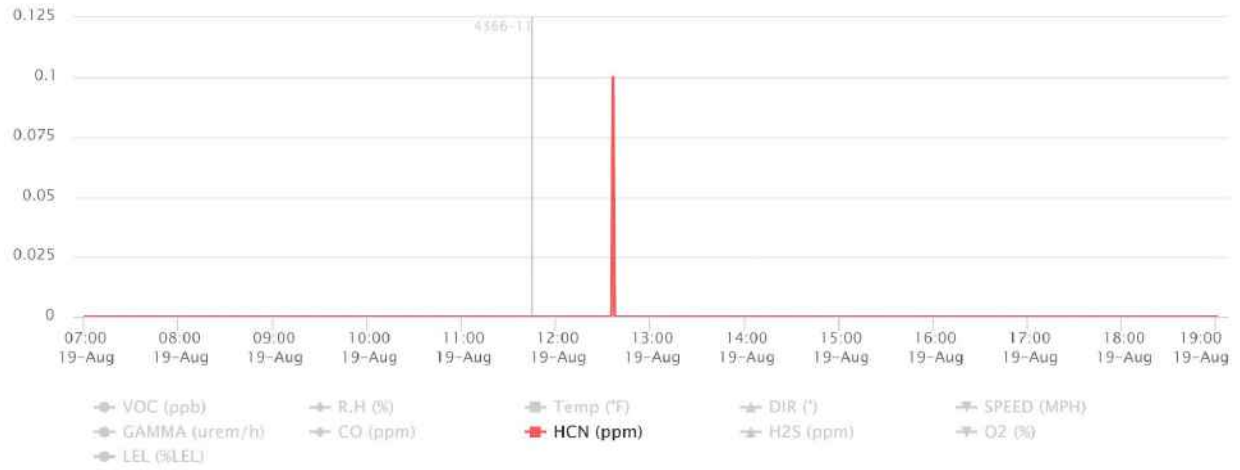
8/19/19 DAY Data for AREARAE PRO 2 (HCn) – Northwest of Pile



8/19/19 DAY Data for AREARAE PRO 3 (HCn) – Northeast of Pile



8/19/19 DAY Data for AREARAE PRO 4 (HCn) – Forrest Concrete



Air Monitoring Summary Tables

The table below summarizes monitoring data collected on using EPA's Viper wireless remote monitoring system.

Project Name: Able Contracting Fire Site

From: 8/19/19
19:00

To: 8/20/19
7:00



On Site, Southwest Corner of Pile							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 1	VOC	No	6,861	327	0 - 444 ppb	3.25 ppb	1,000 ppb
	CO	No	6,861	130	0 - 5 ppm	0.06 ppm	83 ppm
	H ₂ S	No	6,861	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	6,861	6,861	20.9 - 20.9 %	20.9 %	<19.5 or >23%
	LEL	No	6,861	0	0 - 0 %	0 %	10%
	HCN	No	6,861	6,861	0.1 - 1.4 ppm	0.47 ppm	7.1 ppm

Peacock Collision							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
DustTrak 1	PM-2.5	Good	692	692	4 - 20 µg/m ³	5.9 ug/m3	See SOG #: T106

On Site, Northwest Corner of Pile							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 2	VOC	No	6,617	5	0 - 73 ppb	0.02 ppb	1,000 ppb
	CO	No	6,617	570	0 - 17 ppm	0.42 ppm	83 ppm
	H ₂ S	Yes	6,617	16	0 - 0.6 ppm	0.001 ppm	0.5 ppm
	O ₂	No	6,617	6,617	20.9 - 20.9 %	20.9 %	<19.5 or >23%
	LEL	No	6,617	0	0 - 0 %	0 %	10%
	HCN	No	6,617	6,517	0 - 2.7 ppm	0.42 ppm	7.1 ppm

Short Cut Road							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
DustTrak 2	PM-2.5	Good	617	617	2 - 22 µg/m ³	5.7 ug/m3	See SOG #: T106

Able Contracting Workshop, Northeast of Pile							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 3	VOC	No	6,695	5	0 - 7 ppb	0 ppb	1,000 ppb
	CO	No	6,695	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	6,695	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	6,695	6,695	20.9 - 21.2 %	21 %	<19.5 or >23%
	LEL	No	6,695	308	0 - 2 %	0.1 %	10%
	HCN	No	6,695	2,713	0 - 0.3 ppm	0.04 ppm	7.1 ppm

Grace Costal Church							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
DustTrak 3	PM-2.5	Moderate	694	694	6 - 122 µg/m ³	14.4 ug/m3	See SOG #: T106

Forrest Concrete							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 4	VOC	No	6,654	0	0 - 0 ppb	0 ppb	1,000 ppb
	CO	No	6,654	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	6,654	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	6,654	6,654	20 - 20.5 %	20.1 %	<19.5 or >23%
	LEL	No	6,654	0	0 - 0 %	0 %	10%
	HCN	No	6,654	0	0 - 0 ppm	0 ppm	7.1 ppm

Sun City							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
EBAM 1	PM-2.5	Moderate	746	237	0 - 60 ug/m3	13.6 ug/m3	See SOG #: T106

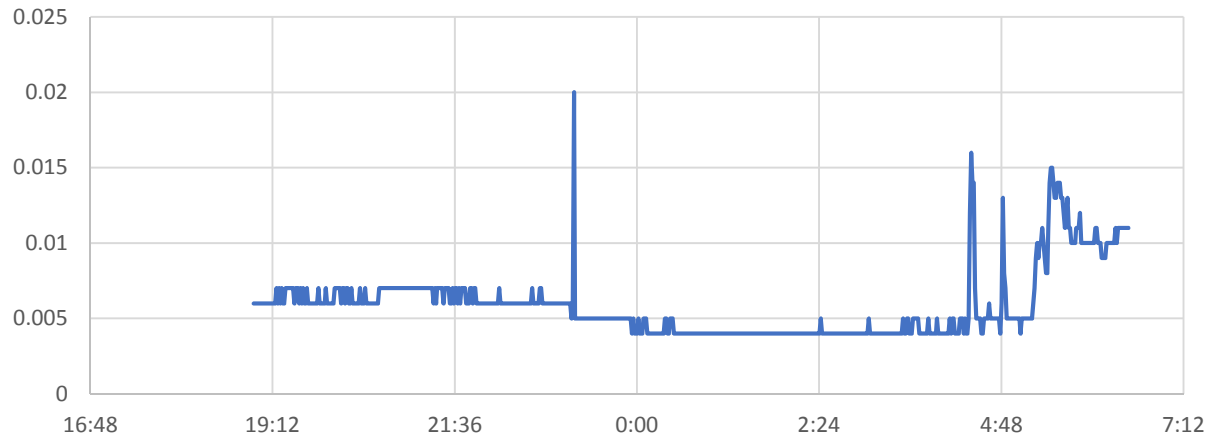
Brooke Mill Apartments							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
EBAM 2	PM-2.5	Good	751	550	0 - 45 ug/m3	11.9 ug/m3	See SOG #: T106

EPA Mobile Command Post							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
EBAM 3	PM-2.5	Moderate	738	178	0 - 54 ug/m3	12.2 ug/m3	See SOG #: T106

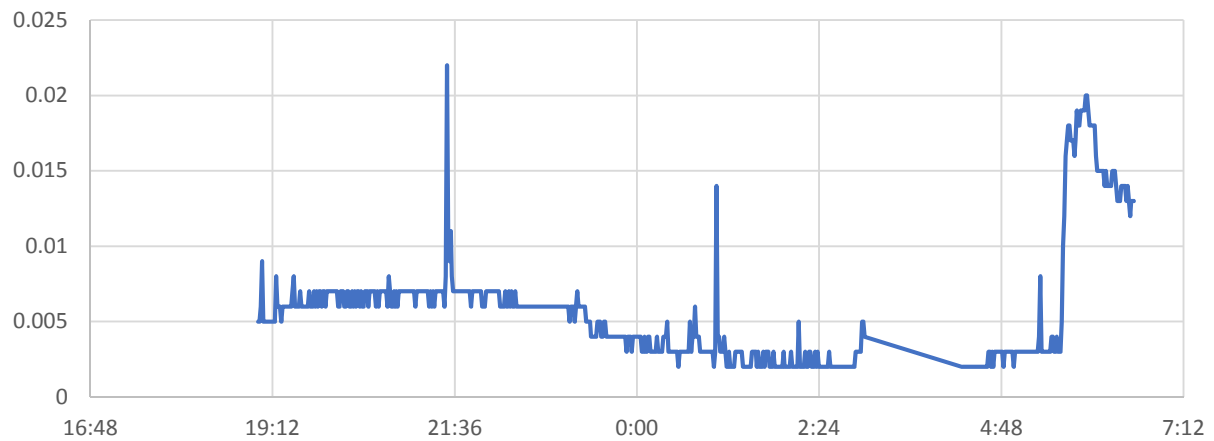
Notes:

%	Percent	O ₂	Oxygen
<	Less than	PEL	Permissible exposure limit
>	Greater than	ppb	Parts per billion
AEGL	Acute Exposure Guideline Levels for Airborne Chemicals	ppm	Parts per million
CO	Carbon monoxide	PM	Particulate matter
H ₂ S	Hydrogen Sulfide	SOG	Standard Operating Guidelines
HCN	Hydrogen Cyanide	TLV	Threshold limit value
LEL	Lower Explosive Level	µg/m ³	Micrograms per cubic meter
min	Minute	VOC	Volatile organic compound

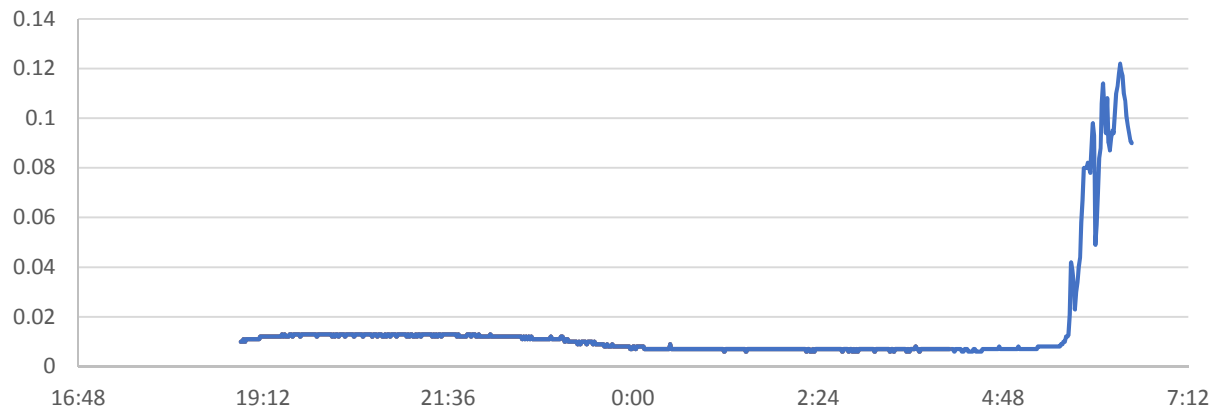
8/19/19 NIGHT Data for DustTrak 1 (PM_{2.5}) - Peacock Collision



8/19/19 NIGHT Data for DustTrak 2 (PM_{2.5}) – Short Cut Road



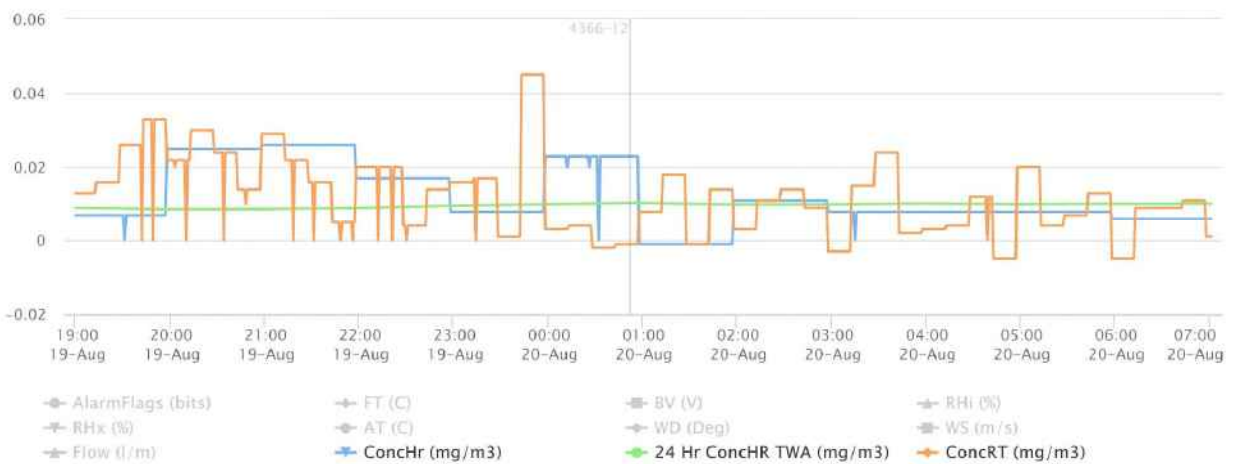
8/19/19 NIGHT Data for DustTrak 3 (PM_{2.5}) – Grace Costal Church



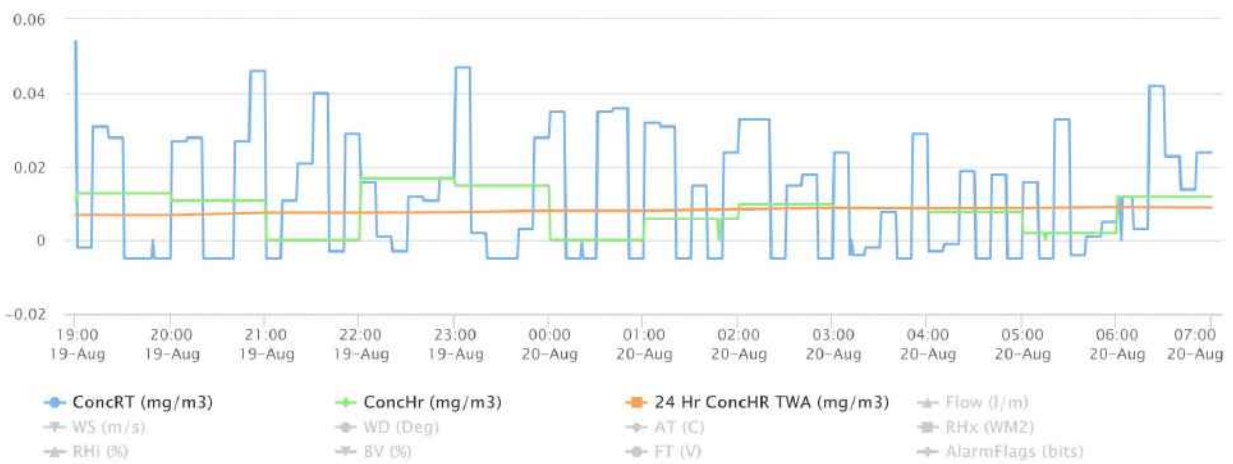
8/19/19 NIGHT Data for EBAM 1 (ConcRT) – Sun City



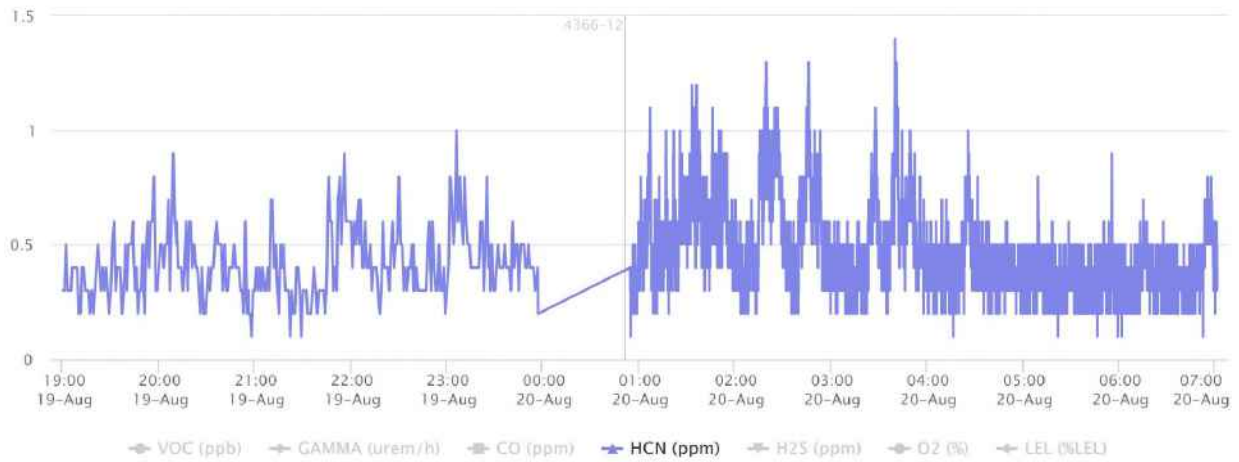
8/19/19 NIGHT Data for EBAM 2 (ConcRT) – Brooke Mill Apartments



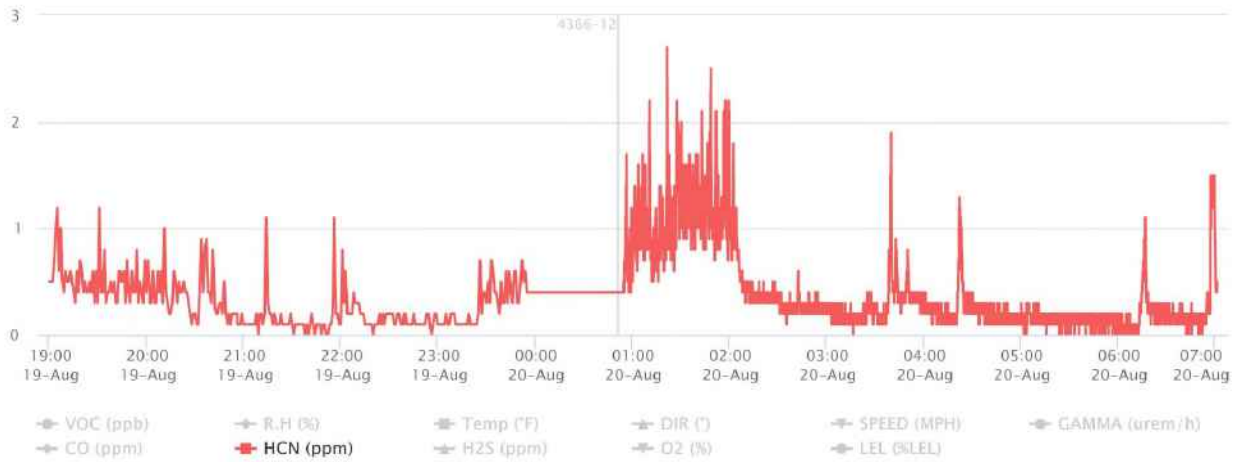
8/19/19 NIGHT Data for EBAM 3 (ConcRT) – EPA Mobile Command Post



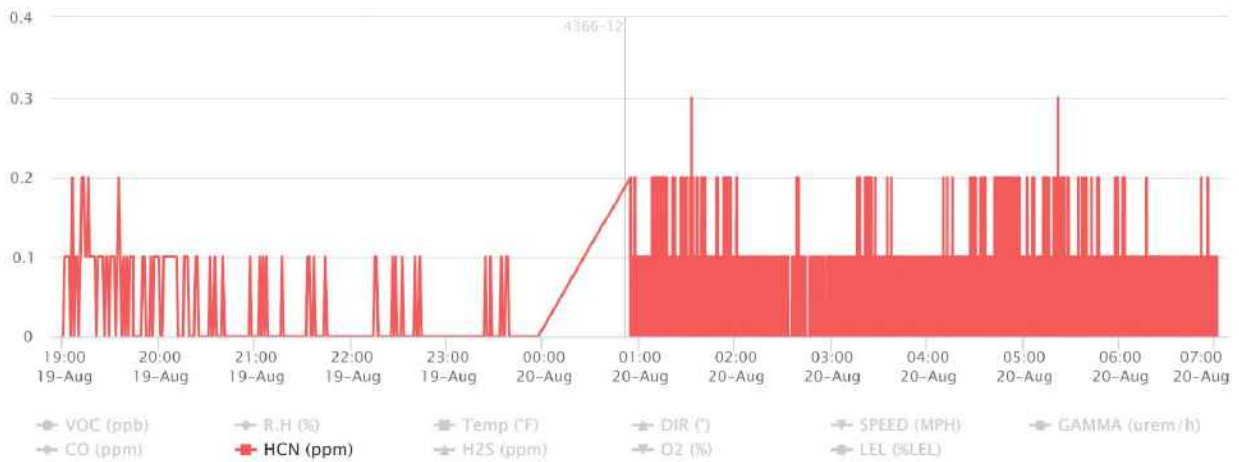
8/19/19 NIGHT Data for AREARAE PRO 1 (HCn) – Southwest of Pile



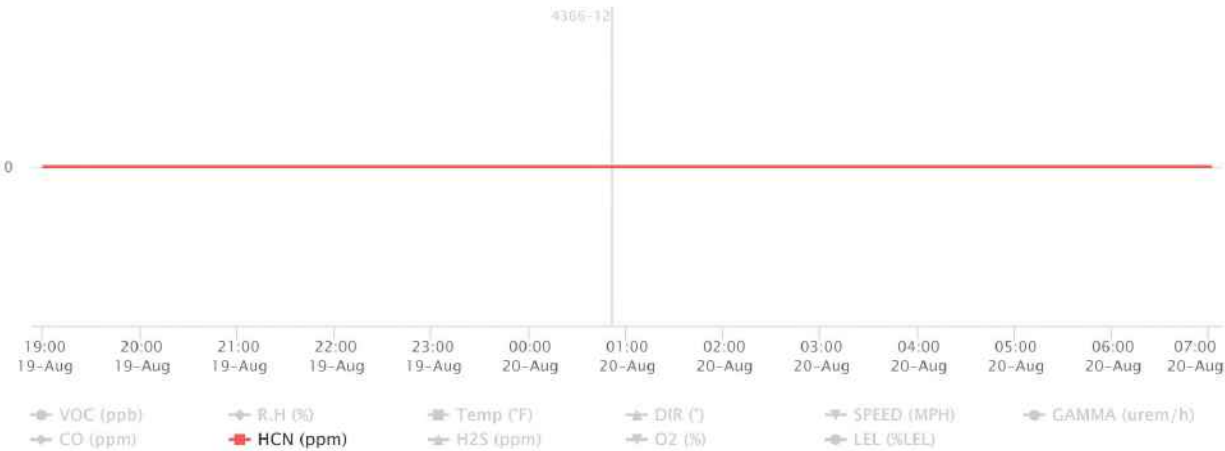
8/19/19 NIGHT Data for AREARAE PRO 2 (HCn) – Northwest of Pile



8/19/19 NIGHT Data for AREARAE PRO 3 (HCn) – Northeast of Pile



8/19/19 NIGHT Data for AREARAE PRO 4 (HCN) – Forrest Concrete



Air Monitoring Summary Tables

The table below summarize monitoring data collected on using EPA's Viper wireless remote monitoring system.

Project Name: Able Contracting Fire Site

From: 8/20/19
7:00

To: 8/20/19
19:00



On Site, Southwest Corner of Pile							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 1	VOC	Yes	6,752	235	0 - 47274 ppb	49.75 ppb	1,000 ppb
	CO	No	6,752	196	0 - 14 ppm	0.13 ppm	83 ppm
	H ₂ S	No	6,752	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	6,752	6,752	20.9 - 20.9 %	20.9 %	<19.5 or >23%
	LEL	No	6,752	111	0 - 2 %	0 %	10%
	HCN	No	6,752	6,751	0 - 2.4 ppm	0.66 ppm	7.1 ppm

Note: High analyte concentrations were the result of AreaRAE unit calibration.

Peacock Collision							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
DustTrak 1	PM-2.5	Good	745	745	5 - 74 ug/m ³	10.5 ug/m ³	See SOG #: T106

On Site, Northwest Corner of Pile							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 2	VOC	Yes	6,461	20	0 - 3068 ppb	2.36 ppb	1,000 ppb
	CO	No	6,461	18	0 - 7 ppm	0.01 ppm	83 ppm
	H ₂ S	Yes	6,461	3	0 - 0.6 ppm	0 ppm	0.5 ppm
	O ₂	No	6,461	6,461	20.9 - 21.3 %	21.1 %	<19.5 or >23%
	LEL	No	6,461	0	0 - 0 %	0 %	10%
	HCN	No	6,461	6,378	0 - 2.1 ppm	0.64 ppm	7.1 ppm

Short Cut Road							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
DustTrak 2	PM-2.5	Moderate	733	733	4 - 129 ug/m ³	12.7 ug/m ³	See SOG #: T106

Able Contracting Workshop, Northeast of Pile							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 3	VOC	No	6,642	6	0 - 161 ppb	0.07 ppb	1,000 ppb
	CO	No	6,642	29	0 - 12 ppm	0.02 ppm	83 ppm
	H ₂ S	No	6,642	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	6,642	6,642	20.9 - 21.3 %	21.1 %	<19.5 or >23%
	LEL	No	6,642	0	0 - 0 %	0 %	10%
	HCN	No	6,642	5,922	0 - 1 ppm	0.2 ppm	7.1 ppm

Grace Costal Church							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
DustTrak 3	PM-2.5	Moderate	742	742	9 - 118 ug/m ³	18.1 ug/m ³	See SOG #: T106

Forrest Concrete							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 4	VOC	No	6,519	2	0 - 28 ppb	0.01 ppb	1,000 ppb
	CO	No	6,519	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	6,519	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	6,519	6,519	20 - 21.5 %	20.8 %	<19.5 or >23%
	LEL	No	6,519	0	0 - 0 %	0 %	10%
	HCN	No	6,519	1,258	0 - 0.8 ppm	0.03 ppm	7.1 ppm

Sun City							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
EBAM 1	PM-2.5	Moderate	692	519	0 - 84 ug/m ³	15 ug/m ³	See SOG #: T106

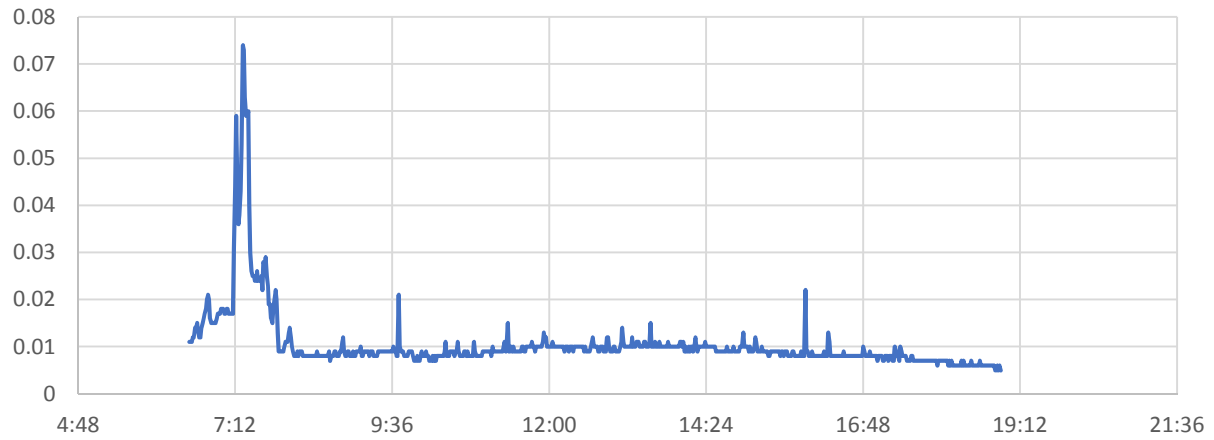
Brooke Mill Apartments							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
EBAM 2	PM-2.5	Good	558	316	0 - 38 ug/m ³	9.5 ug/m ³	See SOG #: T106

EPA Mobile Command Post							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
EBAM 3	PM-2.5	Moderate	574	439	0 - 72 ug/m ³	16.4 ug/m ³	See SOG #: T106

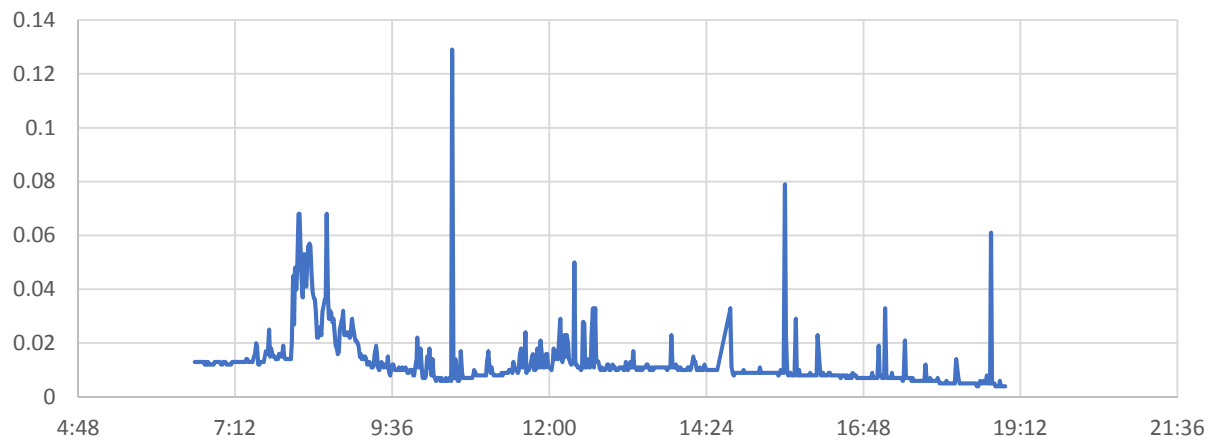
Notes:

%	Percent	O ₂	Oxygen
<	Less than	PEL	Permissible exposure limit
>	Greater than	ppb	Parts per billion
AEGL	Acute Exposure Guideline Levels for Airborne Chemicals	ppm	Parts per million
CO	Carbon monoxide	PM	Particulate matter
H ₂ S	Hydrogen Sulfide	SOG	Standard Operating Guidelines
HCN	Hydrogen Cyanide	TLV	Threshold limit value
LEL	Lower Explosive Level	µg/m ³	Micrograms per cubic meter
min	Minute	VOC	Volatile organic compound

8/20/19 Day Data for DustTrak 1 (PM_{2.5}) - Peacock Collision



8/20/19 DAY Data for DustTrak 2 (PM_{2.5}) – Short Cut Road



8/20/19 DAY Data for DustTrak 3 (PM_{2.5}) - Grace Coastal Church



8/20/19 DAY Data for EBAM 1 (ConcRT) – Sun City



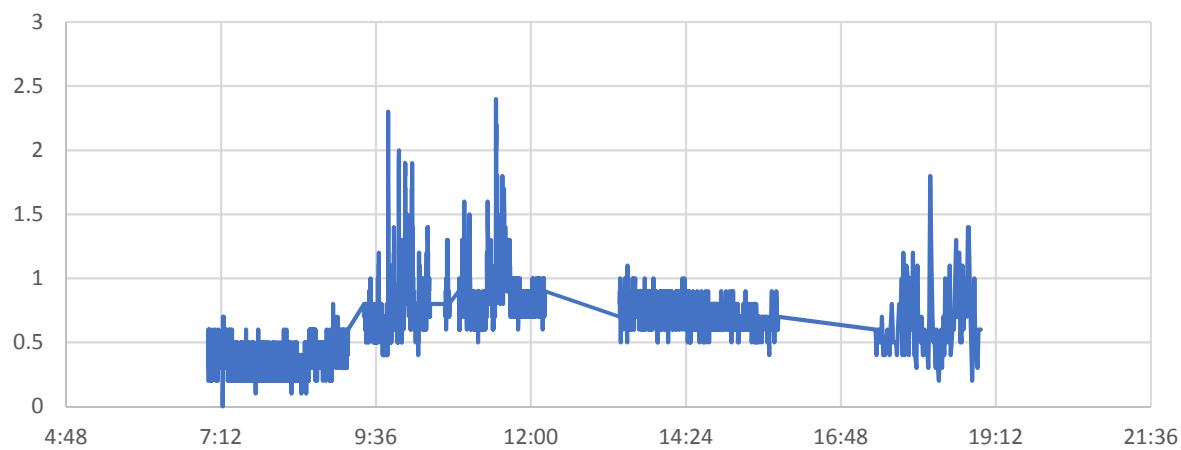
8/20/19 DAY Data for EBAM 2 (ConcRT) – Brooke Mill Apartments



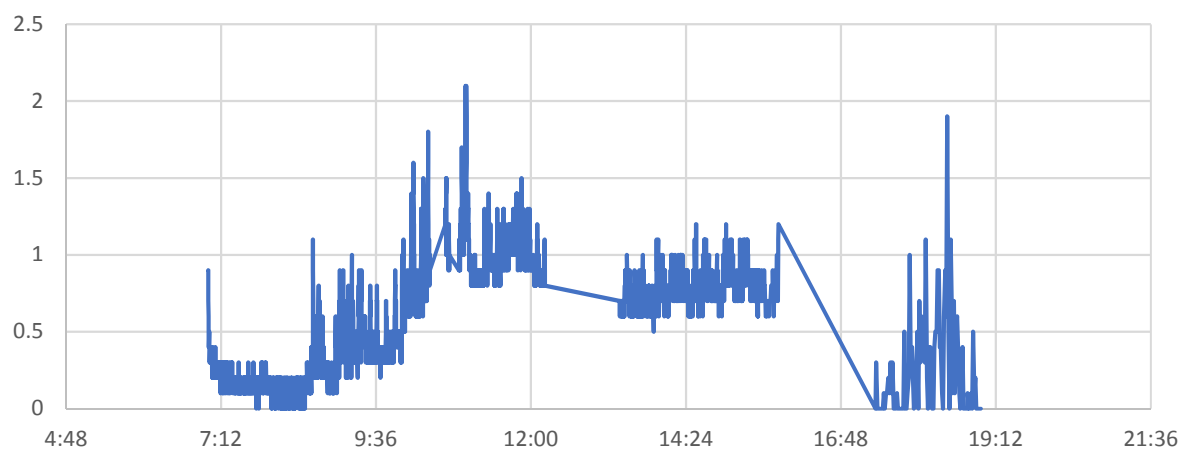
8/20/19 DAY Data for EBAM 3 (ConcRT) – EPA Mobile Command Post



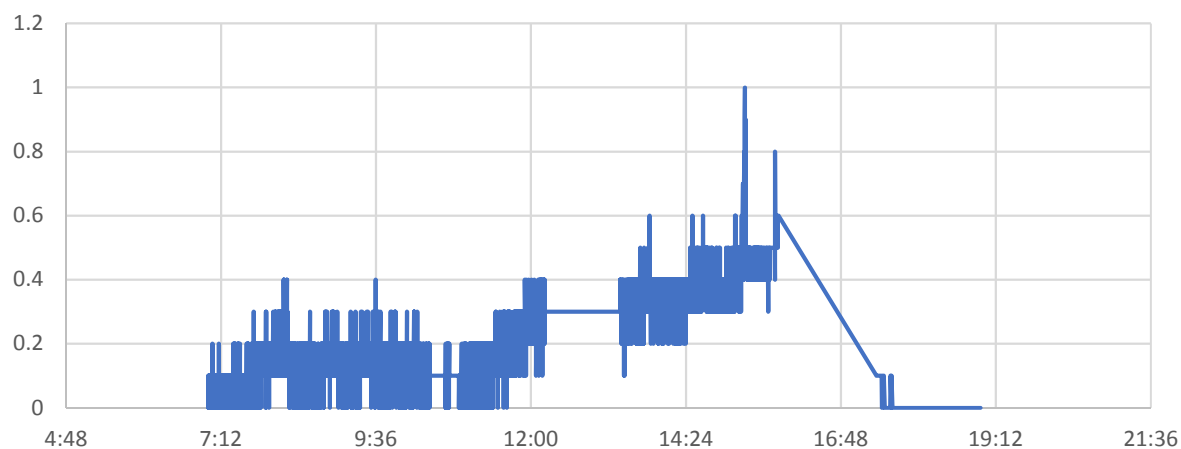
8/20/19 DAY Data for AREARAE PRO 1 (HCn) – Southwest of Pile



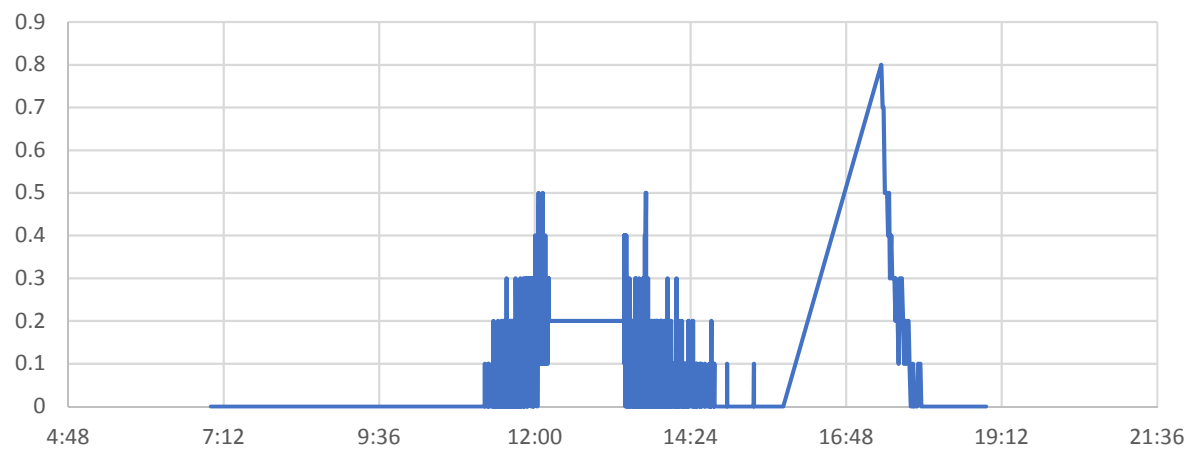
8/20/19 DAY Data for AREARAE PRO 2 (HCn) – Northwest of Pile



8/20/19 DAY Data for AREARAE PRO 3 (HCn) – Northeast of Pile



8/20/19 DAY Data for AREARAE PRO 4 (HCn) – Forrest Concrete



Air Monitoring Summary Tables

The table below summarizes monitoring data collected on using EPA's Viper wireless remote monitoring system.

Project Name: Able Contracting Fire Site

From: 8/20/19
19:00

To: 8/21/19
7:00



On Site, Southwest Corner of Pile							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 1	VOC	No	385	2	0 - 312 ppb	1.06 ppb	1,000 ppb
	CO	No	385	2	0 - 7 ppm	0.03 ppm	83 ppm
	H ₂ S	No	385	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	385	385	20.9 - 20.9 %	20.9 %	<19.5 or >23%
	LEL	No	385	110	0 - 2 %	0.6 %	10%
	HCN	No	385	332	0 - 1.8 ppm	0.55 ppm	7.1 ppm

Peacock Collision							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
DustTrak 1	PM-2.5	Moderate	741	741	2 - 117 µg/m ³	12.2 ug/m3	See SOG #: T106

On Site, Northwest Corner of Pile							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 2	VOC	No	381	0	0 - 0 ppb	0 ppb	1,000 ppb
	CO	No	381	60	0 - 12 ppm	0.71 ppm	83 ppm
	H ₂ S	Yes	381	8	0 - 0.6 ppm	0.01 ppm	0.5 ppm
	O ₂	No	381	381	20.9 - 20.9 %	20.9 %	<19.5 or >23%
	LEL	No	381	0	0 - 0 %	0 %	10%
	HCN	No	381	289	0 - 3.7 ppm	0.81 ppm	7.1 ppm

Short Cut Road							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
DustTrak 2	PM-2.5	Good	480	287	0 - 25 µg/m ³	3.2 ug/m3	See SOG #: T106

Able Contracting Workshop, Northeast of Pile							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 3	VOC	No	387	7	0 - 172 ppb	0.73 ppb	1,000 ppb
	CO	No	387	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	387	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	387	387	20.9 - 20.9 %	20.9 %	<19.5 or >23%
	LEL	No	387	0	0 - 0 %	0 %	10%
	HCN	No	387	0	0 - 0 ppm	0 ppm	7.1 ppm

Grace Costal Church							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
DustTrak 3	PM-2.5	Good	692	692	3 - 63 µg/m ³	7.5 ug/m3	See SOG #: T106

Forrest Concrete							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 4	VOC	No	387	0	0 - 0 ppb	0 ppb	1,000 ppb
	CO	No	387	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	387	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	387	387	20.5 - 20.9 %	20.7 %	<19.5 or >23%
	LEL	No	387	0	0 - 0 %	0 %	10%
	HCN	No	387	0	0 - 0 ppm	0 ppm	7.1 ppm

Sun City							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
EBAM 1	PM-2.5	Good	736	229	0 - 53 ug/m3	9.4 ug/m3	See SOG #: T106

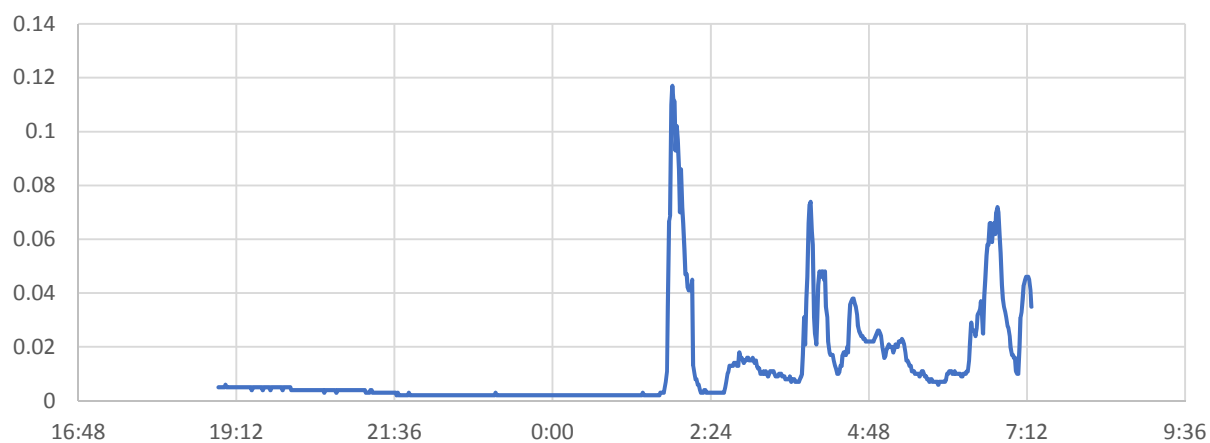
Brooke Mill Apartments							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
EBAM 2	PM-2.5	Good	740	456	0 - 34 ug/m3	7.9 ug/m3	See SOG #: T106

EPA Mobile Command Post							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
EBAM 3	PM-2.5	Good	468	135	0 - 61 ug/m3	9 ug/m3	See SOG #: T106

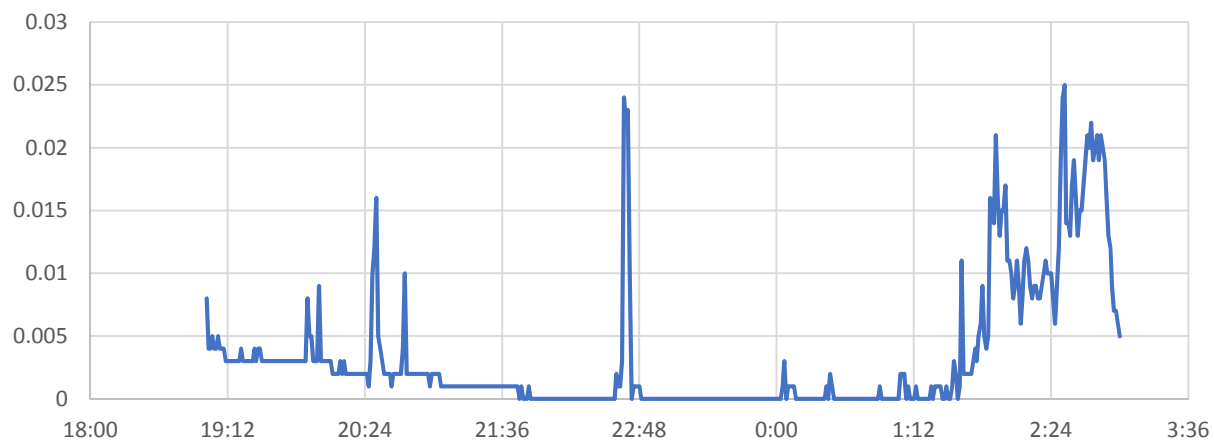
Notes:

%	Percent	O ₂	Oxygen
<	Less than	PEL	Permissible exposure limit
>	Greater than	ppb	Parts per billion
AEGL	Acute Exposure Guideline Levels for Airborne Chemicals	ppm	Parts per million
CO	Carbon monoxide	PM	Particulate matter
H ₂ S	Hydrogen Sulfide	SOG	Standard Operating Guidelines
HCN	Hydrogen Cyanide	TLV	Threshold limit value
LEL	Lower Explosive Level	µg/m ³	Micrograms per cubic meter
min	Minute	VOC	Volatile organic compound

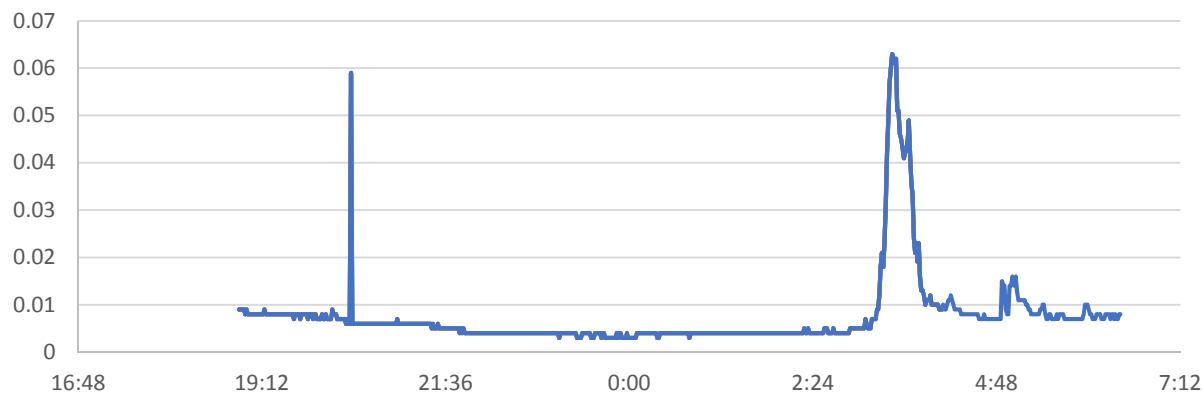
8/20/19 NIGHT Data for DustTrak 1 (PM_{2.5}) - Peacock Collision



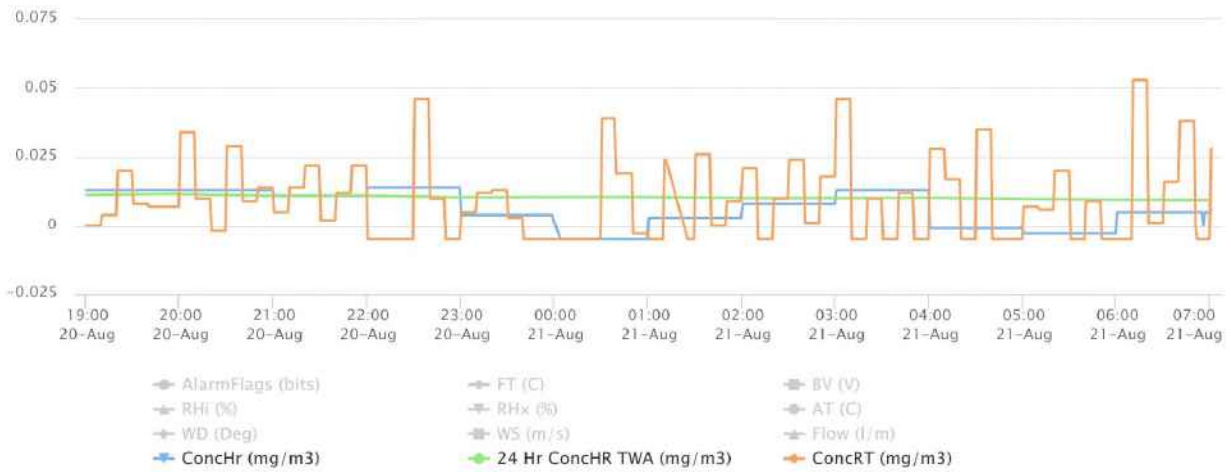
8/20/19 NIGHT Data for DustTrak 2 (PM_{2.5}) – Short Cut Road



8/20/19 NIGHT Data for DustTrak 3 (PM_{2.5}) – Grace Costal Church



8/20/19 NIGHT Data for EBAM 1 (ConcRT) – Sun City



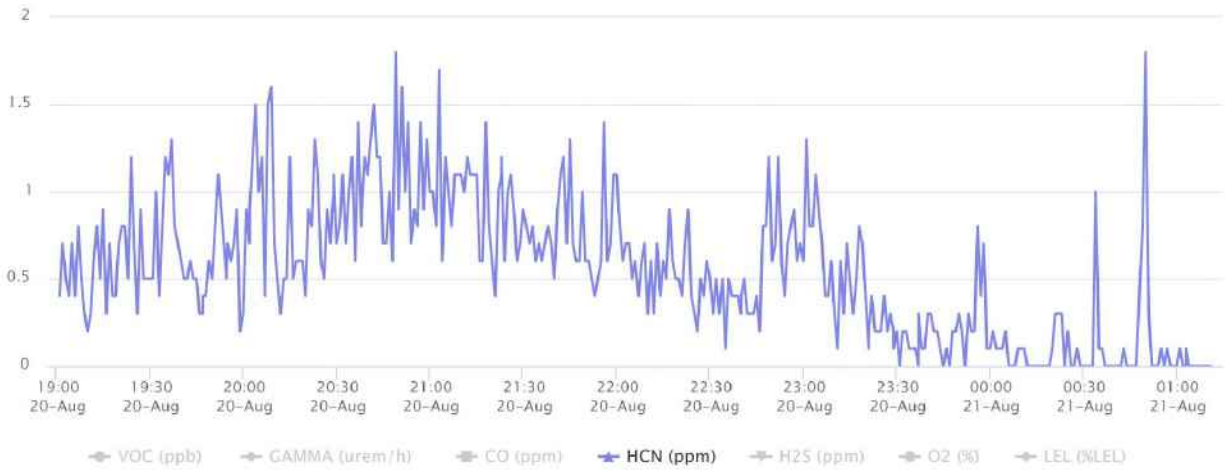
8/20/19 NIGHT Data for EBAM 2 (ConcRT) – Brooke Mill Apartments



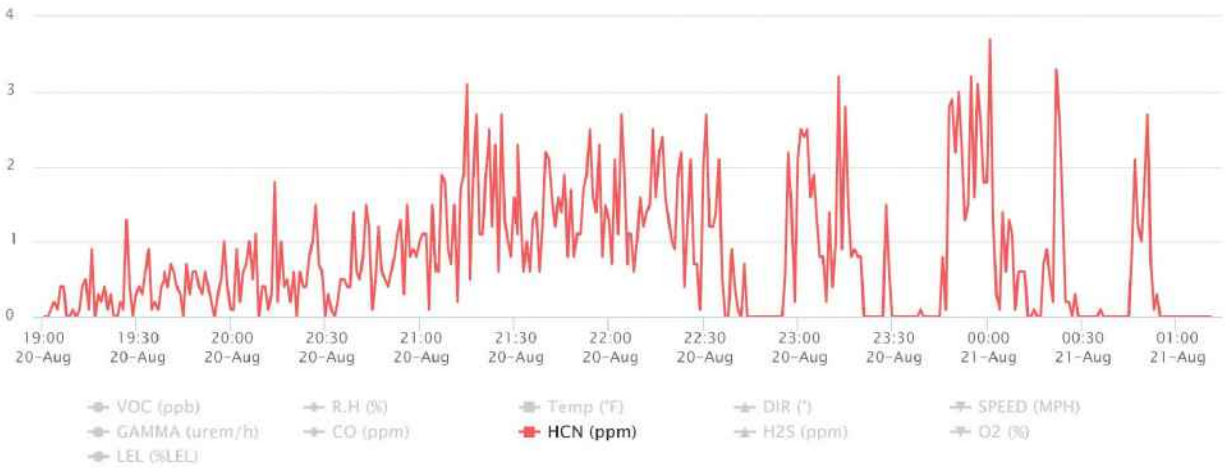
8/20/19 NIGHT Data for EBAM 3 (ConcRT) – EPA Mobile Command Post



8/20/19 NIGHT Data for AREARAE PRO 1 (HCn) – Southwest of Pile



8/20/19 NIGHT Data for AREARAE PRO 2 (HCn) – Northwest of Pile



8/20/19 NIGHT Data for AREARAE PRO 3 (HCn) – Northeast of Pile



8/20/19 NIGHT Data for AREARAE PRO 4 (HCN) – Forrest Concrete

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Air Monitoring Summary Tables

The table below summarize monitoring data collected on using EPA's Viper wireless remote monitoring system.

Project Name: Able Contracting Fire Site

**From: 8/21/19
7:00**

**To: 8/21/19
19:00**



On Site, Southwest Corner of Pile							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 1	VOC	No	712	3	0 - 205 ppb	0.45 ppb	1,000 ppb
	CO	No	712	3	0 - 6 ppm	0.02 ppm	83 ppm
	H ₂ S	No	712	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	712	712	20.9 - 20.9 %	20.9 %	<19.5 or >23%
	LEL	No	712	0	0 - 0 %	0 %	10%
	HCN	No	712	552	0 - 2.3 ppm	0.28 ppm	7.1 ppm

On Site, Northwest Corner of Pile							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 2	VOC	No	719	0	0 - 0 ppb	0 ppb	1,000 ppb
	CO	No	719	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	719	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	719	719	20.9 - 20.9 %	20.9 %	<19.5 or >23%
	LEL	No	719	0	0 - 0 %	0 %	10%
	HCN	No	719	154	0 - 2 ppm	0.06 ppm	7.1 ppm

Short Cut Road							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
DustTrak 2	PM-2.5	Moderate	736	736	1 - 236 µg/m ³	15.2 ug/m3	See SOG #: T106

Able Contracting Workshop, Northeast of Pile							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 3	VOC	Yes	716	56	0 - 1828 ppb	8.49 ppb	1,000 ppb
	CO	Yes	716	21	0 - 197 ppm	0.96 ppm	83 ppm
	H ₂ S	Yes	716	11	0 - 3.3 ppm	0.016 ppm	0.5 ppm
	O ₂	No	716	716	20.9 - 20.9 %	20.9 %	<19.5 or >23%
	LEL	No	716	537	0 - 3 %	1.6 %	10%
	HCN	Yes	716	134	0 - 13.2 ppm	0.09 ppm	7.1 ppm

Grace Costal Church							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
DustTrak 3	PM-2.5	Good	740	740	4 - 40 µg/m ³	9.2 ug/m3	See SOG #: T106

Forrest Concrete							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 4	VOC	No	711	0	0 - 0 ppb	0 ppb	1,000 ppb
	CO	No	711	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	711	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	711	711	20.5 - 21.3 %	20.9 %	<19.5 or >23%
	LEL	No	711	0	0 - 0 %	0 %	10%
	HCN	No	711	409	0 - 1.2 ppm	0.32 ppm	7.1 ppm

Sun City							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
EBAM 1	PM-2.5	Good	748	250	0 - 93 ug/m3	10.6 ug/m3	See SOG #: T106

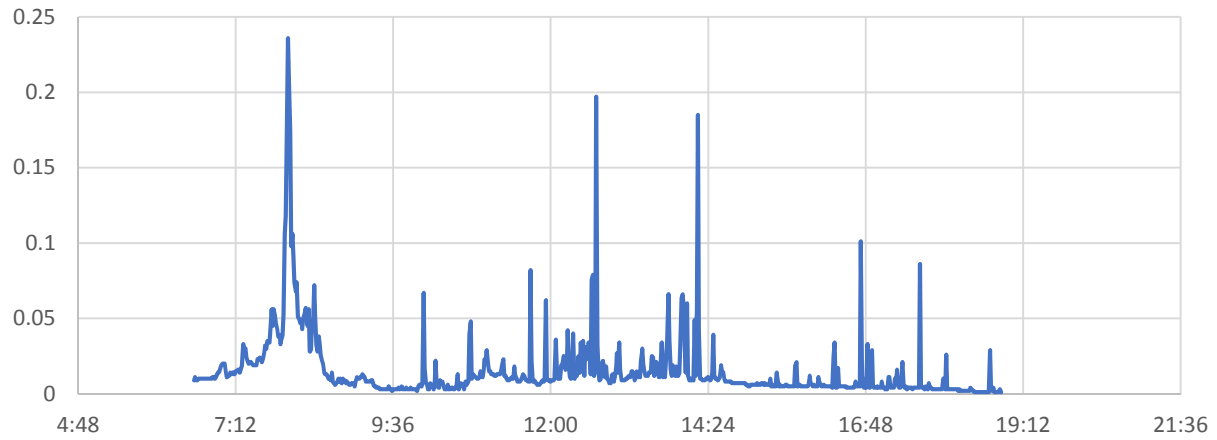
Brooke Mill Apartments							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
EBAM 2	PM-2.5	Good	697	111	0 - 41 ug/m3	6.1 ug/m3	See SOG #: T106

EPA Mobile Command Post							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
EBAM 3	PM-2.5	Good	730	209	0 - 96 ug/m3	11.5 ug/m3	See SOG #: T106

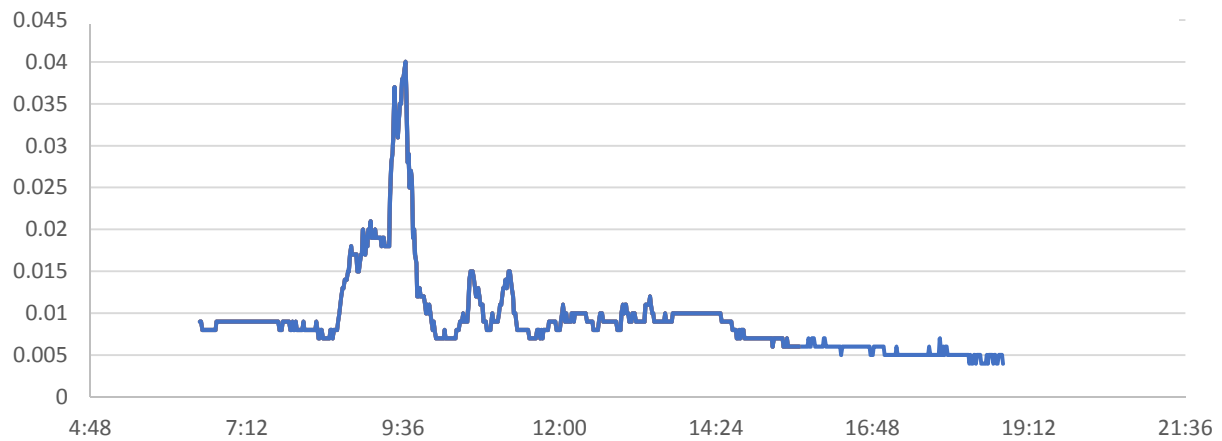
Notes:

%	Percent	O ₂	Oxygen
<	Less than	PEL	Permissible exposure limit
>	Greater than	ppb	Parts per billion
AEGL	Acute Exposure Guideline Levels for Airborne Chemicals	ppm	Parts per million
CO	Carbon monoxide	PM	Particulate matter
H ₂ S	Hydrogen Sulfide	SOG	Standard Operating Guidelines
HCN	Hydrogen Cyanide	TLV	Threshold limit value
LEL	Lower Explosive Level	µg/m ³	Micrograms per cubic meter
min	Minute	VOC	Volatile organic compound

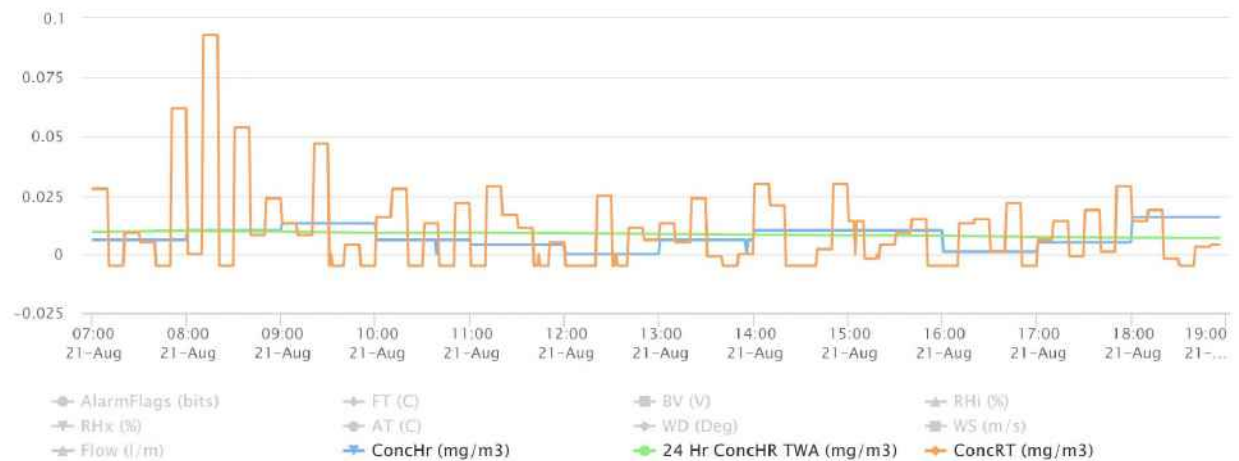
8/21/19 DAY Data for DustTrak 2 (PM_{2.5}) – Short Cut Road



8/21/19 DAY Data for DustTrak 3 (PM_{2.5}) – Grace Costal Church



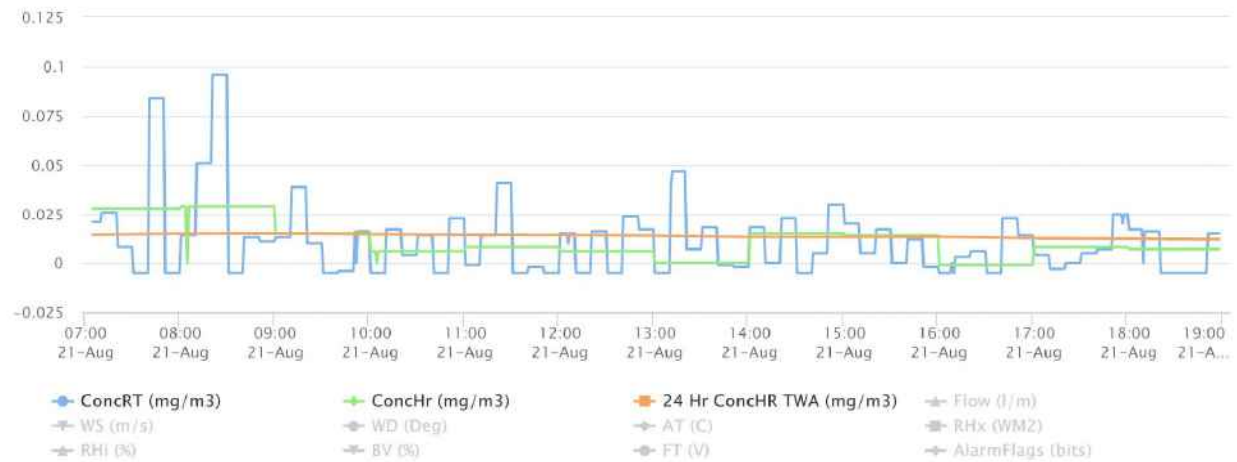
8/21/19 DAY Data for EBAM 1 (ConcRT) – Sun City



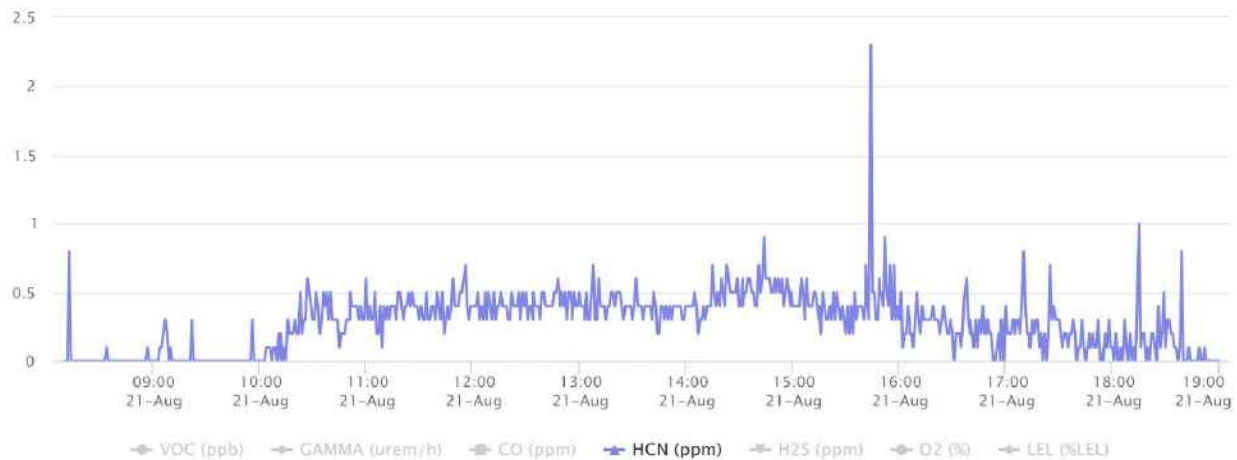
8/21/19 DAY Data for EBAM 2 (ConcRT) – Brooke Mill Apartments



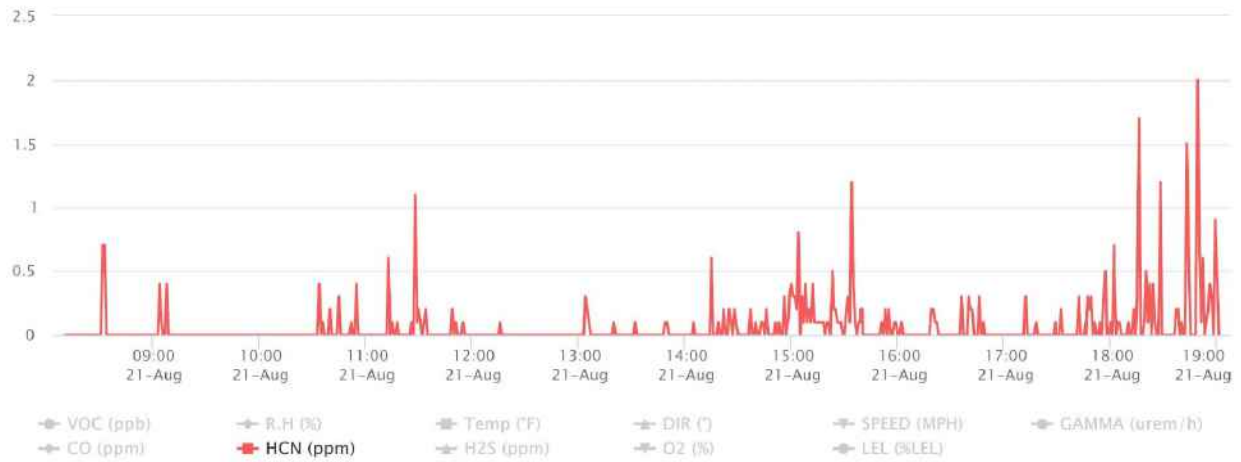
8/21/19 DAY Data for EBAM 3 (ConcRT) – EPA Mobile Command Post



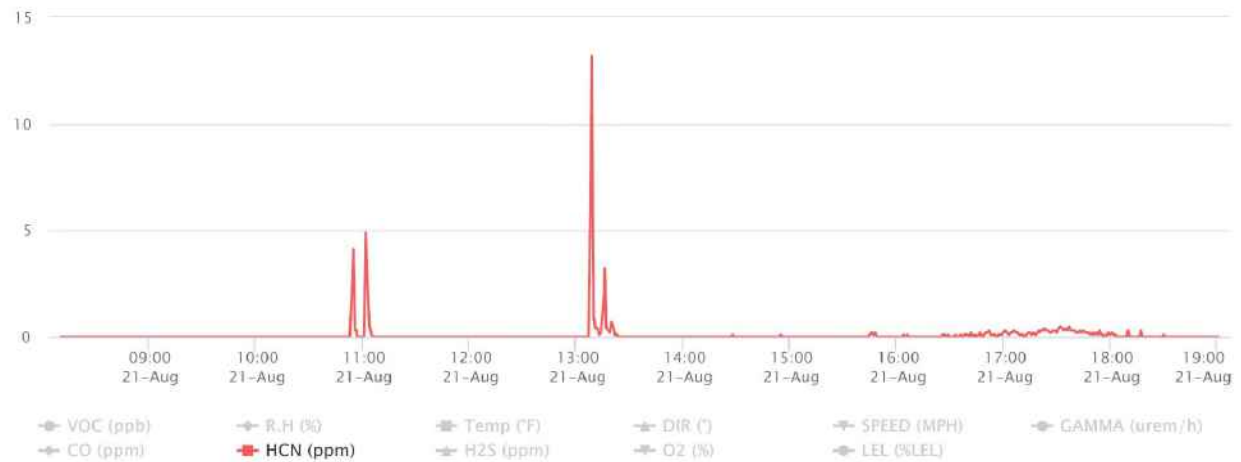
8/21/19 DAY Data for AREARAE PRO 1 (HCn) – Southwest of Pile



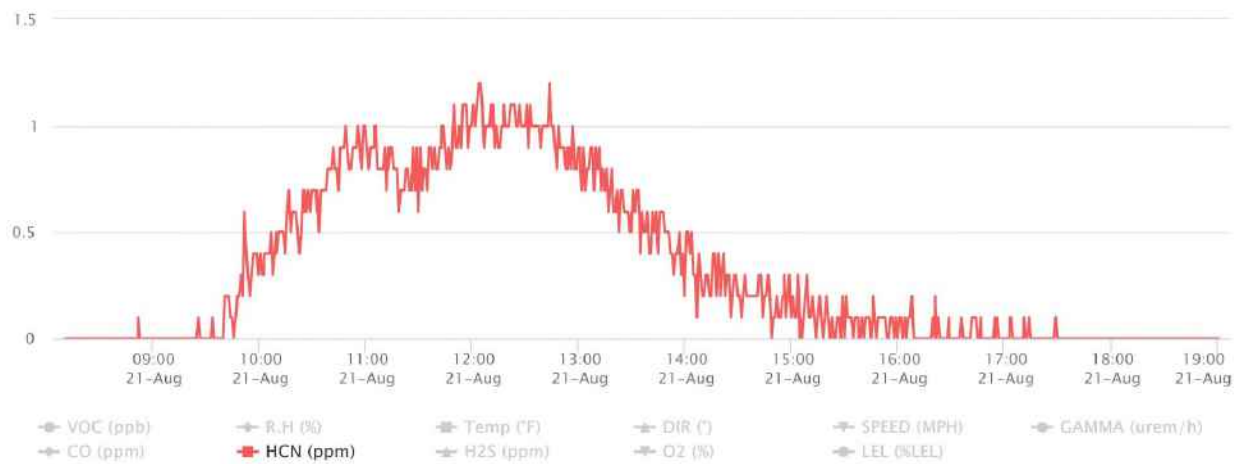
8/21/19 DAY Data for AREARAE PRO 2 (HCn) – Northwest of Pile



8/21/19 DAY Data for AREARAE PRO 3 (HCn) – Northeast of Pile



8/21/19 DAY Data for AREARAE PRO 4 (HCn) – Forrest Concrete



Air Monitoring Summary Tables

The table below summarizes monitoring data collected on using EPA's Viper wireless remote monitoring system.

Project Name: Able Contracting Fire Site

From: 8/21/19
19:00

To: 8/22/19
7:00



On Site, Southwest Corner of Pile							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEG)
AreaRAE 1	VOC	No	751	7	0 - 106 ppb	0.58 ppb	1,000 ppb
	CO	No	751	8	0 - 8 ppm	0.05 ppm	83 ppm
	H ₂ S	No	751	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	751	751	20.9 - 20.9 %	20.9 %	<19.5 or >23%
	LEL	No	751	0	0 - 0 %	0 %	10%
	HCN	No	751	36	0 - 1.5 ppm	0.01 ppm	7.1 ppm

Peacock Collision							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEG)
DustTrak 1	PM-2.5	Moderate	590	590	4 - 229 µg/m ³	15 ug/m3	See SOG #: T106

On Site, Northwest Corner of Pile							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEG)
AreaRAE 2	VOC	No	762	1	0 - 15 ppb	0.02 ppb	1,000 ppb
	CO	No	762	2	0 - 6 ppm	0.01 ppm	83 ppm
	H ₂ S	Yes	762	16	0 - 0.9 ppm	0.012 ppm	0.5 ppm
	O ₂	No	762	762	20.9 - 20.9 %	20.9 %	<19.5 or >23%
	LEL	No	762	0	0 - 0 %	0 %	10%
	HCN	No	762	246	0 - 5.3 ppm	0.33 ppm	7.1 ppm

Short Cut Road							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEG)
DustTrak 2	PM-2.5	Good	743	651	0 - 36 µg/m ³	4.8 ug/m3	See SOG #: T106

Able Contracting Workshop, Northeast of Pile							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEG)
AreaRAE 3	VOC	No	753	288	0 - 366 ppb	25.01 ppb	1,000 ppb
	CO	No	753	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	753	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	753	753	20.9 - 20.9 %	20.9 %	<19.5 or >23%
	LEL	No	753	753	2 - 3 %	2.1 %	10%
	HCN	No	753	3	0 - 1.1 ppm	0 ppm	7.1 ppm

Grace Costal Church							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEG)
DustTrak 3	PM-2.5	Good	744	744	4 - 14 µg/m ³	6.3 ug/m3	See SOG #: T106

Forrest Concrete							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEG)
AreaRAE 4	VOC	No	759	0	0 - 0 ppb	0 ppb	1,000 ppb
	CO	No	759	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	759	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	759	759	20.5 - 20.9 %	20.7 %	<19.5 or >23%
	LEL	No	759	0	0 - 0 %	0 %	10%
	HCN	No	759	1	0 - 0.1 ppm	0 ppm	7.1 ppm

Sun City							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEG)
EBAM 1	PM-2.5	Good	742	261	0 - 66 ug/m3	9.9 ug/m3	See SOG #: T106

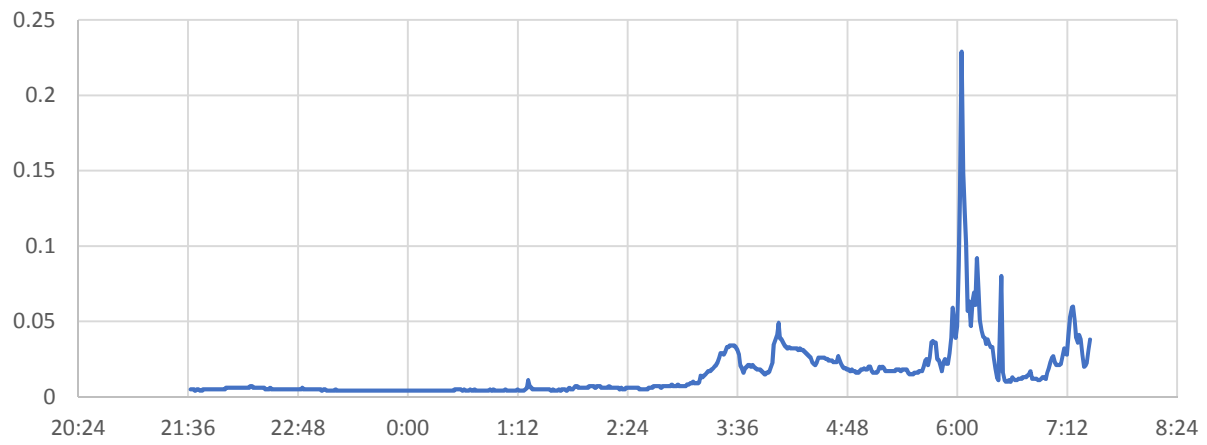
Brooke Mill Apartments							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEG)
EBAM 2	PM-2.5	Good	744	372	0 - 46 ug/m3	6.4 ug/m3	See SOG #: T106

EPA Mobile Command Post							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEG)
EBAM 3	PM-2.5	Good	747	143	0 - 63 ug/m3	9.4 ug/m3	See SOG #: T106

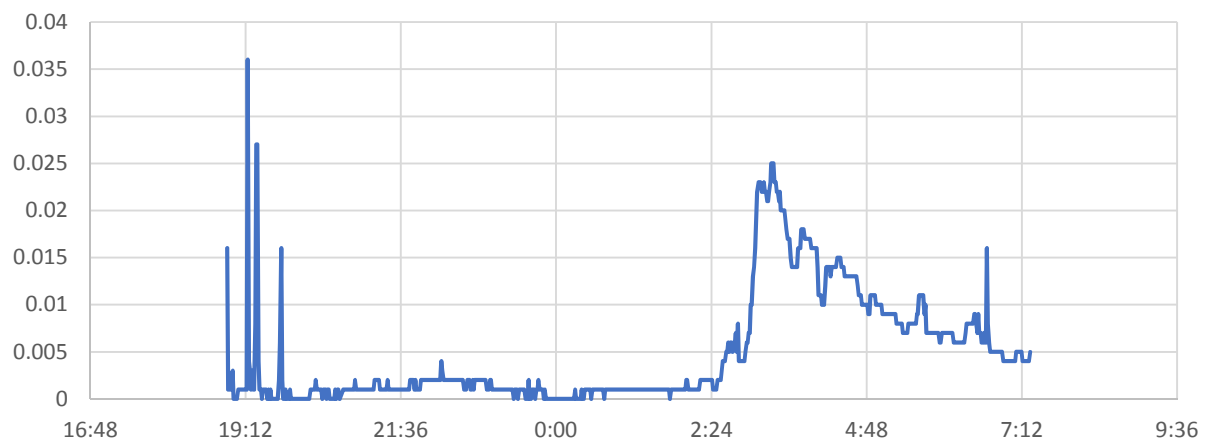
Notes:

%	Percent	O ₂	Oxygen
<	Less than	PEL	Permissible exposure limit
>	Greater than	ppb	Parts per billion
AEG	Acute Exposure Guideline Levels for Airborne Chemicals	ppm	Parts per million
CO	Carbon monoxide	PM	Particulate matter
H ₂ S	Hydrogen Sulfide	SOG	Standard Operating Guidelines
HCN	Hydrogen Cyanide	TLV	Threshold limit value
LEL	Lower Explosive Level	µg/m ³	Micrograms per cubic meter
min	Minute	VOC	Volatile organic compound

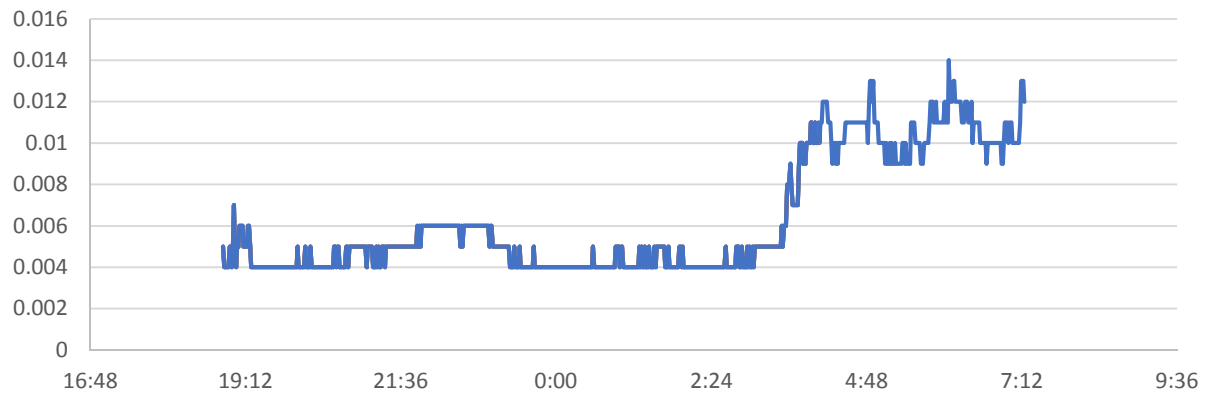
8/21/19 NIGHT Data for DustTrak 1 (PM_{2.5}) - Peacock Collision



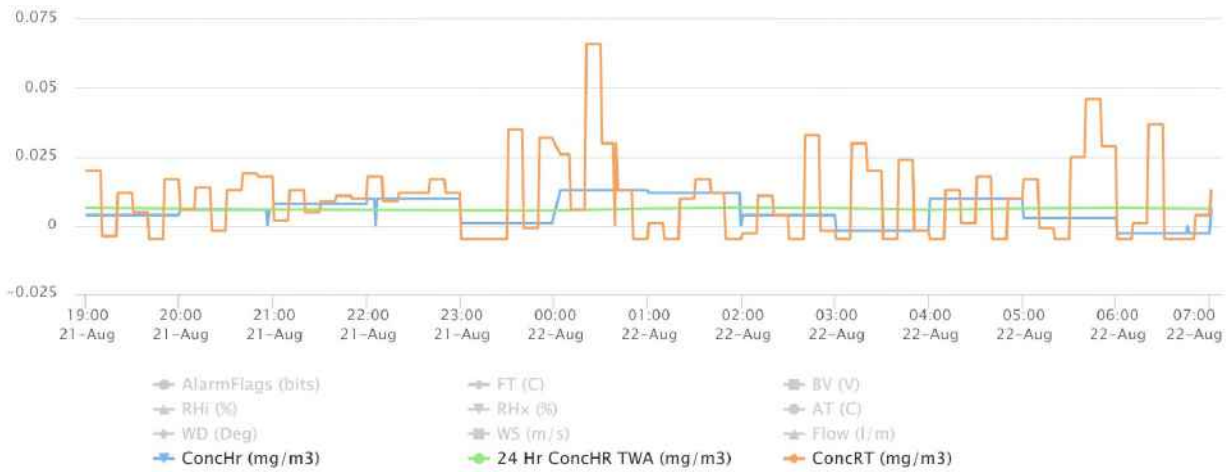
8/21/19 NIGHT Data for DustTrak 2 (PM_{2.5}) – Short Cut Road



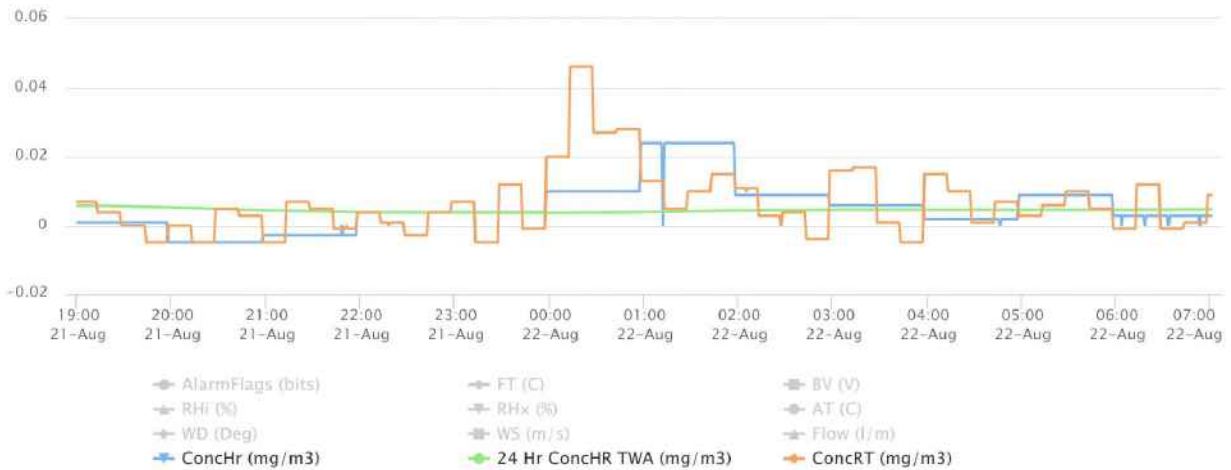
8/21/19 NIGHT Data for DustTrak 3 (PM_{2.5}) – Grace Costal Church



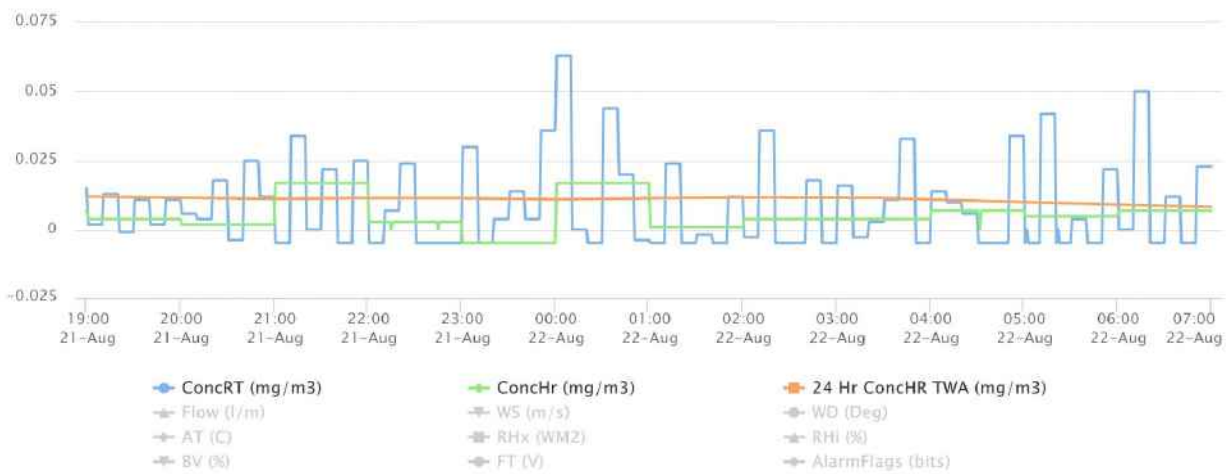
8/21/19 NIGHT Data for EBAM 1 (ConcRT) – Sun City



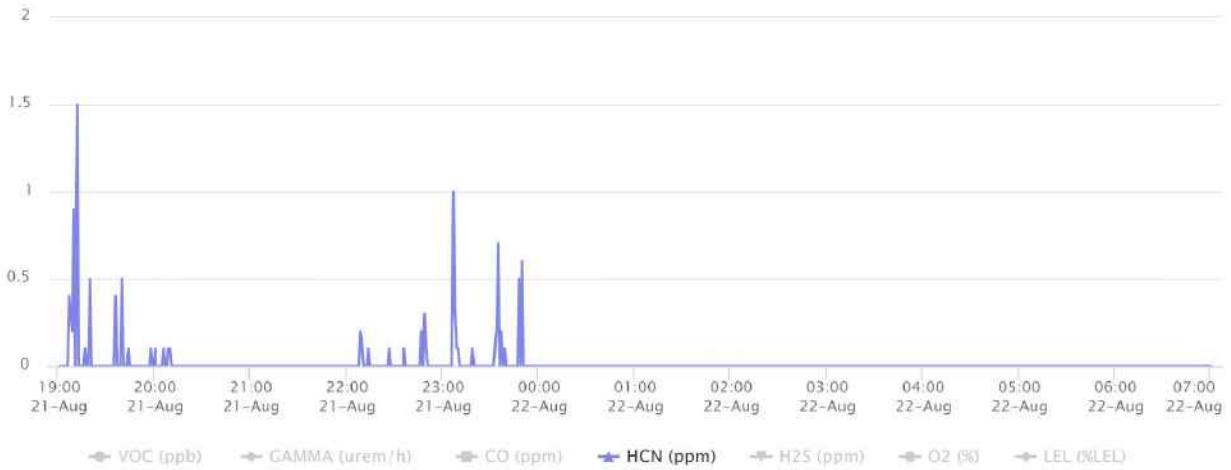
8/21/19 NIGHT Data for EBAM 2 (ConcRT) – Brooke Mill Apartments



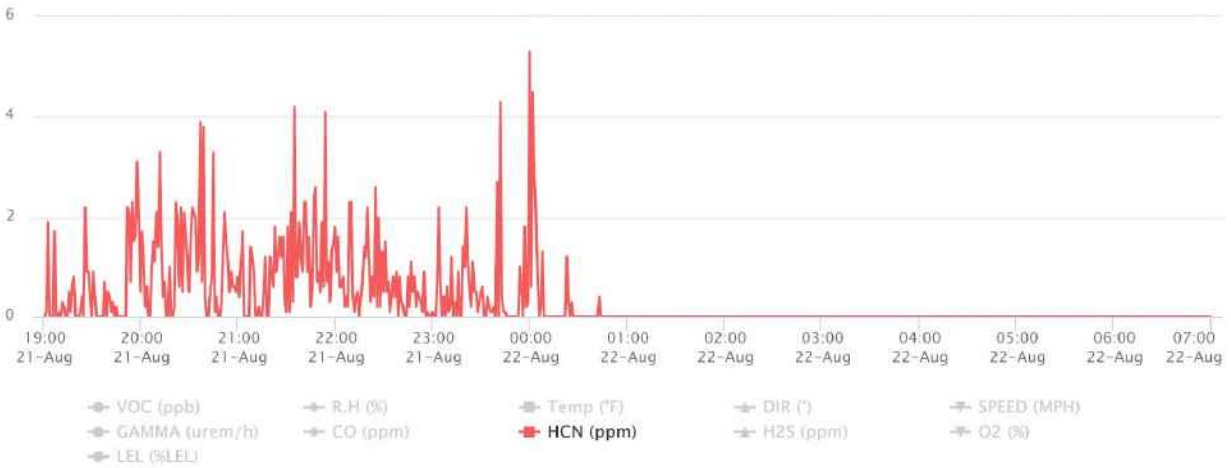
8/21/19 NIGHT Data for EBAM 3 (ConcRT) – EPA Mobile Command Post



8/21/19 NIGHT Data for AREARAE PRO 1 (HCn) – Southwest of Pile



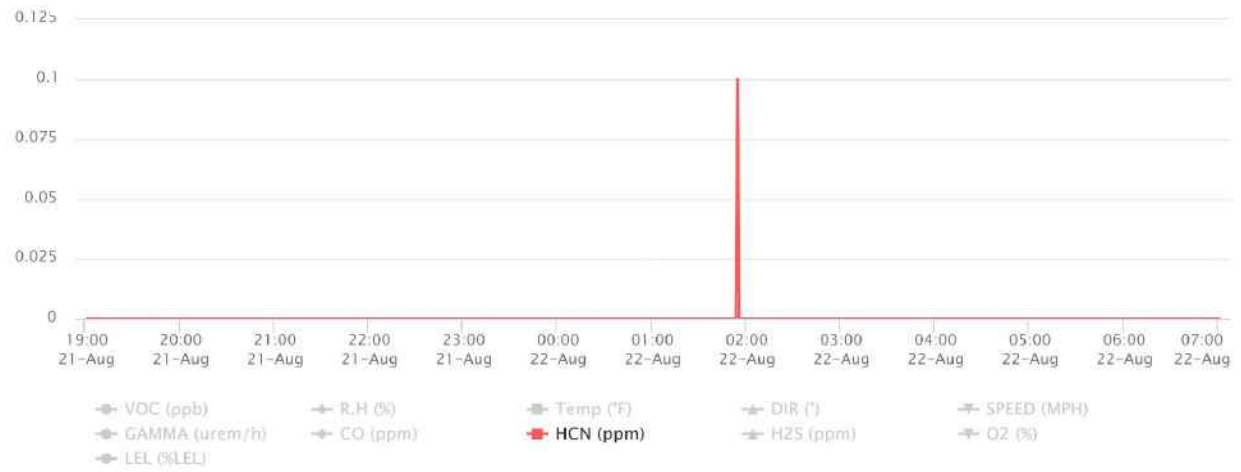
8/21/19 NIGHT Data for AREARAE PRO 2 (HCn) – Northwest of Pile



8/21/19 NIGHT Data for AREARAE PRO 3 (HCn) – Northeast of Pile



8/21/19 NIGHT Data for AREARAE PRO 4 (HCn) – Forrest Concrete



Air Monitoring Summary Tables

The table below summarizes monitoring data collected on using EPA's Viper wireless remote monitoring system.

Project Name: Able Contracting Fire Site

From: 8/22/19
7:00

To: 8/22/19
19:00



On Site, Southwest Corner of Pile							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEG)
AreaRAE 1	VOC	Yes	770	14	0 - 2177 ppb	9.52 ppb	1,000 ppb
	CO	No	770	5	0 - 13 ppm	0.04 ppm	83 ppm
	H ₂ S	Yes	770	10	0 - 2.1 ppm	0.015 ppm	0.5 ppm
	O ₂	No	770	770	20.9 - 20.9 %	20.9 %	<19.5 or >23%
	LEL	No	770	0	0 - 0 %	0 %	10%
	HCN	Yes	770	462	0 - 9.4 ppm	0.32 ppm	7.1 ppm

Peacock Collision							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEG)
DustTrak 1	PM-2.5	Moderate	681	681	4 - 51 µg/m ³	13 ug/m3	See SOG #: T106

On Site, Northwest Corner of Pile							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEG)
AreaRAE 2	VOC	No	771	6	0 - 416 ppb	1.64 ppb	1,000 ppb
	CO	No	771	27	0 - 10 ppm	0.14 ppm	83 ppm
	H ₂ S	No	771	1	0 - 0.5 ppm	0.001 ppm	0.5 ppm
	O ₂	No	771	771	20.9 - 20.9 %	20.9 %	<19.5 or >23%
	LEL	No	771	0	0 - 0 %	0 %	10%
	HCN	No	771	89	0 - 1.2 ppm	0.04 ppm	7.1 ppm

Short Cut Road							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEG)
DustTrak 2	PM-2.5	Good	527	527	4 - 107 µg/m ³	11.1 ug/m3	See SOG #: T106

Able Contracting Workshop, Northeast of Pile							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEG)
AreaRAE 3	VOC	No	767	17	0 - 215 ppb	1.5 ppb	1,000 ppb
	CO	No	767	6	0 - 18 ppm	0.05 ppm	83 ppm
	H ₂ S	No	767	1	0 - 0.5 ppm	0.001 ppm	0.5 ppm
	O ₂	No	767	767	20.9 - 20.9 %	20.9 %	<19.5 or >23%
	LEL	No	767	767	2 - 3 %	2.4 %	10%
	HCN	No	767	14	0 - 4.1 ppm	0.01 ppm	7.1 ppm

Grace Costal Church							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEG)
DustTrak 3	PM-2.5	Good	682	682	3 - 47 µg/m ³	7.6 ug/m3	See SOG #: T106

Forrest Concrete							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEG)
AreaRAE 4	VOC	No	770	6	0 - 52 ppb	0.16 ppb	1,000 ppb
	CO	No	770	2	0 - 3 ppm	0.01 ppm	83 ppm
	H ₂ S	No	770	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	770	770	20.5 - 21.3 %	20.8 %	<19.5 or >23%
	LEL	No	770	0	0 - 0 %	0 %	10%
	HCN	No	770	394	0 - 1.5 ppm	0.28 ppm	7.1 ppm

Sun City							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEG)
EBAM 1	PM-2.5	Good	754	205	0 - 90 ug/m3	11.8 ug/m3	See SOG #: T106

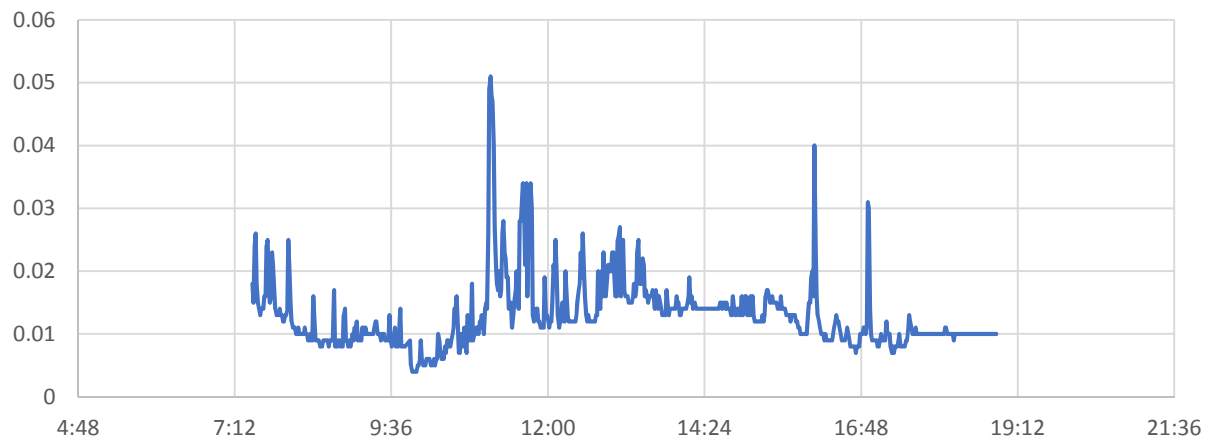
Brooke Mill Apartments							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEG)
EBAM 2	PM-2.5	Good	650	189	0 - 47 ug/m3	9.9 ug/m3	See SOG #: T106

EPA Mobile Command Post							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEG)
EBAM 3	PM-2.5	Good	739	237	0 - 153 ug/m3	11.6 ug/m3	See SOG #: T106

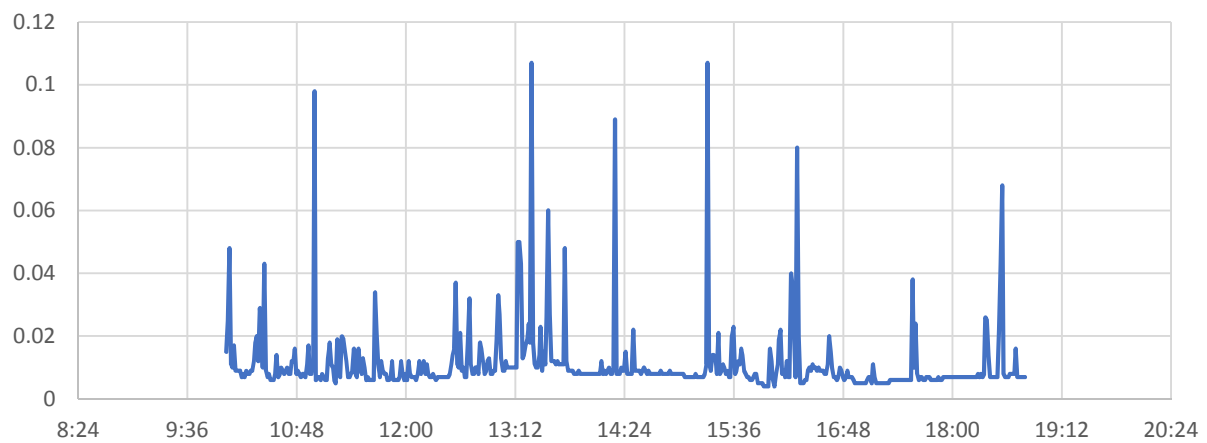
Notes:

%	Percent	O ₂	Oxygen
<	Less than	PEL	Permissible exposure limit
>	Greater than	ppb	Parts per billion
AEG	Acute Exposure Guideline Levels for Airborne Chemicals	ppm	Parts per million
CO	Carbon monoxide	PM	Particulate matter
H ₂ S	Hydrogen Sulfide	SOG	Standard Operating Guidelines
HCN	Hydrogen Cyanide	TLV	Threshold limit value
LEL	Lower Explosive Level	µg/m ³	Micrograms per cubic meter
min	Minute	VOC	Volatile organic compound

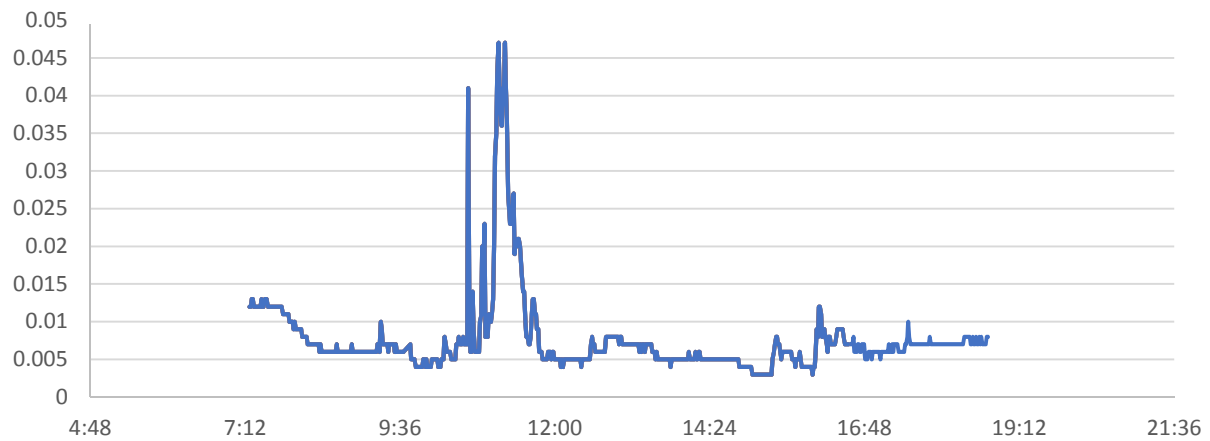
8/22/19 DAY Data for DustTrak 1 (PM_{2.5}) - Peacock Collision



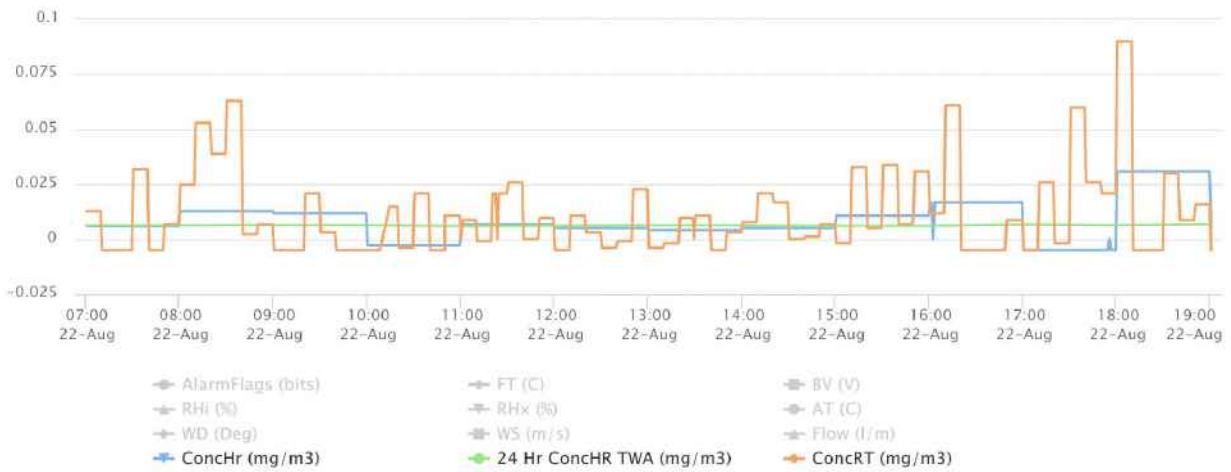
8/22/19 DAY Data for DustTrak 2 (PM_{2.5}) – Short Cut Road



8/22/19 DAY Data for DustTrak 3 (PM_{2.5}) – Grace Costal Church



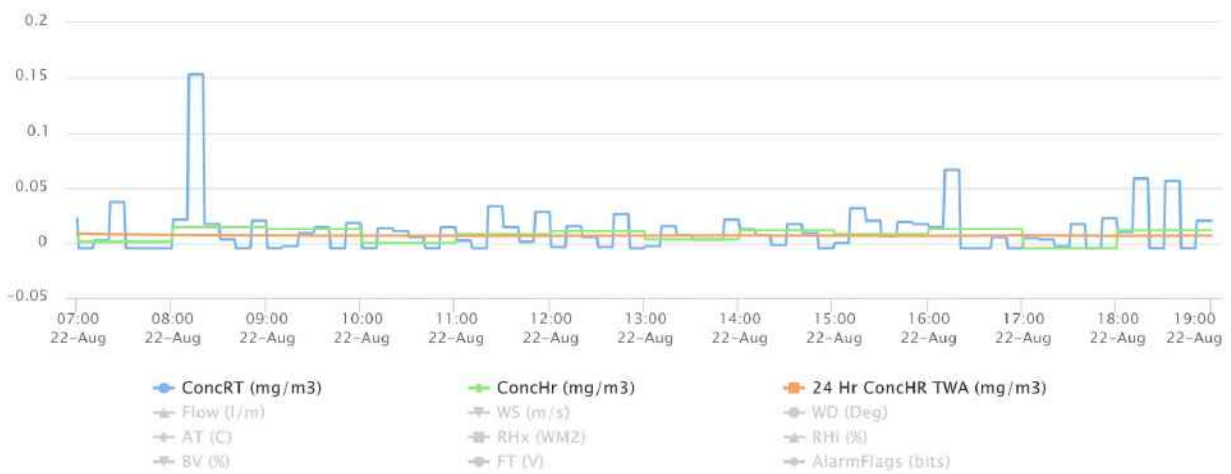
8/22/19 DAY Data for EBAM 1 (ConcRT) – Sun City



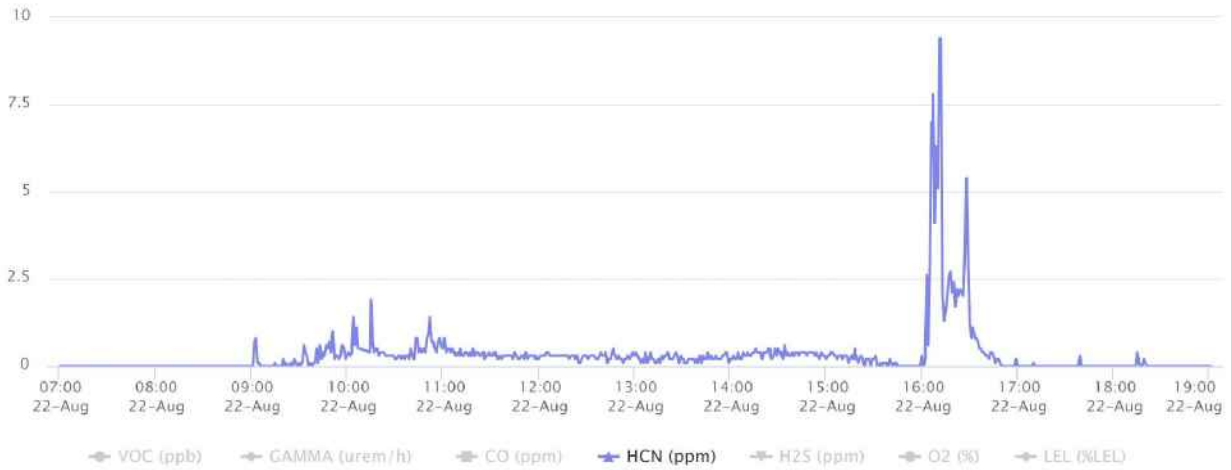
8/22/19 DAY Data for EBAM 2 (ConcRT) – Brooke Mill Apartments



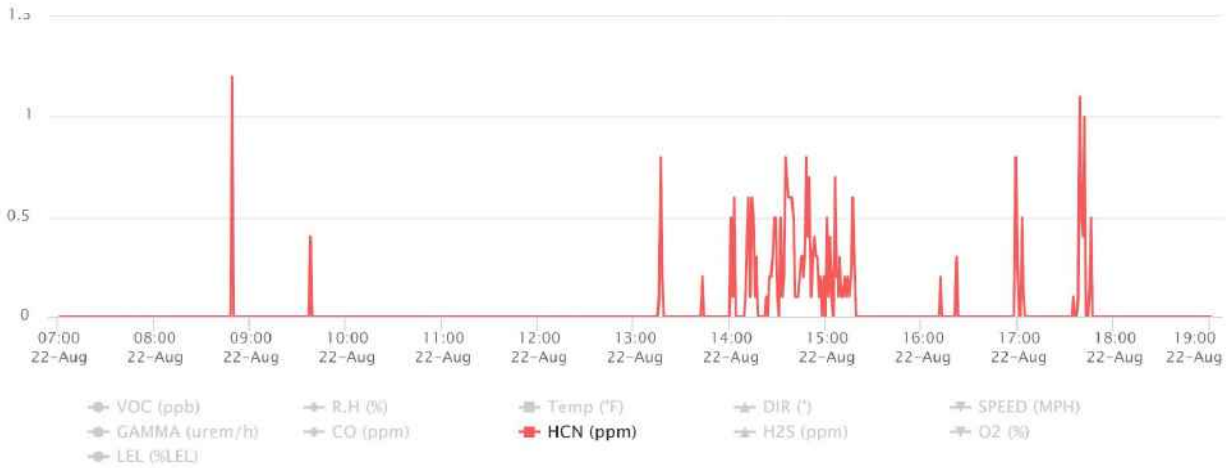
8/22/19 DAY Data for EBAM 3 (ConcRT) – EPA Mobile Command Post



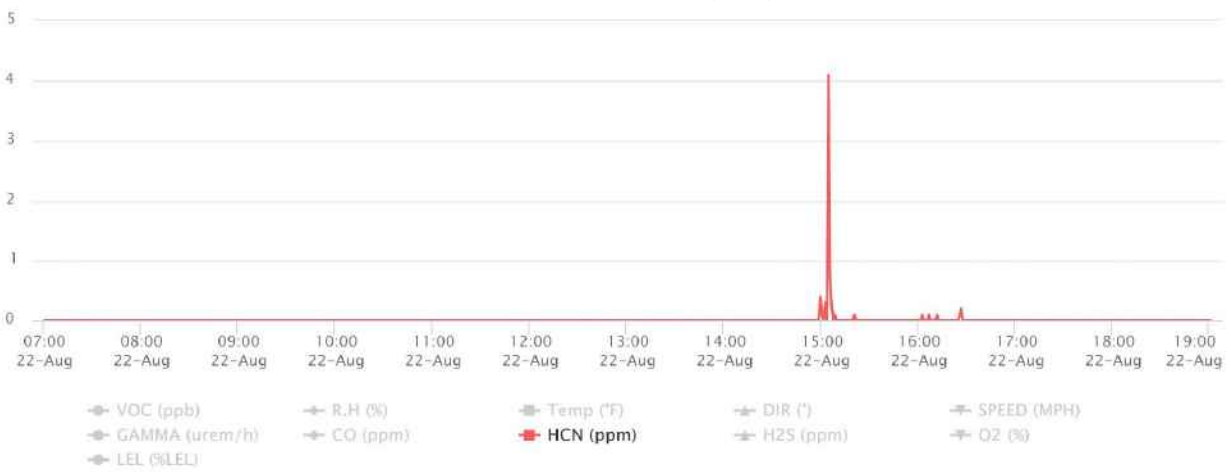
8/22/19 DAY Data for AREARAE PRO 1 (HCn) – Southwest of Pile



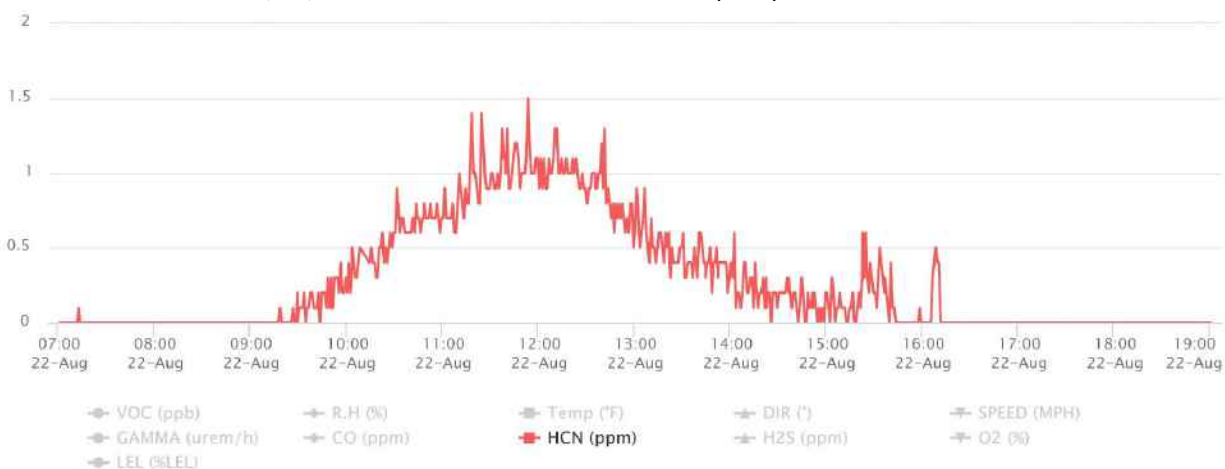
8/22/19 DAY Data for AREARAE PRO 2 (HCn) – Northwest of Pile



8/22/19 DAY Data for AREARAE PRO 3 (HCn) – Northeast of Pile



8/22/19 DAY Data for AREARAE PRO 4 (HCn) – Forrest Concrete



Air Monitoring Summary Tables

The table below summarizes monitoring data collected on using EPA's Viper wireless remote monitoring system.

Project Name: Able Contracting Fire Site

From: 8/22/19
19:00

To: 8/23/19
7:00



On Site, Southwest Corner of Pile							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 1	VOC	No	758	0	0 - 0 ppb	0 ppb	1,000 ppb
	CO	No	758	1	0 - 2 ppm	0 ppm	83 ppm
	H ₂ S	No	758	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	758	758	20.9 - 20.9 %	20.9 %	<19.5 or >23%
	LEL	No	758	0	0 - 0 %	0 %	10%
	HCN	No	758	4	0 - 1.1 ppm	0 ppm	7.1 ppm

Peacock Collision							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
DustTrak 1	PM-2.5	Moderate	747	747	5 - 72 µg/m ³	13.2 ug/m3	See SOG #: T106

On Site, Northwest Corner of Pile							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 2	VOC	No	762	1	0 - 36 ppb	0.05 ppb	1,000 ppb
	CO	No	762	62	0 - 19 ppm	0.5 ppm	83 ppm
	H ₂ S	Yes	762	3	0 - 0.7 ppm	0.002 ppm	0.5 ppm
	O ₂	No	762	762	20.9 - 20.9 %	20.9 %	<19.5 or >23%
	LEL	No	762	0	0 - 0 %	0 %	10%
	HCN	No	762	8	0 - 1.7 ppm	0.01 ppm	7.1 ppm

Short Cut Road							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
DustTrak 2	PM-2.5	Good	746	746	3 - 44 µg/m ³	7 ug/m3	See SOG #: T106

Able Contracting Workshop, Northeast of Pile							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 3	VOC	No	762	0	0 - 0 ppb	0 ppb	1,000 ppb
	CO	No	762	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	762	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	762	762	20.9 - 20.9 %	20.9 %	<19.5 or >23%
	LEL	No	762	762	2 - 3 %	2.4 %	10%
	HCN	No	762	0	0 - 0 ppm	0 ppm	7.1 ppm

Grace Costal Church							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
DustTrak 3	PM-2.5	Moderate	735	735	1 - 159 µg/m ³	16 ug/m3	See SOG #: T106

Forrest Concrete							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 4	VOC	No	757	0	0 - 0 ppb	0 ppb	1,000 ppb
	CO	No	757	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	757	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	757	757	20.4 - 20.5 %	20.5 %	<19.5 or >23%
	LEL	No	757	0	0 - 0 %	0 %	10%
	HCN	No	757	60	0 - 0.8 ppm	0.02 ppm	7.1 ppm

Sun City							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
EBAM 1	PM-2.5	Moderate	743	245	0 - 109 ug/m3	14.1 ug/m3	See SOG #: T106

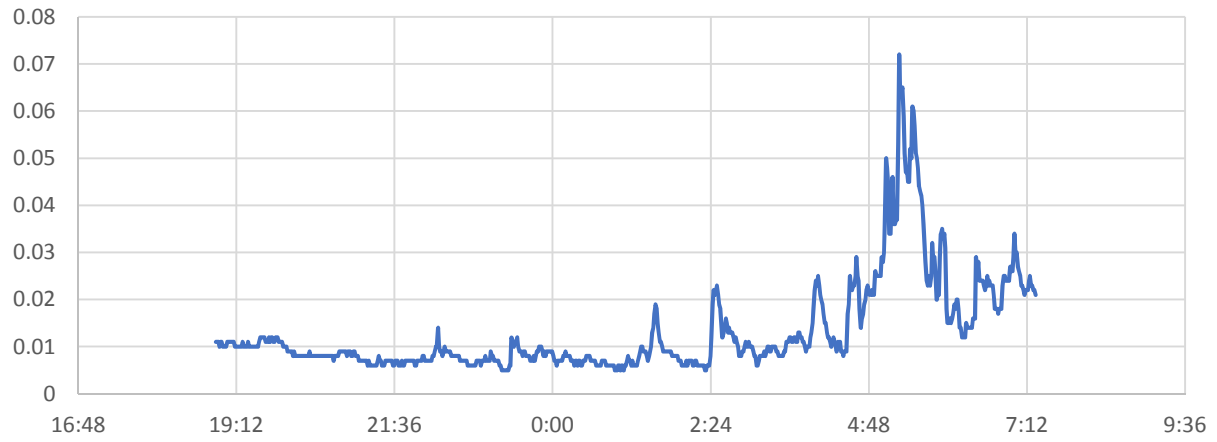
Brooke Mill Apartments							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
EBAM 2	PM-2.5	Good	753	438	0 - 41 ug/m3	9.4 ug/m3	See SOG #: T106

EPA Mobile Command Post							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
EBAM 3	PM-2.5	Good	735	146	0 - 63 ug/m3	11.7 ug/m3	See SOG #: T106

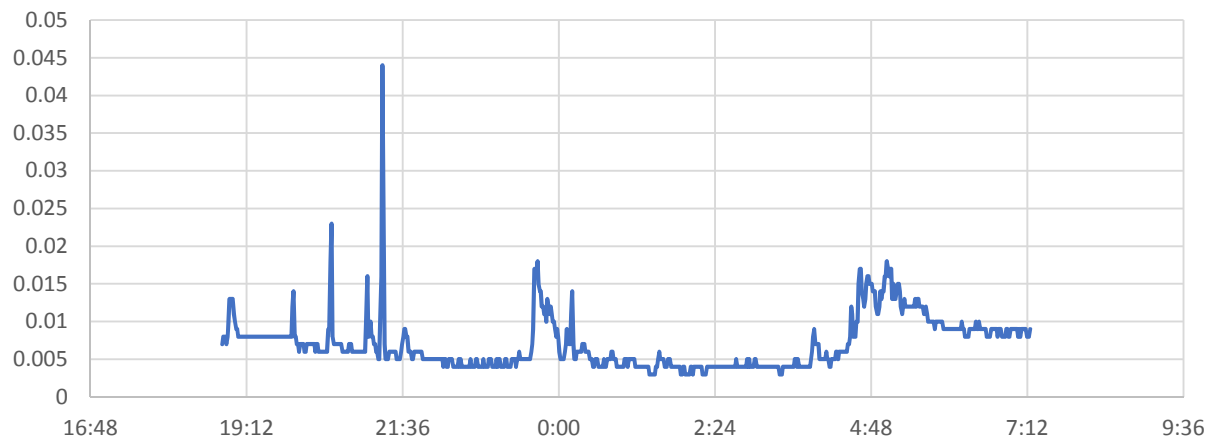
Notes:

%	Percent	O ₂	Oxygen
<	Less than	PEL	Permissible exposure limit
>	Greater than	ppb	Parts per billion
AEGL	Acute Exposure Guideline Levels for Airborne Chemicals	ppm	Parts per million
CO	Carbon monoxide	PM	Particulate matter
H ₂ S	Hydrogen Sulfide	SOG	Standard Operating Guidelines
HCN	Hydrogen Cyanide	TLV	Threshold limit value
LEL	Lower Explosive Level	µg/m ³	Micrograms per cubic meter
min	Minute	VOC	Volatile organic compound

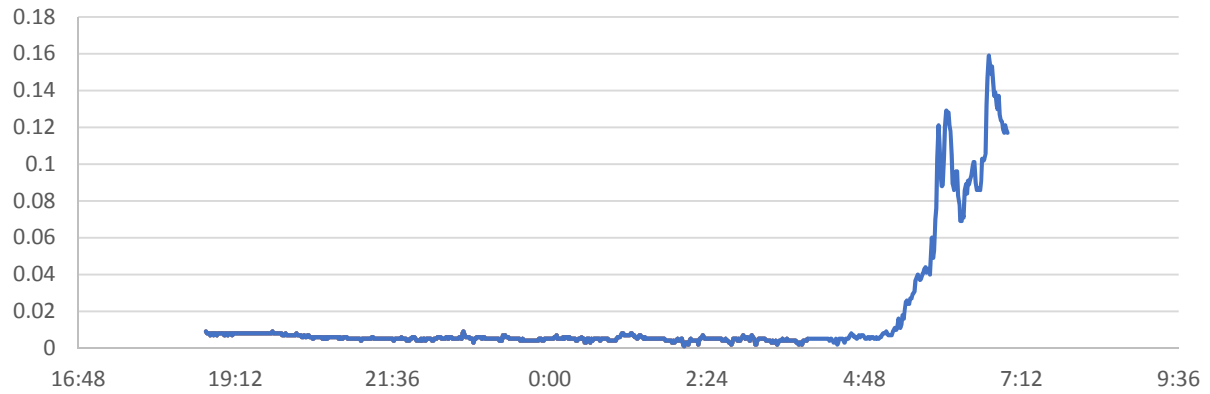
8/22/19 NIGHT Data for DustTrak 1 (PM_{2.5}) - Peacock Collision



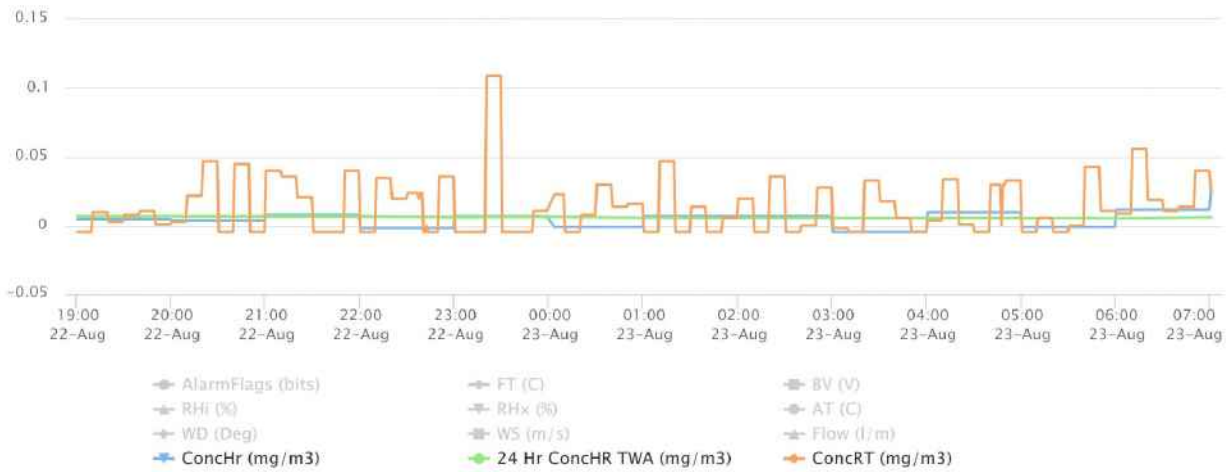
8/22/19 NIGHT Data for DustTrak 2 (PM_{2.5}) – Short Cut Road



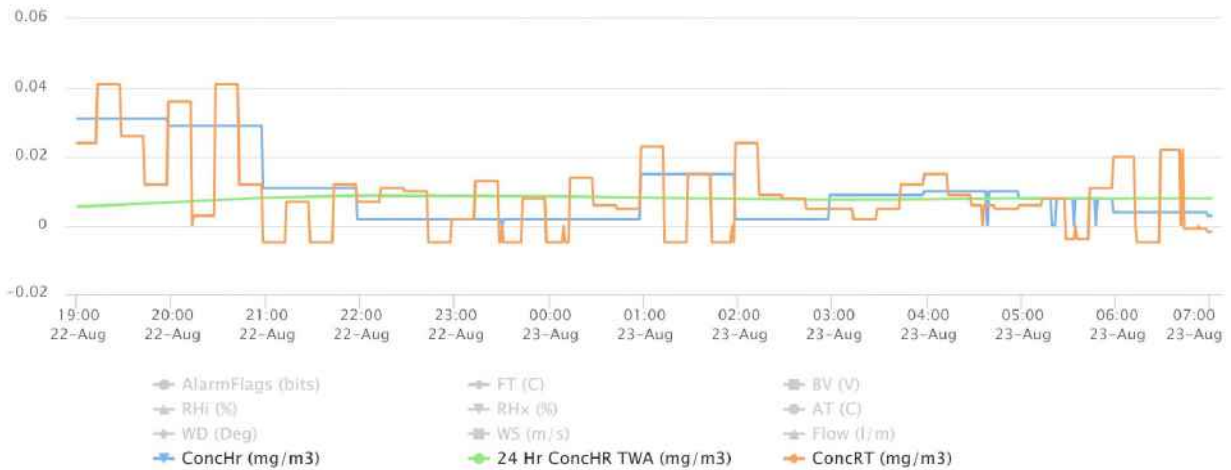
8/22/19 NIGHT Data for DustTrak 3 (PM_{2.5}) – Grace Costal Church



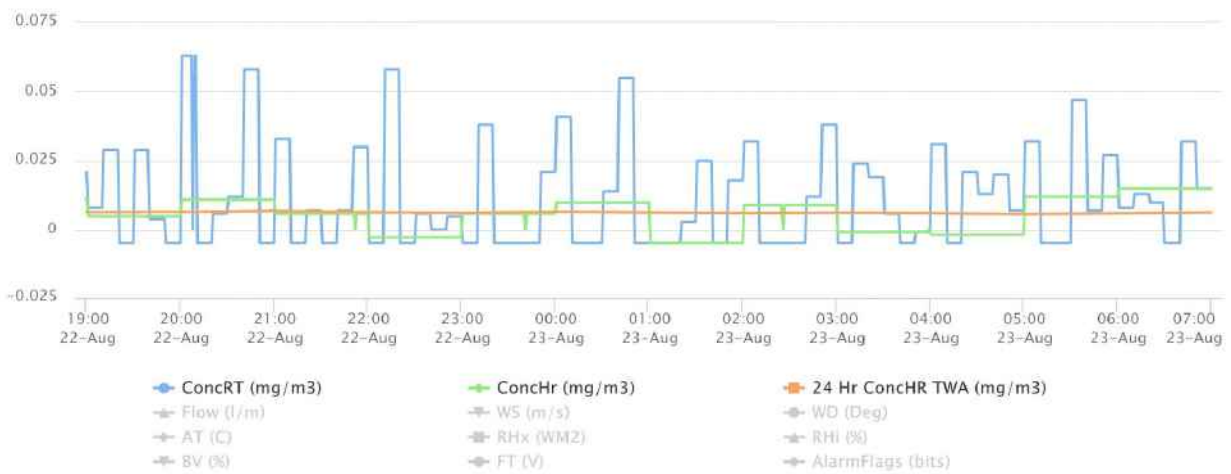
8/22/19 NIGHT Data for EBAM 1 (ConcRT) – Sun City



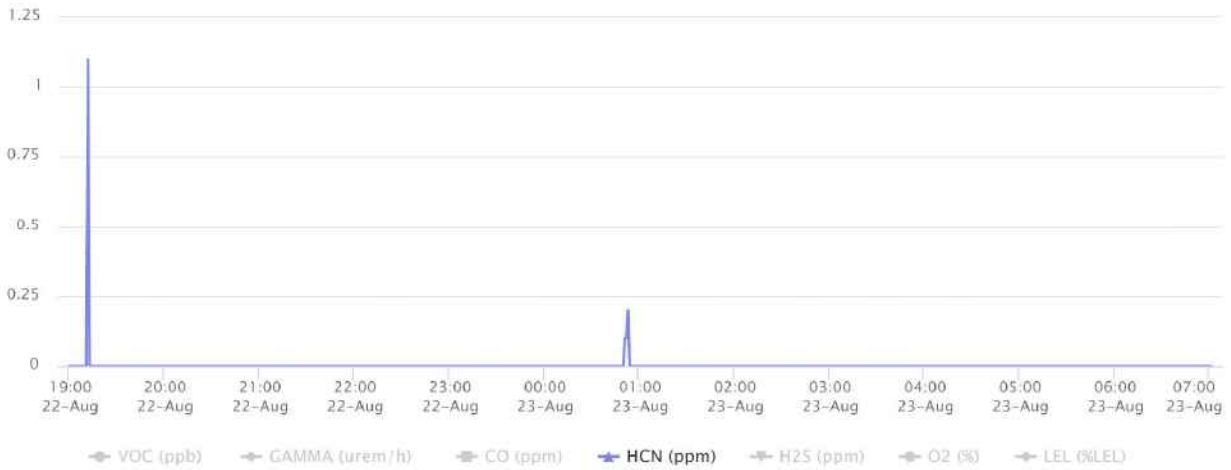
8/22/19 NIGHT Data for EBAM 2 (ConcRT) – Brooke Mill Apartments



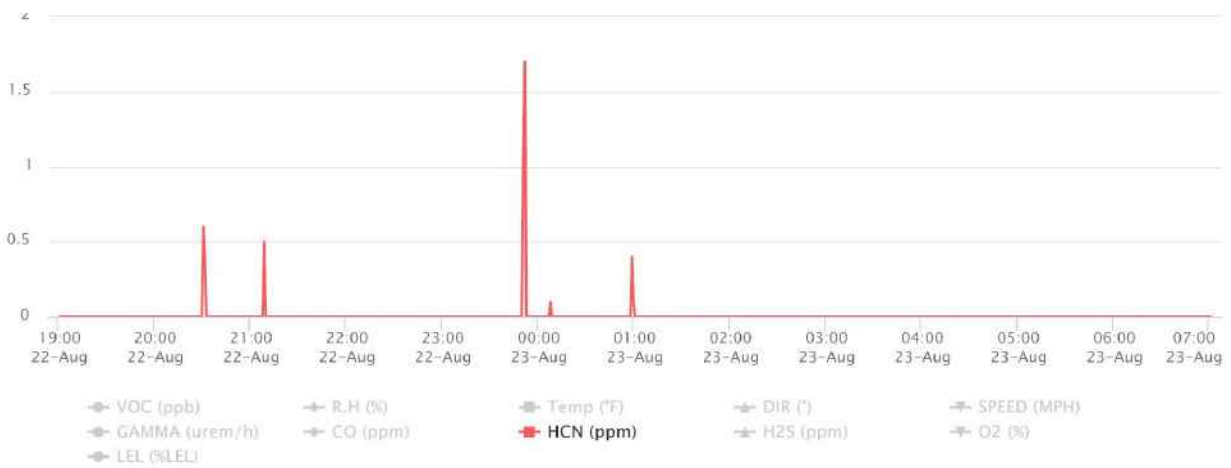
8/22/19 NIGHT Data for EBAM 3 (ConcRT) – EPA Mobile Command Post



8/22/19 NIGHT Data for AREARAE PRO 1 (HCn) – Southwest of Pile



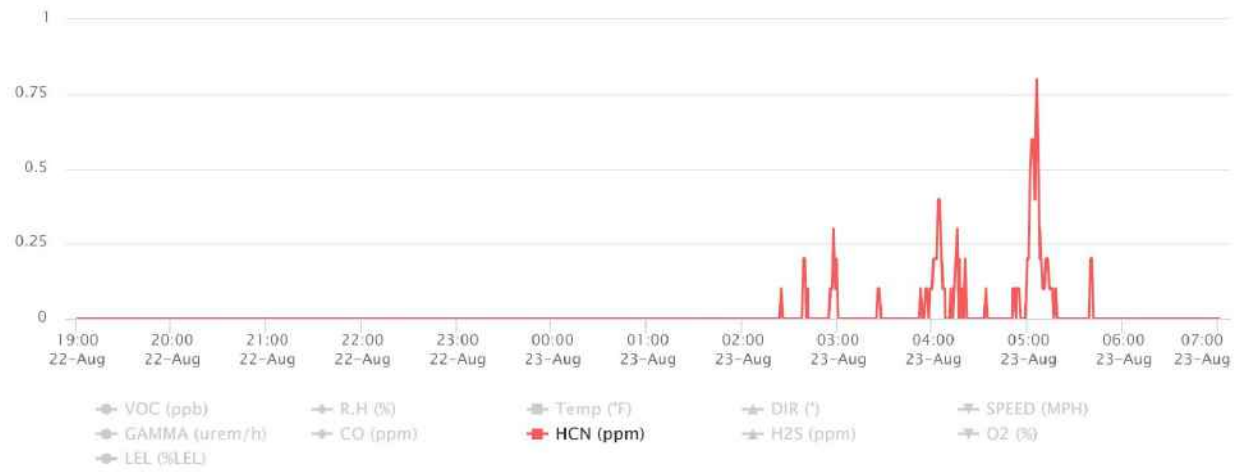
8/22/19 NIGHT Data for AREARAE PRO 2 (HCn) – Northwest of Pile



8/22/19 DAY Data for AREARAE PRO 3 (HCn) – Northeast of Pile



8/22/19 NIGHT Data for AREARAE PRO 4 (HCn) – Forrest Concrete



Air Monitoring Summary Tables

The table below summarizes monitoring data collected on using EPA's Viper wireless remote monitoring system.

Project Name: Able Contracting Fire Site

From: 8/23/19
7:00

To: 8/23/19
19:00



On Site, Southwest Corner of Pile							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 1	VOC	No	772	1	0 - 72 ppb	0.09 ppb	1,000 ppb
	CO	No	772	6	0 - 5 ppm	0.03 ppm	83 ppm
	H ₂ S	Yes	772	3	0 - 1.8 ppm	0.004 ppm	0.5 ppm
	O ₂	No	772	772	20.9 - 20.9 %	20.9 %	<19.5 or >23%
	LEL	No	772	0	0 - 0 %	0 %	10%
	HCN	No	772	505	0 - 5.7 ppm	0.19 ppm	7.1 ppm

Peacock Collision							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
DustTrak 1	PM-2.5	Good	1,025	982	0 - 32 µg/m ³	6.2 ug/m3	See SOG #: T106

On Site, Northwest Corner of Pile							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 2	VOC	Yes	777	15	0 - 1048 ppb	5.13 ppb	1,000 ppb
	CO	No	777	79	0 - 19 ppm	0.56 ppm	83 ppm
	H ₂ S	Yes	777	4	0 - 0.9 ppm	0.003 ppm	0.5 ppm
	O ₂	No	777	777	20.6 - 20.9 %	20.7 %	<19.5 or >23%
	LEL	No	777	0	0 - 0 %	0 %	10%
	HCN	No	777	130	0 - 3.1 ppm	0.1 ppm	7.1 ppm

Short Cut Road							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
DustTrak 2	PM-2.5	Good	1,118	1,118	2 - 38 µg/m ³	7.2 ug/m3	See SOG #: T106

Able Contracting Workshop, Northeast of Pile							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 3	VOC	No	771	9	0 - 433 ppb	1.67 ppb	1,000 ppb
	CO	No	771	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	771	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	771	771	20.9 - 20.9 %	20.9 %	<19.5 or >23%
	LEL	No	771	771	2 - 3 %	2.5 %	10%
	HCN	No	771	193	0 - 0.6 ppm	0.08 ppm	7.1 ppm

Grace Costal Church							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
DustTrak 3	PM-2.5	Good	1,082	1,016	0 - 111 µg/m ³	6.5 ug/m3	See SOG #: T106

Forrest Concrete							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 4	VOC	No	777	0	0 - 0 ppb	0 ppb	1,000 ppb
	CO	No	777	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	777	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	777	777	20.4 - 21.3 %	20.9 %	<19.5 or >23%
	LEL	No	777	0	0 - 0 %	0 %	10%
	HCN	No	777	386	0 - 1.6 ppm	0.31 ppm	7.1 ppm

Sun City							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
EBAM 1	PM-2.5	Good	733	122	0 - 154 ug/m3	10.3 ug/m3	See SOG #: T106

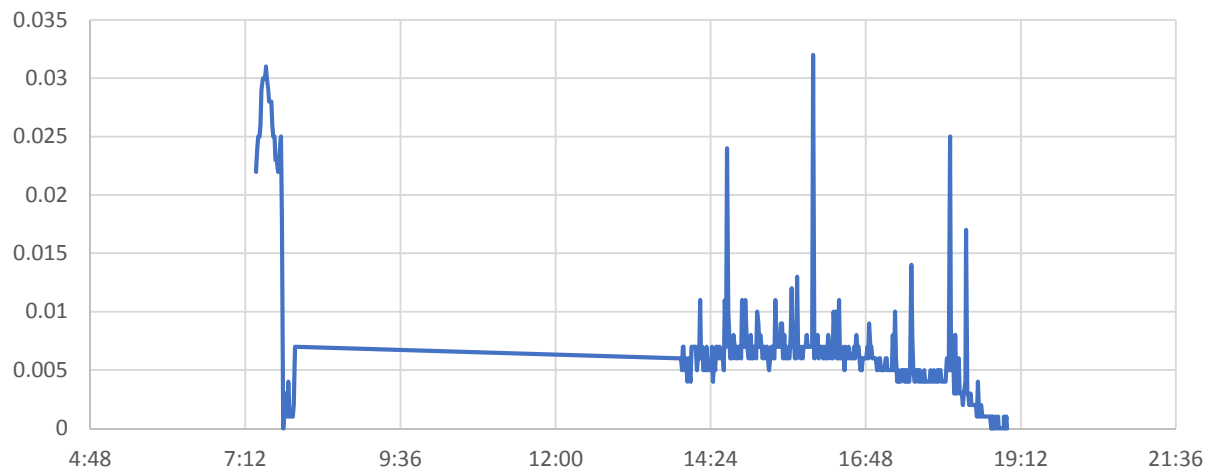
Brooke Mill Apartments							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
EBAM 2	PM-2.5	Good	742	130	0 - 34 ug/m3	4.2 ug/m3	See SOG #: T106

EPA Mobile Command Post							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
EBAM 3	PM-2.5	Moderate	387	125	0 - 121 ug/m3	15.8 ug/m3	See SOG #: T106

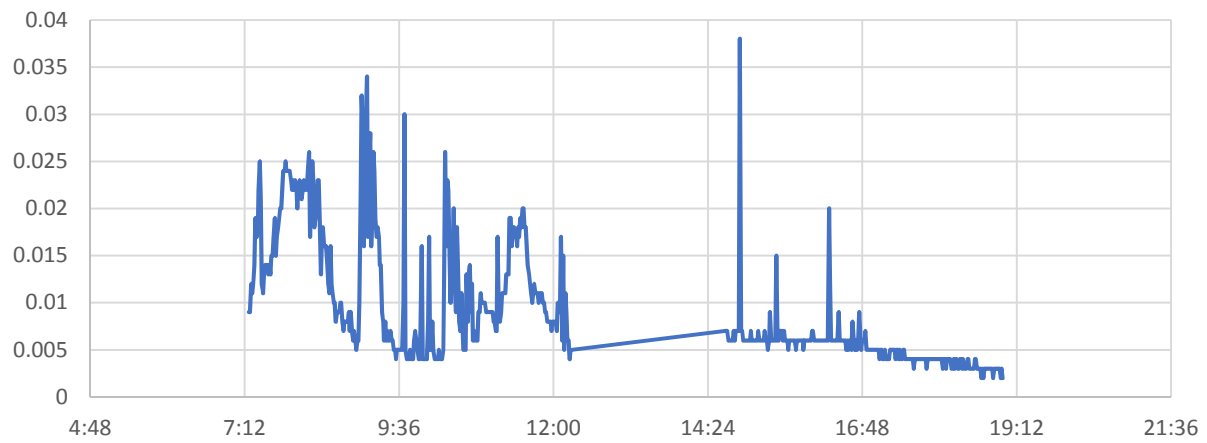
Notes:

%	Percent	O ₂	Oxygen
<	Less than	PEL	Permissible exposure limit
>	Greater than	ppb	Parts per billion
AEGL	Acute Exposure Guideline Levels for Airborne Chemicals	ppm	Parts per million
CO	Carbon monoxide	PM	Particulate matter
H ₂ S	Hydrogen Sulfide	SOG	Standard Operating Guidelines
HCN	Hydrogen Cyanide	TLV	Threshold limit value
LEL	Lower Explosive Level	µg/m ³	Micrograms per cubic meter
min	Minute	VOC	Volatile organic compound

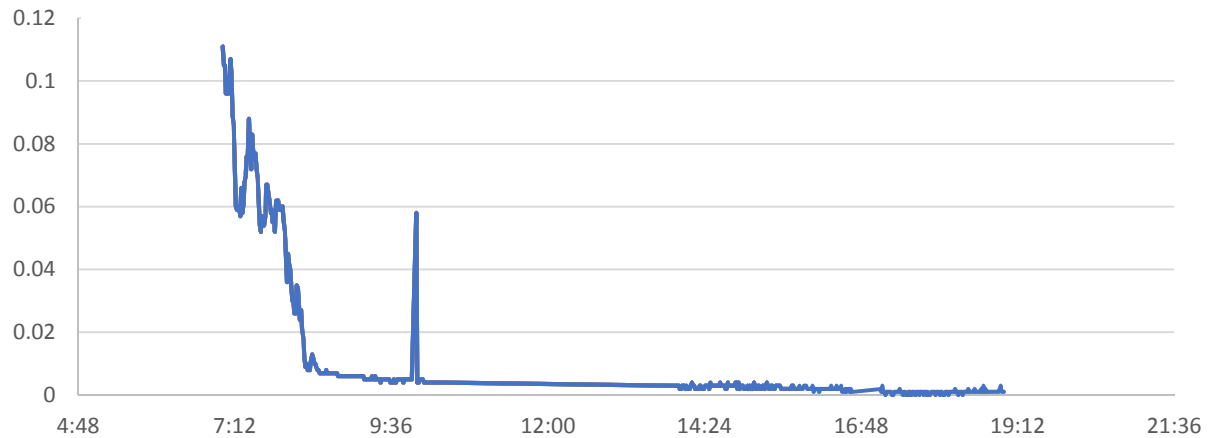
8/23/19 DAY Data for DustTrak 1 (PM_{2.5}) - Peacock Collision



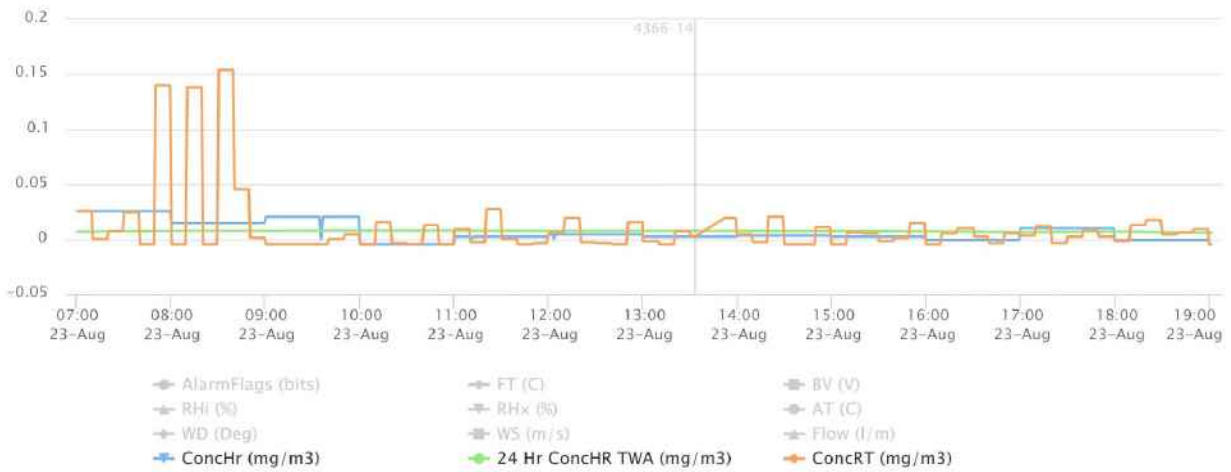
8/23/19 DAY Data for DustTrak 2 (PM_{2.5}) – Short Cut Road



8/23/19 DAY Data for DustTrak 3 (PM_{2.5}) – Grace Costal Church



8/23/19 DAY Data for EBAM 1 (ConcRT) – Sun City



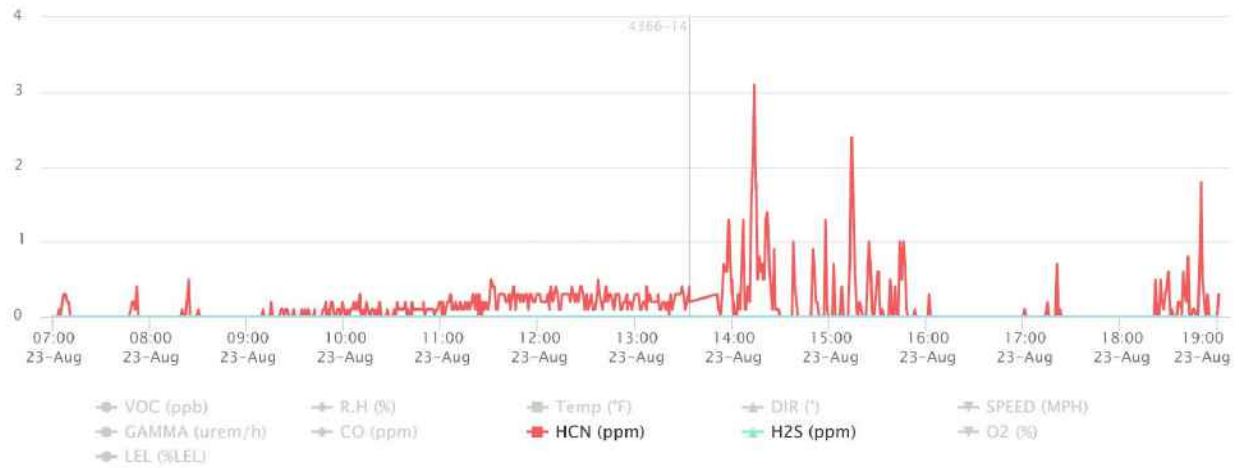
8/23/19 DAY Data for EBAM 2 (ConcRT) – Brooke Mill Apartments



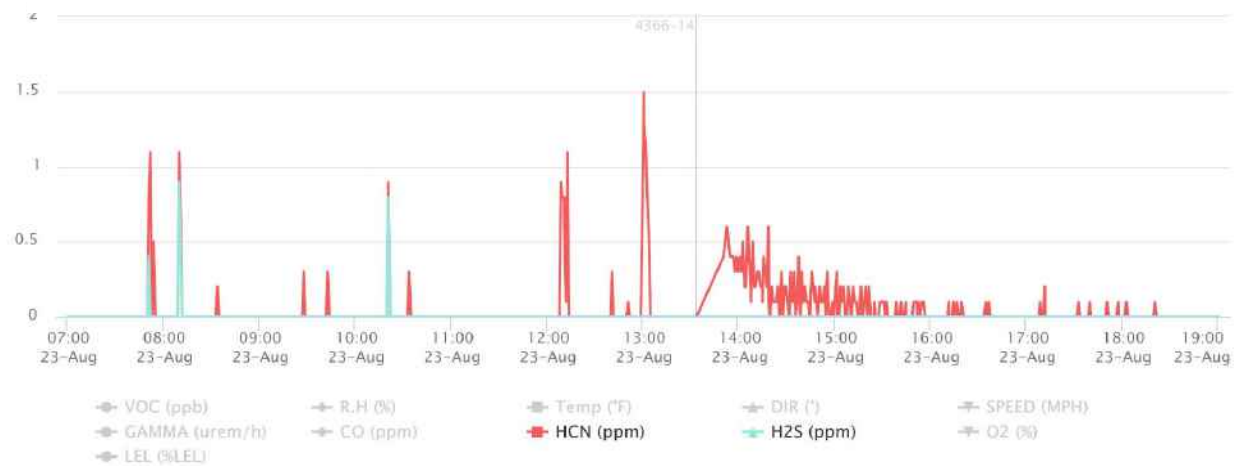
8/23/19 DAY Data for EBAM 3 (ConcRT) – EPA Mobile Command Post



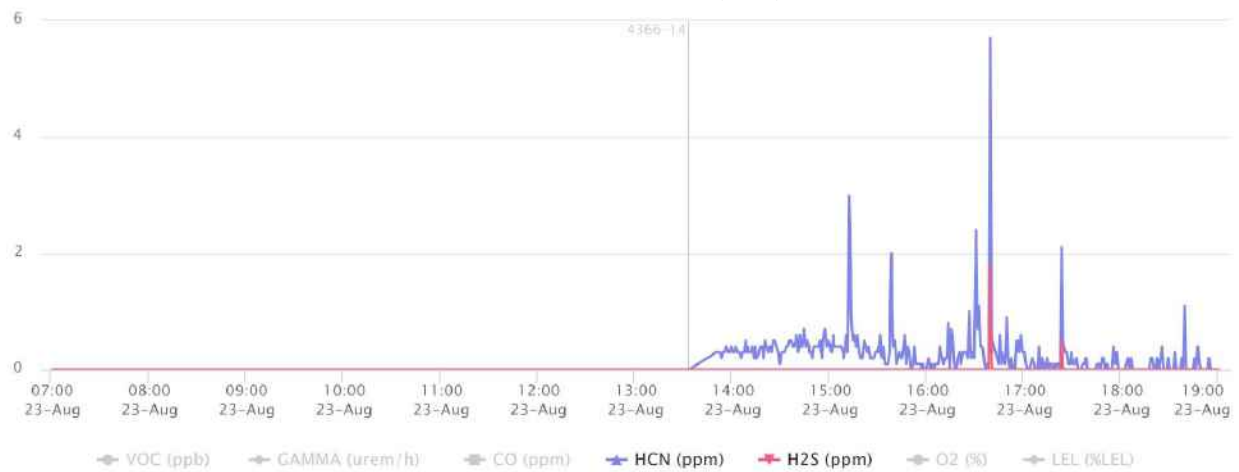
8/23/19 DAY Data for AREARAE PRO 1 (HCn) – Southwest of Pile



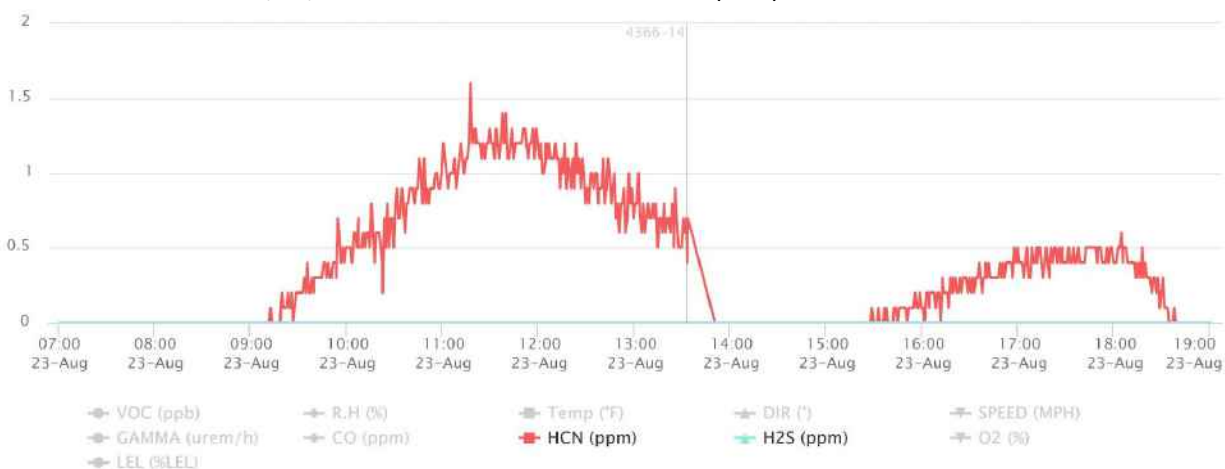
8/23/19 DAY Data for AREARAE PRO 2 (HCn) – Northwest of Pile



8/23/19 DAY Data for AREARAE PRO 3 (HCn) – Northeast of Pile



8/23/19 DAY Data for AREARAE PRO 4 (HCn) – Forrest Concrete



Air Monitoring Summary Tables

The table below summarizes monitoring data collected on using EPA's Viper wireless remote monitoring system.

Project Name: Able Contracting Fire Site

From: 8/23/19
19:00

To: 8/24/19
7:00



On Site, Southwest Corner of Pile							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 1	VOC	Yes	758	62	0 - 8742 ppb	20.34 ppb	1,000 ppb
	CO	No	758	134	0 - 28 ppm	0.96 ppm	83 ppm
	H ₂ S	No	758	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	758	758	20.9 - 20.9 %	20.9 %	<19.5 or >23%
	LEL	No	758	0	0 - 0 %	0 %	10%
	HCN	Yes	758	348	0 - 13.5 ppm	0.4 ppm	7.1 ppm

Peacock Collision							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
DustTrak 1	PM-2.5	Good	1,008	480	0 - 13 µg/m ³	1.1 ug/m3	See SOG #: T106

On Site, Northwest Corner of Pile							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 2	VOC	No	765	9	0 - 511 ppb	2.58 ppb	1,000 ppb
	CO	No	765	43	0 - 16 ppm	0.26 ppm	83 ppm
	H ₂ S	No	765	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	765	765	20.6 - 20.7 %	20.7 %	<19.5 or >23%
	LEL	No	765	0	0 - 0 %	0 %	10%
	HCN	No	765	29	0 - 1.2 ppm	0.02 ppm	7.1 ppm

Short Cut Road							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
DustTrak 2	PM-2.5	Good	939	939	1 - 214 µg/m ³	8.7 ug/m3	See SOG #: T106

Able Contracting Workshop, Northeast of Pile							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 3	VOC	No	756	234	0 - 195 ppb	18.06 ppb	1,000 ppb
	CO	No	756	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	756	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	756	756	20.9 - 20.9 %	20.9 %	<19.5 or >23%
	LEL	No	756	756	2 - 3 %	2 %	10%
	HCN	No	756	0	0 - 0 ppm	0 ppm	7.1 ppm

Grace Costal Church							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
DustTrak 3	PM-2.5	Good	490	490	1 - 72 µg/m ³	6.8 ug/m3	See SOG #: T106

Forrest Concrete							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 4	VOC	No	769	0	0 - 0 ppb	0 ppb	1,000 ppb
	CO	No	769	17	0 - 6 ppm	0.08 ppm	83 ppm
	H ₂ S	No	769	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	769	769	20.4 - 20.9 %	20.5 %	<19.5 or >23%
	LEL	No	769	0	0 - 0 %	0 %	10%
	HCN	No	769	46	0 - 0.7 ppm	0.01 ppm	7.1 ppm

Sun City							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
EBAM 1	PM-2.5	Moderate	752	315	0 - 99 ug/m3	20.8 ug/m3	See SOG #: T106

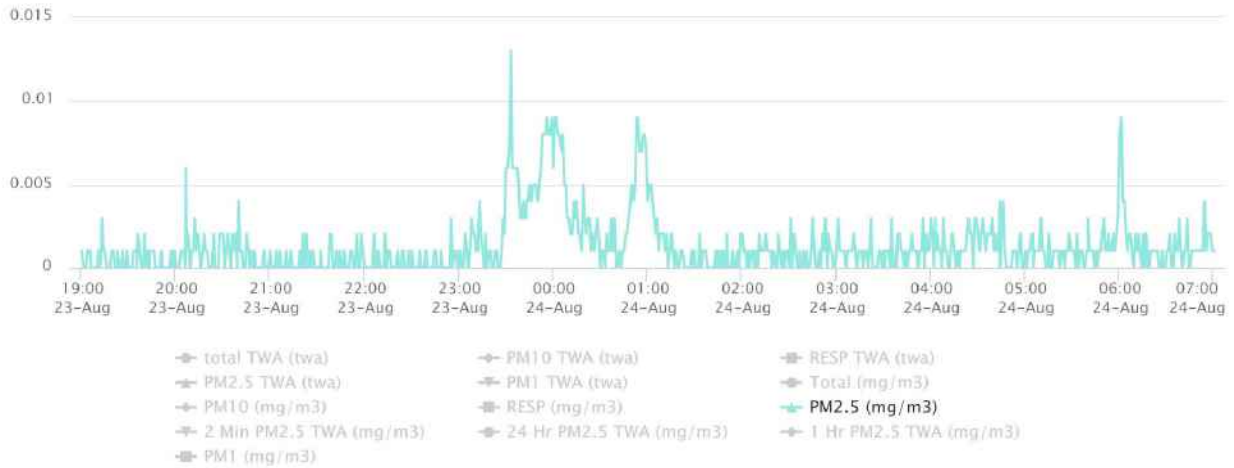
Brooke Mill Apartments							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
EBAM 2	PM-2.5	Good	743	416	0 - 72 ug/m3	11.8 ug/m3	See SOG #: T106

EPA Mobile Command Post							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
EBAM 3	PM-2.5	Moderate	387	125	0 - 121 ug/m3	15.8 ug/m3	See SOG #: T106

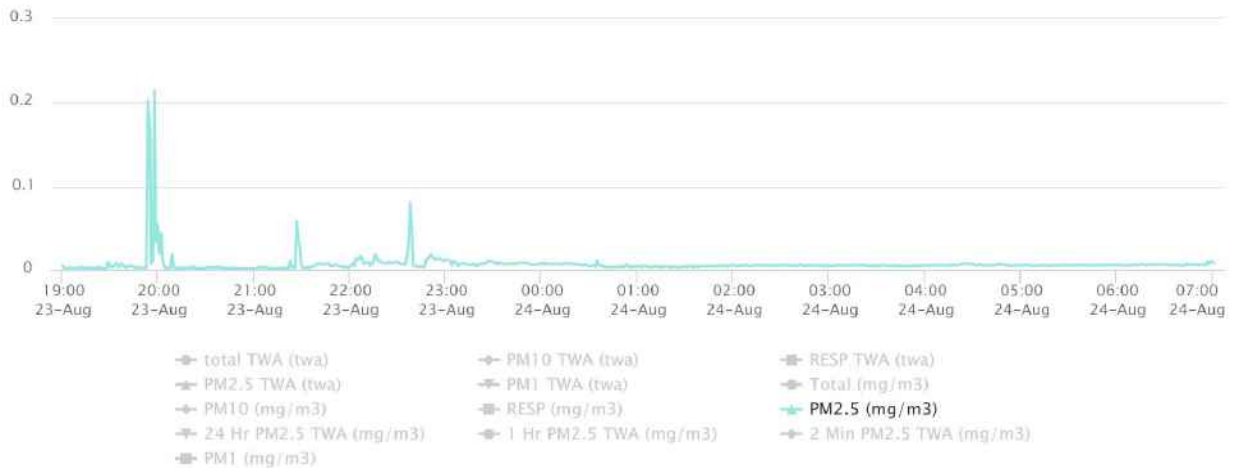
Notes:

%	Percent	O ₂	Oxygen
<	Less than	PEL	Permissible exposure limit
>	Greater than	ppb	Parts per billion
AEGL	Acute Exposure Guideline Levels for Airborne Chemicals	ppm	Parts per million
CO	Carbon monoxide	PM	Particulate matter
H ₂ S	Hydrogen Sulfide	SOG	Standard Operating Guidelines
HCN	Hydrogen Cyanide	TLV	Threshold limit value
LEL	Lower Explosive Level	µg/m ³	Micrograms per cubic meter
min	Minute	VOC	Volatile organic compound

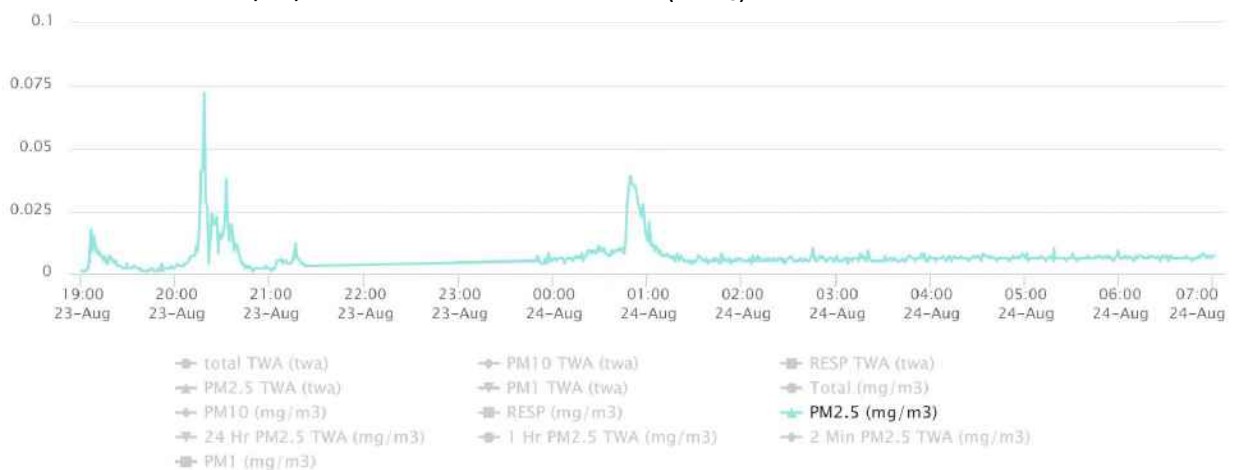
8/23/19 NIGHT Data for DustTrak 1 (PM_{2.5}) - Peacock Collision



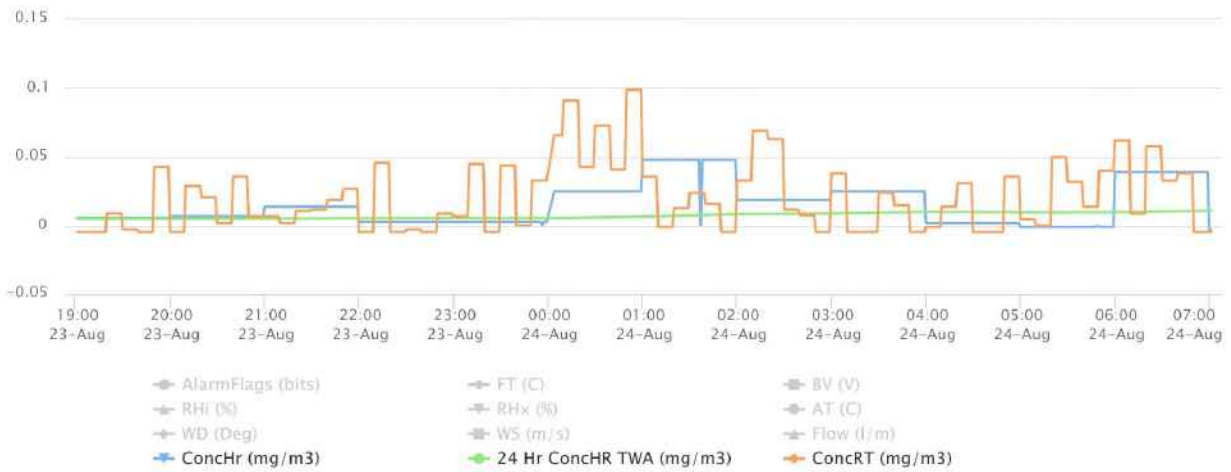
8/23/19 NIGHT Data for DustTrak 2 (PM_{2.5}) – Short Cut Road



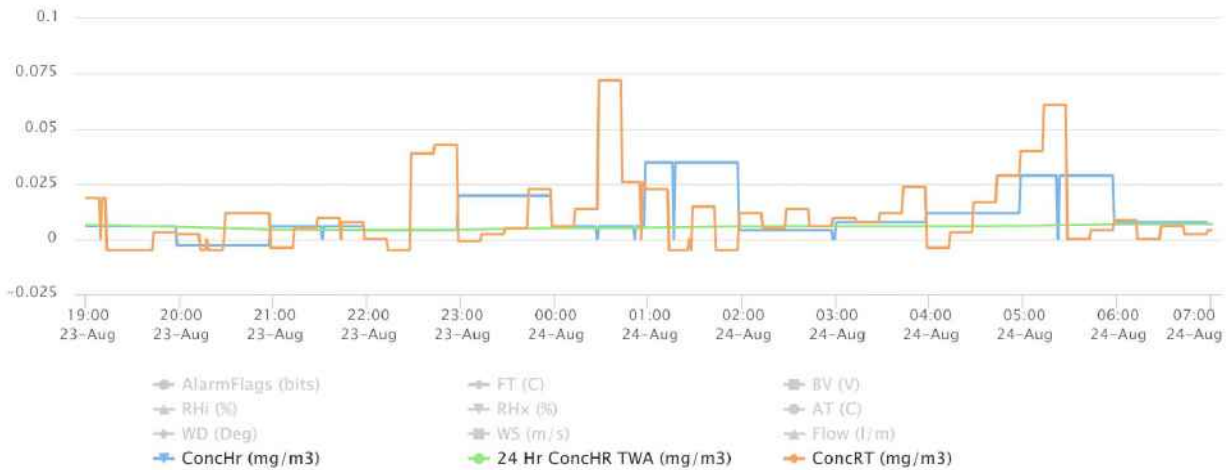
8/23/19 NIGHT Data for DustTrak 3 (PM_{2.5}) – Grace Costal Church



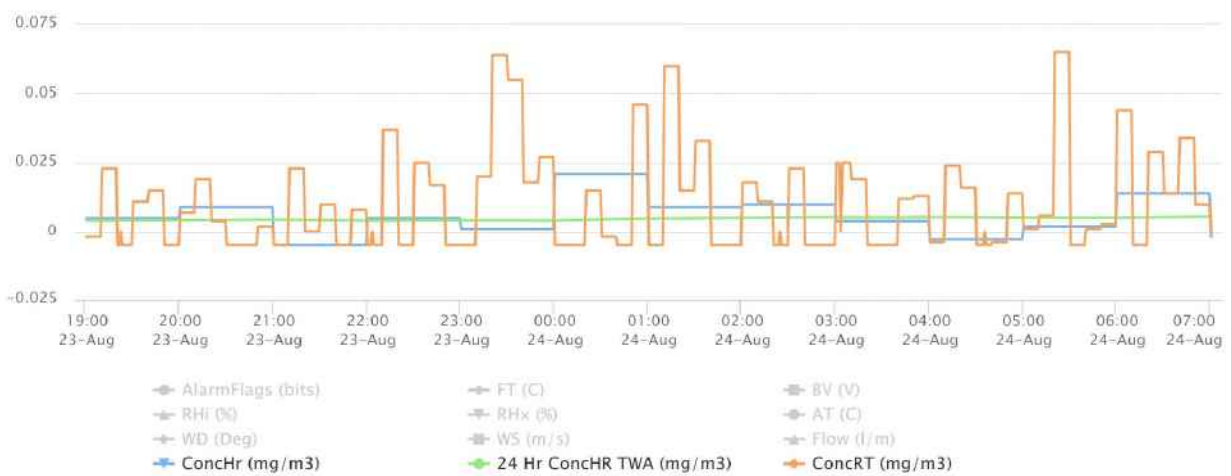
8/23/19 NIGHT Data for EBAM 1 (ConcRT) – Sun City



8/23/19 NIGHT Data for EBAM 2 (ConcRT) – Brooke Mill Apartments



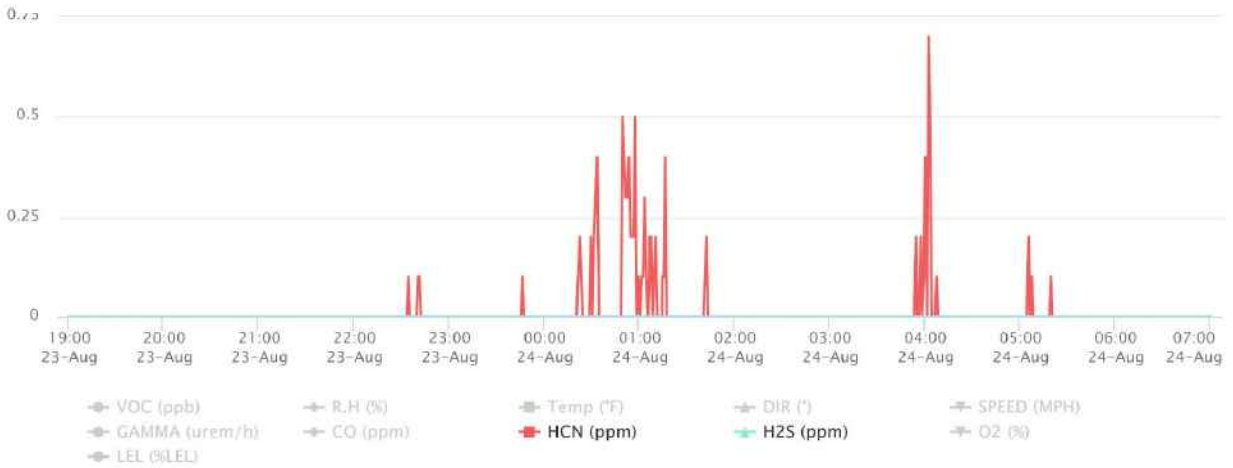
8/23/19 NIGHT Data for EBAM 3 (ConcRT) – EPA Mobile Command Post



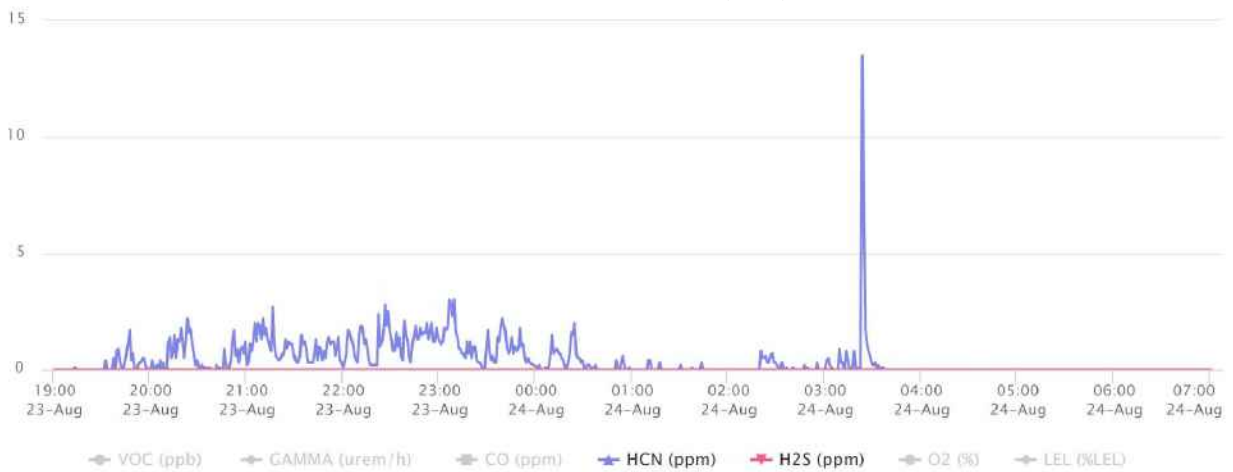
8/23/19 NIGHT Data for AREARAE PRO 1 (HCn) – Southwest of Pile



8/23/19 NIGHT Data for AREARAE PRO 2 (HCn) – Northwest of Pile



8/23/19 NIGHT Data for AREARAE PRO 3 (HCn) – Northeast of Pile



8/23/19 NIGHT Data for AREARAE PRO 4 (HCn) – Forrest Concrete



Air Monitoring Summary Tables

The table below summarize monitoring data collected on using EPA's Viper wireless remote monitoring system.

Project Name: Able Contracting Fire Site

From: 8/24/19
7:00

To: 8/24/19
19:00



On Site, Southwest Corner of Pile							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 1	VOC	No	775	1	0 - 25 ppb	0.03 ppb	1,000 ppb
	CO	No	775	3	0 - 6 ppm	0.01 ppm	83 ppm
	H ₂ S	No	775	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	775	775	20.9 - 20.9 %	20.9 %	<19.5 or >23%
	LEL	No	775	0	0 - 0 %	0 %	10%
	HCN	No	775	391	0 - 1.3 ppm	0.1 ppm	7.1 ppm

Peacock Collision							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
DustTrak 1	PM-2.5	Good	1,349	1,349	1 - 62 µg/m ³	2.8 µg/m ³	See SOG #: T106

On Site, Northwest Corner of Pile							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 2	VOC	No	777	0	0 - 0 ppb	0 ppb	1,000 ppb
	CO	No	777	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	777	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	777	777	20.6 - 20.7 %	20.6 %	<19.5 or >23%
	LEL	No	777	0	0 - 0 %	0 %	10%
	HCN	No	777	111	0 - 1.8 ppm	0.05 ppm	7.1 ppm

Short Cut Road							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
DustTrak 2	PM-2.5	Good	685	685	4 - 34 µg/m ³	5.8 µg/m ³	See SOG #: T106

Able Contracting Workshop, Northeast of Pile							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 3	VOC	No	775	0	0 - 0 ppb	0 ppb	1,000 ppb
	CO	No	775	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	775	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	775	775	20.9 - 20.9 %	20.9 %	<19.5 or >23%
	LEL	No	775	775	2 - 3 %	2 %	10%
	HCN	No	775	0	0 - 0 ppm	0 ppm	7.1 ppm

Grace Costal Church							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
DustTrak 3	PM-2.5	Good	1,326	1,326	1 - 10 µg/m ³	4.2 µg/m ³	See SOG #: T106

Forrest Concrete							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 4	VOC	No	775	0	0 - 0 ppb	0 ppb	1,000 ppb
	CO	No	775	1	0 - 2 ppm	0 ppm	83 ppm
	H ₂ S	No	775	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	775	775	20.4 - 20.9 %	20.8 %	<19.5 or >23%
	LEL	No	775	0	0 - 0 %	0 %	10%
	HCN	No	775	320	0 - 1.4 ppm	0.22 ppm	7.1 ppm

Sun City							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
EBAM 1	PM-2.5	Good	744	39	0 - 124 µg/m ³	10.9 µg/m ³	See SOG #: T106

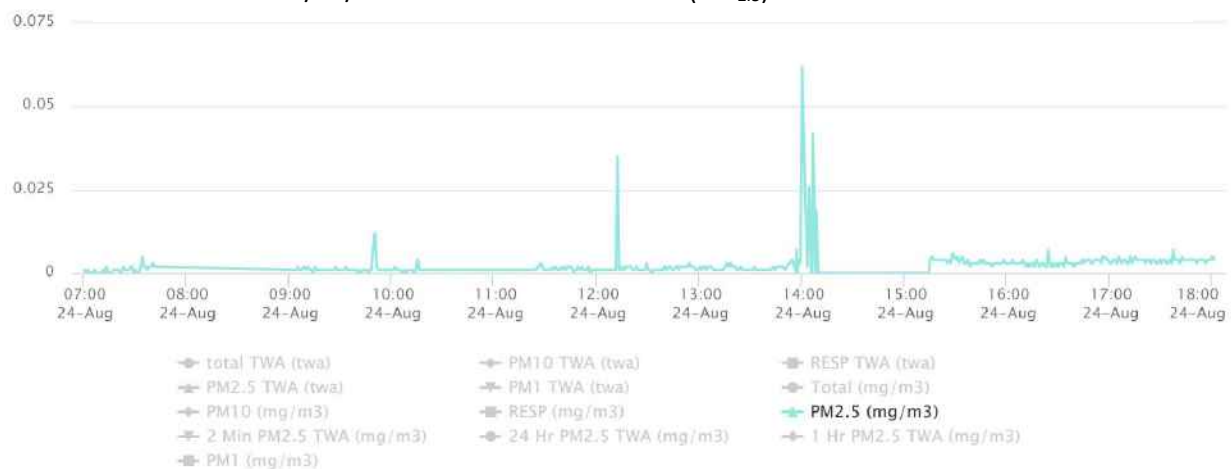
Brooke Mill Apartments							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
EBAM 2	PM-2.5	Good	753	98	0 - 42 µg/m ³	4.3 µg/m ³	See SOG #: T106

EPA Mobile Command Post							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
EBAM 3	PM-2.5	Good	750	172	0 - 106 µg/m ³	11.1 µg/m ³	See SOG #: T106

Notes:

%	Percent	O ₂	Oxygen
<	Less than	PEL	Permissible exposure limit
>	Greater than	ppb	Parts per billion
AEGL	Acute Exposure Guideline Levels for Airborne Chemicals	ppm	Parts per million
CO	Carbon monoxide	PM	Particulate matter
H ₂ S	Hydrogen Sulfide	SOG	Standard Operating Guidelines
HCN	Hydrogen Cyanide	TLV	Threshold limit value
LEL	Lower Explosive Level	µg/m ³	Micrograms per cubic meter
min	Minute	VOC	Volatile organic compound

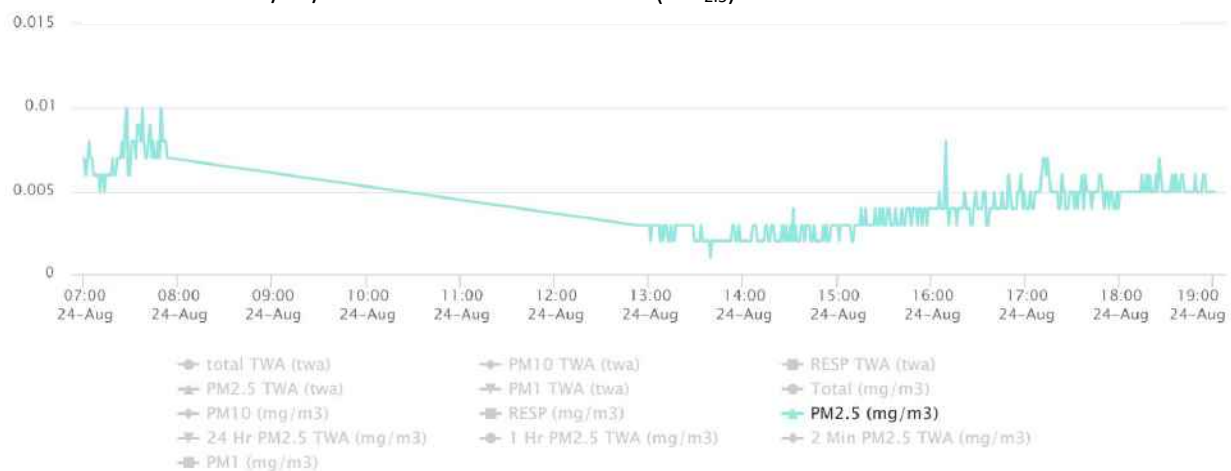
8/24/19 DAY Data for DustTrak 1 (PM_{2.5}) - Peacock Collision



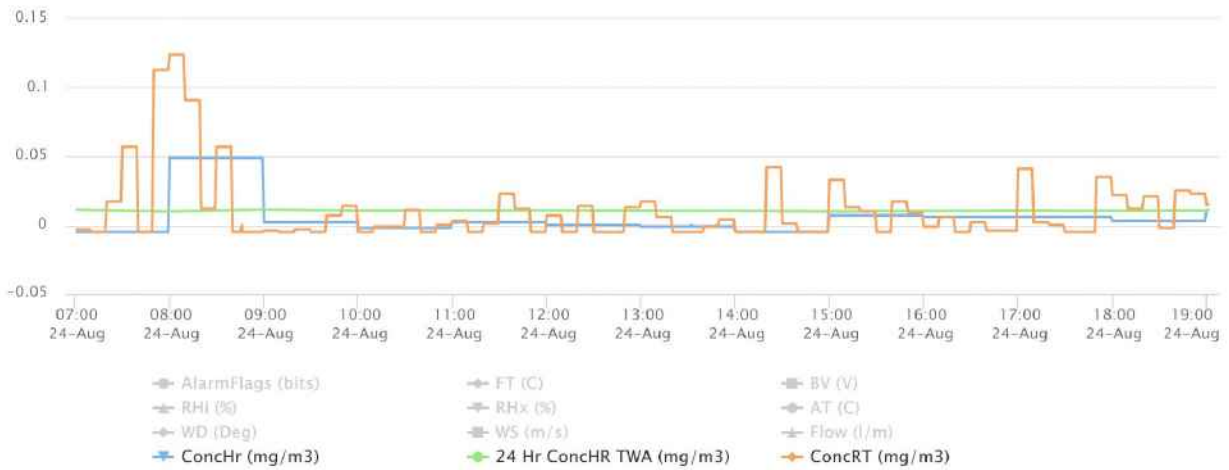
8/24/19 DAY Data for DustTrak 2 (PM_{2.5}) – Short Cut Road



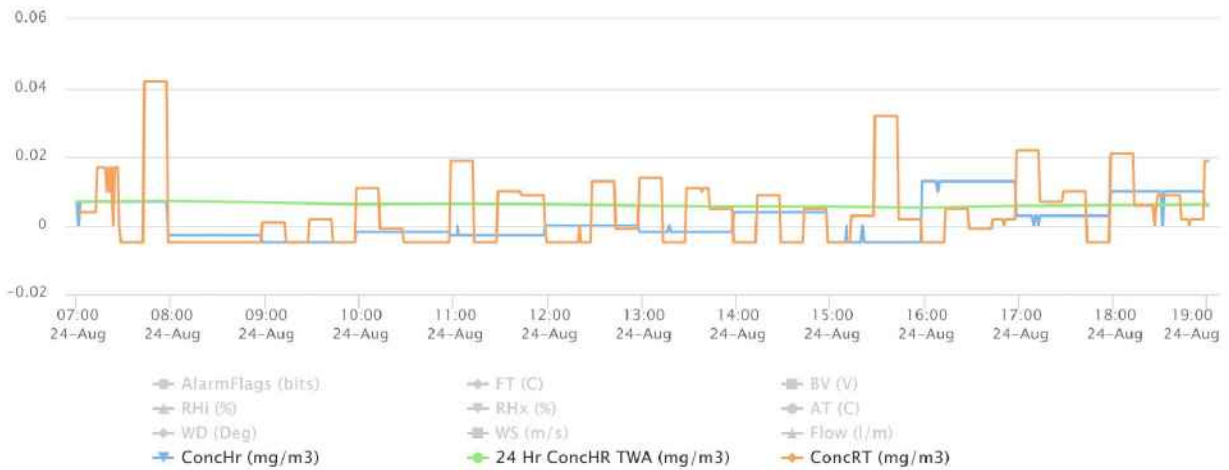
8/24/19 DAY Data for DustTrak 3 (PM_{2.5}) – Grace Costal Church



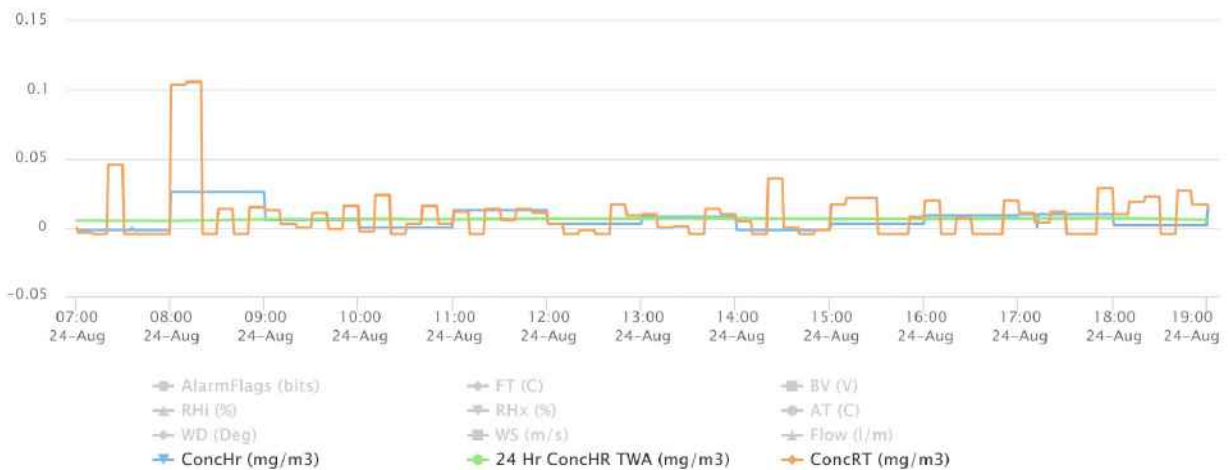
8/24/19 DAY Data for EBAM 1 (ConcRT) – Sun City



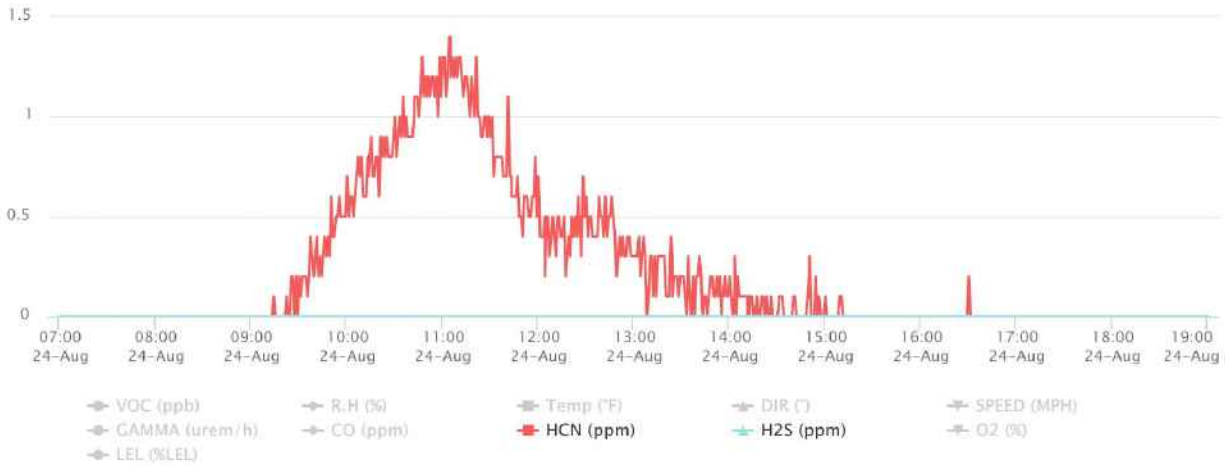
8/24/19 DAY Data for EBAM 2 (ConcRT) – Brooke Mill Apartments



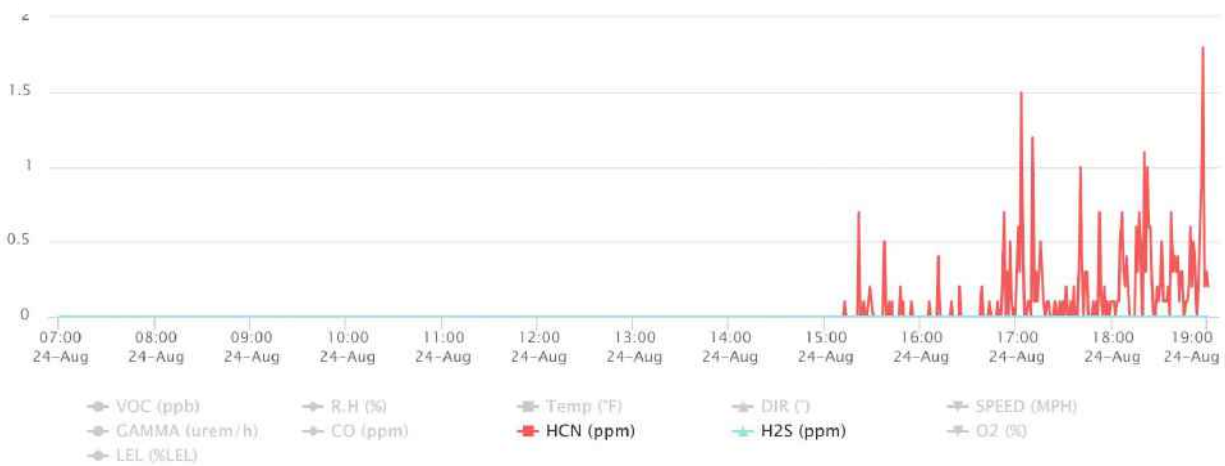
8/24/19 DAY Data for EBAM 3 (ConcRT) – EPA Mobile Command Post



8/24/19 DAY Data for AREARAE PRO 1 (HCn) – Southwest of Pile



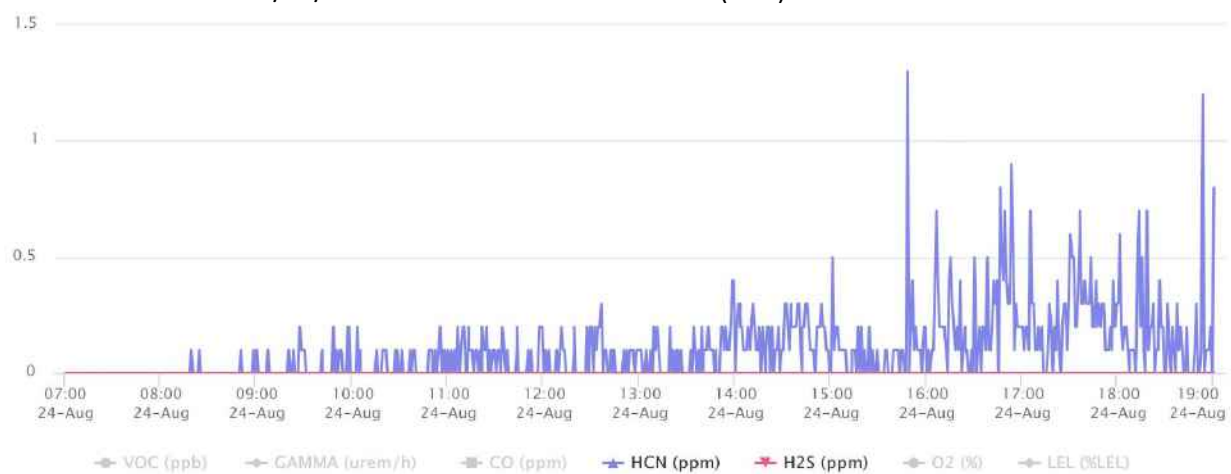
8/24/19 DAY Data for AREARAE PRO 2 (HCn) – Northwest of Pile



8/24/19 DAY Data for AREARAE PRO 3 (HCn) – Northeast of Pile



8/24/19 DAY Data for AREARAE PRO 4 (HCn) – Forrest Concrete



Air Monitoring Summary Tables

The table below summarize monitoring data collected on using EPA's Viper wireless remote monitoring system.

Project Name: Able Contracting Fire Site

From: 8/24/19
19:00

To: 8/25/19
7:00



On Site, Southwest Corner of Pile							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 1	VOC	No	755	22	0 - 316 ppb	2.18 ppb	1,000 ppb
	CO	No	755	28	0 - 10 ppm	0.18 ppm	83 ppm
	H ₂ S	Yes	755	5	0 - 0.7 ppm	0.004 ppm	0.5 ppm
	O ₂	No	755	755	20.9 - 20.9 %	20.9 %	<19.5 or >23%
	LEL	No	755	0	0 - 0 %	0 %	10%
	HCN	No	755	615	0 - 5.4 ppm	0.57 ppm	7.1 ppm

Peacock Collision							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
DustTrak 1	PM-2.5	Good	116	116	1 - 11 µg/m ³	7.1 µg/m ³	See SOG #: T106

On Site, Northwest Corner of Pile							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 2	VOC	No	778	0	0 - 0 ppb	0 ppb	1,000 ppb
	CO	No	778	24	0 - 14 ppm	0.18 ppm	83 ppm
	H ₂ S	No	778	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	778	778	20.6 - 20.9 %	20.8 %	<19.5 or >23%
	LEL	No	778	0	0 - 0 %	0 %	10%
	HCN	No	778	27	0 - 1.2 ppm	0.02 ppm	7.1 ppm

Short Cut Road							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
DustTrak 2	PM-2.5	Moderate	115	115	7 - 17 µg/m ³	13.0 µg/m ³	See SOG #: T106

Able Contracting Workshop, Northeast of Pile							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 3	VOC	No	754	0	0 - 0 ppb	0 ppb	1,000 ppb
	CO	No	754	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	754	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	754	754	20.9 - 20.9 %	20.9 %	<19.5 or >23%
	LEL	No	754	573	0 - 3 %	1.5 %	10%
	HCN	No	754	0	0 - 0 ppm	0 ppm	7.1 ppm

Grace Costal Church							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
DustTrak 3	PM-2.5	Moderate	87	87	11 - 17 µg/m ³	14.5 µg/m ³	See SOG #: T106

Forrest Concrete							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 4	VOC	No	761	0	0 - 0 ppb	0 ppb	1,000 ppb
	CO	No	761	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	761	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	761	761	20.4 - 20.9 %	20.5 %	<19.5 or >23%
	LEL	No	761	0	0 - 0 %	0 %	10%
	HCN	No	761	14	0 - 0.3 ppm	0 ppm	7.1 ppm

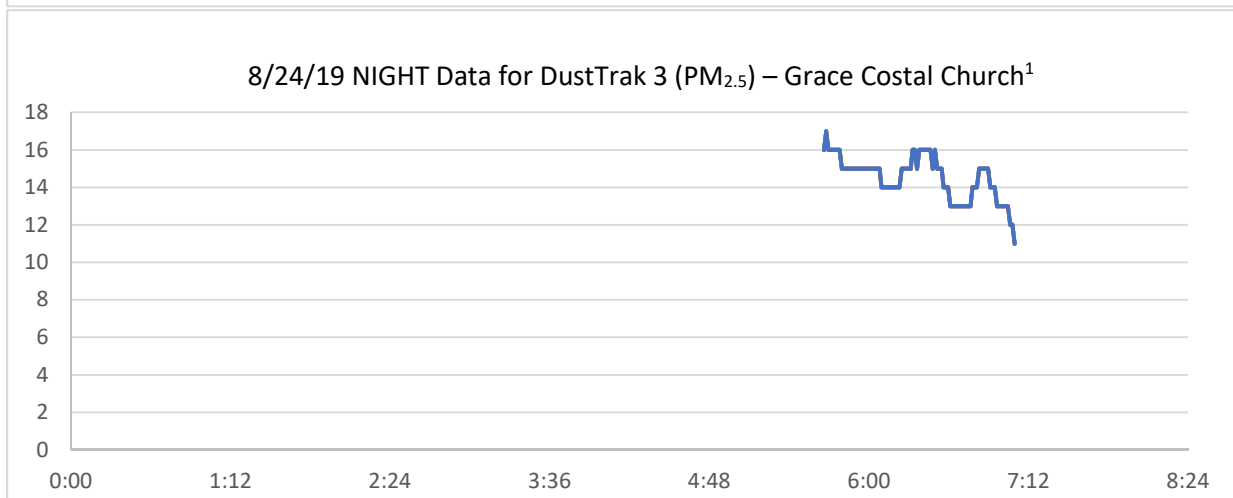
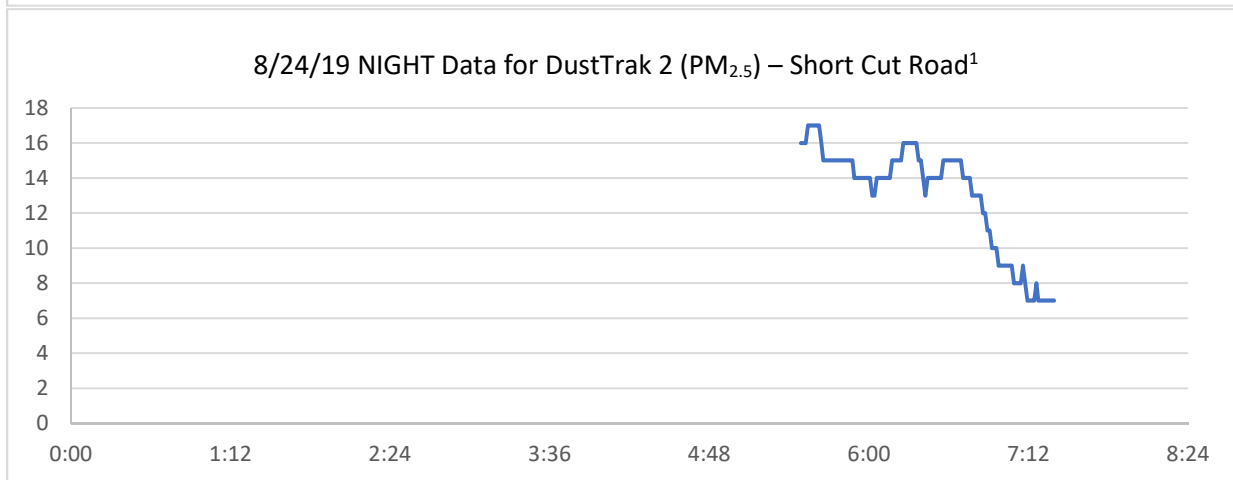
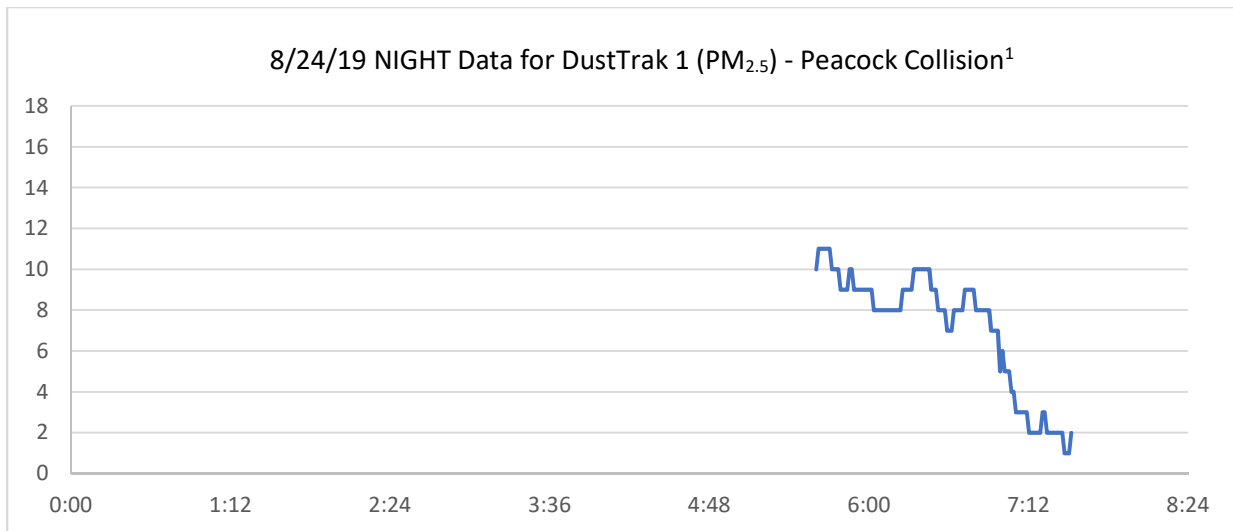
Sun City							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
EBAM 1	PM-2.5	Moderate	740	263	0 - 131 µg/m ³	15.5 µg/m ³	See SOG #: T106

Brooke Mill Apartments							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
EBAM 2	PM-2.5	Moderate	756	442	0 - 78 µg/m ³	13.9 µg/m ³	See SOG #: T106

EPA Mobile Command Post							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
EBAM 3	PM-2.5	Moderate	745	105	0 - 131 µg/m ³	13.0 µg/m ³	See SOG #: T106

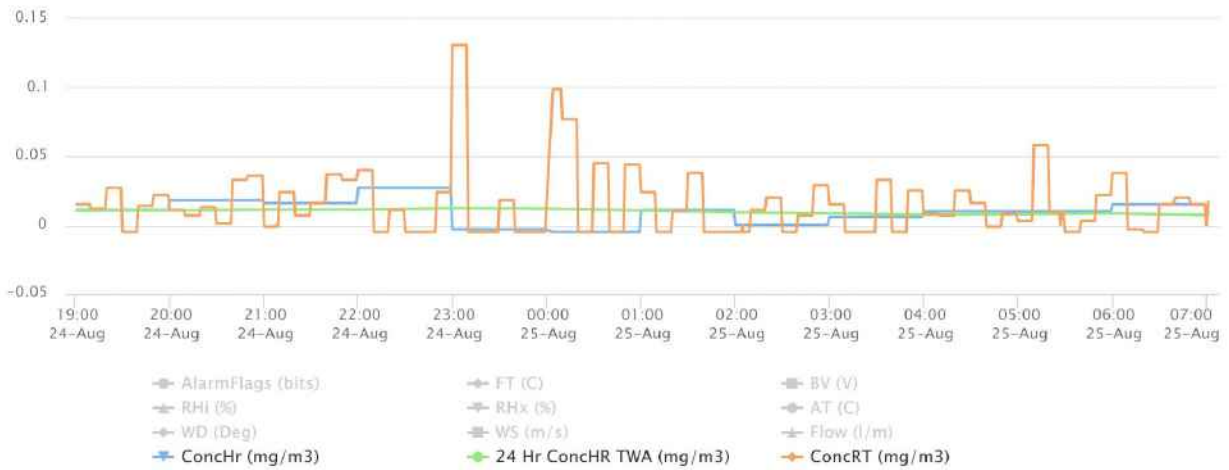
Notes:

%	Percent	O ₂	Oxygen
<	Less than	PEL	Permissible exposure limit
>	Greater than	ppb	Parts per billion
AEGL	Acute Exposure Guideline Levels for Airborne Chemicals	ppm	Parts per million
CO	Carbon monoxide	PM	Particulate matter
H ₂ S	Hydrogen Sulfide	SOG	Standard Operating Guidelines
HCN	Hydrogen Cyanide	TLV	Threshold limit value
LEL	Lower Explosive Level	µg/m ³	Micrograms per cubic meter
min	Minute	VOC	Volatile organic compound

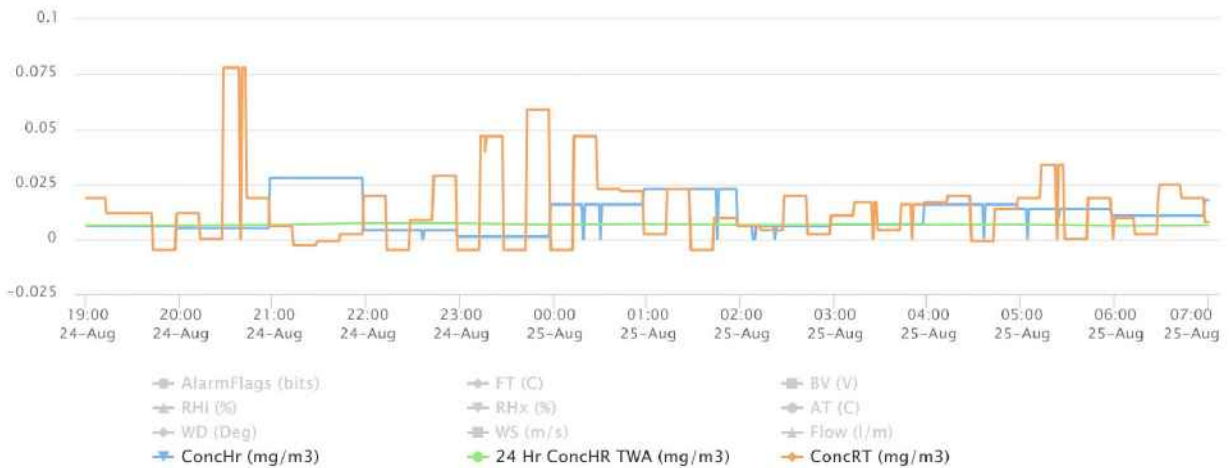


¹ The DustTrak Gateways were down for a large portion of the reporting period. At approximately 0530, all three units were switched to MANUAL mode and allowed to run for the remainder of the reporting period. The above graphs reflect the limited data.

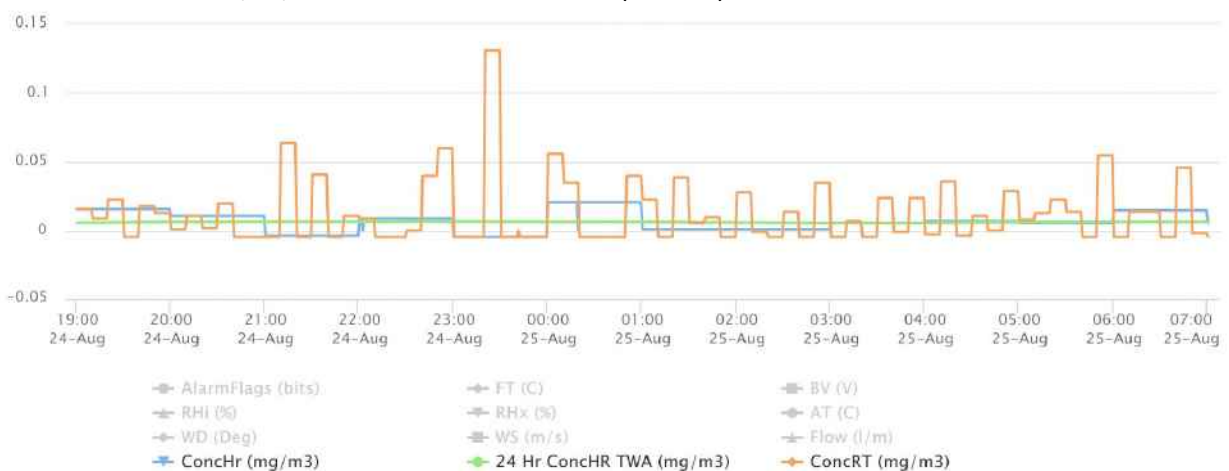
8/24/19 NIGHT Data for EBAM 1 (ConcRT) – Sun City



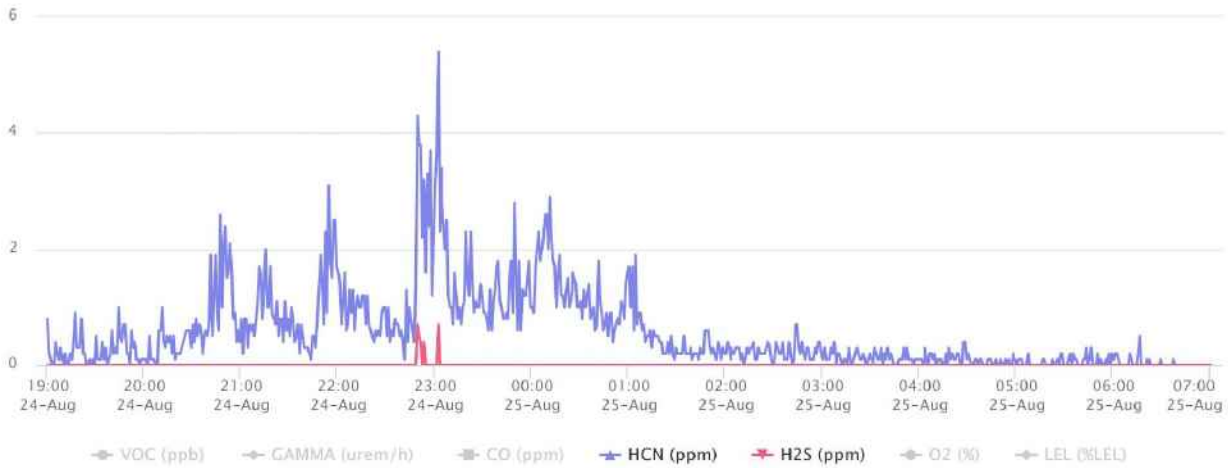
8/24/19 NIGHT Data for EBAM 2 (ConcRT) – Brooke Mill Apartments



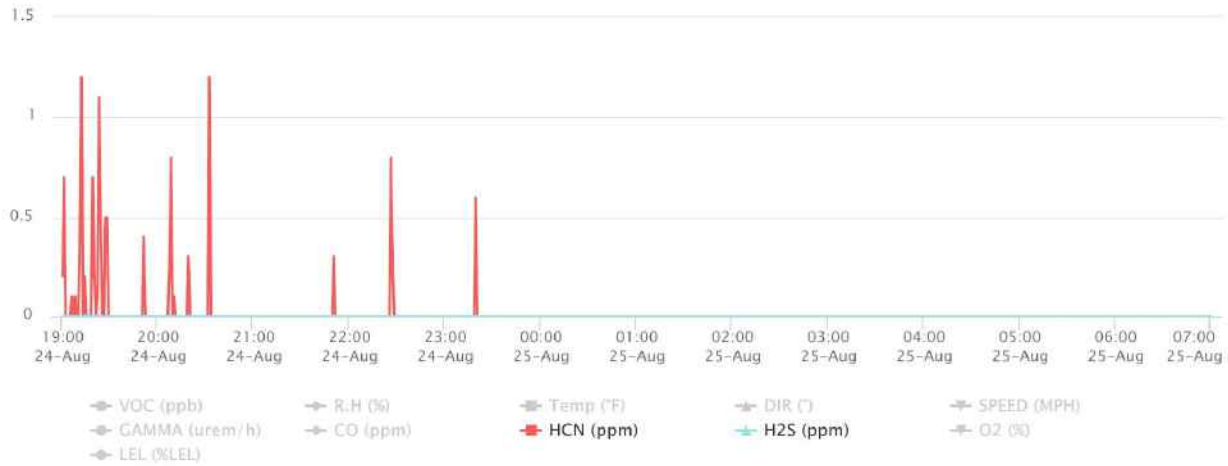
8/24/19 NIGHT Data for EBAM 3 (ConcRT) – EPA Mobile Command Post



8/24/19 NIGHT Data for AREARAE PRO 1 (HCn) – Southwest of Pile



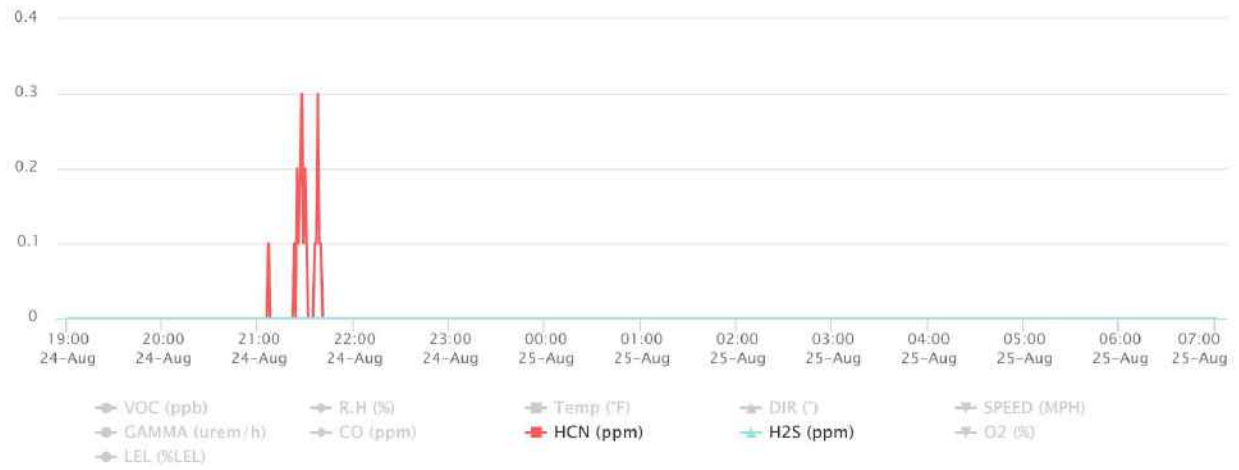
8/24/19 NIGHT Data for AREARAE PRO 2 (HCn) – Northwest of Pile



8/24/19 NIGHT Data for AREARAE PRO 3 (HCn) – Northeast of Pile



8/24/19 NIGHT Data for AREARAE PRO 4 (HCn) – Forrest Concrete



Air Monitoring Summary Tables

The table below summarize monitoring data collected on using EPA's Viper wireless remote monitoring system.

Project Name: Able Contracting Fire Site

From: 8/25/19
7:00

To: 8/25/19
19:00



On Site, Southwest Corner of Pile							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 1	VOC	No	591	10	0 - 562 ppb	3.27 ppb	1,000 ppb
	CO	No	591	2	0 - 5 ppm	0.02 ppm	83 ppm
	H ₂ S	No	591	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	591	591	20.9 - 20.9 %	20.9 %	<19.5 or >23%
	LEL	No	591	0	0 - 0 %	0 %	10%
	HCN	No	591	261	0 - 1.8 ppm	0.1 ppm	7.1 ppm

Peacock Collision							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
DustTrak 1	PM-2.5	Good	1,600	1,600	0 - 13 µg/m ³	5.9 µg/m ³	See SOG #: T106

On Site, Northwest Corner of Pile							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 2	VOC	No	594	0	0 - 0 ppb	0 ppb	1,000 ppb
	CO	No	594	6	0 - 4 ppm	0.03 ppm	83 ppm
	H ₂ S	No	594	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	594	594	20.9 - 20.9 %	20.9 %	<19.5 or >23%
	LEL	No	594	0	0 - 0 %	0 %	10%
	HCN	No	594	0	0 - 0 ppm	0 ppm	7.1 ppm

Short Cut Road							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
DustTrak 2	PM-2.5	Good	957	957	5 - 56 µg/m ³	8.5 µg/m ³	See SOG #: T106

Able Contracting Workshop, Northeast of Pile							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 3	VOC	No	586	5	0 - 826 ppb	4.67 ppb	1,000 ppb
	CO	No	586	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	586	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	586	586	20.9 - 20.9 %	20.9 %	<19.5 or >23%
	LEL	No	586	0	0 - 0 %	0 %	10%
	HCN	No	586	0	0 - 0 ppm	0 ppm	7.1 ppm

Grace Coastal Church							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
DustTrak 3	PM-2.5	Good	1,101	1,101	5 - 13 µg/m ³	8.2 µg/m ³	See SOG #: T106

Forrest Concrete							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 4	VOC	No	587	0	0 - 0 ppb	0 ppb	1,000 ppb
	CO	No	587	1	0 - 2 ppm	0 ppm	83 ppm
	H ₂ S	No	587	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	587	587	20.5 - 20.9 %	20.8 %	<19.5 or >23%
	LEL	No	587	0	0 - 0 %	0 %	10%
	HCN	No	587	4	0 - 0.1 ppm	0 ppm	7.1 ppm

Sun City							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
EBAM 1	PM-2.5	Good	574	192	0 - 24 µg/m ³	5.8 µg/m ³	See SOG #: T106

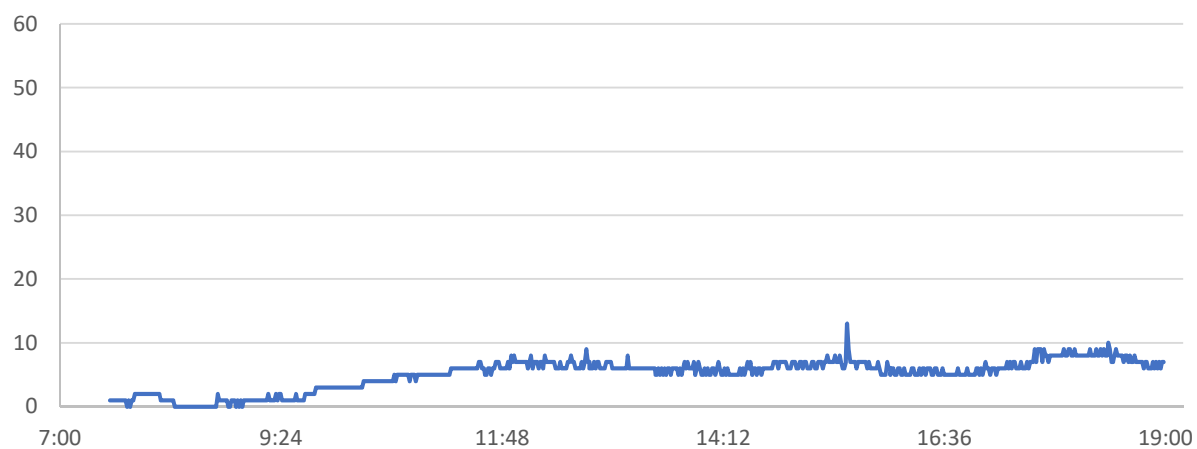
Brooke Mill Apartments							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
EBAM 2	PM-2.5	Good	586	182	0 - 24 µg/m ³	4.3 µg/m ³	See SOG #: T106

EPA Mobile Command Post							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
EBAM 3	PM-2.5	Good	540	147	0 - 55 µg/m ³	8.2 µg/m ³	See SOG #: T106

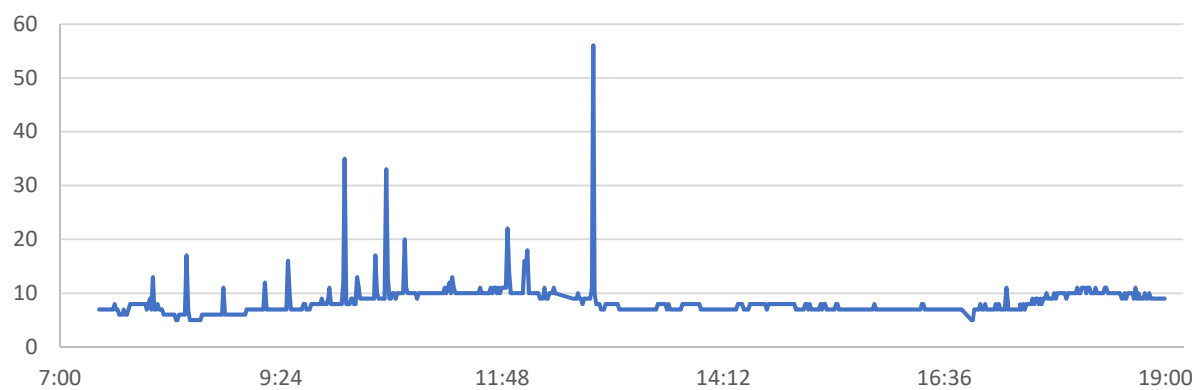
Notes:

%	Percent	O ₂	Oxygen
<	Less than	PEL	Permissible exposure limit
>	Greater than	ppb	Parts per billion
AEGL	Acute Exposure Guideline Levels for Airborne Chemicals	ppm	Parts per million
CO	Carbon monoxide	PM	Particulate matter
H ₂ S	Hydrogen Sulfide	SOG	Standard Operating Guidelines
HCN	Hydrogen Cyanide	TLV	Threshold limit value
LEL	Lower Explosive Level	µg/m ³	Micrograms per cubic meter
min	Minute	VOC	Volatile organic compound

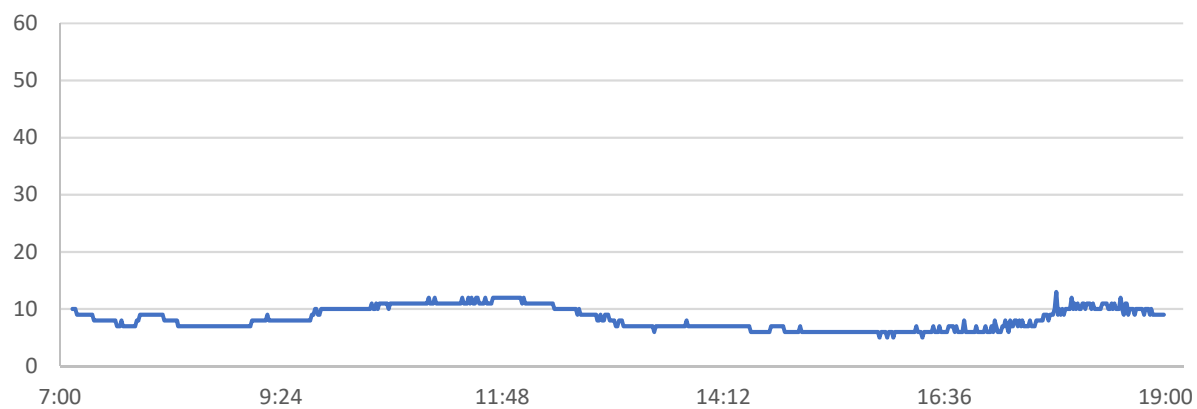
8/25/19 DAY Data for DustTrak 1 (PM_{2.5}) - Peacock Collision



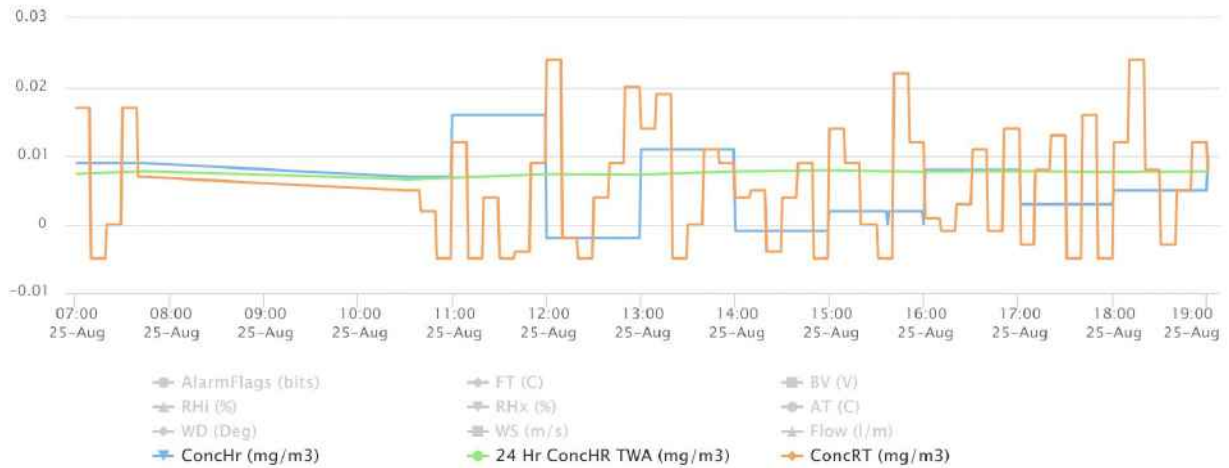
8/25/19 DAY Data for DustTrak 2 (PM_{2.5}) – Short Cut Road



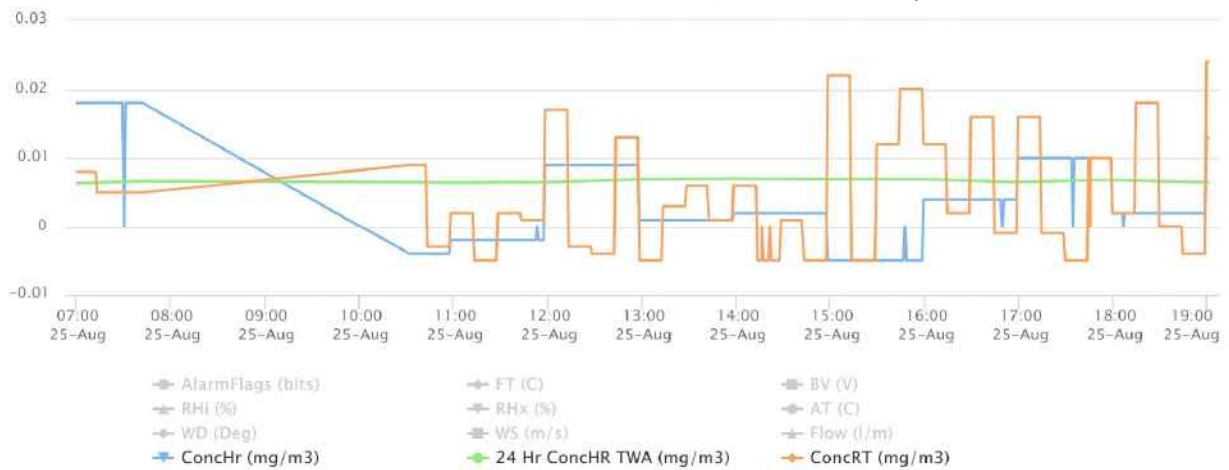
8/25/19 DAY Data for DustTrak 3 (PM_{2.5}) – Grace Coastal Church



8/25/19 DAY Data for EBAM 1 (ConcRT) – Sun City



8/25/19 DAY Data for EBAM 2 (ConcRT) – Brooke Mill Apartments

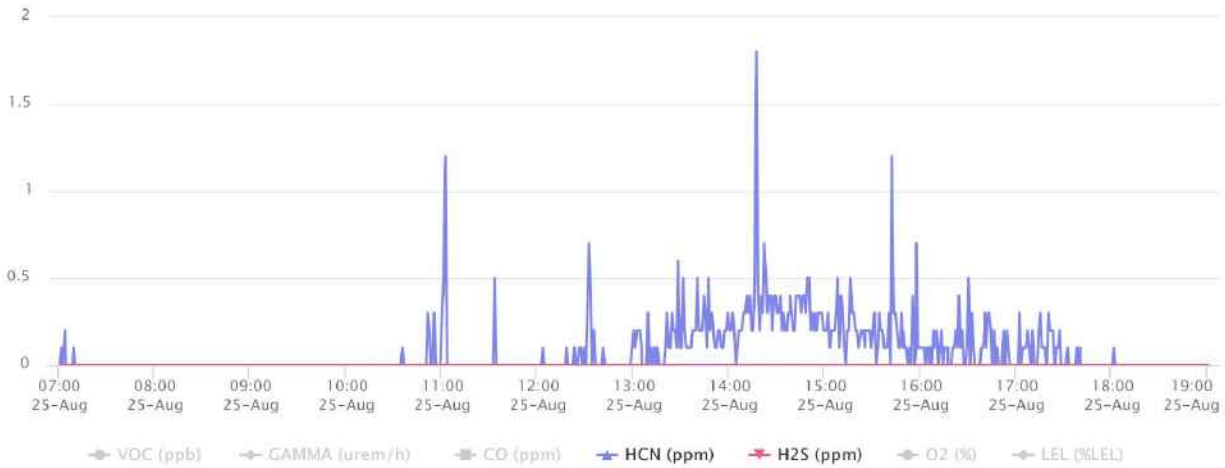


8/25/19 DAY Data for EBAM 3 (ConcRT) – EPA Mobile Command Post



The VIPER run was paused between approximately 0745 and 1045 during the reporting period. This represents a data gap for EBAM and AreaRAE Pro data.

8/25/19 DAY Data for AREARAE PRO 1 (HCn) – Southwest of Pile



8/25/19 DAY Data for AREARAE PRO 2 (HCn) – Northwest of Pile

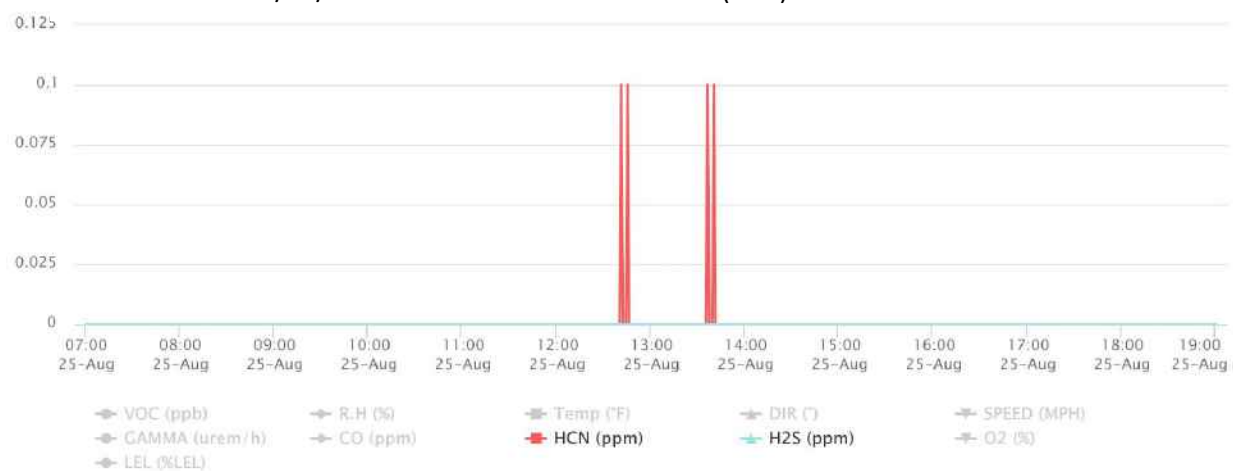


8/25/19 DAY Data for AREARAE PRO 3 (HCn) – Northeast of Pile



The VIPER run was paused between approximately 0745 and 1045 during the reporting period. This represents a data gap for EBAM and AreaRAE Pro data.

8/25/19 DAY Data for AREARAE PRO 4 (HCN) – Forrest Concrete



The VIPER run was paused between approximately 0745 and 1045 during the reporting period. This represents a data gap for EBAM and AreaRAE Pro data.

Air Monitoring Summary Tables

The table below summarize monitoring data collected on using EPA's Viper wireless remote monitoring system.

Project Name: Able Contracting Fire Site

From: 8/25/19
19:00

To: 8/26/19
7:00



On Site, Southwest Corner of Pile							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 1	VOC	No	768	333	0 - 66 ppb	7.66 ppb	1,000 ppb
	CO	No	768	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	768	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	768	768	20.9 - 20.9 %	20.9 %	<19.5 or >23%
	LEL	No	768	0	0 - 0 %	0 %	10%
	HCN	No	768	226	0 - 0.9 ppm	0.06 ppm	7.1 ppm

Peacock Collision							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
DustTrak 1	PM-2.5	Good	1,985	1,985	0 - 66 µg/m ³	3.0 µg/m ³	See SOG #: T106

On Site, Northwest Corner of Pile							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 2	VOC	No	788	0	0 - 0 ppb	0 ppb	1,000 ppb
	CO	No	788	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	788	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	788	788	20.9 - 20.9 %	20.9 %	<19.5 or >23%
	LEL	No	788	0	0 - 0 %	0 %	10%
	HCN	No	788	0	0 - 0 ppm	0 ppm	7.1 ppm

Short Cut Road							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
DustTrak 2	PM-2.5	Good	2,196	2,196	4 - 11 µg/m ³	6.2 µg/m ³	See SOG #: T106

Able Contracting Workshop, Northeast of Pile							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 3	VOC	No	783	556	0 - 120 ppb	43.17 ppb	1,000 ppb
	CO	No	783	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	783	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	783	783	20.9 - 20.9 %	20.9 %	<19.5 or >23%
	LEL	No	783	0	0 - 0 %	0 %	10%
	HCN	No	783	0	0 - 0 ppm	0 ppm	7.1 ppm

Grace Coastal Church							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
DustTrak 3	PM-2.5	Good	1,701	1,701	5 - 14 µg/m ³	7.7 µg/m ³	See SOG #: T106

Forrest Concrete							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 4	VOC	No	781	0	0 - 0 ppb	0 ppb	1,000 ppb
	CO	No	781	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	781	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	781	781	20.4 - 20.9 %	20.6 %	<19.5 or >23%
	LEL	No	781	0	0 - 0 %	0 %	10%
	HCN	No	781	0	0 - 0 ppm	0 ppm	7.1 ppm

Sun City							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
EBAM 1	PM-2.5	Moderate	743	189	0 - 78 µg/m ³	12.1 µg/m ³	See SOG #: T106

Brooke Mill Apartments							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
EBAM 2	PM-2.5	Good	751	547	0 - 24 µg/m ³	8.7 µg/m ³	See SOG #: T106

EPA Mobile Command Post							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
EBAM 3	PM-2.5	Moderate	703	145	0 - 88 µg/m ³	13.1 µg/m ³	See SOG #: T106

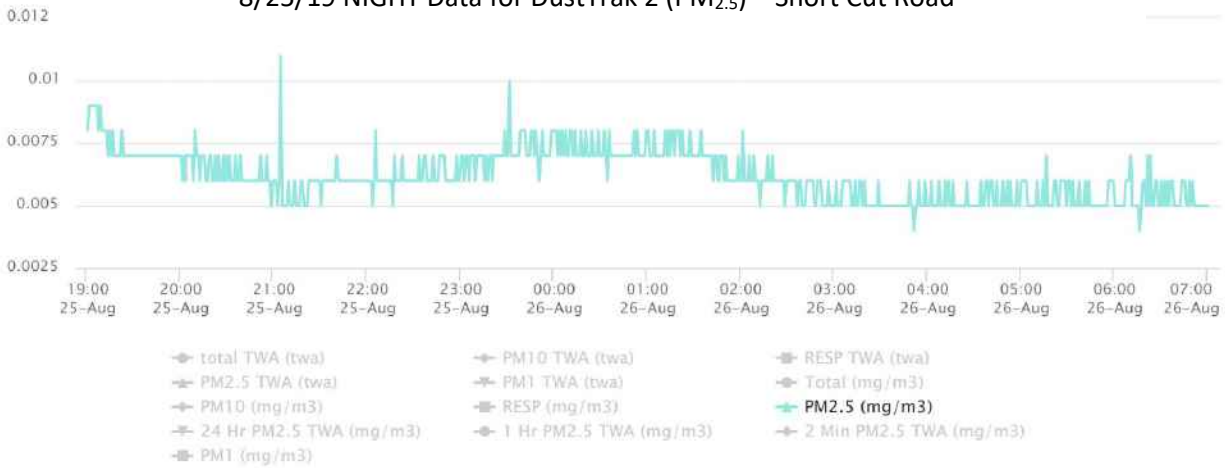
Notes:

%	Percent	O ₂	Oxygen
<	Less than	PEL	Permissible exposure limit
>	Greater than	ppb	Parts per billion
AEGL	Acute Exposure Guideline Levels for Airborne Chemicals	ppm	Parts per million
CO	Carbon monoxide	PM	Particulate matter
H ₂ S	Hydrogen Sulfide	SOG	Standard Operating Guidelines
HCN	Hydrogen Cyanide	TLV	Threshold limit value
LEL	Lower Explosive Level	µg/m ³	Micrograms per cubic meter
min	Minute	VOC	Volatile organic compound

8/25/19 NIGHT Data for DustTrak 1 (PM_{2.5}) - Peacock Collision



8/25/19 NIGHT Data for DustTrak 2 (PM_{2.5}) – Short Cut Road



8/25/19 NIGHT Data for DustTrak 3 (PM_{2.5} in µg/m³) – Grace Coastal Church

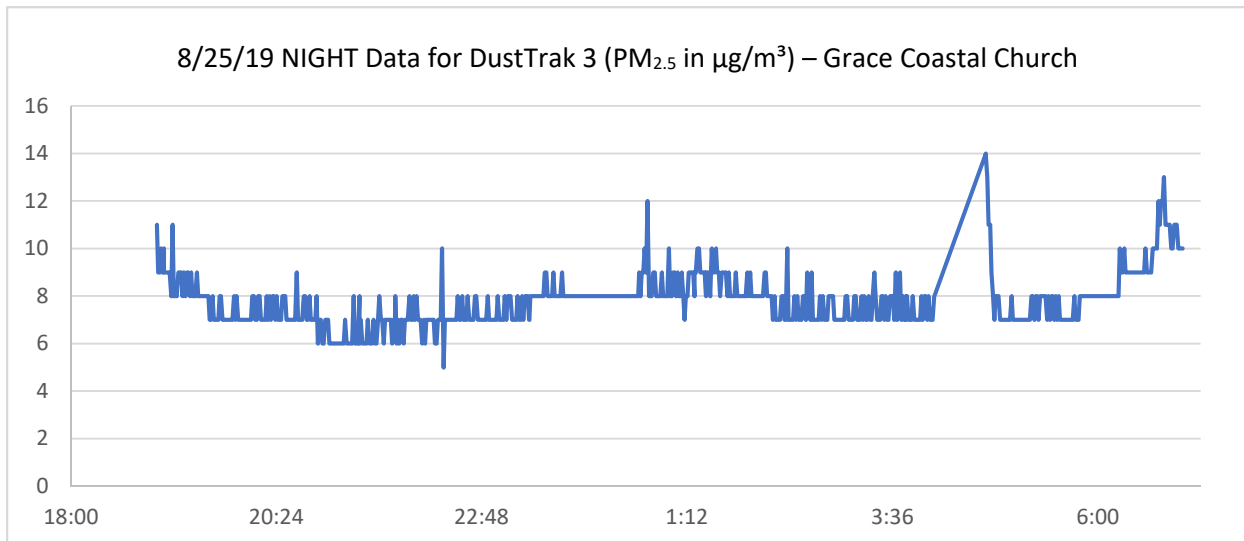
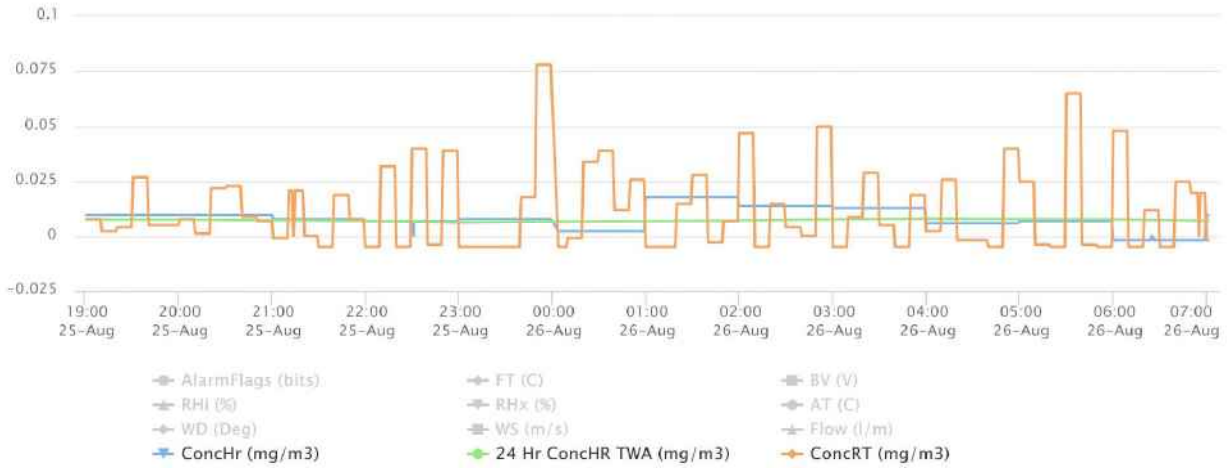
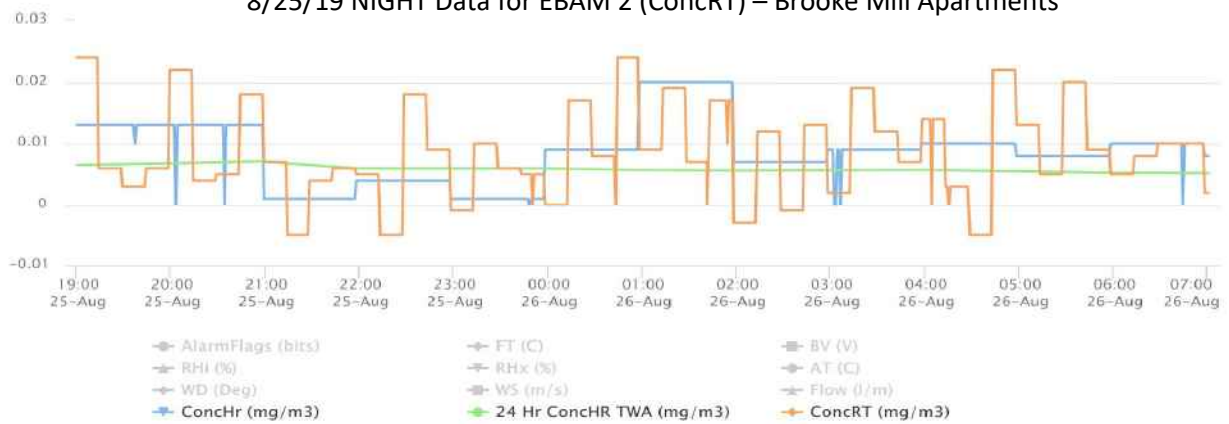


Figure 3: DustTrak 3 was switched from Survey mode to Manual mode around 0400. Data for this reporting period was compiled from both VIPER and manual downloading.

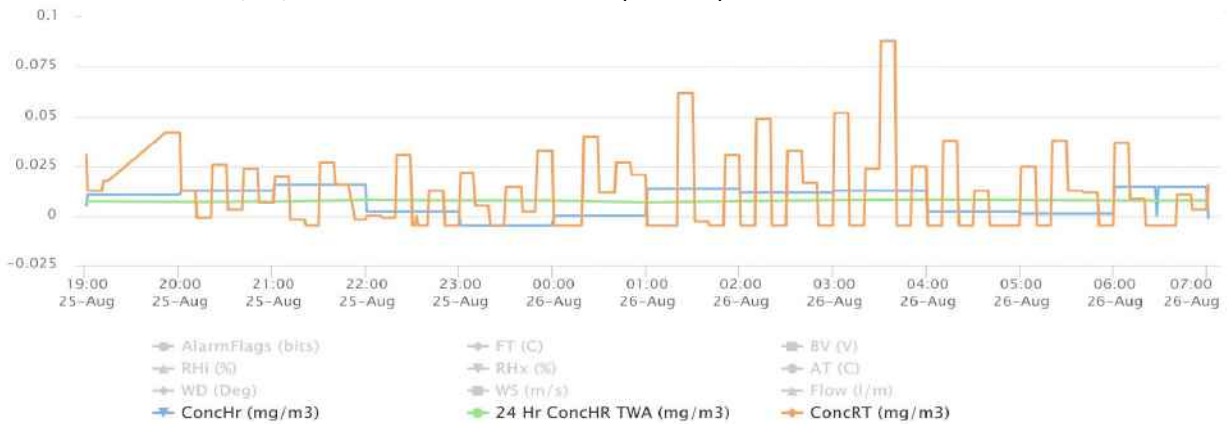
8/25/19 NIGHT Data for EBAM 1 (ConcRT) – Sun City



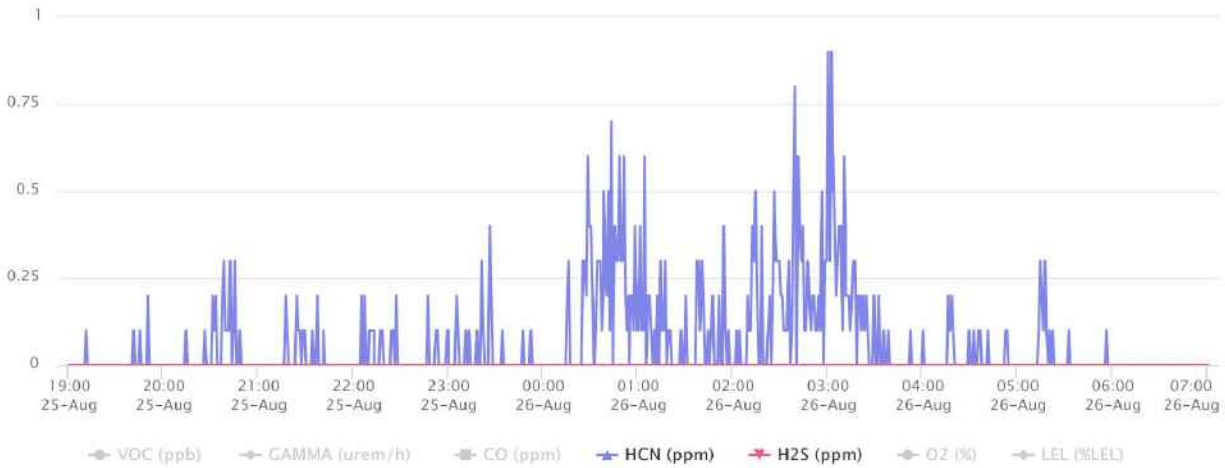
8/25/19 NIGHT Data for EBAM 2 (ConcRT) – Brooke Mill Apartments



8/25/19 NIGHT Data for EBAM 3 (ConcRT) – EPA Mobile Command Post



8/25/19 NIGHT Data for AREARAE PRO 1 (HCn) – Southwest of Pile



8/25/19 NIGHT Data for AREARAE PRO 2 (HCn) – Northwest of Pile



8/25/19 NIGHT Data for AREARAE PRO 3 (HCn) – Northeast of Pile



8/25/19 NIGHT Data for AREARAE PRO 4 (HCn) – Forrest Concrete

0



Air Monitoring Summary Tables

The table below summarize monitoring data collected on using EPA's Viper wireless remote monitoring system.

Project Name: Able Contracting Fire Site

From: 8/26/19
7:00

To: 8/27/19
7:00



On Site, Southwest Corner of Pile							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 1	VOC	Yes	1,328	902	0 - 14814 ppb	241.72 ppb	1,000 ppb
	CO	No	1,328	5	0 - 16 ppm	0.02 ppm	83 ppm
	H ₂ S	Yes	1,328	10	0 - 0.6 ppm	0.004 ppm	0.5 ppm
	O ₂	No	1,328	1,328	20.9 - 20.9 %	20.9 %	<19.5 or >23%
	LEL	No	1,328	0	0 - 0 %	0 %	10%
	HCN	No	1,328	813	0 - 5.6 ppm	0.67 ppm	7.1 ppm

Peacock Collision							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
DustTrak 1	PM-2.5	Good	4,283	2,537	0 - 29 µg/m ³	2.6 µg/m ³	See SOG #: T106

On Site, Northwest Corner of Pile							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 2	VOC	No	1,349	913	0 - 445 ppb	182.95 ppb	1,000 ppb
	CO	No	1,349	23	0 - 21 ppm	0.12 ppm	83 ppm
	H ₂ S	Yes	1,349	11	0 - 0.9 ppm	0.005 ppm	0.5 ppm
	O ₂	No	1,349	1,349	20.9 - 20.9 %	20.9 %	<19.5 or >23%
	LEL	No	1,349	0	0 - 0 %	0 %	10%
	HCN	No	1,349	364	0 - 5.7 ppm	0.39 ppm	7.1 ppm

Short Cut Road							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
DustTrak 2	PM-2.5	Good	4,393	4,393	1 - 254 µg/m ³	5.2 µg/m ³	See SOG #: T106

Able Contracting Workshop, Northeast of Pile							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 3	VOC	No	1,350	1,067	0 - 423 ppb	163.79 ppb	1,000 ppb
	CO	No	1,350	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	Yes	1,350	1	0 - 0.6 ppm	0 ppm	0.5 ppm
	O ₂	No	1,350	1,350	20.9 - 20.9 %	20.9 %	<19.5 or >23%
	LEL	No	1,350	0	0 - 0 %	0 %	10%
	HCN	No	1,350	15	0 - 1.8 ppm	0.01 ppm	7.1 ppm

Grace Coastal Church							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
DustTrak 3	PM-2.5	Good	1,431	1,431	4 - 13 µg/m ³	5.9 µg/m ³	See SOG #: T106

Forrest Concrete							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 4	VOC	No	1,348	116	0 - 378 ppb	1.48 ppb	1,000 ppb
	CO	No	1,348	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	1,348	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	1,348	1,348	20.4 - 21.3 %	20.8 %	<19.5 or >23%
	LEL	No	1,348	0	0 - 0 %	0 %	10%
	HCN	No	1,348	530	0 - 1.9 ppm	0.15 ppm	7.1 ppm

Sun City							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
EBAM 1	PM-2.5	Good	1,495	540	0 - 71 µg/m ³	9.4 µg/m ³	See SOG #: T106

Brooke Mill Apartments							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
EBAM 2	PM-2.5	Good	1,495	844	0 - 50 µg/m ³	8.7 µg/m ³	See SOG #: T106

EPA Mobile Command Post							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
EBAM 3	PM-2.5	Good	1,507	521	0 - 79 µg/m ³	9.7 µg/m ³	See SOG #: T106

Notes:

%	Percent	O ₂	Oxygen
<	Less than	PEL	Permissible exposure limit
>	Greater than	ppb	Parts per billion
AEGL	Acute Exposure Guideline Levels for Airborne Chemicals	ppm	Parts per million
CO	Carbon monoxide	PM	Particulate matter
H ₂ S	Hydrogen Sulfide	SOG	Standard Operating Guidelines
HCN	Hydrogen Cyanide	TLV	Threshold limit value
LEL	Lower Explosive Level	µg/m ³	Micrograms per cubic meter
min	Minute	VOC	Volatile organic compound

Air Monitoring Summary Tables

The table below summarize monitoring data collected on using EPA's Viper wireless remote monitoring system.

Project Name: Able Contracting Fire Site

From: 8/27/19
7:00

To: 8/28/19
7:00



On Site, Southwest Corner of Pile							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 1	VOC	No	1,379	517	0 - 836 ppb	77.22 ppb	1,000 ppb
	CO	No	1,379	14	0 - 6 ppm	0.03 ppm	83 ppm
	H ₂ S	Yes	1,379	17	0 - 3.4 ppm	0.011 ppm	0.5 ppm
	O ₂	No	1,379	1,379	20.3 - 20.9 %	20.9 %	<19.5 or >23%
	LEL	No	1,379	1	0 - 4 %	0 %	10%
	HCN	Yes	1,379	943	0 - 22.5 ppm	0.59 ppm	7.1 ppm

Peacock Collision							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
DustTrak 1	PM-2.5	Good	1,460	1,460	1 - 46 µg/m ³	3 µg/m ³	See SOG #: T106

On Site, Northwest Corner of Pile							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 2	VOC	No	1,378	1,272	0 - 532 ppb	164.84 ppb	1,000 ppb
	CO	No	1,378	17	0 - 10 ppm	0.06 ppm	83 ppm
	H ₂ S	Yes	1,378	34	0 - 1.1 ppm	0.015 ppm	0.5 ppm
	O ₂	No	1,378	1,378	20.9 - 20.9 %	20.9 %	<19.5 or >23%
	LEL	No	1,378	0	0 - 0 %	0 %	10%
	HCN	Yes	1,378	801	0 - 9.1 ppm	0.84 ppm	7.1 ppm

Short Cut Road							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
DustTrak 2	PM-2.5	Good	1,455	1,455	3-516 µg/m ³	7 µg/m ³	See SOG #: T106

Able Contracting Workshop, Northeast of Pile							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 3	VOC	Yes	1,378	1,182	0 - 1603 ppb	151.27 ppb	1,000 ppb
	CO	No	1,378	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	1,378	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	1,378	1,378	20.9 - 20.9 %	20.9 %	<19.5 or >23%
	LEL	No	1,378	0	0 - 0 %	0 %	10%
	HCN	No	1,378	2	0 - 0.1 ppm	0 ppm	7.1 ppm

Grace Coastal Church							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
DustTrak 3	PM-2.5	Good	1,405	1,405	3 - 40 µg/m ³	7 µg/m ³	See SOG #: T106

Forrest Concrete							
Instrument	Analyte	Action Level Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 4	VOC	No	1,382	196	0 - 38 ppb	1.9 ppb	1,000 ppb
	CO	No	1,382	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	1,382	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	1,382	1,382	20.5 - 21.3 %	20.8 %	<19.5 or >23%
	LEL	No	1,382	0	0 - 0 %	0 %	10%
	HCN	No	1,382	297	0 - 1.2 ppm	0.1 ppm	7.1 ppm

Sun City							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
EBAM 1	PM-2.5	Good	846	244	0 - 106 µg/m ³	10.1 µg/m ³	See SOG #: T106

Brooke Mill Apartments							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
EBAM 2	PM-2.5	Good	1,504	635	0 - 81 µg/m ³	8.4 µg/m ³	See SOG #: T106

EPA Mobile Command Post							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
EBAM 3	PM-2.5	Good	1,498	402	0 - 132 µg/m ³	10.0 µg/m ³	See SOG #: T106

Notes:

%	Percent	O ₂	Oxygen
<	Less than	PEL	Permissible exposure limit
>	Greater than	ppb	Parts per billion
AEGL	Acute Exposure Guideline Levels for Airborne Chemicals	ppm	Parts per million
CO	Carbon monoxide	PM	Particulate matter
H ₂ S	Hydrogen Sulfide	SOG	Standard Operating Guidelines
HCN	Hydrogen Cyanide	TLV	Threshold limit value
LEL	Lower Explosive Level	µg/m ³	Micrograms per cubic meter
min	Minute	VOC	Volatile organic compound

Air Monitoring Summary Tables

The table below summarize monitoring data collected on using EPA's Viper wireless remote monitoring system.

Project Name: Able Contracting Fire Site

From: 8/28/19
7:00

To: 8/29/19
7:00



On Site, Southwest Corner of Pile								
Instrument	Analyte	Action Level Exceedance	Period Average Exceedance	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 1	VOC	No	No	1,481	1	0 - 365 ppb	0.25 ppb	1,000 ppb
	CO	No	No	1,481	2	0 - 2 ppm	0 ppm	83 ppm
	H ₂ S	No	No	1,481	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	No	1,481	1,481	20.9 - 20.9 %	20.9 %	<19.5 or >23%
	LEL	No	No	1,481	775	0 - 3 %	1.3 %	10%
	HCN	No	No	1,481	1,230	0 - 2.1 ppm	0.41 ppm	7.1 ppm

Peacock Collision							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
DustTrak 1	PM-2.5	Good	1,395	1,393	1 - 119 µg/m ³	11.8 µg/m ³	See SOG #: T106

On Site, Northwest Corner of Pile								
Instrument	Analyte	Action Level Exceedance	Period Average Exceedance	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 2	VOC	Yes	No	1,509	1,089	0 - 1038 ppb	161.43 ppb	1,000 ppb
	CO	No	No	1,509	61	0 - 12 ppm	0.19 ppm	83 ppm
	H ₂ S	Yes	No	1,509	2	0 - 0.7 ppm	0.001 ppm	0.5 ppm
	O ₂	No	No	1,509	1,509	20.9 - 20.9 %	20.9 %	<19.5 or >23%
	LEL	No	No	1,509	39	0 - 2 %	0.1 %	10%
	HCN	No	No	1,509	55	0 - 2.8 ppm	0.01 ppm	7.1 ppm

Short Cut Road							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
DustTrak 2	PM-2.5	Moderate	1,394	1,394	5 - 142 µg/m ³	16.6 µg/m ³	See SOG #: T106

Able Contracting Workshop, Northeast of Pile								
Instrument	Analyte	Action Level Exceedance	Period Average Exceedance	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 3	VOC	Yes	No	1,484	1,004	0 - 5096 ppb	124.61 ppb	1,000 ppb
	CO	No	No	1,484	3	0 - 3 ppm	0 ppm	83 ppm
	H ₂ S	No	No	1,484	1	0 - 0.5 ppm	0 ppm	0.5 ppm
	O ₂	No	No	1,484	1,484	20.9 - 20.9 %	20.9 %	<19.5 or >23%
	LEL	No	No	1,484	0	0 - 0 %	0 %	10%
	HCN	No	No	1,484	257	0 - 0.8 ppm	0.07 ppm	7.1 ppm

Grace Coastal Church							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
DustTrak 3	PM-2.5	Moderate	1,416	1,416	7 - 23 µg/m ³	13.9 µg/m ³	See SOG #: T106

Forrest Concrete								
Instrument	Analyte	Action Level Exceedance	Period Average Exceedance	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 4	VOC	No	No	1,504	226	0 - 308 ppb	12.61 ppb	1,000 ppb
	CO	No	No	1,504	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	No	1,504	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	No	1,504	1,504	20.5 - 20.9 %	20.8 %	<19.5 or >23%
	LEL	No	No	1,504	0	0 - 0 %	0 %	10%
	HCN	No	No	1,504	1,004	0 - 1.1 ppm	0.16 ppm	7.1 ppm

Sun City							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
EBAM 1	PM-2.5	Good	1,225	438	0 - 59 µg/m ³	11.4 µg/m ³	See SOG #: T106

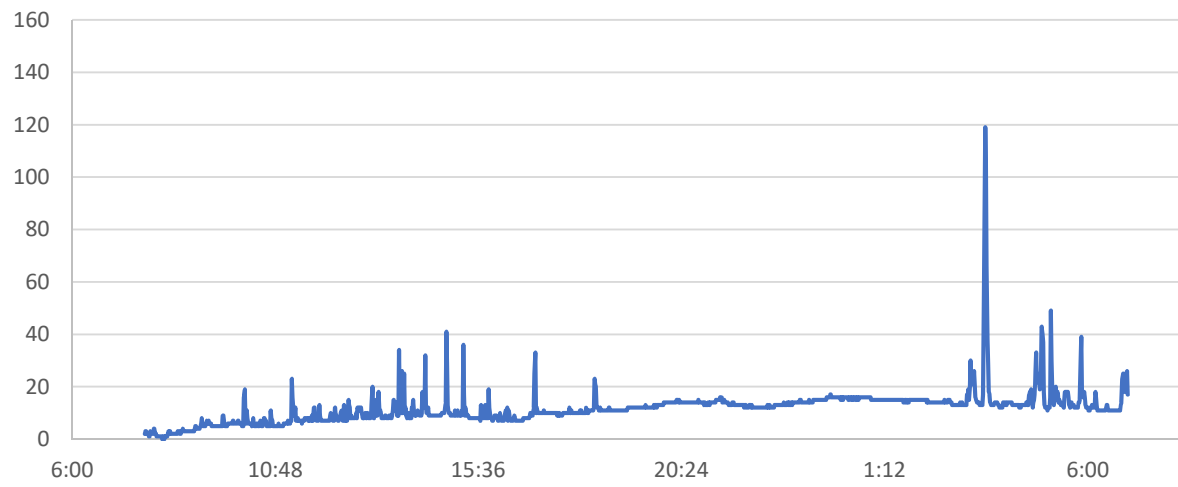
Brooke Mill Apartments							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
EBAM 2	PM-2.5	Good	1,414	768	0 - 41 µg/m ³	11.1 µg/m ³	See SOG #: T106

EPA Mobile Command Post							
Instrument	Analyte	Air Quality Index	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
EBAM 3	PM-2.5	Moderate	1,350	588	0 - 143 µg/m ³	12.8 µg/m ³	See SOG #: T106

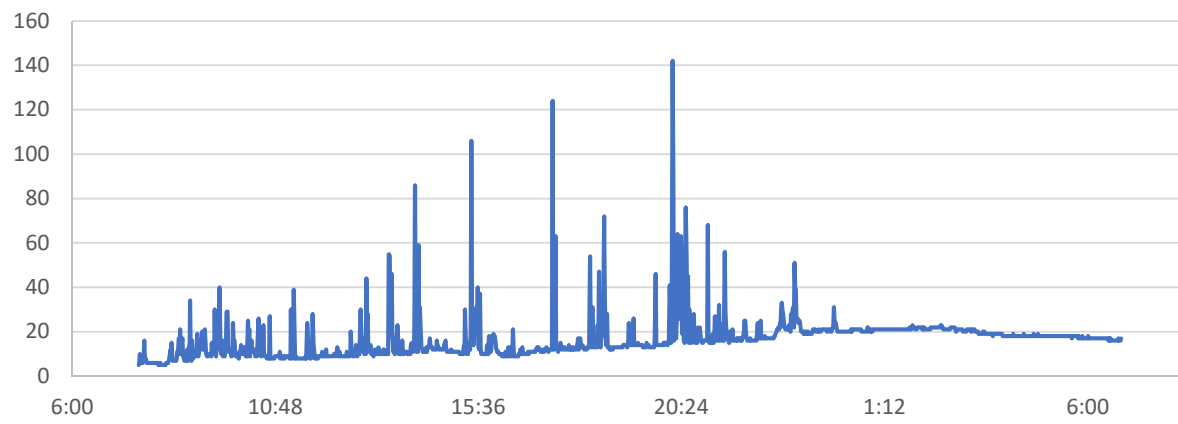
Notes:

%	Percent	O ₂	Oxygen
<	Less than	PEL	Permissible exposure limit
>	Greater than	ppb	Parts per billion
AEGL	Acute Exposure Guideline Levels for Airborne Chemicals	ppm	Parts per million
CO	Carbon monoxide	PM	Particulate matter
H ₂ S	Hydrogen Sulfide	SOG	Standard Operating Guidelines
HCN	Hydrogen Cyanide	TLV	Threshold limit value
LEL	Lower Explosive Level	µg/m ³	Micrograms per cubic meter
min	Minute	VOC	Volatile organic compound

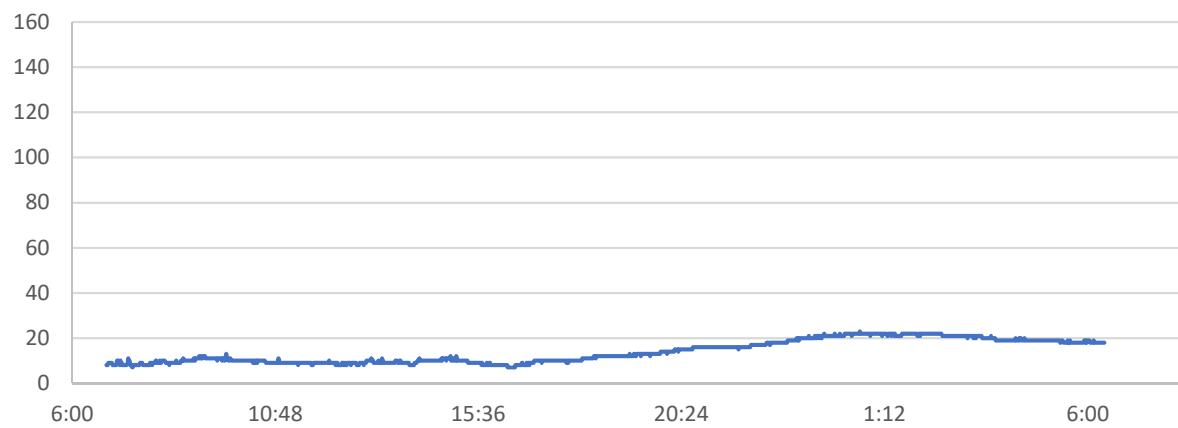
8/28/19 24-hour Data for DustTrak 1 (PM_{2.5}) - Peacock Collision



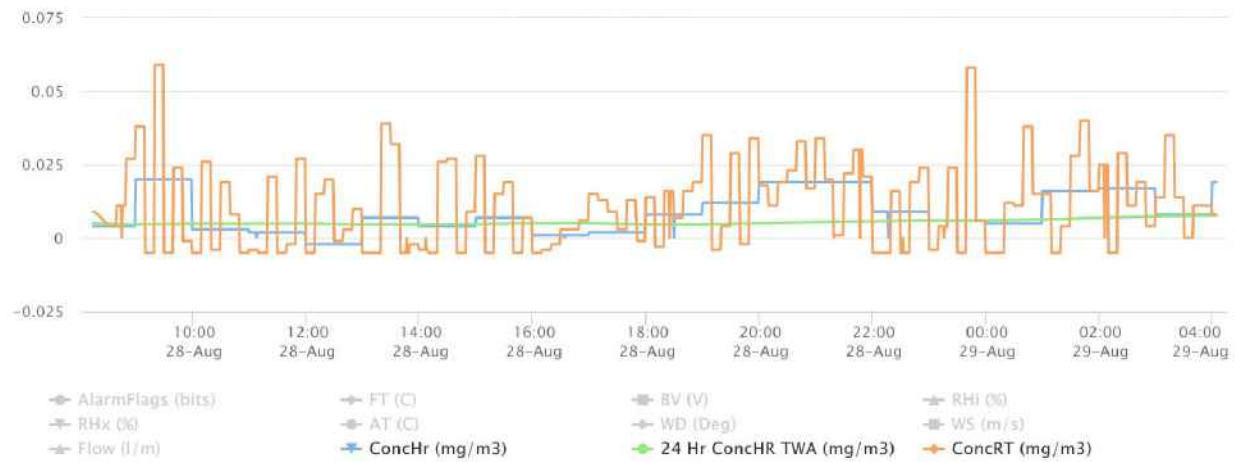
8/28/19 24-hour Data for DustTrak 2 (PM_{2.5}) – Short Cut Road



8/28/19 24-hour Data for DustTrak 3 (PM_{2.5} in $\mu\text{g}/\text{m}^3$) – Grace Coastal Church



8/28/19 24-hour Data for EBAM 1 (ConcRT) – Sun City



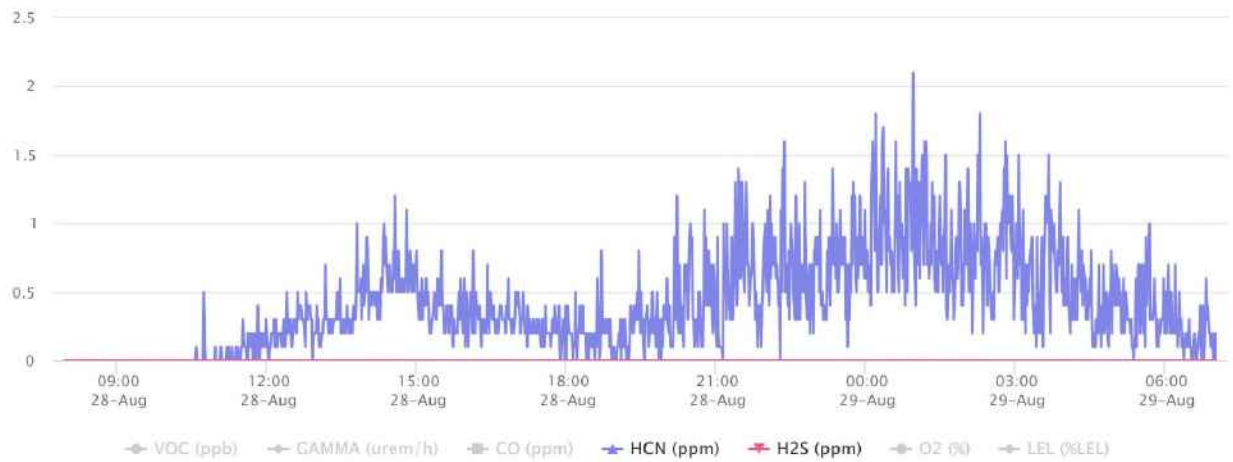
8/28/19 24-hour Data for EBAM 2 (ConcRT) – Brooke Mill Apartments



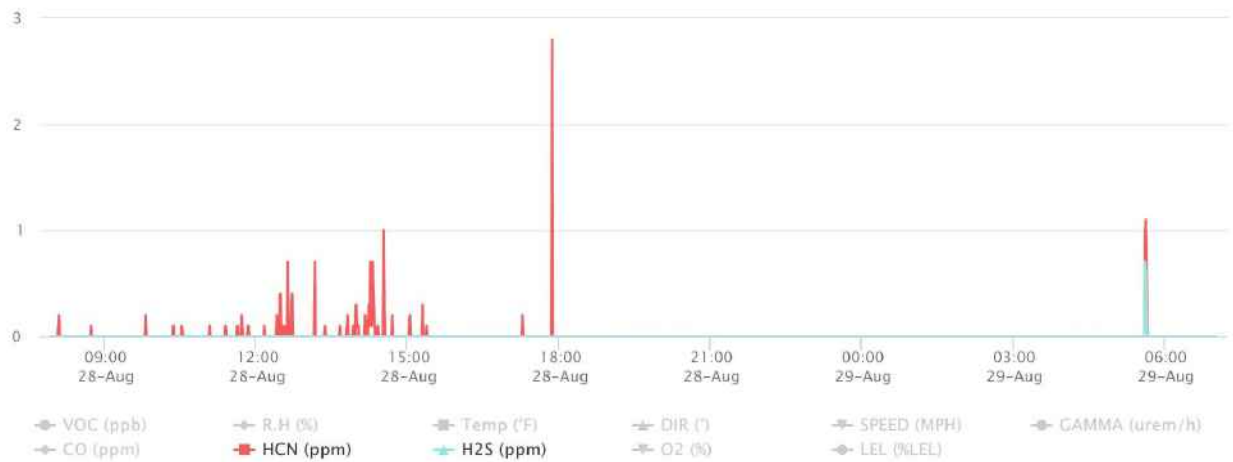
8/28/19 24-hour Data for EBAM 3 (ConcRT) – EPA Mobile Command Post



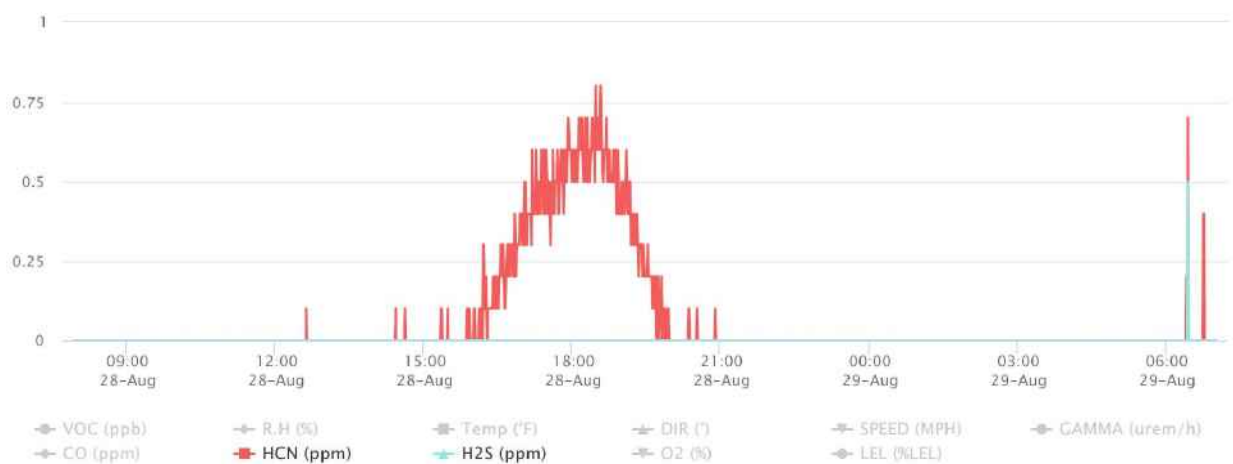
8/28/19 24-hour Data for AREARAE PRO 1 (HCn) – Southwest of Pile



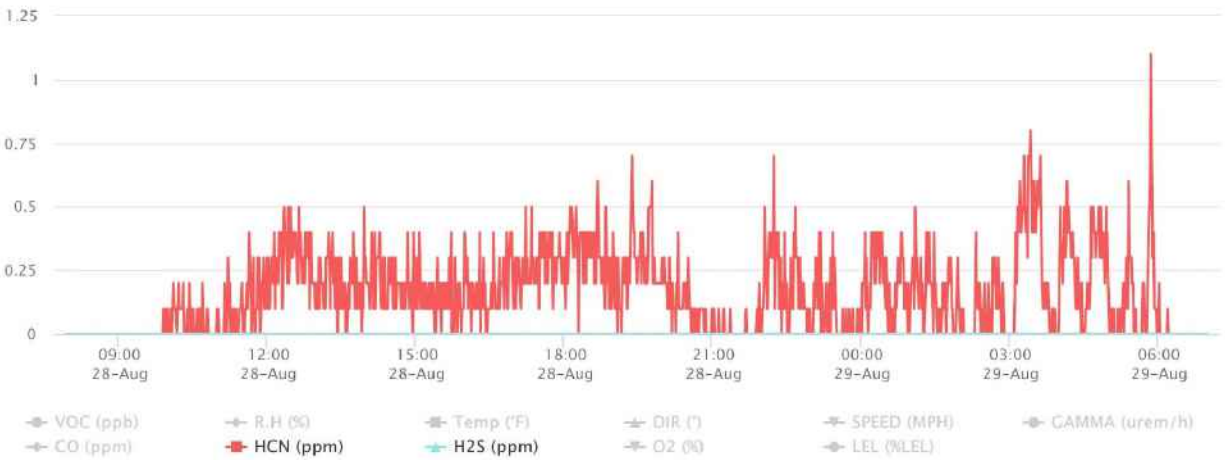
8/28/19 24-hour Data for AREARAE PRO 2 (HCn) – Northwest of Pile



8/28/19 24-hour Data for AREARAE PRO 3 (HCn) – Northeast of Pile



8/28/19 24-hour Data for AREARAE PRO 4 (HCn) – Forrest Concrete



Air Monitoring Summary Tables

The table below summarize monitoring data collected on using EPA's Viper wireless remote monitoring system.

Project Name: Able Contracting Fire Site

From: 8/29/19
7:00

To: 8/30/19
7:00



On Site, Southwest Corner of Pile								
Instrument	Analyte	Action Level Exceedance	Period Average Exceedance	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 1	VOC	No	No	1,419	4	0 - 273 ppb	0.47 ppb	1,000 ppb
	CO	No	No	1,419	7	0 - 7 ppm	0.02 ppm	83 ppm
	H ₂ S	Yes	No	1,419	54	0 - 1.3 ppm	0.02 ppm	0.5 ppm
	O ₂	No	No	1,419	1,419	20.9 - 20.9 %	20.9 %	<19.5 or >23%
	LEL	No	No	1,419	0	0 - 0 %	0 %	10%
	HCN	Yes	No	1,419	1,285	0 - 7.5 ppm	1.21 ppm	7.1 ppm

Peacock Collision								
Instrument	Analyte	Air Quality Index		Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
DustTrak 1	PM-2.5	Good		1,434	1,434	3 - 86 µg/m ³	7.4 µg/m ³	See SOG #: T106

On Site, Northwest Corner of Pile								
Instrument	Analyte	Action Level Exceedance	Period Average Exceedance	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 2	VOC	Yes	No	1,458	1,020	0 - 1618 ppb	195.66 ppb	1,000 ppb
	CO	No	No	1,458	36	0 - 11 ppm	0.1 ppm	83 ppm
	H ₂ S	No	No	1,458	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	No	1,458	1,458	20.9 - 20.9 %	20.9 %	<19.5 or >23%
	LEL	No	No	1,458	0	0 - 0 %	0 %	10%
	HCN	No	No	1,458	12	0 - 1 ppm	0 ppm	7.1 ppm

Short Cut Road								
Instrument	Analyte	Air Quality Index		Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
DustTrak 2	PM-2.5	Good		1,430	1,430	7 - 121 µg/m ³	11.2 µg/m ³	See SOG #: T106

Able Contracting Workshop, Northeast of Pile								
Instrument	Analyte	Action Level Exceedance	Period Average Exceedance	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 3	VOC	No	No	1,430	1,102	0 - 473 ppb	197.65 ppb	1,000 ppb
	CO	No	No	1,430	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	Yes	No	1,430	1	0 - 0.7 ppm	0 ppm	0.5 ppm
	O ₂	No	No	1,430	1,430	20.9 - 20.9 %	20.9 %	<19.5 or >23%
	LEL	No	No	1,430	0	0 - 0 %	0 %	10%
	HCN	No	No	1,430	318	0 - 1.2 ppm	0.08 ppm	7.1 ppm

Grace Coastal Church								
Instrument	Analyte	Air Quality Index		Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
DustTrak 3	PM-2.5	Good		1,420	1,420	6 - 31 µg/m ³	10.2 µg/m ³	See SOG #: T106

Forrest Concrete								
Instrument	Analyte	Action Level Exceedance	Period Average Exceedance	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 4	VOC	No	No	1,442	660	0 - 264 ppb	75.77 ppb	1,000 ppb
	CO	No	No	1,442	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	No	1,442	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	No	1,442	1,442	20.5 - 21.4 %	20.8 %	<19.5 or >23%
	LEL	No	No	1,442	0	0 - 0 %	0 %	10%
	HCN	No	No	1,442	340	0 - 1.2 ppm	0.09 ppm	7.1 ppm

Sun City								
Instrument	Analyte	Air Quality Index		Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
EBAM 1	PM-2.5	Good		1,230	354	0 - 76 µg/m ³	10.8 µg/m ³	See SOG #: T106

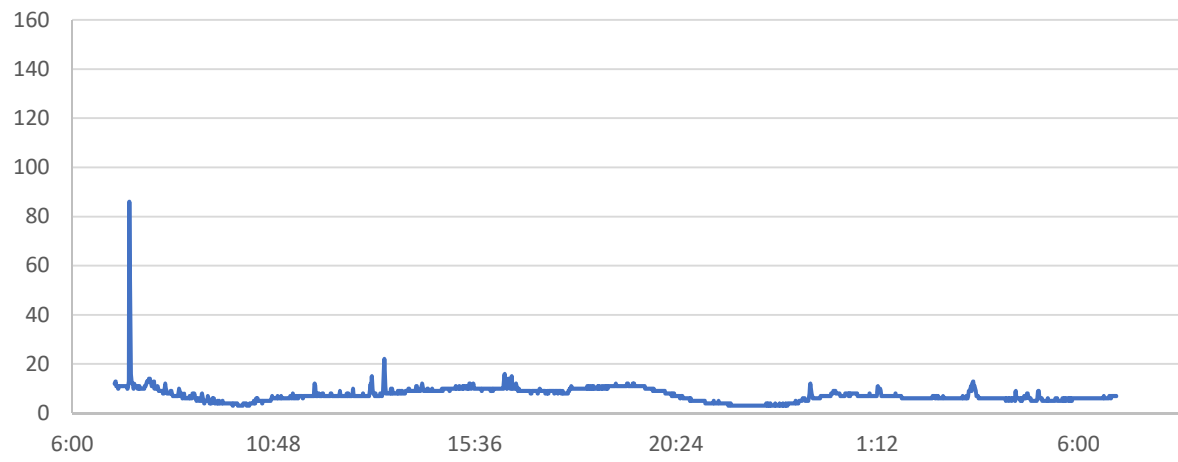
Brooke Mill Apartments								
Instrument	Analyte	Air Quality Index		Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
EBAM 2	PM-2.5	Good		1,486	859	0 - 50 µg/m ³	11.7 µg/m ³	See SOG #: T106

EPA Mobile Command Post								
Instrument	Analyte	Air Quality Index		Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
EBAM 3	PM-2.5	Good		1,151	367	0 - 125 µg/m ³	11.8 µg/m ³	See SOG #: T106

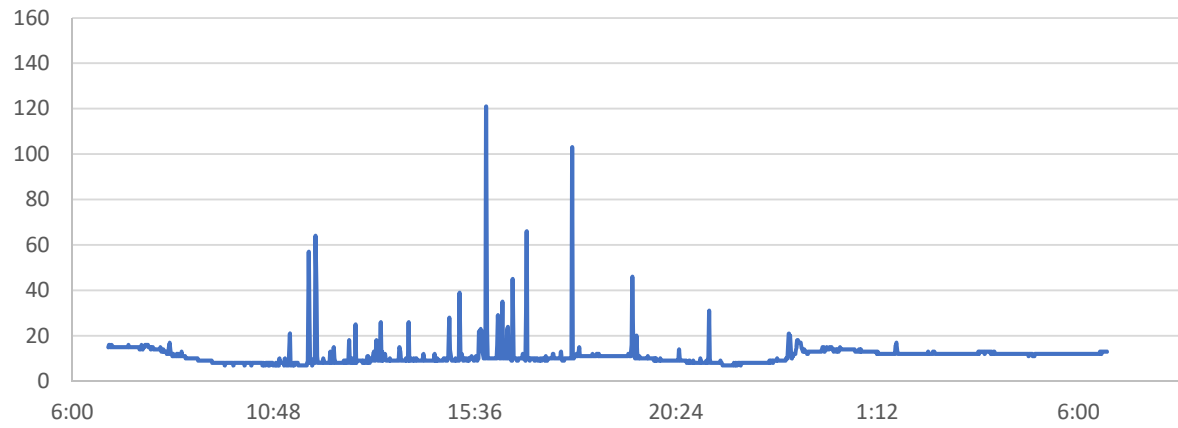
Notes:

%	Percent	O ₂	Oxygen
<	Less than	PEL	Permissible exposure limit
>	Greater than	ppb	Parts per billion
AEGL	Acute Exposure Guideline Levels for Airborne Chemicals	ppm	Parts per million
CO	Carbon monoxide	PM	Particulate matter
H ₂ S	Hydrogen Sulfide	SOG	Standard Operating Guidelines
HCN	Hydrogen Cyanide	TLV	Threshold limit value
LEL	Lower Explosive Level	µg/m ³	Micrograms per cubic meter
min	Minute	VOC	Volatile organic compound

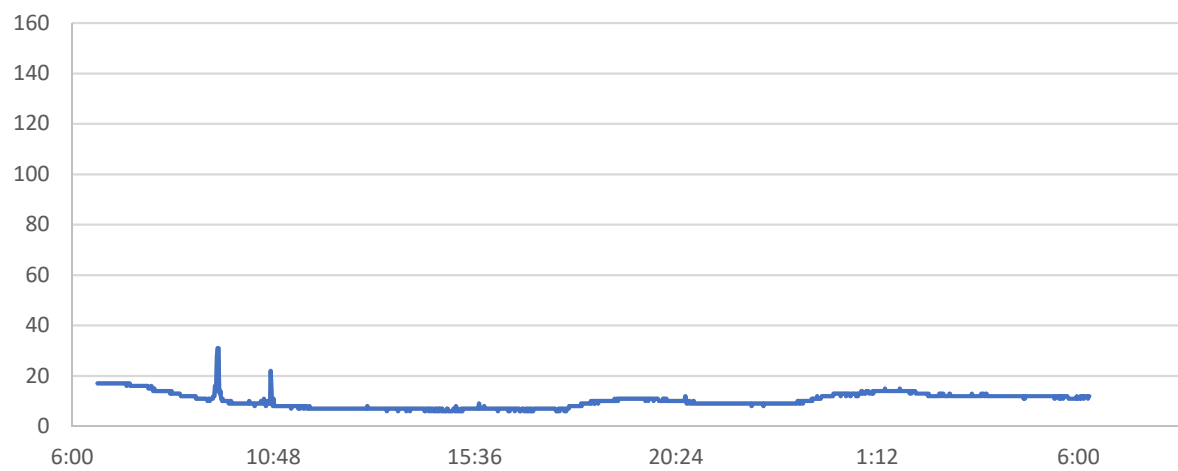
8/29/19 24-hour Data for DustTrak 1 (PM_{2.5}) - Peacock Collision



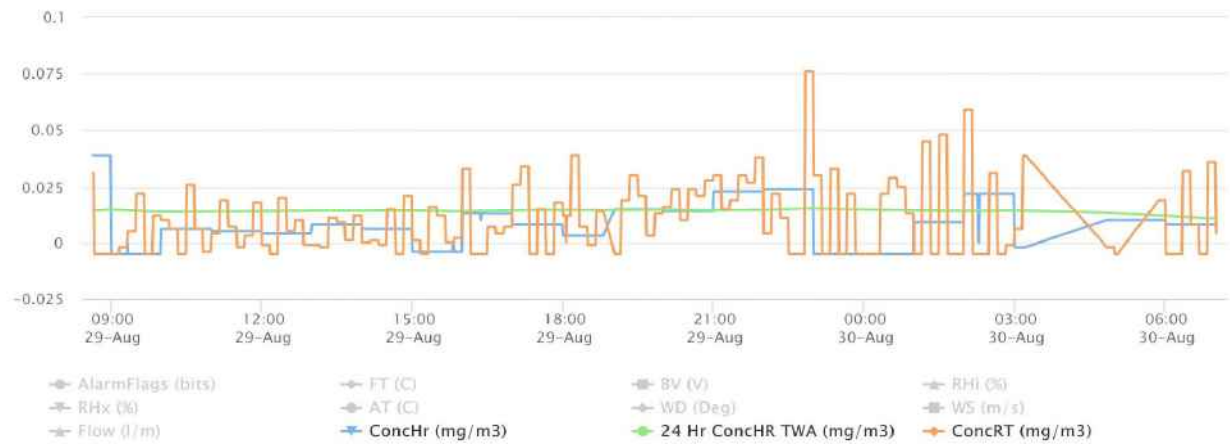
8/29/19 24-hour Data for DustTrak 2 (PM_{2.5}) – Short Cut Road



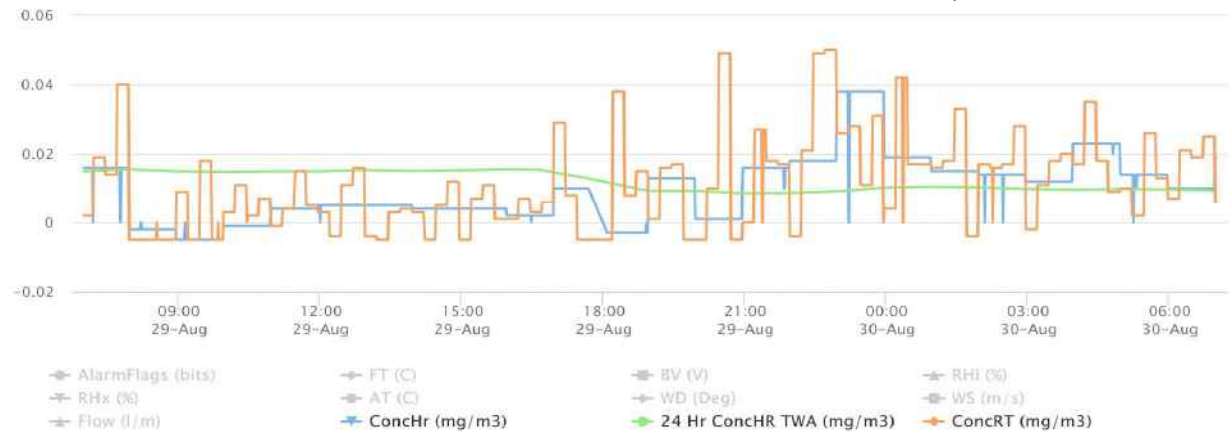
8/29/19 24-hour Data for DustTrak 3 (PM_{2.5} in µg/m³) – Grace Coastal Church



8/29/19 24-hour Data for EBAM 1 (ConcRT) – Sun City



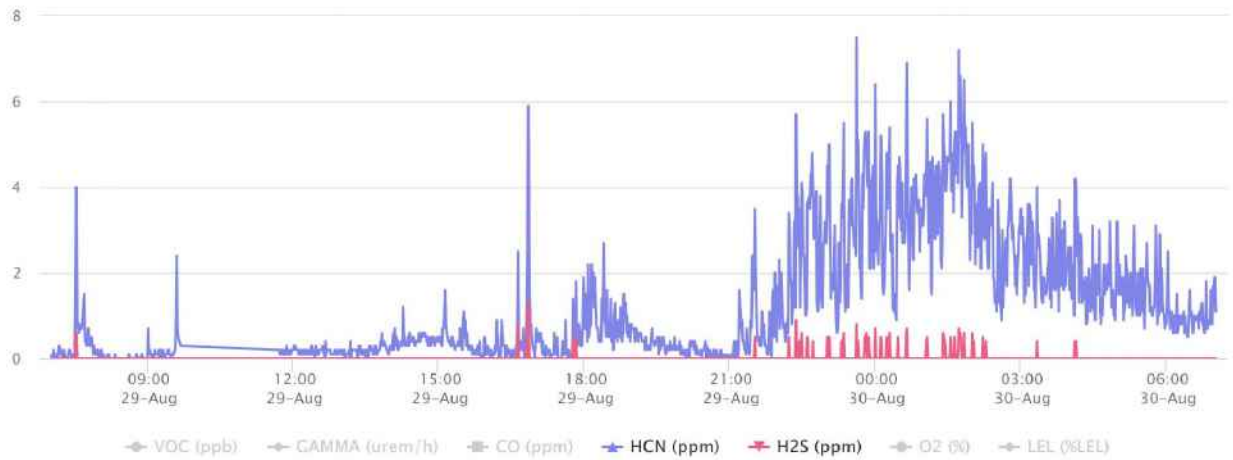
8/29/19 24-hour Data for EBAM 2 (ConcRT) – Brooke Mill Apartments



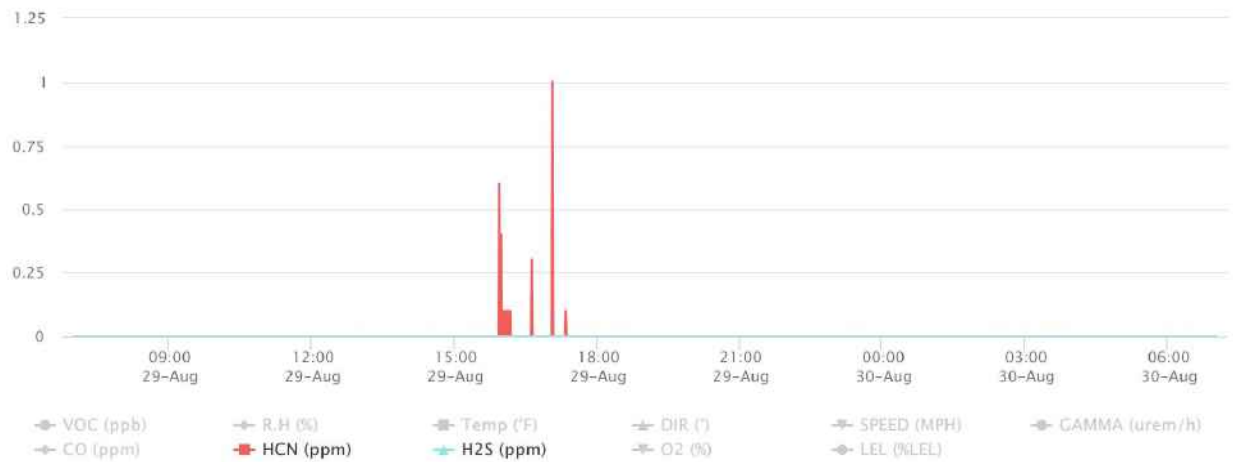
8/29/19 24-hour Data for EBAM 3 (ConcRT) – EPA Mobile Command Post



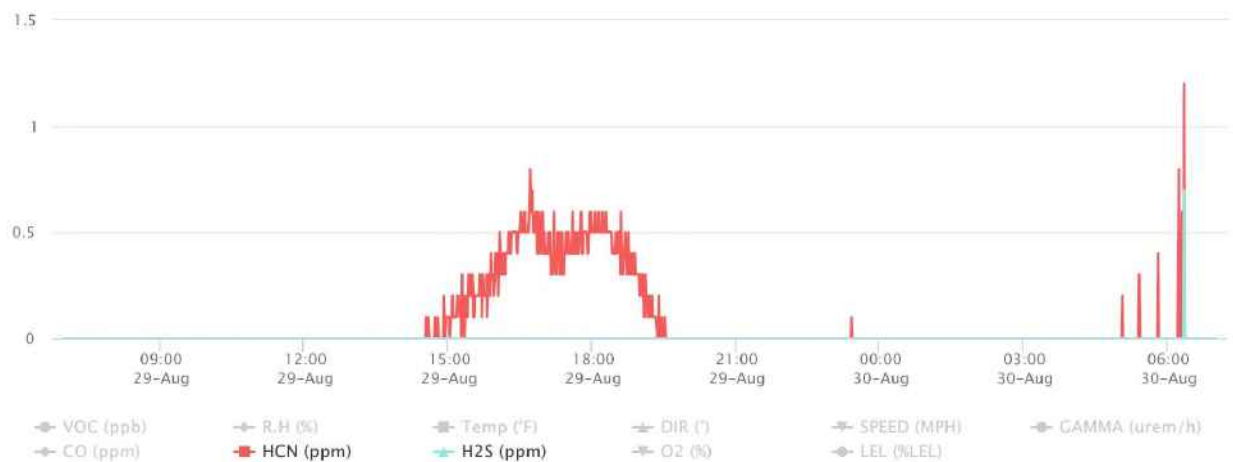
8/29/19 24-hour Data for AREARAE PRO 1 (HCn) – Southwest of Pile



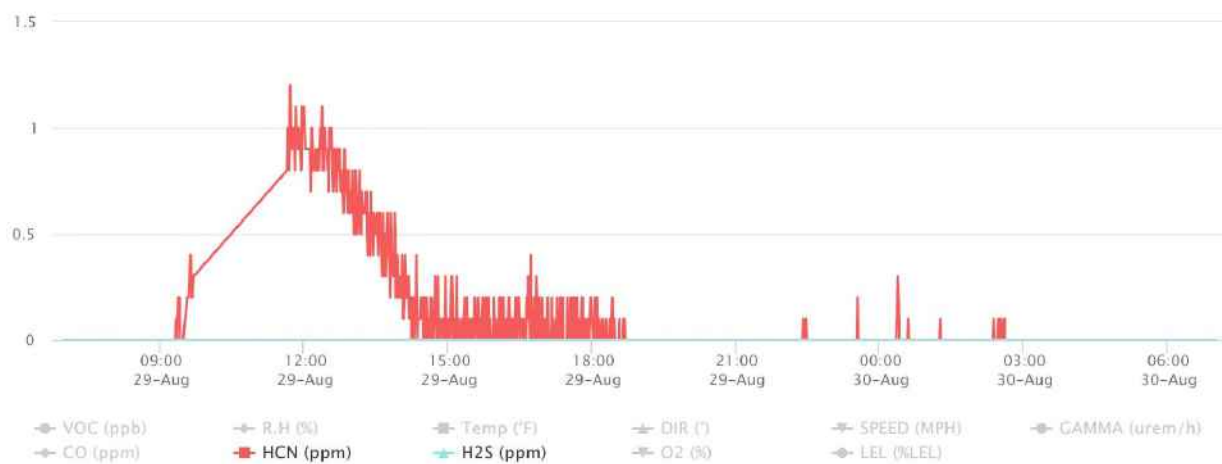
8/29/19 24-hour Data for AREARAE PRO 2 (HCn) – Northwest of Pile



8/29/19 24-hour Data for AREARAE PRO 3 (HCn) – Northeast of Pile



8/29/19 24-hour Data for AREARAE PRO 4 (HCn) – Forrest Concrete



Air Monitoring Summary Tables

The table below summarize monitoring data collected on using EPA's Viper wireless remote monitoring system.

Project Name: Able Contracting Fire Site

From: 8/30/19
7:00

To: 8/31/19
7:00



On Site, Southwest Corner of Pile								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedance	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 1	VOC	No	No	957	19	0 - 369 ppb	1.52 ppb	1,000 ppb
	CO	No	No	957	1	0 - 4 ppm	0 ppm	83 ppm
	H ₂ S	Yes	No	957	4	0 - 0.8 ppm	0.003 ppm	0.5 ppm
	O ₂	No	No	957	957	20.9 - 20.9 %	20.9 %	<19.5 or >23%
	LEL	No	No	957	630	0 - 4 %	1.7 %	10%
	HCN	No	No	957	488	0 - 5.5 ppm	0.22 ppm	7.1 ppm

Peacock Collision								
Instrument	Analyte	Air Quality Index		Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
DustTrak 1	PM-2.5	Good		1,434	1,434	0 - 62 µg/m ³	4.9 µg/m ³	See SOG #: T106

On Site, Northwest Corner of Pile								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedance	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 2	VOC	Yes	No	961	279	0 - 1269 ppb	52.09 ppb	1,000 ppb
	CO	No	No	961	38	0 - 12 ppm	0.17 ppm	83 ppm
	H ₂ S	No	No	961	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	No	961	961	20.9 - 20.9 %	20.9 %	<19.5 or >23%
	LEL	No	No	961	0	0 - 0 %	0 %	10%
	HCN	No	No	961	364	0 - 0.7 ppm	0.12 ppm	7.1 ppm

Power Line Right of Way - South								
Instrument	Analyte	Air Quality Index		Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
DustTrak 2	PM-2.5	Good		1,430	1,430	2 - 66 µg/m ³	7.7 µg/m ³	See SOG #: T106

Able Contracting Workshop, Northeast of Pile								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedance	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 3	VOC	No	No	963	329	0 - 341 ppb	74.66 ppb	1,000 ppb
	CO	No	No	963	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	No	963	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	No	963	963	20.9 - 20.9 %	20.9 %	<19.5 or >23%
	LEL	Yes	No	488	163	0 - 12 %	3.7 %	10%
	HCN	No	No	963	30	0 - 0.9 ppm	0.01 ppm	7.1 ppm

Grace Coastal Church								
Instrument	Analyte	Air Quality Index		Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
DustTrak 3	PM-2.5	Good		1,420	1,420	3 - 13 µg/m ³	7.2 µg/m ³	See SOG #: T106

Forrest Concrete								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedance	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 4	VOC	No	No	959	53	0 - 81 ppb	2 ppb	1,000 ppb
	CO	No	No	959	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	No	959	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	No	959	959	20.1 - 21.3 %	20.5 %	<19.5 or >23%
	LEL	No	No	959	0	0 - 0 %	0 %	10%
	HCN	No	No	959	277	0 - 1.1 ppm	0.12 ppm	7.1 ppm

Sun City								
Instrument	Analyte	Air Quality Index		Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
EBAM 1	PM-2.5	Good		755	308	0 - 90 µg/m ³	10.4 µg/m ³	See SOG #: T106

Brooke Mill Apartments								
Instrument	Analyte	Air Quality Index		Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
EBAM 2	PM-2.5	Good		1,506	799	0 - 75 µg/m ³	9.7 µg/m ³	See SOG #: T106

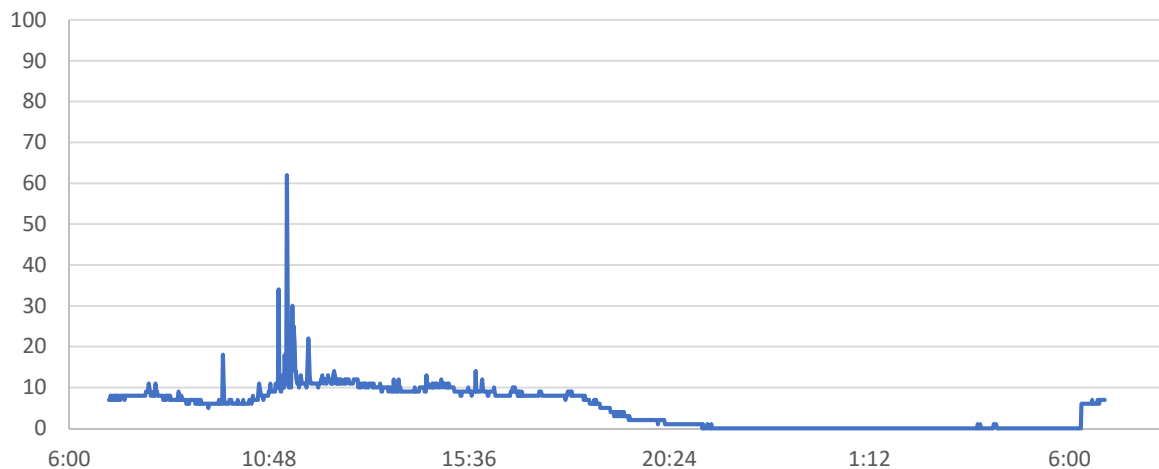
EPA Mobile Command Post								
Instrument	Analyte	Air Quality Index		Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
EBAM 3	PM-2.5	Good		1,259	301	0 - 162 µg/m ³	11.5 µg/m ³	See SOG #: T106

Notes:

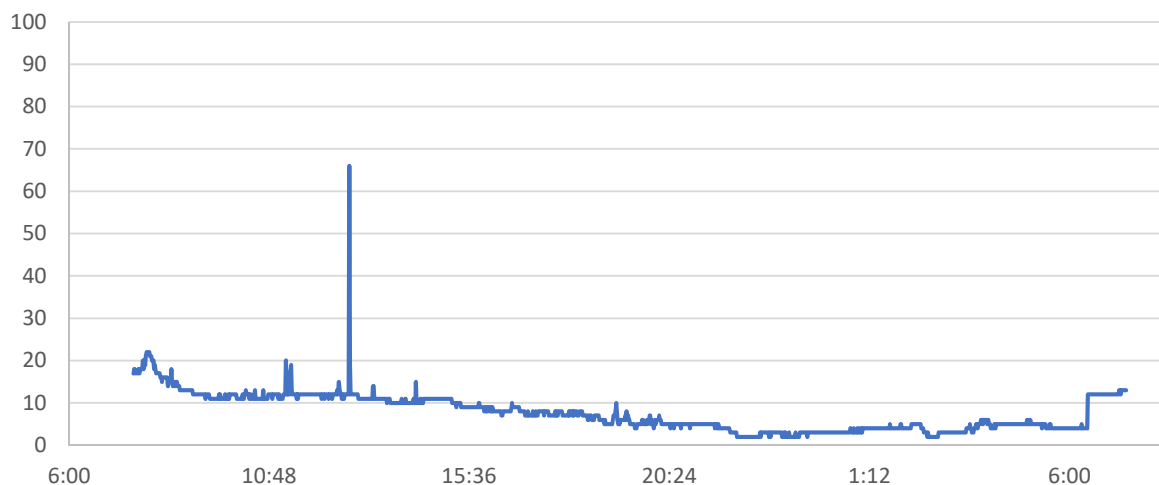
% Percent
 < Less than
 > Greater than
 AEGL Acute Exposure Guideline Levels for Airborne Chemicals
 CO Carbon monoxide
 H₂S Hydrogen Sulfide
 HCN Hydrogen Cyanide
 LEL Lower Explosive Level
 min Minute

O₂ Oxygen
 PEL Permissible exposure limit
 ppb Parts per billion
 ppm Parts per million
 PM Particulate matter
 SOG Standard Operating Guidelines
 TLV Threshold limit value
 µg/m³ Micrograms per cubic meter
 VOC Volatile organic compound

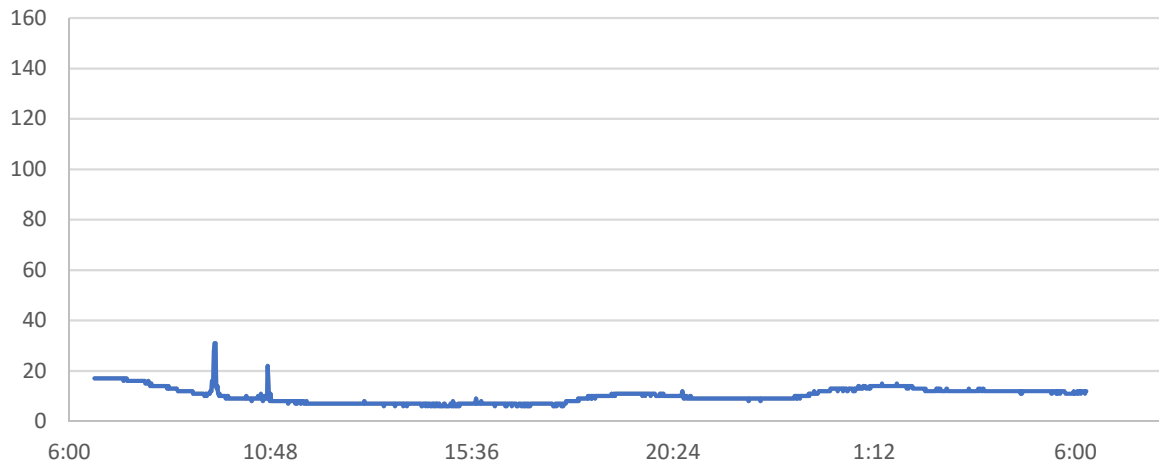
8/30/19 24-hour Data for DustTrak 1 (PM_{2.5}) - Peacock Collision



8/30/19 24-hour Data for DustTrak 2 (PM_{2.5}) – Power Line Right of Way - South



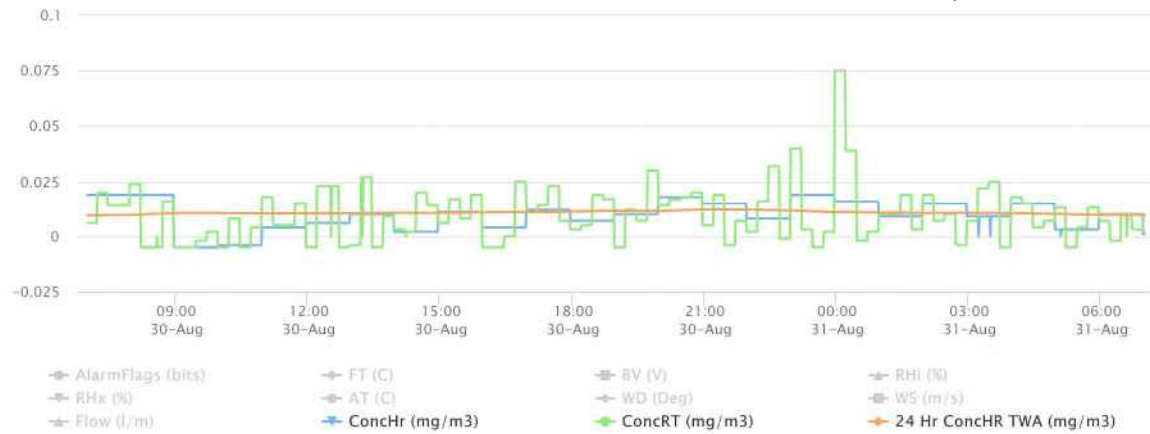
8/30/19 24-hour Data for DustTrak 3 (PM_{2.5} in µg/m³) – Grace Coastal Church



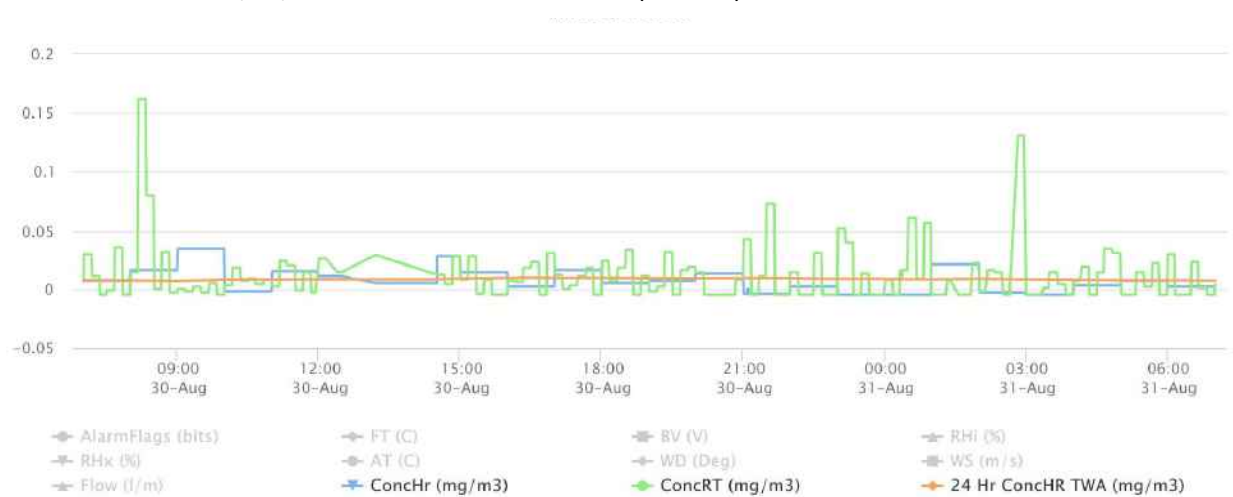
8/30/19 24-hour Data for EBAM 1 (ConcRT) – Sun City



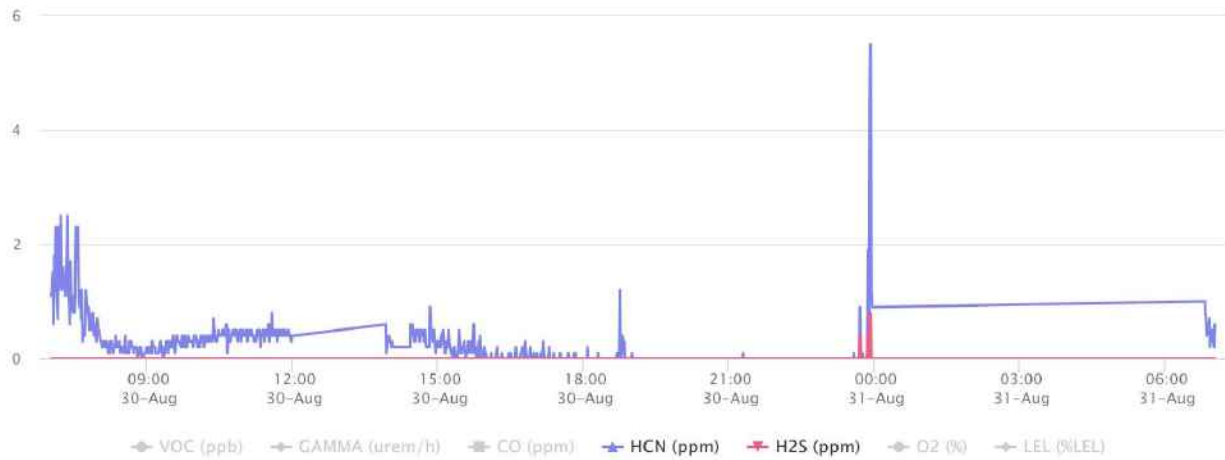
8/30/19 24-hour Data for EBAM 2 (ConcRT) – Brooke Mill Apartments



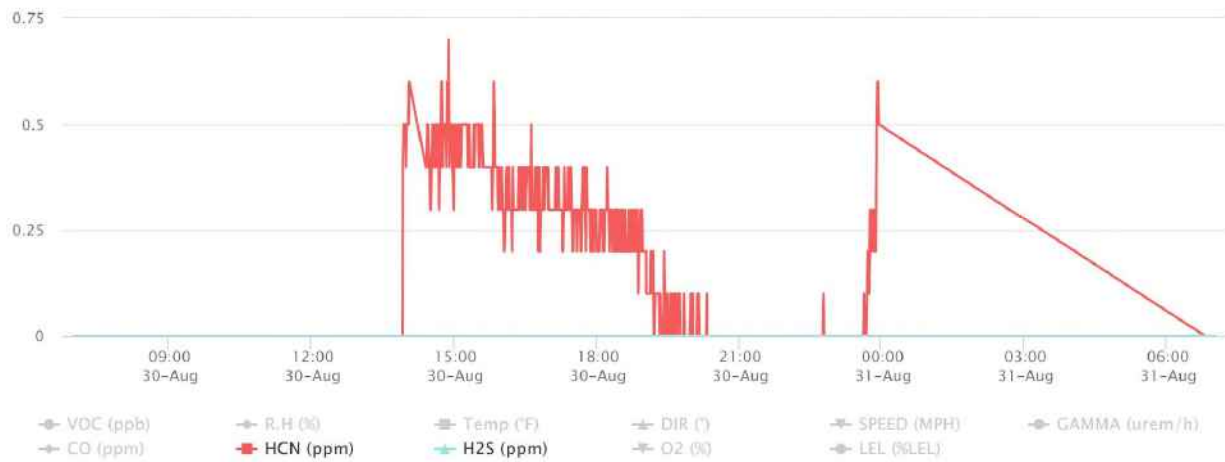
8/30/19 24-hour Data for EBAM 3 (ConcRT) – EPA Mobile Command Post



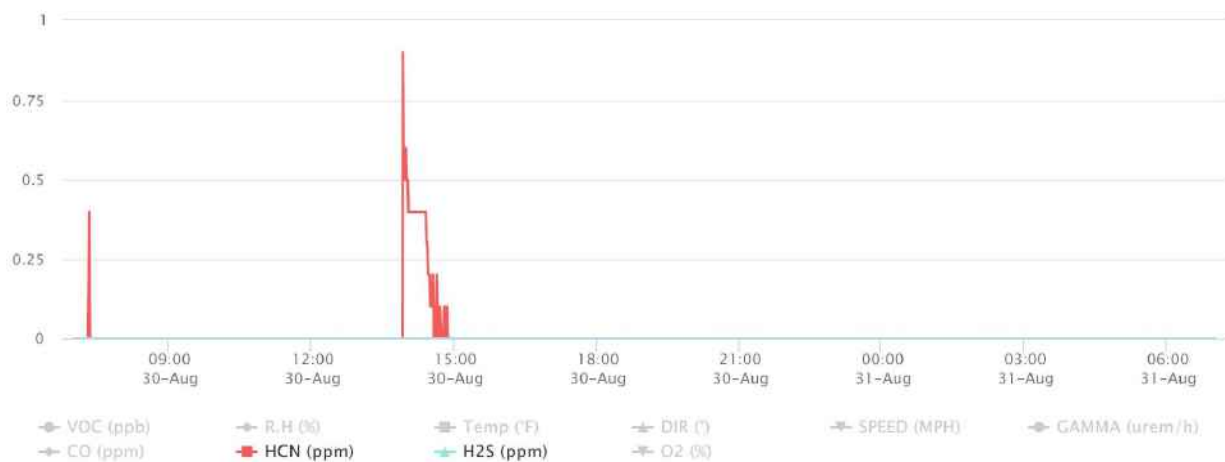
8/30/19 24-hour Data for AREARAE PRO 1 (HCn) – Southwest of Pile



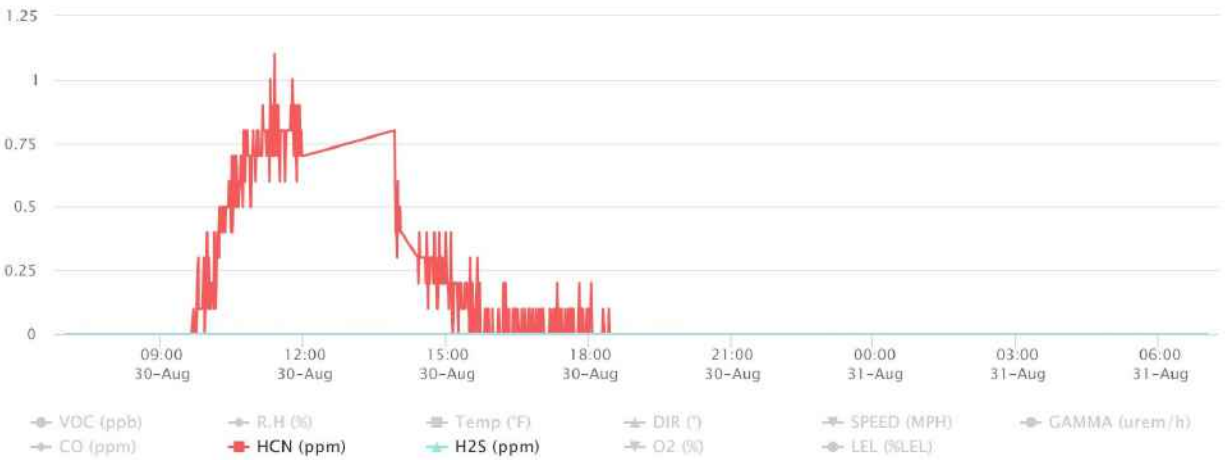
8/30/19 24-hour Data for AREARAE PRO 2 (HCn) – Northwest of Pile



8/30/19 24-hour Data for AREARAE PRO 3 (HCn) – Northeast of Pile



8/30/19 24-hour Data for AREARAE PRO 4 (HCN) – Forrest Concrete



Air Monitoring Summary Tables

The table below summarize monitoring data collected on using EPA's Viper wireless remote monitoring system.

Project Name: Able Contracting Fire Site

From: 8/31/19
7:00

To: 9/1/19
7:00



On Site, Southwest Corner of Pile								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedance	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 1	VOC	No	No	1,516	8	0 - 531 ppb	0.72 ppb	1,000 ppb
	CO	No	No	1,516	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	No	1,516	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	No	1,516	1,516	20.9 - 20.9 %	20.9 %	<19.5 or >23%
	LEL	No	No	1,516	892	0 - 3 %	1.2 %	10%
	HCN	No	No	1,516	60	0 - 0.9 ppm	0.01 ppm	7.1 ppm

Peacock Collision							
Instrument	Analyte	Air Quality Index		Number of Readings	Number of Detections	Concentration Range	Action Level (PEL/TLV/60 min AEGL)
DustTrak 1	PM-2.5	Good		1,467	1,467	0 - 8 µg/m ³	See SOG #: T106

On Site, Northwest Corner of Pile								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedance	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 2	VOC	No	No	1,563	1	0 - 8 ppb	0.01 ppb	1,000 ppb
	CO	No	No	1,563	19	0 - 6 ppm	0.04 ppm	83 ppm
	H ₂ S	No	No	1,563	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	No	1,563	1,563	20.9 - 20.9 %	20.9 %	<19.5 or >23%
	LEL	No	No	1,563	0	0 - 0 %	0 %	10%
	HCN	No	No	1,563	106	0 - 0.4 ppm	0.01 ppm	7.1 ppm

Power Line Right of Way - South							
Instrument	Analyte	Air Quality Index		Number of Readings	Number of Detections	Concentration Range	Action Level (PEL/TLV/60 min AEGL)
DustTrak 2	PM-2.5	Good		1	1	0 - 0 µg/m ³	See SOG #: T106

Able Contracting Workshop, Northeast of Pile								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedance	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 3	VOC	No	No	1,540	0	0 - 0 ppb	0 ppb	1,000 ppb
	CO	No	No	1,540	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	No	1,540	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	No	1,540	1,540	20.9 - 20.9 %	20.9 %	<19.5 or >23%
	LEL	#N/A	No	#N/A	#N/A	#N/A	#N/A	10%
	HCN	No	No	1,540	0	0 - 0 ppm	0 ppm	7.1 ppm

Grace Coastal Church							
Instrument	Analyte	Air Quality Index		Number of Readings	Number of Detections	Concentration Range	Action Level (PEL/TLV/60 min AEGL)
DustTrak 3	PM-2.5	Good		1	1	0 - 0 µg/m ³	See SOG #: T106

Forrest Concrete								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedance	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 4	VOC	No	No	1,558	0	0 - 0 ppb	0 ppb	1,000 ppb
	CO	No	No	1,558	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	No	1,558	0	0 - 0 ppm	0 ppm	0.5 ppm
	O ₂	No	No	1,558	1,558	20 - 20.5 %	20.2 %	<19.5 or >23%
	LEL	No	No	1,558	0	0 - 0 %	0 %	10%
	HCN	No	No	1,558	1	0 - 0.1 ppm	0 ppm	7.1 ppm

Sun City							
Instrument	Analyte	Air Quality Index		Number of Readings	Number of Detections	Concentration Range	Action Level (PEL/TLV/60 min AEGL)
EBAM 1	PM-2.5	Good		767	209	0 - 63 µg/m ³	See SOG #: T106

Brooke Mill Apartments							
Instrument	Analyte	Air Quality Index		Number of Readings	Number of Detections	Concentration Range	Action Level (PEL/TLV/60 min AEGL)
EBAM 2	PM-2.5	Good		1,429	354	0 - 112 µg/m ³	See SOG #: T106

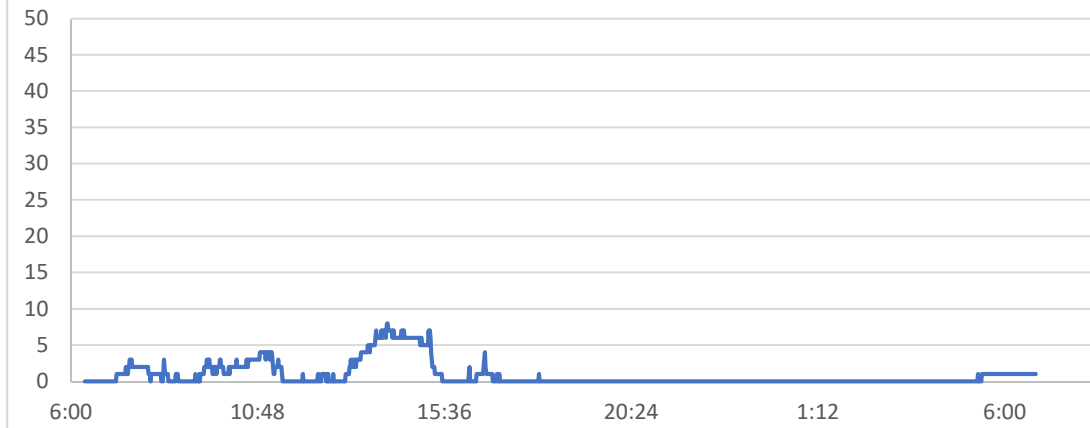
EPA Mobile Command Post							
Instrument	Analyte	Air Quality Index		Number of Readings	Number of Detections	Concentration Range	Action Level (PEL/TLV/60 min AEGL)
EBAM 3	PM-2.5	Good		1,024	226	0 - 102 µg/m ³	See SOG #: T106

Notes:

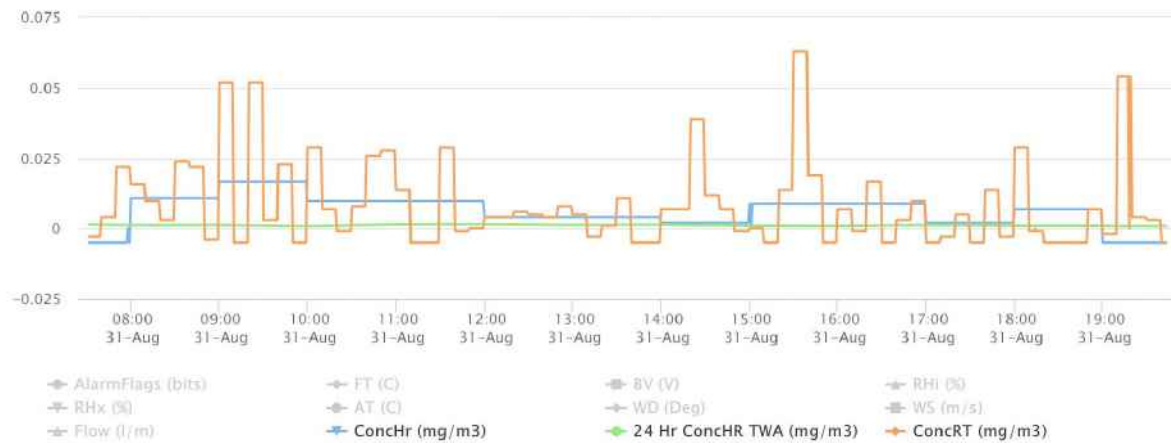
% Percent
< Less than
> Greater than
AEGL Acute Exposure Guideline Levels for Airborne Chemicals
CO Carbon monoxide
H₂S Hydrogen Sulfide
HCN Hydrogen Cyanide
LEL Lower Explosive Level
min Minute

O₂ Oxygen
PEL Permissible exposure limit
ppb Parts per billion
ppm Parts per million
PM Particulate matter
SOG Standard Operating Guidelines
TLV Threshold limit value
µg/m³ Micrograms per cubic meter
VOC Volatile organic compound

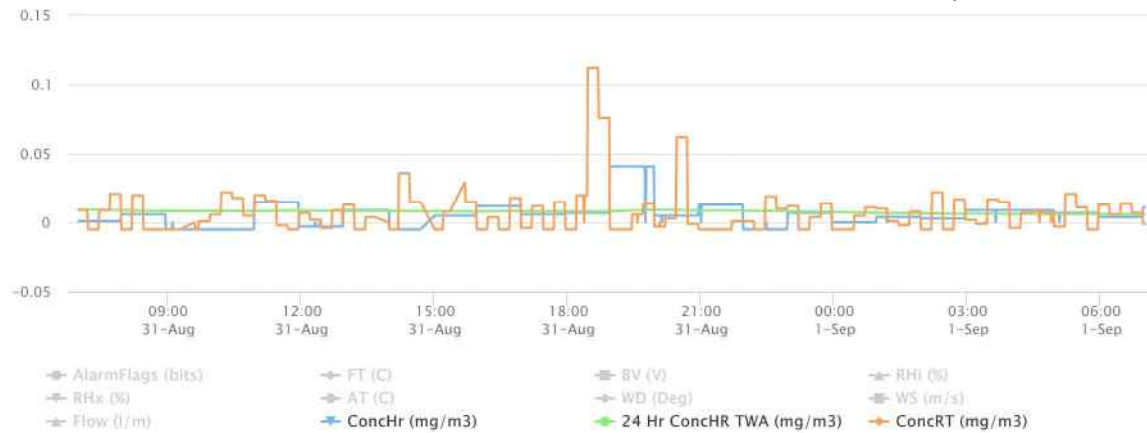
8/31/19 24-hour Data for DustTrak 1 (PM_{2.5}) - Peacock Collision



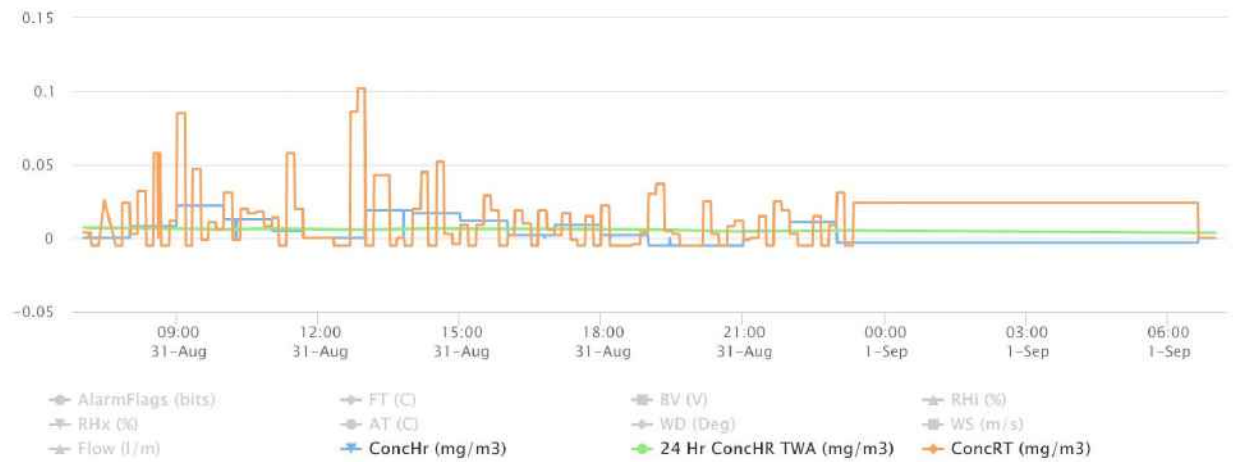
8/31/19 24-hour Data for EBAM 1 (ConcRT) – Sun City



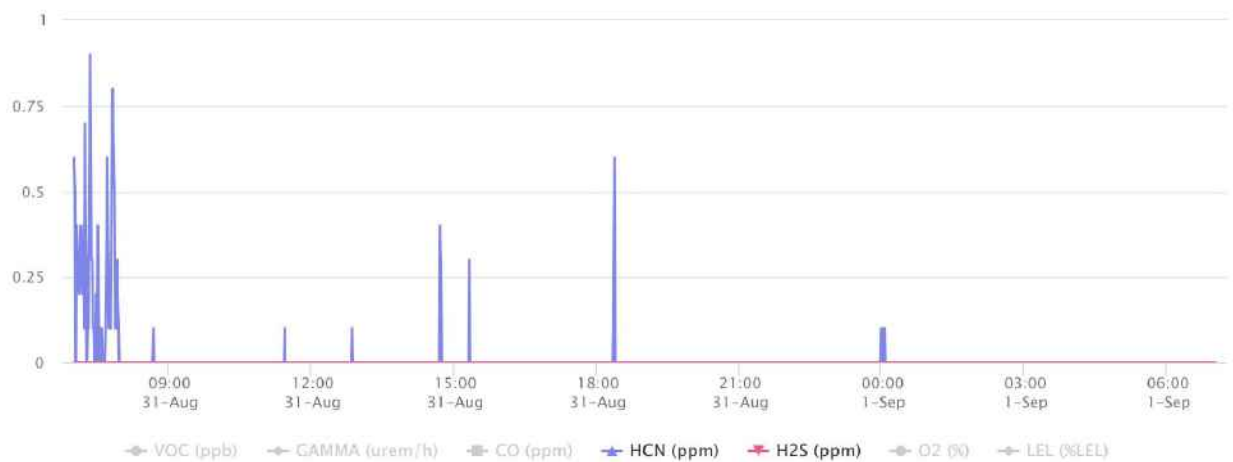
8/31/19 24-hour Data for EBAM 2 (ConcRT) – Brooke Mill Apartments



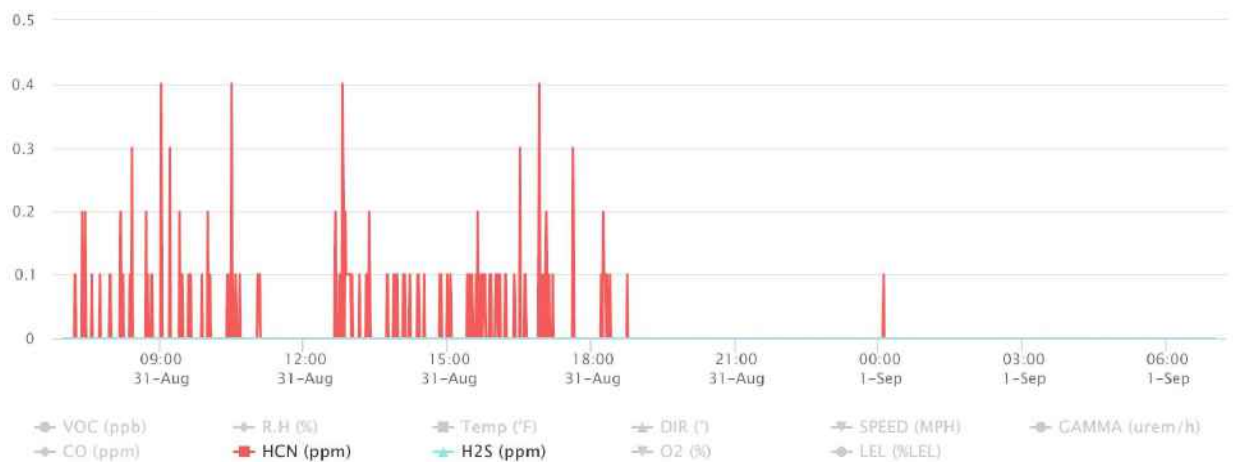
8/31/19 24-hour Data for EBAM 3 (ConcRT) – EPA Mobile Command Post



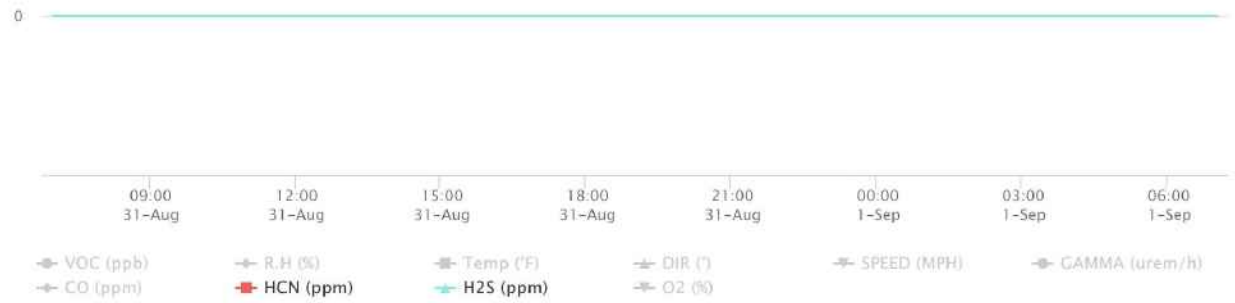
8/31/19 24-hour Data for AREARAE PRO 1 (HCn) – Southwest of Pile



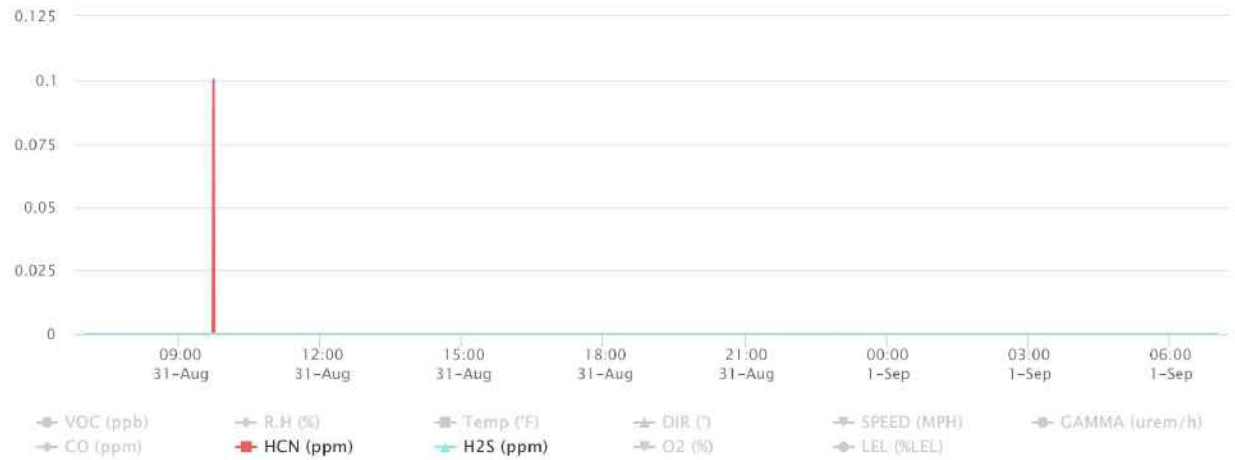
8/31/19 24-hour Data for AREARAE PRO 2 (HCn) – Northwest of Pile



8/31/19 24-hour Data for AREARAE PRO 3 (HCn) – Northeast of Pile



8/31/19 24-hour Data for AREARAE PRO 4 (HCn) – Forrest Concrete



Air Monitoring Summary Tables

The table below summarize monitoring data collected on using EPA's Viper wireless remote monitoring system.

