Part 3 of 6: Appendix S of Resource Report No. 2

ATTACHMENT C: LIQUEFACTION FACILITY GROUNDWATER QUALITY REPORT – EVENT 1

Confidential

LNG FACILITIES GROUNDWATER QUALITY SAMPLING AND TESTING REPORT - EVENT 1

USAL-FG-GRZZZ-00-002016-003

Rev	Date	Revision Description	Originator	Reviewer / Endorser	Response Code	Approver
A	18-Jul-16	Issued for Review	D. Sadoff	P. Wong	2	J. Alexander
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FUGRO CONSULTANTS, INC.

Alaska LNG

LNG FACILITIES GROUNDWATER QUALITY SAMPLING AND TESTING REPORT - EVENT 1 ONSHORE LNG FACILITIES ALASKA LNG PROJECT NIKISKI, ALASKA

AKLNG REPORT NO. USAL-FG-GRZZZ-00-002016-003
REPORT NO. 04.10160001-2
EXXONMOBIL ALASKA LNG LLC (EMALL)
HOUSTON, TEXAS

Rev	Date	Revision Description	Originator	Reviewer	Approver
A	18-Jul-16	Issued for Review	D. Sadoff	K. Emery	J. Alexander
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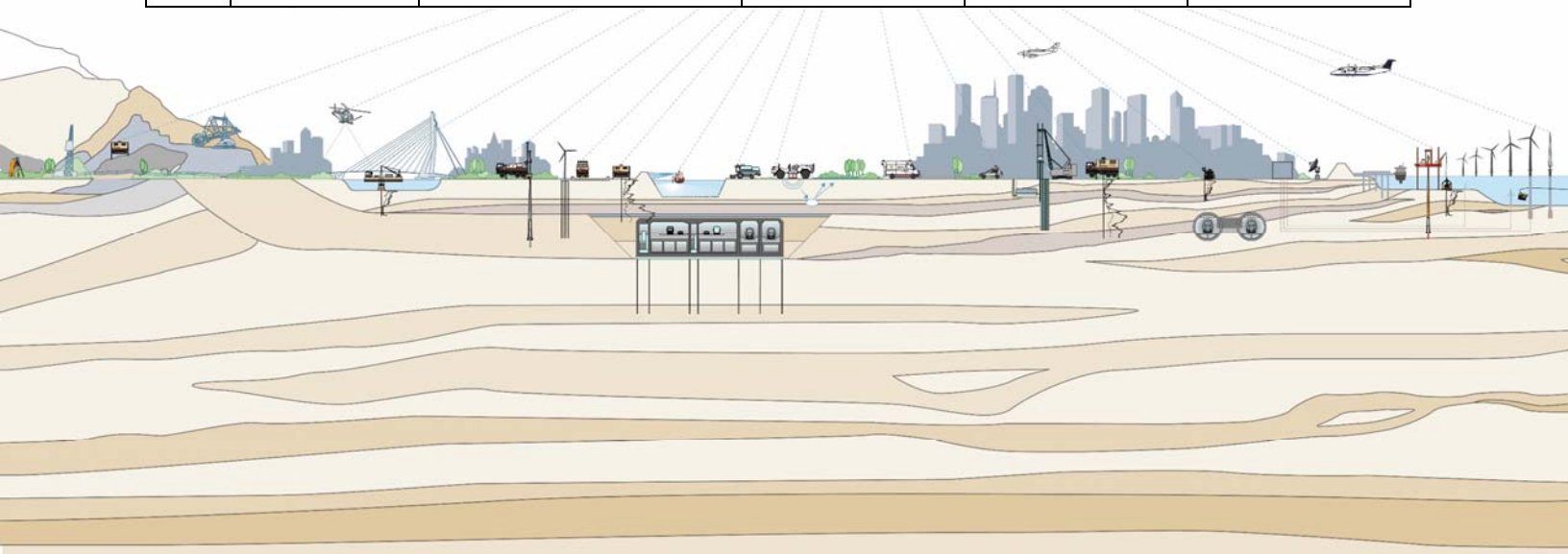

REVISION MODIFICATION LOG

Revision	Section	Description

1777 Botelho Drive, STE 262
Walnut Creek, California 94596
Tel: (925) 949-7100
Fax: (925) 949-7070

September 20, 2016
Report No. 04.10160001-2

ExxonMobil Alaska LNG LLC (EMALL)
10613 W. Sam Houston Pkwy N, Suite 500
Houston, Texas 77064

Attention: Patrick Wong
Geotechnical Engineering Advisor Alaska LNG/Technical POC

LNG FACILITIES GROUNDWATER SAMPLING AND TESTING REPORT - EVENT 1
ONSHORE LNG FACILITIES
ALASKA LNG PROJECT
NIKISKI, ALASKA

Fugro Consultants, Inc. (Fugro) is pleased to present this groundwater quality monitoring event report for the onshore facilities of the Alaska LNG Project (AKLNG) located in Nikiski, Alaska. Our services were authorized under Service Work Order No. AKLNG-FUG-US-005 Rev 0, dated March 2, 2016 in accordance with the Service Agreement No. A2275592 between Fugro and ExxonMobil Global Services Company, dated October 29, 2012. Fugro has been providing services for the proposed AKLNG Project since 2014.

We appreciate the opportunity to be of service to EMALL. Please call Mr. Abhishek Shethji, P.E., Fugro's Project Manager at (713) 369-5431, if you have any questions or comments concerning this report, or when we may be of further assistance.

Sincerely,

FUGRO CONSULTANTS, INC.
TBPE Firm Registration No. 299

Dave Sadoff, P.G. (CA), C.P.G
Associate Geologist/Hydrogeologist

Jeriann Alexander, P.E, R.E.P.A
Principal Engineer/Hydrologist

Copies Submitted: Aconex Document Control System

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1.0 INTRODUCTION

1.1 PROJECT DESCRIPTION

The Alaska Gasline Development Corporation, BP Alaska LNG LLC, ConocoPhillips Alaska LNG Company, and ExxonMobil Alaska LNG LLC (Applicants) plan to construct one integrated liquefied natural gas (LNG) Project (Project) with interdependent facilities for the purpose of liquefying supplies of natural gas from Alaska, in particular from the Point Thomson Unit (PTU) and Prudhoe Bay Unit (PBU) production fields on the Alaska North Slope (North Slope), for export in foreign commerce and opportunities for in-state deliveries of natural gas.

The Natural Gas Act (NGA), 15 U.S.C. § 717a(11) (2006), and Federal Energy Regulatory Commission (FERC) regulations, 18 C.F.R. § 153.2(d) (2014), define "LNG terminal" to include "all natural gas facilities located onshore or in State waters that are used to receive, unload, load, store, transport, gasify, liquefy, or process natural gas that is ... exported to a foreign country from the United States." With respect to this Project, the "LNG Terminal" includes the following: a liquefaction facility (Liquefaction Facility) in Southcentral Alaska; an approximately 804-mile gas pipeline (Mainline); a gas treatment plant (GTP) on the North Slope; an approximately 62-mile gas transmission line connecting the GTP to the PTU gas production facility (PTU Gas Transmission Line or PTTL); and an approximately 1-mile gas transmission line connecting the GTP to the PBU gas production facility (PBU Gas Transmission Line or PBTL). All of these facilities are essential to export natural gas in foreign commerce.

The new Liquefaction Facility would be constructed on the eastern shore of Cook Inlet just south of the existing Agrium fertilizer plant on the Kenai Peninsula, approximately 3 miles southwest of Nikiski and 8.5 miles north of Kenai (Plate 1). The Liquefaction Facility would include the structures, equipment, underlying access rights, and all other associated systems for final processing and liquefaction of natural gas, as well as storage and loading of LNG, including terminal facilities and auxiliary marine vessels used to support Marine Terminal operations (excluding LNG carriers [LNGCs]). The Liquefaction Facility would include three liquefaction trains combining to process up to approximately 20 million metric tons per annum (MMTPA) of LNG. Two 240,000-cubic-meter tanks would be constructed to store the LNG. The Liquefaction Facility would be capable of accommodating two LNG carriers. The size of LNGCs that the Liquefaction Facility would accommodate would range between 125,000–216,000-cubic-meter vessels.

EMALL contracted Fugro to investigate the site conditions of the onshore LNG facilities, marine LNG Terminal, and marine pipeline corridors. A plan of completed onshore explorations and the water quality well sampling locations are presented on Plate 2 and Plate 3. This report presents the results of the baseline groundwater quality sampling and testing study for the onshore LNG facilities conducted during the 2016 geophysical and geotechnical site investigation (G&G) program at the Alaska LNG site (Site) near Nikiski, Alaska (Plate 1).

A list of the reports (including the superseded reports) that are generated by Fugro as part of 2014, 2015 and 2016 G&G programs are presented in the table below. A copy of the below table is also separately submitted to AKLNG under document number USAL-FG-BRCTL-00-000001-000[1].

Summary of Fugro Reports Developed for 2014, 2015 and 2016 G&G Programs

G&G Program	Report Title (Superseded Reports in Gray)	AKLNG Document Number	Fugro Report Number
2014	Project Execution Plan for 2014 Onshore and Marine G&G	USAL-FG-GPZZZ-00-000001-000	04.10140094-1
	Geologic Mapping Report	USAL-FG-GRZZZ-00-000001-000	04.10140094-2
	Marine Survey Report Pipeline Corridor Route 1	USAP-FG-GRZZZ-10-000001-000	04.10140094-3
	Marine Survey Report Pipeline Corridor Route 2	USAP-FG-GRZZZ-10-000002-000	04.10140094-4
	Marine Survey Report Nearshore LNG Facilities and Approach Channel	USAL-FG-GRZZZ-90-000003-000	04.10140094-5
	Probabilistic Seismic Hazard Analysis Report(1)	USAL-FG-GRHAZ-00-000001-000	04.10140094-6
	Geophysical Survey Report	USAL-FG-GRZZZ-00-000002-000	04.10140094-7
	Geotechnical Data Report Onshore LNG Facilities	USAL-FG-GRZZZ-00-000003-000	04.10140094-8
	Geologic Hazard Report(2)	USAL-FG-GRHAZ-00-000002-000	04.10140094-9
	Hydrogeologic Report(3)	USAL-FG-GRZZZ-00-000004-000	04.10140094-10
	Groundwater Monitoring Well Installation Report	USAL-FG-GRZZZ-00-000007-000	04.10140094-10A
	Liquefaction Potential Evaluation Report(4)	USAL-FG-GRZZZ-00-000005-000	04.10140094-11
	Integrated Site Characterization and Engineering Report(5)	USAL-FG-GRZZZ-00-000006-000	04.10140094-12

[1] Fugro Consultants, Inc. (Fugro), 2016, A Roadmap to Fugro G&G Reports Covering Site Investigation Campaigns in 2014, 2015 & 2016, Alaska LNG Project, Nikiski, Alaska, AKLNG Document No. USAL-FG-BRCTL-00-000001-000, Rev.0, dated December 22, 2016.

G&G Program	Report Title (Superseded Reports in Gray)	AKLNG Document Number	Fugro Report Number
2015	Project Execution Plan for 2015 Onshore and Marine G&G Program	USAL-FG-GPZZZ-00-000002-000	04.10140334-1
	LNG Facilities Onshore Geologic Field Mapping Report	USAL-FG-GRZZZ-00-002015-004	04.10140334-2
	Pipeline Marine Geophysical Survey Report - Route 1	USAP-FG-GRZZZ-10-002015-013	04.10140334-3
	Pipeline Marine Geophysical Survey Report - Route 2	USAP-FG-GRZZZ-10-002015-014	04.10140334-4
	LNG Facilities Marine Geophysical Survey Report	USAL-FG-GRZZZ-90-002015-010	04.10140334-5
	LNG Facilities Probabilistic Seismic Hazard Analysis (PSHA) Report(1)	USAL-FG-GRHAZ-00-002015-001	04.10140334-6
	LNG Facilities Onshore Geophysical Survey Report	USAL-FG-GRZZZ-00-002015-005	04.10140334-7
	LNG Facilities Onshore Geotechnical Data Report	USAL-FG-GRZZZ-00-002015-006	04.10140334-8
	LNG Facilities Marine Geotechnical Data Report	USAL-FG-GRZZZ-90-002015-011	04.10140334-9
	LNG Facilities Geologic Hazard Report(2)	USAL-FG-GRHAZ-00-002015-002	04.10140334-10
	LNG Facilities Onshore Groundwater Monitoring Well Installation Report	USAL-FG-GRZZZ-00-002015-007	04.10140334-11
	LNG Facilities Onshore Hydrogeologic Report(3)	USAL-FG-GRZZZ-00-002015-008	04.10140334-12
	LNG Facilities Seismic Engineering Report(4)	USAL-FG-GRZZZ-00-002015-003	04.10140334-13
	LNG Facilities Onshore Integrated Site Characterization and Geotechnical Engineering Report(5)	USAL-FG-GRZZZ-00-002015-009	04.10140334-14
	LNG Facilities Marine Integrated Site Characterization and Geotechnical Engineering Report	USAL-FG-GRZZZ-90-002015-012	04.10140334-15
2016	Project Execution Plan for 2016 Onshore and Marine G&G Program	USAL-FG-GPZZZ-00-002016-001	04.10160001-1
	LNG Facilities Groundwater Quality Sampling and Testing Report – Event 1	USAL-FG-GRZZZ-00-002016-003	04.10160001-2

G&G Program	Report Title (Superseded Reports in Gray)	AKLNG Document Number	Fugro Report Number
2016	LNG Facilities Groundwater Quality Sampling and Testing Report – Event 2	USAL-FG-GRZZZ-00-002016-004	04.10160001-3
	LNG Facilities Aquifer Pump Test Well and Groundwater Observation Well Installation Report	USAL-FG-GRZZZ-00-002016-002	04.10160001-4
	LNG Facilities Onshore Geotechnical Data Report	USAL-FG-GRZZZ-00-002016-001	04.10160001-5
	LNG Facilities Onshore Hydrogeologic Report[3]	USAL-FG-GRZZZ-00-002016-007	04.10160001-8
	LNG Facilities Seismic Engineering Report[4]	USAL-FG-GRZZZ-00-002016-008	04.10160001-9
	Pipeline Marine Shallow Geotechnical Report	USAP-FG-GRZZZ-10-002016-011	04.10160001-10
	LNG Facilities Marine Survey Report	USAL-FG-GRZZZ-90-002016-010	04.10160001-11
	LNG Facilities Onshore Integrated Site Characterization and Geotechnical Engineering Report[5]	USAL-FG-GRZZZ-00-002016-009	04.10160001-12
	LNG Facilities Rigs Tenders Wharf Siltation Survey Report	USAL-FG-CRZZZ-90-002016-001	04.10160001-13

Notes: [1] Fugro Report No. 04.10140334-6 supersedes Fugro Report No. 04.10140094-6.

[2] Fugro Report No. 04.10140334-10 supersedes Fugro Report No. 04.10140094-9.

[3] Fugro Report No. 04.10160001-8 supersedes Fugro Report Nos. 04.10140094-10 and 04.10140334-12.

[4] Fugro Report No. 04.10160001-9 supersedes Fugro Report Nos. 04.10140094-11 and 04.10140334-13.

[5] Fugro Report No. 04.10160001-12 supersedes Fugro Report Nos. 04.10140094-12 and 04.10140334-14.

1.2 GENERAL SCOPE OF WORK

Fugro prepared this report to document the sampling and analyses of groundwater monitoring wells at the Alaska LNG site (Site) near Nikiski, Kenai (see Plate 1 – Vicinity Map). Since 2014, Fugro has completed multiple phases of investigations at the Site including the completion of eighty-seven (87) borings and the installation of twenty-six (26) groundwater monitoring wells. Locations of the borings and wells are depicted on Plate 2 – Investigation Plan.

For this event, water sampling and testing activities were conducted in accordance with an approved Project Execution Plan (PEP) (USAL-FG-GPZZZ-00-002016-001). Specific deviations from the PEP, which were discussed with the Client prior to implementation included the following:

- Three (3) Third-Party wells were also sampled during this baseline monitoring event.

1.3 LIMITATIONS

Fugro makes no claim or representation concerning any activity or condition falling outside the specified purposes to which this report is directed. We have conducted our work using the standard level of care and diligence normally practiced by recognized engineering firms now performing similar services under similar circumstances. We intend for this report, including all illustrations, to be used in its entirety. The information presented in this report may not apply to locations not explored by borings or areas outside the project boundaries. This information should be made available to prospective users for information only, and not as a warranty of subsurface conditions.

1.4 ELEVATION DATUMS

All coordinates are reported in Zone AK4 North, NAD83 (NSRS 2007), and are in feet. Topographic elevations for onshore areas are referenced to NAVD88. It should be noted that the marine report is referenced to Mean Low Lower Water (MLLW). The following conversion formula is used to convert the elevations from MLLW to NAVD88:

- Elevation, in feet (NAVD88) = Elevation, in feet (MLLW) – 7.32 feet

Please note that this conversion formula is only applicable at Nikiski Area. Elevations presented in this report, and the corresponding illustrations and engineering plates are all referenced to the NAVD88 datum, unless noted otherwise.

2.0 GROUNDWATER SAMPLING AND TESTING ACTIVITIES

2.1 SAMPLING ACTIVITIES

On April 19 through 23, 2016, field personnel from Fugro and SLR International Corp (SLR, a subcontractor retained by Fugro to assist with sampling activities) visited the Site to conduct the baseline groundwater sampling event. Wells which were sampled during this event are summarized in Table 1, and included six wells completed into the first water bearing unit below the Site (Water Bearing Unit 1: MW-27B, MW-39B, MW-50B, MW-74B, MW-82B, and MW-87B), six wells completed into the second encountered water bearing unit (Water Bearing Unit 2: MW-39A, MW-50A, MW-62A. MW-74A, MW-82A, and MW-91A), and three Third-Party wells (TPW-1, PQW-1, and TPW-2). The locations of all wells is shown on Plate 3 – Water Quality Well Sampling Locations – Event 1.

Depth to groundwater data was obtained on April 7, 2016 from all the Site monitoring wells by reviewing water level data collected by Micro-Diver water level data logger units previously installed in the monitoring wells. Prior to purging and sampling, the depth to groundwater was also measured in all monitoring wells to be sampled and in two of the Third-Party wells (TPW-1 and PQW-1) using a water level indicator probe. The TPW-2 well is an active, surface sealed potable well and the depth to groundwater was not measured. Groundwater depth measurements and elevations are summarized in Table 2.

Industry-standard sampling protocol was employed during the event in accordance with ASTMD 5903/4448 and with Alaska Department of Environmental Conservation (ADEC) Alaska guidelines. All wells were purged prior to drawing samples. For TPW-2, the well was purged by activating the well pump for about 10 minutes while monitoring for water quality parameters listed above. Field personnel

collected a water sample from the end of the existing garden hose reportedly attached to the well head system. Field personnel purged all other wells using a low-flow submersible pump, maintaining a pumping rate between 0.1 to 0.5 liters per minute. During purging, water levels were periodically checked with a water level indicator to monitor drawdown. Wells were purged at the low-flow rates while continuously monitoring for changes in water pH, turbidity, dissolved oxygen (DO), conductivity, Oxidation-Reduction Potential (ORP), and temperature using a flow-through cell. Water quality field parameters are summarized in Table 3. Once these parameters stabilized, purging was stopped, and water samples were obtained using low-flow pumping methods. Groundwater samples were retained in analyte-appropriate containers pre-cleaned by the laboratory in accordance with Environmental Protection Agency (EPA) protocols.

Duplicate samples were also collected during the sampling event to provide quality assurance (QA) data. The duplicate samples were collected from monitoring wells MW-74A, MW-87B, and MW-91A, and from Third-Party well TPW-1.

All sampling containers were uniquely labeled and placed in ice-filled coolers, pending delivery to the testing laboratory. Well sampling forms are presented in Appendix A.

Purge water and other investigation-derived waste liquids were containerized and temporarily stored at the ASRC Rig Tenders yard, until removed and disposed offsite on June 15, 2016. A copy of the non-hazardous waste manifest is presented in Appendix B.

2.2 CHEMICAL AND ANALYTE TESTING PROGRAM

Due to short hold time restrictions on select analyses, groundwater samples were packed and shipped daily under chain-of-custody documentation to SGS North America Inc. (SGS) in Anchorage, Alaska. Groundwater samples collected during this event were analyzed for some or all of the following parameters (see Table 1 for details):

Parameter	Method
Water Quality Suite	
Hardness	SM2340B
Alkalinity	SM21 2320B
Nitrate/Nitrite	SM21 4500NO3-F
Total Dissolved Solids (TDS)	SM21 2340C
Total Suspended Solids (TSS)	SM21 2340D
Turbidity	SM21 2130B
Chloride, Sulfate, Fluoride	EPA 300.0
pH	SM21 4500-H B
Metals (total and dissolved)	
Total Metals – Al, As, Ba, Be, Ca, Cd, Cr, Co, Cu, Fe, K, Pb, Mg, Mn, Mo, Na, Ni, Sb, Se, Tl, V, Zn	EPA 200.8
Total Mercury	EPA 1631E
Dissolved Metals – Al, As, Ba, Be, Ca, Cd, Cr, Co, Cu, Fe, K, Pb, Mg, Mn, Mo, Na, Ni, Sb, Se, Tl, V, Zn	EPA 200.8
Dissolved Mercury	EPA 1631E
Organics	
Volatile Organic Compounds	SW8260B
Semi-Volatile Organic Compounds	SW8270D
Petroleum Hydrocarbons	
Gasoline Range Organics	AK101
Diesel Range Organics	AK102
Residual Range Organics	AK103

Field pH values measured within about 15 minutes of collection are judged in the environmental assessment practice to be more representative than those measured in the laboratory. Field and laboratory measured pH values are both presented in Table 3.

2.3 ADDITIONAL SAMPLING ACTIVITIES CONDUCTED BY OTHERS

Following the initial review of laboratory data for Third-party potable well PQW-1 (refer to Section 5.4 for additional information), AKLNG requested that AECOM purge and resample the well. On June 7, 2016, AECOM removed approximately 150 gallons using a purge rate of 2 gallons per minute (gpm), while monitoring for water quality parameters listed above. Once 150 gallons were removed, AECOM slowed the pump rate to 0.5 gpm to facilitate sample collection. Groundwater samples were retained in analyte-appropriate containers pre-cleaned by the laboratory in accordance with EPA protocols. A duplicate sample was also collected. Well sampling forms are presented in Appendix A. Purge water and other investigation-derived waste liquids were containerized and temporarily stored at the ASRC Rig Tenders yard, until removed and disposed offsite on June 15, 2016. A copy of the non-hazardous waste manifest is presented in Appendix B.

Groundwater samples were packed and shipped under chain-of-custody documentation to SGS for analyses. One groundwater sample and one duplicate sample were analyzed for the following:

Parameter	Method
Organics	
Volatile Organic Compounds	SW8260B
Semi-Volatile Organic Compounds	SW8270D
Petroleum Hydrocarbons	
Gasoline Range Organics	AK101
Diesel Range Organics	AK102
Residual Range Organics	AK103

3.0 SUBSURFACE CONDITIONS

Three distinct water bearing zones have been identified during the previous 2014 and 2015 field investigations. Previous investigations installed wells within Water Bearing Units 1 and 2, which are the subject of this monitoring event.

The first encountered water bearing unit (Water Bearing Unit 1) is found within the Killey geologic unit, is unconfined, and was observed across the Site at elevations ranging between 100.12 feet (NAVD88) (at the location of well MW-82B) and 72.62 feet (NAVD88) (at the location of well MW-39B). This groundwater unit was observed present at shallower depths in proximity to surface water bodies.

Five of the groundwater monitoring wells targeting Water Bearing Unit 1 remain dry, consistent with observations made following well installation. This confirms that perched water conditions were observed during well installation, and suggests variable groundwater conditions exist within Water Bearing Unit 1. All of the dry wells are also located in the western, near-shore portion of the Site. Groundwater levels in Water Bearing Unit 1 also appear to drop as the water surface coincides with the point of discharge along the Kiley-Moosehorn transition zone along the western face of the shoreline bluff.

Water Bearing Unit 2 is present within the Moosehorn geologic unit, is semi-confined, and lies immediately beneath the Killey-Moosehorn transition zone. The potentiometric surface (the surface to which water in a confined aquifer will rise within a well) elevation in Water Bearing Unit 2 was observed ranging between 95.18 feet (NAVD88) (at the location of well MW-82A) and 16.73 feet (NAVD88) (at the location of well MW-91A). This elevation range is reflective of conditions at the most upgradient and most downgradient locations, respectively.

The groundwater surface (unconfined aquifer) and potentiometric surface (confined aquifer) elevations, as measured through April 8, 2016 using Micro-Divers installed in Site wells, are presented in Table 2. The wells cover a large spatial area, and top of well casing elevations vary from 97.75 feet (NAVD88) at well MW-39A in the southern portion of the Site to 136.24 feet (NAVD88) at well MW-14B about 5,000 feet to the north. Graphical depictions of the variation in groundwater surface elevations

within the wells, as recorded by the Micro-Divers are presented on Plates 4 and 5. It should be noted that a 7.1M earthquake occurred in the Site vicinity on January 24, 2016. Groundwater levels and/or the well casing itself at select well locations showed a response to the earthquake as captured by the Micro-Divers. The surface elevations were not re-surveyed following the earthquake event. The Micro-Diver in well MW-98B also recorded an anomalous drawdown condition possibly representative of local water withdrawal in the vicinity of the well between December 2015 to April 2016.

We also note that groundwater within well MW-98B measured at 90 feet (NAVD88) during this event, which represents a higher elevation than groundwater levels within nearby wells. With the exception of the period between November 2015 and March 2016, groundwater within this well has measured anomalously high compared to the other wells since installation. Between November 2015 and March 2016, this well showed a decrease in groundwater elevation which may be attributed to local groundwater use. The cause of the anomalous changes in groundwater elevation at this well is unknown.

Graphical depictions of the groundwater contours of the first and second water bearing units below the Site (Water Bearing Units 1 and 2) are presented as Plates 6 and 7. In general, groundwater flow within both water bearing units is in a westerly/southwesterly direction toward Cook Inlet. Groundwater gradients do fluctuate in both water bearing units as the water flows from east to west. The groundwater gradient within Water Bearing Unit 1 is 0.01 ft/ft and ranges between 0.01 to 0.04 ft/ft within Water Bearing Unit 2.

4.0 DATA QUALITY ASSESSMENT

For this event, a quality assurance program was implemented which evaluated project administration, sampling, quality control, and data review. The analytical laboratory data was reviewed for consistence with project specific requirements[2], *Alaska Department of Environmental Conservation (ADEC) Technical Memorandum, Environmental Laboratory Data and Quality Assurance* requirements (2009a), analytical method criteria, and internal laboratory criteria. The data review process included the following:

- Review of COC records for completeness, signatures, and dates;
- Identification of any sample receipt or preservation anomalies that could impact data quality;
- Verification that quality control blanks (field blanks, equipment blanks, trip blanks, etc.) were properly prepared, identified, and analyzed;
- Evaluation of whether laboratory reporting limits met project goals;
- Review of calibration verification recoveries to cofirm that the laboratory did not identify that any Calibration Verifications (CCV) recoveries or other calibration related criteria were outside applicable acceptance limits;
- Verification that surrogate analyses were within recovery acceptance limits;

[2] Method Statement, Alaska LNG Well Sampling, Issue 1 Rev 1, dated April 28, 2016.

- Verification that Laboratory Control Samples (LCS), Laboratory Control Sample Duplicates (LCSD), Matrix Spike (MS), and Matrix Spike Duplicates (MSD) were within recovery acceptance limits;
- Evaluation of the result relative percent difference between primary and duplicate field samples, LCS/LCSD, MS/MSD, and laboratory duplicates; and
- Providing an overall assessment of laboratory data quality and qualifying sample results if necessary.

SLR adhered to required and established sampling and chain-of-custody (COC) protocols as observed in the field by Fugro and by review of all field documents prepared by SLR. Based on these observations, we judge that the data collection methods were sufficient to provide representative samples for testing. It was noted that on occasion, samples included on one COC would be shipped in multiple coolers. While the laboratory did not flag any samples as being received at a temperature that would suggest sample integrity was a concern, for future events, samples documented on one COC will be prepared for each cooler. This change will allow better monitoring of the temperatures of each cooler.

SGS, the chemical testing laboratory which conducted all the testing for this event, maintains an internal quality assurance program and standard operating procedures. SLR completed a Quality Assurance Review (QAR) for the groundwater monitoring well data and one for the potable water data. SLR's findings are presented in *Laboratory Data Quality Assurance Review, April 2016 Potable Well Monitoring, Nikiski, Alaska, Alaska LNG*, dated May 31, 2016 and *Laboratory Data Quality Assurance Review, April 2016 Groundwater Monitoring, Nikiski, Alaska, Alaska LNG*, dated June 6, 2016 (Appendix C).

For non-detect results, limits of detection (LODs) were compared to applicable cleanup levels for the site. For groundwater samples, LODs were compared to 18 AAC 75.345, Table C, groundwater cleanup levels. All results of non-detected analytes had LODs at or below the applicable cleanup levels, except as noted in Appendix 1 of the QAR.

Appendix 1 of the QAR shows results of select non-detected analytes with LODs and Detection Limits (DL) not meeting project limits. All affected analytes were either VOCs by SW8260 and SVOCs by SW8270D. For all affected analytes presented in the QAR Appendix 1 table, typical methodology limitations caused the LOD and DL to not meet project goals, but in our opinion the data is still useable for this investigation. Additional laboratory testing will be performed during the next monitoring event to improve LOD compliance. Affected analytes are highlighted in Tables 5 through 9.

Based on these QAR findings, we judge that the data from this event is valid and can be relied upon for the purpose of this investigation. Please note that data collected during AECOM's sampling of Third-party potable well PQW-1 is also included in this report as the data was collected and associated with the data generated during the baseline event. However, the AECOM data package provided for Fugro's review did not include a QAR.

5.0 RESULTS OF GROUNDWATER QUALITY ANAYLSIS

Groundwater analytical results are summarized in Tables 5 through 9, and the analytical laboratory reports are presented in Appendix D. Table 4 is provided as a cross-reference between the site Well Identifications (ID) and laboratory and field sample IDs. Analytical results were compared to ADEC groundwater cleanup levels from 18 AAC.75.345 Table C (May 8, 2016). Data presented in Tables 6 and 9 were also compared to ADEC's General Discharge Permit AKG003000 Table 3 criteria.

Tables 7 and 8 provide a summary of analyses for wells located in either Water Bearing Unit 1 and 2, respectively. A summary of select data results is presented below.

5.1 WATER BEARING UNIT 1

No VOCs, SVOCs, or PAHs were detected in the six wells sampled during this monitoring event.

Detected petroleum hydrocarbon concentrations were well below respective ADEC Table C groundwater cleanup levels. Analyses detected gasoline range organics in one of the six wells sampled (MW-39B) at a concentration of 0.0388 milligrams per liter (mg/L). Diesel range organics were only detected in well MW-27B at 0.197 mg/L. Additionally, residual range organics were detected in two out of six wells at concentrations of 0.561 (MW-27B) and 0.823 mg/L (MW-74B).

Detected total and dissolved metal concentrations were below respective ADEC Table C groundwater cleanup levels, where established.

pH values measured in the field varied from 6.40 to 7.93 Standard Units (SU).

No ADEC Table C groundwater cleanup levels have been established for the water quality parameters listed below:

- Chloride in all six wells varying from 11.8 mg/L to 113 mg/L (Highest concentration detected in samples from MW-39B.)
- Alkalinity in all six wells varying from 40.6 mg/L to 58.2 mg/L (MW-27)
- Hardness as $CaCO_3$ in all six wells varying from 55.8 mg/L to 118 mg/L (MW-39B)

5.2 WATER BEARING UNIT 2

No diesel range organics, VOCs, or SVOCs were detected in the six wells sampled during this monitoring event.

Detected petroleum hydrocarbon concentrations were well below respective ADEC Table C groundwater cleanup levels. Analyses detected gasoline range organics in one of the six wells sampled (MW-39A) at a concentration of 0.0539 mg/L. Residual range organics were detected in one of six wells at a concentration of 0.352 mg/L (MW-74A).

Various total metals were detected in all six monitoring wells sampled. With the exception of arsenic, detected total metals were well below respective ADEC Table C groundwater cleanup levels, where established. Analyses detected arsenic at concentrations ranging from 0.0077 mg/L to 0.0634 mg/L, exceeding the ADEC Table C groundwater cleanup level of 0.01 mg/L in MW-39A, MW-50A, MW-62A, and MW-74A.

Various dissolved metals were also detected in the six wells sampled at concentrations below respective ADEC Table C groundwater cleanup levels, where established.

pH values measured in the field varied from 8.37 to 9.99 SU.

No ADEC Table C groundwater cleanup levels have been established for the water quality parameters listed below:

- Chloride in all six wells varying from 4.33 mg/L to 10.4 mg/L (MW-91A)
- Alkalinity in all six wells varying from 61.3 mg/L to 97.4 mg/L (MW-50A)
- Hardness as $CaCO_3$ in all six wells varying from 42.9 mg/L to 105 mg/L (MW-50A)

5.3 COMPARISON OF WATER QUALITY DATA BETWEEN WATER BEARING UNITS

As this is only the baseline event, it is difficult to draw meaningful conclusions with only one data point. However, differences in water quality do exist between the water bearing units. Of particular note is the presence of arsenic values that were detected at an order of magnitude higher in Water Bearing Unit 2 wells than in Water Bearing Unit 1 wells. Water Bearing Unit 2 also had higher levels of pH and alkalinity than Water Bearing Unit 1.

5.4 THIRD-PARTY WELLS

Analyses detected select VOCs including 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, benzene, ethylbenzene, m,p-Xylene, and styrene in the potable wells analyzed. With the exception of benzene, detected VOCs were below respective ADEC Table C groundwater cleanup levels. Benzene was detected in well PQW-1 at 0.0677 mg/L during the April 2016 sampling event. Results of testing completed by AECOM in June following the purging of 150 gallons of water from the well, reported a significant decrease in benzene concentrations (0.00073 mg/L), well under the ADEC Table C groundwater cleanup level of 0.005 mg/L.

No diesel range organics were identified in any of the potable wells sampled during this event. Analyses detected gasoline range organics in potable well PQW-1 at 0.204 mg/L in April. No gasoline range organics were detected during AECOM's resampling effort in June. Residual range organics were detected in April in all Third-Party wells at concentrations ranging from 0.221 mg/L (TPW-2), 0.419 mg/L (PQW-1), and 0.869 mg/L (TPW-1). Resampling of PQW-1 by AECOM in June, following the purging of 150 gallons of groundwater, reported a lower residual range concentration at 0.161 mg/L. All detected hydrocarbons were well below respective ADEC Table C groundwater cleanup levels.

Total (mono) Aromatic Hydrocarbons (TAHs; cumulative BTEX, chlorobenzene, and 1-2,1-3, 1-4-dichlorobenzenes concentrations) were detected ranging from 0.00083 mg/L to 0.0677 mg/L, exceeding ADEC's APT General Discharge permit criteria of 0.01 mg/L in well PQW-1. Additionally, Total Aqueous Hydrocarbons (TAqH; cumulative TAH and PAH concentrations) were detected ranging from 0.000129 mg/L to 0.0882 mg/L, exceeding ADEC's APT General Discharge permit criteria of 0.015 mg/L. However subsequent purging of the PQW-1 well significantly reduced the aqueous hydrocarbon component, therefore we anticipate encountering significantly lower TAqH levels to below the General Discharge permit criteria.

Various total metals were detected in all three potable wells sampled. With the exception of arsenic, detected total metals were well below respective ADEC Table C groundwater cleanup levels, where established. Analyses detected arsenic at 0.000555 mg/L (PQW-1) and 0.0143 mg/L (TPW-2), exceeding the ADEC Table C groundwater cleanup level of 0.01 mg/L in TPW-2. Various dissolved metals were also detected in the three potable wells at concentrations below respective ADEC Table C groundwater cleanup levels, where established.

No ADEC Table C groundwater cleanup levels have been established for the water quality parameters listed below:

- Chloride in all three wells varying from 4.2 mg/L to 24.1 mg/L (PQW-1)
- Alkalinity in all three wells varying from 41.8 mg/L to 63.6 mg/L (TPW-2)
- Hardness as $CaCO_3$ in two wells at 55.4 mg/L (PQW-1) to 69.7 mg/L (PQW-1)

5.5 CONDITIONS IN THE VICINITY OF THE FORMER QUARRY PIT

Groundwater monitoring wells MW-27B and MW-87B, and the three Third-party potable wells (TPW-1, PQW-1, and TPW-2) are located in the general vicinity of the Former Quarry Pit.

In April 2016, petroleum hydrocarbons including gasoline range (up to 0.204 mg/L, PQW-1), diesel range (0.197 mg/L, MW-27), and residual range organics (up to 0.869 mg/L, TPW-1) were identified in groundwater within the quarry area. Analyses also detected the presence of select VOCs and SVOCs in groundwater within the potable water wells, with benzene detected up to 0.0677 mg/L, exceeding ADEC's Table C groundwater cleanup level of 0.005 mg/L. As previously discussed, subsequent purging of PQW-1 by AECOM in June, significantly reduced benzene to 0.00073 mg/L, well under the ADEC Table C groundwater cleanup level of 0.005 mg/L, and the purging would also have a significant reduction of the TAqH concentration to below the General Discharge permit criteria.

Various total metals were detected in all wells located in the vicinity of the quarry. With the exception of arsenic, detected total metals were well below respective ADEC Table C groundwater cleanup levels, where established. Analyses detected arsenic up to 0.0143 mg/L, exceeding ADEC's Table C groundwater cleanup level and APT General Discharge Permit criteria of 0.01 mg/L in TPW-2. Various dissolved metals were also detected in the three potable wells at concentrations below respective ADEC Table C groundwater cleanup levels, where established.

For the water quality testing suite, testing reported the following:

- Chloride up to 30.6 mg/L (MW-27)
- Alkalinity up to to 63.6 mg/L (TPW-2)
- Hardness as $CaCO_3$ up to 77.1 mg/L (MW-27)

6.0 CONCLUSIONS AND RECOMMENDATIONS

A total of twelve (12) groundwater monitoring wells and three (3) Third-Party wells were sampled during this baseline monitoring event. Additional monitoring events are required to provide comparative data for trend analysis.

The monitoring event identified a potential concern with respect to water quality in the area of the Former Quarry where aquifer pump test water may be discharged during planned 2016 aquifer pump testing. Groundwater in the area of the quarry has been shown to contain arsenic and benzene at concentrations above ADEC's screening criteria for a potential discharge. It is acknowledged that purging had a localized effect on the water quality in well PQW-1.

Water Bearing Unit 2 water samples did show generally higher arsenic, pH and alkalinity than water samples from Water Bearing Unit 1. These and other differences in quality, need to be considered when evaluating the overall effect of discharging water from one water bearing unit into another.

ADEC has requested additional water quality data to facilitate their formal evaluation of conditions in the proposed discharge area at the Former Quarry, and their assessment of significance, if any, of changes in water quality which may result from a discharge of extracted groundwater from one water bearing unit into another. The additional water quality data would comprise results from the extraction wells and possibly additional data from existing local monitoring and Third-Party wells. Additional laboratory analytical testing will also be conducted during the next monitoring event to improve LOD compliance issues for select analytes identified during this event.

TABLES

Table 1 - Groundwater Quality Sampling Program
Alaska LNG
Nikiski, AK

Well Id	April 2016 Sampling Event (Event 1)	August 2016 Sampling Event (Event 2)	September 2016 Sampling Event (Event 2)
MW-27B	X1	not sampled	X1
MW-39A	X	not sampled	X
MW-39B	X	not sampled	X
MW-50A	X	not sampled	X
MW-50B	X	not sampled	X
MW-62A	X	not sampled	X
MW-74A	X	not sampled	X
MW-74B	X	not sampled	X
MW-82A	X	not sampled	X
MW-82B	X	not sampled	X
MW-87B	X1	not sampled	X1
MW-91A	X	not sampled	X
MW-138B	not sampled	not sampled	Z
APT-1	not available	not available	Z1
APT-2	not available	not available	Z1
APT-3	not available	not available	Z1
OW-1	not available	X	Y
OW-2	not available	Z	Y
OW-3	not available	X	Y
OW-4	not available	Z	Y
TPW-1	X1	not sampled	X1
TPW-2	X1	not sampled	X1
TPW-5	not sampled	Z	W
PQW-1	X1	not sampled	X1

Notes:

X = Initial basic suite of analytes shown in Table 2.2

1 = Samples additionally analyzed and reported per ADEC requirements for TAH (BTEX) and TAqH (PAH).

Z = Additional water supply suite of analytes will be added to the testing program during subsequent events

Y = Select additional analyte testing proposed including select chlorinated hydrocarbons, SVOC and 1,2,3-trichloropropane and 1,2-Dibromoethane with lower detection limits, and Arsenic

W= Select additional analyte testing including SVOC with lower detection limits and Arsenic

Event completed

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Table 2 - Depth to Water Measurements
Alaska LNG
Nikiski, AK

Unit	Well ID	Date	Data Collector	Well Depth (Feet)	TOC (Feet NAVD88)	Depth to Water (Feet BTOC)	Groundwater Elevation [1] (Feet NAVD88)
Water Bearing Unit 1	MW-14	11/7/2015	Micro Diver	55	136.24	44.55	94.64
		4/7/2016	Micro Diver			43.39	92.85
	MW-27B	11/7/2015	Micro Diver	56	126.79	34.06	92.62
		4/7/2016	Micro Diver			33.70	93.09
		4/19/2016	SLR			33.62	93.17
	MW-39B	11/7/2015	Micro Diver	39	97.75	25.22	72.51
		4/7/2016	Micro Diver			24.40	73.35
		4/21/2016	SLR			24.13	73.62
	MW-50B	11/7/2015	Micro Diver	55	134.67	44.75	89.51
		4/7/2016	Micro Diver			43.37	91.30
		4/20/2016	SLR			43.34	91.33
	MW-62B	11/7/2015	Micro Diver	46.5	130.44	Dry	Dry
		4/7/2016	Micro Diver			Dry	Dry
	MW-74B	11/7/2015	Micro Diver	80.5	114.38	41.06	73.33
		4/7/2016	Micro Diver			40.45	73.93
		4/22/2016	SLR			40.48	73.90
	MW-77B	11/7/2015	Micro Diver	60.5	119.04	Dry	Dry
		4/8/2016	Micro Diver			Dry	Dry
	MW-80B	11/7/2015	Micro Diver	60.9	133.64	48.86	84.79
		4/7/2016	Micro Diver			47.72	85.92
	MW-82B	11/7/2015	Micro Diver	51.3	122.45	22.93	99.50
		4/7/2016	Micro Diver			22.62	99.83
		4/20/2016	SLR			22.33	100.12
	MW-86B	11/7/2015	Micro Diver	41	127.34	Dry	Dry
		4/7/2016	Micro Diver			Dry	Dry
	MW-87B	11/7/2015	Micro Diver	51	109.85	30.14	79.72
		4/7/2016	Micro Diver			29.38	80.47
		4/19/2016	SLR			29.38	80.47
	MW-91B	11/7/2015	Micro Diver	63.6	119.87	Dry	Dry
		4/7/2016	Micro Diver			Dry	Dry
	MW-98B	11/7/2015	Micro Diver	42	125.22	35.38	89.83
		4/7/2016	Micro Diver			35.22	90.00
	MW-112B	11/7/2015	Micro Diver	61	118.67	Dry	Dry
		4/7/2016	Micro Diver			Dry	Dry
	MW-138B	11/7/2015	Micro Diver	43.3	106.22	23.29	82.89
		4/7/2016	Micro Diver			22.57	83.65
Water Bearing Unit 2	MW-39A	11/7/2015	Micro Diver	146	97.99	65.15	32.64
		4/7/2016	Micro Diver			64.86	33.13
		4/21/2016	SLR			65.00	32.99
	MW-50A	11/7/2015	Micro Diver	145	135.12	67.09	68.03
		4/7/2016	Micro Diver			65.64	69.48
		4/20/2016	SLR			65.60	69.52
	MW-62A	11/7/2015	Micro Diver	143.4	129.92	81.30	48.38
		4/7/2016	Micro Diver			79.37	50.55
		4/23/2016	SLR			79.55	50.37
	MW-74A	11/7/2015	Micro Diver	159	114.50	52.26	62.13
		4/7/2016	Micro Diver			51.13	63.37
		4/22/2016	SLR			51.79	62.71
	MW-77A	11/7/2015	MicroDiver	143.5	119.24	91.62	27.40
		4/8/2016	MicroDiver			90.41	28.83
	MW-82A	11/7/2015	Micro Diver	143.5	121.68	26.76	94.88
		4/7/2016	Micro Diver			26.16	95.52
		4/20/2016	SLR			26.50	95.18
	MW-86A	11/7/2015	Micro Diver	145	127.29	71.04	56.17
		4/7/2016	Micro Diver			69.54	57.75
	MW-91A	11/7/2015	Micro Diver	144.5	119.98	106.25	13.68
		4/7/2016	Micro Diver			104.28	15.70
		4/21/2016	SLR			103.25	16.73
	MW-98A	11/7/2015	Micro Diver	114.9	125.25	99.23	25.78
		4/7/2016	Micro Diver			98.87	26.38
	MW-112AA	11/7/2015	Micro Diver	113	118.17	99.24	18.91
		4/7/2016	Micro Diver			98.64	19.53
	MW-138A	11/7/2015	Micro Diver	147	106.24	45.72	60.41
		4/7/2016	Micro Diver			45.34	60.90
Third-Party Wells	TPW-1	4/23/2016	SLR	138.3	NM	44.20	NM
	TPW-2 [2]	4/23/2016	SLR	NM	NM	NM	NM
	PQW-1	4/23/2016	SLR	65.8	NM	23.76	NM

Notes

1 = References to NAVD88 Datum

2 = Potable Well

TOC = Top of Casing

BTOC = Below Top of Casing

SLR = SLR Consulting

NM = Not Measured

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Table 3 - Summary of Water Quality Parameters
Alaska LNG
Nikiski, Alaska

				Water Quality Parameters [1]										
Unit	Well ID	Date	Time	Flow rate (liters/min)	Purge Volume (gallons)	Temp (° C)	pH[3] (SU)	pH[4] (SU)	ORP (mV)	SC (µS/cm[3])	DO (mg/L)	Turbidity [3] (NTU)	Turbidity [5] (NTU)	Drawdown (feet)
Water Bearing Unit 1	MW-27B	4/19/2016	17:13	0.45	7.50	7.54	7.08	6.60	27.1	0.243	1.40	47.40	21	0.01
	MW-39B	4/21/2016	13:55	0.45	9.70	8.18	6.40	6.30	34.8	0.464	1.12	9.20	150	0.05
	MW-50B	4/20/2016	18:36	0.45	3.80	8.91	7.93	6.90	30.2	0.156	1.23	5.38	4.1	0.07
	MW-74B	4/22/2016	14:52	0.45	4.50	7.39	7.05	6.70	-2.7	0.140	1.05	8.00	1.6	0.00
	MW-82B	4/20/2016	13:02	0.45	5.50	7.52	7.32	6.40	43.0	0.264	4.86	28.50	10	0.00
	MW-87B	4/19/2016	13:50	0.50	3.80	7.10	7.05	6.70	55.0	0.197	1.31	3.32	9.9	0.01
Water Bearing Unit 2	MW-39A	4/21/2016	11:26	0.30	4.60	6.27	9.02	8.30	60.3	0.215	1.78	88.40	60	0.95
	MW-50A	4/20/2016	17:05	0.50	7.50	6.50	9.99	8.40	45.0	0.229	1.59	183.00	170	0.02
	MW-62A	4/23/2016	11:38	0.30	6.80	7.30	8.76	8.10	68.5	0.183	1.75	11.30	4.4	0.13
	MW-74A	4/22/2016	11:46	0.30	6.25	4.93	8.72	8.40	47.4	0.183	2.42	46.60	15	5.01
	MW-82A	4/20/2016	11:00	0.45	7.70	5.27	9.38	7.90	53.6	0.166	0.84	17.80	6.6	0.13
	MW-91A	4/21/2016	18:05	0.45	7.90	8.96	8.37	7.60	-17.8	0.244	1.06	38.70	35	0.03
Third-Party Wells	TPW-1	4/23/2016	14:22	0.50	5.50	7.96	9.32	8.10	42.3	0.114	1.72	28.30	14	0.50
	TPW-2	4/23/2016	17:45	0.75 2	18.00	6.14	9.50	8.10	-49.8	0.173	1.16	0.48	0.4 B	NM
	PQW-1	4/23/2016	16:29	0.50	6.40	6.91	10.22	7.50	-98.5	0.177	0.68	18.20	23	0.01
Screening Criteria [6]	Water Quality Standards for Designated Uses			--	--	15	6.0 ≤. pH ≤8.5		--	--	≥ 4	5 [7]		--

Notes:

MW = Monitoring Well
DTW = Depth to Water
° C = degrees Celsious
SU = Standard Units
ORP = Oxidation Reduction Potential
mV = millivolts
SC = Electrical Conductivity
µS/cm[3] = microSiemens per cubic centimeter
DO = Dissolved Oxygen
mg/L = miligrams per liter
NTU = Nephelometric Turbidity Unit
ft BTOC = Feet Below Top of Casing
N/A = Not Available
NM=Not Measured
-- = Not Established

[1] = Parameter readings last purge recorded
[2] = Measured in gallons/minute
[3] = Field Measured
[4] = Lab Analytical Result. Analyzed via Method SM21 4500-H B
[5] = Lab analytical result. Analyzed via method SM21 2130B
[6] = This screening level corresponds to the most conservative values within ADEC Water Quality Standards 18 AAC 70. Amended 2/19/2016. https://dec.alaska.gov/commish/regulations/pdfs/18%20AAC%2070.pdf
[7] = May not exceed 5 NTUs above natural conditions (NC) when the natural turbidity is 50 NTU or less, and may not have more than 10% increase in turbidity when the natural turbidity is more than 50 NTU, not to exceed a maximum increase of 25 NTU. Turbidity screening levels corresponds to ADEC Alaska General Permit AKG003000 for discharge of Aquifer Pump Test (Table 4). http://dec.alaska.gov/water/wnpspc/stormwater/docs/AKG003000_Hydrostatic_GP_Permit.pdf
[B] = The reported conventration was less than five times that of the associated method blank and/or trip blank

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Table 4 - Laboratory Report Cross-Reference
Alaska LNG
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Well ID	Sample ID	Sample Date	Lab Report ID	Lab Sample ID
MW-27B	MW27-0416	4/19/2016	1161853	1161853005; 1161853009
	MW27-0416	4/19/2016	1161901	1161901006; 1161901020
MW-39A	MW39A-0416	4/21/2016	1161901	1161901001; 1161901017
MW-39B	MW39B-0416	4/21/2016	1161901	1161901002; 1161901018
MW-50A	MW50A-0416	4/20/2016	1161876	1161876003; 1161876009
	MW50A-0416	4/20/2016	1161901	1161901010; 1161901024
MW-50B	MW50B-0416	4/20/2016	1161876	1161876004; 11618760010
	MW50B-0416	4/20/2016	1161901	1161901011; 1161901025
MW-62A	MW62A-0416	4/23/2016	1161924	1161924001; 1161924004
MW-74A	MW74A-0416	4/22/2016	1161922	1161922001; 1161922006
	MW74A-0416	4/22/2016	1161924	1161924010; 1161924017
MW-74A (Duplicate)	MW74Z-0416	4/22/2016	1161922	1161922002
MW-74B	MW74B-0416	4/21/2016	1161922	1161922003; 1161922007
	MW74B-0416	4/21/2016	1161924	1161924007; 1161924014
MW-82A	MW82A-0416	4/20/2016	1161876	1161876001; 1161876007
	MW82A-0416	4/20/2016	1161901	1161901008; 1161901022
MW-82B	MW82B-0416	4/20/2016	1161876	1161876002; 1161876008
	MW82B-0416	4/20/2016	1161901	1161901009; 1161901023
MW-87B	MW87B-0416	4/19/2016	1161853	1161853003; 1161853007
	MW87B-0416	4/19/2016	1161901	1161901005; 1161901019
MW-87B (Duplicate)	MW87Z-0416	4/19/2016	1161853	1161853004; 1161853008
	MW87Z-0416	4/19/2016	1161901	1161901007; 1161901021
MW-91A	MW91A-0416	4/21/2016	1161901	1161901003; 1161901026
	MW91A-0416	4/21/2016	1161924	1161924005; 1161924012
MW-91A (Duplicate)	MW91Z-0416	4/21/2016	1161901	1161901004; 1161901027
	MW91Z-0416	4/21/2016	1161924	1161924006; 1161924013
TPW-1	TP1-0416	4/23/2016	1161923	1161923001; 1161923005
TPW-1 (Duplicate)	TP6-0416	4/23/2016	1161923	1161923004
TPW-2	Decker-0416	4/23/2016	1161923	1161923003; 1161923007
PQW-1	PQW1-0416	4/23/2016	1161923	1161923002; 1161923006
PQW-1 (Primary)	PQW-1	6/7/2016	1162930	1162930001
PQW-1 (Duplicate)	PQW-2	6/7/2016	1162930	1162930002

Table 5 - Groundwater Sample Results for Monitoring Wells
Alaska LNG
Nikiski, AK

Method	Compound in milligrams per Liter (mg/L)	Screening Criteria: Water Quality Standards for Designated Uses [1]	Screening Criteria: ADEC Table C Groundwater Cleanup Level[2]	Sample Identification[3]: MW-27B 4/19/2016 17:15 Conc.[4]	Flag	MW-39A 04/21/2016 11:30 Conc.[4]	Flag	MW-39B 04/21/2016 14:00 Conc.[4]	Flag	MW-50A 04/20/2016 16:25 Conc.[4]	Flag
200.8 Metal, Dissolved	Aluminum, Dissolved	--	--	0.00683	=	0.0049	=, B	0.0244	=	1.72	=
	Antimony, Dissolved	--	--	[0.000025]	ND	0.000048	J	0.0000627	=	0.000194	=
	Arsenic, Dissolved	--	--	0.00109	=	0.025	=	0.00113	=	0.018	=
	Barium, Dissolved	--	--	0.0687	=	0.00951	=	0.059	=	0.0374	=
	Beryllium, Dissolved	--	--	[0.000025]	ND	[0.000025]	ND	0.0000299	J	[0.000025]	ND
	Bismuth, Dissolved	--	--	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND
	Boron, Dissolved	--	--	0.00383	J	0.135	=	0.00697	=	0.0207	=
	Cadmium, Dissolved	--	--	[0.000025]	ND	[0.000025]	ND	0.0000574	=	[0.000025]	ND
	Calcium, Dissolved	--	--	19.6	=	10.5	=	30	=	28.7	=
	Chromium, Dissolved	--	--	0.000641	=	0.00111	=	0.000557	=	0.00389	=
	Cobalt, Dissolved	--	--	0.000356	=	0.0000832	=	0.0131	=	0.00072	=
	Copper, Dissolved	--	--	0.00102	=	0.0002	J	0.000843	=	0.00359	=
	Iron, Dissolved	--	--	9.4	=	0.0373	=	7.43	=	1.68	=
	Lead, Dissolved	--	--	[0.00005]	ND	[0.00005]	ND	[0.00005]	ND	0.00107	=
	Magnesium, Dissolved	--	--	6.86	=	4.05	=	10.5	=	8.23	=
	Manganese, Dissolved	--	--	0.459	=	0.0613	=	0.916	=	0.129	=
	Molybdenum, Dissolved	--	--	0.000199	=	0.00186	=	0.000335	=	0.000898	=
	Nickel, Dissolved	--	--	0.00204	=	0.00183	=	0.0208	=	0.00335	=
	Potassium, Dissolved	--	--	2.14	=	5.1	=	3.11	=	4.9	=
	Selenium, Dissolved	--	--	[0.0005]	ND	[0.0005]	ND	0.000843	J	[0.0005]	ND
	Silicon, Dissolved	--	--	16.6	=, QH	14.1	=	14.1	=	19.3	=, QH
	Silver, Dissolved	--	--	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND
	Sodium, Dissolved	--	--	7.52	=	21.2	=	24.5	=	7.72	=
	Thallium, Dissolved	--	--	[0.00001]	ND	[0.00001]	ND	0.00000648	J	[0.00001]	ND
	Tin, Dissolved	--	--	[0.0001]	ND	[0.0001]	ND	[0.0001]	ND	0.000268	=
	Vanadium, Dissolved	--	--	[0.0005]	ND	0.00062	J	0.000877	J	0.00416	=
	Zinc, Dissolved	--	--	0.00107	J, B	[0.00155]	ND	0.0153	=	0.00791	=
200.8 Metals, Total	Aluminum, Total	--	--	0.882	=	1.75	=	0.463	=	10.5	=
	Antimony, Total	--	0.006	0.00011	=	0.000171	=	0.0000866	=	0.000513	=
	Arsenic, Total	--	0.01	0.00252	=	**0.0283**	=	0.00206	=	**0.023**	=
	Barium, Total	--	2	0.0833	=	0.0456	=	0.0645	=	0.118	=
	Beryllium, Total	--	0.004	0.000042	J	0.00011	=	0.0000379	J	[0.000025]	ND
	Bismuth, Total	--	--	[0.000025]	ND	0.0000429	J	[0.000025]	ND	0.0000947	=
	Boron, Total	--	--	0.0064	=	0.134	=	0.00708	=	0.0274	=
	Cadmium, Total	--	0.005	0.0000309	J	0.0000317	J	0.00006	=	0.0000349	J
	Calcium, Total	--	--	21	=	11.7	=	31.1	=	31.8	=
	Chromium, Total	--	0.1	0.00344	=	0.0237	=	0.00194	=	0.0246	=
	Cobalt, Total	--	--	0.000836	=	0.00172	=	0.0137	=	0.00393	=
	Copper, Total	--	1	0.00403	=	0.00868	=	0.00163	=	0.0198	=
	Iron, Total	--	--	12.9	=	4.02	=	7.91	=	9.69	=
	Lead, Total	--	0.015	0.000614	=	0.00199	=	0.000289	=	0.00622	=
	Magnesium, Total	--	--	6.99	=	5.19	=	11.1	=	11.6	=
	Manganese, Total	--	--	0.501	=	0.138	=	0.941	=	0.374	=
	Molybdenum, Total	--	--	0.000343	=	0.00351	=	0.000419	=	0.0015	=
	Nickel, Total	--	0.1	0.00363	=	0.0147	=	0.0221	=	0.0161	=
	Potassium, Total	--	--	2.41	=	5.77	=	3.27	=	6.63	=
	Selenium, Total	--	0.05	[0.0005]	ND	[0.0005]	ND	0.00071	J	[0.0005]	ND
	Silver, Total	--	0.1	0.00000744	J, B	0.0000164	J	[0.00001]	ND	0.0000457	=, B
	Sodium, Total	--	--	7.95	=	11.8	=	14.7	=	8.23	=
	Thallium, Total	--	0.002	0.00000694	J	0.0000245	=	0.0000113	J	0.0000598	=
	Tin, Total	--	--	0.000121	J	0.000269	=	[0.0001]	ND	0.00148	=
	Vanadium, Total	--	0.26	0.00284	=	0.00867	=	0.00309	=	0.0219	=
	Zinc, Total	--	5	0.00398	=, B	0.0122	=	0.0156	=	0.0451	=
EPA 1631 E, Dissolved	Mercury, Dissolved	--	--	0.00000051	J	[0.0000005]	ND	[0.0000005]	ND	0.00000215	=
EPA 1631 E, Total	Mercury, Total	--	0.002	0.00000282	=	0.00000543	=	0.00000112	=	0.00000922	=
AK101	Gasoline Range Organics	--	2.2	[0.05]	ND	0.0539	J, B	0.0388	J, B	[0.05]	ND
AK102	Diesel Range Organics	--	1.5	0.197	J	[0.288]	ND	[0.283]	ND	[0.283]	ND
AK103	Residual Range Organics	--	1.1	0.561	=	[0.24]	ND	[0.236]	ND	[0.236]	ND
EPA 300.0	Chloride	250	--	30.6	=	4.66	=	113	=	7.6	=
	Fluoride	--	--	0.056	J, QH	0.222	=	0.071	J	0.082	J, QH
	Sulfate	250	--	5.31	=	2.22	=	15.8	=	4.55	=
SM21 2130B	Turbidity	<5 NTU above NC [5]	--	21	=	60	=	150	=	170	=
SM21 2320B	Alkalinity	--	--	58.2	=	93.4	=	40.6	=	97.4	=
SM21 2340B	Hardness as CaCO3	--	--	77.1	=	42.9	=	118	=	105	=
SM21 2540C	Total Dissolved Solids	500	--	160	=	173	=	301	=	158	=
SM21 2540D	Total Suspended Solids	--	--	25	=	82.5	=	170	=	170	=
SM21 4500NO3-F	Nitrate-N	--	--	[0.05]	ND	0.0786	J, B	[0.05]	ND	0.0486	J, B
	Nitrite-N	--	--	[0.05]	ND	0.034	J	0.049	J	[0.05]	ND
SW8260B - VOC	1,1,1,2-Tetrachloroethane	--	--	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND
	1,1,1-Trichloroethane	--	0.2	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	1,1,2,2-Tetrachloroethane	--	0.0043	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND
	1,1,2-Trichloroethane	--	0.005	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	1,1-Dichloroethane	--	7.3	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	1,1-Dichloroethene	--	0.007	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	1,1-Dichloropropene	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	1,2,3-Trichlorobenzene	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	1,2,3-Trichloropropane	--	0.00012	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	1,2,4-Trichlorobenzene	--	0.07	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	1,2,4-Trimethylbenzene	--	1.8	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	1,2-Dibromo-3-chloropropane	--	--	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND
	1,2-Dibromoethane	--	0.00005	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	1,2-Dichlorobenzene	--	0.6	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	1,2-Dichloroethane	--	0.005	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND
	1,2-Dichloropropane	--	0.005	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	1,3,5-Trimethylbenzene	--	1.8	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	1,3-Dichlorobenzene	--	3.3	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	1,3-Dichloropropane	--	--	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND
	1,4-Dichlorobenzene	--	0.075	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND
	2,2-Dichloropropane	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	2-Butanone (MEK)	--	22	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND
	2-Chlorotoluene	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	2-Hexanone	--	--	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND
	4-Chlorotoluene	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	4-Isopropyltoluene	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	4-Methyl-2-pentanone (MIBK)	--	2.9	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND
	Benzene	--	0.005	[0.0002]	ND	[0.0002]	ND	[0.0002]	ND	[0.0002]	ND

Compound	MW-50B 04/20/2016 18:40 Conc.[4]	Flag	MW-62A 04/23/2016 11:40 Conc.[4]	Flag	MW-74A 04/22/2016 11:50 Conc.[4]	Flag	MW-74A (Duplicate) 04/22/2016 11:50 Conc.[4]	Flag	MW-74B 04/21/2016 18:10 Conc.[4]	Flag
Aluminum, Dissolved	0.00235	=, B	0.00442	=, B	0.00881	=	--	--	0.00357	=, B, MH
Antimony, Dissolved	0.0000707	=	[0.000025]	ND	0.0000412	J	--	--	0.0000214	J, MH
Arsenic, Dissolved	[0.0004]	ND	0.0151	=	0.0566	=	--	--	0.00144	=
Barium, Dissolved	0.0235	=	0.0147	=	0.00394	=, B	--	--	0.0327	=, MH
Beryllium, Dissolved	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	--	--	[0.000025]	ND
Bismuth, Dissolved	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	--	--	[0.000025]	ND
Boron, Dissolved	0.00372	J	0.0341	=	0.156	=	--	--	0.00756	=, MH
Cadmium, Dissolved	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	--	--	[0.000025]	ND
Calcium, Dissolved	13.5	=	14.3	=	3.69	=	--	--	14.9	=
Chromium, Dissolved	[0.00025]	ND	0.000792	=	0.000688	=	--	--	0.000697	=, MH
Cobalt, Dissolved	0.000804	=	0.000086	=	0.0000633	=	--	--	0.00138	=, MH
Copper, Dissolved	0.000303	J	[0.00025]	ND	[0.00025]	ND	--	--	[0.00025]	ND
Iron, Dissolved	0.47	=	0.0213	=	0.0315	=	--	--	4.74	=
Lead, Dissolved	[0.00005]	ND	[0.00005]	ND	[0.00005]	ND	--	--	[0.00005]	ND
Magnesium, Dissolved	5.33	=	8.28	=	1.89	=	--	--	5.03	=, MH
Manganese, Dissolved	0.0387	=	0.12	=	0.0254	=	--	--	0.191	=
Molybdenum, Dissolved	0.000496	=	0.000596	=	0.00199	=	--	--	0.000381	=, MH
Nickel, Dissolved	0.00298	=	0.00105	=	0.000954	=	--	--	0.0026	=, MH
Potassium, Dissolved	2.15	=	7.53	=	8.87	=	--	--	2.18	=
Selenium, Dissolved	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND
Silicon, Dissolved	16.1	=, QH	14.9	=, QH	13.9	=	--	--	19.1	=
Silver, Dissolved	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	--	--	[0.00001]	ND
Sodium, Dissolved	7.14	=	5.32	=	33.3	=	--	--	8.04	=, MH
Thallium, Dissolved	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	--	--	[0.00001]	ND
Tin, Dissolved	[0.0001]	ND	[0.0001]	ND	[0.0001]	ND	--	--	[0.0001]	ND
Vanadium, Dissolved	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	0.000477	J, MH
Zinc, Dissolved	0.000748	J, B	0.00135	J, B	0.000557	J	--	--	0.00112	J
Aluminum, Total	0.07	=	0.523	=	1.71	=	--	--	0.43	=, MH
Antimony, Total	0.00012	=	0.0000276	J	0.000128	=	--	--	0.00011	=
Arsenic, Total	0.00106	=	**0.0169**	=	**0.0634**	=	--	--	0.00154	=
Barium, Total	0.0253	=	0.0217	=	0.0284	=	--	--	0.0414	=
Beryllium, Total	[0.000025]	ND	[0.000025]	ND	0.0000694	=	--	--	[0.000025]	ND
Bismuth, Total	[0.000025]	ND	[0.000025]	ND	0.000032	J	--	--	[0.000025]	ND
Boron, Total	0.00382	J	0.039	=	0.17	=	--	--	0.00884	=
Cadmium, Total	[0.000025]	ND	[0.000025]	ND	0.0000286	J	--	--	[0.000025]	ND
Calcium, Total	13.8	=	16.6	=	4.97	=	--	--	16.8	=
Chromium, Total	0.00111	=	0.00431	=	0.0145	=	--	--	0.00248	=, MH
Cobalt, Total	0.000832	=	0.000452	=	0.00155	=	--	--	0.00173	=, MH
Copper, Total	0.000813	=	0.00136	=	0.00635	=	--	--	0.000973	=
Iron, Total	2.44	=	0.711	=	3.03	=	--	--	5.81	=
Lead, Total	0.000124	=	0.000287	=	0.00124	=	--	--	0.000222	=
Magnesium, Total	5.38	=	9.37	=	3	=	--	--	6.2	=
Manganese, Total	0.0409	=	0.145	=	0.0891	=	--	--	0.22	=
Molybdenum, Total	0.000491	=	0.000892	=	0.00313	=	--	--	0.000445	=, MH
Nickel, Total	0.00291	=	0.00433	=	0.0101	=	--	--	0.00329	=, MH
Potassium, Total	2.14	=	8.56	=	10	=	--	--	2.45	=
Selenium, Total	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND
Silver, Total	[0.00001]	ND	[0.00001]	ND	0.0000237	=	--	--	0.0000106	J
Sodium, Total	7.18	=	6.14	=	37.2	=	--	--	9.86	=
Thallium, Total	[0.00001]	ND	[0.00001]	ND	0.0000179	J	--	--	[0.00001]	ND
Tin, Total	[0.0001]	ND	[0.0001]	ND	0.000115	J	--	--	[0.0001]	ND
Vanadium, Total	0.00129	=	0.00168	=	0.00749	=	--	--	0.00191	=, MH
Zinc, Total	0.00104	J, B	0.00872	=	0.0136	=	--	--	0.00239	J
Mercury, Dissolved	0.000000708	=	0.00000513	J, B	0.00000547	J, B	--	--	[0.0000005]	ND
Mercury, Total	0.00000101	=	0.00000144	=, B	0.0000049	=, B	--	--	0.00000333	=, B
Gasoline Range Organics	[0.05]	ND	[0.05]	ND	[0.05]	ND	--	--	[0.05]	ND
Diesel Range Organics	[0.288]	ND	[0.288]	ND	[0.288]	ND	--	--	[0.288]	ND
Residual Range Organics	[0.24]	ND	[0.24]	ND	0.352	J	--	--	0.823	=
Chloride	14.8	=	5.39	=	4.33	=	--	--	11.8	=
Fluoride	0.069	J, QH	0.086	J	0.193	=	--	--	0.064	J
Sulfate	4.85	=	3.39	=	1.24	=	--	--	5.19	=
Turbidity	4.1	=	4.4	=	15	=	--	--	1.6	=
Alkalinity	47.2	=	76.3	=	81.8	=	--	--	44.8	=
Hardness as CaCO3	55.8	=	69.7	=	17	=	--	--	58	=
Total Dissolved Solids	106	=	125	=	131	=	--	--	106	=
Total Suspended Solids	3.57	=	41.1	=	24.7	=	21.3	=	4.14	=, QN
Nitrate-N	0.0558	J, B	[0.05]	ND, QL	[0.05]	ND, QL	--	--	[0.05]	ND, QL
Nitrite-N	[0.05]	ND	0.056	J, QL	[0.05]	ND, QL	--	--	0.056	J, QL
1,1,1,2-Tetrachloroethane	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	--	--	[0.00025]	ND
1,1,1-Trichloroethane	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND
1,1,2,2-Tetrachloroethane	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	--	--	[0.00025]	ND
1,1,2-Trichloroethane	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND
1,1-Dichloroethane	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND
1,1-Dichloroethene	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND
1,1-Dichloropropene	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND
1,2,3-Trichlorobenzene	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND
1,2,3-Trichloropropane	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND
1,2,4-Trichlorobenzene	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND
1,2,4-Trimethylbenzene	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND
1,2-Dibromo-3-chloropropane	[0.005]	ND	[0.005]	ND	[0.005]	ND	--	--	[0.005]	ND
1,2-Dibromoethane	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND
1,2-Dichlorobenzene	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND
1,2-Dichloroethane	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	--	--	[0.00025]	ND
1,2-Dichloropropane	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND
1,3,5-Trimethylbenzene	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND
1,3-Dichlorobenzene	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND
1,3-Dichloropropane	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	--	--	[0.00025]	ND
1,4-Dichlorobenzene	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	--	--	[0.00025]	ND
2,2-Dichloropropane	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND
2-Butanone (MEK)	[0.005]	ND	[0.005]	ND	[0.005]	ND	--	--	[0.005]	ND
2-Chlorotoluene	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND
2-Hexanone	[0.005]	ND	[0.005]	ND	[0.005]	ND	--	--	[0.005]	ND
4-Chlorotoluene	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND
4-Isopropyltoluene	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND
4-Methyl-2-pentanone (MIBK)	[0.005]	ND	[0.005]	ND	[0.005]	ND	--	--	[0.005]	ND
Benzene	[0.0002]	ND	[0.0002]	ND	[0.0002]	ND	--	--	[0.0002]	ND

Compound	MW-82A 04/20/2016 11:05 Conc.[4]	Flag	MW-82B 04/20/2016 13:05 Conc.[4]	Flag	MW-87B 04/19/2016 14:02 Conc.[4]	Flag	MW-87B (Duplicate) 04/19/2016 14:02 Conc.[4]	Flag	MW-91A 04/21/2016 18:10 Conc.[4]	Flag	MW-91A (Duplicate) 04/21/2016 18:10 Conc.[4]	Flag
Aluminum, Dissolved	0.123	=	0.00312	=, B	0.00239	=, B	0.00285	=, B	0.0113	=	0.0137	=
Antimony, Dissolved	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND
Arsenic, Dissolved	0.00752	=	[0.0004]	ND	0.00143	=	0.00132	=	0.0077	=	0.00763	=
Barium, Dissolved	0.01	=	0.0234	=	0.0411	=	0.041	=	0.022	=	0.0218	=
Beryllium, Dissolved	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND
Bismuth, Dissolved	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND
Boron, Dissolved	0.0123	=	0.0078	=	0.00563	=	0.00539	=	0.0187	=	0.0191	=
Cadmium, Dissolved	[0.000025]	ND	0.0000811	=	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND
Calcium, Dissolved	19.3	=	20.7	=	15.7	=	15.6	=	29.7	=	30	=
Chromium, Dissolved	0.000471	J	0.000151	J	0.000783	=	0.000922	=	0.00019	J	[0.00025]	ND
Cobalt, Dissolved	0.000101	=	0.000249	=	0.000384	=	0.000378	=	0.0000948	=	0.000104	=
Copper, Dissolved	0.000392	J	0.00038	J	0.00523	=	0.00541	=	0.000306	J	0.00025	J
Iron, Dissolved	0.168	=	2.14	=	8.59	=	8.6	=	1.99	=	2.07	=
Lead, Dissolved	0.0000706	J	[0.00005]	ND	[0.00005]	ND	[0.00005]	ND	[0.00005]	ND	[0.00005]	ND
Magnesium, Dissolved	4.93	=	5.24	=	6.23	=	6.17	=	6.53	=	6.62	=
Manganese, Dissolved	0.0937	=	0.124	=	0.366	=	0.371	=	0.965	=	0.982	=
Molybdenum, Dissolved	0.000696	=	0.000343	=	0.000433	=	0.000451	=	0.000543	=	0.000574	=
Nickel, Dissolved	0.00114	=	0.00189	=	0.003	=	0.00314	=	0.00171	=	0.00167	=
Potassium, Dissolved	2.87	=	2.26	=	2.19	=	2.2	=	3.21	=	3.17	=
Selenium, Dissolved	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
Silicon, Dissolved	16.8	=, QH	14.5	=, QH	18.1	=, QH	18.2	=, QH	15.7	=	16.2	=
Silver, Dissolved	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND
Sodium, Dissolved	5.27	=	15.3	=	8.24	=	8.23	=	6.74	=	6.69	=
Thallium, Dissolved	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND
Tin, Dissolved	[0.0001]	ND	[0.0001]	ND	[0.0001]	ND	0.000197	J	[0.0001]	ND	[0.0001]	ND
Vanadium, Dissolved	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
Zinc, Dissolved	0.00132	J, B	0.00188	J, B	0.00077	J, B	0.000769	J, B	0.0024	J	0.00176	J
Aluminum, Total	0.781	=	0.37	=	0.0272	=	0.025	=	1.5	=	1.28	=
Antimony, Total	0.0000244	J	0.0000448	J	0.0000268	J	0.0000209	J	0.0000511	=	0.0000536	=
Arsenic, Total	0.0077	=	0.000786	J	0.00139	J	0.00162	=	0.00873	=	0.00857	=
Barium, Total	0.0149	=	0.029	=	0.0412	=	0.0393	=	0.0346	=	0.0366	=
Beryllium, Total	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	0.000034	J	0.0000348	J
Bismuth, Total	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND
Boron, Total	0.013	=	0.00918	=	0.00736	=	0.0071	=	0.0195	=	0.0201	=
Cadmium, Total	[0.000025]	ND	0.0000842	=	[0.000025]	ND	[0.000025]	ND	0.000015	J	[0.000025]	ND
Calcium, Total	19.8	=	23.5	=	15.4	=	14.8	=	30.7	=	30.5	=
Chromium, Total	0.00288	=	0.00237	=	0.0012	=	0.0013	=	0.00676	=	0.00736	=
Cobalt, Total	0.000399	=	0.000462	=	0.000405	=	0.000382	=	0.000728	=	0.000787	=
Copper, Total	0.00145	=	0.00138	=	0.00383	=	0.00339	=	0.00233	=	0.00257	=
Iron, Total	0.823	=	3.82	=	8.4	=	8.36	=	3.8	=	3.76	=
Lead, Total	0.000313	=	0.000257	=	0.0000347	J	[0.00005]	ND	0.000569	=	0.000589	=
Magnesium, Total	5.21	=	6	=	5.68	=	5.36	=	7.26	=	7.09	=
Manganese, Total	0.109	=	0.141	=	0.356	=	0.34	=	1.03	=	1.04	=
Molybdenum, Total	0.000745	=	0.000495	=	0.000421	=	0.000415	=	0.000896	=	0.00115	=
Nickel, Total	0.00256	=	0.00289	=	0.00265	=	0.00259	=	0.00497	=	0.00532	=
Potassium, Total	2.98	=	2.53	=	2.1	=	2.05	=	3.4	=	3.49	=
Selenium, Total	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
Silver, Total	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND
Sodium, Total	5.43	=	17.6	=	7.64	=	7.18	=	7.11	=	7.12	=
Thallium, Total	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	0.00000838	J	0.00000928	J
Tin, Total	0.0000749	J	[0.0001]	ND	[0.0001]	ND	[0.0001]	ND	0.000114	J	0.000129	J
Vanadium, Total	0.00161	=	0.00181	=	0.000443	J	0.000366	J	0.00361	=	0.00401	=
Zinc, Total	0.00703	=	0.00416	=, B	0.00122	J, B	0.00115	J, B	0.0148	=	0.0146	=
Mercury, Dissolved	0.000000579	=	[0.0000005]	ND	0.000000519	J	0.000000768	J	0.000000599	J, B	0.000000536	J, B
Mercury, Total	0.00000131	=	0.00000162	=	0.000000949	J	0.000000581	J	0.00000264	=, B	0.00000299	=, B
Gasoline Range Organics	[0.05]	ND	[0.05]	ND	[0.05]	ND	[0.05]	ND	[0.05]	ND	[0.05]	ND
Diesel Range Organics	[0.283]	ND	[0.283]	ND	[0.283]	ND	[0.294]	ND	[0.283]	ND	[0.288]	ND
Residual Range Organics	[0.236]	ND	[0.236]	ND	[0.236]	ND	[0.245]	ND	[0.236]	ND	[0.24]	ND
Chloride	9.29	=	45.0	=, QL	18.3	=	18.3	=	10.4	=	10.4	=
Fluoride	0.089	J, QH	0.0530	J, QL	0.06	J, QH	0.06	J, QH	0.08	J	0.08	J
Sulfate	2.31	=	3.85	=, QL	6.61	=	6.61	=	8.12	=	8.03	=
Turbidity	6.6	=	10	=	9.9	=	9	=	35	=	32	=
Alkalinity	61.3	=	44.7	=	55	=	50.9	=	93.7	=	92.7	=
Hardness as CaCO3	68.5	=	73.3	=	64.9	=	64.3	=	101	=	102	=
Total Dissolved Solids	121	=	161	=	125	=	128	=	169	=	169	=
Total Suspended Solids	13.1	=	11	=	8	=	7.21	=	39.5	=	43	=
Nitrate-N	0.0452	J, B	0.563	=	[0.05]	ND	[0.05]	ND	0.0654	J, B	0.0648	J, B
Nitrite-N	[0.05]	ND	[0.05]	ND	[0.05]	ND	[0.05]	ND	[0.05]	ND	[0.05]	ND
1,1,1,2-Tetrachloroethane	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND
1,1,1-Trichloroethane	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
1,1,2,2-Tetrachloroethane	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND
1,1,2-Trichloroethane	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
1,1-Dichloroethane	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
1,1-Dichloroethene	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
1,1-Dichloropropene	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
1,2,3-Trichlorobenzene	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
1,2,3-Trichloropropane	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
1,2,4-Trichlorobenzene	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
1,2,4-Trimethylbenzene	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
1,2-Dibromo-3-chloropropane	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND
1,2-Dibromoethane	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
1,2-Dichlorobenzene	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
1,2-Dichloroethane	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND
1,2-Dichloropropane	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
1,3,5-Trimethylbenzene	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
1,3-Dichlorobenzene	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
1,3-Dichloropropane	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND
1,4-Dichlorobenzene	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND
2,2-Dichloropropane	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
2-Butanone (MEK)	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND
2-Chlorotoluene	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
2-Hexanone	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND
4-Chlorotoluene	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
4-Isopropyltoluene	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
4-Methyl-2-pentanone (MIBK)	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND
Benzene	[0.0002]	ND	[0.0002]	ND	[0.0002]	ND	[0.0002]	ND	[0.0002]	ND	[0.0002]	ND

