



Shelby Lathrop
Operations Lead W

**Chevron Environmental
Management Company**
6001 Bollinger Canyon Road C2092
San Ramon, CA 94583
Tel (925) 842-4249
slathrop@chevron.com

November 8, 2021

Mr. Peter Campbell, Project Manager
Alaska Department of Environmental Conservation / SPAR / CSP
43335 Kalifornsky Beach Road, Suite 11
Soldotna, AK 99669-8250

Re: **Chevron Swanson River Plant 10 PCB Monitoring Report for 2021**
File Number 2334.38.013, Hazard ID 1303

Dear Mr. Campbell:

Please find enclosed for your files, the *Plant 10 PCB Monitoring Report for 2021*, Chevron Swanson River, Sterling, Alaska. The submittal was prepared by Stantec on behalf of Chevron Environmental Management Company (CEMC).

We request that the ADEC consider allowing PCB sampling to be discontinued, as none have been detected since 2006 (15 years).

Please do not hesitate to contact Craig Wilson (907 266-1128) and/or Tom Madsen (801 743-4924) with Stantec or myself at 925-493-9858/SLathrop@chevron.com should you have any questions

Respectfully,

Chevron Environmental Management Company
on behalf of
Chevron U.S.A. Inc.

A handwritten signature in black ink, appearing to read "Shelby Lathrop".

Shelby Lathrop
Operations Lead W



Stantec Consulting Services Inc.
725 East Fireweed Lane Suite 200, Anchorage AK 99503-2245

November 4, 2021
File: 203721236

Attention: Shelby Lathrop
Chevron Environmental Management Company
6001 Bollinger Canyon Road C2092
San Ramon, CA 94583

Dear Ms. Lathrop,

**Reference: Chevron Swanson River Plant 10 PCB Monitoring Report for 2021
File Number 2334.38.013, Hazard ID 1303**

Stantec has prepared this letter report on behalf of Chevron Environmental Management Company (CEMC), providing the results of semi-annual sampling as established in Amendment #4 to the Order by Consent (OBC) for Compressor Plant 10 (Plant 10) at the Swanson River facility. The OBC was originally issued by the U.S. Fish and Wildlife Service (USFWS) on August 6, 1985, and Amendment #4 was issued on September 5, 1990.

The polychlorinated biphenyl (PCB) contamination at Plant 10 is believed to originate from a January 1972 explosion at the compressor plant that released an undetermined amount of Aroclor 1248 heat transfer oil to the environment. Historical minor leaks and spills from the heat transfer fluid system may have also contributed to the PCB contamination, and Aroclor 1242 and Aroclor 1248 were listed as the primary contaminants of concern in the OBC. A remediation effort occurred at the plant in 1988-89 in response to the OBC, during which the PCB contaminated soils were remediated to the OBC cleanup level of 12 ppm and the site was listed as "Cleanup Complete with Institutional Controls" (ADEC File Number 2334.38.016, Hazard ID 175). Amendment #4 was issued in 1990 to allow for the remaining PCBs to remain in the soil beneath the compressor plant until permanent closure of the field or until PCBs are detected in the groundwater. Semi-annual sampling of the four monitoring wells around Plant 10 is a mandatory requirement of the amendment.

In accordance with Amendment #4 of the OBC, PCB groundwater monitoring was conducted twice in 2021, on June 22nd and September 24th. On both occasions groundwater samples were collected from the four existing monitoring 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 laboratory data review checklists, and
- Attachment C includes a site location map and Plant 10 well locations.

Reference: Chevron Swanson River Plant 10 PCB Monitoring Report for 2021 File Number 2334.38.013, Hazard ID 1303

Table 1 (Attachment A) shows that all 2021 sample results continue to be non-detectable (ND) at concentrations above the method detection limit (DL). The DL for each individual PCB and total PCBs was used to compare to cleanup levels. For all samples, there were no detections or DLs 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 21-year sampling and analysis record. Since that 2006 event, sampling has continued with no detectable PCB Aroclors.

Based on the historical data set and current site conditions, groundwater at Plant 10 is not impacted with PCBs. Stantec has recommended in the past that CEMC request an amendment to the OBC from the USFWS (the lead agency) to reduce the sampling frequency at Plant 10 from semiannual to annual. That recommendation remains valid, although USFWS has not been amenable to the change in the past.

In accordance with the OBC, Amendment #4, and ADEC's letter of January 31, 2017 on this topic, semi-annual groundwater sampling is currently planned for 2022 at Plant 10.

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

Best 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)

chw [https://stantec.sharepoint.com/teams/swansonriverunit/shared documents/plant_10/2021 plant 10 report/plant 10 2021 annual report 07oct2021.docx](https://stantec.sharepoint.com/teams/swansonriverunit/shared%20documents/plant_10/2021%20plant%20report/plant%2010%202021%20annual%20report%2007oct2021.docx)

Attachment A

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 ^a			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		
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)

Attachment A

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 ^a			0.5	—	—	0.5	—	—	0.5	—	—	0.5
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 ^b		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	<i>ND(0.604)</i>	12.93	155.93	<i>ND(0.606)</i>	8.09	161.86	<i>ND(0.585)</i>	3.66	166.88	<i>ND(0.600)</i>
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 ^c	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 ^c	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-
ADEC Groundwater Cleanup Levels ^e			0.44	—	—	0.44	—	—	0.44	—	—	0.44
7/15/2018 ^d	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 ^d	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 ^f	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]
7/25/2020 ^f	10.14	158.74	ND[0.0326]	12.85	156.01	ND[0.0369]	10.15	159.80	ND[0.0326]	10.43	160.11	ND[0.0365]
9/11/2020 ^f	15.35	153.53	ND[0.0323]	12.38	156.48	ND[0.0348]	11.06	158.89	ND[0.0344]	17.80	152.74	ND[0.0323]
6/22/2021 ^f	8.92	159.96	ND[0.0555]	12.39	156.47	ND[0.0580]	9.68	160.27	ND[0.0500]	10.23	160.31	ND[0.0500] / ND[0.0500]
9/23/2021 ^f	10.15	158.73	ND[0.0515]	13.50	155.36	ND[0.0515]	10.77	159.18	ND[0.0550] / ND[0.0550]	10.26	160.28	ND[0.0580]

Notes:

Results above site-specific cleanup levels are 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

^a 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.

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

^c 2017 ND value in () is the TestAmerica laboratory reporting limit.

^d 2018 ND value in [] is the TestAmerica method detection limit.

^e ADEC 2018, 18 AAC 75, Table C. October 27, 2018.

^f ND value in [] is the SGS detection limit.

Laboratory Report of Analysis

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

Report Number: **1213592**

Client Project: **Swanson River Unit**

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
2021.07.14
13:09:42 -08'00'

Justin Nelson
Project Manager
Justin.Nelson@sgs.com

Date

Case Narrative

SGS Client: **Stantec Consulting Services Inc.**

SGS Project: **1213592**

Project Name/Site: **Swanson River Unit**

Project Contact: **Douglas Quist**

Refer to sample receipt form for information on sample condition.

