



April 6, 2020  
File: 203721237

**Attention: Jason Michelson**  
Chevron Environmental Management Company  
1500 Louisiana Street, Office 38116  
Houston, Texas 77002

Dear Mr. Michelson,

**Reference: Chevron Swanson River Plant 10 PCB Monitoring Report for 2018 and 2019**

Stantec has prepared this letter report on behalf of Chevron Environmental Management Company (CEMC), providing semi-annual sampling results as established in Amendment #4 to the Order by Consent (OBC) for Compressor Plant 10 (Plant 10) at the Swanson River facility. Due to the changeover of contractors, biannual polychlorinated biphenyl (PCB) groundwater monitoring was only conducted once in 2019, on July 31, 2019.

Groundwater samples were collected from the four existing wells at Plant 10 (CP-A, CP-BR, CP-C, and CP-F) utilizing low-flow purge and sample techniques in accordance with Environmental Protection Agency (EPA) sampling procedures. Water quality parameters and water level measurements were collected and recorded on sample forms and the samples were analyzed by SGS North America for PCBs using EPA Method 8082A.

This letter report includes three attachments:

- Attachment A includes the current and historical analytical results for Plant 10,
- Attachment B includes the laboratory reports, and
- Attachment C includes a site location map and Plant 10 well locations.

Table 1 (Attachment A) includes notations that ADEC revised the Method Two total PCB groundwater cleanup level from 0.0005 milligrams per liter (mg/L) to 0.00044 mg/L in 18 Alaska Administrative Code Chapter 75 as amended through September 29, 2018. Individual PCB and the total PCB values for Plant 10 groundwater were compared against the revised ADEC Method Two groundwater cleanup level of 0.00044 mg/L (0.44 micrograms per liter [ $\mu\text{g/L}$ ]) for sample results in 2018 and 2019. All sample results were non-detectable (ND) at concentrations above the method detection limit (MDL). The MDL for each individual PCB and total PCBs was used to compare to cleanup levels. For all samples, there were no detections or MDLs above the cleanup levels established by the OBC.

Table 1 continues to show that only one sampling event (October 2006 at one location, CP-A) had detectable total PCBs over the entire 19-year sampling and analysis record. Since that 2006 event, sampling has continued with no detectable PCB Aroclors. Based on the historical data set, ND values are expected for future groundwater sampling at Plant 10.

Reference: Chevron Swanson River Plant 10 PCB Monitoring Report for 2018 and 2019

In accordance with the OBC and the January 31, 2017, letter from ADEC, semi-annual sampling is planned for 2020 at Plant 10. However, based on the historical data set, Stantec recommends CEMC request approval from the United States Fish and Wildlife Service (the lead agency) to reduce the sampling frequency at Plant 10 from semiannual to annual.

If you have any questions regarding this letter report, please contact the undersigned.

Regards,

**Stantec Consulting Services Inc.**



**Craig Wilson**  
Principal  
Phone: 907 266 1128  
Cell: 907 240 3752  
craig.wilson@stantec.com

Attachment: Attachment A Summary of Current and Historical Analytical Results  
Attachment B Laboratory Reports and ADEC Laboratory Data Review Checklist  
Attachment C Figures

- c. Peter Campbell, ADEC (via email)
- Lynnda Kahn, USFWS (via email)
- Sharon L. Yarawsky, BLM (via email)

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## **Attachment A: Summary of Current and Historical Analytical Results**

**Table 1. Plant 10 Current and Historical Groundwater Analytical Results and Groundwater Elevations**

Date	CP-A			CP-BR			CP-C			CP-F		
	Depth to Groundwater (ft)	Groundwater Elevation AMSL (ft)	PCB (µg/L)	Depth to Groundwater (ft)	Groundwater Elevation AMSL (ft)	PCB (µg/L)	Depth to Groundwater (ft)	Groundwater Elevation AMSL (ft)	PCB (µg/L)	Depth to Groundwater (ft)	Groundwater Elevation AMSL (ft)	PCB (µg/L)
ADEC Groundwater Cleanup Levels <sup>a</sup>			0.5	—	—	0.5	—	—	0.5	—	—	0.5
10/19/2000	11.51	156.40	ND(0.51)	15.42	152.96	ND(0.51)	10.59	158.10	ND(0.51)	11.44	158.04	ND(0.51)/ ND(0.53)
6/26/2001	9.01	158.90	ND(0.50)	16.34	152.04	ND(0.50)/ ND(0.050)	10.87	157.81	ND(0.50)	10.88	158.61	ND(0.53)
10/19/2001	10.84	157.07	ND(0.51)	17.66	150.72	ND(0.53)	10.28	158.41	ND(0.53)	11.99	157.49	ND(0.50)/ ND(0.50)
6/30/2002	6.53	161.38	ND(0.51)	16.99	151.39	ND(0.51)	8.98	159.71	ND(0.053)/ ND(0.53)	5.95	163.53	ND(0.51)
10/29/2002	7.58	160.33	ND(0.50)	13.59	154.79	ND(0.050)	9.31	159.38	ND(0.050)	8.67	160.81	ND(0.50)/ ND(0.50)
5/14/2003	9.99	157.95	ND(0.052)	16.19	151.86	ND(0.051)	11.22	157.33	ND(0.51)	11.58	158.12	ND(0.51)/ ND(0.52)
10/8/2003	6.22	162.54	ND(0.054)	10.11	157.94	ND(0.053)	10.62	157.93	ND(0.53)	7.16	162.72	ND(0.54)/ ND(0.54)
5/17/2004	6.23	161.71	ND(1.0)	8.32	159.73	ND(1.0)	9.01	159.54	ND(1.0)	7.46	162.24	ND(1.0)/ ND(1.0)
10/20/2004	5.42	162.52	ND(1.0)	9.09	158.96	ND(1.0)	6.85	161.70	ND(1.0)	7.10	162.60	ND(1.0)/ ND(1.0)
5/19/2005	5.83	162.11	ND(1.0)	9.03	159.02	ND(1.0)	8.61	161.85	ND(1.0)	6.70	161.10	ND(1.0)/ ND(1.0)
11/8/2005	6.84	161.10	ND(0.95)	9.65	158.40	ND(0.95)	8.05	160.50	ND(0.95)	8.45	161.25	ND(0.95)/ ND(0.95)
6/22/2006	9.40	158.54	ND(0.97)	12.83	155.22	ND(0.94)	10.16	158.39	ND(0.96)	9.49	160.21	ND(0.96)/ ND(0.96)
10/13/2006	4.88	163.06	1.55	7.94	160.11	ND(0.48)	6.45	162.10	ND(0.48)	6.41	163.29	ND(0.48)/ ND(0.47)
5/18/2007	10.93	157.01	ND(0.48)	14.77	153.28	ND(0.48)	9.90	158.65	ND(0.48)	13.08	156.62	ND(0.48)/ ND(0.48)
11/8/2007	5.82	162.12	ND(0.48)	10.42	157.63	ND(0.47)	7.48	161.07	ND(0.48)	8.28	161.42	ND(0.49)/ ND(0.49)
6/4/2008	7.84	160.10	ND(0.57)	13.93	154.12	ND(0.57)	10.84	157.71	ND(0.57)	11.87	157.83	ND(0.57)/ ND(1.1)
11/17/2008	8.40	159.54	ND(0.19)	11.74	156.31	ND(0.095)	8.78	159.77	ND(0.097)	9.01	160.69	ND(0.10)/ ND(0.19)
6/15/2009	9.52	158.42	ND(0.095)	13.69	154.36	ND(0.095)	10.03	158.52	ND(0.095)	11.75	157.95	ND(0.095)/ ND(0.095)
11/18/2009	12.84	155.10	ND(0.48)	18.19	149.86	ND(0.48)	12.03	156.52	ND(0.48)	14.71	155.53	ND(0.48)/ ND(0.48)
5/11/2010	12.57	155.37	ND(0.48)	24.04	144.01	ND(0.48)	10.61	157.94	ND(0.47)/ ND(0.48)	Dry		
11/30/2010	10.45	157.49	ND(0.0952)	18.81	149.24	ND(0.191)	9.66	158.89	ND(0.0978)/ ND(0.0964)	11.52	158.18	ND(0.188)
7/26/2011	13.42	154.52	ND(0.63)	22.02	146.03	ND(0.47)/ ND(0.47)	11.53	157.02	ND(0.47)	Off-limits due to Plant 10 demolition		

**Table 1. Plant 10 Current and Historical Groundwater Analytical Results and Groundwater Elevations**

Date	CP-A			CP-BR			CP-C			CP-F		
	Depth to Groundwater (ft)	Groundwater Elevation AMSL (ft)	PCB (µg/L)	Depth to Groundwater (ft)	Groundwater Elevation AMSL (ft)	PCB (µg/L)	Depth to Groundwater (ft)	Groundwater Elevation AMSL (ft)	PCB (µg/L)	Depth to Groundwater (ft)	Groundwater Elevation AMSL (ft)	PCB (µg/L)
<b>ADEC Groundwater Cleanup Levels <sup>a</sup></b>			<b>0.5</b>	—	—	<b>0.5</b>	—	—	<b>0.5</b>	—	—	<b>0.5</b>
12/26/2011	10.08	157.86	ND(0.194)	15.34	152.71	ND(0.196)	8.63	159.92	ND(0.192)	10.50	159.20	ND(0.191)/ND(0.191)
6/1/2012	7.50	160.44	ND(0.49)	11.90	156.15	ND(0.49)	8.82	159.73	ND(0.48)	9.12	160.58	ND(0.48)
1/13/2013	12.65	155.29	ND(0.095)	15.52	152.53	ND(0.101)/ND(0.099)	11.08	157.47	ND(0.095)	11.62	158.08	ND(0.099)
6/26/2013	4.73	163.21	ND(0.347)	6.90	161.15	ND(0.354)	7.43	161.12	ND(0.350)	5.80	163.90	ND(0.373)
10/15/2013	5.60	162.34	ND(0.352)	10.01	158.04	ND(0.343)	6.26	162.29	ND(0.336)	6.80	162.90	ND(0.359)
6/23/2014	PVC riser damaged <sup>b</sup>		ND(0.358)	13.29	154.76	ND(0.370)	9.85	158.70	ND(0.350)	10.55	159.15	ND(0.363)
10/9/2014			ND(0.358)	11.10	156.95	ND(0.361)	13.20	155.35	ND(0.336)	8.12	161.58	ND(0.350)
7/8/2015	3.33	165.55	ND(0.604)	12.93	155.93	ND(0.606)	8.09	161.86	ND(0.585)	3.66	166.88	ND(0.600)
10/2/2015	4.29	164.59	ND(0.226)	9.16	159.70	ND(0.226)	5.24	164.71	ND(0.226)	5.09	165.45	ND(0.226)
8/3/2016	11.68	157.20	ND(0.160)	15.06	153.80	ND(0.180)	11.80	158.15	ND(0.180)	12.26	158.28	ND(0.175)
9/29/2016	15.30	153.75	ND(0.229)	11.26	157.60	ND(0.182)	7.83	162.12	ND(0.184)	17.98	152.56	ND(0.229)
7/7/2017 <sup>c</sup>	12.17	156.71	ND(0.099)/ND(0.099)	20.62	148.24	ND(0.10)	10.56	159.39	ND(0.097)	14.53	156.01	ND(0.098)
9/21/2017 <sup>c</sup>	7.04	161.84	ND(0.098) JS-/ND(0.10)	12.80	156.06	ND(0.096) JS-	9.59	160.36	ND(0.10)	8.72	161.82	ND(0.11) JS-
<b>ADEC Groundwater Cleanup Levels <sup>e</sup></b>			<b>0.44</b>	—	—	<b>0.44</b>	—	—	<b>0.44</b>	—	—	<b>0.44</b>
7/15/2018 <sup>d</sup>	10.30	158.58	ND[0.076] JS- / ND[0.077]	13.52	155.34	ND[0.076]	11.34	158.61	ND[0.077]	11.47	159.07	ND[0.076] JS-
9/22/2018 <sup>d</sup>	12.05	156.83	ND[0.077] / ND[0.081]	15.33	153.53	ND[0.082]	11.70	158.25	ND[0.073]	12.32	158.22	ND[0.076] JS-
8/2/2019 <sup>f</sup>	12.28	156.60	ND [0.333]	14.84	154.02	ND [0.320]	11.91	158.04	ND [0.341]	13.10	157.44	ND [0.344]

Notes:

Results above site-specific cleanup levels are highlighted, underlined, and **bolded**.

Non-detect results with reporting limits above the 2018 site-specific amended cleanup level of 0.44 µg/L are *italicized*.

2013 PCB results are for total aroclor.

Plant 10 monitoring wells were resurveyed in October 2015.

Water was discharging out of Plant 10 vent above CP-F on 7/8/15. Water was pooled around CP-F and flowing toward CP-A, which also had water pooled around the security casing.

Two sets of analytical results are reported and separated by "/" when a duplicate sample was collected.

AMSL = above mean sea level

ft = feet

— = Not applicable

JS- = One or more surrogates recovered outside of control criteria (biased low)

ND = Analyte not detected above the laboratory reporting/method detection limit (provided in parentheses or brackets).

PCB = polychlorinated biphenyl

µg/L = Micrograms per liter

<sup>a</sup> Alaska Department of Environmental Conservation (ADEC), 2017, Title 18, Alaska Administrative Code Chapter 75 (18 AAC 75), Oil and Other Hazardous Substances Pollution Control, Table C.

<sup>b</sup> Polyvinyl chloride (PVC) riser was damaged, and technician could not get water level indicator probe past the bulge in the damaged PVC riser.

<sup>c</sup> 2017 ND value in ( ) is the TestAmerica laboratory reporting limit.

<sup>d</sup> 2018 ND value in [ ] is the TestAmerica method detection limit.

<sup>e</sup> ADEC 2018, 18 AAC 75, Table C. October 27, 2018.

<sup>f</sup> 2019 ND value in [ ] is the SGS limit of detection.



**Attachment B: Laboratory Reports and ADEC  
Laboratory Data Review Checklist**



## Laboratory Report of Analysis

To: Stantec Consulting Services Inc.  
725 East Fireweed Lane, #200  
Anchorage, AK 99503  
(907)266-1148

Report Number: **1194337**

Client Project: **Swanson River Unit(SRU) CEMREC**

Dear Douglas Quist,

Enclosed are the results of the analytical services performed under the referenced project for the received samples and associated QC as applicable. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of ten years in the event they are required for future reference. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. Any samples submitted to our laboratory will be retained for a maximum of fourteen (14) days from the date of this report unless other archiving requirements were included in the quote.

If there are any questions about the report or services performed during this project, please call Justin at (907) 562-2343. We will be happy to answer any questions or concerns which you may have.

Thank you for using SGS North America Inc. for your analytical services. We look forward to working with you again on any additional analytical needs.

Sincerely,  
SGS North America Inc.

---

Justin Nelson  
Project Manager  
Justin.Nelson@sgs.com

Date

Case Narrative

SGS Client: **Stantec Consulting Services Inc.**  
SGS Project: **1194337**  
Project Name/Site: **Swanson River Unit(SRU) CEMREC**  
Project Contact: **Douglas Quist**

Refer to sample receipt form for information on sample condition.

**MW-1 (1194337009) PS**

RSK 175- Methane were analyzed by SGS of Orlando, FL.

**W-1P (1194337025) PS**

RSK 175- Methane were analyzed by SGS of Orlando, FL.

**Dup-04 (1194337026) PS**

8021B - Sample has a pH greater than 2.

**MW-1 - MS (1194337010) BMS**

RSK 175- Methane and MS were analyzed by SGS of Orlando, FL.  
300.0 - Anions - BMS recovery for Sulfate is outside of QC criteria. Refer to LCS for accuracy requirements.

**MW-1 - MSD (1194337011) BMSD**

RSK 175- Methane and MSD were analyzed by SGS of Orlando, FL.  
300.0 - Anions - BMSD recovery for Sulfate is outside of QC criteria. Refer to LCS for accuracy requirements.

**1194374001MS (1524361) MS**

8270D SIM - PAH MS recovery for several analytes do not meet QC criteria. Refer to the LCS for accuracy requirements.

**1194431001MS (1524596) MS**

4500NO3-F - Nitrate/Nitrite - MS recovery for Total Nitrite / Nitrate is outside of QC criteria. Refer to LCS for accuracy requirements.

**1194337009(1526456MS) (1526459) MS**

300.0 - Anions - MS recover for Sulfate is outside of QC criteria. Refer to LCS for accuracy requirements.

**1194374001MSD (1524362) MSD**

8270D SIM - PAH MSD recovery for several analytes do not meet QC criteria. Refer to the LCS for accuracy requirements.

**1194397001MSD (1524595) MSD**

4500NO3-F - Nitrate/Nitrite - MSD recovery for Total Nitrite / Nitrate is outside of QC criteria. Refer to LCS for accuracy requirements.

**1194431001MSD (1524597) MSD**

4500NO3-F - Nitrate/Nitrite - MSD recovery for Total Nitrite / Nitrate is outside of QC criteria. Refer to LCS for accuracy requirements.

**1194337009(1526456MSD) (1526460) MSD**

300.0 - Anions - MSD recover for Sulfate is outside of QC criteria. Refer to LCS for accuracy requirements.

\*QC comments may be associated with the field samples found in this report. When applicable, comments will be applied to associated field samples.



### Report of Manual Integrations

<u>Laboratory ID</u>	<u>Client Sample ID</u>	<u>Analytical Batch</u>	<u>Analyte</u>	<u>Reason</u>
<b>SW8082A</b>				
1194337004	CP-A - MSD	XGC10479	Aroclor-1016	SP

#### Manual Integration Reason Code Descriptions

Code	Description
O	Original Chromatogram
M	Modified Chromatogram
SS	Skimmed surrogate
BLG	Closed baseline gap
RP	Reassign peak name
PIR	Pattern integration required
IT	Included tail
SP	Split peak
RSP	Removed split peak
FPS	Forced peak start/stop
BLC	Baseline correction
PNF	Peak not found by software

All DRO/RRO analysis are integrated per SOP.

## Laboratory Qualifiers

Enclosed are the analytical results associated with the above work order. The results apply to the samples as received. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. This document is issued by the Company under its General Conditions of Service accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the context or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS maintains a formal Quality Assurance/Quality Control (QA/QC) program. A copy of our Quality Assurance Plan (QAP), which outlines this program, is available at your request. The laboratory certification numbers are AK00971 (DW Chemistry & Microbiology) & 17-021 (CS) for ADEC and 2944.01 for DOD ELAP/ISO17025 (RCRA methods: 1020B, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035A, 6020A, 7470A, 7471B, 8015C, 8021B, 8082A, 8260C, 8270D, 8270D-SIM, 9040C, 9045D, 9056A, 9060A, AK101 and AK102/103). SGS is only certified for the analytes listed on our Drinking Water Certification, and only those analytes will be reported to the State of Alaska for compliance. Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS QAP and, when applicable, other regulatory authorities.

The following descriptors or qualifiers may be found in your report:

*	The analyte has exceeded allowable regulatory or control limits.
!	Surrogate out of control limits.
B	Indicates the analyte is found in a blank associated with the sample.
CCV/CVA/CVB	Continuing Calibration Verification
CCCV/CVC/CVCA/CVCB	Closing Continuing Calibration Verification
CL	Control Limit
DF	Analytical Dilution Factor
DL	Detection Limit (i.e., maximum method detection limit)
E	The analyte result is above the calibrated range.
GT	Greater Than
IB	Instrument Blank
ICV	Initial Calibration Verification
J	The quantitation is an estimation.
LCS(D)	Laboratory Control Spike (Duplicate)
LLQC/LLIQC	Low Level Quantitation Check
LOD	Limit of Detection (i.e., 1/2 of the LOQ)
LOQ	Limit of Quantitation (i.e., reporting or practical quantitation limit)
LT	Less Than
MB	Method Blank
MS(D)	Matrix Spike (Duplicate)
ND	Indicates the analyte is not detected.
RPD	Relative Percent Difference
U	Indicates the analyte was analyzed for but not detected.

**Note:** Sample summaries which include a result for "Total Solids" have already been adjusted for moisture content. All DRO/RRO analyses are integrated per SOP.