Table 5 - Groundwater Sample Results for Monitoring Wells
Alaska LNG
Nikiski, AK

Method	Compound in milligrams per Liter (mg/L)	Screening Criteria		Sample Identification[3]																													
		Water Quality Standards for Designated Uses [1]	ADEC Table C Groundwater Cleanup Level[2]	MW-27B 4/19/2016 17:15		MW-39A 04/21/2016 11:30		MW-39B 04/21/2016 14:00		MW-50A 04/20/2016 16:25		MW-50B 04/20/2016 18:40		MW-62A 04/23/2016 11:40		MW-74A 04/22/2016 11:50		MW-74A (Duplicate) 04/22/2016 11:50		MW-74B 04/21/2016 18:10		MW-82A 04/20/2016 11:05		MW-82B 04/20/2016 13:05		MW-87B 04/19/2016 14:02		MW-87B (Duplicate) 04/19/2016 14:02		MW-91A 04/21/2016 18:10		MW-91A (Duplicate) 04/21/2016 18:10	
				Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag
SW8260B - VOC (cont)	Bromobenzene	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Bromochloromethane	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Bromodichloromethane	--	0.014	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	--	--	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND
	Bromoform	--	0.11	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Bromomethane	--	0.051	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	--	--	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND
	Carbon disulfide	--	3.7	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	--	--	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND
	Carbon tetrachloride	--	0.005	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Chlorobenzene	--	0.1	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	--	--	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND
	Chloroethane	--	0.29	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Chloroform	--	0.14	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Chloromethane	--	0.066	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	cis-1,2-Dichloroethene	--	0.07	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	cis-1,3-Dichloropropene	--	0.0085	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	--	--	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND
	Dibromochloromethane	--	0.01	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	--	--	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND
	Dibromomethane	--	0.37	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Dichlorodifluoromethane	--	7.3	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Ethylbenzene	--	0.7	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Freon-113	--	1100	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	--	--	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND
	Hexachlorobutadiene	--	0.0073	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Isopropylbenzene (Cumene)	--	3.7	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Methylene chloride	--	0.005	[0.0025]	ND	[0.0025]	ND	[0.0025]	ND	[0.0025]	ND	[0.0025]	ND	[0.0025]	ND	[0.0025]	ND	--	--	[0.0025]	ND	[0.0025]	ND	[0.0025]	ND	[0.0025]	ND	[0.0025]	ND	[0.0025]	ND	[0.0025]	ND
	Methyl-t-butyl ether	--	0.47	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	--	--	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND
	Naphthalene	--	0.73	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	--	--	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND
	n-Butylbenzene	--	0.37	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	n-Propylbenzene	--	0.37	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	o-Xylene	--	10	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	P & M -Xylene	--	10	[0.001]	ND	[0.001]	ND	[0.001]	ND	[0.001]	ND	[0.001]	ND	[0.001]	ND	[0.001]	ND	--	--	[0.001]	ND	[0.001]	ND	[0.001]	ND	[0.001]	ND	[0.001]	ND	[0.001]	ND	[0.001]	ND
	sec-Butylbenzene	--	0.37	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Styrene	--	0.1	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	tert-Butylbenzene	--	0.37	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Tetrachloroethene	--	0.005	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Toluene	--	1	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	trans-1,2-Dichloroethene	--	0.1	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	trans-1,3-Dichloropropene	--	0.0085	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Trichloroethene	--	0.005	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Trichlorofluoromethane	--	11	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Vinyl acetate	--	37	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	--	--	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND
	Vinyl chloride	--	0.002	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Xylenes (total)	--	10	[0.0015]	ND	[0.0015]	ND	[0.0015]	ND	[0.0015]	ND	[0.0015]	ND	[0.0015]	ND	[0.0015]	ND	--	--	[0.0015]	ND	[0.0015]	ND	[0.0015]	ND	[0.0015]	ND	[0.0015]	ND	[0.0015]	ND	[0.0015]	ND
EPA 625M SIM (PAH)	Acenaphthene	--	2.2	[0.0000254]	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	[0.0000256]	ND	--	--	--	--	--	--
	Acenaphthylene	--	2.2	[0.0000254]	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	[0.0000256]	ND	--	--	--	--	--	--
	Anthracene	--	11	[0.0000254]	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	[0.0000256]	ND	--	--	--	--	--	--
	Benzo(a)Anthracene	--	0.0012	[0.0000254]	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	[0.0000256]	ND	--	--	--	--	--	--
	Benzo[a]pyrene	--	0.0002	[0.0000101]	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	[0.0000103]	ND	--	--	--	--	--	--
	Benzo[b]Fluoranthene	--	0.0012	[0.0000254]	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	[0.0000256]	ND	--	--	--	--	--	--
	Benzo[g,h,i]perylene	--	1.1	[0.0000254]	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	[0.0000256]	ND	--	--	--	--	--	--
	Benzo[k]fluoranthene	--	0.012	[0.0000254]	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	[0.0000256]	ND	--	--	--	--	--	--
	Chrysene	--	0.12	[0.0000254]	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	[0.0000256]	ND	--	--	--	--	--	--
	Dibenzo[a,h]anthracene	--	0.00012	[0.0000101]	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	[0.0000103]	ND	--	--	--	--	--	--
	Fluoranthene	--	1.5	[0.0000254]	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	[0.0000256]	ND	--	--	--	--	--	--
	Fluorene	--	1.5	[0.0000254]	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	[0.0000256]	ND	--	--	--	--	--	--
	Indeno[1,2,3-c,d] pyrene	--	0.0012	[0.0000254]	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	[0.0000256]	ND	--	--	--	--	--	--
	Naphthalene	--	0.73	[0.000051]	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	[0.0000515]	ND	--	--	--	--	--	--
	Phenanthrene	--	11	[0.0000254]	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	[0.0000256]	ND	--	--	--	--	--	--
	Pyrene	--	1.1	[0.0000254]	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	[0.0000256]	ND	--	--	--	--	--	--
SW8270D - SVOC	1,2,4-Trichlorobenzene	--	0.07	[0.00515]	ND	[0.0051]	ND	[0.0053]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.00505]	ND	[0.0051]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND	[0.0051]	ND	[0.0051]	ND
	1,2-Dichlorobenzene	--	0.6	[0.00515]	ND	[0.0051]	ND	[0.0053]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.00505]	ND	[0.0051]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND	[0.0051]	ND	[0.0051]	ND
	1,3-Dichlorobenzene	--	3.3	[0.00515]	ND	[0.0051]	ND	[0.0053]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.00505]	ND	[0.0051]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND	[0.0051]	ND	[0.0051]	ND
	1,4-Dichlorobenzene	--	0.075	[0.00515]	ND	[0.0051]	ND	[0.0053]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.00505]	ND	[0.0051]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND	[0.0051]	ND	[0.0051]	ND
	1-Chloronaphthalene	--	--	[0.00515]	ND	[0.0051]	ND	[0.0053]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.00505]	ND	[0.0051]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND	[0.0051]	ND	[0.0051]	ND
	1-Methylnaphthalene	--	0.15	[0.00515]	ND	[0.0051]	ND	[0.0053]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.00505]	ND	[0.0051]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND	[0.0051]	ND	[0.0051]	ND
	2,4,5-Trichlorophenol	--	3.7	[0.00515]	ND	[0.0051]	ND	[0.0053]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.00505]	ND	[0.0051]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND	[0.0051]	ND	[0.0051]	ND
	2,4,6-Trichlorophenol	--	0.077	[0.00515]	ND	[0.0051]	ND	[0.0053]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.00505]	ND	[0.0051]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND	[0.0051]	ND	[0.0051]	ND
	2,4-Dichlorophenol	--	0.11	[0.00515]	ND	[0.0051]	ND	[0.0053]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.00505]	ND	[0.0051]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND	[0.0051]	ND	[0.0051]	ND
	2,4-Dimethylphenol	--	0.73	[0.00515]	ND	[0.0051]	ND	[0.0053]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.00505]	ND	[0.0051]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND	[0.0051]	ND	[0.0051]	ND
	2,4-Dinitrophenol	--	0.073	[0.0257]	ND	[0.0255]	ND	[0.0266]	ND	[0.0265]	ND	[0.0255]	ND	[0.0253]	ND	[0.0261]	ND	--	--	[0.0253]	ND	[0.0255]	ND	[0.0253]	ND	[0.0256]	ND	[0.0261]	ND	[0.0255]	ND	[0.0255]	ND
	2,4-Dinitrotoluene	--	0.0013	[0.00515]	ND	[0.0051]	ND	[0.0053]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.00505]	ND	[0.0051]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND	[0.0051]	ND	[0.0051]	ND
	2,6-Dichlorophenol	--	--	[0.00515]	ND	[0.0051]	ND	[0.0053]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.00505]	ND	[0.0051]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND	[0.0051]	ND	[0.0051]	ND
	2,6-Dinitrotoluene	--	0.0013	[0.00515]	ND	[0.0051]	ND	[0.0053]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.00505]	ND	[0.0051]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND	[0.0051]	ND	[0.0051]	ND
	2-Chloronaphthalene	--	2.9	[0.00515]	ND	[0.0051]	ND	[0.0053]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.00505]	ND	[0.0051]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND	[0.0051]	ND	[0.0051]	ND
	2-Chlorophenol	--	0.18	[0.00515]	ND	[0.0051]	ND	[0.0053]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.00505]	ND	[0.0051]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND	[0.0051]	ND	[0.0051]	ND
	2-Methyl-4,6-dinitrophenol	--	--	[0.0257]	ND	[0.0255]	ND	[0.0266]	ND	[0.0265]	ND	[0.0255]	ND	[0.0253]	ND	[0.0261]	ND	--	--	[0.0253]	ND	[0.0255]	ND	[0.0253]	ND	[0.0256]	ND	[0.0261]	ND	[0.0255]	ND	[0.0255]	ND
	2-Methylnaphthalene	--	0.15	[0.00515]	ND	[0.0051]	ND	[0.0053]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.00505]	ND	[0.0051]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND	[0.0051]	ND	[0.0051]	ND
	2-Methylphenol (o-Cresol)	--	1.8	[0.00515]	ND	[0.0051]	ND	[0.0053]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.00505]	ND	[0.0051]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND	[0.0051]	ND	[0.0051]	ND
	2-Nitroaniline	--	--	[0.00515]	ND	[0.0051]	ND	[0.0053]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.00505]	ND	[0.0051]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND	[0.0051]	ND	[0.0051]	ND
	2-Nitrophenol	--	--	[0.00515]	ND	[0.0051]	ND	[0.0053]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.00505]	ND	[0.0051]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND	[0.0051]	ND	[0.0051]	ND
	3&4-Methylphenol (p&m-Cresol)	--	0.18	[0.0103]	ND	[0.0102]	ND	[0.0107]	ND	[0.0106]	ND	[0.0102]	ND	[0.0101]	ND	[0.0104]	ND	--	--	[0.0101]	ND	[0.0102]	ND	[0.0101]	ND	[0.0103]	ND	[0.0104]	ND	[0.0102]	ND	[0.0102]	ND
	3,3-Dichlorobenzidine	--	0.0019	[0.00515]	ND	[0.0051]	ND	[0.0053]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.00505]	ND	[0.0051]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND	[0.0051]	ND	[0.0051]	ND
	3-Nitroaniline	--	--	[0.00515]	ND	[0.0051]	ND	[0.0053]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.00505]	ND	[0.0051]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND	[0.0051]	ND	[0.0051]	ND
	4-Bromophenyl-phenylether	--	--	[0.00515]	ND	[0.0051]	ND	[0.0053]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.00505]	ND	[0.0051]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND	[0.0051]	ND	[0.0051]	ND
	4-Chloro-3-methylphenol	--	--	[0.00515]	ND	[0.0051]	ND	[0.0053]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.00505]	ND	[0.0051]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND	[0.0051]	ND	[0.0051]	ND
	4-Chloroaniline	--	0.016	[0.00515]	ND	[0.0051]	ND	[0.0053]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.00505]	ND	[0.0051]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND	[0.0051]	ND	[0.0051]	ND
	4-Chlorophenyl-phenylether	--	--	[0.00515]	ND	[0.0051]	ND	[0.0053]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.00505]	ND	[0.0051]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND	[0.0051]	ND	[0.0051]	ND
	4-Nitroaniline	--	--	[0.00515]	ND	[0.0051]	ND	[0.0053]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.00505]	ND	[0.0051]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND	[0.0051]	ND	[0.0051]	ND
	4-Nitrophenol	--	--	[0.0257]	ND, QL	[0.0255]	ND	[0.0266]	ND	[0.0265]	ND	[0.0255]	ND	[0.0253]	ND	[0.0261]	ND	--	--	[0.0253]	ND	[0.0255]	ND	[0.0253]	ND	[0.0256]	ND, QL	[0.0261]	ND, QL	[0.0255]	ND	[0.0255]	ND
	Acenaphthene	--	2.2	[0.00515]	ND	[0.0051]	ND	[0.0053]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.00505]	ND	[0.0051]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND	[0.0051]	ND	[0.0051]	ND
	Acenaphthylene	--	2.2	[0.00515]	ND	[0.0051]	ND	[0.0053]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.00505]	ND	[0.0051]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND	[0.0051]	ND	[0.0051]	ND
	Aniline	--	--	[0.0257]	ND	[0.0255]	ND	[0.0266]	ND	[0.0265]	ND	[0.0255]	ND	[0.0253]	ND	[0.0261]	ND	--	--	[0.0253]	ND	[0.0255]	ND	[0.0253]	ND	[0.0256]	ND	[0.0261]	ND	[0.0255]	ND	[0.0255]	ND
	Anthracene	--	11	[0.00515]	ND	[0.0051]	ND	[0.0053]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.00505]	ND	[0.0051]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND	[0.0051]	ND	[0.0051]	ND
	Azobenzene	--	--	[0.00515]	ND	[0.0051]	ND	[0.0053]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.00505]	ND	[0.0051]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND	[0.0051]	ND	[0.0051]	ND
	Benzo(a)Anthracene	--	0.0012	[0.00515]	ND	[0.0051]	ND	[0.0053]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.00505]	ND	[0.0051]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND	[0.0051]	ND	[0.0051]	ND
	Benzo[a]pyrene	--	0.0002	[0.00515]	ND	[0.0051]	ND	[0.0053]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.00505]	ND	[0.0051]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND	[0.0051]	ND	[0.0051]	ND
	Benzo[b]Fluoranthene	--	0.0012	[0.00515]	ND	[0.0051]	ND	[0.0053]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.00505]	ND	[0.0051]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND	[0.0051]	ND	[0.0051]	ND
	Benzo[g,h,i]perylene	--	1.1	[0.00515]	ND	[0.0051]	ND	[0.0053]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.00505]	ND	[0.0051]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND	[0.0051]	ND	[0.0051]	ND
	Benzo[k]fluoranthene	--	0.012	[0.00515]	ND	[0.0051]	ND	[0.0053]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.00505]	ND	[0.0051]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND	[0.0051]	ND	[0.0051]	ND
	Benzoic acid	--	150	[0.0257]	ND, QL	[0.0255]	ND	[0.0266]	ND	[0.0265]	ND	[0.0255]	ND	[0.0253]	ND	[0.0261]	ND	--	--	[0.0253]	ND	[0.0255]	ND	[0.0253]	ND	[0.0256]	ND, QL	[0.0261]	ND, QL	[0.0255]	ND	[0.0255]	ND

Table 5 - Groundwater Sample Results for Monitoring Wells
Alaska LNG
Nikiski, AK

Method	Compound in milligrams per Liter (mg/L)	Screening Criteria		Sample Identification[3]																											
		Water Quality Standards for Designated Uses [1]	ADEC Table C Groundwater Cleanup Level[2]	MW-27B 4/19/2016 17:15		MW-39A 04/21/2016 11:30		MW-39B 04/21/2016 14:00		MW-50A 04/20/2016 16:25		MW-50B 04/20/2016 18:40		MW-62A 04/23/2016 11:40		MW-74A 04/22/2016 11:50		MW-74A (Duplicate) 04/22/2016 11:50		MW-74B 04/20/2016 18:10		MW-82A 04/20/2016 11:05		MW-82B 04/20/2016 13:05		MW-87B 04/19/2016 14:02		MW-87B (Duplicate) 04/19/2016 14:02		MW-91A 04/21/2016 18:10		MW-91A (Duplicate) 04/21/2016 18:10	
				Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag
SW8270D - SVOC (cont)	Benzyl alcohol	--	--	[0.00515]	ND	[0.0051]	ND	[0.0053]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.00505]	ND	[0.0051]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND	[0.0051]	ND	[0.0051]	ND
	Bis(2chloro1methylethyl)Ether	--	--	[0.00515]	ND	[0.0051]	ND	[0.0053]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.00505]	ND	[0.0051]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND	[0.0051]	ND	[0.0051]	ND
	Bis(2-Chloroethoxy)methane	--	--	[0.00515]	ND	[0.0051]	ND	[0.0053]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.00505]	ND	[0.0051]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND	[0.0051]	ND	[0.0051]	ND
	Bis(2-Chloroethyl)ether	--	0.00077	[0.00515]	ND	[0.0051]	ND	[0.0053]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.00505]	ND	[0.0051]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND	[0.0051]	ND	[0.0051]	ND
	bis(2-Ethylhexyl)phthalate	--	0.006	[0.00515]	ND	[0.0051]	ND	[0.0053]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.00505]	ND	[0.0051]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND	[0.0051]	ND	[0.0051]	ND
	Butylbenzylphthalate	--	7.3	[0.00515]	ND	[0.0051]	ND	[0.0053]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.00505]	ND	[0.0051]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND	[0.0051]	ND	[0.0051]	ND
	Carbazole	--	0.043	[0.00515]	ND	[0.0051]	ND	[0.0053]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.00505]	ND	[0.0051]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND	[0.0051]	ND	[0.0051]	ND
	Chrysene	--	0.12	[0.00515]	ND	[0.0051]	ND	[0.0053]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.00505]	ND	[0.0051]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND	[0.0051]	ND	[0.0051]	ND
	Dibenzo[a,h]anthracene	--	0.00012	[0.00515]	ND	[0.0051]	ND	[0.0053]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.00505]	ND	[0.0051]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND	[0.0051]	ND	[0.0051]	ND
	Dibenzofuran	--	0.073	[0.00515]	ND	[0.0051]	ND	[0.0053]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.00505]	ND	[0.0051]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND	[0.0051]	ND	[0.0051]	ND
	Diethylphthalate	--	29	[0.00515]	ND	[0.0051]	ND	[0.0053]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.00505]	ND	[0.0051]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND	[0.0051]	ND	[0.0051]	ND
	Dimethylphthalate	--	370	[0.00515]	ND	[0.0051]	ND	[0.0053]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.00505]	ND	[0.0051]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND	[0.0051]	ND	[0.0051]	ND
	Di-n-butylphthalate	--	3.7	[0.00515]	ND	[0.0051]	ND	[0.0053]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.00505]	ND	[0.0051]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND	[0.0051]	ND	[0.0051]	ND
	di-n-Octylphthalate	--	1.5	[0.00515]	ND	[0.0051]	ND	[0.0053]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.00505]	ND	[0.0051]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND	[0.0051]	ND	[0.0051]	ND
	Fluoranthene	--	1.5	[0.00515]	ND	[0.0051]	ND	[0.0053]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.00505]	ND	[0.0051]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND	[0.0051]	ND	[0.0051]	ND
	Fluorene	--	1.5	[0.00515]	ND	[0.0051]	ND	[0.0053]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.00505]	ND	[0.0051]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND	[0.0051]	ND	[0.0051]	ND
	Hexachlorobenzene	--	0.001	[0.00515]	ND	[0.0051]	ND	[0.0053]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.00505]	ND	[0.0051]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND	[0.0051]	ND	[0.0051]	ND
	Hexachlorobutadiene	--	0.0073	[0.00515]	ND	[0.0051]	ND	[0.0053]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.00505]	ND	[0.0051]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND	[0.0051]	ND	[0.0051]	ND
	Hexachlorocyclopentadiene	--	0.05	[0.0155]	ND	[0.0153]	ND	[0.0159]	ND	[0.0159]	ND	[0.0153]	ND	[0.0152]	ND	[0.0157]	ND	--	--	[0.0152]	ND	[0.0153]	ND	[0.0152]	ND	[0.0154]	ND	[0.0157]	ND	[0.0153]	ND	[0.0153]	ND
	Hexachloroethane	--	0.04	[0.00515]	ND	[0.0051]	ND	[0.0053]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.00505]	ND	[0.0051]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND	[0.0051]	ND	[0.0051]	ND
	Indeno[1,2,3-c,d] pyrene	--	0.0012	[0.00515]	ND	[0.0051]	ND	[0.0053]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.00505]	ND	[0.0051]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND	[0.0051]	ND	[0.0051]	ND
	Isophorone	--	0.9	[0.00515]	ND	[0.0051]	ND	[0.0053]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.00505]	ND	[0.0051]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND	[0.0051]	ND	[0.0051]	ND
	Naphthalene	--	0.73	[0.00515]	ND	[0.0051]	ND	[0.0053]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.00505]	ND	[0.0051]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND	[0.0051]	ND	[0.0051]	ND
	Nitrobenzene	--	0.018	[0.00515]	ND	[0.0051]	ND	[0.0053]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.00505]	ND	[0.0051]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND	[0.0051]	ND	[0.0051]	ND
	N-Nitrosodimethylamine	--	0.000017	[0.00515]	ND	[0.0051]	ND	[0.0053]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.00505]	ND	[0.0051]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND	[0.0051]	ND	[0.0051]	ND
	N-Nitroso-di-n-propylamine	--	0.00012	[0.00515]	ND	[0.0051]	ND	[0.0053]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.00505]	ND	[0.0051]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND	[0.0051]	ND	[0.0051]	ND
	N-Nitrosodiphenylamine	--	0.17	[0.00515]	ND	[0.0051]	ND	[0.0053]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.00505]	ND	[0.0051]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND	[0.0051]	ND	[0.0051]	ND
	Pentachlorophenol	--	0.001	[0.0257]	ND	[0.0255]	ND	[0.0266]	ND	[0.0265]	ND	[0.0255]	ND	[0.0253]	ND	[0.0261]	ND	--	--	[0.0253]	ND	[0.0255]	ND	[0.0253]	ND	[0.0256]	ND	[0.0261]	ND	[0.0255]	ND	[0.0255]	ND
	Phenanthrene	--	11	[0.00515]	ND	[0.0051]	ND	[0.0053]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.00505]	ND	[0.0051]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND	[0.0051]	ND	[0.0051]	ND
	Phenol	--	11	[0.00515]	ND	[0.0051]	ND	[0.0053]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.00505]	ND	[0.0051]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND	[0.0051]	ND	[0.0051]	ND
	Pyrene	--	1.1	[0.00515]	ND	[0.0051]	ND	[0.0053]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.00505]	ND	[0.0051]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND	[0.0051]	ND	[0.0051]	ND

Notes:

1 - This screening level corresponds to ADEC groundwater cleanup levels from 18 AAC 75.345 Table C. Revised 5/8/2016
http://dec.alaska.gov/commish/regulations/pdfs/18%20aac%2075.pdf
2 - This screening level corresponds to ADEC Alaska General Permit AKG003000 for discharge of Aquifer Pump Test (Table 6).
http://dec.alaska.gov/water/wnpspc/stormwater/docs/AKG003000_Hydrostatic_GP_Permit.pdf
3 - The field sample identification number, date collected, and laboratory sample identification numbers for the total and dissolved fractions are provided.
4 - For detected results, the sample result is listed in this column. For results of non-detect, the LOD is listed in [ ] in this column.
5 - May not exceed 5 NTUs above natural conditions (NC) when the natural turbidity is 50 NTU or less, and may not have more than
10% increase in turbidity when the natural turbidity is more than 50 NTU, not to exceed a maximum increase of 25 NTU. Turbidity screening levels
corresponds to ADEC Alaska General Permit AKG003000 for discharge of Aquifer Pump Test (Table 6).
http://dec.alaska.gov/water/wnpspc/stormwater/docs/AKG003000_Hydrostatic_GP_Permit.pdf

Abbreviations

-- Not applicable or screening criteria does not exist for this compound
AAC Alaska Administrative Code
ADEC Alaska Department of Environmental Conservation
DL Detection Limit
LOD Limit of Detection
LOQ Limit of Quantitation
PAH Polycyclic Aromatic Hydrocarbon
SVOCs Semi-volatile Organic Compounds
VOCs Volatile Organic Compounds

Sample results exceeding the screening criteria are shown in (**BOLD** with yellow shading).
Analyte was not detected, but the LOD was above the screening level (light blue shading).

Data Flags

=	Analyte detected at concentration listed in column to the left.
B	The reported concentration was less than five times that of the associated method blank and/or trip blank.
J	Result is considered an estimated value because the level is below the laboratory LOQ, but above the DL.
ND	Nondetect, LOD is in brackets in the concentration column.
MH, ML, MN	The quantitation was an estimate due to a quality control failure. Where applicable, a "H", "L", or "N" was used to indicate possible high, low, or unknown bias.
QH, QL, QN	The quantitation was an estimate due to a sample matrix quality control failure. Where applicable, a "H", "L", or "N" was used to indicate possible high, low, or unknown bias.

Table 6 - Groundwater Sample Results for Third-Party Wells
Alaska LNG
Nikiski, AK

Method	Compound in milligrams per Liter (mg/L)	Screening Criteria			Sample Identification[4]											
		Water Quality Standards for Designated Uses [1]	Permit AKG003000 Table 6[2]	ADEC Table C Groundwater Cleanup Level[3]	TPW-1 04/23/2016 14:25		TPW-1 (Duplicate) 4/23/2016 14:25		TPW-2 4/23/2016 17:45		PQW-1 4/23/2016 16:30		PQW-1 (Primary) 6/7/2016 13:30		PQW-1 (Duplicate) 6/7/2016 13:35	
					Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag
200.8 Metal, Dissolved	Aluminum , Dissolved	--	--	--	0.00311	=	--	--	0.00231	=	0.000823	J	--	--	--	--
	Antimony , Dissolved	--	--	--	0.0000222	J	--	--	[0.000025]	ND	[0.000025]	ND	--	--	--	--
	Arsenic , Dissolved	--	--	--	[0.0004]	ND	--	--	0.0156	=	[0.0004]	ND	--	--	--	--
	Barium , Dissolved	--	--	--	0.000568	=	--	--	0.0104	=	0.0208	=	--	--	--	--
	Beryllium , Dissolved	--	--	--	[0.000025]	ND	--	--	[0.000025]	ND	[0.000025]	ND	--	--	--	--
	Bismuth , Dissolved	--	--	--	[0.000025]	ND	--	--	[0.000025]	ND	[0.000025]	ND	--	--	--	--
	Boron , Dissolved	--	--	--	0.0335	=	--	--	0.0246	=	0.00544	=	--	--	--	--
	Cadmium , Dissolved	--	--	--	0.0000333	J	--	--	[0.000025]	ND	[0.000025]	ND	--	--	--	--
	Calcium , Dissolved	--	--	--	6.61	=	--	--	17.9	=	15.8	=	--	--	--	--
	Chromium , Dissolved	--	--	--	0.000534	=	--	--	0.000185	J	[0.00025]	ND	--	--	--	--
	Cobalt , Dissolved	--	--	--	0.0000922	=	--	--	0.0000284	=	0.0000325	=	--	--	--	--
	Copper , Dissolved	--	--	--	0.000653	=	--	--	[0.00025]	ND	[0.00025]	ND	--	--	--	--
	Iron , Dissolved	--	--	--	0.652	=	--	--	0.0624	=	1.08	=	--	--	--	--
	Lead , Dissolved	--	--	--	0.000623	=	--	--	0.0000688	J	0.000108	=	--	--	--	--
	Magnesium , Dissolved	--	--	--	3.18	=	--	--	6.05	=	3.91	=	--	--	--	--
	Manganese , Dissolved	--	--	--	0.08	=	--	--	0.0858	=	0.18	=	--	--	--	--
	Molybdenum , Dissolved	--	--	--	0.000525	=	--	--	0.000488	=	0.000525	=	--	--	--	--
	Nickel , Dissolved	--	--	--	0.00062	=	--	--	0.000328	J	0.000664	=	--	--	--	--
	Potassium , Dissolved	--	--	--	6.38	=	--	--	4.82	=	2.95	=	--	--	--	--
	Selenium , Dissolved	--	--	--	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	--	--	--	--
	Silicon , Dissolved	--	--	--	1.54	=, QH	--	--	14.5	=, QH	0.575	=, QH	--	--	--	--
	Silver , Dissolved	--	--	--	[0.00001]	ND	--	--	[0.00001]	ND	[0.00001]	ND	--	--	--	--
	Sodium , Dissolved	--	--	--	9.74	=	--	--	7.62	=	12.8	=	--	--	--	--
	Thallium , Dissolved	--	--	--	[0.00001]	ND	--	--	[0.00001]	ND	[0.00001]	ND	--	--	--	--
	Tin , Dissolved	--	--	--	[0.0001]	ND	--	--	[0.0001]	ND	[0.0001]	ND	--	--	--	--
	Vanadium , Dissolved	--	--	--	[0.0005]	ND	--	--	0.000322	J	[0.0005]	ND	--	--	--	--
	Zinc , Dissolved	--	--	--	0.142	=	--	--	0.000452	J	0.044	=	--	--	--	--
200.8 Metal, Total	Aluminum , Total	--	--	--	0.0294	=	--	--	0.00193	J	0.0103	=	--	--	--	--
	Antimony , Total	--	0.006	0.006	0.000058	=	--	--	[0.000025]	ND	[0.000025]	ND	--	--	--	--
	Arsenic , Total	--	0.01	0.01	[0.0004]	ND	--	--	**0.0143**	=	0.000555	J	--	--	--	--
	Barium , Total	--	--	2	0.00169	=	--	--	0.00985	=	0.0215	=	--	--	--	--
	Beryllium , Total	--	--	0.004	[0.000025]	ND	--	--	[0.000025]	ND	[0.000025]	ND	--	--	--	--
	Bismuth , Total	--	--	--	[0.000025]	ND	--	--	[0.000025]	ND	[0.000025]	ND	--	--	--	--
	Boron , Total	--	--	--	0.0333	=	--	--	0.0231	=	0.00307	J	--	--	--	--
	Cadmium , Total	--	0.005	0.005	0.000186	=	--	--	[0.000025]	ND	[0.000025]	ND	--	--	--	--
	Calcium , Total	--	--	--	7.23	=	--	--	16.7	=	15.8	=	--	--	--	--
	Chromium , Total	--	0.1	0.1	0.00176	=	--	--	0.000254	J	0.000369	J	--	--	--	--
	Cobalt , Total	--	--	--	0.000347	=	--	--	0.0000264	=	0.0000952	=	--	--	--	--
	Copper , Total	--	0.2	1	0.00766	=	--	--	0.000217	J	0.000683	=	--	--	--	--
	Iron , Total	--	--	--	5.98	=	--	--	0.0613	=	7.31	=	--	--	--	--
	Lead , Total	--	0.05	0.015	0.0065	=	--	--	[0.00005]	ND	0.00339	=	--	--	--	--
	Magnesium , Total	--	--	--	3.38	=	--	--	5.77	=	3.65	=	--	--	--	--
	Manganese , Total	--	--	--	0.147	=	--	--	0.0797	=	0.222	=	--	--	--	--
	Molybdenum , Total	--	0.01	--	0.00033	=	--	--	0.000436	=	0.000408	=	--	--	--	--
	Nickel , Total	--	0.2	0.1	0.0024	=	--	--	0.000297	J	0.00118	=	--	--	--	--
	Potassium , Total	--	--	--	7.41	=	--	--	4.58	=	3	=	--	--	--	--
	Selenium , Total	--	0.1	0.05	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	--	--	--	--
	Silver , Total	--	--	0.1	[0.00001]	ND	--	--	[0.00001]	ND	[0.00001]	ND	--	--	--	--
	Sodium , Total	--	--	--	9.93	=	--	--	7.07	=	12	=	--	--	--	--
	Thallium , Total	--	--	0.002	[0.00001]	ND	--	--	[0.00001]	ND	[0.00001]	ND	--	--	--	--
	Tin , Total	--	--	--	0.0000699	J	--	--	[0.0001]	ND	[0.0001]	ND	--	--	--	--
	Vanadium , Total	--	--	0.26	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	--	--	--	--
	Zinc , Total	--	2	5	0.95	=	--	--	[0.00155]	ND	1.41	=	--	--	--	--
EPA 1631 E, Dissolved	Mercury, dissolved	--	--	--	0.000000517	J	--	--	[0.0000005]	ND	0.000000854	J	--	--	--	--
EPA 1631 E, Total	Mercury, Total	--	0.002	0.002	0.000000646	J	--	--	[0.0000005]	ND	0.000000828	J	--	--	--	--
AK101	Gasoline Range Organics	--		2.2	[0.05]	ND	--	--	[0.05]	ND	0.204	=	[0.05]	ND	[0.05]	ND
AK102	Diesel Range Organics	--		1.5	[0.283]	ND	--	--	[0.3]	ND	[0.283]	ND	[0.294]	ND	[0.283]	ND
AK103	Residual Range Organics	--		1.1	0.869	=	--	--	0.221	J	0.419	J	0.161	J	[0.236]	ND
EPA 300.0	Chloride	250	--	--	4.2	=	--	--	11.4	=	24.1	=	--	--	--	--
	Fluoride	--	--	--	0.078	J	--	--	0.097	J	0.035	J	--	--	--	--
	Sulfate	250	--	--	0.576	=	--	--	1.75	=	[0.05]	ND	--	--	--	--
SM21 2130B	Turbidity	5 NTUs above NC[5]	5 NTUs above NC[6]	--	14	=	--	--	0.4	=, B	23	=	--	--	--	--
SM21 2320B	Alkalinity	--	--	--	47	=	--	--	63.6	=	41.8	=	--	--	--	--
SM21 2340B	Hardness as CaCO3	--	--	--	[1]	=	--	--	69.7	=	55.4	=	--	--	--	--
SM21 2540C	Total Dissolved Solids	500	500	--	66	=	--	--	121	=	102	=	--	--	--	--
SM21 2540D	Total Suspended Solids	--	--	--	8.1	=	--	--	[0.498]	ND	15	=	--	--	--	--

Table 6 - Groundwater Sample Results for Third-Party Wells
Alaska LNG
Nikiski, AK

Method	Compound in milligrams per Liter (mg/L)	Screening Criteria			Sample Identification[4]											
		Water Quality Standards for Designated Uses [1]	Permit AKG003000 Table 6[2]	ADEC Table C Groundwater Cleanup Level[3]	TPW-1 04/23/2016 14:25		TPW-1 (Duplicate) 4/23/2016 14:25		TPW-2 4/23/2016 17:45		PQW-1 4/23/2016 16:30		PQW-1 (Primary) 6/7/2016 13:30		PQW-1 (Duplicate) 6/7/2016 13:35	
					Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag
SM21 4500NO3-F	Nitrate-N	--	--	--	0.07	J, B	--	--	[0.05]	ND	0.067	J, B	--	--	--	--
	Nitrite-N	--	--	--	[0.05]	ND	--	--	0.056	J	[0.05]	ND	--	--	--	--
SW8260B VOC	1,1,1,2-Tetrachloroethane	--	--	--	[0.00025]	ND	--	--	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND
	1,1,1-Trichloroethane	--	--	0.2	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	1,1,2,2-Tetrachloroethane	--	--	0.0043	[0.00025]	ND	--	--	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND
	1,1,2-Trichloroethane	--	--	0.005	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	1,1-Dichloroethane	--	--	7.3	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	1,1-Dichloroethene	--	--	0.007	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	1,1-Dichloropropene	--	--	--	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	1,2,3-Trichlorobenzene	--	--	--	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	1,2,3-Trichloropropane	--	--	0.00012	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	1,2,4-Trichlorobenzene	--	--	0.07	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	1,2,4-Trimethylbenzene	--	--	1.8	[0.0005]	ND	--	--	0.00031	J	0.00238	=	[0.0005]	ND	[0.0005]	ND
	1,2-Dibromo-3-chloropropane	--	--	--	[0.005]	ND	--	--	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND
	1,2-Dibromoethane	--	--	0.00005	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	1,2-Dichlorobenzene	--	--	0.6	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	1,2-Dichloroethane	--	--	0.005	[0.00025]	ND	--	--	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND
	1,2-Dichloropropane	--	--	0.005	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	1,3,5-Trimethylbenzene	--	--	1.8	[0.0005]	ND	--	--	[0.0005]	ND	0.0004	J	[0.0005]	ND	[0.0005]	ND
	1,3-Dichlorobenzene	--	--	3.3	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	1,3-Dichloropropane	--	--	--	[0.00025]	ND	--	--	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND
	1,4-Dichlorobenzene	--	--	0.075	[0.00025]	ND	--	--	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND
	2,2-Dichloropropane	--	--	--	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	2-Butanone (MEK)	--	--	22	[0.005]	ND	--	--	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND
	2-Chlorotoluene	--	--	--	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	2-Hexanone	--	--	--	[0.005]	ND	--	--	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND
	4-Chlorotoluene	--	--	--	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	4-Isopropyltoluene	--	--	--	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	4-Methyl-2-pentanone (MIBK)	--	--	2.9	[0.005]	ND	--	--	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND
	Benzene	--	--	0.005	[0.0002]	ND	--	--	[0.0002]	ND	**0.0677**	=	0.00073	=	0.00098	=
	Bromobenzene	--	--	--	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Bromochloromethane	--	--	--	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Bromodichloromethane	--	--	0.014	[0.00025]	ND	--	--	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND
	Bromoform	--	--	0.11	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Bromomethane	--	--	0.051	[0.005]	ND	--	--	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND
	Carbon disulfide	--	--	3.7	[0.005]	ND	--	--	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND
	Carbon tetrachloride	--	--	0.005	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Chlorobenzene	--	--	0.1	[0.00025]	ND	--	--	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND
	Chloroethane	--	--	0.29	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Chloroform	--	--	0.14	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Chloromethane	--	--	0.066	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	cis-1,2-Dichloroethene	--	--	0.07	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	cis-1,3-Dichloropropene	--	--	0.0085	[0.00025]	ND	--	--	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND
	Dibromochloromethane	--	--	0.01	[0.00025]	ND	--	--	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND
	Dibromomethane	--	--	0.37	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Dichlorodifluoromethane	--	--	7.3	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Ethylbenzene	--	--	0.7	[0.0005]	ND	--	--	[0.0005]	ND	0.00056	J	[0.0005]	ND	[0.0005]	ND
	Freon-113	--	--	1100	[0.005]	ND	--	--	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND
	Hexachlorobutadiene	--	--	0.0073	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Isopropylbenzene (Cumene)	--	--	3.7	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Methylene chloride	--	--	0.005	[0.0025]	ND	--	--	[0.0025]	ND	[0.0025]	ND	[0.0025]	ND	[0.0025]	ND
	Methyl-t-butyl ether	--	--	0.47	[0.005]	ND	--	--	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND
	Naphthalene	--	--	0.73	[0.005]	ND	--	--	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND
	n-Butylbenzene	--	--	0.37	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	n-Propylbenzene	--	--	0.37	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	o-Xylene	--	--	10	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	P & M -Xylene	--	--	10	[0.001]	ND	--	--	[0.001]	ND	0.00493	=	[0.001]	ND	[0.001]	ND
	sec-Butylbenzene	--	--	0.37	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Styrene	--	--	0.1	[0.0005]	ND	--	--	[0.0005]	ND	0.0031	=	[0.0005]	ND	[0.0005]	ND
	tert-Butylbenzene	--	--	0.37	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Tetrachloroethene	--	--	0.005	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Toluene	--	--	1	0.00083	J	--	--	[0.0005]	ND	0.0146	=	[0.0005]	ND	[0.0005]	ND
	trans-1,2-Dichloroethene	--	--	0.1	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	trans-1,3-Dichloropropene	--	--	0.0085	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND

Table 6 - Groundwater Sample Results for Third-Party Wells
Alaska LNG
Nikiski, AK

Method	Compound in milligrams per Liter (mg/L)	Screening Criteria			Sample Identification[4]											
		Water Quality Standards for Designated Uses [1]	Permit AKG003000 Table 6[2]	ADEC Table C Groundwater Cleanup Level[3]	TPW-1 04/23/2016 14:25		TPW-1 (Duplicate) 4/23/2016 14:25		TPW-2 4/23/2016 17:45		PQW-1 4/23/2016 16:30		PQW-1 (Primary) 6/7/2016 13:30		PQW-1 (Duplicate) 6/7/2016 13:35	
					Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag
SW8260B VOC (cont)	Trichloroethene	--	--	0.005	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Trichlorofluoromethane	--	--	11	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Vinyl acetate	--	--	37	[0.005]	ND	--	--	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND
	Vinyl chloride	--	--	0.002	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Xylenes (total)	--	--	10	[0.0015]	ND	--	--	[0.0015]	ND	0.00493	=	[0.0015]	ND	[0.0015]	ND
	TAH	0.01	0.01	--	0.00083	J	--	--	[0.00445]	ND	**0.08779**	=	0.00073	=	0.00098	=
SW8270D SVOC	1,2,4-Trichlorobenzene	--	--	0.07	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	1,2-Dichlorobenzene	--	--	0.6	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	1,3-Dichlorobenzene	--	--	3.3	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	1,4-Dichlorobenzene	--	--	0.075	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	1-Chloronaphthalene	--	--	--	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	1-Methylnaphthalene	--	--	0.15	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	2,4,5-Trichlorophenol	--	--	3.7	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	2,4,6-Trichlorophenol	--	--	0.077	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	2,4-Dichlorophenol	--	--	0.11	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	2,4-Dimethylphenol	--	--	0.73	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	2,4-Dinitrophenol	--	--	0.073	[0.0255]	ND	--	--	[0.0257]	ND	[0.0255]	ND	[0.0253]	ND	[0.0266]	ND
	2,4-Dinitrotoluene	--	--	0.0013	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	2,6-Dichlorophenol	--	--	--	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	2,6-Dinitrotoluene	--	--	0.0013	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	2-Chloronaphthalene	--	--	2.9	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	2-Chlorophenol	--	--	0.18	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	2-Methyl-4,6-dinitrophenol	--	--	--	[0.0255]	ND	--	--	[0.0257]	ND	[0.0255]	ND	[0.0253]	ND	[0.0266]	ND
	2-Methylnaphthalene	--	--	0.15	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	2-Methylphenol (o-Cresol)	--	--	1.8	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	2-Nitroaniline	--	--	--	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	2-Nitrophenol	--	--	--	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	3&4-Methylphenol (p&m-Cresol)	--	--	0.18	[0.0102]	ND	--	--	[0.0103]	ND	[0.0102]	ND	[0.0101]	ND	[0.0107]	ND
	3,3-Dichlorobenzidine	--	--	0.0019	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	3-Nitroaniline	--	--	--	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	4-Bromophenyl-phenylether	--	--	--	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	4-Chloro-3-methylphenol	--	--	--	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	4-Chloroaniline	--	--	0.016	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	4-Chlorophenyl-phenylether	--	--	--	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	4-Nitroaniline	--	--	--	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	4-Nitrophenol	--	--	--	[0.0255]	ND	--	--	[0.0257]	ND	[0.0255]	ND	[0.0253]	ND	[0.0266]	ND
	Acenaphthene	--	--	2.2	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	Acenaphthylene	--	--	2.2	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	Aniline	--	--	--	[0.0255]	ND	--	--	[0.0257]	ND	[0.0255]	ND	[0.0253]	ND	[0.0266]	ND
	Anthracene	--	--	11	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	Azobenzene	--	--	--	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	Benzo(a)Anthracene	--	--	0.0012	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	Benzo[a]pyrene	--	--	0.0002	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	Benzo[b]Fluoranthene	--	--	0.0012	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	Benzo[g,h,i]perylene	--	--	1.1	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	Benzo[k]fluoranthene	--	--	0.012	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	Benzoic acid	--	--	150	[0.0255]	ND	--	--	[0.0257]	ND	0.0334	J	[0.02353]	ND	[0.0266]	ND
	Benzyl alcohol	--	--	--	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	Bis(2chloro1methylethyl)Ether	--	--	--	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	Bis(2-Chloroethoxy)methane	--	--	--	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	Bis(2-Chloroethyl)ether	--	--	0.00077	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	bis(2-Ethylhexyl)phthalate	--	--	0.006	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	Butylbenzylphthalate	--	--	7.3	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	Carbazole	--	--	0.043	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	Chrysene	--	--	0.12	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	Dibenzo[a,h]anthracene	--	--	0.00012	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	Dibenzofuran	--	--	0.073	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	Diethylphthalate	--	--	29	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	Dimethylphthalate	--	--	370	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	Di-n-butylphthalate	--	--	3.7	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	0.00322	J	[0.00530]	ND
	di-n-Octylphthalate	--	--	1.5	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	Fluoranthene	--	--	1.5	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	Fluorene	--	--	1.5	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	Hexachlorobenzene	--	--	0.001	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	Hexachlorobutadiene	--	--	0.0073	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND

Table 6 - Groundwater Sample Results for Third-Party Wells
Alaska LNG
Nikiski, AK

Method	Compound in milligrams per Liter (mg/L)	Screening Criteria			Sample Identification[4]											
		Water Quality Standards for Designated Uses [1]	Permit AKG003000 Table 6[2]	ADEC Table C Groundwater Cleanup Level[3]	TPW-1 04/23/2016 14:25		TPW-1 (Duplicate) 4/23/2016 14:25		TPW-2 4/23/2016 17:45		PQW-1 4/23/2016 16:30		PQW-1 (Primary) 6/7/2016 13:30		PQW-1 (Duplicate) 6/7/2016 13:35	
					Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag
SW8270D SVOC (cont)]	Hexachlorocyclopentadiene	--	--	0.05	[0.0153]	ND	--	--	[0.0155]	ND	[0.0153]	ND	[0.0152]	ND	[0.0159]	ND
	Hexachloroethane	--	--	0.04	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	Indeno[1,2,3-c,d] pyrene	--	--	0.0012	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	Isophorone	--	--	0.9	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	Naphthalene	--	--	0.73	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	Nitrobenzene	--	--	0.018	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	N-Nitrosodimethylamine	--	--	0.000017	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	N-Nitroso-di-n-propylamine	--	--	0.00012	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	N-Nitrosodiphenylamine	--	--	0.17	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	Pentachlorophenol	--	--	0.001	[0.0255]	ND	--	--	[0.0257]	ND	[0.0255]	ND	[0.0253]	ND	[0.0266]	ND
	Phenanthrene	--	--	11	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	Phenol	--	--	11	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	Pyrene	--	--	1.1	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
EPA 625M SIM (PAH)	Acenaphthene	--	--	2.2	[0.0000255]	ND	[0.0000255]	ND	[0.0000261]	ND	[0.0000255]	ND	--	--	--	--
	Acenaphthylene	--	--	2.2	[0.0000255]	ND	[0.0000255]	ND	[0.0000261]	ND	0.0000412	J	--	--	--	--
	Anthracene	--	--	11	[0.0000255]	ND	[0.0000255]	ND	[0.0000261]	ND	[0.0000255]	ND	--	--	--	--
	Benzo(a)Anthracene	--	--	0.0012	[0.0000255]	ND	[0.0000255]	ND	[0.0000261]	ND	[0.0000255]	ND	--	--	--	--
	Benzo[a]pyrene	--	--	0.0002	[0.0000102]	ND	[0.0000102]	ND	[0.0000104]	ND	[0.0000102]	ND	--	--	--	--
	Benzo[b]Fluoranthene	--	--	0.0012	[0.0000255]	ND	[0.0000255]	ND	[0.0000261]	ND	[0.0000255]	ND	--	--	--	--
	Benzo[g,h,i]perylene	--	--	1.1	[0.0000255]	ND	[0.0000255]	ND	[0.0000261]	ND	[0.0000255]	ND	--	--	--	--
	Benzo[k]fluoranthene	--	--	0.012	[0.0000255]	ND	[0.0000255]	ND	[0.0000261]	ND	[0.0000255]	ND	--	--	--	--
	Chrysene	--	--	0.12	[0.0000255]	ND	[0.0000255]	ND	[0.0000261]	ND	[0.0000255]	ND	--	--	--	--
	Dibenzo[a,h]anthracene	--	--	0.00012	[0.0000102]	ND	[0.0000102]	ND	[0.0000104]	ND	[0.0000102]	ND	--	--	--	--
	Fluoranthene	--	--	1.5	[0.0000255]	ND	[0.0000255]	ND	[0.0000261]	ND	[0.0000255]	ND	--	--	--	--
	Fluorene	--	--	1.5	[0.0000255]	ND	[0.0000255]	ND	[0.0000261]	ND	[0.0000255]	ND	--	--	--	--
	Indeno[1,2,3-c,d] pyrene	--	--	0.0012	[0.0000255]	ND	[0.0000255]	ND	[0.0000261]	ND	[0.0000255]	ND	--	--	--	--
	Naphthalene	--	--	0.73	[0.000051]	ND	[0.000051]	ND	0.000129	=	0.000406	=	--	--	--	--
	Phenanthrene	--	--	11	[0.0000255]	ND	[0.0000255]	ND	[0.0000261]	ND	[0.0000255]	ND	--	--	--	--
	Pyrene	--	--	1.1	[0.0000255]	ND	[0.0000255]	ND	[0.0000261]	ND	[0.0000255]	ND	--	--	--	--
TAH + PAH	TAqH	0.015	0.015	--	0.00083	J	[0.000403]	ND	0.000129	=	**0.0882**	=	0.00073	=	0.00098	=

Notes:

1 - This screening level corresponds to the most conservative values within ADEC Water Quality Standards 18 AAC 70. Amended 2/19/2016.
https://dec.alaska.gov/commish/regulations/pdfs/18%20AAC%2070.pdf
2 - This screening level corresponds to ADEC Alaska General Permit AKG003000 for discharge of Aquifer Pump Test (Table 6).
http://dec.alaska.gov/water/wnpspc/stormwater/docs/AKG003000_Hydrostatic_GP_Permit.pdf
3 - This screening level corresponds to ADEC groundwater cleanup levels from 18 AAC 75.345 Table C. Revised 5/8/2016
http://dec.alaska.gov/commish/regulations/pdfs/18%20aac%2075.pdf
4 - For detected results, the sample result is listed in this column. For results of non-detect, the LOD is listed in [ ] in this column.
5 - May not exceed 5 NTUs above natural conditions (NC) when the natural turbidity is 50 NTU or less, and may not have more than 10% increase in turbidity when the natural turbidity is more than 50 NTU, not to exceed a maximum increase of 25 NTU.
6 - Turbididy shall not have more than a 10% increase when the natural condition is more than 50 NTU, not to exceed a maximum increase of 15 NTU. Shall not exceed 5 NTU over natural conditions for all lake waters. Turbidity screening levels corresponds to ADEC Alaska General Permit AKG003000 for discharge of Aquifer Pump Test (Table 6). http://dec.alaska.gov/water/wnpspc/stormwater/docs/AKG003000_Hydrostatic_GP_Permit.pdf

Sample result exceeded the most stringent screening criteria (**BOLD** with yellow shading).
Analyte was not detected, but the LOD was above the most stringent screening level (light blue shading).

Data Flags

=	Analyte detected at concentration listed in column to the left.
B	The reported concentration was less than five times that of the associated method blank and/or trip blank.
J	Result is considered an estimated value because the level is below the laboratory LOQ, but above the DL.
ND	Nondetect, LOD is in brackets in the concentration column.
QH	The quantitation was an estimate due to a quality control failure. Where applicable, a "H", "L", or "N" was used to indicate possible high, low, or unknown bias.

Abbreviations

--	Not applicable or screening criteria does not exist for this compound
AAC	Alaska Administrative Code
ADEC	Alaska Department of Environmental Conservation
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
PAH	Polycyclic Aromatic Hydrocarbon
SVOCs	Semi-volatile Organic Compounds
TAH	Total (mono) Aromatic Hydrocarbon = Benzene, Chlorobenzene, Toluene, Ethylbenzene, 1-3, 1-4, and 1-2 di-Chlorobenzenes and total Xylenes (sum of m, p, and o-Xylene).
TAqH	Total Aqueous Hydrocarbon = TAH + PAH
VOCs	Volatile Organic Compounds

Table 7 - Groundwater Sample Results for Water Bearing Unit 1
Alaska LNG
Nikiski, AK

Method	Compound in milligrams per Liter (mg/L)	Screening Criteria		Sample Identification[3]													
		Water Quality Standards for Designated Uses[1]	ADEC Table C Groundwater Cleanup Level[2]	MW-27B 4/19/2016 17:15		MW-39B 04/21/2016 14:00		MW-50B 04/20/2016 18:40		MW-74B 04/21/2016 18:10		MW-82B 04/20/2016 13:05		MW-87B 04/19/2016 14:02		MW-87B (Duplicate) 04/19/2016 14:02	
				Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag
200.8 Metal, Dissolved	Aluminum, Dissolved	--	--	0.00683	=	0.0244	=	0.00235	=, B	0.00357	=, B, MH	0.00312	=, B	0.00239	=, B	0.00285	=, B
	Antimony, Dissolved	--	--	[0.000025]	ND	0.0000627	=	0.0000707	=	0.0000214	J, MH	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND
	Arsenic, Dissolved	--	--	0.00109	=	0.00113	=	[0.0004]	ND	0.00144	=	[0.0004]	ND	0.00143	=	0.00132	=
	Barium, Dissolved	--	--	0.0687	=	0.059	=	0.0235	=	0.0327	=, MH	0.0234	=	0.0411	=	0.041	=
	Beryllium, Dissolved	--	--	[0.000025]	ND	0.0000299	J	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND
	Bismuth, Dissolved	--	--	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND
	Boron, Dissolved	--	--	0.00383	J	0.00697	=	0.00372	J	0.00756	=, MH	0.0078	=	0.00563	=	0.00539	=
	Cadmium, Dissolved	--	--	[0.000025]	ND	0.0000574	=	[0.000025]	ND	[0.000025]	ND	0.0000811	=	[0.000025]	ND	[0.000025]	ND
	Calcium, Dissolved	--	--	19.6	=	30	=	13.5	=	14.9	=	20.7	=	15.7	=	15.6	=
	Chromium, Dissolved	--	--	0.000641	=	0.000557	=	[0.00025]	ND	0.000697	=, MH	0.000151	J	0.000783	=	0.000922	=
	Cobalt, Dissolved	--	--	0.000356	=	0.0131	=	0.000804	=	0.00138	=, MH	0.000249	=	0.000384	=	0.000378	=
	Copper, Dissolved	--	--	0.00102	=	0.000843	=	0.000303	J	[0.00025]	ND	0.00038	J	0.00523	=	0.00541	=
	Iron, Dissolved	--	--	9.4	=	7.43	=	0.47	=	4.74	=	2.14	=	8.59	=	8.6	=
	Lead, Dissolved	--	--	[0.00005]	ND	[0.00005]	ND	[0.00005]	ND	[0.00005]	ND	[0.00005]	ND	[0.00005]	ND	[0.00005]	ND
	Magnesium, Dissolved	--	--	6.86	=	10.5	=	5.33	=	5.03	=, MH	5.24	=	6.23	=	6.17	=
	Manganese, Dissolved	--	--	0.459	=	0.916	=	0.0387	=	0.191	=	0.124	=	0.366	=	0.371	=
	Molybdenum, Dissolved	--	--	0.000199	=	0.000335	=	0.000496	=	0.000381	=, MH	0.000343	=	0.000433	=	0.000451	=
	Nickel, Dissolved	--	--	0.00204	=	0.0208	=	0.00298	=	0.0026	=, MH	0.00189	=	0.003	=	0.00314	=
	Potassium, Dissolved	--	--	2.14	=	3.11	=	2.15	=	2.18	=	2.26	=	2.19	=	2.2	=
	Selenium, Dissolved	--	--	[0.0005]	ND	0.000843	J	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Silicon, Dissolved	--	--	16.6	=, QH	14.1	=	16.1	=, QH	19.1	=	14.5	=, QH	18.1	=, QH	18.2	=, QH
	Silver, Dissolved	--	--	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND
	Sodium, Dissolved	--	--	7.52	=	24.5	=	7.14	=	8.04	=, MH	15.3	=	8.24	=	8.23	=
	Thallium, Dissolved	--	--	[0.00001]	ND	0.00000648	J	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND
	Tin, Dissolved	--	--	[0.0001]	ND	[0.0001]	ND	[0.0001]	ND	[0.0001]	ND	[0.0001]	ND	[0.0001]	ND	0.000197	J
	Vanadium, Dissolved	--	--	[0.0005]	ND	0.000877	J	[0.0005]	ND	0.000477	J, MH	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Zinc, Dissolved	--	--	0.00107	J, B	0.0153	=	0.000748	J, B	0.00112	J	0.00188	J, B	0.00077	J, B	0.000769	J, B
200.8 Metals, Total	Aluminum, Total	--	--	0.882	=	0.463	=	0.07	=	0.43	=, MH	0.37	=	0.0272	=	0.025	=
	Antimony, Total	--	0.006	0.00011	=	0.0000866	=	0.00012	=	0.00011	=	0.0000448	J	0.0000268	J	0.0000209	J
	Arsenic, Total	--	0.01	0.00252	=	0.00206	=	0.00106	=	0.00154	=	0.000786	J	0.00139	=	0.00162	=
	Barium, Total	--	2	0.0833	=	0.0645	=	0.0253	=	0.0414	=	0.029	=	0.0412	=	0.0393	=
	Beryllium, Total	--	0.004	0.000042	J	0.000379	J	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND
	Bismuth, Total	--	--	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND
	Boron, Total	--	--	0.0064	=	0.00708	=	0.00382	J	0.00884	=	0.00918	=	0.00736	=	0.0071	=
	Cadmium, Total	--	0.005	0.0000309	J	0.00006	=	[0.000025]	ND	[0.000025]	ND	0.0000842	=	[0.000025]	ND	[0.000025]	ND
	Calcium, Total	--	--	21	=	31.1	=	13.8	=	16.8	=	23.5	=	15.4	=	14.8	=
	Chromium, Total	--	0.1	0.00344	=	0.00194	=	0.00111	=	0.00248	=, MH	0.00237	=	0.0012	=	0.0013	=
	Cobalt, Total	--	--	0.000836	=	0.0137	=	0.000832	=	0.00173	=, MH	0.000462	=	0.000405	=	0.000382	=
	Copper, Total	--	1	0.00403	=	0.00163	=	0.000813	=	0.000973	=	0.00138	=	0.00383	=	0.00339	=
	Iron, Total	--	--	12.9	=	7.91	=	2.44	=	5.81	=	3.82	=	8.4	=	8.36	=
	Lead, Total	--	0.015	0.000614	=	0.000289	=	0.000124	=	0.000222	=	0.000257	=	0.0000347	J	[0.00005]	ND
	Magnesium, Total	--	--	6.99	=	11.1	=	5.38	=	6.2	=	6	=	5.68	=	5.36	=
	Manganese, Total	--	--	0.501	=	0.941	=	0.0409	=	0.22	=	0.141	=	0.356	=	0.34	=
	Molybdenum, Total	--	--	0.000343	=	0.000419	=	0.000491	=	0.000445	=, MH	0.000495	=	0.000421	=	0.000415	=
	Nickel, Total	--	0.1	0.00363	=	0.0221	=	0.00291	=	0.00329	=, MH	0.00289	=	0.00265	=	0.00259	=
	Potassium, Total	--	--	2.41	=	3.27	=	2.14	=	2.45	=	2.53	=	2.1	=	2.05	=
	Selenium, Total	--	0.05	[0.0005]	ND	0.00071	J	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Silver, Total	--	0.1	0.00000744	J, B	[0.00001]	ND	[0.00001]	ND	0.0000106	J	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND
	Sodium, Total	--	--	7.95	=	14.7	=	7.18	=	9.86	=	17.6	=	7.64	=	7.18	=
	Thallium, Total	--	0.002	0.00000694	J	0.0000113	J	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND
	Tin, Total	--	--	0.000121	J	[0.0001]	ND	[0.0001]	ND	[0.0001]	ND	[0.0001]	ND	[0.0001]	ND	[0.0001]	ND
	Vanadium, Total	--	0.26	0.00284	=	0.00309	=	0.00129	=	0.00191	=, MH	0.00181	=	0.000443	J	0.000366	J
	Zinc, Total	--	5	0.00398	=, B	0.0156	=	0.00104	J, B	0.00239	J	0.00416	=, B	0.00122	J, B	0.00115	J, B
EPA 1631 E, Dissolved	Mercury, Dissolved	--	--	0.00000051	J	[0.0000005]	ND	0.00000708	=	[0.0000005]	ND	[0.0000005]	ND	0.000000519	J	0.000000768	J
EPA 1631 E, Total	Mercury, Total	--	0.002	0.00000282	=	0.00000112	=	0.00000101	=	0.00000333	=, B	0.00000162	=	0.000000949	J	0.000000581	J
AK101	Gasoline Range Organics	--	2.2	[0.05]	ND	0.0388	J, B	[0.05]	ND	[0.05]	ND	[0.05]	ND	[0.05]	ND	[0.05]	ND
AK102	Diesel Range Organics	--	1.5	0.197	J	[0.283]	ND	[0.288]	ND	[0.288]	ND	[0.283]	ND	[0.283]	ND	[0.294]	ND
AK103	Residual Range Organics	--	1.1	0.561	=	[0.236]	ND	[0.24]	ND	0.823	=	[0.236]	ND	[0.236]	ND	[0.245]	ND
EPA 300.0	Chloride	250	--	30.6	=	113	=	14.8	=	11.8	=	45.0	=, QL	18.3	=	18.3	=
	Fluoride	--	--	0.056	J, QH	0.071	J	0.069	J, QH	0.064	J	0.0530	J, QL	0.06	J, QH	0.06	J, QH
	Sulfate	250	--	5.31	=	15.8	=	4.85	=	5.19	=	3.85	=, QL	6.61	=	6.61	=
SM21 2130B	Turbidity	<5 NTU above NC[5]	--	21	=	150	=	4.1	=	1.6	=	10	=	9.9	=	9	=
SM21 2320B	Alkalinity	--	--	58.2	=	40.6	=	47.2	=	44.8	=	44.7	=	55	=	50.9	=
SM21 2340B	Hardness as CaCO3	--	--	77.1	=	118	=	55.8	=	58	=	73.3	=	64.9	=	64.3	=
SM21 2540C	Total Dissolved Solids	500	--	160	=	301	=	106	=	106	=	161	=	125	=	128	=
SM21 2540D	Total Suspended Solids	--	--	25	=	170	=	3.57	=	4.14	=, QN	11	=	8	=	7.21	=
SM21 4500NO3-F	Nitrate-N	--	--	[0.05]	ND	[0.05]	ND	0.0558	J, B	[0.05]	ND, QL	0.563	=	[0.05]	ND	[0.05]	ND
	Nitrite-N	--	--	[0.05]	ND	0.049	J	[0.05]	ND	0.056	J, QL	[0.05]	ND	[0.05]	ND	[0.05]	ND
SW8260B - VOC	1,1,1,2-Tetrachloroethane	--	--	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND
	1,1,1-Trichloroethane	--	0.2	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	1,1,2,2-Tetrachloroethane	--	0.0043	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND
	1,1,2-Trichloroethane	--	0.005	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	1,1-Dichloroethane	--	7.3	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	1,1-Dichloroethene	--	0.007	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	1,1-Dichloropropene	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	1,2,3-Trichlorobenzene	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	1,2,3-Trichloropropane	--	0.00012	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	1,2,4-Trichlorobenzene	--	0.07	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	1,2,4-Trimethylbenzene	--	1.8	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	1,2-Dibromo-3-chloropropane	--	--	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND
	1,2-Dibromoethane	--	0.00005	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	1,2-Dichlorobenzene	--	0.6	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	1,2-Dichloroethane	--	0.005	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND
	1,2-Dichloropropane	--	0.005	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	1,3,5-Trimethylbenzene	--	1.8	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	1,3-Dichlorobenzene	--	3.3	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	1,3-Dichloropropane	--	--	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND
	1,4-Dichlorobenzene	--	0.075	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND
	2,2-Dichloropropane	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	2-Butanone (MEK)	--	22	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND
	2-Chlorotoluene	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	2-Hexanone	--	--	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND
	4-Chlorotoluene	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	4-Isopropyltoluene	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	4-Methyl-2-pentanone (MIBK)	--	2.9	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND
	Benzene	--	0.005	[0.0002]	ND	[0.0002]	ND	[0.0002]	ND	[0.0002]	ND	[0.0002]	ND	[0.0002]	ND	[0.0002]	ND

Table 7 - Groundwater Sample Results for Water Bearing Unit 1
Alaska LNG
Nikiski, AK

Method	Compound in milligrams per Liter (mg/L)	Screening Criteria		Sample Identification[3]													
		Water Quality Standards for Designated Uses [1]	ADEC Table C Groundwater Cleanup Level[2]	MW-27B 4/19/2016 17:15		MW-39B 04/21/2016 14:00		MW-50B 04/20/2016 18:40		MW-74B 04/21/2016 18:10		MW-82B 04/20/2016 13:05		MW-87B 04/19/2016 14:02		MW-87B (Duplicate) 04/19/2016 14:02	
				Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag
SW8260B - VOC (cont)	Bromobenzene	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Bromochloromethane	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Bromodichloromethane	--	0.014	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND
	Bromoform	--	0.11	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Bromomethane	--	0.051	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND
	Carbon disulfide	--	3.7	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND
	Carbon tetrachloride	--	0.005	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Chlorobenzene	--	0.1	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND
	Chloroethane	--	0.29	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Chloroform	--	0.14	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Chloromethane	--	0.066	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	cis-1,2-Dichloroethene	--	0.07	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	cis-1,3-Dichloropropene	--	0.0085	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND
	Dibromochloromethane	--	0.01	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND
	Dibromomethane	--	0.37	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Dichlorodifluoromethane	--	7.3	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Ethylbenzene	--	0.7	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Freon-113	--	1100	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND
	Hexachlorobutadiene	--	0.0073	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Isopropylbenzene (Cumene)	--	3.7	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Methylene chloride	--	0.005	[0.0025]	ND	[0.0025]	ND	[0.0025]	ND	[0.0025]	ND	[0.0025]	ND	[0.0025]	ND	[0.0025]	ND
	Methyl-t-butyl ether	--	0.47	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND
	Naphthalene	--	0.73	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND
	n-Butylbenzene	--	0.37	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	n-Propylbenzene	--	0.37	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	o-Xylene	--	10	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	P & M -Xylene	--	10	[0.001]	ND	[0.001]	ND	[0.001]	ND	[0.001]	ND	[0.001]	ND	[0.001]	ND	[0.001]	ND
	sec-Butylbenzene	--	0.37	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Styrene	--	0.1	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	tert-Butylbenzene	--	0.37	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Tetrachloroethene	--	0.005	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Toluene	--	1	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	trans-1,2-Dichloroethene	--	0.1	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	trans-1,3-Dichloropropene	--	0.0085	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Trichloroethene	--	0.005	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Trichlorofluoromethane	--	11	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Vinyl acetate	--	37	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND
	Vinyl chloride	--	0.002	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Xylenes (total)	--	10	[0.0015]	ND	[0.0015]	ND	[0.0015]	ND	[0.0015]	ND	[0.0015]	ND	[0.0015]	ND	[0.0015]	ND
EPA 625M SIM (PAH)	Acenaphthene	--	2.2	[0.0000254]	ND	--	--	--	--	--	--	--	--	[0.0000256]	ND	--	--
	Acenaphthylene	--	2.2	[0.0000254]	ND	--	--	--	--	--	--	--	--	[0.0000256]	ND	--	--
	Anthracene	--	11	[0.0000254]	ND	--	--	--	--	--	--	--	--	[0.0000256]	ND	--	--
	Benzo(a)Anthracene	--	0.0012	[0.0000254]	ND	--	--	--	--	--	--	--	--	[0.0000256]	ND	--	--
	Benzo[a]pyrene	--	0.0002	[0.0000101]	ND	--	--	--	--	--	--	--	--	[0.0000103]	ND	--	--
	Benzo[b]Fluoranthene	--	0.0012	[0.0000254]	ND	--	--	--	--	--	--	--	--	[0.0000256]	ND	--	--
	Benzo[g,h,i]perylene	--	1.1	[0.0000254]	ND	--	--	--	--	--	--	--	--	[0.0000256]	ND	--	--
	Benzo[k]fluoranthene	--	0.012	[0.0000254]	ND	--	--	--	--	--	--	--	--	[0.0000256]	ND	--	--
	Chrysene	--	0.12	[0.0000254]	ND	--	--	--	--	--	--	--	--	[0.0000256]	ND	--	--
	Dibenzo[a,h]anthracene	--	0.00012	[0.0000101]	ND	--	--	--	--	--	--	--	--	[0.0000103]	ND	--	--
	Fluoranthene	--	1.5	[0.0000254]	ND	--	--	--	--	--	--	--	--	[0.0000256]	ND	--	--
	Fluorene	--	1.5	[0.0000254]	ND	--	--	--	--	--	--	--	--	[0.0000256]	ND	--	--
	Indeno[1,2,3-c,d] pyrene	--	0.0012	[0.0000254]	ND	--	--	--	--	--	--	--	--	[0.0000256]	ND	--	--
	Naphthalene	--	0.73	[0.0000051]	ND	--	--	--	--	--	--	--	--	[0.0000515]	ND	--	--
	Phenanthrene	--	11	[0.0000254]	ND	--	--	--	--	--	--	--	--	[0.0000256]	ND	--	--
	Pyrene	--	1.1	[0.0000254]	ND	--	--	--	--	--	--	--	--	[0.0000256]	ND	--	--
SW8270D - SVOC	1,2,4-Trichlorobenzene	--	0.07	[0.00515]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND
	1,2-Dichlorobenzene	--	0.6	[0.00515]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND
	1,3-Dichlorobenzene	--	3.3	[0.00515]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND
	1,4-Dichlorobenzene	--	0.075	[0.00515]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND
	1-Chloronaphthalene	--	--	[0.00515]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND
	1-Methylnaphthalene	--	0.15	[0.00515]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND
	2,4,5-Trichlorophenol	--	3.7	[0.00515]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND
	2,4,6-Trichlorophenol	--	0.077	[0.00515]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND
	2,4-Dichlorophenol	--	0.11	[0.00515]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND
	2,4-Dimethylphenol	--	0.73	[0.00515]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND
	2,4-Dinitrophenol	--	0.073	[0.0257]	ND	[0.0266]	ND	[0.0255]	ND	[0.0253]	ND	[0.0253]	ND	[0.0256]	ND	[0.0261]	ND
	2,4-Dinitrotoluene	--	0.0013	[0.00515]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND
	2,6-Dichlorophenol	--	--	[0.00515]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND
	2,6-Dinitrotoluene	--	0.0013	[0.00515]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND
	2-Chloronaphthalene	--	2.9	[0.00515]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND
	2-Chlorophenol	--	0.18	[0.00515]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND
	2-Methyl-4,6-dinitrophenol	--	--	[0.0257]	ND	[0.0266]	ND	[0.0255]	ND	[0.0253]	ND	[0.0253]	ND	[0.0256]	ND	[0.0261]	ND
	2-Methylnaphthalene	--	0.15	[0.00515]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND
	2-Methylphenol (o-Cresol)	--	1.8	[0.00515]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND
	2-Nitroaniline	--	--	[0.00515]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND
	2-Nitrophenol	--	--	[0.00515]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND
	3&4-Methylphenol (p&m-Cresol)	--	0.18	[0.0103]	ND	[0.0107]	ND	[0.0102]	ND	[0.0101]	ND	[0.0101]	ND	[0.0103]	ND	[0.0104]	ND
	3,3-Dichlorobenzidine	--	0.0019	[0.00515]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND
	3-Nitroaniline	--	--	[0.00515]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND
	4-Bromophenyl-phenylether	--	--	[0.00515]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND
	4-Chloro-3-methylphenol	--	--	[0.00515]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND
	4-Chloroaniline	--	0.016	[0.00515]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND
	4-Chlorophenyl-phenylether	--	--	[0.00515]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND
	4-Nitroaniline	--	--	[0.00515]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND
	4-Nitrophenol	--	--	[0.0257]	ND, QL	[0.0266]	ND	[0.0255]	ND	[0.0253]	ND	[0.0253]	ND	[0.0256]	ND, QL	[0.0261]	ND, QL
	Acenaphthene	--	2.2	[0.00515]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND
	Acenaphthylene	--	2.2	[0.00515]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND
	Aniline	--	--	[0.0257]	ND	[0.0266]	ND	[0.0255]	ND	[0.0253]	ND	[0.0253]	ND	[0.0256]	ND	[0.0261]	ND
	Anthracene	--	11	[0.00515]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND
	Azobenzene	--	--	[0.00515]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND
	Benzo(a)Anthracene	--	0.0012	[0.00515]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND
	Benzo[a]pyrene	--	0.0002	[0.00515]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND
	Benzo[b]Fluoranthene	--	0.0012	[0.00515]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND
	Benzo[g,h,i]perylene	--	1.1	[0.00515]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND
	Benzo[k]fluoranthene	--	0.012	[0.00515]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND
	Benzoic acid	--	150	[0.0257]	ND, QL	[0.0266]	ND	[0.0255]	ND	[0.0253]	ND	[0.0253]	ND	[0.0256]	ND, QL	[0.0261]	ND, QL

Table 7 - Groundwater Sample Results for Water Bearing Unit 1
Alaska LNG
Nikiski, AK

Method	Compound in milligrams per Liter (mg/L)	Screening Criteria		Sample Identification[3]													
		Water Quality Standards for Designated Uses [1]	ADEC Table C Groundwater Cleanup Level[2]	MW-27B 4/19/2016 17:15		MW-39B 04/21/2016 14:00		MW-50B 04/20/2016 18:40		MW-74B 04/21/2016 18:10		MW-82B 04/20/2016 13:05		MW-87B 04/19/2016 14:02		MW-87B (Duplicate) 04/19/2016 14:02	
				Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag
SW8270D - SVOC (cont)	Benzyl alcohol	--	--	[0.00515]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND
	Bis(2chloro1methylethyl)Ether	--	--	[0.00515]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND
	Bis(2-Chloroethoxy)methane	--	--	[0.00515]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND
	Bis(2-Chloroethyl)ether	--	0.00077	[0.00515]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND
	bis(2-Ethylhexyl)phthalate	--	0.006	[0.00515]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND
	Butylbenzylphthalate	--	7.3	[0.00515]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND
	Carbazole	--	0.043	[0.00515]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND
	Chrysene	--	0.12	[0.00515]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND
	Dibenzo[a,h]anthracene	--	0.00012	[0.00515]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND
	Dibenzofuran	--	0.073	[0.00515]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND
	Diethylphthalate	--	29	[0.00515]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND
	Dimethylphthalate	--	370	[0.00515]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND
	Di-n-butylphthalate	--	3.7	[0.00515]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND
	di-n-Octylphthalate	--	1.5	[0.00515]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND
	Fluoranthene	--	1.5	[0.00515]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND
	Fluorene	--	1.5	[0.00515]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND
	Hexachlorobenzene	--	0.001	[0.00515]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND
	Hexachlorobutadiene	--	0.0073	[0.00515]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND
	Hexachlorocyclopentadiene	--	0.05	[0.0155]	ND	[0.0159]	ND	[0.0153]	ND	[0.0152]	ND	[0.0152]	ND	[0.0154]	ND	[0.0157]	ND
	Hexachloroethane	--	0.04	[0.00515]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND
	Indeno[1,2,3-c,d] pyrene	--	0.0012	[0.00515]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND
	Isophorone	--	0.9	[0.00515]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND
	Naphthalene	--	0.73	[0.00515]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND
	Nitrobenzene	--	0.018	[0.00515]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND
	N-Nitrosodimethylamine	--	0.000017	[0.00515]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND
	N-Nitroso-di-n-propylamine	--	0.00012	[0.00515]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND
	N-Nitrosodiphenylamine	--	0.17	[0.00515]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND
	Pentachlorophenol	--	0.001	[0.0257]	ND	[0.0266]	ND	[0.0255]	ND	[0.0253]	ND	[0.0253]	ND	[0.0256]	ND	[0.0261]	ND
	Phenanthrene	--	11	[0.00515]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND
	Phenol	--	11	[0.00515]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND
	Pyrene	--	1.1	[0.00515]	ND	[0.0053]	ND	[0.0051]	ND	[0.00505]	ND	[0.00505]	ND	[0.00515]	ND	[0.0052]	ND

Notes:

1 - This screening level corresponds to ADEC groundwater cleanup levels from 18 AAC 75.345 Table C. Revised 5/8/2016
http://dec.alaska.gov/commish/regulations/pdfs/18%20aac%2075.pdf
2 - This screening level corresponds to ADEC Alaska General Permit AKG003000 for discharge of Aquifer Pump Test (Table 6).
http://dec.alaska.gov/water/wnpspc/stormwater/docs/AKG003000 Hydrostatic GP Permit.pdf
3 - The field sample identification number, date collected, and laboratory sample identification numbers for the total and dissolved fractions are provided.
4 - For detected results, the sample result is listed in this column. For results of non-detect, the LOD is listed in [ ] in this column.
5 - May not exceed 5 NTUs above natural conditions (NC) when the natural turbidity is 50 NTU or less, and may not have more than
10% increase in turbidity when the natural turbidity is more than 50 NTU, not to exceed a maximum increase of 25 NTU. Turbidity screening levels corresponds to ADEC Alaska General Permit AKG003000 for discharge of Aquifer Pump Test (Table 6).
http://dec.alaska.gov/water/wnpspc/stormwater/docs/AKG003000_Hydrostatic_GP_Permit.pdf

Sample results exceeding the screening criteria are shown in (**BOLD** with yellow shading).
Analyte was not detected, but the LOD was above the screening level (light blue shading).

Abbreviations

--	Not applicable or screening criteria does not exist for this compound
AAC	Alaska Administrative Code
ADEC	Alaska Department of Environmental Conservation
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
PAH	Polycyclic Aromatic Hydrocarbon
SVOCs	Semi-volatile Organic Compounds
VOCs	Volatile Organic Compounds

Data Flags

=	Analyte detected at concentration listed in column to the left.
B	The reported concentration was less than five times that of the associated method blank and/or trip blank.
J	Result is considered an estimated value because the level is below the laboratory LOQ, but above the DL.
ND	Nondetect, LOD is in brackets in the concentration column.
MH, ML, MN	The quantitation was an estimate due to a quality control failure. Where applicable, a "H", "L", or "N" was used to indicate possible high, low, or unknown bias.
QH, QL, QN	The quantitation was an estimate due to a sample matrix quality control failure. Where applicable, a "H", "L", or "N" was used to indicate possible high, low, or unknown bias.

Table 8 - Groundwater Sample Results for Water Bearing Unit 2
Alaska LNG
Nikiski, AK

Method	Compound in milligrams per Liter (mg/L)	Screening Criteria		Sample Identification[3]															
		Water Quality Standards for Designated Uses [1]	ADEC Table C Groundwater Cleanup Level[2]	MW-39A 04/21/2016 11:30		MW-50A 04/20/2016 16:25		MW-62A 04/23/2016 11:40		MW-74A 04/22/2016 11:50		MW-74A (Duplicate) 04/22/2016 11:50		MW-82A 04/20/2016 11:05		MW-91A 04/21/2016 18:10		MW-91A (Duplicate) 04/21/2016 18:10	
				Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag
200.8 Metal, Dissolved	Aluminum, Dissolved	--	--	0.0049	=, B	1.72	=	0.00442	=, B	0.00881	=	--	--	0.123	=	0.0113	=	0.0137	=
	Antimony, Dissolved	--	--	0.000048	J	0.000194	=	[0.000025]	ND	0.0000412	J	--	--	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND
	Arsenic, Dissolved	--	--	0.025	=	0.018	=	0.0151	=	0.0566	=	--	--	0.00752	=	0.0077	=	0.00763	=
	Barium, Dissolved	--	--	0.00951	=	0.0374	=	0.0147	=	0.00394	=, B	--	--	0.01	=	0.022	=	0.0218	=
	Beryllium, Dissolved	--	--	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	--	--	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND
	Bismuth, Dissolved	--	--	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	--	--	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND
	Boron, Dissolved	--	--	0.135	=	0.0207	=	0.0341	=	0.156	=	--	--	0.0123	=	0.0187	=	0.0191	=
	Cadmium, Dissolved	--	--	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	--	--	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND
	Calcium, Dissolved	--	--	10.5	=	28.7	=	14.3	=	3.69	=	--	--	19.3	=	29.7	=	30	=
	Chromium, Dissolved	--	--	0.00111	=	0.00389	=	0.000792	=	0.000688	=	--	--	0.000471	J	0.00019	J	[0.00025]	ND
	Cobalt, Dissolved	--	--	0.0000832	=	0.00072	=	0.000086	=	0.0000633	=	--	--	0.000101	=	0.0000948	=	0.000104	=
	Copper, Dissolved	--	--	0.0002	J	0.00359	=	[0.00025]	ND	[0.00025]	ND	--	--	0.000392	J	0.000306	J	0.00025	J
	Iron, Dissolved	--	--	0.0373	=	1.68	=	0.0213	=	0.0315	=	--	--	0.168	=	1.99	=	2.07	=
	Lead, Dissolved	--	--	[0.00005]	ND	0.00107	=	[0.00005]	ND	[0.00005]	ND	--	--	0.0000706	J	[0.00005]	ND	[0.00005]	ND
	Magnesium, Dissolved	--	--	4.05	=	8.23	=	8.28	=	1.89	=	--	--	4.93	=	6.53	=	6.62	=
	Manganese, Dissolved	--	--	0.0613	=	0.129	=	0.12	=	0.0254	=	--	--	0.0937	=	0.965	=	0.982	=
	Molybdenum, Dissolved	--	--	0.00186	=	0.000898	=	0.000596	=	0.00199	=	--	--	0.000696	=	0.000543	=	0.000574	=
	Nickel, Dissolved	--	--	0.00183	=	0.00335	=	0.00105	=	0.000954	=	--	--	0.00114	=	0.00171	=	0.00167	=
	Potassium, Dissolved	--	--	5.1	=	4.9	=	7.53	=	8.87	=	--	--	2.87	=	3.21	=	3.17	=
	Selenium, Dissolved	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Silicon, Dissolved	--	--	14.1	=	19.3	=, QH	14.9	=, QH	13.9	=	--	--	16.8	=, QH	15.7	=	16.2	=
	Silver, Dissolved	--	--	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	--	--	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND
	Sodium, Dissolved	--	--	21.2	=	7.72	=	5.32	=	33.3	=	--	--	5.27	=	6.74	=	6.69	=
	Thallium, Dissolved	--	--	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	--	--	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND
	Tin, Dissolved	--	--	[0.0001]	ND	0.000288	=	[0.0001]	ND	[0.0001]	ND	--	--	[0.0001]	ND	[0.0001]	ND	[0.0001]	ND
	Vanadium, Dissolved	--	--	0.00062	J	0.00416	=	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Zinc, Dissolved	--	--	[0.00155]	ND	0.00791	=	0.00135	J, B	0.000557	J	--	--	0.00132	J, B	0.0024	J	0.00176	J
200.8 Metals, Total	Aluminum, Total	--	--	1.75	=	10.5	=	0.523	=	1.71	=	--	--	0.781	=	1.5	=	1.28	=
	Antimony, Total	--	0.006	0.000171	=	0.000513	=	0.0000276	J	0.000128	=	--	--	0.0000244	J	0.0000511	=	0.0000536	=
	Arsenic, Total	--	0.01	**0.0283**	=	**0.023**	=	**0.0169**	=	**0.0634**	=	--	--	0.0077	=	0.00873	=	0.00857	=
	Barium, Total	--	2	0.0456	=	0.118	=	0.0217	=	0.0284	=	--	--	0.0149	=	0.0346	=	0.0366	=
	Beryllium, Total	--	0.004	0.0011	=	[0.000025]	ND	[0.000025]	ND	0.0000894	=	--	--	[0.000025]	ND	0.000034	J	0.0000348	J
	Bismuth, Total	--	--	0.0000429	J	0.0000947	=	[0.000025]	ND	0.000032	J	--	--	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND
	Boron, Total	--	--	0.134	=	0.0274	=	0.039	=	0.17	=	--	--	0.013	=	0.0195	=	0.0201	=
	Cadmium, Total	--	0.005	0.0000317	J	0.0000349	J	[0.000025]	ND	0.0000286	J	--	--	[0.000025]	ND	0.000015	J	[0.000025]	ND
	Calcium, Total	--	--	11.7	=	31.8	=	16.6	=	4.97	=	--	--	19.8	=	30.7	=	30.5	=
	Chromium, Total	--	0.1	0.0237	=	0.0246	=	0.00431	=	0.0145	=	--	--	0.00288	=	0.00676	=	0.00736	=
	Cobalt, Total	--	--	0.00172	=	0.00393	=	0.000452	=	0.00155	=	--	--	0.000399	=	0.000728	=	0.000787	=
	Copper, Total	--	1	0.00868	=	0.0198	=	0.00136	=	0.00635	=	--	--	0.00145	=	0.00233	=	0.00257	=
	Iron, Total	--	--	4.02	=	9.69	=	0.711	=	3.03	=	--	--	0.823	=	3.8	=	3.76	=
	Lead, Total	--	0.015	0.00199	=	0.00622	=	0.000287	=	0.00124	=	--	--	0.000313	=	0.000569	=	0.000589	=
	Magnesium, Total	--	--	5.19	=	11.6	=	9.37	=	3	=	--	--	5.21	=	7.26	=	7.09	=
	Manganese, Total	--	--	0.138	=	0.374	=	0.145	=	0.0891	=	--	--	0.109	=	1.03	=	1.04	=
	Molybdenum, Total	--	--	0.00351	=	0.0015	=	0.000892	=	0.00313	=	--	--	0.000745	=	0.000896	=	0.00115	=
	Nickel, Total	--	0.1	0.0147	=	0.0161	=	0.00433	=	0.0101	=	--	--	0.00256	=	0.00497	=	0.00532	=
	Potassium, Total	--	--	5.77	=	6.63	=	8.56	=	10	=	--	--	2.98	=	3.4	=	3.49	=
	Selenium, Total	--	0.05	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Silver, Total	--	0.1	0.0000164	J	0.0000457	=, B	[0.00001]	ND	0.0000237	=	--	--	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND
	Sodium, Total	--	--	11.8	=	8.23	=	6.14	=	37.2	=	--	--	5.43	=	7.11	=	7.12	=
	Thallium, Total	--	0.002	0.0000245	=	0.0000598	=	[0.00001]	ND	0.0000179	J	--	--	[0.00001]	ND	0.00000838	J	0.00000928	J
	Tin, Total	--	--	0.000269	=	0.00148	=	[0.0001]	ND	0.000115	J	--	--	0.0000749	J	0.000114	J	0.000129	J
	Vanadium, Total	--	0.26	0.00867	=	0.0219	=	0.00168	=	0.00749	=	--	--	0.00161	=	0.00361	=	0.00401	=
	Zinc, Total	--	5	0.0122	=	0.0451	=	0.00872	=	0.0136	=	--	--	0.00703	=	0.0148	=	0.0146	=
EPA 1631 E, Dissolved	Mercury, Dissolved	--	--	[0.0000005]	ND	0.00000215	=	0.00000513	J, B	0.00000547	J, B	--	--	0.000000579	=	0.000000599	J, B	0.000000536	J, B
EPA 1631 E, Total	Mercury, Total	--	0.002	0.00000543	=	0.00000922	=	0.00000144	=, B	0.0000049	=, B	--	--	0.00000131	=	0.00000264	=, B	0.00000299	=, B
AK101	Gasoline Range Organics	--	2.2	0.0539	J, B	[0.05]	ND	[0.05]	ND	[0.05]	ND	--	--	[0.05]	ND	[0.05]	ND	[0.05]	ND
AK102	Diesel Range Organics	--	1.5	[0.288]	ND	[0.283]	ND	[0.288]	ND	[0.288]	ND	--	--	[0.283]	ND	[0.283]	ND	[0.288]	ND
AK103	Residual Range Organics	--	1.1	[0.24]	ND	[0.236]	ND	[0.24]	ND	0.352	J	--	--	[0.236]	ND	[0.236]	ND	[0.24]	ND
EPA 300.0	Chloride	250	--	4.66	=	7.6	=	5.39	=	4.33	=	--	--	9.29	=	10.4	=	10.4	=
	Fluoride	--	--	0.222	=	0.082	J, QH	0.086	J	0.193	=	--	--	0.089	J, QH	0.08	J	0.08	J
	Sulfate	250	--	2.22	=	4.55	=	3.39	=	1.24	=	--	--	2.31	=	8.12	=	8.03	=
SM21 2130B	Turbidity	<5 NTU above NC [5]	--	60	=	170	=	4.4	=	15	=	--	--	6.6	=	35	=	32	=
SM21 2320B	Alkalinity	--	--	93.4	=	97.4	=	76.3	=	81.8	=	--	--	61.3	=	93.7	=	92.7	=
SM21 2340B	Hardness as CaCO3	--	--	42.9	=	105	=	69.7	=	17	=	--	--	68.5	=	101	=	102	=
SM21 2540C	Total Dissolved Solids	500	--	173	=	158	=	125	=	131	=	--	--	121	=	169	=	169	=
SM21 2540D	Total Suspended Solids	--	--	82.5	=	170	=	41.1	=	24.7	=	21.3	=	13.1	=	39.5	=	43	=
SM21 4500NO3-F	Nitrate-N	--	--	0.0786	J, B	0.0486	J, B	[0.05]	ND, QL	[0.05]	ND, QL	--	--	0.0452	J, B	0.0654	J, B	0.0648	J, B
	Nitrite-N	--	--	0.034	J	[0.05]	ND	0.056	J, QL	[0.05]	ND, QL	--	--	[0.05]	ND	[0.05]	ND	[0.05]	ND
SW8260B - VOC	1,1,1,2-Tetrachloroethane	--	--	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	--	--	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND
	1,1,1-Trichloroethane	--	0.2	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	1,1,2,2-Tetrachloroethane	--	0.0043	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	--	--	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND
	1,1,2-Trichloroethane	--	0.005	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	1,1-Dichloroethane	--	7.3	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	1,1-Dichloroethene	--	0.007	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	1,1-Dichloropropene	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	1,2,3-Trichlorobenzene	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	1,2,3-Trichloropropane	--	0.00012	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	1,2,4-Trichlorobenzene	--	0.07	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	1,2,4-Trimethylbenzene	--	1.8	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	1,2-Dibromo-3-chloropropane	--	--	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	--	--	[0.005]	ND	[0.005]	ND	[0.005]	ND
	1,2-Dibromoethane	--	0.00005	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	1,2-Dichlorobenzene	--	0.6	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	1,2-Dichloroethane	--	0.005	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	--	--	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND
	1,2-Dichloropropane	--	0.005	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	1,3,5-Trimethylbenzene	--	1.8	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	1,3-Dichlorobenzene	--	3.3	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	1,3-Dichloropopane	--	--	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	--	--	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND
	1,4-Dichlorobenzene	--	0.075	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	--	--	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND
	2,2-Dichloropropane	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	2-Butanone (MEK)	--	22	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	--	--	[0.005]	ND	[0.005]	ND	[0.005]	ND
	2-Chlorotoluene	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	2-Hexanone	--	--	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	--	--	[0.005]	ND	[0.005]	ND	[0.005]	ND
	4-Chlorotoluene	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	4-Isopropyltoluene	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	4-Methyl-2-pentanone (MIBK)	--	2.9	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	--	--	[0.005]	ND	[0.005]	ND	[0.005]	ND
	Benzene	--	0.005	[0.0002]	ND	[0.0002]	ND	[0.0002]	ND	[0.0002]	ND	--	--	[0.0002]	ND	[0.0002]	ND	[0.0002]	ND

Table 8 - Groundwater Sample Results for Water Bearing Unit 2
Alaska LNG
Nikiski, AK

