

ORGANIC DATA VALIDATION REPORT

To: U.S. EPA Region 10
Validated by: Gloria J. Switalski, Weston Solutions, Inc.
Report Date: December 17, 2021
Project/Site: EPA Region 10 – Sitka Sound Science Center Oil Spill
Laboratory No: 1217758

This memo presents the organic data validation report for the data obtained during the field activities for the above referenced work assignment. The purpose of this review is to provide a Stage 2A validation of the following samples collected on 30 November 2021 and analyzed by SGS North America, Inc. located in Anchorage, AK:

Field Sample Numbers	Laboratory ID	Analyses/Methods
SSSC-TB-01	1217758001	Gasoline Range Organics (GRO) by Alaska DEC Method AK101
SSSC-SW-91	1217758002	Diesel Range Organics (DRO) by Alaska DEC Method AK102
SSSC-SW-01	1217758003	Residual Range Organics (RRO) by Alaska DEC Method AK103
SSSC-SW-02	1217758004	Diesel Range Organics (DRO) by Alaska DEC Method AK102
SSSC-SW-03	1217758005	Residual Range Organics (RRO) by Alaska DEC Method AK103 Gasoline Range Organics (GRO) by Alaska DEC Method AK101

Data validation was conducted in accordance with the USEPA National Functional Guidelines (NFG) for Organic Superfund Methods Data Review, November 2020, Test Methods for Evaluating Solid Wastes, SW-846, 3rd Edition and Updates, and/or appropriate methods.

Stage 2A validation was performed on the sample results. The data were evaluated based on the following parameters:

- Data Completeness
- * Holding Times, Sample Preservation and Receipt
- Laboratory Blanks
- * Field Blanks
- * Surrogate Compounds
- * Matrix Spike/Matrix Spike Duplicates
- NA Laboratory Duplicate Samples
- * Laboratory Control Samples (Blank Spikes)/Laboratory Control
- Sample Duplicates (Blank Spike Duplicates)
- * Field Duplicates
- Sample Dilutions and Detection Limits

- * **All criteria were met for this parameter**
- NA **Not applicable**

Data Completeness

The Level 2 data package was complete and included a case narrative, sample results, batch QC results, QC association summary, Chain-of-Custody (CoC) forms, and a sample receipt condition form. Raw data is not included in a Level 2 data package.

Holding Times, Sample Preservation and Receipt

All holding times were met.

The samples were received within the recommended $\leq 6^{\circ}\text{C}$ NFG QC limit. No shipping or receiving problems were noted.

Laboratory Blanks

The method blanks (MB) were analyzed at the required frequency. No contaminants were found in these blanks with the following exception:

RRO (0.219 J mg/L) was detected at a concentration $< \text{LOQ}$ in method blank MB 1649141 (RRO).

- The detected RRO result was qualified as undetected (U) at the LOQ in the following samples: SSSC-SW-91 and SSSC-SW-01

No other contaminants were found in the method blanks associated with these samples.

Field Blanks

The trip blank, SSSC-TB-01, associated with the GRO analysis was free of contamination.

Surrogate Compounds

Surrogate compounds were added to the DRO, RRO, and GRO samples and QC samples. The surrogate percent recoveries were within laboratory control limits.

Matrix Spike/Matrix Spike Duplicates

The DRO, RRO, and GRO recoveries and relative percent differences (RPDs) of MS/MSD analyses performed on sample SSSC-SW-03 were within laboratory control limits.

Laboratory Duplicate Samples

Laboratory duplicates were not provided for any analyses. No action was taken. Refer to the MS/MSD and LCS/LCSD section below for precision evaluation.

Laboratory Control Samples/Laboratory Control Sample Duplicate

At least one laboratory control sample (LCS) or laboratory control sample/laboratory control sample duplicate (LCS/LCSD) analysis was analyzed per QC batch for DRO, RRO, and GRO. All LCS and/or LCSD analyte recoveries were within the laboratory control limits. All LCS/LCSD RPD values were within laboratory control limits.

Field Duplicates

DRO and RRO field duplicate samples SSSC-SW-91/SSSC-SW-01 were analyzed in this SDG. Both samples were non-detected for DRO and RRO after method blank action was applied as noted above.

Sample Dilution and Detection Limits

The laboratory correctly “J” flagged results less than the reporting limits. The data validator retained the J qualifier unless the analyte was qualified as non-detected for blank contamination.

DATA QUALIFIER DEFINITIONS

For the purpose of Data Validation, the following validation qualifiers and associated definitions are provided for use by the data validator to summarize the data quality.

- U The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
- J The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
- J+ The result is an estimated quantity, but the result may be biased high.
- J- The result is an estimated quantity, but the result may be biased low.
- UJ The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
- R Reported value is “rejected.” The sample results are rejected due to serious deficiencies in meeting QC criteria. The data are unusable. The analyte may or may not be present in the sample.