### Sample Summary

<u>Client Sample ID</u>	<u>Lab Sample ID</u>	<u>Collected</u>	<u>Received</u>	<u>Matrix</u>
CP-C	1194337001	07/31/2019	08/05/2019	Water (Surface, Eff., Ground)
CP-A	1194337002	07/31/2019	08/05/2019	Water (Surface, Eff., Ground)
CP-A - MS	1194337003	07/31/2019	08/05/2019	Water (Surface, Eff., Ground)
CP-A - MSD	1194337004	07/31/2019	08/05/2019	Water (Surface, Eff., Ground)
CP-F	1194337005	07/31/2019	08/05/2019	Water (Surface, Eff., Ground)
DUP-01	1194337006	07/31/2019	08/05/2019	Water (Surface, Eff., Ground)
MW-3	1194337007	08/01/2019	08/05/2019	Water (Surface, Eff., Ground)
MW-2	1194337008	08/01/2019	08/05/2019	Water (Surface, Eff., Ground)
MW-1	1194337009	08/01/2019	08/05/2019	Water (Surface, Eff., Ground)
MW-1 - MS	1194337010	08/01/2019	08/05/2019	Water (Surface, Eff., Ground)
MW-1 - MSD	1194337011	08/01/2019	08/05/2019	Water (Surface, Eff., Ground)
TW-1	1194337012	08/01/2019	08/05/2019	Water (Surface, Eff., Ground)
TW-2	1194337013	08/01/2019	08/05/2019	Water (Surface, Eff., Ground)
TW-3	1194337014	08/01/2019	08/05/2019	Water (Surface, Eff., Ground)
Dup-02	1194337015	08/01/2019	08/05/2019	Water (Surface, Eff., Ground)
TW-6	1194337016	08/01/2019	08/05/2019	Water (Surface, Eff., Ground)
TW-6 - MS	1194337017	08/01/2019	08/05/2019	Water (Surface, Eff., Ground)
TW-6 - MSD	1194337018	08/01/2019	08/05/2019	Water (Surface, Eff., Ground)
TW-7	1194337019	08/01/2019	08/05/2019	Water (Surface, Eff., Ground)
TW-8	1194337020	08/01/2019	08/05/2019	Water (Surface, Eff., Ground)
PSW-1	1194337021	08/01/2019	08/05/2019	Water (Surface, Eff., Ground)
Dup-03	1194337022	08/01/2019	08/05/2019	Water (Surface, Eff., Ground)
PSW-2	1194337023	08/01/2019	08/05/2019	Water (Surface, Eff., Ground)
TW-13	1194337024	08/01/2019	08/05/2019	Water (Surface, Eff., Ground)
W-1P	1194337025	08/01/2019	08/05/2019	Water (Surface, Eff., Ground)
Dup-04	1194337026	08/01/2019	08/05/2019	Water (Surface, Eff., Ground)
TW-12	1194337027	08/01/2019	08/05/2019	Water (Surface, Eff., Ground)
CP-BR	1194337028	08/02/2019	08/05/2019	Water (Surface, Eff., Ground)
TW-14	1194337029	08/02/2019	08/05/2019	Water (Surface, Eff., Ground)
TW-11	1194337030	08/02/2019	08/05/2019	Water (Surface, Eff., Ground)
W-1E	1194337031	08/02/2019	08/05/2019	Water (Surface, Eff., Ground)
Dup-05	1194337032	08/02/2019	08/05/2019	Water (Surface, Eff., Ground)
TW-15	1194337033	08/02/2019	08/05/2019	Water (Surface, Eff., Ground)
TW-16	1194337034	08/02/2019	08/05/2019	Water (Surface, Eff., Ground)
Trip Blank	1194337035	08/01/2019	08/05/2019	Water (Surface, Eff., Ground)
TW-14	1194337036	08/02/2019	08/05/2019	Water (Surface, Eff., Ground)
TW-15	1194337037	08/02/2019	08/05/2019	Water (Surface, Eff., Ground)
TW-16	1194337038	08/02/2019	08/05/2019	Water (Surface, Eff., Ground)
MW-1 BDUP	1194337039	08/01/2019	08/05/2019	Water (Surface, Eff., Ground)

Print Date: 08/22/2019 2:18:15PM

### Sample Summary

<u>Client Sample ID</u>	<u>Lab Sample ID</u>	<u>Collected</u>	<u>Received</u>	<u>Matrix</u>
<u>Method</u>	<u>Method Description</u>			
8270D SIM LV (PAH)	8270 PAH SIM GC/MS Liq/Liq ext. LV			
SM21 2320B	Alkalinity as CaCO3 QC			
SW8021B	BTEX 8021			
SW9056A	Ion Chromatographic Analysis Water			
EP200.8	Metals in Drinking Water by ICP-MS DISSO			
EP200.8	Metals in Water by 200.8 ICP-MS			
SM21 4500NO3-F	Nitrate/Nitrite Flow injection Pres.			
SW8082A	SW8082 PCB's			

Print Date: 08/22/2019 2:18:15PM

### Detectable Results Summary

Client Sample ID: **MW-1**  
 Lab Sample ID: 1194337009  
**Dissolved Metals by ICP/MS**  
**Waters Department**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Iron	31600	ug/L
Alkalinity	129	mg/L
Sulfate	2.60	mg/L
Total Nitrate/Nitrite-N	0.140J	mg/L

Client Sample ID: **TW-2**  
 Lab Sample ID: 1194337013  
**Volatile Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Ethylbenzene	28.0	ug/L
o-Xylene	5.06	ug/L
P & M -Xylene	71.0	ug/L
Xylenes (total)	76.1	ug/L

Client Sample ID: **TW-3**  
 Lab Sample ID: 1194337014  
**Volatile Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Benzene	0.363J	ug/L
Ethylbenzene	2510	ug/L
o-Xylene	237	ug/L
P & M -Xylene	7960	ug/L
Toluene	0.564J	ug/L
Xylenes (total)	8190	ug/L

Client Sample ID: **Dup-02**  
 Lab Sample ID: 1194337015  
**Volatile Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Ethylbenzene	31.5	ug/L
o-Xylene	5.88	ug/L
P & M -Xylene	84.2	ug/L
Xylenes (total)	90.1	ug/L

Client Sample ID: **TW-6**  
 Lab Sample ID: 1194337016  
**Volatile Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Benzene	0.536	ug/L
Ethylbenzene	13.2	ug/L
o-Xylene	1.50	ug/L
P & M -Xylene	119	ug/L
Xylenes (total)	121	ug/L

Client Sample ID: **TW-7**  
 Lab Sample ID: 1194337019  
**Volatile Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Benzene	0.666	ug/L
Ethylbenzene	27.9	ug/L
o-Xylene	6.79	ug/L
P & M -Xylene	157	ug/L
Toluene	0.337J	ug/L
Xylenes (total)	164	ug/L

### Detectable Results Summary

Client Sample ID: **TW-8**  
 Lab Sample ID: 1194337020

**Volatile Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Benzene	1.18	ug/L
Ethylbenzene	176	ug/L
o-Xylene	54.2	ug/L
P & M -Xylene	231	ug/L
Xylenes (total)	285	ug/L

Client Sample ID: **PSW-1**  
 Lab Sample ID: 1194337021

**Volatile Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Ethylbenzene	0.480J	ug/L
P & M -Xylene	0.976J	ug/L
Xylenes (total)	1.20J	ug/L

Client Sample ID: **TW-13**  
 Lab Sample ID: 1194337024

**Volatile Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
o-Xylene	0.496J	ug/L
P & M -Xylene	75.0	ug/L
Xylenes (total)	75.5	ug/L

Client Sample ID: **W-1P**  
 Lab Sample ID: 1194337025

**Dissolved Metals by ICP/MS**

**Volatile Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Iron	5370	ug/L
Benzene	0.260J	ug/L
Ethylbenzene	0.586J	ug/L
o-Xylene	2.59	ug/L
P & M -Xylene	219	ug/L
Xylenes (total)	221	ug/L
Alkalinity	120	mg/L
Sulfate	1.38	mg/L

**Waters Department**

Client Sample ID: **Dup-04**  
 Lab Sample ID: 1194337026

**Dissolved Metals by ICP/MS**

**Volatile Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Iron	5310	ug/L
o-Xylene	2.14	ug/L
P & M -Xylene	170	ug/L
Xylenes (total)	172	ug/L
Alkalinity	120	mg/L
Sulfate	1.36	mg/L

**Waters Department**

### Detectable Results Summary

Client Sample ID: **TW-12**  
 Lab Sample ID: 1194337027  
**Dissolved Metals by ICP/MS**  
**Volatile Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Iron	20700	ug/L
o-Xylene	0.571J	ug/L
P & M -Xylene	30.9	ug/L
Toluene	0.709J	ug/L
Xylenes (total)	31.5	ug/L
Alkalinity	81.0	mg/L
Sulfate	1.16	mg/L
Total Nitrate/Nitrite-N	0.0868J	mg/L

**Waters Department**

Client Sample ID: **TW-14**  
 Lab Sample ID: 1194337029  
**Dissolved Metals by ICP/MS**  
**Waters Department**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Iron	10500	ug/L
Alkalinity	112	mg/L

Client Sample ID: **TW-15**  
 Lab Sample ID: 1194337033  
**Dissolved Metals by ICP/MS**  
**Volatile Fuels**  
**Waters Department**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Iron	11400	ug/L
P & M -Xylene	0.783J	ug/L
Alkalinity	131	mg/L
Sulfate	0.761	mg/L

Client Sample ID: **TW-16**  
 Lab Sample ID: 1194337034  
**Dissolved Metals by ICP/MS**  
**Waters Department**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Iron	424	ug/L
Alkalinity	135	mg/L

Client Sample ID: **TW-14**  
 Lab Sample ID: 1194337036  
**Metals by ICP/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Iron	8910	ug/L

Client Sample ID: **TW-15**  
 Lab Sample ID: 1194337037  
**Metals by ICP/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Iron	12300	ug/L

Client Sample ID: **TW-16**  
 Lab Sample ID: 1194337038  
**Metals by ICP/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Iron	384	ug/L



### Results of CP-C

Client Sample ID: **CP-C**  
 Client Project ID: **Swanson River Unit(SRU) CEMREC**  
 Lab Sample ID: 1194337001  
 Lab Project ID: 1194337

Collection Date: 07/31/19 16:21  
 Received Date: 08/05/19 09:17  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

### Results by Polychlorinated Biphenyls

<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>
Aroclor-1016	0.0550 U	0.110	0.0341	ug/L	1		08/15/19 18:39
Aroclor-1221	0.550 U	1.10	0.341	ug/L	1		08/15/19 18:39
Aroclor-1232	0.0550 U	0.110	0.0341	ug/L	1		08/15/19 18:39
Aroclor-1242	0.0550 U	0.110	0.0341	ug/L	1		08/15/19 18:39
Aroclor-1248	0.0550 U	0.110	0.0341	ug/L	1		08/15/19 18:39
Aroclor-1254	0.0550 U	0.110	0.0341	ug/L	1		08/15/19 18:39
Aroclor-1260	0.0550 U	0.110	0.0341	ug/L	1		08/15/19 18:39
<b>Surrogates</b>							
Decachlorobiphenyl (surr)	96.9	40-135		%	1		08/15/19 18:39

### Batch Information

Analytical Batch: XGC10479  
 Analytical Method: SW8082A  
 Analyst: BMZ  
 Analytical Date/Time: 08/15/19 18:39  
 Container ID: 1194337001-A

Prep Batch: XXX42007  
 Prep Method: SW3520C  
 Prep Date/Time: 08/14/19 09:57  
 Prep Initial Wt./Vol.: 910 mL  
 Prep Extract Vol: 1 mL





**Results of CP-A**

Client Sample ID: **CP-A**  
Client Project ID: **Swanson River Unit(SRU) CEMREC**  
Lab Sample ID: 1194337002  
Lab Project ID: 1194337

Collection Date: 07/31/19 17:18  
Received Date: 08/05/19 09:17  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Polychlorinated Biphenyls**

<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>
Aroclor-1016	0.0540 U	0.108	0.0333	ug/L	1		08/15/19 18:49
Aroclor-1221	0.540 U	1.08	0.333	ug/L	1		08/15/19 18:49
Aroclor-1232	0.0540 U	0.108	0.0333	ug/L	1		08/15/19 18:49
Aroclor-1242	0.0540 U	0.108	0.0333	ug/L	1		08/15/19 18:49
Aroclor-1248	0.0540 U	0.108	0.0333	ug/L	1		08/15/19 18:49
Aroclor-1254	0.0540 U	0.108	0.0333	ug/L	1		08/15/19 18:49
Aroclor-1260	0.0540 U	0.108	0.0333	ug/L	1		08/15/19 18:49
<b>Surrogates</b>							
Decachlorobiphenyl (surr)	98.1	40-135		%	1		08/15/19 18:49

**Batch Information**

Analytical Batch: XGC10479  
Analytical Method: SW8082A  
Analyst: BMZ  
Analytical Date/Time: 08/15/19 18:49  
Container ID: 1194337002-A

Prep Batch: XXX42007  
Prep Method: SW3520C  
Prep Date/Time: 08/14/19 09:57  
Prep Initial Wt./Vol.: 930 mL  
Prep Extract Vol: 1 mL



**Results of CP-F**

Client Sample ID: **CP-F**  
Client Project ID: **Swanson River Unit(SRU) CEMREC**  
Lab Sample ID: 1194337005  
Lab Project ID: 1194337

Collection Date: 07/31/19 17:31  
Received Date: 08/05/19 09:17  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Polychlorinated Biphenyls**

<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>
Aroclor-1016	0.0555 U	0.111	0.0344	ug/L	1		08/15/19 19:20
Aroclor-1221	0.555 U	1.11	0.344	ug/L	1		08/15/19 19:20
Aroclor-1232	0.0555 U	0.111	0.0344	ug/L	1		08/15/19 19:20
Aroclor-1242	0.0555 U	0.111	0.0344	ug/L	1		08/15/19 19:20
Aroclor-1248	0.0555 U	0.111	0.0344	ug/L	1		08/15/19 19:20
Aroclor-1254	0.0555 U	0.111	0.0344	ug/L	1		08/15/19 19:20
Aroclor-1260	0.0555 U	0.111	0.0344	ug/L	1		08/15/19 19:20
<b>Surrogates</b>							
Decachlorobiphenyl (surr)	96.6	40-135		%	1		08/15/19 19:20

**Batch Information**

Analytical Batch: XGC10479  
Analytical Method: SW8082A  
Analyst: BMZ  
Analytical Date/Time: 08/15/19 19:20  
Container ID: 1194337005-A

Prep Batch: XXX42007  
Prep Method: SW3520C  
Prep Date/Time: 08/14/19 09:57  
Prep Initial Wt./Vol.: 900 mL  
Prep Extract Vol: 1 mL



Results of **DUP-01**

Client Sample ID: **DUP-01**  
Client Project ID: **Swanson River Unit(SRU) CEMREC**  
Lab Sample ID: 1194337006  
Lab Project ID: 1194337

Collection Date: 07/31/19 17:31  
Received Date: 08/05/19 09:17  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

Results by **Polychlorinated Biphenyls**

<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>
Aroclor-1016	0.0550 U	0.110	0.0341	ug/L	1		08/15/19 19:30
Aroclor-1221	0.550 U	1.10	0.341	ug/L	1		08/15/19 19:30
Aroclor-1232	0.0550 U	0.110	0.0341	ug/L	1		08/15/19 19:30
Aroclor-1242	0.0550 U	0.110	0.0341	ug/L	1		08/15/19 19:30
Aroclor-1248	0.0550 U	0.110	0.0341	ug/L	1		08/15/19 19:30
Aroclor-1254	0.0550 U	0.110	0.0341	ug/L	1		08/15/19 19:30
Aroclor-1260	0.0550 U	0.110	0.0341	ug/L	1		08/15/19 19:30
<b>Surrogates</b>							
Decachlorobiphenyl (surr)	92.2	40-135		%	1		08/15/19 19:30

**Batch Information**

Analytical Batch: XGC10479  
Analytical Method: SW8082A  
Analyst: BMZ  
Analytical Date/Time: 08/15/19 19:30  
Container ID: 1194337006-A

Prep Batch: XXX42007  
Prep Method: SW3520C  
Prep Date/Time: 08/14/19 09:57  
Prep Initial Wt./Vol.: 910 mL  
Prep Extract Vol: 1 mL



**Results of MW-3**

Client Sample ID: **MW-3**  
Client Project ID: **Swanson River Unit(SRU) CEMREC**  
Lab Sample ID: 1194337007  
Lab Project ID: 1194337

Collection Date: 08/01/19 10:09  
Received Date: 08/05/19 09:17  
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>
Benzene	0.250 U	0.500	0.150	ug/L	1		08/08/19 22:46
Ethylbenzene	0.500 U	1.00	0.310	ug/L	1		08/08/19 22:46
o-Xylene	0.500 U	1.00	0.310	ug/L	1		08/08/19 22:46
P & M -Xylene	1.00 U	2.00	0.620	ug/L	1		08/08/19 22:46
Toluene	0.500 U	1.00	0.310	ug/L	1		08/08/19 22:46
Xylenes (total)	1.50 U	3.00	0.930	ug/L	1		08/08/19 22:46

**Surrogates**

1,4-Difluorobenzene (surr)	91.3	77-115		%	1		08/08/19 22:46
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**Batch Information**

Analytical Batch: VFC14871  
Analytical Method: SW8021B  
Analyst: NRB  
Analytical Date/Time: 08/08/19 22:46  
Container ID: 1194337007-A

Prep Batch: VXX34616  
Prep Method: SW5030B  
Prep Date/Time: 08/08/19 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL

## Results of MW-2

Client Sample ID: **MW-2**  
 Client Project ID: **Swanson River Unit(SRU) CEMREC**  
 Lab Sample ID: 1194337008  
 Lab Project ID: 1194337

Collection Date: 08/01/19 10:33  
 Received Date: 08/05/19 09:17  
 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>
Benzene	0.250 U	0.500	0.150	ug/L	1		08/08/19 23:04
Ethylbenzene	0.500 U	1.00	0.310	ug/L	1		08/08/19 23:04
o-Xylene	0.500 U	1.00	0.310	ug/L	1		08/08/19 23:04
P & M -Xylene	1.00 U	2.00	0.620	ug/L	1		08/08/19 23:04
Toluene	0.500 U	1.00	0.310	ug/L	1		08/08/19 23:04
Xylenes (total)	1.50 U	3.00	0.930	ug/L	1		08/08/19 23:04

## Surrogates

1,4-Difluorobenzene (surr)	91.2	77-115		%	1		08/08/19 23:04
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## Batch Information

Analytical Batch: VFC14871  
 Analytical Method: SW8021B  
 Analyst: NRB  
 Analytical Date/Time: 08/08/19 23:04  
 Container ID: 1194337008-A

Prep Batch: VXX34616  
 Prep Method: SW5030B  
 Prep Date/Time: 08/08/19 06:00  
 Prep Initial Wt./Vol.: 5 mL  
 Prep Extract Vol: 5 mL



**Results of MW-1**

Client Sample ID: **MW-1**  
Client Project ID: **Swanson River Unit(SRU) CEMREC**  
Lab Sample ID: 1194337009  
Lab Project ID: 1194337

Collection Date: 08/01/19 10:46  
Received Date: 08/05/19 09:17  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Dissolved Metals by ICP/MS**

<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>
Iron	31600	250	78.0	ug/L	1		08/06/19 19:22

**Batch Information**

Analytical Batch: MMS10583  
Analytical Method: EP200.8  
Analyst: DSH  
Analytical Date/Time: 08/06/19 19:22  
Container ID: 1194337009-J

Prep Batch: MXX32637  
Prep Method: E200.2  
Prep Date/Time: 08/06/19 09:42  
Prep Initial Wt./Vol.: 20 mL  
Prep Extract Vol: 50 mL



Results of MW-1

Client Sample ID: MW-1
Client Project ID: Swanson River Unit(SRU) CEMREC
Lab Sample ID: 1194337009
Lab Project ID: 1194337

Collection Date: 08/01/19 10:46
Received Date: 08/05/19 09:17
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Volatile Fuels

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Rows include Benzene, Ethylbenzene, o-Xylene, P & M -Xylene, Toluene, and Xylenes (total).

Surrogates

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Row includes 1,4-Difluorobenzene (surr).

Batch Information

Analytical Batch: VFC14871
Analytical Method: SW8021B
Analyst: NRB
Analytical Date/Time: 08/08/19 23:22
Container ID: 1194337009-A

Prep Batch: VXX34616
Prep Method: SW5030B
Prep Date/Time: 08/08/19 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL



### Results of MW-1

Client Sample ID: **MW-1**  
 Client Project ID: **Swanson River Unit(SRU) CEMREC**  
 Lab Sample ID: 1194337009  
 Lab Project ID: 1194337

Collection Date: 08/01/19 10:46  
 Received Date: 08/05/19 09:17  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

### Results by Waters Department

<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>
Alkalinity	129	10.0	2.50	mg/L	1		08/06/19 15:42

### Batch Information

Analytical Batch: WTI5239  
 Analytical Method: SM21 2320B  
 Analyst: EWW  
 Analytical Date/Time: 08/06/19 15:42  
 Container ID: 1194337009-M

<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>
Total Nitrate/Nitrite-N	0.140 J	0.200	0.0500	mg/L	2		08/09/19 15:48

### Batch Information

Analytical Batch: WFI2832  
 Analytical Method: SM21 4500NO3-F  
 Analyst: EWW  
 Analytical Date/Time: 08/09/19 15:48  
 Container ID: 1194337009-G

<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>
Sulfate	2.60	0.200	0.0500	mg/L	1		08/12/19 19:51

### Batch Information

Analytical Batch: WIC5949	Prep Batch: WXX12976
Analytical Method: SW9056A	Prep Method: METHOD
Analyst: DMM	Prep Date/Time: 08/12/19 17:00
Analytical Date/Time: 08/12/19 19:51	Prep Initial Wt./Vol.: 10 mL
Container ID: 1194337009-M	Prep Extract Vol: 10 mL





### Results of TW-1

Client Sample ID: **TW-1**  
 Client Project ID: **Swanson River Unit(SRU) CEMREC**  
 Lab Sample ID: 1194337012  
 Lab Project ID: 1194337

Collection Date: 08/01/19 11:34  
 Received Date: 08/05/19 09:17  
 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>
Benzene	0.250 U	0.500	0.150	ug/L	1		08/09/19 00:15
Ethylbenzene	0.500 U	1.00	0.310	ug/L	1		08/09/19 00:15
o-Xylene	0.500 U	1.00	0.310	ug/L	1		08/09/19 00:15
P & M -Xylene	1.00 U	2.00	0.620	ug/L	1		08/09/19 00:15
Toluene	0.500 U	1.00	0.310	ug/L	1		08/09/19 00:15
Xylenes (total)	1.50 U	3.00	0.930	ug/L	1		08/09/19 00:15

### Surrogates

1,4-Difluorobenzene (surr)	90.1	77-115		%	1		08/09/19 00:15
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### Batch Information

Analytical Batch: VFC14871  
 Analytical Method: SW8021B  
 Analyst: NRB  
 Analytical Date/Time: 08/09/19 00:15  
 Container ID: 1194337012-A

Prep Batch: VXX34616  
 Prep Method: SW5030B  
 Prep Date/Time: 08/08/19 06:00  
 Prep Initial Wt./Vol.: 5 mL  
 Prep Extract Vol: 5 mL



**Results of TW-2**

Client Sample ID: **TW-2**  
Client Project ID: **Swanson River Unit(SRU) CEMREC**  
Lab Sample ID: 1194337013  
Lab Project ID: 1194337

Collection Date: 08/01/19 12:03  
Received Date: 08/05/19 09:17  
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>
Benzene	0.250 U	0.500	0.150	ug/L	1		08/09/19 00:32
Ethylbenzene	28.0	1.00	0.310	ug/L	1		08/09/19 00:32
o-Xylene	5.06	1.00	0.310	ug/L	1		08/09/19 00:32
P & M -Xylene	71.0	2.00	0.620	ug/L	1		08/09/19 00:32
Toluene	0.500 U	1.00	0.310	ug/L	1		08/09/19 00:32
Xylenes (total)	76.1	3.00	0.930	ug/L	1		08/09/19 00:32

**Surrogates**

1,4-Difluorobenzene (surr)	87.9	77-115		%	1		08/09/19 00:32
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**Batch Information**

Analytical Batch: VFC14871  
Analytical Method: SW8021B  
Analyst: NRB  
Analytical Date/Time: 08/09/19 00:32  
Container ID: 1194337013-A

Prep Batch: VXX34616  
Prep Method: SW5030B  
Prep Date/Time: 08/08/19 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL



### Results of TW-3

Client Sample ID: **TW-3**  
 Client Project ID: **Swanson River Unit(SRU) CEMREC**  
 Lab Sample ID: 1194337014  
 Lab Project ID: 1194337

Collection Date: 08/01/19 12:30  
 Received Date: 08/05/19 09:17  
 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>
Benzene	0.363 J	0.500	0.150	ug/L	1		08/09/19 00:50
Ethylbenzene	2510	100	31.0	ug/L	100		08/14/19 08:42
o-Xylene	237	100	31.0	ug/L	100		08/14/19 08:42
P & M -Xylene	7960	200	62.0	ug/L	100		08/14/19 08:42
Toluene	0.564 J	1.00	0.310	ug/L	1		08/09/19 00:50
Xylenes (total)	8190	300	93.0	ug/L	100		08/14/19 08:42

### Surrogates

1,4-Difluorobenzene (surr)	89.9	77-115		%	1		08/09/19 00:50
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### Batch Information

Analytical Batch: VFC14871  
 Analytical Method: SW8021B  
 Analyst: NRB  
 Analytical Date/Time: 08/09/19 00:50  
 Container ID: 1194337014-A

Prep Batch: VXX34616  
 Prep Method: SW5030B  
 Prep Date/Time: 08/08/19 06:00  
 Prep Initial Wt./Vol.: 5 mL  
 Prep Extract Vol: 5 mL

Analytical Batch: VFC14876  
 Analytical Method: SW8021B  
 Analyst: NRB  
 Analytical Date/Time: 08/14/19 08:42  
 Container ID: 1194337014-B

Prep Batch: VXX34639  
 Prep Method: SW5030B  
 Prep Date/Time: 08/13/19 06:00  
 Prep Initial Wt./Vol.: 5 mL  
 Prep Extract Vol: 5 mL



### Results of Dup-02

Client Sample ID: **Dup-02**  
 Client Project ID: **Swanson River Unit(SRU) CEMREC**  
 Lab Sample ID: 1194337015  
 Lab Project ID: 1194337

Collection Date: 08/01/19 12:30  
 Received Date: 08/05/19 09:17  
 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>
Benzene	0.250 U	0.500	0.150	ug/L	1		08/09/19 01:07
Ethylbenzene	31.5	1.00	0.310	ug/L	1		08/09/19 01:07
o-Xylene	5.88	1.00	0.310	ug/L	1		08/09/19 01:07
P & M -Xylene	84.2	2.00	0.620	ug/L	1		08/09/19 01:07
Toluene	0.500 U	1.00	0.310	ug/L	1		08/09/19 01:07
Xylenes (total)	90.1	3.00	0.930	ug/L	1		08/09/19 01:07