Method	Compound in milligrams per Liter (mg/L)	Screening Criteria		Sample Identification[3]															
		Water Quality Standards for Designated Uses [1]	ADEC Table C Groundwater Cleanup Level[2]	MW-39A 04/21/2016 11:30		MW-50A 04/20/2016 16:25		MW-62A 04/23/2016 11:40		MW-74A 04/22/2016 11:50		MW-74A (Duplicate) 04/22/2016 11:50		MW-82A 04/20/2016 11:05		MW-91A 04/21/2016 18:10		MW-91A (Duplicate) 04/21/2016 18:10	
				Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag
SW8260B - VOC (cont)	Bromobenzene	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Bromochloromethane	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Bromodichloromethane	--	0.014	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	--	--	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND
	Bromoform	--	0.11	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Bromomethane	--	0.051	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	--	--	[0.005]	ND	[0.005]	ND	[0.005]	ND
	Carbon disulfide	--	3.7	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	--	--	[0.005]	ND	[0.005]	ND	[0.005]	ND
	Carbon tetrachloride	--	0.005	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Chlorobenzene	--	0.1	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	--	--	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND
	Chloroethane	--	0.29	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Chloroform	--	0.14	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Chloromethane	--	0.066	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	cis-1,2-Dichloroethene	--	0.07	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	cis-1,3-Dichloropropene	--	0.0085	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	--	--	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND
	Dibromochloromethane	--	0.01	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	--	--	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND
	Dibromomethane	--	0.37	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Dichlorodifluoromethane	--	7.3	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Ethylbenzene	--	0.7	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Freon-113	--	1100	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	--	--	[0.005]	ND	[0.005]	ND	[0.005]	ND
	Hexachlorobutadiene	--	0.0073	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Isopropylbenzene (Cumene)	--	3.7	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Methylene chloride	--	0.005	[0.0025]	ND	[0.0025]	ND	[0.0025]	ND	[0.0025]	ND	--	--	[0.0025]	ND	[0.0025]	ND	[0.0025]	ND
	Methyl-t-butyl ether	--	0.47	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	--	--	[0.005]	ND	[0.005]	ND	[0.005]	ND
	Naphthalene	--	0.73	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	--	--	[0.005]	ND	[0.005]	ND	[0.005]	ND
	n-Butylbenzene	--	0.37	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	n-Propylbenzene	--	0.37	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	o-Xylene	--	10	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	P & M -Xylene	--	10	[0.001]	ND	[0.001]	ND	[0.001]	ND	[0.001]	ND	--	--	[0.001]	ND	[0.001]	ND	[0.001]	ND
	sec-Butylbenzene	--	0.37	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Styrene	--	0.1	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	tert-Butylbenzene	--	0.37	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Tetrachloroethene	--	0.005	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Toluene	--	1	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	trans-1,2-Dichloroethene	--	0.1	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	trans-1,3-Dichloropropene	--	0.0085	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Trichloroethene	--	0.005	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Trichlorofluoromethane	--	11	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Vinyl acetate	--	37	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	--	--	[0.005]	ND	[0.005]	ND	[0.005]	ND
	Vinyl chloride	--	0.002	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Xylenes (total)	--	10	[0.0015]	ND	[0.0015]	ND	[0.0015]	ND	[0.0015]	ND	--	--	[0.0015]	ND	[0.0015]	ND	[0.0015]	ND
EPA 625M SIM (PAH)	Acenaphthene	--	2.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Acenaphthylene	--	2.2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Anthracene	--	11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Benzo(a)Anthracene	--	0.0012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Benzo[a]pyrene	--	0.0002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Benzo[b]Fluoranthene	--	0.0012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Benzo[g,h,i]perylene	--	1.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Benzo[k]fluoranthene	--	0.012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Chrysene	--	0.12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Dibenzo(a,h)anthracene	--	0.00012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Fluoranthene	--	1.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Fluorene	--	1.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Indeno[1,2,3-c,d] pyrene	--	0.0012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Naphthalene	--	0.73	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Phenanthrene	--	11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Pyrene	--	1.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SW8270D - SVOC	1,2,4-Trichlorobenzene	--	0.07	[0.0051]	ND	[0.0053]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.0051]	ND	[0.0051]	ND	[0.0051]	ND
	1,2-Dichlorobenzene	--	0.6	[0.0051]	ND	[0.0053]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.0051]	ND	[0.0051]	ND	[0.0051]	ND
	1,3-Dichlorobenzene	--	3.3	[0.0051]	ND	[0.0053]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.0051]	ND	[0.0051]	ND	[0.0051]	ND
	1,4-Dichlorobenzene	--	0.075	[0.0051]	ND	[0.0053]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.0051]	ND	[0.0051]	ND	[0.0051]	ND
	1-Chloronaphthalene	--	--	[0.0051]	ND	[0.0053]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.0051]	ND	[0.0051]	ND	[0.0051]	ND
	1-Methylnaphthalene	--	0.15	[0.0051]	ND	[0.0053]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.0051]	ND	[0.0051]	ND	[0.0051]	ND
	2,4,5-Trichlorophenol	--	3.7	[0.0051]	ND	[0.0053]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.0051]	ND	[0.0051]	ND	[0.0051]	ND
	2,4,6-Trichlorophenol	--	0.077	[0.0051]	ND	[0.0053]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.0051]	ND	[0.0051]	ND	[0.0051]	ND
	2,4-Dichlorophenol	--	0.11	[0.0051]	ND	[0.0053]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.0051]	ND	[0.0051]	ND	[0.0051]	ND
	2,4-Dimethylphenol	--	0.73	[0.0051]	ND	[0.0053]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.0051]	ND	[0.0051]	ND	[0.0051]	ND
	2,4-Dinitrophenol	--	0.073	[0.0255]	ND	[0.0265]	ND	[0.0253]	ND	[0.0261]	ND	--	--	[0.0255]	ND	[0.0255]	ND	[0.0255]	ND
	2,4-Dinitrotoluene	--	0.0013	[0.0051]	ND	[0.0053]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.0051]	ND	[0.0051]	ND	[0.0051]	ND
	2,6-Dichlorophenol	--	--	[0.0051]	ND	[0.0053]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.0051]	ND	[0.0051]	ND	[0.0051]	ND
	2,6-Dinitrotoluene	--	0.0013	[0.0051]	ND	[0.0053]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.0051]	ND	[0.0051]	ND	[0.0051]	ND
	2-Chloronaphthalene	--	2.9	[0.0051]	ND	[0.0053]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.0051]	ND	[0.0051]	ND	[0.0051]	ND
	2-Chlorophenol	--	0.18	[0.0051]	ND	[0.0053]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.0051]	ND	[0.0051]	ND	[0.0051]	ND
	2-Methyl-4,6-dinitrophenol	--	--	[0.0255]	ND	[0.0265]	ND	[0.0253]	ND	[0.0261]	ND	--	--	[0.0255]	ND	[0.0255]	ND	[0.0255]	ND
	2-Methylnaphthalene	--	0.15	[0.0051]	ND	[0.0053]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.0051]	ND	[0.0051]	ND	[0.0051]	ND
	2-Methylphenol (o-Cresol)	--	1.8	[0.0051]	ND	[0.0053]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.0051]	ND	[0.0051]	ND	[0.0051]	ND
	2-Nitroaniline	--	--	[0.0051]	ND	[0.0053]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.0051]	ND	[0.0051]	ND	[0.0051]	ND
	2-Nitrophenol	--	--	[0.0051]	ND	[0.0053]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.0051]	ND	[0.0051]	ND	[0.0051]	ND
	3&4-Methylphenol (p&m-Cresol)	--	0.18	[0.0102]	ND	[0.0106]	ND	[0.0101]	ND	[0.0104]	ND	--	--	[0.0102]	ND	[0.0102]	ND	[0.0102]	ND
	3,3-Dichlorobenzidine	--	0.0019	[0.0051]	ND	[0.0053]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.0051]	ND	[0.0051]	ND	[0.0051]	ND
	3-Nitroaniline	--	--	[0.0051]	ND	[0.0053]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.0051]	ND	[0.0051]	ND	[0.0051]	ND
	4-Bromophenyl-phenylether	--	--	[0.0051]	ND	[0.0053]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.0051]	ND	[0.0051]	ND	[0.0051]	ND
	4-Chloro-3-methylphenol	--	--	[0.0051]	ND	[0.0053]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.0051]	ND	[0.0051]	ND	[0.0051]	ND
	4-Chloroaniline	--	0.016	[0.0051]	ND	[0.0053]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.0051]	ND	[0.0051]	ND	[0.0051]	ND
	4-Chlorophenyl-phenylether	--	--	[0.0051]	ND	[0.0053]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.0051]	ND	[0.0051]	ND	[0.0051]	ND
	4-Nitroaniline	--	--	[0.0051]	ND	[0.0053]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.0051]	ND	[0.0051]	ND	[0.0051]	ND
	4-Nitrophenol	--	--	[0.0255]	ND	[0.0265]	ND	[0.0253]	ND	[0.0261]	ND	--	--	[0.0255]	ND	[0.0255]	ND	[0.0255]	ND
	Acenaphthene	--	2.2	[0.0051]	ND	[0.0053]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.0051]	ND	[0.0051]	ND	[0.0051]	ND
	Acenaphthylene	--	2.2	[0.0051]	ND	[0.0053]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.0051]	ND	[0.0051]	ND	[0.0051]	ND
	Aniline	--	--	[0.0255]	ND	[0.0265]	ND	[0.0253]	ND	[0.0261]	ND	--	--	[0.0255]	ND	[0.0255]	ND	[0.0255]	ND
	Anthracene	--	11	[0.0051]	ND	[0.0053]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.0051]	ND	[0.0051]	ND	[0.0051]	ND
	Azobenzene	--	--	[0.0051]	ND	[0.0053]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.0051]	ND	[0.0051]	ND	[0.0051]	ND
	Benzo(a)Anthracene	--	0.0012	[0.0051]	ND	[0.0053]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.0051]	ND	[0.0051]	ND	[0.0051]	ND
	Benzo[a]pyrene	--	0.0002	[0.0051]	ND	[0.0053]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.0051]	ND	[0.0051]	ND	[0.0051]	ND
	Benzo[b]Fluoranthene	--	0.0012	[0.0051]	ND	[0.0053]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.0051]	ND	[0.0051]	ND	[0.0051]	ND
	Benzo[g,h,i]perylene	--	1.1	[0.0051]	ND	[0.0053]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.0051]	ND	[0.0051]	ND	[0.0051]	ND
	Benzo[k]fluoranthene	--	0.012	[0.0051]	ND	[0.0053]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.0051]	ND	[0.0051]	ND	[0.0051]	ND
	Benzoic acid	--	150	[0.0255]	ND	[0.0265]	ND	[0.0253]	ND	[0.0261]	ND	--	--	[0.0255]	ND	[0.0255]	ND	[0.0255]	ND

Table 8 - Groundwater Sample Results for Water Bearing Unit 2
Alaska LNG
Nikiski, AK

Method	Compound in milligrams per Liter (mg/L)	Screening Criteria		Sample Identification[3]															
		Water Quality Standards for Designated Uses [1]	ADEC Table C Groundwater Cleanup Level[2]	MW-39A 04/21/2016 11:30		MW-50A 04/20/2016 16:25		MW-62A 04/23/2016 11:40		MW-74A 04/22/2016 11:50		MW-74A (Duplicate) 04/22/2016 11:50		MW-82A 04/20/2016 11:05		MW-91A 04/21/2016 18:10		MW-91A (Duplicate) 04/21/2016 18:10	
				Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag
SW8270D - SVOC (cont)	Benzyl alcohol	--	--	[0.0051]	ND	[0.0053]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.0051]	ND	[0.0051]	ND	[0.0051]	ND
	Bis(2chloro1methylethyl)Ether	--	--	[0.0051]	ND	[0.0053]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.0051]	ND	[0.0051]	ND	[0.0051]	ND
	Bis(2-Chloroethoxy)methane	--	--	[0.0051]	ND	[0.0053]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.0051]	ND	[0.0051]	ND	[0.0051]	ND
	Bis(2-Chloroethyl)ether	--	0.00077	[0.0051]	ND	[0.0053]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.0051]	ND	[0.0051]	ND	[0.0051]	ND
	bis(2-Ethylhexyl)phthalate	--	0.006	[0.0051]	ND	[0.0053]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.0051]	ND	[0.0051]	ND	[0.0051]	ND
	Butylbenzylphthalate	--	7.3	[0.0051]	ND	[0.0053]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.0051]	ND	[0.0051]	ND	[0.0051]	ND
	Carbazole	--	0.043	[0.0051]	ND	[0.0053]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.0051]	ND	[0.0051]	ND	[0.0051]	ND
	Chrysene	--	0.12	[0.0051]	ND	[0.0053]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.0051]	ND	[0.0051]	ND	[0.0051]	ND
	Dibenzo[a,h]anthracene	--	0.00012	[0.0051]	ND	[0.0053]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.0051]	ND	[0.0051]	ND	[0.0051]	ND
	Dibenzofuran	--	0.073	[0.0051]	ND	[0.0053]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.0051]	ND	[0.0051]	ND	[0.0051]	ND
	Diethylphthalate	--	29	[0.0051]	ND	[0.0053]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.0051]	ND	[0.0051]	ND	[0.0051]	ND
	Dimethylphthalate	--	370	[0.0051]	ND	[0.0053]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.0051]	ND	[0.0051]	ND	[0.0051]	ND
	Di-n-butylphthalate	--	3.7	[0.0051]	ND	[0.0053]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.0051]	ND	[0.0051]	ND	[0.0051]	ND
	di-n-Octylphthalate	--	1.5	[0.0051]	ND	[0.0053]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.0051]	ND	[0.0051]	ND	[0.0051]	ND
	Fluoranthene	--	1.5	[0.0051]	ND	[0.0053]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.0051]	ND	[0.0051]	ND	[0.0051]	ND
	Fluorene	--	1.5	[0.0051]	ND	[0.0053]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.0051]	ND	[0.0051]	ND	[0.0051]	ND
	Hexachlorobenzene	--	0.001	[0.0051]	ND	[0.0053]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.0051]	ND	[0.0051]	ND	[0.0051]	ND
	Hexachlorobutadiene	--	0.0073	[0.0051]	ND	[0.0053]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.0051]	ND	[0.0051]	ND	[0.0051]	ND
	Hexachlorocyclopentadiene	--	0.05	[0.0153]	ND	[0.0159]	ND	[0.0152]	ND	[0.0157]	ND	--	--	[0.0153]	ND	[0.0153]	ND	[0.0153]	ND
	Hexachloroethane	--	0.04	[0.0051]	ND	[0.0053]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.0051]	ND	[0.0051]	ND	[0.0051]	ND
	Indeno[1,2,3-c,d] pyrene	--	0.0012	[0.0051]	ND	[0.0053]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.0051]	ND	[0.0051]	ND	[0.0051]	ND
	Isophorone	--	0.9	[0.0051]	ND	[0.0053]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.0051]	ND	[0.0051]	ND	[0.0051]	ND
	Naphthalene	--	0.73	[0.0051]	ND	[0.0053]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.0051]	ND	[0.0051]	ND	[0.0051]	ND
	Nitrobenzene	--	0.018	[0.0051]	ND	[0.0053]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.0051]	ND	[0.0051]	ND	[0.0051]	ND
	N-Nitrosodimethylamine	--	0.000017	[0.0051]	ND	[0.0053]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.0051]	ND	[0.0051]	ND	[0.0051]	ND
	N-Nitroso-di-n-propylamine	--	0.00012	[0.0051]	ND	[0.0053]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.0051]	ND	[0.0051]	ND	[0.0051]	ND
	N-Nitrosodiphenylamine	--	0.17	[0.0051]	ND	[0.0053]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.0051]	ND	[0.0051]	ND	[0.0051]	ND
	Pentachlorophenol	--	0.001	[0.0255]	ND	[0.0265]	ND	[0.0253]	ND	[0.0261]	ND	--	--	[0.0255]	ND	[0.0255]	ND	[0.0255]	ND
	Phenanthrene	--	11	[0.0051]	ND	[0.0053]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.0051]	ND	[0.0051]	ND	[0.0051]	ND
	Phenol	--	11	[0.0051]	ND	[0.0053]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.0051]	ND	[0.0051]	ND	[0.0051]	ND
	Pyrene	--	1.1	[0.0051]	ND	[0.0053]	ND	[0.00505]	ND	[0.0052]	ND	--	--	[0.0051]	ND	[0.0051]	ND	[0.0051]	ND

Notes:

1 - This screening level corresponds to ADEC groundwater cleanup levels from 18 AAC 75.345 Table C. Revised 5/8/2016
http://dec.alaska.gov/commish/regulations/pdfs/18%20aac%2075.pdf
2 - This screening level corresponds to ADEC Alaska General Permit AKG003000 for discharge of Aquifer Pump Test (Table 6).
http://dec.alaska.gov/water/wnpspc/stormwater/docs/AKG003000 Hydrostatic GP Permit.pdf
3 - The field sample identification number, date collected, and laboratory sample identification numbers for the total and dissolved fractions are provided.
4 - For detected results, the sample result is listed in this column. For results of non-detect, the LOD is listed in [ ] in this column.
5 - May not exceed 5 NTUs above natural conditions (NC) when the natural turbidity is 50 NTU or less, and may not have more than 10% increase in turbidity when the natural turbidity is more than 50 NTU, not to exceed a maximum increase of 25 NTU. Turbidity screening levels corresponds to ADEC Alaska General Permit AKG003000 for discharge of Aquifer Pump Test (Table 6).
http://dec.alaska.gov/water/wnpspc/stormwater/docs/AKG003000_Hydrostatic_GP_Permit.pdf

Sample results exceeding the screening criteria are shown in (**BOLD** with yellow shading).
Analyte was not detected, but the LOD was above the screening level (light blue shading).

Abbreviations

--	Not applicable or screening criteria does not exist for this compound
AAC	Alaska Administrative Code
ADEC	Alaska Department of Environmental Conservation
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
PAH	Polycyclic Aromatic Hydrocarbon
SVOCs	Semi-volatile Organic Compounds
VOCs	Volatile Organic Compounds

Data Flags

=	Analyte detected at concentration listed in column to the left.
B	The reported concentration was less than five times that of the associated method blank and/or trip blank.
J	Result is considered an estimated value because the level is below the laboratory LOQ, but above the DL.
ND	Nondetect, LOD is in brackets in the concentration column.
MH, ML, MN	The quantitation was an estimate due to a quality control failure. Where applicable, a "H", "L", or "N" was used to indicate possible high, low, or unknown bias.
QH, QL, QN	The quantitation was an estimate due to a sample matrix quality control failure. Where applicable, a "H", "L", or "N" was used to indicate possible high, low, or unknown bias.

Table 9 - Groundwater Sample Results for Former Quarry Area
Alaska LNG
Nikiski, AK

Method	Compound in milligrams per Liter (mg/L)	Screening Criteria			Sample Identification[4]															
		Water Quality Standards for Designated Uses [1]	Permit AKG003000 Table 6[2]	ADEC Table C Groundwater Cleanup Level[3]	MW-27B 4/19/2016 17:15		MW-87B 04/19/2016 14:02		TPW-1 04/23/2016 14:25		TPW-1 (Duplicate) 4/23/2016 14:25		TPW-2 4/23/2016 17:45		PQW-1 4/23/2016 16:30		PQW-1 (Primary) 6/7/2016 13:30		PQW-1 (Duplicate) 6/7/2016 13:35	
					Conc.[4]	Flag	Conc.[4]	Flag	Conc.[5]	Flag	Conc.[5]	Flag	Conc.[5]	Flag	Conc.[5]	Flag	Conc.[5]	Flag	Conc.[5]	Flag
200.8 Metal, Dissolved	Aluminum , Dissolved	--	--	--	0.00683	=	0.00239	=, B	0.00311	=	--	--	0.00231	=	0.000823	J	--	--	--	--
	Antimony , Dissolved	--	--	--	[0.000025]	ND	[0.000025]	ND	0.0000222	J	--	--	[0.000025]	ND	[0.000025]	ND	--	--	--	--
	Arsenic , Dissolved	--	--	--	0.00109	=	0.00143	=	[0.0004]	ND	--	--	0.0156	=	[0.0004]	ND	--	--	--	--
	Barium , Dissolved	--	--	--	0.0687	=	0.0411	=	0.000568	=	--	--	0.0104	=	0.0208	=	--	--	--	--
	Beryllium , Dissolved	--	--	--	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	--	--	[0.000025]	ND	[0.000025]	ND	--	--	--	--
	Bismuth , Dissolved	--	--	--	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	--	--	[0.000025]	ND	[0.000025]	ND	--	--	--	--
	Boron , Dissolved	--	--	--	0.00383	J	0.00563	=	0.0335	=	--	--	0.0246	=	0.00544	=	--	--	--	--
	Cadmium , Dissolved	--	--	--	[0.000025]	ND	[0.000025]	ND	0.0000333	J	--	--	[0.000025]	ND	[0.000025]	ND	--	--	--	--
	Calcium , Dissolved	--	--	--	19.6	=	15.7	=	6.61	=	--	--	17.9	=	15.8	=	--	--	--	--
	Chromium , Dissolved	--	--	--	0.000641	=	0.000783	=	0.000534	=	--	--	0.000185	J	[0.00025]	ND	--	--	--	--
	Cobalt , Dissolved	--	--	--	0.000356	=	0.000384	=	0.0000922	=	--	--	0.0000284	=	0.0000325	=	--	--	--	--
	Copper , Dissolved	--	--	--	0.00102	=	0.00523	=	0.000653	=	--	--	[0.00025]	ND	[0.00025]	ND	--	--	--	--
	Iron , Dissolved	--	--	--	9.4	=	8.59	=	0.652	=	--	--	0.0624	=	1.08	=	--	--	--	--
	Lead , Dissolved	--	--	--	[0.00005]	ND	[0.00005]	ND	0.000623	=	--	--	0.0000688	J	0.000108	=	--	--	--	--
	Magnesium , Dissolved	--	--	--	6.86	=	6.23	=	3.18	=	--	--	6.05	=	3.91	=	--	--	--	--
	Manganese , Dissolved	--	--	--	0.459	=	0.366	=	0.08	=	--	--	0.0858	=	0.18	=	--	--	--	--
	Molybdenum , Dissolved	--	--	--	0.000199	=	0.000433	=	0.000525	=	--	--	0.000488	=	0.000525	=	--	--	--	--
	Nickel , Dissolved	--	--	--	0.00204	=	0.003	=	0.00062	=	--	--	0.000328	J	0.000664	=	--	--	--	--
	Potassium , Dissolved	--	--	--	2.14	=	2.19	=	6.38	=	--	--	4.82	=	2.95	=	--	--	--	--
	Selenium , Dissolved	--	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	--	--	--	--
	Silicon , Dissolved	--	--	--	16.6	=, QH	18.1	=, QH	1.54	=, QH	--	--	14.5	=, QH	0.575	=, QH	--	--	--	--
	Silver , Dissolved	--	--	--	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	--	--	[0.00001]	ND	[0.00001]	ND	--	--	--	--
	Sodium , Dissolved	--	--	--	7.52	=	8.24	=	9.74	=	--	--	7.62	=	12.8	=	--	--	--	--
	Thallium , Dissolved	--	--	--	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	--	--	[0.00001]	ND	[0.00001]	ND	--	--	--	--
	Tin , Dissolved	--	--	--	[0.0001]	ND	[0.0001]	ND	[0.0001]	ND	--	--	[0.0001]	ND	[0.0001]	ND	--	--	--	--
	Vanadium , Dissolved	--	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	0.000322	J	[0.0005]	ND	--	--	--	--
	Zinc , Dissolved	--	--	--	0.00107	J, B	0.00077	J, B	0.142	=	--	--	0.000452	J	0.044	=	--	--	--	--
200.8 Metal, Total	Aluminum , Total	--	--	--	0.882	=	0.0272	=	0.0294	=	--	--	0.00193	J	0.0103	=	--	--	--	--
	Antimony , Total	--	0.006	0.006	0.00011	=	0.0000268	J	0.000058	=	--	--	[0.000025]	ND	[0.000025]	ND	--	--	--	--
	Arsenic , Total	--	0.01	0.01	0.00252	=	0.00139	=	[0.0004]	ND	--	--	**0.0143**	=	0.000555	J	--	--	--	--
	Barium , Total	--	--	2	0.0833	=	0.0412	=	0.00169	=	--	--	0.00985	=	0.0215	=	--	--	--	--
	Beryllium , Total	--	--	0.004	0.000042	J	[0.000025]	ND	[0.000025]	ND	--	--	[0.000025]	ND	[0.000025]	ND	--	--	--	--
	Bismuth , Total	--	--	--	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	--	--	[0.000025]	ND	[0.000025]	ND	--	--	--	--
	Boron , Total	--	--	--	0.0064	=	0.00736	=	0.0333	=	--	--	0.0231	=	0.00307	J	--	--	--	--
	Cadmium , Total	--	0.005	0.005	0.0000309	J	[0.000025]	ND	0.000186	=	--	--	[0.000025]	ND	[0.000025]	ND	--	--	--	--
	Calcium , Total	--	--	--	21	=	15.4	=	7.23	=	--	--	16.7	=	15.8	=	--	--	--	--
	Chromium , Total	--	0.1	0.1	0.00344	=	0.0012	=	0.00176	=	--	--	0.000254	J	0.000369	J	--	--	--	--
	Cobalt , Total	--	--	--	0.000836	=	0.000405	=	0.000347	=	--	--	0.0000264	=	0.0000952	=	--	--	--	--
	Copper , Total	--	0.2	1	0.00403	=	0.00383	=	0.00766	=	--	--	0.000217	J	0.000683	=	--	--	--	--
	Iron , Total	--	--	--	12.9	=	8.4	=	5.98	=	--	--	0.0613	=	7.31	=	--	--	--	--
	Lead , Total	--	0.05	0.015	0.000614	=	0.0000347	J	0.0065	=	--	--	[0.00005]	ND	0.00339	=	--	--	--	--
	Magnesium , Total	--	--	--	6.99	=	5.68	=	3.38	=	--	--	5.77	=	3.65	=	--	--	--	--
	Manganese , Total	--	--	--	0.501	=	0.356	=	0.147	=	--	--	0.0797	=	0.222	=	--	--	--	--
	Molybdenum , Total	--	0.01	--	0.000343	=	0.000421	=	0.00033	=	--	--	0.000436	=	0.000408	=	--	--	--	--
	Nickel , Total	--	0.2	0.1	0.00363	=	0.00265	=	0.0024	=	--	--	0.000297	J	0.00118	=	--	--	--	--
	Potassium , Total	--	--	--	2.41	=	2.1	=	7.41	=	--	--	4.58	=	3	=	--	--	--	--
	Selenium , Total	--	0.1	0.05	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	--	--	--	--
	Silver , Total	--	--	0.1	0.00000744	J, B	[0.00001]	ND	[0.00001]	ND	--	--	[0.00001]	ND	[0.00001]	ND	--	--	--	--
	Sodium , Total	--	--	--	7.95	=	7.64	=	9.93	=	--	--	7.07	=	12	=	--	--	--	--
	Thallium , Total	--	--	0.002	0.00000694	J	[0.00001]	ND	[0.00001]	ND	--	--	[0.00001]	ND	[0.00001]	ND	--	--	--	--
	Tin , Total	--	--	--	0.000121	J	[0.0001]	ND	0.0000699	J	--	--	[0.0001]	ND	[0.0001]	ND	--	--	--	--
	Vanadium , Total	--	--	0.26	0.00284	=	0.000443	J	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	--	--	--	--
	Zinc , Total	--	2	5	0.00398	=, B	0.00122	J, B	0.95	=	--	--	[0.00155]	ND	1.41	=	--	--	--	--
EPA 1631 E, Dissolved	Mercury, dissolved	--	--	--	0.00000051	J	0.000000519	J	0.000000517	J	--	--	[0.0000005]	ND	0.000000854	J	--	--	--	--
EPA 1631 E, Total	Mercury, Total	--	0.002	0.002	0.00000282	=	0.000000949	J	0.0000006646	J	--	--	[0.0000005]	ND	0.000000828	J	--	--	--	--
AK101	Gasoline Range Organics	--		2.2	[0.05]	ND	[0.05]	ND	[0.05]	ND	--	--	[0.05]	ND	0.204	=	[0.05]	ND	[0.05]	ND
AK102	Diesel Range Organics	--		1.5	0.197	J	[0.283]	ND	[0.283]	ND	--	--	[0.3]	ND	[0.283]	ND	[0.294]	ND	[0.283]	ND
AK103	Residual Range Organics	--		1.1	0.561	=	[0.236]	ND	0.869	=	--	--	0.221	J	0.419	J	0.161	J	[0.236]	ND
EPA 300.0	Chloride	250	--	--	30.6	=	18.3	=	4.2	=	--	--	11.4	=	24.1	=	--	--	--	--
	Fluoride	--	--	--	0.056	J, QH	0.06	J, QH	0.078	J	--	--	0.097	J	0.035	J	--	--	--	--
	Sulfate	250	--	--	5.31	=	6.61	=	0.576	=	--	--	1.75	=	[0.05]	ND	--	--	--	--
SM21 2130B	Turbidity	5 NTUs above NC [5]	5 NTUs above NC [6]	--	21	=	9.9	=	14	=	--	--	0.4	=, B	23	=	--	--	--	--
SM21 2320B	Alkalinity	--	--	--	58.2	=	55	=	47	=	--	--	63.6	=	41.8	=	--	--	--	--
SM21 2340B	Hardness as CaCO3	--	--	--	77.1	=	64.9	=	[1]	=	--	--	69.7	=	55.4	=	--	--	--	--
SM21 2540C	Total Dissolved Solids	500	500	--	160	=	125	=	66	=	--	--	121	=	102	=	--	--	--	--
SM21 2540D	Total Suspended Solids	--	--	--	25	=	8	=	8.1	=	--	--	[0.498]	ND	15	=	--	--	--	--

Table 9 - Groundwater Sample Results for Former Quarry Area
Alaska LNG
Nikiski, AK

Method	Compound in milligrams per Liter (mg/L)	Screening Criteria			Sample Identification[4]													
		Water Quality Standards for Designated Uses [1]	Permit AKG003000 Table 6[2]	ADEC Table C Groundwater Cleanup Level[3]	MW-27B 4/19/2016 17:15		MW-87B 04/19/2016 14:02		TPW-1 04/23/2016 14:25		TPW-1 (Duplicate) 4/23/2016 14:25		TPW-2 4/23/2016 17:45		PQW-1 4/23/2016 16:30		PQW-1 (Primary) 6/7/2016 13:30		PQW-1 (Duplicate) 6/7/2016 13:35	
					Conc.[4]	Flag	Conc.[4]	Flag	Conc.[5]	Flag	Conc.[5]	Flag	Conc.[5]	Flag	Conc.[5]	Flag	Conc.[5]	Flag	Conc.[5]	Flag
SM21 4500NO3-F	Nitrate-N	--	--	--	[0.05]	ND	[0.05]	ND	0.07	J, B	--	--	[0.05]	ND	0.067	J, B	--	--	--	--
	Nitrite-N	--	--	--	[0.05]	ND	[0.05]	ND	[0.05]	ND	--	--	0.056	J	[0.05]	ND	--	--	--	--
SW8260B VOC	1,1,1,2-Tetrachloroethane	--	--	--	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	--	--	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND
	1,1,1-Trichloroethane	--	--	0.2	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	1,1,2,2-Tetrachloroethane	--	--	0.0043	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	--	--	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND
	1,1,2-Trichloroethane	--	--	0.005	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	1,1-Dichloroethane	--	--	7.3	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	1,1-Dichloroethene	--	--	0.007	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	1,1-Dichloropropene	--	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	1,2,3-Trichlorobenzene	--	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	1,2,3-Trichloropropane	--	--	0.00012	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	1,2,4-Trichlorobenzene	--	--	0.07	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	1,2,4-Trimethylbenzene	--	--	1.8	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	0.00031	J	0.00238	=	[0.0005]	ND	[0.0005]	ND
	1,2-Dibromo-3-chloropropane	--	--	--	[0.005]	ND	[0.005]	ND	[0.005]	ND	--	--	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND
	1,2-Dibromoethane	--	--	0.00005	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	1,2-Dichlorobenzene	--	--	0.6	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	1,2-Dichloroethane	--	--	0.005	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	--	--	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND
	1,2-Dichloropropane	--	--	0.005	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	1,3,5-Trimethylbenzene	--	--	1.8	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	0.0004	J	[0.0005]	ND	[0.0005]	ND
	1,3-Dichlorobenzene	--	--	3.3	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	1,3-Dichloropropane	--	--	--	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	--	--	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND
	1,4-Dichlorobenzene	--	--	0.075	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	--	--	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND
	2,2-Dichloropropane	--	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	2-Butanone (MEK)	--	--	22	[0.005]	ND	[0.005]	ND	[0.005]	ND	--	--	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND
	2-Chlorotoluene	--	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	2-Hexanone	--	--	--	[0.005]	ND	[0.005]	ND	[0.005]	ND	--	--	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND
	4-Chlorotoluene	--	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	4-Isopropyltoluene	--	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	4-Methyl-2-pentanone (MIBK)	--	--	2.9	[0.005]	ND	[0.005]	ND	[0.005]	ND	--	--	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND
	Benzene	--	--	0.005	[0.0002]	ND	[0.0002]	ND	[0.0002]	ND	--	--	[0.0002]	ND	**0.0677**	=	0.00073	=	0.00098	=
	Bromobenzene	--	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Bromochloromethane	--	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Bromodichloromethane	--	--	0.014	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	--	--	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND
	Bromoform	--	--	0.11	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Bromomethane	--	--	0.051	[0.005]	ND	[0.005]	ND	[0.005]	ND	--	--	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND
	Carbon disulfide	--	--	3.7	[0.005]	ND	[0.005]	ND	[0.005]	ND	--	--	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND
	Carbon tetrachloride	--	--	0.005	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Chlorobenzene	--	--	0.1	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	--	--	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND
	Chloroethane	--	--	0.29	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Chloroform	--	--	0.14	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Chloromethane	--	--	0.066	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	cis-1,2-Dichloroethene	--	--	0.07	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	cis-1,3-Dichloropropene	--	--	0.0085	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	--	--	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND
	Dibromochloromethane	--	--	0.01	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	--	--	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND
	Dibromomethane	--	--	0.37	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Dichlorodifluoromethane	--	--	7.3	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Ethylbenzene	--	--	0.7	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	0.00056	J	[0.0005]	ND	[0.0005]	ND
	Freon-113	--	--	1100	[0.005]	ND	[0.005]	ND	[0.005]	ND	--	--	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND
	Hexachlorobutadiene	--	--	0.0073	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Isopropylbenzene (Cumene)	--	--	3.7	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Methylene chloride	--	--	0.005	[0.0025]	ND	[0.0025]	ND	[0.0025]	ND	--	--	[0.0025]	ND	[0.0025]	ND	[0.0025]	ND	[0.0025]	ND
	Methyl-t-butyl ether	--	--	0.47	[0.005]	ND	[0.005]	ND	[0.005]	ND	--	--	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND
	Naphthalene	--	--	0.73	[0.005]	ND	[0.005]	ND	[0.005]	ND	--	--	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND
	n-Butylbenzene	--	--	0.37	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	n-Propylbenzene	--	--	0.37	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	o-Xylene	--	--	10	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	P & M -Xylene	--	--	10	[0.001]	ND	[0.001]	ND	[0.001]	ND	--	--	[0.001]	ND	0.00493	=	[0.001]	ND	[0.001]	ND
	sec-Butylbenzene	--	--	0.37	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Styrene	--	--	0.1	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	0.0031	=	[0.0005]	ND	[0.0005]	ND
	tert-Butylbenzene	--	--	0.37	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Tetrachloroethene	--	--	0.005	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Toluene	--	--	1	[0.0005]	ND	[0.0005]	ND	0.00083	J	--	--	[0.0005]	ND	0.0146	=	[0.0005]	ND	[0.0005]	ND
	trans-1,2-Dichloroethene	--	--	0.1	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	trans-1,3-Dichloropropene	--	--	0.0085	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND

Table 9 - Groundwater Sample Results for Former Quarry Area
Alaska LNG
Nikiski, AK

Method	Compound in milligrams per Liter (mg/L)	Screening Criteria			Sample Identification[4]															
		Water Quality Standards for Designated Uses [1]	Permit AKG003000 Table 6[2]	ADEC Table C Groundwater Cleanup Level[3]	MW-27B 4/19/2016 17:15		MW-87B 04/19/2016 14:02		TPW-1 04/23/2016 14:25		TPW-1 (Duplicate) 4/23/2016 14:25		TPW-2 4/23/2016 17:45		PQW-1 4/23/2016 16:30		PQW-1 (Primary) 6/7/2016 13:30		PQW-1 (Duplicate) 6/7/2016 13:35	
					Conc.[4]	Flag	Conc.[4]	Flag	Conc.[5]	Flag	Conc.[5]	Flag	Conc.[5]	Flag	Conc.[5]	Flag	Conc.[5]	Flag	Conc.[5]	Flag
SW8260B VOC (cont)	Trichloroethene	--	--	0.005	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Trichlorofluoromethane	--	--	11	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Vinyl acetate	--	--	37	[0.005]	ND	[0.005]	ND	[0.005]	ND	--	--	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND
	Vinyl chloride	--	--	0.002	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Xylenes (total)	--	--	10	[0.0015]	ND	[0.0015]	ND	[0.0015]	ND	--	--	[0.0015]	ND	0.00493	=	[0.0015]	ND	[0.0015]	ND
	TAH	0.01	0.01	--	[0.00445]	ND	[0.00445]	ND	0.00083	J	--	--	[0.00445]	ND	**0.08779**	=	0.00073	=	0.00098	=
SW8270D SVOC	1,2,4-Trichlorobenzene	--	--	0.07	[0.00515]	ND	[0.00515]	ND	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	1,2-Dichlorobenzene	--	--	0.6	[0.00515]	ND	[0.00515]	ND	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	1,3-Dichlorobenzene	--	--	3.3	[0.00515]	ND	[0.00515]	ND	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	1,4-Dichlorobenzene	--	--	0.075	[0.00515]	ND	[0.00515]	ND	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	1-Chloronaphthalene	--	--	--	[0.00515]	ND	[0.00515]	ND	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	1-Methylnaphthalene	--	--	0.15	[0.00515]	ND	[0.00515]	ND	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	2,4,5-Trichlorophenol	--	--	3.7	[0.00515]	ND	[0.00515]	ND	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	2,4,6-Trichlorophenol	--	--	0.077	[0.00515]	ND	[0.00515]	ND	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	2,4-Dichlorophenol	--	--	0.11	[0.00515]	ND	[0.00515]	ND	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	2,4-Dimethylphenol	--	--	0.73	[0.00515]	ND	[0.00515]	ND	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	2,4-Dinitrophenol	--	--	0.073	[0.0257]	ND	[0.0256]	ND	[0.0255]	ND	--	--	[0.0257]	ND	[0.0255]	ND	[0.0253]	ND	[0.0266]	ND
	2,4-Dinitrotoluene	--	--	0.0013	[0.00515]	ND	[0.00515]	ND	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	2,6-Dichlorophenol	--	--	--	[0.00515]	ND	[0.00515]	ND	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	2,6-Dinitrotoluene	--	--	0.0013	[0.00515]	ND	[0.00515]	ND	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	2-Chloronaphthalene	--	--	2.9	[0.00515]	ND	[0.00515]	ND	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	2-Chlorophenol	--	--	0.18	[0.00515]	ND	[0.00515]	ND	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	2-Methyl-4,6-dinitrophenol	--	--	--	[0.0257]	ND	[0.0256]	ND	[0.0255]	ND	--	--	[0.0257]	ND	[0.0255]	ND	[0.0253]	ND	[0.0266]	ND
	2-Methylnaphthalene	--	--	0.15	[0.00515]	ND	[0.00515]	ND	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	2-Methylphenol (o-Cresol)	--	--	1.8	[0.00515]	ND	[0.00515]	ND	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	2-Nitroaniline	--	--	--	[0.00515]	ND	[0.00515]	ND	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	2-Nitrophenol	--	--	--	[0.00515]	ND	[0.00515]	ND	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	3&4-Methylphenol (p&m-Cresol)	--	--	0.18	[0.0103]	ND	[0.0103]	ND	[0.0102]	ND	--	--	[0.0103]	ND	[0.0102]	ND	[0.0101]	ND	[0.0107]	ND
	3,3-Dichlorobenzidine	--	--	0.0019	[0.00515]	ND	[0.00515]	ND	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	3-Nitroaniline	--	--	--	[0.00515]	ND	[0.00515]	ND	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	4-Bromophenyl-phenylether	--	--	--	[0.00515]	ND	[0.00515]	ND	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	4-Chloro-3-methylphenol	--	--	--	[0.00515]	ND	[0.00515]	ND	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	4-Chloroaniline	--	--	0.016	[0.00515]	ND	[0.00515]	ND	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	4-Chlorophenyl-phenylether	--	--	--	[0.00515]	ND	[0.00515]	ND	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	4-Nitroaniline	--	--	--	[0.00515]	ND	[0.00515]	ND	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	4-Nitrophenol	--	--	--	[0.0257]	ND, QL	[0.0256]	ND, QL	[0.0255]	ND	--	--	[0.0257]	ND	[0.0255]	ND	[0.0253]	ND	[0.0266]	ND
	Acenaphthene	--	--	2.2	[0.00515]	ND	[0.00515]	ND	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	Acenaphthylene	--	--	2.2	[0.00515]	ND	[0.00515]	ND	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	Aniline	--	--	--	[0.0257]	ND	[0.0256]	ND	[0.0255]	ND	--	--	[0.0257]	ND	[0.0255]	ND	[0.0253]	ND	[0.0266]	ND
	Anthracene	--	--	11	[0.00515]	ND	[0.00515]	ND	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	Azobenzene	--	--	--	[0.00515]	ND	[0.00515]	ND	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	Benzo(a)Anthracene	--	--	0.0012	[0.00515]	ND	[0.00515]	ND	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	Benzo[a]pyrene	--	--	0.0002	[0.00515]	ND	[0.00515]	ND	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	Benzo[b]Fluoranthene	--	--	0.0012	[0.00515]	ND	[0.00515]	ND	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	Benzo[g,h,i]perylene	--	--	1.1	[0.00515]	ND	[0.00515]	ND	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	Benzo[k]fluoranthene	--	--	0.012	[0.00515]	ND	[0.00515]	ND	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	Benzoic acid	--	--	150	[0.0257]	ND, QL	[0.0256]	ND, QL	[0.0255]	ND	--	--	[0.0257]	ND	0.0334	J	[0.02353]	ND	[0.0266]	ND
	Benzyl alcohol	--	--	--	[0.00515]	ND	[0.00515]	ND	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	Bis(2chloro1methylethyl)Ether	--	--	--	[0.00515]	ND	[0.00515]	ND	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	Bis(2-Chloroethoxy)methane	--	--	--	[0.00515]	ND	[0.00515]	ND	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	Bis(2-Chloroethyl)ether	--	--	0.00077	[0.00515]	ND	[0.00515]	ND	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	bis(2-Ethylhexyl)phthalate	--	--	0.006	[0.00515]	ND	[0.00515]	ND	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	Butylbenzylphthalate	--	--	7.3	[0.00515]	ND	[0.00515]	ND	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	Carbazole	--	--	0.043	[0.00515]	ND	[0.00515]	ND	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	Chrysene	--	--	0.12	[0.00515]	ND	[0.00515]	ND	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	Dibenzo[a,h]anthracene	--	--	0.00012	[0.00515]	ND	[0.00515]	ND	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	Dibenzofuran	--	--	0.073	[0.00515]	ND	[0.00515]	ND	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	Diethylphthalate	--	--	29	[0.00515]	ND	[0.00515]	ND	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	Dimethylphthalate	--	--	370	[0.00515]	ND	[0.00515]	ND	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	Di-n-butylphthalate	--	--	3.7	[0.00515]	ND	[0.00515]	ND	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	0.00322	J	[0.00530]	ND
	di-n-Octylphthalate	--	--	1.5	[0.00515]	ND	[0.00515]	ND	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	Fluoranthene	--	--	1.5	[0.00515]	ND	[0.00515]	ND	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	Fluorene	--	--	1.5	[0.00515]	ND	[0.00515]	ND	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	Hexachlorobenzene	--	--	0.001	[0.00515]	ND	[0.00515]	ND	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	Hexachlorobutadiene	--	--	0.0073	[0.00515]	ND	[0.00515]	ND	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND

Table 9 - Groundwater Sample Results for Former Quarry Area
Alaska LNG
Nikiski, AK

Method	Compound in milligrams per Liter (mg/L)	Screening Criteria			Sample Identification[4]													
		Water Quality Standards for Designated Uses [1]	Permit AKG003000 Table 6[2]	ADEC Table C Groundwater Cleanup Level[3]	MW-27B 4/19/2016 17:15		MW-87B 04/19/2016 14:02		TPW-1 04/23/2016 14:25		TPW-1 (Duplicate) 4/23/2016 14:25		TPW-2 4/23/2016 17:45		PQW-1 4/23/2016 16:30		PQW-1 (Primary) 6/7/2016 13:30		PQW-1 (Duplicate) 6/7/2016 13:35	
					Conc.[4]	Flag	Conc.[4]	Flag	Conc.[5]	Flag	Conc.[5]	Flag	Conc.[5]	Flag	Conc.[5]	Flag	Conc.[5]	Flag	Conc.[5]	Flag
SW8270D SVOC (cont)]	Hexachlorocyclopentadiene	--	--	0.05	[0.0155]	ND	[0.0154]	ND	[0.0153]	ND	--	--	[0.0155]	ND	[0.0153]	ND	[0.0152]	ND	[0.0159]	ND
	Hexachloroethane	--	--	0.04	[0.00515]	ND	[0.00515]	ND	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	Indeno[1,2,3-c,d] pyrene	--	--	0.0012	[0.00515]	ND	[0.00515]	ND	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	Isophorone	--	--	0.9	[0.00515]	ND	[0.00515]	ND	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	Naphthalene	--	--	0.73	[0.00515]	ND	[0.00515]	ND	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	Nitrobenzene	--	--	0.018	[0.00515]	ND	[0.00515]	ND	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	N-Nitrosodimethylamine	--	--	0.000017	[0.00515]	ND	[0.00515]	ND	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	N-Nitroso-di-n-propylamine	--	--	0.00012	[0.00515]	ND	[0.00515]	ND	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	N-Nitrosodiphenylamine	--	--	0.17	[0.00515]	ND	[0.00515]	ND	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	Pentachlorophenol	--	--	0.001	[0.0257]	ND	[0.0256]	ND	[0.0255]	ND	--	--	[0.0257]	ND	[0.0255]	ND	[0.0253]	ND	[0.0266]	ND
	Phenanthrene	--	--	11	[0.00515]	ND	[0.00515]	ND	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	Phenol	--	--	11	[0.00515]	ND	[0.00515]	ND	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
	Pyrene	--	--	1.1	[0.00515]	ND	[0.00515]	ND	[0.0051]	ND	--	--	[0.00515]	ND	[0.0051]	ND	[0.00505]	ND	[0.00530]	ND
EPA 625M SIM (PAH)	Acenaphthene	--	--	2.2	[0.0000254]	ND	[0.0000256]	ND	[0.0000255]	ND	[0.0000255]	ND	[0.0000261]	ND	[0.0000255]	ND	--	--	--	--
	Acenaphthylene	--	--	2.2	[0.0000254]	ND	[0.0000256]	ND	[0.0000255]	ND	[0.0000255]	ND	[0.0000261]	ND	0.0000412	J	--	--	--	--
	Anthracene	--	--	11	[0.0000254]	ND	[0.0000256]	ND	[0.0000255]	ND	[0.0000255]	ND	[0.0000261]	ND	[0.0000255]	ND	--	--	--	--
	Benzo(a)Anthracene	--	--	0.0012	[0.0000254]	ND	[0.0000256]	ND	[0.0000255]	ND	[0.0000255]	ND	[0.0000261]	ND	[0.0000255]	ND	--	--	--	--
	Benzo[a]pyrene	--	--	0.0002	[0.0000101]	ND	[0.0000103]	ND	[0.0000102]	ND	[0.0000102]	ND	[0.0000104]	ND	[0.0000102]	ND	--	--	--	--
	Benzo[b]Fluoranthene	--	--	0.0012	[0.0000254]	ND	[0.0000256]	ND	[0.0000255]	ND	[0.0000255]	ND	[0.0000261]	ND	[0.0000255]	ND	--	--	--	--
	Benzo[g,h,i]perylene	--	--	1.1	[0.0000254]	ND	[0.0000256]	ND	[0.0000255]	ND	[0.0000255]	ND	[0.0000261]	ND	[0.0000255]	ND	--	--	--	--
	Benzo[k]fluoranthene	--	--	0.012	[0.0000254]	ND	[0.0000256]	ND	[0.0000255]	ND	[0.0000255]	ND	[0.0000261]	ND	[0.0000255]	ND	--	--	--	--
	Chrysene	--	--	0.12	[0.0000254]	ND	[0.0000256]	ND	[0.0000255]	ND	[0.0000255]	ND	[0.0000261]	ND	[0.0000255]	ND	--	--	--	--
	Dibenzo[a,h]anthracene	--	--	0.00012	[0.0000101]	ND	[0.0000103]	ND	[0.0000102]	ND	[0.0000102]	ND	[0.0000104]	ND	[0.0000102]	ND	--	--	--	--
	Fluoranthene	--	--	1.5	[0.0000254]	ND	[0.0000256]	ND	[0.0000255]	ND	[0.0000255]	ND	[0.0000261]	ND	[0.0000255]	ND	--	--	--	--
	Fluorene	--	--	1.5	[0.0000254]	ND	[0.0000256]	ND	[0.0000255]	ND	[0.0000255]	ND	[0.0000261]	ND	[0.0000255]	ND	--	--	--	--
	Indeno[1,2,3-c,d] pyrene	--	--	0.0012	[0.0000254]	ND	[0.0000256]	ND	[0.0000255]	ND	[0.0000255]	ND	[0.0000261]	ND	[0.0000255]	ND	--	--	--	--
	Naphthalene	--	--	0.73	[0.000051]	ND	[0.0000515]	ND	[0.000051]	ND	[0.000051]	ND	0.000129	=	0.000406	=	--	--	--	--
	Phenanthrene	--	--	11	[0.0000254]	ND	[0.0000256]	ND	[0.0000255]	ND	[0.0000255]	ND	[0.0000261]	ND	[0.0000255]	ND	--	--	--	--
	Pyrene	--	--	1.1	[0.0000254]	ND	[0.0000256]	ND	[0.0000255]	ND	[0.0000255]	ND	[0.0000261]	ND	[0.0000255]	ND	--	--	--	--
TAH + PAH	TAqH	0.015	0.015	--	[0.000403]	ND	[0.000403]	ND	0.00083	J	[0.000403]	ND	0.000129	=	**0.0882**	=	0.00073	=	0.00098	=

Notes:

1 - This screening level corresponds to the most conservative values within ADEC Water Quality Standards 18 AAC 70. Amended 2/19/2016.
https://dec.alaska.gov/commish/regulations/pdfs/18%20AAC%2070.pdf
2 - This screening level corresponds to ADEC Alaska General Permit AKG003000 for discharge of Aquifer Pump Test (Table 6).
http://dec.alaska.gov/water/wnpspc/stormwater/docs/AKG003000_Hydrostatic_GP_Permit.pdf
3 - This screening level corresponds to ADEC groundwater cleanup levels from 18 AAC 75.345 Table C. Revised 5/8/2016
http://dec.alaska.gov/commish/regulations/pdfs/18%20aac%2075.pdf
4 - For detected results, the sample result is listed in this column. For results of non-detect, the LOD is listed in [ ] in this column.
5 - May not exceed 5 NTUs above natural conditions (NC) when the natural turbidity is 50 NTU or less, and may not have more than
10% increase in turbidity when the natural turbidity is more than 50 NTU, not to exceed a maximum increase of 25 NTU.
6 - Turbidity shall not have more than a 10% increase when the natural condition is more than 50 NTU, not to exceed a maximum increase of 15 NTU.
Shall not exceed 5 NTU over natural conditions for all lake waters. Turbidity screening levels corresponds to ADEC Alaska General Permit AKG003000 for discharge of Aquifer Pump Test (Table 6). http://dec.alaska.gov/water/wnpspc/stormwater/docs/AKG003000_Hydrostatic_GP_Permit.pdf

Sample result exceeded the most stringent screening criteria (**BOLD** with yellow shading).
Analyte was not detected, but the LOD was above the most stringent screening level (light blue shading).

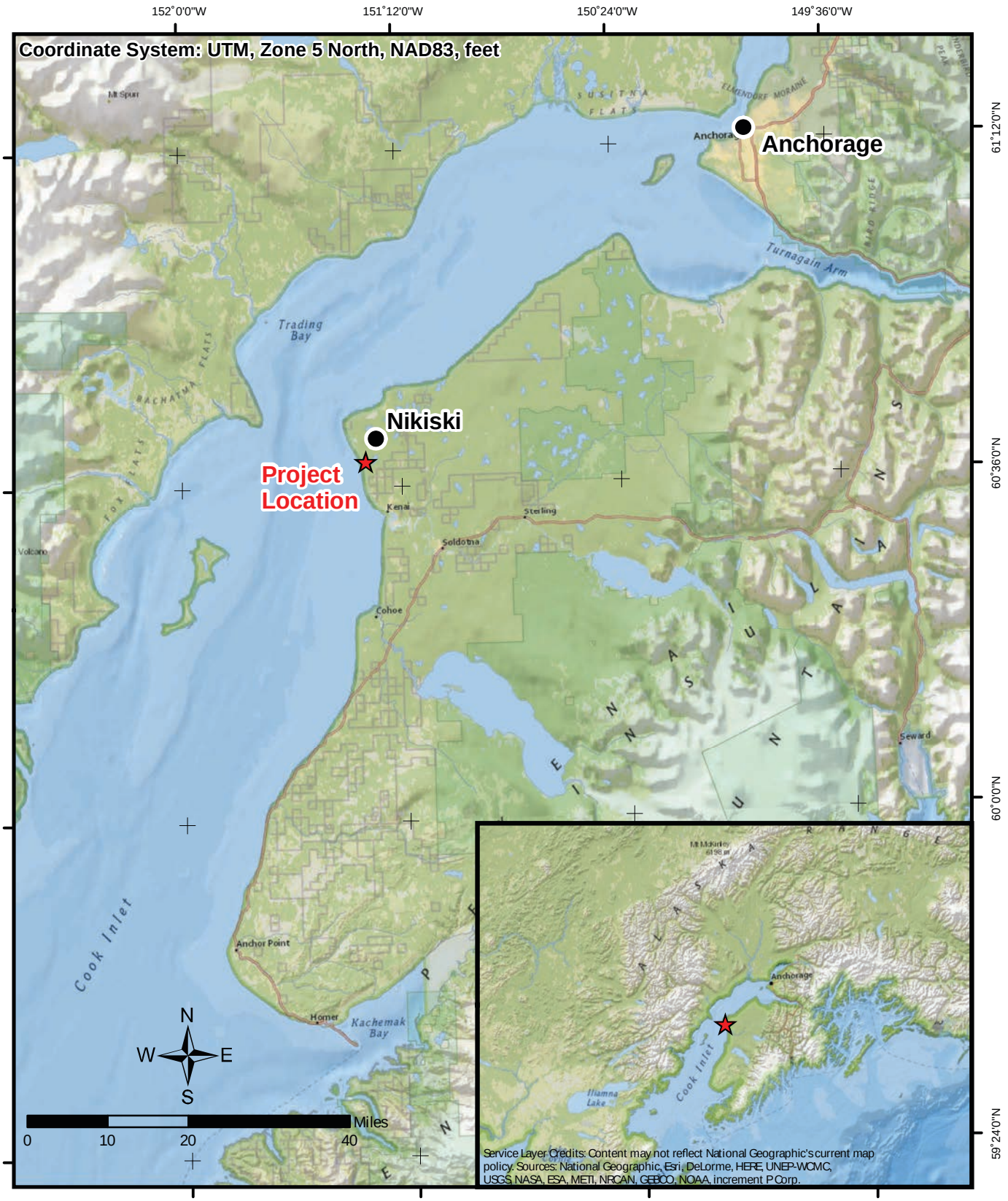
Data Flags

=	Analyte detected at concentration listed in column to the left.
B	The reported concentration was less than five times that of the associated method blank and/or trip blank.
J	Result is considered an estimated value because the level is below the laboratory LOQ, but above the DL.
ND	Nondetect, LOD is in brackets in the concentration column.
QH	The quantitation was an estimate due to a quality control failure. Where applicable, a "H", "L", or "N" was used to indicate possible high, low, or unknown bias.

Abbreviations

--	Not applicable or screening criteria does not exist for this compound
AAC	Alaska Administrative Code
ADEC	Alaska Department of Environmental Conservation
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
SVOCs	Semi-volatile Organic Compounds
TAH	Total (mono) Aromatic Hydrocarbon = Benzene, Chlorobenzene, Toluene, Ethylbenzene, 1-3, 1-4, and 1-2 di-Chlorobenzenes and total Xylenes (sum of m, p, and o-Xylene).
TAqH	Total Aqueous Hydrocarbon = TAH + PAH
VOCs	Volatile Organic Compounds

ILLUSTRATIONS



VICINITY MAP
ONSHORE LNG FACILITIES
ALASKA LNG PROJECT
NIKISKI, ALASKA

PLATE 1

151°23'0"W 151°22'0"W 151°21'0"W 151°20'0"W

60°40'30"N 60°40'0"N 60°39'30"N 60°39'0"N

S-490 N Miller Loop Miller Loop Rd N Miller Loop N Miller Loop Jackport St Bernice Lake Rd Miller Loop Rd Forest Ln Birchwood Dr Timber Ln Duke St

B-133 B-49 B-50 B-60 B-61 B-62 B-64 B-131 B-66 B-67 B-9 B-10 B-11

Industrial Ave Baranoff Dr Interlake Dr Cabin Lake Rd

B-127 B-68 B-69 B-132 B-71 B-14 B-72 B-126 B-73 B-15 B-74 B-75 B-17 B-18 B-76

Nichols St Walter St Josephine Way Autumn Rd Belmoral Cir Ray Ct

B-125 B-77 B-78 B-79 B-80 B-81 B-82 B-124 B-23 B-24 B-83 B-84 B-26 B-27 B-28

TPW-5 Hinerman Rd Steven St

Rena Ct Kenai Spur Hwy Cirrus St OW-1 OW-2 APT-1, APT-3

B-123 B-85 B-86 B-90 B-87 B-88 B-89 B-47 TPW-1 PQW-1 TPW-2 OW-3 OW-4

Gina St Robt Walker Ave APT-2

B-122 B-91 B-92 B-95 B-93 B-96 B-32 B-94 B-121 B-97 B-98 B-34 B-138 B-99

B-120 B-36 B-101 B-37 B-38 Joyce Cir B-102 B-39 B-104 B-40 B-45 B-105 B-42 B-43

B-107 N Lovers Loop Walker St Redoubt Cir Redoubt Dr Lumber Dr Foley Dr

B-117 B-137 B-110 B-112 B-113 B-114 Spruce Pl Fireweed Pl Birch Ln Treetop Ln

S Miller Loop Rd B-136 B-135

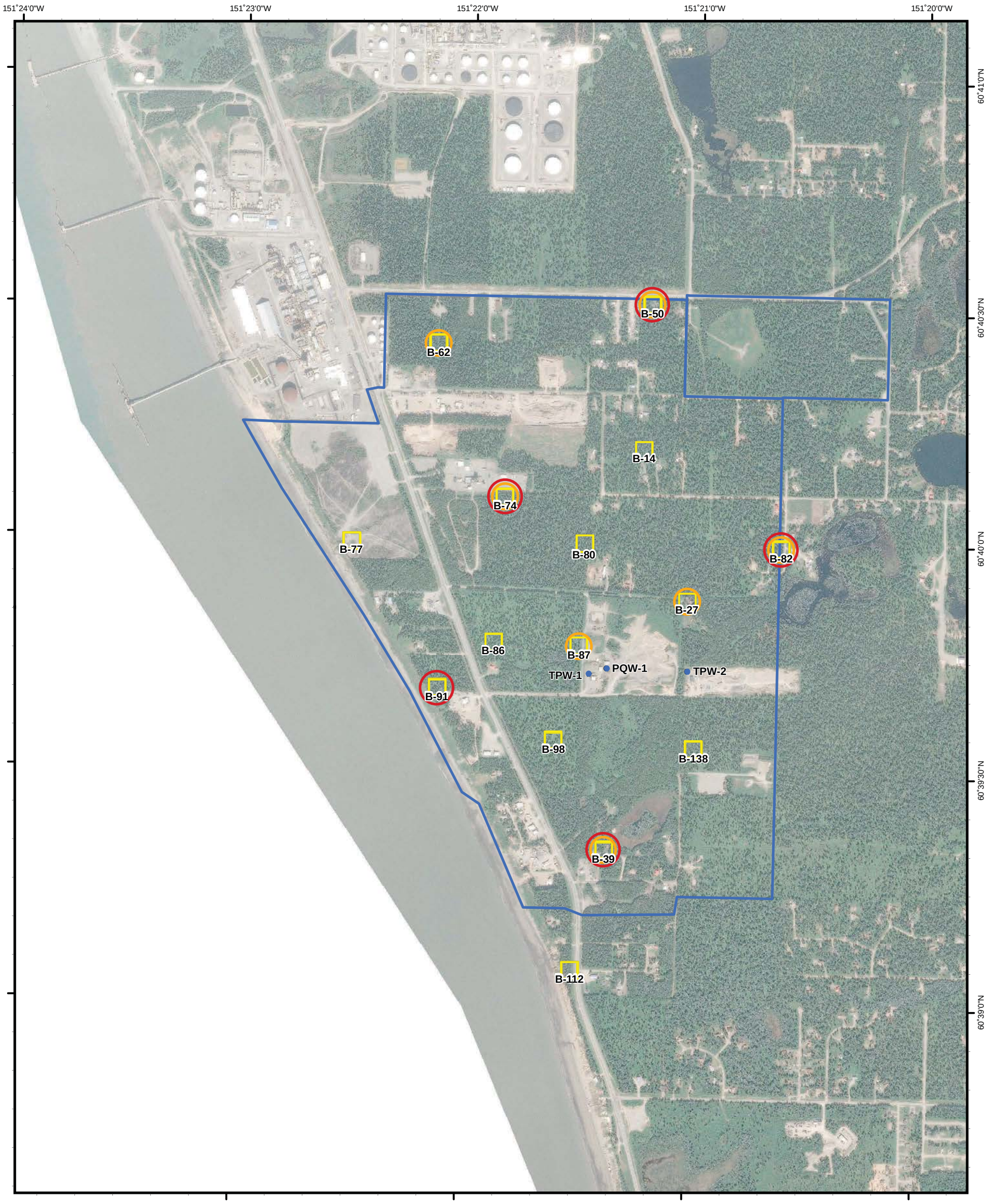
LEGEND

- Onshore borings (Completed)
- Well Locations
- Onshore LNG Facilities Study Area
- APT Well
- Observation Well Pair
- Third Party Well

0 500 1,000 2,000 Feet

INVESTIGATION PLAN
ONSHORE FACILITIES
ALASKA LNG PROJECT
NIKISKI, ALASKA

PLATE 2



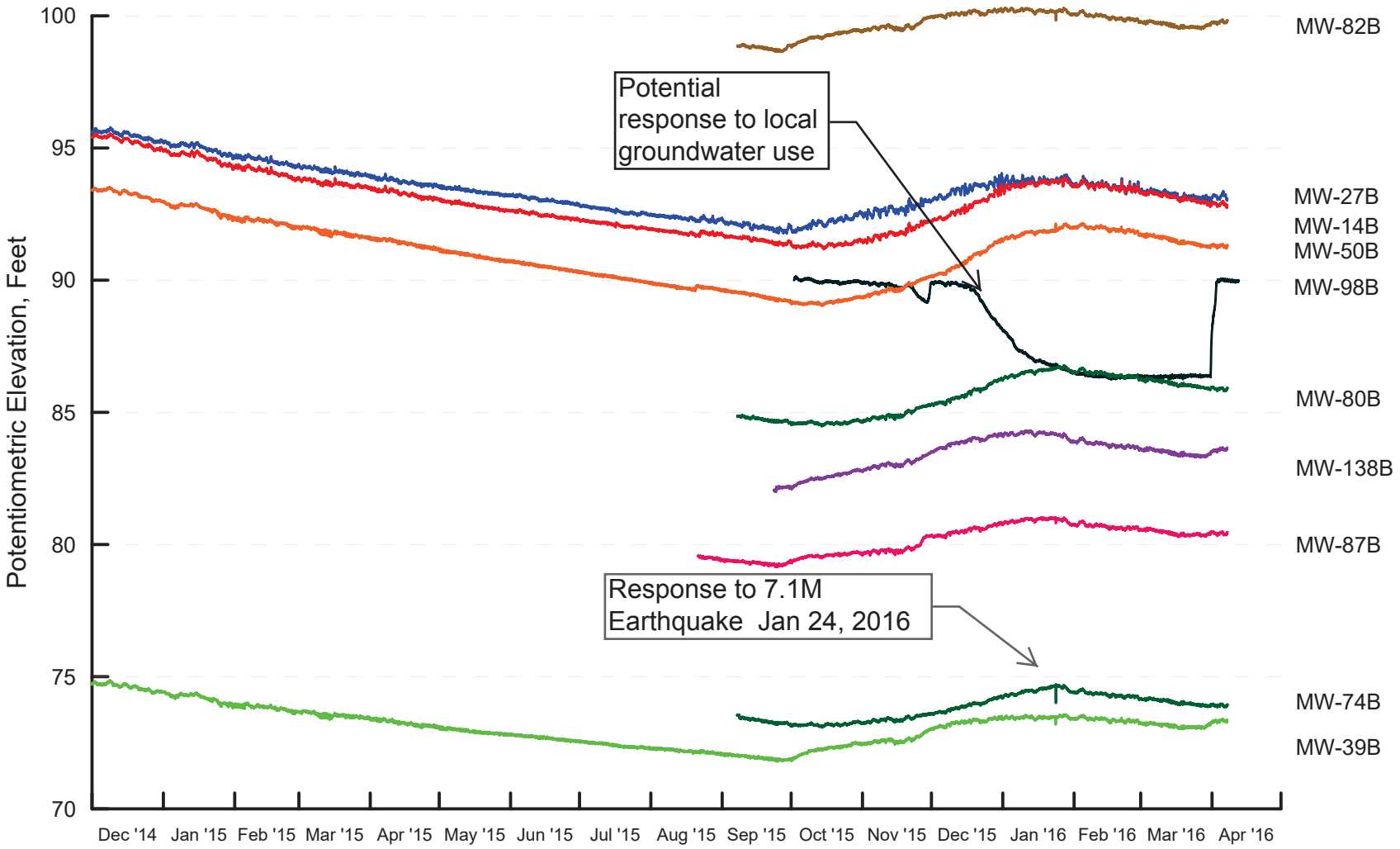
LEGEND

- Monitoring Well Locations
- Onshore LNG Facilities Study Area
- Shallow Well – Water Bearing Unit 1
- Intermediate Well – Water Bearing Unit 2
- Third Party Well

0 750 1,500 3,000 Feet

WATER QUALITY WELL SAMPLING LOCATIONS – EVENT 1
ONSHORE FACILITIES
ALASKA LNG PROJECT
NIKISKI, ALASKA

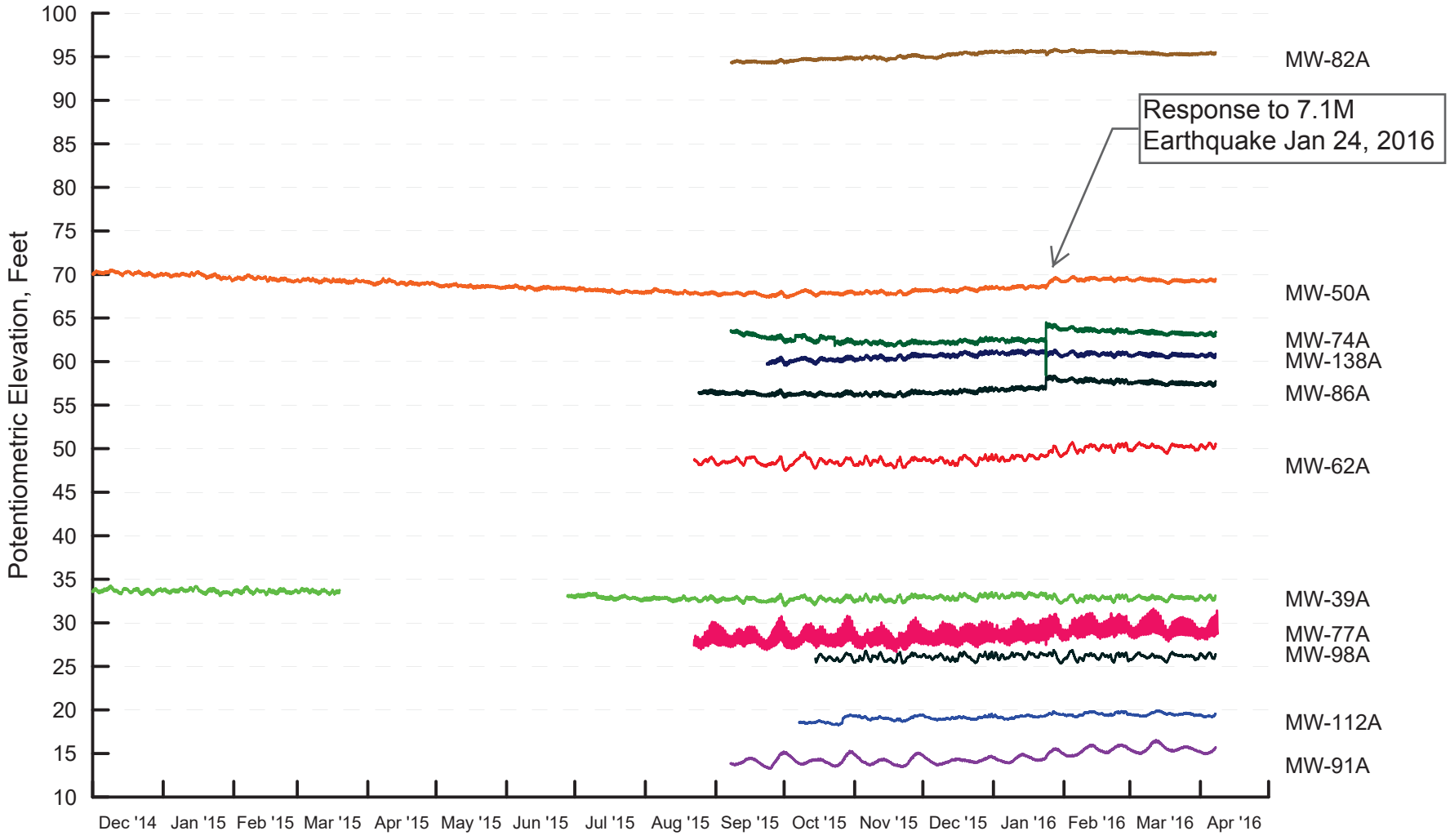
PLATE 3



Elevation in Feet, NAVD88

GROUNDWATER SURFACE - WATER BEARING UNIT 1
ONSHORE LNG FACILITIES
ALASKA LNG PROJECT
NIKISKI, ALASKA

PLATE 4



Elevation in Feet, NAVD88

POTENTIOMETRIC SURFACE - WATER BEARING UNIT 2
ONSHORE LNG FACILITIES
ALASKA LNG PROJECT
NIKISKI, ALASKA

PLATE 5

151°23'W 151°22'W 151°21'W 151°20'W

60°40'30"N 60°40'N 60°39'30"N 60°39'N

Groundwater Gradient
0.01 ft/ft

MW-50B
91.33

MW-62B
Dry

MW-14B
92.85

MW-74B
73.9

MW-77B
Dry

MW-80B
85.92

MW-82B
100.12

MW-27B
93.17

MW-86B
Dry

MW-87B
80.47

MW-91B
Dry

MW-98B
90

MW-138B
83.65

MW-39B
73.62

MW-112B
Dry

Bernice Lake Rd
Taiga Way
Birchwood Dr
Jeffery Ave
Timber Ln
Forest Ln
Miller Loop Rd
N Miller Loop
Cabin Lake Dr
Alto Rd
Industrial Ave
Nichols St
Walter St
Autumn Rd
Josephine Way
Belmoral Cir
Jody St
Gun St
Ray Ct
Russ Ct
Kenai Spur Hwy
S-490
Hinerman Ave
Hinerman Rd
Rena Ct
Teppwood Ct
Cirrus St
Gina St
Robt Walker Ave
Joyce Cir
Miller St
Aaron Ave
Walker St
N Lovers Loop
S Lovers Loop
Redoubt Cir
Redoubt Dr
Lumber Dr
Birch Ln
Foley Dr
Alder Cir
Spruce Pl
Fireweed Pl
S Miller Loop Rd
Inlet Breeze
Treetop Ln
Baranoff Dr

75 80 85 90 95

N

0 1,000 ft
0 400 m

LEGEND

MW-39B 73.62 — Well Locations (labeled with well ID and groundwater elevation, NAVD88, feet, measured April 2016)

80 — Water Bearing Unit 1 Contour Elevations

Onshore LNG Facilities Study Area

Groundwater Flow Direction and Gradient

WATER BEARING UNIT 1
GROUNDWATER ELEVATIONS AND GRADIENT
ONSHORE FACILITIES
ALASKA LNG PROJECT
NIKISKI, ALASKA

PLATE 6

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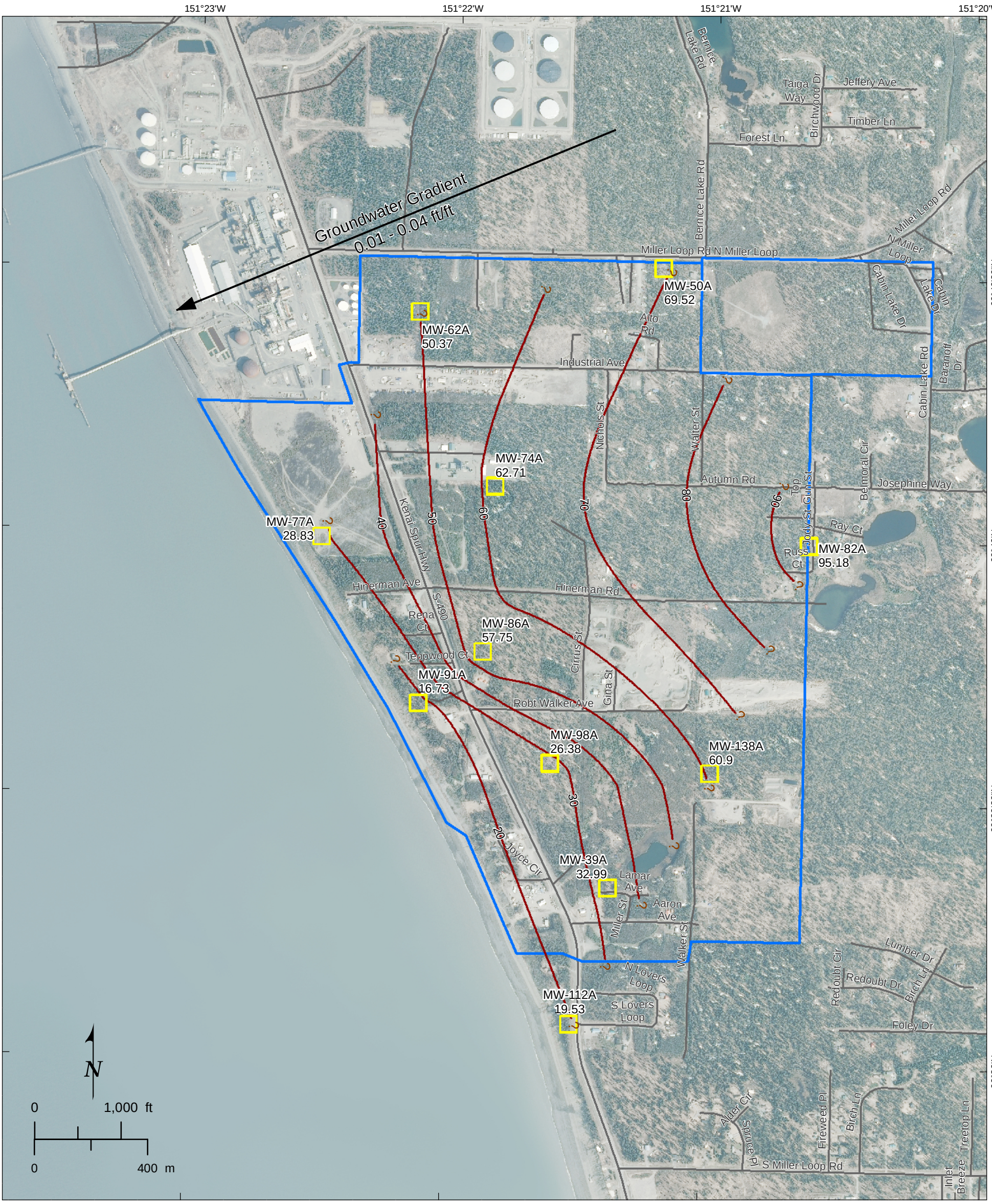


LEGEND

- MW-39A 32.99 — Well Locations (labeled with well ID and groundwater elevation, NAVD88, feet, measured April 2016)
- 80 — Water Bearing Unit 2 Contour Elevations
- Onshore LNG Facilities Study Area
- Groundwater Flow Direction and Gradient

WATER BEARING UNIT 2
POTENTIOMETRIC SURFACE
ONSHORE FACILITIES
ALASKA LNG PROJECT
NIKISKI, ALASKA

PLATE 7

P:\Projects\10_0000\10_160001_AKLNG_2016\04_GIS\MXD\Figures\AKLNG_Plate_7_WaterBearing_U2.mxd, ticci, 9/20/2016

APPENDIX A
WELL SAMPLING FORMS

SLR

Groundwater Sampling Form

Site/Client Name: Nikiski, AK	**Well ID:** MW-27
Project # : Water Quality Monitoring (WQM), AK LNG	Sample ID: MW27-0416
Sampled By: B Siwiec, Kyle Johnson	Sample Time: 1715 Sample Date: 4/19/16
Weather Conditions: Cloudy, light wind, high 40s	Duplicate ID: —
Sampling Method: ☒ Low Flow ☐ Other_____	MS/MSD ☐ Yes ☒ No Trip Blank Required: ☒ Yes ☐ No

Well Information

Well Type: ☒ Permanent ☐ Temporary	Well Diameter 2 in.	Screen Interval: 31 ft BGS to 51 ft BGS
Well Condition: ☒ Good ☐ Fair ☐ Poor (if fair or poor explain in Notes)		Stickup ☒ Yes ☐ No; If yes, _____ ft above ground

Gauging/Purging Information

Depth to Water (ft BTOC): 33.62	Tubing/Pump Depth (ft. BTOC): 43
Total Depth (ft BTOC): 58.15	Purge Start Time (24-hr) 1604
Depth to Product (ft. BTOC) NA	Purge End Time (24-hr) 1715
Product Thickness (ft) NA	Total Purge Time (min) 71

LOW FLOW: **Max Draw Down** = (Tubing Depth – Top of Screen Depth)_____ X 0.25 = _____(ft); if screen interval is not known or water table is below top of screen, then use default value of 0.3 ft.;

Min. purge volume if required: purge volume (gal) = volume of water/ft_____(gal/ft) X Water column thickness_____(ft) X # of casing volumes_____ =_____gal

Well Diameter – gal/ft	1" – 0.041 gal/ft	2" – 0.163 gal/ft	4' – 0.653 gal/ft	6' – 1.469 gal/ft

Water Quality Parameters
(Achieve stable parameters for 3 consecutive reading, 4 parameters if practical [each reading taken after pumping a minimum of 1 flow through cell volume])

Time (24-hr)	Flow Rate (~~L/min~~ gal/minute)	Purge Volume (gal)	Temp (°C) (± 3 %)	Specific Conductance (µS/cm°) (± 3%)	DO (mg/L) (± 10%)	ORP (mV) (± 10mV)	pH (± 0.1)	Turbidity (NTU) (± 10%, or <5 NTU)	DTW (ft BTOC)	Drawdown (ft) (Max____ft)
1610	—	—	—	—	—	—	—	1031	—	—
1625	—	2.3	—	—	—	—	—	258	33.63	0.01
1657	0.5	5.4	7.97	0.242	2.07	36.6	7.13	97	33.63	0.01
1703	0.45	6.2	7.83	0.240	1.53	30.6	7.13	84.6	33.63	0.01
1708	0.45	6.8	7.11	0.242	1.43	29.7	7.10	58.8	33.63	0.01
1713	0.45	7.5	7.54	0.243	1.40	27.1	7.08	47.4	33.63	0.01
Parameter Stable (Check applicable)				Yes	Yes	Yes	Yes			

Sample Color: Clear	**Sample Odor:** None	**Sheen:** None

Analytical Sampling

Analyses	Check Applicable	Comments
WQM Method Statement Table 2: General Groundwater Quality Suite	X	
WQM Method Statement Table 3: Water Supply Quality Suite	—	

Notes: Grundfos pump controller at 131.00 Hz

Equipment: Pump Type Grundfos Redflo2 Tubing (Type/Length) Teflon lined LDPE Bailer Type —
Water Level Meter 300 ft (yellow SLR) Multi-Parameter Meter (Make/SN#) YSI 556 05B2462AE
Turbidity Meter (Make/SN#) La Motte 2020e 14145 Filter Lot # L1456

Purge Water Handling: ☐ Discharged to surface ☒ Containerized ☐ Treated (how?)_____

BGS = Below Ground Surface, BTOC= Below Top of Casing, NA = Not Applicable

SLR

Groundwater Sampling Form

Site/Client Name: Nikiski, AK	**Well ID:** MW-39A
Project # : Water Quality Monitoring (WQM), AK LNG	Sample ID: MW39A-0416
Sampled By: B. Sivilec	Sample Time: 1130 Sample Date: 4/21/16
Weather Conditions: Clear, lt wind ~45°	Duplicate ID: —
Sampling Method: ☒ Low Flow ☐ Other_____	MS/MSD ☐ Yes ☒ No Trip Blank Required: ☒ Yes ☐ No

Well Information

Well Type: ☒ Permanent ☐ Temporary	Well Diameter 2 in.	Screen Interval: 121 ft BGS to 141 ft BGS
Well Condition: ☒ Good ☐ Fair ☐ Poor (if fair or poor explain in Notes)		Stickup ☐ Yes ☐ No; If yes, 2.05 (ft above ground)

Gauging/Purging Information

Depth to Water (ft BTOC): 65.00	Tubing/Pump Depth (ft. BTOC): 133
Total Depth (ft BTOC): 148.80	Purge Start Time (24-hr) 1030
Depth to Product (ft. BTOC) NA	Purge End Time (24-hr) 1130
Product Thickness (ft) NA	Total Purge Time (min) 60

LOW FLOW: **Max Draw Down** = (Tubing Depth – Top of Screen Depth)_____ X 0.25 = _____(ft); if screen interval is not known or water table is below top of screen, then use default value of 0.3 ft.;

Min. purge volume if required: purge volume (gal) = volume of water/ft_____(gal/ft) X Water column thickness_____(ft) X # of casing volumes_____ =_____gal

Well Diameter – gal/ft	1" – 0.041 gal/ft	2" – 0.163 gal/ft	4" – 0.653 gal/ft	6" – 1.469 gal/ft

Water Quality Parameters

(Achieve stable parameters for 3 consecutive reading, 4 parameters if practical [each reading taken after pumping a minimum of 1 flow through cell volume])

Time (24-hr)	Flow Rate (liter ~~(gal)~~/minute)	Purge Volume (gal)	Temp (°C) (± 3 %)	Specific Conductance (µS/cm°) (± 3%)	DO (mg/L) (± 10%)	ORP (mV) (± 10mV)	pH (± 0.1)	Turbidity (NTU) (± 10%, or <5 NTU)	DTW (ft BTOC)	Drawdown (ft) (Max____ft)
1041	0.45	0.7	4.66	0.162	4.70	75.1	8.44	68.6	65.57	0.57
1046	0.45	1.1	4.43	0.178	3.28	79.6	8.50	137	65.79	0.79
1051	0.45	1.6	4.84	0.199	2.44	87.4	8.42	129	65.85	0.85
1056	0.45	2.2	5.51	0.211	2.38	83.2	8.59	—	65.93	0.93
1101	0.3	2.7	5.81	0.227	2.36	79.9	8.73	121	65.93	0.93
1106	0.3	3.1	5.99	0.234	2.36	82.6	8.77	138	65.91	0.91
1111	0.3	3.5	5.94	0.234	2.13	69.0	8.95	146	65.96	0.96
1116	0.3	3.9	5.92	0.222	1.91	65.0	8.99	98.6	65.99	0.99
1121	0.38	4.3	6.00	0.218	1.77	63.0	8.99	81.3	65.97	0.97
1126	0.3	4.6	6.27	0.215	1.78	60.3	9.02	88.4	65.95	0.95
Parameter Stable (Check applicable)				Yes	Yes	Yes	Yes			

Sample Color: Slightly cloudy - gray **Sample Odor:** None **Sheen:** None

Analytical Sampling

Analyses	Check Applicable	Comments
WQM Method Statement Table 2: General Groundwater Quality Suite	✓	
WQM Method Statement Table 3: Water Supply Quality Suite	—	

Notes: Total tubing length in well 138'
Grundfos pump at 184.50Hz

Equipment: Pump Type Grundfos Rediflo 2 Tubing (Type/Length) Tef-lined LDPE Bailer Type —
Water Level Meter Yellow 300ft Multi-Parameter Meter (Make/SN#) YSI 556 05B2462 AE
Turbidity Meter (Make/SN#) La Motte 2020e 14145 Filter Lot # 21456

Purge Water Handling: ☐ Discharged to surface ☒ Containerized ☐ Treated (how?)_____

BGS = Below Ground Surface, BTOC= Below Top of Casing, NA = Not Applicable

SLR

Groundwater Sampling Form

Site/Client Name: Nikiski, AK	**Well ID:** MW-39B
Project # : Water Quality Monitoring (WQM), AK LNG	Sample ID: MW39B-0416
Sampled By: B Siwiec K Johnson	Sample Time: 1400 Sample Date:
Weather Conditions: Clear, 1 wind, ~50°	Duplicate ID: —
Sampling Method: ☒ Low Flow ☐ Other	MS/MSD ☐ Yes ☒ No Trip Blank Required: ☒ Yes ☐ No

Well Information

Well Type: ☒ Permanent ☐ Temporary	Well Diameter 2 in.	Screen Interval: 14.5 ft BGS to 34.5 ft BGS
Well Condition: ☒ Good ☐ Fair ☐ Poor (if fair or poor explain in Notes)		Stickup ☒ Yes ☐ No; If yes, 2.30 (ft above ground

Gauging/Purging Information

Depth to Water (ft BTOC): 24.13	Tubing/Pump Depth (ft. BTOC): 27
Total Depth (ft BTOC): 37.75 soft bottom	Purge Start Time (24-hr) 1235
Depth to Product (ft. BTOC) NA	Purge End Time (24-hr) 1400
Product Thickness (ft)	Total Purge Time (min) 85

LOW FLOW: **Max Draw Down** = (Tubing Depth – Top of Screen Depth)_____ X 0.25 = _____(ft); if screen interval is not known or water table is below top of screen, then use default value of 0.3 ft.;

Min. purge volume if required: purge volume (gal) = volume of water/ft_____(gal/ft) X Water column thickness_____(ft) X # of casing volumes_____ =_____gal

Well Diameter – gal/ft	1" – 0.041 gal/ft	2" – 0.163 gal/ft	4' – 0.653 gal/ft	6' – 1.469 gal/ft

Water Quality Parameters

(Achieve stable parameters for 3 consecutive reading, 4 parameters if practical [each reading taken after pumping a minimum of 1 flow through cell volume])

Time (24-hr)	Flow Rate (liters/minute)	Purge Volume (gal)	Temp (°C) (± 3 %)	Specific Conductance (µS/cm°) (± 3%)	DO (mg/L) (± 10%)	ORP (mV) (± 10mV)	pH (± 0.1)	Turbidity (NTU) (± 10%, or <5 NTU)	DTW (ft BTOC)	Drawdown (ft) (Max____ft)
1255	2.75	0.5	7.30	0.456	5.00	79.6	6.92	80.6	24.18	0.05
1310	0.4	—	7.94	0.456	2.39	46.8	6.70	42.6	24.18	0.05
1315	0.4	—	8.36	0.451	2.43	42.6	6.65	35.6	24.18	0.05
1320	0.45	6.0	7.02	0.458	1.77	42.4	6.63	27.2	24.18	0.05
1325	0.45	6.5	7.64	0.458	1.75	41.4	6.59	20.6	24.18	0.05
1330	0.45	7.2	8.26	0.458	1.64	37.5	6.54	17.1	24.18	0.05
1335	0.45	7.9	7.79	0.463	1.46	37.2	6.57	12.8	24.18	0.05
1340	0.45	8.2	8.18	0.461	1.41	36.8	6.50	10.84	24.18	0.05
1345	0.45	8.7	8.41	0.461	1.31	35.1	6.50	12.2	24.18	0.05
1350	0.45	9.2	7.89	0.465	1.13	35.3	6.41	9.20	24.18	0.05
1355	0.45	9.7	8.18	0.464	1.12	34.8	6.40	—	24.18	0.05
Parameter Stable (Check applicable)				Yes		Yes	Yes			

Sample Color: Clear **Sample Odor:** None **Sheen:** None

Analytical Sampling

Analyses	Check Applicable	Comments
WQM Method Statement Table 2: General Groundwater Quality Suite	✓	
WQM Method Statement Table 3: Water Supply Quality Suite	—	

Notes: Total of 35 ft tubing left in well. Note flow rate fluctuated and pump speed was adjusted multiple times. Sample taken w/out stable parameters per Dave Sadoff of Fugro

Equipment: Pump Type Grundfos Rediflo 2 Tubing (Type/Length) Tef-lined LDPE Bailer Type —

Water Level Meter Keltron 300ft Multi-Parameter Meter (Make/SN#) YSI 5560 05B2402AE

Turbidity Meter (Make/SN#) LaMotte 2020e 14145 Filter Lot # L1456

Purge Water Handling: ☐ Discharged to surface ☒ Containerized ☐ Treated (how?)_____

BGS = Below Ground Surface, BTOC= Below Top of Casing, NA = Not Applicable

SLR

Groundwater Sampling Form

Site/Client Name: Nikiski, AK	**Well ID:** MW-50A
Project # : Water Quality Monitoring (WQM), AK LNG	Sample ID: MW50A-0416
Sampled By: B Siwiec, K Johnson	Sample Time: 1625 Sample Date: 4/20/16
Weather Conditions: Ptly Cloudy, Calm ~50°	Duplicate ID: —
Sampling Method: ☒ Low Flow ☐ Other_____	MS/MSD ☐ Yes ☒ No Trip Blank Required: ☒ Yes ☐ No

Well Information

Well Type: ☒ Permanent ☐ Temporary	Well Diameter 2 in.	Screen Interval: 120 ft BGS to 140 ft BGS
Well Condition: ☒ Good ☐ Fair ☐ Poor (if fair or poor explain in Notes)		Stickup ☒ Yes ☐ No; If yes, 34 inches above ground

Gauging/Purging Information

Depth to Water (ft BTOC): 65.60	Tubing/Pump Depth (ft. BTOC): ~~135~~ 133
Total Depth (ft BTOC): 148.60	Purge Start Time (24-hr) 1514
Depth to Product (ft. BTOC) NF	Purge End Time (24-hr) 1620
Product Thickness (ft) NF	Total Purge Time (min) 66

LOW FLOW: **Max Draw Down** = (Tubing Depth – Top of Screen Depth)_____ X 0.25 = _____(ft); if screen interval is not known or water table is below top of screen, then use default value of 0.3 ft.;

Min. purge volume if required: purge volume (gal) = volume of water/ft_____(gal/ft) X Water column thickness_____(ft) X # of casing volumes_____ =_____gal

Well Diameter – gal/ft	1" – 0.041 gal/ft	2" – 0.163 gal/ft	4' – 0.653 gal/ft	6' – 1.469 gal/ft

Water Quality Parameters

(Achieve stable parameters for 3 consecutive reading, 4 parameters if practical [each reading taken after pumping a minimum of 1 flow through cell volume])

Time (24-hr)	Flow Rate (~~liter/gal~~/minute)	Purge Volume (gal)	Temp (°C) (± 3 %)	Specific Conductance (µS/cm°) (± 3%)	DO (mg/L) (± 10%)	ORP (mV) (± 10mV)	pH (± 0.1)	Turbidity (NTU) (± 10%, or <5 NTU)	DTW (ft BTOC)	Drawdown (ft) (Max____ft)
1525	0.5	0.75	5.69	0.184	6.45	57.2	10.09	1207	65.62	0.02
1535	0.5	1.8	5.83	0.199	3.37	97.0	9.70	323	65.62	0.02
1545	0.5	3.25	6.32	0.208	2.80	62.6	10.06	313	65.62	0.02
1555	0.5	—	6.41	0.222	2.30	52.5	10.05	271	65.63	0.03
1600	0.5	4.8	6.54	0.226	2.32	49.5	10.06	234	65.62	0.02
1605	0.5	5.5	6.56	0.229	2.20	46.8	10.04	216	65.62	0.02
1617	0.5	7.5	6.50	0.229	1.59	45.0	9.99	183	65.62	0.02
Parameter Stable (Check applicable)			Yes	Yes	~~Yes~~ No	Yes	Yes	No		

Sample Color: Milky-gray **Sample Odor:** None **Sheen:** None

Analytical Sampling

Analyses	Check Applicable	Comments
WQM Method Statement Table 2: General Groundwater Quality Suite	✓	
WQM Method Statement Table 3: Water Supply Quality Suite	—	

Notes: Poss. Calcium buildup on Diver.
Total tubing length in well: 140
Grundfos pump at 187.00 Hz

Equipment: Pump Type Grundfos Redi-Flo 2 Tubing (Type/Length) Tef-lined LDPE Bailer Type —
Water Level Meter Yellow 300ft Multi-Parameter Meter (Make/SN#) YSI 556 05B2462AE
Turbidity Meter (Make/SN#) LaMotte 2020e 14145 Filter Lot # L1456

Purge Water Handling: ☐ Discharged to surface ☒ Containerized ☐ Treated (how?)_____

BGS = Below Ground Surface, BTOC= Below Top of Casing, NA = Not Applicable

SLR

Groundwater Sampling Form

Site/Client Name: Nikiski, AK	**Well ID:** MW-50B
Project # : Water Quality Monitoring (WQM), AK LNG	Sample ID: MW50B-0416
Sampled By: B Swiec, K Johnson	Sample Time: 1840 Sample Date: 4/20/16
Weather Conditions: Ptly cloudy, lt wind ~50°	Duplicate ID: MW50Z-0416 (TDS only)
Sampling Method: ☒ Low Flow ☐ Other_____	MS/MSD ☐ Yes ☒ No Trip Blank Required: ☒ Yes ☐ No

Well Information

Well Type: ☒ Permanent ☐ Temporary	Well Diameter 2 in.	Screen Interval: 30 ft BGS to 50 ft BGS
Well Condition: ☒ Good ☐ Fair ☐ Poor (if fair or poor explain in Notes)		Stickup ☒ Yes ☐ No; If yes, 32 in above ground

Gauging/Purging Information

Depth to Water (ft BTOC): 43.34	Tubing/Pump Depth (ft BTOC): 43 BB 46
Total Depth (ft BTOC): 55.80	Purge Start Time (24-hr) 1750
Depth to Product (ft BTOC) NA	Purge End Time (24-hr) 1840
Product Thickness (ft) NA	Total Purge Time (min) 50

LOW FLOW: **Max Draw Down** = (Tubing Depth – Top of Screen Depth)_____ X 0.25 = _____(ft); if screen interval is not known or water table is below top of screen, then use default value of 0.3 ft.;

Min. purge volume if required: purge volume (gal) = volume of water/ft_____(gal/ft) X Water column thickness_____(ft) X # of casing volumes_____ =_____gal

Well Diameter – gal/ft	1" – 0.041 gal/ft	2" – 0.163 gal/ft	4' – 0.653 gal/ft	6' – 1.469 gal/ft

Water Quality Parameters

(Achieve stable parameters for 3 consecutive reading. 4 parameters if practical [each reading taken after pumping a minimum of 1 flow through cell volume])

Time (24-hr)	Flow Rate (~~liter~~ gal/minute)	Purge Volume (gal)	Temp (°C) (± 3 %)	Specific Conductance (µS/cm°) (± 3%)	DO (mg/L) (± 10%)	ORP (mV) (± 10mV)	pH (± 0.1)	Turbidity (NTU) (± 10%, or <5 NTU)	DTW (ft BTOC)	Drawdown (ft) (Max____ft)
1805	0.45	1.2	8.23	0.165	4.80	71.5	8.75	59.1	43.41	0.07
1810	0.45	1.6	8.41	0.159	2.23	45.4	8.43	35.4	43.41	0.07
1815	0.45	2	8.83	0.157	1.60	40.9	8.25	19.7	43.41	0.07
1820	0.45	2.5	9.04	0.156	1.54	36.9	8.13	13.6	43.41	0.07
1825	0.45	2.8	8.99	0.156	1.28	35.0	8.05	9.66	43.41	0.07
1830	0.45	3.4	8.84	0.155	1.17	32.7	7.97	6.90	43.41	0.07
1836	0.45	3.9	8.91	0.156	1.23	30.2	7.93	5.38	43.41	0.07
Parameter Stable (Check applicable)			Yes	Yes	Yes	Yes				

Sample Color: Clear **Sample Odor:** None **Sheen:** None

Analytical Sampling

Analyses	Check Applicable	Comments
WQM Method Statement Table 2: General Groundwater Quality Suite	✓	
WQM Method Statement Table 3: Water Supply Quality Suite	—	
Note: Duplicate collected only for TDS in 500 ml poly bottle.		

