

Groundwater Monitoring Report  
For  
Bird Creek Essential One Station  
29383 Seward Highway  
Milepost 100  
Bird Creek, Alaska

ADEC File # 2105.26.001

Prepared For:

Shoreside Petroleum, Inc.  
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Anchorage, Alaska 99507  
(907) 344-4571

Prepared By:

TELLUS, Ltd.  
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Anchorage, Alaska 99517  
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June 2020  
#13-001

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## **1.0 INTRODUCTION**

This Field Summary Report (report) has been prepared by TELLUS, Ltd. (TELLUS) on behalf of Shoreside Petroleum, Inc. (Shoreside) for their Bird Creek Essential One Station (station) located at 29383 Seward Highway (Milepost 100) in Bird Creek, Alaska. Shoreside has been operating this station since 1997.

State of Alaska Statutes 18 AAC 75 and 18 AAC 78, along with guidance documents for Monitoring Wells and the Field Sampling Guidance (October 2019) were followed while performing this required work. These regulations and guidelines serve as the Alaska Department of Environmental Conservation's (ADEC) environmental compliance requirements which pertain to this type of environmental assessment work.

All work was performed as described in Shoreside Petroleum Inc.'s ADEC-approved groundwater monitoring work plan for this project. This report describes the work activities performed during this effort and lists all analytical results obtained. All analytical samples submitted for laboratory testing were analyzed using approved methods by SGS, Incorporated.

## **2.0 SITE DESCRIPTION**

The specific project area is located at 29383 Seward Highway (Milepost 100) in Bird Creek, Alaska. A single building structure exists onsite which houses the combination retail fueling and convenience store facility. No service bays are present within the building structure and no automotive mechanical or maintenance services are performed onsite. Two remote fuel dispenser islands are supplied fuel from a compartmentalized underground storage tank located adjacent to the building.

The site is comprised of a large paved area encompassing the western and southern portions of the parcel. The western section incorporates three paved driveways with unpaved gravel areas located between them. The eastern majority of the parcel is unpaved and relatively level.

The site is shown in the attached Figure. The six (6) groundwater monitoring wells which make up the existing well network are located across the eastern portion of the site lot.

### **3.0 GROUNDWATER SAMPLING**

Groundwater monitoring wells MW1, MW2, MW3, MW4a, MW5 & MW6 were accessed, monitored, and some (MW1, MW2 & MW3) were then sampled for analytical testing during this effort. Groundwater wells MW1, MW2 and MW3 are the deeper (>78.0') wells onsite that access the existing static groundwater level.

Groundwater wells MW4a, MW5 and MW6 are the shallower (50.0') wells onsite that appear to collect some moisture from the upper soil horizon. Trace amounts of water have been observed in these shallower wells' casings but recharge was not observed after bailing the wells dry. These monitoring efforts confirmed these three shallower wells would not yield water columns capable of being purged and sampled according to ADEC regulations.

The three deeper groundwater monitoring wells were purged and sampled using a positive pressure pump along with new, clean, dedicated tubing. The depths to groundwater were measured at the time of purging and sampling in order to confirm that the pump's intake was within one (1) foot of the measured soil/groundwater interface at the time of the sampling effort.

All pertinent groundwater monitoring data collected during this effort was recorded in the attached Groundwater Collection Data Forms. Groundwater flow direction across the eastern portion of the site was again determined to be due south.

All of the groundwater samples were analyzed for parameters as required by ADEC for this specific project. The required analytical methods are defined below in Section 4.0 (Analytical Testing Program) of this document.

Sample packaging, handling, documentation, transportation, chain of custody, and reporting procedures were all performed as specified in ADEC guidance documents.

### **4.0 ANALYTICAL TESTING PROGRAM**

SGS, Incorporated (SGS) was the contract laboratory providing the analytical testing services during this project. SGS is certified by ADEC, EPA, and the ACOE to perform the analytical testing using the methods employed during this project.

Specific analytical testing methods utilized during this this project included:

- Volatile Organic Compounds (BTEX) using EPA Method 8260C,
- Gasoline Range Organics (GRO) using Method AK101, &
- Diesel Range Organics (DRO) using Method AK102.

SGS performed all required quality assurance and quality control measures associated with the analytical testing portion of this program.

## **5.0 ANALYTICAL RESULTS**

Table 1 lists the analytical results associated with the May 2020 groundwater monitoring event.

All three of these deeper wells (MW1, MW2 & MW3) were sampled and found to possess either undetected (U) or trace constituent concentrations estimated well below ADEC Groundwater Cleanup Levels.

These reported analytical results are consistent with previously reported quarterly groundwater monitoring results.

## **6.0 QUALITY ASSURANCE / QUALITY CONTROL**

Mr. Scott Erdmann of TELLUS was the representative who performed all of the groundwater monitoring and sampling activities on behalf of Shoreside during this project. Mr. Erdmann is qualified under 18 AAC 75, 18 AAC 78 and is a qualified person for environmental sampling as defined by ADEC.

SGS performed all required quality assurance and quality control measures associated with the analytical testing portion of this program. SGS also provided all documentation in support of the reporting requirements set forth in their ADEC Data Deliverable Packages. An ADEC Laboratory Data Review Checklist was completed, and is provided, for the analytical laboratory work order performed during this groundwater monitoring effort.

## **7.0 CONCLUSIONS**

Based on the analytical results obtained during this groundwater monitoring effort, it can be concluded that wells MW1, MW2 & MW3 were either found to possess undetected (U) or trace constituent concentrations estimated well below ADEC Groundwater Cleanup Levels.

These reported analytical results are consistent with previously reported quarterly groundwater monitoring results.

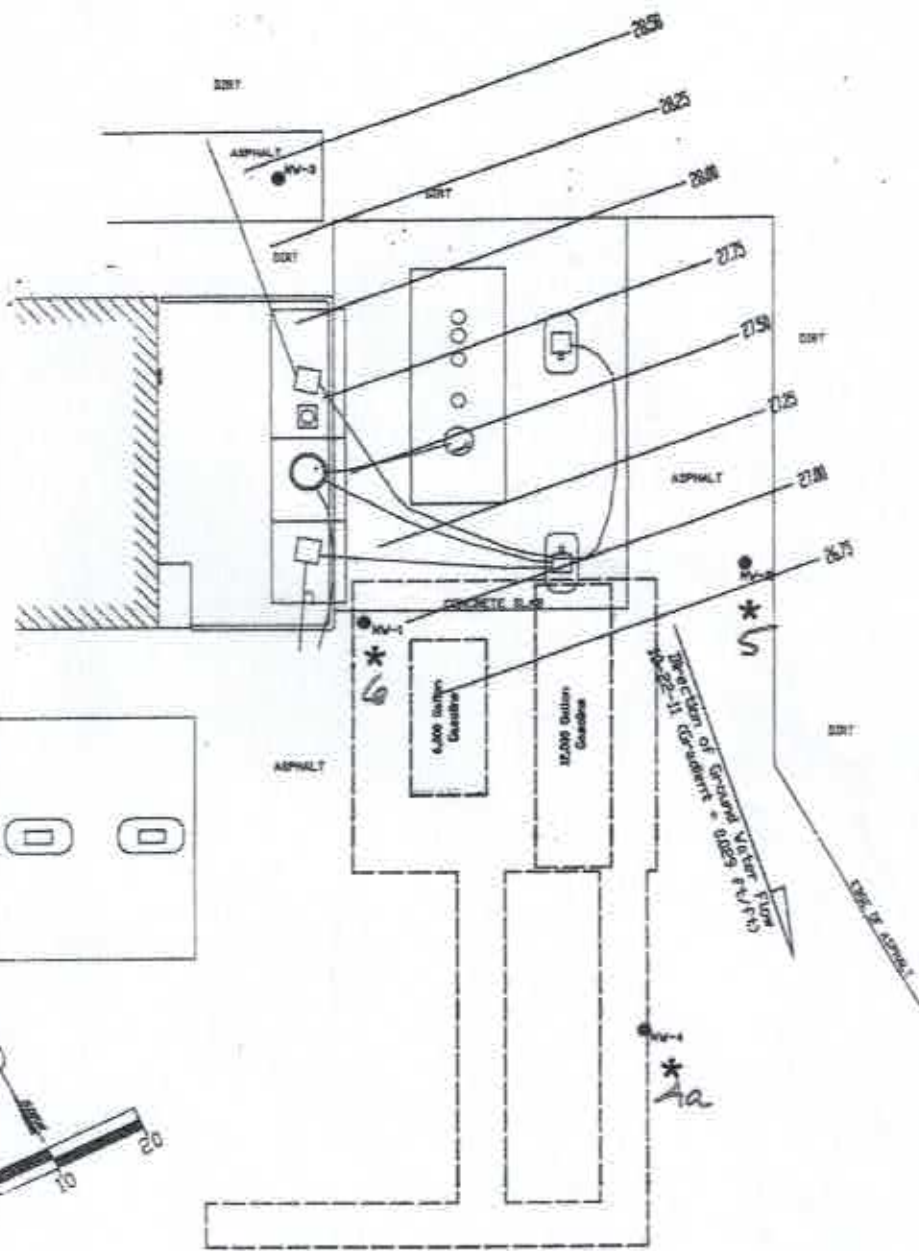
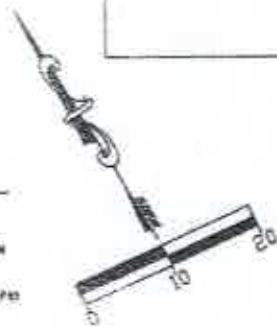
## **8.0 PROPOSED ACTIONS**

Groundwater monitoring efforts have been successfully performed at this facility during this spring quarter. This past winter quarter monitoring attempt was not successful due to ice blockages within the well casings. This limitation has been a common occurrence during the winter.

Based on the analytical results obtained, Shoreside plans on sampling this well network again in both the summer and fall of 2020. It is anticipated that the future monitoring efforts will be performed in mid-August & mid-November of 2020.