Project Name:

From: 9/12/19
7:00

To: 9/13/19
6:58



Location 1 - Northeast of Fire							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 1	VOC	No	1,498	363	0 - 142 ppb	15.9 ppb	1,000 ppb
	CO	No	1,498	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	1,498	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	1,498	1,143	0 - 6.6 ppm	0.4 ppm	7.1 ppm
	O ₂	No	1,498	1,498	20.2 - 20.9%	20.5%	<19.5 or >23%
	LEL	No	1,498	0	0 - 0%	0%	10%
DustTrak 1	PM-2.5	Moderate	1,423	1,423	17 - 465 µg/m ³	28.1 µg/m ³	See SOG #: T106

Location 2 - Southeast of Fire							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 2	VOC	No	1,488	678	0 - 292 ppb	30.7 ppb	1,000 ppb
	CO	No	1,488	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	1,488	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	1,488	897	0 - 0.8 ppm	0.1 ppm	7.1 ppm
	O ₂	No	1,488	1,488	20.9 - 20.9%	20.9%	<19.5 or >23%
	LEL	No	1,488	0	0 - 0 %	0%	10%
DustTrak 2	PM-2.5	Unhealthy	1,462	1,462	18 - 1930 µg/m ³	94.5 µg/m ³	See SOG #: T106

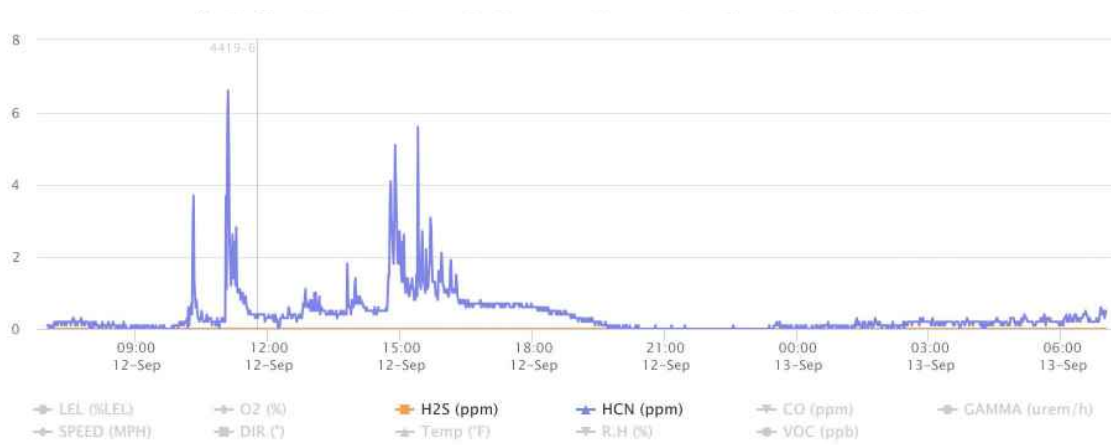
Location 3 - South of Fire							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 3	VOC	No	1,491	1,221	0 - 1052 ppb	401.4 ppb	1,000 ppb
	CO	No	1,491	166	0 - 11 ppm	0.5 ppm	83 ppm
	H ₂ S	No	1,491	6	0 - 2.2 ppm	0 ppm	0.5 ppm
	HCN	No	1,491	113	0 - 17.8 ppm	0.1 ppm	7.1 ppm
	O ₂	No	1,491	1,491	20.9 - 20.9%	20.9%	<19.5 or >23%
	LEL	No	1,491	0	0 - 0%	0%	10%
DustTrak 3	PM-2.5	Moderate	1,363	1,350	0 - 461 µg/m ³	15.6 µg/m ³	See SOG #: T106

Location 4 - Northwest of Fire							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 4	VOC	No	574	547	0 - 837 ppb	611.8 ppb	1,000 ppb
	CO	No	574	13	0 - 3 ppm	0.1 ppm	83 ppm
	H ₂ S	No	574	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	574	339	0 - 3.1 ppm	0.9 ppm	7.1 ppm
	O ₂	No	574	574	20.5 - 20.9%	20.7%	<19.5 or >23%
	LEL	No	574	0	0 - 0%	0%	10%
DustTrak 4	PM-2.5	Moderate	1,474	1,469	0 - 193 µg/m ³	17.3 µg/m ³	See SOG #: T106

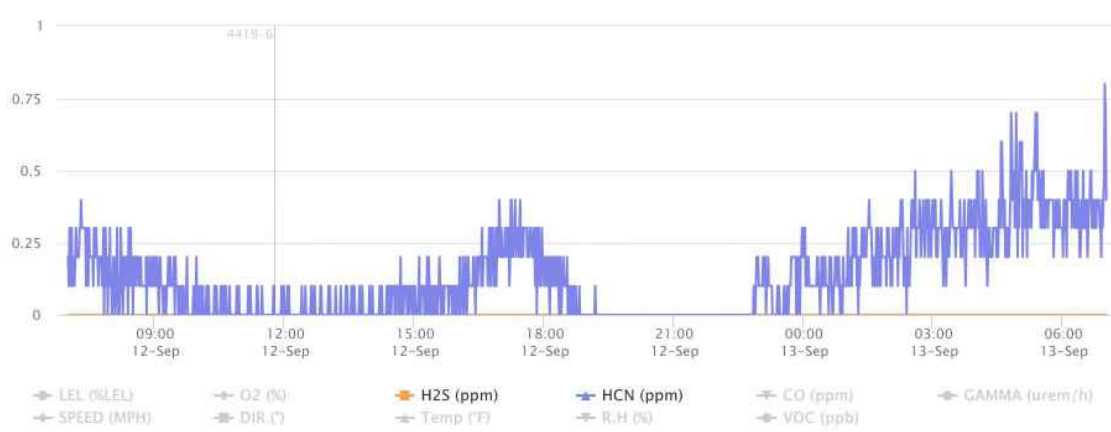
Notes:

%	Percent	O ₂	Oxygen
<	Less than	PEL	Permissible exposure limit
>	Greater than	ppb	Parts per billion
AEGL	Acute Exposure Guideline Levels for Airborne Chemicals	ppm	Parts per million
CO	Carbon monoxide	PM	Particulate matter
H ₂ S	Hydrogen Sulfide	SOG	Standard Operating Guidelines
HCN	Hydrogen Cyanide	TLV	Threshold limit value
LEL	Lower Explosive Level	µg/m ³	Micrograms per cubic meter
min	Minute	VOC	Volatile organic compound

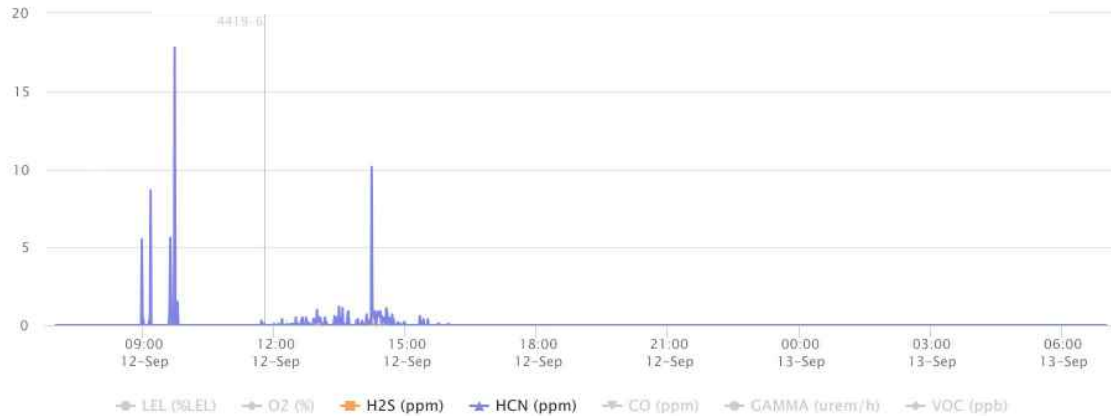
9/12/19 to 9/13/19 Data for AreaRAE Pro (HCN and H₂S) – Northeast of fire



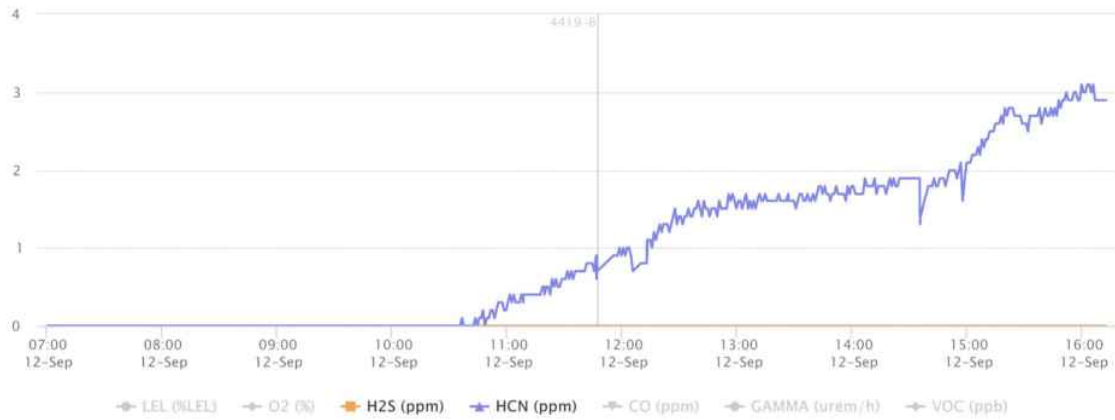
9/12/19 to 9/13/19 Data for AreaRAE Pro (HCN and H₂S) – Southeast of fire



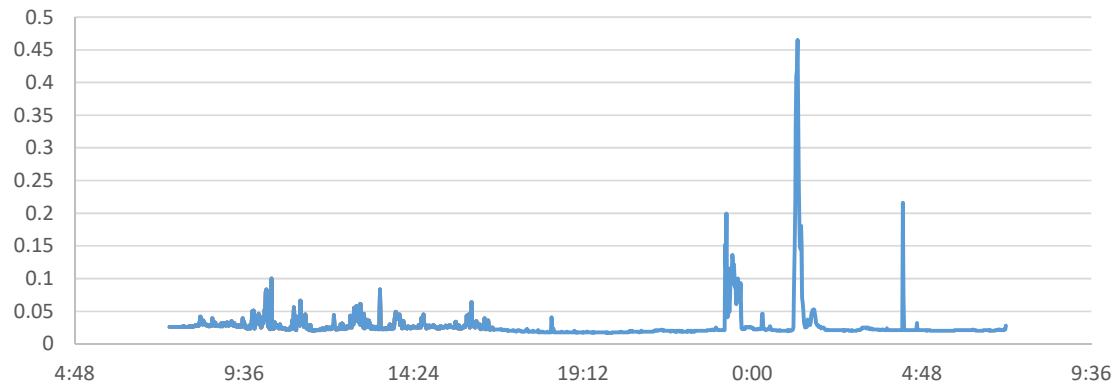
9/12/19 to 9/13/19 Data for AreaRAE Pro (HCN and H₂S) – South of fire



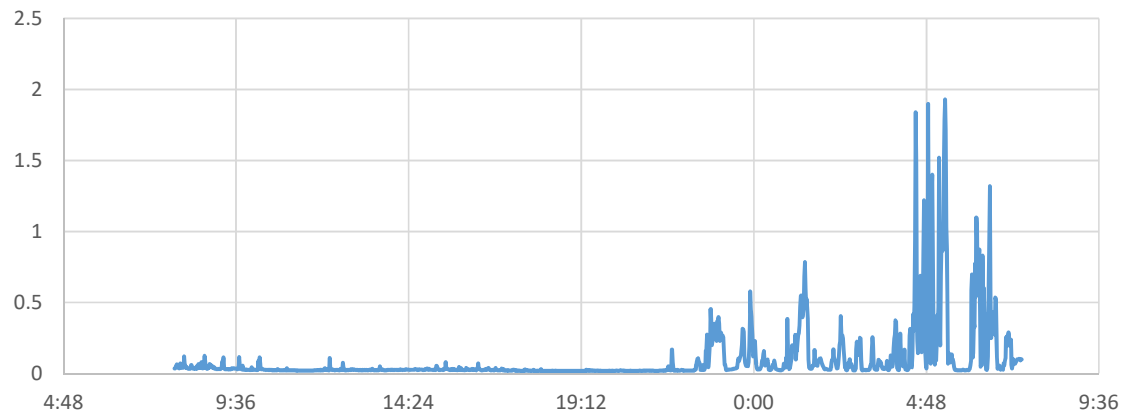
9/12/19 to 9/13/19 Data for AreaRAE Pro (HCN and H₂S) – Northwest of fire

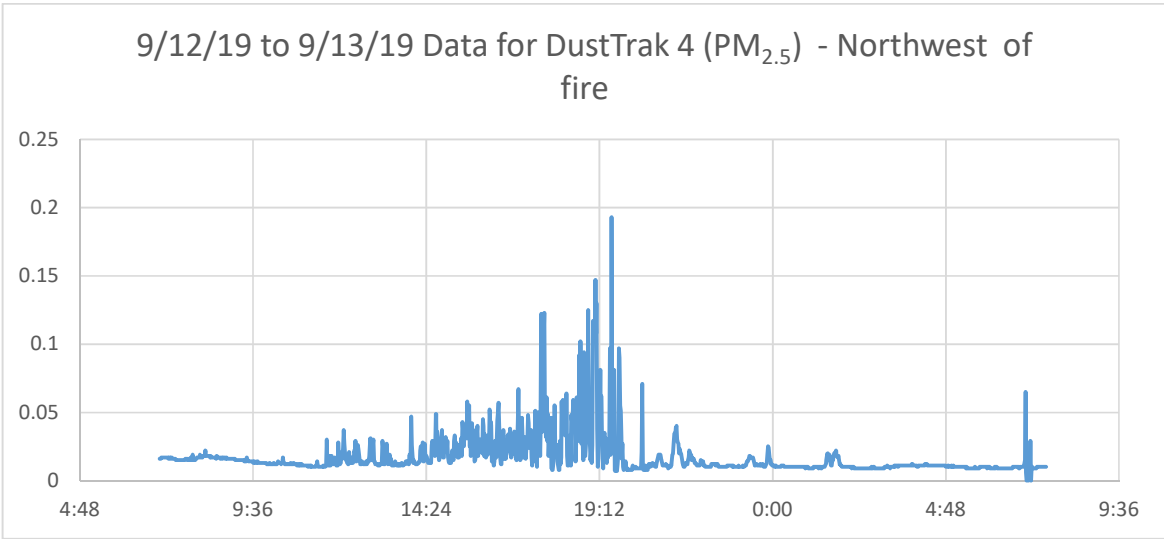
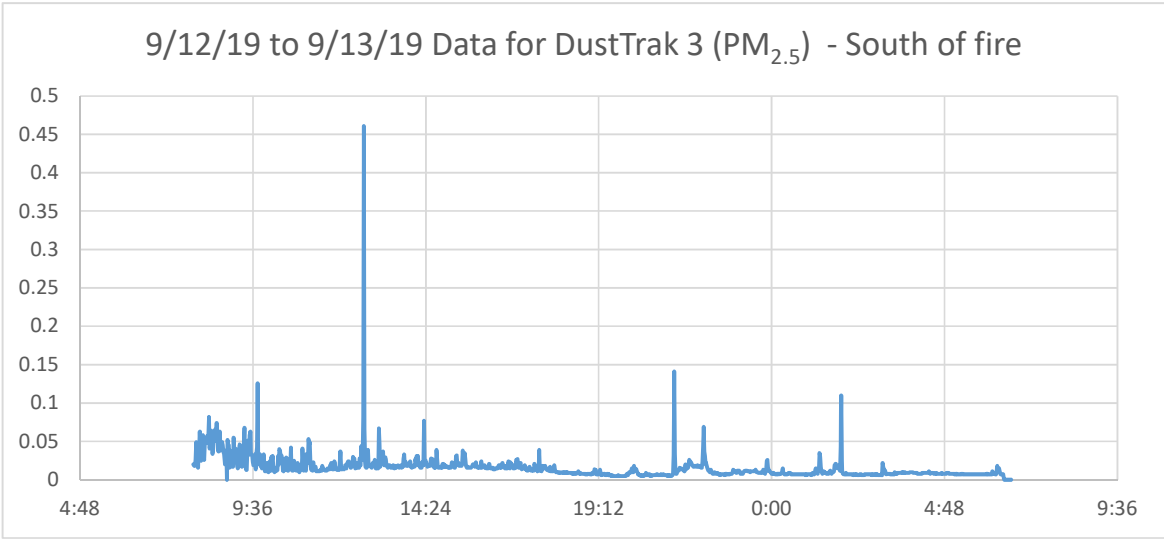


9/12/19 to 9/13/19 Data for DustTrak 1 (PM_{2.5}) - Northeast of fire



9/12/19 to 9/13/19 Data for DustTrak 2 (PM_{2.5}) - Southeast of fire





Air Monitoring Summary Tables

The table below summarize monitoring data collected on using EPA's Viper wireless remote monitoring system.

Project Name:

From: 9/13/19
7:00

To: 9/14/19
6:58



Location 1 - Northeast of Fire							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 1	VOC	No	1,483	336	0 - 81 ppb	9.3 ppb	1,000 ppb
	CO	No	1,483	2	0 - 2 ppm	0 ppm	83 ppm
	H ₂ S	No	1,483	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	1,483	763	0 - 1.6 ppm	0.2 ppm	7.1 ppm
	O ₂	No	1,483	1,483	20.2 - 20.9%	20.5%	<19.5 or >23%
	LEL	No	1,483	0	0 - 0%	0%	10%
DustTrak 1	PM-2.5	Moderate	1,598	1,598	12 - 334 µg/m ³	18.5 µg/m ³	See SOG #: T106

Location 2 - Southeast of Fire							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 2	VOC	No	1,482	322	0 - 110 ppb	8.3 ppb	1,000 ppb
	CO	No	1,482	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	1,482	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	1,482	492	0 - 0.6 ppm	0.1 ppm	7.1 ppm
	O ₂	No	1,482	1,482	20.9 - 20.9%	20.9%	<19.5 or >23%
	LEL	No	1,482	0	0 - 0 %	0%	10%
DustTrak 2	PM-2.5	Moderate	1,816	1,816	12 - 1030 µg/m ³	30.9 µg/m ³	See SOG #: T106

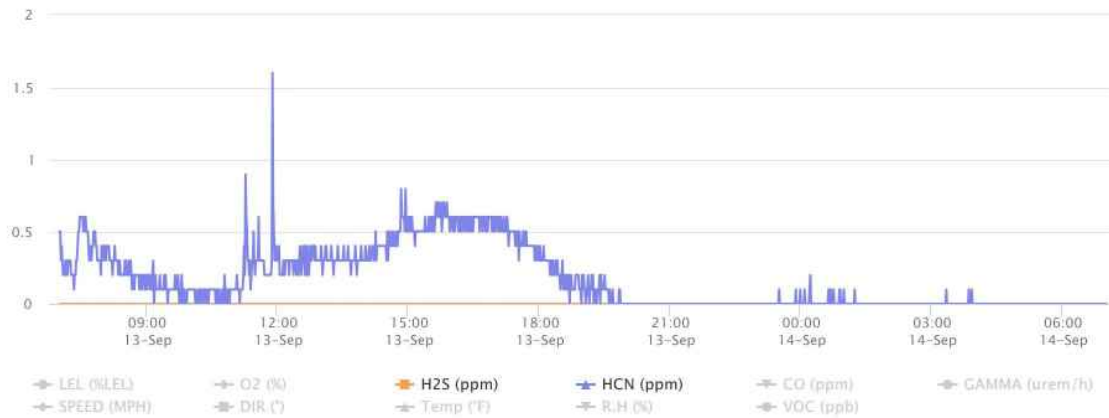
Location 3 - South of Fire							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 3	VOC	No	1,482	1,215	0 - 6138 ppb	374.7 ppb	1,000 ppb
	CO	No	1,482	36	0 - 12 ppm	0.1 ppm	83 ppm
	H ₂ S	No	1,482	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	1,482	5	0 - 0.6 ppm	0 ppm	7.1 ppm
	O ₂	No	1,482	1,482	20.9 - 20.9%	20.9%	<19.5 or >23%
	LEL	No	1,482	0	0 - 0%	0%	10%
DustTrak 3	PM-2.5	Unhealthy	1,623	1,424	0 - 1240 µg/m ³	57.2 µg/m ³	See SOG #: T106

Location 4 - Northwest of Fire							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
DustTrak 4	PM-2.5	Moderate	1,393	1,393	1 - 790 µg/m ³	29.9 µg/m ³	See SOG #: T106

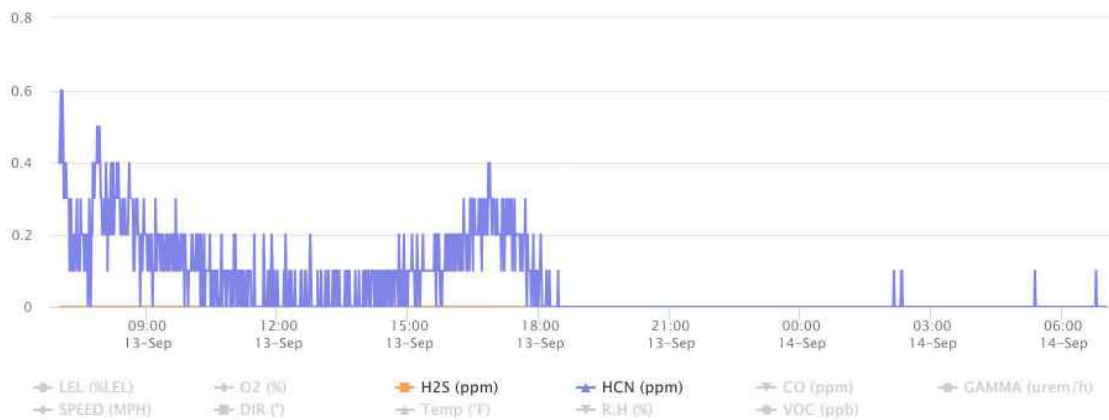
Notes:

%	Percent	O ₂	Oxygen
<	Less than	PEL	Permissible exposure limit
>	Greater than	ppb	Parts per billion
AEGL	Acute Exposure Guideline Levels for Airborne Chemicals	ppm	Parts per million
CO	Carbon monoxide	PM	Particulate matter
H ₂ S	Hydrogen Sulfide	SOG	Standard Operating Guidelines
HCN	Hydrogen Cyanide	TLV	Threshold limit value
LEL	Lower Explosive Level	µg/m ³	Micrograms per cubic meter
min	Minute	VOC	Volatile organic compound

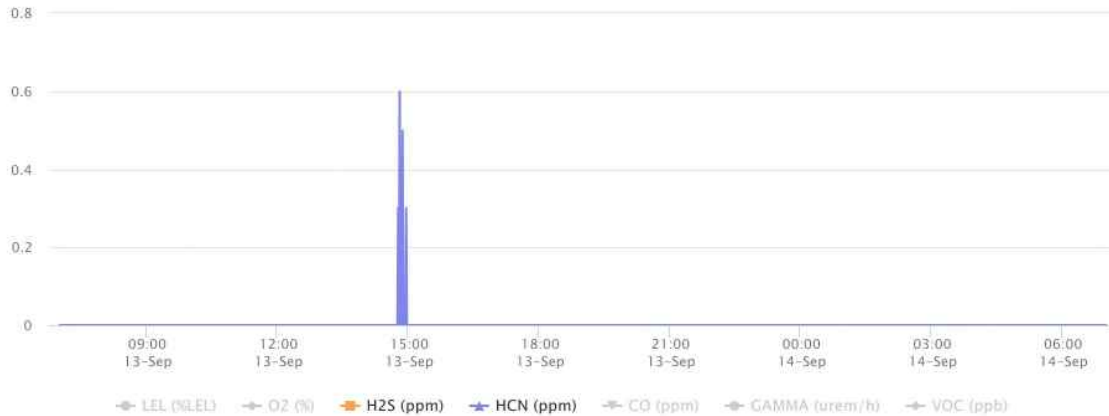
9/13/19 to 9/14/19 Data for AreaRAE Pro (HCN and H₂S) – Northeast of fire



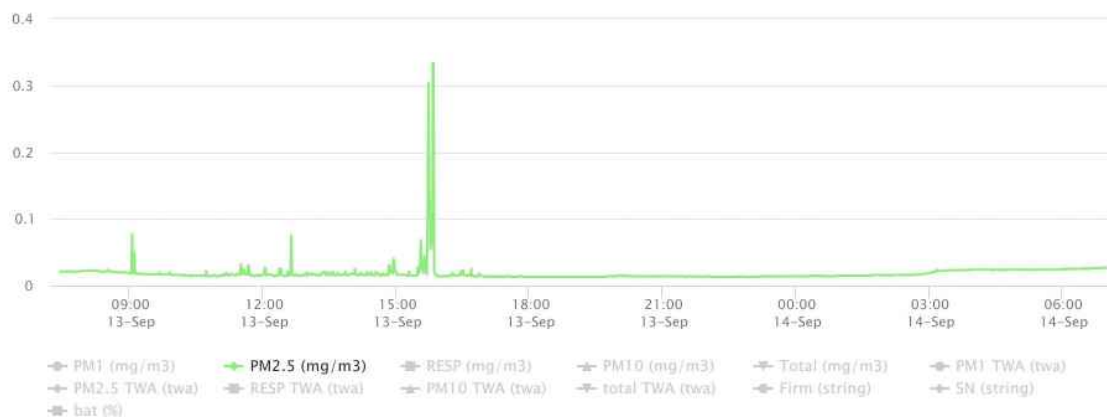
9/13/19 to 9/14/19 Data for AreaRAE Pro (HCN and H₂S) – Southeast of fire



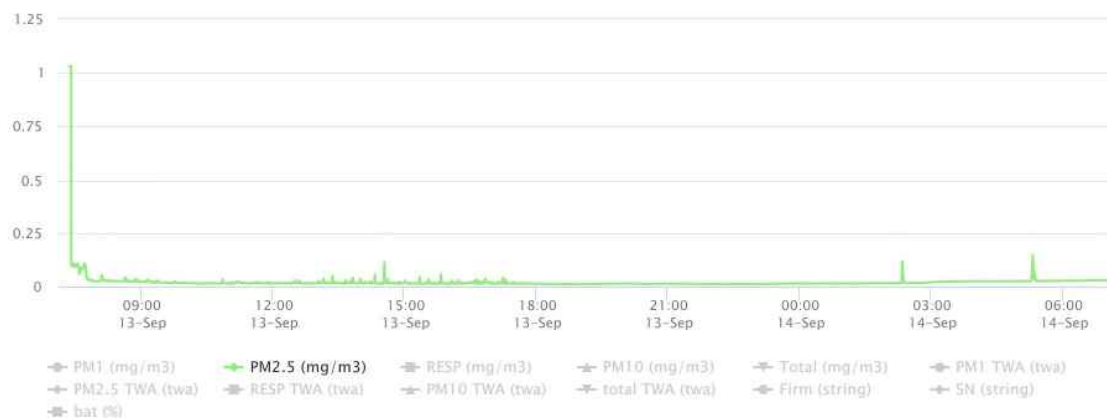
9/13/19 to 9/14/19 Data for AreaRAE Pro (HCN and H₂S) – South of fire



9/13/19 to 9/14/19 Data for DustTrak (PM2.5) – Northeast of fire



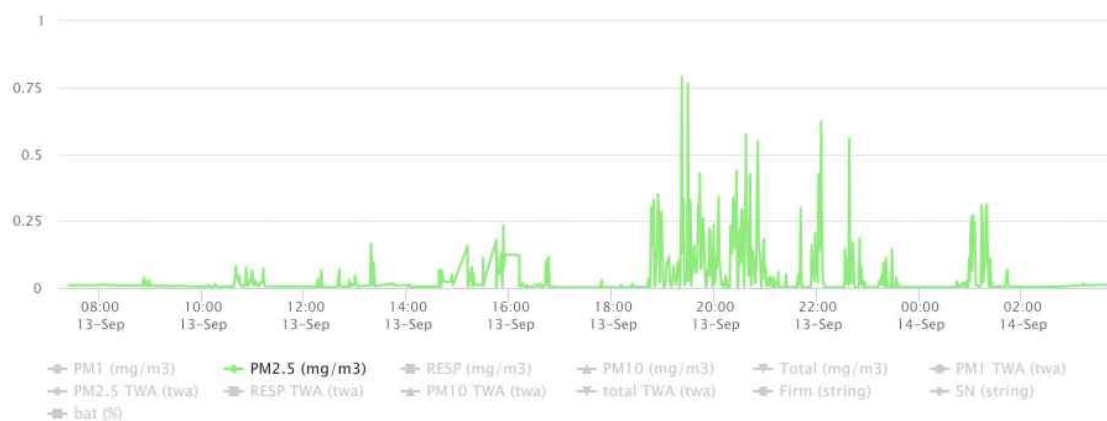
9/13/19 to 9/14/19 Data for DustTrak (PM2.5) – Southeast of fire



9/13/19 to 9/14/19 Data for DustTrak (PM2.5) – South of fire



9/13/19 to 9/14/19 Data for DustTrak (PM2.5) – Northwest of fire



Air Monitoring Summary Tables

The table below summarize monitoring data collected on using EPA's Viper wireless remote monitoring system.

Project Name:

From: 9/14/19
7:00

To: 9/15/19
6:58



Location 1 - Northeast of Fire							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 1	VOC	No	1,487	1	0 - 1 ppb	0 ppb	1,000 ppb
	CO	No	1,487	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	1,487	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	1,487	490	0 - 0.6 ppm	0.1 ppm	7.1 ppm
	O ₂	No	1,487	1,487	20.2 - 20.9%	20.5%	<19.5 or >23%
	LEL	No	1,487	0	0 - 0%	0%	10%
DustTrak 1	PM-2.5	Moderate	1,511	1,511	17 - 40 µg/m ³	21.8 µg/m ³	See SOG #: T106

Location 2 - Southeast of Fire							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 2	VOC	No	1,490	0	0 - 0 ppb	0 ppb	1,000 ppb
	CO	No	1,490	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	1,490	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	1,490	325	0 - 0.7 ppm	0 ppm	7.1 ppm
	O ₂	No	1,490	1,490	20.9 - 20.9%	20.9%	<19.5 or >23%
	LEL	No	1,490	0	0 - 0 %	0%	10%
DustTrak 2	PM-2.5	Moderate	1,703	1,703	14 - 107 µg/m ³	25 µg/m ³	See SOG #: T106

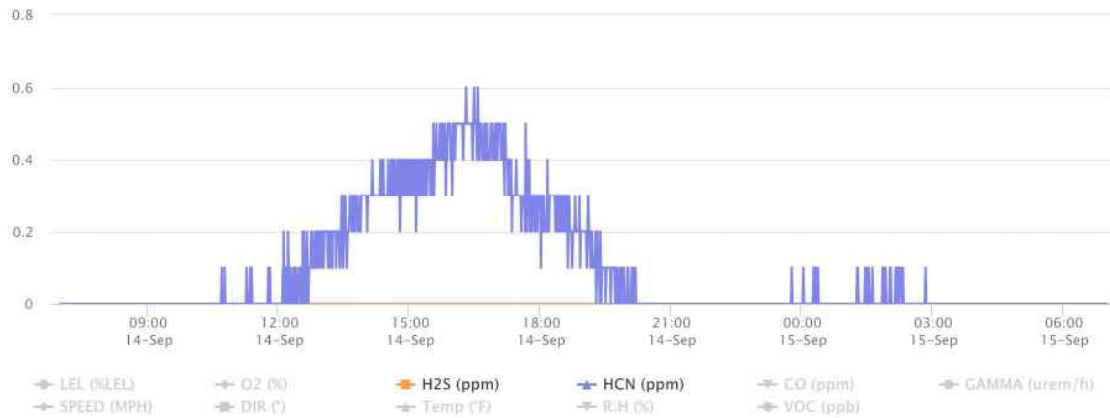
Location 3 - South of Fire							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 3	VOC	No	1,482	238	0 - 1366 ppb	66.6 ppb	1,000 ppb
	CO	No	1,482	31	0 - 7 ppm	0.1 ppm	83 ppm
	H ₂ S	No	1,482	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	1,482	1,245	0 - 2.2 ppm	0.5 ppm	7.1 ppm
	O ₂	No	1,482	1,482	20.9 - 21.4%	21.2%	<19.5 or >23%
	LEL	No	1,482	0	0 - 0%	0%	10%
DustTrak 3	PM-2.5	Unhealthy	1,598	1,437	0 - 4150 µg/m ³	99.3 µg/m ³	See SOG #: T106

Location 4 - Northwest of Fire							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
DustTrak 4	PM-2.5	Moderate	559	559	11 - 204 µg/m ³	24.1 µg/m ³	See SOG #: T106

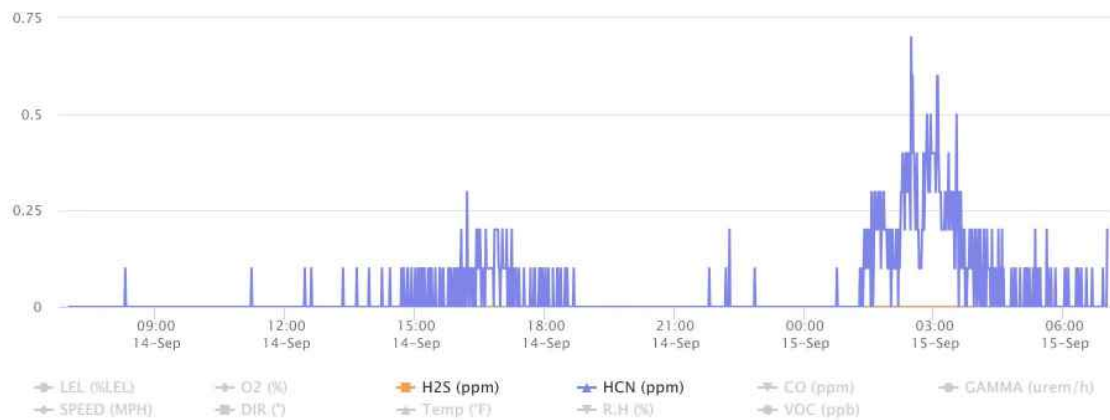
Notes:

%	Percent	O ₂	Oxygen
<	Less than	PEL	Permissible exposure limit
>	Greater than	ppb	Parts per billion
AEGL	Acute Exposure Guideline Levels for Airborne Chemicals	ppm	Parts per million
CO	Carbon monoxide	PM	Particulate matter
H ₂ S	Hydrogen Sulfide	SOG	Standard Operating Guidelines
HCN	Hydrogen Cyanide	TLV	Threshold limit value
LEL	Lower Explosive Level	µg/m ³	Micrograms per cubic meter
min	Minute	VOC	Volatile organic compound

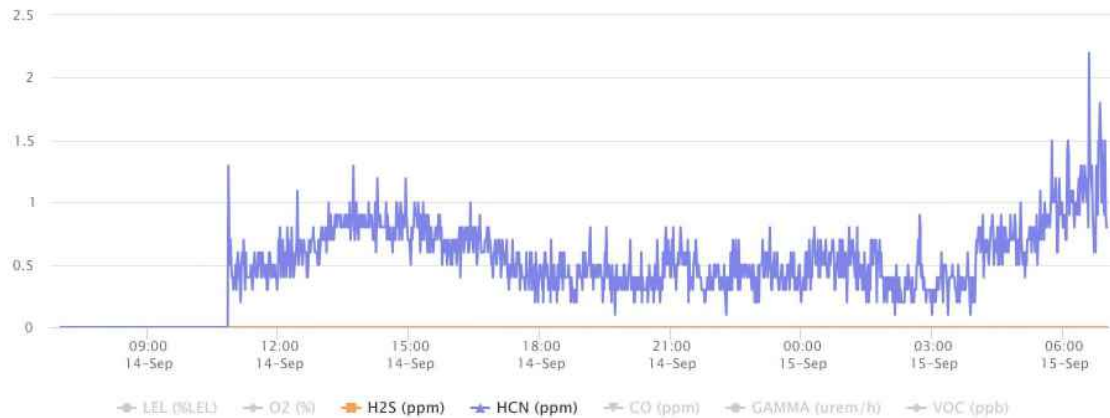
9/14/19 to 9/15/19 Data for AreaRAE Pro (HCN and H₂S) – Northeast of fire



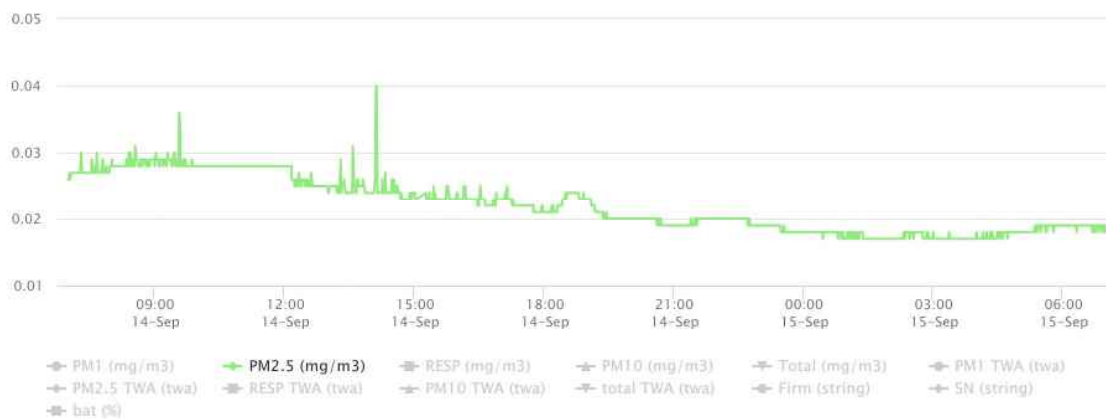
9/14/19 to 9/15/19 Data for AreaRAE Pro (HCN and H₂S) – Southeast of fire



9/14/19 to 9/15/19 Data for AreaRAE Pro (HCN and H₂S) – South of fire



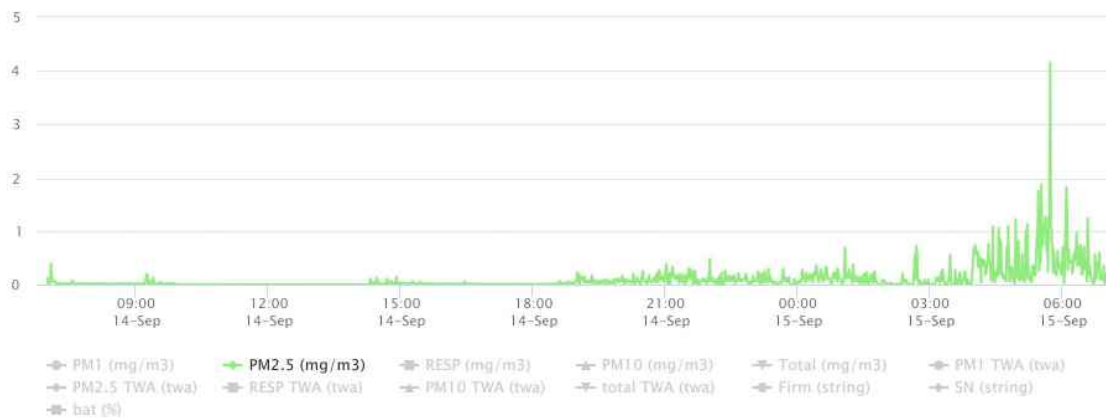
9/14/19 to 9/15/19 Data for DustTrak (PM2.5) – Northeast of fire



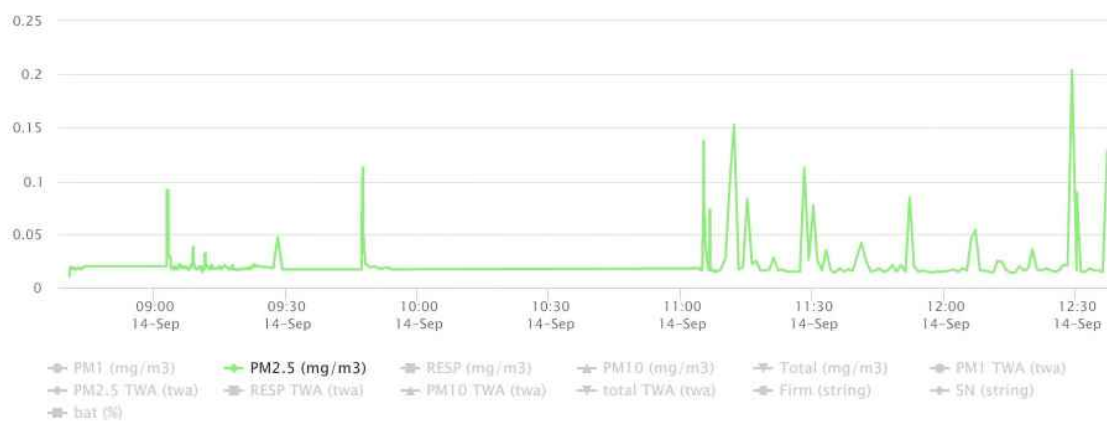
9/14/19 to 9/15/19 Data for DustTrak (PM2.5) – Southeast of fire



9/14/19 to 9/15/19 Data for DustTrak (PM2.5) – South of fire



9/14/19 to 9/15/19 Data for DustTrak (PM2.5) – Northwest of fire



Air Monitoring Summary Tables

The table below summarize monitoring data collected on using EPA's Viper wireless remote monitoring system.

Project Name:

From: 9/15/19
7:00

To: 9/16/19
6:58



Location 1 - Northeast of Fire							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 1	VOC	No	1,507	8	0 - 12 ppb	0 ppb	1,000 ppb
	CO	No	1,507	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	1,507	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	1,507	534	0 - 0.6 ppm	0.1 ppm	7.1 ppm
	O ₂	No	1,507	1,507	20.2 - 20.9%	20.5%	<19.5 or >23%
	LEL	No	1,507	0	0 - 0%	0%	10%
DustTrak 1	PM-2.5	Moderate	2,942	2,942	14 - 43 µg/m ³	19.3 µg/m ³	See SOG #: T106

Location 2 - Southeast of Fire							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 2	VOC	No	1,503	347	0 - 50 ppb	2.7 ppb	1,000 ppb
	CO	No	1,503	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	1,503	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	1,503	896	0 - 1.2 ppm	0.2 ppm	7.1 ppm
	O ₂	No	1,503	1,503	20.9 - 20.9%	20.9%	<19.5 or >23%
	LEL	No	1,503	0	0 - 0 %	0%	10%
DustTrak 2	PM-2.5	Moderate	1,677	1,677	13 - 107 µg/m ³	20 µg/m ³	See SOG #: T106

Location 3 - South of Fire							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 3	VOC	No	1,500	0	0 - 0 ppb	0 ppb	1,000 ppb
	CO	No	1,500	11	0 - 8 ppm	0 ppm	83 ppm
	H ₂ S	No	1,500	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	1,500	1,479	0 - 1.8 ppm	0.5 ppm	7.1 ppm
	O ₂	No	1,500	1,500	21.1 - 21.5%	21.3%	<19.5 or >23%
	LEL	No	1,500	0	0 - 0%	0%	10%
DustTrak 3	PM-2.5	Moderate	968	956	0 - 773 µg/m ³	19 µg/m ³	See SOG #: T106

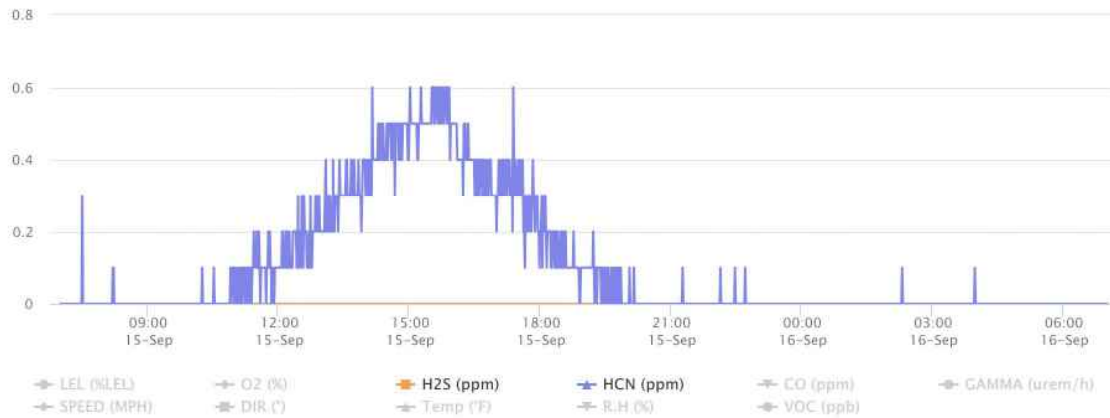
Location 4 - Northwest of Fire							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 4	VOC	No	4,115	0	0 - 0 ppb	0 ppb	1,000 ppb
	CO	No	4,115	2,682	0 - 11 ppm	3.8 ppm	83 ppm
	H ₂ S	No	4,115	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	4,115	3,607	0 - 1.7 ppm	0.7 ppm	7.1 ppm
	O ₂	No	4,115	4,115	20.3 - 20.9%	20.9%	<19.5 or >23%
DustTrak 4	PM-2.5	Moderate	1,417	1,416	0 - 43 µg/m ³	6.3 µg/m ³	See SOG #: T106

Notes:

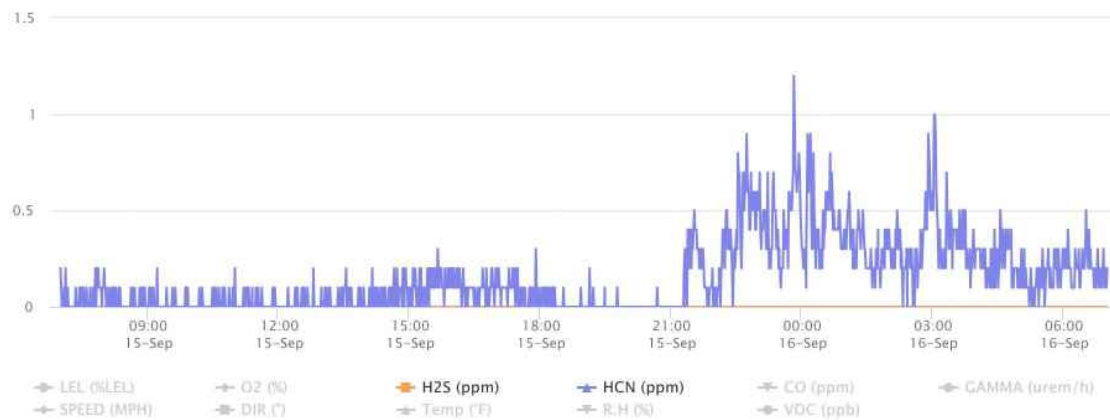
% Percent
 < Less than
 > Greater than
 AEGL Acute Exposure Guideline Levels for Airborne Chemicals
 CO Carbon monoxide
 H₂S Hydrogen Sulfide
 HCN Hydrogen Cyanide
 LEL Lower Explosive Level
 min Minute

O₂ Oxygen
 PEL Permissible exposure limit
 ppb Parts per billion
 ppm Parts per million
 PM Particulate matter
 SOG Standard Operating Guidelines
 TLV Threshold limit value
 µg/m³ Micrograms per cubic meter
 VOC Volatile organic compound

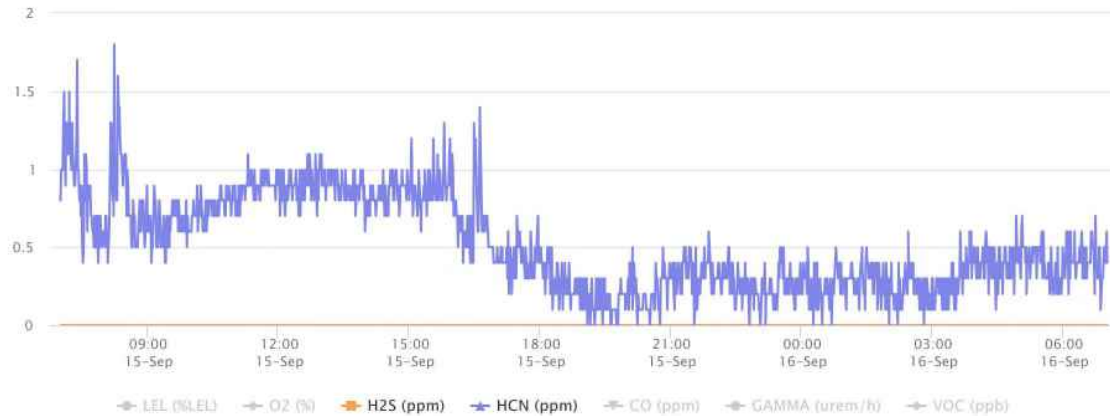
9/15/19 to 9/16/19 Data for AreaRAE Pro (HCN and H₂S) – Northeast of fire



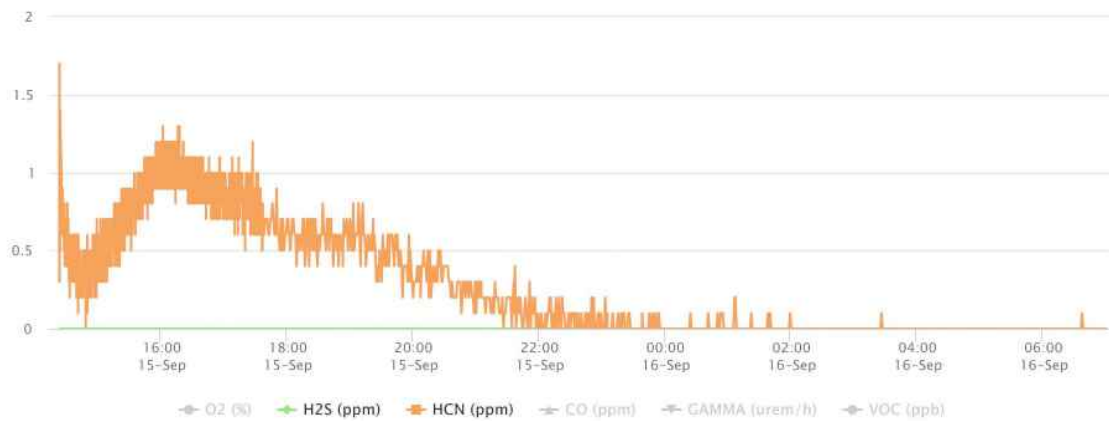
9/15/19 to 9/16/19 Data for AreaRAE Pro (HCN and H₂S) – Southeast of fire



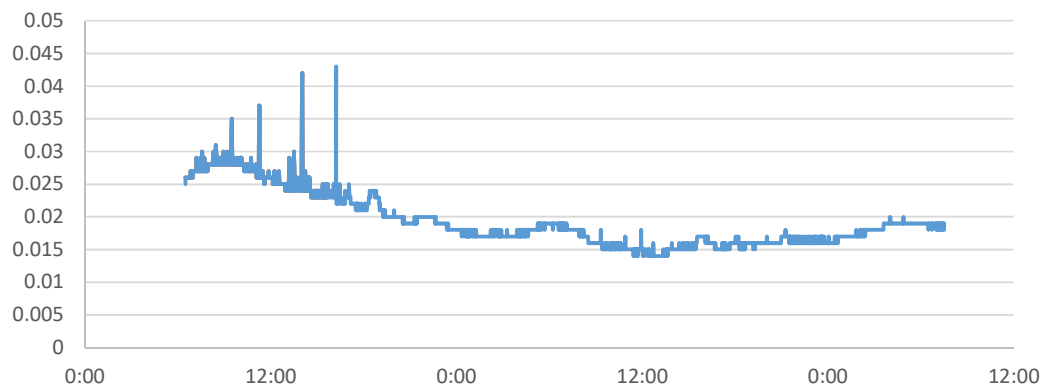
9/15/19 to 9/16/19 Data for AreaRAE Pro (HCN and H₂S) – South of fire



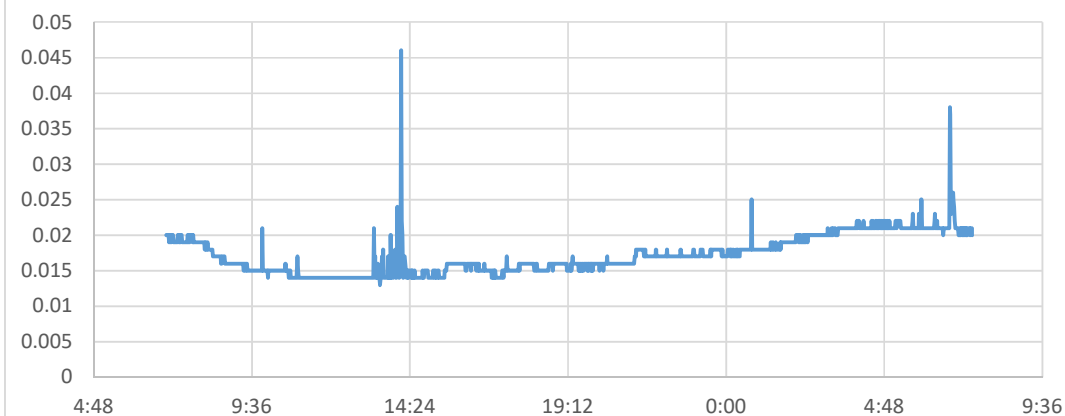
9/15/19 to 9/16/19 Data for AreaRAE Pro (HCN and H₂S) – Northwest of fire



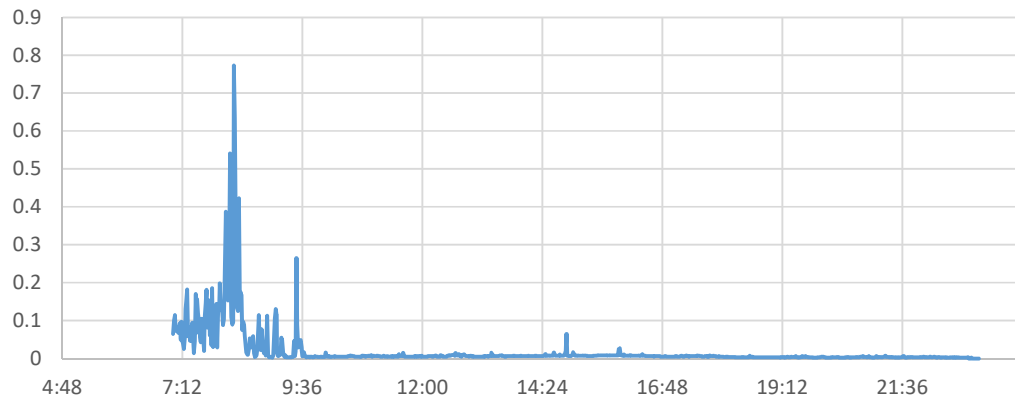
9/15/19 to 9/16/19 Data for DustTrak (PM_{2.5}) – Northeast of fire



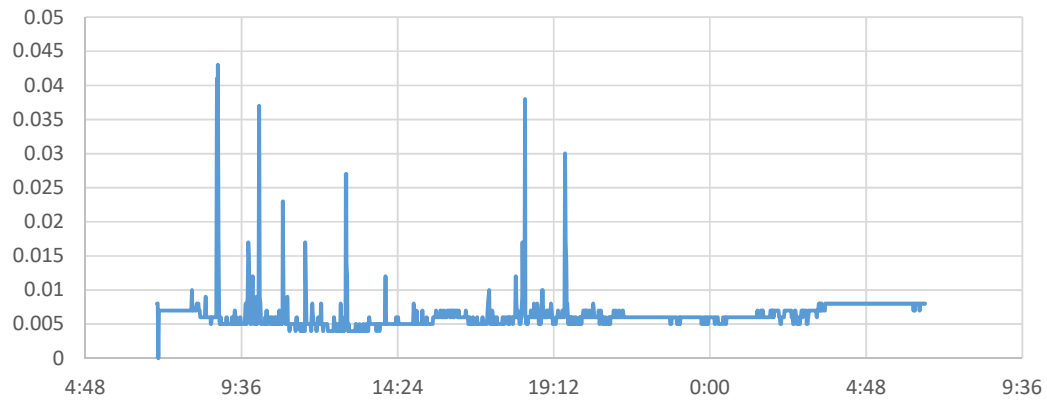
9/15/19 to 9/16/19 Data for DustTrak (PM_{2.5}) – Southeast of fire



9/15/19 to 9/16/19 Data for DustTrak (PM2.5) – South of fire



9/15/19 to 9/16/19 Data for DustTrak (PM2.5) – Northwest of fire



Air Monitoring Summary Tables

The table below summarize monitoring data collected on using EPA's Viper wireless remote monitoring system.

Project Name:

From: 9/16/19
7:00

To: 9/17/19
6:59



Location 1 - Northeast of Fire							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 1	VOC	No	1,514	989	0 - 694 ppb	64.6 ppb	1,000 ppb
	CO	No	1,514	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	1,514	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	1,514	438	0 - 3.5 ppm	0.2 ppm	7.1 ppm
	O ₂	No	1,514	1,514	19.7 - 20.9%	20.4%	<19.5 or >23%
	LEL	No	1,514	0	0 - 0%	0%	10%
DustTrak 1	PM-2.5	Moderate	1,741	1,741	15 - 80 µg/m ³	20.5 µg/m ³	See SOG #: T106

Location 2 - Southeast of Fire							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 2	VOC	No	1,505	762	0 - 291 ppb	53 ppb	1,000 ppb
	CO	No	1,505	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	1,505	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	1,505	1,266	0 - 0.8 ppm	0.2 ppm	7.1 ppm
	O ₂	No	1,505	1,505	20.9 - 20.9%	20.9%	<19.5 or >23%
	LEL	No	1,505	0	0 - 0 %	0%	10%
DustTrak 2	PM-2.5	Moderate	1,930	1,930	14 - 123 µg/m ³	23.1 µg/m ³	See SOG #: T106

Location 3 - South of Fire							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 3	VOC	No	1,526	960	0 - 1165 ppb	557.3 ppb	1,000 ppb
	CO	No	1,526	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	1,526	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	1,526	567	0 - 1.7 ppm	0.3 ppm	7.1 ppm
	O ₂	No	1,526	1,526	20.9 - 21.5%	21.1%	<19.5 or >23%
	LEL	No	1,526	0	0 - 0%	0%	10%
DustTrak 3	PM-2.5	Moderate	1,731	1,731	3 - 164 µg/m ³	12.9 µg/m ³	See SOG #: T106

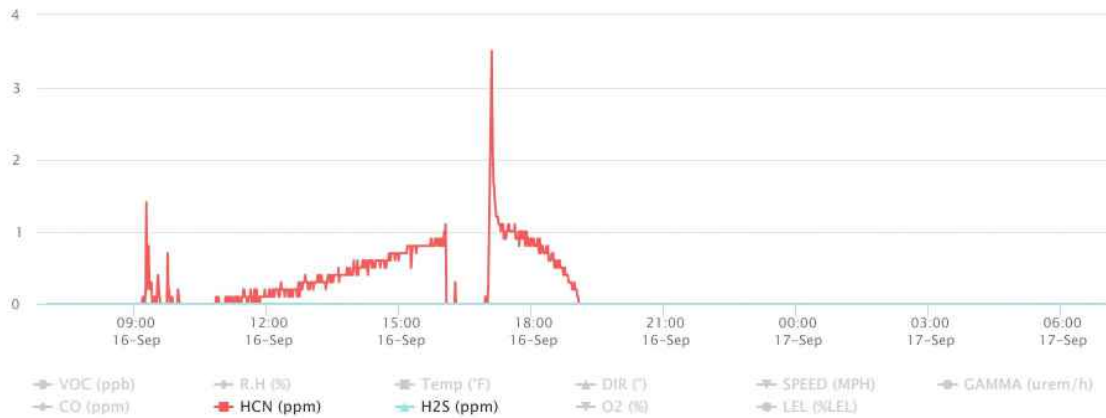
Location 4 - Northwest of Fire							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 4	VOC	No	1,489	0	0 - 0 ppb	0 ppb	1,000 ppb
	CO	No	1,489	17	0 - 37 ppm	0.1 ppm	83 ppm
	H ₂ S	No	1,489	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	1,489	665	0 - 1 ppm	0.2 ppm	7.1 ppm
	O ₂	No	1,489	1,489	20.9 - 20.9%	20.9%	<19.5 or >23%
DustTrak 4	PM-2.5	Moderate	3,042	3,042	4 - 264 µg/m ³	13.2 µg/m ³	See SOG #: T106

Notes:

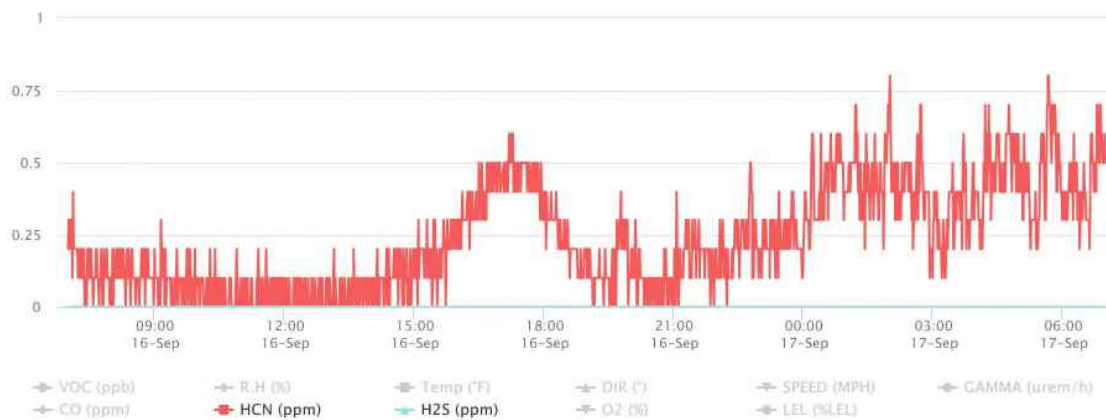
% Percent
 < Less than
 > Greater than
 AEGL Acute Exposure Guideline Levels for Airborne Chemicals
 CO Carbon monoxide
 H₂S Hydrogen Sulfide
 HCN Hydrogen Cyanide
 LEL Lower Explosive Level
 min Minute

O₂ Oxygen
 PEL Permissible exposure limit
 ppb Parts per billion
 ppm Parts per million
 PM Particulate matter
 SOG Standard Operating Guidelines
 TLV Threshold limit value
 µg/m³ Micrograms per cubic meter
 VOC Volatile organic compound

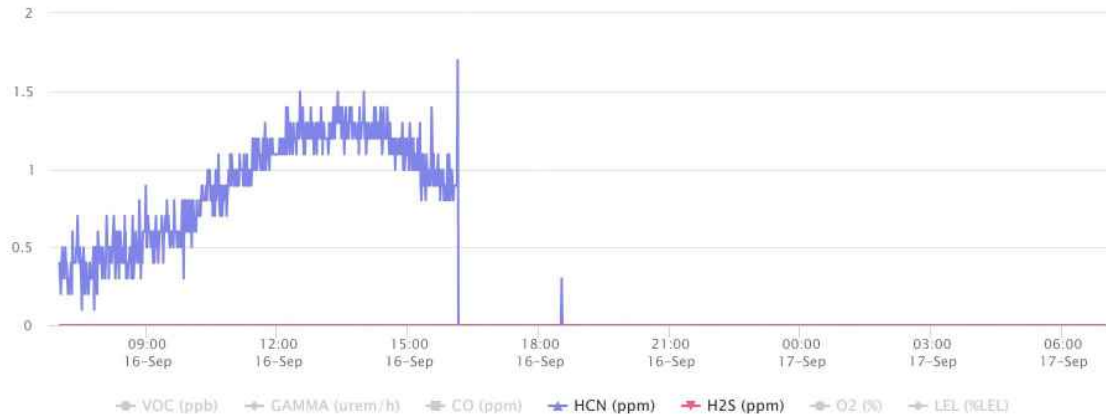
9/16/19 to 9/17/19 Data for AreaRAE Pro (HCN and H₂S) – Northeast of fire



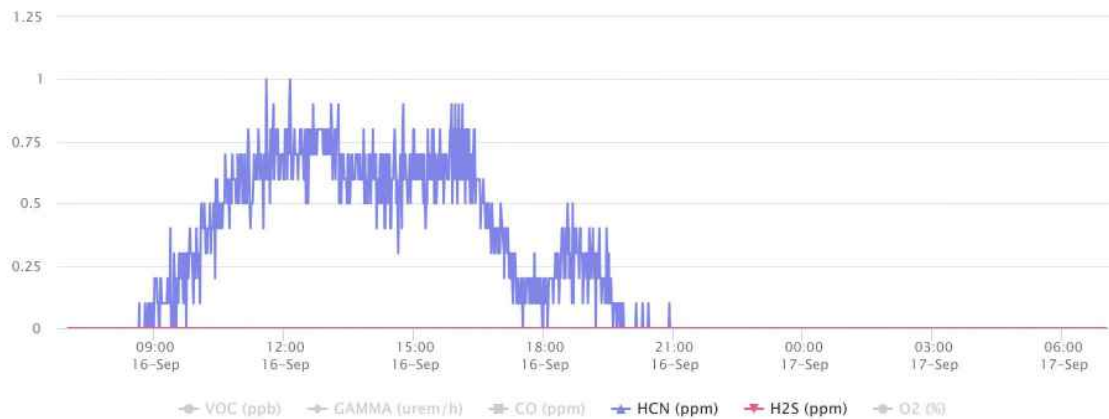
9/16/19 to 9/17/19 Data for AreaRAE Pro (HCN and H₂S) – Southeast of fire



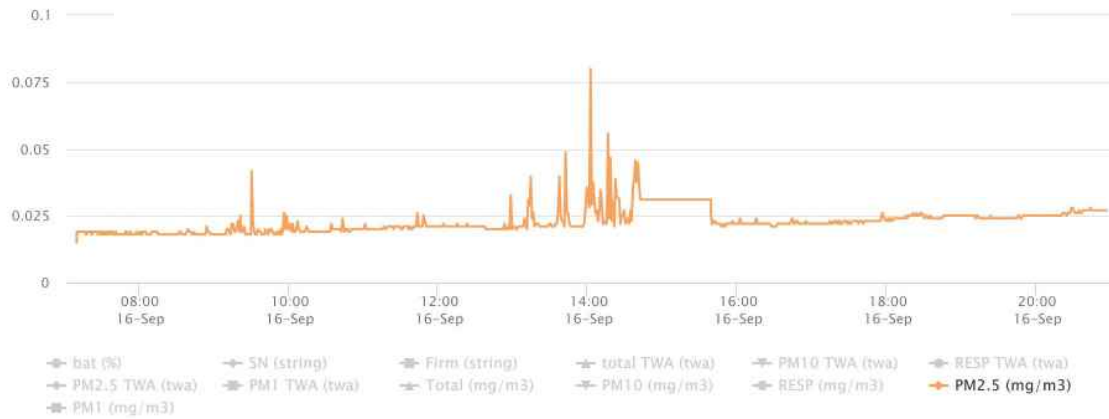
9/16/19 to 9/17/19 Data for AreaRAE Pro (HCN and H₂S) – South of fire



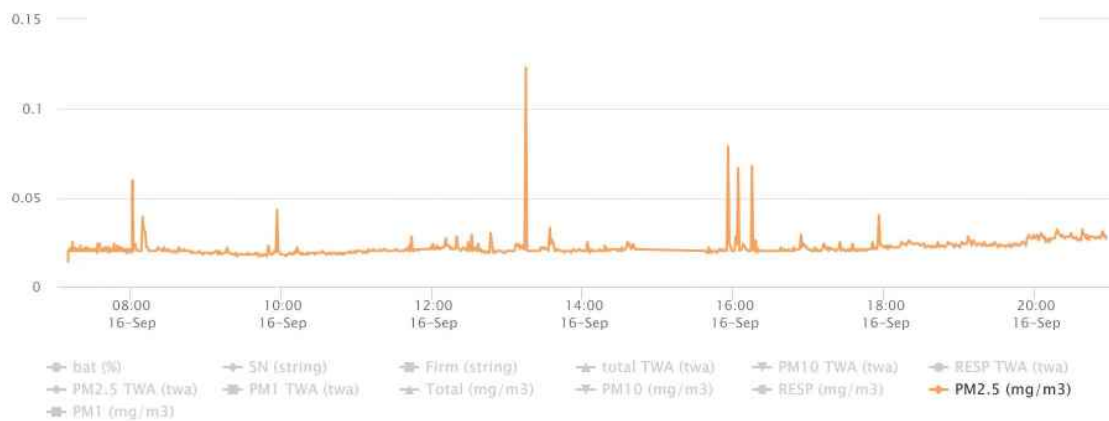
9/16/19 to 9/17/19 Data for AreaRAE Pro (HCN and H₂S) – Northwest of fire



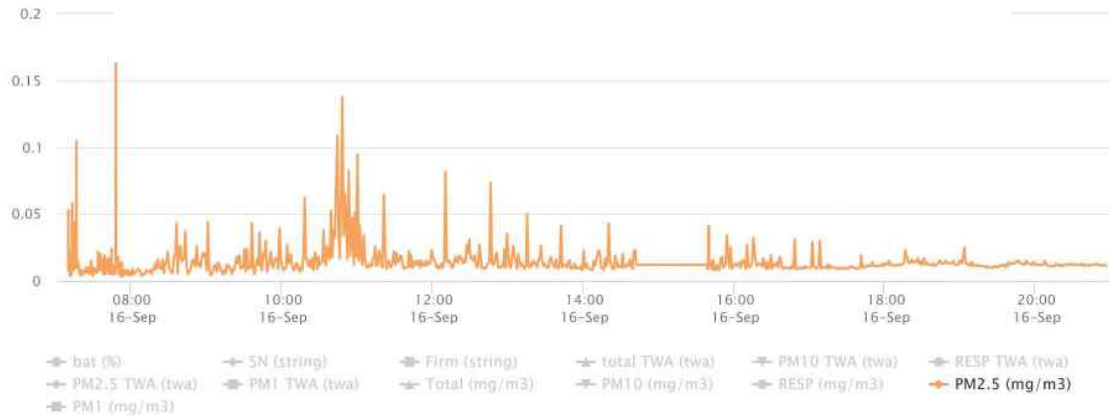
9/16/19 to 9/17/19 Data for DustTrak (PM_{2.5}) – Northeast of fire



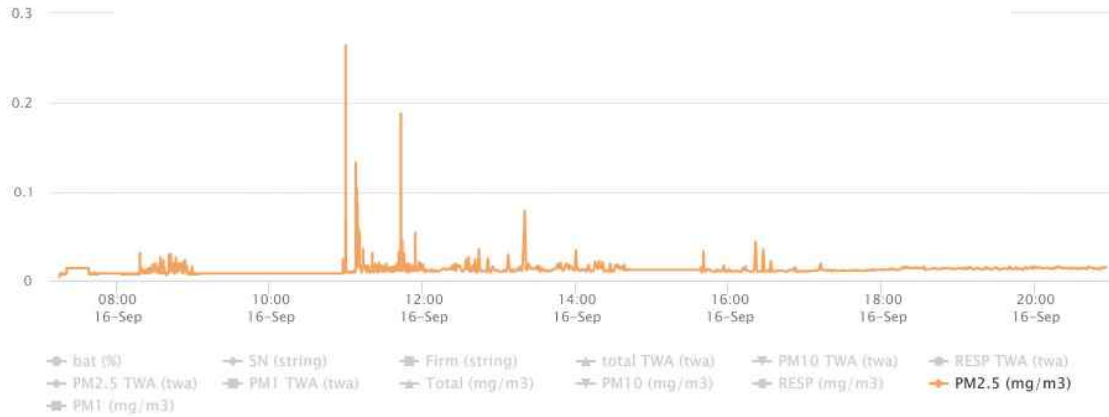
9/16/19 to 9/17/19 Data for DustTrak (PM_{2.5}) – Southeast of fire



9/16/19 to 9/17/19 Data for DustTrak (PM2.5) – South of fire



9/16/19 to 9/17/19 Data for DustTrak (PM2.5) – Northwest of fire



Air Monitoring Summary Tables

The table below summarize monitoring data collected on using EPA's Viper wireless remote monitoring system.

Project Name:

From: 9/17/19
7:00

To: 9/18/19
6:59



Location 1 - Northeast of Fire							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 1	VOC	No	1,415	67	0 - 85 ppb	2.3 ppb	1,000 ppb
	CO	No	1,415	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	1,415	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	1,415	0	0 - 0 ppm	0 ppm	7.1 ppm
	O ₂	No	1,415	1,415	20 - 21.8%	21.1%	<19.5 or >23%
	LEL	No	1,415	0	0 - 0%	0%	10%
DustTrak 1	PM-2.5	Unhealthy	1,272	1,272	24 - 61 µg/m ³	43.3 µg/m ³	See SOG #: T106

Location 2 - Southeast of Fire							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 2	VOC	No	1,417	946	0 - 592 ppb	55.7 ppb	1,000 ppb
	CO	No	1,417	1	0 - 2 ppm	0 ppm	83 ppm
	H ₂ S	No	1,417	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	1,417	801	0 - 0.8 ppm	0.1 ppm	7.1 ppm
	O ₂	No	1,417	1,417	20.9 - 20.9%	20.9%	<19.5 or >23%
	LEL	No	1,417	0	0 - 0 %	0%	10%
DustTrak 2	PM-2.5	Unhealthy	1,587	1,587	14 - 341 µg/m ³	46.6 µg/m ³	See SOG #: T106

Location 3 - South of Fire							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 3	VOC	No	1,410	1,217	0 - 1874 ppb	698.4 ppb	1,000 ppb
	CO	No	1,410	65	0 - 12 ppm	0.2 ppm	83 ppm
	H ₂ S	No	1,410	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	1,410	227	0 - 2.4 ppm	0.1 ppm	7.1 ppm
	O ₂	No	1,410	1,410	20.9 - 20.9%	20.9%	<19.5 or >23%
	LEL	No	1,410	0	0 - 0%	0%	10%
DustTrak 3	PM-2.5	Moderate	1,334	1,224	0 - 359 µg/m ³	19.7 µg/m ³	See SOG #: T106

Location 4 - Northwest of Fire							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 4	VOC	No	1,408	0	0 - 0 ppb	0 ppb	1,000 ppb
	CO	No	1,408	13	0 - 44 ppm	0.1 ppm	83 ppm
	H ₂ S	No	1,408	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	1,408	476	0 - 1.1 ppm	0.2 ppm	7.1 ppm
	O ₂	No	1,408	1,408	20.9 - 20.9%	20.9%	<19.5 or >23%
DustTrak 4	PM-2.5	Moderate	1,217	1,217	11 - 349 µg/m ³	26.4 µg/m ³	See SOG #: T106

Notes:

% Percent
 < Less than
 > Greater than
 AEGL Acute Exposure Guideline Levels for Airborne Chemicals
 CO Carbon monoxide
 H₂S Hydrogen Sulfide
 HCN Hydrogen Cyanide
 LEL Lower Explosive Level
 min Minute

O₂ Oxygen
 PEL Permissible exposure limit
 ppb Parts per billion
 ppm Parts per million
 PM Particulate matter
 SOG Standard Operating Guidelines
 TLV Threshold limit value
 µg/m³ Micrograms per cubic meter
 VOC Volatile organic compound

Air Monitoring Summary Tables

The table below summarize monitoring data collected on using EPA's Viper wireless remote monitoring system.

Project Name:

From: 9/18/19
7:00

To: 9/19/19
6:58



Location 1 - Northeast of Fire							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 1	VOC	No	1,493	0	0 - 0 ppb	0 ppb	1,000 ppb
	CO	No	1,493	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	1,493	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	1,493	0	0 - 0 ppm	0 ppm	7.1 ppm
	O ₂	No	1,493	1,493	20.9 - 21.3%	21%	<19.5 or >23%
	LEL	No	1,493	0	0 - 0%	0%	10%
DustTrak 1	PM-2.5	Moderate	2,000	2,000	15 - 29 µg/m ³	20.1 µg/m ³	See SOG #: T106

Location 2 - Southeast of Fire							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 2	VOC	No	1,493	518	0 - 132 ppb	27.8 ppb	1,000 ppb
	CO	No	1,493	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	1,493	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	1,493	280	0 - 0.6 ppm	0 ppm	7.1 ppm
	O ₂	No	1,493	1,493	20.9 - 20.9%	20.9%	<19.5 or >23%
	LEL	No	1,493	0	0 - 0 %	0%	10%
DustTrak 2	PM-2.5	Moderate	2,186	2,186	12 - 107 µg/m ³	21.7 µg/m ³	See SOG #: T106

Location 3 - South of Fire							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 3	VOC	No	1,490	488	0 - 4313 ppb	303.7 ppb	1,000 ppb
	CO	No	1,490	302	0 - 33 ppm	1.4 ppm	83 ppm
	H ₂ S	No	1,490	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	1,490	68	0 - 9.2 ppm	0.1 ppm	7.1 ppm
	O ₂	No	1,490	1,490	20.9 - 20.9%	20.9%	<19.5 or >23%
	LEL	No	1,490	111	0 - 2%	0.1%	10%
DustTrak 3	PM-2.5	Good	2,041	2,031	0 - 17 µg/m ³	7 µg/m ³	See SOG #: T106

Location 4 - Northwest of Fire							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 4	VOC	No	1,500	0	0 - 0 ppb	0 ppb	1,000 ppb
	CO	No	1,500	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	1,500	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	1,500	0	0 - 0 ppm	0 ppm	7.1 ppm
	O ₂	No	1,500	1,500	20.9 - 20.9%	20.9%	<19.5 or >23%
	LEL	No	1,500	1,500	20.9 - 20.9%	20.9%	<19.5 or >23%
DustTrak 4	PM-2.5	Moderate	1,635	1,635	11 - 31 µg/m ³	13.2 µg/m ³	See SOG #: T106

Notes:

% Percent
< Less than
> Greater than
AEGL Acute Exposure Guideline Levels for Airborne Chemicals
CO Carbon monoxide
H₂S Hydrogen Sulfide
HCN Hydrogen Cyanide
LEL Lower Explosive Level
min Minute

O₂ Oxygen
PEL Permissible exposure limit
ppb Parts per billion
ppm Parts per million
PM Particulate matter
SOG Standard Operating Guidelines
TLV Threshold limit value
µg/m³ Micrograms per cubic meter
VOC Volatile organic compound

Air Monitoring Summary Tables

The table below summarize monitoring data collected on using EPA's Viper wireless remote monitoring system.

Project Name:

From: 9/19/19
7:00

To: 9/20/19
6:58



Location 1 - Northeast of Fire							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 1	VOC	No	1,479	894	0 - 24 ppb	5.9 ppb	1,000 ppb
	CO	No	1,479	14	0 - 51 ppm	0.1 ppm	83 ppm
	H ₂ S	No	1,476	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	1,475	57	0 - 1.1 ppm	0 ppm	7.1 ppm
	O ₂	No	1,479	1,479	17.9 - 21.4%	21%	<19.5 or >23%
	LEL	No	1,479	2	0 - 48%	0%	10%
DustTrak 1	PM-2.5	Moderate	758	758	16 - 70 µg/m ³	17.7 µg/m ³	See SOG #: T106

Location 2 - Southeast of Fire							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 2	VOC	No	1,450	759	0 - 185 ppb	16.9 ppb	1,000 ppb
	CO	No	1,450	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	1,488	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	1,488	88	0 - 0.5 ppm	0 ppm	7.1 ppm
	O ₂	No	1,450	1,450	20.9 - 20.9%	20.9%	<19.5 or >23%
	LEL	No	1,450	0	0 - 0 %	0%	10%
DustTrak 2	PM-2.5	Moderate	942	942	14 - 167 µg/m ³	21.3 µg/m ³	See SOG #: T106

Location 3 - South of Fire							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 3	VOC	No	1,494	13	0 - 570 ppb	0.5 ppb	1,000 ppb
	CO	No	1,494	357	0 - 28 ppm	1.5 ppm	83 ppm
	H ₂ S	No	1,494	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	1,494	100	0 - 1.6 ppm	0 ppm	7.1 ppm
	O ₂	No	1,494	1,494	20.9 - 20.9%	20.9%	<19.5 or >23%
	LEL	No	1,494	0	0 - 0%	0%	10%
DustTrak 3	PM-2.5	Moderate	746	746	2 - 523 µg/m ³	22.7 µg/m ³	See SOG #: T106

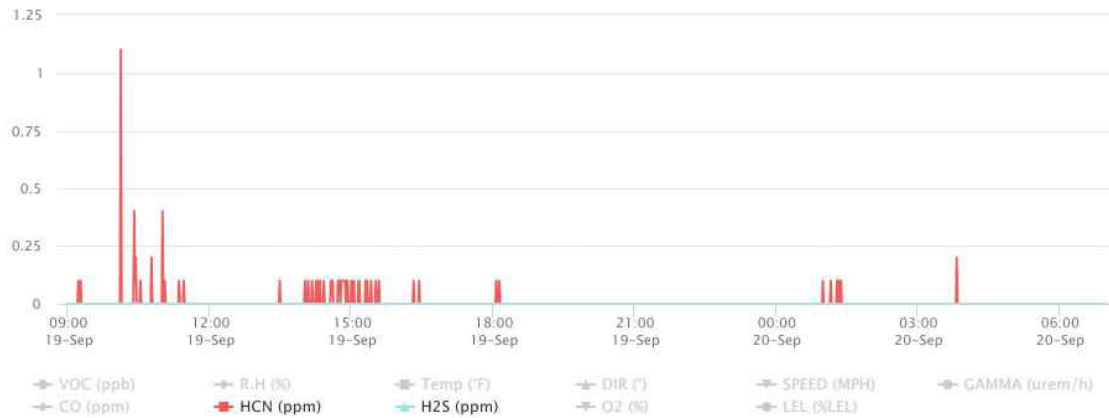
Location 4 - Northwest of Fire							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 4	VOC	No	1,488	1	0 - 1 ppb	0 ppb	1,000 ppb
	CO	No	1,488	1	0 - 2 ppm	0 ppm	83 ppm
	H ₂ S	No	1,489	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	1,488	0	0 - 0 ppm	0 ppm	7.1 ppm
	O ₂	No	1,487	1,487	20.9 - 20.9%	20.9%	<19.5 or >23%
DustTrak 4	PM-2.5	Good	734	734	4 - 27 µg/m ³	6.3 µg/m ³	See SOG #: T106

Notes:

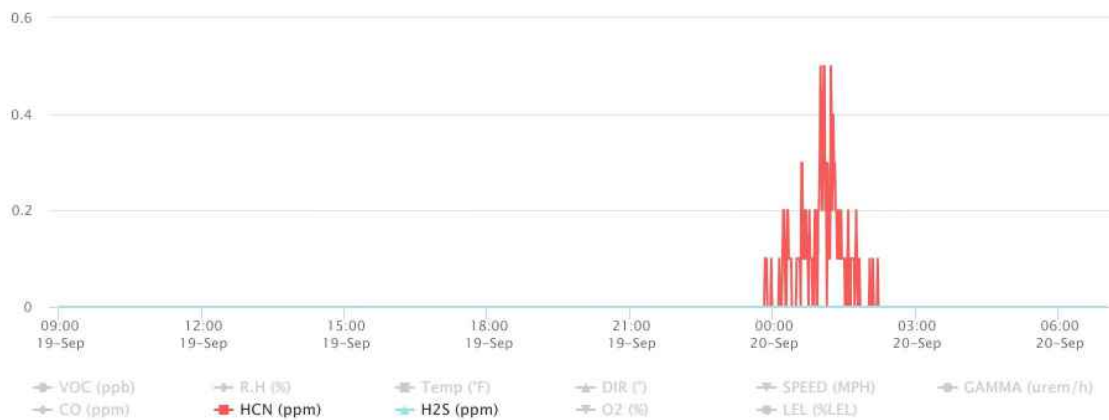
% Percent
 < Less than
 > Greater than
 AEGL Acute Exposure Guideline Levels for Airborne Chemicals
 CO Carbon monoxide
 H₂S Hydrogen Sulfide
 HCN Hydrogen Cyanide
 LEL Lower Explosive Level
 min Minute

O₂ Oxygen
 PEL Permissible exposure limit
 ppb Parts per billion
 ppm Parts per million
 PM Particulate matter
 SOG Standard Operating Guidelines
 TLV Threshold limit value
 µg/m³ Micrograms per cubic meter
 VOC Volatile organic compound

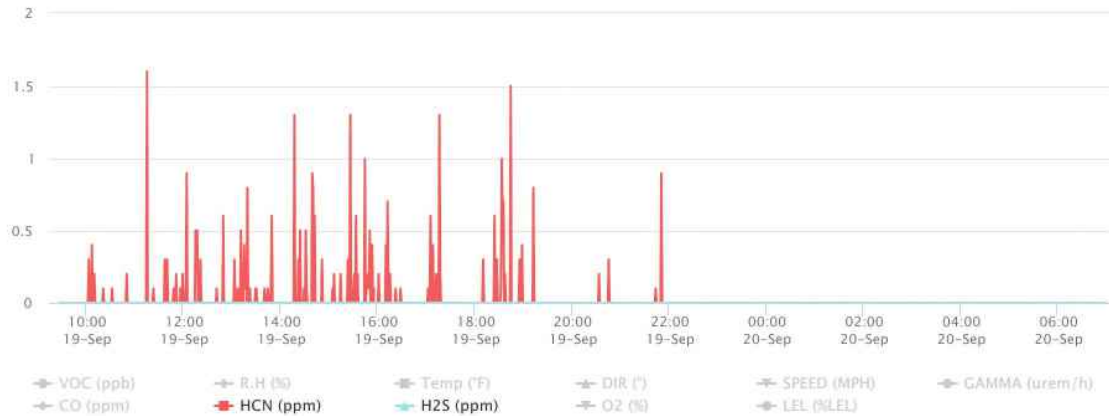
9/19/19 to 9/20/19 Data for AreaRAE Pro (HCN and H₂S) – Northeast of fire



9/19/19 to 9/20/19 Data for AreaRAE Pro (HCN and H₂S) – Southeast of fire



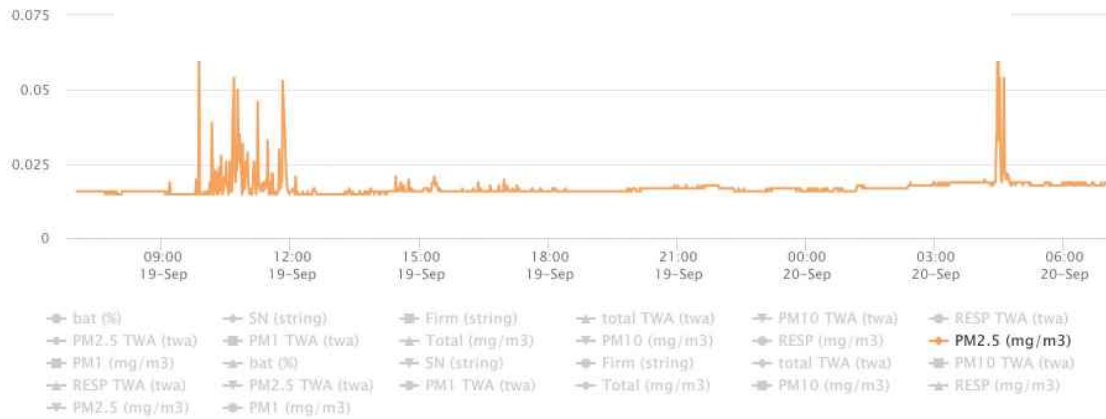
9/19/19 to 9/20/19 Data for AreaRAE Pro (HCN and H₂S) – South of fire



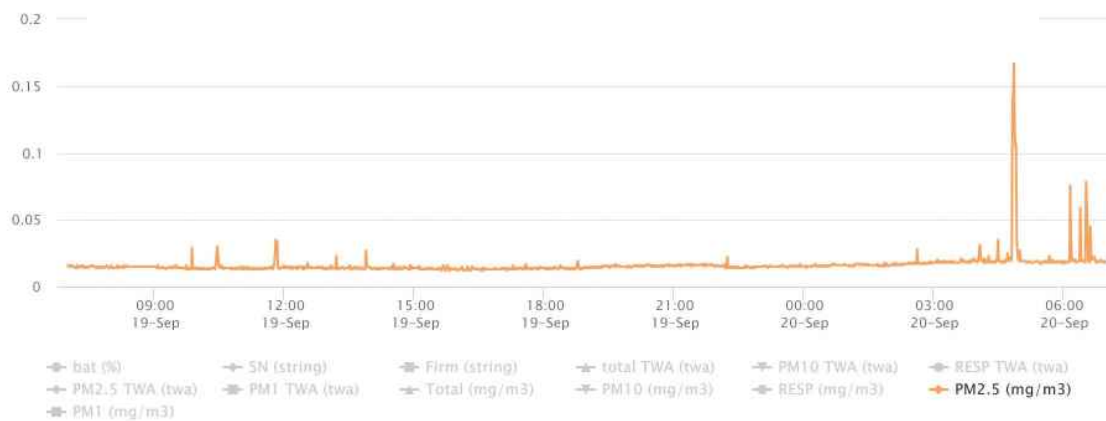
9/19/19 to 9/20/19 Data for AreaRAE Pro (HCN and H₂S) – Northwest of fire



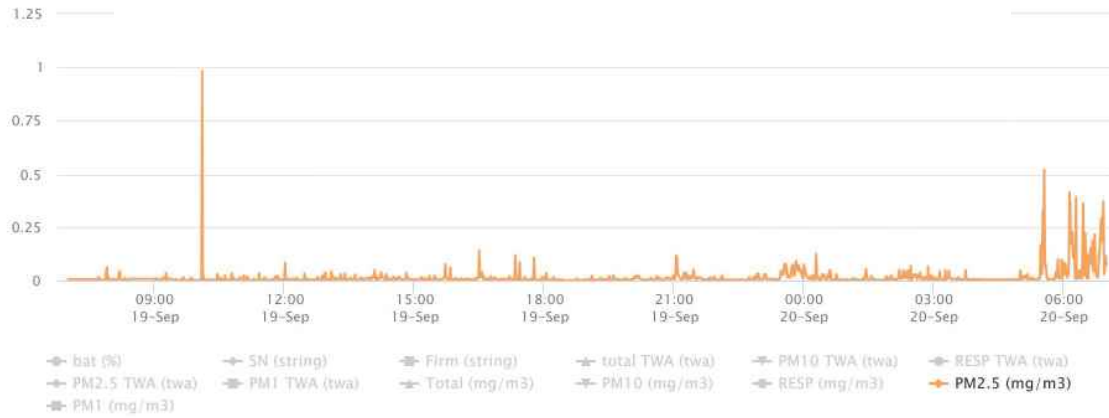
9/19/19 to 9/20/19 Data for DustTrak (PM2.5) – Northeast of fire



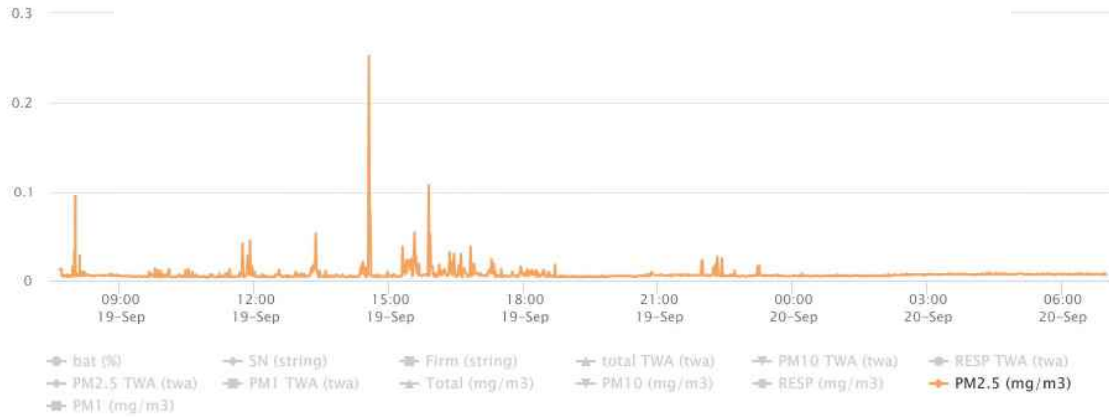
9/19/19 to 9/20/19 Data for DustTrak (PM2.5) – Southeast of fire



9/19/19 to 9/20/19 Data for DustTrak (PM2.5) – South of fire



9/19/19 to 9/20/19 Data for DustTrak (PM2.5) – Northwest of fire



Air Monitoring Summary Tables

The table below summarize monitoring data collected on using EPA's Viper wireless remote monitoring system.

Project Name:

From: 9/20/19
7:00

To: 9/21/19
6:59



Location 1 - Northeast of Fire							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 1	VOC	No	1,492	0	0 - 0 ppb	0 ppb	1,000 ppb
	CO	No	1,492	3	0 - 5 ppm	0 ppm	83 ppm
	H ₂ S	No	1,492	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	1,492	276	0 - 1.6 ppm	0.1 ppm	7.1 ppm
	O ₂	No	1,492	1,492	20.9 - 21.3%	21%	<19.5 or >23%
	LEL	No	1,492	0	0 - 0%	0%	10%
DustTrak 1	PM-2.5	Moderate	1,486	1,486	16 - 874 µg/m ³	20.6 µg/m ³	See SOG #: T106

Location 2 - Southeast of Fire							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 2	VOC	No	1,495	950	0 - 30 ppb	8.2 ppb	1,000 ppb
	CO	No	1,495	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	1,495	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	1,495	275	0 - 0.8 ppm	0.1 ppm	7.1 ppm
	O ₂	No	1,495	1,495	20.9 - 20.9%	20.9%	<19.5 or >23%
	LEL	No	1,495	0	0 - 0 %	0%	10%
DustTrak 2	PM-2.5	Moderate	1,491	1,491	14 - 111 µg/m ³	20.1 µg/m ³	See SOG #: T106

Location 3 - South of Fire							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 3	VOC	No	1,495	1	0 - 882 ppb	0.6 ppb	1,000 ppb
	CO	No	1,495	439	0 - 28 ppm	2.1 ppm	83 ppm
	H ₂ S	No	1,495	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	1,495	138	0 - 1.6 ppm	0 ppm	7.1 ppm
	O ₂	No	1,495	1,495	20.9 - 20.9%	20.9%	<19.5 or >23%
	LEL	No	1,495	0	0 - 0%	0%	10%
DustTrak 3	PM-2.5	Moderate	1,496	1,496	2 - 776 µg/m ³	14.6 µg/m ³	See SOG #: T106

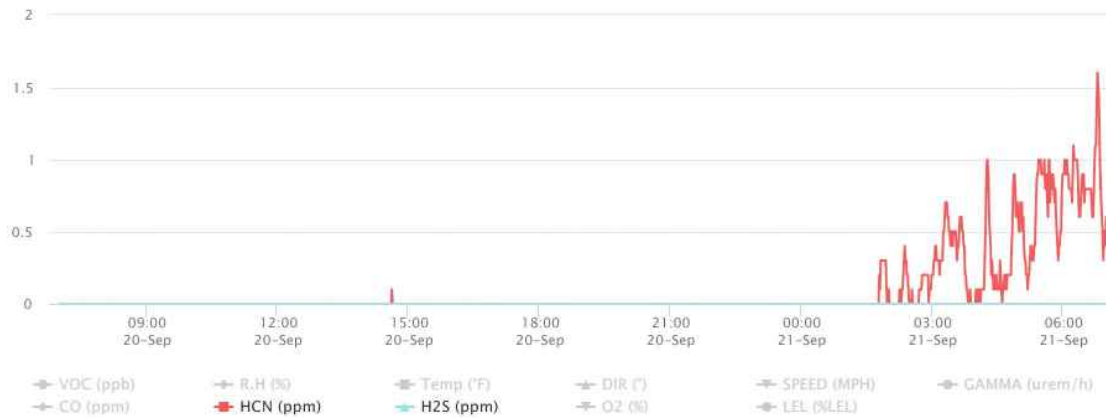
Location 4 - Northwest of Fire							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 4	VOC	No	1,473	895	0 - 2604 ppb	243.6 ppb	1,000 ppb
	CO	No	1,473	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	1,473	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	1,473	0	0 - 0 ppm	0 ppm	7.1 ppm
	O ₂	No	1,473	1,473	20.9 - 20.9%	20.9%	<19.5 or >23%
	LEL*		0	0			10%
DustTrak 4	PM-2.5	Moderate	1,193	1,193	5 - 311 µg/m ³	16.5 µg/m ³	See SOG #: T106

Notes:

* The LEL sensor and the pump in AreaRae 4 are not functioning properly. The unit is out of service as of 6:30AM 09/21/2019.

%	Percent	O ₂	Oxygen
<	Less than	PEL	Permissible exposure limit
>	Greater than	ppb	Parts per billion
AEGL	Acute Exposure Guideline Levels for Airborne Chemicals	ppm	Parts per million
CO	Carbon monoxide	PM	Particulate matter
H ₂ S	Hydrogen Sulfide	SOG	Standard Operating Guidelines
HCN	Hydrogen Cyanide	TLV	Threshold limit value
LEL	Lower Explosive Level	µg/m ³	Micrograms per cubic meter
min	Minute	VOC	Volatile organic compound

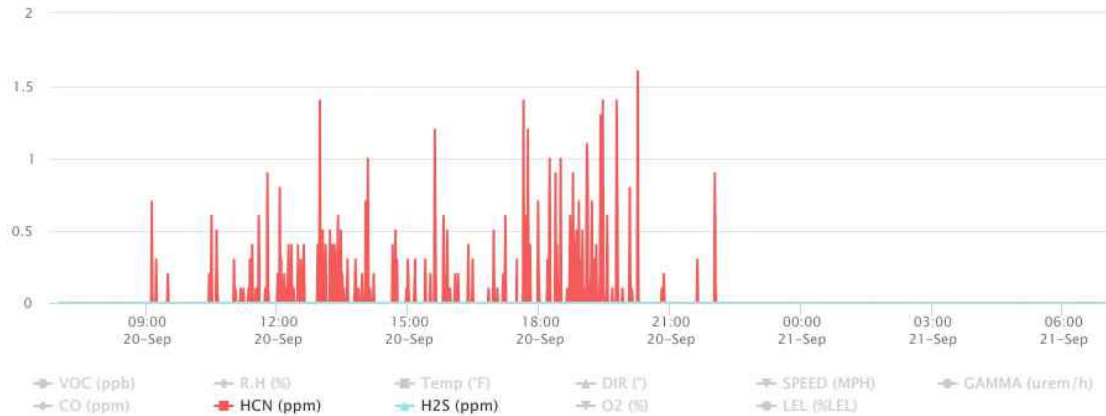
9/20/19 to 9/21/19 Data for AreaRAE Pro (HCN and H₂S) – Northeast of fire



9/20/19 to 9/21/19 Data for AreaRAE Pro (HCN and H₂S) – Southeast of fire



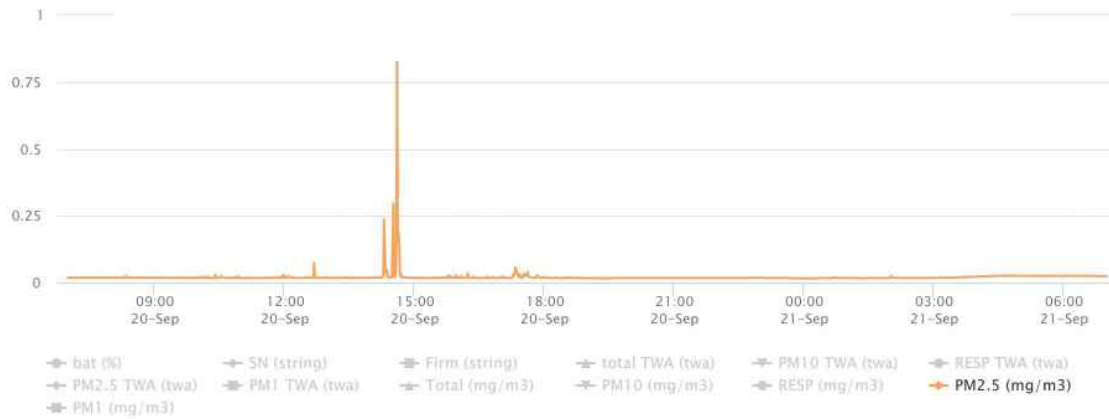
9/20/19 to 9/21/19 Data for AreaRAE Pro (HCN and H₂S) – South of fire



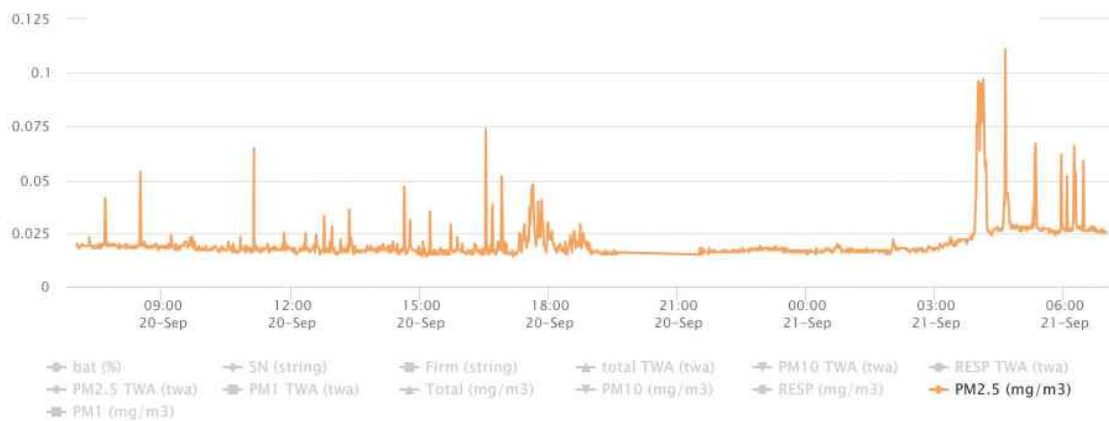
9/20/19 to 9/21/19 Data for AreaRAE Pro (HCN and H₂S) – Northwest of fire



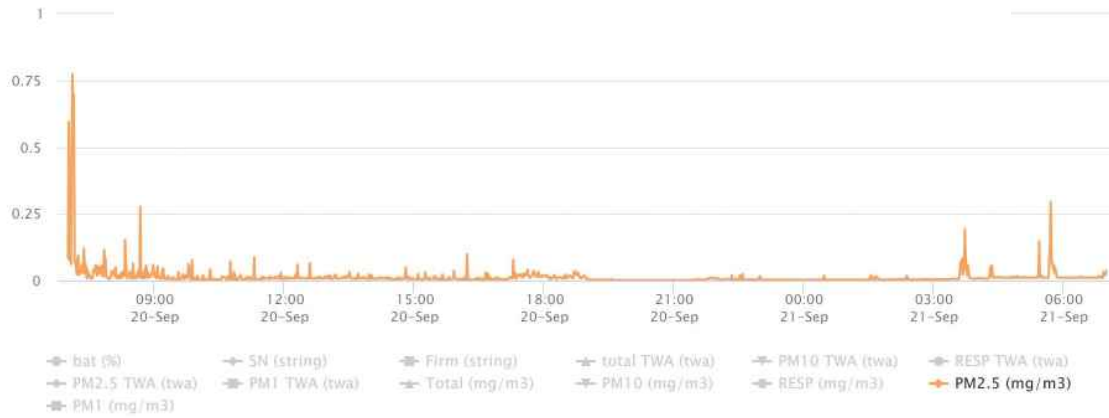
9/20/19 to 9/21/19 Data for DustTrak (PM2.5) – Northeast of fire



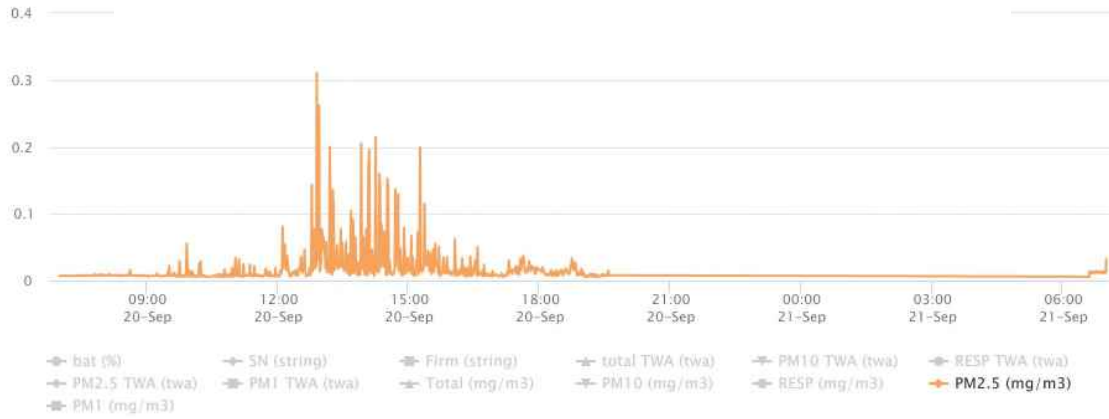
9/20/19 to 9/21/19 Data for DustTrak (PM2.5) – Southeast of fire



9/20/19 to 9/21/19 Data for DustTrak (PM2.5) – South of fire



9/20/19 to 9/21/19 Data for DustTrak (PM2.5) – Northwest of fire



Air Monitoring Summary Tables

The table below summarize monitoring data collected on using EPA's Viper wireless remote monitoring system.

Project Name:

From: 9/21/19
7:00

To: 9/22/19
6:58



Location 1 - Northeast of Fire							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 1	VOC	No	1,489	0	0 - 0 ppb	0 ppb	1,000 ppb
	CO	No	1,489	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	1,489	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	1,489	70	0 - 1.9 ppm	0.1 ppm	7.1 ppm
	O ₂	No	1,489	1,489	20.9 - 21.8%	21.3%	<19.5 or >23%
	LEL	No	1,489	0	0 - 0%	0%	10%
DustTrak 1	PM-2.5	Moderate	1,492	1,492	15 - 40 µg/m ³	17.4 µg/m ³	See SOG #: T106

Location 2 - Southeast of Fire							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 2	VOC	No	1,483	802	0 - 27 ppb	10.7 ppb	1,000 ppb
	CO	No	1,483	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	1,483	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	1,483	640	0 - 1.9 ppm	0.1 ppm	7.1 ppm
	O ₂	No	1,483	1,483	20.3 - 20.9%	20.5%	<19.5 or >23%
	LEL	No	1,483	351	0 - 9 %	1.9%	10%
DustTrak 2	PM-2.5	Moderate	1,494	1,494	11 - 63 µg/m ³	17.9 µg/m ³	See SOG #: T106

Location 3 - South of Fire							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 3	VOC	No	1,483	0	0 - 0 ppb	0 ppb	1,000 ppb
	CO	No	1,483	313	0 - 29 ppm	1.5 ppm	83 ppm
	H ₂ S	No	1,483	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	1,483	76	0 - 1.7 ppm	0 ppm	7.1 ppm
	O ₂	No	1,483	1,483	20.9 - 20.9%	20.9%	<19.5 or >23%
	LEL	No	1,483	0	0 - 0%	0%	10%
DustTrak 3	PM-2.5	Good	1,480	1,453	0 - 269 µg/m ³	9.4 µg/m ³	See SOG #: T106

Location 4 - Northwest of Fire							
Instrument	Analyte	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 4*	VOC		0	0	0 - 0 ppb		1,000 ppb
	CO		0	0	0 - 0 ppm		83 ppm
	H ₂ S		0	0	0 - 0 ppm		0.5 ppm
	HCN		0	0	0 - 0 ppm		7.1 ppm
	O ₂		0	0	0 - 0%		<19.5 or >23%
	LEL		0	0	0 - 0%		10%
DustTrak 4	PM-2.5	Moderate	1,740	1,740	3 - 471 µg/m ³	14.2 µg/m ³	See SOG #: T106

Notes:

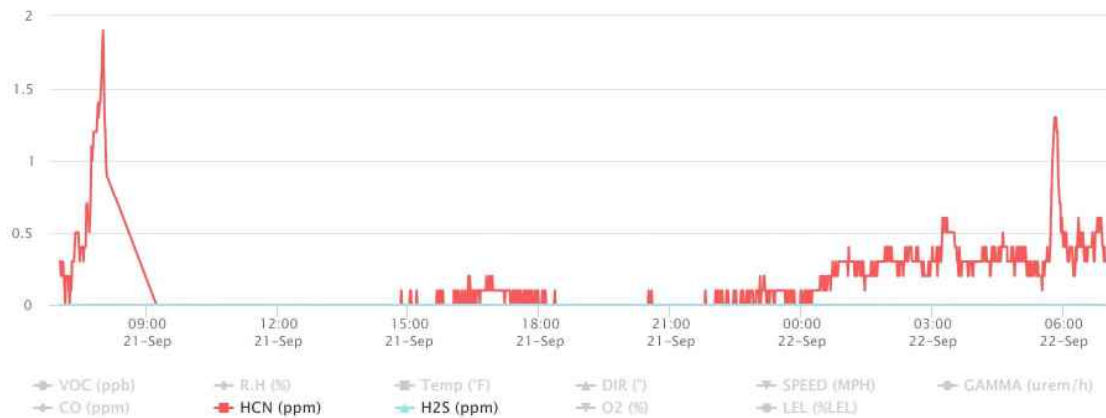
* The LEL sensor and the pump in AreaRae 4 are not functioning properly. The unit is out of service as of 6:30AM 09/21/2019.

%	Percent	O ₂	Oxygen
<	Less than	PEL	Permissible exposure limit
>	Greater than	ppb	Parts per billion
AEGL	Acute Exposure Guideline Levels for Airborne Chemicals	ppm	Parts per million
CO	Carbon monoxide	PM	Particulate matter
H ₂ S	Hydrogen Sulfide	SOG	Standard Operating Guidelines
HCN	Hydrogen Cyanide	TLV	Threshold limit value
LEL	Lower Explosive Level	µg/m ³	Micrograms per cubic meter
min	Minute	VOC	Volatile organic compound

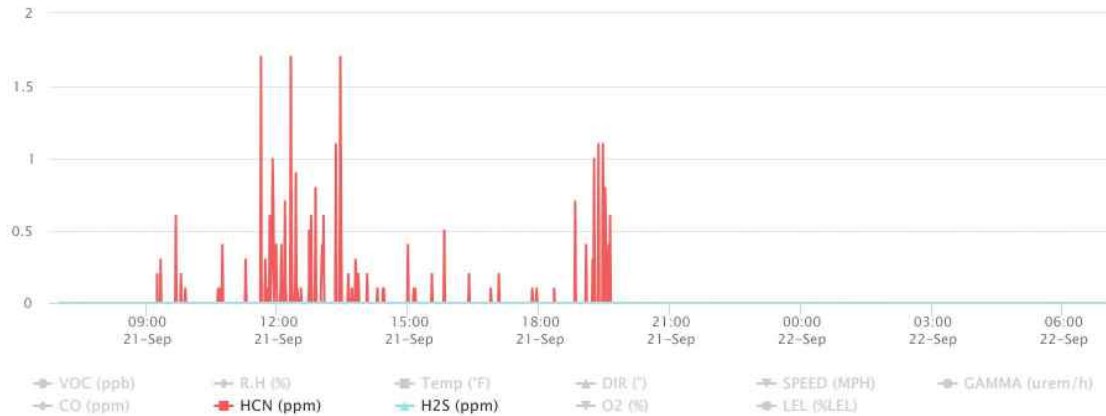
9/21/19 to 9/22/19 Data for AreaRAE Pro (HCN and H₂S) – Northeast of fire



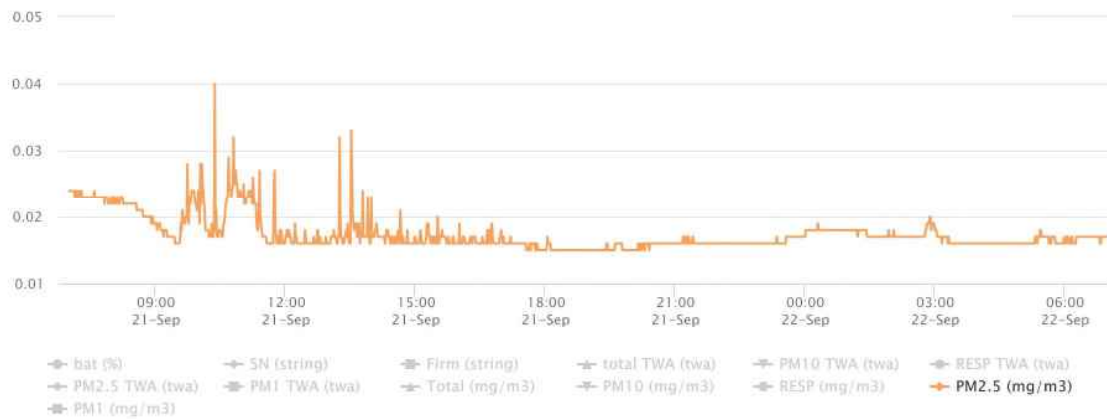
9/21/19 to 9/22/19 Data for AreaRAE Pro (HCN and H₂S) – Southeast of fire



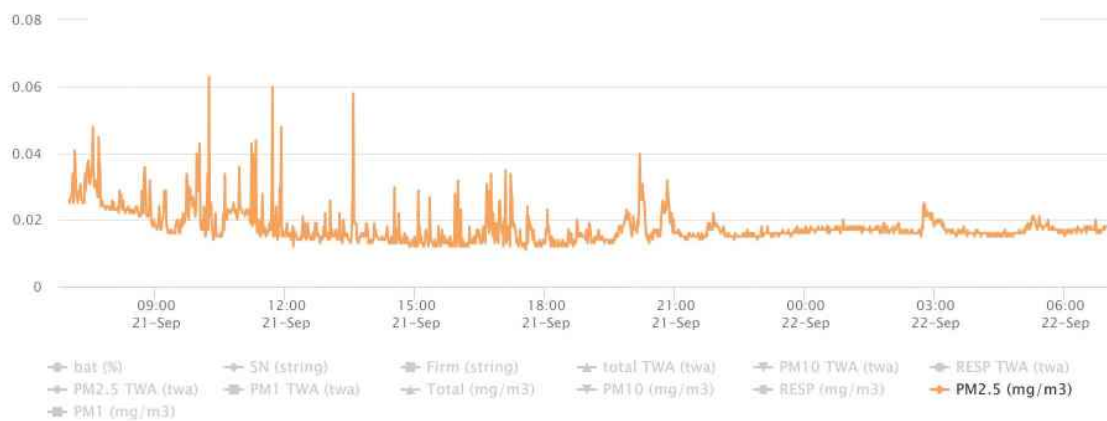
9/21/19 to 9/22/19 Data for AreaRAE Pro (HCN and H₂S) – South of fire



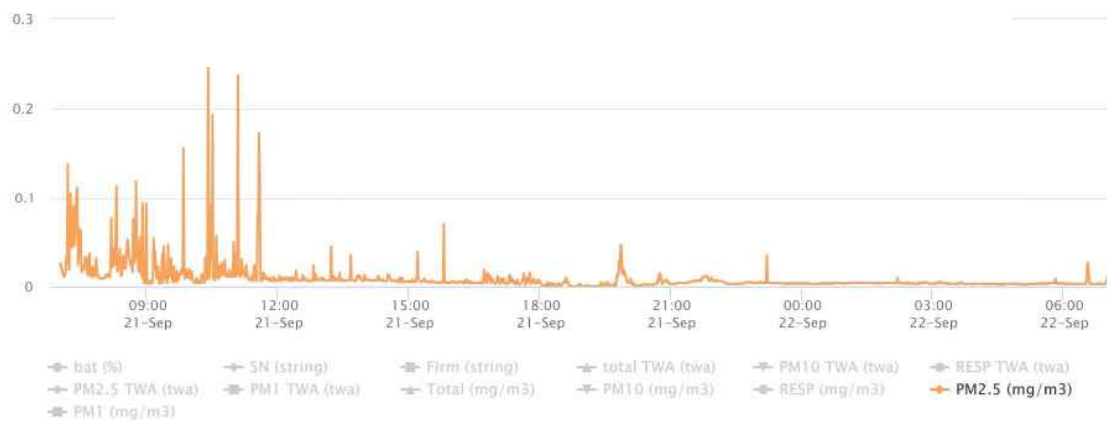
9/21/19 to 9/22/19 Data for DustTrak (PM2.5) – Northeast of fire



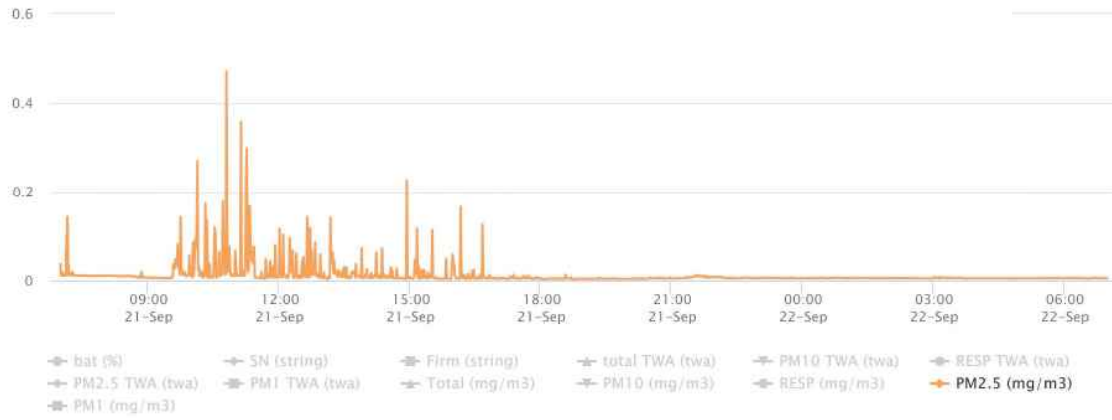
9/21/19 to 9/22/19 Data for DustTrak (PM2.5) – Southeast of fire



9/21/19 to 9/22/19 Data for DustTrak (PM2.5) – South of fire



9/21/19 to 9/22/19 Data for DustTrak (PM2.5) – Northwest of fire



Air Monitoring Summary Tables

The table below summarize monitoring data collected on using EPA's Viper wireless remote monitoring system.

Project Name:

From: 9/22/19
7:00

To: 9/23/19
6:58



Location 1 - Northeast of Fire								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 1	VOC	No	No	1,499	0	0 - 0 ppb	0 ppb	1,000 ppb
	CO	No	No	1,499	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	No	1,499	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	No	1,499	0	0 - 0 ppm	0 ppm	7.1 ppm
	O ₂	No	No	1,499	1,499	21.1 - 21.8%	21.3%	<19.5 or >23%
	LEL	No	No	1,499	0	0 - 0%	0%	10%
DustTrak 1	PM-2.5	Moderate		1,497	1,497	14 - 135 µg/m ³	0 µg/m ³	See SOG #: T106

Location 2 - Southeast of Fire								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 2	VOC	No	No	1,478	865	0 - 31 ppb	9.2 ppb	1,000 ppb
	CO	No	No	1,478	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	No	1,478	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	No	1,478	735	0 - 0.9 ppm	0.1 ppm	7.1 ppm
	O ₂	No	No	1,478	1,478	20.3 - 20.4%	20.4%	<19.5 or >23%
	LEL	No	No	1,478	0	0 - 0%	0%	10%
DustTrak 2	PM-2.5	Moderate		1,507	1,507	11 - 426 µg/m ³	0 µg/m ³	See SOG #: T106

Location 3 - South of Fire								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 3	VOC	No	No	1,484	6	0 - 247 ppb	0.2 ppb	1,000 ppb
	CO	No	No	1,484	416	0 - 49 ppm	2.3 ppm	83 ppm
	H ₂ S	No	No	1,484	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	No	1,484	1,419	0 - 3.7 ppm	0.6 ppm	7.1 ppm
	O ₂	No	No	1,484	1,484	20.9 - 21.6%	21.4%	<19.5 or >23%
	LEL	No	No	1,484	0	0 - 0%	0%	10%
DustTrak 3	PM-2.5	Good		1,497	1,427	0 - 169 µg/m ³	0 µg/m ³	See SOG #: T106

Location 4 - Northwest of Fire								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
DustTrak 4	PM-2.5	Good		1,488	1,488	2 - 108 µg/m ³	0 µg/m ³	See SOG #: T106

Notes:

* AreaRae 4 are not functioning properly and has been out of service since 6:30AM 09/21/2019. Replacement parts are expected tomorrow.

% Percent

< Less than

> Greater than

AEGL Acute Exposure Guideline Levels for Airborne Chemicals

CO Carbon monoxide

H₂S Hydrogen Sulfide

HCN Hydrogen Cyanide

LEL Lower Explosive Level

min Minute

O₂ Oxygen

PEL Permissible exposure limit

ppb Parts per billion

ppm Parts per million

PM Particulate matter

SOG Standard Operating Guidelines

TLV Threshold limit value

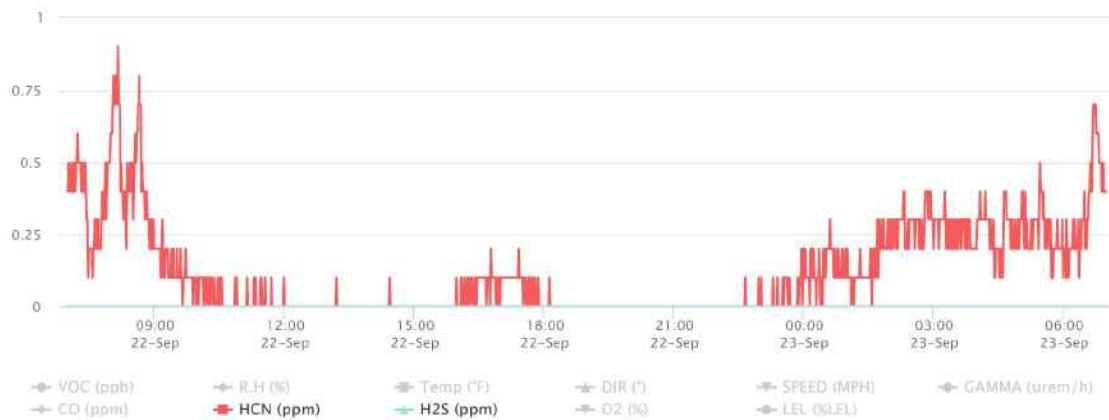
µg/m³ Micrograms per cubic meter

VOC Volatile organic compound

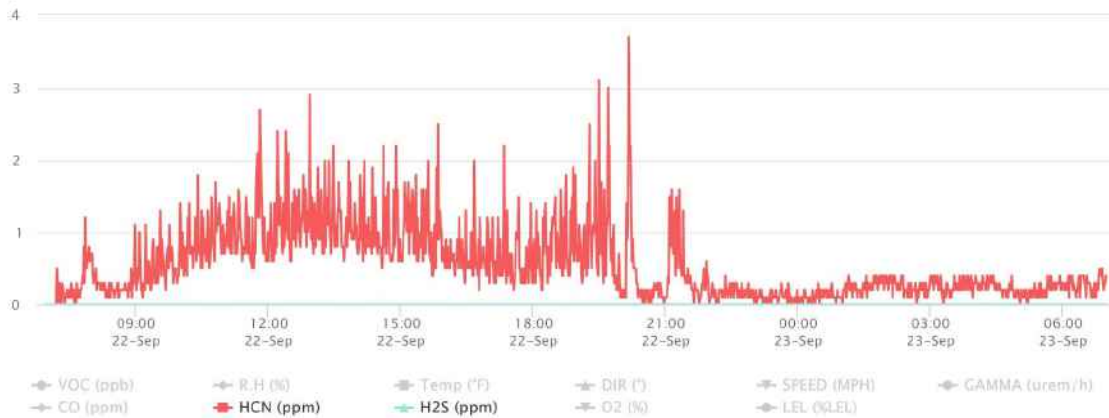
9/22/19 to 9/23/19 Data for AreaRAE Pro (HCN and H₂S) – Northeast of fire



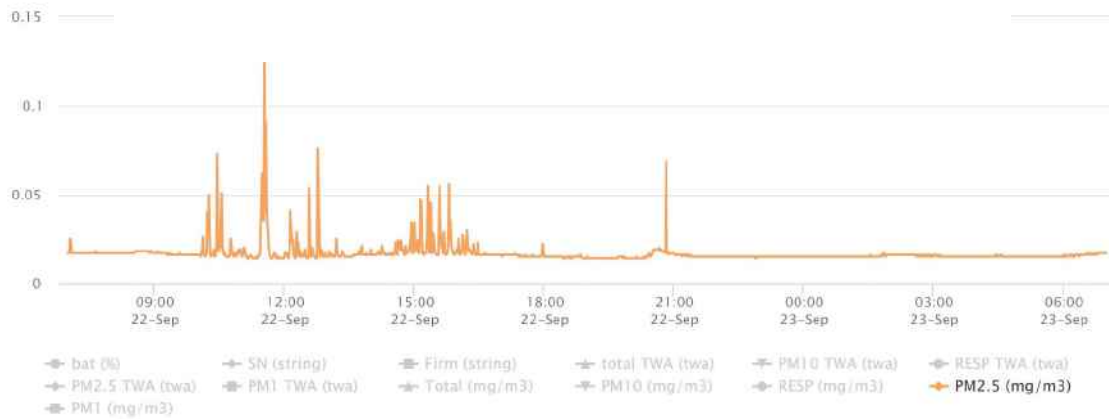
9/22/19 to 9/23/19 Data for AreaRAE Pro (HCN and H₂S) – Southeast of fire



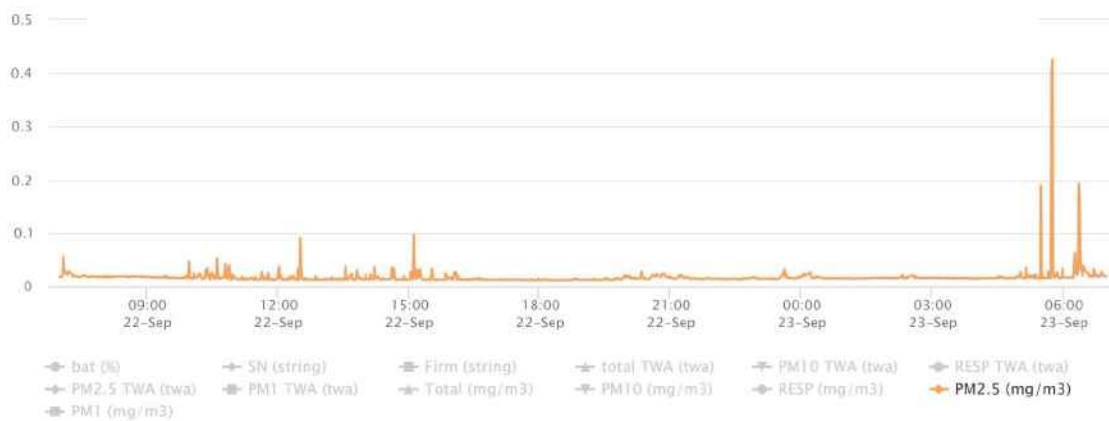
9/22/19 to 9/23/19 Data for AreaRAE Pro (HCN and H₂S) – South of fire



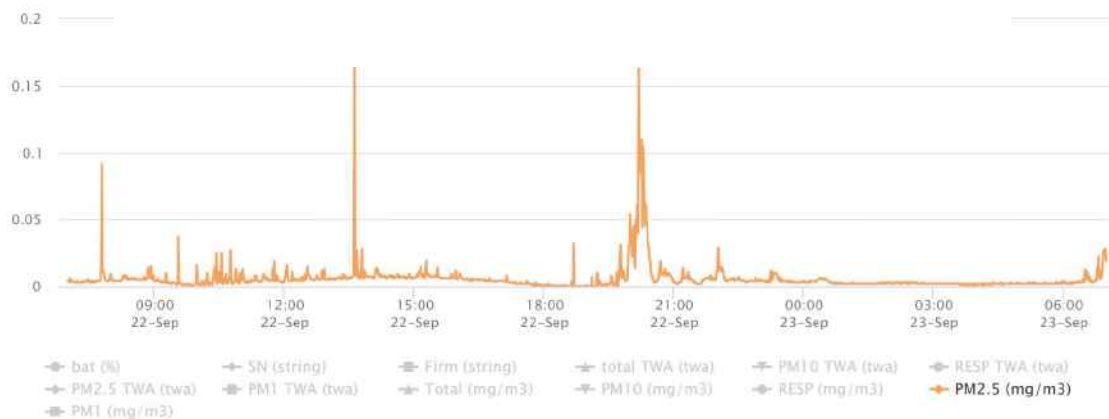
9/22/19 to 9/23/19 Data for DustTrak (PM2.5) – Northeast of fire



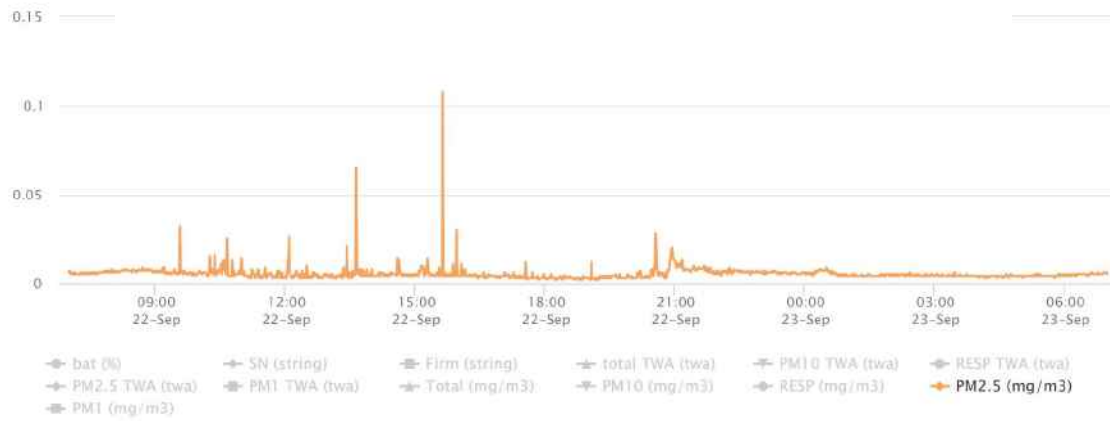
9/22/19 to 9/23/19 Data for DustTrak (PM2.5) – Southeast of fire



9/22/19 to 9/23/19 Data for DustTrak (PM2.5) – South of fire



9/22/19 to 9/23/19 Data for DustTrak (PM2.5) – West of fire



Air Monitoring Summary Tables

The table below summarize monitoring data collected on using EPA's Viper wireless remote monitoring system.

Project Name:

From: 9/23/19
7:00

To: 9/24/19
6:58



Location 1 - Northeast of Fire								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 1	VOC	No	No	1,477	2	0 - 132 ppb	0.1 ppb	1,000 ppb
	CO	No	No	1,477	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	No	1,477	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	No	1,477	341	0 - 0.9 ppm	0.1 ppm	7.1 ppm
	O ₂	No	No	1,477	1,477	19.6 - 21.7%	20.4%	<19.5 or >23%
	LEL	No	No	1,477	4	0 - 2%	0%	10%
DustTrak 1	PM-2.5	Moderate		1,497	1,497	14 - 236 µg/m ³	24.9 µg/m ³	See SOG #: T106

Location 2 - Southeast of Fire								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 2	VOC	No	No	1,449	836	0 - 39 ppb	4.9 ppb	1,000 ppb
	CO	No	No	1,449	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	No	1,449	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	No	1,449	1,033	0 - 1.4 ppm	0.2 ppm	7.1 ppm
	O ₂	No	No	1,449	1,449	20.2 - 20.9%	20.7%	<19.5 or >23%
	LEL	No	No	1,449	1,041	0 - 10%	6.1%	10%
DustTrak 2	PM-2.5	Moderate		1,502	1,502	12 - 766 µg/m ³	25 µg/m ³	See SOG #: T106

Location 3 - South of Fire								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 3	VOC	No	No	1,471	858	0 - 428 ppb	26.1 ppb	1,000 ppb
	CO	No	No	1,471	202	0 - 23 ppm	0.9 ppm	83 ppm
	H ₂ S	No	No	1,471	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	No	1,471	682	0 - 2.2 ppm	0.3 ppm	7.1 ppm
	O ₂	No	No	1,471	1,471	20 - 21.6%	21%	<19.5 or >23%
	LEL	No	No	1,471	977	0 - 4%	2.4%	10%
DustTrak 3	PM-2.5	Good		1,487	1,473	0 - 453 µg/m ³	8.4 µg/m ³	See SOG #: T106

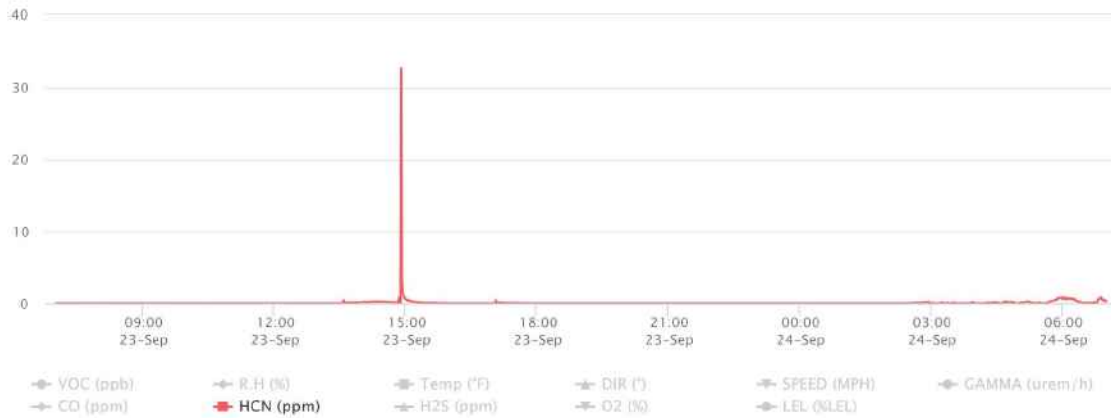
Location 4 - Northwest of Fire								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
DustTrak 4	PM-2.5	Good		1,494	1,494	3 - 1570 µg/m ³	10.1 µg/m ³	See SOG #: T106

Notes:

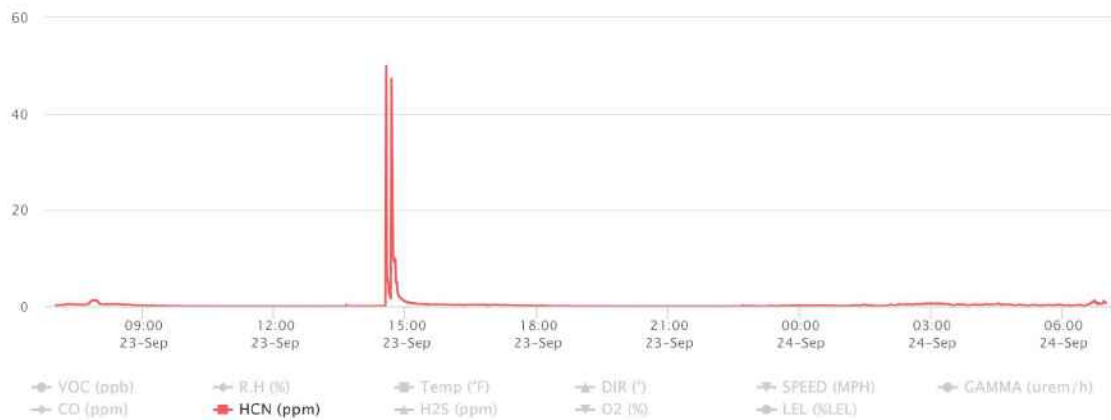
* AreaRae 4 are not functioning properly and has been out of service since 6:30AM 09/21/2019. Replacement parts are expected today.

%	Percent	O ₂	Oxygen
<	Less than	PEL	Permissible exposure limit
>	Greater than	ppb	Parts per billion
AEGL	Acute Exposure Guideline Levels for Airborne Chemicals	ppm	Parts per million
CO	Carbon monoxide	PM	Particulate matter
H ₂ S	Hydrogen Sulfide	SOG	Standard Operating Guidelines
HCN	Hydrogen Cyanide	TLV	Threshold limit value
LEL	Lower Explosive Level	µg/m ³	Micrograms per cubic meter
min	Minute	VOC	Volatile organic compound

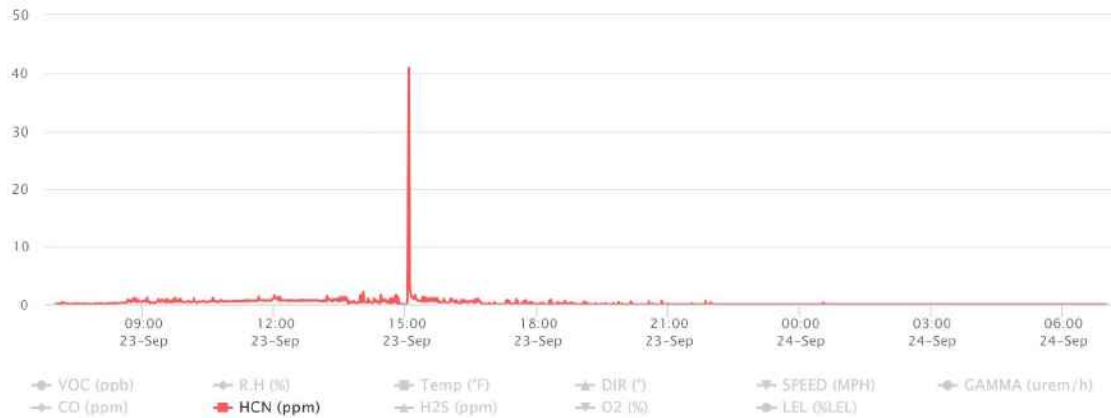
9/23/19 to 9/24/19 Data for AreaRAE Pro (HCN and H₂S) – Northeast of fire



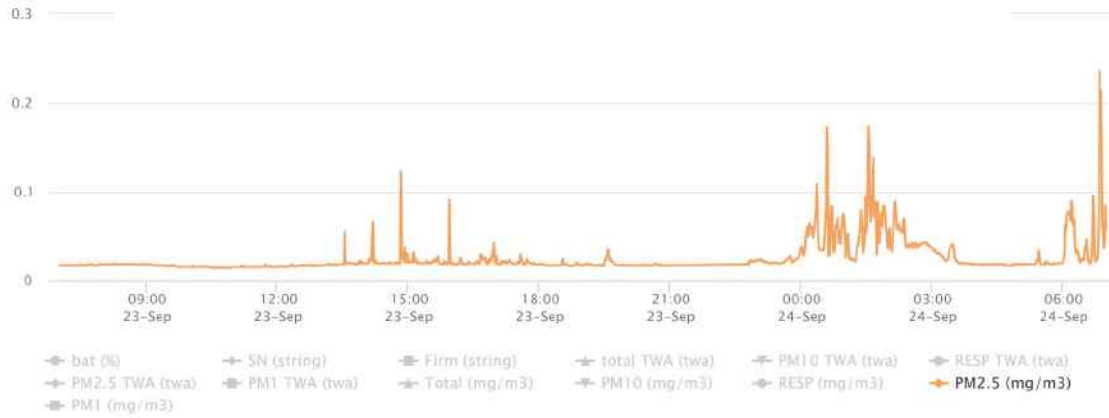
9/23/19 to 9/24/19 Data for AreaRAE Pro (HCN and H₂S) – Southeast of fire



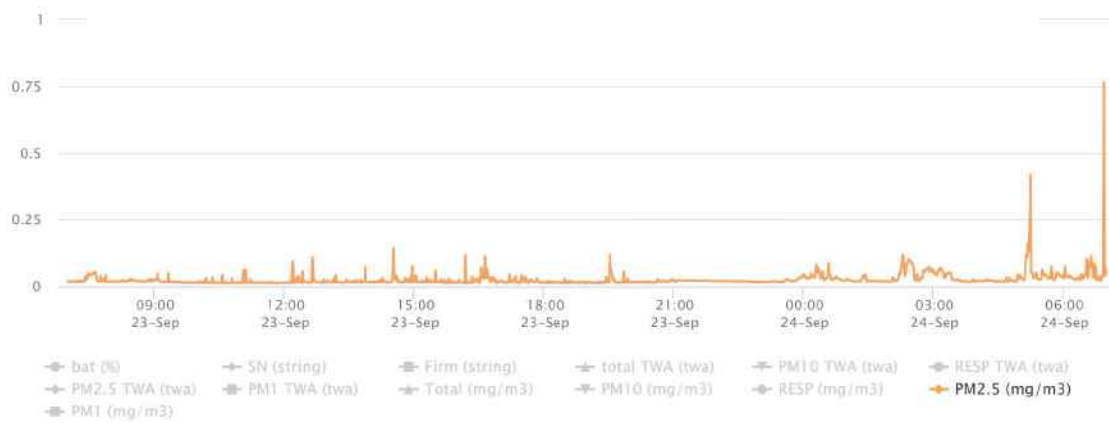
9/23/19 to 9/24/19 Data for AreaRAE Pro (HCN and H₂S) – South of fire



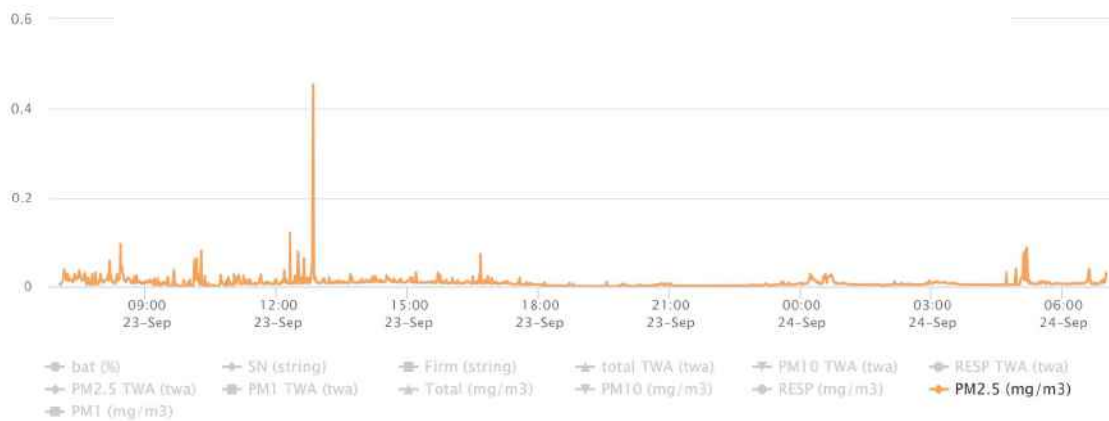
9/23/19 to 9/24/19 Data for DustTrak (PM2.5) – Northeast of fire



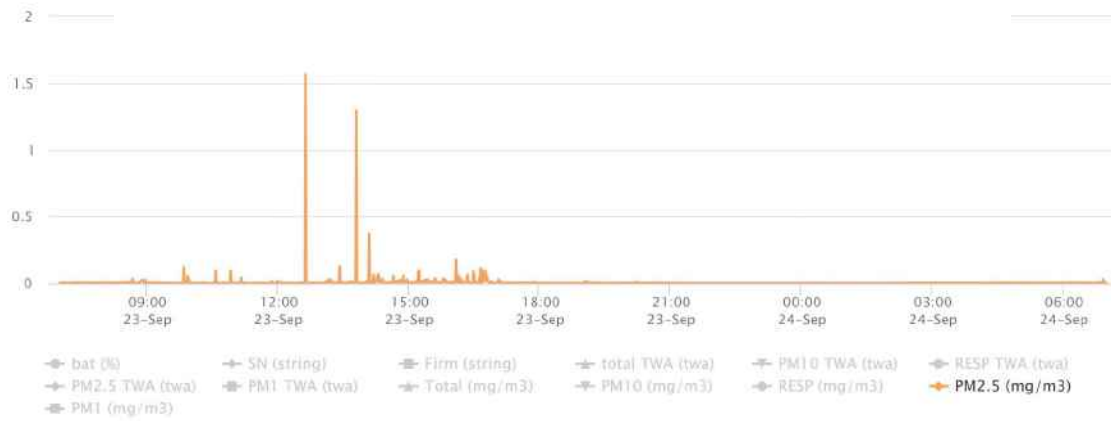
9/23/19 to 9/24/19 Data for DustTrak (PM2.5) – Southeast of fire



9/23/19 to 9/24/19 Data for DustTrak (PM2.5) – South of fire



9/23/19 to 9/24/19 Data for DustTrak (PM2.5) – Northwest of fire



Air Monitoring Summary Tables

The table below summarize monitoring data collected on using EPA's Viper wireless remote monitoring system.

Project Name:

From: 9/24/19
7:00

To: 9/25/19
6:58



Location 1 - Northeast of Fire								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 1	VOC	No	No	1,509	0	0 - 0 ppb	0 ppb	1,000 ppb
	CO	No	No	1,509	1	0 - 8 ppm	0 ppm	83 ppm
	H ₂ S	Yes	No	1,509	14	0 - 0.6 ppm	0 ppm	0.5 ppm
	HCN	No	No	1,509	550	0 - 1.4 ppm	0.1 ppm	7.1 ppm
	O ₂	No	No	1,509	1,509	19.6 - 20.9%	20.2%	<19.5 or >23%
	LEL	No	No	1,509	1,023	0 - 4%	1.6%	10%
DustTrak 1	PM-2.5	Moderate		1,497	1,497	19 - 118 µg/m ³	28.4 µg/m ³	See SOG #: T106

Location 2 - Southeast of Fire								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 2	VOC	No	No	1,502	85	0 - 19 ppb	0.3 ppb	1,000 ppb
	CO	No	No	1,502	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	No	1,502	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	No	1,502	1,138	0 - 1.1 ppm	0.2 ppm	7.1 ppm
	O ₂	No	No	1,502	1,502	20.9 - 20.9%	20.9%	<19.5 or >23%
	LEL	No	No	1,502	1,502	8 - 10 %	9%	10%
DustTrak 2	PM-2.5	Moderate		1,501	1,501	20 - 414 µg/m ³	32.1 µg/m ³	See SOG #: T106

Location 3 - South of Fire								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 3	VOC	No	No	1,519	1,053	0 - 474 ppb	22.5 ppb	1,000 ppb
	CO	No	No	1,519	266	0 - 51 ppm	1.5 ppm	83 ppm
	H ₂ S	Yes	No	1,519	7	0 - 0.7 ppm	0 ppm	0.5 ppm
	HCN	No	No	1,519	867	0 - 4.2 ppm	0.3 ppm	7.1 ppm
	O ₂	No	No	1,519	1,519	20.9 - 20.9%	20.9%	<19.5 or >23%
	LEL	No	No	1,519	1,143	0 - 5%	2.8%	10%
DustTrak 3	PM-2.5	Moderate		1,505	1,505	6 - 1050 µg/m ³	19.2 µg/m ³	See SOG #: T106

Location 4 - Northwest of Fire								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 4*	VOC	No	No	1,306	1	0 - 63 ppb	0 ppb	1,000 ppb
	CO	Yes	No	1,306	980	0 - 466 ppm	10.4 ppm	83 ppm
	H ₂ S	No	No	1,306	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	No	1,306	1,301	0 - 2.6 ppm	0.7 ppm	7.1 ppm
	O ₂	No	No	1,306	1,306	20.4 - 20.9%	20.5%	<19.5 or >23%
	LEL	No	No	1,306	0	0 - 0%	0%	10%
DustTrak 4	PM-2.5	Moderate		1,313	1,313	5 - 314 µg/m ³	16.1 µg/m ³	See SOG #: T106

Notes: * AreaRae 4 was restored to service since 10:08AM 09/24/2019.

% Percent

< Less than

> Greater than

AEGL Acute Exposure Guideline Levels for Airborne Chemicals

CO Carbon monoxide

H₂S Hydrogen Sulfide

HCN Hydrogen Cyanide

LEL Lower Explosive Level

min Minute

O₂ Oxygen

PEL Permissible exposure limit

ppb Parts per billion

ppm Parts per million

PM Particulate matter

SOG Standard Operating Guidelines

TLV Threshold limit value

µg/m³ Micrograms per cubic meter

VOC Volatile organic compound

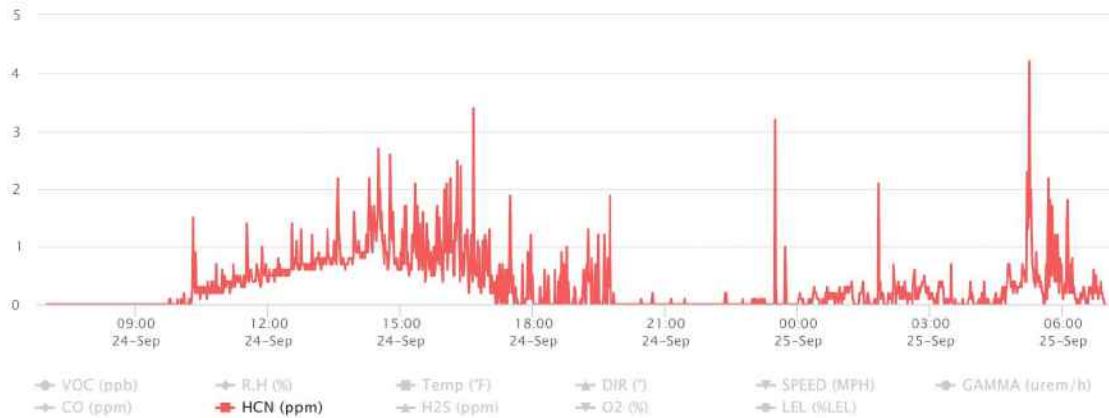
9/24/19 to 9/25/19 Data for AreaRAE Pro (HCN and H₂S) – Northeast of fire



9/24/19 to 9/25/19 Data for AreaRAE Pro (HCN and H₂S) – Southeast of fire



9/24/19 to 9/25/19 Data for AreaRAE Pro (HCN and H₂S) – South of fire



Air Monitoring Summary Tables

The table below summarize monitoring data collected on using EPA's Viper wireless remote monitoring system.

Project Name:

From: 9/24/19
7:00

To: 9/25/19
6:58



Location 1 - Northeast of Fire								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 1	VOC	No	No	1,509	0	0 - 0 ppb	0 ppb	1,000 ppb
	CO	No	No	1,509	1	0 - 8 ppm	0 ppm	83 ppm
	H ₂ S	Yes	No	1,509	14	0 - 0.6 ppm	0 ppm	0.5 ppm
	HCN	No	No	1,509	550	0 - 1.4 ppm	0.1 ppm	7.1 ppm
	O ₂	No	No	1,509	1,509	19.6 - 20.9%	20.2%	<19.5 or >23%
	LEL	No	No	1,509	1,023	0 - 4%	1.6%	10%
DustTrak 1	PM-2.5	Moderate		1,497	1,497	19 - 118 µg/m ³	28.4 µg/m ³	See SOG #: T106

Location 2 - Southeast of Fire								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 2	VOC	No	No	1,502	85	0 - 19 ppb	0.3 ppb	1,000 ppb
	CO	No	No	1,502	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	No	1,502	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	No	1,502	1,138	0 - 1.1 ppm	0.2 ppm	7.1 ppm
	O ₂	No	No	1,502	1,502	20.9 - 20.9%	20.9%	<19.5 or >23%
	LEL	No	No	1,502	1,502	8 - 10 %	9%	10%
DustTrak 2	PM-2.5	Moderate		1,501	1,501	20 - 414 µg/m ³	32.1 µg/m ³	See SOG #: T106

Location 3 - South of Fire								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 3	VOC	No	No	1,519	1,053	0 - 474 ppb	22.5 ppb	1,000 ppb
	CO	No	No	1,519	266	0 - 51 ppm	1.5 ppm	83 ppm
	H ₂ S	Yes	No	1,519	7	0 - 0.7 ppm	0 ppm	0.5 ppm
	HCN	No	No	1,519	867	0 - 4.2 ppm	0.3 ppm	7.1 ppm
	O ₂	No	No	1,519	1,519	20.9 - 20.9%	20.9%	<19.5 or >23%
	LEL	No	No	1,519	1,143	0 - 5%	2.8%	10%
DustTrak 3	PM-2.5	Moderate		1,505	1,505	6 - 1050 µg/m ³	19.2 µg/m ³	See SOG #: T106

Location 4 - Northwest of Fire								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 4*	VOC	No	No	1,306	1	0 - 63 ppb	0 ppb	1,000 ppb
	CO	Yes	No	1,306	980	0 - 466 ppm	10.4 ppm	83 ppm
	H ₂ S	No	No	1,306	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	No	1,306	1,301	0 - 2.6 ppm	0.7 ppm	7.1 ppm
	O ₂	No	No	1,306	1,306	20.4 - 20.9%	20.5%	<19.5 or >23%
	LEL	No	No	1,306	0	0 - 0%	0%	10%
DustTrak 4	PM-2.5	Moderate		1,313	1,313	5 - 314 µg/m ³	16.1 µg/m ³	See SOG #: T106

Notes: * AreaRae 4 was restored to service since 10:08AM 09/24/2019.

% Percent

< Less than

> Greater than

AEGL Acute Exposure Guideline Levels for Airborne Chemicals

CO Carbon monoxide

H₂S Hydrogen Sulfide

HCN Hydrogen Cyanide

LEL Lower Explosive Level

min Minute

O₂ Oxygen

PEL Permissible exposure limit

ppb Parts per billion

ppm Parts per million

PM Particulate matter

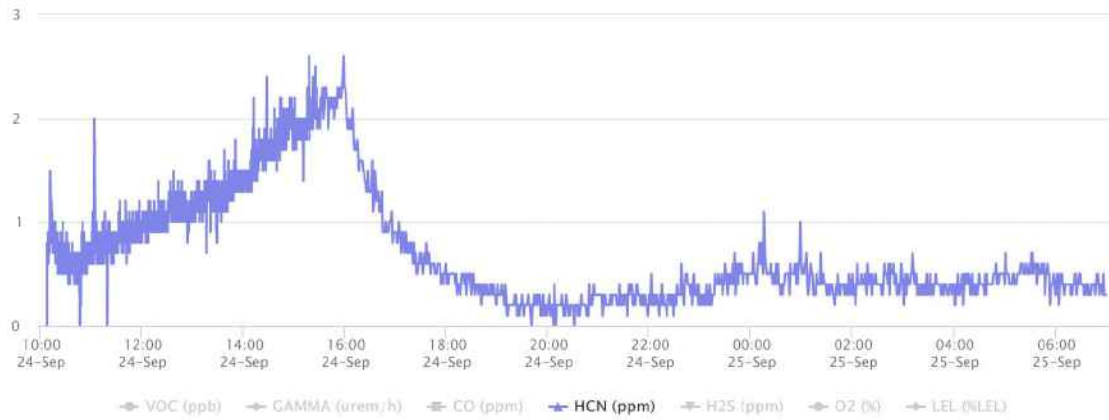
SOG Standard Operating Guidelines

TLV Threshold limit value

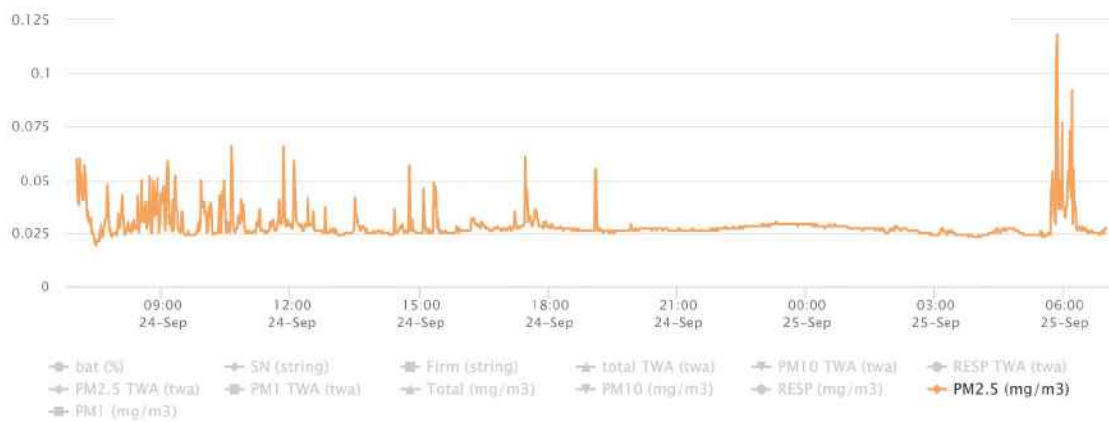
µg/m³ Micrograms per cubic meter

VOC Volatile organic compound

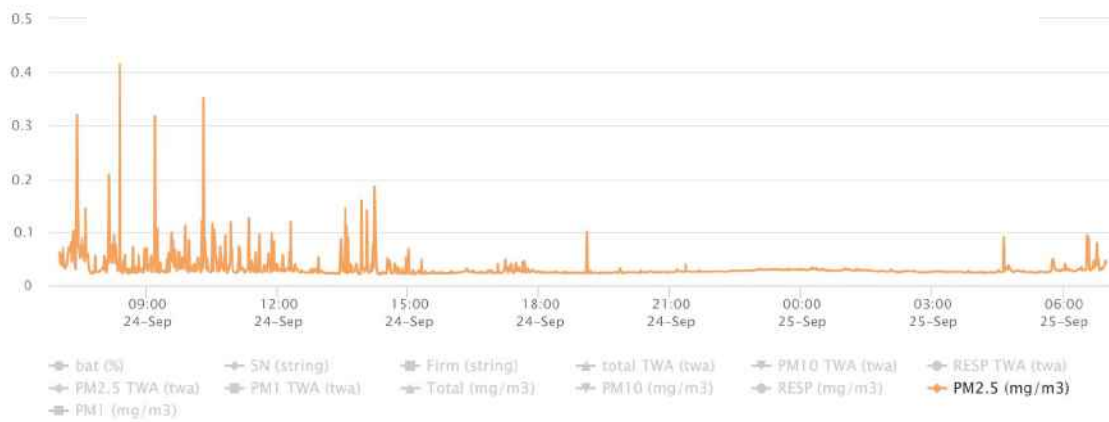
9/24/19 to 9/25/19 Data for AreaRAE Pro (HCN and H₂S) – West of fire



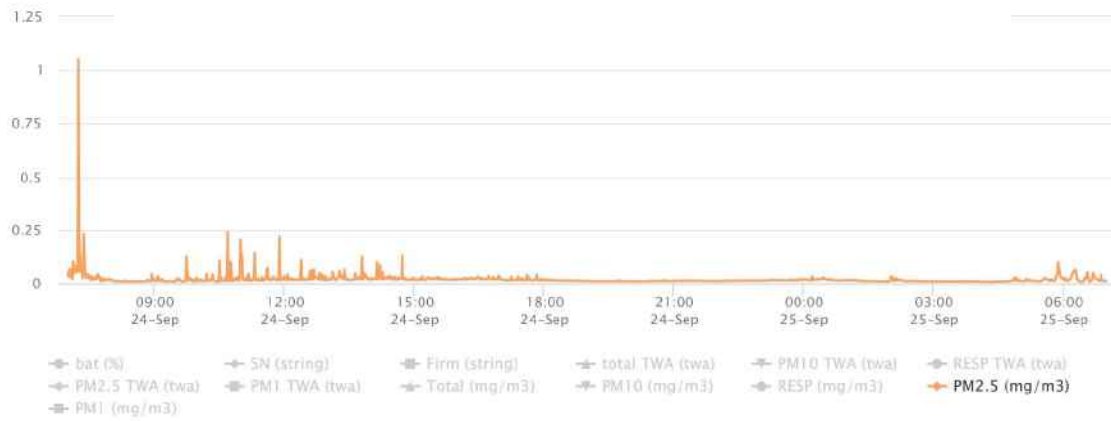
9/24/19 to 9/25/19 Data for DustTrak (PM_{2.5}) – Northeast of fire



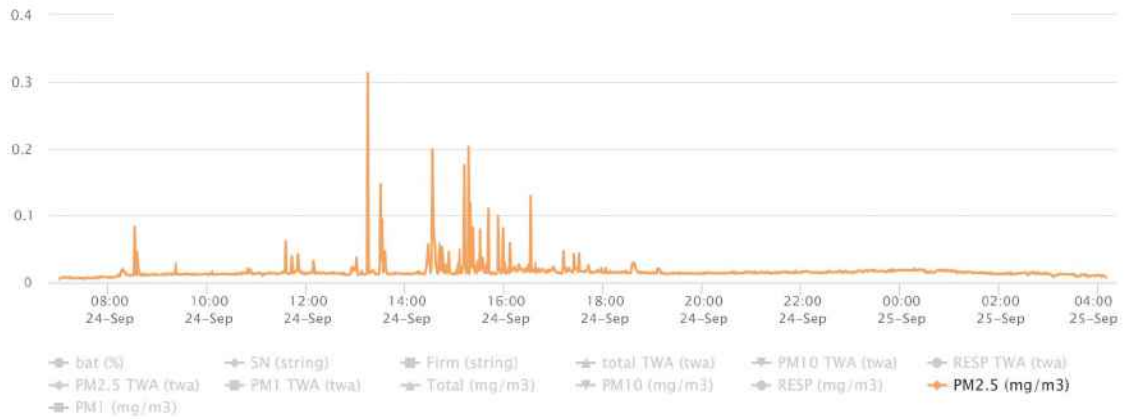
9/24/19 to 9/25/19 Data for DustTrak (PM_{2.5}) – Southeast of fire



9/24/19 to 9/25/19 Data for DustTrak (PM2.5) – South of fire



9/24/19 to 9/25/19 Data for DustTrak (PM2.5) – West of fire



Air Monitoring Summary Tables

The table below summarize monitoring data collected on using EPA's Viper wireless remote monitoring system.

Project Name:

From: 9/25/19
7:00

To: 9/26/19
6:58



Location 1 - Northeast of Fire								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 1	VOC	No	No	1,491	0	0 - 0 ppb	0 ppb	1,000 ppb
	CO	No	No	1,491	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	Yes	No	1,491	12	0 - 0.6 ppm	0 ppm	0.5 ppm
	HCN	No	No	1,491	325	0 - 2.4 ppm	0.1 ppm	7.1 ppm
	O ₂	No	No	1,491	1,491	19.7 - 20.9%	20.2%	<19.5 or >23%
	LEL	No	No	1,491	1,491	2 - 4%	2.7%	10%
DustTrak 1	PM-2.5	Moderate		1,499	1,499	24 - 150 µg/m ³	31.6 µg/m ³	See SOG #: T106

Location 2 - Southeast of Fire								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 2	VOC	No	No	1,492	0	0 - 0 ppb	0 ppb	1,000 ppb
	CO	No	No	1,492	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	No	1,492	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	No	1,492	584	0 - 0.7 ppm	0.1 ppm	7.1 ppm
	O ₂	No	No	1,492	1,492	20.9 - 20.9%	20.9%	<19.5 or >23%
	LEL *	No	No	1,492	250	9 - 10 %	9.5%	10%
DustTrak 2	PM-2.5	Moderate		1,502	1,502	23 - 168 µg/m ³	32.3 µg/m ³	See SOG #: T106

Location 3 - South of Fire								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 3	VOC	No	No	1,493	1,016	0 - 922 ppb	17.1 ppb	1,000 ppb
	CO	No	No	1,493	617	0 - 29 ppm	3.3 ppm	83 ppm
	H ₂ S	Yes	No	1,493	1	0 - 0.5 ppm	0 ppm	0.5 ppm
	HCN	No	No	1,493	976	0 - 2.9 ppm	0.4 ppm	7.1 ppm
	O ₂	No	No	1,493	1,493	20.9 - 20.9%	20.9%	<19.5 or >23%
	LEL	No	No	1,493	1,493	2 - 5%	3.5%	10%
DustTrak 3	PM-2.5	Moderate		1,483	1,483	8 - 380 µg/m ³	18.8 µg/m ³	See SOG #: T106

Location 4 - Northwest of Fire								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 4	VOC	No	No	1,489	0	0 - 0 ppb	0 ppb	1,000 ppb
	CO	Yes	No	1,489	1,455	0 - 173 ppm	12 ppm	83 ppm
	H ₂ S	No	No	1,489	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	No	1,489	1,313	0 - 1.4 ppm	0.4 ppm	7.1 ppm
	O ₂	No	No	1,489	1,489	20.3 - 20.5%	20.5%	<19.5 or >23%
	LEL	No	No	1,489	27	0 - 2%	0%	10%
DustTrak 4	PM-2.5	Moderate		1,189	1,189	8 - 396 µg/m ³	23.4 µg/m ³	See SOG #: T106

Notes: * AreaRae 2 LEL sensor was checked against a MiniRAE, found to be malfunctioning, and stopped at 10:19AM 09/25/2019. A new sensor was ordered and is expected today.

% Percent

< Less than

> Greater than

AEGL Acute Exposure Guideline Levels for Airborne Chemicals

CO Carbon monoxide

H₂S Hydrogen Sulfide

HCN Hydrogen Cyanide

LEL Lower Explosive Level

min Minute

O₂ Oxygen

PEL Permissible exposure limit

ppb Parts per billion

ppm Parts per million

PM Particulate matter

SOG Standard Operating Guidelines

TLV Threshold limit value

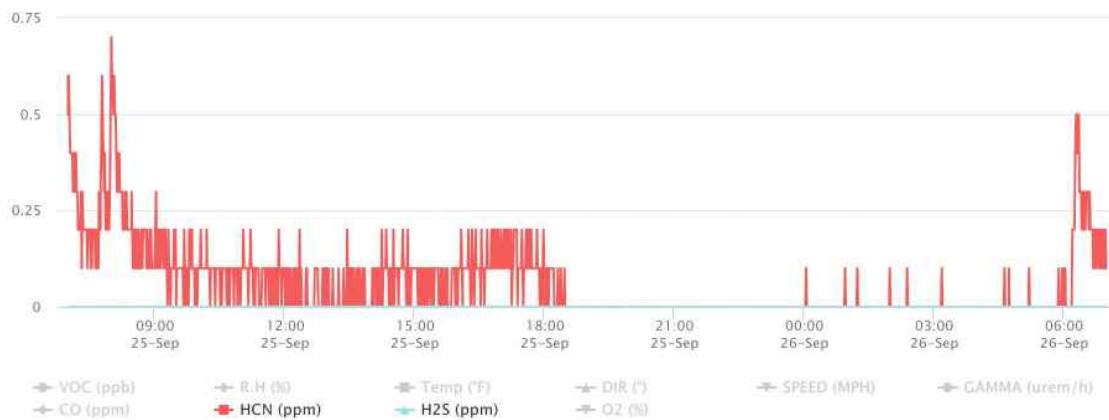
µg/m³ Micrograms per cubic meter

VOC Volatile organic compound

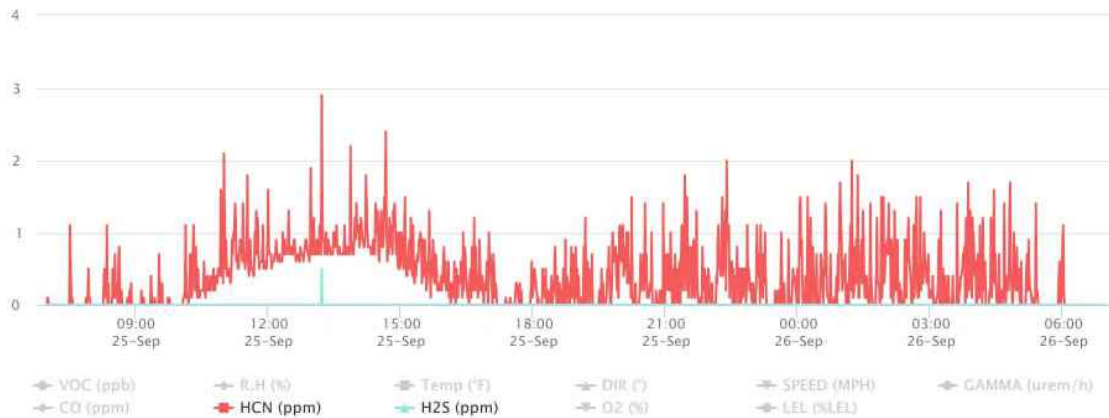
9/25/19 to 9/26/19 Data for AreaRAE Pro (HCN and H₂S) – Northeast of fire



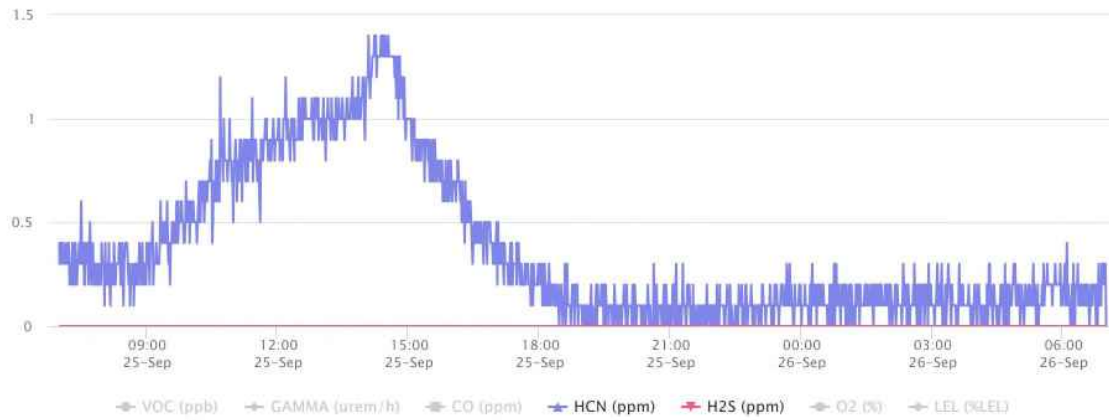
9/25/19 to 9/26/19 Data for AreaRAE Pro (HCN and H₂S) – Southeast of fire



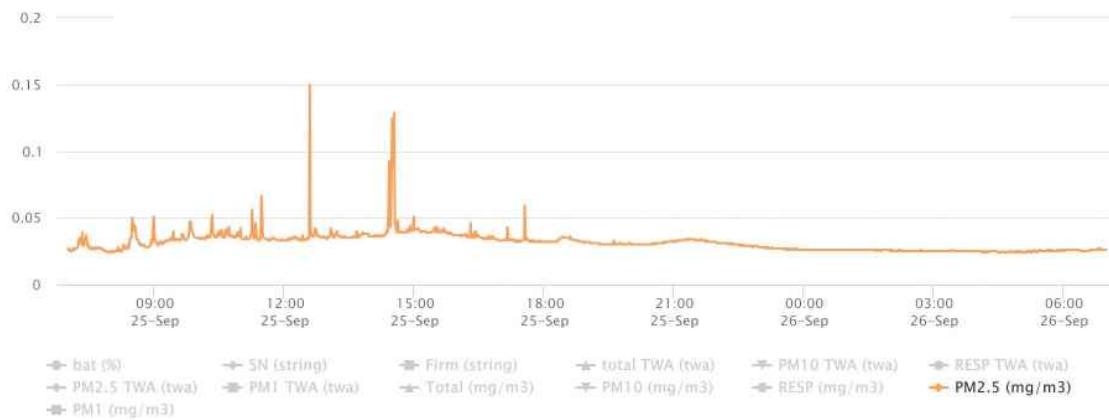
9/25/19 to 9/26/19 Data for AreaRAE Pro (HCN and H₂S) – South of fire



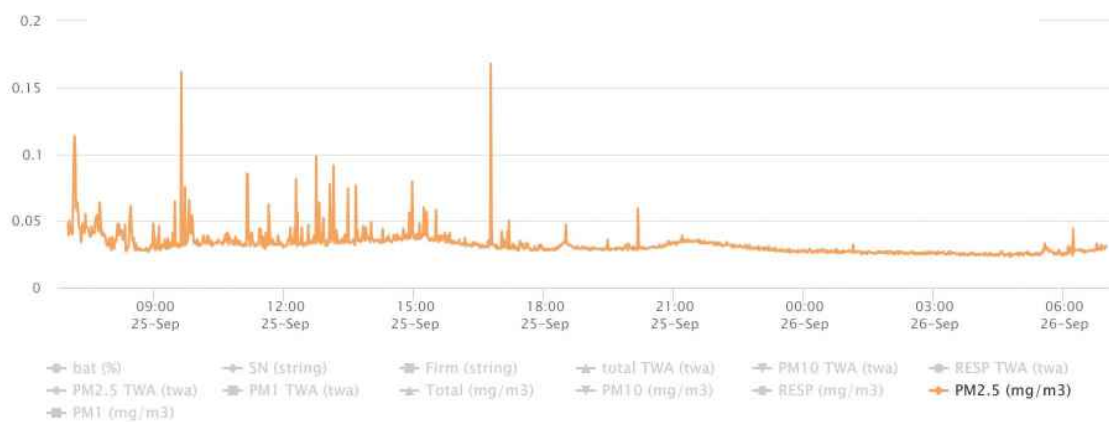
9/25/19 to 9/26/19 Data for AreaRAE Pro (HCN and H₂S) – West of fire



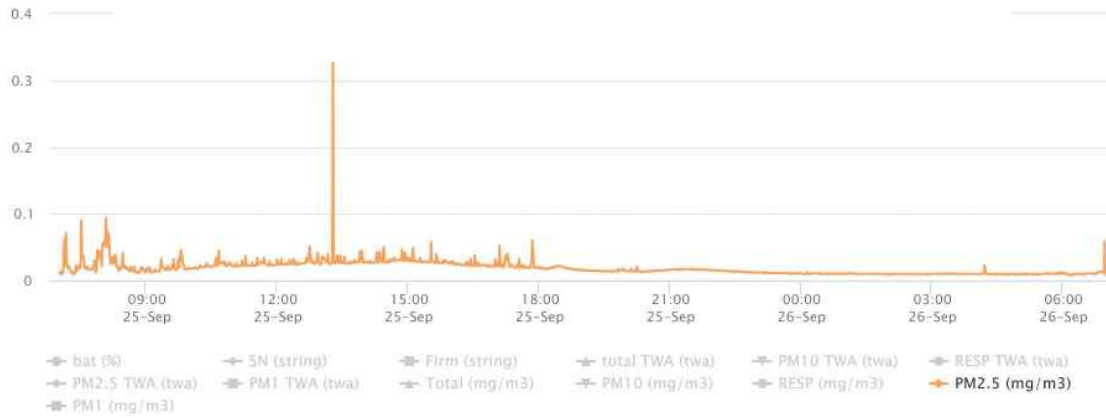
9/25/19 to 9/26/19 Data for DustTrak (PM_{2.5}) – Northeast of fire



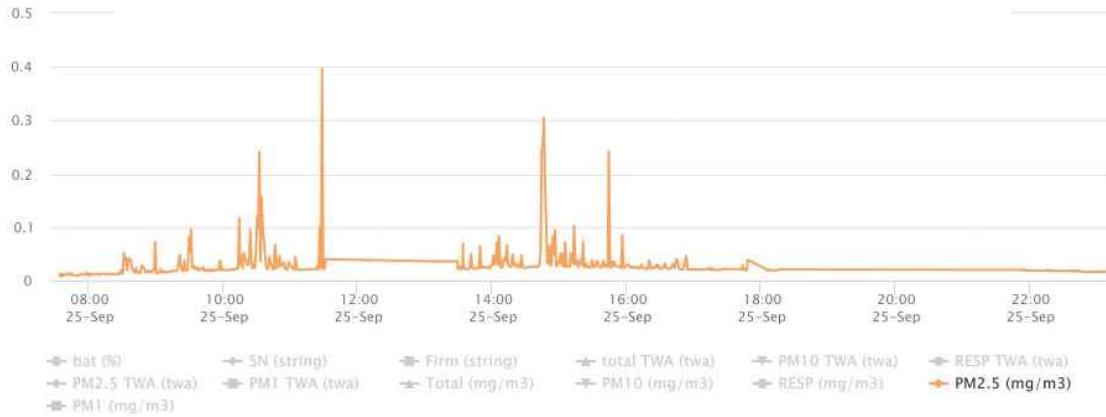
9/25/19 to 9/26/19 Data for DustTrak (PM_{2.5}) – Southeast of fire



9/25/19 to 9/26/19 Data for DustTrak (PM2.5) – South of fire



9/25/19 to 9/26/19 Data for DustTrak (PM2.5) – West of fire



Air Monitoring Summary Tables

The table below summarize monitoring data collected on using EPA's Viper wireless remote monitoring system.

Project Name:

From: 9/26/19
7:00

To: 9/27/19
6:59



Location 1 - Northeast of Fire								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 1	VOC	No	No	1,494	0	0 - 0 ppb	0 ppb	1,000 ppb
	CO	No	No	1,494	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	No	1,494	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	No	1,494	269	0 - 0.3 ppm	0 ppm	7.1 ppm
	O ₂	No	No	1,494	1,494	19.8 - 20.9%	20.2%	<19.5 or >23%
	LEL	No	No	1,494	1,494	2 - 4%	2.6%	10%
DustTrak 1	PM-2.5	Moderate		1,487	1,487	22 - 69 µg/m ³	34.8 µg/m ³	See SOG #: T106

Location 2 - Southeast of Fire								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 2	VOC	No	No	1,490	0	0 - 0 ppb	0 ppb	1,000 ppb
	CO	No	No	1,490	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	No	1,490	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	No	1,490	517	0 - 0.4 ppm	0 ppm	7.1 ppm
	O ₂	No	No	1,490	1,490	20.9 - 20.9%	20.9%	<19.5 or >23%
	LEL *	No	No					
DustTrak 2	PM-2.5	Moderate		1,500	1,500	22 - 148 µg/m ³	37.4 µg/m ³	See SOG #: T106

Location 3 - South of Fire								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 3	VOC	No	No	1,496	968	0 - 336 ppb	16.1 ppb	1,000 ppb
	CO	No	No	1,496	487	0 - 49 ppm	2.6 ppm	83 ppm
	H ₂ S	Yes	No	1,496	3	0 - 0.5 ppm	0 ppm	0.5 ppm
	HCN	No	No	1,496	859	0 - 3.1 ppm	0.3 ppm	7.1 ppm
	O ₂	No	No	1,496	1,496	20.9 - 20.9%	20.9%	<19.5 or >23%
	LEL	No	No	1,496	1,496	2 - 5%	3.5%	10%
DustTrak 3	PM-2.5	Moderate		1,480	1,480	7 - 87 µg/m ³	21.5 µg/m ³	See SOG #: T106

Location 4 - Northwest of Fire								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 4	VOC	No	No	1,492	2	0 - 2759 ppb	2 ppb	1,000 ppb
	CO	Yes	No	1,492	1,415	0 - 247 ppm	12 ppm	83 ppm
	H ₂ S	No	No	1,492	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	No	1,492	1,483	0 - 3 ppm	0.5 ppm	7.1 ppm
	O ₂	No	No	1,492	1,492	20.2 - 20.5%	20.4%	<19.5 or >23%
	LEL	No	No	1,492	0	0 - 0%	0%	10%
DustTrak 4	PM-2.5	Moderate		1,189	1,189	11 - 396 µg/m ³	25.3 µg/m ³	See SOG #: T106

Notes: * AreaRAE 2 LEL sensor was checked against a MiniRAE, found to be malfunctioning, and stopped at 10:19AM 09/25/2019. A new sensor will be installed today.

% Percent

< Less than

> Greater than

AEGL Acute Exposure Guideline Levels for Airborne Chemicals

CO Carbon monoxide

H₂S Hydrogen Sulfide

HCN Hydrogen Cyanide

LEL Lower Explosive Level

min Minute

O₂ Oxygen

PEL Permissible exposure limit

ppb Parts per billion

ppm Parts per million

PM Particulate matter

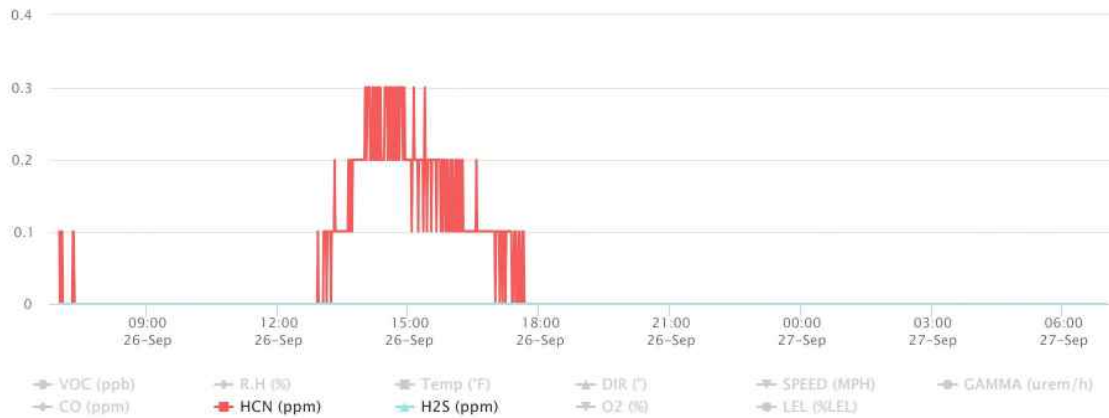
SOG Standard Operating Guidelines

TLV Threshold limit value

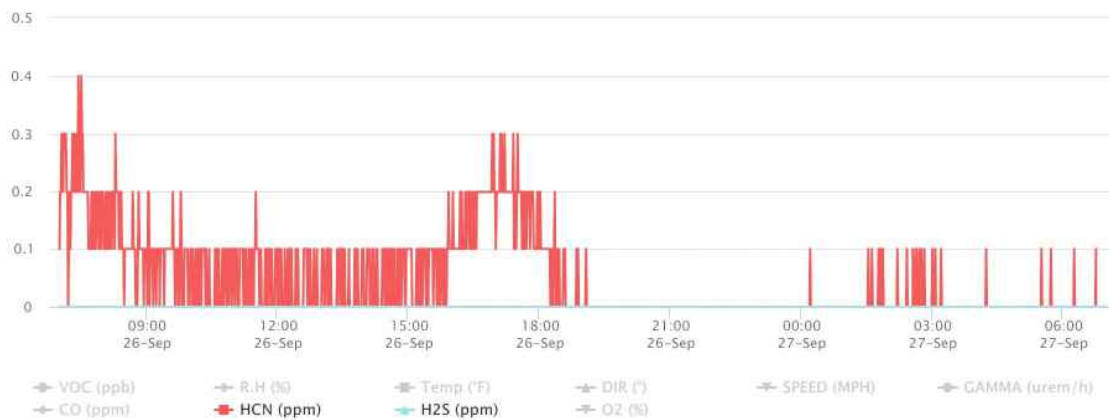
µg/m³ Micrograms per cubic meter

VOC Volatile organic compound

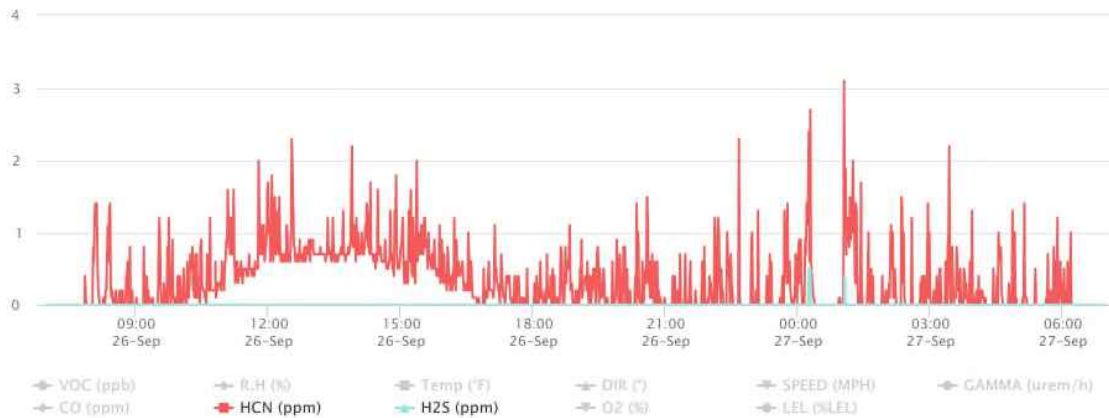
9/26/19 to 9/27/19 Data for AreaRAE Pro (HCN and H₂S) – Northeast of fire



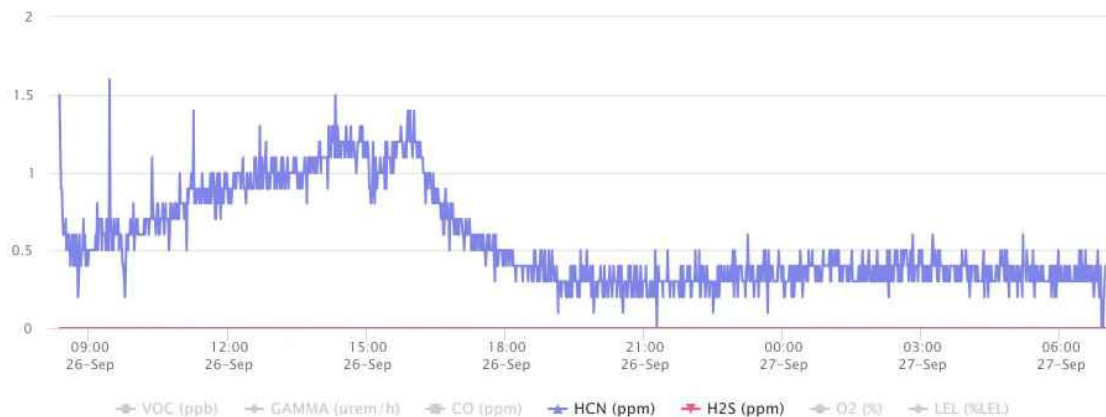
9/26/19 to 9/27/19 Data for AreaRAE Pro (HCN and H₂S) – Southeast of fire



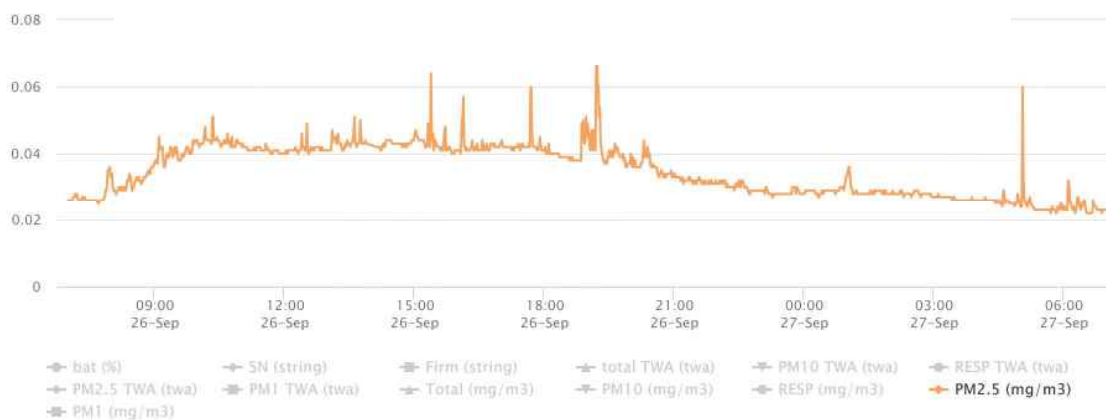
9/26/19 to 9/27/19 Data for AreaRAE Pro (HCN and H₂S) – South of fire



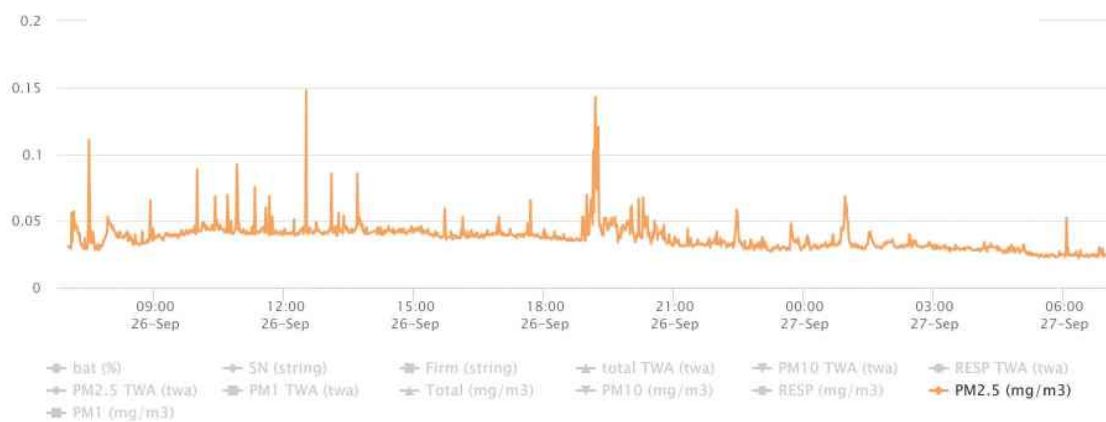
9/26/19 to 9/27/19 Data for AreaRAE Pro (HCN and H₂S) – Northwest of fire



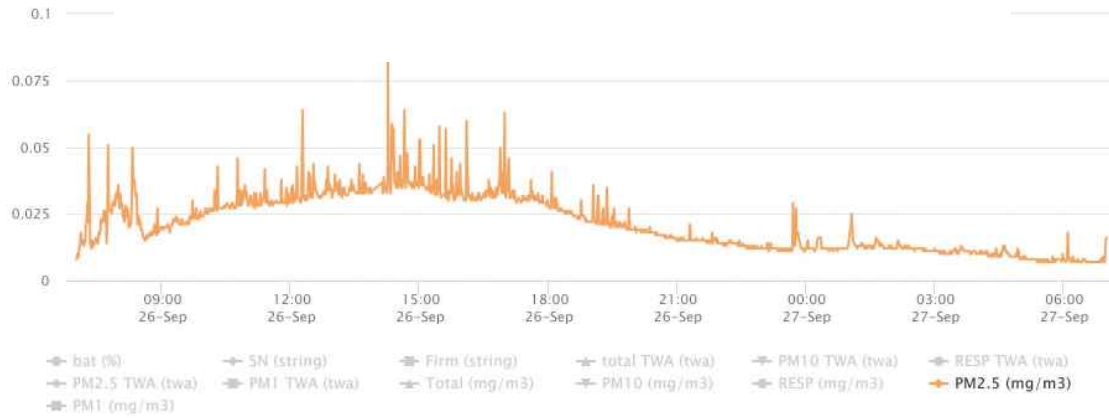
9/26/19 to 9/27/19 Data for DustTrak (PM2.5) – Northeast of fire



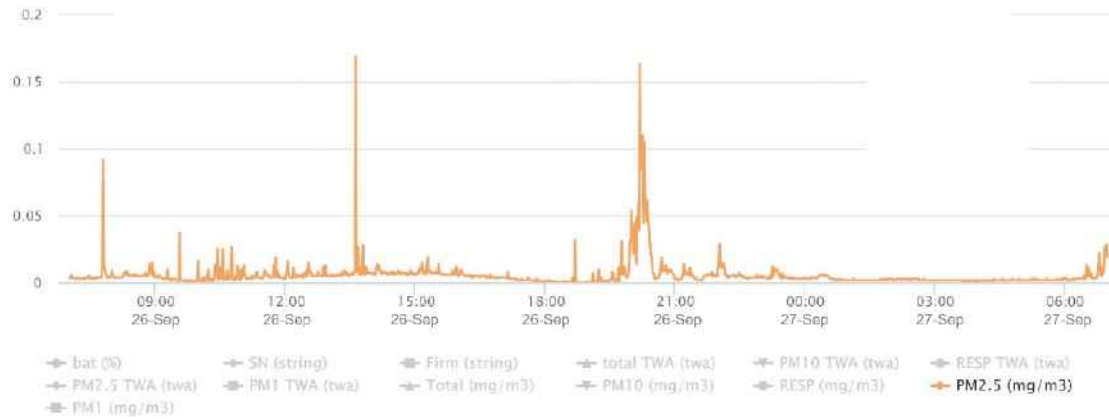
9/25/19 to 9/26/19 Data for DustTrak (PM2.5) – Southeast of fire



9/26/19 to 9/27/19 Data for DustTrak (PM2.5) – South of fire



9/26/19 to 9/27/19 Data for DustTrak (PM2.5) – Northwest of fire



Air Monitoring Summary Tables

The table below summarize monitoring data collected on using EPA's Viper wireless remote monitoring system.

Project Name:

From: 9/27/19
7:00

To: 9/28/19
6:57



Location 1 - Northeast of Fire								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 1	VOC	No	No	1,464	0	0 - 0 ppb	0 ppb	1,000 ppb
	CO	No	No	1,464	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	No	1,464	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	No	1,464	1,347	0 - 1 ppm	0.5 ppm	7.1 ppm
	O ₂	No	No	1,464	1,464	19.8 - 21.6%	21%	<19.5 or >23%
	LEL	No	No	1,464	532	0 - 3%	0.8%	10%
DustTrak 1	PM-2.5	Moderate		1,581	1,581	17 - 172 µg/m ³	23.6 µg/m ³	See SOG #: T106

Location 2 - Southeast of Fire								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 2	VOC	No	No	1,466	0	0 - 0 ppb	0 ppb	1,000 ppb
	CO	No	No	1,466	0	0 - 0 ppm	0 ppm	83 ppm
	H ₂ S	No	No	1,466	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	No	1,466	505	0 - 0.8 ppm	0.1 ppm	7.1 ppm
	O ₂	No	No	1,466	1,466	20.9 - 21.5%	20.9%	<19.5 or >23%
	LEL *	No	No	1,466	41	0 - 9 %	0.2%	10%
DustTrak 2	PM-2.5	Moderate		1,567	1,567	15 - 127 µg/m ³	22.6 µg/m ³	See SOG #: T106

Location 3 - South of Fire								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 3	VOC	No	No	1,469	120	0 - 489 ppb	2.7 ppb	1,000 ppb
	CO	No	No	1,469	462	0 - 38 ppm	2.4 ppm	83 ppm
	H ₂ S	No	No	1,469	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	No	1,469	1,350	0 - 3 ppm	0.7 ppm	7.1 ppm
	O ₂	No	No	1,469	1,469	20.9 - 20.9%	20.9%	<19.5 or >23%
	LEL	No	Yes	1,469	120	0 - 5%	0.3%	10%
DustTrak 3	PM-2.5	Good		1,561	1,561	3 - 168 µg/m ³	9.5 µg/m ³	See SOG #: T106

Location 4 - Northwest of Fire								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 4	VOC	No	No	1,466	0	0 - 0 ppb	0 ppb	1,000 ppb
	CO	Yes	No	1,466	171	0 - 197 ppm	1.7 ppm	83 ppm
	H ₂ S	No	No	1,466	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	No	1,466	906	0 - 1.7 ppm	0.2 ppm	7.1 ppm
	O ₂	No	No	1,466	1,466	20.3 - 20.9%	20.9%	<19.5 or >23%
	LEL	No	No	1,466	0	0 - 0%	0%	10%
DustTrak 4	PM-2.5	Moderate		1,443	1,443	6 - 207 µg/m ³	13.1 µg/m ³	See SOG #: T106

Notes: * AreaRAE 2 LEL sensor was checked against a MiniRAE, found to be malfunctioning, and stopped at 10:19AM 09/25/2019. A new sensor will be installed today.

% Percent

< Less than

> Greater than

AEGL Acute Exposure Guideline Levels for Airborne Chemicals

CO Carbon monoxide

H₂S Hydrogen Sulfide

HCN Hydrogen Cyanide

LEL Lower Explosive Level

min Minute

O₂ Oxygen

PEL Permissible exposure limit

ppb Parts per billion

ppm Parts per million

PM Particulate matter

SOG Standard Operating Guidelines

TLV Threshold limit value

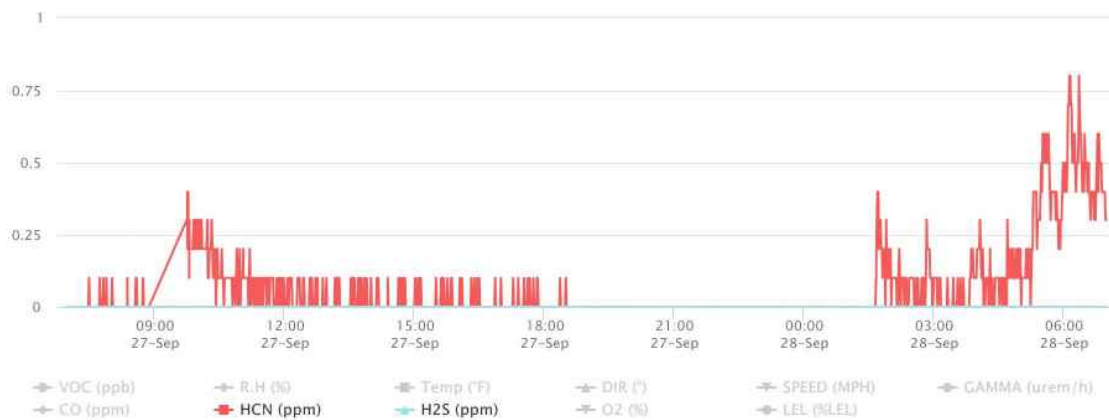
µg/m³ Micrograms per cubic meter

VOC Volatile organic compound

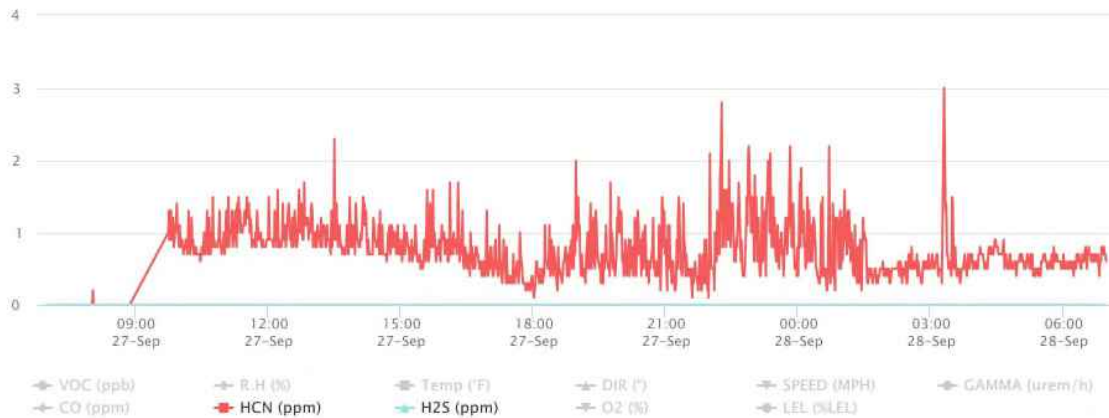
9/27/19 to 9/28/19 Data for AreaRAE Pro (HCN and H₂S) – Northeast of fire



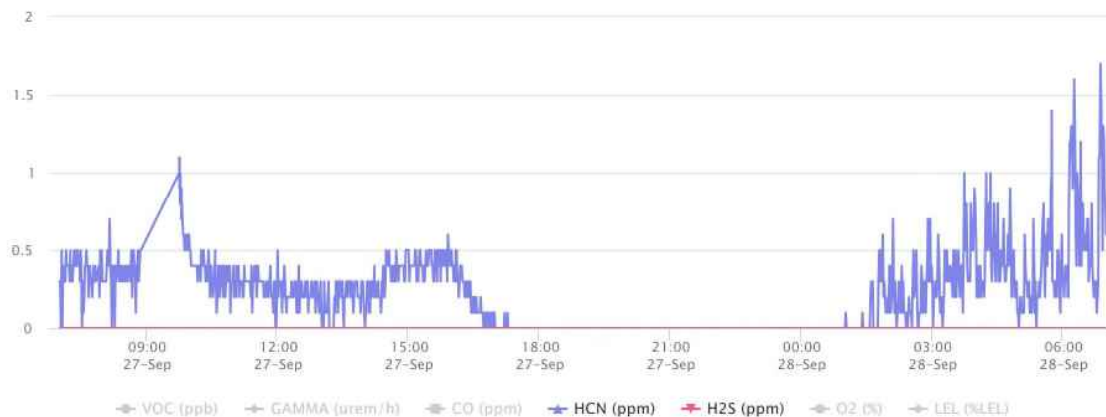
9/27/19 to 9/28/19 Data for AreaRAE Pro (HCN and H₂S) – Southeast of fire



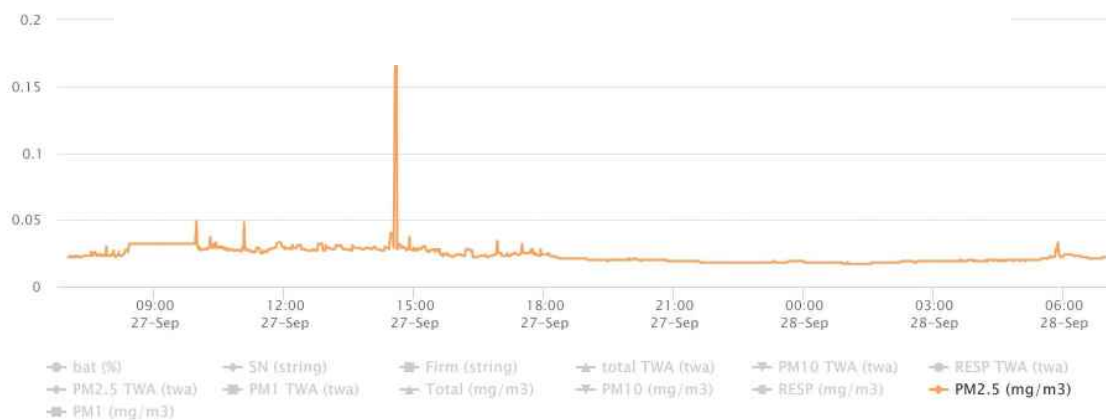
9/27/19 to 9/28/19 Data for AreaRAE Pro (HCN and H₂S) – South of fire



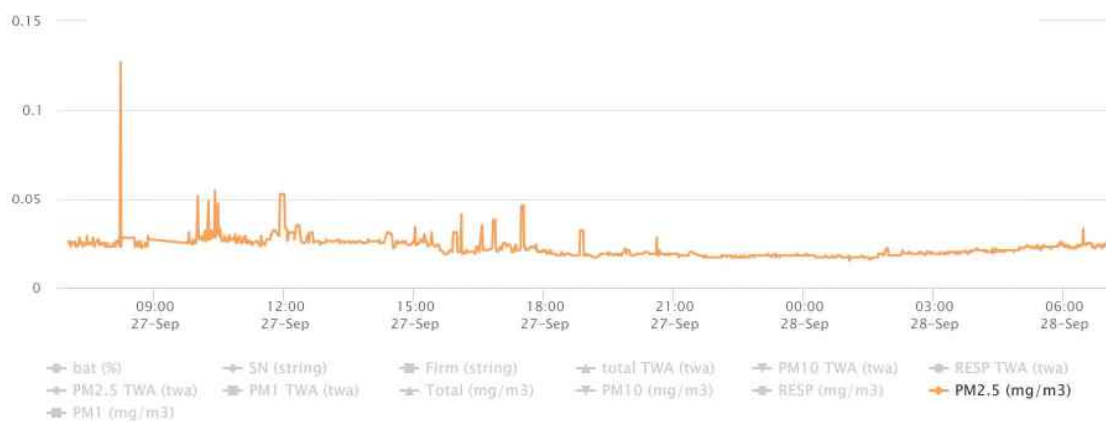
9/27/19 to 9/28/19 Data for AreaRAE Pro (HCN and H₂S) – Northwest of fire



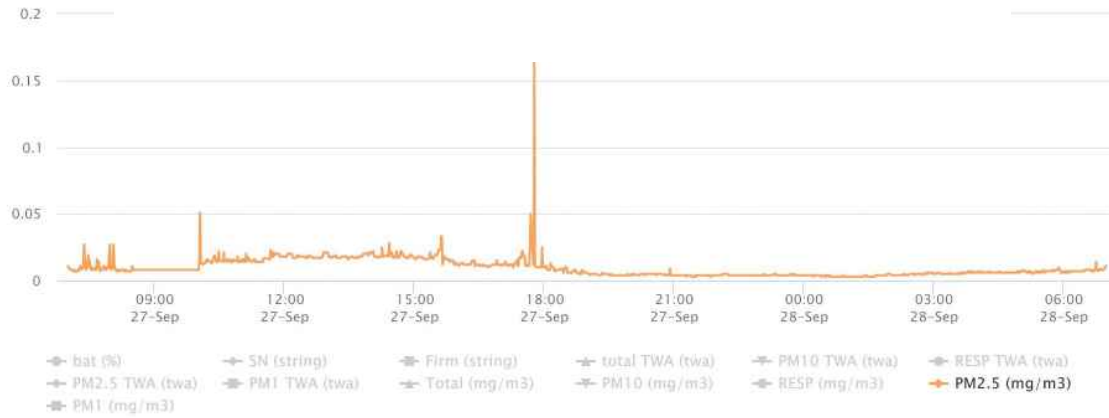
9/27/19 to 9/28/19 Data for DustTrak (PM2.5) – Northeast of fire



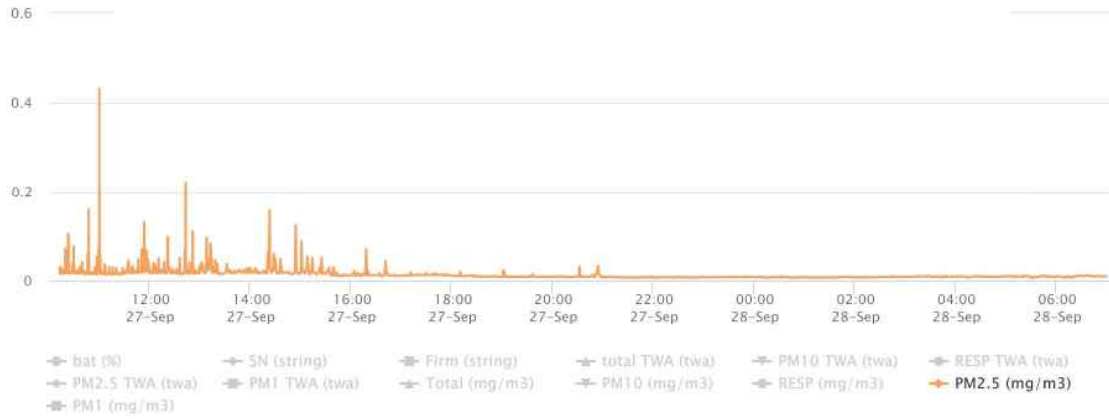
9/27/19 to 9/28/19 Data for DustTrak (PM2.5) – Southeast of fire



9/27/19 to 9/28/19 Data for DustTrak (PM2.5) – South of fire



9/27/19 to 9/28/19 Data for DustTrak (PM2.5) – Northwest of fire



Air Monitoring Summary Tables

The table below summarize monitoring data collected on using EPA's Viper wireless remote monitoring system.

Project Name:

From: 9/30/19
7:00

To: 10/1/19
6:59



Location 1 - Northeast of Fire								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 1	VOC	No	No	1,460	2	0 - 114 ppb	0.1 ppb	1,000 ppb
	CO	No	No	1,460	1	0 - 3 ppm	0 ppm	83 ppm
	H2S	No	No	1,460	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	No	1,460	670	0 - 0.9 ppm	0.3 ppm	7.1 ppm
	O2	No	No	1,460	1,460	19.8 - 21.6%	20.5%	<19.5 or >23%
	LEL	No	No	1,460	0	0 - 0%	0%	10%
DustTrak 1	PM-2.5	Moderate		1,663	1,663	27 - 70 µg/m³	34.5 µg/m³	See SOG #: T106

Location 2 - Southeast of Fire								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 2	VOC	No	No	1,469	0	0 - 0 ppb	0 ppb	1,000 ppb
	CO	No	No	1,469	0	0 - 0 ppm	0 ppm	83 ppm
	H2S	No	No	1,469	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	No	1,469	694	0 - 0.8 ppm	0.1 ppm	7.1 ppm
	O2	No	No	1,469	1,469	20.5 - 20.7%	20.6%	<19.5 or >23%
	LEL	No	No	1,469	0	0 - 0 %	0%	10%
DustTrak 2	PM-2.5	Unhealthy for Sensitive Groups		1,888	1,888	19 - 413 µg/m³	35.9 µg/m³	See SOG #: T106

Location 3 - South of Fire								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 3	VOC	No	No	1,468	7	0 - 166 ppb	0.5 ppb	1,000 ppb
	CO	No	No	1,468	85	0 - 14 ppm	0.3 ppm	83 ppm
	H2S	No	No	1,468	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	Yes	No	1,468	1,097	0 - 9.5 ppm	0.3 ppm	7.1 ppm
	O2	No	No	1,468	1,464	0 - 21.7%	21.3%	<19.5 or >23%
	LEL	No	Yes	1,468	0	0 - 0%	0%	10%
DustTrak 3	PM-2.5	Moderate		1,850	1,850	13 - 161 µg/m³	18 µg/m³	See SOG #: T106

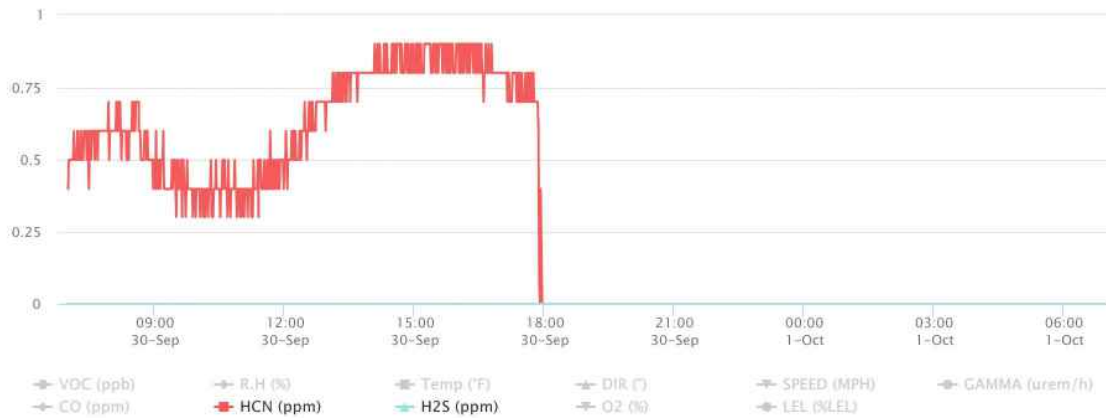
Location 4 - Northwest of Fire								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 4	VOC	No	No	1,473	0	0 - 0 ppb	0 ppb	1,000 ppb
	CO	No	No	1,473	24	0 - 77 ppm	0.2 ppm	83 ppm
	H2S	No	No	1,473	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	No	1,473	547	0 - 1.3 ppm	0.1 ppm	7.1 ppm
	O2	No	No	1,473	1,473	20.9 - 20.9%	20.9%	<19.5 or >23%
	LEL	No	No	1,473	0	0 - 0%	0%	10%
DustTrak 4	PM-2.5	Moderate		1,467	1,467	1 - 47 µg/m³	24.2 µg/m³	See SOG #: T106

Notes:

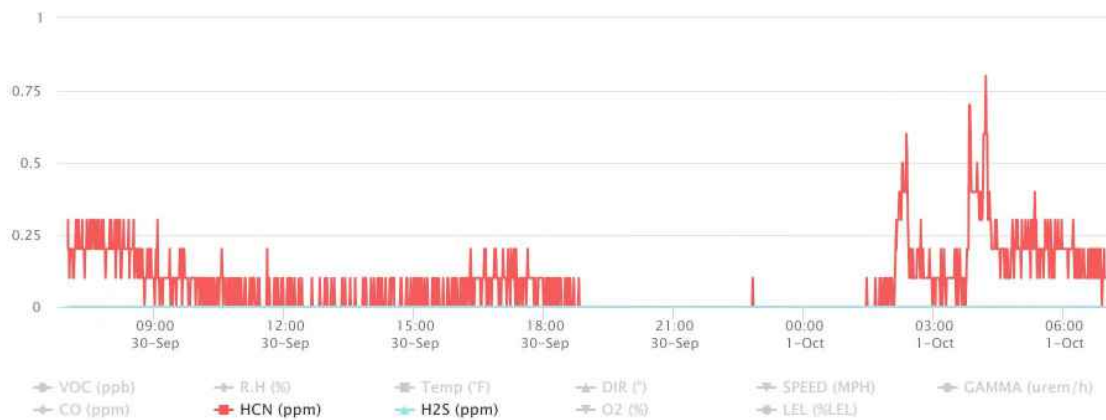
% Percent
< Less than
> Greater than
AEGL Acute Exposure Guideline Levels for Airborne Chemicals
CO Carbon monoxide
H₂S Hydrogen Sulfide
HCN Hydrogen Cyanide
LEL Lower Explosive Level
min Minute

O₂ Oxygen
PEL Permissible exposure limit
ppb Parts per billion
ppm Parts per million
PM Particulate matter
SOG Standard Operating Guidelines
TLV Threshold limit value
µg/m³ Micrograms per cubic meter
VOC Volatile organic compound

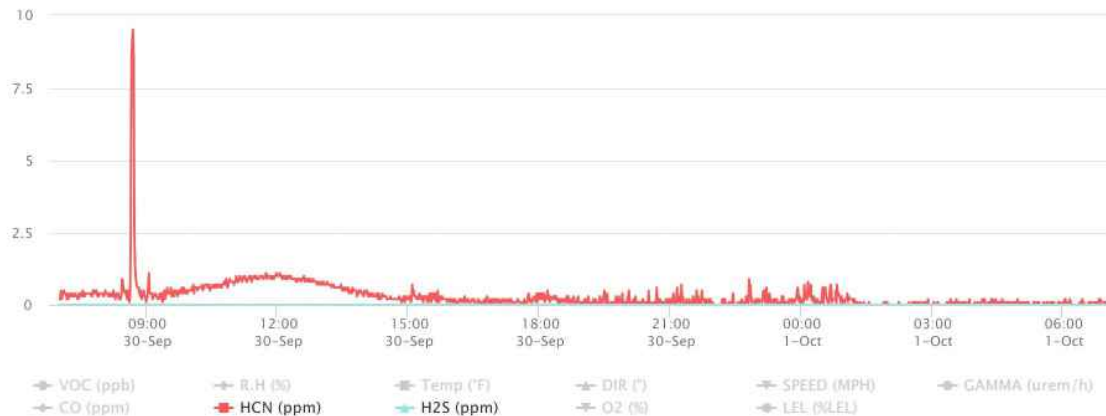
9/30/19 to 10/01/19 Data for AreaRAE Pro (HCN and H₂S) – Northeast of fire



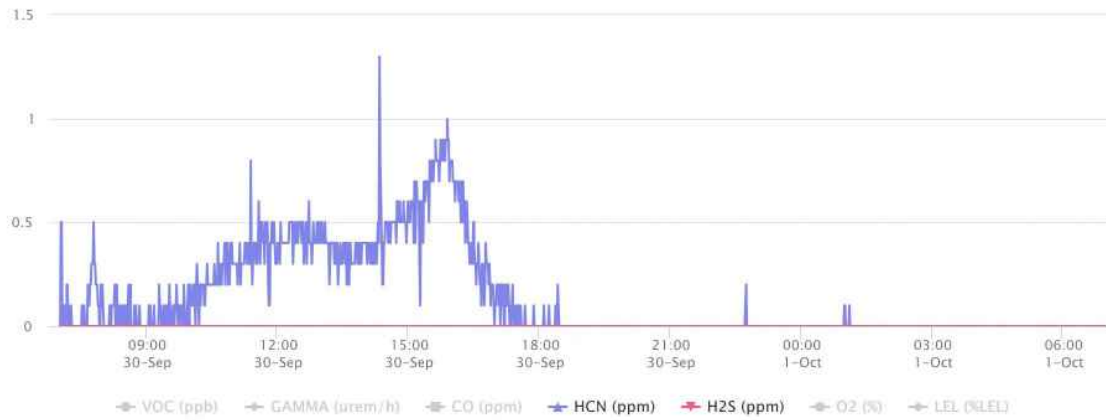
9/30/19 to 10/01/19 Data for AreaRAE Pro (HCN and H₂S) – Southeast of fire



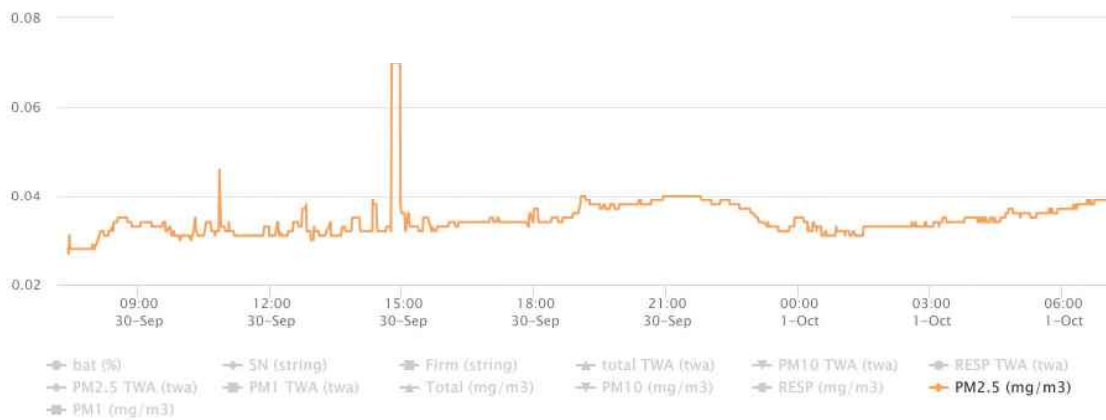
9/30/19 to 10/01/19 Data for AreaRAE Pro (HCN and H₂S) – South of fire



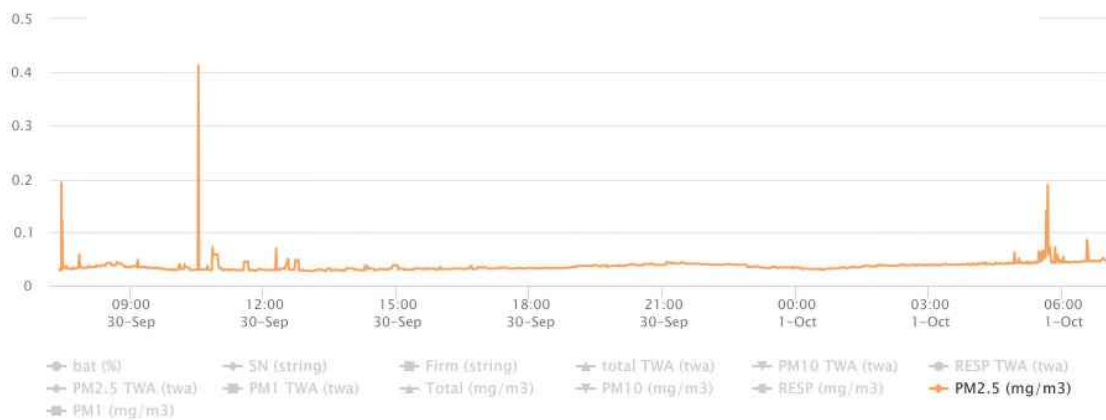
9/30/19 to 10/01/19 Data for AreaRAE Pro (HCN and H₂S) – Northwest of



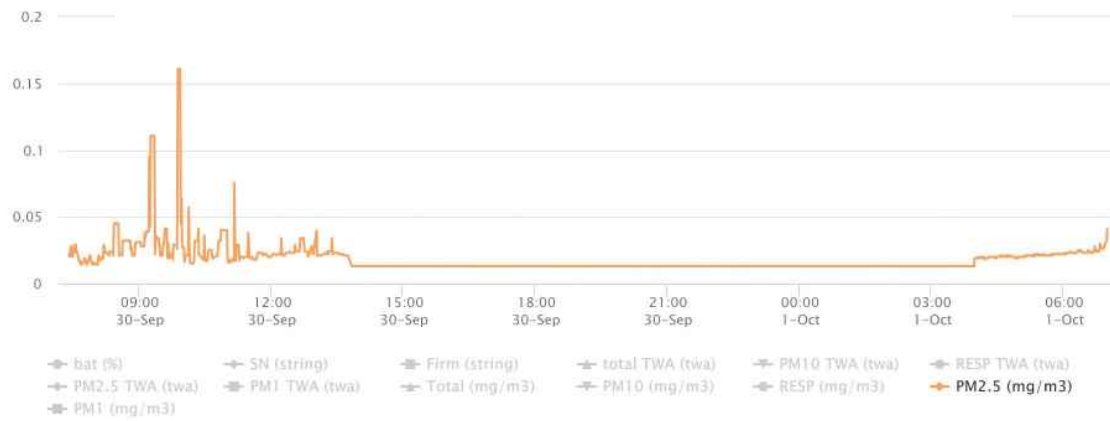
9/30/19 to 10/01/19 Data for DustTrak (PM2.5) – Northeast of fire



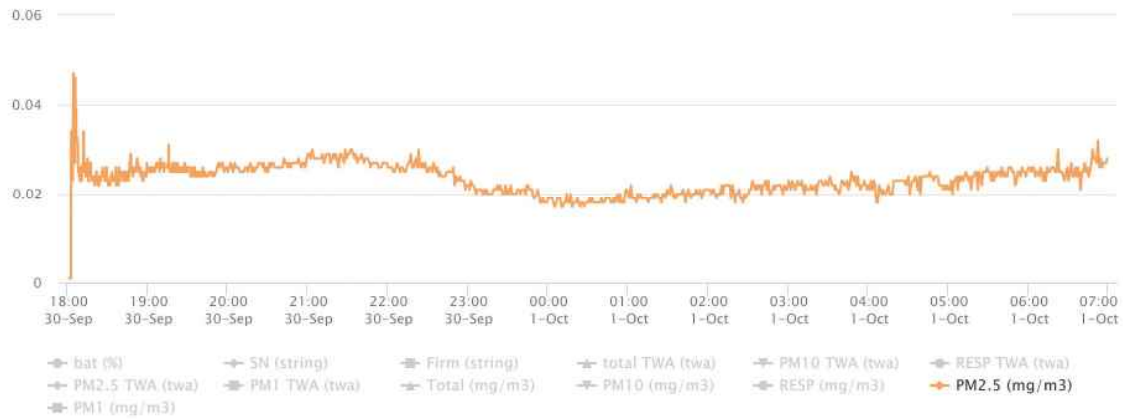
9/30/19 to 10/01/19 Data for DustTrak (PM2.5) – Southeast of fire



9/30/19 to 10/01/19 Data for DustTrak (PM2.5) – South of fire



9/30/19 to 10/01/19 Data for DustTrak (PM2.5) – Northwest of fire



Air Monitoring Summary Tables

The table below summarize monitoring data collected on using EPA's Viper wireless remote monitoring system.



Project Name:

From: 10/1/19
7:00

To: 10/2/19
6:58

Location 1 - Northeast of Fire								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 1	VOC	No	No	1,485	145	0 - 125 ppb	0.7 ppb	1,000 ppb
	CO	No	No	1,485	2	0 - 9 ppm	0 ppm	83 ppm
	H2S	No	No	1,485	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	Yes	No	1,485	915	0 - 10.7 ppm	0.2 ppm	7.1 ppm
	O2	No	No	1,485	1,482	0 - 21.3%	20.8%	<19.5 or >23%
	LEL	No	No	1,485	0	0 - 0%	0%	10%
DustTrak 1	PM-2.5	Moderate		1,525	1,525	20 - 85 µg/m³	29.1 µg/m³	See SOG #: T106

Location 2 - Southeast of Fire								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 2	VOC	No	No	1,477	0	0 - 0 ppb	0 ppb	1,000 ppb
	CO	No	No	1,477	0	0 - 0 ppm	0 ppm	83 ppm
	H2S	No	No	1,477	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	No	1,477	636	0 - 0.8 ppm	0.1 ppm	7.1 ppm
	O2	No	No	1,477	1,477	20.5 - 20.6%	20.5%	<19.5 or >23%
	LEL	No	No	1,477	0	0 - 0 %	0%	10%
DustTrak 2	PM-2.5	Moderate		1,864	1,864	17 - 307 µg/m³	31.8 µg/m³	See SOG #: T106

Location 3 - South of Fire								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 3	VOC	No	No	1,483	0	0 - 0 ppb	0 ppb	1,000 ppb
	CO	No	No	1,483	31	0 - 8 ppm	0.1 ppm	83 ppm
	H2S	No	No	1,483	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	No	1,483	1,025	0 - 0.6 ppm	0.1 ppm	7.1 ppm
	O2	No	No	1,483	1,483	21.3 - 21.7%	21.4%	<19.5 or >23%
	LEL	No	No	1,483	0	0 - 0%	0%	10%
DustTrak 3	PM-2.5	Moderate		1,500	1,499	0 - 386 µg/m³	16.1 µg/m³	See SOG #: T106

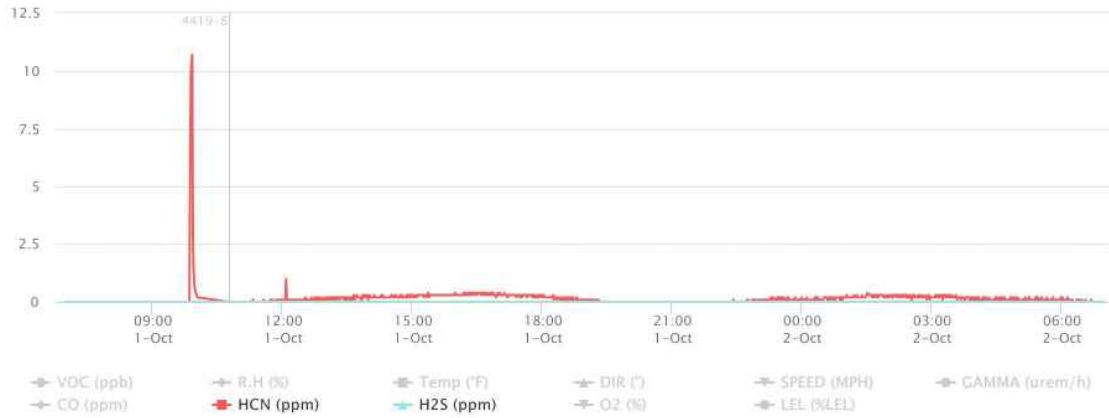
Location 4 - Northwest of Fire								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 4	VOC	No	No	1,465	0	0 - 0 ppb	0 ppb	1,000 ppb
	CO	No	No	1,465	34	0 - 51 ppm	0.2 ppm	83 ppm
	H2S	No	No	1,465	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	No	1,465	329	0 - 0.7 ppm	0.1 ppm	7.1 ppm
	O2	No	No	1,465	1,465	20.9 - 20.9%	20.9%	<19.5 or >23%
	LEL	No	No	1,465	0	0 - 0%	0%	10%
DustTrak 4	PM-2.5	Moderate		1,417	1,416	0 - 711 µg/m³	18.6 µg/m³	See SOG #: T106

Notes:

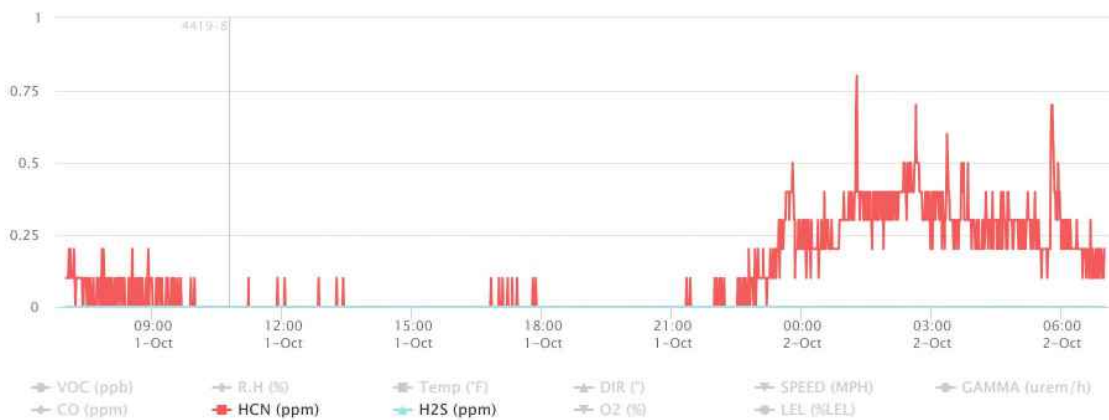
% Percent
< Less than
> Greater than
AEGL Acute Exposure Guideline Levels for Airborne Chemicals
CO Carbon monoxide
H₂S Hydrogen Sulfide
HCN Hydrogen Cyanide
LEL Lower Explosive Level
min Minute

O₂ Oxygen
PEL Permissible exposure limit
ppb Parts per billion
ppm Parts per million
PM Particulate matter
SOG Standard Operating Guidelines
TLV Threshold limit value
µg/m³ Micrograms per cubic meter
VOC Volatile organic compound

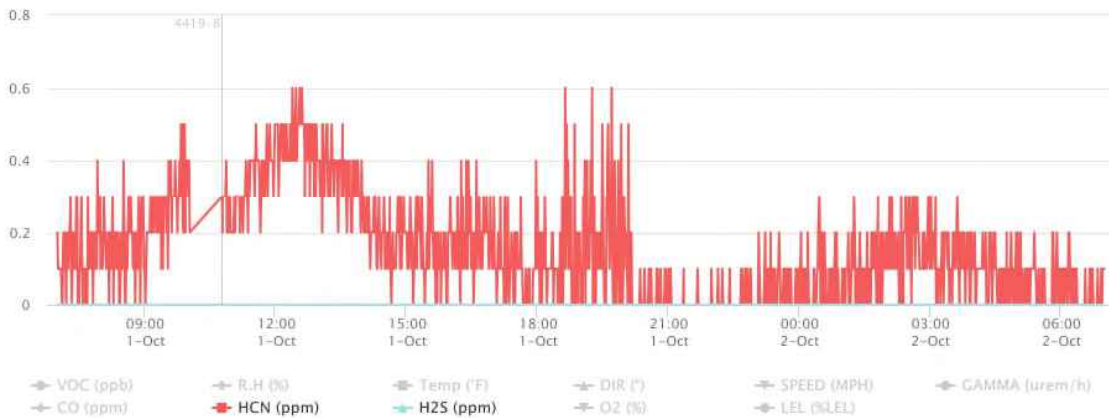
10/01/19 to 10/02/19 Data for AreaRAE Pro (HCN and H₂S) – Northeast of site



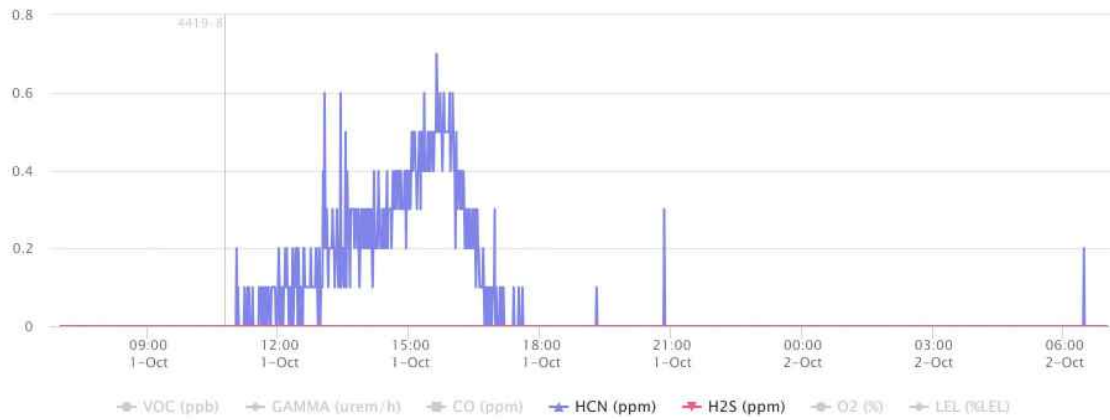
10/01/19 to 10/02/19 Data for AreaRAE Pro (HCN and H₂S) – Southeast of site



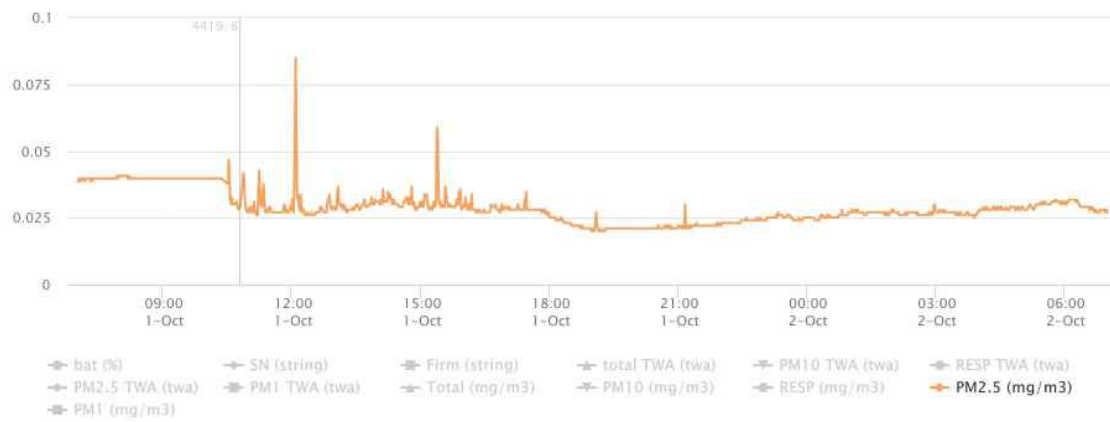
10/01/19 to 10/02/19 Data for AreaRAE Pro (HCN and H₂S) – South of site



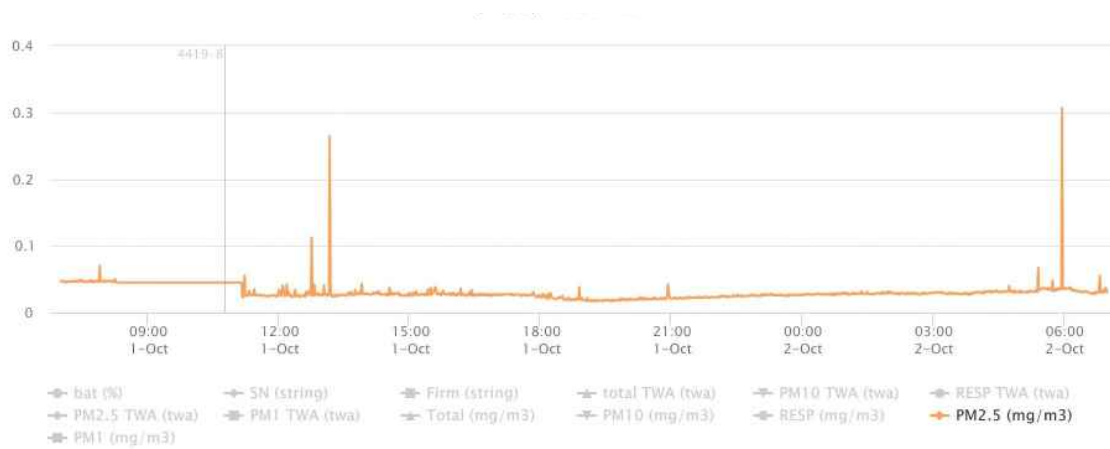
10/01/19 to 10/02/19 Data for AreaRAE Pro (HCN and H₂S) – Northwest of site



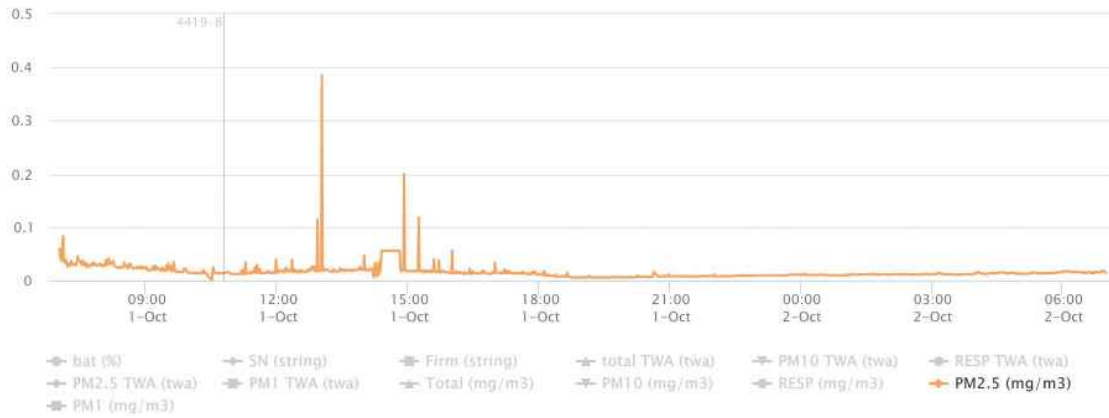
10/01/19 to 10/02/19 Data for DustTrak (PM_{2.5}) – Northeast of site



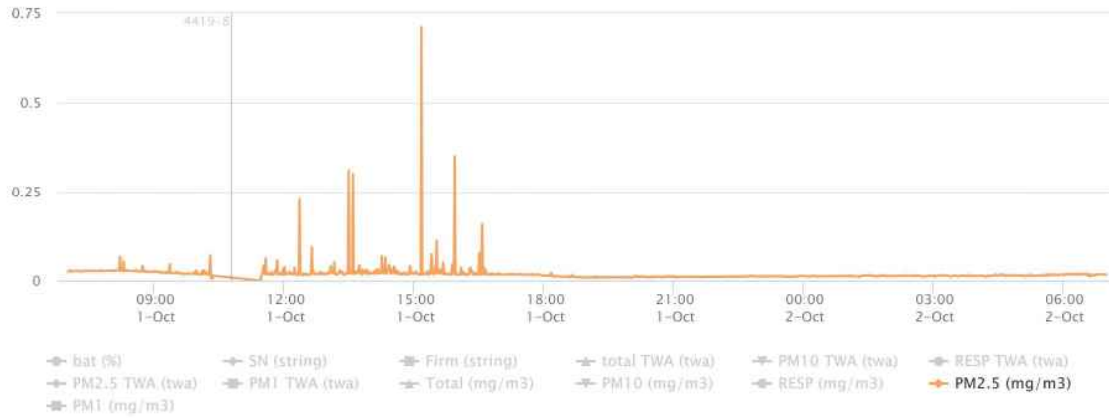
10/01/19 to 10/02/19 Data for DustTrak (PM_{2.5}) – Southeast of site



10/01/19 to 10/02/19 Data for DustTrak (PM2.5) – South of site



10/01/19 to 10/02/19 Data for DustTrak (PM2.5) – Northwest of site



Air Monitoring Summary Tables

The table below summarize monitoring data collected on using EPA's Viper wireless remote monitoring system.

Project Name:

From: 10/3/19
7:00

To: 10/4/19
5:00
7:00 (DustTraks) *See Notes



Location 1 - Northeast of Fire								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 1	VOC	No	No	1,385	372	0 - 47 ppb	2.1 ppb	1,000 ppb
	CO	No	No	1,385	0	0 - 0 ppm	0 ppm	83 ppm
	H2S	No	No	1,385	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	No	1,385	183	0 - 0.4 ppm	0 ppm	7.1 ppm
	O2	No	No	1,385	1,385	20.4 - 20.9%	20.7%	<19.5 or >23%
	LEL	No	No	1,385	0	0 - 0%	0%	10%
DustTrak 1	PM-2.5	Moderate		1,442	1,442	8 - 437 µg/m³	24.9 µg/m³	See SOG #: T106

Location 2 - Southeast of Fire								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 2	VOC	No	No	1,373	0	0 - 0 ppb	0 ppb	1,000 ppb
	CO	No	No	1,373	0	0 - 0 ppm	0 ppm	83 ppm
	H2S	No	No	1,373	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	No	1,373	623	0 - 2.3 ppm	0.2 ppm	7.1 ppm
	O2	No	No	1,373	1,373	20.5 - 20.9%	20.8%	<19.5 or >23%
	LEL	No	No	1,373	0	0 - 0 %	0%	10%
DustTrak 2	PM-2.5	Moderate		1,849	1,849	10 - 362 µg/m³	23.5 µg/m³	See SOG #: T106

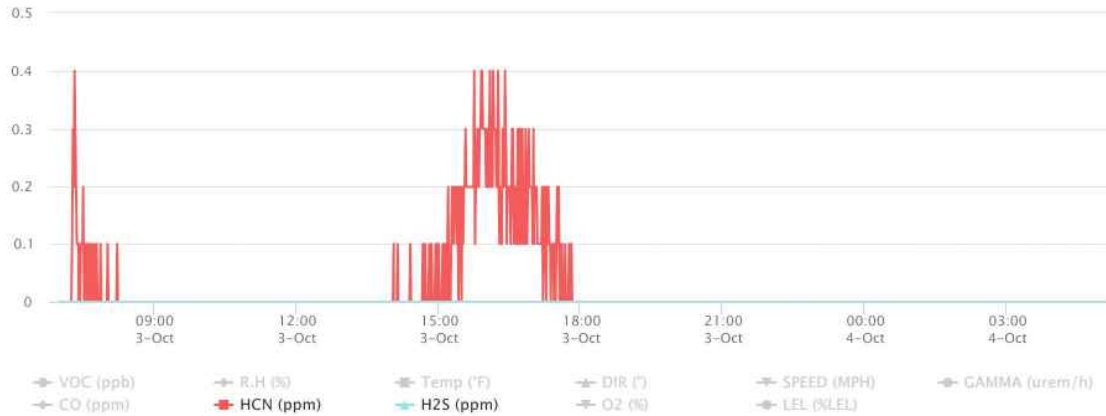
Location 3 - South of Fire								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 3	VOC	Yes	No	1,317	2	0 - 1819 ppb	1.6 ppb	1,000 ppb
	CO	No	No	1,316	121	0 - 18 ppm	0.5 ppm	83 ppm
	H2S	No	No	1,317	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	No	1,317	536	0 - 3.3 ppm	0.4 ppm	7.1 ppm
	O2	No	No	1,317	1,317	20.9 - 20.9%	20.9%	<19.5 or >23%
	LEL	No	No	1,317	0	0 - 0%	0%	10%
DustTrak 3*	PM-2.5							See SOG #: T106

Location 4 - Northwest of Fire								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 4	VOC	No	No	1,372	954	0 - 69 ppb	26.9 ppb	1,000 ppb
	CO	No	No	1,372	0	0 - 0 ppm	0 ppm	83 ppm
	H2S	Yes	No	1,372	1	0 - 0.7 ppm	0 ppm	0.5 ppm
	HCN	No	No	1,372	305	0 - 1.5 ppm	0.1 ppm	7.1 ppm
	O2	No	No	1,372	1,372	20.5 - 20.9%	20.9%	<19.5 or >23%
	LEL	No	No	1,372	0	0 - 0%	0%	10%
DustTrak 4	PM-2.5	Moderate		1,441	1,441	7 - 476 µg/m³	16.7 µg/m³	See SOG #: T106

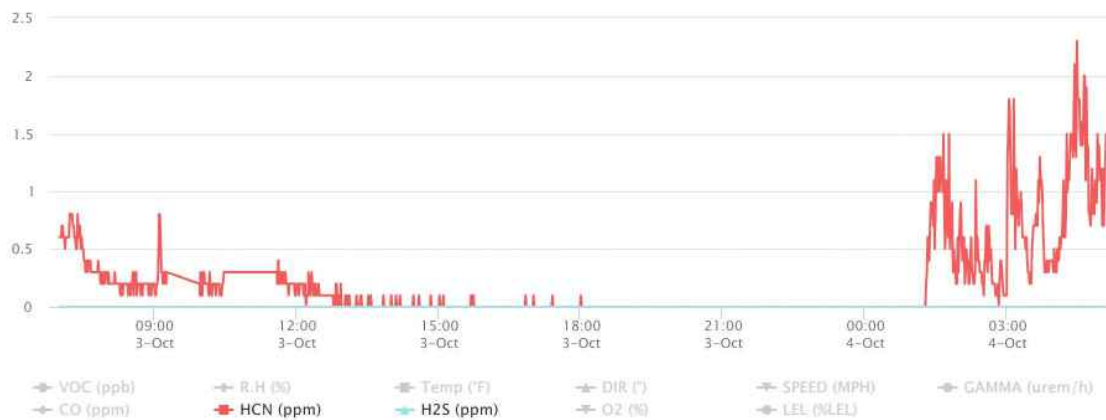
Notes: * All AreaRae data stopped transmitting at 0500hrs due to the loss of power to the server at that time. Data collection resumed by 0800hrs 10/04/2019.
* DustTrak data collection was not affected during this period. DustTrak 3 collected erroneous data during this period and was re-calibrated on 10/04/2019.

%	Percent	O ₂	Oxygen
<	Less than	PEL	Permissible exposure limit
>	Greater than	ppb	Parts per billion
AEGL	Acute Exposure Guideline Levels for Airborne Chemicals	ppm	Parts per million
CO	Carbon monoxide	PM	Particulate matter
H ₂ S	Hydrogen Sulfide	SOG	Standard Operating Guidelines
HCN	Hydrogen Cyanide	TLV	Threshold limit value
LEL	Lower Explosive Level	µg/m³	Micrograms per cubic meter
min	Minute	VOC	Volatile organic compound

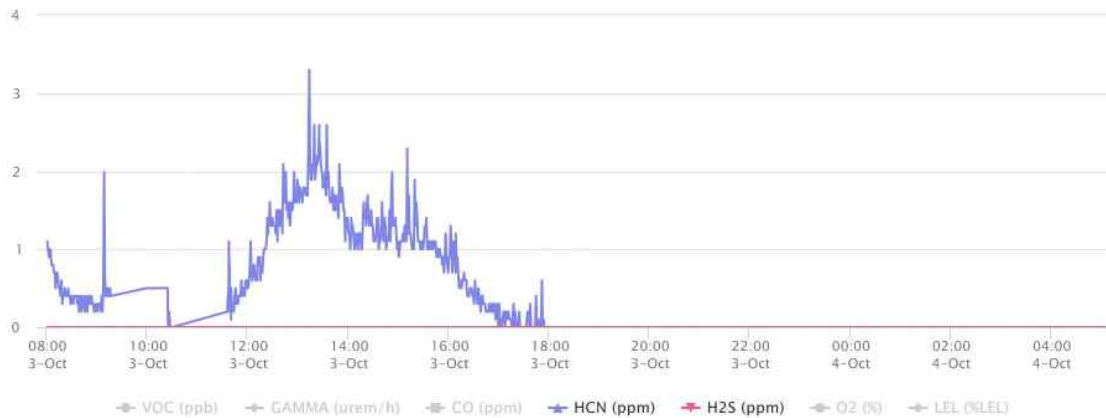
10/03/19 to 10/04/19 Data for AreaRAE Pro (HCN and H₂S) – Northeast of site



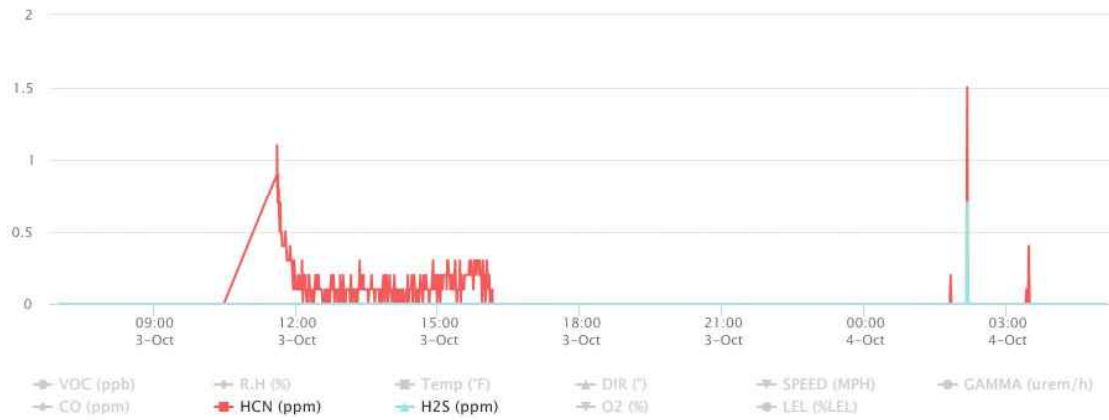
10/03/19 to 10/04/19 Data for AreaRAE Pro (HCN and H₂S) – Southeast of site



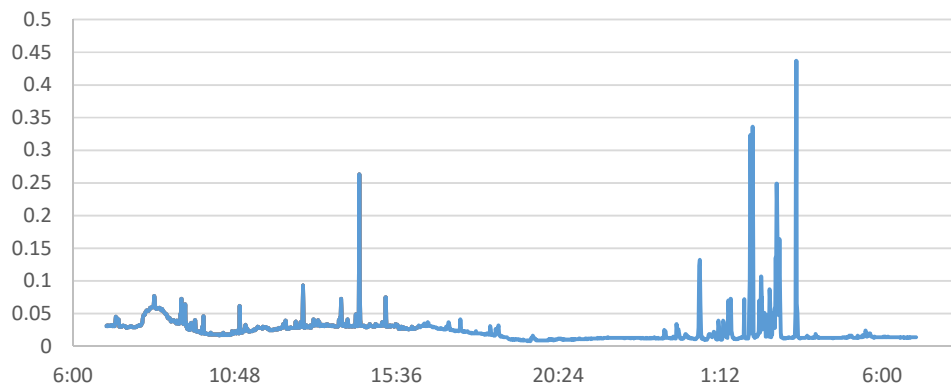
10/03/19 to 10/04/19 Data for AreaRAE Pro (HCN and H₂S) – South of site



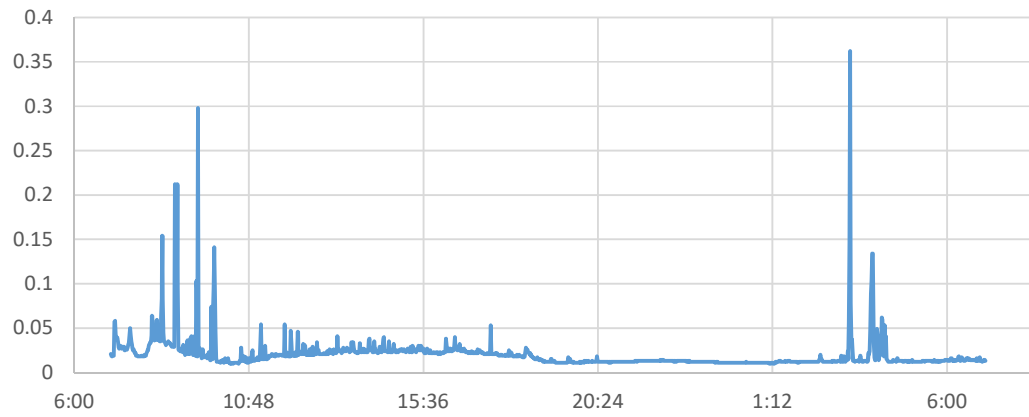
10/03/19 to 10/04/19 Data for AreaRAE Pro (HCN and H₂S) – Northwest of site



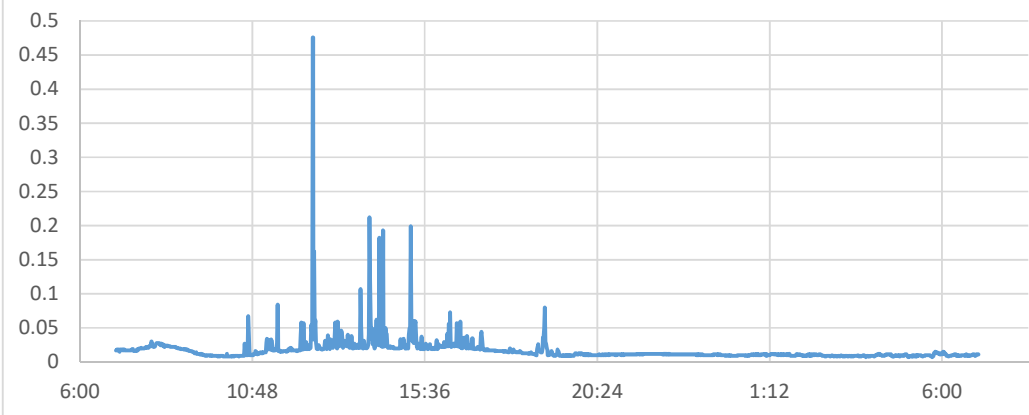
10/03/19 to 10/04/19 Data for DustTrak (PM_{2.5} mg/m³) – Northeast of site



10/03/19 to 10/04/19 Data for DustTrak (PM2.5 mg/m3) – Southeast of site



10/03/19 to 10/04/19 Data for DustTrak (PM2.5 mg/m3) – Northwest of site



Air Monitoring Summary Tables

The table below summarize monitoring data collected on using EPA's Viper wireless remote monitoring system.



Project Name:

From: 10/4/19
7:21

To: 10/5/19
6:52

Location 1 - Northeast of Fire								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 1	VOC	No	No	1,619	646	0 - 738 ppb	7.8 ppb	1,000 ppb
	CO	No	No	1,619	0	0 - 0 ppm	0 ppm	83 ppm
	H2S	No	No	1,619	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	No	1,619	62	0 - 0.9 ppm	0 ppm	7.1 ppm
	O2	No	No	1,619	1,619	20.3 - 20.9%	20.6%	<19.5 or >23%
	LEL	No	No	1,619	0	0 - 0%	0%	10%
DustTrak 1	PM-2.5	Moderate		1,836	1,835	0 - 572 µg/m³	34.2 µg/m³	See SOG #: T106

Location 2 - Southeast of Fire								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 2	VOC	No	No	1,615	0	0 - 0 ppb	0 ppb	1,000 ppb
	CO	No	No	1,615	0	0 - 0 ppm	0 ppm	83 ppm
	H2S	Yes	No	1,615	4	0 - 0.7 ppm	0 ppm	0.5 ppm
	HCN	No	No	1,615	678	0 - 4.9 ppm	0.2 ppm	7.1 ppm
	O2	No	No	1,615	1,615	20.9 - 20.9%	20.9%	<19.5 or >23%
	LEL	No	No	1,615	0	0 - 0 %	0%	10%
DustTrak 2	PM-2.5	Moderate		1,740	1,739	0 - 362 µg/m³	25.3 µg/m³	See SOG #: T106

Location 3 - South of Fire								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 3	VOC	Yes	No	1,612	79	0 - 2860 ppb	3.8 ppb	1,000 ppb
	CO	No	No	1,612	4	0 - 5 ppm	0 ppm	83 ppm
	H2S	No	No	1,612	1	0 - 0.4 ppm	0 ppm	0.5 ppm
	HCN	No	No	1,612	384	0 - 2.1 ppm	0.3 ppm	7.1 ppm
	O2	No	No	1,612	1,612	20.9 - 20.9%	20.9%	<19.5 or >23%
	LEL	No	No	1,612	0	0 - 0%	0%	10%
DustTrak 3	PM-2.5	Good		1,277	1,277	2 - 263 µg/m³	8.8 µg/m³	See SOG #: T106

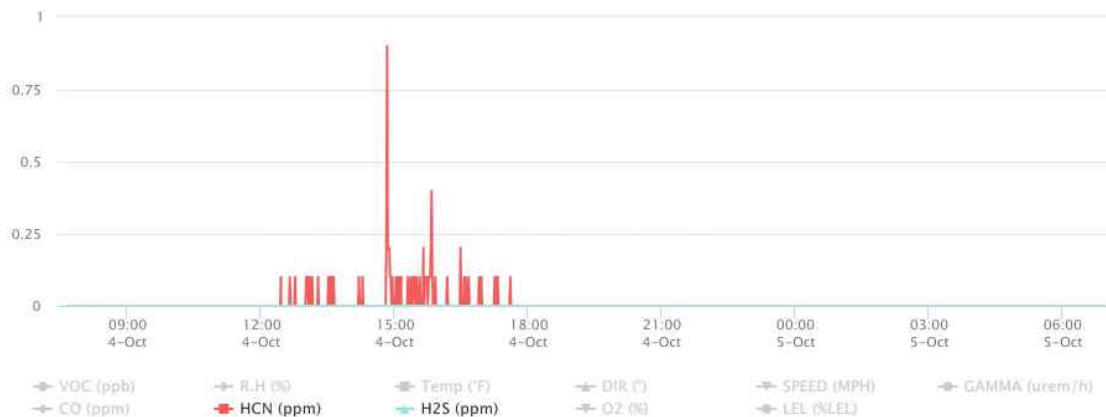
Location 4 - Northwest of Fire								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 4	VOC	No	No	1,620	1,214	0 - 81 ppb	32.2 ppb	1,000 ppb
	CO	No	No	1,620	0	0 - 0 ppm	0 ppm	83 ppm
	H2S	No	No	1,620	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	No	1,620	152	0 - 1 ppm	0 ppm	7.1 ppm
	O2	No	No	1,620	1,620	20.9 - 20.9%	20.9%	<19.5 or >23%
	LEL	No	No	1,620	0	0 - 0%	0%	10%
DustTrak 4	PM-2.5	Moderate		2,247	2,247	8 - 3980 µg/m³	29.9 µg/m³	See SOG #: T106

Notes: * DustTrak data was interrupted due to power loss at all locations during this period.

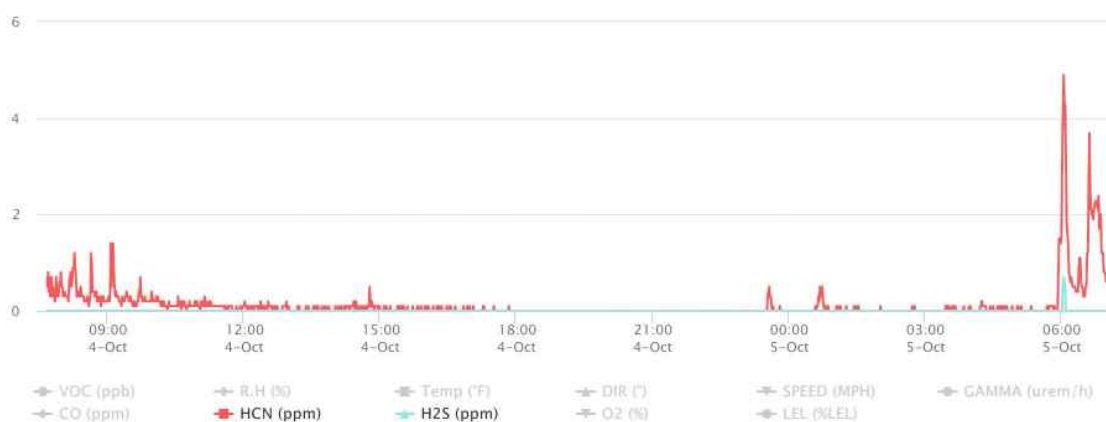
% Percent
 < Less than
 > Greater than
 AEGL Acute Exposure Guideline Levels for Airborne Chemicals
 CO Carbon monoxide
 H₂S Hydrogen Sulfide
 HCN Hydrogen Cyanide
 LEL Lower Explosive Level
 min Minute

O₂ Oxygen
 PEL Permissible exposure limit
 ppb Parts per billion
 ppm Parts per million
 PM Particulate matter
 SOG Standard Operating Guidelines
 TLV Threshold limit value
 µg/m³ Micrograms per cubic meter
 VOC Volatile organic compound

10/04/19 to 10/05/19 Data for AreaRAE Pro (HCN and H₂S) – Northeast of site



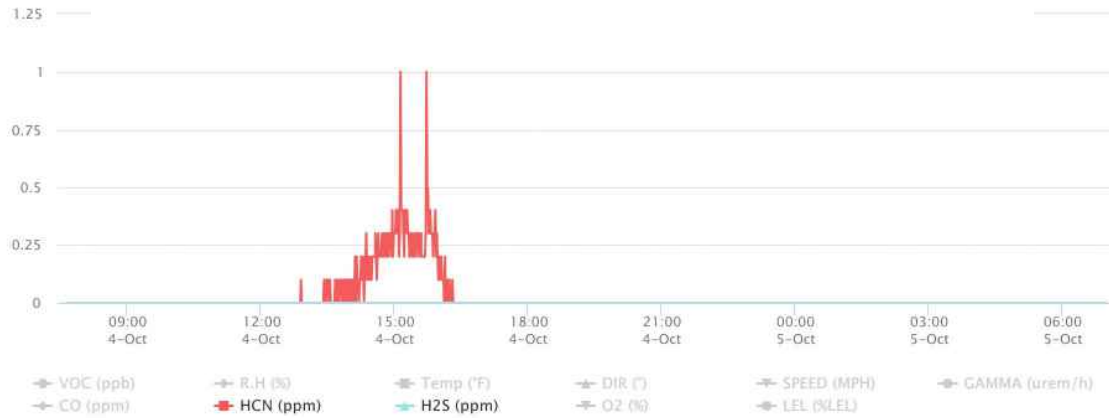
10/04/19 to 10/05/19 Data for AreaRAE Pro (HCN and H₂S) – Southeast of site



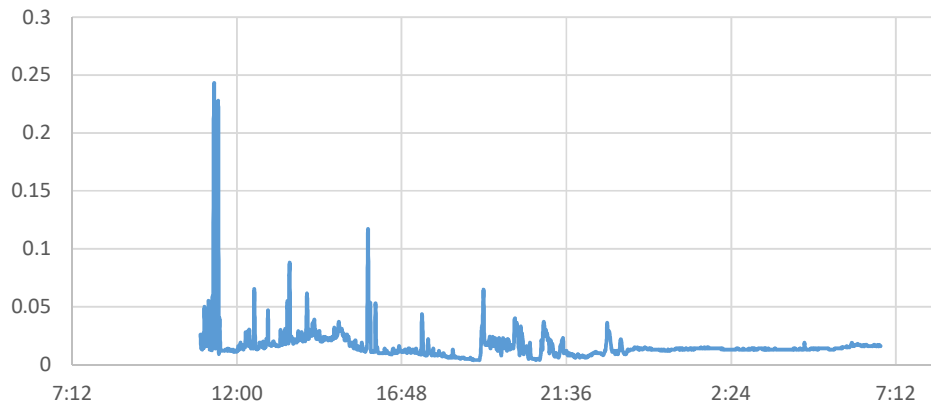
10/04/19 to 10/05/19 Data for AreaRAE Pro (HCN and H₂S) – South of site



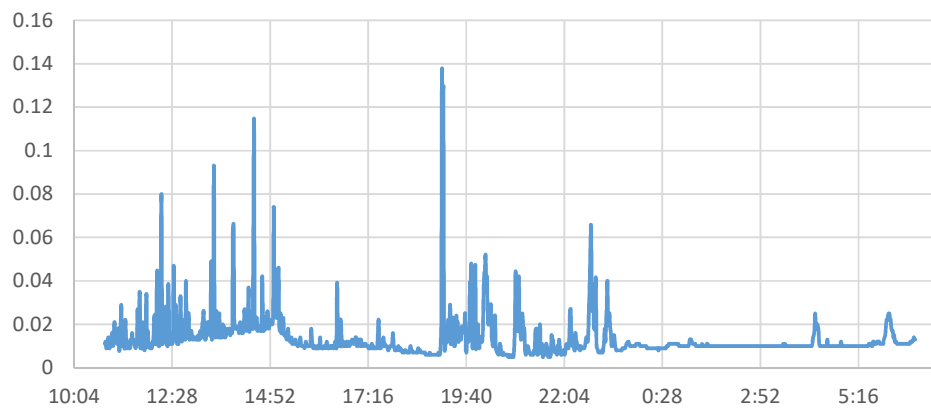
10/04/19 to 10/05/19 Data for AreaRAE Pro (HCN and H₂S) – Northwest of site



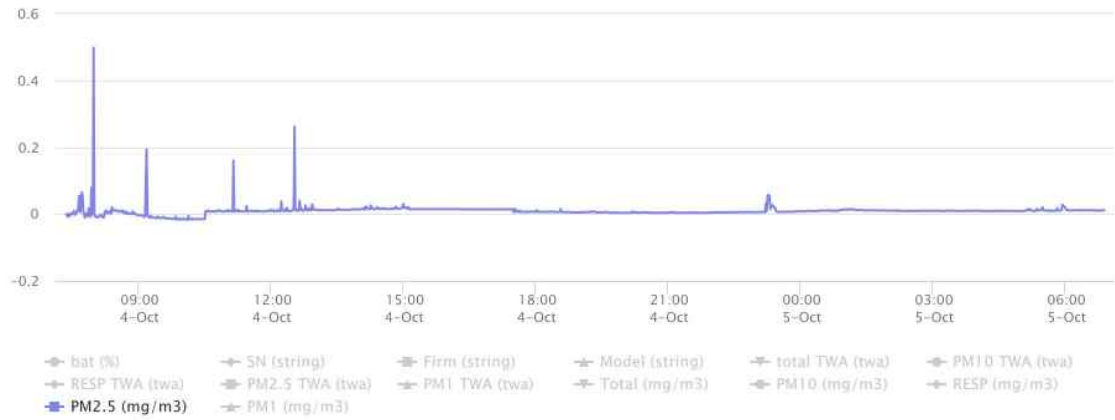
10/04/19 to 10/05/19 Data for DustTrak 1 (PM_{2.5} mg/m³) – Northeast of site



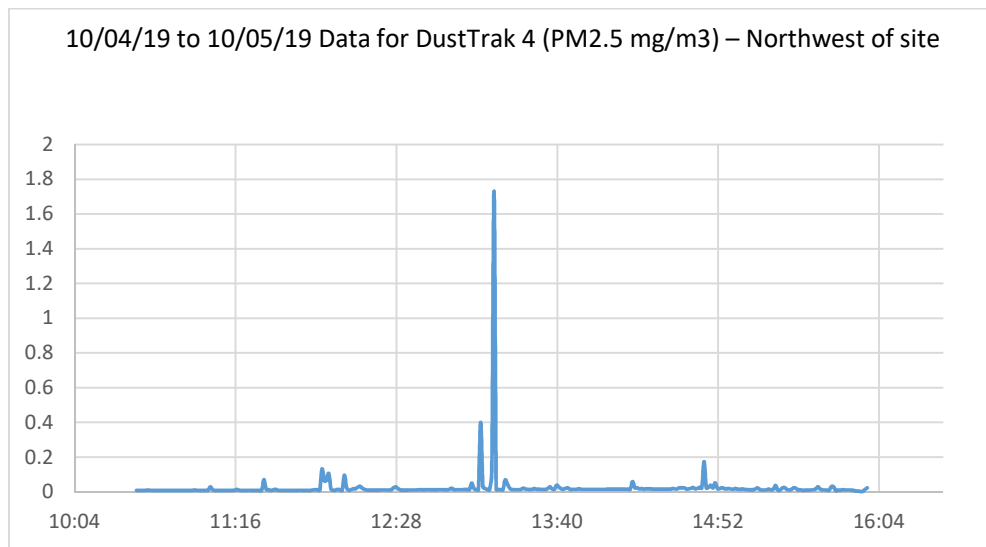
10/04/19 to 10/05/19 Data for DustTrak 2 (PM_{2.5} mg/m³) – Southeast of site



10/04/19 to 10/05/19 Data for DustTrak 3 (PM2.5 mg/m3) – South of site



10/04/19 to 10/05/19 Data for DustTrak 4 (PM2.5 mg/m3) – Northwest of site



Air Monitoring Summary Tables

The table below summarize monitoring data collected on using EPA's Viper wireless remote monitoring system.



Project Name:

From: 10/8/19
7:00

To: 10/9/19
6:58

Location 1 - Northeast of Fire								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 1	VOC	No	No	1,507	1	0 - 1 ppb	0 ppb	1,000 ppb
	CO	No	No	1,507	0	0 - 0 ppm	0 ppm	83 ppm
	H2S	No	No	1,507	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	No	1,507	726	0 - 0.7 ppm	0.2 ppm	7.1 ppm
	O2	No	No	1,507	1,507	20.2 - 20.9%	20.9%	<19.5 or >23%
	LEL	No	No	1,507	0	0 - 0%	0%	10%
DustTrak 1	PM-2.5	Good		1,183	1,183	3 - 25 µg/m³	6.6 µg/m³	See SOG #: T106

Location 2 - Southeast of Fire								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 2	VOC	No	No	1,497	0	0 - 0 ppb	0 ppb	1,000 ppb
	CO	No	No	1,497	0	0 - 0 ppm	0 ppm	83 ppm
	H2S	No	No	1,497	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	No	1,497	68	0 - 0.3 ppm	0 ppm	7.1 ppm
	O2	No	No	1,497	1,497	20.9 - 20.9%	20.9%	<19.5 or >23%
	LEL	No	No	1,497	0	0 - 0 %	0%	10%
DustTrak 2	PM-2.5	Moderate		1,849	1,849	5 - 307 µg/m³	13.5 µg/m³	See SOG #: T106

Location 3 - South of Fire								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 3	VOC	Yes	No	1,493	9	0 - 4917 ppb	5.8 ppb	1,000 ppb
	CO	Yes	No	1,493	199	0 - 202 ppm	1.4 ppm	83 ppm
	H2S	No	No	1,493	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	No	1,493	593	0 - 1.6 ppm	0.2 ppm	7.1 ppm
	O2	No	No	1,493	1,493	20.9 - 20.9%	20.9%	<19.5 or >23%
	LEL	No	No	1,493	148	0 - 4%	0.3%	10%
DustTrak 3	PM-2.5	Good		1,462	1,458	0 - 51 µg/m³	7.1 µg/m³	See SOG #: T106

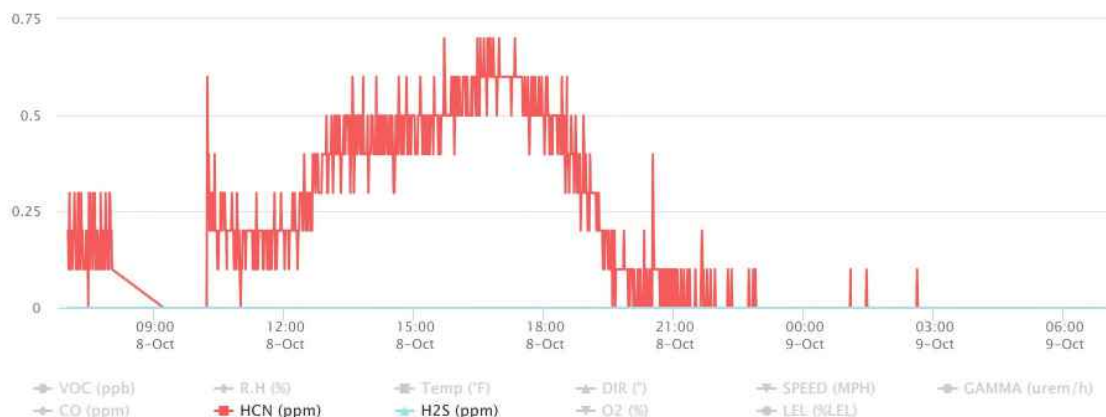
Location 4 - Northwest of Fire								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 4	VOC	No	No	1,497	4	0 - 53 ppb	0 ppb	1,000 ppb
	CO	No	No	1,497	16	0 - 5 ppm	0 ppm	83 ppm
	H2S	Yes	No	1,497	1	0 - 0.8 ppm	0 ppm	0.5 ppm
	HCN	No	No	1,497	1,133	0 - 2.2 ppm	0.2 ppm	7.1 ppm
	O2	No	No	1,497	1,497	20.9 - 21.2%	20.9%	<19.5 or >23%
	LEL	No	No	1,497	0	0 - 0%	0%	10%
DustTrak 4	PM-2.5	Good		980	973	0 - 132 µg/m³	10.2 µg/m³	See SOG #: T106

Notes: * DustTrak data was interrupted due to power loss at locations 1, 2, and 4 during this period.

% Percent
 < Less than
 > Greater than
 AEGL Acute Exposure Guideline Levels for Airborne Chemicals
 CO Carbon monoxide
 H₂S Hydrogen Sulfide
 HCN Hydrogen Cyanide
 LEL Lower Explosive Level
 min Minute

O₂ Oxygen
 PEL Permissible exposure limit
 ppb Parts per billion
 ppm Parts per million
 PM Particulate matter
 SOG Standard Operating Guidelines
 TLV Threshold limit value
 µg/m³ Micrograms per cubic meter
 VOC Volatile organic compound

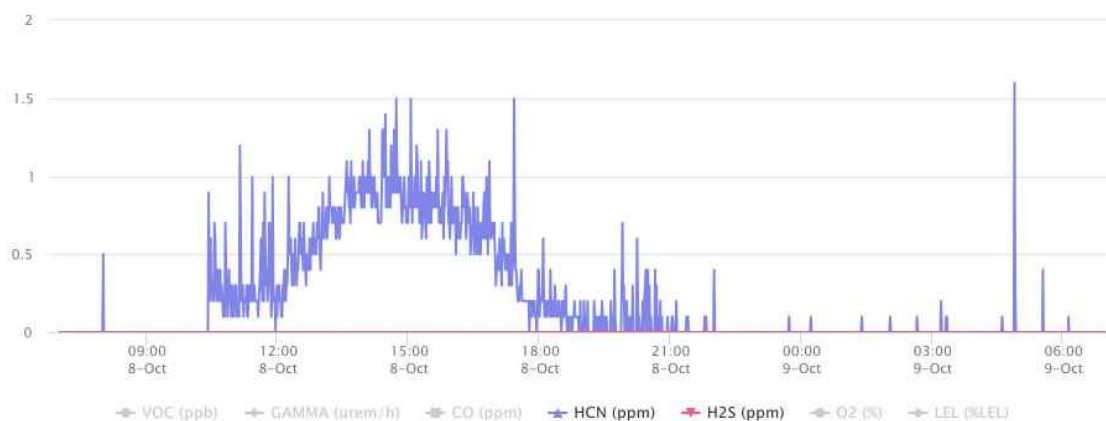
10/08/19 to 10/09/19 Data for AreaRAE Pro (HCN and H₂S) – Northeast of site



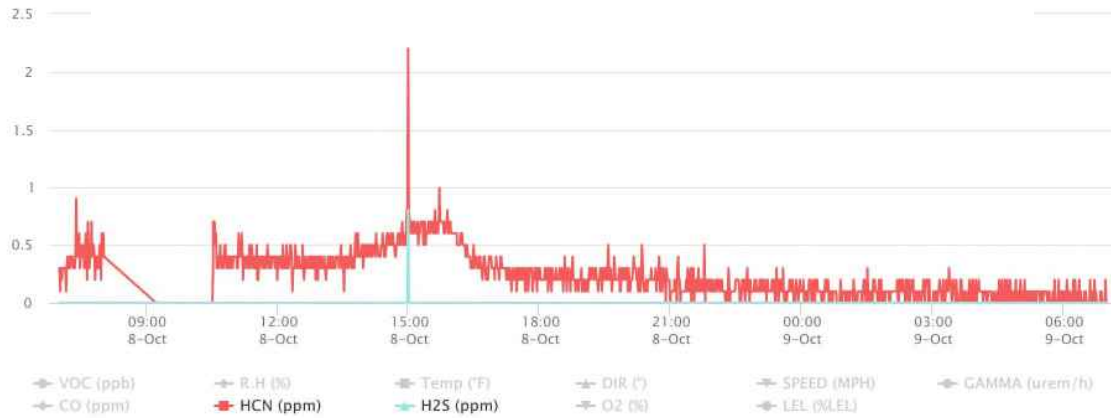
10/08/19 to 10/09/19 Data for AreaRAE Pro (HCN and H₂S) – Southeast of site



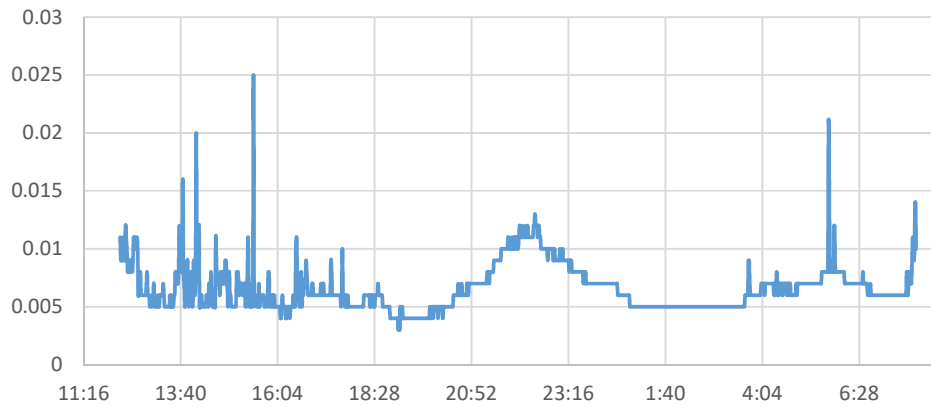
10/08/19 to 10/09/19 Data for AreaRAE Pro (HCN and H₂S) – South of site



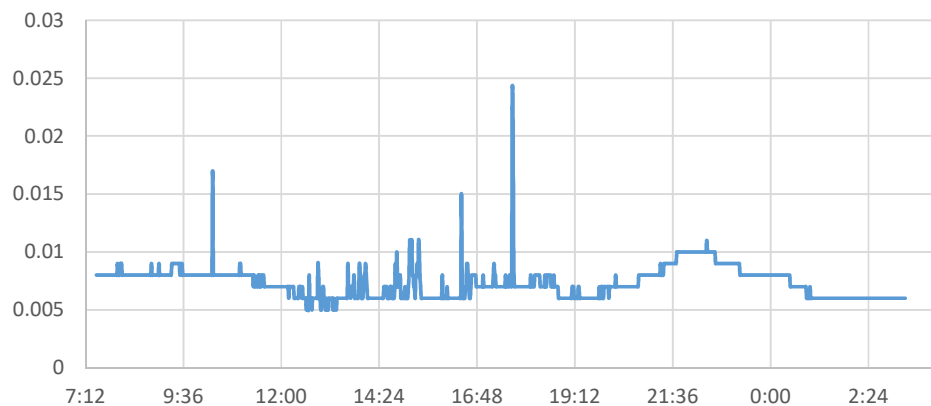
10/08/19 to 10/09/19 Data for AreaRAE Pro (HCN and H₂S) – Northwest of site



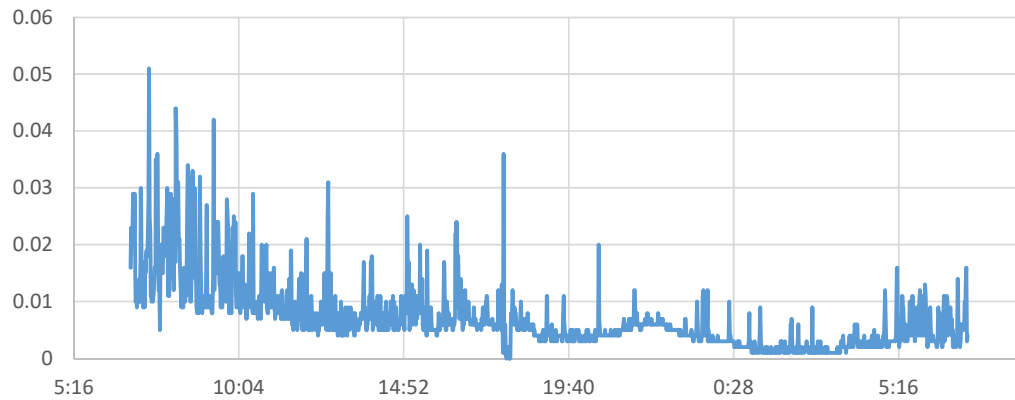
10/08/19 to 10/09/19 Data for DustTrak 1 (PM_{2.5} mg/m³) – Northeast of site



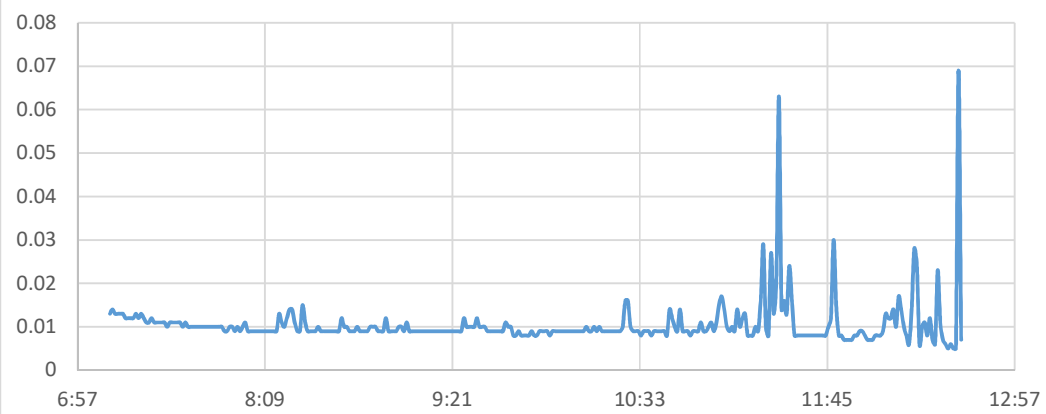
10/08/19 to 10/09/19 Data for DustTrak 2 (PM_{2.5} mg/m³) – Southeast of site



10/08/19 to 10/09/19 Data for DustTrak 3 (PM2.5 mg/m3) – South of site
of fire



10/08/19 to 10/09/19 Data for DustTrak 4 (PM2.5 mg/m3) – Northwest of site



Air Monitoring Summary Tables

The table below summarize monitoring data collected on using EPA's Viper wireless remote monitoring system.



Project Name:

From: 10/9/19
7:00

To: 10/10/19
6:46

Location 1 - Northeast of Fire								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 1	VOC	No	No	1,492	0	0 - 0 ppb	0 ppb	1,000 ppb
	CO	No	No	1,492	1	0 - 2 ppm	0 ppm	83 ppm
	H2S	No	No	1,492	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	No	1,492	609	0 - 0.5 ppm	0.1 ppm	7.1 ppm
	O2	No	No	1,492	1,492	20.9 - 20.9%	20.9%	<19.5 or >23%
	LEL	No	No	1,492	0	0 - 0%	0%	10%
DustTrak 1	PM-2.5	Good		1,384	1,384	2 - 97 µg/m³	11.2 µg/m³	See SOG #: T106

Location 2 - Southeast of Fire								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 2	VOC	No	No	1,490	0	0 - 0 ppb	0 ppb	1,000 ppb
	CO	No	No	1,490	0	0 - 0 ppm	0 ppm	83 ppm
	H2S	No	No	1,490	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	No	1,490	0	0 - 0 ppm	0 ppm	7.1 ppm
	O2	No	No	1,490	1,490	20.9 - 20.9%	20.9%	<19.5 or >23%
	LEL	No	No	1,490	0	0 - 0 %	0%	10%
DustTrak 2	PM-2.5	Good		1,396	1,396	4 - 16 µg/m³	7.2 µg/m³	See SOG #: T106

Location 3 - South of Fire								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 3	VOC	No	No	1,476	0	0 - 0 ppb	0 ppb	1,000 ppb
	CO	No	No	1,476	33	0 - 29 ppm	0.1 ppm	83 ppm
	H2S	No	No	1,476	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	No	1,476	227	0 - 1.2 ppm	0 ppm	7.1 ppm
	O2	No	No	1,476	1,476	20.9 - 20.9%	20.9%	<19.5 or >23%
	LEL	No	No	1,476	0	0 - 0%	0%	10%
DustTrak 3	PM-2.5	Moderate		1,524	1,407	0 - 184 µg/m³	14.5 µg/m³	See SOG #: T106

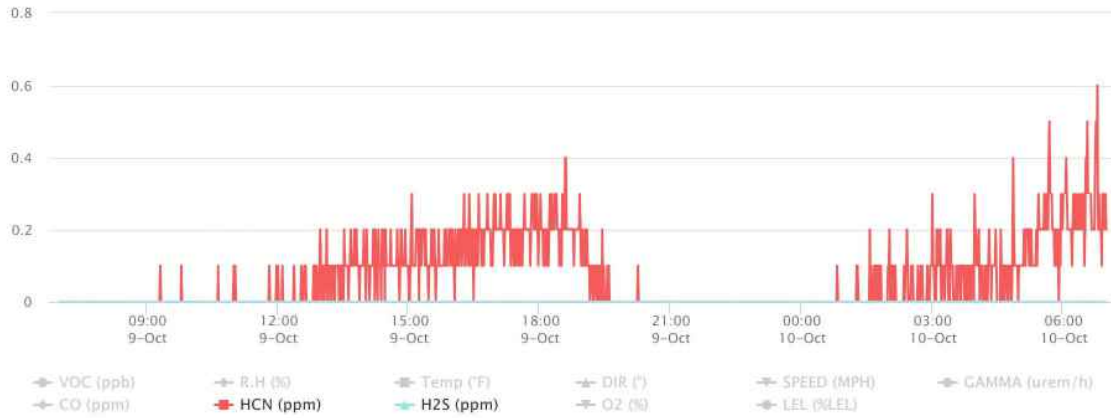
Location 4 - Northwest of Fire								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 4	VOC	No	No	1,498	3	0 - 59 ppb	0.1 ppb	1,000 ppb
	CO	No	No	1,498	35	0 - 18 ppm	0.1 ppm	83 ppm
	H2S	No	No	1,498	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	No	1,498	1,310	0 - 6.8 ppm	0.2 ppm	7.1 ppm
	O2	No	No	1,498	1,498	20.9 - 20.9%	20.9%	<19.5 or >23%
	LEL	No	No	1,498	0	0 - 0%	0%	10%
DustTrak 4	PM-2.5	Good		1,236	1,236	4 - 492 µg/m³	11.6 µg/m³	See SOG #: T106

Notes:

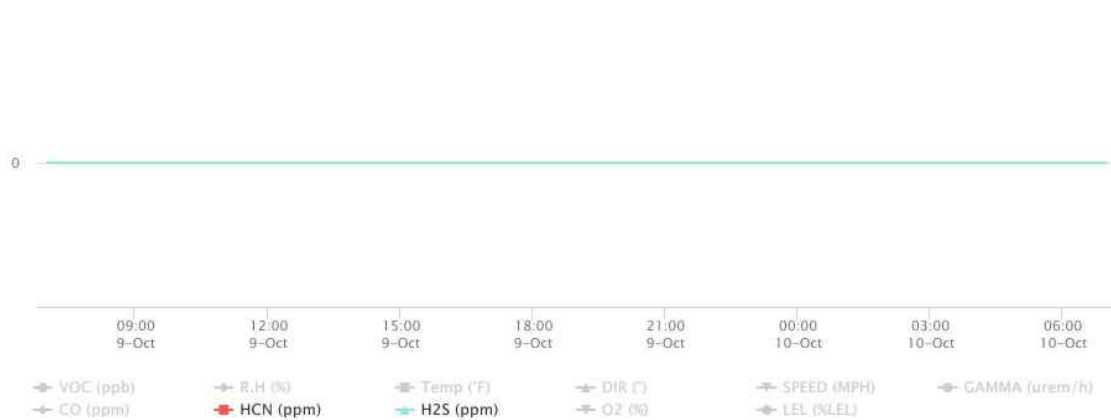
% Percent
 < Less than
 > Greater than
 AEGL Acute Exposure Guideline Levels for Airborne Chemicals
 CO Carbon monoxide
 H₂S Hydrogen Sulfide
 HCN Hydrogen Cyanide
 LEL Lower Explosive Level
 min Minute

O₂ Oxygen
 PEL Permissible exposure limit
 ppb Parts per billion
 ppm Parts per million
 PM Particulate matter
 SOG Standard Operating Guidelines
 TLV Threshold limit value
 µg/m³ Micrograms per cubic meter
 VOC Volatile organic compound

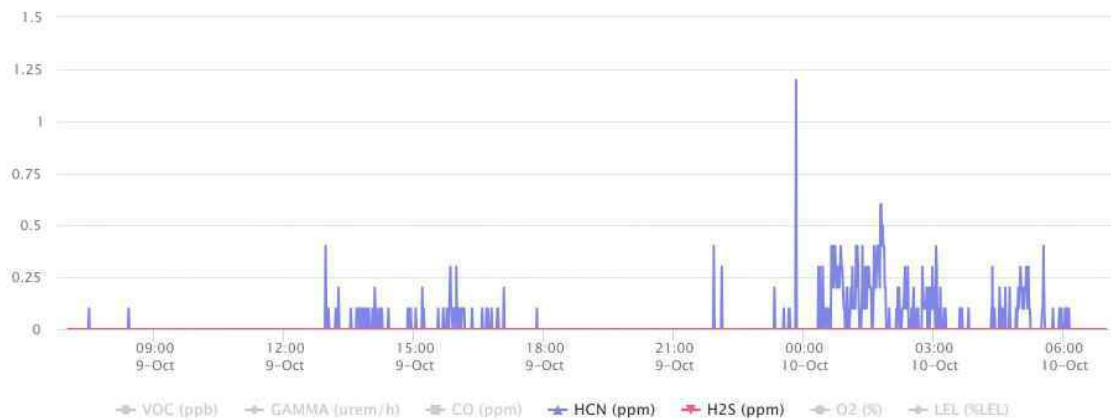
10/09/19 to 10/10/19 Data for AreaRAE Pro (HCN and H₂S) – Northeast of site



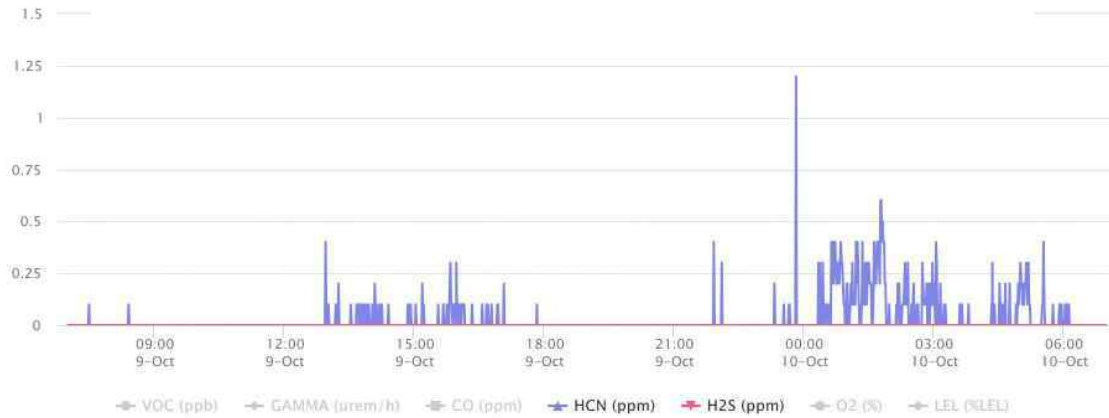
10/09/19 to 10/10/19 Data for AreaRAE Pro (HCN and H₂S) – Southeast of site



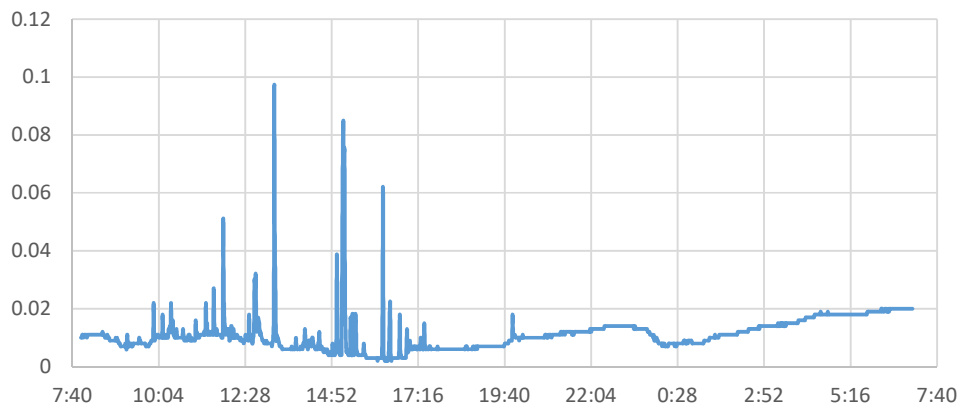
10/09/19 to 10/10/19 Data for AreaRAE Pro (HCN and H₂S) – South of site



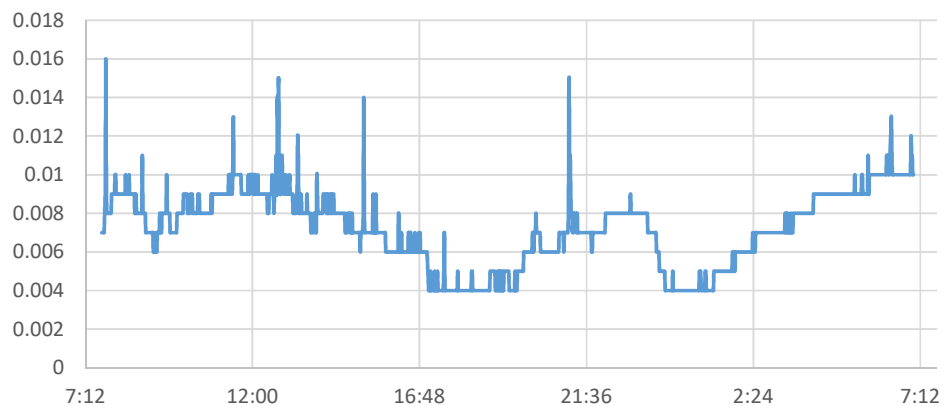
10/09/19 to 10/10/19 Data for AreaRAE Pro (HCN and H₂S) – Northwest of site



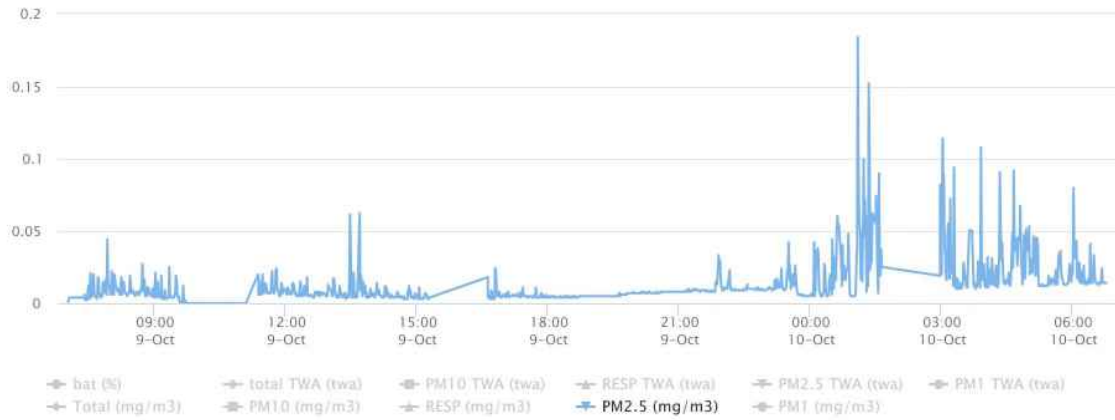
10/09/19 to 10/10/19 Data for DustTrak 1 (PM_{2.5} mg/m³) – Northeast of site



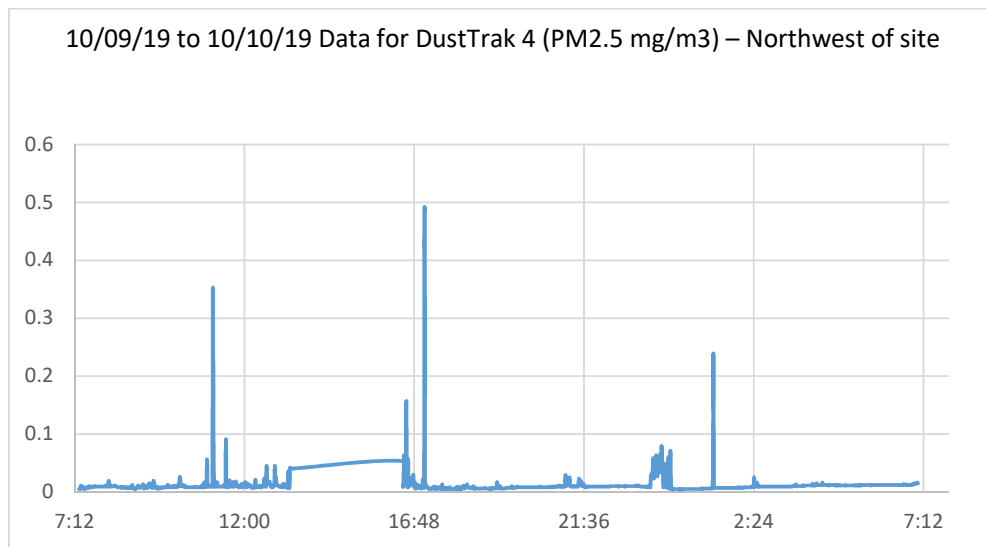
10/09/19 to 10/10/19 Data for DustTrak 2 (PM_{2.5} mg/m³) – Southeast of site



10/09/19 to 10/10/19 Data for DustTrak 3 (PM2.5 mg/m3) – South of site



10/09/19 to 10/10/19 Data for DustTrak 4 (PM2.5 mg/m3) – Northwest of site



Air Monitoring Summary Tables

The table below summarize monitoring data collected on using EPA's Viper wireless remote monitoring system.

Project Name:

From: 10/10/19
7:00

To: 10/11/19
6:59



Location 1 - Northeast of Fire								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 1	VOC	No	No	586	19	0 - 778 ppb	1.9 ppb	1,000 ppb
	CO	No	No	586	0	0 - 0 ppm	0 ppm	83 ppm
	H2S	No	No	586	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	No	586	393	0 - 0.6 ppm	0.2 ppm	7.1 ppm
	O2	No	No	586	586	20.9 - 20.9%	20.9%	<19.5 or >23%
	LEL	No	No	586	0	0 - 0%	0%	10%
DustTrak 1	PM-2.5	Moderate		1,374	1,374	6 - 171 µg/m³	16 µg/m³	See SOG #: T106

Location 2 - Southeast of Fire								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 2	VOC	No	No	592	0	0 - 0 ppb	0 ppb	1,000 ppb
	CO	No	No	592	0	0 - 0 ppm	0 ppm	83 ppm
	H2S	No	No	592	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	No	592	15	0 - 0.1 ppm	0 ppm	7.1 ppm
	O2	No	No	592	592	20.9 - 20.9%	20.9%	<19.5 or >23%
	LEL	No	No	592	0	0 - 0 %	0%	10%
DustTrak 2	PM-2.5	Good		1,395	1,395	4 - 316 µg/m³	9.2 µg/m³	See SOG #: T106

Location 3 - South of Fire								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 3	VOC	Yes	No	618	2	0 - 4397 ppb	12.2 ppb	1,000 ppb
	CO	Yes	No	618	43	0 - 136 ppm	1.2 ppm	83 ppm
	H2S	No	No	618	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	No	618	230	0 - 0.8 ppm	0.1 ppm	7.1 ppm
	O2	No	No	618	618	20.9 - 20.9%	20.9%	<19.5 or >23%
	LEL	No	No	618	0	0 - 0%	0%	10%
DustTrak 3	PM-2.5	Moderate		1,408	1,408	5 - 107 µg/m³	12.8 µg/m³	See SOG #: T106

Location 4 - Northwest of Fire								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 4	VOC	No	No	571	4	0 - 156 ppb	0.4 ppb	1,000 ppb
	CO	No	No	571	7	0 - 7 ppm	0.1 ppm	83 ppm
	H2S	No	No	571	1	0 - 0.5 ppm	0 ppm	0.5 ppm
	HCN	No	No	571	512	0 - 2 ppm	0.2 ppm	7.1 ppm
	O2	No	No	571	571	20.9 - 20.9%	20.9%	<19.5 or >23%
	LEL	No	No	571	0	0 - 0%	0%	10%
DustTrak 4	PM-2.5	Moderate		1,435	1,435	5 - 761 µg/m³	12.4 µg/m³	See SOG #: T106

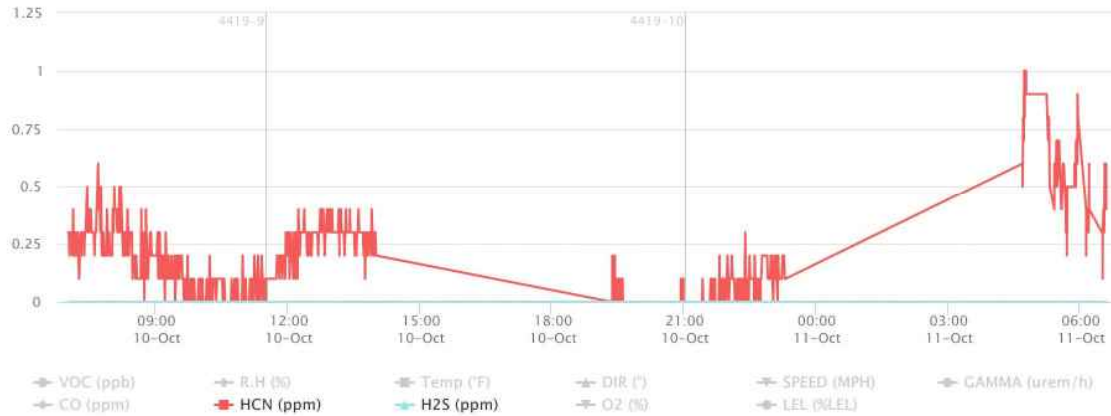
Issues with the Smart Gateway reduced the number of AreaRAE readings collected during the period.

Notes:

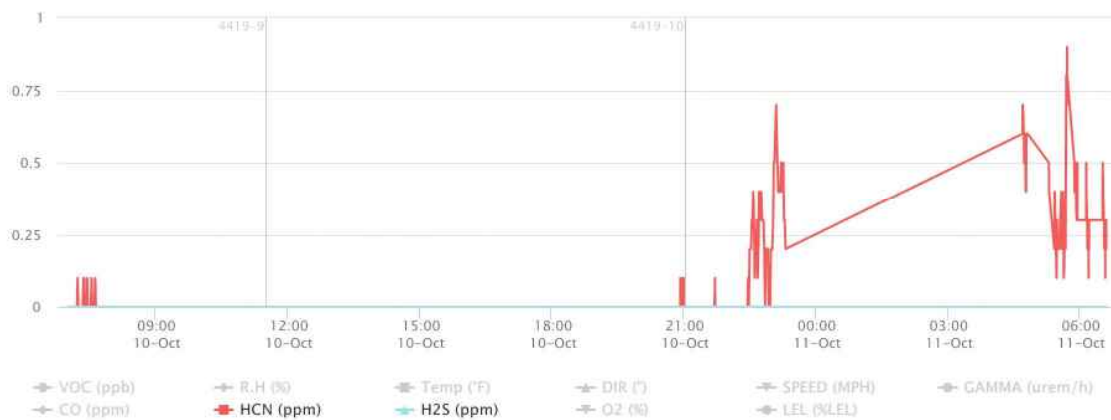
% Percent
 < Less than
 > Greater than
 AEGL Acute Exposure Guideline Levels for Airborne Chemicals
 CO Carbon monoxide
 H₂S Hydrogen Sulfide
 HCN Hydrogen Cyanide
 LEL Lower Explosive Level
 min Minute

O₂ Oxygen
 PEL Permissible exposure limit
 ppb Parts per billion
 ppm Parts per million
 PM Particulate matter
 SOG Standard Operating Guidelines
 TLV Threshold limit value
 µg/m³ Micrograms per cubic meter
 VOC Volatile organic compound

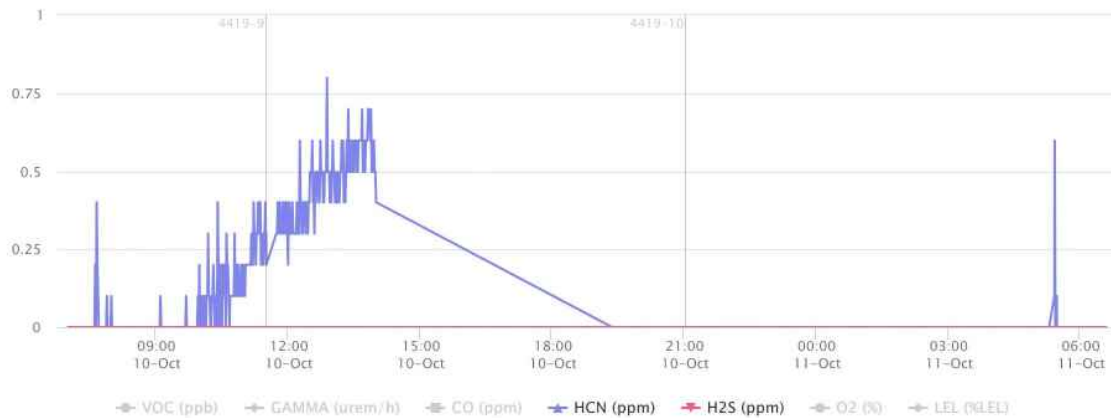
10/10/19 to 10/11/19 Data for AreaRAE Pro (HCN and H₂S) – Northeast of site



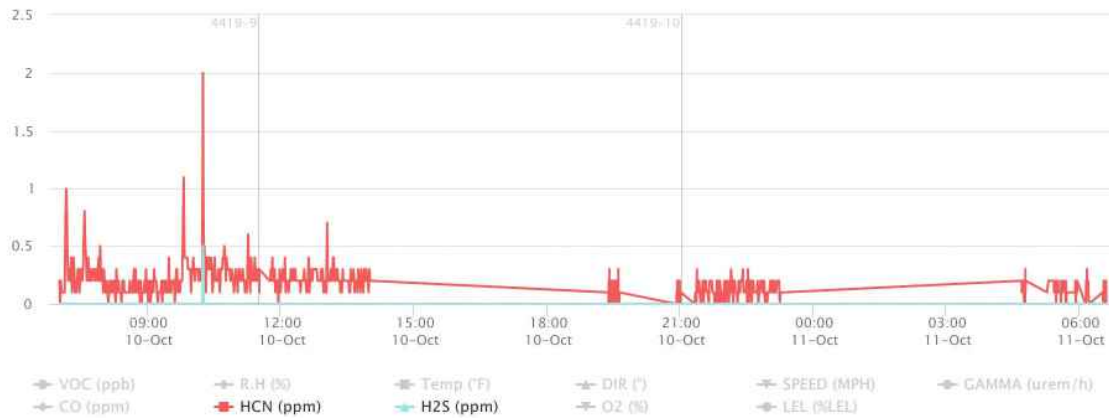
10/10/19 to 10/11/19 Data for AreaRAE Pro (HCN and H₂S) – Southeast of site



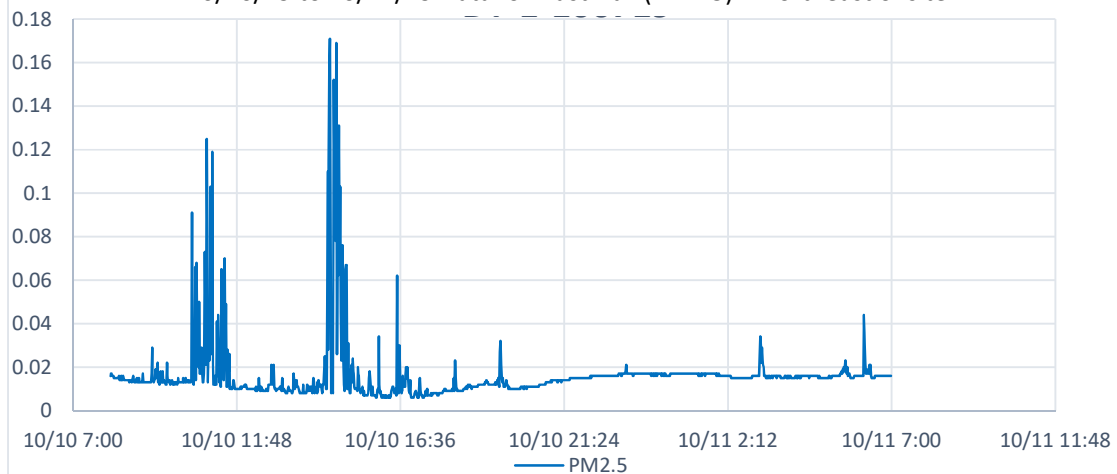
10/10/19 to 10/11/19 Data for AreaRAE Pro (HCN and H₂S) – South of site



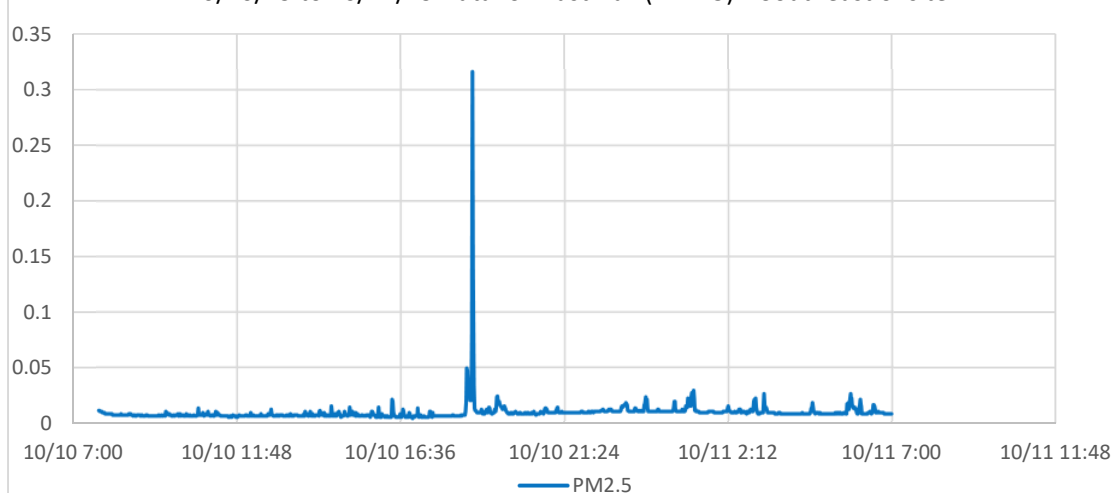
10/10/19 to 10/11/19 Data for AreaRAE Pro (HCN and H₂S) – Northwest of site

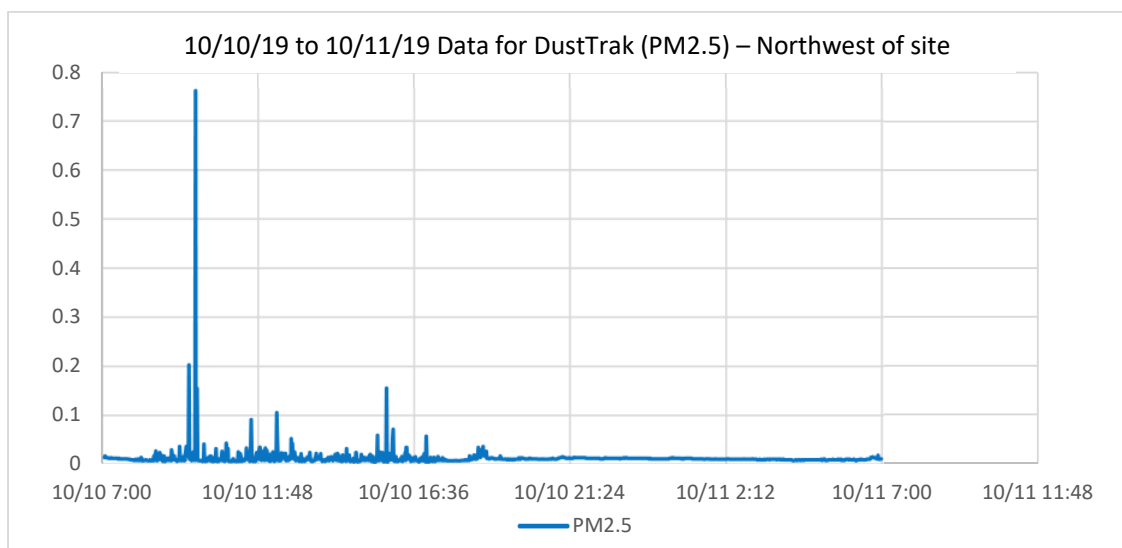
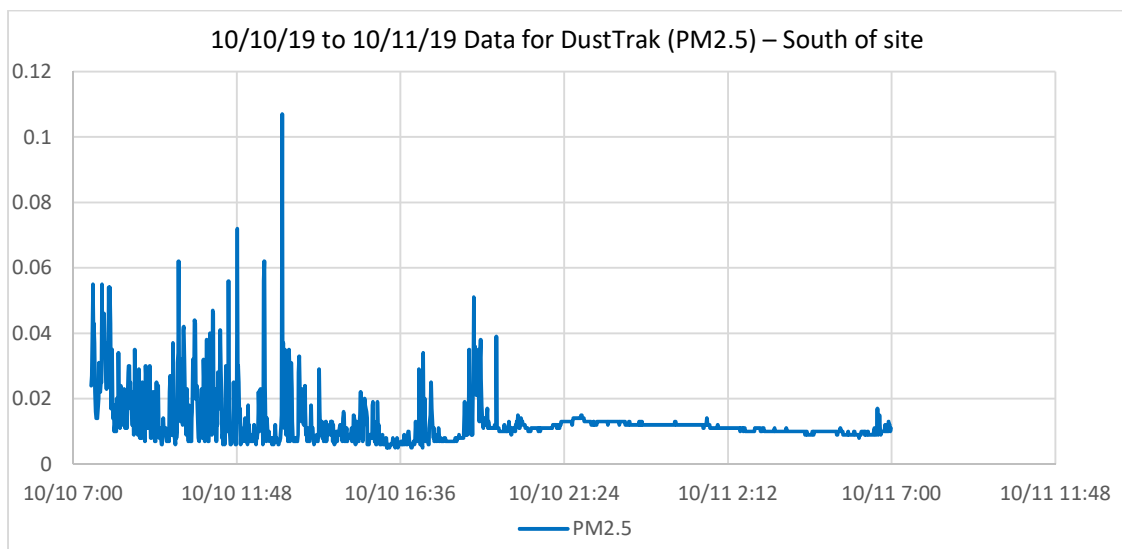


10/10/19 to 10/11/19 Data for DustTrak (PM_{2.5}) – Northeast of site



10/10/19 to 10/11/19 Data for DustTrak (PM_{2.5}) – Southeast of site





Air Monitoring Summary Tables

The table below summarize monitoring data collected on using EPA's Viper wireless remote monitoring system.

Project Name:

From: 10/11/19
7:01

To: 10/12/19
6:58



Location 1 - Northeast of Fire								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 1	VOC	No	No	1,136	263	0 - 37 ppb	2.1 ppb	1,000 ppb
	CO	No	No	1,136	0	0 - 0 ppm	0 ppm	83 ppm
	H2S	No	No	1,136	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	No	1,136	507	0 - 1 ppm	0.2 ppm	7.1 ppm
	O2	No	No	1,136	1,136	20.3 - 20.9%	20.5%	<19.5 or >23%
	LEL	No	No	1,136	0	0 - 0%	0%	10%
DustTrak 1	PM-2.5	Good		1,439	1,439	1 - 185 µg/m³	11.5 µg/m³	See SOG #: T106

Location 2 - Southeast of Fire								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 2	VOC	No	No	1,134	0	0 - 0 ppb	0 ppb	1,000 ppb
	CO	No	No	1,134	0	0 - 0 ppm	0 ppm	83 ppm
	H2S	No	No	1,134	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	No	1,134	944	0 - 1.5 ppm	0.5 ppm	7.1 ppm
	O2	No	No	1,134	1,134	20.9 - 20.9%	20.9%	<19.5 or >23%
	LEL	No	No	1,134	0	0 - 0 %	0%	10%
DustTrak 2	PM-2.5	Good		1,440	1,440	3 - 24 µg/m³	6.2 µg/m³	See SOG #: T106

Location 3 - South of Fire								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 3	VOC	Yes	No	1,119	234	0 - 2743 ppb	16.5 ppb	1,000 ppb
	CO	No	No	1,119	63	0 - 21 ppm	0.3 ppm	83 ppm
	H2S	No	No	1,119	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	No	1,119	185	0 - 0.6 ppm	0 ppm	7.1 ppm
	O2	No	No	1,119	1,119	20.9 - 20.9%	20.9%	<19.5 or >23%
	LEL	No	No	1,119	698	0 - 4%	1.6%	10%
DustTrak 3	PM-2.5	Good		1,471	1,471	3 - 49 µg/m³	7.5 µg/m³	See SOG #: T106

Location 4 - Northwest of Fire								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 4	VOC	No	No	1,130	0	0 - 0 ppb	0 ppb	1,000 ppb
	CO	No	No	1,130	1	0 - 4 ppm	0 ppm	83 ppm
	H2S	No	No	1,130	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	No	1,130	315	0 - 1 ppm	0.1 ppm	7.1 ppm
	O2	No	No	1,130	1,130	20.9 - 20.9%	20.9%	<19.5 or >23%
	LEL	No	No	1,130	298	0 - 4%	0.8%	10%
DustTrak 4	PM-2.5	Good		1,439	1,439	3 - 338 µg/m³	9.4 µg/m³	See SOG #: T106

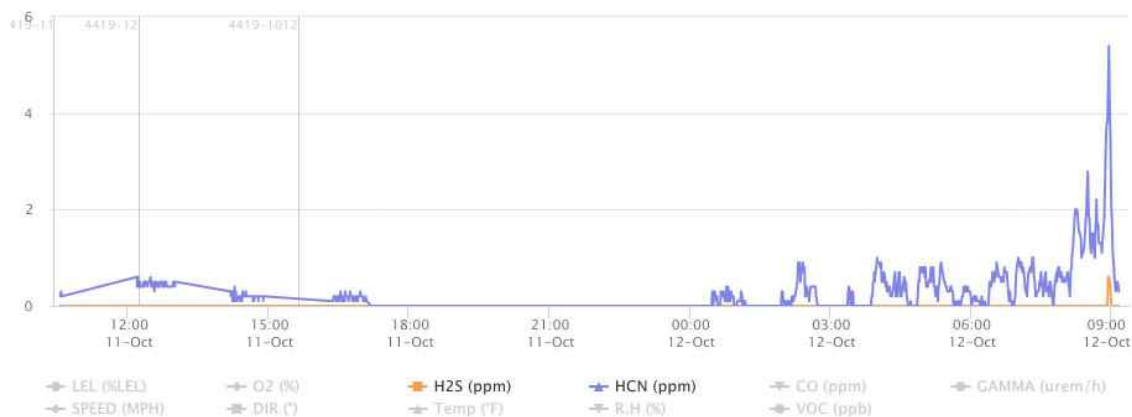
Resolved issue with the Smart Gateway but still had a reduced number of AreaRAE readings collected during the period.