Notes: Total tubing length in well 50 ft
Grundfos pump at 149.80 Hz

Equipment: Pump Type Grundfos Redi flo 2 Tubing (Type/Length) tef-lined LDPE Bailer Type —
Water Level Meter Yellow 300 ft Multi-Parameter Meter (Make/SN#) TSI 556 05B2462AE
Turbidity Meter (Make/SN#) LaMotte 2020e 14145 Filter Lot # L1456

Purge Water Handling: ☐ Discharged to surface ☒ Containerized ☐ Treated (how?)_____

BGS = Below Ground Surface, BTOC= Below Top of Casing, NA = Not Applicable

SLR

Groundwater Sampling Form

Site/Client Name: Nikiski, AK	**Well ID:** MW-62A
Project # : Water Quality Monitoring (WQM), AK LNG	Sample ID: MW62A-0416
Sampled By: B Siwiec & Johnson	Sample Time: 1140 Sample Date: 4/23/16
Weather Conditions: Cloudy, lt wind, low 40's	Duplicate ID: —
Sampling Method: ☒ Low Flow ☐ Other	MS/MSD ☐ Yes ☒ No Trip Blank Required: ☒ Yes ☐ No

Well Information

Well Type: ☒ Permanent ☐ Temporary	Well Diameter 2 in.	Screen Interval: 120 ft BGS to 140 ft BGS
Well Condition: ☒ Good ☐ Fair ☐ Poor (if fair or poor explain in Notes)		Stickup ☒ Yes ☐ No; If yes, 26.5 cm above ground

Gauging/Purging Information

Depth to Water (ft BTOC): 79.55	Tubing/Pump Depth (ft. BTOC): 133
Total Depth (ft BTOC): 144.60	Purge Start Time (24-hr) 1026
Depth to Product (ft. BTOC) NA	Purge End Time (24-hr) 1140
Product Thickness (ft) NA	Total Purge Time (min) 74

LOW FLOW: **Max Draw Down** = (Tubing Depth – Top of Screen Depth)_____ X 0.25 = _____(ft); if screen interval is not known or water table is below top of screen, then use default value of 0.3 ft.;

Min. purge volume if required: purge volume (gal) = volume of water/ft_____(gal/ft) X Water column thickness_____(ft) X # of casing volumes_____ =_____gal

Well Diameter – gal/ft	1" – 0.041 gal/ft	2" – 0.163 gal/ft	4' – 0.653 gal/ft	6' – 1.469 gal/ft

Water Quality Parameters

(Achieve stable parameters for 3 consecutive reading, 4 parameters if practical [each reading taken after pumping a minimum of 1 flow through cell volume])

Time (24-hr)	Flow Rate (liter/minute)	Purge Volume (gal)	Temp (°C) (± 3 %)	Specific Conductance (µS/cm°) (± 3%)	DO (mg/L) (± 10%)	ORP (mV) (± 10mV)	pH (± 0.1)	Turbidity (NTU) (± 10%, or <5 NTU)	DTW (ft BTOC)	Drawdown (ft) (Max____ft)
1050	0.45	2.5	6.60	0.194	5.17	96.3	7.78	128	79.68	0.13
1055	0.3	2.9	6.18	0.187	4.23	108.7	7.75	123	79.68	0.13
1100 1103	0.3	3.5	5.71	0.183	3.93	98.6	7.88	67.7	79.68	0.13
1108	0.3	3.8	5.94	0.184	3.62	84.9	8.12	53.3	79.68	0.13
1113	0.3	4.0	6.13	0.180	3.36	86.2	8.29	43.6	79.68	0.13
1118	0.3	4.5	6.39	0.180	2.85	74.7	8.46	32.4	79.68	0.13
1123	0.3	5	6.78	0.182	2.54	74.6	8.60	—	79.68	0.13
1128	0.3	5.9	7.13	0.183	2.28	71.2	8.69	21.6	79.68	0.13
1133	0.3	6.3	7.23	0.181	1.95	69.5	8.74	15.6	79.68	0.13
1138	0.3	6.8	7.30	0.183	1.75	68.5	8.76	11.3	79.68	0.13
Parameter Stable (Check applicable)			Yes	Yes		Yes	Yes			

Sample Color: Clear **Sample Odor:** None **Sheen:** None

Analytical Sampling

Analyses	Check Applicable	Comments
WQM Method Statement Table 2: General Groundwater Quality Suite	✓	
WQM Method Statement Table 3: Water Supply Quality Suite	—	
PAH SIMS SM 625	✓	2 x 1L amber glass

Notes: Total tubing left in well: 141 ft - Note tubing is 2 pieces with coupling. Grundfos pump @ 208.00 Hz

Equipment: Pump Type Grundfos Redi flo 2 Tubing (Type/Length) Tef-lined LDPE Bailer Type —
Water Level Meter Yellow 300 ft Multi-Parameter Meter (Make/SN#) YSI 556 05B2462AE
Turbidity Meter (Make/SN#) LaMotte 2020e 14145 Filter Lot # L1456

Purge Water Handling: ☐ Discharged to surface ☒ Containerized ☐ Treated (how?)_____

BGS = Below Ground Surface, BTOC= Below Top of Casing, NA = Not Applicable

SLR

Groundwater Sampling Form

Site/Client Name: Nikiski, AK	**Well ID:** MW-74A
Project # : Water Quality Monitoring (WQM), AK LNG	Sample ID: MW74A-0416
Sampled By: B Siwiec, K Johnson	Sample Time: 1150 Sample Date: 4/22/16
Weather Conditions: Cloudy, lt wind ~45°	Duplicate ID: — MW74Z-0416 (TSS only)
Sampling Method: ☒ Low Flow ☐ Other_____	MS/MSD ☐ Yes ☒ No Trip Blank Required: ☒ Yes ☐ No

Well Information

Well Type: ☒ Permanent ☐ Temporary	Well Diameter 2 in.	Screen Interval: 134 ft BGS to 154 ft BGS
Well Condition: ☒ Good ☐ Fair ☐ Poor (if fair or poor explain in Notes)		Stickup ☒ Yes ☐ No; If yes, 2.60 ft above ground

Gauging/Purging Information

Depth to Water (ft BTOC):	51.79	Tubing/Pump Depth (ft. BTOC):	147
Total Depth (ft BTOC):	160.05	Purge Start Time (24-hr)	1042
Depth to Product (ft. BTOC)	NA	Purge End Time (24-hr)	1150
Product Thickness (ft)	NA	Total Purge Time (min)	68

LOW FLOW: **Max Draw Down** = (Tubing Depth – Top of Screen Depth)_____ X 0.25 = _____(ft); if screen interval is not known or water table is below top of screen, then use default value of 0.3 ft.;

Min. purge volume if required: purge volume (gal) = volume of water/ft_____(gal/ft) X Water column thickness_____(ft) X # of casing volumes_____ =_____gal

Well Diameter – gal/ft	1" – 0.041 gal/ft	2" – 0.163 gal/ft	4' – 0.653 gal/ft	6' – 1.469 gal/ft

Water Quality Parameters

(Achieve stable parameters for 3 consecutive reading, 4 parameters if practical [each reading taken after pumping a minimum of 1 flow through cell volume])

Time (24-hr)	Flow Rate (liters/minute)	Purge Volume (gal)	Temp (°C) (± 3 %)	Specific Conductance (µS/cm°) (± 3%)	DO (mg/L) (± 10%)	ORP (mV) (± 10mV)	pH (± 0.1)	Turbidity (NTU) (± 10%, or <5 NTU)	DTW (ft BTOC)	Drawdown (ft) (Max____ft)	
1106	0.2	32.9	4.40	0.192	5.76	82.0	7.87	101.9	57.60	5.81	
1111	0.34	3.3	4.48	0.188	4.57	81.3	7.91	78.4	57.55	5.76	
1116	0.34	3.7	4.53	0.184	4.12	82.9	8.01	61.0	57.55	5.76	
~~1121~~ 1121	0.34	4.0	4.55	0.184	3.74	74.5	8.21	67.0	57.55	5.76	
1126	0.34	4.4	4.64	0.184	3.44	64.7	8.39	—	57.63	5.84	
1131	0.3	4.7	4.76	0.184	2.77	56.2	8.50	75.5	57.84	6.05	pump rate slightly
1136	0.3	5.4	4.88	0.184	2.68	52.6	8.63	72.2	57.62	Note: flow reduced	
1141	0.4	—	4.91	0.185	2.49	50.3	8.67	—	56.77	4.98	
1146	0.3	6.25	4.93	0.183	2.42	47.4	8.72	46.6	56.80	5.01	
Parameter Stable (Check applicable)			Yes	Yes		Yes	Yes				

Sample Color: Clear	**Sample Odor:** None	**Sheen:** None

Analytical Sampling

Analyses	Check Applicable	Comments
WQM Method Statement Table 2: General Groundwater Quality Suite	✓	
WQM Method Statement Table 3: Water Supply Quality Suite	–	

Notes: Grundfos pump at 173.4
Tubing left in well: 152 ft
Duplicate for TSS (1L) collected.

Equipment: Pump Type Grundfos Redi-flo 2 Tubing (Type/Length) Tef-lined LDPE Bailer Type —
Water Level Meter Yellow 300 ft Multi-Parameter Meter (Make/SN#) YSI 556 05B2462AE
Turbidity Meter (Make/SN#) Lamotte 2020e 14145 Filter Lot # L1456

Purge Water Handling: ☐ Discharged to surface ☒ Containerized ☐ Treated (how?)_____

BGS = Below Ground Surface, BTOC= Below Top of Casing, NA = Not Applicable

SLR

Groundwater Sampling Form

Site/Client Name: Nikiski, AK	**Well ID:** MW-74B
Project # : Water Quality Monitoring (WQM), AK LNG	Sample ID: MW74B-0416
Sampled By: B Siwiec, K Johnson	Sample Time: 1350 Sample Date: 4/22/16
Weather Conditions: cloudy, lt wind, 45-50°	Duplicate ID: —
Sampling Method: ☒ Low Flow ☐ Other_____	MS/MSD ☒ Yes ☐ No Trip Blank Required: ☒ Yes ☐ No

Well Information

Well Type: ☒ Permanent ☐ Temporary	Well Diameter 2 in.	Screen Interval: 55 ft BGS to 75 ft BGS
Well Condition: ☒ Good ☐ Fair ☐ Poor (if fair or poor explain in Notes)		Stickup ☐ Yes ☐ No; If yes, 2.70 ft above ground

Gauging/Purging Information

Depth to Water (ft BTOC):	40.48	Tubing/Pump Depth (ft. BTOC):	68
Total Depth (ft BTOC):	81.20	Purge Start Time (24-hr)	1259
Depth to Product (ft. BTOC)	NA	Purge End Time (24-hr)	1350
Product Thickness (ft)	NA	Total Purge Time (min)	51

LOW FLOW: **Max Draw Down** = (Tubing Depth – Top of Screen Depth)_____ X 0.25 = _____(ft); if screen interval is not known or water table is below top of screen, then use default value of 0.3 ft.;

Min. purge volume if required: purge volume (gal) = volume of water/ft_____(gal/ft) X Water column thickness_____(ft) X # of casing volumes_____ =_____gal

Well Diameter – gal/ft	1" – 0.041 gal/ft	2" – 0.163 gal/ft	4" – 0.653 gal/ft	6" – 1.469 gal/ft

Water Quality Parameters

(Achieve stable parameters for 3 consecutive reading, 4 parameters if practical [each reading taken after pumping a minimum of 1 flow through cell volume])

Time (24-hr)	Flow Rate (liters/minute)	Purge Volume (gal)	Temp (°C) (± 3 %)	Specific Conductance (µS/cm°) (± 3%)	DO (mg/L) (± 10%)	ORP (mV) (± 10mV)	pH (± 0.1)	Turbidity (NTU) (± 10%, or <5 NTU)	DTW (ft BTOC)	Drawdown (ft) (Max____ft)
1318	0.45	1.5	7.18	0.144	4.40	10.9	7.57	171	40.48	Ø
1323	0.45	2.2	7.52	0.139	2.62	13.9	7.22	70.9	40.48	Ø
1328	0.45	2.8	7.53	0.140	1.85	0.7	7.22	37.6	40.48	Ø
1333	0.45	3.1	7.61	0.140	1.51	-1.1	7.18	23.1	40.48	Ø
1338	0.45	3.7	7.46	0.141	1.29	-1.9	7.12	14.5	40.48	Ø
1443	0.45	4	7.51	0.140	1.19	-2.4	7.09	10.3	40.48	Ø
1452	0.45	4.5	7.39	0.140	1.05	-2.7	7.05	8.00	40.48	Ø
Parameter Stable (Check applicable)			Yes	Yes		Yes	Yes			

Sample Color: Clear **Sample Odor:** None **Sheen:** None

Analytical Sampling

Analyses	Check Applicable	Comments
WQM Method Statement Table 2: General Groundwater Quality Suite	✓	
WQM Method Statement Table 3: Water Supply Quality Suite	—	

Notes: Tubing length in well: 73ft.
Gundfos pump at 180.7 Hz

Equipment: Pump Type Grundfos Redi flo 2 Tubing (Type/Length) Teflon lined LDPE Bailer Type —
Water Level Meter Yellow 300 ft Multi-Parameter Meter (Make/SN#) YSI 556 05B2462 AE
Turbidity Meter (Make/SN#) La Motte 2020e 14145 Filter Lot # L1456

Purge Water Handling: ☐ Discharged to surface ☒ Containerized ☐ Treated (how?)_____

BGS = Below Ground Surface, BTOC= Below Top of Casing, NA = Not Applicable

SLR

Groundwater Sampling Form

Site/Client Name: Nikiski, AK	**Well ID:** MW-82A
Project # : Water Quality Monitoring (WQM), AK LNG	Sample ID: MW82A-0416
Sampled By: B Siwiec Kyle Johnson	Sample Time: 1105 Sample Date: 4/20/16
Weather Conditions: Cloudy Calm mid 40's	Duplicate ID: —
Sampling Method: ☒ Low Flow ☐ Other	MS/MSD ☐ Yes ☒ No Trip Blank Required: ☒ Yes ☐ No

Well Information

Well Type: ☒ Permanent ☐ Temporary	Well Diameter 2 in.	Screen Interval: 119 ft BGS to 139 ft BGS
Well Condition: ☒ Good ☐ Fair ☐ Poor (if fair or poor explain in Notes)		Stickup ☒ Yes ☐ No; If yes, 32.5 ft above ground

Gauging/Purging Information

Depth to Water (ft BTOC): 26.50	Tubing/Pump Depth (ft. BTOC): 132
Total Depth (ft BTOC): 148.10	Purge Start Time (24-hr) 0957
Depth to Product (ft. BTOC) NA	Purge End Time (24-hr) 1105
Product Thickness (ft) NA	Total Purge Time (min) 68

LOW FLOW: **Max Draw Down** = (Tubing Depth – Top of Screen Depth)_____ X 0.25 = _____(ft); if screen interval is not known or water table is below top of screen, then use default value of 0.3 ft.;

Min. purge volume if required: purge volume (gal) = volume of water/ft_____(gal/ft) X Water column thickness_____(ft) X # of casing volumes_____ = _____gal

Well Diameter – gal/ft	1" – 0.041 gal/ft	2" – 0.163 gal/ft	4' – 0.653 gal/ft	6' – 1.469 gal/ft

Water Quality Parameters

(Achieve stable parameters for 3 consecutive reading. 4 parameters if practical [each reading taken after pumping a minimum of 1 flow through cell volume])

Time (24-hr)	Flow Rate (~~gal~~ liters/minute)	Purge Volume (gal)	Temp (°C) (± 3 %)	Specific Conductance (µS/cm°) (± 3%)	DO (mg/L) (± 10%)	ORP (mV) (± 10mV)	pH (± 0.1)	Turbidity (NTU) (± 10%, or <5 NTU)	DTW (ft BTOC)	Drawdown (ft) (Max____ft)
1004	0.45	0.4	4.89	0.174	5.03	86.1	8.51	26.1	26.58	0.08
1009	0.45	0.9	4.72	0.164	3.46	106.7	8.34	240	26.59	0.09
1019	0.45	2	4.84	0.166	2.74	102.9	8.56	154	26.59	0.09
1024	0.45	2.6	4.91	0.165	2.37	91.8	8.82	109.6	26.59	0.09
1029	0.45	3.0	5.00	0.165	2.18	83.1	8.98	93.2	26.59	0.09
1034	0.35	3.6	5.07	0.167	2.12	74.3	9.11	—	26.59	0.09
1039	0.45	4.1	5.09	0.165	1.84	65.1	9.24	68.3	26.60	0.1
1050	0.45	6.3	5.43	0.165	0.86	56.5	9.38	35.3	26.63	0.13
1055	0.45	7.3	5.21	0.166	0.84	55.5	9.37	28.1	26.63	0.13
1100	0.45	7.7	5.27	0.166	0.84	53.6	9.38	17.8	26.63	0.13
Parameter Stable (Check applicable)				Yes	Yes	Yes	Yes			

Sample Color: Clear **Sample Odor:** Slight Organic **Sheen:** None

Analytical Sampling

Analyses	Check Applicable	Comments
WQM Method Statement Table 2: General Groundwater Quality Suite	✓	
WQM Method Statement Table 3: Water Supply Quality Suite	X	

Notes: tubing left in well- total length 143 ft.
Grundfos pump at 120.80 hz

Equipment: Pump Type Grundfos Redi-Flo2 Tubing (Type/Length) tef-lined LDPE Bailer Type —
Water Level Meter Lx Mark 2020e 14145 Multi-Parameter Meter (Make/SN#) YSI 556 05B2462AE
Turbidity Meter (Make/SN#) Hellow 300 ft Filter Lot # L1456

Purge Water Handling: ☐ Discharged to surface ☒ Containerized ☐ Treated (how?)_____

BGS = Below Ground Surface, BTOC= Below Top of Casing, NA = Not Applicable

SLR

Groundwater Sampling Form

Site/Client Name: Nikiski, AK	**Well ID:** MW-82B
Project # : Water Quality Monitoring (WQM), AK LNG	Sample ID: MW82B-0416
Sampled By: B Siwiec K Johnson	Sample Time: 1305 Sample Date: 4/20.16
Weather Conditions: Cloudy, lt wind 47°	Duplicate ID: —
Sampling Method: ☒ Low Flow ☐ Other_____	MS/MSD ☐ Yes ☒ No Trip Blank Required: ☒ Yes ☐ No

Well Information

Well Type: ☒ Permanent ☐ Temporary	Well Diameter 2 in.	Screen Interval: 15 ft BGS to 45 ft BGS
Well Condition: ☒ Good ☐ Fair ☐ Poor (if fair or poor explain in Notes)		Stickup ☒ Yes ☐ No; If yes, 34.5 MP above ground

Gauging/Purging Information

Depth to Water (ft BTOC): 22.33	Tubing/Pump Depth (ft. BTOC): 33
Total Depth (ft BTOC): 53.25	Purge Start Time (24-hr) 1213
Depth to Product (ft. BTOC) NA	Purge End Time (24-hr) 1305
Product Thickness (ft) NA	Total Purge Time (min) 53

LOW FLOW: **Max Draw Down** = (Tubing Depth – Top of Screen Depth)_____ X 0.25 = _____(ft); if screen interval is not known or water table is below top of screen, then use default value of 0.3 ft.;

Min. purge volume if required: purge volume (gal) = volume of water/ft_____(gal/ft) X Water column thickness_____(ft) X # of casing volumes_____ =_____gal

Well Diameter – gal/ft	1" – 0.041 gal/ft	2" – 0.163 gal/ft	4' – 0.653 gal/ft	6' – 1.469 gal/ft

Water Quality Parameters

(Achieve stable parameters for 3 consecutive reading, 4 parameters if practical [each reading taken after pumping a minimum of 1 flow through cell volume])

Time (24-hr)	Flow Rate (gal/minute)	Purge Volume (gal)	Temp (°C) (± 3 %)	Specific Conductance (µS/cm^c) (± 3%)	DO (mg/L) (± 10%)	ORP (mV) (± 10mV)	pH (± 0.1)	Turbidity (NTU) (± 10%, or <5 NTU)	DTW (ft BTOC)	Drawdown (ft) (Max____ft)
1228	0.5	1.6	7.39	0.278	8.66	82.1	7.38	high	22.33	Ø
1232	0.5	2	7.21	0.278	7.78	74.5	7.45	134	22.33	Ø
1237	0.5	2.3	7.51	0.278	7.33	70.9	7.25	110	22.33	Ø
1242	0.45	—	8.29	0.278	6.57	45.4	7.42	90.9	22.33	Ø
1247	0.45	3.5	7.83	0.277	6.09	42.9	7.44	64.4	22.33	Ø
1252	0.45	4	7.60	0.274	5.50	43.5	7.40	60.3	22.33	Ø
1257	0.45	4.7	7.53	0.270	5.18	43.5	7.33	39.8	22.33	Ø
1302	0.45	5.5	7.52	0.264	4.86	43.0	7.32	28.5	22.33	Ø
Parameter Stable (Check applicable)			Yes	Yes		Yes	Yes			

Sample Color: lt brown **Sample Odor:** None **Sheen:** None

Analytical Sampling

Analyses	Check Applicable	Comments
WQM Method Statement Table 2: General Groundwater Quality Suite	✓	
WQM Method Statement Table 3: Water Supply Quality Suite	—	

Notes: Tubing left in well – total length 40 ft.
Grundfos pump at 110-115 Hz

Equipment: Pump Type Grundfos Redi-flo 2 Tubing (Type/Length) tef-lined LDPE Bailer Type —
Water Level Meter Yellow 300 ft Multi-Parameter Meter (Make/SN#) YSI 556 05B2462AE
Turbidity Meter (Make/SN#) La Motte 2020e 14145 Filter Lot # 41456

Purge Water Handling: ☐ Discharged to surface ☒ Containerized ☐ Treated (how?)_____

BGS = Below Ground Surface, BTOC= Below Top of Casing, NA = Not Applicable

SLR

Groundwater Sampling Form

Site/Client Name: Nikiski, AK	**Well ID:** MW-87
Project # : Water Quality Monitoring (WQM), AK LNG	Sample ID: MW87B-0416
Sampled By: B. Siwiec, K. Johnson	Sample Time: 1402 Sample Date: 4/19/16
Weather Conditions: Cloudy, light wind, high 40s	Duplicate ID: MW87Z-0416
Sampling Method: ☒ Low Flow ☐ Other_____	MS/MSD ☐ Yes ☒ No Trip Blank Required: ☒ Yes ☐ No

Well Information

Well Type: ☒ Permanent ☐ Temporary	Well Diameter 2 in.	Screen Interval: 25 ft BGS to 45 ft BGS
Well Condition: ☐ Good ☐ Fair ☐ Poor (if fair or poor explain in Notes)		Stickup ☒ Yes ☐ No; If yes, 31 inch ft above ground

Gauging/Purging Information

Depth to Water (ft BTOC): 29.38 mark on N side	Tubing/Pump Depth (ft. BTOC): 38
Total Depth (ft BTOC): 52.15	Purge Start Time (24-hr) 1330
Depth to Product (ft. BTOC) NA	Purge End Time (24-hr) 1402
Product Thickness (ft) NA	Total Purge Time (min) 42

LOW FLOW: **Max Draw Down** = (Tubing Depth – Top of Screen Depth)_____ X 0.25 = _____(ft); if screen interval is not known or water table is below top of screen, then use default value of 0.3 ft.;

Min. purge volume if required: purge volume (gal) = volume of water/ft_____(gal/ft) X Water column thickness_____(ft) X # of casing volumes_____ = _____gal

Well Diameter – gal/ft	1" – 0.041 gal/ft	2" – 0.163 gal/ft	4' – 0.653 gal/ft	6' – 1.469 gal/ft

Water Quality Parameters

(Achieve stable parameters for 3 consecutive reading, 4 parameters if practical [each reading taken after pumping a minimum of 1 flow through cell volume])

Time (24-hr)	Flow Rate (~~gal~~ liters/minute)	Purge Volume (gal)	Temp (°C) (± 3 %)	Specific Conductance (µS/cm°) (± 3%)	DO (mg/L) (± 10%)	ORP (mV) (± 10mV)	pH (± 0.1)	Turbidity (NTU) (± 10%, or <5 NTU)	DTW (ft BTOC)	Drawdown (ft) (Max____ft)
1330	0.5	1.5	6.90	0.193	2.80	69.7	7.06	8.00	29.39	0.01
1335	0.5	2	7.05	0.195	2.31	75.5	6.85	3.95	29.39	0.01
1340	0.5	2.8	7.13	0.195	1.58	66.1	6.96	3.32	29.39	0.01
1345	0.5	3.3	7.15	0.196	1.63	58.9	7.03	2.53	29.39	0.01
1350	0.5	3.8	7.10	0.197	1.31	55.0	7.05	3.32	29.39	0.01
Parameter Stable (Check applicable)			Yes	Yes			Yes	Yes		

Sample Color: Clear	**Sample Odor:** None	**Sheen:** None

Analytical Sampling

Analyses	Check Applicable	Comments
WQM Method Statement Table 2: General Groundwater Quality Suite	✓	
WQM Method Statement Table 3: Water Supply Quality Suite	✓	

Notes:
Hertz 126.2
Duplicate collected.

Equipment: Pump Type Grundfos Rediflo2 Tubing (Type/Length) tef-lined LDPE Bailer Type —
Water Level Meter 300-ft (SLR yellow) Multi-Parameter Meter (Make/SN#) YSI 556 05B2462AE
Turbidity Meter (Make/SN#) LaMotte 2020e 14145 Filter Lot # L1456

Purge Water Handling: ☐ Discharged to surface ☒ Containerized ☐ Treated (how?)_____

BGS = Below Ground Surface, BTOC= Below Top of Casing, NA = Not Applicable

SLR

Groundwater Sampling Form

Site/Client Name: Nikiski, AK	**Well ID:** MW-91A
Project # : Water Quality Monitoring (WQM), AK LNG	Sample ID: MW91A-0416
Sampled By: BSiwiec, K Johnson	Sample Time: 1810 Sample Date: 4/21/16
Weather Conditions: Clear, lt wind ~50°	Duplicate ID: MW91Z-0416
Sampling Method: ☒ Low Flow ☐ Other_____	MS/MSD ☐ Yes ☐ No Trip Blank Required: ☒ Yes ☐ No

Well Information

Well Type: ☒ Permanent ☐ Temporary	Well Diameter 2 in.	Screen Interval: 119 ft BGS to 139 ft BGS
Well Condition: ☒ Good ☐ Fair ☐ Poor (if fair or poor explain in Notes)		Stickup ☒ Yes ☐ No; If yes, 2-3 (6) ft above ground

Gauging/Purging Information

Depth to Water (ft BTOC): 103.25	Tubing/Pump Depth (ft. BTOC): 1
Total Depth (ft BTOC): 147.90	Purge Start Time (24-hr) 1701
Depth to Product (ft BTOC) NA	Purge End Time (24-hr) 1810
Product Thickness (ft) NA	Total Purge Time (min) 69

LOW FLOW: **Max Draw Down** = (Tubing Depth – Top of Screen Depth)_____ X 0.25 = _____(ft); if screen interval is not known or water table is below top of screen, then use default value of 0.3 ft.;

Min. purge volume if required: purge volume (gal) = volume of water/ft_____(gal/ft) X Water column thickness_____(ft) X # of casing volumes_____ =_____gal

Well Diameter – gal/ft			
1" – 0.041 gal/ft	2" – 0.163 gal/ft	4" – 0.653 gal/ft	6" – 1.469 gal/ft

Water Quality Parameters

(Achieve stable parameters for 3 consecutive reading, 4 parameters if practical [each reading taken after pumping a minimum of 1 flow through cell volume])

Time (24-hr)	Flow Rate (liters ~~gal~~/ minute)	Purge Volume (gal)	Temp (°C) (± 3 %)	Specific Conductance (µS/cm°) (± 3%)	DO (mg/L) (± 10%)	ORP (mV) (± 10mV)	pH (± 0.1)	Turbidity (NTU) (± 10%, or <5 NTU)	DTW (ft BTOC)	Drawdown (ft) (Max____ft)
1725	0.45	3.5	6.54	0.254	2.42	42.9	7.96	350	103.28	0.03
1730	0.45	4	7.31	0.244	1.63	42.0	7.88	217	103.28	0.03
1735	0.45	4.6	8.27	0.245	1.54	28.6	8.07	128	103.28	0.03
1740	0.45	5.5	8.60	0.245	1.60	17.0	8.22	79.5	103.28	0.03
1745	0.45	6.1	8.88	0.244	1.40	6.2	8.29	61.3	103.28	0.03
1750	0.45	6.5	9.03	0.244	1.29	-1.9	8.33	55.5	103.28	0.03
1755	0.45	7	9.12	0.244	1.41	-8.6	8.36	42.2	103.28	0.03
1800	0.45	7.5	9.02	0.244	1.21	-13.9	8.37	37.1	103.28	0.03
1805	0.45	7.9	8.96	0.244	1.06	-17.8	8.37	38.7	103.28	0.03
Parameter Stable (Check applicable)			Yes	Yes		Yes	Yes			

Sample Color: Clear **Sample Odor:** None **Sheen:** None

Analytical Sampling

Analyses	Check Applicable	Comments
WQM Method Statement Table 2: General Groundwater Quality Suite	✓	
WQM Method Statement Table 3: Water Supply Quality Suite	—	

Notes: Grundfos pump at 231.90 Hz
Duplicate of all analytes collected
Tubing left in well 140 ft.

Equipment: Pump Type Grundfos Redflo 2 Tubing (Type/Length) Tef-lined LDPE Bailer Type —
Water Level Meter Yellow 300ft Multi-Parameter Meter (Make/SN#) YSI 556 05B2402AE
Turbidity Meter (Make/SN#) LaMotte 14145 Filter Lot # L1456

Purge Water Handling: ☐ Discharged to surface ☒ Containerized ☐ Treated (how?)_____

BGS = Below Ground Surface, BTOC= Below Top of Casing, NA = Not Applicable

SLR

Groundwater Sampling Form

Site/Client Name: Nikiski, AK	**Well ID:** TP-1
Project # : Water Quality Monitoring (WQM), AK LNG	Sample ID: TP1-0416
Sampled By: BSiwiec, KyJohnson	Sample Time: 1425 Sample Date: ~~4/8~~ 4/23/16
Weather Conditions: Light rain, Light wind mid 40's	Duplicate ID: ~~TP6 (PAH 625)~~ TP6-0416
Sampling Method: ☒ Low Flow ☐ Other	MS/MSD ☐ Yes ☒ No Trip Blank Required: ☒ Yes ☐ No

Well Information

Well Type: ☒ Permanent ☐ Temporary	Well Diameter 6 in.	Screen Interval: ND ft BGS to ND ft BGS
Well Condition: ☐ Good ☒ Fair ☐ Poor (if fair or poor explain in Notes)		Stickup ☒ Yes ☐ No; If yes, 3.25 ft above ground

Gauging/Purging Information

Depth to Water (ft BTOC): 44.20	Tubing/Pump Depth (ft. BTOC): 50
Total Depth (ft BTOC): 138.3	Purge Start Time (24-hr) 1341
Depth to Product (ft. BTOC) NA	Purge End Time (24-hr) 1425
Product Thickness (ft) NA	Total Purge Time (min) 44

LOW FLOW: **Max Draw Down** = (Tubing Depth – Top of Screen Depth)_____ X 0.25 = _____(ft); if screen interval is not known or water table is below top of screen, then use default value of 0.3 ft.

Min. purge volume if required: purge volume (gal) = volume of water/ft_____(gal/ft) X Water column thickness_____(ft) X # of casing volumes_____ =_____gal

Well Diameter – gal/ft	1" – 0.041 gal/ft	2" – 0.163 gal/ft	4" – 0.653 gal/ft	6" – 1.469 gal/ft

ND: Not determined

Water Quality Parameters

(Achieve stable parameters for 3 consecutive reading, 4 parameters if practical [each reading taken after pumping a minimum of 1 flow through cell volume])

Time (24-hr)	Flow Rate (Liter ~~gal~~/minute)	Purge Volume (gal)	Temp (°C) (± 3 %)	Specific Conductance (µS/cm°) (± 3%)	DO (mg/L) (± 10%)	ORP (mV) (± 10mV)	pH (± 0.1)	Turbidity (NTU) (± 10%, or <5 NTU)	DTW (ft BTOC)	Drawdown (ft) (Max____ft)
1346	0.5	0.25	6.43	0.116	9.08	65.3	8.58	46.3	44.26	0.06
1351	0.5	1.2	7.77	0.112	4.20	65.9	8.73	44.7	44.26	0.06
1356	0.5	1.9	7.97	0.113	3.43	58.7	8.95	37.9	44.26	0.06
1402	0.5	2.8	7.95	0.113	2.65	52.7	9.11	33.6	44.26	0.06
1407	0.5	3.5	7.92	0.113	2.30	49.9	9.18	30.6	44.25	0.05
1412	0.5	4	7.99	0.113	2.07	46.9	9.26	30.6	44.25	0.05
1417	0.5	4.7	8.00	0.114	1.90	44.4	9.31	29.5	44.25	0.05
1422	0.5	5.5	7.96	0.114	1.72	42.3	9.32	28.3	44.25	0.05
Parameter Stable (Check applicable)			Yes	Yes		Yes	Yes	Yes		

Sample Color: Clear	**Sample Odor:** None	**Sheen:** None

Analytical Sampling

Analyses	Check Applicable	Comments
WQM Method Statement Table 2: General Groundwater Quality Suite	✓	
WQM Method Statement Table 3: Water Supply Quality Suite	✓	
PAH SIMS SM 625	✓	2x 1L amber glass

Notes: Note 54 ft of tubing left in well. Grundfos pump @ 153.3 Hz Duplicate collected for PAH SIMS only.

This is a former domestic water well. It is open to the elements and steel is rusty.

Equipment: Pump Type Grundfos Redi flo 2 Tubing (Type/Length) Tef-lined LDPE Bailer Type

Water Level Meter Yellow 300 ft Multi-Parameter Meter (Make/SN#) YSI 556 05B2462AE

Turbidity Meter (Make/SN#) LaMotte 2020e 14145 Filter Lot # L1456

Purge Water Handling: ☐ Discharged to surface ☒ Containerized ☐ Treated (how?)_____

BGS = Below Ground Surface, BTOC= Below Top of Casing, NA = Not Applicable

SLR

Groundwater Sampling Form

Site/Client Name: Nikiski, AK	**Well ID:** PQ-W1
Project # : Water Quality Monitoring (WQM), AK LNG	Sample ID: PQ-W1-0416
Sampled By: B Siwiec, K Johnson	Sample Time: 1630 Sample Date: 4/23/16
Weather Conditions: Cloudy, light wind ~45°	Duplicate ID: —
Sampling Method: ☒ Low Flow ☐ Other	MS/MSD ☐ Yes ☒ No Trip Blank Required: ☒ Yes ☐ No

Well Information

Well Type: ☒ Permanent ☐ Temporary	Well Diameter 6 in.	Screen Interval: ND ft BGS to ND ft BGS
Well Condition: ☐ Good ☒ Fair ☐ Poor (if fair or poor explain in Notes)		Stickup ☒ Yes ☐ No; If yes, 4.95 ft above ground

Gauging/Purging Information

Depth to Water (ft BTOC): 23.76	Tubing/Pump Depth (ft. BTOC): 45
Total Depth (ft BTOC): 65.86	Purge Start Time (24-hr) 1536
Depth to Product (ft. BTOC) NA	Purge End Time (24-hr) 1630
Product Thickness (ft) NA	Total Purge Time (min) 54

LOW FLOW: **Max Draw Down** = (Tubing Depth – Top of Screen Depth)_____ X 0.25 = _____(ft); if screen interval is not known or water table is below top of screen, then use default value of 0.3 ft.;

Min. purge volume if required: purge volume (gal) = volume of water/ft_____(gal/ft) X Water column thickness_____(ft) X # of casing volumes_____ = _____gal

Well Diameter – gal/ft	1" – 0.041 gal/ft	2" – 0.163 gal/ft	4' – 0.653 gal/ft	6' – 1.469 gal/ft

ND: Not determined

Water Quality Parameters

(Achieve stable parameters for 3 consecutive reading, 4 parameters if practical [each reading taken after pumping a minimum of 1 flow through cell volume])

Time (24-hr)	Flow Rate (liters/minute)	Purge Volume (gal)	Temp (°C) (± 3 %)	Specific Conductance (µS/cm°) (± 3%)	DO (mg/L) (± 10%)	ORP (mV) (± 10mV)	pH (± 0.1)	Turbidity (NTU) (± 10%, or <5 NTU)	DTW (ft BTOC)	Drawdown (ft) (Max____ft)
1539										
~~1544~~	0.45	0.5	5.93	0.172	2.37	78.3	8.53	30.1	23.75	0
1544	0.5	1	6.24	0.175	1.72	Cel. 6	8.43	20.9	23.77	0.01
1549	0.5	1.5	6.94	0.175	1.30	19.1	8.73	21.3	23.77	0.01
1554	0.5	2	7.17	0.177	1.33	-0.9	8.98	18.0	23.77	0.01
1559	0.5	2.6	7.12	0.177	1.03	-37.4	9.31	19.8	23.77	0.01
1604	0.5	3.2	7.14	0.178	1.04	-62.1	9.48	19.3	23.77	0.01
1609	0.5	3.8	7.14	0.177	0.99	-95.1	9.66	17.8	23.77	0.01
1614	0.5	4.3	7.08	0.178	0.86	-119.9	9.81	17.5	23.77	0.01
1619	0.5	5	7.04	0.177	0.75	-141.7	9.93	18.0	23.77	0.01
1624	0.5	5.8	7.02	0.178	0.69	-155.3	9.98	18.0	23.77	0.01
1629	0.5	6.4	6.91	0.177	0.68	-98.5	10.22	18.2	23.77	0.01
Parameter Stable (Check applicable)			Yes	Yes	Yes			Yes		

Sample Color: Clear – slight yellow **Sample Odor:** None **Sheen:** None

Analytical Sampling

Analyses	Check Applicable	Comments
WQM Method Statement Table 2: General Groundwater Quality Suite	✓	
WQM Method Statement Table 3: Water Supply Quality Suite	–	
PAH SIMS SM 6250	✓	2x 1L amber glass

Notes: Grundfos pump @ 106.40 ft
Total of 50 ft tubing left in well.
This is a former domestic water well. It is open to elements and steel is rusty.

Equipment: Pump Type Grundfos Redi-flo 2 Tubing (Type/Length) Tef-lined LDPE Bailer Type —
Water Level Meter Yellow 300ft Multi-Parameter Meter (Make/SN#) YSI 556 05B2462AE
Turbidity Meter (Make/SN#) LaMotte 2020e 14145 Filter Lot # L1456

Purge Water Handling: ☐ Discharged to surface ☒ Containerized ☐ Treated (how?)_____

BGS = Below Ground Surface, BTOC= Below Top of Casing, NA = Not Applicable

SLR

Groundwater Sampling Form

Site/Client Name: Nikiski, AK	**Well ID:** Decker
Project # : Water Quality Monitoring (WQM), AK LNG	Sample ID: Decker-0416
Sampled By: B Siwiec K Johnson	Sample Time: 1745 Sample Date: 4/23/16
Weather Conditions: Cloudy light wind	Duplicate ID: —
Sampling Method: ☐ Low Flow ☒ Other See notes	MS/MSD ☐ Yes ☒ No Trip Blank Required: ☒ Yes ☐ No

Well Information

Well Type: ☒ Permanent ☐ Temporary	Well Diameter ND in.	Screen Interval: ND ft BGS to ND ft BGS
Well Condition: ☐ Good ☐ Fair ☐ Poor (if fair or poor explain in Notes) ND		Stickup ☐ Yes ☐ No; If yes, ND ft above ground

Gauging/Purging Information

Depth to Water (ft BTOC):	ND	Tubing/Pump Depth (ft. BTOC):	ND
Total Depth (ft BTOC):	ND	Purge Start Time (24-hr)	1721
Depth to Product (ft. BTOC)	ND	Purge End Time (24-hr)	1745
Product Thickness (ft)	ND	Total Purge Time (min)	24

LOW FLOW: **Max Draw Down** = (Tubing Depth – Top of Screen Depth)_____ X 0.25 = _____(ft); if screen interval is not known or water table is below top of screen, then use default value of 0.3 ft.;

Min. purge volume if required: purge volume (gal) = volume of water/ft_____(gal/ft) X Water column thickness_____(ft) X # of casing volumes_____ =_____gal

Well Diameter – gal/ft	1" – 0.041 gal/ft	2" – 0.163 gal/ft	4' – 0.653 gal/ft	6' – 1.469 gal/ft

ND: Not determined

Water Quality Parameters

(Achieve stable parameters for 3 consecutive reading, 4 parameters if practical [each reading taken after pumping a minimum of 1 flow through cell volume])

Time (24-hr)	Flow Rate (gal/minute)	Purge Volume (gal)	Temp (°C) (± 3 %)	Specific Conductance (µS/cm^c) (± 3%)	DO (mg/L) (± 10%)	ORP (mV) (± 10mV)	pH (± 0.1)	Turbidity (NTU) (± 10%, or <5 NTU)	DTW (ft BTOC)	Drawdown (ft) (Max____ft)
1735	0.75	6	5.93	0.174	3.70	-15.5	9.27	1.35	NA	ND
1740	0.75		6.07	0.174	1.62	-22.5	9.17	0.91	NA	ND
1745	0.75	18	6.14	0.173	1.16	-49.8	9.50	0.48	NA	ND
Parameter Stable (Check applicable)										

Sample Color: Clear **Sample Odor:** None **Sheen:** None

Analytical Sampling

Analyses	Check Applicable	Comments
WQM Method Statement Table 2: General Groundwater Quality Suite	✓	
WQM Method Statement Table 3: Water Supply Quality Suite	–	
PAH SIMS SM 625	✓	2x 1L amber glass

Notes: Sample collected from garden hose.
Parameters collected from bucket placed under hose end.

Equipment: Pump Type ND; domestic well pump Tubing (Type/Length) Garden hose from spigot Bailer Type —
Water Level Meter (Make/SN#) SOLINST Not used Multi-Parameter Meter (Make/SN#) YSI 556 05B2460AE
Turbidity Meter (Make/SN#) La Motte 2020e 14145 Filter Lot # L1456

Purge Water Handling: ☒ Discharged to surface ☐ Containerized ☐ Treated (how?)_____

BGS = Below Ground Surface, BTOC= Below Top of Casing, NA = Not Applicable

AECOM

WELL DEVELOPMENT, PURGE, & SAMPLE RECORD

Date: 6-7-16 | Field Book #: ~

Sampler Names: PTM, NRD

Project Location: Nikiski, AK - Peterkin Prop | Project No. 60489694 | Page 1 of 2 (rev 03/16)

Location / Well ID: PQW1

Task (circle): Development | (Water Sample) | Other (list)

EQUIPMENT USED — Type of pump/equipment: ☐Grundfos ☐Peristaltic ☐QED ☐Air Bladder ☐ Bailer ☒Other: Tornado - New pump.
Type of slug (for development): Volume of Slug:

METHOD OF DEVELOPMENT/PURGING ☐ Bailing ☒Pump – Well Volume ☒Pump – Parameter Stabilization ☐ Low flow

WATER QUALITY PARAMETERS by (a) YSI 556 & 2100P Turbidimeter (c) other (describe):
Calibrated? ☒Yes ☐ No Equipment Decontaminated? ☒Yes ☐ No Describe:

CASING WELL VOLUME INFORMATION (circle) 6.0"

Casing ID (inch)	0.75	2.0	3.0	4.0
Unit Casing Volume (A) (gal/ft)	0.023	0.16	0.37	0.65

Formula: (Diameter)^2 /÷ 24.5 = gals / ft | 6" / 1.47

BAILER CHECK ☐ Yes ☒No Describe:

Color: clear | Sheen: ☐ Yes ☒No

Odor: ☒Yes ☐ No Describe: | Free-Phase Product: ☐ Yes ☒No

Notes: Anoxic odor that dissipated after 55 gallons purged

THICKNESS OF PRODUCT (if present) Measured with: Bailer ☐ or Interface Probe ☐ Type: N/A

Top of product (ft btoc): NA Top of Groundwater (ft btoc): 24.06 Thickness of Product (ft): NA

PURGING INFORMATION **Note: If no obvious reference, measure off north side of PVC casing and tick mark pipe.**
Measurement Reference Point: ☐ BTOC (at tick mark) ☐ BGS ☐ Bottom of "V" Notch on PVC casing
☐ Other (describe)

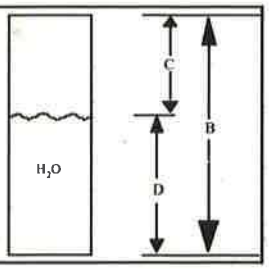
Depth to Top of Well Screen Unknown (feet) Length of Well Screen: Unknown (feet) Tubing Placement: 60' (feet)

Total Well Depth (B) 65.20 feet

Measured Water Level Depth (not product) [Start] (C) 24.06 feet

Length of Static Water Column (D) 65.2 (B) - 24.06 (C) = 41.14 (D) feet

Casing Water Volume 1.46 gal. (A) x 41.14 (D) = 60 gallons



↳ within screened interval (bottom 5' of well or top of pump)

Conversion from Gallons to Liters: # gal x 3.784 = Liters

Three Casing Water Volumes 180 (Liters) (gallons)

Maintain pump rate at less than 1 Liters / min for low flow purging.
Maintain pump rate at less than 4 Liters/min for all other purge methods

Total Water Volume Removed 150 gallons (Liters)

Measured Water Level Depth [End] (C) 24.45 feet

IMPORTANT! VERIFY UNITS AND CIRCLE APPROPRIATE VALUE FOR EACH WELL!

Time	Purge Rate (L/min) gal/min	Water Level Depth (feet)	Volume Purged (Liter)	Temp (°C)	pH	Specific Cond. (µS/cm)	Salinity (ppt)	DO (mg/L)	ORP (mV)	Turbidity (NTU)
Stabilization Method Only: three consecutive readings, taken every half well volume, are within the following limits (shaded):				+/- 10%	+/- 0.2 units	+/- 3%	NA	+/- 10%	+/- 20%	+/- 10% or less than 5 NTUs
1300	2 gal.									
1305	2 gal		12	4.93°	5.32	126		1.22	93.0	
1310	2 gal	24.44	22	4.90°	5.77	126		.77	45.9	9.60
1315	2 gal	24.45	32	4.93°	6.04	126		.57	21.6	0.00
1320	2 gal	24.45	42	4.91°	6.20	126		.46	.5	0.00
1325	2 gal	24.45	52	4.84°	6.20	126		.40	-6.8	6.67
1330	2 gal	24.45	62	4.94°	6.28	126		.38	-22.2	0.00

Samplers Signature: Date: 6/7/16

AECOM

WELL DEVELOPMENT, PURGE, & SAMPLE RECORD (Continued)

Date: 6/7/16 | Field Book #:

Sampler Names: SJM, NRD.

Project Location: Peterkin Site | Project No. 60489694 | Page 2 of 2 (rev 03/19/08)

Location / Well ID: PQW1

Time	Purge Rate (L/min) gal/min	Water Level Depth (feet)	Volume Purged (Liter)	Temp (°C)	pH	Specific Cond. (µS/cm)	Salinity (ppt)	DO (mg/L)	ORP (mV)	Turbidity (NTU)
1335	2	24.45	72	4.97°	6.36	126		0.37	-28.8	4.32
1340	2	24.45	82	4.92°	6.36	125		.32	-34.6	1.90
1345	2	24.45	92	4.82	6.34	125		.32	-34.6	4.68
1350	2	24.45	102	4.93°	6.38	126		.26	-41.1	0.00
1355	2	24.45	112	4.86°	6.42	125		.26	-43.7	4.51
1400	2	24.45	122	4.88°	6.22	124		1.07	-46.2	.16
1405	2	24.45	132	4.91°	6.47	125		.32	-48.9	3.40
1410	2	24.45	142	4.86°	6.51	125		.31	-50.7	2.93
1412	0.5	Pump rate slowed to 0.5 gpm to accomodate sampling flow rate. Total of Approx 150 gallons purged prior to sampling of well.								

SAMPLE COLLECTION

Sample ID: PQW1 | Sample Date/Time: 6/7/16 @ 13:30

Additional Field Sample Parameters Analyzed in Field with Equipment/Test Kits

Analyzed with 1) HACH Fe^{2+} Powder Pillow (result ← mg/L) 2) YSI 556

3) Other (specify with result):

QA/QC SAMPLES

Trip blank carried with samples?	Yes	No	Sample ID:	
Was a duplicate sample collected?	Yes	No	Sample ID:	PQW2
Was an equipment blank sample collected?	Yes	No	Sample ID:	
Was an MS/MSD sample collected?	Yes	No	Note on COC which sample is the MS/MSD	

Scanned and Input to Database by: | Date:

Samplers Signature: | Date: 6/7/16

Well has a hard bottom, no soft sediment. Corrosion scale present on drop tubing. No odors, Fe^{2+} staining.

1412

APPENDIX B
INVESTIGATION-DERIVED WASTE DISPOSAL MANIFEST

CHAIN OF CUSTODY

Project Name:	Alaska LNG Site Investigation	Client:	Alaska LNG LLC	Project Engineer:	
Project Number:	04.10160001	Project Location:	Water Quality Sampling Event #1; Wells MW-27B, MW-39A, MW-39B, MW-50A, MW-50B, MW-62A, MW-74A, MW-74B, MW-82A, MW-82B, MW-87B, MW-91A, TPW-1, TPW-PQW1	Sheet 1 of 1	

No.	Sample Identification		Depth	Sample Container (Size/Material)	Sample Type	USDA Regulated Yes or No*	Test Type						Remarks
	Description of contents	Sample No.	( )				A	B	C	D	E	F	
1	Drum 1	MW-62A, TPW-1, TPW-PQW1	N/A	55-gal Poly Barrel	Purge water								
2	Drum 2	MW-27B, MW-50A, MW-50B, MW-82A, MW-82B, MW-87B	N/A	55-gal Poly Barrel	Purge water								
3	Drum 3	MW-39A, MW-39B, MW-74A, W-74B, MW-91A	N/A	55-gal Poly Barrel	Purge water								
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													

Invoice must reference the following billing code: 04.10160001 Phase 6

Relinquished By					Received By			Test Type
Print Name	Signature	Phone No.	Date	Time	Print Name	Signature	Phone No.	A
Adrian Darrier			06-15-16	3:10pm	Nicholas Russell	Nicholas Russell	398-8604	B
								C
								D
								E
								F

*** IN CASE OF EMERGENCY CALL 1-800-899-4672 ***

NON-HAZARDOUS WASTE MANIFEST

Please print or type (Form designed for use on elite (12 pitch) typewriter)

NON-HAZARDOUS WASTE

GENERATOR

NON-HAZARDOUS WASTE MANIFEST	1. Generator's US EPA ID No. EXEMPT	Manifest Document No. 104671A	2. Page 1 of 1
3. Generator's Name and Mailing Address FUGRO CONSULTANTS LLC 6100 HILLCROFT AVE HOUSTON, TX 77081 FUGRO CONSULTANTS ONSHORE DRILLING SITES - NIKISKI KENAI, AK 99611			
4. Generator's Phone ( )			
5. Transporter 1 Company Name NRC ALASKA LLC	6. US EPA ID Number AKR000004184	A. State Transporter's ID B. Transporter 1 Phone (907) 258-1558	
7. Transporter 2 Company Name	8. US EPA ID Number	C. State Transporter's ID D. Transporter 2 Phone	
9. Designated Facility Name and Site Address NRC ALASKA LLC 44066 KENAI SPUR HIGHWAY KENAI, AK 99611	10. US EPA ID Number AKR000203984	E. State Facility's ID F. Facility's Phone 907-395-4600	

HM	11. WASTE DESCRIPTION	Containers No.	Containers Type	13. Total Quantity	14. Unit Wt./Vol.
a.	Material Not Regulated by DOT	3	DF	1200	P
b.					
c.					
d.					

G. Additional Descriptions for Materials Listed Above	H. Handling Codes for Wastes Listed Above
) EA0302 IDW PURGE WATER (DF55)	D2958

15. Special Handling Instructions and Additional Information

Shipper's Certification: This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation

16. **GENERATOR'S CERTIFICATION:** I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.

Printed/Typed Name	Signature	Date: Month	Day	Year
Randy Lukasik	Randy Lukasik	6	15	16

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials		Date: Month	Day	Year
Printed/Typed Name: Nicholas Russell	Signature: Nicholas Russell	06	15	2016
18. Transporter 2 Acknowledgement of Receipt of Materials		Date: Month	Day	Year
Printed/Typed Name	Signature			

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.

Printed/Typed Name	Signature	Date: Month	Day	Year

FUGRO

CHAIN OF CUSTODY

Project Name:	Alaska LNG Site Investigation	Client:	Alaska LNG LLC	Project Engineer:	
Project Number:	04.10160001	Project Location:	APT Task 4	Sheet	1 of 1

No.	Sample Identification: Description of contents	Sample Identification: Sample No.	Depth ( )	Sample Container (Size/Material)	Sample Type	USDA Regulated Yes or No*	Test Type A	B	C	D	E	F	Remarks
1	**Fugro Water Samplers Peterkin Quarry**	PQW-1		55-gal Metal Barrel	water	No							Collection Date 6/7/16 Laboratory Report of Analysis Number 1162930
2		PQW-2		55-gal Metal Barrel	water	No							Collection Date 6/7/16 Laboratory Report of Analysis Number 1162930
3		Trip Blank		55-gal Metal Barrel	water	No							Collection Date 6/7/16 Laboratory Report of Analysis Number 1162930
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													

NOTES: Laboratory Report of Analysis Number 1162930

Relinquished By: Print Name	Signature	Phone No.	Date	Time
Robert Mosher		281 658-9841	6/27/2016	

Received By: Print Name	Signature	Phone No.
Thomas Robinson		398-5346

Test Type
A
B
C
D
E
F

NON-HAZARDOUS WASTE MANIFEST

Please print or type (Form designed for use on elite (12 pitch) typewriter)

NON-HAZARDOUS WASTE

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. EXEMPT

Manifest Document No. 105293A

2. Page 1 of 1

3. Generator's Name and Mailing Address
FUGRO CONSULTANTS LLC
6100 HILLCROFT AVE
HOUSTON, TX 77081

FUGRO CONSULTANTS
ONSHORE DRILLING SITES
KENAI, AK 99611

NIKISKI

4. Generator's Phone ( )

5. Transporter 1 Company Name: NRC ALASKA LLC
6. US EPA ID Number: AKR000004184
A. State Transporter's ID
B. Transporter 1 Phone (907) 262-1558

7. Transporter 2 Company Name
8. US EPA ID Number
C. State Transporter's ID
D. Transporter 2 Phone

9. Designated Facility Name and Site Address
NRC ALASKA LLC
44066 KENAI SPUR HIGHWAY
KENAI, AK 99611
10. US EPA ID Number: AKR000203984
E. State Facility's ID
F. Facility's Phone 907-395-4600

HM	11. WASTE DESCRIPTION	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt./Vol.
a.	Material Not Regulated by DOT	3	DM	1320	P
b.					
c.					
d.					

G. Additional Descriptions for Materials Listed Above
1) EA0302 IDW PURGE WATER (DF55)

H. Handling Codes for Wastes Listed Above
D3572

15. Special Handling Instructions and Additional Information
Shipper's Certification. This is to certify that the above named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation

16. **GENERATOR'S CERTIFICATION:** I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.

Printed/Typed Name	Signature	Date Month	Day	Year

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date Month	Day	Year
Thomas Robinson		7	7	16

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date Month	Day	Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.

Printed/Typed Name	Signature	Date Month	Day	Year

APPENDIX C
DATA QUALITY ASSESSMENT

LABORATORY DATA QUALITY ASSURANCE REVIEW

APRIL 2016 GROUNDWATER MONITORING NIKISKI, ALASKA ALASKA LNG

SLR Project Number 105.00148.16001

Prepared by Jennifer McLean
Reviewed by Jason Gray
Date: 9-16-16

This report summarizes a review of analytical data for groundwater samples collected between April 19, 2016 and April 23, 2016 at Nikiski, Alaska. Samples were collected by SLR International Corporation (SLR). SGS North America, Inc (SGS) provided analytical support to the project. SGS maintains a current Alaska Department of Environmental Conservation (ADEC) Contaminated Sites approval number (UST-005) for analytical methods of interest, as applicable. Table 1 provides a summary of work orders, sample collection, analytical methods, and analytes.

Table 1 Summary of Work Orders, Sample Receipt, and Analytical Methods

SDG	Date Received by Lab	Temp Blank	Matrix	Analytical Methods (and SDG Association)	Analytes
1161853 [1]	4/20/16	0.6 °C	Ground Water	200.8 Low Level [1,2,3,4,5] AK101 [1,2,3,4,5] AK102 [1,2,3,4,5] AK103 [1,2,3,4,5] EPA 300.0 [1,2,3,4,5] EPA 300.0 [4,5] EPA 625M - SIM[1] SM21 2130B [1,2,3,4,5] SM21 2320B [1,2,3,4,5] SM2340B [1,2,3,4,5] SM2340C [1,2,3,4,5] SM2340D [1,2,3,4,5] SM21 4500NO3-F [1,2,3] SM21 4500-H B [1,2,3,4,5] SW8260B [1,2,3,4,5] SW8270D [1,2,3,4,5] EPA 1631 E [3, 5]	27 Metals GRO DRO RRO Chloride, Fluoride Sulfate Nitrate/Nitrite PAH Turbidity Alkalinity Hardness TDS TSS Nitrate/Nitrite pH VOCs SVOCs Mercury
		1.5 °C			
1161876 [2]	4/21/16	0.4 °C			
		0.0°C			
		-0.2°C			
1161901 [3]	4/22/16	0.9 °C			
		1.0°C			
		0.5°C			
1161922 [4]	4/22/16	0.7°C			
		0.7°C			
		0.1°C			
1161924 [5]	4/24/16	0.5°C			
		3.7°C			

Acronyms:
°C – degrees Celsius
DRO – diesel range organics
EPA – Environmental Protection Agency
GRO – gasoline range organics
ID – identification
PAH – polycyclic aromatic hydrocarbons
RRO – residual range organics
SIM – selective ion monitoring
SDG – sample delivery group
SM – Standard Methods
SVOCs – semi-volatile organic compounds
TDS – total dissolved solids
TSS – total suspended solids
VOCs – volatile organic compounds

Laboratory final reports were provided as Level II deliverables, and included documentation of each delivery group chain-of-custody (COC) and sample receipt condition. Microsoft Access compatible electronic data deliverables (EDDs) for each report were also provided. The PDF laboratory reports and the EDDs are provided electronically as Attachment 3.

Quality Assurance Program

A quality assurance (QA) program was followed for this project that addressed project administration, sampling, quality control, and data review. SLR adhered to required and established sampling and COC protocols. The select laboratory maintains an internal quality assurance program and standard operating procedures.

The analytical data was reviewed for consistency with any project specific requirements (Method Statement, April 2016), *ADEC Technical Memorandum, Environmental Laboratory Data and Quality Assurance* (ADEC 2009a) requirements, analytical method criteria and laboratory criteria. An ADEC Laboratory Data Review Checklist was completed for each SDG, and is included as Attachment 2 to this QAR. A review for any anomalies to the project requirements for precision, accuracy, representativeness, comparability, completeness and sensitivity (PARCCS) are noted in this QAR, and any data qualifications discussed.
The data review included the following, as applicable:

- Reviewing COC records for completeness, signatures, and dates;
- Identifying any sample receipt or preservation anomalies that could impact data quality;
- Verifying that quality control (QC) blanks [e.g,. field blanks (equipment blanks; trip blanks; etc.); equipment blanks; etc.] were properly prepared, identified, and analyzed;
- Evaluating whether laboratory reporting limits met project goals; Reviewing calibration verification recoveries, to include confirming that the laboratory did not identify that any Calibration Verification (CCV) recoveries or other calibration related criteria were outside applicable acceptance limits;

- Verifying that surrogate analyses were within recovery acceptance limits;
- Verifying that Laboratory Control Samples (LCS) and Laboratory Control Sample Duplicates (LCSD), and the Matrix Spike (MS) and Matrix Spike Duplicate (MSD) were within recovery acceptance limits;
- Evaluating the result relative percent difference (RPD) between primary and duplicate field samples, LCS/LCSD, MS/MSD, and laboratory duplicates; and
- Providing an overall assessment of laboratory data quality and qualifying sample results if necessary.

Data Qualifications

As part of the quality assurance review, qualifiers were applied to datum as determined necessary based on specified criteria, or professional judgement. In all cases, the basis for qualification and the applied data flag are discussed in this QAR. Table 2 provides a list of potential qualifiers (i.e., flags). These data flags were appended to the data as appropriate.

Table 2 Data Qualifiers

Qualifier	Definition
Q	One or more laboratory quality control criteria (for example, laboratory control sample (LCS) recovery or surrogate spike recovery) failed. Where applicable, an "H", "L", or "N" was appended to indicate positive, negative, or unknown bias, respectively.
J	Estimated: The analyte was positively identified but the result was outside the calibration range, between the limit of quantitation (LOQ) and the detection limit (DL); the quantitation was an estimate.
M	The concentration was an estimate due to a sample matrix quality control failure. Where applicable, an "H", "L", or "N" will be appended to indicate positive, negative, or unknown bias, respectively.
B	Blank contamination: The analyte was positively identified in the blank (e.g., trip blank and/or method blank) associated with the sample and the concentration reported for the sample was less than five times that of the blank (ten times for metals and common laboratory contaminants methylene chloride and acetone).
P	Sample preservation requirements were not satisfied.

A discussion of the project data quality relative to PARCCS goals and summary of any anomalies or failures requiring data qualifiers follows.

Data Validation

Data Packages

The data packages were checked for transcription errors, omissions, or other anomalies. No issues were noted with regards to the data packages, except as noted below.
For all work orders

- Nitrate and nitrite were analyzed via Method SM21 4500-NO3 for work orders 1161853, 1161876, and 1161901 and alternately analyzed via Method EPA 300.0 for work orders 1161922 and 1161924. Both methodologies are comparable and considered acceptable by ADEC. Data usability was not affected.

For work order1161876

- For total suspended solids (TSS) by Method SM21 2540D, the LCS/LCSD RPD exceeded allowable limits. This was not noted in the case narrative. Refer to the LCS/LCSD section for further discussion.

Sample Receipt

The sample receipt documentation was checked for anomalies. No issues were noted with regards to the receipt of the samples, except as noted below.

For all project work orders:

ADEC specifies a cooler receipt temperature of 4±2 degrees Celsius (°C). Temperatures above the required range have the potential to degrade the sample and introduce bias to the reported sample results. In no instances for this project were coolers received at the lab with a temperature blank measurement above the required range. Cooler temperatures below 0°C have the potential to result in freezing of the sample with the potential for damage to the integrity of the sample container but there is no concern that unfrozen samples would otherwise be impacted if received below 2°C. In cases where the cooler receipt temperatures were below 2°C, the lab inspected the sample containers and made note if there were any ice present in the samples or other indications of compromised containers. As long as the samples did not contain ice or otherwise appear damaged, samples received slightly below the 2°C temperature limit were considered acceptable and analyzed with no further qualification due to receipt temperature. Cooler temperatures and any anomalous sample conditions were documented in the data package sample receipt documentation but are not otherwise discussed in the report case narrative if there are no impacts to the sample results due to receipt condition.

A total of thirteen of the project coolers were received at the laboratory slightly below the 2°C criteria due to the inherent imprecision of achieving stable cooler temperatures within a narrow temperature range using frozen gel ice for cooling. No ice or evidence of freezing was noted in any of the samples within these coolers, and the samples were considered acceptable without any impact to the results as documented in this report.

The COCs prepared for shipments of project samples at times listed the samples from multiple coolers together without identifying which cooler the samples were located in. The laboratory did assign and record cooler ID numbers upon receipt for recording the cooler temperatures but without identifying the cooler association to the samples. Within the April 2016 sampling event, there were no instances where receipt temperatures above the required preservation range occurred which might have compromised the sample data and required association of the containers to a specific cooler. Volatile trip blank samples were always packed and shipped together in the same cooler with associated volatile field samples. For subsequent sample events, SLR will adhere to preparing a single COC specific to the contents of each cooler and identify the cooler on the COC so there is no possibility of confusion as to which cooler samples were shipped in.

For work order 1161853

- Two coolers were received at SGS with temperature blanks at 0.6 °C and 1.5°C, both slightly below the ADEC required 4±2°C. The sample receipt form did not note any evidence of freezing or sample container damage; the sample condition was considered acceptable without any impact to the results.

- The February 2016 scope of services defining the analytical methods to be used for the project did not specify that any of the samples would need to meet the TAqH reporting limits for PAH compounds. The PAH compounds are included on the SVOC by 8270D analysis however the reporting limits that are routinely achieved by SGS for the PAH compounds are above the TAqH limits. After samples had been collected and submitted to the laboratory, it was determined that for the purpose of pump test discharge permitting, samples MW27-0416 and MW87B-0416 did need to meet the TAqH detection limits for PAH analytes. An e-mail change order request was sent to the laboratory to add the 625M-SIM PAH analysis to these samples in order to meet the TAqH reporting requirements. This e-mail change order was included in the report as documentation of the analytical request. The second of two available sample containers originally intended as a back-up samples for SVOC (SW8270D) was able to be used for the PAH-SIM analysis by EPA 625M. All analyses were performed by appropriate methods as requested by SLR. This, however, resulted in no backup sample container being available for a re-extraction of SVOC by SW8270D analysis needed due to batch QC failure issues (discussed further in the LCS/LCSD section).

- For sample MW87B-0416, the sample receipt form noted that one unpreserved 500 milliliter (mL) container intended for wet chemistry methods arrived at the laboratory empty, having spilled in the cooler during shipping. A portion of the 1L container from this same sample that was originally intended for Total Suspended Solids (TSS) was able to be used to replace the spilled sample container and provide sufficient sample matrix to perform all of the original requested analysis. However, the reduced volume of sample remaining for TSS analysis necessarily elevated the LOQ for that analysis. TSS was still detected above the elevated reporting limit and is not regulated by 18 AAC 75 Table C; therefore, data usability was not affected.

- For sample MW87Z-0416, the sample receipt form noted that two of the three replicate VOA vials collected for the sample were damaged during the receiving process at the laboratory. The one remaining undamaged fraction of this sample provided sufficient sample volume to perform the requested analyses. Data were not impacted.

For work order 1161876

- Three coolers were received at SGS with temperature blanks at 0.4°C, 0.0°C, and -0.2°C, all below the ADEC required 4±2°C. The sample receipt form did not note any evidence of freezing or sample container damage, sample condition was considered acceptable without any impact to the results.

- For sample MW50Z-0416, TDS, alkalinity, turbidity, and pH were requested on the COC because it was thought that an additional blind duplicate sample would be needed to replace the spilled blind duplicate sample MW87Z-0416 from work order 1161853. The laboratory successfully obtained results for MW87Z-0416 therefor the additional blind duplicate MW50Z-0416 was not needed and cancelled by SLR as documented via email.

For work orders 1161853 and 1161876

- Analysis of a GRO trip blank sample was not requested on the COC. Trip blank sample sets were included in the cooler with all samples and requested for 8260B VOC but not requested for GRO by AK 101. A request to add GRO analysis of the trip blank sets was added via e-mail and trip blank samples analyzed appropriately for all requested volatile analyses, data were not impacted. For subsequent work orders, the VOC and GRO trip blanks were included as separate samples on the COC.

- For all samples of work orders 1161853 and 1161876, due to a preparation oversite a request for hardness calculation (derived from the dissolved metals results) was initially absent from the COC template list of requested analysis utilized for these two work orders. The request to report this calculated result was subsequently made by SLR via email. Data was not impacted, the hardness was still able to be calculated and reported from the dissolved metals analysis results, no separate sample collection or analysis for hardness is required. The COC template used for subsequent work orders was revised to include the hardness calculation request for all dissolved metals samples.

For work order 1161901

- Three coolers were received at SGS with temperature blanks at 0.9°C, 1.0°C, and 0.5°C, all slightly below the ADEC required 4±2°C. The sample receipt form did not note any evidence of freezing or sample container damage, sample condition was considered acceptable without any impact to the results.

For work order 1161922

- Three coolers were received at SGS with temperature blanks at 0.7°C, 0.7°C, and 0.1°C, all below the ADEC required 4±2°C. The sample receipt form did not note any evidence of freezing or sample container damage; sample condition was considered acceptable without any impact to the results.

- The laboratory sample receipt discovered that three unlabeled water filled VOA vials were included in the cooler delivery. Containers for all of the samples listed on the COC were received properly labeled, present and accounted for. The laboratory notified SLR and after discussion with the field samplers it was determined that the unlabeled vials were likely mistakenly collected as excess duplicate sample fractions for a MS/MSD sample preparation but were not needed. SLR directed the laboratory to dispose of the unlabeled vials and discussed the incident with the field sampling crew to avoid repeat of such errors. All of the samples that were analyzed were from properly labeled containers and associated data were not considered impacted.

For work order 1161924

- One of two coolers was received at SGS with a temperature blank at 0.5°C, slightly below the ADEC required 4±2°C. The sample receipt form did not note any evidence of freezing or sample container damage; sample condition was considered acceptable without any impact to the results

- For sample MW62A-0416, two containers for PAH SIM by EPA 625M were collected and included in the coolers received at the laboratory. This analysis was not requested on the COC. It was later determined by SLR and requested via email to the laboratory that the containers not be analyzed for this method, and be disposed of by the laboratory. Data were not impacted.

Holding Times and Preservation
Samples were appropriately preserved and were submitted to SGS. Field pH analysis was performed, and should be considered the primary data for pH. The laboratory also performed a pH analysis within three days of sample collection as a potential QA check. All results are considered to be within an acceptable hold time for all, except as noted below. No issues were noted in regard to sample preservation.

For work order 1161853

- For SVOC by SW8270D, due to low benzoic acid and 4-nitrophenol recoveries in the LCS/LCSD, sample MW87Z-0416 was re-extracted past hold time and re-analyzed. In the analysis of the re-extract, the LCS/LCSD recovered within acceptable limits. Both the initial and re-extracted analysis had results of non-detect for this analyte. Since the re-extraction was performed past the method allowed hold time, the initial analysis was reported with a data qualifier of “QL” to indicate potential low bias. Results confirmed, therefore, the impact is considered minimal. Also, the non-detect LOD of 0.0000261 mg/L is well below the project limit of 150 mg/L for benzoic acid and unregulated for 4-nitrophenol, defined by 18 AAC 75, Table C. Data is usable as qualified.

For work order 1161876

- For EPA Method 300.0, for sample MW82B-0416 chloride, fluoride and sulfate were analyzed 13 days past the 28 day method allowed hold time. Upon arrival at the laboratory this sample was mistakenly not logged in for this analysis. The error was first noticed on Friday May 27, 2016. The sample was analyzed on May 31, 2016. The data were qualified with a “QL”, and should be considered potentially biased low. Because no 18 AAC 75, Table C limits exist for these analytes, and the data still indicates approximate values; data is considered usable as qualified.

Laboratory Method Blanks
Laboratory method blanks were analyzed at the appropriate frequencies. Analytes were not detected in any method blanks at or above the Limit of Detection (LOD), except as noted in Table 3. Associated results that were less than, or equal to, five times the blank detection results were considered affected, and were qualified as shown in Table 3. Results were considered unaffected and not qualified or shown on Table 3, when associated sample results were greater than five times the blank detection or non-detect.

In all cases, affected results were well below applicable project cleanup levels. Data usability was not affected.

Table 3 Method Blank and Trip Blank Detections

Work Order	Sample ID	Lab ID	Method	Analyte	Result (mg/L)	Flag	Project Limits (mg/L)
1161853	MB	1324619	200.8 Low Level	Aluminum	0.00127	J	Not regulated
	EBF-Lot #L1456 [1]	1161853002			0.00311	B	
	MW87B-0416 [1]	1161853007			0.00239	B	
	MW87Z-0416 [1]	1161853008			0.00285	B	
1161876	MW82B-0416 [1]	1161876008			0.00312	B	
	MW50B-0416 [1]	1161876010			0.00235	B	
1161924	MW62A-0416 [1]	1161924004			0.00442	B	
1161922	MB	1324629	200.8 Low Level	Aluminum	0.00113	J	
1161901	MW39A-0416 [1]	1161901017			0.0049	B	
1161922	MW74B-0416 [1]	1161922007			0.00357	B	
1161901	MB	1324624	200.8 Low Level	Barium	0.000942	=	2.0
1161853	EBT-0416 [2]	1161853001			0.000207	J, B	
	EBF-Lot #L1456 [1]	1161853002			0.000153	J, B	
1161922	MW74A-0416 [1]	1161922006			0.00394	B	
1161853	MB	1324619	200.8 Low Level	Manganese	0.0000326	J	Not regulated
	EBT-0416 [2]	1161853001			0.00012	B	
	EBF-Lot #L1456 [1]	1161853002			0.0000742	J, B	
1161853	MB	1324619	200.8 Low Level	Silver	0.000014	J	0.10
	EBT-0416 [2]	1161853001			0.00000738	J, B	
	MW27-0416 [2]	1161853005			0.00000744	J, B	
1161876	MW50A-0416 [2]	1161876003			0.0000457	B	
1161853	MB	1324619	200.8 Low Level	Zinc	0.00109	J	5.0
	EBT-0416 [2]	1161853001			0.000622	J, B	
	EBF-Lot #L1456 [1]	1161853002			0.00111	J, B	
	MW87Z-0416 [2]	1161853004			0.00115	J, B	
	MW87Z-0416 [1]	1161853008			0.000769	J, B	
	MW87B-0416 [2]	1161853003			0.00122	J, B	
	MW87B-0416 [1]	1161853007			0.00077	J, B	
	MW27-0416 [2]	1161853005			0.00398	B	
	MW27-0416 [1]	1161853009			0.00107	J, B	
1161876	MW82B-0416 [2]	1161876002			0.00416	B	
	MW82B-0416 [1]	1161876008			0.00188	J, B	
	MW50B-0416 [2]	1161876004			0.00104	J, B	
	MW50B-0416 [1]	1161876010			0.000748	J, B	
	MW82A-0416 [1]	1161876007			0.00132	J, B	
1161924	MW62A-0416 [1]	1161924004			0.00135	J, B	
1161901	MB	1324706	EPA 1631 E	Mercury	5.87E-07	J	0.002
	MW50A-0416 [1]	1161901024			0.00000215	B	
1161924	TBHG2	1161924011	EPA 1631 E	Mercury	5.06E-07	J, B	
	MW62A-0416 [2]	1161924001			0.00000144	B	
	MW62A-0416 [1]	1161924004			5.13E-07	J, B	
	MW74A-0416 [1]	1161924017			5.47E-07	J, B	
	MW74A-0416 [2]	1161924010			0.0000049	B	
	MW74B-0416 [2]	1161924007			0.00000333	B	
	MW91A-0416 [2]	1161924005			0.00000264	B	
	MW91A-0416 [2]	1161924012			5.99E-07	J, B	
	MW91Z-0416 [2]	1161924006			0.00000299	B	
	MW91Z-0416 [2]	1161924013			5.36E-07	J, B	
1161901	MB	1321330	AK101	GRO	0.0315	J	2.2
	MW39B-0416	1161901002			0.0388	J, B	
	MW39A-0416	1161901001			0.0539	J, B	
1161853	MB	1321395	SM21	Nitrate-N	0.0574	J	Not regulated
1161876	MB	1321405	SM21 4500NO3-F	Nitrate-N	0.0572	J	
	MW50A-0416	1161876003			0.0486	J, B	
	MW50B-0416	1161876004			0.0558	J, B	
	MW82A-0416	1161876001			0.0452	J, B	
1161901	MB	1321432	SM21 4500NO3-F	Nitrate-N	0.0794	J	
	MW39A-0416	1161901001			0.0786	J, B	
	MW91A-0416	1161901003			0.0654	J, B	
	MW91Z-0416	1161901004			0.0648	J, B	
1161924	MB	1321585	EPA	Nitrate-N	0.058	J	
1161876	MB	1320896	SM21	Turbidity[3]	0.1	J	

Work Order	Sample ID	Lab ID	Method	Analyte	Result (mg/L)	Flag	Project Limits (mg/L)
1161901	MB	1321417	2130B		0.1	J	
1161922	MB	1321421			0.1	J	
1161924	MB	1321424			0.1	J	

1 – The affected sample result shown is dissolved metals.
2 – The affected sample result shown is total metals.
3 – Turbidity results were reported in NTU.

Trip Blanks

Trip blanks were analyzed at appropriate frequencies for VOCs and low level mercury. Trip blank samples were included in each cooler containing volatile samples. Analytes were not detected in the trip blank except for low levels of mercury as noted in Table 3 above. Affected associated sample mercury data were qualified as shown in the table.

Equipment Blanks

Equipment Blanks were analyzed at appropriate frequencies for total and dissolved metals by EPA Method 200.8. Equipment blank detections are presented in Table 4 below. Equipment blank detections for total manganese and total and dissolved aluminum were associated with method blank detections. All associated project sample detections were well below the applicable regulatory limits; therefore, the impact on usability of the associated sample data was considered negligible. Data were not qualified based on equipment blank detections.

Table 4 Equipment Blank Detections

Compound in milligrams per Liter (mg/L)	Screening Criteria		Sample Identification[3]			
			Filter Blank (Dissolved Metals)		Sample Tube Blank (Total Metals)	
	Permit AKG003000 Table 3 [1]	ADEC Table C Groundwater Cleanup Level[2]	EBF-Lot #L1456 19-Apr-16 1161853002		EBT-0416 19-Apr-16 1161853001	
			Conc.	Flag	Conc.	Flag
200.8 Metal, Dissolved						
Aluminum	--	--	0.00311	=	0.00651	=
Antimony	0.006	0.006	0.0000294	J	[0.000025]	ND
Barium	--	2	0.000153	J	0.000207	J
Cadmium	0.005	0.005	0.000187	=	[0.000025]	ND
Copper	0.2	1	0.00215	=	0.000208	J
Iron	--	--	0.0105	J	0.0126	J
Manganese	--	--	0.0000742	J	0.00012	=
Nickel	0.2	0.1	0.0000782	J	[0.00031]	ND
Silicon			[0.05]	ND	--	--
Silver	--	0.1	[0.00001]	ND	0.00000738	J
Vanadium	--	0.26	[0.0005]	ND	0.000347	J
Zinc	2	5	0.00111	J	0.000622	J

Reporting Limits

For non-detect results, limits of detection (LODs) were compared to applicable cleanup levels for the site. For groundwater samples, LODs were compared to 18 AAC 75.345, Table C,

groundwater cleanup levels (ADEC, May 8, 2016). All results of non-detected analytes had LODs at or below the applicable cleanup levels, except for those analytes noted in table 5 which shows those non-detected analytes with LODs which were above the applicable groundwater cleanup screening limits. All affected analytes were either VOCs by SW8260B or SVOCs by SW8270D. For all analytes presented in Table 5, typical laboratory technological methodology limitations resulted the LOD which did not meet project goals.

For subsequent sampling events, the laboratory and analytical method utilized for these two analyses will be changed and selected on the basis of lower available LODs in order to reduce the number of compounds which do not meet the regulatory screening limits.

Table 5 - LOD for Undetected Sample Results Exceeding Cleanup Limits

Analytical Method	Compound in milligrams per Liter	Screening Criteria	Lowest LOD From Project Field Samples [2] (mg/L)	LOD / Screening Level Ratio [3]
		ADEC Table C Groundwater Cleanup Level[1] (mg/L)		
8260B	1,2,3-Trichloropropane	0.00012	0.0005	4.2
	1,2-Dibromoethane	0.00005	0.0005	10.0
8270D	2,4-Dinitrotoluene	0.0013	0.00505	3.9
	2,6-Dinitrotoluene	0.0013	0.00505	3.9
	3,3-Dichlorobenzidine	0.0019	0.00505	2.7
	Benzo(a)Anthracene	0.0012	0.00505	4.2
	Benzo[a]pyrene	0.0002	0.00505	25.3
	Benzo[b]Fluoranthene	0.0012	0.00505	4.2
	Bis(2-Chloroethyl)ether	0.00077	0.00505	6.6
	Dibenzo[a,h]anthracene	0.00012	0.00505	42.1
	Hexachlorobenzene	0.001	0.00505	5.1
	Indeno[1,2,3-c,d] pyrene	0.0012	0.00505	4.2
	N-Nitrosodimethylamine	0.000017	0.00515	302.9
	N-Nitroso-di-n-propylamine	0.00012	0.00515	42.9
	Pentachlorophenol	0.001	0.0257	25.7

1 - This screening level corresponds to ADEC groundwater cleanup levels of 18 AAC 75.345 Table C (May 2016).
2 - Lowest Available LOD from project field samples show, some samples had slighty higher LOD due to decreased volume of sample analyzed.
3 - Ratio of the LOD to the screening limits, higher ratio indicates that the analyte LOD was further above the screening limit.