**LEGEND**

- — — — — OUTLINE OF OIL SYSTEM
- MW-1 MONITORING WELL LOCATION
- 22.0 — GROUND WATER CONTOUR (contour interval = 0.25 Ft)



\* Proposed MW

DWD FILE: Bird\_Creek\_Oil\_Monitoring\_11-22-11

**BIRD CREEK STATION - MONITORING WELL LOCATIONS AND GROUND WATER FLOW**

**ASTRO ENVIRONMENTAL SERVICES, INC.**  
 11700 Mary Avenue  
 Anchorage, AK 99515  
 (907) 770-3942  
 Fax (907) 770-3943

SCALE: 1"=20'	DRAWN BY: CJH
DATE: 11/28/11	CHECKED BY: CJH
PROJECT No. SPIBIRD	

**TABLE 1 - BIRD CREEK STATION - #13-001  
CONTAMINANT CONCENTRATIONS IN  
GROUNDWATER WELLS LOCATED ONSITE  
BIRD, ALASKA  
MAY 2020**

CONTAMINANT CONCENTRATIONS IN GROUNDWATER								
WELL NUMBER SAMPLE ID	DATE SAMPLED	DEPTH TO WATER BELOW TOP OF WELL CASING (ft)	DIESEL RANGE ORGANICS (mg/L)	GASOLINE RANGE ORGANICS (mg/L)	BENZENE (ug/L)	TOLUENE (ug/L)	ETHYL- BENZENE (ug/L)	TOTAL XYLENES (ug/L)
MW1	5/15/2020	68.9	0.213 J	0.0386 J	0.200 U	0.500 U	0.500 U	1.50 U
MW2	5/15/2020	68.8	0.268 J	0.0572 J	0.200 U	0.500 U	0.500 U	1.50 U
MW3	5/15/2020	69.1	0.329 J	0.0413 J	0.200 U	0.500 U	0.500 U	1.50 U
ADEC Groundwater Cleanup Levels Per 18 AAC 75.345, Table C.			1.5	1.3	5.0	1000	700	10,000

**NOTES:**

- 1) Diesel Range Organics (DRO) by Method AK 102.
- 2) Gasoline Range Organics (GRO) by Method AK 101.
- 3) Aromatic volatiles (BTEX) by EPA Method 8260D. Total xylenes refers to the summation of p&m-xylene and o-xylene concentrations.
- 4) J indicates the quantitation is an estimation.
- 5) U indicates the analyte was undetected at the detection limits noted.



**GROUNDWATER COLLECTION DATA FORM**

DATE: <u>MAY 1<sup>ST</sup> 2020</u>	JOB #: <u>13-001</u>
LOCATION: <u>BIRD STATION</u> <u>BIRD, ALASKA</u>	WEATHER: <u>OVERCAST</u> <u>BREEZY &amp; 48°F</u>

**MONITORING WELL DATA**

5/4/20

WELL #	<u>P4A</u>	<u>P5</u>	<u>P6</u>	<u>MW1</u>
DATE/TIME	<u>1400</u>	<u>1610</u>	<u>1500</u>	<u>1600</u>
DTW (FT.)	<u>49.6</u>	<u>49.6'</u>	<u>49.6'</u>	<u>70.4'</u>
DTB (FT.)	<u>49.7'</u>	<u>49.7'</u>	<u>49.8'</u>	<u>78.0'</u>
DTP (FT.)	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
WELL DIAMETER (INCHES)	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>
COLUMN HEIGHT (FT.)	<u>0.1'</u>	<u>0.1'</u>	<u>0.2'</u>	<u>7.6'</u>
(3) WELL VOLUMES (GAL.)				
DATE/TIME PURGED	<u>NO</u>	<u>No</u>	<u>No</u>	
PURGE METHOD				
VOLUME PURGED				
PURGED DRY?				
DTW After Purging				
Date/Time Sampled	<u>No</u>	<u>No</u>	<u>No</u>	
pH/Temp °C				
Conductivity μS				
Redox Potential (mV)				
Odor				
color				
Sheen				
Comments				

**GROUNDWATER COLLECTION DATA FORM**

DATE: <i>MAY 15<sup>th</sup> 2020</i>	JOB #: <i>13-001</i>
LOCATION: <i>BIRD STATION BIRD, ALASKA</i>	WEATHER: <i>SUNNY &amp; 58°F BREEZY</i>

**MONITORING WELL DATA**

WELL #	MW2	MW1	MW3	
DATE/TIME	<i>5/15/2020</i>	<i>1300</i>	<i>1450</i>	<i>1605</i>
DTW (FT.)	<i>68.8'</i>	<i>68.9'</i>	<i>69.1'</i>	
DTB (FT.)	<i>78.0'</i>	<i>79.9'</i>	<i>79.5'</i>	
DTP (FT.)	<i>-</i>	<i>-</i>	<i>-</i>	
WELL DIAMETER (INCHES)	<i>2</i>	<i>2</i>	<i>2</i>	
COLUMN HEIGHT (FT.)	<i>9.2'</i>	<i>11.0'</i>	<i>10.4'</i>	
(3) WELL VOLUMES (GAL.)	<i>1.6/4.8</i>	<i>1.9/5.7</i>	<i>18/5.4</i>	
DATE/TIME PURGED	<i>1345</i>	<i>1520</i>	<i>1620</i>	
PURGE METHOD	<i>S/S HURRICANE PUMP</i>			
VOLUME PURGED	<i>7.0</i>	<i>7.0</i>	<i>7.0</i>	
PURGED DRY?	<i>NO</i>	<i>NO</i>	<i>NO</i>	
DTW After Purging	<i>68.9'</i>	<i>68.9'</i>	<i>69.0'</i>	
Date/Time Sampled	<i>5/15/20</i>	<i>1415</i>	<i>1545</i>	<i>1655</i>
pH/Temp °C	<i>6.0/7°</i>	<i>6.1/5.8°</i>	<i>6.1/6.4°</i>	
Conductivity μS	<i>0.004</i>	<i>0.160</i>	<i>0.057</i>	
Redox Potential (mV)	<i>-</i>	<i>-</i>	<i>-</i>	
Odor	<i>NONE</i>	<i>NONE</i>	<i>NONE</i>	
color	<i>CLEAR</i>	<i>CLEAR</i>	<i>CLEAR</i>	
Sheen	<i>NONE</i>	<i>NONE</i>	<i>NONE</i>	
Comments	<i>DUG OUT CAP ASSEMBLY</i>	<i>-</i>	<i>SEARCH FOR COVER</i>	



# TTT Environmental

The preferred source for instrument Rentals, Sales, Service, and Supplies!

## INSTRUMENT RENTAL FUNCTION/CHECKLIST

Check-out Date: 5-14-20

Company Name: TELLUS

Sales Order #: 5200832

Rental Description: Proactive SS Hurricane Pump

Serial #: 1117

Instrument Function Test / Inspection (Correct all deficiencies)	✓	Pre-rental Check-out	Post-rental Check-in (damage may result in customer charge)	
Pump frame sits flat and straight and is not bent or damaged; reel is attached to frame snugly, spins straight, and is not bent or damaged; reel lock operates properly (if applicable):	/		No Damage	Damage
Reel handle, motor hanger/hoister, TTT property tag, factory serial number sticker, and motor lead connector on/attached to reel properly and is in proper condition:	/		No Damage	Damage
Hose barb & eye bolt is attached to pump housing properly and is in good condition; <b>entire length of motor lead wires</b> are not sliced or scraped and in good condition:	/		No Damage	Damage
Remove motor housing & inspect for general good condition, look down into motor housing and ensure filter inlet does not have excessive erosion (if it does it will look wobbled out and not circular); inspect filter inlet from below and ensure in good condition and is not loose:	/		No Damage	Damage
Remove motor module, inspect impeller for good condition & free spin; top of module for corrosion/moisture on motor contacts; dry/clean top of motor module:	/		No Damage	Damage
Inspect motor block contacts for melted plastic, corroded or overly worn motor contacts; inspect the 3 o-rings on pump block for good condition and apply light layer of silicone grease; re-install motor module and motor housing:	/			
Lay pump on table, discharge facing you, apply power quickly to pump and ensure pump jumps to the left:	/			
Perform wet pressure test by running pump at full speed in water drum; fully close valve for 20 seconds; pressure should be stable at $\geq 56$ PSI. Stable reading: <u>60</u> PSI; Motor module S/N# <u>Z514</u> :	/			
Connect controller, dry run pump at full speed for 3 seconds (only) to ensure proper operation:		Yes		
New unused spare motor module S/N# <u>Z319</u> is provided to customer (only charged to customer if used):		Yes	Customer did not use	Customer did use
Tag pump (w/S/O #) and S/O w/note for post rental wet test:	/			Yes

Signature (Check-out): [Signature]

Signature (Check-in): \_\_\_\_\_

Declared Value: \$2,000

- By renting with TTT customer agrees to the rental terms and conditions (copy available upon request).
- Notify TTT within 24hrs of receipt if anything is damaged or missing.
- Customer is responsible for all parts and equipment damaged or missing during rental.
- All instruments have been inspected and calibrated (when applicable) prior to rental.



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## INSTRUMENT RENTAL FUNCTION/CHECKLIST

Company Name: TELLUS

Sales Order #: 5200838

Rental Description: Proactive SS Hurricane 2.5 LCD Controller

Serial #: 81045

Instrument Function Test / Inspection (Correct all deficiencies)	✓	Pre-rental Check-out	Post-rental Check-in (damage may result in customer charge)	
			Yes	No
Controller housing, voltage output window, and handle is in good condition and is not bent or damaged:	✓		Yes	No
Proactive label identifying controller model, s/n tag, and TTT property tag is present and in good condition:	✓			
Controller top lid contains labels stating "For use with S.S. Hurricane pump only" and "Good motor normally reads 18+ on display":	✓			
Control dial is in good condition and properly secured to housing and turns freely ~10 revolutions:	✓	Yes		
Fuse holder is in good condition and properly attached to housing; remove fuse from top cap...when inspected fuse, top cap, and fuse holder does not show any signs of rust, moisture, or overheating. Spare 30A fuses are attached with tape to end of control housing:	✓			
Controller motor leads are securely fastened to controller and do not have any exposed wire or deep scraps or cuts; alligator clips and connector are in good condition and are securely fastened to motor lead when pulled back and forth:	✓		Yes	No
Connect controller to 12VDC power supply (do not connect to pump), turn dial fully clockwise and with volt meter measure voltage output of motor connector; voltage output at connector and voltage output display should read 28 VDC:	✓			
Connect controller to 12VDC power supply (do not connect to pump), turn dial fully clockwise voltage output display reading should be 28 VDC:		Yes	Yes	No
Turn dial fully counterclockwise (off position), wrap motor leads longways around controller housing and secure with 2 rubber bands:		Yes		

Signature (Check-out): 

Signature (Check-in): \_\_\_\_\_

Declared Value: \$1,100

- \* By renting with TTT customer agrees to the rental terms and conditions (copy available upon request).
- \* Notify TTT within 24hrs of receipt if anything is damaged or missing.
- \* Customer is responsible for all parts and equipment damaged or missing during rental.
- \* All instruments have been inspected and calibrated (when applicable) prior to rental.