Notes:

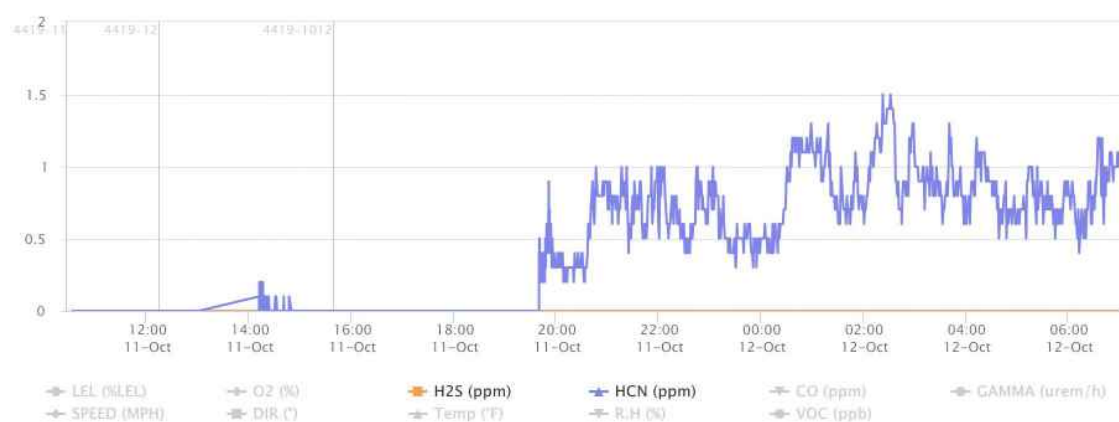
% Percent
< Less than
> Greater than
AEGL Acute Exposure Guideline Levels for Airborne Chemicals
CO Carbon monoxide
H₂S Hydrogen Sulfide
HCN Hydrogen Cyanide
LEL Lower Explosive Level
min Minute

O₂ Oxygen
PEL Permissible exposure limit
ppb Parts per billion
ppm Parts per million
PM Particulate matter
SOG Standard Operating Guidelines
TLV Threshold limit value
µg/m³ Micrograms per cubic meter
VOC Volatile organic compound

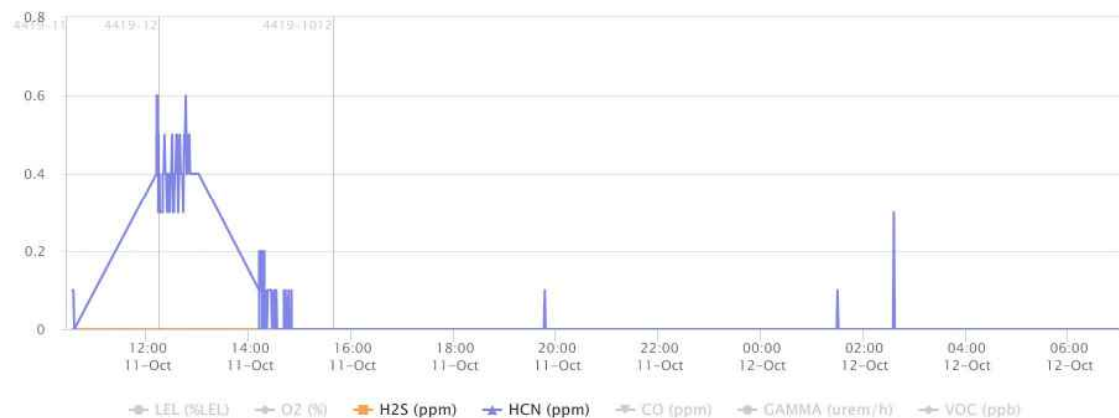
10/11/19 to 10/12/19 Data for AreaRAE Pro (HCN and H₂S) – Northeast of site



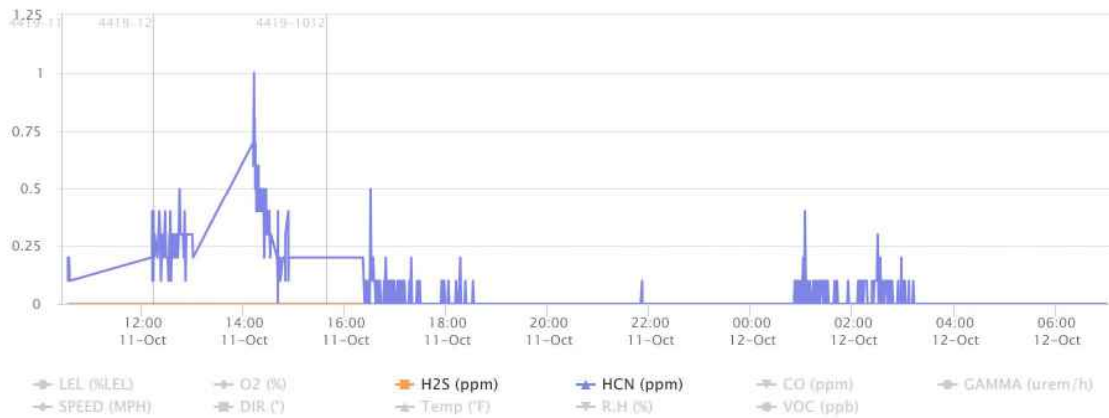
10/11/19 to 10/12/19 Data for AreaRAE Pro (HCN and H₂S) – Southeast of site



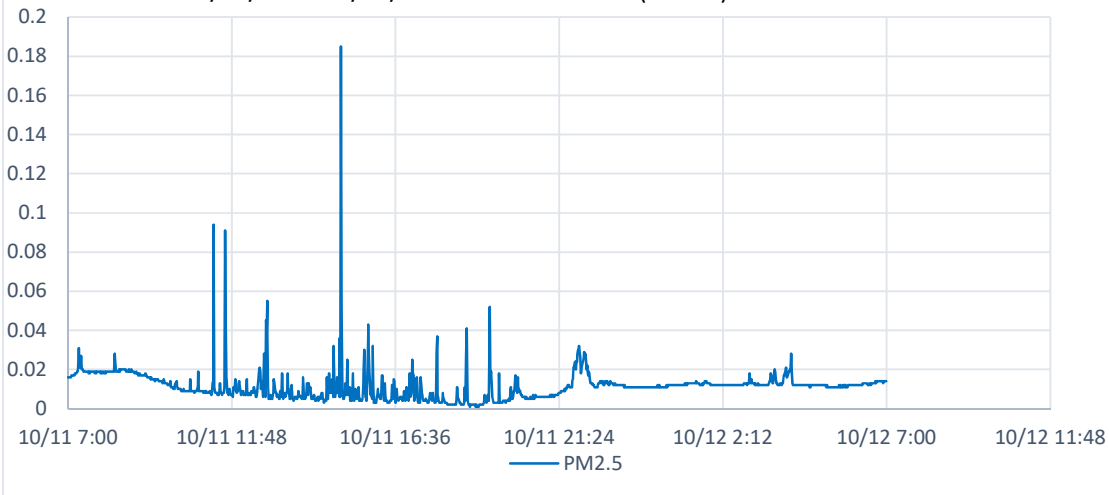
10/11/19 to 10/12/19 Data for AreaRAE Pro (HCN and H₂S) – South of site



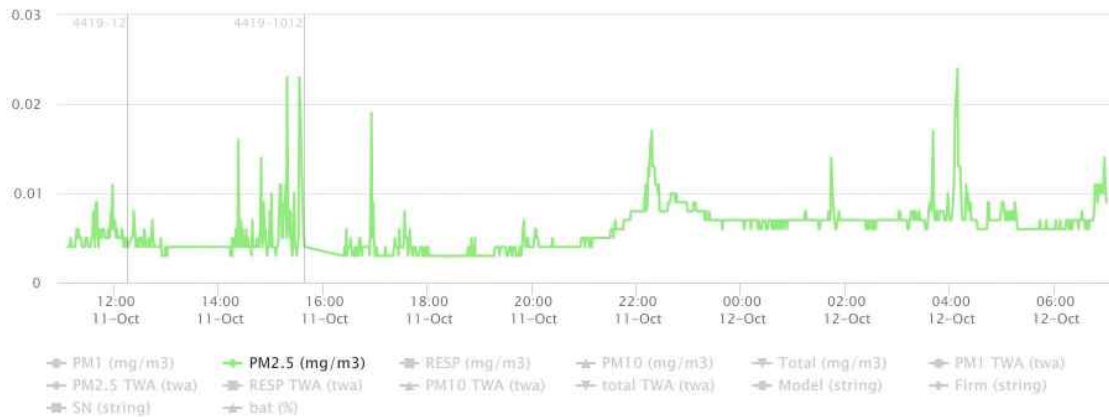
10/11/19 to 10/12/19 Data for AreaRAE Pro (HCN and H₂S) – Northwest of site



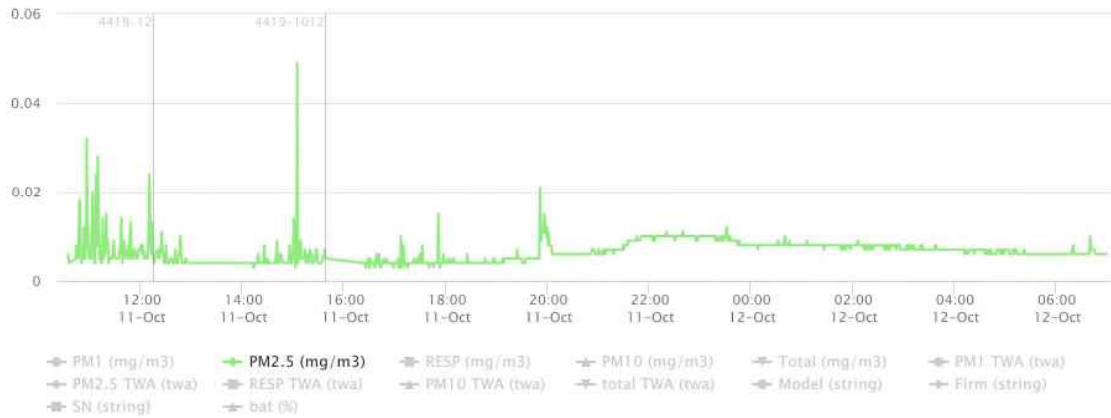
10/11/19 to 10/12/19 Data for DustTrak (PM2.5) – Northeast of site



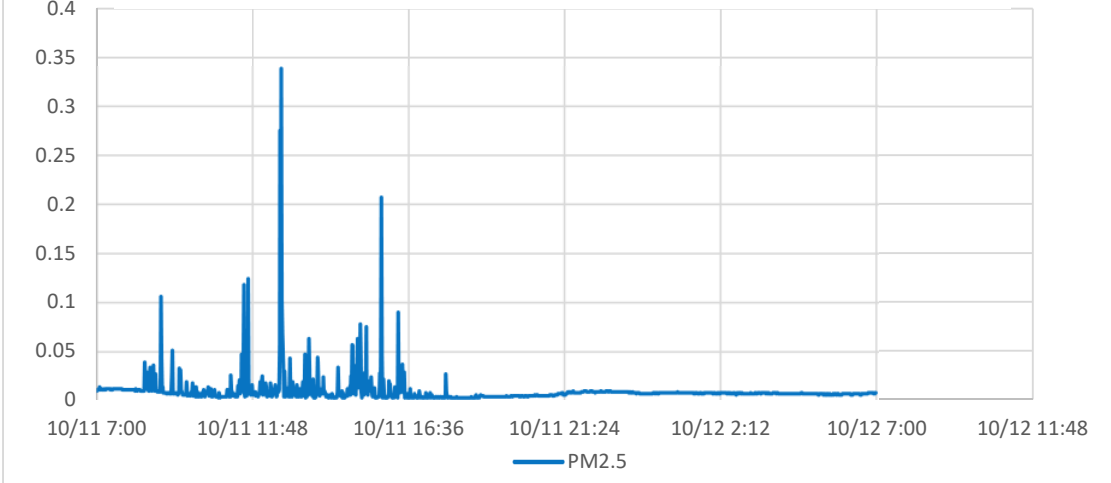
10/11/19 to 10/12/19 Data for DustTrak (PM2.5) – Southeast of site



10/11/19 to 10/12/19 Data for DustTrak (PM2.5) – South of site



10/11/19 to 10/12/19 Data for DustTrak (PM2.5) – Northwest of site



Air Monitoring Summary Tables

The table below summarize monitoring data collected on using EPA's Viper wireless remote monitoring system.

Project Name:

From: 10/12/19
7:00

To: 10/14/19
6:59



Location 1 - Northeast of Fire								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 1	VOC	No	No	2,993	378	0 - 20 ppb	1 ppb	1,000 ppb
	CO	No	No	2,993	0	0 - 0 ppm	0 ppm	83 ppm
	H2S	Yes	No	2,993	29	0 - 0.6 ppm	0 ppm	0.5 ppm
	HCN	Yes	No	2,993	1,389	0 - 7.2 ppm	0.5 ppm	7.1 ppm
	O2	No	No	2,993	2,993	20.3 - 20.9%	20.6%	<19.5 or >23%
	LEL	No	No	2,993	0	0 - 0%	0%	10%
DustTrak 1	PM-2.5	Good		2,834	2,812	0 - 57 µg/m³	8.4 µg/m³	See SOG #: T106

Location 2 - Southeast of Fire								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 2	VOC	No	No	2,991	0	0 - 0 ppb	0 ppb	1,000 ppb
	CO	No	No	2,991	0	0 - 0 ppm	0 ppm	83 ppm
	H2S	No	No	2,991	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	No	2,991	2,990	0 - 4.7 ppm	0.7 ppm	7.1 ppm
	O2	No	No	2,991	2,991	20.9 - 20.9%	20.9%	<19.5 or >23%
	LEL	No	No	2,991	0	0 - 0 %	0%	10%
DustTrak 2	PM-2.5	Good		2,881	2,881	3 - 58 µg/m³	6.4 µg/m³	See SOG #: T106

Location 3 - South of Fire								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 3	VOC	Yes	No	2,988	155	0 - 10830 ppb	17.6 ppb	1,000 ppb
	CO	No	No	2,988	277	0 - 26 ppm	0.5 ppm	83 ppm
	H2S	No	No	2,988	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	No	2,988	250	0 - 1.6 ppm	0 ppm	7.1 ppm
	O2	No	No	2,988	2,988	20.9 - 20.9%	20.9%	<19.5 or >23%
	LEL	No	No	2,988	0	0 - 0%	0%	10%
DustTrak 3	PM-2.5	Good		2,882	2,880	0 - 189 µg/m³	6.9 µg/m³	See SOG #: T106

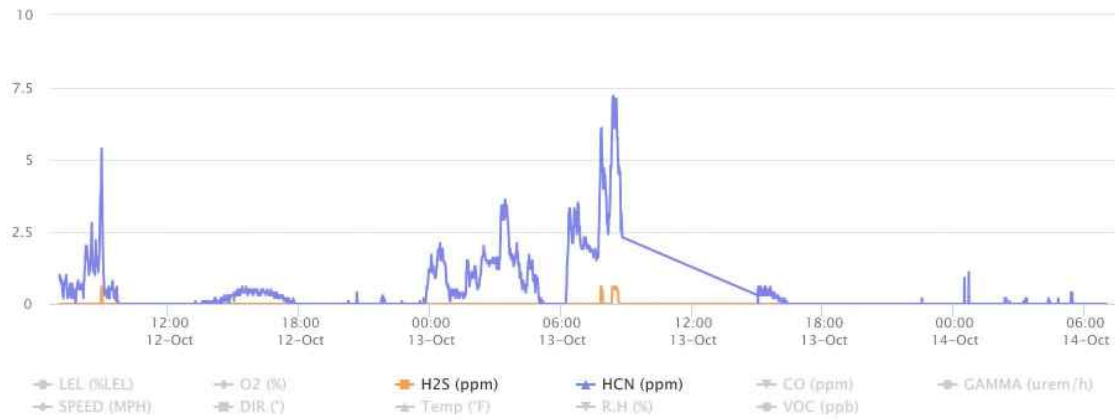
Location 4 - Northwest of Fire								
Instrument	Analyte	Momentary Action Level Exceedance	Period Average Exceedances	Number of Readings	Number of Detections	Concentration Range	Period Average	Action Level (PEL/TLV/60 min AEGL)
AreaRAE 4	VOC	No	No	2,990	13	0 - 128 ppb	0.2 ppb	1,000 ppb
	CO	No	No	2,990	30	0 - 10 ppm	0 ppm	83 ppm
	H2S	No	No	2,990	0	0 - 0 ppm	0 ppm	0.5 ppm
	HCN	No	No	2,990	921	0 - 2.5 ppm	0.1 ppm	7.1 ppm
	O2	No	No	2,990	2,990	20.9 - 20.9%	20.9%	<19.5 or >23%
	LEL	No	No	2,990	680	0 - 4%	0.7%	10%
DustTrak 4	PM-2.5	Good		2,726	2,726	2 - 938 µg/m³	6.8 µg/m³	See SOG #: T106

Notes:

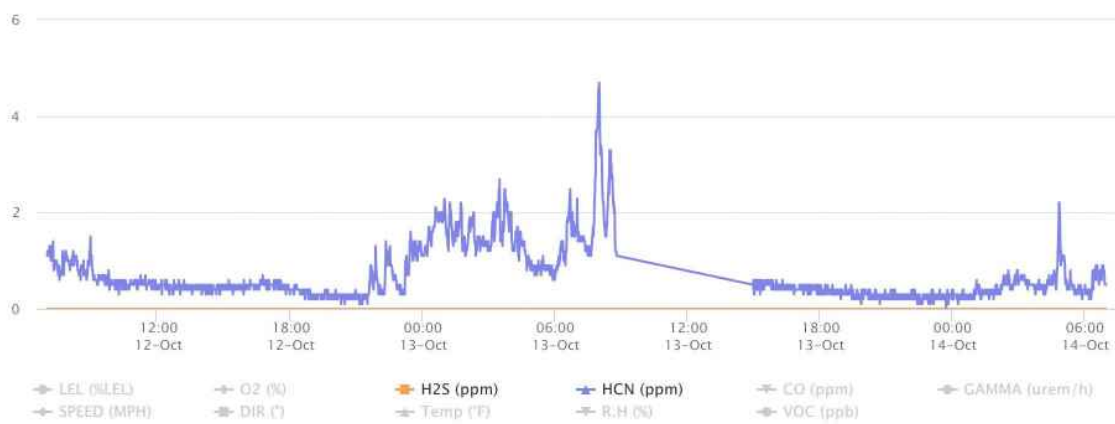
% Percent
< Less than
> Greater than
AEGL Acute Exposure Guideline Levels for Airborne Chemicals
CO Carbon monoxide
H₂S Hydrogen Sulfide
HCN Hydrogen Cyanide
LEL Lower Explosive Level
min Minute

O₂ Oxygen
PEL Permissible exposure limit
ppb Parts per billion
ppm Parts per million
PM Particulate matter
SOG Standard Operating Guidelines
TLV Threshold limit value
µg/m³ Micrograms per cubic meter
VOC Volatile organic compound

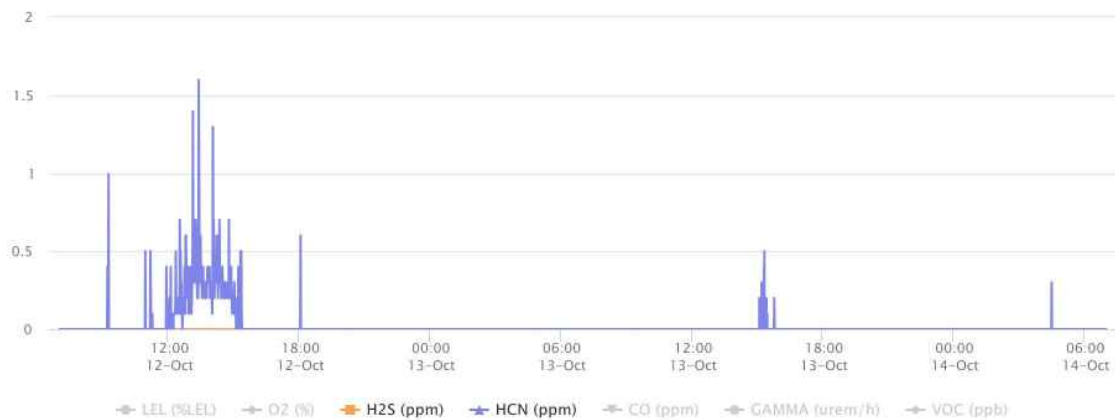
10/12/19 to 10/14/19 Data for AreaRAE Pro (HCN and H₂S) – Northeast of site



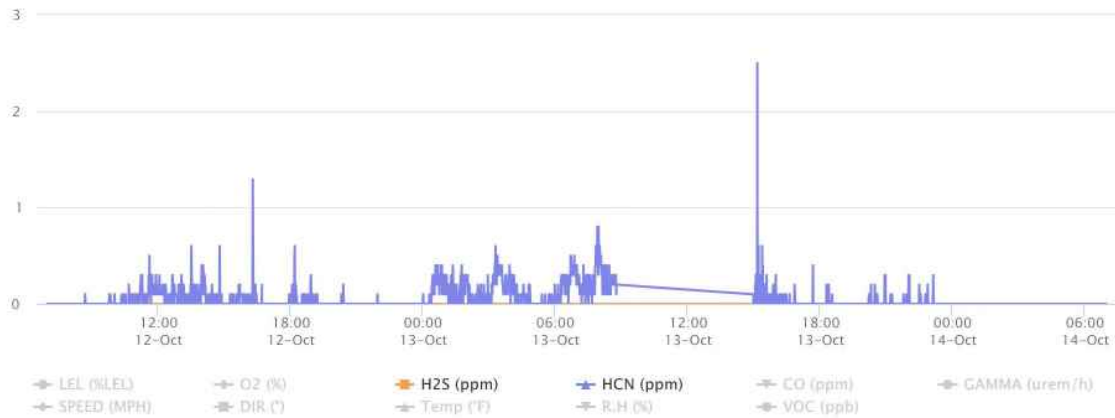
10/12/19 to 10/14/19 Data for AreaRAE Pro (HCN and H₂S) – Southeast of site



10/12/19 to 10/14/19 Data for AreaRAE Pro (HCN and H₂S) – South of site



10/12/19 to 10/14/19 Data for AreaRAE Pro (HCN and H₂S) – Northwest of site

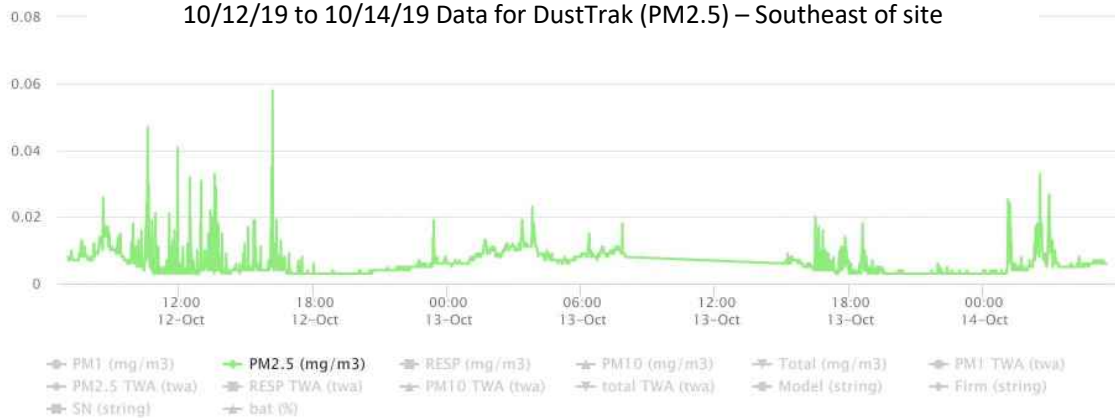


10/12/19 to 10/14/19 Data for DustTrak (PM_{2.5}) – Northeast of site

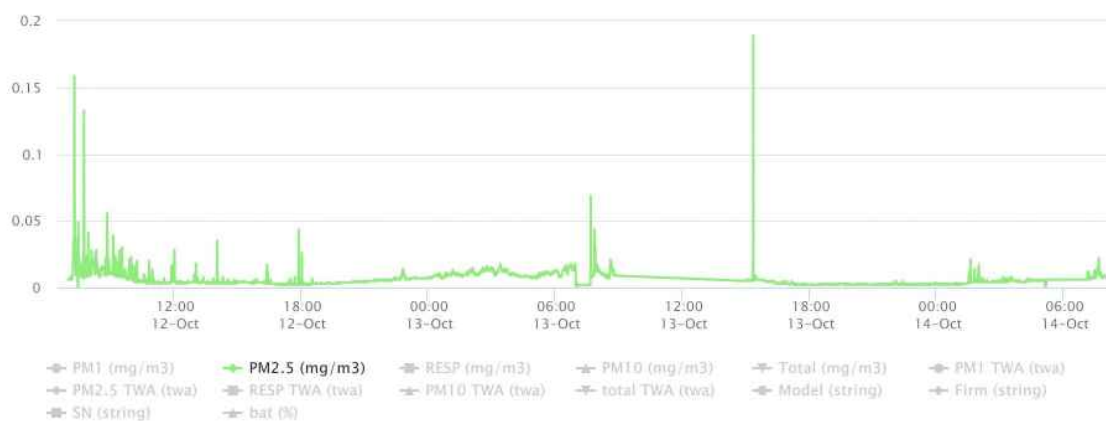


(.155) DustTrack

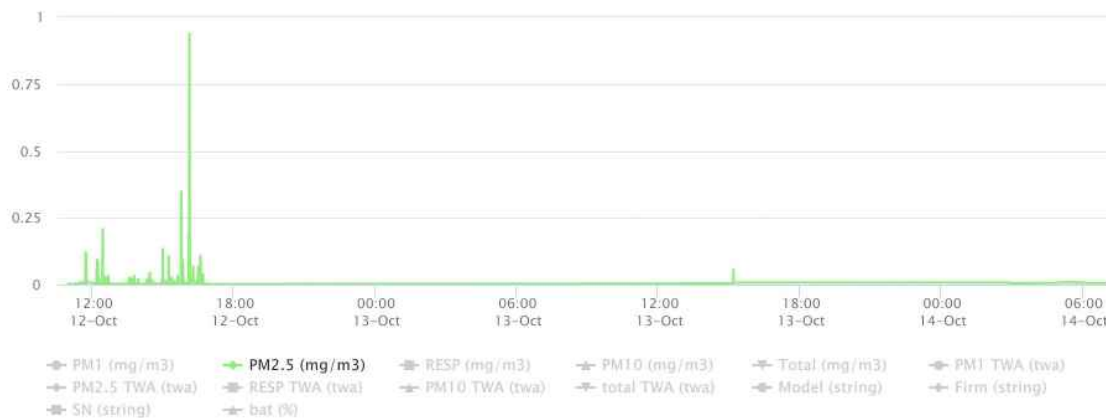
10/12/19 to 10/14/19 Data for DustTrak (PM_{2.5}) – Southeast of site



10/12/19 to 10/14/19 Data for DustTrak (PM2.5) – South of site



10/12/19 to 10/14/19 Data for DustTrak (PM2.5) – Northwest of site



Air Sampling Results: July 27-28, 2019

ABLE CONTRACTING FIRE
AIR SAMPLE RESULTS FOR JULY 27 and 28, 2019

		BACKGROUND	STATION 1 (SE Corner)	STATION 2 (SW Corner)	STATION 1 (SE Corner)	STATION 2 (SW Corner)
		ACF-AS-BKGD-072819	ACF-AS-RES-AM-072719	ACF-AS-SMOKE-AM-072719	ACF-AS-RES-PM-072719	ACF-AS-SMOKE-PM-072719
Date		7/28/2019	7/27/2019	7/27/2019	7/27/2019	7/27/2019
Start Time		11:30	0:18	1:00	12:10	12:15
End Time		19:15	8:10	8:35	20:20	20:30
Analyte	EPA RMLs	Sample Volume	Sample Volume	Sample Volume	Sample Volume	Sample Volume
Asbestos (fibers/cc)		946.3 Liters	767 Liters	898.6 Liters	965.3 Liters	913.3 Liters
Asbestos	Not Listed	None detected	None detected	None detected	None detected	None detected
Formaldehyde (µg/m³)		516.20 Liters	410.60 Liters	411.80 Liters	541.50 Liters	549.50 Liters
Formaldehyde	22	4.88	1.70	2.50	3.04	6.09
Metals (µg/m³)		776.6 Liters	672.6 Liters	657.5 Liters	744.8 Liters	784.6 Liters
Aluminum	16	0.55	0.77	0.52	0.5	0.48
Antimony	Not Listed	0.19 U	0.22 U	0.23 U	0.2 U	0.19 U
Arsenic	Not Listed	0.39 U	0.45 U	0.46 U	0.4 U	0.38 U
Barium	1.6	0.11 U	0.13 U	0.25 J+	0.13 J+	0.11 U
Beryllium	Not Listed	0.039 U	0.045 U	0.046 U	0.04 U	0.038 U
Cadmium	Not Listed	0.039 U	0.045 U	0.046 U	0.04 U	0.038 U
Calcium	Not Listed	52.7 J+	0.54 U	55.1 U	48 J+	41.3 U
Chromium	Not Listed	0.73 U	0.89 U	0.9 U	1.1 U	0.75 U
Cobalt	0.019	0.039 U	0.045 U	0.046 U	0.04 U	0.038 U
Copper	Not Listed	0.019 U	0.22 U	0.23 U	0.2 U	0.19 U
Iron	Not Listed	0.93 J+	1.3 J+	0.87 U	0.81 J+	0.86 J+
Lead	Not Listed	0.039 U	0.045 U	0.046 U	0.04 U	0.038 U
Manganese	Not Listed	0.19 U	0.22 U	0.23 U	0.2 U	0.19 U
Magnesium	Not Listed	9.6 J+	11.2 J+	11.5 J+	10.4 J+	8.5 U
Nickel	Not Listed	0.19 U	0.22 U	0.23 U	0.2 U	0.19 U
Selenium	63	0.39 U	0.45 U	0.46 U	0.4 U	0.38 U
Silver	Not Listed	0.039 U	0.045 U	0.046 U	0.04 U	0.038 U
Thallium	Not Listed	0.039 U	0.045 U	0.046 U	0.04 U	0.038 U
Vanadium	Not Listed	0.39 U	0.45 U	0.46 U	0.4 U	0.38 U
Zinc	Not Listed	0.39 U	0.45 U	0.46 U	0.4 U	0.38 U
Potassium	Not Listed	3.9 U	4.5 U	4.6 U	4 U	3.8 U
Sodium	Not Listed	12.7 J+	15.8 J+	16.5 J+	14.7 J+	12 U
Volatile Organic Compounds (µg/m³)		-	-	-	-	-
Propylene	9,400	2.91	7.88	3.99	2.96	14.2
Freon 12 (CCl2F2)	Not Listed	2.33	2.4	2.38	2.41	2.36
Freon 114 (C2Cl2F4)	Not Listed	0.5 U	0.502 U	0.5 U	0.513 U	0.505 U
Chloromethane	280	1.23	4.76	2.95	1.23	11.6
Chloroethene (Vinyl chloride)	Not Listed	0.184 U	0.185 U	0.184 U	0.189 U	0.186 U
1,3-Butadiene	Not Listed	0.749	1.06	0.689	0.769	2.21
Bromomethane	16	0.275 U	0.276 U	0.274 U	0.282 U	0.277 U
Chloroethane	Not Listed	0.19 U	0.191 U	0.19 U	0.195 U	0.276
Bromoethene (Vinyl bromide)	Not Listed	0.312 U	0.313 U	0.312 U	0.32 U	0.315 U
Freon 11 (CCl3F)	Not Listed	1.18	1.38	1.33	1.4	1.28
Ethanol	Not Listed	16.7	4.28	2.33	9.26	2.56
Acrolein	0.063	0.25	0.49	0.498	0.283	1.18
Freon 113 (C2Cl3F3)	Not Listed	0.554	0.66	0.547	0.605	0.577
1,1-Dichloroethene	Not Listed	0.284 U	0.285 U	0.284 U	0.291 U	0.287 U
Acetone	97000	12	8.66	7.51	10.5	16.1
Carbon disulfide	2200	0.214	0.514 J+	0.279 J+	0.444 J+	0.405 J+
Isopropyl alcohol	Not Listed	0.404	0.468	0.434	0.949	0.478
Allyl chloride (3-chloropropene)	Not Listed	0.225 U	0.226 U	0.225 U	0.231 U	0.227 U
Acetonitrile	190	1.85	2.17	0.892	0.99	1.63 J+
Methylene chloride	1900	0.691 J+	0.871 J+	0.674 J+	0.999 J+	0.651
trans-1,2-Dichloroethene	Not Listed	0.289 U	0.29 U	0.289 U	0.296 U	0.292 U
Methyl tert-butyl ether	Not Listed	0.264 U	0.265 U	0.264 U	0.312	0.267 U
Acrylonitrile	4	0.159 U	0.159 U	0.158 U	0.163 U	0.202
Hexane	Not Listed	4.05	1.55	0.647	2.37	1.43
1,1-Dichloroethane	Not Listed	0.285 U	0.286 U	0.285 U	0.292 U	0.288 U
Vinyl acetate	630	0.256 U	0.257 U	0.256 U	0.263 U	0.259 U
cis-1,2-Dichloroethene	Not Listed	0.285 U	0.287 U	0.285 U	0.293 U	0.288 U
Methyl ethyl ketone (2-Butanone)	16,000	1.02	0.847	0.805	0.612	1.57
Ethyl acetate	220	0.259 U	0.261 U	0.259 U	0.266 U	0.262 U
Chloroform	12	0.353 U	0.354 U	0.353 U	0.362 U	0.356 U
Tetrahydrofuran	Not Listed	0.213 U	0.472	0.373	0.218 U	0.796
1,1,1-Trichloroethane	Not Listed	0.388 U	0.39 U	0.388 U	0.398 U	0.392 U
Cyclohexane	19,000	0.999	0.262	0.25 U	0.803	0.253 U
Carbon tetrachloride	47	0.481	0.482	0.478	0.496	0.466
Benzene	36	2.52	6.46	3.4	2.5	15.1
2,2,4-trimethylpentane	Not Listed	2.12	0.684	0.342 U	0.487	0.346 U
1,2-Dichloroethane	Not Listed	0.296 U	0.297 U	0.296 U	0.303 U	0.299 U
Heptane	Not Listed	2.26	0.769	0.365	0.891	1
Trichloroethene	Not Listed	0.386 U	0.387 U	0.385 U	0.396 U	0.39 U
1,2-Dichloropropane	Not Listed	0.338 U	0.339 U	0.337 U	0.346 U	0.341 U
Methyl methacrylate	2200	0.304 U	0.305 U	0.303 U	0.312 U	0.857
1,4-Dioxane	Not Listed	0.321	0.294	0.26 U	0.267 U	0.374
Bromodichloromethane	7.6	0.476 U	0.478 U	0.475 U	0.488 U	0.48 U
cis-1,3-Dichloropropene	Not Listed	0.319 U	0.32 U	0.319 U	0.327 U	0.322 U
Methyl isobutyl ketone	Not Listed	0.302 U	0.373	0.302 U	0.31 U	0.305 U
Toluene	16000	9.82	6.48	2.62	5.08	7.6
trans-1,3-Dichloropropene	Not Listed	0.33 U	0.331 U	0.329 U	0.338 U	0.333 U
1,1,2-Trichloroethane	Not Listed	0.391 U	0.393 U	0.391 U	0.401 U	0.395 U
Tetrachloroethene	Not Listed	0.489 U	0.491 U	0.489 U	0.736	0.494 U
2-Hexanone (Methyl butyl ketone)	Not Listed	0.298 U	0.299 U	0.297 U	0.305 U	0.3 U
Dibromochloromethane	Not Listed	0.601 U	0.604 U	0.601 U	0.617 U	0.607 U
1,2-Dibromoethane	Not Listed	0.556 U	0.559 U	0.556 U	0.571 U	0.562 U
Chlorobenzene	160	0.339 U	0.34 U	0.338 U	0.348 U	0.342 U
Ethylbenzene	110	2.07	3.36	1.12	0.768	5.86
1,1,1,2-Tetrachloroethane	Not Listed	0.491 U	0.493 U	0.49 U	0.504 U	0.496 U
m-p-Xylenes	Not Listed	6.86	2.37	0.941	2.51	1.66
o-Xylene	Not Listed	2.75	0.95	0.362	0.916	0.759
Styrene	3100	0.348	1.71	2.13	0.446	8.66
Bromoform	260	0.742 U	0.745 U	0.741 U	0.761 U	0.749 U
1,1,2,2-Tetrachloroethane	Not Listed	0.491 U	0.493 U	0.49 U	0.504 U	0.496 U
4-Ethyltoluene	Not Listed	0.913	0.355 U	0.354 U	0.363 U	0.357 U
2-Chlorotoluene	Not Listed	0.373 U	0.374 U	0.372 U	0.382 U	0.376 U
1,3,5-Trimethylbenzene	Not Listed	0.898	0.354 U	0.352 U	0.362 U	0.356 U
1,2,4-Trimethylbenzene	Not Listed	3.23	0.784	0.318 J	0.817	0.414

		BACKGROUND	STATION 1 (SE Corner)	STATION 2 (SW Corner)	STATION 1 (SE Corner)	STATION 2 (SW Corner)
		ACF-AS-BKGD-072819	ACF-AS-RES-AM-072719	ACF-AS-SMOKE-AM-072719	ACF-AS-RES-PM-072719	ACF-AS-SMOKE-PM-072719
Date		7/28/2019	7/27/2019	7/27/2019	7/27/2019	7/27/2019
Start Time		11:30	0:18	1:00	12:10	12:15
End Time		19:15	8:10	8:35	20:20	20:30
Analyte	EPA RMLs	Sample Volume	Sample Volume	Sample Volume	Sample Volume	Sample Volume
1,3-Dichlorobenzene	Not Listed	0.434 U	0.436 U	0.433 U	0.445 U	0.438 U
1,4-Dichlorobenzene	Not Listed	0.431 U	0.433 U	0.431 U	0.442 U	0.435 U
Benzyl chloride	3.1	0.369 U	0.371 U	0.369 U	0.379 U	0.373 U
1,2-Dichlorobenzene	Not Listed	0.438 U	0.44 U	0.438 U	0.449 U	0.442 U
1,2,4-Trichlorobenzene	Not Listed	0.538 U	0.541 U	0.538 U	0.553 U	0.544 U
Hexachlorobutadiene	13	0.764 U	0.767 U	0.763 U	0.784 U	0.772 U
Naphthalene	Not Listed	0.336 J	0.39 U	0.388 U	0.398 U	0.537
1-Bromopropane	Not Listed	0.355 U	0.357 U	0.355 U	0.365 U	0.359 U
1-Octene	Not Listed	0.321 U	0.322 U	0.321 U	0.329 U	0.324 U
n-Octane	Not Listed	0.99	0.353	0.334 U	0.343 U	0.562
Isopropylbenzene	Not Listed	0.357 U	0.838	0.421	0.366 U	1.06
n-Propylbenzene	Not Listed	0.629	0.359 U	0.357 U	0.367 U	0.361 U
Semivolatile Organic Compounds (µg/m³)		439.4 Liters	486.2 Liters	562.5 Liters	421.4 Liters	438.3 Liters
Semivolatile Organic Compounds	Not Listed	None detected	None detected	None detected	None detected	None detected
N-Nitrosodimethylamine	Not Listed	8.78 U	7.94 U	6.86 U	9.16 U	8.81 U
Pyridine	Not Listed	17.1 U	15.4 U	13.3 U	17.8 U	17.1 U
Phenol (CCC)	Not Listed	7.39 U	6.67 U	5.77 U	7.70 U	7.40 U
Aniline	3.1	7.90 U	7.14 U	6.17 U	8.23 U	7.92 U
bis(2-Chloroethyl)ether	0.85	8.97 U	8.10 U	7.00 U	9.35 U	8.99 U
2-Chlorophenol	Not Listed	7.10 U	6.42 U	5.55 U	7.40 U	7.12 U
1,3-Dichlorobenzene	Not Listed	6.35 U	5.74 U	4.96 U	6.62 U	6.37 U
1,4-Dichlorobenzene (CCC)	Not Listed	6.01 U	5.43 U	4.69 U	6.26 U	6.02 U
Benzyl alcohol	Not Listed	7.97 U	7.20 U	6.22 U	8.31 U	7.99 U
1,2-Dichlorobenzene	Not Listed	6.35 U	5.74 U	4.96 U	6.62 U	6.37 U
2-Methylphenol	Not Listed	7.70 U	6.96 U	6.02 U	8.03 U	7.72 U
bis(2-Chloroisopropyl) ether	Not Listed	11.2 U	10.1 U	8.73 U	11.7 U	11.2 U
3,4-Methylphenol	Not Listed	6.73 U	6.08 U	5.25 U	7.01 U	6.74 U
N-Nitroso-di-n-propylamine (SPCC)	Not Listed	9.47 U	8.56 U	7.40 U	9.87 U	9.49 U
o-Toluidine	Not Listed	56.9 U	51.4 U	44.4 U	59.3 U	57.0 U
Hexachloroethane	26	7.19 U	6.50 U	5.62 U	7.50 U	7.21 U
Nitrobenzene	7	9.29 U	8.39 U	7.25 U	9.68 U	9.31 U
Isophorone	6300	8.51 U	7.69 U	6.65 U	8.88 U	8.53 U
2,4-Dimethylphenol	Not Listed	8.30 U	7.50 U	6.48 U	8.65 U	8.32 U
2-Nitrophenol (CCC)	Not Listed	7.61 U	6.88 U	5.95 U	7.94 U	7.63 U
Benzoic acid	Not Listed	56.9 U	51.4 U	44.4 U	59.3 U	57.0 U
bis(2-Chloroethoxy)methane	Not Listed	8.33 U	7.53 U	6.51 U	8.69 U	8.35 U
2,4-Dichlorophenol (CCC)	Not Listed	7.42 U	6.71 U	5.80 U	7.74 U	7.44 U
a,a-Dimethylphenethylamine	Not Listed	56.9 U	51.4 U	44.4 U	59.3 U	57.0 U
1,2,4-Trichlorobenzene	Not Listed	7.02 U	6.35 U	5.48 U	7.32 U	7.04 U
Naphthalene	Not Listed	7.57 U	6.84 U	5.91 U	7.89 U	7.59 U
4-Chloroaniline	Not Listed	9.66 U	8.73 U	7.55 U	10.1 U	9.69 U
Hexachlorobutadiene (CCC)	Not Listed	6.93 U	6.26 U	5.41 U	7.23 U	6.95 U
Quinoline	Not Listed	11.4 U	10.3 U	8.89 U	11.9 U	11.4 U
1,4-Phenylenediamine	Not Listed	56.9 U	51.4 U	44.4 U	59.3 U	57.0 U
4-Chloro-3-methylphenol (CCC)	Not Listed	7.52 U	6.80 U	5.88 U	7.84 U	7.54 U
2-Methylnaphthalene	Not Listed	7.03 U	6.36 U	5.49 U	7.33 U	7.05 U
1-Methylnaphthalene	Not Listed	6.98 U	6.30 U	5.45 U	7.27 U	6.99 U
Hexachlorocyclopentadiene (SPCC)	Not Listed	92.4 U	83.5 U	72.2 U	96.3 U	92.6 U
2,4,6-Trichlorophenol (CCC)	Not Listed	8.40 U	7.59 U	6.56 U	8.76 U	8.42 U
2,4,5-Trichlorophenol	Not Listed	6.16 U	5.56 U	4.81 U	6.42 U	6.17 U
Biphenyl	Not Listed	56.9 U	51.4 U	44.4 U	59.3 U	57.0 U
2-Chloronaphthalene	Not Listed	7.42 U	6.71 U	5.80 U	7.74 U	7.44 U
2-Nitroaniline	Not Listed	11.0 U	9.93 U	8.59 U	11.5 U	11.0 U
1,4-Dinitrobenzene	Not Listed	7.65 U	6.91 U	5.97 U	7.97 U	7.67 U
Dimethylphthalate	Not Listed	9.21 U	8.32 U	7.19 U	9.60 U	9.23 U
1,3-Dinitrobenzene	Not Listed	9.32 U	8.42 U	7.28 U	9.72 U	9.34 U
2,6-Dinitrotoluene	Not Listed	8.82 U	7.97 U	6.89 U	9.20 U	8.84 U
1,2-Dinitrobenzene	Not Listed	8.84 U	7.99 U	6.91 U	9.22 U	8.86 U
Acenaphthylene	Not Listed	7.68 U	6.94 U	6.00 U	8.01 U	7.70 U
3-Nitroaniline	Not Listed	9.29 U	8.39 U	7.25 U	9.68 U	9.31 U
Acenaphthene (CCC)	Not Listed	10.6 U	9.61 U	8.30 U	11.1 U	10.7 U
2,4-Dinitrophenol (SPCC)	Not Listed	56.9 U	51.4 U	44.4 U	59.3 U	57.0 U
4-Nitrophenol (SPCC)	Not Listed	56.9 U	51.4 U	44.4 U	59.3 U	57.0 U
2,4-Dinitrotoluene	Not Listed	9.15 U	8.27 U	7.15 U	9.54 U	9.17 U
Dibenzofuran	Not Listed	7.83 U	7.08 U	6.12 U	8.16 U	7.85 U
2,3,5,6-Tetrachlorophenol	Not Listed	8.66 U	7.83 U	6.76 U	9.03 U	8.68 U
2,3,4,6-Tetrachlorophenol	Not Listed	7.98 U	7.21 U	6.23 U	8.32 U	8.00 U
Diethylphthalate	Not Listed	11.6 U	10.5 U	9.07 U	12.1 U	11.6 U
4-Chlorophenyl-phenylether	Not Listed	8.58 U	7.75 U	6.70 U	8.95 U	8.60 U
Fluorene	Not Listed	8.91 U	8.05 U	6.96 U	9.29 U	8.93 U
4-Nitroaniline	Not Listed	7.90 U	7.14 U	6.17 U	8.24 U	7.92 U
4,6-Dinitro-2-methylphenol	Not Listed	56.9 U	51.4 U	44.4 U	59.3 U	57.0 U
N-Nitrosodiphenylamine (CCC)	Not Listed	8.15 U	7.36 U	6.36 U	8.50 U	8.17 U
Azobenzene	9.1	11.3 U	10.2 U	8.81 U	11.8 U	11.3 U
4-Bromophenyl-phenylether	Not Listed	7.64 U	6.90 U	5.96 U	7.96 U	7.65 U
Hexachlorobenzene	0.61	6.21 U	5.61 U	4.85 U	6.48 U	6.23 U
Pentachlorophenol (CCC)	Not Listed	56.9 U	51.4 U	44.4 U	59.3 U	57.0 U
Phenanthrene	Not Listed	8.77 U	7.93 U	6.85 U	9.15 U	8.80 U
Anthracene	Not Listed	8.65 U	7.82 U	6.76 U	9.02 U	8.67 U
Carbazole	Not Listed	8.02 U	7.25 U	6.27 U	8.36 U	8.04 U
Di-n-butylphthalate	Not Listed	11.8 U	10.7 U	9.24 U	12.3 U	11.9 U
Fluoranthene (CCC)	Not Listed	10.5 U	9.45 U	8.17 U	10.9 U	10.5 U
Benidine	0.0015	259 U	234 U	203 U	271 U	260 U
Pyrene	Not Listed	10.7 U	9.64 U	8.33 U	11.1 U	10.7 U
4-Dimethylaminobenzene	Not Listed	56.9 U	51.4 U	44.4 U	59.3 U	57.0 U
Butylbenzylphthalate	Not Listed	9.22 U	8.33 U	7.20 U	9.61 U	9.24 U
3,3-Dimethylbenzidine	Not Listed	123 U	111 U	96.0 U	128 U	123 U
bis(2-Ethylhexyl)adipate	Not Listed	9.95 U	8.99 U	7.77 U	10.4 U	9.97 U
3,3-Dimethoxybenzidine	Not Listed	56.9 U	51.4 U	44.4 U	59.3 U	57.0 U
bis(2-Ethylhexyl)phthalate	Not Listed	19.8 U	17.9 U	15.5 U	20.6 U	19.8 U
3,3'-Dichlorobenzidine	Not Listed	56.9 U	51.4 U	44.4 U	59.3 U	57.0 U
Benzo(a)anthracene	Not Listed	6.26 U	5.66 U	4.89 U	6.53 U	6.27 U
Chrysene	Not Listed	6.33 U	5.72 U	4.94 U	6.60 U	6.34 U
Di-n-octylphthalate (CCC)	Not Listed	7.33 U	6.62 U	5.72 U	7.64 U	7.35 U

ABLE CONTRACTING FIRE
AIR SAMPLE RESULTS FOR JULY 27 and 28, 2019

		BACKGROUND	STATION 1 (SE Corner)	STATION 2 (SW Corner)	STATION 1 (SE Corner)	STATION 2 (SW Corner)
		ACF-AS-BKGD-072819	ACF-AS-RES-AM-072719	ACF-AS-SMOKE-AM-072719	ACF-AS-RES-PM-072719	ACF-AS-SMOKE-PM-072719
Date		7/28/2019	7/27/2019	7/27/2019	7/27/2019	7/27/2019
Start Time		11:30	0:18	1:00	12:10	12:15
End time		19:15	8:10	8:35	20:20	20:30
Analyte	EPA RMLs	Sample Volume	Sample Volume	Sample Volume	Sample Volume	Sample Volume
7,12-Dimethylbenz(a)anthracene	Not Listed	56.9 U	51.4 U	44.4 U	59.3 U	57.0 U
Benzo(b)fluoranthene	Not Listed	3.41 U	3.09 U	2.67 U	3.56 U	3.42 U
Benzo(k)fluoranthene	Not Listed	4.05 U	3.66 U	3.16 U	4.22 U	4.06 U
Benzo(e)pyrene	Not Listed	3.87 U	3.50 U	3.02 U	4.03 U	3.88 U
Benzo(a)pyrene (CCC)	Not Listed	3.87 U	3.50 U	3.02 U	4.03 U	3.88 U
Perylene	Not Listed	3.87 U	3.50 U	3.02 U	4.03 U	3.88 U
3-Methylcholanthrene	Not Listed	56.9 U	51.4 U	44.4 U	59.3 U	57.0 U
Indeno(1,2,3-cd)pyrene	Not Listed	3.41 U	3.09 U	2.67 U	3.56 U	3.42 U
Dibenz(a,h)anthracene	Not Listed	4.84 U	4.37 U	3.78 U	5.04 U	4.85 U
Benzo(g,h,i)perylene	Not Listed	4.01 U	3.62 U	3.13 U	4.18 U	4.02 U
Dibenzo(a,e)pyrene	Not Listed	56.9 U	51.4 U	44.4 U	59.3 U	57.0 U

Notes:

ACF	Able Contracting Fire
EPA	Environmental Protection Agency
J	The identification of the analyte is acceptable; the reported value is an estimate
J+	The identification of the analyte is acceptable; the reported value is an estimate biased high
µg/m³	Micrograms per cubic meter
NA	Not Analysed
ND	Not Detected
RMLs	Removal Management Levels; Residential Ambient Air, April 2019. (Lower value of carcinogenic/noncarcinogenic listed; TR=1E-04/THQ+3.0)
U	The analyte was not detected at or above the reporting limit
UJ	The analyte was not detected at or above the reporting limit; which is considered approximate due to
BOLD	Bolded values indicate a chemical detection
SHADE	Shaded values indicate an RML exceedance

Water Sampling Results: July 28, 2019



SURFACE WATER RESULTS SUMMARY TABLE
DETECTIONS ONLY
ABLE CONTRACTING FIRE

Parameter	MCL/RSL ¹	ACF-GW-472R		DHEC (max/cont) /EPA (chr/acute) ²	ACF-SW-DITCH	ACF-SW-POND
	Groundwater			Surface Water		
Metals (µg/L)						
Aluminum	2,000	100 U		87/750	527	251
Antimony	6	5.0 U		190/900	61.0	32.3
Arsenic	10	10.0 U		340/150	554	493
Barium	2,000	5.7		220/2,000	175	133
Cadmium	5	1.0 U		0.53/0.10	4.3	3.6
Calcium	NL	27,200		116,000/NL	904,000	725,000
Chromium	100	5.0 U		580/28	191	148
Copper	1,300	27.6		3.8/2.9	38.1	20.2
Iron	1,400	50.0 U		1,000/NL	1,070	300
Lead	15	5.0 U		14/0.54	3.0 J	5.0 U
Magnesium	NL	9,370		82,000/NL	83,100	48,900
Manganese	48	21.8		93/1,680	820	526
Nickel	40	2.6 J		150/16	43.2	30.5
Potassium	NL	2,760 J		53,000/NL	112,000	75,300
Sodium	NL	10,600		680,000/NL	430,000	248,000
Vanadium	NL	5.0 U		27/79	36.4	22.7
Zinc	600	130		37/37	72.7	24.4
Volatile Organic Compounds (µg/L)						
1,2-Dichloroethane	5	1.0 U		2,000/8,200	0.83 J	0.55 J
2-Butanone (MEK)	1,200	5.0 U		22,000/200,000	71.6	43.2 J+
2-Hexanone	10	5.0 U		99/1,800	3.5 J	5.0 U
4-Methyl-2-pentanone (MIBK)	630	5.0 U		170/2,200	9.4 J	5.0 U
Acetone	1,800	25.0 U		1,700/15,000	325	269 J+
Benzene	5	1.0 U		160/700	29.7	21.4
Chloromethane	19	0.69 J		NL	2.0 U	1.8
Ethylbenzene	700	1.0 U		61/550	6.2	6.0
m&p-Xylene	400	2.0 U		27/240	2.4 J	1.8 J
Naphthalene	40	1.0 U		21/170	3.9	2.3
o-Xylene	400	1.0 U		27/240	1.6 J	1.1
Toluene	1,000	1.0 U		62/560	14.5	10.5
Xylene (Total)	10,000	1.0 U		27/240	2.0 U	1.1
Semivolatile Organic Compounds (µg/L)						
2,4-Dimethylphenol	40	100 U		15/140	108 J-	6.0 J
2-Methylphenol(o-Cresol)	100	100 U		67/600	137 J-	11.1
3&4-Methylphenol(m&p Cresol)	200	100 U		62/560	82.9 J-	7.9 J
Phenol	580	100 UJ		160/4,700	67.8 J-	9.8 UJ

Notes:

¹ Drinking water values are compared to EPA MCLs. When an MCL is not listed, the EPA RSL is used

² Surface water values are compared to DHEC Freshwater Aquatic Life levels. When DHEC levels are not listed, EPA Surface Water Screening Values are used

SHAD Reported value exceeds the comparison criteria

Acute Acute exposure

Chr Chronic exposure

Cont Continuous exposure

J The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample.

J+ The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample, biased high.

J- The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample, biased low.

Max Maximum exposure level

MCL Maximum contaminant level

NL Not listed

RSL Regional Screening Level; Tapwater TR=1E-06, THQ=0.1

U The analyte was analyzed for, but was not detected at or above the associated value (reporting limit).

SURFACE WATER RESULTS SUMMARY TABLE
DETECTIONS ONLY
ABLE CONTRACTING FIRE

UJ	The analyte was analyzed for, but was not detected at or above the associated value (reporting limit), which is estimated.
µg/L	micrograms per liter

Air Sampling Results: August 2-3, 2019

ABLE CONTRACTING FIRE
AIR SAMPLE RESULTS FOR AUGUST 2, 2019

		STATION 1 (SE Corner)	STATION 2 (West Side)	STATION 3 (Upwind)
		ACF-AS-RES-24HRVOC	ACF-AS-SMOKE-24HRVOC	ACF-AS-UPWIND-24HRVOC
Date		8/2/2019	8/2/2019	8/2/2019
Start Time		20:10	20:30	21:00
End time		15:20	12:55	16:55
Analyte	EPA RMLs	Sample Volume	Sample Volume	Sample Volume
Volatile Organic Compounds (µg/m ³)		-	-	-
Propylene	9,400	2.98	21.5	0.633
Freon 12 (CCl ₂ F ₂)	Not Listed	2.44	2.43	2.37
Freon 114 (C ₂ Cl ₂ F ₄)	Not Listed	0.481 U	0.483 U	0.489 U
Chloromethane	280	3.53	13.8	2.09
Chloroethene (Vinyl chloride)	Not Listed	0.177 U	0.178 U	0.180 U
1,3-Butadiene	Not Listed	0.195	2.35	0.151 U
Bromomethane	16	0.264 U	0.46	0.268 U
Chloroethane	Not Listed	0.183 U	0.268	0.186 U
Bromoethene (Vinyl bromide)	Not Listed	0.300 U	0.301 U	0.305 U
Freon 11 (CCl ₃ F)	Not Listed	1.42	1.41	1.39
Ethanol	Not Listed	2.62	3.26	1.21 J+
Acrolein	0.063	0.307	2.56	0.273
Freon 113 (C ₂ Cl ₃ F ₃)	Not Listed	0.591	0.613	0.584
1,1-Dichloroethene	Not Listed	0.273 U	0.274 U	0.277 U
Acetone	97000	6.87	14.7	5.46
Carbon disulfide	2200	0.448 J+	0.736 J+	0.262 J+
Isopropyl alcohol	Not Listed	0.432	0.41	0.305
Allyl chloride (3-chloropropene)	Not Listed	0.217 U	0.218 U	0.220 U
Acetonitrile	190	1.17	3.64	0.893
Methylene chloride	1900	0.625 J+	0.66 J+	0.551
trans-1,2-Dichloroethene	Not Listed	0.278 U	0.279 U	0.282 U
Methyl tert-butyl ether	Not Listed	0.254 U	0.355	0.258 U
Acrylonitrile	4	0.153 U	0.946	0.155 U
Hexane	Not Listed	0.849	1.71	0.28
1,1-Dichloroethane	Not Listed	0.274 U	0.275 U	0.278 U
Vinyl acetate	630	0.246 U	0.247 U	0.250 U
cis-1,2-Dichloroethene	Not Listed	0.275 U	0.276 U	0.279 U
Methyl ethyl ketone (2-Butanone)	16,000	0.657	2.69	0.42
Ethyl acetate	220	0.719	0.251 U	0.253 U
Chloroform	12	0.340 U	0.341 U	0.345 U
Tetrahydrofuran	Not Listed	0.222	1.32	0.208 U
1,1,1-Trichloroethane	Not Listed	0.374 U	0.375 U	0.379 U
Cyclohexane	19,000	0.241 U	0.319	0.244 U
Carbon tetrachloride	47	0.523	0.497	0.491
Benzene	36	2.00	26.2	0.223 U
2,2,4-trimethylpentane	Not Listed	0.322	0.331 U	0.334 U
1,2-Dichloroethane	Not Listed	0.285 U	0.286 U	0.289 U
Heptane	Not Listed	0.478	1.51	0.288 U
Trichloroethene	Not Listed	0.371 U	0.373 U	0.377 U
1,2-Dichloropropane	Not Listed	0.325 U	0.326 U	0.330 U
Methyl methacrylate	2200	0.292 U	1.4	0.297 U
1,4-Dioxane	Not Listed	0.251 U	0.584	0.254 U
Bromodichloromethane	7.6	0.458 U	0.460 U	0.465 U
cis-1,3-Dichloropropene	Not Listed	0.307 U	0.31 U	0.31 U
Methyl isobutyl ketone	Not Listed	0.291 U	0.292 U	0.295 U
Toluene	16000	2.26	11.8	0.657
trans-1,3-Dichloropropene	Not Listed	0.317 U	0.319 U	0.322 U
1,1,2-Trichloroethane	Not Listed	0.376 U	0.378 U	0.382 U
Tetrachloroethene	Not Listed	0.471 U	0.473 U	0.478 U
2-Hexanone (Methyl butyl ketone)	Not Listed	0.286 U	0.338	0.291 U
Dibromochloromethane	Not Listed	0.578 U	0.581 U	0.587 U
1,2-Dibromoethane	Not Listed	0.535 U	0.538 U	0.544 U
Chlorobenzene	160	0.326 U	0.748	0.331 U
Ethylbenzene	110	1.33	8	0.298 U
1,1,1,2-Tetrachloroethane	Not Listed	0.472 U	0.474 U	0.479 U
m-/p-Xylenes	Not Listed	0.673	2.07	0.307 U
o-Xylene	Not Listed	0.284 J+	0.98	0.303 U
Styrene	3100	0.842	21.2	0.29 U
Bromoform	260	0.714 U	0.717 U	0.725 U
1,1,2,2-Tetrachloroethane	Not Listed	0.472 U	0.474 U	0.479 U
4-Ethyltoluene	Not Listed	0.341 U	0.342 U	0.346 U
2-Chlorotoluene	Not Listed	0.359 U	0.360 U	0.364 U
1,3,5-Trimethylbenzene	Not Listed	0.339 U	0.535	0.344 U

ABLE CONTRACTING FIRE
AIR SAMPLE RESULTS FOR AUGUST 2, 2019

		STATION 1 (SE Corner)	STATION 2 (West Side)	STATION 3 (Upwind)
		ACF-AS-RES-24HRVOC	ACF-AS-SMOKE-24HRVOC	ACF-AS-UPWIND-24HRVOC
Date		8/2/2019	8/2/2019	8/2/2019
Start Time		20:10	20:30	21:00
End time		15:20	12:55	16:55
Analyte	EPA RMLs	Sample Volume	Sample Volume	Sample Volume
Volatile Organic Compounds (µg/m ³)		-	-	-
1,2,4-Trimethylbenzene	Not Listed	0.336 U	0.534	0.341 U
1,3-Dichlorobenzene	Not Listed	0.417 U	0.419 U	0.424 U
1,4-Dichlorobenzene	Not Listed	0.415 U	0.417 U	0.421 U
Benzyl chloride	3.1	0.355 U	0.357 U	0.361 U
1,2-Dichlorobenzene	Not Listed	0.422 U	0.423 U	0.428 U
1,2,4-Trichlorobenzene	Not Listed	0.518 U	0.520 U	0.526 U
Hexachlorobutadiene	13	0.735 U	0.738 U	0.746 U
Naphthalene	Not Listed	0.373 U	1.02	0.379 U
1-Bromopropane	Not Listed	0.342 U	0.343 U	0.347 U
1-Octene	Not Listed	0.309 U	0.310 U	0.314 U
n-Octane	Not Listed	0.322 U	0.957	0.327 U
Isopropylbenzene	Not Listed	0.466	1.92	0.355
n-Propylbenzene	Not Listed	0.344 U	0.453	0.349 U

Notes:

ACF	Able Contracting Fire
EPA	Environmental Protection Agency
J+	The identification of the analyte is acceptable; the reported value is an estimate biased high
µg/m ³	Micrograms per cubic meter
NA	Not Analysed
ND	Not Detected
RMLs	Removal Management Levels; Residential Ambient Air, April 2019. (Lower value of carcinogenic/noncarcinogenic listed; TR=1E-04/THQ+3.0)
U	The analyte was not detected at or above the reporting limit
UJ	The analyte
BOLD	Bolded values
SHADE	Shaded values indicate an RML exceedance

Air Sampling Results: August 21-22, 2019

ABLE CONTRACTING FIRE
AIR SAMPLE RESULTS FOR AUGUST 21-22, 2019

			352 Schinger Avenue	Forrest Concrete	Able Contracting Office	Able Contracting Shop
			ACF-AS-RES-1-24HR-082119	ACF-AS-RES-2-24HR-082119	ACF-AS-PAMI-082119	ACF-AS-PAM2-082119
Date			8/21/2019 - 8/22/19	8/21/2019 - 8/22/19	8/21/2019 - 8/22/19	8/21/2019 - 8/22/19
Analyte	EPA Residential RMLs	EPA Worker RMLs				
Hydrogen cyanide (µg/m³)						
Hydrogen cyanide	2.5	11	3,960 U	4,400 U	4,059 U	3,960 U
Hydrogen Sulfide (µg/m³)						
Hydrogen sulfide	6.3	26	219.8 U	239.4 U	218.4 U	225.4 U
Volatile Organic Compounds (µg/m³)						
Propylene	9,400	39,000	3.12	1.16	6.92	7.39
Freon 12 (CCl2F2)	310	1,300	2.19	2.18	2.15	2.14
Freon 114 (C2Cl2F4)	Not Listed	Not Listed	0.564 U	0.614 U	0.558 U	0.578 U
Chloroethane	280	1,200	4.44	2.01	9.08	8.29
Chloroethene (Vinyl chloride)	17	280	0.207 U	0.225 U	0.205 U	0.212 U
1,3-Butadiene	6.2	26	0.180	0.19 U	0.479	0.549
Bromomethane	16	66	0.310 U	0.337 U	0.306 U	0.317 U
Chloroethane	31,000	130,000	0.214 U	0.233 U	0.212 U	0.220 U
Bromoethene (Vinyl bromide)	8.8	38	0.352 U	0.382 U	0.348 U	0.360 U
Freon 11 (CCl3F)	Not Listed	Not Listed	1.14	1.19	1.18	1.15
Ethanol	Not Listed	Not Listed	4.05	5.29	6.15	5.87
Acrolein	0.063	0.26	0.432	0.491	0.666	0.643
Freon 113 (C2Cl3F3)	16,000	66,000	0.587 J	0.646 J	0.595 J	0.588 J
1,1-Dichloroethene	630	2,600	0.320 U	0.348 U	0.317 U	0.328 U
Acetone	97,000	410,000	6.97	8.16	14.4	9.27
Carbon disulfide	2,200	9,200	0.287	0.274 U	0.511	0.342
Isopropyl alcohol	630	2,600	1.780	1.01	0.72	0.602
Allyl chloride (3-chloropropene)	3.1	13	0.254 U	0.276 U	0.251 U	0.260 U
Acetonitrile	190	790	0.78	1.1	1.89	1.19
Methylene chloride	1900	7,900	0.709 U	0.771 U	0.901	0.726 U
trans-1,2-Dichloroethene	Not Listed	Not Listed	0.326 U	0.354 U	0.322 U	0.334 U
Methyl tert-butyl ether	1,100	4,700	0.298 U	0.324 U	0.295 U	0.305 U
Acrylonitrile	4.1	18	0.179 U	0.194 U	0.177 U	0.183 U
Hexane	2,200	920	0.932	0.684	1.4	1.2
1,1-Dichloroethane	180	770	0.321 U	0.350 U	0.318 U	0.329 U
Vinyl acetate	630	2,600	0.289 U	0.314 U	0.286 U	0.296 U
cis-1,2-Dichloroethene	Not Listed	Not Listed	0.322 U	0.350 U	0.319 U	0.330 U
Methyl ethyl ketone (2-Butanone)	16,000	66,000	0.770	0.72	1.23	1.26
Ethyl acetate	220	920	5.720	3.740	0.295	0.300 U
Chloroform	12	53	0.398 U	0.433 U	0.394 U	0.408 U
Tetrahydrofuran	6,300	26,000	0.300	0.261 U	0.474	0.489
1,1,1-Trichloroethane	16,000	66,000	0.438 U	0.476 U	0.433 U	0.448 U
Cyclohexane	19,000	79,000	0.282 U	0.307 U	0.257 J	0.289 U
Carbon tetrachloride	47	200	0.485 J	0.536 J	0.499 J	0.475 J
Benzene	36	160	2.66	0.851	6.820	7.210
2,2,4-trimethylpentane	Not Listed	Not Listed	0.386 U	0.420 U	0.435	0.365 J
1,2-Dichloroethane	11	47	0.334 U	0.363 U	0.330 U	0.342 U
Heptane	1,300	5,300	0.716	0.406	0.977	1.010
Trichloroethene	6.3	26	0.435 U	0.473 U	0.431 U	0.445 U
1,2-Dichloropropane	13	53	0.381 U	0.414 U	0.377 U	0.390 U
Methyl methacrylate	2,200	9,200	0.342 U	0.372 U	0.339 U	0.351 U
1,4-Dioxane	56	250	0.294 U	0.319 U	0.280 J	0.293 J
Bromodichloromethane	7.6	33	0.537 U	0.583 U	0.531 U	0.549 U
cis-1,3-Dichloropropene	Not Listed	Not Listed	0.360 U	0.39 U	0.36 U	0.37 U
Methyl isobutyl ketone	9,400	39,000	0.341 U	0.486	0.337 U	0.349 U
Toluene	16,000	66,000	2.50	2.24	4.33	4.41
trans-1,3-Dichloropropene	Not Listed	Not Listed	0.372 U	0.404 U	0.368 U	0.381 U
1,1,2-Trichloroethane	18	2.6	0.441 U	0.479 U	0.436 U	0.451 U
Tetrachloroethene	130	530	0.552 U	0.600 U	0.546 U	1.62
2-Hexanone (Methyl butyl ketone)	94	390	0.317 J	0.365 U	0.332 U	0.755
Dibromochloromethane	Not Listed	Not Listed	0.678 U	0.737 U	0.671 U	0.694 U
1,2-Dibromoethane	0.47	2.0	0.628 U	0.682 U	0.621 U	0.643 U
Chlorobenzene	160	660	0.382 U	0.415 U	0.378 U	0.391 U
Ethylbenzene	110	490	1.46	0.499	3.11	3.17
1,1,1,2-Tetrachloroethane	38	170	0.554 U	0.602 U	0.548 U	0.567 U
m-p-Xylenes	31	1,300	1.020	1.04	1.26	1.65
p-Xylene	31	1,300	0.465	0.426	0.661	0.731
Styrene	3,100	13,000	1.270	0.364 U	3.31	3.41
Bromoform	260	1,100	0.837 U	0.910 U	0.828 U	0.857 U
1,1,2,2-Tetrachloroethane	4.8	21	0.554 U	0.602 U	0.548 U	0.567 U
4-Ethyltoluene	Not Listed	Not Listed	0.399 U	0.434 U	0.395 U	0.409 U
2-Chlorotoluene	Not Listed	Not Listed	0.420 U	0.457 U	0.416 U	0.43 U
1,3,5-Trimethylbenzene	190	790	0.398 U	0.432 U	0.393 U	0.407 U
1,2,4-Trimethylbenzene	190	790	0.443	0.481	0.5	0.531
1,3-Dichlorobenzene	Not Listed	Not Listed	0.489 U	0.532 U	0.484 U	0.501 U
1,4-Dichlorobenzene	Not Listed	110	0.486 U	0.529 U	0.481 U	0.498 U
Benzyl chloride	3.1	13	0.417 U	0.453 U	0.412 U	0.427 U
1,2-Dichlorobenzene	630	2,600	0.494 U	0.537 U	0.489 U	0.506 U
1,2,4-Trichlorobenzene	6.3	26	0.607 U	0.660 U	0.601 U	0.622 U
Hexachlorobutadiene	13	56	0.862 U	0.937 U	0.853 U	0.882 U
Naphthalene	8.3	36	0.409 J	0.585	0.584	0.591
1-Bromopropane	310	1,300	0.401 U	0.436 U	0.397 U	0.41 U
1-Octene	Not Listed	Not Listed	0.362 U	0.394 U	0.358 U	0.371 U
n-Octane	Not Listed	Not Listed	0.378 U	0.41 U	0.409	0.425
Isopropylbenzene	1,300	5,300	0.617	0.438 U	1.06	1.05
n-Propylbenzene	3,100	13,000	0.403 U	0.438 U	0.399 U	0.413 U

Notes:

ACF Able Contracting Fire
EPA Environmental Protection Agency
J The identification of the analyte is acceptable; the reported value is an estimate
µg/m³ Micrograms per cubic meter
NA Not Analyzed
ND Not Detected
RMLs Removal Management Levels; Residential/Worker Ambient Air, April 2019. (Lower value of carcinogenic/noncarcinogenic listed; TR=1E-04/THO+3.0)
U The analyte was not detected at or above the reporting limit
BOLD Bolded values
SHADE Shaded values indicate an RML exceedance

ABLE CONTRACTING FIRE
AIR SAMPLE RESULTS FOR AUGUST 21-22, 2019

			353 Schinger Avenue	Forrest Concrete	NW Side of Pile	NE Corner of Site	Komatsu Cab	Doosan Cab
			ACF-AS-RES-1-24HR-082219	ACF-AS-RES-2-24HR-082219	ACF-AS-PAMI-082219	ACF-AS-PAMI-082219	ACF-AS-CAB1-DAY-082219	ACF-AS-CAB2-DAY-082219
Date			8/22/2019 - 8/23/19	8/22/2019 - 8/23/19	8/22/2019 - 8/23/19	8/22/2019 - 8/23/19	8/22/2019 - 8/23/19	8/22/2019 - 8/23/19
Analyte	EPA Residential RMLs	EPA Worker RMLs						
Hydrogen cyanide (µg/m³)								
Hydrogen cyanide	2.5	11	2,497 U	2,475 U	2,475 U	2,607 U	4,455 U	3,828 U
Hydrogen Sulfide (µg/m³)								
Hydrogen sulfide	6.3	26	219.8 U	215.6 U	218.4 U	228.2 U	390.6 U	337.4 U
Volatile Organic Compounds (µg/m³)								
Propylene	9,400	39,000	4.97	7.41	19.8	11.2	8.67	16.3
Freon 12 (CCl2F2)	310	1,300	2.18	2.19	2.22	2.13	2.25	2.2
Freon 114 (C2Cl2F4)	Not Listed	Not Listed	0.563 U	0.553 U	0.558 U	0.585 U	1,000 U	0.862 U
Chloromethane	280	1,200	5.20	7.35	21.3	11.4	5.59	21.2
Chloroethene (Vinyl chloride)	17	280	0.207 U	0.203 U	0.205 U	0.215 U	0.368 U	0.317 U
1,3-Butadiene	6.2	26	0.322	0.591	1.760	0.980	1.580	1.720
Bromomethane	16	66	0.309 U	0.304 U	0.306 U	0.321 U	0.549 U	0.473 U
Chloroethane	31,000	130,000	0.214 U	0.21 U	0.329	0.214 J	0.380 U	0.399
Bromoethene (Vinyl bromide)	8.8	38	0.351 U	0.345 U	0.347 U	0.365 U	0.624 U	0.537 U
Freon 11 (CCl3F)	Not Listed	Not Listed	1.14	1.16	1.18	1.14	1.33	1.46
Ethanol	Not Listed	Not Listed	2.87	5.51	3.6	3.84	174	103
Acrolein	0.063	0.26	0.384	0.676	1.34	0.726	2.94	1.87
Freon 113 (C2Cl3F3)	16,000	66,000	0.592 J	0.602 J	0.618	0.596 J	1.09 U	0.94 U
1,1-Dichloroethene	630	2,600	0.319 U	0.314 U	0.316 U	0.332 U	0.568 U	0.489 U
Acetone	97,000	410,000	6.37	10.6	12.1	8.91	207	54
Carbon disulfide	2,200	9,200	0.228 J	0.407	0.59	0.438	1.39	1.01
Isopropyl alcohol	630	2,600	1.220	0.65	1.1	1.54	15.8	4.6
Allyl chloride (3-chloropropene)	3.1	13	0.253 U	0.249 U	0.251 U	0.263 U	0.450 U	0.388 U
Acetonitrile	190	790	0.56	1.06	1.65	1.11	6.88	2.09
Methylene chloride	1900	7,900	0.708 U	0.723	0.701 U	0.736 U	1.26 U	1.08 U
trans-1,2-Dichloroethene	Not Listed	Not Listed	0.325 U	0.319 U	0.322 U	0.338 U	0.578 U	0.498 U
Methyl tert-butyl ether	1,100	4,700	0.297 U	0.292 U	0.294 U	0.309 U	0.528 U	0.455 U
Acrylonitrile	4.1	18	0.178 U	0.175 U	0.295	0.186 U	0.356	0.518
Hexane	2,200	920	1.270	3.03	2.22	1.43	1.92	2.09
1,1-Dichloroethane	180	770	0.321 U	0.315 U	0.318 U	0.333 U	0.570 U	0.491 U
Vinyl acetate	630	2,600	0.288 U	0.283 U	0.285 U	0.300 U	0.459 J	0.441 U
cis-1,2-Dichloroethene	Not Listed	Not Listed	0.321 U	0.316 U	0.318 U	0.334 U	0.571 U	0.492 U
Methyl ethyl ketone (2-Butanone)	16,000	66,000	0.570	0.868	2.05	1.16	12.1	4.12
Ethyl acetate	220	920	0.292 U	0.261 J	0.289 U	0.650	35.500	19.300
Chloroform	12	53	0.397 U	0.390 U	0.393 U	0.413 U	0.706 U	0.608 U
Tetrahydrofuran	6,300	26,000	0.339	0.488	1.160	0.664	16.400	8.940
1,1,1-Trichloroethane	16,000	66,000	0.437 U	0.429 U	0.433 U	0.454 U	0.776 U	0.669 U
Cyclohexane	19,000	79,000	0.514	0.97	0.262 J	0.317	0.730	0.415 J
Carbon tetrachloride	47	200	0.488 J	0.556	0.492 J	0.509 J	0.91 U	0.785 U
Benzene	36	160	3.46	5.73	14.900	9.340	4.990	12.000
2,2,4-trimethylpentane	Not Listed	Not Listed	0.505	1.830	0.550	0.371 J	0.685 U	0.590 U
1,2-Dichloroethane	11	47	0.333 U	0.327 U	0.330 U	0.346 U	0.592 U	0.510 U
Heptane	1,300	5,300	1.000	1.38	1.650	1.080	2.260	2.110
Trichloroethene	6.3	26	0.434 U	0.426 U	0.430 U	0.451 U	0.772 U	0.665 U
1,2-Dichloropropane	13	53	0.380 U	0.373 U	0.376 U	0.395 U	0.675 U	0.582 U
Methyl methacrylate	2,200	9,200	0.342 U	0.336 U	0.484	0.355 U	0.607 U	1.650
1,4-Dioxane	56	250	0.293 U	0.288 U	0.422	0.459	0.838	0.648
Bromodichloromethane	7.6	33	0.535 U	0.526 U	0.530 U	0.557 U	0.951 U	0.820 U
cis-1,3-Dichloropropene	Not Listed	Not Listed	0.359 U	0.35 U	0.36 U	0.37 U	0.64 U	0.55 U
Methyl isobutyl ketone	9,400	39,000	0.340 U	0.334 U	0.373	0.353 U	9.500	7.070
Toluene	16,000	66,000	3.35	5.88	8.4	5.66	13.1	11.8
trans-1,3-Dichloropropene	Not Listed	Not Listed	0.371 U	0.364 U	0.367 U	0.386 U	0.659 U	0.568 U
1,1,2-Trichloroethane	18	2.6	0.440 U	0.432 U	0.436 U	0.457 U	0.782 U	0.674 U
Tetrachloroethene	130	530	0.550 U	0.541 U	0.545 U	0.572 U	0.979 U	0.843 U
2-Hexanone (Methyl butyl ketone)	94	390	0.335 U	0.329 U	0.339	0.348 U	1.31	0.518
Dibromochloromethane	Not Listed	Not Listed	0.676 U	0.665 U	0.67 U	0.703 U	1.2 U	1.04 U
1,2-Dibromoethane	0.47	2.0	0.626 U	0.615 U	0.62 U	0.651 U	1.11 U	0.959 U
Chlorobenzene	160	660	0.381 U	0.374 U	0.377 U	0.396 U	0.677 U	0.584 U
Ethylbenzene	110	490	1.56	2.42	5.94	3.78	7.7	7.65
1,1,1,2-Tetrachloroethane	38	170	0.552 U	0.543 U	0.547 U	0.574 U	0.982 U	0.846 U
m-p-Xylenes	31	1,300	1.440	2.11	2.3	1.75	16.4	5.38
o-Xylene	31	1,300	0.574	0.871	1.1	0.848	7.31	2.64
Styrene	3,100	13,000	1.850	3.05	8.39	4.77	5.69	7.43
Bromoform	260	1,100	0.835 U	0.820 U	0.827 U	0.868 U	1.48 U	1.28 U
1,1,2,2-Tetrachloroethane	4.8	21	0.552 U	0.543 U	0.547 U	0.574 U	0.982 U	0.846 U
4-Ethyltoluene	Not Listed	Not Listed	0.398 U	0.391 U	0.394 U	0.414 U	2.8	0.743
2-Chlorotoluene	Not Listed	Not Listed	0.419 U	0.412 U	0.415 U	0.436 U	0.746 U	0.643 U
1,3,5-Trimethylbenzene	190	790	0.397 U	0.345 J	0.559	0.376 J	3.65	1.16
1,2,4-Trimethylbenzene	190	790	0.483	0.642	0.756	0.484	13.7	3.11
1,3-Dichlorobenzene	Not Listed	Not Listed	0.488 U	0.479 U	0.483 U	0.507 U	0.868 U	0.748 U
1,4-Dichlorobenzene	Not Listed	Not Listed	0.485 U	0.477 U	0.48 U	0.504 U	0.862 U	0.743 U
Benzyl chloride	3.1	13	0.416 U	0.408 U	0.412 U	0.432 U	0.739 U	0.637 U
1,2-Dichlorobenzene	630	2,600	0.493 U	0.484 U	0.488 U	0.512 U	0.876 U	0.755 U
1,2,4-Trichlorobenzene	6.3	26	0.606 U	0.595 U	0.6 U	0.63 U	1.08 U	0.928 U
Hexachlorobutadiene	13	56	0.860 U	0.845 U	0.851 U	0.894 U	1.53 U	1.32 U
Naphthalene	8.3	36	0.436 U	0.429 U	0.933	0.454 U	3.62	2.01
1-Bromopropane	310	1,300	0.400 U	0.393 U	0.396 U	0.416 U	0.711 U	0.612 U
1-Octene	Not Listed	Not Listed	0.361 U	0.355 U	0.358 U	0.376 U	0.642 U	0.553 U
n-Octane	Not Listed	Not Listed	0.377 U	0.434	0.803	0.478	1.3	1.2
Isopropylbenzene	1,300	5,300	0.939	1.06	1.91	1.45	1.85	2.21
n-Propylbenzene	3,100	13,000	0.402 U	0.395 U	0.406	0.418 U	1.88	0.746

Notes:
ACF Able Contracting Fire
EPA Environmental Protection Agency
J The identification of the analyte is acceptable; the reported value is an estimate
µg/m³ Micrograms per cubic meter
NA Not Analysed
ND Not Detected
RMLs Removal Management Levels; Residential/Worker Ambient Air, April 2019. (Lower value of carcinogenic/noncarcinogenic listed; TR=1E-04/THQ+3.0)
U The analyte was not detected at or above the reporting limit
BOLD Bolded values
SHADE Shaded values indicate an RML exceedance

Air Sampling Results: August 31-September 1, 2019

			352 Schinger Ave	402 Schinger Ave	402 Schinger Ave	Forrest Concrete
			ACF-AS-352SCH-083119	ACF-402SCH-083119	ACF-AS-402SCH-083119-DUP	ACF-AS-FORCON-083119
Date			8/31/2019-9/1/2019	8/31/2019-9/1/2019	8/31/2019-9/1/2019	8/31/2019-9/1/2019
Analyte	EPA Residential RMLs	EPA Worker RMLs				
Volatile Organic Compounds (µg/m³)						
Propylene	9,400	39,000	0.39	0.546 J	0.285 J	0.346
Freon 12 (C12F2)	310	1,300	2.44	2.46	2.43	2.5
Freon 114 (C2Cl2F4)	Not Listed	Not Listed	0.485 U	0.481 U	0.491 U	0.479 U
Chloromethane	280	1,200	1.41	1.49	1.33	1.37
Chloroethene (Vinyl chloride)	17	280	0.178 U	0.177 U	0.180 U	0.176 U
1,3-Butadiene	6.2	26	0.150 U	0.149 U	0.152 U	0.148 U
Bromomethane	16	66	0.266 U	0.264 U	0.269 U	0.263 U
Chloroethane	31,000	130,000	0.184 U	0.183 U	0.187 U	0.182 U
Bromoethene (Vinyl bromide)	8.8	38	0.302 U	0.300 U	0.306 U	0.298 U
Freon 11 (CCl3F)	Not Listed	Not Listed	1.30	1.33	1.29	1.26
Ethanol	Not Listed	Not Listed	39.10	2.39 J	4.29 J	2.86
Acrolein	0.063	0.26	0.751	1.06 J	0.638 J	0.327
Freon 113 (C2Cl3F3)	16,000	66,000	0.581	0.547	0.565	0.566
1,1-Dichloroethene	630	2,600	0.275 U	0.273 U	0.278 U	0.272 U
Acetone	97,000	410,000	15.30	12 J	7.12 J	7.7
Carbon disulfide	2,200	9,200	0.444	0.384	0.209 J	0.31
Isopropyl alcohol	630	2,600	0.939 J+	0.95 J+	1.09 J+	2.32
Allyl chloride (3-chloropropene)	3.1	13	0.218 U	0.217 U	0.221 U	0.215 U
Acetonitrile	190	790	0.44	0.445 J	0.346 J	0.509
Methylene chloride	1900	7,900	0.609 U	0.605 U	0.617 U	0.602 U
trans-1,2-Dichloroethene	Not Listed	Not Listed	0.280 U	0.278 U	0.283 U	0.277 U
Methyl tert-butyl ether	1,100	4,700	0.256 U	0.254 U	0.259 U	0.253 U
Acrylonitrile	4.1	18	0.154 U	0.153 U	0.156 U	0.152 U
Hexane	2,200	920	0.359	0.337	0.25 U	0.31
1,1-Dichloroethane	180	770	0.276 U	0.274 U	0.280 U	0.273 U
Vinyl acetate	630	2,600	0.248 U	0.246 U	0.251 U	0.245 U
cis-1,2-Dichloroethene	Not Listed	Not Listed	0.277 U	0.275 U	0.280 U	0.273 U
Methyl ethyl ketone (2-Butanone)	16,000	66,000	0.820	2.42	2.11	0.71
Ethyl acetate	220	920	2.300	2.500 J	1.040 J	0.248 U
Chloroform	12	53	0.342 U	0.340 U	0.346 U	0.338 U
Tetrahydrofuran	6,300	26,000	0.206 U	0.205 U	0.209 U	0.204 U
1,1,1-Trichloroethane	16,000	66,000	0.376 U	0.374 U	0.381 U	0.372 U
Cyclohexane	19,000	79,000	0.243 U	0.241 U	0.246 U	0.240 U
Carbon tetrachloride	47	200	0.527	0.508	0.514	0.533
Benzene	36	160	0.33	0.309	0.224 U	0.300
2,4-trimethylpentane	Not Listed	Not Listed	0.332 U	0.329 U	0.336 U	0.328 U
1,2-Dichloroethane	11	47	0.287 U	0.285 U	0.290 U	0.283 U
Heptane	1,300	5,300	0.355	0.283 U	0.289 U	0.271 J
Trichloroethene	6.3	26	0.374 U	0.371 U	0.379 U	0.369 U
1,2-Dichloropropane	13	53	0.327 U	0.325 U	0.331 U	0.323 U
Methyl methacrylate	2,200	9,200	0.294 U	0.292 U	0.298 U	0.291 U
1,4-Dioxane	56	250	0.252 U	0.251 U	0.256 U	0.249 U
Bromodichloromethane	7.6	33	0.461 U	0.458 U	0.467 U	0.455 U
cis-1,3-Dichloropropene	Not Listed	Not Listed	0.309 U	0.31 U	0.31 U	0.31 U
Methyl isobutyl ketone	9,400	39,000	0.293 U	0.248 J	0.513	0.358
Toluene	16,000	66,000	1.41	1.29 J	0.59 J	0.949
trans-1,3-Dichloropropene	Not Listed	Not Listed	0.319 U	0.317 U	0.324 U	0.316 U
1,1,2-Trichloroethane	18	2.6	0.379 U	0.376 U	0.384 U	0.374 U
Tetrachloroethene	130	530	0.474 U	0.471 U	0.48 U	0.468 U
2-Hexanone (Methyl butyl ketone)	94	390	0.288 U	0.286 U	0.319	0.285 U
Dibromochloromethane	Not Listed	Not Listed	0.582 U	0.578 U	0.59 U	0.575 U
1,2-Dibromoethane	0.47	2.0	0.539 U	0.535 U	0.546 U	0.533 U
Chlorobenzene	160	660	0.328 U	0.326 U	0.332 U	0.324 U
Ethylbenzene	110	490	0.3 U	0.294 U	0.3 U	0.292 U
1,1,1,2-Tetrachloroethane	38	170	0.476 U	0.472 U	0.482 U	0.47 U
m-p-Xylenes	31	1,300	0.567	0.355	0.311	0.482
o-Xylene	31	1,300	0.301 U	0.298 U	0.304 U	0.297 U
Styrene	3,100	13,000	0.287 U	0.285 U	0.291 U	0.284 U
Bromoform	260	1,100	0.719 U	0.714 U	0.728 U	0.71 U
1,1,2,2-Tetrachloroethane	4.8	21	0.476 U	0.472 U	0.482 U	0.47 U
4-Ethyltoluene	Not Listed	Not Listed	0.343 U	0.341 U	0.347 U	0.339 U
2-Chlorotoluene	Not Listed	Not Listed	0.361 U	0.359 U	0.366 U	0.357 U
1,3,5-Trimethylbenzene	190	790	0.342 U	0.339 U	0.346 U	0.337 U
1,2,4-Trimethylbenzene	190	790	0.339 U	0.336 U	0.343 U	0.334 U
1,3-Dichlorobenzene	Not Listed	Not Listed	0.420 U	0.417 U	0.426 U	0.415 U
1,4-Dichlorobenzene	Not Listed	110	0.418 U	0.415 U	0.423 U	0.413 U
Benzyl chloride	3.1	13	0.358 U	0.355 U	0.363 U	0.354 U
1,2-Dichlorobenzene	630	2,600	0.424 U	0.422 U	0.43 U	0.419 U
1,2,4-Trichlorobenzene	6.3	26	0.522 U	0.518 U	0.528 U	0.516 U
Hexachlorobutadiene	13	56	0.740 U	0.735 U	0.75 U	0.731 U
Naphthalene	8.3	36	0.376 U	0.373 U	0.381 U	0.371 U
1-Bromopropane	310	1,300	0.344 U	0.342 U	0.349 U	0.34 U
1-Octene	Not Listed	Not Listed	0.378	0.309 U	0.315 U	0.307 U
n-Octane	Not Listed	Not Listed	0.324 U	0.322 U	0.328 U	0.32 U
Isopropylbenzene	1,300	5,300	0.346 U	0.343 U	0.35 U	0.342 U
n-Propylbenzene	3,100	13,000	0.346 U	0.344 U	0.351 U	0.342 U

Notes:

ACF Able Contracting Fire
EPA Environmental Protection Agency
J The identification of the analyte is acceptable; the reported value is an estimate
J+ The identification of the analyte is acceptable, but biased high; the reported value is an estimate
µg/m³ Micrograms per cubic meter
NA Not Analysed
ND Not Detected
RMLs Removal Management Levels; Residential Worker Ambient Air, April 2019. (Lower value of carcinogenic/noncarcinogenic listed; TR=1E-04/THQ+3.0)
U The analyte was not detected at or above the reporting limit
BKGD Background
BOLD Analyte was detected
SHADE Shaded values indicate an RML exceedance

			Sun City BKGD	Riverbend BKGD	Fire Dept BKGD	Heartstone BKGD	Lot Blank
			ACF-AS-SUNCITY-08319	ACF-AS-BKGD2-083119	ACF-AS-BKGD1-083119	ACF-AS-BKGD3-083119	ACF-AS-LOTBLK-083119
Date			8/31/2019-9/1/2019	8/31/2019-9/1/2019	8/31/2019-9/1/2019	8/31/2019-9/1/2019	8/31/2019-9/1/2019
Analyte	EPA Residential RMLs	EPA Worker RMLs					
Volatile Organic Compounds (µg/m³)							
Propylene	9,400	39,000	0.44	0.275	0.347	0.332	0.066 U
Freon 12 (CCl2F2)	310	1,300	2.45	2.44	2.46	2.44	0.193 U
Freon 114 (C2Cl2F4)	Not Listed	Not Listed	0.483 U	0.486 U	0.485 U	0.484 U	0.280 U
Chloromethane	280	1,200	1.38	1.51	1.36	1.42	0.0805 U
Chloroethene (Vinyl chloride)	17	280	0.177 U	0.179 U	0.178 U	0.178 U	0.103 U
1,3-Butadiene	6.2	26	0.149 U	0.15 U	0.150 U	0.149 U	0.087 U
Bromomethane	16	66	0.265 U	0.267 U	0.266 U	0.266 U	0.154 U
Chloroethane	31,000	130,000	0.183 U	0.185 U	0.184 U	0.184 U	0.106 U
Bromoethene (Vinyl bromide)	8.8	38	0.301 U	0.303 U	0.302 U	0.302 U	0.174 U
Freon 11 (CCl3F)	Not Listed	Not Listed	1.38	1.3	1.28	1.24	0.233 U
Ethanol	Not Listed	Not Listed	2.09	1.81	3.84	2.61	0.143 J
Acrolein	0.063	0.26	0.374	0.444	0.469	0.302	0.0911 U
Freon 113 (C2Cl3F3)	16,000	66,000	0.583	0.574	0.581	0.573	0.305 U
1,1-Dichloroethene	630	2,600	0.274 U	0.276 U	0.275 U	0.274 U	0.159 U
Acetone	97,000	410,000	6.19	6.39	7.05	5.65	0.18 J+
Carbon disulfide	2,200	9,200	0.216 U	0.977	0.347	0.343	0.125 U
Isopropyl alcohol	630	2,600	0.627 J+	0.43 J+	0.446 J+	1.35 J+	0.136
Allyl chloride (3-chloropropene)	3.1	13	0.217 U	0.219 U	0.218 U	0.218 U	0.126 U
Acetonitrile	190	790	0.40	0.467	0.359	0.33	0.0675 U
Methylene chloride	1900	7,900	0.607 U	0.611 U	0.609 U	0.608 U	0.352 U
trans-1,2-Dichloroethene	Not Listed	Not Listed	0.279 U	0.281 U	0.280 U	0.279 U	0.162 U
Methyl tert-butyl ether	1,100	4,700	0.255 U	0.257 U	0.256 U	0.255 U	0.148 U
Acrylonitrile	4.1	18	0.153 U	0.154 U	0.154 U	0.153 U	0.089 U
Hexane	2,200	920	0.246 U	0.248 U	0.247 U	0.246 U	0.143 U
1,1-Dichloroethane	180	770	0.275 U	0.277 U	0.276 U	0.276 U	0.159 U
Vinyl acetate	630	2,600	0.247 U	0.249 U	0.248 U	0.248 U	0.143 U
cis-1,2-Dichloroethene	Not Listed	Not Listed	0.275 U	0.277 U	0.276 U	0.276 U	0.160 U
Methyl ethyl ketone (2-Butanone)	16,000	66,000	0.633	0.648	1.56	0.686	0.12 U
Ethyl acetate	220	920	0.250 U	0.884	0.251 U	0.251 U	0.145 U
Chloroform	12	53	0.340 U	0.401	0.342 U	0.341 U	0.197 U
Tetrahydrofuran	6,300	26,000	0.205 U	0.207 U	0.206 U	0.206 U	0.119 U
1,1,1-Trichloroethane	16,000	66,000	0.374 U	0.377 U	0.376 U	0.375 U	0.217 U
Cyclohexane	19,000	79,000	0.241 U	0.243 U	0.242 U	0.242 U	0.140 U
Carbon tetrachloride	47	200	0.526	0.541	0.524	0.52	0.255 U
Benzene	36	160	0.27	0.222 U	0.219 J	0.272	0.128 U
2,2,4-trimethylpentane	Not Listed	Not Listed	0.330 U	0.333 U	0.332 U	0.331 U	0.192 U
1,2-Dichloroethane	11	47	0.285 U	0.287 U	0.286 U	0.286 U	0.165 U
Heptane	1,300	5,300	0.284 U	0.286 U	0.285 U	0.285 U	0.165 U
Trichloroethene	6.3	26	0.372 U	0.375 U	0.374 U	0.373 U	0.216 U
1,2-Dichloropropane	13	53	0.326 U	0.328 U	0.327 U	0.327 U	0.189 U
Methyl methacrylate	2,200	9,200	0.293 U	0.295 U	0.294 U	0.294 U	0.170 U
1,4-Dioxane	56	250	0.251 U	0.253 U	0.252 U	0.252 U	0.146 U
Bromodichloromethane	7.6	33	0.459 U	0.462 U	0.461 U	0.460 U	0.266 U
cis-1,3-Dichloropropene	Not Listed	Not Listed	0.308 U	0.31 U	0.31 U	0.31 U	0.18 U
Methyl isobutyl ketone	9,400	39,000	0.291 U	0.293 U	0.292 U	0.292 U	0.169 U
Toluene	16,000	66,000	0.52	0.36	2.08	0.831	0.153 U
trans-1,3-Dichloropropene	Not Listed	Not Listed	0.318 U	0.320 U	0.319 U	0.319 U	0.184 U
1,1,2-Trichloroethane	18	2.6	0.377 U	0.380 U	0.379 U	0.378 U	0.219 U
Tetrachloroethene	130	530	0.472 U	0.475 U	0.474 U	0.473 U	0.274 U
2-Hexanone (Methyl butyl ketone)	94	390	0.287 U	0.289 U	0.288 U	0.288 U	0.166 U
Dibromochloromethane	Not Listed	Not Listed	0.580 U	0.584 U	0.582 U	0.581 U	0.336 U
1,2-Dibromoethane	0.47	2.0	0.537 U	0.541 U	0.539 U	0.538 U	0.311 U
Chlorobenzene	160	660	0.327 U	0.329 U	0.328 U	0.328 U	0.189 U
Ethylbenzene	110	490	0.30 U	0.297 U	0.296 U	0.295 U	0.171 U
1,1,1,2-Tetrachloroethane	38	170	0.473 U	0.477 U	0.475 U	0.475 U	0.275 U
m-/p-Xylenes	31	1,300	0.291 J	0.306 U	0.385	0.422	0.176 U
o-Xylene	31	1,300	0.299 U	0.301 U	0.3 U	0.3 U	0.174 U
Styrene	3,100	13,000	0.286 U	0.288 U	0.287 U	0.287 U	0.166 U
Bromoform	260	1,100	0.716 U	0.721 U	0.719 U	0.718 U	0.415 U
1,1,2,2-Tetrachloroethane	4.8	21	0.473 U	0.477 U	0.475 U	0.475 U	0.275 U
4-Ethyltoluene	Not Listed	Not Listed	0.341 U	0.344 U	0.343 U	0.342 U	0.198 U
2-Chlorotoluene	Not Listed	Not Listed	0.340 U	0.362 U	0.361 U	0.361 U	0.209 U
1,3,5-Trimethylbenzene	190	790	0.340 U	0.343 U	0.341 U	0.341 U	0.197 U
1,2,4-Trimethylbenzene	190	790	0.337 U	0.34 U	0.338 U	0.338 U	0.195 U
1,3-Dichlorobenzene	Not Listed	Not Listed	0.418 U	0.421 U	0.42 U	0.42 U	0.243 U
1,4-Dichlorobenzene	Not Listed	110	0.416 U	0.419 U	0.418 U	0.417 U	0.241 U
Benzyl chloride	3.1	13	0.356 U	0.359 U	0.358 U	0.357 U	0.207 U
1,2-Dichlorobenzene	630	2,600	0.422 U	0.426 U	0.424 U	0.424 U	0.245 U
1,2,4-Trichlorobenzene	6.3	26	0.519 U	0.523 U	0.522 U	0.521 U	0.301 U
Hexachlorobutadiene	13	56	0.737 U	0.742 U	0.74 U	0.739 U	0.427 U
Naphthalene	8.3	36	0.374 U	0.377 U	0.376 U	0.375 U	0.217 U
1-Bromopropane	310	1,300	0.343 U	0.345 U	0.344 U	0.344 U	0.199 U
1-Octene	Not Listed	Not Listed	0.310 U	0.312 U	0.311 U	0.311 U	0.18 U
n-Octane	Not Listed	Not Listed	0.323 U	0.325 U	0.324 U	0.324 U	0.187 U
Isopropylbenzene	1,300	5,300	0.344 U	0.347 U	0.346 U	0.345 U	0.2 U
n-Propylbenzene	3,100	13,000	0.345 U	0.347 U	0.346 U	0.346 U	0.2 U

Notes:

ACF Able Contracting Fire
EPA Environmental Protection Agency
J The identification of the analyte is acceptable; the reported value is an estimate
J+ The identification of the analyte is acceptable, but biased high; the reported value is an estimate
µg/m³ Micrograms per cubic meter
NA Not Analyzed
ND Not Detected
RMLs Removal Management Levels: Residential/Worker Ambient Air, April 2019. (Lower value of carcinogenic/noncarcinogenic listed; TR-1E-04/THQ+3.0)
U The analyte was not detected at or above the reporting limit
BKGD Background
BOLD Analyte was detected
SHADE Shaded values indicate an RML exceedance

ENCLOSURE 3
PHOTOGRAPHIC LOG
(8 Pages)



**OFFICIAL PHOTOGRAPH NO. 1
U.S. ENVIRONMENTAL PROTECTION AGENCY**

TOLIN:	82-001	Location:	472 Schinger Ave, Ridgeland, Jasper County, South Carolina
Orientation:	Southeast	Date:	August 3, 2019
Photographer:	Paul Prys, Tetra Tech, Inc. (Tetra Tech) Superfund Technical Assessment and Response Team (START)	Witness:	Jordan Garrard, U.S. Environmental Protection Agency (EPA)
Subject:	On August 3, 2019, personnel from EPA and Tetra Tech START mobilized to the site of the former Able Contracting Recycling facility in Ridgeland, Jasper County, South Carolina. This photograph shows the former operations area, scale, office, conveyor, and stockpiled materials. Plumes of smoke arise from an active fire within the stockpile.		



**OFFICIAL PHOTOGRAPH NO. 2
U.S. ENVIRONMENTAL PROTECTION AGENCY**

TOLIN: 82-001 **Location:** 352 Schinger Ave, Ridgeland,
Jasper County, South Carolina

Orientation: East **Date:** August 3, 2019

Photographer: Paul Prys, Tetra Tech **Witness:** Jordan Garrard, EPA
START

Subject: This photograph shows remote air monitoring and air sample collection at 402 Schinger Ave (residential property) for analyses for volatile organic compounds, hydrogen cyanide, hydrogen sulfide, and asbestos. A South Carolina Department of Health and Environmental Control (SC DHEC) particulate monitoring station is at the left.



**OFFICIAL PHOTOGRAPH NO. 3
U.S. ENVIRONMENTAL PROTECTION AGENCY**

TOLIN:	82-001	Location:	472 Schinger Ave, Ridgeland, Jasper County, South Carolina
Orientation:	Southeast	Date:	August 17, 2019
Photographer:	Paul Prys, Tetra Tech START	Witness:	Courtney Redd, Tetra Tech START
Subject:	This photograph shows an active fire and smoke plume emanating from the stockpiled material. Continuous remote air monitoring instruments are in the foreground. An excavator and dump truck in the background are moving material to access hot spots.		



**OFFICIAL PHOTOGRAPH NO. 4
U.S. ENVIRONMENTAL PROTECTION AGENCY**

TOLIN:	82-001	Location:	472 Schinger Ave, Ridgeland, Jasper County, South Carolina
Orientation:	West	Date:	August 23, 2019
Photographer:	Paul Prys, Tetra Tech START	Witness:	Laura Lawrence, Tetra Tech START
Subject:	This photograph shows continuous remote air monitoring instruments and air sampling media for asbestos analysis.		



OFFICIAL PHOTOGRAPH NO. 5
U.S. ENVIRONMENTAL PROTECTION AGENCY

TOLIN:	82-001	Location:	472 Schinger Ave, Ridgeland, Jasper County, South Carolina
Orientation:	East	Date:	August 23, 2019
Photographer:	Paul Prys, Tetra Tech START	Witness:	Laura Lawrence, Tetra Tech START
Subject:	This photograph shows an active fire and smoke plume emanating from the stockpiled material. Excavators, a water truck for fire suppression, and a dump truck are removing material from the pile.		



OFFICIAL PHOTOGRAPH NO. 6
U.S. ENVIRONMENTAL PROTECTION AGENCY

TOLIN: 82-001 **Location:** 472 Schinger Ave, Ridgeland,
Jasper County, South Carolina

Orientation: North **Date:** September 20, 2019

Photographer: David Reed, Tetra Tech **Witness:** Terrence Byrd, EPA
START

Subject: On September 20, 2019, personnel from EPA and Tetra Tech START mobilized to the site of the former Able Contracting Recycling facility in Ridgeland, Jasper County, South Carolina. This photograph shows an active fire and smoke plume emanating from the stockpiled material. Excavators, a water truck for fire suppression, and dump trucks are removing material from the pile.



OFFICIAL PHOTOGRAPH NO. 7
U.S. ENVIRONMENTAL PROTECTION AGENCY

TOLIN:	82-001	Location:	472 Schinger Ave, Ridgeland, Jasper County, South Carolina
Orientation:	Southeast	Date:	October 4, 2019
Photographer:	David Reed, Tetra Tech START	Witness:	Terry Tanner, EPA
Subject:	This photograph shows, next to stockpiled material, runoff water in a trench from fire suppression activities.		



OFFICIAL PHOTOGRAPH NO. 8
U.S. ENVIRONMENTAL PROTECTION AGENCY

TOLIN:	82-001	Location:	472 Schinger Ave, Ridgeland, Jasper County, South Carolina
Orientation:	East	Date:	October 10, 2019
Photographer:	David Reed, Tetra Tech START	Witness:	Terry Tanner, EPA
Subject:	On October 10, 2019, personnel from EPA and Tetra Tech START mobilized to the site of the former Able Contracting Recycling facility in Ridgeland, Jasper County, South Carolina. This photograph shows a smoke plume from an active fire in the stockpiled material—early in the morning at initiation of removal and fire suppression activities.		

ENCLOSURE 4
LOGBOOK NOTES
(58 Pages)

Able Contracting
Fire



Rite in the Rain

ALL-WEATHER

FIELD

No 351FX

TT-01-128

LOC BOOK

1 OF 3



Name Terra Teuh

Address 1955 Evergreen Blvd., Bldg 200,
Ste 300, Duluth, GA 30096

Phone (770) 775-3080

Project TT-01-128 Able Contracting Fire



RiteintheRain.com

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	843 384 2519 - Chandler Lloyd	
	Scott Reynolds - SCOTHEC 803-898-3305	
	ERT 24/7 # 917 860 7188	
	JCMA JC MEDY	

2
7/25/19 Thursday
0500 1700 - T4 Snyder, Huss, + OSC
Garrard on site w/ Chandler
Lloyd. —————

1720 - Mr Lloyd grants verbal
access to EPA to conduct
monitoring/sampling on the
site —————

1735 - Mr Lloyd + Norm off site
for the evening —————

1745 - EH + JS investigate runoff
pathways —————

1810 - Spillfiter on south side runoff
Neutral / nonoxidizer / non-flammable
non-petro / non-volatile / bromine / chlorine

1815 - Meet up w/ Steve Keynolds
w/ SCOTEC —————

1900 - OSC Eichenger on site w/
EPA trailer —————

1910 - T + Josiah Williams on site

1925 - Setting up 3x remote stations,
each w/ DustTrak + AreaRAE

2230 - Night Ops ran by T + Williams.
Stations are located @ the following
gps points: —————

Will

Thursday 7/25/19³
DT 155 : 32.3234350, -80.9410265
DT 156 : 32.3231131, -80.9425562
DT 157 : 32.3245382, -80.9428249
note: an additional AR is by the CP

There are visible fires at different
locations within the recycling pile.
Most are on the west side, but
there are a couple of smoking spots
on the south side of the pile as well.
(Pictures will be uploaded to the shared
drive). —————

2328 - The time on the smart gateway
was stuck at 2030, so times
might be a little off. Run time
is in the negatives bc it says
started @ 2045. Clock is moving
now though, so it should be OK
from now on —————

0045 - Changed time on Smart gateway
bc it was stuck again —————

0100 Smoke is increasing. Most of it
is being blown west. One of the
locations on the west side is getting
more intense. Flames are on the
exterior of the pile now. —————

4/26/19 Friday

0230' The west side has become so intense, the local fire dpt was called in by a couple of residents nearby. They are actively putting out the fires as best as they can and then they'll demobilize. They aren't going to do anything further until ~~after~~^{the} decisions are made at the meeting later in the morning.

0610 DT 155 not connected to viper.
Gateway ran out of batt., gassed
up generator and restarted.

0715 T+ JW off site. Rest of team to equip maintenance (refuel / calibrate),

0745 - Snyder preparing material + summarizing data for OSC
Guard's, 1000 meeting w/
stakeholders.

0910 - Snyder + Hoss to bump
test Area RAEs. ————— *du*

ISO-100 ppm Lot EBJ-248-100-23 exp 4/23
4-gas Lot EBJ-413-18-6 exp 4/21

0930 - T7 EH to Durham, NC
to get laboratory supplies
- OSC Garrard + T7 Snyder
to stakeholder meeting

1000 - $\ddot{T} + \ddot{EPA}$ to courthouse

- County attorney

- SCDHEC

- Red Cross

- County projects

- SCENA

- Jasper Co Fire

1200-Meeting adjourned.

1335-OSC Garrard + 1+JS on
site. Refill generators —

1530-T+JS calibrates EPA Hoxles
U-52 (B10129) w/ AutoCal solution
Lot # 18366306; exp 11/19

- pH, conductivity, + turb calibrated.
- DO reading 9.09 mg/L (high?)

In With

Pond continued 7/26/19

DO PH Cond Turb Temp TDS
 8.0% ~~10.75~~
 0.65 mg/L 7.86 4.05 mS/cm 34.1 C 2.6
 ORP ~~NOTED~~ 191 NTU
 -458 mV/Ls 0

Salinity - 2.1 ppt

Point 1 32.3231 -80.9428
 DO PH Cond Turb Temp TDS
 3.50%
 0.25 mg/L 7.90 5.39 mS/cm 199 32.01 3.40
 ORP Salinity
 -338 2.9 ppt

Point 2 32.3232, -80.9428
 22.4%
 1.64 mg/L 7.86 5.71 mS/cm 92.6 31.65 3.60
 ORP Salinity
 -334 3.1 ppt

Point 3 32.3237 -80.9429
 28.7%
 2.11 mg/L 7.86 5.14 mS/cm 141 31.09 3.24
 ORP Salinity
 -362 3.24

7/26/19

cont'd

Friday

1900 Tt Williams onsite
 - Call sign EPA 1
 Jasper MA or Dispatch
 - Sustained over 250 for particulates
 (several minutes)
 - open flames, call them
 - 1/2 in rain, take water sample
 by pulling the dam, call Jordan

WEATHER for tonight:
 Partly cloudy with a 10% chance
 of rain. Wind direction NE 4 mph

- Do a data pull
 Keep time frame 7-7

2010 Charged AR 1810 battery

2045 Tt Snyder onsite
 2110 - Begin setting up sampling
 equipment. Will sample for the
 following:

- VOCs - Summa - 24 hr
 - TAL Metals - 8 hr @ 1.5 L/min
 - Formaldehyde - 8 hr @ 1 L/min
 - SWOC - 8 hr @ 1 L/min
 - Phosgene - 8 hr @ 1 L/min
 - Asbestos - 8 hr @ 5 L/min

7/26/19 Friday cont'd
2135 - T+ Robert Shuster on site
2140 - T+ EH returns
2200 - RS + EH off site, continue
setting up sampling equipment

7/27/19 Saturday
0015 - Install samples @ "Res"
station; collocated w/ 155 @
corner of Able driveway
0100 - Install samples @ "Smoke"
station; collocated w/ 156 @
rear gate of Able property on
Schuyler Ave.
0348 - Radio in to Jasper Co
fire to inform them of flame
on West side of pile that is
strengthening.
0400 - Jasper Co FD on site,
applying water to fire on west
side. Observe embers + sparks
along southern face of pile
as well.
0525 - Jasper Co FD off site. While
fighting fire along south face,
part of pile sloughed off into
ditch
0645 - T+ Eric Hays back on site
0700 - All on-site
0730 - T+ JW off site
0800 - Pull AM samples

7/27/19 (Saturday)

- 1000 - Call Enthalpy to discuss irregularity in the the phosgene media used. They confirm that that sent the wrong sample media for phosgene. Need to scrap AM samples
- 1015 - T+ will meet Enthalpy carrier on I-95
- 1025 - T+ begins prepping PM samplers equipment.
- 1150 - Finished prepping PM samplers equipment
- T+ RS off to meet carrier
- 1210 - Install PM samples
- 1300 Check Sample pumps + Rejda RES - Switch pump to ST.
- 1400 Check Sample pumps all are working / Sampling
- 1505 Check Sample pump all are working / Sampling
- 1800 Filled generators, switched pump 51 with pump 510 sampling Smoke Ashbestos
- 2000 T+ Snyder on site
- 2020 Begin pulling PM samples
- 2100 T+ Huns on site

7/27/19 (Saturday)

- 2110 - Jasper Co. FD on site
- will proactively spray west side flames
- 2210 - T+ RS off site for the day
- 2300 Filled all generators.
- 2330 - Setting up sampling equipment for 7/28 AM sampling event
- will collect Phosgene only
- 2 locations; RES + SMOKE

7/28/17 (Sunday)

0002- Begin Phosgene sampling
(8 hr pull)

0010- Jasper Co FID demobe

0045 JS checks on sample pump

0145 EIT checks on sample pump

0240 EIT checks on sample pump

0300 EIT fuels up all generators

0400 EIT checks on sample pumps

0610 JS checks pumps, fuels generators

0745 EIT off site, OSCs on site

T+ RS on site

0800- Start pulling AM Phosgene-only
samples0840- Calibrate EPA Hambi, same
standard as 7/26 calibration0915- Collect surface water sample
ACF-SW-DITCH from SW corner
of property ditch, upstream of
earthen dam.

pH - 8.06

DO - 0.17 ms/L

Temp - 28.07

Lat - 32° 19' 23" N

ORP - -434

Long - 80° 56' 34" W

Cond - 5.70 ms/cm

Turb - 86 NTU

7/28/17 cont'd (Sunday)

930- OSC JG, T+ JS+RS to
pond to sample + screen

945- Temp - 27.73°C Turb - 97.3 NTU

pH - 7.93

DO - 2.76 ms/L

ORP - -405

Lat - 32° 19' 23"

Cond - 3.65

Long - 80° 56' 34" W

955- Collect pond surface water
sample ACF-SW-POND

1015- Prep PM air sampling gear

1x - Full screen background

2x - Phosgene only (Res + Smoke)

1100- Employ phosgene-only samplers

1130- Employ background samplers

1145- Process surface water
samples1430- Set up to sample well in
backyard of 472 Schinger Ave
(see next page for sampling data)

1845 EIT turn on site

1906 Stop RES PM Phos.

1908 Stop Smoke PM Phos

1915 Stop Background Sample collection

7/28/19 (cont'd)

Monitoring Well

Rear of 472 Schinger Ave

Sampler

Snyder

Total Well Depth (ft)

unknown

Depth to Water (ft)

unknown

Water Column

unknown

Well Diameter (in)

unknown

Well Volume (gal)

unknown

Purge START/END

1445 / 1505

Purged Volume

40 gal

Pump Type

Installed plumbing

TIME

1450 1455 1500 1505

Volume Purged (gal)

10 20 30 40

Water level (ft)

- - - -

pH ✓

7.95 7.95 7.94 7.91

Conductivity (uS/cm) ✓

189 188 187 187

Temperature (°C)

21.22 20.86 20.75 20.61

Turbidity (NTUs) ✓

0.00 0.00 0.00 0.00

DO (mg/L)

1.58 1.35 1.24 1.04

ORP (mV)

-166 -169 -168 -165

Sample Time/Date

1510 / 7-28-19

Sample NAME

ACF-GW-472R

Sample collected from
sprigot on wellhouse

7/28/19 (cont'd)

1930 TF Snyder to OSC's office
2010 TF J. William onsite to get box truck
2025 TF J. William + R. Shuck offsite
2130 Check all ^{OK} generators running
2300 Check all ^{OK} generators running

7/29/19 (Monday)

- 0020 Check all OK / running
 0055 Reven Call to ERT-1 -
 report of smoke in neighbourhood
 investigate + Site Smoke rising
 vertical appears to be fog/haze
 in surrounding area.
 0100 - Call Fire Central to cancel call.
 as no active flames visible at
 current smoking. (15X20A)
 0250 note active flames on Schinger
 Rd Side of pile + request
 resources from fire department.
 0300 Fire dept on site setup +
 puts out fire + 2nd fire that
 started/shows up while on site.
 0358 note Dust truck 157 (Station #3)
 not communicating w/ receiver
 check on unit. all appear OK
 turn off discom. - reconnect
 + restart unit does not reconnect.
 0430 Dust Truck 157 connected generator still
 running
 Fire crew packing up Equip.
 after putting out 2 fires + shutting off
 hot spots
 0458 Dust truck 157 not communicating

7/29/19 (Cont'd)

- 0520 Restart Dust truck 157 to attempt
 to get it to connect to system.
 Appears to have reconnected + is
 downloading data.
 0645 TT R Shuler on site
 0655 TT J Snyder on site
 0700 OSCs on site
 0820 TT J Snyder off site to Lab
 TT packed up response trailer
 1030 TT personnel off site for prep

WV
 8/9/19
 JH

18 8/2/19

Friday

JW

~~Weather 97°/77° Sunny, 10% chance of rain~~

1730 Tt Snyder + OSC Garrard on-site

- speak to property owner; walk site
- discuss sampling/monitoring plan
- 3X stations ———— JW
- SPM (Phosgene) on Viper ———— JW
- Arccon (Phosgene) 8 hr pulls ———— JW
- Summer (VOCs) 24 hr pull ———— JW

1830 Tt Paul Prys + Laura Lawrence on-site

- site safety meeting; briefing ———— JW
- began assembling Viper + sampling equip

1930 Tt Eric Huss on-site ———— JW

2000 Begin setting out samplers ———— JW

2130 Tt Snyder + OSC Garrard walk site

Setup SPM at the 3 locations

2210 Fuel up generator @ upwind/background location. Continue troubleshooting viper.

Smoke appears to be moving west

2330 HDM asked START if a fire started by the scales ———— JW

J.W. With
8/9/19

Saturday

8/3/19 19

0030 Jasper FD on site. They just finished watering the pile from a walkway. The area by the scales and the air sampling/monitoring area was smoky ———— JW

0120 START Prys + Lawrence offsite. Fire department finishing up on east side

0230 Pumps running OK ———— JW

0320 Pumps running OK ———— JW

0410 Stop collection of smoke Pm + postcal ———— JW

0428 Stop collection of res Pm + postcal

0500 Stop collection of bkgd Pm + postcal

0615 SPM 160 in fault - check, has low battery upon return to site. SPM 161 also faulting. Connected to power ———— JW

0700 Tt Snyder + OSC Garrard onsite. Relocate SPM 159 onto sorting table closer to pile. ———— JW

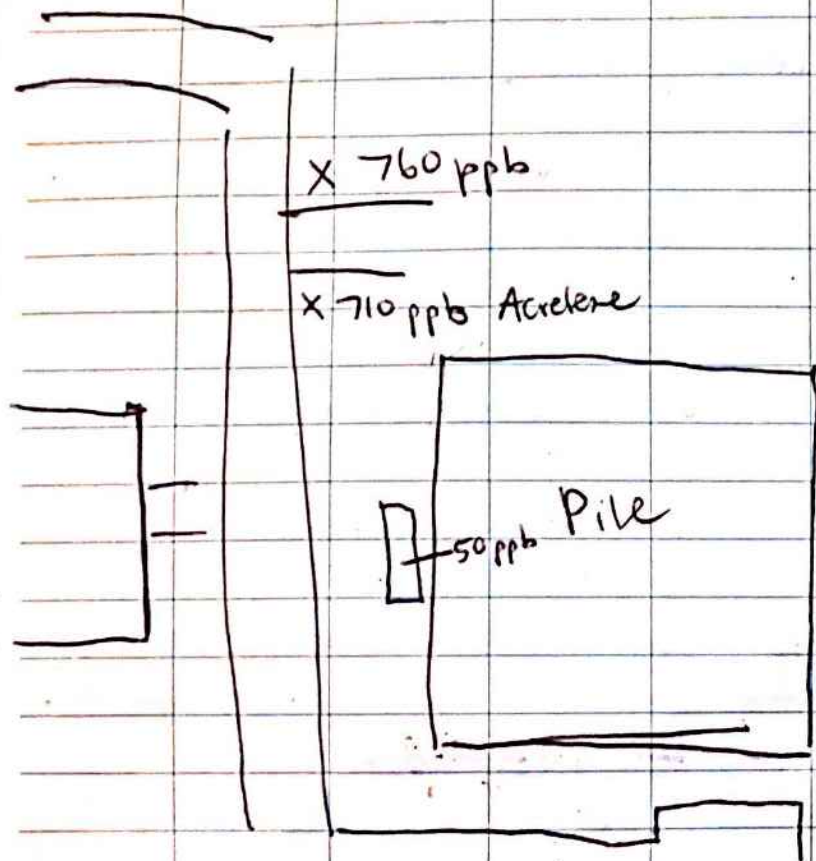
0750 Tt JS. + OSC Garrard go to get additional splitters ———— JW

0755 Tt Prys + Lawrence onsite

0810 Tt Huss offsite ———— JW

J.W. With
8/9/19

Rite in the Rain



VOCs

Mackinley Way / Schinger - 70 ppb
 SCDECH - South monitor - 0 ppb

Scatter plot

	1	2	3	4	5	6	7
1	Co: 3 ppm VOC: 0 ppb Time 1210	0 0 1412	0 0 1530 <i>20.9%</i>	0 0 1742 <i>20.9%</i>	0 0 1907	0 0 2040	0 0 2235
2	3 0 1214	0 0 1412	0 0 1536	0 0 1750	0 0 1908	0 0 2041	0 0 2236
3	0 0 1216	0 0 1414	0 0 1538 <i>21.2%</i>	0 0 1752 <i>40</i>	0 0 1910 <i>210</i>	0 0 2044	0 0 2239
4	0 0 1223	0 0 1420	0 0 1540	0 0 1754	0 0 1912 <i>10</i>	0 0 2045	0 0 2241
5	0 0 1228	0 0 1422	0 0 1544 <i>21.3%</i>	0 0 1748	0 0 1915	0 0 2046	0 0 2243
6	0 0 1233	0 0 1425	0 0 1546	0 0 1746	0 0 1917	0 0 2050	0 0 2246
7	0 0 1236	0 0 1430	0 0 1548 <i>21.2%</i>	0 0 1744	0 0 1918	0 0 2051	0 0 2248
8	0 0 1242	0 0 1440	0 0 1550	0 0 1740 <i>20.8%</i>	0 0 1921	0 0 2052	0 0 2249

↑
Station

O₂: 21.2 - 21.3 %

1840 Tt Huss onsite

1930 Tt PP & LL offsite

John W. [Signature]
 8/9/19

22 8/9/19

Friday

Weather: 97°/77° Sunny, 10% chance of rain
0915 Tt Jarrah Williams & Courtney Redd
at meeting site

0925 Tt Huss arrives

1000 Meeting b/n all government &
contractors.

1300 - Made it to the able site

1330 - Basha arrived with the RV w/ all the
equipment

1400 - Began setting up ^{con} the RV w/ the
air monitoring equipment

1445 - Began setting up air monitoring equipment

1530 - put away

1800 - Tt Snyder on site; team
still setting up monitoring equip.
4x Area RAEs / 3x DustTraks

1930 - Jasper Co FD on site; applying
water to fire

2200 Tt Snyder & Redd offsite.

Williams & Huss overnight ops.

2253 Viper restarted @ 1 min intervals

0000 Pile is smoking quite a lot ~~in the~~
& it's going to the NE

8/10/19

Saturday

23

0100 pile smoking moderate to heavy
Smoke @ Able Contracting Office/Shop

0200 pile smoking small fire ⁱⁿ 12 ft
wide on NE corner of pile

0338 Gateway 85 ran out of batt.

put on charge

0452 Pile hasn't changed much. minor
flair up in northeast, but it doesn't
seem to be intensifying

0600 Replaced line & dusttrak batteries.

Old ones put on charge. 173 is down.

We think the gateway died & will put
it on charge

0700 Tt Snyder onsite

0715 Tt Redd onsite

0740 Station 171 is being moved across the
highway to a spot more in the plane
which has been trending east

- set up @ Peacock Collision
(32,3236645, -80.9335605)

1000 - Call Jasper Co FD to request
water on NE corner of pile

1100 - FD applying water to NE corner;
able to soak low spot, unable
to apply much to high area

Rite on the Rain

1600 - Mary Benton - 352 Schinger
(843-715-6109) ————
- on private well ————
- complaining of discoloration
+ particulate in water ————

1615 - Otis w/ Busha on site
w/ additional EPA equip

1700 - Hot spots on pile (NE corner)
where FD applied water are
smoldering, but no defined plume

1900 - T + EH on site ————
- T + JW on site ————

2100 Extra Dusttrak batteries deployed. All stations
have two now. Line batteries switched
out as well ————

2330 NE area of pile has a minor flare
up, will continue to monitor. Smoke
is less than previous nights. It's
hard to see a direction it's headed
in, but directly off of the pile, it
appears to be going ~~ENE~~ NE

0030 Brief heavy shower passes through
area. w/ lightning close. Internet
dropped for a bit ————

8/11/19 (Sunday) 25
0050 Check pile + smoke NE ~~fire~~ Fire
out, just smoking. The light ~~ENE~~ ENE
smoke coming off pile heading ~~ENE~~ ENE
Once Sattelite reconnects, checked
Viper all appears to be operating
after Sattelite reconnects. ————

0120 Check on all equipment at all
is running and standing. ————

0200 Check on pile smoke is light
and heading ~~ESE~~ ~~ENE~~ ESE

0300 Check on pile smoke has picked up
but still light heading ~~SSE~~ to S


0445 Check on pile similar smoke
as previous heading ~~ENE~~ ~~SSE~~ ENE

0700 T + EH on site ————
T + JD on site ————

0753 Relocate DT #1 Line 171
to BGIE off of Short-
Cut Rd.

0820 - T + EH + JW off site

0900 - OSC Hyser reports large
plume of smoke emanating
from NE corner of pile



Rite in the Rain

1430 - T + Cory Peaslee on site — 2
- Snyder + Peaslee tour site

1500 - Talk to Steven Hodskins w/
Ensate (state contractor)
Ensate ops - complete HIS brief
- begin applying water on NE
corner SW

1830H - then move to south side
1830H Hyss on the chak or pit
water being applied to South side of the

1900 Tt, William's onsite

1915 Tt Con Pearler offsite

2012 TE Redd offsite ————— An

Note: There was a meeting @ 1800 @ the Grace coastal Church b/n residents, OSC Munser, + SCDHEC,

2015 ENSAFE ceased water application
due to light night. Water was
applied for 2.5 hours to NW NE
SE Hotspots ————— (E)

2050 Change but Links GW buffers
for DT #1 ————— GW

8/11/19, Sunday 27

2140 Smoke noted in ^{Brook} apartment
property nr. of B. 1e.

2230 Smoke still in Brook Mill Ave

2345 Smoke still in Book room
Smoke coming off Pile hall

8/12/19 Monday

0105 Smoke is heated SW from pile
No visible smoke in perimeter
areas

0217 Smoke still going SW. Restate
DT @ Sun City. It keeps stopping
its run. Need to have BASHA
look at it in the morning. Doesn't
seem like the fan is running

0313 DT 173 batteries replaced &
fan started working again. 01

0330 Smoke going WSW from pile
No smoke noted in neighborhood

0430 Smoke going SSW, from fire.
No visible smoke odor, not
in Sun City neighborhood.

0535 Smoke goes SSR from Picnic
road side smoke, but odors not
in Sun City neighborhoods

8/12/19

Monday

- 0615 Smoke going SSW from Pile
 0700 TT Redd onsite ————
 0745 Smoke is heavy in Sun City.
 DT keeps shutting off run. Replaced
 batteries & deleted all data. ————
 0830 Weather: 91°/75°, partly cloudy,
 20% chance of rain ————
 Smoke → SSW currently
 no water is being applied &
 smoke is dense ————
 0945 LINGS 173 & 172 Swapped
 since linc 173 stopped working.
 172 is now at Sun City, 173 is
 now at MCP.
 1200 Pile is smoking in several areas. SE
 Ensite is onsite applying water
 1430 Sprinkler/home owner at corner of
 Parkway & Village Green She OK's
 us to connect 110 power outlet
 in rear of her house.
 work on getting linc 172
 working in Sun City & Set up
 E-Bans
 1900 TT Redd off site
 TT Peaslee onsite

8/12/19

Monday

- 1900 confirm E-Bans coming
 Sun City Glv 87 Linc 129
 Brooks Mill Glv 86 Linc 32
 MCP Glv 85 Linc 31
 2030 TE William onsite
 2115 Pile isn't visibly smoking. No
 smoke in perimeter areas either.
 2200 All EIBAMS membrane spanned &
 calibrated. ————
 self test ✓ Sun City — PASS 0.316 0.882
 self test ✓ MCP — PASS 0.384 1.029
 Brooks mill — not working atm
 2345 very minimal smoke coming off
 pile. Looks to be going out.
 8/13/19 Tuesday
 0010 Sun city ebam chords consolidated
 and connection checked. ————
 0125 smoke from pile S, SW ———— CP
 0145 Adjusted AreaRAE low alarms to
 CO 25 ppm; VOC 10 ppm ———— CP
 0205 No smell/no visible smoke from
 highway. ———— CP
 0246 Bcta count failed! 3624 EBAM erroring
 changed DT batteries @ Sun City
 very smoky @ Sun City

8/13/19

Tuesday

0317 Pile smoking heavily. SSW
 0500 Heavy smoke. mainly S.
 0620 Heavy smoke. mainly S. Industrial
 park immediately adjacent to
 pile has thick smoke

0630 TT Eric Huss onsite

0700 TT Courtney Ridd onsite

0820 changed battery DT 173

915 checked E-bar sunset city, outside MCP, Brookmill

1030 changed battery in E-bar link sun city

1035 Viper reports PM2.5 spikes
 momentarily for Ling 171 (Brookmill)
 Dusttrak in west gate area clear
 no obstruction for anyone in the area

1110 unit now reports PM2.5 of
 0.27 mg/m³ Cont. now on check
 on. DustTrak + unit was stopped
 restarted unit + reading drops to 0.05

1155 Restart DT #1 as it had stopped
 properly and w/catch chips
 Catch side open \approx 1-1.5 inches
 to allow light-out

1225 Start Relocate Equipment
 to PM Plan (Viper Rep) for
 Set up Connectivity Test with
 PM Plan

Tuesday

8/13/1931

1515 Moved DT 173 to Grace Coastal Church

1600 changed Batteries in DT 173

changed batteries in DT 172

Ther different find card, in
 GW-18 could not get it to
 work with no luck

work on summary report
 1950 Publish Report & Issue.

2005 # off site for day

Note: TT Williams & Peaslee
 onsite @ 1900

2140 light smoke bearing NE from
 pile

2230 Sun City offline

2235 smoke dissipating to NE

2243 DT @ church started

2259 Sun City online again

2330 Peacock down

~~0040~~ Wednesday 8/14/19

0040 Peacock back online

0051 Sun City online

0130 smoke slow bearing NNE

0217 Smoke still headed in
 same direction. nothing changed
 Odor at Argent & Sunset
 Intersection no areas have
 been on the line

8/14/19

Wednesday

visible haze. Just above atm.
The workshop on ABLT is only
place that's hazy.

0330 No change

0500 No change. Minor fire in NE pile.

0615 The NE fire is intensifying &
growing slowly. Contacted Stephen
Hodskins of Ensate. He said his
team will be onsite @ 06:45 & will
have his fire suppression crew address
it. Will call FD if worsens before
they arrive. Also collected Grace
Church data from DT.

0645 TT Huss onsite

0650 TT Redd onsite

0720 checked dusttrk Grace Coast

0900 Checked all th monitoring equipment
tapped off the generator for Arr. has 10

1035 changed battery for GW 86

1050 Change sensor in AR 12

1115 AR 10 sensor changed

1150 DT 172 battery changed

1200 AR 11 sensor changed

1325 AR 09 sensor changed

1423- changed battery on GT 85

1520- Changed Batteries on DT 128

Wednesday

8/14/19 33

1700- change Line on E-ban 129

~~1740 change Line battery E-ban~~

1650 replace Line on E-ban + switch
with reprogrammed Line to 129

2020 TT Credel off site for day

2100 TT Feltz off site for day

2230 smoke bearing East from pile 8/14/19

0010 smoke bearing North

0145 minimal smoke east.

0315 no change

0420 no change

Note: ~~DT~~ DT 172 down @ 1021.
couldn't fix, went to manual
mode.

0510 smoke bearing ENE, minimal

0620 No change

0645 DT 172 won't recognize
USB.

0630 TT Credel + Feltz arrive

1000 Replace Battery on Redox
+ take Coast Guard team to
each monitoring location
showing them the equipment
1150 Replace GW Battery at GW 86/85
Add Second DustTrk battery to GW

Return to base

Thursday 8/15/19

1225 Smoke near Able Cont. warning reported HCN 2.5-3.0 measured by DHEC Contractor Multitec Based on concentration DHEC Contractor recommended voluntary evacuation of Able workers. TF. Hays relayed that recommendation to Able who chose to close and send home workers for day. Able Contracting asked about getting water applied to NE corner to get fire + smoke suppressed.

1300 TF. Hays going to attempt to download data from Short Cut PT

1357 Contact w/ Angus Concrete Representative to meet w/

1742 Regional Hazmat Chalk: 0.5 @ Gate 3.0 on west side from Sorting Deck, no change. East Side no reading until NE Corner 1.0-1.5. Recommendation: no overnight personnel on pile. Area Discard Exposure Levels - most 4.7, HCN 0.5. RT Bring additional 3rd Team

Thursday 8/15/19 35

Cargo Coast Guard 1350h will be on site Monday

1) Engineers in to get Animals - Hold off until notified. Ron - USFPA - putty out updates often as needed.

Messing. Overly Cautious - want to keep area clear. Areakte to be called by Cont. Harzmat person to Hot Spots from his Survey

Friday 8/16/19

2320 ^{SW} Areakte 1809, Unit 11 taken for mobile monitoring.

2323 Corner of Riverbank + Old coach HCN 0.5 ppm

2325 Browns cave North corner HCN 0.5 ppm

2328 Browns cave west corner HCN 0.5 ppm

2330 Rice Pond South End HCN 0.5 ppm

2336 Pearlstone End
→ HCN 1.0 ppm

2342 Shortcut
HCN 0.5 ppm

Right on the River

8/15/19

Thursday Friday

2344

Argento + Jasper

HCN 0.5, odor present

2347

Brook mill

HCN 0.5

2357

Trailer West of Pile

8/16/19

HCN 0.5

Friday

0045

Charged DT Battery @ Shortcut

0257

MCP HCN 0.0

0258

Corner of Riverwalk & old couch

HCN 0.5

0300

Rice Pond S end HCN 0.5

0305

Pearlstone End 1.0; odor

0310

Shortcut 0.5, odor

0312

Argento + Jasper 0.5, odor

0315

Brook mill 0.5

0318

Sunbelt rental 0.5

0324

Sun City 0.0 (exit gate)

0430

- Call w/ chieft Edwards

- Notifying Argus concrete & the landscaping company, 1.0 ppm

- Opening Pearlstone Rd.

0500

Office of shoreline medical

@ around 0100 - 0200 and got 0.0 inside, 0.5 outside.

This is a call w/ DHEC

Gary Stewart

Friday

8/16/19³⁷

- Egress is out of abundance of caution, will notify public/occupants of any events.

Argos USA: (843) 987-1927

Ocean Woods: (843) 682-4000

0606 Remote desktop is down. ERT is looking into it.

AM Situation Report: Five

Chief briefs on monitoring & HCN readings from both Remde & Community monitoring. Sent

Blast message that roads reopen after conferencing with DHEC

Met with Nature Cabin & briefed then readings were

0.5 in their areas & will monitor

Opened roads & changed signs. Went to Pearlstone Dr & Met with

Landscaping Business Manager informed him that readings were down to 0.5

in the area. Met with & briefed 3 other businesses in the area.

at Safety meeting concern exposure about work area & Area 115 related

to SW + NW corners of pile

Notes on the scene

Friday 8/16/19

Area RAE @ NW corner, rec in alarm note remote desktop not working contact ERT & they report system wide issue. Palmetto Area RAE to Paul Conner closer to site.

0800 Peacock Bust Trak not communicating replace galvan & still not communicating. Check with ERT & Setup Text alerts for any HCN readings over 1.0 ppm. Sent to Matt, Jose, & USCG Smith.

Tt Josiah restarts r/n setting up Peacock Busttrak as Stationary. Inputting GPS coordinates.

Still not operating/communicating. Put Equip on generator power restart Linker GW-System.com. Generate revised equip location file. Speaker/mange at Peacock about plugging equip/extension cord into shore power. he gives OK. Tt Reddit. BAEH gets offsite to get extension cord & connect equip.

Friday 8/16/19 39

1430 Tt P. Pryz & A. Falkner onsite work on reporting problem. Replace Battery in Line (72) it reconnects to network. Take Tt AF on tour of location. 1825 Tt Huz offsite for day.

1835 Tt WILLIAMS onsite

2000 switched Peacock & shorted DTS

2130 Calibrated multi RAE HCN sensor. OSC Russell wants it to actively monitor for the fire department.

2145 Walked perimeter of pile. West sides of NE corner were 0.5 ppm. Rest was 0.0.

2230 Viper troubleshooting. Some chords & batteries are broken.

0000 Area RAEs down, not communicating

0040 calibrated HCN on all Area RAEs.

0100 Restarted run which fixed the problem

0615 batteries switched on all stations not on shore

0645 Tt Pryz & Falkner onsite

0745 Tt Williams offsite

40 08.17.2019 Saturday

0945 - Tt Falkner detection of HCN of 0.5ppm Southwest of pile during monitoring (MultiRae 035PB).

1145 - ~~Det~~^{AF} Detection of HCN of 0.5ppm in consecutive perimeter monitoring at NW point of perimeter.

1245 - HCN of 1.0ppm at SW corner of pile. 0.5ppm at NW corner.

1330 - Tt Redd and Basha reset low level alarms to 10ppm and audible alarm high to 20ppm.

1345 - Tt started MultiRae at Okatie Elementary School. Tt Prys and Falkner check on DustTrak. Two DustTraks not started back up after morning data dump.

1400 - Following activities occurred: HCN VIPER alarms reset to 2ppm, mobile air monitoring will be conducted if levels exceed 2.0 for 10 minutes. —

CMC HCN detections from 16 to 210 ppm. Coast Guard conducted additional air monitoring. —

Trouble shooting with Gateways

-0 Saturday

08.17.2019 41

and DustTraks. Switched out 3 Gateways at church, connecting issues. Updated firmware and configured software on -83^{AF} 86. will attempt again in the morning.

1845 Tt Williams onsite

2120 Minimal smoke coming from the chimneys on top of the pile. Headed north. Odor on Argent between Calhoun Rd. & SEAG Equipment store.

2230 No change

2330 Minimal smoke headed east.

0050 Troubleshooting PRG. It discovered from Viper. DTs @ shorted & peaked down.

0130 Shinger has a slight haze and odor

0147 PRG reconnected after run was stopped & restarted. Batts replaced for DTs.

0240 Smoke rate has increased. Still due east. No change on Schinger. Faint odor @ peacock collision.

0345 Smoke going into atmosphere. No direction at the moment. Schinger & peacock cleared up.

lit in the rain

42 08/18/2019 Sunday
Weather: 91°/74°, partly cloudy, humid
Wind SSW 6 mph, 25% chance of rain

0500 Smoke coming from chimneys
on southside. Headed east. Haze only
around workshop. Feint odor at end
of Pearlshire

0555 Went to collect the data from the
Okatie Elementary School MultiRAE & all
of the DustTraks.

0653 Tt Falkner & Prys onsite.

0710 DT batteries changed. Tt Redd
onsite. Going to check out the SW
AreaRAE since it went offline

0745 - Tt Falkner perimeter of
pile. All points 0.0ppm HCN. Tt
Redd and Basha troubleshoot
generators that keep cutting out.

1050 - DHEC HCN hit of 0.5ppm SW
of pile.

1120 - NW point of ~~po~~^{NE} pile - 0.5ppm HCN.

1300 - S point of pile = 0.5ppm HCN, 0.7 H₂S
Water being applied at excavation
point and dump area NW of ^{burning} pile.

1540 - HCN at 0.5ppm at SE and
S monitoring point. VOC = 0.2 at
SW point.

Sunday 08/19/2019
1630 - HCN = 0.5ppm at NW monitoring
pt. 1700 - VOC = 0.1ppm at NW and NNW.
(closest to machinery).

1800 - HCN = 0.5ppm at NW and 1.0ppm
at NNW monitoring points. CMC
got hit of 3.0ppm while excavating.

1845 Tt Williams onsite.

1930 Tt Falkner screened all hallways,
common areas, and random classrooms
with OSC Russell, Cn, & school head of
security. All HCN results 0.0.

2030 Tt Williams out to do a smoke
round. Minimal smoke headed NE.

2200 Minimal smoke headed E

2330 No change

0100 No change

0200 No change

0320 Minimal smoke headed northeast
Pearlshire Dr & shortcut have feint
odors.

0440 No change

0600 Same as previous except there's an
odor on the northern section of Argent
by shortcut Rd.

44 Monday 8/19/19

Weather: 87°/73°, Thunderstorms
Wind from S 6mph, 62% chance of rain

0650 Tt Prys & Falkner onsite

0700 Tt RGD onsite.

0730 Tt RGD replaced dust truck
batteries and performed air
equipment check

0930 - HCN = 0.5 at ^{of pile} SV monitoring point.

0945 Tt START and USCG conducted air
monitoring ~~at~~ ^{at} each entrance of
Atlas Surveying Inc. (49 Brown's Cove
RD, Ridgeland, SC 29936). (units 4, 5, 6).
Air monitoring results for each unit
WERG UG: 0.7%, O₂: 20.9%, CO: 0 ppm,
H₂S: 0 ppm; VOC: 0.1 ppm, HCN: 0 ppm.
USCG had same results. Tt START and
USCG fully calibrated their
respective multi-RAE PDS prior
to conducting air monitoring.

1230 - Tt Falkner accompanies
SCDHEC Dana Cook on pond
survey. Pond located directly ^{AF} NW
of pile. All HCN hits = 0.0 ppm.

1300 - HCN = 1.0 ppm at NW monitoring point

1700 HCN detection by excavator
operator = 3.0 ppm up on pile (SW
corner).

Monday 8/19/19

1741 - Visible open flames at SW
corner of pile during excavation.

1830 - Tt Williams onsite, Tt Redd offsite

2045 - Tt Prys, Falkner, Jones offsite

2200 - Minimal smoke headed north

2330 - No change except odor on Argent

0030 - No change. ———— *SW*

0050 - Area RAEs have disconnected since
midnight. Restarted run to reestablish the
connection. ———— *SW*

0200 Headed SE ———— *SW*

0320 Faint odor @ MCP ———— *SW*

0430 Smoking a lot to the left of the water spray

0550 Smoke headed ^{East} SE. Place @ church

0630 No change. ———— *SW*

8/20/19

Tuesday

Weather: 91°/75°, Scattered Thunderstorms

Wind S 5mph, 42% chance of rain

0910 C. Jones heads to pile; USCG

0925 received a HCN hit of 49ppm
in run off water. Will use

ARPro to confirm

- use unit 11 (SW corner) to confirm hit

0910 Take unit off stand

0924 Unit 11 back on stand

- HCN detection determined to be a false positive due to cross-sensitivity w/ H_2S . Both an ARPro and MultiRAE Pro w/ both H_2S and HCN sensors were placed near the HCN detection.

Initially, HCN read ≈ 12 ppm and H_2S read ≈ 2 ppm.

According to RAE system TN-121, the HCN sensor will have a response 600% greater than HCN ⁽⁵⁾ H_2S .

1130 Checked on DUSTRAICS and ARGARAE.

All instruments functioning properly

Tuesday

8/20/19 47

1130 Conducted walk-through of Land Fill area. Activities slow during lunch. 2 excavators were still working. Smoke from chimneys looked like moving toward NW. No activity at ABLE Contracting.

1400 Hooked up MultiRAE Pro (unit 38) to PRG and CMC will place it in the cab of one excavator to monitor H_2S and HCN.

1430 Configured MultiRAE Pro Unit 36. Removed gamma sensor and replaced it with H_2S sensor. Calibrated unit and gave to CMC to place in NW excavator.

1612 Stop run to add two MultiRAEs to run (in excavator cab) and perform Bump test on ARS. Note: At 1530, Stuart and Brown changed out batteries for DUSTRAICS and calibrated ARGARAE Pros. Troubleshoot EBOM at Brooks mill apt. GFI faulted out. Reset and EBOM began running. Also, CMC put MultiRAE Pro Unit 38 in CAT excavator 320D (long stick).

Rite in the Rain

48 Tuesday

8/20/19

1612 Calibrations work completed at 1715
1800 Troubleshoot Brook Mill EBAM.
Back online and functioning properly

1840 DUSTTrak data download
on to flash drive

1900 TT Lawrence on-site
2130 TT Jones and Prys offsite

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storms



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sweat



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ALL-WEATHER TOUGH!



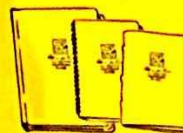
The Rite in the Rain story began a century ago in the forests of the Great Pacific Northwest. Entrepreneur Jerry Darling recognized the logging industry's need for a durable material that could be written on and survive in poor weather conditions. Jerry developed a special coating that created a unique moisture shield on the hand-dipped sheets of paper that he and his wife, Mary, processed at their home.

From these humble beginnings our first all-weather paper was born. Over the many years we've perfected and patented our environmentally responsible coating process. Still located in Tacoma, our continued mission is to provide innovative products for professionals and enthusiasts who brave the outdoors.

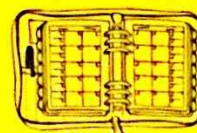
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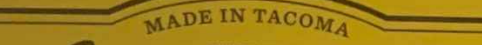


Rite in the Rain

ALL-WEATHER
UNIVERSAL

Nº 371FX

LOGBOOK
2 of 3

The logo is a horizontal rectangular emblem with a double-line border. At the top, the words "MADE IN TACOMA" are written in a small, sans-serif, all-caps font. Below this, the words "— SINCE 1916 —" are written in a similar font. The central part of the logo features the brand name "Rite in the Rain" in a large, elegant, cursive script. To the right of the word "Rain" is a small registered trademark symbol (®). At the bottom, the words "— DEFYING MOTHER NATURE —" are written in a sans-serif, all-caps font, flanked by horizontal lines.

Address _____

Phone _____

Project _____



RiteintheRain.com

28/20/19

1140 - smoke report conducted by
TT Lawrence. DustTrak at
Short Cut Rd also inspected.
Confirmed functioning properly.

1200 - Sun City EBAM offline

1220 - START reconnected EBAM
and confirmed online.

0110 - water being applied to chimney
at Southeast side of the pile
haze on south side of pile
and odor on Argent

0140 - no change but AreaRAEs
went offline.

0200 - chimney on west side
of pile creating minimal
smoke headed southwest.
odor at MCP.

0240 - smoke check

0300 - went to try and fix AreaRAEs
and saw EBAM at MCP offline.
START not able to recon Area
RAEs.

0630 - START collected DustTrak data

0800 MCB32037PB MultiRAE
calibrated VOC, CEL, CO, H₂S

Scale: 1 square =

8/21/19 2201

MCM and U2. All sensors passed
unit 36.

0820 - Screen the Southeast
part of excavation area for
MCM spikes due to H₂S cross
sensitivity

0900 MultiRAE 38 in the env
pole, MultiRAE 36 indoors on

0900 -

Location: Adjacent to SHEC air
Start time: 0930 monitoring station

End time: 0930

Start pressure mmHg: -30

End pressure mmHg: -4

Can # 0826

Reg # 01606

Lat: 32.323562

Long: -80.941113

Location: Station 4

Start time: ~~0945~~ 0957

End time: 0935

Start pressure: -33 mmHg

End pressure: -4

Can # 0762

Reg # 01538

Scale: 1 square =

Print on the back

8/21/17

Lat: 32.324204

Long: -80.940783

Location Forest Concrete

Start time: 1120

End time: 0938

Start pressure: -25 mmHg

End pressure: -4

Can #: Q807

Reg #: ~~Q1802~~ Q1803 Lat: 32.32185

Location: 352 Schinger Long: -80.94078

Start time: 1130

End time: 0945

Start pressure: -33 mmHg

End pressure: -3

Can #: Q811

Reg #: ~~Q7533~~ Q3725

Lat: 32.323434

Long: -80.939804

0927 - Based on anticipated

Wind direction for the day
the 24-hour summa canisters
will be placed on the eastern
and northern sides of the
pile (according to the weather
channel the winds will be out

Scale: 1 square =

8/21/17

Of the Southwest

1140: Regulator numbers were
changed because air sampling plan
was amended. Rather than

Place two canisters in the cabs
TT directed to increase perimeter
sampling locations. one was
placed downwind in a residential
area and the second
placed adjacent to business.

1200 STAFF LAWRENCE off site. STAFF
JONES AND PRYS continued working
with ERT to troubleshoot day and
update data spreadsheet to produce
data summary reports.

1700 STAFF JONES CONDUCTED TRANSLATION
of ECRM 2 at Brooks Mill Apts. and
RES-1/VED ISSUE.

1850 STAFF PRYS COLLECTED DATA FROM
DUST TRAIL. DUST TRAIL 1 at Peacock
Collision would not recognize 2
different thumb drives and could
not download data. STAFF JONES
conducted troubleshooting.

2030 Continued troubleshooting the dust trail

Scale: 1 square =

Put in car

6 08/22/19

0700 - TT arrives onsite. Data from previous 12 hours was summarized and sent to client. This included overnight data obtained from DUSTTRAKS, EBAMS, and AreaRAEs.

0900 - SUMMA canisters were obtained and prepared for laboratory analysis.

0930 - Weather based locations for 24-hour sampling locations for today were based off of data obtained from the weather channel. Wind direction for the day indicates that SUMMA canisters

will be placed on the ~~northeast~~ 24 Northern Portion of the work area. Two SUMMA canisters will also be placed in the cabs of excavators for an 8-hour sampling period.

Location: DOO San Cab 2

Start time: 10:34

End time: 1630

Start pressure: -25 mmHg

End pressure: -11

Scale: 1 square = _____

8/22/19 7

Can# Q852

reg# : Q1802

Location: Komatsu Cab

Start time: 10:39

End time: 1630

Start pressure: -33 mmHg

End pressure: -17

Can# : Q798

reg# : ~~Q798~~ Q7533

Lat:

Long:

24-hour SUMMA canisters. Two for resident location & two for perimeter.

~~Location: 352 Sching sample ID: RES1~~

~~Start time: 11:21~~

~~End time:~~

~~Start pressure: -30 mmHg~~

~~End pressure:~~

~~Can# : Q810~~

~~reg# : Q1606~~

~~Lat: 32.323434~~

~~Long: -80.939804~~

~~Location: Forestcom sample ID: RES2~~

~~Start time: 11:28~~

Scale: 1 square = _____

Rite in the Rain

8/22/19

End time:

Start Pressure: -30

End Pressure:

Can #: Q857

reg #: Q1538

Lat: 32.32185

Long: -80.940887

Location: NE corner sample ID: PAM2

Start time: 11:25

End time:

Start Pressure: -25 mmHg

End Pressure:

Can #: Q853

reg #: Q3725

Lat:

Long:

Location:

sample ID:

Start time:

End time:

Start Pressure: -30 mmHg

End Pressure:

Can #: Q849

reg #: Q1803

Lat:

Long:

Scale: 1 square = _____

XY

8/22/19

Location: NW side sample ID: PAM1

Start time: 11:36

End time: 11:00

Pressure start: -25 mmHg

Pressure end: -2

Can #: Q853

reg #: Q3725

Lat: 32.323877

Long: -80.942454

Location: Forest concrete sample ID:

Start time 11:28

End time 1055

Start Pressure: -30 mmHg

End Pressure: -2

Can #: Q810

reg #: Q1606

Lat: 32.32185

Long: -80.940887

Location: NE corner sample ID: PAM2

Start time: 11:25

End time: 11:25 22 0954

Start Pressure: -30 mmHg

End Pressure: -1

Can #: Q849

reg #: Q1803

Scale: 1 square = _____

Write in the Rain

10 8/22/19

Lat: 32.324633

Long: -80.941374

Location 352 Schinger Sample ID: RES2

Start time: 11:21

End time: 11:05

Start pressure: ~~Q857~~ 22 - 30 mmHg

End pressure: -4

Can #: Q857

Weg #: Q1538

Lat: 32.323434

Long: -80.939804

1507 USCG Strike Team called a lightning standstill due to storms moving into the area.

1622 EPA call ops for the day due to the storms moving through the area.

- 1630 Rick w/ cmc notices START ~~they~~ (3) they removed the sumas from the cabs @ 1600. Crew stopped work due to weather. Can were cut short and did not run for the full 8-hrs Both can for approx 6-hrs

Scale: 1 square = _____

8/22/19₁

Sample IDs for Excavators

Samples:

ACF-AS-CAB1-Day-082219

ACF-AS-CAB2-Day-082219

1800 Submitted air monitoring

sampling plan and daily shift air monitoring report for 12-hour period

2000 TT PMS, Jones, Reed, and Lawrence offsite.

Laura Lawrence 8/22/19

Scale: 1 square = _____

Put in the Rain

8/23/19

0700 - TT Jones, Reed, Prys, and Lawrence onsite and attend safety meeting.

0730 - DustTrak data from past 12 hours is collected for air monitoring summary report.

0800 BUMP test of MULTIRAE

Unit 36

4 GAS - CO: PASS

- H₂S: PASS

LEL ~~fail~~ - ~~fail~~: PASS

- O₂: PASS

HCN - HCN: fail

VOC - VOC: PASS

TT calibrate HCN sensor

- HCN: recalibrated to 10 ppm

Unit 34

4 GAS - CO: PASS

- H₂S: PASS

- LEL: fail

- O₂: fail

HCN - HCN: fail

VOC - VOC: PASS

HCN recalibrated to 10 ppm

8/23/19

- CO: recalibrated pass

Has recalibrated pass

LEL recalibrated fail

- O₂: recalibrated pass

1030 START PRYS AND LAWRENCE BEGAN AIR SAMPLING USING AIRCON 2 (high-volume) AND GILAIRS (low-volume) samplers to test for asbestos in the air. Pumps were placed at the ACQU ROE 3 location northeast of the pile upwind of removal activities. Samples will be analyzed via PCM by Enthalpy Labs using NIOSH 7400. Calibration and start time for the samples:

- AIRCON 2 (ACE-AA-H-01-092319)

start: 1042 Flow rate: 9.034 l/min

- GILAIRS (ACE-AA-L-01-092319)

start: 1047 Flow rate: 2.47 l/min

1130 - SUMMA canisters collected and packaged for shipment to ENTHALPY ANALYTICAL

1500 - 121 truckloads, water trucks still loading water to deposit on pile.

1845 - START PRYS and START

148/23/19

Lawrence went and conducted post-calibration for air sampling samples collected with the Air Can and GilAirs.

- AirCan 2 (ACF-AA-H-01-082319)

end: 1854 flow rate: 8.73

- GilAirs (ACF-AA-L-01-082319)

end: 1857 flow rate: 2.28

1900 - DUSTTRAKS connected to VIPER and new run started. Air

monitoring data summary for past 12 hours submitted.

2000 - START PMS and Reed offsite

2100 - Gateway 84 switched with Gateway 85 at Grace Coastal Church

8/24/19

0600 - START Lawrence conducts pump test calibration for MultiRAE 38.

- OXY PASS

- LEL PASS

- H₂S PASS

- CO PASS

- HCN PASS

- VOC PASS

MultiRAE 36

- OXY PASS

- LEL PASS

- H₂S PASS

- CO PASS

- HCN PASS

- VOC PASS

16 20K 08/24 0940 hrs DAVID REED

- multi Rec #38 Survey * Suspected bad VOC Lamp, VOC's on site by other ^{AREA} REC'S = 0
- Field Survey of Area around site of fire / *NR = Not Recorded:

A. ① Loc: 32.322187, -80.941506 ^{By} Browns
0950 hrs ② $O_2 = 20.9\%$, LEL = 0%, CO = 0 ppm

$H_2S = 0.0$ ppm, VOC = NR, HCN = 0.0 ppm

B. ① Loc: 32.321808, -80.9410827 DHEC Air Samp

1000 hrs ② $O_2 = 20.9\%$, LEL = 0%, CO = 0 ppm
 $H_2S = 0.0$ ppm, VOC = NR, HCN = 0.0 ppm

C. ① Loc: G+E SERVICES 379 MACKINAW WAY
32.321791, -80.940074

② $O_2 = 20.9\%$, LEL = 0%, CO = 0 ppm
 $H_2S = 0$ ppm, HCN = 0 ppm, VOC = NR
1025 hrs

D. 1030 hrs ① Loc: MACKINAW WAY COL OF SAC
32.320352, -80.939915

② $O_2 = 20.9\%$, LEL = 0%, CO = 0 ppm
 $H_2S = 0.0$ ppm, VOC = NR, HCN = 0 ppm

E. 1033 hrs ① 472 SCHWABER ABLE CONTRACTING
32.323473, -80.941134

② $O_2 = 20.9\%$, LEL = 0%, CO = 0 ppm
 $H_2S = 0.0$ ppm, VOC = NR, HCN = 0.0 ppm

F. 1042 hrs ① PALMETTO STATE ARMOY 358 BROWNS COVE
32.39001, -80.941142

20K 08/24

DAVID REED

17

② $O_2 = 20.9\%$, LEL = 0% CO = 0 ppm

$H_2S = 0$ ppm VOC = NR HCN = 0 ppm

G. 1047 hrs RIVER DOG BROWNS CO 591 BROWNS AVE
32.320084, -80.938907

$O_2 = 20.9\%$, LEL = 0% CO = 0 ppm

$H_2S = 0$ ppm VOC = NR HCN = 0 ppm

H. 1052 hrs RIVERWALK ANIMAL HOSPITAL

58 BROWNS COVE RD 32.321852, -80.938581

$O_2 = 20.9\%$, LEL = 0% CO = 0 ppm

$H_2S = 0$ ppm VOC = NR HCN = 0 ppm

- 1140 hrs CHANGED VOC LAMP OUT IN

MULTIRAS 38 TO COAST GARDENS NEW LAMP

PID 10.6eV 4RT SN: SC03AS005351

EXPIRED APR 2016 BUT CONTAINER STILL

SEALED, LAMP PASSED CALIBRATION AND

PASSED BUMP CHECK - D Reed

1350 - T+ Snyder on site

1730 - Cease ops for day; lightning

1845 - T+ LL on site for night ops

1900 - FRT Data Dump; begin processing data

- DR+LL troubleshoot DistTrk

Viper 135 hrs

2100 - T+ DR off site

2135 - Data Summary out

8/24/19 cont'd

- 2145 - T+ JS off site for high +
 - LL continues troubleshooting
 DustTrak Viper issues.
 - call to Chris Jones - may be
 issue w/ switching aircards in
 the Gateways, Issue may
 resolve itself after a few hours.

8/25/19 (Sunday)

- 0330 - T+ JS back on site
 - DustTraks still down
 - continue to troubleshoot w/
 LL

0530 - Decision made by JS to
 switch all DustTraks to manual
 mode; will download data
 manually.

0600 - Calibrate MultiRae Pros for
 on site use. Cal gas used:
 Cocktail: CO^{JS} Lot EBJ-413-18-6
 expires 4/21

CO - 50 ppm

H₂S - 10 ppm

LEL - 50%

O₂ - 18%

HCN: MBI-HCN-10-S exp 1/20

HCN - 10 ppm

ISO - EBJ-248-10-16 exp 4/23 10 ppm

EPA MultiRAE 3634: all pass

EPA MultiRAE 38: all pass

0630 - H+S fail site w/ ERRS

0700 - T+LL off site

- JS begins processing data

1030 - Calibrate EPA MultiRAE Pro #36, same gas above

20 2014/08/25

1157 hrs - JOHN SNYDER CALIBRATED THE HCN
Sensor on AREARAG PRO 2 (3002).

READINGS FOR HCN GAS AT THIS TIME
ARE DUE TO CALIBRATION AND NOT FROM
SITE EMISSIONS. - DAVID REED

- THIS MAY TAKE SEVERAL MINUTES TO CLEAR
THE INSTRUMENT. - DAVID REED

1206 - Snyder off site

1353 hrs OKATIO ELEMENTARY SCHOOL SURVEY
WITH MULTIRAG 36 DAVID REED
COAST GUARD ~~G. DOR~~ GALLEGOS
SCOTCH J. MARTIN

EPA OSL CHRIS RUSSELL

- HALLWAYS OF SCHOOL = NO ELEVATED

READINGS (O_2 , LEL, CO , H_2S , WC , HCN)

- 2 RANDOMLY CHOSEN CLASS ROOMS =

NO ELEVATED READINGS

- CAFETERIA = NO ELEVATED READINGS

- PLAYGROUNDS = NO ELEVATED READINGS

- MEASUREMENTS TAKEN AT BOTH

ADULT AND CHILD BREATHING HEIGHT

1425 - LEAVING SCHOOL - DAVID REED

1800 - Snyder back on site

1900 - Lura Lawrence back on site

- began processing DAY data

Scale: 1 square = _____

8/25/19 cont'd (Sunday) 8/26/19

2200 - Submit data summary to
OSC Tanner

2215 - Snyder off site

2220 - Gateway at Peacock collision
changed out with Gateway 84
and now DUSTRAK is back
online.

2230 EBAM at MCP is disconnecting
every 2-5 minutes. Adjusting
air card in Gateway reconnects
signal or it comes online by itself
within 2 minutes

0110 Gateway at Grace church switched
with one with charged battery

0230 Gateway at Peacock collision
died and was changed

0420 LINC at Grace Coastal Church
died. Tried three batteries and
would not turn on. Switched
DUSTRAK to manual mode.

0600 Calibrate MultiRAE Pro for
on site use. Cal gas used:

Lot #: EBT-413-18-6

EXPIRES: 4/29/2021

CO - Suppm

Scale: 1 square = _____

Put in the Rain

8/26/19

H₂S - 10 ppm

LEL - 50%

O₂ - 18%

HCN DBJ - HCN - 10-11

Expires: 3/25/2020

HCN - 10 ppm

ISO - EBJ - 248-100-23

Expires - 4/29/2023

EPA MultiRAE 36 - All Pass

EPA MultiRAE Pro 38 - All Pass

0615 - T+ Snyder on site

0700 - H+S meeting w/ ERRS

0705 - T+ Reed on site

0715 - Begin processing last night's data

0800 - T+ Lawrence off site

- Reed troubleshooting Viper issues

1015 - Data submitted for last night.

- per OSC Tanner's request, will now be on 24-hr reporting cycle.

1020 - OSC Swanson request daily screening of fire runoff to sewer. Water to be screened for pH + Dissolved O₂

John

8/26/19 cont'd

1030 - Calibrate EPA Horba U-52

Unit B10128 AutoCal solution lot 1836/306

- calibrated to pH, and, + turbidity standard

1045 - START notices that AreaRAEs have been down for ≈ 1.5 hrs.

1115 - AreaRAEs trouble shot. Possibly related to EPA transferring licenses to deal w/ another ER in Columbus GA.

1145 - Screen sewer discharge w/ Horba:

Temp - 31.33°C

DO - 4.40 mg/L

pH - 7.82

Turb - exceeds meter

ORP - -229

Cond - 1,000 $\mu\text{S/cm}$

1530 - JS + DR calibrate all AreaRAEs

HCN: Lot DBJ - HCN-10-11 exp 3/20

Cocktail: Lot EBJ - 413-18-6 exp 4/21

ISO: Lot EBJ - 248-10-16 exp 4/22

1535 - Calibrate Unit 10 (...1808)

Fresh air, HCN, cocktail, VOC - pass

1555 - Calibrate Unit 9 (...1807)

Fresh air, HCN, cocktail, VOC - pass

1612 - Calibrate Unit 11 (...1809)

Fresh air, HCN, cocktail - pass

John

8/26/19 cont'd

1622 - Calibrate Unit 12 (...1810)

Fresh air, cockpit, HCN, VOC - pass

1637 - Return to Unit 11, calibrate VOC sensor w/ 100ppm ISO.

- Lot EBJ-248-100-23, exp 4/23
VOC - pass

1640 - Return to MCP

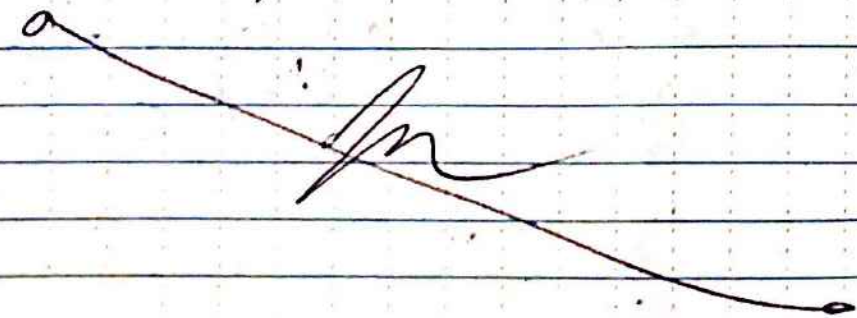
1730 - Snyder to fire to retrieve MultiRAEs for recharge + night time calibration

1820 - Tt Eric Huss on site to run night time ops

1900 - Tt JS + PR off site

2000 Note neighboring property South of Schinny SE of site has border change Battery for GW

2345 Check on equipment all operating normally - slight smoke coming from center of pile



8/27/19

Tuesday

0200 Still light smoke coming from center of pile.

0440 Change GW @ feed all to EPAERT-28 - also change Dusttrak Batteries. Smoke Source

0548 Calibrate MultiRAE Pros for on-site use. Cal Gas used

4-Gas Lot EBJ-413-18-L Exp 4/20/21
CO-50ppm H₂S 10ppmMethane 50% LEL O₂ 18%

HCN Lot DBJ-HCN-1071 Exp 3/28/20

HCN - 10ppm

Isobutyl Lot EBJ-248-1076 Exp 4/29/23

Isobutyl - 10ppm

0600 Tt Snyder arrives on site

0700 H+S meeting with ERRC

0730 Tt Reed arrives after cleaning
14 data from Dusttrak & taking
other 2 Dusttraks offline

0740 Tt Huss off site for day

0900 - Data summary table out

-Tt DR gets Peacock Dusttrak
on generator power1015 - Recalibrate same Honey U-52
w/ same substance as yesterday

8/27/17 (Tuesday)

1030 - Screen sewer discharge

Temp: 29.85°C Turb: exceed

pH: 7.5

DO: 4.59 mg/L

ORP: -227 mV

1130 - JS to lunch

1200 - Back from lunch

- JS installs DistTrk software on laptop

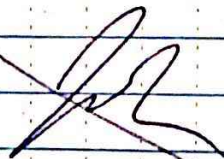
1220 - Investigate down EBAM @ Sun City

1240 - Swap out Guleways

1600 - Sun City EBAM operational.

1620 - Check DistTrks, ensure operability

1910 - TT off site



8/28/19 (Wed)

0550 - TT Eric Huss on site

0620 - TT John Snyder on site

- Sun City EBAM down for over 5 hrs. Area RAs down

0630 - Snyder off to download DistTrks while Huss calibrates MultiRAEs (same cal gas as yesterday)

Calibrate 3 MultiRAE Pro + 1 MultiRAE

0700 - H+S talk w/ ERHS

0745 - All instruments back up running

0845 - Data summary out

1030 - Peacock Calls on DistTrk on Shore power

1300 Recalibrate Sun Harbor with same solution as yesterday

Screen Sewer Discharge

Temp: 34.82°C Turb: ~~Exceed~~

pH: 7.54

DO: 2.54 mg/L

ORP: -67

1730 Cool-Air cond at Brooke Mill. + Replace EBAM paper tape

1745 replace Sun City Line Batter

1810 replace Brooke Mill Line Batter

1830 replace MCP Mill Line Batter

1945 - TT off site



8/29/19 (Thursday)

0555 - T+ Eric Huss on-site
 - calibrate MultiRAE Pros for on-site worker use.

0630 - Snyder @ DustTrak stations manually downloading runs

0700 - EH to H+S tailgate

0710 - Snyder back EPA trailer.

0845 - Discussion w/ EPA regarding potential mowing @ Short Cut Road DustTrak station. May shutdown instrument for the day, possibly relocate to south of job site

0945 - JS to site

1000 - Trouble shooting AreaRAEs
 - all off line

1200 - AreaRAEs online

1500 - Conf call w/ R4 Risk Assessment Addams + Frederic re: upcoming air sampling

1825 - Screen sewer discharge

Temp: 30.31°C

Turb - exceed

pH: 8.04

DO - 6.27 mg/L

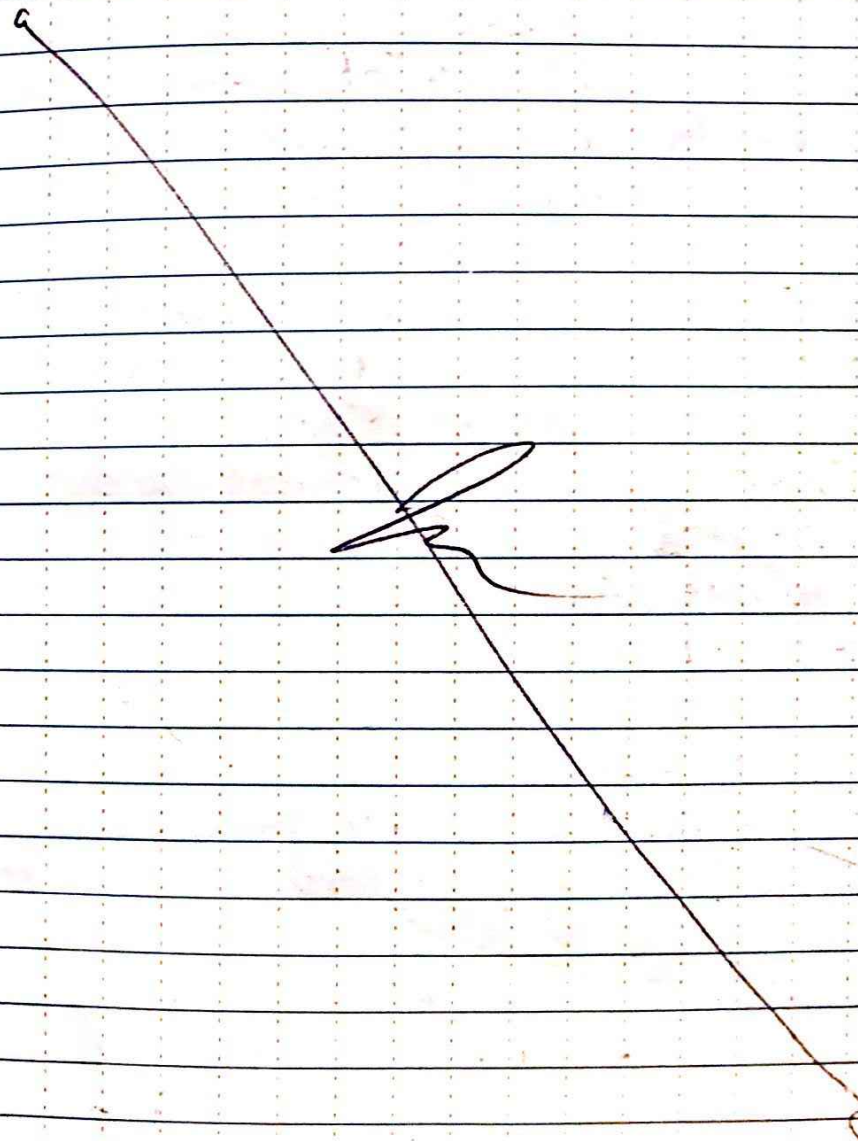
ORP - 240 mV

1900 - Troubleshoot Sun City

Scale: 1 square = _____

8/29/19

1930 - All instruments green
 T7 off site



Scale: 1 square = _____

Write in the Rain

8/30/19 (Friday)

0600 - T+ Hass changes out
Sun City link battery

- all instruments green

0620 - T+ Snyder begins manually
downloading DustTrak

0625 - EH begins calibrating MultiRAE
pros for workers

0645 - JS breaks down Short Cut
Rd DustTrak for relocation

0700 - H+S tailgate w/ ERRS

0715 - EH installs DustTrak 2 @
Pammy company next to
Palmetto State Army

- Snyder working on data

Summary

0945 Restart AreaRAE Line goth
again - back online

0955 Calibrate Horiba U-52 with
Auto cal solution

Screen Sewer Discharge

Temp: 27.16

Turb: exceed

pH: 7.72

D.O: 4.66

ORP: -245

1145: Pause AreaRAE run for
full calibration.

8/30/19 cont'd

1300 - During routine AreaRAE calibration
AreaRAE 1808 (#3) LEL sensor

began reading 11-13%. EH
recalibrated w/ zero air + cocktail.

- continued reading 11-13%

- Snyder brings MultiRAE Pro on
site to check readings. MRP reads
0% LEL. Both instruments bumped
w/ cocktail, both read 50% LEL.

1410 - JS calls T+ Denny Cox to report
Cox recommend moving AR off site
to check response.

- Offsite, AR continues to read
11-12% LEL. Determine that
sensor is faulty.

Basha OHS will bring new
LEL sensor tomorrow.

1655 - AreaRAE LEL sensor turned
off. Previous elevated readings
will be zero'd in the data

Summary.

1745 - JS submits revised air
sampling plan to address
upcoming air sampling protocol

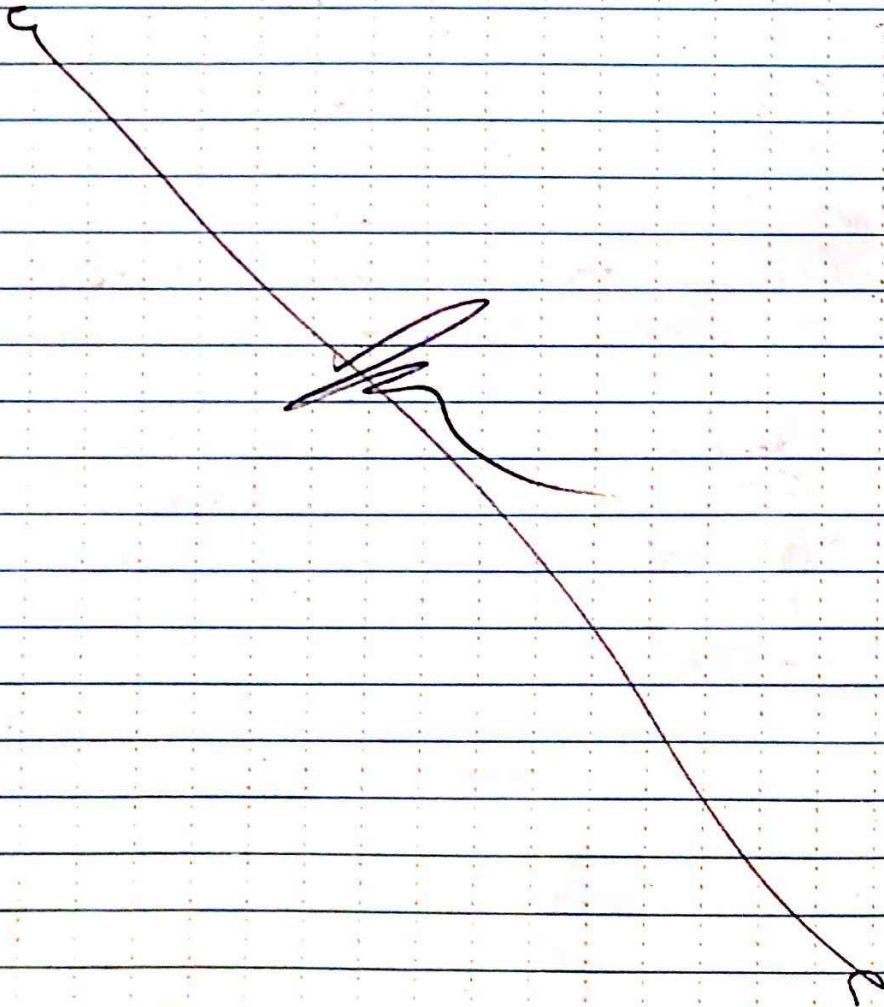
1815 - T+ EH + JS to fire

8/30/19 (cont'd)

1850 - T+ retrieves all MultiRAEs
on site to recharge @ trailer

1900 - T+ off site for the day.

Will replace all EBAM Inc
batteries on the way to hotel.



8/31/19 (Saturday)

0600 - Eric Hoss manually downloading
DustTraks

0630 - JS calibrating MultiRAEs

EPA 34, EPA 36, EPA 38 + Pine 045047

Zero Air: MBI-1-3

HCN : MBI-HCN-10-5

Iso : EBJ-248-100-23

Cocktail: GBI-413-18-8

0700 - H+S tailgate w/ ERRS

1115 - Data Summary out

1120 - OSC Spurlin orders evacuation
prep. Will collect 1 round of
air samples, pull down monitoring
equipment, then demob tomorrow

Set up SumCanister for sample

Install Sample Locations

352 Schinder 402 Stark trip

Farrest Canyon, Sun City

Fire Dept Bldg / Riverbend Bldg,

+ Hearth Stone Bldg.

1700 Check all SumCanister
all appear to be dropping pressure
slowly. Regulator Intake Valve Plate
Bugs to prevent pulling any
water into sample.

[Handwritten signature]

8/31/19 (Cont)

Check all Dustraks. all
 operational with shore power
 1850 Rept from all MultiRATs
 on site to recharge overnight
 no pile work planned for
 tomorrow no MultiRATs needed
 1915 TT Pand-off's defrag glay
 Check to confirm shutdown
 temporary AMOP Vape System
 and retrieving equipment
 1930 TT Effus off site for dinner



Scale: 1 square = _____

09/01/19 (Sunday)

0545 TT-Effus checking Summer
 canister pressure from 8-9-16
 0610 arrive @ trailer & power is off
 head to dust truck at Kew-Sax
 TT. Read Getty other 2 Dustraks
 0928 Stop Fire Dept Pressure -3
 0940 Stop Sun City Pressure -4
 0950 Report Sun City -6.5
 1000 Pause Vape Run
 1038 Stop Vape Run
 1115 Stop Sun River Bend -2
 1130- other summer canisters called
 1213 with pressure of -2.5 to -6
 box up samples + pack
 regulators into bags each
 Label for later use
 Straighten up equipment & other
 a few prep. for shutdown
 Notes: 352 Schinse Sample had Quaternary
 Telling next to it when sampling was stopped
 BKGD-Fictum had Ambulance Telling
 next to it before sampling was stopped
 1430 TT Personnel off site for evening
 no smoke visible coming from pile

Scale: 1 square = _____

Rise in the Rain

9/9/19

1700 Arrive on site and set up Viper/PRG.

- Location 1 - NE corner of pile

• On shore power

AR Pro Unit 9

DT Unit 4

line - 174

GW - 271

- Location 2 - SE corner of pile

• On shore power

AR Pro Unit 4

DT Unit 5

line - 155

GW - 271 (23)

- Location 3 NE NW corner of pile

• Generator power

• AR Pro Unit 11

• DT Unit 2

• line 157

• GW 27

- Location 4 SW corner of pile

• Gen Power

• AR Pro Unit 12 GW - 27

• DT Unit 4 line - 128

Scale: 1 square =

2000 AR Pro and Dred Tractors are operational, off site for the night.

~~2040-2112~~

DT

~~0700 START PUMP AND TANKS ON SITE~~

Scale: 1 square =

Rate in the hour

0700 START Jones and Reed on site.

- Speak w/ OSC Tanner regarding set up. Tanner requests that the SW location be moved to South of pile
- START also troubleshoots the dust trucks that are not communicating w/ Viper.

Location 4 - Now South of pile

AR Pro Unit - 12

DT Unit - 4

line 128 GW 86

1340 AR Pro (Unit 9) was Bumped (HCN sensor) and data was transmitted. HCN values during this time will be omitted from the summary rpt.

- Switch line 174 w/ line 140 @ Location 1.

1618 PRG was shut down o/t approx 1350 to 1618 to bump test units and troubleshoot

Viper. Viper continued to have connectivity issues w/ multiple GW's and aircards. START suspects the aircards are part of the issue. Extreme operational temps are causing aircards to overheat and stop working. This happened frequently during previous DT deployments at this site and appears to be repeating aircards again. In coordination w/ OSC Tanner, it is decided to discontinue DTs on Viper and START will manually pull data off DTs.

40 9/11/19

0700 START JONES and Reed

arrive on site.

- Reed downloads DT data while Jones downloads viper AR data.

- Jones summarizes' data ⁽³⁾ ~~over~~ ^{from} past 24 hrs

- Reed Bump tests ARs.

20190912

- 0700 START REED AND JONES ON SITE

- Reed downloads DT data while Jones downloads VIPER AR DATA

- JONES SUMMARIZED ALL DATA FROM PAST 24 hrs

- 1700 hrs JONES OFF SITE

- 1800 hrs Reed OFF SITE

20190913 DAVID REED

- 0700 REED ON SITE

- ARGARRE UNIT 11 OUT OF SERVICE DUE TO A FAULTY PUMP - NW LOCATION

AT THE SCALDS - LOST AT 1612 hrs on 9/12/19

- Reed DOWNLOADS DATA AND PREPARING SUMMARY REPORT FOR EPA OSC TANNER

- Reed MOVED NW STATION FROM SCALDS TO THE ~~EASTERN~~ ^{WESTERN} POLE AT 1615 hrs

Scale: 1 square = 100m

20190913

41

- AR UNIT 11 (NW) STILL DOWN

- 1700 REED OFF SITE

- EPA OSC LEFT SITE TODAY ABOUT 1300hrs

- EPA OSC BOYD TO BE HERE MONDAY 9/16/19

09/14/19

0630 - H+Smecting T Reed & H+Smecting Generator & 4 group down system

not sending data. active fire @ NE

Corner of pile. return to trailer

Reed - Download DT Data & preparing

Summary report for EPA

- Restart Link @ DT #4 off restart but Battery dead - replace battery

DT 4306 - Line 157 intermittent all

afternoon. Heat issues suspected

Passing spurs of dust allow

case to be opened to cool.

1750 T/Hrs off site today

09/16/19

0605 T.H. Effuss onsite to check

DT's. Generator off @ S. Location

Restart Generator & Download

Data from DT.

Scale: 1 square = 100m

Return to base

09/18/19

0630 TT Reed + Hasi onsite

after safety meeting

Download data from W-DT.

Download data from other DT's

- Switch Line Batter (157) Station 4.

- After switch DT reconnect to system

- Contractor working in SE corner to put out burn there.

1240 TT Reed arrives onsite

1300 TT Hasi offsite

1710 Reed Calibrated AR 1501, NE, site 1

WITH 4 GAS. ALL SENSORS READING WITHIN SPEC'S NOW.

09/17/19 DAVID REED

- 0700 Reed on site

- AR 1 1807 HAVING ISSUES WITH O₂ SENSOR AND POSSIBLY RAD DETECTOR

ODO - AR1, AR2, AND AR3 ALL SHOWING GAMMA RADIATION DETECTIONS

W - AR1 AND AR2 SHOWING QUANTUM READINGS FOR GAMMA AROUND THE SAME TIME.

- WORK ON THE SITE STOPPED IN THE AREA'S OF DETECTION (C/D AREA'S)

51.5%

1741 - WDOWN 196687 BKGD/LIM 169

- WDOWN 222252 55.5% BKGD/LIM 170

1750 - BEGAN SURVEY OF SITE WITH

LUDON 196687 USING THE 51.5% BACKGROUND READING AS REFERENCE

- NO AREAS WERE FOUND ON SITE OR IN THE IMMEDIATE AREA AROUND IT THAT EXCEEDED 3X BACKGROUND

1945 - REED OFF SITE

09/18/2019 DAVID REED

- 0700 REED ON SITE

- 1030 SC DUSTTRAK STOPPED BECAUSE OF LAWN MAINTENANCE GOING ON NEARBY

- 1115 SC DUSTTRAK BACK ONLINE

- 1450 PRG CAP RUN STOPPED TO CAL AR 1510 AT SOUTH STATION

- 1530 PRG CAP RUN STARTED

- 1810 CHECKED ALL INSTRUMENTS ON SITE

- 1830 TT Reed OFF SITE

9/19/19 TT Reed

- 0700 ONSITE TT Reed

- 0740 Completed check of all air monitoring stations. All 4 AR's had Gamma peaks during the night, AR1 @ 28 μ r/hr
AR2, 3, 4 @ 14-15 μ r/hr

- 0750 - PROCAP PAUSED TO CAL AR's
 0900 - PROCAP DID NOT PAUSE SO IT
 COLLECTION THE CALIBRATION HITS
 1730 - CHECKING ALL INSTRUMENTS ONSITE
 - ALL OPERATING FINE
 1800 - TT Reed OFF SITE
 1900-2000 - TT Reed FINISHING DATA
 Report
 - PEAK GAMMA READINGS FROM
 0700 TODAY TO ~1800 HRS TODAY (uCi/hr)
 AR1 - 15 AR2 - 21 AR3 - 17
 AR4 - 15
 - READINGS ARE DIRECT FROM EACH AR
 - BOTH WINDOWS REMAINED BELOW 100 CPM
 DURING THE SAME TIME PERIOD
 WITH BKGD AROUND 55 CPM

09202019 DAVID REED

- 0700 TT Reed ON SITE
- CHECKED ALL STATIONS, ALL ONLINE
- AR GAMMA READINGS (uCi/hr) PEAK
 AR1 = 23 AR2 = 20 AR3 = 17 AR4 = 4
- 1600 TT Reed Pulled BOTH WINDOWS FROM THE
 SITE. BKGD ONLY READ FOR OUR SINCE
 DEPLOYMENT.
- 1730 AR GAMMA PEAKS (uCi/hr)

Scale: 1 square = _____

- AR1 = 21 AR2 = 20 AR3 = 15 AR4 = 14
- 1800 - TT Reed OFF SITE
 9/21/19 DAVID REED
- 0630 HRS - NOTICED AR4, UNIT 11
 HAVING LAMP ISSUED AT 0400 HRS.
 WHEN CHECKED AT HOTEL
- UNIT 11 HAS A FAULTY PUMP AND
 WAS REMOVED FROM SERVICE
- AR GAMMA PEAKS (uCi/hr)
 AR1 = 21 AR2 = 24 AR3 = 18 AR4 = 16
- 0800 HRS - PRG RUN PAUSED SO MIKE
 CAN CALIBRATE 3 AR's
- ALL DISTRICTS IN MANUAL MODE AND
 FLOODING VIPER. SET FOR 72 HOUR RUN
 THIS MORNING TO COVER THE WEEKEND.
- 0914 HRS PRG RUN STARTED BACK UP
- 1500 HRS TT Reed OFF SITE *David Reed*

09/23/19 Monday

0625 TT F. Huss ONSITE after Tailgate
 Safety meeting.

Check on monitoring stations all are
 operational - On battery power/charging
 Add column for momentary action log
 Exceedence & Issue, summary report

Scale: 1 square = _____

David Reed

- Area RFE calibrated without
pausing RRG run. will monitor
Delete Cal data for summer
1730 TT Huss offsite today *See*

09/24/19 Tuesday

0628 TT Huss onsite & attends
tailgate safety meeting. Jasper
County Fire Dept. Onsite after
being called by 911 call @ ~0400
for open flames on p. 1.
Fire Dept. departs site during
tailgate safety meeting.

Prepare daily Summary Report
1006 Bashy tech. departs w/ repair
Area RFE to test at location 4
System operational with 8 monitors
4 - DT & 4 AR. 5
Retrieve Extension cords from
Peacode collision

1700 TT Huss offsite today *See*

09/25/19 Wednesday

0626 TT Huss onsite & attends
tailgate safety meeting

Scale: 1 square = _____

- Note: DT-4 not greeting take out
batteries starting & DT. Restart unit
Gateway - also dead. On return to get
gateway battery pass back. going to
fuel & start generator.

- Prepare daily summary report
1245 - note Reporter onsite filming
from WTKR northy OSC.

- Note DT-4 not communicating, replace
line battery & restart

1515 TT Huss offsite today *See*

09/26/19 Thursday

0620 TT Huss arrives onsite and
attends tailgate safety meeting.

- Note DT-4 Stopped & check generator
Stopped & Gen - Stopped transmission
= Restart & communication
restarted.

- Connection Dropped Several Times
throughout the day

1530 TT Huss offsite today *See*

09/27/19 Friday

0621 TT Huss arrives onsite & attends

Scale: 1 square = _____

Handwritten signature

tailgate Safety Meeting.
 - Paused PRG Run while Otis
 Calibrated the Area RFE Pros.
 - Noted connection issue w/ GW22
 west of pile. tension on plug
 stops charging / Power from reading
 device. after resolving connection
 issues remained. Turned dustal
 off + restarted - results improved
 1515 TT Huss off site early

08/19 Saturday
 0628 TT Huss arrives on site +
 attends tailgate Safety Meeting
 Generators still running @ location 34
 - Prepare Daily Summary Report
 - Submit Report after review by TT Huss
 - Confirm no scheduled work tomorrow
 1415 RHEG Stops by Trailer to report
 observing residence with smoke
 from Able Pile much Smokey
 w/ Black Smoke coming off pile
 1430 TT Huss off site for dinner

Scale: 1 square =



USE WET OR DRY
 most pens stop writing when wet

- ALL PENCILS
- RITE IN THE RAIN PENS
- WAX MARKERS
- CRAYONS
- OIL PASTELS / PAINT

WHEN DRY ONLY
 what you write won't wash off

- PERMANENT MARKERS
- STANDARD BALLPOINTS

WON'T WORK
 water-based inks bead off sheet

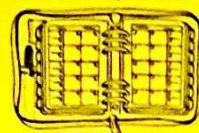
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Logbook
3 of 3



Name _____

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Project _____

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Reference

Date

2 Sept 30, 2019 DAVID REED, TI (DR)

1630 - ONSITE DR

1730 - DR OFF SITE

David Reed

OCT 01, 2019

0820 hrs - TI DR ON SITE

1003 hrs - TI CHRIS JONES SHOT DOWN SMART

GW 271, FROM DOWTH BECAUSE IT WAS WORKING

1020 hrs - TI DR HAD RESIT OF GW 271 PERFORMED

1050 hrs - TI DR RESTARTED VIPER RUN

1300 hrs - DATA COLLECTED BY AR 1810 - SOUTH

INDICATED A SUSTAINED GAMMA DETECTION

ABOVE 5 $\mu\text{rem/hr}$ beginning Sept 30 1103 hrs.

PEAK 1 of 34 $\mu\text{rem/hr}$ at 1250 hrs

PEAK 2 of 11 $\mu\text{rem/hr}$ at 1624 hrs

Return to 5 $\mu\text{rem/hr}$ at 1640 hrs

TI DR Presented data to OSC T. Tanner

Will note in email with report.

1730 - TI Reed OFF SITE

David Reed

OCT 02, 2019 DAVID REED, TI (DR)

0700 hrs - TI DR ON SITE

- TWO WADDER TRUCKS STILL PUTTING WATER

ON SOUTHERN MOST PART OFF PILE.

MOSTLY STEAM FROM THE PILE.

- ALL INSTRUMENTS RUNNING SIMULTANEOUSLY AND

SENDING DATA TO VIPER SERVER

0815 - SWITCHED AR4 WITH AR3 TO TEST

Scale: 1 square = _____

OCT 02, 2019 DAVID REED

3

→ RAD DETECTOR

- 180 hrs ALL 4 DUSTTRAKS REPLACED

WITH UNITS RENTED FROM PINE ENV.

THE VIPER LINES WERE NOT MOVED.

- 1845 - DROPT TI OFF SITE

David Reed

10/03/2019

0620 TT E HESS ON SITE.

0700 Attend Tailgate Ht Summit,
Prepare, have review of Issue Brief,
Summit report

- 2 HEN Sensors needed to be
replaced.

- Bashir Start calibration before
Run was paused AR 1809 (South)
has calibration spike 0745 → 0755
that should be removed from data

- Issue with DT Line 128, connects
all day no data collection.

There are some stops in other DT
data as that GW was restarted

Several times trying to connect them

- GW 86 (South) on its own extension
card w/ generate running register (not
Eco Mode) to try to change battery.

1530 TT HESS OFF SITE

David Reed

Scale: 1 square = _____

4 OCT 04, 2019 TT DAVID REED (DR)

- 0700 DR ON SITE
- SMART GATEWAY 271 AND MESH GATEWAY LOST DURING THE NIGHT DUE TO A TRIPPED GFCI BREAKER.
- DATA FROM AR'S WILL BE LOST FROM THAT TIME PERIOD
- 0830 ALL DUSTRAK'S AND AR'S ARE BACK ONLINE
- 1045 - ZERO CAL'S ALL 4 DT'S
- NOTICED THERE WAS PAINTING GOING ON NEAR AR 1 THAT MAY AFFECT VOL READINGS BETWEEN ABOUT 1030 HRS AND 1130 HRS.
- DT 157 MAY NOT HAVE BEEN DOLLED BY VIPER. MAY HAVE TO MANUALLY GET DATA TOMORROW

- 1500 HRS TT REED OFF SITE TO GET BOXES FOR SHIPPING SUMMA'S BACK TO ENTHALPY ANTICTION.

OCT 05, 2019 TT DAVID REED

- 0615 TT REED ON SITE
- ~~SMART~~ DR DT'S ON AND OFF LAST NIGHT CROUND 8 PM. DID NOT RETURN TO SITE DUE TO SAFETY ISSUES.
- LOST THE GENERATOR AT STATION 4

Scale: 1 square = _____

OCT 05, 2019 D Reed

5

WHICH SHUT DOWN THE DT AT 4.

- GENERATOR WILL BE SWITCHED AT THIS AM
- GENERATOR WAS OK AND NOT SWITCHED AT STATION 4.
- DT 2 (155) OFFLINE AT 1900 HRS 10/04/19
- DT 4 (157) AND DT 1 DATA LOSS
- 0915 SMART GATEWAY LOST POWER AND REBOOTED. HAD MORE ISSUES LAST NIGHT
- DT 2 (155) NOT GETTING DATA
- 0950 SMART GATEWAY BACK ONLINE
- 1045 ~~TT~~ TT REED OFF SITE

OCT 07 2019

- 0630 TT REED ARRIVES ON SITE + CHECKS ON EQUIPMENT. RESTARTS AR-2 THAT WAS OFF UPON HIS ARRIVAL
- 0700 ATTEND TAILGATE SAFETY MEETING
- CHECK ON OTHER EQUIPMENT + NOTE LINE BATTERY DEAD IN DT-2
- 0750 TT REED OFF SITE FOR SHORT TIME
- 1000 TT REED BACK ON SITE. DOWNLOADS DATA + STARTS SUMMER REPORT
- SUBMIT SUMMER REPORT TO TT REED FOR REVIEW BEFORE SUBMITTING
- SUBMIT SUMMER REPORT + CHECK OF DT-4 - NO DATA LOGGED BY VIPER TRUCK

Scale: 1 square = _____

Connect DT-4-GW charge directly
to generator + turn off Eec Mode
Still no connection
1700 TT Huss offsite for day
OCT 08 2019

- 0629 TT Huss arrives onsite check
system all DT's show down.
check on GW @ Location 3
appears to be working. Cycle it.
Download data from all DistTrk
DT's @ 3+4 were shut down
because no power DT-4 Generator off.
DT-3 was unplugged w/ generator running.
- Pause Run to allow calibration
of Area RAEs
- Restart after calibration complete
- Note negative HEN Readings +
request Bashore - zero out
all area RAEs. This appears to
solve negative reading issue
1530 TT Huss offsite for day
OCT 09 2019 TT DAVID ROTH
0700 - TT Reed on-site
1800 - TT Reed DT's all have power issues
AND DATA COLLECTION TROUBLE

- SOLVING THE PUNCH ISSUE USING
BATTERIES FROM PINE
- 1805 - TT Reed OFF SITE *David*
- OCTOBER 10, 2019 TT D. Reed
- 0700 TT Reed ON-SITE
- ALL DT'S RAN OVER NIGHT WITHOUT
POWER LOSS
- SOUTH LOCATION STILL THE ONLY ONE
SENDING DATA TO VIPER.
- 1400 hrs TT Reed OFF SITE *David*
- OCTOBER 11, 2019
- 0712 TT Huss onsite
- Down load All DT's
- Restart - SmartBakery twice
- Restart PRC-2CAP Multityper
- 1530 TT Huss offsite for day
- 0646 TT 10/12/19
- Huss arrives onsite and checks
on system. Attends to local safety issues
- Generate daily Summary Report and
have reviewed.
- ISSUE Summary Report + check
on DT-4 GW which worked with both
to get connected to Viper
- 1515 TT Huss offsite for day *David*

October 14, 2019

- 0646 Tt-E Huss arrives on site checks
off monitoring system + attend
tailgate safety meeting @ 7:00
- Download data from DustTrak
 - Prepare Summary Report + send to owner
 - Submit Report after it was ready
 - Run so that the system can be calibrated
 - Restart after calibration completed
 - Meet with owner. No report needed
tomorrow. Just pack up & go.

1525 Tt Huss off site for day

October 15, 2019

0621 Tt-E Huss arrives on site proceeds
to download data from DustTrak
and shut them down

0703 Stop Run on Viper proceed w/
Barry Mike to breakdown &
load up equipment.
Pack up Rover DustTrak for
ER contractor.

0900 Barry Mike off site for job.
work on packing up remaining
supplies & cleaning off truck

1320 Tt-E Huss off site for project

ATTACHMENT 1
LABORATORY ANALYTICAL DATA PACKAGE
(675 Pages)

ENTHALPY ANALYTICAL REPORT: 0719-205

Sample Collection Date: 07/27/2019

Analyses:

Volatile Organic Compounds (VOC) via EPA Method Toxic Organics (TO)-15

Semivolatile Organic Compounds (SVOC) via EPA Method 8270D

Formaldehyde via EPA Method TO 11A

Phosgene via Occupational Safety and Health Administration (OSHA) Method 61

Target Analyte List (TAL) Metals via EPA Compendium Method IO-3.4 & 3.5

Tetra Tech, Inc.

3746 Mt. Diablo Blvd. Suite 300
Lafayette, CA 94549

Able Contracting
Richland, SC

Analytical Report
(0719-205)

EPA Method TO-11A
Formaldehyde

OSHA Method 61 (2-fraction)
Phosgene

EPA Method TO-15
TO-15 Compound List

EPA Method 8270D
SV Target Compound List



Enthalpy Analytical, LLC

Phone: (919) 850 - 4392 / Fax: (919) 850 - 9012 / www.enthalpy.com
800-1 Capitola Drive Durham, NC 27713-4385

I certify that to the best of my knowledge all analytical data presented in this report:

- Have been checked for completeness
- Are accurate, error-free, and legible
- Have been conducted in accordance with approved protocol, and that all deviations and analytical problems are summarized in the appropriate narrative(s)

This analytical report was prepared in Portable Document Format (.PDF) and contains ??? pages.

Report Issued: xx/xx/xxxx



Summary of Results

Enthalpy Analytical

Company: Tetra Tech, Inc.

Job No.: 0719-205 EPA Method TO-11A Analysis -

Site: Able Contracting - Richland, SC

Summary Table - Formaldehyde

Sample ID	Concentration (ug/m3)
<i>ACF-AS-RES-AM-072719 DNPH Tube 7969802213</i>	1.70
<i>ACF-AS-Smoke-AM-072719 DNPH Tube 7969802214</i>	2.50
<i>ACF-AS-RES-PM-072719 DNPH Tube 7969802217</i>	3.04
<i>ACF-AS-Smoke-PM-072719 DNPH Tube 7969802216</i>	6.09
<i>ACF-AS-BKGD-072819 DNPH Tube 7969802215</i>	4.88

Sample ID	Catch Weight (ug)
<i>ACF-Blank-DNPH Tube 7969802212</i>	0.0726 J

Enthalpy Analytical

Job No.: 0719-205 OSHA Method 61 (two-fraction) Analysis

Tetra Tech, Inc. Able Contracting: Richland, SC

Analyst: Daniel Clayton

Summary Table - Phosgene

Sample ID	Concentration (ug/m ³)
ACF-AS-RES-AM-7/28/19 HMP Tubes 8123100531 and 8123100530	3.95 J
ACF-AS-Smoke-AM-7/28/19 HMP Tubes 8123100523 and 8123100529	3.17 J
ACF-AS-RES-PM-7/28/19 HMP Tubes 8123100526 and 8123100532	3.94 J
ACF-AS-Smoke-PM-7/28/19 HMP Tubes 8123100528 and 8123100524	4.27 J
ACF-AS-BKGD-7/28/19 HMP Tubes 8123100527 and 8123100525	4.31 J

Sample ID	Catch Weight (ug)
ACF-Blank HMP Tubes 8123100608 and 8123100615	1.61 J

Results

Enthalpy Analytical

Company: Tetra Tech, Inc.

Job No.: 0719-205 EPA Method TO-11A Analysis -

Site: Able Contracting - Richland, SC

Formaldehyde

Sample ID	Filename	Analysis Method	MDL (ug/mL)	Curve Min (ug/mL)	Curve Max (ug/mL)	Ret Time (min)	Conc. (ug/mL)	DF	Liquid Vol. (mL)	Catch Weight (ug)	Gas Vol. (L)	Conc (ug/m3)	Flag
ACF-AS-RES-AM-072719 DNPH Tube 7969802213	036	Groucho768.m	0.0112	0.112	15.0	2.67	0.140	1	5.00	0.700	410.6	1.70	
LD / ACF-AS-RES-AM-072719 DNPH Tube 7969802213	037	Groucho768.m	0.0112	0.112	15.0	2.69	0.140	1	5.00	0.702	410.6	1.71	
Difference:												0.3%	

ACF-AS-Smoke-AM-072719 DNPH Tube 7969802214	038	Groucho768.m	0.0112	0.112	15.0	2.69	0.206	1	5.00	1.03	411.8	2.50	
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ACF-AS-RES-PM-072719 DNPH Tube 7969802217	039	Groucho768.m	0.0112	0.112	15.0	2.69	0.329	1	5.00	1.65	541.5	3.04	
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ACF-AS-Smoke-PM-072719 DNPH Tube 7969802216	040	Groucho768.m	0.0112	0.112	15.0	2.69	0.669	1	5.00	3.35	549.5	6.09	
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ACF-AS-BKGD-072819 DNPH Tube 7969802215	041	Groucho768.m	0.0112	0.112	15.0	2.69	0.504	1	5.00	2.52	516.2	4.88	
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ACF-Blank-DNPH Tube 7969802212	042	Groucho768.m	0.0112	0.112	15.0	2.69	0.0145	1	5.00	0.0726			J
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HPLCPrep3581.MB	043	Groucho768.m	0.0112	0.112	15.0	2.69	0.0140	1	5.00	0.0701			J
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Enthalpy Analytical

Job No.: 0719-205 OSHA Method 61 (two-fraction) Analysis

Tetra Tech, Inc. Able Contracting: Richland, SC

Analyst: Daniel Clayton

Sample ID	Filename	MDL	Curve Min	Curve Max	Ret Time (min)	Conc. (ug/mL)	DF	Liquid Vol (mL)	Catch Weight (ug)	Gas Vol (L)	Conc. (ug/m3)	Flag
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Phosgene

ACF-AS-RES-AM-072819-FH-HMP-Tube 8123100531 FH	040B0801.D	0.0999	0.999	9.99	5.34	0.697	1	1.00	0.697	473.9	1.47	J
ACF-AS-RES-AM-072819-FH-HMP-Tube 8123100531 BH	041B0901.D	0.0999	0.999	9.99	5.34	0.265	1	1.00	0.265	473.9	0.558	J
ACF-AS-RES-AM-072819-BH-HMP-Tube 8123100530 FH	042B1001.D	0.0999	0.999	9.99	5.34	0.596	1	1.00	0.596	473.9	1.26	J
ACF-AS-RES-AM-072819-BH-HMP-Tube 8123100530 BH	043B1101.D	0.0999	0.999	9.99	5.34	0.316	1	1.00	0.316	473.9	0.667	J
											3.95	J

ACF-AS-Smoke-AM-072819-FH-HMP-Tube 8123100523 FH	044B1301.D	0.0999	0.999	9.99	5.34	0.747	1	1.00	0.747	603.9	1.24	J
ACF-AS-Smoke-AM-072819-FH-HMP-Tube 8123100523 BH	045B1401.D	0.0999	0.999	9.99	5.34	0.299	1	1.00	0.299	603.9	0.495	J
ACF-AS-Smoke-AM-072819-BH-HMP-Tube 8123100529 FH	046B1501.D	0.0999	0.999	9.99	5.34	0.575	1	1.00	0.575	603.9	0.95	J
ACF-AS-Smoke-AM-072819-BH-HMP-Tube 8123100529 BH	047B1601.D	0.0999	0.999	9.99	5.34	0.296	1	1.00	0.296	603.9	0.490	J
											3.17	J

ACF-AS-RES-PM-072819-FH-HMP-Tube 8123100526 FH	048B1701.D	0.0999	0.999	9.99	5.36	0.799	1	1.00	0.799	522.5	1.53	J
ACF-AS-RES-PM-072819-FH-HMP-Tube 8123100526 BH	049B1801.D	0.0999	0.999	9.99	5.36	0.339	1	1.00	0.339	522.5	0.649	J
ACF-AS-RES-PM-072819-BH-HMP-Tube 8123100532 FH	050B1901.D	0.0999	0.999	9.99	5.36	0.623	1	1.00	0.623	522.5	1.19	J
ACF-AS-RES-PM-072819-BH-HMP-Tube 8123100532 BH	051B2001.D	0.0999	0.999	9.99	5.36	0.299	1	1.00	0.299	522.5	0.571	J
											3.94	J

ACF-AS-Smoke-PM-072819-FH-HMP-Tube 8123100528 FH	056B2201.D	0.0999	0.999	9.99	5.36	0.819	1	1.00	0.819	515.2	1.59	J
ACF-AS-Smoke-PM-072819-FH-HMP-Tube 8123100528 BH	057B2301.D	0.0999	0.999	9.99	5.36	0.376	1	1.00	0.376	515.2	0.729	J
ACF-AS-Smoke-PM-072819-BH-HMP-Tube 8123100524 FH	058B2401.D	0.0999	0.999	9.99	5.36	0.664	1	1.00	0.664	515.2	1.29	J
ACF-AS-Smoke-PM-072819-BH-HMP-Tube 8123100524 BH	059B2501.D	0.0999	0.999	9.99	5.36	0.341	1	1.00	0.341	515.2	0.661	J
											4.27	J

Enthalpy Analytical

Job No.: 0719-205 OSHA Method 61 (two-fraction) Analysis

Tetra Tech, Inc. Able Contracting: Richland, SC

Analyst: Daniel Clayton

Sample ID	Filename	MDL	Curve Min	Curve Max	Ret Time (min)	Conc. (ug/mL)	DF	Liquid Vol (mL)	Catch Weight (ug)	Gas Vol (L)	Conc. (ug/m3)	Flag
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Phosgene

ACF-AS-BKGD-072819-FH-HMP-Tube 8123100527 FH	035B0301.D	0.0999	0.999	9.99	5.34	0.878	1	1.00	0.878	537.1	1.63	J
ACF-AS-BKGD-072819-FH-HMP-Tube 8123100527 BH	037B0501.D	0.0999	0.999	9.99	5.34	0.371	1	1.00	0.371	537.1	0.691	J
ACF-AS-BKGD-072819-BH-HMP-Tube 8123100525 FH	038B0601.D	0.0999	0.999	9.99	5.34	0.731	1	1.00	0.731	537.1	1.36	J
ACF-AS-BKGD-072819-BH-HMP-Tube 8123100525 BH	039B0701.D	0.0999	0.999	9.99	5.33	0.336	1	1.00	0.336	537.1	0.625	J
											4.31	J

ACF-Blank-FH-HMP-Tube 8123100608 FH	052B2601.D	0.0999	0.999	9.99	5.36	0.516	1	1.00	0.516	J
ACF-Blank-FH-HMP-Tube 8123100608 BH	053B2701.D	0.0999	0.999	9.99	5.36	0.276	1	1.00	0.276	J
ACF-Blank-BH-HMP-Tube 8123100615 FH	054B2801.D	0.0999	0.999	9.99	5.36	0.513	1	1.00	0.513	J
ACF-Blank-BH-HMP-Tube 8123100615 BH	055B2901.D	0.0999	0.999	9.99	5.36	0.309	1	1.00	0.309	J
									1.61	J

gcprep2953 #MB XAD FH	060B3001.D	0.0999	0.999	9.99	5.36	0.489	1	1.00	0.489	J
gcprep2953 #MB XAD BH	061B3101.D	0.0999	0.999	9.99	5.36	0.276	1	1.00	0.276	J
									0.765	J

gcprep2953 #RB	034B0201.D	0.0999	0.999	9.99	NA	0.0999	1	1.00	0.0999			ND
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LD / ACF-AS-BKGD-072819-FH-HMP-Tube 8123100527 FH	036B0401.D	0.0999	0.999	9.99	5.34	0.889	1	1.00	0.889	537.1	1.66	J
											Difference:	1.8%

Sample Name : ACF-AS-RES-AM-072719

Sample Info : 0719-205; Can #0802; 500mL load

Data File : X1902708.D

Dilution : 1

Pressurization Factor : 1.795

Acquisition Date : 2019-07-30 04:33:30

Instrument Method : TO15-SCN.M

Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
Propylene	4.58	0.0689	0.0628	7.88	0.119	0.108	
Freon 12 (CCI2F2)	0.485	0.0701	0.0628	2.40	0.347	0.311	
Freon 114 (C2CI2F4)	ND	0.0719	0.0628	ND	0.502	0.439	
Chloromethane	2.31	0.0700	0.0628	4.76	0.145	0.130	
Chloroethene (Vinyl chloride)	ND	0.0722	0.0628	ND	0.185	0.161	
1,3-Butadiene	0.480	0.0701	0.0628	1.06	0.155	0.139	
Bromomethane	ND	0.0710	0.0628	ND	0.276	0.244	
Chloroethane	ND	0.0724	0.0628	ND	0.191	0.166	
Bromoethene (Vinyl bromide)	ND	0.0716	0.0628	ND	0.313	0.275	
Freon 11 (CCI3F)	0.246	0.0745	0.0628	1.38	0.419	0.353	
Ethanol	2.27	0.180	0.180	4.28	0.338	0.338	
Acrolein	0.214	0.0713	0.0628	0.490	0.163	0.144	
Freon 113 (C2CI3F3)	0.0862	0.0714	0.0628	0.660	0.547	0.481	
1,1-Dichloroethene	ND	0.0719	0.0628	ND	0.285	0.249	
Acetone	3.64	0.0722	0.0628	8.66	0.171	0.149	
Carbon disulfide	0.165	0.0721	0.0628	0.514	0.224	0.196	
Isopropyl alcohol	0.190	0.0721	0.0628	0.468	0.177	0.154	
Allyl chloride (3-chloropropene)	ND	0.0722	0.0628	ND	0.226	0.197	
Acetonitrile	1.29	0.0722	0.0628	2.17	0.121	0.105	
Methylene chloride	0.251	0.0727	0.0628	0.871	0.253	0.218	
trans-1,2-Dichloroethene	ND	0.0732	0.0628	ND	0.290	0.249	
Methyl tert-butyl ether	ND	0.0735	0.0628	ND	0.265	0.226	
Acrylonitrile	ND	0.0734	0.0628	ND	0.159	0.136	
Hexane	0.439	0.0726	0.0628	1.55	0.256	0.221	
1,1-Dichloroethane	ND	0.0707	0.0628	ND	0.286	0.254	
Vinyl acetate	ND	0.0730	0.0628	ND	0.257	0.221	
cis-1,2-Dichloroethene	ND	0.0723	0.0628	ND	0.287	0.249	
Methyl ethyl ketone (2-Butanone)	0.287	0.0729	0.0628	0.847	0.215	0.185	
Ethyl acetate	ND	0.0723	0.0628	ND	0.261	0.226	
Chloroform	ND	0.0726	0.0628	ND	0.354	0.307	
Tetrahydrofuran	0.160	0.0724	0.0628	0.472	0.214	0.185	
1,1,1-Trichloroethane	ND	0.0714	0.0628	ND	0.390	0.343	
Cyclohexane	0.0760	0.0730	0.0628	0.262	0.251	0.216	
Carbon tetrachloride	0.0766	0.0727	0.0628	0.482	0.457	0.395	
Benzene	2.02	0.0717	0.0628	6.46	0.229	0.201	
2,2,4-trimethylpentane	0.147	0.0736	0.0628	0.684	0.344	0.294	
1,2-Dichloroethane	ND	0.0734	0.0628	ND	0.297	0.254	
Heptane	0.188	0.0722	0.0628	0.769	0.296	0.257	
Trichloroethene	ND	0.0721	0.0628	ND	0.387	0.338	
1,2-Dichloropropane	ND	0.0734	0.0628	ND	0.339	0.290	
Methyl methacrylate	ND	0.0745	0.0628	ND	0.305	0.257	
1,4-Dioxane	0.0815	0.0726	0.0628	0.294	0.262	0.226	
Bromodichloromethane	ND	0.0713	0.0628	ND	0.478	0.421	
cis-1,3-Dichloropropene	ND	0.0706	0.0628	ND	0.320	0.285	
Methyl isobutyl ketone	0.0911	0.0740	0.0628	0.373	0.303	0.257	
Toluene	1.72	0.0729	0.0628	6.48	0.275	0.237	
trans-1,3-Dichloropropene	ND	0.0729	0.0628	ND	0.331	0.285	
1,1,2-Trichloroethane	ND	0.0719	0.0628	ND	0.393	0.343	
Tetrachloroethene	ND	0.0724	0.0628	ND	0.491	0.426	
2-Hexanone (Methyl butyl ketone)	ND	0.0729	0.0628	ND	0.299	0.257	
Dibromochloromethane	ND	0.0709	0.0628	ND	0.604	0.535	
1,2-Dibromoethane	ND	0.0727	0.0628	ND	0.559	0.483	
Chlorobenzene	ND	0.0739	0.0628	ND	0.340	0.289	
Ethylbenzene	0.773	0.0707	0.0628	3.36	0.307	0.273	
1,1,1,2-Tetrachloroethane	ND	0.0718	0.0628	ND	0.493	0.431	
m-/p-Xylenes	0.547	0.0727	0.0628	2.37	0.316	0.273	

Sample Name : ACF-AS-RES-AM-072719

Sample Info : 0719-205; Can #0802; 500mL load

Data File : X1902708.D

Dilution : 1

Pressurization Factor : 1.795

Acquisition Date : 2019-07-30 04:33:30

Instrument Method : TO15-SCN.M

Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
o-Xylene	0.219	0.0717	0.0628	0.950	0.311	0.273	
Styrene	0.402	0.0699	0.0628	1.71	0.298	0.268	
Bromoform	ND	0.0721	0.0628	ND	0.745	0.649	
1,1,2,2-Tetrachloroethane	ND	0.0718	0.0628	ND	0.493	0.431	
4-Ethyltoluene	ND	0.0723	0.0628	ND	0.355	0.309	
2-Chlorotoluene	ND	0.0723	0.0628	ND	0.374	0.325	
1,3,5-Trimethylbenzene	ND	0.0720	0.0628	ND	0.354	0.309	
1,2,4-Trimethylbenzene	0.160	0.0714	0.0628	0.784	0.351	0.309	m
1,3-Dichlorobenzene	ND	0.0724	0.0628	ND	0.436	0.378	
1,4-Dichlorobenzene	ND	0.0720	0.0628	ND	0.433	0.378	
Benzyl chloride	ND	0.0717	0.0628	ND	0.371	0.325	
1,2-Dichlorobenzene	ND	0.0732	0.0628	ND	0.440	0.378	
1,2,4-Trichlorobenzene	ND	0.0729	0.0628	ND	0.541	0.466	
Hexachlorobutadiene	ND	0.0719	0.0628	ND	0.767	0.670	
Naphthalene	ND	0.0743	0.0628	ND	0.390	0.329	
1-Bromopropane	ND	0.0709	0.0628	ND	0.357	0.316	
1-Octene	ND	0.0702	0.0628	ND	0.322	0.288	
n-Octane	0.0755	0.0719	0.0628	0.353	0.336	0.294	m
Isopropylbenzene	0.170	0.0729	0.0628	0.838	0.358	0.309	
n-Propylbenzene	ND	0.0730	0.0628	ND	0.359	0.309	

Internal Standards	Response	Retention Time (min)	Concentration (PPBV)	Flag *
Bromochloromethane (IS)	958,197	11.94	5.00	PASS
1,4-Difluorobenzene (IS)	3,467,327	13.69	5.04	PASS
Chlorobenzene-d5 (IS)	2,785,036	17.86	4.80	PASS

(ND) = Not Detected

* (J) = Below Calibration Range, (E) = Above Calibration Range, (m) = Manual Integration

IS Acceptance Criteria: RT +/- 20 sec, Response +/- 40%

Sample Name : ACF-AS-Smoke-AM-072719
Sample Info : 0719-205; Can #0799; 500mL load
Data File : X1902707.D
Dilution : 1
Pressurization Factor : 1.786
Acquisition Date : 2019-07-30 03:37:21
Instrument Method : TO15-SCN.M
Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
Propylene	2.32	0.0685	0.0625	3.99	0.118	0.108	
Freon 12 (CCI2F2)	0.481	0.0697	0.0625	2.38	0.345	0.309	
Freon 114 (C2CI2F4)	ND	0.0715	0.0625	ND	0.500	0.437	
Chloromethane	1.43	0.0697	0.0625	2.95	0.144	0.129	
Chloroethene (Vinyl chloride)	ND	0.0719	0.0625	ND	0.184	0.160	
1,3-Butadiene	0.311	0.0698	0.0625	0.689	0.154	0.138	
Bromomethane	ND	0.0707	0.0625	ND	0.274	0.243	
Chloroethane	ND	0.0720	0.0625	ND	0.190	0.165	
Bromoethene (Vinyl bromide)	ND	0.0712	0.0625	ND	0.312	0.273	
Freon 11 (CCI3F)	0.236	0.0742	0.0625	1.33	0.417	0.351	
Ethanol	1.24	0.179	0.179	2.33	0.337	0.337	
Acrolein	0.217	0.0709	0.0625	0.498	0.163	0.143	m
Freon 113 (C2CI3F3)	0.0714	0.0711	0.0625	0.547	0.545	0.479	
1,1-Dichloroethene	ND	0.0715	0.0625	ND	0.284	0.248	
Acetone	3.16	0.0718	0.0625	7.51	0.171	0.148	
Carbon disulfide	0.0896	0.0717	0.0625	0.279	0.223	0.195	
Isopropyl alcohol	0.177	0.0717	0.0625	0.434	0.176	0.154	
Allyl chloride (3-chloropropene)	ND	0.0719	0.0625	ND	0.225	0.196	
Acetonitrile	0.531	0.0718	0.0625	0.892	0.121	0.105	
Methylene chloride	0.194	0.0723	0.0625	0.674	0.251	0.217	
trans-1,2-Dichloroethene	ND	0.0728	0.0625	ND	0.289	0.248	
Methyl tert-butyl ether	ND	0.0732	0.0625	ND	0.264	0.225	
Acrylonitrile	ND	0.0730	0.0625	ND	0.158	0.136	
Hexane	0.184	0.0722	0.0625	0.647	0.255	0.220	m
1,1-Dichloroethane	ND	0.0704	0.0625	ND	0.285	0.253	
Vinyl acetate	ND	0.0727	0.0625	ND	0.256	0.220	
cis-1,2-Dichloroethene	ND	0.0719	0.0625	ND	0.285	0.248	
Methyl ethyl ketone (2-Butanone)	0.273	0.0726	0.0625	0.805	0.214	0.184	
Ethyl acetate	ND	0.0719	0.0625	ND	0.259	0.225	
Chloroform	ND	0.0722	0.0625	ND	0.353	0.305	
Tetrahydrofuran	0.126	0.0721	0.0625	0.373	0.213	0.184	
1,1,1-Trichloroethane	ND	0.0711	0.0625	ND	0.388	0.341	
Cyclohexane	ND	0.0727	0.0625	ND	0.250	0.215	
Carbon tetrachloride	0.0760	0.0723	0.0625	0.478	0.455	0.393	
Benzene	1.06	0.0713	0.0625	3.40	0.228	0.200	
2,2,4-trimethylpentane	ND	0.0732	0.0625	ND	0.342	0.292	
1,2-Dichloroethane	ND	0.0730	0.0625	ND	0.296	0.253	
Heptane	0.0890	0.0718	0.0625	0.365	0.294	0.256	
Trichloroethene	ND	0.0717	0.0625	ND	0.385	0.336	
1,2-Dichloropropane	ND	0.0730	0.0625	ND	0.337	0.289	
Methyl methacrylate	ND	0.0741	0.0625	ND	0.303	0.256	
1,4-Dioxane	ND	0.0722	0.0625	ND	0.260	0.225	
Bromodichloromethane	ND	0.0709	0.0625	ND	0.475	0.419	
cis-1,3-Dichloropropene	ND	0.0702	0.0625	ND	0.319	0.284	
Methyl isobutyl ketone	ND	0.0737	0.0625	ND	0.302	0.256	
Toluene	0.697	0.0726	0.0625	2.62	0.274	0.236	
trans-1,3-Dichloropropene	ND	0.0726	0.0625	ND	0.329	0.284	
1,1,2-Trichloroethane	ND	0.0716	0.0625	ND	0.391	0.341	
Tetrachloroethene	ND	0.0721	0.0625	ND	0.489	0.424	
2-Hexanone (Methyl butyl ketone)	ND	0.0726	0.0625	ND	0.297	0.256	
Dibromochloromethane	ND	0.0705	0.0625	ND	0.601	0.532	
1,2-Dibromoethane	ND	0.0724	0.0625	ND	0.556	0.480	
Chlorobenzene	ND	0.0735	0.0625	ND	0.338	0.288	
Ethylbenzene	0.257	0.0703	0.0625	1.12	0.305	0.271	
1,1,1,2-Tetrachloroethane	ND	0.0714	0.0625	ND	0.490	0.429	
m-/p-Xylenes	0.217	0.0724	0.0625	0.941	0.314	0.271	

Sample Name : ACF-AS-Smoke-AM-072719

Sample Info : 0719-205; Can #0799; 500mL load

Data File : X1902707.D

Dilution : 1

Pressurization Factor : 1.786

Acquisition Date : 2019-07-30 03:37:21

Instrument Method : TO15-SCN.M

Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
o-Xylene	0.0833	0.0714	0.0625	0.362	0.310	0.271	
Styrene	0.500	0.0696	0.0625	2.13	0.296	0.266	
Bromoform	ND	0.0717	0.0625	ND	0.741	0.646	
1,1,2,2-Tetrachloroethane	ND	0.0714	0.0625	ND	0.490	0.429	
4-Ethyltoluene	ND	0.0719	0.0625	ND	0.354	0.307	
2-Chlorotoluene	ND	0.0719	0.0625	ND	0.372	0.324	
1,3,5-Trimethylbenzene	ND	0.0717	0.0625	ND	0.352	0.307	
1,2,4-Trimethylbenzene	0.0648	0.0710	0.0625	0.318	0.349	0.307	J
1,3-Dichlorobenzene	ND	0.0721	0.0625	ND	0.433	0.376	
1,4-Dichlorobenzene	ND	0.0717	0.0625	ND	0.431	0.376	
Benzyl chloride	ND	0.0713	0.0625	ND	0.369	0.324	
1,2-Dichlorobenzene	ND	0.0728	0.0625	ND	0.438	0.376	
1,2,4-Trichlorobenzene	ND	0.0725	0.0625	ND	0.538	0.464	
Hexachlorobutadiene	ND	0.0716	0.0625	ND	0.763	0.667	
Naphthalene	ND	0.0739	0.0625	ND	0.388	0.328	
1-Bromopropane	ND	0.0706	0.0625	ND	0.355	0.314	
1-Octene	ND	0.0699	0.0625	ND	0.321	0.287	
n-Octane	ND	0.0716	0.0625	ND	0.334	0.292	
Isopropylbenzene	0.0855	0.0725	0.0625	0.421	0.356	0.307	
n-Propylbenzene	ND	0.0727	0.0625	ND	0.357	0.307	

Internal Standards	Response	Retention Time (min)	Concentration (PPBV)	Flag *
Bromochloromethane (IS)	956,550	11.93	5.00	PASS
1,4-Difluorobenzene (IS)	3,472,838	13.69	5.04	PASS
Chlorobenzene-d5 (IS)	2,804,458	17.86	4.80	PASS

(ND) = Not Detected

* (J) = Below Calibration Range, (E) = Above Calibration Range, (m) = Manual Integration

IS Acceptance Criteria: RT +/- 20 sec, Response +/- 40%

Sample Name

: ACF-AS-RES-PM-072719

Sample Info

: 0719-205; Can #0809; 500mL load

Data File

: X1902710.D

Dilution

: 1

Pressurization Factor

: 1.834

Acquisition Date

: 2019-07-30 06:25:54

Instrument Method

: TO15-SCN.M

Matrix

: AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
Propylene	1.72	0.0704	0.0642	2.96	0.121	0.110	
Freon 12 (CCI2F2)	0.488	0.0716	0.0642	2.41	0.354	0.317	
Freon 114 (C2CI2F4)	ND	0.0734	0.0642	ND	0.513	0.449	
Chloromethane	0.596	0.0715	0.0642	1.23	0.148	0.133	
Chloroethene (Vinyl chloride)	ND	0.0738	0.0642	ND	0.189	0.164	
1,3-Butadiene	0.348	0.0717	0.0642	0.769	0.159	0.142	
Bromomethane	ND	0.0726	0.0642	ND	0.282	0.249	
Chloroethane	ND	0.0739	0.0642	ND	0.195	0.169	
Bromoethene (Vinyl bromide)	ND	0.0731	0.0642	ND	0.320	0.281	
Freon 11 (CCI3F)	0.249	0.0761	0.0642	1.40	0.428	0.361	
Ethanol	4.91	0.183	0.183	9.26	0.346	0.346	
Acrolein	0.124	0.0728	0.0642	0.283	0.167	0.147	m
Freon 113 (C2CI3F3)	0.0790	0.0730	0.0642	0.605	0.559	0.492	
1,1-Dichloroethene	ND	0.0734	0.0642	ND	0.291	0.255	
Acetone	4.44	0.0737	0.0642	10.5	0.175	0.152	
Carbon disulfide	0.143	0.0737	0.0642	0.444	0.229	0.200	
Isopropyl alcohol	0.386	0.0737	0.0642	0.949	0.181	0.158	
Allyl chloride (3-chloropropene)	ND	0.0738	0.0642	ND	0.231	0.201	
Acetonitrile	0.590	0.0737	0.0642	0.990	0.124	0.108	
Methylene chloride	0.288	0.0743	0.0642	0.999	0.258	0.223	
trans-1,2-Dichloroethene	ND	0.0748	0.0642	ND	0.296	0.255	
Methyl tert-butyl ether	0.0865	0.0751	0.0642	0.312	0.271	0.231	
Acrylonitrile	ND	0.0750	0.0642	ND	0.163	0.139	
Hexane	0.673	0.0742	0.0642	2.37	0.261	0.226	
1,1-Dichloroethane	ND	0.0723	0.0642	ND	0.292	0.260	
Vinyl acetate	ND	0.0746	0.0642	ND	0.263	0.226	
cis-1,2-Dichloroethene	ND	0.0739	0.0642	ND	0.293	0.255	
Methyl ethyl ketone (2-Butanone)	0.207	0.0745	0.0642	0.612	0.220	0.189	
Ethyl acetate	ND	0.0739	0.0642	ND	0.266	0.231	
Chloroform	ND	0.0742	0.0642	ND	0.362	0.313	
Tetrahydrofuran	ND	0.0740	0.0642	ND	0.218	0.189	
1,1,1-Trichloroethane	ND	0.0730	0.0642	ND	0.398	0.350	
Cyclohexane	0.233	0.0746	0.0642	0.803	0.257	0.221	m
Carbon tetrachloride	0.0789	0.0742	0.0642	0.496	0.467	0.404	
Benzene	0.784	0.0732	0.0642	2.50	0.234	0.205	
2,2,4-trimethylpentane	0.104	0.0752	0.0642	0.487	0.351	0.300	
1,2-Dichloroethane	ND	0.0750	0.0642	ND	0.303	0.260	
Heptane	0.217	0.0737	0.0642	0.891	0.302	0.263	
Trichloroethene	ND	0.0737	0.0642	ND	0.396	0.345	
1,2-Dichloropropane	ND	0.0750	0.0642	ND	0.346	0.297	
Methyl methacrylate	ND	0.0761	0.0642	ND	0.312	0.263	
1,4-Dioxane	ND	0.0742	0.0642	ND	0.267	0.231	
Bromodichloromethane	ND	0.0728	0.0642	ND	0.488	0.430	
cis-1,3-Dichloropropene	ND	0.0721	0.0642	ND	0.327	0.291	
Methyl isobutyl ketone	ND	0.0756	0.0642	ND	0.310	0.263	
Toluene	1.35	0.0745	0.0642	5.08	0.281	0.242	
trans-1,3-Dichloropropene	ND	0.0745	0.0642	ND	0.338	0.291	
1,1,2-Trichloroethane	ND	0.0735	0.0642	ND	0.401	0.350	
Tetrachloroethene	0.109	0.0740	0.0642	0.736	0.502	0.435	
2-Hexanone (Methyl butyl ketone)	ND	0.0745	0.0642	ND	0.305	0.263	
Dibromochloromethane	ND	0.0724	0.0642	ND	0.617	0.547	
1,2-Dibromoethane	ND	0.0743	0.0642	ND	0.571	0.493	
Chlorobenzene	ND	0.0755	0.0642	ND	0.348	0.296	
Ethylbenzene	0.177	0.0722	0.0642	0.768	0.313	0.279	
1,1,1,2-Tetrachloroethane	ND	0.0734	0.0642	ND	0.504	0.441	
m-/p-Xylenes	0.577	0.0743	0.0642	2.51	0.323	0.279	

Sample Name : ACF-AS-RES-PM-072719

Sample Info : 0719-205; Can #0809; 500mL load

Data File : X1902710.D

Dilution : 1

Pressurization Factor : 1.834

Acquisition Date : 2019-07-30 06:25:54

Instrument Method : TO15-SCN.M

Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
o-Xylene	0.211	0.0733	0.0642	0.916	0.318	0.279	
Styrene	0.105	0.0715	0.0642	0.446	0.304	0.273	
Bromoform	ND	0.0737	0.0642	ND	0.761	0.664	
1,1,2,2-Tetrachloroethane	ND	0.0734	0.0642	ND	0.504	0.441	
4-Ethyltoluene	ND	0.0739	0.0642	ND	0.363	0.316	
2-Chlorotoluene	ND	0.0739	0.0642	ND	0.382	0.332	
1,3,5-Trimethylbenzene	ND	0.0736	0.0642	ND	0.362	0.316	
1,2,4-Trimethylbenzene	0.166	0.0729	0.0642	0.817	0.358	0.316	m
1,3-Dichlorobenzene	ND	0.0740	0.0642	ND	0.445	0.386	
1,4-Dichlorobenzene	ND	0.0736	0.0642	ND	0.442	0.386	
Benzyl chloride	ND	0.0732	0.0642	ND	0.379	0.332	
1,2-Dichlorobenzene	ND	0.0748	0.0642	ND	0.449	0.386	
1,2,4-Trichlorobenzene	ND	0.0745	0.0642	ND	0.553	0.476	
Hexachlorobutadiene	ND	0.0735	0.0642	ND	0.784	0.685	
Naphthalene	ND	0.0759	0.0642	ND	0.398	0.336	
1-Bromopropane	ND	0.0725	0.0642	ND	0.365	0.323	
1-Octene	ND	0.0717	0.0642	ND	0.329	0.295	
n-Octane	ND	0.0735	0.0642	ND	0.343	0.300	
Isopropylbenzene	ND	0.0745	0.0642	ND	0.366	0.316	
n-Propylbenzene	ND	0.0746	0.0642	ND	0.367	0.316	

Internal Standards	Response	Retention Time (min)	Concentration (PPBV)	Flag *
Bromochloromethane (IS)	977,610	11.94	5.00	PASS
1,4-Difluorobenzene (IS)	3,507,464	13.69	5.04	PASS
Chlorobenzene-d5 (IS)	2,824,077	17.86	4.80	PASS

(ND) = Not Detected

* (J) = Below Calibration Range, (E) = Above Calibration Range, (m) = Manual Integration

IS Acceptance Criteria: RT +/- 20 sec, Response +/- 40%

Sample Name

: ACF-AS-Smoke-PM-072719

Sample Info

: 0719-205; Can #0797; 500mL load

Data File

: X1902709.D

Dilution

: 1

Pressurization Factor

: 1.805

Acquisition Date

: 2019-07-30 05:29:45

Instrument Method

: TO15-SCN.M

Matrix

: AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
Propylene	8.26	0.0692	0.0632	14.2	0.119	0.109	
Freon 12 (CCI2F2)	0.477	0.0705	0.0632	2.36	0.348	0.312	
Freon 114 (C2Cl2F4)	ND	0.0723	0.0632	ND	0.505	0.442	
Chloromethane	5.60	0.0704	0.0632	11.6	0.145	0.130	
Chloroethene (Vinyl chloride)	ND	0.0726	0.0632	ND	0.186	0.161	
1,3-Butadiene	1.00	0.0705	0.0632	2.21	0.156	0.140	
Bromomethane	ND	0.0714	0.0632	ND	0.277	0.245	
Chloroethane	0.105	0.0728	0.0632	0.276	0.192	0.167	m
Bromoethene (Vinyl bromide)	ND	0.0720	0.0632	ND	0.315	0.276	
Freon 11 (CCI3F)	0.227	0.0749	0.0632	1.28	0.421	0.355	
Ethanol	1.36	0.181	0.181	2.56	0.340	0.340	
Acrolein	0.516	0.0717	0.0632	1.18	0.164	0.145	m
Freon 113 (C2Cl3F3)	0.0753	0.0718	0.0632	0.577	0.551	0.484	
1,1-Dichloroethene	ND	0.0723	0.0632	ND	0.287	0.250	
Acetone	6.78	0.0726	0.0632	16.1	0.172	0.150	
Carbon disulfide	0.130	0.0725	0.0632	0.405	0.226	0.197	
Isopropyl alcohol	0.194	0.0725	0.0632	0.478	0.178	0.155	
Allyl chloride (3-chloropropene)	ND	0.0726	0.0632	ND	0.227	0.198	
Acetonitrile	0.969	0.0726	0.0632	1.63	0.122	0.106	
Methylene chloride	0.187	0.0731	0.0632	0.651	0.254	0.219	
trans-1,2-Dichloroethene	ND	0.0736	0.0632	ND	0.292	0.250	
Methyl tert-butyl ether	ND	0.0739	0.0632	ND	0.267	0.228	
Acrylonitrile	0.0932	0.0738	0.0632	0.202	0.160	0.137	
Hexane	0.407	0.0730	0.0632	1.43	0.257	0.223	
1,1-Dichloroethane	ND	0.0711	0.0632	ND	0.288	0.256	
Vinyl acetate	ND	0.0734	0.0632	ND	0.259	0.222	
cis-1,2-Dichloroethene	ND	0.0727	0.0632	ND	0.288	0.250	
Methyl ethyl ketone (2-Butanone)	0.533	0.0734	0.0632	1.57	0.216	0.186	
Ethyl acetate	ND	0.0727	0.0632	ND	0.262	0.228	
Chloroform	ND	0.0730	0.0632	ND	0.356	0.308	
Tetrahydrofuran	0.270	0.0728	0.0632	0.796	0.215	0.186	
1,1,1-Trichloroethane	ND	0.0718	0.0632	ND	0.392	0.345	
Cyclohexane	ND	0.0734	0.0632	ND	0.253	0.217	
Carbon tetrachloride	0.0741	0.0731	0.0632	0.466	0.460	0.397	
Benzene	4.73	0.0721	0.0632	15.1	0.230	0.202	
2,2,4-trimethylpentane	ND	0.0740	0.0632	ND	0.346	0.295	
1,2-Dichloroethane	ND	0.0738	0.0632	ND	0.299	0.256	
Heptane	0.245	0.0726	0.0632	1.00	0.297	0.259	
Trichloroethene	ND	0.0725	0.0632	ND	0.390	0.339	
1,2-Dichloropropane	ND	0.0738	0.0632	ND	0.341	0.292	
Methyl methacrylate	0.209	0.0749	0.0632	0.857	0.307	0.259	
1,4-Dioxane	0.104	0.0730	0.0632	0.374	0.263	0.228	
Bromodichloromethane	ND	0.0717	0.0632	ND	0.480	0.423	
cis-1,3-Dichloropropene	ND	0.0710	0.0632	ND	0.322	0.287	
Methyl isobutyl ketone	ND	0.0744	0.0632	ND	0.305	0.259	
Toluene	2.02	0.0734	0.0632	7.60	0.276	0.238	
trans-1,3-Dichloropropene	ND	0.0734	0.0632	ND	0.333	0.287	
1,1,2-Trichloroethane	ND	0.0723	0.0632	ND	0.395	0.345	
Tetrachloroethene	ND	0.0728	0.0632	ND	0.494	0.428	
2-Hexanone (Methyl butyl ketone)	ND	0.0734	0.0632	ND	0.300	0.259	
Dibromochloromethane	ND	0.0713	0.0632	ND	0.607	0.538	
1,2-Dibromoethane	ND	0.0731	0.0632	ND	0.562	0.485	
Chlorobenzene	ND	0.0743	0.0632	ND	0.342	0.291	
Ethylbenzene	1.35	0.0710	0.0632	5.86	0.308	0.274	
1,1,1,2-Tetrachloroethane	ND	0.0722	0.0632	ND	0.496	0.434	
m-/p-Xylenes	0.383	0.0731	0.0632	1.66	0.318	0.274	

Sample Name : ACF-AS-Smoke-PM-072719
Sample Info : 0719-205; Can #0797; 500mL load
Data File : X1902709.D
Dilution : 1
Pressurization Factor : 1.805
Acquisition Date : 2019-07-30 05:29:45
Instrument Method : TO15-SCN.M
Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
o-Xylene	0.175	0.0721	0.0632	0.759	0.313	0.274	
Styrene	2.03	0.0703	0.0632	8.66	0.300	0.269	
Bromoform	ND	0.0725	0.0632	ND	0.749	0.653	
1,1,2,2-Tetrachloroethane	ND	0.0722	0.0632	ND	0.496	0.434	
4-Ethyltoluene	ND	0.0727	0.0632	ND	0.357	0.311	
2-Chlorotoluene	ND	0.0727	0.0632	ND	0.376	0.327	
1,3,5-Trimethylbenzene	ND	0.0724	0.0632	ND	0.356	0.311	
1,2,4-Trimethylbenzene	0.0841	0.0718	0.0632	0.414	0.353	0.311	m
1,3-Dichlorobenzene	ND	0.0728	0.0632	ND	0.438	0.380	
1,4-Dichlorobenzene	ND	0.0724	0.0632	ND	0.435	0.380	
Benzyl chloride	ND	0.0721	0.0632	ND	0.373	0.327	
1,2-Dichlorobenzene	ND	0.0736	0.0632	ND	0.442	0.380	
1,2,4-Trichlorobenzene	ND	0.0733	0.0632	ND	0.544	0.469	
Hexachlorobutadiene	ND	0.0723	0.0632	ND	0.772	0.674	
Naphthalene	0.102	0.0747	0.0632	0.537	0.392	0.331	
1-Bromopropane	ND	0.0713	0.0632	ND	0.359	0.318	
1-Octene	ND	0.0706	0.0632	ND	0.324	0.290	
n-Octane	0.120	0.0723	0.0632	0.562	0.338	0.295	m
Isopropylbenzene	0.217	0.0733	0.0632	1.06	0.360	0.311	
n-Propylbenzene	ND	0.0734	0.0632	ND	0.361	0.311	

Internal Standards	Response	Retention Time (min)	Concentration (PPBV)	Flag *
Bromochloromethane (IS)	976,965	11.93	5.00	PASS
1,4-Difluorobenzene (IS)	3,519,818	13.69	5.04	PASS
Chlorobenzene-d5 (IS)	2,850,934	17.86	4.80	PASS

(ND) = Not Detected
* (J) = Below Calibration Range, (E) = Above Calibration Range, (m) = Manual Integration
IS Acceptance Criteria: RT +/- 20 sec, Response +/- 40%

Sample Name : ACF-AS-Bkgd-072819

Sample Info : 0719-205; Can #0808; 500mL load

Data File : X1902706.D

Dilution : 1

Pressurization Factor : 1.787

Acquisition Date : 2019-07-30 02:41:12

Instrument Method : TO15-SCN.M

Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
Propylene	1.69	0.0685	0.0625	2.91	0.118	0.108	
Freon 12 (CCI2F2)	0.470	0.0698	0.0625	2.33	0.345	0.309	
Freon 114 (C2CI2F4)	ND	0.0716	0.0625	ND	0.500	0.437	
Chloromethane	0.596	0.0697	0.0625	1.23	0.144	0.129	
Chloroethene (Vinyl chloride)	ND	0.0719	0.0625	ND	0.184	0.160	
1,3-Butadiene	0.339	0.0698	0.0625	0.749	0.154	0.138	
Bromomethane	ND	0.0707	0.0625	ND	0.275	0.243	
Chloroethane	ND	0.0721	0.0625	ND	0.190	0.165	
Bromoethene (Vinyl bromide)	ND	0.0713	0.0625	ND	0.312	0.274	
Freon 11 (CCI3F)	0.211	0.0742	0.0625	1.18	0.417	0.351	
Ethanol	8.84	0.179	0.179	16.7	0.337	0.337	
Acrolein	0.109	0.0710	0.0625	0.250	0.163	0.143	m
Freon 113 (C2CI3F3)	0.0723	0.0711	0.0625	0.554	0.545	0.479	
1,1-Dichloroethene	ND	0.0716	0.0625	ND	0.284	0.248	
Acetone	5.05	0.0718	0.0625	12.0	0.171	0.149	
Carbon disulfide	0.0687	0.0718	0.0625	0.214	0.223	0.195	m J
Isopropyl alcohol	0.164	0.0718	0.0625	0.404	0.176	0.154	
Allyl chloride (3-chloropropene)	ND	0.0719	0.0625	ND	0.225	0.196	
Acetonitrile	1.10	0.0718	0.0625	1.85	0.121	0.105	
Methylene chloride	0.199	0.0724	0.0625	0.691	0.251	0.217	
trans-1,2-Dichloroethene	ND	0.0728	0.0625	ND	0.289	0.248	
Methyl tert-butyl ether	ND	0.0732	0.0625	ND	0.264	0.225	
Acrylonitrile	ND	0.0731	0.0625	ND	0.159	0.136	
Hexane	1.15	0.0723	0.0625	4.05	0.255	0.220	
1,1-Dichloroethane	ND	0.0704	0.0625	ND	0.285	0.253	
Vinyl acetate	ND	0.0727	0.0625	ND	0.256	0.220	
cis-1,2-Dichloroethene	ND	0.0720	0.0625	ND	0.285	0.248	
Methyl ethyl ketone (2-Butanone)	0.345	0.0726	0.0625	1.02	0.214	0.184	m
Ethyl acetate	ND	0.0720	0.0625	ND	0.259	0.225	
Chloroform	ND	0.0723	0.0625	ND	0.353	0.305	
Tetrahydrofuran	ND	0.0721	0.0625	ND	0.213	0.184	
1,1,1-Trichloroethane	ND	0.0711	0.0625	ND	0.388	0.341	
Cyclohexane	0.290	0.0727	0.0625	0.999	0.250	0.215	m
Carbon tetrachloride	0.0765	0.0723	0.0625	0.481	0.455	0.393	
Benzene	0.789	0.0713	0.0625	2.52	0.228	0.200	
2,2,4-trimethylpentane	0.454	0.0733	0.0625	2.12	0.342	0.292	
1,2-Dichloroethane	ND	0.0731	0.0625	ND	0.296	0.253	
Heptane	0.551	0.0718	0.0625	2.26	0.294	0.256	
Trichloroethene	ND	0.0718	0.0625	ND	0.386	0.336	
1,2-Dichloropropane	ND	0.0731	0.0625	ND	0.338	0.289	
Methyl methacrylate	ND	0.0741	0.0625	ND	0.304	0.256	
1,4-Dioxane	0.0890	0.0723	0.0625	0.321	0.260	0.225	
Bromodichloromethane	ND	0.0710	0.0625	ND	0.476	0.419	
cis-1,3-Dichloropropene	ND	0.0703	0.0625	ND	0.319	0.284	
Methyl isobutyl ketone	ND	0.0737	0.0625	ND	0.302	0.256	
Toluene	2.61	0.0726	0.0625	9.82	0.274	0.236	
trans-1,3-Dichloropropene	ND	0.0726	0.0625	ND	0.330	0.284	
1,1,2-Trichloroethane	ND	0.0716	0.0625	ND	0.391	0.341	
Tetrachloroethene	ND	0.0721	0.0625	ND	0.489	0.424	
2-Hexanone (Methyl butyl ketone)	ND	0.0726	0.0625	ND	0.298	0.256	
Dibromochloromethane	ND	0.0706	0.0625	ND	0.601	0.533	
1,2-Dibromoethane	ND	0.0724	0.0625	ND	0.556	0.481	
Chlorobenzene	ND	0.0736	0.0625	ND	0.339	0.288	
Ethylbenzene	0.478	0.0703	0.0625	2.07	0.305	0.272	
1,1,1,2-Tetrachloroethane	ND	0.0715	0.0625	ND	0.491	0.429	
m-/p-Xylenes	1.58	0.0724	0.0625	6.86	0.314	0.272	

Sample Name : ACF-AS-Bkgd-072819

Sample Info : 0719-205; Can #0808; 500mL load

Data File : X1902706.D

Dilution : 1

Pressurization Factor : 1.787

Acquisition Date : 2019-07-30 02:41:12

Instrument Method : TO15-SCN.M

Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
o-Xylene	0.634	0.0714	0.0625	2.75	0.310	0.272	
Styrene	0.0818	0.0696	0.0625	0.348	0.297	0.266	
Bromoform	ND	0.0718	0.0625	ND	0.742	0.647	
1,1,2,2-Tetrachloroethane	ND	0.0715	0.0625	ND	0.491	0.429	
4-Ethyltoluene	0.186	0.0720	0.0625	0.913	0.354	0.307	m
2-Chlorotoluene	ND	0.0720	0.0625	ND	0.373	0.324	
1,3,5-Trimethylbenzene	0.183	0.0717	0.0625	0.898	0.352	0.307	
1,2,4-Trimethylbenzene	0.657	0.0711	0.0625	3.23	0.349	0.307	m
1,3-Dichlorobenzene	ND	0.0721	0.0625	ND	0.434	0.376	
1,4-Dichlorobenzene	ND	0.0717	0.0625	ND	0.431	0.376	
Benzyl chloride	ND	0.0713	0.0625	ND	0.369	0.324	
1,2-Dichlorobenzene	ND	0.0728	0.0625	ND	0.438	0.376	
1,2,4-Trichlorobenzene	ND	0.0726	0.0625	ND	0.538	0.464	
Hexachlorobutadiene	ND	0.0716	0.0625	ND	0.764	0.667	
Naphthalene	0.0642	0.0740	0.0625	0.336	0.388	0.328	J
1-Bromopropane	ND	0.0706	0.0625	ND	0.355	0.315	
1-Octene	ND	0.0699	0.0625	ND	0.321	0.287	
n-Octane	0.212	0.0716	0.0625	0.990	0.335	0.292	m
Isopropylbenzene	ND	0.0726	0.0625	ND	0.357	0.307	
n-Propylbenzene	0.128	0.0727	0.0625	0.629	0.357	0.307	

Internal Standards	Response	Retention Time (min)	Concentration (PPBV)	Flag *
Bromochloromethane (IS)	953,670	11.94	5.00	PASS
1,4-Difluorobenzene (IS)	3,452,164	13.69	5.04	PASS
Chlorobenzene-d5 (IS)	2,804,962	17.86	4.80	PASS

(ND) = Not Detected

* (J) = Below Calibration Range, (E) = Above Calibration Range, (m) = Manual Integration

IS Acceptance Criteria: RT +/- 20 sec, Response +/- 40%

Sample Name : ACF-Blank

Sample Info : 0719-205; Can #0821; 500mL load

Data File : X1902705.D

Dilution : 1

Pressurization Factor : 1.000

Acquisition Date : 2019-07-30 01:44:58

Instrument Method : TO15-SCN.M

Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
Propylene	ND	0.0384	0.0350	ND	0.0660	0.0602	
Freon 12 (CCl2F2)	ND	0.0390	0.0350	ND	0.193	0.173	
Freon 114 (C2Cl2F4)	ND	0.0400	0.0350	ND	0.280	0.245	
Chloromethane	ND	0.0390	0.0350	ND	0.0805	0.0723	
Chloroethene (Vinyl chloride)	ND	0.0402	0.0350	ND	0.103	0.0895	
1,3-Butadiene	ND	0.0391	0.0350	ND	0.0865	0.0774	
Bromomethane	ND	0.0396	0.0350	ND	0.154	0.136	
Chloroethane	ND	0.0403	0.0350	ND	0.106	0.0924	
Bromoethene (Vinyl bromide)	ND	0.0399	0.0350	ND	0.174	0.153	
Freon 11 (CCl3F)	ND	0.0415	0.0350	ND	0.233	0.197	
Ethanol	ND	0.100	0.100	ND	0.188	0.188	
Acrolein	ND	0.0397	0.0350	ND	0.0911	0.0803	
Freon 113 (C2Cl3F3)	ND	0.0398	0.0350	ND	0.305	0.268	
1,1-Dichloroethene	ND	0.0400	0.0350	ND	0.159	0.139	
Acetone	ND	0.0402	0.0350	ND	0.0955	0.0831	
Carbon disulfide	ND	0.0402	0.0350	ND	0.125	0.109	
Isopropyl alcohol	ND	0.0402	0.0350	ND	0.0987	0.0860	
Allyl chloride (3-chloropropene)	ND	0.0402	0.0350	ND	0.126	0.110	
Acetonitrile	ND	0.0402	0.0350	ND	0.0675	0.0588	
Methylene chloride	0.0461	0.0405	0.0350	0.160	0.141	0.122	
trans-1,2-Dichloroethene	ND	0.0408	0.0350	ND	0.162	0.139	
Methyl tert-butyl ether	ND	0.0410	0.0350	ND	0.148	0.126	
Acrylonitrile	ND	0.0409	0.0350	ND	0.0887	0.0760	
Hexane	ND	0.0404	0.0350	ND	0.143	0.123	
1,1-Dichloroethane	ND	0.0394	0.0350	ND	0.159	0.142	
Vinyl acetate	ND	0.0407	0.0350	ND	0.143	0.123	
cis-1,2-Dichloroethene	ND	0.0403	0.0350	ND	0.160	0.139	
Methyl ethyl ketone (2-Butanone)	ND	0.0406	0.0350	ND	0.120	0.103	
Ethyl acetate	ND	0.0403	0.0350	ND	0.145	0.126	
Chloroform	ND	0.0404	0.0350	ND	0.197	0.171	
Tetrahydrofuran	ND	0.0404	0.0350	ND	0.119	0.103	
1,1,1-Trichloroethane	ND	0.0398	0.0350	ND	0.217	0.191	
Cyclohexane	ND	0.0407	0.0350	ND	0.140	0.120	
Carbon tetrachloride	ND	0.0405	0.0350	ND	0.255	0.220	
Benzene	ND	0.0399	0.0350	ND	0.128	0.112	
2,2,4-trimethylpentane	ND	0.0410	0.0350	ND	0.192	0.164	
1,2-Dichloroethane	ND	0.0409	0.0350	ND	0.165	0.142	
Heptane	ND	0.0402	0.0350	ND	0.165	0.143	
Trichloroethene	ND	0.0402	0.0350	ND	0.216	0.188	
1,2-Dichloropropane	ND	0.0409	0.0350	ND	0.189	0.162	
Methyl methacrylate	ND	0.0415	0.0350	ND	0.170	0.143	
1,4-Dioxane	ND	0.0404	0.0350	ND	0.146	0.126	
Bromodichloromethane	ND	0.0397	0.0350	ND	0.266	0.235	
cis-1,3-Dichloropropene	ND	0.0393	0.0350	ND	0.178	0.159	
Methyl isobutyl ketone	ND	0.0412	0.0350	ND	0.169	0.143	
Toluene	ND	0.0406	0.0350	ND	0.153	0.132	
trans-1,3-Dichloropropene	ND	0.0406	0.0350	ND	0.184	0.159	
1,1,2-Trichloroethane	ND	0.0401	0.0350	ND	0.219	0.191	
Tetrachloroethene	ND	0.0404	0.0350	ND	0.274	0.237	
2-Hexanone (Methyl butyl ketone)	ND	0.0406	0.0350	ND	0.166	0.143	
Dibromochloromethane	ND	0.0395	0.0350	ND	0.336	0.298	
1,2-Dibromoethane	ND	0.0405	0.0350	ND	0.311	0.269	
Chlorobenzene	ND	0.0412	0.0350	ND	0.189	0.161	
Ethylbenzene	ND	0.0394	0.0350	ND	0.171	0.152	
1,1,1,2-Tetrachloroethane	ND	0.0400	0.0350	ND	0.275	0.240	
m-/p-Xylenes	ND	0.0405	0.0350	ND	0.176	0.152	

Sample Name : ACF-Blank

Sample Info : 0719-205; Can #0821; 500mL load

Data File : X1902705.D

Dilution : 1

Pressurization Factor : 1.000

Acquisition Date : 2019-07-30 01:44:58

Instrument Method : TO15-SCN.M

Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
o-Xylene	ND	0.0400	0.0350	ND	0.174	0.152	
Styrene	ND	0.0390	0.0350	ND	0.166	0.149	
Bromoform	ND	0.0402	0.0350	ND	0.415	0.362	
1,1,2,2-Tetrachloroethane	ND	0.0400	0.0350	ND	0.275	0.240	
4-Ethyltoluene	ND	0.0403	0.0350	ND	0.198	0.172	
2-Chlorotoluene	ND	0.0403	0.0350	ND	0.209	0.181	
1,3,5-Trimethylbenzene	ND	0.0401	0.0350	ND	0.197	0.172	
1,2,4-Trimethylbenzene	ND	0.0398	0.0350	ND	0.195	0.172	
1,3-Dichlorobenzene	ND	0.0404	0.0350	ND	0.243	0.210	
1,4-Dichlorobenzene	ND	0.0401	0.0350	ND	0.241	0.210	
Benzyl chloride	ND	0.0399	0.0350	ND	0.207	0.181	
1,2-Dichlorobenzene	ND	0.0408	0.0350	ND	0.245	0.210	
1,2,4-Trichlorobenzene	ND	0.0406	0.0350	ND	0.301	0.260	
Hexachlorobutadiene	ND	0.0401	0.0350	ND	0.427	0.373	
Naphthalene	ND	0.0414	0.0350	ND	0.217	0.183	
1-Bromopropane	ND	0.0395	0.0350	ND	0.199	0.176	
1-Octene	ND	0.0391	0.0350	ND	0.180	0.161	
n-Octane	ND	0.0401	0.0350	ND	0.187	0.164	
Isopropylbenzene	ND	0.0406	0.0350	ND	0.200	0.172	
n-Propylbenzene	ND	0.0407	0.0350	ND	0.200	0.172	

Internal Standards	Response	Retention Time (min)	Concentration (PPBV)	Flag *
Bromochloromethane (IS)	952,374	11.93	5.00	PASS
1,4-Difluorobenzene (IS)	3,413,584	13.69	5.04	PASS
Chlorobenzene-d5 (IS)	2,676,004	17.87	4.80	PASS

(ND) = Not Detected

* (J) = Below Calibration Range, (E) = Above Calibration Range, (m) = Manual Integration

IS Acceptance Criteria: RT +/- 20 sec, Response +/- 40%

Sample Name

: ACF-AS-RES-AM-072719

Sample Info

: 0719-205

Data File

: W1900511.D

Air Sampling Volume (L): 486.2

Dilution

: 1

Extract Volume

: 5.00

Acquisition Date

: 2019-07-31 18:56:48

Instrument Method

: RXI-M8270.M

Matrix

: LIQUID

Target Compound	MDL (ug/mL)	Concentration (ug/mL)	MDL (ug)	Catch Weight (ug)	MDL (ug/m³)	Catch Weight (ug/m³)	Flag *
N-Nitrosodimethylamine	0.772	ND	3.86	ND	7.94	ND	
Pyridine	1.50	ND	7.50	ND	15.4	ND	
Phenol (CCC)	0.649	ND	3.25	ND	6.67	ND	
Aniline	0.694	ND	3.47	ND	7.14	ND	
bis(2-Chloroethyl)ether	0.788	ND	3.94	ND	8.10	ND	
2-Chlorophenol	0.624	ND	3.12	ND	6.42	ND	
1,3-Dichlorobenzene	0.558	ND	2.79	ND	5.74	ND	
1,4-Dichlorobenzene (CCC)	0.528	ND	2.64	ND	5.43	ND	
Benzyl alcohol	0.700	ND	3.50	ND	7.20	ND	
1,2-Dichlorobenzene	0.558	ND	2.79	ND	5.74	ND	
2-Methylphenol	0.677	ND	3.39	ND	6.96	ND	
bis(2-Chloroisopropyl) ether	0.982	ND	4.91	ND	10.1	ND	
3/4-Methylphenol	0.591	ND	2.96	ND	6.08	ND	
N-Nitroso-di-n-propylamine (SPCC)	0.832	ND	4.16	ND	8.56	ND	
o-Toluidine	5.00	ND	25.0	ND	51.4	ND	
Hexachloroethane	0.632	ND	3.16	ND	6.50	ND	
Nitrobenzene	0.816	ND	4.08	ND	8.39	ND	
Isophorone	0.748	ND	3.74	ND	7.69	ND	
2,4-Dimethylphenol	0.729	ND	3.65	ND	7.50	ND	
2-Nitrophenol (CCC)	0.669	ND	3.35	ND	6.88	ND	
Benzoic acid	5.00	ND	25.0	ND	51.4	ND	
bis(2-Chloroethoxy)methane	0.732	ND	3.66	ND	7.53	ND	
2,4-Dichlorophenol (CCC)	0.652	ND	3.26	ND	6.71	ND	
a,a-Dimethylphenethylamine	5.00	ND	25.0	ND	51.4	ND	
1,2,4-Trichlorobenzene	0.617	ND	3.09	ND	6.35	ND	
Naphthalene	0.665	ND	3.33	ND	6.84	ND	
4-Chloroaniline	0.849	ND	4.25	ND	8.73	ND	
Hexachlorobutadiene (CCC)	0.609	ND	3.05	ND	6.26	ND	
Quinoline	1.00	ND	5.00	ND	10.3	ND	
1,4-Phenylenediamine	5.00	ND	25.0	ND	51.4	ND	
4-Chloro-3 methylphenol (CCC)	0.661	ND	3.31	ND	6.80	ND	
2-Methylnaphthalene	0.618	ND	3.09	ND	6.36	ND	
1-Methylnaphthalene	0.613	ND	3.07	ND	6.30	ND	
Hexachlorocyclopentadiene (SPCC)	8.12	ND	40.6	ND	83.5	ND	
2,4,6-Trichlorophenol (CCC)	0.738	ND	3.69	ND	7.59	ND	
2,4,5-Trichlorophenol	0.541	ND	2.71	ND	5.56	ND	
Biphenyl	5.00	ND	25.0	ND	51.4	ND	
2-Chloronaphthalene	0.652	ND	3.26	ND	6.71	ND	
2-Nitroaniline	0.966	ND	4.83	ND	9.93	ND	
1,4-Dinitrobenzene	0.672	ND	3.36	ND	6.91	ND	
Dimethylphthalate	0.809	ND	4.05	ND	8.32	ND	
1,3-Dinitrobenzene	0.819	ND	4.10	ND	8.42	ND	
2,6-Dinitrotoluene	0.775	ND	3.88	ND	7.97	ND	
1,2-Dinitrobenzene	0.777	ND	3.89	ND	7.99	ND	
Acenaphthylene	0.675	ND	3.38	ND	6.94	ND	
3-Nitroaniline	0.816	ND	4.08	ND	8.39	ND	
Acenaphthene (CCC)	0.934	ND	4.67	ND	9.61	ND	
2,4-Dinitrophenol (SPCC)	5.00	ND	25.0	ND	51.4	ND	
4-Nitrophenol (SPCC)	5.00	ND	25.0	ND	51.4	ND	
2,4-Dinitrotoluene	0.804	ND	4.02	ND	8.27	ND	

Sample Name

: ACF-AS-RES-AM-072719

Sample Info

: 0719-205

Data File

: W1900511.D

Air Sampling Volume (L): 486.2

Dilution

: 1

Extract Volume

: 5.00

Acquisition Date

: 2019-07-31 18:56:48

Instrument Method

: RXI-M8270.M

Matrix

: LIQUID

Target Compound	MDL (ug/mL)	Concentration (ug/mL)	MDL (ug)	Catch Weight (ug)	MDL (ug/m³)	Catch Weight (ug/m³)	Flag *
Dibenzofuran	0.688	ND	3.44	ND	7.08	ND	
2,3,5,6-Tetrachlorophenol	0.761	ND	3.81	ND	7.83	ND	
2,3,4,6-Tetrachlorophenol	0.701	ND	3.51	ND	7.21	ND	
Diethylphthalate	1.02	ND	5.10	ND	10.5	ND	
4-Chlorophenyl-phenylether	0.754	ND	3.77	ND	7.75	ND	
Fluorene	0.783	ND	3.92	ND	8.05	ND	
4-Nitroaniline	0.694	ND	3.47	ND	7.14	ND	
4,6-Dinitro2-methylphenol	5.00	ND	25.0	ND	51.4	ND	
N-Nitrosodiphenylamine (CCC)	0.716	ND	3.58	ND	7.36	ND	
Azobenzene	0.991	ND	4.96	ND	10.2	ND	
4-Bromophenyl-phenylether	0.671	ND	3.36	ND	6.90	ND	
Hexachlorobenzene	0.546	ND	2.73	ND	5.61	ND	
Pentachlorophenol (CCC)	5.00	ND	25.0	ND	51.4	ND	
Phenanthrene	0.771	ND	3.86	ND	7.93	ND	
Anthracene	0.760	ND	3.80	ND	7.82	ND	
Carbazole	0.705	ND	3.53	ND	7.25	ND	
Di-n-butylphthalate	1.04	ND	5.20	ND	10.7	ND	
Fluoranthene (CCC)	0.919	ND	4.60	ND	9.45	ND	
Benzidine	22.8	ND	114	ND	234	ND	
Pyrene	0.937	ND	4.69	ND	9.64	ND	
4-Dimethylaminoazobenzene	5.00	ND	25.0	ND	51.4	ND	
Butylbenzylphthalate	0.810	ND	4.05	ND	8.33	ND	
3,3-Dimethylbenzidine	10.8	ND	54.0	ND	111	ND	
bis(2-Ethylhexyl)adipate	0.874	ND	4.37	ND	8.99	ND	
3,3-Dimethoxybenzidine	5.00	ND	25.0	ND	51.4	ND	
bis(2-Ethylhexyl)phthalate	1.74	ND	8.70	ND	17.9	ND	
3,3'-Dichlorobenzidine	5.00	ND	25.0	ND	51.4	ND	
Benzo(a)anthracene	0.550	ND	2.75	ND	5.66	ND	
Chrysene	0.556	ND	2.78	ND	5.72	ND	
Di-n-octylphthalate (CCC)	0.644	ND	3.22	ND	6.62	ND	
7,12-Dimethylbenz(a)anthracene	5.00	ND	25.0	ND	51.4	ND	
Benzo(b)fluoranthene	0.300	ND	1.50	ND	3.09	ND	
Benzo(k)fluoranthene	0.356	ND	1.78	ND	3.66	ND	
Benzo(e)pyrene	0.340	ND	1.70	ND	3.50	ND	
Benzo(a)pyrene (CCC)	0.340	ND	1.70	ND	3.50	ND	
Perylene	0.340	ND	1.70	ND	3.50	ND	
3-Methylcholanthrene	5.00	ND	25.0	ND	51.4	ND	
Indeno(1,2,3-cd)pyrene	0.300	ND	1.50	ND	3.09	ND	
Dibenz(a,h)anthracene	0.425	ND	2.13	ND	4.37	ND	
Benzo(g,h,i)perylene	0.352	ND	1.76	ND	3.62	ND	
Dibenzo(a,e)pyrene	5.00	ND	25.0	ND	51.4	ND	

(ND) = Not Detected

* (J) = Below Calibration Range, (E) = Above Calibration Range, (m) = Manual Integration

Sample Name : ACF-AS-RES-AM-072719
Sample Info : 0719-205
Data File : W1900511.D
Dilution : 1
Extract Volume : 5.00
Acquisition Date : 2019-07-31 18:56:48
Instrument Method : RXI-M8270.M
Matrix : LIQUID

Internal Standards	Response	Retention Time (min)	Concentration (ug/mL)	% Deviation	Flag *
1,4-Dichlorobenzene-d4 (I)	392,705	4.24	40.00	10.7	PASS
Naphthalene-d8 (I)	1,431,493	5.32	40.00	11.2	PASS
Acenaphthene-d10 (I)	845,573	6.88	40.00	10.5	PASS
Phenanthrene-d10 (I)	1,455,461	8.23	40.00	9.7	PASS
Chrysene-d12 (I)	1,579,379	12.23	40.00	6.5	PASS
Perylene-d12 (I)	1,468,035	16.35	40.00	7.4	PASS

* (m) = Manual Integration
IS Acceptance Criteria: RT +/- 20 sec, Response +/- 40%

Sample Name

: ACF-AS-SMOKE-AM-072719

Sample Info

: 0719-205

Data File

: W1900512.D

Air Sampling Volume (L): 562.5

Dilution

: 1

Extract Volume

: 5.00

Acquisition Date

: 2019-07-31 19:28:28

Instrument Method

: RXI-M8270.M

Matrix

: LIQUID

Target Compound	MDL (ug/mL)	Concentration (ug/mL)	MDL (ug)	Catch Weight (ug)	MDL (ug/m ³)	Catch Weight (ug/m ³)	Flag *
N-Nitrosodimethylamine	0.772	ND	3.86	ND	6.86	ND	
Pyridine	1.50	ND	7.50	ND	13.3	ND	
Phenol (CCC)	0.649	ND	3.25	ND	5.77	ND	
Aniline	0.694	ND	3.47	ND	6.17	ND	
bis(2-Chloroethyl)ether	0.788	ND	3.94	ND	7.00	ND	
2-Chlorophenol	0.624	ND	3.12	ND	5.55	ND	
1,3-Dichlorobenzene	0.558	ND	2.79	ND	4.96	ND	
1,4-Dichlorobenzene (CCC)	0.528	ND	2.64	ND	4.69	ND	
Benzyl alcohol	0.700	ND	3.50	ND	6.22	ND	
1,2-Dichlorobenzene	0.558	ND	2.79	ND	4.96	ND	
2-Methylphenol	0.677	ND	3.39	ND	6.02	ND	
bis(2-Chloroisopropyl) ether	0.982	ND	4.91	ND	8.73	ND	
3/4-Methylphenol	0.591	ND	2.96	ND	5.25	ND	
N-Nitroso-di-n-propylamine (SPCC)	0.832	ND	4.16	ND	7.40	ND	
o-Toluidine	5.00	ND	25.0	ND	44.4	ND	
Hexachloroethane	0.632	ND	3.16	ND	5.62	ND	
Nitrobenzene	0.816	ND	4.08	ND	7.25	ND	
Isophorone	0.748	ND	3.74	ND	6.65	ND	
2,4-Dimethylphenol	0.729	ND	3.65	ND	6.48	ND	
2-Nitrophenol (CCC)	0.669	ND	3.35	ND	5.95	ND	
Benzoic acid	5.00	ND	25.0	ND	44.4	ND	
bis(2-Chloroethoxy)methane	0.732	ND	3.66	ND	6.51	ND	
2,4-Dichlorophenol (CCC)	0.652	ND	3.26	ND	5.80	ND	
a,a-Dimethylphenethylamine	5.00	ND	25.0	ND	44.4	ND	
1,2,4-Trichlorobenzene	0.617	ND	3.09	ND	5.48	ND	
Naphthalene	0.665	ND	3.33	ND	5.91	ND	
4-Chloroaniline	0.849	ND	4.25	ND	7.55	ND	
Hexachlorobutadiene (CCC)	0.609	ND	3.05	ND	5.41	ND	
Quinoline	1.00	ND	5.00	ND	8.89	ND	
1,4-Phenylenediamine	5.00	ND	25.0	ND	44.4	ND	
4-Chloro-3 methylphenol (CCC)	0.661	ND	3.31	ND	5.88	ND	
2-Methylnaphthalene	0.618	ND	3.09	ND	5.49	ND	
1-Methylnaphthalene	0.613	ND	3.07	ND	5.45	ND	
Hexachlorocyclopentadiene (SPCC)	8.12	ND	40.6	ND	72.2	ND	
2,4,6-Trichlorophenol (CCC)	0.738	ND	3.69	ND	6.56	ND	
2,4,5-Trichlorophenol	0.541	ND	2.71	ND	4.81	ND	
Biphenyl	5.00	ND	25.0	ND	44.4	ND	
2-Chloronaphthalene	0.652	ND	3.26	ND	5.80	ND	
2-Nitroaniline	0.966	ND	4.83	ND	8.59	ND	
1,4-Dinitrobenzene	0.672	ND	3.36	ND	5.97	ND	
Dimethylphthalate	0.809	ND	4.05	ND	7.19	ND	
1,3-Dinitrobenzene	0.819	ND	4.10	ND	7.28	ND	
2,6-Dinitrotoluene	0.775	ND	3.88	ND	6.89	ND	
1,2-Dinitrobenzene	0.777	ND	3.89	ND	6.91	ND	
Acenaphthylene	0.675	ND	3.38	ND	6.00	ND	
3-Nitroaniline	0.816	ND	4.08	ND	7.25	ND	
Acenaphthene (CCC)	0.934	ND	4.67	ND	8.30	ND	
2,4-Dinitrophenol (SPCC)	5.00	ND	25.0	ND	44.4	ND	
4-Nitrophenol (SPCC)	5.00	ND	25.0	ND	44.4	ND	
2,4-Dinitrotoluene	0.804	ND	4.02	ND	7.15	ND	

Sample Name

: ACF-AS-SMOKE-AM-072719

Sample Info

: 0719-205

Data File

: W1900512.D

Air Sampling Volume (L): 562.5

Dilution

: 1

Extract Volume

: 5.00

Acquisition Date

: 2019-07-31 19:28:28

Instrument Method

: RXI-M8270.M

Matrix

: LIQUID

Target Compound	MDL (ug/mL)	Concentration (ug/mL)	MDL (ug)	Catch Weight (ug)	MDL (ug/m³)	Catch Weight (ug/m³)	Flag *
Dibenzofuran	0.688	ND	3.44	ND	6.12	ND	
2,3,5,6-Tetrachlorophenol	0.761	ND	3.81	ND	6.76	ND	
2,3,4,6-Tetrachlorophenol	0.701	ND	3.51	ND	6.23	ND	
Diethylphthalate	1.02	ND	5.10	ND	9.07	ND	
4-Chlorophenyl-phenylether	0.754	ND	3.77	ND	6.70	ND	
Fluorene	0.783	ND	3.92	ND	6.96	ND	
4-Nitroaniline	0.694	ND	3.47	ND	6.17	ND	
4,6-Dinitro2-methylphenol	5.00	ND	25.0	ND	44.4	ND	
N-Nitrosodiphenylamine (CCC)	0.716	ND	3.58	ND	6.36	ND	
Azobenzene	0.991	ND	4.96	ND	8.81	ND	
4-Bromophenyl-phenylether	0.671	ND	3.36	ND	5.96	ND	
Hexachlorobenzene	0.546	ND	2.73	ND	4.85	ND	
Pentachlorophenol (CCC)	5.00	ND	25.0	ND	44.4	ND	
Phenanthrene	0.771	ND	3.86	ND	6.85	ND	
Anthracene	0.760	ND	3.80	ND	6.76	ND	
Carbazole	0.705	ND	3.53	ND	6.27	ND	
Di-n-butylphthalate	1.04	ND	5.20	ND	9.24	ND	
Fluoranthene (CCC)	0.919	ND	4.60	ND	8.17	ND	
Benzidine	22.8	ND	114	ND	203	ND	
Pyrene	0.937	ND	4.69	ND	8.33	ND	
4-Dimethylaminoazobenzene	5.00	ND	25.0	ND	44.4	ND	
Butylbenzylphthalate	0.810	ND	4.05	ND	7.20	ND	
3,3-Dimethylbenzidine	10.8	ND	54.0	ND	96.0	ND	
bis(2-Ethylhexyl)adipate	0.874	ND	4.37	ND	7.77	ND	
3,3-Dimethoxybenzidine	5.00	ND	25.0	ND	44.4	ND	
bis(2-Ethylhexyl)phthalate	1.74	ND	8.70	ND	15.5	ND	
3,3'-Dichlorobenzidine	5.00	ND	25.0	ND	44.4	ND	
Benzo(a)anthracene	0.550	ND	2.75	ND	4.89	ND	
Chrysene	0.556	ND	2.78	ND	4.94	ND	
Di-n-octylphthalate (CCC)	0.644	ND	3.22	ND	5.72	ND	
7,12-Dimethylbenz(a)anthracene	5.00	ND	25.0	ND	44.4	ND	
Benzo(b)fluoranthene	0.300	ND	1.50	ND	2.67	ND	
Benzo(k)fluoranthene	0.356	ND	1.78	ND	3.16	ND	
Benzo(e)pyrene	0.340	ND	1.70	ND	3.02	ND	
Benzo(a)pyrene (CCC)	0.340	ND	1.70	ND	3.02	ND	
Perylene	0.340	ND	1.70	ND	3.02	ND	
3-Methylcholanthrene	5.00	ND	25.0	ND	44.4	ND	
Indeno(1,2,3-cd)pyrene	0.300	ND	1.50	ND	2.67	ND	
Dibenz(a,h)anthracene	0.425	ND	2.13	ND	3.78	ND	
Benzo(g,h,i)perylene	0.352	ND	1.76	ND	3.13	ND	
Dibenzo(a,e)pyrene	5.00	ND	25.0	ND	44.4	ND	

(ND) = Not Detected

* (J) = Below Calibration Range, (E) = Above Calibration Range, (m) = Manual Integration

Sample Name : ACF-AS-SMOKE-AM-072719

Sample Info : 0719-205

Data File : W1900512.D

Dilution : 1

Extract Volume : 5.00

Acquisition Date : 2019-07-31 19:28:28

Instrument Method : RXI-M8270.M

Matrix : LIQUID

Internal Standards	Response	Retention Time (min)	Concentration (ug/mL)	% Deviation	Flag *
1,4-Dichlorobenzene-d4 (I)	393,105	4.24	40.00	10.8	PASS
Naphthalene-d8 (I)	1,418,557	5.32	40.00	10.2	PASS
Acenaphthene-d10 (I)	861,297	6.88	40.00	12.6	PASS
Phenanthrene-d10 (I)	1,483,798	8.23	40.00	11.8	PASS
Chrysene-d12 (I)	1,627,615	12.22	40.00	9.8	PASS
Perylene-d12 (I)	1,511,658	16.34	40.00	10.6	PASS

* (m) = Manual Integration
IS Acceptance Criteria: RT +/- 20 sec, Response +/- 40%

Sample Name

: ACF-AS-RES-PM-072719

Sample Info

: 0719-205

Data File

: W1900513.D

Air Sampling Volume (L): 421.4

Dilution

: 1

Extract Volume

: 5.00

Acquisition Date

: 2019-07-31 20:00:00

Instrument Method

: RXI-M8270.M

Matrix

: LIQUID

Target Compound	MDL (ug/mL)	Concentration (ug/mL)	MDL (ug)	Catch Weight (ug)	MDL (ug/m ³)	Catch Weight (ug/m ³)	Flag *
N-Nitrosodimethylamine	0.772	ND	3.86	ND	9.16	ND	
Pyridine	1.50	ND	7.50	ND	17.8	ND	
Phenol (CCC)	0.649	ND	3.25	ND	7.70	ND	
Aniline	0.694	ND	3.47	ND	8.23	ND	
bis(2-Chloroethyl)ether	0.788	ND	3.94	ND	9.35	ND	
2-Chlorophenol	0.624	ND	3.12	ND	7.40	ND	
1,3-Dichlorobenzene	0.558	ND	2.79	ND	6.62	ND	
1,4-Dichlorobenzene (CCC)	0.528	ND	2.64	ND	6.26	ND	
Benzyl alcohol	0.700	ND	3.50	ND	8.31	ND	
1,2-Dichlorobenzene	0.558	ND	2.79	ND	6.62	ND	
2-Methylphenol	0.677	ND	3.39	ND	8.03	ND	
bis(2-Chloroisopropyl) ether	0.982	ND	4.91	ND	11.7	ND	
3/4-Methylphenol	0.591	ND	2.96	ND	7.01	ND	
N-Nitroso-di-n-propylamine (SPCC)	0.832	ND	4.16	ND	9.87	ND	
o-Toluidine	5.00	ND	25.0	ND	59.3	ND	
Hexachloroethane	0.632	ND	3.16	ND	7.50	ND	
Nitrobenzene	0.816	ND	4.08	ND	9.68	ND	
Isophorone	0.748	ND	3.74	ND	8.88	ND	
2,4-Dimethylphenol	0.729	ND	3.65	ND	8.65	ND	
2-Nitrophenol (CCC)	0.669	ND	3.35	ND	7.94	ND	
Benzoic acid	5.00	ND	25.0	ND	59.3	ND	
bis(2-Chloroethoxy)methane	0.732	ND	3.66	ND	8.69	ND	
2,4-Dichlorophenol (CCC)	0.652	ND	3.26	ND	7.74	ND	
a,a-Dimethylphenethylamine	5.00	ND	25.0	ND	59.3	ND	
1,2,4-Trichlorobenzene	0.617	ND	3.09	ND	7.32	ND	
Naphthalene	0.665	ND	3.33	ND	7.89	ND	
4-Chloroaniline	0.849	ND	4.25	ND	10.1	ND	
Hexachlorobutadiene (CCC)	0.609	ND	3.05	ND	7.23	ND	
Quinoline	1.00	ND	5.00	ND	11.9	ND	
1,4-Phenylenediamine	5.00	ND	25.0	ND	59.3	ND	
4-Chloro-3 methylphenol (CCC)	0.661	ND	3.31	ND	7.84	ND	
2-Methylnaphthalene	0.618	ND	3.09	ND	7.33	ND	
1-Methylnaphthalene	0.613	ND	3.07	ND	7.27	ND	
Hexachlorocyclopentadiene (SPCC)	8.12	ND	40.6	ND	96.3	ND	
2,4,6-Trichlorophenol (CCC)	0.738	ND	3.69	ND	8.76	ND	
2,4,5-Trichlorophenol	0.541	ND	2.71	ND	6.42	ND	
Biphenyl	5.00	ND	25.0	ND	59.3	ND	
2-Chloronaphthalene	0.652	ND	3.26	ND	7.74	ND	
2-Nitroaniline	0.966	ND	4.83	ND	11.5	ND	
1,4-Dinitrobenzene	0.672	ND	3.36	ND	7.97	ND	
Dimethylphthalate	0.809	ND	4.05	ND	9.60	ND	
1,3-Dinitrobenzene	0.819	ND	4.10	ND	9.72	ND	
2,6-Dinitrotoluene	0.775	ND	3.88	ND	9.20	ND	
1,2-Dinitrobenzene	0.777	ND	3.89	ND	9.22	ND	
Acenaphthylene	0.675	ND	3.38	ND	8.01	ND	
3-Nitroaniline	0.816	ND	4.08	ND	9.68	ND	
Acenaphthene (CCC)	0.934	ND	4.67	ND	11.1	ND	
2,4-Dinitrophenol (SPCC)	5.00	ND	25.0	ND	59.3	ND	
4-Nitrophenol (SPCC)	5.00	ND	25.0	ND	59.3	ND	
2,4-Dinitrotoluene	0.804	ND	4.02	ND	9.54	ND	

Sample Name

: ACF-AS-RES-PM-072719

Sample Info

: 0719-205

Data File

: W1900513.D

Air Sampling Volume (L): 421.4

Dilution

: 1

Extract Volume

: 5.00

Acquisition Date

: 2019-07-31 20:00:00

Instrument Method

: RXI-M8270.M

Matrix

: LIQUID

Target Compound	MDL (ug/mL)	Concentration (ug/mL)	MDL (ug)	Catch Weight (ug)	MDL (ug/m³)	Catch Weight (ug/m³)	Flag *
Dibenzofuran	0.688	ND	3.44	ND	8.16	ND	
2,3,5,6-Tetrachlorophenol	0.761	ND	3.81	ND	9.03	ND	
2,3,4,6-Tetrachlorophenol	0.701	ND	3.51	ND	8.32	ND	
Diethylphthalate	1.02	ND	5.10	ND	12.1	ND	
4-Chlorophenyl-phenylether	0.754	ND	3.77	ND	8.95	ND	
Fluorene	0.783	ND	3.92	ND	9.29	ND	
4-Nitroaniline	0.694	ND	3.47	ND	8.24	ND	
4,6-Dinitro2-methylphenol	5.00	ND	25.0	ND	59.3	ND	
N-Nitrosodiphenylamine (CCC)	0.716	ND	3.58	ND	8.50	ND	
Azobenzene	0.991	ND	4.96	ND	11.8	ND	
4-Bromophenyl-phenylether	0.671	ND	3.36	ND	7.96	ND	
Hexachlorobenzene	0.546	ND	2.73	ND	6.48	ND	
Pentachlorophenol (CCC)	5.00	ND	25.0	ND	59.3	ND	
Phenanthrene	0.771	ND	3.86	ND	9.15	ND	
Anthracene	0.760	ND	3.80	ND	9.02	ND	
Carbazole	0.705	ND	3.53	ND	8.36	ND	
Di-n-butylphthalate	1.04	ND	5.20	ND	12.3	ND	
Fluoranthene (CCC)	0.919	ND	4.60	ND	10.9	ND	
Benzidine	22.8	ND	114	ND	271	ND	
Pyrene	0.937	ND	4.69	ND	11.1	ND	
4-Dimethylaminoazobenzene	5.00	ND	25.0	ND	59.3	ND	
Butylbenzylphthalate	0.810	ND	4.05	ND	9.61	ND	
3,3-Dimethylbenzidine	10.8	ND	54.0	ND	128	ND	
bis(2-Ethylhexyl)adipate	0.874	ND	4.37	ND	10.4	ND	
3,3-Dimethoxybenzidine	5.00	ND	25.0	ND	59.3	ND	
bis(2-Ethylhexyl)phthalate	1.74	ND	8.70	ND	20.6	ND	
3,3'-Dichlorobenzidine	5.00	ND	25.0	ND	59.3	ND	
Benzo(a)anthracene	0.550	ND	2.75	ND	6.53	ND	
Chrysene	0.556	ND	2.78	ND	6.60	ND	
Di-n-octylphthalate (CCC)	0.644	ND	3.22	ND	7.64	ND	
7,12-Dimethylbenz(a)anthracene	5.00	ND	25.0	ND	59.3	ND	
Benzo(b)fluoranthene	0.300	ND	1.50	ND	3.56	ND	
Benzo(k)fluoranthene	0.356	ND	1.78	ND	4.22	ND	
Benzo(e)pyrene	0.340	ND	1.70	ND	4.03	ND	
Benzo(a)pyrene (CCC)	0.340	ND	1.70	ND	4.03	ND	
Perylene	0.340	ND	1.70	ND	4.03	ND	
3-Methylcholanthrene	5.00	ND	25.0	ND	59.3	ND	
Indeno(1,2,3-cd)pyrene	0.300	ND	1.50	ND	3.56	ND	
Dibenz(a,h)anthracene	0.425	ND	2.13	ND	5.04	ND	
Benzo(g,h,i)perylene	0.352	ND	1.76	ND	4.18	ND	
Dibenzo(a,e)pyrene	5.00	ND	25.0	ND	59.3	ND	

(ND) = Not Detected

* (J) = Below Calibration Range, (E) = Above Calibration Range, (m) = Manual Integration

Sample Name : ACF-AS-RES-PM-072719
Sample Info : 0719-205
Data File : W1900513.D
Dilution : 1
Extract Volume : 5.00
Acquisition Date : 2019-07-31 20:00:00
Instrument Method : RXI-M8270.M
Matrix : LIQUID

Internal Standards	Response	Retention Time (min)	Concentration (ug/mL)	% Deviation	Flag *
1,4-Dichlorobenzene-d4 (I)	383,015	4.24	40.00	8.0	PASS
Naphthalene-d8 (I)	1,394,824	5.32	40.00	8.4	PASS
Acenaphthene-d10 (I)	838,233	6.88	40.00	9.6	PASS
Phenanthrene-d10 (I)	1,437,543	8.23	40.00	8.4	PASS
Chrysene-d12 (I)	1,553,980	12.22	40.00	4.8	PASS
Perylene-d12 (I)	1,452,555	16.35	40.00	6.3	PASS

* (m) = Manual Integration
IS Acceptance Criteria: RT +/- 20 sec, Response +/- 40%

Sample Name

: ACF-AS-SMOKE-PM-072719

Sample Info

: 0719-205

Data File

: W1900514.D

Air Sampling Volume (L): 438.3

Dilution

: 1

Extract Volume

: 5.00

Acquisition Date

: 2019-07-31 20:31:41

Instrument Method

: RXI-M8270.M

Matrix

: LIQUID

Target Compound	MDL (ug/mL)	Concentration (ug/mL)	MDL (ug)	Catch Weight (ug)	MDL (ug/m³)	Catch Weight (ug/m³)	Flag *
N-Nitrosodimethylamine	0.772	ND	3.86	ND	8.81	ND	
Pyridine	1.50	ND	7.50	ND	17.1	ND	
Phenol (CCC)	0.649	ND	3.25	ND	7.40	ND	
Aniline	0.694	ND	3.47	ND	7.92	ND	
bis(2-Chloroethyl)ether	0.788	ND	3.94	ND	8.99	ND	
2-Chlorophenol	0.624	ND	3.12	ND	7.12	ND	
1,3-Dichlorobenzene	0.558	ND	2.79	ND	6.37	ND	
1,4-Dichlorobenzene (CCC)	0.528	ND	2.64	ND	6.02	ND	
Benzyl alcohol	0.700	ND	3.50	ND	7.99	ND	
1,2-Dichlorobenzene	0.558	ND	2.79	ND	6.37	ND	
2-Methylphenol	0.677	ND	3.39	ND	7.72	ND	
bis(2-Chloroisopropyl) ether	0.982	ND	4.91	ND	11.2	ND	
3/4-Methylphenol	0.591	ND	2.96	ND	6.74	ND	
N-Nitroso-di-n-propylamine (SPCC)	0.832	ND	4.16	ND	9.49	ND	
o-Toluidine	5.00	ND	25.0	ND	57.0	ND	
Hexachloroethane	0.632	ND	3.16	ND	7.21	ND	
Nitrobenzene	0.816	ND	4.08	ND	9.31	ND	
Isophorone	0.748	ND	3.74	ND	8.53	ND	
2,4-Dimethylphenol	0.729	ND	3.65	ND	8.32	ND	
2-Nitrophenol (CCC)	0.669	ND	3.35	ND	7.63	ND	
Benzoic acid	5.00	ND	25.0	ND	57.0	ND	
bis(2-Chloroethoxy)methane	0.732	ND	3.66	ND	8.35	ND	
2,4-Dichlorophenol (CCC)	0.652	ND	3.26	ND	7.44	ND	
a,a-Dimethylphenethylamine	5.00	ND	25.0	ND	57.0	ND	
1,2,4-Trichlorobenzene	0.617	ND	3.09	ND	7.04	ND	
Naphthalene	0.665	ND	3.33	ND	7.59	ND	
4-Chloroaniline	0.849	ND	4.25	ND	9.69	ND	
Hexachlorobutadiene (CCC)	0.609	ND	3.05	ND	6.95	ND	
Quinoline	1.00	ND	5.00	ND	11.4	ND	
1,4-Phenylenediamine	5.00	ND	25.0	ND	57.0	ND	
4-Chloro-3 methylphenol (CCC)	0.661	ND	3.31	ND	7.54	ND	
2-Methylnaphthalene	0.618	ND	3.09	ND	7.05	ND	
1-Methylnaphthalene	0.613	ND	3.07	ND	6.99	ND	
Hexachlorocyclopentadiene (SPCC)	8.12	ND	40.6	ND	92.6	ND	
2,4,6-Trichlorophenol (CCC)	0.738	ND	3.69	ND	8.42	ND	
2,4,5-Trichlorophenol	0.541	ND	2.71	ND	6.17	ND	
Biphenyl	5.00	ND	25.0	ND	57.0	ND	
2-Chloronaphthalene	0.652	ND	3.26	ND	7.44	ND	
2-Nitroaniline	0.966	ND	4.83	ND	11.0	ND	
1,4-Dinitrobenzene	0.672	ND	3.36	ND	7.67	ND	
Dimethylphthalate	0.809	ND	4.05	ND	9.23	ND	
1,3-Dinitrobenzene	0.819	ND	4.10	ND	9.34	ND	
2,6-Dinitrotoluene	0.775	ND	3.88	ND	8.84	ND	
1,2-Dinitrobenzene	0.777	ND	3.89	ND	8.86	ND	
Acenaphthylene	0.675	ND	3.38	ND	7.70	ND	
3-Nitroaniline	0.816	ND	4.08	ND	9.31	ND	
Acenaphthene (CCC)	0.934	ND	4.67	ND	10.7	ND	
2,4-Dinitrophenol (SPCC)	5.00	ND	25.0	ND	57.0	ND	
4-Nitrophenol (SPCC)	5.00	ND	25.0	ND	57.0	ND	
2,4-Dinitrotoluene	0.804	ND	4.02	ND	9.17	ND	

Sample Name

: ACF-AS-SMOKE-PM-072719

Sample Info

: 0719-205

Data File

: W1900514.D

Air Sampling Volume (L): 438.3

Dilution

: 1

Extract Volume

: 5.00

Acquisition Date

: 2019-07-31 20:31:41

Instrument Method

: RXI-M8270.M

Matrix

: LIQUID

Target Compound	MDL (ug/mL)	Concentration (ug/mL)	MDL (ug)	Catch Weight (ug)	MDL (ug/m³)	Catch Weight (ug/m³)	Flag *
Dibenzofuran	0.688	ND	3.44	ND	7.85	ND	
2,3,5,6-Tetrachlorophenol	0.761	ND	3.81	ND	8.68	ND	
2,3,4,6-Tetrachlorophenol	0.701	ND	3.51	ND	8.00	ND	
Diethylphthalate	1.02	ND	5.10	ND	11.6	ND	
4-Chlorophenyl-phenylether	0.754	ND	3.77	ND	8.60	ND	
Fluorene	0.783	ND	3.92	ND	8.93	ND	
4-Nitroaniline	0.694	ND	3.47	ND	7.92	ND	
4,6-Dinitro2-methylphenol	5.00	ND	25.0	ND	57.0	ND	
N-Nitrosodiphenylamine (CCC)	0.716	ND	3.58	ND	8.17	ND	
Azobenzene	0.991	ND	4.96	ND	11.3	ND	
4-Bromophenyl-phenylether	0.671	ND	3.36	ND	7.65	ND	
Hexachlorobenzene	0.546	ND	2.73	ND	6.23	ND	
Pentachlorophenol (CCC)	5.00	ND	25.0	ND	57.0	ND	
Phenanthrene	0.771	ND	3.86	ND	8.80	ND	
Anthracene	0.760	ND	3.80	ND	8.67	ND	
Carbazole	0.705	ND	3.53	ND	8.04	ND	
Di-n-butylphthalate	1.04	ND	5.20	ND	11.9	ND	
Fluoranthene (CCC)	0.919	ND	4.60	ND	10.5	ND	
Benzidine	22.8	ND	114	ND	260	ND	
Pyrene	0.937	ND	4.69	ND	10.7	ND	
4-Dimethylaminoazobenzene	5.00	ND	25.0	ND	57.0	ND	
Butylbenzylphthalate	0.810	ND	4.05	ND	9.24	ND	
3,3-Dimethylbenzidine	10.8	ND	54.0	ND	123	ND	
bis(2-Ethylhexyl)adipate	0.874	ND	4.37	ND	9.97	ND	
3,3-Dimethoxybenzidine	5.00	ND	25.0	ND	57.0	ND	
bis(2-Ethylhexyl)phthalate	1.74	ND	8.70	ND	19.8	ND	
3,3'-Dichlorobenzidine	5.00	ND	25.0	ND	57.0	ND	
Benzo(a)anthracene	0.550	ND	2.75	ND	6.27	ND	
Chrysene	0.556	ND	2.78	ND	6.34	ND	
Di-n-octylphthalate (CCC)	0.644	ND	3.22	ND	7.35	ND	
7,12-Dimethylbenz(a)anthracene	5.00	ND	25.0	ND	57.0	ND	
Benzo(b)fluoranthene	0.300	ND	1.50	ND	3.42	ND	
Benzo(k)fluoranthene	0.356	ND	1.78	ND	4.06	ND	
Benzo(e)pyrene	0.340	ND	1.70	ND	3.88	ND	
Benzo(a)pyrene (CCC)	0.340	ND	1.70	ND	3.88	ND	
Perylene	0.340	ND	1.70	ND	3.88	ND	
3-Methylcholanthrene	5.00	ND	25.0	ND	57.0	ND	
Indeno(1,2,3-cd)pyrene	0.300	ND	1.50	ND	3.42	ND	
Dibenz(a,h)anthracene	0.425	ND	2.13	ND	4.85	ND	
Benzo(g,h,i)perylene	0.352	ND	1.76	ND	4.02	ND	
Dibenzo(a,e)pyrene	5.00	ND	25.0	ND	57.0	ND	

(ND) = Not Detected

* (J) = Below Calibration Range, (E) = Above Calibration Range, (m) = Manual Integration

Sample Name : ACF-AS-SMOKE-PM-072719
Sample Info : 0719-205
Data File : W1900514.D
Dilution : 1
Extract Volume : 5.00
Acquisition Date : 2019-07-31 20:31:41
Instrument Method : RXI-M8270.M
Matrix : LIQUID

Internal Standards	Response	Retention Time (min)	Concentration (ug/mL)	% Deviation	Flag *
1,4-Dichlorobenzene-d4 (I)	382,230	4.24	40.00	7.7	PASS
Naphthalene-d8 (I)	1,401,092	5.32	40.00	8.9	PASS
Acenaphthene-d10 (I)	884,341	6.88	40.00	15.6	PASS
Phenanthrene-d10 (I)	1,524,916	8.23	40.00	14.9	PASS
Chrysene-d12 (I)	1,672,645	12.23	40.00	12.8	PASS
Perylene-d12 (I)	1,545,251	16.35	40.00	13.1	PASS

* (m) = Manual Integration
IS Acceptance Criteria: RT +/- 20 sec, Response +/- 40%

Sample Name

: ACF-AS-BKGD-072819

Sample Info

: 0719-205

Data File

: W1900510.D

Air Sampling Volume (L): 439.4

Dilution

: 1

Extract Volume

: 5.00

Acquisition Date

: 2019-07-31 18:25:14

Instrument Method

: RXI-M8270.M

Matrix

: LIQUID

Target Compound	MDL (ug/mL)	Concentration (ug/mL)	MDL (ug)	Catch Weight (ug)	MDL (ug/m³)	Catch Weight (ug/m³)	Flag *
N-Nitrosodimethylamine	0.772	ND	3.86	ND	8.78	ND	
Pyridine	1.50	ND	7.50	ND	17.1	ND	
Phenol (CCC)	0.649	ND	3.25	ND	7.39	ND	
Aniline	0.694	ND	3.47	ND	7.90	ND	
bis(2-Chloroethyl)ether	0.788	ND	3.94	ND	8.97	ND	
2-Chlorophenol	0.624	ND	3.12	ND	7.10	ND	
1,3-Dichlorobenzene	0.558	ND	2.79	ND	6.35	ND	
1,4-Dichlorobenzene (CCC)	0.528	ND	2.64	ND	6.01	ND	
Benzyl alcohol	0.700	ND	3.50	ND	7.97	ND	
1,2-Dichlorobenzene	0.558	ND	2.79	ND	6.35	ND	
2-Methylphenol	0.677	ND	3.39	ND	7.70	ND	
bis(2-Chloroisopropyl) ether	0.982	ND	4.91	ND	11.2	ND	
3/4-Methylphenol	0.591	ND	2.96	ND	6.73	ND	
N-Nitroso-di-n-propylamine (SPCC)	0.832	ND	4.16	ND	9.47	ND	
o-Toluidine	5.00	ND	25.0	ND	56.9	ND	
Hexachloroethane	0.632	ND	3.16	ND	7.19	ND	
Nitrobenzene	0.816	ND	4.08	ND	9.29	ND	
Isophorone	0.748	ND	3.74	ND	8.51	ND	
2,4-Dimethylphenol	0.729	ND	3.65	ND	8.30	ND	
2-Nitrophenol (CCC)	0.669	ND	3.35	ND	7.61	ND	
Benzoic acid	5.00	ND	25.0	ND	56.9	ND	
bis(2-Chloroethoxy)methane	0.732	ND	3.66	ND	8.33	ND	
2,4-Dichlorophenol (CCC)	0.652	ND	3.26	ND	7.42	ND	
a,a-Dimethylphenethylamine	5.00	ND	25.0	ND	56.9	ND	
1,2,4-Trichlorobenzene	0.617	ND	3.09	ND	7.02	ND	
Naphthalene	0.665	ND	3.33	ND	7.57	ND	
4-Chloroaniline	0.849	ND	4.25	ND	9.66	ND	
Hexachlorobutadiene (CCC)	0.609	ND	3.05	ND	6.93	ND	
Quinoline	1.00	ND	5.00	ND	11.4	ND	
1,4-Phenylenediamine	5.00	ND	25.0	ND	56.9	ND	
4-Chloro-3 methylphenol (CCC)	0.661	ND	3.31	ND	7.52	ND	
2-Methylnaphthalene	0.618	ND	3.09	ND	7.03	ND	
1-Methylnaphthalene	0.613	ND	3.07	ND	6.98	ND	
Hexachlorocyclopentadiene (SPCC)	8.12	ND	40.6	ND	92.4	ND	
2,4,6-Trichlorophenol (CCC)	0.738	ND	3.69	ND	8.40	ND	
2,4,5-Trichlorophenol	0.541	ND	2.71	ND	6.16	ND	
Biphenyl	5.00	ND	25.0	ND	56.9	ND	
2-Chloronaphthalene	0.652	ND	3.26	ND	7.42	ND	
2-Nitroaniline	0.966	ND	4.83	ND	11.0	ND	
1,4-Dinitrobenzene	0.672	ND	3.36	ND	7.65	ND	
Dimethylphthalate	0.809	ND	4.05	ND	9.21	ND	
1,3-Dinitrobenzene	0.819	ND	4.10	ND	9.32	ND	
2,6-Dinitrotoluene	0.775	ND	3.88	ND	8.82	ND	
1,2-Dinitrobenzene	0.777	ND	3.89	ND	8.84	ND	
Acenaphthylene	0.675	ND	3.38	ND	7.68	ND	
3-Nitroaniline	0.816	ND	4.08	ND	9.29	ND	
Acenaphthene (CCC)	0.934	ND	4.67	ND	10.6	ND	
2,4-Dinitrophenol (SPCC)	5.00	ND	25.0	ND	56.9	ND	
4-Nitrophenol (SPCC)	5.00	ND	25.0	ND	56.9	ND	
2,4-Dinitrotoluene	0.804	ND	4.02	ND	9.15	ND	

Sample Name

: ACF-AS-BKGD-072819

Sample Info

: 0719-205

Data File

: W1900510.D

Air Sampling Volume (L): 439.4

Dilution

: 1

Extract Volume

: 5.00

Acquisition Date

: 2019-07-31 18:25:14

Instrument Method

: RXI-M8270.M

Matrix

: LIQUID

Target Compound	MDL (ug/mL)	Concentration (ug/mL)	MDL (ug)	Catch Weight (ug)	MDL (ug/m³)	Catch Weight (ug/m³)	Flag *
Dibenzofuran	0.688	ND	3.44	ND	7.83	ND	
2,3,5,6-Tetrachlorophenol	0.761	ND	3.81	ND	8.66	ND	
2,3,4,6-Tetrachlorophenol	0.701	ND	3.51	ND	7.98	ND	
Diethylphthalate	1.02	ND	5.10	ND	11.6	ND	
4-Chlorophenyl-phenylether	0.754	ND	3.77	ND	8.58	ND	
Fluorene	0.783	ND	3.92	ND	8.91	ND	
4-Nitroaniline	0.694	ND	3.47	ND	7.90	ND	
4,6-Dinitro2-methylphenol	5.00	ND	25.0	ND	56.9	ND	
N-Nitrosodiphenylamine (CCC)	0.716	ND	3.58	ND	8.15	ND	
Azobenzene	0.991	ND	4.96	ND	11.3	ND	
4-Bromophenyl-phenylether	0.671	ND	3.36	ND	7.64	ND	
Hexachlorobenzene	0.546	ND	2.73	ND	6.21	ND	
Pentachlorophenol (CCC)	5.00	ND	25.0	ND	56.9	ND	
Phenanthrene	0.771	ND	3.86	ND	8.77	ND	
Anthracene	0.760	ND	3.80	ND	8.65	ND	
Carbazole	0.705	ND	3.53	ND	8.02	ND	
Di-n-butylphthalate	1.04	ND	5.20	ND	11.8	ND	
Fluoranthene (CCC)	0.919	ND	4.60	ND	10.5	ND	
Benzidine	22.8	ND	114	ND	259	ND	
Pyrene	0.937	ND	4.69	ND	10.7	ND	
4-Dimethylaminoazobenzene	5.00	ND	25.0	ND	56.9	ND	
Butylbenzylphthalate	0.810	ND	4.05	ND	9.22	ND	
3,3-Dimethylbenzidine	10.8	ND	54.0	ND	123	ND	
bis(2-Ethylhexyl)adipate	0.874	ND	4.37	ND	9.95	ND	
3,3-Dimethoxybenzidine	5.00	ND	25.0	ND	56.9	ND	
bis(2-Ethylhexyl)phthalate	1.74	ND	8.70	ND	19.8	ND	
3,3'-Dichlorobenzidine	5.00	ND	25.0	ND	56.9	ND	
Benzo(a)anthracene	0.550	ND	2.75	ND	6.26	ND	
Chrysene	0.556	ND	2.78	ND	6.33	ND	
Di-n-octylphthalate (CCC)	0.644	ND	3.22	ND	7.33	ND	
7,12-Dimethylbenz(a)anthracene	5.00	ND	25.0	ND	56.9	ND	
Benzo(b)fluoranthene	0.300	ND	1.50	ND	3.41	ND	
Benzo(k)fluoranthene	0.356	ND	1.78	ND	4.05	ND	
Benzo(e)pyrene	0.340	ND	1.70	ND	3.87	ND	
Benzo(a)pyrene (CCC)	0.340	ND	1.70	ND	3.87	ND	
Perylene	0.340	ND	1.70	ND	3.87	ND	
3-Methylcholanthrene	5.00	ND	25.0	ND	56.9	ND	
Indeno(1,2,3-cd)pyrene	0.300	ND	1.50	ND	3.41	ND	
Dibenz(a,h)anthracene	0.425	ND	2.13	ND	4.84	ND	
Benzo(g,h,i)perylene	0.352	ND	1.76	ND	4.01	ND	
Dibenzo(a,e)pyrene	5.00	ND	25.0	ND	56.9	ND	

(ND) = Not Detected

* (J) = Below Calibration Range, (E) = Above Calibration Range, (m) = Manual Integration

Sample Name : ACF-AS-BKGD-072819
Sample Info : 0719-205
Data File : W1900510.D
Dilution : 1
Extract Volume : 5.00
Acquisition Date : 2019-07-31 18:25:14
Instrument Method : RXI-M8270.M
Matrix : LIQUID

Internal Standards	Response	Retention Time (min)	Concentration (ug/mL)	% Deviation	Flag *
1,4-Dichlorobenzene-d4 (I)	399,406	4.24	40.00	12.6	PASS
Naphthalene-d8 (I)	1,439,960	5.32	40.00	11.9	PASS
Acenaphthene-d10 (I)	883,047	6.88	40.00	15.4	PASS
Phenanthrene-d10 (I)	1,474,593	8.23	40.00	11.2	PASS
Chrysene-d12 (I)	1,580,684	12.22	40.00	6.6	PASS
Perylene-d12 (I)	1,466,669	16.35	40.00	7.3	PASS

* (m) = Manual Integration
IS Acceptance Criteria: RT +/- 20 sec, Response +/- 40%

Sample Name

: ACF-BLANK-TUBE

Sample Info

: 0719-205

Data File

: W1900509.D

Air Sampling Volume (L): 439.4

Dilution

: 1

Extract Volume

: 5.00

Acquisition Date

: 2019-07-31 17:53:29

Instrument Method

: RXI-M8270.M

Matrix

: LIQUID

Target Compound	MDL (ug/mL)	Concentration (ug/mL)	MDL (ug)	Catch Weight (ug)	MDL (ug/m ³)	Catch Weight (ug/m ³)	Flag *
N-Nitrosodimethylamine	0.772	ND	3.86	ND	8.78	ND	
Pyridine	1.50	ND	7.50	ND	17.1	ND	
Phenol (CCC)	0.649	ND	3.25	ND	7.39	ND	
Aniline	0.694	ND	3.47	ND	7.90	ND	
bis(2-Chloroethyl)ether	0.788	ND	3.94	ND	8.97	ND	
2-Chlorophenol	0.624	ND	3.12	ND	7.10	ND	
1,3-Dichlorobenzene	0.558	ND	2.79	ND	6.35	ND	
1,4-Dichlorobenzene (CCC)	0.528	ND	2.64	ND	6.01	ND	
Benzyl alcohol	0.700	ND	3.50	ND	7.97	ND	
1,2-Dichlorobenzene	0.558	ND	2.79	ND	6.35	ND	
2-Methylphenol	0.677	ND	3.39	ND	7.70	ND	
bis(2-Chloroisopropyl) ether	0.982	ND	4.91	ND	11.2	ND	
3/4-Methylphenol	0.591	ND	2.96	ND	6.73	ND	
N-Nitroso-di-n-propylamine (SPCC)	0.832	ND	4.16	ND	9.47	ND	
o-Toluidine	5.00	ND	25.0	ND	56.9	ND	
Hexachloroethane	0.632	ND	3.16	ND	7.19	ND	
Nitrobenzene	0.816	ND	4.08	ND	9.29	ND	
Isophorone	0.748	ND	3.74	ND	8.51	ND	
2,4-Dimethylphenol	0.729	ND	3.65	ND	8.30	ND	
2-Nitrophenol (CCC)	0.669	ND	3.35	ND	7.61	ND	
Benzoic acid	5.00	ND	25.0	ND	56.9	ND	
bis(2-Chloroethoxy)methane	0.732	ND	3.66	ND	8.33	ND	
2,4-Dichlorophenol (CCC)	0.652	ND	3.26	ND	7.42	ND	
a,a-Dimethylphenethylamine	5.00	ND	25.0	ND	56.9	ND	
1,2,4-Trichlorobenzene	0.617	ND	3.09	ND	7.02	ND	
Naphthalene	0.665	ND	3.33	ND	7.57	ND	
4-Chloroaniline	0.849	ND	4.25	ND	9.66	ND	
Hexachlorobutadiene (CCC)	0.609	ND	3.05	ND	6.93	ND	
Quinoline	1.00	ND	5.00	ND	11.4	ND	
1,4-Phenylenediamine	5.00	ND	25.0	ND	56.9	ND	
4-Chloro-3 methylphenol (CCC)	0.661	ND	3.31	ND	7.52	ND	
2-Methylnaphthalene	0.618	ND	3.09	ND	7.03	ND	
1-Methylnaphthalene	0.613	ND	3.07	ND	6.98	ND	
Hexachlorocyclopentadiene (SPCC)	8.12	ND	40.6	ND	92.4	ND	
2,4,6-Trichlorophenol (CCC)	0.738	ND	3.69	ND	8.40	ND	
2,4,5-Trichlorophenol	0.541	ND	2.71	ND	6.16	ND	
Biphenyl	5.00	ND	25.0	ND	56.9	ND	
2-Chloronaphthalene	0.652	ND	3.26	ND	7.42	ND	
2-Nitroaniline	0.966	ND	4.83	ND	11.0	ND	
1,4-Dinitrobenzene	0.672	ND	3.36	ND	7.65	ND	
Dimethylphthalate	0.809	ND	4.05	ND	9.21	ND	
1,3-Dinitrobenzene	0.819	ND	4.10	ND	9.32	ND	
2,6-Dinitrotoluene	0.775	ND	3.88	ND	8.82	ND	
1,2-Dinitrobenzene	0.777	ND	3.89	ND	8.84	ND	
Acenaphthylene	0.675	ND	3.38	ND	7.68	ND	
3-Nitroaniline	0.816	ND	4.08	ND	9.29	ND	
Acenaphthene (CCC)	0.934	ND	4.67	ND	10.6	ND	
2,4-Dinitrophenol (SPCC)	5.00	ND	25.0	ND	56.9	ND	
4-Nitrophenol (SPCC)	5.00	ND	25.0	ND	56.9	ND	
2,4-Dinitrotoluene	0.804	ND	4.02	ND	9.15	ND	

Sample Name

: ACF-BLANK-TUBE

Sample Info

: 0719-205

Data File

: W1900509.D

Air Sampling Volume (L): 439.4

Dilution

: 1

Extract Volume

: 5.00

Acquisition Date

: 2019-07-31 17:53:29

Instrument Method

: RXI-M8270.M

Matrix

: LIQUID

Target Compound	MDL (ug/mL)	Concentration (ug/mL)	MDL (ug)	Catch Weight (ug)	MDL (ug/m³)	Catch Weight (ug/m³)	Flag *
Dibenzofuran	0.688	ND	3.44	ND	7.83	ND	
2,3,5,6-Tetrachlorophenol	0.761	ND	3.81	ND	8.66	ND	
2,3,4,6-Tetrachlorophenol	0.701	ND	3.51	ND	7.98	ND	
Diethylphthalate	1.02	ND	5.10	ND	11.6	ND	
4-Chlorophenyl-phenylether	0.754	ND	3.77	ND	8.58	ND	
Fluorene	0.783	ND	3.92	ND	8.91	ND	
4-Nitroaniline	0.694	ND	3.47	ND	7.90	ND	
4,6-Dinitro2-methylphenol	5.00	ND	25.0	ND	56.9	ND	
N-Nitrosodiphenylamine (CCC)	0.716	ND	3.58	ND	8.15	ND	
Azobenzene	0.991	ND	4.96	ND	11.3	ND	
4-Bromophenyl-phenylether	0.671	ND	3.36	ND	7.64	ND	
Hexachlorobenzene	0.546	ND	2.73	ND	6.21	ND	
Pentachlorophenol (CCC)	5.00	ND	25.0	ND	56.9	ND	
Phenanthrene	0.771	ND	3.86	ND	8.77	ND	
Anthracene	0.760	ND	3.80	ND	8.65	ND	
Carbazole	0.705	ND	3.53	ND	8.02	ND	
Di-n-butylphthalate	1.04	ND	5.20	ND	11.8	ND	
Fluoranthene (CCC)	0.919	ND	4.60	ND	10.5	ND	
Benzidine	22.8	ND	114	ND	259	ND	
Pyrene	0.937	ND	4.69	ND	10.7	ND	
4-Dimethylaminoazobenzene	5.00	ND	25.0	ND	56.9	ND	
Butylbenzylphthalate	0.810	ND	4.05	ND	9.22	ND	
3,3-Dimethylbenzidine	10.8	ND	54.0	ND	123	ND	
bis(2-Ethylhexyl)adipate	0.874	ND	4.37	ND	9.95	ND	
3,3-Dimethoxybenzidine	5.00	ND	25.0	ND	56.9	ND	
bis(2-Ethylhexyl)phthalate	1.74	ND	8.70	ND	19.8	ND	
3,3'-Dichlorobenzidine	5.00	ND	25.0	ND	56.9	ND	
Benzo(a)anthracene	0.550	ND	2.75	ND	6.26	ND	
Chrysene	0.556	ND	2.78	ND	6.33	ND	
Di-n-octylphthalate (CCC)	0.644	ND	3.22	ND	7.33	ND	
7,12-Dimethylbenz(a)anthracene	5.00	ND	25.0	ND	56.9	ND	
Benzo(b)fluoranthene	0.300	ND	1.50	ND	3.41	ND	
Benzo(k)fluoranthene	0.356	ND	1.78	ND	4.05	ND	
Benzo(e)pyrene	0.340	ND	1.70	ND	3.87	ND	
Benzo(a)pyrene (CCC)	0.340	ND	1.70	ND	3.87	ND	
Perylene	0.340	ND	1.70	ND	3.87	ND	
3-Methylcholanthrene	5.00	ND	25.0	ND	56.9	ND	
Indeno(1,2,3-cd)pyrene	0.300	ND	1.50	ND	3.41	ND	
Dibenz(a,h)anthracene	0.425	ND	2.13	ND	4.84	ND	
Benzo(g,h,i)perylene	0.352	ND	1.76	ND	4.01	ND	
Dibenzo(a,e)pyrene	5.00	ND	25.0	ND	56.9	ND	

(ND) = Not Detected

* (J) = Below Calibration Range, (E) = Above Calibration Range, (m) = Manual Integration

Sample Name : ACF-BLANK-TUBE
Sample Info : 0719-205
Data File : W1900509.D
Dilution : 1
Extract Volume : 5.00
Acquisition Date : 2019-07-31 17:53:29
Instrument Method : RXI-M8270.M
Matrix : LIQUID

Internal Standards	Response	Retention Time (min)	Concentration (ug/mL)	% Deviation	Flag *
1,4-Dichlorobenzene-d4 (I)	352,170	4.24	40.00	-0.7	PASS
Naphthalene-d8 (I)	1,291,972	5.32	40.00	0.4	PASS
Acenaphthene-d10 (I)	799,028	6.88	40.00	4.4	PASS
Phenanthrene-d10 (I)	1,361,689	8.23	40.00	2.6	PASS
Chrysene-d12 (I)	1,452,857	12.22	40.00	-2.0	PASS
Perylene-d12 (I)	1,344,660	16.34	40.00	-1.6	PASS

* (m) = Manual Integration
IS Acceptance Criteria: RT +/- 20 sec, Response +/- 40%

Lab QC

Sample Name

: Humid Blank #0702

Sample Info

: 500mL load

Data File

: X1902691.D

Dilution

: 1

Pressurization Factor

: 1.000

Acquisition Date

: 2019-07-29 12:52:34

Instrument Method

: TO15-SCN.M

Matrix

: AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
Propylene	ND	0.0384	0.0350	ND	0.0660	0.0602	
Freon 12 (CCl2F2)	ND	0.0390	0.0350	ND	0.193	0.173	
Freon 114 (C2Cl2F4)	ND	0.0400	0.0350	ND	0.280	0.245	
Chloromethane	ND	0.0390	0.0350	ND	0.0805	0.0723	
Chloroethene (Vinyl chloride)	ND	0.0402	0.0350	ND	0.103	0.0895	
1,3-Butadiene	ND	0.0391	0.0350	ND	0.0865	0.0774	
Bromomethane	ND	0.0396	0.0350	ND	0.154	0.136	
Chloroethane	ND	0.0403	0.0350	ND	0.106	0.0924	
Bromoethene (Vinyl bromide)	ND	0.0399	0.0350	ND	0.174	0.153	
Freon 11 (CCl3F)	ND	0.0415	0.0350	ND	0.233	0.197	
Ethanol	ND	0.100	0.100	ND	0.188	0.188	
Acrolein	ND	0.0397	0.0350	ND	0.0911	0.0803	
Freon 113 (C2Cl3F3)	ND	0.0398	0.0350	ND	0.305	0.268	
1,1-Dichloroethene	ND	0.0400	0.0350	ND	0.159	0.139	
Acetone	0.0480	0.0402	0.0350	0.114	0.0955	0.0831	m
Carbon disulfide	0.0441	0.0402	0.0350	0.137	0.125	0.109	
Isopropyl alcohol	ND	0.0402	0.0350	ND	0.0987	0.0860	
Allyl chloride (3-chloropropene)	ND	0.0402	0.0350	ND	0.126	0.110	
Acetonitrile	ND	0.0402	0.0350	ND	0.0675	0.0588	
Methylene chloride	0.0477	0.0405	0.0350	0.166	0.141	0.122	
trans-1,2-Dichloroethene	ND	0.0408	0.0350	ND	0.162	0.139	
Methyl tert-butyl ether	ND	0.0410	0.0350	ND	0.148	0.126	
Acrylonitrile	ND	0.0409	0.0350	ND	0.0887	0.0760	
Hexane	ND	0.0404	0.0350	ND	0.143	0.123	
1,1-Dichloroethane	ND	0.0394	0.0350	ND	0.159	0.142	
Vinyl acetate	ND	0.0407	0.0350	ND	0.143	0.123	
cis-1,2-Dichloroethene	ND	0.0403	0.0350	ND	0.160	0.139	
Methyl ethyl ketone (2-Butanone)	ND	0.0406	0.0350	ND	0.120	0.103	
Ethyl acetate	ND	0.0403	0.0350	ND	0.145	0.126	
Chloroform	ND	0.0404	0.0350	ND	0.197	0.171	
Tetrahydrofuran	ND	0.0404	0.0350	ND	0.119	0.103	
1,1,1-Trichloroethane	ND	0.0398	0.0350	ND	0.217	0.191	
Cyclohexane	ND	0.0407	0.0350	ND	0.140	0.120	
Carbon tetrachloride	ND	0.0405	0.0350	ND	0.255	0.220	
Benzene	ND	0.0399	0.0350	ND	0.128	0.112	
2,2,4-trimethylpentane	ND	0.0410	0.0350	ND	0.192	0.164	
1,2-Dichloroethane	ND	0.0409	0.0350	ND	0.165	0.142	
Heptane	ND	0.0402	0.0350	ND	0.165	0.143	
Trichloroethene	ND	0.0402	0.0350	ND	0.216	0.188	
1,2-Dichloropropane	ND	0.0409	0.0350	ND	0.189	0.162	
Methyl methacrylate	ND	0.0415	0.0350	ND	0.170	0.143	
1,4-Dioxane	ND	0.0404	0.0350	ND	0.146	0.126	
Bromodichloromethane	ND	0.0397	0.0350	ND	0.266	0.235	
cis-1,3-Dichloropropene	ND	0.0393	0.0350	ND	0.178	0.159	
Methyl isobutyl ketone	ND	0.0412	0.0350	ND	0.169	0.143	
Toluene	ND	0.0406	0.0350	ND	0.153	0.132	
trans-1,3-Dichloropropene	ND	0.0406	0.0350	ND	0.184	0.159	
1,1,2-Trichloroethane	ND	0.0401	0.0350	ND	0.219	0.191	
Tetrachloroethene	ND	0.0404	0.0350	ND	0.274	0.237	
2-Hexanone (Methyl butyl ketone)	ND	0.0406	0.0350	ND	0.166	0.143	
Dibromochloromethane	ND	0.0395	0.0350	ND	0.336	0.298	
1,2-Dibromoethane	ND	0.0405	0.0350	ND	0.311	0.269	
Chlorobenzene	ND	0.0412	0.0350	ND	0.189	0.161	
Ethylbenzene	ND	0.0394	0.0350	ND	0.171	0.152	
1,1,1,2-Tetrachloroethane	ND	0.0400	0.0350	ND	0.275	0.240	
m-/p-Xylenes	ND	0.0405	0.0350	ND	0.176	0.152	

Sample Name: Humid Blank #0702

Sample Info: 500mL load

Data File: X1902691.D

Dilution: 1

Pressurization Factor: 1.000

Acquisition Date: 2019-07-29 12:52:34

Instrument Method: TO15-SCN.M

Matrix: AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
o-Xylene	ND	0.0400	0.0350	ND	0.174	0.152	
Styrene	ND	0.0390	0.0350	ND	0.166	0.149	
Bromoform	ND	0.0402	0.0350	ND	0.415	0.362	
1,1,2,2-Tetrachloroethane	ND	0.0400	0.0350	ND	0.275	0.240	
4-Ethyltoluene	ND	0.0403	0.0350	ND	0.198	0.172	
2-Chlorotoluene	ND	0.0403	0.0350	ND	0.209	0.181	
1,3,5-Trimethylbenzene	ND	0.0401	0.0350	ND	0.197	0.172	
1,2,4-Trimethylbenzene	ND	0.0398	0.0350	ND	0.195	0.172	
1,3-Dichlorobenzene	ND	0.0404	0.0350	ND	0.243	0.210	
1,4-Dichlorobenzene	ND	0.0401	0.0350	ND	0.241	0.210	
Benzyl chloride	ND	0.0399	0.0350	ND	0.207	0.181	
1,2-Dichlorobenzene	ND	0.0408	0.0350	ND	0.245	0.210	
1,2,4-Trichlorobenzene	ND	0.0406	0.0350	ND	0.301	0.260	
Hexachlorobutadiene	ND	0.0401	0.0350	ND	0.427	0.373	
Naphthalene	ND	0.0414	0.0350	ND	0.217	0.183	
1-Bromopropane	ND	0.0395	0.0350	ND	0.199	0.176	
1-Octene	ND	0.0391	0.0350	ND	0.180	0.161	
n-Octane	ND	0.0401	0.0350	ND	0.187	0.164	
Isopropylbenzene	ND	0.0406	0.0350	ND	0.200	0.172	
n-Propylbenzene	ND	0.0407	0.0350	ND	0.200	0.172	

Internal Standards	Response	Retention Time (min)	Concentration (PPBV)	Flag *
Bromochloromethane (IS)	960,105	11.93	5.00	PASS
1,4-Difluorobenzene (IS)	3,512,279	13.69	5.04	PASS
Chlorobenzene-d5 (IS)	2,888,804	17.86	4.80	PASS

(ND) = Not Detected

* (J) = Below Calibration Range, (E) = Above Calibration Range, (m) = Manual Integration

IS Acceptance Criteria: RT +/- 20 sec, Response +/- 40%

QC Summary Report

Enthalpy Analytical, LLC

Sample Name : 5ppbv TO15 LCS
 Sample Info : 125mL load; Can #0738; GCMSPrepPg770
 Data File : X1902687.D
 Dilution : 1
 Pressurization Factor : 1.000
 Acquisition Date : 2019-07-29 09:16:20
 Instrument Method : TO15-SCN.M
 Matrix : AIR

Target Compound	Response	Concentration (PPBV)	Tag Value (PPBV)	% Recovery	Flag
Propylene	597,626	5.04	4.80	105.0	PASS
Freon 12 (CCl2F2)	1,784,943	4.47	4.88	91.7	PASS
Freon 114 (C2Cl2F4)	2,091,649	4.64	5.01	92.7	PASS
Chloromethane	712,358	4.77	4.88	97.8	PASS
Chloroethene (Vinyl chloride)	774,507	4.71	5.03	93.7	PASS
1,3-Butadiene	569,697	5.21	4.89	106.7	PASS
Bromomethane	778,361	4.78	4.95	96.6	PASS
Chloroethane	417,718	4.54	5.04	90.0	PASS
Bromoethene (Vinyl bromide)	908,981	5.10	4.99	102.2	PASS
Freon 11 (CCl3F)	1,998,442	4.84	5.19	93.3	PASS
Ethanol	321,962	4.74	5.00	94.7	PASS
Acrolein	303,513	4.47	4.97	90.1	PASS
1,1-Dichloroethene	1,180,147	4.42	5.01	88.3	PASS
Freon 113 (C2Cl3F3)	1,436,791	5.16	4.98	103.8	PASS
Acetone	1,082,913	4.60	5.03	91.4	PASS
Isopropyl alcohol	1,346,052	5.04	5.02	100.4	PASS
Carbon disulfide	2,513,961	4.56	5.02	90.8	PASS
Acetonitrile	696,920	5.27	5.03	105.0	PASS
Allyl chloride (3-chloropropene)	373,011	4.60	5.03	91.5	PASS
Methylene chloride	1,005,889	4.27	5.07	84.4	PASS
Acrylonitrile	619,709	4.79	5.11	93.7	PASS
Methyl tert-butyl ether	2,003,964	4.59	5.12	89.6	PASS
trans-1,2-Dichloroethene	1,084,493	4.42	5.10	86.8	PASS
Hexane	1,166,756	4.36	5.06	86.2	PASS
Vinyl acetate	1,964,164	5.56	5.09	109.3	PASS
1,1-Dichloroethane	1,357,809	4.33	4.93	87.8	PASS
Methyl ethyl ketone (2-Butanone)	400,280	4.65	5.08	91.5	PASS
cis-1,2-Dichloroethene	1,271,514	4.42	5.04	87.8	PASS
Ethyl acetate	267,569	4.94	5.04	98.1	PASS
1-Bromopropane	1,369,243	5.16	4.94	104.5	PASS
Tetrahydrofuran	374,658	4.66	5.05	92.4	PASS
Chloroform	1,622,389	4.60	5.06	91.0	PASS
1,1,1-Trichloroethane	1,511,852	4.34	4.98	87.2	PASS
Cyclohexane	1,213,294	4.50	5.09	88.4	PASS
Carbon tetrachloride	1,615,084	4.64	5.06	91.8	PASS
Benzene	2,378,630	4.73	4.99	94.8	PASS
1,2-Dichloroethane	905,045	4.29	5.11	83.9	PASS
2,2,4-trimethylpentane	3,729,373	4.58	5.13	89.3	PASS
Heptane	735,588	4.36	5.03	86.7	PASS
Trichloroethene	1,131,488	5.14	5.02	102.4	PASS
1,2-Dichloropropane	914,918	4.50	4.98	90.4	PASS
Methyl methacrylate	905,723	5.19	5.19	100.2	PASS

Sample Name : 5ppbv TO15 LCS
 Sample Info : 125mL load; Can #0738; GCMSPrepPg770
 Data File : X1902687.D
 Dilution : 1
 Pressurization Factor : 1.000
 Acquisition Date : 2019-07-29 09:16:20
 Instrument Method : TO15-SCN.M
 Matrix : AIR

Target Compound	Response	Concentration (PPBV)	Tag Value (PPBV)	% Recovery	Flag
1,4-Dioxane	563,304	4.78	5.06	94.6	PASS
Bromodichloromethane	1,690,599	4.76	4.97	95.9	PASS
cis-1,3-Dichloropropene	1,329,351	4.56	4.92	92.7	PASS
Methyl isobutyl ketone	1,912,576	5.57	5.16	108.1	PASS
Toluene	2,797,483	4.38	5.08	86.3	PASS
1-Octene	680,085	4.34	4.89	88.8	PASS
n-Octane	874,309	4.24	5.01	84.6	PASS
trans-1,3-Dichloropropene	1,291,249	4.50	5.08	88.7	PASS
1,1,2-Trichloroethane	1,024,906	4.52	5.01	90.3	PASS
Tetrachloroethene	1,521,386	5.09	5.05	100.9	PASS
2-Hexanone (Methyl butyl ketone)	1,747,741	5.37	5.08	105.8	PASS
Dibromochloromethane	1,961,671	4.87	4.94	98.7	PASS
1,2-Dibromoethane	1,716,769	4.96	5.07	98.0	PASS
Chlorobenzene	2,273,462	4.84	5.15	94.0	PASS
Ethylbenzene	3,242,827	4.14	4.92	84.1	PASS
1,1,1,2-Tetrachloroethane	1,274,381	4.62	5.00	92.4	PASS
m-/p-Xylenes	2,739,864	4.26	5.07	84.1	PASS
o-Xylene	2,700,810	4.17	5.00	83.5	PASS
Styrene	2,191,947	4.52	4.87	92.9	PASS
Bromoform	1,949,911	5.80	5.02	115.5	PASS
Isopropylbenzene	3,928,801	4.36	5.08	85.9	PASS
1,1,2,2-Tetrachloroethane	2,266,461	4.41	5.00	88.2	PASS
n-Propylbenzene	4,470,977	4.48	5.09	88.1	PASS
4-Ethyltoluene	3,686,854	4.40	5.04	87.5	PASS
2-Chlorotoluene	3,108,905	4.22	5.04	83.8	PASS
1,3,5-Trimethylbenzene	3,178,910	4.09	5.02	81.5	PASS
1,2,4-Trimethylbenzene	3,142,263	4.09	4.97	82.3	PASS
1,3-Dichlorobenzene	2,068,617	5.63	5.05	111.6	PASS
1,4-Dichlorobenzene	1,937,502	6.08	5.02	121.1	PASS
Benzyl chloride	2,342,723	5.65	4.99	113.3	PASS
1,2-Dichlorobenzene	2,150,824	5.31	5.10	104.2	PASS
1,2,4-Trichlorobenzene	779,417	5.95	5.08	117.3	PASS
Hexachlorobutadiene	1,554,246	3.80	5.01	75.9	PASS
Naphthalene	2,714,002	5.29	5.18	102.2	PASS

Sample Name : 5ppbv TO15 LCS

Sample Info : 125mL load; Can #0738; GCMSPrepPg770

Data File : X1902687.D

Dilution : 1

Pressurization Factor : 1.000

Acquisition Date : 2019-07-29 09:16:20

Instrument Method : TO15-SCN.M

Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
Propylene	5.04	0.0384	0.0350	8.67	0.0660	0.0602	
Freon 12 (CCI2F2)	4.47	0.0390	0.0350	22.1	0.193	0.173	
Freon 114 (C2CI2F4)	4.64	0.0400	0.0350	32.4	0.280	0.245	
Chloromethane	4.77	0.0390	0.0350	9.84	0.0805	0.0723	
Chloroethene (Vinyl chloride)	4.71	0.0402	0.0350	12.0	0.103	0.0895	
1,3-Butadiene	5.21	0.0391	0.0350	11.5	0.0865	0.0774	
Bromomethane	4.78	0.0396	0.0350	18.6	0.154	0.136	
Chloroethane	4.54	0.0403	0.0350	12.0	0.106	0.0924	
Bromoethene (Vinyl bromide)	5.10	0.0399	0.0350	22.3	0.174	0.153	
Freon 11 (CCI3F)	4.84	0.0415	0.0350	27.2	0.233	0.197	
Ethanol	4.74	0.100	0.100	8.92	0.188	0.188	
Acrolein	4.47	0.0397	0.0350	10.3	0.0911	0.0803	
Freon 113 (C2CI3F3)	5.16	0.0398	0.0350	39.6	0.305	0.268	
1,1-Dichloroethene	4.42	0.0400	0.0350	17.5	0.159	0.139	
Acetone	4.60	0.0402	0.0350	10.9	0.0955	0.0831	
Carbon disulfide	4.56	0.0402	0.0350	14.2	0.125	0.109	
Isopropyl alcohol	5.04	0.0402	0.0350	12.4	0.0987	0.0860	
Allyl chloride (3-chloropropene)	4.60	0.0402	0.0350	14.4	0.126	0.110	
Acetonitrile	5.27	0.0402	0.0350	8.86	0.0675	0.0588	
Methylene chloride	4.27	0.0405	0.0350	14.8	0.141	0.122	
trans-1,2-Dichloroethene	4.42	0.0408	0.0350	17.5	0.162	0.139	
Methyl tert-butyl ether	4.59	0.0410	0.0350	16.5	0.148	0.126	
Acrylonitrile	4.79	0.0409	0.0350	10.4	0.0887	0.0760	
Hexane	4.36	0.0404	0.0350	15.4	0.143	0.123	
1,1-Dichloroethane	4.33	0.0394	0.0350	17.5	0.159	0.142	
Vinyl acetate	5.56	0.0407	0.0350	19.6	0.143	0.123	
cis-1,2-Dichloroethene	4.42	0.0403	0.0350	17.5	0.160	0.139	
Methyl ethyl ketone (2-Butanone)	4.65	0.0406	0.0350	13.7	0.120	0.103	
Ethyl acetate	4.94	0.0403	0.0350	17.8	0.145	0.126	m
Chloroform	4.60	0.0404	0.0350	22.5	0.197	0.171	
Tetrahydrofuran	4.66	0.0404	0.0350	13.7	0.119	0.103	
1,1,1-Trichloroethane	4.34	0.0398	0.0350	23.7	0.217	0.191	
Cyclohexane	4.50	0.0407	0.0350	15.5	0.140	0.120	
Carbon tetrachloride	4.64	0.0405	0.0350	29.2	0.255	0.220	
Benzene	4.73	0.0399	0.0350	15.1	0.128	0.112	
2,2,4-trimethylpentane	4.58	0.0410	0.0350	21.4	0.192	0.164	
1,2-Dichloroethane	4.29	0.0409	0.0350	17.4	0.165	0.142	
Heptane	4.36	0.0402	0.0350	17.9	0.165	0.143	
Trichloroethene	5.14	0.0402	0.0350	27.6	0.216	0.188	
1,2-Dichloropropane	4.50	0.0409	0.0350	20.8	0.189	0.162	
Methyl methacrylate	5.19	0.0415	0.0350	21.3	0.170	0.143	
1,4-Dioxane	4.78	0.0404	0.0350	17.2	0.146	0.126	
Bromodichloromethane	4.76	0.0397	0.0350	31.9	0.266	0.235	
cis-1,3-Dichloropropene	4.56	0.0393	0.0350	20.7	0.178	0.159	
Methyl isobutyl ketone	5.57	0.0412	0.0350	22.8	0.169	0.143	
Toluene	4.38	0.0406	0.0350	16.5	0.153	0.132	
trans-1,3-Dichloropropene	4.50	0.0406	0.0350	20.4	0.184	0.159	
1,1,2-Trichloroethane	4.52	0.0401	0.0350	24.7	0.219	0.191	
Tetrachloroethene	5.09	0.0404	0.0350	34.5	0.274	0.237	
2-Hexanone (Methyl butyl ketone)	5.37	0.0406	0.0350	22.0	0.166	0.143	
Dibromochloromethane	4.87	0.0395	0.0350	41.5	0.336	0.298	
1,2-Dibromoethane	4.96	0.0405	0.0350	38.1	0.311	0.269	
Chlorobenzene	4.84	0.0412	0.0350	22.3	0.189	0.161	
Ethylbenzene	4.14	0.0394	0.0350	18.0	0.171	0.152	
1,1,1,2-Tetrachloroethane	4.62	0.0400	0.0350	31.7	0.275	0.240	
m-/p-Xylenes	4.26	0.0405	0.0350	18.5	0.176	0.152	

Sample Name : 5ppbv TO15 LCS

Sample Info : 125mL load; Can #0738; GCMSPrepPg770

Data File : X1902687.D

Dilution : 1

Pressurization Factor : 1.000

Acquisition Date : 2019-07-29 09:16:20

Instrument Method : TO15-SCN.M

Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
o-Xylene	4.17	0.0400	0.0350	18.1	0.174	0.152	
Styrene	4.52	0.0390	0.0350	19.3	0.166	0.149	
Bromoform	5.80	0.0402	0.0350	59.9	0.415	0.362	
1,1,2,2-Tetrachloroethane	4.41	0.0400	0.0350	30.3	0.275	0.240	
4-Ethyltoluene	4.40	0.0403	0.0350	21.6	0.198	0.172	
2-Chlorotoluene	4.22	0.0403	0.0350	21.9	0.209	0.181	
1,3,5-Trimethylbenzene	4.09	0.0401	0.0350	20.1	0.197	0.172	
1,2,4-Trimethylbenzene	4.09	0.0398	0.0350	20.1	0.195	0.172	
1,3-Dichlorobenzene	5.63	0.0404	0.0350	33.9	0.243	0.210	
1,4-Dichlorobenzene	6.08	0.0401	0.0350	36.5	0.241	0.210	
Benzyl chloride	5.65	0.0399	0.0350	29.3	0.207	0.181	
1,2-Dichlorobenzene	5.31	0.0408	0.0350	31.9	0.245	0.210	
1,2,4-Trichlorobenzene	5.95	0.0406	0.0350	44.2	0.301	0.260	
Hexachlorobutadiene	3.80	0.0401	0.0350	40.5	0.427	0.373	
Naphthalene	5.29	0.0414	0.0350	27.7	0.217	0.183	
1-Bromopropane	5.16	0.0395	0.0350	26.0	0.199	0.176	m
1-Octene	4.34	0.0391	0.0350	19.9	0.180	0.161	
n-Octane	4.24	0.0401	0.0350	19.8	0.187	0.164	
Isopropylbenzene	4.36	0.0406	0.0350	21.4	0.200	0.172	
n-Propylbenzene	4.48	0.0407	0.0350	22.0	0.200	0.172	

Internal Standards	Response	Retention Time (min)	Concentration (PPBV)	Flag *
Bromochloromethane (IS)	904,667	11.93	5.00	PASS
1,4-Difluorobenzene (IS)	3,441,622	13.69	5.04	PASS
Chlorobenzene-d5 (IS)	2,966,600	17.86	4.80	PASS

(ND) = Not Detected

* (J) = Below Calibration Range, (E) = Above Calibration Range, (m) = Manual Integration

IS Acceptance Criteria: RT +/- 20 sec, Response +/- 40%

Sample Name : 5ppbv TO15 LCS LD
 Sample Info : 125mL load; Can #0738; GCMSPrepPg770
 Data File : X1902688.D
 Dilution : 1
 Pressurization Factor : 1.000
 Acquisition Date : 2019-07-29 10:05:52
 Instrument Method : TO15-SCN.M
 Matrix : AIR

Target Compound	Response	Concentration (PPBV)	Tag Value (PPBV)	% Recovery	Flag
Propylene	601,734	4.96	4.80	103.4	PASS
Freon 12 (CCl2F2)	1,787,273	4.38	4.88	89.7	PASS
Freon 114 (C2Cl2F4)	2,088,671	4.53	5.01	90.5	PASS
Chloromethane	719,177	4.70	4.88	96.5	PASS
Chloroethene (Vinyl chloride)	777,338	4.62	5.03	91.9	PASS
1,3-Butadiene	568,294	5.08	4.89	104.1	PASS
Bromomethane	777,566	4.67	4.95	94.4	PASS
Chloroethane	414,625	4.40	5.04	87.3	PASS
Bromoethene (Vinyl bromide)	912,539	5.00	4.99	100.3	PASS
Freon 11 (CCl3F)	1,999,079	4.73	5.19	91.2	PASS
Ethanol	329,624	4.74	5.00	94.8	PASS
Acrolein	302,920	4.36	4.97	87.9	PASS
1,1-Dichloroethene	1,183,377	4.33	5.01	86.6	PASS
Freon 113 (C2Cl3F3)	1,451,001	5.10	4.98	102.5	PASS
Acetone	1,078,950	4.48	5.03	89.0	PASS
Isopropyl alcohol	1,378,766	5.05	5.02	100.5	PASS
Carbon disulfide	2,520,805	4.47	5.02	89.0	PASS
Acetonitrile	700,667	5.18	5.03	103.2	PASS
Allyl chloride (3-chloropropene)	378,758	4.57	5.03	90.9	PASS
Methylene chloride	1,002,726	4.17	5.07	82.2	PASS
Acrylonitrile	618,161	4.67	5.11	91.4	PASS
Methyl tert-butyl ether	2,033,600	4.55	5.12	88.8	PASS
trans-1,2-Dichloroethene	1,095,539	4.37	5.10	85.7	PASS
Hexane	1,172,630	4.28	5.06	84.7	PASS
Vinyl acetate	1,950,930	5.39	5.09	106.1	PASS
1,1-Dichloroethane	1,362,978	4.24	4.93	86.2	PASS
Methyl ethyl ketone (2-Butanone)	409,748	4.65	5.08	91.5	PASS
cis-1,2-Dichloroethene	1,273,214	4.33	5.04	86.0	PASS
Ethyl acetate	268,006	4.84	5.04	96.0	PASS
1-Bromopropane	1,357,946	5.01	4.94	101.4	PASS
Tetrahydrofuran	381,090	4.63	5.05	91.8	PASS
Chloroform	1,640,310	4.55	5.06	90.0	PASS
1,1,1-Trichloroethane	1,524,057	4.28	4.98	86.0	PASS
Cyclohexane	1,210,245	4.38	5.09	86.2	PASS
Carbon tetrachloride	1,636,404	4.60	5.06	90.9	PASS
Benzene	2,381,545	4.69	4.99	93.9	PASS
1,2-Dichloroethane	921,912	4.32	5.11	84.6	PASS
2,2,4-trimethylpentane	3,747,270	4.55	5.13	88.7	PASS
Heptane	749,884	4.39	5.03	87.4	PASS
Trichloroethene	1,157,679	5.20	5.02	103.6	PASS
1,2-Dichloropropane	920,984	4.48	4.98	90.0	PASS
Methyl methacrylate	888,528	5.04	5.19	97.2	PASS

Sample Name : 5ppbv TO15 LCS LD
 Sample Info : 125mL load; Can #0738; GCMSPrepPg770
 Data File : X1902688.D
 Dilution : 1
 Pressurization Factor : 1.000
 Acquisition Date : 2019-07-29 10:05:52
 Instrument Method : TO15-SCN.M
 Matrix : AIR

Target Compound	Response	Concentration (PPBV)	Tag Value (PPBV)	% Recovery	Flag
1,4-Dioxane	572,076	4.80	5.06	95.0	PASS
Bromodichloromethane	1,698,020	4.73	4.97	95.2	PASS
cis-1,3-Dichloropropene	1,361,214	4.61	4.92	93.9	PASS
Methyl isobutyl ketone	1,928,930	5.56	5.16	107.8	PASS
Toluene	2,811,425	4.40	5.08	86.7	PASS
1-Octene	679,555	4.34	4.89	88.7	PASS
n-Octane	889,570	4.31	5.01	86.0	PASS
trans-1,3-Dichloropropene	1,323,639	4.62	5.08	90.9	PASS
1,1,2-Trichloroethane	1,031,990	4.55	5.01	90.9	PASS
Tetrachloroethene	1,528,464	5.11	5.05	101.4	PASS
2-Hexanone (Methyl butyl ketone)	1,734,936	5.33	5.08	105.0	PASS
Dibromochloromethane	1,993,624	4.95	4.94	100.3	PASS
1,2-Dibromoethane	1,771,248	5.12	5.07	101.1	PASS
Chlorobenzene	2,321,656	4.94	5.15	96.0	PASS
Ethylbenzene	3,304,993	4.21	4.92	85.7	PASS
1,1,1,2-Tetrachloroethane	1,294,386	4.69	5.00	93.8	PASS
m-/p-Xylenes	2,789,192	4.33	5.07	85.6	PASS
o-Xylene	2,716,538	4.20	5.00	84.0	PASS
Styrene	2,226,065	4.59	4.87	94.3	PASS
Bromoform	1,996,551	5.94	5.02	118.2	PASS
Isopropylbenzene	3,941,137	4.37	5.08	86.1	PASS
1,1,2,2-Tetrachloroethane	2,285,645	4.45	5.00	88.9	PASS
n-Propylbenzene	4,528,501	4.53	5.09	89.2	PASS
4-Ethyltoluene	3,749,941	4.48	5.04	88.9	PASS
2-Chlorotoluene	3,170,914	4.30	5.04	85.5	PASS
1,3,5-Trimethylbenzene	3,223,664	4.14	5.02	82.6	PASS
1,2,4-Trimethylbenzene	3,184,427	4.14	4.97	83.4	PASS
1,3-Dichlorobenzene	2,126,942	5.79	5.05	114.7	PASS
1,4-Dichlorobenzene	1,990,973	6.24	5.02	124.5	PASS
Benzyl chloride	2,375,348	5.73	4.99	114.8	PASS
1,2-Dichlorobenzene	2,222,902	5.48	5.10	107.7	PASS
1,2,4-Trichlorobenzene	835,881	6.38	5.08	125.8	PASS
Hexachlorobutadiene	1,614,781	3.95	5.01	78.8	PASS
Naphthalene	2,813,082	5.48	5.18	105.9	PASS

Sample Name : 5ppbv TO15 LCS LD
Sample Info : 125mL load; Can #0738; GCMSPrepPg770
Data File : X1902688.D
Dilution : 1
Pressurization Factor : 1.000
Acquisition Date : 2019-07-29 10:05:52
Instrument Method : TO15-SCN.M
Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	% Diff	Flag *
Propylene	4.96	0.0384	0.0350	8.53	0.0660	0.0602	1.6	
Freon 12 (CCl2F2)	4.38	0.0390	0.0350	21.7	0.193	0.173	2.1	
Freon 114 (C2Cl2F4)	4.53	0.0400	0.0350	31.7	0.280	0.245	2.4	
Chloromethane	4.70	0.0390	0.0350	9.71	0.0805	0.0723	1.3	
Chloroethene (Vinyl chloride)	4.62	0.0402	0.0350	11.8	0.103	0.0895	1.9	
1,3-Butadiene	5.08	0.0391	0.0350	11.2	0.0865	0.0774	2.5	
Bromomethane	4.67	0.0396	0.0350	18.1	0.154	0.136	2.4	
Chloroethane	4.40	0.0403	0.0350	11.6	0.106	0.0924	3.0	
Bromoethene (Vinyl bromide)	5.00	0.0399	0.0350	21.9	0.174	0.153	1.9	
Freon 11 (CCl3F)	4.73	0.0415	0.0350	26.6	0.233	0.197	2.2	
Ethanol	4.74	0.100	0.100	8.93	0.188	0.188	0.1	
Acrolein	4.36	0.0397	0.0350	10.0	0.0911	0.0803	2.5	
Freon 113 (C2Cl3F3)	5.10	0.0398	0.0350	39.1	0.305	0.268	1.3	
1,1-Dichloroethene	4.33	0.0400	0.0350	17.2	0.159	0.139	2.0	
Acetone	4.48	0.0402	0.0350	10.6	0.0955	0.0831	2.6	
Carbon disulfide	4.47	0.0402	0.0350	13.9	0.125	0.109	2.0	
Isopropyl alcohol	5.05	0.0402	0.0350	12.4	0.0987	0.0860	0.1	
Allyl chloride (3-chloropropene)	4.57	0.0402	0.0350	14.3	0.126	0.110	0.7	
Acetonitrile	5.18	0.0402	0.0350	8.70	0.0675	0.0588	1.7	
Methylene chloride	4.17	0.0405	0.0350	14.5	0.141	0.122	2.6	
trans-1,2-Dichloroethene	4.37	0.0408	0.0350	17.3	0.162	0.139	1.3	
Methyl tert-butyl ether	4.55	0.0410	0.0350	16.4	0.148	0.126	0.8	
Acrylonitrile	4.67	0.0409	0.0350	10.1	0.0887	0.0760	2.5	
Hexane	4.28	0.0404	0.0350	15.1	0.143	0.123	1.8	
1,1-Dichloroethane	4.24	0.0394	0.0350	17.2	0.159	0.142	1.9	
Vinyl acetate	5.39	0.0407	0.0350	19.0	0.143	0.123	2.9	
cis-1,2-Dichloroethene	4.33	0.0403	0.0350	17.2	0.160	0.139	2.1	
Methyl ethyl ketone (2-Butanone)	4.65	0.0406	0.0350	13.7	0.120	0.103	0.1	
Ethyl acetate	4.84	0.0403	0.0350	17.4	0.145	0.126	2.1	
Chloroform	4.55	0.0404	0.0350	22.2	0.197	0.171	1.2	
Tetrahydrofuran	4.63	0.0404	0.0350	13.7	0.119	0.103	0.6	
1,1,1-Trichloroethane	4.28	0.0398	0.0350	23.3	0.217	0.191	1.5	
Cyclohexane	4.38	0.0407	0.0350	15.1	0.140	0.120	2.5	
Carbon tetrachloride	4.60	0.0405	0.0350	28.9	0.255	0.220	1.0	
Benzene	4.69	0.0399	0.0350	15.0	0.128	0.112	1.0	
2,2,4-trimethylpentane	4.55	0.0410	0.0350	21.2	0.192	0.164	0.6	
1,2-Dichloroethane	4.32	0.0409	0.0350	17.5	0.165	0.142	0.7	
Heptane	4.39	0.0402	0.0350	18.0	0.165	0.143	0.8	
Trichloroethene	5.20	0.0402	0.0350	28.0	0.216	0.188	1.2	
1,2-Dichloropropane	4.48	0.0409	0.0350	20.7	0.189	0.162	0.4	
Methyl methacrylate	5.04	0.0415	0.0350	20.6	0.170	0.143	3.0	
1,4-Dioxane	4.80	0.0404	0.0350	17.3	0.146	0.126	0.4	
Bromodichloromethane	4.73	0.0397	0.0350	31.7	0.266	0.235	0.7	
cis-1,3-Dichloropropene	4.61	0.0393	0.0350	20.9	0.178	0.159	1.3	
Methyl isobutyl ketone	5.56	0.0412	0.0350	22.8	0.169	0.143	0.3	
Toluene	4.40	0.0406	0.0350	16.6	0.153	0.132	0.5	
trans-1,3-Dichloropropene	4.62	0.0406	0.0350	20.9	0.184	0.159	2.5	
1,1,2-Trichloroethane	4.55	0.0401	0.0350	24.8	0.219	0.191	0.7	
Tetrachloroethene	5.11	0.0404	0.0350	34.7	0.274	0.237	0.4	
2-Hexanone (Methyl butyl ketone)	5.33	0.0406	0.0350	21.8	0.166	0.143	0.8	
Dibromochloromethane	4.95	0.0395	0.0350	42.2	0.336	0.298	1.6	
1,2-Dibromoethane	5.12	0.0405	0.0350	39.3	0.311	0.269	3.1	
Chlorobenzene	4.94	0.0412	0.0350	22.7	0.189	0.161	2.1	
Ethylbenzene	4.21	0.0394	0.0350	18.3	0.171	0.152	1.9	
1,1,1,2-Tetrachloroethane	4.69	0.0400	0.0350	32.2	0.275	0.240	1.5	
m-/p-Xylenes	4.33	0.0405	0.0350	18.8	0.176	0.152	1.8	
o-Xylene	4.20	0.0400	0.0350	18.2	0.174	0.152	0.6	
Styrene	4.59	0.0390	0.0350	19.6	0.166	0.149	1.5	
Bromoform	5.94	0.0402	0.0350	61.4	0.415	0.362	2.3	
1,1,2,2-Tetrachloroethane	4.45	0.0400	0.0350	30.5	0.275	0.240	0.8	
4-Ethyltoluene	4.48	0.0403	0.0350	22.0	0.198	0.172	1.7	
2-Chlorotoluene	4.30	0.0403	0.0350	22.3	0.209	0.181	2.0	

Sample Name : 5ppbv TO15 LCS LD

Sample Info : 125mL load; Can #0738; GCMSPrepPg770

Data File : X1902688.D

Dilution : 1

Pressurization Factor : 1.000

Acquisition Date : 2019-07-29 10:05:52

Instrument Method : TO15-SCN.M

Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	% Diff	Flag *
1,3,5-Trimethylbenzene	4.14	0.0401	0.0350	20.4	0.197	0.172	1.4	
1,2,4-Trimethylbenzene	4.14	0.0398	0.0350	20.4	0.195	0.172	1.3	
1,3-Dichlorobenzene	5.79	0.0404	0.0350	34.8	0.243	0.210	2.8	
1,4-Dichlorobenzene	6.24	0.0401	0.0350	37.5	0.241	0.210	2.7	
Benzyl chloride	5.73	0.0399	0.0350	29.7	0.207	0.181	1.4	
1,2-Dichlorobenzene	5.48	0.0408	0.0350	33.0	0.245	0.210	3.3	
1,2,4-Trichlorobenzene	6.38	0.0406	0.0350	47.4	0.301	0.260	7.0	
Hexachlorobutadiene	3.95	0.0401	0.0350	42.1	0.427	0.373	3.8	
Naphthalene	5.48	0.0414	0.0350	28.7	0.217	0.183	3.6	
1-Bromopropane	5.01	0.0395	0.0350	25.2	0.199	0.176	3.1	m
1-Octene	4.34	0.0391	0.0350	19.9	0.180	0.161	0.1	
n-Octane	4.31	0.0401	0.0350	20.1	0.187	0.164	1.7	
Isopropylbenzene	4.37	0.0406	0.0350	21.5	0.200	0.172	0.3	
n-Propylbenzene	4.53	0.0407	0.0350	22.3	0.200	0.172	1.3	

Internal Standards	Response	Retention Time (min)	Concentration (PPBV)	Flag *
Bromochloromethane (IS)	925,425	11.93	5.00	PASS
1,4-Difluorobenzene (IS)	3,479,905	13.69	5.04	PASS
Chlorobenzene-d5 (IS)	2,967,102	17.86	4.80	PASS

(ND) = Not Detected

* (J) = Below Calibration Range, (E) = Above Calibration Range, (m) = Manual Integration

IS Acceptance Criteria: RT +/- 20 sec, Response +/- 40%

Canister and Controller Data Sheet

Enthalpy Analytical, LLC

Client Name: Tetra Tech, Inc.