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

Print Date: 07/14/2021 8:53:15AM

Report of Manual Integrations

<u>Laboratory ID</u>	<u>Client Sample ID</u>	<u>Analytical Batch</u>	<u>Analyte</u>	<u>Reason</u>
SW8082A				
1213592003	CP-A(1213592002BMS)	XGC10912	Aroclor-1016	BLC
1213592003	CP-A(1213592002BMS)	XGC10912	Aroclor-1260	BLC
1213592004	CP-A(1213592002BMSD)	XGC10912	Aroclor-1016	BLC
1213592004	CP-A(1213592002BMSD)	XGC10912	Aroclor-1260	BLC

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.

Print Date: 07/14/2021 8:53:17AM

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 (Provisionally Certified as of 05/27/2021 for Mercury by EPA200.8, Nitrate as N by SM 4500NO3-F and VOCs by EPA 524.2) & Microbiology & 17-021 (CS) for ADEC and 2944.01 for DOD ELAP/ISO17025 (RCRA methods: 1020B, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035A, 6020B, 7470A, 7471B, 8015C, 8021B, 8082A, 8260D, 8270D, 8270D-SIM, 9040C, 9045D, 9056A, 9060A, AK101 and AK102/103). SGS is only certified for the analytes listed on our Drinking Water Certification (DW methods: 200.8, 2130B, 2320B, 2510B, 300.0, 4500-CN-C,E, 4500-H-B, 4500-NO3-F, 4500-P-E and 524.2) 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

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
TNTC	Too Numerous To Count
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-BR	1213592001	06/22/2021	06/23/2021	Water (Surface, Eff., Ground)
CP-A	1213592002	06/22/2021	06/23/2021	Water (Surface, Eff., Ground)
CP-A(1213592002BMS)	1213592003	06/22/2021	06/23/2021	Water (Surface, Eff., Ground)
CP-A(1213592002BMSD)	1213592004	06/22/2021	06/23/2021	Water (Surface, Eff., Ground)
CP-C	1213592005	06/22/2021	06/23/2021	Water (Surface, Eff., Ground)
CP-F	1213592006	06/22/2021	06/23/2021	Water (Surface, Eff., Ground)
Dup-01	1213592007	06/22/2021	06/23/2021	Water (Surface, Eff., Ground)

<u>Method</u>	<u>Method Description</u>
SW8082A	SW8082 PCB's



Results of CP-BR

Client Sample ID: CP-BR
Client Project ID: Swanson River Unit
Lab Sample ID: 1213592001
Lab Project ID: 1213592

Collection Date: 06/22/21 12:24
Received Date: 06/23/21 10:50
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Polychlorinated Biphenyls

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Rows include Aroclor-1016 through Aroclor-1260 and Surrogates (Decachlorobiphenyl (surr)).

Batch Information

Analytical Batch: XGC10912
Analytical Method: SW8082A
Analyst: CDM
Analytical Date/Time: 07/01/21 02:06
Container ID: 1213592001-A

Prep Batch: XXX45068
Prep Method: SW3520C
Prep Date/Time: 06/29/21 09:59
Prep Initial Wt./Vol.: 860 mL
Prep Extract Vol: 1 mL



Results of CP-A

Client Sample ID: **CP-A**
 Client Project ID: **Swanson River Unit**
 Lab Sample ID: 1213592002
 Lab Project ID: 1213592

Collection Date: 06/22/21 09:57
 Received Date: 06/23/21 10:50
 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		07/01/21 02:19
Aroclor-1221	0.555 U	1.11	0.344	ug/L	1		07/01/21 02:19
Aroclor-1232	0.0555 U	0.111	0.0344	ug/L	1		07/01/21 02:19
Aroclor-1242	0.0555 U	0.111	0.0344	ug/L	1		07/01/21 02:19
Aroclor-1248	0.0555 U	0.111	0.0344	ug/L	1		07/01/21 02:19
Aroclor-1254	0.0555 U	0.111	0.0344	ug/L	1		07/01/21 02:19
Aroclor-1260	0.0555 U	0.111	0.0344	ug/L	1		07/01/21 02:19

Surrogates

Decachlorobiphenyl (surr)	75	40-135		%	1		07/01/21 02:19
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Batch Information

Analytical Batch: XGC10912
 Analytical Method: SW8082A
 Analyst: CDM
 Analytical Date/Time: 07/01/21 02:19
 Container ID: 1213592002-A

Prep Batch: XXX45068
 Prep Method: SW3520C
 Prep Date/Time: 06/29/21 09:59
 Prep Initial Wt./Vol.: 900 mL
 Prep Extract Vol: 1 mL



Results of CP-C

Client Sample ID: **CP-C**
 Client Project ID: **Swanson River Unit**
 Lab Sample ID: 1213592005
 Lab Project ID: 1213592

Collection Date: 06/22/21 13:27
 Received Date: 06/23/21 10:50
 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	0.0500 U	0.100	0.0310	ug/L	1		07/01/21 02:58
Aroclor-1221	0.500 U	1.00	0.310	ug/L	1		07/01/21 02:58
Aroclor-1232	0.0500 U	0.100	0.0310	ug/L	1		07/01/21 02:58
Aroclor-1242	0.0500 U	0.100	0.0310	ug/L	1		07/01/21 02:58
Aroclor-1248	0.0500 U	0.100	0.0310	ug/L	1		07/01/21 02:58
Aroclor-1254	0.0500 U	0.100	0.0310	ug/L	1		07/01/21 02:58
Aroclor-1260	0.0500 U	0.100	0.0310	ug/L	1		07/01/21 02:58
Surrogates							
Decachlorobiphenyl (surr)	82.5	40-135		%	1		07/01/21 02:58

Batch Information

Analytical Batch: XGC10912
 Analytical Method: SW8082A
 Analyst: CDM
 Analytical Date/Time: 07/01/21 02:58
 Container ID: 1213592005-A

Prep Batch: XXX45068
 Prep Method: SW3520C
 Prep Date/Time: 06/29/21 09:59
 Prep Initial Wt./Vol.: 1000 mL
 Prep Extract Vol: 1 mL



Results of CP-F

Client Sample ID: **CP-F**
Client Project ID: **Swanson River Unit**
Lab Sample ID: 1213592006
Lab Project ID: 1213592

Collection Date: 06/22/21 10:19
Received Date: 06/23/21 10:50
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	0.0500 U	0.100	0.0310	ug/L	1		07/01/21 03:11
Aroclor-1221	0.500 U	1.00	0.310	ug/L	1		07/01/21 03:11
Aroclor-1232	0.0500 U	0.100	0.0310	ug/L	1		07/01/21 03:11
Aroclor-1242	0.0500 U	0.100	0.0310	ug/L	1		07/01/21 03:11
Aroclor-1248	0.0500 U	0.100	0.0310	ug/L	1		07/01/21 03:11
Aroclor-1254	0.0500 U	0.100	0.0310	ug/L	1		07/01/21 03:11
Aroclor-1260	0.0500 U	0.100	0.0310	ug/L	1		07/01/21 03:11
Surrogates							
Decachlorobiphenyl (surr)	77.5	40-135		%	1		07/01/21 03:11