### Surrogates

1,4-Difluorobenzene (surr)	88	77-115		%	1		08/09/19 01:07
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### Batch Information

Analytical Batch: VFC14871  
 Analytical Method: SW8021B  
 Analyst: NRB  
 Analytical Date/Time: 08/09/19 01:07  
 Container ID: 1194337015-A

Prep Batch: VXX34616  
 Prep Method: SW5030B  
 Prep Date/Time: 08/08/19 06:00  
 Prep Initial Wt./Vol.: 5 mL  
 Prep Extract Vol: 5 mL



**Results of TW-6**

Client Sample ID: **TW-6**  
Client Project ID: **Swanson River Unit(SRU) CEMREC**  
Lab Sample ID: 1194337016  
Lab Project ID: 1194337

Collection Date: 08/01/19 12:47  
Received Date: 08/05/19 09:17  
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>
Benzene	0.536	0.500	0.150	ug/L	1		08/09/19 01:25
Ethylbenzene	13.2	1.00	0.310	ug/L	1		08/09/19 01:25
o-Xylene	1.50	1.00	0.310	ug/L	1		08/09/19 01:25
P & M -Xylene	119	2.00	0.620	ug/L	1		08/09/19 01:25
Toluene	0.500 U	1.00	0.310	ug/L	1		08/09/19 01:25
Xylenes (total)	121	3.00	0.930	ug/L	1		08/09/19 01:25

**Surrogates**

1,4-Difluorobenzene (surr)	90.2	77-115		%	1		08/09/19 01:25
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**Batch Information**

Analytical Batch: VFC14871  
Analytical Method: SW8021B  
Analyst: NRB  
Analytical Date/Time: 08/09/19 01:25  
Container ID: 1194337016-A

Prep Batch: VXX34616  
Prep Method: SW5030B  
Prep Date/Time: 08/08/19 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL



### Results of TW-7

Client Sample ID: **TW-7**  
 Client Project ID: **Swanson River Unit(SRU) CEMREC**  
 Lab Sample ID: 1194337019  
 Lab Project ID: 1194337

Collection Date: 08/01/19 13:34  
 Received Date: 08/05/19 09:17  
 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>
Benzene	0.666	0.500	0.150	ug/L	1		08/09/19 02:18
Ethylbenzene	27.9	1.00	0.310	ug/L	1		08/09/19 02:18
o-Xylene	6.79	1.00	0.310	ug/L	1		08/09/19 02:18
P & M -Xylene	157	2.00	0.620	ug/L	1		08/09/19 02:18
Toluene	0.337 J	1.00	0.310	ug/L	1		08/09/19 02:18
Xylenes (total)	164	3.00	0.930	ug/L	1		08/09/19 02:18

### Surrogates

1,4-Difluorobenzene (surr)	89.8	77-115		%	1		08/09/19 02:18
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### Batch Information

Analytical Batch: VFC14871  
 Analytical Method: SW8021B  
 Analyst: NRB  
 Analytical Date/Time: 08/09/19 02:18  
 Container ID: 1194337019-A

Prep Batch: VXX34616  
 Prep Method: SW5030B  
 Prep Date/Time: 08/08/19 06:00  
 Prep Initial Wt./Vol.: 5 mL  
 Prep Extract Vol: 5 mL



### Results of TW-8

Client Sample ID: **TW-8**  
 Client Project ID: **Swanson River Unit(SRU) CEMREC**  
 Lab Sample ID: 1194337020  
 Lab Project ID: 1194337

Collection Date: 08/01/19 13:47  
 Received Date: 08/05/19 09:17  
 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>
Benzene	1.18	0.500	0.150	ug/L	1		08/09/19 02:35
Ethylbenzene	176	1.00	0.310	ug/L	1		08/09/19 02:35
o-Xylene	54.2	1.00	0.310	ug/L	1		08/09/19 02:35
P & M -Xylene	231	2.00	0.620	ug/L	1		08/09/19 02:35
Toluene	0.500 U	1.00	0.310	ug/L	1		08/09/19 02:35
Xylenes (total)	285	3.00	0.930	ug/L	1		08/09/19 02:35

### Surrogates

1,4-Difluorobenzene (surr)	89.4	77-115		%	1		08/09/19 02:35
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### Batch Information

Analytical Batch: VFC14871  
 Analytical Method: SW8021B  
 Analyst: NRB  
 Analytical Date/Time: 08/09/19 02:35  
 Container ID: 1194337020-A

Prep Batch: VXX34616  
 Prep Method: SW5030B  
 Prep Date/Time: 08/08/19 06:00  
 Prep Initial Wt./Vol.: 5 mL  
 Prep Extract Vol: 5 mL



### Results of PSW-1

Client Sample ID: **PSW-1**  
 Client Project ID: **Swanson River Unit(SRU) CEMREC**  
 Lab Sample ID: 1194337021  
 Lab Project ID: 1194337

Collection Date: 08/01/19 14:45  
 Received Date: 08/05/19 09:17  
 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>
Benzene	0.250 U	0.500	0.150	ug/L	1		08/09/19 02:53
Ethylbenzene	0.480 J	1.00	0.310	ug/L	1		08/09/19 02:53
o-Xylene	0.500 U	1.00	0.310	ug/L	1		08/09/19 02:53
P & M -Xylene	0.976 J	2.00	0.620	ug/L	1		08/09/19 02:53
Toluene	0.500 U	1.00	0.310	ug/L	1		08/09/19 02:53
Xylenes (total)	1.20 J	3.00	0.930	ug/L	1		08/09/19 02:53

### Surrogates

1,4-Difluorobenzene (surr)	89	77-115		%	1		08/09/19 02:53
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### Batch Information

Analytical Batch: VFC14871  
 Analytical Method: SW8021B  
 Analyst: NRB  
 Analytical Date/Time: 08/09/19 02:53  
 Container ID: 1194337021-A

Prep Batch: VXX34616  
 Prep Method: SW5030B  
 Prep Date/Time: 08/08/19 06:00  
 Prep Initial Wt./Vol.: 5 mL  
 Prep Extract Vol: 5 mL





### Results of Dup-03

Client Sample ID: **Dup-03**  
 Client Project ID: **Swanson River Unit(SRU) CEMREC**  
 Lab Sample ID: 1194337022  
 Lab Project ID: 1194337

Collection Date: 08/01/19 14:45  
 Received Date: 08/05/19 09:17  
 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>
Benzene	0.250 U	0.500	0.150	ug/L	1		08/09/19 03:11
Ethylbenzene	0.500 U	1.00	0.310	ug/L	1		08/09/19 03:11
o-Xylene	0.500 U	1.00	0.310	ug/L	1		08/09/19 03:11
P & M -Xylene	1.00 U	2.00	0.620	ug/L	1		08/09/19 03:11
Toluene	0.500 U	1.00	0.310	ug/L	1		08/09/19 03:11
Xylenes (total)	1.50 U	3.00	0.930	ug/L	1		08/09/19 03:11

### Surrogates

1,4-Difluorobenzene (surr)	89.4	77-115		%	1		08/09/19 03:11
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### Batch Information

Analytical Batch: VFC14871  
 Analytical Method: SW8021B  
 Analyst: NRB  
 Analytical Date/Time: 08/09/19 03:11  
 Container ID: 1194337022-A

Prep Batch: VXX34616  
 Prep Method: SW5030B  
 Prep Date/Time: 08/08/19 06:00  
 Prep Initial Wt./Vol.: 5 mL  
 Prep Extract Vol: 5 mL



**Results of PSW-2**

Client Sample ID: **PSW-2**  
Client Project ID: **Swanson River Unit(SRU) CEMREC**  
Lab Sample ID: 1194337023  
Lab Project ID: 1194337

Collection Date: 08/01/19 14:55  
Received Date: 08/05/19 09:17  
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>
Benzene	0.250 U	0.500	0.150	ug/L	1		08/09/19 03:28
Ethylbenzene	0.500 U	1.00	0.310	ug/L	1		08/09/19 03:28
o-Xylene	0.500 U	1.00	0.310	ug/L	1		08/09/19 03:28
P & M -Xylene	1.00 U	2.00	0.620	ug/L	1		08/09/19 03:28
Toluene	0.500 U	1.00	0.310	ug/L	1		08/09/19 03:28
Xylenes (total)	1.50 U	3.00	0.930	ug/L	1		08/09/19 03:28

**Surrogates**

1,4-Difluorobenzene (surr)	88.8	77-115		%	1		08/09/19 03:28
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**Batch Information**

Analytical Batch: VFC14871  
Analytical Method: SW8021B  
Analyst: NRB  
Analytical Date/Time: 08/09/19 03:28  
Container ID: 1194337023-A

Prep Batch: VXX34616  
Prep Method: SW5030B  
Prep Date/Time: 08/08/19 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL



**Results of TW-13**

Client Sample ID: **TW-13**  
Client Project ID: **Swanson River Unit(SRU) CEMREC**  
Lab Sample ID: 1194337024  
Lab Project ID: 1194337

Collection Date: 08/01/19 15:42  
Received Date: 08/05/19 09:17  
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>
Benzene	0.250 U	0.500	0.150	ug/L	1		08/09/19 03:46
Ethylbenzene	0.500 U	1.00	0.310	ug/L	1		08/09/19 03:46
o-Xylene	0.496 J	1.00	0.310	ug/L	1		08/09/19 03:46
P & M -Xylene	75.0	2.00	0.620	ug/L	1		08/09/19 03:46
Toluene	0.500 U	1.00	0.310	ug/L	1		08/09/19 03:46
Xylenes (total)	75.5	3.00	0.930	ug/L	1		08/09/19 03:46

**Surrogates**

1,4-Difluorobenzene (surr)	89.2	77-115		%	1		08/09/19 03:46
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**Batch Information**

Analytical Batch: VFC14871  
Analytical Method: SW8021B  
Analyst: NRB  
Analytical Date/Time: 08/09/19 03:46  
Container ID: 1194337024-A

Prep Batch: VXX34616  
Prep Method: SW5030B  
Prep Date/Time: 08/08/19 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL



**Results of W-1P**

Client Sample ID: **W-1P**  
Client Project ID: **Swanson River Unit(SRU) CEMREC**  
Lab Sample ID: 1194337025  
Lab Project ID: 1194337

Collection Date: 08/01/19 16:03  
Received Date: 08/05/19 09:17  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Dissolved Metals by ICP/MS**

<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>
Iron	5370	250	78.0	ug/L	1		08/06/19 19:31

**Batch Information**

Analytical Batch: MMS10583  
Analytical Method: EP200.8  
Analyst: DSH  
Analytical Date/Time: 08/06/19 19:31  
Container ID: 1194337025-H

Prep Batch: MXX32637  
Prep Method: E200.2  
Prep Date/Time: 08/06/19 09:42  
Prep Initial Wt./Vol.: 20 mL  
Prep Extract Vol: 50 mL



### Results of W-1P

Client Sample ID: **W-1P**  
 Client Project ID: **Swanson River Unit(SRU) CEMREC**  
 Lab Sample ID: 1194337025  
 Lab Project ID: 1194337

Collection Date: 08/01/19 16:03  
 Received Date: 08/05/19 09:17  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

### Results by Polynuclear Aromatics GC/MS

<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>
1-Methylnaphthalene	0.0252 U	0.0504	0.0151	ug/L	1		08/08/19 23:47
2-Methylnaphthalene	0.0252 U	0.0504	0.0151	ug/L	1		08/08/19 23:47
Acenaphthene	0.0252 U	0.0504	0.0151	ug/L	1		08/08/19 23:47
Acenaphthylene	0.0252 U	0.0504	0.0151	ug/L	1		08/08/19 23:47
Anthracene	0.0252 U	0.0504	0.0151	ug/L	1		08/08/19 23:47
Benzo(a)Anthracene	0.0252 U	0.0504	0.0151	ug/L	1		08/08/19 23:47
Benzo[a]pyrene	0.0101 U	0.0202	0.00625	ug/L	1		08/08/19 23:47
Benzo[b]Fluoranthene	0.0252 U	0.0504	0.0151	ug/L	1		08/08/19 23:47
Benzo[g,h,i]perylene	0.0252 U	0.0504	0.0151	ug/L	1		08/08/19 23:47
Benzo[k]fluoranthene	0.0252 U	0.0504	0.0151	ug/L	1		08/08/19 23:47
Chrysene	0.0252 U	0.0504	0.0151	ug/L	1		08/08/19 23:47
Dibenzo[a,h]anthracene	0.0101 U	0.0202	0.00625	ug/L	1		08/08/19 23:47
Fluoranthene	0.0252 U	0.0504	0.0151	ug/L	1		08/08/19 23:47
Fluorene	0.0252 U	0.0504	0.0151	ug/L	1		08/08/19 23:47
Indeno[1,2,3-c,d] pyrene	0.0252 U	0.0504	0.0151	ug/L	1		08/08/19 23:47
Naphthalene	0.0505 U	0.101	0.0313	ug/L	1		08/08/19 23:47
Phenanthrene	0.0252 U	0.0504	0.0151	ug/L	1		08/08/19 23:47
Pyrene	0.0252 U	0.0504	0.0151	ug/L	1		08/08/19 23:47
<b>Surrogates</b>							
2-Methylnaphthalene-d10 (surr)	51	47-106		%	1		08/08/19 23:47
Fluoranthene-d10 (surr)	50	24-116		%	1		08/08/19 23:47

### Batch Information

Analytical Batch: XMS11619  
 Analytical Method: 8270D SIM LV (PAH)  
 Analyst: DSD  
 Analytical Date/Time: 08/08/19 23:47  
 Container ID: 1194337025-J

Prep Batch: XXX41953  
 Prep Method: SW3520C  
 Prep Date/Time: 08/07/19 13:17  
 Prep Initial Wt./Vol.: 248 mL  
 Prep Extract Vol: 1 mL



**Results of W-1P**

Client Sample ID: **W-1P**  
Client Project ID: **Swanson River Unit(SRU) CEMREC**  
Lab Sample ID: 1194337025  
Lab Project ID: 1194337

Collection Date: 08/01/19 16:03  
Received Date: 08/05/19 09:17  
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>
Benzene	0.260 J	0.500	0.150	ug/L	1		08/09/19 04:21
Ethylbenzene	0.586 J	1.00	0.310	ug/L	1		08/09/19 04:21
o-Xylene	2.59	1.00	0.310	ug/L	1		08/09/19 04:21
P & M -Xylene	219	2.00	0.620	ug/L	1		08/09/19 04:21
Toluene	0.500 U	1.00	0.310	ug/L	1		08/09/19 04:21
Xylenes (total)	221	3.00	0.930	ug/L	1		08/09/19 04:21

**Surrogates**

1,4-Difluorobenzene (surr)	90.4	77-115		%	1		08/09/19 04:21
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**Batch Information**

Analytical Batch: VFC14871  
Analytical Method: SW8021B  
Analyst: NRB  
Analytical Date/Time: 08/09/19 04:21  
Container ID: 1194337025-A

Prep Batch: VXX34616  
Prep Method: SW5030B  
Prep Date/Time: 08/08/19 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL



**Results of W-1P**

Client Sample ID: **W-1P**  
Client Project ID: **Swanson River Unit(SRU) CEMREC**  
Lab Sample ID: 1194337025  
Lab Project ID: 1194337

Collection Date: 08/01/19 16:03  
Received Date: 08/05/19 09:17  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Waters Department**

<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>
Alkalinity	120	10.0	2.50	mg/L	1		08/06/19 15:57

**Batch Information**

Analytical Batch: WTI5239  
Analytical Method: SM21 2320B  
Analyst: EWW  
Analytical Date/Time: 08/06/19 15:57  
Container ID: 1194337025-I

<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>
Total Nitrate/Nitrite-N	0.100 U	0.200	0.0500	mg/L	2		08/09/19 15:53

**Batch Information**

Analytical Batch: WFI2832  
Analytical Method: SM21 4500NO3-F  
Analyst: EWW  
Analytical Date/Time: 08/09/19 15:53  
Container ID: 1194337025-G

<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>
Sulfate	1.38	0.200	0.0500	mg/L	1		08/12/19 20:48

**Batch Information**

Analytical Batch: WIC5949	Prep Batch: WXX12976
Analytical Method: SW9056A	Prep Method: METHOD
Analyst: DMM	Prep Date/Time: 08/12/19 17:00
Analytical Date/Time: 08/12/19 20:48	Prep Initial Wt./Vol.: 10 mL
Container ID: 1194337025-I	Prep Extract Vol: 10 mL



**Results of Dup-04**

Client Sample ID: **Dup-04**  
Client Project ID: **Swanson River Unit(SRU) CEMREC**  
Lab Sample ID: 1194337026  
Lab Project ID: 1194337

Collection Date: 08/01/19 16:03  
Received Date: 08/05/19 09:17  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Dissolved Metals by ICP/MS**

<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>
Iron	5310	250	78.0	ug/L	1		08/06/19 19:49

**Batch Information**

Analytical Batch: MMS10583  
Analytical Method: EP200.8  
Analyst: DSH  
Analytical Date/Time: 08/06/19 19:49  
Container ID: 1194337026-H

Prep Batch: MXX32637  
Prep Method: E200.2  
Prep Date/Time: 08/06/19 09:42  
Prep Initial Wt./Vol.: 20 mL  
Prep Extract Vol: 50 mL



## Results of Dup-04

Client Sample ID: **Dup-04**  
 Client Project ID: **Swanson River Unit(SRU) CEMREC**  
 Lab Sample ID: 1194337026  
 Lab Project ID: 1194337

Collection Date: 08/01/19 16:03  
 Received Date: 08/05/19 09:17  
 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>
Benzene	0.250 U	0.500	0.150	ug/L	1		08/09/19 04:39
Ethylbenzene	0.500 U	1.00	0.310	ug/L	1		08/09/19 04:39
o-Xylene	2.14	1.00	0.310	ug/L	1		08/09/19 04:39
P & M -Xylene	170	2.00	0.620	ug/L	1		08/09/19 04:39
Toluene	0.500 U	1.00	0.310	ug/L	1		08/09/19 04:39
Xylenes (total)	172	3.00	0.930	ug/L	1		08/09/19 04:39

## Surrogates

1,4-Difluorobenzene (surr)	88.7	77-115		%	1		08/09/19 04:39
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## Batch Information

Analytical Batch: VFC14871  
 Analytical Method: SW8021B  
 Analyst: NRB  
 Analytical Date/Time: 08/09/19 04:39  
 Container ID: 1194337026-A

Prep Batch: VXX34616  
 Prep Method: SW5030B  
 Prep Date/Time: 08/08/19 06:00  
 Prep Initial Wt./Vol.: 5 mL  
 Prep Extract Vol: 5 mL



**Results of Dup-04**

Client Sample ID: **Dup-04**  
Client Project ID: **Swanson River Unit(SRU) CEMREC**  
Lab Sample ID: 1194337026  
Lab Project ID: 1194337

Collection Date: 08/01/19 16:03  
Received Date: 08/05/19 09:17  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Waters Department**

<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>
Alkalinity	120	10.0	2.50	mg/L	1		08/06/19 16:05

**Batch Information**

Analytical Batch: WTI5239  
Analytical Method: SM21 2320B  
Analyst: EWW  
Analytical Date/Time: 08/06/19 16:05  
Container ID: 1194337026-I

<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>
Total Nitrate/Nitrite-N	0.100 U	0.200	0.0500	mg/L	2		08/09/19 16:00

**Batch Information**

Analytical Batch: WFI2832  
Analytical Method: SM21 4500NO3-F  
Analyst: EWW  
Analytical Date/Time: 08/09/19 16:00  
Container ID: 1194337026-G

<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>
Sulfate	1.36	0.200	0.0500	mg/L	1		08/12/19 21:07

**Batch Information**

Analytical Batch: WIC5949	Prep Batch: WXX12976
Analytical Method: SW9056A	Prep Method: METHOD
Analyst: DMM	Prep Date/Time: 08/12/19 17:00
Analytical Date/Time: 08/12/19 21:07	Prep Initial Wt./Vol.: 10 mL
Container ID: 1194337026-I	Prep Extract Vol: 10 mL



Results of TW-12

Client Sample ID: TW-12  
Client Project ID: Swanson River Unit(SRU) CEMREC  
Lab Sample ID: 1194337027  
Lab Project ID: 1194337

Collection Date: 08/01/19 16:36  
Received Date: 08/05/19 09:17  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

Results by Dissolved Metals by ICP/MS

<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>
Iron	20700	250	78.0	ug/L	1		08/06/19 19:52

Batch Information

Analytical Batch: MMS10583  
Analytical Method: EP200.8  
Analyst: DSH  
Analytical Date/Time: 08/06/19 19:52  
Container ID: 1194337027-H

Prep Batch: MXX32637  
Prep Method: E200.2  
Prep Date/Time: 08/06/19 09:42  
Prep Initial Wt./Vol.: 20 mL  
Prep Extract Vol: 50 mL



### Results of TW-12

Client Sample ID: **TW-12**  
 Client Project ID: **Swanson River Unit(SRU) CEMREC**  
 Lab Sample ID: 1194337027  
 Lab Project ID: 1194337

Collection Date: 08/01/19 16:36  
 Received Date: 08/05/19 09:17  
 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>
Benzene	0.250 U	0.500	0.150	ug/L	1		08/09/19 04:56
Ethylbenzene	0.500 U	1.00	0.310	ug/L	1		08/09/19 04:56
o-Xylene	0.571 J	1.00	0.310	ug/L	1		08/09/19 04:56
P & M -Xylene	30.9	2.00	0.620	ug/L	1		08/09/19 04:56
Toluene	0.709 J	1.00	0.310	ug/L	1		08/09/19 04:56
Xylenes (total)	31.5	3.00	0.930	ug/L	1		08/09/19 04:56

### Surrogates

1,4-Difluorobenzene (surr)	89.2	77-115		%	1		08/09/19 04:56
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### Batch Information

Analytical Batch: VFC14871  
 Analytical Method: SW8021B  
 Analyst: NRB  
 Analytical Date/Time: 08/09/19 04:56  
 Container ID: 1194337027-A

Prep Batch: VXX34616  
 Prep Method: SW5030B  
 Prep Date/Time: 08/08/19 06:00  
 Prep Initial Wt./Vol.: 5 mL  
 Prep Extract Vol: 5 mL



Results of TW-12

Client Sample ID: TW-12
Client Project ID: Swanson River Unit(SRU) CEMREC
Lab Sample ID: 1194337027
Lab Project ID: 1194337

Collection Date: 08/01/19 16:36
Received Date: 08/05/19 09:17
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Waters Department

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Row 1: Alkalinity, 81.0, 10.0, 2.50, mg/L, 1, 08/06/19 16:13

Batch Information

Analytical Batch: WTI5239
Analytical Method: SM21 2320B
Analyst: EWW
Analytical Date/Time: 08/06/19 16:13
Container ID: 1194337027-I

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Row 1: Total Nitrate/Nitrite-N, 0.0868 J, 0.200, 0.0500, mg/L, 2, 08/09/19 16:02

Batch Information

Analytical Batch: WFI2832
Analytical Method: SM21 4500NO3-F
Analyst: EWW
Analytical Date/Time: 08/09/19 16:02
Container ID: 1194337027-G

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Row 1: Sulfate, 1.16, 0.200, 0.0500, mg/L, 1, 08/12/19 21:26

Batch Information

Analytical Batch: WIC5949
Analytical Method: SW9056A
Analyst: DMM
Analytical Date/Time: 08/12/19 21:26
Container ID: 1194337027-I
Prep Batch: WXX12976
Prep Method: METHOD
Prep Date/Time: 08/12/19 17:00
Prep Initial Wt./Vol.: 10 mL
Prep Extract Vol: 10 mL