Continuous Calibration Verifications (CCVs)

CCVs were analyzed at the appropriate frequencies. CCV data was included only in the EDDs, not in the case narratives. All CCV recoveries were within acceptable limits, as reviewed in the EDDs, except as noted in the Table 6 below.

Data were qualified as shown in the Table 5. In all cases, LCS and MS/MSD recoveries and RPDs were within acceptable limits. Because all other QC was within acceptable limits, data is considered minimally impacted. Also, neither fluoride nor silicon is regulated by 18 AAC 75, Table C. All data is usable as qualified.

Table 6 CCV Failures and Affected Data

Work Order	Sample ID	Batch	Method	Analyte	Recovery (%)	LCL (%)	UCL (%)	Flag
	CCV [1] 1320984	WIC5531	EPA 300.0	Fluoride	113	90	110	NA
					Result (mg/L)			
1161853	MW27-0416				0.056 J			QH
	MW87B-0416				0.06 J			QH
	MW87Z-0416				0.06 J			QH
1161876	MW50A-0416				0.082 J			QH
	MW50B-0416				0.069 J			QH
	MW82A-0416				0.089 J			QH
	CCV [2] 1324864	MMS9354	200.8 Low Level	Dissolved Silicon	139	85	115	NA
					Result (mg/L)			
1161853	MW27-0416				16.6			QH
	MW87B-0416				18.1			QH
	MW87Z-0416				18.2			QH
1161876	MW50A-0416				19.3			QH
	MW50B-0416				16.1			QH
	MW82A-0416				16.8			QH
	MW82B-0416				14.5			QH
1161924	MW62A-0416				14.9			QH

1 - Three of four CCVs were within acceptable limits. Only the CCV shown exceeded limits.
2 - Two of three CCVs were within acceptable limits. Only the CCV shown exceeded limits.
LCL – lower control limit
UCL – upper control limit

Internal Standards

No internal standards were noted in the case narratives as being outside of acceptance limits. Internal standard performance was not otherwise presented in the report or in the electronic data deliverable. Internal standards criteria were considered met.

Surrogate Recovery Results

Surrogate analysis was performed at the required frequencies. All surrogate recoveries were within analytical method and SGS percent recovery acceptance limits.

Laboratory Control Samples and Laboratory Control Duplicate Samples

LCS and LCSDs were analyzed at the appropriate frequencies. All LCS and LCSD recoveries and RPDs were within acceptable limits except as presented in Table 7. Data were qualified as presented in the table. Results of non-detected analytes were not qualified based on RPD exceedances, as it was considered inappropriate to qualify non-detect values as estimated with unknown bias. All affected results were well below applicable cleanup limits (18 AAC 75, Table C). Data usability was not affected.

For work order 1161853

- For SVOC by SW8270D, for benzoic acid and 4-nitrophenol for samples MW27-0416 and MW87B-0416 (noted in the table below) a re-extraction, due to LCS/LCSD exceedance, was not possible. Refer to the Sample Receipt section for further discussion. Sample MW87Z-0416 was re-extracted past hold time and re-analyzed. Refer to the Hold Times and Sample Receipt sections for further discussion.

For work orders 1161876, 1161901, and 1161922

- For TSS by Method SM21 2540D, the LCS/LCSD RPD exceeded allowable limits. Also, one of three laboratory duplicates associated with this batch had an RPD exceeding allowable limits. Because the LCS and LCSD recoveries were within acceptable limits, and two of three duplicates had RPDs within acceptable limits, establishing precision, batch data were not qualified. Only the parent sample of the laboratory duplicate exceeding RPD limits was recommended for qualification. Refer to the Duplicates section for further discussion. All data was usable as qualified.

Table 7 - LCS/LCSD Recovery and Precision Qualifications

Work Order	Sample ID	Batch	Method Analyte	LCS Recovery (%)	LCSD Recovery (%)	RPD (%)	Flag
1161853	LCS/LCSD	XXX35194	SW8270D Benzoic acid	0	0	0	NA
				(Rec. Limits 21-107%) [2]			
				Result (mg/L)			
	MW27-0416			ND [0.0000257]			QL
	MW87B-0416			ND [0.0000256]			QL
	MW87Z-0416			ND [0.0000261]			QL
	LCS/LCSD	XXX35194	SW8270D 4-nitrophenol	40	42	7.2	NA
				(Rec. Limits 52-111%) [2]			
				Result (mg/L)			
	MW27-0416			ND [0.0000257]			QL
	MW87B-0416			ND [0.0000256]			QL
	MW87Z-0416			ND [0.0000261]			QL
1161853, 1161876	LCS/LCSD	VXX28746	SW8260B 2-butanone ((MEK)	118	95.1	21.5	NA
						(RPD Limit is 20%) [2]	
				Result (mg/L)			
1161853	MW27-0416			ND [0.005]			NA
	MW87B-0416			ND [0.005]			
	MW87Z-0416			ND [0.005]			
	TB1			ND [0.005]			
1161876	MW50A-0416			ND [0.005]			
	MW50B-0416			ND [0.005]			
	MW82A-0416			ND [0.005]			
	MW82B-0416			ND [0.005]			
	TB2			ND [0.005]			
1161876, 1161901, 1161922, 1161924	LCS/LCSD	XXX35213	SW8270D aniline	44	36	20.9	NA
						(RPD Limit is 20%) [2]	
				Result (mg/L)			
1161876	MW50A-0416			ND [0.0265]			NA
	MW50B-0416			ND [0.0255]			
	MW82A-0416			ND [0.0255]			
	MW82B-0416			ND [0.0253]			
1161901	MW39A-0416			ND [0.0255]			
	MW39B-0416			ND [0.0266]			
	MW91A-0416			ND [0.0255]			
	MW91Z-0416			ND [0.0255]			
1161922	MW74A-0416			ND [0.0261]			
	MW74B-0416			ND [0.0253]			
1161924	MW62A-0416			ND [0.0253]			
1161876, 1161901, and 1161922	LCS/LCSD	STS5019 [3]	SM21 2540D TSS	98.4	91.4	7.4	NA
	DUP 1321135			NA	NA	1.3	NA
	DUP 1321136			NA	NA	0.6	NA
	DUP of 1161922003			NA	NA	13.0	NA [1]
						(RPD Limit is 5%) [2]	
				Result (mg/L)			
1161876	MW50A-0416			170			NA
	MW50B-0416			3.57			
	MW82A-0416			13.1			
	MW82B-0416			11			
1161901	MW39A-0416			82.5			
	MW39B-0416			170			
	MW91A-0416			39.5			
	MW91Z-0416			43			
1161922	MW74A-0416			24.7			
	MW74B-0416 [3]			4.14			QN
	MW74Z-0416			21.3			NA

1 - Refer to the Duplicate section for flagging discussion.
2 –Recovery or RPD limits are presented only when recoveries or RPDs exceeded allowable limits.

Matrix Spike and Matrix Spike Duplicate Samples

LCS/LCSD and MS/MSD pairs were analyzed at the appropriate frequencies. All MS/MSD percent recoveries for samples analyzed at dilutions of five-fold or less were within acceptable limits, except as listed in Table 8. All MS/MSD RPDs for samples analyzed at dilutions of five-fold or less were within acceptable limits, except as listed in Table 9.

Data were qualified as presented in the table. Data were not qualified in cases where the recovery for an analyte was high and the sample result was non-detectable. Data were not qualified based on RPD exceedances when the sample result was non-detectable, as it was considered inappropriate to qualify non-detectable values as estimated with unknown bias. Data were not qualified in cases where the spike amount was less than one-half the parent concentration as it was considered not possible to accurately determine recoveries in these instances. All affected results were well below applicable cleanup limits (18 AAC 75, Table C). Data usability was not affected.

For work order 1161922

- For Method 200.8 Low Level Metals (both total and dissolved), several analytes recovered outside acceptable recovery limits in the MS/MSD for parent sample MW74B-0416. Most affected analytes had recovery limits above upper control limits. As per the methodology, a post-digestion spike was analyzed and produced recovery within acceptance criteria, indicating that matrix interferences likely caused these exceedances. Since the post digestion spike was successful, batch data was not qualified. Only parent sample MW74B-0416 was considered affected and qualified. All impacted results were below applicable cleanup levels (18 AAC 75, Table C). All data was usable as qualified.

Table 8 MS/MSD Recovery Exceedances

Work Order	Parent Sample Lab ID (MS/MSD)	Method Analyte	Initial Conc. (mg/L)	Amount Spiked (mg/L)	Per. Rec. MS (%)	Per. Rec. MSD (%)	LCL (%)	UCL (%)	Flag
1161901, 1161924	1162311001 (MS)[1]	EPA 1631 E Mercury	0.00000914	0.000025	37	38	71	125	NA
	1162159001 (MS)[1]		0.0000917	0.000025	182	182	71	125	NA
1161853, 1161876	1320929 (MSD)[1]	EPA 300.0 Fluoride	0.093	10	112	NA	90	110	NA
1161876	1161860001 (MS)[1]	SM21 4500 NO3-F Nitrate/Nitrite	0.722	5	87	NA	90	110	NA
		200.8 Low Level Total Metals							
1161922	MW74B-0416 1161922003 (MS)	Aluminum	0.43	0.05	264	269	70	130	NA
		Antimony	0.00011	0.005	135	132	70	130	MH
		Chromium	0.00248	0.0125	136	131	70	130	MH
		Cobalt	0.00173	0.0125	136	NA	70	130	MH
		Iron	5.81	0.5	33	1.8	70	130	NA
		Molybdenum	0.000445	0.0125	138	133	70	130	MH
		Nickel	0.00329	0.0125	133	NA	70	130	MH
		Vanadium	0.00191	0.025	138	133	70	130	MH
		200.8 Low Level Dissolved Metals							
1161922	MW74B-0416 1161922003 (MS)	Aluminum	0.00357	0.05	133	148	70	130	MH
		Antimony	0.0000214	0.005	141	140	70	130	MH
		Barium	0.0327	0.025	143	133	70	130	MH
		Beryllium	ND	0.0125	NA	142	70	130	NA
		Boron	0.00756	0.05	NA	141	70	130	MH
		Cadmium	ND	0.0125	131	NA	70	130	NA
		Calcium	14.9	5	132	NA	70	130	NA
		Chromium	0.000697	0.0125	134	151	70	130	MH
		Cobalt	0.00138	0.0125	NA	135	70	130	MH
		Iron	4.74	0.5	145	213	70	130	NA
		Magnesium	5.03	5	136	154	70	130	MH
		Manganese	0.191	0.05	134	153	70	130	NA
		Molybdenum	0.000381	0.0125	131	133	70	130	MH
		Nickel	0.0026	0.0125	NA	131	70	130	MH
		Silicon	19.1	2.5	189	271	70	130	NA
		Sodium	8.04	5	147	172	70	130	MH
		Tin	ND	0.0125	135	135	70	130	NA
		Vanadium	0.000477	0.025	136	145	70	130	MH

Table 9 MS/MSD RPD Exceedances

Work Order	Parent Sample Lab ID	Method	Analyte	Initial Conc. (mg/L)	MS/MSD RPD (%)	Flag
1161922	MW74B-0416 1161922003	SW8270D	Aniline	ND [0.0253]	29.2**	NA

Field Duplicates

The field duplicate sample frequency is presented below in Table 10. This project satisfied the required frequency of one per 10 samples or less per matrix and analyte. Field duplicates were submitted blind to the laboratory.

During the April sample event which included sampling of both groundwater monitoring wells and potable wells, a total of three field duplicates for TSS, and two field duplicates for all other methods listed in Table 1, were collected for 15 primary samples. One field duplicate was collected for five samples for PAH SIM by EPA Method 625M. This satisfied the required frequency of one per 10 samples or less per matrix and analyte. Field duplicates were submitted blind to the laboratory.

Table 10 Field Duplicate Frequency, Identification, Methods, and Analyes

Work Order	Number of Field Duplicates	Number of Parent Samples	Parent Sample	Field Duplicate	Method	Analytes
1161856	0	2			SW8260B SW8270D E625M-SIM	VOCs SVOCs PAH
1161923 (potable)	1	3	TP6-0416	TP1-0416		
Total	1	5				
1161922	1 (TSS only)	2	MW74A-0416	MW74Z-0416	SM2340D	TSS
1161853	1	2	MW87B-0416	MW87Z-0416	200.8 Low Level AK101 AK102 AK103 EPA 300.0 SM21 2130B SM21 2320B SM2340B SM2340C SM2340D SM21 4500NO3-F SM21 4500-H B SW8260B SW8270D EPA 1631 E	27 Metals GRO DRO RRO chloride fluoride sulfate turbidity alkalinity hardness TDS TSS nitrate/nitrite pH VOCs SVOCs mercury
1161876	0	4	NA	NA		
1161901	1	3	MW91A-0416	MW91Z-0416		
1161924	0	1	NA	NA		
Totals	2 (3 TSS)	12 (13 TSS)				

All parent sample/field duplicate RPDs were within the ADEC required 30% for waters. Samples with both results below the LOQ were considered acceptable without qualification.

Laboratory Duplicate Samples

Laboratory duplicates were analyzed at appropriate frequencies. All duplicate RPDs were within acceptable limits, except as noted below.
For work order 1161922

- For TSS by Method SM21 2540D, one of three laboratory duplicates associated with batch STS5019 had an RPD exceeding allowable limits. Two of three duplicates had RPDs within acceptable limits, establishing batch precision; therefore, batch data were not qualified. The TSS result of 4.14 mg/L for parent sample MW74B-0416 was recommended for qualification with a, "QN", and should be considered estimated with unknown bias. TSS is not regulated by 18 AAC 75, Table C. Data usability was not affected.

Overall Assessment

Precision, Accuracy, Representativeness, Comparability, Completeness, and Sensitivity Summary

- Precision: Overall project precision goals were met, except as noted for several isolated analyte results as previously noted in the LCS/LCSD (5 analytes), MS/MSD, and Laboratory Duplicates sections (1 analyte).
- Accuracy: Overall project accuracy goals were met, except for several isolated instances as previously noted in the Hold Times, CCV, LCS/LCSD, and MS/MSD sections.
- Representativeness: Representativeness goals were met. The samples were collected from planned locations in accordance with the April 2016 Method Statement and applicable requirements and guidance documents.
- Comparability: Comparability goals were met. The same laboratory and approved methods were used for the analysis of all samples.
- Completeness: Completeness goals were met. The data were 100% complete with respect to analysis and not data was rejected.
- Sensitivity: Sensitivity goals were met, except as noted in the Method Blank, Trip Blank, Equipment Blanks, and Reporting Limits sections.

This data were considered of overall good quality and acceptable for use with the noted limitations and qualifications in this QAR. No data were rejected.

References

- Alaska Department of Environmental Conservation (ADEC), 18 AAC 75, Oil and Other Hazardous Substances Pollution Control (May 8, 2016).

- ADEC, Technical Memorandum – 06-002, Environmental Laboratory Data and Quality Assurance Requirements (ADEC, March 2009).

- Alaska LNG (AKLNG), FUGRO, Method Statement, Revision 1 (April 2016).

- USEPA Document 530/SW-846, Test Methods for Evaluating Solid Waste: Physical/Chemical Methods, fourth edition (USEPA, November 1991).

- Standard Methods for the Examination of Water and Wastewater, 21st Edition, (2005).

Attachments

Attachment 1 – ADEC Data Review Checklists
Attachment 2 – Laboratory Deliverables (on CD)

Attachment 1

ADEC Data Review Checklists

Laboratory Data Review Checklist

Completed by: Jennifer McLean

Title: Project Scientist Date: June 2, 2016

CS Report Name: April Sampling Kenai Wells Groundwater Report Date: May 19, 2016

Consultant Firm: SLR International Corporation

Laboratory Name: SGS North America, Inc. Laboratory Report Number: 1161924

ADEC File Number: NA ADEC RecKey Number: NA

1. Laboratory
   a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses?
      ☒ Yes ☐ No ☐ NA (Please explain.) 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 ☒ NA (Please explain.) Comments:

2. Chain of Custody (COC)
   a. COC information completed, signed, and dated (including released/received by)?
      ☒ Yes ☐ No ☐ NA (Please explain.) Comments:

   b. Correct analyses requested?
      ☒ Yes ☐ No ☐ NA (Please explain.) Comments:

3. Laboratory Sample Receipt Documentation
   a. Sample/cooler temperature documented and within range at receipt (4° ± 2° C)?
      ☐ Yes ☒ No ☐ NA (Please explain.) Comments:

   One of two coolers was received at SGS with a temperature blank at 0.5°C, slightly below the ADEC required 4±2°C.

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

☒ Yes ☐ No ☐ NA (Please explain.) Comments:

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

☒ Yes ☐ No ☐ NA (Please explain.) Comments:

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 ☐ NA (Please explain.) Comments:

Temperature was noted.
For sample MW62A-0416, two containers for PAH SIM by EPA 625M were collected and included in the coolers received at the laboratory. This analysis was not requested on the COC.

e. Data quality or usability affected? (Please explain.)

Comments:

Regarding temperature, the sample receipt form did not note any evidence of freezing. Data were considered not impacted.
Regarding extra PAH sample containers, it was later determined by SLR and requested via email to the laboratory that the containers not be analyzed for this method, and be disposed of by the laboratory. Data was not impacted.

4. Case Narrative

a. Present and understandable?

☒ Yes ☐ No ☐ NA (Please explain.) Comments:

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

☐ Yes ☒ No ☐ NA (Please explain.) Comments:

The temperature exceedance was noted on the sample receipt form, but was not documented in the case narrative.

c. Were all corrective actions documented?

☐ Yes ☐ No ☒ NA (Please explain.) Comments:

None were taken.

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

Comments:

No impact.

5. Samples Results
   a. Correct analyses performed/reported as requested on COC?
      ☒ Yes ☐ No ☐ NA (Please explain.) Comments:

   b. All applicable holding times met?
      ☒ Yes ☐ No ☐ NA (Please explain.) Comments:

   c. All soils reported on a dry weight basis?
      ☐ Yes ☐ No ☒ NA (Please explain.) Comments:

      Only water samples were included in this work order.

   d. Are the reported PQLs less than the Cleanup Level or the minimum required detection level for the project?
      ☐ Yes ☒ No ☐ NA (Please explain.) Comments:

      For April groundwater well samples, LODs were compared to 18 AAC 75.345, Table C, groundwater cleanup levels (ADEC, May 8, 2015). All results of non-detect had LODs at or below the applicable cleanup levels, except as noted in Appendix 1of the QAR.
      Appendix 1 shows non-detected resultst with LODs and DLs not meeting project limits. All affected analytes were either VOCs by SW8260 or SVOCs by SW8270D.

   e. Data quality or usability affected?
      Comments:

      Regarding detection limits, for all analytes presented in the table, typical methodology limitations caused the LOD and DL to not meet project goals. Data quality was not impacted; however, it is not possible to determine with certainty whether the analytes were present in the affected samples over the cleanup levels.

6. QC Samples
   a. Method Blank
      i. One method blank reported per matrix, analysis and 20 samples?
      ☒ Yes ☐ No ☐ NA (Please explain.) Comments:

      ii. All method blank results less than PQL?
      ☐ Yes ☒ No ☐ NA (Please explain.) Comments:

      Analytes were not detected in any method blanks at or above the Limit of Detection (LOD), except as noted in Table 3 of the QAR.

iii. If above PQL, what samples are affected?

Comments:

Associated results that were less than or equal to five times the blank detection were considered affected, and were recommended for qualification. Results were considered unaffected, and were not presented in Table 3, when associated sample results were greater than five times the blank detection or non-detect.

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

☒ Yes ☐ No ☐ NA (Please explain.) Comments:

Data were qualified as noted in Table 3 of the QAR.

v. Data quality or usability affected? (Please explain.)

Comments:

All affected results were well below applicable project cleanup levels. Data usability was not affected.

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 ☐ NA (Please explain.) Comments:

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

☐ Yes ☒ No ☐ NA (Please explain.) Comments:

An LCS and an MS/MSD were analyzed with each batch.

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 ☐ NA (Please explain.) Comments:

Table 5 of the QAR presents CCV recovery exceedances and associated data. Table 7 of the QAR presents MS/MSD recovery exceedances and associated data.

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 ☐ NA (Please explain.) Comments:

Table 6 of the QAR presents LCS/LCSD RPD exceedances and associated data.

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

Affected data were presented in Tables 5, 6, and 7of the QAR.

Comments:

vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?
☒ Yes ☐ No ☐ NA (Please explain.) Comments:

Data were qualified as indicated in Tables 5, 6, and 7 of the QAR.

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

All affected results were well below applicable cleanup limits (18 AAC 75, Table C). Data usability was not affected.

c. Surrogates – Organics Only

i. Are surrogate recoveries reported for organic analyses – field, QC and laboratory samples?
☒ Yes ☐ No ☐ NA (Please explain.) 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 ☐ NA (Please explain.) Comments:

iii. Do the sample results with failed surrogate recoveries have data flags? If so, are the data flags clearly defined?
☐ Yes ☐ No ☒ NA (Please explain.) Comments:

iv. Data quality or usability affected? (Use the comment box to explain.)
Comments:

No impact.

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

i. One trip blank reported per matrix, analysis and for each cooler containing volatile samples? (If not, enter explanation below.)
☒ Yes ☐ No ☐ NA (Please explain.) 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 ☐ NA (Please explain.) Comments:

It was indicated on the sample receipt form.

iii. All results less than PQL?

☒ Yes ☐ No ☐ NA (Please explain.) Comments:

Analytes were not detected in any method blanks at or above the Limit of Detection (LOD), except as noted in Table 3 of the QAR.

iv. If above PQL, what samples are affected?

Comments:

Associated results that were less than or equal to five times the blank detection were considered affected, and were recommended for qualification. Results were considered unaffected, and were not presented in Table 3, when associated sample results were greater than five times the blank detection or non-detect.

v. Data quality or usability affected? (Please explain.)

Comments:

Data were qualified as noted in Table 3 of the QAR. All affected results were well below applicable project cleanup levels. Data usability was not affected

e. Field Duplicate

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

☒ Yes ☐ No ☐ NA (Please explain.) Comments:

During the April sample event which included sampling of both groundwater monitoring wells and potable wells, a total of three field duplicates for TSS, and two field duplicates for all other methods listed in Table 1, were collected for 15 primary samples. One field duplicate was collected for five samples for PAH SIM by EPA Method 625M. This satisfied the required frequency of one per 10 samples or less per matrix and analyte.

ii. Submitted blind to lab?

Field duplicates for this project are presented in Table 9 of the QAR.

☒ Yes ☐ No ☐ NA (Please explain.) 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 ☐ NA (Please explain.) Comments:

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

Comments:

No impact.

f. Decontamination or Equipment Blank (If not used explain why).

☒ Yes ☐ No ☐ NA (Please explain.) Comments:

i. All results less than PQL?

☐ Yes ☒ No ☐ NA (Please explain.) Comments:

There were detections above the LOQ in the filter blank (for dissolved metals): for aluminum, cadmium, and copper.
There were detections above the LOQ in the sample tube equipment blank (for total metals): for aluminum and manganese.

ii. If above PQL, what samples are affected?

Comments:

All samples associated with this April 2016 Kenai Wells Groundwater and Potable Water project were affected.

iii. Data quality or usability affected? (Please explain.)

Comments:

Total and dissolved aluminum and total manganese were also present in the associated method blank.
All affected sample results were below applicable project cleanup levels. Data were not qualified based on equipment blank detections. Data usability was not affected.

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)
   a. Defined and appropriate?
      ☒ Yes ☐ No ☐ NA (Please explain.) Comments:

Attachment 2
Laboratory Deliverables on Compact Disc

(Data packages and electronic files)

LABORATORY DATA QUALITY ASSURANCE REVIEW

APRIL 2016 POTABLE WELL MONITORING NIKISKI, ALASKA ALASKA LNG

SLR Project Number 105.00148.16001, Task 1

Prepared by Jennifer McLean
Reviewed by Jason Gray
Date: 9-16-16

This report summarizes a review of analytical data for potable well samples collected on April 23, 2016 at Nikiski, Alaska. Samples were collected by SLR International Corporation (SLR). SGS North America, Inc (SGS) provided analytical support to the project. SGS maintains a current Alaska Department of Environmental Conservation (ADEC) Contaminated Sites approval number (UST-005) for analytical methods of interest, as applicable. Table 1 provides a summary of the work order, sample receipt, analytical methods and analytes.

Table 1 Summary of Work Orders, Sample Receipt, and Analytical Methods

SDG	Date Received by Lab	Temp Blank	Matrix	Analytical Methods	Analytes
1161923	4/24/16	Ambient[1]	Ground Water	200.8 Low Level	27 Metals
				AK101	GRO
				AK102	DRO
				AK103	RRO
				EPA 300.0	Chloride, Fluoride Nitrate/Nitrite Sulfate
		0.5 ºC			
				EPA 625M	PAH SIM
				SM21 2130B	Turbidity
		1.3 ºC		SM21 2320B	Alkalinity
				SM2340B	Hardness
				SM2340C	TDS
				SM2340D	TSS
		1.5 ºC		SM21 4500-H B	pH
				SW8260B	VOCs
				SW8270D	SVOCs
				EPA 1631 E	Mercury

1 – This cooler contained only samples for low level mercury by EPA Method 1631. This method has no temperature preservation requirement.

Acronyms:
°C – degrees Celsius
DRO – diesel range organics
EPA – Environmental Protection Agency
GRO – gasoline range organics
ID – identification
PAH – polycyclic aromatic hydrocarbons
RRO – residual range organics
SIM – selective ion monitoring
SDG – sample delivery group
SM – Standard Methods
SVOCs – semi-volatile organic compounds
TDS – total dissolved solids
TSS – total suspended solids
VOCs – volatile organic compounds

The laboratory final report was presented as a Level II deliverable, and included documentation of the delivery group chain-of-custody (COC) and sample receipt condition. A Microsoft Access compatible electronic data deliverable (EDD) was also provided. The PDF laboratory report is provided electronically as Attachment 3.

Quality Assurance Program

A quality assurance (QA) program was followed for this project that addressed project administration, sampling, quality control, and data review. SLR adhered to required and established sampling and COC protocols. The select laboratory maintains an internal quality assurance program and standard operating procedures.

The analytical data was reviewed for consistency with any project specific requirements (Method Statement, April 2016), *ADEC Technical Memorandum, Environmental Laboratory Data and Quality Assurance* (ADEC 2009a) requirements, analytical method criteria and laboratory criteria. An ADEC Laboratory Data Review Checklist was completed for the SDG, and is included as Attachment 2 to this QAR. A review for any anomalies to the project requirements for precision, accuracy, representativeness, comparability, completeness and sensitivity (PARCCS) are noted in this QAR, and any data qualifications discussed.

The data review included the following, as applicable:

- Reviewing COC records for completeness, signatures, and dates;
- Identifying any sample receipt or preservation anomalies that could impact data quality;
- Verifying that quality control (QC) blanks [e.g, field blanks (equipment blanks; trip blanks; etc.); equipment blanks; etc.] were properly prepared, identified, and analyzed;
- Evaluating whether laboratory reporting limits met project goals; Reviewing calibration verification recoveries, to include confirming that the laboratory did not identify that any Calibration Verification (CCV) recoveries or other calibration related criteria were outside applicable acceptance limits;
- Verifying that surrogate analyses were within recovery acceptance limits;

- Verifying that Laboratory Control Samples (LCS) and Laboratory Control Sample Duplicates (LCSD), and the Matrix Spike (MS) and Matrix Spike Duplicate (MSD) were within recovery acceptance limits;

- Evaluating the result relative percent difference (RPD) between primary and duplicate field samples, LCS/LCSD, MS/MSD, and laboratory duplicates; and

- Providing an overall assessment of laboratory data quality and qualifying sample results if necessary.

Data Qualifications

As part of the quality assurance review, qualifiers were applied to datum as determined necessary based on specified criteria, or professional judgement. In all cases, the basis for qualification and the applied data flag are discussed in this QAR. Table 2 provides a list of potential qualifiers (i.e., flags). These data flags were appended to the data as appropriate.

Table 2 Data Qualifiers

Qualifier	Definition
Q	One or more laboratory quality control criteria (for example, laboratory control sample (LCS) recovery or surrogate spike recovery) failed. Where applicable, an "H", "L", or "N" was appended to indicate positive, negative, or unknown bias, respectively.
J	Estimated: The analyte was positively identified but the result was outside the calibration range, between the limit of quantitation (LOQ) and the detection limit (DL); the quantitation was an estimate.
M	The concentration was an estimate due to a sample matrix quality control failure. Where applicable, an "H", "L", or "N" will be appended to indicate positive, negative, or unknown bias, respectively.
B	Blank contamination: The analyte was positively identified in the blank (e.g., trip blank and/or method blank) associated with the sample and the concentration reported for the sample was less than five times that of the blank (ten times for metals and common laboratory contaminants methylene chloride and acetone).
P	Sample preservation requirements were not satisfied.

A discussion of the project data quality relative to PARCCS goals and summary of any anomalies or failures requiring data qualifiers follows.

Data Validation

Data Packages

The data package was checked for transcription errors, omissions, or other anomalies. No issues were noted with regards to the data package.

Sample Receipt

The sample receipt documentation was checked for anomalies. No issues were noted with regards to the receipt of the samples, except as noted below.

- ADEC specifies a cooler receipt temperature of 4±2 degrees Celsius (°C) for temperature sensitive analytes. Temperatures above the required range have the potential to degrade the sample and introduce and bias to the reported sample results. In no instances for this project were coolers received at the lab with a temperature blank measurement above the required range. Cooler temperatures below 0°C have the potential to result in freezing of the sample with the potential for damage to the integrity of the sample container but there is no concern that unfrozen samples would otherwise be impacted if received below 2°C. Four coolers were received at SGS on April 24, 2016. Cooler one was received at ambient temperature, as it included only non-temperature sensitive samples for mercury by EPA 1631. Coolers 2, 3, and 4 were received with temperature blanks at 0.5°C, 1.3°C, and 1.5ºC, all slightly below the ADEC required 4±2°C. In cases where the cooler receipt temperatures were below 2°C, the lab inspected the sample containers and made note if there were any ice present in the samples or other indications of compromised containers. As long as the samples did not contain ice or otherwise appear damaged, samples received slightly below the 2°C temperature limit were considered acceptable and analyzed with no further qualification due to receipt temperature. Cooler temperatures and any anomalous sample conditions were documented in the data package sample receipt documentation but are not otherwise discussed in the report case narrative if there are no impacts to the sample results due to receipt condition.

- The COC prepared for the project shipment listed the samples from multiple coolers together on a single without uniquely identifying which cooler the samples were located in. The laboratory did assign and record cooler ID numbers upon receipt for recording the cooler temperatures but without identifying the cooler association to the samples. Within the April potable water sampling event, there were no instances where receipt temperatures above the required preservation range occurred which might have compromised the sample data and required association of the containers to a specific cooler. Volatile trip blank samples were always packed and shipped together in the same cooler with associated volatile field samples. For subsequent sample events, SLR will adhere to preparing a single COC specific to the contents of each cooler and identify the cooler on the COC so there is no possibility of confusion as to which cooler samples were shipped in.

- For sample Decker-0416, SVOC by SW8270 containers which were incorrectly labeled as having HCl preservative, the method requires unpreserved sample for analysis. Upon check-in at the laboratory, it was confirmed that these sample containers were correctly unpreserved. Data was not impacted.

Holding Times and Preservation

Samples were appropriately preserved and were submitted to SGS. Field pH analysis was performed, and should be considered the primary data for pH. The laboratory also performed a pH analysis within three days of sample collection as a potential QA check. All results are considered to be within an acceptable hold time for all analysis. No issues were noted in regard to sample preservation.

Laboratory Method Blanks

Laboratory method blanks were analyzed at the appropriate frequencies. Analytes were not detected in any method blanks at or above the Limit of Detection (LOD), except as noted in Table 3. Affected results that were less than, or equal to, five times an associated method blank result were qualified with the flags indicated below. Results were considered unaffected, and were not presented in Table 3, when associated sample results were greater than five times the blank detection or non-detect. Qualified data should be considered estimated, potentially biased high. All affected results were non-regulated analytes. Data usability was not affected.

Table 3 Method Blank Detections

Sample ID	Lab ID	Method	Analyte	Result (mg/L)	Flag	Project Limits (mg/L)
MB	1324624	200.8 Low Level	Barium	0.000942	=	2
MB	1321585	EPA 300.0	Nitrate-N	0.058	J	Not Regulated
PQW1-0416	1161923002			0.067 A	J, B	
TP1-0416	1161923001			0.07 A	J, B	
MB	1321424	SM21 2130B	Turbidity[1]	0.1	J	Not Regulated
Decker-0416	1161923003			0.4	B	

1 – Turbidity units are reported in NTU.

Trip Blanks

Trip blanks were analyzed at appropriate frequencies for VOCs and low level mercury analysis. A trip blank was included in each cooler containing volatile samples. No analytes were detected in the trip blank at or above the LOD.

Equipment Blanks

Equipment Blanks were analyzed at appropriate frequencies for total and dissolved metals by EPA Method 200.8. Equipment Blank Detections are presented in Table 4 below. All associated sample detections for impacted analytes were well below the applicable project cleanup limits; therefore, the impact was considered negligible. Data were not qualified based on equipment blank detections.

Table 4 Equipment Blank Detections

Compound in milligrams per Liter (mg/L)	Screening Criteria		Sample Identification[3]			
	Permit AKG003000 Table 3 [1]	ADEC Table C Groundwater Cleanup Level[2]	Filter Blank (Dissolved Metals) EBF-Lot #L1456 19-Apr-16 1161853002		Sample Tube Blank (Total Metals) EBT-0416 19-Apr-16 1161853001	
			Conc.	Flag	Conc.	Flag
200.8 Metal, Dissolved						
Aluminum	--	--	0.00311	=	0.00651	=
Antimony	0.006	0.006	0.0000294	J	[0.000025]	ND
Barium	--	2	0.000153	J	0.000207	J
Cadmium	0.005	0.005	0.000187	=	[0.000025]	ND
Copper	0.2	1	0.00215	=	0.000208	J
Iron	--	--	0.0105	J	0.0126	J
Manganese	--	--	0.0000742	J	0.00012	=
Nickel	0.2	0.1	0.0000782	J	[0.00031]	ND
Silicon			[0.05]	ND	NR	NR
Silver	--	0.1	[0.00001]	ND	0.00000738	J
Vanadium	--	0.26	[0.0005]	ND	0.000347	J
Zinc	2	5	0.00111	J	0.000622	J

NR – not reported

Reporting Limits

For non-detect results, limits of detection (LODs) were compared to applicable cleanup levels for the site. For groundwater samples, LODs were compared to 18 AAC 75.345, Table C, groundwater cleanup levels (ADEC, May 8, 2016) and ADEC Alaska General Permit AKG003000 for discharge of Aquifer Pump Test. All results of non-detected analytes had LODs at or below the applicable cleanup levels, except for those analytes noted in table 5 which shows those non-detected analytes with LODs which were above the applicable groundwater cleanup screening limits. All affected analytes were either VOCs by SW8260B or SVOCs by SW8270D. For all analytes presented in the Table 5, typical laboratory technological methodology limitations resulted the LOD which did not meet project goals. For this reason, the PAH compounds were additionally analyzed for all of the samples of this project via a separate E625M-SIM analysis which did achieve LODs below the regulatory screening criteria for PAH analytes which were not met by SW8270D.

For subsequent sampling events, the laboratory and analytical method utilized for VOCs by SW8260B and SVOCs by SW8270D will be changed and selected on the basis of lower available LODs in order to reduce the number of compounds which do not meet the regulatory screening limits.

Table 5 - LOD for Undetected Sample Results Exceeding Cleanup Limits

Analytical Method	Compound in milligrams per Liter	Screening Criteria: ADEC Table C Groundwater Cleanup Level[1] (mg/L)	Lowest LOD From Project Field Samples [2] (mg/L)	LOD / Screening Level Ratio [3]
8260B	1,2,3-Trichloropropane	0.00012	0.0005	4.2
	1,2-Dibromoethane	0.00005	0.0005	10.0
8270D	2,4-Dinitrotoluene	0.0013	0.0051	3.9
	2,6-Dinitrotoluene	0.0013	0.0051	3.9
	3,3-Dichlorobenzidine	0.0019	0.0051	2.7
	Benzo(a)Anthracene [4]	0.0012	0.0051	4.2
	Benzo[a]pyrene [4]	0.0002	0.0051	25.3
	Benzo[b]Fluoranthene [4]	0.0012	0.0051	4.2
	Bis(2-Chloroethyl)ether	0.00077	0.0051	6.6
	Dibenzo[a,h]anthracene [4]	0.00012	0.0051	42.1
	Hexachlorobenzene	0.001	0.0051	5.1
	Indeno[1,2,3-c,d] pyrene [4]	0.0012	0.0051	4.2
	N-Nitrosodimethylamine	0.000017	0.0051	302.9
	N-Nitroso-di-n-propylamine	0.00012	0.0051	42.9
	Pentachlorophenol	0.001	0.0257	25.7

1 - This screening level corresponds to ADEC groundwater cleanup levels of 18 AAC 75.345 Table C (May 2016).
2 - Lowest Available LOD from project field samples show, some samples had slighty higher LOD due to decreased volume of sample analyzed.
3 - Ratio of the LOD to the screening limits, higher ratio indicates that the analyte LOD was further above the screening limit.
4- PAH analyte additionally analyzed with LOD < screening limit via method 625M-SIM.

Continuous Calibration Verifications (CCVs)

CCVs were analyzed at the appropriate frequencies. CCV data was included only in the EDD, not in the case narrative. All CCV recoveries were within acceptable limits, as reviewed in the EDD, except as noted in the table below.

Data were qualified as shown in the Table 6 below. For data shown in the table, all other QC were within acceptable limits; therefore, data is considered minimally impacted. Also, silicon is not regulated by 18 AAC 75, Table C. All data is usable as qualified.

Table 6 CCV Failures and Affected Data

Lab ID	Batch	Method	Analyte	Recovery (%)	LCL (%)	UCL (%)	Flag
CCV [1] 1324864	MMS9354	200.8 Low Level	Dissolved Silicon	139	85	115	NA
				Result (mg/L)			
TP1-0416				1.54			QH
PQW1-0416				0.575			QH
Decker-0416				14.5			QH

1 - Two of three CCVs were within acceptable limits. Only the CCV shown exceeded limits.
LCL – lower control limit
UCL – upper control limit

Internal Standards

No internal standards were noted in the case narratives as being outside of acceptance limits. Internal standard performance was not otherwise presented in the report or in the electronic data deliverable. Internal standards criteria were considered met.

Surrogate Recovery Results

Surrogate analysis was performed at the required frequencies. All surrogate recoveries were within analytical method and SGS percent recovery acceptance limits.

Laboratory Control Samples and Laboratory Control Duplicate Samples

LCS and LCSDs were analyzed at the appropriate frequencies. All LCS and LCSD recoveries and RPDs were within acceptable limits except as presented in Table 7. Data were qualified as presented in the table. Results of non-detected analytes were not qualified based on RPD exceedances, as it was considered inappropriate to qualify non-detect values as estimated with unknown bias. All affected results were well below applicable cleanup limits (18 AAC 75, Table C). Data usability was not affected.

- For TSS by Method SM21 2540D, the LCS/LCSD RPD exceeded allowable limits. Also, one of three laboratory duplicates associated with this batch had an RPD exceeding allowable limits. Because the LCS and LCSD recoveries were within acceptable limits, and two of three duplicates had RPDs within acceptable limits, establishing precision, batch data were not qualified. Only the parent sample of the laboratory duplicate exceeding RPD limits (not from this work order) were qualified. All data associated with this work was usable without qualification.

Table 7 LCS/LCSD Precision Qualifications

Sample ID	Batch	Method	Analyte	RPD (%)	Flag
LCS/LCSD	XXX35213	SW8270D	aniline	20.9 [2]	NA
				Result (mg/L)	
TP1-0416				ND [0.0255]	NA
PQW1-0416				ND [0.0255]	
Decker-0416				ND [0.0257]	
LCS/LCSD	STS5019 [3]	SM21 2540D	TSS	7.4 [1]	NA
DUP 1321135				1.3 [1]	NA
DUP 1321136				0.6 [1]	NA
DUP of 1161922003				13.0 [1]	NA [3]
				Result (mg/L)	
TP1-0416				8.1	NA
PQW1-0416				15	
Decker-0416				ND [0.498]	

1 - Allowable RPD limit is 5%.
2 - Allowable RPD limit is 20%.
3 - Refer to the Laboratory Duplicates section for flagging discussion

Matrix Spike and Matrix Spike Duplicate Samples

LCS/LCSD and MS/MSD pairs were analyzed at the appropriate frequencies. All MS/MSD percent recoveries and RPDs for samples analyzed at dilutions of five-fold or less were within acceptable limits.

Field Duplicates

For potable wells, three primary samples were collected for the methods and analytes listed in Table 1. One field duplicate was collected for PAH SIM by EPA Method 625M only.

During the April sample event which included sampling of both groundwater monitoring wells and potable wells, a total of three field duplicates for TSS, and two field duplicates for all other methods listed in Table 1, were collected for 15 primary samples. One field duplicate was collected for five samples for PAH SIM by EPA Method 625M. This satisfied the required frequency of one per 10 samples or less per matrix and analyte. Field duplicates were submitted blind to the laboratory.

For potable wells, the following field duplicate was collected.

- Sample TP6-0416 was the duplicate of sample TP1-0416 (EPA Method 625M).

All parent sample and field duplicate results were non-detect for all analytes. Samples with both results below the LOQ were considered acceptable without qualification.

Laboratory Duplicate Samples

Laboratory duplicates were analyzed at appropriate frequencies. All duplicate RPDs were within acceptable limits, except as noted below.

- For TSS by Method SM21 2540D, one of three laboratory duplicates associated with batch STS5019 had an RPD exceeding allowable limits. Associated samples were TP1-0416, PQW1-0416, and Decker-0416. Two of three duplicates had RPDs within acceptable limits, establishing batch precision; therefore, batch data were not qualified. Only the parent sample, not from this work order was considered affected, thus qualified. All data associated with this work order was usable without qualification.

Overall Assessment

Precision, Accuracy, Representativeness, Comparability, Completeness, and Sensitivity Summary

- Precision: Overall project precision goals were met, except for several isolated analyte results as previously noted in the LCS/LCSD and Laboratory Duplicates sections.
- Accuracy: Overall project accuracy goals were met, except for several isolated instances as previously noted in the CCV section.
- Representativeness: Representativeness goals were met. The samples were collected from planned locations in accordance with the Method Statement and discussion, and applicable requirements and documents.
- Comparability: Comparability goals were met. Standard Methods noted in Table 1 were used by SGS.
- Completeness: Completeness goals were met. The data were 100% complete with no omissions or rejections with respect to analysis.
- Sensitivity: Sensitivity goals were met, except as noted in the Method Blank, Equipment Blank, and Reporting Limits sections.

This data were considered of good quality and acceptable for use with the qualifications noted limitations and in this QAR. No data were rejected.

References

- Alaska Department of Environmental Conservation (ADEC), 18 AAC 75, Oil and Other Hazardous Substances Pollution Control (June 17, 2015).

- ADEC, Technical Memorandum – 06-002, Environmental Laboratory Data and Quality Assurance Requirements (ADEC, March 2009).

- Alaska LNG (AKLNG), FUGRO, Method Statement, Revision 1 (April 2016).

- USEPA Document 530/SW-846, Test Methods for Evaluating Solid Waste: Physical/Chemical Methods, fourth edition (USEPA, November 1991).

- Standard Methods for the Examination of Water and Wastewater, 21st Edition, (2005).

Attachments

Attachment 1 – ADEC Data Review Checklists
Attachment 2 – Laboratory Data Package and Access Database Deliverables

Attachment 1

ADEC Data Review Checklists

Laboratory Data Review Checklist

Completed by: Jennifer McLean

Title: Project Scientist Date: June 1, 2016

CS Report Name: April Sampling Kenai Wells Potable Water Report Date: May 23, 2016

Consultant Firm: SLR International Corporation

Laboratory Name: SGS North America, Inc. Laboratory Report Number: 1161923

ADEC File Number: NA ADEC RecKey Number: NA

1. Laboratory
   a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses?
      ☒ Yes ☐ No ☐ NA (Please explain.) 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 ☒ NA (Please explain.) Comments:

2. Chain of Custody (COC)
   a. COC information completed, signed, and dated (including released/received by)?
      ☒ Yes ☐ No ☐ NA (Please explain.) Comments:

   b. Correct analyses requested?
      ☒ Yes ☐ No ☐ NA (Please explain.) Comments:

3. Laboratory Sample Receipt Documentation
   a. Sample/cooler temperature documented and within range at receipt (4° ± 2° C)?
      ☐ Yes ☒ No ☐ NA (Please explain.) Comments:

   Four coolers were received at SGS on April 24, 2016. Cooler one was received ambient temperature, as it included only non-temperature sensitive samples for mercury by EPA 1631. Coolers 2, 3, and 4 were received with temperature blanks at 0.5°C, 1.3°C, and 1.5°C, all slightly below the ADEC required 4±2°C.

b. Sample preservation acceptable – acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)?
☒ Yes ☐ No ☐ NA (Please explain.) Comments:

For sample Decker-0416, SVOC by SW8270 containers were noted as having HCl preservative. Method SW8270 requires unpreserved sample for analysis. Upon check-in at the laboratory, it was confirmed that these sample containers were correctly unpreserved.

c. Sample condition documented – broken, leaking (Methanol), zero headspace (VOC vials)?
☒ Yes ☐ No ☐ NA (Please explain.) Comments:

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 ☐ NA (Please explain.) Comments:

Temperature was noted.

e. Data quality or usability affected? (Please explain.)
Comments:

The sample receipt form did not note any evidence of freezing. Data were considered not impacted.
Regarding preservation, since samples were correctly unpreserved, data was not impacted.

4. Case Narrative
a. Present and understandable?
☒ Yes ☐ No ☐ NA (Please explain.) Comments:

b. Discrepancies, errors or QC failures identified by the lab?
☐ Yes ☒ No ☐ NA (Please explain.) Comments:

The temperature exceedance was noted on the sample receipt form, but was not documented in the case narrative.

c. Were all corrective actions documented?
☐ Yes ☐ No ☒ NA (Please explain.) Comments:

None were taken.

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

No impact.

5. Samples Results

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

☒ Yes ☐ No ☐ NA (Please explain.) Comments:

b. All applicable holding times met?

☒ Yes ☐ No ☐ NA (Please explain.) Comments:

c. All soils reported on a dry weight basis?

☐ Yes ☐ No ☒ NA (Please explain.) Comments:

Only water samples were included in this work order.

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

☐ Yes ☒ No ☐ NA (Please explain.) Comments:

For potable well samples, LODs were compared to 18 AAC 75.345, Table C, groundwater cleanup levels (ADEC, May 8, 2015) and ADEC Alaska General Permit AKG003000 for the discharge of Aquifer Pump Test. All results of non-detect had LODs at or below the applicable cleanup levels, except as noted in Appendix 1of the QAR.
Appendix 1 shows results of nondetect with LODs and DLs not meeting project limits. All affected analytes were either VOCs by SW8260 or SVOCs by SW8270D.

e. Data quality or usability affected?

Comments:

For all analytes presented in the table, typical methodology limitations caused the LOD and DL to not meet project goals. Data quality was not impacted; however, it is not possible to determine with certainty whether the analytes were present in the affected samples over the cleanup levels.

6. QC Samples

a. Method Blank

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

☒ Yes ☐ No ☐ NA (Please explain.) Comments:

ii. All method blank results less than PQL?

☐ Yes ☒ No ☐ NA (Please explain.) Comments:

Barium was detected in MB 1324624 above the LOQ.
Turbidity and nitrate/nitrite were detected between the DL and LOQ.

iii. If above PQL, what samples are affected?

Comments:

Affected samples and results were noted in Table 3 of the QAR.

iv. Do the affected sample(s) have data flags and if so, are the data flags clearly defined?
☒ Yes ☐ No ☐ NA (Please explain.) Comments:

Nitrate/nitrite results for samples Decker-0416, PQW1-0416, and TP1-0416 were flagged with a "B". The turbidity result for sample Decker-0416 was flagged with a "B".

v. Data quality or usability affected? (Please explain.)
Comments:

All affected results were non-regulated analytes. Data usability was not affected.

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 ☐ NA (Please explain.) Comments:

ii. Metals/Inorganics – one LCS and one sample duplicate reported per matrix, analysis and 20 samples?
☐ Yes ☒ No ☐ NA (Please explain.) Comments:

An LCS and an MS/MSD were analyzed with each batch.

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 ☐ NA (Please explain.) Comments:

Silicon recovered above the acceptable upper limit in CCV 1324864.

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 ☐ NA (Please explain.) Comments:

LCS/LCSD RPDs exceeded allowable limits for analine by Method SW8270D and TSS by SM21 2540D.

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

Associated samples were TP1-0416, PQW1-0416, and Decker-0416.

vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?
☒ Yes ☐ No ☐ NA (Please explain.) Comments:

For CCV exceedances: silicon results for TP1-0416, PQW1-0416, and Decker-0416 were qualified with a "QH", and should be considered estimated with potential high bias. For LCS/LCSD RPDs, data were considered not affected. For aniline associated results were non-detect. It was considered inappropriate to qualify non-detect values as estimated with unknown bias. For TSS, two of three laboratory batch duplicates established precision.

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

Silicon is not regulated by 18 AAC 75, Table C or permit AKG0030000. Aniline and TSS data were not affected. Data usability was not affected.

c. Surrogates – Organics Only

i. Are surrogate recoveries reported for organic analyses – field, QC and laboratory samples?
☒ Yes ☐ No ☐ NA (Please explain.) 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 ☐ NA (Please explain.) Comments:

iii. Do the sample results with failed surrogate recoveries have data flags? If so, are the data flags clearly defined?
☐ Yes ☐ No ☒ NA (Please explain.) Comments:

No failed surrogate recoveries.

iv. Data quality or usability affected? (Use the comment box to explain.)
Comments:

No impact.

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 ☐ NA (Please explain.) 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 ☐ NA (Please explain.) Comments:

Cooler association was indicated on the sample receipt form.

iii. All results less than PQL?

☒ Yes ☐ No ☐ NA (Please explain.) Comments:

iv. If above PQL, what samples are affected?

Comments:

Not applicable.

v. Data quality or usability affected? (Please explain.)

Comments:

No impact.

e. Field Duplicate

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

☒ Yes ☐ No ☐ NA (Please explain.) Comments:

For this work order (potable wells), three primary samples were collected for the methods and analytes listed in Table 1 of the QAR. One field duplicate was collected for PAH SIM by EPA Method 625M only.
Overall for this project, including groundwater and potable data: a total of three field duplicates for TSS, and two field duplicates for all other methods listed in Table 1, were collected for 15 primary samples. One field duplicate was collected for five samples for PAH SIM by EPA Method 625M.

ii. Submitted blind to lab?

☒ Yes ☐ No ☐ NA (Please explain.) Comments:

Sample TP6-0416 was the duplicate of sample TP1-0416 (EPA Method 625M).

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 ☐ NA (Please explain.) Comments:

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

Comments:

No impact.

f. Decontamination or Equipment Blank (If not used explain why).

☒ Yes ☐ No ☐ NA (Please explain.) Comments:

The associated equipment blank was reported with work order 1161853.

i. All results less than PQL?

☐ Yes ☒ No ☐ NA (Please explain.) Comments:

There were detections above the LOQ in the filter blank for aluminum, cadmium, and copper. There were detections above the LOQ in the sample tube equipment blank for aluminum and manganese.

ii. If above PQL, what samples are affected?

Comments:

All samples associated with this April 2016 Kenai Wells Groundwater and Potable Water project were affected.

iii. Data quality or usability affected? (Please explain.)

Comments:

All affected sample results were below applicable project cleanup levels. Data was not qualified based on equipment blank detections. Data usability was not affected.

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)
   a. Defined and appropriate?
      ☒ Yes ☐ No ☐ NA (Please explain.) Comments:

Attachment 2

Laboratory Data Package and Access Database Deliverables (as electronic files)

APPENDIX D
ANALYTICAL LABORATORY REPORTS

MONITORING WELLS

Laboratory Report of Analysis

To: SLR Alaska-Anchorage
2700 Gambell St Suite 200
Anchorage, AK 99503
(907)222-1112

Report Number: **1161853**

Client Project: **105.00148.16001 Kenai Wells**

Dear Jason Gray,

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
2016.05.19
12:49:33 -08'00'

SGS North America Inc.
Environmental Services – Alaska Division
Project Manager

Justin Nelson Date
Project Manager
Justin.Nelson@sgs.com

Print Date: 05/19/2016 11:59:11AM

Case Narrative

SGS Client: **SLR Alaska-Anchorage**
SGS Project: **1161853**
Project Name/Site: **105.00148.16001 Kenai Wells**
Project Contact: **Jason Gray**

Refer to sample receipt form for information on sample condition.

MW87B-0416 (1161853003) PS

8270D - LCS/LCSD recovery for benzoic acid (0%) and 4-nitrophenol (40%) does not meet QC criteria. There is no remaining volume for re-extraction of the sample.

MW87Z-0416 (1161853004) PS

8270D - Sample was re-extracted outside of hold time with passing LCS/LCSD recovery for benzoic acid and 4-nitrophenol.

MW27-0416 (1161853005) PS

8270D - LCS/LCSD recovery for benzoic acid (0%) and 4-nitrophenol (40%) does not meet QC criteria. There is no remaining volume for re-extraction of the sample.

LCS for HBN 1732068 [XXX/35194 (1320691) LCS

8270D - LCS recovery for benzoic acid (0%) and 4-nitrophenol (40%) does not meet QC criteria.

LCSD for HBN 1732068 [XXX/3519 (1320692) LCSD

8270D - LCSD recovery for benzoic acid (0%) and 4-nitrophenol (42%) does not meet QC criteria.

LCSD for HBN 1732500 [VXX/2874 (1321732) LCSD

8260B - LCS/LCSD RPD for 2-butanone (MEK) (21.5%) does not meet QC criteria. This analyte was not detected above the LOQ in the associated samples.

1161731001(1320929MSD) (1320937) MSD

300.0 - Anions - MSD recovery for fluoride is outside QC criteria. Refer to LCS for accuracy requirements.

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

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Report of Manual Integrations

Laboratory ID	Client Sample ID	Analytical Batch	Analyte	Reason
EPA 625M SIM (PAH)				
1321049	LCS for HBN 1732246 [XXX/35207	XMS9268	Benzo[k]fluoranthene	RP
1321049	LCS for HBN 1732246 [XXX/35207	XMS9268	Chrysene	RP
1321050	LCSD for HBN 1732246 [XXX/3520	XMS9268	Benzo[k]fluoranthene	RP
1321050	LCSD for HBN 1732246 [XXX/3520	XMS9268	Chrysene	RP
1321345	CCV for HBN 1732367 [XMS/9268]	XMS9268	Benzo[k]fluoranthene	RP
1321345	CCV for HBN 1732367 [XMS/9268]	XMS9268	Chrysene	RP
SW8270D				
1320691	LCS for HBN 1732068 [XXX/35194	XMS9271	1-Chloronaphthalene	BLC
1320692	LCSD for HBN 1732068 [XXX/3519	XMS9271	1-Chloronaphthalene	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: 05/19/2016 11:59:17AM

Laboratory Qualifiers

Enclosed are the analytical results associated with the above work order. 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, indenmification and jurisdiction issues defined therein.

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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) & UST-005 (CS) for ADEC and 2944.01 for DOD ELAP/ISO17025 (RCRA methods: 1020B, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035A, 6020A, 7470A, 7471B, 8021B, 8082A, 8260B, 8270D, 8270D-SIM, 9040C, 9045D, 9056A, 9060A, AK101 and AK102/103). 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
D	The analyte concentration is the result of a dilution.
DF	Dilution Factor
DL	Detection Limit (i.e., maximum method detection limit)
E	The analyte result is above the calibrated range.
F	Indicates value that is greater than or equal to the DL
GT	Greater Than
IB	Instrument Blank
ICV	Initial Calibration Verification
J	The quantitation is an estimation.
JL	The analyte was positively identified, but the quantitation is a low estimation.
LCS(D)	Laboratory Control Spike (Duplicate)
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
M	A matrix effect was present.
MB	Method Blank
MS(D)	Matrix Spike (Duplicate)
ND	Indicates the analyte is not detected.
Q	QC parameter out of acceptance range.
R	Rejected
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.

Print Date: 05/19/2016 11:59:21AM

Sample Summary

Client Sample ID	Lab Sample ID	Collected	Received	Matrix
EBT-0416	1161853001	04/19/2016	04/20/2016	Water (Surface, Eff., Ground)
EBF-Lot #L1456	1161853002	04/19/2016	04/20/2016	Water (Surface, Eff., Ground)
MW87B-0416	1161853003	04/19/2016	04/20/2016	Water (Surface, Eff., Ground)
MW87Z-0416	1161853004	04/19/2016	04/20/2016	Water (Surface, Eff., Ground)
MW27-0416	1161853005	04/19/2016	04/20/2016	Water (Surface, Eff., Ground)
TB1	1161853006	04/19/2016	04/20/2016	Water (Surface, Eff., Ground)
MW87B-0416	1161853007	04/19/2016	04/20/2016	Water (Surface, Eff., Ground)
MW87Z-0416	1161853008	04/19/2016	04/20/2016	Water (Surface, Eff., Ground)
MW27-0416	1161853009	04/19/2016	04/20/2016	Water (Surface, Eff., Ground)

Method	Method Description
EPA 625M SIM (PAH)	625 Semi-Volatiles GC/MS Liq/Liq ext.
SM21 2320B	Alkalinity as CaCO3 QC
SM21 2340B	Dissolved Hardness as CaCO3 ICP-MS-LowLv
AK102	DRO/RRO Low Volume Water
AK103	DRO/RRO Low Volume Water
SM21 4500NO3-F	Flow Injection Analysis
AK101	Gasoline Range Organics (W)
EPA 300.0	Ion Chromatographic Analysis (W)
200.8 Low Level	Metals in Water by 200.8 ICP-MS LL
200.8 Low Level	Metals in Water by 200.8 ICP-MS LL DIS
SM21 4500-H B	pH Analysis
SW8270D	SW846-8270 SVOC by GC/MS (W) Liq/Liq ext
SM21 2540C	Total Dissolved Solids SM18 2540C
SM21 2540D	Total Suspended Solids SM20 2540D
SM21 2130B	Turbidity Analysis
SW8260B	Volatile Organic Compounds (W) FULL

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Detectable Results Summary

Client Sample ID: **EBT-0416**
Lab Sample ID: 1161853001
Metals by ICP/MS

Parameter	Result	Units
Aluminum	6.51	ug/L
Barium	0.207J	ug/L
Copper	0.208J	ug/L
Iron	12.6J	ug/L
Manganese	0.120	ug/L
Silver	0.00738J	ug/L
Vanadium	0.347J	ug/L
Zinc	0.622J	ug/L

Client Sample ID: **EBF-Lot #L1456**
Lab Sample ID: 1161853002
Dissolved Metals by ICP/MS

Parameter	Result	Units
Aluminum	3.11	ug/L
Antimony	0.0294J	ug/L
Barium	0.153J	ug/L
Cadmium	0.187	ug/L
Copper	2.15	ug/L
Iron	10.5J	ug/L
Manganese	0.0742J	ug/L
Nickel	0.0782J	ug/L
Zinc	1.11J	ug/L

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Detectable Results Summary

Client Sample ID: **MW87B-0416**
Lab Sample ID: 1161853003

	Parameter	Result	Units
Metals by ICP/MS	Aluminum	27.2	ug/L
	Antimony	0.0268J	ug/L
	Arsenic	1.39	ug/L
	Barium	41.2	ug/L
	Boron	7.36	ug/L
	Calcium	15400	ug/L
	Chromium	1.20	ug/L
	Cobalt	0.405	ug/L
	Copper	3.83	ug/L
	Iron	8400	ug/L
	Lead	0.0347J	ug/L
	Magnesium	5680	ug/L
	Manganese	356	ug/L
	Molybdenum	0.421	ug/L
	Nickel	2.65	ug/L
	Potassium	2100	ug/L
	Sodium	7640	ug/L
	Vanadium	0.443J	ug/L
	Zinc	1.22J	ug/L
Waters Department	Alkalinity	55.0	mg/L
	Chloride	18.3	mg/L
	Fluoride	0.0600J	mg/L
	pH	6.70	pH units
	Sulfate	6.61	mg/L
	Total Dissolved Solids	125	mg/L
	Total Suspended Solids	8.00	mg/L
	Turbidity	9.90	NTU

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Detectable Results Summary

Client Sample ID: **MW87Z-0416**
Lab Sample ID: 1161853004

	Parameter	Result	Units
Metals by ICP/MS	Aluminum	25.0	ug/L
	Antimony	0.0209J	ug/L
	Arsenic	1.62	ug/L
	Barium	39.3	ug/L
	Boron	7.10	ug/L
	Calcium	14800	ug/L
	Chromium	1.30	ug/L
	Cobalt	0.382	ug/L
	Copper	3.39	ug/L
	Iron	8360	ug/L
	Magnesium	5360	ug/L
	Manganese	340	ug/L
	Molybdenum	0.415	ug/L
	Nickel	2.59	ug/L
	Potassium	2050	ug/L
	Sodium	7180	ug/L
	Vanadium	0.366J	ug/L
	Zinc	1.15J	ug/L
Waters Department	Alkalinity	50.9	mg/L
	Chloride	18.3	mg/L
	Fluoride	0.0600J	mg/L
	pH	6.70	pH units
	Sulfate	6.61	mg/L
	Total Dissolved Solids	128	mg/L
	Total Suspended Solids	7.21	mg/L
	Turbidity	9.00	NTU

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Detectable Results Summary

Client Sample ID: **MW27-0416**
Lab Sample ID: 1161853005

	Parameter	Result	Units
Metals by ICP/MS	Aluminum	882	ug/L
	Antimony	0.110	ug/L
	Arsenic	2.52	ug/L
	Barium	83.3	ug/L
	Beryllium	0.0420J	ug/L
	Boron	6.40	ug/L
	Cadmium	0.0309J	ug/L
	Calcium	21000	ug/L
	Chromium	3.44	ug/L
	Cobalt	0.836	ug/L
	Copper	4.03	ug/L
	Iron	12900	ug/L
	Lead	0.614	ug/L
	Magnesium	6990	ug/L
	Manganese	501	ug/L
	Molybdenum	0.343	ug/L
	Nickel	3.63	ug/L
	Potassium	2410	ug/L
	Silver	0.00744J	ug/L
	Sodium	7950	ug/L
	Thallium	0.00694J	ug/L
	Tin	0.121J	ug/L
	Vanadium	2.84	ug/L
	Zinc	3.98	ug/L
Semivolatile Organic Fuels	Diesel Range Organics	0.197J	mg/L
	Residual Range Organics	0.561	mg/L
Waters Department	Alkalinity	58.2	mg/L
	Chloride	30.6	mg/L
	Fluoride	0.0560J	mg/L
	pH	6.60	pH units
	Sulfate	5.31	mg/L
	Total Dissolved Solids	160	mg/L
	Total Suspended Solids	25.0	mg/L
	Turbidity	21.0	NTU

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Detectable Results Summary

Client Sample ID: **MW87B-0416**
Lab Sample ID: 1161853007
Dissolved Metals by ICP/MS

Parameter	Result	Units
Aluminum	2.39	ug/L
Arsenic	1.43	ug/L
Barium	41.1	ug/L
Boron	5.63	ug/L
Calcium	15700	ug/L
Chromium	0.783	ug/L
Cobalt	0.384	ug/L
Copper	5.23	ug/L
Hardness as CaCO3	64.9	mg/L
Iron	8590	ug/L
Magnesium	6230	ug/L
Manganese	366	ug/L
Molybdenum	0.433	ug/L
Nickel	3.00	ug/L
Potassium	2190	ug/L
Silicon	18100	ug/L
Sodium	8240	ug/L
Zinc	0.770J	ug/L

Client Sample ID: **MW87Z-0416**
Lab Sample ID: 1161853008
Dissolved Metals by ICP/MS

Parameter	Result	Units
Aluminum	2.85	ug/L
Arsenic	1.32	ug/L
Barium	41.0	ug/L
Boron	5.39	ug/L
Calcium	15600	ug/L
Chromium	0.922	ug/L
Cobalt	0.378	ug/L
Copper	5.41	ug/L
Hardness as CaCO3	64.3	mg/L
Iron	8600	ug/L
Magnesium	6170	ug/L
Manganese	371	ug/L
Molybdenum	0.451	ug/L
Nickel	3.14	ug/L
Potassium	2200	ug/L
Silicon	18200	ug/L
Sodium	8230	ug/L
Tin	0.197J	ug/L
Zinc	0.769J	ug/L

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Detectable Results Summary

Client Sample ID: **MW27-0416**
Lab Sample ID: 1161853009
Dissolved Metals by ICP/MS

Parameter	Result	Units
Aluminum	6.83	ug/L
Arsenic	1.09	ug/L
Barium	68.7	ug/L
Boron	3.83J	ug/L
Calcium	19600	ug/L
Chromium	0.641	ug/L
Cobalt	0.356	ug/L
Copper	1.02	ug/L
Hardness as CaCO3	77.1	mg/L
Iron	9400	ug/L
Magnesium	6860	ug/L
Manganese	459	ug/L
Molybdenum	0.199	ug/L
Nickel	2.04	ug/L
Potassium	2140	ug/L
Silicon	16600	ug/L
Sodium	7520	ug/L
Zinc	1.07J	ug/L

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Results of **EBT-0416**

Client Sample ID: **EBT-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161853001
Lab Project ID: 1161853

Collection Date: 04/19/16 12:30
Received Date: 04/20/16 13:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Metals by ICP/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Aluminum	6.51		2.00	0.620	ug/L	2.5		05/17/16 18:12
Antimony	0.0250	U	0.0500	0.0150	ug/L	2.5		05/17/16 18:12
Arsenic	0.400	U	0.800	0.200	ug/L	2.5		05/17/16 18:12
Barium	0.207	J	0.250	0.0400	ug/L	2.5		05/17/16 18:12
Beryllium	0.0250	U	0.0500	0.0250	ug/L	2.5		05/17/16 18:12
Bismuth	0.0250	U	0.0500	0.0150	ug/L	2.5		05/17/16 18:12
Boron	2.50	U	5.00	1.50	ug/L	2.5		05/17/16 18:12
Cadmium	0.0250	U	0.0500	0.0150	ug/L	2.5		05/17/16 18:12
Calcium	25.0	U	50.0	15.0	ug/L	2.5		05/17/16 18:12
Chromium	0.250	U	0.500	0.150	ug/L	2.5		05/17/16 18:12
Cobalt	0.0100	U	0.0200	0.0100	ug/L	2.5		05/17/16 18:12
Copper	0.208	J	0.500	0.200	ug/L	2.5		05/17/16 18:12
Iron	12.6	J	20.0	6.20	ug/L	2.5		05/17/16 18:12
Lead	0.0500	U	0.100	0.0310	ug/L	2.5		05/17/16 18:12
Magnesium	10.0	U	20.0	6.20	ug/L	2.5		05/17/16 18:12
Manganese	0.120		0.100	0.0310	ug/L	2.5		05/17/16 18:12
Molybdenum	0.0250	U	0.0500	0.0150	ug/L	2.5		05/17/16 18:12
Nickel	0.310	U	0.620	0.0620	ug/L	2.5		05/17/16 18:12
Potassium	25.0	U	50.0	15.0	ug/L	2.5		05/17/16 18:12
Selenium	0.500	U	1.00	0.310	ug/L	2.5		05/17/16 18:12
Silver	0.00738	J	0.0200	0.00620	ug/L	2.5		05/17/16 18:12
Sodium	50.0	U	100	31.0	ug/L	2.5		05/17/16 18:12
Thallium	0.0100	U	0.0200	0.00620	ug/L	2.5		05/17/16 18:12
Tin	0.100	U	0.200	0.0620	ug/L	2.5		05/17/16 18:12
Vanadium	0.347	J	1.00	0.310	ug/L	2.5		05/17/16 18:12
Zinc	0.622	J	3.10	0.400	ug/L	2.5		05/17/16 18:12

Batch Information

Analytical Batch: MMS9353
Analytical Method: 200.8 Low Level
Analyst: VDL
Analytical Date/Time: 05/17/16 18:12
Container ID: 1161853001-A

Prep Batch: MXX29752
Prep Method: E200.2
Prep Date/Time: 05/17/16 08:07
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 10 mL

Print Date: 05/19/2016 11:59:29AM

J flagging is activated

Results of **EBF-Lot #L1456**

Client Sample ID: **EBF-Lot #L1456**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161853002
Lab Project ID: 1161853

Collection Date: 04/19/16 12:35
Received Date: 04/20/16 13:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

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

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Aluminum	3.11		2.00	0.620	ug/L	2.5		05/17/16 18:24
Antimony	0.0294	J	0.0500	0.0150	ug/L	2.5		05/17/16 18:24
Arsenic	0.400	U	0.800	0.200	ug/L	2.5		05/17/16 18:24
Barium	0.153	J	0.250	0.0400	ug/L	2.5		05/17/16 18:24
Beryllium	0.0250	U	0.0500	0.0250	ug/L	2.5		05/17/16 18:24
Bismuth	0.0250	U	0.0500	0.0150	ug/L	2.5		05/17/16 18:24
Boron	2.50	U	5.00	1.50	ug/L	2.5		05/17/16 18:24
Cadmium	0.187		0.0500	0.0150	ug/L	2.5		05/17/16 18:24
Calcium	25.0	U	50.0	15.0	ug/L	2.5		05/17/16 18:24
Chromium	0.250	U	0.500	0.150	ug/L	2.5		05/17/16 18:24
Cobalt	0.0100	U	0.0200	0.0100	ug/L	2.5		05/17/16 18:24
Copper	2.15		0.500	0.200	ug/L	2.5		05/17/16 18:24
Iron	10.5	J	20.0	6.20	ug/L	2.5		05/17/16 18:24
Lead	0.0500	U	0.100	0.0310	ug/L	2.5		05/17/16 18:24
Magnesium	10.0	U	20.0	6.20	ug/L	2.5		05/17/16 18:24
Manganese	0.0742	J	0.100	0.0310	ug/L	2.5		05/17/16 18:24
Molybdenum	0.0250	U	0.0500	0.0150	ug/L	2.5		05/17/16 18:24
Nickel	0.0782	J	0.620	0.0620	ug/L	2.5		05/17/16 18:24
Potassium	25.0	U	50.0	15.0	ug/L	2.5		05/17/16 18:24
Selenium	0.500	U	1.00	0.310	ug/L	2.5		05/17/16 18:24
Silicon	50.0	U	100	31.0	ug/L	2.5		05/17/16 18:24
Silver	0.0100	U	0.0200	0.00620	ug/L	2.5		05/17/16 18:24
Sodium	50.0	U	100	31.0	ug/L	2.5		05/17/16 18:24
Thallium	0.0100	U	0.0200	0.00620	ug/L	2.5		05/17/16 18:24
Tin	0.100	U	0.200	0.0620	ug/L	2.5		05/17/16 18:24
Vanadium	0.500	U	1.00	0.310	ug/L	2.5		05/17/16 18:24
Zinc	1.11	J	3.10	0.400	ug/L	2.5		05/17/16 18:24

Batch Information

Analytical Batch: MMS9353
Analytical Method: 200.8 Low Level
Analyst: VDL
Analytical Date/Time: 05/17/16 18:24
Container ID: 1161853002-A

Prep Batch: MXX29752
Prep Method: E200.2
Prep Date/Time: 05/17/16 08:07
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 10 mL

Print Date: 05/19/2016 11:59:29AM

J flagging is activated

Results of **MW87B-0416**

Client Sample ID: **MW87B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161853003
Lab Project ID: 1161853

Collection Date: 04/19/16 14:02
Received Date: 04/20/16 13:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Metals by ICP/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Aluminum	27.2		2.00	0.620	ug/L	2.5		05/17/16 18:27
Antimony	0.0268	J	0.0500	0.0150	ug/L	2.5		05/17/16 18:27
Arsenic	1.39		0.800	0.200	ug/L	2.5		05/17/16 18:27
Barium	41.2		0.250	0.0400	ug/L	2.5		05/17/16 18:27
Beryllium	0.0250	U	0.0500	0.0250	ug/L	2.5		05/17/16 18:27
Bismuth	0.0250	U	0.0500	0.0150	ug/L	2.5		05/17/16 18:27
Boron	7.36		5.00	1.50	ug/L	2.5		05/17/16 18:27
Cadmium	0.0250	U	0.0500	0.0150	ug/L	2.5		05/17/16 18:27
Calcium	15400		50.0	15.0	ug/L	2.5		05/17/16 18:27
Chromium	1.20		0.500	0.150	ug/L	2.5		05/17/16 18:27
Cobalt	0.405		0.0200	0.0100	ug/L	2.5		05/17/16 18:27
Copper	3.83		0.500	0.200	ug/L	2.5		05/17/16 18:27
Iron	8400		20.0	6.20	ug/L	2.5		05/17/16 18:27
Lead	0.0347	J	0.100	0.0310	ug/L	2.5		05/17/16 18:27
Magnesium	5680		20.0	6.20	ug/L	2.5		05/17/16 18:27
Manganese	356		0.100	0.0310	ug/L	2.5		05/17/16 18:27
Molybdenum	0.421		0.0500	0.0150	ug/L	2.5		05/17/16 18:27
Nickel	2.65		0.620	0.0620	ug/L	2.5		05/17/16 18:27
Potassium	2100		50.0	15.0	ug/L	2.5		05/17/16 18:27
Selenium	0.500	U	1.00	0.310	ug/L	2.5		05/17/16 18:27
Silver	0.0100	U	0.0200	0.00620	ug/L	2.5		05/17/16 18:27
Sodium	7640		100	31.0	ug/L	2.5		05/17/16 18:27
Thallium	0.0100	U	0.0200	0.00620	ug/L	2.5		05/17/16 18:27
Tin	0.100	U	0.200	0.0620	ug/L	2.5		05/17/16 18:27
Vanadium	0.443	J	1.00	0.310	ug/L	2.5		05/17/16 18:27
Zinc	1.22	J	3.10	0.400	ug/L	2.5		05/17/16 18:27

Batch Information

Analytical Batch: MMS9353
Analytical Method: 200.8 Low Level
Analyst: VDL
Analytical Date/Time: 05/17/16 18:27
Container ID: 1161853003-A

Prep Batch: MXX29752
Prep Method: E200.2
Prep Date/Time: 05/17/16 08:07
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 10 mL

Print Date: 05/19/2016 11:59:29AM

J flagging is activated

Results of **MW87B-0416**

Client Sample ID: **MW87B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161853003
Lab Project ID: 1161853

Collection Date: 04/19/16 14:02
Received Date: 04/20/16 13:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Polynuclear Aromatics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Acenaphthene	0.0256	U	0.0513	0.0154	ug/L	1		04/25/16 18:32
Acenaphthylene	0.0256	U	0.0513	0.0154	ug/L	1		04/25/16 18:32
Anthracene	0.0256	U	0.0513	0.0154	ug/L	1		04/25/16 18:32
Benzo(a)Anthracene	0.0256	U	0.0513	0.0154	ug/L	1		04/25/16 18:32
Benzo[a]pyrene	0.0103	U	0.0205	0.0154	ug/L	1		04/25/16 18:32
Benzo[b]Fluoranthene	0.0256	U	0.0513	0.0154	ug/L	1		04/25/16 18:32
Benzo[g,h,i]perylene	0.0256	U	0.0513	0.0154	ug/L	1		04/25/16 18:32
Benzo[k]fluoranthene	0.0256	U	0.0513	0.0154	ug/L	1		04/25/16 18:32
Chrysene	0.0256	U	0.0513	0.0154	ug/L	1		04/25/16 18:32
Dibenzo[a,h]anthracene	0.0103	U	0.0205	0.0154	ug/L	1		04/25/16 18:32
Fluoranthene	0.0256	U	0.0513	0.0154	ug/L	1		04/25/16 18:32
Fluorene	0.0256	U	0.0513	0.0154	ug/L	1		04/25/16 18:32
Indeno[1,2,3-c,d] pyrene	0.0256	U	0.0513	0.0154	ug/L	1		04/25/16 18:32
Naphthalene	0.0515	U	0.103	0.0318	ug/L	1		04/25/16 18:32
Phenanthrene	0.0256	U	0.0513	0.0154	ug/L	1		04/25/16 18:32
Pyrene	0.0256	U	0.0513	0.0154	ug/L	1		04/25/16 18:32
Surrogates								
2-Fluorobiphenyl (surr)	78		53-106		%	1		04/25/16 18:32
Terphenyl-d14 (surr)	90.4		58-132		%	1		04/25/16 18:32

Batch Information

Analytical Batch: XMS9268
Analytical Method: EPA 625M SIM (PAH)
Analyst: BRV
Analytical Date/Time: 04/25/16 18:32
Container ID: 1161853003-I

Prep Batch: XXX35207
Prep Method: SW3520C
Prep Date/Time: 04/25/16 10:30
Prep Initial Wt./Vol.: 975 mL
Prep Extract Vol: 1 mL

Print Date: 05/19/2016 11:59:29AM

J flagging is activated

Results of **MW87B-0416**

Client Sample ID: **MW87B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161853003
Lab Project ID: 1161853

Collection Date: 04/19/16 14:02
Received Date: 04/20/16 13:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	0.283	U	0.566	0.170	mg/L	1		04/26/16 18:50
Surrogates								
5a Androstane (surr)	86.4		50-150		%	1		04/26/16 18:50

Batch Information

Analytical Batch: XFC12348
Analytical Method: AK102
Analyst: S.G
Analytical Date/Time: 04/26/16 18:50
Container ID: 1161853003-J

Prep Batch: XXX35215
Prep Method: SW3520C
Prep Date/Time: 04/26/16 09:52
Prep Initial Wt./Vol.: 265 mL
Prep Extract Vol: 1 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Residual Range Organics	0.236	U	0.472	0.142	mg/L	1		04/26/16 18:50
Surrogates								
n-Triacontane-d62 (surr)	87.8		50-150		%	1		04/26/16 18:50

Batch Information

Analytical Batch: XFC12348
Analytical Method: AK103
Analyst: S.G
Analytical Date/Time: 04/26/16 18:50
Container ID: 1161853003-J

Prep Batch: XXX35215
Prep Method: SW3520C
Prep Date/Time: 04/26/16 09:52
Prep Initial Wt./Vol.: 265 mL
Prep Extract Vol: 1 mL

Print Date: 05/19/2016 11:59:29AM

J flagging is activated

Results of **MW87B-0416**

Client Sample ID: **MW87B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161853003
Lab Project ID: 1161853

Collection Date: 04/19/16 14:02
Received Date: 04/20/16 13:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,2,4-Trichlorobenzene	0.00515	U	0.0103	0.00318	mg/L	1		04/28/16 20:00
1,2-Dichlorobenzene	0.00515	U	0.0103	0.00318	mg/L	1		04/28/16 20:00
1,3-Dichlorobenzene	0.00515	U	0.0103	0.00318	mg/L	1		04/28/16 20:00
1,4-Dichlorobenzene	0.00515	U	0.0103	0.00318	mg/L	1		04/28/16 20:00
1-Chloronaphthalene	0.00515	U	0.0103	0.00318	mg/L	1		04/28/16 20:00
1-Methylnaphthalene	0.00515	U	0.0103	0.00318	mg/L	1		04/28/16 20:00
2,4,5-Trichlorophenol	0.00515	U	0.0103	0.00318	mg/L	1		04/28/16 20:00
2,4,6-Trichlorophenol	0.00515	U	0.0103	0.00318	mg/L	1		04/28/16 20:00
2,4-Dichlorophenol	0.00515	U	0.0103	0.00318	mg/L	1		04/28/16 20:00
2,4-Dimethylphenol	0.00515	U	0.0103	0.00318	mg/L	1		04/28/16 20:00
2,4-Dinitrophenol	0.0256	U	0.0513	0.0154	mg/L	1		04/28/16 20:00
2,4-Dinitrotoluene	0.00515	U	0.0103	0.00318	mg/L	1		04/28/16 20:00
2,6-Dichlorophenol	0.00515	U	0.0103	0.00318	mg/L	1		04/28/16 20:00
2,6-Dinitrotoluene	0.00515	U	0.0103	0.00318	mg/L	1		04/28/16 20:00
2-Chloronaphthalene	0.00515	U	0.0103	0.00318	mg/L	1		04/28/16 20:00
2-Chlorophenol	0.00515	U	0.0103	0.00318	mg/L	1		04/28/16 20:00
2-Methyl-4,6-dinitrophenol	0.0256	U	0.0513	0.0154	mg/L	1		04/28/16 20:00
2-Methylnaphthalene	0.00515	U	0.0103	0.00318	mg/L	1		04/28/16 20:00
2-Methylphenol (o-Cresol)	0.00515	U	0.0103	0.00318	mg/L	1		04/28/16 20:00
2-Nitroaniline	0.00515	U	0.0103	0.00318	mg/L	1		04/28/16 20:00
2-Nitrophenol	0.00515	U	0.0103	0.00318	mg/L	1		04/28/16 20:00
3&4-Methylphenol (p&m-Cresol)	0.0103	U	0.0205	0.00636	mg/L	1		04/28/16 20:00
3,3-Dichlorobenzidine	0.00515	U	0.0103	0.00318	mg/L	1		04/28/16 20:00
3-Nitroaniline	0.00515	U	0.0103	0.00318	mg/L	1		04/28/16 20:00
4-Bromophenyl-phenylether	0.00515	U	0.0103	0.00318	mg/L	1		04/28/16 20:00
4-Chloro-3-methylphenol	0.00515	U	0.0103	0.00318	mg/L	1		04/28/16 20:00
4-Chloroaniline	0.00515	U	0.0103	0.00318	mg/L	1		04/28/16 20:00
4-Chlorophenyl-phenylether	0.00515	U	0.0103	0.00318	mg/L	1		04/28/16 20:00
4-Nitroaniline	0.00515	U	0.0103	0.00318	mg/L	1		04/28/16 20:00
4-Nitrophenol	0.0256	U	0.0513	0.0154	mg/L	1		04/28/16 20:00
Acenaphthene	0.00515	U	0.0103	0.00318	mg/L	1		04/28/16 20:00
Acenaphthylene	0.00515	U	0.0103	0.00318	mg/L	1		04/28/16 20:00
Aniline	0.0256	U	0.0513	0.0154	mg/L	1		04/28/16 20:00
Anthracene	0.00515	U	0.0103	0.00318	mg/L	1		04/28/16 20:00
Azobenzene	0.00515	U	0.0103	0.00318	mg/L	1		04/28/16 20:00
Benzo(a)Anthracene	0.00515	U	0.0103	0.00318	mg/L	1		04/28/16 20:00
Benzo[a]pyrene	0.00515	U	0.0103	0.00318	mg/L	1		04/28/16 20:00

Print Date: 05/19/2016 11:59:29AM

J flagging is activated

Results of **MW87B-0416**

Client Sample ID: **MW87B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161853003
Lab Project ID: 1161853

Collection Date: 04/19/16 14:02
Received Date: 04/20/16 13:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Benzo[b]Fluoranthene	0.00515	U	0.0103	0.00318	mg/L	1		04/28/16 20:00
Benzo[g,h,i]perylene	0.00515	U	0.0103	0.00318	mg/L	1		04/28/16 20:00
Benzo[k]fluoranthene	0.00515	U	0.0103	0.00318	mg/L	1		04/28/16 20:00
Benzoic acid	0.0256	U	0.0513	0.0154	mg/L	1		04/28/16 20:00
Benzyl alcohol	0.00515	U	0.0103	0.00318	mg/L	1		04/28/16 20:00
Bis(2chloro1methylethyl)Ether	0.00515	U	0.0103	0.00318	mg/L	1		04/28/16 20:00
Bis(2-Chloroethoxy)methane	0.00515	U	0.0103	0.00318	mg/L	1		04/28/16 20:00
Bis(2-Chloroethyl)ether	0.00515	U	0.0103	0.00318	mg/L	1		04/28/16 20:00
bis(2-Ethylhexyl)phthalate	0.00515	U	0.0103	0.00318	mg/L	1		04/28/16 20:00
Butylbenzylphthalate	0.00515	U	0.0103	0.00318	mg/L	1		04/28/16 20:00
Carbazole	0.00515	U	0.0103	0.00318	mg/L	1		04/28/16 20:00
Chrysene	0.00515	U	0.0103	0.00318	mg/L	1		04/28/16 20:00
Dibenzo[a,h]anthracene	0.00515	U	0.0103	0.00318	mg/L	1		04/28/16 20:00
Dibenzofuran	0.00515	U	0.0103	0.00318	mg/L	1		04/28/16 20:00
Diethylphthalate	0.00515	U	0.0103	0.00318	mg/L	1		04/28/16 20:00
Dimethylphthalate	0.00515	U	0.0103	0.00318	mg/L	1		04/28/16 20:00
Di-n-butylphthalate	0.00515	U	0.0103	0.00318	mg/L	1		04/28/16 20:00
di-n-Octylphthalate	0.00515	U	0.0103	0.00318	mg/L	1		04/28/16 20:00
Fluoranthene	0.00515	U	0.0103	0.00318	mg/L	1		04/28/16 20:00
Fluorene	0.00515	U	0.0103	0.00318	mg/L	1		04/28/16 20:00
Hexachlorobenzene	0.00515	U	0.0103	0.00318	mg/L	1		04/28/16 20:00
Hexachlorobutadiene	0.00515	U	0.0103	0.00318	mg/L	1		04/28/16 20:00
Hexachlorocyclopentadiene	0.0154	U	0.0308	0.00964	mg/L	1		04/28/16 20:00
Hexachloroethane	0.00515	U	0.0103	0.00318	mg/L	1		04/28/16 20:00
Indeno[1,2,3-c,d] pyrene	0.00515	U	0.0103	0.00318	mg/L	1		04/28/16 20:00
Isophorone	0.00515	U	0.0103	0.00318	mg/L	1		04/28/16 20:00
Naphthalene	0.00515	U	0.0103	0.00318	mg/L	1		04/28/16 20:00
Nitrobenzene	0.00515	U	0.0103	0.00318	mg/L	1		04/28/16 20:00
N-Nitrosodimethylamine	0.00515	U	0.0103	0.00318	mg/L	1		04/28/16 20:00
N-Nitroso-di-n-propylamine	0.00515	U	0.0103	0.00318	mg/L	1		04/28/16 20:00
N-Nitrosodiphenylamine	0.00515	U	0.0103	0.00318	mg/L	1		04/28/16 20:00
Pentachlorophenol	0.0256	U	0.0513	0.0154	mg/L	1		04/28/16 20:00
Phenanthrene	0.00515	U	0.0103	0.00318	mg/L	1		04/28/16 20:00
Phenol	0.00515	U	0.0103	0.00318	mg/L	1		04/28/16 20:00
Pyrene	0.00515	U	0.0103	0.00318	mg/L	1		04/28/16 20:00
Surrogates								
2,4,6-Tribromophenol (surr)	85.2		43-140		%	1		04/28/16 20:00

Print Date: 05/19/2016 11:59:29AM

J flagging is activated

Results of **MW87B-0416**

Client Sample ID: **MW87B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161853003
Lab Project ID: 1161853