Client #: Abel Contracting: Richland, SC

Enthalpy Job #: 0719-205

Canister Data

Canister ID	Sample ID	Canister Pressure Pre-Sample (mmHg)	Canister Pressure Post-Sample (mmHg)	Canister Pressure Final (mmHg)	Canister Pressurization Factor
0808	X1902079	-769	-172	293	1.787
0809	X1902078	-769	-119	418	1.834
0802	X1902101	-769	-126	380	1.795
0797	X1902082	-769	-139	363	1.805
0799	X1902074	-769	-167	301	1.786

Date Prepared: 7/26/19

Date Received:

Prepared By: WRC

Received By:

Sample Name : ACF-AS-SMOKE-PM-072719 LD

Sample Info : 0719-205

Data File : W1900515.D

Dilution : 1

Extract Volume : 5.00

Acquisition Date : 2019-07-31 21:03:08

Instrument Method : RXI-M8270.M

Matrix : LIQUID

Air Sampling Volume (L): 438.3

Target Compound	MDL (ug/mL)	Concentration (ug/mL)	MDL (ug)	Catch Weight (ug)	MDL (ug/m ³)	Catch Weight (ug/m ³)	Diff	Flag *
N-Nitrosodimethylamine	0.772	ND	3.86	ND	8.81	ND	NA	
Pyridine	1.50	ND	7.50	ND	17.1	ND	NA	
Phenol (CCC)	0.649	ND	3.25	ND	7.40	ND	NA	
Aniline	0.694	ND	3.47	ND	7.92	ND	NA	
bis(2-Chloroethyl)ether	0.788	ND	3.94	ND	8.99	ND	NA	
2-Chlorophenol	0.624	ND	3.12	ND	7.12	ND	NA	
1,3-Dichlorobenzene	0.558	ND	2.79	ND	6.37	ND	NA	
1,4-Dichlorobenzene (CCC)	0.528	ND	2.64	ND	6.02	ND	NA	
Benzyl alcohol	0.700	ND	3.50	ND	7.99	ND	NA	
1,2-Dichlorobenzene	0.558	ND	2.79	ND	6.37	ND	NA	
2-Methylphenol	0.677	ND	3.39	ND	7.72	ND	NA	
bis(2-Chloroisopropyl) ether	0.982	ND	4.91	ND	11.2	ND	NA	
3/4-Methylphenol	0.591	ND	2.96	ND	6.74	ND	NA	
N-Nitroso-di-n-propylamine (SPCC)	0.832	ND	4.16	ND	9.49	ND	NA	
o-Toluidine	5.00	ND	25.0	ND	57.0	ND	NA	
Hexachloroethane	0.632	ND	3.16	ND	7.21	ND	NA	
Nitrobenzene	0.816	ND	4.08	ND	9.31	ND	NA	
Isophorone	0.748	ND	3.74	ND	8.53	ND	NA	
2,4-Dimethylphenol	0.729	ND	3.65	ND	8.32	ND	NA	
2-Nitrophenol (CCC)	0.669	ND	3.35	ND	7.63	ND	NA	
Benzoic acid	5.00	ND	25.0	ND	57.0	ND	NA	
bis(2-Chloroethoxy)methane	0.732	ND	3.66	ND	8.35	ND	NA	
2,4-Dichlorophenol (CCC)	0.652	ND	3.26	ND	7.44	ND	NA	
a,a-Dimethylphenethylamine	5.00	ND	25.0	ND	57.0	ND	NA	
1,2,4-Trichlorobenzene	0.617	ND	3.09	ND	7.04	ND	NA	
Naphthalene	0.665	ND	3.33	ND	7.59	ND	NA	
4-Chloroaniline	0.849	ND	4.25	ND	9.69	ND	NA	
Hexachlorobutadiene (CCC)	0.609	ND	3.05	ND	6.95	ND	NA	
Quinoline	1.00	ND	5.00	ND	11.4	ND	NA	
1,4-Phenylenediamine	5.00	ND	25.0	ND	57.0	ND	NA	
4-Chloro-3 methylphenol (CCC)	0.661	ND	3.31	ND	7.54	ND	NA	
2-Methylnaphthalene	0.618	ND	3.09	ND	7.05	ND	NA	
1-Methylnaphthalene	0.613	ND	3.07	ND	6.99	ND	NA	
Hexachlorocyclopentadiene (SPCC)	8.12	ND	40.6	ND	92.6	ND	NA	
2,4,6-Trichlorophenol (CCC)	0.738	ND	3.69	ND	8.42	ND	NA	
2,4,5-Trichlorophenol	0.541	ND	2.71	ND	6.17	ND	NA	
Biphenyl	5.00	ND	25.0	ND	57.0	ND	NA	
2-Chloronaphthalene	0.652	ND	3.26	ND	7.44	ND	NA	
2-Nitroaniline	0.966	ND	4.83	ND	11.0	ND	NA	
1,4-Dinitrobenzene	0.672	ND	3.36	ND	7.67	ND	NA	
Dimethylphthalate	0.809	ND	4.05	ND	9.23	ND	NA	
1,3-Dinitrobenzene	0.819	ND	4.10	ND	9.34	ND	NA	
2,6-Dinitrotoluene	0.775	ND	3.88	ND	8.84	ND	NA	
1,2-Dinitrobenzene	0.777	ND	3.89	ND	8.86	ND	NA	
Acenaphthylene	0.675	ND	3.38	ND	7.70	ND	NA	
3-Nitroaniline	0.816	ND	4.08	ND	9.31	ND	NA	
Acenaphthene (CCC)	0.934	ND	4.67	ND	10.7	ND	NA	
2,4-Dinitrophenol (SPCC)	5.00	ND	25.0	ND	57.0	ND	NA	
4-Nitrophenol (SPCC)	5.00	ND	25.0	ND	57.0	ND	NA	
2,4-Dinitrotoluene	0.804	ND	4.02	ND	9.17	ND	NA	
Dibenzofuran	0.688	ND	3.44	ND	7.85	ND	NA	
2,3,5,6-Tetrachlorophenol	0.761	ND	3.81	ND	8.68	ND	NA	
2,3,4,6-Tetrachlorophenol	0.701	ND	3.51	ND	8.00	ND	NA	
Diethylphthalate	1.02	ND	5.10	ND	11.6	ND	NA	
4-Chlorophenyl-phenylether	0.754	ND	3.77	ND	8.60	ND	NA	
Fluorene	0.783	ND	3.92	ND	8.93	ND	NA	
4-Nitroaniline	0.694	ND	3.47	ND	7.92	ND	NA	
4,6-Dinitro2-methylphenol	5.00	ND	25.0	ND	57.0	ND	NA	

Sample Name

: ACF-AS-SMOKE-PM-072719 LD

Sample Info

: 0719-205

Data File

: W1900515.D

Dilution

: 1

Extract Volume

: 5.00

Acquisition Date

: 2019-07-31 21:03:08

Instrument Method

: RXI-M8270.M

Matrix

: LIQUID

Air Sampling Volume (L): 438.3

Target Compound	MDL (ug/mL)	Concentration (ug/mL)	MDL (ug)	Catch Weight (ug)	MDL (ug/m ³)	Catch Weight (ug/m ³)	Diff	Flag *
N-Nitrosodiphenylamine (CCC)	0.716	ND	3.58	ND	8.17	ND	NA	
Azobenzene	0.991	ND	4.96	ND	11.3	ND	NA	
4-Bromophenyl-phenylether	0.671	ND	3.36	ND	7.65	ND	NA	
Hexachlorobenzene	0.546	ND	2.73	ND	6.23	ND	NA	
Pentachlorophenol (CCC)	5.00	ND	25.0	ND	57.0	ND	NA	
Phenanthrene	0.771	ND	3.86	ND	8.80	ND	NA	
Anthracene	0.760	ND	3.80	ND	8.67	ND	NA	
Carbazole	0.705	ND	3.53	ND	8.04	ND	NA	
Di-n-butylphthalate	1.04	ND	5.20	ND	11.9	ND	NA	
Fluoranthene (CCC)	0.919	ND	4.60	ND	10.5	ND	NA	
Benzidine	22.8	ND	114	ND	260	ND	NA	
Pyrene	0.937	ND	4.69	ND	10.7	ND	NA	
4-Dimethylaminoazobenzene	5.00	ND	25.0	ND	57.0	ND	NA	
Butylbenzylphthalate	0.810	ND	4.05	ND	9.24	ND	NA	
3,3-Dimethylbenzidine	10.8	ND	54.0	ND	123	ND	NA	
bis(2-Ethylhexyl)adipate	0.874	ND	4.37	ND	9.97	ND	NA	
3,3-Dimethoxybenzidine	5.00	ND	25.0	ND	57.0	ND	NA	
bis(2-Ethylhexyl)phthalate	1.74	ND	8.70	ND	19.8	ND	NA	
3,3'-Dichlorobenzidine	5.00	ND	25.0	ND	57.0	ND	NA	
Benzo(a)anthracene	0.550	ND	2.75	ND	6.27	ND	NA	
Chrysene	0.556	ND	2.78	ND	6.34	ND	NA	
Di-n-octylphthalate (CCC)	0.644	ND	3.22	ND	7.35	ND	NA	
7,12-Dimethylbenz(a)anthracene	5.00	ND	25.0	ND	57.0	ND	NA	
Benzo(b)fluoranthene	0.300	ND	1.50	ND	3.42	ND	NA	
Benzo(k)fluoranthene	0.356	ND	1.78	ND	4.06	ND	NA	
Benzo(e)pyrene	0.340	ND	1.70	ND	3.88	ND	NA	
Benzo(a)pyrene (CCC)	0.340	ND	1.70	ND	3.88	ND	NA	
Perylene	0.340	ND	1.70	ND	3.88	ND	NA	
3-Methylcholanthrene	5.00	ND	25.0	ND	57.0	ND	NA	
Indeno(1,2,3-cd)pyrene	0.300	ND	1.50	ND	3.42	ND	NA	
Dibenz(a,h)anthracene	0.425	ND	2.13	ND	4.85	ND	NA	
Benzo(g,h,i)perylene	0.352	ND	1.76	ND	4.02	ND	NA	
Dibenzo(a,e)pyrene	5.00	ND	25.0	ND	57.0	ND	NA	

(ND) = Not Detected

* (J) = Below Calibration Range, (E) = Above Calibration Range, (m) = Manual Integration

Sample Name : ACF-AS-SMOKE-PM-072719 LD
Sample Info : 0719-205
Data File : W1900515.D
Dilution : 1
Extract Volume : 5.00
Acquisition Date : 2019-07-31 21:03:08
Instrument Method : RXI-M8270.M
Matrix : LIQUID

Internal Standards	Response	Retention Time (min)	Concentration (ug/mL)	% Deviation	Flag *
1,4-Dichlorobenzene-d4 (I)	421,700	4.24	40.00	18.9	PASS
Naphthalene-d8 (I)	1,567,570	5.32	40.00	21.8	PASS
Acenaphthene-d10 (I)	969,164	6.88	40.00	26.7	PASS
Phenanthrene-d10 (I)	1,650,461	8.23	40.00	24.4	PASS
Chrysene-d12 (I)	1,791,527	12.23	40.00	20.9	PASS
Perylene-d12 (I)	1,663,905	16.34	40.00	21.7	PASS

* (m) = Manual Integration
IS Acceptance Criteria: RT +/- 20 sec, Response +/- 40%

Sample Name : DCM System Blank
 Sample Info :
 Data File : W1900508.D
 Dilution : 1
 Extract Volume : 1.00
 Acquisition Date : 2019-07-31 17:21:22
 Instrument Method : RXI-M8270.M
 Matrix : LIQUID

Target Compound	MDL (ug/mL)	Concentration (ug/mL)	MDL (ug)	Catch Weight (ug)	Flag *
N-Nitrosodimethylamine	0.772	ND	0.772	ND	
Pyridine	1.50	ND	1.50	ND	
Phenol (CCC)	0.649	ND	0.649	ND	
Aniline	0.694	ND	0.694	ND	
bis(2-Chloroethyl)ether	0.788	ND	0.788	ND	
2-Chlorophenol	0.624	ND	0.624	ND	
1,3-Dichlorobenzene	0.558	ND	0.558	ND	
1,4-Dichlorobenzene (CCC)	0.528	ND	0.528	ND	
Benzyl alcohol	0.700	ND	0.700	ND	
1,2-Dichlorobenzene	0.558	ND	0.558	ND	
2-Methylphenol	0.677	ND	0.677	ND	
bis(2-Chloroisopropyl) ether	0.982	ND	0.982	ND	
3/4-Methylphenol	0.591	ND	0.591	ND	
N-Nitroso-di-n-propylamine (SPCC)	0.832	ND	0.832	ND	
o-Toluidine	5.00	ND	5.00	ND	
Hexachloroethane	0.632	ND	0.632	ND	
Nitrobenzene	0.816	ND	0.816	ND	
Isophorone	0.748	ND	0.748	ND	
2,4-Dimethylphenol	0.729	ND	0.729	ND	
2-Nitrophenol (CCC)	0.669	ND	0.669	ND	
Benzoic acid	5.00	ND	5.00	ND	
bis(2-Chloroethoxy)methane	0.732	ND	0.732	ND	
2,4-Dichlorophenol (CCC)	0.652	ND	0.652	ND	
a,a-Dimethylphenethylamine	5.00	ND	5.00	ND	
1,2,4-Trichlorobenzene	0.617	ND	0.617	ND	
Naphthalene	0.665	ND	0.665	ND	
4-Chloroaniline	0.849	ND	0.849	ND	
Hexachlorobutadiene (CCC)	0.609	ND	0.609	ND	
Quinoline	1.00	ND	1.00	ND	
1,4-Phenylenediamine	5.00	ND	5.00	ND	
4-Chloro-3 methylphenol (CCC)	0.661	ND	0.661	ND	
2-Methylnaphthalene	0.618	ND	0.618	ND	
1-Methylnaphthalene	0.613	ND	0.613	ND	
Hexachlorocyclopentadiene (SPCC)	8.12	ND	8.12	ND	
2,4,6-Trichlorophenol (CCC)	0.738	ND	0.738	ND	
2,4,5-Trichlorophenol	0.541	ND	0.541	ND	
Biphenyl	5.00	ND	5.00	ND	
2-Chloronaphthalene	0.652	ND	0.652	ND	
2-Nitroaniline	0.966	ND	0.966	ND	
1,4-Dinitrobenzene	0.672	ND	0.672	ND	
Dimethylphthalate	0.809	ND	0.809	ND	
1,3-Dinitrobenzene	0.819	ND	0.819	ND	

Sample Name : DCM System Blank
 Sample Info :
 Data File : W1900508.D
 Dilution : 1
 Extract Volume : 1.00
 Acquisition Date : 2019-07-31 17:21:22
 Instrument Method : RXI-M8270.M
 Matrix : LIQUID

Target Compound	MDL (ug/mL)	Concentration (ug/mL)	MDL (ug)	Catch Weight (ug)	Flag *
2,6-Dinitrotoluene	0.775	ND	0.775	ND	
1,2-Dinitrobenzene	0.777	ND	0.777	ND	
Acenaphthylene	0.675	ND	0.675	ND	
3-Nitroaniline	0.816	ND	0.816	ND	
Acenaphthene (CCC)	0.934	ND	0.934	ND	
2,4-Dinitrophenol (SPCC)	5.00	ND	5.00	ND	
4-Nitrophenol (SPCC)	5.00	ND	5.00	ND	
2,4-Dinitrotoluene	0.804	ND	0.804	ND	
Dibenzofuran	0.688	ND	0.688	ND	
2,3,5,6-Tetrachlorophenol	0.761	ND	0.761	ND	
2,3,4,6-Tetrachlorophenol	0.701	ND	0.701	ND	
Diethylphthalate	1.02	ND	1.02	ND	
4-Chlorophenyl-phenylether	0.754	ND	0.754	ND	
Fluorene	0.783	ND	0.783	ND	
4-Nitroaniline	0.694	ND	0.694	ND	
4,6-Dinitro2-methylphenol	5.00	ND	5.00	ND	
N-Nitrosodiphenylamine (CCC)	0.716	ND	0.716	ND	
Azobenzene	0.991	ND	0.991	ND	
4-Bromophenyl-phenylether	0.671	ND	0.671	ND	
Hexachlorobenzene	0.546	ND	0.546	ND	
Pentachlorophenol (CCC)	5.00	ND	5.00	ND	
Phenanthrene	0.771	ND	0.771	ND	
Anthracene	0.760	ND	0.760	ND	
Carbazole	0.705	ND	0.705	ND	
Di-n-butylphthalate	1.04	ND	1.04	ND	
Fluoranthene (CCC)	0.919	ND	0.919	ND	
Benzidine	22.8	ND	22.8	ND	
Pyrene	0.937	ND	0.937	ND	
4-Dimethylaminoazobenzene	5.00	ND	5.00	ND	
Butylbenzylphthalate	0.810	ND	0.810	ND	
3,3-Dimethylbenzidine	10.8	ND	10.8	ND	
bis(2-Ethylhexyl)adipate	0.874	ND	0.874	ND	
3,3-Dimethoxybenzidine	5.00	ND	5.00	ND	
bis(2-Ethylhexyl)phthalate	1.74	ND	1.74	ND	
3,3'-Dichlorobenzidine	5.00	ND	5.00	ND	
Benzo(a)anthracene	0.550	ND	0.550	ND	
Chrysene	0.556	ND	0.556	ND	
Di-n-octylphthalate (CCC)	0.644	ND	0.644	ND	
7,12-Dimethylbenz(a)anthracene	5.00	ND	5.00	ND	
Benzo(b)fluoranthene	0.300	ND	0.300	ND	
Benzo(k)fluoranthene	0.356	ND	0.356	ND	
Benzo(e)pyrene	0.340	ND	0.340	ND	

Sample Name : DCM System Blank
Sample Info :
Data File : W1900508.D
Dilution : 1
Extract Volume : 1.00
Acquisition Date : 2019-07-31 17:21:22
Instrument Method : RXI-M8270.M
Matrix : LIQUID

Target Compound	MDL (ug/mL)	Concentration (ug/mL)	MDL (ug)	Catch Weight (ug)	Flag *
Benzo(a)pyrene (CCC)	0.340	ND	0.340	ND	
Perylene	0.340	ND	0.340	ND	
3-Methylcholanthrene	5.00	ND	5.00	ND	
Indeno(1,2,3-cd)pyrene	0.300	ND	0.300	ND	
Dibenz(a,h)anthracene	0.425	ND	0.425	ND	
Benzo(g,h,i)perylene	0.352	ND	0.352	ND	
Dibenzo(a,e)pyrene	5.00	ND	5.00	ND	

(ND) = Not Detected

* (J) = Below Calibration Range, (E) = Above Calibration Range, (m) = Manual Integration

Sample Name : DCM System Blank
Sample Info :
Data File : W1900508.D
Dilution : 1
Extract Volume : 1.00
Acquisition Date : 2019-07-31 17:21:22
Instrument Method : RXI-M8270.M
Matrix : LIQUID

Internal Standards	Response	Retention Time (min)	Concentration (ug/mL)	% Deviation	Flag *
1,4-Dichlorobenzene-d4 (I)	386,545	4.24	40.00	9.0	PASS
Naphthalene-d8 (I)	1,414,266	5.32	40.00	9.9	PASS
Acenaphthene-d10 (I)	829,207	6.89	40.00	8.4	PASS
Phenanthrene-d10 (I)	1,418,301	8.23	40.00	6.9	PASS
Chrysene-d12 (I)	1,562,781	12.23	40.00	5.4	PASS
Perylene-d12 (I)	1,438,168	16.35	40.00	5.2	PASS

* (m) = Manual Integration
IS Acceptance Criteria: RT +/- 20 sec, Response +/- 40%

Narrative Summary

Enthalpy Analytical Narrative Summary

Company	Tetra Tech, Inc.
Analyst	AMP
Parameters	EPA Method TO-11A

Client #	Ablw Contracting - Richland, SC
Job #	0719-205
# Samples	5, 1 Blank

Custody	<p>David Myers received the samples on 7/29/19 after being relinquished by Tetra Tech, Inc. The samples were received at 5.6 °C and in good condition.</p> <p>Prior to, during, and after analysis, the sample was kept under lock with access only to authorized personnel by Enthalpy Analytical, LLC.</p>
Analysis	<p>The sample was analyzed for formaldehyde using the analytical procedures in EPA Method TO-11A.</p> <p>The SKC DNPH-coated silica gel (Cat# 226-119) tube was desorbed whole using 5 mL of acetonitrile on 7/30/19.</p> <p>The HPLC “Groucho” was used for this analysis.</p>
Calibration	<p>The calibration curve is included in the Raw Data section of this report and referenced in the Analysis Method column on the Detailed Results page.</p> <p>For each calibration curve used, the first page of the curve contains all method specific parameters (i.e., curve type, origin, weight, etc.) used to quantify the samples. The calibration curve section also includes a table with the Retention Time (RetTime), Level (Lvl), Amount (corresponding units), Area, Response Factor (Amt/Area) and the analyte Name. The calibration table is used to identify (by retention time) and quantify each target compound.</p>
Chromatographic Conditions	A copy of the acquisition method Grouch_AgilentZprbaxSBC CARBS is included near the end of this PDF report.
QC Notes	<p>Formaldehyde was not identified at concentrations greater than the LOQ in the analyses of the client blank or the laboratory reagent blank.</p> <p>A second source sample was analyzed with the sample and yielded a recovery value of 98.2%.</p>
Reporting Notes	<p>The four samples and the background sample have results reported on a concentration basis ($\mu\text{g}/\text{m}^3$) per client request, using air sampling volumes the client provided in an Excel workbook. The client’s tube blank had no sampling volume and so is reported as a catch weight.</p> <p>The results presented in this report are representative of the samples as provided to the laboratory.</p>



Enthalpy Analytical Narrative Summary

Company	Tetra Tech, Inc.
Analyst	DDC
Parameters	OSHA Method 61

Client #	Able Contracting - Richland, SC
Job #	0719-205
# Samples	5, 1 Blank

Custody	<p>David Myers received the samples on 7/29/19 after being relinquished by Tetra Tech, Inc. The samples were received at 5.6 °C and in good condition.</p> <p>Prior to, during, and after analysis, the sample was kept under lock with access only to authorized personnel by Enthalpy Analytical, LLC.</p>
Analysis	<p>The sample was analyzed for phosgene using the analytical procedures in OSHA Method 61.</p> <p>Each sample was collected on two SKC XAD-2 (Cat# 226-117) tubes. Each tube was desorbed in two fractions: front half (FH) and back half (BH), so the runs had 4 fractions. All fractions were desorbed using 1 mL of OSHA M61 Phosgene reagent solution and shaken at 450 rev/min for 60 minutes. The tubes were desorbed on 7/30/19.</p> <p>The GC “Lolita” was used for this analysis.</p>
Calibration	<p>The calibration curve is included in the Raw Data section of this report and referenced in the Analysis Method column on the Detailed Results page.</p> <p>For each calibration curve used, the first page of the curve contains all method specific parameters (i.e., curve type, origin, weight, etc.) used to quantify the samples. The calibration curve section also includes a table with the Retention Time (RetTime), Level (Lvl), Amount (corresponding units), Area, Response Factor (Amt/Area) and the analyte Name. The calibration table is used to identify (by retention time) and quantify each target compound.</p>
Chromatographic Conditions	A copy of the acquisition method LOLITA0273_PHOSGENE.M is included near the end of this PDF report.
QC Notes	<p>Phosgene was not identified at concentrations greater than the LOQ in the analyses of the client blank or laboratory method and reagent blanks.</p> <p>A second source sample was analyzed with the sample and yielded a recovery value of 98.2%.</p>



Enthalpy Analytical Narrative Summary

(continued)

QC Notes (continued)

The four samples and the background sample have results reported on a concentration basis ($\mu\text{g}/\text{m}^3$) per client request, using air sampling volumes the client provided in an Excel workbook. The client's tube blank had no sampling volume and so is reported as a catch weight.

Reporting Notes

The results presented in this report are representative of the samples as provided to the laboratory.

Enthalpy Analytical Narrative Summary

Company	Tetra Tech, Inc.
Analyst	TDD
Parameters	EPA Method TO-15

Client #	Able Contracting
Job #	0719-205
# Samples	6 Canisters

Custody

David Myers received the samples on 7/29/19 after being relinquished by Tetra Tech, Inc. The samples were received at ambient temperature and in good condition.

Prior to, during, and after analysis, the samples were kept under lock with access only to authorized personnel by Enthalpy Analytical, LLC.

Analysis

The samples were analyzed for the TO-15 target compound list using the analytical procedures in EPA Method TO-15, *Determination of Volatile Organic Compounds (VOCs) In Air Collected In Specially-Prepared Canisters And Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS)*.

Upon receipt, the canister pressures were measured and recorded. The canisters were then pressurized with UHP nitrogen and a dilution ratio was calculated for each canister. Sample **ACF-Blank** has been assigned a dilution factor of 1. Refer to the Canister and Controller Data Sheet in the Lab QC section of this PDF report for sample pressurization factors.

The Agilent Technologies Model 7890A, Gas Chromatograph "Tobias" (S/N US81839501 / CN10823053) was equipped with a 5975C Inert XL MSD with Triple Axis and a Restek Rxi-624 Sil MS, 60 m x 0.25 mm x 1.4 µm (S/N 1348592) capillary column for this analysis. All samples and standards were introduced directly to the analyzer using an Entech 7100A Preconcentrator.

Calibration

The BFB tune analyses associated with the initial and continuing calibrations met method acceptance criteria. The initial calibration (**X051419A-TO15**) met the 30% RSD criteria. The initial calibration verification met the 70-130% recovery criteria. The continuing calibration met the 30% difference criteria. Calibration data has not been provided in this level 2 report, however is available upon request.

Chromatographic Conditions

A copy of the acquisition method (**TO15-SCN2.M**) has not been included in this report but is available upon request.



Enthalpy Analytical Narrative Summary (continued)

QC Notes

All internal standard area responses and retention time criteria were met for these analyses.

The laboratory humid blank associated with the analysis of these samples did not contain any of the target analytes at a concentration greater than 3-times the MDL value.

The Laboratory Control Sample (LCS) met the 70-130% recovery criteria for all analytes of interest.

The Laboratory Duplicate (LD) analyzed with this sample set met 25% difference acceptance criteria.

The samples were analyzed within the 30-day holding time required by the method.

Reporting Notes

These analyses met the requirements of the TNI Standard. Any deviations from the requirements of the reference method or TNI Standard have been stated above.

The results presented in this report are representative of the samples as provided to the laboratory.

Enthalpy Analytical Narrative Summary

Company	Tetra Tech, Inc.
Analyst	TDD
Parameters	EPA Method 8270D

Client #	Able Contracting
Job #	0719-205
# Samples	5 Samples, 1 Blank

Custody

David Myers received the samples on 7/29/19 after being relinquished by Tetra Tech, Inc. The samples were received in good condition at 5.6 °C.

Prior to, during, and after analysis, the samples were kept under lock with access only to authorized personnel by Enthalpy Analytical, LLC.

Analysis

The samples were analyzed for the Method 8270D Target Compound List using the analytical procedures in EPA SW-846 Method 8270D, *Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry*.

Each sample consisted of a XAD-2 tube. Each tube was desorbed in 5 mLs of methylene chloride and placed on a 2-dimensional shake for for 30 minutes at 450 rpm. A 100-uL aliquot of each prepared proportional aliquot sample was transferred to an autosampler vial and spiked with 40 ug of SV internal standard solution prior to analysis.

The Agilent Technologies Model 6890N, Gas Chromatograph "Wiley" (S/N CN10244010) was equipped with a 5973N Mass Selective Detector and a Restek Rxi-5Sil MS, 30 m x 0.25 mm x 0.5 µm capillary column (S/N 1479765) for these analyses.

Chromatographic Conditions

The acquisition method ***RXI5-M8270.m*** has not been included in this Level 2 report but is available upon request.

Calibration

Calibration data is not included in this Level 2 report but is available upon request.

The initial calibration (*W012119A-M8270*) met 20% RSD or greater than 0.99 coefficient of determination (R^2) acceptance criteria. Minimum RF criteria were met for all compounds. The initial calibration verification met the 30% recovery criteria.



Enthalpy Analytical Narrative Summary

(continued)

Calibration (continued)

The continuing calibration did not meet the less than 20% difference criteria for all compounds using % RSD or 80% to 120% recovery criteria for all compounds using linear regression. The failing compounds in the opening CCV include bis(2-Chloroisopropyl)ether, benzoic acid, hexachlorobutadiene, 1,4-phenylenediamine, 2,4,6-trichlorophenol, 2,4,5-trichlorophenol, 2,4-dinitrophenol, 2,3,5,6-tetrachlorophenol, 2,3,4,6-tetrachlorophenol, 4,6-dinitro-2-methylphenol, hexachlorobenzene, pentachlorophenol, 4-dimethylaminoazobenzene, butylbenzylphthalate, and bis(2-ethylhexyl)adipate.

QC Notes

The DFTPP tune analysis associated with this sample data met acceptance criteria.

All internal standard criteria were met for this analysis.

The Laboratory Duplicate (LD) associated with this sample data set met the less than 20% difference criteria.

No target analytes were detected in the analysis of the laboratory system blank at concentrations greater than the limit of quantitation (LOQ) for the SVOA scan analysis

The samples were analyzed within the 40-day holding time required by the method.

Reporting Notes

The four samples and background sample have results reported on a concentration basis ($\mu\text{g}/\text{m}^3$) per client request, using air sampling volumes the client provided in an Excel workbook. The sampling volume for sample **ACF-AS-BKGD-072819** was used for the sample **ACF-BLANK-TUBE**.

The results presented in this report are representative of the samples as provided to the laboratory.

General Reporting Notes

The following are general reporting notes that are applicable to all Enthalpy Analytical, LLC data reports, unless specifically noted otherwise.

- Any analysis which refers to the method as “**Type**” represents a planned deviation from the reference method. For instance a Hydrogen Sulfide assay from a Tedlar bag would be labeled as “EPA Method 16-Type” because Tedlar bags are not mentioned as one of the collection options in EPA Method 16.
- The acronym **MDL** represents the Minimum Detection Limit. Below this value the laboratory cannot determine the presence of the analyte of interest reliably.
- The acronym **LOQ** represents the Limit of Quantification. Below this value the laboratory cannot quantitate the analyte of interest within the criteria of the method.
- The acronym **ND** following a value indicates a non-detect or analytical result below the MDL.
- The letter **J** in the Qualifier or Flag column in the results indicates that the value is between the MDL and the LOQ. The laboratory can positively identify the analyte of interest as present, but the value should be considered an estimate.
- The letter **E** in the Qualifier or Flag column indicates an analytical result exceeding 100% of the highest calibration point. The associated value should be considered as an estimate.
- Sample results are presented ‘as measured’ for single injection methodologies, or an average value if multiple injections are made. If all injections are below the MDL, the sample is considered non-detect and the ND value is presented. If one, but not all, are below the MDL, the MDL value is used for any injections that are below the MDL. For example, if the MDL is 0.500 and LOQ is 1.00, and the instrument measures 0.355, 0.620, and 0.442 - the result reported is the average of 0.500, 0.620, and 0.500 - - - i.e. 0.540 with a J flag.
- When a spike recovery (Bag Spike, Collocated Spike Train, or liquid matrix spike) is being calculated, the native (unspiked) sample result is used in the calculations, as long as the value is above the MDL. If a sample is ND, then 0 is used as the native amount (not the MDL value).
- The acronym **DF** represents Dilution Factor. This number represents dilution of the sample during the preparation and/or analysis process. The analytical result taken from a laboratory instrument is multiplied by the DF to determine the final undiluted sample results.
- The addition of **MS** to the Sample ID represents a Matrix Spike. An aliquot of an actual sample is spiked with a known amount of analyte so that a percent recovery value can be determined. The MS analysis indicates what effect the sample matrix may have on the target analyte, i.e. whether or not anything in the sample matrix interferes with the analysis of the analyte(s).



General Reporting Notes

(continued)

- The addition of **MSD** to the Sample ID represents a Matrix Spike Duplicate. Prepared in the same manner as a MS, the use of duplicate matrix spikes allows further confirmation of laboratory quality by showing the consistency of results gained by performing the same steps multiple times.
- The addition of **LD** to the Sample ID represents a Laboratory Duplicate. The analyst prepares an additional aliquot of sample for testing and the results of the duplicate analysis are compared to the initial result. The result should have a difference value of within 10% of the initial result (if the results of the original analysis are greater than the LOQ).
- The addition of **AD** to the Sample ID represents an Alternate Dilution. The analyst prepares an additional aliquot at a different dilution factor (usually double the initial factor). This analysis helps confirm that no additional compound is present and coeluting or sharing absorbance with the analyte of interest, as they would have a different response/absorbance than the analyte of interest.
- The Sample ID **LCS** represents a Laboratory Control Sample. Clean matrix, similar to the client sample matrix, prepared and analyzed by the laboratory using the same reagents, spiking standards and procedures used for the client samples. The LCS is used to assess the control of the laboratory's analytical system. Whenever spikes are prepared for our client projects, two spikes are retained as LCSs. The LCSs are labeled with the associated project number and kept in-house at the appropriate temperature conditions. When the project samples are received for analysis, the LCSs are analyzed to confirm that the analyte could be recovered from the media, separate from the samples which were used on the project and which may have been affected by source matrix, sample collection, and/or sample transport.
- **Significant Figures:** Where the reported value is much greater than unity (1.00) in the units expressed, the number is rounded to a whole number of units, rather than to 3 significant figures. For example, a value of 10,456.45 ug catch is rounded to 10,456 ug. There are five significant digits displayed, but no confidence should be placed on more than two significant digits. In the case of small numbers, generally 3 significant figures are presented, but still only 2 should be used with confidence. Many neat materials are only certified to 3 digits, and as the mathematically correct final result is always 1 digit less than all its pre-cursors - 2 significant figures are what are most defensible.
- **Manual Integration:** The data systems used for processing will flag manually integrated peaks with an "M". There are several reasons a peak may be manually integrated. These reasons will be identified by the following two letter designations on sample chromatograms, if provided in the report. The peak was *not integrated* by the software "**NI**", the peak was *integrated incorrectly* by the software "**II**" or the *wrong peak* was integrated by the software "**WP**". These codes will accompany the analyst's manual integration stamp placed next to the compound name on the chromatogram.

Sample Custody



Chain of Custody Record

Page 1 of 4

Special Handling:

- ☐ Standard Turn Around Time
- ☒ Rush Turn Around Time -- Date Needed ASAP
- All TATs Subject to Approval by Enthalpy Analytical
 - All Bag/Can Samples Disposed of 1 Month from Receipt
 - All Other Samples Disposed of 4 Months from Receipt

Sample(s) Collected by: John Snyder
 Client Name: Tetra Tech
 Project Manager: _____

Project Number: _____
 Site Name: Able Contracting
 Location: SC

PO#: _____
 Telephone#: _____
 Email: jessica.vick@tetra-tech.com

For spiked or duplicate samples: please provide sample volumes for recovery calculations. For Particulates: please provide tare weights and/or condensed water volumes.

Special Instructions:

A=Air 1=H2SO4 2=NaOH W=Water O=Other
 X=XAD C=Charcoal SG=Silica Gel

G=Grab C=Composite Q=Quality Control O=Other

Sample ID	Date	Time	Sample Volume	Type	Matrix	Sample Containers							Analyses:					Notes:
						# of VOA Vials	# of Glass	# of Plastic	# of Bags	# of Canisters	# of Tubes	# Other	TO-15	TAL Metals	Formal.	SVOC	TEM	
ALF-AS-RES-AM-072719	7/27	00:18	672.6	G	37mm							1		/				
			410.6	G	SG						1				/			7969802213
			486.2	G	X						1					/		8262001732
			21"-3"	G	A					1		4	/					Summa 0802
		00:40	767.0	G	0.451 20.50							1				/		BA319492
ALF-AS-SMOKE-AM-072719	7/27	01:00	30/-7	G	A					1		4	/					Summa 0799
			657.5	G	37mm							1		/				
			411.8	G	SG						1				/			7969802214
		04:45	562.5	G	X						1					/		8262001729
		01:00	898.6	G	0.451 5.0							1				/		BA319047

Relinquished By: _____

Date: 7/29

Received By: Jim [Signature]

Date: 7-29-19

Time: 1:35 PM

Sample Condition Upon Receipt

☐ Iced ☐ Ambient ☐ °C _____

☐ Iced ☐ Ambient ☐ °C _____

☐ Iced ☐ Ambient ☐ °C _____



Chain of Custody Record

Page 2 of 4

Special Handling:

- ☐ Standard Turn Around Time
- ☐ Rush Turn Around Time -- Date Needed _____
- All TATs Subject to Approval by Enthalpy Analytical
- All Bag/Can Samples Disposed of 1 Month from Receipt.
- All Other Samples Disposed of 4 Months from Receipt.

Sample(s) Collected by: _____	Project Number: _____	PO#: _____	For spiked or duplicate samples: please provide sample volumes for recovery calculations. For Particulates: please provide tare weights and/or condensed water volumes.
Client Name: _____	Site Name: _____	Telephone#: _____	
Project Manager: _____	Location: _____	Email: _____	

Special Instructions:

A=Air 1=H2SO4 2=NaOH W=Water O=Other
X=XAD C=Charcoal SG=Silica Gel

G=Grab C=Composite Q=Quality Control O=Other

Sample ID	Date	Time	Sample Volume	Type	Matrix	Sample Containers							Analyses:					Notes:
						# of VOA Vials	# of Glass	# of Plastic	# of Bags	# of Canisters	# of Tubes	# Other						
ACP-AS-RES PM-072719	7/27	1210	30/-5	G	A					1			TD-15	TALNuk	Formal	SUOL	TEN	Summa 0809
↓	↓	↓	744.8	↓	37mm							1						7969802217
↓	↓	↓	541.5	↓	SG						1							8262001736
↓	↓	↓	421.4	↓	X						1							8262001736
↓	↓	↓	965.3	↓	0.45% S.O							1						BA318444
ACP-AS-SMOKE- PM-072719	7/27	1215	32/-6	G	A					1			✓					Summa 0797
↓	↓	↓	784.6	↓	37mm							1						7969802216
↓	↓	↓	549.5	↓	SG						1							8262001738
↓	↓	↓	438.3	↓	X						1							BA318947
↓	↓	↓	913.3	↓	0.45% S.O							1						

Relinquished By: _____	Date: 7/29	Received By: _____	Date: 7-29-19	Time: 1:35 PM	Sample Condition Upon Receipt:
					<input type="checkbox"/> Iced <input type="checkbox"/> Ambient <input type="checkbox"/> °C _____
					<input type="checkbox"/> Iced <input type="checkbox"/> Ambient <input type="checkbox"/> °C _____
					<input type="checkbox"/> Iced <input type="checkbox"/> Ambient <input type="checkbox"/> °C _____

5.6°C Raytek 5 Good Condition Cans received Ambient 8/10/19



Chain of Custody Record

Page 3 of 4

Special Handling:

- ☐ Standard Turn Around Time
- ☐ Rush Turn Around Time -- Date Needed _____
- All TATs Subject to Approval by Enthalpy Analytical
- All Bag/Can Samples Disposed of 1 Month from Receipt.
- All Other Samples Disposed of 4 Months from Receipt.

Sample(s) Collected by: _____
 Client Name: _____
 Project Manager: _____

Project Number: _____
 Site Name: _____
 Location: _____

PO#: _____
 Telephone#: _____
 Email: _____

For spiked or duplicate samples: please provide sample volumes for recovery calculations. For Particulates: please provide tare weights and/or condensed water volumes.

Special Instructions:

A=Air 1=H2SO4 2=NaOH W=Water O=Other
 X=XAD C=Charcoal SG=Silica Gel

G=Grab C=Composite Q=Quality Control O=Other

Sample ID	Date	Time	Sample Volume	Type	Matrix	Sample Containers							Analyses:						Notes:
						# of VOA Vials	# of Glass	# of Plastic	# of Bags	# of Canisters	# of Tubes	# Other	Phosphate	VOC	TAL Metals	Formaldehyde	SVOC	Asbestos	
ACF-AS-RES-AM-072819	7/28	0:02	473.9	G	X						2		✓						8123100531 530
ACF-AS-SMOKE-AM-072819	7/28	0:05	603.9	G	X						2		✓						8123100523 527
ACF-AS-RES-PM-072819	7/28	11:00	522.5	G	X						2		✓						526 532
ACF-AS-SMOKE-PM-072819	7/28	11:02	515.2	G	Y						2		✓						528 524
ACF-AS-BKGD-072819	7/28	1130	-32/-7	G	A					1				✓					Summer 0808
			776.6	G	37mm							1			✓				7969802215
			516.2	G	SG						1					✓			8262001735
			439.4	G	X						1						✓		8123100527 525
			537.1	G	X						2		✓						
			946.3	G	0.45+5.0							1						✓	BA318940

Relinquished By: _____

Date: 7/29

Received By: [Signature]

Date: 7-29-19

Time: 1:35 PM

Sample Condition Upon Receipt:

- ☐ Iced ☐ Ambient ☐ °C _____
- ☐ Iced ☐ Ambient ☐ °C _____
- ☐ Iced ☐ Ambient ☐ °C _____



- For spiked or duplicate samples: please provide sample volumes for recovery calculations. For Particulates: please provide tare weights and/or condensed water volumes.

Email: _____

Analyses:

Notes:

812310060'S
015

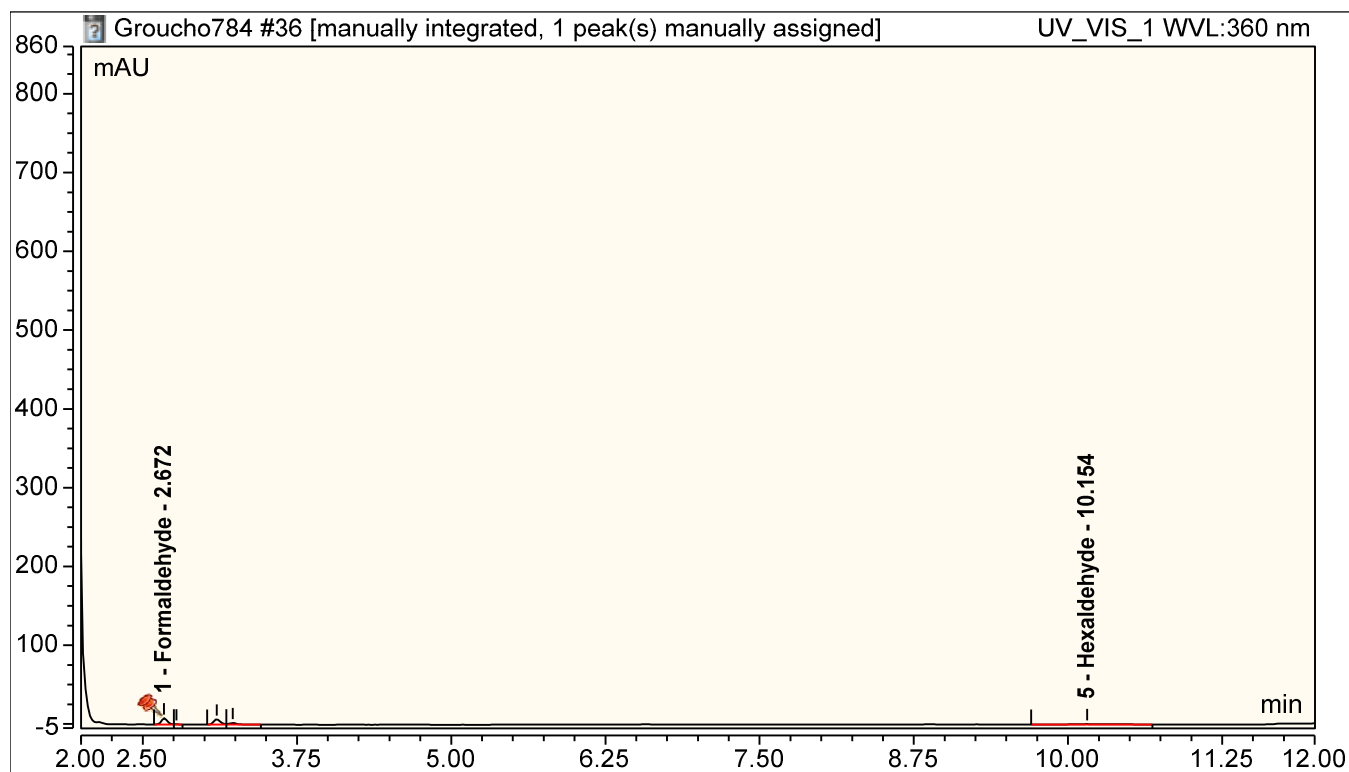
Sample Condition Upon Receipt:

☐ Iced ☐ Ambient ☐ °C

Raw Data

Peak Analysis Report

Sample Name:	0719-205.R-AM.TO11	Injection Volume:	5.00
Injection Type:	Unknown	Dilution Factor:	1.0
Instrument Method:	Grouch_AgilentZprbaxSBC CARBS	Operator:	APaolantonio
Inj. Date / Time:	30-Jul-2019 / 12:27	Run Time:	14.00



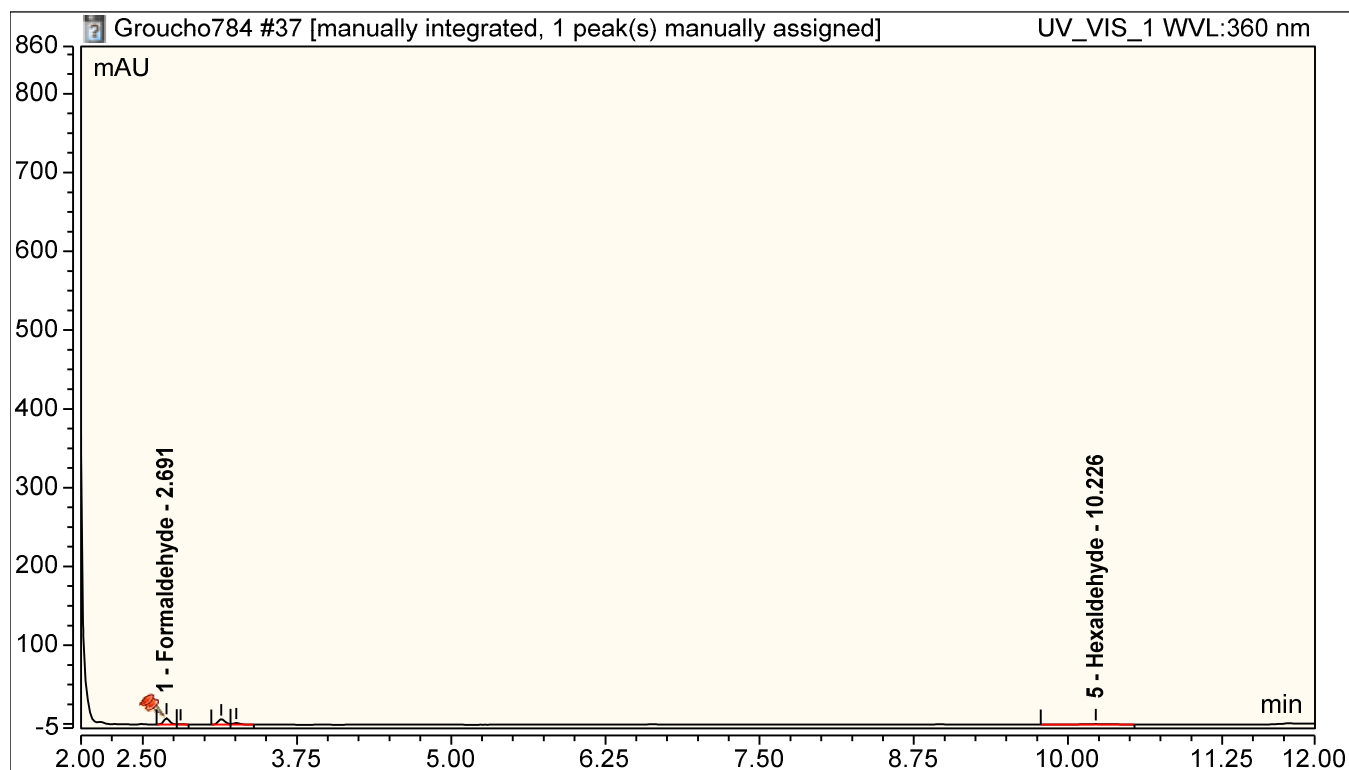
Analyst Comment:

II AMP 7/30/19

No.	Time min	Peak Name	Area mAU*min	Height mAU	Amount
1	2.67	Formaldehyde	0.453	7.999	0.140
5	10.15	Hexaldehyde	0.158	0.617	0.098

Peak Analysis Report

Sample Name:	0719-205.R-AM.TO11	Injection Volume:	5.00
Injection Type:	Unknown	Dilution Factor:	1.0
Instrument Method:	Grouch_AgilentZprbaxSBC CARBS	Operator:	APaolantonio
Inj. Date / Time:	30-Jul-2019 / 12:43	Run Time:	14.00



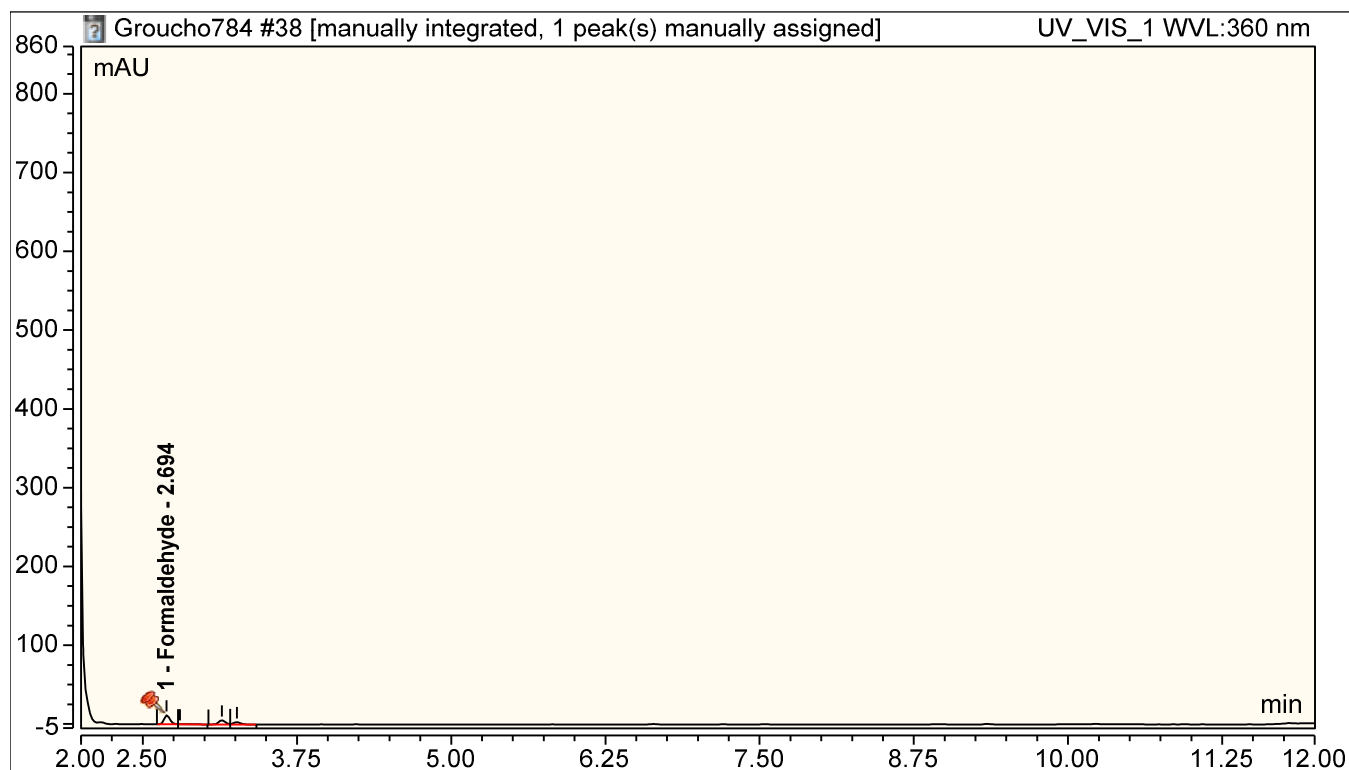
Analyst Comment:

II AMP 7/30/19

No.	Time min	Peak Name	Area mAU*min	Height mAU	Amount
1	2.69	Formaldehyde	0.454	8.070	0.140
5	10.23	Hexaldehyde	0.109	0.578	0.052

Peak Analysis Report

Sample Name:	0719-205.S-AM.TO11	Injection Volume:	5.00
Injection Type:	Unknown	Dilution Factor:	1.0
Instrument Method:	Grouch_AgilentZprbaxSBC CARBS	Operator:	APaolantonio
Inj. Date / Time:	30-Jul-2019 / 12:58	Run Time:	14.00



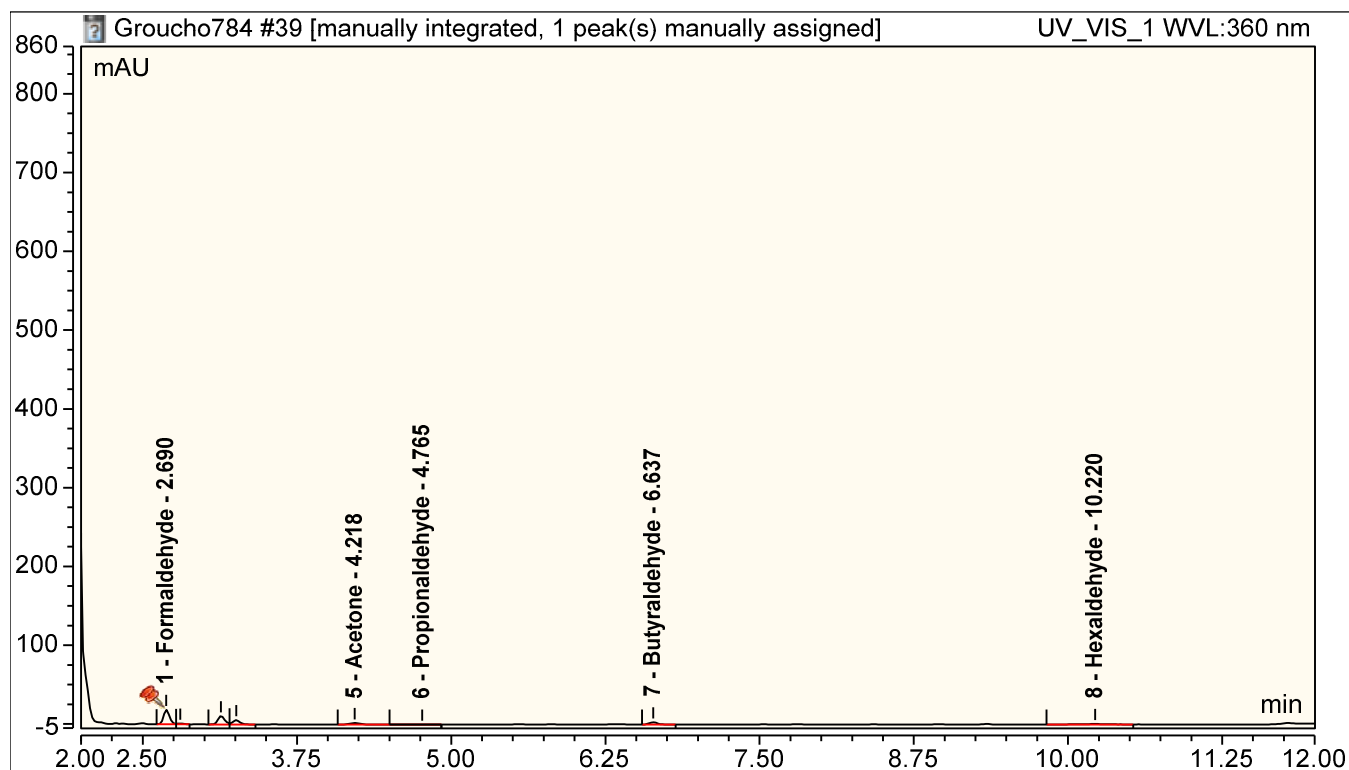
Analyst Comment:

II AMP 7/30/19

No.	Time min	Peak Name	Area mAU*min	Height mAU	Amount
1	2.69	Formaldehyde	0.655	11.627	0.206

Peak Analysis Report

Sample Name:	0719-205.R-PM.TO11	Injection Volume:	5.00
Injection Type:	Unknown	Dilution Factor:	1.0
Instrument Method:	Grouch_AgilentZprbaxSBC CARBS	Operator:	APaolantonio
Inj. Date / Time:	30-Jul-2019 / 13:14	Run Time:	14.00



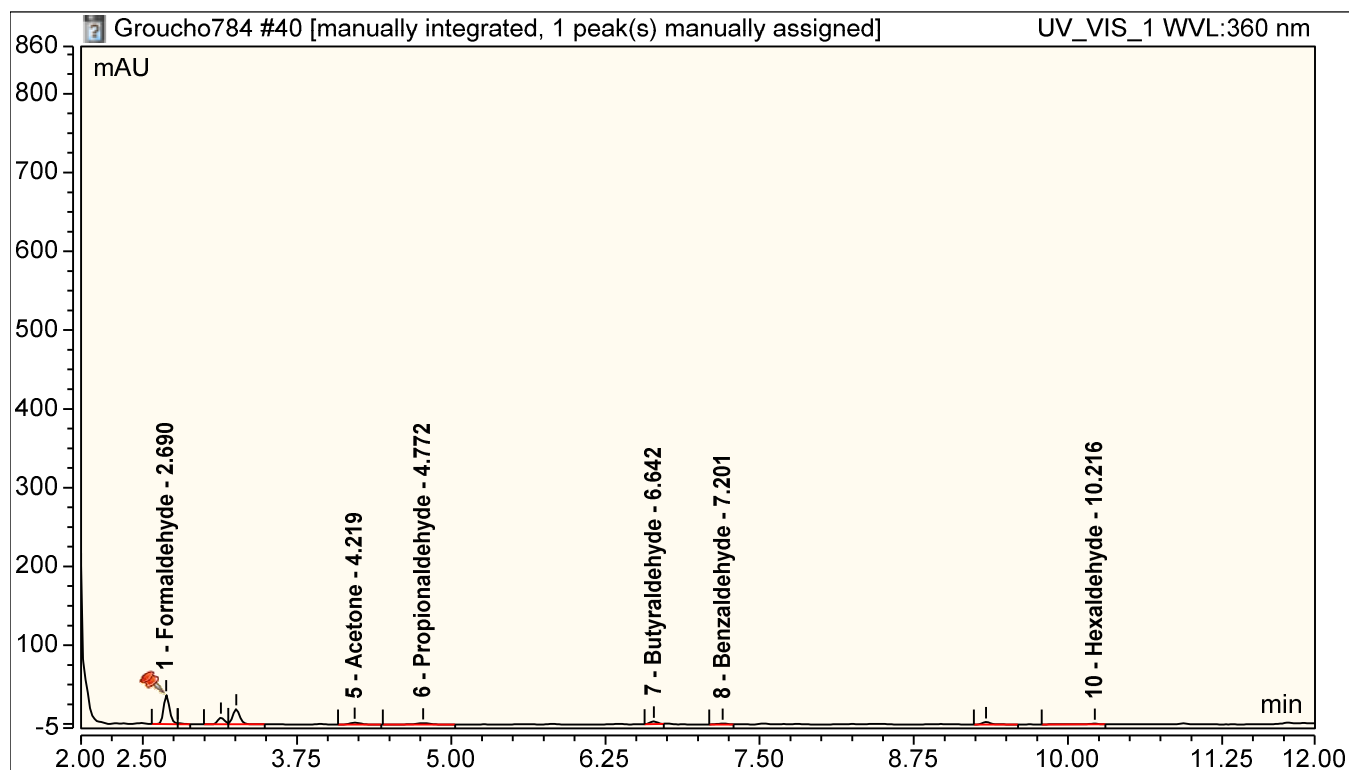
Analyst Comment:

II AMP 7/30/19

No.	Time min	Peak Name	Area mAU*min	Height mAU	Amount
1	2.69	Formaldehyde	1.035	18.479	0.329
5	4.22	Acetone	0.221	2.052	0.118
6	4.76	Propionaldehyde	0.051	0.307	0.019
7	6.64	Butyraldehyde	0.224	2.886	0.148
8	10.22	Hexaldehyde	0.116	0.812	0.059

Peak Analysis Report

Sample Name:	0719-205.S-PM.TO11	Injection Volume:	5.00
Injection Type:	Unknown	Dilution Factor:	1.0
Instrument Method:	Grouch_AgilentZprbaxSBC CARBS	Operator:	APaolantonio
Inj. Date / Time:	30-Jul-2019 / 13:30	Run Time:	14.00



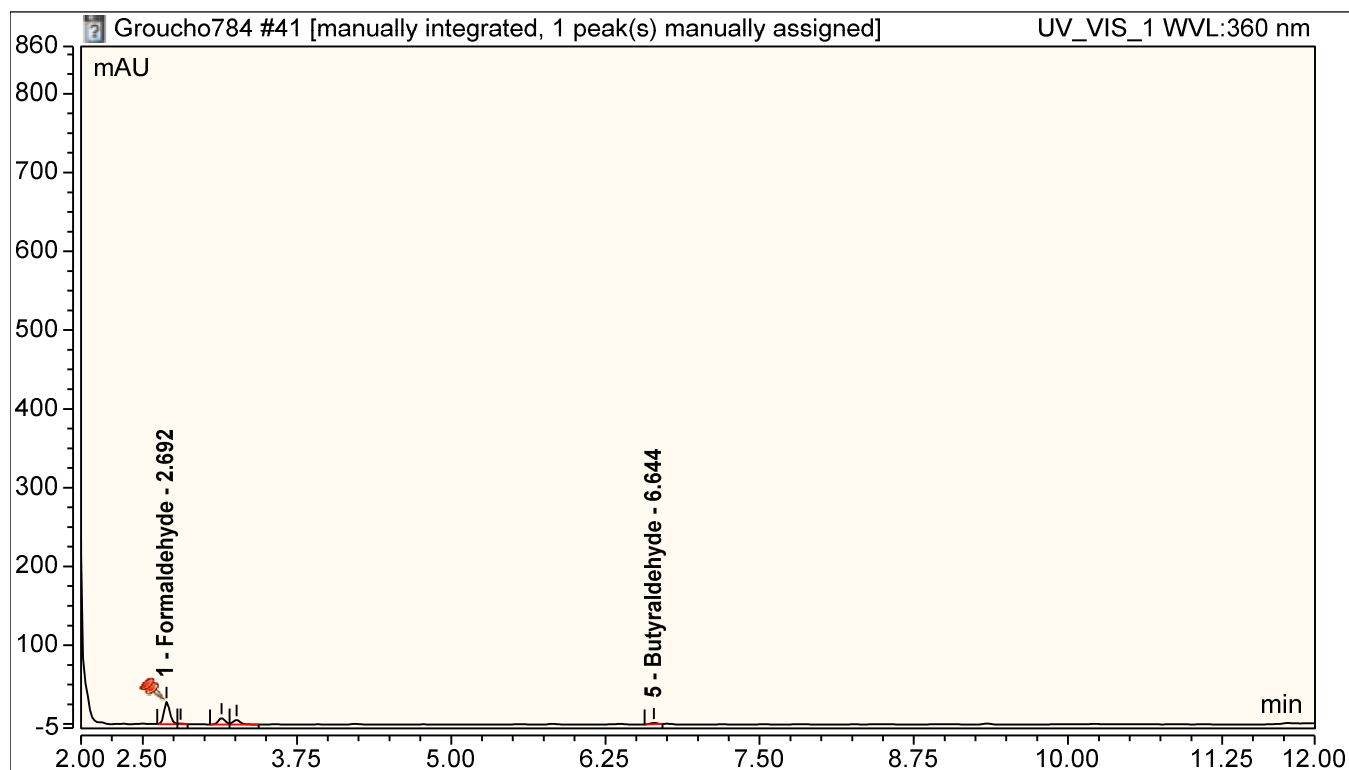
Analyst Comment:

II AMP 7/30/19

No.	Time min	Peak Name	Area mAU*min	Height mAU	Amount
1	2.69	Formaldehyde	2.079	36.770	0.669
5	4.22	Acetone	0.269	2.534	0.146
6	4.77	Propionaldehyde	0.283	1.818	0.157
7	6.64	Butyraldehyde	0.220	3.214	0.145
8	7.20	Benzaldehyde	0.102	1.187	0.089
10	10.22	Hexaldehyde	0.117	0.861	0.059

Peak Analysis Report

Sample Name:	0719-205.BKGD.TO11	Injection Volume:	5.00
Injection Type:	Unknown	Dilution Factor:	1.0
Instrument Method:	Grouch_AgilentZprbaxSBC CARBS	Operator:	APaolantonio
Inj. Date / Time:	30-Jul-2019 / 13:46	Run Time:	14.00



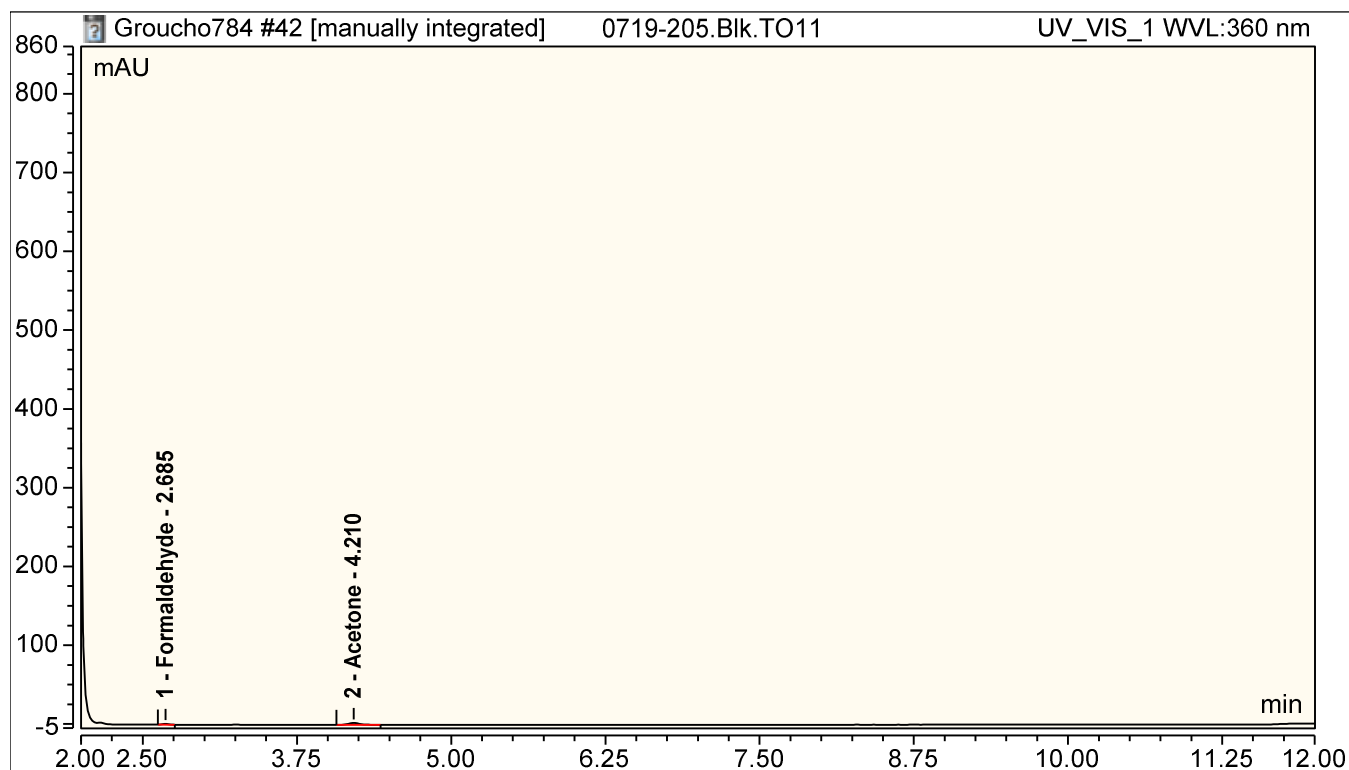
Analyst Comment:

II AMP 7/30/19

No.	Time min	Peak Name	Area mAU*min	Height mAU	Amount
1	2.69	Formaldehyde	1.572	28.181	0.504
5	6.64	Butyraldehyde	0.109	1.662	0.068

Peak Analysis Report

Sample Name:	0719-205.Blk.TO11	Injection Volume:	5.00
Injection Type:	Unknown	Dilution Factor:	1.0
Instrument Method:	Grouch_AgilentZprbaxSBC CARBS	Operator:	APaolantonio
Inj. Date / Time:	30-Jul-2019 / 14:01	Run Time:	14.00



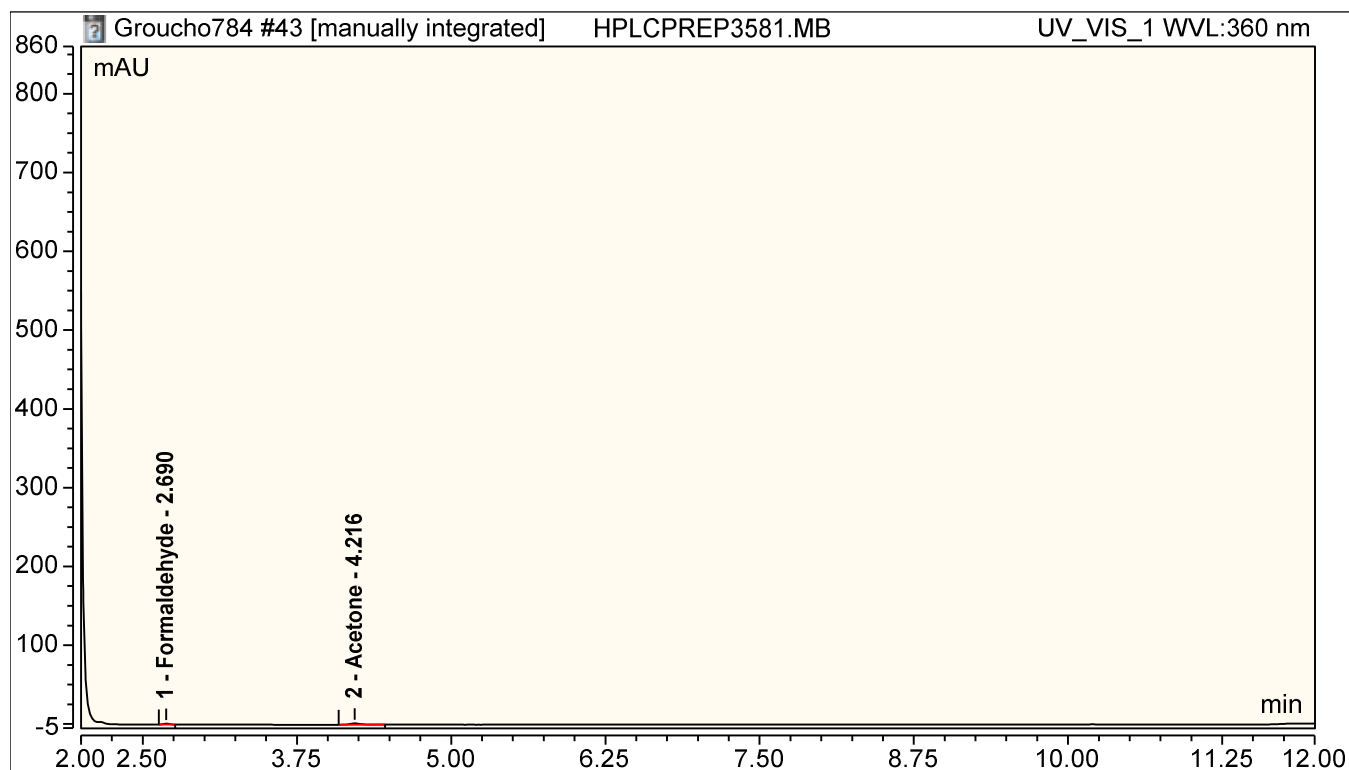
Analyst Comment:

NI AMP 7/30/19

No.	Time min	Peak Name	Area mAU*min	Height mAU	Amount
1	2.69	Formaldehyde	0.068	1.198	0.015
2	4.21	Acetone	0.239	2.237	0.128

Peak Analysis Report

Sample Name:	HPLCPREP3581.MB	Injection Volume:	5.00
Injection Type:	Unknown	Dilution Factor:	1.0
Instrument Method:	Grouch_AgilentZprbaxSBC CARBS	Operator:	APaolantonio
Inj. Date / Time:	30-Jul-2019 / 14:17	Run Time:	14.00



Analyst Comment:

NI AMP 7/30/19

No.	Time min	Peak Name	Area mAU*min	Height mAU	Amount
1	2.69	Formaldehyde	0.066	1.177	0.014
2	4.22	Acetone	0.178	1.658	0.093

No.	Injection Name	Inject Time	Pos.	Level	Ref.Amount	Calibration Point Status	Ref.Amount	Calibration Point Status	Ref.Amount	Calibration Point Status
					UV_VIS_1 Formaldehyde	UV_VIS_1 Formaldehyde	UV_VIS_1 Acetaldehyde	UV_VIS_1 Acetaldehyde	UV_VIS_1 Acrolein	UV_VIS_1 Acrolein
4	HPLCSTDS805 #1	01/Jul/2019 15:40	1	1	0.1117	Ok	0.1117	Ok	0.1117	Ok
5	HPLCSTDS805 #1	01/Jul/2019 15:55	1	1	0.1117	Ok	0.1117	Ok	0.1117	Ok
6	HPLCSTDS805 #1	01/Jul/2019 16:11	1	1	0.1117	Ok	0.1117	Ok	0.1117	Ok
7	HPLCSTDS805 #2	01/Jul/2019 16:27	2	2	0.5769	Ok	0.5769	Ok	0.5769	Ok
8	HPLCSTDS805 #2	01/Jul/2019 16:42	2	2	0.5769	Ok	0.5769	Ok	0.5769	Ok
9	HPLCSTDS805 #2	01/Jul/2019 16:58	2	2	0.5769	Ok	0.5769	Ok	0.5769	Ok
10	HPLCSTDS805 #3	01/Jul/2019 17:14	3	3	1.6667	Ok	1.6667	Ok	1.6667	Ok
11	HPLCSTDS805 #3	01/Jul/2019 17:30	3	3	1.6667	Ok	1.6667	Ok	1.6667	Ok
12	HPLCSTDS805 #3	01/Jul/2019 17:45	3	3	1.6667	Ok	1.6667	Ok	1.6667	Ok
13	HPLCSTDS805 #4	01/Jul/2019 18:01	4	4	4.2857	Ok	4.2857	Ok	4.2857	Ok
14	HPLCSTDS805 #4	01/Jul/2019 18:17	4	4	4.2857	Ok	4.2857	Ok	4.2857	Ok
15	HPLCSTDS805 #4	01/Jul/2019 18:32	4	4	4.2857	Ok	4.2857	Ok	4.2857	Ok
16	HPLCSTDS805 #5	01/Jul/2019 18:48	5	5	7.5000	Ok	7.5000	Ok	7.5000	Ok
17	HPLCSTDS805 #5	01/Jul/2019 19:04	5	5	7.5000	Ok	7.5000	Ok	7.5000	Ok
18	HPLCSTDS805 #5	01/Jul/2019 19:20	5	5	7.5000	Ok	7.5000	Ok	7.5000	Ok
19	HPLCSTDS805 #6	01/Jul/2019 19:35	6	6	9.7059	Ok	9.7059	Ok	9.7059	Ok
20	HPLCSTDS805 #6	01/Jul/2019 19:51	6	6	9.7059	Ok	9.7059	Ok	9.7059	Ok
21	HPLCSTDS805 #6	01/Jul/2019 20:07	6	6	9.7059	Ok	9.7059	Ok	9.7059	Ok
22	HPLCSTDS805 #7	01/Jul/2019 20:22	7	7	15.0000	Ok	15.0000	Ok	15.0000	Ok
23	HPLCSTDS805 #7	01/Jul/2019 20:38	7	7	15.0000	Ok	15.0000	Ok	15.0000	Ok
24	HPLCSTDS805 #7	01/Jul/2019 20:54	7	7	15.0000	Ok	15.0000	Ok	15.0000	Ok

Detection Parameters

Ret. Time min	Param. Name	Param. Value	Inj. Type	Channel
<Initial>	Consider Void Peak	Off	Any	All Channels
<Initial>	Smoothing Width	Auto	Any	All Channels
<Initial>	Baseline Noise Range	Auto	Any	All Channels
0.000	Tailing Sensitivity Factor	Off	Any	All Channels
0.000	Fronting Sensitivity Factor	Off	Any	All Channels
0.000	Minimum Area	0.1000 [Signal*min]	Any	All Channels
0.000	Inhibit Integration	On	Any	All Channels
2.533	Inhibit Integration	Off	Any	All Channels
11.800	Inhibit Integration	On	Any	All Channels
13.999	Inhibit Integration	On	Any	All Channels

Ref.Amount	Calibration Point Status	Ref.Amount	Calibration Point Status	Ref.Amount	Calibration Point Status	Ref.Amount	Calibration Point Status	Ref.Amount
UV_VIS_1	UV_VIS_1	UV_VIS_1	UV_VIS_1	UV_VIS_1	UV_VIS_1	UV_VIS_1	UV_VIS_1	UV_VIS_1
Acetone	Acetone	Propionaldehyde	Propionaldehyde	Crotonaldehyde	Crotonaldehyde	2-Butanone	2-Butanone	Butyraldehyde
0.1117	Ok	0.1124	Ok	0.1117	Ok	n.a.	n.a.	0.1117
0.1117	Ok	0.1124	Ok	0.1117	Ok	n.a.	n.a.	0.1117
0.1117	Ok	0.1124	Ok	0.1117	Ok	n.a.	n.a.	0.1117
0.5769	Ok	0.5808	Ok	0.5769	Ok	n.a.	n.a.	0.5769
0.5769	Ok	0.5808	Ok	0.5769	Ok	n.a.	n.a.	0.5769
0.5769	Ok	0.5808	Ok	0.5769	Ok	n.a.	n.a.	0.5769
1.6667	Ok	1.6778	Ok	1.6667	Ok	n.a.	n.a.	1.6667
1.6667	Ok	1.6778	Ok	1.6667	Ok	n.a.	n.a.	1.6667
1.6667	Ok	1.6778	Ok	1.6667	Ok	n.a.	n.a.	1.6667
4.2857	Ok	4.3143	Ok	4.2857	Ok	n.a.	n.a.	4.2857
4.2857	Ok	4.3143	Ok	4.2857	Ok	n.a.	n.a.	4.2857
4.2857	Ok	4.3143	Ok	4.2857	Ok	n.a.	n.a.	4.2857
7.5000	Ok	7.5500	Ok	7.5000	Ok	n.a.	n.a.	7.5000
7.5000	Ok	7.5500	Ok	7.5000	Ok	n.a.	n.a.	7.5000
7.5000	Ok	7.5500	Ok	7.5000	Ok	n.a.	n.a.	7.5000
9.7059	Ok	9.7706	Ok	9.7059	Ok	n.a.	n.a.	9.7059
9.7059	Ok	9.7706	Ok	9.7059	Ok	n.a.	n.a.	9.7059
9.7059	Ok	9.7706	Ok	9.7059	Ok	n.a.	n.a.	9.7059
15.0000	Ok	15.1000	Ok	15.0000	Ok	n.a.	n.a.	15.0000
15.0000	Ok	15.1000	Ok	15.0000	Ok	n.a.	n.a.	15.0000
15.0000	Ok	15.1000	Ok	15.0000	Ok	n.a.	n.a.	15.0000

Calibration Point Status	Ref.Amount	Calibration Point Status	Ref.Amount	Calibration Point Status	Ref.Amount	Calibration Point Status	Ref.Amount	Calibration Point Status
UV_VIS_1	UV_VIS_1	UV_VIS_1	UV_VIS_1	UV_VIS_1	UV_VIS_1	UV_VIS_1	UV_VIS_1	UV_VIS_1
Butyraldehyde	Benzaldehyde	Benzaldehyde	Isovaleraldehyde	Isovaleraldehyde	Valeraldehyde	Valeraldehyde	o-Tolualdehyde	o-Tolualdehyde
Ok	0.1117	Ok	0.1117	Ok	0.1117	Ok	0.1117	Ok
Ok	0.1117	Ok	0.1117	Ok	0.1117	Ok	0.1117	Ok
Ok	0.1117	Ok	0.1117	Ok	0.1117	Ok	0.1117	Ok
Ok	0.5769	Ok	0.5769	Ok	0.5769	Ok	0.5769	Ok
Ok	0.5769	Ok	0.5769	Ok	0.5769	Ok	0.5769	Ok
Ok	0.5769	Ok	0.5769	Ok	0.5769	Ok	0.5769	Ok
Ok	1.6667	Ok	1.6667	Ok	1.6667	Ok	1.6667	Ok
Ok	1.6667	Ok	1.6667	Ok	1.6667	Ok	1.6667	Ok
Ok	1.6667	Ok	1.6667	Ok	1.6667	Ok	1.6667	Ok
Ok	4.2857	Ok	4.2857	Ok	4.2857	Ok	4.2857	Ok
Ok	4.2857	Ok	4.2857	Ok	4.2857	Ok	4.2857	Ok
Ok	4.2857	Ok	4.2857	Ok	4.2857	Ok	4.2857	Ok
Ok	7.5000	Ok	7.5000	Ok	7.5000	Ok	7.5000	Ok
Ok	7.5000	Ok	7.5000	Ok	7.5000	Ok	7.5000	Ok
Ok	7.5000	Ok	7.5000	Ok	7.5000	Ok	7.5000	Ok
Ok	9.7059	Ok	9.7059	Ok	9.7059	Ok	9.7059	Ok
Ok	9.7059	Ok	9.7059	Ok	9.7059	Ok	9.7059	Ok
Ok	9.7059	Ok	9.7059	Ok	9.7059	Ok	9.7059	Ok
Ok	15.0000	Ok	15.0000	Ok	15.0000	Ok	15.0000	Ok
Ok	15.0000	Ok	15.0000	Ok	15.0000	Ok	15.0000	Ok
Ok	15.0000	Ok	15.0000	Ok	15.0000	Ok	15.0000	Ok

Ref.Amount	Calibration Point Status	Ref.Amount	Calibration Point Status	Ref.Amount	Calibration Point Status	Volume	Dil.Factor
UV_VIS_1	UV_VIS_1	UV_VIS_1	UV_VIS_1	UV_VIS_1	UV_VIS_1		
m&p-Tolualdehyde	m&p-Tolualdehyde	Hexaldehyde	Hexaldehyde	2,5-Dimethylbenzaldehyde	2,5-Dimethylbenzaldehyde		
0.2234	Ok	0.1117	Disabled	0.1124	Ok	5.00	1.0000
0.2234	Ok	0.1117	Disabled	0.1124	Ok	5.00	1.0000
0.2234	Ok	0.1117	Disabled	0.1124	Ok	5.00	1.0000
1.1538	Ok	0.5769	Ok	0.5808	Ok	5.00	1.0000
1.1538	Ok	0.5769	Ok	0.5808	Ok	5.00	1.0000
1.1538	Ok	0.5769	Ok	0.5808	Ok	5.00	1.0000
3.3334	Ok	1.6667	Ok	1.6778	Ok	5.00	1.0000
3.3334	Ok	1.6667	Ok	1.6778	Ok	5.00	1.0000
3.3334	Ok	1.6667	Ok	1.6778	Ok	5.00	1.0000
8.5714	Ok	4.2857	Ok	4.3143	Ok	5.00	1.0000
8.5714	Ok	4.2857	Ok	4.3143	Ok	5.00	1.0000
8.5714	Ok	4.2857	Ok	4.3143	Ok	5.00	1.0000
15.0000	Ok	7.5000	Ok	7.5500	Ok	5.00	1.0000
15.0000	Ok	7.5000	Ok	7.5500	Ok	5.00	1.0000
15.0000	Ok	7.5000	Ok	7.5500	Ok	5.00	1.0000
19.4118	Ok	9.7059	Ok	9.7706	Ok	5.00	1.0000
19.4118	Ok	9.7059	Ok	9.7706	Ok	5.00	1.0000
19.4118	Ok	9.7059	Ok	9.7706	Ok	5.00	1.0000
30.0000	Ok	15.0000	Ok	15.1000	Ok	5.00	1.0000
30.0000	Ok	15.0000	Ok	15.1000	Ok	5.00	1.0000
30.0000	Ok	15.0000	Ok	15.1000	Ok	5.00	1.0000

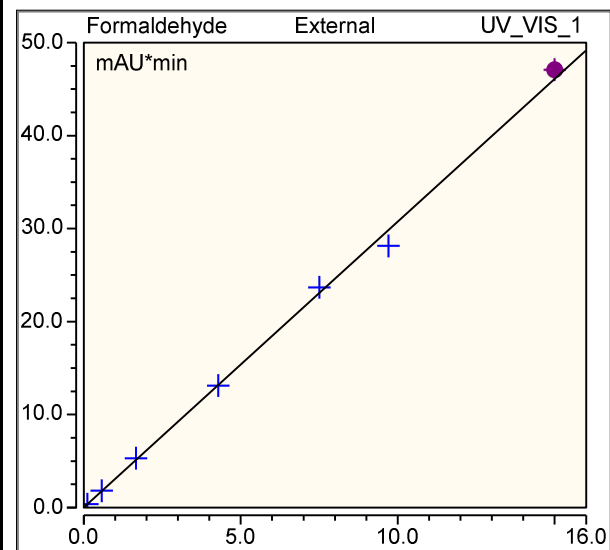
Calibration Batch Report

Sequence:	Groucho768	Injection Vo	5.00
Instrument Method:	Grouch_AgilentZprbaxSBC CARBS	Operator:	APaolantonio
Inj. Date / Time:	01-Jul-2019 / 20:54	Run Time:	13.99944

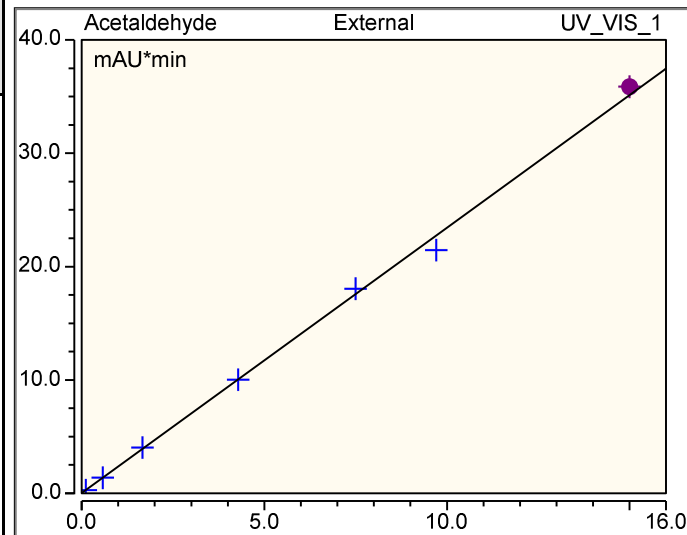
Calibration Summary

Peak Name	Eval.Type	Cal.Type	Points	Offset (C0)	Slope (C1)	Curve (C2)	Coeff.Det. %
Formaldehyde	Area	Lin, WithOffset, 1/A, Avg	7.000	0.023	3.072	0.000	99.869
Acetaldehyde	Area	Lin, WithOffset, 1/A, Avg	7.000	0.019	2.341	0.000	99.871
Acrolein	Area	Lin, WithOffset, 1/A, Avg	7.000	0.006	2.003	0.000	99.870
Acetone	Area	Lin, WithOffset, 1/A, Avg	7.000	0.017	1.734	0.000	99.873
Propionaldehyde	Area	Lin, WithOffset, 1/A, Avg	7.000	0.019	1.683	0.000	99.885
Crotonaldehyde	Area	Lin, WithOffset, 1/A, Avg	7.000	0.014	1.544	0.000	99.874
Butyraldehyde	Area	Lin, WithOffset, 1/A, Avg	7.000	0.011	1.436	0.000	99.870
Benzaldehyde	Area	Lin, WithOffset, 1/A, Avg	7.000	0.009	1.044	0.000	99.869
Isovaleraldehyde	Area	Lin, WithOffset, 1/A, Avg	7.000	0.006	1.219	0.000	99.866
Valeraldehyde	Area	Lin, WithOffset, 1/A, Avg	7.000	0.004	1.164	0.000	99.870
o-Tolualdehyde	Area	Lin, WithOffset, 1/A, Avg	7.000	0.007	0.870	0.000	99.869
m&p-Tolualdehyde	Area	Lin, WithOffset, 1/A, Avg	7.000	0.017	0.886	0.000	99.868
Hexaldehyde	Area	Lin, WithOffset, 1/A, Avg	6.000	0.054	1.054	0.000	99.852
2,5-Dimethylbenzaldehyde	Area	Lin, WithOffset, 1/A, Avg	7.000	0.033	0.777	0.000	99.863

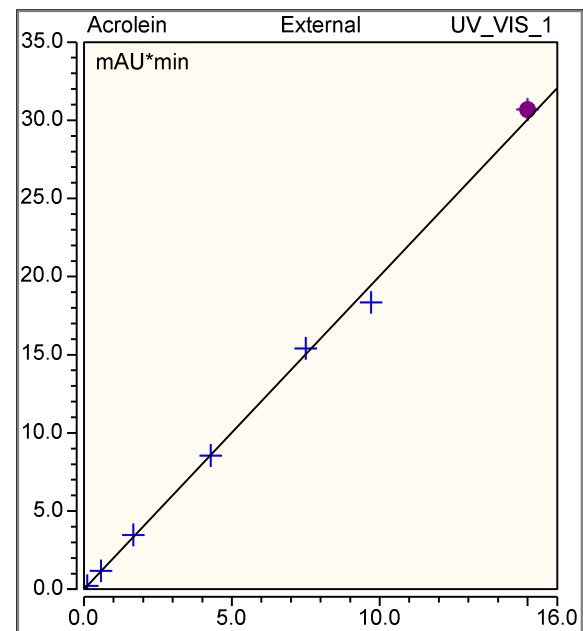
Injection Name	Ret.Time min UV_VIS_1	Area mAU*min UV_VIS_1	Height mAU UV_VIS_1	Amount UV_VIS_1
	Formaldehyde	Formaldehyde	Formaldehyde	Formaldehyde
HPLCSTDS805 #1	2.706	0.3611	6.325	0.110
HPLCSTDS805 #1	2.703	0.3575	6.319	0.109
HPLCSTDS805 #1	2.702	0.3568	6.302	0.109
HPLCSTDS805 #2	2.706	1.8043	31.409	0.580
HPLCSTDS805 #2	2.705	1.8028	31.457	0.579
HPLCSTDS805 #2	2.702	1.8049	31.512	0.580
HPLCSTDS805 #3	2.702	5.3061	92.633	1.720
HPLCSTDS805 #3	2.703	5.3162	92.848	1.723
HPLCSTDS805 #3	2.703	5.2996	92.737	1.718
HPLCSTDS805 #4	2.702	13.1016	229.431	4.257
HPLCSTDS805 #4	2.706	13.1321	229.817	4.267
HPLCSTDS805 #4	2.703	13.1233	230.131	4.264
HPLCSTDS805 #5	2.703	23.7275	415.746	7.716
HPLCSTDS805 #5	2.703	23.6427	414.043	7.689
HPLCSTDS805 #5	2.706	23.6653	414.027	7.696
HPLCSTDS805 #6	2.706	28.1652	493.646	9.161
HPLCSTDS805 #6	2.703	28.1456	493.341	9.155
HPLCSTDS805 #6	2.705	28.1166	492.720	9.145
HPLCSTDS805 #7	2.706	47.0814	824.776	15.319
HPLCSTDS805 #7	2.706	47.1619	826.771	15.345
HPLCSTDS805 #7	2.706	47.0192	825.517	15.299



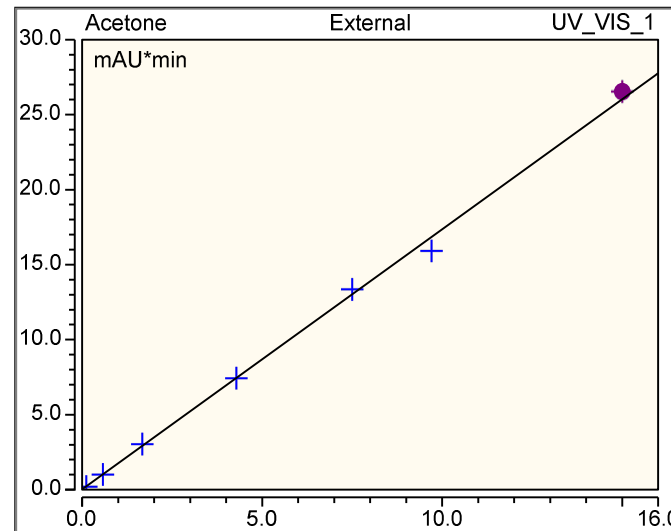
Injection Name	Ret.Time min UV_VIS_1	Area mAU*min UV_VIS_1	Height mAU UV_VIS_1	Amount UV_VIS_1
	Acetaldehyde	Acetaldehyde	Acetaldehyde	Acetaldehyde
HPLCSTDS805 #1	3.281	0.278	4.363	0.110
HPLCSTDS805 #1	3.280	0.274	4.337	0.109
HPLCSTDS805 #1	3.277	0.276	4.340	0.109
HPLCSTDS805 #2	3.281	1.372	21.545	0.578
HPLCSTDS805 #2	3.280	1.372	21.587	0.578
HPLCSTDS805 #2	3.277	1.371	21.618	0.577
HPLCSTDS805 #3	3.277	4.044	63.538	1.719
HPLCSTDS805 #3	3.278	4.049	63.709	1.721
HPLCSTDS805 #3	3.278	4.029	63.532	1.713
HPLCSTDS805 #4	3.277	10.011	157.496	4.268
HPLCSTDS805 #4	3.281	10.029	157.572	4.276
HPLCSTDS805 #4	3.280	10.028	157.811	4.275
HPLCSTDS805 #5	3.280	18.084	285.237	7.716
HPLCSTDS805 #5	3.280	18.033	284.371	7.694
HPLCSTDS805 #5	3.282	18.028	283.911	7.692
HPLCSTDS805 #6	3.282	21.478	339.031	9.165
HPLCSTDS805 #6	3.280	21.446	338.841	9.152
HPLCSTDS805 #6	3.281	21.440	338.372	9.149
HPLCSTDS805 #7	3.282	35.869	566.415	15.312
HPLCSTDS805 #7	3.282	35.914	567.907	15.331
HPLCSTDS805 #7	3.282	35.835	567.391	15.298



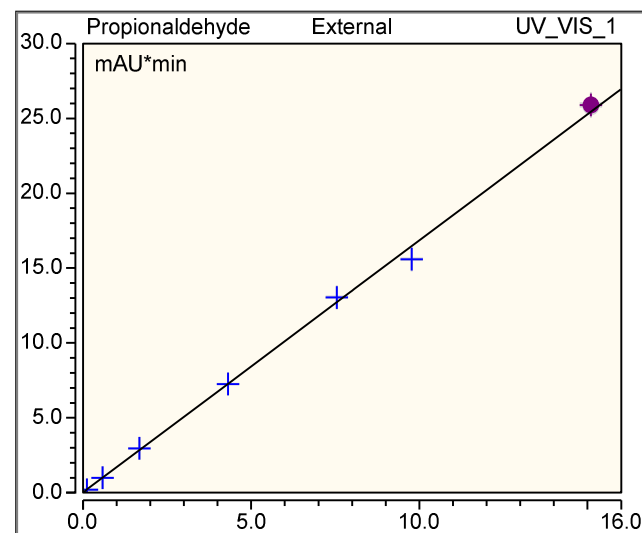
Injection Name	Ret.Time min UV_VIS_1	Area mAU*min UV_VIS_1	Height mAU UV_VIS_1	Amount UV_VIS_1
	Acrolein	Acrolein	Acrolein	Acrolein
HPLCSTDS805 #1	4.046	0.225	2.428	0.109
HPLCSTDS805 #1	4.042	0.219	2.428	0.106
HPLCSTDS805 #1	4.043	0.223	2.434	0.108
HPLCSTDS805 #2	4.048	1.170	12.349	0.581
HPLCSTDS805 #2	4.045	1.183	12.425	0.587
HPLCSTDS805 #2	4.040	1.176	12.488	0.584
HPLCSTDS805 #3	4.037	3.475	37.070	1.731
HPLCSTDS805 #3	4.039	3.475	37.000	1.732
HPLCSTDS805 #3	4.038	3.468	37.252	1.728
HPLCSTDS805 #4	4.038	8.551	91.434	4.265
HPLCSTDS805 #4	4.043	8.569	91.663	4.274
HPLCSTDS805 #4	4.049	8.543	89.440	4.261
HPLCSTDS805 #5	4.045	15.442	163.217	7.705
HPLCSTDS805 #5	4.040	15.392	164.262	7.680
HPLCSTDS805 #5	4.051	15.380	161.374	7.674
HPLCSTDS805 #6	4.046	18.355	195.545	9.159
HPLCSTDS805 #6	4.046	18.333	193.318	9.148
HPLCSTDS805 #6	4.040	18.358	197.505	9.161
HPLCSTDS805 #7	4.044	30.690	327.899	15.317
HPLCSTDS805 #7	4.044	30.736	328.846	15.339
HPLCSTDS805 #7	4.045	30.636	327.770	15.290



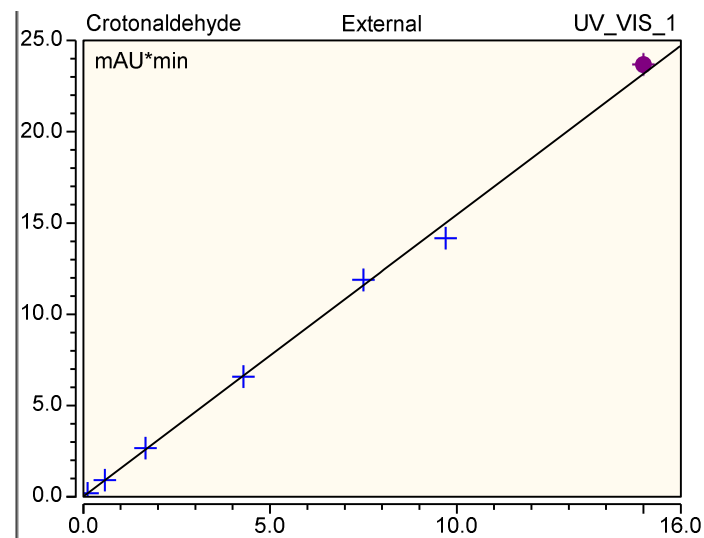
Injection Name	Ret.Time min UV_VIS_1	Area mAU*min UV_VIS_1	Height mAU UV_VIS_1	Amount UV_VIS_1
HPLCSTDS805 #1	4.262	0.209	1.879	0.111
HPLCSTDS805 #1	4.256	0.200	1.861	0.106
HPLCSTDS805 #1	4.259	0.207	1.862	0.110
HPLCSTDS805 #2	4.264	1.012	9.274	0.574
HPLCSTDS805 #2	4.260	1.013	9.309	0.574
HPLCSTDS805 #2	4.254	1.013	9.336	0.574
HPLCSTDS805 #3	4.250	3.044	27.702	1.746
HPLCSTDS805 #3	4.253	3.041	27.681	1.744
HPLCSTDS805 #3	4.250	3.033	27.751	1.739
HPLCSTDS805 #4	4.252	7.425	68.313	4.272
HPLCSTDS805 #4	4.256	7.438	68.432	4.279
HPLCSTDS805 #4	4.266	7.422	67.568	4.270
HPLCSTDS805 #5	4.261	13.399	122.704	7.716
HPLCSTDS805 #5	4.255	13.318	122.825	7.669
HPLCSTDS805 #5	4.269	13.336	121.479	7.679
HPLCSTDS805 #6	4.261	15.935	146.437	9.178
HPLCSTDS805 #6	4.262	15.873	145.483	9.143
HPLCSTDS805 #6	4.253	15.938	147.322	9.180
HPLCSTDS805 #7	4.259	26.531	244.760	15.288
HPLCSTDS805 #7	4.259	26.615	245.300	15.336
HPLCSTDS805 #7	4.260	26.472	244.566	15.254



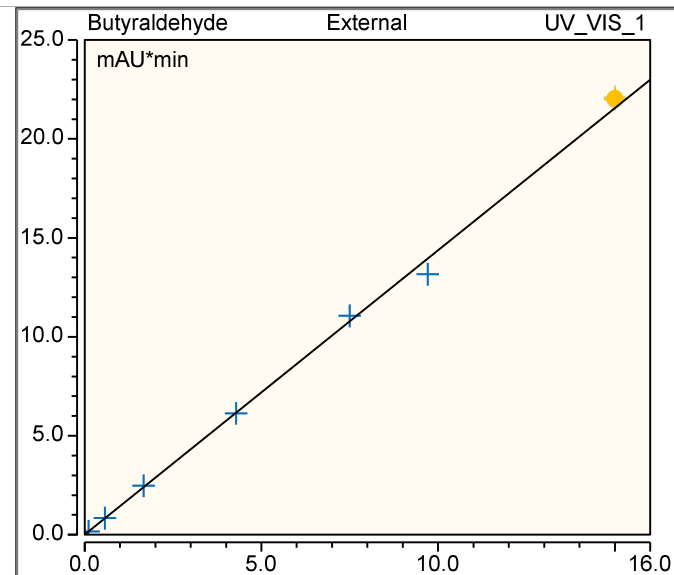
Injection Name	Ret.Time min UV_VIS_1	Area mAU*min UV_VIS_1	Height mAU UV_VIS_1	Amount UV_VIS_1
HPLCSTDS805 #1	4.835	0.206	1.552	0.111
HPLCSTDS805 #1	4.828	0.199	1.554	0.107
HPLCSTDS805 #1	4.828	0.200	1.559	0.108
HPLCSTDS805 #2	4.835	0.996	7.725	0.581
HPLCSTDS805 #2	4.830	1.001	7.753	0.584
HPLCSTDS805 #2	4.823	1.001	7.766	0.584
HPLCSTDS805 #3	4.817	2.969	22.948	1.753
HPLCSTDS805 #3	4.821	2.963	22.936	1.749
HPLCSTDS805 #3	4.816	2.959	22.892	1.747
HPLCSTDS805 #4	4.819	7.258	56.600	4.301
HPLCSTDS805 #4	4.824	7.269	56.651	4.307
HPLCSTDS805 #4	4.839	7.256	56.589	4.300
HPLCSTDS805 #5	4.831	13.101	102.323	7.772
HPLCSTDS805 #5	4.824	12.992	101.795	7.707
HPLCSTDS805 #5	4.845	13.033	101.114	7.732
HPLCSTDS805 #6	4.830	15.591	121.909	9.251
HPLCSTDS805 #6	4.834	15.542	121.561	9.222
HPLCSTDS805 #6	4.821	15.644	121.840	9.283
HPLCSTDS805 #7	4.829	25.894	203.099	15.372
HPLCSTDS805 #7	4.830	26.008	203.387	15.440
HPLCSTDS805 #7	4.830	25.782	202.992	15.306



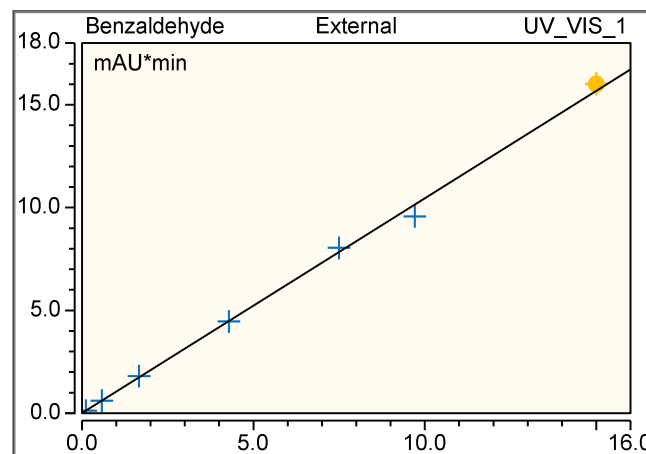
Injection Name	Ret.Time min UV_VIS_1	Area mAU*min UV_VIS_1	Height mAU UV_VIS_1	Amount UV_VIS_1
HPLCSTD805 #1	5.937	0.188	2.177	0.113
HPLCSTD805 #1	5.931	0.186	2.180	0.111
HPLCSTD805 #1	5.938	0.178	2.152	0.106
HPLCSTD805 #2	5.940	0.906	10.768	0.578
HPLCSTD805 #2	5.942	0.908	10.811	0.579
HPLCSTD805 #2	5.930	0.904	10.787	0.577
HPLCSTD805 #3	5.926	2.665	31.692	1.717
HPLCSTD805 #3	5.930	2.668	31.806	1.719
HPLCSTD805 #3	5.930	2.654	31.690	1.710
HPLCSTD805 #4	5.927	6.585	78.723	4.257
HPLCSTD805 #4	5.934	6.587	78.718	4.258
HPLCSTD805 #4	5.950	6.565	78.922	4.244
HPLCSTD805 #5	5.939	11.912	142.545	7.708
HPLCSTD805 #5	5.933	11.865	141.877	7.677
HPLCSTD805 #5	5.949	11.868	142.039	7.679
HPLCSTD805 #6	5.938	14.189	169.373	9.182
HPLCSTD805 #6	5.944	14.133	169.389	9.146
HPLCSTD805 #6	5.933	14.173	169.355	9.173
HPLCSTD805 #7	5.938	23.684	283.269	15.334
HPLCSTD805 #7	5.943	23.730	283.358	15.363
HPLCSTD805 #7	5.944	23.648	283.480	15.311



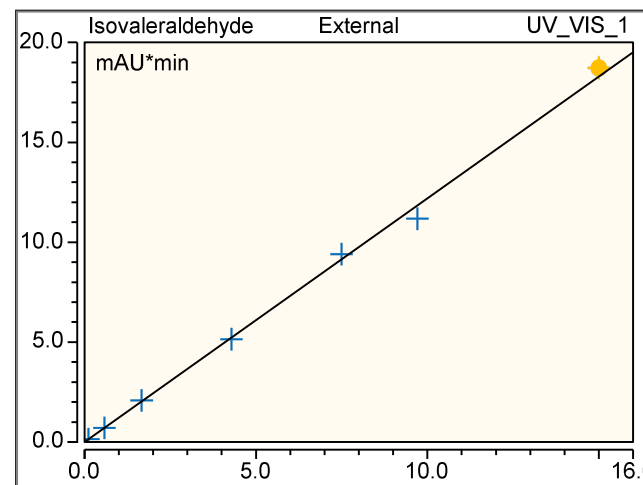
Injection Name	Ret.Time min	Area mAU*min	Height mAU	Amount
	UV_VIS_1	UV_VIS_1	UV_VIS_1	UV_VIS_1
	Butyraldehyde	Butyraldehyde	Butyraldehyde	Butyraldehyde
HPLCSTDS805 #1	6.673	0.169	2.051	0.110
HPLCSTDS805 #1	6.670	0.168	2.050	0.109
HPLCSTDS805 #1	6.677	0.172	2.055	0.112
HPLCSTDS805 #2	6.677	0.837	10.185	0.575
HPLCSTDS805 #2	6.679	0.837	10.206	0.575
HPLCSTDS805 #2	6.668	0.840	10.209	0.577
HPLCSTDS805 #3	6.665	2.480	30.162	1.719
HPLCSTDS805 #3	6.668	2.482	30.068	1.720
HPLCSTDS805 #3	6.668	2.460	30.024	1.705
HPLCSTDS805 #4	6.666	6.125	74.481	4.256
HPLCSTDS805 #4	6.672	6.136	74.615	4.264
HPLCSTDS805 #4	6.687	6.134	74.772	4.263
HPLCSTDS805 #5	6.677	11.087	135.075	7.711
HPLCSTDS805 #5	6.671	11.042	134.678	7.679
HPLCSTDS805 #5	6.687	11.048	134.753	7.683
HPLCSTDS805 #6	6.677	13.171	160.288	9.162
HPLCSTDS805 #6	6.682	13.156	160.812	9.151
HPLCSTDS805 #6	6.671	13.160	160.088	9.154
HPLCSTDS805 #7	6.677	22.025	268.049	15.325
HPLCSTDS805 #7	6.685	22.132	268.876	15.400
HPLCSTDS805 #7	6.682	21.977	268.668	15.292



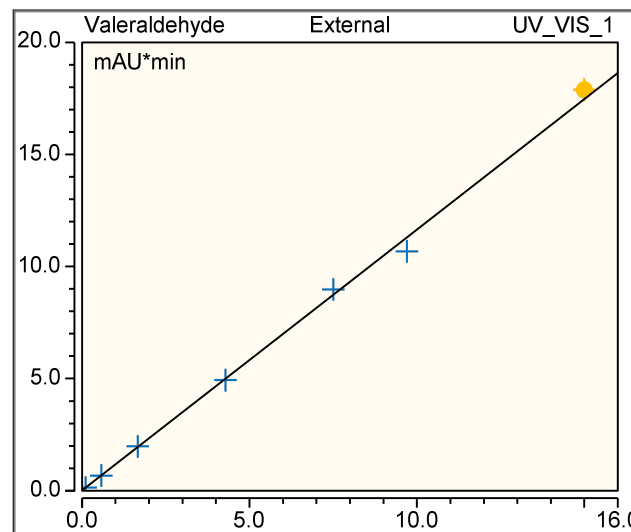
Injection Name	Ret.Time min UV_VIS_1	Area mAU*min UV_VIS_1	Height mAU UV_VIS_1	Amount UV_VIS_1
	Benzaldehyde	Benzaldehyde	Benzaldehyde	Benzaldehyde
HPLCSTDS805 #1	7.240	0.125	1.522	0.111
HPLCSTDS805 #1	7.240	0.123	1.496	0.109
HPLCSTDS805 #1	7.247	0.121	1.500	0.108
HPLCSTDS805 #2	7.246	0.609	7.532	0.575
HPLCSTDS805 #2	7.250	0.613	7.559	0.579
HPLCSTDS805 #2	7.239	0.616	7.582	0.582
HPLCSTDS805 #3	7.233	1.804	22.247	1.719
HPLCSTDS805 #3	7.239	1.808	22.308	1.723
HPLCSTDS805 #3	7.239	1.805	22.278	1.720
HPLCSTDS805 #4	7.236	4.458	55.199	4.260
HPLCSTDS805 #4	7.241	4.465	55.244	4.267
HPLCSTDS805 #4	7.257	4.457	55.326	4.259
HPLCSTDS805 #5	7.247	8.058	100.086	7.707
HPLCSTDS805 #5	7.241	8.024	99.759	7.674
HPLCSTDS805 #5	7.255	8.039	99.780	7.689
HPLCSTDS805 #6	7.248	9.582	118.907	9.166
HPLCSTDS805 #6	7.251	9.558	119.165	9.143
HPLCSTDS805 #6	7.241	9.568	118.683	9.153
HPLCSTDS805 #7	7.248	16.026	198.992	15.336
HPLCSTDS805 #7	7.259	16.054	198.732	15.363
HPLCSTDS805 #7	7.252	15.986	199.329	15.298



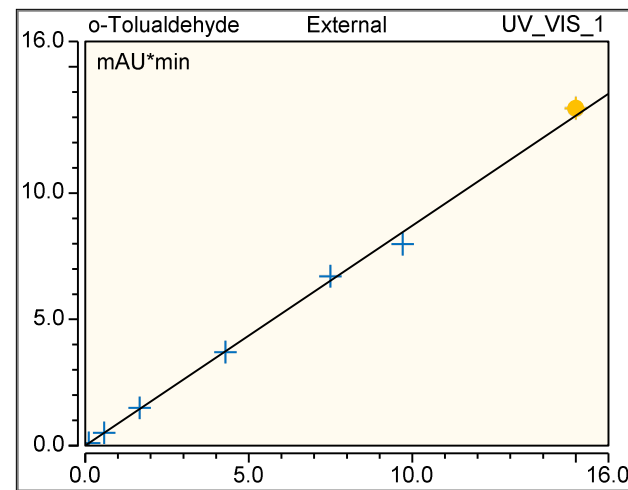
Injection Name	Ret.Time min UV_VIS_1	Area mAU*min UV_VIS_1	Height mAU UV_VIS_1	Amount UV_VIS_1
Isovaleraldehyde	Isovaleraldehyde	Isovaleraldehyde	Isovaleraldehyde	Isovaleraldehyde
HPLCSTDS805 #1	8.156	0.143	1.779	0.113
HPLCSTDS805 #1	8.157	0.141	1.781	0.111
HPLCSTDS805 #1	8.162	0.140	1.763	0.110
HPLCSTDS805 #2	8.160	0.707	8.830	0.575
HPLCSTDS805 #2	8.165	0.710	8.855	0.578
HPLCSTDS805 #2	8.155	0.708	8.852	0.577
HPLCSTDS805 #3	8.148	2.085	26.056	1.706
HPLCSTDS805 #3	8.155	2.084	26.077	1.706
HPLCSTDS805 #3	8.155	2.078	26.039	1.700
HPLCSTDS805 #4	8.154	5.142	64.493	4.214
HPLCSTDS805 #4	8.157	5.152	64.546	4.223
HPLCSTDS805 #4	8.171	5.145	64.819	4.217
HPLCSTDS805 #5	8.162	9.425	117.445	7.728
HPLCSTDS805 #5	8.156	9.382	117.130	7.693
HPLCSTDS805 #5	8.167	9.393	117.097	7.702
HPLCSTDS805 #6	8.165	11.179	139.345	9.168
HPLCSTDS805 #6	8.165	11.174	139.735	9.163
HPLCSTDS805 #6	8.157	11.175	139.333	9.165
HPLCSTDS805 #7	8.163	18.743	233.285	15.374
HPLCSTDS805 #7	8.177	18.762	233.236	15.389
HPLCSTDS805 #7	8.167	18.689	233.521	15.329



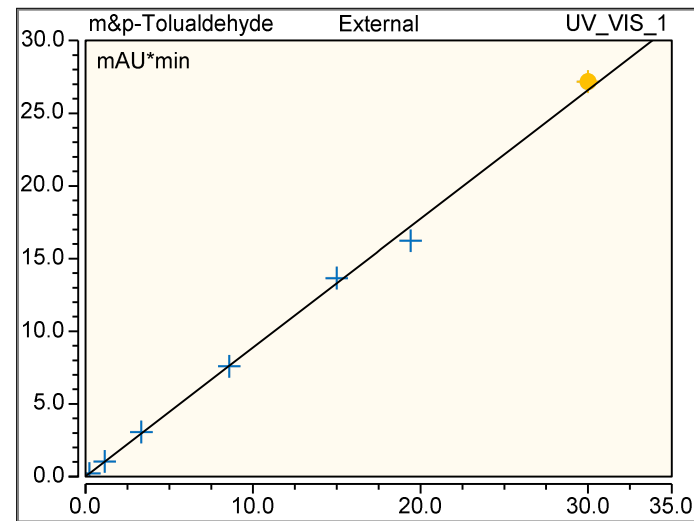
Injection Name	Ret.Time min UV_VIS_1	Area mAU*min UV_VIS_1	Height mAU UV_VIS_1	Amount UV_VIS_1
	Valeraldehyde	Valeraldehyde	Valeraldehyde	Valeraldehyde
HPLCSTDS805 #1	8.462	0.138	1.701	0.115
HPLCSTDS805 #1	8.462	0.132	1.660	0.110
HPLCSTDS805 #1	8.464	0.134	1.677	0.111
HPLCSTDS805 #2	8.464	0.676	8.327	0.577
HPLCSTDS805 #2	8.469	0.674	8.334	0.575
HPLCSTDS805 #2	8.459	0.673	8.332	0.574
HPLCSTDS805 #3	8.452	1.980	24.483	1.697
HPLCSTDS805 #3	8.458	1.981	24.520	1.698
HPLCSTDS805 #3	8.459	1.975	24.513	1.692
HPLCSTDS805 #4	8.458	4.927	60.757	4.228
HPLCSTDS805 #4	8.462	4.943	60.870	4.242
HPLCSTDS805 #4	8.475	4.930	61.020	4.231
HPLCSTDS805 #5	8.467	9.004	110.492	7.731
HPLCSTDS805 #5	8.461	8.956	110.015	7.689
HPLCSTDS805 #5	8.470	8.961	110.238	7.693
HPLCSTDS805 #6	8.469	10.685	131.270	9.174
HPLCSTDS805 #6	8.468	10.671	131.467	9.162
HPLCSTDS805 #6	8.462	10.675	131.208	9.165
HPLCSTDS805 #7	8.468	17.885	219.599	15.359
HPLCSTDS805 #7	8.484	17.920	219.304	15.389
HPLCSTDS805 #7	8.473	17.848	219.921	15.327



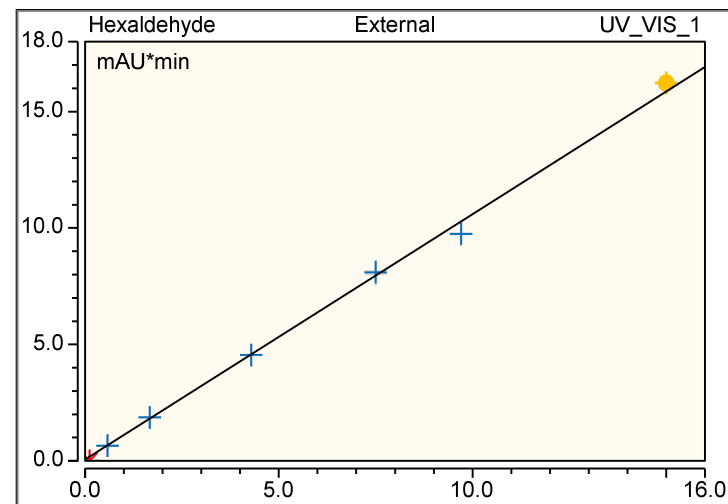
Injection Name	Ret.Time min UV_VIS_1	Area mAU*min UV_VIS_1	Height mAU UV_VIS_1	Amount UV_VIS_1
	o-Tolualdehyde	o-Tolualdehyde	o-Tolualdehyde	o-Tolualdehyde
HPLCSTDS805 #1	8.803	0.105	1.317	0.113
HPLCSTDS805 #1	8.805	0.102	1.306	0.109
HPLCSTDS805 #1	8.809	0.104	1.313	0.111
HPLCSTDS805 #2	8.809	0.505	6.464	0.572
HPLCSTDS805 #2	8.814	0.510	6.518	0.578
HPLCSTDS805 #2	8.805	0.505	6.492	0.572
HPLCSTDS805 #3	8.795	1.497	19.126	1.712
HPLCSTDS805 #3	8.804	1.499	19.163	1.714
HPLCSTDS805 #3	8.804	1.492	19.135	1.706
HPLCSTDS805 #4	8.803	3.699	47.400	4.242
HPLCSTDS805 #4	8.805	3.704	47.491	4.248
HPLCSTDS805 #4	8.820	3.709	47.611	4.254
HPLCSTDS805 #5	8.814	6.727	86.077	7.722
HPLCSTDS805 #5	8.806	6.702	85.753	7.694
HPLCSTDS805 #5	8.815	6.693	85.867	7.682
HPLCSTDS805 #6	8.815	7.984	102.291	9.167
HPLCSTDS805 #6	8.814	7.974	102.291	9.154
HPLCSTDS805 #6	8.808	7.976	102.203	9.157
HPLCSTDS805 #7	8.815	13.346	170.987	15.328
HPLCSTDS805 #7	8.833	13.397	170.020	15.387
HPLCSTDS805 #7	8.820	13.337	170.941	15.317



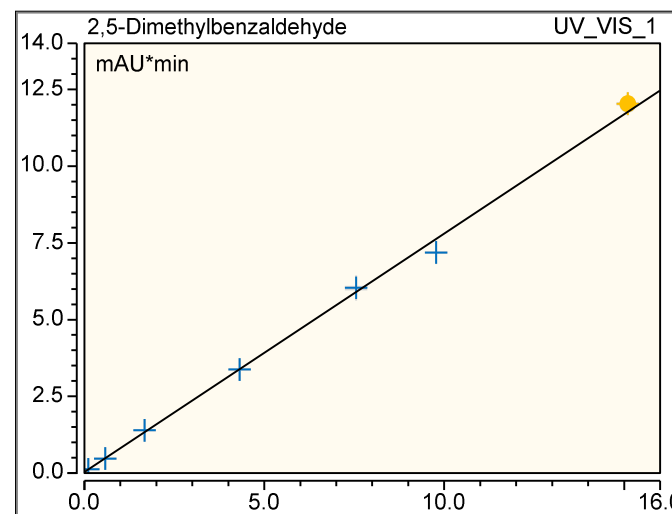
Injection Name	Ret.Time min UV_VIS_1	Area mAU*min UV_VIS_1	Height mAU UV_VIS_1	Amount
	m&p-Tolualdehyde	m&p-Tolualdehyde	m&p-Tolualdehy	m&p-Tolualdehyde
HPLCSTDS805 #1	8.999	0.213	1.682	0.221
HPLCSTDS805 #1	9.008	0.211	1.674	0.219
HPLCSTDS805 #1	9.008	0.210	1.668	0.218
HPLCSTDS805 #2	9.010	1.039	8.288	1.153
HPLCSTDS805 #2	9.015	1.040	8.273	1.154
HPLCSTDS805 #2	9.005	1.039	8.255	1.153
HPLCSTDS805 #3	8.996	3.067	24.492	3.442
HPLCSTDS805 #3	9.004	3.070	24.459	3.445
HPLCSTDS805 #3	9.005	3.053	24.309	3.426
HPLCSTDS805 #4	9.005	7.585	60.440	8.541
HPLCSTDS805 #4	9.007	7.599	60.747	8.557
HPLCSTDS805 #4	9.020	7.576	60.615	8.531
HPLCSTDS805 #5	9.015	13.677	109.722	15.417
HPLCSTDS805 #5	9.008	13.614	109.230	15.346
HPLCSTDS805 #5	9.015	13.677	109.930	15.417
HPLCSTDS805 #6	9.016	16.240	130.357	18.310
HPLCSTDS805 #6	9.016	16.224	130.280	18.292
HPLCSTDS805 #6	9.009	16.221	130.498	18.288
HPLCSTDS805 #7	9.017	27.188	219.085	30.666
HPLCSTDS805 #7	9.038	27.179	217.762	30.656
HPLCSTDS805 #7	9.024	27.156	217.926	30.630



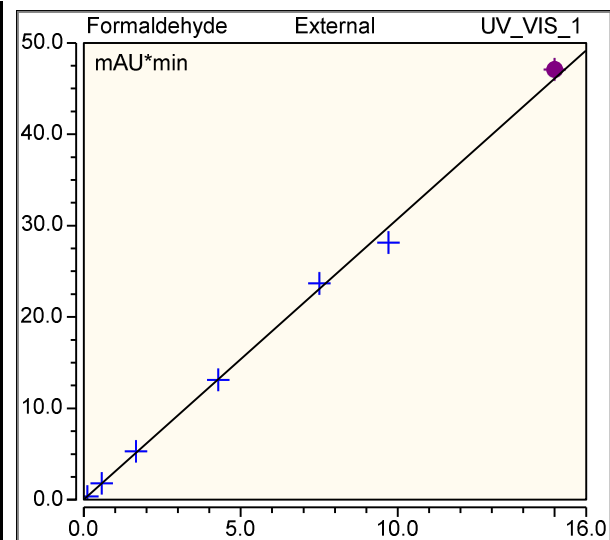
Injection Name	Ret.Time min	Area mAU*min	Height mAU	Amount
	UV_VIS_1	UV_VIS_1	UV_VIS_1	UV_VIS_1
Hexaldehyde	Hexaldehyde	Hexaldehyde	Hexaldehyde	Hexaldehyde
HPLCSTDS805 #1	n.a.	n.a.	n.a.	n.a.
HPLCSTDS805 #1	n.a.	n.a.	n.a.	n.a.
HPLCSTDS805 #1	n.a.	n.a.	n.a.	n.a.
HPLCSTDS805 #2	10.261	0.650	8.874	0.565
HPLCSTDS805 #2	10.268	0.652	8.924	0.567
HPLCSTDS805 #2	10.260	0.656	8.955	0.571
HPLCSTDS805 #3	10.251	1.862	25.808	1.715
HPLCSTDS805 #3	10.259	1.875	25.963	1.727
HPLCSTDS805 #3	10.261	1.869	25.924	1.721
HPLCSTDS805 #4	10.261	4.540	63.723	4.256
HPLCSTDS805 #4	10.258	4.550	63.817	4.265
HPLCSTDS805 #4	10.270	4.545	63.983	4.261
HPLCSTDS805 #5	10.266	8.024	114.825	7.562
HPLCSTDS805 #5	10.261	8.135	115.033	7.667
HPLCSTDS805 #5	10.264	8.144	115.010	7.675
HPLCSTDS805 #6	10.266	9.773	137.380	9.221
HPLCSTDS805 #6	10.267	9.738	137.609	9.188
HPLCSTDS805 #6	10.262	9.746	137.187	9.196
HPLCSTDS805 #7	10.266	16.232	230.030	15.350
HPLCSTDS805 #7	10.285	16.252	231.526	15.369
HPLCSTDS805 #7	10.273	16.210	230.395	15.329



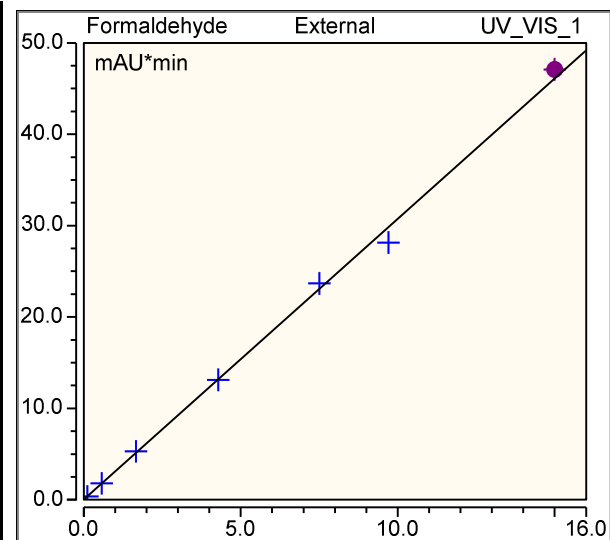
Injection Name	Ret.Time min UV_VIS_1	Area mAU*min UV_VIS_1	Height mAU UV_VIS_1	Amount UV_VIS_1
HPLCSTD805 #1	10.418	0.120	1.475	0.112
HPLCSTD805 #1	10.423	0.124	1.480	0.117
HPLCSTD805 #1	10.425	0.116	1.462	0.107
HPLCSTD805 #2	10.421	0.469	6.670	0.562
HPLCSTD805 #2	10.430	0.469	6.698	0.561
HPLCSTD805 #2	10.420	0.478	6.743	0.572
HPLCSTD805 #3	10.412	1.387	19.625	1.743
HPLCSTD805 #3	10.419	1.396	19.713	1.754
HPLCSTD805 #3	10.421	1.393	19.675	1.751
HPLCSTD805 #4	10.423	3.371	48.469	4.295
HPLCSTD805 #4	10.418	3.378	48.533	4.305
HPLCSTD805 #4	10.430	3.371	48.621	4.296
HPLCSTD805 #5	10.427	5.985	87.525	7.659
HPLCSTD805 #5	10.424	6.062	87.579	7.758
HPLCSTD805 #5	10.425	6.068	87.600	7.766
HPLCSTD805 #6	10.427	7.187	104.610	9.206
HPLCSTD805 #6	10.429	7.200	104.733	9.222
HPLCSTD805 #6	10.424	7.181	104.564	9.197
HPLCSTD805 #7	10.427	12.047	175.486	15.459
HPLCSTD805 #7	10.447	12.045	175.939	15.457
HPLCSTD805 #7	10.436	12.014	175.535	15.417



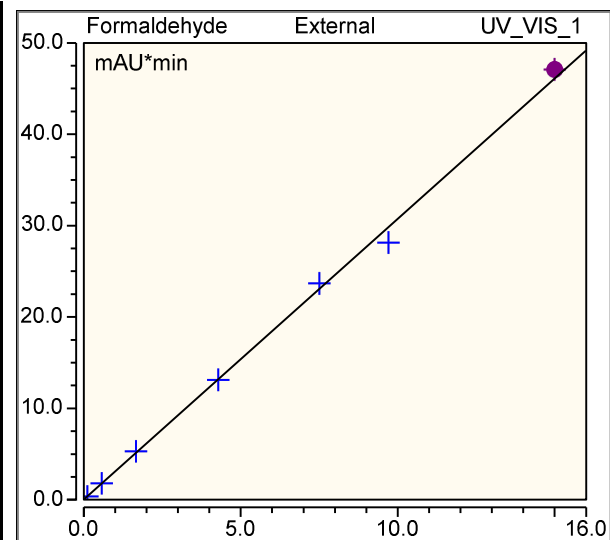
Injection Name	Ret.Time min UV_VIS_1	Area mAU*min UV_VIS_1	Height mAU UV_VIS_1	Amount UV_VIS_1
	Formaldehyde	Formaldehyde	Formaldehyde	Formaldehyde
HPLCSTDS805 #1	2.706	0.3611	6.325	0.110
HPLCSTDS805 #1	2.703	0.3575	6.319	0.109
HPLCSTDS805 #1	2.702	0.3568	6.302	0.109
HPLCSTDS805 #2	2.706	1.8043	31.409	0.580
HPLCSTDS805 #2	2.705	1.8028	31.457	0.579
HPLCSTDS805 #2	2.702	1.8049	31.512	0.580
HPLCSTDS805 #3	2.702	5.3061	92.633	1.720
HPLCSTDS805 #3	2.703	5.3162	92.848	1.723
HPLCSTDS805 #3	2.703	5.2996	92.737	1.718
HPLCSTDS805 #4	2.702	13.1016	229.431	4.257
HPLCSTDS805 #4	2.706	13.1321	229.817	4.267
HPLCSTDS805 #4	2.703	13.1233	230.131	4.264
HPLCSTDS805 #5	2.703	23.7275	415.746	7.716
HPLCSTDS805 #5	2.703	23.6427	414.043	7.689
HPLCSTDS805 #5	2.706	23.6653	414.027	7.696
HPLCSTDS805 #6	2.706	28.1652	493.646	9.161
HPLCSTDS805 #6	2.703	28.1456	493.341	9.155
HPLCSTDS805 #6	2.705	28.1166	492.720	9.145
HPLCSTDS805 #7	2.706	47.0814	824.776	15.319
HPLCSTDS805 #7	2.706	47.1619	826.771	15.345
HPLCSTDS805 #7	2.706	47.0192	825.517	15.299



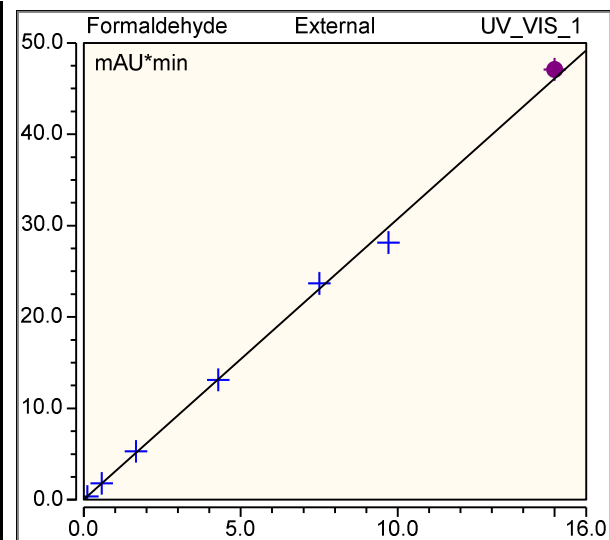
Injection Name	Ret.Time min UV_VIS_1	Area mAU*min UV_VIS_1	Height mAU UV_VIS_1	Amount UV_VIS_1
	Formaldehyde	Formaldehyde	Formaldehyde	Formaldehyde
HPLCSTDS805 #1	2.706	0.3611	6.325	0.110
HPLCSTDS805 #1	2.703	0.3575	6.319	0.109
HPLCSTDS805 #1	2.702	0.3568	6.302	0.109
HPLCSTDS805 #2	2.706	1.8043	31.409	0.580
HPLCSTDS805 #2	2.705	1.8028	31.457	0.579
HPLCSTDS805 #2	2.702	1.8049	31.512	0.580
HPLCSTDS805 #3	2.702	5.3061	92.633	1.720
HPLCSTDS805 #3	2.703	5.3162	92.848	1.723
HPLCSTDS805 #3	2.703	5.2996	92.737	1.718
HPLCSTDS805 #4	2.702	13.1016	229.431	4.257
HPLCSTDS805 #4	2.706	13.1321	229.817	4.267
HPLCSTDS805 #4	2.703	13.1233	230.131	4.264
HPLCSTDS805 #5	2.703	23.7275	415.746	7.716
HPLCSTDS805 #5	2.703	23.6427	414.043	7.689
HPLCSTDS805 #5	2.706	23.6653	414.027	7.696
HPLCSTDS805 #6	2.706	28.1652	493.646	9.161
HPLCSTDS805 #6	2.703	28.1456	493.341	9.155
HPLCSTDS805 #6	2.705	28.1166	492.720	9.145
HPLCSTDS805 #7	2.706	47.0814	824.776	15.319
HPLCSTDS805 #7	2.706	47.1619	826.771	15.345
HPLCSTDS805 #7	2.706	47.0192	825.517	15.299



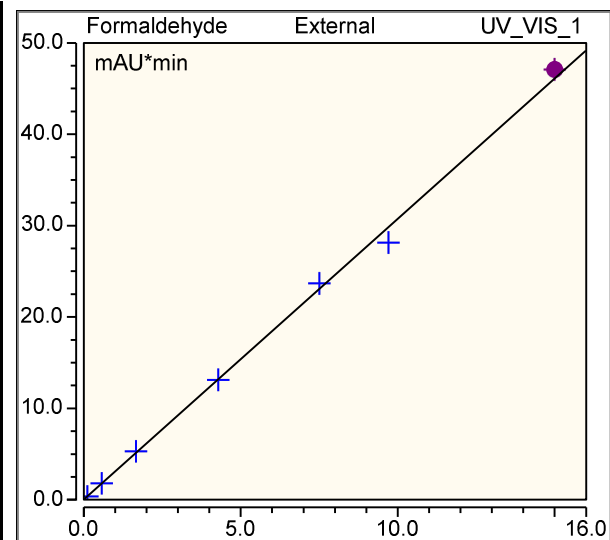
Injection Name	Ret.Time min UV_VIS_1	Area mAU*min UV_VIS_1	Height mAU UV_VIS_1	Amount UV_VIS_1
	Formaldehyde	Formaldehyde	Formaldehyde	Formaldehyde
HPLCSTDS805 #1	2.706	0.3611	6.325	0.110
HPLCSTDS805 #1	2.703	0.3575	6.319	0.109
HPLCSTDS805 #1	2.702	0.3568	6.302	0.109
HPLCSTDS805 #2	2.706	1.8043	31.409	0.580
HPLCSTDS805 #2	2.705	1.8028	31.457	0.579
HPLCSTDS805 #2	2.702	1.8049	31.512	0.580
HPLCSTDS805 #3	2.702	5.3061	92.633	1.720
HPLCSTDS805 #3	2.703	5.3162	92.848	1.723
HPLCSTDS805 #3	2.703	5.2996	92.737	1.718
HPLCSTDS805 #4	2.702	13.1016	229.431	4.257
HPLCSTDS805 #4	2.706	13.1321	229.817	4.267
HPLCSTDS805 #4	2.703	13.1233	230.131	4.264
HPLCSTDS805 #5	2.703	23.7275	415.746	7.716
HPLCSTDS805 #5	2.703	23.6427	414.043	7.689
HPLCSTDS805 #5	2.706	23.6653	414.027	7.696
HPLCSTDS805 #6	2.706	28.1652	493.646	9.161
HPLCSTDS805 #6	2.703	28.1456	493.341	9.155
HPLCSTDS805 #6	2.705	28.1166	492.720	9.145
HPLCSTDS805 #7	2.706	47.0814	824.776	15.319
HPLCSTDS805 #7	2.706	47.1619	826.771	15.345
HPLCSTDS805 #7	2.706	47.0192	825.517	15.299



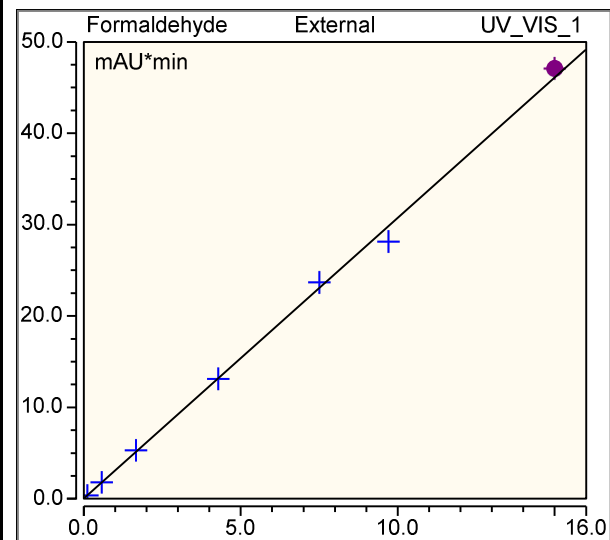
Injection Name	Ret.Time min UV_VIS_1	Area mAU*min UV_VIS_1	Height mAU UV_VIS_1	Amount UV_VIS_1
	Formaldehyde	Formaldehyde	Formaldehyde	Formaldehyde
HPLCSTDS805 #1	2.706	0.3611	6.325	0.110
HPLCSTDS805 #1	2.703	0.3575	6.319	0.109
HPLCSTDS805 #1	2.702	0.3568	6.302	0.109
HPLCSTDS805 #2	2.706	1.8043	31.409	0.580
HPLCSTDS805 #2	2.705	1.8028	31.457	0.579
HPLCSTDS805 #2	2.702	1.8049	31.512	0.580
HPLCSTDS805 #3	2.702	5.3061	92.633	1.720
HPLCSTDS805 #3	2.703	5.3162	92.848	1.723
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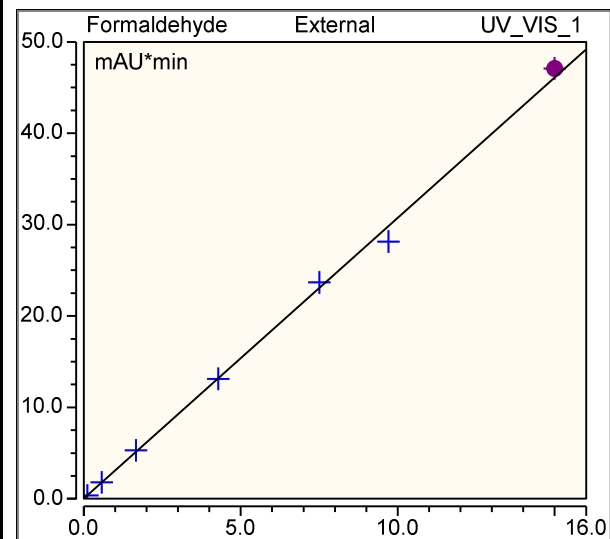
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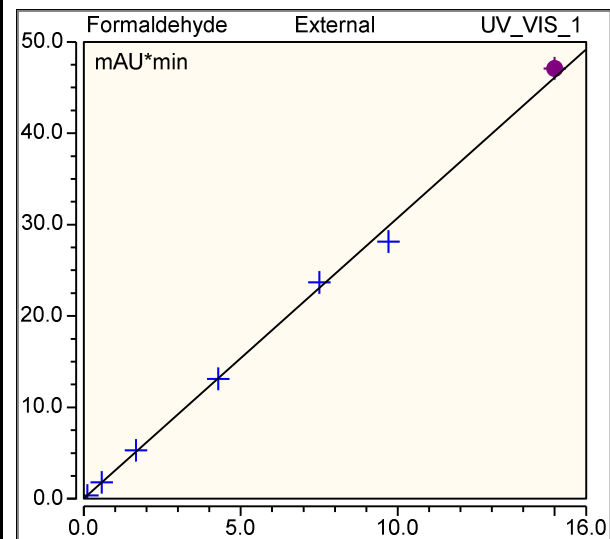
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	Formaldehyde	Formaldehyde	Formaldehyde	Formaldehyde
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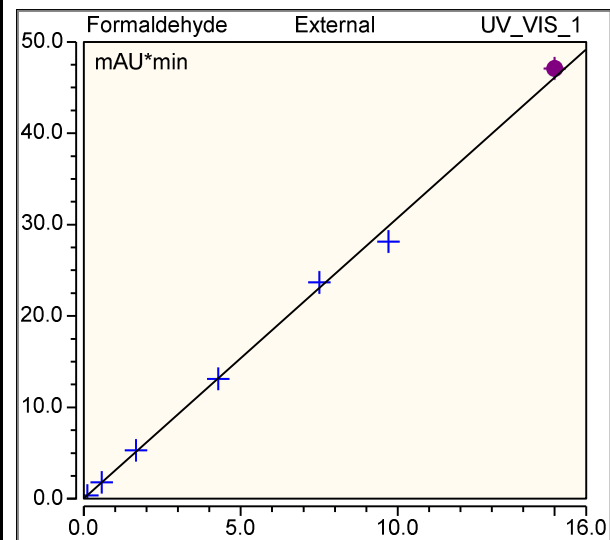
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	Formaldehyde	Formaldehyde	Formaldehyde	Formaldehyde
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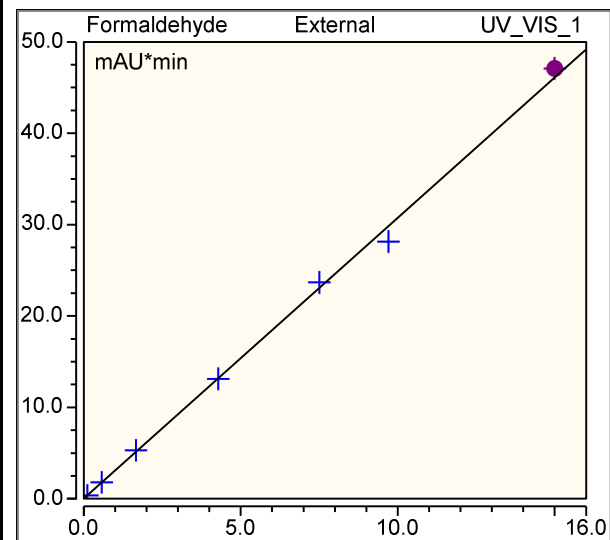
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	Formaldehyde	Formaldehyde	Formaldehyde	Formaldehyde
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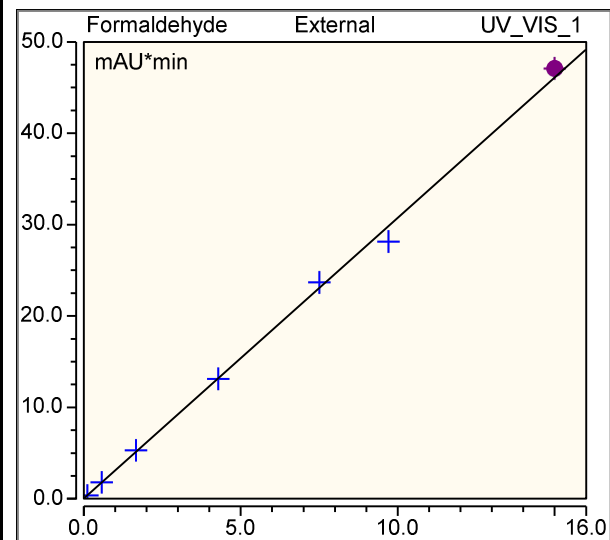
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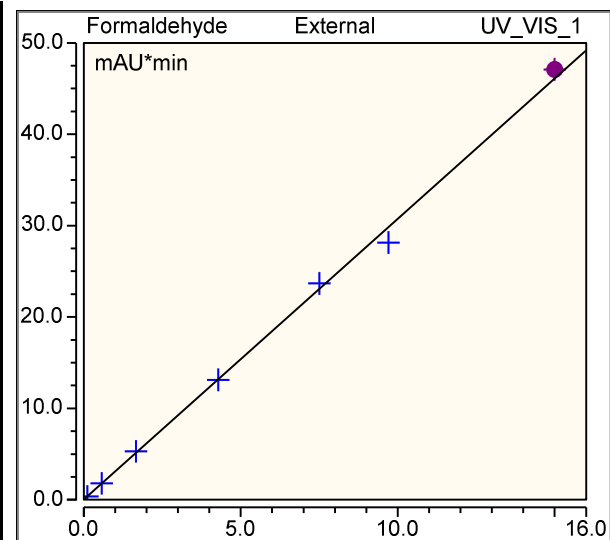
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	Formaldehyde	Formaldehyde	Formaldehyde	Formaldehyde
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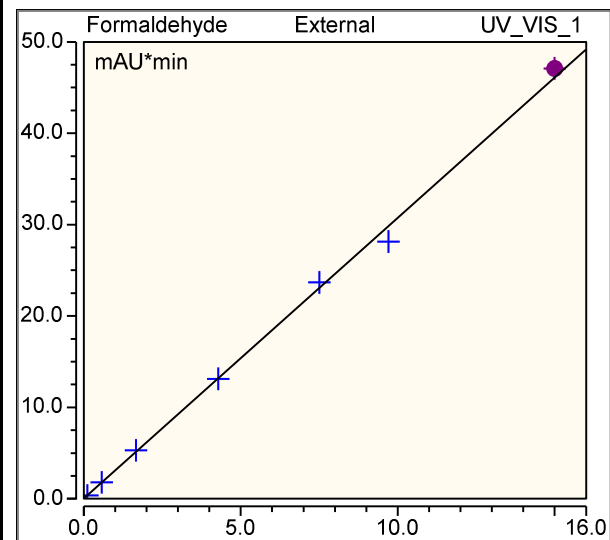
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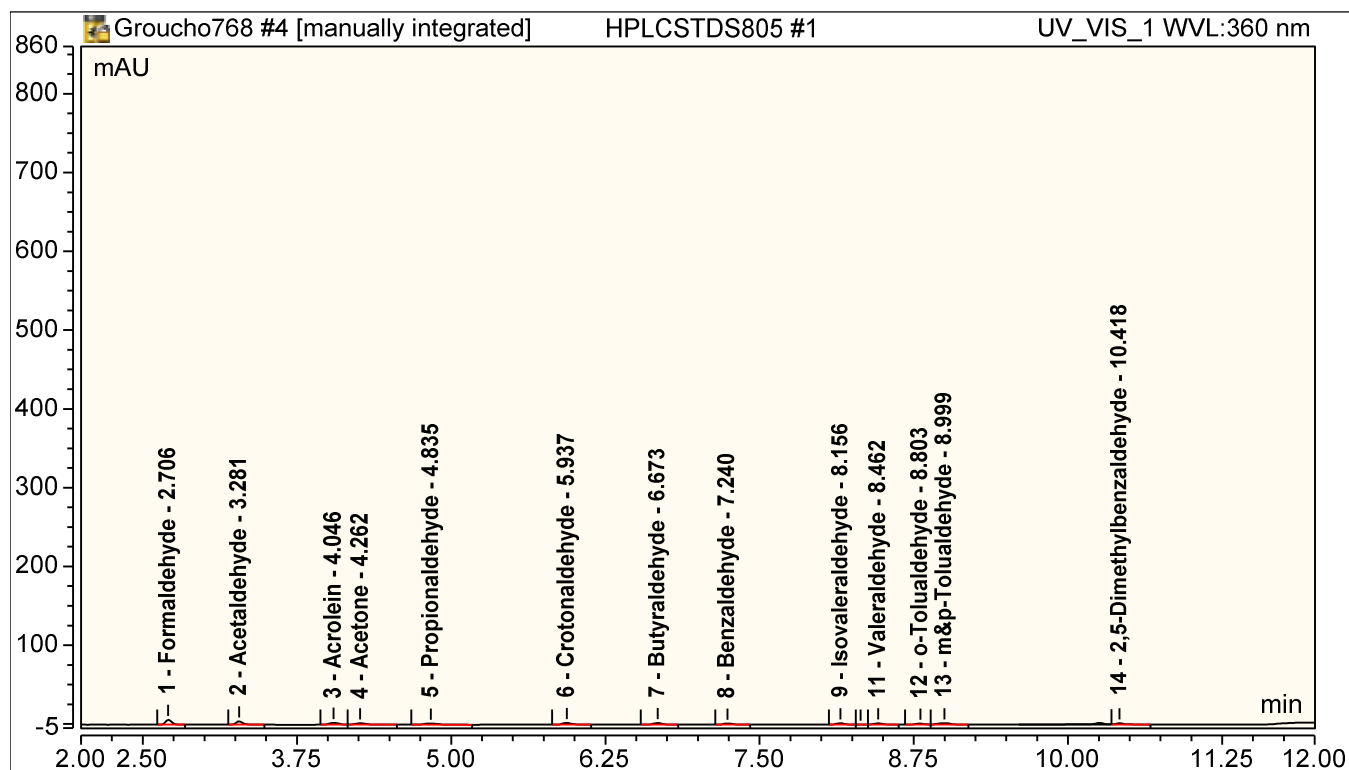


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Peak Analysis Report

Sample Name:	HPLCSTDS805 #1	Injection Volume:	5.00
Injection Type:	Calibration Standard	Dilution Factor:	1.0
Instrument Method:	Groucho_AgilentZprbaxSBC CARBS	Operator:	APaolantonio
Inj. Date / Time:	01-Jul-2019 / 15:40	Run Time:	14.00



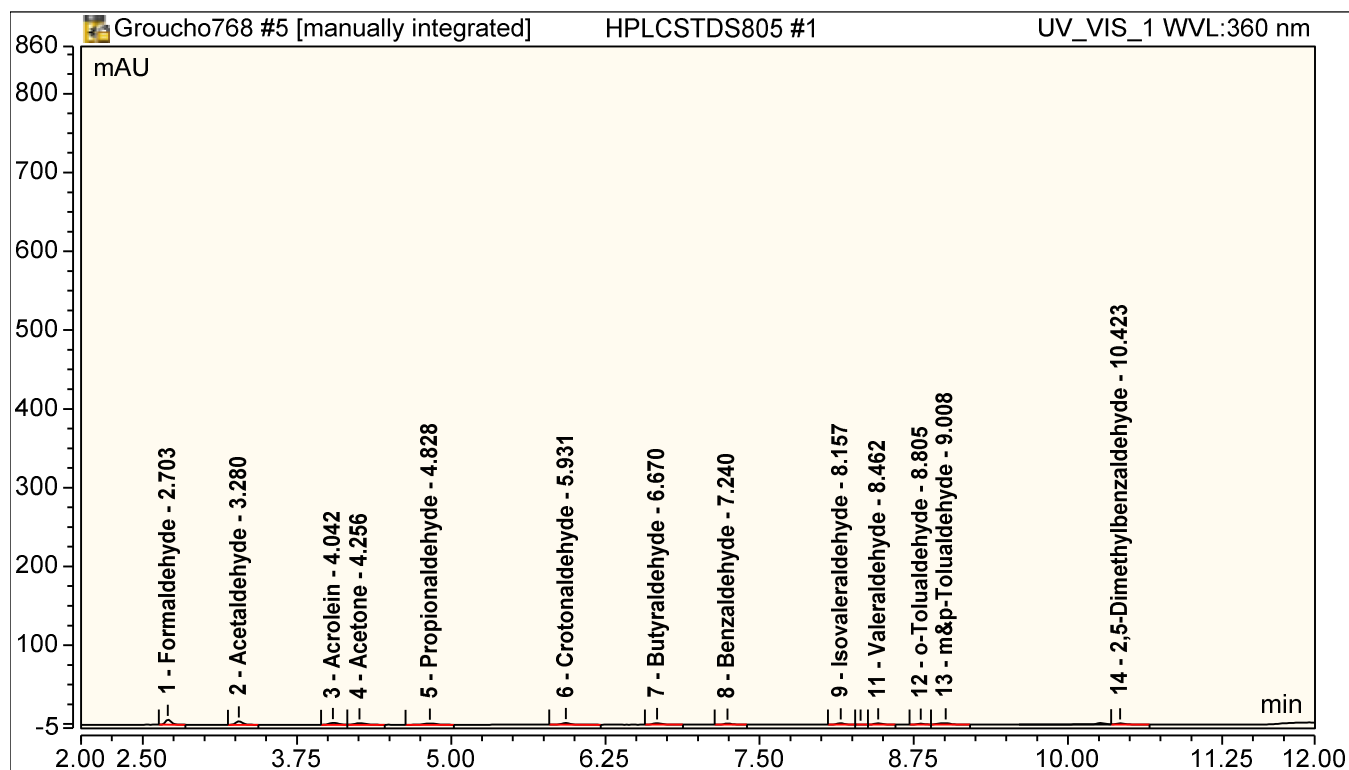
Analyst Comment:

Curve: Groucho768

No.	Time min	Peak Name	Area mAU*min	Height mAU	Amount
1	2.71	Formaldehyde	0.361	6.325	0.110
2	3.28	Acetaldehyde	0.278	4.363	0.110
3	4.05	Acrolein	0.225	2.428	0.109
4	4.26	Acetone	0.209	1.879	0.111
5	4.84	Propionaldehyde	0.206	1.552	0.111
6	5.94	Crotonaldehyde	0.188	2.177	0.113
7	6.67	Butyraldehyde	0.169	2.051	0.110
8	7.24	Benzaldehyde	0.125	1.522	0.111
9	8.16	Isovaleraldehyde	0.143	1.779	0.113
11	8.46	Valeraldehyde	0.138	1.701	0.115
12	8.80	o-Tolualdehyde	0.105	1.317	0.113
13	9.00	m&p-Tolualdehyde	0.213	1.682	0.221
14	10.42	2,5-Dimethylbenzaldehyde	0.120	1.475	0.112

Peak Analysis Report

Sample Name:	HPLCSTDS805 #1	Injection Volume:	5.00
Injection Type:	Calibration Standard	Dilution Factor:	1.0
Instrument Method:	Groucho_AgilentZprbaxSBC CARBS	Operator:	APaolantonio
Inj. Date / Time:	01-Jul-2019 / 15:55	Run Time:	14.00



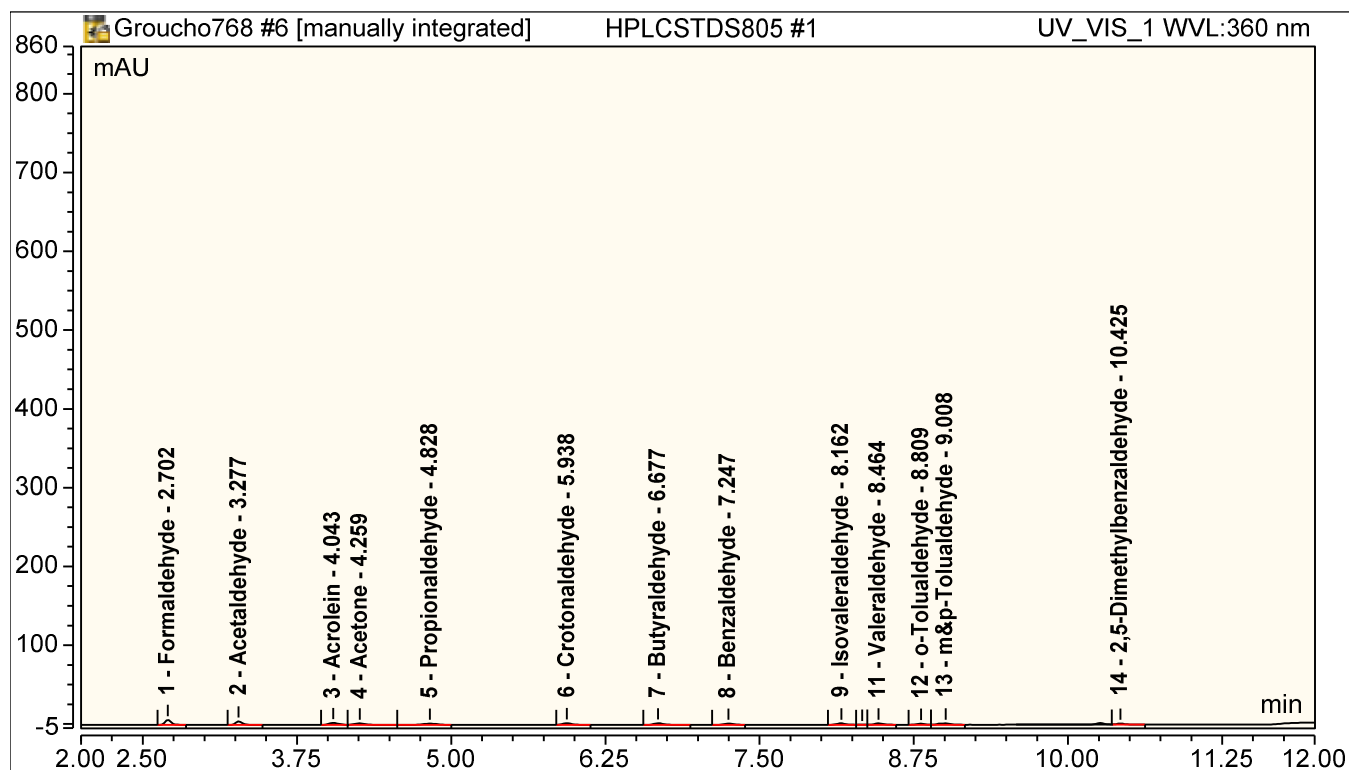
Analyst Comment:

Curve: Groucho768

No.	Time min	Peak Name	Area mAU*min	Height mAU	Amount
1	2.70	Formaldehyde	0.358	6.319	0.109
2	3.28	Acetaldehyde	0.274	4.337	0.109
3	4.04	Acrolein	0.219	2.428	0.106
4	4.26	Acetone	0.200	1.861	0.106
5	4.83	Propionaldehyde	0.199	1.554	0.107
6	5.93	Crotonaldehyde	0.186	2.180	0.111
7	6.67	Butyraldehyde	0.168	2.050	0.109
8	7.24	Benzaldehyde	0.123	1.496	0.109
9	8.16	Isovaleraldehyde	0.141	1.781	0.111
11	8.46	Valeraldehyde	0.132	1.660	0.110
12	8.81	o-Tolualdehyde	0.102	1.306	0.109
13	9.01	m&p-Tolualdehyde	0.211	1.674	0.219
14	10.42	2,5-Dimethylbenzaldehyde	0.124	1.480	0.117

Peak Analysis Report

Sample Name:	HPLCSTDS805 #1	Injection Volume:	5.00
Injection Type:	Calibration Standard	Dilution Factor:	1.0
Instrument Method:	Groucho_AgilentZprbaxSBC CARBS	Operator:	APaolantonio
Inj. Date / Time:	01-Jul-2019 / 16:11	Run Time:	14.00



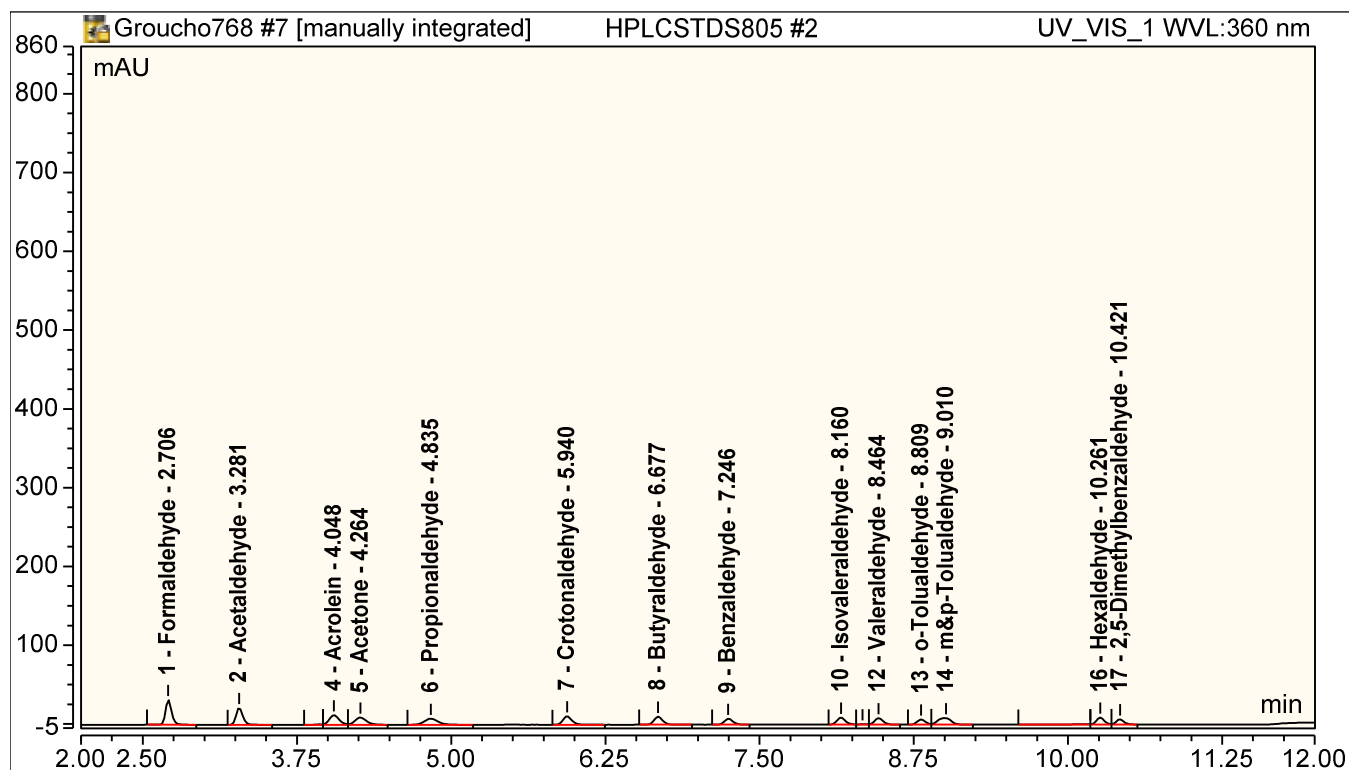
Analyst Comment:

Curve: Groucho768

No.	Time min	Peak Name	Area mAU*min	Height mAU	Amount
1	2.70	Formaldehyde	0.357	6.302	0.109
2	3.28	Acetaldehyde	0.276	4.340	0.109
3	4.04	Acrolein	0.223	2.434	0.108
4	4.26	Acetone	0.207	1.862	0.110
5	4.83	Propionaldehyde	0.200	1.559	0.108
6	5.94	Crotonaldehyde	0.178	2.152	0.106
7	6.68	Butyraldehyde	0.172	2.055	0.112
8	7.25	Benzaldehyde	0.121	1.500	0.108
9	8.16	Isovaleraldehyde	0.140	1.763	0.110
11	8.46	Valeraldehyde	0.134	1.677	0.111
12	8.81	o-Tolualdehyde	0.104	1.313	0.111
13	9.01	m&p-Tolualdehyde	0.210	1.668	0.218
14	10.42	2,5-Dimethylbenzaldehyde	0.116	1.462	0.107

Peak Analysis Report

Sample Name:	HPLCSTDS805 #2	Injection Volume:	5.00
Injection Type:	Calibration Standard	Dilution Factor:	1.0
Instrument Method:	Grouch_AgilentZprbaxSBC CARBS	Operator:	APaolantonio
Inj. Date / Time:	01-Jul-2019 / 16:27	Run Time:	14.00



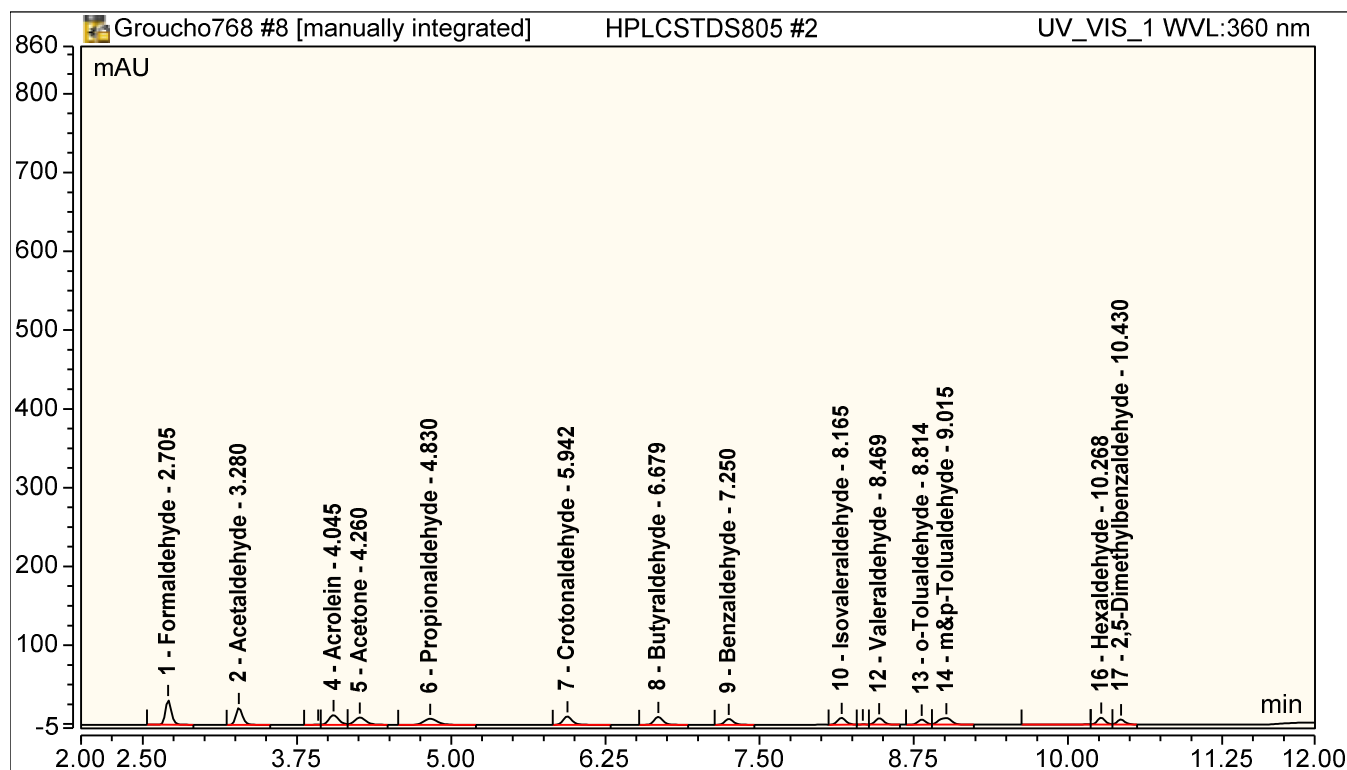
Analyst Comment:

Curve: Groucho768

No.	Time min	Peak Name	Area mAU*min	Height mAU	Amount
1	2.71	Formaldehyde	1.804	31.409	0.580
2	3.28	Acetaldehyde	1.372	21.545	0.578
4	4.05	Acrolein	1.170	12.349	0.581
5	4.26	Acetone	1.012	9.274	0.574
6	4.84	Propionaldehyde	0.996	7.725	0.581
7	5.94	Crotonaldehyde	0.906	10.768	0.578
8	6.68	Butyraldehyde	0.837	10.185	0.575
9	7.25	Benzaldehyde	0.609	7.532	0.575
10	8.16	Isovaleraldehyde	0.707	8.830	0.575
12	8.46	Valeraldehyde	0.676	8.327	0.577
13	8.81	o-Tolualdehyde	0.505	6.464	0.572
14	9.01	m&p-Tolualdehyde	1.039	8.288	1.153
16	10.26	Hexaldehyde	0.650	8.874	0.565
17	10.42	2,5-Dimethylbenzaldehyde	0.469	6.670	0.562

Peak Analysis Report

Sample Name:	HPLCSTDS805 #2	Injection Volume:	5.00
Injection Type:	Calibration Standard	Dilution Factor:	1.0
Instrument Method:	Groucho_AgilentZprbaxSBC CARBS	Operator:	APaolantonio
Inj. Date / Time:	01-Jul-2019 / 16:42	Run Time:	14.00



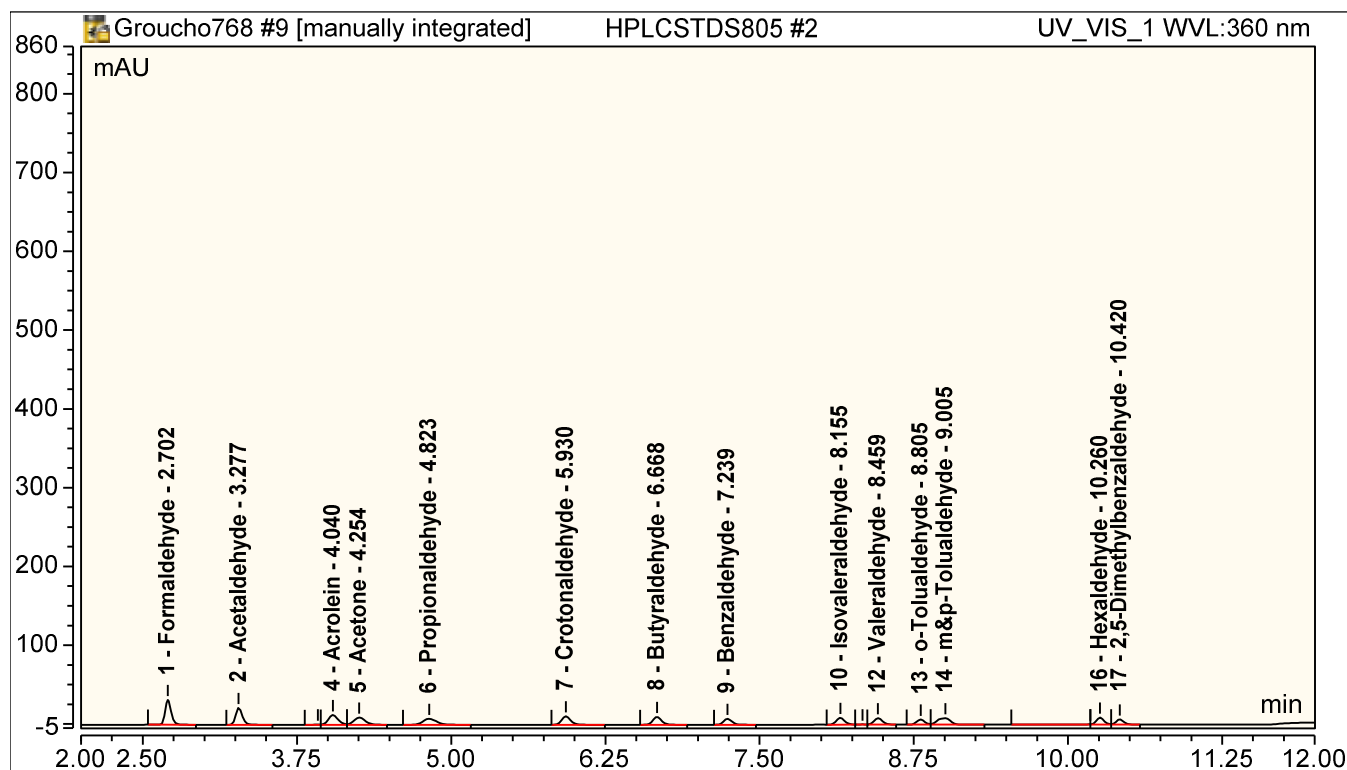
Analyst Comment:

Curve: Groucho768

No.	Time min	Peak Name	Area mAU*min	Height mAU	Amount
1	2.70	Formaldehyde	1.803	31.457	0.579
2	3.28	Acetaldehyde	1.372	21.587	0.578
4	4.05	Acrolein	1.183	12.425	0.587
5	4.26	Acetone	1.013	9.309	0.574
6	4.83	Propionaldehyde	1.001	7.753	0.584
7	5.94	Crotonaldehyde	0.908	10.811	0.579
8	6.68	Butyraldehyde	0.837	10.206	0.575
9	7.25	Benzaldehyde	0.613	7.559	0.579
10	8.16	Isovaleraldehyde	0.710	8.855	0.578
12	8.47	Valeraldehyde	0.674	8.334	0.575
13	8.81	o-Tolualdehyde	0.510	6.518	0.578
14	9.02	m&p-Tolualdehyde	1.040	8.273	1.154
16	10.27	Hexaldehyde	0.652	8.924	0.567
17	10.43	2,5-Dimethylbenzaldehyde	0.469	6.698	0.561

Peak Analysis Report

Sample Name:	HPLCSTDS805 #2	Injection Volume:	5.00
Injection Type:	Calibration Standard	Dilution Factor:	1.0
Instrument Method:	Grouch_AgilentZprbaxSBC CARBS	Operator:	APaolantonio
Inj. Date / Time:	01-Jul-2019 / 16:58	Run Time:	14.00



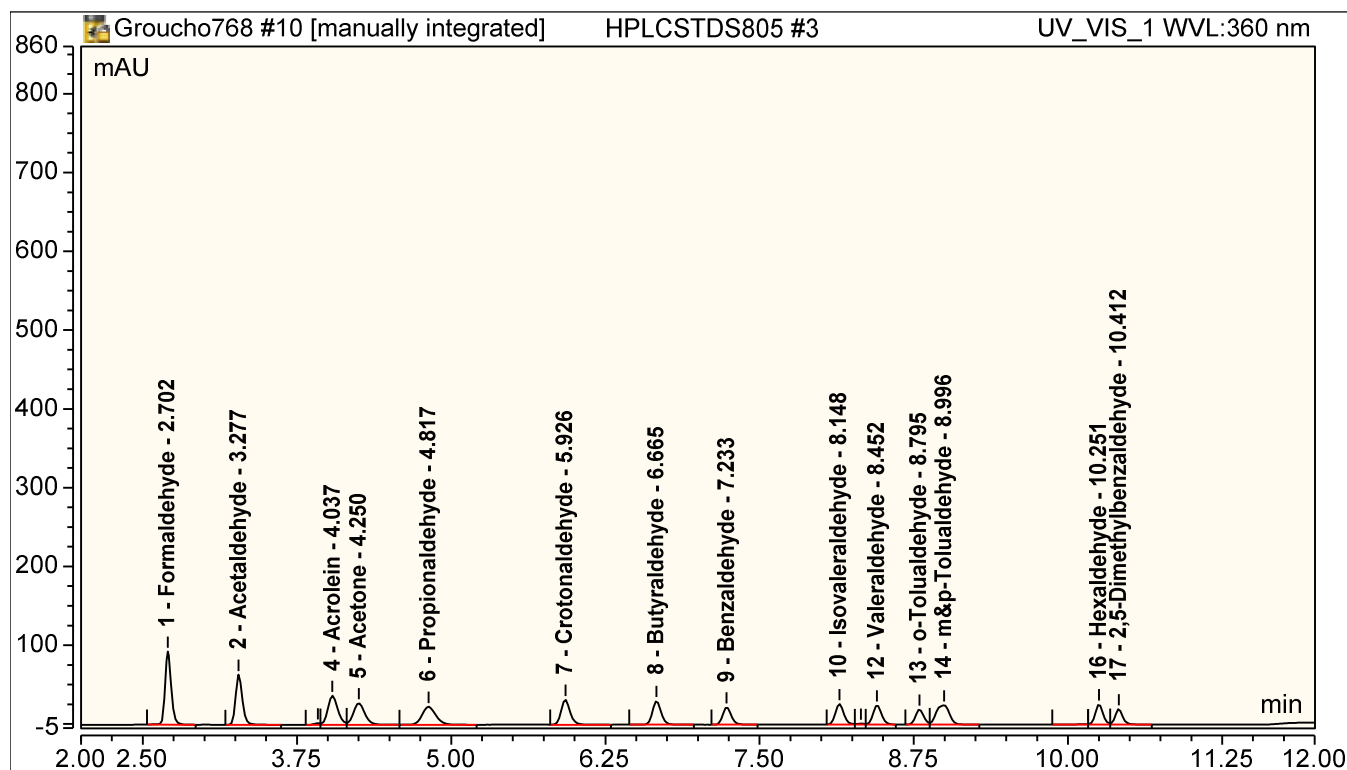
Analyst Comment:

Curve: Groucho768

No.	Time min	Peak Name	Area mAU*min	Height mAU	Amount
1	2.70	Formaldehyde	1.805	31.512	0.580
2	3.28	Acetaldehyde	1.371	21.618	0.577
4	4.04	Acrolein	1.176	12.488	0.584
5	4.25	Acetone	1.013	9.336	0.574
6	4.82	Propionaldehyde	1.001	7.766	0.584
7	5.93	Crotonaldehyde	0.904	10.787	0.577
8	6.67	Butyraldehyde	0.840	10.209	0.577
9	7.24	Benzaldehyde	0.616	7.582	0.582
10	8.15	Isovaleraldehyde	0.708	8.852	0.577
12	8.46	Valeraldehyde	0.673	8.332	0.574
13	8.81	o-Tolualdehyde	0.505	6.492	0.572
14	9.01	m&p-Tolualdehyde	1.039	8.255	1.153
16	10.26	Hexaldehyde	0.656	8.955	0.571
17	10.42	2,5-Dimethylbenzaldehyde	0.478	6.743	0.572

Peak Analysis Report

Sample Name:	HPLCSTDS805 #3	Injection Volume:	5.00
Injection Type:	Calibration Standard	Dilution Factor:	1.0
Instrument Method:	Groucho_AgilentZprbaxSBC CARBS	Operator:	APaolantonio
Inj. Date / Time:	01-Jul-2019 / 17:14	Run Time:	14.00



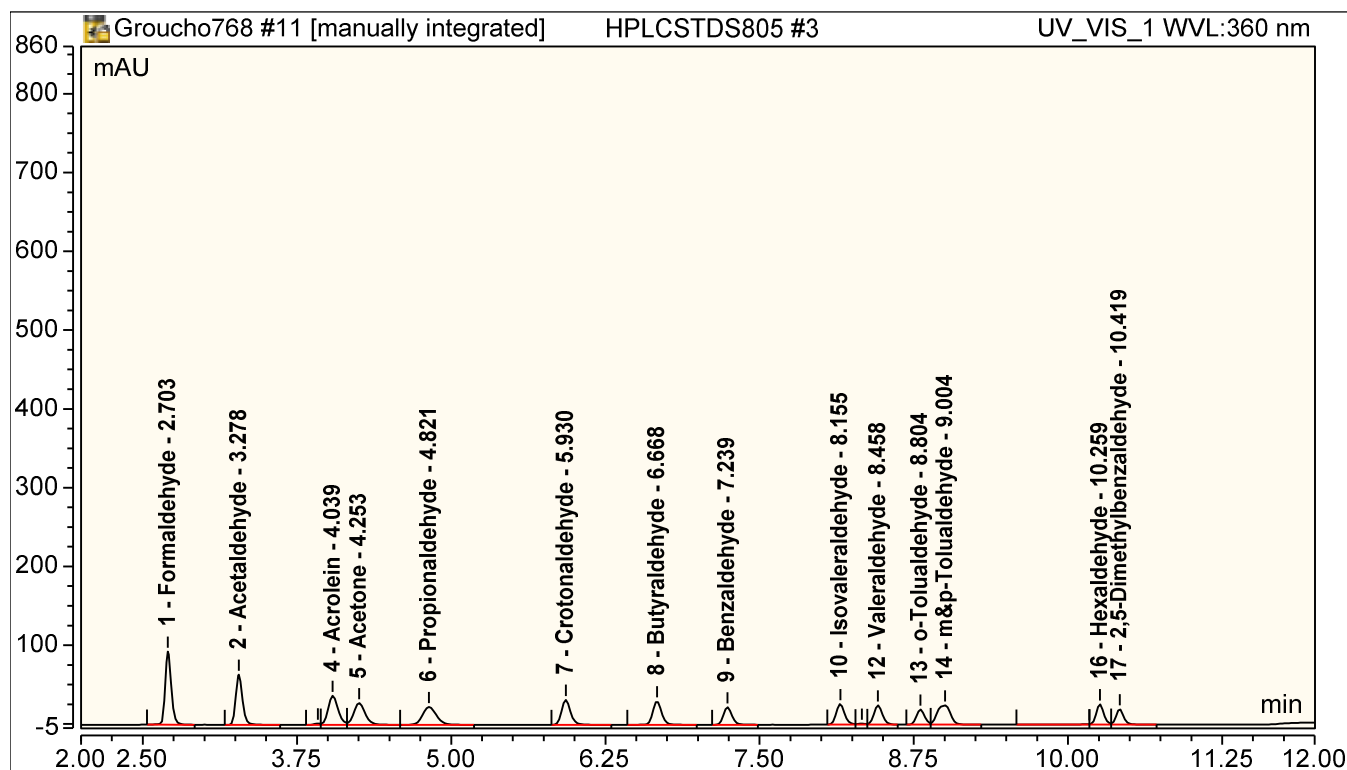
Analyst Comment:

Curve: Groucho768

No.	Time min	Peak Name	Area mAU*min	Height mAU	Amount
1	2.70	Formaldehyde	5.306	92.633	1.720
2	3.28	Acetaldehyde	4.044	63.538	1.719
4	4.04	Acrolein	3.475	37.070	1.731
5	4.25	Acetone	3.044	27.702	1.746
6	4.82	Propionaldehyde	2.969	22.948	1.753
7	5.93	Crotonaldehyde	2.665	31.692	1.717
8	6.66	Butyraldehyde	2.480	30.162	1.719
9	7.23	Benzaldehyde	1.804	22.247	1.719
10	8.15	Isovaleraldehyde	2.085	26.056	1.706
12	8.45	Valeraldehyde	1.980	24.483	1.697
13	8.80	o-Tolualdehyde	1.497	19.126	1.712
14	9.00	m&p-Tolualdehyde	3.067	24.492	3.442
16	10.25	Hexaldehyde	1.862	25.808	1.715
17	10.41	2,5-Dimethylbenzaldehyde	1.387	19.625	1.743

Peak Analysis Report

Sample Name:	HPLCSTDS805 #3	Injection Volume:	5.00
Injection Type:	Calibration Standard	Dilution Factor:	1.0
Instrument Method:	Groucho_AgilentZprbaxSBC CARBS	Operator:	APaolantonio
Inj. Date / Time:	01-Jul-2019 / 17:30	Run Time:	14.00



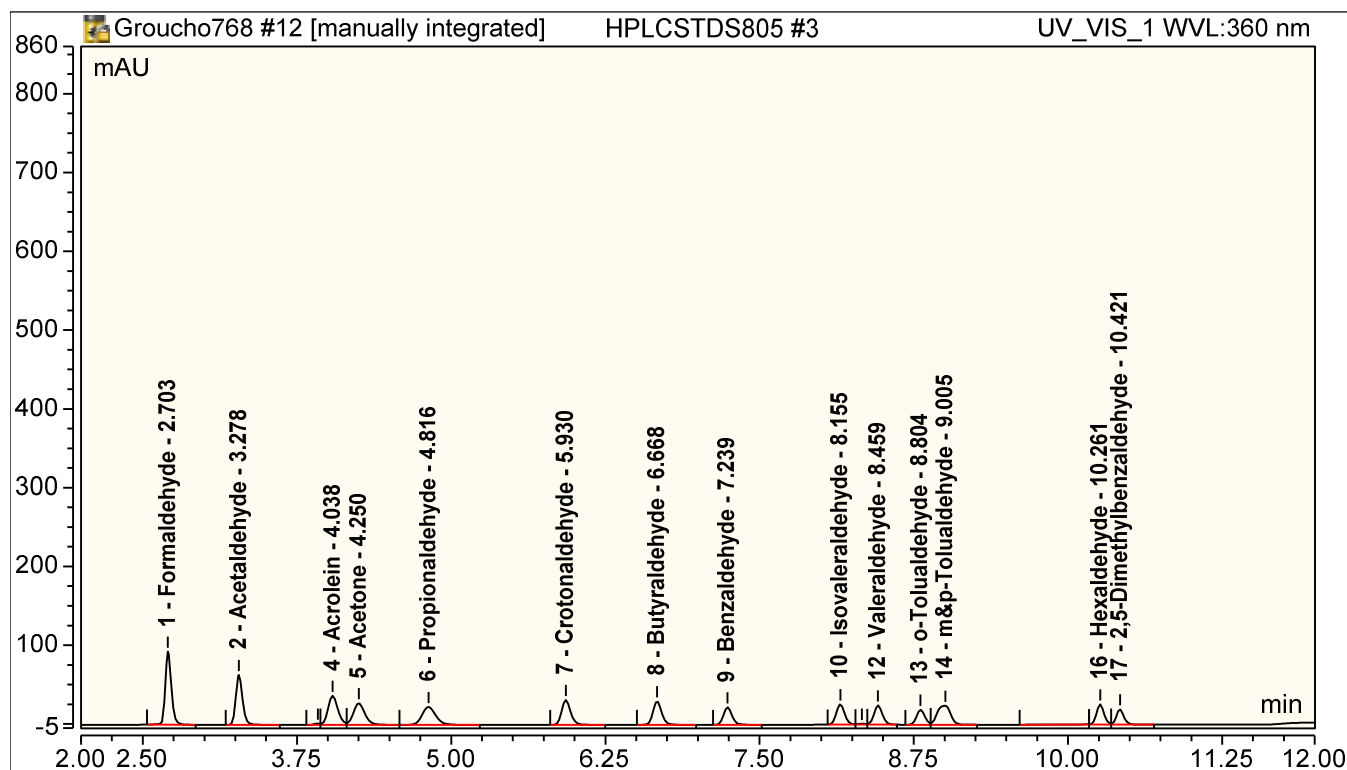
Analyst Comment:

Curve: Groucho768

No.	Time min	Peak Name	Area mAU*min	Height mAU	Amount
1	2.70	Formaldehyde	5.316	92.848	1.723
2	3.28	Acetaldehyde	4.049	63.709	1.721
4	4.04	Acrolein	3.475	37.000	1.732
5	4.25	Acetone	3.041	27.681	1.744
6	4.82	Propionaldehyde	2.963	22.936	1.749
7	5.93	Crotonaldehyde	2.668	31.806	1.719
8	6.67	Butyraldehyde	2.482	30.068	1.720
9	7.24	Benzaldehyde	1.808	22.308	1.723
10	8.15	Isovaleraldehyde	2.084	26.077	1.706
12	8.46	Valeraldehyde	1.981	24.520	1.698
13	8.80	o-Tolualdehyde	1.499	19.163	1.714
14	9.00	m&p-Tolualdehyde	3.070	24.459	3.445
16	10.26	Hexaldehyde	1.875	25.963	1.727
17	10.42	2,5-Dimethylbenzaldehyde	1.396	19.713	1.754

Peak Analysis Report

Sample Name:	HPLCSTDS805 #3	Injection Volume:	5.00
Injection Type:	Calibration Standard	Dilution Factor:	1.0
Instrument Method:	Groucho_AgilentZprbaxSBC CARBS	Operator:	APaolantonio
Inj. Date / Time:	01-Jul-2019 / 17:45	Run Time:	14.00



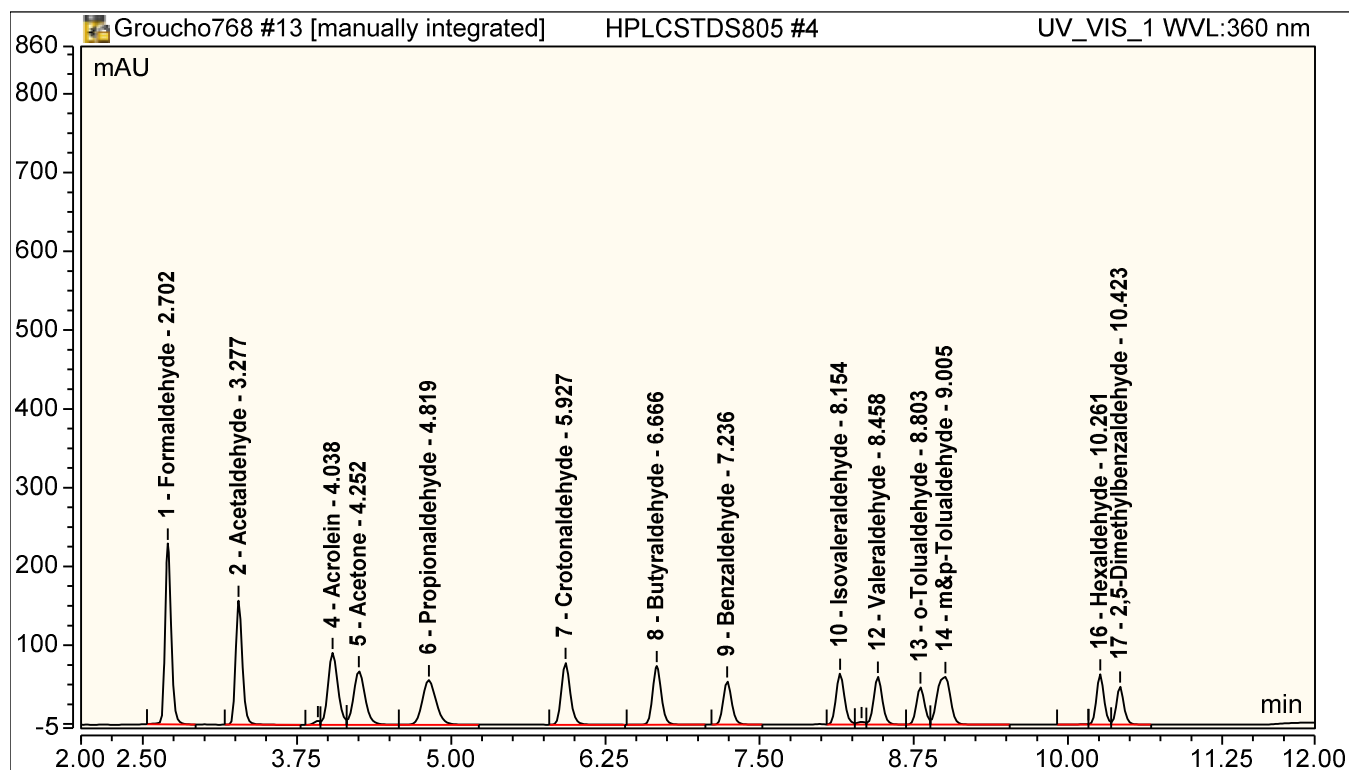
Analyst Comment:

Curve: Groucho768

No.	Time min	Peak Name	Area mAU*min	Height mAU	Amount
1	2.70	Formaldehyde	5.300	92.737	1.718
2	3.28	Acetaldehyde	4.029	63.532	1.713
4	4.04	Acrolein	3.468	37.252	1.728
5	4.25	Acetone	3.033	27.751	1.739
6	4.82	Propionaldehyde	2.959	22.892	1.747
7	5.93	Crotonaldehyde	2.654	31.690	1.710
8	6.67	Butyraldehyde	2.460	30.024	1.705
9	7.24	Benzaldehyde	1.805	22.278	1.720
10	8.15	Isovaleraldehyde	2.078	26.039	1.700
12	8.46	Valeraldehyde	1.975	24.513	1.692
13	8.80	o-Tolualdehyde	1.492	19.135	1.706
14	9.01	m&p-Tolualdehyde	3.053	24.309	3.426
16	10.26	Hexaldehyde	1.869	25.924	1.721
17	10.42	2,5-Dimethylbenzaldehyde	1.393	19.675	1.751

Peak Analysis Report

Sample Name:	HPLCSTDS805 #4	Injection Volume:	5.00
Injection Type:	Calibration Standard	Dilution Factor:	1.0
Instrument Method:	Groucho_AgilentZprbaxSBC CARBS	Operator:	APaolantonio
Inj. Date / Time:	01-Jul-2019 / 18:01	Run Time:	14.00



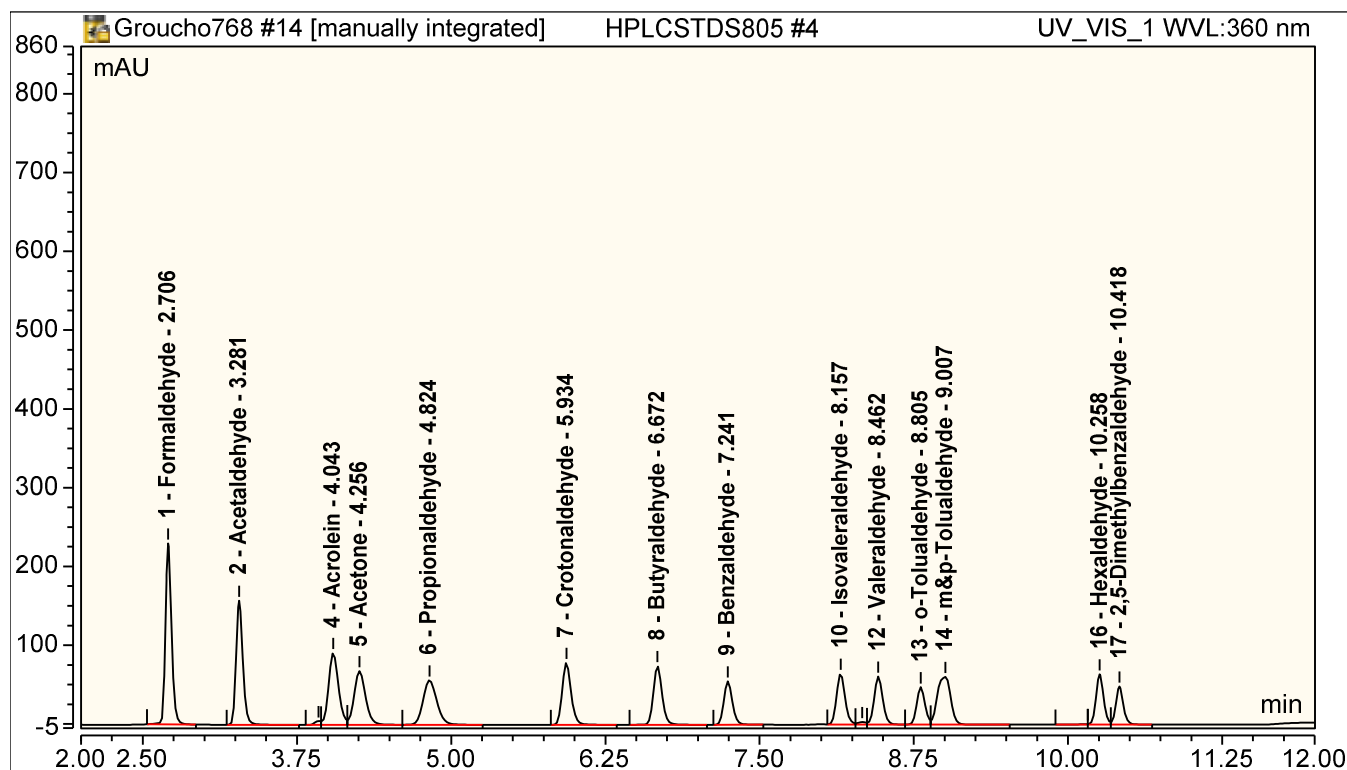
Analyst Comment:

Curve: Groucho768

No.	Time min	Peak Name	Area mAU*min	Height mAU	Amount
1	2.70	Formaldehyde	13.102	229.431	4.257
2	3.28	Acetaldehyde	10.011	157.496	4.268
4	4.04	Acrolein	8.551	91.434	4.265
5	4.25	Acetone	7.425	68.313	4.272
6	4.82	Propionaldehyde	7.258	56.600	4.301
7	5.93	Crotonaldehyde	6.585	78.723	4.257
8	6.67	Butyraldehyde	6.125	74.481	4.256
9	7.24	Benzaldehyde	4.458	55.199	4.260
10	8.15	Isovaleraldehyde	5.142	64.493	4.214
12	8.46	Valeraldehyde	4.927	60.757	4.228
13	8.80	o-Tolualdehyde	3.699	47.400	4.242
14	9.01	m&p-Tolualdehyde	7.585	60.440	8.541
16	10.26	Hexaldehyde	4.540	63.723	4.256
17	10.42	2,5-Dimethylbenzaldehyde	3.371	48.469	4.295

Peak Analysis Report

Sample Name:	HPLCSTDS805 #4	Injection Volume:	5.00
Injection Type:	Calibration Standard	Dilution Factor:	1.0
Instrument Method:	Groucho_AgilentZprbaxSBC CARBS	Operator:	APaolantonio
Inj. Date / Time:	01-Jul-2019 / 18:17	Run Time:	14.00



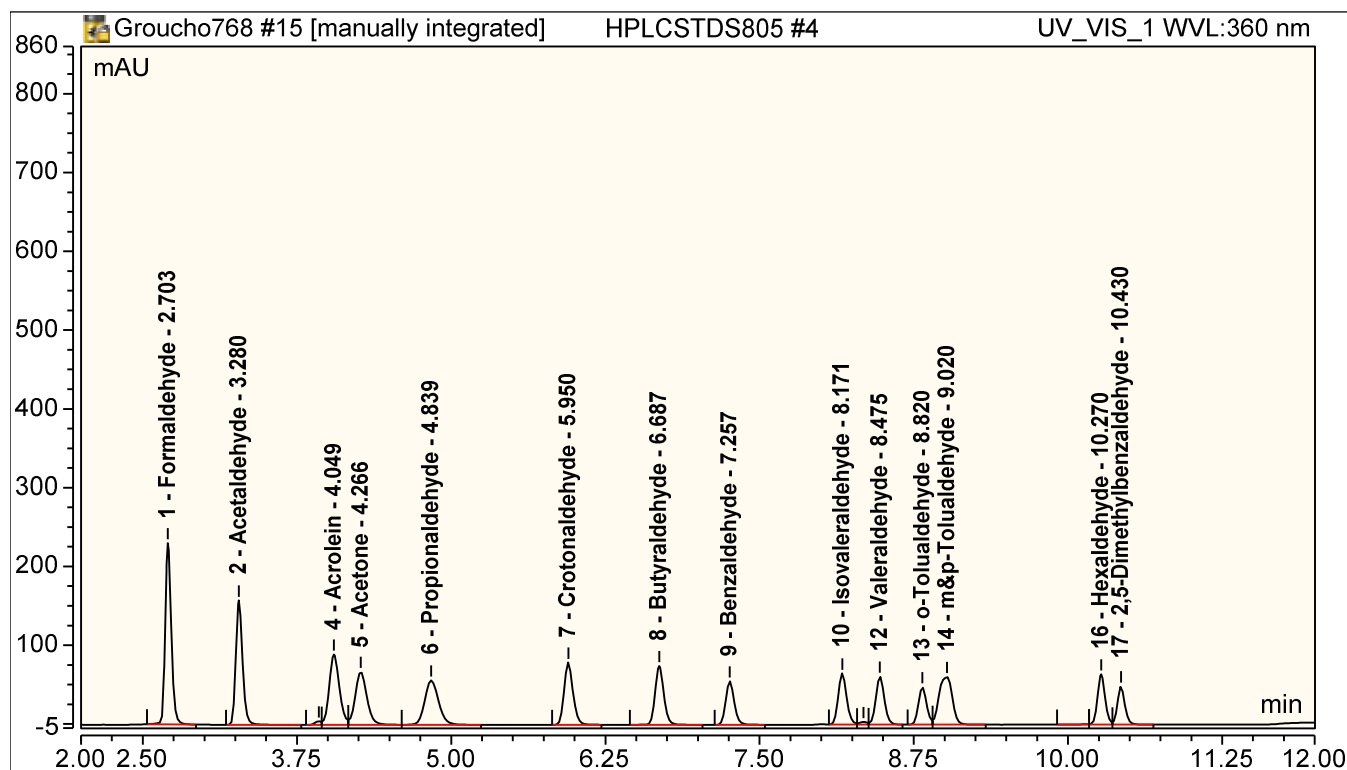
Analyst Comment:

Curve: Groucho768

No.	Time min	Peak Name	Area mAU*min	Height mAU	Amount
1	2.71	Formaldehyde	13.132	229.817	4.267
2	3.28	Acetaldehyde	10.029	157.572	4.276
4	4.04	Acrolein	8.569	91.663	4.274
5	4.26	Acetone	7.438	68.432	4.279
6	4.82	Propionaldehyde	7.269	56.651	4.307
7	5.93	Crotonaldehyde	6.587	78.718	4.258
8	6.67	Butyraldehyde	6.136	74.615	4.264
9	7.24	Benzaldehyde	4.465	55.244	4.267
10	8.16	Isovaleraldehyde	5.152	64.546	4.223
12	8.46	Valeraldehyde	4.943	60.870	4.242
13	8.81	o-Tolualdehyde	3.704	47.491	4.248
14	9.01	m&p-Tolualdehyde	7.599	60.747	8.557
16	10.26	Hexaldehyde	4.550	63.817	4.265
17	10.42	2,5-Dimethylbenzaldehyde	3.378	48.533	4.305

Peak Analysis Report

Sample Name:	HPLCSTDS805 #4	Injection Volume:	5.00
Injection Type:	Calibration Standard	Dilution Factor:	1.0
Instrument Method:	Groucho_AgilentZprbaxSBC CARBS	Operator:	APaolantonio
Inj. Date / Time:	01-Jul-2019 / 18:32	Run Time:	14.00



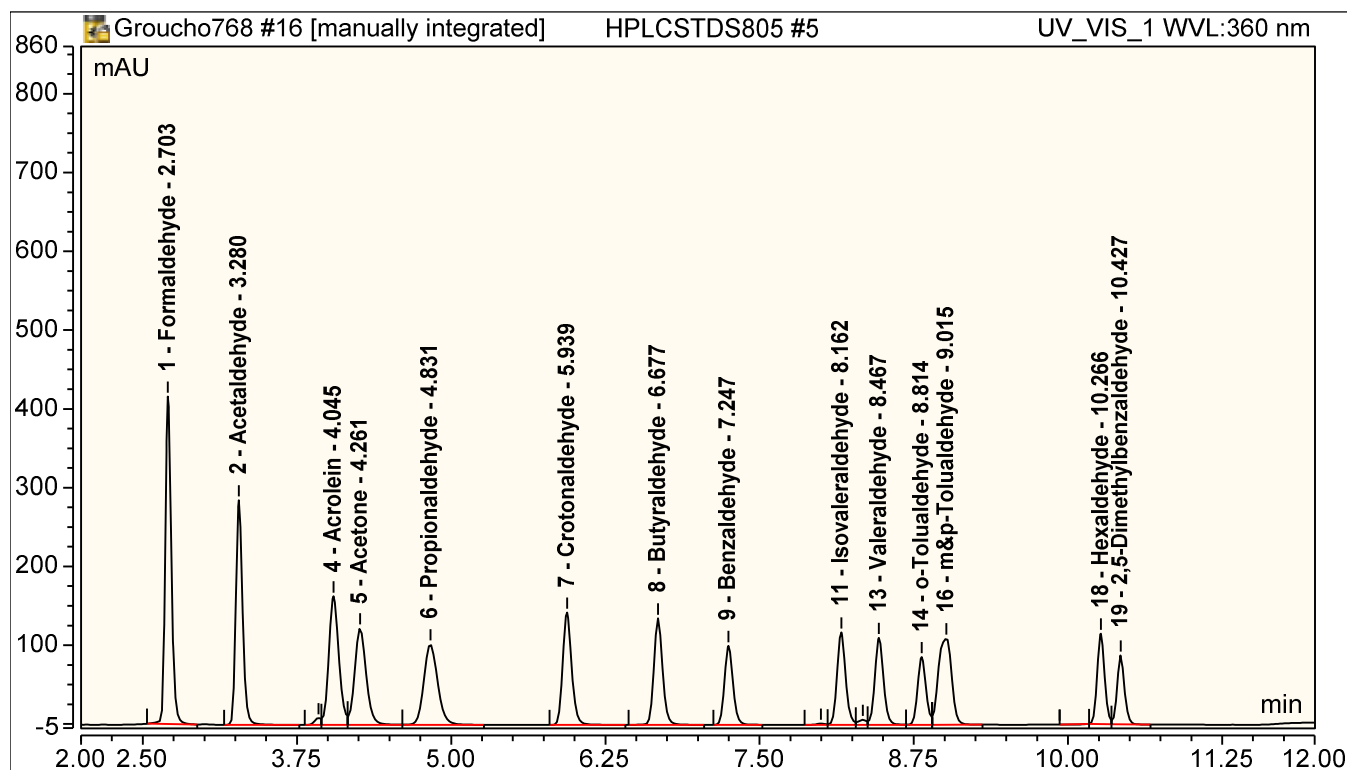
Analyst Comment:

Curve: Groucho768

No.	Time min	Peak Name	Area mAU*min	Height mAU	Amount
1	2.70	Formaldehyde	13.123	230.131	4.264
2	3.28	Acetaldehyde	10.028	157.811	4.275
4	4.05	Acrolein	8.543	89.440	4.261
5	4.27	Acetone	7.422	67.568	4.270
6	4.84	Propionaldehyde	7.256	56.589	4.300
7	5.95	Crotonaldehyde	6.565	78.922	4.244
8	6.69	Butyraldehyde	6.134	74.772	4.263
9	7.26	Benzaldehyde	4.457	55.326	4.259
10	8.17	Isovaleraldehyde	5.145	64.819	4.217
12	8.48	Valeraldehyde	4.930	61.020	4.231
13	8.82	o-Tolualdehyde	3.709	47.611	4.254
14	9.02	m&p-Tolualdehyde	7.576	60.615	8.531
16	10.27	Hexaldehyde	4.545	63.983	4.261
17	10.43	2,5-Dimethylbenzaldehyde	3.371	48.621	4.296

Peak Analysis Report

Sample Name:	HPLCSTDS805 #5	Injection Volume:	5.00
Injection Type:	Calibration Standard	Dilution Factor:	1.0
Instrument Method:	Groucho_AgilentZprbaxSBC CARBS	Operator:	APaolantonio
Inj. Date / Time:	01-Jul-2019 / 18:48	Run Time:	14.00



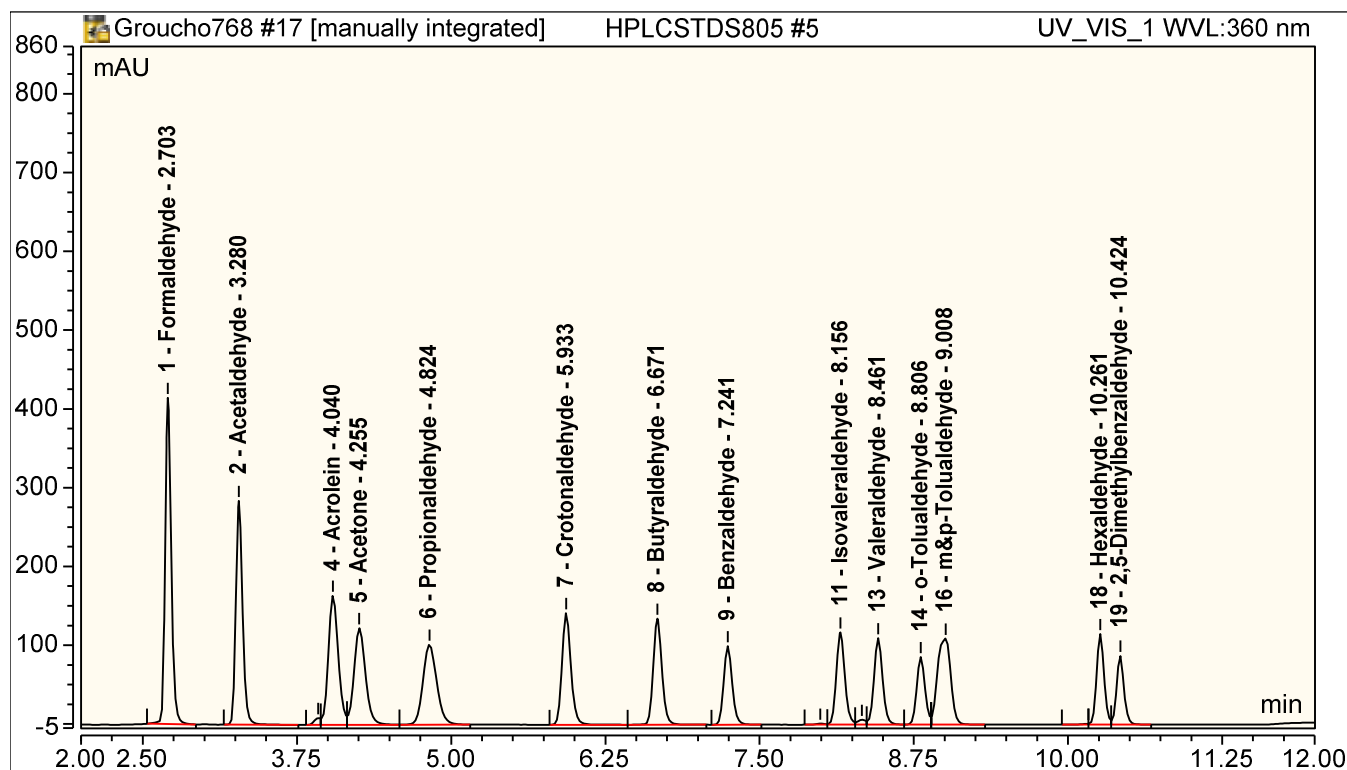
Analyst Comment:

Curve: Groucho768

No.	Time min	Peak Name	Area mAU*min	Height mAU	Amount
1	2.70	Formaldehyde	23.728	415.746	7.716
2	3.28	Acetaldehyde	18.084	285.237	7.716
4	4.05	Acrolein	15.442	163.217	7.705
5	4.26	Acetone	13.399	122.704	7.716
6	4.83	Propionaldehyde	13.101	102.323	7.772
7	5.94	Crotonaldehyde	11.912	142.545	7.708
8	6.68	Butyraldehyde	11.087	135.075	7.711
9	7.25	Benzaldehyde	8.058	100.086	7.707
11	8.16	Isovaleraldehyde	9.425	117.445	7.728
13	8.47	Valeraldehyde	9.004	110.492	7.731
14	8.81	o-Tolualdehyde	6.727	86.077	7.722
16	9.02	m&p-Tolualdehyde	13.677	109.722	15.417
18	10.27	Hexaldehyde	8.024	114.825	7.562
19	10.43	2,5-Dimethylbenzaldehyde	5.985	87.525	7.659

Peak Analysis Report

Sample Name:	HPLCSTDS805 #5	Injection Volume:	5.00
Injection Type:	Calibration Standard	Dilution Factor:	1.0
Instrument Method:	Groucho_AgilentZprbaxSBC CARBS	Operator:	APaolantonio
Inj. Date / Time:	01-Jul-2019 / 19:04	Run Time:	14.00



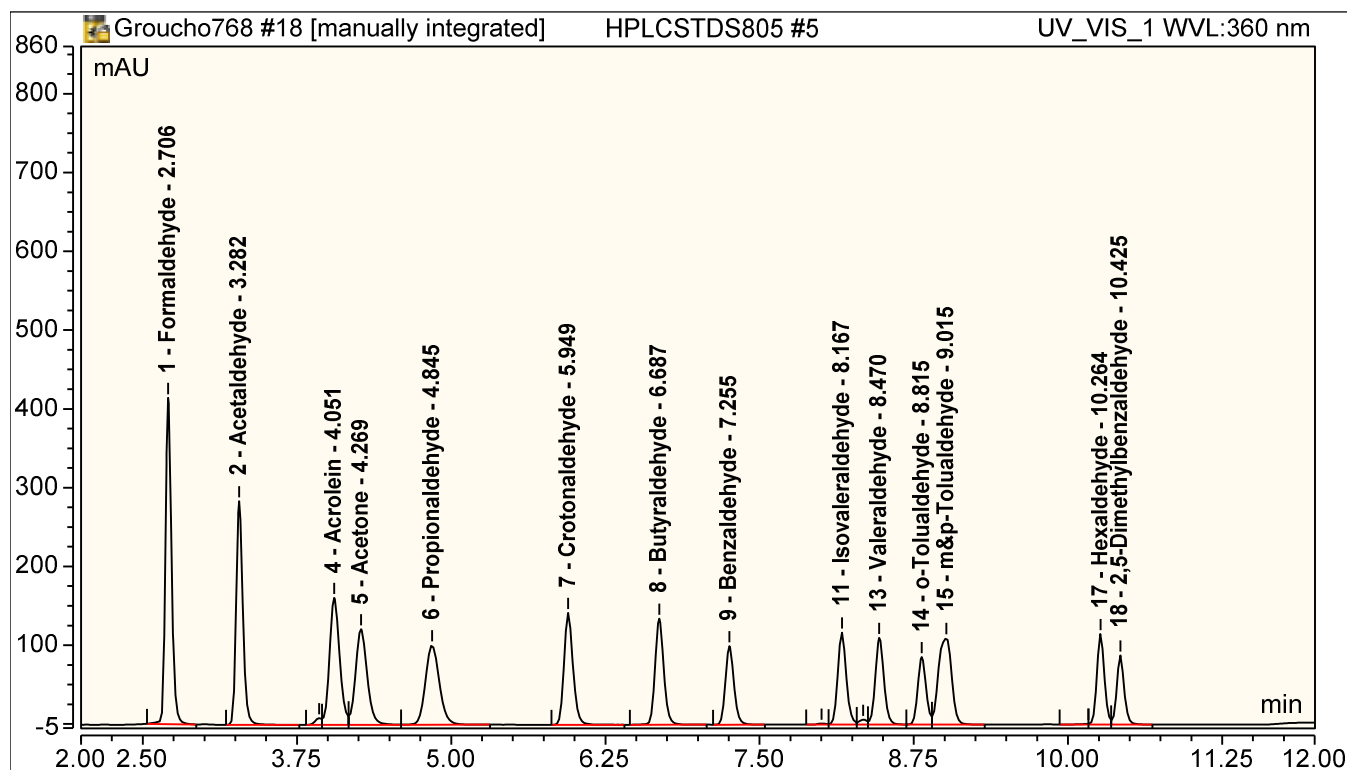
Analyst Comment:

Curve: Groucho768

No.	Time min	Peak Name	Area mAU*min	Height mAU	Amount
1	2.70	Formaldehyde	23.643	414.043	7.689
2	3.28	Acetaldehyde	18.033	284.371	7.694
4	4.04	Acrolein	15.392	164.262	7.680
5	4.26	Acetone	13.318	122.825	7.669
6	4.82	Propionaldehyde	12.992	101.795	7.707
7	5.93	Crotonaldehyde	11.865	141.877	7.677
8	6.67	Butyraldehyde	11.042	134.678	7.679
9	7.24	Benzaldehyde	8.024	99.759	7.674
11	8.16	Isovaleraldehyde	9.382	117.130	7.693
13	8.46	Valeraldehyde	8.956	110.015	7.689
14	8.81	o-Tolualdehyde	6.702	85.753	7.694
16	9.01	m&p-Tolualdehyde	13.614	109.230	15.346
18	10.26	Hexaldehyde	8.135	115.033	7.667
19	10.42	2,5-Dimethylbenzaldehyde	6.062	87.579	7.758

Peak Analysis Report

Sample Name:	HPLCSTDS805 #5	Injection Volume:	5.00
Injection Type:	Calibration Standard	Dilution Factor:	1.0
Instrument Method:	Groucho_AgilentZprbaxSBC CARBS	Operator:	APaolantonio
Inj. Date / Time:	01-Jul-2019 / 19:20	Run Time:	14.00



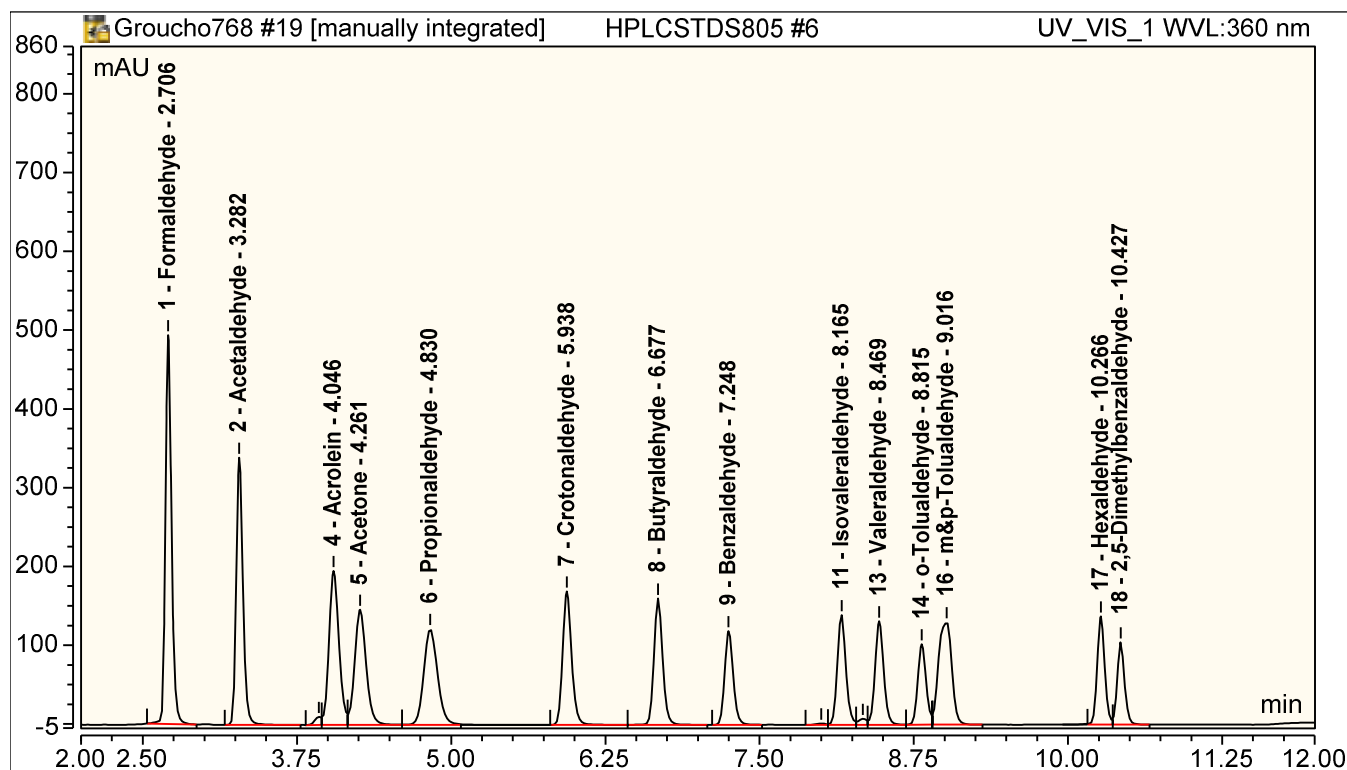
Analyst Comment:

Curve: Groucho768

No.	Time min	Peak Name	Area mAU*min	Height mAU	Amount
1	2.71	Formaldehyde	23.665	414.027	7.696
2	3.28	Acetaldehyde	18.028	283.911	7.692
4	4.05	Acrolein	15.380	161.374	7.674
5	4.27	Acetone	13.336	121.479	7.679
6	4.84	Propionaldehyde	13.033	101.114	7.732
7	5.95	Crotonaldehyde	11.868	142.039	7.679
8	6.69	Butyraldehyde	11.048	134.753	7.683
9	7.25	Benzaldehyde	8.039	99.780	7.689
11	8.17	Isovaleraldehyde	9.393	117.097	7.702
13	8.47	Valeraldehyde	8.961	110.238	7.693
14	8.81	o-Tolualdehyde	6.693	85.867	7.682
15	9.02	m&p-Tolualdehyde	13.677	109.930	15.417
17	10.26	Hexaldehyde	8.144	115.010	7.675
18	10.42	2,5-Dimethylbenzaldehyde	6.068	87.600	7.766

Peak Analysis Report

Sample Name:	HPLCSTDS805 #6	Injection Volume:	5.00
Injection Type:	Calibration Standard	Dilution Factor:	1.0
Instrument Method:	Groucho_AgilentZprbaxSBC CARBS	Operator:	APaolantonio
Inj. Date / Time:	01-Jul-2019 / 19:35	Run Time:	14.00



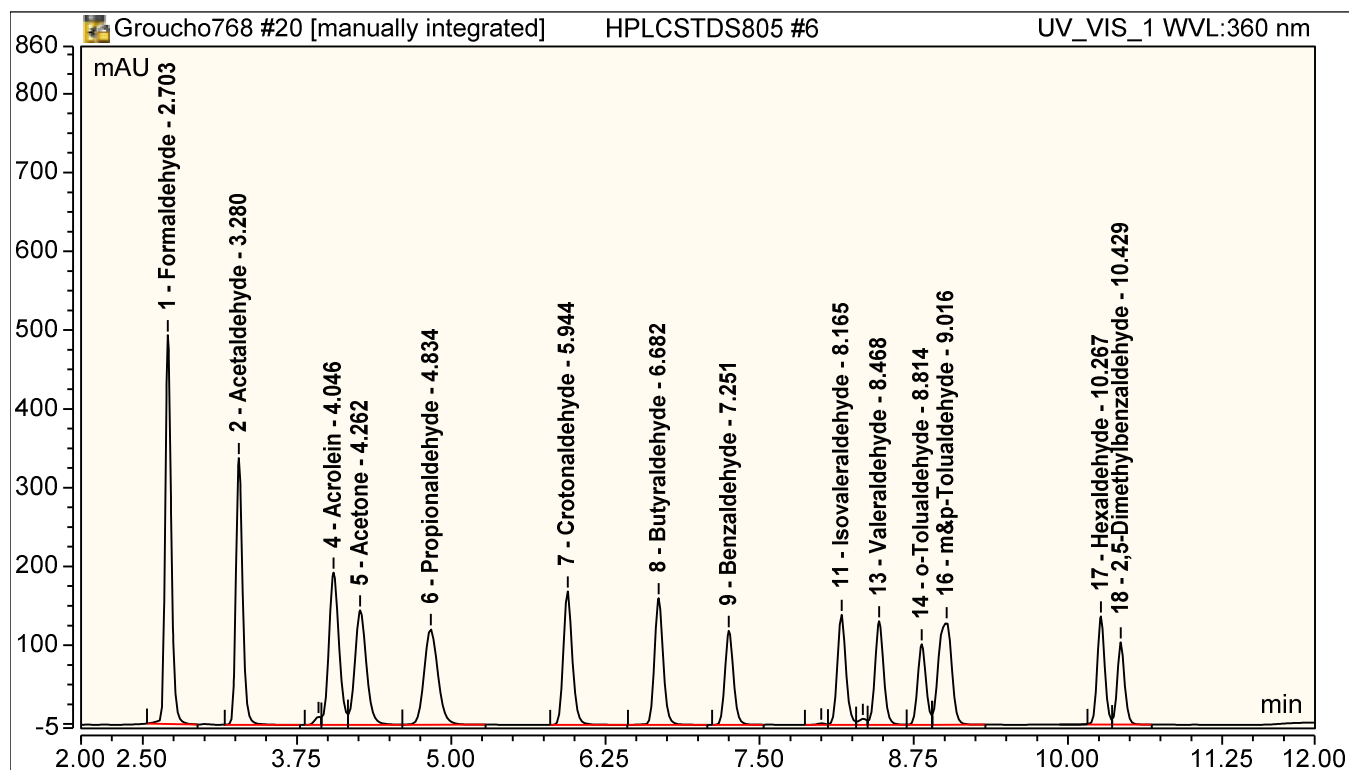
Analyst Comment:

Curve: Groucho768

No.	Time min	Peak Name	Area mAU*min	Height mAU	Amount
1	2.71	Formaldehyde	28.165	493.646	9.161
2	3.28	Acetaldehyde	21.478	339.031	9.165
4	4.05	Acrolein	18.355	195.545	9.159
5	4.26	Acetone	15.935	146.437	9.178
6	4.83	Propionaldehyde	15.591	121.909	9.251
7	5.94	Crotonaldehyde	14.189	169.373	9.182
8	6.68	Butyraldehyde	13.171	160.288	9.162
9	7.25	Benzaldehyde	9.582	118.907	9.166
11	8.16	Isovaleraldehyde	11.179	139.345	9.168
13	8.47	Valeraldehyde	10.685	131.270	9.174
14	8.81	o-Tolualdehyde	7.984	102.291	9.167
16	9.02	m&p-Tolualdehyde	16.240	130.357	18.310
17	10.27	Hexaldehyde	9.773	137.380	9.221
18	10.43	2,5-Dimethylbenzaldehyde	7.187	104.610	9.206

Peak Analysis Report

Sample Name:	HPLCSTDS805 #6	Injection Volume:	5.00
Injection Type:	Calibration Standard	Dilution Factor:	1.0
Instrument Method:	Groucho_AgilentZprbaxSBC CARBS	Operator:	APaolantonio
Inj. Date / Time:	01-Jul-2019 / 19:51	Run Time:	14.00



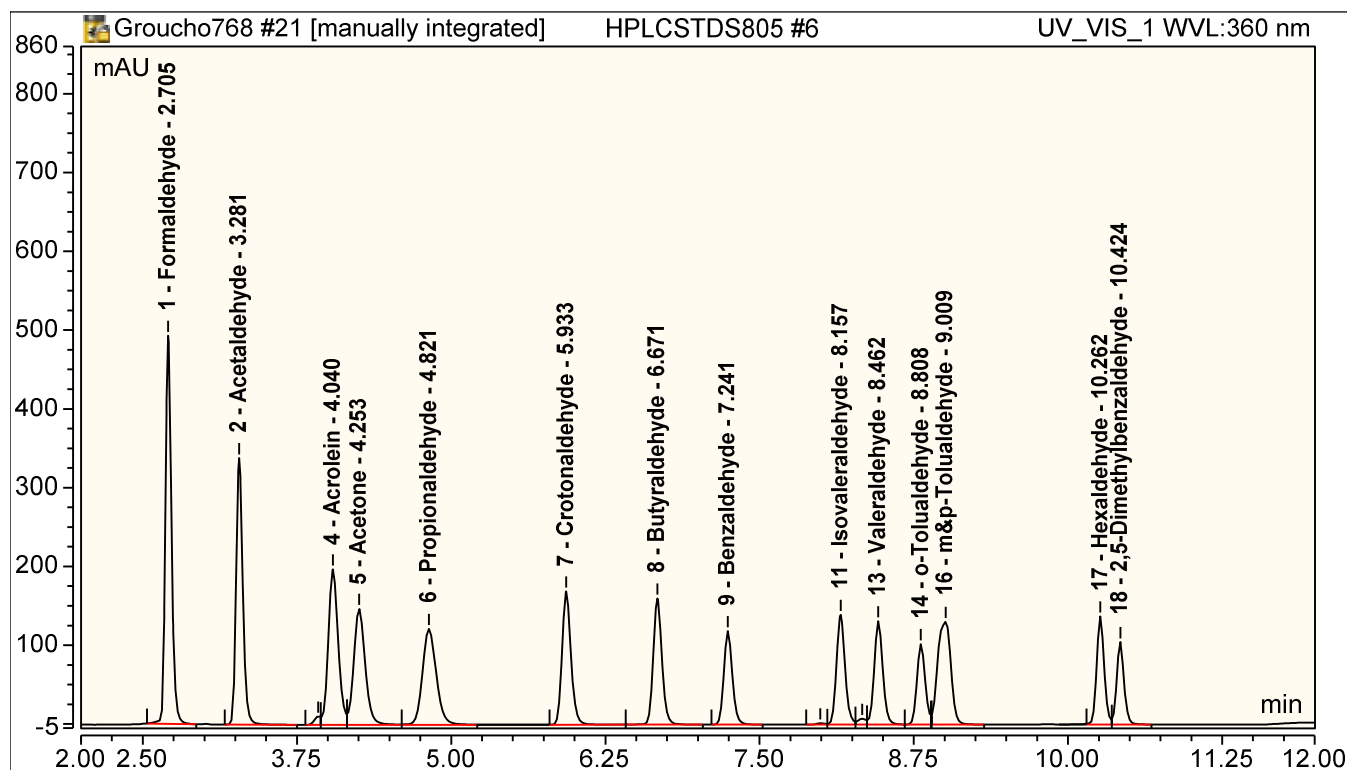
Analyst Comment:

Curve: Groucho768

No.	Time min	Peak Name	Area mAU*min	Height mAU	Amount
1	2.70	Formaldehyde	28.146	493.341	9.155
2	3.28	Acetaldehyde	21.446	338.841	9.152
4	4.05	Acrolein	18.333	193.318	9.148
5	4.26	Acetone	15.873	145.483	9.143
6	4.83	Propionaldehyde	15.542	121.561	9.222
7	5.94	Crotonaldehyde	14.133	169.389	9.146
8	6.68	Butyraldehyde	13.156	160.812	9.151
9	7.25	Benzaldehyde	9.558	119.165	9.143
11	8.16	Isovaleraldehyde	11.174	139.735	9.163
13	8.47	Valeraldehyde	10.671	131.467	9.162
14	8.81	o-Tolualdehyde	7.974	102.291	9.154
16	9.02	m&p-Tolualdehyde	16.224	130.280	18.292
17	10.27	Hexaldehyde	9.738	137.609	9.188
18	10.43	2,5-Dimethylbenzaldehyde	7.200	104.733	9.222

Peak Analysis Report

Sample Name:	HPLCSTDS805 #6	Injection Volume:	5.00
Injection Type:	Calibration Standard	Dilution Factor:	1.0
Instrument Method:	Groucho_AgilentZprbaxSBC CARBS	Operator:	APaolantonio
Inj. Date / Time:	01-Jul-2019 / 20:07	Run Time:	14.00



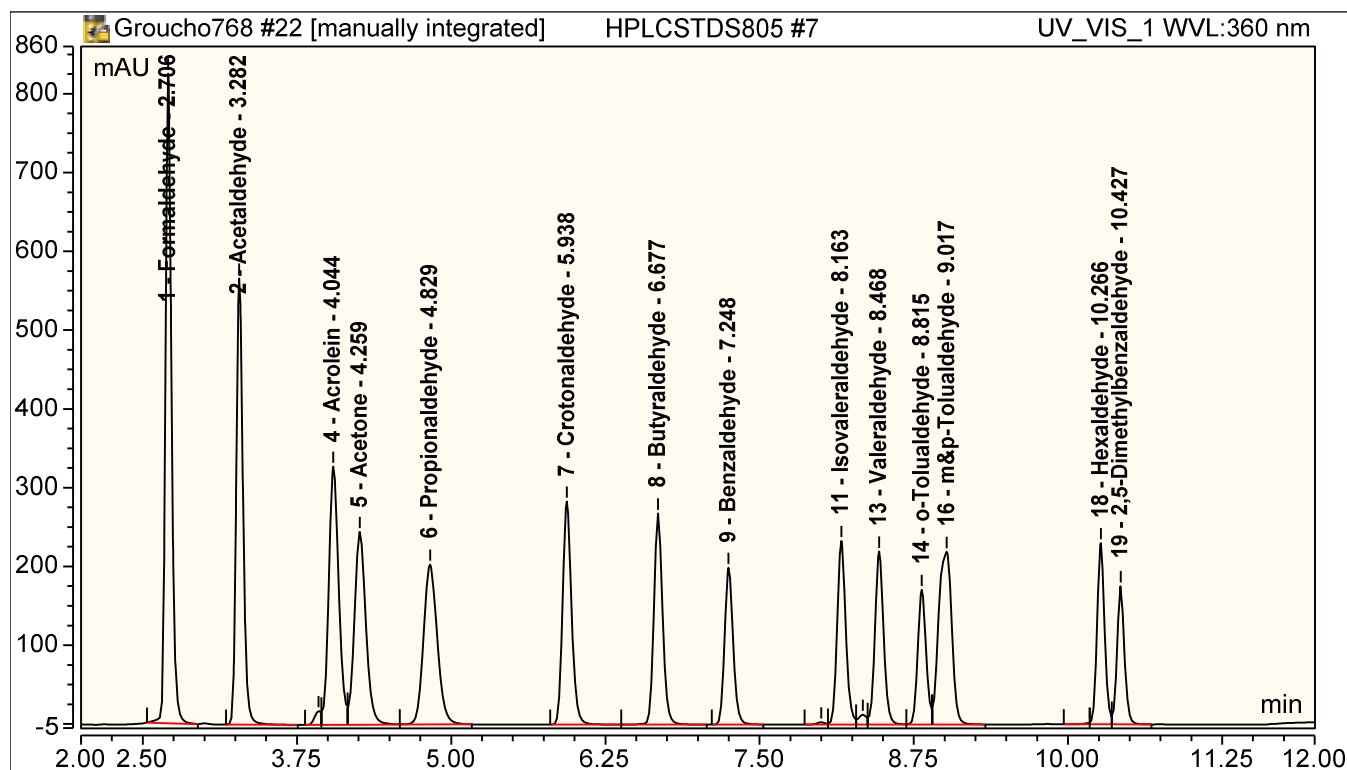
Analyst Comment:

Curve: Groucho768

No.	Time min	Peak Name	Area mAU*min	Height mAU	Amount
1	2.70	Formaldehyde	28.117	492.720	9.145
2	3.28	Acetaldehyde	21.440	338.372	9.149
4	4.04	Acrolein	18.358	197.505	9.161
5	4.25	Acetone	15.938	147.322	9.180
6	4.82	Propionaldehyde	15.644	121.840	9.283
7	5.93	Crotonaldehyde	14.173	169.355	9.173
8	6.67	Butyraldehyde	13.160	160.088	9.154
9	7.24	Benzaldehyde	9.568	118.683	9.153
11	8.16	Isovaleraldehyde	11.175	139.333	9.165
13	8.46	Valeraldehyde	10.675	131.208	9.165
14	8.81	o-Tolualdehyde	7.976	102.203	9.157
16	9.01	m&p-Tolualdehyde	16.221	130.498	18.288
17	10.26	Hexaldehyde	9.746	137.187	9.196
18	10.42	2,5-Dimethylbenzaldehyde	7.181	104.564	9.197

Peak Analysis Report

Sample Name:	HPLCSTDS805 #7	Injection Volume:	5.00
Injection Type:	Calibration Standard	Dilution Factor:	1.0
Instrument Method:	Groucho_AgilentZprbaxSBC CARBS	Operator:	APaolantonio
Inj. Date / Time:	01-Jul-2019 / 20:22	Run Time:	14.00



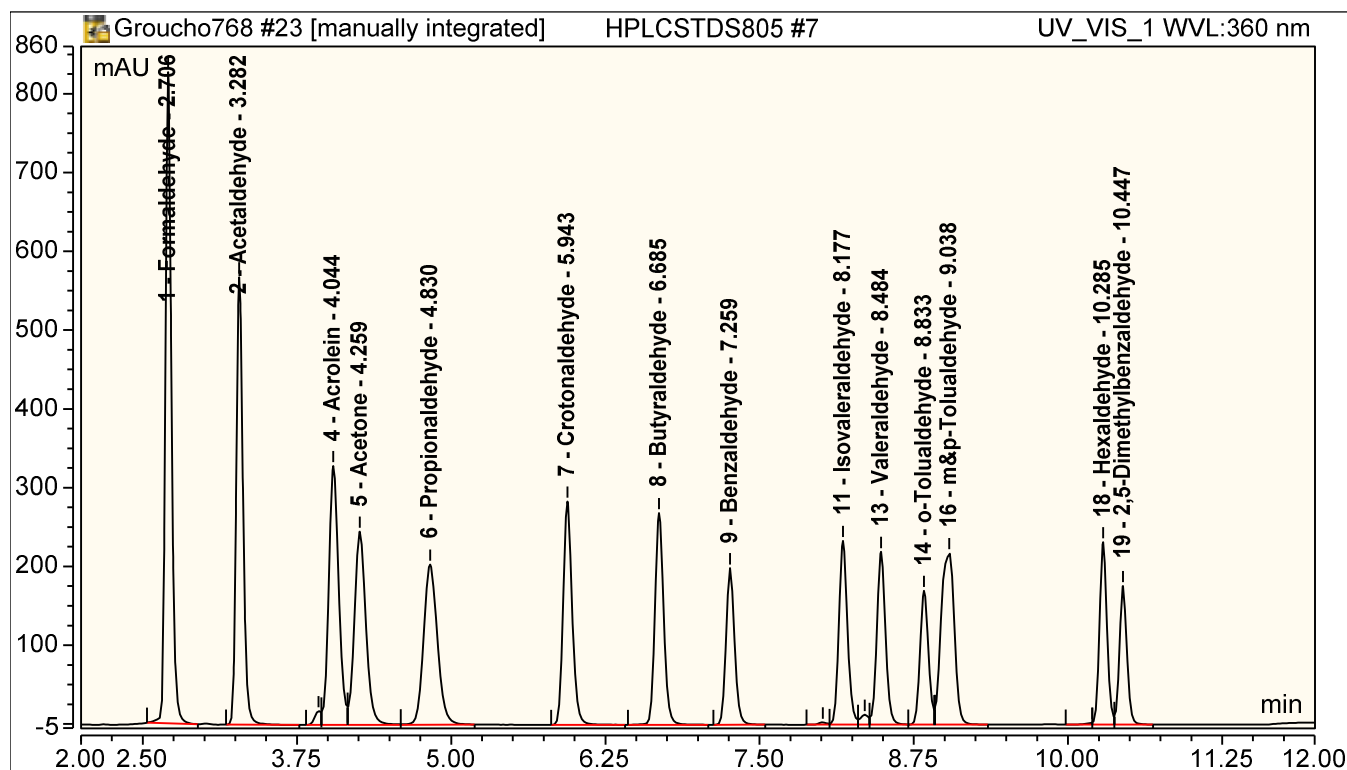
Analyst Comment:

Curve: Groucho768

No.	Time min	Peak Name	Area mAU*min	Height mAU	Amount
1	2.71	Formaldehyde	47.081	824.776	15.319
2	3.28	Acetaldehyde	35.869	566.415	15.312
4	4.04	Acrolein	30.690	327.899	15.317
5	4.26	Acetone	26.531	244.760	15.288
6	4.83	Propionaldehyde	25.894	203.099	15.372
7	5.94	Crotonaldehyde	23.684	283.269	15.334
8	6.68	Butyraldehyde	22.025	268.049	15.325
9	7.25	Benzaldehyde	16.026	198.992	15.336
11	8.16	Isovaleraldehyde	18.743	233.285	15.374
13	8.47	Valeraldehyde	17.885	219.599	15.359
14	8.81	o-Tolualdehyde	13.346	170.987	15.328
16	9.02	m&p-Tolualdehyde	27.188	219.085	30.666
18	10.27	Hexaldehyde	16.232	230.030	15.350
19	10.43	2,5-Dimethylbenzaldehyde	12.047	175.486	15.459

Peak Analysis Report

Sample Name:	HPLCSTDS805 #7	Injection Volume:	5.00
Injection Type:	Calibration Standard	Dilution Factor:	1.0
Instrument Method:	Groucho_AgilentZprbaxSBC CARBS	Operator:	APaolantonio
Inj. Date / Time:	01-Jul-2019 / 20:38	Run Time:	14.00



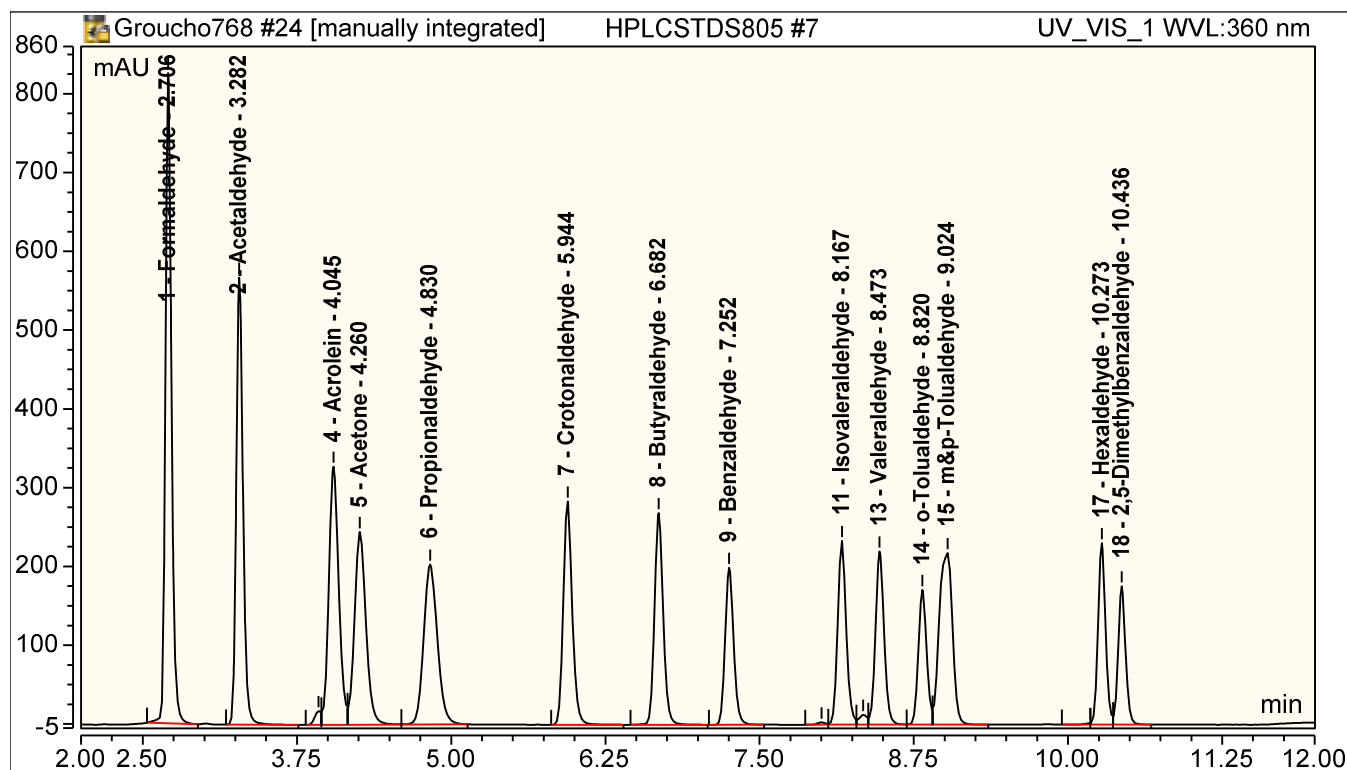
Analyst Comment:

Curve: Groucho768

No.	Time min	Peak Name	Area mAU*min	Height mAU	Amount
1	2.71	Formaldehyde	47.162	826.771	15.345
2	3.28	Acetaldehyde	35.914	567.907	15.331
4	4.04	Acrolein	30.736	328.846	15.339
5	4.26	Acetone	26.615	245.300	15.336
6	4.83	Propionaldehyde	26.008	203.387	15.440
7	5.94	Crotonaldehyde	23.730	283.358	15.363
8	6.69	Butyraldehyde	22.132	268.876	15.400
9	7.26	Benzaldehyde	16.054	198.732	15.363
11	8.18	Isovaleraldehyde	18.762	233.236	15.389
13	8.48	Valeraldehyde	17.920	219.304	15.389
14	8.83	o-Tolualdehyde	13.397	170.020	15.387
16	9.04	m&p-Tolualdehyde	27.179	217.762	30.656
18	10.29	Hexaldehyde	16.252	231.526	15.369
19	10.45	2,5-Dimethylbenzaldehyde	12.045	175.939	15.457

Peak Analysis Report

Sample Name:	HPLCSTDS805 #7	Injection Volume:	5.00
Injection Type:	Calibration Standard	Dilution Factor:	1.0
Instrument Method:	Groucho_AgilentZprbaxSBC CARBS	Operator:	APaolantonio
Inj. Date / Time:	01-Jul-2019 / 20:54	Run Time:	14.00



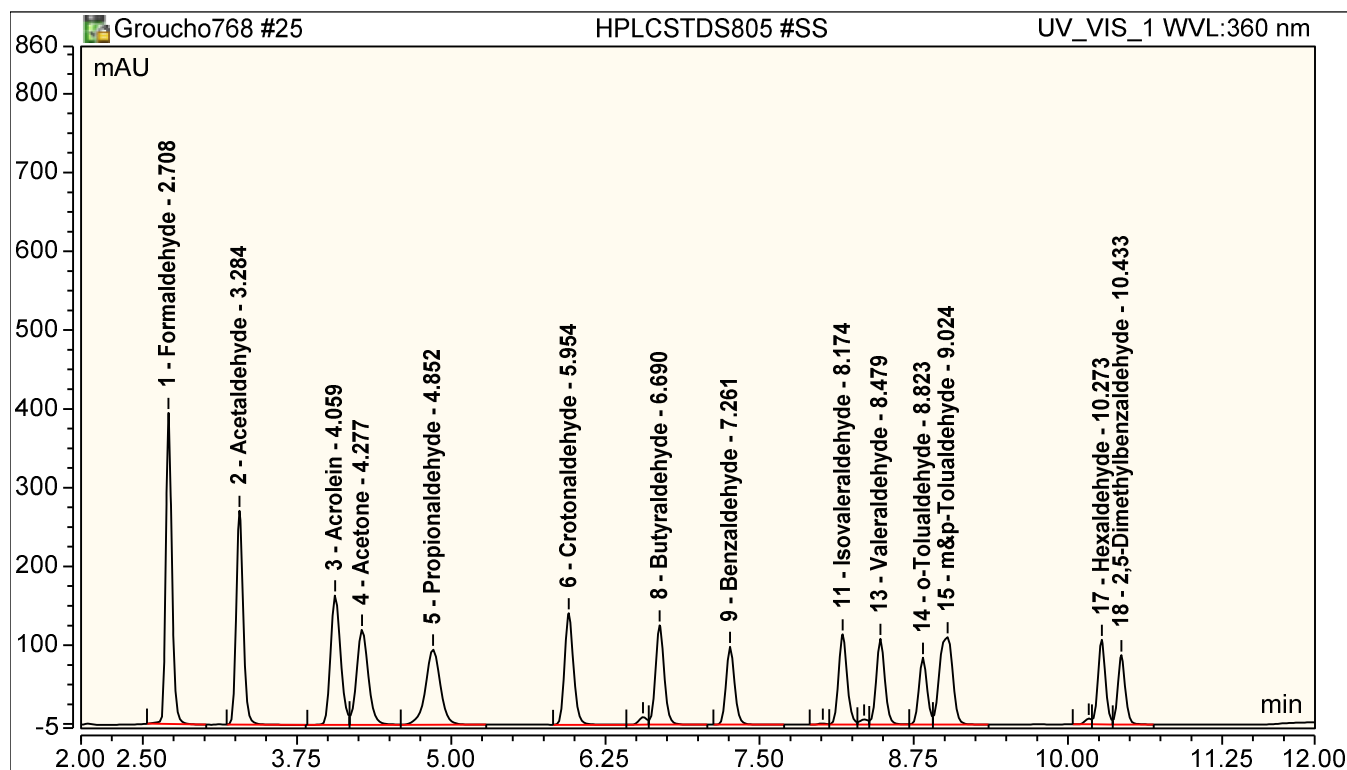
Analyst Comment:

Curve: Groucho768

No.	Time min	Peak Name	Area mAU*min	Height mAU	Amount
1	2.71	Formaldehyde	47.019	825.517	15.299
2	3.28	Acetaldehyde	35.835	567.391	15.298
4	4.05	Acrolein	30.636	327.770	15.290
5	4.26	Acetone	26.472	244.566	15.254
6	4.83	Propionaldehyde	25.782	202.992	15.306
7	5.94	Crotonaldehyde	23.648	283.480	15.311
8	6.68	Butyraldehyde	21.977	268.668	15.292
9	7.25	Benzaldehyde	15.986	199.329	15.298
11	8.17	Isovaleraldehyde	18.689	233.521	15.329
13	8.47	Valeraldehyde	17.848	219.921	15.327
14	8.82	o-Tolualdehyde	13.337	170.941	15.317
15	9.02	m&p-Tolualdehyde	27.156	217.926	30.630
17	10.27	Hexaldehyde	16.210	230.395	15.329
18	10.44	2,5-Dimethylbenzaldehyde	12.014	175.535	15.417

Peak Analysis Report

Sample Name:	HPLCSTDS805 #SS	Injection Volume:	5.00
Injection Type:	Check Standard	Dilution Factor:	1.0
Instrument Method:	Grouch_AgilentZprbaxSBC CARBS	Operator:	APaolantonio
Inj. Date / Time:	01-Jul-2019 / 21:10	Run Time:	14.00



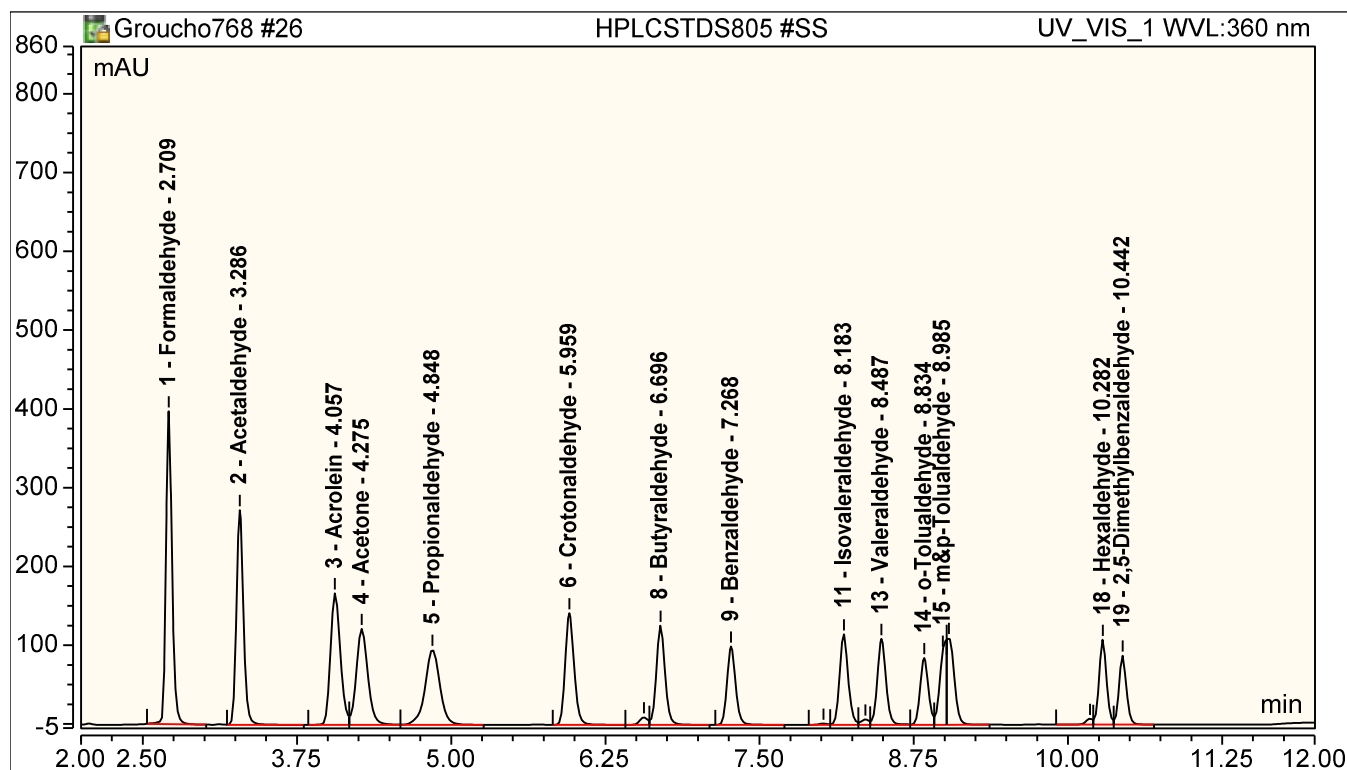
Analyst Comment:

Curve: Groucho768

No.	Time min	Peak Name	Area mAU*min	Height mAU	Amount
1	2.71	Formaldehyde	22.589	395.170	7.346
2	3.28	Acetaldehyde	17.916	271.749	7.644
3	4.06	Acrolein	15.666	164.685	7.817
4	4.28	Acetone	13.325	120.922	7.674
5	4.85	Propionaldehyde	13.145	95.618	7.798
6	5.95	Crotonaldehyde	11.730	141.701	7.589
8	6.69	Butyraldehyde	10.346	126.106	7.195
9	7.26	Benzaldehyde	7.983	99.040	7.635
11	8.17	Isovaleraldehyde	9.182	114.688	7.529
13	8.48	Valeraldehyde	8.887	108.893	7.630
14	8.82	o-Tolualdehyde	6.609	84.815	7.587
15	9.02	m&p-Tolualdehyde	13.941	110.864	15.715
17	10.27	Hexaldehyde	7.653	107.390	7.209
18	10.43	2,5-Dimethylbenzaldehyde	6.060	87.792	7.756

Peak Analysis Report

Sample Name:	HPLCSTDS805 #SS	Injection Volume:	5.00
Injection Type:	Check Standard	Dilution Factor:	1.0
Instrument Method:	Groucho_AgilentZprbaxSBC CARBS	Operator:	APaolantonio
Inj. Date / Time:	01-Jul-2019 / 21:25	Run Time:	14.00



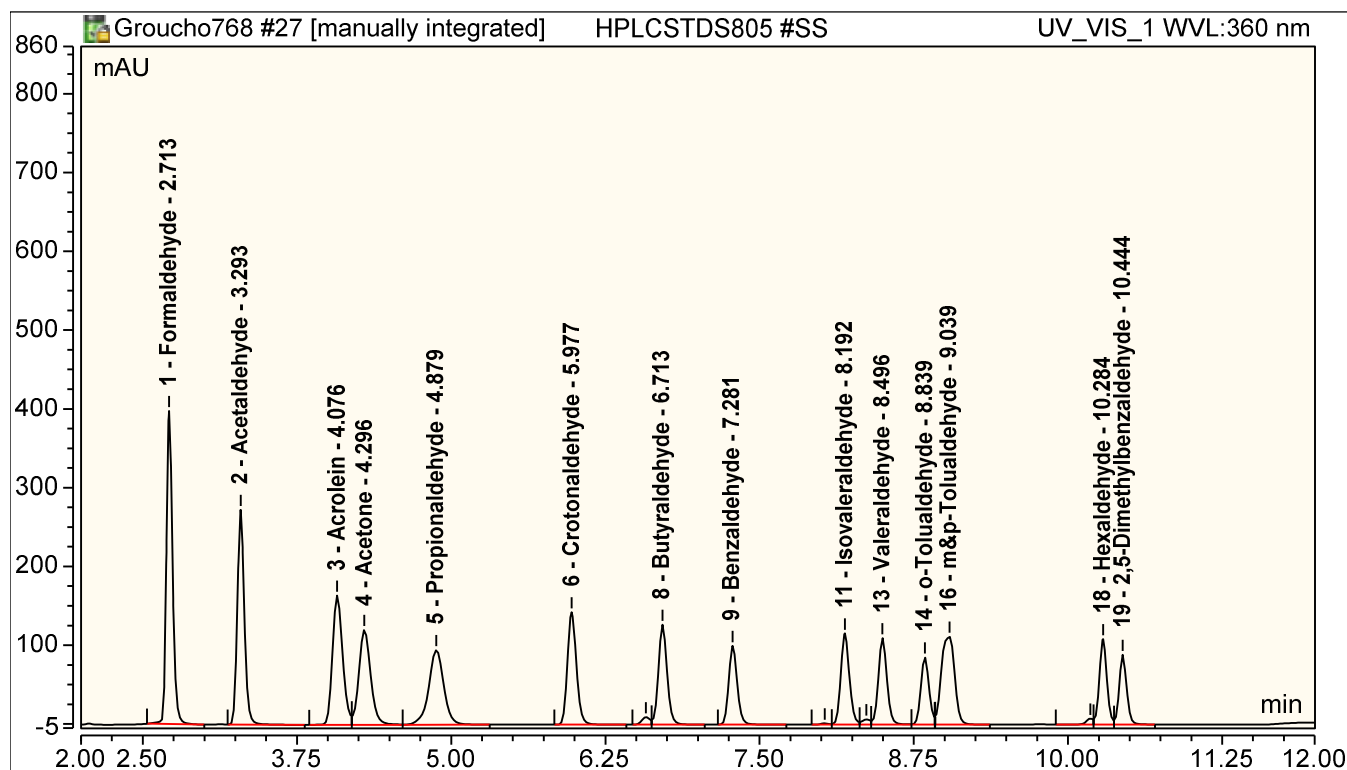
Analyst Comment:

Curve: Groucho768

No.	Time min	Peak Name	Area mAU*min	Height mAU	Amount
1	2.71	Formaldehyde	22.579	397.104	7.343
2	3.29	Acetaldehyde	17.896	272.636	7.635
3	4.06	Acrolein	15.658	167.305	7.813
4	4.27	Acetone	13.306	122.054	7.662
5	4.85	Propionaldehyde	13.119	95.555	7.783
6	5.96	Crotonaldehyde	11.696	141.895	7.568
8	6.70	Butyraldehyde	10.318	126.030	7.175
9	7.27	Benzaldehyde	7.980	99.350	7.632
11	8.18	Isovaleraldehyde	9.168	114.826	7.518
13	8.49	Valeraldehyde	8.858	108.963	7.605
14	8.83	o-Tolualdehyde	6.598	84.772	7.574
15	8.98	m&p-Tolualdehyde	6.321	94.063	7.115
18	10.28	Hexaldehyde	7.640	107.747	7.197
19	10.44	2,5-Dimethylbenzaldehyde	6.056	87.890	7.751

Peak Analysis Report

Sample Name:	HPLCSTDS805 #SS	Injection Volume:	5.00
Injection Type:	Check Standard	Dilution Factor:	1.0
Instrument Method:	Groucho_AgilentZprbaxSBC CARBS	Operator:	APaolantonio
Inj. Date / Time:	01-Jul-2019 / 21:41	Run Time:	14.00



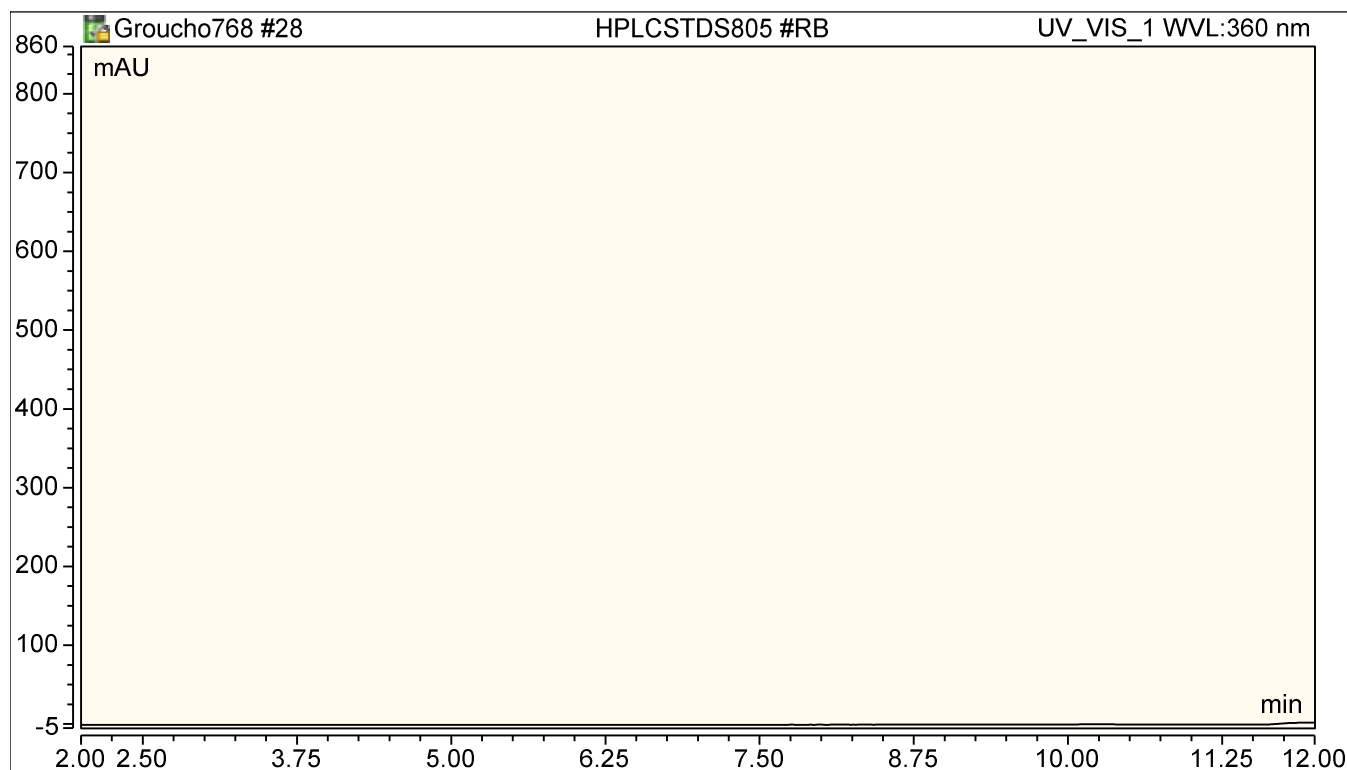
Analyst Comment:

Curve: Groucho768

No.	Time min	Peak Name	Area mAU*min	Height mAU	Amount
1	2.71	Formaldehyde	22.779	397.369	7.408
2	3.29	Acetaldehyde	18.056	272.635	7.704
3	4.08	Acrolein	15.771	164.006	7.869
4	4.30	Acetone	13.384	120.486	7.708
5	4.88	Propionaldehyde	13.195	94.861	7.828
6	5.98	Crotonaldehyde	11.786	142.706	7.626
8	6.71	Butyraldehyde	10.389	126.868	7.225
9	7.28	Benzaldehyde	8.013	99.946	7.664
11	8.19	Isovaleraldehyde	9.228	115.761	7.567
13	8.50	Valeraldehyde	8.926	109.799	7.663
14	8.84	o-Tolualdehyde	6.638	85.504	7.620
16	9.04	m&p-Tolualdehyde	13.948	111.702	15.723
18	10.28	Hexaldehyde	7.698	108.556	7.253
19	10.44	2,5-Dimethylbenzaldehyde	6.096	88.521	7.802

Peak Analysis Report

Sample Name:	HPLCSTDS805 #RB	Injection Volume:	5.00
Injection Type:	Check Standard	Dilution Factor:	1.0
Instrument Method:	Grouch_AgilentZprbaxSBC CARBS	Operator:	APaolantonio
Inj. Date / Time:	01-Jul-2019 / 21:57	Run Time:	14.00



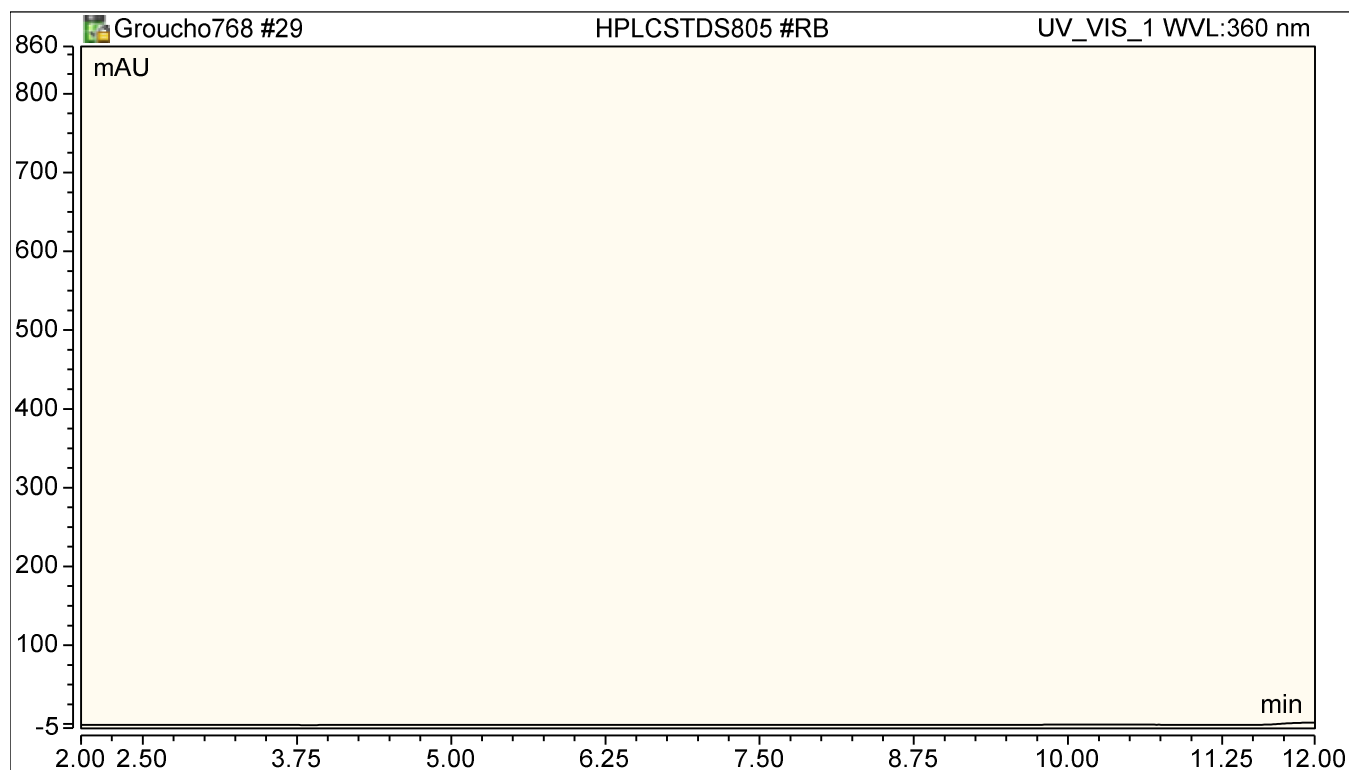
Analyst Comment:

Curve: Groucho768

No.	Time min	Peak Name	Area mAU*min	Height mAU	Amount n.a.
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Peak Analysis Report

Sample Name:	HPLCSTDS805 #RB	Injection Volume:	5.00
Injection Type:	Check Standard	Dilution Factor:	1.0
Instrument Method:	Grouch_AgilentZprbaxSBC CARBS	Operator:	APaolantonio
Inj. Date / Time:	01-Jul-2019 / 22:12	Run Time:	14.00



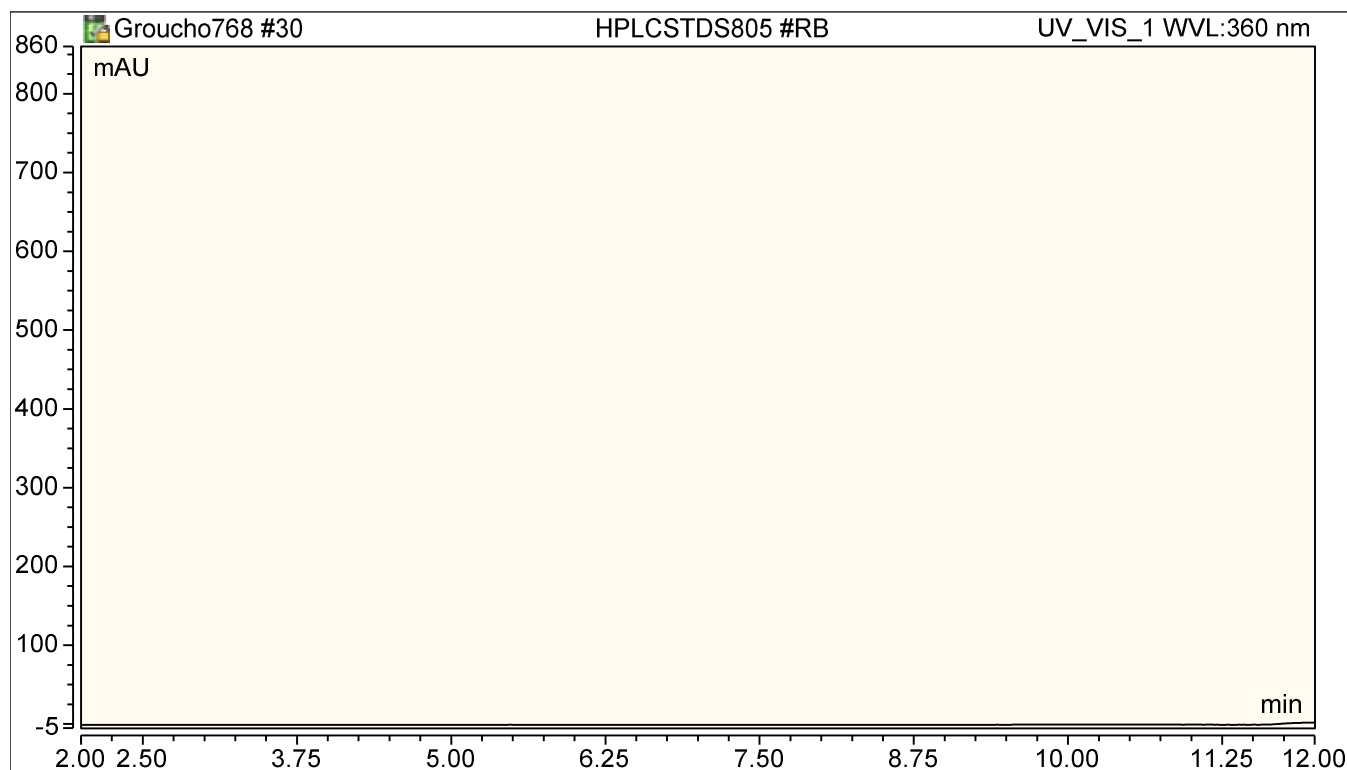
Analyst Comment:

Curve: Groucho768

No.	Time min	Peak Name	Area mAU*min	Height mAU	Amount n.a.
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Peak Analysis Report

Sample Name:	HPLCSTDS805 #RB	Injection Volume:	5.00
Injection Type:	Check Standard	Dilution Factor:	1.0
Instrument Method:	Grouch_AgilentZprbaxSBC CARBS	Operator:	APaolantonio
Inj. Date / Time:	01-Jul-2019 / 22:28	Run Time:	14.00



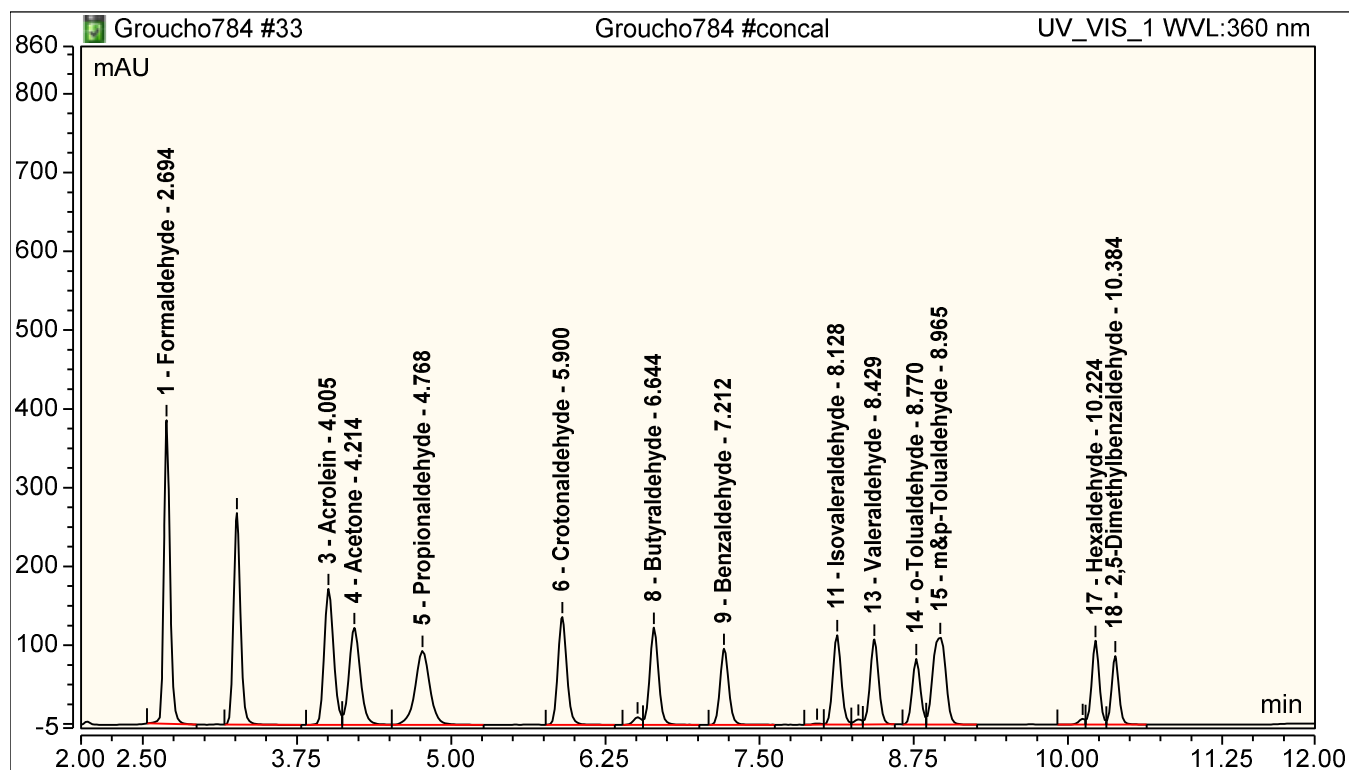
Analyst Comment:

Curve: Groucho768

No.	Time min	Peak Name	Area mAU*min	Height mAU	Amount n.a.
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Peak Analysis Report

Sample Name:	Groucho784 #concal	Injection Volume:	5.00
Injection Type:	Check Standard	Dilution Factor:	1.0
Instrument Method:	Grouch_AgilentZprbaxSBC CARBS	Operator:	APaolantonio
Inj. Date / Time:	30-Jul-2019 / 11:40	Run Time:	14.00

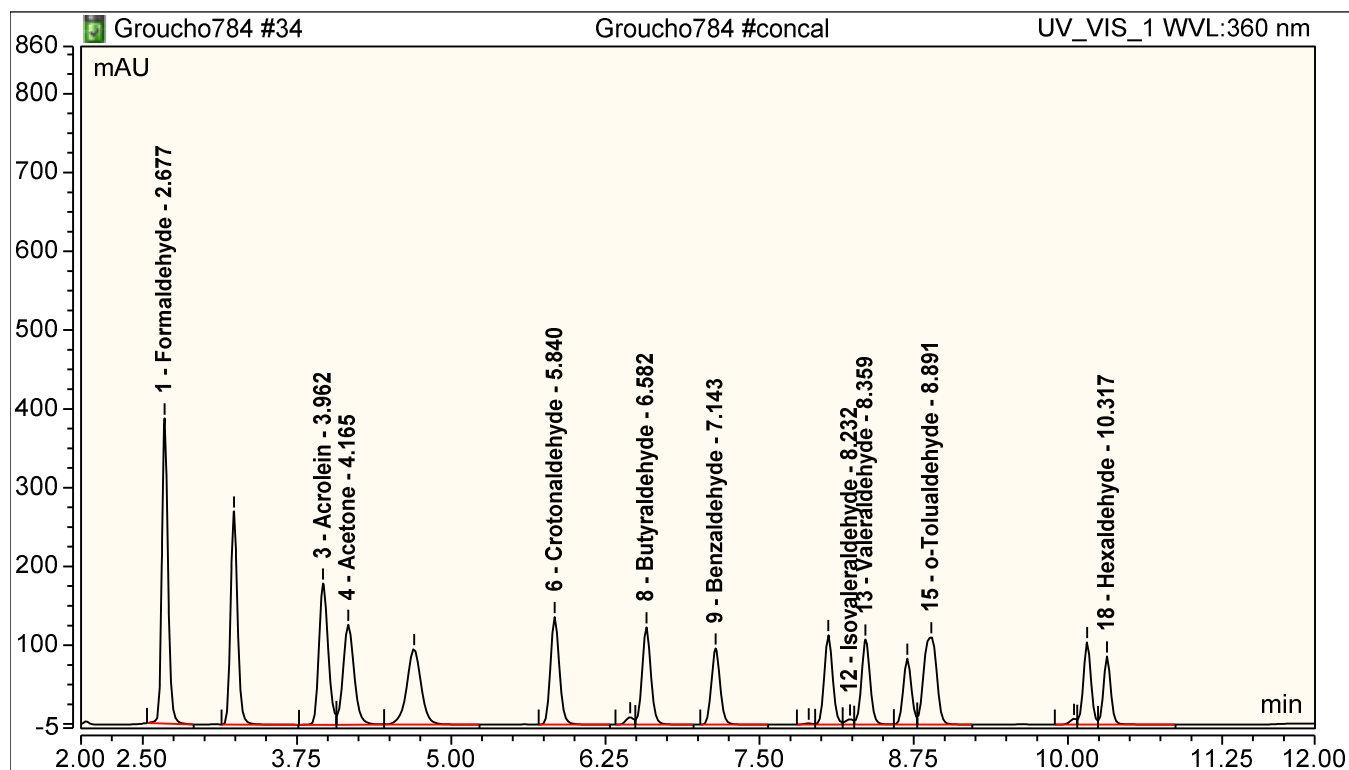


Analyst Comment:

No.	Time min	Peak Name	Area mAU*min	Height mAU	Amount
1	2.69	Formaldehyde	21.977	385.638	7.147
3	4.01	Acrolein	15.411	172.560	7.690
4	4.21	Acetone	13.105	122.993	7.547
5	4.77	Propionaldehyde	12.968	94.019	7.693
6	5.90	Crotonaldehyde	11.443	136.683	7.404
8	6.64	Butyraldehyde	10.153	123.199	7.060
9	7.21	Benzaldehyde	7.793	96.554	7.453
11	8.13	Isovaleraldehyde	8.976	113.556	7.360
13	8.43	Valeraldehyde	8.580	107.702	7.366
14	8.77	o-Tolualdehyde	6.421	83.312	7.370
15	8.97	m&p-Tolualdehyde	13.527	110.214	15.247
17	10.22	Hexaldehyde	7.509	106.267	7.074
18	10.38	2,5-Dimethylbenzaldehyde	5.897	86.996	7.545

Peak Analysis Report

Sample Name:	Groucho784 #concal	Injection Volume:	5.00
Injection Type:	Check Standard	Dilution Factor:	1.0
Instrument Method:	Grouch_AgilentZprbaxSBC CARBS	Operator:	APaolantonio
Inj. Date / Time:	30-Jul-2019 / 11:55	Run Time:	14.00

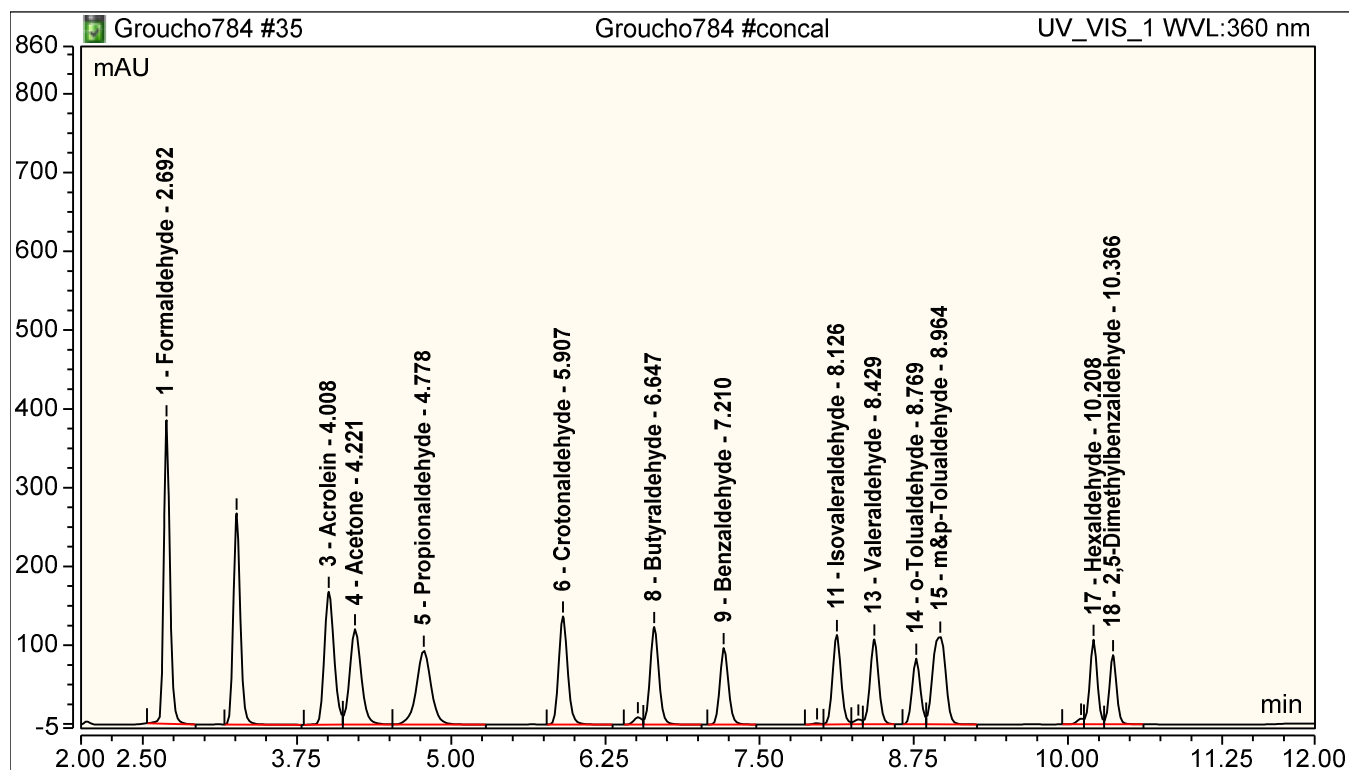


Analyst Comment:

No.	Time min	Peak Name	Area mAU*min	Height mAU	Amount
1	2.68	Formaldehyde	21.978	387.334	7.147
3	3.96	Acrolein	15.531	179.456	7.750
4	4.17	Acetone	13.201	126.973	7.602
6	5.84	Crotonaldehyde	11.494	136.632	7.437
8	6.58	Butyraldehyde	10.209	123.564	7.099
9	7.14	Benzaldehyde	7.822	96.912	7.481
12	8.23	Isovaleraldehyde	0.485	6.678	0.393
13	8.36	Valeraldehyde	8.738	108.231	7.502
15	8.89	o-Tolualdehyde	13.630	111.011	15.655
18	10.32	Hexaldehyde	5.942	86.550	5.587

Peak Analysis Report

Sample Name:	Groucho784 #concal	Injection Volume:	5.00
Injection Type:	Check Standard	Dilution Factor:	1.0
Instrument Method:	Grouch_AgilentZprbaxSBC CARBS	Operator:	APaolantonio
Inj. Date / Time:	30-Jul-2019 / 12:11	Run Time:	14.00

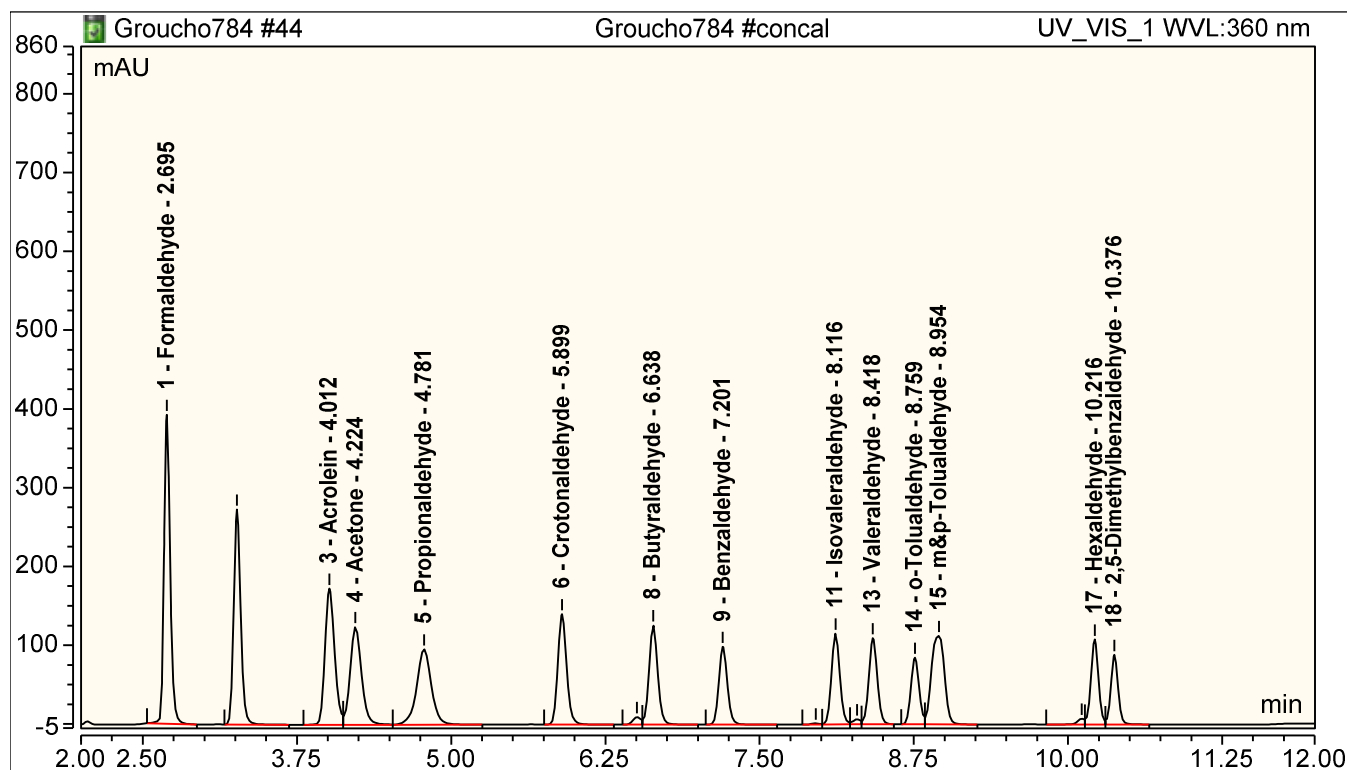


Analyst Comment:

No.	Time min	Peak Name	Area mAU*min	Height mAU	Amount
1	2.69	Formaldehyde	22.076	385.186	7.179
3	4.01	Acrolein	15.467	168.804	7.718
4	4.22	Acetone	13.173	121.296	7.586
5	4.78	Propionaldehyde	13.039	94.033	7.735
6	5.91	Crotonaldehyde	11.523	137.457	7.455
8	6.65	Butyraldehyde	10.228	123.856	7.113
9	7.21	Benzaldehyde	7.825	97.155	7.484
11	8.13	Isovaleraldehyde	9.019	113.334	7.396
13	8.43	Valeraldehyde	8.623	107.504	7.403
14	8.77	o-Tolualdehyde	6.448	83.391	7.401
15	8.96	m&p-Tolualdehyde	13.598	111.353	15.328
17	10.21	Hexaldehyde	7.543	107.338	7.105
18	10.37	2,5-Dimethylbenzaldehyde	5.933	88.009	7.592

Peak Analysis Report

Sample Name:	Groucho784 #concal	Injection Volume:	5.00
Injection Type:	Check Standard	Dilution Factor:	1.0
Instrument Method:	Grouch_AgilentZprbaxSBC CARBS	Operator:	APaolantonio
Inj. Date / Time:	30-Jul-2019 / 14:33	Run Time:	14.00

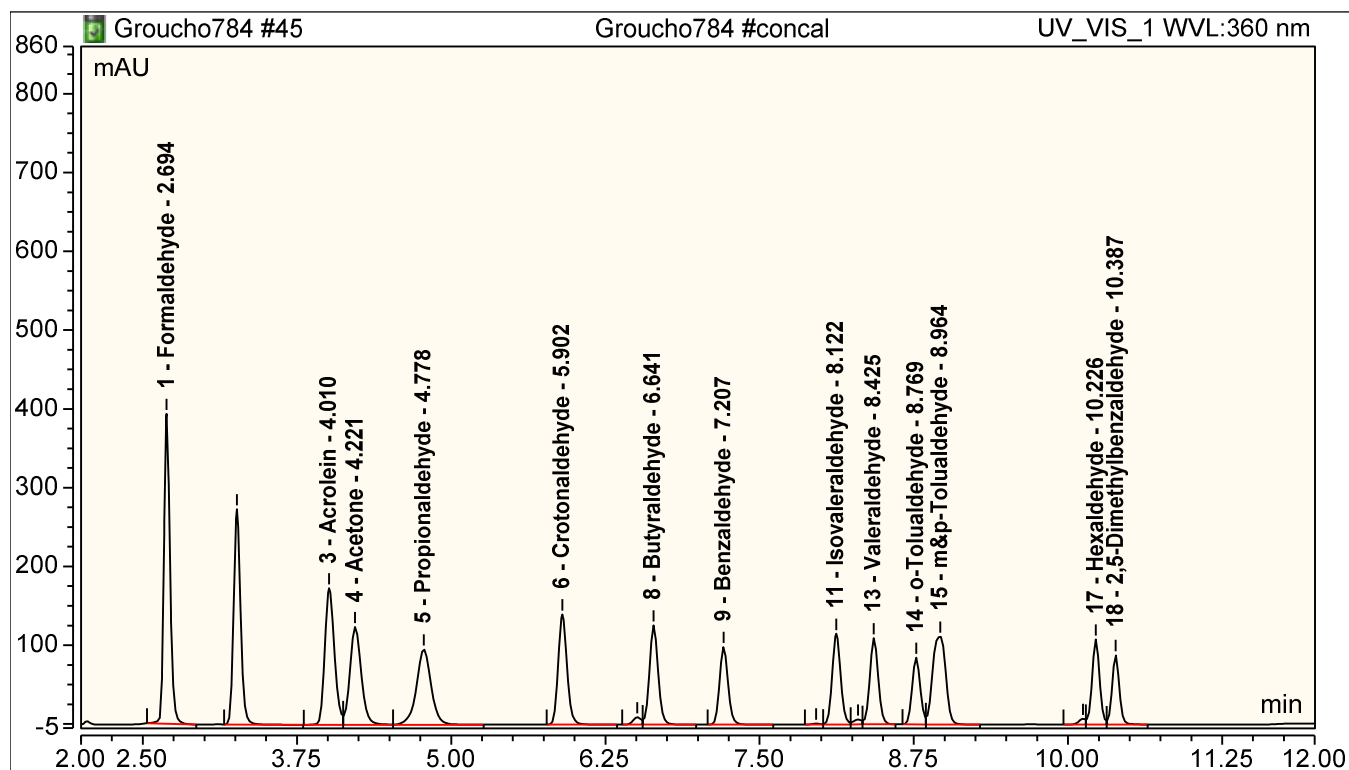


Analyst Comment:

No.	Time min	Peak Name	Area mAU*min	Height mAU	Amount
1	2.69	Formaldehyde	22.357	392.320	7.270
3	4.01	Acrolein	15.680	172.781	7.824
4	4.22	Acetone	13.334	124.096	7.678
5	4.78	Propionaldehyde	13.185	95.815	7.822
6	5.90	Crotonaldehyde	11.663	140.207	7.546
8	6.64	Butyraldehyde	10.345	126.244	7.194
9	7.20	Benzaldehyde	7.939	98.881	7.593
11	8.12	Isovaleraldehyde	9.134	115.425	7.490
13	8.42	Valeraldehyde	8.731	109.450	7.496
14	8.76	o-Tolualdehyde	6.529	84.790	7.494
15	8.95	m&p-Tolualdehyde	13.775	112.215	15.528
17	10.22	Hexaldehyde	7.638	107.741	7.196
18	10.38	2,5-Dimethylbenzaldehyde	6.009	88.276	7.690

Peak Analysis Report

Sample Name:	Groucho784 #concal	Injection Volume:	5.00
Injection Type:	Check Standard	Dilution Factor:	1.0
Instrument Method:	Grouch_AgilentZprbaxSBC CARBS	Operator:	APaolantonio
Inj. Date / Time:	30-Jul-2019 / 14:49	Run Time:	14.00

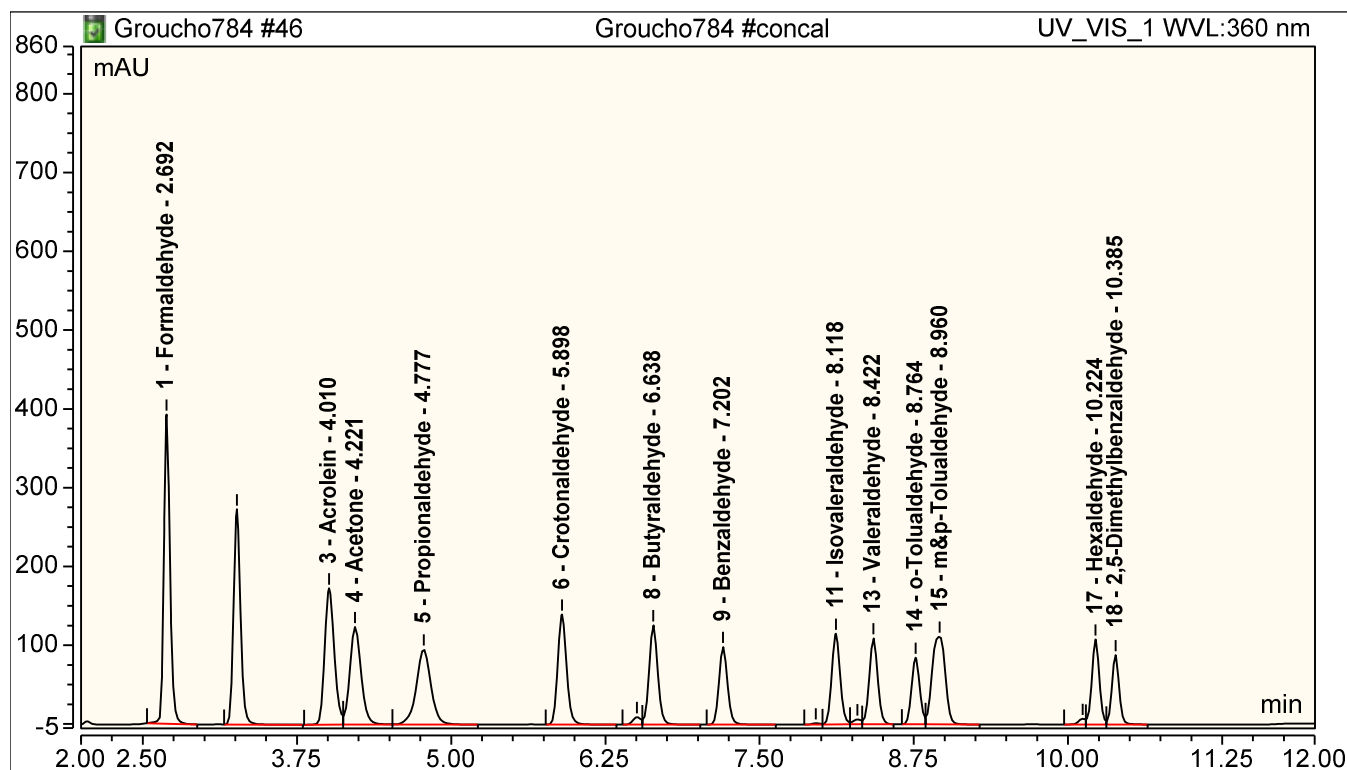


Analyst Comment:

No.	Time min	Peak Name	Area mAU*min	Height mAU	Amount
1	2.69	Formaldehyde	22.377	393.404	7.277
3	4.01	Acrolein	15.715	173.354	7.842
4	4.22	Acetone	13.342	124.304	7.683
5	4.78	Propionaldehyde	13.208	95.758	7.836
6	5.90	Crotonaldehyde	11.676	140.123	7.555
8	6.64	Butyraldehyde	10.347	126.130	7.195
9	7.21	Benzaldehyde	7.942	98.822	7.596
11	8.12	Isovaleraldehyde	9.147	115.184	7.500
13	8.43	Valeraldehyde	8.740	109.333	7.503
14	8.77	o-Tolualdehyde	6.536	84.753	7.502
15	8.96	m&p-Tolualdehyde	13.786	111.601	15.540
17	10.23	Hexaldehyde	7.653	108.106	7.210
18	10.39	2,5-Dimethylbenzaldehyde	6.005	88.306	7.684

Peak Analysis Report

Sample Name:	Groucho784 #concal	Injection Volume:	5.00
Injection Type:	Check Standard	Dilution Factor:	1.0
Instrument Method:	Grouch_AgilentZprbaxSBC CARBS	Operator:	APaolantonio
Inj. Date / Time:	30-Jul-2019 / 15:04	Run Time:	14.00



Analyst Comment:

No.	Time min	Peak Name	Area mAU*min	Height mAU	Amount
1	2.69	Formaldehyde	22.353	392.493	7.269
3	4.01	Acrolein	15.701	173.087	7.834
4	4.22	Acetone	13.328	124.154	7.675
5	4.78	Propionaldehyde	13.200	95.633	7.831
6	5.90	Crotonaldehyde	11.667	139.864	7.549
8	6.64	Butyraldehyde	10.350	126.214	7.197
9	7.20	Benzaldehyde	7.944	98.741	7.598
11	8.12	Isovaleraldehyde	9.138	115.216	7.493
13	8.42	Valeraldehyde	8.728	109.215	7.493
14	8.76	o-Tolualdehyde	6.539	84.568	7.506
15	8.96	m&p-Tolualdehyde	13.758	111.419	15.508
17	10.22	Hexaldehyde	7.635	107.866	7.193
18	10.38	2,5-Dimethylbenzaldehyde	6.006	88.187	7.687

<i>Name</i>	Grouch_AgilentZprbaxSBC CARBS
<i>Data Vault</i>	CM7SQLDVGLP
<i>Path</i>	chrom://s022vas04/CM7SQLDVGLP/Instrument Data/Groucho/2019Q3/Groucho768/Groucho768.seq/Grouch_Agil entZprbaxSBC CARBS.instmeth
<i>Comment</i>	Grouch_AgilentZprbaxSBC CARBS
<i>Description</i>	
<i>Run time</i>	14.000 [min]
<i>Instrument</i>	Groucho on c022-le71-3
<i>Created</i>	8/7/2018 2:15:55 PM -04:00 APaolantonio
<i>Last Update</i>	10/4/2018 5:33:14 PM -04:00 SWilson

Stage	Time min	Command	Value	Comment
Instrument Setup	initial	UV.PeakWidth	0.050 [min]	
		UV.UV_LampRequired	Yes	
		ColumnOven.Mode	Combined	
		ColumnOven.LeftTemperature.Nominal	32.00 [°C]	
		ColumnOven.LeftTemperature.UpperLimit	80.00 [°C]	
		ColumnOven.LeftTemperature.LowerLimit	-5.00 [°C]	
		ColumnOven.LeftTemperatureDelta	0.80 [°C]	
		ColumnOven.TempCtrl	On	
		Sampler.WashVial	10	
		Sampler.SampleHeight	0.0 [mm]	
		Sampler.DispSpeed	200 [µl/min]	
		Sampler.DrawSpeed	200 [µl/min]	
		Pump.%A.Equate	"DIUF H2O"	
		Pump.%B.Equate	"ACN"	
		Pump.%C.Equate	"%C"	
		Pump.%D.Equate	"%D"	
		Pump.Pressure.LowerLimit	0.0 [bar]	
		Pump.Pressure.UpperLimit	400.0 [bar]	
		Pump.MaximumFlowRamp	100.000 [ml/min²]	
		Pump.Stroke	Automatic	
		Pump.Compressibility	83 [1/Mbar]	
		Pump.PrimaryChannel	Automatic	
		UV.UV_VIS_1.Wavelength	360 [nm]	
Inject Preparation	0.000	UV.Autozero		
		Wait	UV.Ready And ColumnOven.Re ady And Sampler.Ready And Pump.Ready	
Inject	0.000	Sampler.Inject		
Start Run	0.000	UV.UV_VIS_1.AcqOn		
Run	0.000		Duration = 14.000 [min]	
		Pump.Flow	1.000 [ml/min]	