Batch Information

Analytical Batch: XGC10912
Analytical Method: SW8082A
Analyst: CDM
Analytical Date/Time: 07/01/21 03:11
Container ID: 1213592006-A

Prep Batch: XXX45068
Prep Method: SW3520C
Prep Date/Time: 06/29/21 09:59
Prep Initial Wt./Vol.: 1000 mL
Prep Extract Vol: 1 mL



Results of Dup-01

Client Sample ID: **Dup-01**
Client Project ID: **Swanson River Unit**
Lab Sample ID: 1213592007
Lab Project ID: 1213592

Collection Date: 06/22/21 10:41
Received Date: 06/23/21 10:50
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	0.0500 U	0.100	0.0310	ug/L	1		07/01/21 03:23
Aroclor-1221	0.500 U	1.00	0.310	ug/L	1		07/01/21 03:23
Aroclor-1232	0.0500 U	0.100	0.0310	ug/L	1		07/01/21 03:23
Aroclor-1242	0.0500 U	0.100	0.0310	ug/L	1		07/01/21 03:23
Aroclor-1248	0.0500 U	0.100	0.0310	ug/L	1		07/01/21 03:23
Aroclor-1254	0.0500 U	0.100	0.0310	ug/L	1		07/01/21 03:23
Aroclor-1260	0.0500 U	0.100	0.0310	ug/L	1		07/01/21 03:23
Surrogates							
Decachlorobiphenyl (surr)	87.5	40-135		%	1		07/01/21 03:23

Batch Information

Analytical Batch: XGC10912
Analytical Method: SW8082A
Analyst: CDM
Analytical Date/Time: 07/01/21 03:23
Container ID: 1213592007-A

Prep Batch: XXX45068
Prep Method: SW3520C
Prep Date/Time: 06/29/21 09:59
Prep Initial Wt./Vol.: 1000 mL
Prep Extract Vol: 1 mL

Method Blank

Blank ID: MB for HBN 1821473 [XXX/45068]
 Blank Lab ID: 1619360

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
 1213592001, 1213592002, 1213592005, 1213592006, 1213592007

Results by SW8082A

Parameter	Results	LOQ/CL	DL	Units
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)	82.5	40-135		%
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Batch Information

Analytical Batch: XGC10912
 Analytical Method: SW8082A
 Instrument: Agilent 7890B/G3440B ECD Rear
 Analyst: CDM
 Analytical Date/Time: 7/1/2021 1:27:00AM

Prep Batch: XXX45068
 Prep Method: SW3520C
 Prep Date/Time: 6/29/2021 9:59:05AM
 Prep Initial Wt./Vol.: 1000 mL
 Prep Extract Vol: 1 mL



Blank Spike Summary

Blank Spike ID: LCS for HBN 1213592 [XXX45068]
 Blank Spike Lab ID: 1619361
 Date Analyzed: 07/01/2021 01:40

Spike Duplicate ID: LCSD for HBN 1213592 [XXX45068]
 Spike Duplicate Lab ID: 1619362
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1213592001, 1213592002, 1213592005, 1213592006, 1213592007

Results by SW8082A

Parameter	Blank Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Aroclor-1016	1	0.760	76	1	0.670	67	(46-129)	12.60	(< 30)
Aroclor-1260	1	0.860	86	1	0.780	78	(45-134)	9.76	(< 30)

Surrogates

Decachlorobiphenyl (surr)	0.400		85	0.400		80	(40-135)	6.06	
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Batch Information

Analytical Batch: XGC10912
 Analytical Method: SW8082A
 Instrument: Agilent 7890B/G3440B ECD Rear
 Analyst: CDM

Prep Batch: XXX45068
 Prep Method: SW3520C
 Prep Date/Time: 06/29/2021 09:59
 Spike Init Wt./Vol.: 1 ug/L Extract Vol: 1 mL
 Dupe Init Wt./Vol.: 1 ug/L Extract Vol: 1 mL

Print Date: 07/14/2021 8:53:26AM



Billable Matrix Spike Summary

Original Sample ID: 1213592002
MS Sample ID: 1213592003 BMS
MSD Sample ID: 1213592004 BMSD

Analysis Date: 07/01/2021 2:19
Analysis Date: 07/01/2021 2:32
Analysis Date: 07/01/2021 2:45
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	0.0555U	1.12	.663	59	1.14	0.739	65	46-129	10.80	(< 30)
Aroclor-1260	0.0555U	1.12	.719	64	1.14	0.773	68	45-134	7.19	(< 30)
Surrogates										
Decachlorobiphenyl (surr)		0.449	0.360	80	0.455	0.364	80	40-135	1.13	

Batch Information

Analytical Batch: XGC10912
Analytical Method: SW8082A
Instrument: Agilent 7890B/G3440B ECD Rear
Analyst: CDM
Analytical Date/Time: 7/1/2021 2:32:00AM

Prep Batch: XXX45068
Prep Method: Liquid/Liquid Extraction for SW8082 PCB
Prep Date/Time: 6/29/2021 9:59:05AM
Prep Initial Wt./Vol.: 890.00mL
Prep Extract Vol: 1.00mL

Print Date: 07/14/2021 8:53:28AM



SGS North America Inc.
CHAIN OF CUSTODY RECORD

www.us.sgs.com

362427

CLIENT: Stantec
 CONTACT: CRAIG WILSON
 PROJECT NAME: SWANSON ENER UNIT
 PROJECT PWSID/ PERMIT#: 75623
 REPORTS TO: CRAIG WILSON
 INVOICE TO: Stantec
 E-MAIL: Roxanne.Russell@stantec.co
 Profile #:
 QUOTE #:
 P.O. #:
 PHONE #:
 PROJECT/ PWSID/ PERMIT#: PLANT 10
 REPORTS TO: SWANSON ENER UNIT
 INVOICE TO: Stantec

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

Section 1

Section 2

Section 3

Section 4

Section 5

Section 16

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

REMARKS/LOC ID

MS | MSD

Temp Blank °C: 5.1 or Ambient []

Delivery Method: Hand Delivery [] Commercial Delivery []

Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT

Requested Turnaround Time and/or Special Instructions: STANDARD

Relinquished By: (1) [Signature]

Relinquished By: (2) [Signature]

Relinquished By: (3) [Signature]

Relinquished By: (4) [Signature]

Received By: [Signature]

Received By: [Signature]

Received By: [Signature]

Received For Laboratory By: [Signature]

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



e-Sample Receipt Form

SGS Workorder #:

1213592

1213592

Review Criteria	Condition (Yes, No, N/A)	Exceptions Noted below
Chain of Custody / Temperature Requirements		
Were Custody Seals intact? Note # & location	N/A	Yes Exemption permitted if sampler hand carries/delivers.
COC accompanied samples?	Yes	
DOD: Were samples received in COC corresponding coolers?	N/A	
Temperature blank compliant* (i.e., 0-6 °C after CF)?	N/A	**Exemption permitted if chilled & collected <8 hours ago, or for samples where chilling is not required
If samples received without a temperature blank, the "cooler temperature" will be documented instead & "COOLER TEMP" will be noted to the right. "ambient" or "chilled" will be noted if neither is available.	Yes	Cooler ID: 1 @ 3.1 °C Therm. ID: D52
		Cooler ID: @ °C Therm. ID:
		Cooler ID: @ °C Therm. ID:
		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.		
Holding Time / Documentation / Sample Condition Requirements		
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	
**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.200.8/6020B).
Volatile / LL-Hg Requirements		
Were Trip Blanks (i.e., VOAs, LL-Hg) in cooler with samples?	N/A	
Were all water VOA vials free of headspace (i.e., bubbles ≤ 6mm)?	N/A	
Were all soil VOAs field extracted with MeOH+BFB?	N/A	
Note to Client: 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>
1213592001-A	No Preservative Required	OK			
1213592001-B	No Preservative Required	OK			
1213592002-A	No Preservative Required	OK			
1213592002-B	No Preservative Required	OK			
1213592003-A	No Preservative Required	OK			
1213592003-B	No Preservative Required	OK			
1213592004-A	No Preservative Required	OK			
1213592004-B	No Preservative Required	OK			
1213592005-A	No Preservative Required	OK			
1213592005-B	No Preservative Required	OK			
1213592006-A	No Preservative Required	OK			
1213592006-B	No Preservative Required	OK			
1213592007-A	No Preservative Required	OK			
1213592007-B	No Preservative Required	OK			

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.

QN - Insufficient sample quantity provided.

Laboratory Data Review Checklist

Completed By:

Craig Wilson

Title:

Principal

Date:

03 November 2021

Consultant Firm:

Stantec Consulting

Laboratory Name:

SGS

Laboratory Report Number:

1213592

Laboratory Report Date:

14 July 2021

CS Site Name:

Swanson River Unit

ADEC File Number:

2334.38.013

Hazard Identification Number:

1303

1213592

Laboratory Report Date:

14 July 2021

CS Site Name:

Swanson River Unit

Note: Any N/A or No box checked must have an explanation in the comments box.

1. Laboratory

a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses?

Yes No N/A Comments:

b. If the samples were transferred to another “network” laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses ADEC CS approved?

Yes No N/A Comments:

2. Chain of Custody (CoC)

a. CoC information completed, signed, and dated (including released/received by)?

Yes No N/A Comments:

b. Correct analyses requested?

Yes No N/A Comments:

3. Laboratory Sample Receipt Documentation

a. Sample/cooler temperature documented and within range at receipt (0° to 6° C)?

Yes No N/A Comments:

b. Sample preservation acceptable – acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)?

Yes No N/A Comments:

No preservative required

1213592

Laboratory Report Date:

14 July 2021

CS Site Name:

Swanson River Unit

c. Sample condition documented – broken, leaking (Methanol), zero headspace (VOC vials)?

Yes No N/A Comments:

Container condition noted as OK

d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, etc.?

Yes No N/A Comments:

No discrepancies

e. Data quality or usability affected?

Comments:

N/A

4. Case Narrative

a. Present and understandable?

Yes No N/A Comments:

b. Discrepancies, errors, or QC failures identified by the lab?

Yes No N/A Comments:

c. Were all corrective actions documented?

Yes No N/A Comments:

d. What is the effect on data quality/usability according to the case narrative?

Comments:

N/A

1213592

Laboratory Report Date:

14 July 2021

CS Site Name:

Swanson River Unit

5. Samples Results

a. Correct analyses performed/reported as requested on COC?

Yes No N/A Comments:

b. All applicable holding times met?

Yes No N/A Comments:

c. All soils reported on a dry weight basis?

Yes No N/A Comments:

d. Are the reported LOQs less than the Cleanup Level or the minimum required detection level for the project?

Yes No N/A Comments:

e. Data quality or usability affected?

N/A

6. QC Samples

a. Method Blank

i. One method blank reported per matrix, analysis and 20 samples?

Yes No N/A Comments:

ii. All method blank results less than limit of quantitation (LOQ) or project specified objectives?

Yes No N/A Comments:

1213592

Laboratory Report Date:

14 July 2021

CS Site Name:

Swanson River Unit

iii. If above LOQ or project specified objectives, what samples are affected?

Comments:

iv. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes No N/A Comments:

v. Data quality or usability affected?

Comments:

No

b. Laboratory Control Sample/Duplicate (LCS/LCSD)

i. Organics – One LCS/LCSD reported per matrix, analysis and 20 samples? (LCS/LCSD required per AK methods, LCS required per SW846)

Yes No N/A Comments:

ii. Metals/Inorganics – one LCS and one sample duplicate reported per matrix, analysis and 20 samples?

Yes No N/A Comments:

iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable? (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages)

Yes No N/A Comments:

iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits and project specified objectives, if applicable? RPD reported from LCS/LCSD, and or sample/sample duplicate. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)

Yes No N/A Comments:

1213592

Laboratory Report Date:

14 July 2021

CS Site Name:

Swanson River Unit

v. If %R or RPD is outside of acceptable limits, what samples are affected?

Comments:

vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes No N/A Comments:

vii. Data quality or usability affected? (Use comment box to explain.)

Comments:

c. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

Note: Leave blank if not required for project

i. Organics – One MS/MSD reported per matrix, analysis and 20 samples?

Yes No N/A Comments:

ii. Metals/Inorganics – one MS and one MSD reported per matrix, analysis and 20 samples?

Yes No N/A Comments:

iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable?

Yes No N/A Comments:

iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits and project specified objectives, if applicable? RPD reported from MS/MSD, and or sample/sample duplicate.

Yes No N/A Comments:

1213592

Laboratory Report Date:

14 July 2021

CS Site Name:

Swanson River Unit

v. If %R or RPD is outside of acceptable limits, what samples are affected?

Comments:

vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes No N/A Comments:

vii. Data quality or usability affected? (Use comment box to explain.)

Comments:

No. Data flag was U - undetected

d. Surrogates – Organics Only or Isotope Dilution Analytes (IDA) – Isotope Dilution Methods Only

i. Are surrogate/IDA recoveries reported for organic analyses – field, QC and laboratory samples?

Yes No N/A Comments:

ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable? (AK Petroleum methods 50-150 %R for field samples and 60-120 %R for QC samples; all other analyses see the laboratory report pages)

Yes No N/A Comments:

iii. Do the sample results with failed surrogate/IDA recoveries have data flags? If so, are the data flags clearly defined?

Yes No N/A Comments:

iv. Data quality or usability affected?