Collection Date: 04/19/16 14:02
Received Date: 04/20/16 13:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
2-Fluorobiphenyl (surr)	78.5		44-119		%	1		04/28/16 20:00
2-Fluorophenol (surr)	64.7		19-119		%	1		04/28/16 20:00
Nitrobenzene-d5 (surr)	72.6		44-120		%	1		04/28/16 20:00
Phenol-d6 (surr)	69.1		10-115		%	1		04/28/16 20:00
Terphenyl-d14 (surr)	99.9		50-134		%	1		04/28/16 20:00

Batch Information

Analytical Batch: XMS9271
Analytical Method: SW8270D
Analyst: DSH
Analytical Date/Time: 04/28/16 20:00
Container ID: 1161853003-H

Prep Batch: XXX35194
Prep Method: SW3520C
Prep Date/Time: 04/21/16 09:52
Prep Initial Wt./Vol.: 975 mL
Prep Extract Vol: 1 mL

Print Date: 05/19/2016 11:59:29AM

J flagging is activated

Results of **MW87B-0416**

Client Sample ID: **MW87B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161853003
Lab Project ID: 1161853

Collection Date: 04/19/16 14:02
Received Date: 04/20/16 13:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.0500	U	0.100	0.0310	mg/L	1		04/22/16 13:34
Surrogates								
4-Bromofluorobenzene (surr)	77.9		50-150		%	1		04/22/16 13:34

Batch Information

Analytical Batch: VFC12972
Analytical Method: AK101
Analyst: S.P
Analytical Date/Time: 04/22/16 13:34
Container ID: 1161853003-B

Prep Batch: VXX28731
Prep Method: SW5030B
Prep Date/Time: 04/22/16 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/19/2016 11:59:29AM

J flagging is activated

Results of **MW87B-0416**

Client Sample ID: **MW87B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161853003
Lab Project ID: 1161853

Collection Date: 04/19/16 14:02
Received Date: 04/20/16 13:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		04/27/16 17:20
1,1,1-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:20
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		04/27/16 17:20
1,1,2-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:20
1,1-Dichloroethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:20
1,1-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:20
1,1-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:20
1,2,3-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:20
1,2,3-Trichloropropane	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:20
1,2,4-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:20
1,2,4-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:20
1,2-Dibromo-3-chloropropane	5.00	U	10.0	3.10	ug/L	1		04/27/16 17:20
1,2-Dibromoethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:20
1,2-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:20
1,2-Dichloroethane	0.250	U	0.500	0.150	ug/L	1		04/27/16 17:20
1,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:20
1,3,5-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:20
1,3-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:20
1,3-Dichloropropane	0.250	U	0.500	0.150	ug/L	1		04/27/16 17:20
1,4-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1		04/27/16 17:20
2,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:20
2-Butanone (MEK)	5.00	U	10.0	3.10	ug/L	1		04/27/16 17:20
2-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:20
2-Hexanone	5.00	U	10.0	3.10	ug/L	1		04/27/16 17:20
4-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:20
4-Isopropyltoluene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:20
4-Methyl-2-pentanone (MIBK)	5.00	U	10.0	3.10	ug/L	1		04/27/16 17:20
Benzene	0.200	U	0.400	0.120	ug/L	1		04/27/16 17:20
Bromobenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:20
Bromochloromethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:20
Bromodichloromethane	0.250	U	0.500	0.150	ug/L	1		04/27/16 17:20
Bromoform	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:20
Bromomethane	5.00	U	10.0	3.10	ug/L	1		04/27/16 17:20
Carbon disulfide	5.00	U	10.0	3.10	ug/L	1		04/27/16 17:20
Carbon tetrachloride	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:20
Chlorobenzene	0.250	U	0.500	0.150	ug/L	1		04/27/16 17:20
Chloroethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:20

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J flagging is activated

Results of **MW87B-0416**

Client Sample ID: **MW87B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161853003
Lab Project ID: 1161853

Collection Date: 04/19/16 14:02
Received Date: 04/20/16 13:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroform	0.500	U	1.00	0.300	ug/L	1		04/27/16 17:20
Chloromethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:20
cis-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:20
cis-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		04/27/16 17:20
Dibromochloromethane	0.250	U	0.500	0.150	ug/L	1		04/27/16 17:20
Dibromomethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:20
Dichlorodifluoromethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:20
Ethylbenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:20
Freon-113	5.00	U	10.0	3.10	ug/L	1		04/27/16 17:20
Hexachlorobutadiene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:20
Isopropylbenzene (Cumene)	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:20
Methylene chloride	2.50	U	5.00	1.00	ug/L	1		04/27/16 17:20
Methyl-t-butyl ether	5.00	U	10.0	3.10	ug/L	1		04/27/16 17:20
Naphthalene	5.00	U	10.0	3.10	ug/L	1		04/27/16 17:20
n-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:20
n-Propylbenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:20
o-Xylene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:20
P & M -Xylene	1.00	U	2.00	0.620	ug/L	1		04/27/16 17:20
sec-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:20
Styrene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:20
tert-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:20
Tetrachloroethene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:20
Toluene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:20
trans-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:20
trans-1,3-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:20
Trichloroethene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:20
Trichlorofluoromethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:20
Vinyl acetate	5.00	U	10.0	3.10	ug/L	1		04/27/16 17:20
Vinyl chloride	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:20
Xylenes (total)	1.50	U	3.00	1.00	ug/L	1		04/27/16 17:20
Surrogates								
1,2-Dichloroethane-D4 (surr)	108		81-118		%	1		04/27/16 17:20
4-Bromofluorobenzene (surr)	97.1		85-114		%	1		04/27/16 17:20
Toluene-d8 (surr)	100		89-112		%	1		04/27/16 17:20

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Results of **MW87B-0416**

Client Sample ID: **MW87B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161853003
Lab Project ID: 1161853

Collection Date: 04/19/16 14:02
Received Date: 04/20/16 13:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS15744
Analytical Method: SW8260B
Analyst: NRB
Analytical Date/Time: 04/27/16 17:20
Container ID: 1161853003-E

Prep Batch: VXX28746
Prep Method: SW5030B
Prep Date/Time: 04/27/16 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

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J flagging is activated

Results of **MW87B-0416**

Client Sample ID: **MW87B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161853003
Lab Project ID: 1161853

Collection Date: 04/19/16 14:02
Received Date: 04/20/16 13:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloride	18.3		0.100	0.0310	mg/L	1		04/22/16 03:39
Fluoride	0.0600	J	0.100	0.0310	mg/L	1		04/22/16 03:39
Sulfate	6.61		0.100	0.0310	mg/L	1		04/22/16 03:39

Batch Information

Analytical Batch: WIC5531
Analytical Method: EPA 300.0
Analyst: ACF
Analytical Date/Time: 04/22/16 03:39
Container ID: 1161853003-M

Prep Batch: WXX11476
Prep Method: METHOD
Prep Date/Time: 04/21/16 15:05
Prep Initial Wt./Vol.: 10 mL
Prep Extract Vol: 10 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Turbidity	9.90		0.200	0.100	NTU	1		04/20/16 18:27

Batch Information

Analytical Batch: WAT10630
Analytical Method: SM21 2130B
Analyst: ACF
Analytical Date/Time: 04/20/16 18:27
Container ID: 1161853003-L

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Alkalinity	55.0		10.0	3.10	mg/L	1		04/25/16 16:26

Batch Information

Analytical Batch: WTI4445
Analytical Method: SM21 2320B
Analyst: ACF
Analytical Date/Time: 04/25/16 16:26
Container ID: 1161853003-L

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Dissolved Solids	125		10.0	3.10	mg/L	1		04/26/16 09:58

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J flagging is activated

Results of **MW87B-0416**

Client Sample ID: **MW87B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161853003
Lab Project ID: 1161853

Collection Date: 04/19/16 14:02
Received Date: 04/20/16 13:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Batch Information

Analytical Batch: STS5020
Analytical Method: SM21 2540C
Analyst: MBS
Analytical Date/Time: 04/26/16 09:58
Container ID: 1161853003-L

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Suspended Solids	8.00		2.00	0.620	mg/L	1		04/25/16 12:19

Batch Information

Analytical Batch: STS5018
Analytical Method: SM21 2540D
Analyst: MBS
Analytical Date/Time: 04/25/16 12:19
Container ID: 1161853003-L

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
pH	6.70		0.100	0.100	pH units	1		04/25/16 16:26

Batch Information

Analytical Batch: WTI4443
Analytical Method: SM21 4500-H B
Analyst: ACF
Analytical Date/Time: 04/25/16 16:26
Container ID: 1161853003-L

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Nitrate-N	0.0500	U	0.100	0.0300	mg/L	2		04/21/16 12:25
Nitrite-N	0.0500	U	0.100	0.0300	mg/L	2		04/21/16 12:25

Batch Information

Analytical Batch: WFI2469
Analytical Method: SM21 4500NO3-F
Analyst: NEG
Analytical Date/Time: 04/21/16 12:25
Container ID: 1161853003-M

Print Date: 05/19/2016 11:59:29AM

J flagging is activated

Results of **MW87Z-0416**

Client Sample ID: **MW87Z-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161853004
Lab Project ID: 1161853

Collection Date: 04/19/16 14:02
Received Date: 04/20/16 13:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Metals by ICP/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Aluminum	25.0		2.00	0.620	ug/L	2.5		05/17/16 18:29
Antimony	0.0209	J	0.0500	0.0150	ug/L	2.5		05/17/16 18:29
Arsenic	1.62		0.800	0.200	ug/L	2.5		05/17/16 18:29
Barium	39.3		0.250	0.0400	ug/L	2.5		05/17/16 18:29
Beryllium	0.0250	U	0.0500	0.0250	ug/L	2.5		05/17/16 18:29
Bismuth	0.0250	U	0.0500	0.0150	ug/L	2.5		05/17/16 18:29
Boron	7.10		5.00	1.50	ug/L	2.5		05/17/16 18:29
Cadmium	0.0250	U	0.0500	0.0150	ug/L	2.5		05/17/16 18:29
Calcium	14800		50.0	15.0	ug/L	2.5		05/17/16 18:29
Chromium	1.30		0.500	0.150	ug/L	2.5		05/17/16 18:29
Cobalt	0.382		0.0200	0.0100	ug/L	2.5		05/17/16 18:29
Copper	3.39		0.500	0.200	ug/L	2.5		05/17/16 18:29
Iron	8360		20.0	6.20	ug/L	2.5		05/17/16 18:29
Lead	0.0500	U	0.100	0.0310	ug/L	2.5		05/17/16 18:29
Magnesium	5360		20.0	6.20	ug/L	2.5		05/17/16 18:29
Manganese	340		0.100	0.0310	ug/L	2.5		05/17/16 18:29
Molybdenum	0.415		0.0500	0.0150	ug/L	2.5		05/17/16 18:29
Nickel	2.59		0.620	0.0620	ug/L	2.5		05/17/16 18:29
Potassium	2050		50.0	15.0	ug/L	2.5		05/17/16 18:29
Selenium	0.500	U	1.00	0.310	ug/L	2.5		05/17/16 18:29
Silver	0.0100	U	0.0200	0.00620	ug/L	2.5		05/17/16 18:29
Sodium	7180		100	31.0	ug/L	2.5		05/17/16 18:29
Thallium	0.0100	U	0.0200	0.00620	ug/L	2.5		05/17/16 18:29
Tin	0.100	U	0.200	0.0620	ug/L	2.5		05/17/16 18:29
Vanadium	0.366	J	1.00	0.310	ug/L	2.5		05/17/16 18:29
Zinc	1.15	J	3.10	0.400	ug/L	2.5		05/17/16 18:29

Batch Information

Analytical Batch: MMS9353
Analytical Method: 200.8 Low Level
Analyst: VDL
Analytical Date/Time: 05/17/16 18:29
Container ID: 1161853004-A

Prep Batch: MXX29752
Prep Method: E200.2
Prep Date/Time: 05/17/16 08:07
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 10 mL

Print Date: 05/19/2016 11:59:29AM

J flagging is activated

Results of **MW87Z-0416**

Client Sample ID: **MW87Z-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161853004
Lab Project ID: 1161853

Collection Date: 04/19/16 14:02
Received Date: 04/20/16 13:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	0.294	U	0.588	0.176	mg/L	1		04/26/16 19:00
Surrogates								
5a Androstane (surr)	89.3		50-150		%	1		04/26/16 19:00

Batch Information

Analytical Batch: XFC12348
Analytical Method: AK102
Analyst: S.G
Analytical Date/Time: 04/26/16 19:00
Container ID: 1161853004-H

Prep Batch: XXX35215
Prep Method: SW3520C
Prep Date/Time: 04/26/16 09:52
Prep Initial Wt./Vol.: 255 mL
Prep Extract Vol: 1 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Residual Range Organics	0.245	U	0.490	0.147	mg/L	1		04/26/16 19:00
Surrogates								
n-Triacontane-d62 (surr)	89		50-150		%	1		04/26/16 19:00

Batch Information

Analytical Batch: XFC12348
Analytical Method: AK103
Analyst: S.G
Analytical Date/Time: 04/26/16 19:00
Container ID: 1161853004-H

Prep Batch: XXX35215
Prep Method: SW3520C
Prep Date/Time: 04/26/16 09:52
Prep Initial Wt./Vol.: 255 mL
Prep Extract Vol: 1 mL

Print Date: 05/19/2016 11:59:29AM

J flagging is activated

Results of **MW87Z-0416**

Client Sample ID: **MW87Z-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161853004
Lab Project ID: 1161853

Collection Date: 04/19/16 14:02
Received Date: 04/20/16 13:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,2,4-Trichlorobenzene	0.00520	U	0.0104	0.00323	mg/L	1		04/28/16 20:16
1,2-Dichlorobenzene	0.00520	U	0.0104	0.00323	mg/L	1		04/28/16 20:16
1,3-Dichlorobenzene	0.00520	U	0.0104	0.00323	mg/L	1		04/28/16 20:16
1,4-Dichlorobenzene	0.00520	U	0.0104	0.00323	mg/L	1		04/28/16 20:16
1-Chloronaphthalene	0.00520	U	0.0104	0.00323	mg/L	1		04/28/16 20:16
1-Methylnaphthalene	0.00520	U	0.0104	0.00323	mg/L	1		04/28/16 20:16
2,4,5-Trichlorophenol	0.00520	U	0.0104	0.00323	mg/L	1		04/28/16 20:16
2,4,6-Trichlorophenol	0.00520	U	0.0104	0.00323	mg/L	1		04/28/16 20:16
2,4-Dichlorophenol	0.00520	U	0.0104	0.00323	mg/L	1		04/28/16 20:16
2,4-Dimethylphenol	0.00520	U	0.0104	0.00323	mg/L	1		04/28/16 20:16
2,4-Dinitrophenol	0.0261	U	0.0521	0.0156	mg/L	1		04/28/16 20:16
2,4-Dinitrotoluene	0.00520	U	0.0104	0.00323	mg/L	1		04/28/16 20:16
2,6-Dichlorophenol	0.00520	U	0.0104	0.00323	mg/L	1		04/28/16 20:16
2,6-Dinitrotoluene	0.00520	U	0.0104	0.00323	mg/L	1		04/28/16 20:16
2-Chloronaphthalene	0.00520	U	0.0104	0.00323	mg/L	1		04/28/16 20:16
2-Chlorophenol	0.00520	U	0.0104	0.00323	mg/L	1		04/28/16 20:16
2-Methyl-4,6-dinitrophenol	0.0261	U	0.0521	0.0156	mg/L	1		04/28/16 20:16
2-Methylnaphthalene	0.00520	U	0.0104	0.00323	mg/L	1		04/28/16 20:16
2-Methylphenol (o-Cresol)	0.00520	U	0.0104	0.00323	mg/L	1		04/28/16 20:16
2-Nitroaniline	0.00520	U	0.0104	0.00323	mg/L	1		04/28/16 20:16
2-Nitrophenol	0.00520	U	0.0104	0.00323	mg/L	1		04/28/16 20:16
3&4-Methylphenol (p&m-Cresol)	0.0104	U	0.0208	0.00646	mg/L	1		04/28/16 20:16
3,3-Dichlorobenzidine	0.00520	U	0.0104	0.00323	mg/L	1		04/28/16 20:16
3-Nitroaniline	0.00520	U	0.0104	0.00323	mg/L	1		04/28/16 20:16
4-Bromophenyl-phenylether	0.00520	U	0.0104	0.00323	mg/L	1		04/28/16 20:16
4-Chloro-3-methylphenol	0.00520	U	0.0104	0.00323	mg/L	1		04/28/16 20:16
4-Chloroaniline	0.00520	U	0.0104	0.00323	mg/L	1		04/28/16 20:16
4-Chlorophenyl-phenylether	0.00520	U	0.0104	0.00323	mg/L	1		04/28/16 20:16
4-Nitroaniline	0.00520	U	0.0104	0.00323	mg/L	1		04/28/16 20:16
4-Nitrophenol	0.0261	U	0.0521	0.0156	mg/L	1		04/28/16 20:16
Acenaphthene	0.00520	U	0.0104	0.00323	mg/L	1		04/28/16 20:16
Acenaphthylene	0.00520	U	0.0104	0.00323	mg/L	1		04/28/16 20:16
Aniline	0.0261	U	0.0521	0.0156	mg/L	1		04/28/16 20:16
Anthracene	0.00520	U	0.0104	0.00323	mg/L	1		04/28/16 20:16
Azobenzene	0.00520	U	0.0104	0.00323	mg/L	1		04/28/16 20:16
Benzo(a)Anthracene	0.00520	U	0.0104	0.00323	mg/L	1		04/28/16 20:16
Benzo[a]pyrene	0.00520	U	0.0104	0.00323	mg/L	1		04/28/16 20:16

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J flagging is activated

Results of **MW87Z-0416**

Client Sample ID: **MW87Z-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161853004
Lab Project ID: 1161853

Collection Date: 04/19/16 14:02
Received Date: 04/20/16 13:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Benzo[b]Fluoranthene	0.00520	U	0.0104	0.00323	mg/L	1		04/28/16 20:16
Benzo[g,h,i]perylene	0.00520	U	0.0104	0.00323	mg/L	1		04/28/16 20:16
Benzo[k]fluoranthene	0.00520	U	0.0104	0.00323	mg/L	1		04/28/16 20:16
Benzoic acid	0.0261	U	0.0521	0.0156	mg/L	1		04/28/16 20:16
Benzyl alcohol	0.00520	U	0.0104	0.00323	mg/L	1		04/28/16 20:16
Bis(2chloro1methylethyl)Ether	0.00520	U	0.0104	0.00323	mg/L	1		04/28/16 20:16
Bis(2-Chloroethoxy)methane	0.00520	U	0.0104	0.00323	mg/L	1		04/28/16 20:16
Bis(2-Chloroethyl)ether	0.00520	U	0.0104	0.00323	mg/L	1		04/28/16 20:16
bis(2-Ethylhexyl)phthalate	0.00520	U	0.0104	0.00323	mg/L	1		04/28/16 20:16
Butylbenzylphthalate	0.00520	U	0.0104	0.00323	mg/L	1		04/28/16 20:16
Carbazole	0.00520	U	0.0104	0.00323	mg/L	1		04/28/16 20:16
Chrysene	0.00520	U	0.0104	0.00323	mg/L	1		04/28/16 20:16
Dibenzo[a,h]anthracene	0.00520	U	0.0104	0.00323	mg/L	1		04/28/16 20:16
Dibenzofuran	0.00520	U	0.0104	0.00323	mg/L	1		04/28/16 20:16
Diethylphthalate	0.00520	U	0.0104	0.00323	mg/L	1		04/28/16 20:16
Dimethylphthalate	0.00520	U	0.0104	0.00323	mg/L	1		04/28/16 20:16
Di-n-butylphthalate	0.00520	U	0.0104	0.00323	mg/L	1		04/28/16 20:16
di-n-Octylphthalate	0.00520	U	0.0104	0.00323	mg/L	1		04/28/16 20:16
Fluoranthene	0.00520	U	0.0104	0.00323	mg/L	1		04/28/16 20:16
Fluorene	0.00520	U	0.0104	0.00323	mg/L	1		04/28/16 20:16
Hexachlorobenzene	0.00520	U	0.0104	0.00323	mg/L	1		04/28/16 20:16
Hexachlorobutadiene	0.00520	U	0.0104	0.00323	mg/L	1		04/28/16 20:16
Hexachlorocyclopentadiene	0.0157	U	0.0313	0.00979	mg/L	1		04/28/16 20:16
Hexachloroethane	0.00520	U	0.0104	0.00323	mg/L	1		04/28/16 20:16
Indeno[1,2,3-c,d] pyrene	0.00520	U	0.0104	0.00323	mg/L	1		04/28/16 20:16
Isophorone	0.00520	U	0.0104	0.00323	mg/L	1		04/28/16 20:16
Naphthalene	0.00520	U	0.0104	0.00323	mg/L	1		04/28/16 20:16
Nitrobenzene	0.00520	U	0.0104	0.00323	mg/L	1		04/28/16 20:16
N-Nitrosodimethylamine	0.00520	U	0.0104	0.00323	mg/L	1		04/28/16 20:16
N-Nitroso-di-n-propylamine	0.00520	U	0.0104	0.00323	mg/L	1		04/28/16 20:16
N-Nitrosodiphenylamine	0.00520	U	0.0104	0.00323	mg/L	1		04/28/16 20:16
Pentachlorophenol	0.0261	U	0.0521	0.0156	mg/L	1		04/28/16 20:16
Phenanthrene	0.00520	U	0.0104	0.00323	mg/L	1		04/28/16 20:16
Phenol	0.00520	U	0.0104	0.00323	mg/L	1		04/28/16 20:16
Pyrene	0.00520	U	0.0104	0.00323	mg/L	1		04/28/16 20:16
Surrogates								
2,4,6-Tribromophenol (surr)	89.3		43-140		%	1		04/28/16 20:16

Print Date: 05/19/2016 11:59:29AM

J flagging is activated

Results of **MW87Z-0416**

Client Sample ID: **MW87Z-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161853004
Lab Project ID: 1161853

Collection Date: 04/19/16 14:02
Received Date: 04/20/16 13:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
2-Fluorobiphenyl (surr)	82.1		44-119		%	1		04/28/16 20:16
2-Fluorophenol (surr)	62.7		19-119		%	1		04/28/16 20:16
Nitrobenzene-d5 (surr)	70.7		44-120		%	1		04/28/16 20:16
Phenol-d6 (surr)	66.9		10-115		%	1		04/28/16 20:16
Terphenyl-d14 (surr)	101		50-134		%	1		04/28/16 20:16

Batch Information

Analytical Batch: XMS9271
Analytical Method: SW8270D
Analyst: DSH
Analytical Date/Time: 04/28/16 20:16
Container ID: 1161853004-F

Prep Batch: XXX35194
Prep Method: SW3520C
Prep Date/Time: 04/21/16 09:52
Prep Initial Wt./Vol.: 960 mL
Prep Extract Vol: 1 mL

Print Date: 05/19/2016 11:59:29AM

J flagging is activated

Results of **MW87Z-0416**

Client Sample ID: **MW87Z-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161853004
Lab Project ID: 1161853

Collection Date: 04/19/16 14:02
Received Date: 04/20/16 13:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.0500	U	0.100	0.0310	mg/L	1		04/22/16 13:53
Surrogates								
4-Bromofluorobenzene (surr)	77.3		50-150		%	1		04/22/16 13:53

Batch Information

Analytical Batch: VFC12972
Analytical Method: AK101
Analyst: S.P
Analytical Date/Time: 04/22/16 13:53
Container ID: 1161853004-B

Prep Batch: VXX28731
Prep Method: SW5030B
Prep Date/Time: 04/22/16 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/19/2016 11:59:29AM

J flagging is activated

Results of **MW87Z-0416**

Client Sample ID: **MW87Z-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161853004
Lab Project ID: 1161853

Collection Date: 04/19/16 14:02
Received Date: 04/20/16 13:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		04/27/16 17:37
1,1,1-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:37
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		04/27/16 17:37
1,1,2-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:37
1,1-Dichloroethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:37
1,1-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:37
1,1-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:37
1,2,3-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:37
1,2,3-Trichloropropane	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:37
1,2,4-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:37
1,2,4-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:37
1,2-Dibromo-3-chloropropane	5.00	U	10.0	3.10	ug/L	1		04/27/16 17:37
1,2-Dibromoethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:37
1,2-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:37
1,2-Dichloroethane	0.250	U	0.500	0.150	ug/L	1		04/27/16 17:37
1,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:37
1,3,5-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:37
1,3-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:37
1,3-Dichloropropane	0.250	U	0.500	0.150	ug/L	1		04/27/16 17:37
1,4-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1		04/27/16 17:37
2,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:37
2-Butanone (MEK)	5.00	U	10.0	3.10	ug/L	1		04/27/16 17:37
2-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:37
2-Hexanone	5.00	U	10.0	3.10	ug/L	1		04/27/16 17:37
4-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:37
4-Isopropyltoluene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:37
4-Methyl-2-pentanone (MIBK)	5.00	U	10.0	3.10	ug/L	1		04/27/16 17:37
Benzene	0.200	U	0.400	0.120	ug/L	1		04/27/16 17:37
Bromobenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:37
Bromochloromethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:37
Bromodichloromethane	0.250	U	0.500	0.150	ug/L	1		04/27/16 17:37
Bromoform	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:37
Bromomethane	5.00	U	10.0	3.10	ug/L	1		04/27/16 17:37
Carbon disulfide	5.00	U	10.0	3.10	ug/L	1		04/27/16 17:37
Carbon tetrachloride	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:37
Chlorobenzene	0.250	U	0.500	0.150	ug/L	1		04/27/16 17:37
Chloroethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:37

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Results of **MW87Z-0416**

Client Sample ID: **MW87Z-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161853004
Lab Project ID: 1161853

Collection Date: 04/19/16 14:02
Received Date: 04/20/16 13:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroform	0.500	U	1.00	0.300	ug/L	1		04/27/16 17:37
Chloromethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:37
cis-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:37
cis-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		04/27/16 17:37
Dibromochloromethane	0.250	U	0.500	0.150	ug/L	1		04/27/16 17:37
Dibromomethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:37
Dichlorodifluoromethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:37
Ethylbenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:37
Freon-113	5.00	U	10.0	3.10	ug/L	1		04/27/16 17:37
Hexachlorobutadiene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:37
Isopropylbenzene (Cumene)	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:37
Methylene chloride	2.50	U	5.00	1.00	ug/L	1		04/27/16 17:37
Methyl-t-butyl ether	5.00	U	10.0	3.10	ug/L	1		04/27/16 17:37
Naphthalene	5.00	U	10.0	3.10	ug/L	1		04/27/16 17:37
n-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:37
n-Propylbenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:37
o-Xylene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:37
P & M -Xylene	1.00	U	2.00	0.620	ug/L	1		04/27/16 17:37
sec-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:37
Styrene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:37
tert-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:37
Tetrachloroethene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:37
Toluene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:37
trans-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:37
trans-1,3-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:37
Trichloroethene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:37
Trichlorofluoromethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:37
Vinyl acetate	5.00	U	10.0	3.10	ug/L	1		04/27/16 17:37
Vinyl chloride	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:37
Xylenes (total)	1.50	U	3.00	1.00	ug/L	1		04/27/16 17:37
Surrogates								
1,2-Dichloroethane-D4 (surr)	108		81-118		%	1		04/27/16 17:37
4-Bromofluorobenzene (surr)	100		85-114		%	1		04/27/16 17:37
Toluene-d8 (surr)	101		89-112		%	1		04/27/16 17:37

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Results of **MW87Z-0416**

Client Sample ID: **MW87Z-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161853004
Lab Project ID: 1161853

Collection Date: 04/19/16 14:02
Received Date: 04/20/16 13:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS15744
Analytical Method: SW8260B
Analyst: NRB
Analytical Date/Time: 04/27/16 17:37
Container ID: 1161853004-D

Prep Batch: VXX28746
Prep Method: SW5030B
Prep Date/Time: 04/27/16 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/19/2016 11:59:29AM

J flagging is activated

Results of **MW87Z-0416**

Client Sample ID: **MW87Z-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161853004
Lab Project ID: 1161853

Collection Date: 04/19/16 14:02
Received Date: 04/20/16 13:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloride	18.3		0.100	0.0310	mg/L	1		04/22/16 04:01
Fluoride	0.0600	J	0.100	0.0310	mg/L	1		04/22/16 04:01
Sulfate	6.61		0.100	0.0310	mg/L	1		04/22/16 04:01

Batch Information

Analytical Batch: WIC5531
Analytical Method: EPA 300.0
Analyst: ACF
Analytical Date/Time: 04/22/16 04:01
Container ID: 1161853004-L

Prep Batch: WXX11476
Prep Method: METHOD
Prep Date/Time: 04/21/16 15:05
Prep Initial Wt./Vol.: 10 mL
Prep Extract Vol: 10 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Turbidity	9.00		0.200	0.100	NTU	1		04/20/16 18:27

Batch Information

Analytical Batch: WAT10630
Analytical Method: SM21 2130B
Analyst: ACF
Analytical Date/Time: 04/20/16 18:27
Container ID: 1161853004-K

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Alkalinity	50.9		10.0	3.10	mg/L	1		04/25/16 16:35

Batch Information

Analytical Batch: WTI4445
Analytical Method: SM21 2320B
Analyst: ACF
Analytical Date/Time: 04/25/16 16:35
Container ID: 1161853004-K

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Dissolved Solids	128		10.0	3.10	mg/L	1		04/26/16 09:58

Print Date: 05/19/2016 11:59:29AM

J flagging is activated

Results of **MW87Z-0416**

Client Sample ID: **MW87Z-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161853004
Lab Project ID: 1161853

Collection Date: 04/19/16 14:02
Received Date: 04/20/16 13:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Batch Information

Analytical Batch: STS5020
Analytical Method: SM21 2540C
Analyst: MBS
Analytical Date/Time: 04/26/16 09:58
Container ID: 1161853004-K

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Suspended Solids	7.21		1.02	0.315	mg/L	1		04/25/16 12:19

Batch Information

Analytical Batch: STS5018
Analytical Method: SM21 2540D
Analyst: MBS
Analytical Date/Time: 04/25/16 12:19
Container ID: 1161853004-J

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
pH	6.70		0.100	0.100	pH units	1		04/25/16 16:35

Batch Information

Analytical Batch: WTI4443
Analytical Method: SM21 4500-H B
Analyst: ACF
Analytical Date/Time: 04/25/16 16:35
Container ID: 1161853004-K

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Nitrate-N	0.0500	U	0.100	0.0300	mg/L	2		04/21/16 12:27
Nitrite-N	0.0500	U	0.100	0.0300	mg/L	2		04/21/16 12:27

Batch Information

Analytical Batch: WFI2469
Analytical Method: SM21 4500NO3-F
Analyst: NEG
Analytical Date/Time: 04/21/16 12:27
Container ID: 1161853004-L

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J flagging is activated

Results of **MW27-0416**

Client Sample ID: **MW27-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161853005
Lab Project ID: 1161853

Collection Date: 04/19/16 17:15
Received Date: 04/20/16 13:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Metals by ICP/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Aluminum	882		8.00	2.48	ug/L	10		05/18/16 08:51
Antimony	0.110		0.0500	0.0150	ug/L	2.5		05/17/16 18:32
Arsenic	2.52		0.800	0.200	ug/L	2.5		05/17/16 18:32
Barium	83.3		0.250	0.0400	ug/L	2.5		05/17/16 18:32
Beryllium	0.0420	J	0.0500	0.0250	ug/L	2.5		05/17/16 18:32
Bismuth	0.0250	U	0.0500	0.0150	ug/L	2.5		05/17/16 18:32
Boron	6.40		5.00	1.50	ug/L	2.5		05/17/16 18:32
Cadmium	0.0309	J	0.0500	0.0150	ug/L	2.5		05/17/16 18:32
Calcium	21000		50.0	15.0	ug/L	2.5		05/17/16 18:32
Chromium	3.44		0.500	0.150	ug/L	2.5		05/17/16 18:32
Cobalt	0.836		0.0200	0.0100	ug/L	2.5		05/17/16 18:32
Copper	4.03		0.500	0.200	ug/L	2.5		05/17/16 18:32
Iron	12900		20.0	6.20	ug/L	2.5		05/17/16 18:32
Lead	0.614		0.100	0.0310	ug/L	2.5		05/17/16 18:32
Magnesium	6990		20.0	6.20	ug/L	2.5		05/17/16 18:32
Manganese	501		0.100	0.0310	ug/L	2.5		05/17/16 18:32
Molybdenum	0.343		0.0500	0.0150	ug/L	2.5		05/17/16 18:32
Nickel	3.63		0.620	0.0620	ug/L	2.5		05/17/16 18:32
Potassium	2410		50.0	15.0	ug/L	2.5		05/17/16 18:32
Selenium	0.500	U	1.00	0.310	ug/L	2.5		05/17/16 18:32
Silver	0.00744	J	0.0200	0.00620	ug/L	2.5		05/17/16 18:32
Sodium	7950		100	31.0	ug/L	2.5		05/17/16 18:32
Thallium	0.00694	J	0.0200	0.00620	ug/L	2.5		05/17/16 18:32
Tin	0.121	J	0.200	0.0620	ug/L	2.5		05/17/16 18:32
Vanadium	2.84		1.00	0.310	ug/L	2.5		05/17/16 18:32
Zinc	3.98		3.10	0.400	ug/L	2.5		05/17/16 18:32

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Results of **MW27-0416**

Client Sample ID: **MW27-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161853005
Lab Project ID: 1161853

Collection Date: 04/19/16 17:15
Received Date: 04/20/16 13:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Metals by ICP/MS**

Batch Information

Analytical Batch: MMS9353
Analytical Method: 200.8 Low Level
Analyst: VDL
Analytical Date/Time: 05/17/16 18:32
Container ID: 1161853005-A

Prep Batch: MXX29752
Prep Method: E200.2
Prep Date/Time: 05/17/16 08:07
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 10 mL

Analytical Batch: MMS9354
Analytical Method: 200.8 Low Level
Analyst: VDL
Analytical Date/Time: 05/18/16 08:51
Container ID: 1161853005-A

Prep Batch: MXX29752
Prep Method: E200.2
Prep Date/Time: 05/17/16 08:07
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 10 mL

SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
t 907.562.2343 **f** 907.561.5301 www.us.sgs.com

Results of **MW27-0416**

Client Sample ID: **MW27-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161853005
Lab Project ID: 1161853

Collection Date: 04/19/16 17:15
Received Date: 04/20/16 13:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Polynuclear Aromatics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Acenaphthene	0.0254	U	0.0508	0.0152	ug/L	1		04/25/16 18:51
Acenaphthylene	0.0254	U	0.0508	0.0152	ug/L	1		04/25/16 18:51
Anthracene	0.0254	U	0.0508	0.0152	ug/L	1		04/25/16 18:51
Benzo(a)Anthracene	0.0254	U	0.0508	0.0152	ug/L	1		04/25/16 18:51
Benzo[a]pyrene	0.0101	U	0.0203	0.0152	ug/L	1		04/25/16 18:51
Benzo[b]Fluoranthene	0.0254	U	0.0508	0.0152	ug/L	1		04/25/16 18:51
Benzo[g,h,i]perylene	0.0254	U	0.0508	0.0152	ug/L	1		04/25/16 18:51
Benzo[k]fluoranthene	0.0254	U	0.0508	0.0152	ug/L	1		04/25/16 18:51
Chrysene	0.0254	U	0.0508	0.0152	ug/L	1		04/25/16 18:51
Dibenzo[a,h]anthracene	0.0101	U	0.0203	0.0152	ug/L	1		04/25/16 18:51
Fluoranthene	0.0254	U	0.0508	0.0152	ug/L	1		04/25/16 18:51
Fluorene	0.0254	U	0.0508	0.0152	ug/L	1		04/25/16 18:51
Indeno[1,2,3-c,d] pyrene	0.0254	U	0.0508	0.0152	ug/L	1		04/25/16 18:51
Naphthalene	0.0510	U	0.102	0.0315	ug/L	1		04/25/16 18:51
Phenanthrene	0.0254	U	0.0508	0.0152	ug/L	1		04/25/16 18:51
Pyrene	0.0254	U	0.0508	0.0152	ug/L	1		04/25/16 18:51
Surrogates								
2-Fluorobiphenyl (surr)	77.4		53-106		%	1		04/25/16 18:51
Terphenyl-d14 (surr)	88.7		58-132		%	1		04/25/16 18:51

Batch Information

Analytical Batch: XMS9268
Analytical Method: EPA 625M SIM (PAH)
Analyst: BRV
Analytical Date/Time: 04/25/16 18:51
Container ID: 1161853005-I

Prep Batch: XXX35207
Prep Method: SW3520C
Prep Date/Time: 04/25/16 10:30
Prep Initial Wt./Vol.: 985 mL
Prep Extract Vol: 1 mL

Print Date: 05/19/2016 11:59:29AM

J flagging is activated

Results of **MW27-0416**

Client Sample ID: **MW27-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161853005
Lab Project ID: 1161853

Collection Date: 04/19/16 17:15
Received Date: 04/20/16 13:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	0.197	J	0.577	0.173	mg/L	1		04/26/16 19:10
Surrogates								
5a Androstane (surr)	88.4		50-150		%	1		04/26/16 19:10

Batch Information

Analytical Batch: XFC12348
Analytical Method: AK102
Analyst: S.G
Analytical Date/Time: 04/26/16 19:10
Container ID: 1161853005-J

Prep Batch: XXX35215
Prep Method: SW3520C
Prep Date/Time: 04/26/16 09:52
Prep Initial Wt./Vol.: 260 mL
Prep Extract Vol: 1 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Residual Range Organics	0.561		0.481	0.144	mg/L	1		04/26/16 19:10
Surrogates								
n-Triacontane-d62 (surr)	88.3		50-150		%	1		04/26/16 19:10

Batch Information

Analytical Batch: XFC12348
Analytical Method: AK103
Analyst: S.G
Analytical Date/Time: 04/26/16 19:10
Container ID: 1161853005-J

Prep Batch: XXX35215
Prep Method: SW3520C
Prep Date/Time: 04/26/16 09:52
Prep Initial Wt./Vol.: 260 mL
Prep Extract Vol: 1 mL

Print Date: 05/19/2016 11:59:29AM

J flagging is activated

Results of **MW27-0416**

Client Sample ID: **MW27-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161853005
Lab Project ID: 1161853

Collection Date: 04/19/16 17:15
Received Date: 04/20/16 13:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,2,4-Trichlorobenzene	0.00515	U	0.0103	0.00320	mg/L	1		04/28/16 20:33
1,2-Dichlorobenzene	0.00515	U	0.0103	0.00320	mg/L	1		04/28/16 20:33
1,3-Dichlorobenzene	0.00515	U	0.0103	0.00320	mg/L	1		04/28/16 20:33
1,4-Dichlorobenzene	0.00515	U	0.0103	0.00320	mg/L	1		04/28/16 20:33
1-Chloronaphthalene	0.00515	U	0.0103	0.00320	mg/L	1		04/28/16 20:33
1-Methylnaphthalene	0.00515	U	0.0103	0.00320	mg/L	1		04/28/16 20:33
2,4,5-Trichlorophenol	0.00515	U	0.0103	0.00320	mg/L	1		04/28/16 20:33
2,4,6-Trichlorophenol	0.00515	U	0.0103	0.00320	mg/L	1		04/28/16 20:33
2,4-Dichlorophenol	0.00515	U	0.0103	0.00320	mg/L	1		04/28/16 20:33
2,4-Dimethylphenol	0.00515	U	0.0103	0.00320	mg/L	1		04/28/16 20:33
2,4-Dinitrophenol	0.0257	U	0.0515	0.0155	mg/L	1		04/28/16 20:33
2,4-Dinitrotoluene	0.00515	U	0.0103	0.00320	mg/L	1		04/28/16 20:33
2,6-Dichlorophenol	0.00515	U	0.0103	0.00320	mg/L	1		04/28/16 20:33
2,6-Dinitrotoluene	0.00515	U	0.0103	0.00320	mg/L	1		04/28/16 20:33
2-Chloronaphthalene	0.00515	U	0.0103	0.00320	mg/L	1		04/28/16 20:33
2-Chlorophenol	0.00515	U	0.0103	0.00320	mg/L	1		04/28/16 20:33
2-Methyl-4,6-dinitrophenol	0.0257	U	0.0515	0.0155	mg/L	1		04/28/16 20:33
2-Methylnaphthalene	0.00515	U	0.0103	0.00320	mg/L	1		04/28/16 20:33
2-Methylphenol (o-Cresol)	0.00515	U	0.0103	0.00320	mg/L	1		04/28/16 20:33
2-Nitroaniline	0.00515	U	0.0103	0.00320	mg/L	1		04/28/16 20:33
2-Nitrophenol	0.00515	U	0.0103	0.00320	mg/L	1		04/28/16 20:33
3&4-Methylphenol (p&m-Cresol)	0.0103	U	0.0206	0.00639	mg/L	1		04/28/16 20:33
3,3-Dichlorobenzidine	0.00515	U	0.0103	0.00320	mg/L	1		04/28/16 20:33
3-Nitroaniline	0.00515	U	0.0103	0.00320	mg/L	1		04/28/16 20:33
4-Bromophenyl-phenylether	0.00515	U	0.0103	0.00320	mg/L	1		04/28/16 20:33
4-Chloro-3-methylphenol	0.00515	U	0.0103	0.00320	mg/L	1		04/28/16 20:33
4-Chloroaniline	0.00515	U	0.0103	0.00320	mg/L	1		04/28/16 20:33
4-Chlorophenyl-phenylether	0.00515	U	0.0103	0.00320	mg/L	1		04/28/16 20:33
4-Nitroaniline	0.00515	U	0.0103	0.00320	mg/L	1		04/28/16 20:33
4-Nitrophenol	0.0257	U	0.0515	0.0155	mg/L	1		04/28/16 20:33
Acenaphthene	0.00515	U	0.0103	0.00320	mg/L	1		04/28/16 20:33
Acenaphthylene	0.00515	U	0.0103	0.00320	mg/L	1		04/28/16 20:33
Aniline	0.0257	U	0.0515	0.0155	mg/L	1		04/28/16 20:33
Anthracene	0.00515	U	0.0103	0.00320	mg/L	1		04/28/16 20:33
Azobenzene	0.00515	U	0.0103	0.00320	mg/L	1		04/28/16 20:33
Benzo(a)Anthracene	0.00515	U	0.0103	0.00320	mg/L	1		04/28/16 20:33
Benzo[a]pyrene	0.00515	U	0.0103	0.00320	mg/L	1		04/28/16 20:33

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Results of **MW27-0416**

Client Sample ID: **MW27-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161853005
Lab Project ID: 1161853

Collection Date: 04/19/16 17:15
Received Date: 04/20/16 13:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Benzo[b]Fluoranthene	0.00515	U	0.0103	0.00320	mg/L	1		04/28/16 20:33
Benzo[g,h,i]perylene	0.00515	U	0.0103	0.00320	mg/L	1		04/28/16 20:33
Benzo[k]fluoranthene	0.00515	U	0.0103	0.00320	mg/L	1		04/28/16 20:33
Benzoic acid	0.0257	U	0.0515	0.0155	mg/L	1		04/28/16 20:33
Benzyl alcohol	0.00515	U	0.0103	0.00320	mg/L	1		04/28/16 20:33
Bis(2chloro1methylethyl)Ether	0.00515	U	0.0103	0.00320	mg/L	1		04/28/16 20:33
Bis(2-Chloroethoxy)methane	0.00515	U	0.0103	0.00320	mg/L	1		04/28/16 20:33
Bis(2-Chloroethyl)ether	0.00515	U	0.0103	0.00320	mg/L	1		04/28/16 20:33
bis(2-Ethylhexyl)phthalate	0.00515	U	0.0103	0.00320	mg/L	1		04/28/16 20:33
Butylbenzylphthalate	0.00515	U	0.0103	0.00320	mg/L	1		04/28/16 20:33
Carbazole	0.00515	U	0.0103	0.00320	mg/L	1		04/28/16 20:33
Chrysene	0.00515	U	0.0103	0.00320	mg/L	1		04/28/16 20:33
Dibenzo[a,h]anthracene	0.00515	U	0.0103	0.00320	mg/L	1		04/28/16 20:33
Dibenzofuran	0.00515	U	0.0103	0.00320	mg/L	1		04/28/16 20:33
Diethylphthalate	0.00515	U	0.0103	0.00320	mg/L	1		04/28/16 20:33
Dimethylphthalate	0.00515	U	0.0103	0.00320	mg/L	1		04/28/16 20:33
Di-n-butylphthalate	0.00515	U	0.0103	0.00320	mg/L	1		04/28/16 20:33
di-n-Octylphthalate	0.00515	U	0.0103	0.00320	mg/L	1		04/28/16 20:33
Fluoranthene	0.00515	U	0.0103	0.00320	mg/L	1		04/28/16 20:33
Fluorene	0.00515	U	0.0103	0.00320	mg/L	1		04/28/16 20:33
Hexachlorobenzene	0.00515	U	0.0103	0.00320	mg/L	1		04/28/16 20:33
Hexachlorobutadiene	0.00515	U	0.0103	0.00320	mg/L	1		04/28/16 20:33
Hexachlorocyclopentadiene	0.0155	U	0.0309	0.00969	mg/L	1		04/28/16 20:33
Hexachloroethane	0.00515	U	0.0103	0.00320	mg/L	1		04/28/16 20:33
Indeno[1,2,3-c,d] pyrene	0.00515	U	0.0103	0.00320	mg/L	1		04/28/16 20:33
Isophorone	0.00515	U	0.0103	0.00320	mg/L	1		04/28/16 20:33
Naphthalene	0.00515	U	0.0103	0.00320	mg/L	1		04/28/16 20:33
Nitrobenzene	0.00515	U	0.0103	0.00320	mg/L	1		04/28/16 20:33
N-Nitrosodimethylamine	0.00515	U	0.0103	0.00320	mg/L	1		04/28/16 20:33
N-Nitroso-di-n-propylamine	0.00515	U	0.0103	0.00320	mg/L	1		04/28/16 20:33
N-Nitrosodiphenylamine	0.00515	U	0.0103	0.00320	mg/L	1		04/28/16 20:33
Pentachlorophenol	0.0257	U	0.0515	0.0155	mg/L	1		04/28/16 20:33
Phenanthrene	0.00515	U	0.0103	0.00320	mg/L	1		04/28/16 20:33
Phenol	0.00515	U	0.0103	0.00320	mg/L	1		04/28/16 20:33
Pyrene	0.00515	U	0.0103	0.00320	mg/L	1		04/28/16 20:33
Surrogates								
2,4,6-Tribromophenol (surr)	86.1		43-140		%	1		04/28/16 20:33

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J flagging is activated

Results of **MW27-0416**

Client Sample ID: **MW27-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161853005
Lab Project ID: 1161853

Collection Date: 04/19/16 17:15
Received Date: 04/20/16 13:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
2-Fluorobiphenyl (surr)	76.7		44-119		%	1		04/28/16 20:33
2-Fluorophenol (surr)	57.5		19-119		%	1		04/28/16 20:33
Nitrobenzene-d5 (surr)	69.7		44-120		%	1		04/28/16 20:33
Phenol-d6 (surr)	62.2		10-115		%	1		04/28/16 20:33
Terphenyl-d14 (surr)	105		50-134		%	1		04/28/16 20:33

Batch Information

Analytical Batch: XMS9271
Analytical Method: SW8270D
Analyst: DSH
Analytical Date/Time: 04/28/16 20:33
Container ID: 1161853005-H

Prep Batch: XXX35194
Prep Method: SW3520C
Prep Date/Time: 04/21/16 09:52
Prep Initial Wt./Vol.: 970 mL
Prep Extract Vol: 1 mL

Print Date: 05/19/2016 11:59:29AM

J flagging is activated

Results of **MW27-0416**

Client Sample ID: **MW27-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161853005
Lab Project ID: 1161853

Collection Date: 04/19/16 17:15
Received Date: 04/20/16 13:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.0500	U	0.100	0.0310	mg/L	1		04/22/16 14:12
Surrogates								
4-Bromofluorobenzene (surr)	81		50-150		%	1		04/22/16 14:12

Batch Information

Analytical Batch: VFC12972
Analytical Method: AK101
Analyst: S.P
Analytical Date/Time: 04/22/16 14:12
Container ID: 1161853005-B

Prep Batch: VXX28731
Prep Method: SW5030B
Prep Date/Time: 04/22/16 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/19/2016 11:59:29AM

J flagging is activated

Results of **MW27-0416**

Client Sample ID: **MW27-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161853005
Lab Project ID: 1161853

Collection Date: 04/19/16 17:15
Received Date: 04/20/16 13:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		04/27/16 17:53
1,1,1-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:53
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		04/27/16 17:53
1,1,2-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:53
1,1-Dichloroethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:53
1,1-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:53
1,1-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:53
1,2,3-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:53
1,2,3-Trichloropropane	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:53
1,2,4-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:53
1,2,4-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:53
1,2-Dibromo-3-chloropropane	5.00	U	10.0	3.10	ug/L	1		04/27/16 17:53
1,2-Dibromoethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:53
1,2-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:53
1,2-Dichloroethane	0.250	U	0.500	0.150	ug/L	1		04/27/16 17:53
1,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:53
1,3,5-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:53
1,3-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:53
1,3-Dichloropropane	0.250	U	0.500	0.150	ug/L	1		04/27/16 17:53
1,4-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1		04/27/16 17:53
2,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:53
2-Butanone (MEK)	5.00	U	10.0	3.10	ug/L	1		04/27/16 17:53
2-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:53
2-Hexanone	5.00	U	10.0	3.10	ug/L	1		04/27/16 17:53
4-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:53
4-Isopropyltoluene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:53
4-Methyl-2-pentanone (MIBK)	5.00	U	10.0	3.10	ug/L	1		04/27/16 17:53
Benzene	0.200	U	0.400	0.120	ug/L	1		04/27/16 17:53
Bromobenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:53
Bromochloromethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:53
Bromodichloromethane	0.250	U	0.500	0.150	ug/L	1		04/27/16 17:53
Bromoform	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:53
Bromomethane	5.00	U	10.0	3.10	ug/L	1		04/27/16 17:53
Carbon disulfide	5.00	U	10.0	3.10	ug/L	1		04/27/16 17:53
Carbon tetrachloride	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:53
Chlorobenzene	0.250	U	0.500	0.150	ug/L	1		04/27/16 17:53
Chloroethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:53

Print Date: 05/19/2016 11:59:29AM

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Results of **MW27-0416**

Client Sample ID: **MW27-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161853005
Lab Project ID: 1161853

Collection Date: 04/19/16 17:15
Received Date: 04/20/16 13:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroform	0.500	U	1.00	0.300	ug/L	1		04/27/16 17:53
Chloromethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:53
cis-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:53
cis-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		04/27/16 17:53
Dibromochloromethane	0.250	U	0.500	0.150	ug/L	1		04/27/16 17:53
Dibromomethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:53
Dichlorodifluoromethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:53
Ethylbenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:53
Freon-113	5.00	U	10.0	3.10	ug/L	1		04/27/16 17:53
Hexachlorobutadiene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:53
Isopropylbenzene (Cumene)	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:53
Methylene chloride	2.50	U	5.00	1.00	ug/L	1		04/27/16 17:53
Methyl-t-butyl ether	5.00	U	10.0	3.10	ug/L	1		04/27/16 17:53
Naphthalene	5.00	U	10.0	3.10	ug/L	1		04/27/16 17:53
n-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:53
n-Propylbenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:53
o-Xylene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:53
P & M -Xylene	1.00	U	2.00	0.620	ug/L	1		04/27/16 17:53
sec-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:53
Styrene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:53
tert-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:53
Tetrachloroethene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:53
Toluene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:53
trans-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:53
trans-1,3-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:53
Trichloroethene	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:53
Trichlorofluoromethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:53
Vinyl acetate	5.00	U	10.0	3.10	ug/L	1		04/27/16 17:53
Vinyl chloride	0.500	U	1.00	0.310	ug/L	1		04/27/16 17:53
Xylenes (total)	1.50	U	3.00	1.00	ug/L	1		04/27/16 17:53
Surrogates								
1,2-Dichloroethane-D4 (surr)	107		81-118		%	1		04/27/16 17:53
4-Bromofluorobenzene (surr)	97.9		85-114		%	1		04/27/16 17:53
Toluene-d8 (surr)	100		89-112		%	1		04/27/16 17:53

Print Date: 05/19/2016 11:59:29AM

J flagging is activated

Results of **MW27-0416**

Client Sample ID: **MW27-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161853005
Lab Project ID: 1161853

Collection Date: 04/19/16 17:15
Received Date: 04/20/16 13:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS15744
Analytical Method: SW8260B
Analyst: NRB
Analytical Date/Time: 04/27/16 17:53
Container ID: 1161853005-E

Prep Batch: VXX28746
Prep Method: SW5030B
Prep Date/Time: 04/27/16 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/19/2016 11:59:29AM

J flagging is activated

Results of **MW27-0416**

Client Sample ID: **MW27-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161853005
Lab Project ID: 1161853

Collection Date: 04/19/16 17:15
Received Date: 04/20/16 13:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloride	30.6		0.100	0.0310	mg/L	1		04/22/16 04:24
Fluoride	0.0560	J	0.100	0.0310	mg/L	1		04/22/16 04:24
Sulfate	5.31		0.100	0.0310	mg/L	1		04/22/16 04:24

Batch Information

Analytical Batch: WIC5531
Analytical Method: EPA 300.0
Analyst: ACF
Analytical Date/Time: 04/22/16 04:24
Container ID: 1161853005-N

Prep Batch: WXX11476
Prep Method: METHOD
Prep Date/Time: 04/21/16 15:05
Prep Initial Wt./Vol.: 10 mL
Prep Extract Vol: 10 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Turbidity	21.0		0.200	0.100	NTU	1		04/20/16 18:27

Batch Information

Analytical Batch: WAT10630
Analytical Method: SM21 2130B
Analyst: ACF
Analytical Date/Time: 04/20/16 18:27
Container ID: 1161853005-M

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Alkalinity	58.2		10.0	3.10	mg/L	1		04/25/16 16:44

Batch Information

Analytical Batch: WTI4445
Analytical Method: SM21 2320B
Analyst: ACF
Analytical Date/Time: 04/25/16 16:44
Container ID: 1161853005-M

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Dissolved Solids	160		10.0	3.10	mg/L	1		04/26/16 09:58

Print Date: 05/19/2016 11:59:29AM

J flagging is activated

Results of **MW27-0416**

Client Sample ID: **MW27-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161853005
Lab Project ID: 1161853

Collection Date: 04/19/16 17:15
Received Date: 04/20/16 13:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Batch Information

Analytical Batch: STS5020
Analytical Method: SM21 2540C
Analyst: MBS
Analytical Date/Time: 04/26/16 09:58
Container ID: 1161853005-M

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Suspended Solids	25.0		2.00	0.620	mg/L	1		04/25/16 12:19

Batch Information

Analytical Batch: STS5018
Analytical Method: SM21 2540D
Analyst: MBS
Analytical Date/Time: 04/25/16 12:19
Container ID: 1161853005-L

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
pH	6.60		0.100	0.100	pH units	1		04/25/16 16:44

Batch Information

Analytical Batch: WTI4443
Analytical Method: SM21 4500-H B
Analyst: ACF
Analytical Date/Time: 04/25/16 16:44
Container ID: 1161853005-M

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Nitrate-N	0.0500	U	0.100	0.0300	mg/L	2		04/21/16 12:29
Nitrite-N	0.0500	U	0.100	0.0300	mg/L	2		04/21/16 12:29

Batch Information

Analytical Batch: WFI2469
Analytical Method: SM21 4500NO3-F
Analyst: NEG
Analytical Date/Time: 04/21/16 12:29
Container ID: 1161853005-N

Print Date: 05/19/2016 11:59:29AM

J flagging is activated

Results of **TB1**

Client Sample ID: **TB1**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161853006
Lab Project ID: 1161853

Collection Date: 04/19/16 12:30
Received Date: 04/20/16 13:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.0500	U	0.100	0.0310	mg/L	1		04/22/16 12:37
Surrogates								
4-Bromofluorobenzene (surr)	85.3		50-150		%	1		04/22/16 12:37

Batch Information

Analytical Batch: VFC12972
Analytical Method: AK101
Analyst: S.P
Analytical Date/Time: 04/22/16 12:37
Container ID: 1161853006-A

Prep Batch: VXX28731
Prep Method: SW5030B
Prep Date/Time: 04/22/16 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/19/2016 11:59:29AM

J flagging is activated

Results of **TB1**

Client Sample ID: **TB1**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161853006
Lab Project ID: 1161853

Collection Date: 04/19/16 12:30
Received Date: 04/20/16 13:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		04/27/16 14:35
1,1,1-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 14:35
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		04/27/16 14:35
1,1,2-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 14:35
1,1-Dichloroethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 14:35
1,1-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		04/27/16 14:35
1,1-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		04/27/16 14:35
1,2,3-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 14:35
1,2,3-Trichloropropane	0.500	U	1.00	0.310	ug/L	1		04/27/16 14:35
1,2,4-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 14:35
1,2,4-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 14:35
1,2-Dibromo-3-chloropropane	5.00	U	10.0	3.10	ug/L	1		04/27/16 14:35
1,2-Dibromoethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 14:35
1,2-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 14:35
1,2-Dichloroethane	0.250	U	0.500	0.150	ug/L	1		04/27/16 14:35
1,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		04/27/16 14:35
1,3,5-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 14:35
1,3-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 14:35
1,3-Dichloropropane	0.250	U	0.500	0.150	ug/L	1		04/27/16 14:35
1,4-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1		04/27/16 14:35
2,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		04/27/16 14:35
2-Butanone (MEK)	5.00	U	10.0	3.10	ug/L	1		04/27/16 14:35
2-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		04/27/16 14:35
2-Hexanone	5.00	U	10.0	3.10	ug/L	1		04/27/16 14:35
4-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		04/27/16 14:35
4-Isopropyltoluene	0.500	U	1.00	0.310	ug/L	1		04/27/16 14:35
4-Methyl-2-pentanone (MIBK)	5.00	U	10.0	3.10	ug/L	1		04/27/16 14:35
Benzene	0.200	U	0.400	0.120	ug/L	1		04/27/16 14:35
Bromobenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 14:35
Bromochloromethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 14:35
Bromodichloromethane	0.250	U	0.500	0.150	ug/L	1		04/27/16 14:35
Bromoform	0.500	U	1.00	0.310	ug/L	1		04/27/16 14:35
Bromomethane	5.00	U	10.0	3.10	ug/L	1		04/27/16 14:35
Carbon disulfide	5.00	U	10.0	3.10	ug/L	1		04/27/16 14:35
Carbon tetrachloride	0.500	U	1.00	0.310	ug/L	1		04/27/16 14:35
Chlorobenzene	0.250	U	0.500	0.150	ug/L	1		04/27/16 14:35
Chloroethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 14:35

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J flagging is activated

Results of **TB1**

Client Sample ID: **TB1**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161853006
Lab Project ID: 1161853

Collection Date: 04/19/16 12:30
Received Date: 04/20/16 13:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroform	0.500	U	1.00	0.300	ug/L	1		04/27/16 14:35
Chloromethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 14:35
cis-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		04/27/16 14:35
cis-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		04/27/16 14:35
Dibromochloromethane	0.250	U	0.500	0.150	ug/L	1		04/27/16 14:35
Dibromomethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 14:35
Dichlorodifluoromethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 14:35
Ethylbenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 14:35
Freon-113	5.00	U	10.0	3.10	ug/L	1		04/27/16 14:35
Hexachlorobutadiene	0.500	U	1.00	0.310	ug/L	1		04/27/16 14:35
Isopropylbenzene (Cumene)	0.500	U	1.00	0.310	ug/L	1		04/27/16 14:35
Methylene chloride	2.50	U	5.00	1.00	ug/L	1		04/27/16 14:35
Methyl-t-butyl ether	5.00	U	10.0	3.10	ug/L	1		04/27/16 14:35
Naphthalene	5.00	U	10.0	3.10	ug/L	1		04/27/16 14:35
n-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 14:35
n-Propylbenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 14:35
o-Xylene	0.500	U	1.00	0.310	ug/L	1		04/27/16 14:35
P & M -Xylene	1.00	U	2.00	0.620	ug/L	1		04/27/16 14:35
sec-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 14:35
Styrene	0.500	U	1.00	0.310	ug/L	1		04/27/16 14:35
tert-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 14:35
Tetrachloroethene	0.500	U	1.00	0.310	ug/L	1		04/27/16 14:35
Toluene	0.500	U	1.00	0.310	ug/L	1		04/27/16 14:35
trans-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		04/27/16 14:35
trans-1,3-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		04/27/16 14:35
Trichloroethene	0.500	U	1.00	0.310	ug/L	1		04/27/16 14:35
Trichlorofluoromethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 14:35
Vinyl acetate	5.00	U	10.0	3.10	ug/L	1		04/27/16 14:35
Vinyl chloride	0.500	U	1.00	0.310	ug/L	1		04/27/16 14:35
Xylenes (total)	1.50	U	3.00	1.00	ug/L	1		04/27/16 14:35
Surrogates								
1,2-Dichloroethane-D4 (surr)	111		81-118		%	1		04/27/16 14:35
4-Bromofluorobenzene (surr)	98.3		85-114		%	1		04/27/16 14:35
Toluene-d8 (surr)	102		89-112		%	1		04/27/16 14:35

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J flagging is activated

Results of **TB1**

Client Sample ID: **TB1**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161853006
Lab Project ID: 1161853

Collection Date: 04/19/16 12:30
Received Date: 04/20/16 13:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS15744
Analytical Method: SW8260B
Analyst: NRB
Analytical Date/Time: 04/27/16 14:35
Container ID: 1161853006-C

Prep Batch: VXX28746
Prep Method: SW5030B
Prep Date/Time: 04/27/16 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/19/2016 11:59:29AM

J flagging is activated

Results of **MW87B-0416**

Client Sample ID: **MW87B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161853007
Lab Project ID: 1161853

Collection Date: 04/19/16 14:02
Received Date: 04/20/16 13:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

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

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Aluminum	2.39		2.00	0.620	ug/L	2.5		05/18/16 08:54
Antimony	0.0250	U	0.0500	0.0150	ug/L	2.5		05/18/16 08:54
Arsenic	1.43		0.800	0.200	ug/L	2.5		05/18/16 08:54
Barium	41.1		0.250	0.0400	ug/L	2.5		05/18/16 08:54
Beryllium	0.0250	U	0.0500	0.0250	ug/L	2.5		05/18/16 08:54
Bismuth	0.0250	U	0.0500	0.0150	ug/L	2.5		05/18/16 08:54
Boron	5.63		5.00	1.50	ug/L	2.5		05/18/16 08:54
Cadmium	0.0250	U	0.0500	0.0150	ug/L	2.5		05/18/16 08:54
Calcium	15700		50.0	15.0	ug/L	2.5		05/18/16 08:54
Chromium	0.783		0.500	0.150	ug/L	2.5		05/18/16 08:54
Cobalt	0.384		0.0200	0.0100	ug/L	2.5		05/18/16 08:54
Copper	5.23		0.500	0.200	ug/L	2.5		05/18/16 08:54
Iron	8590		20.0	6.20	ug/L	2.5		05/18/16 08:54
Lead	0.0500	U	0.100	0.0310	ug/L	2.5		05/18/16 08:54
Magnesium	6230		20.0	6.20	ug/L	2.5		05/18/16 08:54
Manganese	366		0.100	0.0310	ug/L	2.5		05/18/16 08:54
Molybdenum	0.433		0.0500	0.0150	ug/L	2.5		05/18/16 08:54
Nickel	3.00		0.620	0.0620	ug/L	2.5		05/18/16 08:54
Potassium	2190		50.0	15.0	ug/L	2.5		05/18/16 08:54
Selenium	0.500	U	1.00	0.310	ug/L	2.5		05/18/16 08:54
Silicon	18100		100	31.0	ug/L	2.5		05/18/16 08:54
Silver	0.0100	U	0.0200	0.00620	ug/L	2.5		05/18/16 08:54
Sodium	8240		100	31.0	ug/L	2.5		05/18/16 08:54
Thallium	0.0100	U	0.0200	0.00620	ug/L	2.5		05/18/16 08:54
Tin	0.100	U	0.200	0.0620	ug/L	2.5		05/18/16 08:54
Vanadium	0.500	U	1.00	0.310	ug/L	2.5		05/18/16 08:54
Zinc	0.770	J	3.10	0.400	ug/L	2.5		05/18/16 08:54

Batch Information

Analytical Batch: MMS9354
Analytical Method: 200.8 Low Level
Analyst: VDL
Analytical Date/Time: 05/18/16 08:54
Container ID: 1161853007-A

Prep Batch: MXX29752
Prep Method: E200.2
Prep Date/Time: 05/17/16 08:07
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 10 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Hardness as CaCO3	64.9		1.00	1.00	mg/L	2.5		05/18/16 08:54

Print Date: 05/19/2016 11:59:29AM

J flagging is activated

Results of **MW87B-0416**

Client Sample ID: **MW87B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161853007
Lab Project ID: 1161853

Collection Date: 04/19/16 14:02
Received Date: 04/20/16 13:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

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

Batch Information

Analytical Batch: MMS9354
Analytical Method: SM21 2340B
Analyst: VDL
Analytical Date/Time: 05/18/16 08:54
Container ID: 1161853007-A

Prep Batch: MXX29752
Prep Method: E200.2
Prep Date/Time: 05/17/16 08:07
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 10 mL

Print Date: 05/19/2016 11:59:29AM

J flagging is activated

Results of **MW87Z-0416**

Client Sample ID: **MW87Z-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161853008
Lab Project ID: 1161853

Collection Date: 04/19/16 14:02
Received Date: 04/20/16 13:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

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

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Aluminum	2.85		2.00	0.620	ug/L	2.5		05/18/16 08:56
Antimony	0.0250	U	0.0500	0.0150	ug/L	2.5		05/18/16 08:56
Arsenic	1.32		0.800	0.200	ug/L	2.5		05/18/16 08:56
Barium	41.0		0.250	0.0400	ug/L	2.5		05/18/16 08:56
Beryllium	0.0250	U	0.0500	0.0250	ug/L	2.5		05/18/16 08:56
Bismuth	0.0250	U	0.0500	0.0150	ug/L	2.5		05/18/16 08:56
Boron	5.39		5.00	1.50	ug/L	2.5		05/18/16 08:56
Cadmium	0.0250	U	0.0500	0.0150	ug/L	2.5		05/18/16 08:56
Calcium	15600		50.0	15.0	ug/L	2.5		05/18/16 08:56
Chromium	0.922		0.500	0.150	ug/L	2.5		05/18/16 08:56
Cobalt	0.378		0.0200	0.0100	ug/L	2.5		05/18/16 08:56
Copper	5.41		0.500	0.200	ug/L	2.5		05/18/16 08:56
Iron	8600		20.0	6.20	ug/L	2.5		05/18/16 08:56
Lead	0.0500	U	0.100	0.0310	ug/L	2.5		05/18/16 08:56
Magnesium	6170		20.0	6.20	ug/L	2.5		05/18/16 08:56
Manganese	371		0.100	0.0310	ug/L	2.5		05/18/16 08:56
Molybdenum	0.451		0.0500	0.0150	ug/L	2.5		05/18/16 08:56
Nickel	3.14		0.620	0.0620	ug/L	2.5		05/18/16 08:56
Potassium	2200		50.0	15.0	ug/L	2.5		05/18/16 08:56
Selenium	0.500	U	1.00	0.310	ug/L	2.5		05/18/16 08:56
Silicon	18200		100	31.0	ug/L	2.5		05/18/16 08:56
Silver	0.0100	U	0.0200	0.00620	ug/L	2.5		05/18/16 08:56
Sodium	8230		100	31.0	ug/L	2.5		05/18/16 08:56
Thallium	0.0100	U	0.0200	0.00620	ug/L	2.5		05/18/16 08:56
Tin	0.197	J	0.200	0.0620	ug/L	2.5		05/18/16 08:56
Vanadium	0.500	U	1.00	0.310	ug/L	2.5		05/18/16 08:56
Zinc	0.769	J	3.10	0.400	ug/L	2.5		05/18/16 08:56

Batch Information

Analytical Batch: MMS9354
Analytical Method: 200.8 Low Level
Analyst: VDL
Analytical Date/Time: 05/18/16 08:56
Container ID: 1161853008-A

Prep Batch: MXX29752
Prep Method: E200.2
Prep Date/Time: 05/17/16 08:07
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 10 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Hardness as CaCO3	64.3		1.00	1.00	mg/L	2.5		05/18/16 08:56

Print Date: 05/19/2016 11:59:29AM

J flagging is activated

Results of **MW87Z-0416**

Client Sample ID: **MW87Z-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161853008
Lab Project ID: 1161853

Collection Date: 04/19/16 14:02
Received Date: 04/20/16 13:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

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

Batch Information

Analytical Batch: MMS9354
Analytical Method: SM21 2340B
Analyst: VDL
Analytical Date/Time: 05/18/16 08:56
Container ID: 1161853008-A

Prep Batch: MXX29752
Prep Method: E200.2
Prep Date/Time: 05/17/16 08:07
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 10 mL

Print Date: 05/19/2016 11:59:29AM

J flagging is activated

Results of **MW27-0416**

Client Sample ID: **MW27-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161853009
Lab Project ID: 1161853

Collection Date: 04/19/16 17:15
Received Date: 04/20/16 13:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

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

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Aluminum	6.83		2.00	0.620	ug/L	2.5		05/18/16 08:59
Antimony	0.0250	U	0.0500	0.0150	ug/L	2.5		05/18/16 08:59
Arsenic	1.09		0.800	0.200	ug/L	2.5		05/18/16 08:59
Barium	68.7		0.250	0.0400	ug/L	2.5		05/18/16 08:59
Beryllium	0.0250	U	0.0500	0.0250	ug/L	2.5		05/18/16 08:59
Bismuth	0.0250	U	0.0500	0.0150	ug/L	2.5		05/18/16 08:59
Boron	3.83	J	5.00	1.50	ug/L	2.5		05/18/16 08:59
Cadmium	0.0250	U	0.0500	0.0150	ug/L	2.5		05/18/16 08:59
Calcium	19600		50.0	15.0	ug/L	2.5		05/18/16 08:59
Chromium	0.641		0.500	0.150	ug/L	2.5		05/18/16 08:59
Cobalt	0.356		0.0200	0.0100	ug/L	2.5		05/18/16 08:59
Copper	1.02		0.500	0.200	ug/L	2.5		05/18/16 08:59
Iron	9400		20.0	6.20	ug/L	2.5		05/18/16 08:59
Lead	0.0500	U	0.100	0.0310	ug/L	2.5		05/18/16 08:59
Magnesium	6860		20.0	6.20	ug/L	2.5		05/18/16 08:59
Manganese	459		0.100	0.0310	ug/L	2.5		05/18/16 08:59
Molybdenum	0.199		0.0500	0.0150	ug/L	2.5		05/18/16 08:59
Nickel	2.04		0.620	0.0620	ug/L	2.5		05/18/16 08:59
Potassium	2140		50.0	15.0	ug/L	2.5		05/18/16 08:59
Selenium	0.500	U	1.00	0.310	ug/L	2.5		05/18/16 08:59
Silicon	16600		100	31.0	ug/L	2.5		05/18/16 08:59
Silver	0.0100	U	0.0200	0.00620	ug/L	2.5		05/18/16 08:59
Sodium	7520		100	31.0	ug/L	2.5		05/18/16 08:59
Thallium	0.0100	U	0.0200	0.00620	ug/L	2.5		05/18/16 08:59
Tin	0.100	U	0.200	0.0620	ug/L	2.5		05/18/16 08:59
Vanadium	0.500	U	1.00	0.310	ug/L	2.5		05/18/16 08:59
Zinc	1.07	J	3.10	0.400	ug/L	2.5		05/18/16 08:59

Batch Information

Analytical Batch: MMS9354
Analytical Method: 200.8 Low Level
Analyst: VDL
Analytical Date/Time: 05/18/16 08:59
Container ID: 1161853009-A

Prep Batch: MXX29752
Prep Method: E200.2
Prep Date/Time: 05/17/16 08:07
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 10 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Hardness as CaCO3	77.1		1.00	1.00	mg/L	2.5		05/18/16 08:59

Print Date: 05/19/2016 11:59:29AM

J flagging is activated

Results of **MW27-0416**

Client Sample ID: **MW27-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161853009
Lab Project ID: 1161853

Collection Date: 04/19/16 17:15
Received Date: 04/20/16 13:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

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

Batch Information

Analytical Batch: MMS9354
Analytical Method: SM21 2340B
Analyst: VDL
Analytical Date/Time: 05/18/16 08:59
Container ID: 1161853009-A

Prep Batch: MXX29752
Prep Method: E200.2
Prep Date/Time: 05/17/16 08:07
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 10 mL

Print Date: 05/19/2016 11:59:29AM

J flagging is activated

Method Blank

Blank ID: MB for HBN 1734140 [MXX/29752]
Blank Lab ID: 1324619

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161853001, 1161853002, 1161853003, 1161853004, 1161853005, 1161853007, 1161853008, 1161853009

Results by **200.8 Low Level**

Parameter	Results	LOQ/CL	DL	Units
Aluminum	1.27J	2.00	0.620	ug/L
Antimony	0.0250U	0.0500	0.0150	ug/L
Arsenic	0.400U	0.800	0.200	ug/L
Barium	0.125U	0.250	0.0400	ug/L
Beryllium	0.0250U	0.0500	0.0250	ug/L
Bismuth	0.0250U	0.0500	0.0150	ug/L
Boron	2.50U	5.00	1.50	ug/L
Cadmium	0.0250U	0.0500	0.0150	ug/L
Calcium	24.8J	50.0	15.0	ug/L
Chromium	0.250U	0.500	0.150	ug/L
Cobalt	0.0100U	0.0200	0.0100	ug/L
Copper	0.250U	0.500	0.200	ug/L
Iron	10.0U	20.0	6.20	ug/L
Lead	0.0500U	0.100	0.0310	ug/L
Magnesium	10.0U	20.0	6.20	ug/L
Manganese	0.0326J	0.100	0.0310	ug/L
Molybdenum	0.0250U	0.0500	0.0150	ug/L
Nickel	0.310U	0.620	0.0620	ug/L
Potassium	25.0U	50.0	15.0	ug/L
Selenium	0.500U	1.00	0.310	ug/L
Silicon	50.0U	100	31.0	ug/L
Silver	0.0140J	0.0200	0.00620	ug/L
Sodium	50.0U	100	31.0	ug/L
Thallium	0.0100U	0.0200	0.00620	ug/L
Tin	0.100U	0.200	0.0620	ug/L
Vanadium	0.500U	1.00	0.310	ug/L
Zinc	1.09J	3.10	0.400	ug/L

Batch Information

Analytical Batch: MMS9353
Analytical Method: 200.8 Low Level
Instrument: Perkin Elmer Nexlon P5
Analyst: VDL
Analytical Date/Time: 5/17/2016 6:06:51PM

Prep Batch: MXX29752
Prep Method: E200.2
Prep Date/Time: 5/17/2016 8:07:44AM
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 10 mL

Print Date: 05/19/2016 12:00:38PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161853 [MXX29752]
Blank Spike Lab ID: 1324620
Date Analyzed: 05/17/2016 18:09

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161853001, 1161853002, 1161853003, 1161853004, 1161853005, 1161853007, 1161853008, 1161853009

Results by **200.8 Low Level**

Blank Spike (ug/L)

Parameter	Spike	Result	Rec (%)	CL
Aluminum	50	51.2	102	(85-115)
Antimony	5	5.52	110	(85-115)
Arsenic	25	25.8	103	(85-115)
Barium	25	25.8	103	(85-115)
Beryllium	12.5	12.6	101	(85-115)
Bismuth	12.5	12.6	101	(85-115)
Boron	50	49.9	100	(85-115)
Cadmium	12.5	13.2	105	(85-115)
Calcium	5000	4660	93	(85-115)
Chromium	12.5	12.1	97	(85-115)
Cobalt	12.5	13.3	106	(85-115)
Copper	25	24.6	98	(85-115)
Iron	500	515	103	(85-115)
Lead	5	5.14	103	(85-115)
Magnesium	5000	4880	98	(85-115)
Manganese	50	51.3	103	(85-115)
Molybdenum	12.5	12.7	102	(85-115)
Nickel	12.5	12.9	103	(85-115)
Potassium	5000	5040	101	(85-115)
Selenium	25	26.3	105	(85-115)
Silicon	2500	2470	99	(85-115)
Silver	5	5.35	107	(85-115)
Sodium	5000	4970	99	(85-115)
Thallium	2.5	2.59	103	(85-115)
Tin	12.5	13.3	106	(85-115)
Vanadium	25	24.0	96	(85-115)
Zinc	50	49.9	100	(85-115)

Batch Information

Analytical Batch: **MMS9353**
Analytical Method: **200.8 Low Level**
Instrument: **Perkin Elmer Nexlon P5**
Analyst: **VDL**

Prep Batch: **MXX29752**
Prep Method: **E200.2**
Prep Date/Time: **05/17/2016 08:07**
Spike Init Wt./Vol.: 50 ug/L Extract Vol: 10 mL
Dupe Init Wt./Vol.: Extract Vol:

Print Date: 05/19/2016 12:00:43PM

Matrix Spike Summary

Original Sample ID: 1161853001
MS Sample ID: 1324621 MS
MSD Sample ID: 1324622 MSD

Analysis Date: 05/17/2016 18:12
Analysis Date: 05/17/2016 18:15
Analysis Date: 05/17/2016 18:18
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161853001, 1161853002, 1161853003, 1161853004, 1161853005, 1161853007, 1161853008, 1161853009

Results by **200.8 Low Level**

		Matrix Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Aluminum	6.51	50.0	57.5	102	50.0	54.5	96	70-130	5.30	(< 20)
Antimony	0.0250U	5.00	5.74	115	5.00	5.17	103	70-130	10.40	(< 20)
Arsenic	0.400U	25.0	25.4	102	25.0	23.8	95	70-130	6.60	(< 20)
Barium	0.207J	25.0	27.8	110	25.0	25.0	99	70-130	10.60	(< 20)
Beryllium	0.0250U	12.5	12.5	100	12.5	11.8	95	70-130	5.30	(< 20)
Bismuth	0.0250U	12.5	13.2	105	12.5	12.2	98	70-130	7.50	(< 20)
Boron	2.50U	50.0	49.3	99	50.0	47.4	95	70-130	4.10	(< 20)
Cadmium	0.0250U	12.5	13.7	110	12.5	12.3	98	70-130	10.80	(< 20)
Calcium	25.0U	5000	4930	99	5000	4550	91	70-130	7.90	(< 20)
Chromium	0.250U	12.5	13.1	105	12.5	11.9	95	70-130	9.20	(< 20)
Cobalt	0.0100U	12.5	13.2	105	12.5	12.5	100	70-130	4.90	(< 20)
Copper	0.208J	25.0	25.5	101	25.0	24.0	95	70-130	5.90	(< 20)
Iron	12.6J	500	549	107	500	533	104	70-130	3.00	(< 20)
Lead	0.0500U	5.00	5.38	108	5.00	5.02	100	70-130	6.80	(< 20)
Magnesium	10.0U	5000	5100	102	5000	4720	94	70-130	7.80	(< 20)
Manganese	0.120	50.0	51.7	103	50.0	49.6	99	70-130	4.20	(< 20)
Molybdenum	0.0250U	12.5	13.2	105	12.5	12.6	101	70-130	4.60	(< 20)
Nickel	0.310U	12.5	13.7	110	12.5	12.4	99	70-130	10.60	(< 20)
Potassium	25.0U	5000	5340	107	5000	5050	101	70-130	5.60	(< 20)
Selenium	0.500U	25.0	25.4	102	25.0	24.5	98	70-130	4.00	(< 20)
Silver	0.00738J	5.00	5.55	111	5.00	4.97	99	70-130	11.10	(< 20)
Sodium	50.0U	5000	4980	100	5000	4740	95	70-130	5.00	(< 20)
Thallium	0.0100U	2.50	2.69	107	2.50	2.51	100	70-130	6.90	(< 20)
Tin	0.100U	12.5	14	112	12.5	12.5	100	70-130	11.20	(< 20)
Vanadium	0.347J	25.0	26.3	104	25.0	24.6	97	70-130	6.50	(< 20)
Zinc	0.622J	50.0	49.8	98	50.0	47.1	93	70-130	5.60	(< 20)

Batch Information

Analytical Batch: MMS9353
Analytical Method: 200.8 Low Level
Instrument: Perkin Elmer NexIon P5
Analyst: VDL
Analytical Date/Time: 5/17/2016 6:15:32PM

Prep Batch: MXX29752
Prep Method: LL Digest for Metals on ICP-MS
Prep Date/Time: 5/17/2016 8:07:44AM
Prep Initial Wt./Vol.: 50.00mL
Prep Extract Vol: 10.00mL

Print Date: 05/19/2016 12:00:46PM

Method Blank

Blank ID: MB for HBN 1732271 [STS/5018]
Blank Lab ID: 1321127

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161853003, 1161853004, 1161853005

Results by **SM21 2540D**

Parameter	Results	LOQ/CL	DL	Units
Total Suspended Solids	0.500U	1.00	0.310	mg/L

Batch Information

Analytical Batch: STS5018
Analytical Method: SM21 2540D
Instrument:
Analyst: MBS
Analytical Date/Time: 4/25/2016 12:19:31PM

Print Date: 05/19/2016 12:00:54PM

Duplicate Sample Summary

Original Sample ID: 1161861007
Duplicate Sample ID: 1321130
QC for Samples:
1161853003, 1161853004, 1161853005

Analysis Date: 04/25/2016 12:19
Matrix: Water (Surface, Eff., Ground)

Results by **SM21 2540D**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
Total Suspended Solids	6300	6200	mg/L	1.60	(< 5)

Batch Information

Analytical Batch: STS5018
Analytical Method: SM21 2540D
Instrument:
Analyst: MBS

Print Date: 05/19/2016 12:00:56PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161853 [STS5018]
Blank Spike Lab ID: 1321128
Date Analyzed: 04/25/2016 12:19

Spike Duplicate ID: LCSD for HBN 1161853 [STS5018]
Spike Duplicate Lab ID: 1321129
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161853003, 1161853004, 1161853005

Results by **SM21 2540D**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Total Suspended Solids	50	49.3	99	50	49.6	99	(75-125)	0.61	(< 5)

Batch Information

Analytical Batch: **STS5018**
Analytical Method: **SM21 2540D**
Instrument:
Analyst: **MBS**

Prep Batch:
Prep Method:
Prep Date/Time:
Spike Init Wt./Vol.: 50 mg/L Extract Vol: 1000 mL
Dupe Init Wt./Vol.: 50 mg/L Extract Vol: 1000 mL

Print Date: 05/19/2016 12:00:57PM

Method Blank

Blank ID: MB for HBN 17323[2 S/ T5[0208
Blank] aL ID: 13212b7

Matrix: Water (Turface, Eff., Ground)

QC for Tamples:
11b16[3003, 11b16[3004, 11b16[300[

Results Ly **SM21 2540C**

Parameter	Results	] OQ5C]	D]	Units
/ otal Dissolged Tolids	[.00U	10.0	3.10	mA5]

Batch Information

hnalytical Batc9: T/ T[020
hnalytical Met9od: TM21 2[40C
Instrument:
hnalyst: MBT
hnalytical Date5/ ime: 452b5201b v:[6:[bhM

Print Date: 0[51v5201b 12:01:00PM

Duplicate Sample Summary

Original Sample ID: 1161806771
Duplicate Sample ID: 1321207
QC for Samples:
1161893773, 1161893774, 1161893779

Analysis Date: 74/26/2716 75:98
Matrix: Water (Surface, Eff., Ground)

Results by **SM21 2540C**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
Total Dissol<ed Solids	121	122	mg/L	7.82	(B 9)

Batch Information

Analytical hatcv: STS9727
Analytical Metvod: SM21 2947C
Instrument:
Analyst: MhS

Print Date: 79/15/2716 12:71:72PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161853 [STS50] 0b
Blank Spike La2 ID: 13] 1] 68
Date Analyzed: 04/] 6/] 016 09:58

Spike Duplicate ID: LCSD for HBN 1161853 [STS50] 0b
Spike Duplicate La2 ID: 13] 1] 69
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161853003, 1161853004, 1161853005

Results 2y **SM21 2540C**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Total Dissol7ed Solids	330	330	100	330	3] 9	100	(- 5<1] 5)	0.30	(h 5)

Batch Information

Analytical BatcV: **STS5020**
Analytical MetVod: **SM21 2540C**
Instrument:
Analyst: **MBS**

Prep BatcV:
Prep MetVod:
Prep Date/Time:
Spike Init Wt./v ol.: 330 mg/L Extract v ol: 100 mL
Dupe Init Wt./v ol.: 330 mg/L Extract v ol: 100 mL

Print Date: 05/19/] 016 1] :01:04PM

Method Blank

Blank ID: MB for HBN 1732266 [VXX/28731]
Blank Lab ID: 1321098

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161853003, 1161853004, 1161853005, 1161853006

Results by **AK101**

Parameter	Results	LOQ/CL	DL	Units
Gasoline Range Organics	0.0500U	0.100	0.0310	mg/L
Surrogates				
4-Bromofluorobenzene (surr)	78	50-150		%

Batch Information

Analytical Batch: VFC12972
Analytical Method: AK101
Instrument: Agilent 7890A PID/FID
Analyst: S.P
Analytical Date/Time: 4/22/2016 10:03:00AM

Prep Batch: VXX28731
Prep Method: SW5030B
Prep Date/Time: 4/22/2016 8:00:00AM
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/19/2016 12:01:08PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161853 [VXX28731]
Blank Spike Lab ID: 1321101
Date Analyzed: 04/22/2016 11:00

Spike Duplicate ID: LCSD for HBN 1161853 [VXX28731]
Spike Duplicate Lab ID: 1321102
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161853003, 1161853004, 1161853005, 1161853006

Results by **AK101**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Gasoline Range Organics	1.00	1.00	100	1.00	1.00	100	(60-120)	0.35	(< 20)
Surrogates									
4-Bromofluorobenzene (surr)	0.0500	85.7	86	0.0500	87.6	88	(50-150)	2.30	

Batch Information

Analytical Batch: **VFC12972**
Analytical Method: **AK101**
Instrument: **Agilent 7890A PID/FID**
Analyst: **S.P**

Prep Batch: **VXX28731**
Prep Method: **SW5030B**
Prep Date/Time: **04/22/2016 08:00**
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: 05/19/2016 12:01:12PM

Method Blank

Blank ID: MB for HBN 1732500 [VXX/28746]
Blank Lab ID: 1321730

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161853003, 1161853004, 1161853005, 1161853006