Phone: (907) 770-9041

Fax: (907) 770-9046

Email: info@tttenviro.com

www.tttenviro.com



# TTT Environmental

The preferred source for instrument Rentals, Sales, Service, and Supplies!

## INSTRUMENT RENTAL FUNCTION/CHECKLIST

Company Name: 3510

S/O #: S200832

Rental Description: YSI 556

Serial #: 3510

Item Description	Checked Out?	Checked In?	Damaged / Missing?
556 Multi parameter meter with barometer	/		
Wrist strap	/		
4 meter probe assembly w/ pH/ORP, cond./temp. & DO	/		
Pelican carrying case	/		
556 Quick-start Guide & CD in ziploc bag	/		
YSI 5511 Maintenance kit (including the following):	/		
Probe installation/removal tool	/		
DO sensor set screw	/		
Allen wrench for DO sensor set screw	/		
DO sensor port plug	/		
Conductivity probe cleaning brush	/		
O-Rings for DO sensor	/		
2 - Replacement Flow cell O-ring	/		
DO membrane kit (w/2 replacement caps & instructions)	/		
DO membrane solution (at least 1/4 full)	/		
Probe Sensor Guard	/		
Transport/Calibration cup	/		
Stainless Steel sampling cup	/		
<b>Optional:</b>			
Flow cell (including the following):	/		
2 each hose barbs: 3/16", 1/4", 3/8", 1/2"	/		
Optional - 2 each YSI body couplings	/		
Both upper and lower o-rings in place on flow cell	/		

Instrument Function Test / Inspection (Correct all deficiencies)	
Pelican case general condition, rubber seal, TTT label, & foam in place and in good condition:	Yes
TTT property tag in place on top of instrument:	Yes
Instrument display face plate in good condition (only minor scratches and smears); And backlight functions properly:	Yes
Date and Time set correctly (Esc/system setup/date & time):	Yes
Shutoff time set to 60 min. (Esc/system setup/shut off time):	Yes
All data deleted (Esc/file/delete all files/delete):	Yes
Battery power bar (lower right hand corner) shows at least 30%:	Yes

Signature (Check-out): 

Signature (Check-in): \_\_\_\_\_

Declared Value: \$3,700

- By renting with TTT customer agrees to the rental terms and conditions (copy available upon request).
- Customer is responsible for all parts and equipment damaged or missing during rental.
- All instruments have been inspected and calibrated (when applicable) prior to rental.
- TTT suggests calibrating/bump testing instruments prior to each days use.

# TTT Environmental

The preferred source for Instrument Rentals, Sales, Service, and Supplies!

## CALIBRATION/INSPECTION REPORT

Calibration Date: 5/11/2020  
 Report Date (check-out): 5/14/2020

Company Name: Tellus  
 Rental Description: YSI 556

S/O #: S200832  
 Serial #: 556-15.14B103510

CALIBRATION*					
Sensor	Zero Value	Calibration*		mV	Slope/Gain
		Desired reading	Instrument reading		
Spec. Conductivity/Cond.	na	1.413 @25 C	1.413 @ 19.68 C	1.413/1274	
pH	na	7.02 @20 C	7.02 @ -9.4 C	-9.4	
pH	na	4.00 @20 C	4.00 @ 19.86 C	164	173
pH	na	10.06 @20 C	10.07 @ 19.92 C	-180.6	171
ORP	na	240mV @25 C	240.0 @ 19.93 C	-7	
D.O.	na	100% @25 C	99.8 % 19.9 C	BP= 29.85" Hg	0.8
			9.09 Mg/L		

\* Calibrated per manufacturer specifications

CALIBRATION SOLUTION INFORMATION						
Components	Conc.	Lot #	Manuf.	Accuracy	Fill Date	Exp. Date
Specific Conductivity	1.413mS/cm	WZ2	OAKTON	-	na	01/2020
pH	7.00@25C	17E1S	YSI	+/- 0.02	na	09/2020
pH	4.01@25C	18C1R	YSI	+/- 0.02	na	11/2020
pH	10.00@25C	17F3T	YSI	+/- 0.02	na	07/2020
ORP	240mV	2079	Hanna	+/- 20	na	10/2022

Calibrated by: Logan Hermans

Signature: [Signature]

INSTRUMENT INSPECTION			
Item	Pre-rental Check-out	Post-rental Check-in (*Damaged* or *No* may indicate customer charge)	
		No Damage	Damaged
Inspect all instrument components for cracks, damage, etc.		No Damage	Damaged
Meter (battery cover screws) & cable?		No Damage	Damaged
Cable is plugged into handheld?	Yes	Yes	No
Instrument powers on/off properly?	Yes	Yes	No
Battery power bar (lower right hand corner) shows at least 30%?	Yes		
Display/LCD contrast is correct and no black streaks in LCD screen exist?	Yes	Yes	No
All display readings are positive (excluding pHmV & ORP)?	Yes	Yes	No
Probe inspection?		No Damage	Damaged
Probe transport cup is attached & contains 1/4" tap water or pH 4 buffer?	Yes	Yes	No
Calibrated within the last 10 days?	Yes		
Rental checklist completed?	Yes	Yes	

Comments: \_\_\_\_\_

Signature (Check-out): [Signature]

Signature (Check-in): \_\_\_\_\_







## Laboratory Report of Analysis

To: TELLUS Ltd  
2551 Susitna Dr.  
Anchorage, AK 99517  
(907)248-8055

Report Number: **1201985**

Client Project: **Bird Station**

Dear Scott Erdmann,

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 Chuck 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.

---

Chuck Homestead  
Project Manager  
Charles.Homestead@sgs.com

Date

Print Date: 05/29/2020 11:51:19AM



## Case Narrative

SGS Client: **TELLUS Ltd**  
SGS Project: **1201985**  
Project Name/Site: **Bird Station**  
Project Contact: **Scott Erdmann**

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: 05/29/2020 11:51:20AM

## 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 (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
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>
MW1	1201985001	05/15/2020	05/18/2020	Water (Surface, Eff., Ground)
MW2	1201985002	05/15/2020	05/18/2020	Water (Surface, Eff., Ground)
MW3	1201985003	05/15/2020	05/18/2020	Water (Surface, Eff., Ground)

<u>Method</u>	<u>Method Description</u>
AK102	DRO/RRO Low Volume Water
AK101	Gasoline Range Organics (W)
SW8260D	Volatile Organic Compounds (W)

Print Date: 05/29/2020 11:51:24AM

### Detectable Results Summary

Client Sample ID: **MW1**  
 Lab Sample ID: 1201985001  
**Semivolatile Organic Fuels**  
**Volatile Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	0.213J	mg/L
Gasoline Range Organics	0.0386J	mg/L

Client Sample ID: **MW2**  
 Lab Sample ID: 1201985002  
**Semivolatile Organic Fuels**  
**Volatile Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	0.268J	mg/L
Gasoline Range Organics	0.0572J	mg/L

Client Sample ID: **MW3**  
 Lab Sample ID: 1201985003  
**Semivolatile Organic Fuels**  
**Volatile Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	0.329J	mg/L
Gasoline Range Organics	0.0413J	mg/L



**Results of MW1**

Client Sample ID: **MW1**  
Client Project ID: **Bird Station**  
Lab Sample ID: 1201985001  
Lab Project ID: 1201985

Collection Date: 05/15/20 15:45  
Received Date: 05/18/20 15:46  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Semivolatile Organic Fuels**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	0.213 J	0.600	0.180	mg/L	1		05/26/20 14:16
<b>Surrogates</b>							
5a Androstane (surr)	69.7	50-150		%	1		05/26/20 14:16

**Batch Information**

Analytical Batch: XFC15596  
Analytical Method: AK102  
Analyst: DSD  
Analytical Date/Time: 05/26/20 14:16  
Container ID: 1201985001-D

Prep Batch: XXX43094  
Prep Method: SW3535A  
Prep Date/Time: 05/22/20 12:30  
Prep Initial Wt./Vol.: 250 mL  
Prep Extract Vol: 1 mL



**Results of MW1**

Client Sample ID: **MW1**  
Client Project ID: **Bird Station**  
Lab Sample ID: 1201985001  
Lab Project ID: 1201985

Collection Date: 05/15/20 15:45  
Received Date: 05/18/20 15:46  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Volatile Fuels**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	0.0386 J	0.100	0.0310	mg/L	1		05/19/20 14:43
<b>Surrogates</b>							
4-Bromofluorobenzene (surr)	88.9	50-150		%	1		05/19/20 14:43

**Batch Information**

Analytical Batch: VFC15138  
Analytical Method: AK101  
Analyst: TAM  
Analytical Date/Time: 05/19/20 14:43  
Container ID: 1201985001-A

Prep Batch: VXX35644  
Prep Method: SW5030B  
Prep Date/Time: 05/19/20 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL



### Results of MW1

Client Sample ID: **MW1**  
Client Project ID: **Bird Station**  
Lab Sample ID: 1201985001  
Lab Project ID: 1201985

Collection Date: 05/15/20 15:45  
Received Date: 05/18/20 15:46  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

### Results by Volatile 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>
Benzene	0.200 U	0.400	0.120	ug/L	1		05/26/20 21:50
Ethylbenzene	0.500 U	1.00	0.310	ug/L	1		05/26/20 21:50
o-Xylene	0.500 U	1.00	0.310	ug/L	1		05/26/20 21:50
P & M -Xylene	1.00 U	2.00	0.620	ug/L	1		05/26/20 21:50
Toluene	0.500 U	1.00	0.310	ug/L	1		05/26/20 21:50
Xylenes (total)	1.50 U	3.00	1.00	ug/L	1		05/26/20 21:50

### Surrogates

1,2-Dichloroethane-D4 (surr)	107	81-118		%	1		05/26/20 21:50
4-Bromofluorobenzene (surr)	97.1	85-114		%	1		05/26/20 21:50
Toluene-d8 (surr)	98.6	89-112		%	1		05/26/20 21:50