Comments:

1213592

Laboratory Report Date:

14 July 2021

CS Site Name:

Swanson River Unit

e. Trip Blanks

i. One trip blank reported per matrix, analysis and for each cooler containing volatile samples?
(If not, enter explanation below.)

Yes No N/A Comments:

No volatiles

ii. Is the cooler used to transport the trip blank and VOA samples clearly indicated on the COC?
(If not, a comment explaining why must be entered below)

Yes No N/A Comments:

iii. All results less than LOQ and project specified objectives?

Yes No N/A Comments:

iv. If above LOQ or project specified objectives, what samples are affected?

Comments:

v. Data quality or usability affected?

Comments:

f. Field Duplicate

i. One field duplicate submitted per matrix, analysis and 10 project samples?

Yes No N/A Comments:

ii. Submitted blind to lab?

Yes No N/A Comments:

1213592

Laboratory Report Date:

14 July 2021

CS Site Name:

Swanson River Unit

iii. Precision – All relative percent differences (RPD) less than specified project objectives?
(Recommended: 30% water, 50% soil)

$$RPD (\%) = \text{Absolute value of: } \frac{(R_1 - R_2)}{((R_1 + R_2)/2)} \times 100$$

Where R_1 = Sample Concentration
 R_2 = Field Duplicate Concentration

Yes No N/A Comments:

iv. Data quality or usability affected? (Use the comment box to explain why or why not.)

Comments:

g. Decontamination or Equipment Blank (If not applicable, a comment stating why must be entered below)?

Yes No N/A Comments:

No GRO, BTEX, or VOCs sampled

i. All results less than LOQ and project specified objectives?

Yes No N/A Comments:

ii. If above LOQ or project specified objectives, what samples are affected?

Comments:

iii. Data quality or usability affected?

Comments:

1213592

Laboratory Report Date:

14 July 2021

CS Site Name:

Swanson River Unit

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)

a. Defined and appropriate?

Yes No N/A

Comments:

Laboratory Report of Analysis

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

Report Number: **1216337**

Client Project: **Plant 10 Swanson River Unit**

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
2021.10.08
15:59:35 -08'00'

Justin Nelson
Project Manager
Justin.Nelson@sgs.com

Date

Case Narrative

SGS Client: **Stantec Consulting Services Inc.**
SGS Project: **1216337**
Project Name/Site: **Plant 10 Swanson River Unit**
Project Contact: **Douglas Quist**

Refer to sample receipt form for information on sample condition.

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

Print Date: 10/08/2021 10:44:42AM

Report of Manual Integrations

<u>Laboratory ID</u>	<u>Client Sample ID</u>	<u>Analytical Batch</u>	<u>Analyte</u>	<u>Reason</u>
SW8082A				
1216337002	CP-A(1216337001BMS)	XGC10991	Aroclor-1016	BLC
1216337002	CP-A(1216337001BMS)	XGC10991	Aroclor-1260	BLC
1216337003	CP-A(1216337001BMSD)	XGC10991	Aroclor-1016	BLC
1216337003	CP-A(1216337001BMSD)	XGC10991	Aroclor-1260	BLC

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, 6020B, 7470A, 7471B, 8015C, 8021B, 8082A, 8260D, 8270D, 8270D-SIM, 9040C, 9045D, 9056A, 9060A, AK101 and AK102/103). SGS is only certified for the analytes listed on our Drinking Water Certification (DW methods: 200.8, 2130B, 2320B, 2510B, 300.0, 4500-CN-C,E, 4500-H-B, 4500-NO3-F, 4500-P-E and 524.2) 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
TNTC	Too Numerous To Count
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-A	1216337001	09/23/2021	09/27/2021	Water (Surface, Eff., Ground)
CP-A(1216337001BMS)	1216337002	09/23/2021	09/27/2021	Water (Surface, Eff., Ground)
CP-A(1216337001BMSD)	1216337003	09/23/2021	09/27/2021	Water (Surface, Eff., Ground)
CP-F	1216337004	09/23/2021	09/27/2021	Water (Surface, Eff., Ground)
DUP-01	1216337005	09/23/2021	09/27/2021	Water (Surface, Eff., Ground)
CP-C	1216337006	09/24/2021	09/27/2021	Water (Surface, Eff., Ground)
CP-BR	1216337007	09/24/2021	09/27/2021	Water (Surface, Eff., Ground)

<u>Method</u>	<u>Method Description</u>
SW8082A	SW8082 PCB's

Print Date: 10/08/2021 10:44:46AM

Results of CP-A

Client Sample ID: **CP-A**
 Client Project ID: **Plant 10 Swanson River Unit**
 Lab Sample ID: 1216337001
 Lab Project ID: 1216337

Collection Date: 09/23/21 15:56
 Received Date: 09/27/21 10:03
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Polychlorinated Biphenyls

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Aroclor-1016	0.0515 U	0.103	0.0318	ug/L	1		09/30/21 18:19
Aroclor-1221	0.515 U	1.03	0.318	ug/L	1		09/30/21 18:19
Aroclor-1232	0.0515 U	0.103	0.0318	ug/L	1		09/30/21 18:19
Aroclor-1242	0.0515 U	0.103	0.0318	ug/L	1		09/30/21 18:19
Aroclor-1248	0.0515 U	0.103	0.0318	ug/L	1		09/30/21 18:19
Aroclor-1254	0.0515 U	0.103	0.0318	ug/L	1		09/30/21 18:19
Aroclor-1260	0.0515 U	0.103	0.0318	ug/L	1		09/30/21 18:19

Surrogates

Decachlorobiphenyl (surr)	85	40-135	%	1			09/30/21 18:19
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Batch Information

Analytical Batch: XGC10991
 Analytical Method: SW8082A
 Analyst: CDM
 Analytical Date/Time: 09/30/21 18:19
 Container ID: 1216337001-A

Prep Batch: XXX45647
 Prep Method: SW3520C
 Prep Date/Time: 09/30/21 10:25
 Prep Initial Wt./Vol.: 975 mL
 Prep Extract Vol: 1 mL



Results of CP-F

Client Sample ID: **CP-F**
 Client Project ID: **Plant 10 Swanson River Unit**
 Lab Sample ID: 1216337004
 Lab Project ID: 1216337

Collection Date: 09/23/21 16:02
 Received Date: 09/27/21 10:03
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Polychlorinated Biphenyls

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Aroclor-1016	0.0580 U	0.116	0.0360	ug/L	1		09/30/21 18:55
Aroclor-1221	0.580 U	1.16	0.360	ug/L	1		09/30/21 18:55
Aroclor-1232	0.0580 U	0.116	0.0360	ug/L	1		09/30/21 18:55
Aroclor-1242	0.0580 U	0.116	0.0360	ug/L	1		09/30/21 18:55
Aroclor-1248	0.0580 U	0.116	0.0360	ug/L	1		09/30/21 18:55
Aroclor-1254	0.0580 U	0.116	0.0360	ug/L	1		09/30/21 18:55
Aroclor-1260	0.0580 U	0.116	0.0360	ug/L	1		09/30/21 18:55