Results by **SW8260B**

Parameter	Results	LOQ/CL	DL	Units
1,1,1,2-Tetrachloroethane	0.250U	0.500	0.150	ug/L
1,1,1-Trichloroethane	0.500U	1.00	0.310	ug/L
1,1,2,2-Tetrachloroethane	0.250U	0.500	0.150	ug/L
1,1,2-Trichloroethane	0.500U	1.00	0.310	ug/L
1,1-Dichloroethane	0.500U	1.00	0.310	ug/L
1,1-Dichloroethene	0.500U	1.00	0.310	ug/L
1,1-Dichloropropene	0.500U	1.00	0.310	ug/L
1,2,3-Trichlorobenzene	0.500U	1.00	0.310	ug/L
1,2,3-Trichloropropane	0.500U	1.00	0.310	ug/L
1,2,4-Trichlorobenzene	0.500U	1.00	0.310	ug/L
1,2,4-Trimethylbenzene	0.500U	1.00	0.310	ug/L
1,2-Dibromo-3-chloropropane	5.00U	10.0	3.10	ug/L
1,2-Dibromoethane	0.500U	1.00	0.310	ug/L
1,2-Dichlorobenzene	0.500U	1.00	0.310	ug/L
1,2-Dichloroethane	0.250U	0.500	0.150	ug/L
1,2-Dichloropropane	0.500U	1.00	0.310	ug/L
1,3,5-Trimethylbenzene	0.500U	1.00	0.310	ug/L
1,3-Dichlorobenzene	0.500U	1.00	0.310	ug/L
1,3-Dichloropropane	0.250U	0.500	0.150	ug/L
1,4-Dichlorobenzene	0.250U	0.500	0.150	ug/L
2,2-Dichloropropane	0.500U	1.00	0.310	ug/L
2-Butanone (MEK)	5.00U	10.0	3.10	ug/L
2-Chlorotoluene	0.500U	1.00	0.310	ug/L
2-Hexanone	5.00U	10.0	3.10	ug/L
4-Chlorotoluene	0.500U	1.00	0.310	ug/L
4-Isopropyltoluene	0.500U	1.00	0.310	ug/L
4-Methyl-2-pentanone (MIBK)	5.00U	10.0	3.10	ug/L
Benzene	0.200U	0.400	0.120	ug/L
Bromobenzene	0.500U	1.00	0.310	ug/L
Bromochloromethane	0.500U	1.00	0.310	ug/L
Bromodichloromethane	0.250U	0.500	0.150	ug/L
Bromoform	0.500U	1.00	0.310	ug/L
Bromomethane	5.00U	10.0	3.10	ug/L
Carbon disulfide	5.00U	10.0	3.10	ug/L
Carbon tetrachloride	0.500U	1.00	0.310	ug/L
Chlorobenzene	0.250U	0.500	0.150	ug/L
Chloroethane	0.500U	1.00	0.310	ug/L
Chloroform	0.500U	1.00	0.300	ug/L

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Method Blank

Blank ID: MB for HBN 1732500 [VXX/28746]
Blank Lab ID: 1321730

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161853003, 1161853004, 1161853005, 1161853006

Results by **SW8260B**

Parameter	Results	LOQ/CL	DL	Units
Chloromethane	0.500U	1.00	0.310	ug/L
cis-1,2-Dichloroethene	0.500U	1.00	0.310	ug/L
cis-1,3-Dichloropropene	0.250U	0.500	0.150	ug/L
Dibromochloromethane	0.250U	0.500	0.150	ug/L
Dibromomethane	0.500U	1.00	0.310	ug/L
Dichlorodifluoromethane	0.500U	1.00	0.310	ug/L
Ethylbenzene	0.500U	1.00	0.310	ug/L
Freon-113	5.00U	10.0	3.10	ug/L
Hexachlorobutadiene	0.500U	1.00	0.310	ug/L
Isopropylbenzene (Cumene)	0.500U	1.00	0.310	ug/L
Methylene chloride	2.50U	5.00	1.00	ug/L
Methyl-t-butyl ether	5.00U	10.0	3.10	ug/L
Naphthalene	5.00U	10.0	3.10	ug/L
n-Butylbenzene	0.500U	1.00	0.310	ug/L
n-Propylbenzene	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
sec-Butylbenzene	0.500U	1.00	0.310	ug/L
Styrene	0.500U	1.00	0.310	ug/L
tert-Butylbenzene	0.500U	1.00	0.310	ug/L
Tetrachloroethene	0.500U	1.00	0.310	ug/L
Toluene	0.500U	1.00	0.310	ug/L
trans-1,2-Dichloroethene	0.500U	1.00	0.310	ug/L
trans-1,3-Dichloropropene	0.500U	1.00	0.310	ug/L
Trichloroethene	0.500U	1.00	0.310	ug/L
Trichlorofluoromethane	0.500U	1.00	0.310	ug/L
Vinyl acetate	5.00U	10.0	3.10	ug/L
Vinyl chloride	0.500U	1.00	0.310	ug/L
Xylenes (total)	1.50U	3.00	1.00	ug/L
Surrogates				
1,2-Dichloroethane-D4 (surr)	109	81-118		%
4-Bromofluorobenzene (surr)	97.7	85-114		%
Toluene-d8 (surr)	99.9	89-112		%

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Method Blank

Blank ID: MB for HBN 1732500 [VXX/28746]
Blank Lab ID: 1321730

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161853003, 1161853004, 1161853005, 1161853006

Results by **SW8260B**

Parameter	Results	LOQ/CL	DL	Units

Batch Information

Analytical Batch: VMS15744
Analytical Method: SW8260B
Instrument: VPA 780/5975 GC/MS
Analyst: NRB
Analytical Date/Time: 4/27/2016 9:59:00AM

Prep Batch: VXX28746
Prep Method: SW5030B
Prep Date/Time: 4/27/2016 8:00:00AM
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/19/2016 12:01:15PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161853 [VXX28746]
Blank Spike Lab ID: 1321731
Date Analyzed: 04/27/2016 10:38

Spike Duplicate ID: LCSD for HBN 1161853 [VXX28746]
Spike Duplicate Lab ID: 1321732
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161853003, 1161853004, 1161853005, 1161853006

Results by **SW8260B**

	Blank Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
1,1,1,2-Tetrachloroethane	30	32.6	109	30	32.0	107	(78-124)	2.00	(< 20)
1,1,1-Trichloroethane	30	32.5	108	30	32.6	109	(74-131)	0.15	(< 20)
1,1,2,2-Tetrachloroethane	30	30.8	103	30	28.9	96	(71-121)	6.40	(< 20)
1,1,2-Trichloroethane	30	31.9	106	30	31.2	104	(80-119)	2.20	(< 20)
1,1-Dichloroethane	30	32.4	108	30	33.0	110	(77-125)	1.80	(< 20)
1,1-Dichloroethene	30	31.5	105	30	31.5	105	(71-131)	0.03	(< 20)
1,1-Dichloropropene	30	31.8	106	30	31.2	104	(79-125)	1.70	(< 20)
1,2,3-Trichlorobenzene	30	33.8	113	30	32.5	108	(69-129)	3.90	(< 20)
1,2,3-Trichloropropane	30	31.3	104	30	29.0	97	(73-122)	7.60	(< 20)
1,2,4-Trichlorobenzene	30	33.0	110	30	32.9	110	(69-130)	0.27	(< 20)
1,2,4-Trimethylbenzene	30	29.7	99	30	29.6	99	(79-124)	0.27	(< 20)
1,2-Dibromo-3-chloropropane	30	31.0	103	30	27.1	90	(62-128)	13.40	(< 20)
1,2-Dibromoethane	30	33.0	110	30	31.9	106	(77-121)	3.40	(< 20)
1,2-Dichlorobenzene	30	31.1	104	30	31.2	104	(80-119)	0.10	(< 20)
1,2-Dichloroethane	30	32.7	109	30	32.7	109	(73-128)	0.03	(< 20)
1,2-Dichloropropane	30	34.2	114	30	34.2	114	(78-122)	0.06	(< 20)
1,3,5-Trimethylbenzene	30	29.7	99	30	29.4	98	(75-124)	0.88	(< 20)
1,3-Dichlorobenzene	30	31.2	104	30	31.3	104	(80-119)	0.06	(< 20)
1,3-Dichloropropane	30	31.2	104	30	30.4	101	(80-119)	2.50	(< 20)
1,4-Dichlorobenzene	30	32.0	107	30	31.6	105	(79-118)	1.10	(< 20)
2,2-Dichloropropane	30	32.2	107	30	32.3	108	(60-139)	0.25	(< 20)
2-Butanone (MEK)	90	106	118	90	85.6	95	(56-143)	21.50	* (< 20)
2-Chlorotoluene	30	31.2	104	30	31.6	105	(79-122)	1.20	(< 20)
2-Hexanone	90	103	115	90	88.7	99	(57-139)	14.90	(< 20)
4-Chlorotoluene	30	31.3	104	30	32.0	107	(78-122)	2.40	(< 20)
4-Isopropyltoluene	30	30.2	101	30	29.6	99	(77-127)	2.20	(< 20)
4-Methyl-2-pentanone (MIBK)	90	102	113	90	90.7	101	(67-130)	11.60	(< 20)
Benzene	30	32.0	107	30	31.7	106	(79-120)	0.97	(< 20)
Bromobenzene	30	31.9	106	30	31.7	106	(80-120)	0.57	(< 20)
Bromochloromethane	30	32.3	108	30	33.0	110	(78-123)	2.00	(< 20)
Bromodichloromethane	30	31.8	106	30	31.9	106	(79-125)	0.19	(< 20)
Bromoform	30	33.2	111	30	32.0	107	(66-130)	3.80	(< 20)
Bromomethane	30	24.0	80	30	28.5	95	(53-141)	16.90	(< 20)
Carbon disulfide	45	43.5	97	45	43.7	97	(64-133)	0.39	(< 20)

Print Date: 05/19/2016 12:01:17PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161853 [VXX28746]
Blank Spike Lab ID: 1321731
Date Analyzed: 04/27/2016 10:38

Spike Duplicate ID: LCSD for HBN 1161853 [VXX28746]
Spike Duplicate Lab ID: 1321732
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161853003, 1161853004, 1161853005, 1161853006

Results by **SW8260B**

	Blank Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Carbon tetrachloride	30	33.2	111	30	32.9	110	(72-136)	0.79	(< 20)
Chlorobenzene	30	32.2	107	30	31.7	106	(82-118)	1.40	(< 20)
Chloroethane	30	25.2	84	30	29.2	97	(60-138)	14.80	(< 20)
Chloroform	30	29.5	98	30	29.9	100	(79-124)	1.30	(< 20)
Chloromethane	30	32.4	108	30	34.3	114	(50-139)	5.60	(< 20)
cis-1,2-Dichloroethene	30	31.7	106	30	32.5	108	(78-123)	2.60	(< 20)
cis-1,3-Dichloropropene	30	30.6	102	30	30.5	102	(75-124)	0.43	(< 20)
Dibromochloromethane	30	33.3	111	30	33.0	110	(74-126)	0.93	(< 20)
Dibromomethane	30	31.0	103	30	31.0	103	(79-123)	0.03	(< 20)
Dichlorodifluoromethane	30	31.5	105	30	30.7	102	(32-152)	2.40	(< 20)
Ethylbenzene	30	32.9	110	30	32.5	108	(79-121)	1.20	(< 20)
Freon-113	45	48.3	107	45	47.7	106	(70-136)	1.30	(< 20)
Hexachlorobutadiene	30	32.9	110	30	32.8	109	(66-134)	0.24	(< 20)
Isopropylbenzene (Cumene)	30	32.5	108	30	32.6	109	(72-131)	0.15	(< 20)
Methylene chloride	30	28.4	95	30	28.8	96	(74-124)	1.30	(< 20)
Methyl-t-butyl ether	45	47.7	106	45	46.7	104	(71-124)	2.30	(< 20)
Naphthalene	30	31.6	105	30	28.9	96	(61-128)	9.20	(< 20)
n-Butylbenzene	30	29.8	99	30	29.4	98	(75-128)	1.50	(< 20)
n-Propylbenzene	30	32.3	108	30	31.9	106	(76-126)	1.30	(< 20)
o-Xylene	30	33.9	113	30	34.0	113	(78-122)	0.03	(< 20)
P & M -Xylene	60	66.9	111	60	66.9	112	(80-121)	0.06	(< 20)
sec-Butylbenzene	30	32.3	108	30	32.3	108	(77-126)	0.09	(< 20)
Styrene	30	33.1	110	30	33.5	112	(78-123)	1.00	(< 20)
tert-Butylbenzene	30	32.5	108	30	32.7	109	(78-124)	0.77	(< 20)
Tetrachloroethene	30	33.0	110	30	32.8	109	(74-129)	0.85	(< 20)
Toluene	30	30.5	102	30	29.9	100	(80-121)	1.80	(< 20)
trans-1,2-Dichloroethene	30	31.9	106	30	32.3	108	(75-124)	1.10	(< 20)
trans-1,3-Dichloropropene	30	29.3	98	30	29.8	99	(73-127)	1.80	(< 20)
Trichloroethene	30	33.4	111	30	33.0	110	(79-123)	1.40	(< 20)
Trichlorofluoromethane	30	30.9	103	30	30.8	103	(65-141)	0.52	(< 20)
Vinyl acetate	30	33.0	110	30	31.7	106	(54-146)	4.00	(< 20)
Vinyl chloride	30	32.7	109	30	32.3	108	(58-137)	1.30	(< 20)
Xylenes (total)	90	101	112	90	101	112	(79-121)	0.05	(< 20)

Print Date: 05/19/2016 12:01:17PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161853 [VXX28746]
Blank Spike Lab ID: 1321731
Date Analyzed: 04/27/2016 10:38

Spike Duplicate ID: LCSD for HBN 1161853 [VXX28746]
Spike Duplicate Lab ID: 1321732
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161853003, 1161853004, 1161853005, 1161853006

Results by **SW8260B**

	Blank Spike (%)			Spike Duplicate (%)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Surrogates									
1,2-Dichloroethane-D4 (surr)	30	103	103	30	104	104	(81-118)	0.71	
4-Bromofluorobenzene (surr)	30	95.4	95	30	97.2	97	(85-114)	1.80	
Toluene-d8 (surr)	30	102	102	30	102	102	(89-112)	0.36	

Batch Information

Analytical Batch: **VMS15744**
Analytical Method: **SW8260B**
Instrument: **VPA 780/5975 GC/MS**
Analyst: **NRB**

Prep Batch: **VXX28746**
Prep Method: **SW5030B**
Prep Date/Time: **04/27/2016 08:00**
Spike Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL
Dupe Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL

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Method Blank

Blank ID: MB for HBN 1732021 [WAT/10630]
Blank Lab ID: 1320675

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161853003, 1161853004, 1161853005

Results by **SM21 2130B**

Parameter	Results	LOQ/CL	DL	Units
Turbidity	0.100U	0.200	0.100	NTU

Batch Information

Analytical Batch: WAT10630
Analytical Method: SM21 2130B
Instrument: Turbidimeter
Analyst: ACF
Analytical Date/Time: 4/20/2016 6:27:00PM

Print Date: 05/19/2016 12:01:21PM

Duplicate Sample Summary

Original Sample ID: 1161853003
Duplicate Sample ID: 1320678
QC for Samples:
1161853003, 1161853004, 1161853005

Analysis Date: 04/20/2016 18:27
Matrix: Water (Surface, Eff., Ground)

Results by **SM21 2130B**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
Turbidity	9.90	10.0	NTU	1.00	(< 20)

Batch Information

Analytical Batch: WAT10630
Analytical Method: SM21 2130B
Instrument: Turbidimeter
Analyst: ACF

Print Date: 05/19/2016 12:01:23PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161853 [WAT10630]
Blank Spike Lab ID: 1320676
Date Analyzed: 04/20/2016 18:27

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161853003, 1161853004, 1161853005

Results by **SM21 2130B**

Blank Spike (NTU)

Parameter	Spike	Result	Rec (%)	CL
Turbidity	10	11.0	110	(90-110)

Batch Information

Analytical Batch: **WAT10630**
Analytical Method: **SM21 2130B**
Instrument: **Turbidimeter**
Analyst: **ACF**

Prep Batch:
Prep Method:
Prep Date/Time:
Spike Init Wt./Vol.: 10 NTU Extract Vol: 1 mL
Dupe Init Wt./Vol.: Extract Vol:

Print Date: 05/19/2016 12:01:25PM

Method Blank

Blank ID: MB for HBN 1732376 [WFI/2469]
Blank Lab ID: 1321395

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161853003, 1161853004, 1161853005

Results by **SM21 4500NO3-F**

Parameter	Results	LOQ/CL	DL	Units
Nitrate-N	0.0574J	0.100	0.0300	mg/L
Nitrite-N	0.0500U	0.100	0.0300	mg/L
Total Nitrate/Nitrite-N	0.0666J	0.100	0.0300	mg/L

Batch Information

Analytical Batch: WFI2469
Analytical Method: SM21 4500NO3-F
Instrument: Astoria segmented flow
Analyst: NEG
Analytical Date/Time: 4/21/2016 12:20:20PM

Print Date: 05/19/2016 12:01:28PM

Method Blank

Blank ID: MB for HBN 1732376 [WFI/2469]
Blank Lab ID: 1321405

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161853003, 1161853004, 1161853005

Results by **SM21 4500NO3-F**

Parameter	Results	LOQ/CL	DL	Units
Nitrate-N	0.0572J	0.100	0.0300	mg/L
Nitrite-N	0.0500U	0.100	0.0300	mg/L
Total Nitrate/Nitrite-N	0.0636J	0.100	0.0300	mg/L

Batch Information

Analytical Batch: WFI2469
Analytical Method: SM21 4500NO3-F
Instrument: Astoria segmented flow
Analyst: NEG
Analytical Date/Time: 4/21/2016 2:14:18PM

Print Date: 05/19/2016 12:01:28PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161853 [WFI2469]
Blank Spike Lab ID: 1321394
Date Analyzed: 04/21/2016 12:18

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161853003, 1161853004, 1161853005

Results by **SM21 4500NO3-F**

Blank Spike (mg/L)

Parameter	Spike	Result	Rec (%)	CL
Nitrate-N	2.5	2.53	101	(70-130)
Nitrite-N	2.5	2.51	100	(90-110)
Total Nitrate/Nitrite-N	5	5.04	101	(90-110)

Batch Information

Analytical Batch: **WFI2469**
Analytical Method: **SM21 4500NO3-F**
Instrument: **Astoria segmented flow**
Analyst: **NEG**

Prep Batch:
Prep Method:
Prep Date/Time:
Spike Init Wt./Vol.: 2.5 mg/L Extract Vol: 5 mL
Dupe Init Wt./Vol.: Extract Vol:

Print Date: 05/19/2016 12:01:30PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161853 [WFI2469]
Blank Spike Lab ID: 1321403
Date Analyzed: 04/21/2016 14:12

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161853003, 1161853004, 1161853005

Results by **SM21 4500NO3-F**

Blank Spike (mg/L)

Parameter	Spike	Result	Rec (%)	CL
Nitrate-N	2.5	2.54	102	(70-130)
Nitrite-N	2.5	2.53	101	(90-110)
Total Nitrate/Nitrite-N	5	5.07	101	(90-110)

Batch Information

Analytical Batch: **WFI2469**
Analytical Method: **SM21 4500NO3-F**
Instrument: **Astoria segmented flow**
Analyst: **NEG**

Prep Batch:
Prep Method:
Prep Date/Time:
Spike Init Wt./Vol.: 2.5 mg/L Extract Vol: 5 mL
Dupe Init Wt./Vol.: Extract Vol:

Print Date: 05/19/2016 12:01:30PM

Matrix Spike Summary

Original Sample ID: 1161853005
MS Sample ID: 1321398 MS
MSD Sample ID: 1321399 MSD

Analysis Date: 04/21/2016 12:29
Analysis Date: 04/21/2016 12:30
Analysis Date: 04/21/2016 12:32
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161853003, 1161853004, 1161853005

Results by **SM21 4500NO3-F**

		Matrix Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Nitrate-N	0.0500U	2.50	2.21	89	2.50	2.19	88	70-130	1.00	(< 25)
Nitrite-N	0.0500U	2.50	2.53	101	2.50	2.54	102	90-110	0.18	(< 25)

Batch Information

Analytical Batch: WFI2469
Analytical Method: SM21 4500NO3-F
Instrument: Astoria segmented flow
Analyst: NEG
Analytical Date/Time: 4/21/2016 12:30:49PM

Prep Batch:
Prep Method:
Prep Date/Time:
Prep Initial Wt./Vol.: 5.00mL
Prep Extract Vol: 5.00mL

Print Date: 05/19/2016 12:01:32PM

Duplicate Sample Summary

Original Sample ID: 1161876001
Duplicate Sample ID: 1321380
QC for Samples:
1161853003, 1161853004, 1161853005

Analysis Date: 04/25/2016 17:11
Matrix: Water (Surface, Eff., Ground)

Results by **SM21 4500-H B**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
pH	7.90	7.90	pH units	0.00	(< 5)

Batch Information

Analytical Batch: WTI4443
Analytical Method: SM21 4500-H B
Instrument: Titration
Analyst: ACF

Print Date: 05/19/2016 12:01:35PM

Duplicate Sample Summary

Original Sample ID: 1161922003
Duplicate Sample ID: 1321381
QC for Samples:
1161853003, 1161853004, 1161853005

Analysis Date: 04/25/2016 16:18
Matrix: Water (Surface, Eff., Ground)

Results by **SM21 4500-H B**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
pH	6.70	6.70	pH units	0.00	(< 5)

Batch Information

Analytical Batch: WTI4443
Analytical Method: SM21 4500-H B
Instrument: Titration
Analyst: ACF

Print Date: 05/19/2016 12:01:35PM

Duplicate Sample Summary

Original Sample ID: 1161885003
Duplicate Sample ID: 1321385
QC for Samples:
1161853003, 1161853004, 1161853005

Analysis Date: 04/25/2016 20:15
Matrix: Drinking Water

Results by **SM21 4500-H B**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
pH	7.50	7.50	pH units	0.00	(< 5)

Batch Information

Analytical Batch: WTI4443
Analytical Method: SM21 4500-H B
Instrument: Titration
Analyst: ACF

Print Date: 05/19/2016 12:01:35PM

Duplicate Sample Summary

Original Sample ID: 1161885004
Duplicate Sample ID: 1321386
QC for Samples:
1161853003, 1161853004, 1161853005

Analysis Date: 04/25/2016 20:32
Matrix: Drinking Water

Results by **SM21 4500-H B**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
pH	7.30	7.30	pH units	0.00	(< 5)

Batch Information

Analytical Batch: WTI4443
Analytical Method: SM21 4500-H B
Instrument: Titration
Analyst: ACF

Print Date: 05/19/2016 12:01:35PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161853 [WTI4443]
Blank Spike Lab ID: 1321377
Date Analyzed: 04/25/2016 14:47

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161853003, 1161853004, 1161853005

Results by **SM21 4500-H B**

Blank Spike (pH units)

Parameter	Spike	Result	Rec (%)	CL
pH	7	7.01	100	(99-101)

Batch Information

Analytical Batch: **WTI4443**
Analytical Method: **SM21 4500-H B**
Instrument: **Titration**
Analyst: **ACF**

Prep Batch:
Prep Method:
Prep Date/Time:
Spike Init Wt./Vol.: 7 pH units Extract Vol: 1 mL
Dupe Init Wt./Vol.: Extract Vol:

Print Date: 05/19/2016 12:01:37PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161853 [WTI4443]
Blank Spike Lab ID: 1321382
Date Analyzed: 04/25/2016 19:16

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161853003, 1161853004, 1161853005

Results by **SM21 4500-H B**

Blank Spike (pH units)

Parameter	Spike	Result	Rec (%)	CL
pH	7	7.01	100	(99-101)

Batch Information

Analytical Batch: **WTI4443**
Analytical Method: **SM21 4500-H B**
Instrument: **Titration**
Analyst: **ACF**

Prep Batch:
Prep Method:
Prep Date/Time:
Spike Init Wt./Vol.: 7 pH units Extract Vol: 1 mL
Dupe Init Wt./Vol.: Extract Vol:

Print Date: 05/19/2016 12:01:37PM

Method Blank

Blank ID: MB for HBN 1732307 [WAIT / / 6]
Blank Lab ID: 1321/ 65

Ma4ti : Wa4er xS(rfaue, c ffE. ro(nGd

QC for Samples:
1151063883, 115106388/ , 1151063886

) es(l4s bR SM21 2320B

Oarame4er	) es(l4s	LUQTCL	DL	y nt4s
Plkaltnt4R	6BB8y	18BB	3E18	mhTL

Batch Information

PnalR4tual Ba4uF: WAI/ / / 6
PnalR4tual Me4FoG: SM21 2328B
Ins4(men4 At4a4on
PnalRs4 PC9
PnalR4tual Da4eTAtme: / T26T2815 3:3v:27OM

Ortn4Da4e: 86TlvT2815 12:81:/ 8OM

Duplicate Sample Summary

Original Sample ID: 1161876001
Duplicate Sample ID: 1321458
QC for Samples:
1161853003, 1161853004, 1161853005

Analysis Date: 04/25/2016 17:11
Matrix: Water (Surface, Eff., Ground)

Results by **SM21 2320B**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
Alkalinity	61.3	61.6	mg/L	0.49	(< 25)

Batch Information

Analytical Batch: WTI4445
Analytical Method: SM21 2320B
Instrument: Titration
Analyst: ACF

Print Date: 05/19/2016 12:01:42PM

Duplicate Sample Summary

Original Sample ID: 1161922003
Duplicate Sample ID: 1321459
QC for Samples:
1161853003, 1161853004, 1161853005

Analysis Date: 04/25/2016 16:18
Matrix: Water (Surface, Eff., Ground)

Results by **SM21 2320B**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
Alkalinity	44.8	45.2	mg/L	0.91	(< 25)

Batch Information

Analytical Batch: WTI4445
Analytical Method: SM21 2320B
Instrument: Titration
Analyst: ACF

Print Date: 05/19/2016 12:01:42PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161853 [WTI4445]
Blank Spike Lab ID: 1321457
Date Analyzed: 04/25/2016 15:48

Matrix: Water (Surface, Eff., Ground)

9 C for Samples: 1161853003, 1161853004, 1161853005

Results by **SM21 2320B**

Blank Spike (mQ/L)

Parameter	Spike	Result	Rec (%)	CL
Alkalinity	250	233	- 3	(85h115)

Batch Information

Analytical BatcV: **WTI4445**
Analytical MetVod: **SM21 2320B**
Instrument: **Titration**
Analyst: **ACF**

Prep BatcV:
Prep MetVod:
Prep Date/Time:
Spike Init Wt./v ol.: 250 mQ/L Extract v ol: 50 mL
Dupe Init Wt./v ol.: Extract v ol:

Print Date: 05/1- /2016 12:01:44PM

Method Blank

Blank ID: MB for HBN 1732132 [WXX/11476]
Blank Lab ID: 1320921

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161853003, 1161853004, 1161853005

Results by **EPA 300.0**

Parameter	Results	LOQ/CL	DL	Units
Chloride	0.0420J	0.100	0.0310	mg/L
Fluoride	0.0500U	0.100	0.0310	mg/L
Sulfate	0.0500U	0.100	0.0310	mg/L

Batch Information

Analytical Batch: WIC5531
Analytical Method: EPA 300.0
Instrument: Metrohm 733 DX2
Analyst: ACF
Analytical Date/Time: 4/21/2016 5:15:42PM

Prep Batch: WXX11476
Prep Method: METHOD
Prep Date/Time: 4/21/2016 3:05:00PM
Prep Initial Wt./Vol.: 10 mL
Prep Extract Vol: 10 mL

Print Date: 05/19/2016 12:01:47PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161853 [WXX11476]
Blank Spike Lab ID: 1320922
Date Analyzed: 04/21/2016 19:07

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161853003, 1161853004, 1161853005

Results by **EPA 300.0**

Blank Spike (mg/L)

Parameter	Spike	Result	Rec (%)	CL
Chloride	10	10.0	100	(90-110)
Fluoride	10	10.4	104	(90-110)
Sulfate	10	9.62	96	(90-110)

Batch Information

Analytical Batch: **WIC5531**
Analytical Method: **EPA 300.0**
Instrument: **Metrohm 733 DX2**
Analyst: **ACF**

Prep Batch: **WXX11476**
Prep Method: **METHOD**
Prep Date/Time: **04/21/2016 15:05**
Spike Init Wt./Vol.: 10 mg/L Extract Vol: 10 mL
Dupe Init Wt./Vol.: Extract Vol:

Print Date: 05/19/2016 12:01:50PM

Matrix Spike Summary

Original Sample ID: 1320929
MS Sample ID: 1320936 MS
MSD Sample ID: 1320937 MSD

Analysis Date: 04/21/2016 18:00
Analysis Date: 04/21/2016 18:22
Analysis Date: 04/21/2016 18:44
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161853003, 1161853004, 1161853005

Results by **EPA 300.0**

		Matrix Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Chloride	11.0	10.0	21.3	103	10.0	21.7	107	90-110	1.70	(< 15)
Fluoride	0.0930J	10.0	10.9	108	10.0	11.3	112 *	90-110	3.20	(< 15)
Sulfate	14.1	10.0	24	99	10.0	24.4	103	90-110	1.40	(< 15)

Batch Information

Analytical Batch: WIC5531
Analytical Method: EPA 300.0
Instrument: Metrohm 733 DX2
Analyst: ACF
Analytical Date/Time: 4/21/2016 6:22:34PM

Prep Batch: WXX11476
Prep Method: EPA 300.0 Extraction Waters/Liquids
Prep Date/Time: 4/21/2016 3:05:00PM
Prep Initial Wt./Vol.: 10.00mL
Prep Extract Vol: 10.00mL

Print Date: 05/19/2016 12:01:51PM

Method Blank

Blank ID: MB for HBN 173250[VXXX/38146]
Blank Lab ID: 1325045

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1101[83553, 1101[83556, 1101[83558

Results by **SW8270D**

Parameter	Results	LOQ/CL	DL	Units
1,2,6-Trichlorobengene	5.55855U	5.5155	5.55315	mz/L
1,2-Dichlorobengene	5.55855U	5.5155	5.55315	mz/L
1,3-Dichlorobengene	5.55855U	5.5155	5.55315	mz/L
1,6-Dichlorobengene	5.55855U	5.5155	5.55315	mz/L
1-Chloronaphthalene	5.55855U	5.5155	5.55315	mz/L
1-Methylnaphthalene	5.55855U	5.5155	5.55315	mz/L
2,6,8-Trichlorophenol	5.55855U	5.5155	5.55315	mz/L
2,6,0-Trichlorophenol	5.55855U	5.5155	5.55315	mz/L
2,6-Dichlorophenol	5.55855U	5.5155	5.55315	mz/L
2,6-Dimethylphenol	5.55855U	5.5155	5.55315	mz/L
2,6-Dinitrophenol	5.5285U	5.5855	5.5185	mz/L
2,6-Dinitrotoluene	5.55855U	5.5155	5.55315	mz/L
2,0-Dichlorophenol	5.55855U	5.5155	5.55315	mz/L
2,0-Dinitrotoluene	5.55855U	5.5155	5.55315	mz/L
2-Chloronaphthalene	5.55855U	5.5155	5.55315	mz/L
2-Chlorophenol	5.55855U	5.5155	5.55315	mz/L
2-Methyl-6,0-dinitrophenol	5.5285U	5.5855	5.5185	mz/L
2-Methylnaphthalene	5.55855U	5.5155	5.55315	mz/L
2-Methylphenol (o-Cresol)	5.55855U	5.5155	5.55315	mz/L
2-Nitroaniline	5.55855U	5.5155	5.55315	mz/L
2-Nitrophenol	5.55855U	5.5155	5.55315	mz/L
3K6-Methylphenol (pKm-Cresol)	5.5155U	5.5255	5.55025	mz/L
3,3-Dichlorobengidine	5.55855U	5.5155	5.55315	mz/L
3-Nitroaniline	5.55855U	5.5155	5.55315	mz/L
6-Bromophenyl-phenylether	5.55855U	5.5155	5.55315	mz/L
6-Chloro-3-methylphenol	5.55855U	5.5155	5.55315	mz/L
6-Chloroaniline	5.55855U	5.5155	5.55315	mz/L
6-Chlorophenyl-phenylether	5.55855U	5.5155	5.55315	mz/L
6-Nitroaniline	5.55855U	5.5155	5.55315	mz/L
6-Nitrophenol	5.5285U	5.5855	5.5185	mz/L
9cenaphthene	5.55855U	5.5155	5.55315	mz/L
9cenaphthylene	5.55855U	5.5155	5.55315	mz/L
9niline	5.5285U	5.5855	5.5185	mz/L
9nthracene	5.55855U	5.5155	5.55315	mz/L
9gobengene	5.55855U	5.5155	5.55315	mz/L
Bengo(a)9nthracene	5.55855U	5.5155	5.55315	mz/L
Bengo\4]pyrene	5.55855U	5.5155	5.55315	mz/L
Bengo\6]Aluoranthene	5.55855U	5.5155	5.55315	mz/L

Print Date: 58/14/2510 12:51:83PM

Method Blank

Blank ID: MB for HBN 173250[\XXX/38146]
Blank Lab ID: 1325045

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1101[83553, 1101[83556, 1101[83558

Results by **SW8270D**

Parameter	Results	LOQ/CL	DL	Units
Bengo\z,h,i]perylene	5.55855U	5.5155	5.55315	mz/L
Bengo\k]fluoranthene	5.55855U	5.5155	5.55315	mz/L
Bengoic acid	5.5285U	5.5855	5.5185	mz/L
Bengyl alcohol	5.55855U	5.5155	5.55315	mz/L
Bis(2chloro1methylethyl)Ether	5.55855U	5.5155	5.55315	mz/L
Bis(2-Chloroethoxy)methane	5.55855U	5.5155	5.55315	mz/L
Bis(2-Chloroethyl)ether	5.55855U	5.5155	5.55315	mz/L
bis(2-Ethylhexyl)phthalate	5.55855U	5.5155	5.55315	mz/L
Butylbengylphthalate	5.55855U	5.5155	5.55315	mz/L
Carbagole	5.55855U	5.5155	5.55315	mz/L
Chrysene	5.55855U	5.5155	5.55315	mz/L
Dibengo\a,h]anthracene	5.55855U	5.5155	5.55315	mz/L
Dibengofuran	5.55855U	5.5155	5.55315	mz/L
Diethylphthalate	5.55855U	5.5155	5.55315	mz/L
Dimethylphthalate	5.55855U	5.5155	5.55315	mz/L
Di-n-butylphthalate	5.55855U	5.5155	5.55315	mz/L
di-n-Octylphthalate	5.55855U	5.5155	5.55315	mz/L
Aluoranthene	5.55855U	5.5155	5.55315	mz/L
Aluorene	5.55855U	5.5155	5.55315	mz/L
Hexachlorobengene	5.55855U	5.5155	5.55315	mz/L
Hexachlorobutadiene	5.55855U	5.5155	5.55315	mz/L
Hexachlorocyclopentadiene	5.5185U	5.5355	5.55465	mz/L
Hexachloroethane	5.55855U	5.5155	5.55315	mz/L
Indeno\1,2,3-c,d] pyrene	5.55855U	5.5155	5.55315	mz/L
Isophorone	5.55855U	5.5155	5.55315	mz/L
Naphthalene	5.55855U	5.5155	5.55315	mz/L
Nitrobengene	5.55855U	5.5155	5.55315	mz/L
N-Nitrosodimethylamine	5.55855U	5.5155	5.55315	mz/L
N-Nitroso-di-n-propylamine	5.55855U	5.5155	5.55315	mz/L
N-Nitrosodiphenylamine	5.55855U	5.5155	5.55315	mz/L
Pentachlorophenol	5.5285U	5.5855	5.5185	mz/L
Phenanthrene	5.55855U	5.5155	5.55315	mz/L
Phenol	5.55855U	5.5155	5.55315	mz/L
Pyrene	5.55855U	5.5155	5.55315	mz/L
Surrogates				
2,6,0-Tribromophenol (surr)	[3.7	63-165		&
2-Aluorobiphenyl (surr)	7[.2	66-114		&
2-Aluorophenol (surr)	05.[	14-114		&

Print Date: 58/14/2510 12:51:83PM

Method Blank

Blank ID: MB for HBN 173250[VXXX/38146]
Blank Lab ID: 1325045

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1101[83553, 1101[83556, 1101[83558

Results by **SW8270D**

Parameter	Results	LOQ/CL	DL	Units
Nitrobengene-d8 (surr)	75.2	66-125		&
Phenol-d0 (surr)	71	15-118		&
Terphenyl-d16 (surr)	44	85-136		&

Batch Information

9nalytical Batch: XMS4271
9nalytical Method: SW[275D
Instrument: HP 0[45/8473 SS9
9nalyst: DSH
9nalytical Date/Time: 6/2[/2510 2:26:55PM

Prep Batch: XXX38146
Prep Method: SW3825C
Prep Date/Time: 6/21/2510 4:82:349M
Prep Initial Wt./%ol.: 1555 mL
Prep Extract %ol: 1 mL

Print Date: 58/14/2510 12:51:83PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161853 [XXX35194]
Blank Spike Lab ID: 1320691
Date Analyzed: 04/28/2016 16:05

Spike Duplicate ID: LCSD for HBN 1161853 [XXX35194]
Spike Duplicate Lab ID: 1320692
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161853003, 1161853004, 1161853005

Results by **SW8270D**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
1,2,4-Trichlorobenzene	0.1	0.0719	72	0.1	0.0739	74	(29-116)	2.70	(< 20)
1,2-Dichlorobenzene	0.1	0.0686	69	0.1	0.0699	70	(32-111)	1.70	(< 20)
1,3-Dichlorobenzene	0.1	0.0685	69	0.1	0.0707	71	(28-110)	3.20	(< 20)
1,4-Dichlorobenzene	0.1	0.0686	69	0.1	0.0700	70	(29-112)	2.00	(< 20)
1-Chloronaphthalene	0.04	0.0313	78	0.04	0.0337	84	(58-111)	7.50	(< 20)
1-Methylnaphthalene	0.1	0.0782	78	0.1	0.0807	81	(41-119)	3.10	(< 20)
2,4,5-Trichlorophenol	0.1	0.0860	86	0.1	0.0907	91	(53-123)	5.30	(< 20)
2,4,6-Trichlorophenol	0.1	0.0824	82	0.1	0.0862	86	(50-125)	4.50	(< 20)
2,4-Dichlorophenol	0.1	0.0696	70	0.1	0.0763	76	(47-121)	9.10	(< 20)
2,4-Dimethylphenol	0.1	0.0587	59	0.1	0.0633	63	(31-124)	7.50	(< 20)
2,4-Dinitrophenol	0.18	0.0555	31	0.18	0.0562	31	(23-143)	1.20	(< 20)
2,4-Dinitrotoluene	0.1	0.0954	95	0.1	0.0984	98	(57-128)	3.10	(< 20)
2,6-Dichlorophenol	0.04	0.0272	68	0.04	0.0290	73	(50-118)	6.30	(< 20)
2,6-Dinitrotoluene	0.1	0.0952	95	0.1	0.0989	99	(57-124)	3.80	(< 20)
2-Chloronaphthalene	0.1	0.0831	83	0.1	0.0842	84	(40-116)	1.40	(< 20)
2-Chlorophenol	0.1	0.0637	64	0.1	0.0682	68	(38-117)	6.90	(< 20)
2-Methyl-4,6-dinitrophenol	0.18	0.124	69	0.18	0.132	73	(44-137)	5.90	(< 20)
2-Methylnaphthalene	0.1	0.0744	74	0.1	0.0770	77	(40-121)	3.40	(< 20)
2-Methylphenol (o-Cresol)	0.1	0.0628	63	0.1	0.0688	69	(30-117)	9.10	(< 20)
2-Nitroaniline	0.1	0.0986	99	0.1	0.102	102	(55-117)	3.30	(< 20)
2-Nitrophenol	0.1	0.0737	74	0.1	0.0758	76	(47-123)	2.80	(< 20)
3&4-Methylphenol (p&m-Cresol)	0.14	0.0978	70	0.14	0.107	76	(29-110)	8.90	(< 20)
3,3-Dichlorobenzidine	0.1	0.102	102	0.1	0.109	109	(27-129)	6.50	(< 20)
3-Nitroaniline	0.1	0.0958	96	0.1	0.103	103	(41-128)	7.20	(< 20)
4-Bromophenyl-phenylether	0.1	0.0951	95	0.1	0.0980	98	(55-124)	3.10	(< 20)
4-Chloro-3-methylphenol	0.1	0.0762	76	0.1	0.0823	82	(52-119)	7.80	(< 20)
4-Chloroaniline	0.1	0.0737	74	0.1	0.0790	79	(33-117)	6.90	(< 20)
4-Chlorophenyl-phenylether	0.1	0.0924	92	0.1	0.0963	96	(53-121)	4.10	(< 20)
4-Nitroaniline	0.1	0.101	101	0.1	0.109	109	(74-118)	6.80	(< 20)
4-Nitrophenol	0.14	0.0553	40 *	0.14	0.0594	42	* (52-111)	7.20	(< 20)
Acenaphthene	0.1	0.0868	87	0.1	0.0876	88	(47-122)	0.84	(< 20)
Acenaphthylene	0.1	0.0850	85	0.1	0.0872	87	(41-130)	2.50	(< 20)
Aniline	0.1	0.0642	64	0.1	0.0704	70	(10-87)	9.10	(< 20)
Anthracene	0.1	0.0935	94	0.1	0.0964	96	(57-123)	3.00	(< 20)

Print Date: 05/19/2016 12:01:56PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161853 [XXX35194]
Blank Spike Lab ID: 1320691
Date Analyzed: 04/28/2016 16:05

Spike Duplicate ID: LCSD for HBN 1161853 [XXX35194]
Spike Duplicate Lab ID: 1320692
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161853003, 1161853004, 1161853005

Results by **SW8270D**

	Blank Spike (mg/L)				Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)		Spike	Result	Rec (%)		CL	RPD (%)	RPD CL
Azobenzene	0.1	0.0931	93		0.1	0.0956	96		(61-116)	2.70	(< 20)
Benzo(a)Anthracene	0.1	0.0982	98		0.1	0.103	103		(58-125)	4.80	(< 20)
Benzo[a]pyrene	0.1	0.0967	97		0.1	0.0998	100		(54-128)	3.10	(< 20)
Benzo[b]Fluoranthene	0.1	0.101	101		0.1	0.108	108		(53-131)	6.80	(< 20)
Benzo[g,h,i]perylene	0.1	0.0977	98		0.1	0.0986	99		(50-134)	0.95	(< 20)
Benzo[k]fluoranthene	0.1	0.104	104		0.1	0.106	106		(57-129)	1.80	(< 20)
Benzoic acid	0.14		0	*	0.14		0	*	(21-107)	0.00	(< 20)
Benzyl alcohol	0.1	0.0638	64		0.1	0.0709	71		(31-112)	10.50	(< 20)
Bis(2chloro1methylethyl)Ether	0.1	0.0758	76		0.1	0.0773	77		(37-130)	2.00	(< 20)
Bis(2-Chloroethoxy)methane	0.1	0.0800	80		0.1	0.0835	84		(48-120)	4.30	(< 20)
Bis(2-Chloroethyl)ether	0.1	0.0666	67		0.1	0.0686	69		(43-118)	3.00	(< 20)
bis(2-Ethylhexyl)phthalate	0.1	0.104	104		0.1	0.107	107		(55-135)	3.10	(< 20)
Butylbenzylphthalate	0.1	0.108	108		0.1	0.111	111		(53-134)	3.00	(< 20)
Carbazole	0.1	0.102	102		0.1	0.104	104		(60-122)	1.60	(< 20)
Chrysene	0.1	0.104	104		0.1	0.109	109		(59-123)	4.70	(< 20)
Dibenzo[a,h]anthracene	0.1	0.0977	98		0.1	0.0983	98		(51-134)	0.57	(< 20)
Dibenzofuran	0.1	0.0859	86		0.1	0.0880	88		(53-118)	2.40	(< 20)
Diethylphthalate	0.1	0.0980	98		0.1	0.101	101		(56-125)	2.80	(< 20)
Dimethylphthalate	0.1	0.0932	93		0.1	0.0952	95		(45-127)	2.10	(< 20)
Di-n-butylphthalate	0.1	0.106	106		0.1	0.107	107		(59-127)	0.51	(< 20)
di-n-Octylphthalate	0.1	0.107	107		0.1	0.112	112		(51-140)	4.70	(< 20)
Fluoranthene	0.1	0.0991	99		0.1	0.100	100		(57-128)	1.40	(< 20)
Fluorene	0.1	0.0890	89		0.1	0.0919	92		(52-124)	3.20	(< 20)
Hexachlorobenzene	0.1	0.0939	94		0.1	0.0966	97		(53-125)	2.80	(< 20)
Hexachlorobutadiene	0.1	0.0797	80		0.1	0.0795	80		(22-124)	0.16	(< 20)
Hexachlorocyclopentadiene	0.1	0.0441	44		0.1	0.0415	42		(10-93)	6.00	(< 20)
Hexachloroethane	0.1	0.0667	67		0.1	0.0677	68		(21-115)	1.40	(< 20)
Indeno[1,2,3-c,d] pyrene	0.1	0.0930	93		0.1	0.0935	94		(52-134)	0.48	(< 20)
Isophorone	0.1	0.0746	75		0.1	0.0778	78		(42-124)	4.20	(< 20)
Naphthalene	0.1	0.0734	73		0.1	0.0755	76		(40-121)	2.80	(< 20)
Nitrobenzene	0.1	0.0722	72		0.1	0.0760	76		(45-121)	5.10	(< 20)
N-Nitrosodimethylamine	0.1	0.0544	54		0.1	0.0615	62		(41-117)	12.30	(< 20)
N-Nitroso-di-n-propylamine	0.1	0.0775	78		0.1	0.0824	82		(49-119)	6.10	(< 20)
N-Nitrosodiphenylamine	0.1	0.0814	81		0.1	0.0815	82		(51-123)	0.18	(< 20)

Print Date: 05/19/2016 12:01:56PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161853 [XXX35194]
Blank Spike Lab ID: 1320691
Date Analyzed: 04/28/2016 16:05

Spike Duplicate ID: LCSD for HBN 1161853 [XXX35194]
Spike Duplicate Lab ID: 1320692
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161853003, 1161853004, 1161853005

Results by **SW8270D**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Pentachlorophenol	0.14	0.130	93	0.14	0.136	97	(35-138)	4.80	(< 20)
Phenanthrene	0.1	0.0951	95	0.1	0.0963	96	(59-120)	1.20	(< 20)
Phenol	0.1	0.0520	52	0.1	0.0585	59	(39-84)	11.80	(< 20)
Pyrene	0.1	0.100	100	0.1	0.102	102	(57-126)	2.10	(< 20)
Surrogates									
2,4,6-Tribromophenol (surr)	0.2	106	106	0.2	107	107	(43-140)	1.40	
2-Fluorobiphenyl (surr)	0.1	80.9	81	0.1	81.9	82	(44-119)	1.30	
2-Fluorophenol (surr)	0.2	63.4	63	0.2	64.5	65	(19-119)	1.70	
Nitrobenzene-d5 (surr)	0.1	73.8	74	0.1	75.2	75	(44-120)	1.90	
Phenol-d6 (surr)	0.2	65.7	66	0.2	68.9	69	(10-115)	4.80	
Terphenyl-d14 (surr)	0.1	112	112	0.1	114	114	(50-134)	1.30	

Batch Information

Analytical Batch: **XMS9271**
Analytical Method: **SW8270D**
Instrument: **HP 6890/5973 SSA**
Analyst: **DSH**

Prep Batch: **XXX35194**
Prep Method: **SW3520C**
Prep Date/Time: **04/21/2016 09:52**
Spike Init Wt./Vol.: 0.1 mg/L Extract Vol: 1 mL
Dupe Init Wt./Vol.: 0.1 mg/L Extract Vol: 1 mL

Print Date: 05/19/2016 12:01:56PM

Method Blank

Blank ID: MB for HBN 173226[VXXX/382] 7L
Blank ba0 ID: 1321] 69

QC for Samples:
11[1983]] 3511[1983]] 8

Ma,r4 : i a,er xSWffa(e5uffc5E roWh. G

d esW,s 0) EPA 625M SIM (PAH)

Uarame,er	d esW,s	by Q/Cb	Db	Rn4s
O(enapP,Pene	] q 28] R	] q 8]]	] q 18]	Wg/b
O(enapP,P) lene	] q 28] R	] q 8]]	] q 18]	Wg/b
On,Pra(ene	] q 28] R	] q 8]]	] q 18]	Wg/b
Ben- oxaG5n,Pra(ene	] q 28] R	] q 8]]	] q 18]	Wg/b
Ben- o\4lp) rene	] q 1]] R	] q 2]]	] q 18]	Wg/b
Ben- o\0lz lWoran,Pene	] q 28] R	] q 8]]	] q 18]	Wg/b
Ben- o\g5P54per) lene	] q 28] R	] q 8]]	] q 18]	Wg/b
Ben- o\klflWoran,Pene	] q 28] R	] q 8]]	] q 18]	Wg/b
CPr) sene	] q 28] R	] q 8]]	] q 18]	Wg/b
D40en- o\a5Plan,Pra(ene	] q 1]] R	] q 2]]	] q 18]	Wg/b
zlWoran,Pene	] q 28] R	] q 8]]	] q 18]	Wg/b
zlWorene	] q 28] R	] q 8]]	] q 18]	Wg/b
In. enoV152538%5 Lp) rene	] q 28] R	] q 8]]	] q 18]	Wg/b
NapP,Palene	] q 8]] R	] c1]]	] q 31]	Wg/b
UPenan,Prene	] q 28] R	] q 8]]	] q 18]	Wg/b
U) rene	] q 28] R	] q 8]]	] q 18]	Wg/b
Surrogates				
2%zlWoro04pPen) l xsWrG	96c8	83%] [		A
herpPen) l%16 xsWrG	FFc1	89%32		A

Batch Information

Onal) ,4(al Ba,(P: XMSF2[9
Onal) ,4(al Me,Po. : uUO [28M SIM xUOHG
Ins,rWmen,: SKO Og4en, 79] /8F78 E C/MS
Onal) s,: Bd K
Onal) ,4(al Da,e/h4me: 6/28/2] 1[8:36:]] UM

Urep Ba,(P: XXX382] 7
Urep Me,Po. : Si 382] C
Urep Da,e/h4me: 6/28/2] 1[1] :3] :33OM
Urep In44al i ,dKolc 1]]] mb
Urep ut ,ra(, Kol: 1 mb

Ur4n, Da,e:] 8/1F/2] 1[12:] 2:]] UM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161853 [XXX35207]
Blank Spike Lab ID: 1321049
Date Analyzed: 04/25/2016 17:54

Spike Duplicate ID: LCSD for HBN 1161853 [XXX35207]
Spike Duplicate Lab ID: 1321050
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161853003, 1161853005

Results by **EPA 625M SIM (PAH)**

	Blank Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Acenaphthene	0.5	0.401	80	0.5	0.391	78	(48-114)	2.50	(< 20)
Acenaphthylene	0.5	0.395	79	0.5	0.384	77	(35-121)	2.90	(< 20)
Anthracene	0.5	0.402	80	0.5	0.398	80	(53-119)	1.00	(< 20)
Benzo(a)Anthracene	0.5	0.360	72	0.5	0.362	73	(59-120)	0.56	(< 20)
Benzo[a]pyrene	0.5	0.343	69	0.5	0.336	67	(53-120)	2.20	(< 20)
Benzo[b]Fluoranthene	0.5	0.355	71	0.5	0.354	71	(53-126)	0.28	(< 20)
Benzo[g,h,i]perylene	0.5	0.291	58	0.5	0.288	58	(44-128)	1.20	(< 20)
Benzo[k]fluoranthene	0.5	0.384	77	0.5	0.387	77	(54-125)	0.71	(< 20)
Chrysene	0.5	0.455	91	0.5	0.439	88	(57-120)	3.60	(< 20)
Dibenzo[a,h]anthracene	0.5	0.238	48	0.5	0.238	48	(44-131)	0.20	(< 20)
Fluoranthene	0.5	0.419	84	0.5	0.414	83	(58-120)	1.00	(< 20)
Fluorene	0.5	0.403	81	0.5	0.396	79	(50-118)	1.80	(< 20)
Indeno[1,2,3-c,d] pyrene	0.5	0.253	51	0.5	0.252	50	(48-130)	0.59	(< 20)
Naphthalene	0.5	0.367	73	0.5	0.360	72	(43-114)	2.00	(< 20)
Phenanthrene	0.5	0.395	79	0.5	0.387	78	(53-115)	1.90	(< 20)
Pyrene	0.5	0.442	88	0.5	0.439	88	(53-121)	0.70	(< 20)
Surrogates									
2-Fluorobiphenyl (surr)	0.5	87.1	87	0.5	85.4	85	(53-106)	2.00	
Terphenyl-d14 (surr)	0.5	91.6	92	0.5	91.8	92	(58-132)	0.16	

Batch Information

Analytical Batch: **XMS9268**
Analytical Method: **EPA 625M SIM (PAH)**
Instrument: **SVA Agilent 780/5975 GC/MS**
Analyst: **BRV**

Prep Batch: **XXX35207**
Prep Method: **SW3520C**
Prep Date/Time: **04/25/2016 10:30**
Spike Init Wt./Vol.: 0.5 ug/L Extract Vol: 1 mL
Dupe Init Wt./Vol.: 0.5 ug/L Extract Vol: 1 mL

Print Date: 05/19/2016 12:02:02PM

Method Blank

Blank ID: MB for HBN 1732351 [XXX/35215]
Blank Lab ID: 1321264

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161853003, 1161853004, 1161853005

Results by **AK102**

Parameter	Results	LOQ/CL	DL	Units
Diesel Range Organics	0.0750U	0.150	0.0450	mg/L
Surrogates				
5a Androstane (surr)	95.5	60-120		%

Batch Information

Analytical Batch: XFC12348
Analytical Method: AK102
Instrument: Agilent 7890B R
Analyst: S.G
Analytical Date/Time: 4/26/2016 5:28:00PM

Prep Batch: XXX35215
Prep Method: SW3520C
Prep Date/Time: 4/26/2016 9:52:01AM
Prep Initial Wt./Vol.: 1000 mL
Prep Extract Vol: 1 mL

Print Date: 05/19/2016 12:02:06PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161853 [VVV35X152
Blank Spike La7 ID: 13X1X65
Da]e bnal0t eA: yzdX6dXy16 14:38

Spike D/ pliua]e ID: LCSD for HBN 1161853 [VVV35X152
Spike D/ pliua]e La7 ID: 13X1X66
s a]riM x a]er W8/ rfaue(, ffE . ro/ nAG

g C for SaP pleR 1161853yy3(1161853yyz(1161853yy5

c eRY l]R70 AK102

		Blank Spike WP %dLG			Spike D/ pliua]e WP %dLG				
) araP e]er	Spike	c eR/ l]	c eu WhG	Spike	c eR/ l]	c eu WhG	CL	c) D WhG	c) D CL
DieRel c an%e Qr%aniuR	5	zE05	OO	5	5EX6	1y5	W45-1X5 G	5EOy	W4 Xy G
Surrogates									
5a bnAroRjane WX rrG	yE	11X	11X	yE	11y	11y	W6y-1Xy G	1Ezy	

Batch Information

bnal0]iual Ba]uh: **XFC12348**
bnal0]iual s e]hoA: **AK102**
InRjr/ P en]: **Agilent 7890B R**
bnal0Rj: **S.G**

) rep Ba]uh: **XXX35215**
) rep s e]hoA: **SW3520C**
) rep Da]edTiP e: **04/26/2016 09:52**
Spike Ini] x]E9olE 5 P %dL , Mjrau] 9ol: 1 PL
D/ pe Ini] x]E9olE 5 P %dL , Mjrau] 9ol: 1 PL

) rin] Da]e: y5dI OdXy16 1X:yX:yO) s

Method Blank

Blank ID: MB for HBN 1732351 [XXX/35215]
Blank Lab ID: 1321264

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161853003, 1161853004, 1161853005

Results by **AK103**

Parameter	Results	LOQ/CL	DL	Units
Residual Range Organics	0.0625U	0.125	0.0375	mg/L
Surrogates				
nA riacontaneAd62 (surr)	94	60A120		%

Batch Information

hnalytical BatcF: XKC12348
hnalytical MetFod: hT103
Instrument: hgilent 7890B R
hnalyst: S.G
hnalytical Date/- ime: 4/26/2016 5:28:00PM

Prep BatcF: XXX35215
Prep MetFod: SW3520C
Prep Date/- ime: 4/26/2016 9:52:01hM
Prep Initial Wt./Vol.: 1000 mL
Prep Extract Vol: 1 mL

Print Date: 05/19/2016 12:02:12PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161853 [VVV35X152
Blank Spike La7 ID: 13X1X65
Da]e bnal0t eA: yzdX6dXy16 14:38

Spike D/ pliua]e ID: LCSD for HBN 1161853 [VVV35X152
Spike D/ pliua]e La7 ID: 13X1X66
s a]riM x a]er W8/ rfaue(, ffE . ro/ nAG

g C for SaP pleR 1161853yy3(1161853yyz(1161853yy5

c eRY l]R70 AK102

		Blank Spike WP %dLG			Spike D/ pliua]e WP %dLG				
) araP e]er	Spike	c eRY l]	c eu Wh G	Spike	c eRY l]	c eu Wh G	CL	c) D Wh G	c) D CL
c eRA/ al c an%e Qr%aniuR	5	zEB5	O4	5	5Ey4	1y1	W6y-1Xy G	zEzy	W Xy G
Surrogates									
n-hriauon]ane-A6X WR rrG	yE	O5	O5	yE	OzE	Oz	W6y-1Xy G	yEB8	

Batch Information

bnal0]iual Ba]uT: **XFC13248**
bnal0]iual s e]ToA: **AK102**
InR]r/ P en]: **Agilent 7890B R**
bnal0R]: **S.G**

) rep Ba]uT: **XXX25315**
) rep s e]ToA: **SW2530C**
) rep Da]edhiP e: **04/36/3016 09:53**
Spike Ini] x]E9olE 5 P %dL , Mjrau] 9ol: 1 PL
D/ pe Ini] x]E9olE 5 P %dL , Mjrau] 9ol: 1 PL

) rin] Da]e: y5dfOdXy16 1X:yX:15) s

Yenke, Ashley (Anchorage)

From: Nelson, Justin (Anchorage)
Sent: Friday, April 22, 2016 11:44 AM
To: Env.Alaska.RcvgLogin
Cc: ENV.ALASKA.GCPREP; ENV.ALASKA.GCSEMIVOL
Subject: FW: Kenai Wells, added task quote needed

Change Order WO #1161853

Per the message below, please add EPA 625M TAqH Analysis to the following samples. We will need to extract the samples from the secondary container that was provided for SVOC analysis.

1161853-003
1161853-005

Both of these samples were collected on 4/19, so please send a short hold message to the department. Thanks!

Justin A. Nelson
Environment, Health, and Safety
Project Manager

Phone: +00 1 907 550-3205

From: Jason Gray [mailto:jgray@slrconsulting.com]
Sent: Friday, April 22, 2016 11:41 AM
To: Nelson, Justin (Anchorage)
Subject: RE: Kenai Wells, added task quote needed

Justin- following up on our conversion,

I need to request that two samples from the first Kenai Wells cooler delivery be requested for analysis of PAH-SIM via method 625. Please use the second available 1L water container originally collected for 8270D-SVOC to perform the additional PAH-SIM analysis for the following two samples;
1161853-03 (MW87B-416) and 1161853-05 (MW27-416). These were both collected 4/19 so holding time is getting short.

There will likely be an additional 2 samples collected Saturday that will be requested for analysis of 624 & 625 TAH/TAqH, they should arrive on their own COC and will requested as such.

Thanks-

From: Nelson, Justin (Anchorage) [mailto:Justin.Nelson@sgs.com]
Sent: April 20, 2016 1:51 PM
To: Jason Gray
Subject: RE: Kenai Wells, added task quote needed

Coolers are here, Jason. Temperatures are good, there was one issue with the sample containers:

- The 500-mL HDPE Unpreserved for sample “MW87B-0416” was received empty. The sample was open, and has clearly spilled in the cooler. The bag containing this particular container was on top of another group of bottles, on its side; I would recommend against shipping any bottles on their side, the caps are usually fine, but if they are cross threaded even a little bit, any bump can unseat them.

- I can still perform all analyses, I will just reduce the amount used for TSS to 500-mL and take the rest of the analyses (TDS, Alkalinity, Turbidity, pH) from the TSS containter. This will raise the TSS LOQ from 0.5 mg/L to 1.0 mg/L. If this is unacceptable, you will need to resample TSS only.

Let me know if there are any questions, the COC should be coming through on Engage once login is completed.

Justin A. Nelson
Environment, Health, and Safety
Project Manager

Phone: +00 1 907 550-3205

From: Jason Gray [mailto:jgray@slrconsulting.com]
Sent: Wednesday, April 20, 2016 1:07 PM
To: Nelson, Justin (Anchorage)
Subject: RE: Kenai Wells, added task quote needed

I think our preference would be to have it reported via 624 & 625 in order to comply with the methods specified by DEC for TAH/TAqH.
Works for me if you can add this to the existing Kenai wells quote.

Do you have todays coolers at the lab yet? It would be helpful if you can send me the COC prior to your full login review.

Thanks-

From: Nelson, Justin (Anchorage) [mailto:Justin.Nelson@sgs.com]
Sent: April 20, 2016 1:00 PM
To: Jason Gray
Subject: RE: Kenai Wells, added task quote needed

Do you have a method preference? Pricing will be the same for TAH/BTEX and TAqH/PAH, so as far as the method goes, the price is the same. Do you need a separate quote from the existing Kenai Wells Quote?

Justin A. Nelson
Environment, Health, and Safety
Project Manager

Phone: +00 1 907 550-3205

From: Jason Gray [mailto:jgray@slrconsulting.com]
Sent: Wednesday, April 20, 2016 12:12 PM
To: Nelson, Justin (Anchorage)
Subject: Kenai Wells, added task quote needed

Justin-
A new task has been added to the Kenai Wells project, I need to get a pricing quote for performing analysis of 10 water samples via either methods 624 & 625 or 8260B & 8270D (only one method pair will be used).

Parameter	Method
TAH	624
TAqH	625
BTEX	8260B
PAH	8270D SIM

Thanks-

Jason Gray
Associate Scientist
SLR International Corporation

Direct: 907-264-6965
Office: 907-222-1112
Fax: 907-222-1113
Email: jgray@slrconsulting.com
2700 Gambell Street, Suite 200, Anchorage, AK, 99503, United States

www.slrconsulting.com

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CHAIN OF CUSTODY RECORD

SGS Environmental Services Inc.

1161853

CLIENT: SLR Consulting

CONTACT: Jason Gray, SLR PHONE NO: (office) 264-6965

PROJECT Name: Kenai Wells PROJECT No.: 105.00148.16001

REPORTS TO: Jason Gray, SLR email jgray@slrconsulting.com

INVOICE TO: Wendy Hansen, SLR QUOTE #: 332060
2700 Gambell Street Anchorage, Alaska 99503

SGS Reference #:

page 1 of 1

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	# CONTAINERS	SAMPLE TYPE C = COMP G = GRAB	Preserv Used	E1631E - Low-level Hg (dissolved)	E200.8 - Dissolved Metals	E1631E - Low-level Hg (total)	E200.8 - Total Metals	SW 8260B - VOC	AK101 -GRO	SW 8270D - SVOC	AK102/AK103 - DRO/RRO	2540D - TSS	2540C - TDS, 2320B - Alkalinity, 2130B - Turbidity, 4500H+B - pH	E300.0 - Cl, FI,SO4 4500NO3-F - Nitrate, Nitrite					
							HCl		HNO3	HCl	HNO3	HCl	HCl	HCl	HCl	None	None	None					
1 A	EBT -0416	4-19-16	1230	GW	1	G					X												
2 A	EBF-Lot #L1456	4-19-16	1235	GW	1	G			X														
3 A-M	MW 87B-0416	4-19-16	1402	GW	15	G			X		X	X	X	X	X	X	X	X					
4 A-L	MW 87Z -0416	4-19-16	1402	GW	15	G			X		X	X	X	X	X	X	X	X					
5 A-N	MW 27 -0416	4-19-16	1715	GW	15	G			X		X	X	X	X	X	X	X	X					
6 A-C	~~Trip Blank~~ TB1	4-19-16	1230	-	3	-						X											

Collected/Relinquished By: (1) Kyle Johnson	Date 4-19-16	Time 2000	Received By:
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date 4/20/16	Time 1333	Received For Laboratory By:

Shipping Carrier:

Shipping Ticket No:

Samples Received Cold? (YES) NO

Temperature °C: 0.6 #1 1.5 #2

Special Deliverable Req: ~~Level IV~~ Level 2 4/20

EDD: PDF, Access

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

Requested Turnaround Time and-or Special Instructions:

Total and Dissolved Metals:
As, Ba, Be, Ca, Cd, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Na, Ni, Sb, Se, Tl, V, Zn
+Dissolved Hardness (SM2340B) per client 4/20

200 W. Potter Drive **Anchorage, AK 99518** Tel: (907) 562-2343 Fax: (907) 561-5301
3180 Peger Road **Fairbanks, AK 99701** Tel: (907) 474-8656 Fax: (907) 474-9685
5500 Business Drive **Wilmington, NC 28405** Tel: (910) 350-1903 Fax: (910) 350-1557

AIRPORT OF DEPARTURE ENA 04/20/16 07:56 095166 808 7023556 Frgt

SHIPPER'S NAME, ADDRESS & PHONE
SLR ATTN RYAN
KANGAS
KENAI AK 7757418015

SHIPPER'S ACCOUNT NUMBER
H7752

NOT AIR WAYBILL (AIR CONSIGNMENT NOTE)

Ravn ALASKA
4700 Old International Airport Road
Anchorage, Alaska 99502

It is agreed that the goods described herein are accepted in apparent good order and condition (except as noted) for carriage SUBJECT TO THE CONDITIONS OF CONTRACT AS LISTED IN THE COMPANIES TARIFFS. THE SHIPPER'S ATTENTION IS DRAWN TO THE NOTICE CONCERNING CARRIERS' LIMITATION OF LIABILITY. Shipper may increase such limitation of liability by declaring a higher value for carriage and paying a supplemental charge if required.

Received in Good Condition Mel Lyt 4/20
Place Date
TO EXPEDITE MOVEMENT, SHIPMENT MAY BE DIVERTED TO MOTOR OR OTHER CARRIER AS PER TARIFF RULE UNLESS SHIPPER GIVES OTHER INSTRUCTION HEREON

CONSIGNEE'S NAME, ADDRESS & PHONE
SLR INTERNATION CORP
ANCHORAGE AK 99502 9072221112

CONSIGNEE'S ACCOUNT NUMBER

ISSUING CARRIER'S AGENT NAME, CITY & PHONE

ALSO NOTIFY NAME & ADDRESS
4/20 @ 944 am called ep

AGENT'S IATA CODE

ACCOUNT NO.

ACCOUNTING INFORMATION 7093171
Acc#: H7752 SLR INTERNATIONAL CORP.

AIRPORT OF DEPARTURE
Kenai

Declared Value $ 0.00

Insured Amount $ 0.00

ROUTING AND DESTINATION
TO BY FIRST | TO | BY | TO | BY

AIRPORT OF DESTINATION
Anchorage

FOR CARRIER USE ONLY
FLIGHT/DATE 0 | FLIGHT/DATE

COMMENTS
project #105.00148 task 10

No. Of Pieces Rcp	Gross Weight	kg lb	Rate Class	Commodity Item No.	Chargeable Weight	Rate/Charge	Total	Nature and Quantity of Goods
2	87	l..	M		1	$29.18	$29.18	samples
2	87						$29.18	

PREPAID	WEIGHT CHARGE	COLLECT
$29.18		

OTHER CHARGES AND DESCRIPTION

AMOUNT	DESCRIPTION

VALUATION CHARGE
$0.00

FEDERAL EXCISE TAX
$1.82

TOTAL OTHER CHARGES DUE AGENT
$0.00

TOTAL OTHER CHARGES DUE CARRIER
$0.00

TOTAL PREPAID
$31.00

TOTAL COLLECT

HAZMAT
No

Shipper certifies that the particulars on the face hereof are correct, agrees to the CONDITIONS AS LISTED IN THE COMPANIES TARIFFS, accepts that carrier's liability is limited as stated in the companies tariffs and accepts such value unless a higher value for carriage is declared on the face hereof subject to an additional charge and that insofar as any part of the consignment contains restricted articles, such part is described by name and is in proper condition for carriage by air according to applicable national governmental regulations, and for international shipments, the current International Air Transport Association's Restricted Articles Regulations.

Paid By Shipper

Printed Name and Title

Signature

STATION NUMBERS
ANCHORAGE - (907) 243-2761
ANIAK - (907) 675-4572
BARROW - (907) 852-5300
BETHEL -(907) 543-3825
DEADHORSE - (907) 659-9222
FAIRBANKS - (907) 450-7250
GALENA -(907) 656-1875
KOTZEBUE - (907) 442-3020
NOME - (907) 443-7595
ST. MARYS - (907) 438-2247
UNALAKLEET - (907) 624-3595

Printed at 07:58:58 on 4/20/2016 at ENA-FRTMGR 10.106.2.15

Consignee Copy

Alert Expeditors Inc. #364166

Citywide Delivery • 440-3351
8421 Flamingo Drive • Anchorage, Alaska 99502

Date 4/20/16
From SLR
To 565

Collect ☐	Prepay ☐ Account ☐	Advance Charges ☐
Job #	PO#	

20 @ 87 Kelly

7022556

Shipped Signature

Total Charge

Received By 4/20/16 1533

SGS

1161853

1161853

SAMPLE RECEIPT FORM

Review Criteria:	Yes	N/A	No	Comments/Action Taken:
Were **custody seals** intact? Note # & location, if applicable. COC accompanied samples?	✓ ✓			*Exemption permitted if sampler hand carries/delivers.* 2F
Temperature blank compliant* (i.e., 0-6°C after CF)? *If >6°C, were samples collected <8 hours ago?* *If <0°C, were all sample containers ice free?* Cooler ID: 1 @ 0.6 w/ Therm.ID: D6 Cooler ID: 2 @ 1.5 w/ Therm.ID: 11 Cooler ID: _____ @ _____ w/ Therm.ID: _____ Cooler ID: _____ @ _____ w/ Therm.ID: _____ Cooler ID: _____ @ _____ w/ Therm.ID: _____ If samples are received without a temperature blank, the "cooler temperature" will be documented in lieu of the temperature blank & "**COOLER TEMP**" will be noted to the right. In cases where neither a temp blank nor cooler temp can be obtained, note "ambient" or "chilled."	✓ 	 ✓ ✓		*Exemption permitted if chilled & collected <8 hrs ago.* *Note: Identify containers received at non-compliant temperature. Use form FS-0029 if more space is needed.*
Delivery method (specify all that apply): ☐Client (hand carried) ☐USPS ☐Lynden ☐AK Air ☑Alert Courier ☐UPS ☐FedEx ☐RAVN ☐C&D Delivery ☐Carlile ☐Pen Air ☐Warp Speed ☐Other: _____ → *For WO# with airbills, was the WO# & airbill info recorded in the Front Counter eLog?*	✓			
	Yes	**N/A**	**No**	
Were samples received within hold time? Do samples **match COC*** (i.e., sample IDs, dates/times collected)? Were analyses requested unambiguous?	✓ ✓ ✓			*Note: Refer to form F-083 "Sample Guide" for hold times.* *Note: If times differ <1hr, record details and login per COC.*
Were samples in **good condition** (no leaks/cracks/breakage)? Packing material used (specify all that apply): ☑Bubble Wrap ☐Separate plastic bags ☐Vermiculite ☐Other:			✓	*
Were **proper containers** (type/mass/volume/preservative*) used? Were **Trip Blanks** (i.e., VOAs, LL-Hg) in cooler with samples? Were all VOA vials **free of headspace** (i.e., bubbles ≤6 mm)? Were all soil VOAs **field extracted** with MeOH+BFB?	✓ ✓ ✓	 ✓		☐*Exemption permitted for metals (e.g., 200.8/6020A).*
For preserved waters (other than VOA vials, LL-Mercury or microbiological analyses), was **pH verified and compliant**? If pH was adjusted, were bottles flagged (i.e., stickers)?	✓	 ✓		
For **special handling** (e.g., "MI" soils, foreign soils, lab filter for dissolved…, lab extract for volatiles, Ref Lab, limited volume), were bottles/paperwork flagged (e.g., sticker)?		☑		
For **RUSH/SHORT Hold Time**, were COC/Bottles flagged accordingly? Was Rush/Short HT email sent, if applicable?	✓			Turbidity, Nitrate/Nitrite (Speciated)
For **SITE-SPECIFIC QC, e.g. BMS/BMSD/BDUP**, were containers / paperwork flagged accordingly?		✓		
For any question answered "No," has the PM been notified and the problem resolved (or paperwork put in their bin)?		✓		SRF Completed by: CRD PM notified:
Was **PEER REVIEW** of ***sample numbering/labeling completed?***		✓		Peer Reviewed by:

Additional notes (if applicable):

*500mL bottle for sample "MW87B-0416" received damaged. 2 VOA vials for sample "MW87Z-0416" damaged during receiving process

Note to Client: *Any "no" answer above indicates non-compliance with standard procedures and may impact data quality.*

Sample Containers and Preservatives

Container Id	Preservative	Container Condition	Container Id	Preservative	Container Condition
1161853001-A	HNO3 to pH < 2	OK	1161853006-B	HCL to pH < 2	OK
1161853002-A	HNO3 to pH < 2	OK	1161853006-C	HCL to pH < 2	OK
1161853003-A	HNO3 to pH < 2	OK	1161853007-A	HNO3 to pH < 2	OK
1161853003-B	HCL to pH < 2	OK	1161853008-A	HNO3 to pH < 2	OK
1161853003-C	HCL to pH < 2	OK	1161853009-A	HNO3 to pH < 2	OK
1161853003-D	HCL to pH < 2	OK			
1161853003-E	HCL to pH < 2	OK			
1161853003-F	HCL to pH < 2	OK			
1161853003-G	HCL to pH < 2	OK			
1161853003-H	No Preservative Required	OK			
1161853003-I	No Preservative Required	OK			
1161853003-J	HCL to pH < 2	OK			
1161853003-K	HCL to pH < 2	OK			
1161853003-L	No Preservative Required	OK			
1161853003-M	No Preservative Required	OK			
1161853004-A	HNO3 to pH < 2	OK			
1161853004-B	HCL to pH < 2	OK			
1161853004-C	HCL to pH < 2	OK			
1161853004-D	HCL to pH < 2	OK			
1161853004-E	HCL to pH < 2	OK			
1161853004-F	No Preservative Required	OK			
1161853004-G	No Preservative Required	OK			
1161853004-H	HCL to pH < 2	OK			
1161853004-I	HCL to pH < 2	OK			
1161853004-J	No Preservative Required	OK			
1161853004-K	No Preservative Required	OK			
1161853004-L	No Preservative Required	OK			
1161853005-A	HNO3 to pH < 2	OK			
1161853005-B	HCL to pH < 2	OK			
1161853005-C	HCL to pH < 2	OK			
1161853005-D	HCL to pH < 2	OK			
1161853005-E	HCL to pH < 2	OK			
1161853005-F	HCL to pH < 2	OK			
1161853005-G	HCL to pH < 2	OK			
1161853005-H	No Preservative Required	OK			
1161853005-I	No Preservative Required	OK			
1161853005-J	HCL to pH < 2	OK			
1161853005-K	HCL to pH < 2	OK			
1161853005-L	No Preservative Required	OK			
1161853005-M	No Preservative Required	OK			
1161853005-N	No Preservative Required	OK			
1161853006-A	HCL to pH < 2	OK			

Container Id	Preservative	Container Condition	Container Id	Preservative	Container Condition

Container Condition Glossary

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

OK - The container was received at an acceptable pH for the analysis requested.
BU - The container was received with headspace greater than 6mm.
DM- The container was received damaged.
FR- The container was received frozen and not usable for Bacteria or BOD analyses.
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.

Laboratory Report of Analysis

To: SLR Alaska-Anchorage
2700 Gambell St Suite 200
Anchorage, AK 99503
(907)222-1112

Report Number: **1161876**

Client Project: **105.00148.16001 Kenai Wells**

Dear Jason Gray,

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.

SGS North America Inc.
Environmental Services – Alaska Division
Project Manager

Justin Nelson
2016.06.01
14:54:04 -08'00'

Justin Nelson Date
Project Manager
Justin.Nelson@sgs.com

Print Date: 06/01/2016 2:30:27PM

Case Narrative

SGS Client: **SLR Alaska-Anchorage**
SGS Project: **1161876**
Project Name/Site: **105.00148.16001 Kenai Wells**
Project Contact: **Jason Gray**

Refer to sample receipt form for information on sample condition.

MW82B-0416 (1161876002) PS

300.0 - Anions - Sample was analyzed outside of hold time due to a laboratory error.

MW50Z-0416 (1161876005) PS

Analysis was cancelled for this sample, per the attached change order.

LCSD for HBN 1732272 [STS/5019 (1321134) LCSD

2540D - Total Suspended Solids - LCSD is not needed for batch QC. Refer to sample duplicate RPD for precision.

LCSD for HBN 1732348 [XXX/3521 (1321253) LCSD

8270D - LCS/LCSD RPD for pyridine (42.2%) and aniline (20.9%) does not meet QC criteria. The associated sample concentrations for these analytes are less than the LOQ.

LCSD for HBN 1732500 [VXX/2874 (1321732) LCSD

8260B - LCS/LCSD RPD for 2-butanone (MEK) (21.5%) does not meet QC criteria. These analytes were not detected above the LOQ in the associated samples.

1161860001MS (1321406) MS

4500NO3-F - Nitrate/Nitrite - MS recovery for Total NO2/NO3 is outside of QC criteria. Refer to LCS for accuracy requirements.

1161731001(1320929MSD) (1320937) MSD

300.0 - Anions - MSD recovery for fluoride is outside QC criteria. Refer to LCS for accuracy requirements.

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

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Report of Manual Integrations

Laboratory ID	Client Sample ID	Analytical Batch	Analyte	Reason
SW8270D				
1321252	LCS for HBN 1732348 [XXX/35213	XMS9274	1-Chloronaphthalene	BLC
1321253	LCSD for HBN 1732348 [XXX/3521	XMS9274	1-Chloronaphthalene	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: 06/01/2016 2:30:31PM

Laboratory Qualifiers

Enclosed are the analytical results associated with the above work order. 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, indenmification 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) & UST-005 (CS) for ADEC and 2944.01 for DOD ELAP/ISO17025 (RCRA methods: 1020B, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035A, 6020A, 7470A, 7471B, 8021B, 8082A, 8260B, 8270D, 8270D-SIM, 9040C, 9045D, 9056A, 9060A, AK101 and AK102/103). 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
D	The analyte concentration is the result of a dilution.
DF	Dilution Factor
DL	Detection Limit (i.e., maximum method detection limit)
E	The analyte result is above the calibrated range.
F	Indicates value that is greater than or equal to the DL
GT	Greater Than
IB	Instrument Blank
ICV	Initial Calibration Verification
J	The quantitation is an estimation.
JL	The analyte was positively identified, but the quantitation is a low estimation.
LCS(D)	Laboratory Control Spike (Duplicate)
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
M	A matrix effect was present.
MB	Method Blank
MS(D)	Matrix Spike (Duplicate)
ND	Indicates the analyte is not detected.
Q	QC parameter out of acceptance range.
R	Rejected
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.