### Batch Information

Analytical Batch: VMS19959  
Analytical Method: SW8260D  
Analyst: NRB  
Analytical Date/Time: 05/26/20 21:50  
Container ID: 1201985001-B

Prep Batch: VXX35662  
Prep Method: SW5030B  
Prep Date/Time: 05/26/20 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL



**Results of MW2**

Client Sample ID: **MW2**  
Client Project ID: **Bird Station**  
Lab Sample ID: 1201985002  
Lab Project ID: 1201985

Collection Date: 05/15/20 14:15  
Received Date: 05/18/20 15:46  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Semivolatile Organic Fuels**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	0.268 J	0.595	0.179	mg/L	1		05/26/20 14:26
<b>Surrogates</b>							
5a Androstane (surr)	67.9	50-150		%	1		05/26/20 14:26

**Batch Information**

Analytical Batch: XFC15596  
Analytical Method: AK102  
Analyst: DSD  
Analytical Date/Time: 05/26/20 14:26  
Container ID: 1201985002-D

Prep Batch: XXX43094  
Prep Method: SW3535A  
Prep Date/Time: 05/22/20 12:30  
Prep Initial Wt./Vol.: 252 mL  
Prep Extract Vol: 1 mL





### Results of MW2

Client Sample ID: **MW2**  
Client Project ID: **Bird Station**  
Lab Sample ID: 1201985002  
Lab Project ID: 1201985

Collection Date: 05/15/20 14:15  
Received Date: 05/18/20 15:46  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

### Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	0.0572 J	0.100	0.0310	mg/L	1		05/19/20 15:54
<b>Surrogates</b>							
4-Bromofluorobenzene (surr)	92.6	50-150		%	1		05/19/20 15:54

### Batch Information

Analytical Batch: VFC15138  
Analytical Method: AK101  
Analyst: TAM  
Analytical Date/Time: 05/19/20 15:54  
Container ID: 1201985002-A

Prep Batch: VXX35644  
Prep Method: SW5030B  
Prep Date/Time: 05/19/20 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL



### Results of MW2

Client Sample ID: **MW2**  
 Client Project ID: **Bird Station**  
 Lab Sample ID: 1201985002  
 Lab Project ID: 1201985

Collection Date: 05/15/20 14:15  
 Received Date: 05/18/20 15:46  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

### Results by Volatile 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>
Benzene	0.200 U	0.400	0.120	ug/L	1		05/26/20 22:05
Ethylbenzene	0.500 U	1.00	0.310	ug/L	1		05/26/20 22:05
o-Xylene	0.500 U	1.00	0.310	ug/L	1		05/26/20 22:05
P & M -Xylene	1.00 U	2.00	0.620	ug/L	1		05/26/20 22:05
Toluene	0.500 U	1.00	0.310	ug/L	1		05/26/20 22:05
Xylenes (total)	1.50 U	3.00	1.00	ug/L	1		05/26/20 22:05

### Surrogates

1,2-Dichloroethane-D4 (surr)	107	81-118		%	1		05/26/20 22:05
4-Bromofluorobenzene (surr)	97.4	85-114		%	1		05/26/20 22:05
Toluene-d8 (surr)	99.2	89-112		%	1		05/26/20 22:05

### Batch Information

Analytical Batch: VMS19959  
 Analytical Method: SW8260D  
 Analyst: NRB  
 Analytical Date/Time: 05/26/20 22:05  
 Container ID: 1201985002-B

Prep Batch: VXX35662  
 Prep Method: SW5030B  
 Prep Date/Time: 05/26/20 06:00  
 Prep Initial Wt./Vol.: 5 mL  
 Prep Extract Vol: 5 mL



Results of **MW3**

Client Sample ID: **MW3**  
Client Project ID: **Bird Station**  
Lab Sample ID: 1201985003  
Lab Project ID: 1201985

Collection Date: 05/15/20 16:55  
Received Date: 05/18/20 15:46  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

Results by **Semivolatile Organic Fuels**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	0.329 J	0.595	0.179	mg/L	1		05/26/20 14:36
<b>Surrogates</b>							
5a Androstane (surr)	56.8	50-150		%	1		05/26/20 14:36

Batch Information

Analytical Batch: XFC15596  
Analytical Method: AK102  
Analyst: DSD  
Analytical Date/Time: 05/26/20 14:36  
Container ID: 1201985003-D

Prep Batch: XXX43094  
Prep Method: SW3535A  
Prep Date/Time: 05/22/20 12:30  
Prep Initial Wt./Vol.: 252 mL  
Prep Extract Vol: 1 mL



**Results of MW3**

Client Sample ID: **MW3**  
Client Project ID: **Bird Station**  
Lab Sample ID: 1201985003  
Lab Project ID: 1201985

Collection Date: 05/15/20 16:55  
Received Date: 05/18/20 15:46  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Volatile Fuels**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	0.0413 J	0.100	0.0310	mg/L	1		05/19/20 16:12
<b>Surrogates</b>							
4-Bromofluorobenzene (surr)	90.6	50-150		%	1		05/19/20 16:12

**Batch Information**

Analytical Batch: VFC15138  
Analytical Method: AK101  
Analyst: TAM  
Analytical Date/Time: 05/19/20 16:12  
Container ID: 1201985003-A

Prep Batch: VXX35644  
Prep Method: SW5030B  
Prep Date/Time: 05/19/20 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL



**Results of MW3**

Client Sample ID: **MW3**  
Client Project ID: **Bird Station**  
Lab Sample ID: 1201985003  
Lab Project ID: 1201985

Collection Date: 05/15/20 16:55  
Received Date: 05/18/20 15:46  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Volatile 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>
Benzene	0.200 U	0.400	0.120	ug/L	1		05/28/20 15:57
Ethylbenzene	0.500 U	1.00	0.310	ug/L	1		05/28/20 15:57
o-Xylene	0.500 U	1.00	0.310	ug/L	1		05/28/20 15:57
P & M -Xylene	1.00 U	2.00	0.620	ug/L	1		05/28/20 15:57
Toluene	0.500 U	1.00	0.310	ug/L	1		05/28/20 15:57
Xylenes (total)	1.50 U	3.00	1.00	ug/L	1		05/28/20 15:57

**Surrogates**

1,2-Dichloroethane-D4 (surr)	108	81-118		%	1		05/28/20 15:57
4-Bromofluorobenzene (surr)	98.2	85-114		%	1		05/28/20 15:57
Toluene-d8 (surr)	99.7	89-112		%	1		05/28/20 15:57

**Batch Information**

Analytical Batch: VMS19964  
Analytical Method: SW8260D  
Analyst: NRB  
Analytical Date/Time: 05/28/20 15:57  
Container ID: 1201985003-C

Prep Batch: VXX35666  
Prep Method: SW5030B  
Prep Date/Time: 05/28/20 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL



### Method Blank

Blank ID: MB for HBN 1806782 [VXX/35644]  
Blank Lab ID: 1559990

Matrix: Water (Surface, Eff., Ground)

QC for Samples:  
1201985001, 1201985002, 1201985003

### Results by AK101

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Gasoline Range Organics	0.0394J	0.100	0.0310	mg/L
<b>Surrogates</b>				
4-Bromofluorobenzene (surr)	88.2	50-150		%

### Batch Information

Analytical Batch: VFC15138  
Analytical Method: AK101  
Instrument: Agilent 7890A PID/FID  
Analyst: TAM  
Analytical Date/Time: 5/19/2020 11:14:00AM

Prep Batch: VXX35644  
Prep Method: SW5030B  
Prep Date/Time: 5/19/2020 6:00:00AM  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL

Print Date: 05/29/2020 11:51:29AM



### Blank Spike Summary

Blank Spike ID: LCS for HBN 1201985 [VXX35644]  
Blank Spike Lab ID: 1559991  
Date Analyzed: 05/19/2020 12:08

Spike Duplicate ID: LCSD for HBN 1201985 [VXX35644]  
Spike Duplicate Lab ID: 1559992  
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1201985001, 1201985002, 1201985003

### Results by AK101

Parameter	Blank Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Gasoline Range Organics	1.00	0.980	98	1.00	0.923	92	( 60-120 )	6.00	(< 20 )

### Surrogates

4-Bromofluorobenzene (surr)	0.0500	98.5	99	0.0500	89.7	90	( 50-150 )	9.40	
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### Batch Information

Analytical Batch: VFC15138  
Analytical Method: AK101  
Instrument: Agilent 7890A PID/FID  
Analyst: TAM

Prep Batch: VXX35644  
Prep Method: SW5030B  
Prep Date/Time: 05/19/2020 06:00  
Spike Init Wt./Vol.: 1.00 mg/L Extract Vol: 5 mL  
Dupe Init Wt./Vol.: 1.00 mg/L Extract Vol: 5 mL

Print Date: 05/29/2020 11:51:31AM



### Method Blank

Blank ID: MB for HBN 1806892 [VXX/35662]

Blank Lab ID: 1560465

QC for Samples:

1201985001, 1201985002

Matrix: Water (Surface, Eff., Ground)

### Results by SW8260D

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Benzene	0.200U	0.400	0.120	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	1.00	ug/L
<b>Surrogates</b>				
1,2-Dichloroethane-D4 (surr)	105	81-118		%
4-Bromofluorobenzene (surr)	99.8	85-114		%
Toluene-d8 (surr)	98.4	89-112		%

### Batch Information

Analytical Batch: VMS19959  
Analytical Method: SW8260D  
Instrument: Agilent 7890-75MS  
Analyst: NRB  
Analytical Date/Time: 5/26/2020 1:30:00PM

Prep Batch: VXX35662  
Prep Method: SW5030B  
Prep Date/Time: 5/26/2020 6:00:00AM  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL

Print Date: 05/29/2020 11:51:34AM





### Blank Spike Summary

Blank Spike ID: LCS for HBN 1201985 [VXX35662]  
 Blank Spike Lab ID: 1560466  
 Date Analyzed: 05/26/2020 13:46

Spike Duplicate ID: LCSD for HBN 1201985  
 [VXX35662]  
 Spike Duplicate Lab ID: 1560467  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1201985001, 1201985002