Surrogates

Decachlorobiphenyl (surr)	80	40-135	%	1			09/30/21 18:55
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Batch Information

Analytical Batch: XGC10991
 Analytical Method: SW8082A
 Analyst: CDM
 Analytical Date/Time: 09/30/21 18:55
 Container ID: 1216337004-A

Prep Batch: XXX45647
 Prep Method: SW3520C
 Prep Date/Time: 09/30/21 10:25
 Prep Initial Wt./Vol.: 860 mL
 Prep Extract Vol: 1 mL

Results of DUP-01

Client Sample ID: **DUP-01**
 Client Project ID: **Plant 10 Swanson River Unit**
 Lab Sample ID: 1216337005
 Lab Project ID: 1216337

Collection Date: 09/23/21 16:04
 Received Date: 09/27/21 10:03
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Polychlorinated Biphenyls

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Aroclor-1016	0.0550 U	0.110	0.0341	ug/L	1		09/30/21 19:08
Aroclor-1221	0.550 U	1.10	0.341	ug/L	1		09/30/21 19:08
Aroclor-1232	0.0550 U	0.110	0.0341	ug/L	1		09/30/21 19:08
Aroclor-1242	0.0550 U	0.110	0.0341	ug/L	1		09/30/21 19:08
Aroclor-1248	0.0550 U	0.110	0.0341	ug/L	1		09/30/21 19:08
Aroclor-1254	0.0550 U	0.110	0.0341	ug/L	1		09/30/21 19:08
Aroclor-1260	0.0550 U	0.110	0.0341	ug/L	1		09/30/21 19:08

Surrogates

Decachlorobiphenyl (surr)	80	40-135	%	1		09/30/21 19:08
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Batch Information

Analytical Batch: XGC10991
 Analytical Method: SW8082A
 Analyst: CDM
 Analytical Date/Time: 09/30/21 19:08
 Container ID: 1216337005-A

Prep Batch: XXX45647
 Prep Method: SW3520C
 Prep Date/Time: 09/30/21 10:25
 Prep Initial Wt./Vol.: 910 mL
 Prep Extract Vol: 1 mL



Results of CP-C

Client Sample ID: **CP-C**
 Client Project ID: **Plant 10 Swanson River Unit**
 Lab Sample ID: 1216337006
 Lab Project ID: 1216337

Collection Date: 09/24/21 11:05
 Received Date: 09/27/21 10:03
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Polychlorinated Biphenyls

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Aroclor-1016	0.0550 U	0.110	0.0343	ug/L	1		09/30/21 19:20
Aroclor-1221	0.550 U	1.10	0.343	ug/L	1		09/30/21 19:20
Aroclor-1232	0.0550 U	0.110	0.0343	ug/L	1		09/30/21 19:20
Aroclor-1242	0.0550 U	0.110	0.0343	ug/L	1		09/30/21 19:20
Aroclor-1248	0.0550 U	0.110	0.0343	ug/L	1		09/30/21 19:20
Aroclor-1254	0.0550 U	0.110	0.0343	ug/L	1		09/30/21 19:20
Aroclor-1260	0.0550 U	0.110	0.0343	ug/L	1		09/30/21 19:20

Surrogates

Decachlorobiphenyl (surr)	82.5	40-135	%	1		09/30/21 19:20
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Batch Information

Analytical Batch: XGC10991
 Analytical Method: SW8082A
 Analyst: CDM
 Analytical Date/Time: 09/30/21 19:20
 Container ID: 1216337006-A

Prep Batch: XXX45647
 Prep Method: SW3520C
 Prep Date/Time: 09/30/21 10:25
 Prep Initial Wt./Vol.: 905 mL
 Prep Extract Vol: 1 mL



Results of CP-BR

Client Sample ID: **CP-BR**
 Client Project ID: **Plant 10 Swanson River Unit**
 Lab Sample ID: 1216337007
 Lab Project ID: 1216337

Collection Date: 09/24/21 11:16
 Received Date: 09/27/21 10:03
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Polychlorinated Biphenyls

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Aroclor-1016	0.0515 U	0.103	0.0318	ug/L	1		09/30/21 19:57
Aroclor-1221	0.515 U	1.03	0.318	ug/L	1		09/30/21 19:57
Aroclor-1232	0.0515 U	0.103	0.0318	ug/L	1		09/30/21 19:57
Aroclor-1242	0.0515 U	0.103	0.0318	ug/L	1		09/30/21 19:57
Aroclor-1248	0.0515 U	0.103	0.0318	ug/L	1		09/30/21 19:57
Aroclor-1254	0.0515 U	0.103	0.0318	ug/L	1		09/30/21 19:57
Aroclor-1260	0.0515 U	0.103	0.0318	ug/L	1		09/30/21 19:57

Surrogates

Decachlorobiphenyl (surr)	80	40-135	%	1		09/30/21 19:57
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Batch Information

Analytical Batch: XGC10991
 Analytical Method: SW8082A
 Analyst: CDM
 Analytical Date/Time: 09/30/21 19:57
 Container ID: 1216337007-A

Prep Batch: XXX45647
 Prep Method: SW3520C
 Prep Date/Time: 09/30/21 10:25
 Prep Initial Wt./Vol.: 975 mL
 Prep Extract Vol: 1 mL

Method Blank

Blank ID: MB for HBN 1826338 [XXX/45647]
 Blank Lab ID: 1639102

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
 1216337001, 1216337004, 1216337005, 1216337006, 1216337007

Results by SW8082A

Parameter	Results	LOQ/CL	DL	Units
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)	92.5	40-135		%
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Batch Information

Analytical Batch: XGC10991
 Analytical Method: SW8082A
 Instrument: Agilent 7890B/G3440B ECD Front
 Analyst: CDM
 Analytical Date/Time: 9/30/2021 5:30:00PM

Prep Batch: XXX45647
 Prep Method: SW3520C
 Prep Date/Time: 9/30/2021 10:25:38AM
 Prep Initial Wt./Vol.: 1000 mL
 Prep Extract Vol: 1 mL



Blank Spike Summary

Blank Spike ID: LCS for HBN 1216337 [XXX45647]
 Blank Spike Lab ID: 1639103
 Date Analyzed: 09/30/2021 17:42

Spike Duplicate ID: LCSD for HBN 1216337 [XXX45647]
 Spike Duplicate Lab ID: 1639104
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1216337001, 1216337004, 1216337005, 1216337006, 1216337007

Results by SW8082A

Parameter	Blank Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Aroclor-1016	1	0.780	78	1	0.680	68	(46-129)	13.70	(< 30)
Aroclor-1260	1	0.900	90	1	0.830	83	(45-134)	8.09	(< 30)

Surrogates

Decachlorobiphenyl (surr)	0.400	90	0.400	88	(40-135)	2.82
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Batch Information

Analytical Batch: **XGC10991**
 Analytical Method: **SW8082A**
 Instrument: **Agilent 7890B/G3440B ECD Front**
 Analyst: **CDM**