	Pump.%B.Value	65.0 [%]
	Pump.%C.Value	0.0 [%]
	Pump.%D.Value	0.0 [%]
1.490		
	Pump.Flow	1.000 [ml/min]
	Pump.%B.Value	65.0 [%]
	Pump.%C.Value	0.0 [%]
	Pump.%D.Value	0.0 [%]
1.500		
	Pump.Flow	1.000 [ml/min]
	Pump.%B.Value	55.0 [%]
	Pump.%C.Value	0.0 [%]
	Pump.%D.Value	0.0 [%]
3.000		
	Pump.Flow	1.000 [ml/min]
	Pump.%B.Value	55.0 [%]
	Pump.%C.Value	0.0 [%]
	Pump.%D.Value	0.0 [%]
3.010		
	Pump.Flow	1.000 [ml/min]
	Pump.%B.Value	65.0 [%]
	Pump.%C.Value	0.0 [%]
	Pump.%D.Value	0.0 [%]
3.560		
	Pump.Flow	1.000 [ml/min]
	Pump.%B.Value	65.0 [%]
	Pump.%C.Value	0.0 [%]
	Pump.%D.Value	0.0 [%]
7.500		
	Pump.Flow	1.000 [ml/min]
	Pump.%B.Value	75.0 [%]
	Pump.%C.Value	0.0 [%]
	Pump.%D.Value	0.0 [%]
8.000		
	Pump.Flow	1.000 [ml/min]
	Pump.%B.Value	80.0 [%]
	Pump.%C.Value	0.0 [%]
	Pump.%D.Value	0.0 [%]
9.500		
	Pump.Flow	1.000 [ml/min]
	Pump.%B.Value	80.0 [%]
	Pump.%C.Value	0.0 [%]
	Pump.%D.Value	0.0 [%]
9.550		
	Pump.Flow	1.000 [ml/min]
	Pump.%B.Value	100.0 [%]
	Pump.%C.Value	0.0 [%]
	Pump.%D.Value	0.0 [%]
12.000		
	Pump.Flow	1.000 [ml/min]

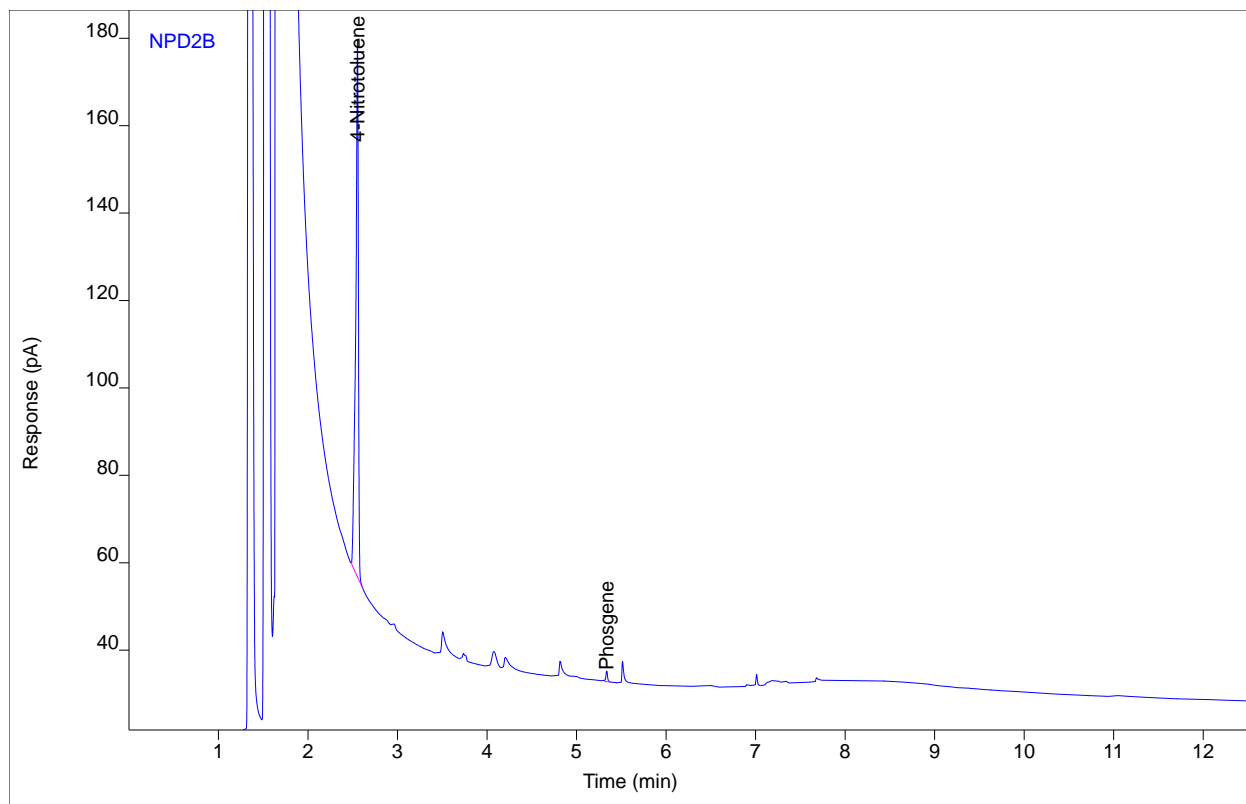
	Pump.%B.Value	100.0 [%]
	Pump.%C.Value	0.0 [%]
	Pump.%D.Value	0.0 [%]
12.010		
	Pump.Flow	1.000 [ml/min]
	Pump.%B.Value	65.0 [%]
	Pump.%C.Value	0.0 [%]
	Pump.%D.Value	0.0 [%]
Stop Run		
14.000		
	UV.UV_VIS_1.AcqOff	
End		

Chromatogram Report

Sample Name 0719-205.R-AM-FH.FH
Sequence Name LOLITA0273A ver.4
Inj Data File 040B0801.D
File Location GC/2019/Lolita/Quarter 3
Injection Date 7/31/2019 9:53 AM
File Modified 7/31/2019 5:41 PM
Instrument Lolita
Operator Daniel Clayton

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 40
Injection Volume 1
Injection 1 of 1
Acquisition Method LOLITA0273_PHOSGENE.M
Analysis Method LOLITA0273_PHOSGENE_R.M
Method Modified 7/31/2019 5:40 PM
Printed 7/31/2019 5:44 PM



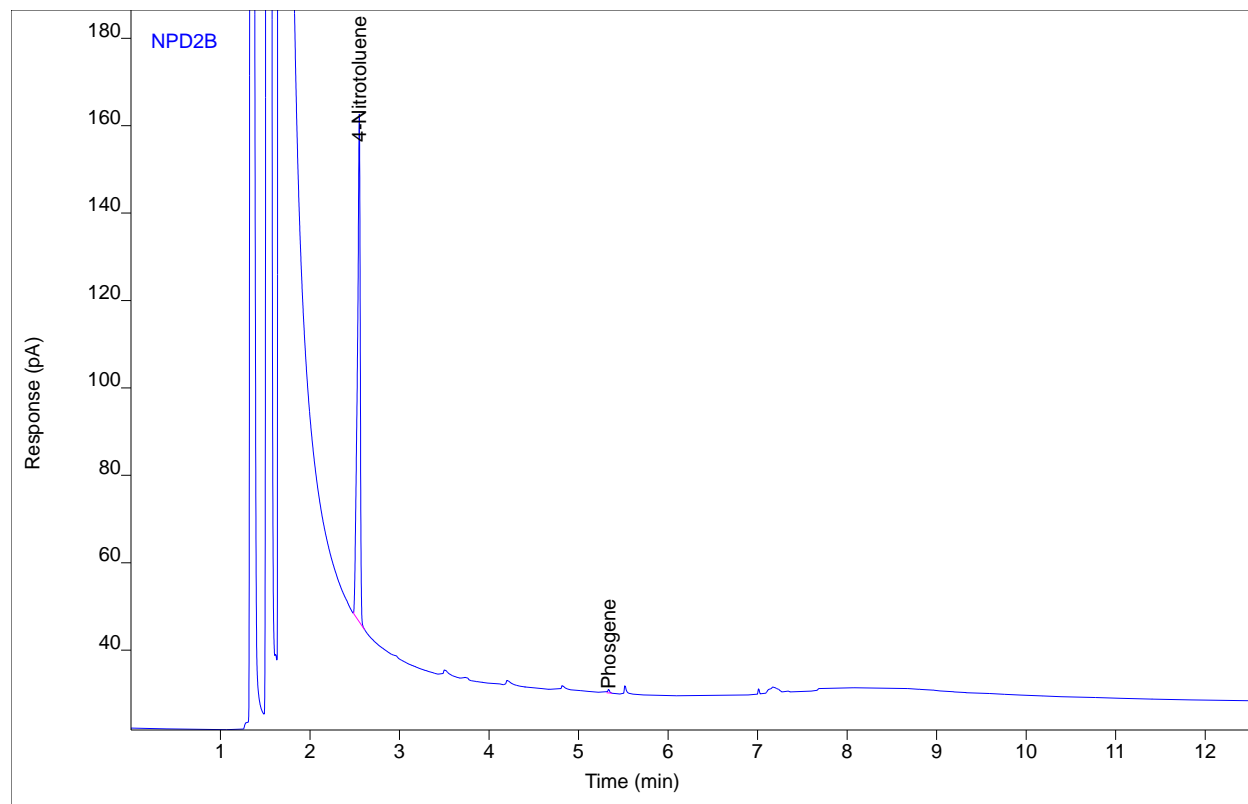
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
4-Nitrotoluene	BB	2.55	258.387	122.934	232.640	1	232.640	ug/mL
Phosgene	BB	5.34	3.17276	2.56059	0.69662	1	0.69662	ug/mL

Chromatogram Report

Sample Name 0719-205.R-AM-FH.BH
Sequence Name LOLITA0273A ver.4
Inj Data File 041B0901.D
File Location GC/2019/Lolita/Quarter 3
Injection Date 7/31/2019 10:08 AM
File Modified 7/31/2019 5:41 PM
Instrument Lolita
Operator Daniel Clayton

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 41
Injection Volume 1
Injection 1 of 1
Acquisition Method LOLITA0273_PHOSGENE.M
Analysis Method LOLITA0273_PHOSGENE_R.M
Method Modified 7/31/2019 5:40 PM
Printed 7/31/2019 5:44 PM



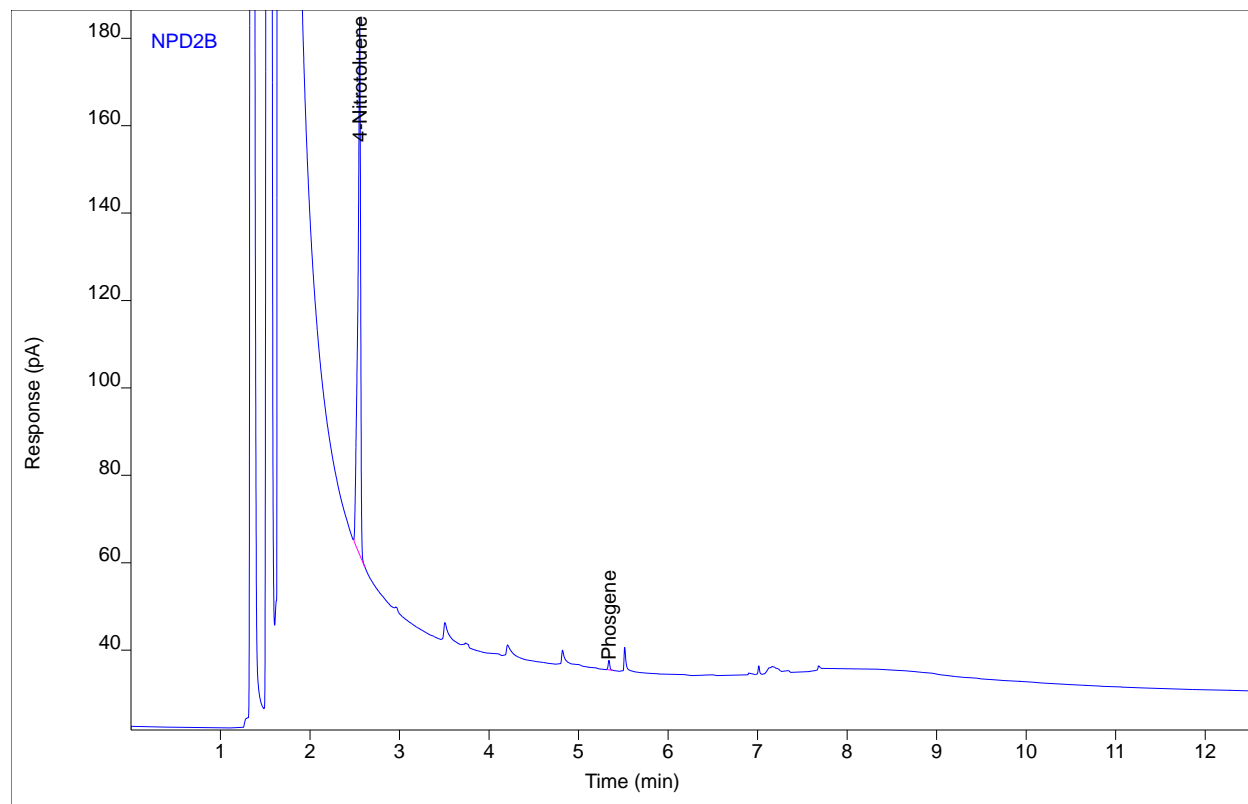
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
4-Nitrotoluene	BB	2.55	257.701	116.225	232.640	1	232.640	ug/mL
Phosgene	BB	5.34	1.20592	0.92112	0.26452	1	0.26452	ug/mL

Chromatogram Report

Sample Name 0719-205.R-AM-BH.FH
Sequence Name LOLITA0273A ver.4
Inj Data File 042B1001.D
File Location GC/2019/Lolita/Quarter 3
Injection Date 7/31/2019 10:23 AM
File Modified 7/31/2019 5:41 PM
Instrument Lolita
Operator Daniel Clayton

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 42
Injection Volume 1
Injection 1 of 1
Acquisition Method LOLITA0273_PHOSGENE.M
Analysis Method LOLITA0273_PHOSGENE_R.M
Method Modified 7/31/2019 5:40 PM
Printed 7/31/2019 5:44 PM



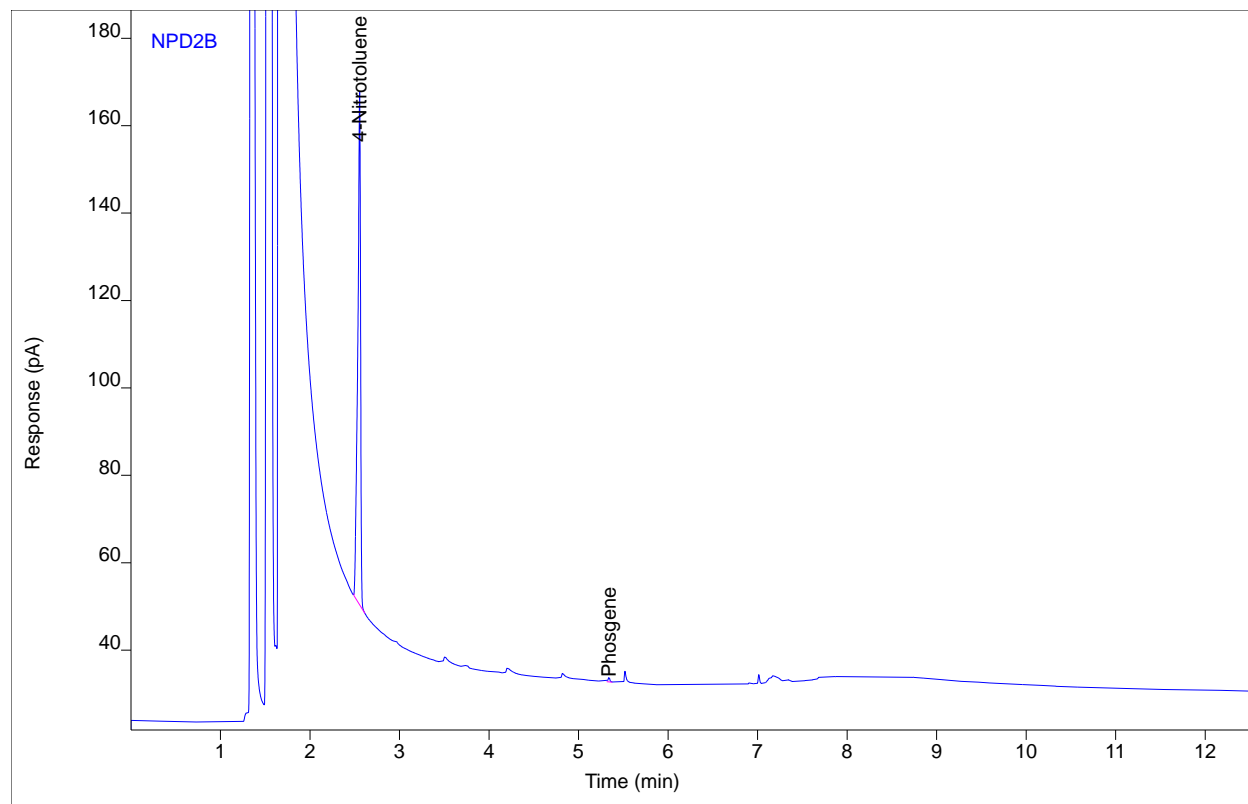
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
4-Nitrotoluene	BB	2.56	260.819	122.611	232.640	1	232.640	ug/mL
Phosgene	BB	5.34	2.74071	2.18513	0.59592	1	0.59592	ug/mL

Chromatogram Report

Sample Name 0719-205.R-AM-BH.BH
Sequence Name LOLITA0273A ver.4
Inj Data File 043B1101.D
File Location GC/2019/Lolita/Quarter 3
Injection Date 7/31/2019 10:38 AM
File Modified 7/31/2019 5:41 PM
Instrument Lolita
Operator Daniel Clayton

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 43
Injection Volume 1
Injection 1 of 1
Acquisition Method LOLITA0273_PHOSGENE.M
Analysis Method LOLITA0273_PHOSGENE_R.M
Method Modified 7/31/2019 5:40 PM
Printed 7/31/2019 5:44 PM



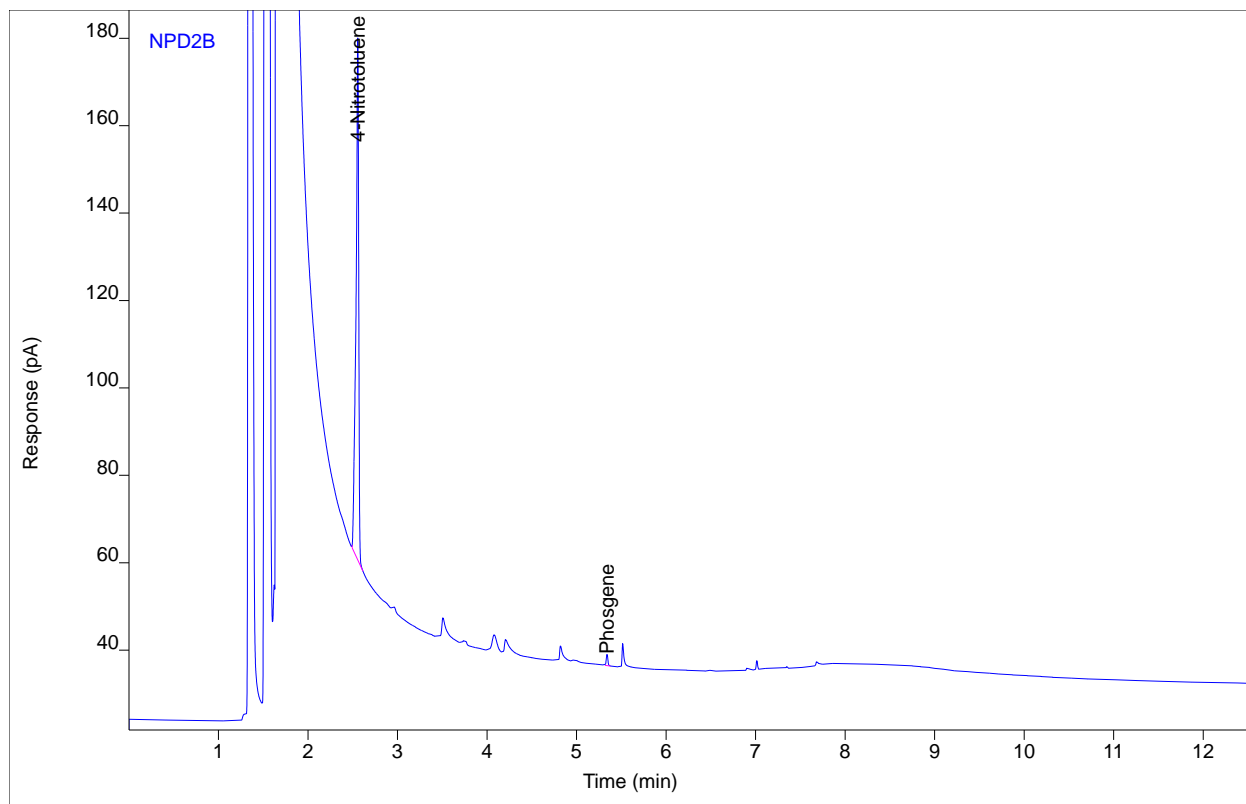
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
4-Nitrotoluene	BB	2.55	256.487	117.479	232.640	1	232.640	ug/mL
Phosgene	BB	5.34	1.43354	1.09672	0.31624	1	0.31624	ug/mL

Chromatogram Report

Sample Name 0719-205.S-AM-FH.FH
Sequence Name LOLITA0273A ver.4
Inj Data File 044B1301.D
File Location GC/2019/Lolita/Quarter 3
Injection Date 7/31/2019 11:08 AM
File Modified 7/31/2019 5:41 PM
Instrument Lolita
Operator Daniel Clayton

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 44
Injection Volume 1
Injection 1 of 1
Acquisition Method LOLITA0273_PHOSGENE.M
Analysis Method LOLITA0273_PHOSGENE_R.M
Method Modified 7/31/2019 5:40 PM
Printed 7/31/2019 5:44 PM



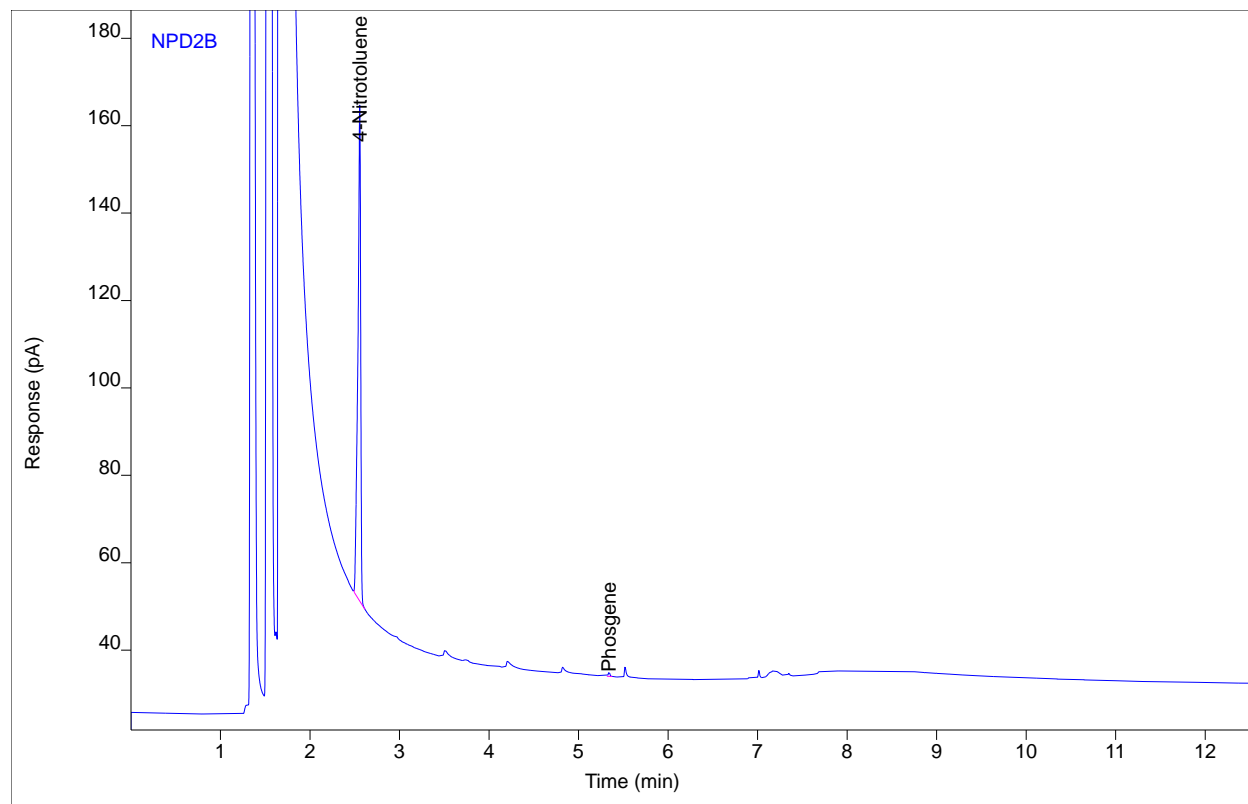
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
4-Nitrotoluene	BB	2.56	253.203	119.506	232.640	1	232.640	ug/mL
Phosgene	BB	5.34	3.33279	2.68041	0.74685	1	0.74685	ug/mL

Chromatogram Report

Sample Name 0719-205.S-AM-FH.BH
Sequence Name LOLITA0273A ver.4
Inj Data File 045B1401.D
File Location GC/2019/Lolita/Quarter 3
Injection Date 7/31/2019 11:23 AM
File Modified 7/31/2019 5:41 PM
Instrument Lolita
Operator Daniel Clayton

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 45
Injection Volume 1
Injection 1 of 1
Acquisition Method LOLITA0273_PHOSGENE.M
Analysis Method LOLITA0273_PHOSGENE_R.M
Method Modified 7/31/2019 5:40 PM
Printed 7/31/2019 5:44 PM



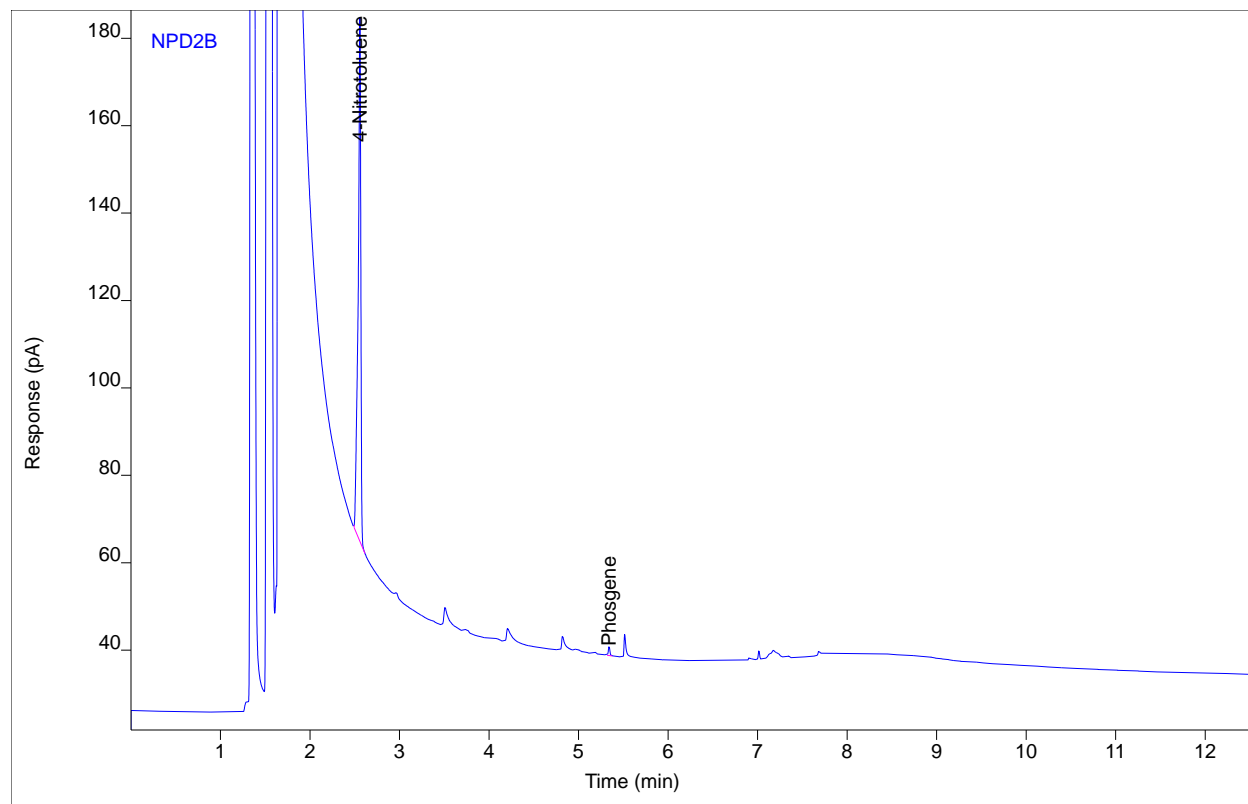
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
4-Nitrotoluene	BB	2.56	247.833	113.486	232.640	1	232.640	ug/mL
Phosgene	BB	5.34	1.31025	1.01697	0.29905	1	0.29905	ug/mL

Chromatogram Report

Sample Name 0719-205.S-AM-BH.FH
Sequence Name LOLITA0273A ver.4
Inj Data File 046B1501.D
File Location GC/2019/Lolita/Quarter 3
Injection Date 7/31/2019 11:38 AM
File Modified 7/31/2019 5:41 PM
Instrument Lolita
Operator Daniel Clayton

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 46
Injection Volume 1
Injection 1 of 1
Acquisition Method LOLITA0273_PHOSGENE.M
Analysis Method LOLITA0273_PHOSGENE_R.M
Method Modified 7/31/2019 5:40 PM
Printed 7/31/2019 5:44 PM



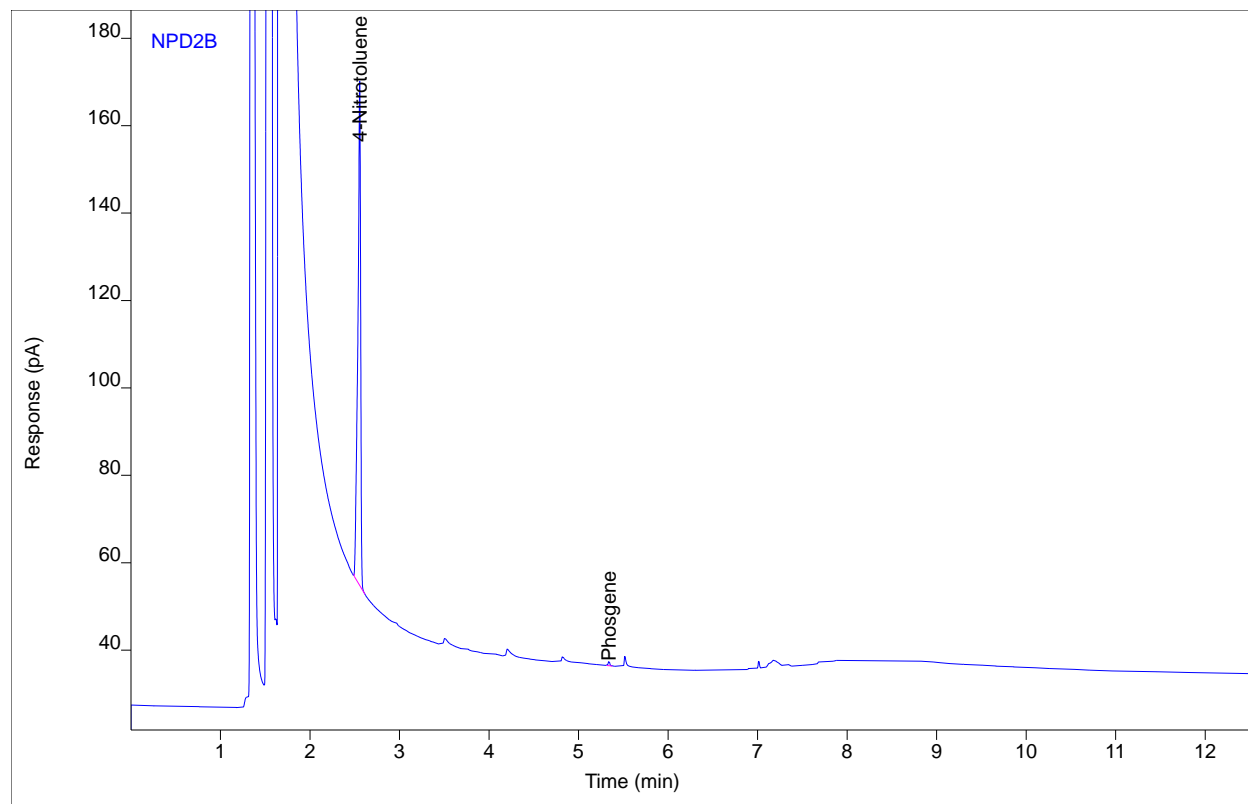
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
4-Nitrotoluene	BB	2.56	249.266	119.850	232.640	1	232.640	ug/mL
Phosgene	BB	5.34	2.52539	2.11143	0.57450	1	0.57450	ug/mL

Chromatogram Report

Sample Name 0719-205.S-AM-BH.BH
Sequence Name LOLITA0273A ver.4
Inj Data File 047B1601.D
File Location GC/2019/Lolita/Quarter 3
Injection Date 7/31/2019 11:53 AM
File Modified 7/31/2019 5:41 PM
Instrument Lolita
Operator Daniel Clayton

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 47
Injection Volume 1
Injection 1 of 1
Acquisition Method LOLITA0273_PHOSGENE.M
Analysis Method LOLITA0273_PHOSGENE_R.M
Method Modified 7/31/2019 5:40 PM
Printed 7/31/2019 5:44 PM



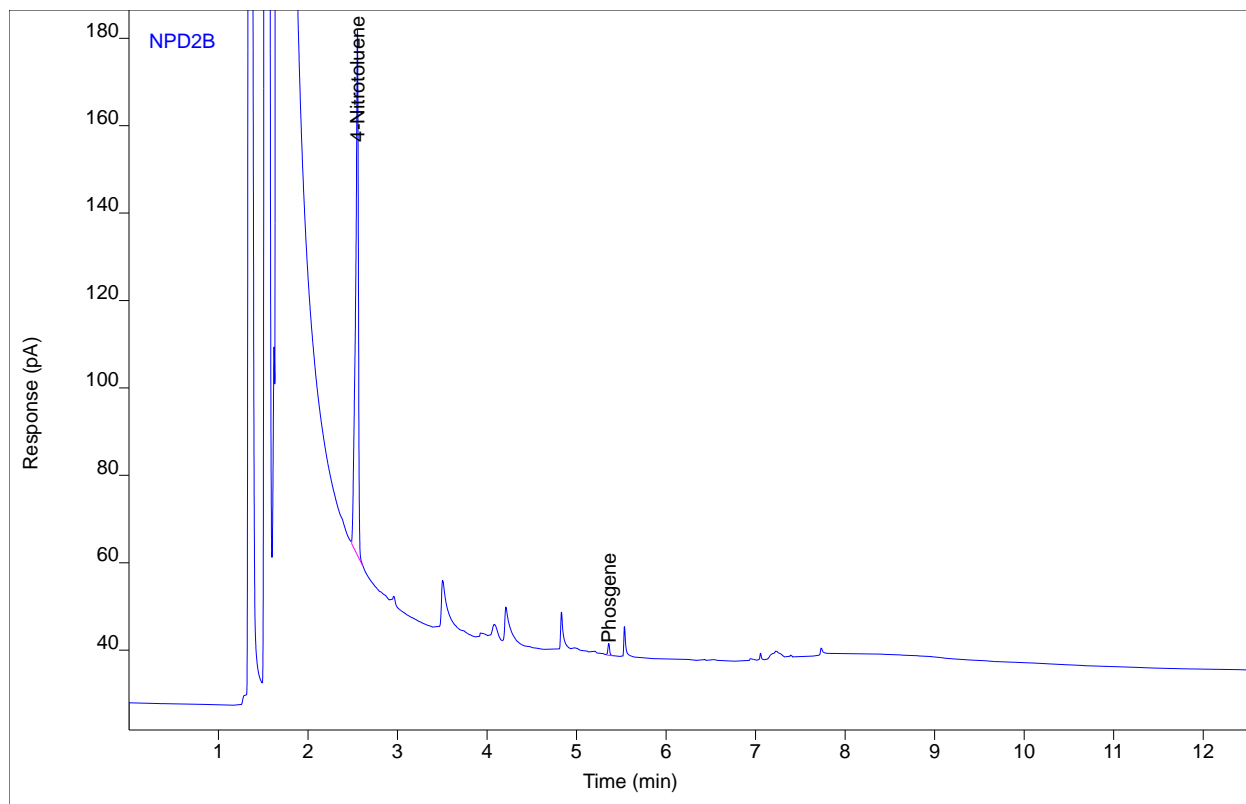
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
4-Nitrotoluene	BB	2.56	250.127	115.462	232.640	1	232.640	ug/mL
Phosgene	BB	5.34	1.30822	1.04659	0.29583	1	0.29583	ug/mL

Chromatogram Report

Sample Name 0719-205.R-PM-FH.FH
Sequence Name LOLITA0273A ver.4
Inj Data File 048B1701.D
File Location GC/2019/Lolita/Quarter 3
Injection Date 7/31/2019 12:08 PM
File Modified 7/31/2019 5:41 PM
Instrument Lolita
Operator Daniel Clayton

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 48
Injection Volume 1
Injection 1 of 1
Acquisition Method LOLITA0273_PHOSGENE.M
Analysis Method LOLITA0273_PHOSGENE_R.M
Method Modified 7/31/2019 5:40 PM
Printed 7/31/2019 5:44 PM



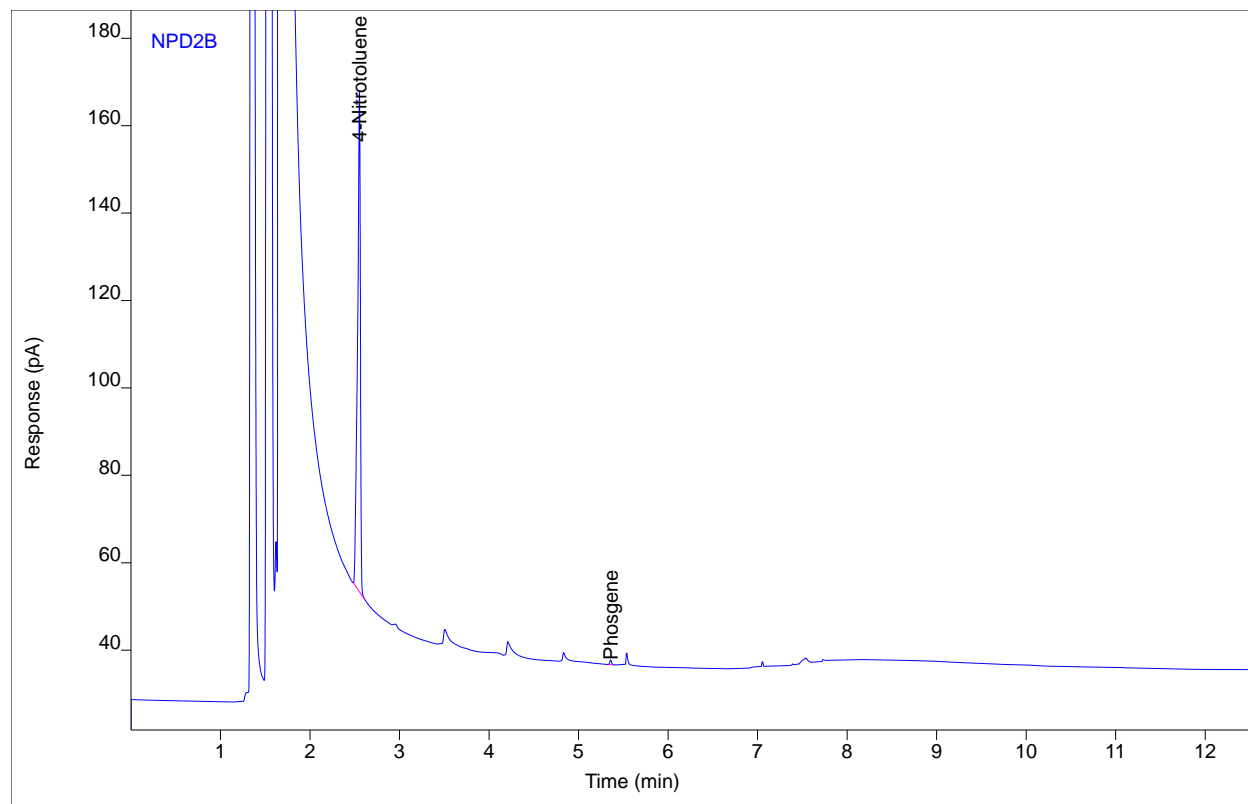
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
4-Nitrotoluene	BB	2.55	261.102	120.114	232.640	1	232.640	ug/mL
Phosgene	BB	5.36	3.67791	2.86897	0.79936	1	0.79936	ug/mL

Chromatogram Report

Sample Name 0719-205.R-PM-FH.BH
Sequence Name LOLITA0273A ver.4
Inj Data File 049B1801.D
File Location GC/2019/Lolita/Quarter 3
Injection Date 7/31/2019 12:24 PM
File Modified 7/31/2019 5:41 PM
Instrument Lolita
Operator Daniel Clayton

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 49
Injection Volume 1
Injection 1 of 1
Acquisition Method LOLITA0273_PHOSGENE.M
Analysis Method LOLITA0273_PHOSGENE_R.M
Method Modified 7/31/2019 5:40 PM
Printed 7/31/2019 5:44 PM



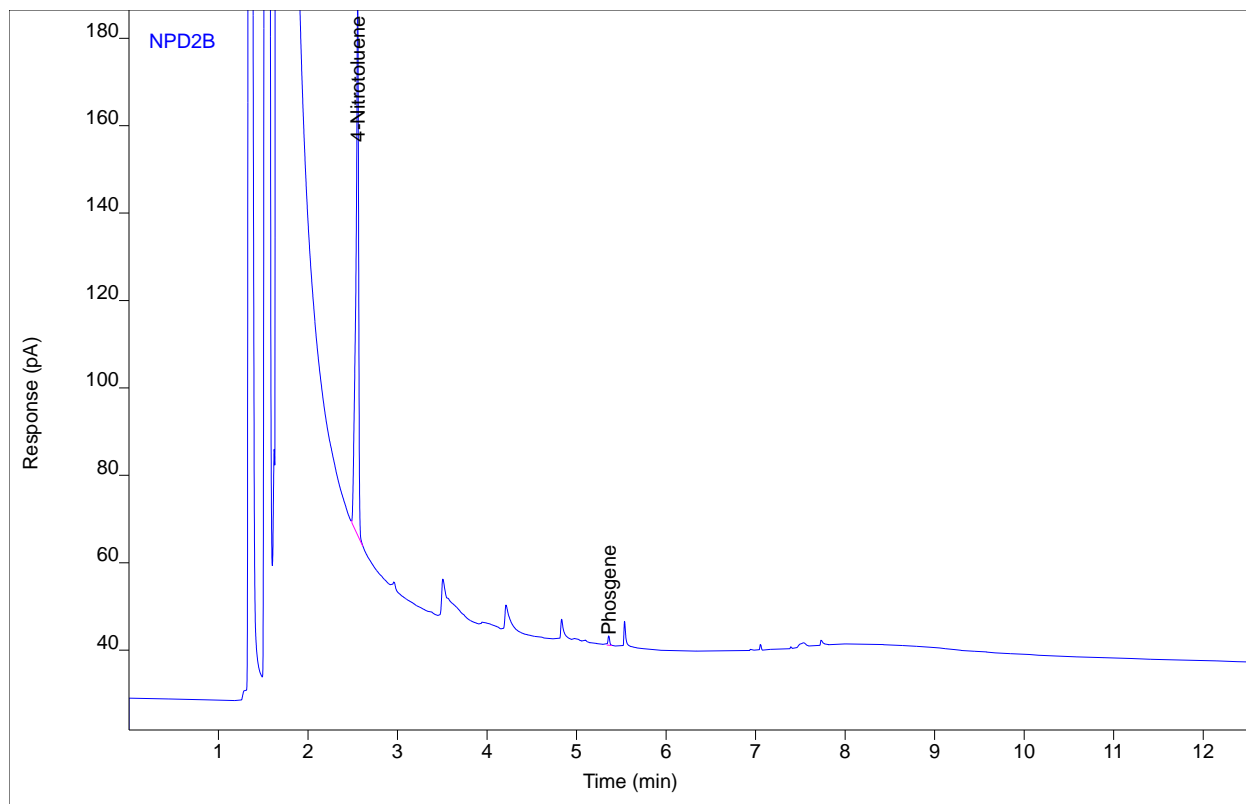
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
4-Nitrotoluene	BB	2.55	252.493	114.673	232.640	1	232.640	ug/mL
Phosgene	BB	5.36	1.51326	1.15138	0.33922	1	0.33922	ug/mL

Chromatogram Report

Sample Name 0719-205.R-PM-BH.FH
Sequence Name LOLITA0273A ver.4
Inj Data File 050B1901.D
File Location GC/2019/Lolita/Quarter 3
Injection Date 7/31/2019 12:39 PM
File Modified 7/31/2019 5:41 PM
Instrument Lolita
Operator Daniel Clayton

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 50
Injection Volume 1
Injection 1 of 1
Acquisition Method LOLITA0273_PHOSGENE.M
Analysis Method LOLITA0273_PHOSGENE_R.M
Method Modified 7/31/2019 5:40 PM
Printed 7/31/2019 5:44 PM



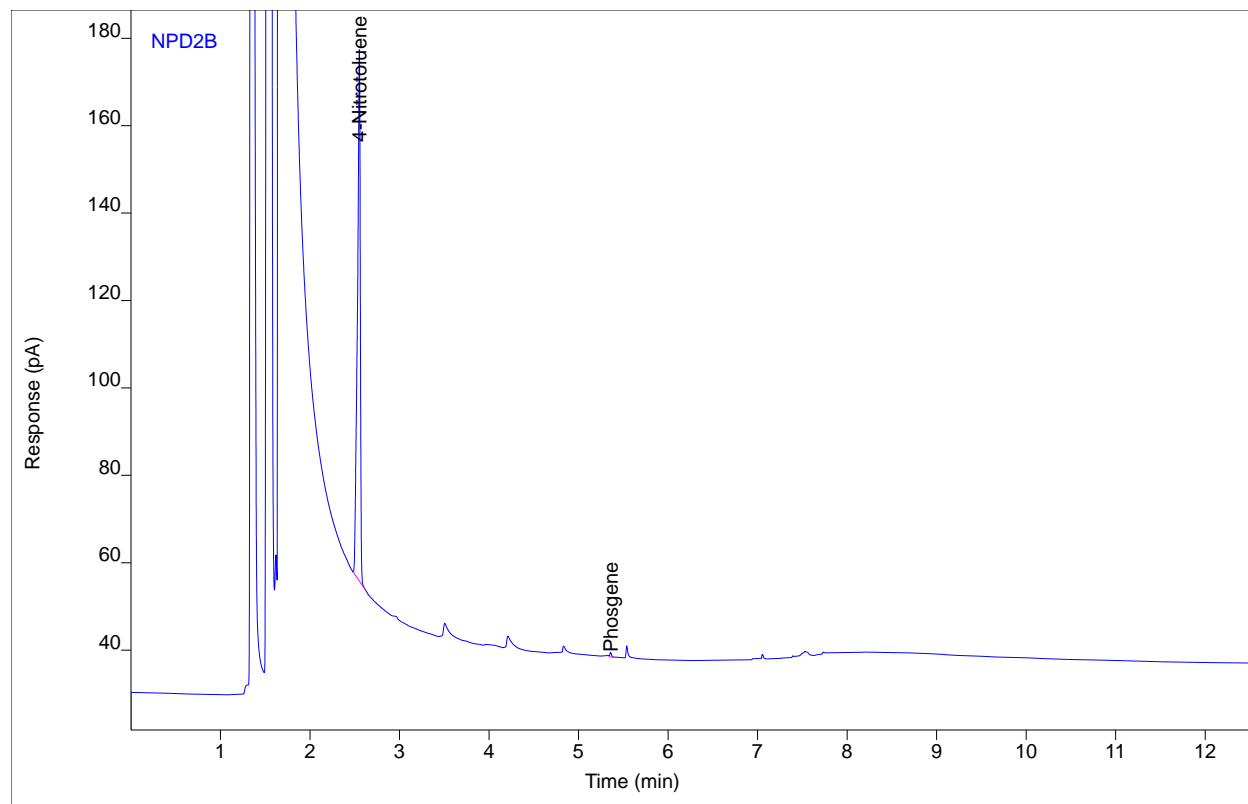
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
4-Nitrotoluene	BB	2.56	260.568	122.318	232.640	1	232.640	ug/mL
Phosgene	BB	5.36	2.86214	2.27166	0.62300	1	0.62300	ug/mL

Chromatogram Report

Sample Name 0719-205.R-PM-BH.BH
Sequence Name LOLITA0273A ver.4
Inj Data File 051B2001.D
File Location GC/2019/Lolita/Quarter 3
Injection Date 7/31/2019 12:54 PM
File Modified 7/31/2019 5:41 PM
Instrument Lolita
Operator Daniel Clayton

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 51
Injection Volume 1
Injection 1 of 1
Acquisition Method LOLITA0273_PHOSGENE.M
Analysis Method LOLITA0273_PHOSGENE_R.M
Method Modified 7/31/2019 5:40 PM
Printed 7/31/2019 5:44 PM



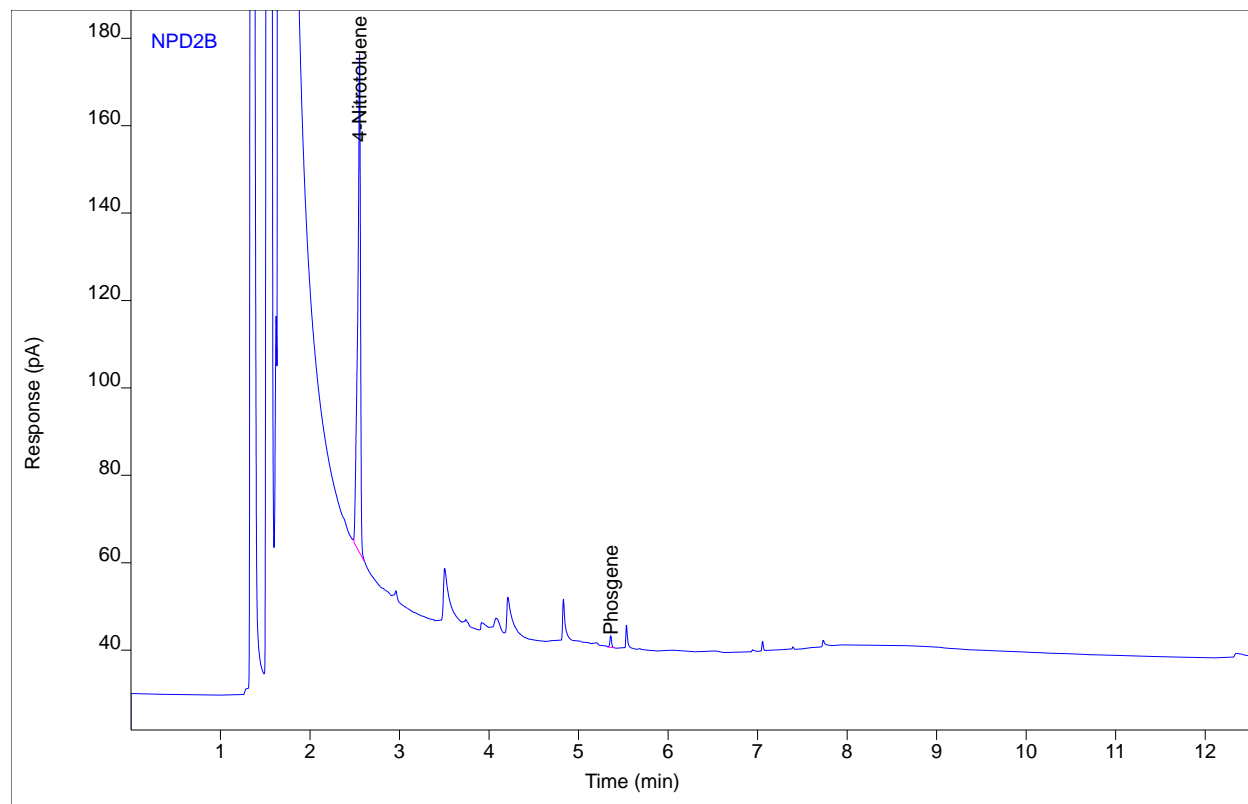
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
4-Nitrotoluene	BB	2.55	270.120	121.573	232.640	1	232.640	ug/mL
Phosgene	BB	5.36	1.42564	1.10488	0.29854	1	0.29854	ug/mL

Chromatogram Report

Sample Name 0719-205.S-PM-FH.FH
Sequence Name LOLITA0273A ver.4
Inj Data File 056B2201.D
File Location GC/2019/Lolita/Quarter 3
Injection Date 7/31/2019 1:24 PM
File Modified 7/31/2019 5:41 PM
Instrument Lolita
Operator Daniel Clayton

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 56
Injection Volume 1
Injection 1 of 1
Acquisition Method LOLITA0273_PHOSGENE.M
Analysis Method LOLITA0273_PHOSGENE_R.M
Method Modified 7/31/2019 5:40 PM
Printed 7/31/2019 5:44 PM



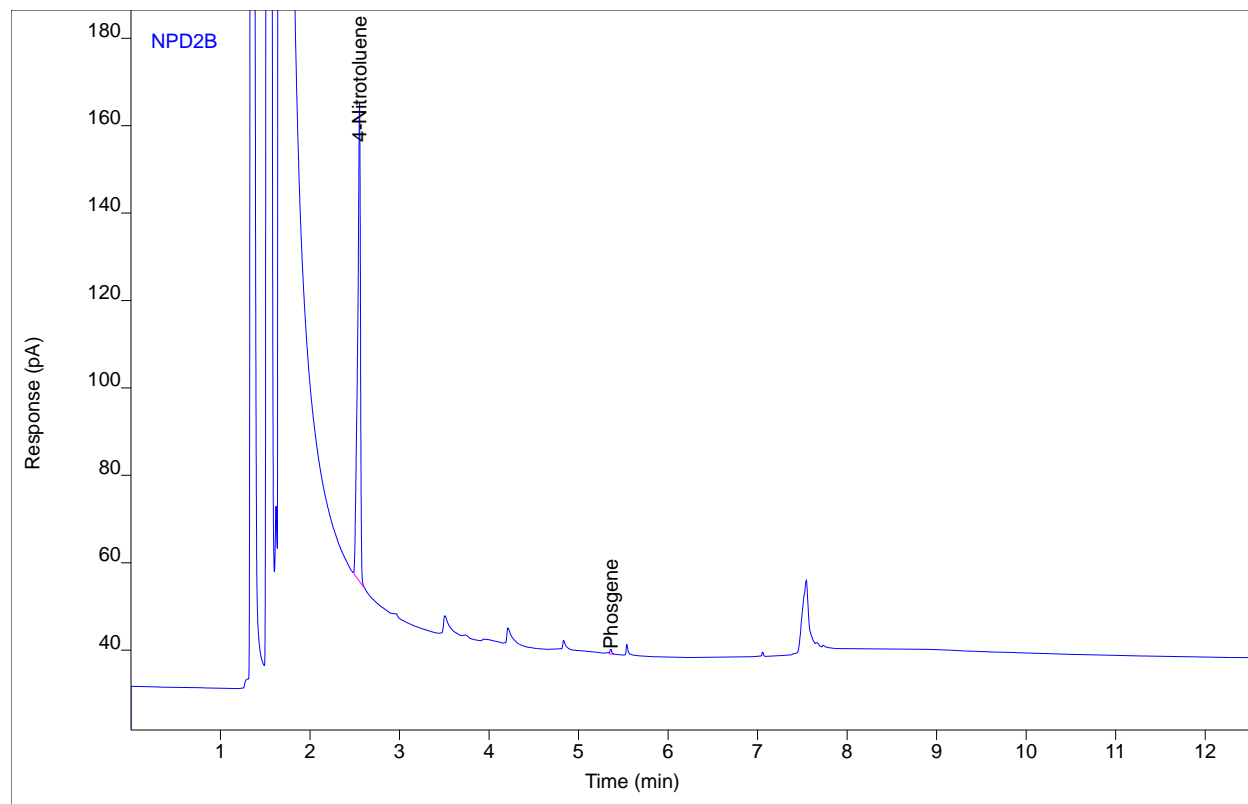
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
4-Nitrotoluene	BB	2.55	247.130	114.209	232.640	1	232.640	ug/mL
Phosgene	BB	5.36	3.56665	2.81301	0.81905	1	0.81905	ug/mL

Chromatogram Report

Sample Name 0719-205.S-PM-FH.BH
Sequence Name LOLITA0273A ver.4
Inj Data File 057B2301.D
File Location GC/2019/Lolita/Quarter 3
Injection Date 7/31/2019 1:39 PM
File Modified 7/31/2019 5:41 PM
Instrument Lolita
Operator Daniel Clayton

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 57
Injection Volume 1
Injection 1 of 1
Acquisition Method LOLITA0273_PHOSGENE.M
Analysis Method LOLITA0273_PHOSGENE_R.M
Method Modified 7/31/2019 5:40 PM
Printed 7/31/2019 5:44 PM



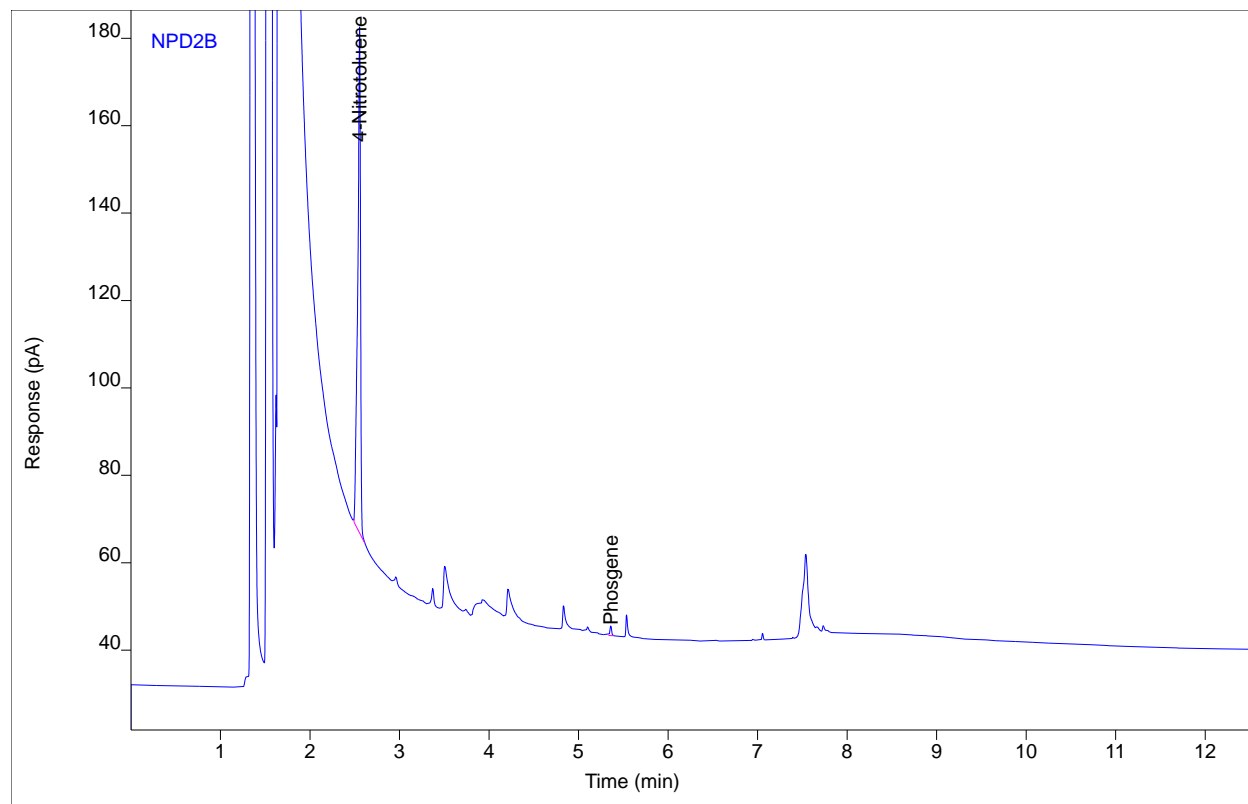
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
4-Nitrotoluene	BB	2.55	241.814	109.433	232.640	1	232.640	ug/mL
Phosgene	BB	5.36	1.60467	1.17868	0.37576	1	0.37576	ug/mL

Chromatogram Report

Sample Name 0719-205.S-PM-BH.FH
Sequence Name LOLITA0273A ver.4
Inj Data File 058B2401.D
File Location GC/2019/Lolita/Quarter 3
Injection Date 7/31/2019 1:54 PM
File Modified 7/31/2019 5:41 PM
Instrument Lolita
Operator Daniel Clayton

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 58
Injection Volume 1
Injection 1 of 1
Acquisition Method LOLITA0273_PHOSGENE.M
Analysis Method LOLITA0273_PHOSGENE_R.M
Method Modified 7/31/2019 5:40 PM
Printed 7/31/2019 5:44 PM



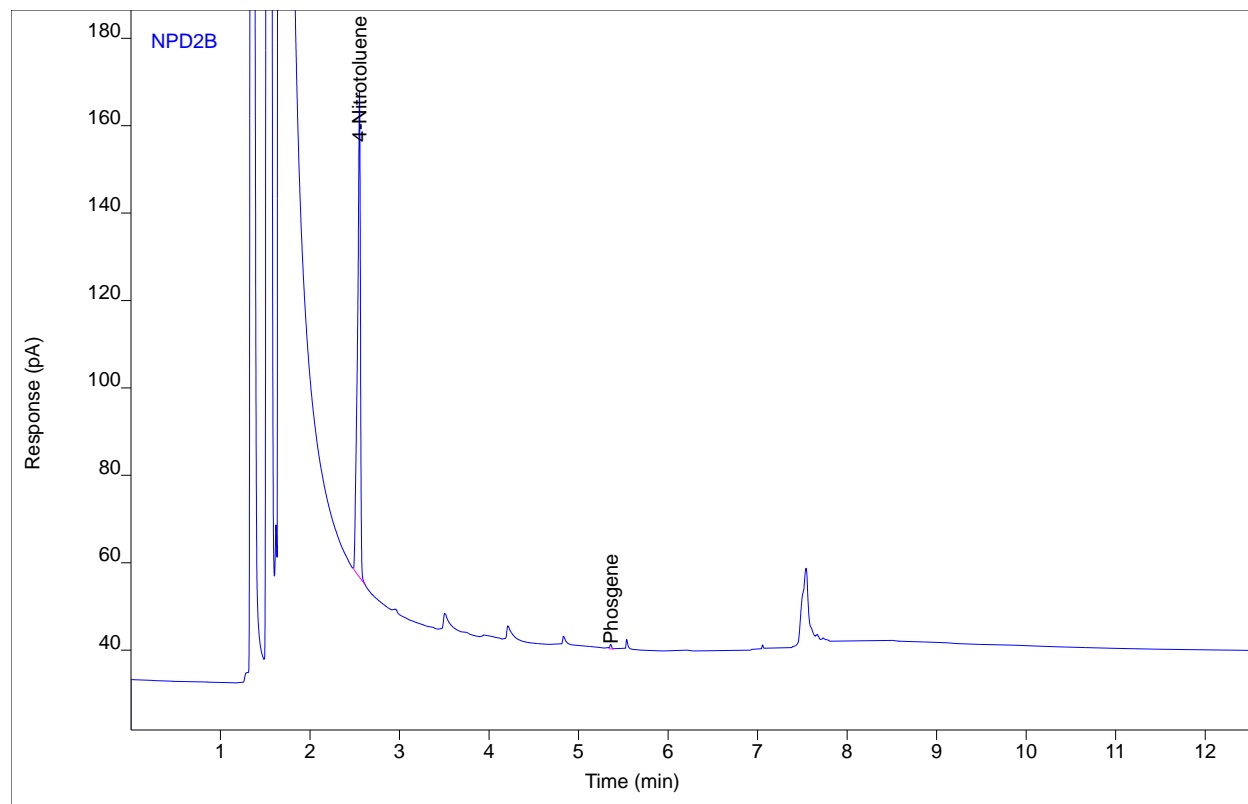
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
4-Nitrotoluene	BB	2.55	251.496	115.790	232.640	1	232.640	ug/mL
Phosgene	BB	5.36	2.94573	2.34204	0.66442	1	0.66442	ug/mL

Chromatogram Report

Sample Name 0719-205.S-PM-BH.BH
Sequence Name LOLITA0273A ver.4
Inj Data File 059B2501.D
File Location GC/2019/Lolita/Quarter 3
Injection Date 7/31/2019 2:09 PM
File Modified 7/31/2019 5:41 PM
Instrument Lolita
Operator Daniel Clayton

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 59
Injection Volume 1
Injection 1 of 1
Acquisition Method LOLITA0273_PHOSGENE.M
Analysis Method LOLITA0273_PHOSGENE_R.M
Method Modified 7/31/2019 5:40 PM
Printed 7/31/2019 5:44 PM



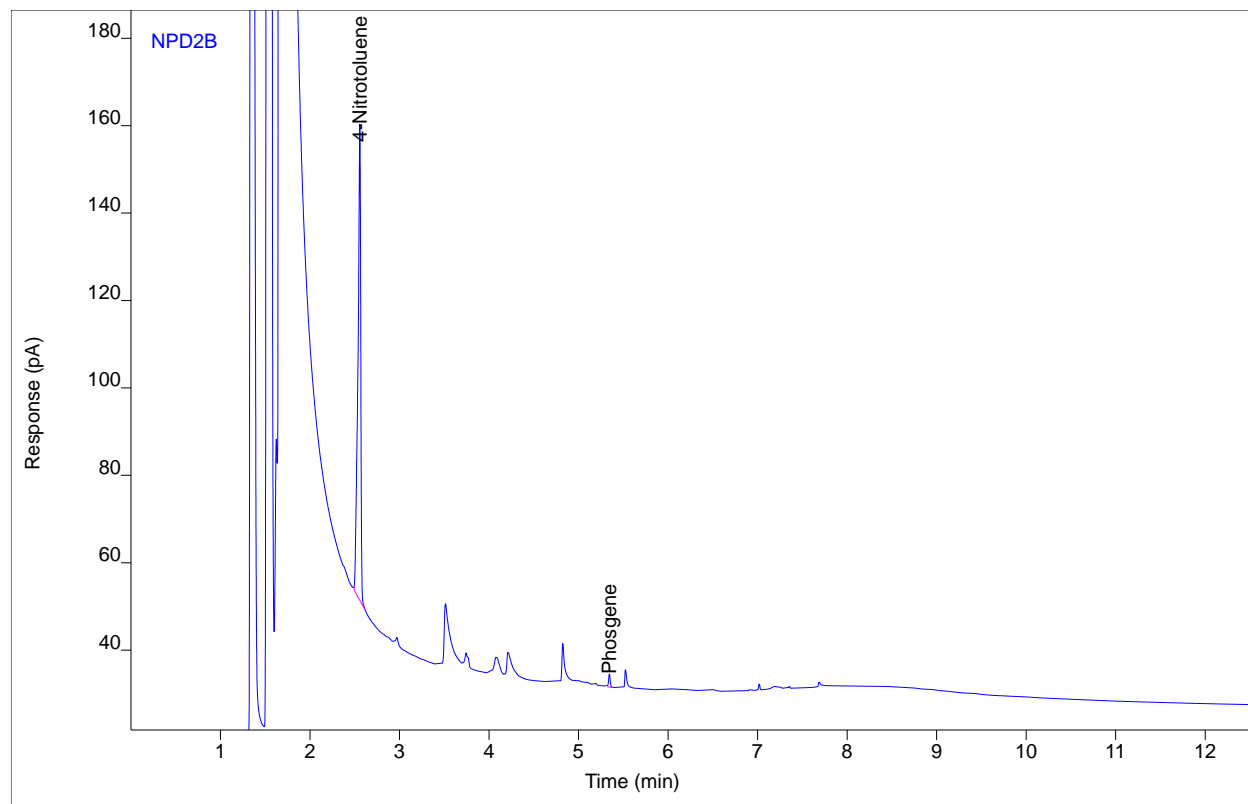
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
4-Nitrotoluene	BB	2.55	249.876	110.970	232.640	1	232.640	ug/mL
Phosgene	BB	5.36	1.50354	1.13129	0.34058	1	0.34058	ug/mL

Chromatogram Report

Sample Name 0719-205.BKGD-FH.FH
Sequence Name LOLITA0273A ver.4
Inj Data File 035B0301.D
File Location GC/2019/Lolita/Quarter 3
Injection Date 7/30/2019 7:03 PM
File Modified 7/31/2019 5:40 PM
Instrument Lolita
Operator Daniel Clayton

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 35
Injection Volume 1
Injection 1 of 1
Acquisition Method LOLITA0273_PHOSGENE.M
Analysis Method LOLITA0273_PHOSGENE_R.M
Method Modified 7/31/2019 5:40 PM
Printed 7/31/2019 5:44 PM



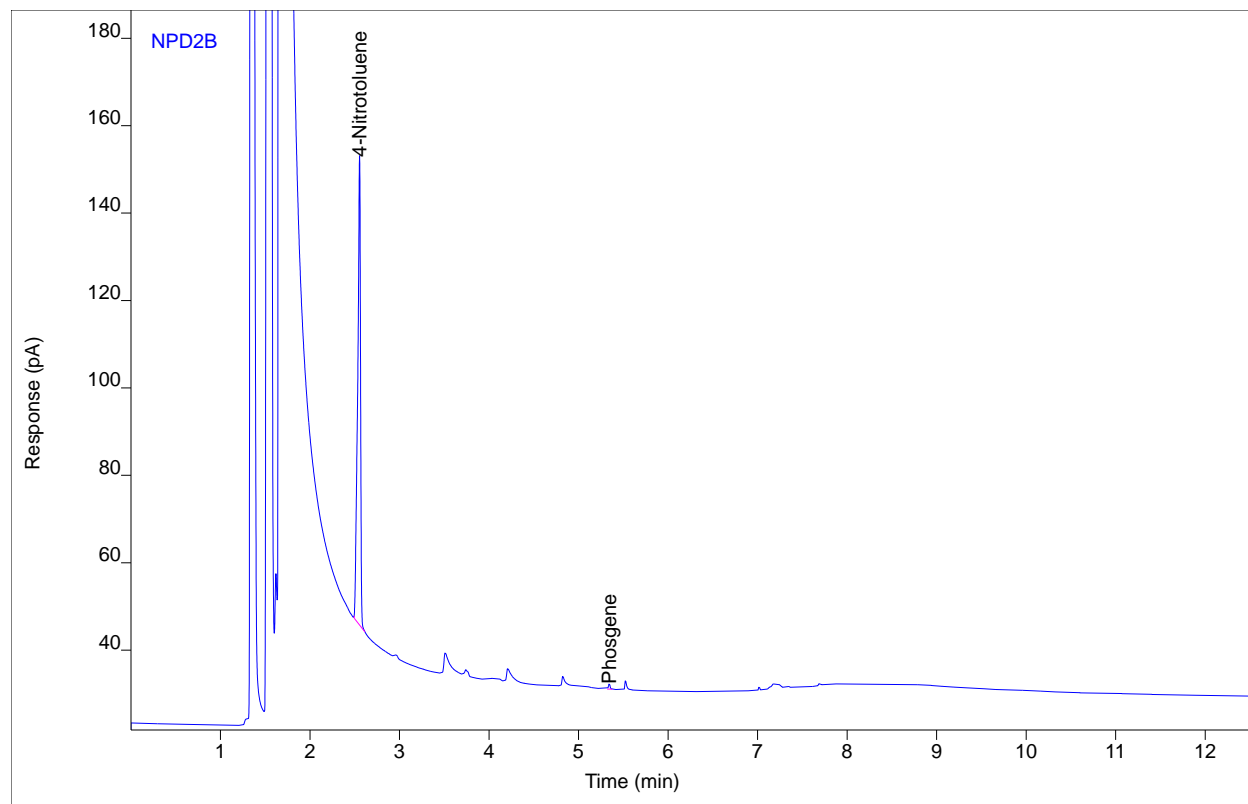
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
4-Nitrotoluene	BB	2.56	237.200	108.953	232.640	1	232.640	ug/mL
Phosgene	BB	5.34	3.66932	2.98460	0.87801	1	0.87801	ug/mL

Chromatogram Report

Sample Name 0719-205.BKGD-FH.BH
Sequence Name LOLITA0273A ver.4
Inj Data File 037B0501.D
File Location GC/2019/Lolita/Quarter 3
Injection Date 7/30/2019 7:33 PM
File Modified 7/31/2019 5:41 PM
Instrument Lolita
Operator Daniel Clayton

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 37
Injection Volume 1
Injection 1 of 1
Acquisition Method LOLITA0273_PHOSGENE.M
Analysis Method LOLITA0273_PHOSGENE_R.M
Method Modified 7/31/2019 5:40 PM
Printed 7/31/2019 5:44 PM



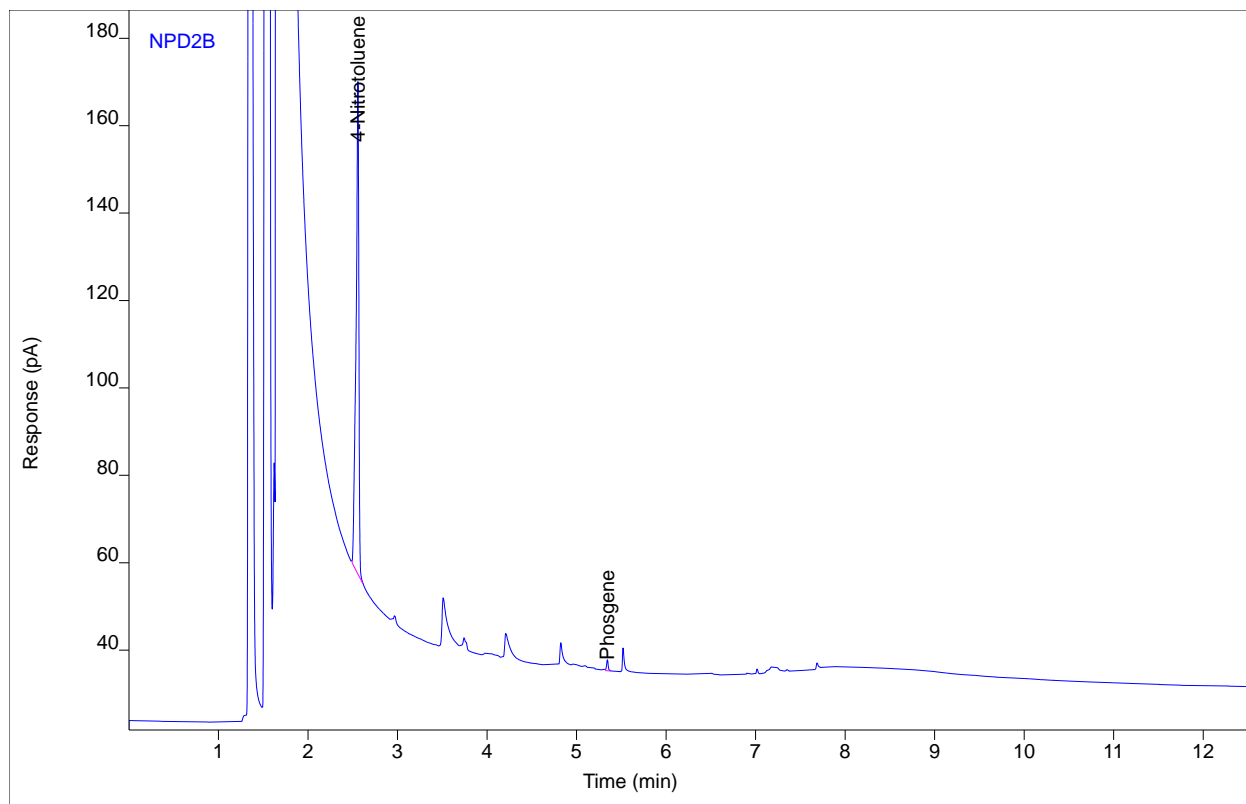
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
4-Nitrotoluene	BB	2.55	236.496	107.398	232.640	1	232.640	ug/mL
Phosgene	BB	5.34	1.55067	1.24445	0.37126	1	0.37126	ug/mL

Chromatogram Report

Sample Name 0719-205.BKGD-BH.FH
Sequence Name LOLITA0273A ver.4
Inj Data File 038B0601.D
File Location GC/2019/Lolita/Quarter 3
Injection Date 7/30/2019 7:48 PM
File Modified 7/31/2019 5:41 PM
Instrument Lolita
Operator Daniel Clayton

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 38
Injection Volume 1
Injection 1 of 1
Acquisition Method LOLITA0273_PHOSGENE.M
Analysis Method LOLITA0273_PHOSGENE_R.M
Method Modified 7/31/2019 5:40 PM
Printed 7/31/2019 5:44 PM



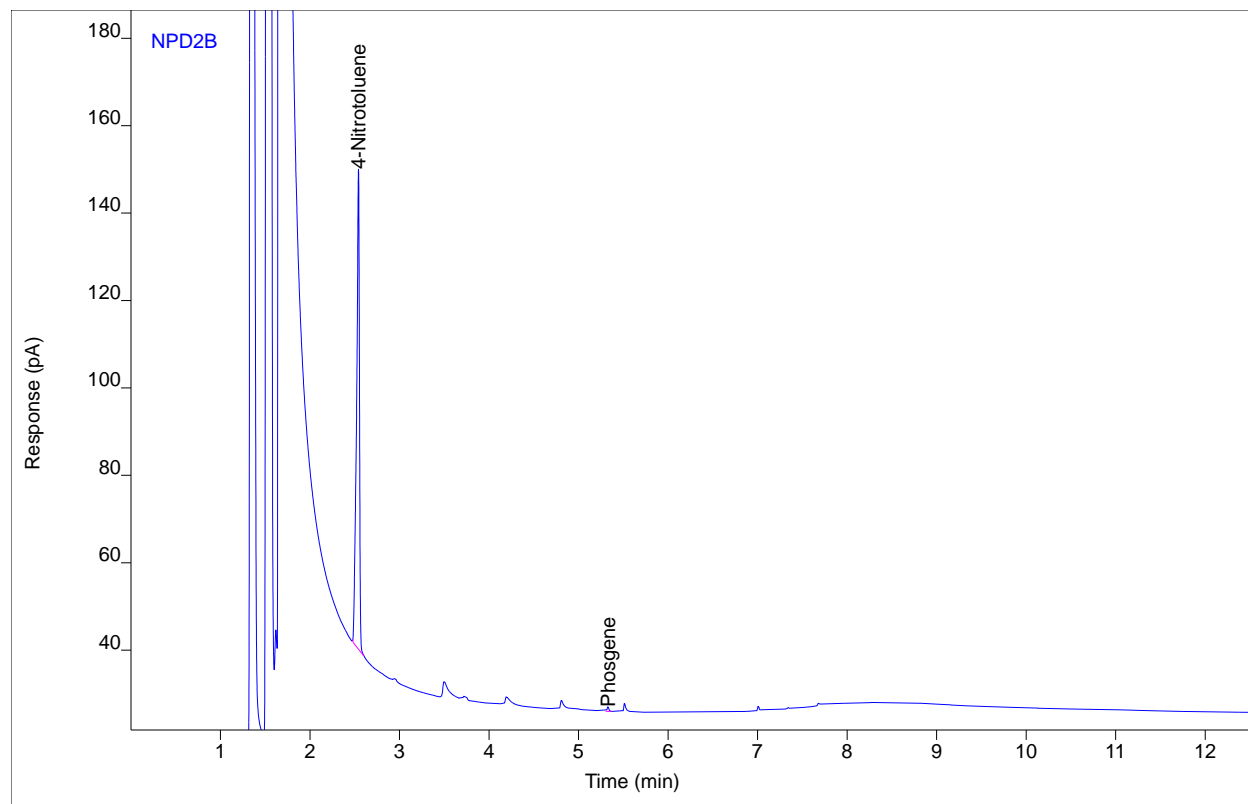
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
4-Nitrotoluene	BB	2.56	244.810	112.676	232.640	1	232.640	ug/mL
Phosgene	BB	5.34	3.15426	2.53047	0.73104	1	0.73104	ug/mL

Chromatogram Report

Sample Name 0719-205.BKGD-BH.BH
Sequence Name LOLITA0273A ver.4
Inj Data File 039B0701.D
File Location GC/2019/Lolita/Quarter 3
Injection Date 7/31/2019 9:38 AM
File Modified 7/31/2019 5:41 PM
Instrument Lolita
Operator Daniel Clayton

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 39
Injection Volume 1
Injection 1 of 1
Acquisition Method LOLITA0273_PHOSGENE.M
Analysis Method LOLITA0273_PHOSGENE_R.M
Method Modified 7/31/2019 5:40 PM
Printed 7/31/2019 5:44 PM



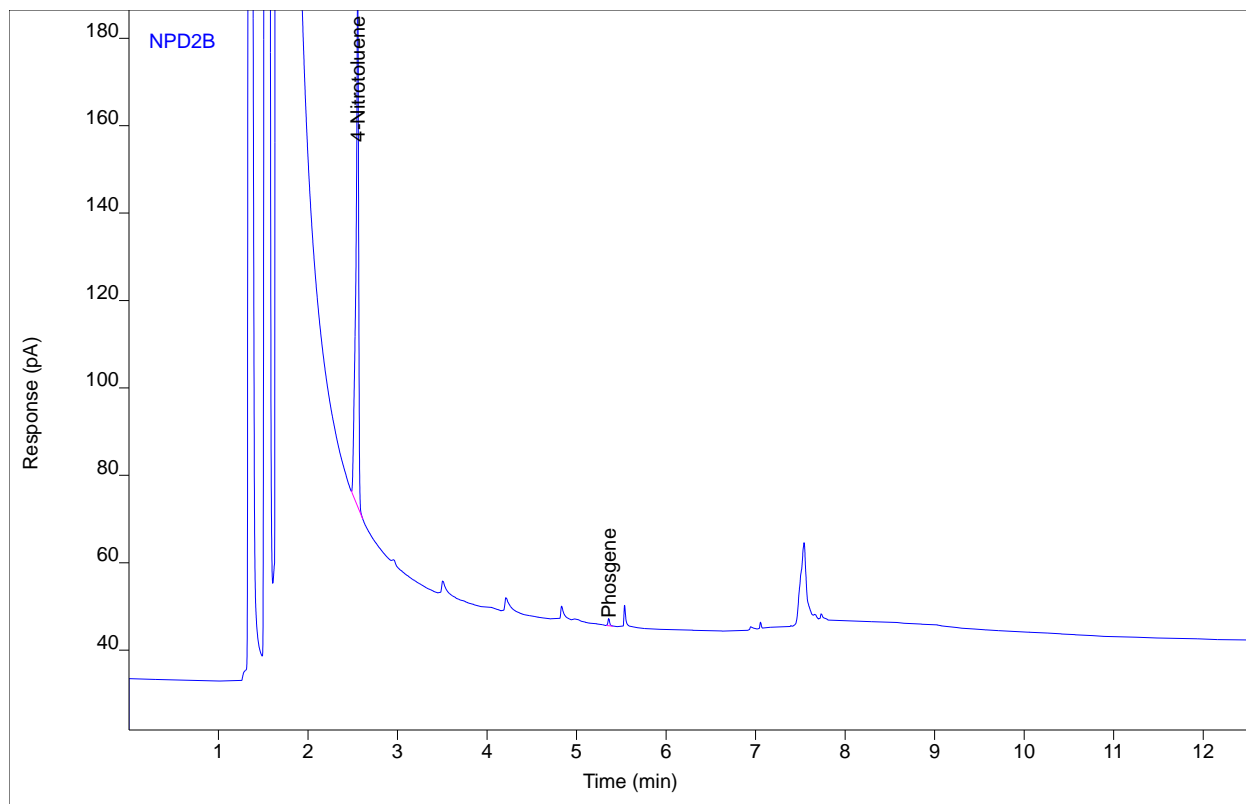
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
4-Nitrotoluene	BB	2.54	244.332	109.872	232.640	1	232.640	ug/mL
Phosgene	BB	5.33	1.44909	1.08402	0.33567	1	0.33567	ug/mL

Chromatogram Report

Sample Name 0719-205.BLK-FH.FH
Sequence Name LOLITA0273A ver.4
Inj Data File 052B2601.D
File Location GC/2019/Lolita/Quarter 3
Injection Date 7/31/2019 2:24 PM
File Modified 7/31/2019 5:41 PM
Instrument Lolita
Operator Daniel Clayton

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 52
Injection Volume 1
Injection 1 of 1
Acquisition Method LOLITA0273_PHOSGENE.M
Analysis Method LOLITA0273_PHOSGENE_R.M
Method Modified 7/31/2019 5:40 PM
Printed 7/31/2019 5:44 PM



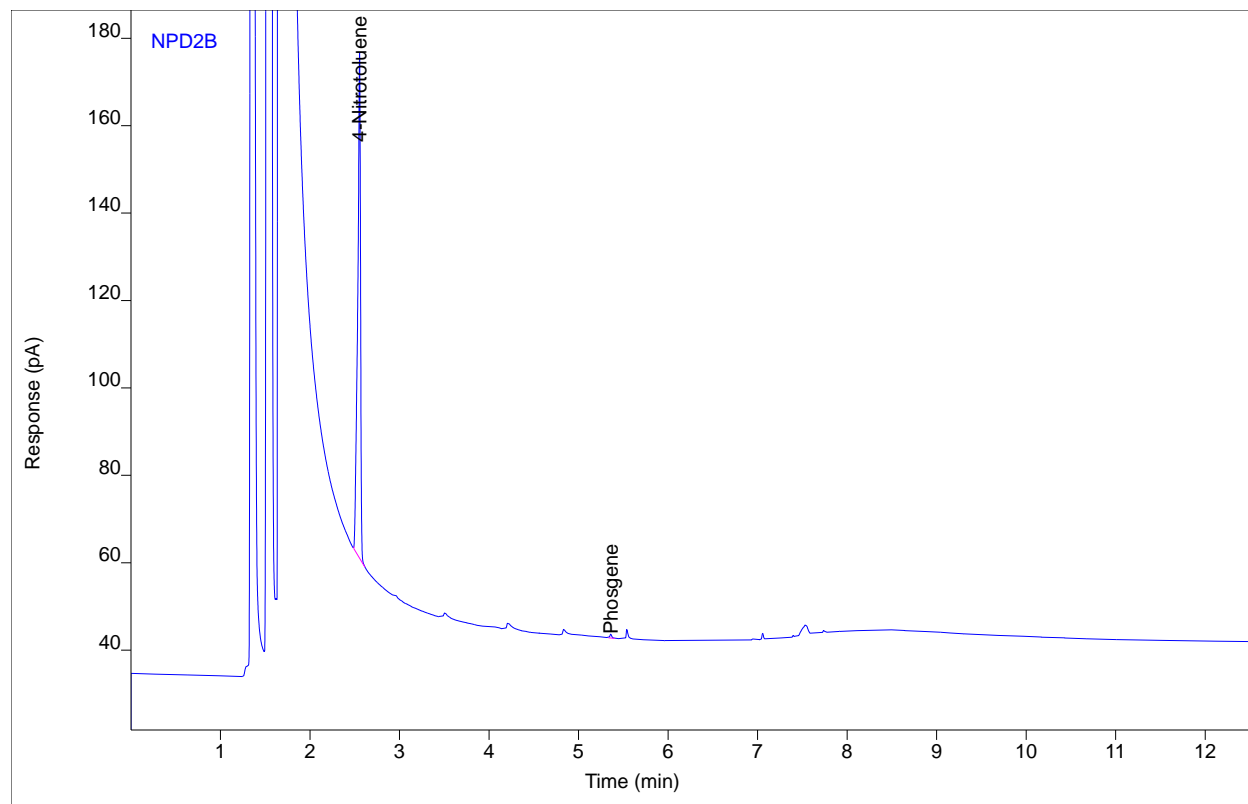
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
4-Nitrotoluene	BB	2.56	247.735	118.573	232.640	1	232.640	ug/mL
Phosgene	BB	5.36	2.25645	1.69188	0.51634	1	0.51634	ug/mL

Chromatogram Report

Sample Name 0719-205.BLK-FH.BH
Sequence Name LOLITA0273A ver.4
Inj Data File 053B2701.D
File Location GC/2019/Lolita/Quarter 3
Injection Date 7/31/2019 2:39 PM
File Modified 7/31/2019 5:41 PM
Instrument Lolita
Operator Daniel Clayton

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 53
Injection Volume 1
Injection 1 of 1
Acquisition Method LOLITA0273_PHOSGENE.M
Analysis Method LOLITA0273_PHOSGENE_R.M
Method Modified 7/31/2019 5:40 PM
Printed 7/31/2019 5:44 PM



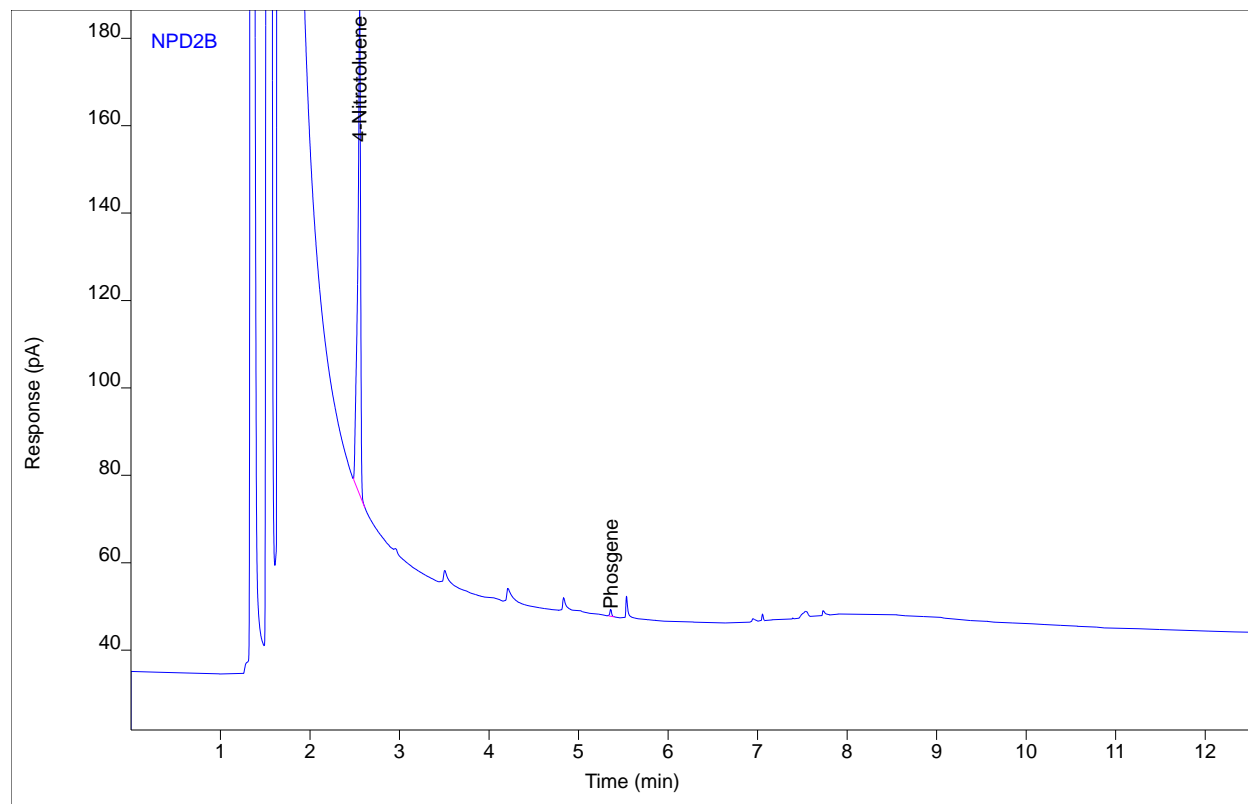
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
4-Nitrotoluene	BB	2.55	256.601	115.596	232.640	1	232.640	ug/mL
Phosgene	BB	5.36	1.25296	0.90088	0.27608	1	0.27608	ug/mL

Chromatogram Report

Sample Name 0719-205.BLK-BH.FH
Sequence Name LOLITA0273A ver.4
Inj Data File 054B2801.D
File Location GC/2019/Lolita/Quarter 3
Injection Date 7/31/2019 2:54 PM
File Modified 7/31/2019 5:41 PM
Instrument Lolita
Operator Daniel Clayton

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 54
Injection Volume 1
Injection 1 of 1
Acquisition Method LOLITA0273_PHOSGENE.M
Analysis Method LOLITA0273_PHOSGENE_R.M
Method Modified 7/31/2019 5:40 PM
Printed 7/31/2019 5:44 PM



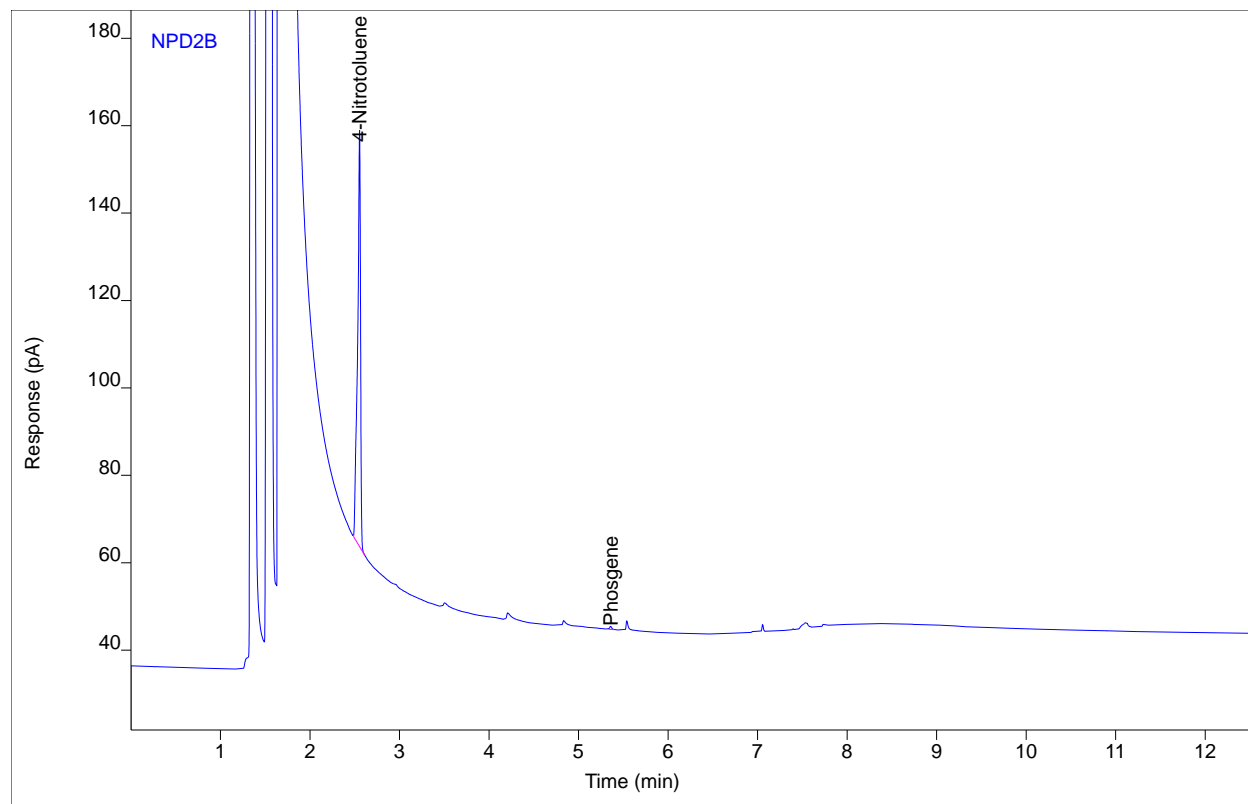
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
4-Nitrotoluene	BB	2.55	243.881	111.490	232.640	1	232.640	ug/mL
Phosgene	BB	5.36	2.20517	1.70104	0.51256	1	0.51256	ug/mL

Chromatogram Report

Sample Name 0719-205.BLK-BH.BH
Sequence Name LOLITA0273A ver.4
Inj Data File 055B2901.D
File Location GC/2019/Lolita/Quarter 3
Injection Date 7/31/2019 3:09 PM
File Modified 7/31/2019 5:41 PM
Instrument Lolita
Operator Daniel Clayton

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 55
Injection Volume 1
Injection 1 of 1
Acquisition Method LOLITA0273_PHOSGENE.M
Analysis Method LOLITA0273_PHOSGENE_R.M
Method Modified 7/31/2019 5:40 PM
Printed 7/31/2019 5:44 PM



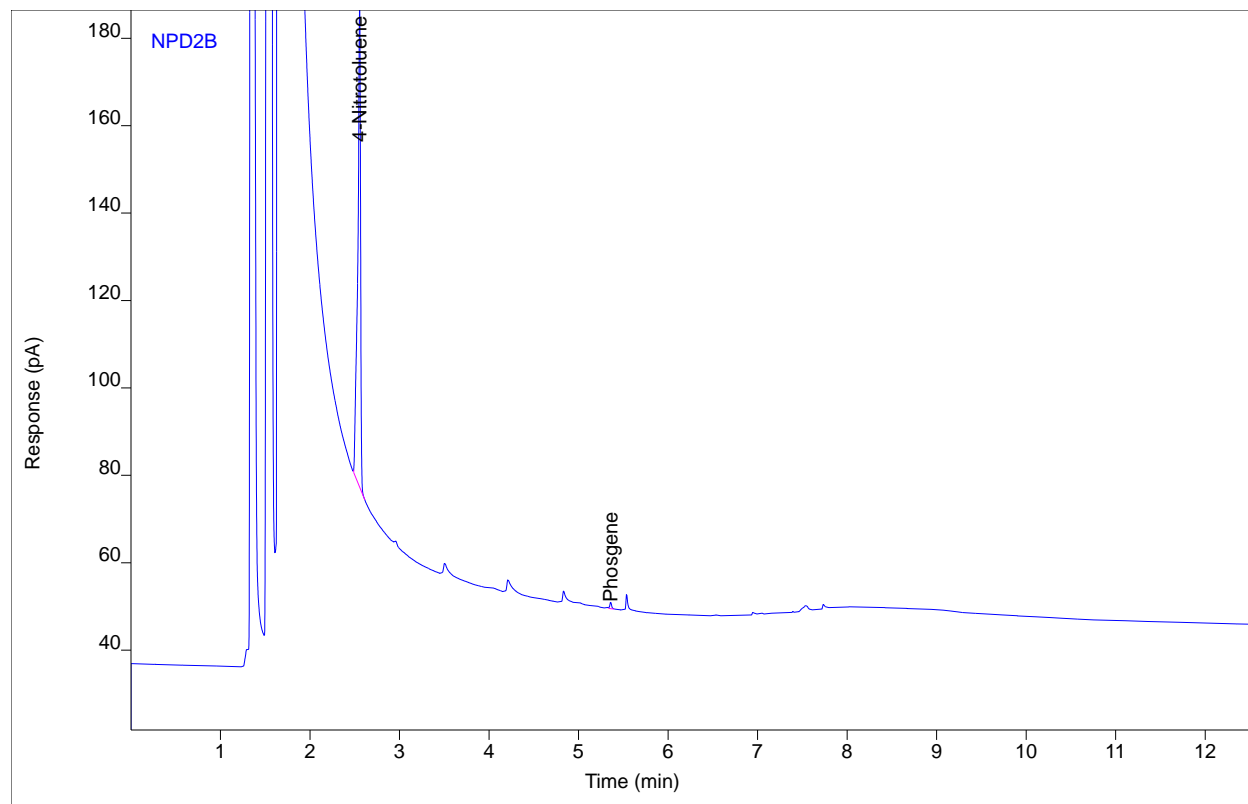
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
4-Nitrotoluene	BB	2.55	216.287	95.2122	232.640	1	232.640	ug/mL
Phosgene	BB	5.36	1.18140	0.84020	0.30902	1	0.30902	ug/mL

Chromatogram Report

Enthalpy Analytical

Sample Name gcprep2953 #MB XAD FH
Sequence Name LOLITA0273A ver.4
Inj Data File 060B3001.D
File Location GC/2019/Lolita/Quarter 3
Injection Date 7/31/2019 3:24 PM
File Modified 7/31/2019 5:41 PM
Instrument Lolita
Operator Daniel Clayton

Sample Type Sample
Vial Number Vial 60
Injection Volume 1
Injection 1 of 1
Acquisition Method LOLITA0273_PHOSGENE.M
Analysis Method LOLITA0273_PHOSGENE_R.M
Method Modified 7/31/2019 5:40 PM
Printed 7/31/2019 5:44 PM



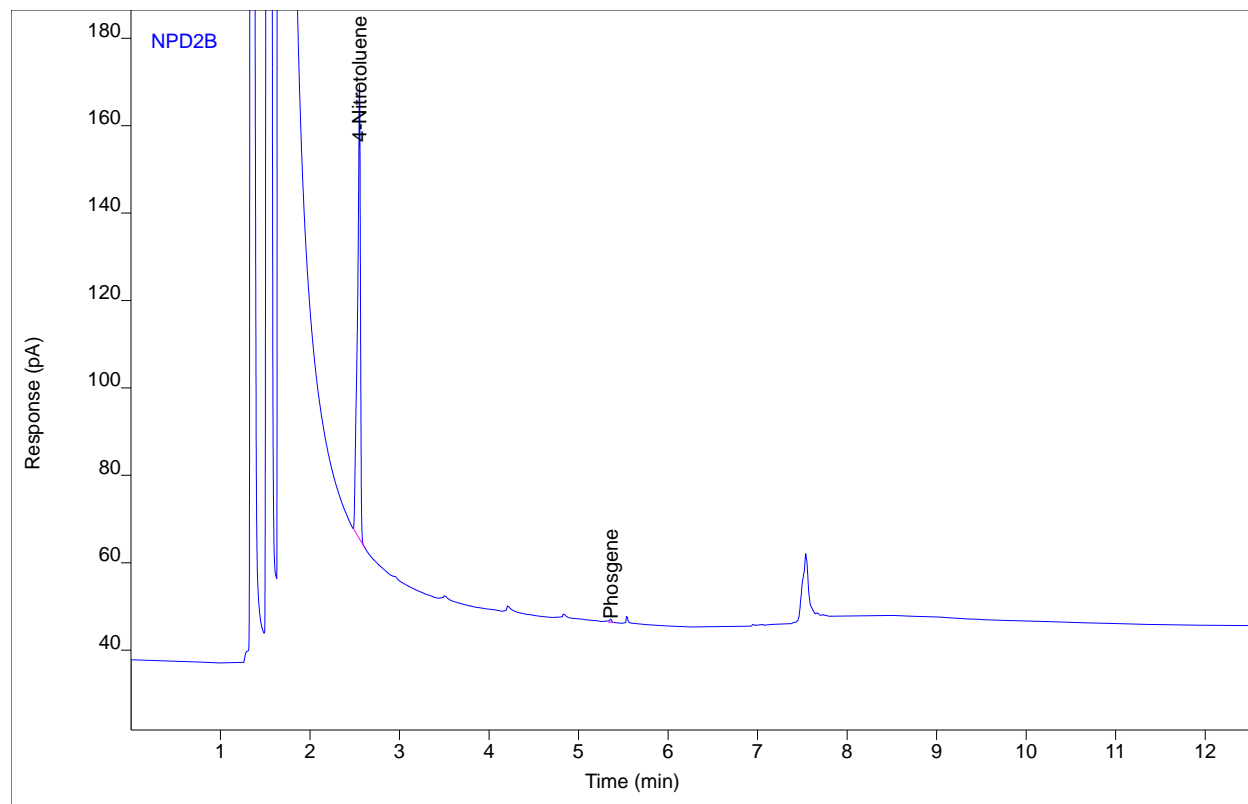
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
4-Nitrotoluene	BB	2.55	241.572	111.162	232.640	1	232.640	ug/mL
Phosgene	BB	5.36	2.08454	1.54719	0.48908	1	0.48908	ug/mL

Chromatogram Report

Sample Name gcprep2953 #MB XAD BH
Sequence Name LOLITA0273A ver.4
Inj Data File 061B3101.D
File Location GC/2019/Lolita/Quarter 3
Injection Date 7/31/2019 3:39 PM
File Modified 7/31/2019 5:41 PM
Instrument Lolita
Operator Daniel Clayton

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 61
Injection Volume 1
Injection 1 of 1
Acquisition Method LOLITA0273_PHOSGENE.M
Analysis Method LOLITA0273_PHOSGENE_R.M
Method Modified 7/31/2019 5:40 PM
Printed 7/31/2019 5:44 PM



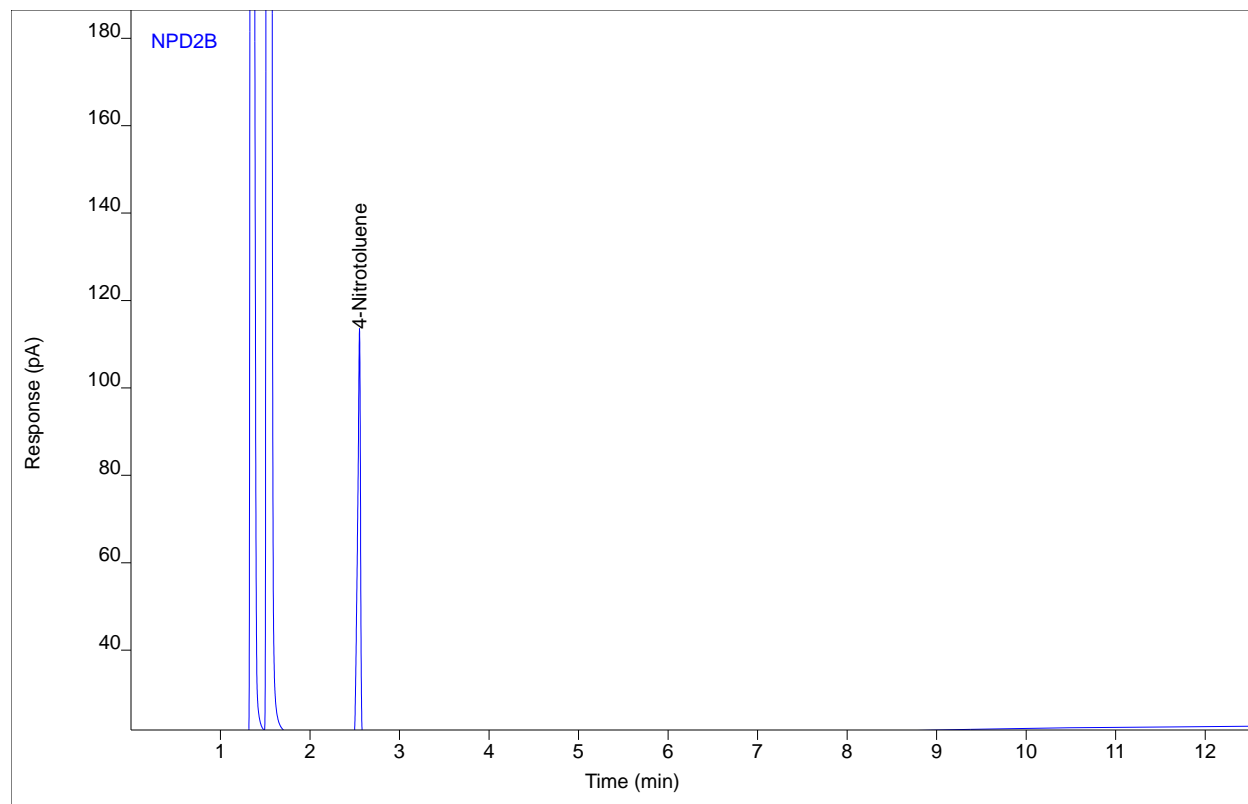
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
4-Nitrotoluene	BB	2.55	238.541	103.827	232.640	1	232.640	ug/mL
Phosgene	BB	5.36	1.16271	0.77692	0.27559	1	0.27559	ug/mL

Chromatogram Report

Sample Name gcprep2953 #RB
Sequence Name LOLITA0273A ver.4
Inj Data File 034B0201.D
File Location GC/2019/Lolita/Quarter 3
Injection Date 7/30/2019 6:48 PM
File Modified 7/31/2019 5:40 PM
Instrument Lolita
Operator Daniel Clayton

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 34
Injection Volume 1
Injection 1 of 1
Acquisition Method LOLITA0273_PHOSGENE.M
Analysis Method LOLITA0273_PHOSGENE_R.M
Method Modified 7/31/2019 5:40 PM
Printed 7/31/2019 5:44 PM



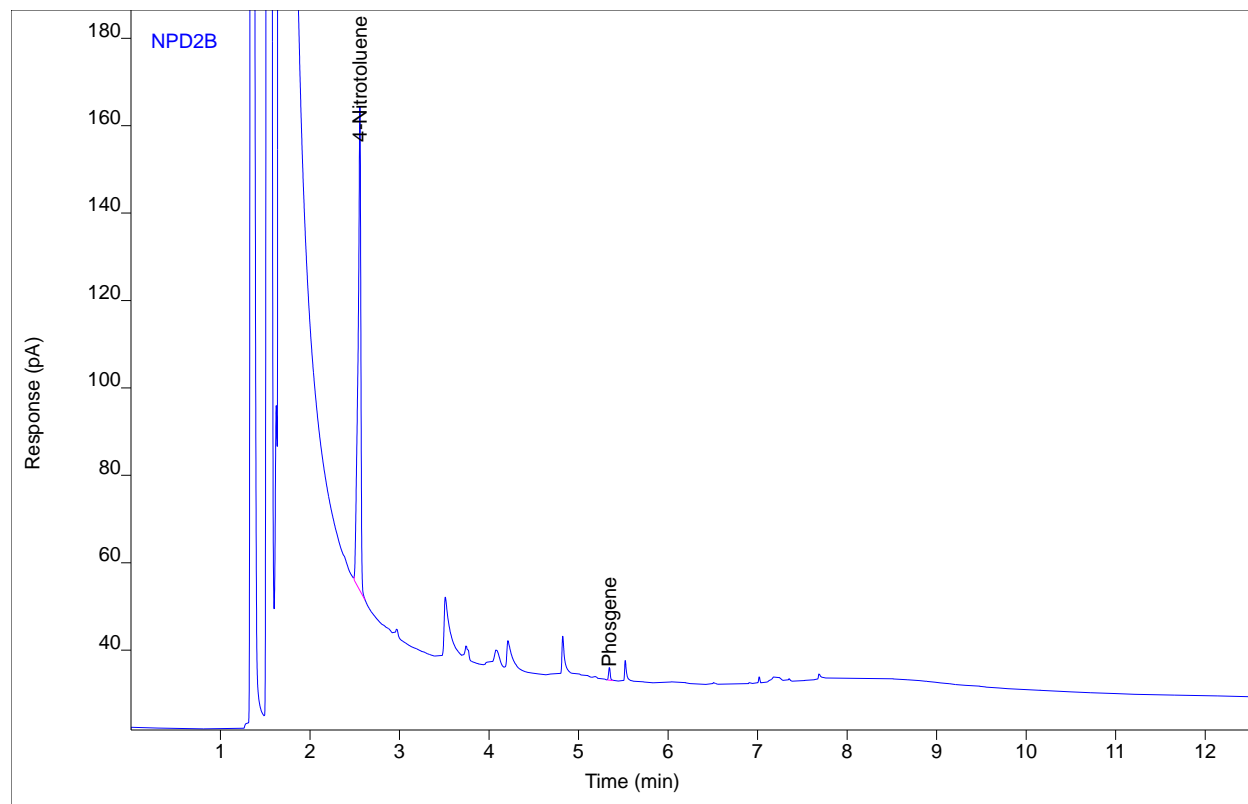
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
4-Nitrotoluene	BB	2.55	210.536	93.7290	232.640	1	232.640	ug/mL
Phosgene		(5.34)				1		

Chromatogram Report

Sample Name 0719-205.BKGD-FH-LD.FH
Sequence Name LOLITA0273A ver.4
Inj Data File 036B0401.D
File Location GC/2019/Lolita/Quarter 3
Injection Date 7/30/2019 7:18 PM
File Modified 7/31/2019 5:40 PM
Instrument Lolita
Operator Daniel Clayton

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 36
Injection Volume 1
Injection 1 of 1
Acquisition Method LOLITA0273_PHOSGENE.M
Analysis Method LOLITA0273_PHOSGENE_R.M
Method Modified 7/31/2019 5:40 PM
Printed 7/31/2019 5:44 PM



Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
4-Nitrotoluene	BB	2.56	241.450	110.769	232.640	1	232.640	ug/mL
Phosgene	BB	5.34	3.78192	3.02576	0.88904	1	0.88904	ug/mL

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Calibration Table

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General Calibration Setting

Calib. Data Modified : 7/31/2019 5:40:12 PM
 Signals calculated separately : No

Rel. Reference Window : 0.000 %
 Abs. Reference Window : 0.100 min
 Rel. Non-ref. Window : 0.000 %
 Abs. Non-ref. Window : 0.070 min
 Uncalibrated Peaks : not reported
 Partial Calibration : Yes, identified peaks are recalibrated
 Correct All Ret. Times: No, only for identified peaks

Curve Type : Linear
 Origin : Ignored
 Weight : Quadratic (Amnt)

Recalibration Settings:
 Average Response : No Update
 Average Retention Time: Floating Average New 75%

Calibration Report Options :
 Printout of recalibrations within a sequence:
 Calibration Table after Recalibration
 Normal Report after Recalibration
 If the sequence is done with bracketing:
 Results of first cycle (ending previous bracket)

Sample ISTD Information:

ISTD #	ISTD Amount [ug/mL]	Name
--------	---------------------	------

1	232.64000	4-Nitrotoluene
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Signal Details

Signal 1: NPD2 B,

Overview Table

RT	Sig	Lvl	Amount [ug/mL]	Area	Rsp.Factor	Ref	ISTD #	Compound
2.552	1	1	239.74800	294.12701	8.15117e-1	No	Yes 1	4-Nitrotoluene
		2	239.75000	295.22165	8.12102e-1			
		3	239.75000	291.11169	8.23567e-1			
5.344	1	1	9.98860e-1	5.05250	1.97696e-1	No	No 1	Phosgene

RT	Sig	Lvl	Amount [ug/mL]	Area	Rsp.Factor	Ref	ISTD #	Compound
2			4.99430	23.78846	2.09946e-1			
3			9.98860	52.05507	1.91885e-1			

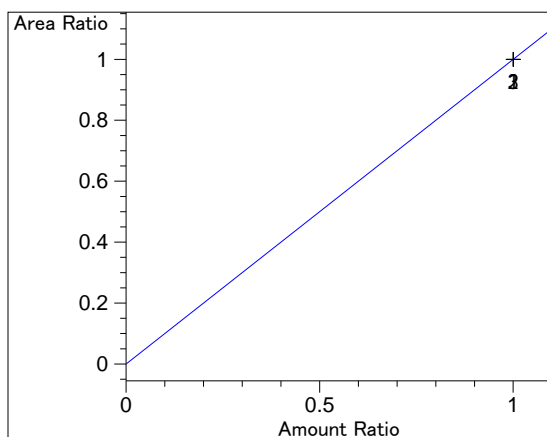
Peak Sum Table

No Entries in table

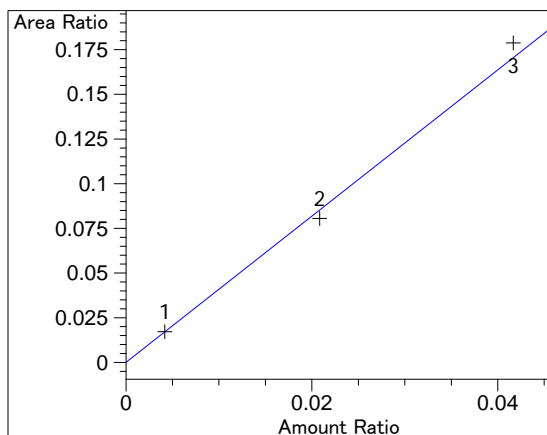
6 Warnings or Errors :

Warning : Curve requires more calibration points., (4-Nitrotoluene)
Warning : Curve requires more calibration points. at 2.552 min, signal 1
Warning : ISTD compound not calibrated on all levels, (4-Nitrotoluene)
Warning : ISTD compound not calibrated on all levels, (4-Nitrotoluene)
Warning : ISTD compound not calibrated on all levels, (4-Nitrotoluene)
Warning : ISTD compound not calibrated on all levels, (4-Nitrotoluene)

Calibration Curves



4-Nitrotoluene at exp. RT: 2.552
NPD2 B,
Correlation: 1.00000
Residual Std. Dev.: 0.00000
Formula: $y = mx + b$
m: 1.00000
b: 0.00000
x: Amount Ratio
y: Area Ratio
Calibration Level Weights:
Level 1 : 1
Level 2 : 1
Level 3 : 1



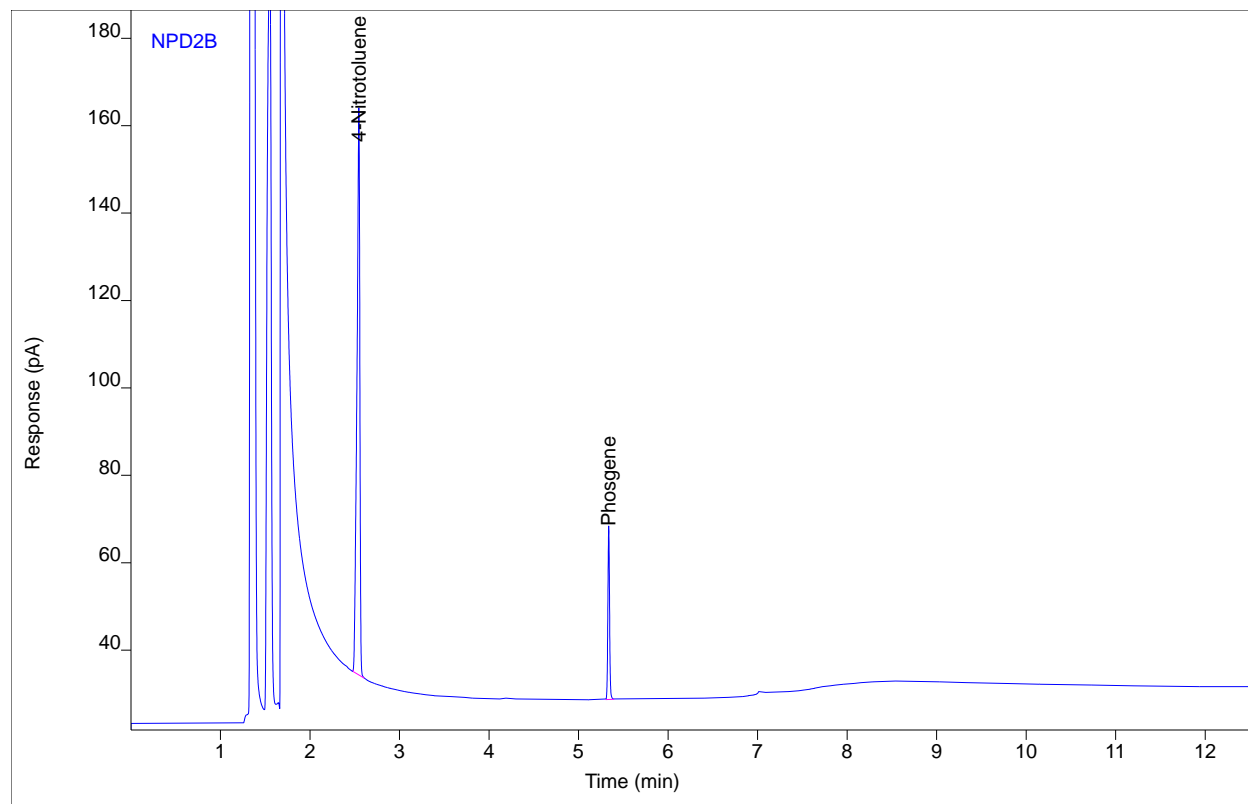
Phosgene at exp. RT: 5.344
NPD2 B,
Correlation: 0.99805
Residual Std. Dev.: 0.00955
Formula: $y = mx + b$
m: 4.09156
b: 2.72753e-5
x: Amount Ratio
y: Area Ratio
Calibration Level Weights:
Level 1 : 1
Level 2 : 0.040001
Level 3 : 0.01

Chromatogram Report

Sample Name gcstds1093 #13
Sequence Name LOLITA0273 ver.3
Inj Data File 031B0601.D
File Location GC/2019/Mr. Ed/Quarter 1
Injection Date 7/30/2019 4:01 PM
File Modified 7/31/2019 4:38 PM
Instrument Lolita
Operator Daniel Clayton

Enthalpy Analytical

Sample Type Calibration
Vial Number 31
Injection Volume 1
Injection 1 of 1
Acquisition Method LOLITA0273_PHOSGENE.M
Analysis Method LOLITA0273_PHOSGENE_R.M
Method Modified 7/31/2019 4:38 PM
Printed 7/31/2019 5:44 PM



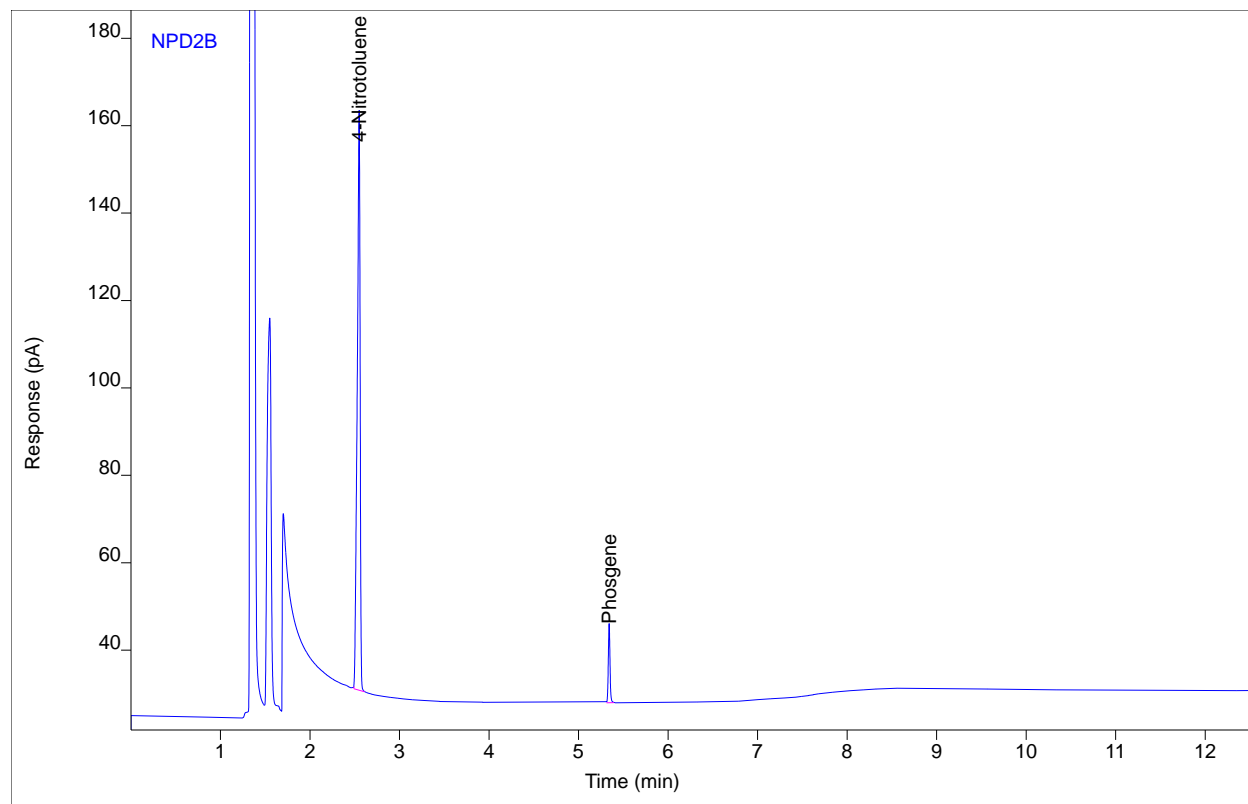
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
4-Nitrotoluene	I BB	2.55	291.112	129.722	239.750			ug/mL
Phosgene	BB	5.34	52.0551	39.6969	10.2677	1	10.2677	ug/mL

Chromatogram Report

Sample Name gcstds1093 #12
Sequence Name LOLITA0273 ver.3
Inj Data File 032B0701.D
File Location GC/2019/Mr. Ed/Quarter 1
Injection Date 7/30/2019 4:16 PM
File Modified 7/31/2019 4:38 PM
Instrument Lolita
Operator Daniel Clayton

Enthalpy Analytical

Sample Type Calibration
Vial Number 32
Injection Volume 1
Injection 1 of 1
Acquisition Method LOLITA0273_PHOSGENE.M
Analysis Method LOLITA0273_PHOSGENE_R.M
Method Modified 7/31/2019 4:38 PM
Printed 7/31/2019 5:44 PM



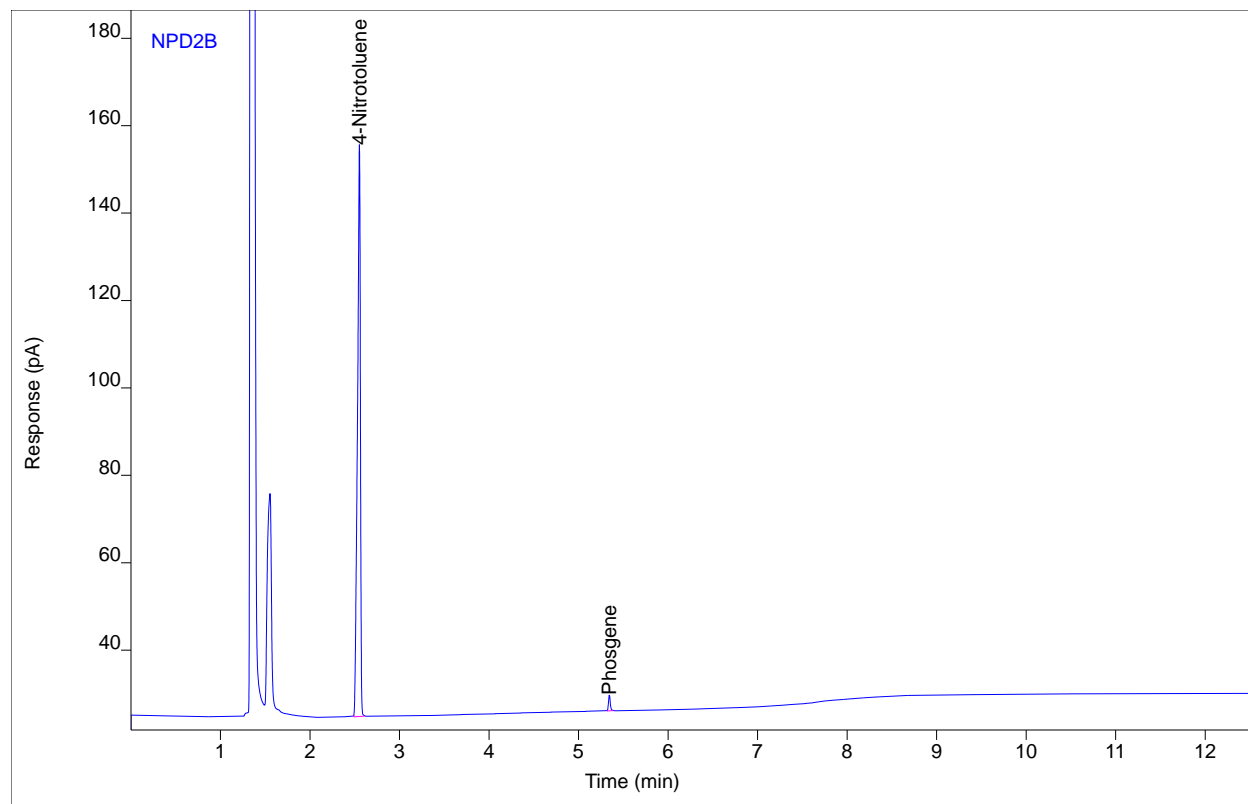
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
4-Nitrotoluene	I BB	2.55	295.222	132.655	239.750			ug/mL
Phosgene	BB	5.34	23.7885	18.1957	4.64391	1	4.64391	ug/mL

Chromatogram Report

Sample Name gcstds1093 #11
Sequence Name LOLITA0273 ver.3
Inj Data File 033B0801.D
File Location GC/2019/Mr. Ed/Quarter 1
Injection Date 7/30/2019 4:31 PM
File Modified 7/31/2019 4:38 PM
Instrument Lolita
Operator Daniel Clayton

Enthalpy Analytical

Sample Type Calibration
Vial Number 33
Injection Volume 1
Injection 1 of 8
Acquisition Method LOLITA0273_PHOSGENE.M
Analysis Method LOLITA0273_PHOSGENE_R.M
Method Modified 7/31/2019 4:38 PM
Printed 7/31/2019 5:44 PM



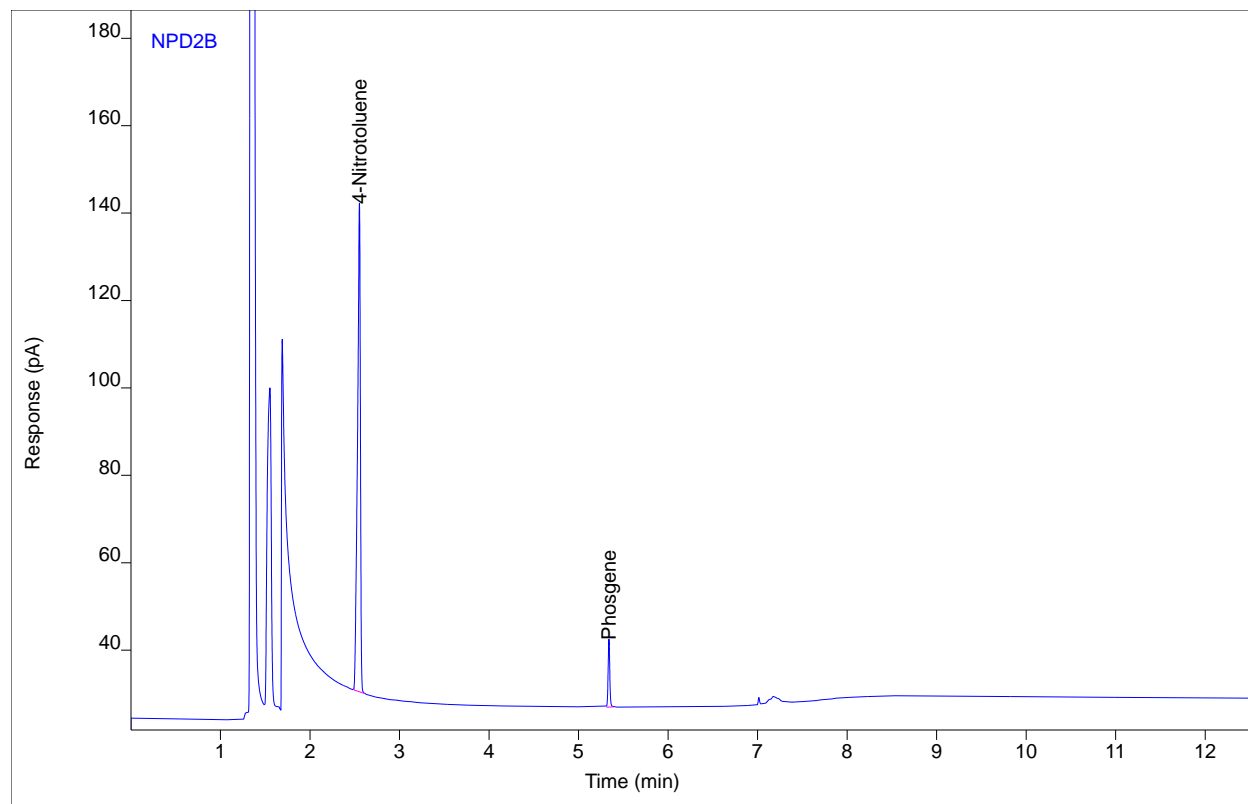
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
4-Nitrotoluene	I BB	2.55	294.127	130.879	239.748			ug/mL
Phosgene	BB	5.34	5.05250	3.69148	1.01442	1	1.01442	ug/mL

Chromatogram Report

Sample Name gcstds1093 #12
Sequence Name LOLITA0273A ver.4
Inj Data File 032B1201.D
File Location GC/2019/Lolita/Quarter 3
Injection Date 7/31/2019 10:53 AM
File Modified 7/31/2019 5:41 PM
Instrument Lolita
Operator Daniel Clayton

Enthalpy Analytical

Sample Type Calibration
Vial Number Vial 32
Injection Volume 1
Injection 1 of 1
Acquisition Method LOLITA0273_PHOSGENE.M
Analysis Method LOLITA0273_PHOSGENE_R.M
Method Modified 7/31/2019 5:40 PM
Printed 7/31/2019 5:44 PM



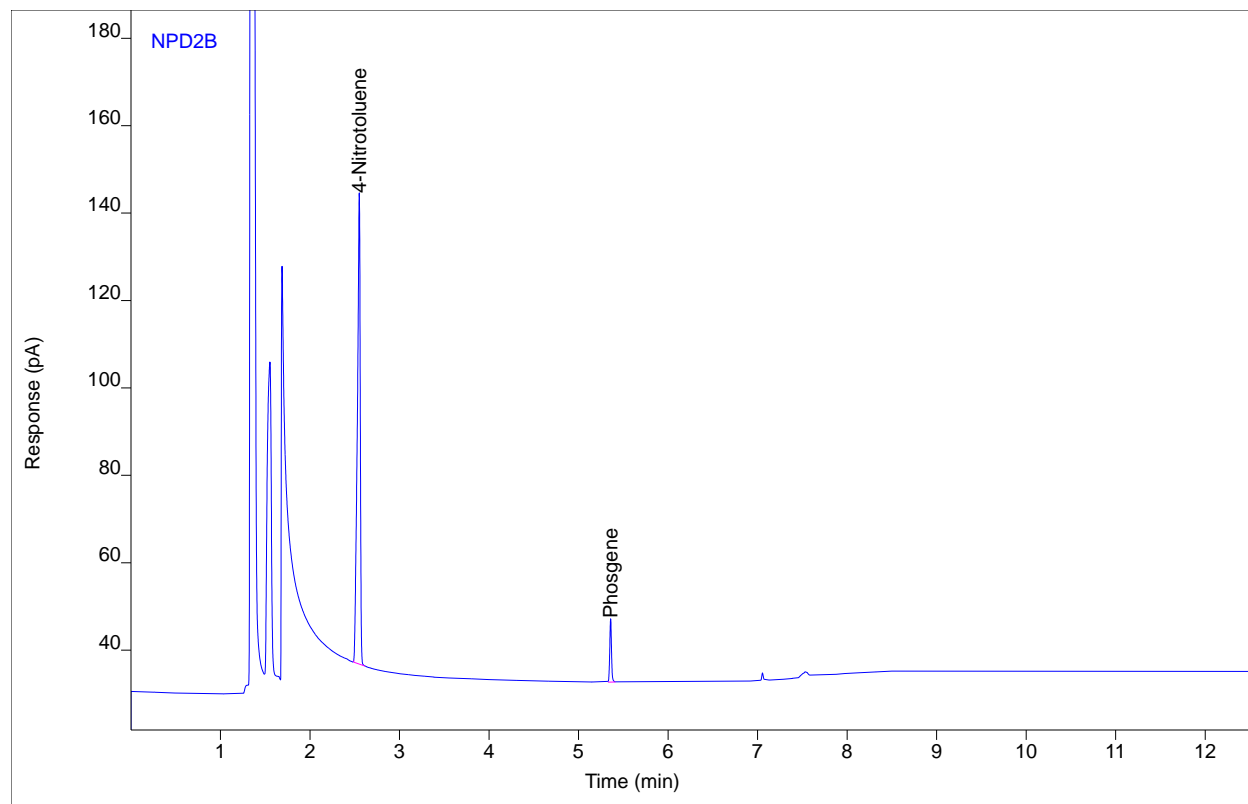
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
4-Nitrotoluene	BB	2.55	249.710	111.791	232.640	1	232.640	ug/mL
Phosgene	BB	5.34	20.1383	15.4905	4.58392	1	4.58392	ug/mL

Chromatogram Report

Sample Name gcstds1093 #12
Sequence Name LOLITA0273A ver.4
Inj Data File 032B2101.D
File Location GC/2019/Lolita/Quarter 3
Injection Date 7/31/2019 1:09 PM
File Modified 7/31/2019 5:41 PM
Instrument Lolita
Operator Daniel Clayton

Enthalpy Analytical

Sample Type Calibration
Vial Number Vial 32
Injection Volume 1
Injection 1 of 1
Acquisition Method LOLITA0273_PHOSGENE.M
Analysis Method LOLITA0273_PHOSGENE_R.M
Method Modified 7/31/2019 5:40 PM
Printed 7/31/2019 5:44 PM



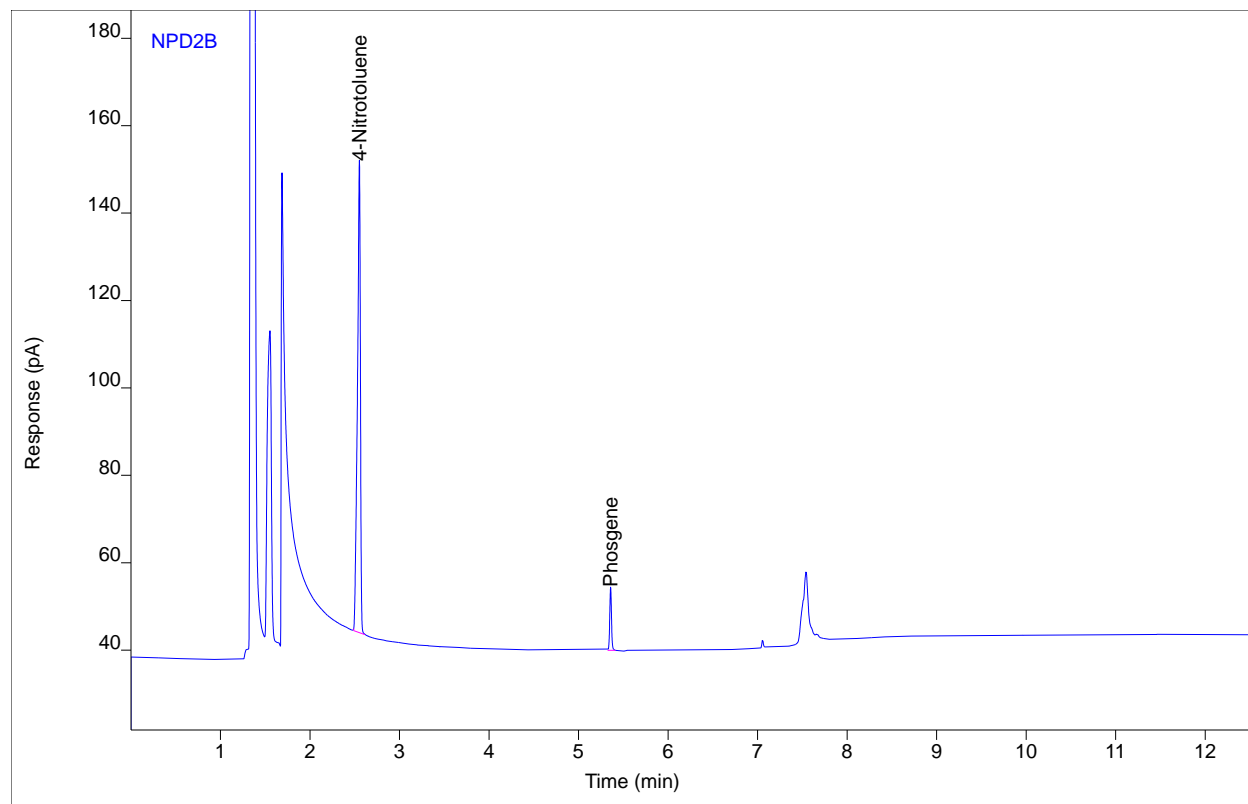
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
4-Nitrotoluene	BB	2.55	243.484	107.793	232.640	1	232.640	ug/mL
Phosgene	BB	5.36	19.4272	14.6337	4.53508	1	4.53508	ug/mL

Chromatogram Report

Sample Name gcstds1093 #12
Sequence Name LOLITA0273A ver.4
Inj Data File 032B3201.D
File Location GC/2019/Lolita/Quarter 3
Injection Date 7/31/2019 3:54 PM
File Modified 7/31/2019 5:41 PM
Instrument Lolita
Operator Daniel Clayton

Enthalpy Analytical

Sample Type
Vial Number
Injection Volume
Injection
Acquisition Method
Analysis Method
Method Modified
Printed
Calibration
Vial 32
1
1 of 1
LOLITA0273_PHOSGENE.M
LOLITA0273_PHOSGENE_R.M
7/31/2019 5:40 PM
7/31/2019 5:44 PM



Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
4-Nitrotoluene	BB	2.55	248.229	108.118	232.640	1	232.640	ug/mL
Phosgene	BB	5.36	19.7415	14.5959	4.52037	1	4.52037	ug/mL

Modified on: 7/30/2019 at 2:13:53 PM

COLUMN COMP 1

Derive from front detector

COLUMN COMP 2

Derive from back detector

POST RUN

Post Time: 0.00 min

TIME TABLE

Time	Specifier	Parameter & Setpoint
------	-----------	----------------------

GC Injector

Front Injector:

No parameters specified

Back Injector:

Sample Washes	0
Sample Pumps	7
Injection Volume	1.00 microliters
Syringe Size	10.0 microliters
Nanoliter Adapter	Off
PostInj Solvent A Washes	3
PostInj Solvent B Washes	3
Viscosity Delay	2 seconds
Plunger Speed	Fast

=====

6890 GC METHOD

=====

OVEN

Initial temp: 160 'C (On) Maximum temp: 400 'C
Initial time: 2.60 min Equilibration time: 0.50 min
Ramps:
 # Rate Final temp Final time
 1 20.00 260 5.00
 2 0.0(Off)
Post temp: 50 'C
Post time: 0.00 min
Run time: 12.60 min

FRONT INLET (SPLIT/SPLITLESS)

Mode: Split
Initial temp: 225 'C (On)
Pressure: 1.60 psi (On)
Split ratio: 1.99:1
Split flow: 10.8 mL/min
Total flow: 24.8 mL/min
Gas saver: Off
Gas type: Hydrogen

BACK INLET (SPLIT/SPLITLESS)

Mode: Split
Initial temp: 180 'C (On)
Pressure: 26.34 psi (On)
Split ratio: 20:1
Split flow: 36.0 mL/min
Total flow: 40.5 mL/min
Gas saver: Off
Gas type: Helium

COLUMN 1

Capillary Column
Model Number: Restek 10637
Stabilwax 15m x 0.53mmID x 0.5um
Max temperature: 260 'C
Nominal length: 15.0 m
Nominal diameter: 530.00 um
Nominal film thickness: 0.50 um
Mode: constant flow
Initial flow: 5.4 mL/min
Nominal init pressure: 1.60 psi
Average velocity: 56 cm/sec
Inlet: Front Inlet
Outlet: Front Detector
Outlet pressure: ambient

COLUMN 2

Capillary Column
Model Number: Restek 15023
Rtx-200 Rtx-200 30m x 0.25 x 0.25
Max temperature: 340 'C
Nominal length: 30.0 m
Nominal diameter: 250.00 um
Nominal film thickness: 0.25 um
Mode: constant flow
Initial flow: 1.8 mL/min
Nominal init pressure: 26.35 psi
Average velocity: 44 cm/sec
Inlet: Back Inlet
Outlet: Back Detector
Outlet pressure: ambient

FRONT DETECTOR (FID)

Temperature: 150 'C (On)
Hydrogen flow: 40.0 mL/min (Off)
Air flow: 450.0 mL/min (Off)
Mode: Constant makeup flow
Makeup flow: 45.0 mL/min (Off)
Makeup Gas Type: Nitrogen
Flame: Off
Electrometer: On
Lit offset: 2.0

BACK DETECTOR (NPD)

Temperature: 275 'C (On)
Hydrogen flow: 2.0 mL/min (On)
Air flow: 60.0 mL/min (On)
Mode: Constant makeup flow
Makeup flow: 3.0 mL/min (On)
Makeup Gas Type: Helium
Adjust offset: 22.00
Electrometer: On
Bead: On
Equilibration time: 1.00

SIGNAL 1

Data rate: 50 Hz
Type: front detector
Save Data: On
Zero: 0.0 (Off)
Range: 0
Fast Peaks: Off
Attenuation: 0

SIGNAL 2

Data rate: 20 Hz
Type: back detector
Save Data: On
Zero: 0.0 (Off)
Range: 0
Fast Peaks: Off
Attenuation: 0

**This Is The Last Page
Of This Report.**

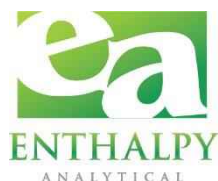
Tetra Tech, Inc.

3746 Mt. Diablo Blvd. Suite 300
Lafayette, CA 94549

Able Contracting
Richland, SC

Analytical Report
EA Project # 0719-205

IO-3.1 (Digestion) / IO-3.4 & 3.5 (Analysis)
TAL Metals



Enthalpy Analytical, LLC

Phone: (919) 942-8607 / Fax: (919) 850-9012 / www.enthalpy.com
4620 Industry Lane, Suite B – Durham, NC 27713



Analysis Report

EA Job#: 0719-205.1 Report Date: 8/1/2019
Client: Tetra Tech Date Received: 7/29/2019
Client Project ID: TAL Metals - Able Contracting - Richland, SC

Concentration in Original Sample - ACF-AS-RES-AM-072719 37mm Filter

Analyte	ug/m ³
Aluminum (Al)	0.77
Antimony (Sb)	< 0.22
Arsenic (As)	< 0.45
Barium (Ba)	0.13
Beryllium (Be)	< 0.045
Cadmium (Cd)	< 0.045
Chromium (Cr)	0.89
Cobalt (Co)	< 0.045
Copper (Cu)	< 0.22
Iron (Fe)	1.3
Lead (Pb)	< 0.045

Approved by:

A handwritten signature in black ink, appearing to read 'Matt Loftis'.

Matt Loftis, Metals Group Leader



Analysis Report

EA Job#: 0719-205.1

Report Date: 8/1/2019

Client: Tetra Tech

Date Received: 7/29/2019

Client Project ID: TAL Metals - Able Contracting - Richland, SC

Concentration in Original Sample - ACF-AS-RES-AM-072719 37mm Filter

Analyte	ug/m ³
Manganese (Mn)	< 0.22
Nickel (Ni)	< 0.22
Selenium (Se)	< 0.45
Silver (Ag)	< 0.045
Thallium (Tl)	< 0.045
Vanadium (V)	< 0.45
Zinc (Zn)	< 0.45
Calcium (Ca)	54.0
Magnesium (Mg)	11.2
Potassium (K)	< 4.5
Sodium (Na)	15.8

Approved by:

A handwritten signature in black ink, appearing to read 'Matt Loftis', is written over a horizontal line.

Matt Loftis, Metals Group Leader



Analysis Report

EA Job#: 0719-205.2 Report Date: 8/1/2019
Client: Tetra Tech Date Received: 7/29/2019
Client Project ID: TAL Metals - Able Contracting - Richland, SC

Concentration in Original Sample - ACF-AS-Smoke-AM 072719 37mm Filter

Analyte	ug/m ³
Aluminum (Al)	0.52
Antimony (Sb)	< 0.23
Arsenic (As)	< 0.46
Barium (Ba)	0.25
Beryllium (Be)	< 0.046
Cadmium (Cd)	< 0.046
Chromium (Cr)	0.90
Cobalt (Co)	< 0.046
Copper (Cu)	< 0.23
Iron (Fe)	0.87
Lead (Pb)	< 0.046

Approved by:

A handwritten signature in black ink, appearing to read 'Matt Loftis'.

Matt Loftis, Metals Group Leader



Analysis Report

EA Job#: 0719-205.2

Report Date: 8/1/2019

Client: Tetra Tech

Date Received: 7/29/2019

Client Project ID: TAL Metals - Able Contracting - Richland, SC

Concentration in Original Sample - ACF-AS-Smoke-AM 072719 37mm Filter

Analyte	ug/m ³
Manganese (Mn)	< 0.23
Nickel (Ni)	< 0.23
Selenium (Se)	< 0.46
Silver (Ag)	< 0.046
Thallium (Tl)	< 0.046
Vanadium (V)	< 0.46
Zinc (Zn)	< 0.46
Calcium (Ca)	55.1
Magnesium (Mg)	11.5
Potassium (K)	< 4.6
Sodium (Na)	16.5

Approved by:

A handwritten signature in black ink, appearing to read 'Matt Loftis', is written over a horizontal line.

Matt Loftis, Metals Group Leader



Analysis Report

EA Job#: 0719-205.3

Report Date: 8/1/2019

Client: Tetra Tech

Date Received: 7/29/2019

Client Project ID: TAL Metals - Able Contracting - Richland, SC

Concentration in Original Sample - ACF-AS-RES-PM-072719 37mm Filter

Analyte	ug/m ³
Aluminum (Al)	0.50
Antimony (Sb)	< 0.20
Arsenic (As)	< 0.40
Barium (Ba)	0.13
Beryllium (Be)	< 0.040
Cadmium (Cd)	< 0.040
Chromium (Cr)	1.1
Cobalt (Co)	< 0.040
Copper (Cu)	< 0.20
Iron (Fe)	0.81
Lead (Pb)	< 0.040

Approved by:

A handwritten signature in black ink, appearing to read 'Matt Loftis', is written over a light gray horizontal line.

Matt Loftis, Metals Group Leader



Analysis Report

EA Job#: 0719-205.3

Report Date: 8/1/2019

Client: Tetra Tech

Date Received: 7/29/2019

Client Project ID: TAL Metals - Able Contracting - Richland, SC

Concentration in Original Sample - ACF-AS-RES-PM-072719 37mm Filter

Analyte	ug/m ³
Manganese (Mn)	< 0.20
Nickel (Ni)	< 0.20
Selenium (Se)	< 0.40
Silver (Ag)	< 0.040
Thallium (Tl)	< 0.040
Vanadium (V)	< 0.40
Zinc (Zn)	< 0.40
Calcium (Ca)	48.0
Magnesium (Mg)	10.4
Potassium (K)	< 4.0
Sodium (Na)	14.7

Approved by:

A handwritten signature in black ink, appearing to read 'Matt Loftis'.

Matt Loftis, Metals Group Leader



Analysis Report

EA Job#: 0719-205.4 Report Date: 8/1/2019
Client: Tetra Tech Date Received: 7/29/2019
Client Project ID: TAL Metals - Able Contracting - Richland, SC

Concentration in Original Sample - ACF-AS-Smoke-PM-072719 37mm Filter

Analyte	ug/m ³
Aluminum (Al)	0.48
Antimony (Sb)	< 0.19
Arsenic (As)	< 0.38
Barium (Ba)	0.11
Beryllium (Be)	< 0.038
Cadmium (Cd)	< 0.038
Chromium (Cr)	0.75
Cobalt (Co)	< 0.038
Copper (Cu)	< 0.19
Iron (Fe)	0.86
Lead (Pb)	< 0.038

Approved by:

A handwritten signature in black ink, appearing to read 'Matt Loftis'.

Matt Loftis, Metals Group Leader



Analysis Report

EA Job#: 0719-205.4

Report Date: 8/1/2019

Client: Tetra Tech

Date Received: 7/29/2019

Client Project ID: TAL Metals - Able Contracting - Richland, SC

Concentration in Original Sample - ACF-AS-Smoke-PM-072719 37mm Filter

Analyte	ug/m ³
Manganese (Mn)	< 0.19
Nickel (Ni)	< 0.19
Selenium (Se)	< 0.38
Silver (Ag)	< 0.038
Thallium (Tl)	< 0.038
Vanadium (V)	< 0.38
Zinc (Zn)	< 0.38
Calcium (Ca)	41.3
Magnesium (Mg)	8.5
Potassium (K)	< 3.8
Sodium (Na)	12.0

Approved by:

A handwritten signature in black ink, appearing to read 'Matt Loftis', is written over a horizontal line.

Matt Loftis, Metals Group Leader



Analysis Report

EA Job#: 0719-205.5 Report Date: 8/1/2019
Client: Tetra Tech Date Received: 7/29/2019
Client Project ID: TAL Metals - Able Contracting - Richland, SC

Concentration in Original Sample - ACF-AS-BKGD-072819 37mm Filter

Analyte	ug/m ³
Aluminum (Al)	0.55
Antimony (Sb)	< 0.19
Arsenic (As)	< 0.39
Barium (Ba)	0.11
Beryllium (Be)	< 0.039
Cadmium (Cd)	< 0.039
Chromium (Cr)	0.73
Cobalt (Co)	< 0.039
Copper (Cu)	< 0.19
Iron (Fe)	0.93
Lead (Pb)	< 0.039

Approved by:

A handwritten signature in black ink, appearing to read 'Matt Loftis'.

Matt Loftis, Metals Group Leader



Analysis Report

EA Job#: 0719-205.5

Report Date: 8/1/2019

Client: Tetra Tech

Date Received: 7/29/2019

Client Project ID: TAL Metals - Able Contracting - Richland, SC

Concentration in Original Sample - ACF-AS-BKGD-072819 37mm Filter

Analyte	ug/m ³
Manganese (Mn)	< 0.19
Nickel (Ni)	< 0.19
Selenium (Se)	< 0.39
Silver (Ag)	< 0.039
Thallium (Tl)	< 0.039
Vanadium (V)	< 0.39
Zinc (Zn)	< 0.39
Calcium (Ca)	52.7
Magnesium (Mg)	9.6
Potassium (K)	< 3.9
Sodium (Na)	12.7

Approved by:

A handwritten signature in black ink, appearing to read 'Matt Loftis', is written over a horizontal line.

Matt Loftis, Metals Group Leader



Analysis Report

EA Job#: 0719-205.6

Report Date: 8/1/2019

Client: Tetra Tech

Date Received: 7/29/2019

Client Project ID: TAL Metals - Able Contracting - Richland, SC

Concentration in Original Sample - ACF-Blank-37mm Filter

Analyte	ug
Aluminum (Al)	0.52
Antimony (Sb)	< 0.15
Arsenic (As)	< 0.30
Barium (Ba)	0.096
Beryllium (Be)	< 0.030
Cadmium (Cd)	< 0.030
Chromium (Cr)	0.67
Cobalt (Co)	< 0.030
Copper (Cu)	< 0.15
Iron (Fe)	0.60
Lead (Pb)	< 0.030

Approved by:

A handwritten signature in black ink, appearing to read 'Matt Loftis', is written over a light grey horizontal line.

Matt Loftis, Metals Group Leader



Analysis Report

EA Job#: 0719-205.6

Report Date: 8/1/2019

Client: Tetra Tech

Date Received: 7/29/2019

Client Project ID: TAL Metals - Able Contracting - Richland, SC

Concentration in Original Sample - ACF-Blank-37mm Filter

Analyte	ug
Manganese (Mn)	< 0.15
Nickel (Ni)	< 0.15
Selenium (Se)	< 0.30
Silver (Ag)	< 0.030
Thallium (Tl)	< 0.030
Vanadium (V)	< 0.30
Zinc (Zn)	< 0.30
Calcium (Ca)	39.2
Magnesium (Mg)	7.3
Potassium (K)	< 3.0
Sodium (Na)	9.6

Approved by:

A handwritten signature in black ink, appearing to read 'Matt Loftis', is written over a horizontal line.

Matt Loftis, Metals Group Leader

Aluminum (27) in Cassette Filter

FLOW CALCULATION WORKSHEET

Client: Tetra Tech
 EA Job#: 0719-205
 Analysis Date: 07-31-19

Sample ID		Filter Volume (L)	Filter Amount (µg)	Sample Amount (µg/m ³)
Client	EA			
ACF-AS-RES-AM-072719 37 mm Filter	0719-205.1	672.6	0.515	0.766
ACF-AS-Smoke-AM-072719 37 mm Filter	0719-205.2	657.5	0.340	0.517
ACF-AS-RES-PM-072719 37 mm Filter	0719-205.3	744.8	0.375	0.503
ACF-AS-Smoke-PM-072719 37 mm Filter	0719-205.4	784.6	0.378	0.482
ACF-AS-BKGD-072819 37 mm Filter	0719-205.5	776.6	0.430	0.554

*Note: 1000L = 1m³

Aluminum (27) in Cassette Filter

ICP-MS ANALYSIS RUN SUMMARY AND CALCULATION WORKSHEET

Client: Tetra Tech
EA Job#: 0719-205
Analysis Date: 07-31-19

LOQ = 10.0 µg/L
LCS Conc. = 100 µg/L
PDS Conc. = 50.0 µg/L
Analyst: MBL

Client	Sample ID	EA	Test Sol'n (µg/L)	Dig'te Conc (µg/L)	FV (mL)	Dilution Factor	Filter Aliquot Factor	Filter Total (µg)
ACF-AS-RES-AM-072719 37mm Filter	0719-205.1		17.18	17.18	30	1	1	0.515
ACF-AS-Smoke-AM-072719 37mm Filter	0719-205.2		11.34	11.34	30	1	1	0.340
ACF-AS-RES-PM-072719 37mm Filter	0719-205.3		12.50	12.50	30	1	1	0.375
ACF-AS-Smoke-PM-072719 37mm Filter	0719-205.4		12.59	12.59	30	1	1	0.378
ACF-AS-BKGD-072819 37mm Filter	0719-205.5		14.32	14.32	30	1	1	0.430
ACF-Blank-37mm Filter	0719-205.6		17.17	17.17	30	1	1	0.515
Lab Blank	0719-205.LB		0.49	0.49	30	1	1	< 0.30
LCS	0719-205.LCS		49.01	98.0	30	2	98.0%	Rec.
Post Digest MS	0719-205.3 PDS		57.12	57.1	30	1	89.2%	Rec.
Duplicate	0719-205.4 DUF		12.24	12.24	30	1	N/A	RPD

Antimony (121) in Cassette Filter

FLOW CALCULATION WORKSHEET

Client: Tetra Tech
EA Job#: 0719-205
Analysis Date: 07-30-19

Sample ID		Filter Volume (L)	Filter Amount (µg)	Sample Amount (µg/m ³)
Client	EA			
ACF-AS-RES-AM-072719 37 mm Filter	0719-205.1	672.6	< 0.150	< 0.223
ACF-AS-Smoke-AM-072719 37 mm Filter	0719-205.2	657.5	< 0.150	< 0.228
ACF-AS-RES-PM-072719 37 mm Filter	0719-205.3	744.8	< 0.150	< 0.201
ACF-AS-Smoke-PM-072719 37 mm Filter	0719-205.4	784.6	< 0.150	< 0.191
ACF-AS-BKGD-072819 37 mm Filter	0719-205.5	776.6	< 0.150	< 0.193

*Note: 1000L = 1m³

Antimony (121) in Cassette Filter

ICP-MS ANALYSIS RUN SUMMARY AND CALCULATION WORKSHEET

Client: Tetra Tech
EA Job#: 0719-205
Analysis Date: 07-30-19

LOQ = 5.0 µg/L
LCS Conc. = 100 µg/L
PDS Conc. = 50.0 µg/L
Analyst: MBL

Client	Sample ID	EA	Test Sol'n (µg/L)	Dig'te Conc (µg/L)	FV (mL)	Dilution Factor	Filter Aliquot Factor	Filter Total (µg)
ACF-AS-RES-AM-072719 37mm Filter	0719-205.1		-0.92	-0.92	30	1	1	< 0.150
ACF-AS-Smoke-AM-072719 37mm Filter	0719-205.2		-0.88	-0.88	30	1	1	< 0.150
ACF-AS-RES-PM-072719 37mm Filter	0719-205.3		-0.92	-0.92	30	1	1	< 0.150
ACF-AS-Smoke-PM-072719 37mm Filter	0719-205.4		-0.78	-0.78	30	1	1	< 0.150
ACF-AS-BKGD-072819 37mm Filter	0719-205.5		-0.96	-0.96	30	1	1	< 0.150
ACF-Blank-37mm Filter	0719-205.6		-0.96	-0.96	30	1	1	< 0.150
Lab Blank	0719-205.LB		-0.83	-0.83	30	1	1	< 0.15
LCS	0719-205.LCS		48.31	96.6	30	2	96.6%	Rec.
Post Digest MS	0719-205.1 PDS		46.81	46.8	30	1	93.6%	Rec.
Duplicate	0719-205.2 DUF		-0.74	-0.74	30	1	N/A	RPD

Arsenic (75) in Cassette Filter

FLOW CALCULATION WORKSHEET

Client: Tetra Tech
 EA Job#: 0719-205
 Analysis Date: 07-30-19

Sample ID		Filter Volume (L)	Filter Amount (µg)	Sample Amount (µg/m ³)
Client	EA			
ACF-AS-RES-AM-072719 37 mm Filter	0719-205.1	672.6	< 0.300	< 0.446
ACF-AS-Smoke-AM-072719 37 mm Filter	0719-205.2	657.5	< 0.300	< 0.456
ACF-AS-RES-PM-072719 37 mm Filter	0719-205.3	744.8	< 0.300	< 0.402
ACF-AS-Smoke-PM-072719 37 mm Filter	0719-205.4	784.6	< 0.300	< 0.382
ACF-AS-BKGD-072819 37 mm Filter	0719-205.5	776.6	< 0.300	< 0.386

*Note: 1000L = 1m³

Arsenic (75) in Cassette Filter

ICP-MS ANALYSIS RUN SUMMARY AND CALCULATION WORKSHEET

Client: Tetra Tech
 EA Job#: 0719-205
 Analysis Date: 07-30-19

LOQ = 10.0 µg/L
 LCS Conc. = 100 µg/L
 PDS Conc. = 50.0 µg/L
 Analyst: MBL

Client	Sample ID	EA	Test Sol'n (µg/L)	Dig'te Conc (µg/L)	FV (mL)	Dilution Factor	Filter Aliquot Factor		Filter Total (µg)
ACF-AS-RES-AM-072719 37mm Filter	0719-205.1		-0.29	-0.29	30	1	1	<	0.300
ACF-AS-Smoke-AM-072719 37mm Filter	0719-205.2		-2.72	-2.72	30	1	1	<	0.300
ACF-AS-RES-PM-072719 37mm Filter	0719-205.3		-4.50	-4.50	30	1	1	<	0.300
ACF-AS-Smoke-PM-072719 37mm Filter	0719-205.4		-1.86	-1.86	30	1	1	<	0.300
ACF-AS-BKGD-072819 37mm Filter	0719-205.5		-2.84	-2.84	30	1	1	<	0.300
ACF-Blank-37mm Filter	0719-205.6		-1.42	-1.42	30	1	1	<	0.300
Lab Blank	0719-205.LB		-2.65	-2.65	30	1	1	<	0.30
LCS	0719-205.LCS		45.14	90.3	30	2	90.3%	Rec.	
Post Digest MS	0719-205.1 PDS		45.60	45.6	30	1	91.2%	Rec.	
Duplicate	0719-205.2 DUF		-1.69	-1.69	30	1	N/A	RPD	

Barium (137) in Cassette Filter

FLOW CALCULATION WORKSHEET

Client: Tetra Tech
 EA Job#: 0719-205
 Analysis Date: 07-30-19

Sample ID		Filter Volume (L)	Filter Amount (µg)	Sample Amount (µg/m ³)
Client	EA			
ACF-AS-RES-AM-072719 37 mm Filter	0719-205.1	672.6	0.090	0.134
ACF-AS-Smoke-AM-072719 37 mm Filter	0719-205.2	657.5	0.163	0.248
ACF-AS-RES-PM-072719 37 mm Filter	0719-205.3	744.8	0.098	0.132
ACF-AS-Smoke-PM-072719 37 mm Filter	0719-205.4	784.6	0.083	0.106
ACF-AS-BKGD-072819 37 mm Filter	0719-205.5	776.6	0.088	0.113

*Note: 1000L = 1m³

Barium (137) in Cassette Filter

ICP-MS ANALYSIS RUN SUMMARY AND CALCULATION WORKSHEET

Client: Tetra Tech
EA Job#: 0719-205
Analysis Date: 07-30-19

LOQ = 1.0 µg/L
LCS Conc. = 100 µg/L
PDS Conc. = 50.0 µg/L
Analyst: MBL

Client	Sample ID	EA	Test Sol'n (µg/L)	Dig'te Conc (µg/L)	FV (mL)	Dilution Factor	Filter Aliquot Factor	Filter Total (µg)
ACF-AS-RES-AM-072719 37mm Filter	0719-205.1		2.99	2.99	30	1	1	0.090
ACF-AS-Smoke-AM-072719 37mm Filter	0719-205.2		5.43	5.43	30	1	1	0.163
ACF-AS-RES-PM-072719 37mm Filter	0719-205.3		3.26	3.26	30	1	1	0.098
ACF-AS-Smoke-PM-072719 37mm Filter	0719-205.4		2.77	2.77	30	1	1	0.083
ACF-AS-BKGD-072819 37mm Filter	0719-205.5		2.95	2.95	30	1	1	0.088
ACF-Blank-37mm Filter	0719-205.6		3.19	3.19	30	1	1	0.096
Lab Blank	0719-205.LB		-0.14	-0.14	30	1	1	< 0.03
LCS	0719-205.LCS		48.24	96.5	30	2	96.5%	Rec.
Post Digest MS	0719-205.1 PDS		50.29	50.3	30	1	100.6%	Rec.
Duplicate	0719-205.2 DUF		5.34	5.34	30	1	1.6%	RPD

Beryllium (9) in Cassette Filter

FLOW CALCULATION WORKSHEET

Client: Tetra Tech
 EA Job#: 0719-205
 Analysis Date: 07-30-19

Sample ID		Filter Volume (L)	Filter Amount (µg)	Sample Amount (µg/m ³)
Client	EA			
ACF-AS-RES-AM-072719 37 mm Filter	0719-205.1	672.6	< 0.030	< 0.045
ACF-AS-Smoke-AM-072719 37 mm Filter	0719-205.2	657.5	< 0.030	< 0.046
ACF-AS-RES-PM-072719 37 mm Filter	0719-205.3	744.8	< 0.030	< 0.040
ACF-AS-Smoke-PM-072719 37 mm Filter	0719-205.4	784.6	< 0.030	< 0.038
ACF-AS-BKGD-072819 37 mm Filter	0719-205.5	776.6	< 0.030	< 0.039

*Note: 1000L = 1m³

Beryllium (9) in Cassette Filter

ICP-MS ANALYSIS RUN SUMMARY AND CALCULATION WORKSHEET

Client: Tetra Tech
 EA Job#: 0719-205
 Analysis Date: 07-30-19

LOQ = 1.0 µg/L
 LCS Conc. = 100 µg/L
 PDS Conc. = 50.0 µg/L
 Analyst: MBL

Client	Sample ID	EA	Test Sol'n (µg/L)	Dig'te Conc (µg/L)	FV (mL)	Dilution Factor	Filter Aliquot Factor		Filter Total (µg)
ACF-AS-RES-AM-072719 37mm Filter	0719-205.1		0.03	0.03	30	1	1	<	0.030
ACF-AS-Smoke-AM-072719 37mm Filter	0719-205.2		0.04	0.04	30	1	1	<	0.030
ACF-AS-RES-PM-072719 37mm Filter	0719-205.3		0.01	0.01	30	1	1	<	0.030
ACF-AS-Smoke-PM-072719 37mm Filter	0719-205.4		0.00	0.00	30	1	1	<	0.030
ACF-AS-BKGD-072819 37mm Filter	0719-205.5		-0.01	-0.01	30	1	1	<	0.030
ACF-Blank-37mm Filter	0719-205.6		-0.01	-0.01	30	1	1	<	0.030
Lab Blank	0719-205.LB		-0.01	-0.01	30	1	1	<	0.03
LCS	0719-205.LCS		47.34	94.7	30	2	94.7%	Rec.	
Post Digest MS	0719-205.1 PDS		46.91	46.9	30	1	93.8%	Rec.	
Duplicate	0719-205.2 DUF		0.03	0.03	30	1	N/A	RPD	

Cadmium (111) in Cassette Filter

FLOW CALCULATION WORKSHEET

Client: Tetra Tech
EA Job#: 0719-205
Analysis Date: 07-30-19

Sample ID		Filter Volume	Filter Amount	Sample Amount
Client	EA	(L)	(µg)	(µg/m ³)
ACF-AS-RES-AM-072719 37 mm Filter	0719-205.1	672.6	< 0.030	< 0.045
ACF-AS-Smoke-AM-072719 37 mm Filter	0719-205.2	657.5	< 0.030	< 0.046
ACF-AS-RES-PM-072719 37 mm Filter	0719-205.3	744.8	< 0.030	< 0.040
ACF-AS-Smoke-PM-072719 37 mm Filter	0719-205.4	784.6	< 0.030	< 0.038
ACF-AS-BKGD-072819 37 mm Filter	0719-205.5	776.6	< 0.030	< 0.039

*Note: 1000L = 1m³

Cadmium (111) in Cassette Filter

ICP-MS ANALYSIS RUN SUMMARY AND CALCULATION WORKSHEET

Client: Tetra Tech
 EA Job#: 0719-205
 Analysis Date: 07-30-19

LOQ = 1.0 µg/L
 LCS Conc. = 100 µg/L
 PDS Conc. = 50.0 µg/L
 Analyst: MBL

Client	Sample ID	EA	Test Sol'n (µg/L)	Dig'te Conc (µg/L)	FV (mL)	Dilution Factor	Filter Aliquot Factor		Filter Total (µg)
ACF-AS-RES-AM-072719 37mm Filter	0719-205.1		0.00	0.00	30	1	1	<	0.030
ACF-AS-Smoke-AM-072719 37mm Filter	0719-205.2		0.01	0.01	30	1	1	<	0.030
ACF-AS-RES-PM-072719 37mm Filter	0719-205.3		0.00	0.00	30	1	1	<	0.030
ACF-AS-Smoke-PM-072719 37mm Filter	0719-205.4		0.02	0.02	30	1	1	<	0.030
ACF-AS-BKGD-072819 37mm Filter	0719-205.5		0.00	0.00	30	1	1	<	0.030
ACF-Blank-37mm Filter	0719-205.6		-0.01	-0.01	30	1	1	<	0.030
Lab Blank	0719-205.LB		-0.01	-0.01	30	1	1	<	0.03
LCS	0719-205.LCS		48.69	97.4	30	2	97.4%	Rec.	
Post Digest MS	0719-205.1 PDS		47.26	47.3	30	1	94.5%	Rec.	
Duplicate	0719-205.2 DUF		0.01	0.01	30	1	N/A	RPD	

Chromium (52) in Cassette Filter

FLOW CALCULATION WORKSHEET

Client: Tetra Tech
 EA Job#: 0719-205
 Analysis Date: 07-31-19

Sample ID		Filter Volume (L)	Filter Amount (µg)	Sample Amount (µg/m ³)
Client	EA			
ACF-AS-RES-AM-072719 37 mm Filter	0719-205.1	672.6	0.596	0.886
ACF-AS-Smoke-AM-072719 37 mm Filter	0719-205.2	657.5	0.589	0.896
ACF-AS-RES-PM-072719 37 mm Filter	0719-205.3	744.8	0.808	1.085
ACF-AS-Smoke-PM-072719 37 mm Filter	0719-205.4	784.6	0.585	0.746
ACF-AS-BKGD-072819 37 mm Filter	0719-205.5	776.6	0.566	0.729

*Note: 1000L = 1m³

Chromium (52) in Cassette Filter

ICP-MS ANALYSIS RUN SUMMARY AND CALCULATION WORKSHEET

Client: Tetra Tech
EA Job#: 0719-205
Analysis Date: 07-31-19

LOQ = 10.0 µg/L
LCS Conc. = 100 µg/L
PDS Conc. = 50.0 µg/L
Analyst: MBL

Client	Sample ID	EA	Test Sol'n (µg/L)	Dig'te Conc (µg/L)	FV (mL)	Dilution Factor	Filter Aliquot Factor	Filter Total (µg)
ACF-AS-RES-AM-072719 37mm Filter	0719-205.1		19.85	19.85	30	1	1	0.596
ACF-AS-Smoke-AM-072719 37mm Filter	0719-205.2		19.62	19.62	30	1	1	0.589
ACF-AS-RES-PM-072719 37mm Filter	0719-205.3		26.94	26.94	30	1	1	0.808
ACF-AS-Smoke-PM-072719 37mm Filter	0719-205.4		19.51	19.51	30	1	1	0.585
ACF-AS-BKGD-072819 37mm Filter	0719-205.5		18.87	18.87	30	1	1	0.566
ACF-Blank-37mm Filter	0719-205.6		22.23	22.23	30	1	1	0.667
Lab Blank	0719-205.LB		5.63	5.63	30	1	1	< 0.30
LCS	0719-205.LCS		48.86	97.7	30	2	97.7%	Rec.
Post Digest MS	0719-205.3 PDS		69.14	69.1	30	1	84.4%	Rec.
Duplicate	0719-205.4 DUF		18.24	18.24	30	1	N/A	RPD

Cobalt (59) in Cassette Filter

FLOW CALCULATION WORKSHEET

Client: Tetra Tech
EA Job#: 0719-205
Analysis Date: 07-30-19

Sample ID		Filter Volume (L)	Filter Amount (µg)	Sample Amount (µg/m ³)
Client	EA			
ACF-AS-RES-AM-072719 37 mm Filter	0719-205.1	672.6	< 0.030	< 0.045
ACF-AS-Smoke-AM-072719 37 mm Filter	0719-205.2	657.5	< 0.030	< 0.046
ACF-AS-RES-PM-072719 37 mm Filter	0719-205.3	744.8	< 0.030	< 0.040
ACF-AS-Smoke-PM-072719 37 mm Filter	0719-205.4	784.6	< 0.030	< 0.038
ACF-AS-BKGD-072819 37 mm Filter	0719-205.5	776.6	< 0.030	< 0.039

*Note: 1000L = 1m³

Cobalt (59) in Cassette Filter

ICP-MS ANALYSIS RUN SUMMARY AND CALCULATION WORKSHEET

Client: Tetra Tech
 EA Job#: 0719-205
 Analysis Date: 07-30-19

LOQ = 1.0 µg/L
 LCS Conc. = 100 µg/L
 PDS Conc. = 50.0 µg/L
 Analyst: MBL

Client	Sample ID	EA	Test Sol'n (µg/L)	Dig'te Conc (µg/L)	FV (mL)	Dilution Factor	Filter Aliquot Factor		Filter Total (µg)
ACF-AS-RES-AM-072719 37mm Filter	0719-205.1		0.00	0.00	30	1	1	<	0.030
ACF-AS-Smoke-AM-072719 37mm Filter	0719-205.2		-0.02	-0.02	30	1	1	<	0.030
ACF-AS-RES-PM-072719 37mm Filter	0719-205.3		-0.02	-0.02	30	1	1	<	0.030
ACF-AS-Smoke-PM-072719 37mm Filter	0719-205.4		-0.02	-0.02	30	1	1	<	0.030
ACF-AS-BKGD-072819 37mm Filter	0719-205.5		-0.02	-0.02	30	1	1	<	0.030
ACF-Blank-37mm Filter	0719-205.6		-0.02	-0.02	30	1	1	<	0.030
Lab Blank	0719-205.LB		-0.03	-0.03	30	1	1	<	0.03
LCS	0719-205.LCS		44.73	89.5	30	2	89.5%	Rec.	
Post Digest MS	0719-205.1 PDS		44.47	44.5	30	1	88.9%	Rec.	
Duplicate	0719-205.2 DUF		-0.01	-0.01	30	1	N/A	RPD	

Copper (63) in Cassette Filter

FLOW CALCULATION WORKSHEET

Client: Tetra Tech
 EA Job#: 0719-205
 Analysis Date: 07-30-19

Sample ID		Filter Volume (L)	Filter Amount (µg)	Sample Amount (µg/m ³)
Client	EA			
ACF-AS-RES-AM-072719 37 mm Filter	0719-205.1	672.6	< 0.150	< 0.223
ACF-AS-Smoke-AM-072719 37 mm Filter	0719-205.2	657.5	< 0.150	< 0.228
ACF-AS-RES-PM-072719 37 mm Filter	0719-205.3	744.8	< 0.150	< 0.201
ACF-AS-Smoke-PM-072719 37 mm Filter	0719-205.4	784.6	< 0.150	< 0.191
ACF-AS-BKGD-072819 37 mm Filter	0719-205.5	776.6	< 0.150	< 0.193

*Note: 1000L = 1m³

Copper (63) in Cassette Filter

ICP-MS ANALYSIS RUN SUMMARY AND CALCULATION WORKSHEET

Client: Tetra Tech
 EA Job#: 0719-205
 Analysis Date: 07-30-19

LOQ = 5.0 µg/L
 LCS Conc. = 100 µg/L
 PDS Conc. = 50.0 µg/L
 Analyst: MBL

Client	Sample ID	EA	Test Sol'n (µg/L)	Dig'te Conc (µg/L)	FV (mL)	Dilution Factor	Filter Aliquot Factor		Filter Total (µg)
ACF-AS-RES-AM-072719 37mm Filter	0719-205.1		1.05	1.05	30	1	1	<	0.150
ACF-AS-Smoke-AM-072719 37mm Filter	0719-205.2		2.78	2.78	30	1	1	<	0.150
ACF-AS-RES-PM-072719 37mm Filter	0719-205.3		1.37	1.37	30	1	1	<	0.150
ACF-AS-Smoke-PM-072719 37mm Filter	0719-205.4		1.45	1.45	30	1	1	<	0.150
ACF-AS-BKGD-072819 37mm Filter	0719-205.5		0.88	0.88	30	1	1	<	0.150
ACF-Blank-37mm Filter	0719-205.6		1.62	1.62	30	1	1	<	0.150
Lab Blank	0719-205.LB		-0.01	-0.01	30	1	1	<	0.15
LCS	0719-205.LCS		45.47	90.9	30	2	90.9%	Rec.	
Post Digest MS	0719-205.1 PDS		45.01	45.0	30	1	90.0%	Rec.	
Duplicate	0719-205.2 DUF		3.90	3.90	30	1	N/A	RPD	

Iron (239.5nm) in Cassette Filter

FLOW CALCULATION WORKSHEET

Client: Tetra Tech
 EA Job#: 0719-205
 Analysis Date: 07-30-19

Sample ID		Filter Volume (L)	Filter Amount (µg)	Sample Amount (µg/m ³)
Client	EA			
ACF-AS-RES-AM-072719 37mm Filter	0719-205.1	672.6	0.841	1.250
ACF-AS-SMOKE-AM-072719 37mm Filter	0719-205.2	657.5	0.570	0.867
ACF-AS-RES-PM-072719 37mm Filter	0719-205.3	744.8	0.601	0.807
ACF-AS-SMOKE-PM-072719 37mm Filter	0719-205.4	784.6	0.677	0.863
ACF-AS-BKGD-072819 37mm Filter	0719-205.5	776.6	0.721	0.928

*Note: 1000L = 1m³

Iron (239.5nm) in Cassette Filter

ICP-OES ANALYSIS RUN SUMMARY AND CALCULATION WORKSHEET

Client: Tetra Tech
 EA Job#: 0719-205
 Analysis Date: 07-30-19

LOQ = 10.0 µg/L
 LCS Conc. = 1000 µg/L
 PDS Conc. = 50.0 µg/L
 Analyst: MAL

Client	Sample ID	EA	Test Sol'n (µg/L)	Dig'te Conc (µg/L)	FV (mL)	Dilution Factor	Filter Aliquot Factor	Filter Total (µg)
ACF-AS-RES-AM-072719 37mm Filter	0719-205.1		28.02	28.02	30	1	1	0.841
ACF-AS-SMOKE-AM-072719 37mm Filter	0719-205.2		18.99	18.99	30	1	1	0.570
ACF-AS-RES-PM-072719 37mm Filter	0719-205.3		20.02	20.02	30	1	1	0.601
ACF-AS-SMOKE-PM-072719 37mm Filter	0719-205.4		22.58	22.58	30	1	1	0.677
ACF-AS-BKGD-072819 37mm Filter	0719-205.5		24.03	24.03	30	1	1	0.721
ACF-Blank-37mm Filter	0719-205.6		20.03	20.03	30	1	1	0.601
Lab Blank	0719-205.LB		0.16	0.16	30	1	1	< 0.30
LCS	0719-205.LCS		48.97	979.4	30	20	97.9%	Rec.
Post Digest MS	0719-205.1.S		49.39	247.0	30	5	87.6%	Rec.
Duplicate	0719-205.3.D		19.79	19.79	30	1	N/A	RPD

Lead (208) in Cassette Filter

FLOW CALCULATION WORKSHEET

Client: Tetra Tech
EA Job#: 0719-205
Analysis Date: 07-30-19

Sample ID		Filter Volume (L)	Filter Amount (µg)	Sample Amount (µg/m ³)
Client	EA			
ACF-AS-RES-AM-072719 37 mm Filter	0719-205.1	672.6	< 0.030	< 0.045
ACF-AS-Smoke-AM-072719 37 mm Filter	0719-205.2	657.5	< 0.030	< 0.046
ACF-AS-RES-PM-072719 37 mm Filter	0719-205.3	744.8	< 0.030	< 0.040
ACF-AS-Smoke-PM-072719 37 mm Filter	0719-205.4	784.6	< 0.030	< 0.038
ACF-AS-BKGD-072819 37 mm Filter	0719-205.5	776.6	< 0.030	< 0.039

*Note: 1000L = 1m³

Lead (208) in Cassette Filter **ICP-MS ANALYSIS RUN SUMMARY AND CALCULATION WORKSHEET**

Client: Tetra Tech
 EA Job#: 0719-205
 Analysis Date: 07-30-19

LOQ = 1.0 µg/L
 LCS Conc. = 100 µg/L
 PDS Conc. = 50.0 µg/L
 Analyst: MBL

Client	Sample ID	EA	Test Sol'n (µg/L)	Dig'te Conc (µg/L)	FV (mL)	Dilution Factor	Filter Aliquot Factor		Filter Total (µg)
ACF-AS-RES-AM-072719 37mm Filter	0719-205.1		0.15	0.15	30	1	1	<	0.030
ACF-AS-Smoke-AM-072719 37mm Filter	0719-205.2		0.29	0.29	30	1	1	<	0.030
ACF-AS-RES-PM-072719 37mm Filter	0719-205.3		0.15	0.15	30	1	1	<	0.030
ACF-AS-Smoke-PM-072719 37mm Filter	0719-205.4		0.37	0.37	30	1	1	<	0.030
ACF-AS-BKGD-072819 37mm Filter	0719-205.5		0.07	0.07	30	1	1	<	0.030
ACF-Blank-37mm Filter	0719-205.6		0.12	0.12	30	1	1	<	0.030
Lab Blank	0719-205.LB		-0.02	-0.02	30	1	1	<	0.03
LCS	0719-205.LCS		47.14	94.3	30	2	94.3%	Rec.	
Post Digest MS	0719-205.1 PDS		46.42	46.4	30	1	92.8%	Rec.	
Duplicate	0719-205.2 DUF		0.49	0.49	30	1	N/A	RPD	

Manganese (55) in Cassette Filter

FLOW CALCULATION WORKSHEET

Client: Tetra Tech
 EA Job#: 0719-205
 Analysis Date: 07-30-19

Sample ID		Filter Volume (L)	Filter Amount (µg)	Sample Amount (µg/m ³)
Client	EA			
ACF-AS-RES-AM-072719 37 mm Filter	0719-205.1	672.6	< 0.150	< 0.223
ACF-AS-Smoke-AM-072719 37 mm Filter	0719-205.2	657.5	< 0.150	< 0.228
ACF-AS-RES-PM-072719 37 mm Filter	0719-205.3	744.8	< 0.150	< 0.201
ACF-AS-Smoke-PM-072719 37 mm Filter	0719-205.4	784.6	< 0.150	< 0.191
ACF-AS-BKGD-072819 37 mm Filter	0719-205.5	776.6	< 0.150	< 0.193

*Note: 1000L = 1m³

Manganese (55) in Cassette Filter

ICP-MS ANALYSIS RUN SUMMARY AND CALCULATION WORKSHEET

Client: Tetra Tech
 EA Job#: 0719-205
 Analysis Date: 07-30-19

LOQ = 5.0 µg/L
 LCS Conc. = 100 µg/L
 PDS Conc. = 50.0 µg/L
 Analyst: MBL

Client	Sample ID	EA	Test Sol'n (µg/L)	Dig'te Conc (µg/L)	FV (mL)	Dilution Factor	Filter Aliquot Factor		Filter Total (µg)
ACF-AS-RES-AM-072719 37mm Filter	0719-205.1		1.78	1.78	30	1	1	<	0.150
ACF-AS-Smoke-AM-072719 37mm Filter	0719-205.2		1.74	1.74	30	1	1	<	0.150
ACF-AS-RES-PM-072719 37mm Filter	0719-205.3		2.21	2.21	30	1	1	<	0.150
ACF-AS-Smoke-PM-072719 37mm Filter	0719-205.4		1.65	1.65	30	1	1	<	0.150
ACF-AS-BKGD-072819 37mm Filter	0719-205.5		1.78	1.78	30	1	1	<	0.150
ACF-Blank-37mm Filter	0719-205.6		2.13	2.13	30	1	1	<	0.150
Lab Blank	0719-205.LB		0.33	0.33	30	1	1	<	0.15
LCS	0719-205.LCS		44.68	89.4	30	2	89.4%	Rec.	
Post Digest MS	0719-205.1 PDS		46.91	46.9	30	1	93.8%	Rec.	
Duplicate	0719-205.2 DUF		1.72	1.72	30	1	N/A	RPD	

Nickel (60) in Cassette Filter

FLOW CALCULATION WORKSHEET

Client: Tetra Tech
 EA Job#: 0719-205
 Analysis Date: 07-30-19

Sample ID		Filter Volume (L)	Filter Amount (µg)	Sample Amount (µg/m ³)
Client	EA			
ACF-AS-RES-AM-072719 37 mm Filter	0719-205.1	672.6	< 0.150	< 0.223
ACF-AS-Smoke-AM-072719 37 mm Filter	0719-205.2	657.5	< 0.150	< 0.228
ACF-AS-RES-PM-072719 37 mm Filter	0719-205.3	744.8	< 0.150	< 0.201
ACF-AS-Smoke-PM-072719 37 mm Filter	0719-205.4	784.6	< 0.150	< 0.191
ACF-AS-BKGD-072819 37 mm Filter	0719-205.5	776.6	< 0.150	< 0.193

*Note: 1000L = 1m³

Nickel (60) in Cassette Filter

ICP-MS ANALYSIS RUN SUMMARY AND CALCULATION WORKSHEET

Client: Tetra Tech
 EA Job#: 0719-205
 Analysis Date: 07-30-19

LOQ = 5.0 µg/L
 LCS Conc. = 100 µg/L
 PDS Conc. = 50.0 µg/L
 Analyst: MBL

Client	Sample ID	EA	Test Sol'n (µg/L)	Dig'te Conc (µg/L)	FV (mL)	Dilution Factor	Filter Aliquot Factor		Filter Total (µg)
ACF-AS-RES-AM-072719 37mm Filter	0719-205.1		0.39	0.39	30	1	1	<	0.150
ACF-AS-Smoke-AM-072719 37mm Filter	0719-205.2		0.43	0.43	30	1	1	<	0.150
ACF-AS-RES-PM-072719 37mm Filter	0719-205.3		0.40	0.40	30	1	1	<	0.150
ACF-AS-Smoke-PM-072719 37mm Filter	0719-205.4		0.33	0.33	30	1	1	<	0.150
ACF-AS-BKGD-072819 37mm Filter	0719-205.5		0.30	0.30	30	1	1	<	0.150
ACF-Blank-37mm Filter	0719-205.6		0.44	0.44	30	1	1	<	0.150
Lab Blank	0719-205.LB		0.00	0.00	30	1	1	<	0.15
LCS	0719-205.LCS		45.28	90.6	30	2	90.6%	Rec.	
Post Digest MS	0719-205.1 PDS		44.74	44.7	30	1	89.5%	Rec.	
Duplicate	0719-205.2 DUF		0.44	0.44	30	1	N/A	RPD	

Selenium (82) in Cassette Filter

FLOW CALCULATION WORKSHEET

Client: Tetra Tech
 EA Job#: 0719-205
 Analysis Date: 07-30-19

Sample ID		Filter Volume (L)	Filter Amount (µg)	Sample Amount (µg/m ³)
Client	EA			
ACF-AS-RES-AM-072719 37 mm Filter	0719-205.1	672.6	< 0.300	< 0.446
ACF-AS-Smoke-AM-072719 37 mm Filter	0719-205.2	657.5	< 0.300	< 0.456
ACF-AS-RES-PM-072719 37 mm Filter	0719-205.3	744.8	< 0.300	< 0.403
ACF-AS-Smoke-PM-072719 37 mm Filter	0719-205.4	784.6	< 0.300	< 0.3822
ACF-AS-BKGD-072819 37 mm Filter	0719-205.5	776.6	< 0.300	< 0.386

*Note: 1000L = 1m³

Selenium (82) in Cassette Filter

ICP-MS ANALYSIS RUN SUMMARY AND CALCULATION WORKSHEET

Client: Tetra Tech
 EA Job#: 0719-205
 Analysis Date: 07-30-19

LOQ = 10.0 µg/L
 LCS Conc. = 100 µg/L
 PDS Conc. = 50.0 µg/L
 Analyst: MBL

Client	Sample ID	EA	Test Sol'n (µg/L)	Dig'te Conc (µg/L)	FV (mL)	Dilution Factor	Filter Aliquot Factor		Filter Total (µg)
ACF-AS-RES-AM-072719 37mm Filter	0719-205.1		-0.36	-0.36	30	1	1	<	0.300
ACF-AS-Smoke-AM-072719 37mm Filter	0719-205.2		-0.27	-0.27	30	1	1	<	0.300
ACF-AS-RES-PM-072719 37mm Filter	0719-205.3		-0.81	-0.81	30	1	1	<	0.300
ACF-AS-Smoke-PM-072719 37mm Filter	0719-205.4		-0.59	-0.59	30	1	1	<	0.300
ACF-AS-BKGD-072819 37mm Filter	0719-205.5		-0.72	-0.72	30	1	1	<	0.300
ACF-Blank-37mm Filter	0719-205.6		-0.59	-0.59	30	1	1	<	0.300
Lab Blank	0719-205.LB		-0.97	-0.97	30	1	1	<	0.30
LCS	0719-205.LCS		47.82	95.6	30	2	95.6%	Rec.	
Post Digest MS	0719-205.1 PDS		47.27	47.3	30	1	94.5%	Rec.	
Duplicate	0719-205.2 DUF		-0.37	-0.37	30	1	N/A	RPD	

Silver (107) in Cassette Filter

FLOW CALCULATION WORKSHEET

Client: Tetra Tech
 EA Job#: 0719-205
 Analysis Date: 07-30-19

Sample ID		Filter Volume (L)	Filter Amount (µg)	Sample Amount (µg/m ³)
Client	EA			
ACF-AS-RES-AM-072719 37 mm Filter	0719-205.1	672.6	< 0.030	< 0.045
ACF-AS-Smoke-AM-072719 37 mm Filter	0719-205.2	657.5	< 0.030	< 0.046
ACF-AS-RES-PM-072719 37 mm Filter	0719-205.3	744.8	< 0.030	< 0.040
ACF-AS-Smoke-PM-072719 37 mm Filter	0719-205.4	784.6	< 0.030	< 0.038
ACF-AS-BKGD-072819 37 mm Filter	0719-205.5	776.6	< 0.030	< 0.039

*Note: 1000L = 1m³

Silver (107) in Cassette Filter

ICP-MS ANALYSIS RUN SUMMARY AND CALCULATION WORKSHEET

Client: Tetra Tech
 EA Job#: 0719-205
 Analysis Date: 07-30-19

LOQ = 1.0 µg/L
 LCS Conc. = 100 µg/L
 PDS Conc. = 50.0 µg/L
 Analyst: MBL

Client	Sample ID	EA	Test Sol'n (µg/L)	Dig'te Conc (µg/L)	FV (mL)	Dilution Factor	Filter Aliquot Factor		Filter Total (µg)
ACF-AS-RES-AM-072719 37mm Filter	0719-205.1		-0.03	-0.03	30	1	1	<	0.030
ACF-AS-Smoke-AM-072719 37mm Filter	0719-205.2		-0.03	-0.03	30	1	1	<	0.030
ACF-AS-RES-PM-072719 37mm Filter	0719-205.3		-0.03	-0.03	30	1	1	<	0.030
ACF-AS-Smoke-PM-072719 37mm Filter	0719-205.4		-0.03	-0.03	30	1	1	<	0.030
ACF-AS-BKGD-072819 37mm Filter	0719-205.5		-0.03	-0.03	30	1	1	<	0.030
ACF-Blank-37mm Filter	0719-205.6		-0.03	-0.03	30	1	1	<	0.030
Lab Blank	0719-205.LB		-0.03	-0.03	30	1	1	<	0.03
LCS	0719-205.LCS		49.27	98.5	30	2	98.5%	Rec.	
Post Digest MS	0719-205.1 PDS		46.81	46.8	30	1	93.6%	Rec.	
Duplicate	0719-205.2 DUF		-0.03	-0.03	30	1	N/A	RPD	

Thallium (205) in Cassette Filter

FLOW CALCULATION WORKSHEET

Client: Tetra Tech
 EA Job#: 0719-205
 Analysis Date: 07-30-19

Sample ID		Filter Volume (L)	Filter Amount (µg)	Sample Amount (µg/m ³)
Client	EA			
ACF-AS-RES-AM-072719 37 mm Filter	0719-205.1	672.6	< 0.030	< 0.045
ACF-AS-Smoke-AM-072719 37 mm Filter	0719-205.2	657.5	< 0.030	< 0.046
ACF-AS-RES-PM-072719 37 mm Filter	0719-205.3	744.8	< 0.030	< 0.040
ACF-AS-Smoke-PM-072719 37 mm Filter	0719-205.4	784.6	< 0.030	< 0.038
ACF-AS-BKGD-072819 37 mm Filter	0719-205.5	776.6	< 0.030	< 0.039

*Note: 1000L = 1m³

Thallium (205) in Cassette Filter

ICP-MS ANALYSIS RUN SUMMARY AND CALCULATION WORKSHEET

Client: Tetra Tech
EA Job#: 0719-205
Analysis Date: 07-30-19

LOQ = 1.0 µg/L
LCS Conc. = 100 µg/L
PDS Conc. = 50.0 µg/L
Analyst: MBL

Client	Sample ID	EA	Test Sol'n (µg/L)	Dig'te Conc (µg/L)	FV (mL)	Dilution Factor	Filter Aliquot Factor	Filter Total (µg)
ACF-AS-RES-AM-072719 37mm Filter	0719-205.1		0.23	0.23	30	1	1	< 0.030
ACF-AS-Smoke-AM-072719 37mm Filter	0719-205.2		0.06	0.06	30	1	1	< 0.030
ACF-AS-RES-PM-072719 37mm Filter	0719-205.3		0.03	0.03	30	1	1	< 0.030
ACF-AS-Smoke-PM-072719 37mm Filter	0719-205.4		0.01	0.01	30	1	1	< 0.030
ACF-AS-BKGD-072819 37mm Filter	0719-205.5		0.00	0.00	30	1	1	< 0.030
ACF-Blank-37mm Filter	0719-205.6		0.00	0.00	30	1	1	< 0.030
Lab Blank	0719-205.LB		-0.01	-0.01	30	1	1	< 0.03
LCS	0719-205.LCS		47.07	94.1	30	2	94.1%	Rec.
Post Digest MS	0719-205.1 PDS		47.39	47.4	30	1	94.8%	Rec.
Duplicate	0719-205.2 DUF		0.00	0.00	30	1	N/A	RPD

Vanadium (292.4nm) in Cassette Filter

FLOW CALCULATION WORKSHEET

Client: Tetra Tech
 EA Job#: 0719-205
 Analysis Date: 07-30-19

Sample ID		Filter Volume (L)	Filter Amount (µg)	Sample Amount (µg/m ³)
Client	EA			
ACF-AS-RES-AM-072719 37mm Filter	0719-205.1	672.6	< 0.300	< 0.446
ACF-AS-SMOKE-AM-072719 37mm Filter	0719-205.2	657.5	< 0.300	< 0.456
ACF-AS-RES-PM-072719 37mm Filter	0719-205.3	744.8	< 0.300	< 0.403
ACF-AS-SMOKE-PM-072719 37mm Filter	0719-205.4	784.6	< 0.300	< 0.382
ACF-AS-BKGD-072819 37mm Filter	0719-205.5	776.6	< 0.300	< 0.386

*Note: 1000L = 1m³

Vanadium (292.4nm) in Cassette Filter

ICP-OES ANALYSIS RUN SUMMARY AND CALCULATION WORKSHEET

Client: Tetra Tech
 EA Job#: 0719-205
 Analysis Date: 07-30-19

LOQ = 10.0 µg/L
 LCS Conc. = 1000 µg/L
 PDS Conc. = 50.0 µg/L
 Analyst: MAL

Client	Sample ID	EA	Test Sol'n (µg/L)	Dig'te Conc (µg/L)	FV (mL)	Dilution Factor	Filter Aliquot Factor	Filter Total (µg)
ACF-AS-RES-AM-072719 37mm Filter	0719-205.1		0.73	0.73	30	1	1	< 0.300
ACF-AS-SMOKE-AM-072719 37mm Filter	0719-205.2		0.19	0.19	30	1	1	< 0.300
ACF-AS-RES-PM-072719 37mm Filter	0719-205.3		0.17	0.17	30	1	1	< 0.300
ACF-AS-SMOKE-PM-072719 37mm Filter	0719-205.4		0.49	0.49	30	1	1	< 0.300
ACF-AS-BKGD-072819 37mm Filter	0719-205.5		0.25	0.25	30	1	1	< 0.300
ACF-Blank-37mm Filter	0719-205.6		0.04	0.04	30	1	1	< 0.300
Lab Blank	0719-205.LB		0.63	0.63	30	1	1	< 0.30
LCS	0719-205.LCS		47.76	955.2	30	20	95.5%	Rec.
Post Digest MS	0719-205.1.S		45.39	227.0	30	5	90.5%	Rec.
Duplicate	0719-205.3.D		0.12	0.12	30	1	N/A	RPD

Zinc (66) in Cassette Filter

FLOW CALCULATION WORKSHEET

Client: Tetra Tech
EA Job#: 0719-205
Analysis Date: 07-30-19

Sample ID		Filter Volume (L)	Filter Amount (µg)	Sample Amount (µg/m ³)
Client	EA			
ACF-AS-RES-AM-072719 37 mm Filter	0719-205.1	672.6	< 0.300	< 0.446
ACF-AS-Smoke-AM-072719 37 mm Filter	0719-205.2	657.5	< 0.300	< 0.456
ACF-AS-RES-PM-072719 37 mm Filter	0719-205.3	744.8	< 0.300	< 0.403
ACF-AS-Smoke-PM-072719 37 mm Filter	0719-205.4	784.6	< 0.300	< 0.3822
ACF-AS-BKGD-072819 37 mm Filter	0719-205.5	776.6	< 0.300	< 0.386

*Note: 1000L = 1m³

Zinc (66) in Cassette Filter

ICP-MS ANALYSIS RUN SUMMARY AND CALCULATION WORKSHEET

Client: Tetra Tech
 EA Job#: 0719-205
 Analysis Date: 07-30-19

LOQ = 10.0 µg/L
 LCS Conc. = 100 µg/L
 PDS Conc. = 50.0 µg/L
 Analyst: MBL

Client	Sample ID	EA	Test Sol'n (µg/L)	Dig'te Conc (µg/L)	FV (mL)	Dilution Factor	Filter Aliquot Factor		Filter Total (µg)
ACF-AS-RES-AM-072719 37mm Filter	0719-205.1		4.10	4.10	30	1	1	<	0.300
ACF-AS-Smoke-AM-072719 37mm Filter	0719-205.2		5.78	5.78	30	1	1	<	0.300
ACF-AS-RES-PM-072719 37mm Filter	0719-205.3		6.53	6.53	30	1	1	<	0.300
ACF-AS-Smoke-PM-072719 37mm Filter	0719-205.4		5.30	5.30	30	1	1	<	0.300
ACF-AS-BKGD-072819 37mm Filter	0719-205.5		6.61	6.61	30	1	1	<	0.300
ACF-Blank-37mm Filter	0719-205.6		5.49	5.49	30	1	1	<	0.300
Lab Blank	0719-205.LB		0.80	0.80	30	1	1	<	0.30
LCS	0719-205.LCS		46.57	93.1	30	2	93.1%	Rec.	
Post Digest MS	0719-205.1 PDS		49.99	50.0	30	1	91.8%	Rec.	
Duplicate	0719-205.2 DUF		5.93	5.93	30	1	N/A	RPD	

Calcium (393.3nm) in Cassette Filter

FLOW CALCULATION WORKSHEET

Client: Tetra Tech
 EA Job#: 0719-205
 Analysis Date: 07-30-19

Sample ID		Filter Volume (L)	Filter Amount (µg)	Sample Amount (µg/m ³)
Client	EA			
ACF-AS-RES-AM-072719 37mm Filter	0719-205.1	672.6	36.306	53.979
ACF-AS-SMOKE-AM-072719 37mm Filter	0719-205.2	657.5	36.198	55.054
ACF-AS-RES-PM-072719 37mm Filter	0719-205.3	744.8	35.730	47.973
ACF-AS-SMOKE-PM-072719 37mm Filter	0719-205.4	784.6	32.382	41.272
ACF-AS-BKGD-072819 37mm Filter	0719-205.5	776.6	40.896	52.660

*Note: 1000L = 1m³

Calcium (393.3nm) in Cassette Filter **ICP-OES ANALYSIS RUN SUMMARY AND CALCULATION WORKSHEET**

Client: Tetra Tech
 EA Job#: 0719-205
 Analysis Date: 07-30-19

LOQ = 100 µg/L
 LCS Conc. = 1000 µg/L
 PDS Conc. = 500.0 µg/L
 Analyst: MAL

Client	Sample ID		Test	Dig'te	FV	Dilution	Filter	Filter
	EA		Sol'n	Conc			Aliquot	
			(µg/L)	(µg/L)	(mL)	Factor	Factor	Total
								(µg)
ACF-AS-RES-AM-072719 37mm Filter	0719-205.1		201.70	1210.20	30	6	1	36.306
ACF-AS-SMOKE-AM-072719 37mm Filter	0719-205.2		201.10	1206.60	30	6	1	36.198
ACF-AS-RES-PM-072719 37mm Filter	0719-205.3		198.50	1191.00	30	6	1	35.730
ACF-AS-SMOKE-PM-072719 37mm Filter	0719-205.4		179.90	1079.40	30	6	1	32.382
ACF-AS-BKGD-072819 37mm Filter	0719-205.5		227.20	1363.20	30	6	1	40.896
ACF-Blank-37mm Filter	0719-205.6		217.60	1305.60	30	6	1	39.168
Lab Blank	0719-205.LB		6.91	6.91	30	1	1	< 3.00
LCS	0719-205.LCS		495.10	990.2	30	2	99.0%	Rec.
Post Digest MS	0719-205.1.S		685.90	3429.5	30	5	88.8%	Rec.
Duplicate	0719-205.2.D		203.00	1218.00	30	6	2.2%	RPD

Magnesium (279.5nm) in Cassette Filter

FLOW CALCULATION WORKSHEET

Client: Tetra Tech
 EA Job#: 0719-205
 Analysis Date: 07-30-19

Sample ID		Filter Volume (L)	Filter Amount (µg)	Sample Amount (µg/m ³)
Client	EA			
ACF-AS-RES-AM-072719 37mm Filter	0719-205.1	672.6	7.527	11.191
ACF-AS-SMOKE-AM-072719 37mm Filter	0719-205.2	657.5	7.533	11.457
ACF-AS-RES-PM-072719 37mm Filter	0719-205.3	744.8	7.716	10.360
ACF-AS-SMOKE-PM-072719 37mm Filter	0719-205.4	784.6	6.630	8.450
ACF-AS-BKGD-072819 37mm Filter	0719-205.5	776.6	7.485	9.638

*Note: 1000L = 1m³

Magnesium (279.5nm) in Cassette Filter

ICP-OES ANALYSIS RUN SUMMARY AND CALCULATION WORKSHEET

Client: Tetra Tech
 EA Job#: 0719-205
 Analysis Date: 07-30-19

LOQ = 100 µg/L
 LCS Conc. = 1000 µg/L
 PDS Conc. = 500.0 µg/L
 Analyst: MAL

Client	Sample ID	EA	Test Sol'n (µg/L)	Dig'te Conc (µg/L)	FV (mL)	Dilution Factor	Filter Aliquot Factor	Filter Total (µg)
ACF-AS-RES-AM-072719 37mm Filter	0719-205.1		250.90	250.90	30	1	1	7.527
ACF-AS-SMOKE-AM-072719 37mm Filter	0719-205.2		251.10	251.10	30	1	1	7.533
ACF-AS-RES-PM-072719 37mm Filter	0719-205.3		257.20	257.20	30	1	1	7.716
ACF-AS-SMOKE-PM-072719 37mm Filter	0719-205.4		221.00	221.00	30	1	1	6.630
ACF-AS-BKGD-072819 37mm Filter	0719-205.5		249.50	249.50	30	1	1	7.485
ACF-Blank-37mm Filter	0719-205.6		244.80	244.80	30	1	1	7.344
Lab Blank	0719-205.LB		-13.73	-13.73	30	1	1	< 3.00
LCS	0719-205.LCS		491.40	982.8	30	2	98.3%	Rec.
Post Digest MS	0719-205.1.S		506.50	2532.5	30	5	91.3%	Rec.
Duplicate	0719-205.3.D		256.30	256.30	30	1	N/A	RPD

Potassium (766.4nm) in Cassette Filter

FLOW CALCULATION WORKSHEET

Client: Tetra Tech
 EA Job#: 0719-205
 Analysis Date: 07-30-19

Sample ID		Filter Volume (L)	Filter Amount (µg)	Sample Amount (µg/m ³)
Client	EA			
ACF-AS-RES-AM-072719 37mm Filter	0719-205.1	672.6	< 3.000	< 4.460
ACF-AS-SMOKE-AM-072719 37mm Filter	0719-205.2	657.5	< 3.000	< 4.563
ACF-AS-RES-PM-072719 37mm Filter	0719-205.3	744.8	< 3.000	< 4.028
ACF-AS-SMOKE-PM-072719 37mm Filter	0719-205.4	784.6	< 3.000	< 3.824
ACF-AS-BKGD-072819 37mm Filter	0719-205.5	776.6	< 3.000	< 3.863

*Note: 1000L = 1m³

Potassium (766.4nm) in Cassette Filter

ICP-OES ANALYSIS RUN SUMMARY AND CALCULATION WORKSHEET

Client: Tetra Tech
 EA Job#: 0719-205
 Analysis Date: 07-30-19

LOQ = 100 µg/L
 LCS Conc. = 1000 µg/L
 PDS Conc. = 500.0 µg/L
 Analyst: MAL

Client	Sample ID		Test	Dig'te	FV	Dilution	Filter		Filter
	EA		Sol'n	Conc			Aliquot		Total
			(µg/L)	(µg/L)	(mL)	Factor	Factor		(µg)
ACF-AS-RES-AM-072719 37mm Filter	0719-205.1		93.92	93.92	30	1	1	<	3.000
ACF-AS-SMOKE-AM-072719 37mm Filter	0719-205.2		93.03	93.03	30	1	1	<	3.000
ACF-AS-RES-PM-072719 37mm Filter	0719-205.3		92.09	92.09	30	1	1	<	3.000
ACF-AS-SMOKE-PM-072719 37mm Filter	0719-205.4		84.12	84.12	30	1	1	<	3.000
ACF-AS-BKGD-072819 37mm Filter	0719-205.5		72.04	72.04	30	1	1	<	3.000
ACF-Blank-37mm Filter	0719-205.6		78.90	78.90	30	1	1	<	3.000
Lab Blank	0719-205.LB		9.71	9.71	30	1	1	<	3.00
LCS	0719-205.LCS		484.20	968.4	30	2	96.8%	Rec.	
Post Digest MS	0719-205.1.S		445.70	2228.5	30	5	85.4%	Rec.	
Duplicate	0719-205.3.D		90.15	90.15	30	1	N/A	RPD	

Sodium (589.5nm) in Cassette Filter

FLOW CALCULATION WORKSHEET

Client: Tetra Tech
EA Job#: 0719-205
Analysis Date: 07-30-19

Sample ID		Filter	Filter	Sample
Client	EA	Volume	Amount	Amount
		(L)	(µg)	(µg/m ³)
ACF-AS-RES-AM-072719 37mm Filter	0719-205.1	672.6	10.614	15.781
ACF-AS-SMOKE-AM-072719 37mm Filter	0719-205.2	657.5	10.821	16.458
ACF-AS-RES-PM-072719 37mm Filter	0719-205.3	744.8	10.923	14.666
ACF-AS-SMOKE-PM-072719 37mm Filter	0719-205.4	784.6	9.390	11.968
ACF-AS-BKGD-072819 37mm Filter	0719-205.5	776.6	9.900	12.748

*Note: 1000L = 1m³

Sodium (589.5nm) in Cassette Filter

ICP-OES ANALYSIS RUN SUMMARY AND CALCULATION WORKSHEET

Client: Tetra Tech
 EA Job#: 0719-205
 Analysis Date: 07-30-19

LOQ = 100 µg/L
 LCS Conc. = 1000 µg/L
 PDS Conc. = 500.0 µg/L
 Analyst: MAL

Client	Sample ID	EA	Test Sol'n (µg/L)	Dig'te Conc (µg/L)	FV (mL)	Dilution Factor	Filter Aliquot Factor	Filter Total (µg)
ACF-AS-RES-AM-072719 37mm Filter	0719-205.1		353.80	353.80	30	1	1	10.614
ACF-AS-SMOKE-AM-072719 37mm Filter	0719-205.2		360.70	360.70	30	1	1	10.821
ACF-AS-RES-PM-072719 37mm Filter	0719-205.3		364.10	364.10	30	1	1	10.923
ACF-AS-SMOKE-PM-072719 37mm Filter	0719-205.4		313.00	313.00	30	1	1	9.390
ACF-AS-BKGD-072819 37mm Filter	0719-205.5		330.00	330.00	30	1	1	9.900
ACF-Blank-37mm Filter	0719-205.6		319.90	319.90	30	1	1	9.597
Lab Blank	0719-205.LB		0.36	0.36	30	1	1	< 3.00
LCS	0719-205.LCS		485.70	971.4	30	2	97.1%	Rec.
Post Digest MS	0719-205.1.S		492.50	2462.5	30	5	84.3%	Rec.
Duplicate	0719-205.3.D		363.60	363.60	30	1	N/A	RPD



Chain of Custody Record

Page 1 of 4

Special Handling:

☐ Standard Turn Around Time

☒ Rush Turn Around Time -- Date Needed ASAP

• All TATs Subject to Approval by Enthalpy Analytical

• All Bag/Can Samples Disposed of 1 Month from Receipt.

• All Other Samples Disposed of 4 Months from Receipt.

Sample(s) Collected by: John Snyder

Client Name: Tetra Tech

Project Manager: _____

Project Number: _____

Site Name: Able Contracting

Location: SC

PO#: _____

Telephone#: _____

Email: jessica.vick@tetra-tech.com

For spiked or duplicate samples: please provide sample volumes for recovery calculations. For Particulates: please provide tare weights and/or condensed water volumes.

Special Instructions: _____

A=Air 1=H2SO4 2=NaOH W=Water O=Other
X=XAD C=Charcoal SG=Silica Gel

G=Grab C=Composite Q=Quality Control O=Other

G-Grab C-Composite G-quantity Control																			Notes:					
Sample ID	Date	Time	Sample Volume	Type	Matrix	# of	# of	# of	# of	# of	# of	# of	# of	TC	TJA	FO	S	H						
ACF-AS-RES-AM-072719	7/27	00:18	672.6	G	37mm								1		/								7969802213	
↓	↓	↓	410.6	G	SG								1			/							8262001732	
			486.2	G	X								1					/					Summa 0802	
			21"-3"	G	A						1		4	/									BA319492	
			00:40	767.0	G	0.45 L 0.50								1					/					Summa 0799
ACF-AS-SMOKE-AM-072719	7/27	01:00	30/-7	G	A							1		4	/							-		
		↓	657.5	G	37mm									1		/							7969802214	
			411.8	G	SG								1				/						8262001729	
			04:45	562.5	G	X								1					/					BA319047
			01:00	898.6	G	0.45 L S.O									1					/				
														</										

Relinquished By: [Signature]

Date: 7/29

Received By: [Signature]

Date: 7-29-19

Time: 1:35 PM

Sample Condition Upon Receipt:

☐ Iced ☐ Ambient ☐ °C _____

☐ Iced ☐ Ambient ☐ °C _____

☐ Iced ☐ Ambient ☐ °C _____

800-1 Capitola Drive • Durham, NC 27713 • (919) 850-4392 • FAX (919) 850-9012 • www.enthalpy.com

5.6°C Raytek 5 Good Condition Cans received Ambient DSH 07-29-19



Chain of Custody Record

Page 2 of 4

Special Handling:

- ☐ Standard Turn Around Time
- ☐ Rush Turn Around Time -- Date Needed _____
- All TATs Subject to Approval by Enthalpy Analytical
- All Bag/Can Samples Disposed of 1 Month from Receipt.
- All Other Samples Disposed of 4 Months from Receipt.

Sample(s) Collected by: _____
 Client Name: _____
 Project Manager: _____

Project Number: _____
 Site Name: _____
 Location: _____

PO#: _____
 Telephone#: _____
 Email: _____

For spiked or duplicate samples: please provide sample volumes for recovery calculations. For Particulates: please provide tare weights and/or condensed water volumes.

Special Instructions:

A=Air 1=H2SO4 2=NaOH W=Water O=Other
 X=XAD C=Charcoal SG=Silica Gel

G=Grab C=Composite Q=Quality Control O=Other

Sample ID	Date	Time	Sample Volume	Type	Matrix	Sample Containers						Analyses:						Notes:
						# of VOA Vials	# of Glass	# of Plastic	# of Bags	# of Canisters	# of Tubes	# Other	TD-15	TALN626	Komald	SUOL	TEM	
ACF-AS-RES- PM-072719	7/27	1210	30/-5	G	A					1			/					Summa 0809
↓	↓	↓	744.8	↓	37mm							1	/					7969802217
↓	↓	↓	541.5	↓	SG						1				/			8262001736
↓	↓	↓	421.4	↓	X						1					/		8262001736
↓	↓	↓	965.3	↓	0.451 5.0							1				/		BA318944
ACF-AS-SMOKE- PM-072719	7/27	1215	32/-6	G	A					1			/					Summa 0797
↓	↓	↓	784.6	↓	37mm							1	/					7969802216
↓	↓	↓	549.5	↓	SG						1				/			8262001738
↓	↓	↓	438.3	↓	X						1					/		BA318947
↓	↓	↓	913.3	↓	0.451 5.0							1				/		

7969802217

Relinquished By: _____

Date: _____

Received By: _____

Date: _____

Time: _____

Sample Condition Upon Receipt:

- ☐ Iced ☐ Ambient ☐ °C _____
- ☐ Iced ☐ Ambient ☐ °C _____
- ☐ Iced ☐ Ambient ☐ °C _____



Chain of Custody Record

Page 3 of 4

Special Handling:

- ☐ Standard Turn Around Time
- ☐ Rush Turn Around Time -- Date Needed _____
- All TATs Subject to Approval by Enthalpy Analytical
- All Bag/Can Samples Disposed of 1 Month from Receipt.
- All Other Samples Disposed of 4 Months from Receipt.

Sample(s) Collected by: _____
 Client Name: _____
 Project Manager: _____

Project Number: _____
 Site Name: _____
 Location: _____

PO#: _____
 Telephone#: _____
 Email: _____

For spiked or duplicate samples: please provide sample volumes for recovery calculations. For Particulates: please provide tare weights and/or condensed water volumes.

Special Instructions:

A=Air 1=H2SO4 2=NaOH W=Water O=Other
 X=XAD C=Charcoal SG=Silica Gel

G=Grab C=Composite Q=Quality Control O=Other

Sample Containers

Analyses:

Sample ID	Date	Time	Sample Volume	Type	Matrix	# of VOA Vials	# of Glass	# of Plastic	# of Bags	# of Canisters	# of Tubes	# Other	Phosgene	VOC	TAL Metals	Formaldehyde	SVOC	Asbestos	Notes:
ACF-AS-RES-AAA-072819	7/28	0:02	473.9	G	X						2		✓						8123100531 530
ACF-AS-SMOKE-AM-072819	7/28	0:05	603.9	G	X						2		✓						8123100523 529
ACF-AS-RES-PM-072819	7/28	11:00	522.5	G	X						2		✓						" 526 " 532
ACF-AS-SMOKE-PM-072819	7/28	11:02	515.2	G	Y						2		✓						" 528 " 524
ACF-AS-BKGD-072819	7/28	1130	-32/-7	G	A					1			✓						Summer 0808
			776.6	G	37mm						1			✓					7969802215
			516.2	G	SG						1					✓			8262001735
			439.4	G	X						1						✓		8123100527 525
			537.1	G	X						2		✓						
			946.3	G	0.45+5.0						1						✓		BA318940

Relinquished By: _____

Date: _____

Received By: _____

Date: _____

Time: _____

Sample Condition Upon Receipt:

- ☐ Iced ☐ Ambient ☐ °C _____
- ☐ Iced ☐ Ambient ☐ °C _____
- ☐ Iced ☐ Ambient ☐ °C _____



- ☐ Standard Turn Around Time
- ☐ Rush Turn Around Time -- Date Needed _____
- All TATs Subject to Approval by Enthalpy Analytical
 - All Bag/Can Samples Disposed of 1 Month from Receipt.
 - All Other Samples Disposed of 4 Months from Receipt.

For spiked or duplicate samples: please provide sample volumes for recovery calculations. For Particulates: please provide tare weights and/or condensed water volumes.

Sample(s) Collected by: _____
Client Name: _____
Project Manager: _____

Project Number: _____
Site Name: _____
Location: _____

PO#: _____
Telephone#: _____
Email: _____

Special Instructions:

A=Air 1=H₂SO₄ 2=NaOH W=Water O=Other
X=XAD C=Charcoal SG=Silica Gel

G=Grab C=Composite Q=Quality Control O=Other

Sample Containers

Analyses:

Notes:

Summer 0821

7969802212

8262001737

8123100608
615

Relinquished By:

Date:

Received By:

Date:

Time:

Sample Condition Upon Receipt:

☐ Iced ☐ Ambient ☐ °C☐ Iced ☐ Ambient ☐ °C☐ Iced ☐ Ambient ☐ °C

5.6% Raytek 5 Good Condition Cans received Ambient 98107-2a-19

QUANTEM LABORATORIES ANALYTICAL REPORT: 0719-205

Sample Collection Date: 07/27/2019

Analyses:

Asbestos via National Institute for Occupational Safety and Health (NIOSH) Method 7402 –
Transmission Electron Microscopy (TEM)



2033 HERITAGE PARK DR, OKLAHOMA CITY, OK 73120 | 1.800.822.1650

Transmission Electron Microscopy Analysis Report

QuanTEM Set ID: 312690

Client: Enthalpy Analytical

Date Received: 07/30/19

Received By: Christiana Younge

Analyst: Gayle Ooten

Date of Report: 7/30/2019

Acct. No.: A050

Methodology: NIOSH 7402, Issue 2, 1994

Project: 0719-205

Location: 0719-205

Project No.: 0719-205

QuanTEM Sample ID	Client Sample ID	Air Volume (liters)	PCM Fiber Concentration (f/cc)	Asbestos Fraction	TEM 7402 Concentration (f/cc)	Asbestos Type
001	ACF-AS-RES-AM-072719	767	<0.00351	0	< 0.00351	
002	ACF-AS-SMOKE-AM-072719	898.6	<0.00299	0	< 0.00299	
003	ACF-AS-RES-PM-072719	965.3	<0.00279	0	< 0.00279	
004	ACF-AS-SMOKE-PM-072719	913.3	<0.00295	0	< 0.00295	
005	ACF-AS-BKGD-072819	946.3	<0.00284	0	< 0.00284	

Authorized Signature: _____

Gayle Ooten, Analyst

This report applies only to the standards or procedures indicated and to the specific samples tested. It is not indicative of the qualities of apparently identical or similar products or procedures, nor does it represent an ongoing assurance program unless so noted. These reports are for the exclusive use of the client and are not to be reproduced without specific written permission. QuanTEM is not responsible for user-supplied data used in calculation.

Unless otherwise noted, upon receipt the condition of the sample was acceptable for analysis.

Results have been blank corrected per the NIOSH 7400 method, as applicable.

312690



Page 1 of

Special Handling:

- ☐ Standard Turn Around Time (10 business days)
- ☐ Rush Turn Around Time -- Date Needed _____
- All TATs Subject to Approval by Enthalpy Analytical, Inc.
- All Bag/Can Samples Disposed of 1 Month from Receipt.
- All Other Samples Disposed of 4 Months from Receipt.

ys) * 24 hr

Client Name: _____
Project Manager: Shannon Hulbert
Report To: _____

Project Number: 0719-205
Site Name:
Location:

PO#: _____
Telephone#: _____
Email: _____

For spiked or duplicate samples: please provide sample volumes for recovery calculations. For Particulates: please provide tare weights and/or condensed water volumes.

Special Instructions:

A=Air 1=H₂SO₄ 2=NaOH W=Water O=Other
X=XAD C=Charcoal SG=Silica Gel

G=Grab C=Composite Q=Quality Control O=Other

Sample Containers

Analyses:

TEM
(N10SH)
(7402)

Relinquished By:

Date: _____

Received By:

Date: _____

Time:

Sample Condition Upon Receipt:

Relinqu

Paul Wynn

7/22/19

Christiana Young

7-30-19

9:00

☐ Iced ☐ Ambient ☐ °C☐ Iced ☐ Ambient ☐ °C☐ Iced ☐ Ambient ☐ °C

800-1 Capitola Drive • Durham, NC 27713 • (919) 850-4392 • FAX (919) 850-9012 • www.enthalpy.com

② *per Shannon Hulbert via phone @ 10:47 am
7-30-2019 City

*per Shannon Hulbert via phone @ 10:40 am
7-30-2019 CAY



PACKING SLIP

800-1 Capitola Drive
Durham, NC 27713
Phone: 919.850.4392

Ship To: QuanTEM Labs
2033 Heritage Park Dr.
Oklahoma City, OK 73120

312690

PROJECT NO.	CUSTOMER REFERENCE	SHIPPED VIA	FOB	SHIP DATE	SALES REP
0719-205		FedEx PO	Destination	07.29.19	Shannon Hulbert

DESCRIPTION	TARGET ANALYTE / METHOD	QTY ORDERED	QTY SHIPPED
MCE Filters		5	5

Notes: DSM
07.29.19

Please contact us at 919.850.4392 with any questions or concerns.
THANK YOU FOR YOUR BUSINESS!

PACE ANALYTICAL REPORT: 92438972 - Water

Sample Collection Date: 07/27/2019

Analyses:

Target Analyte List (TAL) Metals via EPA Method 6010D

Mercury via EPA Method 7470D

Volatile Organic Compounds (VOC) via EPA Method 8260B

Semivolatile Organic Compounds (SVOC) via EPA Method 8270D

August 01, 2019

Jessica Vickers
Tetra Tech
950 South 4th Street
Baldwyn, MS 38824

RE: Project: Able Contracting Fire
Pace Project No.: 92438972

Dear Jessica Vickers:

Enclosed are the analytical results for sample(s) received by the laboratory on July 29, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Taylor Ezell
taylor.ezell@pacelabs.com
(704)875-9092
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Able Contracting Fire

Pace Project No.: 92438972

Charlotte Certification IDs

9800 Kinsey Ave. Ste 100, Huntersville, NC 28078
Louisiana/NELAP Certification # LA170028
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12

South Carolina Certification #: 99006001
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
Virginia/VELAP Certification #: 460221

Asheville Certification IDs

2225 Riverside Drive, Asheville, NC 28804
Florida/NELAP Certification #: E87648
Massachusetts Certification #: M-NC030
North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40
South Carolina Certification #: 99030001
Virginia/VELAP Certification #: 460222

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: Able Contracting Fire

Pace Project No.: 92438972

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92438972001	ACF-SW-DITCH	Water	07/28/19 09:15	07/29/19 14:07
92438972002	ACF-SW-POND	Water	07/28/19 09:55	07/29/19 14:07
92438972003	ACF-GW-472R	Water	07/28/19 15:10	07/29/19 14:07

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Able Contracting Fire

Pace Project No.: 92438972

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92438972001	ACF-SW-DITCH	EPA 6010D	DS, SH1	22	PASI-A
		EPA 7470A	JMW1	1	PASI-A
		EPA 8270D	BPJ	74	PASI-C
		EPA 8260B	CL	62	PASI-C
92438972002	ACF-SW-POND	EPA 6010D	DS, SH1	22	PASI-A
		EPA 7470A	JMW1	1	PASI-A
		EPA 8270D	BPJ	74	PASI-C
		EPA 8260B	CL	62	PASI-C
92438972003	ACF-GW-472R	EPA 6010D	DS	22	PASI-A
		EPA 7470A	JMW1	1	PASI-A
		EPA 8270D	BPJ	74	PASI-C
		EPA 8260B	CL	62	PASI-C

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: Able Contracting Fire

Pace Project No.: 92438972

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92438972001	ACF-SW-DITCH					
EPA 6010D	Aluminum	527	ug/L	100	07/31/19 16:56	
EPA 6010D	Antimony	61.0	ug/L	5.0	07/31/19 16:56	
EPA 6010D	Arsenic	554	ug/L	10.0	07/31/19 16:56	
EPA 6010D	Barium	175	ug/L	5.0	07/31/19 16:56	
EPA 6010D	Cadmium	4.3	ug/L	1.0	07/31/19 16:56	
EPA 6010D	Calcium	904000	ug/L	1000	07/31/19 22:40	
EPA 6010D	Chromium	191	ug/L	5.0	07/31/19 16:56	
EPA 6010D	Copper	38.1	ug/L	5.0	07/31/19 16:56	
EPA 6010D	Iron	1070	ug/L	50.0	07/31/19 16:56	
EPA 6010D	Lead	3.0J	ug/L	5.0	07/31/19 16:56	
EPA 6010D	Magnesium	83100	ug/L	100	07/31/19 16:56	
EPA 6010D	Manganese	820	ug/L	5.0	07/31/19 16:56	
EPA 6010D	Nickel	43.2	ug/L	5.0	07/31/19 16:56	
EPA 6010D	Potassium	112000	ug/L	50000	07/31/19 22:40	
EPA 6010D	Sodium	430000	ug/L	50000	07/31/19 22:40	
EPA 6010D	Vanadium	36.4	ug/L	5.0	07/31/19 16:56	
EPA 6010D	Zinc	72.7	ug/L	10.0	07/31/19 16:56	
EPA 8270D	2,4-Dimethylphenol	108	ug/L	100	07/31/19 20:56	
EPA 8270D	2-Methylphenol(o-Cresol)	137	ug/L	100	07/31/19 20:56	
EPA 8270D	3&4-Methylphenol(m&p Cresol)	82.9J	ug/L	100	07/31/19 20:56	v1
EPA 8270D	Phenol	67.8J	ug/L	100	07/31/19 20:56	
EPA 8260B	Acetone	325	ug/L	50.0	07/31/19 22:49	
EPA 8260B	Benzene	29.7	ug/L	2.0	07/31/19 22:49	
EPA 8260B	2-Butanone (MEK)	71.6	ug/L	10.0	07/31/19 22:49	
EPA 8260B	1,2-Dichloroethane	0.83J	ug/L	2.0	07/31/19 22:49	
EPA 8260B	Ethylbenzene	6.2	ug/L	2.0	07/31/19 22:49	
EPA 8260B	2-Hexanone	3.5J	ug/L	10.0	07/31/19 22:49	
EPA 8260B	4-Methyl-2-pentanone (MIBK)	9.4J	ug/L	10.0	07/31/19 22:49	
EPA 8260B	Naphthalene	3.9	ug/L	2.0	07/31/19 22:49	
EPA 8260B	Toluene	14.5	ug/L	2.0	07/31/19 22:49	
EPA 8260B	m&p-Xylene	2.4J	ug/L	4.0	07/31/19 22:49	
EPA 8260B	o-Xylene	1.6J	ug/L	2.0	07/31/19 22:49	
92438972002	ACF-SW-POND					
EPA 6010D	Aluminum	251	ug/L	100	07/31/19 16:59	
EPA 6010D	Antimony	32.3	ug/L	5.0	07/31/19 16:59	
EPA 6010D	Arsenic	493	ug/L	10.0	07/31/19 16:59	
EPA 6010D	Barium	133	ug/L	5.0	07/31/19 16:59	
EPA 6010D	Cadmium	3.6	ug/L	1.0	07/31/19 16:59	
EPA 6010D	Calcium	725000	ug/L	1000	07/31/19 22:43	
EPA 6010D	Chromium	148	ug/L	5.0	07/31/19 16:59	
EPA 6010D	Copper	20.2	ug/L	5.0	07/31/19 16:59	
EPA 6010D	Iron	300	ug/L	50.0	07/31/19 16:59	
EPA 6010D	Magnesium	48900	ug/L	100	07/31/19 16:59	
EPA 6010D	Manganese	526	ug/L	5.0	07/31/19 16:59	
EPA 6010D	Nickel	30.5	ug/L	5.0	07/31/19 16:59	
EPA 6010D	Potassium	75300	ug/L	5000	07/31/19 16:59	
EPA 6010D	Sodium	248000	ug/L	50000	07/31/19 22:43	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: Able Contracting Fire

Pace Project No.: 92438972

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92438972002	ACF-SW-POND					
EPA 6010D	Vanadium	22.7	ug/L	5.0	07/31/19 16:59	
EPA 6010D	Zinc	24.4	ug/L	10.0	07/31/19 16:59	
EPA 8270D	2,4-Dimethylphenol	6.0J	ug/L	9.8	08/01/19 12:24	
EPA 8270D	2-Methylphenol(o-Cresol)	11.1	ug/L	9.8	08/01/19 12:24	
EPA 8270D	3&4-Methylphenol(m&p Cresol)	7.9J	ug/L	9.8	08/01/19 12:24	
EPA 8260B	Acetone	269	ug/L	25.0	07/31/19 22:31	M1
EPA 8260B	Benzene	21.4	ug/L	1.0	07/31/19 22:31	
EPA 8260B	2-Butanone (MEK)	43.2	ug/L	5.0	07/31/19 22:31	M1
EPA 8260B	Chloromethane	1.8	ug/L	1.0	07/31/19 22:31	
EPA 8260B	1,2-Dichloroethane	0.55J	ug/L	1.0	07/31/19 22:31	
EPA 8260B	Ethylbenzene	6.0	ug/L	1.0	07/31/19 22:31	
EPA 8260B	Naphthalene	2.3	ug/L	1.0	07/31/19 22:31	
EPA 8260B	Toluene	10.5	ug/L	1.0	07/31/19 22:31	
EPA 8260B	Xylene (Total)	1.1	ug/L	1.0	07/31/19 22:31	
EPA 8260B	m&p-Xylene	1.8J	ug/L	2.0	07/31/19 22:31	
EPA 8260B	o-Xylene	1.1	ug/L	1.0	07/31/19 22:31	
92438972003	ACF-GW-472R					
EPA 6010D	Barium	5.7	ug/L	5.0	07/31/19 17:09	
EPA 6010D	Calcium	27200	ug/L	100	07/31/19 17:09	
EPA 6010D	Copper	27.6	ug/L	5.0	07/31/19 17:09	
EPA 6010D	Magnesium	9370	ug/L	100	07/31/19 17:09	
EPA 6010D	Manganese	21.8	ug/L	5.0	07/31/19 17:09	
EPA 6010D	Nickel	2.6J	ug/L	5.0	07/31/19 17:09	
EPA 6010D	Potassium	2760J	ug/L	5000	07/31/19 17:09	
EPA 6010D	Sodium	10600	ug/L	5000	07/31/19 17:09	
EPA 6010D	Zinc	130	ug/L	10.0	07/31/19 17:09	
EPA 8260B	Chloromethane	0.69J	ug/L	1.0	07/31/19 22:12	

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: Able Contracting Fire

Pace Project No.: 92438972

Method: EPA 6010D

Description: 6010 MET ICP

Client: Tetra Tech - Atlanta, GA

Date: August 01, 2019

General Information:

3 samples were analyzed for EPA 6010D. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3010A with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 489233

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92438953002

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 2640315)
 - Aluminum
 - Calcium
 - Iron
 - Magnesium
- MSD (Lab ID: 2640316)
 - Aluminum
 - Calcium
 - Iron

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: Able Contracting Fire

Pace Project No.: 92438972

Method: EPA 7470A

Description: 7470 Mercury

Client: Tetra Tech - Atlanta, GA

Date: August 01, 2019

General Information:

3 samples were analyzed for EPA 7470A. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 7470A with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: Able Contracting Fire

Pace Project No.: 92438972

Method: EPA 8270D

Description: 8270 MSSV Semivolatile Org SC

Client: Tetra Tech - Atlanta, GA

Date: August 01, 2019

General Information:

3 samples were analyzed for EPA 8270D. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:

The samples were prepared in accordance with EPA 3510C with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

QC Batch: 489508

S0: Surrogate recovery outside laboratory control limits.

- ACF-SW-DITCH (Lab ID: 92438972001)
- 2-Fluorophenol (S)

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: 489508

1g: Comment applies to all compounds outside control limits.

- LCS (Lab ID: 2641449)
- Phenol

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: Able Contracting Fire

Pace Project No.: 92438972

Method: EPA 8270D

Description: 8270 MSSV Semivolatile Org SC

Client: Tetra Tech - Atlanta, GA

Date: August 01, 2019

Analyte Comments:

QC Batch: 489508

3g: Recovery did not meet 70-130% South Carolina required limits. Recovery meets method required in-house generated control limits.

- LCS (Lab ID: 2641449)
 - Phenol
- LCSD (Lab ID: 2641450)
 - Phenol

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: Able Contracting Fire

Pace Project No.: 92438972

Method: EPA 8260B

Description: 8260 MSV Low Level SC

Client: Tetra Tech - Atlanta, GA

Date: August 01, 2019

General Information:

3 samples were analyzed for EPA 8260B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 489573

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92438972002

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 2641721)
 - 2-Butanone (MEK)
 - Acetone
 - Chloroethane

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: Able Contracting Fire

Pace Project No.: 92438972

Method: EPA 8260B

Description: 8260 MSV Low Level SC

Client: Tetra Tech - Atlanta, GA

Date: August 01, 2019

Analyte Comments:

QC Batch: 489573

2g: Initial calibration evaluation met acceptance criteria. Compound did not meet additional accuracy assessment for percent error

- LCS (Lab ID: 2641719)
 - 1,2,3-Trichloropropane
 - 2-Butanone (MEK)
 - Vinyl acetate

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Able Contracting Fire

Pace Project No.: 92438972

Sample: ACF-SW-DITCH **Lab ID:** 92438972001 **Collected:** 07/28/19 09:15 **Received:** 07/29/19 14:07 **Matrix:** Water

Parameters	Results	Units	Report	MDL	DF	Prepared	Analyzed	CAS No.	Qual
			Limit						
6010 MET ICP Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Aluminum	527	ug/L	100	29.8	1	07/30/19 15:16	07/31/19 16:56	7429-90-5	
Antimony	61.0	ug/L	5.0	3.0	1	07/30/19 15:16	07/31/19 16:56	7440-36-0	
Arsenic	554	ug/L	10.0	4.7	1	07/30/19 15:16	07/31/19 16:56	7440-38-2	
Barium	175	ug/L	5.0	1.0	1	07/30/19 15:16	07/31/19 16:56	7440-39-3	
Beryllium	ND	ug/L	1.0	0.20	1	07/30/19 15:16	07/31/19 16:56	7440-41-7	
Cadmium	4.3	ug/L	1.0	0.40	1	07/30/19 15:16	07/31/19 16:56	7440-43-9	
Calcium	904000	ug/L	1000	242	10	07/30/19 15:16	07/31/19 22:40	7440-70-2	
Chromium	191	ug/L	5.0	1.0	1	07/30/19 15:16	07/31/19 16:56	7440-47-3	
Cobalt	ND	ug/L	5.0	1.1	1	07/30/19 15:16	07/31/19 16:56	7440-48-4	
Copper	38.1	ug/L	5.0	2.1	1	07/30/19 15:16	07/31/19 16:56	7440-50-8	
Iron	1070	ug/L	50.0	19.5	1	07/30/19 15:16	07/31/19 16:56	7439-89-6	
Lead	3.0J	ug/L	5.0	1.6	1	07/30/19 15:16	07/31/19 16:56	7439-92-1	
Magnesium	83100	ug/L	100	17.1	1	07/30/19 15:16	07/31/19 16:56	7439-95-4	
Manganese	820	ug/L	5.0	0.90	1	07/30/19 15:16	07/31/19 16:56	7439-96-5	
Nickel	43.2	ug/L	5.0	0.90	1	07/30/19 15:16	07/31/19 16:56	7440-02-0	
Potassium	112000	ug/L	50000	8900	10	07/30/19 15:16	07/31/19 22:40	7440-09-7	
Selenium	ND	ug/L	10.0	4.7	1	07/30/19 15:16	07/31/19 16:56	7782-49-2	
Silver	ND	ug/L	5.0	2.5	1	07/30/19 15:16	07/31/19 16:56	7440-22-4	
Sodium	430000	ug/L	50000	1740	10	07/30/19 15:16	07/31/19 22:40	7440-23-5	
Thallium	ND	ug/L	10.0	2.6	1	07/30/19 15:16	07/31/19 16:56	7440-28-0	
Vanadium	36.4	ug/L	5.0	1.3	1	07/30/19 15:16	07/31/19 16:56	7440-62-2	
Zinc	72.7	ug/L	10.0	3.9	1	07/30/19 15:16	07/31/19 16:56	7440-66-6	

7470 Mercury

Analytical Method: EPA 7470A Preparation Method: EPA 7470A

Mercury	ND	ug/L	0.20	0.10	1	07/31/19 11:50	07/31/19 14:31	7439-97-6		
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8270 MSSV Semivolatile Org SC

Analytical Method: EPA 8270D Preparation Method: EPA 3510C

Acenaphthene	ND	ug/L	100	16.0	1	07/31/19 15:39	07/31/19 20:56	83-32-9		
Acenaphthylene	ND	ug/L	100	14.8	1	07/31/19 15:39	07/31/19 20:56	208-96-8		
Aniline	ND	ug/L	100	12.3	1	07/31/19 15:39	07/31/19 20:56	62-53-3		
Anthracene	ND	ug/L	100	17.1	1	07/31/19 15:39	07/31/19 20:56	120-12-7		
Benzo(a)anthracene	ND	ug/L	100	21.1	1	07/31/19 15:39	07/31/19 20:56	56-55-3		
Benzo(a)pyrene	ND	ug/L	100	22.1	1	07/31/19 15:39	07/31/19 20:56	50-32-8		
Benzo(b)fluoranthene	ND	ug/L	100	21.9	1	07/31/19 15:39	07/31/19 20:56	205-99-2		
Benzo(g,h,i)perylene	ND	ug/L	100	20.8	1	07/31/19 15:39	07/31/19 20:56	191-24-2		
Benzo(k)fluoranthene	ND	ug/L	100	19.9	1	07/31/19 15:39	07/31/19 20:56	207-08-9		
Benzoic Acid	ND	ug/L	500	50.1	1	07/31/19 15:39	07/31/19 20:56	65-85-0		
Benzyl alcohol	ND	ug/L	200	30.8	1	07/31/19 15:39	07/31/19 20:56	100-51-6		
4-Bromophenylphenyl ether	ND	ug/L	100	14.9	1	07/31/19 15:39	07/31/19 20:56	101-55-3		
Butylbenzylphthalate	ND	ug/L	100	24.9	1	07/31/19 15:39	07/31/19 20:56	85-68-7		
4-Chloro-3-methylphenol	ND	ug/L	200	28.4	1	07/31/19 15:39	07/31/19 20:56	59-50-7		
4-Chloroaniline	ND	ug/L	500	28.1	1	07/31/19 15:39	07/31/19 20:56	106-47-8		
bis(2-Chloroethoxy)methane	ND	ug/L	100	16.2	1	07/31/19 15:39	07/31/19 20:56	111-91-1		
bis(2-Chloroethyl) ether	ND	ug/L	100	17.1	1	07/31/19 15:39	07/31/19 20:56	111-44-4		
2-Chloronaphthalene	ND	ug/L	100	16.3	1	07/31/19 15:39	07/31/19 20:56	91-58-7		
2-Chlorophenol	ND	ug/L	100	15.1	1	07/31/19 15:39	07/31/19 20:56	95-57-8		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Able Contracting Fire

Pace Project No.: 92438972

Sample: ACF-SW-DITCH		Lab ID: 92438972001		Collected: 07/28/19 09:15		Received: 07/29/19 14:07		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Org SC		Analytical Method: EPA 8270D Preparation Method: EPA 3510C							
4-Chlorophenylphenyl ether	ND	ug/L	100	15.5	1	07/31/19 15:39	07/31/19 20:56	7005-72-3	
Chrysene	ND	ug/L	100	20.9	1	07/31/19 15:39	07/31/19 20:56	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	100	20.3	1	07/31/19 15:39	07/31/19 20:56	53-70-3	
Dibenzofuran	ND	ug/L	100	16.8	1	07/31/19 15:39	07/31/19 20:56	132-64-9	
1,2-Dichlorobenzene	ND	ug/L	100	15.0	1	07/31/19 15:39	07/31/19 20:56	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	100	13.8	1	07/31/19 15:39	07/31/19 20:56	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	100	13.8	1	07/31/19 15:39	07/31/19 20:56	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/L	500	38.6	1	07/31/19 15:39	07/31/19 20:56	91-94-1	
2,4-Dichlorophenol	ND	ug/L	100	15.5	1	07/31/19 15:39	07/31/19 20:56	120-83-2	
Diethylphthalate	ND	ug/L	100	16.2	1	07/31/19 15:39	07/31/19 20:56	84-66-2	
2,4-Dimethylphenol	108	ug/L	100	16.1	1	07/31/19 15:39	07/31/19 20:56	105-67-9	
Dimethylphthalate	ND	ug/L	100	14.1	1	07/31/19 15:39	07/31/19 20:56	131-11-3	
Di-n-butylphthalate	ND	ug/L	100	19.8	1	07/31/19 15:39	07/31/19 20:56	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/L	200	22.5	1	07/31/19 15:39	07/31/19 20:56	534-52-1	v1
2,4-Dinitrophenol	ND	ug/L	500	50.8	1	07/31/19 15:39	07/31/19 20:56	51-28-5	v1
2,4-Dinitrotoluene	ND	ug/L	100	15.3	1	07/31/19 15:39	07/31/19 20:56	121-14-2	
2,6-Dinitrotoluene	ND	ug/L	100	13.8	1	07/31/19 15:39	07/31/19 20:56	606-20-2	
Di-n-octylphthalate	ND	ug/L	100	14.9	1	07/31/19 15:39	07/31/19 20:56	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/L	60.0	23.0	1	07/31/19 15:39	07/31/19 20:56	117-81-7	
Fluoranthene	ND	ug/L	100	22.2	1	07/31/19 15:39	07/31/19 20:56	206-44-0	
Fluorene	ND	ug/L	100	15.6	1	07/31/19 15:39	07/31/19 20:56	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/L	100	15.8	1	07/31/19 15:39	07/31/19 20:56	87-68-3	
Hexachlorobenzene	ND	ug/L	100	16.6	1	07/31/19 15:39	07/31/19 20:56	118-74-1	
Hexachlorocyclopentadiene	ND	ug/L	100	13.4	1	07/31/19 15:39	07/31/19 20:56	77-47-4	
Hexachloroethane	ND	ug/L	100	18.4	1	07/31/19 15:39	07/31/19 20:56	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/L	100	20.5	1	07/31/19 15:39	07/31/19 20:56	193-39-5	
Isophorone	ND	ug/L	100	15.0	1	07/31/19 15:39	07/31/19 20:56	78-59-1	
1-Methylnaphthalene	ND	ug/L	100	14.3	1	07/31/19 15:39	07/31/19 20:56	90-12-0	
2-Methylnaphthalene	ND	ug/L	100	14.2	1	07/31/19 15:39	07/31/19 20:56	91-57-6	
2-Methylphenol(o-Cresol)	137	ug/L	100	16.1	1	07/31/19 15:39	07/31/19 20:56	95-48-7	
3&4-Methylphenol(m&p Cresol)	82.9J	ug/L	100	14.3	1	07/31/19 15:39	07/31/19 20:56	15831-10-4	v1
Naphthalene	ND	ug/L	100	14.0	1	07/31/19 15:39	07/31/19 20:56	91-20-3	
2-Nitroaniline	ND	ug/L	500	22.6	1	07/31/19 15:39	07/31/19 20:56	88-74-4	
3-Nitroaniline	ND	ug/L	500	26.6	1	07/31/19 15:39	07/31/19 20:56	99-09-2	
4-Nitroaniline	ND	ug/L	500	33.7	1	07/31/19 15:39	07/31/19 20:56	100-01-6	
Nitrobenzene	ND	ug/L	100	16.1	1	07/31/19 15:39	07/31/19 20:56	98-95-3	
2-Nitrophenol	ND	ug/L	100	16.5	1	07/31/19 15:39	07/31/19 20:56	88-75-5	
4-Nitrophenol	ND	ug/L	500	42.6	1	07/31/19 15:39	07/31/19 20:56	100-02-7	
N-Nitrosodimethylamine	ND	ug/L	100	15.9	1	07/31/19 15:39	07/31/19 20:56	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/L	100	17.1	1	07/31/19 15:39	07/31/19 20:56	621-64-7	
N-Nitrosodiphenylamine	ND	ug/L	100	14.5	1	07/31/19 15:39	07/31/19 20:56	86-30-6	
2,2'-Oxybis(1-chloropropane)	ND	ug/L	100	18.2	1	07/31/19 15:39	07/31/19 20:56	108-60-1	v1
Pentachlorophenol	ND	ug/L	500	35.2	1	07/31/19 15:39	07/31/19 20:56	87-86-5	
Phenanthrene	ND	ug/L	100	15.9	1	07/31/19 15:39	07/31/19 20:56	85-01-8	
Phenol	67.8J	ug/L	100	12.9	1	07/31/19 15:39	07/31/19 20:56	108-95-2	
Pyrene	ND	ug/L	100	22.0	1	07/31/19 15:39	07/31/19 20:56	129-00-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Able Contracting Fire

Pace Project No.: 92438972

Sample: ACF-SW-DITCH Lab ID: 92438972001 Collected: 07/28/19 09:15 Received: 07/29/19 14:07 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Org SC Analytical Method: EPA 8270D Preparation Method: EPA 3510C									
1,2,4-Trichlorobenzene	ND	ug/L	100	14.1	1	07/31/19 15:39	07/31/19 20:56	120-82-1	
2,4,5-Trichlorophenol	ND	ug/L	100	15.0	1	07/31/19 15:39	07/31/19 20:56	95-95-4	
2,4,6-Trichlorophenol	ND	ug/L	100	14.4	1	07/31/19 15:39	07/31/19 20:56	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	84	%	21-110		1	07/31/19 15:39	07/31/19 20:56	4165-60-0	
2-Fluorobiphenyl (S)	81	%	27-110		1	07/31/19 15:39	07/31/19 20:56	321-60-8	
Terphenyl-d14 (S)	91	%	31-107		1	07/31/19 15:39	07/31/19 20:56	1718-51-0	
Phenol-d6 (S)	17	%	10-110		1	07/31/19 15:39	07/31/19 20:56	13127-88-3	
2-Fluorophenol (S)	10	%	12-110		1	07/31/19 15:39	07/31/19 20:56	367-12-4	S0
2,4,6-Tribromophenol (S)	29	%	27-110		1	07/31/19 15:39	07/31/19 20:56	118-79-6	
8260 MSV Low Level SC Analytical Method: EPA 8260B									
Acetone	325	ug/L	50.0	12.3	2		07/31/19 22:49	67-64-1	
Benzene	29.7	ug/L	2.0	0.30	2		07/31/19 22:49	71-43-2	
Bromobenzene	ND	ug/L	2.0	0.44	2		07/31/19 22:49	108-86-1	
Bromochloromethane	ND	ug/L	2.0	0.69	2		07/31/19 22:49	74-97-5	
Bromodichloromethane	ND	ug/L	2.0	0.51	2		07/31/19 22:49	75-27-4	
Bromoform	ND	ug/L	2.0	1.2	2		07/31/19 22:49	75-25-2	
Bromomethane	ND	ug/L	4.0	1.2	2		07/31/19 22:49	74-83-9	
2-Butanone (MEK)	71.6	ug/L	10.0	6.7	2		07/31/19 22:49	78-93-3	
Carbon tetrachloride	ND	ug/L	2.0	0.45	2		07/31/19 22:49	56-23-5	
Chlorobenzene	ND	ug/L	2.0	0.47	2		07/31/19 22:49	108-90-7	
Chloroethane	ND	ug/L	2.0	0.98	2		07/31/19 22:49	75-00-3	
Chloroform	ND	ug/L	10.0	4.7	2		07/31/19 22:49	67-66-3	
Chloromethane	ND	ug/L	2.0	0.78	2		07/31/19 22:49	74-87-3	
2-Chlorotoluene	ND	ug/L	2.0	0.41	2		07/31/19 22:49	95-49-8	
4-Chlorotoluene	ND	ug/L	2.0	0.41	2		07/31/19 22:49	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	4.0	0.51	2		07/31/19 22:49	96-12-8	
Dibromochloromethane	ND	ug/L	2.0	0.83	2		07/31/19 22:49	124-48-1	
Dibromomethane	ND	ug/L	2.0	0.92	2		07/31/19 22:49	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	2.0	0.58	2		07/31/19 22:49	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	2.0	0.43	2		07/31/19 22:49	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	2.0	0.52	2		07/31/19 22:49	106-46-7	
Dichlorodifluoromethane	ND	ug/L	2.0	0.45	2		07/31/19 22:49	75-71-8	
1,1-Dichloroethane	ND	ug/L	2.0	0.54	2		07/31/19 22:49	75-34-3	
1,2-Dichloroethane	0.83J	ug/L	2.0	0.67	2		07/31/19 22:49	107-06-2	
1,1-Dichloroethene	ND	ug/L	2.0	0.49	2		07/31/19 22:49	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	2.0	0.58	2		07/31/19 22:49	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	2.0	0.51	2		07/31/19 22:49	156-60-5	
1,2-Dichloropropane	ND	ug/L	2.0	0.37	2		07/31/19 22:49	78-87-5	
1,3-Dichloropropane	ND	ug/L	2.0	0.32	2		07/31/19 22:49	142-28-9	
2,2-Dichloropropane	ND	ug/L	2.0	0.54	2		07/31/19 22:49	594-20-7	
1,1-Dichloropropene	ND	ug/L	2.0	0.43	2		07/31/19 22:49	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	2.0	0.59	2		07/31/19 22:49	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	2.0	0.62	2		07/31/19 22:49	10061-02-6	
Diisopropyl ether	ND	ug/L	2.0	0.44	2		07/31/19 22:49	108-20-3	

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ANALYTICAL RESULTS

Project: Able Contracting Fire

Pace Project No.: 92438972

Sample: ACF-SW-DITCH		Lab ID: 92438972001		Collected: 07/28/19 09:15		Received: 07/29/19 14:07		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level SC		Analytical Method: EPA 8260B							
Ethylbenzene	6.2	ug/L	2.0	0.51	2		07/31/19 22:49	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	2.0	0.88	2		07/31/19 22:49	87-68-3	
2-Hexanone	3.5J	ug/L	10.0	1.1	2		07/31/19 22:49	591-78-6	
p-Isopropyltoluene	ND	ug/L	2.0	0.42	2		07/31/19 22:49	99-87-6	
Methylene Chloride	ND	ug/L	10.0	7.4	2		07/31/19 22:49	75-09-2	
4-Methyl-2-pentanone (MIBK)	9.4J	ug/L	10.0	9.1	2		07/31/19 22:49	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	2.0	0.55	2		07/31/19 22:49	1634-04-4	
Naphthalene	3.9	ug/L	2.0	0.70	2		07/31/19 22:49	91-20-3	
Styrene	ND	ug/L	2.0	0.53	2		07/31/19 22:49	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	2.0	0.68	2		07/31/19 22:49	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	2.0	0.44	2		07/31/19 22:49	79-34-5	
Tetrachloroethene	ND	ug/L	2.0	0.32	2		07/31/19 22:49	127-18-4	
Toluene	14.5	ug/L	2.0	0.49	2		07/31/19 22:49	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	2.0	0.69	2		07/31/19 22:49	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	2.0	0.44	2		07/31/19 22:49	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	2.0	0.35	2		07/31/19 22:49	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	2.0	0.47	2		07/31/19 22:49	79-00-5	
Trichloroethene	ND	ug/L	2.0	0.44	2		07/31/19 22:49	79-01-6	
Trichlorofluoromethane	ND	ug/L	2.0	0.62	2		07/31/19 22:49	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	2.0	0.69	2		07/31/19 22:49	96-18-4	
Vinyl acetate	ND	ug/L	4.0	2.9	2		07/31/19 22:49	108-05-4	
Vinyl chloride	ND	ug/L	2.0	0.48	2		07/31/19 22:49	75-01-4	
Xylene (Total)	ND	ug/L	2.0	1.3	2		07/31/19 22:49	1330-20-7	
m&p-Xylene	2.4J	ug/L	4.0	0.82	2		07/31/19 22:49	179601-23-1	
o-Xylene	1.6J	ug/L	2.0	0.44	2		07/31/19 22:49	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	103	%	70-130		2		07/31/19 22:49	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	70-130		2		07/31/19 22:49	17060-07-0	
Toluene-d8 (S)	103	%	70-130		2		07/31/19 22:49	2037-26-5	

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ANALYTICAL RESULTS

Project: Able Contracting Fire

Pace Project No.: 92438972

Sample: ACF-SW-POND		Lab ID: 92438972002		Collected: 07/28/19 09:55		Received: 07/29/19 14:07		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Aluminum	251	ug/L	100	29.8	1	07/30/19 15:16	07/31/19 16:59	7429-90-5	
Antimony	32.3	ug/L	5.0	3.0	1	07/30/19 15:16	07/31/19 16:59	7440-36-0	
Arsenic	493	ug/L	10.0	4.7	1	07/30/19 15:16	07/31/19 16:59	7440-38-2	
Barium	133	ug/L	5.0	1.0	1	07/30/19 15:16	07/31/19 16:59	7440-39-3	
Beryllium	ND	ug/L	1.0	0.20	1	07/30/19 15:16	07/31/19 16:59	7440-41-7	
Cadmium	3.6	ug/L	1.0	0.40	1	07/30/19 15:16	07/31/19 16:59	7440-43-9	
Calcium	725000	ug/L	1000	242	10	07/30/19 15:16	07/31/19 22:43	7440-70-2	
Chromium	148	ug/L	5.0	1.0	1	07/30/19 15:16	07/31/19 16:59	7440-47-3	
Cobalt	ND	ug/L	5.0	1.1	1	07/30/19 15:16	07/31/19 16:59	7440-48-4	
Copper	20.2	ug/L	5.0	2.1	1	07/30/19 15:16	07/31/19 16:59	7440-50-8	
Iron	300	ug/L	50.0	19.5	1	07/30/19 15:16	07/31/19 16:59	7439-89-6	
Lead	ND	ug/L	5.0	1.6	1	07/30/19 15:16	07/31/19 16:59	7439-92-1	
Magnesium	48900	ug/L	100	17.1	1	07/30/19 15:16	07/31/19 16:59	7439-95-4	
Manganese	526	ug/L	5.0	0.90	1	07/30/19 15:16	07/31/19 16:59	7439-96-5	
Nickel	30.5	ug/L	5.0	0.90	1	07/30/19 15:16	07/31/19 16:59	7440-02-0	
Potassium	75300	ug/L	5000	890	1	07/30/19 15:16	07/31/19 16:59	7440-09-7	
Selenium	ND	ug/L	10.0	4.7	1	07/30/19 15:16	07/31/19 16:59	7782-49-2	
Silver	ND	ug/L	5.0	2.5	1	07/30/19 15:16	07/31/19 16:59	7440-22-4	
Sodium	248000	ug/L	50000	1740	10	07/30/19 15:16	07/31/19 22:43	7440-23-5	
Thallium	ND	ug/L	10.0	2.6	1	07/30/19 15:16	07/31/19 16:59	7440-28-0	
Vanadium	22.7	ug/L	5.0	1.3	1	07/30/19 15:16	07/31/19 16:59	7440-62-2	
Zinc	24.4	ug/L	10.0	3.9	1	07/30/19 15:16	07/31/19 16:59	7440-66-6	
7470 Mercury Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Mercury	ND	ug/L	0.20	0.10	1	07/31/19 11:50	07/31/19 14:34	7439-97-6	
8270 MSSV Semivolatile Org SC Analytical Method: EPA 8270D Preparation Method: EPA 3510C									
Acenaphthene	ND	ug/L	9.8	1.6	1	07/31/19 15:39	08/01/19 12:24	83-32-9	
Acenaphthylene	ND	ug/L	9.8	1.5	1	07/31/19 15:39	08/01/19 12:24	208-96-8	
Aniline	ND	ug/L	9.8	1.2	1	07/31/19 15:39	08/01/19 12:24	62-53-3	
Anthracene	ND	ug/L	9.8	1.7	1	07/31/19 15:39	08/01/19 12:24	120-12-7	
Benzo(a)anthracene	ND	ug/L	9.8	2.1	1	07/31/19 15:39	08/01/19 12:24	56-55-3	
Benzo(a)pyrene	ND	ug/L	9.8	2.2	1	07/31/19 15:39	08/01/19 12:24	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	9.8	2.1	1	07/31/19 15:39	08/01/19 12:24	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	9.8	2.0	1	07/31/19 15:39	08/01/19 12:24	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	9.8	2.0	1	07/31/19 15:39	08/01/19 12:24	207-08-9	
Benzoic Acid	ND	ug/L	49.0	4.9	1	07/31/19 15:39	08/01/19 12:24	65-85-0	
Benzyl alcohol	ND	ug/L	19.6	3.0	1	07/31/19 15:39	08/01/19 12:24	100-51-6	
4-Bromophenylphenyl ether	ND	ug/L	9.8	1.5	1	07/31/19 15:39	08/01/19 12:24	101-55-3	
Butylbenzylphthalate	ND	ug/L	9.8	2.4	1	07/31/19 15:39	08/01/19 12:24	85-68-7	
4-Chloro-3-methylphenol	ND	ug/L	19.6	2.8	1	07/31/19 15:39	08/01/19 12:24	59-50-7	
4-Chloroaniline	ND	ug/L	49.0	2.8	1	07/31/19 15:39	08/01/19 12:24	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/L	9.8	1.6	1	07/31/19 15:39	08/01/19 12:24	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/L	9.8	1.7	1	07/31/19 15:39	08/01/19 12:24	111-44-4	
2-Chloronaphthalene	ND	ug/L	9.8	1.6	1	07/31/19 15:39	08/01/19 12:24	91-58-7	
2-Chlorophenol	ND	ug/L	9.8	1.5	1	07/31/19 15:39	08/01/19 12:24	95-57-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Able Contracting Fire

Pace Project No.: 92438972

Sample: ACF-SW-POND		Lab ID: 92438972002		Collected: 07/28/19 09:55		Received: 07/29/19 14:07		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Org SC		Analytical Method: EPA 8270D Preparation Method: EPA 3510C							
4-Chlorophenylphenyl ether	ND	ug/L	9.8	1.5	1	07/31/19 15:39	08/01/19 12:24	7005-72-3	
Chrysene	ND	ug/L	9.8	2.0	1	07/31/19 15:39	08/01/19 12:24	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	9.8	2.0	1	07/31/19 15:39	08/01/19 12:24	53-70-3	
Dibenzofuran	ND	ug/L	9.8	1.6	1	07/31/19 15:39	08/01/19 12:24	132-64-9	
1,2-Dichlorobenzene	ND	ug/L	9.8	1.5	1	07/31/19 15:39	08/01/19 12:24	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	9.8	1.4	1	07/31/19 15:39	08/01/19 12:24	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	9.8	1.4	1	07/31/19 15:39	08/01/19 12:24	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/L	49.0	3.8	1	07/31/19 15:39	08/01/19 12:24	91-94-1	
2,4-Dichlorophenol	ND	ug/L	9.8	1.5	1	07/31/19 15:39	08/01/19 12:24	120-83-2	
Diethylphthalate	ND	ug/L	9.8	1.6	1	07/31/19 15:39	08/01/19 12:24	84-66-2	
2,4-Dimethylphenol	6.0J	ug/L	9.8	1.6	1	07/31/19 15:39	08/01/19 12:24	105-67-9	
Dimethylphthalate	ND	ug/L	9.8	1.4	1	07/31/19 15:39	08/01/19 12:24	131-11-3	
Di-n-butylphthalate	ND	ug/L	9.8	1.9	1	07/31/19 15:39	08/01/19 12:24	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/L	19.6	2.2	1	07/31/19 15:39	08/01/19 12:24	534-52-1	
2,4-Dinitrophenol	ND	ug/L	49.0	5.0	1	07/31/19 15:39	08/01/19 12:24	51-28-5	
2,4-Dinitrotoluene	ND	ug/L	9.8	1.5	1	07/31/19 15:39	08/01/19 12:24	121-14-2	
2,6-Dinitrotoluene	ND	ug/L	9.8	1.4	1	07/31/19 15:39	08/01/19 12:24	606-20-2	
Di-n-octylphthalate	ND	ug/L	9.8	1.5	1	07/31/19 15:39	08/01/19 12:24	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/L	5.9	2.3	1	07/31/19 15:39	08/01/19 12:24	117-81-7	
Fluoranthene	ND	ug/L	9.8	2.2	1	07/31/19 15:39	08/01/19 12:24	206-44-0	
Fluorene	ND	ug/L	9.8	1.5	1	07/31/19 15:39	08/01/19 12:24	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/L	9.8	1.5	1	07/31/19 15:39	08/01/19 12:24	87-68-3	
Hexachlorobenzene	ND	ug/L	9.8	1.6	1	07/31/19 15:39	08/01/19 12:24	118-74-1	
Hexachlorocyclopentadiene	ND	ug/L	9.8	1.3	1	07/31/19 15:39	08/01/19 12:24	77-47-4	
Hexachloroethane	ND	ug/L	9.8	1.8	1	07/31/19 15:39	08/01/19 12:24	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/L	9.8	2.0	1	07/31/19 15:39	08/01/19 12:24	193-39-5	
Isophorone	ND	ug/L	9.8	1.5	1	07/31/19 15:39	08/01/19 12:24	78-59-1	
1-Methylnaphthalene	ND	ug/L	9.8	1.4	1	07/31/19 15:39	08/01/19 12:24	90-12-0	
2-Methylnaphthalene	ND	ug/L	9.8	1.4	1	07/31/19 15:39	08/01/19 12:24	91-57-6	
2-Methylphenol(o-Cresol)	11.1	ug/L	9.8	1.6	1	07/31/19 15:39	08/01/19 12:24	95-48-7	
3&4-Methylphenol(m&p Cresol)	7.9J	ug/L	9.8	1.4	1	07/31/19 15:39	08/01/19 12:24	15831-10-4	
Naphthalene	ND	ug/L	9.8	1.4	1	07/31/19 15:39	08/01/19 12:24	91-20-3	
2-Nitroaniline	ND	ug/L	49.0	2.2	1	07/31/19 15:39	08/01/19 12:24	88-74-4	
3-Nitroaniline	ND	ug/L	49.0	2.6	1	07/31/19 15:39	08/01/19 12:24	99-09-2	
4-Nitroaniline	ND	ug/L	49.0	3.3	1	07/31/19 15:39	08/01/19 12:24	100-01-6	
Nitrobenzene	ND	ug/L	9.8	1.6	1	07/31/19 15:39	08/01/19 12:24	98-95-3	
2-Nitrophenol	ND	ug/L	9.8	1.6	1	07/31/19 15:39	08/01/19 12:24	88-75-5	
4-Nitrophenol	ND	ug/L	49.0	4.2	1	07/31/19 15:39	08/01/19 12:24	100-02-7	
N-Nitrosodimethylamine	ND	ug/L	9.8	1.6	1	07/31/19 15:39	08/01/19 12:24	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/L	9.8	1.7	1	07/31/19 15:39	08/01/19 12:24	621-64-7	
N-Nitrosodiphenylamine	ND	ug/L	9.8	1.4	1	07/31/19 15:39	08/01/19 12:24	86-30-6	
2,2'-Oxybis(1-chloropropane)	ND	ug/L	9.8	1.8	1	07/31/19 15:39	08/01/19 12:24	108-60-1	v1
Pentachlorophenol	ND	ug/L	49.0	3.5	1	07/31/19 15:39	08/01/19 12:24	87-86-5	
Phenanthrene	ND	ug/L	9.8	1.6	1	07/31/19 15:39	08/01/19 12:24	85-01-8	
Phenol	ND	ug/L	9.8	1.3	1	07/31/19 15:39	08/01/19 12:24	108-95-2	
Pyrene	ND	ug/L	9.8	2.2	1	07/31/19 15:39	08/01/19 12:24	129-00-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Able Contracting Fire

Pace Project No.: 92438972

Sample: ACF-SW-POND Lab ID: 92438972002 Collected: 07/28/19 09:55 Received: 07/29/19 14:07 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Org SC Analytical Method: EPA 8270D Preparation Method: EPA 3510C									
1,2,4-Trichlorobenzene	ND	ug/L	9.8	1.4	1	07/31/19 15:39	08/01/19 12:24	120-82-1	
2,4,5-Trichlorophenol	ND	ug/L	9.8	1.5	1	07/31/19 15:39	08/01/19 12:24	95-95-4	
2,4,6-Trichlorophenol	ND	ug/L	9.8	1.4	1	07/31/19 15:39	08/01/19 12:24	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	74	%	21-110		1	07/31/19 15:39	08/01/19 12:24	4165-60-0	
2-Fluorobiphenyl (S)	86	%	27-110		1	07/31/19 15:39	08/01/19 12:24	321-60-8	
Terphenyl-d14 (S)	86	%	31-107		1	07/31/19 15:39	08/01/19 12:24	1718-51-0	
Phenol-d6 (S)	32	%	10-110		1	07/31/19 15:39	08/01/19 12:24	13127-88-3	
2-Fluorophenol (S)	42	%	12-110		1	07/31/19 15:39	08/01/19 12:24	367-12-4	
2,4,6-Tribromophenol (S)	96	%	27-110		1	07/31/19 15:39	08/01/19 12:24	118-79-6	
8260 MSV Low Level SC Analytical Method: EPA 8260B									
Acetone	269	ug/L	25.0	6.2	1		07/31/19 22:31	67-64-1	M1
Benzene	21.4	ug/L	1.0	0.15	1		07/31/19 22:31	71-43-2	
Bromobenzene	ND	ug/L	1.0	0.22	1		07/31/19 22:31	108-86-1	
Bromochloromethane	ND	ug/L	1.0	0.34	1		07/31/19 22:31	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.26	1		07/31/19 22:31	75-27-4	
Bromoform	ND	ug/L	1.0	0.62	1		07/31/19 22:31	75-25-2	
Bromomethane	ND	ug/L	2.0	0.62	1		07/31/19 22:31	74-83-9	
2-Butanone (MEK)	43.2	ug/L	5.0	3.3	1		07/31/19 22:31	78-93-3	M1
Carbon tetrachloride	ND	ug/L	1.0	0.22	1		07/31/19 22:31	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		07/31/19 22:31	108-90-7	
Chloroethane	ND	ug/L	1.0	0.49	1		07/31/19 22:31	75-00-3	M1
Chloroform	ND	ug/L	5.0	2.3	1		07/31/19 22:31	67-66-3	
Chloromethane	1.8	ug/L	1.0	0.39	1		07/31/19 22:31	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	0.20	1		07/31/19 22:31	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	0.20	1		07/31/19 22:31	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	0.26	1		07/31/19 22:31	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.41	1		07/31/19 22:31	124-48-1	
Dibromomethane	ND	ug/L	1.0	0.46	1		07/31/19 22:31	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.29	1		07/31/19 22:31	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.22	1		07/31/19 22:31	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.26	1		07/31/19 22:31	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	0.23	1		07/31/19 22:31	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.27	1		07/31/19 22:31	75-34-3	
1,2-Dichloroethane	0.55J	ug/L	1.0	0.34	1		07/31/19 22:31	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.24	1		07/31/19 22:31	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.29	1		07/31/19 22:31	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.25	1		07/31/19 22:31	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.19	1		07/31/19 22:31	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.16	1		07/31/19 22:31	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	0.27	1		07/31/19 22:31	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	0.21	1		07/31/19 22:31	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.30	1		07/31/19 22:31	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.31	1		07/31/19 22:31	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	0.22	1		07/31/19 22:31	108-20-3	

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ANALYTICAL RESULTS

Project: Able Contracting Fire

Pace Project No.: 92438972

Sample: ACF-SW-POND		Lab ID: 92438972002		Collected: 07/28/19 09:55		Received: 07/29/19 14:07		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level SC		Analytical Method: EPA 8260B							
Ethylbenzene	6.0	ug/L	1.0	0.26	1		07/31/19 22:31	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	0.44	1		07/31/19 22:31	87-68-3	
2-Hexanone	ND	ug/L	5.0	0.57	1		07/31/19 22:31	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	0.21	1		07/31/19 22:31	99-87-6	
Methylene Chloride	ND	ug/L	5.0	3.7	1		07/31/19 22:31	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	4.5	1		07/31/19 22:31	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.28	1		07/31/19 22:31	1634-04-4	
Naphthalene	2.3	ug/L	1.0	0.35	1		07/31/19 22:31	91-20-3	
Styrene	ND	ug/L	1.0	0.27	1		07/31/19 22:31	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.34	1		07/31/19 22:31	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.22	1		07/31/19 22:31	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.16	1		07/31/19 22:31	127-18-4	
Toluene	10.5	ug/L	1.0	0.24	1		07/31/19 22:31	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.34	1		07/31/19 22:31	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.22	1		07/31/19 22:31	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.18	1		07/31/19 22:31	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.24	1		07/31/19 22:31	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.22	1		07/31/19 22:31	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.31	1		07/31/19 22:31	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.35	1		07/31/19 22:31	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1.4	1		07/31/19 22:31	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.24	1		07/31/19 22:31	75-01-4	
Xylene (Total)	1.1	ug/L	1.0	0.63	1		07/31/19 22:31	1330-20-7	
m&p-Xylene	1.8J	ug/L	2.0	0.41	1		07/31/19 22:31	179601-23-1	
o-Xylene	1.1	ug/L	1.0	0.22	1		07/31/19 22:31	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	103	%	70-130		1		07/31/19 22:31	460-00-4	
1,2-Dichloroethane-d4 (S)	93	%	70-130		1		07/31/19 22:31	17060-07-0	
Toluene-d8 (S)	104	%	70-130		1		07/31/19 22:31	2037-26-5	

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ANALYTICAL RESULTS

Project: Able Contracting Fire

Pace Project No.: 92438972

Sample: ACF-GW-472R **Lab ID: 92438972003** Collected: 07/28/19 15:10 Received: 07/29/19 14:07 Matrix: Water

Parameters	Results	Units	Report	MDL	DF	Prepared	Analyzed	CAS No.	Qual
			Limit						
6010 MET ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Aluminum	ND	ug/L	100	29.8	1	07/30/19 15:16	07/31/19 17:09	7429-90-5	
Antimony	ND	ug/L	5.0	3.0	1	07/30/19 15:16	07/31/19 17:09	7440-36-0	
Arsenic	ND	ug/L	10.0	4.7	1	07/30/19 15:16	07/31/19 17:09	7440-38-2	
Barium	5.7	ug/L	5.0	1.0	1	07/30/19 15:16	07/31/19 17:09	7440-39-3	
Beryllium	ND	ug/L	1.0	0.20	1	07/30/19 15:16	07/31/19 17:09	7440-41-7	
Cadmium	ND	ug/L	1.0	0.40	1	07/30/19 15:16	07/31/19 17:09	7440-43-9	
Calcium	27200	ug/L	100	24.2	1	07/30/19 15:16	07/31/19 17:09	7440-70-2	
Chromium	ND	ug/L	5.0	1.0	1	07/30/19 15:16	07/31/19 17:09	7440-47-3	
Cobalt	ND	ug/L	5.0	1.1	1	07/30/19 15:16	07/31/19 17:09	7440-48-4	
Copper	27.6	ug/L	5.0	2.1	1	07/30/19 15:16	07/31/19 17:09	7440-50-8	
Iron	ND	ug/L	50.0	19.5	1	07/30/19 15:16	07/31/19 17:09	7439-89-6	
Lead	ND	ug/L	5.0	1.6	1	07/30/19 15:16	07/31/19 17:09	7439-92-1	
Magnesium	9370	ug/L	100	17.1	1	07/30/19 15:16	07/31/19 17:09	7439-95-4	
Manganese	21.8	ug/L	5.0	0.90	1	07/30/19 15:16	07/31/19 17:09	7439-96-5	
Nickel	2.6J	ug/L	5.0	0.90	1	07/30/19 15:16	07/31/19 17:09	7440-02-0	
Potassium	2760J	ug/L	5000	890	1	07/30/19 15:16	07/31/19 17:09	7440-09-7	
Selenium	ND	ug/L	10.0	4.7	1	07/30/19 15:16	07/31/19 17:09	7782-49-2	
Silver	ND	ug/L	5.0	2.5	1	07/30/19 15:16	07/31/19 17:09	7440-22-4	
Sodium	10600	ug/L	5000	174	1	07/30/19 15:16	07/31/19 17:09	7440-23-5	
Thallium	ND	ug/L	10.0	2.6	1	07/30/19 15:16	07/31/19 17:09	7440-28-0	
Vanadium	ND	ug/L	5.0	1.3	1	07/30/19 15:16	07/31/19 17:09	7440-62-2	
Zinc	130	ug/L	10.0	3.9	1	07/30/19 15:16	07/31/19 17:09	7440-66-6	

7470 Mercury

Analytical Method: EPA 7470A Preparation Method: EPA 7470A

Mercury	ND	ug/L	0.20	0.10	1	07/31/19 11:50	07/31/19 14:36	7439-97-6	
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8270 MSSV Semivolatile Org SC

Analytical Method: EPA 8270D Preparation Method: EPA 3510C

Acenaphthene	ND	ug/L	100	16.0	1	07/31/19 15:39	08/01/19 11:49	83-32-9	
Acenaphthylene	ND	ug/L	100	14.8	1	07/31/19 15:39	08/01/19 11:49	208-96-8	
Aniline	ND	ug/L	100	12.3	1	07/31/19 15:39	08/01/19 11:49	62-53-3	
Anthracene	ND	ug/L	100	17.1	1	07/31/19 15:39	08/01/19 11:49	120-12-7	
Benzo(a)anthracene	ND	ug/L	100	21.1	1	07/31/19 15:39	08/01/19 11:49	56-55-3	
Benzo(a)pyrene	ND	ug/L	100	22.1	1	07/31/19 15:39	08/01/19 11:49	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	100	21.9	1	07/31/19 15:39	08/01/19 11:49	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	100	20.8	1	07/31/19 15:39	08/01/19 11:49	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	100	19.9	1	07/31/19 15:39	08/01/19 11:49	207-08-9	
Benzoic Acid	ND	ug/L	500	50.1	1	07/31/19 15:39	08/01/19 11:49	65-85-0	
Benzyl alcohol	ND	ug/L	200	30.8	1	07/31/19 15:39	08/01/19 11:49	100-51-6	
4-Bromophenylphenyl ether	ND	ug/L	100	14.9	1	07/31/19 15:39	08/01/19 11:49	101-55-3	
Butylbenzylphthalate	ND	ug/L	100	24.9	1	07/31/19 15:39	08/01/19 11:49	85-68-7	
4-Chloro-3-methylphenol	ND	ug/L	200	28.4	1	07/31/19 15:39	08/01/19 11:49	59-50-7	
4-Chloroaniline	ND	ug/L	500	28.1	1	07/31/19 15:39	08/01/19 11:49	106-47-8	
bis(2-Chloroethoxy)methane	ND	ug/L	100	16.2	1	07/31/19 15:39	08/01/19 11:49	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/L	100	17.1	1	07/31/19 15:39	08/01/19 11:49	111-44-4	
2-Chloronaphthalene	ND	ug/L	100	16.3	1	07/31/19 15:39	08/01/19 11:49	91-58-7	
2-Chlorophenol	ND	ug/L	100	15.1	1	07/31/19 15:39	08/01/19 11:49	95-57-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Able Contracting Fire

Pace Project No.: 92438972

Sample: ACF-GW-472R		Lab ID: 92438972003		Collected: 07/28/19 15:10		Received: 07/29/19 14:07		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Org SC		Analytical Method: EPA 8270D Preparation Method: EPA 3510C							
4-Chlorophenylphenyl ether	ND	ug/L	100	15.5	1	07/31/19 15:39	08/01/19 11:49	7005-72-3	
Chrysene	ND	ug/L	100	20.9	1	07/31/19 15:39	08/01/19 11:49	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	100	20.3	1	07/31/19 15:39	08/01/19 11:49	53-70-3	
Dibenzofuran	ND	ug/L	100	16.8	1	07/31/19 15:39	08/01/19 11:49	132-64-9	
1,2-Dichlorobenzene	ND	ug/L	100	15.0	1	07/31/19 15:39	08/01/19 11:49	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	100	13.8	1	07/31/19 15:39	08/01/19 11:49	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	100	13.8	1	07/31/19 15:39	08/01/19 11:49	106-46-7	
3,3'-Dichlorobenzidine	ND	ug/L	500	38.6	1	07/31/19 15:39	08/01/19 11:49	91-94-1	
2,4-Dichlorophenol	ND	ug/L	100	15.5	1	07/31/19 15:39	08/01/19 11:49	120-83-2	
Diethylphthalate	ND	ug/L	100	16.2	1	07/31/19 15:39	08/01/19 11:49	84-66-2	
2,4-Dimethylphenol	ND	ug/L	100	16.1	1	07/31/19 15:39	08/01/19 11:49	105-67-9	
Dimethylphthalate	ND	ug/L	100	14.1	1	07/31/19 15:39	08/01/19 11:49	131-11-3	
Di-n-butylphthalate	ND	ug/L	100	19.8	1	07/31/19 15:39	08/01/19 11:49	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/L	200	22.5	1	07/31/19 15:39	08/01/19 11:49	534-52-1	
2,4-Dinitrophenol	ND	ug/L	500	50.8	1	07/31/19 15:39	08/01/19 11:49	51-28-5	
2,4-Dinitrotoluene	ND	ug/L	100	15.3	1	07/31/19 15:39	08/01/19 11:49	121-14-2	
2,6-Dinitrotoluene	ND	ug/L	100	13.8	1	07/31/19 15:39	08/01/19 11:49	606-20-2	
Di-n-octylphthalate	ND	ug/L	100	14.9	1	07/31/19 15:39	08/01/19 11:49	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/L	60.0	23.0	1	07/31/19 15:39	08/01/19 11:49	117-81-7	
Fluoranthene	ND	ug/L	100	22.2	1	07/31/19 15:39	08/01/19 11:49	206-44-0	
Fluorene	ND	ug/L	100	15.6	1	07/31/19 15:39	08/01/19 11:49	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/L	100	15.8	1	07/31/19 15:39	08/01/19 11:49	87-68-3	
Hexachlorobenzene	ND	ug/L	100	16.6	1	07/31/19 15:39	08/01/19 11:49	118-74-1	
Hexachlorocyclopentadiene	ND	ug/L	100	13.4	1	07/31/19 15:39	08/01/19 11:49	77-47-4	
Hexachloroethane	ND	ug/L	100	18.4	1	07/31/19 15:39	08/01/19 11:49	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/L	100	20.5	1	07/31/19 15:39	08/01/19 11:49	193-39-5	
Isophorone	ND	ug/L	100	15.0	1	07/31/19 15:39	08/01/19 11:49	78-59-1	
1-Methylnaphthalene	ND	ug/L	100	14.3	1	07/31/19 15:39	08/01/19 11:49	90-12-0	
2-Methylnaphthalene	ND	ug/L	100	14.2	1	07/31/19 15:39	08/01/19 11:49	91-57-6	
2-Methylphenol(o-Cresol)	ND	ug/L	100	16.1	1	07/31/19 15:39	08/01/19 11:49	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	ug/L	100	14.3	1	07/31/19 15:39	08/01/19 11:49	15831-10-4	
Naphthalene	ND	ug/L	100	14.0	1	07/31/19 15:39	08/01/19 11:49	91-20-3	
2-Nitroaniline	ND	ug/L	500	22.6	1	07/31/19 15:39	08/01/19 11:49	88-74-4	
3-Nitroaniline	ND	ug/L	500	26.6	1	07/31/19 15:39	08/01/19 11:49	99-09-2	
4-Nitroaniline	ND	ug/L	500	33.7	1	07/31/19 15:39	08/01/19 11:49	100-01-6	
Nitrobenzene	ND	ug/L	100	16.1	1	07/31/19 15:39	08/01/19 11:49	98-95-3	
2-Nitrophenol	ND	ug/L	100	16.5	1	07/31/19 15:39	08/01/19 11:49	88-75-5	
4-Nitrophenol	ND	ug/L	500	42.6	1	07/31/19 15:39	08/01/19 11:49	100-02-7	
N-Nitrosodimethylamine	ND	ug/L	100	15.9	1	07/31/19 15:39	08/01/19 11:49	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/L	100	17.1	1	07/31/19 15:39	08/01/19 11:49	621-64-7	
N-Nitrosodiphenylamine	ND	ug/L	100	14.5	1	07/31/19 15:39	08/01/19 11:49	86-30-6	
2,2'-Oxybis(1-chloropropane)	ND	ug/L	100	18.2	1	07/31/19 15:39	08/01/19 11:49	108-60-1	v1
Pentachlorophenol	ND	ug/L	500	35.2	1	07/31/19 15:39	08/01/19 11:49	87-86-5	
Phenanthrene	ND	ug/L	100	15.9	1	07/31/19 15:39	08/01/19 11:49	85-01-8	
Phenol	ND	ug/L	100	12.9	1	07/31/19 15:39	08/01/19 11:49	108-95-2	
Pyrene	ND	ug/L	100	22.0	1	07/31/19 15:39	08/01/19 11:49	129-00-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Able Contracting Fire

Pace Project No.: 92438972

Sample: ACF-GW-472R Lab ID: 92438972003 Collected: 07/28/19 15:10 Received: 07/29/19 14:07 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Org SC Analytical Method: EPA 8270D Preparation Method: EPA 3510C									
1,2,4-Trichlorobenzene	ND	ug/L	100	14.1	1	07/31/19 15:39	08/01/19 11:49	120-82-1	
2,4,5-Trichlorophenol	ND	ug/L	100	15.0	1	07/31/19 15:39	08/01/19 11:49	95-95-4	
2,4,6-Trichlorophenol	ND	ug/L	100	14.4	1	07/31/19 15:39	08/01/19 11:49	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	72	%	21-110		1	07/31/19 15:39	08/01/19 11:49	4165-60-0	
2-Fluorobiphenyl (S)	81	%	27-110		1	07/31/19 15:39	08/01/19 11:49	321-60-8	
Terphenyl-d14 (S)	98	%	31-107		1	07/31/19 15:39	08/01/19 11:49	1718-51-0	
Phenol-d6 (S)	28	%	10-110		1	07/31/19 15:39	08/01/19 11:49	13127-88-3	
2-Fluorophenol (S)	46	%	12-110		1	07/31/19 15:39	08/01/19 11:49	367-12-4	
2,4,6-Tribromophenol (S)	88	%	27-110		1	07/31/19 15:39	08/01/19 11:49	118-79-6	
8260 MSV Low Level SC Analytical Method: EPA 8260B									
Acetone	ND	ug/L	25.0	6.2	1		07/31/19 22:12	67-64-1	
Benzene	ND	ug/L	1.0	0.15	1		07/31/19 22:12	71-43-2	
Bromobenzene	ND	ug/L	1.0	0.22	1		07/31/19 22:12	108-86-1	
Bromochloromethane	ND	ug/L	1.0	0.34	1		07/31/19 22:12	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.26	1		07/31/19 22:12	75-27-4	
Bromoform	ND	ug/L	1.0	0.62	1		07/31/19 22:12	75-25-2	
Bromomethane	ND	ug/L	2.0	0.62	1		07/31/19 22:12	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	3.3	1		07/31/19 22:12	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	0.22	1		07/31/19 22:12	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		07/31/19 22:12	108-90-7	
Chloroethane	ND	ug/L	1.0	0.49	1		07/31/19 22:12	75-00-3	
Chloroform	ND	ug/L	5.0	2.3	1		07/31/19 22:12	67-66-3	
Chloromethane	0.69J	ug/L	1.0	0.39	1		07/31/19 22:12	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	0.20	1		07/31/19 22:12	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	0.20	1		07/31/19 22:12	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.0	0.26	1		07/31/19 22:12	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.41	1		07/31/19 22:12	124-48-1	
Dibromomethane	ND	ug/L	1.0	0.46	1		07/31/19 22:12	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.29	1		07/31/19 22:12	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.22	1		07/31/19 22:12	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.26	1		07/31/19 22:12	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	0.23	1		07/31/19 22:12	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.27	1		07/31/19 22:12	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.34	1		07/31/19 22:12	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.24	1		07/31/19 22:12	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.29	1		07/31/19 22:12	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.25	1		07/31/19 22:12	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.19	1		07/31/19 22:12	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.16	1		07/31/19 22:12	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	0.27	1		07/31/19 22:12	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	0.21	1		07/31/19 22:12	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.30	1		07/31/19 22:12	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.31	1		07/31/19 22:12	10061-02-6	
Diisopropyl ether	ND	ug/L	1.0	0.22	1		07/31/19 22:12	108-20-3	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Able Contracting Fire

Pace Project No.: 92438972

Sample: ACF-GW-472R		Lab ID: 92438972003		Collected: 07/28/19 15:10		Received: 07/29/19 14:07		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level SC		Analytical Method: EPA 8260B							
Ethylbenzene	ND	ug/L	1.0	0.26	1		07/31/19 22:12	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	0.44	1		07/31/19 22:12	87-68-3	
2-Hexanone	ND	ug/L	5.0	0.57	1		07/31/19 22:12	591-78-6	
p-Isopropyltoluene	ND	ug/L	1.0	0.21	1		07/31/19 22:12	99-87-6	
Methylene Chloride	ND	ug/L	5.0	3.7	1		07/31/19 22:12	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	4.5	1		07/31/19 22:12	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.28	1		07/31/19 22:12	1634-04-4	
Naphthalene	ND	ug/L	1.0	0.35	1		07/31/19 22:12	91-20-3	
Styrene	ND	ug/L	1.0	0.27	1		07/31/19 22:12	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.34	1		07/31/19 22:12	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.22	1		07/31/19 22:12	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.16	1		07/31/19 22:12	127-18-4	
Toluene	ND	ug/L	1.0	0.24	1		07/31/19 22:12	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.34	1		07/31/19 22:12	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.22	1		07/31/19 22:12	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.18	1		07/31/19 22:12	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.24	1		07/31/19 22:12	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.22	1		07/31/19 22:12	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.31	1		07/31/19 22:12	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.35	1		07/31/19 22:12	96-18-4	
Vinyl acetate	ND	ug/L	2.0	1.4	1		07/31/19 22:12	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.24	1		07/31/19 22:12	75-01-4	
Xylene (Total)	ND	ug/L	1.0	0.63	1		07/31/19 22:12	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.41	1		07/31/19 22:12	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.22	1		07/31/19 22:12	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	102	%	70-130		1		07/31/19 22:12	460-00-4	
1,2-Dichloroethane-d4 (S)	86	%	70-130		1		07/31/19 22:12	17060-07-0	
Toluene-d8 (S)	106	%	70-130		1		07/31/19 22:12	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Able Contracting Fire

Pace Project No.: 92438972

QC Batch: 489467 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
Associated Lab Samples: 92438972001, 92438972002, 92438972003

METHOD BLANK: 2641238 Matrix: Water

Associated Lab Samples: 92438972001, 92438972002, 92438972003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	0.10	07/31/19 14:27	

LABORATORY CONTROL SAMPLE: 2641239

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	2.5	2.3	94	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2641240 2641241

Parameter	Units	92439160001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	2.1	2.5	2.5	4.0	4.4	77	91	75-125	8	25	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Able Contracting Fire

Pace Project No.: 92438972

QC Batch: 489233 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A Analysis Description: 6010 MET
Associated Lab Samples: 92438972001, 92438972002, 92438972003

METHOD BLANK: 2640313 Matrix: Water

Associated Lab Samples: 92438972001, 92438972002, 92438972003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Aluminum	ug/L	ND	100	29.8	07/31/19 16:37	
Antimony	ug/L	ND	5.0	3.0	07/31/19 16:37	
Arsenic	ug/L	ND	10.0	4.7	07/31/19 16:37	
Barium	ug/L	ND	5.0	1.0	07/31/19 16:37	
Beryllium	ug/L	ND	1.0	0.20	07/31/19 16:37	
Cadmium	ug/L	ND	1.0	0.40	07/31/19 16:37	
Calcium	ug/L	ND	100	24.2	07/31/19 16:37	
Chromium	ug/L	ND	5.0	1.0	07/31/19 16:37	
Cobalt	ug/L	ND	5.0	1.1	07/31/19 16:37	
Copper	ug/L	ND	5.0	2.1	07/31/19 16:37	
Iron	ug/L	ND	50.0	19.5	07/31/19 16:37	
Lead	ug/L	ND	5.0	1.6	07/31/19 16:37	
Magnesium	ug/L	ND	100	17.1	07/31/19 16:37	
Manganese	ug/L	ND	5.0	0.90	07/31/19 16:37	
Nickel	ug/L	ND	5.0	0.90	07/31/19 16:37	
Potassium	ug/L	ND	5000	890	07/31/19 16:37	
Selenium	ug/L	ND	10.0	4.7	07/31/19 16:37	
Silver	ug/L	ND	5.0	2.5	07/31/19 16:37	
Sodium	ug/L	ND	5000	174	07/31/19 16:37	
Thallium	ug/L	ND	10.0	2.6	07/31/19 16:37	
Vanadium	ug/L	ND	5.0	1.3	07/31/19 16:37	
Zinc	ug/L	ND	10.0	3.9	07/31/19 16:37	

LABORATORY CONTROL SAMPLE: 2640314

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	5000	4880	98	80-120	
Antimony	ug/L	500	490	98	80-120	
Arsenic	ug/L	500	477	95	80-120	
Barium	ug/L	500	500	100	80-120	
Beryllium	ug/L	500	496	99	80-120	
Cadmium	ug/L	500	492	98	80-120	
Calcium	ug/L	5000	4950	99	80-120	
Chromium	ug/L	500	487	97	80-120	
Cobalt	ug/L	500	491	98	80-120	
Copper	ug/L	500	499	100	80-120	
Iron	ug/L	5000	4840	97	80-120	
Lead	ug/L	500	490	98	80-120	
Magnesium	ug/L	5000	4900	98	80-120	
Manganese	ug/L	500	490	98	80-120	

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QUALITY CONTROL DATA

Project: Able Contracting Fire

Pace Project No.: 92438972

LABORATORY CONTROL SAMPLE: 2640314

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nickel	ug/L	500	489	98	80-120	
Potassium	ug/L	5000	4950J	99	80-120	
Selenium	ug/L	500	489	98	80-120	
Silver	ug/L	250	238	95	80-120	
Sodium	ug/L	5000	4960J	99	80-120	
Thallium	ug/L	500	486	97	80-120	
Vanadium	ug/L	500	495	99	80-120	
Zinc	ug/L	500	477	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2640315 2640316

Parameter	Units	92438953002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum	ug/L	7930	5000	5000	19400	19000	229	221	75-125	2	20	M1
Antimony	ug/L	ND	500	500	455	454	91	91	75-125	0	20	
Arsenic	ug/L	ND	500	500	455	456	91	91	75-125	0	20	
Barium	ug/L	1690	500	500	2110	2130	85	89	75-125	1	20	
Beryllium	ug/L	4.2	500	500	480	478	95	95	75-125	0	20	
Cadmium	ug/L	ND	500	500	480	480	96	96	75-125	0	20	
Calcium	ug/L	76700	5000	5000	78300	79500	31	56	75-125	2	20	M1
Chromium	ug/L	5.1	500	500	471	471	93	93	75-125	0	20	
Cobalt	ug/L	32.2	500	500	489	487	91	91	75-125	0	20	
Copper	ug/L	99.7	500	500	595	595	99	99	75-125	0	20	
Iron	ug/L	16800	5000	5000	27800	27400	220	211	75-125	1	20	M1
Lead	ug/L	9.7	500	500	466	465	91	91	75-125	0	20	
Magnesium	ug/L	47500	5000	5000	50700	52000	65	90	75-125	2	20	M1
Manganese	ug/L	1280	500	500	1720	1740	88	94	75-125	2	20	
Nickel	ug/L	16.8	500	500	471	469	91	90	75-125	0	20	
Potassium	ug/L	ND	5000	5000	7890	7900	99	100	75-125	0	20	
Selenium	ug/L	ND	500	500	488	490	98	98	75-125	0	20	
Silver	ug/L	ND	250	250	237	239	95	96	75-125	1	20	
Sodium	ug/L	13200	5000	5000	17600	17800	88	93	75-125	1	20	
Thallium	ug/L	ND	500	500	449	450	89	89	75-125	0	20	
Vanadium	ug/L	306	500	500	784	795	96	98	75-125	1	20	
Zinc	ug/L	105	500	500	559	560	91	91	75-125	0	20	

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QUALITY CONTROL DATA

Project: Able Contracting Fire

Pace Project No.: 92438972

QC Batch: 489573

Analysis Method: EPA 8260B

QC Batch Method: EPA 8260B

Analysis Description: 8260 MSV Low Level SC

Associated Lab Samples: 92438972001, 92438972002, 92438972003

METHOD BLANK: 2641718

Matrix: Water

Associated Lab Samples: 92438972001, 92438972002, 92438972003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	0.34	07/31/19 16:06	
1,1,1-Trichloroethane	ug/L	ND	1.0	0.18	07/31/19 16:06	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.22	07/31/19 16:06	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.24	07/31/19 16:06	
1,1-Dichloroethane	ug/L	ND	1.0	0.27	07/31/19 16:06	
1,1-Dichloroethene	ug/L	ND	1.0	0.24	07/31/19 16:06	
1,1-Dichloropropene	ug/L	ND	1.0	0.21	07/31/19 16:06	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	0.34	07/31/19 16:06	
1,2,3-Trichloropropane	ug/L	ND	1.0	0.35	07/31/19 16:06	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	0.22	07/31/19 16:06	
1,2-Dibromo-3-chloropropane	ug/L	ND	2.0	0.26	07/31/19 16:06	
1,2-Dichlorobenzene	ug/L	ND	1.0	0.29	07/31/19 16:06	
1,2-Dichloroethane	ug/L	ND	1.0	0.34	07/31/19 16:06	
1,2-Dichloropropane	ug/L	ND	1.0	0.19	07/31/19 16:06	
1,3-Dichlorobenzene	ug/L	ND	1.0	0.22	07/31/19 16:06	
1,3-Dichloropropane	ug/L	ND	1.0	0.16	07/31/19 16:06	
1,4-Dichlorobenzene	ug/L	ND	1.0	0.26	07/31/19 16:06	
2,2-Dichloropropane	ug/L	ND	1.0	0.27	07/31/19 16:06	
2-Butanone (MEK)	ug/L	ND	5.0	3.3	07/31/19 16:06	
2-Chlorotoluene	ug/L	ND	1.0	0.20	07/31/19 16:06	
2-Hexanone	ug/L	ND	5.0	0.57	07/31/19 16:06	
4-Chlorotoluene	ug/L	ND	1.0	0.20	07/31/19 16:06	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	4.5	07/31/19 16:06	
Acetone	ug/L	ND	25.0	6.2	07/31/19 16:06	
Benzene	ug/L	ND	1.0	0.15	07/31/19 16:06	
Bromobenzene	ug/L	ND	1.0	0.22	07/31/19 16:06	
Bromochloromethane	ug/L	ND	1.0	0.34	07/31/19 16:06	
Bromodichloromethane	ug/L	ND	1.0	0.26	07/31/19 16:06	
Bromoform	ug/L	ND	1.0	0.62	07/31/19 16:06	
Bromomethane	ug/L	ND	2.0	0.62	07/31/19 16:06	
Carbon tetrachloride	ug/L	ND	1.0	0.22	07/31/19 16:06	
Chlorobenzene	ug/L	ND	1.0	0.23	07/31/19 16:06	
Chloroethane	ug/L	ND	1.0	0.49	07/31/19 16:06	
Chloroform	ug/L	ND	5.0	2.3	07/31/19 16:06	
Chloromethane	ug/L	ND	1.0	0.39	07/31/19 16:06	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.29	07/31/19 16:06	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.30	07/31/19 16:06	
Dibromochloromethane	ug/L	ND	1.0	0.41	07/31/19 16:06	
Dibromomethane	ug/L	ND	1.0	0.46	07/31/19 16:06	
Dichlorodifluoromethane	ug/L	ND	1.0	0.23	07/31/19 16:06	
Diisopropyl ether	ug/L	ND	1.0	0.22	07/31/19 16:06	

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QUALITY CONTROL DATA

Project: Able Contracting Fire

Pace Project No.: 92438972

METHOD BLANK: 2641718

Matrix: Water

Associated Lab Samples: 92438972001, 92438972002, 92438972003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Ethylbenzene	ug/L	ND	1.0	0.26	07/31/19 16:06	
Hexachloro-1,3-butadiene	ug/L	ND	1.0	0.44	07/31/19 16:06	
m&p-Xylene	ug/L	ND	2.0	0.41	07/31/19 16:06	
Methyl-tert-butyl ether	ug/L	ND	1.0	0.28	07/31/19 16:06	
Methylene Chloride	ug/L	ND	5.0	3.7	07/31/19 16:06	
Naphthalene	ug/L	ND	1.0	0.35	07/31/19 16:06	
o-Xylene	ug/L	ND	1.0	0.22	07/31/19 16:06	
p-Isopropyltoluene	ug/L	ND	1.0	0.21	07/31/19 16:06	
Styrene	ug/L	ND	1.0	0.27	07/31/19 16:06	
Tetrachloroethene	ug/L	ND	1.0	0.16	07/31/19 16:06	
Toluene	ug/L	ND	1.0	0.24	07/31/19 16:06	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.25	07/31/19 16:06	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.31	07/31/19 16:06	
Trichloroethene	ug/L	ND	1.0	0.22	07/31/19 16:06	
Trichlorofluoromethane	ug/L	ND	1.0	0.31	07/31/19 16:06	
Vinyl acetate	ug/L	ND	2.0	1.4	07/31/19 16:06	
Vinyl chloride	ug/L	ND	1.0	0.24	07/31/19 16:06	
Xylene (Total)	ug/L	ND	1.0	0.63	07/31/19 16:06	
1,2-Dichloroethane-d4 (S)	%	90	70-130		07/31/19 16:06	
4-Bromofluorobenzene (S)	%	106	70-130		07/31/19 16:06	
Toluene-d8 (S)	%	106	70-130		07/31/19 16:06	

LABORATORY CONTROL SAMPLE: 2641719

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	49.4	99	70-130	
1,1,1-Trichloroethane	ug/L	50	49.5	99	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	53.3	107	70-130	
1,1,2-Trichloroethane	ug/L	50	54.5	109	70-130	
1,1-Dichloroethane	ug/L	50	51.4	103	70-130	
1,1-Dichloroethene	ug/L	50	52.4	105	70-130	
1,1-Dichloropropene	ug/L	50	47.2	94	70-130	
1,2,3-Trichlorobenzene	ug/L	50	52.8	106	70-130	
1,2,3-Trichloropropane	ug/L	50	53.8	108	70-130	2g
1,2,4-Trichlorobenzene	ug/L	50	52.0	104	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	54.1	108	70-130	
1,2-Dichlorobenzene	ug/L	50	50.8	102	70-130	
1,2-Dichloroethane	ug/L	50	51.0	102	70-130	
1,2-Dichloropropane	ug/L	50	54.9	110	70-130	
1,3-Dichlorobenzene	ug/L	50	48.4	97	70-130	
1,3-Dichloropropane	ug/L	50	52.6	105	70-130	
1,4-Dichlorobenzene	ug/L	50	49.0	98	70-130	
2,2-Dichloropropane	ug/L	50	53.3	107	70-130	
2-Butanone (MEK)	ug/L	100	93.4	93	70-130	2g

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QUALITY CONTROL DATA

Project: Able Contracting Fire

Pace Project No.: 92438972

LABORATORY CONTROL SAMPLE: 2641719

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2-Chlorotoluene	ug/L	50	49.0	98	70-130	
2-Hexanone	ug/L	100	105	105	70-130	
4-Chlorotoluene	ug/L	50	50.7	101	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	100	101	101	70-130	
Acetone	ug/L	100	108	108	70-130	
Benzene	ug/L	50	52.5	105	70-130	
Bromobenzene	ug/L	50	52.2	104	70-130	
Bromochloromethane	ug/L	50	52.8	106	70-130	
Bromodichloromethane	ug/L	50	55.5	111	70-130	
Bromoform	ug/L	50	46.5	93	70-130	
Bromomethane	ug/L	50	45.6	91	70-130	
Carbon tetrachloride	ug/L	50	51.3	103	70-130	
Chlorobenzene	ug/L	50	50.3	101	70-130	
Chloroethane	ug/L	50	50.3	101	70-130	
Chloroform	ug/L	50	50.7	101	70-130	
Chloromethane	ug/L	50	49.6	99	70-130	
cis-1,2-Dichloroethene	ug/L	50	51.8	104	70-130	
cis-1,3-Dichloropropene	ug/L	50	53.1	106	70-130	
Dibromochloromethane	ug/L	50	49.1	98	70-130	
Dibromomethane	ug/L	50	50.7	101	70-130	
Dichlorodifluoromethane	ug/L	50	51.4	103	70-130	
Diisopropyl ether	ug/L	50	49.3	99	70-130	
Ethylbenzene	ug/L	50	50.9	102	70-130	
Hexachloro-1,3-butadiene	ug/L	50	49.2	98	70-130	
m&p-Xylene	ug/L	100	101	101	70-130	
Methyl-tert-butyl ether	ug/L	50	47.5	95	70-130	
Methylene Chloride	ug/L	50	47.9	96	70-130	
Naphthalene	ug/L	50	52.2	104	70-130	
o-Xylene	ug/L	50	52.4	105	70-130	
p-Isopropyltoluene	ug/L	50	50.8	102	70-130	
Styrene	ug/L	50	51.1	102	70-130	
Tetrachloroethene	ug/L	50	52.2	104	70-130	
Toluene	ug/L	50	47.2	94	70-130	
trans-1,2-Dichloroethene	ug/L	50	52.6	105	70-130	
trans-1,3-Dichloropropene	ug/L	50	51.3	103	70-130	
Trichloroethene	ug/L	50	53.4	107	70-130	
Trichlorofluoromethane	ug/L	50	49.8	100	70-130	
Vinyl acetate	ug/L	100	93.2	93	70-130	2g
Vinyl chloride	ug/L	50	53.7	107	70-130	
Xylene (Total)	ug/L	150	154	103	70-130	
1,2-Dichloroethane-d4 (S)	%			102	70-130	
4-Bromofluorobenzene (S)	%			100	70-130	
Toluene-d8 (S)	%			97	70-130	

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QUALITY CONTROL DATA

Project: Able Contracting Fire

Pace Project No.: 92438972

MATRIX SPIKE SAMPLE: 2641721		92438972002	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	20	19.9	99	70-130	
1,1,1-Trichloroethane	ug/L	ND	20	21.0	105	70-130	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	21.8	109	70-130	
1,1,2-Trichloroethane	ug/L	ND	20	19.3	97	70-130	
1,1-Dichloroethane	ug/L	ND	20	20.9	105	70-130	
1,1-Dichloroethene	ug/L	ND	20	21.4	107	70-130	
1,1-Dichloropropene	ug/L	ND	20	19.8	99	70-130	
1,2,3-Trichlorobenzene	ug/L	ND	20	19.3	96	70-130	
1,2,3-Trichloropropane	ug/L	ND	20	22.3	111	70-130	
1,2,4-Trichlorobenzene	ug/L	ND	20	19.5	98	70-130	
1,2-Dibromo-3-chloropropane	ug/L	ND	20	21.7	108	70-130	
1,2-Dichlorobenzene	ug/L	ND	20	19.2	96	70-130	
1,2-Dichloroethane	ug/L	0.55J	20	19.4	94	70-130	
1,2-Dichloropropane	ug/L	ND	20	20.7	104	70-130	
1,3-Dichlorobenzene	ug/L	ND	20	19.5	98	70-130	
1,3-Dichloropropane	ug/L	ND	20	19.9	100	70-130	
1,4-Dichlorobenzene	ug/L	ND	20	18.8	94	70-130	
2,2-Dichloropropane	ug/L	ND	20	20.6	103	70-130	
2-Butanone (MEK)	ug/L	43.2	40	105	154	70-130 M1	
2-Chlorotoluene	ug/L	ND	20	18.5	93	70-130	
2-Hexanone	ug/L	ND	40	47.0	117	70-130	
4-Chlorotoluene	ug/L	ND	20	18.8	94	70-130	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	40	47.0	107	70-130	
Acetone	ug/L	269	40	352	206	70-130 M1	
Benzene	ug/L	21.4	20	41.7	102	70-130	
Bromobenzene	ug/L	ND	20	19.1	96	70-130	
Bromochloromethane	ug/L	ND	20	21.5	107	70-130	
Bromodichloromethane	ug/L	ND	20	20.1	100	70-130	
Bromoform	ug/L	ND	20	19.0	95	70-130	
Bromomethane	ug/L	ND	20	25.2	126	70-130	
Carbon tetrachloride	ug/L	ND	20	20.7	104	70-130	
Chlorobenzene	ug/L	ND	20	19.3	97	70-130	
Chloroethane	ug/L	ND	20	35.6	178	70-130 M1	
Chloroform	ug/L	ND	20	18.7	93	70-130	
Chloromethane	ug/L	1.8	20	22.5	103	70-130	
cis-1,2-Dichloroethene	ug/L	ND	20	20.4	102	70-130	
cis-1,3-Dichloropropene	ug/L	ND	20	19.5	98	70-130	
Dibromochloromethane	ug/L	ND	20	18.7	93	70-130	
Dibromomethane	ug/L	ND	20	19.0	95	70-130	
Dichlorodifluoromethane	ug/L	ND	20	17.3	86	70-130	
Diisopropyl ether	ug/L	ND	20	21.3	107	70-130	
Ethylbenzene	ug/L	6.0	20	25.1	96	70-130	
Hexachloro-1,3-butadiene	ug/L	ND	20	19.6	98	70-130	
m&p-Xylene	ug/L	1.8J	40	40.6	97	70-130	
Methyl-tert-butyl ether	ug/L	ND	20	19.5	97	70-130	
Methylene Chloride	ug/L	ND	20	19.4	97	70-130	
Naphthalene	ug/L	2.3	20	25.4	115	70-130	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Able Contracting Fire

Pace Project No.: 92438972

MATRIX SPIKE SAMPLE: 2641721		92438972002	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
o-Xylene	ug/L	1.1	20	21.3	101	70-130	
p-Isopropyltoluene	ug/L	ND	20	20.6	103	70-130	
Styrene	ug/L	ND	20	22.6	113	70-130	
Tetrachloroethene	ug/L	ND	20	20.3	101	70-130	
Toluene	ug/L	10.5	20	27.9	87	70-130	
trans-1,2-Dichloroethene	ug/L	ND	20	21.7	108	70-130	
trans-1,3-Dichloropropene	ug/L	ND	20	18.0	90	70-130	
Trichloroethene	ug/L	ND	20	20.6	103	70-130	
Trichlorofluoromethane	ug/L	ND	20	20.6	103	70-130	
Vinyl acetate	ug/L	ND	40	41.3	103	70-130	
Vinyl chloride	ug/L	ND	20	20.3	101	70-130	
Xylene (Total)	ug/L	1.1	60	61.9	101	70-130	
1,2-Dichloroethane-d4 (S)	%				102	70-130	
4-Bromofluorobenzene (S)	%				104	70-130	
Toluene-d8 (S)	%				96	70-130	

SAMPLE DUPLICATE: 2641720

Parameter	Units	92438972003	Dup	RPD	Max	
		Result	Result		RPD	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	ND		30	
1,1,1-Trichloroethane	ug/L	ND	ND		30	
1,1,2,2-Tetrachloroethane	ug/L	ND	ND		30	
1,1,2-Trichloroethane	ug/L	ND	ND		30	
1,1-Dichloroethane	ug/L	ND	ND		30	
1,1-Dichloroethene	ug/L	ND	ND		30	
1,1-Dichloropropene	ug/L	ND	ND		30	
1,2,3-Trichlorobenzene	ug/L	ND	ND		30	
1,2,3-Trichloropropane	ug/L	ND	ND		30	
1,2,4-Trichlorobenzene	ug/L	ND	ND		30	
1,2-Dibromo-3-chloropropane	ug/L	ND	ND		30	
1,2-Dichlorobenzene	ug/L	ND	ND		30	
1,2-Dichloroethane	ug/L	ND	ND		30	
1,2-Dichloropropane	ug/L	ND	ND		30	
1,3-Dichlorobenzene	ug/L	ND	ND		30	
1,3-Dichloropropane	ug/L	ND	ND		30	
1,4-Dichlorobenzene	ug/L	ND	ND		30	
2,2-Dichloropropane	ug/L	ND	ND		30	
2-Butanone (MEK)	ug/L	ND	ND		30	
2-Chlorotoluene	ug/L	ND	ND		30	
2-Hexanone	ug/L	ND	ND		30	
4-Chlorotoluene	ug/L	ND	ND		30	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	ND		30	
Acetone	ug/L	ND	ND		30	
Benzene	ug/L	ND	ND		30	
Bromobenzene	ug/L	ND	ND		30	

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QUALITY CONTROL DATA

Project: Able Contracting Fire

Pace Project No.: 92438972

SAMPLE DUPLICATE: 2641720

Parameter	Units	92438972003 Result	Dup Result	RPD	Max RPD	Qualifiers
Bromochloromethane	ug/L	ND	ND		30	
Bromodichloromethane	ug/L	ND	ND		30	
Bromoform	ug/L	ND	ND		30	
Bromomethane	ug/L	ND	ND		30	
Carbon tetrachloride	ug/L	ND	ND		30	
Chlorobenzene	ug/L	ND	ND		30	
Chloroethane	ug/L	ND	ND		30	
Chloroform	ug/L	ND	ND		30	
Chloromethane	ug/L	0.69J	ND		30	
cis-1,2-Dichloroethene	ug/L	ND	ND		30	
cis-1,3-Dichloropropene	ug/L	ND	ND		30	
Dibromochloromethane	ug/L	ND	ND		30	
Dibromomethane	ug/L	ND	ND		30	
Dichlorodifluoromethane	ug/L	ND	ND		30	
Diisopropyl ether	ug/L	ND	ND		30	
Ethylbenzene	ug/L	ND	ND		30	
Hexachloro-1,3-butadiene	ug/L	ND	ND		30	
m&p-Xylene	ug/L	ND	ND		30	
Methyl-tert-butyl ether	ug/L	ND	ND		30	
Methylene Chloride	ug/L	ND	ND		30	
Naphthalene	ug/L	ND	ND		30	
o-Xylene	ug/L	ND	ND		30	
p-Isopropyltoluene	ug/L	ND	ND		30	
Styrene	ug/L	ND	ND		30	
Tetrachloroethene	ug/L	ND	ND		30	
Toluene	ug/L	ND	ND		30	
trans-1,2-Dichloroethene	ug/L	ND	ND		30	
trans-1,3-Dichloropropene	ug/L	ND	ND		30	
Trichloroethene	ug/L	ND	ND		30	
Trichlorofluoromethane	ug/L	ND	ND		30	
Vinyl acetate	ug/L	ND	ND		30	
Vinyl chloride	ug/L	ND	ND		30	
Xylene (Total)	ug/L	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%	86	101			
4-Bromofluorobenzene (S)	%	102	99			
Toluene-d8 (S)	%	106	105			

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QUALITY CONTROL DATA

Project: Able Contracting Fire

Pace Project No.: 92438972

QC Batch: 489508

Analysis Method: EPA 8270D

QC Batch Method: EPA 3510C

Analysis Description: 8270 Water MSSV SC

Associated Lab Samples: 92438972001, 92438972002, 92438972003

METHOD BLANK: 2641448

Matrix: Water

Associated Lab Samples: 92438972001, 92438972002, 92438972003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	10.0	1.4	07/31/19 19:30	
1,2-Dichlorobenzene	ug/L	ND	10.0	1.5	07/31/19 19:30	
1,3-Dichlorobenzene	ug/L	ND	10.0	1.4	07/31/19 19:30	
1,4-Dichlorobenzene	ug/L	ND	10.0	1.4	07/31/19 19:30	
1-Methylnaphthalene	ug/L	ND	10.0	1.4	07/31/19 19:30	
2,2'-Oxybis(1-chloropropane)	ug/L	ND	10.0	1.8	07/31/19 19:30	v1
2,4,5-Trichlorophenol	ug/L	ND	10.0	1.5	07/31/19 19:30	
2,4,6-Trichlorophenol	ug/L	ND	10.0	1.4	07/31/19 19:30	
2,4-Dichlorophenol	ug/L	ND	10.0	1.6	07/31/19 19:30	
2,4-Dimethylphenol	ug/L	ND	10.0	1.6	07/31/19 19:30	
2,4-Dinitrophenol	ug/L	ND	50.0	5.1	07/31/19 19:30	v1
2,4-Dinitrotoluene	ug/L	ND	10.0	1.5	07/31/19 19:30	
2,6-Dinitrotoluene	ug/L	ND	10.0	1.4	07/31/19 19:30	
2-Chloronaphthalene	ug/L	ND	10.0	1.6	07/31/19 19:30	
2-Chlorophenol	ug/L	ND	10.0	1.5	07/31/19 19:30	
2-Methylnaphthalene	ug/L	ND	10.0	1.4	07/31/19 19:30	
2-Methylphenol(o-Cresol)	ug/L	ND	10.0	1.6	07/31/19 19:30	
2-Nitroaniline	ug/L	ND	50.0	2.3	07/31/19 19:30	
2-Nitrophenol	ug/L	ND	10.0	1.6	07/31/19 19:30	
3&4-Methylphenol(m&p Cresol)	ug/L	ND	10.0	1.4	07/31/19 19:30	v1
3,3'-Dichlorobenzidine	ug/L	ND	50.0	3.9	07/31/19 19:30	
3-Nitroaniline	ug/L	ND	50.0	2.7	07/31/19 19:30	
4,6-Dinitro-2-methylphenol	ug/L	ND	20.0	2.2	07/31/19 19:30	v1
4-Bromophenylphenyl ether	ug/L	ND	10.0	1.5	07/31/19 19:30	
4-Chloro-3-methylphenol	ug/L	ND	20.0	2.8	07/31/19 19:30	
4-Chloroaniline	ug/L	ND	50.0	2.8	07/31/19 19:30	
4-Chlorophenylphenyl ether	ug/L	ND	10.0	1.6	07/31/19 19:30	
4-Nitroaniline	ug/L	ND	50.0	3.4	07/31/19 19:30	
4-Nitrophenol	ug/L	ND	50.0	4.3	07/31/19 19:30	
Acenaphthene	ug/L	ND	10.0	1.6	07/31/19 19:30	
Acenaphthylene	ug/L	ND	10.0	1.5	07/31/19 19:30	
Aniline	ug/L	ND	10.0	1.2	07/31/19 19:30	
Anthracene	ug/L	ND	10.0	1.7	07/31/19 19:30	
Benzo(a)anthracene	ug/L	ND	10.0	2.1	07/31/19 19:30	
Benzo(a)pyrene	ug/L	ND	10.0	2.2	07/31/19 19:30	
Benzo(b)fluoranthene	ug/L	ND	10.0	2.2	07/31/19 19:30	
Benzo(g,h,i)perylene	ug/L	ND	10.0	2.1	07/31/19 19:30	
Benzo(k)fluoranthene	ug/L	ND	10.0	2.0	07/31/19 19:30	
Benzoic Acid	ug/L	ND	50.0	5.0	07/31/19 19:30	
Benzyl alcohol	ug/L	ND	20.0	3.1	07/31/19 19:30	
bis(2-Chloroethoxy)methane	ug/L	ND	10.0	1.6	07/31/19 19:30	

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QUALITY CONTROL DATA

Project: Able Contracting Fire

Pace Project No.: 92438972

METHOD BLANK: 2641448

Matrix: Water

Associated Lab Samples: 92438972001, 92438972002, 92438972003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
bis(2-Chloroethyl) ether	ug/L	ND	10.0	1.7	07/31/19 19:30	
bis(2-Ethylhexyl)phthalate	ug/L	ND	6.0	2.3	07/31/19 19:30	
Butylbenzylphthalate	ug/L	ND	10.0	2.5	07/31/19 19:30	
Chrysene	ug/L	ND	10.0	2.1	07/31/19 19:30	
Di-n-butylphthalate	ug/L	ND	10.0	2.0	07/31/19 19:30	
Di-n-octylphthalate	ug/L	ND	10.0	1.5	07/31/19 19:30	
Dibenz(a,h)anthracene	ug/L	ND	10.0	2.0	07/31/19 19:30	
Dibenzofuran	ug/L	ND	10.0	1.7	07/31/19 19:30	
Diethylphthalate	ug/L	ND	10.0	1.6	07/31/19 19:30	
Dimethylphthalate	ug/L	ND	10.0	1.4	07/31/19 19:30	
Fluoranthene	ug/L	ND	10.0	2.2	07/31/19 19:30	
Fluorene	ug/L	ND	10.0	1.6	07/31/19 19:30	
Hexachloro-1,3-butadiene	ug/L	ND	10.0	1.6	07/31/19 19:30	
Hexachlorobenzene	ug/L	ND	10.0	1.7	07/31/19 19:30	
Hexachlorocyclopentadiene	ug/L	ND	10.0	1.3	07/31/19 19:30	
Hexachloroethane	ug/L	ND	10.0	1.8	07/31/19 19:30	
Indeno(1,2,3-cd)pyrene	ug/L	ND	10.0	2.0	07/31/19 19:30	
Isophorone	ug/L	ND	10.0	1.5	07/31/19 19:30	
N-Nitroso-di-n-propylamine	ug/L	ND	10.0	1.7	07/31/19 19:30	
N-Nitrosodimethylamine	ug/L	ND	10.0	1.6	07/31/19 19:30	
N-Nitrosodiphenylamine	ug/L	ND	10.0	1.4	07/31/19 19:30	
Naphthalene	ug/L	ND	10.0	1.4	07/31/19 19:30	
Nitrobenzene	ug/L	ND	10.0	1.6	07/31/19 19:30	
Pentachlorophenol	ug/L	ND	50.0	3.5	07/31/19 19:30	v1
Phenanthrene	ug/L	ND	10.0	1.6	07/31/19 19:30	
Phenol	ug/L	ND	10.0	1.3	07/31/19 19:30	
Pyrene	ug/L	ND	10.0	2.2	07/31/19 19:30	
2,4,6-Tribromophenol (S)	%	85	27-110		07/31/19 19:30	
2-Fluorobiphenyl (S)	%	78	27-110		07/31/19 19:30	
2-Fluorophenol (S)	%	48	12-110		07/31/19 19:30	
Nitrobenzene-d5 (S)	%	77	21-110		07/31/19 19:30	
Phenol-d6 (S)	%	28	10-110		07/31/19 19:30	
Terphenyl-d14 (S)	%	81	31-107		07/31/19 19:30	

LABORATORY CONTROL SAMPLE & LCSD: 2641449

2641450

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2,4-Trichlorobenzene	ug/L	50	30.8	34.1	62	68	70-130	10	30	
1,2-Dichlorobenzene	ug/L	50	32.5	35.9	65	72	70-130	10	30	
1,3-Dichlorobenzene	ug/L	50	29.9	33.3	60	67	70-130	10	30	
1,4-Dichlorobenzene	ug/L	50	31.5	34.7	63	69	70-130	10	30	
1-Methylnaphthalene	ug/L	50	39.9	42.6	80	85	70-130	7	30	
2,2'-Oxybis(1-chloropropane)	ug/L	50	55.0	56.9	110	114	70-130	3	30	v1
2,4,5-Trichlorophenol	ug/L	50	44.8	45.1	90	90	70-130	1	30	

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QUALITY CONTROL DATA

Project: Able Contracting Fire

Pace Project No.: 92438972

LABORATORY CONTROL SAMPLE & LCSD: 2641449		2641450								
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
2,4,6-Trichlorophenol	ug/L	50	49.4	50.8	99	102	70-130	3	30	
2,4-Dichlorophenol	ug/L	50	45.6	47.5	91	95	70-130	4	30	
2,4-Dimethylphenol	ug/L	50	45.1	47.6	90	95	70-130	5	30	
2,4-Dinitrophenol	ug/L	250	309	328	124	131	70-130	6	30	v1
2,4-Dinitrotoluene	ug/L	50	45.1	47.1	90	94	70-130	4	30	
2,6-Dinitrotoluene	ug/L	50	47.0	48.7	94	97	70-130	4	30	
2-Chloronaphthalene	ug/L	50	46.7	49.8	93	100	70-130	7	30	
2-Chlorophenol	ug/L	50	44.2	45.3	88	91	70-130	3	30	
2-Methylnaphthalene	ug/L	50	40.7	43.8	81	88	70-130	7	30	
2-Methylphenol(o-Cresol)	ug/L	50	38.8	40.2	78	80	70-130	3	30	
2-Nitroaniline	ug/L	100	92.2	95.3	92	95	70-130	3	30	
2-Nitrophenol	ug/L	50	45.6	46.8	91	94	70-130	3	30	
3&4-Methylphenol(m&p Cresol)	ug/L	50	83.9	86.4	168	173	70-130	3	30	v1
3,3'-Dichlorobenzidine	ug/L	100	79.8	79.6	80	80	70-130	0	30	
3-Nitroaniline	ug/L	100	91.1	93.5	91	94	70-130	3	30	
4,6-Dinitro-2-methylphenol	ug/L	100	130	135	130	135	70-130	3	30	v1
4-Bromophenylphenyl ether	ug/L	50	45.7	45.8	91	92	70-130	0	30	
4-Chloro-3-methylphenol	ug/L	100	94.1	97.9	94	98	70-130	4	30	
4-Chloroaniline	ug/L	100	83.4	84.6	83	85	70-130	1	30	
4-Chlorophenylphenyl ether	ug/L	50	46.1	47.3	92	95	70-130	2	30	
4-Nitroaniline	ug/L	100	93.2	96.1	93	96	70-130	3	30	
4-Nitrophenol	ug/L	250	108	113	43	45	70-130	4	30	
Acenaphthene	ug/L	50	44.8	46.4	90	93	70-130	4	30	
Acenaphthylene	ug/L	50	45.2	47.2	90	94	70-130	4	30	
Aniline	ug/L	50	35.2	34.3	70	69	70-130	3	30	
Anthracene	ug/L	50	49.1	49.8	98	100	70-130	1	30	
Benzo(a)anthracene	ug/L	50	48.5	49.0	97	98	70-130	1	30	
Benzo(a)pyrene	ug/L	50	49.2	50.2	98	100	70-130	2	30	
Benzo(b)fluoranthene	ug/L	50	51.9	53.7	104	107	70-130	3	30	
Benzo(g,h,i)perylene	ug/L	50	48.2	49.0	96	98	70-130	2	30	
Benzo(k)fluoranthene	ug/L	50	49.8	50.3	100	101	70-130	1	30	
Benzoic Acid	ug/L	250	105	108	42	43	70-130	3	30	
Benzyl alcohol	ug/L	100	78.9	81.4	79	81	70-130	3	30	
bis(2-Chloroethoxy)methane	ug/L	50	43.9	45.4	88	91	70-130	3	30	
bis(2-Chloroethyl) ether	ug/L	50	45.2	46.9	90	94	70-130	4	30	
bis(2-Ethylhexyl)phthalate	ug/L	50	48.6	55.4	97	111	70-130	13	30	
Butylbenzylphthalate	ug/L	50	46.2	47.3	92	95	70-130	2	30	
Chrysene	ug/L	50	43.7	44.3	87	89	70-130	2	30	
Di-n-butylphthalate	ug/L	50	48.9	49.9	98	100	70-130	2	30	
Di-n-octylphthalate	ug/L	50	49.2	50.3	98	101	70-130	2	30	
Dibenz(a,h)anthracene	ug/L	50	49.2	49.6	98	99	70-130	1	30	
Dibenzofuran	ug/L	50	45.8	47.5	92	95	70-130	4	30	
Diethylphthalate	ug/L	50	45.8	47.2	92	94	70-130	3	30	
Dimethylphthalate	ug/L	50	46.5	47.8	93	96	70-130	3	30	
Fluoranthene	ug/L	50	50.1	51.8	100	104	70-130	3	30	
Fluorene	ug/L	50	46.4	48.4	93	97	70-130	4	30	
Hexachloro-1,3-butadiene	ug/L	50	25.5	29.3	51	59	70-130	14	30	

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QUALITY CONTROL DATA

Project: Able Contracting Fire

Pace Project No.: 92438972

LABORATORY CONTROL SAMPLE & LCSD: 2641449			2641450							
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Hexachlorobenzene	ug/L	50	45.4	45.7	91	91	70-130	1	30	
Hexachlorocyclopentadiene	ug/L	50	21.8	24.6	44	49	70-130	12	30	
Hexachloroethane	ug/L	50	27.9	31.2	56	62	70-130	11	30	
Indeno(1,2,3-cd)pyrene	ug/L	50	49.1	49.6	98	99	70-130	1	30	
Isophorone	ug/L	50	40.4	41.6	81	83	70-130	3	30	
N-Nitroso-di-n-propylamine	ug/L	50	45.5	46.7	91	93	70-130	3	30	
N-Nitrosodimethylamine	ug/L	50	30.0	31.2	60	62	70-130	4	30	
N-Nitrosodiphenylamine	ug/L	50	49.2	49.6	98	99	70-130	1	30	
Naphthalene	ug/L	50	41.4	44.3	83	89	70-130	7	30	
Nitrobenzene	ug/L	50	38.5	40.2	77	80	70-130	4	30	
Pentachlorophenol	ug/L	100	98.6	101	99	101	70-130	2	30 v1	
Phenanthrene	ug/L	50	48.6	49.3	97	99	70-130	1	30	
Phenol	ug/L	50	24.0	24.6	48	49	70-130	3	30	1g,3g
Pyrene	ug/L	50	44.6	44.6	89	89	70-130	0	30	
2,4,6-Tribromophenol (S)	%				97	96	27-110			
2-Fluorobiphenyl (S)	%				83	85	27-110			
2-Fluorophenol (S)	%				54	56	12-110			
Nitrobenzene-d5 (S)	%				80	82	21-110			
Phenol-d6 (S)	%				34	35	10-110			
Terphenyl-d14 (S)	%				84	84	31-107			

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QUALIFIERS

Project: Able Contracting Fire

Pace Project No.: 92438972

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-A Pace Analytical Services - Asheville

PASI-C Pace Analytical Services - Charlotte

ANALYTE QUALIFIERS

1g Comment applies to all compounds outside control limits.