### Results by SW8260D

Parameter	Blank Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Benzene	30	29.1	97	30	29.8	99	( 79-120 )	2.50	(< 20 )
Ethylbenzene	30	28.7	96	30	28.8	96	( 79-121 )	0.23	(< 20 )
o-Xylene	30	28.0	93	30	28.2	94	( 78-122 )	0.82	(< 20 )
P & M -Xylene	60	56.2	94	60	56.0	93	( 80-121 )	0.42	(< 20 )
Toluene	30	27.6	92	30	27.7	93	( 80-121 )	0.55	(< 20 )
Xylenes (total)	90	84.2	94	90	84.2	94	( 79-121 )	0.01	(< 20 )
<b>Surrogates</b>									
1,2-Dichloroethane-D4 (surr)	30	99.5	100	30	99.9	100	( 81-118 )	0.40	
4-Bromofluorobenzene (surr)	30	98.7	99	30	100	100	( 85-114 )	1.50	
Toluene-d8 (surr)	30	99.3	99	30	99.4	99	( 89-112 )	0.11	

### Batch Information

Analytical Batch: VMS19959  
 Analytical Method: SW8260D  
 Instrument: Agilent 7890-75MS  
 Analyst: NRB

Prep Batch: VXX35662  
 Prep Method: SW5030B  
 Prep Date/Time: 05/26/2020 06:00  
 Spike Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL  
 Dupe Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL

Print Date: 05/29/2020 11:51:36AM



### Method Blank

Blank ID: MB for HBN 1806953 [VXX/35666]  
Blank Lab ID: 1560730

Matrix: Water (Surface, Eff., Ground)

QC for Samples:  
1201985003

### Results by SW8260D

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Benzene	0.200U	0.400	0.120	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	1.00	ug/L
<b>Surrogates</b>				
1,2-Dichloroethane-D4 (surr)	106	81-118		%
4-Bromofluorobenzene (surr)	100	85-114		%
Toluene-d8 (surr)	98.3	89-112		%

### Batch Information

Analytical Batch: VMS19964  
Analytical Method: SW8260D  
Instrument: Agilent 7890-75MS  
Analyst: NRB  
Analytical Date/Time: 5/28/2020 11:37:00AM

Prep Batch: VXX35666  
Prep Method: SW5030B  
Prep Date/Time: 5/28/2020 6:00:00AM  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL

Print Date: 05/29/2020 11:51:39AM



### Leaching Blank

Blank ID: LB for HBN 1806894 [TCLP/10636]  
Blank Lab ID: 1560472

Matrix: Water (Surface, Eff., Ground)

QC for Samples:  
1201985003

### Results by SW8260D

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Benzene	10.0U	20.0	6.00	ug/L
<b>Surrogates</b>				
1,2-Dichloroethane-D4 (surr)	107	81-118		%
4-Bromofluorobenzene (surr)	99	85-114		%
Toluene-d8 (surr)	99.8	89-112		%

### Batch Information

Analytical Batch: VMS19964  
Analytical Method: SW8260D  
Instrument: Agilent 7890-75MS  
Analyst: NRB  
Analytical Date/Time: 5/28/2020 2:25:00PM

Prep Batch: VXX35666  
Prep Method: SW5030B  
Prep Date/Time: 5/28/2020 6:00:00AM  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL

Print Date: 05/29/2020 11:51:39AM



### Blank Spike Summary

Blank Spike ID: LCS for HBN 1201985 [VXX35666]  
 Blank Spike Lab ID: 1560731  
 Date Analyzed: 05/28/2020 13:03

Spike Duplicate ID: LCSD for HBN 1201985 [VXX35666]  
 Spike Duplicate Lab ID: 1560732  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1201985003

### Results by SW8260D

Parameter	Blank Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Benzene	30	30.3	101	30	29.7	99	( 79-120 )	2.10	(< 20 )
Ethylbenzene	30	30.0	100	30	29.6	99	( 79-121 )	1.40	(< 20 )
o-Xylene	30	29.3	98	30	28.9	96	( 78-122 )	1.40	(< 20 )
P & M -Xylene	60	57.8	96	60	57.8	96	( 80-121 )	0.05	(< 20 )
Toluene	30	28.8	96	30	28.3	95	( 80-121 )	1.70	(< 20 )
Xylenes (total)	90	87.2	97	90	86.7	96	( 79-121 )	0.51	(< 20 )
<b>Surrogates</b>									
1,2-Dichloroethane-D4 (surr)	30	100	100	30	100	100	( 81-118 )	0.35	
4-Bromofluorobenzene (surr)	30	97.5	98	30	98.2	98	( 85-114 )	0.69	
Toluene-d8 (surr)	30	100	100	30	101	101	( 89-112 )	0.23	

### Batch Information

Analytical Batch: VMS19964  
 Analytical Method: SW8260D  
 Instrument: Agilent 7890-75MS  
 Analyst: NRB

Prep Batch: VXX35666  
 Prep Method: SW5030B  
 Prep Date/Time: 05/28/2020 06:00  
 Spike Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL  
 Dupe Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL

Print Date: 05/29/2020 11:51:42AM



### Method Blank

Blank ID: MB for HBN 1806772 [XXX/43094]  
Blank Lab ID: 1559950

Matrix: Water (Surface, Eff., Ground)

QC for Samples:  
1201985001, 1201985002, 1201985003

### Results by AK102

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Diesel Range Organics	0.300U	0.600	0.180	mg/L
<b>Surrogates</b>				
5a Androstane (surr)	72.4	60-120		%

### Batch Information

Analytical Batch: XFC15596  
Analytical Method: AK102  
Instrument: Agilent 7890B F  
Analyst: DSD  
Analytical Date/Time: 5/26/2020 12:01:00PM

Prep Batch: XXX43094  
Prep Method: SW3535A  
Prep Date/Time: 5/22/2020 12:30:03PM  
Prep Initial Wt./Vol.: 250 mL  
Prep Extract Vol: 1 mL

Print Date: 05/29/2020 11:51:44AM



### Blank Spike Summary

Blank Spike ID: LCS for HBN 1201985 [XXX43094]  
Blank Spike Lab ID: 1559951  
Date Analyzed: 05/26/2020 12:31

Spike Duplicate ID: LCSD for HBN 1201985 [XXX43094]  
Spike Duplicate Lab ID: 1559952  
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1201985001, 1201985002, 1201985003

### Results by AK102

Parameter	Blank Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Diesel Range Organics	20	15.5	78	20	15.9	79	( 75-125 )	2.10	(< 20 )

### Surrogates

5a Androstane (surr)	0.4	91.2	91	0.4	93.9	94	( 60-120 )	2.90	
----------------------	-----	------	----	-----	------	----	------------	------	--

### Batch Information

Analytical Batch: XFC15596  
Analytical Method: AK102  
Instrument: Agilent 7890B F  
Analyst: DSD

Prep Batch: XXX43094  
Prep Method: SW3535A  
Prep Date/Time: 05/22/2020 12:30  
Spike Init Wt./Vol.: 20 mg/L Extract Vol: 1 mL  
Dupe Init Wt./Vol.: 20 mg/L Extract Vol: 1 mL

Print Date: 05/29/2020 11:51:47AM



SGS North America Inc.  
CHAIN OF CUSTODY RECORD

1201985



www.us.sgs.com

CLIENT: **TELLUS, LTD.** PHONE #: \_\_\_\_\_

CONTACT: **SCOTT ERDMAN** 907.529.0445

PROJECT/ PWSID/ PERMIT#: \_\_\_\_\_

PROJECT NAME: **BIRD STATION**

REPORTS TO: **TELLUS, LTD.** E-MAIL: **tellus@acsalaska.net**

INVOICE TO: **SHORETIDE PETROLEUM** QUOTE #: \_\_\_\_\_

**RUSSELL COOPER** P.O. #: **13-001**

RESERVED for lab use

DATE	TIME	MATRIX	MATRIX CODE
5/15/20	1845	WATER	
5/16/20	1415	WATER	
5/15/20	1055	WATER	

Section 2

Section 3

Instructions: Section 3 must be filled out. Omissions may delay the onset of analysis.

Preservative

Analysis\*

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

REMARKS/LOC ID

Section 4

DOD Project? Yes  No

Data Deliverable Requirements: **ADEC LEVEL IV**

Cooler ID: \_\_\_\_\_

Requested Turnaround Time and/or Special Instructions: **STANDARD THAT DIRECT INVOICE SHORETIDE PETROLEUM FOR THIS WORK ORDER. AMEN RUSSELL COOPER.**

Temp Blank °C: **-0.5 D30**

or Ambient [ ]

Chain of Custody Seal: (Circle) **INTACT** **BROKEN** **ABSENT**

Delivery Method: Hand Delivered  Commercial Delivery [ ]

Section 5

Relinquished By: (2) **Scott Erdman** Date: **5/18/2020** Time: \_\_\_\_\_

Relinquished By: (3) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Relinquished By: (4) \_\_\_\_\_ Date: **5/18/20** Time: **13:46**

Received For Laboratory By: **RFE**

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



e-Sample Receipt Form

SGS Workorder #:

1201985

1201985

Review Criteria	Condition (Yes, No, N/A)	Exceptions Noted below																																			
<b>Chain of Custody / Temperature Requirements</b>		<b>Yes</b> Exemption permitted if sampler hand carries/delivers.																																			
Were Custody Seals intact? Note # & location	N/A	absent																																			
COC accompanied samples?	Yes																																				
DOD: Were samples received in COC corresponding coolers?	N/A																																				
<input type="checkbox"/> N/A <b>**Exemption permitted if chilled &amp; collected &lt;8 hours ago, or for samples where chilling is not required</b>																																					
Temperature blank compliant* (i.e., 0-6 °C after CF)?	N/A	<table border="1"> <tr> <td>Cooler ID:</td> <td>1</td> <td>@</td> <td>-0.5</td> <td>°C</td> <td>Therm. ID:</td> <td>D30</td> </tr> <tr> <td>Cooler ID:</td> <td></td> <td>@</td> <td></td> <td>°C</td> <td>Therm. ID:</td> <td></td> </tr> <tr> <td>Cooler ID:</td> <td></td> <td>@</td> <td></td> <td>°C</td> <td>Therm. ID:</td> <td></td> </tr> <tr> <td>Cooler ID:</td> <td></td> <td>@</td> <td></td> <td>°C</td> <td>Therm. ID:</td> <td></td> </tr> <tr> <td>Cooler ID:</td> <td></td> <td>@</td> <td></td> <td>°C</td> <td>Therm. ID:</td> <td></td> </tr> </table>	Cooler ID:	1	@	-0.5	°C	Therm. ID:	D30	Cooler ID:		@		°C	Therm. ID:		Cooler ID:		@		°C	Therm. ID:		Cooler ID:		@		°C	Therm. ID:		Cooler ID:		@		°C	Therm. ID:	
Cooler ID:	1	@	-0.5	°C	Therm. ID:	D30																															
Cooler ID:		@		°C	Therm. ID:																																
Cooler ID:		@		°C	Therm. ID:																																
Cooler ID:		@		°C	Therm. ID:																																
Cooler ID:		@		°C	Therm. ID:																																
<small>If samples received without a temperature blank, the "cooler temperature" will be documented instead &amp; "COOLER TEMP" will be noted to the right. "ambient" or "chilled" will be noted if neither is available.</small>																																					
*If >6°C, were samples collected <8 hours ago?																																					
	N/A																																				
If <0°C, were sample containers ice free?																																					
	Yes																																				
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 <b>match COC**</b> (i.e., sample IDs, dates/times collected)?		Yes																																			
<small>**Note: If times differ &lt;1hr, record details &amp; login per COC.            ***Note: If sample information on containers differs from COC, SGS will default to COC information</small>																																					
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?		N/A <b>***Exemption permitted for metals (e.g.200.8/6020A).</b>																																			
		Yes																																			
<b>Volatile / LL-Hg Requirements</b>																																					
Were Trip Blanks (i.e., VOAs, LL-Hg) in cooler with samples?		No <b>no trip blank was received with the samples</b>																																			
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>
1201985001-A	HCL to pH < 2	OK			
1201985001-B	HCL to pH < 2	OK			
1201985001-C	HCL to pH < 2	OK			
1201985001-D	HCL to pH < 2	OK			
1201985001-E	HCL to pH < 2	OK			
1201985002-A	HCL to pH < 2	OK			
1201985002-B	HCL to pH < 2	OK			
1201985002-C	HCL to pH < 2	OK			
1201985002-D	HCL to pH < 2	OK			
1201985002-E	HCL to pH < 2	OK			
1201985003-A	HCL to pH < 2	OK			
1201985003-B	HCL to pH < 2	OK			
1201985003-C	HCL to pH < 2	OK			
1201985003-D	HCL to pH < 2	OK			
1201985003-E	HCL to pH < 2	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:

SCOTT ERDMANN, CPG #8084

Title:

PROFESSIONAL GEOLOGIST

Date:

5/29/2020

CS Report Name:

BIRD STATION

Report Date:

5/29/2020

Consultant Firm:

TELLUS, Ltd.

Laboratory Name:

SBS, INC.

Laboratory Report Number:

1201985

ADEC File Number:

Hazard Identification Number:

[Empty box]

1. Laboratory

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

Yes  No

Comments:

[Empty box]

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

Comments:

[Empty box]

2. Chain of Custody (CoC)

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

Yes  No

Comments:

[Empty box]

b. Correct Analyses requested?

Yes  No

Comments:

[Empty box]

3. Laboratory Sample Receipt Documentation

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

Yes  No

Comments:

[Empty box]

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

Yes  No

Comments:

[Empty box]

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

Yes  No

Comments:

[Empty box]



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

Comments:

[Empty text box for comments]

e. Data quality or usability affected?

Comments:

**DATA QUALITY ACCEPTABLE**

4. Case Narrative

a. Present and understandable?

Yes  No

Comments:

[Empty text box for comments]

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

Yes  No

Comments:

[Empty text box for comments]

c. Were all corrective actions documented?

Yes  No

Comments:

[Empty text box for comments]

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

Comments:

**DATA QUALITY ACCEPTABLE.**

5. Samples Results

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

Yes  No

Comments:

[Empty text box for comments]

b. All applicable holding times met?

Yes  No

Comments:

[Empty text box for comments]

c. All soils reported on a dry weight basis?

Yes  No

Comments:

*NO SOILS SAMPLES. WATER SAMPLES ONLY.*

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

Yes  No

Comments:

e. Data quality or usability affected?

Yes  No

Comments:

*DATA QUALITY ACCEPTABLE.*

6. QC Samples

a. Method Blank

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

Yes  No

Comments:

ii. All method blank results less than limit of quantitation (LOQ)?

Yes  No

Comments:

iii. If above LOQ, what samples are affected?

Comments:

*NONE*

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

Yes  No

Comments:

*NO FLAGS OR AFFECTED SAMPLES.*

v. Data quality or usability affected?

Comments:

*DATA QUALITY ACCEPTABLE.*



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

Comments:

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

Yes  No

Comments:

*NO METALS OR INORGANICS SAMPLES.*

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

Yes  No

Comments:

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

Yes  No

Comments:

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

Comments:

*NONE*

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

Yes  No

Comments:

*NO FLAGS, NO AFFECTED SAMPLES.*

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

Comments:

*DATA QUALITY ACCEPTABLE.*

c. Surrogates – Organics Only

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

Yes  No

Comments:

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

Yes  No

Comments:

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

Yes  No

Comments:

**NO FAILED SURROGATE RECOVERIES OR FLAGS.**

iv. Data quality or usability affected?

Comments:

**DATA QUALITY ACCEPTABLE.**

d. Trip blank – Volatile analyses only (GRO, BTEX, Volatile Chlorinated Solvents, etc.): Water and Soil

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

Yes  No

Comments:

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

Comments:

iii. All results less than LOQ?

Yes  No

Comments:

**NO TRIP BLANK**



iv. If above LOQ, what samples are affected?

Comments:

N/A

v. Data quality or usability affected?

Comments:

N/A

e. Field Duplicate

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

Yes  No

Comments:

ii. Submitted blind to lab?

Yes  No

Comments:

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

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

Where  $R_1$  = Sample Concentration  
 $R_2$  = Field Duplicate Concentration

Yes  No

Comments:

N/A

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

Comments:

N/A

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

Yes  No  Not Applicable



[ ]  
i. All results less than LOQ?

Yes  No

Comments:

[ ]  
N/A

ii. If above LOQ, what samples are affected?

Comments:

[ ]  
N/A

iii. Data quality or usability affected?

Comments:

[ ]  
N/A

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

a. Defined and appropriate?

Yes  No

Comments:

**Laboratory Report of Analysis**

To: Shoreside Petroleum Inc Texaco  
 6401 Lake Otis Parkway  
 Anchorage, AK 99507  
 (907)344-4571

Report Number: **1201985**

Client Project: **Bird Station**

Dear Russell Cooper,

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

Revised Report - This report has been reissued to bill to Shoreside Petroleum.

**Case Narrative**

SGS Client: **Shoreside Petroleum Inc Texaco**

SGS Project: **1201985**

Project Name/Site: **Bird Station**

Project Contact: **Russell Cooper**

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: 06/04/2020 4:55:16PM

### 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 6/02/2020 for Mercury by EPA200.8 and Turbidity by SM2130B) & 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 (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
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>
MW1	1201985001	05/15/2020	05/18/2020	Water (Surface, Eff., Ground)
MW2	1201985002	05/15/2020	05/18/2020	Water (Surface, Eff., Ground)
MW3	1201985003	05/15/2020	05/18/2020	Water (Surface, Eff., Ground)

<u>Method</u>	<u>Method Description</u>
AK102	DRO/RRO Low Volume Water
AK101	Gasoline Range Organics (W)
SW8260D	Volatile Organic Compounds (W)

Print Date: 06/04/2020 4:55:19PM

**Detectable Results Summary**

Client Sample ID: **MW1**  
 Lab Sample ID: 1201985001  
**Semivolatile Organic Fuels**  
**Volatile Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	0.213J	mg/L
Gasoline Range Organics	0.0386J	mg/L

Client Sample ID: **MW2**  
 Lab Sample ID: 1201985002  
**Semivolatile Organic Fuels**  
**Volatile Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	0.268J	mg/L
Gasoline Range Organics	0.0572J	mg/L

Client Sample ID: **MW3**  
 Lab Sample ID: 1201985003  
**Semivolatile Organic Fuels**  
**Volatile Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	0.329J	mg/L
Gasoline Range Organics	0.0413J	mg/L

### Results of MW1

Client Sample ID: **MW1**  
 Client Project ID: **Bird Station**  
 Lab Sample ID: 1201985001  
 Lab Project ID: 1201985

Collection Date: 05/15/20 15:45  
 Received Date: 05/18/20 15:46  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

### Results by Semivolatile Organic Fuels

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	0.213 J	0.600	0.180	mg/L	1		05/26/20 14:16
<b>Surrogates</b>							
5a Androstane (surr)	69.7	50-150		%	1		05/26/20 14:16

### Batch Information

Analytical Batch: XFC15596  
 Analytical Method: AK102  
 Analyst: DSD  
 Analytical Date/Time: 05/26/20 14:16  
 Container ID: 1201985001-D

Prep Batch: XXX43094  
 Prep Method: SW3535A  
 Prep Date/Time: 05/22/20 12:30  
 Prep Initial Wt./Vol.: 250 mL  
 Prep Extract Vol: 1 mL

### Results of MW1

Client Sample ID: **MW1**  
 Client Project ID: **Bird Station**  
 Lab Sample ID: 1201985001  
 Lab Project ID: 1201985

Collection Date: 05/15/20 15:45  
 Received Date: 05/18/20 15:46  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

### Results by Volatile Fuels

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.0386 J	0.100	0.0310	mg/L	1		05/19/20 14:43
<b>Surrogates</b>							
4-Bromofluorobenzene (surr)	88.9	50-150		%	1		05/19/20 14:43

### Batch Information

Analytical Batch: VFC15138  
 Analytical Method: AK101  
 Analyst: TAM  
 Analytical Date/Time: 05/19/20 14:43  
 Container ID: 1201985001-A

Prep Batch: VXX35644  
 Prep Method: SW5030B  
 Prep Date/Time: 05/19/20 06:00  
 Prep Initial Wt./Vol.: 5 mL  
 Prep Extract Vol: 5 mL



## Results of MW1

Client Sample ID: **MW1**  
 Client Project ID: **Bird Station**  
 Lab Sample ID: 1201985001  
 Lab Project ID: 1201985

Collection Date: 05/15/20 15:45  
 Received Date: 05/18/20 15:46  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

## Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Benzene	0.200 U	0.400	0.120	ug/L	1		05/26/20 21:50
Ethylbenzene	0.500 U	1.00	0.310	ug/L	1		05/26/20 21:50
o-Xylene	0.500 U	1.00	0.310	ug/L	1		05/26/20 21:50
P & M -Xylene	1.00 U	2.00	0.620	ug/L	1		05/26/20 21:50
Toluene	0.500 U	1.00	0.310	ug/L	1		05/26/20 21:50
Xylenes (total)	1.50 U	3.00	1.00	ug/L	1		05/26/20 21:50
<b>Surrogates</b>							
1,2-Dichloroethane-D4 (surr)	107	81-118		%	1		05/26/20 21:50
4-Bromofluorobenzene (surr)	97.1	85-114		%	1		05/26/20 21:50
Toluene-d8 (surr)	98.6	89-112		%	1		05/26/20 21:50

## Batch Information

Analytical Batch: VMS19959  
 Analytical Method: SW8260D  
 Analyst: NRB  
 Analytical Date/Time: 05/26/20 21:50  
 Container ID: 1201985001-B

Prep Batch: VXX35662  
 Prep Method: SW5030B  
 Prep Date/Time: 05/26/20 06:00  
 Prep Initial Wt./Vol.: 5 mL  
 Prep Extract Vol: 5 mL

### Results of MW2

Client Sample ID: **MW2**  
 Client Project ID: **Bird Station**  
 Lab Sample ID: 1201985002  
 Lab Project ID: 1201985

Collection Date: 05/15/20 14:15  
 Received Date: 05/18/20 15:46  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

### Results by Semivolatile Organic Fuels

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	0.268	J	0.595	0.179	mg/L	1		05/26/20 14:26
<b>Surrogates</b>								
5a Androstane (surr)	67.9		50-150		%	1		05/26/20 14:26

### Batch Information

Analytical Batch: XFC15596  
 Analytical Method: AK102  
 Analyst: DSD  
 Analytical Date/Time: 05/26/20 14:26  
 Container ID: 1201985002-D

Prep Batch: XXX43094  
 Prep Method: SW3535A  
 Prep Date/Time: 05/22/20 12:30  
 Prep Initial Wt./Vol.: 252 mL  
 Prep Extract Vol: 1 mL

### Results of MW2

Client Sample ID: **MW2**  
 Client Project ID: **Bird Station**  
 Lab Sample ID: 1201985002  
 Lab Project ID: 1201985

Collection Date: 05/15/20 14:15  
 Received Date: 05/18/20 15:46  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

### Results by Volatile Fuels

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.0572 J	0.100	0.0310	mg/L	1		05/19/20 15:54
<b>Surrogates</b>							
4-Bromofluorobenzene (surr)	92.6	50-150		%	1		05/19/20 15:54

### Batch Information

Analytical Batch: VFC15138  
 Analytical Method: AK101  
 Analyst: TAM  
 Analytical Date/Time: 05/19/20 15:54  
 Container ID: 1201985002-A

Prep Batch: VXX35644  
 Prep Method: SW5030B  
 Prep Date/Time: 05/19/20 06:00  
 Prep Initial Wt./Vol.: 5 mL  
 Prep Extract Vol: 5 mL

## Results of MW2

Client Sample ID: **MW2**  
 Client Project ID: **Bird Station**  
 Lab Sample ID: 1201985002  
 Lab Project ID: 1201985

Collection Date: 05/15/20 14:15  
 Received Date: 05/18/20 15:46  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

## Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Benzene	0.200 U	0.400	0.120	ug/L	1		05/26/20 22:05
Ethylbenzene	0.500 U	1.00	0.310	ug/L	1		05/26/20 22:05
o-Xylene	0.500 U	1.00	0.310	ug/L	1		05/26/20 22:05
P & M -Xylene	1.00 U	2.00	0.620	ug/L	1		05/26/20 22:05
Toluene	0.500 U	1.00	0.310	ug/L	1		05/26/20 22:05
Xylenes (total)	1.50 U	3.00	1.00	ug/L	1		05/26/20 22:05
<b>Surrogates</b>							
1,2-Dichloroethane-D4 (surr)	107	81-118		%	1		05/26/20 22:05
4-Bromofluorobenzene (surr)	97.4	85-114		%	1		05/26/20 22:05
Toluene-d8 (surr)	99.2	89-112		%	1		05/26/20 22:05

## Batch Information

Analytical Batch: VMS19959  
 Analytical Method: SW8260D  
 Analyst: NRB  
 Analytical Date/Time: 05/26/20 22:05  
 Container ID: 1201985002-B

Prep Batch: VXX35662  
 Prep Method: SW5030B  
 Prep Date/Time: 05/26/20 06:00  
 Prep Initial Wt./Vol.: 5 mL  
 Prep Extract Vol: 5 mL

### Results of MW3

Client Sample ID: **MW3**  
 Client Project ID: **Bird Station**  
 Lab Sample ID: 1201985003  
 Lab Project ID: 1201985

Collection Date: 05/15/20 16:55  
 Received Date: 05/18/20 15:46  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

### Results by Semivolatile Organic Fuels

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	0.329 J	0.595	0.179	mg/L	1		05/26/20 14:36
<b>Surrogates</b>							
5a Androstane (surr)	56.8	50-150		%	1		05/26/20 14:36

### Batch Information

Analytical Batch: XFC15596  
 Analytical Method: AK102  
 Analyst: DSD  
 Analytical Date/Time: 05/26/20 14:36  
 Container ID: 1201985003-D

Prep Batch: XXX43094  
 Prep Method: SW3535A  
 Prep Date/Time: 05/22/20 12:30  
 Prep Initial Wt./Vol.: 252 mL  
 Prep Extract Vol: 1 mL

### Results of MW3

Client Sample ID: **MW3**  
 Client Project ID: **Bird Station**  
 Lab Sample ID: 1201985003  
 Lab Project ID: 1201985

Collection Date: 05/15/20 16:55  
 Received Date: 05/18/20 15:46  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

### Results by Volatile Fuels

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.0413 J	0.100	0.0310	mg/L	1		05/19/20 16:12
<b>Surrogates</b>							
4-Bromofluorobenzene (surr)	90.6	50-150		%	1		05/19/20 16:12

### Batch Information

Analytical Batch: VFC15138  
 Analytical Method: AK101  
 Analyst: TAM  
 Analytical Date/Time: 05/19/20 16:12  
 Container ID: 1201985003-A

Prep Batch: VXX35644  
 Prep Method: SW5030B  
 Prep Date/Time: 05/19/20 06:00  
 Prep Initial Wt./Vol.: 5 mL  
 Prep Extract Vol: 5 mL

### Results of MW3

Client Sample ID: **MW3**  
 Client Project ID: **Bird Station**  
 Lab Sample ID: 1201985003  
 Lab Project ID: 1201985

Collection Date: 05/15/20 16:55  
 Received Date: 05/18/20 15:46  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

### Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Benzene	0.200 U	0.400	0.120	ug/L	1		05/28/20 15:57
Ethylbenzene	0.500 U	1.00	0.310	ug/L	1		05/28/20 15:57
o-Xylene	0.500 U	1.00	0.310	ug/L	1		05/28/20 15:57
P & M -Xylene	1.00 U	2.00	0.620	ug/L	1		05/28/20 15:57
Toluene	0.500 U	1.00	0.310	ug/L	1		05/28/20 15:57
Xylenes (total)	1.50 U	3.00	1.00	ug/L	1		05/28/20 15:57
<b>Surrogates</b>							
1,2-Dichloroethane-D4 (surr)	108	81-118		%	1		05/28/20 15:57
4-Bromofluorobenzene (surr)	98.2	85-114		%	1		05/28/20 15:57
Toluene-d8 (surr)	99.7	89-112		%	1		05/28/20 15:57

### Batch Information

Analytical Batch: VMS19964  
 Analytical Method: SW8260D  
 Analyst: NRB  
 Analytical Date/Time: 05/28/20 15:57  
 Container ID: 1201985003-C

Prep Batch: VXX35666  
 Prep Method: SW5030B  
 Prep Date/Time: 05/28/20 06:00  
 Prep Initial Wt./Vol.: 5 mL  
 Prep Extract Vol: 5 mL



## Method Blank

Blank ID: MB for HBN 1806782 [VXX/35644]  
 Blank Lab ID: 1559990

Matrix: Water (Surface, Eff., Ground)

QC for Samples:  
 1201985001, 1201985002, 1201985003

## Results by AK101

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Gasoline Range Organics	0.0394J	0.100	0.0310	mg/L
<b>Surrogates</b>				
4-Bromofluorobenzene (surr)	88.2	50-150		%

## Batch Information

Analytical Batch: VFC15138  
 Analytical Method: AK101  
 Instrument: Agilent 7890A PID/FID  
 Analyst: TAM  
 Analytical Date/Time: 5/19/2020 11:14:00AM

Prep Batch: VXX35644  
 Prep Method: SW5030B  
 Prep Date/Time: 5/19/2020 6:00:00AM  
 Prep Initial Wt./Vol.: 5 mL  
 Prep Extract Vol: 5 mL

Print Date: 06/04/2020 4:55:25PM

### Blank Spike Summary

Blank Spike ID: LCS for HBN 1201985 [VXX35644]  
 Blank Spike Lab ID: 1559991  
 Date Analyzed: 05/19/2020 12:08

Spike Duplicate ID: LCSD for HBN 1201985 [VXX35644]  
 Spike Duplicate Lab ID: 1559992  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1201985001, 1201985002, 1201985003

### Results by AK101

Parameter	Blank Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Gasoline Range Organics	1.00	0.980	98	1.00	0.923	92	( 60-120 )	6.00	(< 20 )
<b>Surrogates</b>									
4-Bromofluorobenzene (surr)	0.0500	98.5	99	0.0500	89.7	90	( 50-150 )	9.40	

### Batch Information

Analytical Batch: **VFC15138**  
 Analytical Method: **AK101**  
 Instrument: **Agilent 7890A PID/FID**  
 Analyst: **TAM**

Prep Batch: **VXX35644**  
 Prep Method: **SW5030B**  
 Prep Date/Time: **05/19/2020 06:00**  
 Spike Init Wt./Vol.: 1.00 mg/L Extract Vol: 5 mL  
 Dupe Init Wt./Vol.: 1.00 mg/L Extract Vol: 5 mL