Results of SSSC-TB-01

Client Sample ID: **SSSC-TB-01**

Client Project ID: **10ZZ 10ZZ**

Lab Sample ID: 1217758001

Lab Project ID: 1217758

Collection Date: 11/30/21 16:00

Received Date: 12/03/21 11:33

Matrix: Water (Surface, Eff., Ground)

Solids (%):

Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	0.0500 U	0.100	0.0450	mg/L	1		12/06/21 15:48
Surrogates							
4-Bromofluorobenzene (surr)	97.3	50-150		%	1		12/06/21 15:48

Batch Information

Analytical Batch: VFC15969

Analytical Method: AK101

Analyst: IJV

Analytical Date/Time: 12/06/21 15:48

Container ID: 1217758001-A

Prep Batch: VXX38241

Prep Method: SW5030B

Prep Date/Time: 12/06/21 06:00

Prep Initial Wt./Vol.: 5 mL

Prep Extract Vol.: 5 mL

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Print Date: 12/13/2021 2:27:28PM

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Results of SSSC-SW-91

Client Sample ID: **SSSC-SW-91**
Client Project ID: **10ZZ 10ZZ**
Lab Sample ID: 1217758002
Lab Project ID: 1217758

Collection Date: 11/30/21 16:21
Received Date: 12/03/21 11:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	0.300 U	0.600	0.200	mg/L	1		12/07/21 14:24

Surrogates

5a Androstane (surr)	77.4	50-150		%	1		12/07/21 14:24
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Batch Information

Analytical Batch: XFC16157
Analytical Method: AK102
Analyst: IVM
Analytical Date/Time: 12/07/21 14:24
Container ID: 1217758002-A

Prep Batch: XXX45918
Prep Method: SW3520C
Prep Date/Time: 12/06/21 16:00
Prep Initial Wt./Vol.: 250 mL
Prep Extract Vol: 1 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	0.500 U	0.500	0.200	mg/L	1		12/07/21 14:24

Surrogates

n-Triacontane-d62 (surr)	85.6	50-150		%	1		12/07/21 14:24
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Batch Information

Analytical Batch: XFC16157
Analytical Method: AK103
Analyst: IVM
Analytical Date/Time: 12/07/21 14:24
Container ID: 1217758002-A

Prep Batch: XXX45918
Prep Method: SW3520C
Prep Date/Time: 12/06/21 16:00
Prep Initial Wt./Vol.: 250 mL
Prep Extract Vol: 1 mL

Handwritten signature and date: 12/17/21

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Results of SSSC-SW-01

Client Sample ID: **SSSC-SW-01**
Client Project ID: **10ZZ 10ZZ**
Lab Sample ID: 1217758003
Lab Project ID: 1217758

Collection Date: 11/30/21 16:20
Received Date: 12/03/21 11:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Semivolatile Organic Fuels

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	0.288 U	0.577	0.192	mg/L	1		12/07/21 14:34
Surrogates							
5a Androstane (surr)	85.7	50-150		%	1		12/07/21 14:34

Batch Information

Analytical Batch: XFC16157
Analytical Method: AK102
Analyst: IVM
Analytical Date/Time: 12/07/21 14:34
Container ID: 1217758003-D

Prep Batch: XXX45918
Prep Method: SW3520C
Prep Date/Time: 12/06/21 16:00
Prep Initial Wt./Vol.: 260 mL
Prep Extract Vol: 1 mL

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Residual Range Organics	0.481 U	0.481	0.192	mg/L	1		12/07/21 14:34
Surrogates							
n-Triacontane-d62 (surr)	96.2	50-150		%	1		12/07/21 14:34

Batch Information

Analytical Batch: XFC16157
Analytical Method: AK103
Analyst: IVM
Analytical Date/Time: 12/07/21 14:34
Container ID: 1217758003-D

Prep Batch: XXX45918
Prep Method: SW3520C
Prep Date/Time: 12/06/21 16:00
Prep Initial Wt./Vol.: 260 mL
Prep Extract Vol: 1 mL

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Results of SSSC-SW-01

Client Sample ID: **SSSC-SW-01**
Client Project ID: **10ZZ 10ZZ**
Lab Sample ID: 1217758003
Lab Project ID: 1217758

Collection Date: 11/30/21 16:20
Received Date: 12/03/21 11:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Volatile Fuels

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.0500 U	0.100	0.0450	mg/L	1		12/06/21 17:00
Surrogates							
4-Bromofluorobenzene (surr)	92	50-150		%	1		12/06/21 17:00

Batch Information

Analytical Batch: VFC15969
Analytical Method: AK101
Analyst: IJV
Analytical Date/Time: 12/06/21 17:00
Container ID: 1217758003-A