2g Initial calibration evaluation met acceptance criteria. Compound did not meet additional accuracy assessment for percent error

3g Recovery did not meet 70-130% South Carolina required limits. Recovery meets method required in-house generated control limits.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

S0 Surrogate recovery outside laboratory control limits.

v1 The continuing calibration verification was above the method acceptance limit. Any detection for the analyte in the associated samples may have a high bias.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE


Project: Able Contracting Fire

Pace Project No.: 92438972

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92438972001	ACF-SW-DITCH	EPA 3010A	489233	EPA 6010D	489361
92438972002	ACF-SW-POND	EPA 3010A	489233	EPA 6010D	489361
92438972003	ACF-GW-472R	EPA 3010A	489233	EPA 6010D	489361
92438972001	ACF-SW-DITCH	EPA 7470A	489467	EPA 7470A	489523
92438972002	ACF-SW-POND	EPA 7470A	489467	EPA 7470A	489523
92438972003	ACF-GW-472R	EPA 7470A	489467	EPA 7470A	489523
92438972001	ACF-SW-DITCH	EPA 3510C	489508	EPA 8270D	489713
92438972002	ACF-SW-POND	EPA 3510C	489508	EPA 8270D	489713
92438972003	ACF-GW-472R	EPA 3510C	489508	EPA 8270D	489713
92438972001	ACF-SW-DITCH	EPA 8260B	489573		
92438972002	ACF-SW-POND	EPA 8260B	489573		
92438972003	ACF-GW-472R	EPA 8260B	489573		

REPORT OF LABORATORY ANALYSIS

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	Document Name: Sample Condition Upon Receipt (SCUR)	Document Revised: February 7, 2018 Page 1 of 2
	Document No.: F-CAR-CS-033-Rev.06	Issuing Authority: Pace Carolinas Quality Office

Laboratory receiving samples:

Asheville ☐ Eden ☐ Greenwood ☐ Huntersville ☐ Raleigh ☒ Mechanicsville ☐

Sample Condition
Upon Receipt

Client Name:

Project #:

WO#: 92438972



Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client
☐ Commercial ☐ Pace ☐ Other: _____

Custody Seal Present? ☐ Yes ☐ No Seals Intact? ☐ Yes ☐ No

Date/Initials Person Examining Contents: WBT
7/29/19

Packing Material: ☐ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other

Biological Tissue Frozen?

☐ Yes ☐ No ☐ N/A

Thermometer:

☒ IR Gun ID: 91005

Type of Ice: ☒ Wet ☐ Blue ☐ None

Cooler Temp (°C): 0.3 Correction Factor: Add (Subtract) °C: 0.1

Cooler Temp Corrected (°C): 0.2

Temp should be above freezing to 6°C

☐ Samples out of temp criteria. Samples on ice, cooling process has begun

USDA Regulated Soil (☒ N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)?

☐ Yes ☐ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☐ No

Comments/Discrepancy:

Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	<u>Not Pace Containers</u>
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
Dissolved analysis: Samples Field Filtered?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8.
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Includes Date/Time/ID/Analysis Matrix:	<u>WT</u>	
Headspace in VOA Vials (>5-6mm)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? ☐ Yes ☐ No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION


Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: TE

Date: 7/30

Project Manager SRF Review: TE

Date: 7/30

	Document Name:	Document Revised: February 7, 2018
	Sample Condition Upon Receipt(SCUR)	Page 1 of 2
	Document No.: F-CAR-CS-033-Rev.06	Issuing Authority: Pace Carolinas Quality Office

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

**Bottom half of box is to list number of bottle

Project #

WO# : 92438972

PM: PTE

Due Date: 08/01/19

CLIENT: 92-TETRA GA

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4C-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFLU-Wide-mouthed Glass Jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-503S kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)		BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Schillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)	
1										3						3													
2										3						3													
3										3						3													
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers.

CHAIN-OF-CUSTODY / Analytical Request Document
The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:		Page: 1 of 1	
Company: Tetra Tech		Report To: Jessica Vinkers		Attention: Jessica Vinkers		REGULATORY AGENCY: <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER _____	
Address: 1955 Evergreen Blvd		Copy To: John Snyder et al@tetra.com		Company Name: _____			
Email To: Duluth, GA 30096		Purchase Order No.: _____		Address: _____			
Phone: 678-681-5787 Fax: _____		Project Name: Able Landscaping Fire		Reference: _____			
Requested Due Date/TAT: 3-DAY		Project Number: _____		Paco Project Manager: _____		Paco Profile #: _____	
Site Location STATE: SC							

ITEM #	Section D Required Client Information	Matrix Codes MATRIX / CODE	COLLECTED				SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)
			COMPOSITE START	COMPOSITE END/GRAB	DATE	TIME						
1	ACF-SW-DITCH	WT 6	7/28	915			28	7	3	1	3	
2	ACF-SW-DOND	WT 6	7/28	955			21	7	3	1	3	
3	ACF-GW-47AR	WT 6	7/28	1510			20	7	3	1	3	
4												
5												
6												
7												
8												
9												
10												
11												
12												

ADDITIONAL COMMENTS		RELINQUISHED BY / AFFILIATION		DATE		TIME		ACCEPTED BY / AFFILIATION		DATE		TIME		SAMPLE CONDITIONS	
		<i>[Signature]</i>		7/29		1406		<i>[Signature]</i>		7/29		1407		203	

ORIGINAL	
SAMPLER NAME AND SIGNATURE	
PRINT Name of SAMPLER:	<i>John Snyder</i>
SIGNATURE of SAMPLER:	<i>[Signature]</i>
DATE Signed (MM/DD/YY):	07/28/19
Temp In °C	
Received on Ice (Y/N)	
Custody Sealed Cooler (Y/N)	
Samples Intact (Y/N)	

ENTHALPY ANALYTICAL REPORT: 819-013

Sample Collection Date: 08/02/2019

Analyses:

Phosgene via Occupational Safety and Health Administration (OSHA) Method 61
Volatile Organic Compounds (VOC) via EPA Method Toxic Organics (TO)-15

Tetra Tech, Inc.

3746 Mt. Diablo Blvd. Suite 300
Lafayette, CA 94549

Able Contracting
Richland, SC

Analytical Report
(0819-013)

OSHA Method 61

Phosgene

EPA Method TO-15

TO-15 Compound List



Enthalpy Analytical, LLC

Phone: (919) 850 - 4392 / Fax: (919) 850 - 9012 / www.enthalpy.com
800-1 Capitola Drive Durham, NC 27713-4385

I certify that to the best of my knowledge all analytical data presented in this report:

- Have been checked for completeness
- Are accurate, error-free, and legible
- Have been conducted in accordance with approved protocol, and that all deviations and analytical problems are summarized in the appropriate narrative(s)

This analytical report was prepared in Portable Document Format (.PDF) and contains ??? pages.

Report Issued: xx/xx/xxxx



Summary of Results

Enthalpy Analytical

Job No.: 0819-013 OSHA Method 61 Analysis

Tetra Tech, Inc. Able Contracting: Richland, SC

Analyst: Daniel Clayton

Summary Table

Compound / Concentration (ug/m ³)	
Sample ID	Phosgene
<i>ACF-AS-Smoke-Night</i>	1.02 J
<i>ACF-AS-RES-Night</i>	0.652 J
<i>ACF-AS-Upwind-Night</i>	0.501 J
<i>ACF-AS-Smoke-Day</i>	1.22 J
<i>ACF-AS-RES-Day</i>	0.277 J
<i>ACF-AS-Upwind-Day</i>	1.00 J

Compound / Catch Weight (ug)	
Sample ID	Phosgene
<i>ACF-AS-FB</i>	0.0999 ND
<i>ACF-AS-LB</i>	2.54

Note: All the above results (except ACF-AS-LB) have been blank corrected using the Average ACF-AS-LB result.

Results

Enthalpy Analytical

Job No.: 0819-013 OSHA Method 61 Analysis

Tetra Tech, Inc. Able Contracting: Richland, SC

Analyst: Daniel Clayton

Sample ID	Filename	MDL	Curve Min	Curve Max	Ret Time (min)	Conc. (ug/mL)	Liquid Vol (mL)	DF	Catch Weight (ug)	LB Corr. Catch (ug)	Gas Vol (L)	Conc. (ug/m ³)	Flag
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Phosgene

ACF-AS-Smoke-Night-FH-HMP-Tube 8315500289	017B0301.D	0.0999	0.999	99.9	5.36	2.76	1.00	1	2.76	0.218	556.8	0.392	J
ACF-AS-Smoke-Night-BH-HMP-Tube 8315500290	018B0401.D	0.0999	0.999	99.9	5.36	2.89	1.00	1	2.89	0.352	556.8	0.633	J
												1.02	J

ACF-AS-RES-Night-FH-HMP-Tube 8315500291	019B0501.D	0.0999	0.999	99.9	5.36	2.80	1.00	1	2.80	0.257	623.8	0.412	J
ACF-AS-RES-Night-BH-HMP-Tube 8315500286	020B0601.D	0.0999	0.999	99.9	5.36	2.69	1.00	1	2.69	0.150	623.8	0.240	J
												0.652	J

ACF-AS-Upwind-Night-FH-HMP-Tube 8315500295	021B0701.D	0.0999	0.999	99.9	5.36	2.80	1.00	1	2.80	0.261	520.8	0.501	J
ACF-AS-Upwind-Night-BH-HMP-Tube 8315500288	023B0901.D	0.0999	0.999	99.9	5.36	2.55	1.00	1	2.55	0.0999	520.8	0.192	ND
												0.501	J

ACF-AS-Smoke-Day-FH-HMP-Tube 8315500293	024B1001.D	0.0999	0.999	99.9	5.36	3.07	1.00	1	3.07	0.527	542.4	0.972	J
ACF-AS-Smoke-Day-BH-HMP-Tube 8315500292	025B1101.D	0.0999	0.999	99.9	5.36	2.68	1.00	1	2.68	0.135	542.4	0.249	J
												1.22	J

ACF-AS-RES-Day-FH-HMP-Tube 8315500287	026B1301.D	0.0999	0.999	99.9	5.36	2.69	1.00	1	2.69	0.148	535.2	0.277	J
ACF-AS-RES-Day-BH-HMP-Tube 8315500294	027B1401.D	0.0999	0.999	99.9	5.36	2.45	1.00	1	2.45	0.0999	535.2	0.187	ND
												0.277	J

The average result for the two LB tubes has been subtracted from each sample tube in the "LB Corr. Catch (ug)" column, or replaced by the MDL if lower than the MDL.

Enthalpy Analytical

Job No.: 0819-013 OSHA Method 61 Analysis

Tetra Tech, Inc. Able Contracting: Richland, SC

Analyst: Daniel Clayton

Sample ID	Filename	MDL	Curve Min	Curve Max	Ret Time (min)	Conc. (ug/mL)	Liquid Vol (mL)	DF	Catch Weight (ug)	LB Corr. Catch (ug)	Gas Vol (L)	Conc. (ug/m ³)	Flag
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Phosgene

ACF-AS-Upwind-Day-FH-HMP-Tube 8315500308	028B1501.D	0.0999	0.999	99.9	5.36	2.88	1.00	1	2.88	0.334	544.8	0.613	J
ACF-AS-Upwind-Day-BH-HMP-Tube 8315500310	029B1601.D	0.0999	0.999	99.9	5.36	2.75	1.00	1	2.75	0.211	544.8	0.387	J
												1.00	J

LD / ACF-AS-Up-Night-FH-HMP-Tube 8315500295	022B0801.D	0.0999	0.999	99.9	5.36	2.78	1.00	1	2.78	0.243	520.8	0.467	J
Difference:										0.6	Difference:		7.0

Sample ID	Filename	MDL	Curve Min	Curve Max	Ret Time (min)	Conc. (ug/mL)	Liquid Vol (mL)	DF	Catch Weight (ug)	LB Corr. Catch (ug)	Flag
ACF-AS-FB-HMP-Tube 8315500313	030B1701.D	0.0999	0.999	99.9	5.36	2.53	1.00	1	2.53	0.0999	ND
ACF-AS-FB-HMP-Tube 8315500306	031B1801.D	0.0999	0.999	99.9	5.36	2.52	1.00	1	2.52	0.0999	ND
									5.05	0.0999	ND

ACF-AS-LB-HMP-Tube 8315500311	032B1901.D	0.0999	0.999	99.9	5.36	2.60	1.00	1	2.60		
ACF-AS-LB-HMP-Tube 8315500307	033B2001.D	0.0999	0.999	99.9	5.36	2.49	1.00	1	2.49		
Average Value:										2.54	

gcprep2960 #RB	016B0201.D	0.0999	0.999	99.9	NA	0.0999	1.00	1	0.0999		ND
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The average result for the two LB tubes has been subtracted from each sample tube in the "LB Corr. Catch (ug)" column, or replaced by the MDL if lower than the MDL.

Sample Name : ACF-AS-RES-24HrVOC

Sample Info : 0819-013; Can #800; 500mL load

Data File : X1902834.D

Dilution : 1

Pressurization Factor : 1.720

Acquisition Date : 2019-08-05 15:01:45

Instrument Method : TO15-SCN.M

Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
Propylene	1.73	0.0660	0.0602	2.98	0.114	0.104	
Freon 12 (CCI2F2)	0.493	0.0671	0.0602	2.44	0.332	0.298	
Freon 114 (C2Cl2F4)	ND	0.0689	0.0602	ND	0.481	0.421	
Chloromethane	1.71	0.0671	0.0602	3.53	0.139	0.124	
Chloroethene (Vinyl chloride)	ND	0.0692	0.0602	ND	0.177	0.154	
1,3-Butadiene	0.0883	0.0672	0.0602	0.195	0.149	0.133	
Bromomethane	ND	0.0680	0.0602	ND	0.264	0.234	
Chloroethane	ND	0.0694	0.0602	ND	0.183	0.159	
Bromoethene (Vinyl bromide)	ND	0.0686	0.0602	ND	0.300	0.263	
Freon 11 (CCI3F)	0.253	0.0714	0.0602	1.42	0.401	0.338	
Ethanol	1.39	0.172	0.172	2.62	0.324	0.324	
Acrolein	0.134	0.0683	0.0602	0.307	0.157	0.138	m
Freon 113 (C2Cl3F3)	0.0771	0.0685	0.0602	0.591	0.525	0.461	
1,1-Dichloroethene	ND	0.0689	0.0602	ND	0.273	0.239	
Acetone	2.89	0.0691	0.0602	6.87	0.164	0.143	
Carbon disulfide	0.144	0.0691	0.0602	0.448	0.215	0.187	
Isopropyl alcohol	0.176	0.0691	0.0602	0.432	0.170	0.148	
Allyl chloride (3-chloropropene)	ND	0.0692	0.0602	ND	0.217	0.188	
Acetonitrile	0.695	0.0691	0.0602	1.17	0.116	0.101	
Methylene chloride	0.180	0.0697	0.0602	0.625	0.242	0.209	
trans-1,2-Dichloroethene	ND	0.0701	0.0602	ND	0.278	0.239	
Methyl tert-butyl ether	ND	0.0705	0.0602	ND	0.254	0.217	
Acrylonitrile	ND	0.0703	0.0602	ND	0.153	0.131	
Hexane	0.241	0.0696	0.0602	0.849	0.245	0.212	
1,1-Dichloroethane	ND	0.0678	0.0602	ND	0.274	0.244	
Vinyl acetate	ND	0.0700	0.0602	ND	0.246	0.212	
cis-1,2-Dichloroethene	ND	0.0693	0.0602	ND	0.275	0.239	
Methyl ethyl ketone (2-Butanone)	0.223	0.0699	0.0602	0.657	0.206	0.178	
Ethyl acetate	0.199	0.0693	0.0602	0.719	0.250	0.217	
Chloroform	ND	0.0696	0.0602	ND	0.340	0.294	
Tetrahydrofuran	0.0754	0.0694	0.0602	0.222	0.205	0.178	
1,1,1-Trichloroethane	ND	0.0685	0.0602	ND	0.374	0.328	
Cyclohexane	ND	0.0700	0.0602	ND	0.241	0.207	
Carbon tetrachloride	0.0832	0.0696	0.0602	0.523	0.438	0.379	m
Benzene	0.626	0.0687	0.0602	2.00	0.219	0.192	
2,2,4-trimethylpentane	0.0689	0.0705	0.0602	0.322	0.329	0.281	J
1,2-Dichloroethane	ND	0.0703	0.0602	ND	0.285	0.244	
Heptane	0.117	0.0691	0.0602	0.478	0.283	0.247	
Trichloroethene	ND	0.0691	0.0602	ND	0.371	0.323	
1,2-Dichloropropane	ND	0.0703	0.0602	ND	0.325	0.278	
Methyl methacrylate	ND	0.0713	0.0602	ND	0.292	0.247	
1,4-Dioxane	ND	0.0696	0.0602	ND	0.251	0.217	
Bromodichloromethane	ND	0.0683	0.0602	ND	0.458	0.403	
cis-1,3-Dichloropropene	ND	0.0676	0.0602	ND	0.307	0.273	
Methyl isobutyl ketone	ND	0.0709	0.0602	ND	0.291	0.247	
Toluene	0.599	0.0699	0.0602	2.26	0.263	0.227	
trans-1,3-Dichloropropene	ND	0.0699	0.0602	ND	0.317	0.273	
1,1,2-Trichloroethane	ND	0.0689	0.0602	ND	0.376	0.328	
Tetrachloroethene	ND	0.0694	0.0602	ND	0.471	0.408	
2-Hexanone (Methyl butyl ketone)	ND	0.0699	0.0602	ND	0.286	0.247	
Dibromochloromethane	ND	0.0679	0.0602	ND	0.578	0.513	
1,2-Dibromoethane	ND	0.0697	0.0602	ND	0.535	0.463	
Chlorobenzene	ND	0.0708	0.0602	ND	0.326	0.277	
Ethylbenzene	0.306	0.0677	0.0602	1.33	0.294	0.261	
1,1,1,2-Tetrachloroethane	ND	0.0688	0.0602	ND	0.472	0.413	
m-/p-Xylenes	0.155	0.0697	0.0602	0.673	0.303	0.261	

Sample Name

: ACF-AS-RES-24HrVOC

Sample Info

: 0819-013; Can #800; 500mL load

Data File

: X1902834.D

Dilution

: 1

Pressurization Factor

: 1.720

Acquisition Date

: 2019-08-05 15:01:45

Instrument Method

: TO15-SCN.M

Matrix

: AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
o-Xylene	0.0654	0.0687	0.0602	0.284	0.298	0.261	J
Styrene	0.198	0.0670	0.0602	0.842	0.285	0.256	
Bromoform	ND	0.0691	0.0602	ND	0.714	0.622	
1,1,2,2-Tetrachloroethane	ND	0.0688	0.0602	ND	0.472	0.413	
4-Ethyltoluene	ND	0.0693	0.0602	ND	0.341	0.296	
2-Chlorotoluene	ND	0.0693	0.0602	ND	0.359	0.312	
1,3,5-Trimethylbenzene	ND	0.0690	0.0602	ND	0.339	0.296	
1,2,4-Trimethylbenzene	ND	0.0684	0.0602	ND	0.336	0.296	
1,3-Dichlorobenzene	ND	0.0694	0.0602	ND	0.417	0.362	
1,4-Dichlorobenzene	ND	0.0690	0.0602	ND	0.415	0.362	
Benzyl chloride	ND	0.0687	0.0602	ND	0.355	0.312	
1,2-Dichlorobenzene	ND	0.0701	0.0602	ND	0.422	0.362	
1,2,4-Trichlorobenzene	ND	0.0698	0.0602	ND	0.518	0.447	
Hexachlorobutadiene	ND	0.0689	0.0602	ND	0.735	0.642	
Naphthalene	ND	0.0712	0.0602	ND	0.373	0.316	
1-Bromopropane	ND	0.0680	0.0602	ND	0.342	0.303	
1-Octene	ND	0.0673	0.0602	ND	0.309	0.276	
n-Octane	ND	0.0689	0.0602	ND	0.322	0.281	
Isopropylbenzene	0.0948	0.0698	0.0602	0.466	0.343	0.296	
n-Propylbenzene	ND	0.0700	0.0602	ND	0.344	0.296	

Internal Standards	Response	Retention Time (min)	Concentration (PPBV)	Flag *
Bromochloromethane (IS)	907,374	11.93	5.00	PASS
1,4-Difluorobenzene (IS)	3,414,283	13.69	5.04	PASS
Chlorobenzene-d5 (IS)	2,667,742	17.86	4.80	PASS

(ND) = Not Detected

* (J) = Below Calibration Range, (E) = Above Calibration Range, (m) = Manual Integration

IS Acceptance Criteria: RT +/- 20 sec, Response +/- 40%

Sample Name : ACF-AS-SMOKE-24HrVOC

Sample Info : 0819-013; Can #820; 500mL load

Data File : X1902835.D

Dilution : 1

Pressurization Factor : 1.727

Acquisition Date : 2019-08-05 15:57:48

Instrument Method : TO15-SCN.M

Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
Propylene	12.5	0.0662	0.0604	21.5	0.114	0.104	
Freon 12 (CCI2F2)	0.492	0.0674	0.0604	2.43	0.333	0.299	
Freon 114 (C2CI2F4)	ND	0.0691	0.0604	ND	0.483	0.423	
Chloromethane	6.67	0.0674	0.0604	13.8	0.139	0.125	
Chloroethene (Vinyl chloride)	ND	0.0695	0.0604	ND	0.178	0.155	
1,3-Butadiene	1.06	0.0675	0.0604	2.35	0.149	0.134	
Bromomethane	0.118	0.0683	0.0604	0.460	0.265	0.235	
Chloroethane	0.102	0.0696	0.0604	0.268	0.184	0.159	
Bromoethene (Vinyl bromide)	ND	0.0689	0.0604	ND	0.301	0.264	
Freon 11 (CCI3F)	0.251	0.0717	0.0604	1.41	0.403	0.340	
Ethanol	1.73	0.173	0.173	3.26	0.325	0.325	
Acrolein	1.12	0.0686	0.0604	2.56	0.157	0.139	m
Freon 113 (C2CI3F3)	0.0800	0.0687	0.0604	0.613	0.527	0.463	
1,1-Dichloroethene	ND	0.0691	0.0604	ND	0.274	0.240	
Acetone	6.19	0.0694	0.0604	14.7	0.165	0.144	
Carbon disulfide	0.236	0.0694	0.0604	0.736	0.216	0.188	
Isopropyl alcohol	0.167	0.0694	0.0604	0.410	0.170	0.149	
Allyl chloride (3-chloropropene)	ND	0.0695	0.0604	ND	0.218	0.189	
Acetonitrile	2.17	0.0694	0.0604	3.64	0.117	0.101	
Methylene chloride	0.190	0.0699	0.0604	0.660	0.243	0.210	
trans-1,2-Dichloroethene	ND	0.0704	0.0604	ND	0.279	0.240	
Methyl tert-butyl ether	0.0984	0.0707	0.0604	0.355	0.255	0.218	m
Acrylonitrile	0.436	0.0706	0.0604	0.946	0.153	0.131	
Hexane	0.486	0.0698	0.0604	1.71	0.246	0.213	
1,1-Dichloroethane	ND	0.0680	0.0604	ND	0.275	0.245	
Vinyl acetate	ND	0.0703	0.0604	ND	0.247	0.213	
cis-1,2-Dichloroethene	ND	0.0696	0.0604	ND	0.276	0.240	
Methyl ethyl ketone (2-Butanone)	0.912	0.0702	0.0604	2.69	0.207	0.178	
Ethyl acetate	ND	0.0696	0.0604	ND	0.251	0.218	
Chloroform	ND	0.0698	0.0604	ND	0.341	0.295	
Tetrahydrofuran	0.446	0.0697	0.0604	1.32	0.206	0.178	
1,1,1-Trichloroethane	ND	0.0687	0.0604	ND	0.375	0.330	
Cyclohexane	0.0928	0.0703	0.0604	0.319	0.242	0.208	
Carbon tetrachloride	0.0789	0.0699	0.0604	0.497	0.440	0.380	
Benzene	8.19	0.0689	0.0604	26.2	0.220	0.193	
2,2,4-trimethylpentane	ND	0.0708	0.0604	ND	0.331	0.282	
1,2-Dichloroethane	ND	0.0706	0.0604	ND	0.286	0.245	
Heptane	0.368	0.0694	0.0604	1.51	0.285	0.248	
Trichloroethene	ND	0.0694	0.0604	ND	0.373	0.325	
1,2-Dichloropropane	ND	0.0706	0.0604	ND	0.326	0.279	
Methyl methacrylate	0.342	0.0716	0.0604	1.40	0.293	0.248	
1,4-Dioxane	0.162	0.0698	0.0604	0.584	0.252	0.218	
Bromodichloromethane	ND	0.0686	0.0604	ND	0.460	0.405	
cis-1,3-Dichloropropene	ND	0.0679	0.0604	ND	0.308	0.274	
Methyl isobutyl ketone	ND	0.0712	0.0604	ND	0.292	0.248	
Toluene	3.12	0.0702	0.0604	11.8	0.264	0.228	
trans-1,3-Dichloropropene	ND	0.0702	0.0604	ND	0.319	0.274	
1,1,2-Trichloroethane	ND	0.0692	0.0604	ND	0.378	0.330	
Tetrachloroethene	ND	0.0697	0.0604	ND	0.473	0.410	
2-Hexanone (Methyl butyl ketone)	0.0826	0.0702	0.0604	0.338	0.288	0.248	
Dibromochloromethane	ND	0.0682	0.0604	ND	0.581	0.515	
1,2-Dibromoethane	ND	0.0700	0.0604	ND	0.538	0.464	
Chlorobenzene	0.163	0.0711	0.0604	0.748	0.327	0.278	
Ethylbenzene	1.84	0.0680	0.0604	8.00	0.295	0.262	
1,1,1,2-Tetrachloroethane	ND	0.0691	0.0604	ND	0.474	0.415	
m-/p-Xylenes	0.477	0.0700	0.0604	2.07	0.304	0.262	

Sample Name : ACF-AS-SMOKE-24HrVOC

Sample Info : 0819-013; Can #820; 500mL load

Data File : X1902835.D

Dilution : 1

Pressurization Factor : 1.727

Acquisition Date : 2019-08-05 15:57:48

Instrument Method : TO15-SCN.M

Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
o-Xylene	0.226	0.0690	0.0604	0.980	0.300	0.262	
Styrene	4.97	0.0673	0.0604	21.2	0.287	0.257	
Bromoform	ND	0.0694	0.0604	ND	0.717	0.625	
1,1,2,2-Tetrachloroethane	ND	0.0691	0.0604	ND	0.474	0.415	
4-Ethyltoluene	ND	0.0696	0.0604	ND	0.342	0.297	
2-Chlorotoluene	ND	0.0696	0.0604	ND	0.360	0.313	
1,3,5-Trimethylbenzene	0.109	0.0693	0.0604	0.535	0.341	0.297	
1,2,4-Trimethylbenzene	0.109	0.0687	0.0604	0.534	0.338	0.297	m
1,3-Dichlorobenzene	ND	0.0697	0.0604	ND	0.419	0.363	
1,4-Dichlorobenzene	ND	0.0693	0.0604	ND	0.417	0.363	
Benzyl chloride	ND	0.0689	0.0604	ND	0.357	0.313	
1,2-Dichlorobenzene	ND	0.0704	0.0604	ND	0.423	0.363	
1,2,4-Trichlorobenzene	ND	0.0701	0.0604	ND	0.520	0.449	
Hexachlorobutadiene	ND	0.0692	0.0604	ND	0.738	0.645	
Naphthalene	0.194	0.0715	0.0604	1.02	0.375	0.317	
1-Bromopropane	ND	0.0683	0.0604	ND	0.343	0.304	
1-Octene	ND	0.0676	0.0604	ND	0.310	0.277	
n-Octane	0.205	0.0692	0.0604	0.957	0.323	0.282	m
Isopropylbenzene	0.391	0.0701	0.0604	1.92	0.345	0.297	
n-Propylbenzene	0.0923	0.0703	0.0604	0.453	0.345	0.297	

Internal Standards	Response	Retention Time (min)	Concentration (PPBV)	Flag *
Bromochloromethane (IS)	910,652	11.93	5.00	PASS
1,4-Difluorobenzene (IS)	3,422,280	13.69	5.04	PASS
Chlorobenzene-d5 (IS)	2,740,100	17.86	4.80	PASS

(ND) = Not Detected

* (J) = Below Calibration Range, (E) = Above Calibration Range, (m) = Manual Integration

IS Acceptance Criteria: RT +/- 20 sec, Response +/- 40%

Sample Name : ACF-AS-UPWIND-24HrVOC

Sample Info : 0819-013; Can #796; 500mL load

Data File : X1902836.D

Dilution : 1

Pressurization Factor : 1.746

Acquisition Date : 2019-08-05 16:53:54

Instrument Method : TO15-SCN.M

Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
Propylene	0.368	0.0670	0.0611	0.633	0.115	0.105	
Freon 12 (CCl2F2)	0.479	0.0682	0.0611	2.37	0.337	0.302	
Freon 114 (C2Cl2F4)	ND	0.0699	0.0611	ND	0.489	0.427	
Chloromethane	1.01	0.0681	0.0611	2.09	0.141	0.126	
Chloroethene (Vinyl chloride)	ND	0.0703	0.0611	ND	0.180	0.156	
1,3-Butadiene	ND	0.0682	0.0611	ND	0.151	0.135	
Bromomethane	ND	0.0691	0.0611	ND	0.268	0.237	
Chloroethane	ND	0.0704	0.0611	ND	0.186	0.161	
Bromoethene (Vinyl bromide)	ND	0.0696	0.0611	ND	0.305	0.267	
Freon 11 (CCl3F)	0.247	0.0725	0.0611	1.39	0.407	0.343	
Ethanol	0.643	0.175	0.175	1.21	0.329	0.329	
Acrolein	0.119	0.0694	0.0611	0.273	0.159	0.140	m
Freon 113 (C2Cl3F3)	0.0762	0.0695	0.0611	0.584	0.533	0.468	
1,1-Dichloroethene	ND	0.0699	0.0611	ND	0.277	0.242	
Acetone	2.30	0.0702	0.0611	5.46	0.167	0.145	
Carbon disulfide	0.0843	0.0701	0.0611	0.262	0.218	0.190	
Isopropyl alcohol	0.124	0.0701	0.0611	0.305	0.172	0.150	
Allyl chloride (3-chloropropene)	ND	0.0703	0.0611	ND	0.220	0.191	
Acetonitrile	0.532	0.0702	0.0611	0.893	0.118	0.103	
Methylene chloride	0.159	0.0707	0.0611	0.551	0.246	0.212	
trans-1,2-Dichloroethene	ND	0.0712	0.0611	ND	0.282	0.242	
Methyl tert-butyl ether	ND	0.0715	0.0611	ND	0.258	0.220	
Acrylonitrile	ND	0.0714	0.0611	ND	0.155	0.133	
Hexane	0.0793	0.0706	0.0611	0.280	0.249	0.215	
1,1-Dichloroethane	ND	0.0688	0.0611	ND	0.278	0.247	
Vinyl acetate	ND	0.0710	0.0611	ND	0.250	0.215	
cis-1,2-Dichloroethene	ND	0.0703	0.0611	ND	0.279	0.242	
Methyl ethyl ketone (2-Butanone)	0.142	0.0710	0.0611	0.420	0.209	0.180	
Ethyl acetate	ND	0.0703	0.0611	ND	0.253	0.220	
Chloroform	ND	0.0706	0.0611	ND	0.345	0.298	
Tetrahydrofuran	ND	0.0705	0.0611	ND	0.208	0.180	
1,1,1-Trichloroethane	ND	0.0695	0.0611	ND	0.379	0.333	
Cyclohexane	ND	0.0710	0.0611	ND	0.244	0.210	
Carbon tetrachloride	0.0780	0.0707	0.0611	0.491	0.445	0.384	
Benzene	ND	0.0697	0.0611	ND	0.223	0.195	
2,2,4-trimethylpentane	ND	0.0716	0.0611	ND	0.334	0.286	
1,2-Dichloroethane	ND	0.0714	0.0611	ND	0.289	0.247	
Heptane	ND	0.0702	0.0611	ND	0.288	0.250	
Trichloroethene	ND	0.0701	0.0611	ND	0.377	0.328	
1,2-Dichloropropane	ND	0.0714	0.0611	ND	0.330	0.282	
Methyl methacrylate	ND	0.0724	0.0611	ND	0.297	0.250	
1,4-Dioxane	ND	0.0706	0.0611	ND	0.254	0.220	
Bromodichloromethane	ND	0.0694	0.0611	ND	0.465	0.409	
cis-1,3-Dichloropropene	ND	0.0687	0.0611	ND	0.312	0.277	
Methyl isobutyl ketone	ND	0.0720	0.0611	ND	0.295	0.250	
Toluene	0.174	0.0710	0.0611	0.657	0.267	0.230	
trans-1,3-Dichloropropene	ND	0.0710	0.0611	ND	0.322	0.277	
1,1,2-Trichloroethane	ND	0.0700	0.0611	ND	0.382	0.333	
Tetrachloroethene	ND	0.0705	0.0611	ND	0.478	0.414	
2-Hexanone (Methyl butyl ketone)	ND	0.0710	0.0611	ND	0.291	0.250	
Dibromochloromethane	ND	0.0689	0.0611	ND	0.587	0.521	
1,2-Dibromoethane	ND	0.0707	0.0611	ND	0.544	0.470	
Chlorobenzene	ND	0.0719	0.0611	ND	0.331	0.281	
Ethylbenzene	ND	0.0687	0.0611	ND	0.298	0.265	
1,1,1,2-Tetrachloroethane	ND	0.0698	0.0611	ND	0.479	0.420	
m-/p-Xylenes	ND	0.0707	0.0611	ND	0.307	0.265	

Sample Name: ACF-AS-UPWIND-24HrVOC

Sample Info: 0819-013; Can #796; 500mL load

Data File: X1902836.D

Dilution: 1

Pressurization Factor: 1.746

Acquisition Date: 2019-08-05 16:53:54

Instrument Method: TO15-SCN.M

Matrix: AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
o-Xylene	ND	0.0698	0.0611	ND	0.303	0.265	
Styrene	ND	0.0680	0.0611	ND	0.290	0.260	
Bromoform	ND	0.0701	0.0611	ND	0.725	0.632	
1,1,2,2-Tetrachloroethane	ND	0.0698	0.0611	ND	0.479	0.420	
4-Ethyltoluene	ND	0.0703	0.0611	ND	0.346	0.300	
2-Chlorotoluene	ND	0.0703	0.0611	ND	0.364	0.316	
1,3,5-Trimethylbenzene	ND	0.0700	0.0611	ND	0.344	0.300	
1,2,4-Trimethylbenzene	ND	0.0694	0.0611	ND	0.341	0.300	
1,3-Dichlorobenzene	ND	0.0705	0.0611	ND	0.424	0.367	
1,4-Dichlorobenzene	ND	0.0700	0.0611	ND	0.421	0.367	
Benzyl chloride	ND	0.0697	0.0611	ND	0.361	0.316	
1,2-Dichlorobenzene	ND	0.0712	0.0611	ND	0.428	0.367	
1,2,4-Trichlorobenzene	ND	0.0709	0.0611	ND	0.526	0.454	
Hexachlorobutadiene	ND	0.0700	0.0611	ND	0.746	0.652	
Naphthalene	ND	0.0723	0.0611	ND	0.379	0.320	
1-Bromopropane	ND	0.0690	0.0611	ND	0.347	0.307	
1-Octene	ND	0.0683	0.0611	ND	0.314	0.281	
n-Octane	ND	0.0700	0.0611	ND	0.327	0.286	
Isopropylbenzene	0.0723	0.0709	0.0611	0.355	0.348	0.300	
n-Propylbenzene	ND	0.0710	0.0611	ND	0.349	0.300	

Internal Standards	Response	Retention Time (min)	Concentration (PPBV)	Flag *
Bromochloromethane (IS)	946,497	11.93	5.00	PASS
1,4-Difluorobenzene (IS)	3,533,940	13.69	5.04	PASS
Chlorobenzene-d5 (IS)	2,757,266	17.86	4.80	PASS

(ND) = Not Detected
* (J) = Below Calibration Range, (E) = Above Calibration Range, (m) = Manual Integration
IS Acceptance Criteria: RT +/- 20 sec, Response +/- 40%

Sample Name : ACF-AS-BLANK

Sample Info : 0819-013; Can #805; 500mL load

Data File : X1902833.D

Dilution : 1

Pressurization Factor : 1.000

Acquisition Date : 2019-08-05 14:05:43

Instrument Method : TO15-SCN.M

Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
Propylene	0.0438	0.0384	0.0350	0.0753	0.0660	0.0602	m
Freon 12 (CCl2F2)	ND	0.0390	0.0350	ND	0.193	0.173	
Freon 114 (C2Cl2F4)	ND	0.0400	0.0350	ND	0.280	0.245	
Chloromethane	ND	0.0390	0.0350	ND	0.0805	0.0723	
Chloroethene (Vinyl chloride)	ND	0.0402	0.0350	ND	0.103	0.0895	
1,3-Butadiene	ND	0.0391	0.0350	ND	0.0865	0.0774	
Bromomethane	ND	0.0396	0.0350	ND	0.154	0.136	
Chloroethane	ND	0.0403	0.0350	ND	0.106	0.0924	
Bromoethene (Vinyl bromide)	ND	0.0399	0.0350	ND	0.174	0.153	
Freon 11 (CCl3F)	ND	0.0415	0.0350	ND	0.233	0.197	
Ethanol	0.121	0.100	0.100	0.227	0.188	0.188	J
Acrolein	ND	0.0397	0.0350	ND	0.0911	0.0803	
Freon 113 (C2Cl3F3)	ND	0.0398	0.0350	ND	0.305	0.268	
1,1-Dichloroethene	ND	0.0400	0.0350	ND	0.159	0.139	
Acetone	0.0812	0.0402	0.0350	0.193	0.0955	0.0831	
Carbon disulfide	ND	0.0402	0.0350	ND	0.125	0.109	
Isopropyl alcohol	ND	0.0402	0.0350	ND	0.0987	0.0860	
Allyl chloride (3-chloropropene)	ND	0.0402	0.0350	ND	0.126	0.110	
Acetonitrile	0.0386	0.0402	0.0350	0.0649	0.0675	0.0588	
Methylene chloride	0.0507	0.0405	0.0350	0.176	0.141	0.122	
trans-1,2-Dichloroethene	ND	0.0408	0.0350	ND	0.162	0.139	
Methyl tert-butyl ether	ND	0.0410	0.0350	ND	0.148	0.126	
Acrylonitrile	ND	0.0409	0.0350	ND	0.0887	0.0760	
Hexane	ND	0.0404	0.0350	ND	0.143	0.123	
1,1-Dichloroethane	ND	0.0394	0.0350	ND	0.159	0.142	
Vinyl acetate	ND	0.0407	0.0350	ND	0.143	0.123	
cis-1,2-Dichloroethene	ND	0.0403	0.0350	ND	0.160	0.139	
Methyl ethyl ketone (2-Butanone)	ND	0.0406	0.0350	ND	0.120	0.103	
Ethyl acetate	ND	0.0403	0.0350	ND	0.145	0.126	
Chloroform	ND	0.0404	0.0350	ND	0.197	0.171	
Tetrahydrofuran	ND	0.0404	0.0350	ND	0.119	0.103	
1,1,1-Trichloroethane	ND	0.0398	0.0350	ND	0.217	0.191	
Cyclohexane	ND	0.0407	0.0350	ND	0.140	0.120	
Carbon tetrachloride	ND	0.0405	0.0350	ND	0.255	0.220	
Benzene	ND	0.0399	0.0350	ND	0.128	0.112	
2,2,4-trimethylpentane	ND	0.0410	0.0350	ND	0.192	0.164	
1,2-Dichloroethane	ND	0.0409	0.0350	ND	0.165	0.142	
Heptane	ND	0.0402	0.0350	ND	0.165	0.143	
Trichloroethene	ND	0.0402	0.0350	ND	0.216	0.188	
1,2-Dichloropropane	ND	0.0409	0.0350	ND	0.189	0.162	
Methyl methacrylate	ND	0.0415	0.0350	ND	0.170	0.143	
1,4-Dioxane	ND	0.0404	0.0350	ND	0.146	0.126	
Bromodichloromethane	ND	0.0397	0.0350	ND	0.266	0.235	
cis-1,3-Dichloropropene	ND	0.0393	0.0350	ND	0.178	0.159	
Methyl isobutyl ketone	ND	0.0412	0.0350	ND	0.169	0.143	
Toluene	ND	0.0406	0.0350	ND	0.153	0.132	
trans-1,3-Dichloropropene	ND	0.0406	0.0350	ND	0.184	0.159	
1,1,2-Trichloroethane	ND	0.0401	0.0350	ND	0.219	0.191	
Tetrachloroethene	ND	0.0404	0.0350	ND	0.274	0.237	
2-Hexanone (Methyl butyl ketone)	ND	0.0406	0.0350	ND	0.166	0.143	
Dibromochloromethane	ND	0.0395	0.0350	ND	0.336	0.298	
1,2-Dibromoethane	ND	0.0405	0.0350	ND	0.311	0.269	
Chlorobenzene	ND	0.0412	0.0350	ND	0.189	0.161	
Ethylbenzene	ND	0.0394	0.0350	ND	0.171	0.152	
1,1,1,2-Tetrachloroethane	ND	0.0400	0.0350	ND	0.275	0.240	
m-/p-Xylenes	ND	0.0405	0.0350	ND	0.176	0.152	

Sample Name : ACF-AS-BLANK

Sample Info : 0819-013; Can #805; 500mL load

Data File : X1902833.D

Dilution : 1

Pressurization Factor : 1.000

Acquisition Date : 2019-08-05 14:05:43

Instrument Method : TO15-SCN.M

Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
o-Xylene	ND	0.0400	0.0350	ND	0.174	0.152	
Styrene	ND	0.0390	0.0350	ND	0.166	0.149	
Bromoform	ND	0.0402	0.0350	ND	0.415	0.362	
1,1,2,2-Tetrachloroethane	ND	0.0400	0.0350	ND	0.275	0.240	
4-Ethyltoluene	ND	0.0403	0.0350	ND	0.198	0.172	
2-Chlorotoluene	ND	0.0403	0.0350	ND	0.209	0.181	
1,3,5-Trimethylbenzene	ND	0.0401	0.0350	ND	0.197	0.172	
1,2,4-Trimethylbenzene	ND	0.0398	0.0350	ND	0.195	0.172	
1,3-Dichlorobenzene	ND	0.0404	0.0350	ND	0.243	0.210	
1,4-Dichlorobenzene	ND	0.0401	0.0350	ND	0.241	0.210	
Benzyl chloride	ND	0.0399	0.0350	ND	0.207	0.181	
1,2-Dichlorobenzene	ND	0.0408	0.0350	ND	0.245	0.210	
1,2,4-Trichlorobenzene	ND	0.0406	0.0350	ND	0.301	0.260	
Hexachlorobutadiene	ND	0.0401	0.0350	ND	0.427	0.373	
Naphthalene	ND	0.0414	0.0350	ND	0.217	0.183	
1-Bromopropane	ND	0.0395	0.0350	ND	0.199	0.176	
1-Octene	ND	0.0391	0.0350	ND	0.180	0.161	
n-Octane	ND	0.0401	0.0350	ND	0.187	0.164	
Isopropylbenzene	ND	0.0406	0.0350	ND	0.200	0.172	
n-Propylbenzene	ND	0.0407	0.0350	ND	0.200	0.172	

Internal Standards	Response	Retention Time (min)	Concentration (PPBV)	Flag *
Bromochloromethane (IS)	901,599	11.93	5.00	PASS
1,4-Difluorobenzene (IS)	3,376,353	13.69	5.04	PASS
Chlorobenzene-d5 (IS)	2,594,468	17.86	4.80	PASS

(ND) = Not Detected

* (J) = Below Calibration Range, (E) = Above Calibration Range, (m) = Manual Integration

IS Acceptance Criteria: RT +/- 20 sec, Response +/- 40%

Lab QC

Sample Name : ACF-AS-UPWIND-24HrVOC LD
Sample Info : 0819-013; Can #796; 500mL load
Data File : X1902837.D
Dilution : 1
Pressurization Factor : 1.746
Acquisition Date : 2019-08-05 17:50:02
Instrument Method : TO15-SCN.M
Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	% Diff	Flag *
Propylene	0.383	0.0670	0.0611	0.660	0.115	0.105	4.1	m
Freon 12 (C2Cl2F2)	0.484	0.0682	0.0611	2.39	0.337	0.302	0.9	
Freon 114 (C2Cl2F4)	ND	0.0699	0.0611	ND	0.489	0.427		
Chloromethane	1.01	0.0681	0.0611	2.09	0.141	0.126	0.2	
Chloroethene (Vinyl chloride)	ND	0.0703	0.0611	ND	0.180	0.156		
1,3-Butadiene	ND	0.0682	0.0611	ND	0.151	0.135		
Bromomethane	ND	0.0691	0.0611	ND	0.268	0.237		
Chloroethane	ND	0.0704	0.0611	ND	0.186	0.161		
Bromoethene (Vinyl bromide)	ND	0.0696	0.0611	ND	0.305	0.267		
Freon 11 (CCl3F)	0.248	0.0725	0.0611	1.39	0.407	0.343	0.6	
Ethanol	0.639	0.175	0.175	1.20	0.329	0.329	0.7	
Acrolein	0.123	0.0694	0.0611	0.282	0.159	0.140	3.1	m
Freon 113 (C2Cl3F3)	0.0800	0.0695	0.0611	0.613	0.533	0.468	5.0	
1,1-Dichloroethene	ND	0.0699	0.0611	ND	0.277	0.242		
Acetone	2.35	0.0702	0.0611	5.58	0.167	0.145	2.3	
Carbon disulfide	0.0809	0.0701	0.0611	0.252	0.218	0.190	4.1	
Isopropyl alcohol	0.138	0.0701	0.0611	0.339	0.172	0.150	10.6	
Allyl chloride (3-chloropropene)	ND	0.0703	0.0611	ND	0.220	0.191		
Acetonitrile	0.534	0.0702	0.0611	0.896	0.118	0.103	0.3	
Methylene chloride	0.175	0.0707	0.0611	0.608	0.246	0.212	9.8	
trans-1,2-Dichloroethene	ND	0.0712	0.0611	ND	0.282	0.242		
Methyl tert-butyl ether	ND	0.0715	0.0611	ND	0.258	0.220		
Acrylonitrile	ND	0.0714	0.0611	ND	0.155	0.133		
Hexane	0.0900	0.0706	0.0611	0.317	0.249	0.215	12.7	m
1,1-Dichloroethane	ND	0.0688	0.0611	ND	0.278	0.247		
Vinyl acetate	ND	0.0710	0.0611	ND	0.250	0.215		
cis-1,2-Dichloroethene	ND	0.0703	0.0611	ND	0.279	0.242		
Methyl ethyl ketone (2-Butanone)	0.157	0.0710	0.0611	0.464	0.209	0.180	10.0	m
Ethyl acetate	ND	0.0703	0.0611	ND	0.253	0.220		
Chloroform	ND	0.0706	0.0611	ND	0.345	0.298		
Tetrahydrofuran	ND	0.0705	0.0611	ND	0.208	0.180		
1,1,1-Trichloroethane	ND	0.0695	0.0611	ND	0.379	0.333		
Cyclohexane	ND	0.0710	0.0611	ND	0.244	0.210		
Carbon tetrachloride	0.0792	0.0707	0.0611	0.499	0.445	0.384	1.6	
Benzene	0.0651	0.0697	0.0611	0.208	0.223	0.195		J
2,2,4-trimethylpentane	ND	0.0716	0.0611	ND	0.334	0.286		
1,2-Dichloroethane	ND	0.0714	0.0611	ND	0.289	0.247		
Heptane	ND	0.0702	0.0611	ND	0.288	0.250		
Trichloroethene	ND	0.0701	0.0611	ND	0.377	0.328		
1,2-Dichloropropane	ND	0.0714	0.0611	ND	0.330	0.282		
Methyl methacrylate	ND	0.0724	0.0611	ND	0.297	0.250		
1,4-Dioxane	ND	0.0706	0.0611	ND	0.254	0.220		
Bromodichloromethane	ND	0.0694	0.0611	ND	0.465	0.409		
cis-1,3-Dichloropropene	ND	0.0687	0.0611	ND	0.312	0.277		
Methyl isobutyl ketone	ND	0.0720	0.0611	ND	0.295	0.250		
Toluene	0.175	0.0710	0.0611	0.658	0.267	0.230	0.2	
trans-1,3-Dichloropropene	ND	0.0710	0.0611	ND	0.322	0.277		
1,1,2-Trichloroethane	ND	0.0700	0.0611	ND	0.382	0.333		
Tetrachloroethene	ND	0.0705	0.0611	ND	0.478	0.414		
2-Hexanone (Methyl butyl ketone)	ND	0.0710	0.0611	ND	0.291	0.250		
Dibromochloromethane	ND	0.0689	0.0611	ND	0.587	0.521		
1,2-Dibromoethane	ND	0.0707	0.0611	ND	0.544	0.470		
Chlorobenzene	ND	0.0719	0.0611	ND	0.331	0.281		
Ethylbenzene	ND	0.0687	0.0611	ND	0.298	0.265		
1,1,1,2-Tetrachloroethane	ND	0.0698	0.0611	ND	0.479	0.420		
m-/p-Xylenes	ND	0.0707	0.0611	ND	0.307	0.265		
o-Xylene	ND	0.0698	0.0611	ND	0.303	0.265		
Styrene	ND	0.0680	0.0611	ND	0.290	0.260		
Bromoform	ND	0.0701	0.0611	ND	0.725	0.632		
1,1,2,2-Tetrachloroethane	ND	0.0698	0.0611	ND	0.479	0.420		
4-Ethyltoluene	ND	0.0703	0.0611	ND	0.346	0.300		
2-Chlorotoluene	ND	0.0703	0.0611	ND	0.364	0.316		

Sample Name : ACF-AS-UPWIND-24HrVOC LD
Sample Info : 0819-013; Can #796; 500mL load
Data File : X1902837.D
Dilution : 1
Pressurization Factor : 1.746
Acquisition Date : 2019-08-05 17:50:02
Instrument Method : TO15-SCN.M
Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	% Diff	Flag *
1,3,5-Trimethylbenzene	ND	0.0700	0.0611	ND	0.344	0.300		
1,2,4-Trimethylbenzene	ND	0.0694	0.0611	ND	0.341	0.300		
1,3-Dichlorobenzene	ND	0.0705	0.0611	ND	0.424	0.367		
1,4-Dichlorobenzene	ND	0.0700	0.0611	ND	0.421	0.367		
Benzyl chloride	ND	0.0697	0.0611	ND	0.361	0.316		
1,2-Dichlorobenzene	ND	0.0712	0.0611	ND	0.428	0.367		
1,2,4-Trichlorobenzene	ND	0.0709	0.0611	ND	0.526	0.454		
Hexachlorobutadiene	ND	0.0700	0.0611	ND	0.746	0.652		
Naphthalene	ND	0.0723	0.0611	ND	0.379	0.320		
1-Bromopropane	ND	0.0690	0.0611	ND	0.347	0.307		
1-Octene	ND	0.0683	0.0611	ND	0.314	0.281		
n-Octane	ND	0.0700	0.0611	ND	0.327	0.286		
Isopropylbenzene	0.0765	0.0709	0.0611	0.376	0.348	0.300	5.7	
n-Propylbenzene	ND	0.0710	0.0611	ND	0.349	0.300		

Internal Standards	Response	Retention Time (min)	Concentration (PPBV)	Flag *
Bromochloromethane (IS)	928,284	11.93	5.00	PASS
1,4-Difluorobenzene (IS)	3,491,156	13.69	5.04	PASS
Chlorobenzene-d5 (IS)	2,724,398	17.86	4.80	PASS

(ND) = Not Detected
* (J) = Below Calibration Range, (E) = Above Calibration Range, (m) = Manual Integration
IS Acceptance Criteria: RT +/- 20 sec, Response +/- 40%

Sample Name : Humid Blank #0702

Sample Info : 500mL load

Data File : X1902832.D

Dilution : 1

Pressurization Factor : 1.000

Acquisition Date : 2019-08-05 13:09:38

Instrument Method : TO15-SCN.M

Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
Propylene	ND	0.0384	0.0350	ND	0.0660	0.0602	
Freon 12 (CCI2F2)	ND	0.0390	0.0350	ND	0.193	0.173	
Freon 114 (C2CI2F4)	ND	0.0400	0.0350	ND	0.280	0.245	
Chloromethane	ND	0.0390	0.0350	ND	0.0805	0.0723	
Chloroethene (Vinyl chloride)	ND	0.0402	0.0350	ND	0.103	0.0895	
1,3-Butadiene	ND	0.0391	0.0350	ND	0.0865	0.0774	
Bromomethane	ND	0.0396	0.0350	ND	0.154	0.136	
Chloroethane	ND	0.0403	0.0350	ND	0.106	0.0924	
Bromoethene (Vinyl bromide)	ND	0.0399	0.0350	ND	0.174	0.153	
Freon 11 (CCI3F)	ND	0.0415	0.0350	ND	0.233	0.197	
Ethanol	ND	0.100	0.100	ND	0.188	0.188	
Acrolein	ND	0.0397	0.0350	ND	0.0911	0.0803	
Freon 113 (C2CI3F3)	ND	0.0398	0.0350	ND	0.305	0.268	
1,1-Dichloroethene	ND	0.0400	0.0350	ND	0.159	0.139	
Acetone	0.0474	0.0402	0.0350	0.113	0.0955	0.0831	m
Carbon disulfide	0.0386	0.0402	0.0350	0.120	0.125	0.109	J
Isopropyl alcohol	ND	0.0402	0.0350	ND	0.0987	0.0860	
Allyl chloride (3-chloropropene)	ND	0.0402	0.0350	ND	0.126	0.110	
Acetonitrile	ND	0.0402	0.0350	ND	0.0675	0.0588	
Methylene chloride	0.0475	0.0405	0.0350	0.165	0.141	0.122	
trans-1,2-Dichloroethene	ND	0.0408	0.0350	ND	0.162	0.139	
Methyl tert-butyl ether	ND	0.0410	0.0350	ND	0.148	0.126	
Acrylonitrile	ND	0.0409	0.0350	ND	0.0887	0.0760	
Hexane	ND	0.0404	0.0350	ND	0.143	0.123	
1,1-Dichloroethane	ND	0.0394	0.0350	ND	0.159	0.142	
Vinyl acetate	ND	0.0407	0.0350	ND	0.143	0.123	
cis-1,2-Dichloroethene	ND	0.0403	0.0350	ND	0.160	0.139	
Methyl ethyl ketone (2-Butanone)	ND	0.0406	0.0350	ND	0.120	0.103	
Ethyl acetate	ND	0.0403	0.0350	ND	0.145	0.126	
Chloroform	ND	0.0404	0.0350	ND	0.197	0.171	
Tetrahydrofuran	ND	0.0404	0.0350	ND	0.119	0.103	
1,1,1-Trichloroethane	ND	0.0398	0.0350	ND	0.217	0.191	
Cyclohexane	ND	0.0407	0.0350	ND	0.140	0.120	
Carbon tetrachloride	ND	0.0405	0.0350	ND	0.255	0.220	
Benzene	ND	0.0399	0.0350	ND	0.128	0.112	
2,2,4-trimethylpentane	ND	0.0410	0.0350	ND	0.192	0.164	
1,2-Dichloroethane	ND	0.0409	0.0350	ND	0.165	0.142	
Heptane	ND	0.0402	0.0350	ND	0.165	0.143	
Trichloroethene	ND	0.0402	0.0350	ND	0.216	0.188	
1,2-Dichloropropane	ND	0.0409	0.0350	ND	0.189	0.162	
Methyl methacrylate	ND	0.0415	0.0350	ND	0.170	0.143	
1,4-Dioxane	ND	0.0404	0.0350	ND	0.146	0.126	
Bromodichloromethane	ND	0.0397	0.0350	ND	0.266	0.235	
cis-1,3-Dichloropropene	ND	0.0393	0.0350	ND	0.178	0.159	
Methyl isobutyl ketone	ND	0.0412	0.0350	ND	0.169	0.143	
Toluene	ND	0.0406	0.0350	ND	0.153	0.132	
trans-1,3-Dichloropropene	ND	0.0406	0.0350	ND	0.184	0.159	
1,1,2-Trichloroethane	ND	0.0401	0.0350	ND	0.219	0.191	
Tetrachloroethene	ND	0.0404	0.0350	ND	0.274	0.237	
2-Hexanone (Methyl butyl ketone)	ND	0.0406	0.0350	ND	0.166	0.143	
Dibromochloromethane	ND	0.0395	0.0350	ND	0.336	0.298	
1,2-Dibromoethane	ND	0.0405	0.0350	ND	0.311	0.269	
Chlorobenzene	ND	0.0412	0.0350	ND	0.189	0.161	
Ethylbenzene	ND	0.0394	0.0350	ND	0.171	0.152	
1,1,1,2-Tetrachloroethane	ND	0.0400	0.0350	ND	0.275	0.240	
m-/p-Xylenes	ND	0.0405	0.0350	ND	0.176	0.152	

Sample Name: Humid Blank #0702

Sample Info: 500mL load

Data File: X1902832.D

Dilution: 1

Pressurization Factor: 1.000

Acquisition Date: 2019-08-05 13:09:38

Instrument Method: TO15-SCN.M

Matrix: AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
o-Xylene	ND	0.0400	0.0350	ND	0.174	0.152	
Styrene	ND	0.0390	0.0350	ND	0.166	0.149	
Bromoform	ND	0.0402	0.0350	ND	0.415	0.362	
1,1,2,2-Tetrachloroethane	ND	0.0400	0.0350	ND	0.275	0.240	
4-Ethyltoluene	ND	0.0403	0.0350	ND	0.198	0.172	
2-Chlorotoluene	ND	0.0403	0.0350	ND	0.209	0.181	
1,3,5-Trimethylbenzene	ND	0.0401	0.0350	ND	0.197	0.172	
1,2,4-Trimethylbenzene	ND	0.0398	0.0350	ND	0.195	0.172	
1,3-Dichlorobenzene	ND	0.0404	0.0350	ND	0.243	0.210	
1,4-Dichlorobenzene	ND	0.0401	0.0350	ND	0.241	0.210	
Benzyl chloride	ND	0.0399	0.0350	ND	0.207	0.181	
1,2-Dichlorobenzene	ND	0.0408	0.0350	ND	0.245	0.210	
1,2,4-Trichlorobenzene	ND	0.0406	0.0350	ND	0.301	0.260	
Hexachlorobutadiene	ND	0.0401	0.0350	ND	0.427	0.373	
Naphthalene	ND	0.0414	0.0350	ND	0.217	0.183	
1-Bromopropane	ND	0.0395	0.0350	ND	0.199	0.176	
1-Octene	ND	0.0391	0.0350	ND	0.180	0.161	
n-Octane	ND	0.0401	0.0350	ND	0.187	0.164	
Isopropylbenzene	ND	0.0406	0.0350	ND	0.200	0.172	
n-Propylbenzene	ND	0.0407	0.0350	ND	0.200	0.172	

Internal Standards	Response	Retention Time (min)	Concentration (PPBV)	Flag *
Bromochloromethane (IS)	891,571	11.93	5.00	PASS
1,4-Difluorobenzene (IS)	3,373,438	13.69	5.04	PASS
Chlorobenzene-d5 (IS)	2,627,475	17.87	4.80	PASS

(ND) = Not Detected

* (J) = Below Calibration Range, (E) = Above Calibration Range, (m) = Manual Integration

IS Acceptance Criteria: RT +/- 20 sec, Response +/- 40%

QC Summary Report

Enthalpy Analytical, LLC

Sample Name : 5ppbv TO15 LCS
 Sample Info : 125mL load; Can #0738; GCMSPrepPg770
 Data File : X1902829.D
 Dilution : 1
 Pressurization Factor : 1.000
 Acquisition Date : 2019-08-05 10:15:00
 Instrument Method : TO15-SCN.M
 Matrix : AIR

Target Compound	Response	Concentration (PPBV)	Tag Value (PPBV)	% Recovery	Flag
Propylene	596,439	4.77	4.80	99.4	PASS
Freon 12 (CCl2F2)	1,808,992	4.30	4.88	88.1	PASS
Freon 114 (C2Cl2F4)	2,090,737	4.40	5.01	87.9	PASS
Chloromethane	704,211	4.47	4.88	91.7	PASS
Chloroethene (Vinyl chloride)	738,461	4.26	5.03	84.7	PASS
1,3-Butadiene	553,690	4.81	4.89	98.4	PASS
Bromomethane	753,271	4.39	4.95	88.7	PASS
Chloroethane	415,350	4.28	5.04	84.9	PASS
Bromoethene (Vinyl bromide)	924,820	4.92	4.99	98.7	PASS
Freon 11 (CCl3F)	2,082,745	4.79	5.19	92.2	PASS
Ethanol	323,823	4.52	5.00	90.4	PASS
Acrolein	303,176	4.24	4.97	85.3	PASS
1,1-Dichloroethene	1,195,226	4.25	5.01	84.9	PASS
Freon 113 (C2Cl3F3)	1,520,465	5.18	4.98	104.2	PASS
Acetone	1,095,115	4.41	5.03	87.7	PASS
Isopropyl alcohol	1,350,618	4.80	5.02	95.6	PASS
Carbon disulfide	2,520,055	4.34	5.02	86.4	PASS
Acetonitrile	699,095	5.02	5.03	99.9	PASS
Allyl chloride (3-chloropropene)	375,977	4.40	5.03	87.5	PASS
Methylene chloride	1,030,807	4.16	5.07	82.0	PASS
Acrylonitrile	623,450	4.57	5.11	89.4	PASS
Methyl tert-butyl ether	2,089,551	4.54	5.12	88.6	PASS
trans-1,2-Dichloroethene	1,106,701	4.28	5.10	84.1	PASS
Hexane	1,186,727	4.20	5.06	83.2	PASS
Vinyl acetate	1,995,653	5.36	5.09	105.3	PASS
1,1-Dichloroethane	1,379,829	4.17	4.93	84.7	PASS
Methyl ethyl ketone (2-Butanone)	404,768	4.46	5.08	87.7	PASS
cis-1,2-Dichloroethene	1,297,178	4.28	5.04	85.0	PASS
Ethyl acetate	264,966	4.64	5.04	92.1	PASS
1-Bromopropane	1,372,506	4.91	4.94	99.4	PASS
Tetrahydrofuran	382,728	4.52	5.05	89.5	PASS
Chloroform	1,656,473	4.46	5.06	88.2	PASS
1,1,1-Trichloroethane	1,581,890	4.31	4.98	86.6	PASS
Cyclohexane	1,223,649	4.30	5.09	84.6	PASS
Carbon tetrachloride	1,701,122	4.64	5.06	91.7	PASS
Benzene	2,407,594	4.50	4.99	90.3	PASS
1,2-Dichloroethane	971,765	4.33	5.11	84.7	PASS
2,2,4-trimethylpentane	3,779,050	4.36	5.13	85.1	PASS
Heptane	746,744	4.16	5.03	82.8	PASS
Trichloroethene	1,183,668	5.06	5.02	100.7	PASS
1,2-Dichloropropane	926,109	4.28	4.98	86.0	PASS
Methyl methacrylate	910,791	4.91	5.19	94.7	PASS

QC Summary Report

Enthalpy Analytical, LLC

Sample Name : 5ppbv TO15 LCS
 Sample Info : 125mL load; Can #0738; GCMSPrepPg770
 Data File : X1902829.D
 Dilution : 1
 Pressurization Factor : 1.000
 Acquisition Date : 2019-08-05 10:15:00
 Instrument Method : TO15-SCN.M
 Matrix : AIR

Target Compound	Response	Concentration (PPBV)	Tag Value (PPBV)	% Recovery	Flag
1,4-Dioxane	576,032	4.60	5.06	91.0	PASS
Bromodichloromethane	1,728,049	4.58	4.97	92.2	PASS
cis-1,3-Dichloropropene	1,344,775	4.33	4.92	88.2	PASS
Methyl isobutyl ketone	1,939,512	5.31	5.16	103.0	PASS
Toluene	2,863,028	4.46	5.08	87.7	PASS
1-Octene	692,795	4.39	4.89	89.8	PASS
n-Octane	890,227	4.28	5.01	85.5	PASS
trans-1,3-Dichloropropene	1,307,403	4.53	5.08	89.2	PASS
1,1,2-Trichloroethane	1,041,419	4.56	5.01	91.1	PASS
Tetrachloroethene	1,604,878	5.33	5.05	105.7	PASS
2-Hexanone (Methyl butyl ketone)	1,753,708	5.36	5.08	105.4	PASS
Dibromochloromethane	2,016,646	4.97	4.94	100.8	PASS
1,2-Dibromoethane	1,741,739	5.00	5.07	98.7	PASS
Chlorobenzene	2,357,270	4.98	5.15	96.8	PASS
Ethylbenzene	3,336,233	4.23	4.92	85.9	PASS
1,1,1,2-Tetrachloroethane	1,361,747	4.90	5.00	98.1	PASS
m-/p-Xylenes	2,851,118	4.40	5.07	86.9	PASS
o-Xylene	2,770,581	4.25	5.00	85.1	PASS
Styrene	2,272,980	4.66	4.87	95.6	PASS
Bromoform	2,061,612	6.09	5.02	121.3	PASS
Isopropylbenzene	4,067,208	4.48	5.08	88.3	PASS
1,1,2,2-Tetrachloroethane	2,299,857	4.45	5.00	88.9	PASS
n-Propylbenzene	4,593,352	4.57	5.09	89.9	PASS
4-Ethyltoluene	3,842,451	4.56	5.04	90.5	PASS
2-Chlorotoluene	3,181,294	4.29	5.04	85.2	PASS
1,3,5-Trimethylbenzene	3,305,739	4.22	5.02	84.1	PASS
1,2,4-Trimethylbenzene	3,295,815	4.26	4.97	85.7	PASS
1,3-Dichlorobenzene	2,209,124	5.97	5.05	118.4	PASS
1,4-Dichlorobenzene	2,046,225	6.37	5.02	127.1	PASS
Benzyl chloride	2,448,773	5.87	4.99	117.6	PASS
1,2-Dichlorobenzene	2,292,275	5.62	5.10	110.3	PASS
1,2,4-Trichlorobenzene	878,634	6.67	5.08	131.4	FAIL
Hexachlorobutadiene	1,708,676	4.15	5.01	82.8	PASS
Naphthalene	2,940,614	5.69	5.18	109.9	PASS

Sample Name

: 5ppbv TO15 LCS

Sample Info

: 125mL load; Can #0738; GCMSPrepPg770

Data File

: X1902829.D

Dilution

: 1

Pressurization Factor

: 1.000

Acquisition Date

: 2019-08-05 10:15:00

Instrument Method

: TO15-SCN.M

Matrix

: AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
Propylene	4.77	0.0384	0.0350	8.21	0.0660	0.0602	
Freon 12 (CCI2F2)	4.30	0.0390	0.0350	21.3	0.193	0.173	
Freon 114 (C2CI2F4)	4.40	0.0400	0.0350	30.8	0.280	0.245	
Chloromethane	4.47	0.0390	0.0350	9.23	0.0805	0.0723	
Chloroethene (Vinyl chloride)	4.26	0.0402	0.0350	10.9	0.103	0.0895	
1,3-Butadiene	4.81	0.0391	0.0350	10.6	0.0865	0.0774	
Bromomethane	4.39	0.0396	0.0350	17.0	0.154	0.136	
Chloroethane	4.28	0.0403	0.0350	11.3	0.106	0.0924	
Bromoethene (Vinyl bromide)	4.92	0.0399	0.0350	21.5	0.174	0.153	
Freon 11 (CCI3F)	4.79	0.0415	0.0350	26.9	0.233	0.197	
Ethanol	4.52	0.100	0.100	8.51	0.188	0.188	
Acrolein	4.24	0.0397	0.0350	9.72	0.0911	0.0803	
Freon 113 (C2CI3F3)	5.18	0.0398	0.0350	39.7	0.305	0.268	
1,1-Dichloroethene	4.25	0.0400	0.0350	16.8	0.159	0.139	
Acetone	4.41	0.0402	0.0350	10.5	0.0955	0.0831	
Carbon disulfide	4.34	0.0402	0.0350	13.5	0.125	0.109	
Isopropyl alcohol	4.80	0.0402	0.0350	11.8	0.0987	0.0860	
Allyl chloride (3-chloropropene)	4.40	0.0402	0.0350	13.8	0.126	0.110	
Acetonitrile	5.02	0.0402	0.0350	8.43	0.0675	0.0588	
Methylene chloride	4.16	0.0405	0.0350	14.4	0.141	0.122	
trans-1,2-Dichloroethene	4.28	0.0408	0.0350	17.0	0.162	0.139	
Methyl tert-butyl ether	4.54	0.0410	0.0350	16.4	0.148	0.126	
Acrylonitrile	4.57	0.0409	0.0350	9.92	0.0887	0.0760	
Hexane	4.20	0.0404	0.0350	14.8	0.143	0.123	
1,1-Dichloroethane	4.17	0.0394	0.0350	16.9	0.159	0.142	
Vinyl acetate	5.36	0.0407	0.0350	18.9	0.143	0.123	
cis-1,2-Dichloroethene	4.28	0.0403	0.0350	17.0	0.160	0.139	
Methyl ethyl ketone (2-Butanone)	4.46	0.0406	0.0350	13.1	0.120	0.103	
Ethyl acetate	4.64	0.0403	0.0350	16.7	0.145	0.126	
Chloroform	4.46	0.0404	0.0350	21.8	0.197	0.171	
Tetrahydrofuran	4.52	0.0404	0.0350	13.3	0.119	0.103	
1,1,1-Trichloroethane	4.31	0.0398	0.0350	23.5	0.217	0.191	
Cyclohexane	4.30	0.0407	0.0350	14.8	0.140	0.120	
Carbon tetrachloride	4.64	0.0405	0.0350	29.2	0.255	0.220	
Benzene	4.50	0.0399	0.0350	14.4	0.128	0.112	
2,2,4-trimethylpentane	4.36	0.0410	0.0350	20.4	0.192	0.164	
1,2-Dichloroethane	4.33	0.0409	0.0350	17.5	0.165	0.142	
Heptane	4.16	0.0402	0.0350	17.0	0.165	0.143	
Trichloroethene	5.06	0.0402	0.0350	27.2	0.216	0.188	
1,2-Dichloropropane	4.28	0.0409	0.0350	19.8	0.189	0.162	
Methyl methacrylate	4.91	0.0415	0.0350	20.1	0.170	0.143	
1,4-Dioxane	4.60	0.0404	0.0350	16.6	0.146	0.126	
Bromodichloromethane	4.58	0.0397	0.0350	30.7	0.266	0.235	
cis-1,3-Dichloropropene	4.33	0.0393	0.0350	19.7	0.178	0.159	
Methyl isobutyl ketone	5.31	0.0412	0.0350	21.8	0.169	0.143	m
Toluene	4.46	0.0406	0.0350	16.8	0.153	0.132	
trans-1,3-Dichloropropene	4.53	0.0406	0.0350	20.6	0.184	0.159	
1,1,2-Trichloroethane	4.56	0.0401	0.0350	24.9	0.219	0.191	
Tetrachloroethene	5.33	0.0404	0.0350	36.2	0.274	0.237	
2-Hexanone (Methyl butyl ketone)	5.36	0.0406	0.0350	21.9	0.166	0.143	
Dibromochloromethane	4.97	0.0395	0.0350	42.4	0.336	0.298	
1,2-Dibromoethane	5.00	0.0405	0.0350	38.4	0.311	0.269	
Chlorobenzene	4.98	0.0412	0.0350	22.9	0.189	0.161	
Ethylbenzene	4.23	0.0394	0.0350	18.4	0.171	0.152	
1,1,1,2-Tetrachloroethane	4.90	0.0400	0.0350	33.7	0.275	0.240	
m-/p-Xylenes	4.40	0.0405	0.0350	19.1	0.176	0.152	

Sample Name : 5ppbv TO15 LCS

Sample Info : 125mL load; Can #0738; GCMSPrepPg770

Data File : X1902829.D

Dilution : 1

Pressurization Factor : 1.000

Acquisition Date : 2019-08-05 10:15:00

Instrument Method : TO15-SCN.M

Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
o-Xylene	4.25	0.0400	0.0350	18.5	0.174	0.152	
Styrene	4.66	0.0390	0.0350	19.8	0.166	0.149	
Bromoform	6.09	0.0402	0.0350	62.9	0.415	0.362	
1,1,2,2-Tetrachloroethane	4.45	0.0400	0.0350	30.5	0.275	0.240	
4-Ethyltoluene	4.56	0.0403	0.0350	22.4	0.198	0.172	
2-Chlorotoluene	4.29	0.0403	0.0350	22.2	0.209	0.181	
1,3,5-Trimethylbenzene	4.22	0.0401	0.0350	20.7	0.197	0.172	
1,2,4-Trimethylbenzene	4.26	0.0398	0.0350	20.9	0.195	0.172	
1,3-Dichlorobenzene	5.97	0.0404	0.0350	35.9	0.243	0.210	
1,4-Dichlorobenzene	6.37	0.0401	0.0350	38.3	0.241	0.210	
Benzyl chloride	5.87	0.0399	0.0350	30.4	0.207	0.181	
1,2-Dichlorobenzene	5.62	0.0408	0.0350	33.8	0.245	0.210	
1,2,4-Trichlorobenzene	6.67	0.0406	0.0350	49.5	0.301	0.260	
Hexachlorobutadiene	4.15	0.0401	0.0350	44.3	0.427	0.373	
Naphthalene	5.69	0.0414	0.0350	29.8	0.217	0.183	
1-Bromopropane	4.91	0.0395	0.0350	24.7	0.199	0.176	m
1-Octene	4.39	0.0391	0.0350	20.2	0.180	0.161	
n-Octane	4.28	0.0401	0.0350	20.0	0.187	0.164	
Isopropylbenzene	4.48	0.0406	0.0350	22.0	0.200	0.172	
n-Propylbenzene	4.57	0.0407	0.0350	22.5	0.200	0.172	

Internal Standards	Response	Retention Time (min)	Concentration (PPBV)	Flag *
Bromochloromethane (IS)	953,581	11.93	5.00	PASS
1,4-Difluorobenzene (IS)	3,660,280	13.69	5.04	PASS
Chlorobenzene-d5 (IS)	2,986,682	17.87	4.80	PASS

(ND) = Not Detected

* (J) = Below Calibration Range, (E) = Above Calibration Range, (m) = Manual Integration

IS Acceptance Criteria: RT +/- 20 sec, Response +/- 40%

Canister and Controller Data Sheet

Enthalpy Analytical, LLC

Client Name: Tetra Tech, Inc.

Client #: Able Contracting; Richland, SC

Enthalpy Job #: 0819-013

Canister Data

Canister ID	Sample ID	Canister Pressure Pre-Sample (mmHg)	Canister Pressure Post-Sample (mmHg)	Canister Pressure Final (mmHg)	Canister Pressurization Factor
0800	X1902083	-764	-110	359	1.720
0796	X1902073	-764	-152	302	1.746
0820	X1902100	-764	-53	462	1.727

Date Prepared: 8/2/19

Date Received: 8/5/19

Prepared By: BWR

Received By: DSM

Narrative Summary

Enthalpy Analytical Narrative Summary

Company	Tetra Tech, Inc.
Analyst	DDC
Parameters	OSHA Method 61

Client #	Able Contracting - Richland, SC
Job #	0819-013
# Samples	6, 2 Blanks

Custody	<p>David Myers received the samples on 8/5/19 after being relinquished by Tetra Tech, Inc. The samples were received at 0.8 °C and in good condition.</p> <p>Prior to, during, and after analysis, the sample was kept under lock with access only to authorized personnel by Enthalpy Analytical, LLC.</p>
Analysis	<p>The samples were analyzed for phosgene using the analytical procedures in OSHA Method 61.</p> <p>Each sample was collected on two SKC XAD-2 (Cat# 226-117) tubes. Each tube was desorbed whole as the front half (FH) and back half (BH). All fractions were desorbed using 1 mL of OSHA M61 Phosgene reagent solution and shaken at 450 rev/min for 60 minutes. The tubes were desorbed on 8/5/19.</p> <p>The GC “Lolita” was used for this analysis.</p>
Calibration	<p>The calibration curve is included in the Raw Data section of this report and referenced in the Analysis Method column on the Detailed Results page.</p> <p>For each calibration curve used, the first page of the curve contains all method specific parameters (i.e., curve type, origin, weight, etc.) used to quantify the samples. The calibration curve section also includes a table with the Retention Time (RetTime), Level (Lvl), Amount (corresponding units), Area, Response Factor (Amt/Area) and the analyte Name. The calibration table is used to identify (by retention time) and quantify each target compound.</p>
Chromatographic Conditions	A copy of the acquisition method LOLITA0273_PHOSGENE.M is included near the end of this PDF report.
QC Notes	A Laboratory Duplicate (LD) was analyzed using an aliquot of sample ACF-AS-Upwind-Night-FH-HMP-Tube 8315500295 and yielded a percent difference of 0.6% as measured. With the LB correction (see below) this increased to 7.0%.



Enthalpy Analytical Narrative Summary (continued)

QC Notes (continued)

Phosgene was not identified at concentrations greater than the detection limit in the analysis of laboratory reagent blank though phosgene was identified at levels greater than the LOQ in the analyses of the client blanks.

Per the client's request the LB has been used to blank correct all the sample results. We have averaged the results of the two LB tubes, and subtracted that catch weight value from each fractions' catch weight value (any value below the MDL was increased to the MDL).

Reporting Notes

The samples have results reported on a concentration basis (ug/m^3) per client request, using air sampling volumes the client provided on the Chain of Custody. The client's FB and AB (blanks) had no sampling volume and so are reported as catch weight (ug).

The results presented in this report are representative of the samples as provided to the laboratory.

Enthalpy Analytical Narrative Summary

Company	Tetra Tech, Inc.
Analyst	TDD
Parameters	EPA Method TO-15

Client #	Able Contracting
Job #	0819-013
# Samples	4 Canisters

Custody

David Myers received the samples on 8/5/19 after being relinquished by Tetra Tech, Inc. The samples were received at ambient temperature and in good condition.

Prior to, during, and after analysis, the samples were kept under lock with access only to authorized personnel by Enthalpy Analytical, LLC.

Analysis

The samples were analyzed for the TO-15 target compound list using the analytical procedures in EPA Method TO-15, *Determination of Volatile Organic Compounds (VOCs) In Air Collected In Specially-Prepared Canisters And Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS)*.

Upon receipt, the canister pressures were measured and recorded. The canisters were then pressurized with UHP nitrogen and a dilution ratio was calculated for each canister. Sample **ACF-AS-Blank** has been assigned a dilution factor of 1. Refer to the Canister and Controller Data Sheet on page 25 of this PDF report for the can pressurization factors.

The Agilent Technologies Model 6890N, Gas Chromatograph "Xavier" (S/N US10721018) equipped with a 5975C VL Mass Selective Detector (S/N US71215962) and a Restek Rtx-624 Sil MS, 60 m x 0.32 mm x 1.8 µm capillary column (S/N 1555499) for these analyses.

Calibration

The BFB tune analyses associated with the initial and continuing calibrations met method acceptance criteria. The initial calibration (**X051419A-TO15**) met the 30% RSD criteria. The initial calibration verification met the 70-130% recovery criteria. The continuing calibration met the 30% difference criteria. Calibration data has not been provided in this level 2 report, however is available upon request.

Chromatographic Conditions

A copy of the acquisition method (**TO15-SCN2.M**) has not been included in this report but is available upon request.



Enthalpy Analytical Narrative Summary (continued)

QC Notes

All internal standard area responses and retention time criteria were met for these analyses.

The laboratory humid blank associated with the analysis of these samples did not contain any of the target analytes at a concentration greater than 3-times the MDL value.

The Laboratory Control Sample (LCS) met the 70-130% recovery criteria with an allowed exception.

The Laboratory Duplicate (LD) analyzed with this sample set met 25% difference acceptance criteria.

The samples were analyzed within the 30-day holding time required by the method.

Reporting Notes

These analyses met the requirements of the TNI Standard. Any deviations from the requirements of the reference method or TNI Standard have been stated above.

The results presented in this report are representative of the samples as provided to the laboratory.

General Reporting Notes

The following are general reporting notes that are applicable to all Enthalpy Analytical, LLC data reports, unless specifically noted otherwise.

- Any analysis which refers to the method as “**Type**” represents a planned deviation from the reference method. For instance a Hydrogen Sulfide assay from a Tedlar bag would be labeled as “EPA Method 16-Type” because Tedlar bags are not mentioned as one of the collection options in EPA Method 16.
- The acronym **MDL** represents the Minimum Detection Limit. Below this value the laboratory cannot determine the presence of the analyte of interest reliably.
- The acronym **LOQ** represents the Limit of Quantification. Below this value the laboratory cannot quantitate the analyte of interest within the criteria of the method.
- The acronym **ND** following a value indicates a non-detect or analytical result below the MDL.
- The letter **J** in the Qualifier or Flag column in the results indicates that the value is between the MDL and the LOQ. The laboratory can positively identify the analyte of interest as present, but the value should be considered an estimate.
- The letter **E** in the Qualifier or Flag column indicates an analytical result exceeding 100% of the highest calibration point. The associated value should be considered as an estimate.
- Sample results are presented ‘as measured’ for single injection methodologies, or an average value if multiple injections are made. If all injections are below the MDL, the sample is considered non-detect and the ND value is presented. If one, but not all, are below the MDL, the MDL value is used for any injections that are below the MDL. For example, if the MDL is 0.500 and LOQ is 1.00, and the instrument measures 0.355, 0.620, and 0.442 - the result reported is the average of 0.500, 0.620, and 0.500 - - - i.e. 0.540 with a J flag.
- When a spike recovery (Bag Spike, Collocated Spike Train, or liquid matrix spike) is being calculated, the native (unspiked) sample result is used in the calculations, as long as the value is above the MDL. If a sample is ND, then 0 is used as the native amount (not the MDL value).
- The acronym **DF** represents Dilution Factor. This number represents dilution of the sample during the preparation and/or analysis process. The analytical result taken from a laboratory instrument is multiplied by the DF to determine the final undiluted sample results.
- The addition of **MS** to the Sample ID represents a Matrix Spike. An aliquot of an actual sample is spiked with a known amount of analyte so that a percent recovery value can be determined. The MS analysis indicates what effect the sample matrix may have on the target analyte, i.e. whether or not anything in the sample matrix interferes with the analysis of the analyte(s).



General Reporting Notes

(continued)

- The addition of **MSD** to the Sample ID represents a Matrix Spike Duplicate. Prepared in the same manner as a MS, the use of duplicate matrix spikes allows further confirmation of laboratory quality by showing the consistency of results gained by performing the same steps multiple times.
- The addition of **LD** to the Sample ID represents a Laboratory Duplicate. The analyst prepares an additional aliquot of sample for testing and the results of the duplicate analysis are compared to the initial result. The result should have a difference value of within 10% of the initial result (if the results of the original analysis are greater than the LOQ).
- The addition of **AD** to the Sample ID represents an Alternate Dilution. The analyst prepares an additional aliquot at a different dilution factor (usually double the initial factor). This analysis helps confirm that no additional compound is present and coeluting or sharing absorbance with the analyte of interest, as they would have a different response/absorbance than the analyte of interest.
- The Sample ID **LCS** represents a Laboratory Control Sample. Clean matrix, similar to the client sample matrix, prepared and analyzed by the laboratory using the same reagents, spiking standards and procedures used for the client samples. The LCS is used to assess the control of the laboratory's analytical system. Whenever spikes are prepared for our client projects, two spikes are retained as LCSs. The LCSs are labeled with the associated project number and kept in-house at the appropriate temperature conditions. When the project samples are received for analysis, the LCSs are analyzed to confirm that the analyte could be recovered from the media, separate from the samples which were used on the project and which may have been affected by source matrix, sample collection, and/or sample transport.
- **Significant Figures:** Where the reported value is much greater than unity (1.00) in the units expressed, the number is rounded to a whole number of units, rather than to 3 significant figures. For example, a value of 10,456.45 ug catch is rounded to 10,456 ug. There are five significant digits displayed, but no confidence should be placed on more than two significant digits. In the case of small numbers, generally 3 significant figures are presented, but still only 2 should be used with confidence. Many neat materials are only certified to 3 digits, and as the mathematically correct final result is always 1 digit less than all its pre-cursors - 2 significant figures are what are most defensible.
- **Manual Integration:** The data systems used for processing will flag manually integrated peaks with an "M". There are several reasons a peak may be manually integrated. These reasons will be identified by the following two letter designations on sample chromatograms, if provided in the report. The peak was *not integrated* by the software "**NI**", the peak was *integrated incorrectly* by the software "**II**" or the *wrong peak* was integrated by the software "**WP**". These codes will accompany the analyst's manual integration stamp placed next to the compound name on the chromatogram.

Sample Custody



Chain of Custody Record

Page 1 of 1

Special Handling:

- ☐ Standard Turn Around Time
- ☒ Rush Turn Around Time -- Date Needed ASAP
- All TATs Subject to Approval by Enthalpy Analytical
- All Bag/Can Samples Disposed of 1 Month from Receipt
- All Other Samples Disposed of 4 Months from Receipt

Sample(s) Collected by: John Smyler
 Client Name: Tetra Tech
 Project Manager: Jessica Vickers

Project Number: _____
 Site Name: Able Cardiology Fr
 Location: Ridgeland, SC

PO#: _____
 Telephone#: _____
 Email: Jessica.Vickers@enthalpy.com

For spiked or duplicate samples: please provide sample volumes for recovery calculations. For Particulates: please provide tare weights and/or condensed water volumes.

Special Instructions:

A=Air 1=H2SO4 2=NaOH W=Water O=Other
 X=XAD C=Charcoal SG=Silica Gel

G=Grab C=Composite Q=Quality Control O=Other

						Sample Containers							Analyses:					Notes:
Sample ID	Date	Time	Sample Volume	Type	Matrix	# of VOA Vials	# of Glass	# of Plastic	# of Bags	# of Canisters	# of Tubes	# Other						
ACF-AS-SMOKE-NIGHT	8/2/19	2010	556.8	G	X						2		Phosgene					8315500289
ACF-AS-RES-NIGHT	8/2/19	2030	623.8	G	X						2							8315500290
ACF-AS-UPWIND-NIGHT	8/2/19	2100	520.8	G	X						2							8315500291
ACF-AS-SMOKE-DAY	8/3/19	0835	542.4	G	X						2							8315500292
ACF-AS-RES-DAY	8/3/19	0825	535.2	G	X						2							8315500293
ACF-AS-UPWIND-DAY	8/3/19	0855	544.8	G	X						2							8315500294
ACF-AS-FB	-	-	-	Q	X						2							8315500313
ACF-AS-LB	-	-	-	Q	X						2							8315500311
ACF-AS-RES-24HRVOC	8/2/19	2030	-30/-3"	G	A					1								Canister 0800
ACF-AS-SMOKE-24HRVOC	8/2/19	2010	-27/-2"	G	A					1								Canister 0820
ACF-AS-UPWIND-24HRVOC	8/2/19	2100	-32/-5"	G	A					1								Canister 0796
ACF-AS-BLANK	-	-	-	Q	A					1								Canister 0805

Relinquished By:	Date:	Received By:	Date:	Time:	Sample Condition Upon Receipt:
John Smyler	8/5/19	Don Myn	8-5-19	945	<input type="checkbox"/> Iced <input type="checkbox"/> Ambient <input type="checkbox"/> °C _____
					<input type="checkbox"/> Iced <input type="checkbox"/> Ambient <input type="checkbox"/> °C _____
					<input type="checkbox"/> Iced <input type="checkbox"/> Ambient <input type="checkbox"/> °C _____

Good Condition Cans received at ambient temp. Tubes received at 0.8 °C Raytek5 DSM 08-05-19

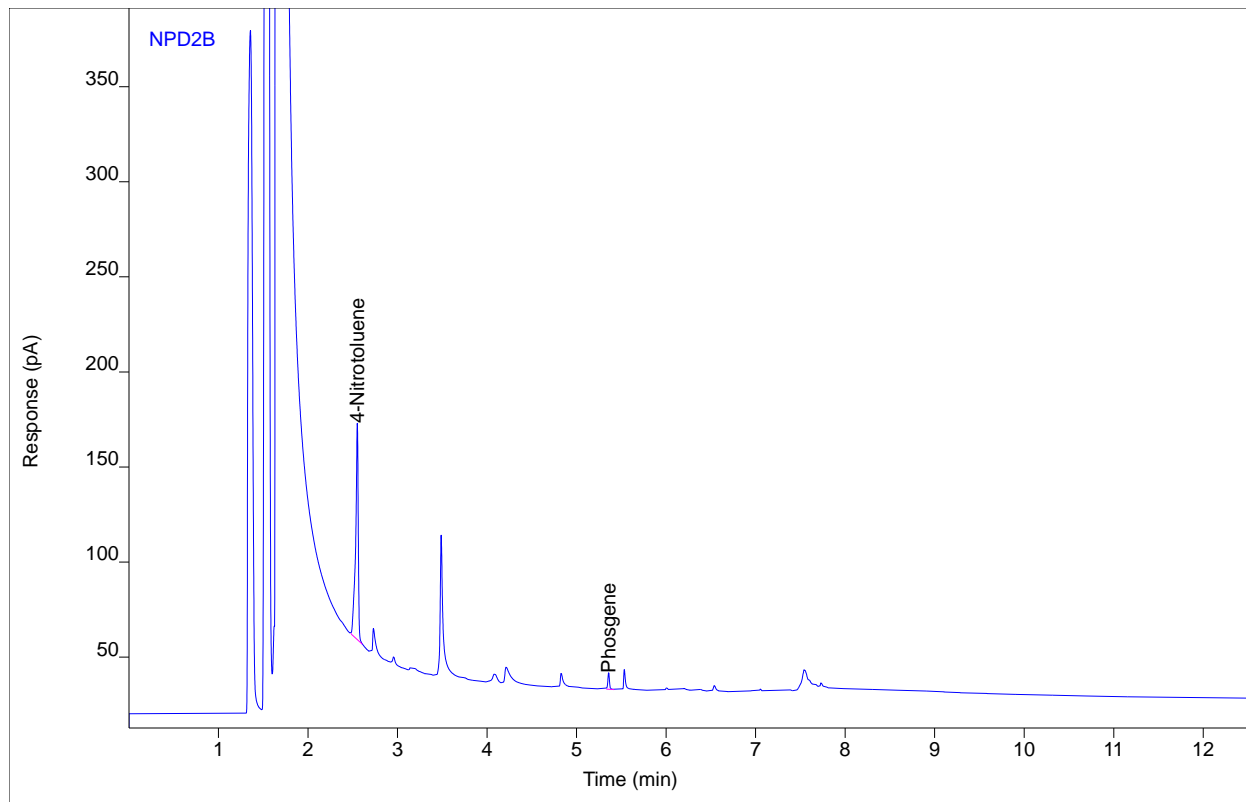
Raw Data

Chromatogram Report

Sample Name 0819-013.S-N.FH
Sequence Name LOLITA0274 ver.5
Inj Data File 017B0301.D
File Location GC/2019/Lolita/Quarter 3
Injection Date 8/5/2019 4:38 PM
File Modified 8/6/2019 11:30 AM
Instrument Lolita
Operator Daniel Clayton

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 17
Injection Volume 1
Injection 1 of 1
Acquisition Method LOLITA0273_PHOSGENE.M
Analysis Method LOLITA0273_PHOSGENE_R.M
Method Modified 7/31/2019 5:08 PM
Printed 8/6/2019 11:33 AM



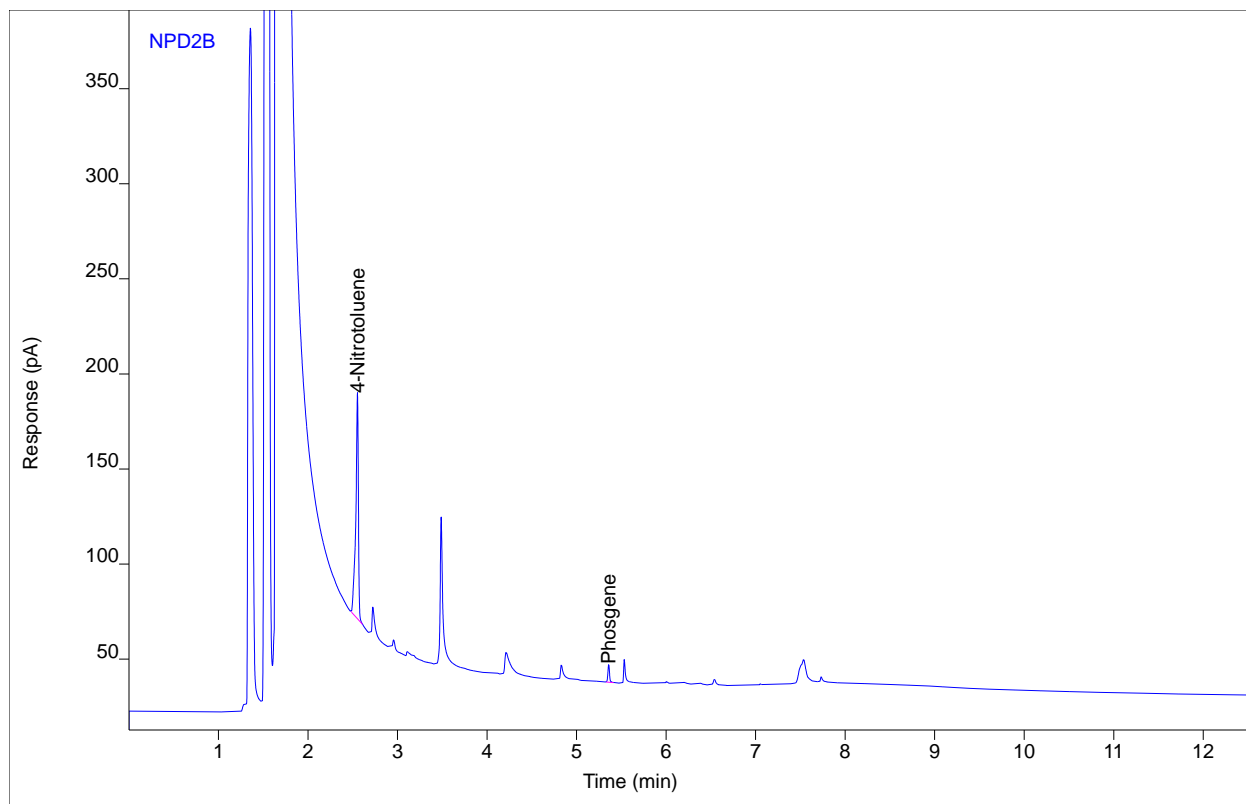
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
4-Nitrotoluene	BB	2.55	232.073	113.754	239.748	1	239.748	ug/mL
Phosgene	BB	5.36	11.0615	8.76326	2.75963	1	2.75963	ug/mL

Chromatogram Report

Sample Name 0819-013.S-N.BH
Sequence Name LOLITA0274 ver.5
Inj Data File 018B0401.D
File Location GC/2019/Lolita/Quarter 3
Injection Date 8/5/2019 4:53 PM
File Modified 8/6/2019 11:30 AM
Instrument Lolita
Operator Daniel Clayton

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 18
Injection Volume 1
Injection 1 of 1
Acquisition Method LOLITA0273_PHOSGENE.M
Analysis Method LOLITA0273_PHOSGENE_R.M
Method Modified 7/31/2019 5:08 PM
Printed 8/6/2019 11:33 AM



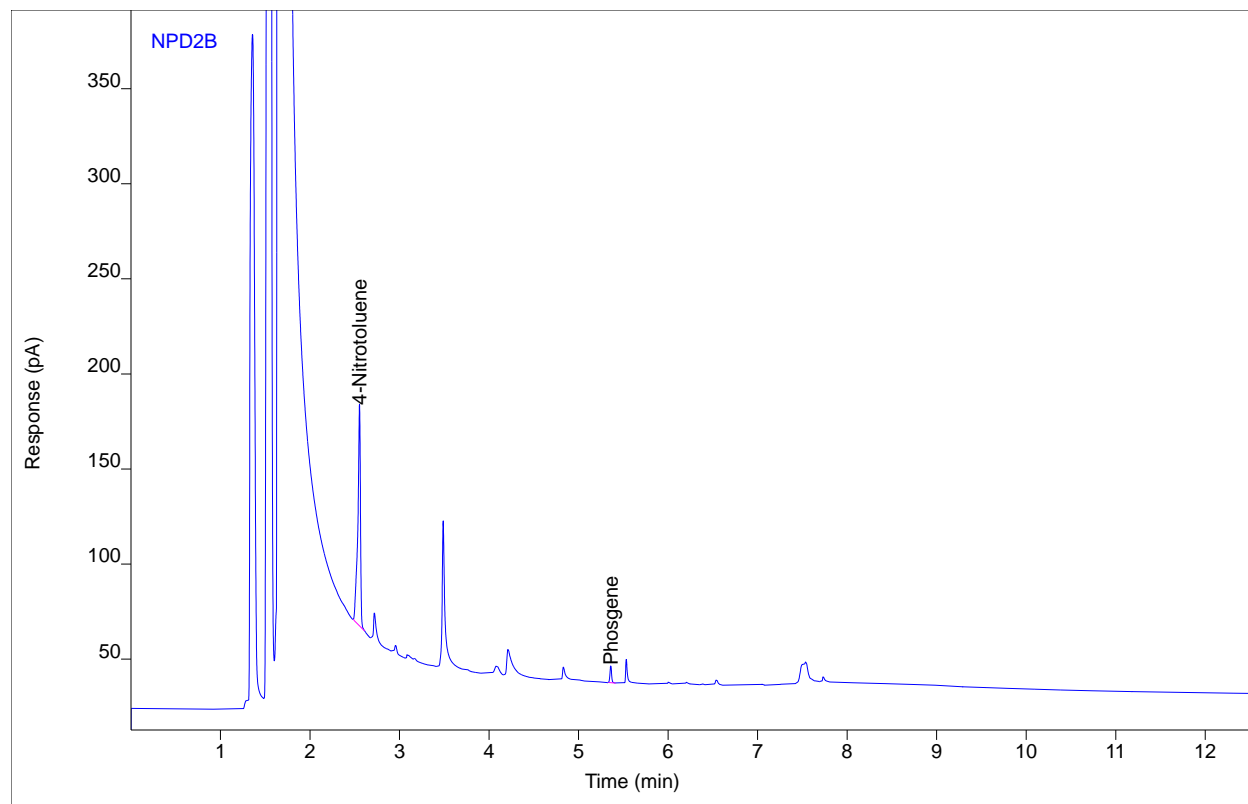
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
4-Nitrotoluene	BB	2.55	239.988	118.804	239.748	1	239.748	ug/mL
Phosgene	VB	5.36	12.0015	9.53979	2.89387	1	2.89387	ug/mL

Chromatogram Report

Sample Name 0819-013.R-N.FH
Sequence Name LOLITA0274 ver.5
Inj Data File 019B0501.D
File Location GC/2019/Lolita/Quarter 3
Injection Date 8/5/2019 5:08 PM
File Modified 8/6/2019 11:30 AM
Instrument Lolita
Operator Daniel Clayton

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 19
Injection Volume 1
Injection 1 of 1
Acquisition Method LOLITA0273_PHOSGENE.M
Analysis Method LOLITA0273_PHOSGENE_R.M
Method Modified 7/31/2019 5:08 PM
Printed 8/6/2019 11:33 AM



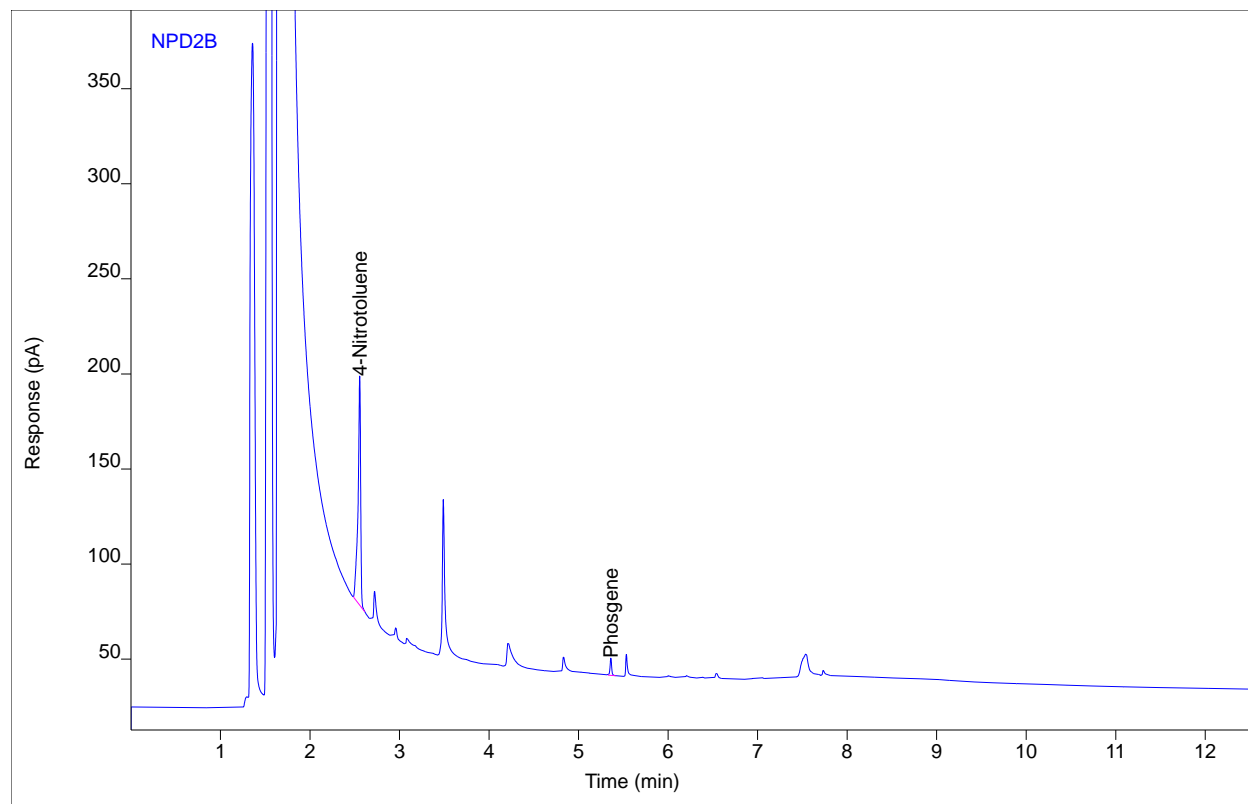
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
4-Nitrotoluene	BB	2.55	238.475	116.596	239.748	1	239.748	ug/mL
Phosgene	BB	5.36	11.5272	9.16080	2.79816	1	2.79816	ug/mL

Chromatogram Report

Sample Name 0819-013.R-N.BH
Sequence Name LOLITA0274 ver.5
Inj Data File 020B0601.D
File Location GC/2019/Lolita/Quarter 3
Injection Date 8/5/2019 5:23 PM
File Modified 8/6/2019 11:30 AM
Instrument Lolita
Operator Daniel Clayton

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 20
Injection Volume 1
Injection 1 of 1
Acquisition Method LOLITA0273_PHOSGENE.M
Analysis Method LOLITA0273_PHOSGENE_R.M
Method Modified 7/31/2019 5:08 PM
Printed 8/6/2019 11:33 AM



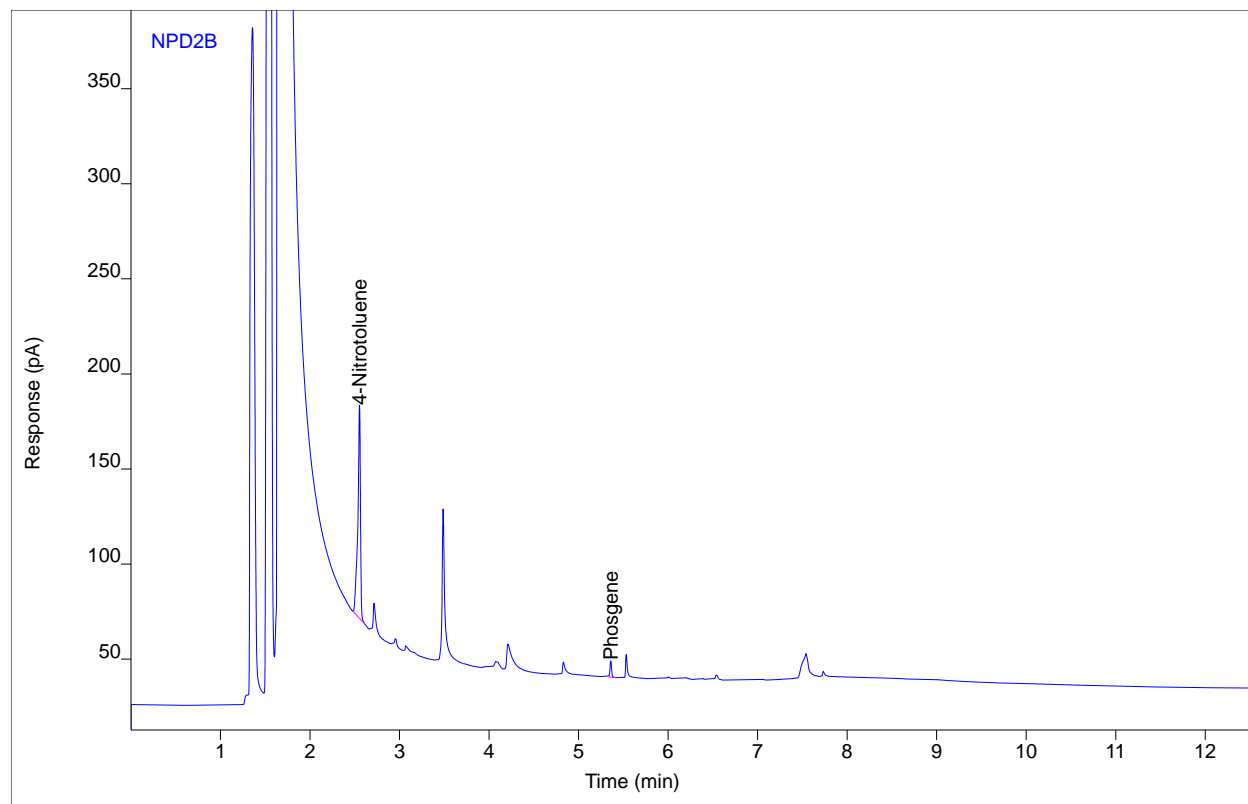
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
4-Nitrotoluene	BB	2.56	244.699	120.601	239.748	1	239.748	ug/mL
Phosgene	VB	5.36	11.3714	9.14092	2.69134	1	2.69134	ug/mL

Chromatogram Report

Sample Name 0819-013.U-N.FH
Sequence Name LOLITA0274 ver.5
Inj Data File 021B0701.D
File Location GC/2019/Lolita/Quarter 3
Injection Date 8/5/2019 5:38 PM
File Modified 8/6/2019 11:30 AM
Instrument Lolita
Operator Daniel Clayton

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 21
Injection Volume 1
Injection 1 of 1
Acquisition Method LOLITA0273_PHOSGENE.M
Analysis Method LOLITA0273_PHOSGENE_R.M
Method Modified 7/31/2019 5:08 PM
Printed 8/6/2019 11:33 AM



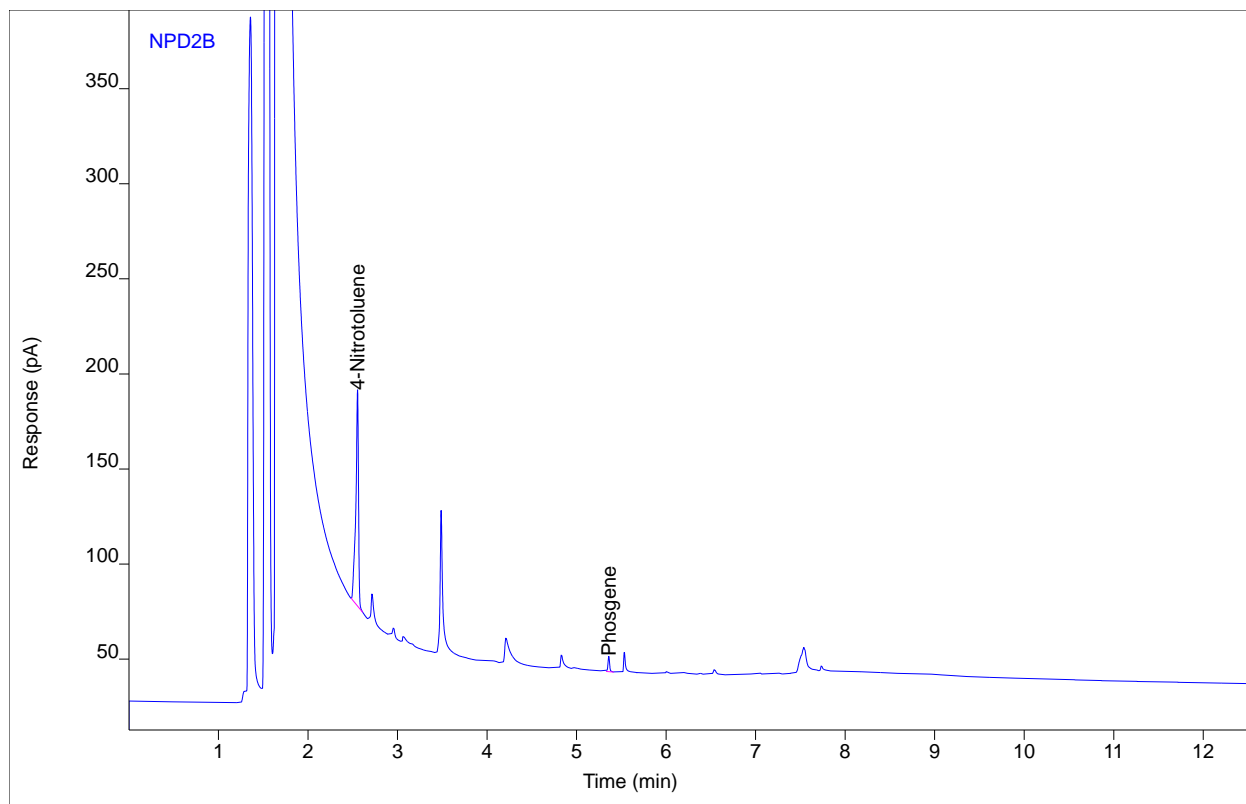
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
4-Nitrotoluene	BB	2.55	228.945	112.339	239.748	1	239.748	ug/mL
Phosgene	BB	5.36	11.0834	8.89495	2.80240	1	2.80240	ug/mL

Chromatogram Report

Sample Name 0819-013.U-N.BH
Sequence Name LOLITA0274 ver.5
Inj Data File 023B0901.D
File Location GC/2019/Lolita/Quarter 3
Injection Date 8/5/2019 6:08 PM
File Modified 8/6/2019 11:30 AM
Instrument Lolita
Operator Daniel Clayton

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 23
Injection Volume 1
Injection 1 of 1
Acquisition Method LOLITA0273_PHOSGENE.M
Analysis Method LOLITA0273_PHOSGENE_R.M
Method Modified 7/31/2019 5:08 PM
Printed 8/6/2019 11:33 AM



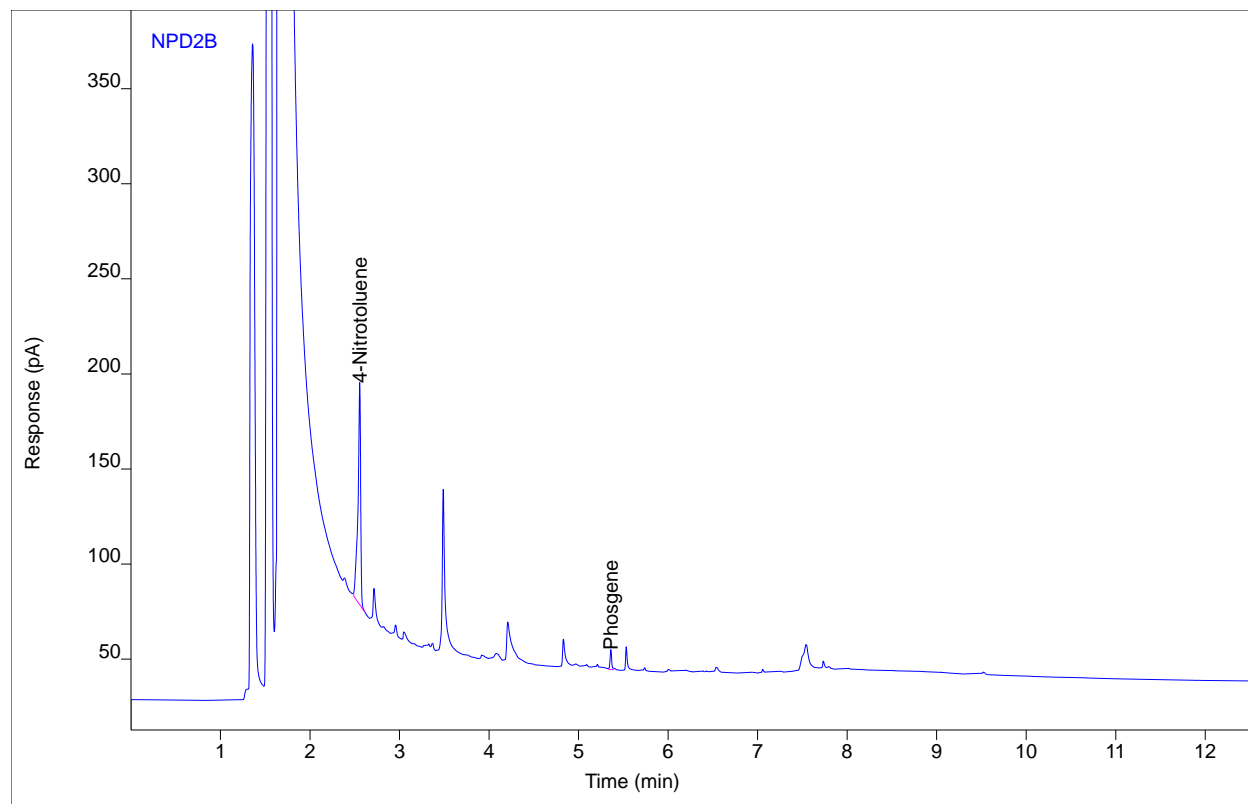
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
4-Nitrotoluene	BB	2.55	237.662	113.760	239.748	1	239.748	ug/mL
Phosgene	VB	5.36	10.4584	8.16962	2.55019	1	2.55019	ug/mL

Chromatogram Report

Sample Name 0819-013.S-D.FH
Sequence Name LOLITA0274 ver.5
Inj Data File 024B1001.D
File Location GC/2019/Lolita/Quarter 3
Injection Date 8/5/2019 6:23 PM
File Modified 8/6/2019 11:30 AM
Instrument Lolita
Operator Daniel Clayton

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 24
Injection Volume 1
Injection 1 of 1
Acquisition Method LOLITA0273_PHOSGENE.M
Analysis Method LOLITA0273_PHOSGENE_R.M
Method Modified 7/31/2019 5:08 PM
Printed 8/6/2019 11:33 AM



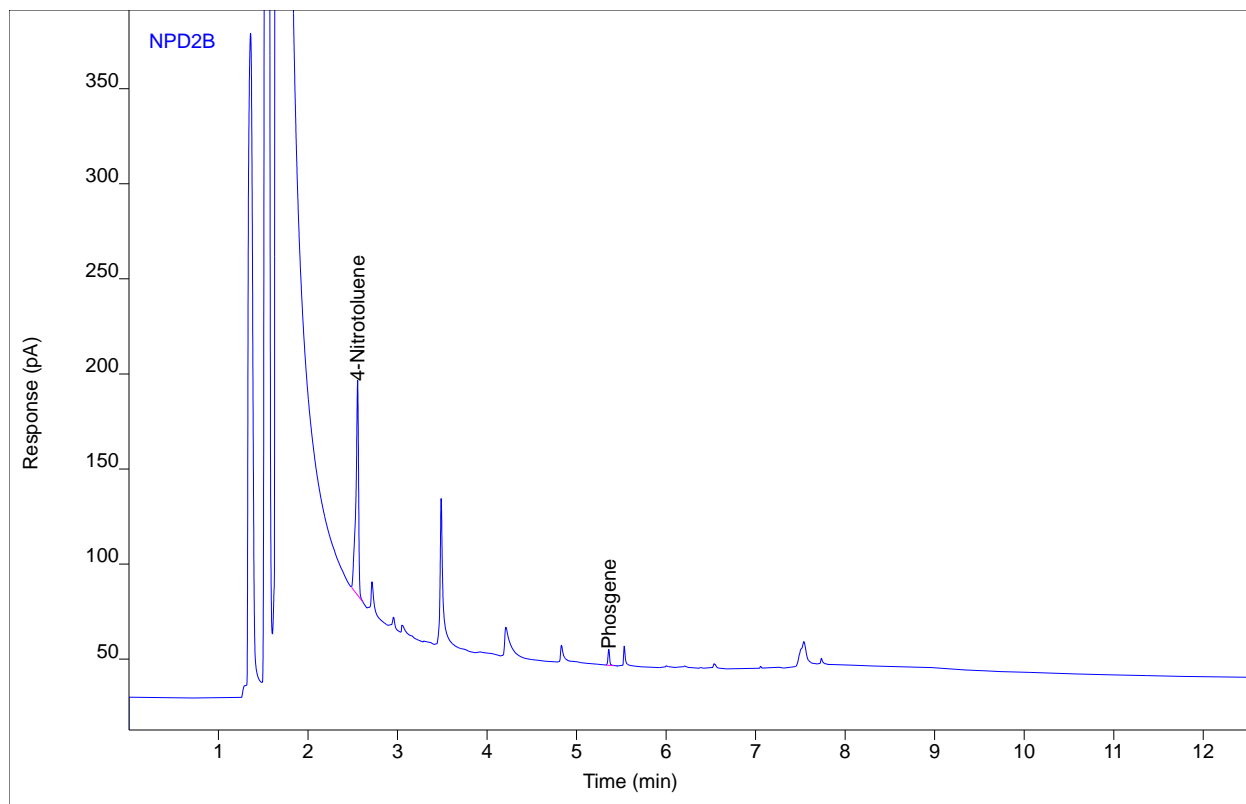
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
4-Nitrotoluene	BB	2.56	242.257	116.799	239.748	1	239.748	ug/mL
Phosgene	VV	5.36	12.8541	10.5442	3.06854	1	3.06854	ug/mL

Chromatogram Report

Sample Name 0819-013.S-D.BH
Sequence Name LOLITA0274 ver.5
Inj Data File 025B1101.D
File Location GC/2019/Lolita/Quarter 3
Injection Date 8/5/2019 6:38 PM
File Modified 8/6/2019 11:30 AM
Instrument Lolita
Operator Daniel Clayton

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 25
Injection Volume 1
Injection 1 of 1
Acquisition Method LOLITA0273_PHOSGENE.M
Analysis Method LOLITA0273_PHOSGENE_R.M
Method Modified 7/31/2019 5:08 PM
Printed 8/6/2019 11:33 AM



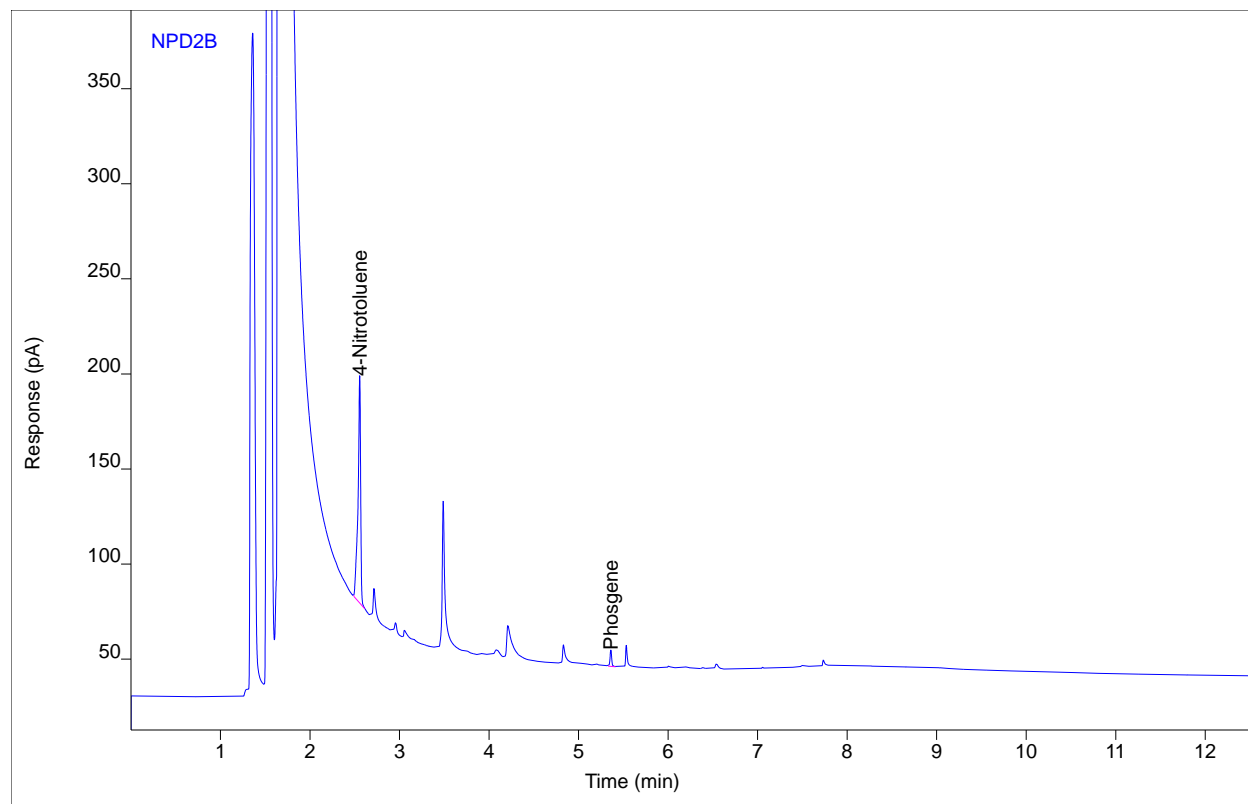
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
4-Nitrotoluene	BB	2.55	235.421	112.945	239.748	1	239.748	ug/mL
Phosgene	VB	5.36	10.8796	8.55639	2.67660	1	2.67660	ug/mL

Chromatogram Report

Sample Name 0819-013.R-D.FH
Sequence Name LOLITA0274 ver.5
Inj Data File 026B1301.D
File Location GC/2019/Lolita/Quarter 3
Injection Date 8/5/2019 7:09 PM
File Modified 8/6/2019 11:30 AM
Instrument Lolita
Operator Daniel Clayton

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 26
Injection Volume 1
Injection 1 of 1
Acquisition Method LOLITA0273_PHOSGENE.M
Analysis Method LOLITA0273_PHOSGENE_R.M
Method Modified 7/31/2019 5:08 PM
Printed 8/6/2019 11:33 AM



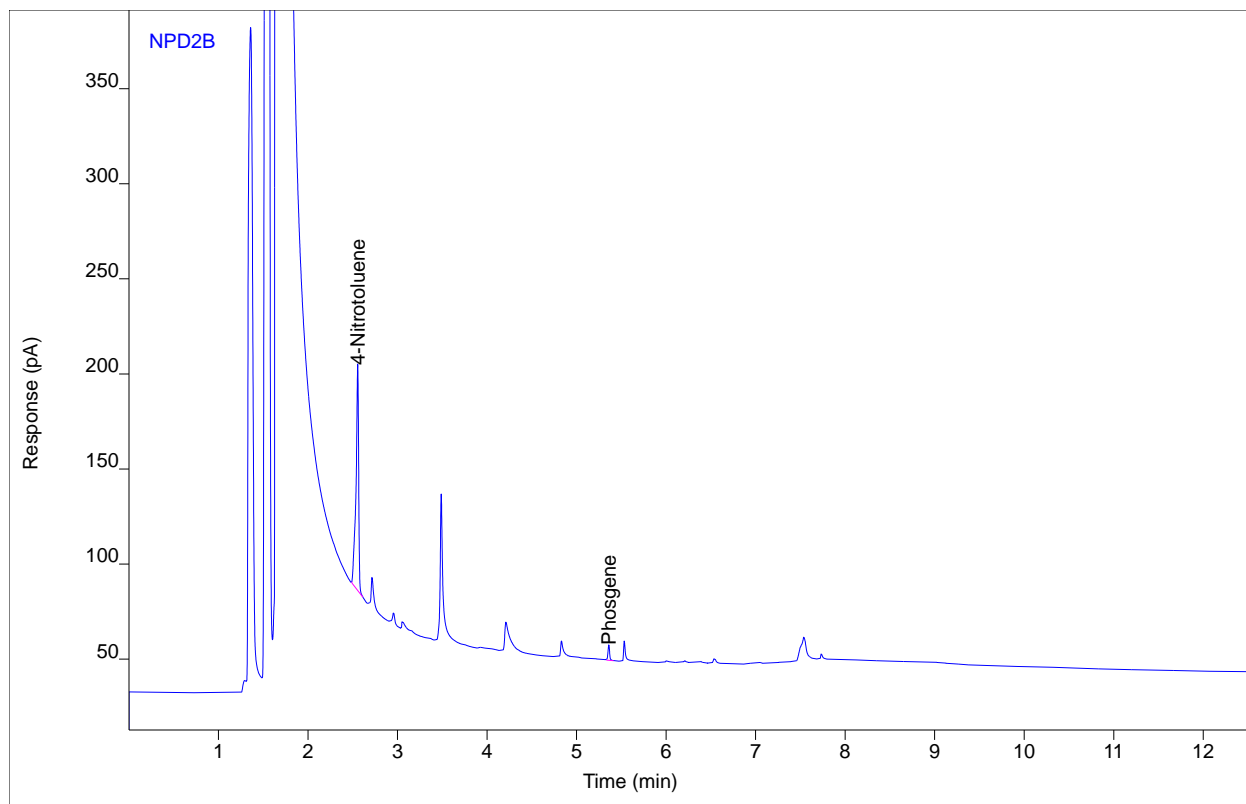
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
4-Nitrotoluene	BB	2.56	242.775	119.548	239.748	1	239.748	ug/mL
Phosgene	VB	5.36	11.2746	8.88456	2.68961	1	2.68961	ug/mL

Chromatogram Report

Sample Name 0819-013.R-D.BH
Sequence Name LOLITA0274 ver.5
Inj Data File 027B1401.D
File Location GC/2019/Lolita/Quarter 3
Injection Date 8/5/2019 7:24 PM
File Modified 8/6/2019 11:30 AM
Instrument Lolita
Operator Daniel Clayton

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 27
Injection Volume 1
Injection 1 of 1
Acquisition Method LOLITA0273_PHOSGENE.M
Analysis Method LOLITA0273_PHOSGENE_R.M
Method Modified 7/31/2019 5:08 PM
Printed 8/6/2019 11:33 AM



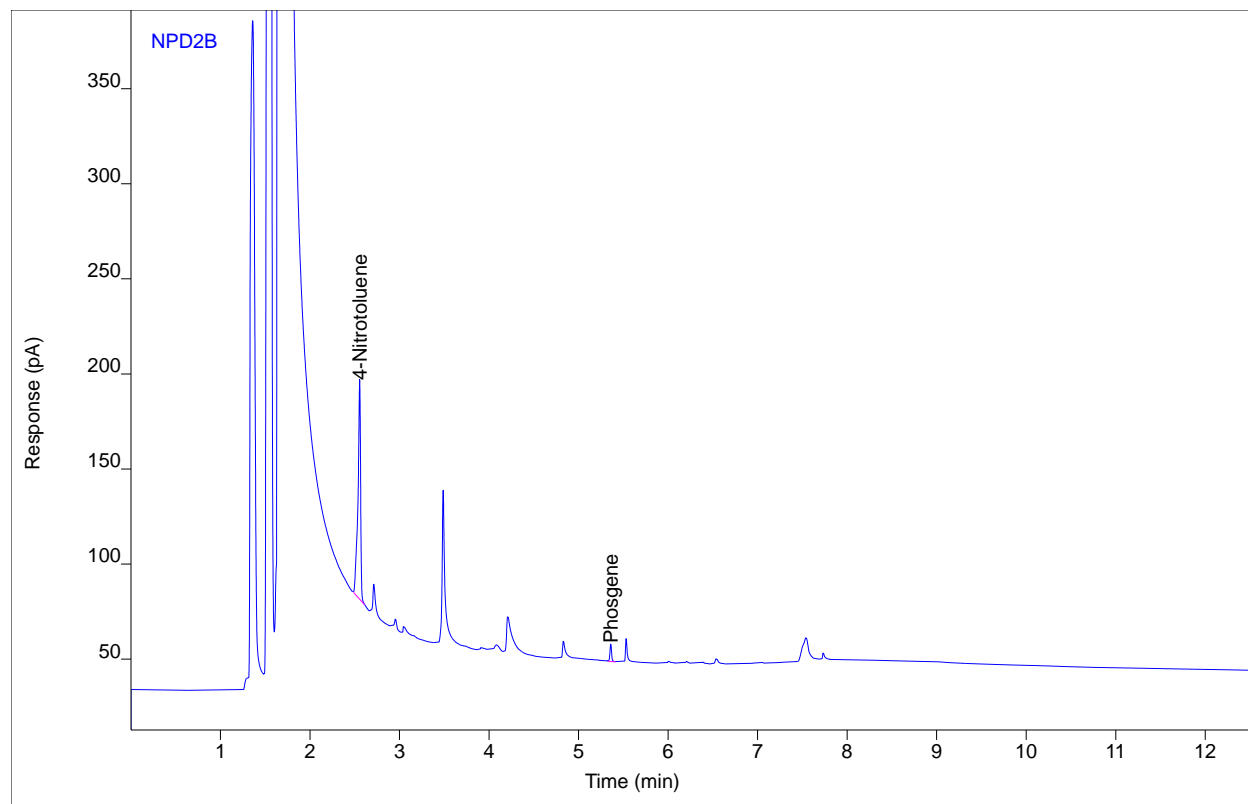
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
4-Nitrotoluene	BB	2.56	246.434	119.151	239.748	1	239.748	ug/mL
Phosgene	BB	5.36	10.4203	8.25036	2.45168	1	2.45168	ug/mL

Chromatogram Report

Sample Name 0819-013.U-D.FH
Sequence Name LOLITA0274 ver.5
Inj Data File 028B1501.D
File Location GC/2019/Lolita/Quarter 3
Injection Date 8/5/2019 7:39 PM
File Modified 8/6/2019 11:30 AM
Instrument Lolita
Operator Daniel Clayton

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 28
Injection Volume 1
Injection 1 of 1
Acquisition Method LOLITA0273_PHOSGENE.M
Analysis Method LOLITA0273_PHOSGENE_R.M
Method Modified 7/31/2019 5:08 PM
Printed 8/6/2019 11:33 AM



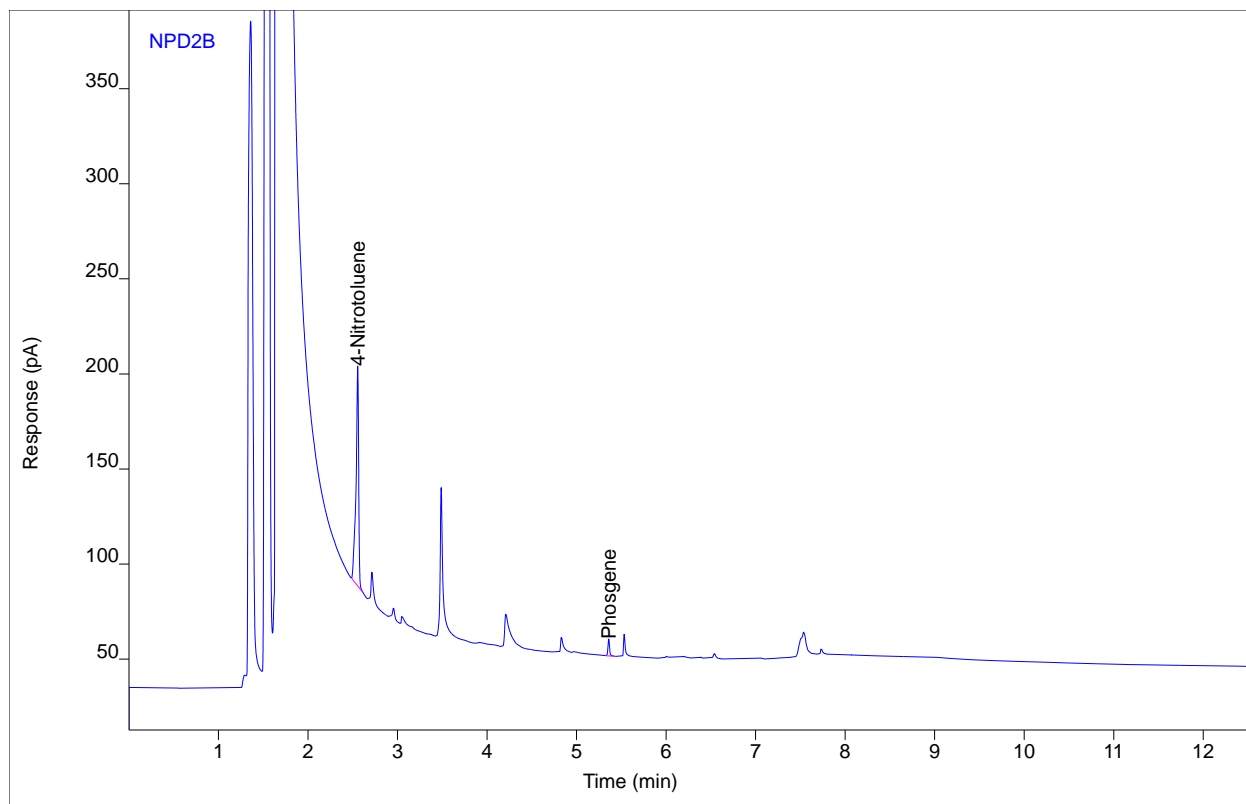
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
4-Nitrotoluene	BB	2.55	238.244	115.510	239.748	1	239.748	ug/mL
Phosgene	VB	5.36	11.8372	9.46701	2.87535	1	2.87535	ug/mL

Chromatogram Report

Sample Name 0819-013.U-D.BH
Sequence Name LOLITA0274 ver.5
Inj Data File 029B1601.D
File Location GC/2019/Lolita/Quarter 3
Injection Date 8/5/2019 7:54 PM
File Modified 8/6/2019 11:30 AM
Instrument Lolita
Operator Daniel Clayton

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 29
Injection Volume 1
Injection 1 of 1
Acquisition Method LOLITA0273_PHOSGENE.M
Analysis Method LOLITA0273_PHOSGENE_R.M
Method Modified 7/31/2019 5:08 PM
Printed 8/6/2019 11:33 AM



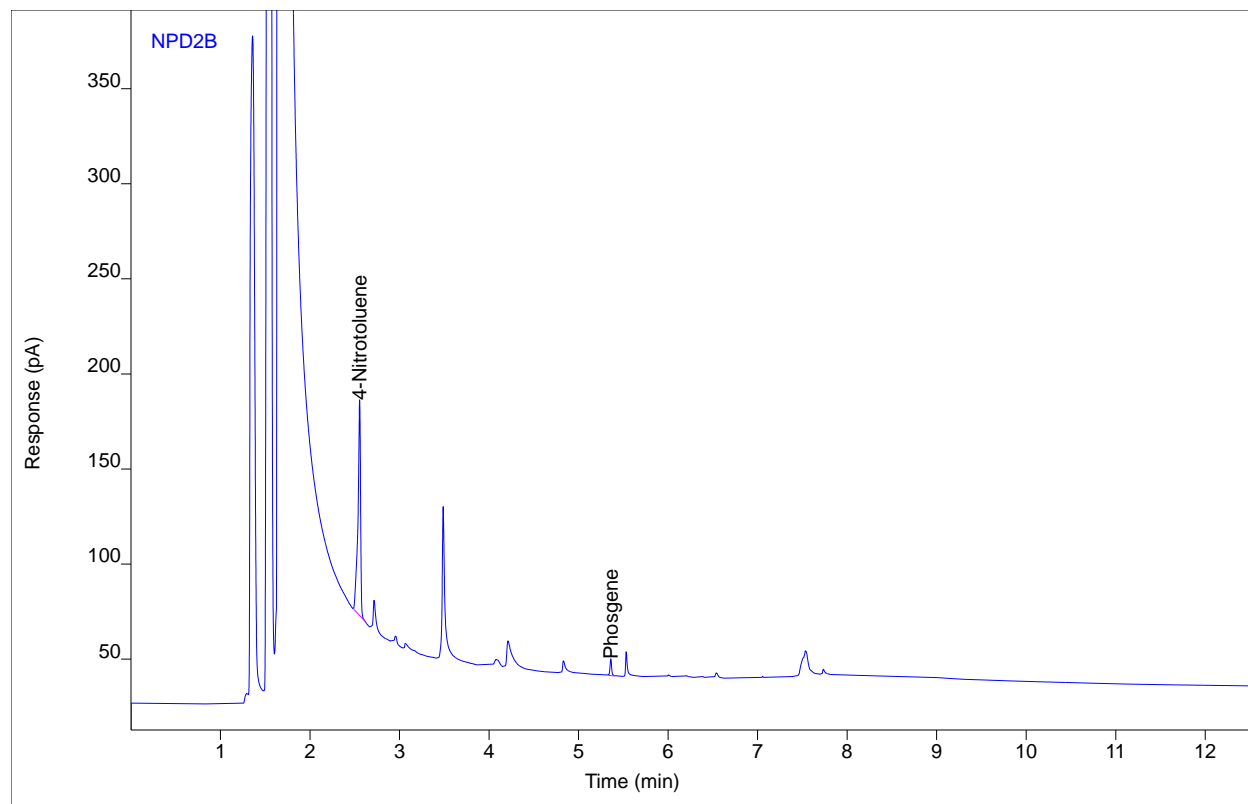
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
4-Nitrotoluene	BB	2.56	238.164	115.930	239.748	1	239.748	ug/mL
Phosgene	VB	5.36	11.3204	8.88982	2.75207	1	2.75207	ug/mL

Chromatogram Report

Sample Name 0819-013.U-N-LD.FH
Sequence Name LOLITA0274 ver.5
Inj Data File 022B0801.D
File Location GC/2019/Lolita/Quarter 3
Injection Date 8/5/2019 5:53 PM
File Modified 8/6/2019 11:30 AM
Instrument Lolita
Operator Daniel Clayton

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 22
Injection Volume 1
Injection 1 of 1
Acquisition Method LOLITA0273_PHOSGENE.M
Analysis Method LOLITA0273_PHOSGENE_R.M
Method Modified 7/31/2019 5:08 PM
Printed 8/6/2019 11:33 AM



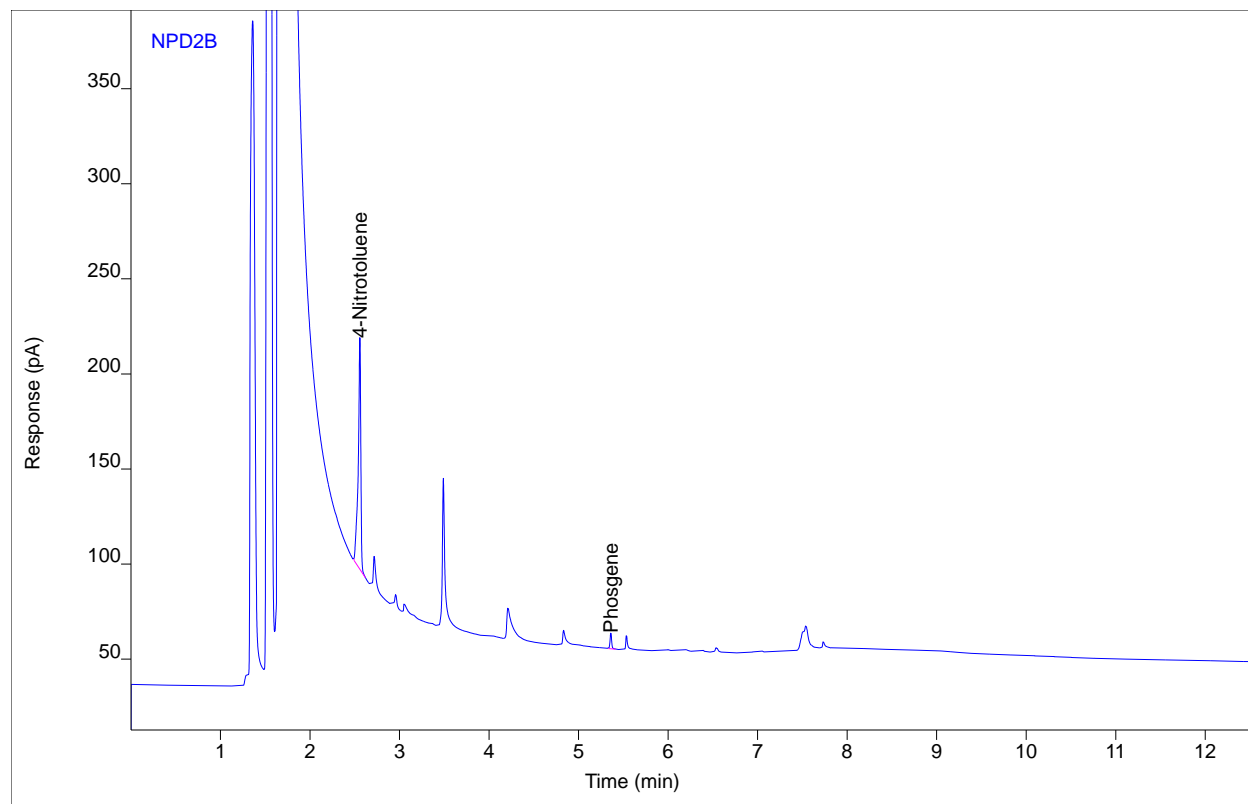
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
4-Nitrotoluene	BB	2.55	230.562	113.388	239.748	1	239.748	ug/mL
Phosgene	VB	5.36	11.0911	8.77664	2.78487	1	2.78487	ug/mL

Chromatogram Report

Sample Name 0819-013.FB-HMP.FH
Sequence Name LOLITA0274 ver.5
Inj Data File 030B1701.D
File Location GC/2019/Lolita/Quarter 3
Injection Date 8/5/2019 8:09 PM
File Modified 8/6/2019 11:30 AM
Instrument Lolita
Operator Daniel Clayton

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 30
Injection Volume 1
Injection 1 of 1
Acquisition Method LOLITA0273_PHOSGENE.M
Analysis Method LOLITA0273_PHOSGENE_R.M
Method Modified 7/31/2019 5:08 PM
Printed 8/6/2019 11:33 AM



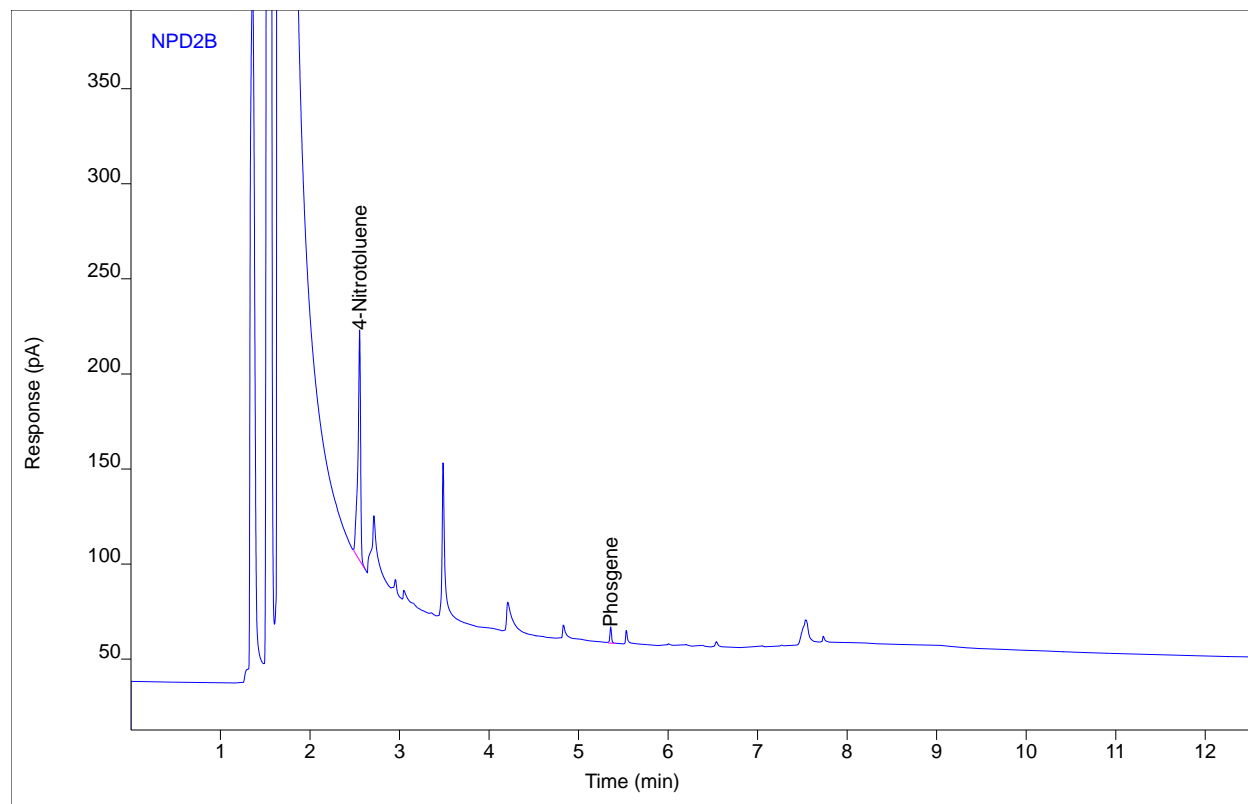
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
4-Nitrotoluene	BB	2.56	245.146	121.835	239.748	1	239.748	ug/mL
Phosgene	BB	5.36	10.7063	8.56376	2.53118	1	2.53118	ug/mL

Chromatogram Report

Sample Name 0819-013.FB-HMP.BH
Sequence Name LOLITA0274 ver.5
Inj Data File 031B1801.D
File Location GC/2019/Lolita/Quarter 3
Injection Date 8/5/2019 8:24 PM
File Modified 8/6/2019 11:30 AM
Instrument Lolita
Operator Daniel Clayton

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 31
Injection Volume 1
Injection 1 of 1
Acquisition Method LOLITA0273_PHOSGENE.M
Analysis Method LOLITA0273_PHOSGENE_R.M
Method Modified 7/31/2019 5:08 PM
Printed 8/6/2019 11:33 AM



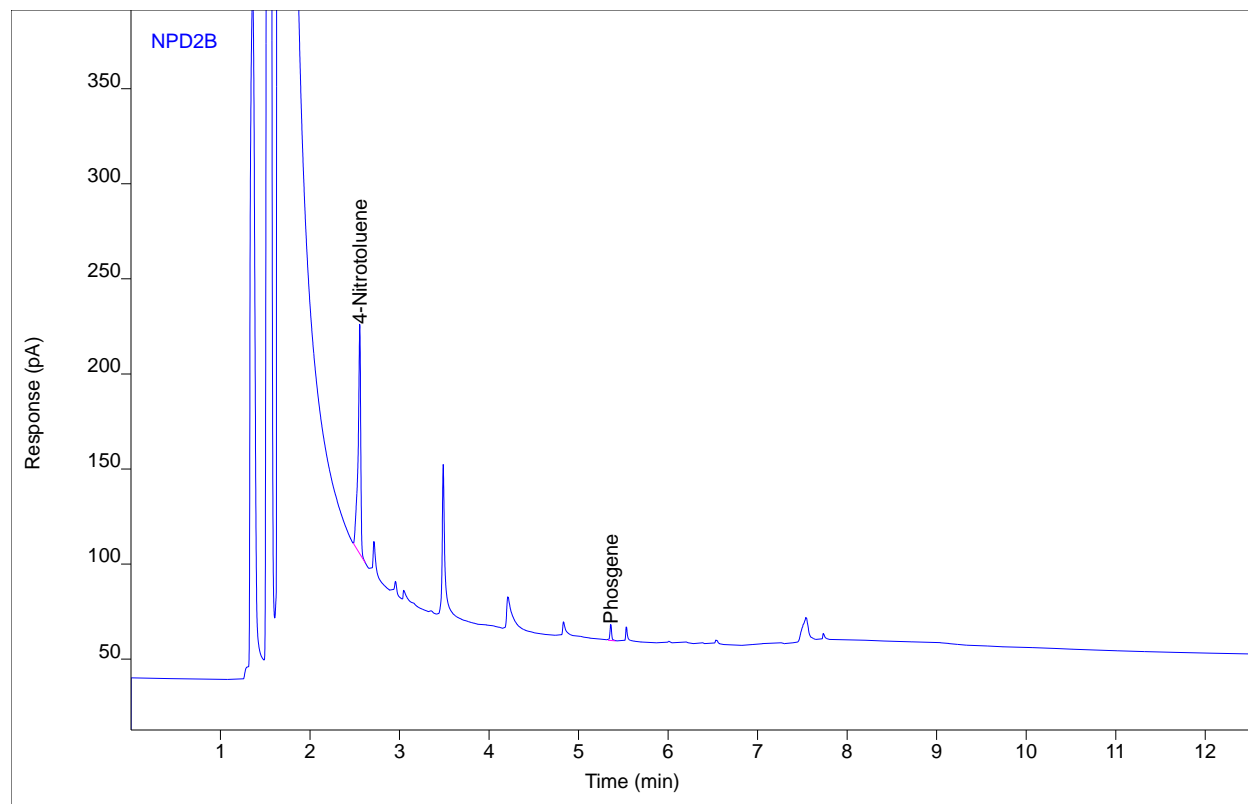
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
4-Nitrotoluene	BB	2.55	247.894	121.045	239.748	1	239.748	ug/mL
Phosgene	VB	5.36	10.7578	8.51000	2.51537	1	2.51537	ug/mL

Chromatogram Report

Sample Name 0819-013.LB-HMP.FH
Sequence Name LOLITA0274 ver.5
Inj Data File 032B1901.D
File Location GC/2019/Lolita/Quarter 3
Injection Date 8/5/2019 8:39 PM
File Modified 8/6/2019 11:30 AM
Instrument Lolita
Operator Daniel Clayton

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 32
Injection Volume 1
Injection 1 of 1
Acquisition Method LOLITA0273_PHOSGENE.M
Analysis Method LOLITA0273_PHOSGENE_R.M
Method Modified 7/31/2019 5:08 PM
Printed 8/6/2019 11:33 AM



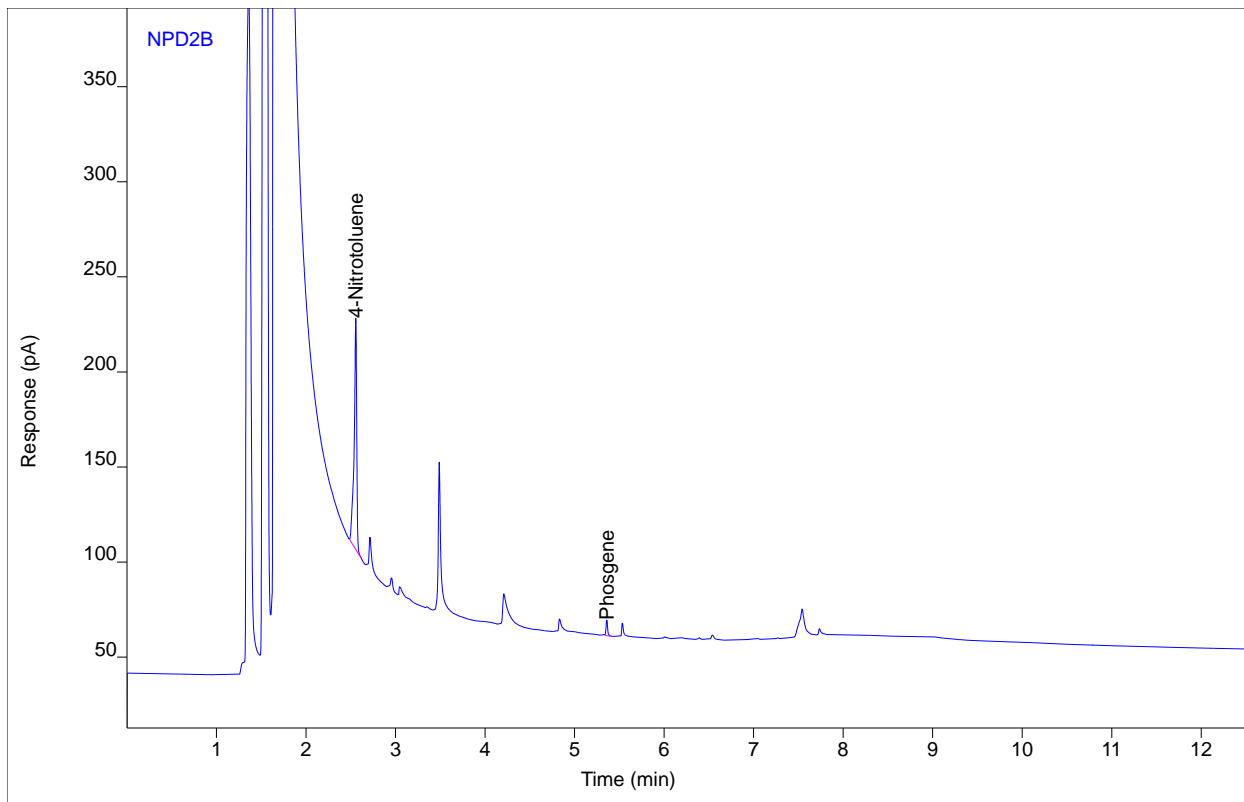
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
4-Nitrotoluene	BB	2.56	246.511	121.066	239.748	1	239.748	ug/mL
Phosgene	VB	5.36	11.0488	8.77161	2.59688	1	2.59688	ug/mL

Chromatogram Report

Sample Name 0819-013.LB-HMP.BH
Sequence Name LOLITA0274 ver.5
Inj Data File 033B2001.D
File Location GC/2019/Lolita/Quarter 3
Injection Date 8/5/2019 8:54 PM
File Modified 8/6/2019 11:30 AM
Instrument Lolita
Operator Daniel Clayton

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 33
Injection Volume 1
Injection 1 of 1
Acquisition Method LOLITA0273_PHOSGENE.M
Analysis Method LOLITA0273_PHOSGENE_R.M
Method Modified 7/31/2019 5:08 PM
Printed 8/6/2019 11:33 AM



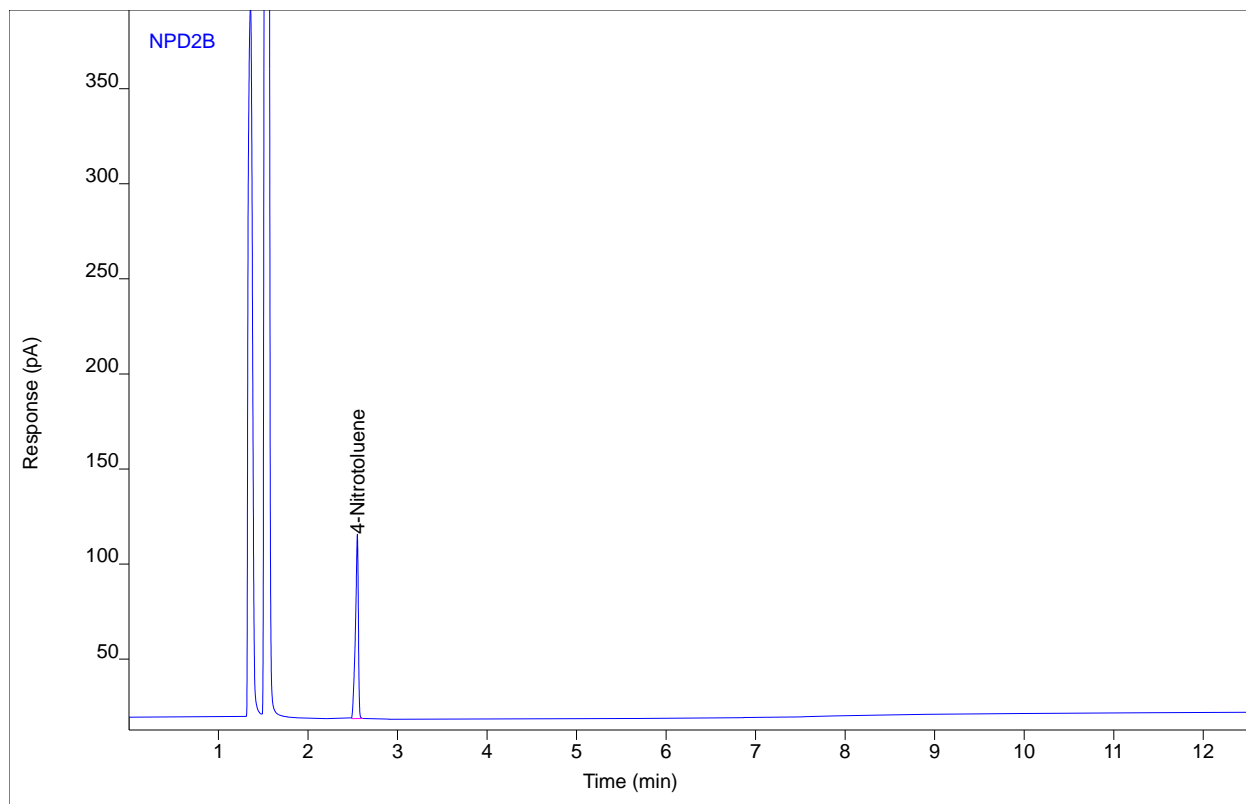
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
4-Nitrotoluene	BB	2.56	244.033	121.600	239.748	1	239.748	ug/mL
Phosgene	BB	5.36	10.4648	8.58231	2.48592	1	2.48592	ug/mL

Chromatogram Report

Sample Name gcprep2960 #RB
Sequence Name LOLITA0274 ver.5
Inj Data File 016B0201.D
File Location GC/2019/Lolita/Quarter 3
Injection Date 8/5/2019 4:23 PM
File Modified 8/6/2019 11:30 AM
Instrument Lolita
Operator Daniel Clayton

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 16
Injection Volume 1
Injection 1 of 1
Acquisition Method LOLITA0273_PHOSGENE.M
Analysis Method LOLITA0273_PHOSGENE_R.M
Method Modified 7/31/2019 5:08 PM
Printed 8/6/2019 11:33 AM



Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
4-Nitrotoluene	BB	2.55	217.756	96.9789	239.748	1	239.748	ug/mL
Phosgene		(5.34)				1		

=====

Calibration Table

=====

General Calibration Setting

Calib. Data Modified : 7/31/2019 5:40:12 PM
 Signals calculated separately : No

Rel. Reference Window : 0.000 %
 Abs. Reference Window : 0.100 min
 Rel. Non-ref. Window : 0.000 %
 Abs. Non-ref. Window : 0.070 min
 Uncalibrated Peaks : not reported
 Partial Calibration : Yes, identified peaks are recalibrated
 Correct All Ret. Times: No, only for identified peaks

Curve Type : Linear
 Origin : Ignored
 Weight : Quadratic (Amnt)

Recalibration Settings:
 Average Response : No Update
 Average Retention Time: Floating Average New 75%

Calibration Report Options :
 Printout of recalibrations within a sequence:
 Calibration Table after Recalibration
 Normal Report after Recalibration
 If the sequence is done with bracketing:
 Results of first cycle (ending previous bracket)

Sample ISTD Information:

ISTD #	ISTD Amount [ug/mL]	Name
--------	---------------------	------

1	232.64000	4-Nitrotoluene
---	-----------	----------------

Signal Details

Signal 1: NPD2 B,

Overview Table

RT	Sig	Lvl	Amount [ug/mL]	Area	Rsp.Factor	Ref	ISTD #	Compound
2.552	1	1	239.74800	294.12701	8.15117e-1	No	Yes 1	4-Nitrotoluene
		2	239.75000	295.22165	8.12102e-1			
		3	239.75000	291.11169	8.23567e-1			
5.344	1	1	9.98860e-1	5.05250	1.97696e-1	No	No 1	Phosgene

RT	Sig	Lvl	Amount [ug/mL]	Area	Rsp.Factor	Ref	ISTD #	Compound
2			4.99430	23.78846	2.09946e-1			
3			9.98860	52.05507	1.91885e-1			

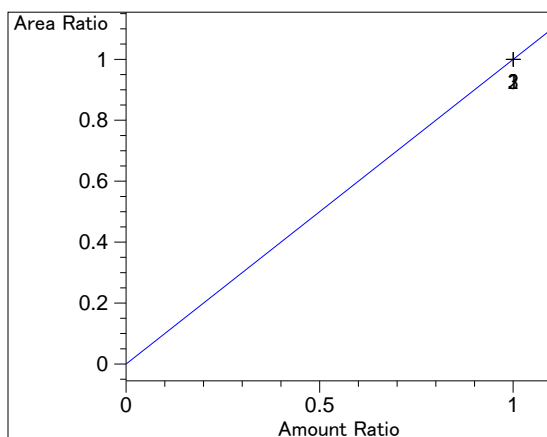
Peak Sum Table

No Entries in table

6 Warnings or Errors :

Warning : Curve requires more calibration points., (4-Nitrotoluene)
Warning : Curve requires more calibration points. at 2.552 min, signal 1
Warning : ISTD compound not calibrated on all levels, (4-Nitrotoluene)
Warning : ISTD compound not calibrated on all levels, (4-Nitrotoluene)
Warning : ISTD compound not calibrated on all levels, (4-Nitrotoluene)
Warning : ISTD compound not calibrated on all levels, (4-Nitrotoluene)

Calibration Curves



4-Nitrotoluene at exp. RT: 2.552

NPD2 B,

Correlation: 1.00000

Residual Std. Dev.: 0.00000

Formula: $y = mx + b$

m: 1.00000

b: 0.00000

x: Amount Ratio

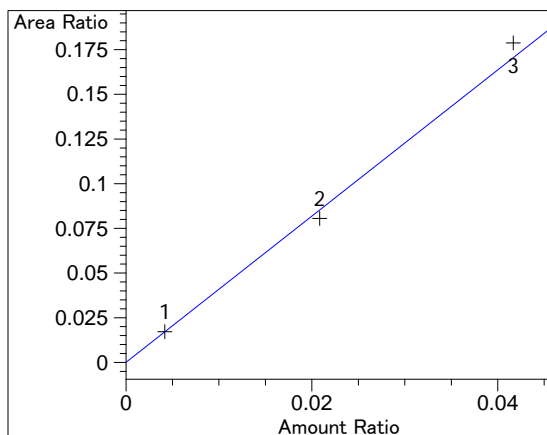
y: Area Ratio

Calibration Level Weights:

Level 1 : 1

Level 2 : 1

Level 3 : 1



Phosgene at exp. RT: 5.344

NPD2 B,

Correlation: 0.99805

Residual Std. Dev.: 0.00955

Formula: $y = mx + b$

m: 4.09156

b: 2.72753e-5

x: Amount Ratio

y: Area Ratio

Calibration Level Weights:

Level 1 : 1

Level 2 : 0.040001

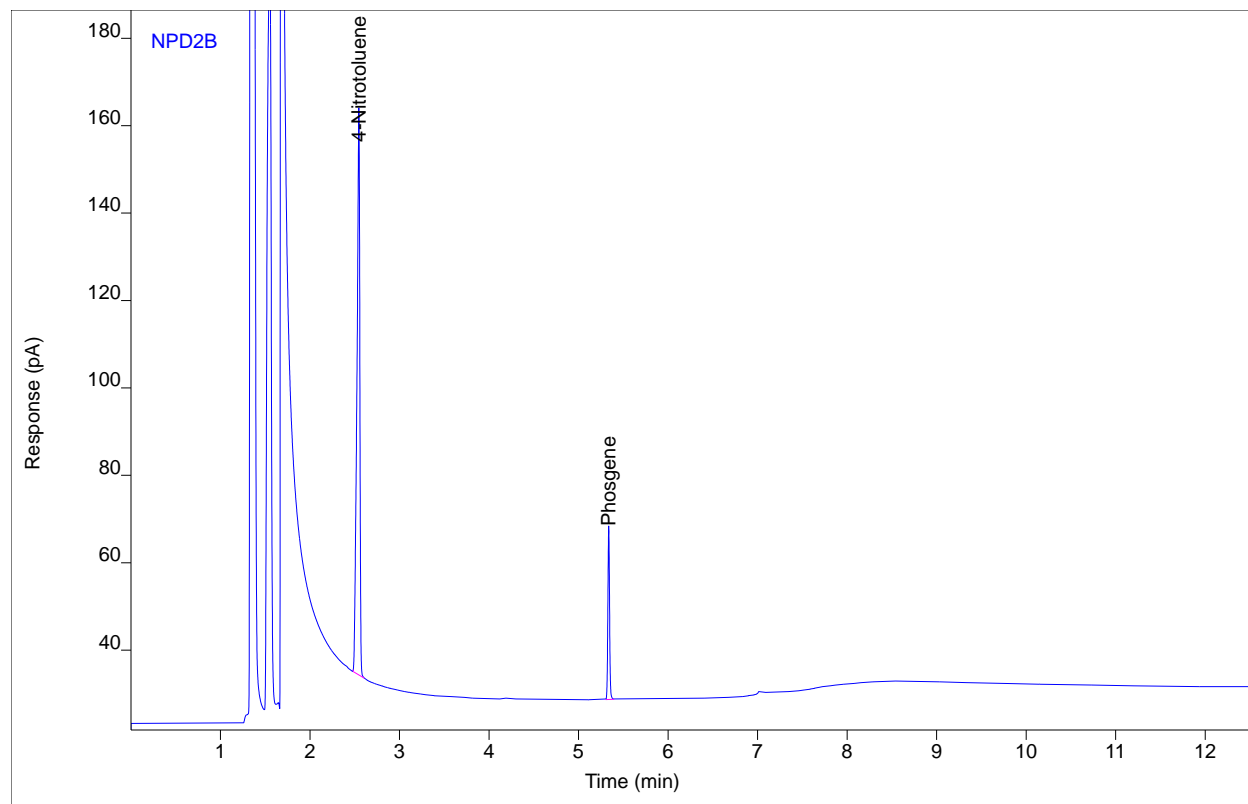
Level 3 : 0.01

Chromatogram Report

Sample Name gcstds1093 #13
Sequence Name LOLITA0273 ver.3
Inj Data File 031B0601.D
File Location GC/2019/Mr. Ed/Quarter 1
Injection Date 7/30/2019 4:01 PM
File Modified 7/31/2019 4:38 PM
Instrument Lolita
Operator Daniel Clayton

Enthalpy Analytical

Sample Type Calibration
Vial Number 31
Injection Volume 1
Injection 1 of 1
Acquisition Method LOLITA0273_PHOSGENE.M
Analysis Method LOLITA0273_PHOSGENE_R.M
Method Modified 7/31/2019 4:38 PM
Printed 7/31/2019 5:44 PM



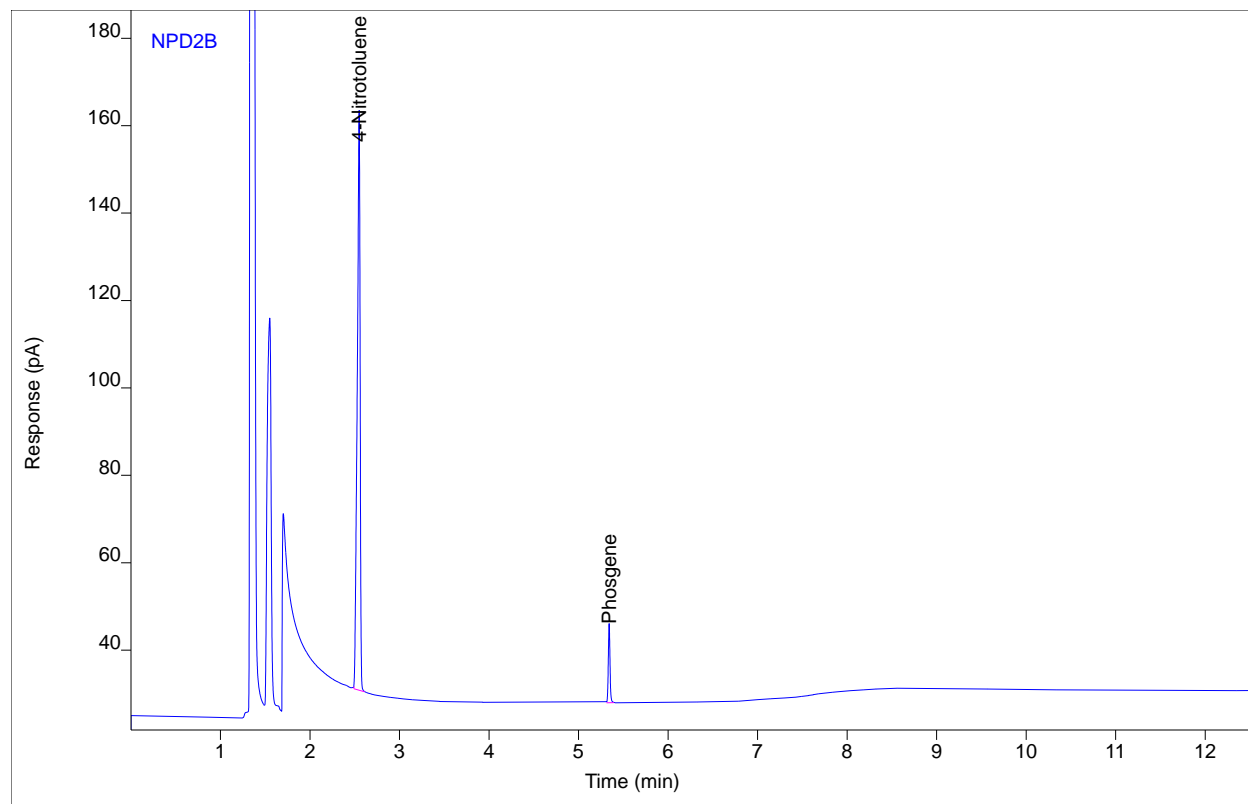
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
4-Nitrotoluene	I BB	2.55	291.112	129.722	239.750			ug/mL
Phosgene	BB	5.34	52.0551	39.6969	10.2677	1	10.2677	ug/mL

Chromatogram Report

Sample Name gcstds1093 #12
Sequence Name LOLITA0273 ver.3
Inj Data File 032B0701.D
File Location GC/2019/Mr. Ed/Quarter 1
Injection Date 7/30/2019 4:16 PM
File Modified 7/31/2019 4:38 PM
Instrument Lolita
Operator Daniel Clayton

Enthalpy Analytical

Sample Type Calibration
Vial Number 32
Injection Volume 1
Injection 1 of 1
Acquisition Method LOLITA0273_PHOSGENE.M
Analysis Method LOLITA0273_PHOSGENE_R.M
Method Modified 7/31/2019 4:38 PM
Printed 7/31/2019 5:44 PM



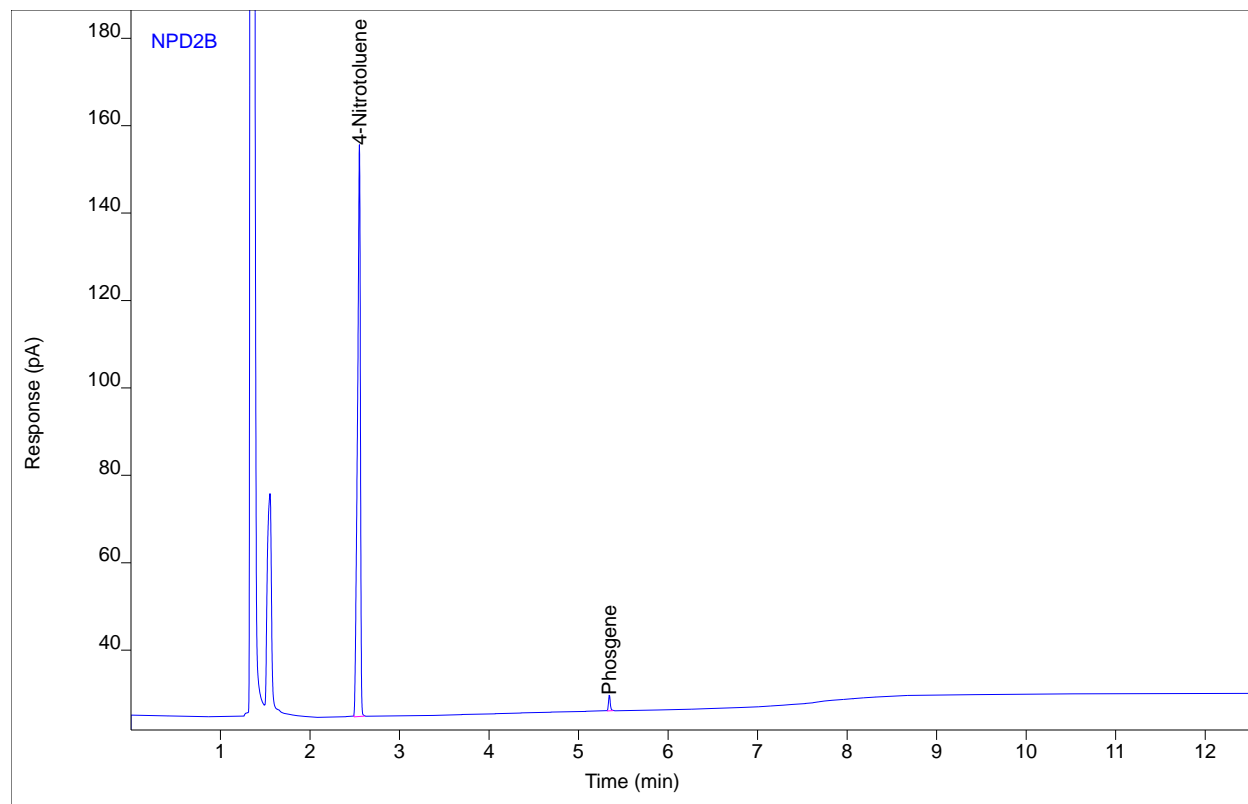
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
4-Nitrotoluene	I BB	2.55	295.222	132.655	239.750			ug/mL
Phosgene	BB	5.34	23.7885	18.1957	4.64391	1	4.64391	ug/mL

Chromatogram Report

Sample Name gcstds1093 #11
Sequence Name LOLITA0273 ver.3
Inj Data File 033B0801.D
File Location GC/2019/Mr. Ed/Quarter 1
Injection Date 7/30/2019 4:31 PM
File Modified 7/31/2019 4:38 PM
Instrument Lolita
Operator Daniel Clayton

Enthalpy Analytical

Sample Type Calibration
Vial Number 33
Injection Volume 1
Injection 1 of 8
Acquisition Method LOLITA0273_PHOSGENE.M
Analysis Method LOLITA0273_PHOSGENE_R.M
Method Modified 7/31/2019 4:38 PM
Printed 7/31/2019 5:44 PM



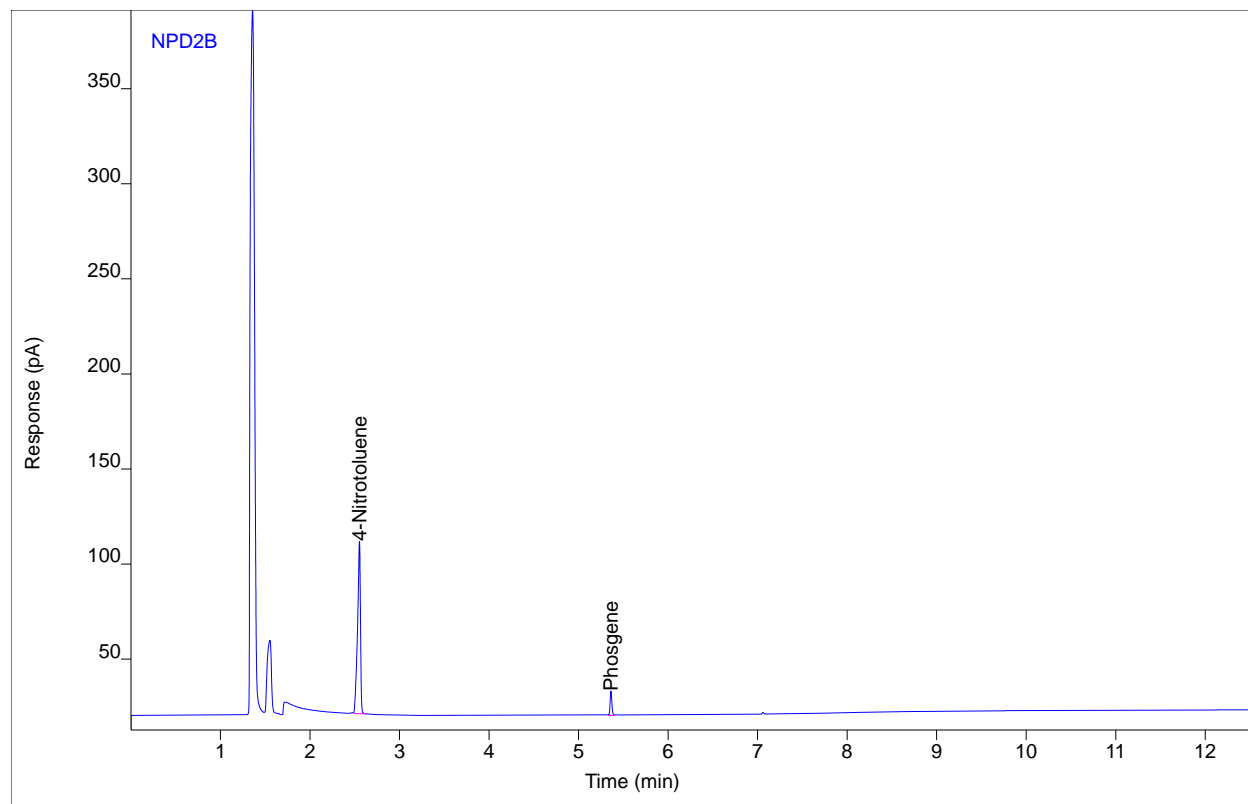
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
4-Nitrotoluene	I BB	2.55	294.127	130.879	239.748			ug/mL
Phosgene	BB	5.34	5.05250	3.69148	1.01442	1	1.01442	ug/mL

Chromatogram Report

Sample Name gcstds1093 #12
Sequence Name LOLITA0274 ver.5
Inj Data File 015B0101.D
File Location GC/2019/Lolita/Quarter 3
Injection Date 8/5/2019 11:48 AM
File Modified 8/6/2019 11:30 AM
Instrument Lolita
Operator Daniel Clayton

Enthalpy Analytical

Sample Type Calibration
Vial Number Vial 15
Injection Volume 1
Injection 1 of 1
Acquisition Method LOLITA0273_PHOSGENE.M
Analysis Method LOLITA0273_PHOSGENE_R.M
Method Modified 7/31/2019 5:08 PM
Printed 8/6/2019 11:33 AM



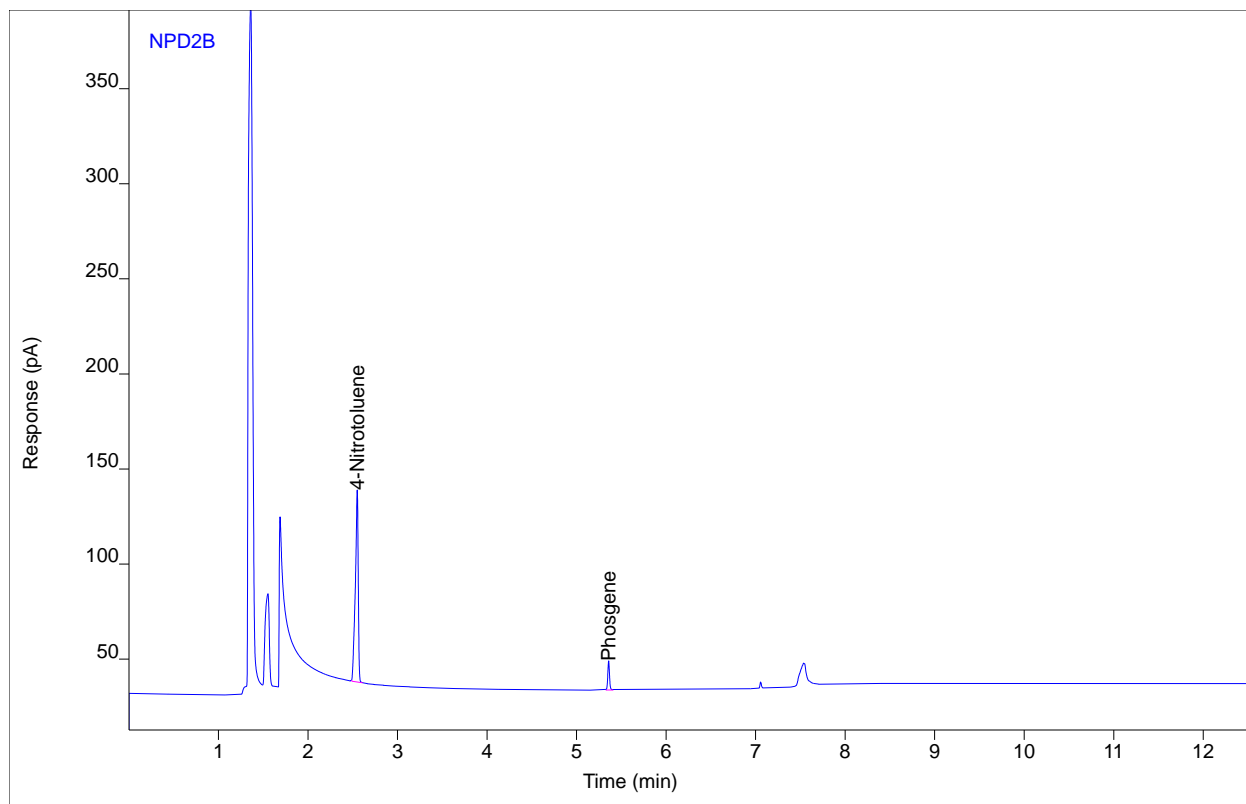
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
4-Nitrotoluene	BB	2.55	205.086	90.8396	239.748	1	239.748	ug/mL
Phosgene	BB	5.36	17.8521	12.9937	5.01417	1	5.01417	ug/mL

Chromatogram Report

Sample Name gcstds1093 #12
Sequence Name LOLITA0274 ver.5
Inj Data File 015B1201.D
File Location GC/2019/Lolita/Quarter 3
Injection Date 8/5/2019 6:53 PM
File Modified 8/6/2019 11:30 AM
Instrument Lolita
Operator Daniel Clayton

Enthalpy Analytical

Sample Type Calibration
Vial Number Vial 15
Injection Volume 1
Injection 1 of 1
Acquisition Method LOLITA0273_PHOSGENE.M
Analysis Method LOLITA0273_PHOSGENE_R.M
Method Modified 7/31/2019 5:08 PM
Printed 8/6/2019 11:33 AM



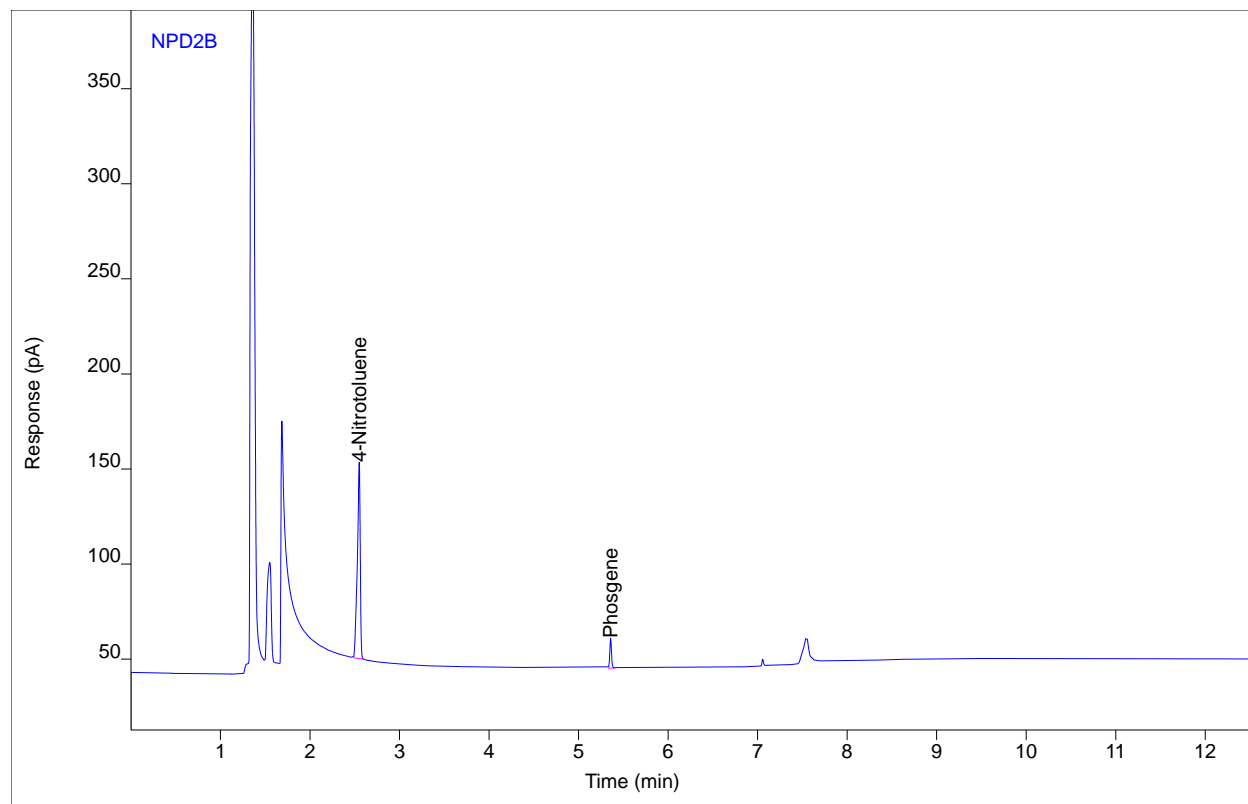
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
4-Nitrotoluene	BB	2.55	227.340	101.030	239.748	1	239.748	ug/mL
Phosgene	BB	5.36	20.4200	15.3750	5.17301	1	5.17301	ug/mL

Chromatogram Report

Sample Name gcstds1093 #12
Sequence Name LOLITA0274 ver.5
Inj Data File 015B2101.D
File Location GC/2019/Lolita/Quarter 3
Injection Date 8/5/2019 9:09 PM
File Modified 8/6/2019 11:30 AM
Instrument Lolita
Operator Daniel Clayton

Enthalpy Analytical

Sample Type Calibration
Vial Number Vial 15
Injection Volume 1
Injection 1 of 1
Acquisition Method LOLITA0273_PHOSGENE.M
Analysis Method LOLITA0273_PHOSGENE_R.M
Method Modified 7/31/2019 5:08 PM
Printed 8/6/2019 11:33 AM



Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
4-Nitrotoluene	BB	2.55	232.054	103.328	239.748	1	239.748	ug/mL
Phosgene	BB	5.36	20.8486	15.7895	5.17430	1	5.17430	ug/mL

=====

6890 GC METHOD

=====

OVEN

Initial temp: 160 'C (On) Maximum temp: 400 'C
Initial time: 2.60 min Equilibration time: 0.50 min
Ramps:
 # Rate Final temp Final time
 1 20.00 260 5.00
 2 0.0(Off)
Post temp: 50 'C
Post time: 0.00 min
Run time: 12.60 min

FRONT INLET (SPLIT/SPLITLESS)

Mode: Split
Initial temp: 225 'C (On)
Pressure: 1.60 psi (On)
Split ratio: 1.99:1
Split flow: 10.8 mL/min
Total flow: 24.8 mL/min
Gas saver: Off
Gas type: Hydrogen

BACK INLET (SPLIT/SPLITLESS)

Mode: Split
Initial temp: 180 'C (On)
Pressure: 26.34 psi (On)
Split ratio: 20:1
Split flow: 36.0 mL/min
Total flow: 40.5 mL/min
Gas saver: Off
Gas type: Helium

COLUMN 1

Capillary Column
Model Number: Restek 10637
Stabilwax 15m x 0.53mmID x 0.5um
Max temperature: 260 'C
Nominal length: 15.0 m
Nominal diameter: 530.00 um
Nominal film thickness: 0.50 um
Mode: constant flow
Initial flow: 5.4 mL/min
Nominal init pressure: 1.60 psi
Average velocity: 56 cm/sec
Inlet: Front Inlet
Outlet: Front Detector
Outlet pressure: ambient

COLUMN 2

Capillary Column
Model Number: Restek 15023
Rtx-200 Rtx-200 30m x 0.25 x 0.25
Max temperature: 340 'C
Nominal length: 30.0 m
Nominal diameter: 250.00 um
Nominal film thickness: 0.25 um
Mode: constant flow
Initial flow: 1.8 mL/min
Nominal init pressure: 26.35 psi
Average velocity: 44 cm/sec
Inlet: Back Inlet
Outlet: Back Detector
Outlet pressure: ambient

FRONT DETECTOR (FID)

Temperature: 150 'C (On)
Hydrogen flow: 40.0 mL/min (Off)
Air flow: 450.0 mL/min (Off)
Mode: Constant makeup flow
Makeup flow: 45.0 mL/min (Off)
Makeup Gas Type: Nitrogen
Flame: Off
Electrometer: On
Lit offset: 2.0

BACK DETECTOR (NPD)

Temperature: 275 'C (On)
Hydrogen flow: 2.0 mL/min (On)
Air flow: 60.0 mL/min (On)
Mode: Constant makeup flow
Makeup flow: 3.0 mL/min (On)
Makeup Gas Type: Helium
Adjust offset: 22.00
Electrometer: On
Bead: On
Equilibration time: 1.00

SIGNAL 1

Data rate: 50 Hz
Type: front detector
Save Data: On
Zero: 0.0 (Off)
Range: 0
Fast Peaks: Off
Attenuation: 0

SIGNAL 2

Data rate: 20 Hz
Type: back detector
Save Data: On
Zero: 0.0 (Off)
Range: 0
Fast Peaks: Off
Attenuation: 0

Modified on: 7/30/2019 at 2:13:53 PM

COLUMN COMP 1

Derive from front detector

COLUMN COMP 2

Derive from back detector

POST RUN

Post Time: 0.00 min

TIME TABLE

Time	Specifier	Parameter & Setpoint
------	-----------	----------------------

GC Injector

Front Injector:

No parameters specified

Back Injector:

Sample Washes	0
Sample Pumps	7
Injection Volume	1.00 microliters
Syringe Size	10.0 microliters
Nanoliter Adapter	Off
PostInj Solvent A Washes	3
PostInj Solvent B Washes	3
Viscosity Delay	2 seconds
Plunger Speed	Fast

**This Is The Last Page
Of This Report.**

ENTHALPY ANALYTICAL REPORT: 0819-068A

Sample Collection Date: 08/21/2019

Analyses:

Volatile Organic Compounds (VOC) via EPA Method Toxic Organics (TO)-15
Hydrogen Sulfide (H₂S) via Modified EPA Method 16

Tetra Tech, Inc.

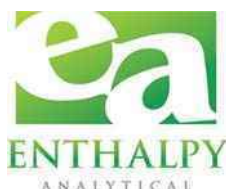
3746 Mt. Diablo Blvd. Suite 300
Lafayette, CA 94549

Able Fire
Ridgeland, SC
Client Project # TT-D1-128

Analytical Report (0819-068A)

EPA Method TO-15
TO-15 Compound List

EPA Method 16
Hydrogen sulfide



Enthalpy Analytical, LLC

Phone: (919) 850 - 4392 / Fax: (919) 850 - 9012 / www.enthalpy.com
800-1 Capitola Drive Durham, NC 27713-4385

I certify that to the best of my knowledge all analytical data presented in this report:

- Have been checked for completeness
- Are accurate, error-free, and legible
- Have been conducted in accordance with approved protocol, and that all deviations and analytical problems are summarized in the appropriate narrative(s)

This analytical report was prepared in Portable Document Format (.PDF) and contains ??? pages.

Report Issued: xx/xx/xxxx



Summary of Results

Enthalpy Analytical

Company: Tetra Tech, Inc.

Job No.: 0819-068 - EPA Method 16 (Canisters)

Client No.: TT-D1-128

Summary Table - Hydrogen sulfide

Sample ID	Concentration (ppmv)
ACF-AS-RES-2-24HR-082119 (Can #0807)	0.171 ND
ACF-AS-RES-1-24HR-082119 (Can #0811)	0.157 ND
ACF-AS-PAM1-082119 (Can #0826)	0.156 ND
ACF-AS-PAM2-082119 (Can #0762)	0.161 ND

Results

Enthalpy Analytical

Company: Tetra Tech, Inc.

Job No.: 0819-068 - EPA Method 16 (Canisters)

Client No.: TT-D1-128

Hydrogen sulfide

Sample ID (Can #)	Filename #1	Filename #2	Filename #3	MDL	Curve Min	Curve Max	Ret Time (min)	Ret Time (min)	Ret Time (min)	%dif RT	Conc. #1 (ppmv)	Conc. #2 (ppmv)	Conc. #3 (ppmv)	%dif Conc.	Avg. Conc. (ppmv)	DF * Can Press.	Sample Conc. (ppmv)	Flag
ACF-AS-RES-2-24HR-082119 (Can #0807)	005B1001.D	005B1002.D	005B1003.D	0.0781	0.643	7.07	NA	NA	NA	NA	0.0781	0.0781	0.0781	0.0	0.0781	2.193	0.171	ND
ACF-AS-RES-1-24HR-082119 (Can #0811)	005B1201.D	005B1202.D	005B1203.D	0.0781	0.643	7.07	NA	NA	NA	NA	0.0781	0.0781	0.0781	0.0	0.0781	2.016	0.157	ND

ACF-AS-PAM1-082119 (Can #0826)	005B1101.D	005B1102.D	005B1103.D	0.0781	0.643	7.07	NA	NA	NA	NA	0.0781	0.0781	0.0781	0.0	0.0781	1.996	0.156	ND
ACF-AS-PAM2-082119 (Can #0762)	005B0901.D	005B0902.D	005B0903.D	0.0781	0.643	7.07	NA	NA	NA	NA	0.0781	0.0781	0.0781	0.0	0.0781	2.065	0.161	ND

Sample Name : ACF-AS-RES-2-24HR-082119

Sample Info : 0819-068; Can #0807; 500mL load

Data File : X1903152.D

Dilution : 1

Pressurization Factor : 2.192

Acquisition Date : 2019-08-25 03:46:26

Instrument Method : TO15-SCN.M

Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
Propylene	0.672	0.0841	0.0767	1.16	0.145	0.132	m
Freon 12 (CCI2F2)	0.440	0.0856	0.0767	2.18	0.423	0.379	
Freon 114 (C2CI2F4)	ND	0.0878	0.0767	ND	0.614	0.536	
Chloromethane	0.973	0.0855	0.0767	2.01	0.177	0.158	
Chloroethene (Vinyl chloride)	ND	0.0882	0.0767	ND	0.225	0.196	
1,3-Butadiene	ND	0.0857	0.0767	ND	0.190	0.170	
Bromomethane	ND	0.0867	0.0767	ND	0.337	0.298	
Chloroethane	ND	0.0884	0.0767	ND	0.233	0.202	
Bromoethene (Vinyl bromide)	ND	0.0874	0.0767	ND	0.382	0.336	
Freon 11 (CCI3F)	0.211	0.0910	0.0767	1.19	0.511	0.431	
Ethanol	2.81	0.219	0.0877	5.29	0.413	0.165	
Acrolein	0.214	0.0871	0.0767	0.491	0.200	0.176	
Freon 113 (C2CI3F3)	0.0843	0.0872	0.0767	0.646	0.669	0.588	J
1,1-Dichloroethene	ND	0.0878	0.0767	ND	0.348	0.304	m
Acetone	3.43	0.0881	0.0767	8.16	0.209	0.182	
Carbon disulfide	ND	0.0880	0.0767	ND	0.274	0.239	
Isopropyl alcohol	0.411	0.0880	0.0767	1.01	0.216	0.189	
Allyl chloride (3-chloropropene)	ND	0.0882	0.0767	ND	0.276	0.240	
Acetonitrile	0.658	0.0881	0.0767	1.10	0.148	0.129	
Methylene chloride	ND	0.222	0.222	ND	0.771	0.771	
trans-1,2-Dichloroethene	ND	0.0893	0.0767	ND	0.354	0.304	
Methyl tert-butyl ether	ND	0.0898	0.0767	ND	0.324	0.277	
Acrylonitrile	ND	0.0896	0.0767	ND	0.194	0.167	
Hexane	0.194	0.0886	0.0767	0.684	0.312	0.270	
1,1-Dichloroethane	ND	0.0864	0.0767	ND	0.350	0.311	
Vinyl acetate	ND	0.0892	0.0767	ND	0.314	0.270	
cis-1,2-Dichloroethene	ND	0.0883	0.0767	ND	0.350	0.304	
Methyl ethyl ketone (2-Butanone)	0.244	0.0891	0.0767	0.720	0.263	0.226	
Ethyl acetate	1.04	0.0883	0.0767	3.74	0.318	0.276	m
Chloroform	ND	0.0886	0.0767	ND	0.433	0.375	
Tetrahydrofuran	ND	0.0885	0.0767	ND	0.261	0.226	
1,1,1-Trichloroethane	ND	0.0872	0.0767	ND	0.476	0.419	
Cyclohexane	ND	0.0892	0.0767	ND	0.307	0.264	
Carbon tetrachloride	0.0853	0.0887	0.0767	0.536	0.558	0.483	
Benzene	0.266	0.0875	0.0767	0.851	0.280	0.245	
2,2,4-trimethylpentane	ND	0.0899	0.0767	ND	0.420	0.358	
1,2-Dichloroethane	ND	0.0896	0.0767	ND	0.363	0.311	
Heptane	0.0990	0.0881	0.0767	0.406	0.361	0.314	
Trichloroethene	ND	0.0880	0.0767	ND	0.473	0.412	
1,2-Dichloropropane	ND	0.0896	0.0767	ND	0.414	0.355	
Methyl methacrylate	ND	0.0909	0.0767	ND	0.372	0.314	
1,4-Dioxane	ND	0.0886	0.0767	ND	0.319	0.276	
Bromodichloromethane	ND	0.0871	0.0767	ND	0.583	0.514	
cis-1,3-Dichloropropene	ND	0.0862	0.0767	ND	0.391	0.348	
Methyl isobutyl ketone	0.119	0.0904	0.0767	0.486	0.370	0.314	
Toluene	0.595	0.0891	0.0767	2.24	0.336	0.289	
trans-1,3-Dichloropropene	ND	0.0891	0.0767	ND	0.404	0.348	
1,1,2-Trichloroethane	ND	0.0879	0.0767	ND	0.479	0.419	
Tetrachloroethene	ND	0.0885	0.0767	ND	0.600	0.520	
2-Hexanone (Methyl butyl ketone)	ND	0.0891	0.0767	ND	0.365	0.314	
Dibromochloromethane	ND	0.0865	0.0767	ND	0.737	0.654	
1,2-Dibromoethane	ND	0.0888	0.0767	ND	0.682	0.589	
Chlorobenzene	ND	0.0902	0.0767	ND	0.415	0.353	
Ethylbenzene	0.115	0.0863	0.0767	0.499	0.375	0.333	
1,1,1,2-Tetrachloroethane	ND	0.0877	0.0767	ND	0.602	0.527	
m-/p-Xylenes	0.239	0.0888	0.0767	1.04	0.386	0.333	

Sample Name : ACF-AS-RES-2-24HR-082119

Sample Info : 0819-068; Can #0807; 500mL load

Data File : X1903152.D

Dilution : 1

Pressurization Factor : 2.192

Acquisition Date : 2019-08-25 03:46:26

Instrument Method : TO15-SCN.M

Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
o-Xylene	0.0981	0.0876	0.0767	0.426	0.380	0.333	
Styrene	ND	0.0854	0.0767	ND	0.364	0.327	
Bromoform	ND	0.0880	0.0767	ND	0.910	0.793	
1,1,2,2-Tetrachloroethane	ND	0.0877	0.0767	ND	0.602	0.527	
4-Ethyltoluene	ND	0.0883	0.0767	ND	0.434	0.377	
2-Chlorotoluene	ND	0.0883	0.0767	ND	0.457	0.397	
1,3,5-Trimethylbenzene	ND	0.0879	0.0767	ND	0.432	0.377	
1,2,4-Trimethylbenzene	0.0978	0.0872	0.0767	0.481	0.428	0.377	m
1,3-Dichlorobenzene	ND	0.0885	0.0767	ND	0.532	0.461	
1,4-Dichlorobenzene	ND	0.0879	0.0767	ND	0.529	0.461	
Benzyl chloride	ND	0.0875	0.0767	ND	0.453	0.397	
1,2-Dichlorobenzene	ND	0.0893	0.0767	ND	0.537	0.461	
1,2,4-Trichlorobenzene	ND	0.0890	0.0767	ND	0.660	0.569	
Hexachlorobutadiene	ND	0.0879	0.0767	ND	0.937	0.818	
Naphthalene	0.112	0.0907	0.0767	0.585	0.476	0.402	
1-Bromopropane	ND	0.0866	0.0767	ND	0.436	0.386	
1-Octene	ND	0.0858	0.0767	ND	0.394	0.352	
n-Octane	ND	0.0879	0.0767	ND	0.410	0.358	
Isopropylbenzene	ND	0.0890	0.0767	ND	0.438	0.377	
n-Propylbenzene	ND	0.0892	0.0767	ND	0.438	0.377	

Internal Standards	Response	Retention Time (min)	Concentration (PPBV)	Flag *
Bromochloromethane (IS)	723,143	11.94	5.00	PASS
1,4-Difluorobenzene (IS)	2,799,084	13.69	5.04	PASS
Chlorobenzene-d5 (IS)	2,240,121	17.87	4.80	PASS

(ND) = Not Detected

* (J) = Below Calibration Range, (E) = Above Calibration Range, (m) = Manual Integration

IS Acceptance Criteria: RT +/- 20 sec, Response +/- 40%

Sample Name

: ACF-AS-RES-1-24HR-082119

Sample Info

: 0819-068; Can #0811; 500mL load

Data File

: X1903154.D

Dilution

: 1

Pressurization Factor

: 2.016

Acquisition Date

: 2019-08-25 05:39:03

Instrument Method

: TO15-SCN.M

Matrix

: AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
Propylene	1.81	0.0773	0.0706	3.12	0.133	0.121	
Freon 12 (CCI2F2)	0.442	0.0787	0.0706	2.19	0.389	0.349	
Freon 114 (C2CI2F4)	ND	0.0807	0.0706	ND	0.564	0.493	
Chloromethane	2.15	0.0786	0.0706	4.44	0.162	0.146	
Chloroethene (Vinyl chloride)	ND	0.0811	0.0706	ND	0.207	0.180	
1,3-Butadiene	0.0816	0.0788	0.0706	0.180	0.174	0.156	
Bromomethane	ND	0.0798	0.0706	ND	0.310	0.274	
Chloroethane	ND	0.0813	0.0706	ND	0.214	0.186	
Bromoethene (Vinyl bromide)	ND	0.0804	0.0706	ND	0.352	0.309	
Freon 11 (CCI3F)	0.204	0.0837	0.0706	1.14	0.470	0.396	
Ethanol	2.15	0.202	0.0806	4.05	0.380	0.152	
Acrolein	0.189	0.0801	0.0706	0.432	0.184	0.162	
Freon 113 (C2CI3F3)	0.0765	0.0802	0.0706	0.587	0.615	0.541	J
1,1-Dichloroethene	ND	0.0807	0.0706	ND	0.320	0.280	
Acetone	2.93	0.0810	0.0706	6.97	0.193	0.168	
Carbon disulfide	0.0920	0.0810	0.0706	0.287	0.252	0.220	
Isopropyl alcohol	0.726	0.0810	0.0706	1.78	0.199	0.173	
Allyl chloride (3-chloropropene)	ND	0.0811	0.0706	ND	0.254	0.221	
Acetonitrile	0.461	0.0810	0.0706	0.775	0.136	0.118	
Methylene chloride	ND	0.204	0.204	ND	0.709	0.709	
trans-1,2-Dichloroethene	ND	0.0822	0.0706	ND	0.326	0.280	
Methyl tert-butyl ether	ND	0.0826	0.0706	ND	0.298	0.254	
Acrylonitrile	ND	0.0824	0.0706	ND	0.179	0.153	
Hexane	0.265	0.0815	0.0706	0.932	0.287	0.249	
1,1-Dichloroethane	ND	0.0794	0.0706	ND	0.321	0.286	
Vinyl acetate	ND	0.0820	0.0706	ND	0.289	0.248	
cis-1,2-Dichloroethene	ND	0.0812	0.0706	ND	0.322	0.280	
Methyl ethyl ketone (2-Butanone)	0.261	0.0819	0.0706	0.770	0.242	0.208	
Ethyl acetate	1.59	0.0812	0.0706	5.72	0.293	0.254	
Chloroform	ND	0.0815	0.0706	ND	0.398	0.345	
Tetrahydrofuran	0.102	0.0814	0.0706	0.300	0.240	0.208	
1,1,1-Trichloroethane	ND	0.0802	0.0706	ND	0.438	0.385	
Cyclohexane	ND	0.0820	0.0706	ND	0.282	0.243	
Carbon tetrachloride	0.0772	0.0816	0.0706	0.485	0.513	0.444	J
Benzene	0.834	0.0805	0.0706	2.66	0.257	0.225	
2,2,4-trimethylpentane	ND	0.0827	0.0706	ND	0.386	0.330	
1,2-Dichloroethane	ND	0.0824	0.0706	ND	0.334	0.286	
Heptane	0.175	0.0810	0.0706	0.716	0.332	0.289	
Trichloroethene	ND	0.0810	0.0706	ND	0.435	0.379	
1,2-Dichloropropane	ND	0.0824	0.0706	ND	0.381	0.326	
Methyl methacrylate	ND	0.0836	0.0706	ND	0.342	0.289	
1,4-Dioxane	ND	0.0815	0.0706	ND	0.294	0.254	
Bromodichloromethane	ND	0.0801	0.0706	ND	0.537	0.473	
cis-1,3-Dichloropropene	ND	0.0793	0.0706	ND	0.360	0.320	
Methyl isobutyl ketone	ND	0.0831	0.0706	ND	0.341	0.289	
Toluene	0.664	0.0819	0.0706	2.50	0.309	0.266	
trans-1,3-Dichloropropene	ND	0.0819	0.0706	ND	0.372	0.320	
1,1,2-Trichloroethane	ND	0.0808	0.0706	ND	0.441	0.385	
Tetrachloroethene	ND	0.0814	0.0706	ND	0.552	0.479	
2-Hexanone (Methyl butyl ketone)	0.0774	0.0819	0.0706	0.317	0.336	0.289	J
Dibromochloromethane	ND	0.0796	0.0706	ND	0.678	0.601	
1,2-Dibromoethane	ND	0.0817	0.0706	ND	0.628	0.542	
Chlorobenzene	ND	0.0830	0.0706	ND	0.382	0.325	
Ethylbenzene	0.337	0.0793	0.0706	1.46	0.345	0.306	
1,1,1,2-Tetrachloroethane	ND	0.0806	0.0706	ND	0.554	0.484	
m-/p-Xylenes	0.236	0.0817	0.0706	1.02	0.355	0.306	

Sample Name : ACF-AS-RES-1-24HR-082119

Sample Info : 0819-068; Can #0811; 500mL load

Data File : X1903154.D

Dilution : 1

Pressurization Factor : 2.016

Acquisition Date : 2019-08-25 05:39:03

Instrument Method : TO15-SCN.M

Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
o-Xylene	0.107	0.0806	0.0706	0.465	0.350	0.306	
Styrene	0.297	0.0785	0.0706	1.27	0.335	0.301	
Bromoform	ND	0.0810	0.0706	ND	0.837	0.729	
1,1,2,2-Tetrachloroethane	ND	0.0806	0.0706	ND	0.554	0.484	
4-Ethyltoluene	ND	0.0812	0.0706	ND	0.399	0.347	
2-Chlorotoluene	ND	0.0812	0.0706	ND	0.420	0.365	
1,3,5-Trimethylbenzene	ND	0.0809	0.0706	ND	0.398	0.347	
1,2,4-Trimethylbenzene	0.0902	0.0802	0.0706	0.443	0.394	0.347	
1,3-Dichlorobenzene	ND	0.0814	0.0706	ND	0.489	0.424	
1,4-Dichlorobenzene	ND	0.0809	0.0706	ND	0.486	0.424	
Benzyl chloride	ND	0.0805	0.0706	ND	0.417	0.365	
1,2-Dichlorobenzene	ND	0.0822	0.0706	ND	0.494	0.424	
1,2,4-Trichlorobenzene	ND	0.0818	0.0706	ND	0.607	0.524	
Hexachlorobutadiene	ND	0.0808	0.0706	ND	0.862	0.753	
Naphthalene	0.0781	0.0835	0.0706	0.409	0.438	0.370	J
1-Bromopropane	ND	0.0797	0.0706	ND	0.401	0.355	
1-Octene	ND	0.0789	0.0706	ND	0.362	0.324	
n-Octane	ND	0.0808	0.0706	ND	0.378	0.330	
Isopropylbenzene	0.125	0.0818	0.0706	0.617	0.402	0.347	
n-Propylbenzene	ND	0.0820	0.0706	ND	0.403	0.347	

Internal Standards	Response	Retention Time (min)	Concentration (PPBV)	Flag *
Bromochloromethane (IS)	740,030	11.94	5.00	PASS
1,4-Difluorobenzene (IS)	2,873,621	13.69	5.04	PASS
Chlorobenzene-d5 (IS)	2,289,413	17.87	4.80	PASS

(ND) = Not Detected

* (J) = Below Calibration Range, (E) = Above Calibration Range, (m) = Manual Integration

IS Acceptance Criteria: RT +/- 20 sec, Response +/- 40%

Sample Name : ACF-AS-PAM1-082119
Sample Info : 0819-068; Can #0826; 500mL load
Data File : X1903155.D
Dilution : 1
Pressurization Factor : 1.995
Acquisition Date : 2019-08-25 06:35:16
Instrument Method : TO15-SCN.M
Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
Propylene	4.02	0.0765	0.0698	6.92	0.132	0.120	
Freon 12 (CCI2F2)	0.435	0.0779	0.0698	2.15	0.385	0.345	
Freon 114 (C2CI2F4)	ND	0.0799	0.0698	ND	0.558	0.488	
Chloromethane	4.40	0.0778	0.0698	9.08	0.161	0.144	
Chloroethene (Vinyl chloride)	ND	0.0803	0.0698	ND	0.205	0.178	
1,3-Butadiene	0.216	0.0780	0.0698	0.479	0.172	0.154	
Bromomethane	ND	0.0789	0.0698	ND	0.306	0.271	
Chloroethane	ND	0.0804	0.0698	ND	0.212	0.184	
Bromoethene (Vinyl bromide)	ND	0.0796	0.0698	ND	0.348	0.305	
Freon 11 (CCI3F)	0.210	0.0828	0.0698	1.18	0.465	0.392	
Ethanol	3.26	0.200	0.0798	6.15	0.376	0.150	
Acrolein	0.290	0.0792	0.0698	0.666	0.182	0.160	m
Freon 113 (C2CI3F3)	0.0776	0.0794	0.0698	0.595	0.608	0.535	J
1,1-Dichloroethene	ND	0.0799	0.0698	ND	0.317	0.277	
Acetone	6.07	0.0802	0.0698	14.4	0.191	0.166	
Carbon disulfide	0.164	0.0801	0.0698	0.511	0.250	0.217	
Isopropyl alcohol	0.293	0.0801	0.0698	0.720	0.197	0.172	
Allyl chloride (3-chloropropene)	ND	0.0803	0.0698	ND	0.251	0.219	
Acetonitrile	1.13	0.0802	0.0698	1.89	0.135	0.117	
Methylene chloride	0.259	0.202	0.202	0.901	0.702	0.702	
trans-1,2-Dichloroethene	ND	0.0813	0.0698	ND	0.322	0.277	
Methyl tert-butyl ether	ND	0.0817	0.0698	ND	0.295	0.252	
Acrylonitrile	ND	0.0816	0.0698	ND	0.177	0.152	
Hexane	0.397	0.0807	0.0698	1.40	0.284	0.246	
1,1-Dichloroethane	ND	0.0786	0.0698	ND	0.318	0.283	
Vinyl acetate	ND	0.0812	0.0698	ND	0.286	0.246	
cis-1,2-Dichloroethene	ND	0.0804	0.0698	ND	0.319	0.277	
Methyl ethyl ketone (2-Butanone)	0.416	0.0811	0.0698	1.23	0.239	0.206	
Ethyl acetate	0.0818	0.0804	0.0698	0.295	0.290	0.252	
Chloroform	ND	0.0807	0.0698	ND	0.394	0.341	
Tetrahydrofuran	0.161	0.0805	0.0698	0.474	0.237	0.206	
1,1,1-Trichloroethane	ND	0.0794	0.0698	ND	0.433	0.381	
Cyclohexane	0.0748	0.0812	0.0698	0.257	0.279	0.240	J
Carbon tetrachloride	0.0794	0.0808	0.0698	0.499	0.508	0.439	J
Benzene	2.14	0.0796	0.0698	6.82	0.254	0.223	
2,2,4-trimethylpentane	0.0931	0.0818	0.0698	0.435	0.382	0.326	
1,2-Dichloroethane	ND	0.0816	0.0698	ND	0.330	0.283	
Heptane	0.238	0.0802	0.0698	0.977	0.329	0.286	
Trichloroethene	ND	0.0801	0.0698	ND	0.431	0.375	
1,2-Dichloropropane	ND	0.0816	0.0698	ND	0.377	0.323	
Methyl methacrylate	ND	0.0828	0.0698	ND	0.339	0.286	
1,4-Dioxane	0.0778	0.0807	0.0698	0.280	0.291	0.252	J
Bromodichloromethane	ND	0.0792	0.0698	ND	0.531	0.468	
cis-1,3-Dichloropropene	ND	0.0784	0.0698	ND	0.356	0.317	
Methyl isobutyl ketone	ND	0.0823	0.0698	ND	0.337	0.286	
Toluene	1.15	0.0811	0.0698	4.33	0.306	0.263	
trans-1,3-Dichloropropene	ND	0.0811	0.0698	ND	0.368	0.317	
1,1,2-Trichloroethane	ND	0.0800	0.0698	ND	0.436	0.381	
Tetrachloroethene	ND	0.0805	0.0698	ND	0.546	0.474	
2-Hexanone (Methyl butyl ketone)	ND	0.0811	0.0698	ND	0.332	0.286	
Dibromochloromethane	ND	0.0788	0.0698	ND	0.671	0.595	
1,2-Dibromoethane	ND	0.0808	0.0698	ND	0.621	0.536	
Chlorobenzene	ND	0.0821	0.0698	ND	0.378	0.321	
Ethylbenzene	0.716	0.0785	0.0698	3.11	0.341	0.303	
1,1,1,2-Tetrachloroethane	ND	0.0798	0.0698	ND	0.548	0.479	
m-/p-Xylenes	0.291	0.0808	0.0698	1.26	0.351	0.303	

Sample Name : ACF-AS-PAM1-082119

Sample Info : 0819-068; Can #0826; 500mL load

Data File : X1903155.D

Dilution : 1

Pressurization Factor : 1.995

Acquisition Date : 2019-08-25 06:35:16

Instrument Method : TO15-SCN.M

Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
o-Xylene	0.152	0.0797	0.0698	0.661	0.346	0.303	
Styrene	0.777	0.0777	0.0698	3.31	0.331	0.297	
Bromoform	ND	0.0801	0.0698	ND	0.828	0.722	
1,1,2,2-Tetrachloroethane	ND	0.0798	0.0698	ND	0.548	0.479	
4-Ethyltoluene	ND	0.0804	0.0698	ND	0.395	0.343	
2-Chlorotoluene	ND	0.0804	0.0698	ND	0.416	0.361	
1,3,5-Trimethylbenzene	ND	0.0800	0.0698	ND	0.393	0.343	
1,2,4-Trimethylbenzene	0.102	0.0793	0.0698	0.500	0.390	0.343	
1,3-Dichlorobenzene	ND	0.0805	0.0698	ND	0.484	0.420	
1,4-Dichlorobenzene	ND	0.0800	0.0698	ND	0.481	0.420	
Benzyl chloride	ND	0.0796	0.0698	ND	0.412	0.361	
1,2-Dichlorobenzene	ND	0.0813	0.0698	ND	0.489	0.420	
1,2,4-Trichlorobenzene	ND	0.0810	0.0698	ND	0.601	0.518	
Hexachlorobutadiene	ND	0.0800	0.0698	ND	0.853	0.745	
Naphthalene	0.111	0.0826	0.0698	0.584	0.433	0.366	
1-Bromopropane	ND	0.0788	0.0698	ND	0.397	0.351	
1-Octene	ND	0.0780	0.0698	ND	0.358	0.321	
n-Octane	0.0875	0.0800	0.0698	0.409	0.374	0.326	
Isopropylbenzene	0.216	0.0810	0.0698	1.06	0.398	0.343	
n-Propylbenzene	ND	0.0812	0.0698	ND	0.399	0.343	

Internal Standards	Response	Retention Time (min)	Concentration (PPBV)	Flag *
Bromochloromethane (IS)	745,177	11.94	5.00	PASS
1,4-Difluorobenzene (IS)	2,878,178	13.69	5.04	PASS
Chlorobenzene-d5 (IS)	2,335,032	17.86	4.80	PASS

(ND) = Not Detected

* (J) = Below Calibration Range, (E) = Above Calibration Range, (m) = Manual Integration

IS Acceptance Criteria: RT +/- 20 sec, Response +/- 40%

Sample Name : ACF-AS-PAM2-082119
Sample Info : 0819-068; Can #0762; 500mL load
Data File : X1903156.D
Dilution : 1
Pressurization Factor : 2.064
Acquisition Date : 2019-08-25 07:31:28
Instrument Method : TO15-SCN.M
Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
Propylene	4.29	0.0792	0.0722	7.39	0.136	0.124	
Freon 12 (CCl2F2)	0.432	0.0806	0.0722	2.14	0.398	0.357	
Freon 114 (C2Cl2F4)	ND	0.0826	0.0722	ND	0.578	0.505	
Chloromethane	4.01	0.0805	0.0722	8.29	0.166	0.149	
Chloroethene (Vinyl chloride)	ND	0.0831	0.0722	ND	0.212	0.185	
1,3-Butadiene	0.248	0.0807	0.0722	0.549	0.178	0.160	
Bromomethane	ND	0.0817	0.0722	ND	0.317	0.281	
Chloroethane	ND	0.0832	0.0722	ND	0.220	0.191	
Bromoethene (Vinyl bromide)	ND	0.0823	0.0722	ND	0.360	0.316	
Freon 11 (CCl3F)	0.205	0.0857	0.0722	1.15	0.481	0.406	
Ethanol	3.12	0.206	0.0826	5.87	0.389	0.156	
Acrolein	0.280	0.0820	0.0722	0.643	0.188	0.166	
Freon 113 (C2Cl3F3)	0.0767	0.0821	0.0722	0.588	0.630	0.554	J
1,1-Dichloroethene	ND	0.0826	0.0722	ND	0.328	0.286	
Acetone	3.90	0.0830	0.0722	9.27	0.197	0.172	m
Carbon disulfide	0.110	0.0829	0.0722	0.342	0.258	0.225	
Isopropyl alcohol	0.245	0.0829	0.0722	0.602	0.204	0.178	
Allyl chloride (3-chloropropene)	ND	0.0831	0.0722	ND	0.260	0.226	
Acetonitrile	0.709	0.0830	0.0722	1.19	0.139	0.121	
Methylene chloride	ND	0.209	0.209	ND	0.726	0.726	
trans-1,2-Dichloroethene	ND	0.0841	0.0722	ND	0.334	0.286	
Methyl tert-butyl ether	ND	0.0845	0.0722	ND	0.305	0.260	
Acrylonitrile	ND	0.0844	0.0722	ND	0.183	0.157	
Hexane	0.339	0.0835	0.0722	1.20	0.294	0.255	
1,1-Dichloroethane	ND	0.0813	0.0722	ND	0.329	0.292	
Vinyl acetate	ND	0.0840	0.0722	ND	0.296	0.254	
cis-1,2-Dichloroethene	ND	0.0831	0.0722	ND	0.330	0.286	
Methyl ethyl ketone (2-Butanone)	0.427	0.0839	0.0722	1.26	0.247	0.213	
Ethyl acetate	ND	0.0831	0.0722	ND	0.300	0.260	
Chloroform	ND	0.0835	0.0722	ND	0.408	0.353	
Tetrahydrofuran	0.166	0.0833	0.0722	0.489	0.246	0.213	
1,1,1-Trichloroethane	ND	0.0821	0.0722	ND	0.448	0.394	
Cyclohexane	ND	0.0840	0.0722	ND	0.289	0.249	
Carbon tetrachloride	0.0754	0.0836	0.0722	0.475	0.526	0.454	J
Benzene	2.26	0.0824	0.0722	7.21	0.263	0.231	
2,2,4-trimethylpentane	0.0782	0.0846	0.0722	0.365	0.395	0.337	J
1,2-Dichloroethane	ND	0.0844	0.0722	ND	0.342	0.292	
Heptane	0.246	0.0830	0.0722	1.01	0.340	0.296	
Trichloroethene	ND	0.0829	0.0722	ND	0.445	0.388	
1,2-Dichloropropane	ND	0.0844	0.0722	ND	0.390	0.334	
Methyl methacrylate	ND	0.0856	0.0722	ND	0.351	0.296	
1,4-Dioxane	0.0813	0.0835	0.0722	0.293	0.301	0.260	J
Bromodichloromethane	ND	0.0820	0.0722	ND	0.549	0.484	
cis-1,3-Dichloropropene	ND	0.0812	0.0722	ND	0.368	0.328	
Methyl isobutyl ketone	ND	0.0851	0.0722	ND	0.349	0.296	
Toluene	1.17	0.0839	0.0722	4.41	0.316	0.272	
trans-1,3-Dichloropropene	ND	0.0839	0.0722	ND	0.381	0.328	
1,1,2-Trichloroethane	ND	0.0827	0.0722	ND	0.451	0.394	
Tetrachloroethene	0.238	0.0833	0.0722	1.62	0.565	0.490	
2-Hexanone (Methyl butyl ketone)	0.184	0.0839	0.0722	0.755	0.344	0.296	
Dibromochloromethane	ND	0.0815	0.0722	ND	0.694	0.615	
1,2-Dibromoethane	ND	0.0836	0.0722	ND	0.643	0.555	
Chlorobenzene	ND	0.0850	0.0722	ND	0.391	0.333	
Ethylbenzene	0.730	0.0812	0.0722	3.17	0.353	0.314	
1,1,1,2-Tetrachloroethane	ND	0.0826	0.0722	ND	0.567	0.496	
m-/p-Xylenes	0.380	0.0836	0.0722	1.65	0.363	0.314	

Sample Name : ACF-AS-PAM2-082119

Sample Info : 0819-068; Can #0762; 500mL load

Data File : X1903156.D

Dilution : 1

Pressurization Factor : 2.064

Acquisition Date : 2019-08-25 07:31:28

Instrument Method : TO15-SCN.M

Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
o-Xylene	0.168	0.0825	0.0722	0.731	0.358	0.314	
Styrene	0.801	0.0804	0.0722	3.41	0.343	0.308	
Bromoform	ND	0.0829	0.0722	ND	0.857	0.747	
1,1,2,2-Tetrachloroethane	ND	0.0826	0.0722	ND	0.567	0.496	
4-Ethyltoluene	ND	0.0831	0.0722	ND	0.409	0.355	
2-Chlorotoluene	ND	0.0831	0.0722	ND	0.430	0.374	
1,3,5-Trimethylbenzene	ND	0.0828	0.0722	ND	0.407	0.355	
1,2,4-Trimethylbenzene	0.108	0.0821	0.0722	0.531	0.403	0.355	m
1,3-Dichlorobenzene	ND	0.0833	0.0722	ND	0.501	0.434	
1,4-Dichlorobenzene	ND	0.0828	0.0722	ND	0.498	0.434	
Benzyl chloride	ND	0.0824	0.0722	ND	0.427	0.374	
1,2-Dichlorobenzene	ND	0.0841	0.0722	ND	0.506	0.434	
1,2,4-Trichlorobenzene	ND	0.0838	0.0722	ND	0.622	0.536	
Hexachlorobutadiene	ND	0.0827	0.0722	ND	0.882	0.770	
Naphthalene	0.113	0.0854	0.0722	0.591	0.448	0.379	
1-Bromopropane	ND	0.0816	0.0722	ND	0.410	0.363	
1-Octene	ND	0.0807	0.0722	ND	0.371	0.332	
n-Octane	0.0910	0.0827	0.0722	0.425	0.386	0.338	m
Isopropylbenzene	0.213	0.0838	0.0722	1.05	0.412	0.355	
n-Propylbenzene	ND	0.0840	0.0722	ND	0.413	0.355	

Internal Standards	Response	Retention Time (min)	Concentration (PPBV)	Flag *
Bromochloromethane (IS)	753,184	11.94	5.00	PASS
1,4-Difluorobenzene (IS)	2,889,384	13.69	5.04	PASS
Chlorobenzene-d5 (IS)	2,310,862	17.87	4.80	PASS

(ND) = Not Detected

* (J) = Below Calibration Range, (E) = Above Calibration Range, (m) = Manual Integration

IS Acceptance Criteria: RT +/- 20 sec, Response +/- 40%

Canister and Controller Data Sheet

Enthalpy Analytical, LLC

Client Name: Tetra Tech, Inc.

Client #: TT-01-128

Enthalpy Job #: 0819-068

Canister Data

Canister ID	Blk Ck ID / Sample ID	Canister Pressure Pre-Sample (mmHg)	Canister Pressure Post-Sample (mmHg)	Canister Pressure Final (mmHg)	Canister Pressurization Factor
0826	X1902037 / ACF-AS-PAM1-082119	-758	-13	733	1.995
0762	X1902855 / ACF-AS-PAM2-082119	-758	-37	735	2.064
0811	X1902102 / ACF-AS-RES-1-24HR- 082119	-758	-23	728	2.016
0807	X1902102 / ACF-AS-RES-2-24HR- 082119	-758	-68	760	2.192

Date Prepared: 8/9/19

Date Received: 8/23/19

Prepared By: BWR

Received By: DSM

Lab QC

Sample Name : ACF-AS-RES-2-24HR-082119 LD
Sample Info : 0819-068; Can #0807; 500mL load
Data File : X1903153.D
Dilution : 1
Pressurization Factor : 2.192
Acquisition Date : 2019-08-25 04:42:46
Instrument Method : TO15-SCN.M
Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	% Diff	Flag *
Propylene	0.679	0.0841	0.0767	1.17	0.145	0.132	1.0	m
Freon 12 (CCI2F2)	0.440	0.0856	0.0767	2.17	0.423	0.379	0.1	
Freon 114 (C2CI2F4)	ND	0.0878	0.0767	ND	0.614	0.536		
Chloromethane	0.987	0.0855	0.0767	2.04	0.177	0.158	1.4	
Chloroethene (Vinyl chloride)	ND	0.0882	0.0767	ND	0.225	0.196		
1,3-Butadiene	ND	0.0857	0.0767	ND	0.190	0.170		
Bromomethane	ND	0.0867	0.0767	ND	0.337	0.298		
Chloroethane	ND	0.0884	0.0767	ND	0.233	0.202		
Bromoethene (Vinyl bromide)	ND	0.0874	0.0767	ND	0.382	0.336		
Freon 11 (CCI3F)	0.212	0.0910	0.0767	1.19	0.511	0.431	0.5	
Ethanol	2.81	0.219	0.0877	5.30	0.413	0.165	0.2	
Acrolein	0.252	0.0871	0.0767	0.578	0.200	0.176	16.3	
Freon 113 (C2CI3F3)	ND	0.0872	0.0767	ND	0.669	0.588		
1,1-Dichloroethene	ND	0.0878	0.0767	ND	0.348	0.304		
Acetone	3.46	0.0881	0.0767	8.22	0.209	0.182	0.8	
Carbon disulfide	ND	0.0880	0.0767	ND	0.274	0.239		
Isopropyl alcohol	0.429	0.0880	0.0767	1.05	0.216	0.189	4.3	
Allyl chloride (3-chloropropene)	ND	0.0882	0.0767	ND	0.276	0.240		
Acetonitrile	0.695	0.0881	0.0767	1.17	0.148	0.129	5.5	
Methylene chloride	ND	0.222	0.222	ND	0.771	0.771		
trans-1,2-Dichloroethene	ND	0.0893	0.0767	ND	0.354	0.304		
Methyl tert-butyl ether	ND	0.0898	0.0767	ND	0.324	0.277		
Acrylonitrile	ND	0.0896	0.0767	ND	0.194	0.167		
Hexane	0.207	0.0886	0.0767	0.728	0.312	0.270	6.3	
1,1-Dichloroethane	ND	0.0864	0.0767	ND	0.350	0.311		
Vinyl acetate	ND	0.0892	0.0767	ND	0.314	0.270		
cis-1,2-Dichloroethene	ND	0.0883	0.0767	ND	0.350	0.304		
Methyl ethyl ketone (2-Butanone)	0.239	0.0891	0.0767	0.705	0.263	0.226	2.1	
Ethyl acetate	1.09	0.0883	0.0767	3.94	0.318	0.276	5.2	
Chloroform	ND	0.0886	0.0767	ND	0.433	0.375		
Tetrahydrofuran	ND	0.0885	0.0767	ND	0.261	0.226		
1,1,1-Trichloroethane	ND	0.0872	0.0767	ND	0.476	0.419		
Cyclohexane	ND	0.0892	0.0767	ND	0.307	0.264		
Carbon tetrachloride	ND	0.0887	0.0767	ND	0.558	0.483		
Benzene	0.269	0.0875	0.0767	0.859	0.280	0.245	1.0	
2,2,4-trimethylpentane	ND	0.0899	0.0767	ND	0.420	0.358		
1,2-Dichloroethane	ND	0.0896	0.0767	ND	0.363	0.311		
Heptane	0.0817	0.0881	0.0767	0.335	0.361	0.314		J
Trichloroethene	ND	0.0880	0.0767	ND	0.473	0.412		
1,2-Dichloropropane	ND	0.0896	0.0767	ND	0.414	0.355		
Methyl methacrylate	ND	0.0909	0.0767	ND	0.372	0.314		
1,4-Dioxane	ND	0.0886	0.0767	ND	0.319	0.276		
Bromodichloromethane	ND	0.0871	0.0767	ND	0.583	0.514		
cis-1,3-Dichloropropene	ND	0.0862	0.0767	ND	0.391	0.348		
Methyl isobutyl ketone	0.117	0.0904	0.0767	0.480	0.370	0.314	1.3	
Toluene	0.606	0.0891	0.0767	2.28	0.336	0.289	1.8	
trans-1,3-Dichloropropene	ND	0.0891	0.0767	ND	0.404	0.348		
1,1,2-Trichloroethane	ND	0.0879	0.0767	ND	0.479	0.419		
Tetrachloroethene	ND	0.0885	0.0767	ND	0.600	0.520		
2-Hexanone (Methyl butyl ketone)	ND	0.0891	0.0767	ND	0.365	0.314		
Dibromochloromethane	ND	0.0865	0.0767	ND	0.737	0.654		
1,2-Dibromoethane	ND	0.0888	0.0767	ND	0.682	0.589		
Chlorobenzene	ND	0.0902	0.0767	ND	0.415	0.353		
Ethylbenzene	0.116	0.0863	0.0767	0.503	0.375	0.333	0.7	
1,1,1,2-Tetrachloroethane	ND	0.0877	0.0767	ND	0.602	0.527		
m-/p-Xylenes	0.247	0.0888	0.0767	1.07	0.386	0.333	3.4	
o-Xylene	0.102	0.0876	0.0767	0.442	0.380	0.333	3.7	
Styrene	ND	0.0854	0.0767	ND	0.364	0.327		
Bromoform	ND	0.0880	0.0767	ND	0.910	0.793		
1,1,2,2-Tetrachloroethane	ND	0.0877	0.0767	ND	0.602	0.527		
4-Ethyltoluene	ND	0.0883	0.0767	ND	0.434	0.377		
2-Chlorotoluene	ND	0.0883	0.0767	ND	0.457	0.397		

Sample Name : ACF-AS-RES-2-24HR-082119 LD
Sample Info : 0819-068; Can #0807; 500mL load
Data File : X1903153.D
Dilution : 1
Pressurization Factor : 2.192
Acquisition Date : 2019-08-25 04:42:46
Instrument Method : TO15-SCN.M
Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	% Diff	Flag *
1,3,5-Trimethylbenzene	ND	0.0879	0.0767	ND	0.432	0.377	7.9	J
1,2,4-Trimethylbenzene	0.106	0.0872	0.0767	0.520	0.428	0.377		
1,3-Dichlorobenzene	ND	0.0885	0.0767	ND	0.532	0.461		
1,4-Dichlorobenzene	ND	0.0879	0.0767	ND	0.529	0.461		
Benzyl chloride	ND	0.0875	0.0767	ND	0.453	0.397		
1,2-Dichlorobenzene	ND	0.0893	0.0767	ND	0.537	0.461		
1,2,4-Trichlorobenzene	ND	0.0890	0.0767	ND	0.660	0.569		
Hexachlorobutadiene	ND	0.0879	0.0767	ND	0.937	0.818		
Naphthalene	0.0838	0.0907	0.0767	0.439	0.476	0.402		
1-Bromopropane	ND	0.0866	0.0767	ND	0.436	0.386		
1-Octene	ND	0.0858	0.0767	ND	0.394	0.352		
n-Octane	ND	0.0879	0.0767	ND	0.410	0.358		
Isopropylbenzene	ND	0.0890	0.0767	ND	0.438	0.377		
n-Propylbenzene	ND	0.0892	0.0767	ND	0.438	0.377		

Internal Standards	Response	Retention Time (min)	Concentration (PPBV)	Flag *
Bromochloromethane (IS)	714,847	11.94	5.00	PASS
1,4-Difluorobenzene (IS)	2,760,689	13.69	5.04	PASS
Chlorobenzene-d5 (IS)	2,210,960	17.87	4.80	PASS

(ND) = Not Detected
* (J) = Below Calibration Range, (E) = Above Calibration Range, (m) = Manual Integration
IS Acceptance Criteria: RT +/- 20 sec, Response +/- 40%

Sample Name: Humid Blank #0702

Sample Info: 500mL load; MP#3

Data File: X1903149.D

Dilution: 1

Pressurization Factor: 1.000

Acquisition Date: 2019-08-25 00:57:44

Instrument Method: TO15-SCN.M

Matrix: AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
Propylene	0.0366	0.0384	0.0350	0.0629	0.0660	0.0602	m J
Freon 12 (CCl2F2)	ND	0.0390	0.0350	ND	0.193	0.173	
Freon 114 (C2Cl2F4)	ND	0.0400	0.0350	ND	0.280	0.245	m J
Chloromethane	ND	0.0390	0.0350	ND	0.0805	0.0723	
Chloroethene (Vinyl chloride)	ND	0.0402	0.0350	ND	0.103	0.0895	m J
1,3-Butadiene	ND	0.0391	0.0350	ND	0.0865	0.0774	
Bromomethane	ND	0.0396	0.0350	ND	0.154	0.136	m J
Chloroethane	ND	0.0403	0.0350	ND	0.106	0.0924	
Bromoethene (Vinyl bromide)	ND	0.0399	0.0350	ND	0.174	0.153	m J
Freon 11 (CCl3F)	ND	0.0415	0.0350	ND	0.233	0.197	
Ethanol	0.0641	0.100	0.0400	0.121	0.188	0.0754	m J
Acrolein	ND	0.0397	0.0350	ND	0.0911	0.0803	
Freon 113 (C2Cl3F3)	ND	0.0398	0.0350	ND	0.305	0.268	J
1,1-Dichloroethene	ND	0.0400	0.0350	ND	0.159	0.139	
Acetone	0.0381	0.0402	0.0350	0.0904	0.0955	0.0831	J
Carbon disulfide	ND	0.0402	0.0350	ND	0.125	0.109	
Isopropyl alcohol	ND	0.0402	0.0350	ND	0.0987	0.0860	J
Allyl chloride (3-chloropropene)	ND	0.0402	0.0350	ND	0.126	0.110	
Acetonitrile	ND	0.0402	0.0350	ND	0.0675	0.0588	J
Methylene chloride	ND	0.101	0.101	ND	0.352	0.352	
trans-1,2-Dichloroethene	ND	0.0408	0.0350	ND	0.162	0.139	J
Methyl tert-butyl ether	ND	0.0410	0.0350	ND	0.148	0.126	
Acrylonitrile	ND	0.0409	0.0350	ND	0.0887	0.0760	J
Hexane	ND	0.0404	0.0350	ND	0.143	0.123	
1,1-Dichloroethane	ND	0.0394	0.0350	ND	0.159	0.142	J
Vinyl acetate	ND	0.0407	0.0350	ND	0.143	0.123	
cis-1,2-Dichloroethene	ND	0.0403	0.0350	ND	0.160	0.139	J
Methyl ethyl ketone (2-Butanone)	ND	0.0406	0.0350	ND	0.120	0.103	
Ethyl acetate	ND	0.0403	0.0350	ND	0.145	0.126	J
Chloroform	ND	0.0404	0.0350	ND	0.197	0.171	
Tetrahydrofuran	ND	0.0404	0.0350	ND	0.119	0.103	J
1,1,1-Trichloroethane	ND	0.0398	0.0350	ND	0.217	0.191	
Cyclohexane	ND	0.0407	0.0350	ND	0.140	0.120	J
Carbon tetrachloride	ND	0.0405	0.0350	ND	0.255	0.220	
Benzene	ND	0.0399	0.0350	ND	0.128	0.112	J
2,2,4-trimethylpentane	ND	0.0410	0.0350	ND	0.192	0.164	
1,2-Dichloroethane	ND	0.0409	0.0350	ND	0.165	0.142	J
Heptane	ND	0.0402	0.0350	ND	0.165	0.143	
Trichloroethene	ND	0.0402	0.0350	ND	0.216	0.188	J
1,2-Dichloropropane	ND	0.0409	0.0350	ND	0.189	0.162	
Methyl methacrylate	ND	0.0415	0.0350	ND	0.170	0.143	J
1,4-Dioxane	ND	0.0404	0.0350	ND	0.146	0.126	
Bromodichloromethane	ND	0.0397	0.0350	ND	0.266	0.235	J
cis-1,3-Dichloropropene	ND	0.0393	0.0350	ND	0.178	0.159	
Methyl isobutyl ketone	ND	0.0412	0.0350	ND	0.169	0.143	J
Toluene	ND	0.0406	0.0350	ND	0.153	0.132	
trans-1,3-Dichloropropene	ND	0.0406	0.0350	ND	0.184	0.159	J
1,1,2-Trichloroethane	ND	0.0401	0.0350	ND	0.219	0.191	
Tetrachloroethene	ND	0.0404	0.0350	ND	0.274	0.237	J
2-Hexanone (Methyl butyl ketone)	ND	0.0406	0.0350	ND	0.166	0.143	
Dibromochloromethane	ND	0.0395	0.0350	ND	0.336	0.298	J
1,2-Dibromoethane	ND	0.0405	0.0350	ND	0.311	0.269	
Chlorobenzene	ND	0.0412	0.0350	ND	0.189	0.161	J
Ethylbenzene	ND	0.0394	0.0350	ND	0.171	0.152	
1,1,1,2-Tetrachloroethane	ND	0.0400	0.0350	ND	0.275	0.240	J
m-/p-Xylenes	ND	0.0405	0.0350	ND	0.176	0.152	

Sample Name: Humid Blank #0702

Sample Info: 500mL load; MP#3

Data File: X1903149.D

Dilution: 1

Pressurization Factor: 1.000

Acquisition Date: 2019-08-25 00:57:44

Instrument Method: TO15-SCN.M

Matrix: AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
o-Xylene	ND	0.0400	0.0350	ND	0.174	0.152	
Styrene	ND	0.0390	0.0350	ND	0.166	0.149	
Bromoform	ND	0.0402	0.0350	ND	0.415	0.362	
1,1,2,2-Tetrachloroethane	ND	0.0400	0.0350	ND	0.275	0.240	
4-Ethyltoluene	ND	0.0403	0.0350	ND	0.198	0.172	
2-Chlorotoluene	ND	0.0403	0.0350	ND	0.209	0.181	
1,3,5-Trimethylbenzene	ND	0.0401	0.0350	ND	0.197	0.172	
1,2,4-Trimethylbenzene	ND	0.0398	0.0350	ND	0.195	0.172	
1,3-Dichlorobenzene	ND	0.0404	0.0350	ND	0.243	0.210	
1,4-Dichlorobenzene	ND	0.0401	0.0350	ND	0.241	0.210	
Benzyl chloride	ND	0.0399	0.0350	ND	0.207	0.181	
1,2-Dichlorobenzene	ND	0.0408	0.0350	ND	0.245	0.210	
1,2,4-Trichlorobenzene	0.0723	0.0406	0.0350	0.537	0.301	0.260	
Hexachlorobutadiene	ND	0.0401	0.0350	ND	0.427	0.373	
Naphthalene	0.0993	0.0414	0.0350	0.521	0.217	0.183	
1-Bromopropane	ND	0.0395	0.0350	ND	0.199	0.176	
1-Octene	ND	0.0391	0.0350	ND	0.180	0.161	
n-Octane	ND	0.0401	0.0350	ND	0.187	0.164	
Isopropylbenzene	ND	0.0406	0.0350	ND	0.200	0.172	
n-Propylbenzene	ND	0.0407	0.0350	ND	0.200	0.172	

Internal Standards	Response	Retention Time (min)	Concentration (PPBV)	Flag *
Bromochloromethane (IS)	712,486	11.94	5.00	PASS
1,4-Difluorobenzene (IS)	2,735,141	13.69	5.04	PASS
Chlorobenzene-d5 (IS)	2,221,375	17.86	4.80	PASS

(ND) = Not Detected

* (J) = Below Calibration Range, (E) = Above Calibration Range, (m) = Manual Integration

IS Acceptance Criteria: RT +/- 20 sec, Response +/- 40%

QC Summary Report

Enthalpy Analytical, LLC

Sample Name : 5ppbv TO15 LCS
 Sample Info : 50mL load; Can #000100; GCMSPrepPg800
 Data File : X1903146.D
 Dilution : 1
 Pressurization Factor : 1.000
 Acquisition Date : 2019-08-24 22:16:30
 Instrument Method : TO15-SCN.M
 Matrix : AIR

Target Compound	Response	Concentration (PPBV)	Tag Value (PPBV)	% Recovery	Flag
Propylene	615,546	5.29	4.80	110.4	PASS
Freon 12 (CCl2F2)	1,330,846	4.08	4.88	83.6	PASS
Freon 114 (C2Cl2F4)	1,514,374	4.32	5.01	86.2	PASS
Chloromethane	746,519	5.68	4.88	116.5	PASS
Chloroethene (Vinyl chloride)	701,724	4.79	5.03	95.3	PASS
1,3-Butadiene	627,935	4.85	4.89	99.3	PASS
Bromomethane	575,767	3.89	4.95	78.6	PASS
Chloroethane	355,077	4.86	5.04	96.5	PASS
Bromoethene (Vinyl bromide)	623,840	4.50	4.99	90.3	PASS
Freon 11 (CCl3F)	1,554,736	4.50	5.19	86.7	PASS
Ethanol	353,614	6.10	5.00	122.0	PASS
Acrolein	312,422	5.86	4.97	118.0	PASS
1,1-Dichloroethene	1,152,125	5.17	5.01	103.3	PASS
Freon 113 (C2Cl3F3)	1,029,056	5.09	4.98	102.3	PASS
Acetone	1,207,494	5.03	5.03	100.0	PASS
Isopropyl alcohol	1,488,060	6.03	5.02	120.1	PASS
Carbon disulfide	1,802,638	4.19	5.02	83.6	PASS
Acetonitrile	750,886	6.35	5.03	126.3	PASS
Allyl chloride (3-chloropropene)	282,493	4.52	5.03	89.8	PASS
Methylene chloride	1,075,109	4.91	5.07	97.0	PASS
Acrylonitrile	675,615	6.31	5.11	123.4	PASS
Methyl tert-butyl ether	1,661,101	4.90	5.12	95.7	PASS
trans-1,2-Dichloroethene	1,062,863	5.36	5.10	105.1	PASS
Hexane	1,203,012	5.83	5.06	115.4	PASS
Vinyl acetate	2,114,314	6.05	5.09	119.0	PASS
1,1-Dichloroethane	1,263,804	5.13	4.93	104.2	PASS
Methyl ethyl ketone (2-Butanone)	314,354	4.76	5.08	93.7	PASS
cis-1,2-Dichloroethene	1,252,580	5.53	5.04	109.8	PASS
Ethyl acetate	291,321	5.80	5.04	115.1	PASS
1-Bromopropane	1,486,959	6.11	4.94	123.7	PASS
Tetrahydrofuran	296,898	4.82	5.05	95.6	PASS
Chloroform	1,287,304	4.50	5.06	89.1	PASS
1,1,1-Trichloroethane	1,228,923	4.41	4.98	88.6	PASS
Cyclohexane	1,270,509	5.79	5.09	113.8	PASS
Carbon tetrachloride	1,318,333	4.69	5.06	92.7	PASS
Benzene	1,843,017	4.72	4.99	94.5	PASS
1,2-Dichloroethane	921,806	5.16	5.11	101.0	PASS
2,2,4-trimethylpentane	3,824,513	6.06	5.13	118.2	PASS
Heptane	758,576	5.78	5.03	115.1	PASS
Trichloroethene	894,455	5.33	5.02	106.2	PASS
1,2-Dichloropropane	840,219	5.30	4.98	106.4	PASS
Methyl methacrylate	711,555	4.97	5.19	95.8	PASS

Sample Name : 5ppbv TO15 LCS
 Sample Info : 50mL load; Can #000100; GCMSPrepPg800
 Data File : X1903146.D
 Dilution : 1
 Pressurization Factor : 1.000
 Acquisition Date : 2019-08-24 22:16:30
 Instrument Method : TO15-SCN.M
 Matrix : AIR

Target Compound	Response	Concentration (PPBV)	Tag Value (PPBV)	% Recovery	Flag
1,4-Dioxane	448,527	4.95	5.06	97.9	PASS
Bromodichloromethane	1,351,746	4.59	4.97	92.4	PASS
cis-1,3-Dichloropropene	1,094,495	4.78	4.92	97.2	PASS
Methyl isobutyl ketone	2,082,742	6.31	5.16	122.3	PASS
Toluene	2,200,068	4.63	5.08	91.2	PASS
1-Octene	535,865	4.74	4.89	97.0	PASS
n-Octane	704,217	4.82	5.01	96.1	PASS
trans-1,3-Dichloropropene	1,094,874	4.89	5.08	96.2	PASS
1,1,2-Trichloroethane	789,260	4.71	5.01	94.1	PASS
Tetrachloroethene	1,121,593	5.48	5.05	108.6	PASS
2-Hexanone (Methyl butyl ketone)	1,953,769	6.49	5.08	127.7	PASS
Dibromochloromethane	1,524,259	4.97	4.94	100.7	PASS
1,2-Dibromoethane	1,358,875	4.87	5.07	96.1	PASS
Chlorobenzene	1,831,256	5.27	5.15	102.5	PASS
Ethylbenzene	2,620,986	4.54	4.92	92.2	PASS
1,1,1,2-Tetrachloroethane	1,006,892	5.10	5.00	102.0	PASS
m-/p-Xylenes	2,291,457	4.92	5.07	97.2	PASS
o-Xylene	2,202,438	4.78	5.00	95.8	PASS
Styrene	1,783,379	4.99	4.87	102.5	PASS
Bromoform	1,501,183	5.32	5.02	106.0	PASS
Isopropylbenzene	3,100,356	5.02	5.08	98.9	PASS
1,1,2,2-Tetrachloroethane	1,706,987	4.68	5.00	93.5	PASS
n-Propylbenzene	3,559,625	4.93	5.09	97.0	PASS
4-Ethyltoluene	3,104,401	5.20	5.04	103.4	PASS
2-Chlorotoluene	2,494,036	4.75	5.04	94.4	PASS
1,3,5-Trimethylbenzene	2,491,518	4.95	5.02	98.7	PASS
1,2,4-Trimethylbenzene	2,532,226	5.14	4.97	103.4	PASS
1,3-Dichlorobenzene	1,716,681	5.92	5.05	117.3	PASS
1,4-Dichlorobenzene	1,682,772	6.13	5.02	122.2	PASS
Benzyl chloride	2,193,140	5.85	4.99	117.2	PASS
1,2-Dichlorobenzene	1,678,279	5.85	5.10	114.8	PASS
1,2,4-Trichlorobenzene	880,737	6.61	5.08	130.3	FAIL
Hexachlorobutadiene	983,393	4.07	5.01	81.2	PASS
Naphthalene	2,591,790	6.71	5.18	129.7	PASS

Sample Name : 5ppbv TO15 LCS

Sample Info : 50mL load; Can #000100; GCMSPrepPg800

Data File : X1903146.D

Dilution : 1

Pressurization Factor : 1.000

Acquisition Date : 2019-08-24 22:16:30

Instrument Method : TO15-SCN.M

Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
Propylene	5.29	0.0384	0.0350	9.11	0.0660	0.0602	
Freon 12 (CCI2F2)	4.08	0.0390	0.0350	20.2	0.193	0.173	
Freon 114 (C2CI2F4)	4.32	0.0400	0.0350	30.2	0.280	0.245	
Chloromethane	5.68	0.0390	0.0350	11.7	0.0805	0.0723	
Chloroethene (Vinyl chloride)	4.79	0.0402	0.0350	12.2	0.103	0.0895	
1,3-Butadiene	4.85	0.0391	0.0350	10.7	0.0865	0.0774	
Bromomethane	3.89	0.0396	0.0350	15.1	0.154	0.136	
Chloroethane	4.86	0.0403	0.0350	12.8	0.106	0.0924	
Bromoethene (Vinyl bromide)	4.50	0.0399	0.0350	19.7	0.174	0.153	
Freon 11 (CCI3F)	4.50	0.0415	0.0350	25.3	0.233	0.197	
Ethanol	6.10	0.100	0.0400	11.5	0.188	0.0754	
Acrolein	5.86	0.0397	0.0350	13.4	0.0911	0.0803	
Freon 113 (C2CI3F3)	5.09	0.0398	0.0350	39.0	0.305	0.268	
1,1-Dichloroethene	5.17	0.0400	0.0350	20.5	0.159	0.139	
Acetone	5.03	0.0402	0.0350	11.9	0.0955	0.0831	
Carbon disulfide	4.19	0.0402	0.0350	13.1	0.125	0.109	
Isopropyl alcohol	6.03	0.0402	0.0350	14.8	0.0987	0.0860	
Allyl chloride (3-chloropropene)	4.52	0.0402	0.0350	14.1	0.126	0.110	
Acetonitrile	6.35	0.0402	0.0350	10.7	0.0675	0.0588	
Methylene chloride	4.91	0.101	0.101	17.1	0.352	0.352	m
trans-1,2-Dichloroethene	5.36	0.0408	0.0350	21.2	0.162	0.139	
Methyl tert-butyl ether	4.90	0.0410	0.0350	17.7	0.148	0.126	
Acrylonitrile	6.31	0.0409	0.0350	13.7	0.0887	0.0760	
Hexane	5.83	0.0404	0.0350	20.6	0.143	0.123	
1,1-Dichloroethane	5.13	0.0394	0.0350	20.8	0.159	0.142	
Vinyl acetate	6.05	0.0407	0.0350	21.3	0.143	0.123	m
cis-1,2-Dichloroethene	5.53	0.0403	0.0350	21.9	0.160	0.139	m
Methyl ethyl ketone (2-Butanone)	4.76	0.0406	0.0350	14.0	0.120	0.103	
Ethyl acetate	5.80	0.0403	0.0350	20.9	0.145	0.126	
Chloroform	4.50	0.0404	0.0350	22.0	0.197	0.171	
Tetrahydrofuran	4.82	0.0404	0.0350	14.2	0.119	0.103	
1,1,1-Trichloroethane	4.41	0.0398	0.0350	24.1	0.217	0.191	
Cyclohexane	5.79	0.0407	0.0350	19.9	0.140	0.120	
Carbon tetrachloride	4.69	0.0405	0.0350	29.5	0.255	0.220	
Benzene	4.72	0.0399	0.0350	15.1	0.128	0.112	
2,2,4-trimethylpentane	6.06	0.0410	0.0350	28.3	0.192	0.164	
1,2-Dichloroethane	5.16	0.0409	0.0350	20.9	0.165	0.142	
Heptane	5.78	0.0402	0.0350	23.7	0.165	0.143	
Trichloroethene	5.33	0.0402	0.0350	28.6	0.216	0.188	
1,2-Dichloropropane	5.30	0.0409	0.0350	24.5	0.189	0.162	
Methyl methacrylate	4.97	0.0415	0.0350	20.3	0.170	0.143	
1,4-Dioxane	4.95	0.0404	0.0350	17.8	0.146	0.126	
Bromodichloromethane	4.59	0.0397	0.0350	30.8	0.266	0.235	
cis-1,3-Dichloropropene	4.78	0.0393	0.0350	21.7	0.178	0.159	
Methyl isobutyl ketone	6.31	0.0412	0.0350	25.8	0.169	0.143	
Toluene	4.63	0.0406	0.0350	17.5	0.153	0.132	
trans-1,3-Dichloropropene	4.89	0.0406	0.0350	22.2	0.184	0.159	
1,1,2-Trichloroethane	4.71	0.0401	0.0350	25.7	0.219	0.191	
Tetrachloroethene	5.48	0.0404	0.0350	37.1	0.274	0.237	
2-Hexanone (Methyl butyl ketone)	6.49	0.0406	0.0350	26.6	0.166	0.143	
Dibromochloromethane	4.97	0.0395	0.0350	42.4	0.336	0.298	
1,2-Dibromoethane	4.87	0.0405	0.0350	37.4	0.311	0.269	
Chlorobenzene	5.27	0.0412	0.0350	24.3	0.189	0.161	
Ethylbenzene	4.54	0.0394	0.0350	19.7	0.171	0.152	
1,1,1,2-Tetrachloroethane	5.10	0.0400	0.0350	35.0	0.275	0.240	
m-/p-Xylenes	4.92	0.0405	0.0350	21.4	0.176	0.152	

Sample Name : 5ppbv TO15 LCS

Sample Info : 50mL load; Can #000100; GCMSPrepPg800

Data File : X1903146.D

Dilution : 1

Pressurization Factor : 1.000

Acquisition Date : 2019-08-24 22:16:30

Instrument Method : TO15-SCN.M

Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
o-Xylene	4.78	0.0400	0.0350	20.8	0.174	0.152	
Styrene	4.99	0.0390	0.0350	21.3	0.166	0.149	
Bromoform	5.32	0.0402	0.0350	55.0	0.415	0.362	
1,1,2,2-Tetrachloroethane	4.68	0.0400	0.0350	32.1	0.275	0.240	
4-Ethyltoluene	5.20	0.0403	0.0350	25.6	0.198	0.172	
2-Chlorotoluene	4.75	0.0403	0.0350	24.6	0.209	0.181	
1,3,5-Trimethylbenzene	4.95	0.0401	0.0350	24.3	0.197	0.172	
1,2,4-Trimethylbenzene	5.14	0.0398	0.0350	25.3	0.195	0.172	
1,3-Dichlorobenzene	5.92	0.0404	0.0350	35.6	0.243	0.210	
1,4-Dichlorobenzene	6.13	0.0401	0.0350	36.8	0.241	0.210	
Benzyl chloride	5.85	0.0399	0.0350	30.3	0.207	0.181	
1,2-Dichlorobenzene	5.85	0.0408	0.0350	35.2	0.245	0.210	
1,2,4-Trichlorobenzene	6.61	0.0406	0.0350	49.1	0.301	0.260	
Hexachlorobutadiene	4.07	0.0401	0.0350	43.4	0.427	0.373	
Naphthalene	6.71	0.0414	0.0350	35.2	0.217	0.183	
1-Bromopropane	6.11	0.0395	0.0350	30.7	0.199	0.176	m
1-Octene	4.74	0.0391	0.0350	21.8	0.180	0.161	
n-Octane	4.82	0.0401	0.0350	22.5	0.187	0.164	
Isopropylbenzene	5.02	0.0406	0.0350	24.7	0.200	0.172	
n-Propylbenzene	4.93	0.0407	0.0350	24.2	0.200	0.172	

Internal Standards	Response	Retention Time (min)	Concentration (PPBV)	Flag *
Bromochloromethane (IS)	676,312	11.93	5.00	PASS
1,4-Difluorobenzene (IS)	2,642,788	13.69	5.04	PASS
Chlorobenzene-d5 (IS)	2,201,661	17.87	4.80	PASS

(ND) = Not Detected

* (J) = Below Calibration Range, (E) = Above Calibration Range, (m) = Manual Integration

IS Acceptance Criteria: RT +/- 20 sec, Response +/- 40%

Narrative Summary

Enthalpy Analytical Narrative Summary

Company	Tetra Tech, Inc.
Job #	0819-068 - EPA Method 16 (Canister) Analysis
Client #	TT-D1-128

Custody	<p>David Myers received the samples on 8/23/19 at ambient temperature after being relinquished by Tetra Tech, Inc. The samples were received in good condition.</p> <p>Prior to, during, and after analysis, the samples were kept under lock with access only to authorized personnel by Enthalpy Analytical, LLC.</p>
Analysis	<p>The samples were analyzed for hydrogen sulfide using the general analytical procedures in EPA Method 16.</p> <p>The samples and standards were introduced directly to the column using an automated multi-port Valco gas sampling valve equipped with a stainless steel loop. Hydrogen sulfide was referenced to gas phase standards prepared using a certified permeation device.</p> <p>Upon receipt, the canisters pressures were measured and recorded. The cans were then pressurized and a dilution ratio was calculated.</p> <p>The Hewlett Packard Model 5890, Series II Gas Chromatograph "Zeppo" (S/N 3235A4448X) was equipped with a Flame Photometric Detector for these analyses.</p>
Chromatographic Conditions	<p>The acquisition methods (DUALFPD8_SHORT.M and DUALFPD8.M) are included in the Raw Data section of this report.</p>
Calibration	<p>The calibration curve is included in the Raw Data section of this report and referenced in the Analysis Method column on the Detailed Results page.</p> <p>For each calibration curve used, the first page of the curve contains all method specific parameters (i.e., curve type, origin, weight, etc.) used to quantify the samples. The calibration curve section also includes a table with the Retention Time (RetTime), Level (Lvl), Amount (corresponding units), Area, Response Factor (Amt/Area) and the analyte Name. The calibration table is used to identify (by retention time) and quantify each target compound.</p>



Enthalpy Analytical Narrative Summary

(continued)

QC Notes

Hydrogen sulfide was not identified at a level greater than the MDL in the analysis of the laboratory zero air blank.

The analysis of a Laboratory Control Sample (*zeppo0463#LCS*), analyzed with the samples, exhibited a spike recovery value of 105%.

Reporting Notes

The results presented in this report are representative of the sample as provided to the laboratory.

Enthalpy Analytical Narrative Summary

Company	Tetra Tech, Inc.
Analyst	TDD
Parameters	EPA Method TO-15

Client #	Able Fire
Job #	0819-068
# Samples	4 Canisters

Custody

David Myers received the samples on 8/23/19 after being relinquished by Tetra Tech, Inc. The samples were received at ambient temperature and in good condition.

Prior to, during, and after analysis, the samples were kept under lock with access only to authorized personnel by Enthalpy Analytical, LLC.

Analysis

The samples were analyzed for the TO-15 target compound list using the analytical procedures in EPA Method TO-15, *Determination of Volatile Organic Compounds (VOCs) In Air Collected In Specially-Prepared Canisters And Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS)*.

Upon receipt, the canister pressures were measured and recorded. The canisters were then pressurized with UHP nitrogen and a dilution ratio was calculated for each canister. Refer to the Canister and Controller Data Sheet in the Lab QC section of this PDF report for sample pressurization factors.

All samples were analyzed undiluted.

The Agilent Technologies Model 6890N, Gas Chromatograph "Xavier" (S/N US10721018) equipped with a 5975C VL Mass Selective Detector (S/N US71215962) and a Restek Rtx-624 Sil MS, 60 m x 0.32 mm x 1.8 μ m capillary column (S/N 1555499) for these analyses. All samples and standards were introduced directly to the analyzer using an Entech 7100A Preconcentrator.

Calibration

The BFB tune analyses associated with the initial and continuing calibrations met method acceptance criteria. The initial calibration (**X082219A-TO15**) met the 30% RSD criteria with allowed exceptions. The initial calibration verification met the 70-130% recovery criteria with the exception of 1,2,4-trichlorobenzene and naphthalene. The continuing calibration met the 30% difference criteria with the exception of 1,2,4-trichlorobenzene and naphthalene. Calibration data has not been provided in this level 2 report, however is available upon request.



Enthalpy Analytical Narrative Summary (continued)

Chromatographic Conditions

A copy of the acquisition method (*TO15-SCN2.M*) has not been included in this report but is available upon request.

QC Notes

All internal standard area responses and retention time criteria were met for these analyses.

The laboratory humid blank associated with the analysis of these samples did not contain any of the target analytes at a concentration greater than 3-times the MDL value.

The Laboratory Control Sample (LCS) met the 70-130% recovery criteria with allowed exceptions. Compounds that failed to meet the 70-130% recovery resulted in a high bias.

The Laboratory Duplicate (LD) analyzed with this sample set met 25% difference acceptance criteria for all compounds reported over the LOQ.

The samples were analyzed within the 30-day holding time required by the method.

Reporting Notes

These analyses met the requirements of the TNI Standard. Any deviations from the requirements of the reference method or TNI Standard have been stated above.

The results presented in this report are representative of the samples as provided to the laboratory.

General Reporting Notes

The following are general reporting notes that are applicable to all Enthalpy Analytical, LLC data reports, unless specifically noted otherwise.

- Any analysis which refers to the method as “**Type**” represents a planned deviation from the reference method. For instance a Hydrogen Sulfide assay from a Tedlar bag would be labeled as “EPA Method 16-Type” because Tedlar bags are not mentioned as one of the collection options in EPA Method 16.
- The acronym **MDL** represents the Minimum Detection Limit. Below this value the laboratory cannot determine the presence of the analyte of interest reliably.
- The acronym **LOQ** represents the Limit of Quantification. Below this value the laboratory cannot quantitate the analyte of interest within the criteria of the method.
- The acronym **ND** following a value indicates a non-detect or analytical result below the MDL.
- The letter **J** in the Qualifier or Flag column in the results indicates that the value is between the MDL and the LOQ. The laboratory can positively identify the analyte of interest as present, but the value should be considered an estimate.
- The letter **E** in the Qualifier or Flag column indicates an analytical result exceeding 100% of the highest calibration point. The associated value should be considered as an estimate.
- Sample results are presented ‘as measured’ for single injection methodologies, or an average value if multiple injections are made. If all injections are below the MDL, the sample is considered non-detect and the ND value is presented. If one, but not all, are below the MDL, the MDL value is used for any injections that are below the MDL. For example, if the MDL is 0.500 and LOQ is 1.00, and the instrument measures 0.355, 0.620, and 0.442 - the result reported is the average of 0.500, 0.620, and 0.500 - - - i.e. 0.540 with a J flag.
- When a spike recovery (Bag Spike, Collocated Spike Train, or liquid matrix spike) is being calculated, the native (unspiked) sample result is used in the calculations, as long as the value is above the MDL. If a sample is ND, then 0 is used as the native amount (not the MDL value).
- The acronym **DF** represents Dilution Factor. This number represents dilution of the sample during the preparation and/or analysis process. The analytical result taken from a laboratory instrument is multiplied by the DF to determine the final undiluted sample results.
- The addition of **MS** to the Sample ID represents a Matrix Spike. An aliquot of an actual sample is spiked with a known amount of analyte so that a percent recovery value can be determined. The MS analysis indicates what effect the sample matrix may have on the target analyte, i.e. whether or not anything in the sample matrix interferes with the analysis of the analyte(s).



General Reporting Notes

(continued)

- The addition of **MSD** to the Sample ID represents a Matrix Spike Duplicate. Prepared in the same manner as a MS, the use of duplicate matrix spikes allows further confirmation of laboratory quality by showing the consistency of results gained by performing the same steps multiple times.
- The addition of **LD** to the Sample ID represents a Laboratory Duplicate. The analyst prepares an additional aliquot of sample for testing and the results of the duplicate analysis are compared to the initial result. The result should have a difference value of within 10% of the initial result (if the results of the original analysis are greater than the LOQ).
- The addition of **AD** to the Sample ID represents an Alternate Dilution. The analyst prepares an additional aliquot at a different dilution factor (usually double the initial factor). This analysis helps confirm that no additional compound is present and coeluting or sharing absorbance with the analyte of interest, as they would have a different response/absorbance than the analyte of interest.
- The Sample ID **LCS** represents a Laboratory Control Sample. Clean matrix, similar to the client sample matrix, prepared and analyzed by the laboratory using the same reagents, spiking standards and procedures used for the client samples. The LCS is used to assess the control of the laboratory's analytical system. Whenever spikes are prepared for our client projects, two spikes are retained as LCSs. The LCSs are labeled with the associated project number and kept in-house at the appropriate temperature conditions. When the project samples are received for analysis, the LCSs are analyzed to confirm that the analyte could be recovered from the media, separate from the samples which were used on the project and which may have been affected by source matrix, sample collection, and/or sample transport.
- **Significant Figures:** Where the reported value is much greater than unity (1.00) in the units expressed, the number is rounded to a whole number of units, rather than to 3 significant figures. For example, a value of 10,456.45 ug catch is rounded to 10,456 ug. There are five significant digits displayed, but no confidence should be placed on more than two significant digits. In the case of small numbers, generally 3 significant figures are presented, but still only 2 should be used with confidence. Many neat materials are only certified to 3 digits, and as the mathematically correct final result is always 1 digit less than all its pre-cursors - 2 significant figures are what are most defensible.
- **Manual Integration:** The data systems used for processing will flag manually integrated peaks with an "M". There are several reasons a peak may be manually integrated. These reasons will be identified by the following two letter designations on sample chromatograms, if provided in the report. The peak was *not integrated* by the software "**NI**", the peak was *integrated incorrectly* by the software "**II**" or the *wrong peak* was integrated by the software "**WP**". These codes will accompany the analyst's manual integration stamp placed next to the compound name on the chromatogram.

Sample Custody

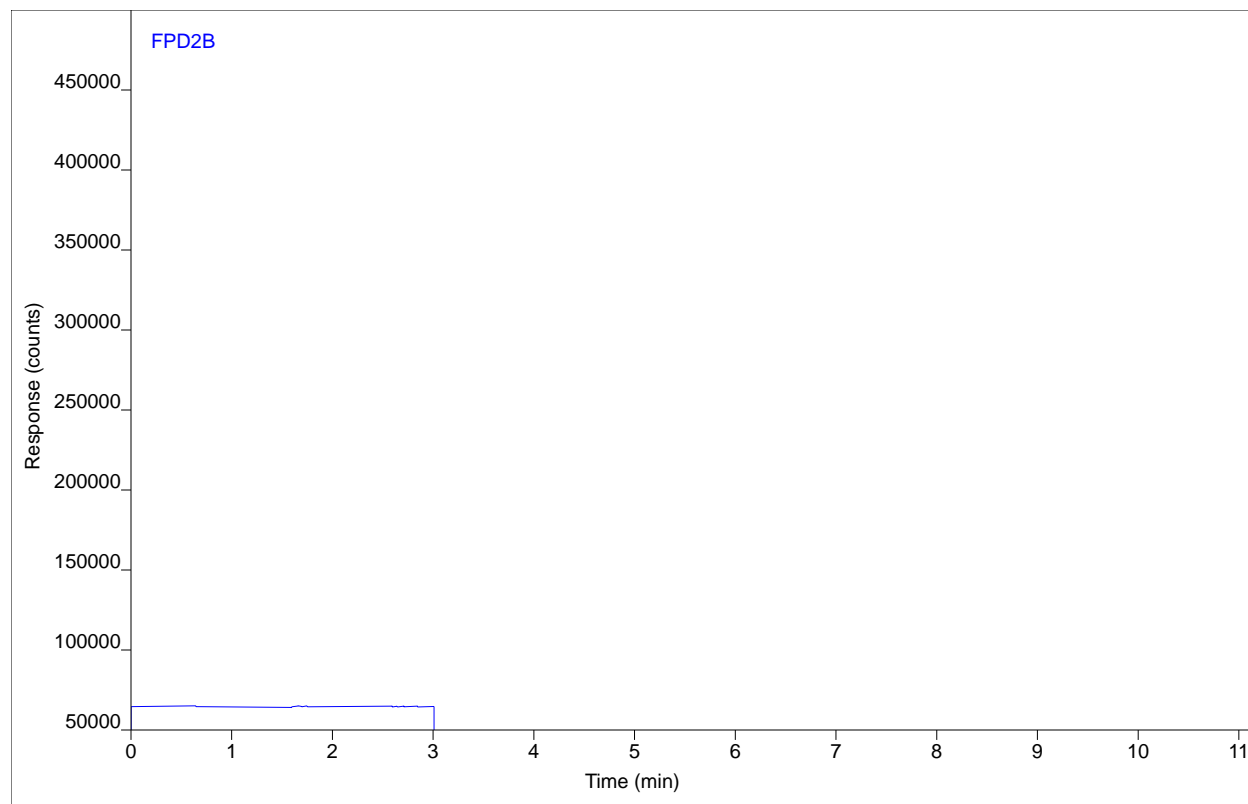
Raw Data

Chromatogram Report

Sample Name 0819-068.Can 0807.Can
Sequence Name ZEPPOP0463B ver.2
Inj Data File 005B1001.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/23/2019 1:19 PM
File Modified 8/26/2019 9:57 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 5
Injection Volume NA
Injection 1 of 3
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/26/2019 10:06 AM



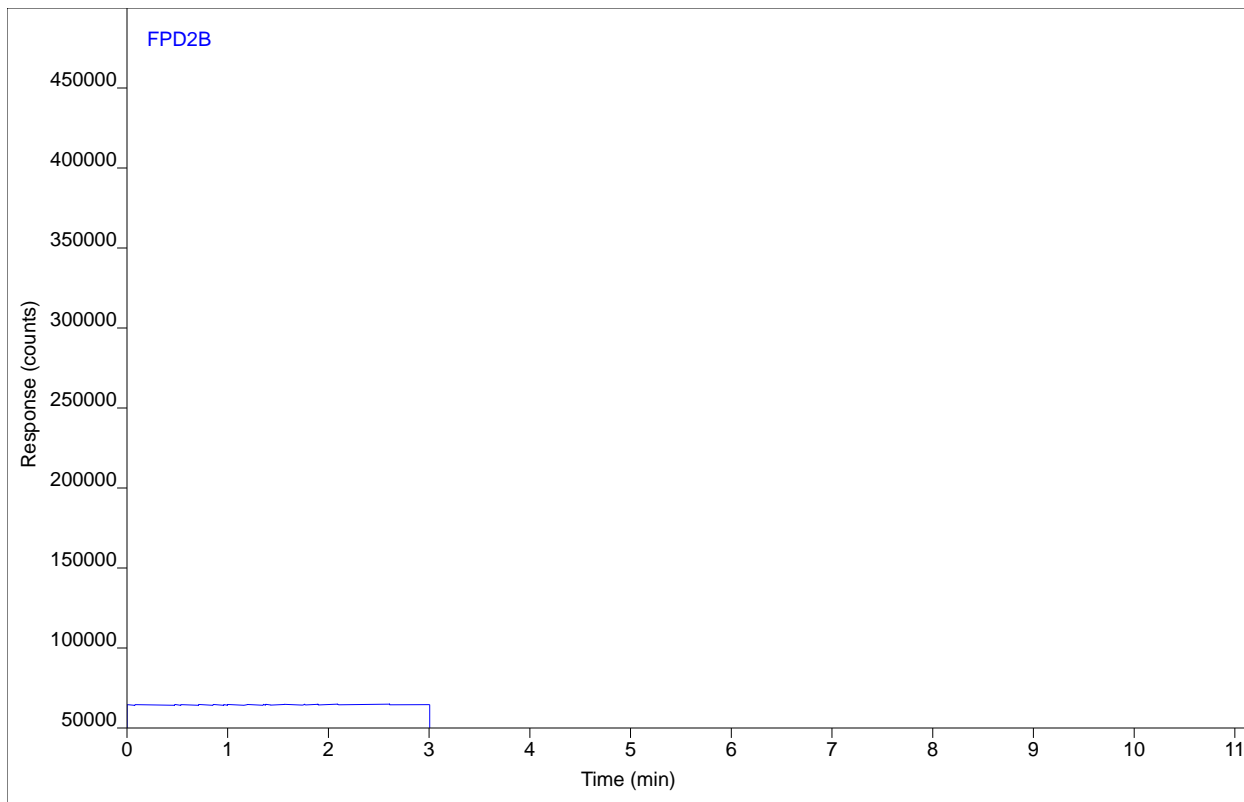
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide		(1.89)				1		

Chromatogram Report

Sample Name 0819-068.Can 0807.Can
Sequence Name ZEPPOP0463B ver.2
Inj Data File 005B1002.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/23/2019 1:24 PM
File Modified 8/26/2019 9:57 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 5
Injection Volume NA
Injection 2 of 3
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/26/2019 10:06 AM



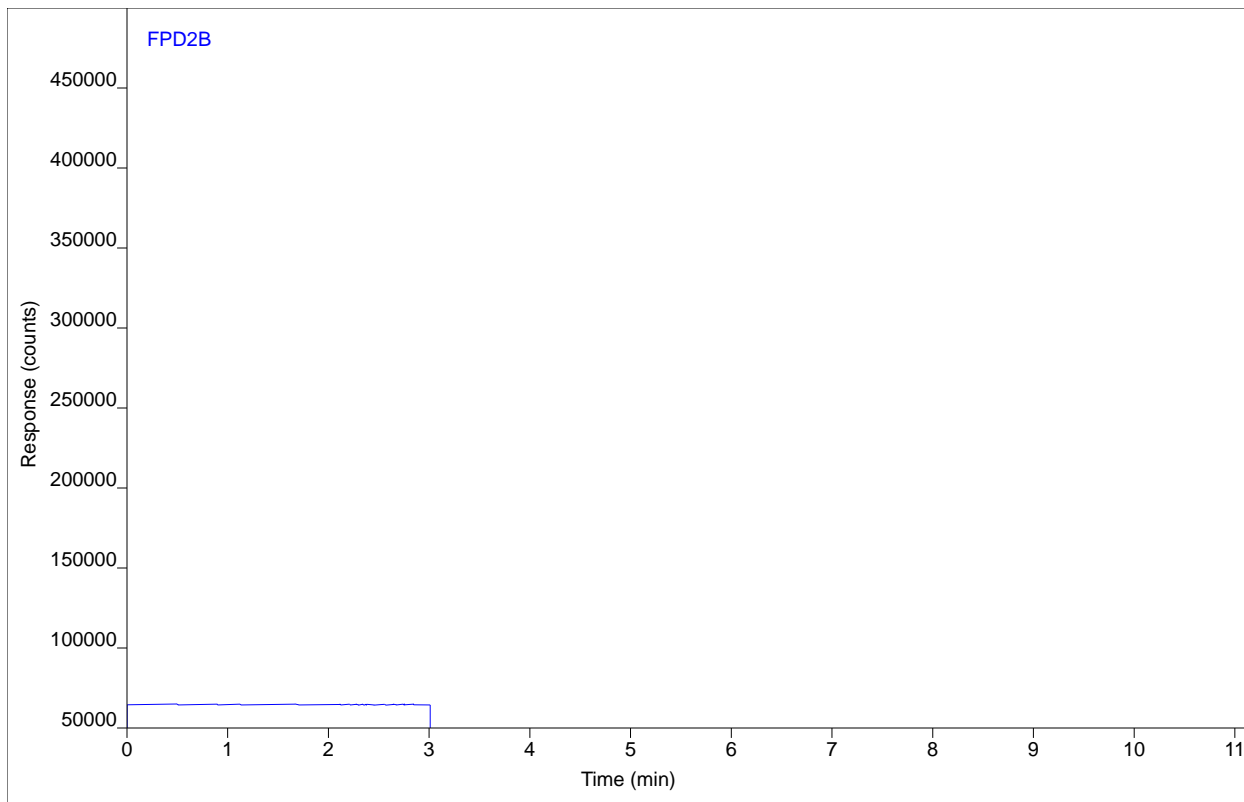
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide		(1.89)				1		

Chromatogram Report

Sample Name 0819-068.Can 0807.Can
Sequence Name ZEPPOP0463B ver.2
Inj Data File 005B1003.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/23/2019 1:28 PM
File Modified 8/26/2019 9:57 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 5
Injection Volume NA
Injection 3 of 3
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/26/2019 10:06 AM



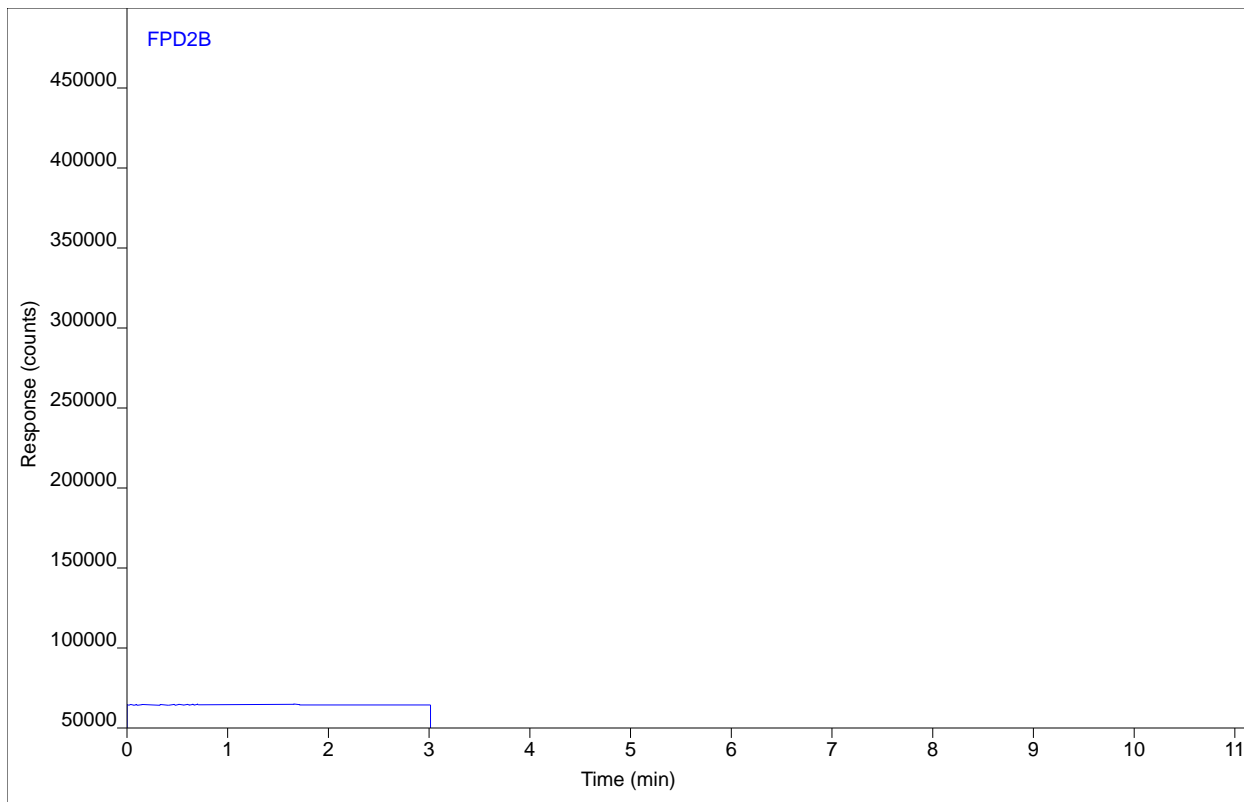
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide		(1.89)				1		

Chromatogram Report

Sample Name 0819-068.Can 0811.Can
Sequence Name ZEPPOP0463B ver.2
Inj Data File 005B1201.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/23/2019 2:40 PM
File Modified 8/26/2019 9:57 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 5
Injection Volume NA
Injection 1 of 3
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/26/2019 10:06 AM



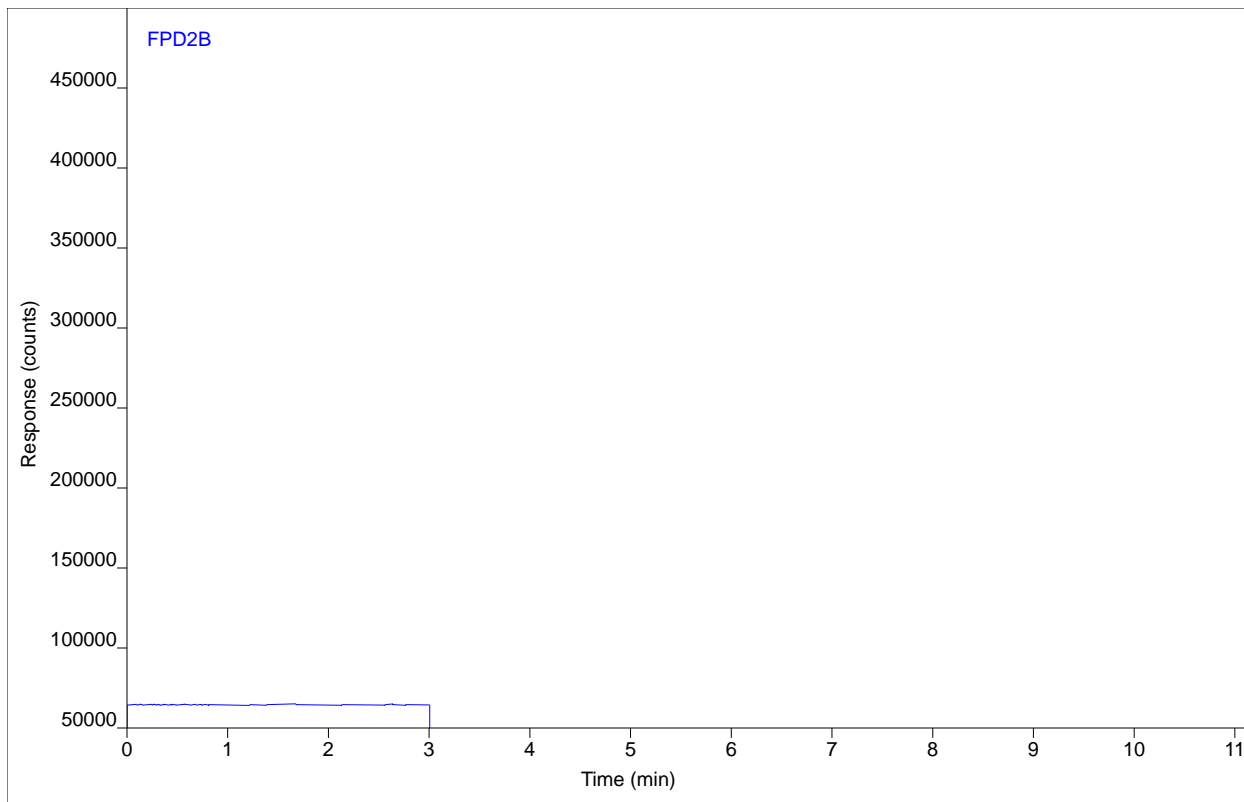
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide		(1.89)				1		

Chromatogram Report

Sample Name 0819-068.Can 0811.Can
Sequence Name ZEPPOP0463B ver.2
Inj Data File 005B1202.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/23/2019 2:44 PM
File Modified 8/26/2019 9:57 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 5
Injection Volume NA
Injection 2 of 3
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/26/2019 10:06 AM



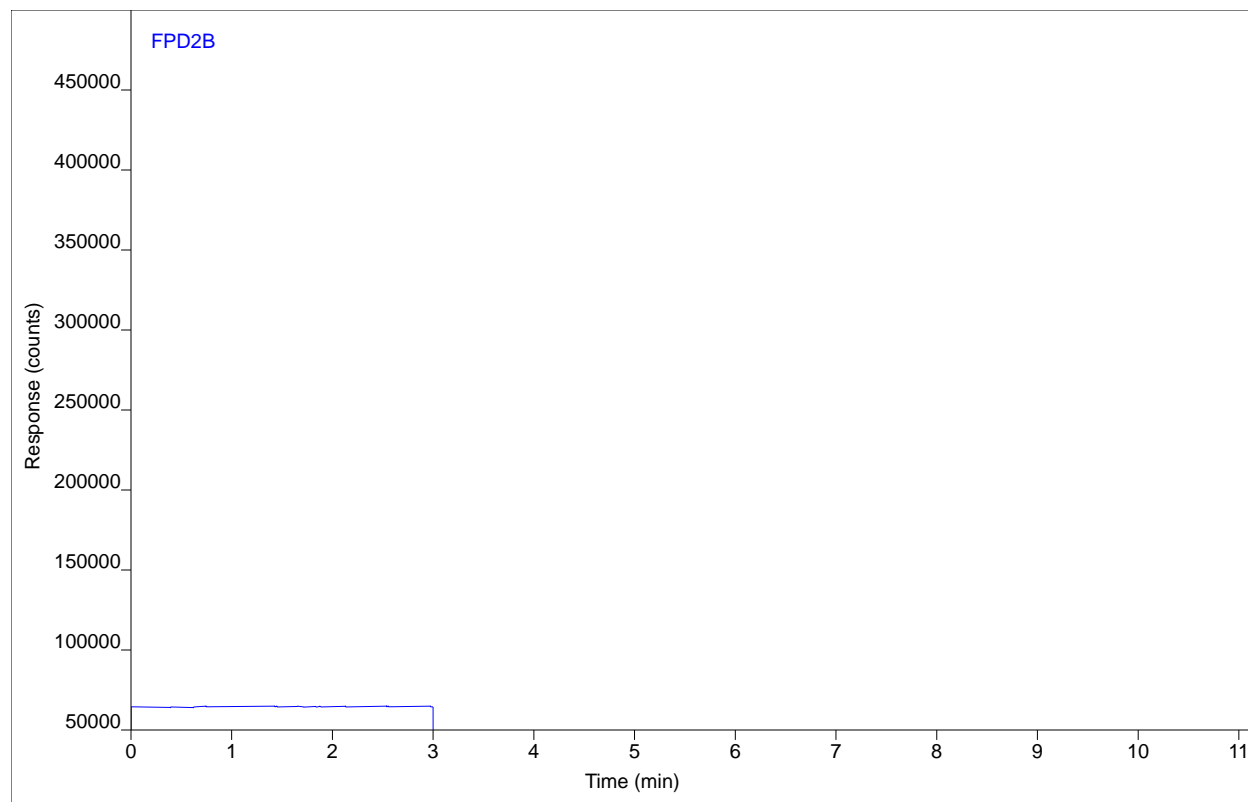
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide		(1.89)				1		

Chromatogram Report

Sample Name 0819-068.Can 0811.Can
Sequence Name ZEPPOP0463B ver.2
Inj Data File 005B1203.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/23/2019 2:49 PM
File Modified 8/26/2019 9:57 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 5
Injection Volume NA
Injection 3 of 3
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/26/2019 10:06 AM



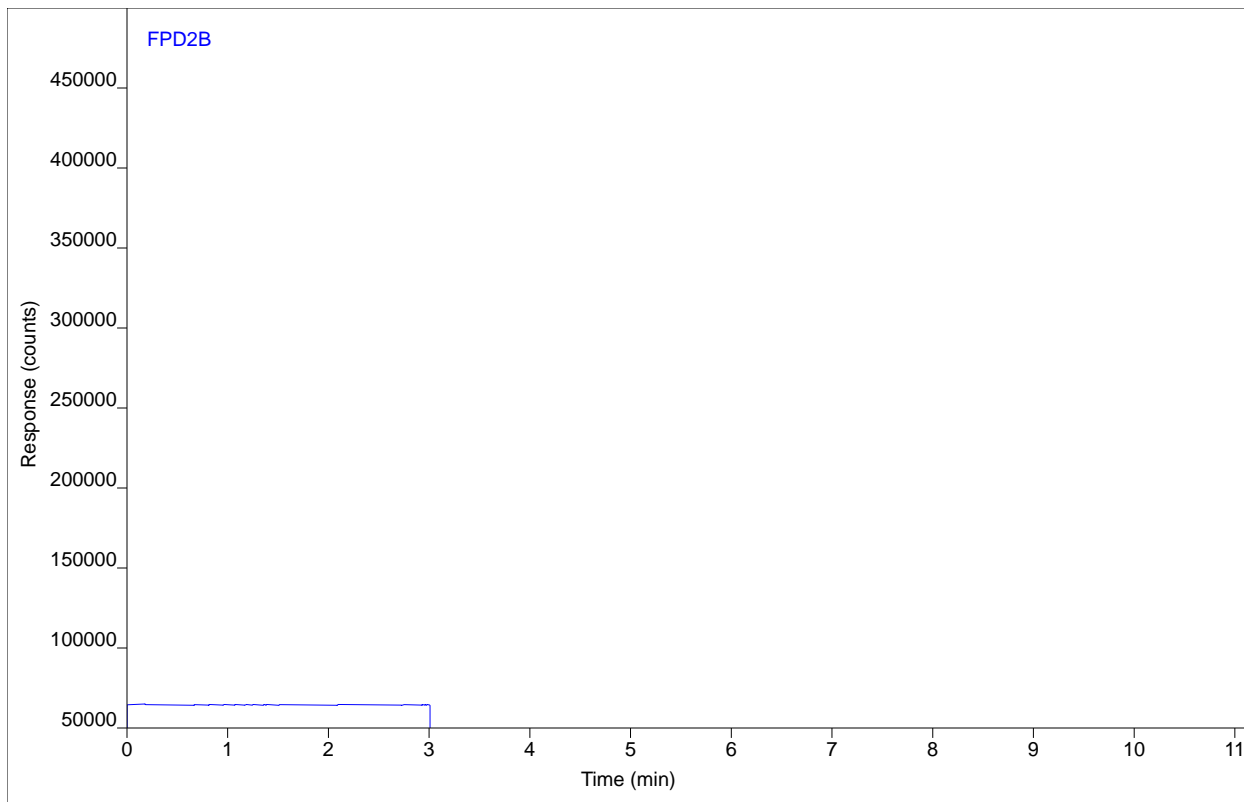
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide		(1.89)				1		

Chromatogram Report

Sample Name 0819-068.Can 0826.Can
Sequence Name ZEPPOP0463B ver.2
Inj Data File 005B1101.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/23/2019 1:33 PM
File Modified 8/26/2019 9:57 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 5
Injection Volume NA
Injection 1 of 3
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/26/2019 10:06 AM



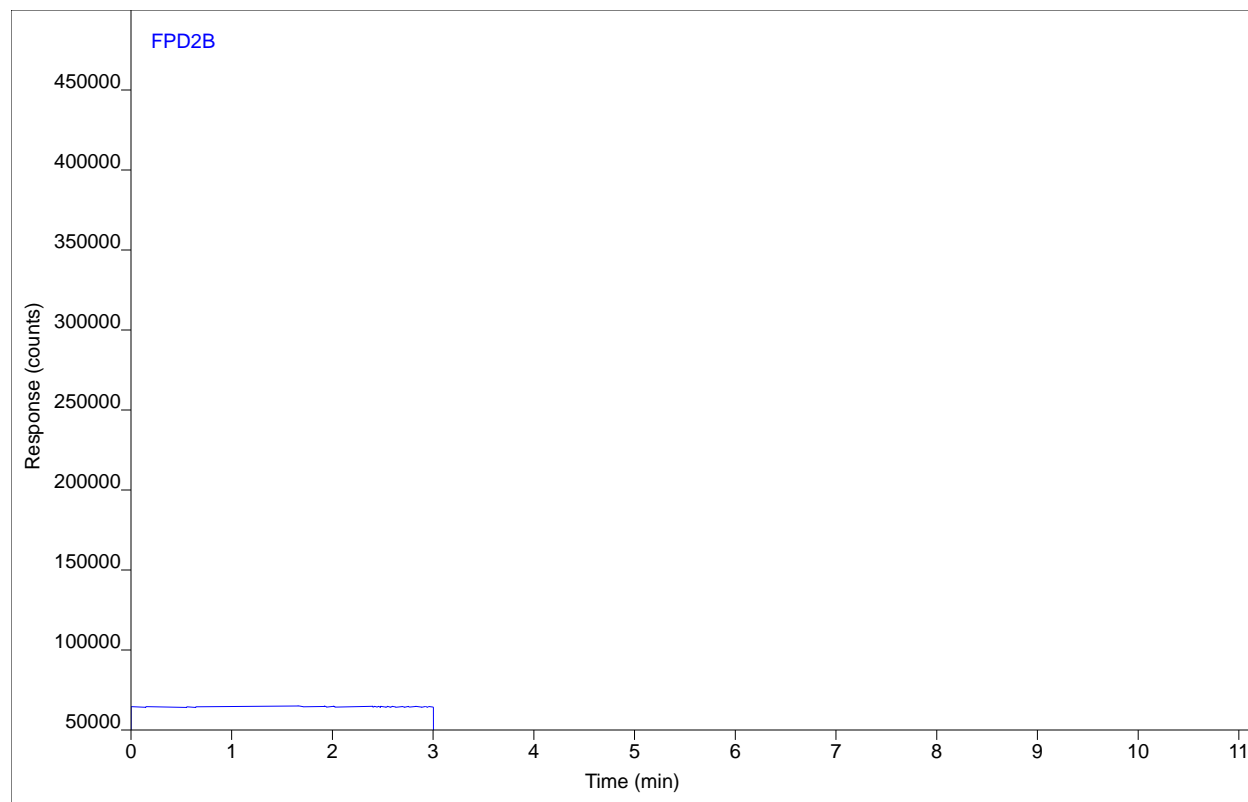
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide		(1.89)				1		

Chromatogram Report

Sample Name 0819-068.Can 0826.Can
Sequence Name ZEPPOP0463B ver.2
Inj Data File 005B1102.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/23/2019 1:37 PM
File Modified 8/26/2019 9:57 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 5
Injection Volume NA
Injection 2 of 3
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/26/2019 10:06 AM



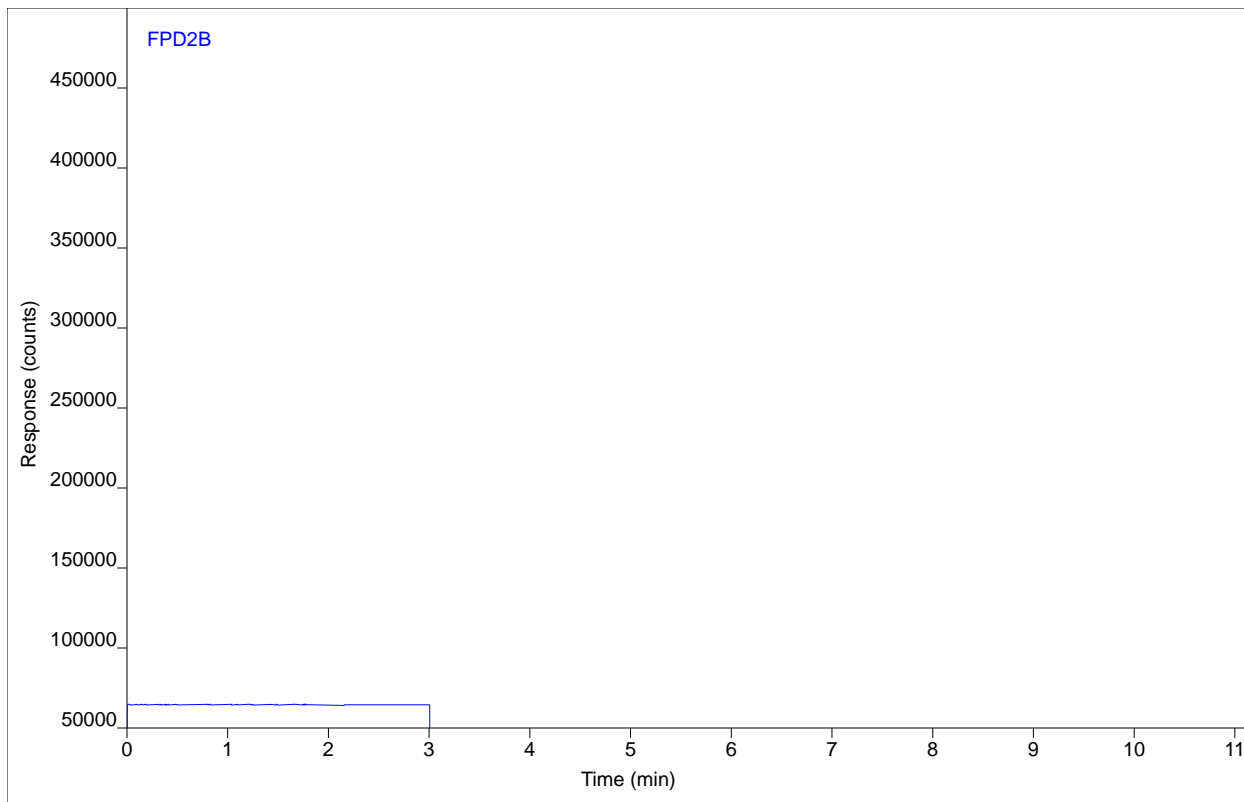
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide		(1.89)				1		

Chromatogram Report

Sample Name 0819-068.Can 0826.Can
Sequence Name ZEPPOP0463B ver.2
Inj Data File 005B1103.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/23/2019 1:42 PM
File Modified 8/26/2019 9:57 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 5
Injection Volume NA
Injection 3 of 3
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/26/2019 10:06 AM



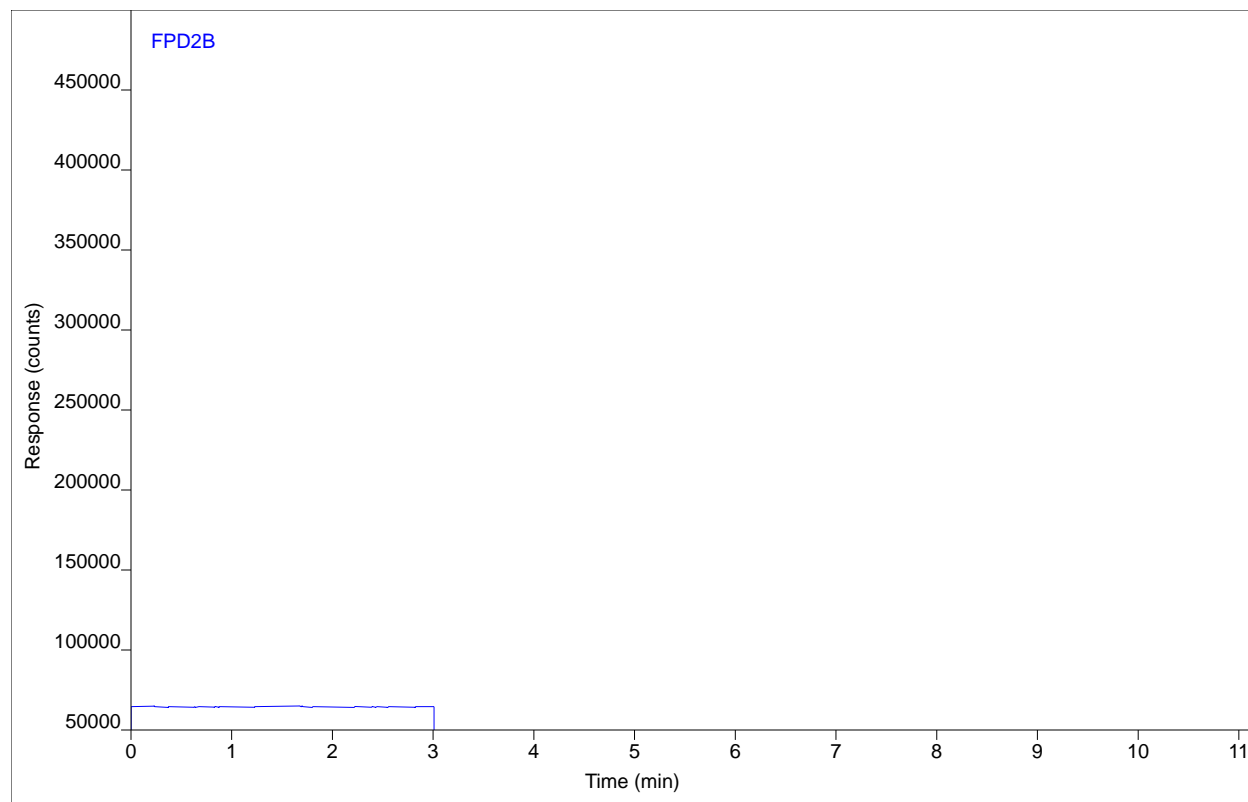
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide		(1.89)				1		

Chromatogram Report

Sample Name 0819-068.Can 0762.Can
Sequence Name ZEPPOP0463B ver.2
Inj Data File 005B0901.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/23/2019 1:04 PM
File Modified 8/26/2019 9:57 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 5
Injection Volume NA
Injection 1 of 3
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/26/2019 10:06 AM



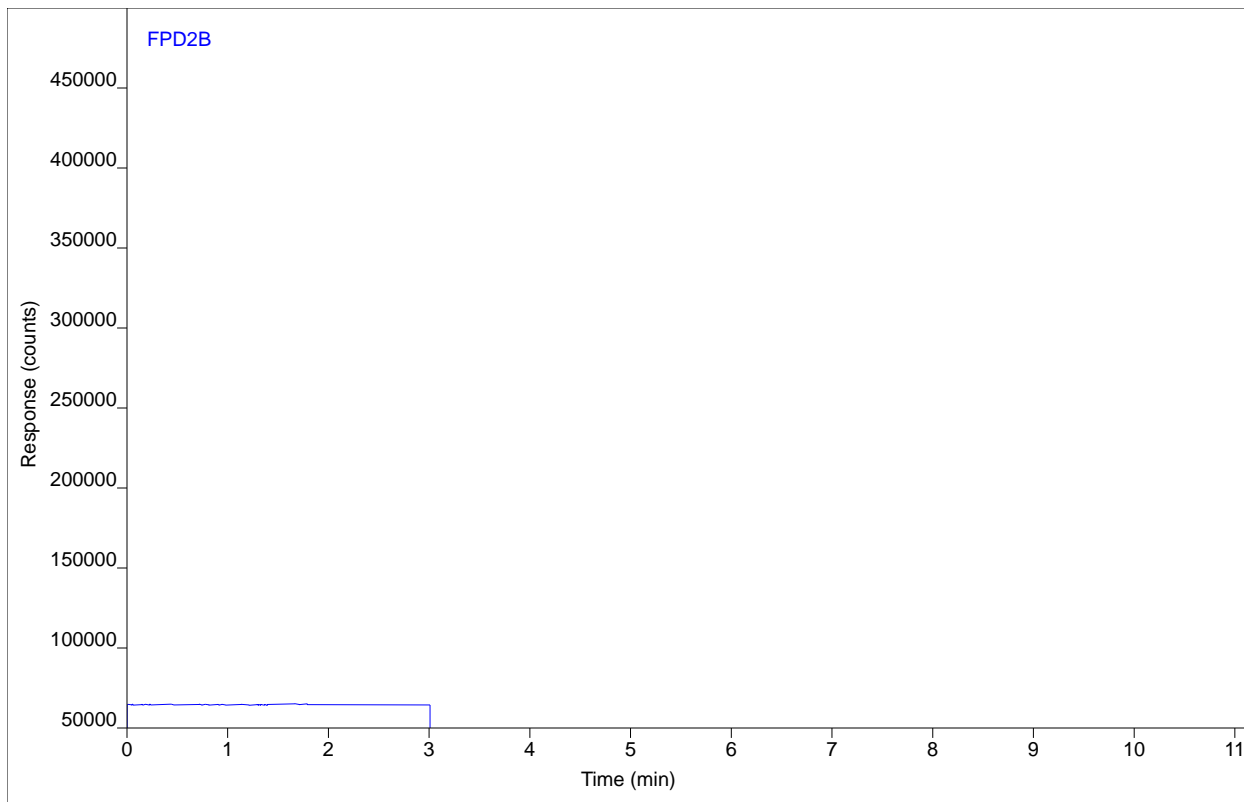
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide		(1.89)				1		

Chromatogram Report

Sample Name 0819-068.Can 0762.Can
Sequence Name ZEPPOP0463B ver.2
Inj Data File 005B0902.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/23/2019 1:09 PM
File Modified 8/26/2019 9:57 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 5
Injection Volume NA
Injection 2 of 3
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/26/2019 10:06 AM



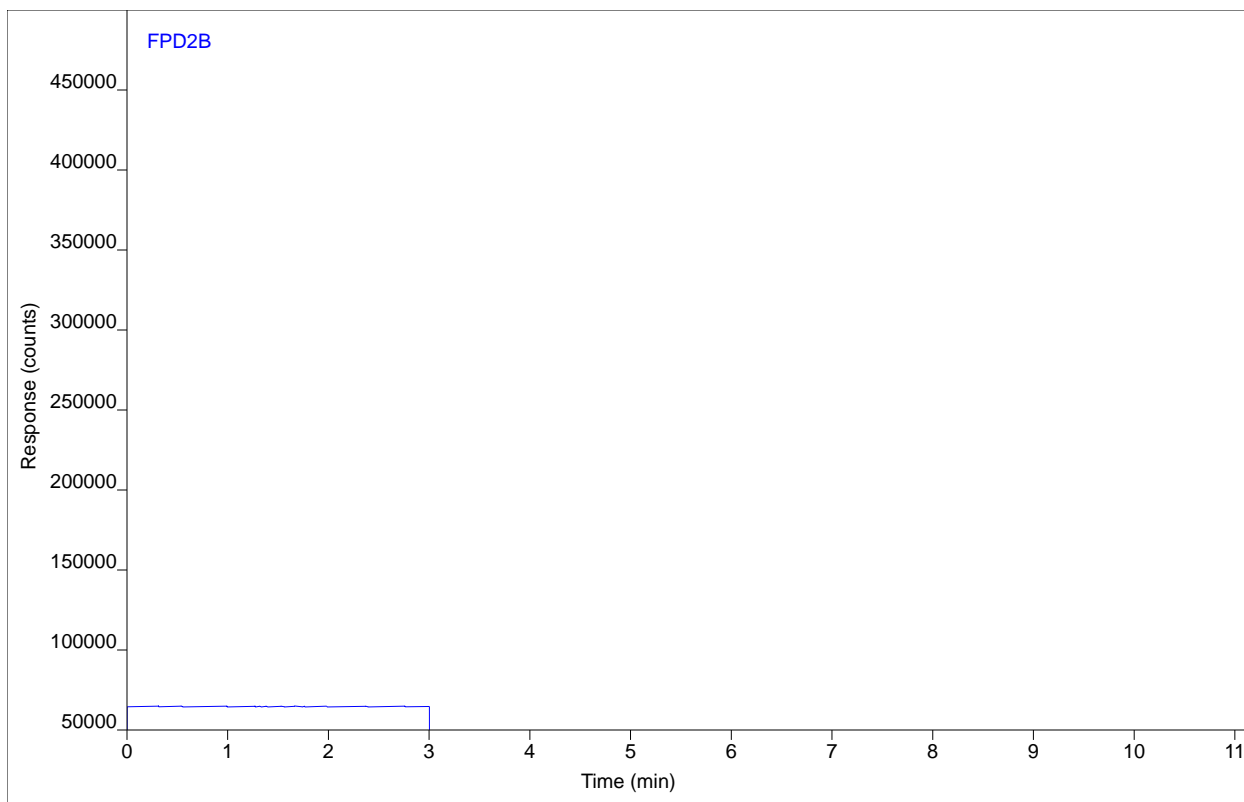
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide		(1.89)				1		

Chromatogram Report

Sample Name 0819-068.Can 0762.Can
Sequence Name ZEPPOP0463B ver.2
Inj Data File 005B0903.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/23/2019 1:13 PM
File Modified 8/26/2019 9:57 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 5
Injection Volume NA
Injection 3 of 3
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/26/2019 10:06 AM



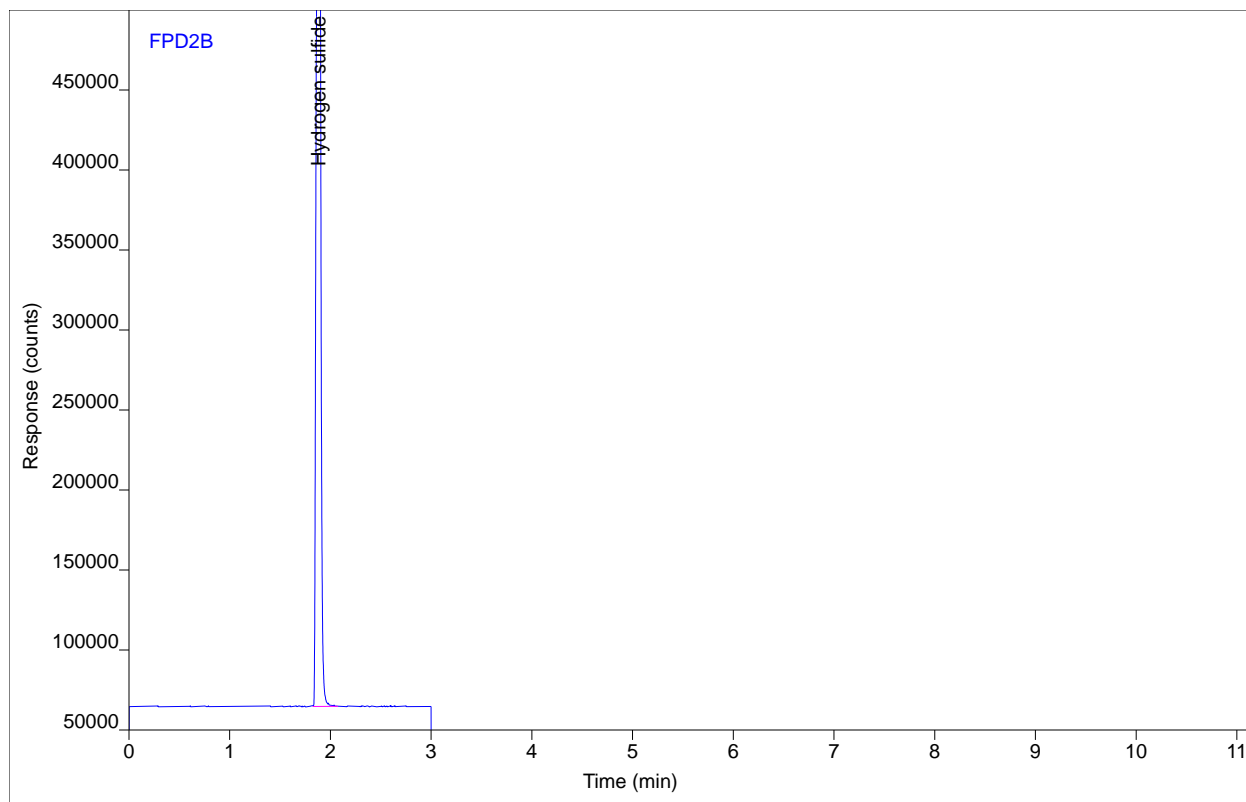
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide		(1.89)				1		

Chromatogram Report

Sample Name zeppoP0463 #LCS
Sequence Name ZEPPOP0463B ver.2
Inj Data File 005B0602.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/23/2019 7:39 AM
File Modified 8/26/2019 9:57 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 5
Injection Volume NA
Injection 2 of 4
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/26/2019 10:06 AM



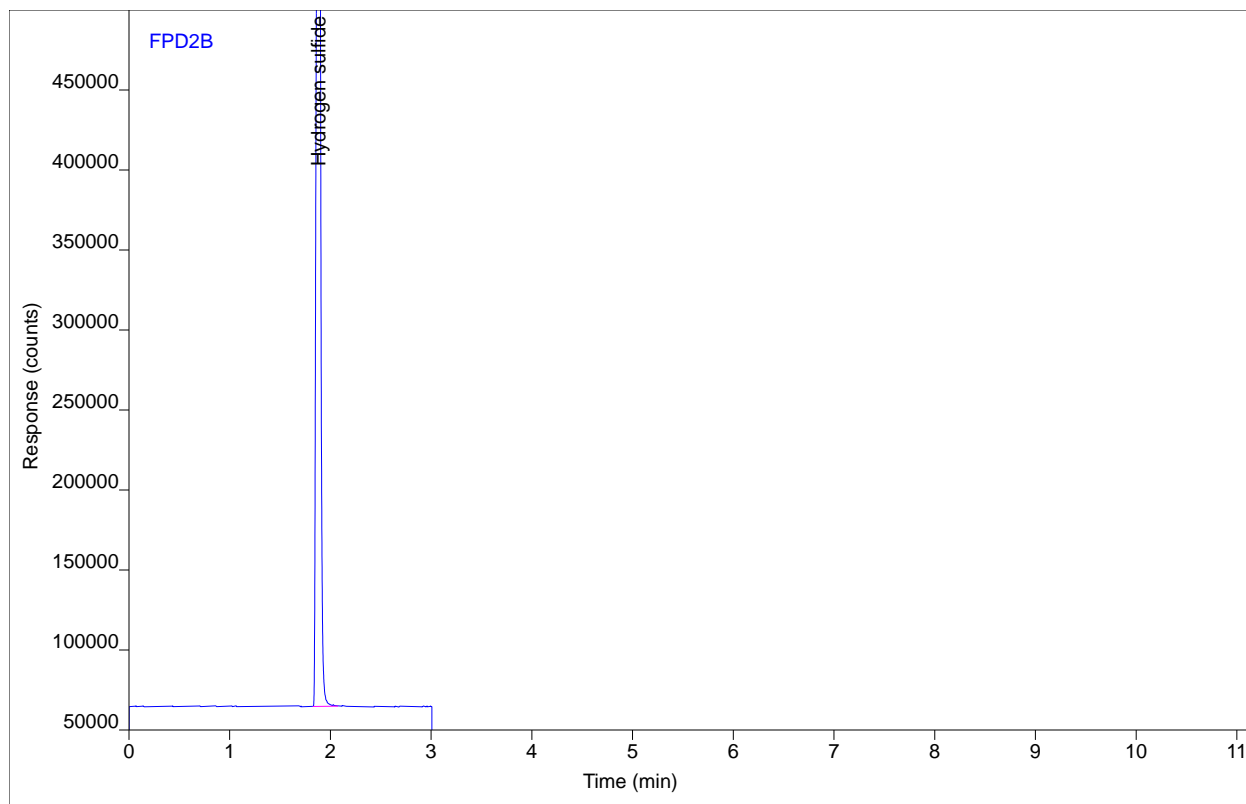
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide	BB	1.88	2005058	673093	7.23755	1	7.23755	ppmv

Chromatogram Report

Sample Name zeppoP0463 #LCS
Sequence Name ZEPPOP0463B ver.2
Inj Data File 005B0603.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/23/2019 7:43 AM
File Modified 8/26/2019 9:57 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 5
Injection Volume NA
Injection 3 of 4
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/26/2019 10:06 AM



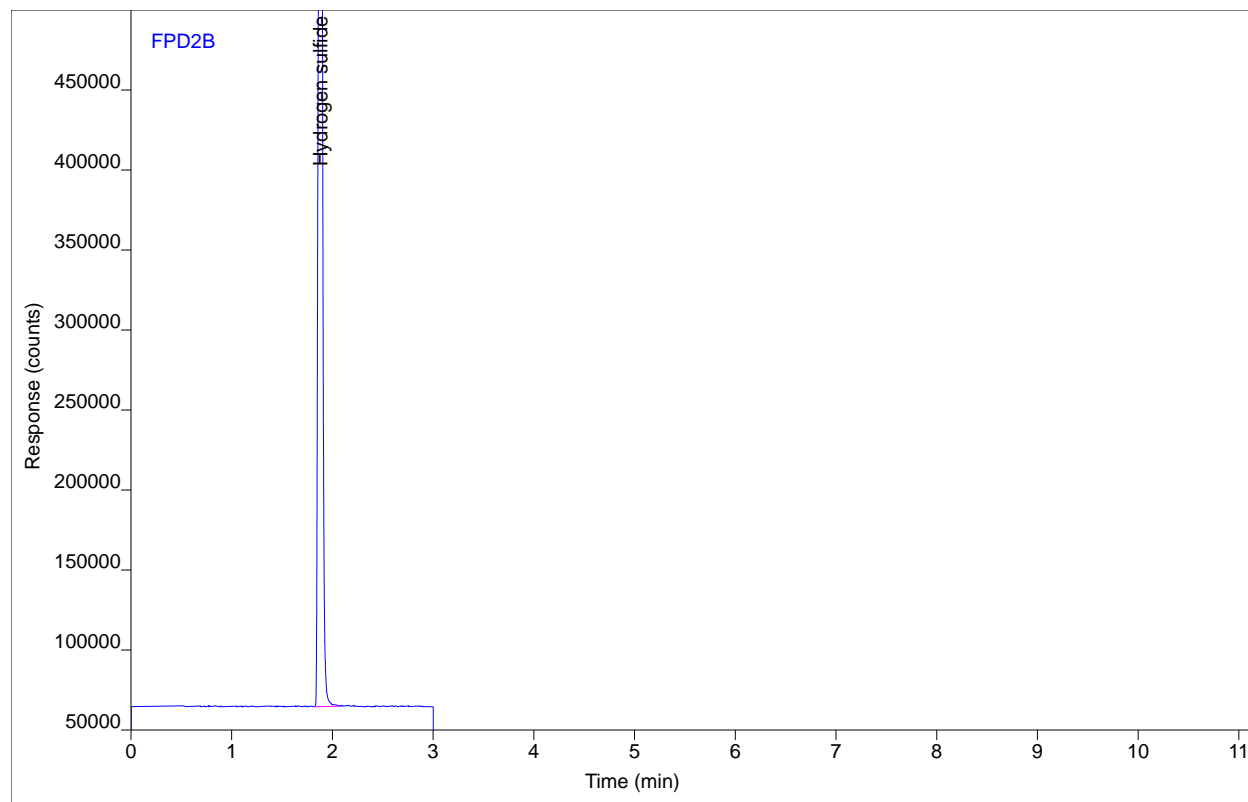
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide	BB	1.88	2036929	695026	7.29369	1	7.29369	ppmv

Chromatogram Report

Sample Name zeppoP0463 #LCS
Sequence Name ZEPPOP0463B ver.2
Inj Data File 005B0604.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/23/2019 7:48 AM
File Modified 8/26/2019 9:57 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 5
Injection Volume NA
Injection 4 of 4
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/26/2019 10:06 AM



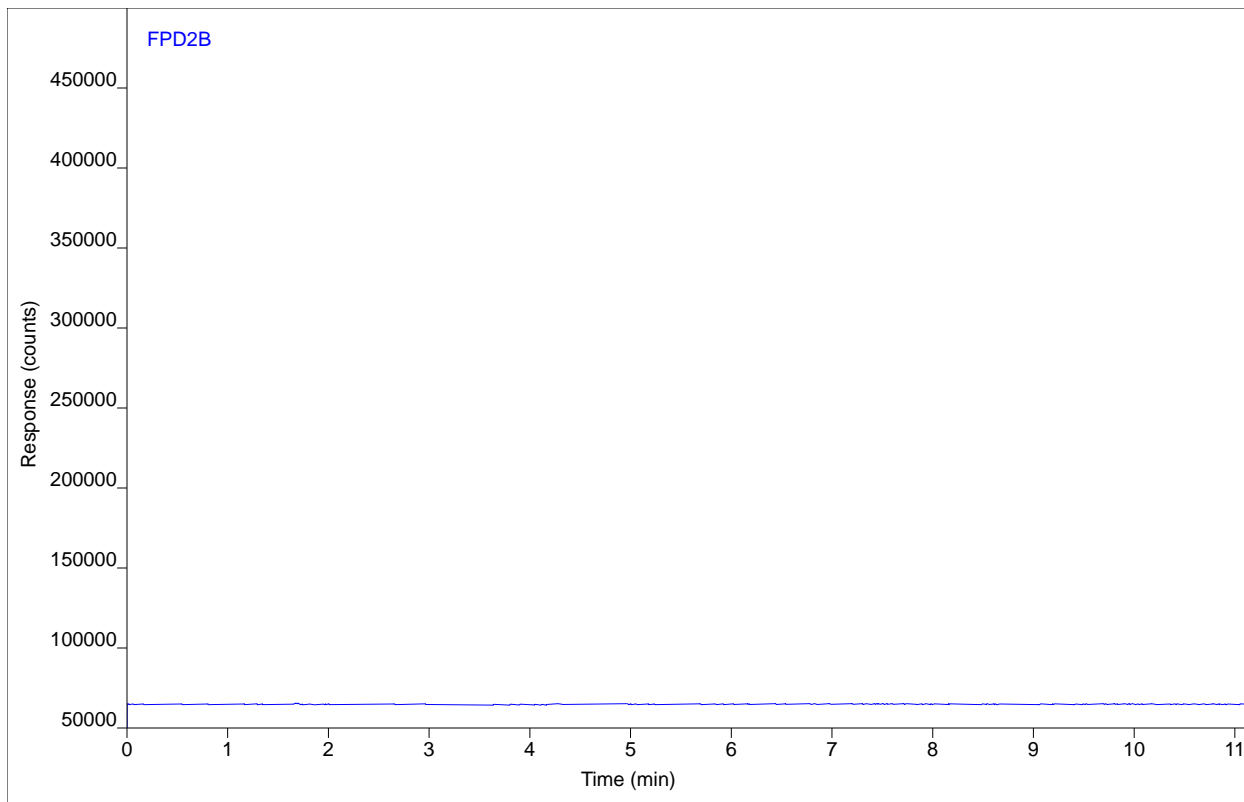
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide	BB	1.88	2066153	705261	7.34478	1	7.34478	ppmv

Chromatogram Report

Sample Name zeppoP0204 #MB
Sequence Name ZEPPOP0463B ver.2
Inj Data File 005B0701.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/23/2019 7:52 AM
File Modified 8/26/2019 9:57 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Control
Vial Number Vial 5
Injection Volume NA
Injection 1 of 3
Acquisition Method DUALFPD8.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/26/2019 10:06 AM