Prep Batch: **XXX45647**
 Prep Method: **SW3520C**
 Prep Date/Time: **09/30/2021 10:25**
 Spike Init Wt./Vol.: 1 ug/L Extract Vol: 1 mL
 Dupe Init Wt./Vol.: 1 ug/L Extract Vol: 1 mL

Print Date: 10/08/2021 10:44:54AM



Billable Matrix Spike Summary

Original Sample ID: 1216337001
MS Sample ID: 1216337002 BMS
MSD Sample ID: 1216337003 BMSD

Analysis Date: 09/30/2021 18:19
Analysis Date: 09/30/2021 18:31
Analysis Date: 09/30/2021 18:43
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	0.0515U	1.03	.738	72	1.02	0.684	67	46-129	7.71	(< 30)
Aroclor-1260	0.0515U	1.03	.79	77	1.02	0.755	74	45-134	4.48	(< 30)
Surrogates										
Decachlorobiphenyl (surr)		0.410	0.338	83	0.408	0.316	78	40-135	6.76	

Batch Information

Analytical Batch: XGC10991
Analytical Method: SW8082A
Instrument: Agilent 7890B/G3440B ECD Front
Analyst: CDM
Analytical Date/Time: 9/30/2021 6:31:00PM

Prep Batch: XXX45647
Prep Method: Liquid/Liquid Extraction for SW8082 PCB
Prep Date/Time: 9/30/2021 10:25:38AM
Prep Initial Wt./Vol.: 975.00mL
Prep Extract Vol: 1.00mL

Print Date: 10/08/2021 10:44:57AM



SGS North America Inc.
CHAIN OF CUSTODY RECORD

1216337



PH 36242780

CLIENT: Stantec

CONTACT: Roxanne Russell
PHONE #: 907-250-3115

PROJECT: SWANSON
PWSID/ PERMIT#: Plant 10

REPORTS TO: CRAIG WILSON
E-MAIL:

INVOICE TO:

INSTRUCTIONS: Sections 1 - 5 m. Omissions may delay the onset of analysis.

Page 1 of 1

RESERVED for lab use	SAMPLE IDENTIFICATION	DATE mm/dd/yy	TIME HH:MM	MATRIX CODE	CONTAINERS					REMARKS/LOC ID		
					Comp Grab	MI (Multi-Incremental)	MI	MI	MI			
(1) (3) (A)	CP-A	9-23-21	1556	W	G						X	
(4) (B)	CP-F	9-23-21	1602	W	G						X	
(5) (A)	DUP-01	9-23-21	1604	W	G						X	
(6) (A)	CP-C	9-24-21	1105	W	G						X	
(7) (A)	CP-BR	9-24-21	1116	W	G						X	

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

REMARKS/LOC ID: MS/MSD

Section 3: Preservative

Section 4: DOD Project? Yes (No) No

Section 5: Data Deliverable Requirements:

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

Temp Blank °C: 16.0 USE or Ambient (17) USE (6) INTACT BROKEN ABSENT

Delivery Method: Hand Delivery Commercial Delivery

Chain of Custody Seal: (Circle)

Received By: Roxanne Russell

Received By: [Signature]

Received By: [Signature]

Received For Laboratory By: [Signature]



e-Sample Receipt Form

SGS Workorder #:

1216337



1 2 1 6 3 3 7

Review Criteria	Condition (Yes, No, N/A)	Exceptions Noted below
Chain of Custody / Temperature Requirements		<input checked="" type="checkbox"/> Exemption permitted if sampler hand carries/delivers.
Were Custody Seals intact? Note # & location	<input type="checkbox"/> N/A	Absent
COC accompanied samples?	<input checked="" type="checkbox"/> Yes	
DOD: Were samples received in COC corresponding coolers?	<input type="checkbox"/> N/A	
<input type="checkbox"/> 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)?	<input checked="" type="checkbox"/> Yes	Cooler ID: 1 @ 6.0 °C Therm. ID: D58
	<input checked="" type="checkbox"/> Yes	Cooler ID: 2 @ 4.8 °C Therm. ID: D65
	<input type="checkbox"/>	Cooler ID: @ °C Therm. ID:
	<input type="checkbox"/>	Cooler ID: @ °C Therm. ID:
	<input type="checkbox"/>	Cooler ID: @ °C Therm. ID:
*If >6°C, were samples collected <8 hours ago? <input type="checkbox"/> N/A		
If <0°C, were sample containers ice free? <input type="checkbox"/> N/A		
Note: Identify containers received at non-compliant temperature . Use form FS-0029 if more space is needed.		
Holding Time / Documentation / Sample Condition Requirements		Note: Refer to form F-083 "Sample Guide" for specific holding times.
Were samples received within holding time?	<input checked="" type="checkbox"/> Yes	
Do samples match COC** (i.e., sample IDs, dates/times collected)?	<input checked="" type="checkbox"/> Yes	
**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)	<input checked="" type="checkbox"/> Yes	
Were proper containers (type/mass/volume/preservative***) used?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> N/A ***Exemption permitted for metals (e.g,200.8/6020B).
Volatile / LL-Hg Requirements		
Were Trip Blanks (i.e., VOAs, LL-Hg) in cooler with samples?	<input type="checkbox"/> N/A	
Were all water VOA vials free of headspace (i.e., bubbles ≤ 6mm)?	<input type="checkbox"/> N/A	
Were all soil VOAs field extracted with MeOH+BFB?	<input type="checkbox"/> N/A	
Note to Client: 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>
1216337001-A	No Preservative Required	OK			
1216337001-B	No Preservative Required	OK			
1216337002-A	No Preservative Required	OK			
1216337002-B	No Preservative Required	OK			
1216337003-A	No Preservative Required	OK			
1216337003-B	No Preservative Required	OK			
1216337004-A	No Preservative Required	OK			
1216337004-B	No Preservative Required	OK			
1216337005-A	No Preservative Required	OK			
1216337005-B	No Preservative Required	OK			
1216337006-A	No Preservative Required	OK			
1216337006-B	No Preservative Required	OK			
1216337007-A	No Preservative Required	OK			
1216337007-B	No Preservative Required	OK			

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.

QN - Insufficient sample quantity provided.

Laboratory Data Review Checklist

Completed By:

Craig Wilson

Title:

Principal

Date:

04 November 2021

Consultant Firm:

Stantec Consulting

Laboratory Name:

SGS

Laboratory Report Number:

1216337

Laboratory Report Date:

08 October 2021

CS Site Name:

Swanson River Unit

ADEC File Number:

2334.38.013

Hazard Identification Number:

1303

1216337

Laboratory Report Date:

08 October 2021

CS Site Name:

Swanson River Unit

Note: Any N/A or No box checked must have an explanation in the comments box.

1. Laboratory

a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses?

Yes No N/A Comments:

b. If the samples were transferred to another “network” laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses ADEC CS approved?