**Results of CP-BR**

Client Sample ID: **CP-BR**  
Client Project ID: **Swanson River Unit(SRU) CEMREC**  
Lab Sample ID: 1194337028  
Lab Project ID: 1194337

Collection Date: 08/02/19 09:14  
Received Date: 08/05/19 09:17  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Polychlorinated Biphenyls**

<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>
Aroclor-1016	0.0515 U	0.103	0.0320	ug/L	1		08/15/19 19:40
Aroclor-1221	0.515 U	1.03	0.320	ug/L	1		08/15/19 19:40
Aroclor-1232	0.0515 U	0.103	0.0320	ug/L	1		08/15/19 19:40
Aroclor-1242	0.0515 U	0.103	0.0320	ug/L	1		08/15/19 19:40
Aroclor-1248	0.0515 U	0.103	0.0320	ug/L	1		08/15/19 19:40
Aroclor-1254	0.0515 U	0.103	0.0320	ug/L	1		08/15/19 19:40
Aroclor-1260	0.0515 U	0.103	0.0320	ug/L	1		08/15/19 19:40
<b>Surrogates</b>							
Decachlorobiphenyl (surr)	94	40-135		%	1		08/15/19 19:40

**Batch Information**

Analytical Batch: XGC10479  
Analytical Method: SW8082A  
Analyst: BMZ  
Analytical Date/Time: 08/15/19 19:40  
Container ID: 1194337028-A

Prep Batch: XXX42007  
Prep Method: SW3520C  
Prep Date/Time: 08/14/19 09:57  
Prep Initial Wt./Vol.: 970 mL  
Prep Extract Vol: 1 mL



**Results of TW-14**

Client Sample ID: **TW-14**  
Client Project ID: **Swanson River Unit(SRU) CEMREC**  
Lab Sample ID: 1194337029  
Lab Project ID: 1194337

Collection Date: 08/02/19 11:06  
Received Date: 08/05/19 09:17  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Dissolved Metals by ICP/MS**

<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>
Iron	10500	250	78.0	ug/L	1		08/06/19 19:55

**Batch Information**

Analytical Batch: MMS10583  
Analytical Method: EP200.8  
Analyst: DSH  
Analytical Date/Time: 08/06/19 19:55  
Container ID: 1194337029-H

Prep Batch: MXX32637  
Prep Method: E200.2  
Prep Date/Time: 08/06/19 09:42  
Prep Initial Wt./Vol.: 20 mL  
Prep Extract Vol: 50 mL



### Results of TW-14

Client Sample ID: **TW-14**  
 Client Project ID: **Swanson River Unit(SRU) CEMREC**  
 Lab Sample ID: 1194337029  
 Lab Project ID: 1194337

Collection Date: 08/02/19 11:06  
 Received Date: 08/05/19 09:17  
 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>
Benzene	0.250 U	0.500	0.150	ug/L	1		08/09/19 05:14
Ethylbenzene	0.500 U	1.00	0.310	ug/L	1		08/09/19 05:14
o-Xylene	0.500 U	1.00	0.310	ug/L	1		08/09/19 05:14
P & M -Xylene	1.00 U	2.00	0.620	ug/L	1		08/09/19 05:14
Toluene	0.500 U	1.00	0.310	ug/L	1		08/09/19 05:14
Xylenes (total)	1.50 U	3.00	0.930	ug/L	1		08/09/19 05:14

### Surrogates

1,4-Difluorobenzene (surr)	89.9	77-115		%	1		08/09/19 05:14
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### Batch Information

Analytical Batch: VFC14871  
 Analytical Method: SW8021B  
 Analyst: NRB  
 Analytical Date/Time: 08/09/19 05:14  
 Container ID: 1194337029-A

Prep Batch: VXX34616  
 Prep Method: SW5030B  
 Prep Date/Time: 08/08/19 06:00  
 Prep Initial Wt./Vol.: 5 mL  
 Prep Extract Vol: 5 mL





**Results of TW-14**

Client Sample ID: **TW-14**  
Client Project ID: **Swanson River Unit(SRU) CEMREC**  
Lab Sample ID: 1194337029  
Lab Project ID: 1194337

Collection Date: 08/02/19 11:06  
Received Date: 08/05/19 09:17  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Waters Department**

<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>
Alkalinity	112	10.0	2.50	mg/L	1		08/06/19 16:20

**Batch Information**

Analytical Batch: WTI5239  
Analytical Method: SM21 2320B  
Analyst: EWW  
Analytical Date/Time: 08/06/19 16:20  
Container ID: 1194337029-I

<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>
Total Nitrate/Nitrite-N	0.100 U	0.200	0.0500	mg/L	2		08/09/19 16:04

**Batch Information**

Analytical Batch: WFI2832  
Analytical Method: SM21 4500NO3-F  
Analyst: EWW  
Analytical Date/Time: 08/09/19 16:04  
Container ID: 1194337029-G

<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>
Sulfate	0.100 U	0.200	0.0500	mg/L	1		08/12/19 22:23

**Batch Information**

Analytical Batch: WIC5949	Prep Batch: WXX12976
Analytical Method: SW9056A	Prep Method: METHOD
Analyst: DMM	Prep Date/Time: 08/12/19 17:00
Analytical Date/Time: 08/12/19 22:23	Prep Initial Wt./Vol.: 10 mL
Container ID: 1194337029-I	Prep Extract Vol: 10 mL



**Results of TW-11**

Client Sample ID: **TW-11**  
Client Project ID: **Swanson River Unit(SRU) CEMREC**  
Lab Sample ID: 1194337030  
Lab Project ID: 1194337

Collection Date: 08/02/19 10:46  
Received Date: 08/05/19 09:17  
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>
Benzene	0.250 U	0.500	0.150	ug/L	1		08/09/19 05:31
Ethylbenzene	0.500 U	1.00	0.310	ug/L	1		08/09/19 05:31
o-Xylene	0.500 U	1.00	0.310	ug/L	1		08/09/19 05:31
P & M -Xylene	1.00 U	2.00	0.620	ug/L	1		08/09/19 05:31
Toluene	0.500 U	1.00	0.310	ug/L	1		08/09/19 05:31
Xylenes (total)	1.50 U	3.00	0.930	ug/L	1		08/09/19 05:31

**Surrogates**

1,4-Difluorobenzene (surr)	89.4	77-115		%	1		08/09/19 05:31
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**Batch Information**

Analytical Batch: VFC14871  
Analytical Method: SW8021B  
Analyst: NRB  
Analytical Date/Time: 08/09/19 05:31  
Container ID: 1194337030-A

Prep Batch: VXX34616  
Prep Method: SW5030B  
Prep Date/Time: 08/08/19 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL



Results of W-1E

Client Sample ID: W-1E
Client Project ID: Swanson River Unit(SRU) CEMREC
Lab Sample ID: 1194337031
Lab Project ID: 1194337

Collection Date: 08/02/19 11:41
Received Date: 08/05/19 09:17
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Polynuclear Aromatics GC/MS

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Lists various polynuclear aromatic hydrocarbons and their surrogate values.

Batch Information

Analytical Batch: XMS11619
Analytical Method: 8270D SIM LV (PAH)
Analyst: DSD
Analytical Date/Time: 08/09/19 00:08
Container ID: 1194337031-A

Prep Batch: XXX41953
Prep Method: SW3520C
Prep Date/Time: 08/07/19 13:17
Prep Initial Wt./Vol.: 248 mL
Prep Extract Vol: 1 mL



### Results of Dup-05

Client Sample ID: **Dup-05**  
 Client Project ID: **Swanson River Unit(SRU) CEMREC**  
 Lab Sample ID: 1194337032  
 Lab Project ID: 1194337

Collection Date: 08/02/19 11:41  
 Received Date: 08/05/19 09:17  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

### Results by Polynuclear Aromatics GC/MS

<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>
1-Methylnaphthalene	0.0236 U	0.0472	0.0142	ug/L	1		08/21/19 13:51
2-Methylnaphthalene	0.0236 U	0.0472	0.0142	ug/L	1		08/21/19 13:51
Acenaphthene	0.0236 U	0.0472	0.0142	ug/L	1		08/21/19 13:51
Acenaphthylene	0.0236 U	0.0472	0.0142	ug/L	1		08/21/19 13:51
Anthracene	0.0236 U	0.0472	0.0142	ug/L	1		08/21/19 13:51
Benzo(a)Anthracene	0.0236 U	0.0472	0.0142	ug/L	1		08/21/19 13:51
Benzo[a]pyrene	0.00945 U	0.0189	0.00585	ug/L	1		08/21/19 13:51
Benzo[b]Fluoranthene	0.0236 U	0.0472	0.0142	ug/L	1		08/21/19 13:51
Benzo[g,h,i]perylene	0.0236 U	0.0472	0.0142	ug/L	1		08/21/19 13:51
Benzo[k]fluoranthene	0.0236 U	0.0472	0.0142	ug/L	1		08/21/19 13:51
Chrysene	0.0236 U	0.0472	0.0142	ug/L	1		08/21/19 13:51
Dibenzo[a,h]anthracene	0.00945 U	0.0189	0.00585	ug/L	1		08/21/19 13:51
Fluoranthene	0.0236 U	0.0472	0.0142	ug/L	1		08/21/19 13:51
Fluorene	0.0236 U	0.0472	0.0142	ug/L	1		08/21/19 13:51
Indeno[1,2,3-c,d] pyrene	0.0236 U	0.0472	0.0142	ug/L	1		08/21/19 13:51
Naphthalene	0.0471 U	0.0943	0.0292	ug/L	1		08/21/19 13:51
Phenanthrene	0.0236 U	0.0472	0.0142	ug/L	1		08/21/19 13:51
Pyrene	0.0236 U	0.0472	0.0142	ug/L	1		08/21/19 13:51
<b>Surrogates</b>							
2-Methylnaphthalene-d10 (surr)	64.8	47-106		%	1		08/21/19 13:51
Fluoranthene-d10 (surr)	69.2	24-116		%	1		08/21/19 13:51

### Batch Information

Analytical Batch: XMS11652  
 Analytical Method: 8270D SIM LV (PAH)  
 Analyst: DSD  
 Analytical Date/Time: 08/21/19 13:51  
 Container ID: 1194337032-A

Prep Batch: XXX41966  
 Prep Method: SW3520C  
 Prep Date/Time: 08/08/19 13:07  
 Prep Initial Wt./Vol.: 265 mL  
 Prep Extract Vol: 1 mL



**Results of TW-15**

Client Sample ID: **TW-15**  
Client Project ID: **Swanson River Unit(SRU) CEMREC**  
Lab Sample ID: 1194337033  
Lab Project ID: 1194337

Collection Date: 08/02/19 12:34  
Received Date: 08/05/19 09:17  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Dissolved Metals by ICP/MS**

<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>
Iron	11400	250	78.0	ug/L	1		08/06/19 19:58

**Batch Information**

Analytical Batch: MMS10583  
Analytical Method: EP200.8  
Analyst: DSH  
Analytical Date/Time: 08/06/19 19:58  
Container ID: 1194337033-H

Prep Batch: MXX32637  
Prep Method: E200.2  
Prep Date/Time: 08/06/19 09:42  
Prep Initial Wt./Vol.: 20 mL  
Prep Extract Vol: 50 mL



### Results of TW-15

Client Sample ID: **TW-15**  
 Client Project ID: **Swanson River Unit(SRU) CEMREC**  
 Lab Sample ID: 1194337033  
 Lab Project ID: 1194337

Collection Date: 08/02/19 12:34  
 Received Date: 08/05/19 09:17  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

### Results by Polynuclear Aromatics GC/MS

<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>
1-Methylnaphthalene	0.0236 U	0.0472	0.0142	ug/L	1		08/21/19 14:11
2-Methylnaphthalene	0.0236 U	0.0472	0.0142	ug/L	1		08/21/19 14:11
Acenaphthene	0.0236 U	0.0472	0.0142	ug/L	1		08/21/19 14:11
Acenaphthylene	0.0236 U	0.0472	0.0142	ug/L	1		08/21/19 14:11
Anthracene	0.0236 U	0.0472	0.0142	ug/L	1		08/21/19 14:11
Benzo(a)Anthracene	0.0236 U	0.0472	0.0142	ug/L	1		08/21/19 14:11
Benzo[a]pyrene	0.00945 U	0.0189	0.00585	ug/L	1		08/21/19 14:11
Benzo[b]Fluoranthene	0.0236 U	0.0472	0.0142	ug/L	1		08/21/19 14:11
Benzo[g,h,i]perylene	0.0236 U	0.0472	0.0142	ug/L	1		08/21/19 14:11
Benzo[k]fluoranthene	0.0236 U	0.0472	0.0142	ug/L	1		08/21/19 14:11
Chrysene	0.0236 U	0.0472	0.0142	ug/L	1		08/21/19 14:11
Dibenzo[a,h]anthracene	0.00945 U	0.0189	0.00585	ug/L	1		08/21/19 14:11
Fluoranthene	0.0236 U	0.0472	0.0142	ug/L	1		08/21/19 14:11
Fluorene	0.0236 U	0.0472	0.0142	ug/L	1		08/21/19 14:11
Indeno[1,2,3-c,d] pyrene	0.0236 U	0.0472	0.0142	ug/L	1		08/21/19 14:11
Naphthalene	0.0471 U	0.0943	0.0292	ug/L	1		08/21/19 14:11
Phenanthrene	0.0236 U	0.0472	0.0142	ug/L	1		08/21/19 14:11
Pyrene	0.0236 U	0.0472	0.0142	ug/L	1		08/21/19 14:11
<b>Surrogates</b>							
2-Methylnaphthalene-d10 (surr)	58.5	47-106		%	1		08/21/19 14:11
Fluoranthene-d10 (surr)	60.5	24-116		%	1		08/21/19 14:11

### Batch Information

Analytical Batch: XMS11652  
 Analytical Method: 8270D SIM LV (PAH)  
 Analyst: DSD  
 Analytical Date/Time: 08/21/19 14:11  
 Container ID: 1194337033-J

Prep Batch: XXX41966  
 Prep Method: SW3520C  
 Prep Date/Time: 08/08/19 13:07  
 Prep Initial Wt./Vol.: 265 mL  
 Prep Extract Vol: 1 mL



### Results of TW-15

Client Sample ID: **TW-15**  
 Client Project ID: **Swanson River Unit(SRU) CEMREC**  
 Lab Sample ID: 1194337033  
 Lab Project ID: 1194337

Collection Date: 08/02/19 12:34  
 Received Date: 08/05/19 09:17  
 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>
Benzene	0.250 U	0.500	0.150	ug/L	1		08/09/19 05:49
Ethylbenzene	0.500 U	1.00	0.310	ug/L	1		08/09/19 05:49
o-Xylene	0.500 U	1.00	0.310	ug/L	1		08/09/19 05:49
P & M -Xylene	0.783 J	2.00	0.620	ug/L	1		08/09/19 05:49
Toluene	0.500 U	1.00	0.310	ug/L	1		08/09/19 05:49
Xylenes (total)	1.50 U	3.00	0.930	ug/L	1		08/09/19 05:49

### Surrogates

1,4-Difluorobenzene (surr)	88.9	77-115		%	1		08/09/19 05:49
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### Batch Information

Analytical Batch: VFC14871  
 Analytical Method: SW8021B  
 Analyst: NRB  
 Analytical Date/Time: 08/09/19 05:49  
 Container ID: 1194337033-A

Prep Batch: VXX34616  
 Prep Method: SW5030B  
 Prep Date/Time: 08/08/19 06:00  
 Prep Initial Wt./Vol.: 5 mL  
 Prep Extract Vol: 5 mL



**Results of TW-15**

Client Sample ID: **TW-15**  
Client Project ID: **Swanson River Unit(SRU) CEMREC**  
Lab Sample ID: 1194337033  
Lab Project ID: 1194337

Collection Date: 08/02/19 12:34  
Received Date: 08/05/19 09:17  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Waters Department**

<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>
Alkalinity	131	10.0	2.50	mg/L	1		08/06/19 16:28

**Batch Information**

Analytical Batch: WTI5239  
Analytical Method: SM21 2320B  
Analyst: EWW  
Analytical Date/Time: 08/06/19 16:28  
Container ID: 1194337033-I

<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>
Total Nitrate/Nitrite-N	0.100 U	0.200	0.0500	mg/L	2		08/09/19 16:06

**Batch Information**

Analytical Batch: WFI2832  
Analytical Method: SM21 4500NO3-F  
Analyst: EWW  
Analytical Date/Time: 08/09/19 16:06  
Container ID: 1194337033-G

<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>
Sulfate	0.761	0.200	0.0500	mg/L	1		08/12/19 22:43

**Batch Information**

Analytical Batch: WIC5949	Prep Batch: WXX12976
Analytical Method: SW9056A	Prep Method: METHOD
Analyst: DMM	Prep Date/Time: 08/12/19 17:00
Analytical Date/Time: 08/12/19 22:43	Prep Initial Wt./Vol.: 10 mL
Container ID: 1194337033-I	Prep Extract Vol: 10 mL





**Results of TW-16**

Client Sample ID: **TW-16**  
Client Project ID: **Swanson River Unit(SRU) CEMREC**  
Lab Sample ID: 1194337034  
Lab Project ID: 1194337

Collection Date: 08/02/19 12:29  
Received Date: 08/05/19 09:17  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Dissolved Metals by ICP/MS**

<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>
Iron	424	250	78.0	ug/L	1		08/06/19 20:01

**Batch Information**

Analytical Batch: MMS10583  
Analytical Method: EP200.8  
Analyst: DSH  
Analytical Date/Time: 08/06/19 20:01  
Container ID: 1194337034-H

Prep Batch: MXX32637  
Prep Method: E200.2  
Prep Date/Time: 08/06/19 09:42  
Prep Initial Wt./Vol.: 20 mL  
Prep Extract Vol: 50 mL



### Results of TW-16

Client Sample ID: **TW-16**  
 Client Project ID: **Swanson River Unit(SRU) CEMREC**  
 Lab Sample ID: 1194337034  
 Lab Project ID: 1194337

Collection Date: 08/02/19 12:29  
 Received Date: 08/05/19 09:17  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

### Results by Polynuclear Aromatics GC/MS

<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>
1-Methylnaphthalene	0.0256 U	0.0512	0.0154	ug/L	1		08/21/19 14:32
2-Methylnaphthalene	0.0256 U	0.0512	0.0154	ug/L	1		08/21/19 14:32
Acenaphthene	0.0256 U	0.0512	0.0154	ug/L	1		08/21/19 14:32
Acenaphthylene	0.0256 U	0.0512	0.0154	ug/L	1		08/21/19 14:32
Anthracene	0.0256 U	0.0512	0.0154	ug/L	1		08/21/19 14:32
Benzo(a)Anthracene	0.0256 U	0.0512	0.0154	ug/L	1		08/21/19 14:32
Benzo[a]pyrene	0.0103 U	0.0205	0.00635	ug/L	1		08/21/19 14:32
Benzo[b]Fluoranthene	0.0256 U	0.0512	0.0154	ug/L	1		08/21/19 14:32
Benzo[g,h,i]perylene	0.0256 U	0.0512	0.0154	ug/L	1		08/21/19 14:32
Benzo[k]fluoranthene	0.0256 U	0.0512	0.0154	ug/L	1		08/21/19 14:32
Chrysene	0.0256 U	0.0512	0.0154	ug/L	1		08/21/19 14:32
Dibenzo[a,h]anthracene	0.0103 U	0.0205	0.00635	ug/L	1		08/21/19 14:32
Fluoranthene	0.0256 U	0.0512	0.0154	ug/L	1		08/21/19 14:32
Fluorene	0.0256 U	0.0512	0.0154	ug/L	1		08/21/19 14:32
Indeno[1,2,3-c,d] pyrene	0.0256 U	0.0512	0.0154	ug/L	1		08/21/19 14:32
Naphthalene	0.0510 U	0.102	0.0318	ug/L	1		08/21/19 14:32
Phenanthrene	0.0256 U	0.0512	0.0154	ug/L	1		08/21/19 14:32
Pyrene	0.0256 U	0.0512	0.0154	ug/L	1		08/21/19 14:32
<b>Surrogates</b>							
2-Methylnaphthalene-d10 (surr)	65.6	47-106		%	1		08/21/19 14:32
Fluoranthene-d10 (surr)	64.8	24-116		%	1		08/21/19 14:32

### Batch Information

Analytical Batch: XMS11652  
 Analytical Method: 8270D SIM LV (PAH)  
 Analyst: DSD  
 Analytical Date/Time: 08/21/19 14:32  
 Container ID: 1194337034-J

Prep Batch: XXX41966  
 Prep Method: SW3520C  
 Prep Date/Time: 08/08/19 13:07  
 Prep Initial Wt./Vol.: 244 mL  
 Prep Extract Vol: 1 mL



**Results of TW-16**

Client Sample ID: **TW-16**  
Client Project ID: **Swanson River Unit(SRU) CEMREC**  
Lab Sample ID: 1194337034  
Lab Project ID: 1194337

Collection Date: 08/02/19 12:29  
Received Date: 08/05/19 09:17  
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>
Benzene	0.250 U	0.500	0.150	ug/L	1		08/08/19 02:53
Ethylbenzene	0.500 U	1.00	0.310	ug/L	1		08/08/19 02:53
o-Xylene	0.500 U	1.00	0.310	ug/L	1		08/08/19 02:53
P & M -Xylene	1.00 U	2.00	0.620	ug/L	1		08/08/19 02:53
Toluene	0.500 U	1.00	0.310	ug/L	1		08/08/19 02:53
Xylenes (total)	1.50 U	3.00	0.930	ug/L	1		08/08/19 02:53

**Surrogates**

1,4-Difluorobenzene (surr)	93.3	77-115		%	1		08/08/19 02:53
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**Batch Information**

Analytical Batch: VFC14869  
Analytical Method: SW8021B  
Analyst: NRB  
Analytical Date/Time: 08/08/19 02:53  
Container ID: 1194337034-A

Prep Batch: VXX34607  
Prep Method: SW5030B  
Prep Date/Time: 08/07/19 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL



**Results of TW-16**

Client Sample ID: **TW-16**  
Client Project ID: **Swanson River Unit(SRU) CEMREC**  
Lab Sample ID: 1194337034  
Lab Project ID: 1194337

Collection Date: 08/02/19 12:29  
Received Date: 08/05/19 09:17  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Waters Department**

<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>
Alkalinity	135	10.0	2.50	mg/L	1		08/06/19 16:36

**Batch Information**

Analytical Batch: WTI5239  
Analytical Method: SM21 2320B  
Analyst: EWW  
Analytical Date/Time: 08/06/19 16:36  
Container ID: 1194337034-I

<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>
Total Nitrate/Nitrite-N	0.100 U	0.200	0.0500	mg/L	2		08/09/19 16:07

**Batch Information**

Analytical Batch: WFI2832  
Analytical Method: SM21 4500NO3-F  
Analyst: EWW  
Analytical Date/Time: 08/09/19 16:07  
Container ID: 1194337034-G

<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>
Sulfate	0.100 U	0.200	0.0500	mg/L	1		08/12/19 23:02

**Batch Information**

Analytical Batch: WIC5949	Prep Batch: WXX12976
Analytical Method: SW9056A	Prep Method: METHOD
Analyst: DMM	Prep Date/Time: 08/12/19 17:00
Analytical Date/Time: 08/12/19 23:02	Prep Initial Wt./Vol.: 10 mL
Container ID: 1194337034-I	Prep Extract Vol: 10 mL



### Results of Trip Blank

Client Sample ID: **Trip Blank**  
 Client Project ID: **Swanson River Unit(SRU) CEMREC**  
 Lab Sample ID: 1194337035  
 Lab Project ID: 1194337