Prep Batch: VXX38241
Prep Method: SW5030B
Prep Date/Time: 12/06/21 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Handwritten signature and date: 12/13/21

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Results of SSSC-SW-02

Client Sample ID: **SSSC-SW-02**
Client Project ID: **10ZZ 10ZZ**
Lab Sample ID: 1217758004
Lab Project ID: 1217758

Collection Date: 11/30/21 16:30
Received Date: 12/03/21 11:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	0.234 J	0.545	0.182	mg/L	1		12/07/21 14:45
Surrogates							
5a Androstane (surr)	87.1	50-150		%	1		12/07/21 14:45

Batch Information

Analytical Batch: XFC16157
Analytical Method: AK102
Analyst: IVM
Analytical Date/Time: 12/07/21 14:45
Container ID: 1217758004-D

Prep Batch: XXX45918
Prep Method: SW3520C
Prep Date/Time: 12/06/21 16:00
Prep Initial Wt./Vol.: 275 mL
Prep Extract Vol: 1 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	0.493	0.455	0.182	mg/L	1		12/07/21 14:45
Surrogates							
n-Triacontane-d62 (surr)	91.5	50-150		%	1		12/07/21 14:45

Batch Information

Analytical Batch: XFC16157
Analytical Method: AK103
Analyst: IVM
Analytical Date/Time: 12/07/21 14:45
Container ID: 1217758004-D

Prep Batch: XXX45918
Prep Method: SW3520C
Prep Date/Time: 12/06/21 16:00
Prep Initial Wt./Vol.: 275 mL
Prep Extract Vol: 1 mL

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Results of SSSC-SW-02

Client Sample ID: **SSSC-SW-02**

Client Project ID: **10ZZ 10ZZ**

Lab Sample ID: 1217758004

Lab Project ID: 1217758

Collection Date: 11/30/21 16:30

Received Date: 12/03/21 11:33

Matrix: Water (Surface, Eff., Ground)

Solids (%):

Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	0.0500 U	0.100	0.0450	mg/L	1		12/06/21 17:18
Surrogates							
4-Bromofluorobenzene (surr)	93.3	50-150		%	1		12/06/21 17:18

Batch Information

Analytical Batch: VFC15969

Analytical Method: AK101

Analyst: IJV

Analytical Date/Time: 12/06/21 17:18

Container ID: 1217758004-A

Prep Batch: VXX38241

Prep Method: SW5030B

Prep Date/Time: 12/06/21 06:00

Prep Initial Wt./Vol.: 5 mL

Prep Extract Vol: 5 mL

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Results of SSSC-SW-03

Client Sample ID: **SSSC-SW-03**
Client Project ID: **10ZZ 10ZZ**
Lab Sample ID: 1217758005
Lab Project ID: 1217758

Collection Date: 11/30/21 16:40
Received Date: 12/03/21 11:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	0.278 U	0.556	0.185	mg/L	1		12/07/21 14:55
Surrogates							
5a Androstane (surr)	84.9	50-150		%	1		12/07/21 14:55

Batch Information

Analytical Batch: XFC16157
Analytical Method: AK102
Analyst: IVM
Analytical Date/Time: 12/07/21 14:55
Container ID: 1217758005-D

Prep Batch: XXX45918
Prep Method: SW3520C
Prep Date/Time: 12/06/21 16:00
Prep Initial Wt./Vol.: 270 mL
Prep Extract Vol: 1 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	0.232 U	0.463	0.185	mg/L	1		12/07/21 14:55
Surrogates							
n-Triacontane-d62 (surr)	91.1	50-150		%	1		12/07/21 14:55

Batch Information

Analytical Batch: XFC16157
Analytical Method: AK103
Analyst: IVM
Analytical Date/Time: 12/07/21 14:55
Container ID: 1217758005-D

Prep Batch: XXX45918
Prep Method: SW3520C
Prep Date/Time: 12/06/21 16:00
Prep Initial Wt./Vol.: 270 mL
Prep Extract Vol: 1 mL

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Results of SSSC-SW-03

Client Sample ID: **SSSC-SW-03**
Client Project ID: **10ZZ 10ZZ**
Lab Sample ID: 1217758005
Lab Project ID: 1217758

Collection Date: 11/30/21 16:40
Received Date: 12/03/21 11:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	0.0500 U	0.100	0.0450	mg/L	1		12/06/21 16:06
Surrogates							
4-Bromofluorobenzene (surr)	95.8	50-150		%	1		12/06/21 16:06

Batch Information

Analytical Batch: VFC15969
Analytical Method: AK101
Analyst: IJV
Analytical Date/Time: 12/06/21 16:06
Container ID: 1217758005-A

Prep Batch: VXX38241
Prep Method: SW5030B
Prep Date/Time: 12/06/21 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 12/13/2021 2:27:28PM

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