Yes No N/A Comments:

2. Chain of Custody (CoC)

a. CoC information completed, signed, and dated (including released/received by)?

Yes No N/A Comments:

b. Correct analyses requested?

Yes No N/A Comments:

3. Laboratory Sample Receipt Documentation

a. Sample/cooler temperature documented and within range at receipt (0° to 6° C)?

Yes No N/A Comments:

b. Sample preservation acceptable – acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)?

Yes No N/A Comments:

No preservative required

1216337

Laboratory Report Date:

08 October 2021

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c. Sample condition documented – broken, leaking (Methanol), zero headspace (VOC vials)?

Yes No N/A Comments:

Container condition noted as OK

d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, etc.?

Yes No N/A Comments:

No discrepancies

e. Data quality or usability affected?

Comments:

N/A

4. Case Narrative

a. Present and understandable?

Yes No N/A Comments:

b. Discrepancies, errors, or QC failures identified by the lab?

Yes No N/A Comments:

c. Were all corrective actions documented?

Yes No N/A Comments:

d. What is the effect on data quality/usability according to the case narrative?

Comments:

N/A

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5. Samples Results

a. Correct analyses performed/reported as requested on COC?

Yes No N/A Comments:

b. All applicable holding times met?

Yes No N/A Comments:

c. All soils reported on a dry weight basis?

Yes No N/A Comments:

d. Are the reported LOQs less than the Cleanup Level or the minimum required detection level for the project?

Yes No N/A Comments:

e. Data quality or usability affected?

N/A

6. QC Samples

a. Method Blank

i. One method blank reported per matrix, analysis and 20 samples?

Yes No N/A Comments:

ii. All method blank results less than limit of quantitation (LOQ) or project specified objectives?

Yes No N/A Comments:

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iii. If above LOQ or project specified objectives, what samples are affected?

Comments:

iv. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes No N/A Comments:

v. Data quality or usability affected?

Comments:

No

b. Laboratory Control Sample/Duplicate (LCS/LCSD)

i. Organics – One LCS/LCSD reported per matrix, analysis and 20 samples? (LCS/LCSD required per AK methods, LCS required per SW846)

Yes No N/A Comments:

ii. Metals/Inorganics – one LCS and one sample duplicate reported per matrix, analysis and 20 samples?

Yes No N/A Comments:

iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable? (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages)

Yes No N/A Comments:

iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits and project specified objectives, if applicable? RPD reported from LCS/LCSD, and or sample/sample duplicate. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)

Yes No N/A Comments:

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v. If %R or RPD is outside of acceptable limits, what samples are affected?

Comments:

vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes No N/A Comments:

vii. Data quality or usability affected? (Use comment box to explain.)

Comments:

c. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

Note: Leave blank if not required for project

i. Organics – One MS/MSD reported per matrix, analysis and 20 samples?

Yes No N/A Comments:

ii. Metals/Inorganics – one MS and one MSD reported per matrix, analysis and 20 samples?

Yes No N/A Comments:

iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable?

Yes No N/A Comments:

iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits and project specified objectives, if applicable? RPD reported from MS/MSD, and or sample/sample duplicate.

Yes No N/A Comments:

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v. If %R or RPD is outside of acceptable limits, what samples are affected?

Comments:

vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes No N/A Comments:

vii. Data quality or usability affected? (Use comment box to explain.)

Comments:

No. Data flag was U - undetected

d. Surrogates – Organics Only or Isotope Dilution Analytes (IDA) – Isotope Dilution Methods Only

i. Are surrogate/IDA recoveries reported for organic analyses – field, QC and laboratory samples?

Yes No N/A Comments:

ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable? (AK Petroleum methods 50-150 %R for field samples and 60-120 %R for QC samples; all other analyses see the laboratory report pages)

Yes No N/A Comments:

iii. Do the sample results with failed surrogate/IDA recoveries have data flags? If so, are the data flags clearly defined?

Yes No N/A Comments:

iv. Data quality or usability affected?

Comments:

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e. Trip Blanks

i. One trip blank reported per matrix, analysis and for each cooler containing volatile samples?
(If not, enter explanation below.)

Yes No N/A Comments:

No volatiles

ii. Is the cooler used to transport the trip blank and VOA samples clearly indicated on the COC?
(If not, a comment explaining why must be entered below)

Yes No N/A Comments:

iii. All results less than LOQ and project specified objectives?

Yes No N/A Comments:

iv. If above LOQ or project specified objectives, what samples are affected?

Comments:

v. Data quality or usability affected?

Comments:

f. Field Duplicate

i. One field duplicate submitted per matrix, analysis and 10 project samples?

Yes No N/A Comments:

ii. Submitted blind to lab?

Yes No N/A Comments:

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iii. Precision – All relative percent differences (RPD) less than specified project objectives?
(Recommended: 30% water, 50% soil)

$$RPD (\%) = \text{Absolute value of: } \frac{(R_1 - R_2)}{((R_1 + R_2) / 2)} \times 100$$

Where R_1 = Sample Concentration
 R_2 = Field Duplicate Concentration

Yes No N/A Comments:

iv. Data quality or usability affected? (Use the comment box to explain why or why not.)

Comments:

g. Decontamination or Equipment Blank (If not applicable, a comment stating why must be entered below)?

Yes No N/A Comments:

No GRO, BTEX, or VOCs sampled

i. All results less than LOQ and project specified objectives?

Yes No N/A Comments:

ii. If above LOQ or project specified objectives, what samples are affected?

Comments:

iii. Data quality or usability affected?

Comments:

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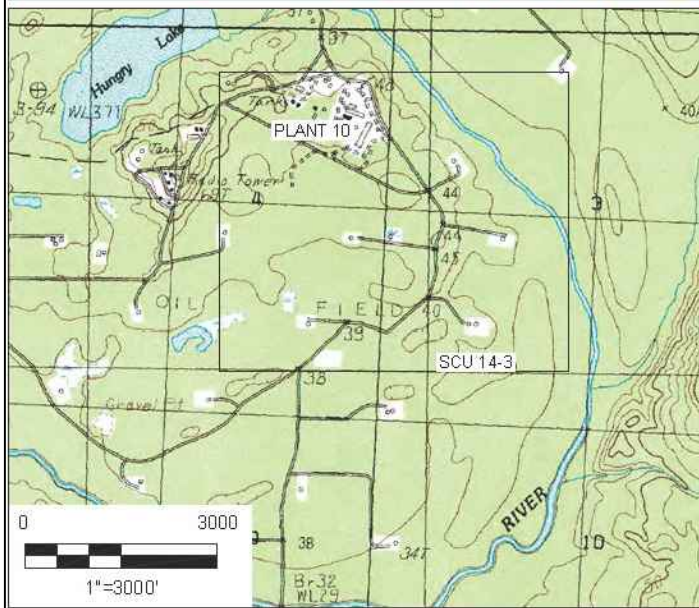
Swanson River Unit

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)

a. Defined and appropriate?

Yes No N/A

Comments:



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