Collection Date: 08/01/19 08:00  
 Received Date: 08/05/19 09:17  
 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>
Benzene	0.250 U	0.500	0.150	ug/L	1		08/07/19 21:34
Ethylbenzene	0.500 U	1.00	0.310	ug/L	1		08/07/19 21:34
o-Xylene	0.500 U	1.00	0.310	ug/L	1		08/07/19 21:34
P & M -Xylene	1.00 U	2.00	0.620	ug/L	1		08/07/19 21:34
Toluene	0.500 U	1.00	0.310	ug/L	1		08/07/19 21:34
Xylenes (total)	1.50 U	3.00	0.930	ug/L	1		08/07/19 21:34

### Surrogates

1,4-Difluorobenzene (surr)	93.2	77-115		%	1		08/07/19 21:34
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### Batch Information

Analytical Batch: VFC14869  
 Analytical Method: SW8021B  
 Analyst: NRB  
 Analytical Date/Time: 08/07/19 21:34  
 Container ID: 1194337035-A

Prep Batch: VXX34607  
 Prep Method: SW5030B  
 Prep Date/Time: 08/07/19 06:00  
 Prep Initial Wt./Vol.: 5 mL  
 Prep Extract Vol: 5 mL



**Results of TW-14**

Client Sample ID: **TW-14**  
Client Project ID: **Swanson River Unit(SRU) CEMREC**  
Lab Sample ID: 1194337036  
Lab Project ID: 1194337

Collection Date: 08/02/19 11:06  
Received Date: 08/05/19 09:17  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Metals by ICP/MS**

<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>
Iron	8910	250	78.0	ug/L	1		08/06/19 20:04

**Batch Information**

Analytical Batch: MMS10583  
Analytical Method: EP200.8  
Analyst: DSH  
Analytical Date/Time: 08/06/19 20:04  
Container ID: 1194337036-A

Prep Batch: MXX32637  
Prep Method: E200.2  
Prep Date/Time: 08/06/19 09:42  
Prep Initial Wt./Vol.: 20 mL  
Prep Extract Vol: 50 mL



**Results of TW-15**

Client Sample ID: **TW-15**  
Client Project ID: **Swanson River Unit(SRU) CEMREC**  
Lab Sample ID: 1194337037  
Lab Project ID: 1194337

Collection Date: 08/02/19 12:34  
Received Date: 08/05/19 09:17  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Metals by ICP/MS**

<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>
Iron	12300	250	78.0	ug/L	1		08/06/19 20:07

**Batch Information**

Analytical Batch: MMS10583  
Analytical Method: EP200.8  
Analyst: DSH  
Analytical Date/Time: 08/06/19 20:07  
Container ID: 1194337037-A

Prep Batch: MXX32637  
Prep Method: E200.2  
Prep Date/Time: 08/06/19 09:42  
Prep Initial Wt./Vol.: 20 mL  
Prep Extract Vol: 50 mL



**Results of TW-16**

Client Sample ID: **TW-16**  
Client Project ID: **Swanson River Unit(SRU) CEMREC**  
Lab Sample ID: 1194337038  
Lab Project ID: 1194337

Collection Date: 08/02/19 12:29  
Received Date: 08/05/19 09:17  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Metals by ICP/MS**

<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>
Iron	384	250	78.0	ug/L	1		08/06/19 20:16

**Batch Information**

Analytical Batch: MMS10583  
Analytical Method: EP200.8  
Analyst: DSH  
Analytical Date/Time: 08/06/19 20:16  
Container ID: 1194337038-A

Prep Batch: MXX32637  
Prep Method: E200.2  
Prep Date/Time: 08/06/19 09:42  
Prep Initial Wt./Vol.: 20 mL  
Prep Extract Vol: 50 mL





**Method Blank**

Blank ID: MB for HBN 1797466 [MXX/32637]  
Blank Lab ID: 1523514

Matrix: Water (Surface, Eff., Ground)

QC for Samples:

1194337009, 1194337025, 1194337026, 1194337027, 1194337029, 1194337033, 1194337034, 1194337036, 1194337037, 1194337038

**Results by EP200.8**

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Iron	125U	250	78.0	ug/L

**Batch Information**

Analytical Batch: MMS10583  
Analytical Method: EP200.8  
Instrument: Perkin Elmer Nexlon P5  
Analyst: DSH  
Analytical Date/Time: 8/6/2019 7:40:21PM

Prep Batch: MXX32637  
Prep Method: E200.2  
Prep Date/Time: 8/6/2019 9:42:22AM  
Prep Initial Wt./Vol.: 20 mL  
Prep Extract Vol: 50 mL

Print Date: 08/22/2019 2:18:20PM

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1194337 [MXX32637]

Blank Spike Lab ID: 1523515

Date Analyzed: 08/06/2019 19:43

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1194337009, 1194337025, 1194337026, 1194337027, 1194337029, 1194337033, 1194337034, 1194337036, 1194337037, 1194337038

## Results by EP200.8

Parameter	Blank Spike (ug/L)			CL
	Spike	Result	Rec (%)	
Iron	5000	5370	107	( 85-115 )

## Batch Information

Analytical Batch: **MMS10583**

Analytical Method: **EP200.8**

Instrument: **Perkin Elmer Nexlon P5**

Analyst: **DSH**

Prep Batch: **MXX32637**

Prep Method: **E200.2**

Prep Date/Time: **08/06/2019 09:42**

Spike Init Wt./Vol.: 5000 ug/L Extract Vol: 50 mL

Dupe Init Wt./Vol.: Extract Vol:



### Billable Matrix Spike Summary

Original Sample ID: 1194337009  
MS Sample ID: 1194337010 BMS  
MSD Sample ID: 1194337011 BMSD

Analysis Date: 08/06/2019 19:22  
Analysis Date: 08/06/2019 19:25  
Analysis Date: 08/06/2019 19:28  
Matrix: Water (Surface, Eff., Ground)

QC for Samples:

### Results by EP200.8

Parameter	Sample	Matrix Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Iron	31600	5000	36800	104	5000	37500	118	70-130	1.90	(< 20 )

### Batch Information

Analytical Batch: MMS10583  
Analytical Method: EP200.8  
Instrument: Perkin Elmer Nexlon P5  
Analyst: DSH  
Analytical Date/Time: 8/6/2019 7:25:24PM

Prep Batch: MXX32637  
Prep Method: DW Digest for Metals on ICP-MS  
Prep Date/Time: 8/6/2019 9:42:22AM  
Prep Initial Wt./Vol.: 20.00mL  
Prep Extract Vol: 50.00mL

Print Date: 08/22/2019 2:18:23PM

## Method Blank

Blank ID: MB for HBN 1797633 [VXX/34607]  
 Blank Lab ID: 1524300

Matrix: Water (Surface, Eff., Ground)

QC for Samples:  
 1194337034, 1194337035

## Results by SW8021B

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Benzene	0.250U	0.500	0.150	ug/L
Ethylbenzene	0.500U	1.00	0.310	ug/L
o-Xylene	0.500U	1.00	0.310	ug/L
P & M -Xylene	1.00U	2.00	0.620	ug/L
Toluene	0.500U	1.00	0.310	ug/L
Xylenes (total)	1.50U	3.00	0.930	ug/L
<b>Surrogates</b>				
1,4-Difluorobenzene (surr)	93.3	77-115		%

## Batch Information

Analytical Batch: VFC14869  
 Analytical Method: SW8021B  
 Instrument: Agilent 7890 PID/FID  
 Analyst: NRB  
 Analytical Date/Time: 8/7/2019 8:21:00PM

Prep Batch: VXX34607  
 Prep Method: SW5030B  
 Prep Date/Time: 8/7/2019 6:00:00AM  
 Prep Initial Wt./Vol.: 5 mL  
 Prep Extract Vol: 5 mL

Print Date: 08/22/2019 2:18:23PM



### Blank Spike Summary

Blank Spike ID: LCS for HBN 1194337 [VXX34607]  
 Blank Spike Lab ID: 1524301  
 Date Analyzed: 08/08/2019 02:18

Spike Duplicate ID: LCSD for HBN 1194337  
 [VXX34607]  
 Spike Duplicate Lab ID: 1524302  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1194337034, 1194337035

### Results by SW8021B

Parameter	Blank Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Benzene	100	112	112	100	113	113	( 80-120 )	0.44	(< 20 )
Ethylbenzene	100	106	106	100	105	105	( 75-125 )	0.77	(< 20 )
o-Xylene	100	104	104	100	102	102	( 80-120 )	1.50	(< 20 )
P & M -Xylene	200	210	105	200	208	104	( 75-130 )	0.96	(< 20 )
Toluene	100	106	106	100	106	106	( 75-120 )	0.24	(< 20 )
Xylenes (total)	300	314	105	300	311	104	( 79-121 )	1.10	(< 20 )
<b>Surrogates</b>									
1,4-Difluorobenzene (surr)	50	102	102	50	102	102	( 77-115 )	0.78	

### Batch Information

Analytical Batch: **VFC14869**  
 Analytical Method: **SW8021B**  
 Instrument: **Agilent 7890 PID/FID**  
 Analyst: **NRB**

Prep Batch: **VXX34607**  
 Prep Method: **SW5030B**  
 Prep Date/Time: **08/07/2019 06:00**  
 Spike Init Wt./Vol.: 100 ug/L Extract Vol: 5 mL  
 Dupe Init Wt./Vol.: 100 ug/L Extract Vol: 5 mL

Print Date: 08/22/2019 2:18:25PM

## Method Blank

Blank ID: MB for HBN 1797692 [VXX/34616]  
 Blank Lab ID: 1524533

Matrix: Water (Surface, Eff., Ground)

### QC for Samples:

1194337007, 1194337008, 1194337009, 1194337012, 1194337013, 1194337014, 1194337015, 1194337016, 1194337019,  
 1194337020, 1194337021, 1194337022, 1194337023, 1194337024, 1194337025, 1194337026, 1194337027, 1194337029,  
 1194337030, 1194337033

## Results by SW8021B

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Benzene	0.152J	0.500	0.150	ug/L
Ethylbenzene	0.500U	1.00	0.310	ug/L
o-Xylene	0.500U	1.00	0.310	ug/L
P & M -Xylene	1.00U	2.00	0.620	ug/L
Toluene	0.500U	1.00	0.310	ug/L
Xylenes (total)	1.50U	3.00	0.930	ug/L
<b>Surrogates</b>				
1,4-Difluorobenzene (surr)	90.9	77-115		%

## Batch Information

Analytical Batch: VFC14871  
 Analytical Method: SW8021B  
 Instrument: Agilent 7890A PID/FID  
 Analyst: NRB  
 Analytical Date/Time: 8/8/2019 10:28:00PM

Prep Batch: VXX34616  
 Prep Method: SW5030B  
 Prep Date/Time: 8/8/2019 6:00:00AM  
 Prep Initial Wt./Vol.: 5 mL  
 Prep Extract Vol: 5 mL



### Blank Spike Summary

Blank Spike ID: LCS for HBN 1194337 [VXX34616]  
 Blank Spike Lab ID: 1524534  
 Date Analyzed: 08/08/2019 22:11

Spike Duplicate ID: LCSD for HBN 1194337 [VXX34616]  
 Spike Duplicate Lab ID: 1524535  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1194337007, 1194337008, 1194337009, 1194337012, 1194337013, 1194337014, 1194337015, 1194337016, 1194337019, 1194337020, 1194337021, 1194337022, 1194337023, 1194337024, 1194337025, 1194337026, 1194337027, 1194337029, 1194337030, 1194337033

### Results by SW8021B

Parameter	Blank Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Benzene	100	102	102	100	103	103	( 80-120 )	0.68	(< 20 )
Ethylbenzene	100	96.7	97	100	94.1	94	( 75-125 )	2.80	(< 20 )
o-Xylene	100	94.5	95	100	90.8	91	( 80-120 )	4.10	(< 20 )
P & M -Xylene	200	194	97	200	188	94	( 75-130 )	3.00	(< 20 )
Toluene	100	98.3	98	100	97.0	97	( 75-120 )	1.40	(< 20 )
Xylenes (total)	300	289	96	300	279	93	( 79-121 )	3.40	(< 20 )

### Surrogates

1,4-Difluorobenzene (surr)	50	95.4	95	50	93.2	93	( 77-115 )	2.30	
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### Batch Information

Analytical Batch: **VFC14871**  
 Analytical Method: **SW8021B**  
 Instrument: **Agilent 7890A PID/FID**  
 Analyst: **NRB**

Prep Batch: **VXX34616**  
 Prep Method: **SW5030B**  
 Prep Date/Time: **08/08/2019 06:00**  
 Spike Init Wt./Vol.: 100 ug/L Extract Vol: 5 mL  
 Dupe Init Wt./Vol.: 100 ug/L Extract Vol: 5 mL

Print Date: 08/22/2019 2:18:28PM



### Billable Matrix Spike Summary

Original Sample ID: 1194337009  
MS Sample ID: 1194337010 BMS  
MSD Sample ID: 1194337011 BMSD

Analysis Date: 08/08/2019 23:22  
Analysis Date: 08/08/2019 23:39  
Analysis Date: 08/08/2019 23:57  
Matrix: Water (Surface, Eff., Ground)

QC for Samples:

### Results by SW8021B

Parameter	Sample	Matrix Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Benzene	0.250U	50.0	51.6	103	50.0	52.9	106	80-120	2.50	(< 20 )
Ethylbenzene	0.500U	50.0	48.2	96	50.0	49.2	98	75-125	2.00	(< 20 )
o-Xylene	0.500U	50.0	47	94	50.0	47.5	95	80-120	1.10	(< 20 )
P & M -Xylene	1.00U	100	97.2	97	100	98.5	99	75-130	1.40	(< 20 )
Toluene	0.500U	50.0	49.4	99	50.0	50.4	101	75-120	2.00	(< 20 )
Xylenes (total)	1.50U	150	144	96	150	146	97	79-121	1.30	(< 20 )
<b>Surrogates</b>										
1,4-Difluorobenzene (surr)		50.0	46.9	94	50.0	47.0	94	77-115	0.24	

### Batch Information

Analytical Batch: VFC14871  
Analytical Method: SW8021B  
Instrument: Agilent 7890A PID/FID  
Analyst: NRB  
Analytical Date/Time: 8/8/2019 11:39:00PM

Prep Batch: VXX34616  
Prep Method: Volatile Fuels Extraction (W)  
Prep Date/Time: 8/8/2019 6:00:00AM  
Prep Initial Wt./Vol.: 5.00mL  
Prep Extract Vol: 5.00mL

Print Date: 08/22/2019 2:18:29PM





### Billable Matrix Spike Summary

Original Sample ID: 1194337016  
 MS Sample ID: 1194337017 BMS  
 MSD Sample ID: 1194337018 BMSD

Analysis Date: 08/09/2019 1:25  
 Analysis Date: 08/09/2019 1:43  
 Analysis Date: 08/09/2019 2:00  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples:

### Results by SW8021B

Parameter	Sample	Matrix Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Benzene	0.536	50.0	50.8	100	50.0	50.7	100	80-120	0.11	(< 20 )
Ethylbenzene	13.2	50.0	67.5	109	50.0	67.0	108	75-125	0.72	(< 20 )
o-Xylene	1.50	50.0	47.4	92	50.0	47.2	92	80-120	0.36	(< 20 )
P & M -Xylene	119	100	247	128	100	245	126	75-130	0.60	(< 20 )
Toluene	0.500U	50.0	48.4	97	50.0	48.0	96	75-120	0.73	(< 20 )
Xylenes (total)	121	150	294	116	150	292	115	79-121	0.56	(< 20 )
<b>Surrogates</b>										
1,4-Difluorobenzene (surr)		50.0	46.1	92	50.0	46.0	92	77-115	0.22	

### Batch Information

Analytical Batch: VFC14871  
 Analytical Method: SW8021B  
 Instrument: Agilent 7890A PID/FID  
 Analyst: NRB  
 Analytical Date/Time: 8/9/2019 1:43:00AM

Prep Batch: VXX34616  
 Prep Method: Volatile Fuels Extraction (W)  
 Prep Date/Time: 8/8/2019 6:00:00AM  
 Prep Initial Wt./Vol.: 5.00mL  
 Prep Extract Vol: 5.00mL

Print Date: 08/22/2019 2:18:29PM



### Method Blank

Blank ID: MB for HBN 1797882 [VXX/34639]  
Blank Lab ID: 1525301

Matrix: Water (Surface, Eff., Ground)

QC for Samples:  
1194337014

### Results by SW8021B

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Ethylbenzene	0.500U	1.00	0.310	ug/L
o-Xylene	0.500U	1.00	0.310	ug/L
P & M -Xylene	1.00U	2.00	0.620	ug/L
Xylenes (total)	1.50U	3.00	0.930	ug/L
<b>Surrogates</b>				
1,4-Difluorobenzene (surr)	90.1	77-115		%

### Batch Information

Analytical Batch: VFC14876  
Analytical Method: SW8021B  
Instrument: Agilent 7890A PID/FID  
Analyst: NRB  
Analytical Date/Time: 8/14/2019 8:06:00AM

Prep Batch: VXX34639  
Prep Method: SW5030B  
Prep Date/Time: 8/13/2019 6:00:00AM  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL

Print Date: 08/22/2019 2:18:30PM



### Blank Spike Summary

Blank Spike ID: LCS for HBN 1194337 [VXX34639]  
 Blank Spike Lab ID: 1525302  
 Date Analyzed: 08/14/2019 03:04

Spike Duplicate ID: LCSD for HBN 1194337 [VXX34639]  
 Spike Duplicate Lab ID: 1525303  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1194337014

### Results by SW8021B

Parameter	Blank Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Ethylbenzene	100	108	108	100	104	104	( 75-125 )	3.00	(< 20 )
o-Xylene	100	103	103	100	99.4	99	( 80-120 )	3.30	(< 20 )
P & M -Xylene	200	213	107	200	205	103	( 75-130 )	3.90	(< 20 )
Xylenes (total)	300	316	105	300	304	101	( 79-121 )	3.70	(< 20 )
<b>Surrogates</b>									
1,4-Difluorobenzene (surr)	50	95.6	96	50	95.6	96	( 77-115 )	0.01	

### Batch Information

Analytical Batch: VFC14876  
 Analytical Method: SW8021B  
 Instrument: Agilent 7890A PID/FID  
 Analyst: NRB

Prep Batch: VXX34639  
 Prep Method: SW5030B  
 Prep Date/Time: 08/13/2019 06:00  
 Spike Init Wt./Vol.: 100 ug/L Extract Vol: 5 mL  
 Dupe Init Wt./Vol.: 100 ug/L Extract Vol: 5 mL

Print Date: 08/22/2019 2:18:32PM

## Method Blank

Blank ID: MB for HBN 1797709 (WFI/2832)

Blank Lab ID: 1524804

QC for Samples:

Matrix: Water (Surface, Eff., Ground)

## Results by SM21 4500NO3-F

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Nitrate-N	0.100U	0.200	0.0500	mg/L
Nitrite-N	0.100U	0.200	0.0500	mg/L
Total Nitrate/Nitrite-N	0.100U	0.200	0.0500	mg/L

## Batch Information

Analytical Batch: WFI2832

Analytical Method: SM21 4500NO3-F

Instrument: Astoria segmented flow

Analyst: EWW

Analytical Date/Time: 8/9/2019 2:28:09PM

Print Date: 08/22/2019 2:18:33PM

## Method Blank

Blank ID: MB for HBN 1797709 (WFI/2832)

Matrix: Water (Surface, Eff., Ground)

Blank Lab ID: 1524806

QC for Samples:

1194337009, 1194337025, 1194337026, 1194337027, 1194337029, 1194337033, 1194337034

## Results by SM21 4500NO3-F

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Nitrate-N	0.100U	0.200	0.0500	mg/L
Nitrite-N	0.100U	0.200	0.0500	mg/L
Total Nitrate/Nitrite-N	0.100U	0.200	0.0500	mg/L

## Batch Information

Analytical Batch: WFI2832

Analytical Method: SM21 4500NO3-F

Instrument: Astoria segmented flow

Analyst: EWW

Analytical Date/Time: 8/9/2019 3:34:39PM

Print Date: 08/22/2019 2:18:33PM

## Method Blank

Blank ID: MB for HBN 1797709 (WFI/2832)  
Blank Lab ID: 1524808

Matrix: Water (Surface, Eff., Ground)

QC for Samples:

1194337009, 1194337025, 1194337026, 1194337027, 1194337029, 1194337033, 1194337034

## Results by SM21 4500NO3-F

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Nitrate-N	0.100U	0.200	0.0500	mg/L
Nitrite-N	0.100U	0.200	0.0500	mg/L
Total Nitrate/Nitrite-N	0.100U	0.200	0.0500	mg/L

## Batch Information

Analytical Batch: WFI2832  
Analytical Method: SM21 4500NO3-F  
Instrument: Astoria segmented flow  
Analyst: EWW  
Analytical Date/Time: 8/9/2019 4:20:09PM

Print Date: 08/22/2019 2:18:33PM

## Method Blank

Blank ID: LCS for HBN 1797709 (WFI/2832)

Blank Lab ID: 1524810

QC for Samples:

Matrix: Water (Surface, Eff., Ground)

## Results by SM21 4500NO3-F

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Nitrate-N	0.100U	0.200	0.0500	mg/L
Nitrite-N	0.100U	0.200	0.0500	mg/L
Total Nitrate/Nitrite-N	0.100U	0.200	0.0500	mg/L

## Batch Information

Analytical Batch: WFI2832

Analytical Method: SM21 4500NO3-F

Instrument: Astoria segmented flow

Analyst: EWW

Analytical Date/Time: 8/9/2019 5:05:39PM

Print Date: 08/22/2019 2:18:33PM

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1194337 [WFI2832]

Blank Spike Lab ID: 1524803

Date Analyzed: 08/09/2019 14:26

Matrix: Water (Surface, Eff., Ground)

QC for Samples:

## Results by SM21 4500NO3-F

Parameter	Blank Spike (mg/L)			CL
	Spike	Result	Rec (%)	
Nitrate-N	2.5	2.52	101	( 70-130 )
Nitrite-N	2.5	2.58	103	( 90-110 )
Total Nitrate/Nitrite-N	5	5.10	102	( 90-110 )

## Batch Information

Analytical Batch: **WFI2832**

Analytical Method: **SM21 4500NO3-F**

Instrument: **Astoria segmented flow**

Analyst: **EWV**

Print Date: 08/22/2019 2:18:34PM





### Blank Spike Summary

Blank Spike ID: LCS for HBN 1194337 [WFI2832]

Blank Spike Lab ID: 1524805

Date Analyzed: 08/09/2019 15:32

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1194337009, 1194337025, 1194337026, 1194337027, 1194337029, 1194337033, 1194337034

### Results by SM21 4500NO3-F

Parameter	Blank Spike (mg/L)			CL
	Spike	Result	Rec (%)	
Nitrate-N	2.5	2.52	101	( 70-130 )
Nitrite-N	2.5	2.67	107	( 90-110 )
Total Nitrate/Nitrite-N	5	5.18	104	( 90-110 )

### Batch Information

Analytical Batch: **WFI2832**

Analytical Method: **SM21 4500NO3-F**

Instrument: **Astoria segmented flow**

Analyst: **EWV**

Print Date: 08/22/2019 2:18:34PM



### Blank Spike Summary

Blank Spike ID: LCS for HBN 1194337 [WFI2832]

Blank Spike Lab ID: 1524807

Date Analyzed: 08/09/2019 16:18

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1194337009, 1194337025, 1194337026, 1194337027, 1194337029, 1194337033, 1194337034