Print Date: 06/04/2020 4:55:28PM

### Method Blank

Blank ID: MB for HBN 1806892 [VXX/35662]  
 Blank Lab ID: 1560465

Matrix: Water (Surface, Eff., Ground)

QC for Samples:  
 1201985001, 1201985002

### Results by SW8260D

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Benzene	0.200U	0.400	0.120	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	1.00	ug/L
<b>Surrogates</b>				
1,2-Dichloroethane-D4 (surr)	105	81-118		%
4-Bromofluorobenzene (surr)	99.8	85-114		%
Toluene-d8 (surr)	98.4	89-112		%

### Batch Information

Analytical Batch: VMS19959  
 Analytical Method: SW8260D  
 Instrument: Agilent 7890-75MS  
 Analyst: NRB  
 Analytical Date/Time: 5/26/2020 1:30:00PM

Prep Batch: VXX35662  
 Prep Method: SW5030B  
 Prep Date/Time: 5/26/2020 6:00:00AM  
 Prep Initial Wt./Vol.: 5 mL  
 Prep Extract Vol: 5 mL

Print Date: 06/04/2020 4:55:31PM

### Blank Spike Summary

Blank Spike ID: LCS for HBN 1201985 [VXX35662]  
 Blank Spike Lab ID: 1560466  
 Date Analyzed: 05/26/2020 13:46

Spike Duplicate ID: LCSD for HBN 1201985 [VXX35662]  
 Spike Duplicate Lab ID: 1560467  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1201985001, 1201985002

### Results by SW8260D

Parameter	Blank Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Benzene	30	29.1	97	30	29.8	99	( 79-120 )	2.50	(< 20 )
Ethylbenzene	30	28.7	96	30	28.8	96	( 79-121 )	0.23	(< 20 )
o-Xylene	30	28.0	93	30	28.2	94	( 78-122 )	0.82	(< 20 )
P & M -Xylene	60	56.2	94	60	56.0	93	( 80-121 )	0.42	(< 20 )
Toluene	30	27.6	92	30	27.7	93	( 80-121 )	0.55	(< 20 )
Xylenes (total)	90	84.2	94	90	84.2	94	( 79-121 )	0.01	(< 20 )
<b>Surrogates</b>									
1,2-Dichloroethane-D4 (surr)	30	99.5	100	30	99.9	100	( 81-118 )	0.40	
4-Bromofluorobenzene (surr)	30	98.7	99	30	100	100	( 85-114 )	1.50	
Toluene-d8 (surr)	30	99.3	99	30	99.4	99	( 89-112 )	0.11	

### Batch Information

Analytical Batch: VMS19959  
 Analytical Method: SW8260D  
 Instrument: Agilent 7890-75MS  
 Analyst: NRB

Prep Batch: VXX35662  
 Prep Method: SW5030B  
 Prep Date/Time: 05/26/2020 06:00  
 Spike Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL  
 Dupe Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL

### Method Blank

Blank ID: MB for HBN 1806953 [VXX/35666]  
 Blank Lab ID: 1560730

Matrix: Water (Surface, Eff., Ground)

QC for Samples:  
 1201985003

### Results by SW8260D

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Benzene	0.200U	0.400	0.120	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	1.00	ug/L
<b>Surrogates</b>				
1,2-Dichloroethane-D4 (surr)	106	81-118		%
4-Bromofluorobenzene (surr)	100	85-114		%
Toluene-d8 (surr)	98.3	89-112		%

### Batch Information

Analytical Batch: VMS19964  
 Analytical Method: SW8260D  
 Instrument: Agilent 7890-75MS  
 Analyst: NRB  
 Analytical Date/Time: 5/28/2020 11:37:00AM

Prep Batch: VXX35666  
 Prep Method: SW5030B  
 Prep Date/Time: 5/28/2020 6:00:00AM  
 Prep Initial Wt./Vol.: 5 mL  
 Prep Extract Vol: 5 mL

Print Date: 06/04/2020 4:55:36PM

## Leaching Blank

Blank ID: LB for HBN 1806894 [TCLP/10636]  
 Blank Lab ID: 1560472

Matrix: Water (Surface, Eff., Ground)

QC for Samples:  
 1201985003

## Results by SW8260D

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Benzene	10.0U	20.0	6.00	ug/L
<b>Surrogates</b>				
1,2-Dichloroethane-D4 (surr)	107	81-118		%
4-Bromofluorobenzene (surr)	99	85-114		%
Toluene-d8 (surr)	99.8	89-112		%

## Batch Information

Analytical Batch: VMS19964  
 Analytical Method: SW8260D  
 Instrument: Agilent 7890-75MS  
 Analyst: NRB  
 Analytical Date/Time: 5/28/2020 2:25:00PM

Prep Batch: VXX35666  
 Prep Method: SW5030B  
 Prep Date/Time: 5/28/2020 6:00:00AM  
 Prep Initial Wt./Vol.: 5 mL  
 Prep Extract Vol: 5 mL

Print Date: 06/04/2020 4:55:36PM

### Blank Spike Summary

Blank Spike ID: LCS for HBN 1201985 [VXX35666]  
 Blank Spike Lab ID: 1560731  
 Date Analyzed: 05/28/2020 13:03

Spike Duplicate ID: LCSD for HBN 1201985 [VXX35666]  
 Spike Duplicate Lab ID: 1560732  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1201985003

### Results by SW8260D

Parameter	Blank Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Benzene	30	30.3	101	30	29.7	99	( 79-120 )	2.10	(< 20 )
Ethylbenzene	30	30.0	100	30	29.6	99	( 79-121 )	1.40	(< 20 )
o-Xylene	30	29.3	98	30	28.9	96	( 78-122 )	1.40	(< 20 )
P & M -Xylene	60	57.8	96	60	57.8	96	( 80-121 )	0.05	(< 20 )
Toluene	30	28.8	96	30	28.3	95	( 80-121 )	1.70	(< 20 )
Xylenes (total)	90	87.2	97	90	86.7	96	( 79-121 )	0.51	(< 20 )
<b>Surrogates</b>									
1,2-Dichloroethane-D4 (surr)	30	100	100	30	100	100	( 81-118 )	0.35	
4-Bromofluorobenzene (surr)	30	97.5	98	30	98.2	98	( 85-114 )	0.69	
Toluene-d8 (surr)	30	100	100	30	101	101	( 89-112 )	0.23	

### Batch Information

Analytical Batch: VMS19964  
 Analytical Method: SW8260D  
 Instrument: Agilent 7890-75MS  
 Analyst: NRB

Prep Batch: VXX35666  
 Prep Method: SW5030B  
 Prep Date/Time: 05/28/2020 06:00  
 Spike Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL  
 Dupe Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL

Print Date: 06/04/2020 4:55:38PM

## Method Blank

Blank ID: MB for HBN 1806772 [XXX/43094]  
 Blank Lab ID: 1559950

Matrix: Water (Surface, Eff., Ground)

QC for Samples:  
 1201985001, 1201985002, 1201985003

## Results by AK102

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Diesel Range Organics	0.300U	0.600	0.180	mg/L
<b>Surrogates</b>				
5a Androstane (surr)	72.4	60-120		%

## Batch Information

Analytical Batch: XFC15596  
 Analytical Method: AK102  
 Instrument: Agilent 7890B F  
 Analyst: DSD  
 Analytical Date/Time: 5/26/2020 12:01:00PM

Prep Batch: XXX43094  
 Prep Method: SW3535A  
 Prep Date/Time: 5/22/2020 12:30:03PM  
 Prep Initial Wt./Vol.: 250 mL  
 Prep Extract Vol: 1 mL

Print Date: 06/04/2020 4:55:40PM



### Blank Spike Summary

Blank Spike ID: LCS for HBN 1201985 [XXX43094]  
 Blank Spike Lab ID: 1559951  
 Date Analyzed: 05/26/2020 12:31

Spike Duplicate ID: LCSD for HBN 1201985 [XXX43094]  
 Spike Duplicate Lab ID: 1559952  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1201985001, 1201985002, 1201985003

### Results by AK102

Parameter	Blank Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Diesel Range Organics	20	15.5	78	20	15.9	79	( 75-125 )	2.10	(< 20 )
<b>Surrogates</b>									
5a Androstane (surr)	0.4	91.2	91	0.4	93.9	94	( 60-120 )	2.90	

### Batch Information

Analytical Batch: **XFC15596**  
 Analytical Method: **AK102**  
 Instrument: **Agilent 7890B F**  
 Analyst: **DSD**

Prep Batch: **XXX43094**  
 Prep Method: **SW3535A**  
 Prep Date/Time: **05/22/2020 12:30**  
 Spike Init Wt./Vol.: 20 mg/L Extract Vol: 1 mL  
 Dupe Init Wt./Vol.: 20 mg/L Extract Vol: 1 mL

Print Date: 06/04/2020 4:55:44PM





SGS Workorder #:

1201985

1201985

Review Criteria		Condition (Yes, No, N/A)	Exceptions Noted below	
<b>Chain of Custody / Temperature Requirements</b>			<b>Yes</b>	Exemption permitted if sampler hand carries/delivers.
Were Custody Seals intact? Note # & location	N/A	absent		
COC accompanied samples?	Yes			
DOD: Were samples received in COC corresponding coolers?	N/A			
<input type="checkbox"/> <b>N/A</b> **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)?	N/A	Cooler ID:	1	@ -0.5 °C Therm. ID: D30
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.		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?	Yes			
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 <b>match COC</b> ** (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.200.8/6020A).	
<b>Volatile / LL-Hg Requirements</b>				
Were Trip Blanks (i.e., VOAs, LL-Hg) in cooler with samples?	No	no trip blank was received with the samples		
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>
1201985001-A	HCL to pH < 2	OK			
1201985001-B	HCL to pH < 2	OK			
1201985001-C	HCL to pH < 2	OK			
1201985001-D	HCL to pH < 2	OK			
1201985001-E	HCL to pH < 2	OK			
1201985002-A	HCL to pH < 2	OK			
1201985002-B	HCL to pH < 2	OK			
1201985002-C	HCL to pH < 2	OK			
1201985002-D	HCL to pH < 2	OK			
1201985002-E	HCL to pH < 2	OK			
1201985003-A	HCL to pH < 2	OK			
1201985003-B	HCL to pH < 2	OK			
1201985003-C	HCL to pH < 2	OK			
1201985003-D	HCL to pH < 2	OK			
1201985003-E	HCL to pH < 2	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.