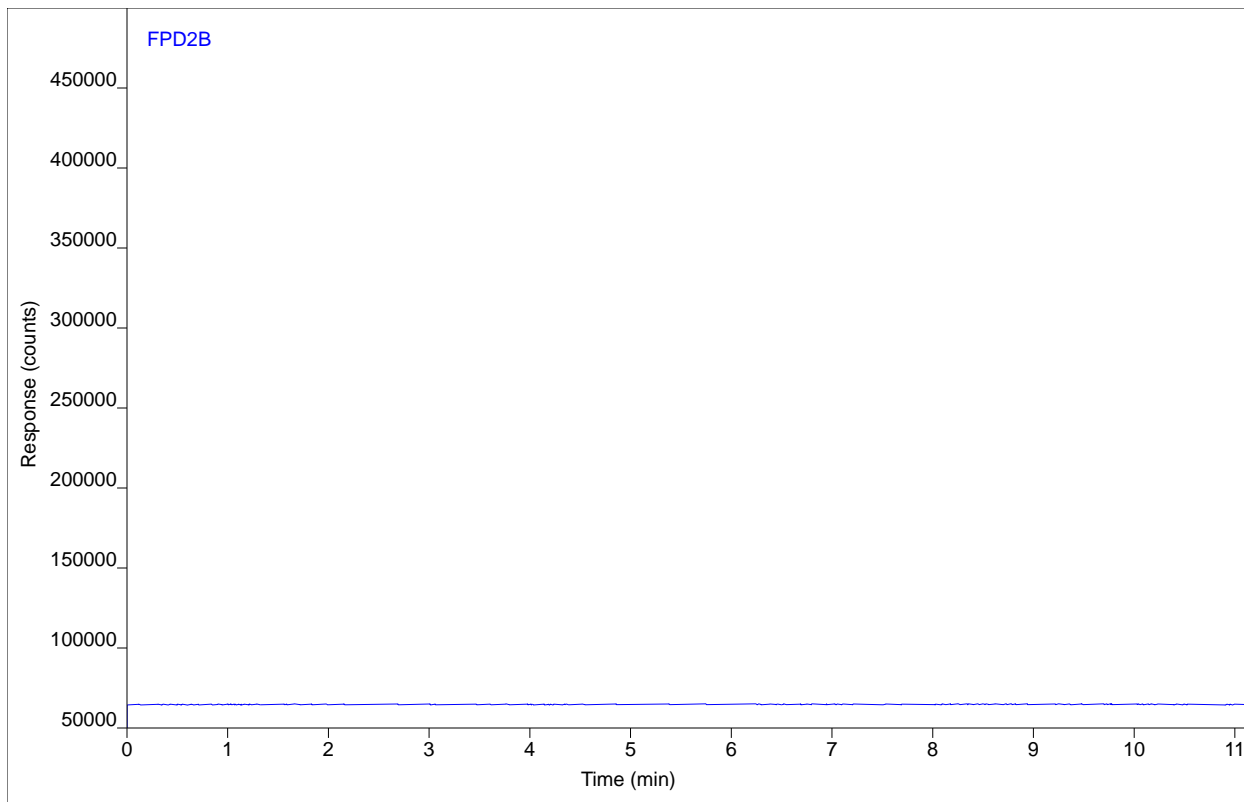
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide		(1.89)				1		

Chromatogram Report

Sample Name zeppoP0204 #MB
Sequence Name ZEPPOP0463B ver.2
Inj Data File 005B0702.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/23/2019 8:08 AM
File Modified 8/26/2019 9:57 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Control
Vial Number Vial 5
Injection Volume NA
Injection 2 of 3
Acquisition Method DUALFPD8.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/26/2019 10:06 AM



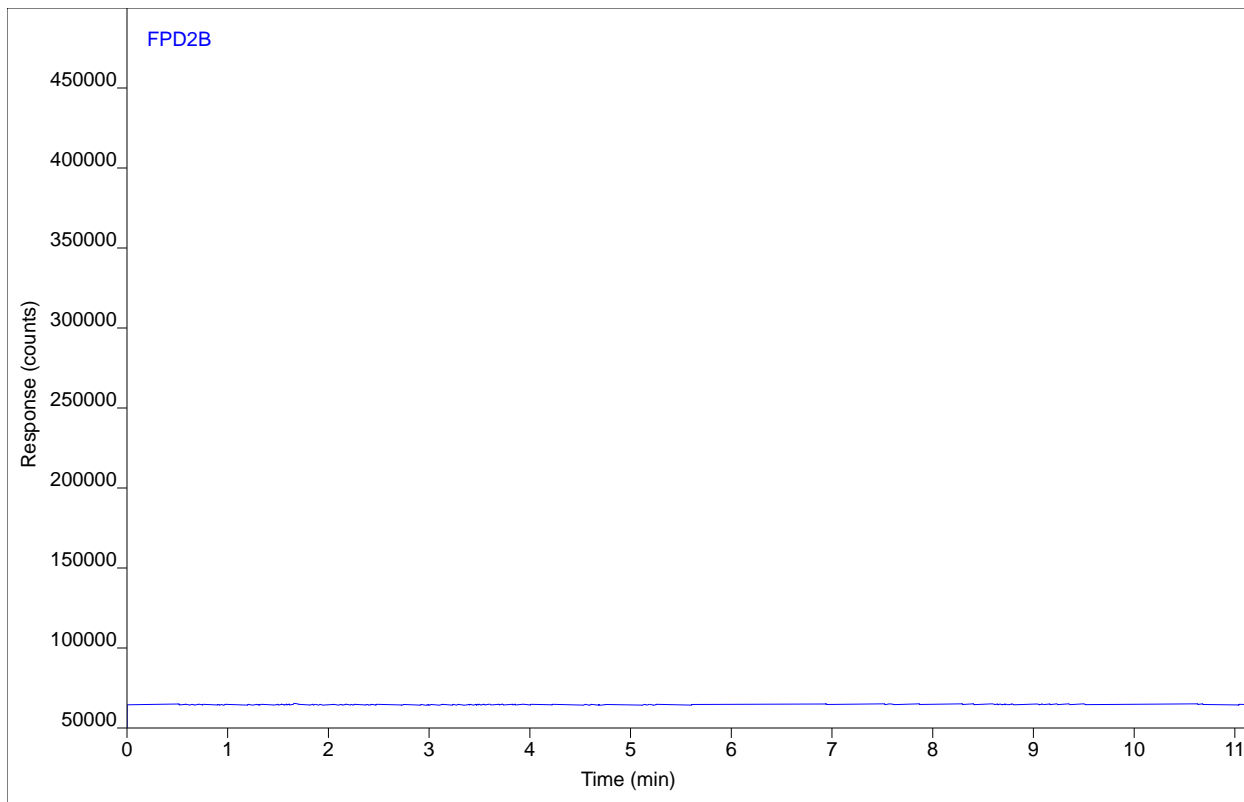
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide		(1.89)				1		

Chromatogram Report

Sample Name zeppoP0204 #MB
Sequence Name ZEPPOP0463B ver.2
Inj Data File 005B0703.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/23/2019 8:24 AM
File Modified 8/26/2019 9:57 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Control
Vial Number Vial 5
Injection Volume NA
Injection 3 of 3
Acquisition Method DUALFPD8.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/26/2019 10:06 AM



Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide		(1.89)				1		

```
=====
                        Calibration Table
=====
```

Calib. Data Modified : Tuesday, August 13, 2019 9:57:36 AM

Rel. Reference Window : 2.500 %
 Abs. Reference Window : 0.000 min
 Rel. Non-ref. Window : 5.000 %
 Abs. Non-ref. Window : 0.100 min
 Uncalibrated Peaks : using compound Hydrogen sulfide
 Partial Calibration : Yes, identified peaks are recalibrated
 Correct All Ret. Times: No, only for identified peaks

Curve Type : Power
 Origin : Ignored
 Weight : Equal

Recalibration Settings:
 Average Response : Average all calibrations
 Average Retention Time: Floating Average New 75%

Calibration Report Options :
 Printout of recalibrations within a sequence:
 Calibration Table after Recalibration
 Normal Report after Recalibration
 If the sequence is done with bracketing:
 Results of first cycle (ending previous bracket)

Signal 1: FPD2 B,

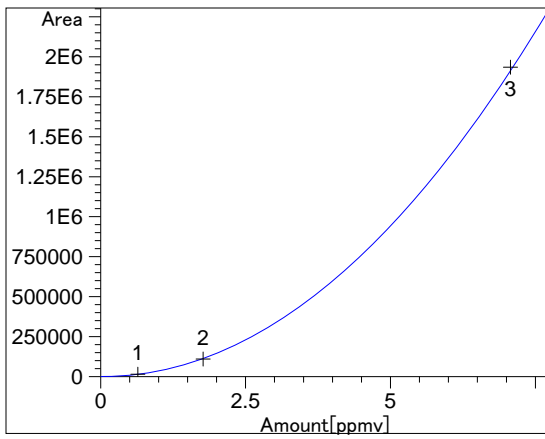
RetTime [min]	Lvl Sig	Amount [ppmv]	Area	Amt/Area	Ref Grp Name
1.885	1	6.42727e-1	1.45605e4	4.41418e-5	Hydrogen sulfide
	2	1.76750	1.09623e5	1.61234e-5	
	3	7.07000	1.93509e6	3.65358e-6	

More compound-specific settings:

Compound: Hydrogen sulfide
 Time Window : From 1.659 min To 2.002 min

```
=====
                        Peak Sum Table
=====
```

Name	StartTime [min]	EndTime [min]	Use Reference	Response factor	Multiplier	ISTD Peak
Total Redu	2.700	12.000	Hydrogen S	0.0000	1.432e-6	None

=====
Calibration Curves
=====

Hydrogen sulfide at exp. RT: 1.885
FPD2 B,
Correlation: 1.00000
Residual Std. Dev.: 23850.62698
Formula: $y = b * x^m$
m: 2.04102
b: 35292.75786
x: Amount
y: Area

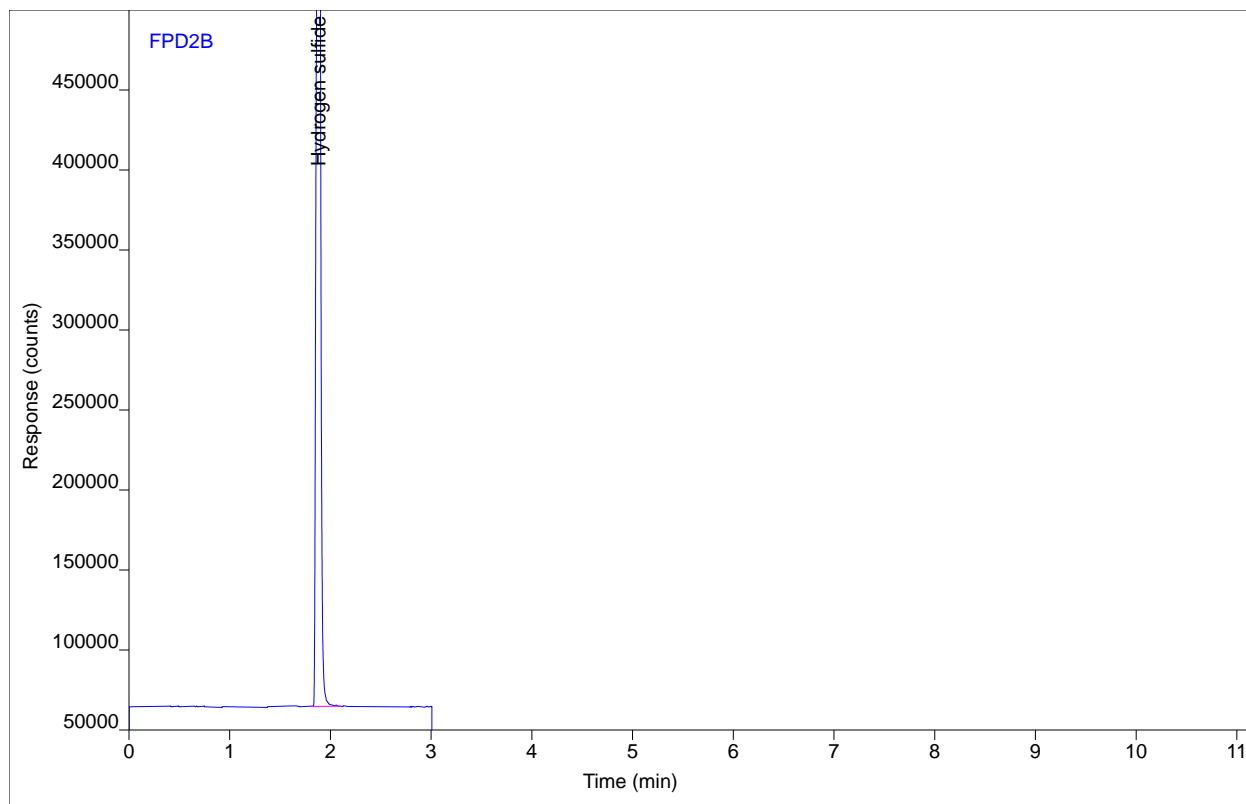
=====

Chromatogram Report

Sample Name zeppoP0462 #3
Sequence Name ZEPPOP0462 ver.2
Inj Data File 005B0102.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/13/2019 9:02 AM
File Modified 8/15/2019 8:09 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type
Vial Number Vial 5
Injection Volume NA
Injection 2 of 4
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/13/2019 9:57 AM
Printed 8/15/2019 12:02 PM



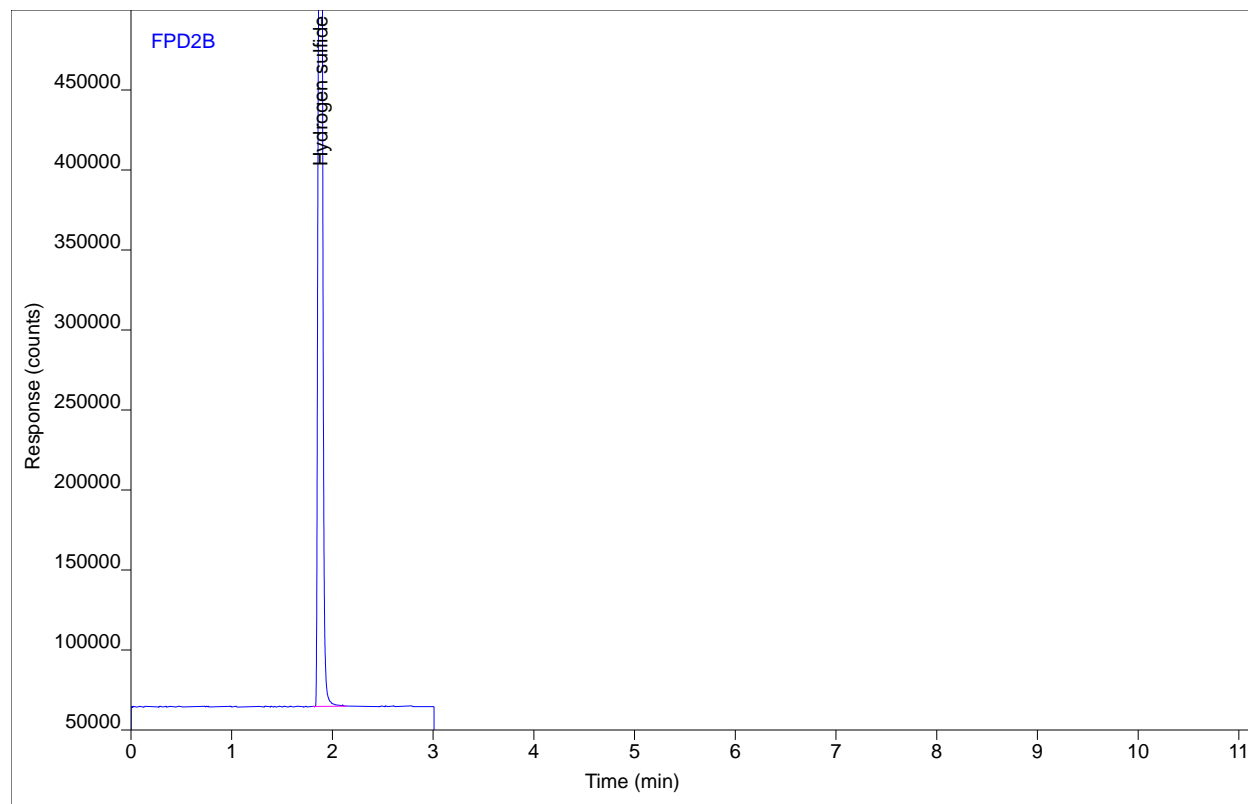
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide	BB	1.88	1916280	631350	7.07873	1	7.07873	ppmv

Chromatogram Report

Sample Name zeppoP0462 #3
Sequence Name ZEPPOP0462 ver.2
Inj Data File 005B0103.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/13/2019 9:06 AM
File Modified 8/15/2019 8:09 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type
Vial Number Vial 5
Injection Volume NA
Injection 3 of 4
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/13/2019 9:57 AM
Printed 8/15/2019 12:02 PM



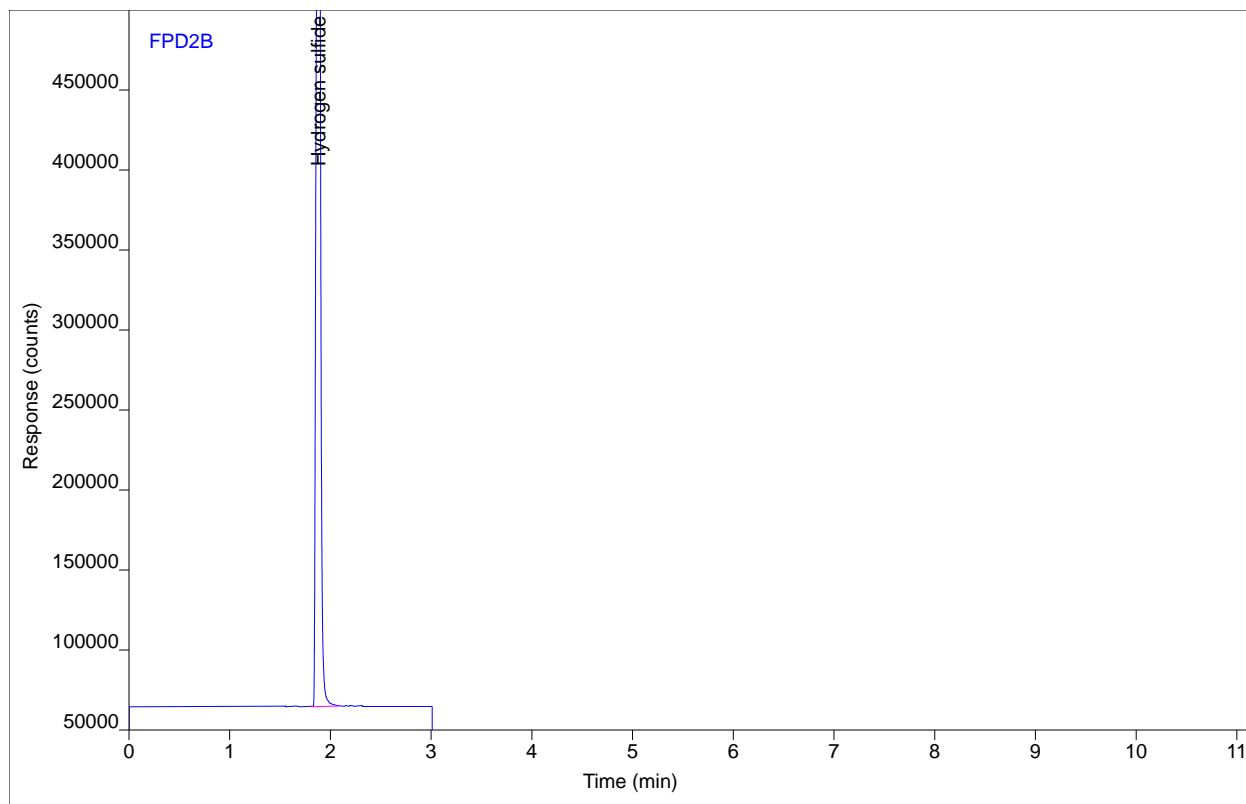
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide	BB	1.88	1947751	643281	7.13546	1	7.13546	ppmv

Chromatogram Report

Sample Name zeppoP0462 #3
Sequence Name ZEPPOP0462 ver.2
Inj Data File 005B0104.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/13/2019 9:11 AM
File Modified 8/15/2019 8:09 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type
Vial Number Vial 5
Injection Volume NA
Injection 4 of 4
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/13/2019 9:57 AM
Printed 8/15/2019 12:02 PM



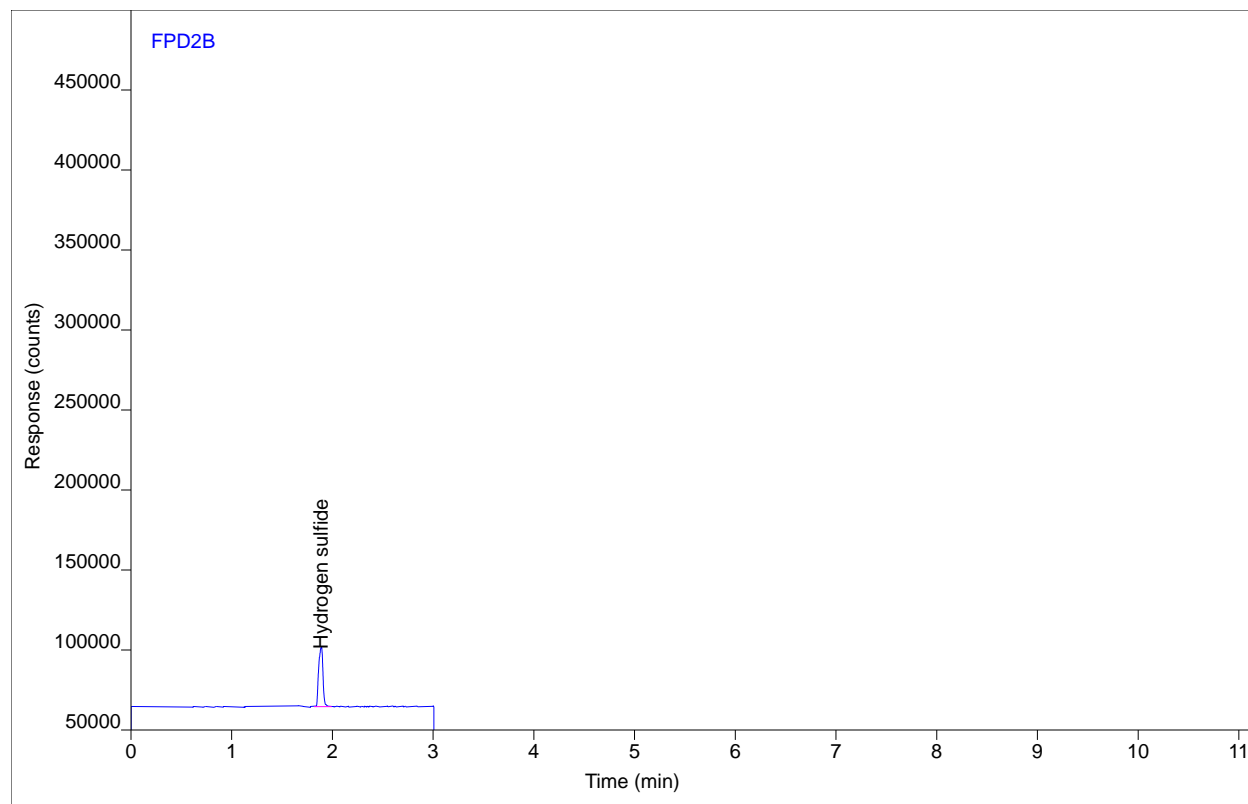
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide	BB	1.88	1941229	653054	7.12374	1	7.12374	ppmv

Chromatogram Report

Sample Name zeppoP0462 #2
Sequence Name ZEPPOP0462 ver.2
Inj Data File 005B0202.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/13/2019 9:20 AM
File Modified 8/15/2019 8:09 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type
Vial Number Vial 5
Injection Volume NA
Injection 2 of 4
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/13/2019 9:57 AM
Printed 8/15/2019 12:02 PM



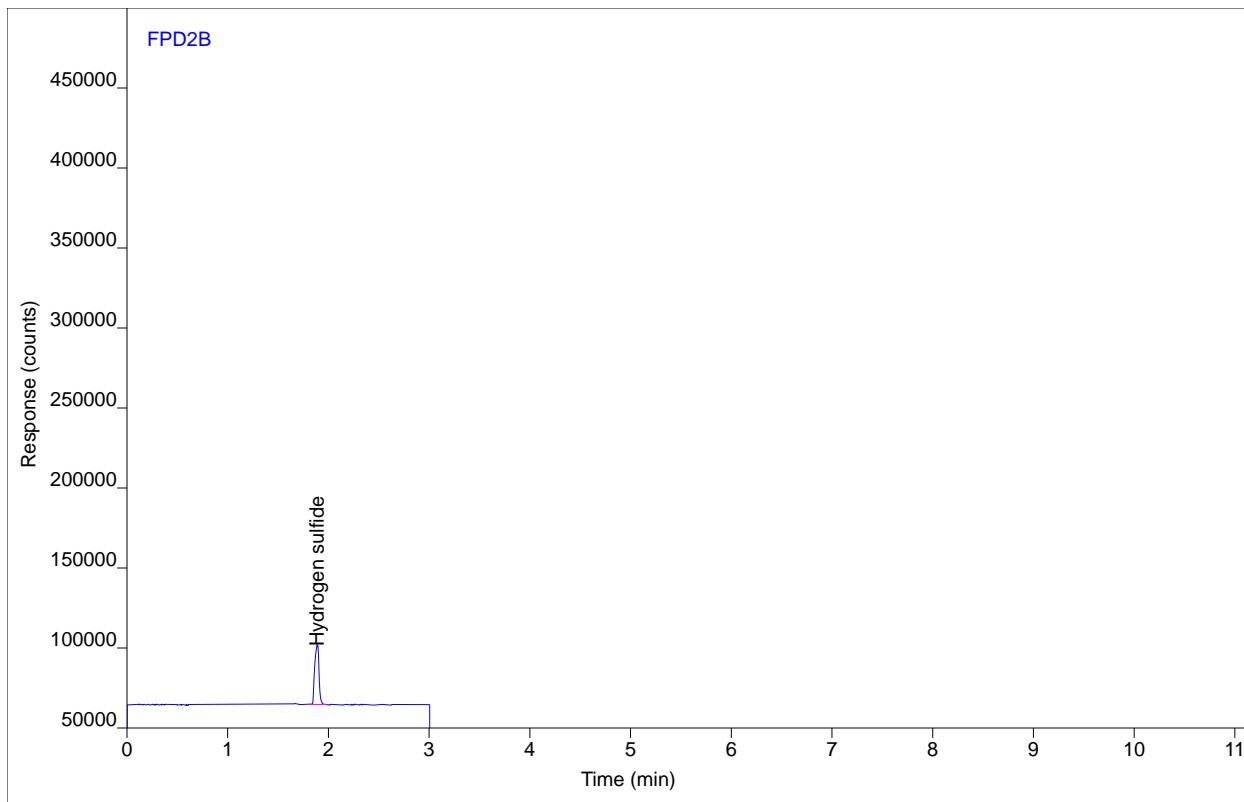
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide	BB	1.89	109896	36115.3	1.74458	1	1.74458	ppmv

Chromatogram Report

Sample Name zeppoP0462 #2
Sequence Name ZEPPOP0462 ver.2
Inj Data File 005B0203.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/13/2019 9:24 AM
File Modified 8/15/2019 8:09 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type
Vial Number Vial 5
Injection Volume NA
Injection 3 of 4
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/13/2019 9:57 AM
Printed 8/15/2019 12:02 PM



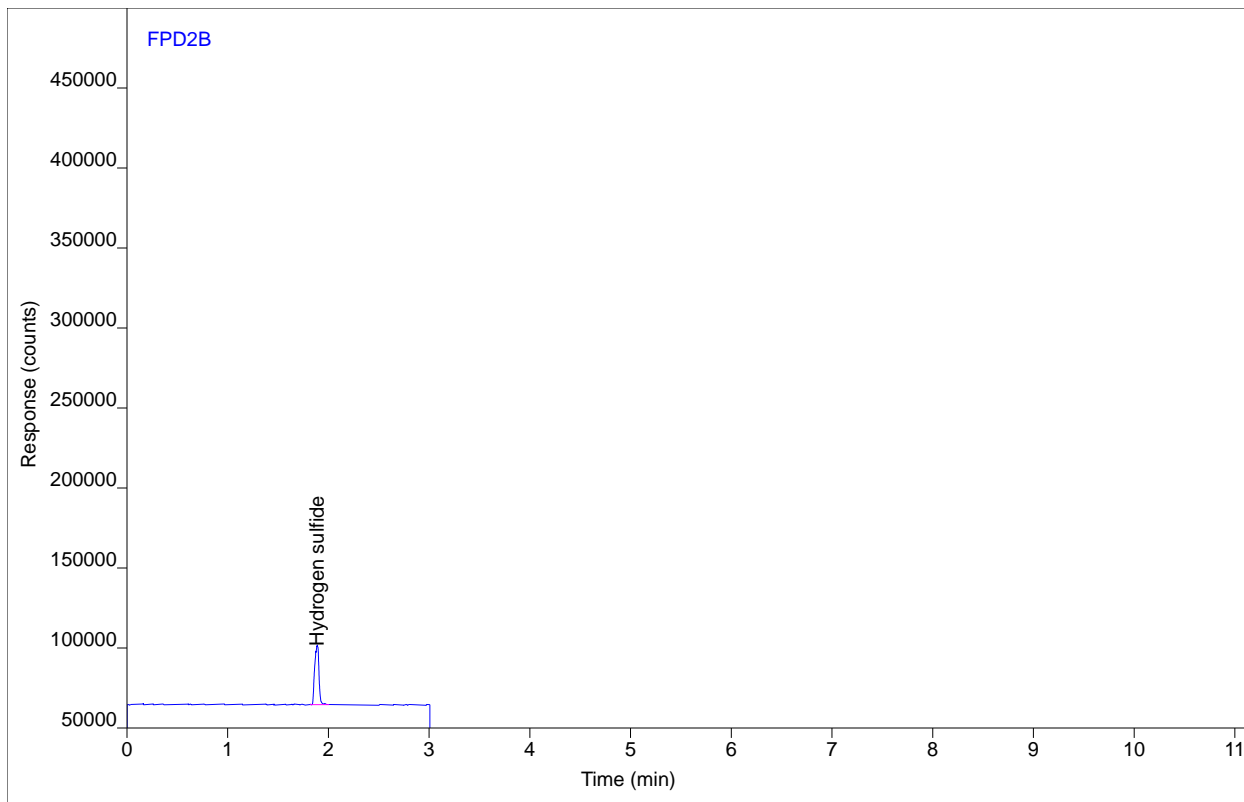
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide	BB	1.89	109990	35619.8	1.74531	1	1.74531	ppmv

Chromatogram Report

Sample Name zeppoP0462 #2
Sequence Name ZEPPOP0462 ver.2
Inj Data File 005B0204.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/13/2019 9:29 AM
File Modified 8/15/2019 8:09 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type
Vial Number Vial 5
Injection Volume NA
Injection 4 of 4
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/13/2019 9:57 AM
Printed 8/15/2019 12:02 PM



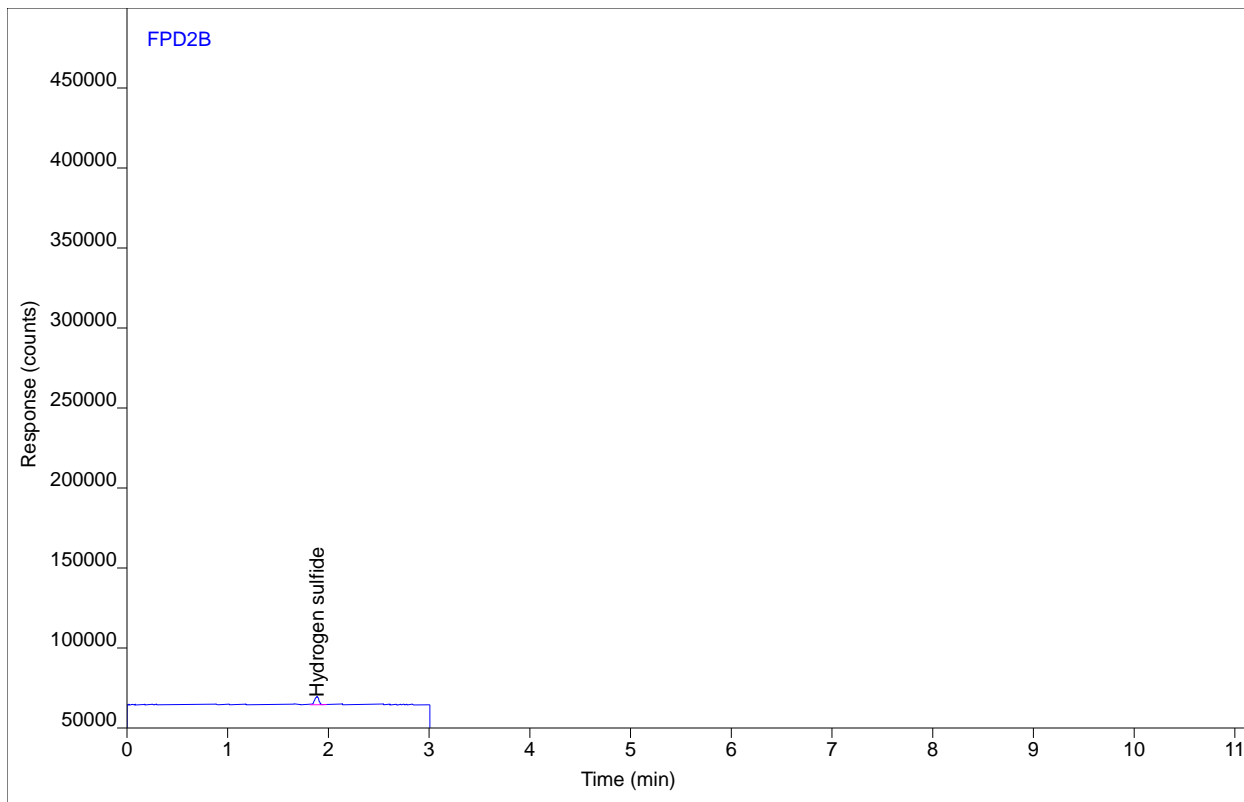
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide	BB	1.89	108984	35603.3	1.73747	1	1.73747	ppmv

Chromatogram Report

Sample Name zeppoP0462 #1
Sequence Name ZEPPOP0462 ver.2
Inj Data File 005B0302.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/13/2019 9:37 AM
File Modified 8/15/2019 8:09 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Calibration
Vial Number Vial 5
Injection Volume NA
Injection 2 of 4
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/13/2019 9:57 AM
Printed 8/15/2019 12:02 PM



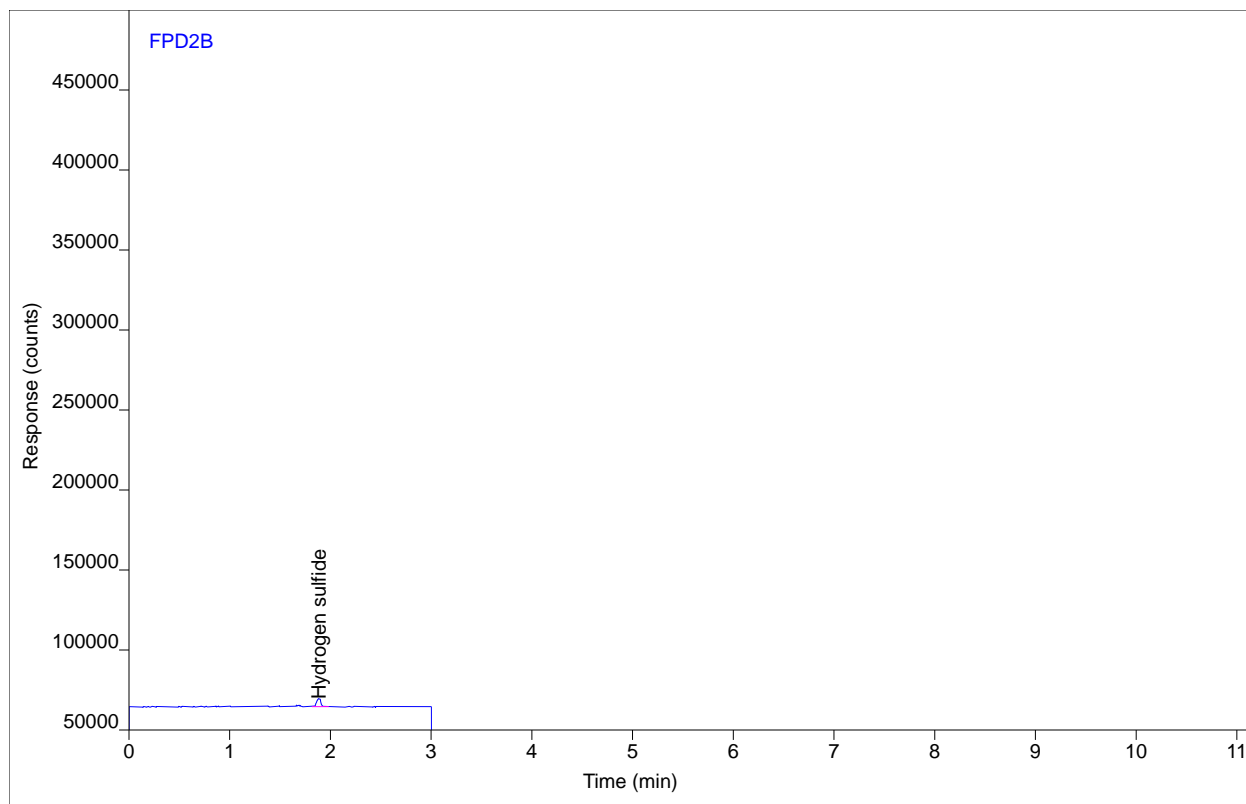
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide	BB	1.89	14382.5	4773.70	0.64416	1	0.64416	ppmv

Chromatogram Report

Sample Name zeppoP0462 #1
Sequence Name ZEPPOP0462 ver.2
Inj Data File 005B0303.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/13/2019 9:42 AM
File Modified 8/15/2019 8:09 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type
Vial Number Vial 5
Injection Volume NA
Injection 3 of 4
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/13/2019 9:57 AM
Printed 8/15/2019 12:02 PM



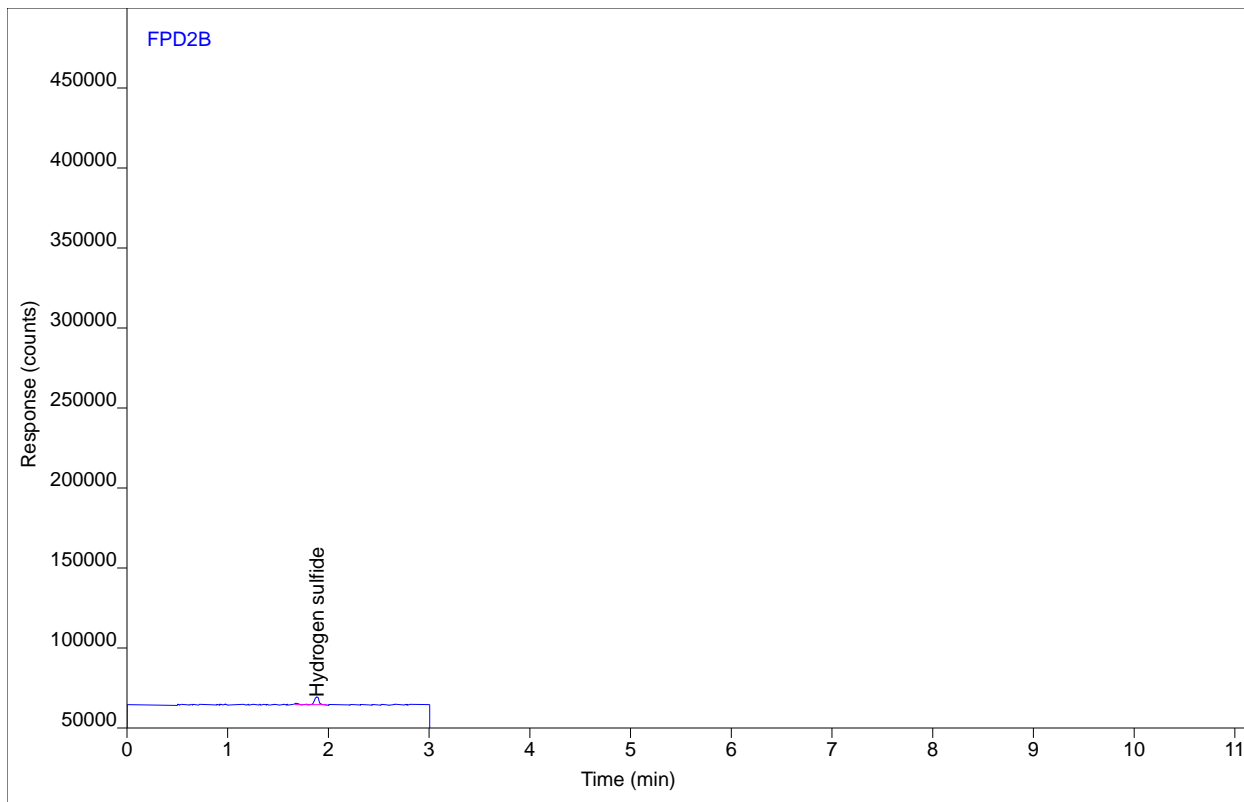
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide	BB	1.89	13715.1	4785.20	0.62933	1	0.62933	ppmv

Chromatogram Report

Sample Name zeppoP0462 #1
Sequence Name ZEPPOP0462 ver.2
Inj Data File 005B0304.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/13/2019 9:46 AM
File Modified 8/15/2019 8:09 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type
Vial Number Vial 5
Injection Volume NA
Injection 4 of 4
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/13/2019 9:57 AM
Printed 8/15/2019 12:02 PM



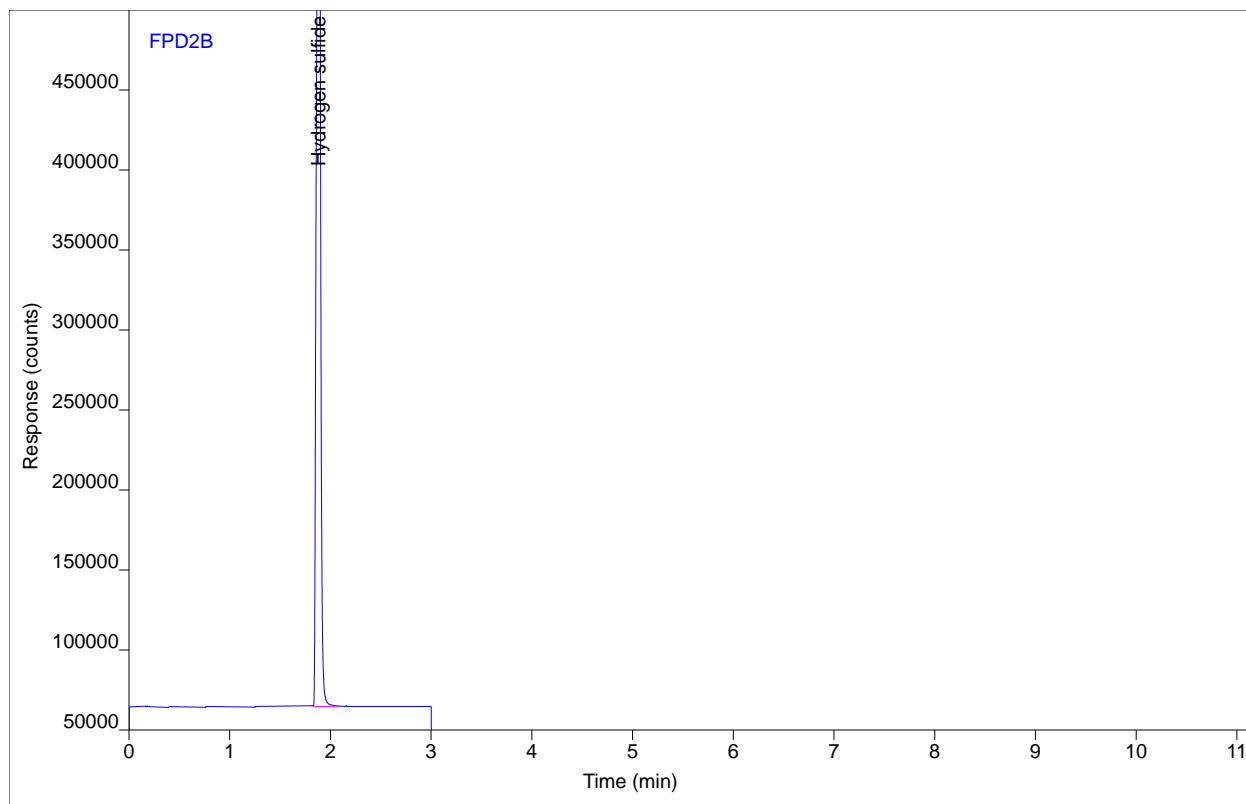
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide	BB	1.89	15583.9	4563.63	0.66998	1	0.66998	ppmv

Chromatogram Report

Sample Name zeppoP0420 #LCS
Sequence Name ZEPPOP0462 ver.2
Inj Data File 005B0402.D
File Location GC/2019/Zeppo/Quarter 3
Injection Date 8/13/2019 9:55 AM
File Modified 8/15/2019 8:09 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 5
Injection Volume NA
Injection 2 of 4
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/13/2019 9:57 AM
Printed 8/15/2019 12:02 PM



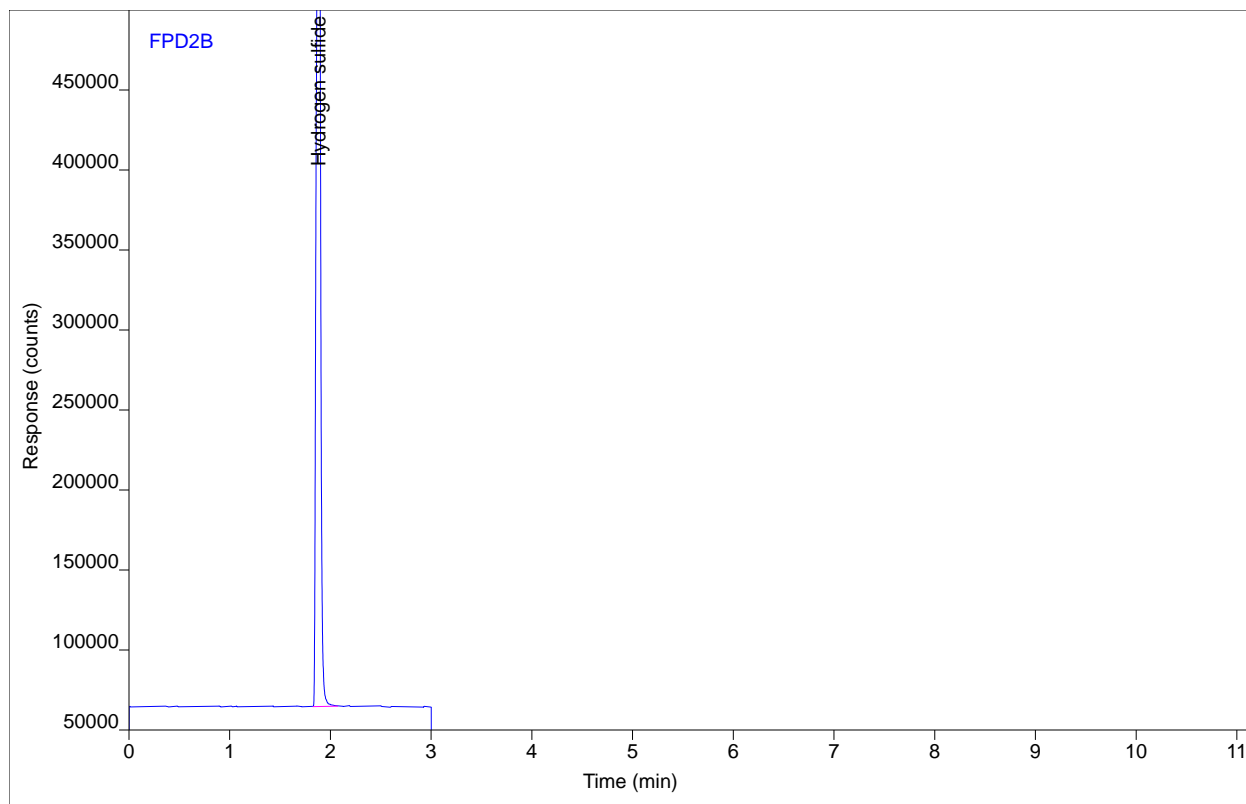
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide	BB	1.88	1731596	590957	6.73584	1	6.73584	ppmv

Chromatogram Report

Sample Name zeppoP0420 #LCS
Sequence Name ZEPPOP0462 ver.2
Inj Data File 005B0403.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/13/2019 9:59 AM
File Modified 8/15/2019 8:09 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 5
Injection Volume NA
Injection 3 of 4
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/13/2019 9:57 AM
Printed 8/15/2019 12:02 PM



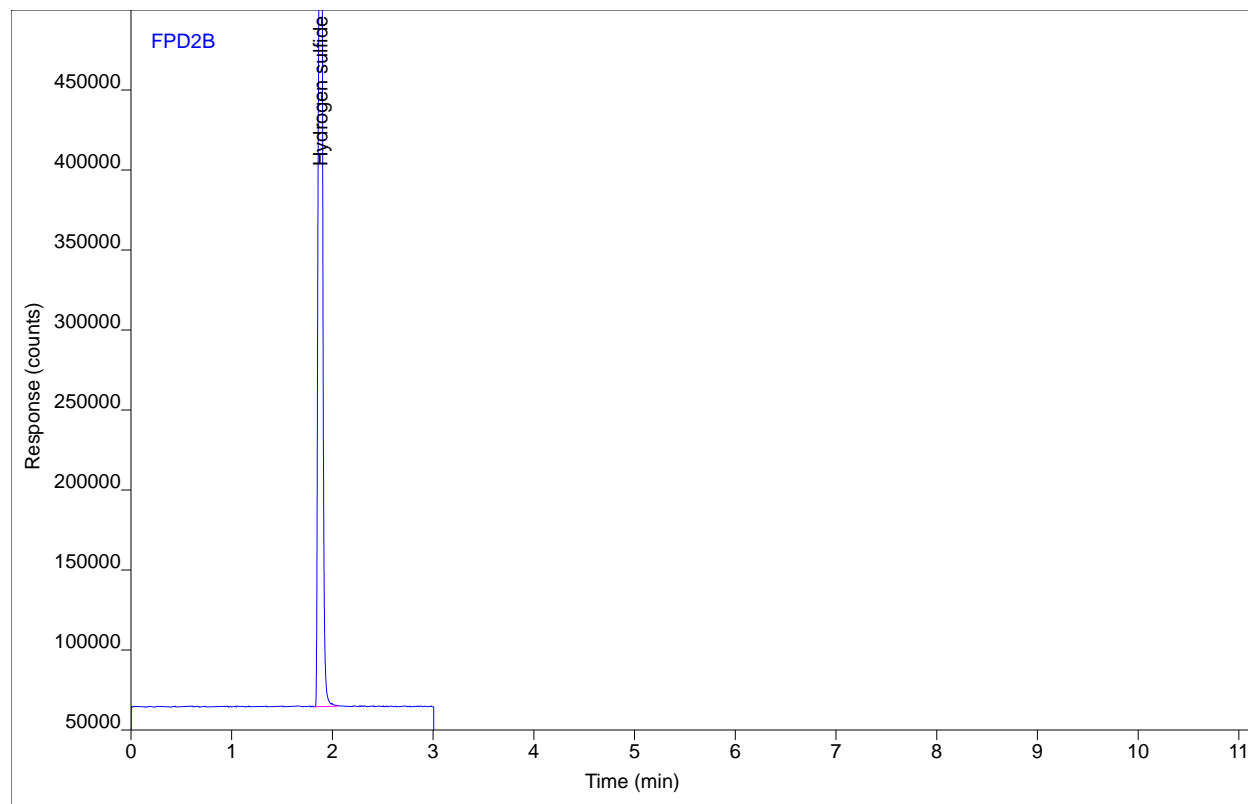
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide	BB	1.88	1765512	607254	6.80016	1	6.80016	ppmv

Chromatogram Report

Sample Name zeppoP0420 #LCS
Sequence Name ZEPPOP0462 ver.2
Inj Data File 005B0404.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/13/2019 10:04 AM
File Modified 8/15/2019 8:09 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 5
Injection Volume NA
Injection 4 of 4
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/13/2019 9:57 AM
Printed 8/15/2019 12:02 PM



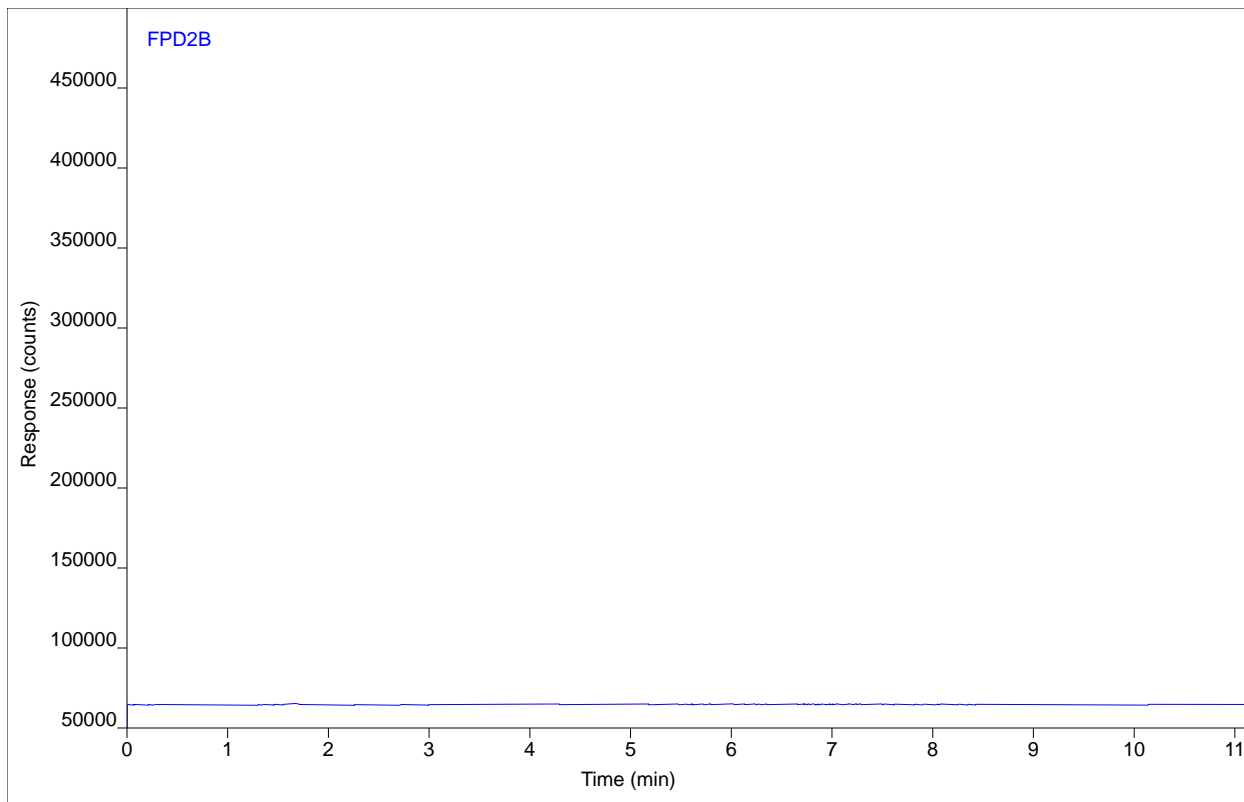
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide	BB	1.88	1811347	613022	6.88609	1	6.88609	ppmv

Chromatogram Report

Sample Name zeppoP0204 #MB
Sequence Name ZEPPOP0462 ver.2
Inj Data File 005B0501.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/13/2019 10:08 AM
File Modified 8/15/2019 8:09 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Control
Vial Number Vial 5
Injection Volume NA
Injection 1 of 3
Acquisition Method DUALFPD8.M
Analysis Method ZEPPOP0462.M
Method Modified 8/13/2019 9:57 AM
Printed 8/15/2019 12:02 PM



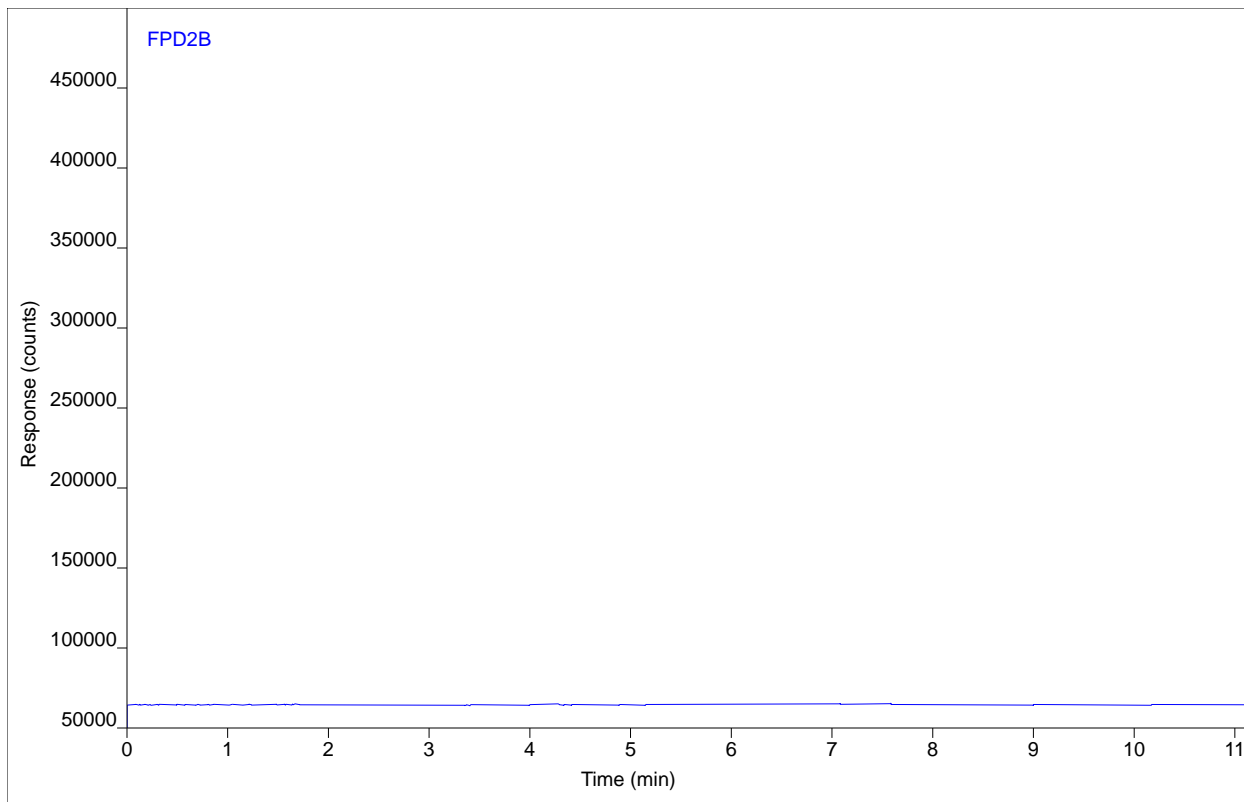
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide		(1.89)				1		

Chromatogram Report

Sample Name zeppoP0204 #MB
Sequence Name ZEPPOP0462 ver.2
Inj Data File 005B0502.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/13/2019 10:24 AM
File Modified 8/15/2019 8:09 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Control
Vial Number Vial 5
Injection Volume NA
Injection 2 of 3
Acquisition Method DUALFPD8.M
Analysis Method ZEPPOP0462.M
Method Modified 8/13/2019 9:57 AM
Printed 8/15/2019 12:02 PM



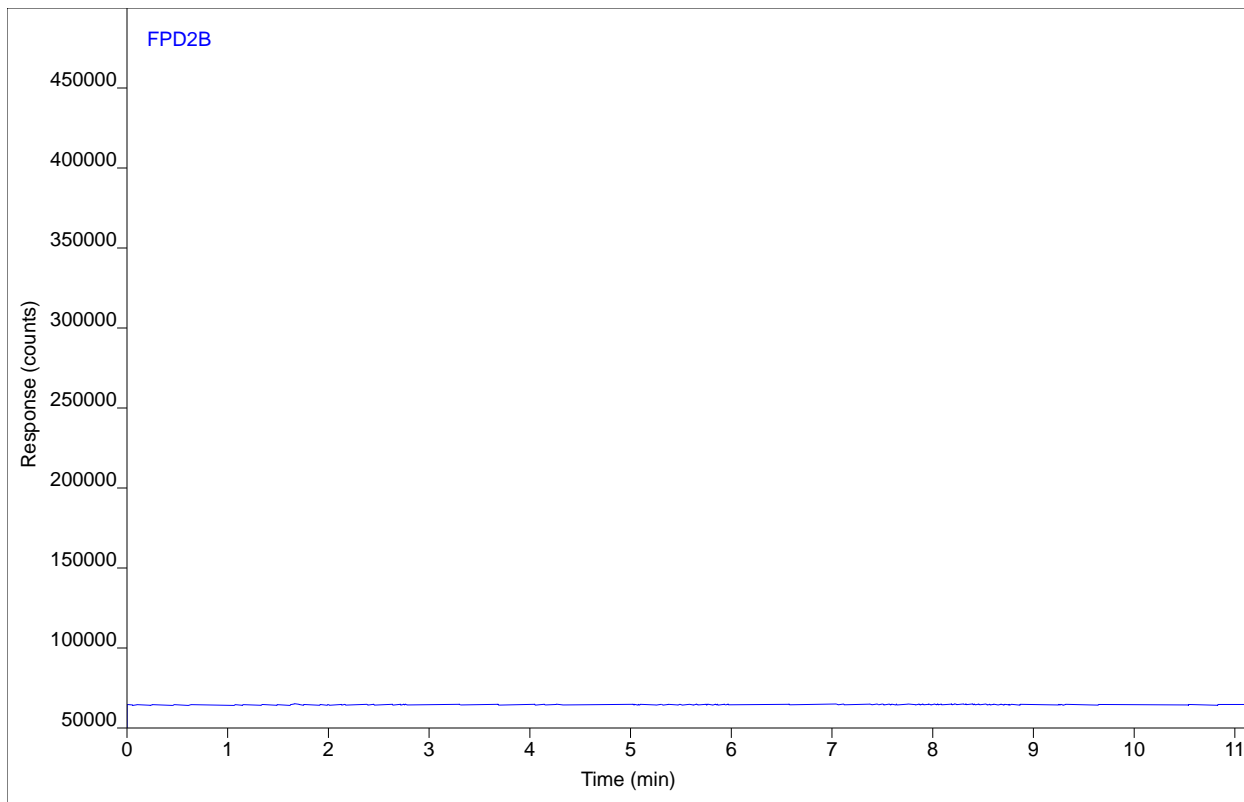
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide		(1.89)				1		

Chromatogram Report

Sample Name zeppoP0204 #MB
Sequence Name ZEPPOP0462 ver.2
Inj Data File 005B0503.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/13/2019 10:40 AM
File Modified 8/15/2019 8:09 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Control
Vial Number Vial 5
Injection Volume NA
Injection 3 of 3
Acquisition Method DUALFPD8.M
Analysis Method ZEPPOP0462.M
Method Modified 8/13/2019 9:57 AM
Printed 8/15/2019 12:02 PM



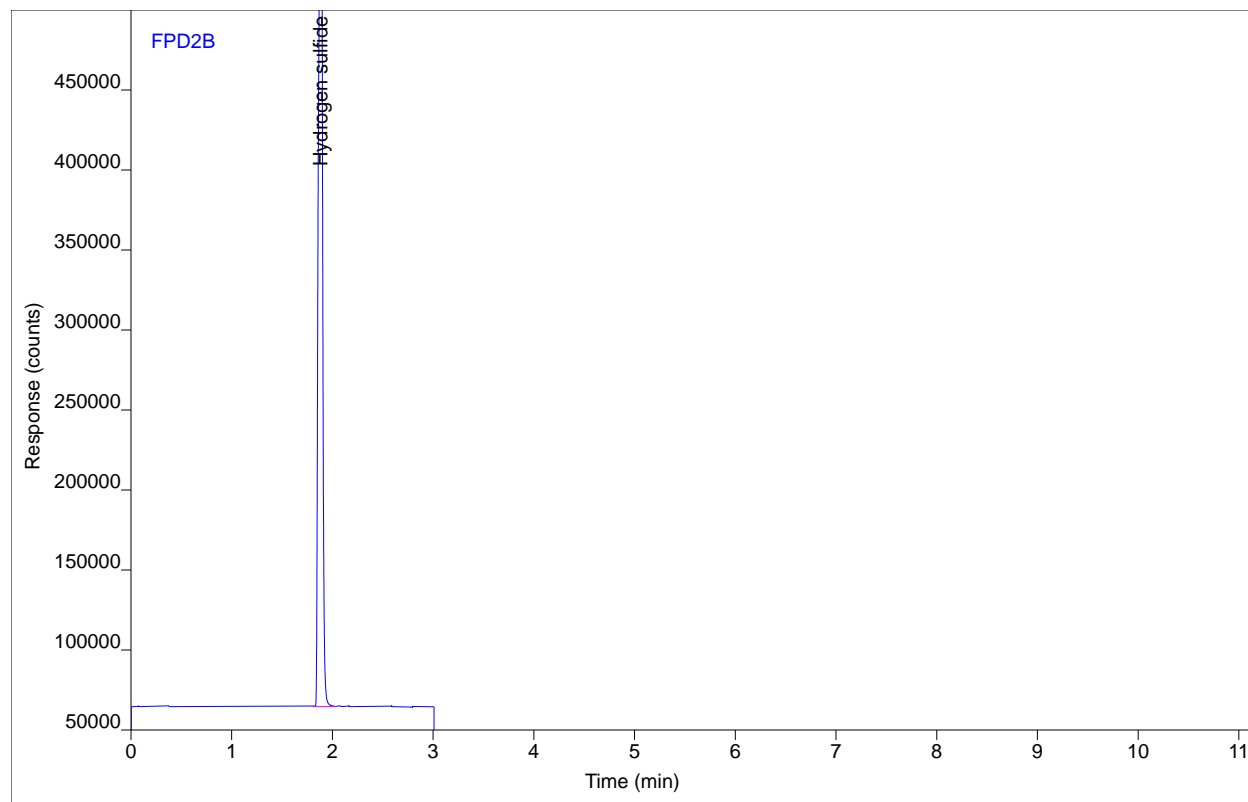
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide		(1.89)				1		

Chromatogram Report

Sample Name zeppoP0462 #3
Sequence Name ZEPPOP0463B ver.2
Inj Data File 005B0201.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/23/2019 4:01 AM
File Modified 8/26/2019 9:57 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type
Vial Number Vial 5
Injection Volume NA
Injection 1 of 4
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/26/2019 10:06 AM



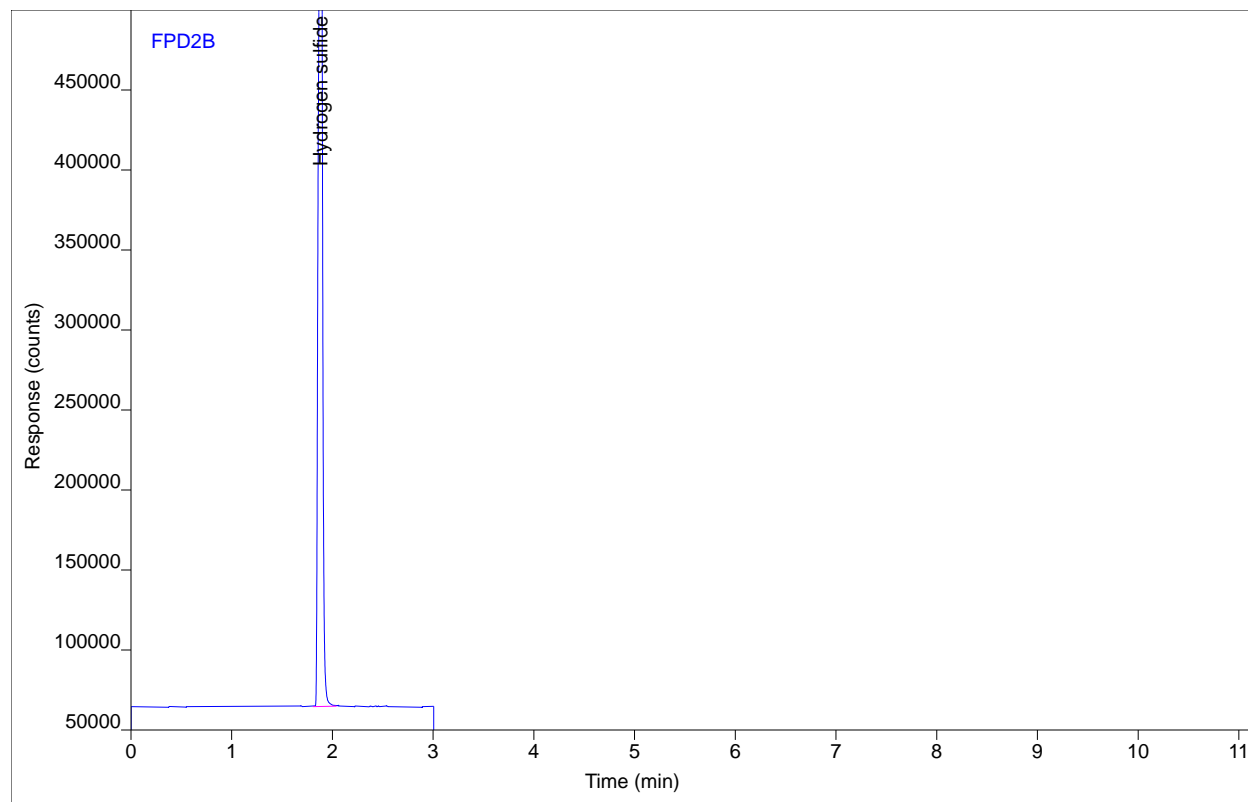
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide	BB	1.88	1586345	533530	6.45282	1	6.45282	ppmv

Chromatogram Report

Sample Name zeppoP0462 #3
Sequence Name ZEPPOP0463B ver.2
Inj Data File 005B0202.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/23/2019 4:06 AM
File Modified 8/26/2019 9:57 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type
Vial Number Vial 5
Injection Volume NA
Injection 2 of 4
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/26/2019 10:06 AM



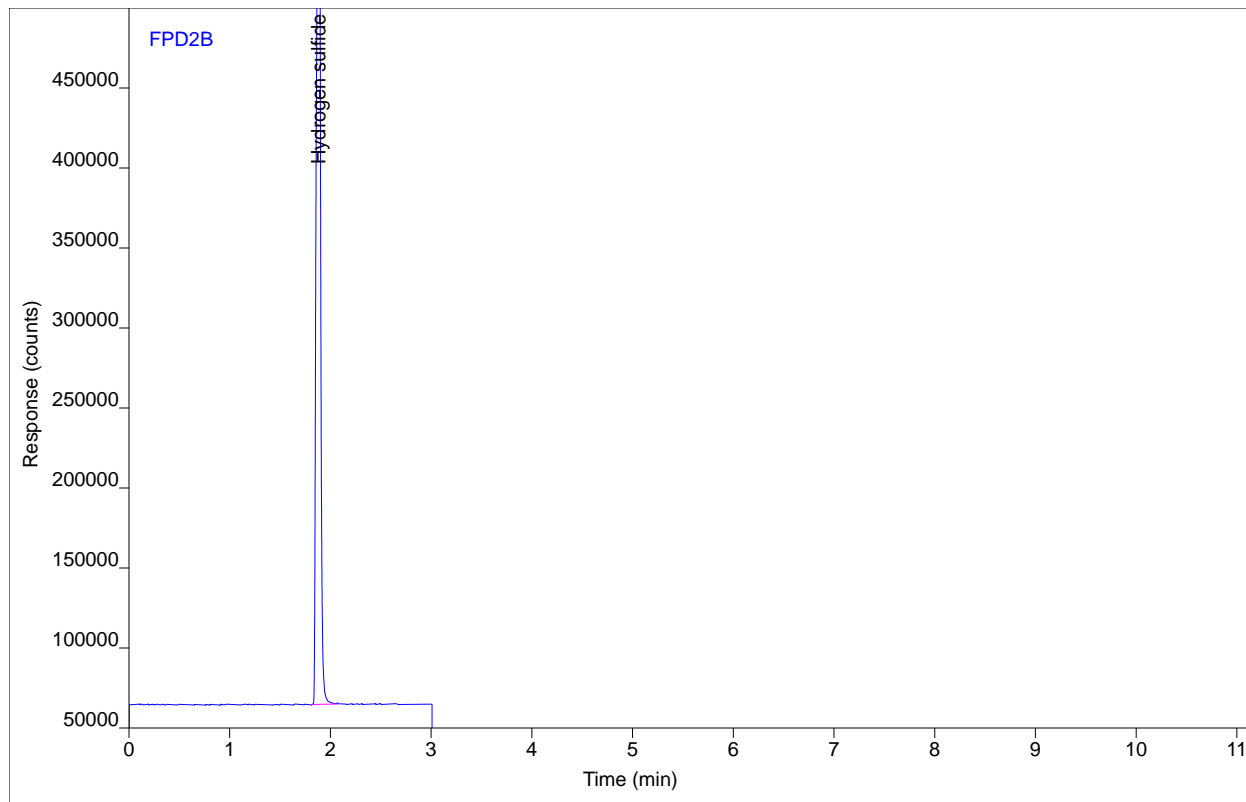
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide	BB	1.88	1656086	562061	6.59029	1	6.59029	ppmv

Chromatogram Report

Sample Name zeppoP0462 #3
Sequence Name ZEPPOP0463B ver.2
Inj Data File 005B0203.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/23/2019 4:10 AM
File Modified 8/26/2019 9:57 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type
Vial Number Vial 5
Injection Volume NA
Injection 3 of 4
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/26/2019 10:06 AM



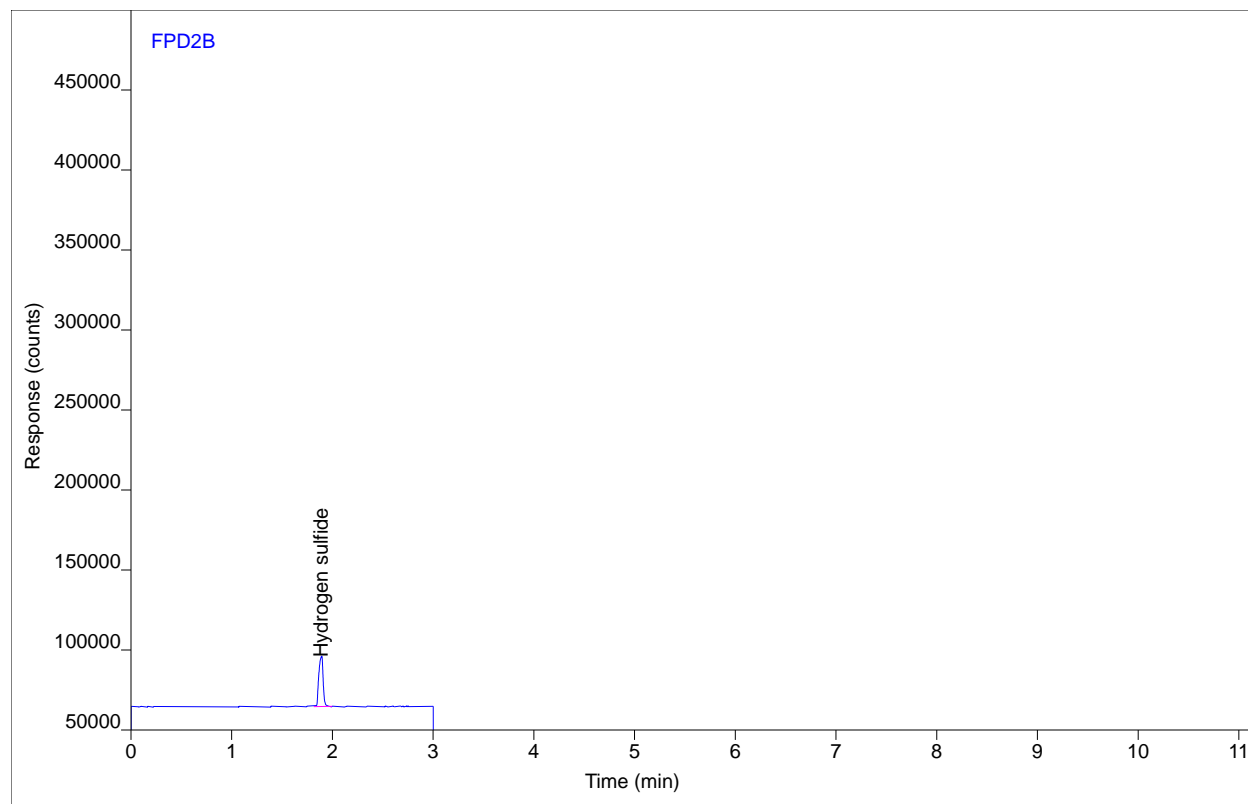
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide	BB	1.88	1688550	569885	6.65327	1	6.65327	ppmv

Chromatogram Report

Sample Name zeppoP0462 #2
Sequence Name ZEPPOP0463B ver.2
Inj Data File 005B0301.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/23/2019 4:19 AM
File Modified 8/26/2019 9:57 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type
Vial Number Vial 5
Injection Volume NA
Injection 1 of 4
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/26/2019 10:06 AM



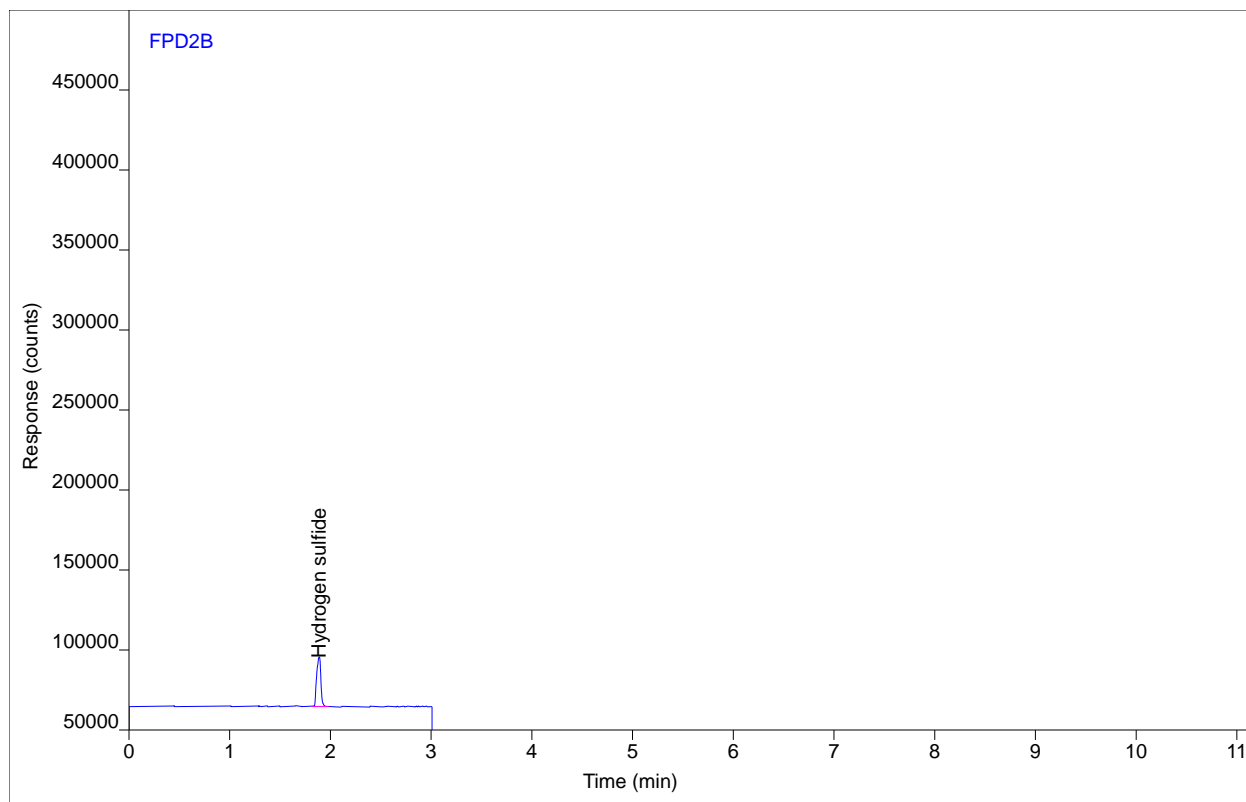
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide	BB	1.89	92906.0	30848.3	1.60678	1	1.60678	ppmv

Chromatogram Report

Sample Name zeppoP0462 #2
Sequence Name ZEPPOP0463B ver.2
Inj Data File 005B0302.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/23/2019 4:23 AM
File Modified 8/26/2019 9:57 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Calibration
Vial Number Vial 5
Injection Volume NA
Injection 2 of 4
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/26/2019 10:06 AM



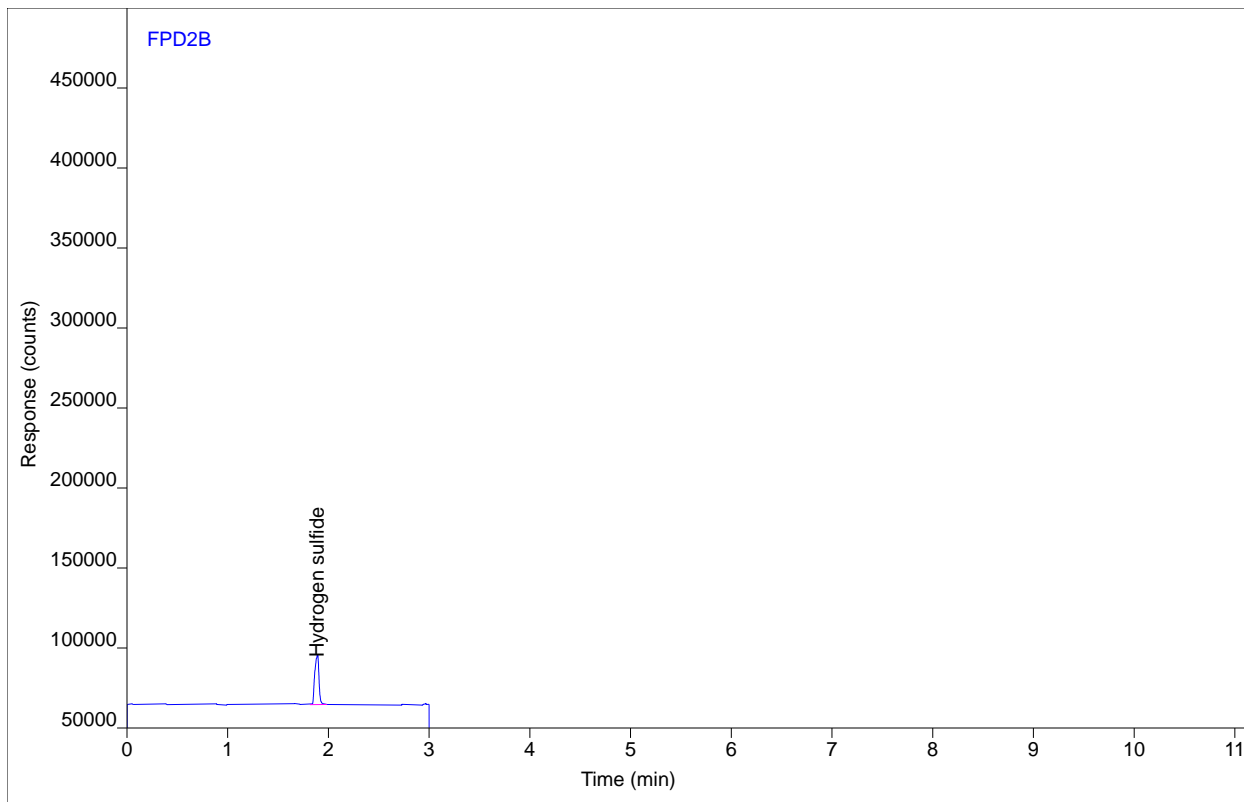
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide	BB	1.89	89249.6	30130.7	1.57548	1	1.57548	ppmv

Chromatogram Report

Sample Name zeppoP0462 #2
Sequence Name ZEPPOP0463B ver.2
Inj Data File 005B0303.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/23/2019 4:28 AM
File Modified 8/26/2019 9:57 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Calibration
Vial Number Vial 5
Injection Volume NA
Injection 3 of 4
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/26/2019 10:06 AM



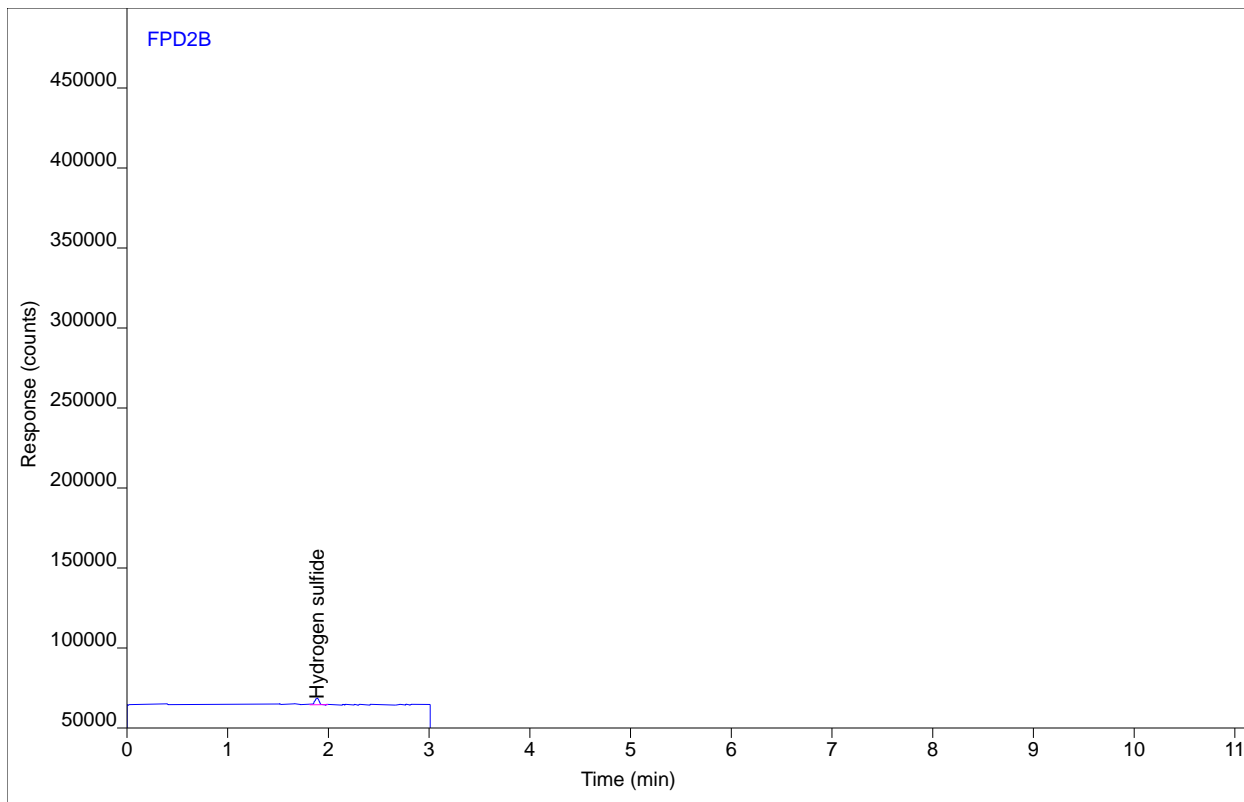
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide	BB	1.89	88728.3	29270.9	1.57096	1	1.57096	ppmv

Chromatogram Report

Sample Name zeppoP0462 #1
Sequence Name ZEPPOP0463B ver.2
Inj Data File 005B0402.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/23/2019 4:41 AM
File Modified 8/26/2019 9:57 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Calibration
Vial Number Vial 5
Injection Volume NA
Injection 2 of 4
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/26/2019 10:06 AM



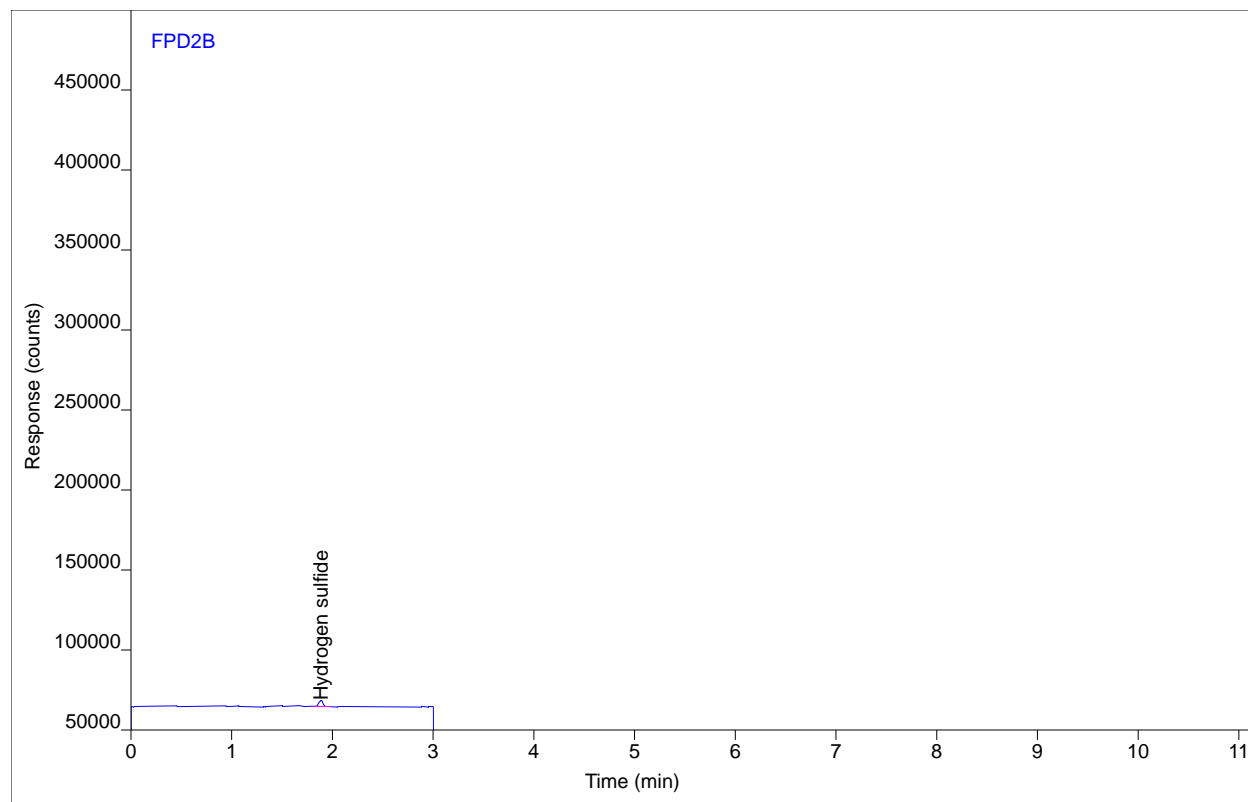
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide	BB	1.89	11961.0	4005.94	0.58852	1	0.58852	ppmv

Chromatogram Report

Sample Name zeppoP0462 #1
Sequence Name ZEPPOP0463B ver.2
Inj Data File 005B0403.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/23/2019 4:45 AM
File Modified 8/26/2019 9:57 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type
Vial Number Vial 5
Injection Volume NA
Injection 3 of 4
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/26/2019 10:06 AM



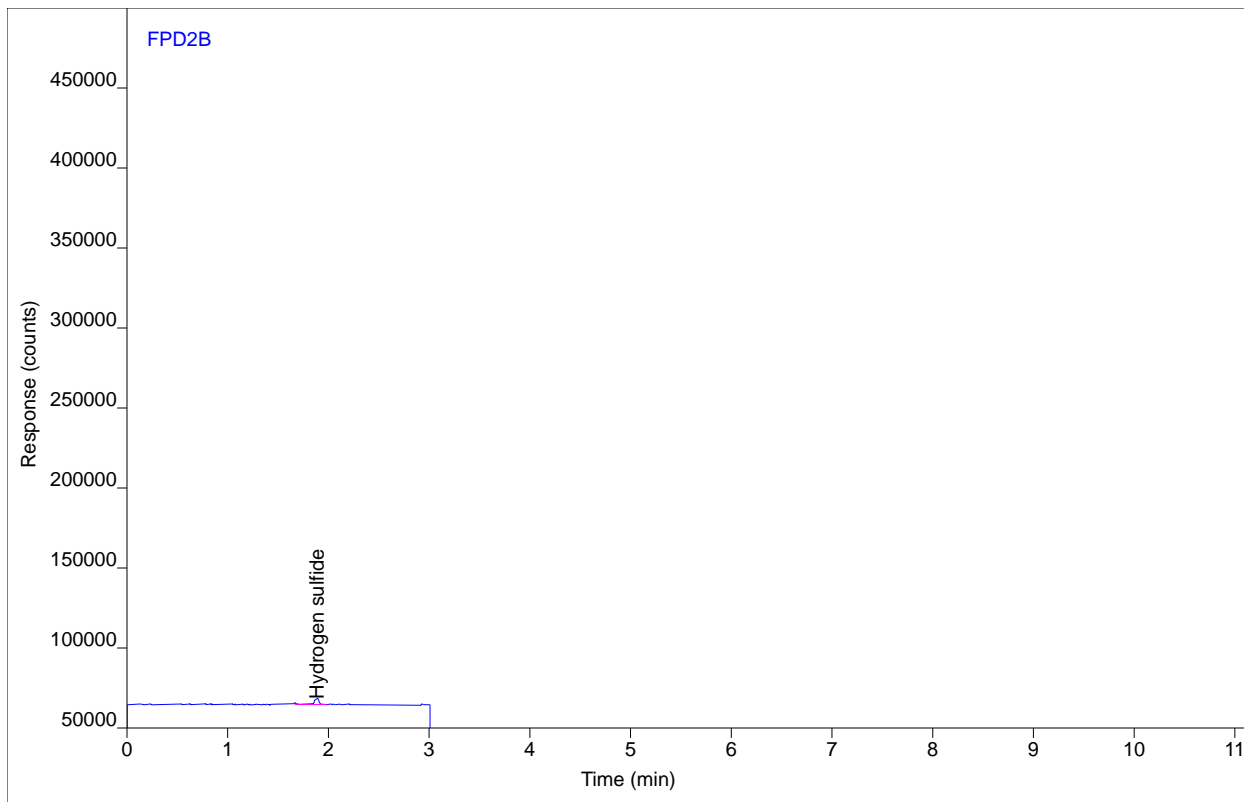
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide	BB	1.89	10416.7	3800.69	0.54998	1	0.54998	ppmv

Chromatogram Report

Sample Name zeppoP0462 #1
Sequence Name ZEPPOP0463B ver.2
Inj Data File 005B0404.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/23/2019 4:50 AM
File Modified 8/26/2019 9:57 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Calibration
Vial Number Vial 5
Injection Volume NA
Injection 4 of 4
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/26/2019 10:06 AM



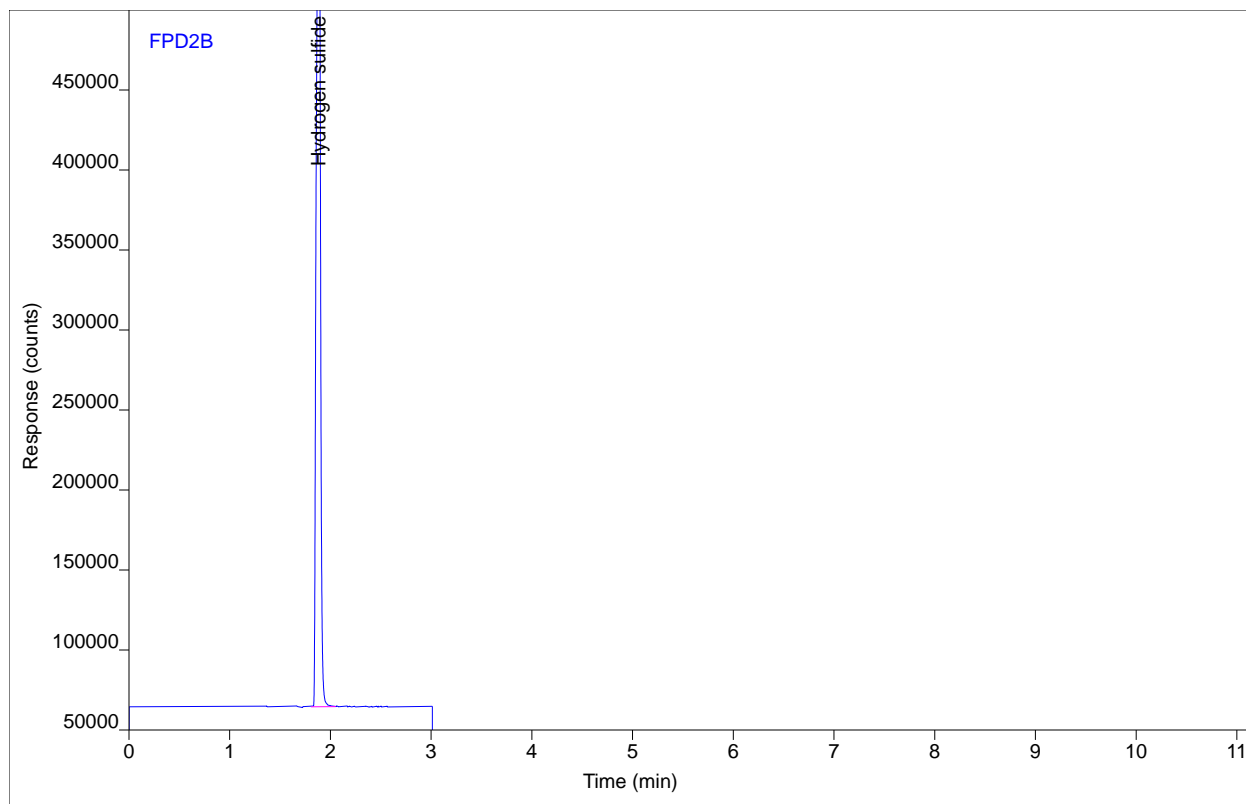
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide	BB	1.89	11926.0	3522.60	0.58768	1	0.58768	ppmv

Chromatogram Report

Sample Name zeppoP0462 #3
Sequence Name ZEPPOP0463B ver.2
Inj Data File 005B1401.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/23/2019 3:36 PM
File Modified 8/26/2019 9:57 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type
Vial Number Vial 5
Injection Volume NA
Injection 1 of 4
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/26/2019 10:06 AM



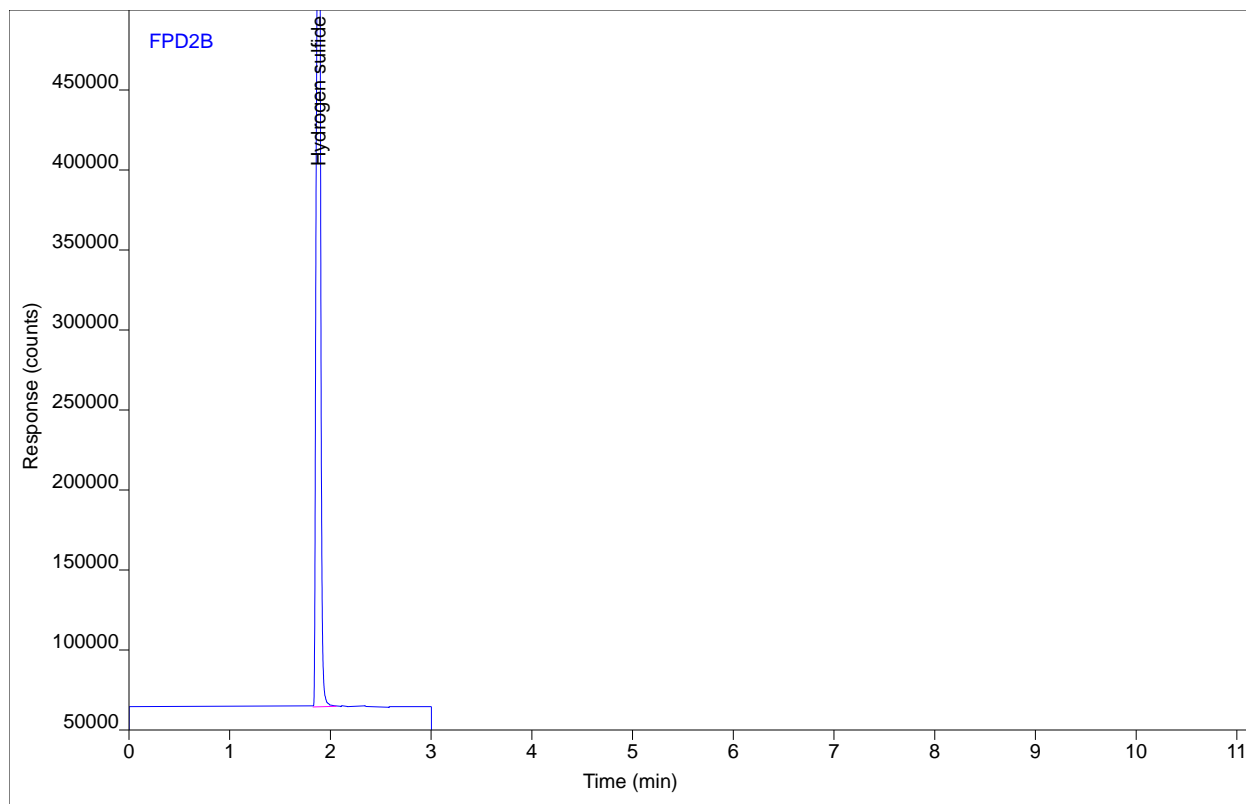
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide	BB	1.88	1582237	545305	6.44463	1	6.44463	ppmv

Chromatogram Report

Sample Name zeppoP0462 #3
Sequence Name ZEPPOP0463B ver.2
Inj Data File 005B1402.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/23/2019 3:40 PM
File Modified 8/26/2019 9:57 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type
Vial Number Vial 5
Injection Volume NA
Injection 2 of 4
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/26/2019 10:06 AM



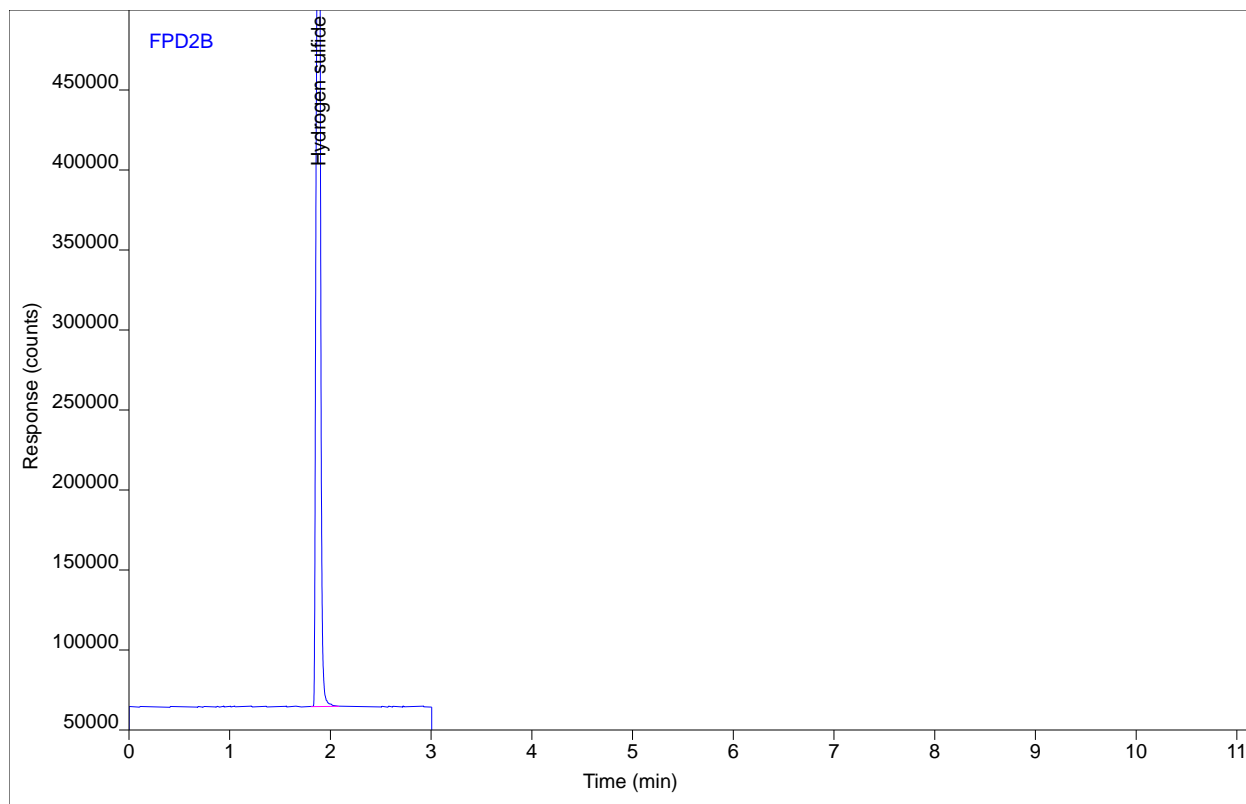
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide	BB	1.88	1688112	567570	6.65242	1	6.65242	ppmv

Chromatogram Report

Sample Name zeppoP0462 #3
Sequence Name ZEPPOP0463B ver.2
Inj Data File 005B1403.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/23/2019 3:45 PM
File Modified 8/26/2019 9:58 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type
Vial Number Vial 5
Injection Volume NA
Injection 3 of 4
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/26/2019 10:06 AM



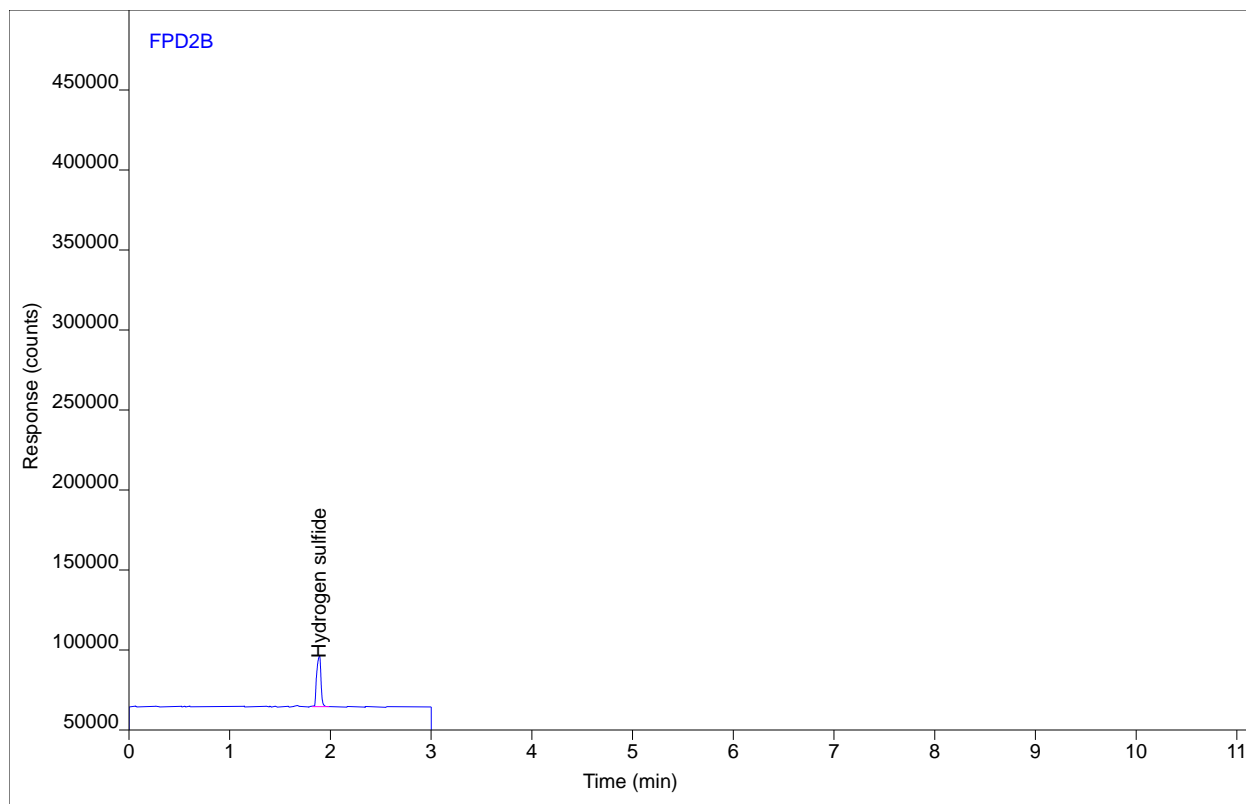
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide	BB	1.88	1714257	581106	6.70270	1	6.70270	ppmv

Chromatogram Report

Sample Name zeppoP0462 #2
Sequence Name ZEPPOP0463B ver.2
Inj Data File 005B1501.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/23/2019 3:53 PM
File Modified 8/26/2019 9:58 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Calibration
Vial Number Vial 5
Injection Volume NA
Injection 1 of 4
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/26/2019 10:06 AM



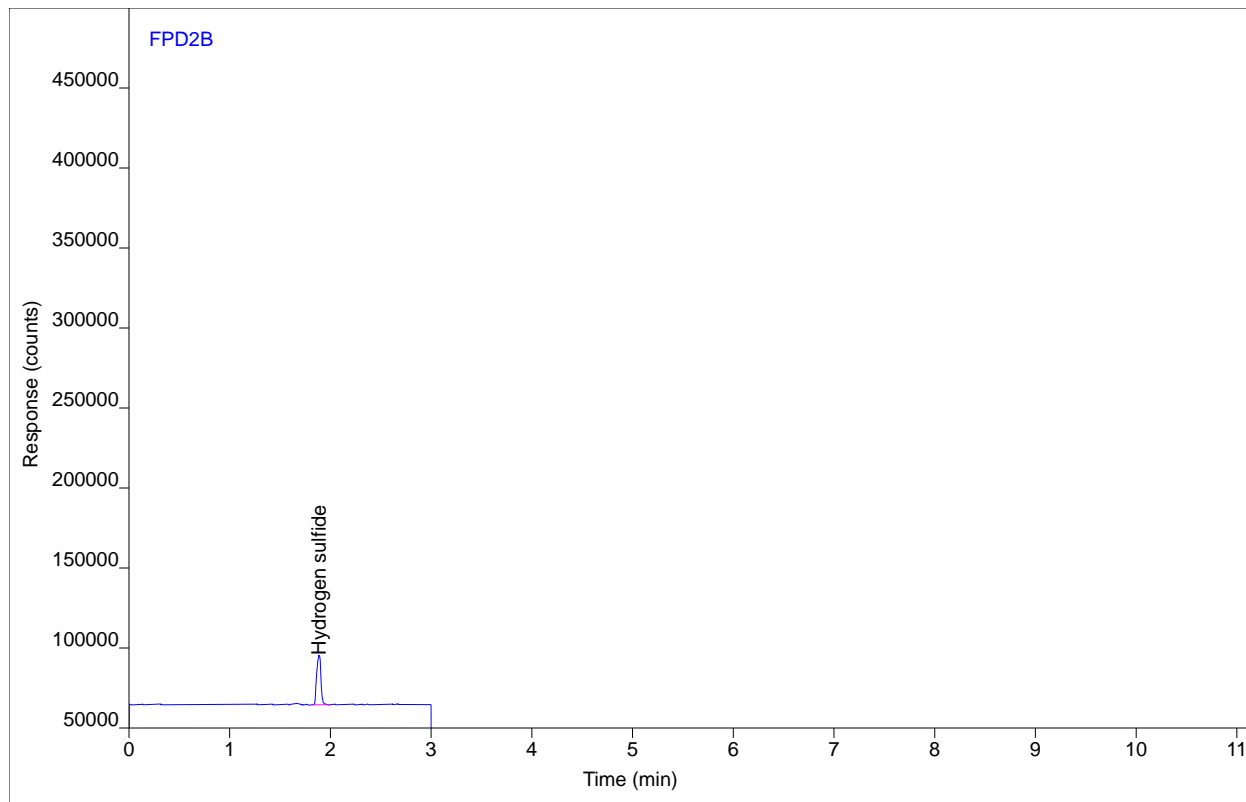
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide	BB	1.89	92863.8	30311.0	1.60642	1	1.60642	ppmv

Chromatogram Report

Sample Name zeppoP0462 #2
Sequence Name ZEPPOP0463B ver.2
Inj Data File 005B1502.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/23/2019 3:58 PM
File Modified 8/26/2019 9:58 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type
Vial Number Vial 5
Injection Volume NA
Injection 2 of 4
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/26/2019 10:06 AM



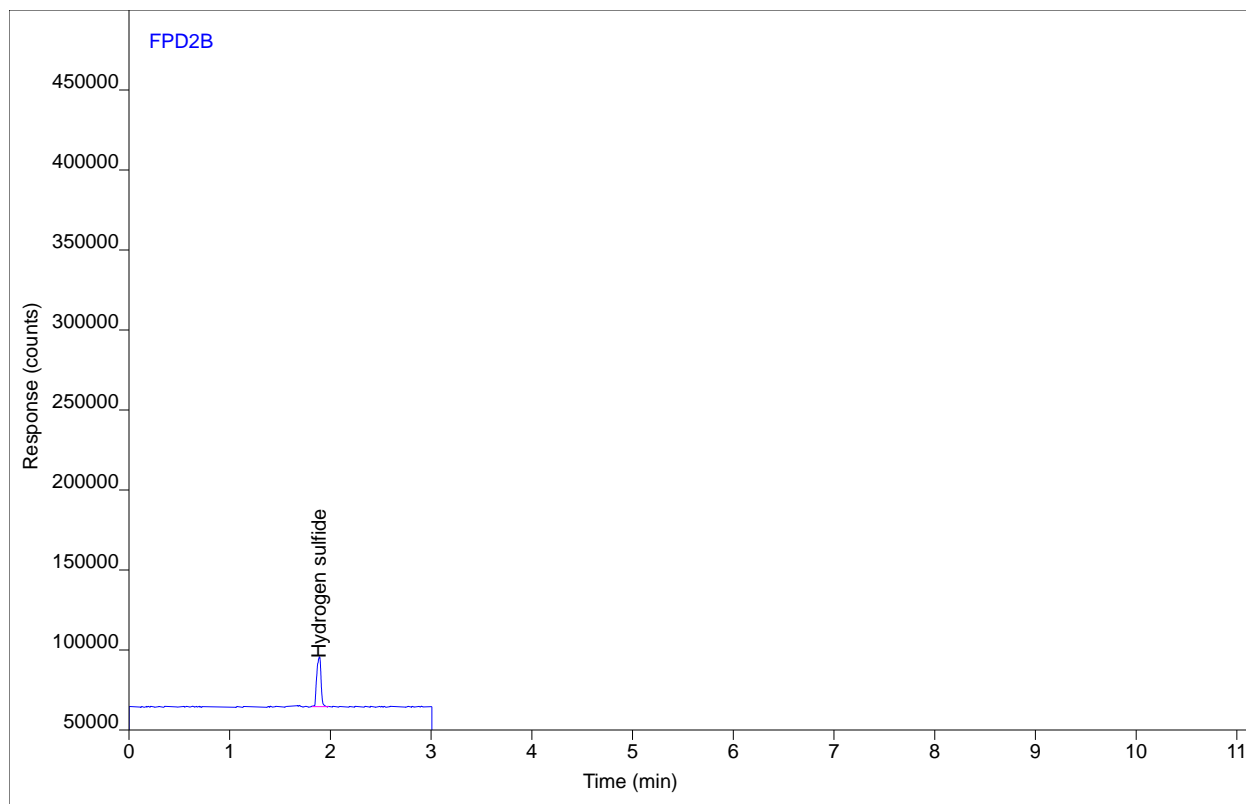
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide	BB	1.89	90968.6	30282.1	1.59027	1	1.59027	ppmv

Chromatogram Report

Sample Name zeppoP0462 #2
Sequence Name ZEPPOP0463B ver.2
Inj Data File 005B1503.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/23/2019 4:02 PM
File Modified 8/26/2019 9:58 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Calibration
Vial Number Vial 5
Injection Volume NA
Injection 3 of 4
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/26/2019 10:06 AM



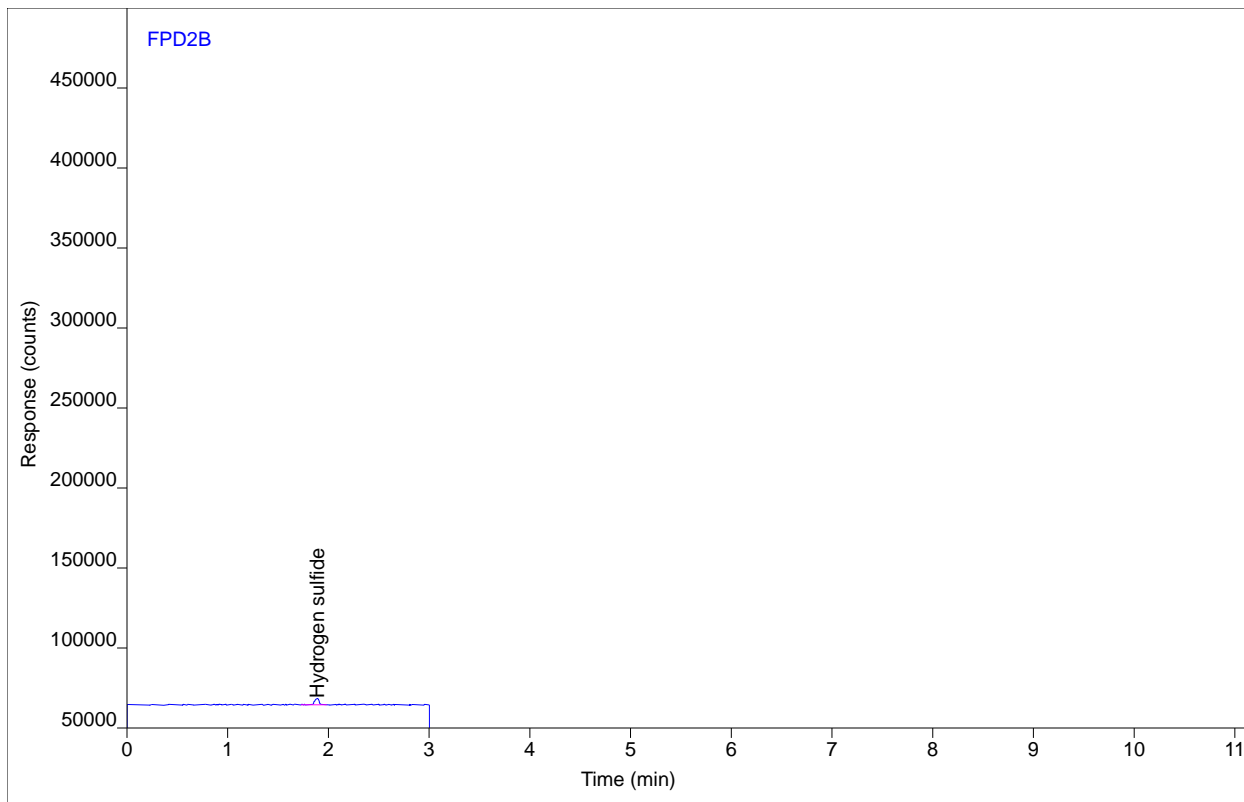
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide	BB	1.89	91007.1	31247.4	1.59060	1	1.59060	ppmv

Chromatogram Report

Sample Name zeppoP0462 #1
Sequence Name ZEPPOP0463B ver.2
Inj Data File 005B1601.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/23/2019 4:11 PM
File Modified 8/26/2019 9:58 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type
Vial Number Vial 5
Injection Volume NA
Injection 1 of 4
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/26/2019 10:06 AM



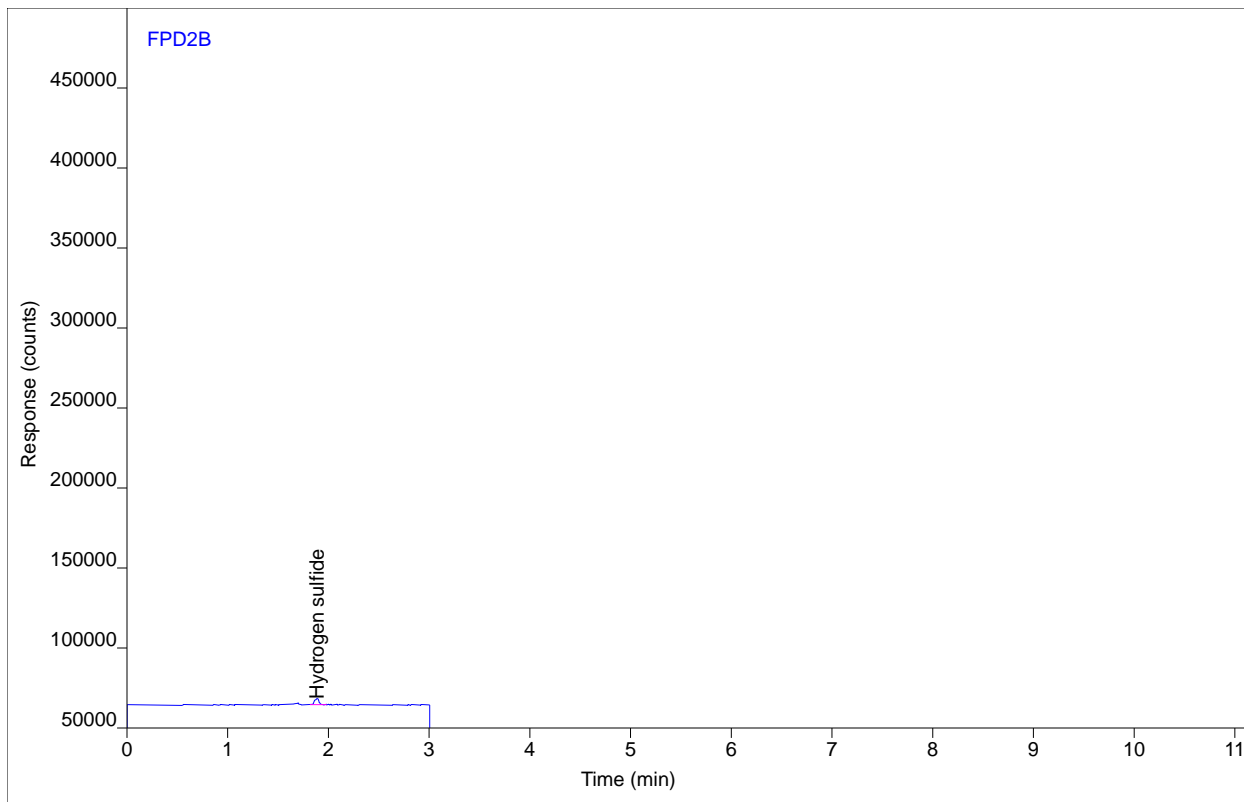
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide	FM	1.89	12950.4	4386.55	0.61189	1	0.61189	ppmv

Chromatogram Report

Sample Name zeppoP0462 #1
Sequence Name ZEPPOP0463B ver.2
Inj Data File 005B1602.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/23/2019 4:15 PM
File Modified 8/26/2019 9:58 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Calibration
Vial Number Vial 5
Injection Volume NA
Injection 2 of 4
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/26/2019 10:06 AM



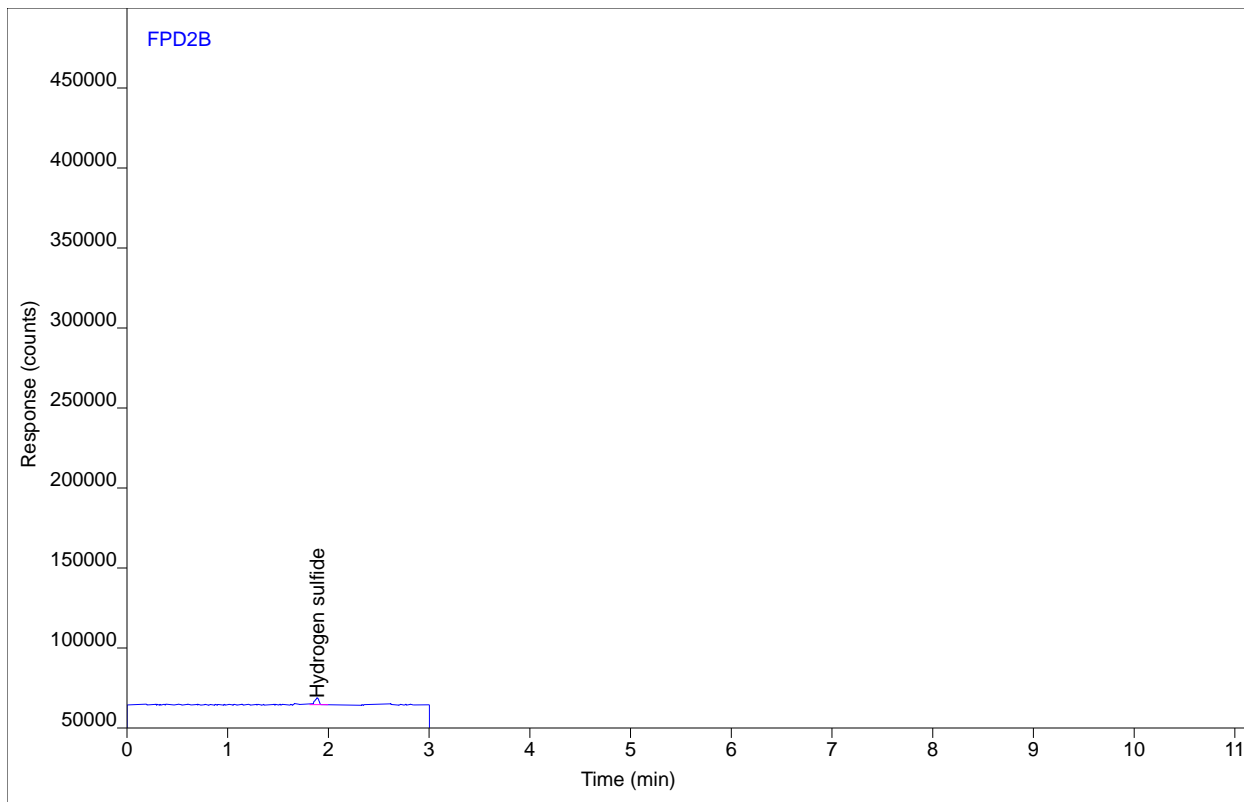
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide	BB	1.89	11454.7	3624.65	0.57618	1	0.57618	ppmv

Chromatogram Report

Sample Name zeppoP0462 #1
Sequence Name ZEPPOP0463B ver.2
Inj Data File 005B1603.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/23/2019 4:20 PM
File Modified 8/26/2019 9:58 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type
Vial Number Vial 5
Injection Volume NA
Injection 3 of 4
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/26/2019 10:06 AM



Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide	BB	1.89	11358.9	4079.05	0.57382	1	0.57382	ppmv

CERTIFICATE OF ANALYSIS

Grade of Product: CERTIFIED STANDARD-SPEC

Part Number:	X02NI99C15AC3D4	Reference Number:	122-401549589-1
Cylinder Number:	CC436735	Cylinder Volume:	144.3 Cubic Feet
Laboratory:	124 - Durham (SAP) - NC	Cylinder Pressure:	2015 PSIG
Analysis Date:	Jul 22, 2019	Valve Outlet:	330
Lot Number:	122-401549589-1		

Expiration Date: Jul 22, 2022

Product composition verified by direct comparison to calibration standards traceable to N.I.S.T. weights and/or N.I.S.T. Gas Mixture reference materials.

ANALYTICAL RESULTS

Component	Req Conc	Actual Concentration (Mole %)	Analytical Uncertainty
HYDROGEN SULFIDE	7.000 PPM	7.070 PPM	+/- 5%
NITROGEN	Balance		

Permanent Notes: MONTROSE ENV ENTHALPY ANALY




Approved for Release

CERTIFICATE OF ANALYSIS

Grade of Product: CERTIFIED STANDARD-SPEC

Part Number:	X02NI99C15AC3D4	Reference Number:	122-401383582-1
Cylinder Number:	CC437143	Cylinder Volume:	144.3 Cubic Feet
Laboratory:	124 - Durham (SAP) - NC	Cylinder Pressure:	2015 PSIG
Analysis Date:	Dec 27, 2018	Valve Outlet:	330
Lot Number:	122-401383582-1		

Expiration Date: Dec 27, 2021

Product composition verified by direct comparison to calibration standards traceable to N.I.S.T. weights and/or N.I.S.T. Gas Mixture reference materials.

ANALYTICAL RESULTS

Component	Req Conc	Actual Concentration (Mole %)	Analytical Uncertainty
HYDROGEN SULFIDE	7.000 PPM	6.924 PPM	+/- 5%
NITROGEN	Balance		

Permanent Notes: MONTROSE ENV ENTHALPY ANALY



A handwritten signature in black ink, appearing to read 'Rip St...', written over a horizontal line.

Approved for Release

DUALFPD8
Method Information

Method: C:\GC\2019\ZEPP0\METHODS\DUALFPD8.M
Modified: 8/6/2019 at 3:46:50 PM

Method Audit Trail

Operator : Shelby Hill
Date : 8/6/2019 3:46:49 PM
Change Info: This method was created at 8/6/2019 3:46:49 PM and based on
method C:\GC\2019\ZEPP0\METHODS\DUALFPD7.M

Operator : Shelby Hill
Date : 8/6/2019 3:46:50 PM
Change Info: Method saved. User comment: ""

Run Time Checklist

Pre-Run Cmd/Macro: on
Name: ValveController
Data Acquisition: on
Standard Data Analysis: off
Customized Data Analysis: off
Save GLP Data: off
Post-Run Cmd/Macro: off
Save Method with Data: off

Injection Source and Location

Injection Source: Valve
Injection Location: Dual

OVEN\DET

Runtime (min): 11.2

Zone Temperatures:

	State	Setpoint
Inl. A	OFF	175 C.
Inl. B	OFF	175 C.
Det. A	ON	200 C.
Det. B	ON	200 C.
Aux.	OFF	50 C.

Oven Zone:
Oven max 280 C.

DUALFPD8

Equi b Time	1. 10 Mi n.
Oven State	ON
Cryo State	OFF
Ambi ent	25 C.
Cryo Bl ast	OFF

Oven Program:

		Setpoi nt		
Ini ti al Temp. :		50 C.		
Ini ti al Time:		3. 00 Mi n.		
Level	Rate (C/mi n.)	Fi nal Temp. (C)	Fi nal Time (mi n)	
1	25. 0	150	4. 20	

InletB Temperature Program Information

Oven Track: OFF

Temperature Program:

		Setpoi nt		
Ini ti al Temp. :		175 C		
Ini ti al Time:		650. 00 mi n.		
Level	Rate (C/mi n.)	Fi nal Temp. (C)	Fi nal Time (mi n)	
1	0	50	0. 00	
Total Program Time:		650. 00		

InletA Pressure Program Information

Constant Flow: On

Pressure: 4. 2 psi

Temperature: 60 C

Pressure Program:

		Setpoi nt		
Ini ti al Pres. :		0. 0 psi		
Ini ti al Time:		650. 00 mi n.		
Level	Rate (psi /mi n.)	Fi nal Pres. (psi)	Fi nal Time (mi n)	
1	0. 00	0. 0	0. 00	
2(A)	0. 00	0. 0	0. 00	
3(B)	0. 00	0. 0	0. 00	
Total Program Time:		650. 00		

GC Pressure Units: psi

Entered Values:

Col umn Length:	60. 00	m.
Col umn Di ameter:	0. 530	mm.
Gas:	H2	
Vacuum Comp:	Off	

InletB Pressure Program Information

Constant Flow: Off

Pressure: 4. 2 psi

Temperature: 60 C.

Pressure Program:

		Setpoi nt
Ini ti al Pres. :		0. 0 psi
Ini ti al Time:		650. 00 mi n.

Page 2

DUALFPD8

Level	Rate (psi /mi n.)	Final Pres. (psi)	Final Time (mi n)
1	0.00	0.0	0.00
2(A)	0.00	0.0	0.00
3(B)	0.00	0.0	0.00
Total Program Time:		650.00	

GC Pressure Uni ts: psi

Entered Values:

Column Length: 60.00 m.
 Column Di ameter: 0.530 mm.
 Gas: H2
 Vacuum Comp: Off

Inl et A Packed Column Informati on

Equati on: ---

Pressure-Fl ow Rel ati onshi p:

	Pres.	Fl ow(psi)	(ml /mi n)
1	---	0.0	
2	---	0.0	
3	---	0.0	

Last pressure cal i brati on: ---

Packed Column Fl ow Setti ng (ml /mi n): 0.0

Inl et B Packed Column Informati on

Equati on: ---

Pressure-Fl ow Rel ati onshi p:

	Pres.	Fl ow(psi)	(ml /mi n)
1	---	0.0	
2	---	0.0	
3	---	0.0	

Last pressure cal i brati on: ---

Packed Column Fl ow Setti ng (ml /mi n): 0.0

Purge Val ve Setti ngs

Purge A/B

	Ini t Val ue	On Ti me (Mi n.)	Off Ti me (Mi n.)
A (Val ve 3)	On	0.00	0.00
B (Val ve 4)	On	0.00	0.00

A - Spl i tless Inj ecti on: No
 B - Spl i tless Inj ecti on: No

Val ves/Rel ays Informati on

Ini ti al Setpoi nts:

5890 Val ves:

Val ve 1: Off
 Val ve 2: Off
 Val ve 3 (Purge A): On
 Val ve 4 (Purge B): On

DUALFPD8

Val ve/Rel ay Ti me Tabl e:

Time	Name	State	Comment
0. 00	Val ve1	On	
0. 10	Val ve1	Off	
1. 00	Val ve2	On	
1. 10	Val ve2	Off	

Detector I nformati on

Detector A:

Type FPD
State ON

Detector B:

Type FPD
State ON

Si gnal I nformati on

Save Data:

Both

Si gnal 1:

Si gnal Det. A
Data rate 20. 000 Hz.
Peakwidth 0. 013 mi n.
Start Time 0. 00 mi n.
Stop Time 650. 00 mi n.

Si gnal 2:

Si gnal Det. B
Data rate 20. 000 Hz.
Peakwidth 0. 013 mi n.
Start Time 0. 00 mi n.
Stop Time 650. 00 mi n.

DUALFPD8_SHORT
Method Information

Method: C:\GC\2019\ZEPP0\METHODS\DUALFPD8_SHORT.M
Modified: 8/6/2019 at 3:45:56 PM

Method Audit Trail

Operator : Shelby Hill
Date : 8/6/2019 3:45:55 PM
Change Info: This method was created at 8/6/2019 3:45:55 PM and based on
method C:\GC\2019\ZEPP0\QUARTER 2\ZEPP0P0460 2\DUALFPD8_SHORT.M

Operator : Shelby Hill
Date : 8/6/2019 3:45:56 PM
Change Info: Method saved. User comment: ""

Run Time Checklist

Pre-Run Cmd/Macro: on
Name: ValveController
Data Acquisition: on
Standard Data Analysis: off
Customized Data Analysis: off
Save GLP Data: off
Post-Run Cmd/Macro: off
Save Method with Data: off

Injection Source and Location

Injection Source: Valve
Injection Location: Dual

OVEN\DET

Runtime (min): 3.0

Zone Temperatures:

	State	Setpoint
Inl. A	OFF	175 C.
Inl. B	OFF	175 C.
Det. A	ON	200 C.
Det. B	ON	200 C.
Aux.	OFF	50 C.

Oven Zone:
Oven max 280 C.

DUALFPD8_SHORT

Equi b Time	1. 10 Mi n.
Oven State	ON
Cryo State	OFF
Ambi ent	25 C.
Cryo Bl ast	OFF

Oven Program:

		Setpoi nt		
Ini ti al Temp. :		50 C.		
Ini ti al Time:		3. 00 Mi n.		
Level	Rate (C/mi n.)	Fi nal Temp. (C)	Fi nal Time (mi n)	
1	0. 00	0	0. 00	

InletB Temperature Program Information

Oven Track: OFF

Temperature Program:

		Setpoi nt		
Ini ti al Temp. :		175 C		
Ini ti al Time:		650. 00 mi n.		
Level	Rate (C/mi n.)	Fi nal Temp. (C)	Fi nal Time (mi n)	
1	0	50	0. 00	
Total Program Time:		650. 00		

InletA Pressure Program Information

Constant Flow: On

Pressure: 4. 2 psi

Temperature: 60 C

Pressure Program:

		Setpoi nt		
Ini ti al Pres. :		0. 0 psi		
Ini ti al Time:		650. 00 mi n.		
Level	Rate (psi /mi n.)	Fi nal Pres. (psi)	Fi nal Time (mi n)	
1	0. 00	0. 0	0. 00	
2(A)	0. 00	0. 0	0. 00	
3(B)	0. 00	0. 0	0. 00	
Total Program Time:		650. 00		

GC Pressure Uni ts: psi

Entered Values:

Col umn Length:	60. 00	m.
Col umn Di ameter:	0. 530	mm.
Gas:	H2	
Vacuum Comp:	Off	

InletB Pressure Program Information

Constant Flow: Off

Pressure: 4. 2 psi

Temperature: 60 C.

Pressure Program:

		Setpoi nt
Ini ti al Pres. :		0. 0 psi
Ini ti al Time:		650. 00 mi n.

Page 2

DUALFPD8_SHORT

Level	Rate (psi /mi n.)	Final Pres. (psi)	Final Time (mi n)
1	0.00	0.0	0.00
2(A)	0.00	0.0	0.00
3(B)	0.00	0.0	0.00
Total Program Time:		650.00	

GC Pressure Uni ts: psi

Entered Values:

Column Length:	60.00	m.
Column Di ameter:	0.530	mm.
Gas:	H2	
Vacuum Comp:	Off	

Inl et A Packed Column Informati on

Equati on: ---

Pressure-Fl ow Rel ati onshi p:

	Pres.	Fl ow(psi)	(ml /mi n)
1	---	0.0	
2	---	0.0	
3	---	0.0	

Last pressure cal i brati on: ---

Packed Column Fl ow Setti ng (ml /mi n): 0.0

Inl et B Packed Column Informati on

Equati on: ---

Pressure-Fl ow Rel ati onshi p:

	Pres.	Fl ow(psi)	(ml /mi n)
1	---	0.0	
2	---	0.0	
3	---	0.0	

Last pressure cal i brati on: ---

Packed Column Fl ow Setti ng (ml /mi n): 0.0

Purge Val ve Setti ngs

Purge A/B

	Ini t Val ue	On Ti me (Mi n.)	Off Ti me (Mi n.)
A (Val ve 3)	On	0.00	0.00
B (Val ve 4)	On	0.00	0.00

A - Spl i tless Inj ecti on:	No
B - Spl i tless Inj ecti on:	No

Val ves/Rel ays Informati on

Ini ti al Setpoi nts:

5890 Val ves:

Val ve 1:	Off
Val ve 2:	Off
Val ve 3 (Purge A):	On
Val ve 4 (Purge B):	On

DUALFPD8_SHORT

Val ve/Rel ay Ti me Tabl e:

Time	Name	State	Comment
0. 00	Val ve1	On	
0. 10	Val ve1	Off	
1. 00	Val ve2	On	
1. 10	Val ve2	Off	

Detector I nformati on

Detector A:

Type FPD
State ON

Detector B:

Type FPD
State ON

Si gnal I nformati on

Save Data:

Both

Si gnal 1:

Si gnal Det. A
Data rate 20. 000 Hz.
Peakwidth 0. 013 mi n.
Start Time 0. 00 mi n.
Stop Time 650. 00 mi n.

Si gnal 2:

Si gnal Det. B
Data rate 20. 000 Hz.
Peakwidth 0. 013 mi n.
Start Time 0. 00 mi n.
Stop Time 650. 00 mi n.

**This Is The Last Page
Of This Report.**

ENTHALPY ANALYTICAL REPORT: 0819-068B

Sample Collection Date: 08/21/2019

Analyses:

Hydrogen Cyanide (HCN) via Modified EPA Method 320

Tetra Tech, Inc.

3746 Mt. Diablo Blvd. Suite 300
Lafayette, CA 94549

Able Fire
Ridgeland, SC
Client Project # TT-D1-128

Analytical Report (0819-068B)

Generic FTIR Analysis
Hydrogen Cyanide



Enthalpy Analytical, LLC

Phone: (919) 850 - 4392 / Fax: (919) 850 - 9012 / www.enthalpy.com
800-1 Capitola Drive Durham, NC 27713-4385

I certify that to the best of my knowledge all analytical data presented in this report:

- Have been checked for completeness
- Are accurate, error-free, and legible
- Have been conducted in accordance with approved protocol, and that all deviations and analytical problems are summarized in the appropriate narrative(s)
- This analytical report was prepared in Portable Document Format (.PDF) and contains ??? pages.

Report Issued: mm/dd/yyyy



FTIR Summary of Results

Enthalpy Analytical

Company: Tetra Tech, Inc.

Job No.: 0819-068B - Generic FTIR Analysis

Client No.: TT-D1-128

Summary Table - Hydrogen cyanide

Sample ID	Sample Concentration (ppmv wet)
ACF-AS-RES-2-24HR-082119 (Can #0807)	4.00 ND
ACF-AS-RES-1-24HR-082119 (Can #0811)	3.60 ND
ACF-AS-PAM1-082119 (Can #0826)	3.69 ND
ACF-AS-PAM2-082119 (Can #0762)	3.60 ND

FTIR Results

Enthalpy Analytical

Company: Tetra Tech, Inc.

Job No.: 0819-068B - Generic FTIR Analysis

Client No.: TT-D1-128

ACF-AS-RES-2-24HR-082119 (Can #0807)

Date	Method	Filename	HCN (ppm)	SEC (ppm)
8/23/2019 10:58	0819-068_L_HCN_B	19_08_23_1058_55_915	1.27	0.697
8/23/2019 10:59	0819-068_L_HCN_B	19_08_23_1059_57_084	1.27	0.718
8/23/2019 11:00	0819-068_L_HCN_B	19_08_23_1100_58_284	1.27	0.716
8/23/2019 11:01	0819-068_L_HCN_B	19_08_23_1101_59_469	1.27	0.781
8/23/2019 11:03	0819-068_L_HCN_B	19_08_23_1103_00_653	1.27	0.754
8/23/2019 11:04	0819-068_L_HCN_B	19_08_23_1104_01_838	1.27	0.861
8/23/2019 11:05	0819-068_L_HCN_B	19_08_23_1105_02_991	1.27	0.746
8/23/2019 11:06	0819-068_L_HCN_B	19_08_23_1106_04_175	1.27	0.771
			DF	
Average Conc. (ppm):			3.142	4.00
				2.37

ACF-AS-RES-1-24HR-082119 (Can #0811)

Date	Method	Filename	HCN (ppm)	SEC (ppm)
8/23/2019 11:34	0819-068_L_HCN_B	19_08_23_1134_49_731	1.27	0.535
8/23/2019 11:35	0819-068_L_HCN_B	19_08_23_1135_49_650	1.27	0.620
8/23/2019 11:36	0819-068_L_HCN_B	19_08_23_1136_51_475	1.27	0.521
8/23/2019 11:37	0819-068_L_HCN_B	19_08_23_1137_51_425	1.27	0.613
8/23/2019 11:38	0819-068_L_HCN_B	19_08_23_1138_53_282	1.27	0.443
8/23/2019 11:39	0819-068_L_HCN_B	19_08_23_1139_53_200	1.27	0.589
8/23/2019 11:40	0819-068_L_HCN_B	19_08_23_1140_55_025	1.27	0.575
8/23/2019 11:41	0819-068_L_HCN_B	19_08_23_1141_54_960	1.27	0.626
8/23/2019 11:42	0819-068_L_HCN_B	19_08_23_1142_56_785	1.27	0.512
			DF	
Average Conc. (ppm):			2.829	3.60
				1.58

Enthalpy Analytical

Company: Tetra Tech, Inc.

Job No.: 0819-068B - Generic FTIR Analysis

Client No.: TT-D1-128

ACF-AS-PAM1-082119 (Can #0826)

Date	Method	Filename	HCN (ppm)	SEC (ppm)
8/23/2019 12:15	0819-068_L_HCN_B	19_08_23_1215_32_376	1.27	0.567
8/23/2019 12:16	0819-068_L_HCN_B	19_08_23_1216_32_311	1.27	0.634
8/23/2019 12:17	0819-068_L_HCN_B	19_08_23_1217_33_542	1.27	0.701
8/23/2019 12:18	0819-068_L_HCN_B	19_08_23_1218_34_852	1.27	0.602
8/23/2019 12:19	0819-068_L_HCN_B	19_08_23_1219_36_302	1.27	0.642
8/23/2019 12:20	0819-068_L_HCN_B	19_08_23_1220_37_611	1.27	0.606
8/23/2019 12:21	0819-068_L_HCN_B	19_08_23_1221_38_858	1.27	0.697
8/23/2019 12:22	0819-068_L_HCN_B	19_08_23_1222_40_168	1.27	0.619
8/23/2019 12:23	0819-068_L_HCN_B	19_08_23_1223_41_415	1.27	0.726
8/23/2019 12:24	0819-068_L_HCN_B	19_08_23_1224_42_724	1.27	0.655
DF				
Average Conc. (ppm):			2.901	1.87

ACF-AS-PAM2-082119 (Can #0762)

Date	Method	Filename	HCN (ppm)	SEC (ppm)
8/23/2019 12:37	0819-068_L_HCN_B	19_08_23_1237_39_467	1.27	0.555
8/23/2019 12:38	0819-068_L_HCN_B	19_08_23_1238_39_996	1.27	0.635
8/23/2019 12:39	0819-068_L_HCN_B	19_08_23_1239_40_508	1.27	0.569
8/23/2019 12:40	0819-068_L_HCN_B	19_08_23_1240_41_021	1.27	0.583
8/23/2019 12:41	0819-068_L_HCN_B	19_08_23_1241_41_565	1.27	0.660
8/23/2019 12:42	0819-068_L_HCN_B	19_08_23_1242_42_093	1.27	0.577
8/23/2019 12:43	0819-068_L_HCN_B	19_08_23_1243_42_606	1.27	0.614
8/23/2019 12:44	0819-068_L_HCN_B	19_08_23_1244_43_134	1.27	0.545
8/23/2019 12:45	0819-068_L_HCN_B	19_08_23_1245_43_631	1.27	0.541
DF				
Average Conc. (ppm):			2.829	1.66

FTIR Narrative Summary

General Reporting Notes

The following are general reporting notes that are applicable to all Enthalpy Analytical, LLC data reports, unless specifically noted otherwise.

- Any analysis which refers to the method as “**Type**” represents a planned deviation from the reference method. For instance a Hydrogen Sulfide assay from a Tedlar bag would be labeled as “EPA Method 16-Type” because Tedlar bags are not mentioned as one of the collection options in EPA Method 16.
- The acronym **MDL** represents the Minimum Detection Limit. Below this value the laboratory cannot determine the presence of the analyte of interest reliably.
- The acronym **LOQ** represents the Limit of Quantification. Below this value the laboratory cannot quantitate the analyte of interest within the criteria of the method.
- The acronym **ND** following a value indicates a non-detect or analytical result below the MDL.
- The letter **J** in the Qualifier or Flag column in the results indicates that the value is between the MDL and the LOQ. The laboratory can positively identify the analyte of interest as present, but the value should be considered an estimate.
- The letter **E** in the Qualifier or Flag column indicates an analytical result exceeding 100% of the highest calibration point. The associated value should be considered as an estimate.
- Sample results are presented ‘as measured’ for single injection methodologies, or an average value if multiple injections are made. If all injections are below the MDL, the sample is considered non-detect and the ND value is presented. If one, but not all, are below the MDL, the MDL value is used for any injections that are below the MDL. For example, if the MDL is 0.500 and LOQ is 1.00, and the instrument measures 0.355, 0.620, and 0.442 - the result reported is the average of 0.500, 0.620, and 0.500 - - - i.e. 0.540 with a J flag.
- When a spike recovery (Bag Spike, Collocated Spike Train, or liquid matrix spike) is being calculated, the native (unspiked) sample result is used in the calculations, as long as the value is above the MDL. If a sample is ND, then 0 is used as the native amount (not the MDL value).
- The acronym **DF** represents Dilution Factor. This number represents dilution of the sample during the preparation and/or analysis process. The analytical result taken from a laboratory instrument is multiplied by the DF to determine the final undiluted sample results.
- The addition of **MS** to the Sample ID represents a Matrix Spike. An aliquot of an actual sample is spiked with a known amount of analyte so that a percent recovery value can be determined. The MS analysis indicates what effect the sample matrix may have on the target analyte, i.e. whether or not anything in the sample matrix interferes with the analysis of the analyte(s).



Enthalpy Analytical Narrative Summary

Sample Custody

David Myers of Enthalpy Analytical, LLC of Durham, NC received four Summa canisters for analysis on August 23th, 2019 after being relinquished by Tetra Tech, Inc.

Prior to and during analysis the samples were kept under lock with access only to authorized personnel of Enthalpy Analytical, LLC.

Sample Analysis

The samples were analyzed for hydrogen cyanide using the analytical procedures in EPA Method 320, *Measurement of Vapor Phase Organic and Inorganic Emissions* (40 CFR, Part 63, Appendix A). While this is a source testing method, the analytical parameters of the method are easily adapted to canister sample analyses.

The FTIR gas cell was purged with nitrogen (N₂) gas and evacuated. Each can was then connected to the inlet of the FTIR gas cell, the valve on the can was opened, and the total gas pressure in the absorption cell was brought to a final pressure of ~15.0 psia, after which the FTIR gas cell was isolated. The FTIR absorption spectrum of the sample was recorded several times. Using the measured cell pressures after evacuations (P_i) and the final cell pressures after being filled with sample gas (P_f), the in-cell dilution factor for the sample was determined. Canisters were also pressurized prior to analysis. Canister pressurization multiplied by cell pressurization and the pre-cell dilution factor is calculated to give the total dilution factor (DF) of the sample. The average sample concentration or MDL was then multiplied by total dilution factor to determine the final sample concentration. Hydrogen cyanide was not identified above minimum detection limit in any of the samples.

Analytes not detected above the minimum detectable concentration (MDC) in the samples are reported in the "Summary" section with "ND" flags. The reported MDC values were calculated using Equation 6.2.2 of the Addendum to Method 320.

Instrumentation

The FTIR system used for this test was a Midac I-1301 medium-resolution spectrometer equipped with a Michelson interferometer. The interferometer and detector were assembled by MIDAC Corporation (Westfield, MA). The nominal spectral resolution of the system was 0.5 cm⁻¹.

The instrument was equipped with a nominal 10-meter path length White cell, a zinc selenide (ZnSe) beamsplitter, zinc selenide (ZnSe) non-hygroscopic windows, and a mercury cadmium telluride (MCT) liquid nitrogen cooled detector. The inside walls of the FTIR absorption cell were of polished stainless steel to minimize interaction of the sample with the cell walls, and the mirrors were bare gold. The pressure of the FTIR absorption cell was monitored with a pressure transducer connected directly to the cell. The cell, with a volume of approximately 1.9 liters, was wrapped in an insulating blanket, and its temperature was monitored with a type J thermocouple.

Enthalpy Analytical Narrative Summary

(continued)

Data Analysis

All data were analyzed using AutoQuant Pro (Build 4.136, Midac Corporation). The spectra used for this analysis were obtained from spectra recorded by Enthalpy, Midac Corporation, or EPA. For all data analysis, the apodization was triangular and the baseline correction was linear. The “Method Map” section contains all the parameters required to reproduce the results of this testing.

Data Review

Enthalpy subjects all the spectroscopic data and analytical results to several levels of review. First, the instrument operator (analyst) inspects the instrument’s outputs to ensure their appropriate performance during the sampling runs. Second, the analyst re-examines the sample spectra and the quantitative analytical results, and also spot-checks the analysis results by hand; these examinations include visual comparisons of the sample and reference spectra. Finally, an independent reviewer checks the final report for consistency.

General Reporting Notes

(continued)

- The addition of **MSD** to the Sample ID represents a Matrix Spike Duplicate. Prepared in the same manner as a MS, the use of duplicate matrix spikes allows further confirmation of laboratory quality by showing the consistency of results gained by performing the same steps multiple times.
- The addition of **LD** to the Sample ID represents a Laboratory Duplicate. The analyst prepares an additional aliquot of sample for testing and the results of the duplicate analysis are compared to the initial result. The result should have a difference value of within 10% of the initial result (if the results of the original analysis are greater than the LOQ).
- The addition of **AD** to the Sample ID represents an Alternate Dilution. The analyst prepares an additional aliquot at a different dilution factor (usually double the initial factor). This analysis helps confirm that no additional compound is present and coeluting or sharing absorbance with the analyte of interest, as they would have a different response/absorbance than the analyte of interest.
- The Sample ID **LCS** represents a Laboratory Control Sample. Clean matrix, similar to the client sample matrix, prepared and analyzed by the laboratory using the same reagents, spiking standards and procedures used for the client samples. The LCS is used to assess the control of the laboratory's analytical system. Whenever spikes are prepared for our client projects, two spikes are retained as LCSs. The LCSs are labeled with the associated project number and kept in-house at the appropriate temperature conditions. When the project samples are received for analysis, the LCSs are analyzed to confirm that the analyte could be recovered from the media, separate from the samples which were used on the project and which may have been affected by source matrix, sample collection, and/or sample transport.
- **Significant Figures:** Where the reported value is much greater than unity (1.00) in the units expressed, the number is rounded to a whole number of units, rather than to 3 significant figures. For example, a value of 10,456.45 ug catch is rounded to 10,456 ug. There are five significant digits displayed, but no confidence should be placed on more than two significant digits. In the case of small numbers, generally 3 significant figures are presented, but still only 2 should be used with confidence. Many neat materials are only certified to 3 digits, and as the mathematically correct final result is always 1 digit less than all its pre-cursors - 2 significant figures are what are most defensible.
- **Manual Integration:** The data systems used for processing will flag manually integrated peaks with an "M". There are several reasons a peak may be manually integrated. These reasons will be identified by the following two letter designations on sample chromatograms, if provided in the report. The peak was *not integrated* by the software "**NI**", the peak was *integrated incorrectly* by the software "**II**" or the *wrong peak* was integrated by the software "**WP**". These codes will accompany the analyst's manual integration stamp placed next to the compound name on the chromatogram.

Sample Custody

FTIR QC

Enthalpy Analytical

Company: Tetra Tech, Inc.

Job No.: 0819-068B - Generic FTIR Analysis

Client No.: TT-D1-128

Minimum Detectable Concentration

	HCN (ppm)	SEC (ppm)
ACF-AS-RES-2-24HR (Can #0807)		0.756
ACF-AS-RES-1-24HR (Can #0811)		0.559
ACF-AS-PAM1 (Can #0826)		0.645
ACF-AS-PAM2 (Can #0762)		0.587
Average SEC	0.637	
MDC (ppm):	1.27	

Enthalpy Analytical

Company: Tetra Tech, Inc.

Job No.: 0819-068B - Generic FTIR Analysis

Client No.: TT-D1-128

Dilution Factor

Can #	Sample ID	Pi	Pf	DF1	DF2	DF3	DF Total
0807	ACF-AS-RES-2-24HR	2.61	8.63	1.434	2.192	1	3.142
0811	ACF-AS-RES-1-24HR	2.56	8.91	1.403	2.016	1	2.829
0826	ACF-AS-PAM1	2.56	8.20	1.454	1.995	1	2.901
0762	ACF-AS-PAM2	2.56	9.47	1.370	2.064	1	2.829

DF1 equals the in cell dilution factor.

DF2 equals the canister dilution factor.

DF3 equals the tedlar bag dilution made from the canisters.

DF total=DF1xDF2xDF3

Company	Tetratech
Analyst Initials	NBT
Parameters	EPA Method 320

Client #	TT-01-128
Job #	0819-068
Samples	Able Fire

Path Length - L

Date	Method	FileName		ethylene (ppm)	SEC (ppm)
8/23/2019 10:25	0819-068_L_CTS_A	19_08_23_1025_44_388	1	8.96	0.175
8/23/2019 10:26	0819-068_L_CTS_A	19_08_23_1026_01_497	1	8.96	0.174
8/23/2019 10:26	0819-068_L_CTS_A	19_08_23_1026_18_652	1	8.95	0.175
8/23/2019 10:26	0819-068_L_CTS_A	19_08_23_1026_35_761	1	8.97	0.175
8/23/2019 10:26	0819-068_L_CTS_A	19_08_23_1026_52_869	1	8.96	0.174
8/23/2019 10:27	0819-068_L_CTS_A	19_08_23_1027_09_993	1	8.99	0.174
8/23/2019 10:27	0819-068_L_CTS_A	19_08_23_1027_27_102	1	8.97	0.174
Average (m)				8.96	0.174
8/23/2019 10:48	0819-068_L_CTS_A	19_08_23_1048_49_757	1	9.01	0.178
8/23/2019 10:49	0819-068_L_CTS_A	19_08_23_1049_06_788	1	9.00	0.177
8/23/2019 10:49	0819-068_L_CTS_A	19_08_23_1049_23_787	1	9.03	0.178
8/23/2019 10:49	0819-068_L_CTS_A	19_08_23_1049_40_810	1	9.00	0.178
8/23/2019 10:49	0819-068_L_CTS_A	19_08_23_1049_57_802	1	8.99	0.176
8/23/2019 10:50	0819-068_L_CTS_A	19_08_23_1050_14_863	1	9.00	0.177
8/23/2019 10:50	0819-068_L_CTS_A	19_08_23_1050_31_877	1	9.00	0.177
8/23/2019 10:50	0819-068_L_CTS_A	19_08_23_1050_48_908	1	9.00	0.177
Average (m)				9.00	0.177
8/23/2019 13:11	0819-068_L_CTS_A	19_08_23_1311_54_272	1	9.03	0.168
8/23/2019 13:12	0819-068_L_CTS_A	19_08_23_1312_11_584	1	9.03	0.168
8/23/2019 13:12	0819-068_L_CTS_A	19_08_23_1312_28_911	1	9.05	0.169
8/23/2019 13:12	0819-068_L_CTS_A	19_08_23_1312_46_426	1	9.06	0.168
8/23/2019 13:13	0819-068_L_CTS_A	19_08_23_1313_03_785	1	9.05	0.168
8/23/2019 13:13	0819-068_L_CTS_A	19_08_23_1313_21_112	1	9.03	0.167
8/23/2019 13:13	0819-068_L_CTS_A	19_08_23_1313_38_611	1	9.04	0.168
8/23/2019 13:13	0819-068_L_CTS_A	19_08_23_1313_55_969	1	9.03	0.168
8/23/2019 13:14	0819-068_L_CTS_A	19_08_23_1314_13_281	1	9.03	0.167
Average (m)				9.04	0.168
Average Pathlength (m)				9.00	0.173
Max (m)				9.04	
Min (m)				8.96	
Max % Deviation				0.4%	

FTIR Method Map

CTS Method Map

Overrides: T(C)=121: L(ppm)=101.3

Method Name: 0819-086_L_CTS_A

Method Path: E:\FTIR\2019\Q3\0819-172 Tetra Tech\Methods\0819-086_L_CTS_A\0819-086_L_CTS_A.aq4

Method Type: AutoQuant 4.0

Linear Analysis Mode

MethodParameters

Wavenumber range: 650.00 - 4500.00 cm-1

Default Pathlength = 100.1000 M

Gain = 0.000000

Apodization = Triangle

Phase Correction = Mertz

Resolution = 0.5 cm-1

Baseline Correction: Single Linear

Exclusion Criterion: 2500.000000

Compound: ethylene

Description:

Molecular Weight: 0.00

Alarms: Disabled

Primary Spectrum: ETYH5A.SPC

Reference Concentration: 206.6000 ppm-m

Reference Pathlength: 1.0000 M

Reference Pressure: 1.0000 atm

Reference Temperature: 121.00 C

Region #1: 870.00 - 1040.00 cm-1

Analye Method Map

Overrides: T(C)=121: L(m)=9

Method Name: 0819-068_L_HCN_B

Method Path: N:\FTIR\2019\Q3\0819-068 Tetra Tech\Methods\0819-068_L_HCN_B\0819-068_L_HCN_B.aq4

Method Type: AutoQuant 4.0

Linear Analysis Mode

MethodParameters

Wavenumber range: 650.00 - 4500.00 cm⁻¹

Default Pathlength = 8.9400 M

Gain = 0.000000

Apodization = Triangle

Phase Correction = Mertz

Resolution = 0.5 cm⁻¹

Baseline Correction: Single

Exclusion Criterion: 2500.000000

Compound: SF6

Description:

Molecular Weight: 0.00

Alarms: Disabled

Primary Spectrum: SF6_T1_3-03ppm_121_14-70psi_9-52m.SPC

Reference Concentration: 28.8456 ppm-m

Reference Pathlength: 9.5200 M

Reference Pressure: 1.0003 atm

Reference Temperature: 121.00 C

Region #1: 935.00 - 955.00 cm⁻¹

Compound: HCN

Description:

Molecular Weight: 0.00

Alarms: Disabled

Spectrum: HCN-L-T-121-8_39-25_0-1_01.SPC

Reference Concentration: 209.7500 ppm-m

Reference Pathlength: 8.3900 M

Reference Pressure: 1.0098 atm

Reference Temperature: 121.00 C

Region #1: 3339.00 - 3352.80 cm⁻¹

Spectrum: HCN-L-T-121-8_39-50_0-1_01.SPC

Reference Concentration: 419.5000 ppm-m

Reference Pathlength: 8.3900 M

Reference Pressure: 1.0098 atm

Reference Temperature: 121.00 C
Region #1: 3339.00 - 3352.80 cm-1
Spectrum: HCN-L-T-121-8_39-75_0-1_01.SPC
Reference Concentration: 629.2500 ppm-m
Reference Pathlength: 8.3900 M
Reference Pressure: 1.0016 atm
Reference Temperature: 121.00 C
Region #1: 3339.00 - 3352.80 cm-1
Spectrum: HCN-L-T-121-8_39-125-1_01.SPC
Reference Concentration: 1048.7500 ppm-m
Reference Pathlength: 8.3900 M
Reference Pressure: 0.9989 atm
Reference Temperature: 121.00 C
Region #1: 3339.00 - 3352.80 cm-1
Primary Spectrum: HCN-L-T-121-8_39-250-1_01.SPC
Reference Concentration: 2097.5000 ppm-m
Reference Pathlength: 8.3900 M
Reference Pressure: 1.0071 atm
Reference Temperature: 121.00 C
Region #1: 3339.00 - 3352.80 cm-1

Compound: H2O

Description:
Molecular Weight: 0.00
Alarms: Disabled
Primary Spectrum: 19_08_29_0943_13_885.abs
Reference Concentration: 1.0013 ppm-m
Reference Pathlength: 8.9400 M
Reference Pressure: 1.0479 atm
Reference Temperature: 121.00 C
Region #1: 3339.19 - 3352.75 cm-1

Logbook Notes

Tetra Tech Cons

Project No.

0819-068

119

Book No.

NBT02

From Page No. _____

Argas CC353870 exp
101.3ppm Ethylene 7/6/21

Instrument: L Midac I-1301 S/N: 532

PDL: L Midac I-0177-3 S/N: 151

Transducer: Honeywell SPT400030PA9W08

Filename	Time	Cell T (°C)	Cell P (mV)	Cell P (mV)	SC	BG	Notes
17-08-23_1011-59-109	10:15	121	-	14.64	128	1	BG Taken
1020-23-406	10:24	121	-	14.64	16	1	CF3 Ety
① NBT 8/23/19	10:29	121	-	14.68	50	1	N2 Spectra
	10:45	121	-	14.68	128	2	BG Taken
	10:48	121	-	14.63	16	2	CF3 Ety
	10:58	121	2.61	8.43	50	2	ACF-AS-RES-2-24HR Can 807
	11:34	121	2.56	8.91	50	2	ACF-AS-RES-1-24HR Can 0811
	12:15	121	2.66	8.20	50	2	ACF-AS-PAM1 Can 826
	12:37	121	2.56	9.47	50	2	ACF-AS-PAM2 Can 762
	13:01	121	-	14.74	128	3	BG Taken
	13:10	121	-	14.62	16	3	CF3 Ety

NBT 8/23/19

Witnessed & Understood by me,

Date

Invented by:

Recorded by:

JYU
NBT

Date

8/23/19
8/23/19

To Page No. _____

**This Is The Last Page
Of This Report.**

ENTHALPY ANALYTICAL REPORT: 0819-172A

Sample Collection Date: 08/22/2019

Analyses:

Volatile Organic Compounds (VOC) via EPA Method Toxic Organics (TO)-15
Hydrogen Sulfide (H₂S) via Modified EPA Method 16

Tetra Tech, Inc.

3746 Mt. Diablo Blvd. Suite 300
Lafayette, CA 94549

Able Fire
Ridgeland, SC
Client Project # TT-01-128

Analytical Report (0819-172A)

EPA Method TO-15

TO-15 Compound List

EPA Method 16-Type

Hydrogen sulfide



Enthalpy Analytical, LLC

Phone: (919) 850 - 4392 / Fax: (919) 850 - 9012 / www.enthalpy.com
800-1 Capitola Drive Durham, NC 27713-4385

I certify that to the best of my knowledge all analytical data presented in this report:

- Have been checked for completeness
- Are accurate, error-free, and legible
- Have been conducted in accordance with approved protocol, and that all deviations and analytical problems are summarized in the appropriate narrative(s)

This analytical report was prepared in Portable Document Format (.PDF) and contains ??? pages.

Report Issued: xx/xx/xxxx



Summary of Results

Enthalpy Analytical

Company: Tetra Tech, Inc.

Job No.: 0819-172A - EPA Method 16-Type

Client No.: TT-01-128

Summary Table - Hydrogen sulfide

Sample ID	Sample Concentration (ppmv)
ACF-AS-PAM1-082219 (Can #0853)	0.156 ND
ACF-AS-RES-2-24-082219 (Can #0810)	0.154 ND
ACF-AS-PAM2-082219 (Can #0849)	0.163 ND
ACF-AS-RES-1-24-082219 (Can #0857)	0.157 ND
ACF-AS-CAB1-DAY-082219 (Can #0798)	0.279 ND
ACF-AS-CAB2-DAY-082219 (Can #0852)	0.241 ND

Results

Enthalpy Analytical

Company: Tetra Tech, Inc.

Job No.: 0819-172A - EPA Method 16-Type

Client No.: TT-01-128

Sample Analysis Method Used:

ZEPPPOP0462.M

Hydrogen sulfide

Sample ID	Filename #1	Filename #2	Filename #3	MDL	Curve Min	Curve Max	Ret Time (min)	Ret Time (min)	Ret Time (min)	%dif RT	Conc. #1 (ppmv)	Conc. #2 (ppmv)	Conc. #3 (ppmv)	%dif Conc.	Avg. Conc. (ppmv)	DF * Can Press.	Sample Conc. (ppmv)	Flag
ACF-AS-PAM1-082219 (Can #0853)	005B1301.D	005B1302.D	005B1303.D	0.0781	0.643	7.07	NA	NA	NA	NA	0.0781	0.0781	0.0781	0.0	0.0781	1.992	0.156	ND
ACF-AS-RES-2-24-082219 (Can #0810)	005B1001.D	005B1002.D	005B1003.D	0.0781	0.643	7.07	NA	NA	NA	NA	0.0781	0.0781	0.0781	0.0	0.0781	1.976	0.154	ND
ACF-AS-PAM2-082219 (Can #0849)	005B1401.D	005B1402.D	005B1403.D	0.0781	0.643	7.07	NA	NA	NA	NA	0.0781	0.0781	0.0781	0.0	0.0781	2.091	0.163	ND
ACF-AS-RES-1-24-082219 (Can #0857)	005B1501.D	005B1502.D	005B1503.D	0.0781	0.643	7.07	NA	NA	NA	NA	0.0781	0.0781	0.0781	0.0	0.0781	2.011	0.157	ND
ACF-AS-CAB1-DAY-082219 (Can #0798)	005B1201.D	005B1202.D	005B1203.D	0.0781	0.643	7.07	NA	NA	NA	NA	0.0781	0.0781	0.0781	0.0	0.0781	3.575	0.279	ND
ACF-AS-CAB2-DAY-082219 (Can #0852)	005B1101.D	005B1102.D	005B1103.D	0.0781	0.643	7.07	NA	NA	NA	NA	0.0781	0.0781	0.0781	0.0	0.0781	3.081	0.241	ND

Sample Name

: ACF-AS-PAM1-082219

Sample Info

: 0819-172; Can #0853; 500mL load

Data File

: X1903157.D

Dilution

: 1

Pressurization Factor

: 1.992

Acquisition Date

: 2019-08-25 08:27:36

Instrument Method

: TO15-SCN.M

Matrix

: AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
Propylene	11.5	0.0764	0.0697	19.8	0.132	0.120	
Freon 12 (CCl2F2)	0.448	0.0778	0.0697	2.22	0.385	0.345	
Freon 114 (C2Cl2F4)	ND	0.0798	0.0697	ND	0.558	0.487	
Chloromethane	10.3	0.0777	0.0697	21.3	0.160	0.144	
Chloroethene (Vinyl chloride)	ND	0.0802	0.0697	ND	0.205	0.178	
1,3-Butadiene	0.794	0.0778	0.0697	1.76	0.172	0.154	
Bromomethane	ND	0.0788	0.0697	ND	0.306	0.271	
Chloroethane	0.125	0.0803	0.0697	0.329	0.212	0.184	
Bromoethene (Vinyl bromide)	ND	0.0794	0.0697	ND	0.347	0.305	
Freon 11 (CCl3F)	0.210	0.0827	0.0697	1.18	0.465	0.392	
Ethanol	1.91	0.199	0.0797	3.60	0.375	0.150	
Acrolein	0.584	0.0791	0.0697	1.34	0.181	0.160	
Freon 113 (C2Cl3F3)	0.0807	0.0793	0.0697	0.618	0.608	0.534	
1,1-Dichloroethene	ND	0.0798	0.0697	ND	0.316	0.276	
Acetone	5.11	0.0801	0.0697	12.1	0.190	0.166	
Carbon disulfide	0.189	0.0800	0.0697	0.590	0.249	0.217	
Isopropyl alcohol	0.448	0.0800	0.0697	1.10	0.197	0.171	
Allyl chloride (3-chloropropene)	ND	0.0802	0.0697	ND	0.251	0.218	
Acetonitrile	0.984	0.0801	0.0697	1.65	0.134	0.117	m
Methylene chloride	ND	0.202	0.202	ND	0.701	0.701	
trans-1,2-Dichloroethene	ND	0.0812	0.0697	ND	0.322	0.276	
Methyl tert-butyl ether	ND	0.0816	0.0697	ND	0.294	0.251	
Acrylonitrile	0.136	0.0814	0.0697	0.295	0.177	0.151	
Hexane	0.629	0.0806	0.0697	2.22	0.284	0.246	
1,1-Dichloroethane	ND	0.0785	0.0697	ND	0.318	0.282	
Vinyl acetate	ND	0.0810	0.0697	ND	0.285	0.245	
cis-1,2-Dichloroethene	ND	0.0802	0.0697	ND	0.318	0.276	
Methyl ethyl ketone (2-Butanone)	0.695	0.0810	0.0697	2.05	0.239	0.206	
Ethyl acetate	ND	0.0802	0.0697	ND	0.289	0.251	
Chloroform	ND	0.0806	0.0697	ND	0.393	0.340	
Tetrahydrofuran	0.393	0.0804	0.0697	1.16	0.237	0.206	
1,1,1-Trichloroethane	ND	0.0793	0.0697	ND	0.433	0.380	
Cyclohexane	0.0761	0.0810	0.0697	0.262	0.279	0.240	J
Carbon tetrachloride	0.0783	0.0806	0.0697	0.492	0.507	0.439	J
Benzene	4.66	0.0795	0.0697	14.9	0.254	0.223	
2,2,4-trimethylpentane	0.118	0.0817	0.0697	0.550	0.382	0.326	
1,2-Dichloroethane	ND	0.0814	0.0697	ND	0.330	0.282	
Heptane	0.402	0.0801	0.0697	1.65	0.328	0.286	
Trichloroethene	ND	0.0800	0.0697	ND	0.430	0.375	
1,2-Dichloropropane	ND	0.0814	0.0697	ND	0.376	0.322	
Methyl methacrylate	0.118	0.0826	0.0697	0.484	0.338	0.285	
1,4-Dioxane	0.117	0.0806	0.0697	0.422	0.290	0.251	
Bromodichloromethane	ND	0.0791	0.0697	ND	0.530	0.467	
cis-1,3-Dichloropropene	ND	0.0783	0.0697	ND	0.355	0.316	
Methyl isobutyl ketone	0.0909	0.0822	0.0697	0.373	0.337	0.286	
Toluene	2.23	0.0810	0.0697	8.40	0.305	0.263	
trans-1,3-Dichloropropene	ND	0.0810	0.0697	ND	0.367	0.316	
1,1,2-Trichloroethane	ND	0.0798	0.0697	ND	0.436	0.380	
Tetrachloroethene	ND	0.0804	0.0697	ND	0.545	0.473	
2-Hexanone (Methyl butyl ketone)	0.0827	0.0810	0.0697	0.339	0.332	0.286	
Dibromochloromethane	ND	0.0786	0.0697	ND	0.670	0.594	
1,2-Dibromoethane	ND	0.0807	0.0697	ND	0.620	0.536	
Chlorobenzene	ND	0.0820	0.0697	ND	0.377	0.321	
Ethylbenzene	1.37	0.0784	0.0697	5.94	0.340	0.303	
1,1,1,2-Tetrachloroethane	ND	0.0797	0.0697	ND	0.547	0.479	
m-/p-Xylenes	0.530	0.0807	0.0697	2.30	0.350	0.303	

Sample Name : ACF-AS-PAM1-082219

Sample Info : 0819-172; Can #0853; 500mL load

Data File : X1903157.D

Dilution : 1

Pressurization Factor : 1.992

Acquisition Date : 2019-08-25 08:27:36

Instrument Method : TO15-SCN.M

Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
o-Xylene	0.254	0.0796	0.0697	1.10	0.346	0.303	
Styrene	1.97	0.0776	0.0697	8.39	0.331	0.297	
Bromoform	ND	0.0800	0.0697	ND	0.827	0.721	
1,1,2,2-Tetrachloroethane	ND	0.0797	0.0697	ND	0.547	0.479	
4-Ethyltoluene	ND	0.0802	0.0697	ND	0.394	0.343	
2-Chlorotoluene	ND	0.0802	0.0697	ND	0.415	0.361	
1,3,5-Trimethylbenzene	0.114	0.0799	0.0697	0.559	0.393	0.343	
1,2,4-Trimethylbenzene	0.154	0.0792	0.0697	0.756	0.389	0.343	
1,3-Dichlorobenzene	ND	0.0804	0.0697	ND	0.483	0.419	
1,4-Dichlorobenzene	ND	0.0799	0.0697	ND	0.480	0.419	
Benzyl chloride	ND	0.0795	0.0697	ND	0.412	0.361	
1,2-Dichlorobenzene	ND	0.0812	0.0697	ND	0.488	0.419	
1,2,4-Trichlorobenzene	ND	0.0809	0.0697	ND	0.600	0.517	
Hexachlorobutadiene	ND	0.0798	0.0697	ND	0.851	0.744	
Naphthalene	0.178	0.0825	0.0697	0.933	0.432	0.365	
1-Bromopropane	ND	0.0787	0.0697	ND	0.396	0.351	
1-Octene	ND	0.0779	0.0697	ND	0.358	0.320	
n-Octane	0.172	0.0798	0.0697	0.803	0.373	0.326	
Isopropylbenzene	0.390	0.0809	0.0697	1.91	0.398	0.343	
n-Propylbenzene	0.0826	0.0810	0.0697	0.406	0.398	0.343	

Internal Standards	Response	Retention Time (min)	Concentration (PPBV)	Flag *
Bromochloromethane (IS)	756,858	11.94	5.00	PASS
1,4-Difluorobenzene (IS)	2,896,789	13.69	5.04	PASS
Chlorobenzene-d5 (IS)	2,317,143	17.87	4.80	PASS

(ND) = Not Detected

* (J) = Below Calibration Range, (E) = Above Calibration Range, (m) = Manual Integration

IS Acceptance Criteria: RT +/- 20 sec, Response +/- 40%

Sample Name : ACF-AS-RES-2-24-082219

Sample Info : 0819-172; Can #0810; 500mL load

Data File : X1903158.D

Dilution : 1

Pressurization Factor : 1.976

Acquisition Date : 2019-08-25 09:23:46

Instrument Method : TO15-SCN.M

Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
Propylene	4.30	0.0758	0.0692	7.41	0.130	0.119	
Freon 12 (CCl2F2)	0.443	0.0771	0.0692	2.19	0.381	0.342	
Freon 114 (C2Cl2F4)	ND	0.0791	0.0692	ND	0.553	0.483	
Chloromethane	3.56	0.0771	0.0692	7.35	0.159	0.143	
Chloroethene (Vinyl chloride)	ND	0.0795	0.0692	ND	0.203	0.177	
1,3-Butadiene	0.267	0.0772	0.0692	0.591	0.171	0.153	
Bromomethane	ND	0.0782	0.0692	ND	0.304	0.269	
Chloroethane	ND	0.0797	0.0692	ND	0.210	0.182	
Bromoethene (Vinyl bromide)	ND	0.0788	0.0692	ND	0.345	0.303	
Freon 11 (CCl3F)	0.206	0.0820	0.0692	1.16	0.461	0.389	
Ethanol	2.92	0.198	0.0790	5.51	0.372	0.149	
Acrolein	0.295	0.0785	0.0692	0.676	0.180	0.159	m
Freon 113 (C2Cl3F3)	0.0785	0.0786	0.0692	0.602	0.603	0.530	J
1,1-Dichloroethene	ND	0.0791	0.0692	ND	0.314	0.274	
Acetone	4.45	0.0794	0.0692	10.6	0.189	0.164	m
Carbon disulfide	0.131	0.0794	0.0692	0.407	0.247	0.215	
Isopropyl alcohol	0.263	0.0794	0.0692	0.648	0.195	0.170	
Allyl chloride (3-chloropropene)	ND	0.0795	0.0692	ND	0.249	0.216	
Acetonitrile	0.631	0.0794	0.0692	1.06	0.133	0.116	
Methylene chloride	0.208	0.200	0.200	0.723	0.695	0.695	
trans-1,2-Dichloroethene	ND	0.0805	0.0692	ND	0.319	0.274	
Methyl tert-butyl ether	ND	0.0809	0.0692	ND	0.292	0.249	
Acrylonitrile	ND	0.0808	0.0692	ND	0.175	0.150	
Hexane	0.859	0.0799	0.0692	3.03	0.282	0.244	
1,1-Dichloroethane	ND	0.0779	0.0692	ND	0.315	0.280	
Vinyl acetate	ND	0.0804	0.0692	ND	0.283	0.244	
cis-1,2-Dichloroethene	ND	0.0796	0.0692	ND	0.316	0.274	
Methyl ethyl ketone (2-Butanone)	0.294	0.0803	0.0692	0.868	0.237	0.204	
Ethyl acetate	0.0725	0.0796	0.0692	0.261	0.287	0.249	J
Chloroform	ND	0.0799	0.0692	ND	0.390	0.338	
Tetrahydrofuran	0.165	0.0798	0.0692	0.488	0.235	0.204	m
1,1,1-Trichloroethane	ND	0.0786	0.0692	ND	0.429	0.377	
Cyclohexane	0.282	0.0804	0.0692	0.970	0.277	0.238	
Carbon tetrachloride	0.0884	0.0800	0.0692	0.556	0.503	0.435	
Benzene	1.79	0.0789	0.0692	5.73	0.252	0.221	
2,2,4-trimethylpentane	0.392	0.0810	0.0692	1.83	0.379	0.323	
1,2-Dichloroethane	ND	0.0808	0.0692	ND	0.327	0.280	
Heptane	0.338	0.0794	0.0692	1.38	0.326	0.283	
Trichloroethene	ND	0.0794	0.0692	ND	0.426	0.372	
1,2-Dichloropropane	ND	0.0808	0.0692	ND	0.373	0.320	
Methyl methacrylate	ND	0.0820	0.0692	ND	0.336	0.283	
1,4-Dioxane	ND	0.0799	0.0692	ND	0.288	0.249	
Bromodichloromethane	ND	0.0785	0.0692	ND	0.526	0.463	
cis-1,3-Dichloropropene	ND	0.0777	0.0692	ND	0.353	0.314	
Methyl isobutyl ketone	ND	0.0815	0.0692	ND	0.334	0.283	
Toluene	1.56	0.0803	0.0692	5.88	0.303	0.261	
trans-1,3-Dichloropropene	ND	0.0803	0.0692	ND	0.364	0.314	
1,1,2-Trichloroethane	ND	0.0792	0.0692	ND	0.432	0.377	
Tetrachloroethene	ND	0.0798	0.0692	ND	0.541	0.469	
2-Hexanone (Methyl butyl ketone)	ND	0.0803	0.0692	ND	0.329	0.283	
Dibromochloromethane	ND	0.0780	0.0692	ND	0.665	0.589	
1,2-Dibromoethane	ND	0.0801	0.0692	ND	0.615	0.531	
Chlorobenzene	ND	0.0813	0.0692	ND	0.374	0.318	
Ethylbenzene	0.558	0.0778	0.0692	2.42	0.338	0.300	
1,1,1,2-Tetrachloroethane	ND	0.0790	0.0692	ND	0.543	0.475	
m-/p-Xylenes	0.487	0.0801	0.0692	2.11	0.348	0.300	

Sample Name : ACF-AS-RES-2-24-082219

Sample Info : 0819-172; Can #0810; 500mL load

Data File : X1903158.D

Dilution : 1

Pressurization Factor : 1.976

Acquisition Date : 2019-08-25 09:23:46

Instrument Method : TO15-SCN.M

Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
o-Xylene	0.201	0.0790	0.0692	0.871	0.343	0.300	
Styrene	0.717	0.0770	0.0692	3.05	0.328	0.295	
Bromoform	ND	0.0794	0.0692	ND	0.820	0.715	
1,1,2,2-Tetrachloroethane	ND	0.0790	0.0692	ND	0.543	0.475	
4-Ethyltoluene	ND	0.0796	0.0692	ND	0.391	0.340	
2-Chlorotoluene	ND	0.0796	0.0692	ND	0.412	0.358	
1,3,5-Trimethylbenzene	0.0701	0.0793	0.0692	0.345	0.390	0.340	J
1,2,4-Trimethylbenzene	0.131	0.0786	0.0692	0.642	0.386	0.340	m
1,3-Dichlorobenzene	ND	0.0798	0.0692	ND	0.479	0.416	
1,4-Dichlorobenzene	ND	0.0793	0.0692	ND	0.477	0.416	
Benzyl chloride	ND	0.0789	0.0692	ND	0.408	0.358	
1,2-Dichlorobenzene	ND	0.0805	0.0692	ND	0.484	0.416	
1,2,4-Trichlorobenzene	ND	0.0802	0.0692	ND	0.595	0.513	
Hexachlorobutadiene	ND	0.0792	0.0692	ND	0.845	0.738	
Naphthalene	ND	0.0818	0.0692	ND	0.429	0.363	
1-Bromopropane	ND	0.0781	0.0692	ND	0.393	0.348	
1-Octene	ND	0.0773	0.0692	ND	0.355	0.317	
n-Octane	0.0929	0.0792	0.0692	0.434	0.370	0.323	m
Isopropylbenzene	0.215	0.0802	0.0692	1.06	0.394	0.340	
n-Propylbenzene	ND	0.0804	0.0692	ND	0.395	0.340	

Internal Standards	Response	Retention Time (min)	Concentration (PPBV)	Flag *
Bromochloromethane (IS)	761,678	11.94	5.00	PASS
1,4-Difluorobenzene (IS)	2,914,069	13.69	5.04	PASS
Chlorobenzene-d5 (IS)	2,331,514	17.87	4.80	PASS

(ND) = Not Detected

* (J) = Below Calibration Range, (E) = Above Calibration Range, (m) = Manual Integration

IS Acceptance Criteria: RT +/- 20 sec, Response +/- 40%

Sample Name : ACF-AS-PAM2-082219

Sample Info : 0819-172; Can #0849; 500mL load

Data File : X1903159.D

Dilution : 1

Pressurization Factor : 2.091

Acquisition Date : 2019-08-25 10:20:01

Instrument Method : TO15-SCN.M

Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
Propylene	6.48	0.0802	0.0732	11.2	0.138	0.126	
Freon 12 (CCl2F2)	0.430	0.0816	0.0732	2.13	0.404	0.362	
Freon 114 (C2Cl2F4)	ND	0.0837	0.0732	ND	0.585	0.512	
Chloromethane	5.52	0.0815	0.0732	11.4	0.168	0.151	
Chloroethene (Vinyl chloride)	ND	0.0841	0.0732	ND	0.215	0.187	
1,3-Butadiene	0.443	0.0817	0.0732	0.980	0.181	0.162	
Bromomethane	ND	0.0827	0.0732	ND	0.321	0.284	
Chloroethane	0.0811	0.0843	0.0732	0.214	0.222	0.193	m J
Bromoethene (Vinyl bromide)	ND	0.0834	0.0732	ND	0.365	0.320	
Freon 11 (CCl3F)	0.203	0.0868	0.0732	1.14	0.488	0.411	
Ethanol	2.04	0.209	0.0836	3.84	0.394	0.158	
Acrolein	0.316	0.0831	0.0732	0.726	0.190	0.168	
Freon 113 (C2Cl3F3)	0.0777	0.0832	0.0732	0.596	0.638	0.561	J
1,1-Dichloroethene	ND	0.0837	0.0732	ND	0.332	0.290	
Acetone	3.75	0.0841	0.0732	8.91	0.200	0.174	m
Carbon disulfide	0.141	0.0840	0.0732	0.438	0.262	0.228	
Isopropyl alcohol	0.628	0.0840	0.0732	1.54	0.206	0.180	
Allyl chloride (3-chloropropene)	ND	0.0841	0.0732	ND	0.263	0.229	
Acetonitrile	0.662	0.0841	0.0732	1.11	0.141	0.123	
Methylene chloride	ND	0.212	0.212	ND	0.736	0.736	
trans-1,2-Dichloroethene	ND	0.0852	0.0732	ND	0.338	0.290	
Methyl tert-butyl ether	ND	0.0856	0.0732	ND	0.309	0.264	
Acrylonitrile	ND	0.0855	0.0732	ND	0.186	0.159	
Hexane	0.407	0.0846	0.0732	1.43	0.298	0.258	
1,1-Dichloroethane	ND	0.0824	0.0732	ND	0.333	0.296	
Vinyl acetate	ND	0.0851	0.0732	ND	0.300	0.258	
cis-1,2-Dichloroethene	ND	0.0842	0.0732	ND	0.334	0.290	
Methyl ethyl ketone (2-Butanone)	0.392	0.0850	0.0732	1.16	0.251	0.216	
Ethyl acetate	0.180	0.0842	0.0732	0.650	0.304	0.264	
Chloroform	ND	0.0846	0.0732	ND	0.413	0.357	
Tetrahydrofuran	0.225	0.0844	0.0732	0.664	0.249	0.216	
1,1,1-Trichloroethane	ND	0.0832	0.0732	ND	0.454	0.399	
Cyclohexane	0.0922	0.0851	0.0732	0.317	0.293	0.252	
Carbon tetrachloride	0.0810	0.0846	0.0732	0.509	0.533	0.460	J
Benzene	2.92	0.0835	0.0732	9.34	0.267	0.234	
2,2,4-trimethylpentane	0.0793	0.0857	0.0732	0.371	0.401	0.342	J
1,2-Dichloroethane	ND	0.0855	0.0732	ND	0.346	0.296	
Heptane	0.264	0.0841	0.0732	1.08	0.344	0.300	
Trichloroethene	ND	0.0840	0.0732	ND	0.451	0.393	
1,2-Dichloropropane	ND	0.0855	0.0732	ND	0.395	0.338	
Methyl methacrylate	ND	0.0867	0.0732	ND	0.355	0.300	
1,4-Dioxane	0.127	0.0846	0.0732	0.459	0.305	0.264	
Bromodichloromethane	ND	0.0831	0.0732	ND	0.557	0.490	
cis-1,3-Dichloropropene	ND	0.0822	0.0732	ND	0.373	0.332	
Methyl isobutyl ketone	ND	0.0862	0.0732	ND	0.353	0.300	
Toluene	1.50	0.0850	0.0732	5.66	0.320	0.276	
trans-1,3-Dichloropropene	ND	0.0850	0.0732	ND	0.386	0.332	
1,1,2-Trichloroethane	ND	0.0838	0.0732	ND	0.457	0.399	
Tetrachloroethene	ND	0.0844	0.0732	ND	0.572	0.496	
2-Hexanone (Methyl butyl ketone)	ND	0.0850	0.0732	ND	0.348	0.300	
Dibromochloromethane	ND	0.0826	0.0732	ND	0.703	0.623	
1,2-Dibromoethane	ND	0.0847	0.0732	ND	0.651	0.562	
Chlorobenzene	ND	0.0861	0.0732	ND	0.396	0.337	
Ethylbenzene	0.869	0.0823	0.0732	3.78	0.357	0.318	
1,1,1,2-Tetrachloroethane	ND	0.0836	0.0732	ND	0.574	0.502	
m-/p-Xylenes	0.403	0.0847	0.0732	1.75	0.368	0.318	

Sample Name : ACF-AS-PAM2-082219

Sample Info : 0819-172; Can #0849; 500mL load

Data File : X1903159.D

Dilution : 1

Pressurization Factor : 2.091

Acquisition Date : 2019-08-25 10:20:01

Instrument Method : TO15-SCN.M

Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
o-Xylene	0.195	0.0836	0.0732	0.848	0.363	0.318	
Styrene	1.12	0.0815	0.0732	4.77	0.347	0.312	
Bromoform	ND	0.0840	0.0732	ND	0.868	0.756	
1,1,2,2-Tetrachloroethane	ND	0.0836	0.0732	ND	0.574	0.502	
4-Ethyltoluene	ND	0.0842	0.0732	ND	0.414	0.360	
2-Chlorotoluene	ND	0.0842	0.0732	ND	0.436	0.379	
1,3,5-Trimethylbenzene	0.0766	0.0839	0.0732	0.376	0.412	0.360	J
1,2,4-Trimethylbenzene	0.0984	0.0831	0.0732	0.484	0.409	0.360	
1,3-Dichlorobenzene	ND	0.0844	0.0732	ND	0.507	0.440	
1,4-Dichlorobenzene	ND	0.0839	0.0732	ND	0.504	0.440	
Benzyl chloride	ND	0.0835	0.0732	ND	0.432	0.379	
1,2-Dichlorobenzene	ND	0.0852	0.0732	ND	0.512	0.440	
1,2,4-Trichlorobenzene	ND	0.0849	0.0732	ND	0.630	0.543	
Hexachlorobutadiene	ND	0.0838	0.0732	ND	0.894	0.781	
Naphthalene	ND	0.0866	0.0732	ND	0.454	0.384	
1-Bromopropane	ND	0.0826	0.0732	ND	0.416	0.368	
1-Octene	ND	0.0818	0.0732	ND	0.376	0.336	
n-Octane	0.102	0.0838	0.0732	0.478	0.392	0.342	m
Isopropylbenzene	0.296	0.0849	0.0732	1.45	0.417	0.360	
n-Propylbenzene	ND	0.0851	0.0732	ND	0.418	0.360	

Internal Standards	Response	Retention Time (min)	Concentration (PPBV)	Flag *
Bromochloromethane (IS)	781,369	11.94	5.00	PASS
1,4-Difluorobenzene (IS)	2,980,266	13.69	5.04	PASS
Chlorobenzene-d5 (IS)	2,361,540	17.86	4.80	PASS

(ND) = Not Detected

* (J) = Below Calibration Range, (E) = Above Calibration Range, (m) = Manual Integration

IS Acceptance Criteria: RT +/- 20 sec, Response +/- 40%

Sample Name : ACF-AS-RES1-24-082219

Sample Info : 0819-172; Can #0857; 500mL load

Data File : X1903160.D

Dilution : 1

Pressurization Factor : 2.011

Acquisition Date : 2019-08-25 11:16:11

Instrument Method : TO15-SCN.M

Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
Propylene	2.89	0.0771	0.0704	4.97	0.133	0.121	
Freon 12 (CCl2F2)	0.440	0.0785	0.0704	2.18	0.388	0.348	
Freon 114 (C2Cl2F4)	ND	0.0805	0.0704	ND	0.563	0.492	
Chloromethane	2.52	0.0784	0.0704	5.20	0.162	0.145	
Chloroethene (Vinyl chloride)	ND	0.0809	0.0704	ND	0.207	0.180	
1,3-Butadiene	0.146	0.0786	0.0704	0.322	0.174	0.156	
Bromomethane	ND	0.0796	0.0704	ND	0.309	0.273	
Chloroethane	ND	0.0811	0.0704	ND	0.214	0.186	
Bromoethene (Vinyl bromide)	ND	0.0802	0.0704	ND	0.351	0.308	
Freon 11 (CCl3F)	0.202	0.0835	0.0704	1.14	0.469	0.395	
Ethanol	1.53	0.201	0.0804	2.87	0.379	0.152	
Acrolein	0.168	0.0799	0.0704	0.384	0.183	0.161	
Freon 113 (C2Cl3F3)	0.0773	0.0800	0.0704	0.592	0.613	0.539	J
1,1-Dichloroethene	ND	0.0805	0.0704	ND	0.319	0.279	
Acetone	2.68	0.0808	0.0704	6.37	0.192	0.167	m
Carbon disulfide	0.0731	0.0808	0.0704	0.228	0.252	0.219	J
Isopropyl alcohol	0.495	0.0808	0.0704	1.22	0.199	0.173	
Allyl chloride (3-chloropropene)	ND	0.0809	0.0704	ND	0.253	0.220	
Acetonitrile	0.332	0.0808	0.0704	0.557	0.136	0.118	
Methylene chloride	ND	0.204	0.204	ND	0.708	0.708	
trans-1,2-Dichloroethene	ND	0.0820	0.0704	ND	0.325	0.279	
Methyl tert-butyl ether	ND	0.0824	0.0704	ND	0.297	0.254	
Acrylonitrile	ND	0.0822	0.0704	ND	0.178	0.153	
Hexane	0.359	0.0813	0.0704	1.27	0.287	0.248	m
1,1-Dichloroethane	ND	0.0792	0.0704	ND	0.321	0.285	
Vinyl acetate	ND	0.0818	0.0704	ND	0.288	0.248	
cis-1,2-Dichloroethene	ND	0.0810	0.0704	ND	0.321	0.279	
Methyl ethyl ketone (2-Butanone)	0.193	0.0817	0.0704	0.570	0.241	0.208	
Ethyl acetate	ND	0.0810	0.0704	ND	0.292	0.254	
Chloroform	ND	0.0813	0.0704	ND	0.397	0.344	
Tetrahydrofuran	0.115	0.0812	0.0704	0.339	0.239	0.208	m
1,1,1-Trichloroethane	ND	0.0800	0.0704	ND	0.437	0.384	
Cyclohexane	0.149	0.0818	0.0704	0.514	0.282	0.242	
Carbon tetrachloride	0.0776	0.0814	0.0704	0.488	0.512	0.443	J
Benzene	1.08	0.0803	0.0704	3.46	0.256	0.225	
2,2,4-trimethylpentane	0.108	0.0825	0.0704	0.505	0.385	0.329	m
1,2-Dichloroethane	ND	0.0822	0.0704	ND	0.333	0.285	
Heptane	0.245	0.0808	0.0704	1.00	0.331	0.288	
Trichloroethene	ND	0.0808	0.0704	ND	0.434	0.378	
1,2-Dichloropropane	ND	0.0822	0.0704	ND	0.380	0.325	
Methyl methacrylate	ND	0.0834	0.0704	ND	0.342	0.288	
1,4-Dioxane	ND	0.0813	0.0704	ND	0.293	0.254	
Bromodichloromethane	ND	0.0799	0.0704	ND	0.535	0.472	
cis-1,3-Dichloropropene	ND	0.0791	0.0704	ND	0.359	0.319	
Methyl isobutyl ketone	ND	0.0829	0.0704	ND	0.340	0.288	
Toluene	0.888	0.0817	0.0704	3.35	0.308	0.265	
trans-1,3-Dichloropropene	ND	0.0817	0.0704	ND	0.371	0.319	
1,1,2-Trichloroethane	ND	0.0806	0.0704	ND	0.440	0.384	
Tetrachloroethene	ND	0.0812	0.0704	ND	0.550	0.477	
2-Hexanone (Methyl butyl ketone)	ND	0.0817	0.0704	ND	0.335	0.288	
Dibromochloromethane	ND	0.0794	0.0704	ND	0.676	0.600	
1,2-Dibromoethane	ND	0.0815	0.0704	ND	0.626	0.541	
Chlorobenzene	ND	0.0828	0.0704	ND	0.381	0.324	
Ethylbenzene	0.359	0.0792	0.0704	1.56	0.344	0.306	
1,1,1,2-Tetrachloroethane	ND	0.0804	0.0704	ND	0.552	0.483	
m-/p-Xylenes	0.331	0.0815	0.0704	1.44	0.354	0.306	

Sample Name : ACF-AS-RES1-24-082219

Sample Info : 0819-172; Can #0857; 500mL load

Data File : X1903160.D

Dilution : 1

Pressurization Factor : 2.011

Acquisition Date : 2019-08-25 11:16:11

Instrument Method : TO15-SCN.M

Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
o-Xylene	0.132	0.0804	0.0704	0.574	0.349	0.306	
Styrene	0.434	0.0783	0.0704	1.85	0.334	0.300	
Bromoform	ND	0.0808	0.0704	ND	0.835	0.728	
1,1,2,2-Tetrachloroethane	ND	0.0804	0.0704	ND	0.552	0.483	
4-Ethyltoluene	ND	0.0810	0.0704	ND	0.398	0.346	
2-Chlorotoluene	ND	0.0810	0.0704	ND	0.419	0.364	
1,3,5-Trimethylbenzene	ND	0.0807	0.0704	ND	0.397	0.346	
1,2,4-Trimethylbenzene	0.0982	0.0800	0.0704	0.483	0.393	0.346	m
1,3-Dichlorobenzene	ND	0.0812	0.0704	ND	0.488	0.423	
1,4-Dichlorobenzene	ND	0.0807	0.0704	ND	0.485	0.423	
Benzyl chloride	ND	0.0803	0.0704	ND	0.416	0.364	
1,2-Dichlorobenzene	ND	0.0820	0.0704	ND	0.493	0.423	
1,2,4-Trichlorobenzene	ND	0.0816	0.0704	ND	0.606	0.522	
Hexachlorobutadiene	ND	0.0806	0.0704	ND	0.860	0.751	
Naphthalene	ND	0.0833	0.0704	ND	0.436	0.369	
1-Bromopropane	ND	0.0795	0.0704	ND	0.400	0.354	
1-Octene	ND	0.0787	0.0704	ND	0.361	0.323	
n-Octane	ND	0.0806	0.0704	ND	0.377	0.329	
Isopropylbenzene	0.191	0.0816	0.0704	0.939	0.401	0.346	
n-Propylbenzene	ND	0.0818	0.0704	ND	0.402	0.346	

Internal Standards	Response	Retention Time (min)	Concentration (PPBV)	Flag *
Bromochloromethane (IS)	777,994	11.94	5.00	PASS
1,4-Difluorobenzene (IS)	2,976,397	13.69	5.04	PASS
Chlorobenzene-d5 (IS)	2,380,851	17.87	4.80	PASS

(ND) = Not Detected

* (J) = Below Calibration Range, (E) = Above Calibration Range, (m) = Manual Integration

IS Acceptance Criteria: RT +/- 20 sec, Response +/- 40%

Sample Name : ACF-AS-CAB1-DAY-082219

Sample Info : 0819-172; Can #0798; 500mL load

Data File : X1903161.D

Dilution : 1

Pressurization Factor : 3.575

Acquisition Date : 2019-08-25 12:12:22

Instrument Method : TO15-SCN.M

Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
Propylene	5.04	0.137	0.125	8.67	0.236	0.215	
Freon 12 (CCl2F2)	0.455	0.140	0.125	2.25	0.690	0.619	
Freon 114 (C2Cl2F4)	ND	0.143	0.125	ND	1.00	0.875	
Chloromethane	2.71	0.139	0.125	5.59	0.288	0.258	
Chloroethene (Vinyl chloride)	ND	0.144	0.125	ND	0.368	0.320	
1,3-Butadiene	0.713	0.140	0.125	1.58	0.309	0.277	
Bromomethane	ND	0.141	0.125	ND	0.549	0.486	
Chloroethane	ND	0.144	0.125	ND	0.380	0.330	
Bromoethene (Vinyl bromide)	ND	0.143	0.125	ND	0.624	0.547	
Freon 11 (CCl3F)	0.237	0.148	0.125	1.33	0.834	0.703	
Ethanol	92.2	0.358	0.143	174	0.674	0.269	
Acrolein	1.28	0.142	0.125	2.94	0.326	0.287	
Freon 113 (C2Cl3F3)	ND	0.142	0.125	ND	1.09	0.959	
1,1-Dichloroethene	ND	0.143	0.125	ND	0.568	0.496	
Acetone	87.0	0.144	0.125	207	0.341	0.297	
Carbon disulfide	0.447	0.144	0.125	1.39	0.447	0.390	
Isopropyl alcohol	6.41	0.144	0.125	15.8	0.353	0.308	
Allyl chloride (3-chloropropene)	ND	0.144	0.125	ND	0.450	0.392	
Acetonitrile	4.10	0.144	0.125	6.88	0.241	0.210	
Methylene chloride	ND	0.362	0.362	ND	1.26	1.26	
trans-1,2-Dichloroethene	ND	0.146	0.125	ND	0.578	0.496	
Methyl tert-butyl ether	ND	0.146	0.125	ND	0.528	0.451	
Acrylonitrile	0.164	0.146	0.125	0.356	0.317	0.272	
Hexane	0.546	0.145	0.125	1.92	0.510	0.441	
1,1-Dichloroethane	ND	0.141	0.125	ND	0.570	0.506	
Vinyl acetate	0.130	0.145	0.125	0.459	0.512	0.441	m J
cis-1,2-Dichloroethene	ND	0.144	0.125	ND	0.571	0.496	
Methyl ethyl ketone (2-Butanone)	4.10	0.145	0.125	12.1	0.428	0.369	
Ethyl acetate	9.85	0.144	0.125	35.5	0.519	0.451	
Chloroform	ND	0.145	0.125	ND	0.706	0.611	
Tetrahydrofuran	5.55	0.144	0.125	16.4	0.426	0.369	m
1,1,1-Trichloroethane	ND	0.142	0.125	ND	0.776	0.683	
Cyclohexane	0.212	0.145	0.125	0.730	0.501	0.431	m
Carbon tetrachloride	ND	0.145	0.125	ND	0.910	0.787	
Benzene	1.56	0.143	0.125	4.99	0.456	0.400	
2,2,4-trimethylpentane	ND	0.147	0.125	ND	0.685	0.585	
1,2-Dichloroethane	ND	0.146	0.125	ND	0.592	0.506	
Heptane	0.551	0.144	0.125	2.26	0.589	0.513	
Trichloroethene	ND	0.144	0.125	ND	0.772	0.672	
1,2-Dichloropropane	ND	0.146	0.125	ND	0.675	0.578	
Methyl methacrylate	ND	0.148	0.125	ND	0.607	0.512	
1,4-Dioxane	0.233	0.145	0.125	0.838	0.521	0.451	m
Bromodichloromethane	ND	0.142	0.125	ND	0.951	0.838	
cis-1,3-Dichloropropene	ND	0.141	0.125	ND	0.638	0.568	
Methyl isobutyl ketone	2.32	0.147	0.125	9.50	0.604	0.513	
Toluene	3.48	0.145	0.125	13.1	0.548	0.472	
trans-1,3-Dichloropropene	ND	0.145	0.125	ND	0.659	0.568	
1,1,2-Trichloroethane	ND	0.143	0.125	ND	0.782	0.683	
Tetrachloroethene	ND	0.144	0.125	ND	0.979	0.849	
2-Hexanone (Methyl butyl ketone)	0.320	0.145	0.125	1.31	0.595	0.513	
Dibromochloromethane	ND	0.141	0.125	ND	1.20	1.07	
1,2-Dibromoethane	ND	0.145	0.125	ND	1.11	0.961	
Chlorobenzene	ND	0.147	0.125	ND	0.677	0.576	
Ethylbenzene	1.77	0.141	0.125	7.70	0.611	0.543	
1,1,1,2-Tetrachloroethane	ND	0.143	0.125	ND	0.982	0.859	
m-/p-Xylenes	3.77	0.145	0.125	16.4	0.629	0.543	

Sample Name : ACF-AS-CAB1-DAY-082219

Sample Info : 0819-172; Can #0798; 500mL load

Data File : X1903161.D

Dilution : 1

Pressurization Factor : 3.575

Acquisition Date : 2019-08-25 12:12:22

Instrument Method : TO15-SCN.M

Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
o-Xylene	1.68	0.143	0.125	7.31	0.620	0.543	
Styrene	1.34	0.139	0.125	5.69	0.593	0.533	
Bromoform	ND	0.144	0.125	ND	1.48	1.29	
1,1,2,2-Tetrachloroethane	ND	0.143	0.125	ND	0.982	0.859	
4-Ethyltoluene	0.569	0.144	0.125	2.80	0.708	0.615	
2-Chlorotoluene	ND	0.144	0.125	ND	0.746	0.648	
1,3,5-Trimethylbenzene	0.743	0.143	0.125	3.65	0.705	0.615	
1,2,4-Trimethylbenzene	2.78	0.142	0.125	13.7	0.699	0.615	
1,3-Dichlorobenzene	ND	0.144	0.125	ND	0.868	0.752	
1,4-Dichlorobenzene	ND	0.143	0.125	ND	0.862	0.752	
Benzyl chloride	ND	0.143	0.125	ND	0.739	0.648	
1,2-Dichlorobenzene	ND	0.146	0.125	ND	0.876	0.752	
1,2,4-Trichlorobenzene	ND	0.145	0.125	ND	1.08	0.929	
Hexachlorobutadiene	ND	0.143	0.125	ND	1.53	1.33	
Naphthalene	0.690	0.148	0.125	3.62	0.776	0.656	
1-Bromopropane	ND	0.141	0.125	ND	0.711	0.629	
1-Octene	ND	0.140	0.125	ND	0.642	0.574	
n-Octane	0.278	0.143	0.125	1.30	0.669	0.585	
Isopropylbenzene	0.375	0.145	0.125	1.85	0.714	0.615	
n-Propylbenzene	0.382	0.145	0.125	1.88	0.715	0.615	

Internal Standards	Response	Retention Time (min)	Concentration (PPBV)	Flag *
Bromochloromethane (IS)	774,427	11.94	5.00	PASS
1,4-Difluorobenzene (IS)	2,954,714	13.69	5.04	PASS
Chlorobenzene-d5 (IS)	2,377,059	17.86	4.80	PASS

(ND) = Not Detected

* (J) = Below Calibration Range, (E) = Above Calibration Range, (m) = Manual Integration

IS Acceptance Criteria: RT +/- 20 sec, Response +/- 40%

Sample Name : ACF-AS-CAB2-DAY-082219

Sample Info : 0819-172; Can #0852; 500mL load

Data File : X1903162.D

Dilution : 1

Pressurization Factor : 3.081

Acquisition Date : 2019-08-25 13:08:40

Instrument Method : TO15-SCN.M

Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
Propylene	9.44	0.118	0.108	16.3	0.203	0.186	
Freon 12 (CCI2F2)	0.445	0.120	0.108	2.20	0.595	0.533	
Freon 114 (C2CI2F4)	ND	0.123	0.108	ND	0.862	0.754	
Chloromethane	10.3	0.120	0.108	21.2	0.248	0.223	
Chloroethene (Vinyl chloride)	ND	0.124	0.108	ND	0.317	0.276	
1,3-Butadiene	0.776	0.120	0.108	1.72	0.266	0.239	
Bromomethane	ND	0.122	0.108	ND	0.473	0.419	
Chloroethane	0.151	0.124	0.108	0.399	0.328	0.285	m
Bromoethene (Vinyl bromide)	ND	0.123	0.108	ND	0.537	0.472	
Freon 11 (CCI3F)	0.259	0.128	0.108	1.46	0.719	0.606	
Ethanol	54.6	0.308	0.123	103	0.581	0.232	
Acrolein	0.816	0.122	0.108	1.87	0.281	0.247	m
Freon 113 (C2CI3F3)	ND	0.123	0.108	ND	0.940	0.826	
1,1-Dichloroethene	ND	0.123	0.108	ND	0.489	0.428	
Acetone	22.7	0.124	0.108	54.0	0.294	0.256	
Carbon disulfide	0.324	0.124	0.108	1.01	0.385	0.336	
Isopropyl alcohol	1.87	0.124	0.108	4.60	0.304	0.265	
Allyl chloride (3-chloropropene)	ND	0.124	0.108	ND	0.388	0.338	
Acetonitrile	1.24	0.124	0.108	2.09	0.208	0.181	
Methylene chloride	ND	0.312	0.312	ND	1.08	1.08	
trans-1,2-Dichloroethene	ND	0.126	0.108	ND	0.498	0.428	
Methyl tert-butyl ether	ND	0.126	0.108	ND	0.455	0.389	
Acrylonitrile	0.239	0.126	0.108	0.518	0.273	0.234	
Hexane	0.592	0.125	0.108	2.09	0.439	0.380	
1,1-Dichloroethane	ND	0.121	0.108	ND	0.491	0.436	
Vinyl acetate	ND	0.125	0.108	ND	0.441	0.380	
cis-1,2-Dichloroethene	ND	0.124	0.108	ND	0.492	0.428	
Methyl ethyl ketone (2-Butanone)	1.40	0.125	0.108	4.12	0.369	0.318	
Ethyl acetate	5.36	0.124	0.108	19.3	0.447	0.389	
Chloroform	ND	0.125	0.108	ND	0.608	0.527	
Tetrahydrofuran	3.03	0.124	0.108	8.94	0.367	0.318	
1,1,1-Trichloroethane	ND	0.123	0.108	ND	0.669	0.588	
Cyclohexane	0.120	0.125	0.108	0.415	0.431	0.371	J
Carbon tetrachloride	ND	0.125	0.108	ND	0.785	0.678	
Benzene	3.75	0.123	0.108	12.0	0.393	0.345	
2,2,4-trimethylpentane	ND	0.126	0.108	ND	0.590	0.504	
1,2-Dichloroethane	ND	0.126	0.108	ND	0.510	0.436	
Heptane	0.514	0.124	0.108	2.11	0.508	0.442	
Trichloroethene	ND	0.124	0.108	ND	0.665	0.579	
1,2-Dichloropropane	ND	0.126	0.108	ND	0.582	0.498	
Methyl methacrylate	0.404	0.128	0.108	1.65	0.523	0.442	
1,4-Dioxane	0.180	0.125	0.108	0.648	0.449	0.389	
Bromodichloromethane	ND	0.122	0.108	ND	0.820	0.723	
cis-1,3-Dichloropropene	ND	0.121	0.108	ND	0.550	0.489	
Methyl isobutyl ketone	1.72	0.127	0.108	7.07	0.521	0.442	m
Toluene	3.14	0.125	0.108	11.8	0.472	0.406	
trans-1,3-Dichloropropene	ND	0.125	0.108	ND	0.568	0.489	
1,1,2-Trichloroethane	ND	0.123	0.108	ND	0.674	0.588	
Tetrachloroethene	ND	0.124	0.108	ND	0.843	0.731	
2-Hexanone (Methyl butyl ketone)	0.127	0.125	0.108	0.518	0.513	0.442	
Dibromochloromethane	ND	0.122	0.108	ND	1.04	0.919	
1,2-Dibromoethane	ND	0.125	0.108	ND	0.959	0.829	
Chlorobenzene	ND	0.127	0.108	ND	0.584	0.496	
Ethylbenzene	1.76	0.121	0.108	7.65	0.527	0.468	
1,1,1,2-Tetrachloroethane	ND	0.123	0.108	ND	0.846	0.740	
m-/p-Xylenes	1.24	0.125	0.108	5.38	0.542	0.468	

Sample Name : ACF-AS-CAB2-DAY-082219

Sample Info : 0819-172; Can #0852; 500mL load

Data File : X1903162.D

Dilution : 1

Pressurization Factor : 3.081

Acquisition Date : 2019-08-25 13:08:40

Instrument Method : TO15-SCN.M

Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
o-Xylene	0.607	0.123	0.108	2.64	0.535	0.468	
Styrene	1.74	0.120	0.108	7.43	0.511	0.459	
Bromoform	ND	0.124	0.108	ND	1.28	1.11	
1,1,2,2-Tetrachloroethane	ND	0.123	0.108	ND	0.846	0.740	
4-Ethyltoluene	0.151	0.124	0.108	0.743	0.610	0.530	
2-Chlorotoluene	ND	0.124	0.108	ND	0.643	0.558	
1,3,5-Trimethylbenzene	0.235	0.124	0.108	1.16	0.608	0.530	
1,2,4-Trimethylbenzene	0.632	0.123	0.108	3.11	0.602	0.530	m
1,3-Dichlorobenzene	ND	0.124	0.108	ND	0.748	0.648	
1,4-Dichlorobenzene	ND	0.124	0.108	ND	0.743	0.648	
Benzyl chloride	ND	0.123	0.108	ND	0.637	0.558	
1,2-Dichlorobenzene	ND	0.126	0.108	ND	0.755	0.648	
1,2,4-Trichlorobenzene	ND	0.125	0.108	ND	0.928	0.800	
Hexachlorobutadiene	ND	0.123	0.108	ND	1.32	1.15	
Naphthalene	0.384	0.128	0.108	2.01	0.669	0.565	
1-Bromopropane	ND	0.122	0.108	ND	0.612	0.542	
1-Octene	ND	0.121	0.108	ND	0.553	0.495	
n-Octane	0.257	0.123	0.108	1.20	0.577	0.504	m
Isopropylbenzene	0.450	0.125	0.108	2.21	0.615	0.530	
n-Propylbenzene	0.152	0.125	0.108	0.746	0.616	0.530	

Internal Standards	Response	Retention Time (min)	Concentration (PPBV)	Flag *
Bromochloromethane (IS)	785,139	11.94	5.00	PASS
1,4-Difluorobenzene (IS)	3,008,291	13.69	5.04	PASS
Chlorobenzene-d5 (IS)	2,408,968	17.86	4.80	PASS

(ND) = Not Detected

* (J) = Below Calibration Range, (E) = Above Calibration Range, (m) = Manual Integration

IS Acceptance Criteria: RT +/- 20 sec, Response +/- 40%

Enthalpy Analytical -- Canister Pressurization

Job No. 0819-172

Company Tetra Tech, Inc.

Site Able Contracting - Ridgeland, SC

Can Number	0853	0810	0849	0857	0798	0852
Job	0819-172	0819-172	0819-172	0819-172	0819-172	0819-172
Sample ID	ACF-AS-PAM1-082219	ACF-AS-RES-2-24-082219	ACF-AS-PAM2-082219	ACF-AS-RES-1-24-082219	ACF-AS-CAB1-day-082219	ACF-AS-CAB2-day-082219
CleanDate	08/21/2019	08/21/2019	08/21/2019	08/21/2019	08/21/2019	08/21/2019
LeakCheckDate	08/21/2019	08/21/2019	08/21/2019	08/21/2019	08/21/2019	08/21/2019
LeakCheckAnalyst	BWR	BWR	BWR	BWR	BWR	shill
BlankCheckRef	X1902980	X1902977	X1902951	X1902976	X1902084	X1902974
Can Size (L)	6	6	6	6	6	6
Evac Temp (F)	73.5	73.5	73.5	73.5	73.5	73.5
Evac Pbar (mmHg)	762.5	762.5	762.5	762.5	762.5	762.5
Evac Gauge (mmHg)	-762.5	-762.5	-762.5	-762.5	-762.5	-762.5
Evac Analyst	shill	shill	shill	shill	shill	shill
Evac Time	08/27/19 09:41	08/27/19 09:37	08/27/19 09:38	08/27/19 09:44	08/27/19 09:44	08/27/19 09:39
Evac Vol (L)	0.000	0.000	0.000	0.000	0.000	0.000
Recd. Temp (F)	73.0	73.0	73.0	73.0	73.0	73.0
Recd. Pbar (mmHg)	764.8	764.8	764.8	764.8	764.8	764.8
Recd. Gauge (mmHg)	-20.0	-19.0	-63.0	-32.0	-352.0	-289.0
Recd Vol (L)	5.825	5.833	5.488	5.731	3.228	3.721
P1 Temp (F)	73.0	73.0	73.0	73.0	73.0	73.0
P1 Pbar (mmHg)	764.8	764.8	764.8	764.8	764.8	764.8
P1 Gauge (mmHg)	719.0	709.0	703.0	709.0	711.0	701.0
P1 Analyst	shill	shill	shill	shill	shill	shill
P1 Time	08/27/19 09:42	08/27/19 09:37	08/27/19 09:39	08/27/19 09:45	08/27/19 09:44	08/27/19 09:40
P1 Vol (L)	11.604	11.526	11.479	11.526	11.542	11.463
P1 Dilution Factor	1.992	1.976	2.091	2.011	3.575	3.081

Lab QC

Sample Name : Humid Blank #0702

Sample Info : 500mL load; MP#3

Data File : X1903149.D

Dilution : 1

Pressurization Factor : 1.000

Acquisition Date : 2019-08-25 00:57:44

Instrument Method : TO15-SCN.M

Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
Propylene	0.0366	0.0384	0.0350	0.0629	0.0660	0.0602	m J
Freon 12 (CCl2F2)	ND	0.0390	0.0350	ND	0.193	0.173	
Freon 114 (C2Cl2F4)	ND	0.0400	0.0350	ND	0.280	0.245	m J
Chloromethane	ND	0.0390	0.0350	ND	0.0805	0.0723	
Chloroethene (Vinyl chloride)	ND	0.0402	0.0350	ND	0.103	0.0895	m J
1,3-Butadiene	ND	0.0391	0.0350	ND	0.0865	0.0774	
Bromomethane	ND	0.0396	0.0350	ND	0.154	0.136	m J
Chloroethane	ND	0.0403	0.0350	ND	0.106	0.0924	
Bromoethene (Vinyl bromide)	ND	0.0399	0.0350	ND	0.174	0.153	m J
Freon 11 (CCl3F)	ND	0.0415	0.0350	ND	0.233	0.197	
Ethanol	0.0641	0.100	0.0400	0.121	0.188	0.0754	m J
Acrolein	ND	0.0397	0.0350	ND	0.0911	0.0803	
Freon 113 (C2Cl3F3)	ND	0.0398	0.0350	ND	0.305	0.268	J
1,1-Dichloroethene	ND	0.0400	0.0350	ND	0.159	0.139	
Acetone	0.0381	0.0402	0.0350	0.0904	0.0955	0.0831	J
Carbon disulfide	ND	0.0402	0.0350	ND	0.125	0.109	
Isopropyl alcohol	ND	0.0402	0.0350	ND	0.0987	0.0860	J
Allyl chloride (3-chloropropene)	ND	0.0402	0.0350	ND	0.126	0.110	
Acetonitrile	ND	0.0402	0.0350	ND	0.0675	0.0588	J
Methylene chloride	ND	0.101	0.101	ND	0.352	0.352	
trans-1,2-Dichloroethene	ND	0.0408	0.0350	ND	0.162	0.139	J
Methyl tert-butyl ether	ND	0.0410	0.0350	ND	0.148	0.126	
Acrylonitrile	ND	0.0409	0.0350	ND	0.0887	0.0760	J
Hexane	ND	0.0404	0.0350	ND	0.143	0.123	
1,1-Dichloroethane	ND	0.0394	0.0350	ND	0.159	0.142	J
Vinyl acetate	ND	0.0407	0.0350	ND	0.143	0.123	
cis-1,2-Dichloroethene	ND	0.0403	0.0350	ND	0.160	0.139	J
Methyl ethyl ketone (2-Butanone)	ND	0.0406	0.0350	ND	0.120	0.103	
Ethyl acetate	ND	0.0403	0.0350	ND	0.145	0.126	J
Chloroform	ND	0.0404	0.0350	ND	0.197	0.171	
Tetrahydrofuran	ND	0.0404	0.0350	ND	0.119	0.103	J
1,1,1-Trichloroethane	ND	0.0398	0.0350	ND	0.217	0.191	
Cyclohexane	ND	0.0407	0.0350	ND	0.140	0.120	J
Carbon tetrachloride	ND	0.0405	0.0350	ND	0.255	0.220	
Benzene	ND	0.0399	0.0350	ND	0.128	0.112	J
2,2,4-trimethylpentane	ND	0.0410	0.0350	ND	0.192	0.164	
1,2-Dichloroethane	ND	0.0409	0.0350	ND	0.165	0.142	J
Heptane	ND	0.0402	0.0350	ND	0.165	0.143	
Trichloroethene	ND	0.0402	0.0350	ND	0.216	0.188	J
1,2-Dichloropropane	ND	0.0409	0.0350	ND	0.189	0.162	
Methyl methacrylate	ND	0.0415	0.0350	ND	0.170	0.143	J
1,4-Dioxane	ND	0.0404	0.0350	ND	0.146	0.126	
Bromodichloromethane	ND	0.0397	0.0350	ND	0.266	0.235	J
cis-1,3-Dichloropropene	ND	0.0393	0.0350	ND	0.178	0.159	
Methyl isobutyl ketone	ND	0.0412	0.0350	ND	0.169	0.143	J
Toluene	ND	0.0406	0.0350	ND	0.153	0.132	
trans-1,3-Dichloropropene	ND	0.0406	0.0350	ND	0.184	0.159	J
1,1,2-Trichloroethane	ND	0.0401	0.0350	ND	0.219	0.191	
Tetrachloroethene	ND	0.0404	0.0350	ND	0.274	0.237	J
2-Hexanone (Methyl butyl ketone)	ND	0.0406	0.0350	ND	0.166	0.143	
Dibromochloromethane	ND	0.0395	0.0350	ND	0.336	0.298	J
1,2-Dibromoethane	ND	0.0405	0.0350	ND	0.311	0.269	
Chlorobenzene	ND	0.0412	0.0350	ND	0.189	0.161	J
Ethylbenzene	ND	0.0394	0.0350	ND	0.171	0.152	
1,1,1,2-Tetrachloroethane	ND	0.0400	0.0350	ND	0.275	0.240	J
m-/p-Xylenes	ND	0.0405	0.0350	ND	0.176	0.152	

Sample Name: Humid Blank #0702

Sample Info: 500mL load; MP#3

Data File: X1903149.D

Dilution: 1

Pressurization Factor: 1.000

Acquisition Date: 2019-08-25 00:57:44

Instrument Method: TO15-SCN.M

Matrix: AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
o-Xylene	ND	0.0400	0.0350	ND	0.174	0.152	
Styrene	ND	0.0390	0.0350	ND	0.166	0.149	
Bromoform	ND	0.0402	0.0350	ND	0.415	0.362	
1,1,2,2-Tetrachloroethane	ND	0.0400	0.0350	ND	0.275	0.240	
4-Ethyltoluene	ND	0.0403	0.0350	ND	0.198	0.172	
2-Chlorotoluene	ND	0.0403	0.0350	ND	0.209	0.181	
1,3,5-Trimethylbenzene	ND	0.0401	0.0350	ND	0.197	0.172	
1,2,4-Trimethylbenzene	ND	0.0398	0.0350	ND	0.195	0.172	
1,3-Dichlorobenzene	ND	0.0404	0.0350	ND	0.243	0.210	
1,4-Dichlorobenzene	ND	0.0401	0.0350	ND	0.241	0.210	
Benzyl chloride	ND	0.0399	0.0350	ND	0.207	0.181	
1,2-Dichlorobenzene	ND	0.0408	0.0350	ND	0.245	0.210	
1,2,4-Trichlorobenzene	0.0723	0.0406	0.0350	0.537	0.301	0.260	
Hexachlorobutadiene	ND	0.0401	0.0350	ND	0.427	0.373	
Naphthalene	0.0993	0.0414	0.0350	0.521	0.217	0.183	
1-Bromopropane	ND	0.0395	0.0350	ND	0.199	0.176	
1-Octene	ND	0.0391	0.0350	ND	0.180	0.161	
n-Octane	ND	0.0401	0.0350	ND	0.187	0.164	
Isopropylbenzene	ND	0.0406	0.0350	ND	0.200	0.172	
n-Propylbenzene	ND	0.0407	0.0350	ND	0.200	0.172	

Internal Standards	Response	Retention Time (min)	Concentration (PPBV)	Flag *
Bromochloromethane (IS)	712,486	11.94	5.00	PASS
1,4-Difluorobenzene (IS)	2,735,141	13.69	5.04	PASS
Chlorobenzene-d5 (IS)	2,221,375	17.86	4.80	PASS

(ND) = Not Detected

* (J) = Below Calibration Range, (E) = Above Calibration Range, (m) = Manual Integration

IS Acceptance Criteria: RT +/- 20 sec, Response +/- 40%

QC Summary Report

Enthalpy Analytical, LLC

Sample Name : 5ppbv TO15 LCS
 Sample Info : 50mL load; Can #000100; GCMSPrepPg800
 Data File : X1903146.D
 Dilution : 1
 Pressurization Factor : 1.000
 Acquisition Date : 2019-08-24 22:16:30
 Instrument Method : TO15-SCN.M
 Matrix : AIR

Target Compound	Response	Concentration (PPBV)	Tag Value (PPBV)	% Recovery	Flag
Propylene	615,546	5.29	4.80	110.4	PASS
Freon 12 (CCl2F2)	1,330,846	4.08	4.88	83.6	PASS
Freon 114 (C2Cl2F4)	1,514,374	4.32	5.01	86.2	PASS
Chloromethane	746,519	5.68	4.88	116.5	PASS
Chloroethene (Vinyl chloride)	701,724	4.79	5.03	95.3	PASS
1,3-Butadiene	627,935	4.85	4.89	99.3	PASS
Bromomethane	575,767	3.89	4.95	78.6	PASS
Chloroethane	355,077	4.86	5.04	96.5	PASS
Bromoethene (Vinyl bromide)	623,840	4.50	4.99	90.3	PASS
Freon 11 (CCl3F)	1,554,736	4.50	5.19	86.7	PASS
Ethanol	353,614	6.10	5.00	122.0	PASS
Acrolein	312,422	5.86	4.97	118.0	PASS
1,1-Dichloroethene	1,152,125	5.17	5.01	103.3	PASS
Freon 113 (C2Cl3F3)	1,029,056	5.09	4.98	102.3	PASS
Acetone	1,207,494	5.03	5.03	100.0	PASS
Isopropyl alcohol	1,488,060	6.03	5.02	120.1	PASS
Carbon disulfide	1,802,638	4.19	5.02	83.6	PASS
Acetonitrile	750,886	6.35	5.03	126.3	PASS
Allyl chloride (3-chloropropene)	282,493	4.52	5.03	89.8	PASS
Methylene chloride	1,075,109	4.91	5.07	97.0	PASS
Acrylonitrile	675,615	6.31	5.11	123.4	PASS
Methyl tert-butyl ether	1,661,101	4.90	5.12	95.7	PASS
trans-1,2-Dichloroethene	1,062,863	5.36	5.10	105.1	PASS
Hexane	1,203,012	5.83	5.06	115.4	PASS
Vinyl acetate	2,114,314	6.05	5.09	119.0	PASS
1,1-Dichloroethane	1,263,804	5.13	4.93	104.2	PASS
Methyl ethyl ketone (2-Butanone)	314,354	4.76	5.08	93.7	PASS
cis-1,2-Dichloroethene	1,252,580	5.53	5.04	109.8	PASS
Ethyl acetate	291,321	5.80	5.04	115.1	PASS
1-Bromopropane	1,486,959	6.11	4.94	123.7	PASS
Tetrahydrofuran	296,898	4.82	5.05	95.6	PASS
Chloroform	1,287,304	4.50	5.06	89.1	PASS
1,1,1-Trichloroethane	1,228,923	4.41	4.98	88.6	PASS
Cyclohexane	1,270,509	5.79	5.09	113.8	PASS
Carbon tetrachloride	1,318,333	4.69	5.06	92.7	PASS
Benzene	1,843,017	4.72	4.99	94.5	PASS
1,2-Dichloroethane	921,806	5.16	5.11	101.0	PASS
2,2,4-trimethylpentane	3,824,513	6.06	5.13	118.2	PASS
Heptane	758,576	5.78	5.03	115.1	PASS
Trichloroethene	894,455	5.33	5.02	106.2	PASS
1,2-Dichloropropane	840,219	5.30	4.98	106.4	PASS
Methyl methacrylate	711,555	4.97	5.19	95.8	PASS

Sample Name : 5ppbv TO15 LCS
 Sample Info : 50mL load; Can #000100; GCMSPrepPg800
 Data File : X1903146.D
 Dilution : 1
 Pressurization Factor : 1.000
 Acquisition Date : 2019-08-24 22:16:30
 Instrument Method : TO15-SCN.M
 Matrix : AIR

Target Compound	Response	Concentration (PPBV)	Tag Value (PPBV)	% Recovery	Flag
1,4-Dioxane	448,527	4.95	5.06	97.9	PASS
Bromodichloromethane	1,351,746	4.59	4.97	92.4	PASS
cis-1,3-Dichloropropene	1,094,495	4.78	4.92	97.2	PASS
Methyl isobutyl ketone	2,082,742	6.31	5.16	122.3	PASS
Toluene	2,200,068	4.63	5.08	91.2	PASS
1-Octene	535,865	4.74	4.89	97.0	PASS
n-Octane	704,217	4.82	5.01	96.1	PASS
trans-1,3-Dichloropropene	1,094,874	4.89	5.08	96.2	PASS
1,1,2-Trichloroethane	789,260	4.71	5.01	94.1	PASS
Tetrachloroethene	1,121,593	5.48	5.05	108.6	PASS
2-Hexanone (Methyl butyl ketone)	1,953,769	6.49	5.08	127.7	PASS
Dibromochloromethane	1,524,259	4.97	4.94	100.7	PASS
1,2-Dibromoethane	1,358,875	4.87	5.07	96.1	PASS
Chlorobenzene	1,831,256	5.27	5.15	102.5	PASS
Ethylbenzene	2,620,986	4.54	4.92	92.2	PASS
1,1,1,2-Tetrachloroethane	1,006,892	5.10	5.00	102.0	PASS
m-/p-Xylenes	2,291,457	4.92	5.07	97.2	PASS
o-Xylene	2,202,438	4.78	5.00	95.8	PASS
Styrene	1,783,379	4.99	4.87	102.5	PASS
Bromoform	1,501,183	5.32	5.02	106.0	PASS
Isopropylbenzene	3,100,356	5.02	5.08	98.9	PASS
1,1,2,2-Tetrachloroethane	1,706,987	4.68	5.00	93.5	PASS
n-Propylbenzene	3,559,625	4.93	5.09	97.0	PASS
4-Ethyltoluene	3,104,401	5.20	5.04	103.4	PASS
2-Chlorotoluene	2,494,036	4.75	5.04	94.4	PASS
1,3,5-Trimethylbenzene	2,491,518	4.95	5.02	98.7	PASS
1,2,4-Trimethylbenzene	2,532,226	5.14	4.97	103.4	PASS
1,3-Dichlorobenzene	1,716,681	5.92	5.05	117.3	PASS
1,4-Dichlorobenzene	1,682,772	6.13	5.02	122.2	PASS
Benzyl chloride	2,193,140	5.85	4.99	117.2	PASS
1,2-Dichlorobenzene	1,678,279	5.85	5.10	114.8	PASS
1,2,4-Trichlorobenzene	880,737	6.61	5.08	130.3	FAIL
Hexachlorobutadiene	983,393	4.07	5.01	81.2	PASS
Naphthalene	2,591,790	6.71	5.18	129.7	PASS

Sample Name

: 5ppbv TO15 LCS

Sample Info

: 50mL load; Can #000100; GCMSPrepPg800

Data File

: X1903146.D

Dilution

: 1

Pressurization Factor

: 1.000

Acquisition Date

: 2019-08-24 22:16:30

Instrument Method

: TO15-SCN.M

Matrix

: AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
Propylene	5.29	0.0384	0.0350	9.11	0.0660	0.0602	
Freon 12 (CCl2F2)	4.08	0.0390	0.0350	20.2	0.193	0.173	
Freon 114 (C2Cl2F4)	4.32	0.0400	0.0350	30.2	0.280	0.245	
Chloromethane	5.68	0.0390	0.0350	11.7	0.0805	0.0723	
Chloroethene (Vinyl chloride)	4.79	0.0402	0.0350	12.2	0.103	0.0895	
1,3-Butadiene	4.85	0.0391	0.0350	10.7	0.0865	0.0774	
Bromomethane	3.89	0.0396	0.0350	15.1	0.154	0.136	
Chloroethane	4.86	0.0403	0.0350	12.8	0.106	0.0924	
Bromoethene (Vinyl bromide)	4.50	0.0399	0.0350	19.7	0.174	0.153	
Freon 11 (CCl3F)	4.50	0.0415	0.0350	25.3	0.233	0.197	
Ethanol	6.10	0.100	0.0400	11.5	0.188	0.0754	
Acrolein	5.86	0.0397	0.0350	13.4	0.0911	0.0803	
Freon 113 (C2Cl3F3)	5.09	0.0398	0.0350	39.0	0.305	0.268	
1,1-Dichloroethene	5.17	0.0400	0.0350	20.5	0.159	0.139	
Acetone	5.03	0.0402	0.0350	11.9	0.0955	0.0831	
Carbon disulfide	4.19	0.0402	0.0350	13.1	0.125	0.109	
Isopropyl alcohol	6.03	0.0402	0.0350	14.8	0.0987	0.0860	
Allyl chloride (3-chloropropene)	4.52	0.0402	0.0350	14.1	0.126	0.110	
Acetonitrile	6.35	0.0402	0.0350	10.7	0.0675	0.0588	
Methylene chloride	4.91	0.101	0.101	17.1	0.352	0.352	m
trans-1,2-Dichloroethene	5.36	0.0408	0.0350	21.2	0.162	0.139	
Methyl tert-butyl ether	4.90	0.0410	0.0350	17.7	0.148	0.126	
Acrylonitrile	6.31	0.0409	0.0350	13.7	0.0887	0.0760	
Hexane	5.83	0.0404	0.0350	20.6	0.143	0.123	
1,1-Dichloroethane	5.13	0.0394	0.0350	20.8	0.159	0.142	
Vinyl acetate	6.05	0.0407	0.0350	21.3	0.143	0.123	m
cis-1,2-Dichloroethene	5.53	0.0403	0.0350	21.9	0.160	0.139	m
Methyl ethyl ketone (2-Butanone)	4.76	0.0406	0.0350	14.0	0.120	0.103	
Ethyl acetate	5.80	0.0403	0.0350	20.9	0.145	0.126	
Chloroform	4.50	0.0404	0.0350	22.0	0.197	0.171	
Tetrahydrofuran	4.82	0.0404	0.0350	14.2	0.119	0.103	
1,1,1-Trichloroethane	4.41	0.0398	0.0350	24.1	0.217	0.191	
Cyclohexane	5.79	0.0407	0.0350	19.9	0.140	0.120	
Carbon tetrachloride	4.69	0.0405	0.0350	29.5	0.255	0.220	
Benzene	4.72	0.0399	0.0350	15.1	0.128	0.112	
2,2,4-trimethylpentane	6.06	0.0410	0.0350	28.3	0.192	0.164	
1,2-Dichloroethane	5.16	0.0409	0.0350	20.9	0.165	0.142	
Heptane	5.78	0.0402	0.0350	23.7	0.165	0.143	
Trichloroethene	5.33	0.0402	0.0350	28.6	0.216	0.188	
1,2-Dichloropropane	5.30	0.0409	0.0350	24.5	0.189	0.162	
Methyl methacrylate	4.97	0.0415	0.0350	20.3	0.170	0.143	
1,4-Dioxane	4.95	0.0404	0.0350	17.8	0.146	0.126	
Bromodichloromethane	4.59	0.0397	0.0350	30.8	0.266	0.235	
cis-1,3-Dichloropropene	4.78	0.0393	0.0350	21.7	0.178	0.159	
Methyl isobutyl ketone	6.31	0.0412	0.0350	25.8	0.169	0.143	
Toluene	4.63	0.0406	0.0350	17.5	0.153	0.132	
trans-1,3-Dichloropropene	4.89	0.0406	0.0350	22.2	0.184	0.159	
1,1,2-Trichloroethane	4.71	0.0401	0.0350	25.7	0.219	0.191	
Tetrachloroethene	5.48	0.0404	0.0350	37.1	0.274	0.237	
2-Hexanone (Methyl butyl ketone)	6.49	0.0406	0.0350	26.6	0.166	0.143	
Dibromochloromethane	4.97	0.0395	0.0350	42.4	0.336	0.298	
1,2-Dibromoethane	4.87	0.0405	0.0350	37.4	0.311	0.269	
Chlorobenzene	5.27	0.0412	0.0350	24.3	0.189	0.161	
Ethylbenzene	4.54	0.0394	0.0350	19.7	0.171	0.152	
1,1,1,2-Tetrachloroethane	5.10	0.0400	0.0350	35.0	0.275	0.240	
m-/p-Xylenes	4.92	0.0405	0.0350	21.4	0.176	0.152	

Sample Name : 5ppbv TO15 LCS

Sample Info : 50mL load; Can #000100; GCMSPrepPg800

Data File : X1903146.D

Dilution : 1

Pressurization Factor : 1.000

Acquisition Date : 2019-08-24 22:16:30

Instrument Method : TO15-SCN.M

Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
o-Xylene	4.78	0.0400	0.0350	20.8	0.174	0.152	
Styrene	4.99	0.0390	0.0350	21.3	0.166	0.149	
Bromoform	5.32	0.0402	0.0350	55.0	0.415	0.362	
1,1,2,2-Tetrachloroethane	4.68	0.0400	0.0350	32.1	0.275	0.240	
4-Ethyltoluene	5.20	0.0403	0.0350	25.6	0.198	0.172	
2-Chlorotoluene	4.75	0.0403	0.0350	24.6	0.209	0.181	
1,3,5-Trimethylbenzene	4.95	0.0401	0.0350	24.3	0.197	0.172	
1,2,4-Trimethylbenzene	5.14	0.0398	0.0350	25.3	0.195	0.172	
1,3-Dichlorobenzene	5.92	0.0404	0.0350	35.6	0.243	0.210	
1,4-Dichlorobenzene	6.13	0.0401	0.0350	36.8	0.241	0.210	
Benzyl chloride	5.85	0.0399	0.0350	30.3	0.207	0.181	
1,2-Dichlorobenzene	5.85	0.0408	0.0350	35.2	0.245	0.210	
1,2,4-Trichlorobenzene	6.61	0.0406	0.0350	49.1	0.301	0.260	
Hexachlorobutadiene	4.07	0.0401	0.0350	43.4	0.427	0.373	
Naphthalene	6.71	0.0414	0.0350	35.2	0.217	0.183	
1-Bromopropane	6.11	0.0395	0.0350	30.7	0.199	0.176	m
1-Octene	4.74	0.0391	0.0350	21.8	0.180	0.161	
n-Octane	4.82	0.0401	0.0350	22.5	0.187	0.164	
Isopropylbenzene	5.02	0.0406	0.0350	24.7	0.200	0.172	
n-Propylbenzene	4.93	0.0407	0.0350	24.2	0.200	0.172	

Internal Standards	Response	Retention Time (min)	Concentration (PPBV)	Flag *
Bromochloromethane (IS)	676,312	11.93	5.00	PASS
1,4-Difluorobenzene (IS)	2,642,788	13.69	5.04	PASS
Chlorobenzene-d5 (IS)	2,201,661	17.87	4.80	PASS

(ND) = Not Detected

* (J) = Below Calibration Range, (E) = Above Calibration Range, (m) = Manual Integration

IS Acceptance Criteria: RT +/- 20 sec, Response +/- 40%

Narrative Summary

Enthalpy Analytical Narrative Summary

Company	Tetra Tech, Inc.
Job #	0819-172 - EPA Method 16-Type (Canister) Analysis
Client #	TT-01-128

Custody	<p>Shannon Hulbert received the samples on 8/24/19 at ambient temperature after being relinquished by Tetra Tech, Inc. The samples were received in good condition.</p> <p>Prior to, during, and after analysis, the samples were kept under lock with access only to authorized personnel by Enthalpy Analytical, LLC.</p>
Analysis	<p>The samples were analyzed for hydrogen sulfide using the general analytical procedures in EPA Method 16.</p> <p>The samples and standards were introduced directly to the column using an automated multi-port Valco gas sampling valve equipped with a stainless steel loop. Hydrogen sulfide was referenced to gas phase standards prepared using a certified permeation device.</p> <p>Upon receipt, the canisters pressures were measured and recorded. The cans were pressurized and dilution ratios were calculated (see page 19).</p> <p>The Hewlett Packard Model 5890, Series II Gas Chromatograph "Zeppo" (S/N 3235A4448X) was equipped with a Flame Photometric Detector for these analyses.</p>
Chromatographic Conditions	The acquisition methods (DUALFPD8_SHORT.M and DUALFPD8.M) are included in the Raw Data section of this report.
Calibration	<p>The calibration curve is included in the Raw Data section of this report and referenced in the Analysis Method column on the Detailed Results page.</p> <p>For each calibration curve used, the first page of the curve contains all method specific parameters (i.e., curve type, origin, weight, etc.) used to quantify the samples. The calibration curve section also includes a table with the Retention Time (RetTime), Level (Lvl), Amount (corresponding units), Area, Response Factor (Amt/Area) and the analyte Name. The calibration table is used to identify (by retention time) and quantify each target compound.</p>



Enthalpy Analytical Narrative Summary

(continued)

QC Notes

Hydrogen sulfide was not identified at a level greater than the MDL in the analysis of the laboratory zero air blank.

The analysis of a Laboratory Control Sample (*zeppo0463#LCS*), analyzed with the samples, exhibited a recovery value of 107%.

Reporting Notes

The results presented in this report are representative of the sample as provided to the laboratory.

Enthalpy Analytical Narrative Summary

Company	Tetra Tech, Inc.
Analyst	TDD
Parameters	EPA Method TO-15

Client #	Able Fire
Job #	0819-172
# Samples	6 Canisters

Custody

Shannon Hulbert received the samples on 8/24/19 after being relinquished by Tetra Tech, Inc. The samples were received at ambient temperature and in good condition.

Prior to, during, and after analysis, the samples were kept under lock with access only to authorized personnel by Enthalpy Analytical, LLC.

Analysis

The samples were analyzed for the TO-15 target compound list using the analytical procedures in EPA Method TO-15, *Determination of Volatile Organic Compounds (VOCs) In Air Collected In Specially-Prepared Canisters And Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS)*.

Upon receipt, the canister pressures were measured and recorded. The canisters were then pressurized with UHP nitrogen and a dilution ratio was calculated for each canister. Refer to the Can pressurization sheet on page 19 of this PDF report for the details.

All samples were analyzed undiluted.

The Agilent Technologies Model 6890N, Gas Chromatograph "Xavier" (S/N US10721018) equipped with a 5975C VL Mass Selective Detector (S/N US71215962) and a Restek Rtx-624 Sil MS, 60 m x 0.32 mm x 1.8 µm capillary column (S/N 1555499) for these analyses. All samples and standards were introduced directly to the analyzer using an Entech 7100A Preconcentrator.

Calibration

The BFB tune analyses associated with the initial and continuing calibrations met method acceptance criteria. The initial calibration (**X082219A-TO15**) met the 30% RSD criteria with allowed exceptions. The initial calibration verification met the 70-130% recovery criteria with the exception of 1,2,4-trichlorobenzene and naphthalene. The continuing calibration met the 30% difference criteria with the exception of 1,2,4-trichlorobenzene and naphthalene. Calibration data has not been provided in this level 2 report, however is available upon request.



Enthalpy Analytical Narrative Summary (continued)

Chromatographic Conditions

A copy of the acquisition method (*TO15-SCN2.M*) has not been included in this report but is available upon request.

QC Notes

All internal standard area responses and retention time criteria were met for these analyses.

The laboratory humid blank associated with the analysis of these samples did not contain any of the target analytes at a concentration greater than 3-times the MDL value.

The Laboratory Control Sample (LCS) met the 70-130% recovery criteria with allowed exceptions. Compounds that failed to meet the 70-130% recovery resulted in a high bias.

The Laboratory Duplicate (LD) analyzed with this sample set met 25% difference acceptance criteria for all compounds reported over the LOQ.

The samples were analyzed within the 30-day holding time required by the method.

Reporting Notes

These analyses met the requirements of the TNI Standard. Any deviations from the requirements of the reference method or TNI Standard have been stated above.

The results presented in this report are representative of the samples as provided to the laboratory.

General Reporting Notes

The following are general reporting notes that are applicable to all Enthalpy Analytical, LLC data reports, unless specifically noted otherwise.

- Any analysis which refers to the method as “**Type**” represents a planned deviation from the reference method. For instance a Hydrogen Sulfide assay from a Tedlar bag would be labeled as “EPA Method 16-Type” because Tedlar bags are not mentioned as one of the collection options in EPA Method 16.
- The acronym **MDL** represents the Minimum Detection Limit. Below this value the laboratory cannot determine the presence of the analyte of interest reliably.
- The acronym **LOQ** represents the Limit of Quantification. Below this value the laboratory cannot quantitate the analyte of interest within the criteria of the method.
- The acronym **ND** following a value indicates a non-detect or analytical result below the MDL.
- The letter **J** in the Qualifier or Flag column in the results indicates that the value is between the MDL and the LOQ. The laboratory can positively identify the analyte of interest as present, but the value should be considered an estimate.
- The letter **E** in the Qualifier or Flag column indicates an analytical result exceeding 100% of the highest calibration point. The associated value should be considered as an estimate.
- Sample results are presented ‘as measured’ for single injection methodologies, or an average value if multiple injections are made. If all injections are below the MDL, the sample is considered non-detect and the ND value is presented. If one, but not all, are below the MDL, the MDL value is used for any injections that are below the MDL. For example, if the MDL is 0.500 and LOQ is 1.00, and the instrument measures 0.355, 0.620, and 0.442 - the result reported is the average of 0.500, 0.620, and 0.500 - - - i.e. 0.540 with a J flag.
- When a spike recovery (Bag Spike, Collocated Spike Train, or liquid matrix spike) is being calculated, the native (unspiked) sample result is used in the calculations, as long as the value is above the MDL. If a sample is ND, then 0 is used as the native amount (not the MDL value).
- The acronym **DF** represents Dilution Factor. This number represents dilution of the sample during the preparation and/or analysis process. The analytical result taken from a laboratory instrument is multiplied by the DF to determine the final undiluted sample results.
- The addition of **MS** to the Sample ID represents a Matrix Spike. An aliquot of an actual sample is spiked with a known amount of analyte so that a percent recovery value can be determined. The MS analysis indicates what effect the sample matrix may have on the target analyte, i.e. whether or not anything in the sample matrix interferes with the analysis of the analyte(s).



General Reporting Notes

(continued)

- The addition of **MSD** to the Sample ID represents a Matrix Spike Duplicate. Prepared in the same manner as a MS, the use of duplicate matrix spikes allows further confirmation of laboratory quality by showing the consistency of results gained by performing the same steps multiple times.
- The addition of **LD** to the Sample ID represents a Laboratory Duplicate. The analyst prepares an additional aliquot of sample for testing and the results of the duplicate analysis are compared to the initial result. The result should have a difference value of within 10% of the initial result (if the results of the original analysis are greater than the LOQ).
- The addition of **AD** to the Sample ID represents an Alternate Dilution. The analyst prepares an additional aliquot at a different dilution factor (usually double the initial factor). This analysis helps confirm that no additional compound is present and coeluting or sharing absorbance with the analyte of interest, as they would have a different response/absorbance than the analyte of interest.
- The Sample ID **LCS** represents a Laboratory Control Sample. Clean matrix, similar to the client sample matrix, prepared and analyzed by the laboratory using the same reagents, spiking standards and procedures used for the client samples. The LCS is used to assess the control of the laboratory's analytical system. Whenever spikes are prepared for our client projects, two spikes are retained as LCSs. The LCSs are labeled with the associated project number and kept in-house at the appropriate temperature conditions. When the project samples are received for analysis, the LCSs are analyzed to confirm that the analyte could be recovered from the media, separate from the samples which were used on the project and which may have been affected by source matrix, sample collection, and/or sample transport.
- **Significant Figures:** Where the reported value is much greater than unity (1.00) in the units expressed, the number is rounded to a whole number of units, rather than to 3 significant figures. For example, a value of 10,456.45 ug catch is rounded to 10,456 ug. There are five significant digits displayed, but no confidence should be placed on more than two significant digits. In the case of small numbers, generally 3 significant figures are presented, but still only 2 should be used with confidence. Many neat materials are only certified to 3 digits, and as the mathematically correct final result is always 1 digit less than all its pre-cursors - 2 significant figures are what are most defensible.
- **Manual Integration:** The data systems used for processing will flag manually integrated peaks with an "M". There are several reasons a peak may be manually integrated. These reasons will be identified by the following two letter designations on sample chromatograms, if provided in the report. The peak was *not integrated* by the software "**NI**", the peak was *integrated incorrectly* by the software "**II**" or the *wrong peak* was integrated by the software "**WP**". These codes will accompany the analyst's manual integration stamp placed next to the compound name on the chromatogram.

Sample Custody



Chain of Custody Record

Page ____ of ____

Special Handling:

☐ Standard Turn Around Time

☒ Rush Turn Around Time - Date Needed ASAP

- All TATs Subject to Approval by Enthalpy Analytical

- All Bag/Can Samples Disposed of 1 Month from Receipt

- All Other Samples Disposed of 4 Months from Receipt

Sample(s) Collected by: Chris Jones

Client Name: Tetra Tech

Project Manager: Chris Jones

Project Number: TT-01-128

Site Name: Able Fire

Location: Ridgeland, SC

PO#: _____

Telephone#: _____

Email: _____

For spiked or duplicate samples: please provide sample volumes for recovery calculations. For Particulates: please provide tare weights and/or condensed water volumes.

Special Instructions:

Sample Containers

Analyses:

A=Air T=H2SO4 2=NaOH W=Water O=Other

X=XAD C=Charcoal SG=Silica Gel

G=Grab C=Composite Q=Quality Control O=Other

Sample ID	Date	Time	Sample Volume	Type	Matrix	# of VOA Vials	# of Glass	# of Plastic	# of Bags	# of Canisters	# of Tubes	# Other	VOCs	H ₂ S	H ₂ N	Notes:
1 [ACF-AS-PAM1-082219	8/22/19	1135	6L	G	A					1			✓	✓	✓	Can # 0853
2 [ACF-AS-RES-2-24-082219	8/22/19	1128	6L	G	A					1			✓	✓	✓	Can # 0810
3 [ACF-AS-PAM2-082219	8/22/19	1125	6L	G	A					1			✓	✓	✓	Can # 0849
4 [ACF-AS-RES-2-24-082219	8/22/19	1121	6L	G	A					1			✓	✓	✓	Can # 0857
5 [ACF-AS-CAB2-day-082219	8/22/19	1039	6L	G	A					1			✓	✓	✓	Can # 0798
6 [ACF-AS-CAB2-day-082219	8/22/19	1034	6L	G	A					1			✓	✓	✓	Can # 0852

Relinquished By: _____

Date: _____

Received By: _____

Date: _____

Time: _____

Sample Condition Upon Receipt:

☐ Iced ☐ Ambient ☐ °C

☐ Iced ☐ Ambient ☐ °C

☐ Iced ☐ Ambient ☐ °C

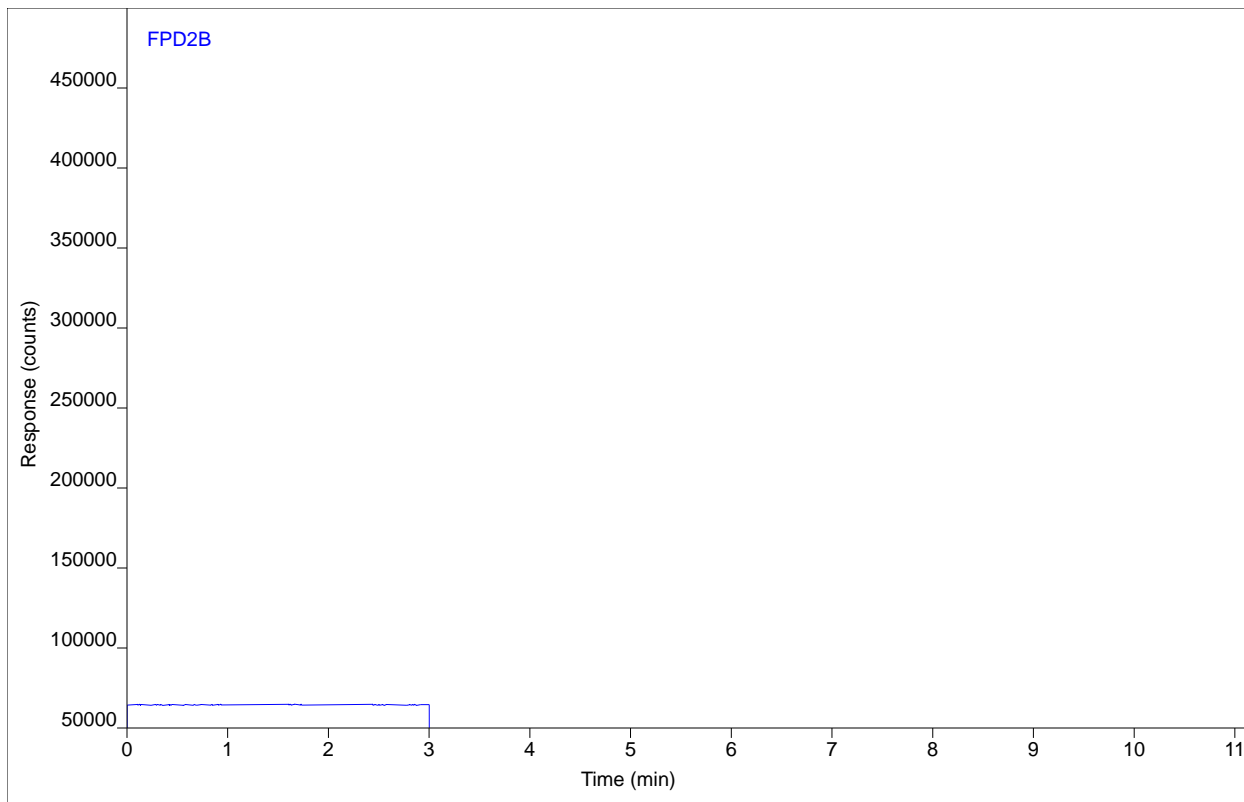
Raw Data

Chromatogram Report

Sample Name 0819-172.Can 0853.Can
Sequence Name ZEPPOP0464 ver.2
Inj Data File 005B1301.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/26/2019 3:11 PM
File Modified 8/27/2019 8:52 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 5
Injection Volume NA
Injection 1 of 3
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/27/2019 9:55 AM



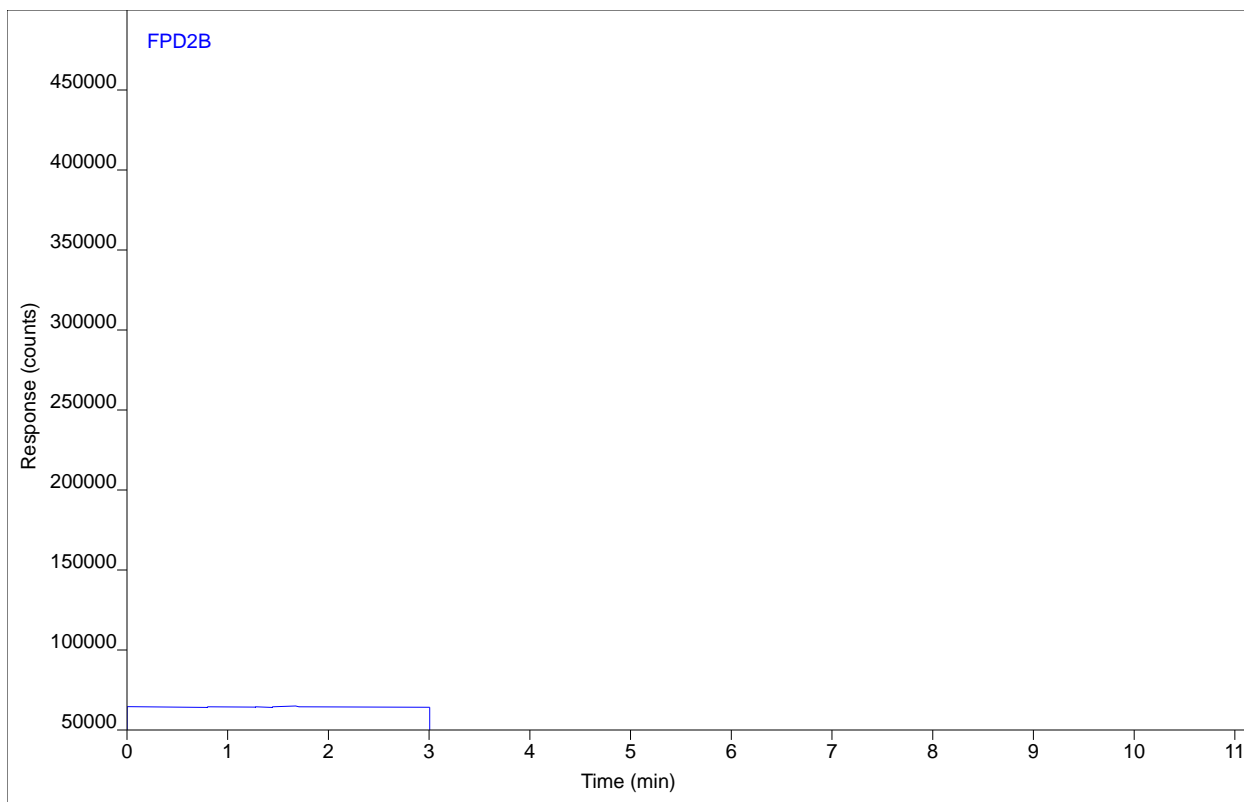
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide		(1.89)				1		

Chromatogram Report

Sample Name 0819-172.Can 0853.Can
Sequence Name ZEPPOP0464 ver.2
Inj Data File 005B1302.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/26/2019 3:15 PM
File Modified 8/27/2019 8:53 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 5
Injection Volume NA
Injection 2 of 3
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/27/2019 9:55 AM



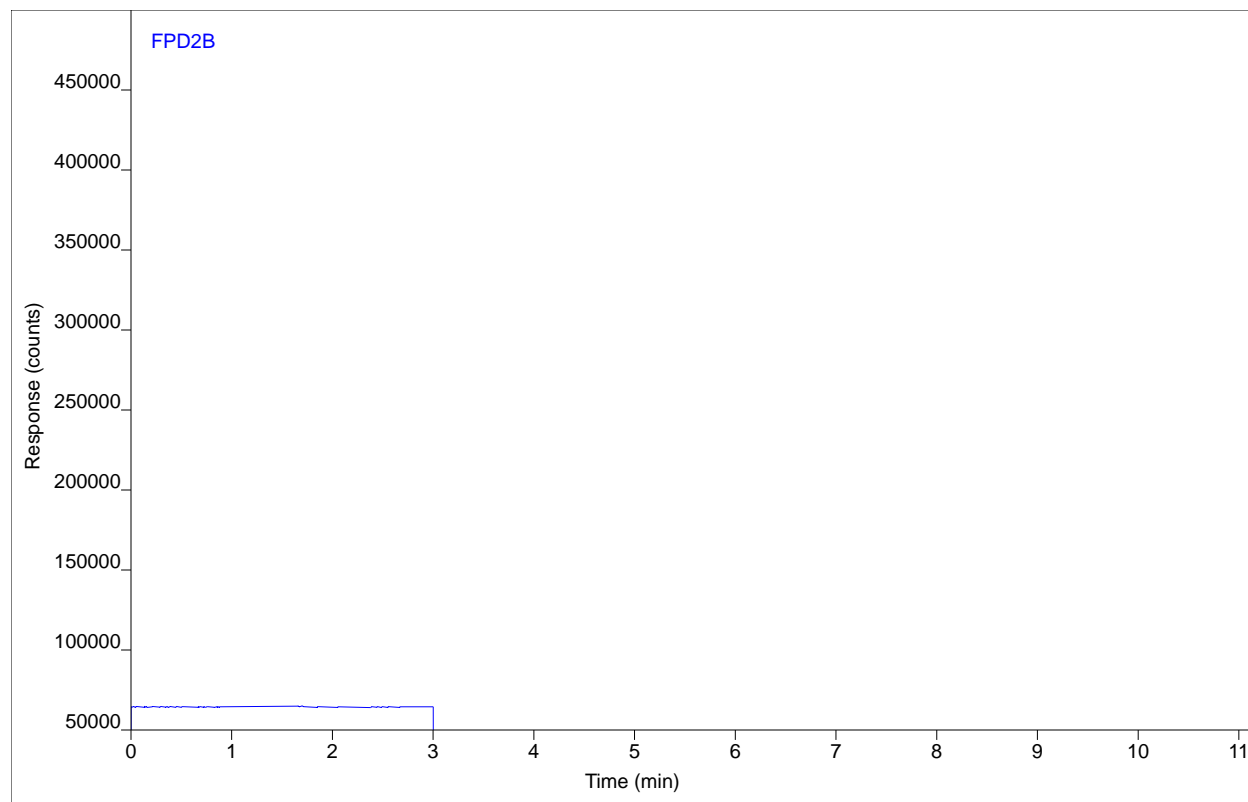
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide		(1.89)				1		

Chromatogram Report

Sample Name 0819-172.Can 0853.Can
Sequence Name ZEPPOP0464 ver.2
Inj Data File 005B1303.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/26/2019 3:20 PM
File Modified 8/27/2019 8:53 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 5
Injection Volume NA
Injection 3 of 3
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/27/2019 9:55 AM



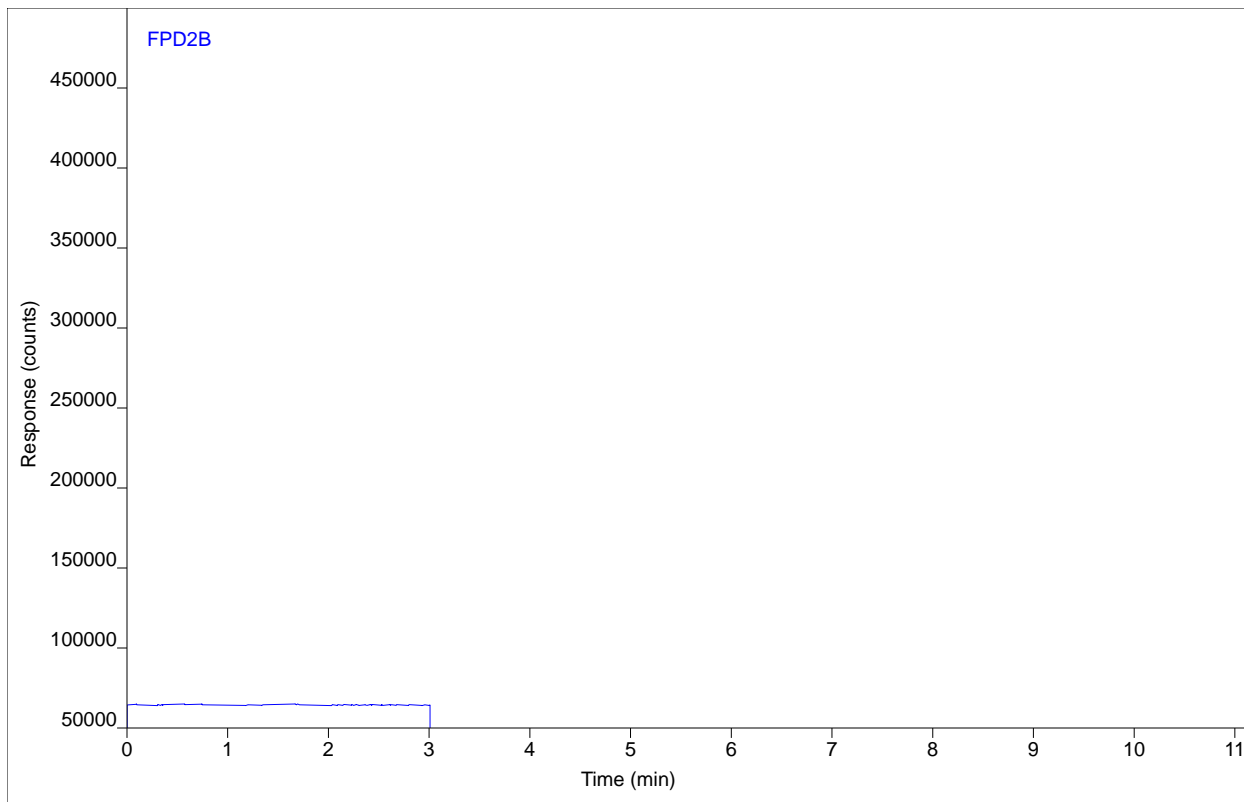
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide		(1.89)				1		

Chromatogram Report

Sample Name 0819-172.Can 0810.Can
Sequence Name ZEPPOP0464 ver.2
Inj Data File 005B1001.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/26/2019 2:31 PM
File Modified 8/27/2019 8:52 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 5
Injection Volume NA
Injection 1 of 3
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/27/2019 9:55 AM



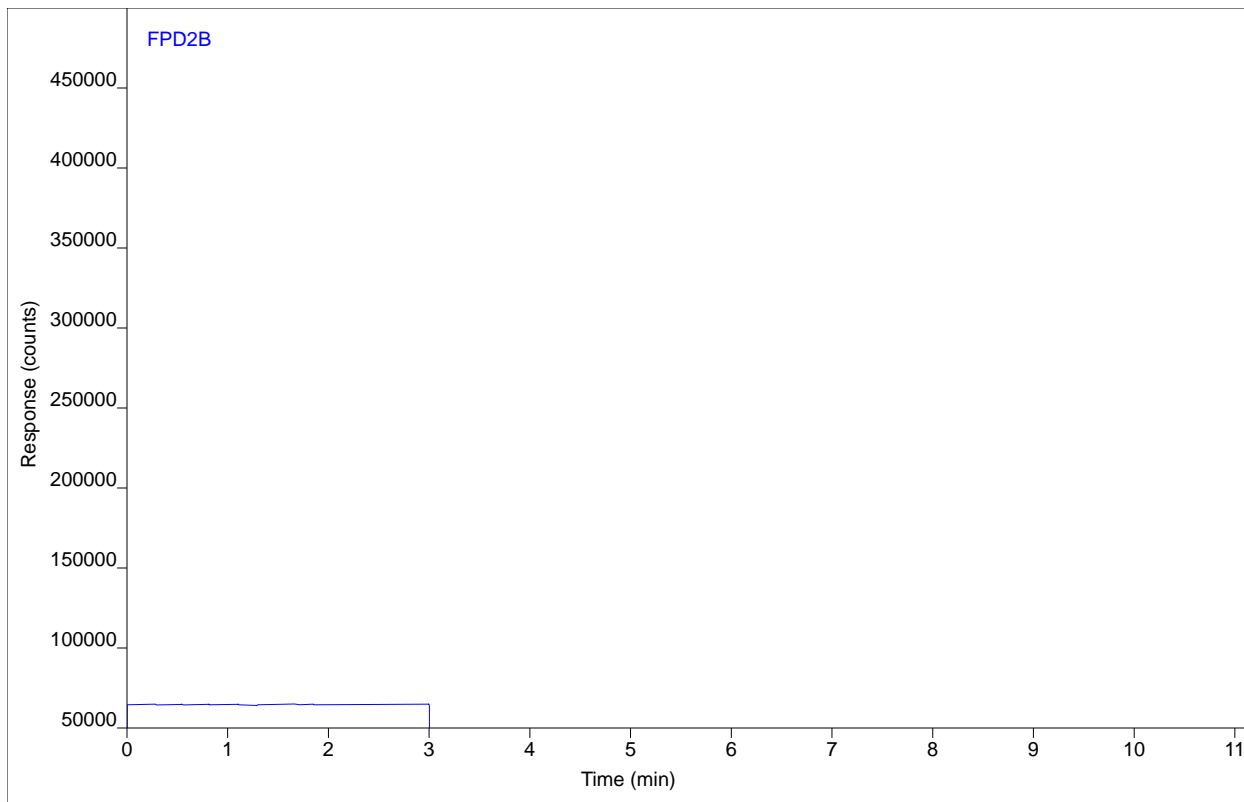
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide		(1.89)				1		

Chromatogram Report

Sample Name 0819-172.Can 0810.Can
Sequence Name ZEPPOP0464 ver.2
Inj Data File 005B1002.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/26/2019 2:35 PM
File Modified 8/27/2019 8:52 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 5
Injection Volume NA
Injection 2 of 3
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/27/2019 9:55 AM



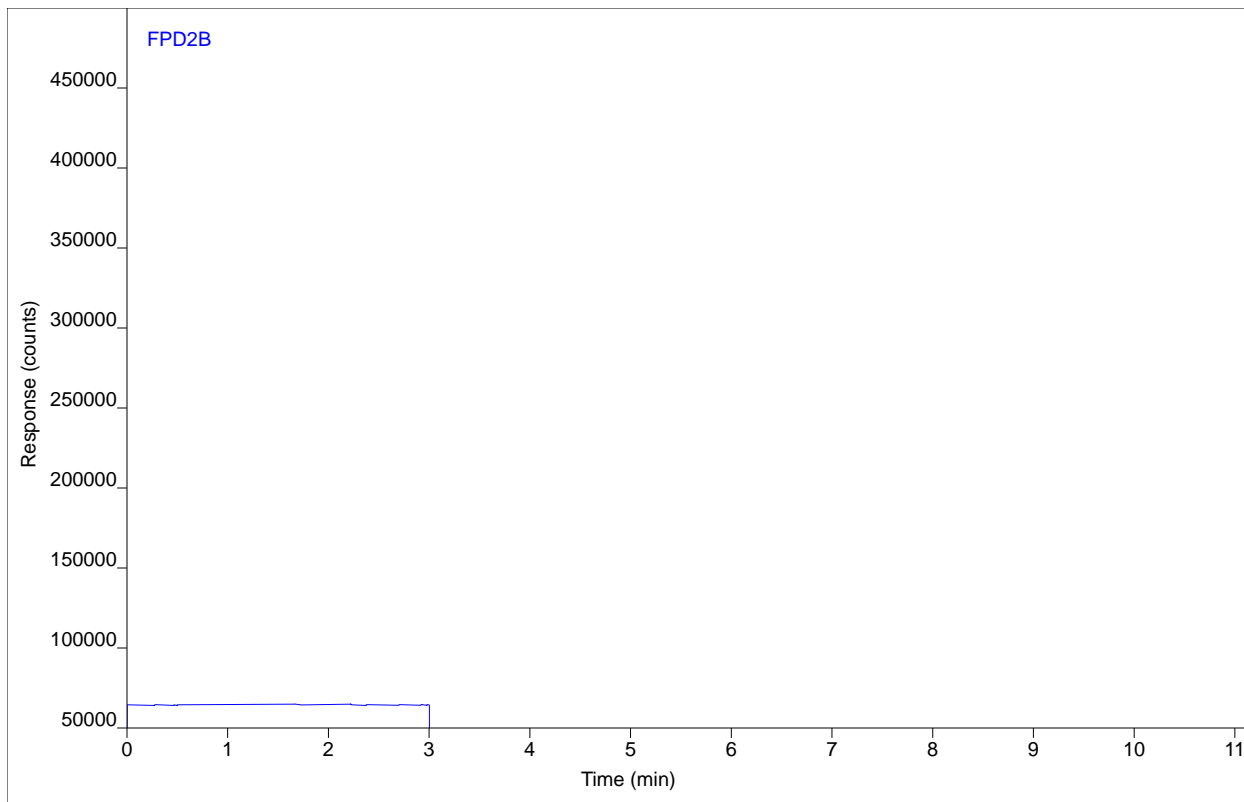
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide		(1.89)				1		

Chromatogram Report

Sample Name 0819-172.Can 0810.Can
Sequence Name ZEPPOP0464 ver.2
Inj Data File 005B1003.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/26/2019 2:40 PM
File Modified 8/27/2019 8:52 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 5
Injection Volume NA
Injection 3 of 3
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/27/2019 9:55 AM



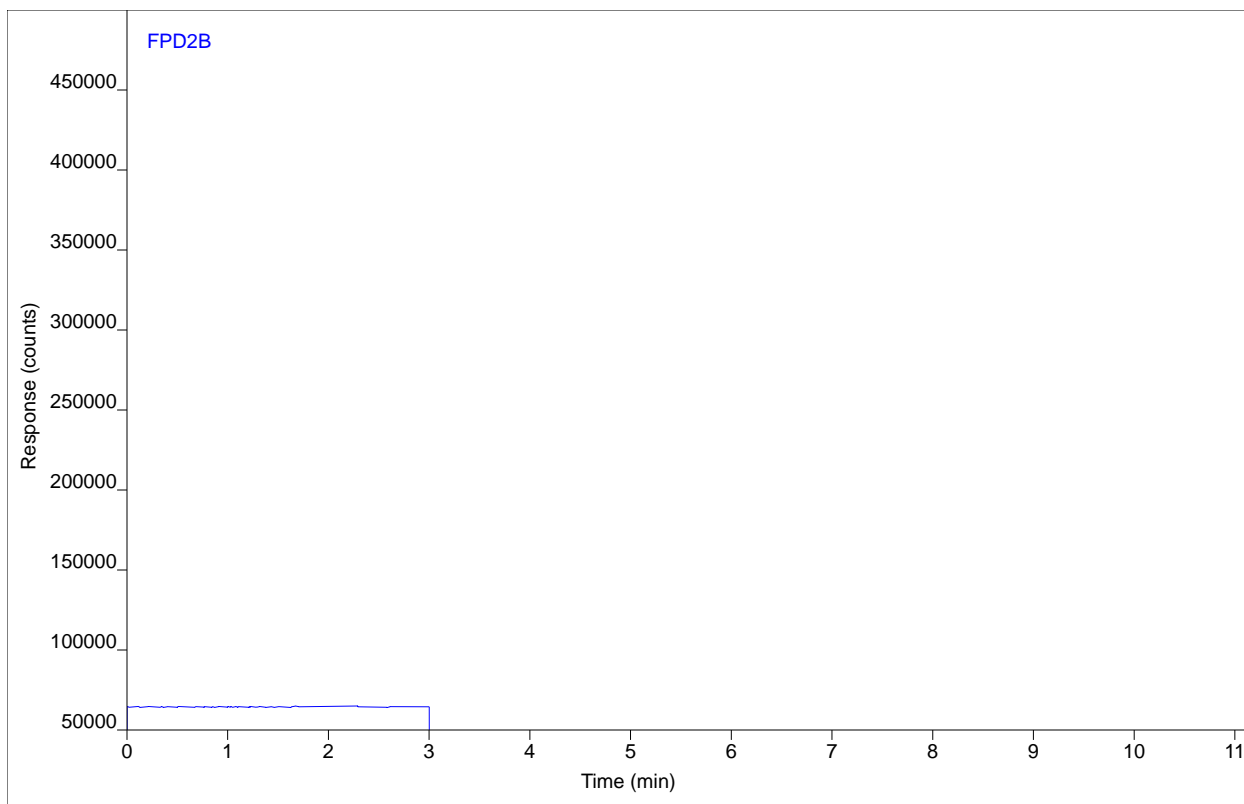
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide		(1.89)				1		

Chromatogram Report

Sample Name 0819-172.Can 0849.Can
Sequence Name ZEPPOP0464 ver.2
Inj Data File 005B1401.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/26/2019 3:24 PM
File Modified 8/27/2019 8:53 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 5
Injection Volume NA
Injection 1 of 3
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/27/2019 9:55 AM



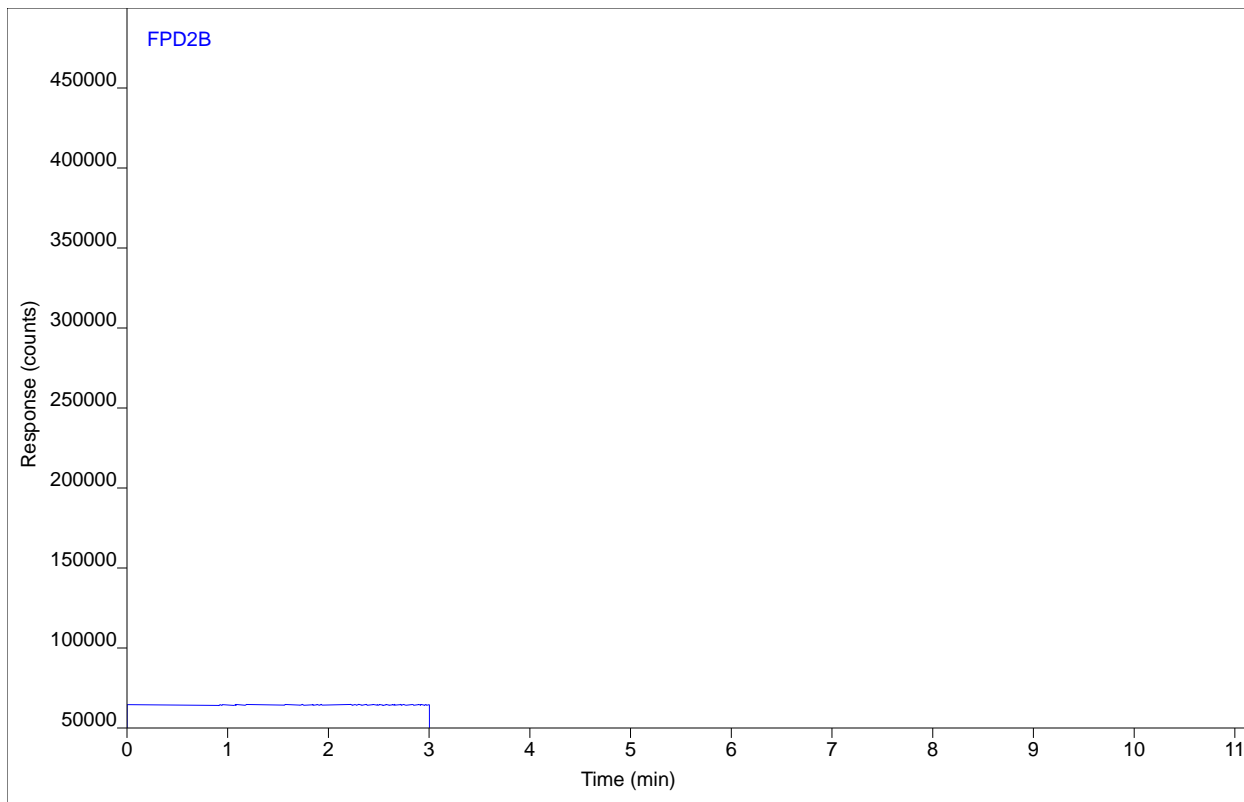
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide		(1.89)				1		

Chromatogram Report

Sample Name 0819-172.Can 0849.Can
Sequence Name ZEPPOP0464 ver.2
Inj Data File 005B1402.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/26/2019 3:28 PM
File Modified 8/27/2019 8:53 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 5
Injection Volume NA
Injection 2 of 3
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/27/2019 9:55 AM



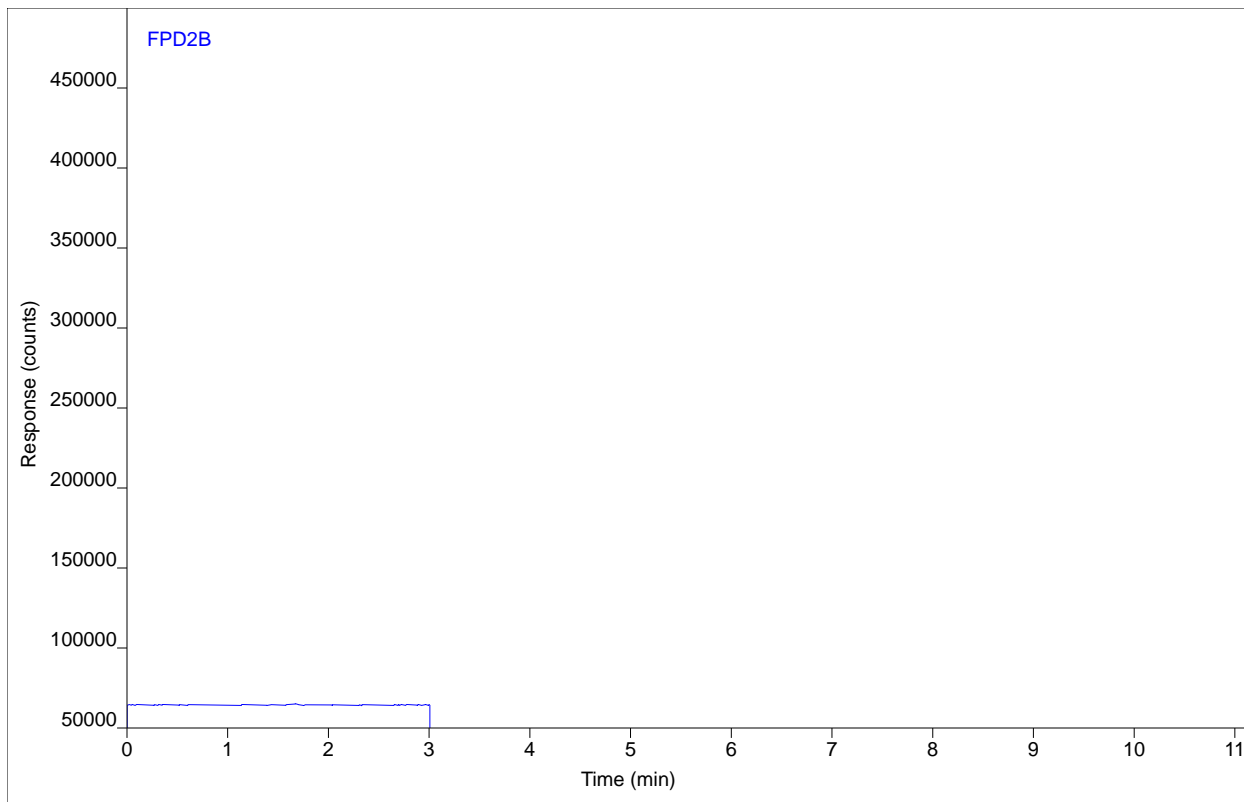
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide		(1.89)				1		

Chromatogram Report

Sample Name 0819-172.Can 0849.Can
Sequence Name ZEPPOP0464 ver.2
Inj Data File 005B1403.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/26/2019 3:33 PM
File Modified 8/27/2019 8:53 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 5
Injection Volume NA
Injection 3 of 3
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/27/2019 9:55 AM



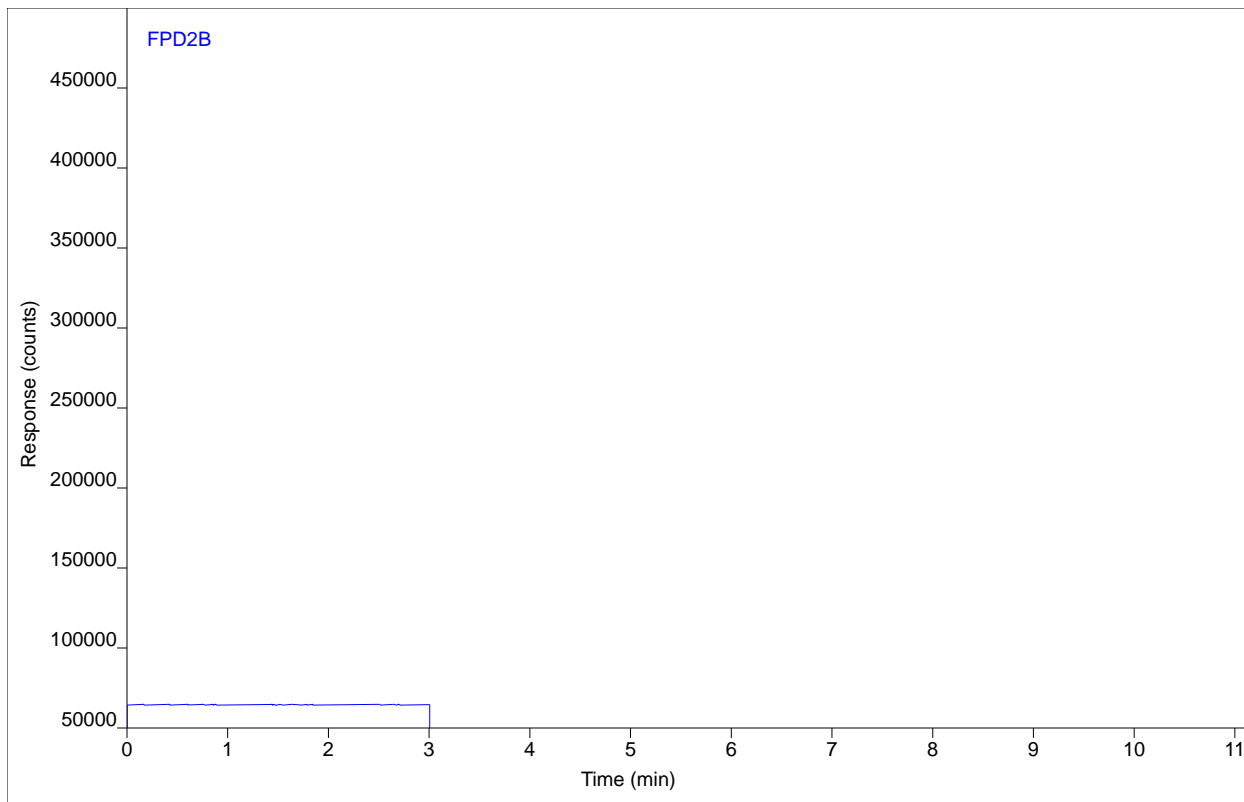
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide		(1.89)				1		

Chromatogram Report

Sample Name 0819-172.Can 0857.Can
Sequence Name ZEPPOP0464 ver.2
Inj Data File 005B1501.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/26/2019 3:37 PM
File Modified 8/27/2019 8:53 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 5
Injection Volume NA
Injection 1 of 3
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/27/2019 9:55 AM



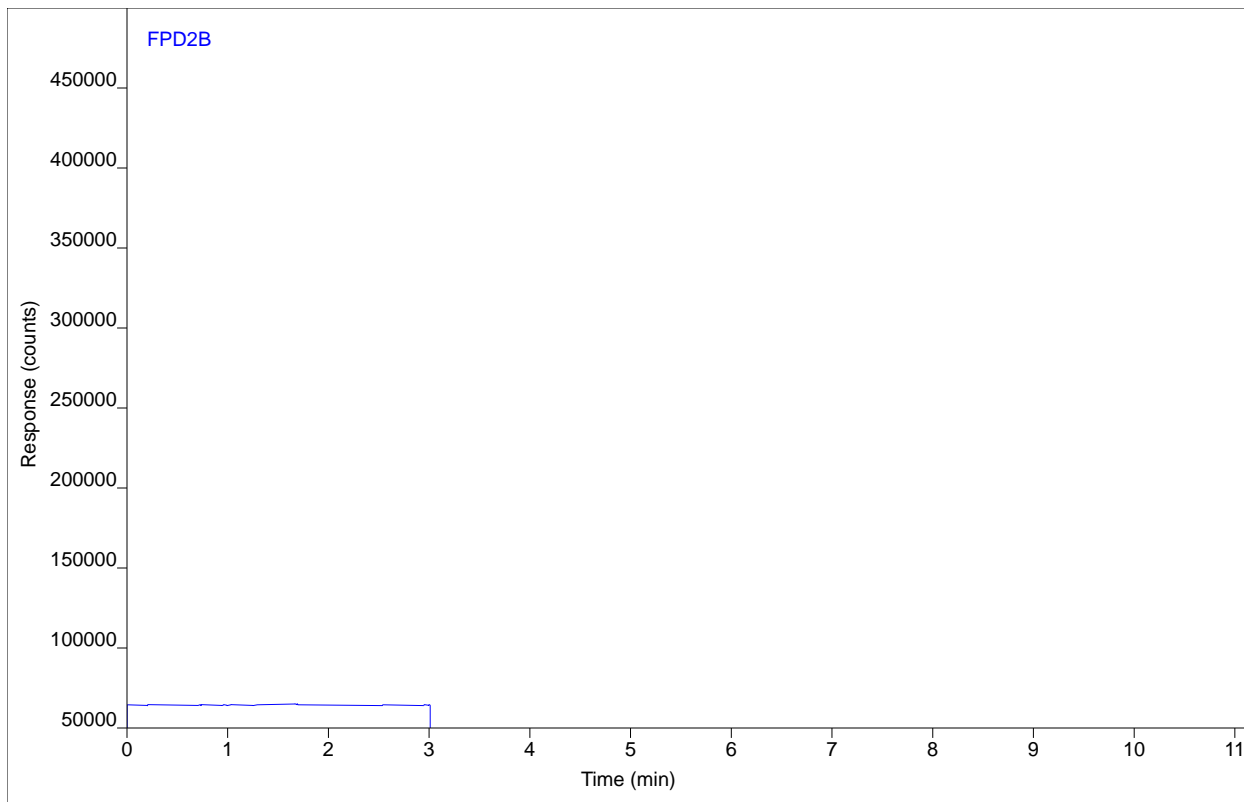
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide		(1.89)				1		

Chromatogram Report

Sample Name 0819-172.Can 0857.Can
Sequence Name ZEPPOP0464 ver.2
Inj Data File 005B1502.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/26/2019 3:42 PM
File Modified 8/27/2019 8:53 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 5
Injection Volume NA
Injection 2 of 3
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/27/2019 9:55 AM



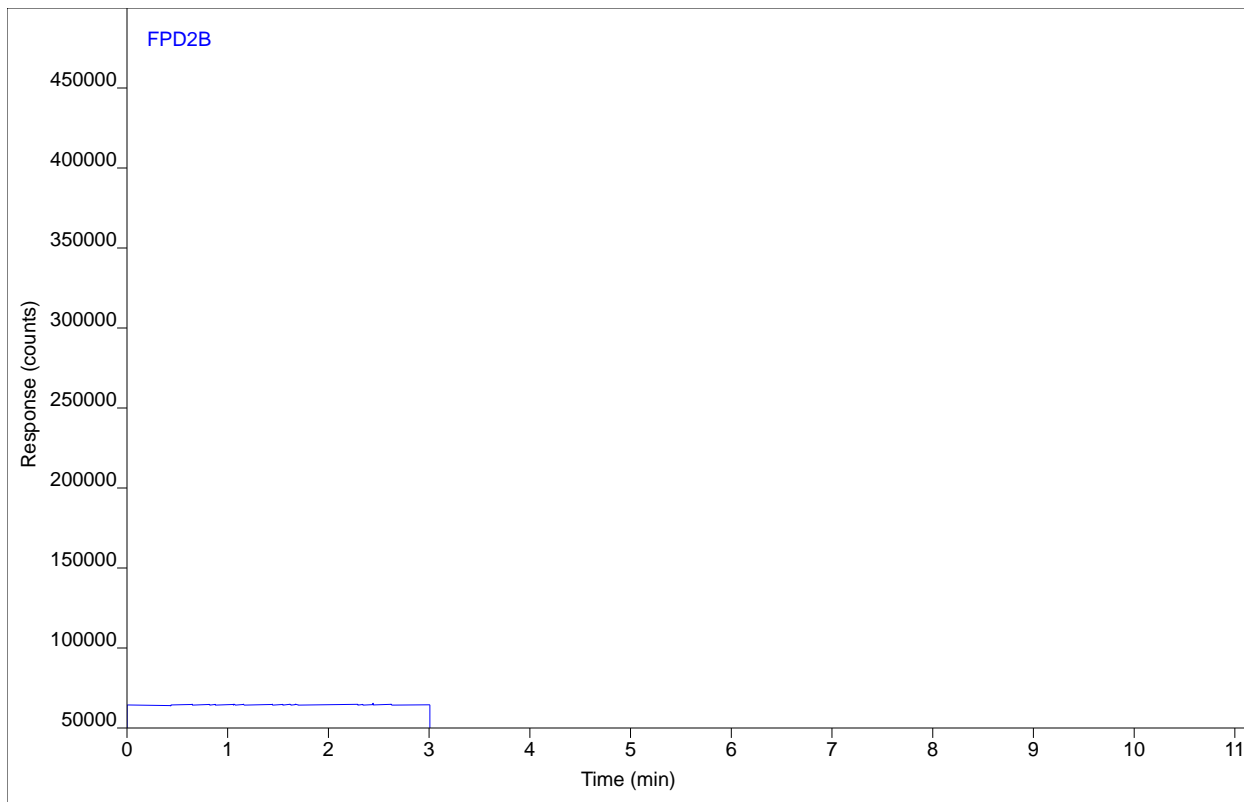
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide		(1.89)				1		

Chromatogram Report

Sample Name 0819-172.Can 0857.Can
Sequence Name ZEPPOP0464 ver.2
Inj Data File 005B1503.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/26/2019 3:46 PM
File Modified 8/27/2019 8:53 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 5
Injection Volume NA
Injection 3 of 3
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/27/2019 9:55 AM



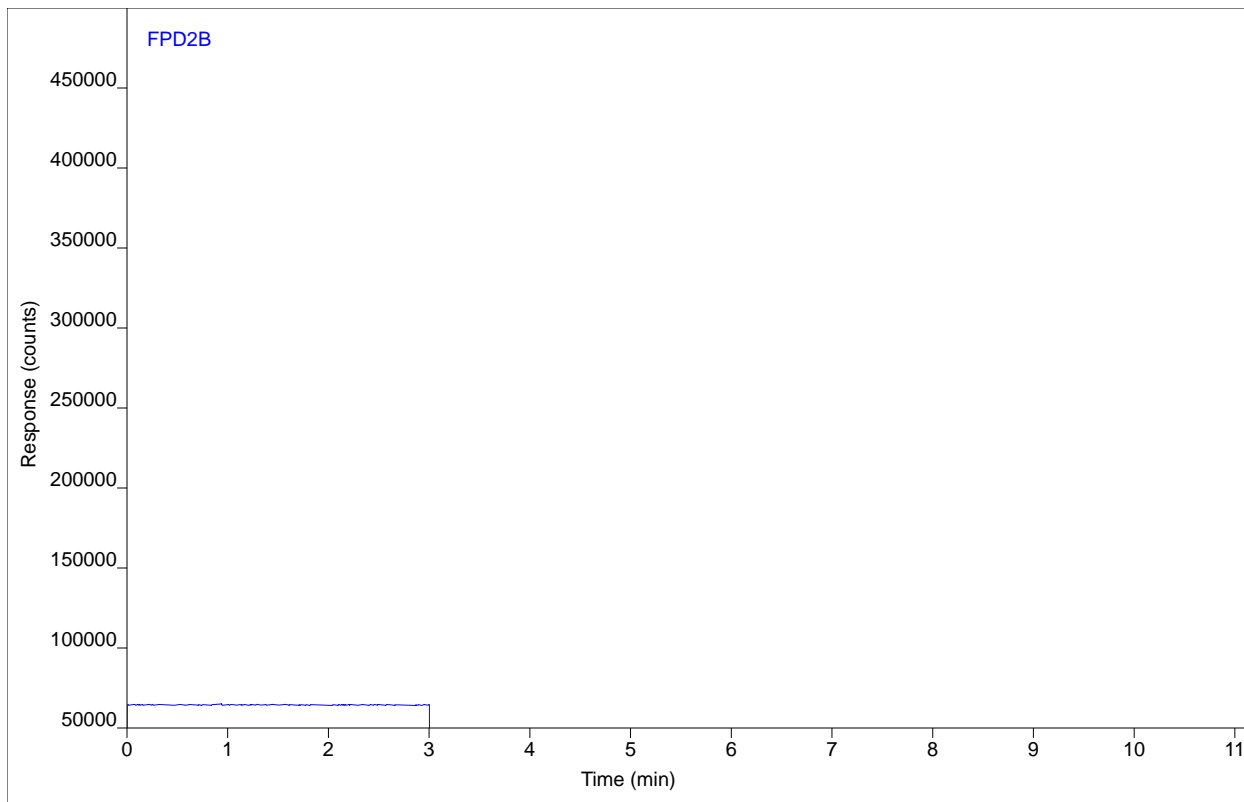
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide		(1.89)				1		

Chromatogram Report

Sample Name 0819-172.Can 0798.Can
Sequence Name ZEPPOP0464 ver.2
Inj Data File 005B1201.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/26/2019 2:58 PM
File Modified 8/27/2019 8:52 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 5
Injection Volume NA
Injection 1 of 3
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/27/2019 9:55 AM



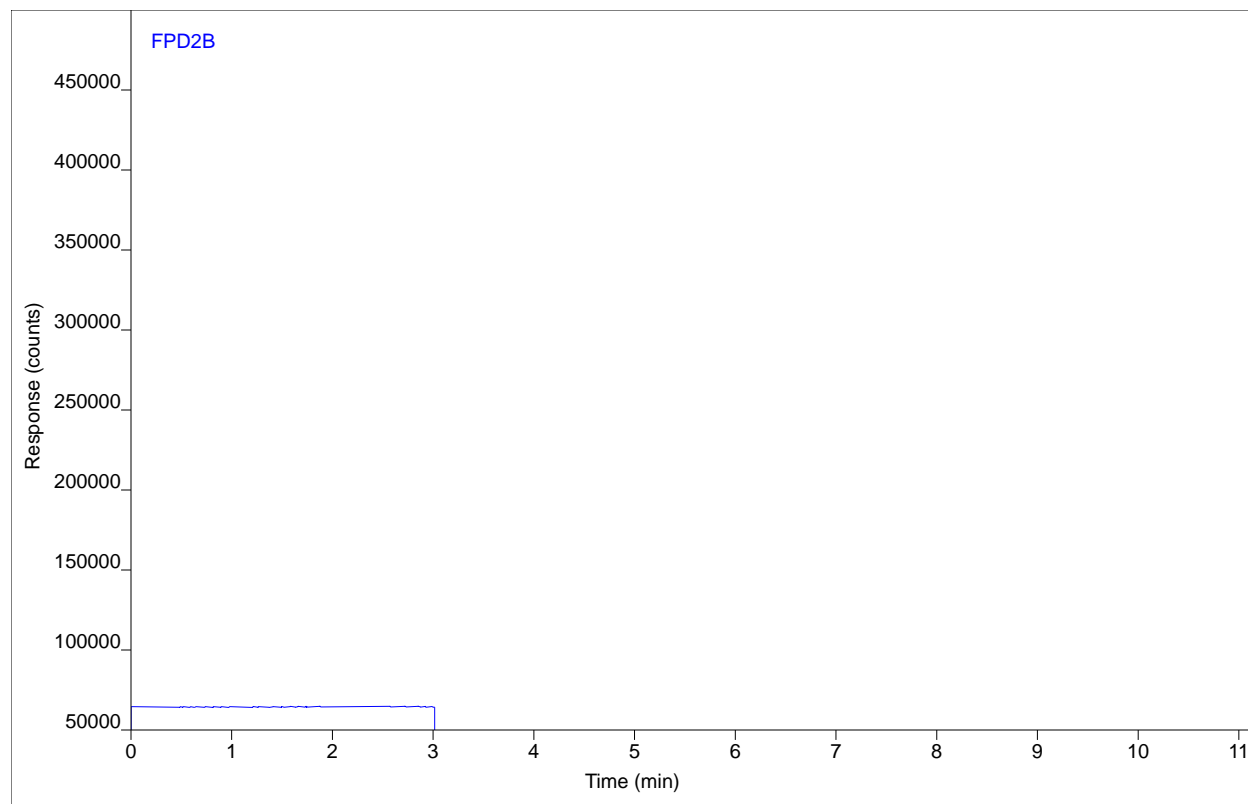
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide		(1.89)				1		

Chromatogram Report

Sample Name 0819-172.Can 0798.Can
Sequence Name ZEPPOP0464 ver.2
Inj Data File 005B1202.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/26/2019 3:02 PM
File Modified 8/27/2019 8:52 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 5
Injection Volume NA
Injection 2 of 3
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/27/2019 9:55 AM



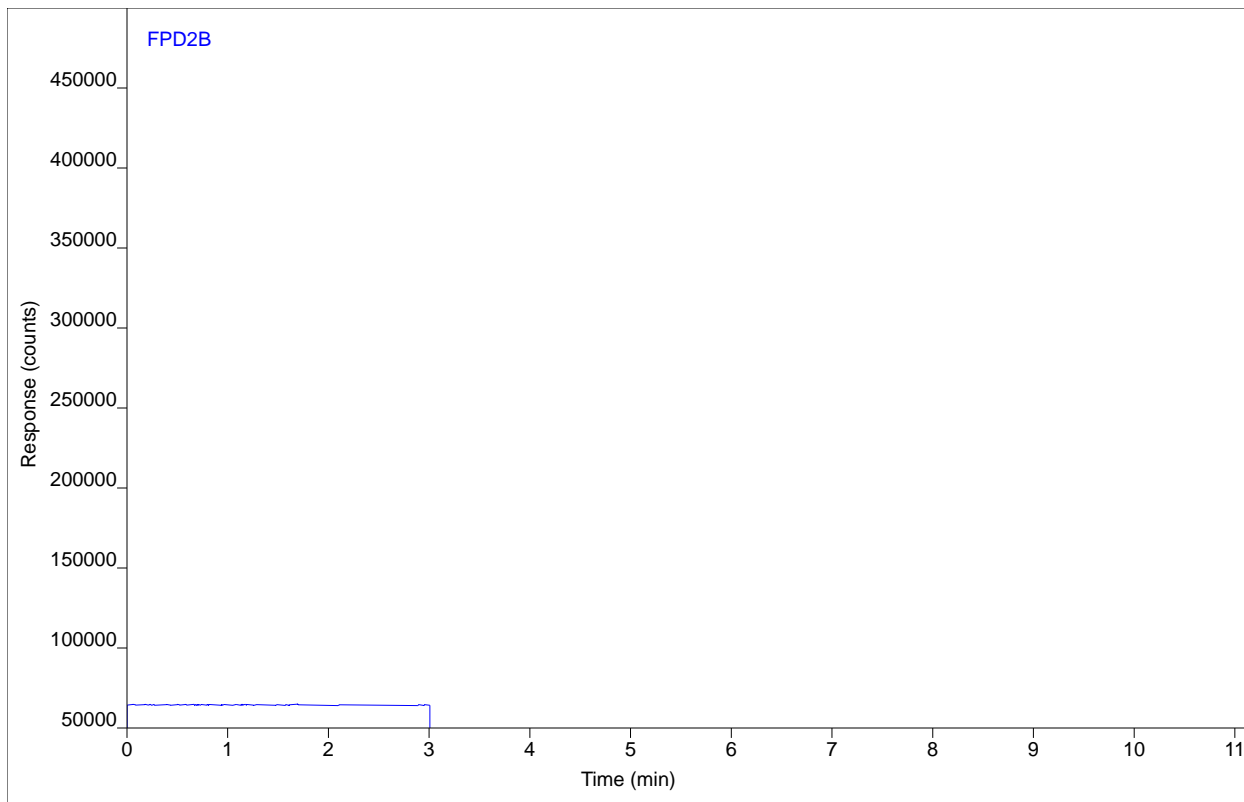
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide		(1.89)				1		

Chromatogram Report

Sample Name 0819-172.Can 0798.Can
Sequence Name ZEPPOP0464 ver.2
Inj Data File 005B1203.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/26/2019 3:06 PM
File Modified 8/27/2019 8:52 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 5
Injection Volume NA
Injection 3 of 3
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/27/2019 9:55 AM



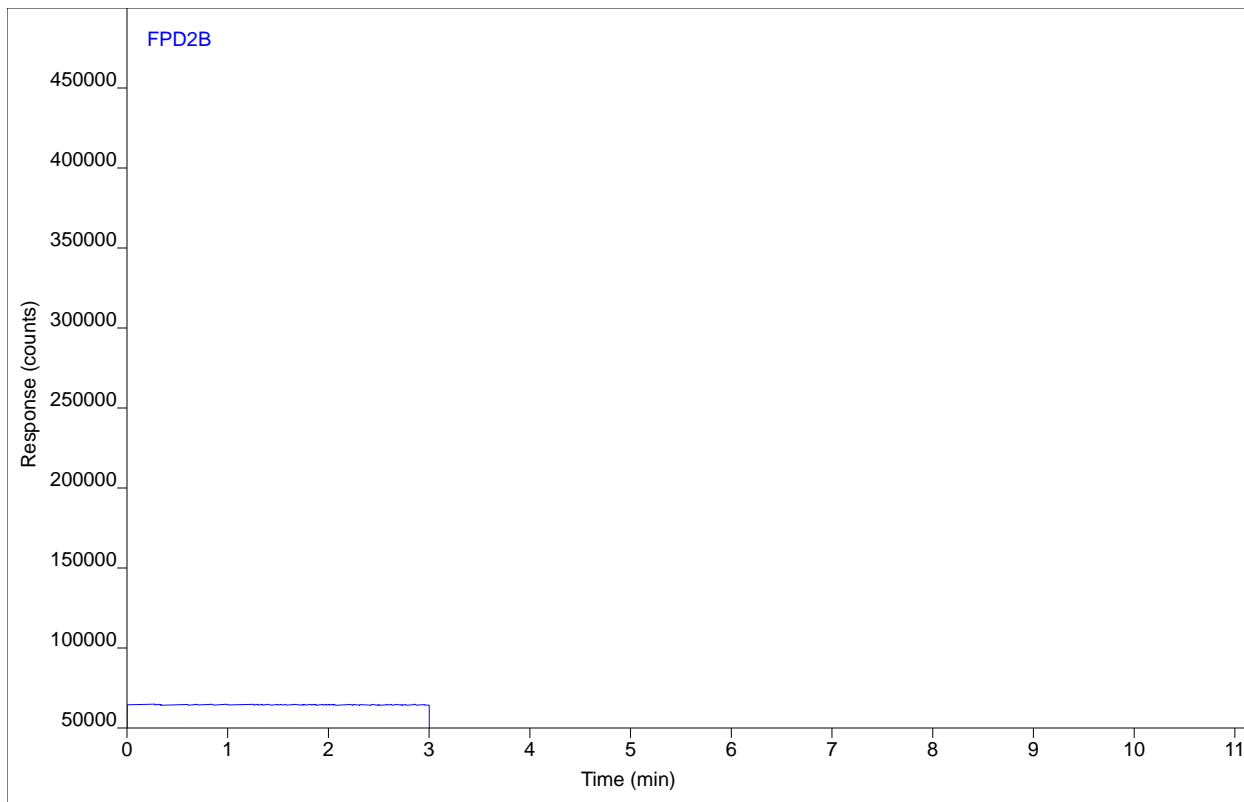
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide		(1.89)				1		

Chromatogram Report

Sample Name 0819-172.Can 0852.Can
Sequence Name ZEPPOP0464 ver.2
Inj Data File 005B1101.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/26/2019 2:44 PM
File Modified 8/27/2019 8:52 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 5
Injection Volume NA
Injection 1 of 3
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/27/2019 9:55 AM



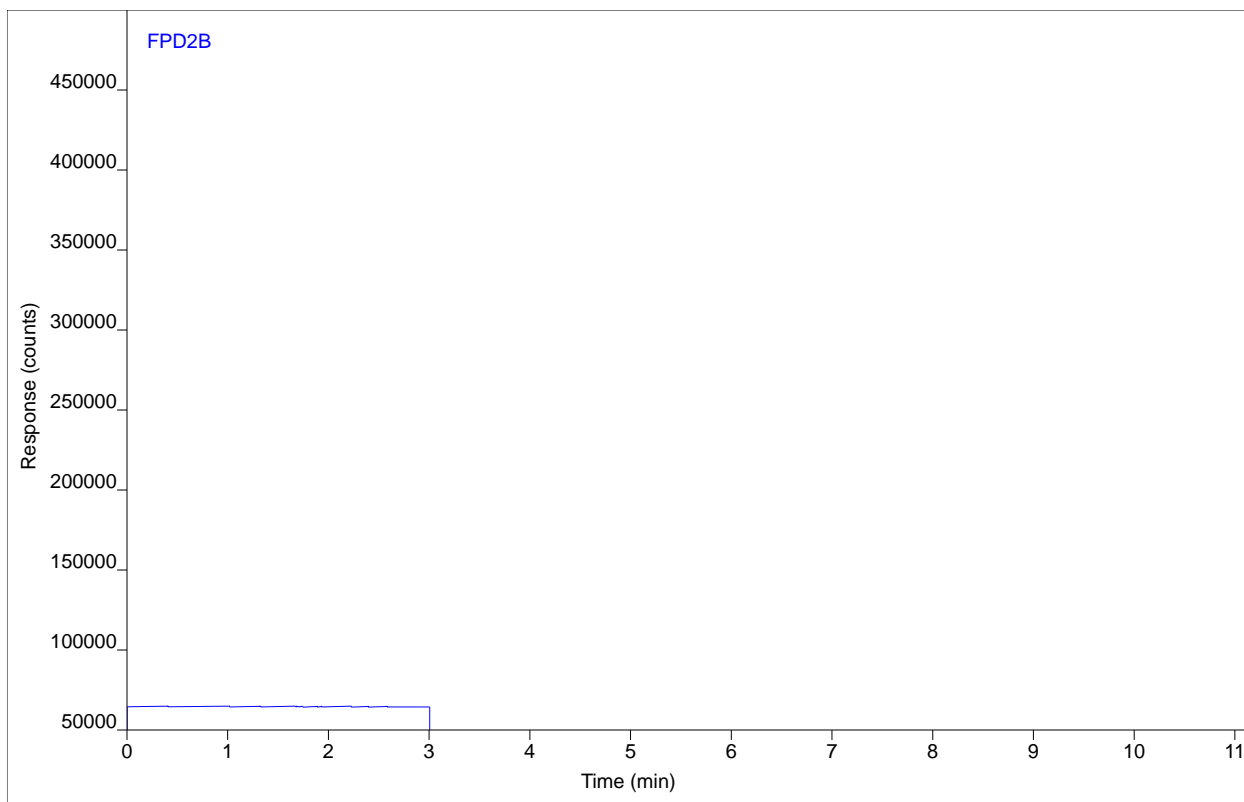
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide		(1.89)				1		

Chromatogram Report

Sample Name 0819-172.Can 0852.Can
Sequence Name ZEPPOP0464 ver.2
Inj Data File 005B1102.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/26/2019 2:49 PM
File Modified 8/27/2019 8:52 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 5
Injection Volume NA
Injection 2 of 3
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/27/2019 9:55 AM



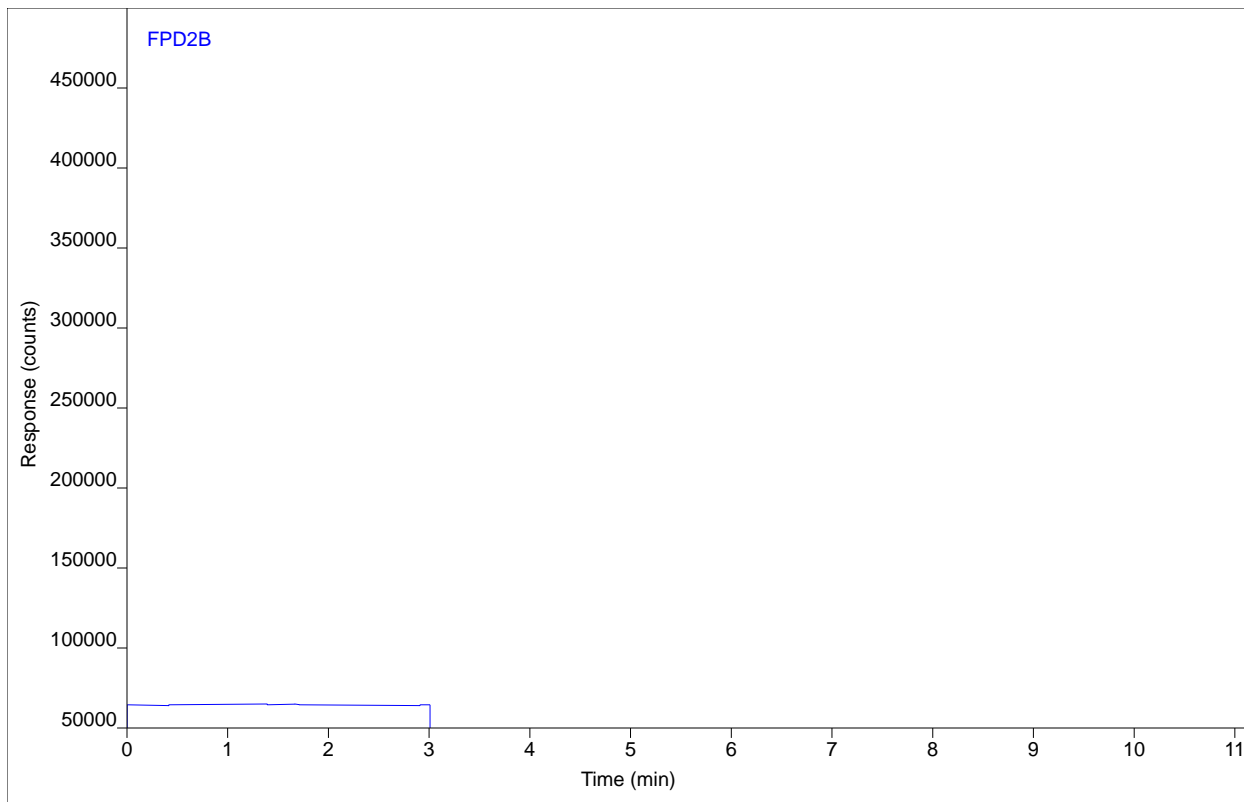
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide		(1.89)				1		

Chromatogram Report

Sample Name 0819-172.Can 0852.Can
Sequence Name ZEPPOP0464 ver.2
Inj Data File 005B1103.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/26/2019 2:53 PM
File Modified 8/27/2019 8:52 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 5
Injection Volume NA
Injection 3 of 3
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/27/2019 9:55 AM



Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide		(1.89)				1		

```

=====
                        Calibration Table
=====

```

Calib. Data Modified : Tuesday, August 13, 2019 9:57:36 AM

Rel. Reference Window : 2.500 %
 Abs. Reference Window : 0.000 min
 Rel. Non-ref. Window : 5.000 %
 Abs. Non-ref. Window : 0.100 min
 Uncalibrated Peaks : using compound Hydrogen sulfide
 Partial Calibration : Yes, identified peaks are recalibrated
 Correct All Ret. Times: No, only for identified peaks

Curve Type : Power
 Origin : Ignored
 Weight : Equal

Recalibration Settings:
 Average Response : Average all calibrations
 Average Retention Time: Floating Average New 75%

Calibration Report Options :
 Printout of recalibrations within a sequence:
 Calibration Table after Recalibration
 Normal Report after Recalibration
 If the sequence is done with bracketing:
 Results of first cycle (ending previous bracket)

Signal 1: FPD2 B,

RetTime [min]	Lvl Sig	Amount [ppmv]	Area	Amt/Area	Ref Grp Name
1.885	1	6.42727e-1	1.45605e4	4.41418e-5	Hydrogen sulfide
	2	1.76750	1.09623e5	1.61234e-5	
	3	7.07000	1.93509e6	3.65358e-6	

More compound-specific settings:

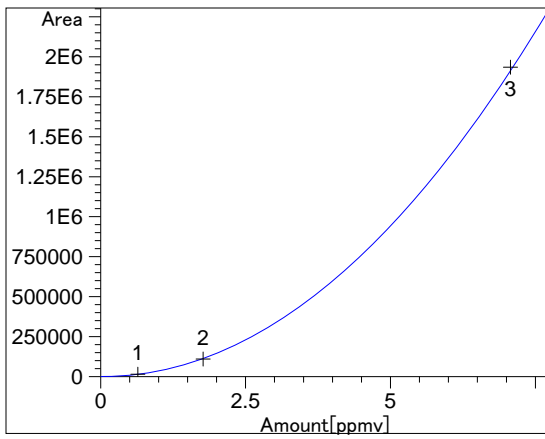
Compound: Hydrogen sulfide
 Time Window : From 1.659 min To 2.002 min

```

=====
                        Peak Sum Table
=====

```

Name	StartTime [min]	EndTime [min]	Use Reference	Response factor	Multiplier	ISTD Peak
Total Redu	2.700	12.000	Hydrogen S	0.0000	1.432e-6	None

=====
Calibration Curves
=====

Hydrogen sulfide at exp. RT: 1.885
FPD2 B,
Correlation: 1.00000
Residual Std. Dev.: 23850.62698
Formula: $y = b * x^m$
m: 2.04102
b: 35292.75786
x: Amount
y: Area

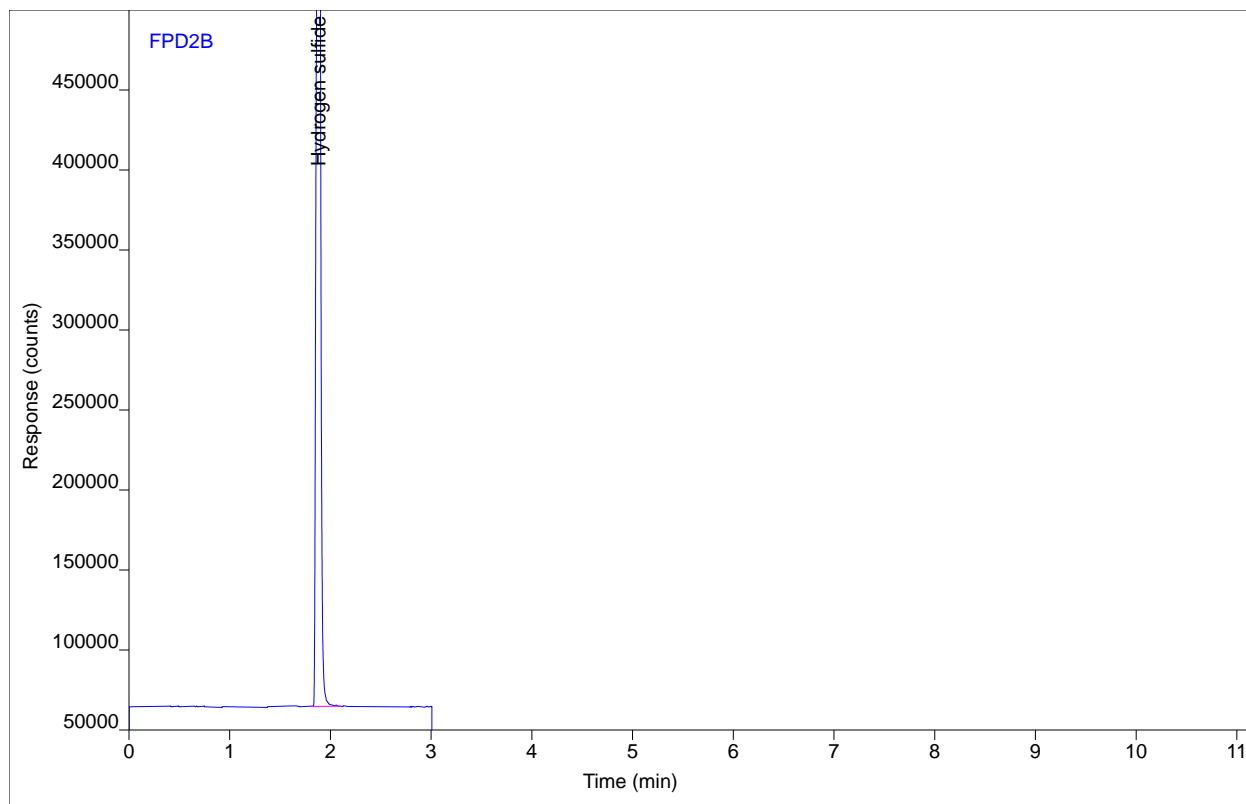
=====

Chromatogram Report

Sample Name zeppoP0462 #3
Sequence Name ZEPPOP0462 ver.2
Inj Data File 005B0102.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/13/2019 9:02 AM
File Modified 8/15/2019 8:09 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type
Vial Number Vial 5
Injection Volume NA
Injection 2 of 4
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/13/2019 9:57 AM
Printed 8/15/2019 12:02 PM



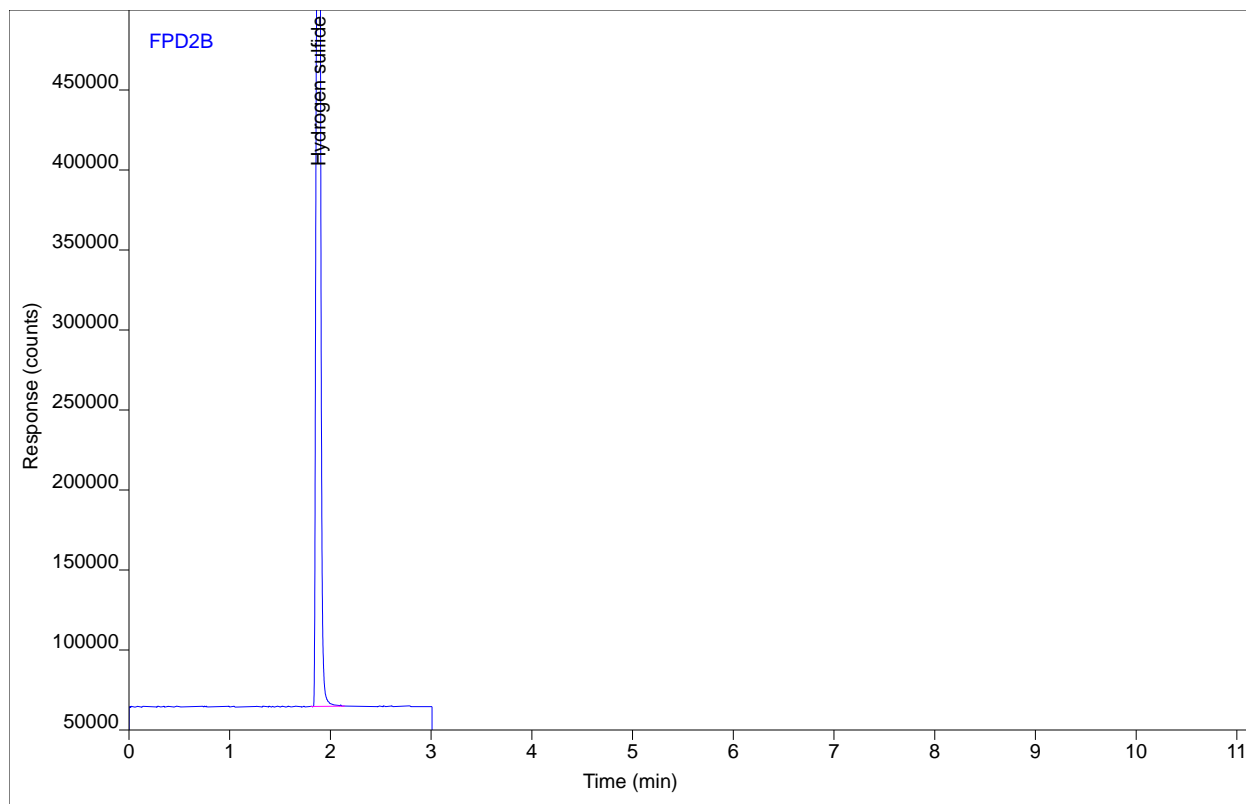
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide	BB	1.88	1916280	631350	7.07873	1	7.07873	ppmv

Chromatogram Report

Sample Name zeppoP0462 #3
Sequence Name ZEPPOP0462 ver.2
Inj Data File 005B0103.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/13/2019 9:06 AM
File Modified 8/15/2019 8:09 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type
Vial Number Vial 5
Injection Volume NA
Injection 3 of 4
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/13/2019 9:57 AM
Printed 8/15/2019 12:02 PM