### Results by SM21 4500NO3-F

Parameter	Blank Spike (mg/L)			CL
	Spike	Result	Rec (%)	
Nitrate-N	2.5	2.47	99	( 70-130 )
Nitrite-N	2.5	2.61	105	( 90-110 )
Total Nitrate/Nitrite-N	5	5.09	102	( 90-110 )

### Batch Information

Analytical Batch: **WFI2832**

Analytical Method: **SM21 4500NO3-F**

Instrument: **Astoria segmented flow**

Analyst: **EWV**

Print Date: 08/22/2019 2:18:34PM

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1194337 [WFI2832]  
 Blank Spike Lab ID: 1524809  
 Date Analyzed: 08/09/2019 17:03

Matrix: Water (Surface, Eff., Ground)

QC for Samples:

## Results by SM21 4500NO3-F

Parameter	Blank Spike (mg/L)			CL
	Spike	Result	Rec (%)	
Nitrate-N	2.5	2.53	101	( 70-130 )
Nitrite-N	2.5	2.68	107	( 90-110 )
Total Nitrate/Nitrite-N	5	5.21	104	( 90-110 )

## Batch Information

Analytical Batch: **WFI2832**  
 Analytical Method: **SM21 4500NO3-F**  
 Instrument: **Astoria segmented flow**  
 Analyst: **EWV**

## Matrix Spike Summary

Original Sample ID: 1194397001  
 MS Sample ID: 1524594 MS  
 MSD Sample ID: 1524595 MSD

Analysis Date: 08/09/2019 15:08  
 Analysis Date: 08/09/2019 15:10  
 Analysis Date: 08/09/2019 15:11  
 Matrix: Drinking Water

QC for Samples: 1194337009

## Results by SM21 4500NO3-F

Parameter	Sample	Matrix Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Total Nitrate/Nitrite-N	8.14	20.0	29.3	106	20.0	30.5	112 *	90-110	3.90	(< 25 )

## Batch Information

Analytical Batch: WFI2832  
 Analytical Method: SM21 4500NO3-F  
 Instrument: Astoria segmented flow  
 Analyst: EWW  
 Analytical Date/Time: 8/9/2019 3:10:09PM

Print Date: 08/22/2019 2:18:35PM



### Matrix Spike Summary

Original Sample ID: 1194431001  
MS Sample ID: 1524596 MS  
MSD Sample ID: 1524597 MSD

Analysis Date: 08/09/2019 16:23  
Analysis Date: 08/09/2019 16:25  
Analysis Date: 08/09/2019 16:27  
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1194337025, 1194337026, 1194337027, 1194337029, 1194337033, 1194337034

### Results by SM21 4500NO3-F

Parameter	Sample	Matrix Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Total Nitrate/Nitrite-N	0.367	5.00	6.62	125 *	5.00	6.66	126 *	90-110	0.59	(< 25 )

### Batch Information

Analytical Batch: WFI2832  
Analytical Method: SM21 4500NO3-F  
Instrument: Astoria segmented flow  
Analyst: EWW  
Analytical Date/Time: 8/9/2019 4:25:24PM

Print Date: 08/22/2019 2:18:35PM



### Billable Matrix Spike Summary

Original Sample ID: 1194337009  
MS Sample ID: 1194337010 BMS  
MSD Sample ID: 1194337011 BMSD

Analysis Date: 08/09/2019 15:48  
Analysis Date: 08/09/2019 15:50  
Analysis Date: 08/09/2019 15:52  
Matrix: Water (Surface, Eff., Ground)

QC for Samples:

### Results by SM21 4500NO3-F

Parameter	Sample	Matrix Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Total Nitrate/Nitrite-N	0.140J	5.00	5.51	107	5.00	5.60	109	90-110	1.70	(< 25 )

### Batch Information

Analytical Batch: WFI2832  
Analytical Method: SM21 4500NO3-F  
Instrument: Astoria segmented flow  
Analyst: EWW  
Analytical Date/Time: 8/9/2019 3:50:24PM

Print Date: 08/22/2019 2:18:35PM



**Method Blank**

Blank ID: MB for HBN 1797558 [WTI/5239]

Matrix: Water (Surface, Eff., Ground)

Blank Lab ID: 1523963

QC for Samples:

1194337009, 1194337025, 1194337026, 1194337027, 1194337029, 1194337033, 1194337034

**Results by SM21 2320B**

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Alkalinity	3.34J	10.0	2.50	mg/L

**Batch Information**

Analytical Batch: WTI5239

Analytical Method: SM21 2320B

Instrument: Titration

Analyst: EWW

Analytical Date/Time: 8/6/2019 2:46:33PM

Print Date: 08/22/2019 2:18:36PM

## Duplicate Sample Summary

Original Sample ID: 1194304002

Duplicate Sample ID: 1523964

QC for Samples:

1194337009

Analysis Date: 08/06/2019 15:07

Matrix: Drinking Water

## Results by SM21 2320B

<u>NAME</u>	<u>Original</u>	<u>Duplicate</u>	<u>Units</u>	<u>RPD (%)</u>	<u>RPD CL</u>
Alkalinity	27.2	27.1	mg/L	0.37	(< 25 )

## Batch Information

Analytical Batch: WTI5239

Analytical Method: SM21 2320B

Instrument: Titration

Analyst: EWW

Print Date: 08/22/2019 2:18:37PM





### Duplicate Sample Summary

Original Sample ID: 1194337009

Duplicate Sample ID: 1523965

QC for Samples:

1194337009, 1194337025, 1194337026, 1194337027, 1194337029, 1194337033, 1194337034

Analysis Date: 08/06/2019 15:49

Matrix: Water (Surface, Eff., Ground)

### Results by SM21 2320B

<u>NAME</u>	<u>Original</u>	<u>Duplicate</u>	<u>Units</u>	<u>RPD (%)</u>	<u>RPD CL</u>
Alkalinity	129	129	mg/L	0.35	(< 25 )

### Batch Information

Analytical Batch: WTI5239

Analytical Method: SM21 2320B

Instrument: Titration

Analyst: EWW

Print Date: 08/22/2019 2:18:37PM

## Duplicate Sample Summary

Original Sample ID: 1194337009  
 Duplicate Sample ID: 1194337039  
 QC for Samples:

Analysis Date: 08/06/2019 15:49  
 Matrix: Water (Surface, Eff., Ground)

## Results by SM21 2320B

<u>NAME</u>	<u>Original</u>	<u>Duplicate</u>	<u>Units</u>	<u>RPD (%)</u>	<u>RPD CL</u>
Alkalinity	129	129	mg/L	0.35	(< 25 )

## Batch Information

Analytical Batch: WTI5239  
 Analytical Method: SM21 2320B  
 Instrument: Titration  
 Analyst: EWW

Print Date: 08/22/2019 2:18:37PM



### Blank Spike Summary

Blank Spike ID: LCS for HBN 1194337 [WTI5239]

Blank Spike Lab ID: 1523962

Date Analyzed: 08/06/2019 14:36

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1194337009, 1194337025, 1194337026, 1194337027, 1194337029, 1194337033, 1194337034

### Results by SM21 2320B

Parameter	Blank Spike (mg/L)			CL
	Spike	Result	Rec (%)	
Alkalinity	250	248	99	( 85-115 )

### Batch Information

Analytical Batch: **WTI5239**

Analytical Method: **SM21 2320B**

Instrument: **Titration**

Analyst: **EWV**

Print Date: 08/22/2019 2:18:38PM



**Method Blank**

Blank ID: MB for HBN 1798176 [WXX/12976]  
Blank Lab ID: 1526457

Matrix: Water (Surface, Eff., Ground)

QC for Samples:  
1194337009, 1194337025, 1194337026, 1194337027, 1194337029, 1194337033, 1194337034

**Results by SW9056A**

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Sulfate	0.100U	0.200	0.0500	mg/L

**Batch Information**

Analytical Batch: WIC5949  
Analytical Method: SW9056A  
Instrument: 930 Metrohm compact IC flex  
Analyst: DMM  
Analytical Date/Time: 8/12/2019 6:54:48PM

Prep Batch: WXX12976  
Prep Method: METHOD  
Prep Date/Time: 8/12/2019 5:00:00PM  
Prep Initial Wt./Vol.: 10 mL  
Prep Extract Vol: 10 mL

Print Date: 08/22/2019 2:18:40PM

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1194337 [WXX12976]

Blank Spike Lab ID: 1526458

Date Analyzed: 08/12/2019 19:13

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1194337009, 1194337025, 1194337026, 1194337027, 1194337029, 1194337033, 1194337034

## Results by SW9056A

Parameter	Blank Spike (mg/L)			CL
	Spike	Result	Rec (%)	
Sulfate	5	4.88	98	( 90-110 )

## Batch Information

Analytical Batch: **WIC5949**

Analytical Method: **SW9056A**

Instrument: **930 Metrohm compact IC flex**

Analyst: **DMM**

Prep Batch: **WXX12976**

Prep Method: **METHOD**

Prep Date/Time: **08/12/2019 17:00**

Spike Init Wt./Vol.: 5 mg/L Extract Vol: 10 mL

Dupe Init Wt./Vol.: Extract Vol:

## Matrix Spike Summary

Original Sample ID: 1526456  
 MS Sample ID: 1526459 MS  
 MSD Sample ID: 1526460 MSD

Analysis Date: 08/12/2019 19:51  
 Analysis Date: 08/12/2019 20:10  
 Analysis Date: 08/12/2019 20:29  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1194337009, 1194337025, 1194337026, 1194337027, 1194337029, 1194337033, 1194337034

## Results by SW9056A

Parameter	Sample	Matrix Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Sulfate	2.60	5.00	6.87	85 *	5.00	6.98	88 *	90-110	1.50	(< 15 )

## Batch Information

Analytical Batch: WIC5949  
 Analytical Method: SW9056A  
 Instrument: 930 Metrohm compact IC flex  
 Analyst: DMM  
 Analytical Date/Time: 8/12/2019 8:10:51PM

Prep Batch: WXX12976  
 Prep Method: EPA 300.0 Extraction Waters/Liquids  
 Prep Date/Time: 8/12/2019 5:00:00PM  
 Prep Initial Wt./Vol.: 10.00mL  
 Prep Extract Vol: 10.00mL

## Billable Matrix Spike Summary

Original Sample ID: 1194337009  
 MS Sample ID: 1194337010 BMS  
 MSD Sample ID: 1194337011 BMSD

Analysis Date: 08/12/2019 19:51  
 Analysis Date: 08/12/2019 20:10  
 Analysis Date: 08/12/2019 20:29  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples:

## Results by SW9056A

Parameter	Sample	Matrix Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Sulfate	2.60	5.00	6.87	85 *	5.00	6.98	88	87-112	1.50	(< 15 )

## Batch Information

Analytical Batch: WIC5949  
 Analytical Method: SW9056A  
 Instrument: 930 Metrohm compact IC flex  
 Analyst: DMM  
 Analytical Date/Time: 8/12/2019 8:10:51PM

Prep Batch: WXX12976  
 Prep Method: SW9056 Extraction Waters/Liquids  
 Prep Date/Time: 8/12/2019 5:00:00PM  
 Prep Initial Wt./Vol.: 10.00mL  
 Prep Extract Vol: 10.00mL

Print Date: 08/22/2019 2:18:42PM



**Method Blank**

Blank ID: MB for HBN 1797549 [XXX/41953]  
Blank Lab ID: 1523919

Matrix: Water (Surface, Eff., Ground)

QC for Samples:  
1194337025, 1194337031

**Results by 8270D SIM LV (PAH)**

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
1-Methylnaphthalene	0.0250U	0.0500	0.0150	ug/L
2-Methylnaphthalene	0.0250U	0.0500	0.0150	ug/L
Acenaphthene	0.0250U	0.0500	0.0150	ug/L
Acenaphthylene	0.0250U	0.0500	0.0150	ug/L
Anthracene	0.0250U	0.0500	0.0150	ug/L
Benzo(a)Anthracene	0.0250U	0.0500	0.0150	ug/L
Benzo[a]pyrene	0.0100U	0.0200	0.00620	ug/L
Benzo[b]Fluoranthene	0.0250U	0.0500	0.0150	ug/L
Benzo[g,h,i]perylene	0.0250U	0.0500	0.0150	ug/L
Benzo[k]fluoranthene	0.0250U	0.0500	0.0150	ug/L
Chrysene	0.0250U	0.0500	0.0150	ug/L
Dibenzo[a,h]anthracene	0.0100U	0.0200	0.00620	ug/L
Fluoranthene	0.0250U	0.0500	0.0150	ug/L
Fluorene	0.0250U	0.0500	0.0150	ug/L
Indeno[1,2,3-c,d] pyrene	0.0250U	0.0500	0.0150	ug/L
Naphthalene	0.0500U	0.100	0.0310	ug/L
Phenanthrene	0.0250U	0.0500	0.0150	ug/L
Pyrene	0.0250U	0.0500	0.0150	ug/L
<b>Surrogates</b>				
2-Methylnaphthalene-d10 (surr)	68.6	47-106		%
Fluoranthene-d10 (surr)	72	24-116		%

**Batch Information**

Analytical Batch: XMS11619  
Analytical Method: 8270D SIM LV (PAH)  
Instrument: SVA Agilent 780/5975 GC/MS  
Analyst: DSD  
Analytical Date/Time: 8/8/2019 9:02:00PM

Prep Batch: XXX41953  
Prep Method: SW3520C  
Prep Date/Time: 8/7/2019 1:17:07PM  
Prep Initial Wt./Vol.: 250 mL  
Prep Extract Vol: 1 mL

Print Date: 08/22/2019 2:18:43PM





### Blank Spike Summary

Blank Spike ID: LCS for HBN 1194337 [XXX41953]  
 Blank Spike Lab ID: 1523920  
 Date Analyzed: 08/08/2019 21:23

Spike Duplicate ID: LCSD for HBN 1194337 [XXX41953]  
 Spike Duplicate Lab ID: 1523921  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1194337025, 1194337031

### Results by 8270D SIM LV (PAH)

Parameter	Blank Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
1-Methylnaphthalene	2	1.39	70	2	1.33	67	( 41-115 )	4.30	(< 20 )
2-Methylnaphthalene	2	1.42	71	2	1.35	68	( 39-114 )	4.70	(< 20 )
Acenaphthene	2	1.43	72	2	1.36	68	( 48-114 )	5.00	(< 20 )
Acenaphthylene	2	1.50	75	2	1.42	71	( 35-121 )	5.80	(< 20 )
Anthracene	2	1.64	82	2	1.55	77	( 53-119 )	6.00	(< 20 )
Benzo(a)Anthracene	2	1.53	76	2	1.41	70	( 59-120 )	8.20	(< 20 )
Benzo[a]pyrene	2	1.34	67	2	1.24	62	( 53-120 )	7.90	(< 20 )
Benzo[b]Fluoranthene	2	1.45	72	2	1.35	67	( 53-126 )	7.20	(< 20 )
Benzo[g,h,i]perylene	2	1.15	57	2	1.05	52	( 44-128 )	9.20	(< 20 )
Benzo[k]fluoranthene	2	1.44	72	2	1.33	66	( 54-125 )	7.80	(< 20 )
Chrysene	2	1.53	77	2	1.45	72	( 57-120 )	5.80	(< 20 )
Dibenzo[a,h]anthracene	2	1.14	57	2	1.03	52	( 44-131 )	10.00	(< 20 )
Fluoranthene	2	1.34	67	2	1.26	63	( 58-120 )	6.30	(< 20 )
Fluorene	2	1.56	78	2	1.50	75	( 50-118 )	4.40	(< 20 )
Indeno[1,2,3-c,d] pyrene	2	1.28	64	2	1.18	59	( 48-130 )	8.00	(< 20 )
Naphthalene	2	1.38	69	2	1.31	66	( 43-114 )	4.80	(< 20 )
Phenanthrene	2	1.58	79	2	1.49	75	( 53-115 )	5.70	(< 20 )
Pyrene	2	1.37	69	2	1.29	65	( 53-121 )	6.20	(< 20 )
<b>Surrogates</b>									
2-Methylnaphthalene-d10 (surr)	2	66.7	67	2	65.1	65	( 47-106 )	2.40	
Fluoranthene-d10 (surr)	2	65.5	66	2	66.1	66	( 24-116 )	0.94	

### Batch Information

Analytical Batch: XMS11619  
 Analytical Method: 8270D SIM LV (PAH)  
 Instrument: SVA Agilent 780/5975 GC/MS  
 Analyst: DSD

Prep Batch: XXX41953  
 Prep Method: SW3520C  
 Prep Date/Time: 08/07/2019 13:17  
 Spike Init Wt./Vol.: 2 ug/L Extract Vol: 1 mL  
 Dupe Init Wt./Vol.: 2 ug/L Extract Vol: 1 mL

Print Date: 08/22/2019 2:18:44PM



**Method Blank**

Blank ID: MB for HBN 1797644 [XXX/41966]  
Blank Lab ID: 1524358

Matrix: Water (Surface, Eff., Ground)

QC for Samples:  
1194337032, 1194337033, 1194337034

**Results by 8270D SIM LV (PAH)**

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
1-Methylnaphthalene	0.0250U	0.0500	0.0150	ug/L
2-Methylnaphthalene	0.0250U	0.0500	0.0150	ug/L
Acenaphthene	0.0250U	0.0500	0.0150	ug/L
Acenaphthylene	0.0250U	0.0500	0.0150	ug/L
Anthracene	0.0250U	0.0500	0.0150	ug/L
Benzo(a)Anthracene	0.0250U	0.0500	0.0150	ug/L
Benzo[a]pyrene	0.0100U	0.0200	0.00620	ug/L
Benzo[b]Fluoranthene	0.0250U	0.0500	0.0150	ug/L
Benzo[g,h,i]perylene	0.0250U	0.0500	0.0150	ug/L
Benzo[k]fluoranthene	0.0250U	0.0500	0.0150	ug/L
Chrysene	0.0250U	0.0500	0.0150	ug/L
Dibenzo[a,h]anthracene	0.0100U	0.0200	0.00620	ug/L
Fluoranthene	0.0250U	0.0500	0.0150	ug/L
Fluorene	0.0250U	0.0500	0.0150	ug/L
Indeno[1,2,3-c,d] pyrene	0.0250U	0.0500	0.0150	ug/L
Naphthalene	0.0500U	0.100	0.0310	ug/L
Phenanthrene	0.0250U	0.0500	0.0150	ug/L
Pyrene	0.0250U	0.0500	0.0150	ug/L
<b>Surrogates</b>				
2-Methylnaphthalene-d10 (surr)	69.8	47-106		%
Fluoranthene-d10 (surr)	72.1	24-116		%

**Batch Information**

Analytical Batch: XMS11652  
Analytical Method: 8270D SIM LV (PAH)  
Instrument: Agilent GC 7890B/5977A SWA  
Analyst: DSD  
Analytical Date/Time: 8/21/2019 11:48:00AM

Prep Batch: XXX41966  
Prep Method: SW3520C  
Prep Date/Time: 8/8/2019 1:07:42PM  
Prep Initial Wt./Vol.: 250 mL  
Prep Extract Vol: 1 mL

Print Date: 08/22/2019 2:18:46PM

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1194337 [XXX41966]  
 Blank Spike Lab ID: 1524359  
 Date Analyzed: 08/21/2019 12:08

Spike Duplicate ID: LCSD for HBN 1194337  
 [XXX41966]  
 Spike Duplicate Lab ID: 1524360  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1194337032, 1194337033, 1194337034

## Results by 8270D SIM LV (PAH)

Parameter	Blank Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
1-Methylnaphthalene	2	1.59	79	2	1.48	74	( 41-115 )	6.90	(< 20 )
2-Methylnaphthalene	2	1.54	77	2	1.43	72	( 39-114 )	7.20	(< 20 )
Acenaphthene	2	1.58	79	2	1.45	73	( 48-114 )	8.00	(< 20 )
Acenaphthylene	2	1.59	80	2	1.50	75	( 35-121 )	5.90	(< 20 )
Anthracene	2	1.60	80	2	1.49	75	( 53-119 )	7.00	(< 20 )
Benzo(a)Anthracene	2	1.57	79	2	1.47	74	( 59-120 )	6.30	(< 20 )
Benzo[a]pyrene	2	1.55	78	2	1.46	73	( 53-120 )	6.10	(< 20 )
Benzo[b]Fluoranthene	2	1.59	80	2	1.50	75	( 53-126 )	5.70	(< 20 )
Benzo[g,h,i]perylene	2	1.48	74	2	1.42	71	( 44-128 )	3.70	(< 20 )
Benzo[k]fluoranthene	2	1.62	81	2	1.56	78	( 54-125 )	4.20	(< 20 )
Chrysene	2	1.52	76	2	1.48	74	( 57-120 )	2.80	(< 20 )
Dibenzo[a,h]anthracene	2	1.39	70	2	1.37	69	( 44-131 )	1.50	(< 20 )
Fluoranthene	2	1.58	79	2	1.53	77	( 58-120 )	3.40	(< 20 )
Fluorene	2	1.60	80	2	1.51	76	( 50-118 )	5.40	(< 20 )
Indeno[1,2,3-c,d] pyrene	2	1.56	78	2	1.50	75	( 48-130 )	3.40	(< 20 )
Naphthalene	2	1.59	79	2	1.48	74	( 43-114 )	7.00	(< 20 )
Phenanthrene	2	1.60	80	2	1.51	75	( 53-115 )	6.30	(< 20 )
Pyrene	2	1.64	82	2	1.56	78	( 53-121 )	4.70	(< 20 )
<b>Surrogates</b>									
2-Methylnaphthalene-d10 (surr)	2	68.1	68	2	66.2	66	( 47-106 )	2.90	
Fluoranthene-d10 (surr)	2	67.7	68	2	66.9	67	( 24-116 )	1.10	

## Batch Information

Analytical Batch: XMS11652  
 Analytical Method: 8270D SIM LV (PAH)  
 Instrument: Agilent GC 7890B/5977A SWA  
 Analyst: DSD

Prep Batch: XXX41966  
 Prep Method: SW3520C  
 Prep Date/Time: 08/08/2019 13:07  
 Spike Init Wt./Vol.: 2 ug/L Extract Vol: 1 mL  
 Dupe Init Wt./Vol.: 2 ug/L Extract Vol: 1 mL



### Matrix Spike Summary

Original Sample ID: 1194374001  
 MS Sample ID: 1524361 MS  
 MSD Sample ID: 1524362 MSD

Analysis Date: 08/21/2019 14:52  
 Analysis Date: 08/21/2019 15:13  
 Analysis Date: 08/21/2019 15:33  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1194337032, 1194337033, 1194337034

### Results by 8270D SIM LV (PAH)

Parameter	Sample	Matrix Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Acenaphthene	0.0267U	2.12	1.51	71	2.12	1.36	64	48-114	10.40	(< 20)
Acenaphthylene	0.0267U	2.12	1.61	76	2.12	1.43	67	35-121	12.20	(< 20)
Anthracene	0.0267U	2.12	1.53	72	2.12	1.37	64	53-119	11.50	(< 20)
Benzo(a)Anthracene	0.0267U	2.12	1.2	57 *	2.12	1.12	53 *	59-120	7.10	(< 20)
Benzo[a]pyrene	0.0107U	2.12	.966	46 *	2.12	0.896	42 *	53-120	7.50	(< 20)
Benzo[b]Fluoranthene	0.0267U	2.12	1.06	50 *	2.12	0.972	46 *	53-126	8.20	(< 20)
Benzo[g,h,i]perylene	0.0267U	2.12	.776	37 *	2.12	0.711	34 *	44-128	8.60	(< 20)
Benzo[k]fluoranthene	0.0267U	2.12	1.02	48 *	2.12	0.936	44 *	54-125	8.40	(< 20)
Chrysene	0.0267U	2.12	1.2	56 *	2.12	1.11	52 *	57-120	7.80	(< 20)
Dibenzo[a,h]anthracene	0.0107U	2.12	.755	36 *	2.12	0.693	33 *	44-131	8.40	(< 20)
Fluoranthene	0.0267U	2.12	1.37	65	2.12	1.27	60	58-120	8.10	(< 20)
Fluorene	0.0267U	2.12	1.6	76	2.12	1.39	66	50-118	14.40	(< 20)
Indeno[1,2,3-c,d] pyrene	0.0267U	2.12	.812	38 *	2.12	0.741	35 *	48-130	9.20	(< 20)
Naphthalene	0.0535U	2.12	1.54	73	2.12	1.37	65	43-114	11.50	(< 20)
Phenanthrene	0.0267U	2.12	1.54	73	2.12	1.37	65	53-115	11.40	(< 20)
Pyrene	0.0267U	2.12	1.43	68	2.12	1.32	62	53-121	8.50	(< 20)
<b>Surrogates</b>										
2-Methylnaphthalene-d10 (surr)		2.12	1.41	67	2.12	1.26	59	47-106	11.30	
Fluoranthene-d10 (surr)		2.12	1.23	58	2.12	1.11	53	24-116	10.10	

### Batch Information

Analytical Batch: XMS11652  
 Analytical Method: 8270D SIM LV (PAH)  
 Instrument: Agilent GC 7890B/5977A SWA  
 Analyst: DSD  
 Analytical Date/Time: 8/21/2019 3:13:00PM

Prep Batch: XXX41966  
 Prep Method: 3520 Liq/Liq Ext for 8270 PAH SIM LV  
 Prep Date/Time: 8/8/2019 1:07:42PM  
 Prep Initial Wt./Vol.: 236.00mL  
 Prep Extract Vol: 1.00mL

Print Date: 08/22/2019 2:18:48PM



**Method Blank**

Blank ID: MB for HBN 1797866 [XXX/42007]  
Blank Lab ID: 1525227

Matrix: Water (Surface, Eff., Ground)

QC for Samples:  
1194337001, 1194337002, 1194337005, 1194337006, 1194337028

**Results by SW8082A**

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Aroclor-1016	0.0500U	0.100	0.0310	ug/L
Aroclor-1221	0.500U	1.00	0.310	ug/L
Aroclor-1232	0.0500U	0.100	0.0310	ug/L
Aroclor-1242	0.0500U	0.100	0.0310	ug/L
Aroclor-1248	0.0500U	0.100	0.0310	ug/L
Aroclor-1254	0.0500U	0.100	0.0310	ug/L
Aroclor-1260	0.0500U	0.100	0.0310	ug/L

**Surrogates**

Decachlorobiphenyl (surr)	98.7	40-135		%
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**Batch Information**

Analytical Batch: XGC10479  
Analytical Method: SW8082A  
Instrument: Agilent 7890B GC ECD SW F  
Analyst: BMZ  
Analytical Date/Time: 8/15/2019 6:18:00PM

Prep Batch: XXX42007  
Prep Method: SW3520C  
Prep Date/Time: 8/14/2019 9:57:11AM  
Prep Initial Wt./Vol.: 1000 mL  
Prep Extract Vol: 1 mL

Print Date: 08/22/2019 2:18:49PM



### Blank Spike Summary

Blank Spike ID: LCS for HBN 1194337 [XXX42007]  
Blank Spike Lab ID: 1525228  
Date Analyzed: 08/15/2019 18:28

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1194337001, 1194337002, 1194337005, 1194337006, 1194337028

### Results by SW8082A

#### Blank Spike (ug/L)

Parameter	Spike	Result	Rec (%)	CL
Aroclor-1016	1	1.02	102	( 46-129 )
Aroclor-1260	1	1.14	114	( 45-134 )

#### Surrogates

Decachlorobiphenyl (surr)	1.00	97.7	98	( 40-135 )
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### Batch Information

Analytical Batch: **XGC10479**  
Analytical Method: **SW8082A**  
Instrument: **Agilent 7890B GC ECD SW F**  
Analyst: **BMZ**

Prep Batch: **XXX42007**  
Prep Method: **SW3520C**  
Prep Date/Time: **08/14/2019 09:57**  
Spike Init Wt./Vol.: 1 ug/L Extract Vol: 1 mL  
Dupe Init Wt./Vol.: Extract Vol:

Print Date: 08/22/2019 2:18:51PM

## Billable Matrix Spike Summary

Original Sample ID: 1194337002  
 MS Sample ID: 1194337003 BMS  
 MSD Sample ID: 1194337004 BMSD

Analysis Date: 08/15/2019 18:49  
 Analysis Date: 08/15/2019 18:59  
 Analysis Date: 08/15/2019 19:09  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples:

## Results by SW8082A

Parameter	Sample	Matrix Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Aroclor-1016	0.0540U	1.04	1.32	127	1.05	1.29	122	46-129	2.73	(< 30 )
Aroclor-1260	0.0540U	1.04	1.29	124	1.05	1.40	133	45-134	7.97	(< 30 )
<b>Surrogates</b>										
Decachlorobiphenyl (surr)		1.04	1.04	99	1.05	1.12	107	40-135	7.94	

## Batch Information

Analytical Batch: XGC10479  
 Analytical Method: SW8082A  
 Instrument: Agilent 7890B GC ECD SW F  
 Analyst: BMZ  
 Analytical Date/Time: 8/15/2019 6:59:00PM

Prep Batch: XXX42007  
 Prep Method: Liquid/Liquid Extraction for SW8082 PCB  
 Prep Date/Time: 8/14/2019 9:57:11AM  
 Prep Initial Wt./Vol.: 960.00mL  
 Prep Extract Vol: 1.00mL

Print Date: 08/22/2019 2:18:52PM



1194337



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Profile #362427 JM

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CLIENT: Stantec		Instructions: Sections 1 - 5 must be filled out. Omissions may delay the onset of analysis.						Page 1 of 3										
CONTACT: Craig Wilson		PHONE #: 907-240-3752		Section 3		Preservative												
Section 1	PROJECT NAME: Swanson River Unit (SRU)		PROJECT/ PWSID/ PERMIT#: CEMREC		# CONTAINERS	Comp Grab MI (Multi-incremental)	Analysis*								NOTE: *The following analyses require specific method and/or compound list: BTEX, Metals, PFAS			
	REPORTS TO: Craig Wilson		E-MAIL: craig.wilson@stantec.com				None	H2SO4	None	HCl								
	INVOICE TO: Stantec		QUOTE #: P.O. #: 203721237				8082A - PCB	8021 - BTEX	4500NO3-F - Nitrate+Nitrite	200.8 - Dissolved Fe (Field Filtered)	200.8 - Total Fe	9056A - Total Sulfate	2320B - Total Alkalinity	RSK-175 - Methane		8270D SIM - PAH		
RESERVED for lab use		SAMPLE IDENTIFICATION		DATE mm/dd/yy	TIME HH:MM	MATRIX/ MATRIX CODE									REMARKS/LOC ID			
1 AB		CR-C CP-C		7-31-19	1621	W	2	G	X									
2 AB		CP-A		7-31-19	1718	W	6	G	X									MS/MSD
3 AB		CP-F		7-31-19	1731	W	42	G	X									
4 AB		DUP-01		7-31-19	-	W	2	G	X									
5 AB		MW-3		8-1-19	1009	W	2	G		X								
6 A-C		MW-2		8-1-19	1033	W	3	G		X								
7 A-C		MW-1		8-1-19	1046	W	27	G		X	X	X		X	X	X		MS/MSD
8 A-C		TW-1		8-1-19	1134	W	3	G		X								
9 A-C		TW-2		8-1-19	1203	W	3	G		X								
10 A-C		TW-3		8-1-19	1230	W	3	G		X								
Section 5	Relinquished By: (1) Roxanne Russell		Date: 8-5-19	Time: 9:17	Received By: To PAVA Air Cargo		Section 4		DOD Project? Yes (NO)		Data Deliverable Requirements:							
	Relinquished By: (2)		Date:	Time:	Received By:		Cooler ID:		Requested Turnaround Time and/or Special Instructions: Standard									
	Relinquished By: (3)		Date:	Time:	Received By:		Temp Blank °C: 30°C DSO		Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT									
	Relinquished By: (4)		Date: 8-05-19	Time: 9:17	Received For Laboratory By:		Delivery Method: Hand Delivery [ ] Commercial Delivery [ ]											

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1.9c DSO  
1.2c DSO





1194337

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CLIENT: Stantec					Instructions: Sections 1 - 5 must be filled out. Omissions may delay the onset of analysis.						Page 2 of 3						
CONTACT: Craig Wilson					PHONE #: 907-240-3752		Section 3		Preservative								
Section 1	PROJECT NAME: Swanson River Unit		PROJECT/PWSID/PERMIT#: CEMREC			# CONTAINERS	None / H2SO4 / None / HCl								NOTE: *The following analyses require specific method and/or compound list: BTEX, Metals, PFAS		
	REPORTS TO: Craig Wilson		E-MAIL: craig.wilson@stantec.com				Analysis*										
	INVOICE TO: Stantec		QUOTE #: 203721237				8082A - PCB, 8021 - BTEX, 4500NO3-F-Nitrate+Nitrite, 200.8 - Dissolved Fe (Field Filtered), 200.8 - Total Fe, 9056A - Total Sulfate, 2320B - Total Alkalinity, RSK-175 - Methane, 8270D SIM - PAH										
RESERVED for lab use												REMARKS/LOC ID					
Section 2	SAMPLE IDENTIFICATION		DATE mm/dd/yy	TIME HH:MM	MATRIX/MATRIX CODE	MI (Multi-incremental)	8082A - PCB	8021 - BTEX	4500NO3-F-Nitrate+Nitrite	200.8 - Dissolved Fe (Field Filtered)	200.8 - Total Fe	9056A - Total Sulfate	2320B - Total Alkalinity	RSK-175 - Methane	8270D SIM - PAH		
	(15) A-C	DUP-02	8-1-19	-	W	3	G	X									
	(16) A-C	TW-6	8-1-19	1247	W	9	G	X								MS/MSD	
		<del>AW-141</del>	<del>8-1-19</del>		W	3	G	X	RR 8-1-19								
	(17) A-C	TW-7	8-1-19	1334	W	3	G	X									
	(20) A-C	TW-8	8-1-19	1347	W	3	G	X									
	(21) A-C	PSW-1	8-1-19	1445	W	3	G	X									
	(22) A-C	DUP-03	8-1-19	-	W	3	G	X									
	(23) A-C	PSW-2	8-1-19	1455	W	3	G	X									
	(24) A-C	TW-13	8-1-19	1542	W	3	G	X									
	(25) A-K	W-1P	8-1-19	1603	W	11	G	X	X	X	X	X	X	X	X		
Section 5	Relinquished By: (1)		Date	Time	Received By:		Section 4		DOD Project? Yes (No)		Data Deliverable Requirements:						
	Loxanne Russell		8-5-19	917	[Signature]		Cooler ID:		Requested Turnaround Time and/or Special Instructions: Standard								
	Relinquished By: (2)		Date	Time	Received By:		Temp Blank °C: 30±0.50									Chain of Custody Seal: (Circle)	
	Relinquished By: (3)		Date	Time	Received By:		or Ambient [ ]									INTACT [X] BROKEN [ ] ABSENT [ ]	
	Relinquished By: (4)		Date	Time	Received For Laboratory By:		Delivery Method: Hand Delivery [ ] Commercial Delivery [ ]										
			8-5-19	9:17	[Signature]												

692050

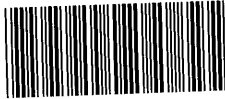
<http://www.sgs.com/terms-and-conditions>

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1194337



SGS North America Inc. CHAIN OF CUSTODY RECORD

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**CLIENT:** Stantec

**CONTACT:** Craig Wilson **PHONE #:** 907-240-3752

**PROJECT NAME:** Swanson River Unit **PROJECT/PWSID/PERMIT#:** CEMREC

**REPORTS TO:** Craig Wilson **E-MAIL:** craig.wilson@stantec.com

**INVOICE TO:** Stantec **QUOTE #:** 203721237 **P.O. #:** 203721237

**Instructions: Sections 1 - 5 must be filled out. Omissions may delay the onset of analysis.**

Section 1: Section 3 Preservative

RESERVED for lab use	SAMPLE IDENTIFICATION	DATE mm/dd/yy	TIME HH:MM	MATRIX MATRIX CODE	CONTAINERS	Comp Grab MI (Multi-incremental)	Analysis*										REMARKS/LOC ID
							8082A - PCB	8021 - BTEX	4500NO3-F - Nitrate+Nitrite	200.8 - Dissolved Fe (Field Filtered)	200.8 - Total Fe	9056A - Total Sulfate	2320B - Total Alkalinity	RSK-175 - Methane	8270D SIM - PAH		
(26) A-I	DUP-04	8-1-19	-	W	9	G		X	X	X		X	X	X			
(27) A-I	TW-12	8-1-19	1636	W	9	G		X	X	X		X	X	X			
(28) AB	CP-BR	8-2-19	0914	W	2	G	X										
(29) A-I	TW-14 (36) A	8-2-19	1106	W	10	G		X	X	X	X	X	X	X			
(30) A-L	TW-11	8-2-19	1046	W	3	G		X									
(31) AB	N-1E	8-2-19	1141	W	2	G										X	
(32) AB	DUP-05	8-2-19	-	W	2	G										X	
(33) A-K	TW-15 (37) A	8-2-19	1234	W	10	G		X	X	X	X	X	X	X	X		
(34) A-K	TW-16 (38) A	8-2-19	1229	W	10	G		X	X	X	X	X	X	X	X		
(35) A-U	TB-01	8-31-19	0800	W	3	-		X									

NOTE: \*The following analyses require specific method and/or compound list: BTEX, Metals, PFAS

Section 2: Section 4 DOD Project? Yes (No) Data Deliverable Requirements:

Section 5: Relinquished By: (1) *Deane Russell* Date: 8-5-19 Time: 917 Received By: *[Signature]*

Relinquished By: (2) Date: Time: Received By:

Relinquished By: (3) Date: Time: Received By:

Relinquished By: (4) Date: 8-25-19 Time: 9:07 Received For Laboratory By:

Section 4: Cooler ID: Requested Turnaround Time and/or Special Instructions: *Standard*

Temp Blank °C: *1,02050* Chain of Custody Seal: (Circle) **INTACT** BROKEN ABSENT

Delivery Method: Hand Delivery [ ] Commercial Delivery [ ]

1,92050  
1,72052

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e-Sample Receipt Form

SGS Workorder #:

1194337



1 1 9 4 3 3 7

Review Criteria	Condition (Yes, No, N/A)	Exceptions Noted below
<b>Chain of Custody / Temperature Requirements</b>		
Were Custody Seals intact? Note # & location	Yes	1 front
COC accompanied samples?	Yes	
DOD: Were samples received in COC corresponding coolers?	N/A	
N/A **Exemption permitted if chilled & collected <8 hours ago, or for samples where chilling is not required		
Temperature blank compliant* (i.e., 0-6 °C after CF)?	Yes	Cooler ID: 1 @ 3.0 °C Therm. ID: D50
	Yes	Cooler ID: 2 @ 1.9 °C Therm. ID: D50
	Yes	Cooler ID: 3 @ 1.7 °C Therm. ID: D52
		Cooler ID: @ °C Therm. ID:
		Cooler ID: @ °C Therm. ID:
*If >6°C, were samples collected <8 hours ago?	N/A	
If <0°C, were sample containers ice free?	N/A	
Note: Identify containers received at non-compliant temperature . Use form FS-0029 if more space is needed.		
<b>Holding Time / Documentation / Sample Condition Requirements</b>		
Note: Refer to form F-083 "Sample Guide" for specific holding times.		
Were samples received within holding time?	Yes	
Do samples match COC** (i.e., sample IDs, dates/times collected)?	Yes	Secondary container provided for samples TW-14, TW-15, and TW-16.
**Note: If times differ <1hr, record details & login per COC.		
***Note: If sample information on containers differs from COC, SGS will default to COC information		
Were analytical requests clear? (i.e., method is specified for analyses with multiple option for analysis (Ex: BTEX, Metals))	Yes	
Were proper containers (type/mass/volume/preservative***) used?	Yes	N/A ***Exemption permitted for metals (e.g, 200.8/6020A).
<b>Volatile / LL-Hg Requirements</b>		
Were Trip Blanks (i.e., VOAs, LL-Hg) in cooler with samples?	Yes	
Were all water VOA vials free of headspace (i.e., bubbles ≤ 6mm)?	Yes	
Were all soil VOAs field extracted with MeOH+BFB?	N/A	
<b>Note to Client:</b> Any "No", answer above indicates non-compliance with standard procedures and may impact data quality.		
Additional notes (if applicable):		



### Sample Containers and Preservatives

<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>	<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>
1194337001-A	No Preservative Required	OK	1194337011-D	HCL to pH < 2	OK
1194337001-B	No Preservative Required	OK	1194337011-E	HCL to pH < 2	OK
1194337002-A	No Preservative Required	OK	1194337011-F	HCL to pH < 2	OK
1194337002-B	No Preservative Required	OK	1194337011-G	H2SO4 to pH < 2	OK
1194337003-A	No Preservative Required	OK	1194337011-H	H2SO4 to pH < 2	OK
1194337003-B	No Preservative Required	OK	1194337011-I	H2SO4 to pH < 2	OK
1194337004-A	No Preservative Required	OK	1194337011-J	HNO3 to pH < 2	OK
1194337004-B	No Preservative Required	OK	1194337011-K	HNO3 to pH < 2	OK
1194337005-A	No Preservative Required	OK	1194337011-L	HNO3 to pH < 2	OK
1194337005-B	No Preservative Required	OK	1194337011-M	No Preservative Required	OK
1194337006-A	No Preservative Required	OK	1194337011-N	No Preservative Required	OK
1194337006-B	No Preservative Required	OK	1194337011-O	No Preservative Required	OK
1194337007-A	HCL to pH < 2	OK	1194337012-A	HCL to pH < 2	OK
1194337007-B	HCL to pH < 2	OK	1194337012-B	HCL to pH < 2	OK
1194337008-A	HCL to pH < 2	OK	1194337012-C	HCL to pH < 2	OK
1194337008-B	HCL to pH < 2	OK	1194337013-A	HCL to pH < 2	OK
1194337008-C	HCL to pH < 2	OK	1194337013-B	HCL to pH < 2	OK
1194337009-A	HCL to pH < 2	OK	1194337013-C	HCL to pH < 2	OK
1194337009-B	HCL to pH < 2	OK	1194337014-A	HCL to pH < 2	OK
1194337009-C	HCL to pH < 2	OK	1194337014-B	HCL to pH < 2	OK
1194337009-D	HCL to pH < 2	OK	1194337014-C	HCL to pH < 2	OK
1194337009-E	HCL to pH < 2	OK	1194337015-A	HCL to pH < 2	OK
1194337009-F	HCL to pH < 2	OK	1194337015-B	HCL to pH < 2	OK
1194337009-G	H2SO4 to pH < 2	OK	1194337015-C	HCL to pH < 2	OK
1194337009-H	H2SO4 to pH < 2	OK	1194337016-A	HCL to pH < 2	OK
1194337009-I	H2SO4 to pH < 2	OK	1194337016-B	HCL to pH < 2	OK
1194337009-J	HNO3 to pH < 2	OK	1194337016-C	HCL to pH < 2	OK
1194337009-K	HNO3 to pH < 2	OK	1194337017-A	HCL to pH < 2	OK
1194337009-L	HNO3 to pH < 2	OK	1194337017-B	HCL to pH < 2	OK
1194337009-M	No Preservative Required	OK	1194337017-C	HCL to pH < 2	OK
1194337009-N	No Preservative Required	OK	1194337018-A	HCL to pH < 2	OK
1194337009-O	No Preservative Required	OK	1194337018-B	HCL to pH < 2	OK
1194337010-A	HCL to pH < 2	OK	1194337018-C	HCL to pH < 2	OK
1194337010-B	HCL to pH < 2	OK	1194337019-A	HCL to pH < 2	OK
1194337010-C	HCL to pH < 2	OK	1194337019-B	HCL to pH < 2	OK
1194337010-D	HCL to pH < 2	OK	1194337019-C	HCL to pH < 2	OK
1194337010-E	HCL to pH < 2	OK	1194337020-A	HCL to pH < 2	OK
1194337010-F	HCL to pH < 2	OK	1194337020-B	HCL to pH < 2	OK
1194337010-G	H2SO4 to pH < 2	OK	1194337020-C	HCL to pH < 2	OK
1194337010-H	H2SO4 to pH < 2	OK	1194337021-A	HCL to pH < 2	OK
1194337010-I	H2SO4 to pH < 2	OK	1194337021-B	HCL to pH < 2	OK
1194337010-J	HNO3 to pH < 2	OK	1194337021-C	HCL to pH < 2	OK
1194337010-K	HNO3 to pH < 2	OK	1194337022-A	HCL to pH < 2	OK
1194337010-L	HNO3 to pH < 2	OK	1194337022-B	HCL to pH < 2	OK
1194337010-M	No Preservative Required	OK	1194337022-C	HCL to pH < 2	OK
1194337010-N	No Preservative Required	OK	1194337023-A	HCL to pH < 2	OK
1194337010-O	No Preservative Required	OK	1194337023-B	HCL to pH < 2	OK
1194337011-A	HCL to pH < 2	OK	1194337023-C	HCL to pH < 2	OK
1194337011-B	HCL to pH < 2	OK	1194337024-A	HCL to pH < 2	OK
1194337011-C	HCL to pH < 2	OK	1194337024-B	HCL to pH < 2	OK

<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>	<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>
1194337024-C	HCL to pH < 2	OK	1194337033-J	No Preservative Required	OK
1194337025-A	HCL to pH < 2	OK	1194337033-K	No Preservative Required	OK
1194337025-B	HCL to pH < 2	OK	1194337034-A	HCL to pH < 2	OK
1194337025-C	HCL to pH < 2	OK	1194337034-B	HCL to pH < 2	OK
1194337025-D	HCL to pH < 2	OK	1194337034-C	HCL to pH < 2	OK
1194337025-E	HCL to pH < 2	OK	1194337034-D	HCL to pH < 2	OK
1194337025-F	HCL to pH < 2	OK	1194337034-E	HCL to pH < 2	OK
1194337025-G	No Preservative Required	OK	1194337034-F	HCL to pH < 2	OK
1194337025-H	No Preservative Required	OK	1194337034-G	H2SO4 to pH < 2	OK
1194337025-I	No Preservative Required	OK	1194337034-H	HNO3 to pH < 2	OK
1194337025-J	No Preservative Required	OK	1194337034-I	No Preservative Required	OK
1194337025-K	No Preservative Required	OK	1194337034-J	No Preservative Required	OK
1194337026-A	HCL to pH < 2	OK	1194337034-K	No Preservative Required	OK
1194337026-B	HCL to pH < 2	OK	1194337035-A	HCL to pH < 2	OK
1194337026-C	HCL to pH < 2	OK	1194337035-B	HCL to pH < 2	OK
1194337026-D	HCL to pH < 2	OK	1194337035-C	HCL to pH < 2	OK
1194337026-E	HCL to pH < 2	OK	1194337036-A	HNO3 to pH < 2	OK
1194337026-F	HCL to pH < 2	OK	1194337037-A	HNO3 to pH < 2	OK
1194337026-G	No Preservative Required	OK	1194337038-A	HNO3 to pH < 2	OK
1194337026-H	No Preservative Required	OK			
1194337026-I	No Preservative Required	OK			
1194337027-A	HCL to pH < 2	OK			
1194337027-B	HCL to pH < 2	OK			
1194337027-C	HCL to pH < 2	OK			
1194337027-D	HCL to pH < 2	OK			
1194337027-E	HCL to pH < 2	OK			
1194337027-F	HCL to pH < 2	OK			
1194337027-G	No Preservative Required	OK			
1194337027-H	No Preservative Required	OK			
1194337027-I	No Preservative Required	OK			
1194337028-A	No Preservative Required	OK			
1194337028-B	No Preservative Required	OK			
1194337029-A	HCL to pH < 2	OK			
1194337029-B	HCL to pH < 2	OK			
1194337029-C	HCL to pH < 2	OK			
1194337029-D	HCL to pH < 2	OK			
1194337029-E	HCL to pH < 2	OK			
1194337029-F	HCL to pH < 2	OK			
1194337029-G	H2SO4 to pH < 2	OK			
1194337029-H	HNO3 to pH < 2	OK			
1194337029-I	No Preservative Required	OK			
1194337030-A	HCL to pH < 2	OK			
1194337030-B	HCL to pH < 2	OK			
1194337030-C	HCL to pH < 2	OK			
1194337031-A	No Preservative Required	OK			
1194337031-B	No Preservative Required	OK			
1194337032-A	No Preservative Required	OK			
1194337032-B	No Preservative Required	OK			
1194337033-A	HCL to pH < 2	OK			
1194337033-B	HCL to pH < 2	OK			
1194337033-C	HCL to pH < 2	OK			
1194337033-D	HCL to pH < 2	OK			
1194337033-E	HCL to pH < 2	OK			
1194337033-F	HCL to pH < 2	OK			
1194337033-G	H2SO4 to pH < 2	OK			
1194337033-H	HNO3 to pH < 2	OK			
1194337033-I	No Preservative Required	OK			

Container Id

Preservative

Container  
Condition

Container Id

Preservative

Container  
Condition

#### Container Condition Glossary

Containers for bacteriological, low level mercury and VOA vials are not opened prior to analysis and will be assigned condition code OK unless evidence indicates than an inappropriate container was submitted.