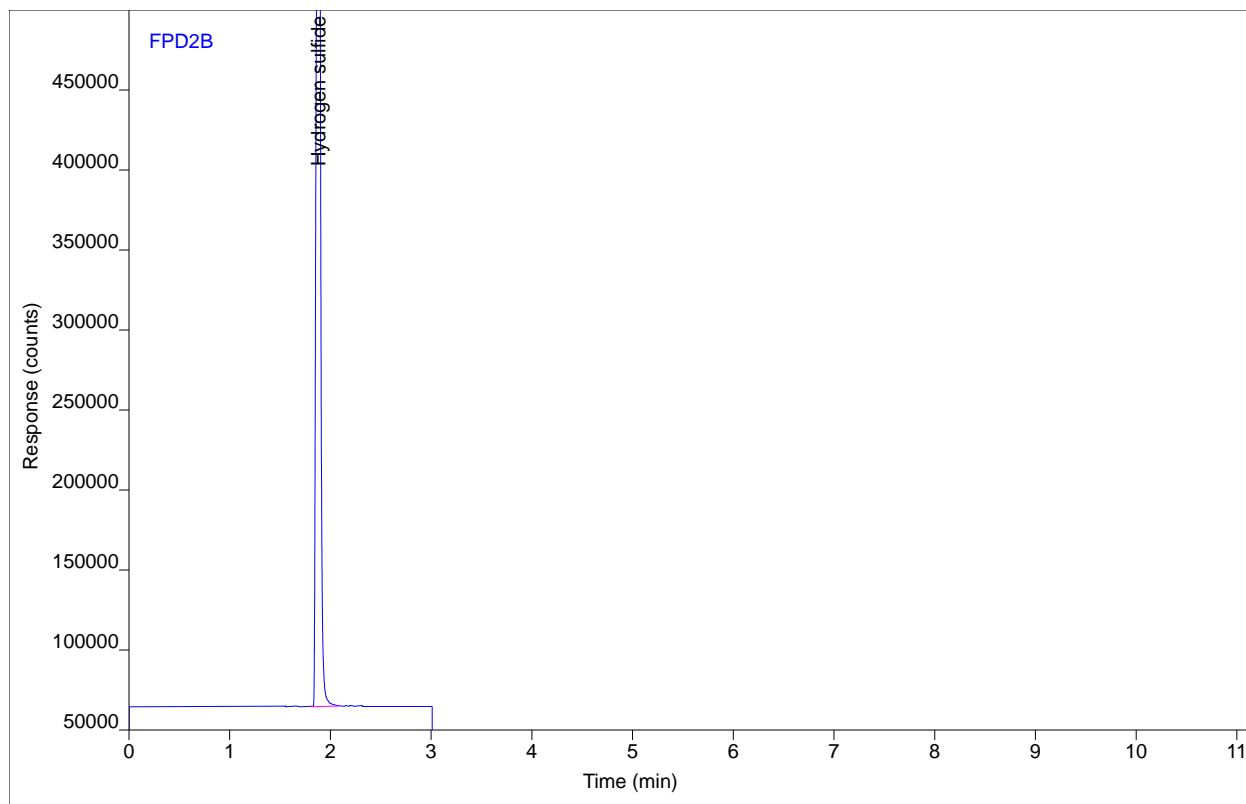
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide	BB	1.88	1947751	643281	7.13546	1	7.13546	ppmv

Chromatogram Report

Sample Name zeppoP0462 #3
Sequence Name ZEPPOP0462 ver.2
Inj Data File 005B0104.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/13/2019 9:11 AM
File Modified 8/15/2019 8:09 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type
Vial Number Vial 5
Injection Volume NA
Injection 4 of 4
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/13/2019 9:57 AM
Printed 8/15/2019 12:02 PM



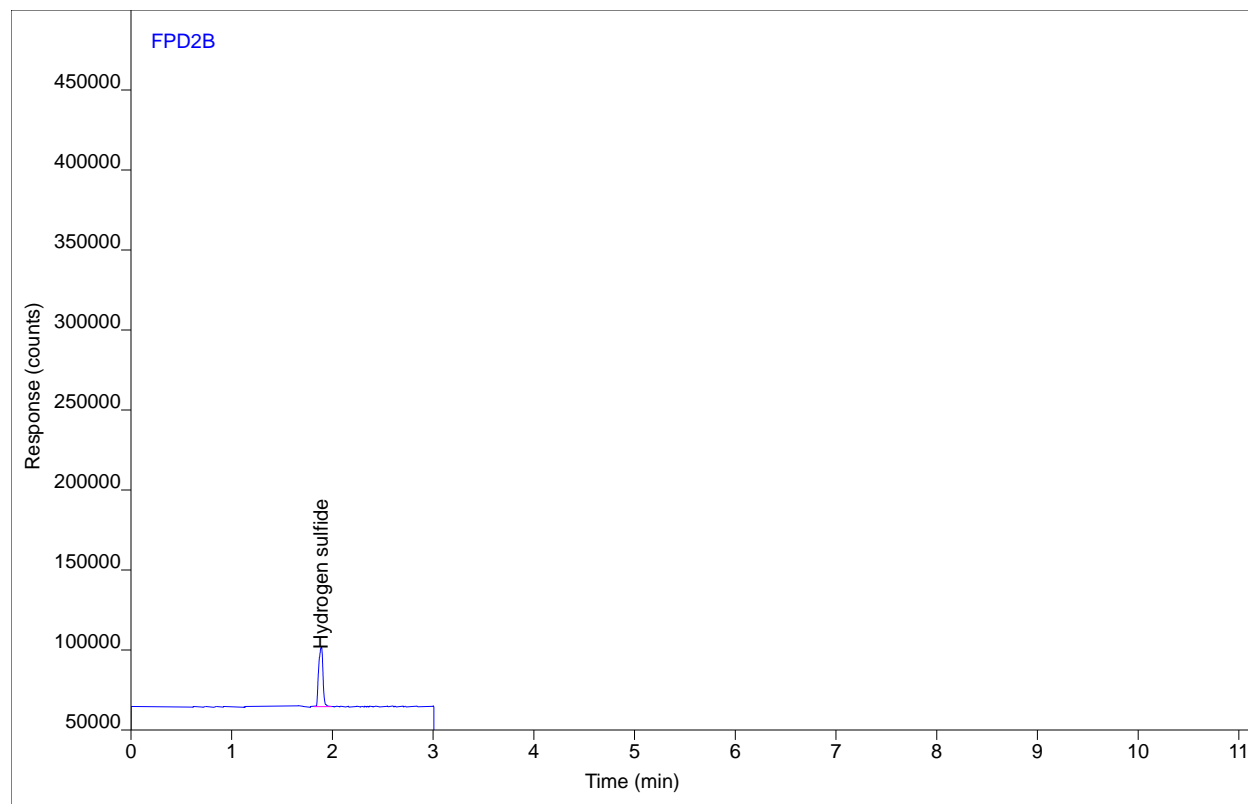
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide	BB	1.88	1941229	653054	7.12374	1	7.12374	ppmv

Chromatogram Report

Sample Name zeppoP0462 #2
Sequence Name ZEPPOP0462 ver.2
Inj Data File 005B0202.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/13/2019 9:20 AM
File Modified 8/15/2019 8:09 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type
Vial Number Vial 5
Injection Volume NA
Injection 2 of 4
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/13/2019 9:57 AM
Printed 8/15/2019 12:02 PM



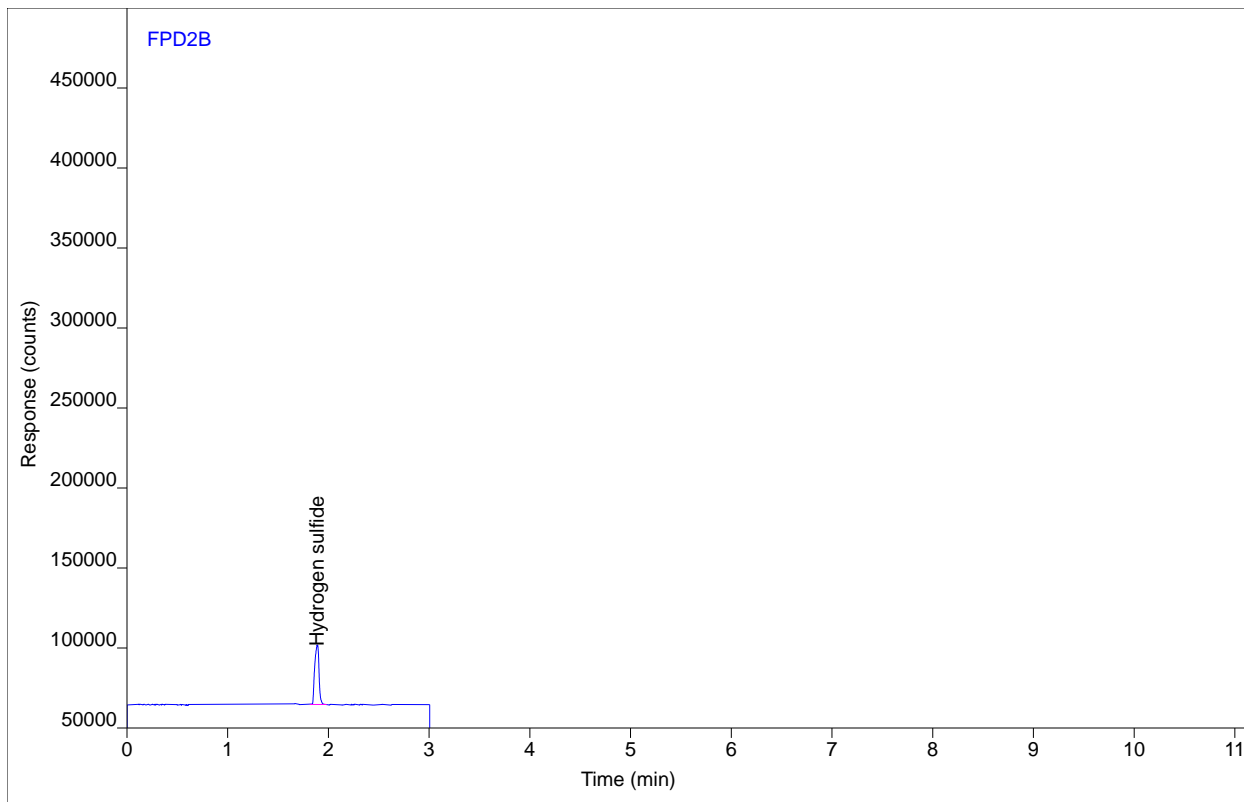
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide	BB	1.89	109896	36115.3	1.74458	1	1.74458	ppmv

Chromatogram Report

Sample Name zeppoP0462 #2
Sequence Name ZEPPOP0462 ver.2
Inj Data File 005B0203.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/13/2019 9:24 AM
File Modified 8/15/2019 8:09 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type
Vial Number Vial 5
Injection Volume NA
Injection 3 of 4
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/13/2019 9:57 AM
Printed 8/15/2019 12:02 PM



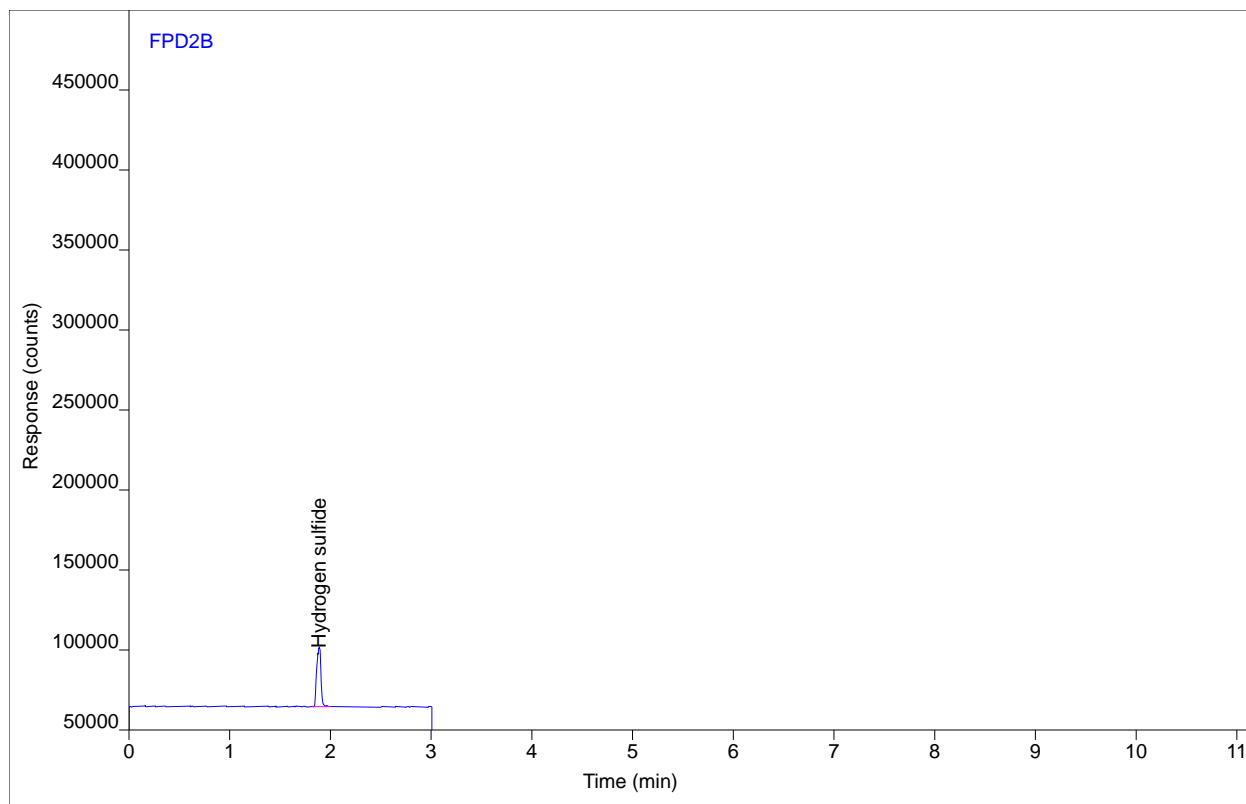
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide	BB	1.89	109990	35619.8	1.74531	1	1.74531	ppmv

Chromatogram Report

Sample Name zeppoP0462 #2
Sequence Name ZEPPOP0462 ver.2
Inj Data File 005B0204.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/13/2019 9:29 AM
File Modified 8/15/2019 8:09 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type
Vial Number Vial 5
Injection Volume NA
Injection 4 of 4
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/13/2019 9:57 AM
Printed 8/15/2019 12:02 PM



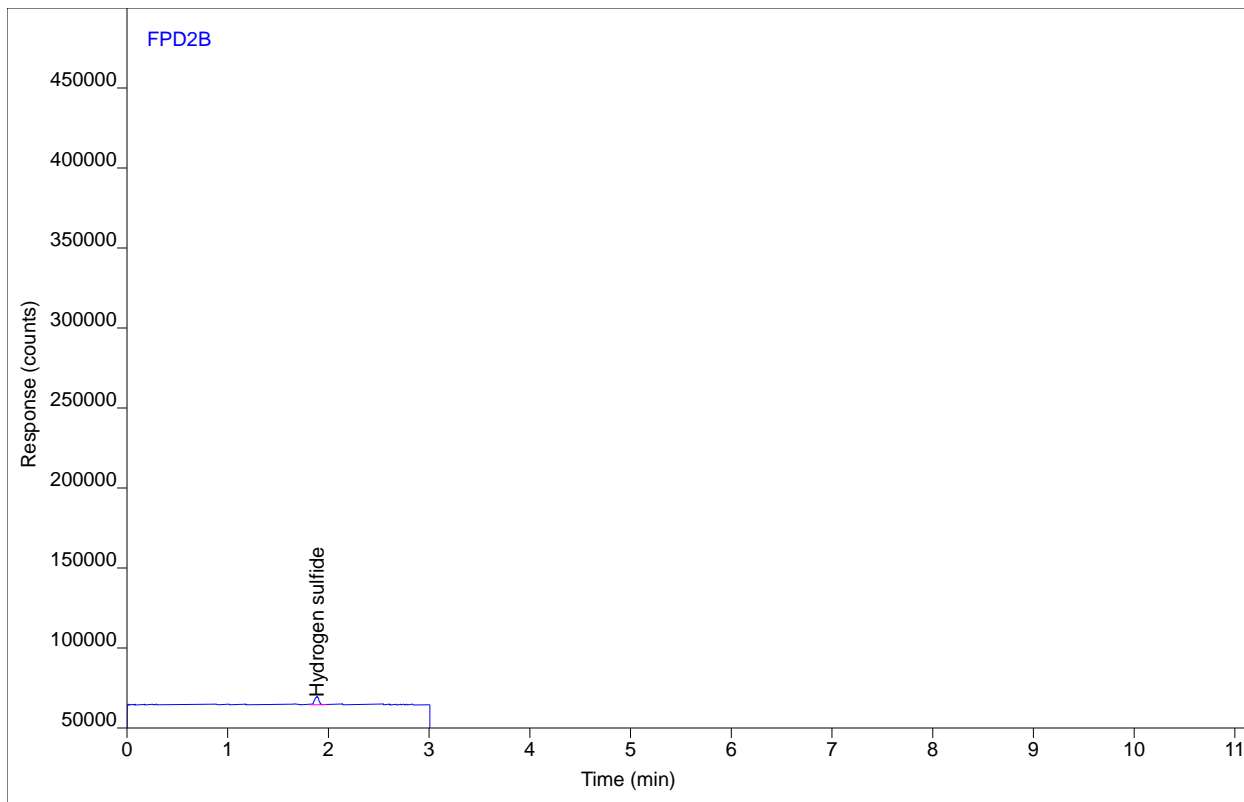
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide	BB	1.89	108984	35603.3	1.73747	1	1.73747	ppmv

Chromatogram Report

Sample Name zeppoP0462 #1
Sequence Name ZEPPOP0462 ver.2
Inj Data File 005B0302.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/13/2019 9:37 AM
File Modified 8/15/2019 8:09 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Calibration
Vial Number Vial 5
Injection Volume NA
Injection 2 of 4
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/13/2019 9:57 AM
Printed 8/15/2019 12:02 PM



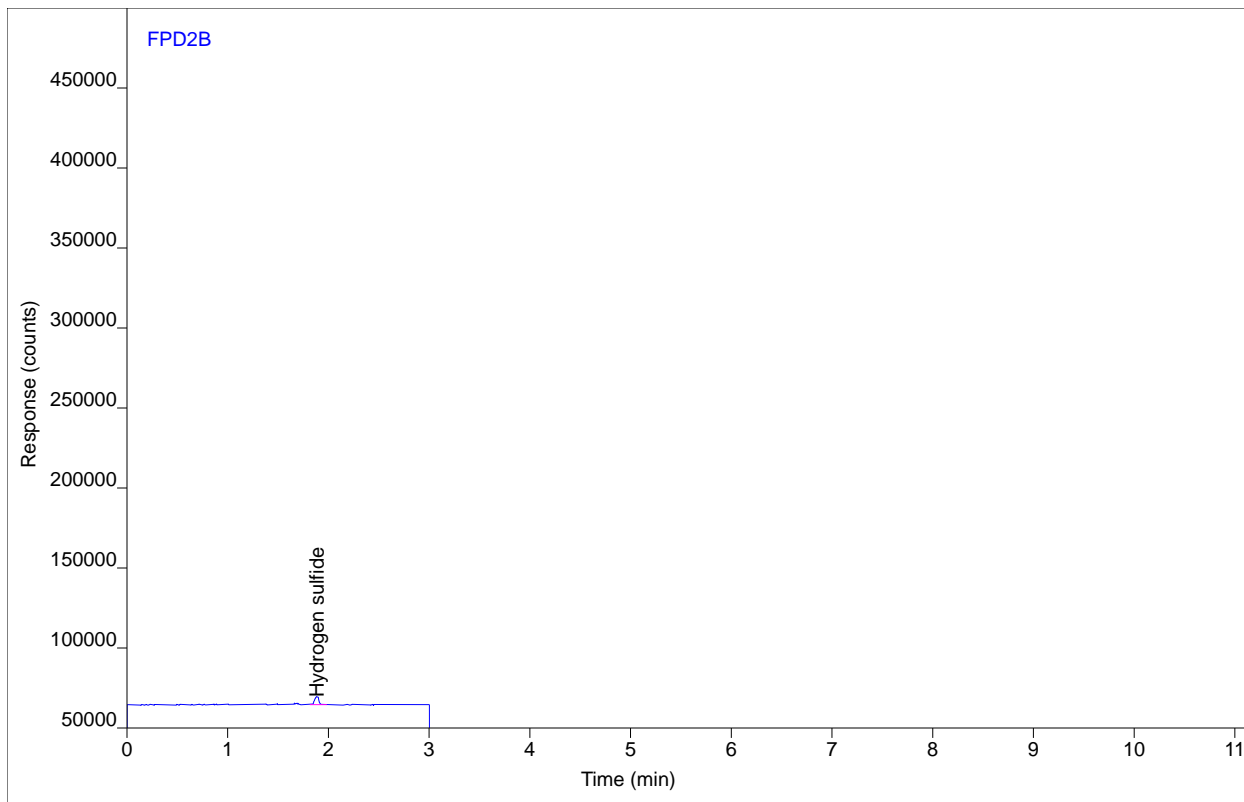
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide	BB	1.89	14382.5	4773.70	0.64416	1	0.64416	ppmv

Chromatogram Report

Sample Name zeppoP0462 #1
Sequence Name ZEPPOP0462 ver.2
Inj Data File 005B0303.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/13/2019 9:42 AM
File Modified 8/15/2019 8:09 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Calibration
Vial Number Vial 5
Injection Volume NA
Injection 3 of 4
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/13/2019 9:57 AM
Printed 8/15/2019 12:02 PM



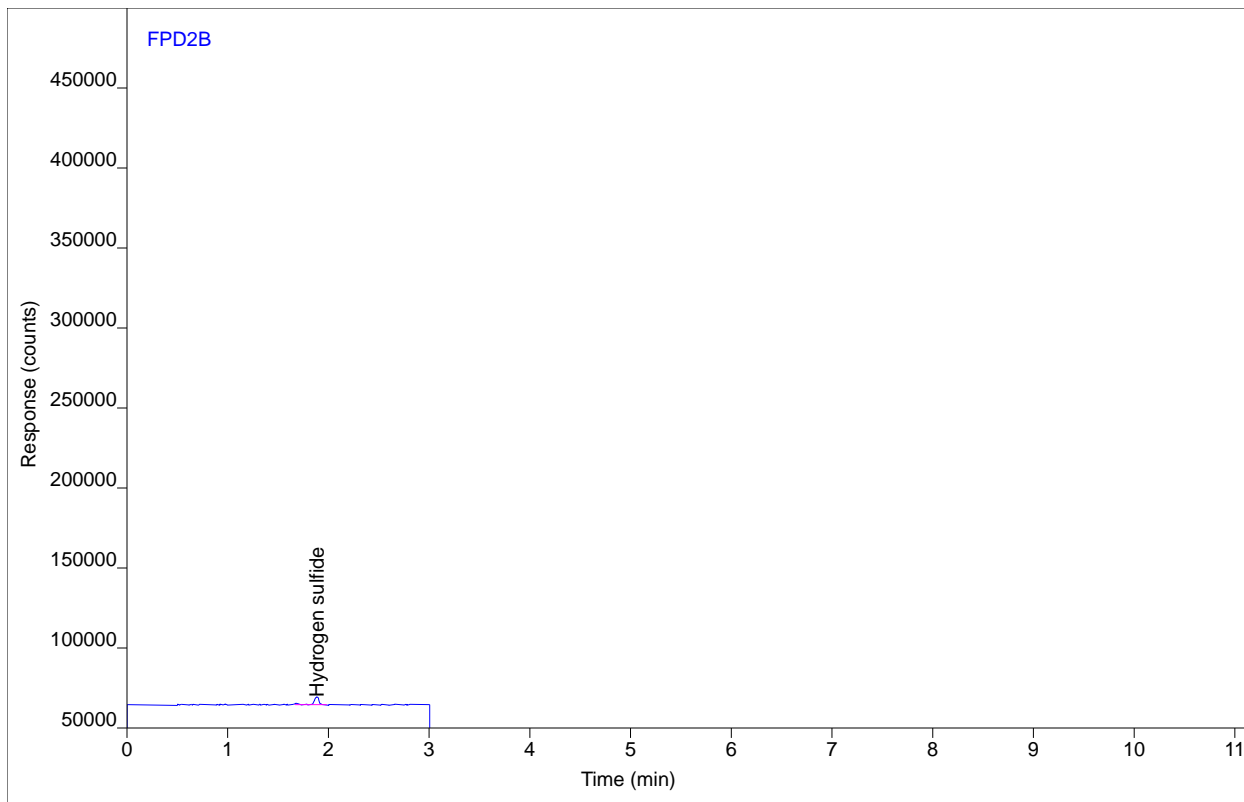
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide	BB	1.89	13715.1	4785.20	0.62933	1	0.62933	ppmv

Chromatogram Report

Sample Name zeppoP0462 #1
Sequence Name ZEPPOP0462 ver.2
Inj Data File 005B0304.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/13/2019 9:46 AM
File Modified 8/15/2019 8:09 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Calibration
Vial Number Vial 5
Injection Volume NA
Injection 4 of 4
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/13/2019 9:57 AM
Printed 8/15/2019 12:02 PM



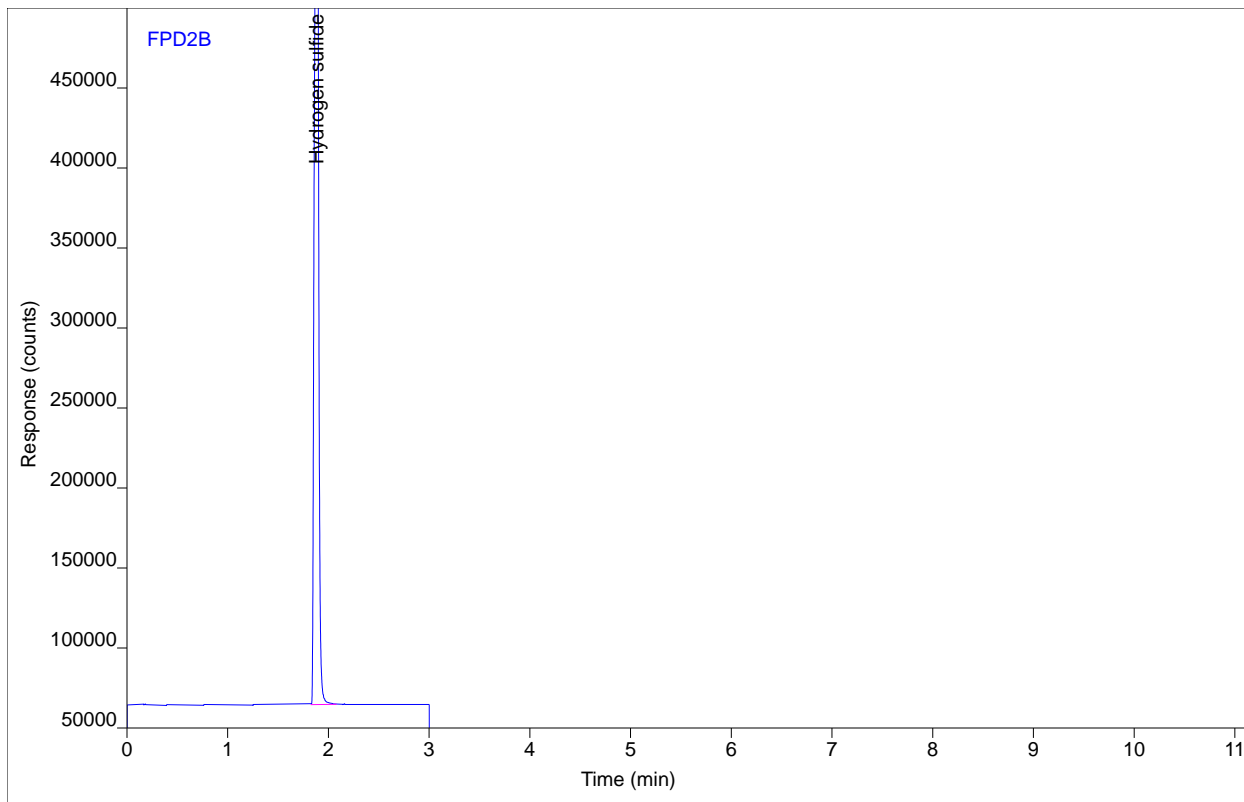
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide	BB	1.89	15583.9	4563.63	0.66998	1	0.66998	ppmv

Chromatogram Report

Sample Name zeppoP0420 #LCS
Sequence Name ZEPPOP0462 ver.2
Inj Data File 005B0402.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/13/2019 9:55 AM
File Modified 8/15/2019 8:09 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 5
Injection Volume NA
Injection 2 of 4
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/13/2019 9:57 AM
Printed 8/15/2019 12:02 PM



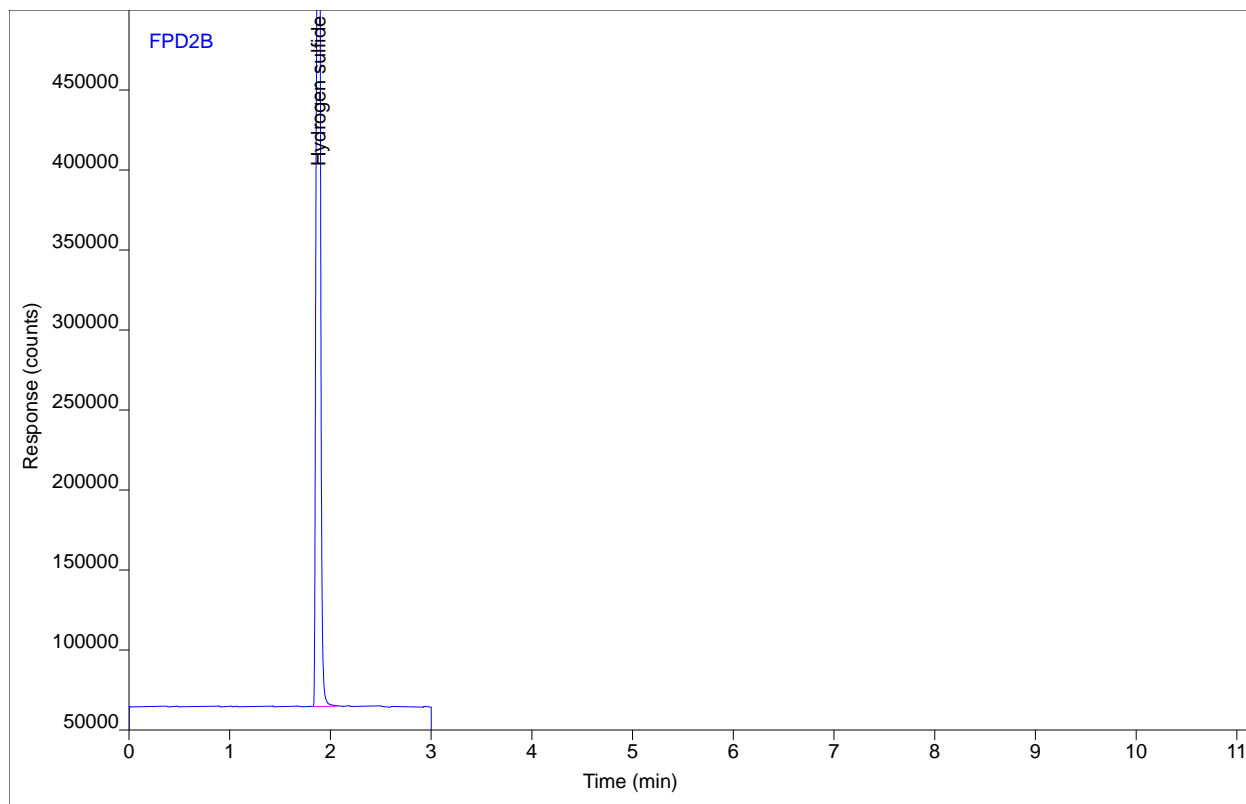
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide	BB	1.88	1731596	590957	6.73584	1	6.73584	ppmv

Chromatogram Report

Sample Name zeppoP0420 #LCS
Sequence Name ZEPPOP0462 ver.2
Inj Data File 005B0403.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/13/2019 9:59 AM
File Modified 8/15/2019 8:09 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 5
Injection Volume NA
Injection 3 of 4
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/13/2019 9:57 AM
Printed 8/15/2019 12:02 PM



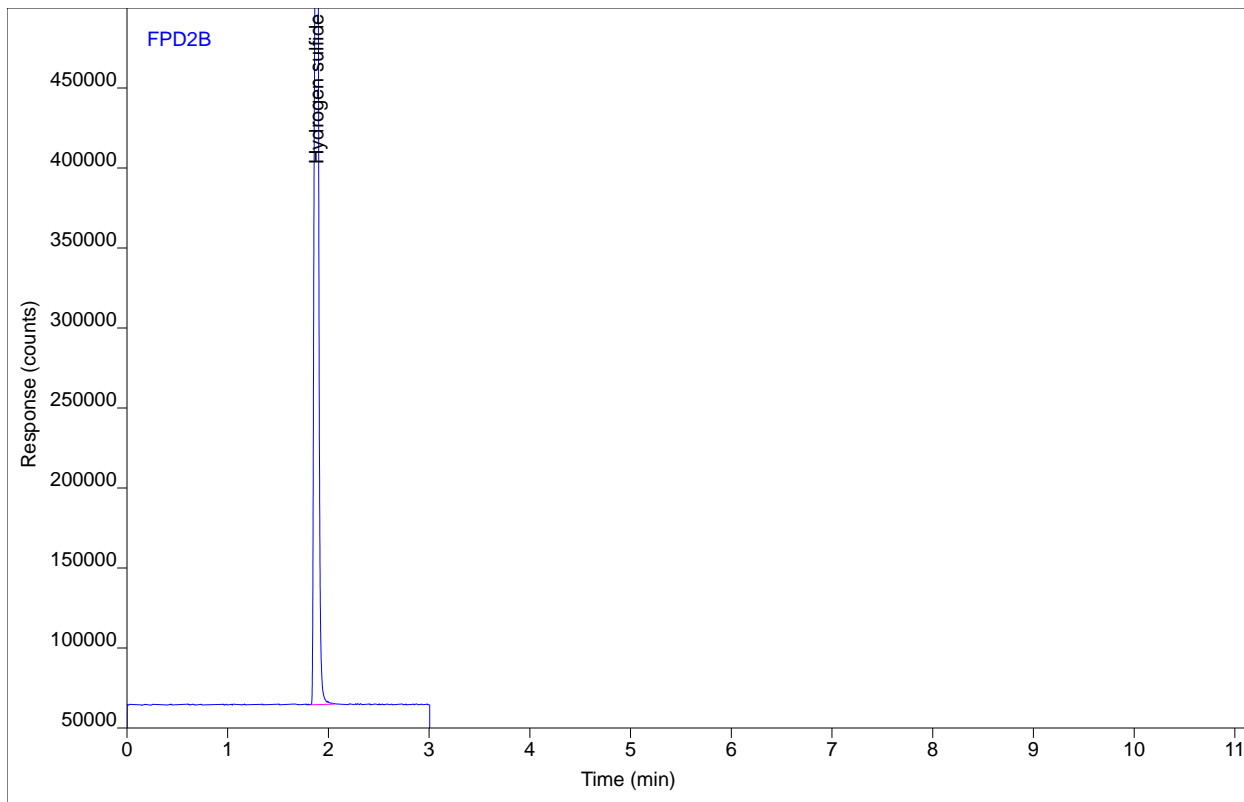
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide	BB	1.88	1765512	607254	6.80016	1	6.80016	ppmv

Chromatogram Report

Sample Name zeppoP0420 #LCS
Sequence Name ZEPPOP0462 ver.2
Inj Data File 005B0404.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/13/2019 10:04 AM
File Modified 8/15/2019 8:09 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 5
Injection Volume NA
Injection 4 of 4
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/13/2019 9:57 AM
Printed 8/15/2019 12:02 PM



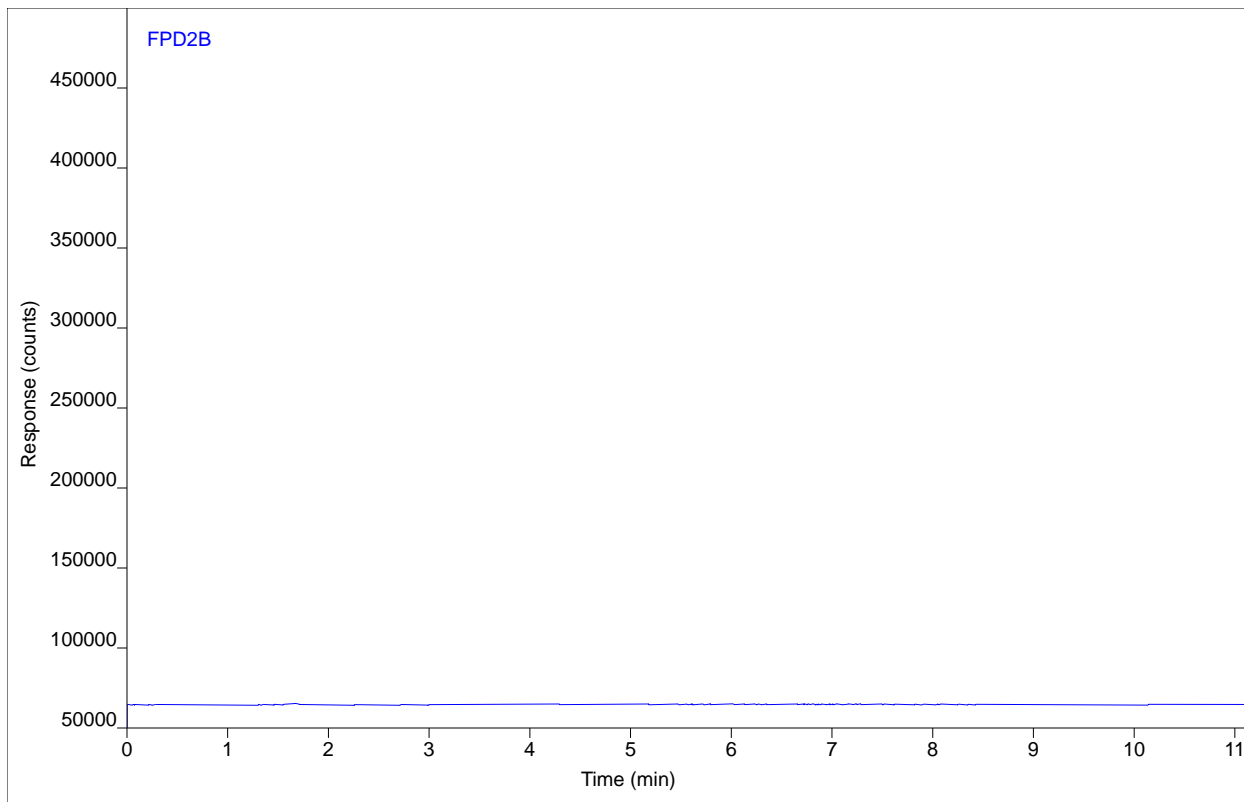
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide	BB	1.88	1811347	613022	6.88609	1	6.88609	ppmv

Chromatogram Report

Sample Name zeppoP0204 #MB
Sequence Name ZEPPOP0462 ver.2
Inj Data File 005B0501.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/13/2019 10:08 AM
File Modified 8/15/2019 8:09 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Control
Vial Number Vial 5
Injection Volume NA
Injection 1 of 3
Acquisition Method DUALFPD8.M
Analysis Method ZEPPOP0462.M
Method Modified 8/13/2019 9:57 AM
Printed 8/15/2019 12:02 PM



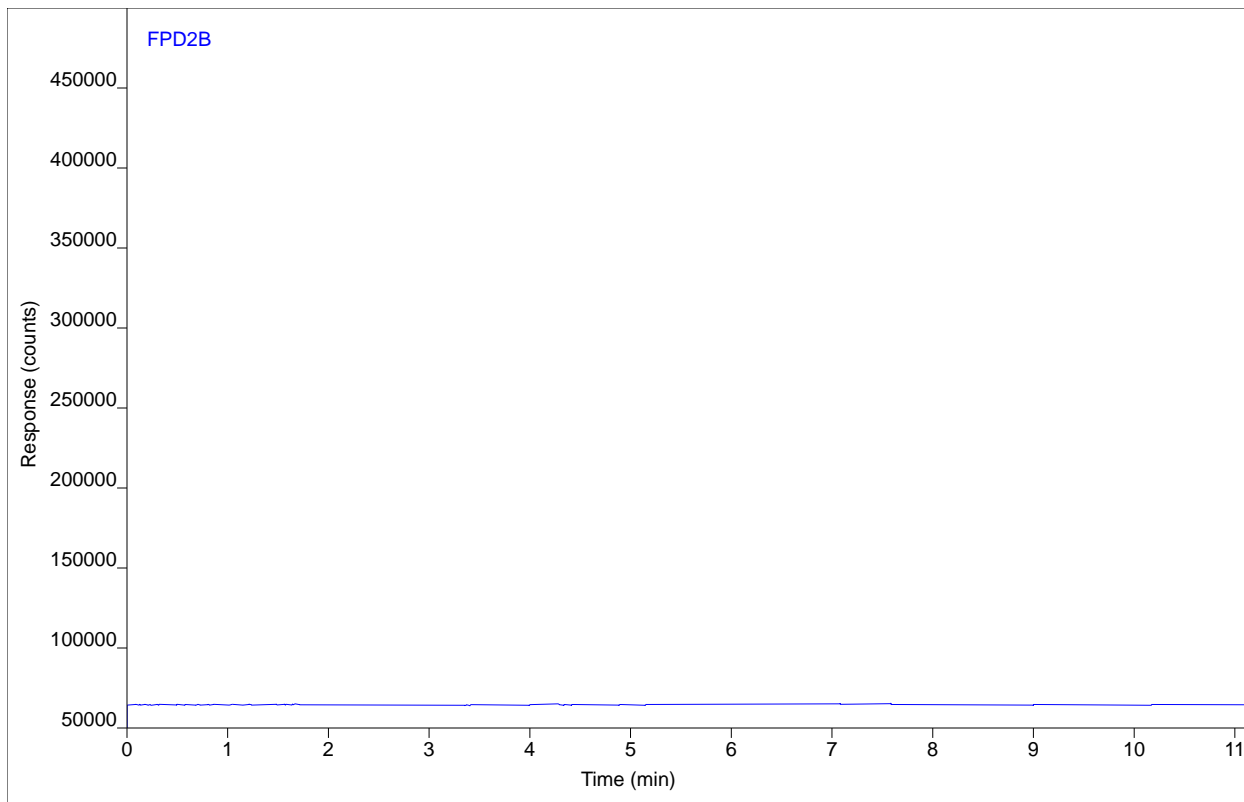
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide		(1.89)				1		

Chromatogram Report

Sample Name zeppoP0204 #MB
Sequence Name ZEPPOP0462 ver.2
Inj Data File 005B0502.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/13/2019 10:24 AM
File Modified 8/15/2019 8:09 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Control
Vial Number Vial 5
Injection Volume NA
Injection 2 of 3
Acquisition Method DUALFPD8.M
Analysis Method ZEPPOP0462.M
Method Modified 8/13/2019 9:57 AM
Printed 8/15/2019 12:02 PM



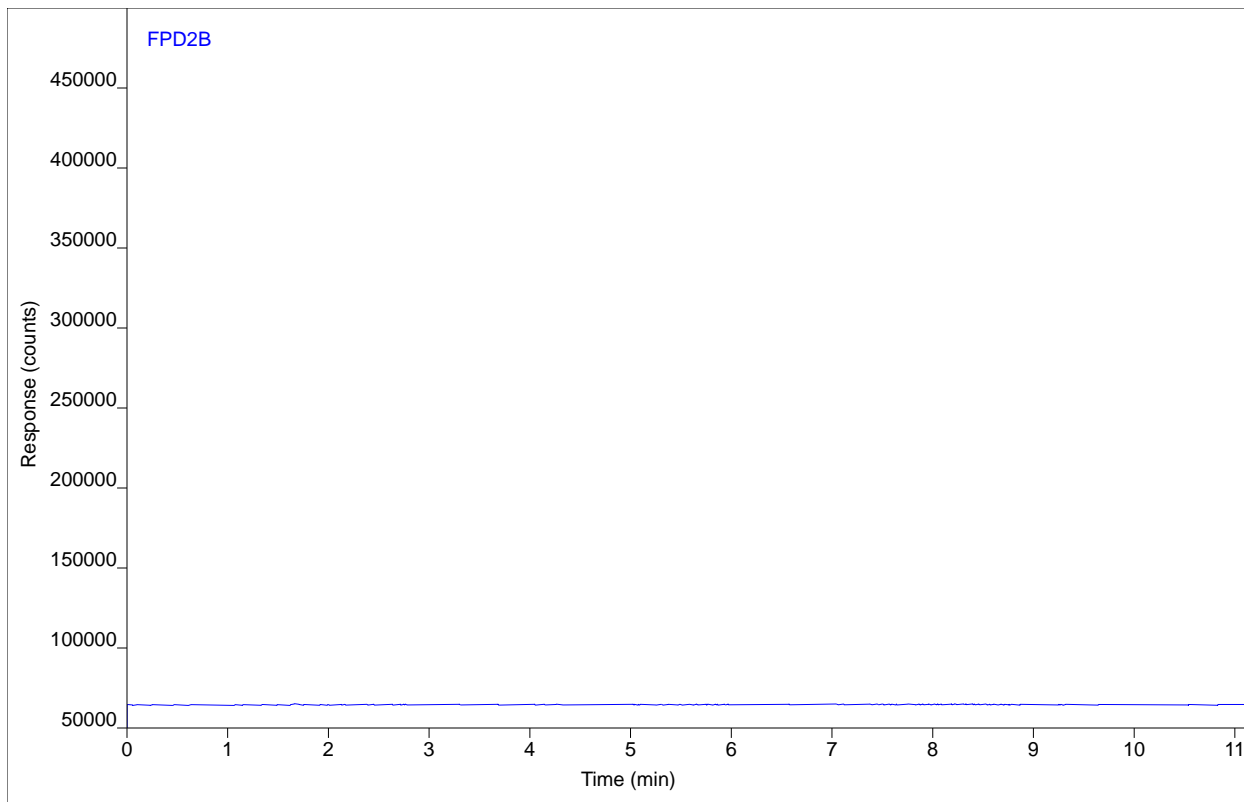
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide		(1.89)				1		

Chromatogram Report

Sample Name zeppoP0204 #MB
Sequence Name ZEPPOP0462 ver.2
Inj Data File 005B0503.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/13/2019 10:40 AM
File Modified 8/15/2019 8:09 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Control
Vial Number Vial 5
Injection Volume NA
Injection 3 of 3
Acquisition Method DUALFPD8.M
Analysis Method ZEPPOP0462.M
Method Modified 8/13/2019 9:57 AM
Printed 8/15/2019 12:02 PM



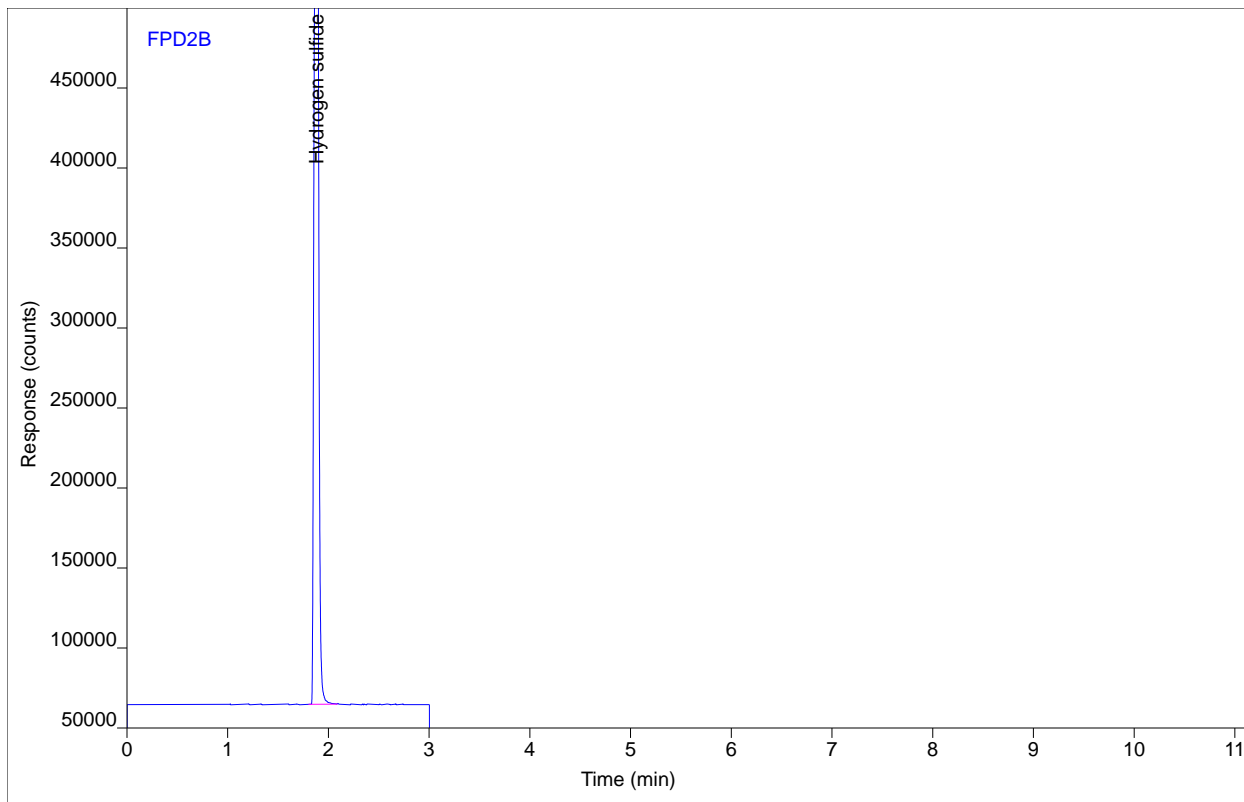
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide		(1.89)				1		

Chromatogram Report

Sample Name zeppoP0462 #3
Sequence Name ZEPPOP0464 ver.2
Inj Data File 005B0502.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/26/2019 12:36 PM
File Modified 8/27/2019 8:52 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Calibration
Vial Number Vial 5
Injection Volume NA
Injection 2 of 4
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/27/2019 9:55 AM



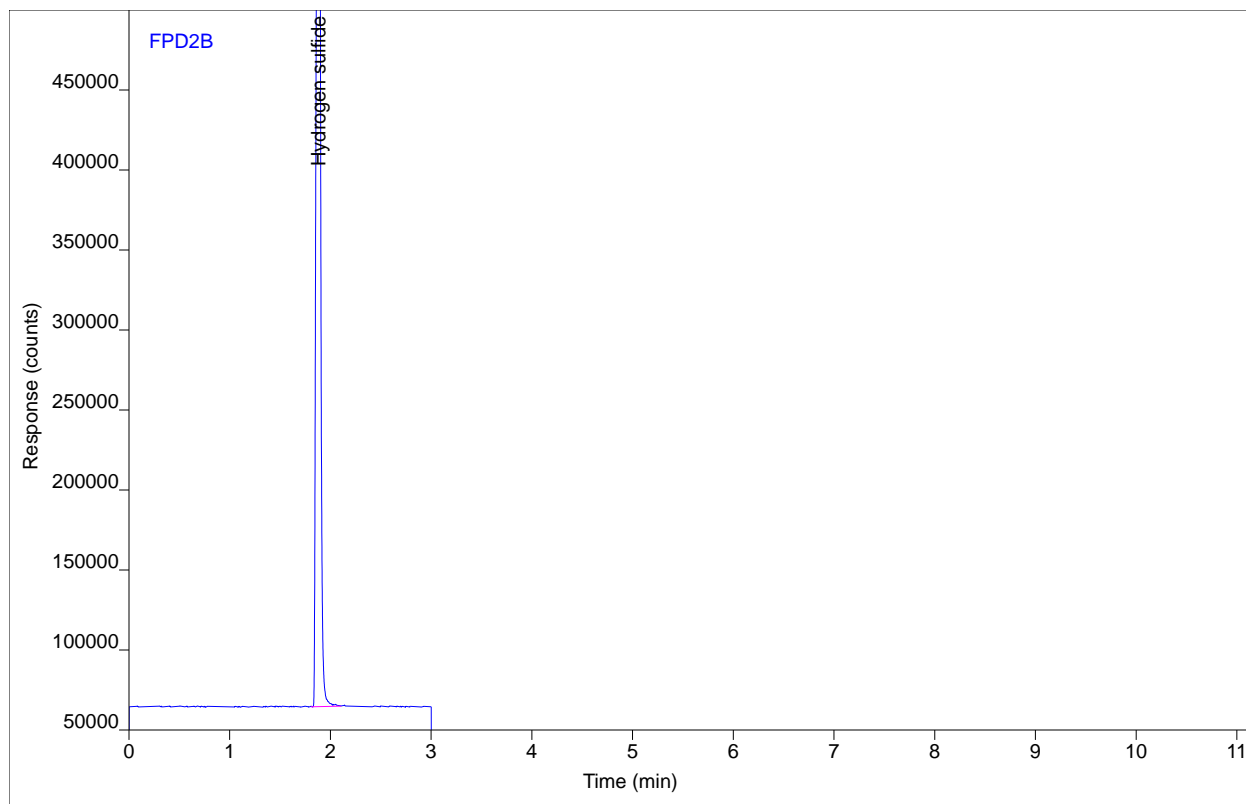
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide	BB	1.88	1952602	655221	7.14416	1	7.14416	ppmv

Chromatogram Report

Sample Name zeppoP0462 #3
Sequence Name ZEPPOP0464 ver.2
Inj Data File 005B0503.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/26/2019 12:41 PM
File Modified 8/27/2019 8:52 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Calibration
Vial Number Vial 5
Injection Volume NA
Injection 3 of 4
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/27/2019 9:55 AM



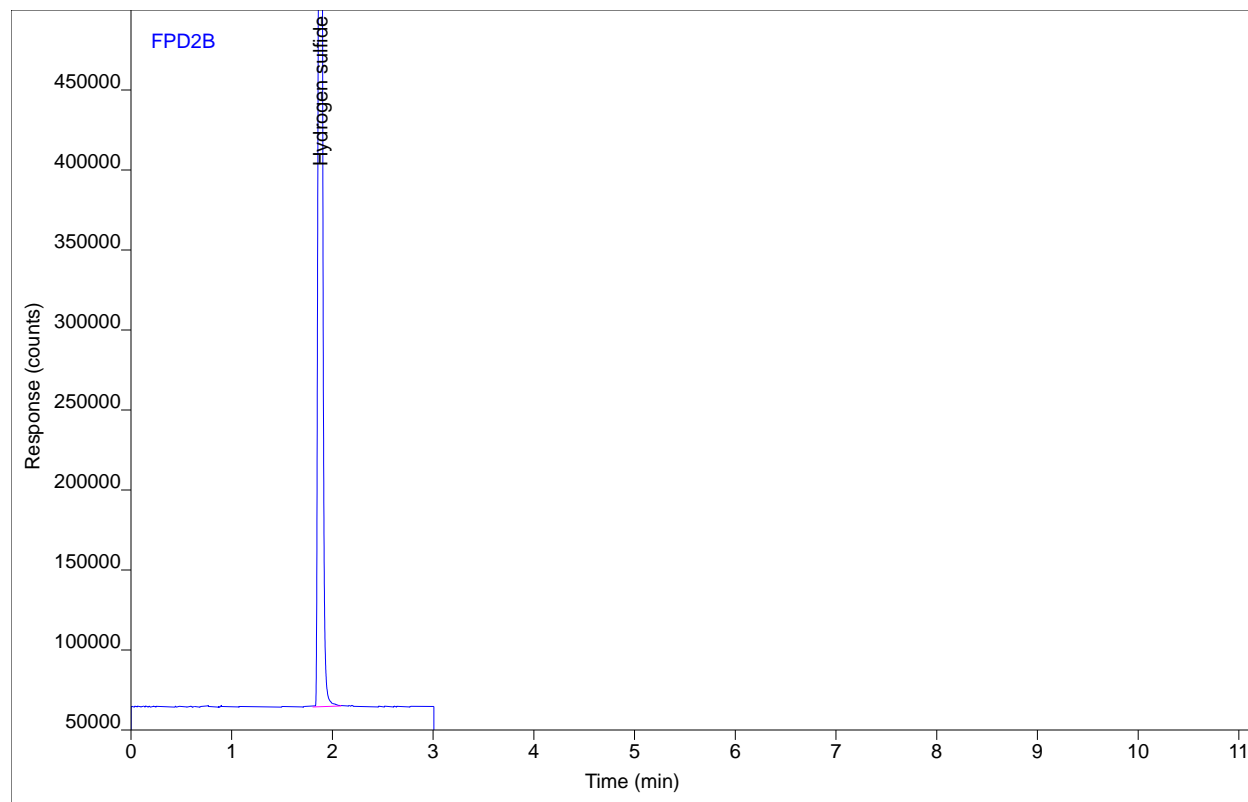
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide	BB	1.88	2025904	677084	7.27433	1	7.27433	ppmv

Chromatogram Report

Sample Name zeppoP0462 #3
Sequence Name ZEPPOP0464 ver.2
Inj Data File 005B0504.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/26/2019 12:45 PM
File Modified 8/27/2019 8:52 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type
Vial Number Vial 5
Injection Volume NA
Injection 4 of 4
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/27/2019 9:55 AM



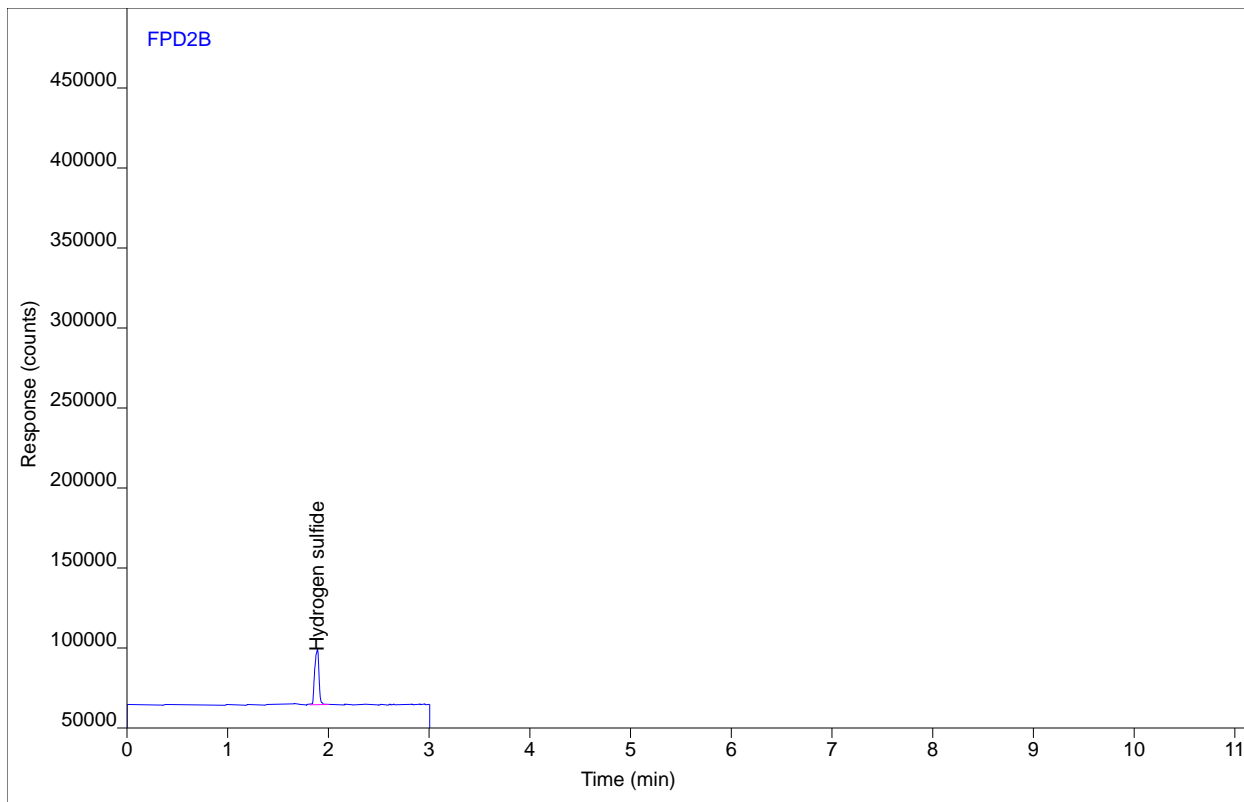
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide	BB	1.88	2083012	684438	7.37408	1	7.37408	ppmv

Chromatogram Report

Sample Name zeppoP0462 #2
Sequence Name ZEPPOP0464 ver.2
Inj Data File 005B0602.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/26/2019 12:54 PM
File Modified 8/27/2019 8:52 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Calibration
Vial Number Vial 5
Injection Volume NA
Injection 2 of 4
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/27/2019 9:55 AM



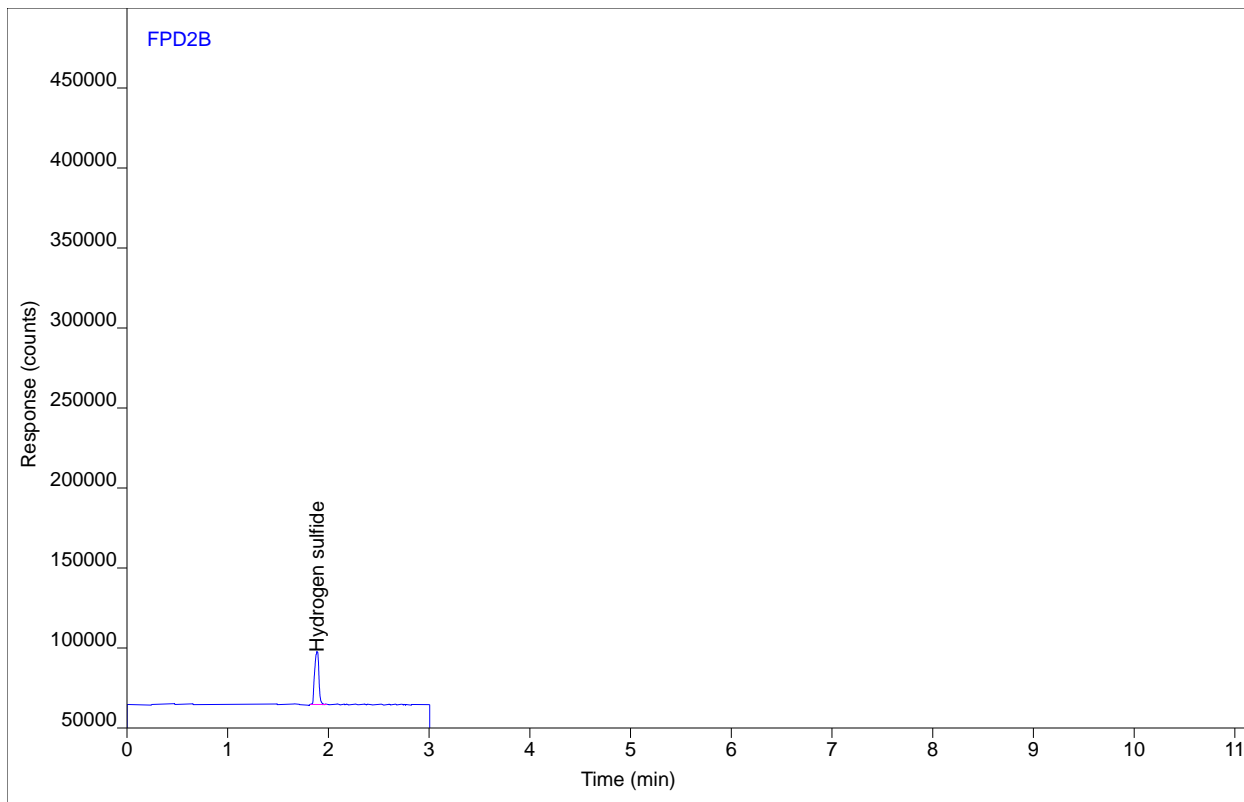
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide	BB	1.89	100282	32611.3	1.66806	1	1.66806	ppmv

Chromatogram Report

Sample Name zeppoP0462 #2
Sequence Name ZEPPOP0464 ver.2
Inj Data File 005B0603.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/26/2019 12:58 PM
File Modified 8/27/2019 8:52 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Calibration
Vial Number Vial 5
Injection Volume NA
Injection 3 of 4
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/27/2019 9:55 AM



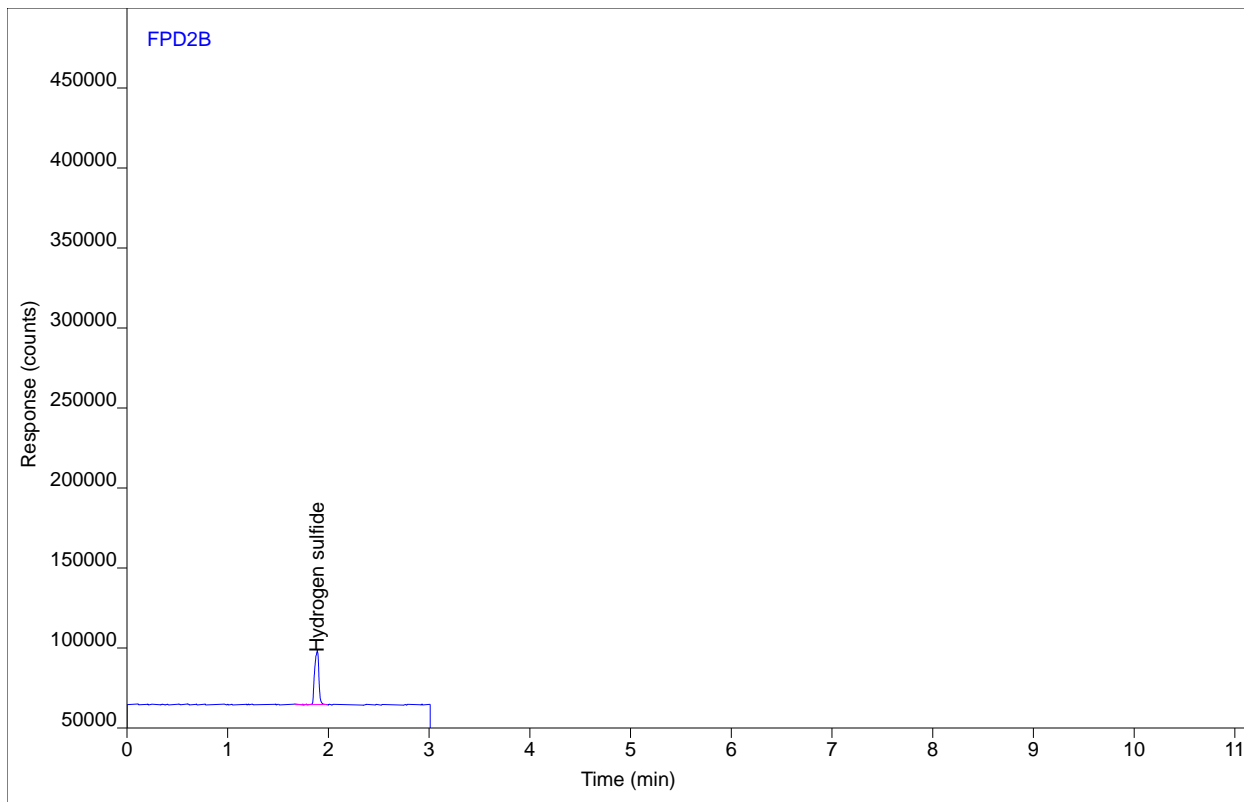
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide	BB	1.89	96754.2	32357.8	1.63905	1	1.63905	ppmv

Chromatogram Report

Sample Name zeppoP0462 #2
Sequence Name ZEPPOP0464 ver.2
Inj Data File 005B0604.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/26/2019 1:03 PM
File Modified 8/27/2019 8:52 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Calibration
Vial Number Vial 5
Injection Volume NA
Injection 4 of 4
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/27/2019 9:55 AM



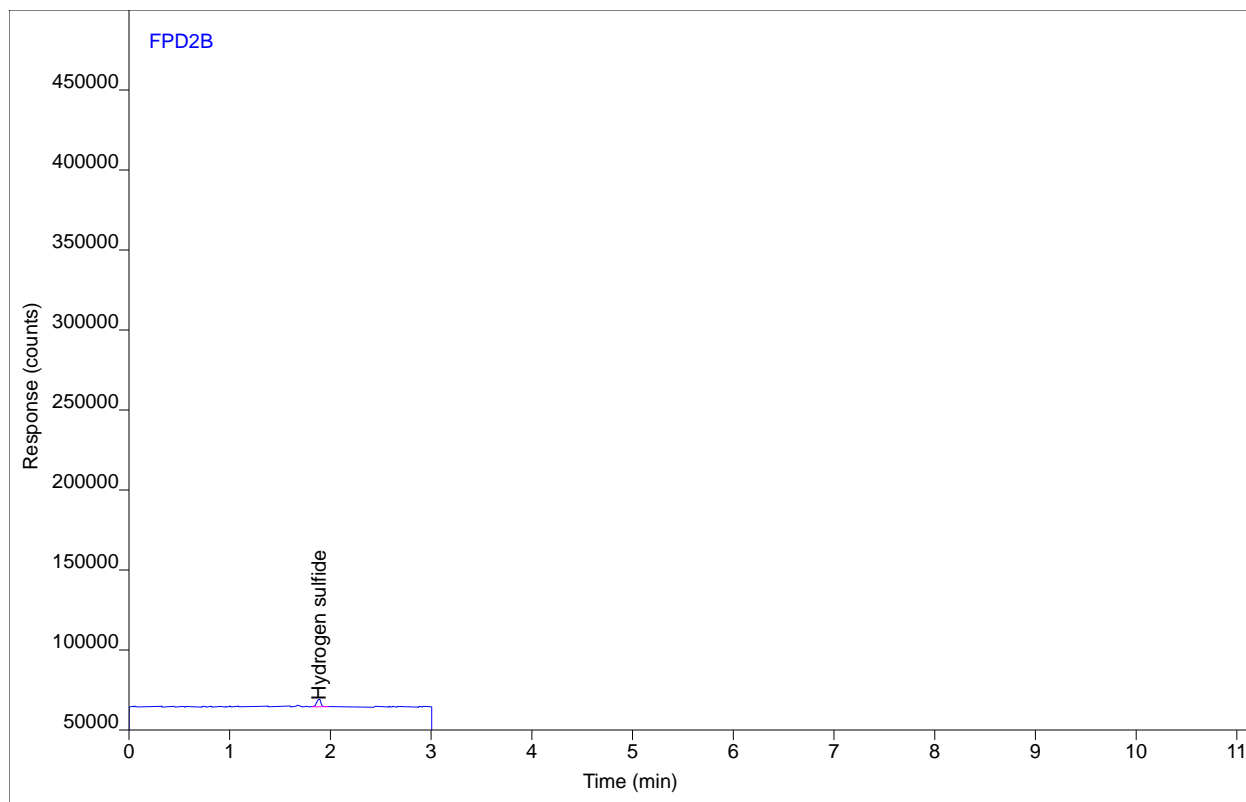
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide	BB	1.88	97737.4	31934.7	1.64719	1	1.64719	ppmv

Chromatogram Report

Sample Name zeppoP0462 #1
Sequence Name ZEPPOP0464 ver.2
Inj Data File 005B0702.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/26/2019 1:12 PM
File Modified 8/27/2019 8:52 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type
Vial Number Vial 5
Injection Volume NA
Injection 2 of 4
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/27/2019 9:55 AM



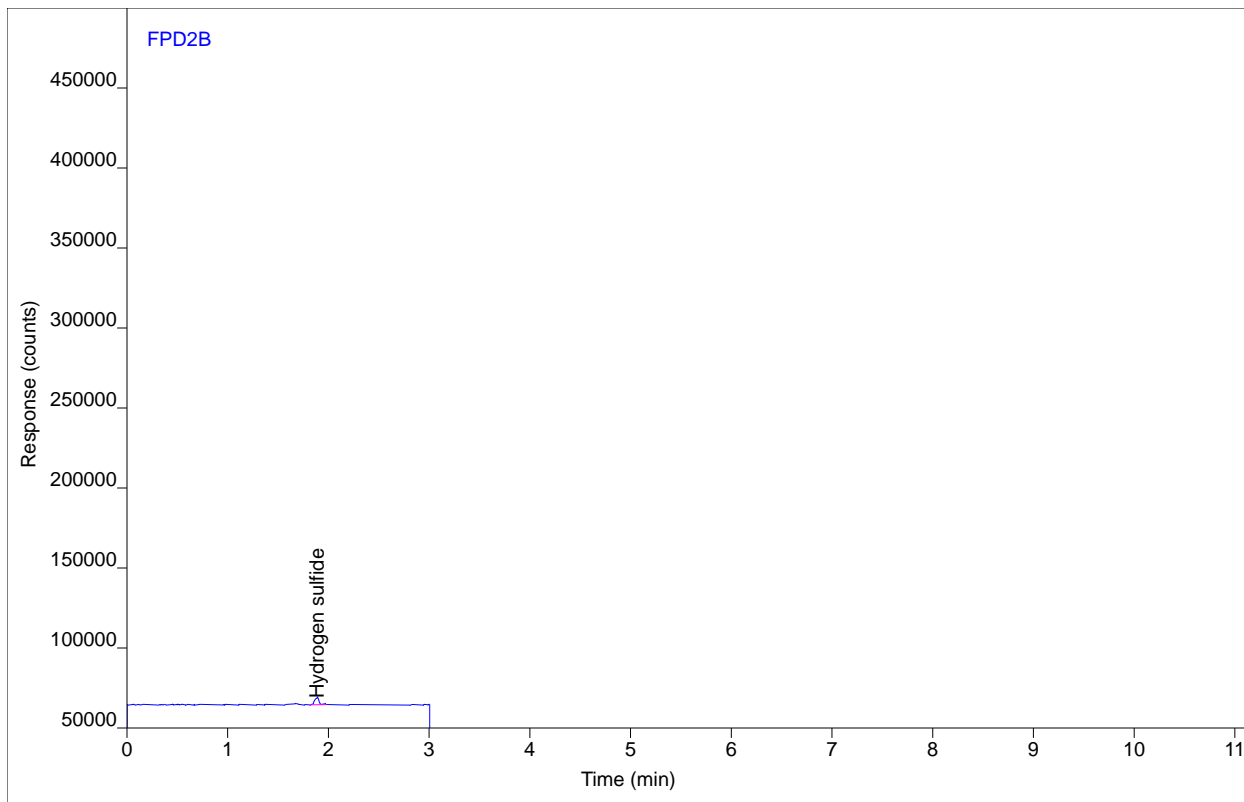
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide	BB	1.89	13339.7	4034.73	0.62084	1	0.62084	ppmv

Chromatogram Report

Sample Name zeppoP0462 #1
Sequence Name ZEPPOP0464 ver.2
Inj Data File 005B0703.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/26/2019 1:16 PM
File Modified 8/27/2019 8:52 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type
Vial Number Vial 5
Injection Volume NA
Injection 3 of 4
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/27/2019 9:55 AM



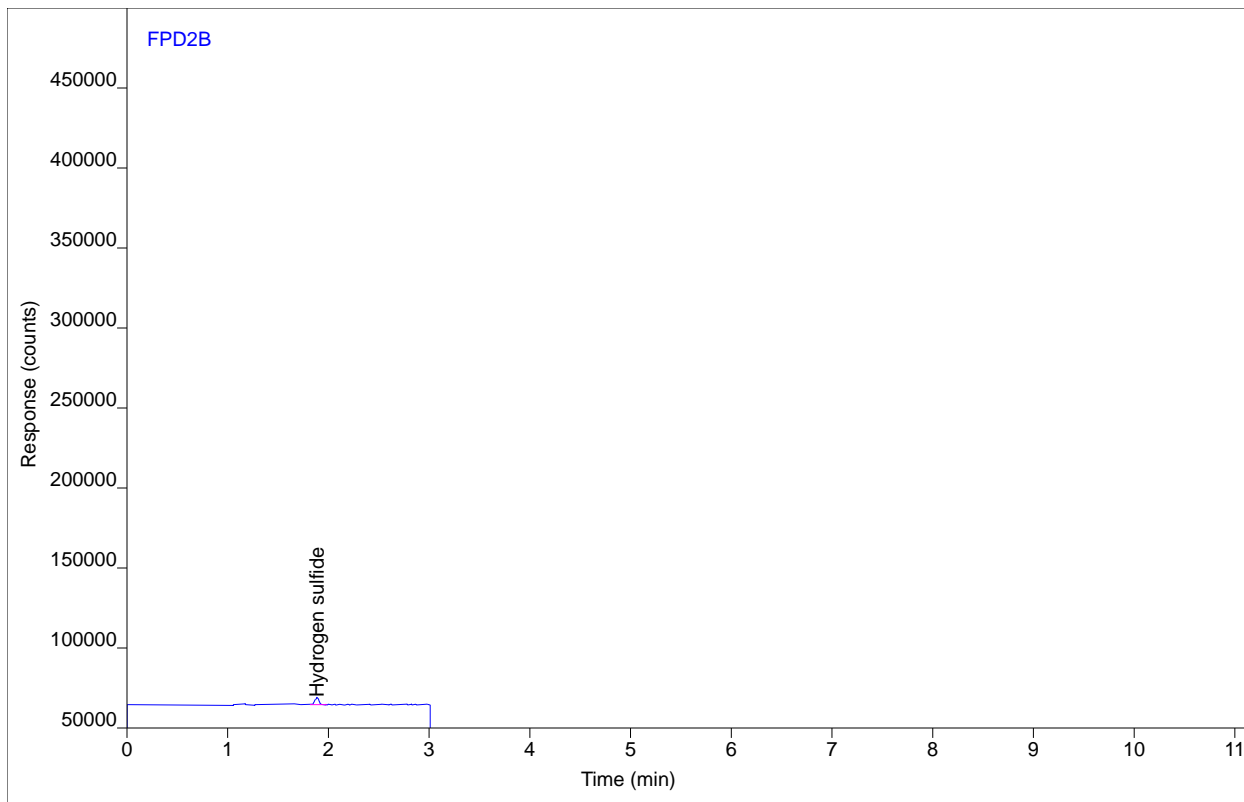
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide	BB	1.89	13118.2	4049.20	0.61576	1	0.61576	ppmv

Chromatogram Report

Sample Name zeppoP0462 #1
Sequence Name ZEPPOP0464 ver.2
Inj Data File 005B0704.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/26/2019 1:21 PM
File Modified 8/27/2019 8:52 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Calibration
Vial Number Vial 5
Injection Volume NA
Injection 4 of 4
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/27/2019 9:55 AM



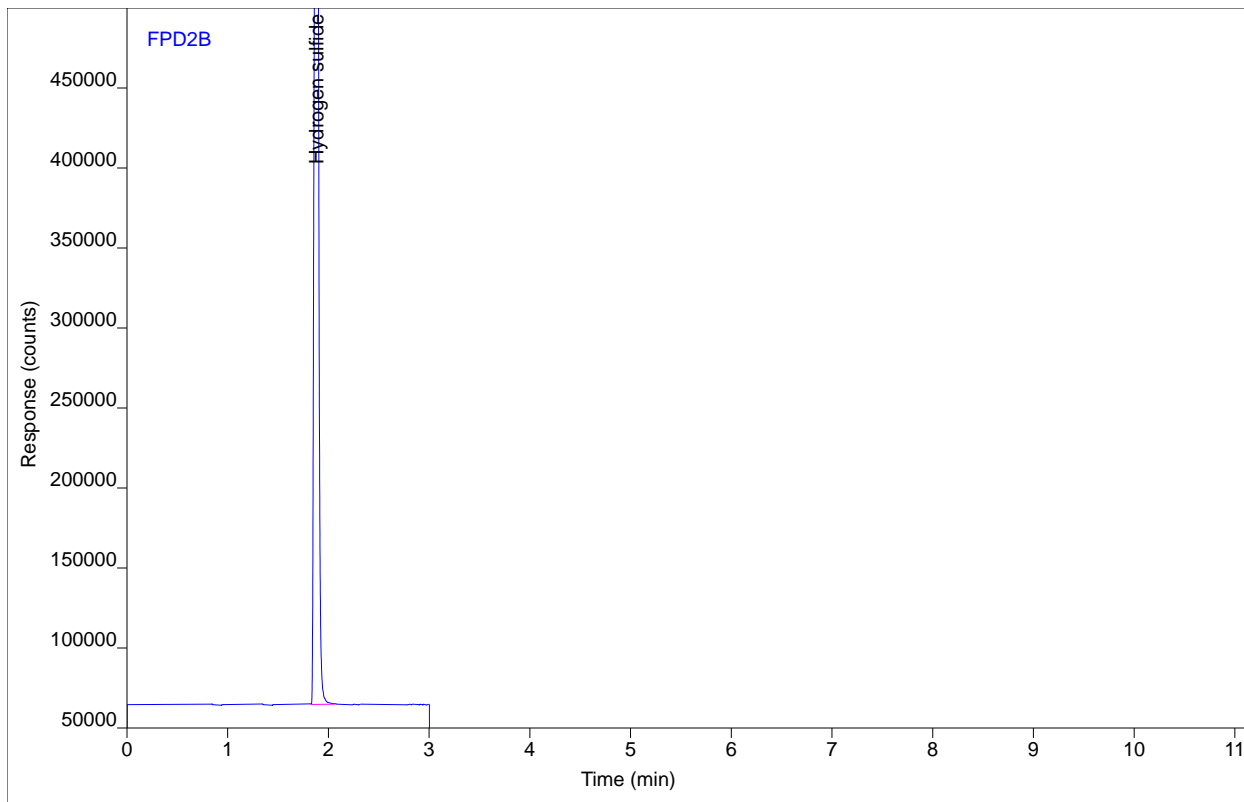
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide	BB	1.89	12287.3	4495.59	0.59634	1	0.59634	ppmv

Chromatogram Report

Sample Name zeppoP0463 #LCS
Sequence Name ZEPPOP0464 ver.2
Inj Data File 005B0802.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/26/2019 1:29 PM
File Modified 8/27/2019 8:52 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 5
Injection Volume NA
Injection 2 of 4
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/27/2019 9:55 AM



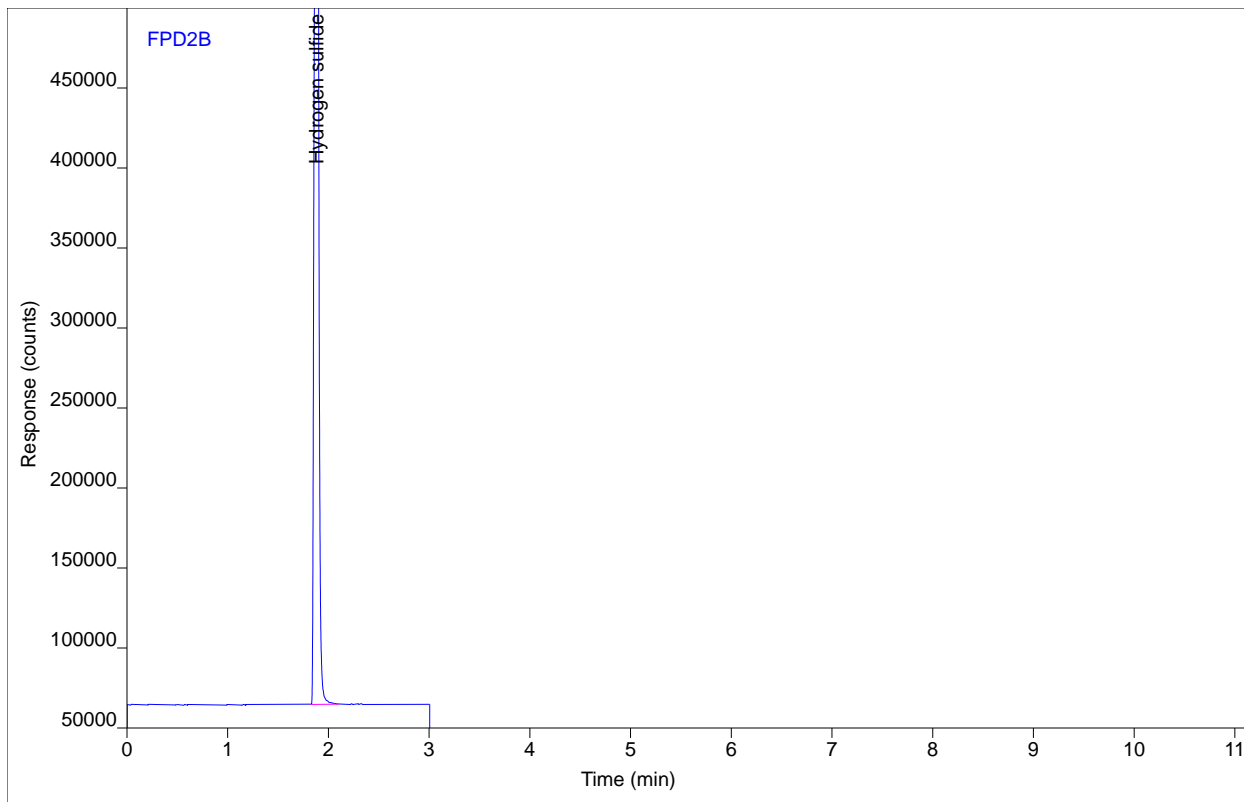
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide	BB	1.88	2069033	698804	7.34979	1	7.34979	ppmv

Chromatogram Report

Sample Name zeppoP0463 #LCS
Sequence Name ZEPPOP0464 ver.2
Inj Data File 005B0803.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/26/2019 1:34 PM
File Modified 8/27/2019 8:52 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 5
Injection Volume NA
Injection 3 of 4
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/27/2019 9:55 AM



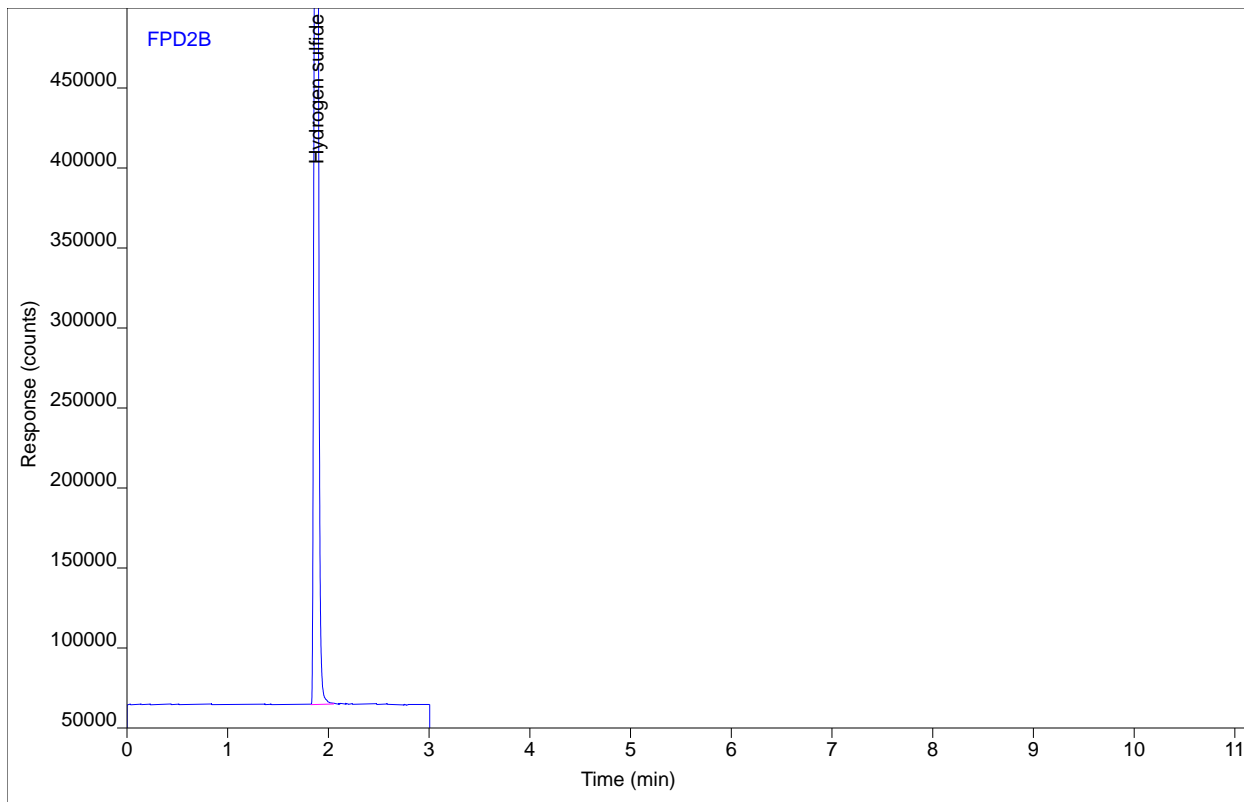
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide	BB	1.88	2110923	704318	7.42233	1	7.42233	ppmv

Chromatogram Report

Sample Name zeppoP0463 #LCS
Sequence Name ZEPPOP0464 ver.2
Inj Data File 005B0804.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/26/2019 1:38 PM
File Modified 8/27/2019 8:52 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Sample
Vial Number Vial 5
Injection Volume NA
Injection 4 of 4
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/27/2019 9:55 AM



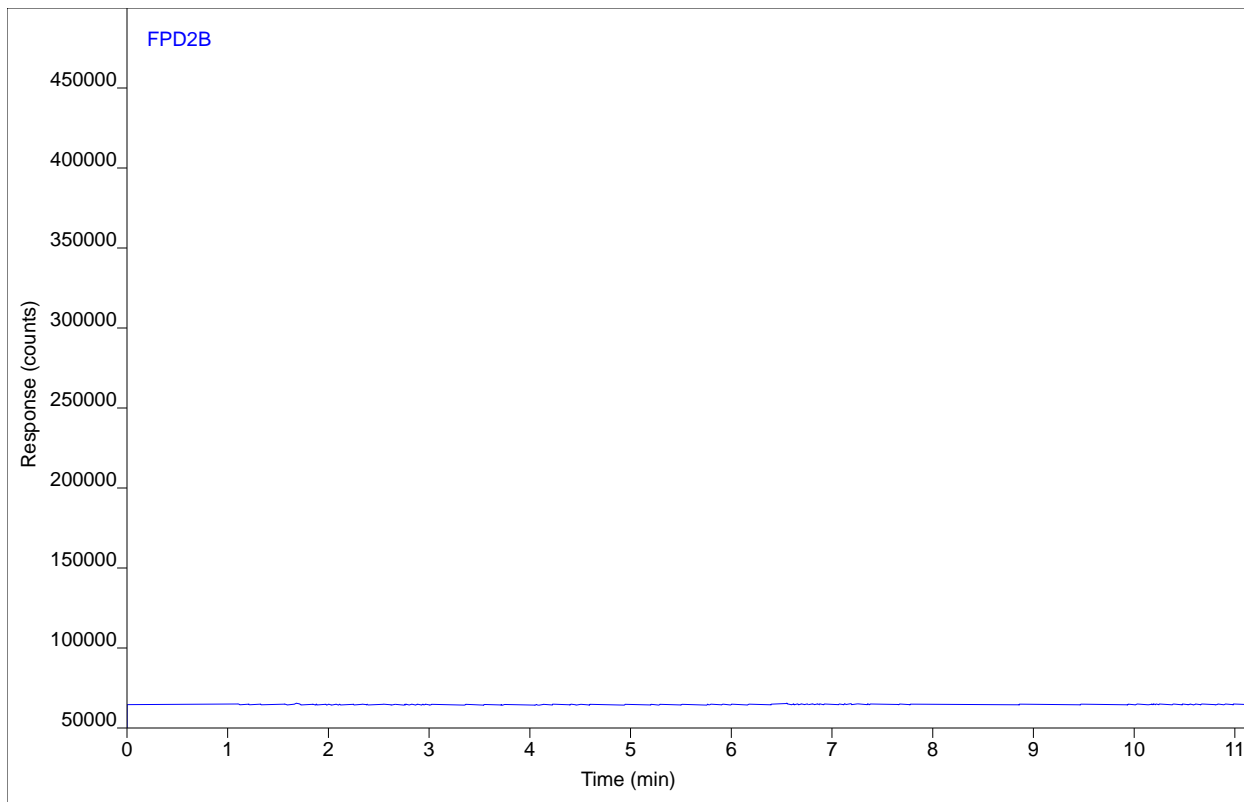
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide	BB	1.88	2103267	718364	7.40912	1	7.40912	ppmv

Chromatogram Report

Sample Name zeppoP0204 #MB
Sequence Name ZEPPOP0464 ver.2
Inj Data File 005B0901.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/26/2019 1:43 PM
File Modified 8/27/2019 8:52 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Control
Vial Number Vial 5
Injection Volume NA
Injection 1 of 3
Acquisition Method DUALFPD8.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/27/2019 9:55 AM



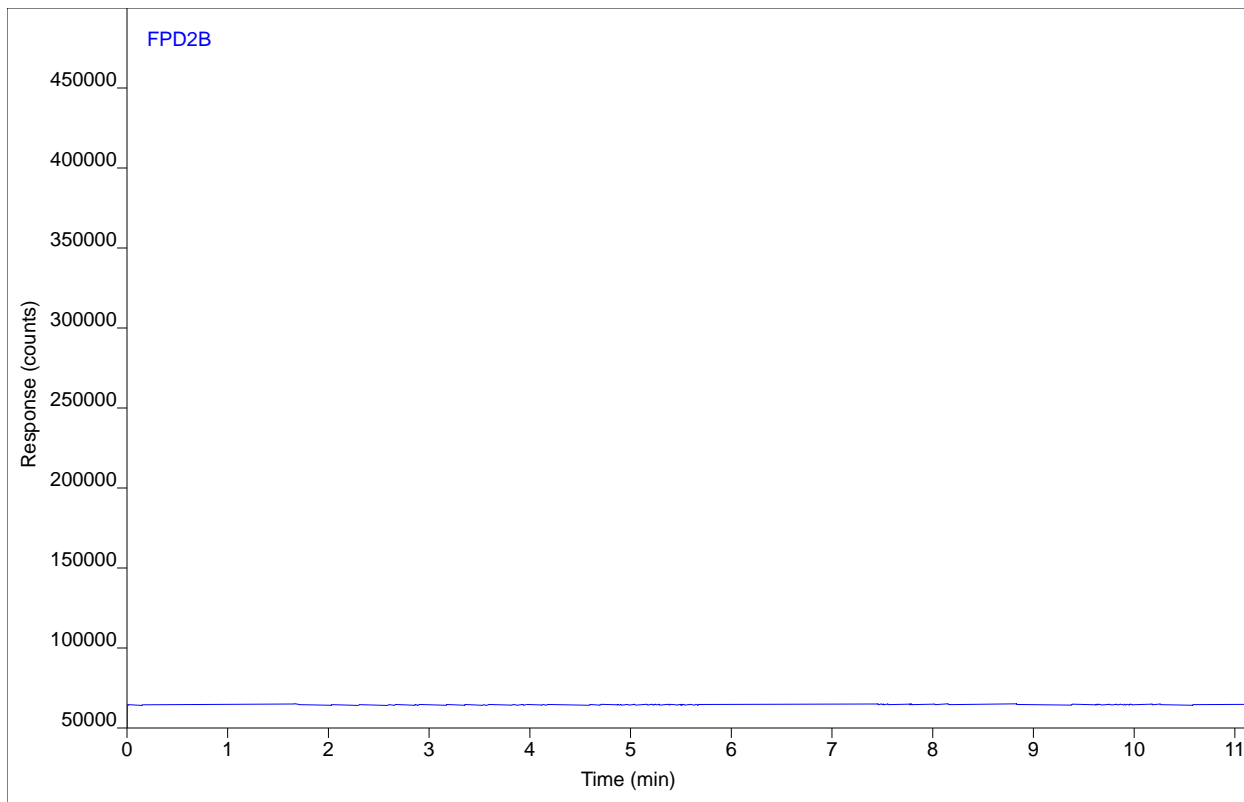
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide		(1.89)				1		

Chromatogram Report

Sample Name zeppoP0204 #MB
Sequence Name ZEPPOP0464 ver.2
Inj Data File 005B0902.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/26/2019 1:59 PM
File Modified 8/27/2019 8:52 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Control
Vial Number Vial 5
Injection Volume NA
Injection 2 of 3
Acquisition Method DUALFPD8.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/27/2019 9:55 AM



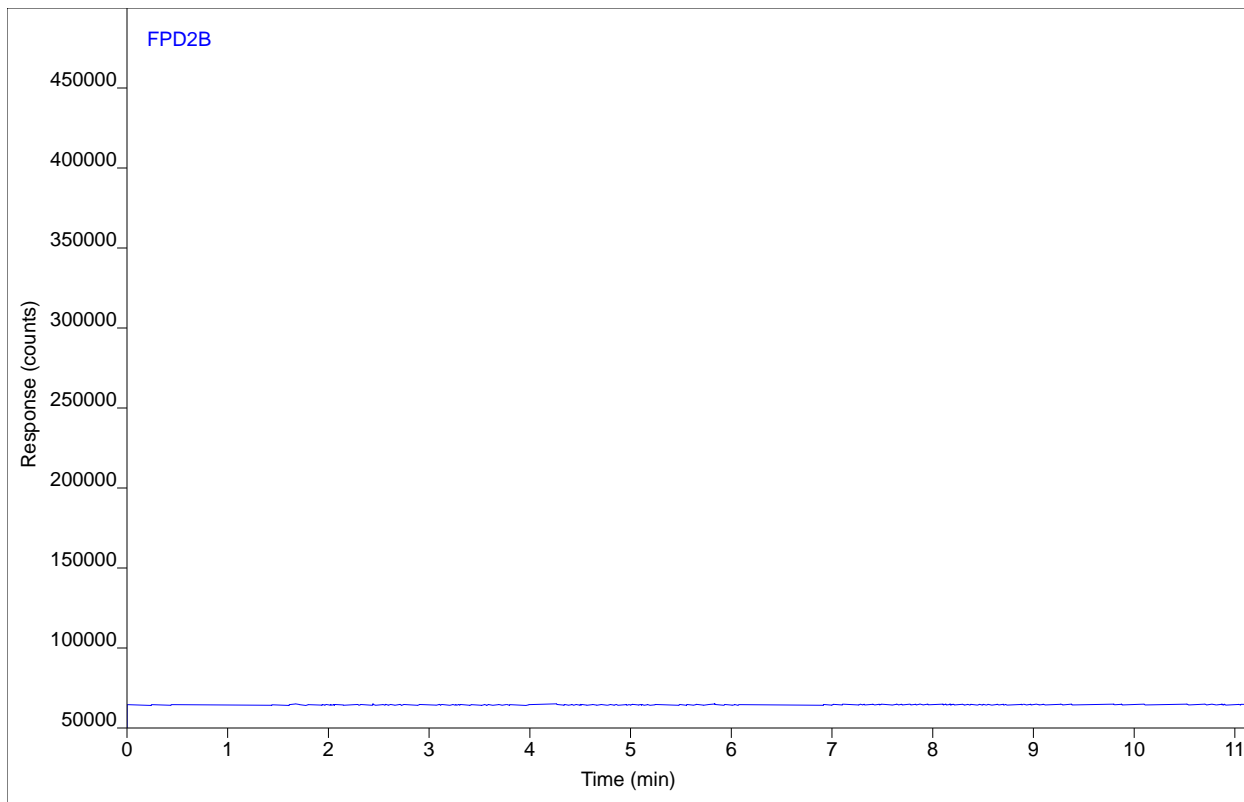
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide		(1.89)				1		

Chromatogram Report

Sample Name zeppoP0204 #MB
Sequence Name ZEPPOP0464 ver.2
Inj Data File 005B0903.D
File Location GC/2019/Zeppo/Quarter 3
Injection Date 8/26/2019 2:15 PM
File Modified 8/27/2019 8:52 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Control
Vial Number Vial 5
Injection Volume NA
Injection 3 of 3
Acquisition Method DUALFPD8.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/27/2019 9:55 AM



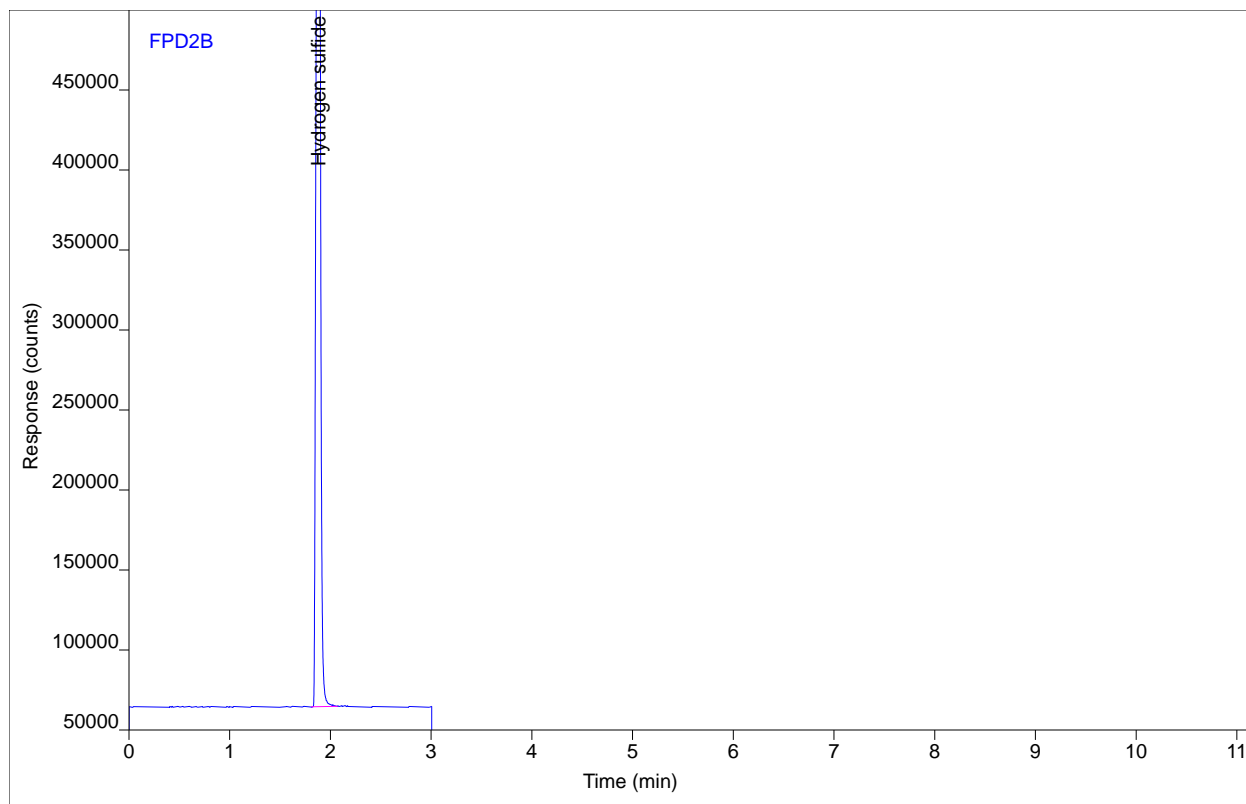
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide		(1.89)				1		

Chromatogram Report

Sample Name zeppoP0462 #3
Sequence Name ZEPPOP0464 ver.2
Inj Data File 005B1702.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/26/2019 3:57 PM
File Modified 8/27/2019 8:53 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Calibration
Vial Number Vial 5
Injection Volume NA
Injection 2 of 4
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/27/2019 9:55 AM



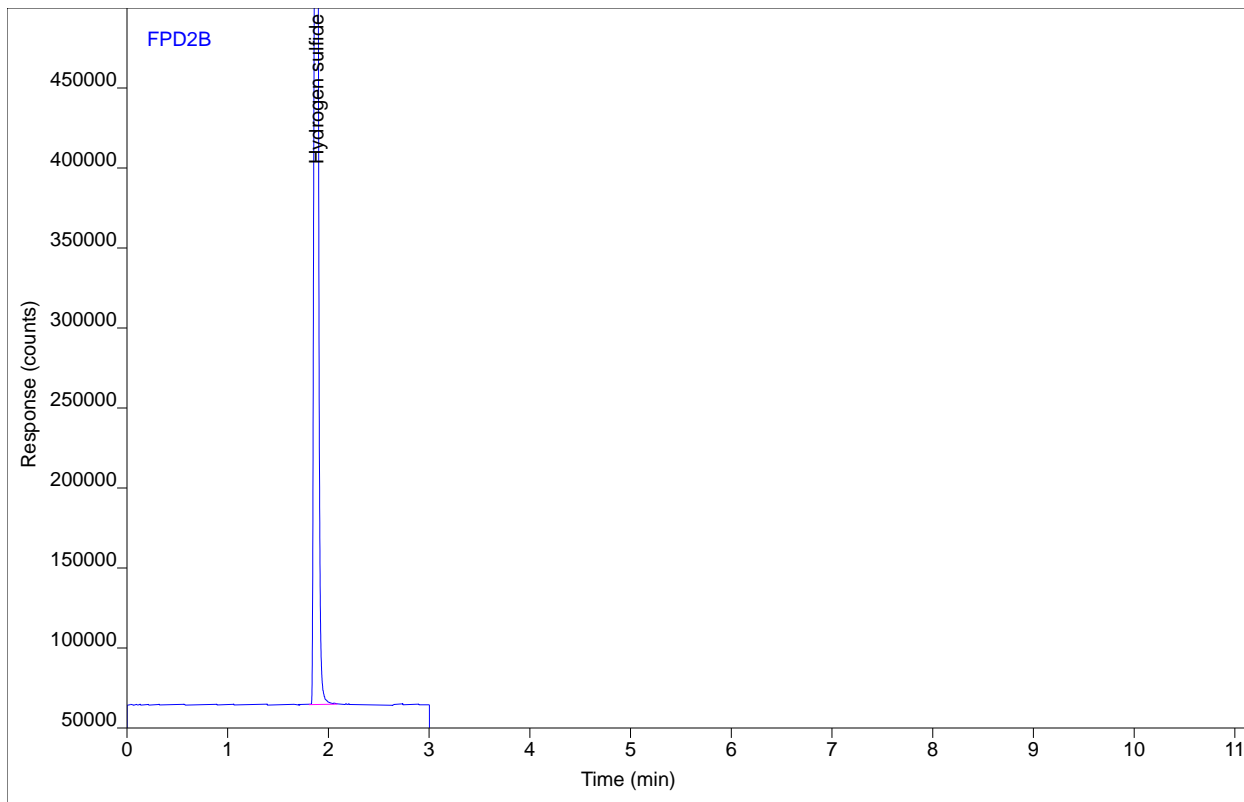
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide	BB	1.88	1996840	676950	7.22301	1	7.22301	ppmv

Chromatogram Report

Sample Name zeppoP0462 #3
Sequence Name ZEPPOP0464 ver.2
Inj Data File 005B1703.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/26/2019 4:01 PM
File Modified 8/27/2019 8:53 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Calibration
Vial Number Vial 5
Injection Volume NA
Injection 3 of 4
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/27/2019 9:55 AM



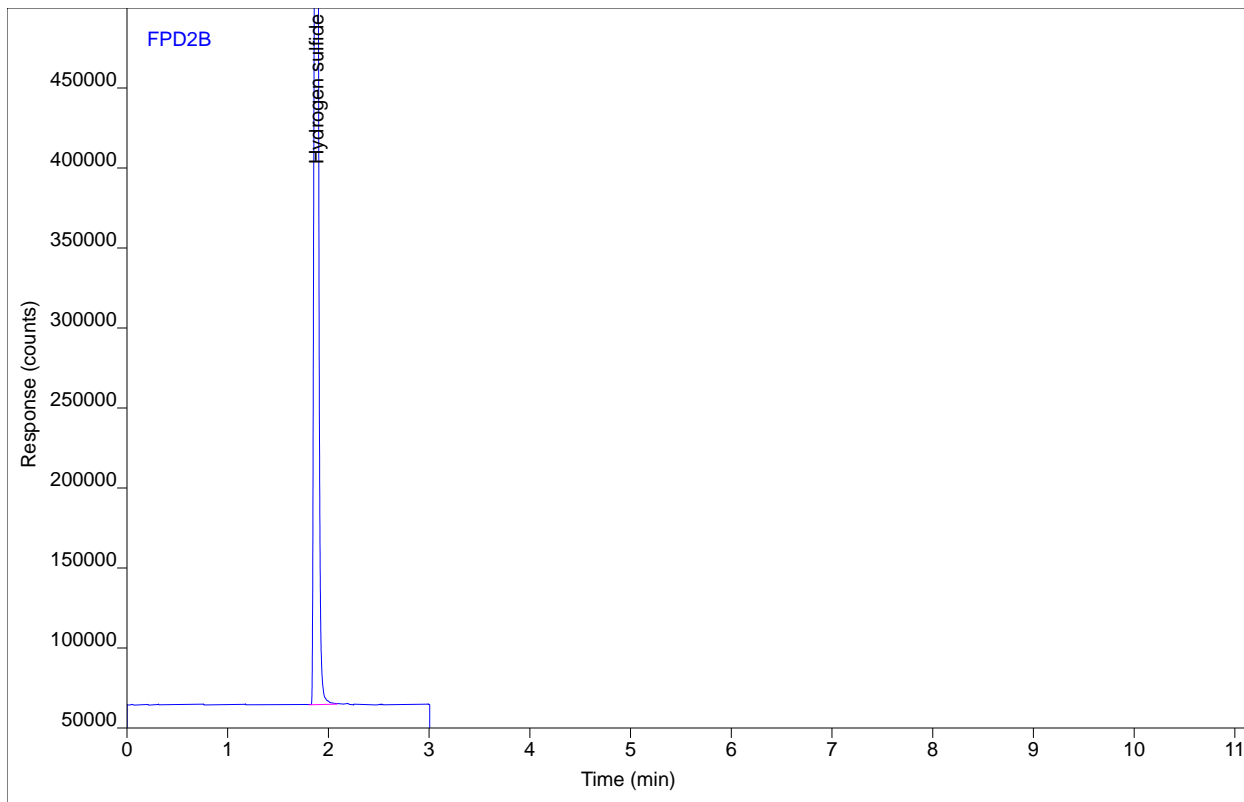
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide	BB	1.88	2040235	693047	7.29949	1	7.29949	ppmv

Chromatogram Report

Sample Name zeppoP0462 #3
Sequence Name ZEPPOP0464 ver.2
Inj Data File 005B1704.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/26/2019 4:06 PM
File Modified 8/27/2019 8:53 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Calibration
Vial Number Vial 5
Injection Volume NA
Injection 4 of 4
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/27/2019 9:55 AM



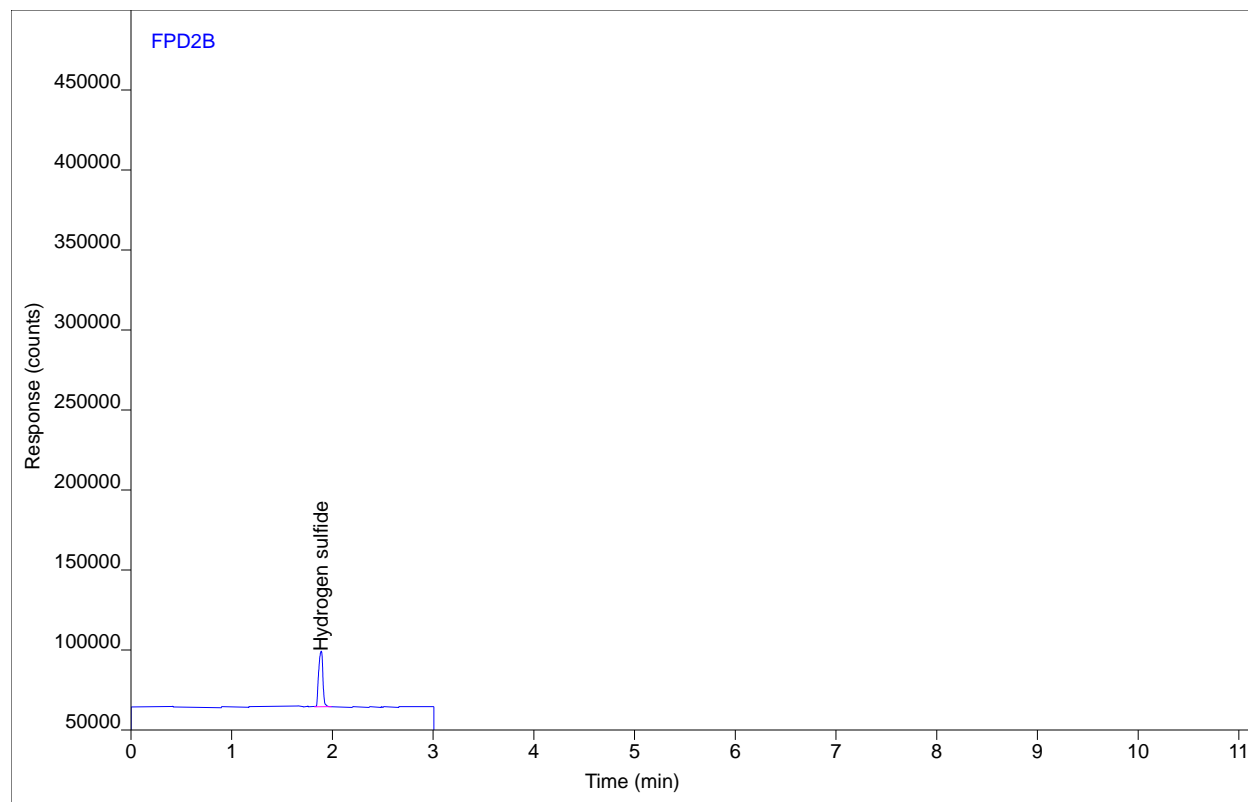
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide	BB	1.88	2094723	699431	7.39436	1	7.39436	ppmv

Chromatogram Report

Sample Name zeppoP0462 #2
Sequence Name ZEPPOP0464 ver.2
Inj Data File 005B1802.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/26/2019 4:15 PM
File Modified 8/27/2019 8:53 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Calibration
Vial Number Vial 5
Injection Volume NA
Injection 2 of 4
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/27/2019 9:55 AM



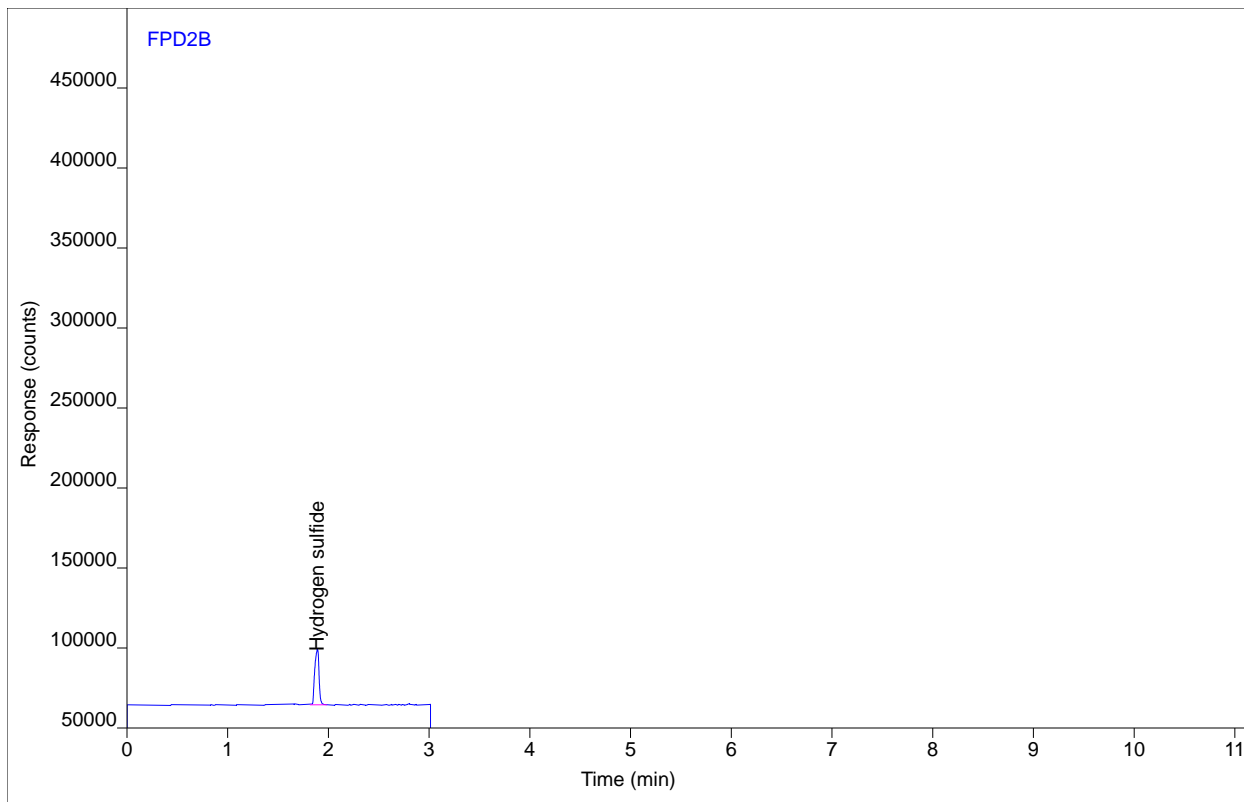
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide	BB	1.89	100960	33869.6	1.67358	1	1.67358	ppmv

Chromatogram Report

Sample Name zeppoP0462 #2
Sequence Name ZEPPOP0464 ver.2
Inj Data File 005B1803.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/26/2019 4:19 PM
File Modified 8/27/2019 8:53 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Calibration
Vial Number Vial 5
Injection Volume NA
Injection 3 of 4
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/27/2019 9:55 AM



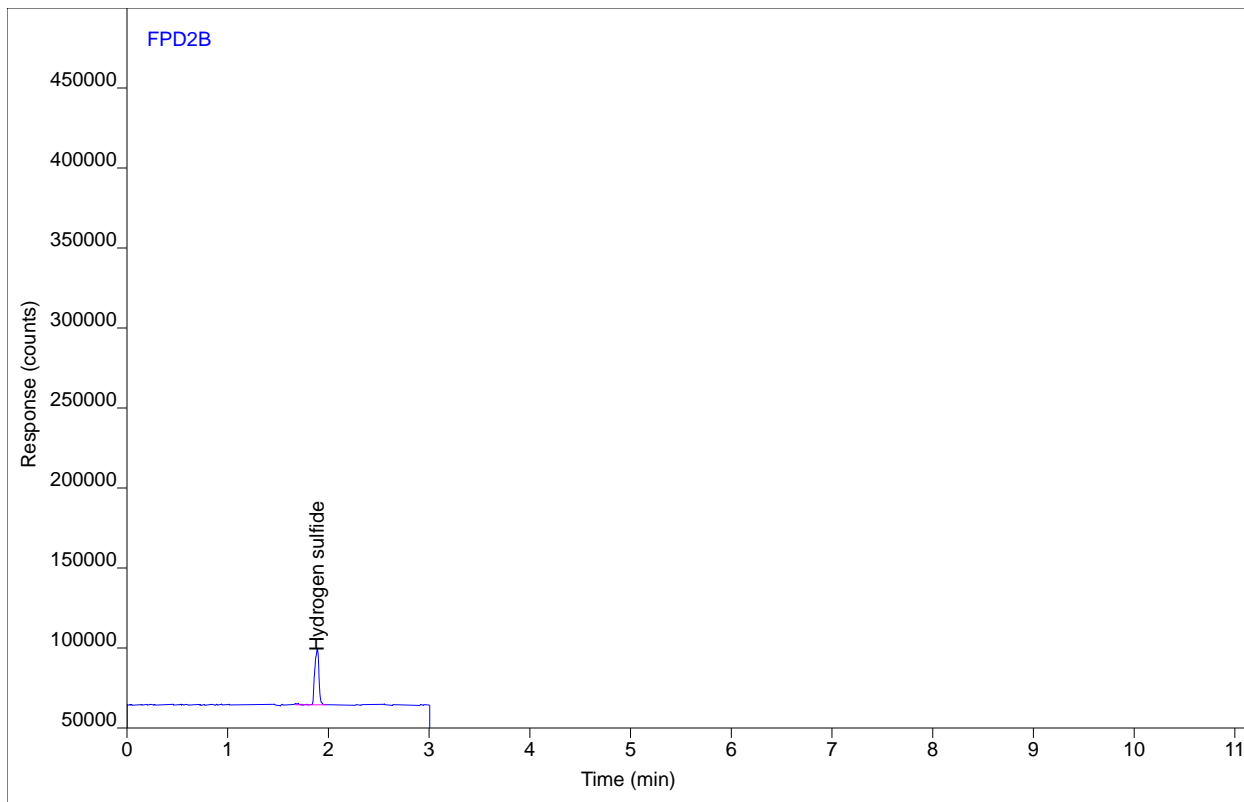
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide	BB	1.89	101466	34574.1	1.67768	1	1.67768	ppmv

Chromatogram Report

Sample Name zeppoP0462 #2
Sequence Name ZEPPOP0464 ver.2
Inj Data File 005B1804.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/26/2019 4:23 PM
File Modified 8/27/2019 8:53 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Calibration
Vial Number Vial 5
Injection Volume NA
Injection 4 of 4
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/27/2019 9:55 AM



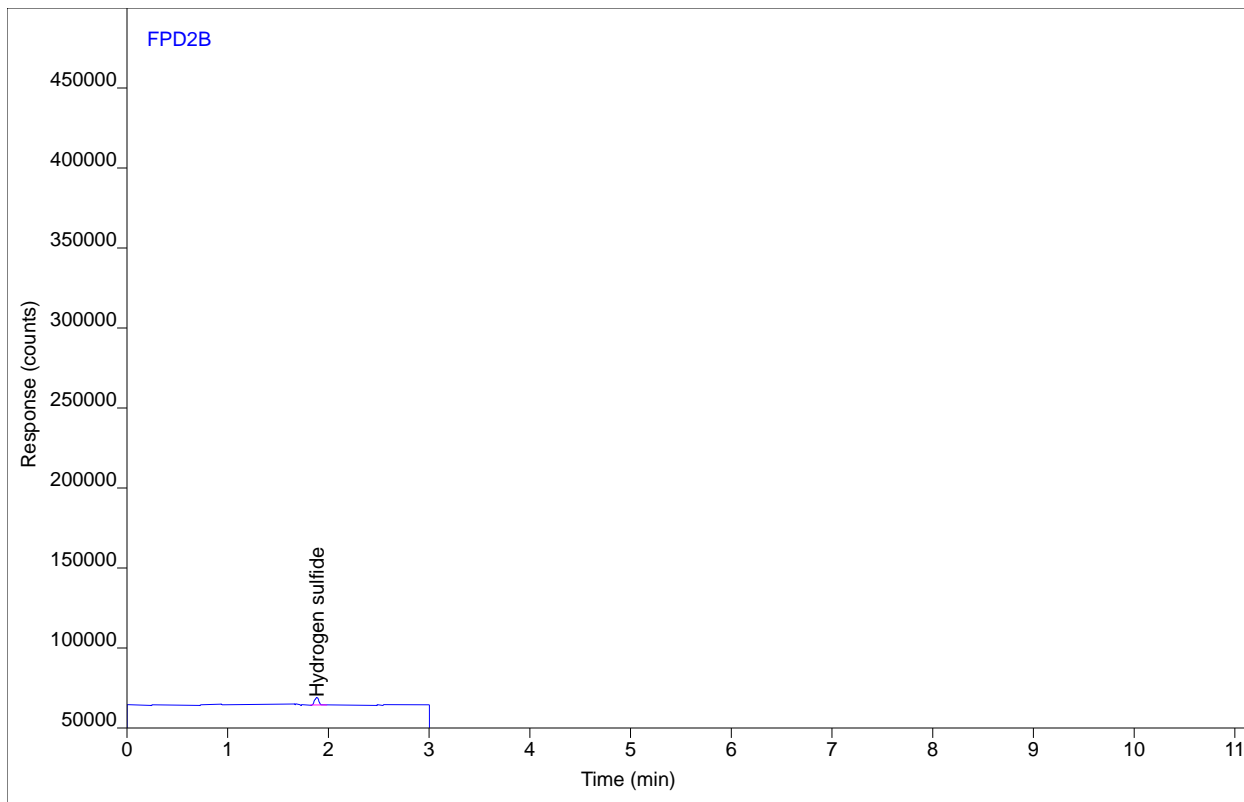
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide	BB	1.89	101218	32566.4	1.67567	1	1.67567	ppmv

Chromatogram Report

Sample Name zeppoP0462 #1
Sequence Name ZEPPOP0464 ver.2
Inj Data File 005B1902.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/26/2019 4:32 PM
File Modified 8/27/2019 8:53 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Calibration
Vial Number Vial 5
Injection Volume NA
Injection 2 of 4
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/27/2019 9:55 AM



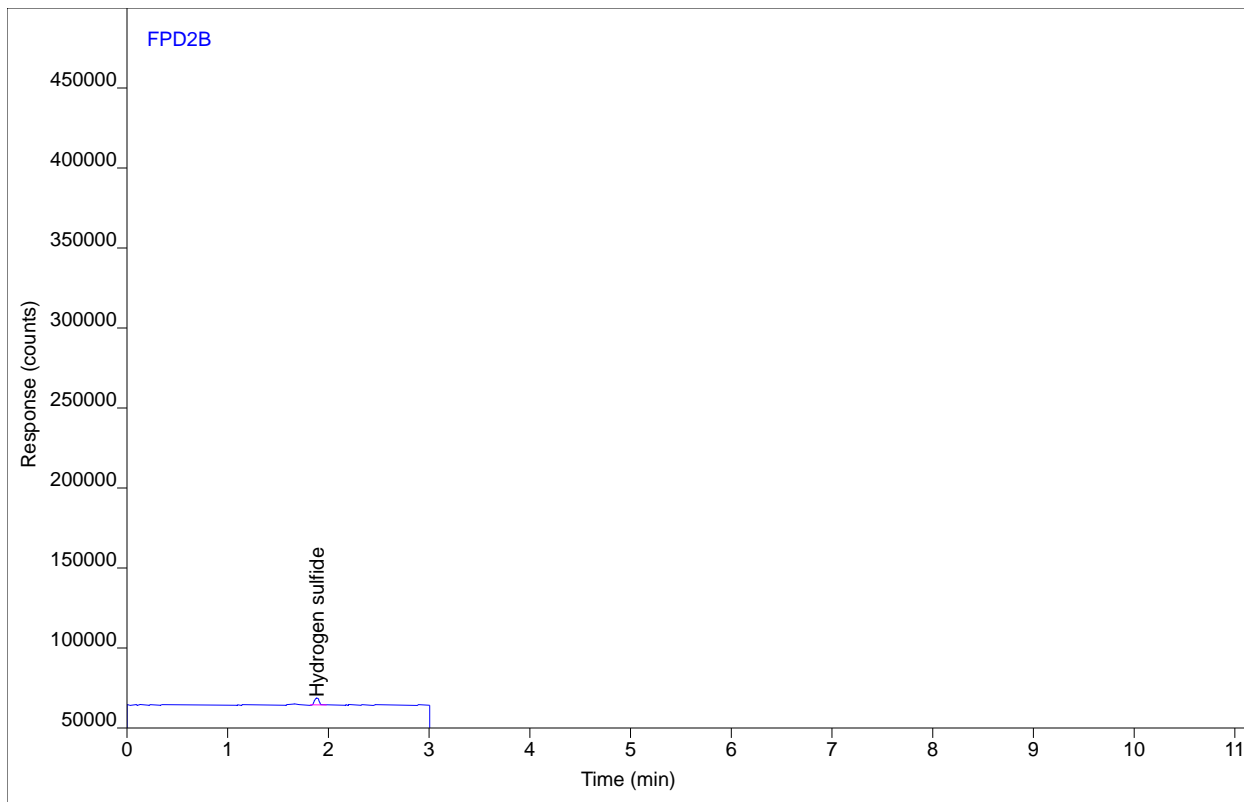
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide	BB	1.88	13273.7	4613.36	0.61933	1	0.61933	ppmv

Chromatogram Report

Sample Name zeppoP0462 #1
Sequence Name ZEPPOP0464 ver.2
Inj Data File 005B1903.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/26/2019 4:37 PM
File Modified 8/27/2019 8:53 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type Calibration
Vial Number Vial 5
Injection Volume NA
Injection 3 of 4
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/27/2019 9:55 AM



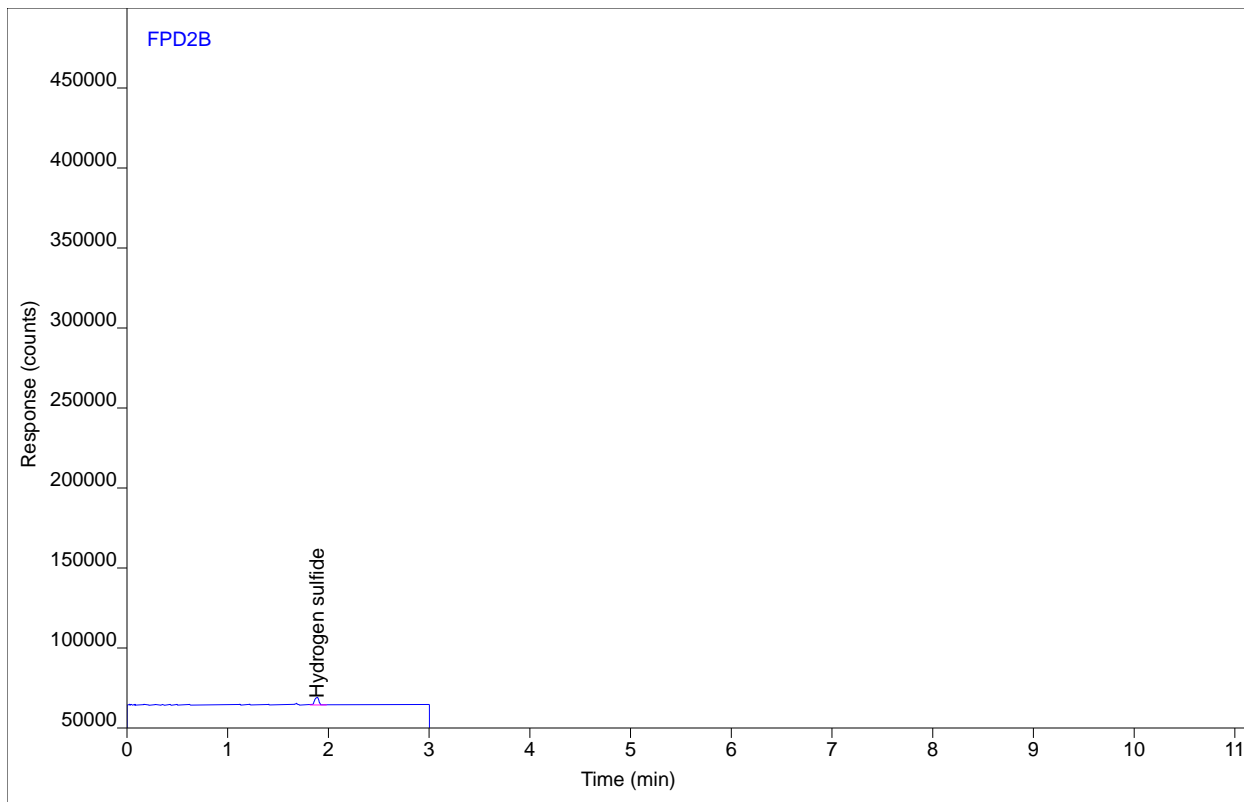
Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide	BB	1.89	13350.7	4442.58	0.62108	1	0.62108	ppmv

Chromatogram Report

Sample Name zeppoP0462 #1
Sequence Name ZEPPOP0464 ver.2
Inj Data File 005B1904.D
File Location GC/2019/Zepo/Quarter 3
Injection Date 8/26/2019 4:41 PM
File Modified 8/27/2019 8:53 AM
Instrument Zeppo
Operator Shelby Hill

Enthalpy Analytical

Sample Type
Vial Number Vial 5
Injection Volume NA
Injection 4 of 4
Acquisition Method DUALFPD8_SHORT.M
Analysis Method ZEPPOP0462.M
Method Modified 8/26/2019 9:56 AM
Printed 8/27/2019 9:55 AM



Compound	Type	RT	Area	Height	Amount	DF	SampAmt	Unit
Hydrogen sulfide	BB	1.89	13640.1	4411.83	0.62765	1	0.62765	ppmv

CERTIFICATE OF ANALYSIS

Grade of Product: CERTIFIED STANDARD-SPEC

Part Number:	X02NI99C15AC3D4	Reference Number:	122-401549589-1
Cylinder Number:	CC436735	Cylinder Volume:	144.3 Cubic Feet
Laboratory:	124 - Durham (SAP) - NC	Cylinder Pressure:	2015 PSIG
Analysis Date:	Jul 22, 2019	Valve Outlet:	330
Lot Number:	122-401549589-1		

Expiration Date: Jul 22, 2022

Product composition verified by direct comparison to calibration standards traceable to N.I.S.T. weights and/or N.I.S.T. Gas Mixture reference materials.

ANALYTICAL RESULTS

Component	Req Conc	Actual Concentration (Mole %)	Analytical Uncertainty
HYDROGEN SULFIDE	7.000 PPM	7.070 PPM	+/- 5%
NITROGEN	Balance		

Permanent Notes: MONTROSE ENV ENTHALPY ANALY




Approved for Release

CERTIFICATE OF ANALYSIS

Grade of Product: CERTIFIED STANDARD-SPEC

Part Number:	X02NI99C15AC3D4	Reference Number:	122-401383582-1
Cylinder Number:	CC437143	Cylinder Volume:	144.3 Cubic Feet
Laboratory:	124 - Durham (SAP) - NC	Cylinder Pressure:	2015 PSIG
Analysis Date:	Dec 27, 2018	Valve Outlet:	330
Lot Number:	122-401383582-1		
Expiration Date: Dec 27, 2021			

Product composition verified by direct comparison to calibration standards traceable to N.I.S.T. weights and/or N.I.S.T. Gas Mixture reference materials.

ANALYTICAL RESULTS

Component	Req Conc	Actual Concentration (Mole %)	Analytical Uncertainty
HYDROGEN SULFIDE	7.000 PPM	6.924 PPM	+/- 5%
NITROGEN	Balance		

Permanent Notes: MONTROSE ENV ENTHALPY ANALY



A handwritten signature in black ink, appearing to read 'Rip St...', written over a horizontal line.

Approved for Release

DUALFPD8
Method Information

Method: C:\GC\2019\ZEPP0\METHODS\DUALFPD8.M
Modified: 8/6/2019 at 3:46:50 PM

Method Audit Trail

Operator : Shelby Hill
Date : 8/6/2019 3:46:49 PM
Change Info: This method was created at 8/6/2019 3:46:49 PM and based on
method C:\GC\2019\ZEPP0\METHODS\DUALFPD7.M

Operator : Shelby Hill
Date : 8/6/2019 3:46:50 PM
Change Info: Method saved. User comment: ""

Run Time Checklist

Pre-Run Cmd/Macro: on
Name: ValveController
Data Acquisition: on
Standard Data Analysis: off
Customized Data Analysis: off
Save GLP Data: off
Post-Run Cmd/Macro: off
Save Method with Data: off

Injection Source and Location

Injection Source: Valve
Injection Location: Dual

OVEN\DET

Runtime (min): 11.2

Zone Temperatures:

	State	Setpoint
Inl. A	OFF	175 C.
Inl. B	OFF	175 C.
Det. A	ON	200 C.
Det. B	ON	200 C.
Aux.	OFF	50 C.

Oven Zone:
Oven max 280 C.

DUALFPD8

Equi b Time	1. 10 Mi n.
Oven State	ON
Cryo State	OFF
Ambi ent	25 C.
Cryo Bl ast	OFF

Oven Program:

	Setpoi nt		
Ini ti al Temp. :	50 C.		
Ini ti al Time:	3. 00 Mi n.		
Level	Rate (C/mi n.)	Fi nal Temp. (C)	Fi nal Time (mi n)
1	25. 0	150	4. 20

InletB Temperature Program Information

Oven Track: OFF

Temperature Program:

	Setpoi nt		
Ini ti al Temp. :	175 C		
Ini ti al Time:	650. 00 mi n.		
Level	Rate (C/mi n.)	Fi nal Temp. (C)	Fi nal Time (mi n)
1	0	50	0. 00
Total Program Time:	650. 00		

InletA Pressure Program Information

Constant Flow: On

Pressure: 4. 2 psi

Temperature: 60 C

Pressure Program:

	Setpoi nt		
Ini ti al Pres. :	0. 0 psi		
Ini ti al Time:	650. 00 mi n.		
Level	Rate (psi /mi n.)	Fi nal Pres. (psi)	Fi nal Time (mi n)
1	0. 00	0. 0	0. 00
2(A)	0. 00	0. 0	0. 00
3(B)	0. 00	0. 0	0. 00
Total Program Time:	650. 00		

GC Pressure Uni ts: psi

Entered Values:

Col umn Length:	60. 00	m.
Col umn Di ameter:	0. 530	mm.
Gas:	H2	
Vacuum Comp:	Off	

InletB Pressure Program Information

Constant Flow: Off

Pressure: 4. 2 psi

Temperature: 60 C.

Pressure Program:

	Setpoi nt
Ini ti al Pres. :	0. 0 psi
Ini ti al Time:	650. 00 mi n.

Page 2

DUALFPD8

Level	Rate (psi /mi n.)	Final Pres. (psi)	Final Time (mi n)
1	0.00	0.0	0.00
2(A)	0.00	0.0	0.00
3(B)	0.00	0.0	0.00
Total Program Time:		650.00	

GC Pressure Uni ts: psi

Entered Values:

Column Length: 60.00 m.
 Column Di ameter: 0.530 mm.
 Gas: H2
 Vacuum Comp: Off

Inl et A Packed Column Informati on

Equati on: ---

Pressure-Fl ow Rel ati onshi p:

	Pres.	Fl ow(psi)	(ml /mi n)
1	---	0.0	
2	---	0.0	
3	---	0.0	

Last pressure cal i brati on: ---

Packed Column Fl ow Setti ng (ml /mi n): 0.0

Inl et B Packed Column Informati on

Equati on: ---

Pressure-Fl ow Rel ati onshi p:

	Pres.	Fl ow(psi)	(ml /mi n)
1	---	0.0	
2	---	0.0	
3	---	0.0	

Last pressure cal i brati on: ---

Packed Column Fl ow Setti ng (ml /mi n): 0.0

Purge Val ve Setti ngs

Purge A/B

	Ini t Val ue	On Ti me (Mi n.)	Off Ti me (Mi n.)
A (Val ve 3)	On	0.00	0.00
B (Val ve 4)	On	0.00	0.00

A - Spl i tless Inj ecti on: No
 B - Spl i tless Inj ecti on: No

Val ves/Rel ays Informati on

Ini ti al Setpoi nts:

5890 Val ves:

Val ve 1: Off
 Val ve 2: Off
 Val ve 3 (Purge A): On
 Val ve 4 (Purge B): On

DUALFPD8

Val ve/Rel ay Ti me Tabl e:

Time	Name	State	Comment
0. 00	Val ve1	On	
0. 10	Val ve1	Off	
1. 00	Val ve2	On	
1. 10	Val ve2	Off	

Detector I nformati on

Detector A:

Type FPD
State ON

Detector B:

Type FPD
State ON

Si gnal I nformati on

Save Data:

Both

Si gnal 1:

Si gnal Det. A
Data rate 20. 000 Hz.
Peakwidth 0. 013 mi n.
Start Time 0. 00 mi n.
Stop Time 650. 00 mi n.

Si gnal 2:

Si gnal Det. B
Data rate 20. 000 Hz.
Peakwidth 0. 013 mi n.
Start Time 0. 00 mi n.
Stop Time 650. 00 mi n.

DUALFPD8_SHORT
Method Information

Method: C:\GC\2019\ZEPP0\METHODS\DUALFPD8_SHORT.M
Modified: 8/6/2019 at 3:45:56 PM

Method Audit Trail

Operator : Shelby Hill
Date : 8/6/2019 3:45:55 PM
Change Info: This method was created at 8/6/2019 3:45:55 PM and based on
method C:\GC\2019\ZEPP0\QUARTER 2\ZEPP0P0460 2\DUALFPD8_SHORT.M

Operator : Shelby Hill
Date : 8/6/2019 3:45:56 PM
Change Info: Method saved. User comment: ""

Run Time Checklist

Pre-Run Cmd/Macro: on
Name: ValveController
Data Acquisition: on
Standard Data Analysis: off
Customized Data Analysis: off
Save GLP Data: off
Post-Run Cmd/Macro: off
Save Method with Data: off

Injection Source and Location

Injection Source: Valve
Injection Location: Dual

OVEN\DET

Runtime (min): 3.0

Zone Temperatures:

	State	Setpoint
Inl. A	OFF	175 C.
Inl. B	OFF	175 C.
Det. A	ON	200 C.
Det. B	ON	200 C.
Aux.	OFF	50 C.

Oven Zone:
Oven max 280 C.

DUALFPD8_SHORT

Equi b Time	1. 10 Mi n.
Oven State	ON
Cryo State	OFF
Ambi ent	25 C.
Cryo Bl ast	OFF

Oven Program:

		Setpoi nt		
Ini ti al Temp. :		50 C.		
Ini ti al Time:		3. 00 Mi n.		
Level	Rate (C/mi n.)	Fi nal Temp. (C)	Fi nal Time (mi n)	
1	0. 00	0	0. 00	

InletB Temperature Program Information

Oven Track: OFF

Temperature Program:

		Setpoi nt		
Ini ti al Temp. :		175 C		
Ini ti al Time:		650. 00 mi n.		
Level	Rate (C/mi n.)	Fi nal Temp. (C)	Fi nal Time (mi n)	
1	0	50	0. 00	
Total Program Time:		650. 00		

InletA Pressure Program Information

Constant Flow: On

Pressure: 4. 2 psi

Temperature: 60 C

Pressure Program:

		Setpoi nt		
Ini ti al Pres. :		0. 0 psi		
Ini ti al Time:		650. 00 mi n.		
Level	Rate (psi /mi n.)	Fi nal Pres. (psi)	Fi nal Time (mi n)	
1	0. 00	0. 0	0. 00	
2(A)	0. 00	0. 0	0. 00	
3(B)	0. 00	0. 0	0. 00	
Total Program Time:		650. 00		

GC Pressure Uni ts: psi

Entered Values:

Col umn Length:	60. 00	m.
Col umn Di ameter:	0. 530	mm.
Gas:	H2	
Vacuum Comp:	Off	

InletB Pressure Program Information

Constant Flow: Off

Pressure: 4. 2 psi

Temperature: 60 C.

Pressure Program:

		Setpoi nt
Ini ti al Pres. :		0. 0 psi
Ini ti al Time:		650. 00 mi n.

Page 2

DUALFPD8_SHORT

Level	Rate (psi /mi n.)	Final Pres. (psi)	Final Time (mi n)
1	0.00	0.0	0.00
2(A)	0.00	0.0	0.00
3(B)	0.00	0.0	0.00
Total Program Time:		650.00	

GC Pressure Uni ts: psi

Entered Values:

Column Length: 60.00 m.
 Column Di ameter: 0.530 mm.
 Gas: H2
 Vacuum Comp: Off

Inlet A Packed Column Information

Equati on: ---

Pressure-Fl ow Rel ati onshi p:

	Pres.	Fl ow(psi)	(ml /mi n)
1	---	0.0	
2	---	0.0	
3	---	0.0	

Last pressure cal i brati on: ---

Packed Column Fl ow Setti ng (ml /mi n): 0.0

Inlet B Packed Column Information

Equati on: ---

Pressure-Fl ow Rel ati onshi p:

	Pres.	Fl ow(psi)	(ml /mi n)
1	---	0.0	
2	---	0.0	
3	---	0.0	

Last pressure cal i brati on: ---

Packed Column Fl ow Setti ng (ml /mi n): 0.0

Purge Valve Settings

Purge A/B

	Ini t Value	On Time (Mi n.)	Off Time (Mi n.)
A (Val ve 3)	On	0.00	0.00
B (Val ve 4)	On	0.00	0.00

A - Spl i tless Inj ecti on: No
 B - Spl i tless Inj ecti on: No

Val ves/Rel ays Information

Ini ti al Setpoi nts:

5890 Val ves:

Val ve 1: Off
 Val ve 2: Off
 Val ve 3 (Purge A): On
 Val ve 4 (Purge B): On

DUALFPD8_SHORT

Val ve/Rel ay Ti me Tabl e:

Time	Name	State	Comment
0. 00	Val ve1	On	
0. 10	Val ve1	Off	
1. 00	Val ve2	On	
1. 10	Val ve2	Off	

Detector I nformati on

Detector A:

Type FPD
State ON

Detector B:

Type FPD
State ON

Si gnal I nformati on

Save Data:

Both

Si gnal 1:

Si gnal Det. A
Data rate 20. 000 Hz.
Peakwidth 0. 013 mi n.
Start Time 0. 00 mi n.
Stop Time 650. 00 mi n.

Si gnal 2:

Si gnal Det. B
Data rate 20. 000 Hz.
Peakwidth 0. 013 mi n.
Start Time 0. 00 mi n.
Stop Time 650. 00 mi n.

**This Is The Last Page
Of This Report.**

ENTHALPY ANALYTICAL REPORT: 0819-172B

Sample Collection Date: 08/22/2019

Analyses:

Hydrogen Cyanide (HCN) via Modified EPA Method 320

Tetra Tech, Inc.

3746 Mt. Diablo Blvd. Suite 300
Lafayette, CA 94549

Able Fire
Ridgeland, SC
Client Project # TT-01-128

Analytical Report (0819-172B)

Generic FTIR Analysis
Hydrogen cyanide



Enthalpy Analytical, LLC

Phone: (919) 850 - 4392 / Fax: (919) 850 - 9012 / www.enthalpy.com
800-1 Capitola Drive Durham, NC 27713-4385

I certify that to the best of my knowledge all analytical data presented in this report:

- Have been checked for completeness
- Are accurate, error-free, and legible
- Have been conducted in accordance with approved protocol, and that all deviations and analytical problems are summarized in the appropriate narrative(s)
- This analytical report was prepared in Portable Document Format (.PDF) and contains ??? pages.

Report Issued: mm/dd/yyyy



FTIR Summary of Results

Enthalpy Analytical

Company: Tetra Tech, Inc.

Job No.: 0819-172 - Generic FTIR Analysis

Client No.: TT-01-128

Summary - Hydrogen cyanide

Sample ID	Sample Concentration (ppmv wet)
ACF-AS-PAM1-082219 (Can #0853)	2.25 ND
ACF-AS-RES-2-24-082219 (Can #0810)	2.25 ND
ACF-AS-PAM2-082219 (Can #0849)	2.37 ND
ACF-AS-RES-1-24-082219 (Can #0857)	2.27 ND
ACF-AS-CAB1-day-082219 (Can #0798)	4.05 ND
ACF-AS-CAB2-day-082219 (Can #0852)	3.48 ND

FTIR Results

Enthalpy Analytical

Company: Tetra Tech, Inc.

Job No.: 0819-172 - Generic FTIR Analysis

Client No.: TT-01-128

ACF-AS-PAM1-082219 (Can #0853)

Date	Method	Filename	HCN (ppm)	SEC (ppm)
8/29/2019 8:32	0819-172_L_HCN_C	19_08_29_0832_20_643	0.943	0.543
8/29/2019 8:33	0819-172_L_HCN_C	19_08_29_0833_14_672	0.943	0.558
8/29/2019 8:34	0819-172_L_HCN_C	19_08_29_0834_08_591	0.943	0.564
8/29/2019 8:35	0819-172_L_HCN_C	19_08_29_0835_02_682	0.943	0.537
8/29/2019 8:35	0819-172_L_HCN_C	19_08_29_0835_56_695	0.943	0.536
8/29/2019 8:36	0819-172_L_HCN_C	19_08_29_0836_50_598	0.943	0.601
DF				
Average Conc. (ppm):			2.390	1.33

ACF-AS-RES-2-24-082219 (Can #0810)

Date	Method	Filename	HCN (ppm)	SEC (ppm)
8/29/2019 8:54	0819-172_L_HCN_C	19_08_29_0854_07_062	0.943	0.744
8/29/2019 8:55	0819-172_L_HCN_C	19_08_29_0855_01_091	0.943	0.781
8/29/2019 8:55	0819-172_L_HCN_C	19_08_29_0855_55_057	0.943	0.753
8/29/2019 8:56	0819-172_L_HCN_C	19_08_29_0856_48_945	0.943	0.732
8/29/2019 8:57	0819-172_L_HCN_C	19_08_29_0857_42_848	0.943	0.727
8/29/2019 8:58	0819-172_L_HCN_C	19_08_29_0858_36_752	0.943	0.683
DF				
Average Conc. (ppm):			2.382	1.75

ACF-AS-PAM2-082219 (Can #0849)

Date	Method	Filename	HCN (ppm)	SEC (ppm)
8/29/2019 9:03	0819-172_L_HCN_C	19_08_29_0903_58_611	0.943	0.518
8/29/2019 9:04	0819-172_L_HCN_C	19_08_29_0904_52_655	0.943	0.542
8/29/2019 9:05	0819-172_L_HCN_C	19_08_29_0905_46_606	0.943	0.505
8/29/2019 9:06	0819-172_L_HCN_C	19_08_29_0906_40_587	0.943	0.464
8/29/2019 9:07	0819-172_L_HCN_C	19_08_29_0907_34_553	0.943	0.486
8/29/2019 9:08	0819-172_L_HCN_C	19_08_29_0908_28_520	0.943	0.472
DF				
Average Conc. (ppm):			2.515	1.25

Enthalpy Analytical

Company: Tetra Tech, Inc.

Job No.: 0819-172 - Generic FTIR Analysis

Client No.: TT-01-128

ACF-AS-RES-1-24-082219 (Can #0857)

Date	Method	Filename	HCN (ppm)	SEC (ppm)
8/29/2019 9:12	0819-172_L_HCN_C	19_08_29_0912_19_289	0.943	0.423
8/29/2019 9:13	0819-172_L_HCN_C	19_08_29_0913_13_255	0.943	0.392
8/29/2019 9:14	0819-172_L_HCN_C	19_08_29_0914_07_206	0.943	0.394
8/29/2019 9:15	0819-172_L_HCN_C	19_08_29_0915_01_109	0.943	0.416
8/29/2019 9:15	0819-172_L_HCN_C	19_08_29_0915_54_950	0.943	0.425
8/29/2019 9:16	0819-172_L_HCN_C	19_08_29_0916_48_854	0.943	0.531
DF				
Average Conc. (ppm):			2.407	1.04

ACF-AS-CAB1-day-082219 (Can #0798)

Date	Method	Filename	HCN (ppm)	SEC (ppm)
8/29/2019 9:20	0819-172_L_HCN_C	19_08_29_0920_56_826	0.943	0.286
8/29/2019 9:21	0819-172_L_HCN_C	19_08_29_0921_50_714	0.943	0.309
8/29/2019 9:22	0819-172_L_HCN_C	19_08_29_0922_44_555	0.943	0.288
8/29/2019 9:23	0819-172_L_HCN_C	19_08_29_0923_38_474	0.943	0.311
8/29/2019 9:24	0819-172_L_HCN_C	19_08_29_0924_32_456	0.943	0.320
8/29/2019 9:25	0819-172_L_HCN_C	19_08_29_0925_26_360	0.943	0.332
DF				
Average Conc. (ppm):			4.292	1.32

ACF-AS-CAB2-day-082219 (Can #0852)

Date	Method	Filename	HCN (ppm)	SEC (ppm)
8/29/2019 9:29	0819-172_L_HCN_C	19_08_29_0929_27_051	0.943	0.319
8/29/2019 9:30	0819-172_L_HCN_C	19_08_29_0930_20_892	0.943	0.304
8/29/2019 9:31	0819-172_L_HCN_C	19_08_29_0931_14_796	0.943	0.289
8/29/2019 9:32	0819-172_L_HCN_C	19_08_29_0932_08_699	0.943	0.317
8/29/2019 9:33	0819-172_L_HCN_C	19_08_29_0933_02_634	0.943	0.281
8/29/2019 9:33	0819-172_L_HCN_C	19_08_29_0933_56_539	0.943	0.291
DF				
Average Conc. (ppm):			3.689	1.11

FTIR Narrative Summary

Enthalpy Analytical Narrative Summary

Sample Custody

Shannon Hulbert of Enthalpy Analytical, LLC of Durham, NC received six Summa canisters for analysis on August 24th, 2019 after being relinquished by Tetra Tech Inc.

Prior to, during, and after analysis, the samples were kept under lock with access only to authorized personnel of Enthalpy Analytical, LLC.

Sample Analysis

The samples were analyzed for hydrogen cyanide using the general analytical procedures in EPA Method 320, *Measurement of Vapor Phase Organic and Inorganic Emissions* (40 CFR, Part 63, Appendix A). While this is a source testing method, the analytical parameters of the method are easily adapted to canister sample analyses.

The FTIR gas cell was purged with nitrogen (N₂) gas and evacuated. Each can was then connected to the inlet of the FTIR gas cell, the valve on the can was opened, and the total gas pressure in the absorption cell was brought to a final pressure of ~15.0 psia, after which the FTIR gas cell was isolated. The FTIR absorption spectrum of the sample was recorded several times. Using the measured cell pressures after evacuations (P_i) and the final cell pressures after being filled with sample gas (P_f), the in-cell dilution factor for the sample was determined. Canisters had also been pressurized upon receipt prior to analysis. Canister pressurization multiplied by cell pressurization and the pre-cell dilution factor is calculated to give the total dilution factor (DF) of the sample. The average sample concentration or MDL was then multiplied by total dilution factor to determine the final sample concentration. Hydrogen cyanide was not identified above the minimum detection limits in any of the samples.

Analytes not detected above its minimum detectable concentration (MDC) in the samples are reported in the “Summary” section with “ND” flags. The reported MDC values were calculated using Equation 6.2.2 of the Addendum to Method 320.

Instrumentation

The FTIR system used for this test was a Midac I-1301 medium-resolution spectrometer equipped with a Michelson interferometer. The interferometer and detector were assembled by MIDAC Corporation (Westfield, MA). The nominal spectral resolution of the system was 0.5 cm⁻¹.

The instrument was equipped with a nominal 10-meter path length White cell, a zinc selenide (ZnSe) beamsplitter, zinc selenide (ZnSe) non-hygroscopic windows, and a mercury cadmium telluride (MCT) liquid nitrogen cooled detector. The inside walls of the FTIR absorption cell were of polished stainless steel to minimize interaction of the sample with the cell walls, and the mirrors were bare gold. The pressure of the FTIR absorption cell was monitored with a pressure transducer connected directly to the cell. The cell, with a volume of approximately 1.9 liters, was wrapped in an insulating blanket, and its temperature was monitored with a type J thermocouple.

Enthalpy Analytical Narrative Summary

(continued)

Data Analysis

All data were analyzed using AutoQuant Pro (Build 4.136, Midac Corporation). The spectra used for this analysis were obtained from spectra recorded by Enthalpy, Midac Corporation, or EPA. For all data analysis, the apodization was triangular and the baseline correction was linear. The “Method Map” section contains all the parameters required to reproduce the results of this testing. CO₂ results are quantified using reference spectra created at temperatures that do not match the sample spectra. The effect of this should be minimal, but additional uncertainty in CO₂ results may be present.

Data Review

Enthalpy subjects all the spectroscopic data and analytical results to several levels of review. First, the instrument operator (analyst) inspects the instrument’s outputs to ensure their appropriate performance during the sampling runs. Second, the analyst re-examines the sample spectra and the quantitative analytical results, and also spot-checks the analysis results by hand; these examinations include visual comparisons of the sample and reference spectra. Finally, an independent reviewer checks the final report for consistency.

General Reporting Notes

The following are general reporting notes that are applicable to all Enthalpy Analytical, LLC data reports, unless specifically noted otherwise.

- Any analysis which refers to the method as “**Type**” represents a planned deviation from the reference method. For instance a Hydrogen Sulfide assay from a Tedlar bag would be labeled as “EPA Method 16-Type” because Tedlar bags are not mentioned as one of the collection options in EPA Method 16.
- The acronym **MDL** represents the Minimum Detection Limit. Below this value the laboratory cannot determine the presence of the analyte of interest reliably.
- The acronym **LOQ** represents the Limit of Quantification. Below this value the laboratory cannot quantitate the analyte of interest within the criteria of the method.
- The acronym **ND** following a value indicates a non-detect or analytical result below the MDL.
- The letter **J** in the Qualifier or Flag column in the results indicates that the value is between the MDL and the LOQ. The laboratory can positively identify the analyte of interest as present, but the value should be considered an estimate.
- The letter **E** in the Qualifier or Flag column indicates an analytical result exceeding 100% of the highest calibration point. The associated value should be considered as an estimate.
- Sample results are presented ‘as measured’ for single injection methodologies, or an average value if multiple injections are made. If all injections are below the MDL, the sample is considered non-detect and the ND value is presented. If one, but not all, are below the MDL, the MDL value is used for any injections that are below the MDL. For example, if the MDL is 0.500 and LOQ is 1.00, and the instrument measures 0.355, 0.620, and 0.442 - the result reported is the average of 0.500, 0.620, and 0.500 - - - i.e. 0.540 with a J flag.
- When a spike recovery (Bag Spike, Collocated Spike Train, or liquid matrix spike) is being calculated, the native (unspiked) sample result is used in the calculations, as long as the value is above the MDL. If a sample is ND, then 0 is used as the native amount (not the MDL value).
- The acronym **DF** represents Dilution Factor. This number represents dilution of the sample during the preparation and/or analysis process. The analytical result taken from a laboratory instrument is multiplied by the DF to determine the final undiluted sample results.
- The addition of **MS** to the Sample ID represents a Matrix Spike. An aliquot of an actual sample is spiked with a known amount of analyte so that a percent recovery value can be determined. The MS analysis indicates what effect the sample matrix may have on the target analyte, i.e. whether or not anything in the sample matrix interferes with the analysis of the analyte(s).



General Reporting Notes

(continued)

- The addition of **MSD** to the Sample ID represents a Matrix Spike Duplicate. Prepared in the same manner as a MS, the use of duplicate matrix spikes allows further confirmation of laboratory quality by showing the consistency of results gained by performing the same steps multiple times.
- The addition of **LD** to the Sample ID represents a Laboratory Duplicate. The analyst prepares an additional aliquot of sample for testing and the results of the duplicate analysis are compared to the initial result. The result should have a difference value of within 10% of the initial result (if the results of the original analysis are greater than the LOQ).
- The addition of **AD** to the Sample ID represents an Alternate Dilution. The analyst prepares an additional aliquot at a different dilution factor (usually double the initial factor). This analysis helps confirm that no additional compound is present and coeluting or sharing absorbance with the analyte of interest, as they would have a different response/absorbance than the analyte of interest.
- The Sample ID **LCS** represents a Laboratory Control Sample. Clean matrix, similar to the client sample matrix, prepared and analyzed by the laboratory using the same reagents, spiking standards and procedures used for the client samples. The LCS is used to assess the control of the laboratory's analytical system. Whenever spikes are prepared for our client projects, two spikes are retained as LCSs. The LCSs are labeled with the associated project number and kept in-house at the appropriate temperature conditions. When the project samples are received for analysis, the LCSs are analyzed to confirm that the analyte could be recovered from the media, separate from the samples which were used on the project and which may have been affected by source matrix, sample collection, and/or sample transport.
- **Significant Figures:** Where the reported value is much greater than unity (1.00) in the units expressed, the number is rounded to a whole number of units, rather than to 3 significant figures. For example, a value of 10,456.45 ug catch is rounded to 10,456 ug. There are five significant digits displayed, but no confidence should be placed on more than two significant digits. In the case of small numbers, generally 3 significant figures are presented, but still only 2 should be used with confidence. Many neat materials are only certified to 3 digits, and as the mathematically correct final result is always 1 digit less than all its pre-cursors - 2 significant figures are what are most defensible.
- **Manual Integration:** The data systems used for processing will flag manually integrated peaks with an "M". There are several reasons a peak may be manually integrated. These reasons will be identified by the following two letter designations on sample chromatograms, if provided in the report. The peak was *not integrated* by the software "**NI**", the peak was *integrated incorrectly* by the software "**II**" or the *wrong peak* was integrated by the software "**WP**". These codes will accompany the analyst's manual integration stamp placed next to the compound name on the chromatogram.

Sample Custody



Chain of Custody Record

Page ____ of ____

Special Handling:

- ☐ Standard Turn Around Time
- ☒ Rush Turn Around Time - Date Needed ASAP
- All TATs Subject to Approval by Enthalpy Analytical
- All Bag/Can Samples Disposed of 1 Month from Receipt
- All Other Samples Disposed of 4 Months from Receipt

Sample(s) Collected by: <u>Chris Jones</u>	Project Number: <u>TT-01-128</u>	PO#: _____	For spiked or duplicate samples: please provide sample volumes for recovery calculations. For Particulates: please provide tare weights and/or condensed water volumes.
Client Name: <u>Tetra Tech</u>	Site Name: <u>Able Fire</u>	Telephone#: _____	
Project Manager: <u>Chris Jones</u>	Location: <u>Ridgeland, SC</u>	Email: _____	

Special Instructions:						Sample Containers							Analyses:							Notes:		
A=Air T=H2SO4 2=NaOH W=Water O=Other X=XAD C=Charcoal SG=Silica Gel						# of VOA Vials	# of Glass	# of Plastic	# of Bags	# of Canisters	# of Tubes	# Other	VOCs	H2S	HCN							
Sample ID	Date	Time	Sample Volume	Type	Matrix																	
ACF-AS-PAM1-082219	8/22/19	1135	6L	G	A					1			✓	✓	✓							Can # 0853
ACF-AS-RES-2-24-082219	8/22/19	1128	6L	G	A					1			✓	✓	✓							Can # 0810
ACF-AS-PAM2-082219	8/22/19	1125	6L	G	A					1			✓	✓	✓							Can # 0849
ACF-AS-RES-2-24-082219	8/22/19	1121	6L	G	A					1			✓	✓	✓							Can # 0857
ACF-AS-CAB2-day-082219	8/22/19	1039	6L	G	A					1			✓	✓	✓							Can # 0798
ACF-AS-CAB2-day-082219	8/22/19	1034	6L	G	A					1			✓	✓	✓							Can # 0852

Relinquished By: <u>[Signature]</u>	Date: <u>8/23/19</u>	Received By: <u>[Signature]</u>	Date: <u>8/24/19</u>	Time: <u>10:00</u>	Sample Condition Upon Receipt:
					<input type="checkbox"/> Iced <input type="checkbox"/> Ambient <input type="checkbox"/> °C
					<input type="checkbox"/> Iced <input type="checkbox"/> Ambient <input type="checkbox"/> °C
					<input type="checkbox"/> Iced <input type="checkbox"/> Ambient <input type="checkbox"/> °C

FTIR QC

Enthalpy Analytical

Company: Tetra Tech, Inc.

Job No.: 0819-172 - Generic FTIR Analysis

Client No.: TT-01-128

Minimum Detectable Concentration

	HCN (ppm)	SEC (ppm)
ACF-AS-PAM1 (Can #0853)		0.557
ACF-AS-RES-2-24 (Can #0810)		0.737
ACF-AS-PAM2 (Can #0849)		0.498
ACF-AS-RES-1-24 (Can #0857)		0.430
ACF-AS-CAB1-day (Can #0798)		0.308
ACF-AS-CAB2-day (Can #0852)		0.300
Average	0.472	
MDC(ppm):	0.943	

Enthalpy Analytical

Company: Tetra Tech, Inc.

Job No.: 0819-172 - Generic FTIR Analysis

Client No.: TT-01-128

Dilution Factor

Can #	Sample ID	Pi	Pf	DF1	DF2	DF3	DF Total
0853	ACF-AS-PAM1	2.53	15.19	1.200	1.992	1	2.390
0810	ACF-AS-RES-2-24	2.60	15.25	1.206	1.976	1	2.382
0849	ACF-AS-PAM2	2.57	15.23	1.203	2.091	1	2.515
0857	ACF-AS-RES-1-24	2.55	15.49	1.197	2.011	1	2.407
0798	ACF-AS-CAB1-day	2.55	15.27	1.200	3.575	1	4.292
0852	ACF-AS-CAB2-day	2.56	15.53	1.197	3.081	1	3.689

DF1 equals the in cell dilution factor.

DF2 equals the canister dilution factor.

DF3 equals the tedlar bag dilution made from the canisters.

DF total=DF1xDF2xDF3

FTIR Method Map

CTS Method Map

Overrides: T(C)=121: L(ppm)=101.3

Method Name: 0819-172_L_CTS_A

Method Path: E:\FTIR\2019\Q3\0819-172 Tetra Tech\Methods\0819-172_L_CTS_A\0819-172_L_CTS_A.aq4

Method Type: AutoQuant 4.0

Linear Analysis Mode

MethodParameters

Wavenumber range: 650.00 - 4500.00 cm-1

Default Pathlength = 100.1000 M

Gain = 0.000000

Apodization = Triangle

Phase Correction = Mertz

Resolution = 0.5 cm-1

Baseline Correction: Single Linear

Exclusion Criterion: 2500.000000

Compound: ethylene

Description:

Molecular Weight: 0.00

Alarms: Disabled

Primary Spectrum: ETYH5A.SPC

Reference Concentration: 206.6000 ppm-m

Reference Pathlength: 1.0000 M

Reference Pressure: 1.0000 atm

Reference Temperature: 121.00 C

Region #1: 870.00 - 1040.00 cm-1

Analye Method Map

Overrides: T(C)=121: L(m)=8.51

Method Name: 0819-172_L_HCN_C

Method Path: N:\FTIR\2019\Q3\0819-172 Tetra Tech\Methods\0819-172_L_HCN_C\0819-172_L_HCN_C.aq4

Method Type: AutoQuant 4.0

Linear Analysis Mode

MethodParameters

Wavenumber range: 650.00 - 4500.00 cm⁻¹

Default Pathlength = 8.9400 M

Gain = 0.000000

Apodization = Triangle

Phase Correction = Mertz

Resolution = 0.5 cm⁻¹

Baseline Correction: Single

Exclusion Criterion: 2500.000000

Compound: SF6

Description:

Molecular Weight: 0.00

Alarms: Disabled

Primary Spectrum: SF6_T1_3-03ppm_121_14-70psi_9-52m.SPC

Reference Concentration: 28.8456 ppm-m

Reference Pathlength: 9.5200 M

Reference Pressure: 1.0003 atm

Reference Temperature: 121.00 C

Region #1: 935.00 - 955.00 cm⁻¹

Compound: HCN

Description:

Molecular Weight: 0.00

Alarms: Disabled

Spectrum: HCN-L-T-121-8_39-25_0-1_01.SPC

Reference Concentration: 209.7500 ppm-m

Reference Pathlength: 8.3900 M

Reference Pressure: 1.0098 atm

Reference Temperature: 121.00 C

Region #1: 3339.00 - 3363.00 cm⁻¹

Spectrum: HCN-L-T-121-8_39-50_0-1_01.SPC

Reference Concentration: 419.5000 ppm-m

Reference Pathlength: 8.3900 M

Reference Pressure: 1.0098 atm
Reference Temperature: 121.00 C
Region #1: 3339.00 - 3363.00 cm-1
Spectrum: HCN-L-T-121-8_39-75_0-1_01.SPC
Reference Concentration: 629.2500 ppm-m
Reference Pathlength: 8.3900 M
Reference Pressure: 1.0016 atm
Reference Temperature: 121.00 C
Region #1: 3339.00 - 3363.00 cm-1
Spectrum: HCN-L-T-121-8_39-125-1_01.SPC
Reference Concentration: 1048.7500 ppm-m
Reference Pathlength: 8.3900 M
Reference Pressure: 0.9989 atm
Reference Temperature: 121.00 C
Region #1: 3339.00 - 3363.00 cm-1
Primary Spectrum: HCN-L-T-121-8_39-250-1_01.SPC
Reference Concentration: 2097.5000 ppm-m
Reference Pathlength: 8.3900 M
Reference Pressure: 1.0071 atm
Reference Temperature: 121.00 C
Region #1: 3339.00 - 3363.00 cm-1

Compound: H2O

Description:
Molecular Weight: 0.00
Alarms: Disabled
Primary Spectrum: 19_08_29_0943_13_885.abs
Reference Concentration: 1.0013 ppm-m
Reference Pathlength: 8.9400 M
Reference Pressure: 1.0479 atm
Reference Temperature: 121.00 C
Region #1: 3339.19 - 3352.75 cm-1

Logbook Notes

From Page No. _____

Instrument: L Midac I-1301 S/W 532

PDC: L Midac E-0177-3 S/W 151

Transducer: Honeywell SPT V0030 PA FWO8

Ethylene = 11353870

Airgas Exp 116.21

1013 ppm bal N₂

filename	Time	cell T °C	cell P initial	cell P final	SL	B6	notes
19-08-29-0801-01-953	8:04	121	—	14.64	128	1	B6 taken
	8:08	121	—	14.63	16	1	CTS Ety
19-08-29-0815-26-312	8:15	121	—	14.71	50	1	N ₂ blank
	8:22	121	2.53	15.14	50	1	Can 0853
	8:34	121	2.60	15.23	50	1	Can 0816
	9:03	121	2.57	15.23	50	1	Can 0844
	9:12	121	2.55	15.44	50	1	Can 0857
	9:20	121	2.55	15.27	50	1	Can 0798
	9:29	121	2.56	15.53	50	1	Can 0852
	9:40	121	—	15.40	50	1	Ambient H ₂ O (3447 @ 400)
	9:45	121	—	15.43	50	1	Ambient H ₂ O (3447 @ 900)
	9:48	121	—	14.67	16	1	CTS Ety

ST 6 8-24-19

To Page No. _____

Witnessed & Understood by me,

Date

Invented by:

PDL

Date

8-29-19

Recorded by:

[Signature]

8-24-19

**This Is The Last Page
Of This Report.**

ENTHALPY ANALYTICAL REPORT: 0819-232

Sample Collection Date: 08/31/2019

Analyses:

Volatile Organic Compounds (VOC) via EPA Method Toxic Organics (TO)-15

Tetra Tech, Inc.

3746 Mt. Diablo Blvd. Suite 300
Lafayette, CA 94549

Able Contracting

Ridgeland, SC
Client Project #103x09077-01128

Analytical Report (0819-232)

EPA Method TO-15

TO-15 Compound List



Enthalpy Analytical, LLC

Phone: (919) 850 - 4392 / Fax: (919) 850 - 9012 / www.enthalpy.com
800-1 Capitola Drive Durham, NC 27713-4385

I certify that to the best of my knowledge all analytical data presented in this report:

- Have been checked for completeness
- Are accurate, error-free, and legible
- Have been conducted in accordance with approved protocol, and that all deviations and analytical problems are summarized in the appropriate narrative(s)

This analytical report was prepared in Portable Document Format (.PDF) and contains ??? pages.

Report Issued: xx/xx/xxxx



Results

Sample Name : ACF-AS-402SCH-083119

Sample Info : 0819-232; Can #0809; 500mL load

Data File : X1903395.D

Dilution : 1

Pressurization Factor : 1.720

Acquisition Date : 2019-09-04 20:01:28

Instrument Method : TO15-SCN.M

Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
Propylene	0.317	0.0660	0.0602	0.546	0.114	0.104	
Freon 12 (CCI2F2)	0.497	0.0671	0.0602	2.46	0.332	0.298	
Freon 114 (C2CI2F4)	ND	0.0689	0.0602	ND	0.481	0.421	
Chloromethane	0.722	0.0671	0.0602	1.49	0.139	0.124	
Chloroethene (Vinyl chloride)	ND	0.0692	0.0602	ND	0.177	0.154	
1,3-Butadiene	ND	0.0672	0.0602	ND	0.149	0.133	
Bromomethane	ND	0.0680	0.0602	ND	0.264	0.234	
Chloroethane	ND	0.0694	0.0602	ND	0.183	0.159	
Bromoethene (Vinyl bromide)	ND	0.0686	0.0602	ND	0.300	0.263	
Freon 11 (CCI3F)	0.237	0.0714	0.0602	1.33	0.401	0.338	
Ethanol	1.27	0.172	0.0688	2.39	0.324	0.130	
Acrolein	0.463	0.0683	0.0602	1.06	0.157	0.138	m
Freon 113 (C2CI3F3)	0.0714	0.0685	0.0602	0.547	0.525	0.461	
1,1-Dichloroethene	ND	0.0689	0.0602	ND	0.273	0.239	
Acetone	5.05	0.0691	0.0602	12.0	0.164	0.143	
Carbon disulfide	0.123	0.0691	0.0602	0.384	0.215	0.187	
Isopropyl alcohol	0.386	0.0691	0.0602	0.949	0.170	0.148	
Allyl chloride (3-chloropropene)	ND	0.0692	0.0602	ND	0.217	0.188	
Acetonitrile	0.265	0.0691	0.0602	0.445	0.116	0.101	
Methylene chloride	ND	0.174	0.174	ND	0.605	0.605	
trans-1,2-Dichloroethene	ND	0.0701	0.0602	ND	0.278	0.239	
Methyl tert-butyl ether	ND	0.0705	0.0602	ND	0.254	0.217	
Acrylonitrile	ND	0.0703	0.0602	ND	0.153	0.131	
Hexane	0.0956	0.0696	0.0602	0.337	0.245	0.212	
1,1-Dichloroethane	ND	0.0678	0.0602	ND	0.274	0.244	
Vinyl acetate	ND	0.0700	0.0602	ND	0.246	0.212	
cis-1,2-Dichloroethene	ND	0.0693	0.0602	ND	0.275	0.239	
Methyl ethyl ketone (2-Butanone)	0.819	0.0699	0.0602	2.42	0.206	0.178	
Ethyl acetate	0.693	0.0693	0.0602	2.50	0.250	0.217	
Chloroform	ND	0.0696	0.0602	ND	0.340	0.294	
Tetrahydrofuran	ND	0.0694	0.0602	ND	0.205	0.178	
1,1,1-Trichloroethane	ND	0.0685	0.0602	ND	0.374	0.328	
Cyclohexane	ND	0.0700	0.0602	ND	0.241	0.207	
Carbon tetrachloride	0.0808	0.0696	0.0602	0.508	0.438	0.379	
Benzene	0.0966	0.0687	0.0602	0.309	0.219	0.192	
2,2,4-trimethylpentane	ND	0.0705	0.0602	ND	0.329	0.281	
1,2-Dichloroethane	ND	0.0703	0.0602	ND	0.285	0.244	
Heptane	ND	0.0691	0.0602	ND	0.283	0.247	
Trichloroethene	ND	0.0691	0.0602	ND	0.371	0.323	
1,2-Dichloropropane	ND	0.0703	0.0602	ND	0.325	0.278	
Methyl methacrylate	ND	0.0713	0.0602	ND	0.292	0.247	
1,4-Dioxane	ND	0.0696	0.0602	ND	0.251	0.217	
Bromodichloromethane	ND	0.0683	0.0602	ND	0.458	0.403	
cis-1,3-Dichloropropene	ND	0.0676	0.0602	ND	0.307	0.273	
Methyl isobutyl ketone	0.0606	0.0709	0.0602	0.248	0.291	0.247	m J
Toluene	0.342	0.0699	0.0602	1.29	0.263	0.227	
trans-1,3-Dichloropropene	ND	0.0699	0.0602	ND	0.317	0.273	
1,1,2-Trichloroethane	ND	0.0689	0.0602	ND	0.376	0.328	
Tetrachloroethene	ND	0.0694	0.0602	ND	0.471	0.408	
2-Hexanone (Methyl butyl ketone)	ND	0.0699	0.0602	ND	0.286	0.247	
Dibromochloromethane	ND	0.0679	0.0602	ND	0.578	0.513	
1,2-Dibromoethane	ND	0.0697	0.0602	ND	0.535	0.463	
Chlorobenzene	ND	0.0708	0.0602	ND	0.326	0.277	
Ethylbenzene	ND	0.0677	0.0602	ND	0.294	0.261	
1,1,1,2-Tetrachloroethane	ND	0.0688	0.0602	ND	0.472	0.413	
m-/p-Xylenes	0.0818	0.0697	0.0602	0.355	0.303	0.261	

Sample Name : ACF-AS-402SCH-083119

Sample Info : 0819-232; Can #0809; 500mL load

Data File : X1903395.D

Dilution : 1

Pressurization Factor : 1.720

Acquisition Date : 2019-09-04 20:01:28

Instrument Method : TO15-SCN.M

Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
o-Xylene	ND	0.0687	0.0602	ND	0.298	0.261	
Styrene	ND	0.0670	0.0602	ND	0.285	0.256	
Bromoform	ND	0.0691	0.0602	ND	0.714	0.622	
1,1,2,2-Tetrachloroethane	ND	0.0688	0.0602	ND	0.472	0.413	
4-Ethyltoluene	ND	0.0693	0.0602	ND	0.341	0.296	
2-Chlorotoluene	ND	0.0693	0.0602	ND	0.359	0.312	
1,3,5-Trimethylbenzene	ND	0.0690	0.0602	ND	0.339	0.296	
1,2,4-Trimethylbenzene	ND	0.0684	0.0602	ND	0.336	0.296	
1,3-Dichlorobenzene	ND	0.0694	0.0602	ND	0.417	0.362	
1,4-Dichlorobenzene	ND	0.0690	0.0602	ND	0.415	0.362	
Benzyl chloride	ND	0.0687	0.0602	ND	0.355	0.312	
1,2-Dichlorobenzene	ND	0.0701	0.0602	ND	0.422	0.362	
1,2,4-Trichlorobenzene	ND	0.0698	0.0602	ND	0.518	0.447	
Hexachlorobutadiene	ND	0.0689	0.0602	ND	0.735	0.642	
Naphthalene	ND	0.0712	0.0602	ND	0.373	0.316	
1-Bromopropane	ND	0.0680	0.0602	ND	0.342	0.303	
1-Octene	ND	0.0673	0.0602	ND	0.309	0.276	
n-Octane	ND	0.0689	0.0602	ND	0.322	0.281	
Isopropylbenzene	ND	0.0698	0.0602	ND	0.343	0.296	
n-Propylbenzene	ND	0.0700	0.0602	ND	0.344	0.296	

Internal Standards	Response	Retention Time (min)	Concentration (PPBV)	Flag *
Bromochloromethane (IS)	511,902	11.93	5.00	PASS
1,4-Difluorobenzene (IS)	1,960,346	13.69	5.04	PASS
Chlorobenzene-d5 (IS)	1,617,089	17.86	4.80	PASS

(ND) = Not Detected

* (J) = Below Calibration Range, (E) = Above Calibration Range, (m) = Manual Integration

IS Acceptance Criteria: RT +/- 20 sec, Response +/- 40%

Sample Name : ACF-AS-402SCH-083119 DUP

Sample Info : 08819-232; Can #0708; 500mL load

Data File : X1903402.D

Dilution : 1

Pressurization Factor : 1.754

Acquisition Date : 2019-09-05 11:22:38

Instrument Method : TO15-SCN.M

Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
Propylene	0.166	0.0673	0.0614	0.285	0.116	0.106	
Freon 12 (CCI2F2)	0.492	0.0685	0.0614	2.43	0.339	0.304	
Freon 114 (C2CI2F4)	ND	0.0702	0.0614	ND	0.491	0.429	
Chloromethane	0.645	0.0684	0.0614	1.33	0.141	0.127	
Chloroethene (Vinyl chloride)	ND	0.0706	0.0614	ND	0.180	0.157	
1,3-Butadiene	ND	0.0685	0.0614	ND	0.152	0.136	
Bromomethane	ND	0.0694	0.0614	ND	0.269	0.238	
Chloroethane	ND	0.0707	0.0614	ND	0.187	0.162	
Bromoethene (Vinyl bromide)	ND	0.0699	0.0614	ND	0.306	0.269	
Freon 11 (CCI3F)	0.229	0.0728	0.0614	1.29	0.409	0.345	
Ethanol	2.27	0.175	0.0702	4.29	0.330	0.132	
Acrolein	0.278	0.0697	0.0614	0.638	0.160	0.141	
Freon 113 (C2CI3F3)	0.0737	0.0698	0.0614	0.565	0.535	0.470	
1,1-Dichloroethene	ND	0.0702	0.0614	ND	0.278	0.243	
Acetone	3.00	0.0705	0.0614	7.12	0.167	0.146	
Carbon disulfide	0.0670	0.0704	0.0614	0.209	0.219	0.191	J
Isopropyl alcohol	0.443	0.0704	0.0614	1.09	0.173	0.151	
Allyl chloride (3-chloropropene)	ND	0.0706	0.0614	ND	0.221	0.192	
Acetonitrile	0.206	0.0705	0.0614	0.346	0.118	0.103	
Methylene chloride	ND	0.178	0.178	ND	0.617	0.617	
trans-1,2-Dichloroethene	ND	0.0715	0.0614	ND	0.283	0.243	
Methyl tert-butyl ether	ND	0.0718	0.0614	ND	0.259	0.221	
Acrylonitrile	ND	0.0717	0.0614	ND	0.156	0.133	
Hexane	ND	0.0709	0.0614	ND	0.250	0.216	
1,1-Dichloroethane	ND	0.0691	0.0614	ND	0.280	0.248	
Vinyl acetate	ND	0.0714	0.0614	ND	0.251	0.216	
cis-1,2-Dichloroethene	ND	0.0707	0.0614	ND	0.280	0.243	
Methyl ethyl ketone (2-Butanone)	0.714	0.0713	0.0614	2.11	0.210	0.181	
Ethyl acetate	0.289	0.0707	0.0614	1.04	0.255	0.221	
Chloroform	ND	0.0709	0.0614	ND	0.346	0.300	
Tetrahydrofuran	ND	0.0708	0.0614	ND	0.209	0.181	
1,1,1-Trichloroethane	ND	0.0698	0.0614	ND	0.381	0.335	
Cyclohexane	ND	0.0714	0.0614	ND	0.246	0.211	
Carbon tetrachloride	0.0817	0.0710	0.0614	0.514	0.447	0.386	
Benzene	ND	0.0700	0.0614	ND	0.224	0.196	
2,2,4-trimethylpentane	ND	0.0719	0.0614	ND	0.336	0.287	
1,2-Dichloroethane	ND	0.0717	0.0614	ND	0.290	0.248	
Heptane	ND	0.0705	0.0614	ND	0.289	0.252	
Trichloroethene	ND	0.0704	0.0614	ND	0.379	0.330	
1,2-Dichloropropane	ND	0.0717	0.0614	ND	0.331	0.284	
Methyl methacrylate	ND	0.0728	0.0614	ND	0.298	0.251	
1,4-Dioxane	ND	0.0709	0.0614	ND	0.256	0.221	
Bromodichloromethane	ND	0.0697	0.0614	ND	0.467	0.411	
cis-1,3-Dichloropropene	ND	0.0690	0.0614	ND	0.313	0.279	
Methyl isobutyl ketone	0.125	0.0723	0.0614	0.513	0.296	0.251	
Toluene	0.157	0.0713	0.0614	0.590	0.269	0.231	
trans-1,3-Dichloropropene	ND	0.0713	0.0614	ND	0.324	0.279	
1,1,2-Trichloroethane	ND	0.0703	0.0614	ND	0.384	0.335	
Tetrachloroethene	ND	0.0708	0.0614	ND	0.480	0.416	
2-Hexanone (Methyl butyl ketone)	0.0778	0.0713	0.0614	0.319	0.292	0.251	
Dibromochloromethane	ND	0.0692	0.0614	ND	0.590	0.523	
1,2-Dibromoethane	ND	0.0711	0.0614	ND	0.546	0.472	
Chlorobenzene	ND	0.0722	0.0614	ND	0.332	0.283	
Ethylbenzene	ND	0.0690	0.0614	ND	0.300	0.267	
1,1,1,2-Tetrachloroethane	ND	0.0702	0.0614	ND	0.482	0.421	
m-/p-Xylenes	0.0716	0.0711	0.0614	0.311	0.309	0.267	

Sample Name : ACF-AS-402SCH-083119 DUP

Sample Info : 08819-232; Can #0708; 500mL load

Data File : X1903402.D

Dilution : 1

Pressurization Factor : 1.754

Acquisition Date : 2019-09-05 11:22:38

Instrument Method : TO15-SCN.M

Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
o-Xylene	ND	0.0701	0.0614	ND	0.304	0.267	
Styrene	ND	0.0683	0.0614	ND	0.291	0.262	
Bromoform	ND	0.0704	0.0614	ND	0.728	0.635	
1,1,2,2-Tetrachloroethane	ND	0.0702	0.0614	ND	0.482	0.421	
4-Ethyltoluene	ND	0.0707	0.0614	ND	0.347	0.302	
2-Chlorotoluene	ND	0.0707	0.0614	ND	0.366	0.318	
1,3,5-Trimethylbenzene	ND	0.0704	0.0614	ND	0.346	0.302	
1,2,4-Trimethylbenzene	ND	0.0697	0.0614	ND	0.343	0.302	
1,3-Dichlorobenzene	ND	0.0708	0.0614	ND	0.426	0.369	
1,4-Dichlorobenzene	ND	0.0704	0.0614	ND	0.423	0.369	
Benzyl chloride	ND	0.0700	0.0614	ND	0.363	0.318	
1,2-Dichlorobenzene	ND	0.0715	0.0614	ND	0.430	0.369	
1,2,4-Trichlorobenzene	ND	0.0712	0.0614	ND	0.528	0.456	
Hexachlorobutadiene	ND	0.0703	0.0614	ND	0.750	0.655	
Naphthalene	ND	0.0726	0.0614	ND	0.381	0.322	
1-Bromopropane	ND	0.0693	0.0614	ND	0.349	0.309	
1-Octene	ND	0.0686	0.0614	ND	0.315	0.282	
n-Octane	ND	0.0703	0.0614	ND	0.328	0.287	
Isopropylbenzene	ND	0.0712	0.0614	ND	0.350	0.302	
n-Propylbenzene	ND	0.0714	0.0614	ND	0.351	0.302	

Internal Standards	Response	Retention Time (min)	Concentration (PPBV)	Flag *
Bromochloromethane (IS)	518,603	11.93	5.00	PASS
1,4-Difluorobenzene (IS)	1,968,596	13.69	5.04	PASS
Chlorobenzene-d5 (IS)	1,627,192	17.86	4.80	PASS

(ND) = Not Detected

* (J) = Below Calibration Range, (E) = Above Calibration Range, (m) = Manual Integration

IS Acceptance Criteria: RT +/- 20 sec, Response +/- 40%

Sample Name : ACF-AS-352SCH-083119

Sample Info : 08819-232; Can #0780; 500mL load

Data File : X1903403.D

Dilution : 1

Pressurization Factor : 1.732

Acquisition Date : 2019-09-05 12:18:42

Instrument Method : TO15-SCN.M

Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
Propylene	0.227	0.0664	0.0606	0.390	0.114	0.104	
Freon 12 (CCl2F2)	0.494	0.0676	0.0606	2.44	0.334	0.300	
Freon 114 (C2Cl2F4)	ND	0.0693	0.0606	ND	0.485	0.424	
Chloromethane	0.685	0.0675	0.0606	1.41	0.139	0.125	
Chloroethene (Vinyl chloride)	ND	0.0697	0.0606	ND	0.178	0.155	
1,3-Butadiene	ND	0.0677	0.0606	ND	0.150	0.134	
Bromomethane	ND	0.0685	0.0606	ND	0.266	0.235	
Chloroethane	ND	0.0698	0.0606	ND	0.184	0.160	
Bromoethene (Vinyl bromide)	ND	0.0691	0.0606	ND	0.302	0.265	
Freon 11 (CCl3F)	0.232	0.0719	0.0606	1.30	0.404	0.341	
Ethanol	20.7	0.173	0.0693	39.1	0.326	0.131	
Acrolein	0.327	0.0688	0.0606	0.751	0.158	0.139	m
Freon 113 (C2Cl3F3)	0.0758	0.0689	0.0606	0.581	0.528	0.465	
1,1-Dichloroethene	ND	0.0693	0.0606	ND	0.275	0.240	
Acetone	6.46	0.0696	0.0606	15.3	0.165	0.144	
Carbon disulfide	0.143	0.0696	0.0606	0.444	0.217	0.189	
Isopropyl alcohol	0.382	0.0696	0.0606	0.939	0.171	0.149	
Allyl chloride (3-chloropropene)	ND	0.0697	0.0606	ND	0.218	0.190	
Acetonitrile	0.262	0.0696	0.0606	0.439	0.117	0.102	
Methylene chloride	ND	0.175	0.175	ND	0.609	0.609	
trans-1,2-Dichloroethene	ND	0.0706	0.0606	ND	0.280	0.240	
Methyl tert-butyl ether	ND	0.0709	0.0606	ND	0.256	0.219	
Acrylonitrile	ND	0.0708	0.0606	ND	0.154	0.132	
Hexane	0.102	0.0700	0.0606	0.359	0.247	0.214	m
1,1-Dichloroethane	ND	0.0682	0.0606	ND	0.276	0.245	
Vinyl acetate	ND	0.0705	0.0606	ND	0.248	0.213	
cis-1,2-Dichloroethene	ND	0.0698	0.0606	ND	0.277	0.240	
Methyl ethyl ketone (2-Butanone)	0.278	0.0704	0.0606	0.820	0.208	0.179	
Ethyl acetate	0.640	0.0698	0.0606	2.30	0.251	0.218	
Chloroform	ND	0.0700	0.0606	ND	0.342	0.296	
Tetrahydrofuran	ND	0.0699	0.0606	ND	0.206	0.179	
1,1,1-Trichloroethane	ND	0.0689	0.0606	ND	0.376	0.331	
Cyclohexane	ND	0.0705	0.0606	ND	0.243	0.209	
Carbon tetrachloride	0.0838	0.0701	0.0606	0.527	0.441	0.381	
Benzene	0.104	0.0691	0.0606	0.332	0.221	0.194	
2,2,4-trimethylpentane	ND	0.0710	0.0606	ND	0.332	0.283	
1,2-Dichloroethane	ND	0.0708	0.0606	ND	0.287	0.245	
Heptane	0.0867	0.0696	0.0606	0.355	0.285	0.248	
Trichloroethene	ND	0.0696	0.0606	ND	0.374	0.326	
1,2-Dichloropropane	ND	0.0708	0.0606	ND	0.327	0.280	
Methyl methacrylate	ND	0.0718	0.0606	ND	0.294	0.248	
1,4-Dioxane	ND	0.0700	0.0606	ND	0.252	0.218	
Bromodichloromethane	ND	0.0688	0.0606	ND	0.461	0.406	
cis-1,3-Dichloropropene	ND	0.0681	0.0606	ND	0.309	0.275	
Methyl isobutyl ketone	ND	0.0714	0.0606	ND	0.293	0.248	
Toluene	0.375	0.0704	0.0606	1.41	0.265	0.228	
trans-1,3-Dichloropropene	ND	0.0704	0.0606	ND	0.319	0.275	
1,1,2-Trichloroethane	ND	0.0694	0.0606	ND	0.379	0.331	
Tetrachloroethene	ND	0.0699	0.0606	ND	0.474	0.411	
2-Hexanone (Methyl butyl ketone)	ND	0.0704	0.0606	ND	0.288	0.248	
Dibromochloromethane	ND	0.0684	0.0606	ND	0.582	0.516	
1,2-Dibromoethane	ND	0.0702	0.0606	ND	0.539	0.466	
Chlorobenzene	ND	0.0713	0.0606	ND	0.328	0.279	
Ethylbenzene	ND	0.0682	0.0606	ND	0.296	0.263	
1,1,1,2-Tetrachloroethane	ND	0.0693	0.0606	ND	0.476	0.416	
m-/p-Xylenes	0.131	0.0702	0.0606	0.567	0.305	0.263	

Sample Name : ACF-AS-352SCH-083119

Sample Info : 08819-232; Can #0780; 500mL load

Data File : X1903403.D

Dilution : 1

Pressurization Factor : 1.732

Acquisition Date : 2019-09-05 12:18:42

Instrument Method : TO15-SCN.M

Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
o-Xylene	ND	0.0692	0.0606	ND	0.301	0.263	
Styrene	ND	0.0675	0.0606	ND	0.287	0.258	
Bromoform	ND	0.0696	0.0606	ND	0.719	0.627	
1,1,2,2-Tetrachloroethane	ND	0.0693	0.0606	ND	0.476	0.416	
4-Ethyltoluene	ND	0.0698	0.0606	ND	0.343	0.298	
2-Chlorotoluene	ND	0.0698	0.0606	ND	0.361	0.314	
1,3,5-Trimethylbenzene	ND	0.0695	0.0606	ND	0.342	0.298	
1,2,4-Trimethylbenzene	ND	0.0689	0.0606	ND	0.339	0.298	
1,3-Dichlorobenzene	ND	0.0699	0.0606	ND	0.420	0.364	
1,4-Dichlorobenzene	ND	0.0695	0.0606	ND	0.418	0.364	
Benzyl chloride	ND	0.0691	0.0606	ND	0.358	0.314	
1,2-Dichlorobenzene	ND	0.0706	0.0606	ND	0.424	0.364	
1,2,4-Trichlorobenzene	ND	0.0703	0.0606	ND	0.522	0.450	
Hexachlorobutadiene	ND	0.0694	0.0606	ND	0.740	0.647	
Naphthalene	ND	0.0717	0.0606	ND	0.376	0.318	
1-Bromopropane	ND	0.0684	0.0606	ND	0.344	0.305	
1-Octene	0.0824	0.0678	0.0606	0.378	0.311	0.278	m
n-Octane	ND	0.0694	0.0606	ND	0.324	0.283	
Isopropylbenzene	ND	0.0703	0.0606	ND	0.346	0.298	
n-Propylbenzene	ND	0.0705	0.0606	ND	0.346	0.298	

Internal Standards	Response	Retention Time (min)	Concentration (PPBV)	Flag *
Bromochloromethane (IS)	523,447	11.93	5.00	PASS
1,4-Difluorobenzene (IS)	1,996,917	13.69	5.04	PASS
Chlorobenzene-d5 (IS)	1,648,905	17.86	4.80	PASS

(ND) = Not Detected

* (J) = Below Calibration Range, (E) = Above Calibration Range, (m) = Manual Integration

IS Acceptance Criteria: RT +/- 20 sec, Response +/- 40%

Sample Name : ACF-AS-FORCON-083119
Sample Info : 08819-232; Can #0786; 500mL load
Data File : X1903404.D
Dilution : 1
Pressurization Factor : 1.711
Acquisition Date : 2019-09-05 13:14:54
Instrument Method : TO15-SCN.M
Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
Propylene	0.201	0.0656	0.0599	0.346	0.113	0.103	
Freon 12 (CCl2F2)	0.505	0.0668	0.0599	2.50	0.330	0.296	
Freon 114 (C2Cl2F4)	ND	0.0685	0.0599	ND	0.479	0.419	
Chloromethane	0.666	0.0667	0.0599	1.37	0.138	0.124	
Chloroethene (Vinyl chloride)	ND	0.0689	0.0599	ND	0.176	0.153	
1,3-Butadiene	ND	0.0669	0.0599	ND	0.148	0.132	
Bromomethane	ND	0.0677	0.0599	ND	0.263	0.233	
Chloroethane	ND	0.0690	0.0599	ND	0.182	0.158	
Bromoethene (Vinyl bromide)	ND	0.0682	0.0599	ND	0.298	0.262	
Freon 11 (CCl3F)	0.224	0.0710	0.0599	1.26	0.399	0.336	
Ethanol	1.52	0.171	0.0684	2.86	0.322	0.129	
Acrolein	0.143	0.0680	0.0599	0.327	0.156	0.137	m
Freon 113 (C2Cl3F3)	0.0738	0.0681	0.0599	0.566	0.522	0.459	
1,1-Dichloroethene	ND	0.0685	0.0599	ND	0.272	0.237	
Acetone	3.24	0.0688	0.0599	7.70	0.163	0.142	
Carbon disulfide	0.0996	0.0687	0.0599	0.310	0.214	0.186	
Isopropyl alcohol	0.945	0.0687	0.0599	2.32	0.169	0.147	
Allyl chloride (3-chloropropene)	ND	0.0689	0.0599	ND	0.215	0.187	
Acetonitrile	0.303	0.0688	0.0599	0.509	0.115	0.101	
Methylene chloride	ND	0.173	0.173	ND	0.602	0.602	
trans-1,2-Dichloroethene	ND	0.0697	0.0599	ND	0.277	0.237	
Methyl tert-butyl ether	ND	0.0701	0.0599	ND	0.253	0.216	
Acrylonitrile	ND	0.0699	0.0599	ND	0.152	0.130	
Hexane	0.0881	0.0692	0.0599	0.310	0.244	0.211	
1,1-Dichloroethane	ND	0.0674	0.0599	ND	0.273	0.242	
Vinyl acetate	ND	0.0696	0.0599	ND	0.245	0.211	
cis-1,2-Dichloroethene	ND	0.0689	0.0599	ND	0.273	0.237	
Methyl ethyl ketone (2-Butanone)	0.241	0.0695	0.0599	0.710	0.205	0.177	
Ethyl acetate	ND	0.0689	0.0599	ND	0.248	0.216	
Chloroform	ND	0.0692	0.0599	ND	0.338	0.292	
Tetrahydrofuran	ND	0.0691	0.0599	ND	0.204	0.177	
1,1,1-Trichloroethane	ND	0.0681	0.0599	ND	0.372	0.327	
Cyclohexane	ND	0.0696	0.0599	ND	0.240	0.206	
Carbon tetrachloride	0.0848	0.0693	0.0599	0.533	0.436	0.377	
Benzene	0.0941	0.0683	0.0599	0.300	0.218	0.191	
2,2,4-trimethylpentane	ND	0.0702	0.0599	ND	0.328	0.280	
1,2-Dichloroethane	ND	0.0699	0.0599	ND	0.283	0.242	
Heptane	0.0660	0.0688	0.0599	0.271	0.282	0.245	J
Trichloroethene	ND	0.0687	0.0599	ND	0.369	0.322	
1,2-Dichloropropane	ND	0.0699	0.0599	ND	0.323	0.277	
Methyl methacrylate	ND	0.0710	0.0599	ND	0.291	0.245	
1,4-Dioxane	ND	0.0692	0.0599	ND	0.249	0.216	
Bromodichloromethane	ND	0.0680	0.0599	ND	0.455	0.401	
cis-1,3-Dichloropropene	ND	0.0673	0.0599	ND	0.305	0.272	
Methyl isobutyl ketone	0.0873	0.0706	0.0599	0.358	0.289	0.245	
Toluene	0.252	0.0695	0.0599	0.949	0.262	0.226	
trans-1,3-Dichloropropene	ND	0.0695	0.0599	ND	0.316	0.272	
1,1,2-Trichloroethane	ND	0.0686	0.0599	ND	0.374	0.327	
Tetrachloroethene	ND	0.0691	0.0599	ND	0.468	0.406	
2-Hexanone (Methyl butyl ketone)	ND	0.0695	0.0599	ND	0.285	0.245	
Dibromochloromethane	ND	0.0676	0.0599	ND	0.575	0.510	
1,2-Dibromoethane	ND	0.0693	0.0599	ND	0.533	0.460	
Chlorobenzene	ND	0.0704	0.0599	ND	0.324	0.276	
Ethylbenzene	ND	0.0673	0.0599	ND	0.292	0.260	
1,1,1,2-Tetrachloroethane	ND	0.0684	0.0599	ND	0.470	0.411	
m-/p-Xylenes	0.111	0.0693	0.0599	0.482	0.301	0.260	

Sample Name : ACF-AS-FORCON-083119

Sample Info : 08819-232; Can #0786; 500mL load

Data File : X1903404.D

Dilution : 1

Pressurization Factor : 1.711

Acquisition Date : 2019-09-05 13:14:54

Instrument Method : TO15-SCN.M

Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
o-Xylene	ND	0.0684	0.0599	ND	0.297	0.260	
Styrene	ND	0.0667	0.0599	ND	0.284	0.255	
Bromoform	ND	0.0687	0.0599	ND	0.710	0.619	
1,1,2,2-Tetrachloroethane	ND	0.0684	0.0599	ND	0.470	0.411	
4-Ethyltoluene	ND	0.0689	0.0599	ND	0.339	0.294	
2-Chlorotoluene	ND	0.0689	0.0599	ND	0.357	0.310	
1,3,5-Trimethylbenzene	ND	0.0686	0.0599	ND	0.337	0.294	
1,2,4-Trimethylbenzene	ND	0.0680	0.0599	ND	0.334	0.294	
1,3-Dichlorobenzene	ND	0.0691	0.0599	ND	0.415	0.360	
1,4-Dichlorobenzene	ND	0.0686	0.0599	ND	0.413	0.360	
Benzyl chloride	ND	0.0683	0.0599	ND	0.354	0.310	
1,2-Dichlorobenzene	ND	0.0697	0.0599	ND	0.419	0.360	
1,2,4-Trichlorobenzene	ND	0.0695	0.0599	ND	0.516	0.444	
Hexachlorobutadiene	ND	0.0686	0.0599	ND	0.731	0.639	
Naphthalene	ND	0.0708	0.0599	ND	0.371	0.314	
1-Bromopropane	ND	0.0676	0.0599	ND	0.340	0.301	
1-Octene	ND	0.0669	0.0599	ND	0.307	0.275	
n-Octane	ND	0.0686	0.0599	ND	0.320	0.280	
Isopropylbenzene	ND	0.0695	0.0599	ND	0.342	0.294	
n-Propylbenzene	ND	0.0696	0.0599	ND	0.342	0.294	

Internal Standards	Response	Retention Time (min)	Concentration (PPBV)	Flag *
Bromochloromethane (IS)	519,619	11.93	5.00	PASS
1,4-Difluorobenzene (IS)	1,973,945	13.69	5.04	PASS
Chlorobenzene-d5 (IS)	1,637,369	17.86	4.80	PASS

(ND) = Not Detected

* (J) = Below Calibration Range, (E) = Above Calibration Range, (m) = Manual Integration

IS Acceptance Criteria: RT +/- 20 sec, Response +/- 40%

Sample Name : ACF-AS-SUNCITY-083119

Sample Info : 08819-232; Can #0802; 500mL load

Data File : X1903406.D

Dilution : 1

Pressurization Factor : 1.724

Acquisition Date : 2019-09-05 15:07:11

Instrument Method : TO15-SCN.M

Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
Propylene	0.255	0.0661	0.0603	0.439	0.114	0.104	
Freon 12 (CCI2F2)	0.495	0.0673	0.0603	2.45	0.333	0.298	
Freon 114 (C2CI2F4)	ND	0.0690	0.0603	ND	0.483	0.422	
Chloromethane	0.669	0.0672	0.0603	1.38	0.139	0.125	
Chloroethene (Vinyl chloride)	ND	0.0694	0.0603	ND	0.177	0.154	
1,3-Butadiene	ND	0.0674	0.0603	ND	0.149	0.133	
Bromomethane	ND	0.0682	0.0603	ND	0.265	0.234	
Chloroethane	ND	0.0695	0.0603	ND	0.183	0.159	
Bromoethene (Vinyl bromide)	ND	0.0688	0.0603	ND	0.301	0.264	
Freon 11 (CCI3F)	0.246	0.0716	0.0603	1.38	0.402	0.339	
Ethanol	1.11	0.172	0.0690	2.09	0.325	0.130	
Acrolein	0.163	0.0685	0.0603	0.374	0.157	0.138	m
Freon 113 (C2CI3F3)	0.0761	0.0686	0.0603	0.583	0.526	0.462	
1,1-Dichloroethene	ND	0.0690	0.0603	ND	0.274	0.239	
Acetone	2.61	0.0693	0.0603	6.19	0.165	0.143	
Carbon disulfide	ND	0.0692	0.0603	ND	0.216	0.188	
Isopropyl alcohol	0.255	0.0692	0.0603	0.627	0.170	0.148	
Allyl chloride (3-chloropropene)	ND	0.0694	0.0603	ND	0.217	0.189	
Acetonitrile	0.236	0.0693	0.0603	0.397	0.116	0.101	
Methylene chloride	ND	0.175	0.175	ND	0.607	0.607	
trans-1,2-Dichloroethene	ND	0.0703	0.0603	ND	0.279	0.239	
Methyl tert-butyl ether	ND	0.0706	0.0603	ND	0.255	0.218	
Acrylonitrile	ND	0.0705	0.0603	ND	0.153	0.131	
Hexane	ND	0.0697	0.0603	ND	0.246	0.213	
1,1-Dichloroethane	ND	0.0679	0.0603	ND	0.275	0.244	
Vinyl acetate	ND	0.0701	0.0603	ND	0.247	0.212	
cis-1,2-Dichloroethene	ND	0.0694	0.0603	ND	0.275	0.239	
Methyl ethyl ketone (2-Butanone)	0.215	0.0701	0.0603	0.633	0.207	0.178	
Ethyl acetate	ND	0.0694	0.0603	ND	0.250	0.217	
Chloroform	ND	0.0697	0.0603	ND	0.340	0.295	
Tetrahydrofuran	ND	0.0696	0.0603	ND	0.205	0.178	
1,1,1-Trichloroethane	ND	0.0686	0.0603	ND	0.374	0.329	
Cyclohexane	ND	0.0701	0.0603	ND	0.241	0.208	
Carbon tetrachloride	0.0835	0.0698	0.0603	0.526	0.439	0.380	
Benzene	0.0842	0.0688	0.0603	0.269	0.220	0.193	
2,2,4-trimethylpentane	ND	0.0707	0.0603	ND	0.330	0.282	
1,2-Dichloroethane	ND	0.0705	0.0603	ND	0.285	0.244	
Heptane	ND	0.0693	0.0603	ND	0.284	0.247	
Trichloroethene	ND	0.0692	0.0603	ND	0.372	0.324	
1,2-Dichloropropane	ND	0.0705	0.0603	ND	0.326	0.279	
Methyl methacrylate	ND	0.0715	0.0603	ND	0.293	0.247	
1,4-Dioxane	ND	0.0697	0.0603	ND	0.251	0.217	
Bromodichloromethane	ND	0.0685	0.0603	ND	0.459	0.404	
cis-1,3-Dichloropropene	ND	0.0678	0.0603	ND	0.308	0.274	
Methyl isobutyl ketone	ND	0.0711	0.0603	ND	0.291	0.247	
Toluene	0.137	0.0701	0.0603	0.518	0.264	0.227	
trans-1,3-Dichloropropene	ND	0.0701	0.0603	ND	0.318	0.274	
1,1,2-Trichloroethane	ND	0.0691	0.0603	ND	0.377	0.329	
Tetrachloroethene	ND	0.0696	0.0603	ND	0.472	0.409	
2-Hexanone (Methyl butyl ketone)	ND	0.0701	0.0603	ND	0.287	0.247	
Dibromochloromethane	ND	0.0681	0.0603	ND	0.580	0.514	
1,2-Dibromoethane	ND	0.0699	0.0603	ND	0.537	0.464	
Chlorobenzene	ND	0.0710	0.0603	ND	0.327	0.278	
Ethylbenzene	ND	0.0679	0.0603	ND	0.295	0.262	
1,1,1,2-Tetrachloroethane	ND	0.0690	0.0603	ND	0.473	0.414	
m-/p-Xylenes	0.0670	0.0699	0.0603	0.291	0.303	0.262	J

Sample Name : ACF-AS-SUNCITY-083119

Sample Info : 08819-232; Can #0802; 500mL load

Data File : X1903406.D

Dilution : 1

Pressurization Factor : 1.724

Acquisition Date : 2019-09-05 15:07:11

Instrument Method : TO15-SCN.M

Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
o-Xylene	ND	0.0689	0.0603	ND	0.299	0.262	
Styrene	ND	0.0672	0.0603	ND	0.286	0.257	
Bromoform	ND	0.0692	0.0603	ND	0.716	0.624	
1,1,2,2-Tetrachloroethane	ND	0.0690	0.0603	ND	0.473	0.414	
4-Ethyltoluene	ND	0.0694	0.0603	ND	0.341	0.297	
2-Chlorotoluene	ND	0.0694	0.0603	ND	0.360	0.312	
1,3,5-Trimethylbenzene	ND	0.0692	0.0603	ND	0.340	0.297	
1,2,4-Trimethylbenzene	ND	0.0685	0.0603	ND	0.337	0.297	
1,3-Dichlorobenzene	ND	0.0696	0.0603	ND	0.418	0.363	
1,4-Dichlorobenzene	ND	0.0692	0.0603	ND	0.416	0.363	
Benzyl chloride	ND	0.0688	0.0603	ND	0.356	0.312	
1,2-Dichlorobenzene	ND	0.0703	0.0603	ND	0.422	0.363	
1,2,4-Trichlorobenzene	ND	0.0700	0.0603	ND	0.519	0.448	
Hexachlorobutadiene	ND	0.0691	0.0603	ND	0.737	0.644	
Naphthalene	ND	0.0714	0.0603	ND	0.374	0.316	
1-Bromopropane	ND	0.0681	0.0603	ND	0.343	0.304	
1-Octene	ND	0.0674	0.0603	ND	0.310	0.277	
n-Octane	ND	0.0691	0.0603	ND	0.323	0.282	
Isopropylbenzene	ND	0.0700	0.0603	ND	0.344	0.297	
n-Propylbenzene	ND	0.0701	0.0603	ND	0.345	0.297	

Internal Standards	Response	Retention Time (min)	Concentration (PPBV)	Flag *
Bromochloromethane (IS)	513,359	11.93	5.00	PASS
1,4-Difluorobenzene (IS)	1,972,665	13.69	5.04	PASS
Chlorobenzene-d5 (IS)	1,632,332	17.86	4.80	PASS

(ND) = Not Detected

* (J) = Below Calibration Range, (E) = Above Calibration Range, (m) = Manual Integration

IS Acceptance Criteria: RT +/- 20 sec, Response +/- 40%

Sample Name : ACF-AS-BKGD1-083119

Sample Info : 08819-232; Can #000092; 500mL load

Data File : X1903407.D

Dilution : 1

Pressurization Factor : 1.731

Acquisition Date : 2019-09-05 15:56:53

Instrument Method : TO15-SCN.M

Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
Propylene	0.202	0.0664	0.0606	0.347	0.114	0.104	
Freon 12 (CCI2F2)	0.498	0.0676	0.0606	2.46	0.334	0.300	
Freon 114 (C2CI2F4)	ND	0.0693	0.0606	ND	0.485	0.424	
Chloromethane	0.660	0.0675	0.0606	1.36	0.139	0.125	
Chloroethene (Vinyl chloride)	ND	0.0697	0.0606	ND	0.178	0.155	
1,3-Butadiene	ND	0.0676	0.0606	ND	0.150	0.134	
Bromomethane	ND	0.0685	0.0606	ND	0.266	0.235	
Chloroethane	ND	0.0698	0.0606	ND	0.184	0.160	
Bromoethene (Vinyl bromide)	ND	0.0690	0.0606	ND	0.302	0.265	
Freon 11 (CCI3F)	0.228	0.0719	0.0606	1.28	0.404	0.340	
Ethanol	2.04	0.173	0.0692	3.84	0.326	0.130	
Acrolein	0.205	0.0688	0.0606	0.469	0.158	0.139	m
Freon 113 (C2CI3F3)	0.0758	0.0689	0.0606	0.581	0.528	0.464	
1,1-Dichloroethene	ND	0.0693	0.0606	ND	0.275	0.240	
Acetone	2.97	0.0696	0.0606	7.05	0.165	0.144	
Carbon disulfide	0.111	0.0695	0.0606	0.347	0.216	0.189	
Isopropyl alcohol	0.181	0.0695	0.0606	0.446	0.171	0.149	
Allyl chloride (3-chloropropene)	ND	0.0697	0.0606	ND	0.218	0.190	
Acetonitrile	0.214	0.0696	0.0606	0.359	0.117	0.102	
Methylene chloride	ND	0.175	0.175	ND	0.609	0.609	
trans-1,2-Dichloroethene	ND	0.0706	0.0606	ND	0.280	0.240	
Methyl tert-butyl ether	ND	0.0709	0.0606	ND	0.256	0.218	
Acrylonitrile	ND	0.0708	0.0606	ND	0.154	0.131	
Hexane	ND	0.0700	0.0606	ND	0.247	0.214	
1,1-Dichloroethane	ND	0.0682	0.0606	ND	0.276	0.245	
Vinyl acetate	ND	0.0704	0.0606	ND	0.248	0.213	
cis-1,2-Dichloroethene	ND	0.0697	0.0606	ND	0.276	0.240	
Methyl ethyl ketone (2-Butanone)	0.529	0.0703	0.0606	1.56	0.207	0.179	
Ethyl acetate	ND	0.0697	0.0606	ND	0.251	0.218	
Chloroform	ND	0.0700	0.0606	ND	0.342	0.296	
Tetrahydrofuran	ND	0.0699	0.0606	ND	0.206	0.179	
1,1,1-Trichloroethane	ND	0.0689	0.0606	ND	0.376	0.331	
Cyclohexane	ND	0.0704	0.0606	ND	0.242	0.209	
Carbon tetrachloride	0.0832	0.0701	0.0606	0.524	0.441	0.381	
Benzene	0.0685	0.0691	0.0606	0.219	0.221	0.194	J
2,2,4-trimethylpentane	ND	0.0710	0.0606	ND	0.332	0.283	
1,2-Dichloroethane	ND	0.0708	0.0606	ND	0.286	0.245	
Heptane	ND	0.0696	0.0606	ND	0.285	0.248	
Trichloroethene	ND	0.0695	0.0606	ND	0.374	0.326	
1,2-Dichloropropane	ND	0.0708	0.0606	ND	0.327	0.280	
Methyl methacrylate	ND	0.0718	0.0606	ND	0.294	0.248	
1,4-Dioxane	ND	0.0700	0.0606	ND	0.252	0.218	
Bromodichloromethane	ND	0.0688	0.0606	ND	0.461	0.406	
cis-1,3-Dichloropropene	ND	0.0681	0.0606	ND	0.309	0.275	
Methyl isobutyl ketone	ND	0.0714	0.0606	ND	0.292	0.248	
Toluene	0.551	0.0703	0.0606	2.08	0.265	0.228	
trans-1,3-Dichloropropene	ND	0.0703	0.0606	ND	0.319	0.275	
1,1,2-Trichloroethane	ND	0.0694	0.0606	ND	0.379	0.331	
Tetrachloroethene	ND	0.0699	0.0606	ND	0.474	0.411	
2-Hexanone (Methyl butyl ketone)	ND	0.0703	0.0606	ND	0.288	0.248	
Dibromochloromethane	ND	0.0683	0.0606	ND	0.582	0.516	
1,2-Dibromoethane	ND	0.0701	0.0606	ND	0.539	0.466	
Chlorobenzene	ND	0.0712	0.0606	ND	0.328	0.279	
Ethylbenzene	ND	0.0681	0.0606	ND	0.296	0.263	
1,1,1,2-Tetrachloroethane	ND	0.0692	0.0606	ND	0.475	0.416	
m-/p-Xylenes	0.0887	0.0701	0.0606	0.385	0.305	0.263	

Sample Name : ACF-AS-BKGD1-083119

Sample Info : 08819-232; Can #000092; 500mL load

Data File : X1903407.D

Dilution : 1

Pressurization Factor : 1.731

Acquisition Date : 2019-09-05 15:56:53

Instrument Method : TO15-SCN.M

Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
o-Xylene	ND	0.0692	0.0606	ND	0.300	0.263	
Styrene	ND	0.0674	0.0606	ND	0.287	0.258	
Bromoform	ND	0.0695	0.0606	ND	0.719	0.626	
1,1,2,2-Tetrachloroethane	ND	0.0692	0.0606	ND	0.475	0.416	
4-Ethyltoluene	ND	0.0697	0.0606	ND	0.343	0.298	
2-Chlorotoluene	ND	0.0697	0.0606	ND	0.361	0.314	
1,3,5-Trimethylbenzene	ND	0.0694	0.0606	ND	0.341	0.298	
1,2,4-Trimethylbenzene	ND	0.0688	0.0606	ND	0.338	0.298	
1,3-Dichlorobenzene	ND	0.0699	0.0606	ND	0.420	0.364	
1,4-Dichlorobenzene	ND	0.0694	0.0606	ND	0.418	0.364	
Benzyl chloride	ND	0.0691	0.0606	ND	0.358	0.314	
1,2-Dichlorobenzene	ND	0.0706	0.0606	ND	0.424	0.364	
1,2,4-Trichlorobenzene	ND	0.0703	0.0606	ND	0.522	0.450	
Hexachlorobutadiene	ND	0.0694	0.0606	ND	0.740	0.646	
Naphthalene	ND	0.0717	0.0606	ND	0.376	0.318	
1-Bromopropane	ND	0.0684	0.0606	ND	0.344	0.305	
1-Octene	ND	0.0677	0.0606	ND	0.311	0.278	
n-Octane	ND	0.0694	0.0606	ND	0.324	0.283	
Isopropylbenzene	ND	0.0703	0.0606	ND	0.346	0.298	
n-Propylbenzene	ND	0.0704	0.0606	ND	0.346	0.298	

Internal Standards	Response	Retention Time (min)	Concentration (PPBV)	Flag *
Bromochloromethane (IS)	517,966	11.93	5.00	PASS
1,4-Difluorobenzene (IS)	1,962,931	13.69	5.04	PASS
Chlorobenzene-d5 (IS)	1,630,719	17.86	4.80	PASS

(ND) = Not Detected

* (J) = Below Calibration Range, (E) = Above Calibration Range, (m) = Manual Integration

IS Acceptance Criteria: RT +/- 20 sec, Response +/- 40%

Sample Name : ACF-AS-BKGD2-083119

Sample Info : 08819-232; Can #0797; 500mL load

Data File : X1903421.D

Dilution : 1

Pressurization Factor : 1.737

Acquisition Date : 2019-09-06 16:18:13

Instrument Method : TO15-SCN.M

Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
Propylene	0.160	0.0666	0.0608	0.275	0.115	0.105	m
Freon 12 (CCl2F2)	0.494	0.0678	0.0608	2.44	0.335	0.301	
Freon 114 (C2Cl2F4)	ND	0.0695	0.0608	ND	0.486	0.425	
Chloromethane	0.732	0.0677	0.0608	1.51	0.140	0.126	
Chloroethene (Vinyl chloride)	ND	0.0699	0.0608	ND	0.179	0.155	
1,3-Butadiene	ND	0.0679	0.0608	ND	0.150	0.134	
Bromomethane	ND	0.0687	0.0608	ND	0.267	0.236	
Chloroethane	ND	0.0700	0.0608	ND	0.185	0.160	
Bromoethene (Vinyl bromide)	ND	0.0693	0.0608	ND	0.303	0.266	
Freon 11 (CCl3F)	0.232	0.0721	0.0608	1.30	0.405	0.342	
Ethanol	0.962	0.174	0.0695	1.81	0.327	0.131	
Acrolein	0.194	0.0690	0.0608	0.444	0.158	0.139	
Freon 113 (C2Cl3F3)	0.0749	0.0691	0.0608	0.574	0.530	0.466	
1,1-Dichloroethene	ND	0.0695	0.0608	ND	0.276	0.241	
Acetone	2.69	0.0698	0.0608	6.39	0.166	0.144	
Carbon disulfide	0.314	0.0698	0.0608	0.977	0.217	0.189	
Isopropyl alcohol	0.174	0.0698	0.0608	0.428	0.171	0.149	
Allyl chloride (3-chloropropene)	ND	0.0699	0.0608	ND	0.219	0.190	
Acetonitrile	0.278	0.0698	0.0608	0.467	0.117	0.102	
Methylene chloride	ND	0.176	0.176	ND	0.611	0.611	
trans-1,2-Dichloroethene	ND	0.0708	0.0608	ND	0.281	0.241	
Methyl tert-butyl ether	ND	0.0711	0.0608	ND	0.257	0.219	
Acrylonitrile	ND	0.0710	0.0608	ND	0.154	0.132	
Hexane	ND	0.0702	0.0608	ND	0.248	0.214	
1,1-Dichloroethane	ND	0.0684	0.0608	ND	0.277	0.246	
Vinyl acetate	ND	0.0707	0.0608	ND	0.249	0.214	
cis-1,2-Dichloroethene	ND	0.0700	0.0608	ND	0.277	0.241	
Methyl ethyl ketone (2-Butanone)	0.220	0.0706	0.0608	0.648	0.208	0.179	
Ethyl acetate	0.245	0.0700	0.0608	0.884	0.252	0.219	
Chloroform	0.0821	0.0702	0.0608	0.401	0.343	0.297	
Tetrahydrofuran	ND	0.0701	0.0608	ND	0.207	0.179	
1,1,1-Trichloroethane	ND	0.0691	0.0608	ND	0.377	0.332	
Cyclohexane	ND	0.0707	0.0608	ND	0.243	0.209	
Carbon tetrachloride	0.0861	0.0703	0.0608	0.541	0.442	0.382	
Benzene	ND	0.0693	0.0608	ND	0.222	0.194	
2,2,4-trimethylpentane	ND	0.0712	0.0608	ND	0.333	0.284	
1,2-Dichloroethane	ND	0.0710	0.0608	ND	0.287	0.246	
Heptane	ND	0.0698	0.0608	ND	0.286	0.249	
Trichloroethene	ND	0.0698	0.0608	ND	0.375	0.327	
1,2-Dichloropropane	ND	0.0710	0.0608	ND	0.328	0.281	
Methyl methacrylate	ND	0.0721	0.0608	ND	0.295	0.249	
1,4-Dioxane	ND	0.0702	0.0608	ND	0.253	0.219	
Bromodichloromethane	ND	0.0690	0.0608	ND	0.462	0.407	
cis-1,3-Dichloropropene	ND	0.0683	0.0608	ND	0.310	0.276	
Methyl isobutyl ketone	ND	0.0716	0.0608	ND	0.293	0.249	
Toluene	0.0956	0.0706	0.0608	0.360	0.266	0.229	
trans-1,3-Dichloropropene	ND	0.0706	0.0608	ND	0.320	0.276	
1,1,2-Trichloroethane	ND	0.0696	0.0608	ND	0.380	0.332	
Tetrachloroethene	ND	0.0701	0.0608	ND	0.475	0.412	
2-Hexanone (Methyl butyl ketone)	ND	0.0706	0.0608	ND	0.289	0.249	
Dibromochloromethane	ND	0.0686	0.0608	ND	0.584	0.518	
1,2-Dibromoethane	ND	0.0704	0.0608	ND	0.541	0.467	
Chlorobenzene	ND	0.0715	0.0608	ND	0.329	0.280	
Ethylbenzene	ND	0.0684	0.0608	ND	0.297	0.264	
1,1,1,2-Tetrachloroethane	ND	0.0695	0.0608	ND	0.477	0.417	
m-/p-Xylenes	ND	0.0704	0.0608	ND	0.306	0.264	

Sample Name : ACF-AS-BKGD2-083119

Sample Info : 08819-232; Can #0797; 500mL load

Data File : X1903421.D

Dilution : 1

Pressurization Factor : 1.737

Acquisition Date : 2019-09-06 16:18:13

Instrument Method : TO15-SCN.M

Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
o-Xylene	ND	0.0694	0.0608	ND	0.301	0.264	
Styrene	ND	0.0677	0.0608	ND	0.288	0.259	
Bromoform	ND	0.0698	0.0608	ND	0.721	0.628	
1,1,2,2-Tetrachloroethane	ND	0.0695	0.0608	ND	0.477	0.417	
4-Ethyltoluene	ND	0.0700	0.0608	ND	0.344	0.299	
2-Chlorotoluene	ND	0.0700	0.0608	ND	0.362	0.315	
1,3,5-Trimethylbenzene	ND	0.0697	0.0608	ND	0.343	0.299	
1,2,4-Trimethylbenzene	ND	0.0691	0.0608	ND	0.340	0.299	
1,3-Dichlorobenzene	ND	0.0701	0.0608	ND	0.421	0.366	
1,4-Dichlorobenzene	ND	0.0697	0.0608	ND	0.419	0.366	
Benzyl chloride	ND	0.0693	0.0608	ND	0.359	0.315	
1,2-Dichlorobenzene	ND	0.0708	0.0608	ND	0.426	0.366	
1,2,4-Trichlorobenzene	ND	0.0705	0.0608	ND	0.523	0.451	
Hexachlorobutadiene	ND	0.0696	0.0608	ND	0.742	0.648	
Naphthalene	ND	0.0719	0.0608	ND	0.377	0.319	
1-Bromopropane	ND	0.0686	0.0608	ND	0.345	0.306	
1-Octene	ND	0.0680	0.0608	ND	0.312	0.279	
n-Octane	ND	0.0696	0.0608	ND	0.325	0.284	
Isopropylbenzene	ND	0.0705	0.0608	ND	0.347	0.299	
n-Propylbenzene	ND	0.0707	0.0608	ND	0.347	0.299	

Internal Standards	Response	Retention Time (min)	Concentration (PPBV)	Flag *
Bromochloromethane (IS)	541,095	11.93	5.00	PASS
1,4-Difluorobenzene (IS)	2,054,940	13.69	5.04	PASS
Chlorobenzene-d5 (IS)	1,711,113	17.86	4.80	PASS

(ND) = Not Detected

* (J) = Below Calibration Range, (E) = Above Calibration Range, (m) = Manual Integration

IS Acceptance Criteria: RT +/- 20 sec, Response +/- 40%

Sample Name : ACF-AS-BKGD3-083119

Sample Info : 08819-232; Can #0838; 500mL load

Data File : X1903422.D

Dilution : 1

Pressurization Factor : 1.729

Acquisition Date : 2019-09-06 17:14:19

Instrument Method : TO15-SCN.M

Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
Propylene	0.193	0.0663	0.0605	0.332	0.114	0.104	
Freon 12 (CCl2F2)	0.493	0.0675	0.0605	2.44	0.334	0.299	
Freon 114 (C2Cl2F4)	ND	0.0692	0.0605	ND	0.484	0.423	
Chloromethane	0.687	0.0674	0.0605	1.42	0.139	0.125	
Chloroethene (Vinyl chloride)	ND	0.0696	0.0605	ND	0.178	0.155	
1,3-Butadiene	ND	0.0676	0.0605	ND	0.149	0.134	
Bromomethane	ND	0.0684	0.0605	ND	0.266	0.235	
Chloroethane	ND	0.0697	0.0605	ND	0.184	0.160	
Bromoethene (Vinyl bromide)	ND	0.0690	0.0605	ND	0.302	0.265	
Freon 11 (CCl3F)	0.221	0.0718	0.0605	1.24	0.403	0.340	
Ethanol	1.38	0.173	0.0692	2.61	0.326	0.130	
Acrolein	0.132	0.0687	0.0605	0.302	0.157	0.139	m
Freon 113 (C2Cl3F3)	0.0748	0.0688	0.0605	0.573	0.527	0.464	
1,1-Dichloroethene	ND	0.0692	0.0605	ND	0.274	0.240	
Acetone	2.38	0.0695	0.0605	5.65	0.165	0.144	
Carbon disulfide	0.110	0.0694	0.0605	0.343	0.216	0.188	
Isopropyl alcohol	0.548	0.0694	0.0605	1.35	0.171	0.149	
Allyl chloride (3-chloropropene)	ND	0.0696	0.0605	ND	0.218	0.189	
Acetonitrile	0.197	0.0695	0.0605	0.330	0.117	0.102	
Methylene chloride	ND	0.175	0.175	ND	0.608	0.608	
trans-1,2-Dichloroethene	ND	0.0705	0.0605	ND	0.279	0.240	
Methyl tert-butyl ether	ND	0.0708	0.0605	ND	0.255	0.218	
Acrylonitrile	ND	0.0707	0.0605	ND	0.153	0.131	
Hexane	ND	0.0699	0.0605	ND	0.246	0.213	
1,1-Dichloroethane	ND	0.0681	0.0605	ND	0.276	0.245	
Vinyl acetate	ND	0.0703	0.0605	ND	0.248	0.213	
cis-1,2-Dichloroethene	ND	0.0696	0.0605	ND	0.276	0.240	
Methyl ethyl ketone (2-Butanone)	0.232	0.0703	0.0605	0.686	0.207	0.178	
Ethyl acetate	ND	0.0696	0.0605	ND	0.251	0.218	
Chloroform	ND	0.0699	0.0605	ND	0.341	0.295	
Tetrahydrofuran	ND	0.0698	0.0605	ND	0.206	0.178	
1,1,1-Trichloroethane	ND	0.0688	0.0605	ND	0.375	0.330	
Cyclohexane	ND	0.0703	0.0605	ND	0.242	0.208	
Carbon tetrachloride	0.0826	0.0700	0.0605	0.520	0.440	0.381	
Benzene	0.0853	0.0690	0.0605	0.272	0.221	0.193	
2,2,4-trimethylpentane	ND	0.0709	0.0605	ND	0.331	0.283	
1,2-Dichloroethane	ND	0.0707	0.0605	ND	0.286	0.245	
Heptane	ND	0.0695	0.0605	ND	0.285	0.248	
Trichloroethene	ND	0.0694	0.0605	ND	0.373	0.325	
1,2-Dichloropropane	ND	0.0707	0.0605	ND	0.327	0.280	
Methyl methacrylate	ND	0.0717	0.0605	ND	0.294	0.248	
1,4-Dioxane	ND	0.0699	0.0605	ND	0.252	0.218	
Bromodichloromethane	ND	0.0687	0.0605	ND	0.460	0.405	
cis-1,3-Dichloropropene	ND	0.0680	0.0605	ND	0.309	0.275	
Methyl isobutyl ketone	ND	0.0713	0.0605	ND	0.292	0.248	
Toluene	0.221	0.0703	0.0605	0.831	0.265	0.228	
trans-1,3-Dichloropropene	ND	0.0703	0.0605	ND	0.319	0.275	
1,1,2-Trichloroethane	ND	0.0693	0.0605	ND	0.378	0.330	
Tetrachloroethene	ND	0.0698	0.0605	ND	0.473	0.410	
2-Hexanone (Methyl butyl ketone)	ND	0.0703	0.0605	ND	0.288	0.248	
Dibromochloromethane	ND	0.0683	0.0605	ND	0.581	0.516	
1,2-Dibromoethane	ND	0.0701	0.0605	ND	0.538	0.465	
Chlorobenzene	ND	0.0712	0.0605	ND	0.328	0.279	
Ethylbenzene	ND	0.0681	0.0605	ND	0.295	0.263	
1,1,1,2-Tetrachloroethane	ND	0.0692	0.0605	ND	0.475	0.415	
m-/p-Xylenes	0.0972	0.0701	0.0605	0.422	0.304	0.263	

Sample Name : ACF-AS-BKGD3-083119

Sample Info : 08819-232; Can #0838; 500mL load

Data File : X1903422.D

Dilution : 1

Pressurization Factor : 1.729

Acquisition Date : 2019-09-06 17:14:19

Instrument Method : TO15-SCN.M

Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
o-Xylene	ND	0.0691	0.0605	ND	0.300	0.263	
Styrene	ND	0.0674	0.0605	ND	0.287	0.258	
Bromoform	ND	0.0694	0.0605	ND	0.718	0.626	
1,1,2,2-Tetrachloroethane	ND	0.0692	0.0605	ND	0.475	0.415	
4-Ethyltoluene	ND	0.0696	0.0605	ND	0.342	0.297	
2-Chlorotoluene	ND	0.0696	0.0605	ND	0.361	0.313	
1,3,5-Trimethylbenzene	ND	0.0694	0.0605	ND	0.341	0.297	
1,2,4-Trimethylbenzene	ND	0.0687	0.0605	ND	0.338	0.297	
1,3-Dichlorobenzene	ND	0.0698	0.0605	ND	0.420	0.364	
1,4-Dichlorobenzene	ND	0.0694	0.0605	ND	0.417	0.364	
Benzyl chloride	ND	0.0690	0.0605	ND	0.357	0.313	
1,2-Dichlorobenzene	ND	0.0705	0.0605	ND	0.424	0.364	
1,2,4-Trichlorobenzene	ND	0.0702	0.0605	ND	0.521	0.449	
Hexachlorobutadiene	ND	0.0693	0.0605	ND	0.739	0.645	
Naphthalene	ND	0.0716	0.0605	ND	0.375	0.317	
1-Bromopropane	ND	0.0683	0.0605	ND	0.344	0.304	
1-Octene	ND	0.0676	0.0605	ND	0.311	0.278	
n-Octane	ND	0.0693	0.0605	ND	0.324	0.283	
Isopropylbenzene	ND	0.0702	0.0605	ND	0.345	0.298	
n-Propylbenzene	ND	0.0703	0.0605	ND	0.346	0.297	

Internal Standards	Response	Retention Time (min)	Concentration (PPBV)	Flag *
Bromochloromethane (IS)	545,038	11.93	5.00	PASS
1,4-Difluorobenzene (IS)	2,058,880	13.69	5.04	PASS
Chlorobenzene-d5 (IS)	1,720,328	17.86	4.80	PASS

(ND) = Not Detected

* (J) = Below Calibration Range, (E) = Above Calibration Range, (m) = Manual Integration

IS Acceptance Criteria: RT +/- 20 sec, Response +/- 40%

Sample Name : Lot Blank Can #0725

Sample Info : 08819-232; Can #0725; 500mL load

Data File : X1903424.D

Dilution : 1

Pressurization Factor : 1.000

Acquisition Date : 2019-09-06 19:01:02

Instrument Method : TO15-SCN.M

Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
Propylene	ND	0.0384	0.0350	ND	0.0660	0.0602	
Freon 12 (CCl2F2)	ND	0.0390	0.0350	ND	0.193	0.173	
Freon 114 (C2Cl2F4)	ND	0.0400	0.0350	ND	0.280	0.245	
Chloromethane	ND	0.0390	0.0350	ND	0.0805	0.0723	
Chloroethene (Vinyl chloride)	ND	0.0402	0.0350	ND	0.103	0.0895	
1,3-Butadiene	ND	0.0391	0.0350	ND	0.0865	0.0774	
Bromomethane	ND	0.0396	0.0350	ND	0.154	0.136	
Chloroethane	ND	0.0403	0.0350	ND	0.106	0.0924	
Bromoethene (Vinyl bromide)	ND	0.0399	0.0350	ND	0.174	0.153	
Freon 11 (CCl3F)	ND	0.0415	0.0350	ND	0.233	0.197	
Ethanol	0.0757	0.100	0.0400	0.143	0.188	0.0754	J
Acrolein	ND	0.0397	0.0350	ND	0.0911	0.0803	
Freon 113 (C2Cl3F3)	ND	0.0398	0.0350	ND	0.305	0.268	
1,1-Dichloroethene	ND	0.0400	0.0350	ND	0.159	0.139	
Acetone	0.0759	0.0402	0.0350	0.180	0.0955	0.0831	
Carbon disulfide	ND	0.0402	0.0350	ND	0.125	0.109	
Isopropyl alcohol	0.0552	0.0402	0.0350	0.136	0.0987	0.0860	
Allyl chloride (3-chloropropene)	ND	0.0402	0.0350	ND	0.126	0.110	
Acetonitrile	ND	0.0402	0.0350	ND	0.0675	0.0588	
Methylene chloride	ND	0.101	0.101	ND	0.352	0.352	
trans-1,2-Dichloroethene	ND	0.0408	0.0350	ND	0.162	0.139	
Methyl tert-butyl ether	ND	0.0410	0.0350	ND	0.148	0.126	
Acrylonitrile	ND	0.0409	0.0350	ND	0.0887	0.0760	
Hexane	ND	0.0404	0.0350	ND	0.143	0.123	
1,1-Dichloroethane	ND	0.0394	0.0350	ND	0.159	0.142	
Vinyl acetate	ND	0.0407	0.0350	ND	0.143	0.123	
cis-1,2-Dichloroethene	ND	0.0403	0.0350	ND	0.160	0.139	
Methyl ethyl ketone (2-Butanone)	ND	0.0406	0.0350	ND	0.120	0.103	
Ethyl acetate	ND	0.0403	0.0350	ND	0.145	0.126	
Chloroform	ND	0.0404	0.0350	ND	0.197	0.171	
Tetrahydrofuran	ND	0.0404	0.0350	ND	0.119	0.103	
1,1,1-Trichloroethane	ND	0.0398	0.0350	ND	0.217	0.191	
Cyclohexane	ND	0.0407	0.0350	ND	0.140	0.120	
Carbon tetrachloride	ND	0.0405	0.0350	ND	0.255	0.220	
Benzene	ND	0.0399	0.0350	ND	0.128	0.112	
2,2,4-trimethylpentane	ND	0.0410	0.0350	ND	0.192	0.164	
1,2-Dichloroethane	ND	0.0409	0.0350	ND	0.165	0.142	
Heptane	ND	0.0402	0.0350	ND	0.165	0.143	
Trichloroethene	ND	0.0402	0.0350	ND	0.216	0.188	
1,2-Dichloropropane	ND	0.0409	0.0350	ND	0.189	0.162	
Methyl methacrylate	ND	0.0415	0.0350	ND	0.170	0.143	
1,4-Dioxane	ND	0.0404	0.0350	ND	0.146	0.126	
Bromodichloromethane	ND	0.0397	0.0350	ND	0.266	0.235	
cis-1,3-Dichloropropene	ND	0.0393	0.0350	ND	0.178	0.159	
Methyl isobutyl ketone	ND	0.0412	0.0350	ND	0.169	0.143	
Toluene	ND	0.0406	0.0350	ND	0.153	0.132	
trans-1,3-Dichloropropene	ND	0.0406	0.0350	ND	0.184	0.159	
1,1,2-Trichloroethane	ND	0.0401	0.0350	ND	0.219	0.191	
Tetrachloroethene	ND	0.0404	0.0350	ND	0.274	0.237	
2-Hexanone (Methyl butyl ketone)	ND	0.0406	0.0350	ND	0.166	0.143	
Dibromochloromethane	ND	0.0395	0.0350	ND	0.336	0.298	
1,2-Dibromoethane	ND	0.0405	0.0350	ND	0.311	0.269	
Chlorobenzene	ND	0.0412	0.0350	ND	0.189	0.161	
Ethylbenzene	ND	0.0394	0.0350	ND	0.171	0.152	
1,1,1,2-Tetrachloroethane	ND	0.0400	0.0350	ND	0.275	0.240	
m-/p-Xylenes	ND	0.0405	0.0350	ND	0.176	0.152	

Sample Name: Lot Blank Can #0725

Sample Info: 08819-232; Can #0725; 500mL load

Data File: X1903424.D

Dilution: 1

Pressurization Factor: 1.000

Acquisition Date: 2019-09-06 19:01:02

Instrument Method: TO15-SCN.M

Matrix: AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
o-Xylene	ND	0.0400	0.0350	ND	0.174	0.152	
Styrene	ND	0.0390	0.0350	ND	0.166	0.149	
Bromoform	ND	0.0402	0.0350	ND	0.415	0.362	
1,1,2,2-Tetrachloroethane	ND	0.0400	0.0350	ND	0.275	0.240	
4-Ethyltoluene	ND	0.0403	0.0350	ND	0.198	0.172	
2-Chlorotoluene	ND	0.0403	0.0350	ND	0.209	0.181	
1,3,5-Trimethylbenzene	ND	0.0401	0.0350	ND	0.197	0.172	
1,2,4-Trimethylbenzene	ND	0.0398	0.0350	ND	0.195	0.172	
1,3-Dichlorobenzene	ND	0.0404	0.0350	ND	0.243	0.210	
1,4-Dichlorobenzene	ND	0.0401	0.0350	ND	0.241	0.210	
Benzyl chloride	ND	0.0399	0.0350	ND	0.207	0.181	
1,2-Dichlorobenzene	ND	0.0408	0.0350	ND	0.245	0.210	
1,2,4-Trichlorobenzene	ND	0.0406	0.0350	ND	0.301	0.260	
Hexachlorobutadiene	ND	0.0401	0.0350	ND	0.427	0.373	
Naphthalene	ND	0.0414	0.0350	ND	0.217	0.183	
1-Bromopropane	ND	0.0395	0.0350	ND	0.199	0.176	
1-Octene	ND	0.0391	0.0350	ND	0.180	0.161	
n-Octane	ND	0.0401	0.0350	ND	0.187	0.164	
Isopropylbenzene	ND	0.0406	0.0350	ND	0.200	0.172	
n-Propylbenzene	ND	0.0407	0.0350	ND	0.200	0.172	

Internal Standards	Response	Retention Time (min)	Concentration (PPBV)	Flag *
Bromochloromethane (IS)	526,621	11.93	5.00	PASS
1,4-Difluorobenzene (IS)	2,018,207	13.69	5.04	PASS
Chlorobenzene-d5 (IS)	1,699,270	17.86	4.80	PASS

(ND) = Not Detected

* (J) = Below Calibration Range, (E) = Above Calibration Range, (m) = Manual Integration

IS Acceptance Criteria: RT +/- 20 sec, Response +/- 40%

Lab QC

Sample Name : ACF-AS-FORCON-083119 LD
Sample Info : 08819-232; Can #0786; 500mL load
Data File : X1903405.D
Dilution : 1
Pressurization Factor : 1.711
Acquisition Date : 2019-09-05 14:11:05
Instrument Method : TO15-SCN.M
Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	% Diff	Flag *
Propylene	0.184	0.0656	0.0599	0.317	0.113	0.103	8.6	m
Freon 12 (CCI2F2)	0.495	0.0668	0.0599	2.45	0.330	0.296	2.0	
Freon 114 (C2CI2F4)	ND	0.0685	0.0599	ND	0.479	0.419		
Chloromethane	0.657	0.0667	0.0599	1.36	0.138	0.124	1.4	
Chloroethene (Vinyl chloride)	ND	0.0689	0.0599	ND	0.176	0.153		
1,3-Butadiene	ND	0.0669	0.0599	ND	0.148	0.132		
Bromomethane	ND	0.0677	0.0599	ND	0.263	0.233		
Chloroethane	ND	0.0690	0.0599	ND	0.182	0.158		
Bromoethene (Vinyl bromide)	ND	0.0682	0.0599	ND	0.298	0.262		
Freon 11 (CCI3F)	0.225	0.0710	0.0599	1.26	0.399	0.336	0.4	
Ethanol	1.51	0.171	0.0684	2.85	0.322	0.129	0.2	m
Acrolein	0.112	0.0680	0.0599	0.257	0.156	0.137	23.9	
Freon 113 (C2CI3F3)	0.0733	0.0681	0.0599	0.562	0.522	0.459	0.7	
1,1-Dichloroethene	ND	0.0685	0.0599	ND	0.272	0.237		
Acetone	3.24	0.0688	0.0599	7.69	0.163	0.142	0.2	
Carbon disulfide	0.0992	0.0687	0.0599	0.309	0.214	0.186	0.3	
Isopropyl alcohol	0.978	0.0687	0.0599	2.40	0.169	0.147	3.5	
Allyl chloride (3-chloropropene)	ND	0.0689	0.0599	ND	0.215	0.187		
Acetonitrile	0.292	0.0688	0.0599	0.491	0.115	0.101	3.7	
Methylene chloride	ND	0.173	0.173	ND	0.602	0.602		
trans-1,2-Dichloroethene	ND	0.0697	0.0599	ND	0.277	0.237		J
Methyl tert-butyl ether	ND	0.0701	0.0599	ND	0.253	0.216		
Acrylonitrile	ND	0.0699	0.0599	ND	0.152	0.130		
Hexane	0.0803	0.0692	0.0599	0.283	0.244	0.211	9.2	
1,1-Dichloroethane	ND	0.0674	0.0599	ND	0.273	0.242		
Vinyl acetate	ND	0.0696	0.0599	ND	0.245	0.211		
cis-1,2-Dichloroethene	ND	0.0689	0.0599	ND	0.273	0.237		
Methyl ethyl ketone (2-Butanone)	0.233	0.0695	0.0599	0.686	0.205	0.177	3.5	
Ethyl acetate	0.0671	0.0689	0.0599	0.242	0.248	0.216		
Chloroform	ND	0.0692	0.0599	ND	0.338	0.292		
Tetrahydrofuran	ND	0.0691	0.0599	ND	0.204	0.177		J
1,1,1-Trichloroethane	ND	0.0681	0.0599	ND	0.372	0.327		
Cyclohexane	ND	0.0696	0.0599	ND	0.240	0.206		
Carbon tetrachloride	0.0816	0.0693	0.0599	0.513	0.436	0.377	3.9	
Benzene	0.0891	0.0683	0.0599	0.285	0.218	0.191	5.4	
2,2,4-trimethylpentane	ND	0.0702	0.0599	ND	0.328	0.280		
1,2-Dichloroethane	ND	0.0699	0.0599	ND	0.283	0.242		
Heptane	ND	0.0688	0.0599	ND	0.282	0.245		
Trichloroethene	ND	0.0687	0.0599	ND	0.369	0.322		
1,2-Dichloropropane	ND	0.0699	0.0599	ND	0.323	0.277		
Methyl methacrylate	ND	0.0710	0.0599	ND	0.291	0.245		J
1,4-Dioxane	ND	0.0692	0.0599	ND	0.249	0.216		
Bromodichloromethane	ND	0.0680	0.0599	ND	0.455	0.401		
cis-1,3-Dichloropropene	ND	0.0673	0.0599	ND	0.305	0.272		
Methyl isobutyl ketone	0.0924	0.0706	0.0599	0.379	0.289	0.245	5.7	
Toluene	0.239	0.0695	0.0599	0.901	0.262	0.226	5.3	
trans-1,3-Dichloropropene	ND	0.0695	0.0599	ND	0.316	0.272		
1,1,2-Trichloroethane	ND	0.0686	0.0599	ND	0.374	0.327		
Tetrachloroethene	ND	0.0691	0.0599	ND	0.468	0.406		
2-Hexanone (Methyl butyl ketone)	ND	0.0695	0.0599	ND	0.285	0.245		
Dibromochloromethane	ND	0.0676	0.0599	ND	0.575	0.510		J
1,2-Dibromoethane	ND	0.0693	0.0599	ND	0.533	0.460		
Chlorobenzene	ND	0.0704	0.0599	ND	0.324	0.276		
Ethylbenzene	ND	0.0673	0.0599	ND	0.292	0.260		
1,1,1,2-Tetrachloroethane	ND	0.0684	0.0599	ND	0.470	0.411		
m-/p-Xylenes	0.104	0.0693	0.0599	0.451	0.301	0.260	6.6	
o-Xylene	ND	0.0684	0.0599	ND	0.297	0.260		
Styrene	ND	0.0667	0.0599	ND	0.284	0.255		
Bromoform	ND	0.0687	0.0599	ND	0.710	0.619		
1,1,2,2-Tetrachloroethane	ND	0.0684	0.0599	ND	0.470	0.411		
4-Ethyltoluene	ND	0.0689	0.0599	ND	0.339	0.294		J
2-Chlorotoluene	ND	0.0689	0.0599	ND	0.357	0.310		

Sample Name : ACF-AS-FORCON-083119 LD
Sample Info : 08819-232; Can #0786; 500mL load
Data File : X1903405.D
Dilution : 1
Pressurization Factor : 1.711
Acquisition Date : 2019-09-05 14:11:05
Instrument Method : TO15-SCN.M
Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	% Diff	Flag *
1,3,5-Trimethylbenzene	ND	0.0686	0.0599	ND	0.337	0.294		
1,2,4-Trimethylbenzene	ND	0.0680	0.0599	ND	0.334	0.294		
1,3-Dichlorobenzene	ND	0.0691	0.0599	ND	0.415	0.360		
1,4-Dichlorobenzene	ND	0.0686	0.0599	ND	0.413	0.360		
Benzyl chloride	ND	0.0683	0.0599	ND	0.354	0.310		
1,2-Dichlorobenzene	ND	0.0697	0.0599	ND	0.419	0.360		
1,2,4-Trichlorobenzene	ND	0.0695	0.0599	ND	0.516	0.444		
Hexachlorobutadiene	ND	0.0686	0.0599	ND	0.731	0.639		
Naphthalene	ND	0.0708	0.0599	ND	0.371	0.314		
1-Bromopropane	ND	0.0676	0.0599	ND	0.340	0.301		
1-Octene	ND	0.0669	0.0599	ND	0.307	0.275		
n-Octane	ND	0.0686	0.0599	ND	0.320	0.280		
Isopropylbenzene	ND	0.0695	0.0599	ND	0.342	0.294		
n-Propylbenzene	ND	0.0696	0.0599	ND	0.342	0.294		

Internal Standards	Response	Retention Time (min)	Concentration (PPBV)	Flag *
Bromochloromethane (IS)	522,553	11.93	5.00	PASS
1,4-Difluorobenzene (IS)	1,986,980	13.69	5.04	PASS
Chlorobenzene-d5 (IS)	1,647,342	17.86	4.80	PASS

(ND) = Not Detected
* (J) = Below Calibration Range, (E) = Above Calibration Range, (m) = Manual Integration
IS Acceptance Criteria: RT +/- 20 sec, Response +/- 40%

Sample Name : Humid Blank #0702

Sample Info : 500mL load; Can #0702

Data File : X1903385.D

Dilution : 1

Pressurization Factor : 1.000

Acquisition Date : 2019-09-04 10:48:23

Instrument Method : TO15-SCN.M

Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
Propylene	ND	0.0384	0.0350	ND	0.0660	0.0602	
Freon 12 (CCl2F2)	ND	0.0390	0.0350	ND	0.193	0.173	
Freon 114 (C2Cl2F4)	ND	0.0400	0.0350	ND	0.280	0.245	
Chloromethane	ND	0.0390	0.0350	ND	0.0805	0.0723	
Chloroethene (Vinyl chloride)	ND	0.0402	0.0350	ND	0.103	0.0895	
1,3-Butadiene	ND	0.0391	0.0350	ND	0.0865	0.0774	
Bromomethane	ND	0.0396	0.0350	ND	0.154	0.136	
Chloroethane	ND	0.0403	0.0350	ND	0.106	0.0924	
Bromoethene (Vinyl bromide)	ND	0.0399	0.0350	ND	0.174	0.153	
Freon 11 (CCl3F)	ND	0.0415	0.0350	ND	0.233	0.197	
Ethanol	ND	0.100	0.0400	ND	0.188	0.0754	
Acrolein	ND	0.0397	0.0350	ND	0.0911	0.0803	
Freon 113 (C2Cl3F3)	ND	0.0398	0.0350	ND	0.305	0.268	
1,1-Dichloroethene	ND	0.0400	0.0350	ND	0.159	0.139	
Acetone	0.0356	0.0402	0.0350	0.0845	0.0955	0.0831	m J
Carbon disulfide	ND	0.0402	0.0350	ND	0.125	0.109	
Isopropyl alcohol	ND	0.0402	0.0350	ND	0.0987	0.0860	
Allyl chloride (3-chloropropene)	ND	0.0402	0.0350	ND	0.126	0.110	
Acetonitrile	ND	0.0402	0.0350	ND	0.0675	0.0588	
Methylene chloride	ND	0.101	0.101	ND	0.352	0.352	
trans-1,2-Dichloroethene	ND	0.0408	0.0350	ND	0.162	0.139	
Methyl tert-butyl ether	ND	0.0410	0.0350	ND	0.148	0.126	
Acrylonitrile	ND	0.0409	0.0350	ND	0.0887	0.0760	
Hexane	ND	0.0404	0.0350	ND	0.143	0.123	
1,1-Dichloroethane	ND	0.0394	0.0350	ND	0.159	0.142	
Vinyl acetate	ND	0.0407	0.0350	ND	0.143	0.123	
cis-1,2-Dichloroethene	ND	0.0403	0.0350	ND	0.160	0.139	
Methyl ethyl ketone (2-Butanone)	ND	0.0406	0.0350	ND	0.120	0.103	
Ethyl acetate	ND	0.0403	0.0350	ND	0.145	0.126	
Chloroform	ND	0.0404	0.0350	ND	0.197	0.171	
Tetrahydrofuran	ND	0.0404	0.0350	ND	0.119	0.103	
1,1,1-Trichloroethane	ND	0.0398	0.0350	ND	0.217	0.191	
Cyclohexane	ND	0.0407	0.0350	ND	0.140	0.120	
Carbon tetrachloride	ND	0.0405	0.0350	ND	0.255	0.220	
Benzene	ND	0.0399	0.0350	ND	0.128	0.112	
2,2,4-trimethylpentane	ND	0.0410	0.0350	ND	0.192	0.164	
1,2-Dichloroethane	ND	0.0409	0.0350	ND	0.165	0.142	
Heptane	ND	0.0402	0.0350	ND	0.165	0.143	
Trichloroethene	ND	0.0402	0.0350	ND	0.216	0.188	
1,2-Dichloropropane	ND	0.0409	0.0350	ND	0.189	0.162	
Methyl methacrylate	ND	0.0415	0.0350	ND	0.170	0.143	
1,4-Dioxane	ND	0.0404	0.0350	ND	0.146	0.126	
Bromodichloromethane	ND	0.0397	0.0350	ND	0.266	0.235	
cis-1,3-Dichloropropene	ND	0.0393	0.0350	ND	0.178	0.159	
Methyl isobutyl ketone	ND	0.0412	0.0350	ND	0.169	0.143	
Toluene	ND	0.0406	0.0350	ND	0.153	0.132	
trans-1,3-Dichloropropene	ND	0.0406	0.0350	ND	0.184	0.159	
1,1,2-Trichloroethane	ND	0.0401	0.0350	ND	0.219	0.191	
Tetrachloroethene	ND	0.0404	0.0350	ND	0.274	0.237	
2-Hexanone (Methyl butyl ketone)	ND	0.0406	0.0350	ND	0.166	0.143	
Dibromochloromethane	ND	0.0395	0.0350	ND	0.336	0.298	
1,2-Dibromoethane	ND	0.0405	0.0350	ND	0.311	0.269	
Chlorobenzene	ND	0.0412	0.0350	ND	0.189	0.161	
Ethylbenzene	ND	0.0394	0.0350	ND	0.171	0.152	
1,1,1,2-Tetrachloroethane	ND	0.0400	0.0350	ND	0.275	0.240	
m-/p-Xylenes	ND	0.0405	0.0350	ND	0.176	0.152	

Sample Name: Humid Blank #0702

Sample Info: 500mL load; Can #0702

Data File: X1903385.D

Dilution: 1

Pressurization Factor: 1.000

Acquisition Date: 2019-09-04 10:48:23

Instrument Method: TO15-SCN.M

Matrix: AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
o-Xylene	ND	0.0400	0.0350	ND	0.174	0.152	
Styrene	ND	0.0390	0.0350	ND	0.166	0.149	
Bromoform	ND	0.0402	0.0350	ND	0.415	0.362	
1,1,2,2-Tetrachloroethane	ND	0.0400	0.0350	ND	0.275	0.240	
4-Ethyltoluene	ND	0.0403	0.0350	ND	0.198	0.172	
2-Chlorotoluene	ND	0.0403	0.0350	ND	0.209	0.181	
1,3,5-Trimethylbenzene	ND	0.0401	0.0350	ND	0.197	0.172	
1,2,4-Trimethylbenzene	ND	0.0398	0.0350	ND	0.195	0.172	
1,3-Dichlorobenzene	ND	0.0404	0.0350	ND	0.243	0.210	
1,4-Dichlorobenzene	ND	0.0401	0.0350	ND	0.241	0.210	
Benzyl chloride	ND	0.0399	0.0350	ND	0.207	0.181	
1,2-Dichlorobenzene	ND	0.0408	0.0350	ND	0.245	0.210	
1,2,4-Trichlorobenzene	ND	0.0406	0.0350	ND	0.301	0.260	
Hexachlorobutadiene	ND	0.0401	0.0350	ND	0.427	0.373	
Naphthalene	0.0372	0.0414	0.0350	0.195	0.217	0.183	J
1-Bromopropane	ND	0.0395	0.0350	ND	0.199	0.176	
1-Octene	ND	0.0391	0.0350	ND	0.180	0.161	
n-Octane	ND	0.0401	0.0350	ND	0.187	0.164	
Isopropylbenzene	ND	0.0406	0.0350	ND	0.200	0.172	
n-Propylbenzene	ND	0.0407	0.0350	ND	0.200	0.172	

Internal Standards	Response	Retention Time (min)	Concentration (PPBV)	Flag *
Bromochloromethane (IS)	509,782	11.93	5.00	PASS
1,4-Difluorobenzene (IS)	1,928,327	13.69	5.04	PASS
Chlorobenzene-d5 (IS)	1,579,820	17.86	4.80	PASS

(ND) = Not Detected

* (J) = Below Calibration Range, (E) = Above Calibration Range, (m) = Manual Integration

IS Acceptance Criteria: RT +/- 20 sec, Response +/- 40%

Sample Name

: Humid Blank #0702

Sample Info

: 500mL load; Can #0702

Data File

: X1903401.D

Dilution

: 1

Pressurization Factor

: 1.000

Acquisition Date

: 2019-09-05 10:26:26

Instrument Method

: TO15-SCN.M

Matrix

: AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
Propylene	ND	0.0384	0.0350	ND	0.0660	0.0602	
Freon 12 (CCI2F2)	ND	0.0390	0.0350	ND	0.193	0.173	
Freon 114 (C2CI2F4)	ND	0.0400	0.0350	ND	0.280	0.245	
Chloromethane	ND	0.0390	0.0350	ND	0.0805	0.0723	
Chloroethene (Vinyl chloride)	ND	0.0402	0.0350	ND	0.103	0.0895	
1,3-Butadiene	ND	0.0391	0.0350	ND	0.0865	0.0774	
Bromomethane	ND	0.0396	0.0350	ND	0.154	0.136	
Chloroethane	ND	0.0403	0.0350	ND	0.106	0.0924	
Bromoethene (Vinyl bromide)	ND	0.0399	0.0350	ND	0.174	0.153	
Freon 11 (CCI3F)	ND	0.0415	0.0350	ND	0.233	0.197	
Ethanol	ND	0.100	0.0400	ND	0.188	0.0754	
Acrolein	ND	0.0397	0.0350	ND	0.0911	0.0803	
Freon 113 (C2CI3F3)	ND	0.0398	0.0350	ND	0.305	0.268	
1,1-Dichloroethene	ND	0.0400	0.0350	ND	0.159	0.139	
Acetone	0.0363	0.0402	0.0350	0.0862	0.0955	0.0831	J
Carbon disulfide	ND	0.0402	0.0350	ND	0.125	0.109	
Isopropyl alcohol	ND	0.0402	0.0350	ND	0.0987	0.0860	
Allyl chloride (3-chloropropene)	ND	0.0402	0.0350	ND	0.126	0.110	
Acetonitrile	ND	0.0402	0.0350	ND	0.0675	0.0588	
Methylene chloride	ND	0.101	0.101	ND	0.352	0.352	
trans-1,2-Dichloroethene	ND	0.0408	0.0350	ND	0.162	0.139	
Methyl tert-butyl ether	ND	0.0410	0.0350	ND	0.148	0.126	
Acrylonitrile	ND	0.0409	0.0350	ND	0.0887	0.0760	
Hexane	ND	0.0404	0.0350	ND	0.143	0.123	
1,1-Dichloroethane	ND	0.0394	0.0350	ND	0.159	0.142	
Vinyl acetate	ND	0.0407	0.0350	ND	0.143	0.123	
cis-1,2-Dichloroethene	ND	0.0403	0.0350	ND	0.160	0.139	
Methyl ethyl ketone (2-Butanone)	ND	0.0406	0.0350	ND	0.120	0.103	
Ethyl acetate	ND	0.0403	0.0350	ND	0.145	0.126	
Chloroform	ND	0.0404	0.0350	ND	0.197	0.171	
Tetrahydrofuran	ND	0.0404	0.0350	ND	0.119	0.103	
1,1,1-Trichloroethane	ND	0.0398	0.0350	ND	0.217	0.191	
Cyclohexane	ND	0.0407	0.0350	ND	0.140	0.120	
Carbon tetrachloride	ND	0.0405	0.0350	ND	0.255	0.220	
Benzene	ND	0.0399	0.0350	ND	0.128	0.112	
2,2,4-trimethylpentane	ND	0.0410	0.0350	ND	0.192	0.164	
1,2-Dichloroethane	ND	0.0409	0.0350	ND	0.165	0.142	
Heptane	ND	0.0402	0.0350	ND	0.165	0.143	
Trichloroethene	ND	0.0402	0.0350	ND	0.216	0.188	
1,2-Dichloropropane	ND	0.0409	0.0350	ND	0.189	0.162	
Methyl methacrylate	ND	0.0415	0.0350	ND	0.170	0.143	
1,4-Dioxane	ND	0.0404	0.0350	ND	0.146	0.126	
Bromodichloromethane	ND	0.0397	0.0350	ND	0.266	0.235	
cis-1,3-Dichloropropene	ND	0.0393	0.0350	ND	0.178	0.159	
Methyl isobutyl ketone	ND	0.0412	0.0350	ND	0.169	0.143	
Toluene	ND	0.0406	0.0350	ND	0.153	0.132	
trans-1,3-Dichloropropene	ND	0.0406	0.0350	ND	0.184	0.159	
1,1,2-Trichloroethane	ND	0.0401	0.0350	ND	0.219	0.191	
Tetrachloroethene	ND	0.0404	0.0350	ND	0.274	0.237	
2-Hexanone (Methyl butyl ketone)	ND	0.0406	0.0350	ND	0.166	0.143	
Dibromochloromethane	ND	0.0395	0.0350	ND	0.336	0.298	
1,2-Dibromoethane	ND	0.0405	0.0350	ND	0.311	0.269	
Chlorobenzene	ND	0.0412	0.0350	ND	0.189	0.161	
Ethylbenzene	ND	0.0394	0.0350	ND	0.171	0.152	
1,1,1,2-Tetrachloroethane	ND	0.0400	0.0350	ND	0.275	0.240	
m-/p-Xylenes	ND	0.0405	0.0350	ND	0.176	0.152	

Sample Name: Humid Blank #0702

Sample Info: 500mL load; Can #0702

Data File: X1903401.D

Dilution: 1

Pressurization Factor: 1.000

Acquisition Date: 2019-09-05 10:26:26

Instrument Method: TO15-SCN.M

Matrix: AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
o-Xylene	ND	0.0400	0.0350	ND	0.174	0.152	
Styrene	ND	0.0390	0.0350	ND	0.166	0.149	
Bromoform	ND	0.0402	0.0350	ND	0.415	0.362	
1,1,2,2-Tetrachloroethane	ND	0.0400	0.0350	ND	0.275	0.240	
4-Ethyltoluene	ND	0.0403	0.0350	ND	0.198	0.172	
2-Chlorotoluene	ND	0.0403	0.0350	ND	0.209	0.181	
1,3,5-Trimethylbenzene	ND	0.0401	0.0350	ND	0.197	0.172	
1,2,4-Trimethylbenzene	ND	0.0398	0.0350	ND	0.195	0.172	
1,3-Dichlorobenzene	ND	0.0404	0.0350	ND	0.243	0.210	
1,4-Dichlorobenzene	ND	0.0401	0.0350	ND	0.241	0.210	
Benzyl chloride	ND	0.0399	0.0350	ND	0.207	0.181	
1,2-Dichlorobenzene	ND	0.0408	0.0350	ND	0.245	0.210	
1,2,4-Trichlorobenzene	ND	0.0406	0.0350	ND	0.301	0.260	
Hexachlorobutadiene	ND	0.0401	0.0350	ND	0.427	0.373	
Naphthalene	0.0387	0.0414	0.0350	0.203	0.217	0.183	J
1-Bromopropane	ND	0.0395	0.0350	ND	0.199	0.176	
1-Octene	ND	0.0391	0.0350	ND	0.180	0.161	
n-Octane	ND	0.0401	0.0350	ND	0.187	0.164	
Isopropylbenzene	ND	0.0406	0.0350	ND	0.200	0.172	
n-Propylbenzene	ND	0.0407	0.0350	ND	0.200	0.172	

Internal Standards	Response	Retention Time (min)	Concentration (PPBV)	Flag *
Bromochloromethane (IS)	523,935	11.93	5.00	PASS
1,4-Difluorobenzene (IS)	1,992,372	13.69	5.04	PASS
Chlorobenzene-d5 (IS)	1,661,747	17.86	4.80	PASS

(ND) = Not Detected

* (J) = Below Calibration Range, (E) = Above Calibration Range, (m) = Manual Integration

IS Acceptance Criteria: RT +/- 20 sec, Response +/- 40%

Sample Name: Humid Blank #0702

Sample Info: 500mL load; Can #0702

Data File: X1903415.D

Dilution: 1

Pressurization Factor: 1.000

Acquisition Date: 2019-09-06 10:27:19

Instrument Method: TO15-SCN.M

Matrix: AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
Propylene	ND	0.0384	0.0350	ND	0.0660	0.0602	
Freon 12 (CCl2F2)	ND	0.0390	0.0350	ND	0.193	0.173	
Freon 114 (C2Cl2F4)	ND	0.0400	0.0350	ND	0.280	0.245	
Chloromethane	ND	0.0390	0.0350	ND	0.0805	0.0723	
Chloroethene (Vinyl chloride)	ND	0.0402	0.0350	ND	0.103	0.0895	
1,3-Butadiene	ND	0.0391	0.0350	ND	0.0865	0.0774	
Bromomethane	ND	0.0396	0.0350	ND	0.154	0.136	
Chloroethane	ND	0.0403	0.0350	ND	0.106	0.0924	
Bromoethene (Vinyl bromide)	ND	0.0399	0.0350	ND	0.174	0.153	
Freon 11 (CCl3F)	ND	0.0415	0.0350	ND	0.233	0.197	
Ethanol	0.0743	0.100	0.0400	0.140	0.188	0.0754	J
Acrolein	ND	0.0397	0.0350	ND	0.0911	0.0803	
Freon 113 (C2Cl3F3)	ND	0.0398	0.0350	ND	0.305	0.268	
1,1-Dichloroethene	ND	0.0400	0.0350	ND	0.159	0.139	
Acetone	0.0359	0.0402	0.0350	0.0852	0.0955	0.0831	J
Carbon disulfide	ND	0.0402	0.0350	ND	0.125	0.109	
Isopropyl alcohol	ND	0.0402	0.0350	ND	0.0987	0.0860	
Allyl chloride (3-chloropropene)	ND	0.0402	0.0350	ND	0.126	0.110	
Acetonitrile	ND	0.0402	0.0350	ND	0.0675	0.0588	
Methylene chloride	ND	0.101	0.101	ND	0.352	0.352	
trans-1,2-Dichloroethene	ND	0.0408	0.0350	ND	0.162	0.139	
Methyl tert-butyl ether	ND	0.0410	0.0350	ND	0.148	0.126	
Acrylonitrile	ND	0.0409	0.0350	ND	0.0887	0.0760	
Hexane	ND	0.0404	0.0350	ND	0.143	0.123	
1,1-Dichloroethane	ND	0.0394	0.0350	ND	0.159	0.142	
Vinyl acetate	ND	0.0407	0.0350	ND	0.143	0.123	
cis-1,2-Dichloroethene	ND	0.0403	0.0350	ND	0.160	0.139	
Methyl ethyl ketone (2-Butanone)	ND	0.0406	0.0350	ND	0.120	0.103	
Ethyl acetate	ND	0.0403	0.0350	ND	0.145	0.126	
Chloroform	ND	0.0404	0.0350	ND	0.197	0.171	
Tetrahydrofuran	ND	0.0404	0.0350	ND	0.119	0.103	
1,1,1-Trichloroethane	ND	0.0398	0.0350	ND	0.217	0.191	
Cyclohexane	ND	0.0407	0.0350	ND	0.140	0.120	
Carbon tetrachloride	ND	0.0405	0.0350	ND	0.255	0.220	
Benzene	ND	0.0399	0.0350	ND	0.128	0.112	
2,2,4-trimethylpentane	ND	0.0410	0.0350	ND	0.192	0.164	
1,2-Dichloroethane	ND	0.0409	0.0350	ND	0.165	0.142	
Heptane	ND	0.0402	0.0350	ND	0.165	0.143	
Trichloroethene	ND	0.0402	0.0350	ND	0.216	0.188	
1,2-Dichloropropane	ND	0.0409	0.0350	ND	0.189	0.162	
Methyl methacrylate	ND	0.0415	0.0350	ND	0.170	0.143	
1,4-Dioxane	ND	0.0404	0.0350	ND	0.146	0.126	
Bromodichloromethane	ND	0.0397	0.0350	ND	0.266	0.235	
cis-1,3-Dichloropropene	ND	0.0393	0.0350	ND	0.178	0.159	
Methyl isobutyl ketone	ND	0.0412	0.0350	ND	0.169	0.143	
Toluene	ND	0.0406	0.0350	ND	0.153	0.132	
trans-1,3-Dichloropropene	ND	0.0406	0.0350	ND	0.184	0.159	
1,1,2-Trichloroethane	ND	0.0401	0.0350	ND	0.219	0.191	
Tetrachloroethene	ND	0.0404	0.0350	ND	0.274	0.237	
2-Hexanone (Methyl butyl ketone)	ND	0.0406	0.0350	ND	0.166	0.143	
Dibromochloromethane	ND	0.0395	0.0350	ND	0.336	0.298	
1,2-Dibromoethane	ND	0.0405	0.0350	ND	0.311	0.269	
Chlorobenzene	ND	0.0412	0.0350	ND	0.189	0.161	
Ethylbenzene	ND	0.0394	0.0350	ND	0.171	0.152	
1,1,1,2-Tetrachloroethane	ND	0.0400	0.0350	ND	0.275	0.240	
m-/p-Xylenes	ND	0.0405	0.0350	ND	0.176	0.152	

Sample Name: Humid Blank #0702

Sample Info: 500mL load; Can #0702

Data File: X1903415.D

Dilution: 1

Pressurization Factor: 1.000

Acquisition Date: 2019-09-06 10:27:19

Instrument Method: TO15-SCN.M

Matrix: AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
o-Xylene	ND	0.0400	0.0350	ND	0.174	0.152	
Styrene	ND	0.0390	0.0350	ND	0.166	0.149	
Bromoform	ND	0.0402	0.0350	ND	0.415	0.362	
1,1,2,2-Tetrachloroethane	ND	0.0400	0.0350	ND	0.275	0.240	
4-Ethyltoluene	ND	0.0403	0.0350	ND	0.198	0.172	
2-Chlorotoluene	ND	0.0403	0.0350	ND	0.209	0.181	
1,3,5-Trimethylbenzene	ND	0.0401	0.0350	ND	0.197	0.172	
1,2,4-Trimethylbenzene	ND	0.0398	0.0350	ND	0.195	0.172	
1,3-Dichlorobenzene	ND	0.0404	0.0350	ND	0.243	0.210	
1,4-Dichlorobenzene	ND	0.0401	0.0350	ND	0.241	0.210	
Benzyl chloride	ND	0.0399	0.0350	ND	0.207	0.181	
1,2-Dichlorobenzene	ND	0.0408	0.0350	ND	0.245	0.210	
1,2,4-Trichlorobenzene	ND	0.0406	0.0350	ND	0.301	0.260	
Hexachlorobutadiene	ND	0.0401	0.0350	ND	0.427	0.373	
Naphthalene	ND	0.0414	0.0350	ND	0.217	0.183	
1-Bromopropane	ND	0.0395	0.0350	ND	0.199	0.176	
1-Octene	ND	0.0391	0.0350	ND	0.180	0.161	
n-Octane	ND	0.0401	0.0350	ND	0.187	0.164	
Isopropylbenzene	ND	0.0406	0.0350	ND	0.200	0.172	
n-Propylbenzene	ND	0.0407	0.0350	ND	0.200	0.172	

Internal Standards	Response	Retention Time (min)	Concentration (PPBV)	Flag *
Bromochloromethane (IS)	533,674	11.93	5.00	PASS
1,4-Difluorobenzene (IS)	2,028,792	13.69	5.04	PASS
Chlorobenzene-d5 (IS)	1,706,126	17.86	4.80	PASS

(ND) = Not Detected

* (J) = Below Calibration Range, (E) = Above Calibration Range, (m) = Manual Integration

IS Acceptance Criteria: RT +/- 20 sec, Response +/- 40%

QC Summary Report

Enthalpy Analytical, LLC

Sample Name : 5ppbv TO15 LCS
 Sample Info : 125mL load; Can #00100; GCMSPrepPg800
 Data File : X1903383.D
 Dilution : 1
 Pressurization Factor : 1.000
 Acquisition Date : 2019-09-04 08:56:39
 Instrument Method : TO15-SCN.M
 Matrix : AIR

Target Compound	Response	Concentration (PPBV)	Tag Value (PPBV)	% Recovery	Flag
Propylene	382,886	3.98	4.80	83.0	PASS
Freon 12 (CCl2F2)	908,165	4.76	4.88	97.6	PASS
Freon 114 (C2Cl2F4)	1,028,985	4.84	5.01	96.7	PASS
Chloromethane	472,061	4.51	4.88	92.4	PASS
Chloroethene (Vinyl chloride)	461,150	4.93	5.03	98.0	PASS
1,3-Butadiene	369,694	4.17	4.89	85.4	PASS
Bromomethane	382,757	4.76	4.95	96.3	PASS
Chloroethane	229,352	4.62	5.04	91.7	PASS
Bromoethene (Vinyl bromide)	449,688	4.95	4.99	99.3	PASS
Freon 11 (CCl3F)	1,074,861	5.13	5.19	98.9	PASS
Ethanol	219,155	4.45	5.00	89.0	PASS
Acrolein	196,903	4.77	4.97	96.0	PASS
1,1-Dichloroethene	748,015	4.66	5.01	93.2	PASS
Freon 113 (C2Cl3F3)	738,855	4.95	4.98	99.5	PASS
Acetone	720,940	4.21	5.03	83.8	PASS
Isopropyl alcohol	902,420	4.58	5.02	91.2	PASS
Carbon disulfide	1,220,336	4.60	5.02	91.6	PASS
Acetonitrile	452,039	4.45	5.03	88.5	PASS
Allyl chloride (3-chloropropene)	187,308	4.81	5.03	95.6	PASS
Methylene chloride	683,123	4.39	5.07	86.8	PASS
Acrylonitrile	423,426	4.77	5.11	93.4	PASS
Methyl tert-butyl ether	1,104,099	4.91	5.12	95.9	PASS
trans-1,2-Dichloroethene	698,092	4.86	5.10	95.3	PASS
Hexane	777,439	4.74	5.06	93.7	PASS
Vinyl acetate	1,307,806	4.60	5.09	90.6	PASS
1,1-Dichloroethane	830,252	4.68	4.93	94.9	PASS
Methyl ethyl ketone (2-Butanone)	208,589	4.94	5.08	97.3	PASS
cis-1,2-Dichloroethene	818,014	4.86	5.04	96.5	PASS
Ethyl acetate	175,690	4.51	5.04	89.6	PASS
1-Bromopropane	925,462	4.63	4.94	93.8	PASS
Tetrahydrofuran	197,051	4.87	5.05	96.5	PASS
Chloroform	872,514	4.93	5.06	97.5	PASS
1,1,1-Trichloroethane	858,827	4.85	4.98	97.5	PASS
Cyclohexane	806,728	4.69	5.09	92.3	PASS
Carbon tetrachloride	953,324	5.11	5.06	101.0	PASS
Benzene	1,266,143	4.76	4.99	95.3	PASS
1,2-Dichloroethane	610,724	4.98	5.11	97.4	PASS
2,2,4-trimethylpentane	2,456,429	4.82	5.13	94.1	PASS
Heptane	481,422	4.57	5.03	90.9	PASS
Trichloroethene	644,624	5.00	5.02	99.5	PASS
1,2-Dichloropropane	557,632	4.75	4.98	95.3	PASS
Methyl methacrylate	466,438	4.99	5.19	96.2	PASS

QC Summary Report

Enthalpy Analytical, LLC

Sample Name : 5ppbv TO15 LCS
 Sample Info : 125mL load; Can #00100; GCMSPrepPg800
 Data File : X1903383.D
 Dilution : 1
 Pressurization Factor : 1.000
 Acquisition Date : 2019-09-04 08:56:39
 Instrument Method : TO15-SCN.M
 Matrix : AIR

Target Compound	Response	Concentration (PPBV)	Tag Value (PPBV)	% Recovery	Flag
1,4-Dioxane	306,911	5.15	5.06	101.8	PASS
Bromodichloromethane	903,342	4.82	4.97	97.0	PASS
cis-1,3-Dichloropropene	736,860	4.82	4.92	98.1	PASS
Methyl isobutyl ketone	1,267,877	4.70	5.16	91.3	PASS
Toluene	1,537,156	4.91	5.08	96.7	PASS
1-Octene	357,331	4.80	4.89	98.3	PASS
n-Octane	471,569	4.94	5.01	98.6	PASS
trans-1,3-Dichloropropene	737,790	5.02	5.08	98.7	PASS
1,1,2-Trichloroethane	544,943	4.83	5.01	96.4	PASS
Tetrachloroethene	851,587	5.15	5.05	102.0	PASS
2-Hexanone (Methyl butyl ketone)	1,196,101	4.79	5.08	94.3	PASS
Dibromochloromethane	1,100,645	5.04	4.94	102.1	PASS
1,2-Dibromoethane	948,820	5.05	5.07	99.7	PASS
Chlorobenzene	1,275,756	5.19	5.15	100.9	PASS
Ethylbenzene	1,827,558	4.74	4.92	96.2	PASS
1,1,1,2-Tetrachloroethane	727,802	5.02	5.00	100.4	PASS
m-/p-Xylenes	1,593,764	4.90	5.07	96.8	PASS
o-Xylene	1,534,362	4.82	5.00	96.4	PASS
Styrene	1,232,427	4.91	4.87	100.8	PASS
Bromoform	1,100,090	5.17	5.02	103.0	PASS
Isopropylbenzene	2,252,731	5.05	5.08	99.5	PASS
1,1,2,2-Tetrachloroethane	1,172,919	4.90	5.00	97.9	PASS
n-Propylbenzene	2,538,702	5.00	5.09	98.4	PASS
4-Ethyltoluene	2,227,844	5.04	5.04	100.1	PASS
2-Chlorotoluene	1,726,646	4.80	5.04	95.4	PASS
1,3,5-Trimethylbenzene	1,850,262	4.93	5.02	98.4	PASS
1,2,4-Trimethylbenzene	1,867,702	4.89	4.97	98.4	PASS
1,3-Dichlorobenzene	1,349,250	5.00	5.05	99.1	PASS
1,4-Dichlorobenzene	1,334,401	4.99	5.02	99.5	PASS
Benzyl chloride	1,646,509	5.09	4.99	101.9	PASS
1,2-Dichlorobenzene	1,339,245	5.08	5.10	99.7	PASS
1,2,4-Trichlorobenzene	972,648	5.51	5.08	108.5	PASS
Hexachlorobutadiene	960,882	5.16	5.01	103.0	PASS
Naphthalene	2,521,237	5.62	5.18	108.5	PASS

Sample Name

: 5ppbv TO15 LCS

Sample Info

: 125mL load; Can #00100; GCMSPrepPg800

Data File

: X1903383.D

Dilution

: 1

Pressurization Factor

: 1.000

Acquisition Date

: 2019-09-04 08:56:39

Instrument Method

: TO15-SCN.M

Matrix

: AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
Propylene	3.98	0.0384	0.0350	6.85	0.0660	0.0602	
Freon 12 (CCI2F2)	4.76	0.0390	0.0350	23.6	0.193	0.173	
Freon 114 (C2CI2F4)	4.84	0.0400	0.0350	33.8	0.280	0.245	
Chloromethane	4.51	0.0390	0.0350	9.31	0.0805	0.0723	
Chloroethene (Vinyl chloride)	4.93	0.0402	0.0350	12.6	0.103	0.0895	
1,3-Butadiene	4.17	0.0391	0.0350	9.23	0.0865	0.0774	
Bromomethane	4.76	0.0396	0.0350	18.5	0.154	0.136	
Chloroethane	4.62	0.0403	0.0350	12.2	0.106	0.0924	
Bromoethene (Vinyl bromide)	4.95	0.0399	0.0350	21.6	0.174	0.153	
Freon 11 (CCI3F)	5.13	0.0415	0.0350	28.8	0.233	0.197	
Ethanol	4.45	0.100	0.0400	8.39	0.188	0.0754	
Acrolein	4.77	0.0397	0.0350	10.9	0.0911	0.0803	
Freon 113 (C2CI3F3)	4.95	0.0398	0.0350	37.9	0.305	0.268	
1,1-Dichloroethene	4.66	0.0400	0.0350	18.5	0.159	0.139	
Acetone	4.21	0.0402	0.0350	10.0	0.0955	0.0831	
Carbon disulfide	4.60	0.0402	0.0350	14.3	0.125	0.109	
Isopropyl alcohol	4.58	0.0402	0.0350	11.3	0.0987	0.0860	
Allyl chloride (3-chloropropene)	4.81	0.0402	0.0350	15.1	0.126	0.110	
Acetonitrile	4.45	0.0402	0.0350	7.47	0.0675	0.0588	
Methylene chloride	4.39	0.101	0.101	15.3	0.352	0.352	m
trans-1,2-Dichloroethene	4.86	0.0408	0.0350	19.3	0.162	0.139	
Methyl tert-butyl ether	4.91	0.0410	0.0350	17.7	0.148	0.126	
Acrylonitrile	4.77	0.0409	0.0350	10.4	0.0887	0.0760	
Hexane	4.74	0.0404	0.0350	16.7	0.143	0.123	
1,1-Dichloroethane	4.68	0.0394	0.0350	18.9	0.159	0.142	
Vinyl acetate	4.60	0.0407	0.0350	16.2	0.143	0.123	
cis-1,2-Dichloroethene	4.86	0.0403	0.0350	19.3	0.160	0.139	m
Methyl ethyl ketone (2-Butanone)	4.94	0.0406	0.0350	14.6	0.120	0.103	
Ethyl acetate	4.51	0.0403	0.0350	16.2	0.145	0.126	m
Chloroform	4.93	0.0404	0.0350	24.1	0.197	0.171	
Tetrahydrofuran	4.87	0.0404	0.0350	14.4	0.119	0.103	
1,1,1-Trichloroethane	4.85	0.0398	0.0350	26.5	0.217	0.191	
Cyclohexane	4.69	0.0407	0.0350	16.2	0.140	0.120	
Carbon tetrachloride	5.11	0.0405	0.0350	32.1	0.255	0.220	
Benzene	4.76	0.0399	0.0350	15.2	0.128	0.112	
2,2,4-trimethylpentane	4.82	0.0410	0.0350	22.5	0.192	0.164	
1,2-Dichloroethane	4.98	0.0409	0.0350	20.1	0.165	0.142	
Heptane	4.57	0.0402	0.0350	18.7	0.165	0.143	
Trichloroethene	5.00	0.0402	0.0350	26.8	0.216	0.188	
1,2-Dichloropropane	4.75	0.0409	0.0350	21.9	0.189	0.162	
Methyl methacrylate	4.99	0.0415	0.0350	20.4	0.170	0.143	
1,4-Dioxane	5.15	0.0404	0.0350	18.5	0.146	0.126	m
Bromodichloromethane	4.82	0.0397	0.0350	32.3	0.266	0.235	
cis-1,3-Dichloropropene	4.82	0.0393	0.0350	21.9	0.178	0.159	
Methyl isobutyl ketone	4.70	0.0412	0.0350	19.3	0.169	0.143	
Toluene	4.91	0.0406	0.0350	18.5	0.153	0.132	
trans-1,3-Dichloropropene	5.02	0.0406	0.0350	22.8	0.184	0.159	
1,1,2-Trichloroethane	4.83	0.0401	0.0350	26.3	0.219	0.191	
Tetrachloroethene	5.15	0.0404	0.0350	34.9	0.274	0.237	
2-Hexanone (Methyl butyl ketone)	4.79	0.0406	0.0350	19.6	0.166	0.143	
Dibromochloromethane	5.04	0.0395	0.0350	42.9	0.336	0.298	
1,2-Dibromoethane	5.05	0.0405	0.0350	38.8	0.311	0.269	
Chlorobenzene	5.19	0.0412	0.0350	23.9	0.189	0.161	
Ethylbenzene	4.74	0.0394	0.0350	20.6	0.171	0.152	
1,1,1,2-Tetrachloroethane	5.02	0.0400	0.0350	34.4	0.275	0.240	
m-/p-Xylenes	4.90	0.0405	0.0350	21.3	0.176	0.152	

Sample Name : 5ppbv TO15 LCS

Sample Info : 125mL load; Can #00100; GCMSPrepPg800

Data File : X1903383.D

Dilution : 1

Pressurization Factor : 1.000

Acquisition Date : 2019-09-04 08:56:39

Instrument Method : TO15-SCN.M

Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
o-Xylene	4.82	0.0400	0.0350	20.9	0.174	0.152	
Styrene	4.91	0.0390	0.0350	20.9	0.166	0.149	
Bromoform	5.17	0.0402	0.0350	53.4	0.415	0.362	
1,1,2,2-Tetrachloroethane	4.90	0.0400	0.0350	33.6	0.275	0.240	
4-Ethyltoluene	5.04	0.0403	0.0350	24.8	0.198	0.172	
2-Chlorotoluene	4.80	0.0403	0.0350	24.9	0.209	0.181	
1,3,5-Trimethylbenzene	4.93	0.0401	0.0350	24.3	0.197	0.172	
1,2,4-Trimethylbenzene	4.89	0.0398	0.0350	24.0	0.195	0.172	
1,3-Dichlorobenzene	5.00	0.0404	0.0350	30.0	0.243	0.210	
1,4-Dichlorobenzene	4.99	0.0401	0.0350	30.0	0.241	0.210	
Benzyl chloride	5.09	0.0399	0.0350	26.3	0.207	0.181	
1,2-Dichlorobenzene	5.08	0.0408	0.0350	30.5	0.245	0.210	
1,2,4-Trichlorobenzene	5.51	0.0406	0.0350	40.9	0.301	0.260	
Hexachlorobutadiene	5.16	0.0401	0.0350	55.0	0.427	0.373	
Naphthalene	5.62	0.0414	0.0350	29.4	0.217	0.183	
1-Bromopropane	4.63	0.0395	0.0350	23.3	0.199	0.176	m
1-Octene	4.80	0.0391	0.0350	22.1	0.180	0.161	
n-Octane	4.94	0.0401	0.0350	23.1	0.187	0.164	
Isopropylbenzene	5.05	0.0406	0.0350	24.8	0.200	0.172	
n-Propylbenzene	5.00	0.0407	0.0350	24.6	0.200	0.172	

Internal Standards	Response	Retention Time (min)	Concentration (PPBV)	Flag *
Bromochloromethane (IS)	493,230	11.93	5.00	PASS
1,4-Difluorobenzene (IS)	1,913,250	13.69	5.04	PASS
Chlorobenzene-d5 (IS)	1,597,635	17.86	4.80	PASS

(ND) = Not Detected

* (J) = Below Calibration Range, (E) = Above Calibration Range, (m) = Manual Integration

IS Acceptance Criteria: RT +/- 20 sec, Response +/- 40%

Sample Name : 5ppbv TO15 LCS
 Sample Info : 125mL load; Can #2040; GCMSPrepPg802
 Data File : X1903399.D
 Dilution : 1
 Pressurization Factor : 1.000
 Acquisition Date : 2019-09-05 08:34:39
 Instrument Method : TO15-SCN.M
 Matrix : AIR

Target Compound	Response	Concentration (PPBV)	Tag Value (PPBV)	% Recovery	Flag
Propylene	394,530	3.94	4.80	82.3	PASS
Freon 12 (CCl2F2)	934,416	4.72	4.88	96.7	PASS
Freon 114 (C2Cl2F4)	1,063,349	4.81	5.01	96.2	PASS
Chloromethane	482,655	4.43	4.88	90.9	PASS
Chloroethene (Vinyl chloride)	468,305	4.82	5.03	95.8	PASS
1,3-Butadiene	368,261	4.00	4.89	81.9	PASS
Bromomethane	384,385	4.60	4.95	93.1	PASS
Chloroethane	247,710	4.80	5.04	95.3	PASS
Bromoethene (Vinyl bromide)	467,111	4.95	4.99	99.2	PASS
Freon 11 (CCl3F)	1,110,718	5.10	5.19	98.3	PASS
Ethanol	216,282	4.23	5.00	84.5	PASS
Acrolein	201,481	4.69	4.97	94.5	PASS
1,1-Dichloroethene	777,418	4.66	5.01	93.2	PASS
Freon 113 (C2Cl3F3)	771,208	4.97	4.98	99.9	PASS
Acetone	743,253	4.18	5.03	83.1	PASS
Isopropyl alcohol	909,230	4.44	5.02	88.4	PASS
Carbon disulfide	1,260,250	4.57	5.02	91.0	PASS
Acetonitrile	459,646	4.35	5.03	86.6	PASS
Allyl chloride (3-chloropropene)	195,124	4.82	5.03	95.8	PASS
Methylene chloride	699,136	4.33	5.07	85.4	PASS
Acrylonitrile	430,040	4.66	5.11	91.2	PASS
Methyl tert-butyl ether	1,139,345	4.88	5.12	95.2	PASS
trans-1,2-Dichloroethene	720,066	4.82	5.10	94.6	PASS
Hexane	798,741	4.68	5.06	92.6	PASS
Vinyl acetate	1,328,200	4.50	5.09	88.5	PASS
1,1-Dichloroethane	863,917	4.68	4.93	95.0	PASS
Methyl ethyl ketone (2-Butanone)	214,133	4.88	5.08	96.1	PASS
cis-1,2-Dichloroethene	839,123	4.79	5.04	95.2	PASS
Ethyl acetate	183,131	4.52	5.04	89.8	PASS
1-Bromopropane	943,506	4.55	4.94	92.0	PASS
Tetrahydrofuran	202,371	4.81	5.05	95.4	PASS
Chloroform	897,865	4.88	5.06	96.5	PASS
1,1,1-Trichloroethane	889,183	4.83	4.98	97.1	PASS
Cyclohexane	826,872	4.63	5.09	91.0	PASS
Carbon tetrachloride	978,907	5.05	5.06	99.8	PASS
Benzene	1,307,871	4.70	4.99	94.2	PASS
1,2-Dichloroethane	617,706	4.82	5.11	94.2	PASS
2,2,4-trimethylpentane	2,516,463	4.73	5.13	92.2	PASS
Heptane	499,874	4.54	5.03	90.3	PASS
Trichloroethene	673,721	5.00	5.02	99.5	PASS
1,2-Dichloropropane	580,909	4.73	4.98	95.0	PASS
Methyl methacrylate	484,472	4.96	5.19	95.6	PASS

QC Summary Report

Enthalpy Analytical, LLC

Sample Name : 5ppbv TO15 LCS
 Sample Info : 125mL load; Can #2040; GCMSPrepPg802
 Data File : X1903399.D
 Dilution : 1
 Pressurization Factor : 1.000
 Acquisition Date : 2019-09-05 08:34:39
 Instrument Method : TO15-SCN.M
 Matrix : AIR

Target Compound	Response	Concentration (PPBV)	Tag Value (PPBV)	% Recovery	Flag
1,4-Dioxane	314,129	5.04	5.06	99.7	PASS
Bromodichloromethane	939,202	4.79	4.97	96.5	PASS
cis-1,3-Dichloropropene	758,800	4.75	4.92	96.7	PASS
Methyl isobutyl ketone	1,292,159	4.59	5.16	89.0	PASS
Toluene	1,576,507	4.80	5.08	94.5	PASS
1-Octene	363,055	4.65	4.89	95.2	PASS
n-Octane	486,834	4.86	5.01	97.0	PASS
trans-1,3-Dichloropropene	756,109	4.90	5.08	96.4	PASS
1,1,2-Trichloroethane	567,760	4.79	5.01	95.7	PASS
Tetrachloroethene	887,174	5.11	5.05	101.3	PASS
2-Hexanone (Methyl butyl ketone)	1,204,638	4.60	5.08	90.5	PASS
Dibromochloromethane	1,140,808	4.98	4.94	100.9	PASS
1,2-Dibromoethane	980,565	4.98	5.07	98.2	PASS
Chlorobenzene	1,319,156	5.11	5.15	99.4	PASS
Ethylbenzene	1,869,714	4.62	4.92	93.8	PASS
1,1,1,2-Tetrachloroethane	747,193	4.91	5.00	98.2	PASS
m-/p-Xylenes	1,605,508	4.71	5.07	92.9	PASS
o-Xylene	1,557,729	4.66	5.00	93.3	PASS
Styrene	1,254,388	4.76	4.87	97.8	PASS
Bromoform	1,156,251	5.18	5.02	103.2	PASS
Isopropylbenzene	2,296,192	4.90	5.08	96.6	PASS
1,1,2,2-Tetrachloroethane	1,210,081	4.81	5.00	96.3	PASS
n-Propylbenzene	2,578,354	4.84	5.09	95.2	PASS
4-Ethyltoluene	2,236,428	4.82	5.04	95.8	PASS
2-Chlorotoluene	1,788,199	4.74	5.04	94.1	PASS
1,3,5-Trimethylbenzene	1,881,541	4.78	5.02	95.3	PASS
1,2,4-Trimethylbenzene	1,904,882	4.75	4.97	95.7	PASS
1,3-Dichlorobenzene	1,411,475	4.98	5.05	98.8	PASS
1,4-Dichlorobenzene	1,402,002	5.00	5.02	99.6	PASS
Benzyl chloride	1,698,947	5.00	4.99	100.2	PASS
1,2-Dichlorobenzene	1,395,176	5.05	5.10	99.0	PASS
1,2,4-Trichlorobenzene	1,070,066	5.78	5.08	113.8	PASS
Hexachlorobutadiene	995,784	5.10	5.01	101.8	PASS
Naphthalene	2,677,267	5.68	5.18	109.8	PASS

Sample Name : 5ppbv TO15 LCS

Sample Info : 125mL load; Can #2040; GCMSPrepPg802

Data File : X1903399.D

Dilution : 1

Pressurization Factor : 1.000

Acquisition Date : 2019-09-05 08:34:39

Instrument Method : TO15-SCN.M

Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
Propylene	3.94	0.0384	0.0350	6.79	0.0660	0.0602	
Freon 12 (CCl2F2)	4.72	0.0390	0.0350	23.3	0.193	0.173	
Freon 114 (C2Cl2F4)	4.81	0.0400	0.0350	33.6	0.280	0.245	
Chloromethane	4.43	0.0390	0.0350	9.15	0.0805	0.0723	
Chloroethene (Vinyl chloride)	4.82	0.0402	0.0350	12.3	0.103	0.0895	
1,3-Butadiene	4.00	0.0391	0.0350	8.85	0.0865	0.0774	
Bromomethane	4.60	0.0396	0.0350	17.9	0.154	0.136	
Chloroethane	4.80	0.0403	0.0350	12.7	0.106	0.0924	
Bromoethene (Vinyl bromide)	4.95	0.0399	0.0350	21.6	0.174	0.153	
Freon 11 (CCl3F)	5.10	0.0415	0.0350	28.7	0.233	0.197	
Ethanol	4.23	0.100	0.0400	7.96	0.188	0.0754	
Acrolein	4.69	0.0397	0.0350	10.8	0.0911	0.0803	
Freon 113 (C2Cl3F3)	4.97	0.0398	0.0350	38.1	0.305	0.268	
1,1-Dichloroethene	4.66	0.0400	0.0350	18.5	0.159	0.139	
Acetone	4.18	0.0402	0.0350	9.93	0.0955	0.0831	
Carbon disulfide	4.57	0.0402	0.0350	14.2	0.125	0.109	
Isopropyl alcohol	4.44	0.0402	0.0350	10.9	0.0987	0.0860	
Allyl chloride (3-chloropropene)	4.82	0.0402	0.0350	15.1	0.126	0.110	
Acetonitrile	4.35	0.0402	0.0350	7.31	0.0675	0.0588	
Methylene chloride	4.33	0.101	0.101	15.0	0.352	0.352	m
trans-1,2-Dichloroethene	4.82	0.0408	0.0350	19.1	0.162	0.139	
Methyl tert-butyl ether	4.88	0.0410	0.0350	17.6	0.148	0.126	
Acrylonitrile	4.66	0.0409	0.0350	10.1	0.0887	0.0760	
Hexane	4.68	0.0404	0.0350	16.5	0.143	0.123	
1,1-Dichloroethane	4.68	0.0394	0.0350	18.9	0.159	0.142	
Vinyl acetate	4.50	0.0407	0.0350	15.8	0.143	0.123	m
cis-1,2-Dichloroethene	4.79	0.0403	0.0350	19.0	0.160	0.139	
Methyl ethyl ketone (2-Butanone)	4.88	0.0406	0.0350	14.4	0.120	0.103	
Ethyl acetate	4.52	0.0403	0.0350	16.3	0.145	0.126	
Chloroform	4.88	0.0404	0.0350	23.8	0.197	0.171	
Tetrahydrofuran	4.81	0.0404	0.0350	14.2	0.119	0.103	
1,1,1-Trichloroethane	4.83	0.0398	0.0350	26.4	0.217	0.191	
Cyclohexane	4.63	0.0407	0.0350	15.9	0.140	0.120	
Carbon tetrachloride	5.05	0.0405	0.0350	31.8	0.255	0.220	
Benzene	4.70	0.0399	0.0350	15.0	0.128	0.112	
2,2,4-trimethylpentane	4.73	0.0410	0.0350	22.1	0.192	0.164	
1,2-Dichloroethane	4.82	0.0409	0.0350	19.5	0.165	0.142	
Heptane	4.54	0.0402	0.0350	18.6	0.165	0.143	
Trichloroethene	5.00	0.0402	0.0350	26.8	0.216	0.188	
1,2-Dichloropropane	4.73	0.0409	0.0350	21.9	0.189	0.162	
Methyl methacrylate	4.96	0.0415	0.0350	20.3	0.170	0.143	
1,4-Dioxane	5.04	0.0404	0.0350	18.2	0.146	0.126	
Bromodichloromethane	4.79	0.0397	0.0350	32.1	0.266	0.235	m
cis-1,3-Dichloropropene	4.75	0.0393	0.0350	21.6	0.178	0.159	
Methyl isobutyl ketone	4.59	0.0412	0.0350	18.8	0.169	0.143	
Toluene	4.80	0.0406	0.0350	18.1	0.153	0.132	
trans-1,3-Dichloropropene	4.90	0.0406	0.0350	22.2	0.184	0.159	
1,1,2-Trichloroethane	4.79	0.0401	0.0350	26.2	0.219	0.191	
Tetrachloroethene	5.11	0.0404	0.0350	34.7	0.274	0.237	
2-Hexanone (Methyl butyl ketone)	4.60	0.0406	0.0350	18.8	0.166	0.143	
Dibromochloromethane	4.98	0.0395	0.0350	42.4	0.336	0.298	
1,2-Dibromoethane	4.98	0.0405	0.0350	38.2	0.311	0.269	
Chlorobenzene	5.11	0.0412	0.0350	23.5	0.189	0.161	
Ethylbenzene	4.62	0.0394	0.0350	20.0	0.171	0.152	
1,1,1,2-Tetrachloroethane	4.91	0.0400	0.0350	33.7	0.275	0.240	
m-/p-Xylenes	4.71	0.0405	0.0350	20.4	0.176	0.152	

Sample Name : 5ppbv TO15 LCS

Sample Info : 125mL load; Can #2040; GCMSPrepPg802

Data File : X1903399.D

Dilution : 1

Pressurization Factor : 1.000

Acquisition Date : 2019-09-05 08:34:39

Instrument Method : TO15-SCN.M

Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
o-Xylene	4.66	0.0400	0.0350	20.2	0.174	0.152	
Styrene	4.76	0.0390	0.0350	20.3	0.166	0.149	
Bromoform	5.18	0.0402	0.0350	53.5	0.415	0.362	
1,1,2,2-Tetrachloroethane	4.81	0.0400	0.0350	33.0	0.275	0.240	
4-Ethyltoluene	4.82	0.0403	0.0350	23.7	0.198	0.172	
2-Chlorotoluene	4.74	0.0403	0.0350	24.5	0.209	0.181	
1,3,5-Trimethylbenzene	4.78	0.0401	0.0350	23.5	0.197	0.172	
1,2,4-Trimethylbenzene	4.75	0.0398	0.0350	23.4	0.195	0.172	
1,3-Dichlorobenzene	4.98	0.0404	0.0350	30.0	0.243	0.210	
1,4-Dichlorobenzene	5.00	0.0401	0.0350	30.0	0.241	0.210	
Benzyl chloride	5.00	0.0399	0.0350	25.9	0.207	0.181	
1,2-Dichlorobenzene	5.05	0.0408	0.0350	30.3	0.245	0.210	
1,2,4-Trichlorobenzene	5.78	0.0406	0.0350	42.9	0.301	0.260	
Hexachlorobutadiene	5.10	0.0401	0.0350	54.4	0.427	0.373	
Naphthalene	5.68	0.0414	0.0350	29.8	0.217	0.183	
1-Bromopropane	4.55	0.0395	0.0350	22.9	0.199	0.176	m
1-Octene	4.65	0.0391	0.0350	21.4	0.180	0.161	
n-Octane	4.86	0.0401	0.0350	22.7	0.187	0.164	
Isopropylbenzene	4.90	0.0406	0.0350	24.1	0.200	0.172	
n-Propylbenzene	4.84	0.0407	0.0350	23.8	0.200	0.172	

Internal Standards	Response	Retention Time (min)	Concentration (PPBV)	Flag *
Bromochloromethane (IS)	512,655	11.93	5.00	PASS
1,4-Difluorobenzene (IS)	1,999,739	13.69	5.04	PASS
Chlorobenzene-d5 (IS)	1,676,245	17.86	4.80	PASS

(ND) = Not Detected

* (J) = Below Calibration Range, (E) = Above Calibration Range, (m) = Manual Integration

IS Acceptance Criteria: RT +/- 20 sec, Response +/- 40%

Sample Name : 5ppbv TO15 LCS
 Sample Info : 125mL load; Can #00100; GCMSPrepPg800
 Data File : X1903413.D
 Dilution : 1
 Pressurization Factor : 1.000
 Acquisition Date : 2019-09-06 08:39:26
 Instrument Method : TO15-SCN.M
 Matrix : AIR

Target Compound	Response	Concentration (PPBV)	Tag Value (PPBV)	% Recovery	Flag
Propylene	402,689	3.92	4.80	81.8	PASS
Freon 12 (CCl2F2)	953,975	4.69	4.88	96.2	PASS
Freon 114 (C2Cl2F4)	1,080,530	4.77	5.01	95.2	PASS
Chloromethane	495,932	4.44	4.88	91.1	PASS
Chloroethene (Vinyl chloride)	487,891	4.89	5.03	97.2	PASS
1,3-Butadiene	381,431	4.04	4.89	82.6	PASS
Bromomethane	402,965	4.70	4.95	95.1	PASS
Chloroethane	241,568	4.57	5.04	90.6	PASS
Bromoethene (Vinyl bromide)	473,650	4.89	4.99	98.0	PASS
Freon 11 (CCl3F)	1,134,442	5.08	5.19	97.8	PASS
Ethanol	232,528	4.43	5.00	88.5	PASS
Acrolein	205,083	4.65	4.97	93.8	PASS
1,1-Dichloroethene	790,085	4.62	5.01	92.3	PASS
Freon 113 (C2Cl3F3)	783,971	4.92	4.98	99.0	PASS
Acetone	765,094	4.19	5.03	83.3	PASS
Isopropyl alcohol	960,516	4.57	5.02	91.0	PASS
Carbon disulfide	1,289,149	4.55	5.02	90.7	PASS
Acetonitrile	478,713	4.42	5.03	87.9	PASS
Allyl chloride (3-chloropropene)	197,178	4.75	5.03	94.4	PASS
Methylene chloride	700,611	4.23	5.07	83.4	PASS
Acrylonitrile	450,078	4.75	5.11	93.1	PASS
Methyl tert-butyl ether	1,164,124	4.85	5.12	94.8	PASS
trans-1,2-Dichloroethene	737,250	4.81	5.10	94.4	PASS
Hexane	815,210	4.66	5.06	92.1	PASS
Vinyl acetate	1,390,765	4.59	5.09	90.3	PASS
1,1-Dichloroethane	888,564	4.69	4.93	95.3	PASS
Methyl ethyl ketone (2-Butanone)	219,840	4.88	5.08	96.1	PASS
cis-1,2-Dichloroethene	860,320	4.79	5.04	95.1	PASS
Ethyl acetate	185,420	4.46	5.04	88.6	PASS
1-Bromopropane	965,246	4.53	4.94	91.7	PASS
Tetrahydrofuran	207,388	4.80	5.05	95.2	PASS
Chloroform	909,814	4.82	5.06	95.3	PASS
1,1,1-Trichloroethane	898,231	4.76	4.98	95.6	PASS
Cyclohexane	848,144	4.62	5.09	91.0	PASS
Carbon tetrachloride	999,880	5.02	5.06	99.3	PASS
Benzene	1,326,385	4.70	4.99	94.1	PASS
1,2-Dichloroethane	632,214	4.86	5.11	95.1	PASS
2,2,4-trimethylpentane	2,557,494	4.73	5.13	92.4	PASS
Heptane	510,823	4.57	5.03	90.9	PASS
Trichloroethene	686,112	5.01	5.02	99.9	PASS
1,2-Dichloropropane	588,777	4.72	4.98	94.9	PASS
Methyl methacrylate	491,833	4.96	5.19	95.7	PASS

Sample Name : 5ppbv TO15 LCS
 Sample Info : 125mL load; Can #00100; GCMSPrepPg800
 Data File : X1903413.D
 Dilution : 1
 Pressurization Factor : 1.000
 Acquisition Date : 2019-09-06 08:39:26
 Instrument Method : TO15-SCN.M
 Matrix : AIR

Target Compound	Response	Concentration (PPBV)	Tag Value (PPBV)	% Recovery	Flag
1,4-Dioxane	323,692	5.12	5.06	101.3	PASS
Bromodichloromethane	947,849	4.76	4.97	96.0	PASS
cis-1,3-Dichloropropene	773,220	4.77	4.92	97.1	PASS
Methyl isobutyl ketone	1,325,207	4.64	5.16	89.9	PASS
Toluene	1,613,323	4.83	5.08	95.2	PASS
1-Octene	371,568	4.69	4.89	95.8	PASS
n-Octane	495,917	4.87	5.01	97.2	PASS
trans-1,3-Dichloropropene	766,961	4.89	5.08	96.3	PASS
1,1,2-Trichloroethane	577,051	4.79	5.01	95.7	PASS
Tetrachloroethene	903,584	5.12	5.05	101.5	PASS
2-Hexanone (Methyl butyl ketone)	1,249,165	4.69	5.08	92.3	PASS
Dibromochloromethane	1,161,965	4.99	4.94	101.1	PASS
1,2-Dibromoethane	992,692	4.96	5.07	97.9	PASS
Chlorobenzene	1,354,191	5.17	5.15	100.4	PASS
Ethylbenzene	1,921,924	4.67	4.92	94.9	PASS
1,1,1,2-Tetrachloroethane	763,886	4.94	5.00	98.8	PASS
m-/p-Xylenes	1,685,162	4.86	5.07	96.0	PASS
o-Xylene	1,601,931	4.72	5.00	94.4	PASS
Styrene	1,309,933	4.89	4.87	100.4	PASS
Bromoform	1,166,847	5.14	5.02	102.5	PASS
Isopropylbenzene	2,369,858	4.98	5.08	98.1	PASS
1,1,2,2-Tetrachloroethane	1,241,302	4.86	5.00	97.2	PASS
n-Propylbenzene	2,666,716	4.93	5.09	96.9	PASS
4-Ethyltoluene	2,355,664	5.00	5.04	99.3	PASS
2-Chlorotoluene	1,825,121	4.76	5.04	94.5	PASS
1,3,5-Trimethylbenzene	1,977,923	4.95	5.02	98.6	PASS
1,2,4-Trimethylbenzene	1,996,256	4.90	4.97	98.6	PASS
1,3-Dichlorobenzene	1,453,890	5.05	5.05	100.1	PASS
1,4-Dichlorobenzene	1,433,639	5.03	5.02	100.2	PASS
Benzyl chloride	1,758,453	5.09	4.99	102.1	PASS
1,2-Dichlorobenzene	1,442,320	5.13	5.10	100.7	PASS
1,2,4-Trichlorobenzene	1,150,168	6.11	5.08	120.4	PASS
Hexachlorobutadiene	1,093,201	5.51	5.01	109.9	PASS
Naphthalene	2,920,033	6.10	5.18	117.9	PASS

Sample Name

: 5ppbv TO15 LCS

Sample Info

: 125mL load; Can #00100; GCMSPrepPg800

Data File

: X1903413.D

Dilution

: 1

Pressurization Factor

: 1.000

Acquisition Date

: 2019-09-06 08:39:26

Instrument Method

: TO15-SCN.M

Matrix

: AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
Propylene	3.92	0.0384	0.0350	6.75	0.0660	0.0602	
Freon 12 (CCI2F2)	4.69	0.0390	0.0350	23.2	0.193	0.173	
Freon 114 (C2CI2F4)	4.77	0.0400	0.0350	33.3	0.280	0.245	
Chloromethane	4.44	0.0390	0.0350	9.17	0.0805	0.0723	
Chloroethene (Vinyl chloride)	4.89	0.0402	0.0350	12.5	0.103	0.0895	
1,3-Butadiene	4.04	0.0391	0.0350	8.93	0.0865	0.0774	
Bromomethane	4.70	0.0396	0.0350	18.3	0.154	0.136	
Chloroethane	4.57	0.0403	0.0350	12.0	0.106	0.0924	
Bromoethene (Vinyl bromide)	4.89	0.0399	0.0350	21.4	0.174	0.153	
Freon 11 (CCI3F)	5.08	0.0415	0.0350	28.5	0.233	0.197	
Ethanol	4.43	0.100	0.0400	8.34	0.188	0.0754	
Acrolein	4.65	0.0397	0.0350	10.7	0.0911	0.0803	
Freon 113 (C2CI3F3)	4.92	0.0398	0.0350	37.7	0.305	0.268	
1,1-Dichloroethene	4.62	0.0400	0.0350	18.3	0.159	0.139	
Acetone	4.19	0.0402	0.0350	9.96	0.0955	0.0831	
Carbon disulfide	4.55	0.0402	0.0350	14.2	0.125	0.109	
Isopropyl alcohol	4.57	0.0402	0.0350	11.2	0.0987	0.0860	
Allyl chloride (3-chloropropene)	4.75	0.0402	0.0350	14.9	0.126	0.110	
Acetonitrile	4.42	0.0402	0.0350	7.41	0.0675	0.0588	
Methylene chloride	4.23	0.101	0.101	14.7	0.352	0.352	m
trans-1,2-Dichloroethene	4.81	0.0408	0.0350	19.1	0.162	0.139	
Methyl tert-butyl ether	4.85	0.0410	0.0350	17.5	0.148	0.126	
Acrylonitrile	4.75	0.0409	0.0350	10.3	0.0887	0.0760	
Hexane	4.66	0.0404	0.0350	16.4	0.143	0.123	
1,1-Dichloroethane	4.69	0.0394	0.0350	19.0	0.159	0.142	
Vinyl acetate	4.59	0.0407	0.0350	16.2	0.143	0.123	
cis-1,2-Dichloroethene	4.79	0.0403	0.0350	19.0	0.160	0.139	
Methyl ethyl ketone (2-Butanone)	4.88	0.0406	0.0350	14.4	0.120	0.103	
Ethyl acetate	4.46	0.0403	0.0350	16.1	0.145	0.126	
Chloroform	4.82	0.0404	0.0350	23.5	0.197	0.171	
Tetrahydrofuran	4.80	0.0404	0.0350	14.2	0.119	0.103	
1,1,1-Trichloroethane	4.76	0.0398	0.0350	25.9	0.217	0.191	
Cyclohexane	4.62	0.0407	0.0350	15.9	0.140	0.120	
Carbon tetrachloride	5.02	0.0405	0.0350	31.6	0.255	0.220	
Benzene	4.70	0.0399	0.0350	15.0	0.128	0.112	
2,2,4-trimethylpentane	4.73	0.0410	0.0350	22.1	0.192	0.164	
1,2-Dichloroethane	4.86	0.0409	0.0350	19.7	0.165	0.142	m
Heptane	4.57	0.0402	0.0350	18.7	0.165	0.143	
Trichloroethene	5.01	0.0402	0.0350	26.9	0.216	0.188	
1,2-Dichloropropane	4.72	0.0409	0.0350	21.8	0.189	0.162	
Methyl methacrylate	4.96	0.0415	0.0350	20.3	0.170	0.143	
1,4-Dioxane	5.12	0.0404	0.0350	18.4	0.146	0.126	
Bromodichloromethane	4.76	0.0397	0.0350	31.9	0.266	0.235	
cis-1,3-Dichloropropene	4.77	0.0393	0.0350	21.7	0.178	0.159	
Methyl isobutyl ketone	4.64	0.0412	0.0350	19.0	0.169	0.143	
Toluene	4.83	0.0406	0.0350	18.2	0.153	0.132	
trans-1,3-Dichloropropene	4.89	0.0406	0.0350	22.2	0.184	0.159	
1,1,2-Trichloroethane	4.79	0.0401	0.0350	26.2	0.219	0.191	
Tetrachloroethene	5.12	0.0404	0.0350	34.7	0.274	0.237	
2-Hexanone (Methyl butyl ketone)	4.69	0.0406	0.0350	19.2	0.166	0.143	
Dibromochloromethane	4.99	0.0395	0.0350	42.5	0.336	0.298	
1,2-Dibromoethane	4.96	0.0405	0.0350	38.1	0.311	0.269	
Chlorobenzene	5.17	0.0412	0.0350	23.8	0.189	0.161	
Ethylbenzene	4.67	0.0394	0.0350	20.3	0.171	0.152	
1,1,1,2-Tetrachloroethane	4.94	0.0400	0.0350	33.9	0.275	0.240	
m-/p-Xylenes	4.86	0.0405	0.0350	21.1	0.176	0.152	

Sample Name : 5ppbv TO15 LCS

Sample Info : 125mL load; Can #00100; GCMSPrepPg800

Data File : X1903413.D

Dilution : 1

Pressurization Factor : 1.000

Acquisition Date : 2019-09-06 08:39:26

Instrument Method : TO15-SCN.M

Matrix : AIR

Target Compound	Concentration (PPBV)	RL (PPBV)	MDL (PPBV)	Concentration (ug/m3)	RL (ug/m3)	MDL (ug/m3)	Flag *
o-Xylene	4.72	0.0400	0.0350	20.5	0.174	0.152	
Styrene	4.89	0.0390	0.0350	20.8	0.166	0.149	
Bromoform	5.14	0.0402	0.0350	53.2	0.415	0.362	
1,1,2,2-Tetrachloroethane	4.86	0.0400	0.0350	33.4	0.275	0.240	
4-Ethyltoluene	5.00	0.0403	0.0350	24.6	0.198	0.172	
2-Chlorotoluene	4.76	0.0403	0.0350	24.6	0.209	0.181	
1,3,5-Trimethylbenzene	4.95	0.0401	0.0350	24.3	0.197	0.172	
1,2,4-Trimethylbenzene	4.90	0.0398	0.0350	24.1	0.195	0.172	
1,3-Dichlorobenzene	5.05	0.0404	0.0350	30.4	0.243	0.210	
1,4-Dichlorobenzene	5.03	0.0401	0.0350	30.2	0.241	0.210	
Benzyl chloride	5.09	0.0399	0.0350	26.4	0.207	0.181	
1,2-Dichlorobenzene	5.13	0.0408	0.0350	30.9	0.245	0.210	
1,2,4-Trichlorobenzene	6.11	0.0406	0.0350	45.3	0.301	0.260	
Hexachlorobutadiene	5.51	0.0401	0.0350	58.7	0.427	0.373	
Naphthalene	6.10	0.0414	0.0350	32.0	0.217	0.183	
1-Bromopropane	4.53	0.0395	0.0350	22.8	0.199	0.176	m
1-Octene	4.69	0.0391	0.0350	21.5	0.180	0.161	
n-Octane	4.87	0.0401	0.0350	22.8	0.187	0.164	
Isopropylbenzene	4.98	0.0406	0.0350	24.5	0.200	0.172	
n-Propylbenzene	4.93	0.0407	0.0350	24.2	0.200	0.172	

Internal Standards	Response	Retention Time (min)	Concentration (PPBV)	Flag *
Bromochloromethane (IS)	526,097	11.93	5.00	PASS
1,4-Difluorobenzene (IS)	2,029,011	13.69	5.04	PASS
Chlorobenzene-d5 (IS)	1,703,585	17.86	4.80	PASS

(ND) = Not Detected

* (J) = Below Calibration Range, (E) = Above Calibration Range, (m) = Manual Integration

IS Acceptance Criteria: RT +/- 20 sec, Response +/- 40%

Canister and Controller Data Sheet**Enthalpy Analytical, LLC**

Client Name: Tetra Tech

Client #: 103x09077-01128

Enthalpy Job #: 0819-232

Canister Data

Canister ID	Blank Check Datafile / Sample ID	Canister Pressure Pre-Sample (mmHg)	Canister Pressure Post-Sample (mmHg)	Canister Pressure Final (mmHg)	Canister Pressurization Factor
0802	X1903175 / ACF-AS-SUNCITY-083119	-762	-104	372	1.724
0809	X1903208 / ACF-AS-402SCH-083119	-762	-148	294	1.720
0780	X1903195 / ACF-AS-352SCH-083119	-762	-81	417	1.732
0797	X1903207 / ACF-AS-BKGD2-083119	-762	-55	466	1.737
0786	X1903203 / ACF-AS-FORCON-083119	-763	-73	417	1.711
000092	X1901603 / ACF-AS-BKGD1-083119	-763	-44	481	1.731
0708	X1901608 / ACF-AS-402SCH-083119 DUP	-763	-104	392	1.754
0838	X1903006 / ACF-AS-BKGD3-083119	-763	-22	517	1.729

Date Prepared: 8/29/19Date Received: 9/4/19

Prepared By: BWR

Received By: DSM

Narrative Summary

Enthalpy Analytical Narrative Summary

Company	Tetra Tech, Inc.
Analyst	TDD
Parameters	EPA Method TO-15

Client #	103x09077-01128
Job #	0819-232
# Samples	9 Canisters

Custody

David Myers received the samples on 9/4/19 after being relinquished by Tetra Tech, Inc. The samples were received at ambient temperature and in good condition.

Prior to, during, and after analysis, the samples were kept under lock with access only to authorized personnel by Enthalpy Analytical, LLC.

Analysis

The samples were analyzed for the TO-15 target compound list using the analytical procedures in EPA Method TO-15, *Determination of Volatile Organic Compounds (VOCs) In Air Collected In Specially-Prepared Canisters And Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS)*.

Upon receipt, the canister pressures were measured and recorded. The canisters were then pressurized with UHP nitrogen and a dilution ratio was calculated for each canister. Sample **Lot Blank Can #0725** was received near complete vacuum and was assigned a tank pressurization of 1. Refer to the Canister and Controller Data Sheet in the Lab QC section of this PDF report for sample pressurization factors.

The Agilent Technologies Model 6890N, Gas Chromatograph "Xavier" (S/N US10721018) was equipped with a 5975C VL Mass Selective Detector (S/N US71215962) and a Restek Rtx-624 Sil MS, 60 m x 0.32 mm x 1.8 µm capillary column (S/N 1555499) for these analyses. All samples and standards were introduced directly to the analyzer using an Entech 7100A Preconcentrator.

Calibration

The BFB tune analyses associated with the initial and continuing calibrations met method acceptance criteria. The initial calibration (**X082919A-TO15**) met the 30% RSD criteria. The initial calibration verification met the 70-130% recovery criteria. The continuing calibration met the 30% difference criteria. Calibration data has not been provided in this level 2 report however is available upon request.

Chromatographic Conditions

A copy of the acquisition method (**TO15-SCN2.M**) has not been included in this report but is available upon request.



Enthalpy Analytical Narrative Summary (continued)

QC Notes

All internal standard area responses and retention time criteria were met for these analyses.

The laboratory humid blanks associated with the analysis of these samples did not contain any of the target analytes at a concentration greater than 3-times the MDL value.

The Laboratory Control Samples (LCS) met the 70-130% recovery criteria.

The Laboratory Duplicate (LD) analyzed with this sample set met 25% difference acceptance criteria for all compounds reported over the LOQ.

The samples were analyzed within the 30-day holding time required by the method.

Reporting Notes

These analyses met the requirements of the TNI Standard. Any deviations from the requirements of the reference method or TNI Standard have been stated above.

The results presented in this report are representative of the samples as provided to the laboratory.

General Reporting Notes

The following are general reporting notes that are applicable to all Enthalpy Analytical, LLC data reports, unless specifically noted otherwise.

- Any analysis which refers to the method as “**Type**” represents a planned deviation from the reference method. For instance a Hydrogen Sulfide assay from a Tedlar bag would be labeled as “EPA Method 16-Type” because Tedlar bags are not mentioned as one of the collection options in EPA Method 16.
- The acronym **MDL** represents the Minimum Detection Limit. Below this value the laboratory cannot determine the presence of the analyte of interest reliably.
- The acronym **LOQ** represents the Limit of Quantification. Below this value the laboratory cannot quantitate the analyte of interest within the criteria of the method.
- The acronym **ND** following a value indicates a non-detect or analytical result below the MDL.
- The letter **J** in the Qualifier or Flag column in the results indicates that the value is between the MDL and the LOQ. The laboratory can positively identify the analyte of interest as present, but the value should be considered an estimate.
- The letter **E** in the Qualifier or Flag column indicates an analytical result exceeding 100% of the highest calibration point. The associated value should be considered as an estimate.
- Sample results are presented ‘as measured’ for single injection methodologies, or an average value if multiple injections are made. If all injections are below the MDL, the sample is considered non-detect and the ND value is presented. If one, but not all, are below the MDL, the MDL value is used for any injections that are below the MDL. For example, if the MDL is 0.500 and LOQ is 1.00, and the instrument measures 0.355, 0.620, and 0.442 - the result reported is the average of 0.500, 0.620, and 0.500 - - - i.e. 0.540 with a J flag.
- When a spike recovery (Bag Spike, Collocated Spike Train, or liquid matrix spike) is being calculated, the native (unspiked) sample result is used in the calculations, as long as the value is above the MDL. If a sample is ND, then 0 is used as the native amount (not the MDL value).
- The acronym **DF** represents Dilution Factor. This number represents dilution of the sample during the preparation and/or analysis process. The analytical result taken from a laboratory instrument is multiplied by the DF to determine the final undiluted sample results.
- The addition of **MS** to the Sample ID represents a Matrix Spike. An aliquot of an actual sample is spiked with a known amount of analyte so that a percent recovery value can be determined. The MS analysis indicates what effect the sample matrix may have on the target analyte, i.e. whether or not anything in the sample matrix interferes with the analysis of the analyte(s).



General Reporting Notes

(continued)

- The addition of **MSD** to the Sample ID represents a Matrix Spike Duplicate. Prepared in the same manner as a MS, the use of duplicate matrix spikes allows further confirmation of laboratory quality by showing the consistency of results gained by performing the same steps multiple times.
- The addition of **LD** to the Sample ID represents a Laboratory Duplicate. The analyst prepares an additional aliquot of sample for testing and the results of the duplicate analysis are compared to the initial result. The result should have a difference value of within 10% of the initial result (if the results of the original analysis are greater than the LOQ).
- The addition of **AD** to the Sample ID represents an Alternate Dilution. The analyst prepares an additional aliquot at a different dilution factor (usually double the initial factor). This analysis helps confirm that no additional compound is present and coeluting or sharing absorbance with the analyte of interest, as they would have a different response/absorbance than the analyte of interest.
- The Sample ID **LCS** represents a Laboratory Control Sample. Clean matrix, similar to the client sample matrix, prepared and analyzed by the laboratory using the same reagents, spiking standards and procedures used for the client samples. The LCS is used to assess the control of the laboratory's analytical system. Whenever spikes are prepared for our client projects, two spikes are retained as LCSs. The LCSs are labeled with the associated project number and kept in-house at the appropriate temperature conditions. When the project samples are received for analysis, the LCSs are analyzed to confirm that the analyte could be recovered from the media, separate from the samples which were used on the project and which may have been affected by source matrix, sample collection, and/or sample transport.
- **Significant Figures:** Where the reported value is much greater than unity (1.00) in the units expressed, the number is rounded to a whole number of units, rather than to 3 significant figures. For example, a value of 10,456.45 ug catch is rounded to 10,456 ug. There are five significant digits displayed, but no confidence should be placed on more than two significant digits. In the case of small numbers, generally 3 significant figures are presented, but still only 2 should be used with confidence. Many neat materials are only certified to 3 digits, and as the mathematically correct final result is always 1 digit less than all its pre-cursors - 2 significant figures are what are most defensible.
- **Manual Integration:** The data systems used for processing will flag manually integrated peaks with an "M". There are several reasons a peak may be manually integrated. These reasons will be identified by the following two letter designations on sample chromatograms, if provided in the report. The peak was *not integrated* by the software "**NI**", the peak was *integrated incorrectly* by the software "**II**" or the *wrong peak* was integrated by the software "**WP**". These codes will accompany the analyst's manual integration stamp placed next to the compound name on the chromatogram.

Sample Custody



Chain of Custody Record

Page ____ of ____

Special Handling:

- ☐ Standard Turn Around Time
- ☐ Rush Turn Around Time -- Date Needed _____
- All TATs Subject to Approval by Enthalpy Analytical
- All Bag/Can Samples Disposed of 1 Month from Receipt
- All Other Samples Disposed of 4 Months from Receipt

Sample(s) Collected by: Enthalpy
 Client Name: Tetra Tech
 Project Manager: John Snyder

Project Number: 103X01007016
 Site Name: Able Fire
 Location: Caliente

PO#: _____
 Telephone#: _____
 Email: _____

For spiked or duplicate samples, please provide sample volumes for recovery calculations. For Particulates, please provide tare weights and/or condensed water volumes.

Special Instructions:

A=Air 1=H2SO4 2=NaOH W=Water O=Other
 X=XAD C=Charcoal SG=Silica Gel

G=Grab C=Composite Q=Quality Control O=Other

Sample Containers

Analyses:

Can ID#	Sample ID	Date	Time	Sample Volume	Type	Matrix	# of VOA Vials	# of Glass	# of Plastic	# of Bags	# of Canisters	# of Tubes	# Other							Notes:
0809	ACF-AS-402SCH-0831	8/31	1415	6L		Air					1									
0708	ACF-AS-402SCH-0831	8/31	1415								1									
0780	ACF-AS-352SCH-0831	8/31	1403								1									
0786	ACF-AS-FORAN-0831	8/31	1410								1									
0802	ACF-AS-SCH-0831	8/31	1346								1									
080092	ACF-AS-BKGD1-0831	8/31	1315								1									
0797	ACF-AS-BKGD2-0831	8/31	1332								1									
0838	ACF-AS-BKGD3-0831	8/31	1255								1									
0725	Lot Blank																			
	DSM 9-04-19																			

Relinquished By: [Signature]

Date: 9/3/19

Received By: [Signature]

Date: 9-4-19

Time: 9:30AM

Sample Condition Upon Receipt:

- ☐ Iced ☐ Ambient ☐ °C _____
- ☐ Iced ☐ Ambient ☐ °C _____
- ☐ Iced ☐ Ambient ☐ °C _____

Good Condition Ambient Temp DSM 9-4-19 Received lot blank not listed on CDC. DSM 9-4-19

**This Is The Last Page
Of This Report.**