OK - The container was received at an acceptable pH for the analysis requested.

BU - The container was received with headspace greater than 6mm.

DM - The container was received damaged.

FR - The container was received frozen and not usable for Bacteria or BOD analyses.

IC - The container provided for microbiology analysis was not a laboratory-supplied, pre-sterilized container and therefore was not suitable for analysis.

NC- The container provided was not preserved or was under-preserved. The method does not allow for additional preservative added after collection.

PA - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt and the container is now at the correct pH. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

PH - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt, but was insufficient to bring the container to the correct pH for the analysis requested. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

The results set forth herein are provided by SGS North America Inc.

*e-Hardcopy 2.0*  
*Automated Report*

## Technical Report for

**SGS North America, Inc**

**1194337**

**SGS Job Number: FA66792**

**Sampling Dates: 08/01/19 - 08/02/19**

### Report to:

**SGS North America, Inc  
200 W Potter Dr  
Anchorage, AK 99518  
julie.shumway@sgs.com**

**ATTN: Julie Shumway**

**Total number of pages in report: 21**



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

A handwritten signature in black ink that reads "Caitlin Brice".

**Caitlin Brice, M.S.**  
**General Manager**

**Client Service contact: Andrea Colby 407-425-6700**

Certifications: FL(E83510), LA(03051), KS(E-10327), IL(200063), NC(573), NJ(FL002), NY(12022), SC(96038001)  
DoD ELAP(ANAB L2229), AZ(AZ0806), CA(2937), TX(T104704404), PA(68-03573), VA(460177),  
AK, AR, IA, KY, MA, MS, ND, NH, NV, OK, OR, UT, WA, WV

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Test results relate only to samples analyzed.

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## Sample Summary

SGS North America, Inc  
1194337

**Job No:** FA66792

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
FA66792-1	08/01/19	10:46	08/07/19	AQ	Ground Water	MW-1
FA66792-1D	08/01/19	10:46	08/07/19	AQ	Water Dup/MSD	MW-1
FA66792-1S	08/01/19	10:46	08/07/19	AQ	Water Matrix Spike	MW-1
FA66792-2	08/01/19	16:03	08/07/19	AQ	Ground Water	W-1P
FA66792-3	08/01/19	16:03	08/07/19	AQ	Ground Water	DUP-04
FA66792-4	08/01/19	16:36	08/07/19	AQ	Ground Water	TW-12
FA66792-5	08/02/19	11:06	08/07/19	AQ	Ground Water	TW-14
FA66792-6	08/02/19	12:34	08/07/19	AQ	Ground Water	TW-15
FA66792-7	08/02/19	12:29	08/07/19	AQ	Ground Water	TW-16

## SAMPLE DELIVERY GROUP CASE NARRATIVE

**Client:** SGS North America, Inc

**Job No:** FA66792

**Site:** 1194337

**Report Date:** 8/14/2019 3:07:05 PM

7 Samples were collected on between 08/01/2019 and 08/02/2019 and were received at SGS North America Inc - Orlando on 08/07/2019 properly preserved, at 2.2 Deg. C and intact. These Samples received an SGS Orlando job number of FA66792. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section. Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

### GC Volatiles By Method RSKSOP-147/175

**Matrix:** AQ

**Batch ID:** GFF1828

All samples were analyzed within the recommended method holding time.

Sample(s) FA66792-1DUP, FA66792-1MS were used as the QC samples indicated.

All method blanks for this batch meet method specific criteria.

Matrix Spike Recovery(s) for Methane are outside control limits. Outside control limits due to high level in sample relative to spike amount.

SGS Orlando certifies that this report meets the project requirements for analytical data produced for the samples as received at SGS Orlando and as stated on the COC. SGS Orlando certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the SGS Orlando Quality Manual except as noted above. This report is to be used in its entirety. SGS Orlando is not responsible for any assumptions of data quality if partial data packages are used.

Narrative prepared by:

\_\_\_\_\_  
Jenna Kravitz, Client Services (*Signature on File*)

## Summary of Hits

**Job Number:** FA66792  
**Account:** SGS North America, Inc  
**Project:** 1194337  
**Collected:** 08/01/19 thru 08/02/19



Lab Sample ID Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
<b>FA66792-1</b>	<b>MW-1</b>					
Methane		466	0.50	0.25	ug/l	RSKSOP-147/175
<b>FA66792-2</b>	<b>W-1P</b>					
Methane		693	0.50	0.25	ug/l	RSKSOP-147/175
<b>FA66792-3</b>	<b>DUP-04</b>					
Methane		728	0.50	0.25	ug/l	RSKSOP-147/175
<b>FA66792-4</b>	<b>TW-12</b>					
Methane		410	0.50	0.25	ug/l	RSKSOP-147/175
<b>FA66792-5</b>	<b>TW-14</b>					
Methane		1230	5.0	2.5	ug/l	RSKSOP-147/175
<b>FA66792-6</b>	<b>TW-15</b>					
Methane		798	0.50	0.25	ug/l	RSKSOP-147/175
<b>FA66792-7</b>	<b>TW-16</b>					
Methane		1060	0.50	0.25	ug/l	RSKSOP-147/175

Sample Results

---

Report of Analysis

---

# Report of Analysis

<b>Client Sample ID:</b> MW-1		<b>Date Sampled:</b> 08/01/19
<b>Lab Sample ID:</b> FA66792-1		<b>Date Received:</b> 08/07/19
<b>Matrix:</b> AQ - Ground Water		<b>Percent Solids:</b> n/a
<b>Method:</b> RSKSOP-147/175		
<b>Project:</b> 1194337		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FF47523.D	1	08/08/19 12:41	EG	n/a	n/a	GFF1828
Run #2							

	Initial Volume	Headspace Volume	Volume Injected	Temperature
Run #1	38.0 ml	5.0 ml	500 ul	22 Deg. C
Run #2				

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
74-82-8	Methane	466	0.50	0.25	0.16	ug/l	

U = Not detected      LOD = Limit of Detection      J = Indicates an estimated value  
 LOQ = Limit of Quantitation      DL = Detection Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

4.1  
4

# Report of Analysis

<b>Client Sample ID:</b> W-1P	
<b>Lab Sample ID:</b> FA66792-2	<b>Date Sampled:</b> 08/01/19
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 08/07/19
<b>Method:</b> RSKSOP-147/175	<b>Percent Solids:</b> n/a
<b>Project:</b> 1194337	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FF47524.D	1	08/08/19 12:59	EG	n/a	n/a	GFF1828
Run #2							

	Initial Volume	Headspace Volume	Volume Injected	Temperature
Run #1	38.0 ml	5.0 ml	500 ul	22 Deg. C
Run #2				

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
74-82-8	Methane	693	0.50	0.25	0.16	ug/l	

U = Not detected      LOD = Limit of Detection      J = Indicates an estimated value  
 LOQ = Limit of Quantitation      DL = Detection Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

4.2  
4

# Report of Analysis

<b>Client Sample ID:</b> DUP-04	
<b>Lab Sample ID:</b> FA66792-3	<b>Date Sampled:</b> 08/01/19
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 08/07/19
<b>Method:</b> RSKSOP-147/175	<b>Percent Solids:</b> n/a
<b>Project:</b> 1194337	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FF47525.D	1	08/08/19 13:11	EG	n/a	n/a	GFF1828
Run #2							

	Initial Volume	Headspace Volume	Volume Injected	Temperature
Run #1	38.0 ml	5.0 ml	500 ul	22 Deg. C
Run #2				

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
74-82-8	Methane	728	0.50	0.25	0.16	ug/l	

U = Not detected      LOD = Limit of Detection      J = Indicates an estimated value  
 LOQ = Limit of Quantitation      DL = Detection Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

4.3  
4

# Report of Analysis

<b>Client Sample ID:</b> TW-12		
<b>Lab Sample ID:</b> FA66792-4		<b>Date Sampled:</b> 08/01/19
<b>Matrix:</b> AQ - Ground Water		<b>Date Received:</b> 08/07/19
<b>Method:</b> RSKSOP-147/175		<b>Percent Solids:</b> n/a
<b>Project:</b> 1194337		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FF47526.D	1	08/08/19 13:22	EG	n/a	n/a	GFF1828
Run #2							

	Initial Volume	Headspace Volume	Volume Injected	Temperature
Run #1	38.0 ml	5.0 ml	500 ul	22 Deg. C
Run #2				

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
74-82-8	Methane	410	0.50	0.25	0.16	ug/l	

U = Not detected      LOD = Limit of Detection      J = Indicates an estimated value  
 LOQ = Limit of Quantitation      DL = Detection Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

4.4  
4



# Report of Analysis

<b>Client Sample ID:</b> TW-14	
<b>Lab Sample ID:</b> FA66792-5	<b>Date Sampled:</b> 08/02/19
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 08/07/19
<b>Method:</b> RSKSOP-147/175	<b>Percent Solids:</b> n/a
<b>Project:</b> 1194337	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FF47539.D	10	08/08/19 16:21	EG	n/a	n/a	GFF1828
Run #2							

	Initial Volume	Headspace Volume	Volume Injected	Temperature
Run #1	38.0 ml	5.0 ml	500 ul	22 Deg. C
Run #2				

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
74-82-8	Methane	1230	5.0	2.5	1.6	ug/l	

U = Not detected      LOD = Limit of Detection      J = Indicates an estimated value  
 LOQ = Limit of Quantitation      DL = Detection Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

# Report of Analysis

<b>Client Sample ID:</b> TW-15	
<b>Lab Sample ID:</b> FA66792-6	<b>Date Sampled:</b> 08/02/19
<b>Matrix:</b> AQ - Ground Water	<b>Date Received:</b> 08/07/19
<b>Method:</b> RSKSOP-147/175	<b>Percent Solids:</b> n/a
<b>Project:</b> 1194337	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FF47532.D	1	08/08/19 14:57	EG	n/a	n/a	GFF1828
Run #2							

	Initial Volume	Headspace Volume	Volume Injected	Temperature
Run #1	38.0 ml	5.0 ml	500 ul	22 Deg. C
Run #2				

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
74-82-8	Methane	798	0.50	0.25	0.16	ug/l	

U = Not detected      LOD = Limit of Detection      J = Indicates an estimated value  
 LOQ = Limit of Quantitation      DL = Detection Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

# Report of Analysis

<b>Client Sample ID:</b> TW-16		<b>Date Sampled:</b> 08/02/19
<b>Lab Sample ID:</b> FA66792-7		<b>Date Received:</b> 08/07/19
<b>Matrix:</b> AQ - Ground Water		<b>Percent Solids:</b> n/a
<b>Method:</b> RSKSOP-147/175		
<b>Project:</b> 1194337		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FF47533.D	1	08/08/19 15:09	EG	n/a	n/a	GFF1828
Run #2							

	Initial Volume	Headspace Volume	Volume Injected	Temperature
Run #1	38.0 ml	5.0 ml	500 ul	22 Deg. C
Run #2				

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
74-82-8	Methane	1060	0.50	0.25	0.16	ug/l	

U = Not detected      LOD = Limit of Detection      J = Indicates an estimated value  
 LOQ = Limit of Quantitation      DL = Detection Limit      B = Indicates analyte found in associated method blank  
 E = Indicates value exceeds calibration range      N = Indicates presumptive evidence of a compound

4.7  
4

Misc. Forms

Custody Documents and Other Forms

---

Includes the following where applicable:

- Chain of Custody

SGS North America Inc.  
CHAIN OF CUSTODY RECORD



FA66792

Locations Nationwide  
Alaska Florida  
New Jersey Colorado  
Texas North Carolina  
Virginia Louisiana  
www.us.sgs.com

CLIENT: SGS North America Inc. - Alaska Division				SGS Reference: <b>SGS FL</b>				Page 1 of 1																																																																					
CONTACT: Julie Shumway		PHONE NO: (907) 562-2343		Additional Comments: All soils report out in dry weight unless																																																																									
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INVOICE TO: SGS - Alaska		QUOTE #: 1194337																																																																											
P.O. #: 1194337		P.O. #:																																																																											
RESERVED for lab use	SAMPLE IDENTIFICATION	DATE mm/dd/yy	TIME HHMM	MATRIX/MATRIX CODE	#	G =	X																																																																						
	MW-1	8/1/2019	10:46:00	Water	3	G =	X				1194337009																																																																		
	MW-1 - MS	8/1/2019	10:46:00	Water	3	G =	X		X		1194337010																																																																		
	MW-1 - MSD	8/1/2019	10:46:00	Water	3	G =	X			X	1194337011																																																																		
	W-1P	8/1/2019	16:03:00	Water	3	G =	X				1194337025																																																																		
	Dup-04	8/1/2019	16:03:00	Water	3	G =	X				1194337026																																																																		
	TW-12	8/1/2019	16:36:00	Water	3	G =	X				1194337027																																																																		
	TW-14	8/2/2019	11:06:00	Water	3	G =	X				1194337029																																																																		
	TW-15	8/2/2019	12:34:00	Water	3	G =	X				1194337033																																																																		
	TW-16	8/2/2019	12:29:00	Water	3	G =	X				1194337034																																																																		
Relinquished By: (1)		Date	Time	Received By:	DOD Project?		No	Data Deliverable Requirements:																																																																					
Relinquished By: (2)		Date	Time	Received By:	Report to DL (J Flags)?		Yes	Level II + Excel EDD																																																																					
Relinquished By: (3)		Date	Time	Received By:	Cooler ID:		Requested Turnaround Time and-or Special Instructions:																																																																						
Relinquished By: (4)		Date	Time	Received For Laboratory By:	Temp Blank °C:		or Ambient [ ]	Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT																																																																					

[ X ] 260 W. Potter Drive Anchorage, AK 99518 Tel: (907) 562-2343 Fax: (907) 561-5301  
[ ] 5500 Business Drive Wilmington, NC 28405 Tel: (910) 350-1903 Fax: (910) 350-1557

[http://www.sgs.com/terms\\_and\\_conditions.htm](http://www.sgs.com/terms_and_conditions.htm)

F088\_COC\_REF\_LAB\_20190411

## SGS Sample Receipt Summary

Job Number: FA66792

Client: SGS AK

Project: 1194337

Date / Time Received: 8/7/2019 11:00:00 AM

Delivery Method: UPS

Airbill #'s: 1za8619w0168656234

Therm ID: IR 1;

Therm CF: 1;

# of Coolers: 1

Cooler Temps (Raw Measured) °C: Cooler 1: (1.2);

Cooler Temps (Corrected) °C: Cooler 1: (2.2);

**Cooler Information**

Y or N

- |                             |                                     |                          |
|-----------------------------|-------------------------------------|--------------------------|
| 1. Custody Seals Present    | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Custody Seals Intact     | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. Temp criteria achieved   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 4. Cooler temp verification | <u>IR Gun</u>                       |                          |
| 5. Cooler media             | <u>Ice (Bag)</u>                    |                          |

**Trip Blank Information**

Y or N N/A

- |                                |                          |                                     |                                     |
|--------------------------------|--------------------------|-------------------------------------|-------------------------------------|
| 1. Trip Blank present / cooler | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| 2. Trip Blank listed on COC    | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
|                                | <u>W or S</u>            |                                     | <u>N/A</u>                          |
| 3. Type Of TB Received         | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

**Sample Information**

Y or N N/A

- |   |                                     |                                     |                                     |
|---|-------------------------------------|-------------------------------------|-------------------------------------|
| 1. Sample labels present on bottles                 | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |                                     |
| 2. Samples preserved properly                       | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |                                     |
| 3. Sufficient volume/containers recvd for analysis: | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |                                     |
| 4. Condition of sample                              | <u>Intact</u>                       |                                     |                                     |
| 5. Sample recvd within HT                           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |                                     |
| 6. Dates/Times/IDs on COC match Sample Label        | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |                                     |
| 7. VOCs have headspace                              | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| 8. Bottles received for unspecified tests           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |                                     |
| 9. Compositing instructions clear                   | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| 10. Voa Soil Kits/Jars received past 48hrs?         | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| 11. % Solids Jar received?                          | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| 12. Residual Chlorine Present?                      | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

**Misc. Information**

Number of Encores: 25-Gram \_\_\_\_\_ 5-Gram \_\_\_\_\_  
 Test Strip Lot #: pH 0-3 230315  
 Residual Chlorine Test Strip Lot #: \_\_\_\_\_

Number of 5035 Field Kits: \_\_\_\_\_  
 pH 10-12 219813A

Number of Lab Filtered Metals: \_\_\_\_\_  
 Other: (Specify) \_\_\_\_\_

Comments

SM001  
 Rev. Date 05/24/17

Technician: BRANDYK

Date: 8/7/2019 11:00:00 AM

Reviewer: \_\_\_\_\_

Date: \_\_\_\_\_

**FA66792: Chain of Custody**

**Page 2 of 2**

5.1  
5

## GC Volatiles

---

## QC Data Summaries

---

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

# Method Blank Summary

**Job Number:** FA66792  
**Account:** SGS/SAKA SGS North America, Inc  
**Project:** 1194337

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GFF1828-MB	FF47520.D	1	08/08/19	EG	n/a	n/a	GFF1828

The QC reported here applies to the following samples:

Method: RSKSOP-147/175

FA66792-1, FA66792-2, FA66792-3, FA66792-4, FA66792-5, FA66792-6, FA66792-7

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	ND	0.50	0.16	ug/l	



# Blank Spike/Blank Spike Duplicate Summary

**Job Number:** FA66792  
**Account:** SGS/SAK/SGS North America, Inc  
**Project:** 1194337

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GFF1828-BS	FF47521.D	1	08/08/19	EG	n/a	n/a	GFF1828
GFF1828-BSD	FF47522.D	1	08/08/19	EG	n/a	n/a	GFF1828

The QC reported here applies to the following samples:

Method: RSKSOP-147/175

FA66792-1, FA66792-2, FA66792-3, FA66792-4, FA66792-5, FA66792-6, FA66792-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
74-82-8	Methane	108	120	111	126	117	5	62-139/30

\* = Outside of Control Limits.

# Matrix Spike Summary

**Job Number:** FA66792  
**Account:** SGS/SAKA SGS North America, Inc  
**Project:** 1194337

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA66792-1MS	FF47528.D	1	08/08/19	EG	n/a	n/a	GFF1828
FA66792-1	FF47523.D	1	08/08/19	EG	n/a	n/a	GFF1828

The QC reported here applies to the following samples:

Method: RSKSOP-147/175

FA66792-1, FA66792-2, FA66792-3, FA66792-4, FA66792-5, FA66792-6, FA66792-7

CAS No.	Compound	FA66792-1 ug/l	Spike Q ug/l	MS ug/l	MS %	Limits
74-82-8	Methane	466	108	510	41* a	62-139

(a) Outside control limits due to high level in sample relative to spike amount.

\* = Outside of Control Limits.

# Duplicate Summary

**Job Number:** FA66792  
**Account:** SGS/SAK North America, Inc  
**Project:** 1194337

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
FA66792-1DUP	FF47527.D	1	08/08/19	EG	n/a	n/a	GFF1828
FA66792-1	FF47523.D	1	08/08/19	EG	n/a	n/a	GFF1828

The QC reported here applies to the following samples:

Method: RSKSOP-147/175

FA66792-1, FA66792-2, FA66792-3, FA66792-4, FA66792-5, FA66792-6, FA66792-7

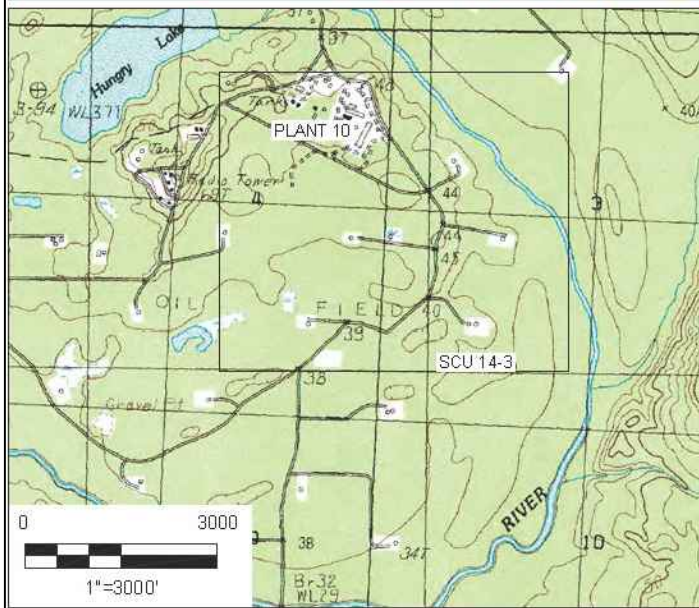
CAS No.	Compound	FA66792-1		Q	RPD	Limits
		ug/l	DUP Q ug/l			
74-82-8	Methane	466	349		29	30

\* = Outside of Control Limits.



## **Attachment C: Figures**





FOR:  
 CHEVRON ENVIRONMENTAL MANAGEMENT  
 COMPANY  
 COMPRESSOR PLANT 10  
 SWANSON RIVER FIELD  
 STERLING, ALASKA

SITE LOCATION MAP

FIGURE:

1

JOB NUMBER:  
 203721237

DRAWN BY:  
 JRO

CHECKED BY:  
 AS

APPROVED BY:  
 TM

DATE:  
 07/23/19





FOR:  
 CHEVRON ENVIRONMENTAL MANAGEMENT  
 COMPANY  
 COMPRESSOR PLANT 10  
 SWANSON RIVER FIELD  
 STERLING, ALASKA

JOB NUMBER:  
 203721237

DRAWN BY:  
 JRO

PLANT 10 SITE AND  
 WELL LOCATION MAP

CHECKED BY:  
 AS

APPROVED BY:  
 TM

FIGURE:  
 2

DATE:  
 07/23/19