Print Date: 06/01/2016 2:30:32PM

Sample Summary

Client Sample ID	Lab Sample ID	Collected	Received	Matrix
MW82A-0416	1161876001	04/20/2016	04/21/2016	Water (Surface, Eff., Ground)
MW82B-0416	1161876002	04/20/2016	04/21/2016	Water (Surface, Eff., Ground)
MW50A-0416	1161876003	04/20/2016	04/21/2016	Water (Surface, Eff., Ground)
MW50B-0416	1161876004	04/20/2016	04/21/2016	Water (Surface, Eff., Ground)
MW50Z-0416	1161876005	04/20/2016	04/21/2016	Water (Surface, Eff., Ground)
TB2	1161876006	04/20/2016	04/21/2016	Water (Surface, Eff., Ground)
MW82A-0416	1161876007	04/20/2016	04/21/2016	Water (Surface, Eff., Ground)
MW82B-0416	1161876008	04/20/2016	04/21/2016	Water (Surface, Eff., Ground)
MW50A-0416	1161876009	04/20/2016	04/21/2016	Water (Surface, Eff., Ground)
MW50B-0416	1161876010	04/20/2016	04/21/2016	Water (Surface, Eff., Ground)

Method	Method Description
SM21 2320B	Alkalinity as CaCO3 QC
SM21 2340B	Dissolved Hardness as CaCO3 ICP-MS-LowLv
AK102	DRO/RRO Low Volume Water
AK103	DRO/RRO Low Volume Water
SM21 4500NO3-F	Flow Injection Analysis
AK101	Gasoline Range Organics (W)
EPA 300.0	Ion Chromatographic Analysis (W)
200.8 Low Level	Metals in Water by 200.8 ICP-MS LL
200.8 Low Level	Metals in Water by 200.8 ICP-MS LL DIS
SM21 4500-H B	pH Analysis
SW8270D	SW846-8270 SVOC by GC/MS (W) Liq/Liq ext
SM21 2540C	Total Dissolved Solids SM18 2540C
SM21 2540D	Total Suspended Solids SM20 2540D
SM21 2130B	Turbidity Analysis
SW8260B	Volatile Organic Compounds (W) FULL

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Detectable Results Summary

Client Sample ID: **MW82A-0416**
Lab Sample ID: 1161876001

	Parameter	Result	Units
Metals by ICP/MS	Aluminum	781	ug/L
	Antimony	0.0244J	ug/L
	Arsenic	7.70	ug/L
	Barium	14.9	ug/L
	Boron	13.0	ug/L
	Calcium	19800	ug/L
	Chromium	2.88	ug/L
	Cobalt	0.399	ug/L
	Copper	1.45	ug/L
	Iron	823	ug/L
	Lead	0.313	ug/L
	Magnesium	5210	ug/L
	Manganese	109	ug/L
	Molybdenum	0.745	ug/L
	Nickel	2.56	ug/L
	Potassium	2980	ug/L
	Sodium	5430	ug/L
	Tin	0.0749J	ug/L
	Vanadium	1.61	ug/L
	Zinc	7.03	ug/L
Waters Department	Alkalinity	61.3	mg/L
	Chloride	9.29	mg/L
	Fluoride	0.0890J	mg/L
	Nitrate-N	0.0452J	mg/L
	pH	7.90	pH units
	Sulfate	2.31	mg/L
	Total Dissolved Solids	121	mg/L
	Total Suspended Solids	13.1	mg/L
	Turbidity	6.60	NTU

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Detectable Results Summary

Client Sample ID: **MW82B-0416**
Lab Sample ID: 1161876002

	Parameter	Result	Units
Metals by ICP/MS	Aluminum	370	ug/L
	Antimony	0.0448J	ug/L
	Arsenic	0.786J	ug/L
	Barium	29.0	ug/L
	Boron	9.18	ug/L
	Cadmium	0.0842	ug/L
	Calcium	23500	ug/L
	Chromium	2.37	ug/L
	Cobalt	0.462	ug/L
	Copper	1.38	ug/L
	Iron	3820	ug/L
	Lead	0.257	ug/L
	Magnesium	6000	ug/L
	Manganese	141	ug/L
	Molybdenum	0.495	ug/L
	Nickel	2.89	ug/L
	Potassium	2530	ug/L
	Sodium	17600	ug/L
	Vanadium	1.81	ug/L
	Zinc	4.16	ug/L
Waters Department	Alkalinity	44.7	mg/L
	Chloride	45.0	mg/L
	Fluoride	0.0530J	mg/L
	Nitrate-N	0.563	mg/L
	pH	6.40	pH units
	Sulfate	3.85	mg/L
	Total Dissolved Solids	161	mg/L
	Total Suspended Solids	11.0	mg/L
	Turbidity	10.0	NTU

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Detectable Results Summary

Client Sample ID: **MW50A-0416**
Lab Sample ID: 1161876003

	Parameter	Result	Units
Metals by ICP/MS	Aluminum	10500	ug/L
	Antimony	0.513	ug/L
	Arsenic	23.0	ug/L
	Barium	118	ug/L
	Bismuth	0.0947	ug/L
	Boron	27.4	ug/L
	Cadmium	0.0349J	ug/L
	Calcium	31800	ug/L
	Chromium	24.6	ug/L
	Cobalt	3.93	ug/L
	Copper	19.8	ug/L
	Iron	9690	ug/L
	Lead	6.22	ug/L
	Magnesium	11600	ug/L
	Manganese	374	ug/L
	Molybdenum	1.50	ug/L
	Nickel	16.1	ug/L
	Potassium	6630	ug/L
	Silver	0.0457	ug/L
	Sodium	8230	ug/L
	Thallium	0.0598	ug/L
	Tin	1.48	ug/L
	Vanadium	21.9	ug/L
	Zinc	45.1	ug/L
Waters Department	Alkalinity	97.4	mg/L
	Chloride	7.60	mg/L
	Fluoride	0.0820J	mg/L
	Nitrate-N	0.0486J	mg/L
	pH	8.40	pH units
	Sulfate	4.55	mg/L
	Total Dissolved Solids	158	mg/L
	Total Suspended Solids	170	mg/L
	Turbidity	170	NTU

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Detectable Results Summary

Client Sample ID: **MW50B-0416**
Lab Sample ID: 1161876004

	Parameter	Result	Units
Metals by ICP/MS	Aluminum	70.0	ug/L
	Antimony	0.120	ug/L
	Arsenic	1.06	ug/L
	Barium	25.3	ug/L
	Boron	3.82J	ug/L
	Calcium	13800	ug/L
	Chromium	1.11	ug/L
	Cobalt	0.832	ug/L
	Copper	0.813	ug/L
	Iron	2440	ug/L
	Lead	0.124	ug/L
	Magnesium	5380	ug/L
	Manganese	40.9	ug/L
	Molybdenum	0.491	ug/L
	Nickel	2.91	ug/L
	Potassium	2140	ug/L
	Sodium	7180	ug/L
	Vanadium	1.29	ug/L
	Zinc	1.04J	ug/L
Waters Department	Alkalinity	47.2	mg/L
	Chloride	14.8	mg/L
	Fluoride	0.0690J	mg/L
	Nitrate-N	0.0558J	mg/L
	pH	6.90	pH units
	Sulfate	4.85	mg/L
	Total Dissolved Solids	106	mg/L
	Total Suspended Solids	3.57	mg/L
	Turbidity	4.10	NTU

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Detectable Results Summary

Client Sample ID: **MW82A-0416**
Lab Sample ID: 1161876007
Dissolved Metals by ICP/MS

Parameter	Result	Units
Aluminum	123	ug/L
Arsenic	7.52	ug/L
Barium	10.0	ug/L
Boron	12.3	ug/L
Calcium	19300	ug/L
Chromium	0.471J	ug/L
Cobalt	0.101	ug/L
Copper	0.392J	ug/L
Hardness as CaCO3	68.5	mg/L
Iron	168	ug/L
Lead	0.0706J	ug/L
Magnesium	4930	ug/L
Manganese	93.7	ug/L
Molybdenum	0.696	ug/L
Nickel	1.14	ug/L
Potassium	2870	ug/L
Silicon	16800	ug/L
Sodium	5270	ug/L
Zinc	1.32J	ug/L

Client Sample ID: **MW82B-0416**
Lab Sample ID: 1161876008
Dissolved Metals by ICP/MS

Parameter	Result	Units
Aluminum	3.12	ug/L
Barium	23.4	ug/L
Boron	7.80	ug/L
Cadmium	0.0811	ug/L
Calcium	20700	ug/L
Chromium	0.151J	ug/L
Cobalt	0.249	ug/L
Copper	0.380J	ug/L
Hardness as CaCO3	73.3	mg/L
Iron	2140	ug/L
Magnesium	5240	ug/L
Manganese	124	ug/L
Molybdenum	0.343	ug/L
Nickel	1.89	ug/L
Potassium	2260	ug/L
Silicon	14500	ug/L
Sodium	15300	ug/L
Zinc	1.88J	ug/L

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Detectable Results Summary

Client Sample ID: **MW50A-0416**
Lab Sample ID: 1161876009
Dissolved Metals by ICP/MS

Parameter	Result	Units
Aluminum	1720	ug/L
Antimony	0.194	ug/L
Arsenic	18.0	ug/L
Barium	37.4	ug/L
Boron	20.7	ug/L
Calcium	28700	ug/L
Chromium	3.89	ug/L
Cobalt	0.720	ug/L
Copper	3.59	ug/L
Hardness as CaCO3	105	mg/L
Iron	1680	ug/L
Lead	1.07	ug/L
Magnesium	8230	ug/L
Manganese	129	ug/L
Molybdenum	0.898	ug/L
Nickel	3.35	ug/L
Potassium	4900	ug/L
Silicon	19300	ug/L
Sodium	7720	ug/L
Tin	0.268	ug/L
Vanadium	4.16	ug/L
Zinc	7.91	ug/L

Client Sample ID: **MW50B-0416**
Lab Sample ID: 1161876010
Dissolved Metals by ICP/MS

Parameter	Result	Units
Aluminum	2.35	ug/L
Antimony	0.0707	ug/L
Barium	23.5	ug/L
Boron	3.72J	ug/L
Calcium	13500	ug/L
Cobalt	0.804	ug/L
Copper	0.303J	ug/L
Hardness as CaCO3	55.8	mg/L
Iron	470	ug/L
Magnesium	5330	ug/L
Manganese	38.7	ug/L
Molybdenum	0.496	ug/L
Nickel	2.98	ug/L
Potassium	2150	ug/L
Silicon	16100	ug/L
Sodium	7140	ug/L
Zinc	0.748J	ug/L

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Results of **MW82A-0416**

Client Sample ID: **MW82A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161876001
Lab Project ID: 1161876

Collection Date: 04/20/16 11:05
Received Date: 04/21/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Metals by ICP/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Aluminum	781		4.00	1.24	ug/L	5		05/18/16 09:02
Antimony	0.0244	J	0.0500	0.0150	ug/L	2.5		05/18/16 09:05
Arsenic	7.70		0.800	0.200	ug/L	2.5		05/18/16 09:05
Barium	14.9		0.250	0.0400	ug/L	2.5		05/18/16 09:05
Beryllium	0.0250	U	0.0500	0.0250	ug/L	2.5		05/18/16 09:05
Bismuth	0.0250	U	0.0500	0.0150	ug/L	2.5		05/18/16 09:05
Boron	13.0		5.00	1.50	ug/L	2.5		05/18/16 09:05
Cadmium	0.0250	U	0.0500	0.0150	ug/L	2.5		05/18/16 09:05
Calcium	19800		50.0	15.0	ug/L	2.5		05/18/16 09:05
Chromium	2.88		0.500	0.150	ug/L	2.5		05/18/16 09:05
Cobalt	0.399		0.0200	0.0100	ug/L	2.5		05/18/16 09:05
Copper	1.45		0.500	0.200	ug/L	2.5		05/18/16 09:05
Iron	823		20.0	6.20	ug/L	2.5		05/18/16 09:05
Lead	0.313		0.100	0.0310	ug/L	2.5		05/18/16 09:05
Magnesium	5210		20.0	6.20	ug/L	2.5		05/18/16 09:05
Manganese	109		0.100	0.0310	ug/L	2.5		05/18/16 09:05
Molybdenum	0.745		0.0500	0.0150	ug/L	2.5		05/18/16 09:05
Nickel	2.56		0.620	0.0620	ug/L	2.5		05/18/16 09:05
Potassium	2980		50.0	15.0	ug/L	2.5		05/18/16 09:05
Selenium	0.500	U	1.00	0.310	ug/L	2.5		05/18/16 09:05
Silver	0.0100	U	0.0200	0.00620	ug/L	2.5		05/18/16 09:05
Sodium	5430		100	31.0	ug/L	2.5		05/18/16 09:05
Thallium	0.0100	U	0.0200	0.00620	ug/L	2.5		05/18/16 09:05
Tin	0.0749	J	0.200	0.0620	ug/L	2.5		05/18/16 09:05
Vanadium	1.61		1.00	0.310	ug/L	2.5		05/18/16 09:05
Zinc	7.03		3.10	0.400	ug/L	2.5		05/18/16 09:05

Batch Information

Analytical Batch: MMS9354
Analytical Method: 200.8 Low Level
Analyst: VDL
Analytical Date/Time: 05/18/16 09:02
Container ID: 1161876001-A

Prep Batch: MXX29752
Prep Method: E200.2
Prep Date/Time: 05/17/16 08:07
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 10 mL

Print Date: 06/01/2016 2:30:35PM

J flagging is activated

Results of **MW82A-0416**

Client Sample ID: **MW82A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161876001
Lab Project ID: 1161876

Collection Date: 04/20/16 11:05
Received Date: 04/21/16 13:07
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	0.283	U	0.566	0.170	mg/L	1		04/25/16 14:23
Surrogates								
5a Androstane (surr)	94		50-150		%	1		04/25/16 14:23

Batch Information

Analytical Batch: XFC12346
Analytical Method: AK102
Analyst: S.G
Analytical Date/Time: 04/25/16 14:23
Container ID: 1161876001-J

Prep Batch: XXX35198
Prep Method: SW3520C
Prep Date/Time: 04/22/16 09:00
Prep Initial Wt./Vol.: 265 mL
Prep Extract Vol: 1 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Residual Range Organics	0.236	U	0.472	0.142	mg/L	1		04/25/16 14:23
Surrogates								
n-Triacontane-d62 (surr)	98		50-150		%	1		04/25/16 14:23

Batch Information

Analytical Batch: XFC12346
Analytical Method: AK103
Analyst: S.G
Analytical Date/Time: 04/25/16 14:23
Container ID: 1161876001-J

Prep Batch: XXX35198
Prep Method: SW3520C
Prep Date/Time: 04/22/16 09:00
Prep Initial Wt./Vol.: 265 mL
Prep Extract Vol: 1 mL

Print Date: 06/01/2016 2:30:35PM

J flagging is activated

Results of **MW82A-0416**

Client Sample ID: **MW82A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161876001
Lab Project ID: 1161876

Collection Date: 04/20/16 11:05
Received Date: 04/21/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,2,4-Trichlorobenzene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 22:20
1,2-Dichlorobenzene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 22:20
1,3-Dichlorobenzene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 22:20
1,4-Dichlorobenzene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 22:20
1-Chloronaphthalene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 22:20
1-Methylnaphthalene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 22:20
2,4,5-Trichlorophenol	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 22:20
2,4,6-Trichlorophenol	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 22:20
2,4-Dichlorophenol	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 22:20
2,4-Dimethylphenol	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 22:20
2,4-Dinitrophenol	0.0255	U	0.0510	0.0153	mg/L	1		05/02/16 22:20
2,4-Dinitrotoluene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 22:20
2,6-Dichlorophenol	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 22:20
2,6-Dinitrotoluene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 22:20
2-Chloronaphthalene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 22:20
2-Chlorophenol	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 22:20
2-Methyl-4,6-dinitrophenol	0.0255	U	0.0510	0.0153	mg/L	1		05/02/16 22:20
2-Methylnaphthalene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 22:20
2-Methylphenol (o-Cresol)	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 22:20
2-Nitroaniline	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 22:20
2-Nitrophenol	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 22:20
3&4-Methylphenol (p&m-Cresol)	0.0102	U	0.0204	0.00633	mg/L	1		05/02/16 22:20
3,3-Dichlorobenzidine	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 22:20
3-Nitroaniline	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 22:20
4-Bromophenyl-phenylether	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 22:20
4-Chloro-3-methylphenol	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 22:20
4-Chloroaniline	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 22:20
4-Chlorophenyl-phenylether	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 22:20
4-Nitroaniline	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 22:20
4-Nitrophenol	0.0255	U	0.0510	0.0153	mg/L	1		05/02/16 22:20
Acenaphthene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 22:20
Acenaphthylene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 22:20
Aniline	0.0255	U	0.0510	0.0153	mg/L	1		05/02/16 22:20
Anthracene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 22:20
Azobenzene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 22:20
Benzo(a)Anthracene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 22:20
Benzo[a]pyrene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 22:20

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Results of **MW82A-0416**

Client Sample ID: **MW82A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161876001
Lab Project ID: 1161876

Collection Date: 04/20/16 11:05
Received Date: 04/21/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Benzo[b]Fluoranthene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 22:20
Benzo[g,h,i]perylene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 22:20
Benzo[k]fluoranthene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 22:20
Benzoic acid	0.0255	U	0.0510	0.0153	mg/L	1		05/02/16 22:20
Benzyl alcohol	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 22:20
Bis(2chloro1methylethyl)Ether	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 22:20
Bis(2-Chloroethoxy)methane	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 22:20
Bis(2-Chloroethyl)ether	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 22:20
bis(2-Ethylhexyl)phthalate	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 22:20
Butylbenzylphthalate	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 22:20
Carbazole	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 22:20
Chrysene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 22:20
Dibenzo[a,h]anthracene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 22:20
Dibenzofuran	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 22:20
Diethylphthalate	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 22:20
Dimethylphthalate	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 22:20
Di-n-butylphthalate	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 22:20
di-n-Octylphthalate	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 22:20
Fluoranthene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 22:20
Fluorene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 22:20
Hexachlorobenzene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 22:20
Hexachlorobutadiene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 22:20
Hexachlorocyclopentadiene	0.0153	U	0.0306	0.00959	mg/L	1		05/02/16 22:20
Hexachloroethane	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 22:20
Indeno[1,2,3-c,d] pyrene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 22:20
Isophorone	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 22:20
Naphthalene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 22:20
Nitrobenzene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 22:20
N-Nitrosodimethylamine	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 22:20
N-Nitroso-di-n-propylamine	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 22:20
N-Nitrosodiphenylamine	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 22:20
Pentachlorophenol	0.0255	U	0.0510	0.0153	mg/L	1		05/02/16 22:20
Phenanthrene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 22:20
Phenol	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 22:20
Pyrene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 22:20
Surrogates								
2,4,6-Tribromophenol (surr)	75		43-140		%	1		05/02/16 22:20

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Results of **MW82A-0416**

Client Sample ID: **MW82A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161876001
Lab Project ID: 1161876

Collection Date: 04/20/16 11:05
Received Date: 04/21/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
2-Fluorobiphenyl (surr)	73.6		44-119		%	1		05/02/16 22:20
2-Fluorophenol (surr)	53.9		19-119		%	1		05/02/16 22:20
Nitrobenzene-d5 (surr)	67.2		44-120		%	1		05/02/16 22:20
Phenol-d6 (surr)	58.3		10-115		%	1		05/02/16 22:20
Terphenyl-d14 (surr)	91		50-134		%	1		05/02/16 22:20

Batch Information

Analytical Batch: XMS9274
Analytical Method: SW8270D
Analyst: NLL
Analytical Date/Time: 05/02/16 22:20
Container ID: 1161876001-H

Prep Batch: XXX35213
Prep Method: SW3520C
Prep Date/Time: 04/26/16 09:00
Prep Initial Wt./Vol.: 980 mL
Prep Extract Vol: 1 mL

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Results of **MW82A-0416**

Client Sample ID: **MW82A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161876001
Lab Project ID: 1161876

Collection Date: 04/20/16 11:05
Received Date: 04/21/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.0500	U	0.100	0.0310	mg/L	1		04/23/16 19:42
Surrogates								
4-Bromofluorobenzene (surr)	75.5		50-150		%	1		04/23/16 19:42

Batch Information

Analytical Batch: VFC12971
Analytical Method: AK101
Analyst: S.P
Analytical Date/Time: 04/23/16 19:42
Container ID: 1161876001-E

Prep Batch: VXX28737
Prep Method: SW5030B
Prep Date/Time: 04/23/16 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 06/01/2016 2:30:35PM

J flagging is activated

Results of **MW82A-0416**

Client Sample ID: **MW82A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161876001
Lab Project ID: 1161876

Collection Date: 04/20/16 11:05
Received Date: 04/21/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		04/27/16 18:10
1,1,1-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:10
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		04/27/16 18:10
1,1,2-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:10
1,1-Dichloroethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:10
1,1-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:10
1,1-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:10
1,2,3-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:10
1,2,3-Trichloropropane	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:10
1,2,4-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:10
1,2,4-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:10
1,2-Dibromo-3-chloropropane	5.00	U	10.0	3.10	ug/L	1		04/27/16 18:10
1,2-Dibromoethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:10
1,2-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:10
1,2-Dichloroethane	0.250	U	0.500	0.150	ug/L	1		04/27/16 18:10
1,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:10
1,3,5-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:10
1,3-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:10
1,3-Dichloropropane	0.250	U	0.500	0.150	ug/L	1		04/27/16 18:10
1,4-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1		04/27/16 18:10
2,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:10
2-Butanone (MEK)	5.00	U	10.0	3.10	ug/L	1		04/27/16 18:10
2-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:10
2-Hexanone	5.00	U	10.0	3.10	ug/L	1		04/27/16 18:10
4-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:10
4-Isopropyltoluene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:10
4-Methyl-2-pentanone (MIBK)	5.00	U	10.0	3.10	ug/L	1		04/27/16 18:10
Benzene	0.200	U	0.400	0.120	ug/L	1		04/27/16 18:10
Bromobenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:10
Bromochloromethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:10
Bromodichloromethane	0.250	U	0.500	0.150	ug/L	1		04/27/16 18:10
Bromoform	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:10
Bromomethane	5.00	U	10.0	3.10	ug/L	1		04/27/16 18:10
Carbon disulfide	5.00	U	10.0	3.10	ug/L	1		04/27/16 18:10
Carbon tetrachloride	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:10
Chlorobenzene	0.250	U	0.500	0.150	ug/L	1		04/27/16 18:10
Chloroethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:10

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Results of **MW82A-0416**

Client Sample ID: **MW82A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161876001
Lab Project ID: 1161876

Collection Date: 04/20/16 11:05
Received Date: 04/21/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroform	0.500	U	1.00	0.300	ug/L	1		04/27/16 18:10
Chloromethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:10
cis-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:10
cis-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		04/27/16 18:10
Dibromochloromethane	0.250	U	0.500	0.150	ug/L	1		04/27/16 18:10
Dibromomethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:10
Dichlorodifluoromethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:10
Ethylbenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:10
Freon-113	5.00	U	10.0	3.10	ug/L	1		04/27/16 18:10
Hexachlorobutadiene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:10
Isopropylbenzene (Cumene)	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:10
Methylene chloride	2.50	U	5.00	1.00	ug/L	1		04/27/16 18:10
Methyl-t-butyl ether	5.00	U	10.0	3.10	ug/L	1		04/27/16 18:10
Naphthalene	5.00	U	10.0	3.10	ug/L	1		04/27/16 18:10
n-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:10
n-Propylbenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:10
o-Xylene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:10
P & M -Xylene	1.00	U	2.00	0.620	ug/L	1		04/27/16 18:10
sec-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:10
Styrene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:10
tert-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:10
Tetrachloroethene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:10
Toluene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:10
trans-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:10
trans-1,3-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:10
Trichloroethene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:10
Trichlorofluoromethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:10
Vinyl acetate	5.00	U	10.0	3.10	ug/L	1		04/27/16 18:10
Vinyl chloride	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:10
Xylenes (total)	1.50	U	3.00	1.00	ug/L	1		04/27/16 18:10
Surrogates								
1,2-Dichloroethane-D4 (surr)	108		81-118		%	1		04/27/16 18:10
4-Bromofluorobenzene (surr)	97		85-114		%	1		04/27/16 18:10
Toluene-d8 (surr)	99.9		89-112		%	1		04/27/16 18:10

Print Date: 06/01/2016 2:30:35PM

J flagging is activated

Results of **MW82A-0416**

Client Sample ID: **MW82A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161876001
Lab Project ID: 1161876

Collection Date: 04/20/16 11:05
Received Date: 04/21/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS15744
Analytical Method: SW8260B
Analyst: NRB
Analytical Date/Time: 04/27/16 18:10
Container ID: 1161876001-D

Prep Batch: VXX28746
Prep Method: SW5030B
Prep Date/Time: 04/27/16 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 06/01/2016 2:30:35PM

J flagging is activated

Results of **MW82A-0416**

Client Sample ID: **MW82A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161876001
Lab Project ID: 1161876

Collection Date: 04/20/16 11:05
Received Date: 04/21/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloride	9.29		0.100	0.0310	mg/L	1		04/22/16 08:06
Fluoride	0.0890	J	0.100	0.0310	mg/L	1		04/22/16 08:06
Sulfate	2.31		0.100	0.0310	mg/L	1		04/22/16 08:06

Batch Information

Analytical Batch: WIC5531
Analytical Method: EPA 300.0
Analyst: ACF
Analytical Date/Time: 04/22/16 08:06
Container ID: 1161876001-N

Prep Batch: WXX11476
Prep Method: METHOD
Prep Date/Time: 04/21/16 15:05
Prep Initial Wt./Vol.: 10 mL
Prep Extract Vol: 10 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Turbidity	6.60		0.200	0.100	NTU	1		04/22/16 09:30

Batch Information

Analytical Batch: WAT10632
Analytical Method: SM21 2130B
Analyst: MBS
Analytical Date/Time: 04/22/16 09:30
Container ID: 1161876001-M

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Alkalinity	61.3		10.0	3.10	mg/L	1		04/25/16 17:03

Batch Information

Analytical Batch: WTI4445
Analytical Method: SM21 2320B
Analyst: ACF
Analytical Date/Time: 04/25/16 17:03
Container ID: 1161876001-M

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Dissolved Solids	121		10.0	3.10	mg/L	1		04/26/16 09:58

Print Date: 06/01/2016 2:30:35PM

J flagging is activated

Results of **MW82A-0416**

Client Sample ID: **MW82A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161876001
Lab Project ID: 1161876

Collection Date: 04/20/16 11:05
Received Date: 04/21/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Batch Information

Analytical Batch: STS5020
Analytical Method: SM21 2540C
Analyst: MBS
Analytical Date/Time: 04/26/16 09:58
Container ID: 1161876001-M

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Suspended Solids	13.1		1.01	0.313	mg/L	1		04/25/16 15:51

Batch Information

Analytical Batch: STS5019
Analytical Method: SM21 2540D
Analyst: MBS
Analytical Date/Time: 04/25/16 15:51
Container ID: 1161876001-L

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
pH	7.90		0.100	0.100	pH units	1		04/25/16 17:03

Batch Information

Analytical Batch: WTI4443
Analytical Method: SM21 4500-H B
Analyst: ACF
Analytical Date/Time: 04/25/16 17:03
Container ID: 1161876001-M

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Nitrate-N	0.0452	J	0.100	0.0300	mg/L	2		04/21/16 15:31
Nitrite-N	0.0500	U	0.100	0.0300	mg/L	2		04/21/16 15:31

Batch Information

Analytical Batch: WFI2469
Analytical Method: SM21 4500NO3-F
Analyst: NEG
Analytical Date/Time: 04/21/16 15:31
Container ID: 1161876001-N

Print Date: 06/01/2016 2:30:35PM

J flagging is activated

Results of **MW82B-0416**

Client Sample ID: **MW82B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161876002
Lab Project ID: 1161876

Collection Date: 04/20/16 13:05
Received Date: 04/21/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Metals by ICP/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Aluminum	370		2.00	0.620	ug/L	2.5		05/18/16 09:08
Antimony	0.0448	J	0.0500	0.0150	ug/L	2.5		05/18/16 09:08
Arsenic	0.786	J	0.800	0.200	ug/L	2.5		05/18/16 09:08
Barium	29.0		0.250	0.0400	ug/L	2.5		05/18/16 09:08
Beryllium	0.0250	U	0.0500	0.0250	ug/L	2.5		05/18/16 09:08
Bismuth	0.0250	U	0.0500	0.0150	ug/L	2.5		05/18/16 09:08
Boron	9.18		5.00	1.50	ug/L	2.5		05/18/16 09:08
Cadmium	0.0842		0.0500	0.0150	ug/L	2.5		05/18/16 09:08
Calcium	23500		50.0	15.0	ug/L	2.5		05/18/16 09:08
Chromium	2.37		0.500	0.150	ug/L	2.5		05/18/16 09:08
Cobalt	0.462		0.0200	0.0100	ug/L	2.5		05/18/16 09:08
Copper	1.38		0.500	0.200	ug/L	2.5		05/18/16 09:08
Iron	3820		20.0	6.20	ug/L	2.5		05/18/16 09:08
Lead	0.257		0.100	0.0310	ug/L	2.5		05/18/16 09:08
Magnesium	6000		20.0	6.20	ug/L	2.5		05/18/16 09:08
Manganese	141		0.100	0.0310	ug/L	2.5		05/18/16 09:08
Molybdenum	0.495		0.0500	0.0150	ug/L	2.5		05/18/16 09:08
Nickel	2.89		0.620	0.0620	ug/L	2.5		05/18/16 09:08
Potassium	2530		50.0	15.0	ug/L	2.5		05/18/16 09:08
Selenium	0.500	U	1.00	0.310	ug/L	2.5		05/18/16 09:08
Silver	0.0100	U	0.0200	0.00620	ug/L	2.5		05/18/16 09:08
Sodium	17600		100	31.0	ug/L	2.5		05/18/16 09:08
Thallium	0.0100	U	0.0200	0.00620	ug/L	2.5		05/18/16 09:08
Tin	0.100	U	0.200	0.0620	ug/L	2.5		05/18/16 09:08
Vanadium	1.81		1.00	0.310	ug/L	2.5		05/18/16 09:08
Zinc	4.16		3.10	0.400	ug/L	2.5		05/18/16 09:08

Batch Information

Analytical Batch: MMS9354
Analytical Method: 200.8 Low Level
Analyst: VDL
Analytical Date/Time: 05/18/16 09:08
Container ID: 1161876002-A

Prep Batch: MXX29752
Prep Method: E200.2
Prep Date/Time: 05/17/16 08:07
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 10 mL

Print Date: 06/01/2016 2:30:35PM

J flagging is activated

Results of **MW82B-0416**

Client Sample ID: **MW82B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161876002
Lab Project ID: 1161876

Collection Date: 04/20/16 13:05
Received Date: 04/21/16 13:07
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	0.283	U	0.566	0.170	mg/L	1		04/25/16 14:33
Surrogates								
5a Androstane (surr)	95.1		50-150		%	1		04/25/16 14:33

Batch Information

Analytical Batch: XFC12346
Analytical Method: AK102
Analyst: S.G
Analytical Date/Time: 04/25/16 14:33
Container ID: 1161876002-J

Prep Batch: XXX35198
Prep Method: SW3520C
Prep Date/Time: 04/22/16 09:00
Prep Initial Wt./Vol.: 265 mL
Prep Extract Vol: 1 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Residual Range Organics	0.236	U	0.472	0.142	mg/L	1		04/25/16 14:33
Surrogates								
n-Triacontane-d62 (surr)	92.9		50-150		%	1		04/25/16 14:33

Batch Information

Analytical Batch: XFC12346
Analytical Method: AK103
Analyst: S.G
Analytical Date/Time: 04/25/16 14:33
Container ID: 1161876002-J

Prep Batch: XXX35198
Prep Method: SW3520C
Prep Date/Time: 04/22/16 09:00
Prep Initial Wt./Vol.: 265 mL
Prep Extract Vol: 1 mL

Print Date: 06/01/2016 2:30:35PM

J flagging is activated

Results of **MW82B-0416**

Client Sample ID: **MW82B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161876002
Lab Project ID: 1161876

Collection Date: 04/20/16 13:05
Received Date: 04/21/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,2,4-Trichlorobenzene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 22:37
1,2-Dichlorobenzene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 22:37
1,3-Dichlorobenzene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 22:37
1,4-Dichlorobenzene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 22:37
1-Chloronaphthalene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 22:37
1-Methylnaphthalene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 22:37
2,4,5-Trichlorophenol	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 22:37
2,4,6-Trichlorophenol	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 22:37
2,4-Dichlorophenol	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 22:37
2,4-Dimethylphenol	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 22:37
2,4-Dinitrophenol	0.0253	U	0.0505	0.0152	mg/L	1		05/02/16 22:37
2,4-Dinitrotoluene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 22:37
2,6-Dichlorophenol	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 22:37
2,6-Dinitrotoluene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 22:37
2-Chloronaphthalene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 22:37
2-Chlorophenol	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 22:37
2-Methyl-4,6-dinitrophenol	0.0253	U	0.0505	0.0152	mg/L	1		05/02/16 22:37
2-Methylnaphthalene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 22:37
2-Methylphenol (o-Cresol)	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 22:37
2-Nitroaniline	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 22:37
2-Nitrophenol	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 22:37
3&4-Methylphenol (p&m-Cresol)	0.0101	U	0.0202	0.00626	mg/L	1		05/02/16 22:37
3,3-Dichlorobenzidine	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 22:37
3-Nitroaniline	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 22:37
4-Bromophenyl-phenylether	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 22:37
4-Chloro-3-methylphenol	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 22:37
4-Chloroaniline	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 22:37
4-Chlorophenyl-phenylether	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 22:37
4-Nitroaniline	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 22:37
4-Nitrophenol	0.0253	U	0.0505	0.0152	mg/L	1		05/02/16 22:37
Acenaphthene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 22:37
Acenaphthylene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 22:37
Aniline	0.0253	U	0.0505	0.0152	mg/L	1		05/02/16 22:37
Anthracene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 22:37
Azobenzene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 22:37
Benzo(a)Anthracene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 22:37
Benzo[a]pyrene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 22:37

Print Date: 06/01/2016 2:30:35PM

J flagging is activated

Results of **MW82B-0416**

Client Sample ID: **MW82B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161876002
Lab Project ID: 1161876

Collection Date: 04/20/16 13:05
Received Date: 04/21/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Benzo[b]Fluoranthene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 22:37
Benzo[g,h,i]perylene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 22:37
Benzo[k]fluoranthene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 22:37
Benzoic acid	0.0253	U	0.0505	0.0152	mg/L	1		05/02/16 22:37
Benzyl alcohol	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 22:37
Bis(2chloro1methylethyl)Ether	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 22:37
Bis(2-Chloroethoxy)methane	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 22:37
Bis(2-Chloroethyl)ether	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 22:37
bis(2-Ethylhexyl)phthalate	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 22:37
Butylbenzylphthalate	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 22:37
Carbazole	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 22:37
Chrysene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 22:37
Dibenzo[a,h]anthracene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 22:37
Dibenzofuran	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 22:37
Diethylphthalate	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 22:37
Dimethylphthalate	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 22:37
Di-n-butylphthalate	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 22:37
di-n-Octylphthalate	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 22:37
Fluoranthene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 22:37
Fluorene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 22:37
Hexachlorobenzene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 22:37
Hexachlorobutadiene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 22:37
Hexachlorocyclopentadiene	0.0152	U	0.0303	0.00949	mg/L	1		05/02/16 22:37
Hexachloroethane	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 22:37
Indeno[1,2,3-c,d] pyrene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 22:37
Isophorone	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 22:37
Naphthalene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 22:37
Nitrobenzene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 22:37
N-Nitrosodimethylamine	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 22:37
N-Nitroso-di-n-propylamine	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 22:37
N-Nitrosodiphenylamine	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 22:37
Pentachlorophenol	0.0253	U	0.0505	0.0152	mg/L	1		05/02/16 22:37
Phenanthrene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 22:37
Phenol	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 22:37
Pyrene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 22:37
Surrogates								
2,4,6-Tribromophenol (surr)	66.7		43-140		%	1		05/02/16 22:37

Print Date: 06/01/2016 2:30:35PM

J flagging is activated

Results of **MW82B-0416**

Client Sample ID: **MW82B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161876002
Lab Project ID: 1161876

Collection Date: 04/20/16 13:05
Received Date: 04/21/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
2-Fluorobiphenyl (surr)	69.7		44-119		%	1		05/02/16 22:37
2-Fluorophenol (surr)	48.7		19-119		%	1		05/02/16 22:37
Nitrobenzene-d5 (surr)	62.2		44-120		%	1		05/02/16 22:37
Phenol-d6 (surr)	52		10-115		%	1		05/02/16 22:37
Terphenyl-d14 (surr)	95.8		50-134		%	1		05/02/16 22:37

Batch Information

Analytical Batch: XMS9274
Analytical Method: SW8270D
Analyst: NLL
Analytical Date/Time: 05/02/16 22:37
Container ID: 1161876002-H

Prep Batch: XXX35213
Prep Method: SW3520C
Prep Date/Time: 04/26/16 09:00
Prep Initial Wt./Vol.: 990 mL
Prep Extract Vol: 1 mL

Print Date: 06/01/2016 2:30:35PM

J flagging is activated

Results of **MW82B-0416**

Client Sample ID: **MW82B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161876002
Lab Project ID: 1161876

Collection Date: 04/20/16 13:05
Received Date: 04/21/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.0500	U	0.100	0.0310	mg/L	1		04/23/16 19:23
Surrogates								
4-Bromofluorobenzene (surr)	75.8		50-150		%	1		04/23/16 19:23

Batch Information

Analytical Batch: VFC12971
Analytical Method: AK101
Analyst: S.P
Analytical Date/Time: 04/23/16 19:23
Container ID: 1161876002-E

Prep Batch: VXX28737
Prep Method: SW5030B
Prep Date/Time: 04/23/16 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 06/01/2016 2:30:35PM

J flagging is activated

Results of **MW82B-0416**

Client Sample ID: **MW82B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161876002
Lab Project ID: 1161876

Collection Date: 04/20/16 13:05
Received Date: 04/21/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		04/27/16 18:27
1,1,1-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:27
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		04/27/16 18:27
1,1,2-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:27
1,1-Dichloroethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:27
1,1-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:27
1,1-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:27
1,2,3-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:27
1,2,3-Trichloropropane	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:27
1,2,4-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:27
1,2,4-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:27
1,2-Dibromo-3-chloropropane	5.00	U	10.0	3.10	ug/L	1		04/27/16 18:27
1,2-Dibromoethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:27
1,2-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:27
1,2-Dichloroethane	0.250	U	0.500	0.150	ug/L	1		04/27/16 18:27
1,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:27
1,3,5-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:27
1,3-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:27
1,3-Dichloropropane	0.250	U	0.500	0.150	ug/L	1		04/27/16 18:27
1,4-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1		04/27/16 18:27
2,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:27
2-Butanone (MEK)	5.00	U	10.0	3.10	ug/L	1		04/27/16 18:27
2-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:27
2-Hexanone	5.00	U	10.0	3.10	ug/L	1		04/27/16 18:27
4-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:27
4-Isopropyltoluene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:27
4-Methyl-2-pentanone (MIBK)	5.00	U	10.0	3.10	ug/L	1		04/27/16 18:27
Benzene	0.200	U	0.400	0.120	ug/L	1		04/27/16 18:27
Bromobenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:27
Bromochloromethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:27
Bromodichloromethane	0.250	U	0.500	0.150	ug/L	1		04/27/16 18:27
Bromoform	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:27
Bromomethane	5.00	U	10.0	3.10	ug/L	1		04/27/16 18:27
Carbon disulfide	5.00	U	10.0	3.10	ug/L	1		04/27/16 18:27
Carbon tetrachloride	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:27
Chlorobenzene	0.250	U	0.500	0.150	ug/L	1		04/27/16 18:27
Chloroethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:27

Print Date: 06/01/2016 2:30:35PM

J flagging is activated

Results of **MW82B-0416**

Client Sample ID: **MW82B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161876002
Lab Project ID: 1161876

Collection Date: 04/20/16 13:05
Received Date: 04/21/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroform	0.500	U	1.00	0.300	ug/L	1		04/27/16 18:27
Chloromethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:27
cis-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:27
cis-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		04/27/16 18:27
Dibromochloromethane	0.250	U	0.500	0.150	ug/L	1		04/27/16 18:27
Dibromomethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:27
Dichlorodifluoromethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:27
Ethylbenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:27
Freon-113	5.00	U	10.0	3.10	ug/L	1		04/27/16 18:27
Hexachlorobutadiene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:27
Isopropylbenzene (Cumene)	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:27
Methylene chloride	2.50	U	5.00	1.00	ug/L	1		04/27/16 18:27
Methyl-t-butyl ether	5.00	U	10.0	3.10	ug/L	1		04/27/16 18:27
Naphthalene	5.00	U	10.0	3.10	ug/L	1		04/27/16 18:27
n-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:27
n-Propylbenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:27
o-Xylene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:27
P & M -Xylene	1.00	U	2.00	0.620	ug/L	1		04/27/16 18:27
sec-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:27
Styrene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:27
tert-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:27
Tetrachloroethene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:27
Toluene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:27
trans-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:27
trans-1,3-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:27
Trichloroethene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:27
Trichlorofluoromethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:27
Vinyl acetate	5.00	U	10.0	3.10	ug/L	1		04/27/16 18:27
Vinyl chloride	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:27
Xylenes (total)	1.50	U	3.00	1.00	ug/L	1		04/27/16 18:27
Surrogates								
1,2-Dichloroethane-D4 (surr)	109		81-118		%	1		04/27/16 18:27
4-Bromofluorobenzene (surr)	96.7		85-114		%	1		04/27/16 18:27
Toluene-d8 (surr)	101		89-112		%	1		04/27/16 18:27

Print Date: 06/01/2016 2:30:35PM

J flagging is activated

Results of **MW82B-0416**

Client Sample ID: **MW82B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161876002
Lab Project ID: 1161876

Collection Date: 04/20/16 13:05
Received Date: 04/21/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS15744
Analytical Method: SW8260B
Analyst: NRB
Analytical Date/Time: 04/27/16 18:27
Container ID: 1161876002-D

Prep Batch: VXX28746
Prep Method: SW5030B
Prep Date/Time: 04/27/16 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 06/01/2016 2:30:35PM

J flagging is activated

Results of **MW82B-0416**

Client Sample ID: **MW82B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161876002
Lab Project ID: 1161876

Collection Date: 04/20/16 13:05
Received Date: 04/21/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloride	45.0		0.500	0.155	mg/L	5		05/31/16 18:51
Fluoride	0.0530	J	0.100	0.0310	mg/L	1		05/31/16 16:15
Sulfate	3.85		0.100	0.0310	mg/L	1		05/31/16 16:15

Batch Information

Analytical Batch: WIC5543
Analytical Method: EPA 300.0
Analyst: ACF
Analytical Date/Time: 05/31/16 18:51
Container ID: 1161876002-M

Prep Batch: WXX11516
Prep Method: METHOD
Prep Date/Time: 05/31/16 13:23
Prep Initial Wt./Vol.: 10 mL
Prep Extract Vol: 10 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Turbidity	10.0		0.200	0.100	NTU	1		04/22/16 09:30

Batch Information

Analytical Batch: WAT10632
Analytical Method: SM21 2130B
Analyst: MBS
Analytical Date/Time: 04/22/16 09:30
Container ID: 1161876002-M

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Alkalinity	44.7		10.0	3.10	mg/L	1		04/25/16 17:20

Batch Information

Analytical Batch: WTI4445
Analytical Method: SM21 2320B
Analyst: ACF
Analytical Date/Time: 04/25/16 17:20
Container ID: 1161876002-M

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Dissolved Solids	161		10.0	3.10	mg/L	1		04/26/16 09:58

Print Date: 06/01/2016 2:30:35PM

J flagging is activated

Results of **MW82B-0416**

Client Sample ID: **MW82B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161876002
Lab Project ID: 1161876

Collection Date: 04/20/16 13:05
Received Date: 04/21/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Batch Information

Analytical Batch: STS5020
Analytical Method: SM21 2540C
Analyst: MBS
Analytical Date/Time: 04/26/16 09:58
Container ID: 1161876002-M

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Suspended Solids	11.0		1.00	0.310	mg/L	1		04/25/16 15:51

Batch Information

Analytical Batch: STS5019
Analytical Method: SM21 2540D
Analyst: MBS
Analytical Date/Time: 04/25/16 15:51
Container ID: 1161876002-L

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
pH	6.40		0.100	0.100	pH units	1		04/25/16 17:20

Batch Information

Analytical Batch: WTI4443
Analytical Method: SM21 4500-H B
Analyst: ACF
Analytical Date/Time: 04/25/16 17:20
Container ID: 1161876002-M

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Nitrate-N	0.563		0.100	0.0300	mg/L	2		04/21/16 15:33
Nitrite-N	0.0500	U	0.100	0.0300	mg/L	2		04/21/16 15:33

Batch Information

Analytical Batch: WFI2469
Analytical Method: SM21 4500NO3-F
Analyst: NEG
Analytical Date/Time: 04/21/16 15:33
Container ID: 1161876002-N

Print Date: 06/01/2016 2:30:35PM

J flagging is activated

Results of **MW50A-0416**

Client Sample ID: **MW50A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161876003
Lab Project ID: 1161876

Collection Date: 04/20/16 16:25
Received Date: 04/21/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Metals by ICP/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Aluminum	10500		80.0	24.8	ug/L	100		05/18/16 09:29
Antimony	0.513		0.0500	0.0150	ug/L	2.5		05/18/16 09:14
Arsenic	23.0		0.800	0.200	ug/L	2.5		05/18/16 09:14
Barium	118		0.250	0.0400	ug/L	2.5		05/18/16 09:14
Beryllium	0.0250	U	0.0500	0.0250	ug/L	2.5		05/18/16 09:14
Bismuth	0.0947		0.0500	0.0150	ug/L	2.5		05/18/16 09:14
Boron	27.4		5.00	1.50	ug/L	2.5		05/18/16 09:14
Cadmium	0.0349	J	0.0500	0.0150	ug/L	2.5		05/18/16 09:14
Calcium	31800		50.0	15.0	ug/L	2.5		05/18/16 09:14
Chromium	24.6		0.500	0.150	ug/L	2.5		05/18/16 09:14
Cobalt	3.93		0.0200	0.0100	ug/L	2.5		05/18/16 09:14
Copper	19.8		0.500	0.200	ug/L	2.5		05/18/16 09:14
Iron	9690		20.0	6.20	ug/L	2.5		05/18/16 09:14
Lead	6.22		0.100	0.0310	ug/L	2.5		05/18/16 09:14
Magnesium	11600		20.0	6.20	ug/L	2.5		05/18/16 09:14
Manganese	374		0.100	0.0310	ug/L	2.5		05/18/16 09:14
Molybdenum	1.50		0.0500	0.0150	ug/L	2.5		05/18/16 09:14
Nickel	16.1		0.620	0.0620	ug/L	2.5		05/18/16 09:14
Potassium	6630		50.0	15.0	ug/L	2.5		05/18/16 09:14
Selenium	0.500	U	1.00	0.310	ug/L	2.5		05/18/16 09:14
Silver	0.0457		0.0200	0.00620	ug/L	2.5		05/18/16 09:14
Sodium	8230		100	31.0	ug/L	2.5		05/18/16 09:14
Thallium	0.0598		0.0200	0.00620	ug/L	2.5		05/18/16 09:14
Tin	1.48		0.200	0.0620	ug/L	2.5		05/18/16 09:14
Vanadium	21.9		1.00	0.310	ug/L	2.5		05/18/16 09:14
Zinc	45.1		3.10	0.400	ug/L	2.5		05/18/16 09:14

Batch Information

Analytical Batch: MMS9354
Analytical Method: 200.8 Low Level
Analyst: VDL
Analytical Date/Time: 05/18/16 09:29
Container ID: 1161876003-A

Prep Batch: MXX29752
Prep Method: E200.2
Prep Date/Time: 05/17/16 08:07
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 10 mL

Print Date: 06/01/2016 2:30:35PM

J flagging is activated

Results of **MW50A-0416**

Client Sample ID: **MW50A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161876003
Lab Project ID: 1161876

Collection Date: 04/20/16 16:25
Received Date: 04/21/16 13:07
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	0.283	U	0.566	0.170	mg/L	1		04/25/16 14:43
Surrogates								
5a Androstane (surr)	92		50-150		%	1		04/25/16 14:43

Batch Information

Analytical Batch: XFC12346
Analytical Method: AK102
Analyst: S.G
Analytical Date/Time: 04/25/16 14:43
Container ID: 1161876003-J

Prep Batch: XXX35198
Prep Method: SW3520C
Prep Date/Time: 04/22/16 09:00
Prep Initial Wt./Vol.: 265 mL
Prep Extract Vol: 1 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Residual Range Organics	0.236	U	0.472	0.142	mg/L	1		04/25/16 14:43
Surrogates								
n-Triacontane-d62 (surr)	88.4		50-150		%	1		04/25/16 14:43

Batch Information

Analytical Batch: XFC12346
Analytical Method: AK103
Analyst: S.G
Analytical Date/Time: 04/25/16 14:43
Container ID: 1161876003-J

Prep Batch: XXX35198
Prep Method: SW3520C
Prep Date/Time: 04/22/16 09:00
Prep Initial Wt./Vol.: 265 mL
Prep Extract Vol: 1 mL

Print Date: 06/01/2016 2:30:35PM

J flagging is activated

Results of **MW50A-0416**

Client Sample ID: **MW50A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161876003
Lab Project ID: 1161876

Collection Date: 04/20/16 16:25
Received Date: 04/21/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,2,4-Trichlorobenzene	0.00530	U	0.0106	0.00328	mg/L	1		05/02/16 22:54
1,2-Dichlorobenzene	0.00530	U	0.0106	0.00328	mg/L	1		05/02/16 22:54
1,3-Dichlorobenzene	0.00530	U	0.0106	0.00328	mg/L	1		05/02/16 22:54
1,4-Dichlorobenzene	0.00530	U	0.0106	0.00328	mg/L	1		05/02/16 22:54
1-Chloronaphthalene	0.00530	U	0.0106	0.00328	mg/L	1		05/02/16 22:54
1-Methylnaphthalene	0.00530	U	0.0106	0.00328	mg/L	1		05/02/16 22:54
2,4,5-Trichlorophenol	0.00530	U	0.0106	0.00328	mg/L	1		05/02/16 22:54
2,4,6-Trichlorophenol	0.00530	U	0.0106	0.00328	mg/L	1		05/02/16 22:54
2,4-Dichlorophenol	0.00530	U	0.0106	0.00328	mg/L	1		05/02/16 22:54
2,4-Dimethylphenol	0.00530	U	0.0106	0.00328	mg/L	1		05/02/16 22:54
2,4-Dinitrophenol	0.0265	U	0.0529	0.0159	mg/L	1		05/02/16 22:54
2,4-Dinitrotoluene	0.00530	U	0.0106	0.00328	mg/L	1		05/02/16 22:54
2,6-Dichlorophenol	0.00530	U	0.0106	0.00328	mg/L	1		05/02/16 22:54
2,6-Dinitrotoluene	0.00530	U	0.0106	0.00328	mg/L	1		05/02/16 22:54
2-Chloronaphthalene	0.00530	U	0.0106	0.00328	mg/L	1		05/02/16 22:54
2-Chlorophenol	0.00530	U	0.0106	0.00328	mg/L	1		05/02/16 22:54
2-Methyl-4,6-dinitrophenol	0.0265	U	0.0529	0.0159	mg/L	1		05/02/16 22:54
2-Methylnaphthalene	0.00530	U	0.0106	0.00328	mg/L	1		05/02/16 22:54
2-Methylphenol (o-Cresol)	0.00530	U	0.0106	0.00328	mg/L	1		05/02/16 22:54
2-Nitroaniline	0.00530	U	0.0106	0.00328	mg/L	1		05/02/16 22:54
2-Nitrophenol	0.00530	U	0.0106	0.00328	mg/L	1		05/02/16 22:54
3&4-Methylphenol (p&m-Cresol)	0.0106	U	0.0212	0.00656	mg/L	1		05/02/16 22:54
3,3-Dichlorobenzidine	0.00530	U	0.0106	0.00328	mg/L	1		05/02/16 22:54
3-Nitroaniline	0.00530	U	0.0106	0.00328	mg/L	1		05/02/16 22:54
4-Bromophenyl-phenylether	0.00530	U	0.0106	0.00328	mg/L	1		05/02/16 22:54
4-Chloro-3-methylphenol	0.00530	U	0.0106	0.00328	mg/L	1		05/02/16 22:54
4-Chloroaniline	0.00530	U	0.0106	0.00328	mg/L	1		05/02/16 22:54
4-Chlorophenyl-phenylether	0.00530	U	0.0106	0.00328	mg/L	1		05/02/16 22:54
4-Nitroaniline	0.00530	U	0.0106	0.00328	mg/L	1		05/02/16 22:54
4-Nitrophenol	0.0265	U	0.0529	0.0159	mg/L	1		05/02/16 22:54
Acenaphthene	0.00530	U	0.0106	0.00328	mg/L	1		05/02/16 22:54
Acenaphthylene	0.00530	U	0.0106	0.00328	mg/L	1		05/02/16 22:54
Aniline	0.0265	U	0.0529	0.0159	mg/L	1		05/02/16 22:54
Anthracene	0.00530	U	0.0106	0.00328	mg/L	1		05/02/16 22:54
Azobenzene	0.00530	U	0.0106	0.00328	mg/L	1		05/02/16 22:54
Benzo(a)Anthracene	0.00530	U	0.0106	0.00328	mg/L	1		05/02/16 22:54
Benzo[a]pyrene	0.00530	U	0.0106	0.00328	mg/L	1		05/02/16 22:54

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J flagging is activated

Results of **MW50A-0416**

Client Sample ID: **MW50A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161876003
Lab Project ID: 1161876

Collection Date: 04/20/16 16:25
Received Date: 04/21/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Benzo[b]Fluoranthene	0.00530	U	0.0106	0.00328	mg/L	1		05/02/16 22:54
Benzo[g,h,i]perylene	0.00530	U	0.0106	0.00328	mg/L	1		05/02/16 22:54
Benzo[k]fluoranthene	0.00530	U	0.0106	0.00328	mg/L	1		05/02/16 22:54
Benzoic acid	0.0265	U	0.0529	0.0159	mg/L	1		05/02/16 22:54
Benzyl alcohol	0.00530	U	0.0106	0.00328	mg/L	1		05/02/16 22:54
Bis(2chloro1methylethyl)Ether	0.00530	U	0.0106	0.00328	mg/L	1		05/02/16 22:54
Bis(2-Chloroethoxy)methane	0.00530	U	0.0106	0.00328	mg/L	1		05/02/16 22:54
Bis(2-Chloroethyl)ether	0.00530	U	0.0106	0.00328	mg/L	1		05/02/16 22:54
bis(2-Ethylhexyl)phthalate	0.00530	U	0.0106	0.00328	mg/L	1		05/02/16 22:54
Butylbenzylphthalate	0.00530	U	0.0106	0.00328	mg/L	1		05/02/16 22:54
Carbazole	0.00530	U	0.0106	0.00328	mg/L	1		05/02/16 22:54
Chrysene	0.00530	U	0.0106	0.00328	mg/L	1		05/02/16 22:54
Dibenzo[a,h]anthracene	0.00530	U	0.0106	0.00328	mg/L	1		05/02/16 22:54
Dibenzofuran	0.00530	U	0.0106	0.00328	mg/L	1		05/02/16 22:54
Diethylphthalate	0.00530	U	0.0106	0.00328	mg/L	1		05/02/16 22:54
Dimethylphthalate	0.00530	U	0.0106	0.00328	mg/L	1		05/02/16 22:54
Di-n-butylphthalate	0.00530	U	0.0106	0.00328	mg/L	1		05/02/16 22:54
di-n-Octylphthalate	0.00530	U	0.0106	0.00328	mg/L	1		05/02/16 22:54
Fluoranthene	0.00530	U	0.0106	0.00328	mg/L	1		05/02/16 22:54
Fluorene	0.00530	U	0.0106	0.00328	mg/L	1		05/02/16 22:54
Hexachlorobenzene	0.00530	U	0.0106	0.00328	mg/L	1		05/02/16 22:54
Hexachlorobutadiene	0.00530	U	0.0106	0.00328	mg/L	1		05/02/16 22:54
Hexachlorocyclopentadiene	0.0159	U	0.0317	0.00995	mg/L	1		05/02/16 22:54
Hexachloroethane	0.00530	U	0.0106	0.00328	mg/L	1		05/02/16 22:54
Indeno[1,2,3-c,d] pyrene	0.00530	U	0.0106	0.00328	mg/L	1		05/02/16 22:54
Isophorone	0.00530	U	0.0106	0.00328	mg/L	1		05/02/16 22:54
Naphthalene	0.00530	U	0.0106	0.00328	mg/L	1		05/02/16 22:54
Nitrobenzene	0.00530	U	0.0106	0.00328	mg/L	1		05/02/16 22:54
N-Nitrosodimethylamine	0.00530	U	0.0106	0.00328	mg/L	1		05/02/16 22:54
N-Nitroso-di-n-propylamine	0.00530	U	0.0106	0.00328	mg/L	1		05/02/16 22:54
N-Nitrosodiphenylamine	0.00530	U	0.0106	0.00328	mg/L	1		05/02/16 22:54
Pentachlorophenol	0.0265	U	0.0529	0.0159	mg/L	1		05/02/16 22:54
Phenanthrene	0.00530	U	0.0106	0.00328	mg/L	1		05/02/16 22:54
Phenol	0.00530	U	0.0106	0.00328	mg/L	1		05/02/16 22:54
Pyrene	0.00530	U	0.0106	0.00328	mg/L	1		05/02/16 22:54
Surrogates								
2,4,6-Tribromophenol (surr)	72.1		43-140		%	1		05/02/16 22:54

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J flagging is activated

Results of **MW50A-0416**

Client Sample ID: **MW50A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161876003
Lab Project ID: 1161876

Collection Date: 04/20/16 16:25
Received Date: 04/21/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
2-Fluorobiphenyl (surr)	75.1		44-119		%	1		05/02/16 22:54
2-Fluorophenol (surr)	52.7		19-119		%	1		05/02/16 22:54
Nitrobenzene-d5 (surr)	69.2		44-120		%	1		05/02/16 22:54
Phenol-d6 (surr)	58.4		10-115		%	1		05/02/16 22:54
Terphenyl-d14 (surr)	87.9		50-134		%	1		05/02/16 22:54

Batch Information

Analytical Batch: XMS9274
Analytical Method: SW8270D
Analyst: NLL
Analytical Date/Time: 05/02/16 22:54
Container ID: 1161876003-H

Prep Batch: XXX35213
Prep Method: SW3520C
Prep Date/Time: 04/26/16 09:00
Prep Initial Wt./Vol.: 945 mL
Prep Extract Vol: 1 mL

Print Date: 06/01/2016 2:30:35PM

J flagging is activated

Results of **MW50A-0416**

Client Sample ID: **MW50A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161876003
Lab Project ID: 1161876

Collection Date: 04/20/16 16:25
Received Date: 04/21/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.0500	U	0.100	0.0310	mg/L	1		04/23/16 19:04
Surrogates								
4-Bromofluorobenzene (surr)	77.9		50-150		%	1		04/23/16 19:04

Batch Information

Analytical Batch: VFC12971
Analytical Method: AK101
Analyst: S.P
Analytical Date/Time: 04/23/16 19:04
Container ID: 1161876003-E

Prep Batch: VXX28737
Prep Method: SW5030B
Prep Date/Time: 04/23/16 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 06/01/2016 2:30:35PM

J flagging is activated

Results of **MW50A-0416**

Client Sample ID: **MW50A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161876003
Lab Project ID: 1161876

Collection Date: 04/20/16 16:25
Received Date: 04/21/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		04/27/16 18:43
1,1,1-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:43
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		04/27/16 18:43
1,1,2-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:43
1,1-Dichloroethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:43
1,1-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:43
1,1-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:43
1,2,3-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:43
1,2,3-Trichloropropane	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:43
1,2,4-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:43
1,2,4-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:43
1,2-Dibromo-3-chloropropane	5.00	U	10.0	3.10	ug/L	1		04/27/16 18:43
1,2-Dibromoethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:43
1,2-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:43
1,2-Dichloroethane	0.250	U	0.500	0.150	ug/L	1		04/27/16 18:43
1,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:43
1,3,5-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:43
1,3-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:43
1,3-Dichloropropane	0.250	U	0.500	0.150	ug/L	1		04/27/16 18:43
1,4-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1		04/27/16 18:43
2,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:43
2-Butanone (MEK)	5.00	U	10.0	3.10	ug/L	1		04/27/16 18:43
2-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:43
2-Hexanone	5.00	U	10.0	3.10	ug/L	1		04/27/16 18:43
4-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:43
4-Isopropyltoluene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:43
4-Methyl-2-pentanone (MIBK)	5.00	U	10.0	3.10	ug/L	1		04/27/16 18:43
Benzene	0.200	U	0.400	0.120	ug/L	1		04/27/16 18:43
Bromobenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:43
Bromochloromethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:43
Bromodichloromethane	0.250	U	0.500	0.150	ug/L	1		04/27/16 18:43
Bromoform	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:43
Bromomethane	5.00	U	10.0	3.10	ug/L	1		04/27/16 18:43
Carbon disulfide	5.00	U	10.0	3.10	ug/L	1		04/27/16 18:43
Carbon tetrachloride	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:43
Chlorobenzene	0.250	U	0.500	0.150	ug/L	1		04/27/16 18:43
Chloroethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:43

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J flagging is activated

Results of **MW50A-0416**

Client Sample ID: **MW50A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161876003
Lab Project ID: 1161876

Collection Date: 04/20/16 16:25
Received Date: 04/21/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroform	0.500	U	1.00	0.300	ug/L	1		04/27/16 18:43
Chloromethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:43
cis-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:43
cis-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		04/27/16 18:43
Dibromochloromethane	0.250	U	0.500	0.150	ug/L	1		04/27/16 18:43
Dibromomethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:43
Dichlorodifluoromethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:43
Ethylbenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:43
Freon-113	5.00	U	10.0	3.10	ug/L	1		04/27/16 18:43
Hexachlorobutadiene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:43
Isopropylbenzene (Cumene)	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:43
Methylene chloride	2.50	U	5.00	1.00	ug/L	1		04/27/16 18:43
Methyl-t-butyl ether	5.00	U	10.0	3.10	ug/L	1		04/27/16 18:43
Naphthalene	5.00	U	10.0	3.10	ug/L	1		04/27/16 18:43
n-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:43
n-Propylbenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:43
o-Xylene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:43
P & M -Xylene	1.00	U	2.00	0.620	ug/L	1		04/27/16 18:43
sec-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:43
Styrene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:43
tert-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:43
Tetrachloroethene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:43
Toluene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:43
trans-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:43
trans-1,3-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:43
Trichloroethene	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:43
Trichlorofluoromethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:43
Vinyl acetate	5.00	U	10.0	3.10	ug/L	1		04/27/16 18:43
Vinyl chloride	0.500	U	1.00	0.310	ug/L	1		04/27/16 18:43
Xylenes (total)	1.50	U	3.00	1.00	ug/L	1		04/27/16 18:43
Surrogates								
1,2-Dichloroethane-D4 (surr)	110		81-118		%	1		04/27/16 18:43
4-Bromofluorobenzene (surr)	99.9		85-114		%	1		04/27/16 18:43
Toluene-d8 (surr)	100		89-112		%	1		04/27/16 18:43

Print Date: 06/01/2016 2:30:35PM

J flagging is activated

Results of **MW50A-0416**

Client Sample ID: **MW50A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161876003
Lab Project ID: 1161876

Collection Date: 04/20/16 16:25
Received Date: 04/21/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS15744
Analytical Method: SW8260B
Analyst: NRB
Analytical Date/Time: 04/27/16 18:43
Container ID: 1161876003-D

Prep Batch: VXX28746
Prep Method: SW5030B
Prep Date/Time: 04/27/16 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 06/01/2016 2:30:35PM

J flagging is activated

Results of **MW50A-0416**

Client Sample ID: **MW50A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161876003
Lab Project ID: 1161876

Collection Date: 04/20/16 16:25
Received Date: 04/21/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloride	7.60		0.100	0.0310	mg/L	1		04/22/16 08:29
Fluoride	0.0820	J	0.100	0.0310	mg/L	1		04/22/16 08:29
Sulfate	4.55		0.100	0.0310	mg/L	1		04/22/16 08:29

Batch Information

Analytical Batch: WIC5531
Analytical Method: EPA 300.0
Analyst: ACF
Analytical Date/Time: 04/22/16 08:29
Container ID: 1161876003-N

Prep Batch: WXX11476
Prep Method: METHOD
Prep Date/Time: 04/21/16 15:05
Prep Initial Wt./Vol.: 10 mL
Prep Extract Vol: 10 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Turbidity	170		0.200	0.100	NTU	1		04/22/16 09:30

Batch Information

Analytical Batch: WAT10632
Analytical Method: SM21 2130B
Analyst: MBS
Analytical Date/Time: 04/22/16 09:30
Container ID: 1161876003-M

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Alkalinity	97.4		10.0	3.10	mg/L	1		04/25/16 17:29

Batch Information

Analytical Batch: WTI4445
Analytical Method: SM21 2320B
Analyst: ACF
Analytical Date/Time: 04/25/16 17:29
Container ID: 1161876003-M

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Dissolved Solids	158		10.0	3.10	mg/L	1		04/26/16 09:58

Print Date: 06/01/2016 2:30:35PM

J flagging is activated

Results of **MW50A-0416**

Client Sample ID: **MW50A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161876003
Lab Project ID: 1161876

Collection Date: 04/20/16 16:25
Received Date: 04/21/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Batch Information

Analytical Batch: STS5020
Analytical Method: SM21 2540C
Analyst: MBS
Analytical Date/Time: 04/26/16 09:58
Container ID: 1161876003-M

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Suspended Solids	170		25.0	7.75	mg/L	1		04/25/16 15:51

Batch Information

Analytical Batch: STS5019
Analytical Method: SM21 2540D
Analyst: MBS
Analytical Date/Time: 04/25/16 15:51
Container ID: 1161876003-L

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
pH	8.40		0.100	0.100	pH units	1		04/25/16 17:29

Batch Information

Analytical Batch: WTI4443
Analytical Method: SM21 4500-H B
Analyst: ACF
Analytical Date/Time: 04/25/16 17:29
Container ID: 1161876003-M

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Nitrate-N	0.0486	J	0.100	0.0300	mg/L	2		04/21/16 15:35
Nitrite-N	0.0500	U	0.100	0.0300	mg/L	2		04/21/16 15:35

Batch Information

Analytical Batch: WFI2469
Analytical Method: SM21 4500NO3-F
Analyst: NEG
Analytical Date/Time: 04/21/16 15:35
Container ID: 1161876003-N

Print Date: 06/01/2016 2:30:35PM

J flagging is activated

Results of **MW50B-0416**

Client Sample ID: **MW50B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161876004
Lab Project ID: 1161876

Collection Date: 04/20/16 18:40
Received Date: 04/21/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Metals by ICP/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Aluminum	70.0		2.00	0.620	ug/L	2.5		05/18/16 09:17
Antimony	0.120		0.0500	0.0150	ug/L	2.5		05/18/16 09:17
Arsenic	1.06		0.800	0.200	ug/L	2.5		05/18/16 09:17
Barium	25.3		0.250	0.0400	ug/L	2.5		05/18/16 09:17
Beryllium	0.0250	U	0.0500	0.0250	ug/L	2.5		05/18/16 09:17
Bismuth	0.0250	U	0.0500	0.0150	ug/L	2.5		05/18/16 09:17
Boron	3.82	J	5.00	1.50	ug/L	2.5		05/18/16 09:17
Cadmium	0.0250	U	0.0500	0.0150	ug/L	2.5		05/18/16 09:17
Calcium	13800		50.0	15.0	ug/L	2.5		05/18/16 09:17
Chromium	1.11		0.500	0.150	ug/L	2.5		05/18/16 09:17
Cobalt	0.832		0.0200	0.0100	ug/L	2.5		05/18/16 09:17
Copper	0.813		0.500	0.200	ug/L	2.5		05/18/16 09:17
Iron	2440		20.0	6.20	ug/L	2.5		05/18/16 09:17
Lead	0.124		0.100	0.0310	ug/L	2.5		05/18/16 09:17
Magnesium	5380		20.0	6.20	ug/L	2.5		05/18/16 09:17
Manganese	40.9		0.100	0.0310	ug/L	2.5		05/18/16 09:17
Molybdenum	0.491		0.0500	0.0150	ug/L	2.5		05/18/16 09:17
Nickel	2.91		0.620	0.0620	ug/L	2.5		05/18/16 09:17
Potassium	2140		50.0	15.0	ug/L	2.5		05/18/16 09:17
Selenium	0.500	U	1.00	0.310	ug/L	2.5		05/18/16 09:17
Silver	0.0100	U	0.0200	0.00620	ug/L	2.5		05/18/16 09:17
Sodium	7180		100	31.0	ug/L	2.5		05/18/16 09:17
Thallium	0.0100	U	0.0200	0.00620	ug/L	2.5		05/18/16 09:17
Tin	0.100	U	0.200	0.0620	ug/L	2.5		05/18/16 09:17
Vanadium	1.29		1.00	0.310	ug/L	2.5		05/18/16 09:17
Zinc	1.04	J	3.10	0.400	ug/L	2.5		05/18/16 09:17

Batch Information

Analytical Batch: MMS9354
Analytical Method: 200.8 Low Level
Analyst: VDL
Analytical Date/Time: 05/18/16 09:17
Container ID: 1161876004-A

Prep Batch: MXX29752
Prep Method: E200.2
Prep Date/Time: 05/17/16 08:07
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 10 mL

Results of **MW50B-0416**

Client Sample ID: **MW50B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161876004
Lab Project ID: 1161876

Collection Date: 04/20/16 18:40
Received Date: 04/21/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	0.288	U	0.577	0.173	mg/L	1		04/25/16 14:54
Surrogates								
5a Androstane (surr)	92.8		50-150		%	1		04/25/16 14:54

Batch Information

Analytical Batch: XFC12346
Analytical Method: AK102
Analyst: S.G
Analytical Date/Time: 04/25/16 14:54
Container ID: 1161876004-J

Prep Batch: XXX35198
Prep Method: SW3520C
Prep Date/Time: 04/22/16 09:00
Prep Initial Wt./Vol.: 260 mL
Prep Extract Vol: 1 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Residual Range Organics	0.240	U	0.481	0.144	mg/L	1		04/25/16 14:54
Surrogates								
n-Triacontane-d62 (surr)	90.3		50-150		%	1		04/25/16 14:54

Batch Information

Analytical Batch: XFC12346
Analytical Method: AK103
Analyst: S.G
Analytical Date/Time: 04/25/16 14:54
Container ID: 1161876004-J

Prep Batch: XXX35198
Prep Method: SW3520C
Prep Date/Time: 04/22/16 09:00
Prep Initial Wt./Vol.: 260 mL
Prep Extract Vol: 1 mL

Print Date: 06/01/2016 2:30:35PM

J flagging is activated

Results of **MW50B-0416**

Client Sample ID: **MW50B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161876004
Lab Project ID: 1161876

Collection Date: 04/20/16 18:40
Received Date: 04/21/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,2,4-Trichlorobenzene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 23:11
1,2-Dichlorobenzene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 23:11
1,3-Dichlorobenzene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 23:11
1,4-Dichlorobenzene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 23:11
1-Chloronaphthalene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 23:11
1-Methylnaphthalene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 23:11
2,4,5-Trichlorophenol	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 23:11
2,4,6-Trichlorophenol	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 23:11
2,4-Dichlorophenol	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 23:11
2,4-Dimethylphenol	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 23:11
2,4-Dinitrophenol	0.0255	U	0.0510	0.0153	mg/L	1		05/02/16 23:11
2,4-Dinitrotoluene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 23:11
2,6-Dichlorophenol	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 23:11
2,6-Dinitrotoluene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 23:11
2-Chloronaphthalene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 23:11
2-Chlorophenol	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 23:11
2-Methyl-4,6-dinitrophenol	0.0255	U	0.0510	0.0153	mg/L	1		05/02/16 23:11
2-Methylnaphthalene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 23:11
2-Methylphenol (o-Cresol)	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 23:11
2-Nitroaniline	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 23:11
2-Nitrophenol	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 23:11
3&4-Methylphenol (p&m-Cresol)	0.0102	U	0.0204	0.00633	mg/L	1		05/02/16 23:11
3,3-Dichlorobenzidine	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 23:11
3-Nitroaniline	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 23:11
4-Bromophenyl-phenylether	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 23:11
4-Chloro-3-methylphenol	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 23:11
4-Chloroaniline	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 23:11
4-Chlorophenyl-phenylether	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 23:11
4-Nitroaniline	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 23:11
4-Nitrophenol	0.0255	U	0.0510	0.0153	mg/L	1		05/02/16 23:11
Acenaphthene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 23:11
Acenaphthylene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 23:11
Aniline	0.0255	U	0.0510	0.0153	mg/L	1		05/02/16 23:11
Anthracene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 23:11
Azobenzene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 23:11
Benzo(a)Anthracene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 23:11
Benzo[a]pyrene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 23:11

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Results of **MW50B-0416**

Client Sample ID: **MW50B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161876004
Lab Project ID: 1161876

Collection Date: 04/20/16 18:40
Received Date: 04/21/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Benzo[b]Fluoranthene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 23:11
Benzo[g,h,i]perylene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 23:11
Benzo[k]fluoranthene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 23:11
Benzoic acid	0.0255	U	0.0510	0.0153	mg/L	1		05/02/16 23:11
Benzyl alcohol	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 23:11
Bis(2chloro1methylethyl)Ether	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 23:11
Bis(2-Chloroethoxy)methane	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 23:11
Bis(2-Chloroethyl)ether	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 23:11
bis(2-Ethylhexyl)phthalate	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 23:11
Butylbenzylphthalate	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 23:11
Carbazole	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 23:11
Chrysene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 23:11
Dibenzo[a,h]anthracene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 23:11
Dibenzofuran	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 23:11
Diethylphthalate	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 23:11
Dimethylphthalate	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 23:11
Di-n-butylphthalate	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 23:11
di-n-Octylphthalate	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 23:11
Fluoranthene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 23:11
Fluorene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 23:11
Hexachlorobenzene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 23:11
Hexachlorobutadiene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 23:11
Hexachlorocyclopentadiene	0.0153	U	0.0306	0.00959	mg/L	1		05/02/16 23:11
Hexachloroethane	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 23:11
Indeno[1,2,3-c,d] pyrene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 23:11
Isophorone	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 23:11
Naphthalene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 23:11
Nitrobenzene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 23:11
N-Nitrosodimethylamine	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 23:11
N-Nitroso-di-n-propylamine	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 23:11
N-Nitrosodiphenylamine	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 23:11
Pentachlorophenol	0.0255	U	0.0510	0.0153	mg/L	1		05/02/16 23:11
Phenanthrene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 23:11
Phenol	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 23:11
Pyrene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 23:11
Surrogates								
2,4,6-Tribromophenol (surr)	73		43-140		%	1		05/02/16 23:11

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J flagging is activated

Results of **MW50B-0416**

Client Sample ID: **MW50B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161876004
Lab Project ID: 1161876

Collection Date: 04/20/16 18:40
Received Date: 04/21/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
2-Fluorobiphenyl (surr)	73		44-119		%	1		05/02/16 23:11
2-Fluorophenol (surr)	51		19-119		%	1		05/02/16 23:11
Nitrobenzene-d5 (surr)	66.6		44-120		%	1		05/02/16 23:11
Phenol-d6 (surr)	52.3		10-115		%	1		05/02/16 23:11
Terphenyl-d14 (surr)	97.1		50-134		%	1		05/02/16 23:11

Batch Information

Analytical Batch: XMS9274
Analytical Method: SW8270D
Analyst: NLL
Analytical Date/Time: 05/02/16 23:11
Container ID: 1161876004-H

Prep Batch: XXX35213
Prep Method: SW3520C
Prep Date/Time: 04/26/16 09:00
Prep Initial Wt./Vol.: 980 mL
Prep Extract Vol: 1 mL

Results of **MW50B-0416**

Client Sample ID: **MW50B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161876004
Lab Project ID: 1161876

Collection Date: 04/20/16 18:40
Received Date: 04/21/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.0500	U	0.100	0.0310	mg/L	1		04/23/16 18:45
Surrogates								
4-Bromofluorobenzene (surr)	77.4		50-150		%	1		04/23/16 18:45

Batch Information

Analytical Batch: VFC12971
Analytical Method: AK101
Analyst: S.P
Analytical Date/Time: 04/23/16 18:45
Container ID: 1161876004-E

Prep Batch: VXX28737
Prep Method: SW5030B
Prep Date/Time: 04/23/16 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 06/01/2016 2:30:35PM

J flagging is activated

Results of **MW50B-0416**

Client Sample ID: **MW50B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161876004
Lab Project ID: 1161876

Collection Date: 04/20/16 18:40
Received Date: 04/21/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		04/27/16 19:00
1,1,1-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 19:00
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		04/27/16 19:00
1,1,2-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 19:00
1,1-Dichloroethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 19:00
1,1-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		04/27/16 19:00
1,1-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		04/27/16 19:00
1,2,3-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 19:00
1,2,3-Trichloropropane	0.500	U	1.00	0.310	ug/L	1		04/27/16 19:00
1,2,4-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 19:00
1,2,4-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 19:00
1,2-Dibromo-3-chloropropane	5.00	U	10.0	3.10	ug/L	1		04/27/16 19:00
1,2-Dibromoethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 19:00
1,2-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 19:00
1,2-Dichloroethane	0.250	U	0.500	0.150	ug/L	1		04/27/16 19:00
1,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		04/27/16 19:00
1,3,5-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 19:00
1,3-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 19:00
1,3-Dichloropropane	0.250	U	0.500	0.150	ug/L	1		04/27/16 19:00
1,4-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1		04/27/16 19:00
2,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		04/27/16 19:00
2-Butanone (MEK)	5.00	U	10.0	3.10	ug/L	1		04/27/16 19:00
2-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		04/27/16 19:00
2-Hexanone	5.00	U	10.0	3.10	ug/L	1		04/27/16 19:00
4-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		04/27/16 19:00
4-Isopropyltoluene	0.500	U	1.00	0.310	ug/L	1		04/27/16 19:00
4-Methyl-2-pentanone (MIBK)	5.00	U	10.0	3.10	ug/L	1		04/27/16 19:00
Benzene	0.200	U	0.400	0.120	ug/L	1		04/27/16 19:00
Bromobenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 19:00
Bromochloromethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 19:00
Bromodichloromethane	0.250	U	0.500	0.150	ug/L	1		04/27/16 19:00
Bromoform	0.500	U	1.00	0.310	ug/L	1		04/27/16 19:00
Bromomethane	5.00	U	10.0	3.10	ug/L	1		04/27/16 19:00
Carbon disulfide	5.00	U	10.0	3.10	ug/L	1		04/27/16 19:00
Carbon tetrachloride	0.500	U	1.00	0.310	ug/L	1		04/27/16 19:00
Chlorobenzene	0.250	U	0.500	0.150	ug/L	1		04/27/16 19:00
Chloroethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 19:00

Print Date: 06/01/2016 2:30:35PM

J flagging is activated

Results of **MW50B-0416**

Client Sample ID: **MW50B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161876004
Lab Project ID: 1161876

Collection Date: 04/20/16 18:40
Received Date: 04/21/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroform	0.500	U	1.00	0.300	ug/L	1		04/27/16 19:00
Chloromethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 19:00
cis-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		04/27/16 19:00
cis-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		04/27/16 19:00
Dibromochloromethane	0.250	U	0.500	0.150	ug/L	1		04/27/16 19:00
Dibromomethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 19:00
Dichlorodifluoromethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 19:00
Ethylbenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 19:00
Freon-113	5.00	U	10.0	3.10	ug/L	1		04/27/16 19:00
Hexachlorobutadiene	0.500	U	1.00	0.310	ug/L	1		04/27/16 19:00
Isopropylbenzene (Cumene)	0.500	U	1.00	0.310	ug/L	1		04/27/16 19:00
Methylene chloride	2.50	U	5.00	1.00	ug/L	1		04/27/16 19:00
Methyl-t-butyl ether	5.00	U	10.0	3.10	ug/L	1		04/27/16 19:00
Naphthalene	5.00	U	10.0	3.10	ug/L	1		04/27/16 19:00
n-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 19:00
n-Propylbenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 19:00
o-Xylene	0.500	U	1.00	0.310	ug/L	1		04/27/16 19:00
P & M -Xylene	1.00	U	2.00	0.620	ug/L	1		04/27/16 19:00
sec-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 19:00
Styrene	0.500	U	1.00	0.310	ug/L	1		04/27/16 19:00
tert-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 19:00
Tetrachloroethene	0.500	U	1.00	0.310	ug/L	1		04/27/16 19:00
Toluene	0.500	U	1.00	0.310	ug/L	1		04/27/16 19:00
trans-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		04/27/16 19:00
trans-1,3-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		04/27/16 19:00
Trichloroethene	0.500	U	1.00	0.310	ug/L	1		04/27/16 19:00
Trichlorofluoromethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 19:00
Vinyl acetate	5.00	U	10.0	3.10	ug/L	1		04/27/16 19:00
Vinyl chloride	0.500	U	1.00	0.310	ug/L	1		04/27/16 19:00
Xylenes (total)	1.50	U	3.00	1.00	ug/L	1		04/27/16 19:00
Surrogates								
1,2-Dichloroethane-D4 (surr)	110		81-118		%	1		04/27/16 19:00
4-Bromofluorobenzene (surr)	99.6		85-114		%	1		04/27/16 19:00
Toluene-d8 (surr)	101		89-112		%	1		04/27/16 19:00

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J flagging is activated

Results of **MW50B-0416**

Client Sample ID: **MW50B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161876004
Lab Project ID: 1161876

Collection Date: 04/20/16 18:40
Received Date: 04/21/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS15744
Analytical Method: SW8260B
Analyst: NRB
Analytical Date/Time: 04/27/16 19:00
Container ID: 1161876004-D

Prep Batch: VXX28746
Prep Method: SW5030B
Prep Date/Time: 04/27/16 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 06/01/2016 2:30:35PM

J flagging is activated

Results of **MW50B-0416**

Client Sample ID: **MW50B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161876004
Lab Project ID: 1161876

Collection Date: 04/20/16 18:40
Received Date: 04/21/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloride	14.8		0.100	0.0310	mg/L	1		04/22/16 08:51
Fluoride	0.0690	J	0.100	0.0310	mg/L	1		04/22/16 08:51
Sulfate	4.85		0.100	0.0310	mg/L	1		04/22/16 08:51

Batch Information

Analytical Batch: WIC5531
Analytical Method: EPA 300.0
Analyst: ACF
Analytical Date/Time: 04/22/16 08:51
Container ID: 1161876004-N

Prep Batch: WXX11476
Prep Method: METHOD
Prep Date/Time: 04/21/16 15:05
Prep Initial Wt./Vol.: 10 mL
Prep Extract Vol: 10 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Turbidity	4.10		0.200	0.100	NTU	1		04/22/16 09:30

Batch Information

Analytical Batch: WAT10632
Analytical Method: SM21 2130B
Analyst: MBS
Analytical Date/Time: 04/22/16 09:30
Container ID: 1161876004-M

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Alkalinity	47.2		10.0	3.10	mg/L	1		04/25/16 17:38

Batch Information

Analytical Batch: WTI4445
Analytical Method: SM21 2320B
Analyst: ACF
Analytical Date/Time: 04/25/16 17:38
Container ID: 1161876004-M

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Dissolved Solids	106		10.0	3.10	mg/L	1		04/26/16 09:58

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J flagging is activated

Results of **MW50B-0416**

Client Sample ID: **MW50B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161876004
Lab Project ID: 1161876

Collection Date: 04/20/16 18:40
Received Date: 04/21/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Batch Information

Analytical Batch: STS5020
Analytical Method: SM21 2540C
Analyst: MBS
Analytical Date/Time: 04/26/16 09:58
Container ID: 1161876004-M

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Suspended Solids	3.57		1.02	0.316	mg/L	1		04/25/16 15:51

Batch Information

Analytical Batch: STS5019
Analytical Method: SM21 2540D
Analyst: MBS
Analytical Date/Time: 04/25/16 15:51
Container ID: 1161876004-L

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
pH	6.90		0.100	0.100	pH units	1		04/25/16 17:38

Batch Information

Analytical Batch: WTI4443
Analytical Method: SM21 4500-H B
Analyst: ACF
Analytical Date/Time: 04/25/16 17:38
Container ID: 1161876004-M

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Nitrate-N	0.0558	J	0.100	0.0300	mg/L	2		04/21/16 15:37
Nitrite-N	0.0500	U	0.100	0.0300	mg/L	2		04/21/16 15:37

Batch Information

Analytical Batch: WFI2469
Analytical Method: SM21 4500NO3-F
Analyst: NEG
Analytical Date/Time: 04/21/16 15:37
Container ID: 1161876004-N

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J flagging is activated

Results of **TB2**

Client Sample ID: **TB2**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161876006
Lab Project ID: 1161876

Collection Date: 04/20/16 11:05
Received Date: 04/21/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.0500	U	0.100	0.0310	mg/L	1		04/26/16 13:51
Surrogates								
4-Bromofluorobenzene (surr)	80.5		50-150		%	1		04/26/16 13:51

Batch Information

Analytical Batch: VFC12974
Analytical Method: AK101
Analyst: S.P
Analytical Date/Time: 04/26/16 13:51
Container ID: 1161876006-C

Prep Batch: VXX28742
Prep Method: SW5030B
Prep Date/Time: 04/26/16 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 06/01/2016 2:30:35PM

J flagging is activated

Results of **TB2**

Client Sample ID: **TB2**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161876006
Lab Project ID: 1161876

Collection Date: 04/20/16 11:05
Received Date: 04/21/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		04/27/16 15:08
1,1,1-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 15:08
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		04/27/16 15:08
1,1,2-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 15:08
1,1-Dichloroethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 15:08
1,1-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		04/27/16 15:08
1,1-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		04/27/16 15:08
1,2,3-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 15:08
1,2,3-Trichloropropane	0.500	U	1.00	0.310	ug/L	1		04/27/16 15:08
1,2,4-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 15:08
1,2,4-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 15:08
1,2-Dibromo-3-chloropropane	5.00	U	10.0	3.10	ug/L	1		04/27/16 15:08
1,2-Dibromoethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 15:08
1,2-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 15:08
1,2-Dichloroethane	0.250	U	0.500	0.150	ug/L	1		04/27/16 15:08
1,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		04/27/16 15:08
1,3,5-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 15:08
1,3-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 15:08
1,3-Dichloropropane	0.250	U	0.500	0.150	ug/L	1		04/27/16 15:08
1,4-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1		04/27/16 15:08
2,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		04/27/16 15:08
2-Butanone (MEK)	5.00	U	10.0	3.10	ug/L	1		04/27/16 15:08
2-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		04/27/16 15:08
2-Hexanone	5.00	U	10.0	3.10	ug/L	1		04/27/16 15:08
4-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		04/27/16 15:08
4-Isopropyltoluene	0.500	U	1.00	0.310	ug/L	1		04/27/16 15:08
4-Methyl-2-pentanone (MIBK)	5.00	U	10.0	3.10	ug/L	1		04/27/16 15:08
Benzene	0.200	U	0.400	0.120	ug/L	1		04/27/16 15:08
Bromobenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 15:08
Bromochloromethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 15:08
Bromodichloromethane	0.250	U	0.500	0.150	ug/L	1		04/27/16 15:08
Bromoform	0.500	U	1.00	0.310	ug/L	1		04/27/16 15:08
Bromomethane	5.00	U	10.0	3.10	ug/L	1		04/27/16 15:08
Carbon disulfide	5.00	U	10.0	3.10	ug/L	1		04/27/16 15:08
Carbon tetrachloride	0.500	U	1.00	0.310	ug/L	1		04/27/16 15:08
Chlorobenzene	0.250	U	0.500	0.150	ug/L	1		04/27/16 15:08
Chloroethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 15:08

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Results of **TB2**

Client Sample ID: **TB2**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161876006
Lab Project ID: 1161876

Collection Date: 04/20/16 11:05
Received Date: 04/21/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroform	0.500	U	1.00	0.300	ug/L	1		04/27/16 15:08
Chloromethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 15:08
cis-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		04/27/16 15:08
cis-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		04/27/16 15:08
Dibromochloromethane	0.250	U	0.500	0.150	ug/L	1		04/27/16 15:08
Dibromomethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 15:08
Dichlorodifluoromethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 15:08
Ethylbenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 15:08
Freon-113	5.00	U	10.0	3.10	ug/L	1		04/27/16 15:08
Hexachlorobutadiene	0.500	U	1.00	0.310	ug/L	1		04/27/16 15:08
Isopropylbenzene (Cumene)	0.500	U	1.00	0.310	ug/L	1		04/27/16 15:08
Methylene chloride	2.50	U	5.00	1.00	ug/L	1		04/27/16 15:08
Methyl-t-butyl ether	5.00	U	10.0	3.10	ug/L	1		04/27/16 15:08
Naphthalene	5.00	U	10.0	3.10	ug/L	1		04/27/16 15:08
n-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 15:08
n-Propylbenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 15:08
o-Xylene	0.500	U	1.00	0.310	ug/L	1		04/27/16 15:08
P & M -Xylene	1.00	U	2.00	0.620	ug/L	1		04/27/16 15:08
sec-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 15:08
Styrene	0.500	U	1.00	0.310	ug/L	1		04/27/16 15:08
tert-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		04/27/16 15:08
Tetrachloroethene	0.500	U	1.00	0.310	ug/L	1		04/27/16 15:08
Toluene	0.500	U	1.00	0.310	ug/L	1		04/27/16 15:08
trans-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		04/27/16 15:08
trans-1,3-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		04/27/16 15:08
Trichloroethene	0.500	U	1.00	0.310	ug/L	1		04/27/16 15:08
Trichlorofluoromethane	0.500	U	1.00	0.310	ug/L	1		04/27/16 15:08
Vinyl acetate	5.00	U	10.0	3.10	ug/L	1		04/27/16 15:08
Vinyl chloride	0.500	U	1.00	0.310	ug/L	1		04/27/16 15:08
Xylenes (total)	1.50	U	3.00	1.00	ug/L	1		04/27/16 15:08
Surrogates								
1,2-Dichloroethane-D4 (surr)	110		81-118		%	1		04/27/16 15:08
4-Bromofluorobenzene (surr)	97.2		85-114		%	1		04/27/16 15:08
Toluene-d8 (surr)	100		89-112		%	1		04/27/16 15:08

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J flagging is activated

Results of **TB2**

Client Sample ID: **TB2**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161876006
Lab Project ID: 1161876

Collection Date: 04/20/16 11:05
Received Date: 04/21/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS15744
Analytical Method: SW8260B
Analyst: NRB
Analytical Date/Time: 04/27/16 15:08
Container ID: 1161876006-B

Prep Batch: VXX28746
Prep Method: SW5030B
Prep Date/Time: 04/27/16 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
t 907.562.2343 **f** 907.561.5301 www.us.sgs.com

Results of **MW82A-0416**

Client Sample ID: **MW82A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161876007
Lab Project ID: 1161876

Collection Date: 04/20/16 11:05
Received Date: 04/21/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

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

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Aluminum	123		2.00	0.620	ug/L	2.5		05/18/16 09:32
Antimony	0.0250	U	0.0500	0.0150	ug/L	2.5		05/18/16 09:32
Arsenic	7.52		0.800	0.200	ug/L	2.5		05/18/16 09:32
Barium	10.0		0.250	0.0400	ug/L	2.5		05/18/16 09:32
Beryllium	0.0250	U	0.0500	0.0250	ug/L	2.5		05/18/16 09:32
Bismuth	0.0250	U	0.0500	0.0150	ug/L	2.5		05/18/16 09:32
Boron	12.3		5.00	1.50	ug/L	2.5		05/18/16 09:32
Cadmium	0.0250	U	0.0500	0.0150	ug/L	2.5		05/18/16 09:32
Calcium	19300		50.0	15.0	ug/L	2.5		05/18/16 09:32
Chromium	0.471	J	0.500	0.150	ug/L	2.5		05/18/16 09:32
Cobalt	0.101		0.0200	0.0100	ug/L	2.5		05/18/16 09:32
Copper	0.392	J	0.500	0.200	ug/L	2.5		05/18/16 09:32
Iron	168		20.0	6.20	ug/L	2.5		05/18/16 09:32
Lead	0.0706	J	0.100	0.0310	ug/L	2.5		05/18/16 09:32
Magnesium	4930		20.0	6.20	ug/L	2.5		05/18/16 09:32
Manganese	93.7		0.100	0.0310	ug/L	2.5		05/18/16 09:32
Molybdenum	0.696		0.0500	0.0150	ug/L	2.5		05/18/16 09:32
Nickel	1.14		0.620	0.0620	ug/L	2.5		05/18/16 09:32
Potassium	2870		50.0	15.0	ug/L	2.5		05/18/16 09:32
Selenium	0.500	U	1.00	0.310	ug/L	2.5		05/18/16 09:32
Silicon	16800		100	31.0	ug/L	2.5		05/18/16 09:32
Silver	0.0100	U	0.0200	0.00620	ug/L	2.5		05/18/16 09:32
Sodium	5270		100	31.0	ug/L	2.5		05/18/16 09:32
Thallium	0.0100	U	0.0200	0.00620	ug/L	2.5		05/18/16 09:32
Tin	0.100	U	0.200	0.0620	ug/L	2.5		05/18/16 09:32
Vanadium	0.500	U	1.00	0.310	ug/L	2.5		05/18/16 09:32
Zinc	1.32	J	3.10	0.400	ug/L	2.5		05/18/16 09:32

Batch Information

Analytical Batch: MMS9354
Analytical Method: 200.8 Low Level
Analyst: VDL
Analytical Date/Time: 05/18/16 09:32
Container ID: 1161876007-A

Prep Batch: MXX29752
Prep Method: E200.2
Prep Date/Time: 05/17/16 08:07
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 10 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Hardness as CaCO3	68.5		1.00	1.00	mg/L	2.5		05/18/16 09:32

Print Date: 06/01/2016 2:30:35PM

J flagging is activated

Results of **MW82A-0416**

Client Sample ID: **MW82A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161876007
Lab Project ID: 1161876

Collection Date: 04/20/16 11:05
Received Date: 04/21/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

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

Batch Information

Analytical Batch: MMS9354
Analytical Method: SM21 2340B
Analyst: VDL
Analytical Date/Time: 05/18/16 09:32
Container ID: 1161876007-A

Prep Batch: MXX29752
Prep Method: E200.2
Prep Date/Time: 05/17/16 08:07
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 10 mL

Results of **MW82B-0416**

Client Sample ID: **MW82B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161876008
Lab Project ID: 1161876

Collection Date: 04/20/16 13:05
Received Date: 04/21/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

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

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Aluminum	3.12		2.00	0.620	ug/L	2.5		05/18/16 09:35
Antimony	0.0250	U	0.0500	0.0150	ug/L	2.5		05/18/16 09:35
Arsenic	0.400	U	0.800	0.200	ug/L	2.5		05/18/16 09:35
Barium	23.4		0.250	0.0400	ug/L	2.5		05/18/16 09:35
Beryllium	0.0250	U	0.0500	0.0250	ug/L	2.5		05/18/16 09:35
Bismuth	0.0250	U	0.0500	0.0150	ug/L	2.5		05/18/16 09:35
Boron	7.80		5.00	1.50	ug/L	2.5		05/18/16 09:35
Cadmium	0.0811		0.0500	0.0150	ug/L	2.5		05/18/16 09:35
Calcium	20700		50.0	15.0	ug/L	2.5		05/18/16 09:35
Chromium	0.151	J	0.500	0.150	ug/L	2.5		05/18/16 09:35
Cobalt	0.249		0.0200	0.0100	ug/L	2.5		05/18/16 09:35
Copper	0.380	J	0.500	0.200	ug/L	2.5		05/18/16 09:35
Iron	2140		20.0	6.20	ug/L	2.5		05/18/16 09:35
Lead	0.0500	U	0.100	0.0310	ug/L	2.5		05/18/16 09:35
Magnesium	5240		20.0	6.20	ug/L	2.5		05/18/16 09:35
Manganese	124		0.100	0.0310	ug/L	2.5		05/18/16 09:35
Molybdenum	0.343		0.0500	0.0150	ug/L	2.5		05/18/16 09:35
Nickel	1.89		0.620	0.0620	ug/L	2.5		05/18/16 09:35
Potassium	2260		50.0	15.0	ug/L	2.5		05/18/16 09:35
Selenium	0.500	U	1.00	0.310	ug/L	2.5		05/18/16 09:35
Silicon	14500		100	31.0	ug/L	2.5		05/18/16 09:35
Silver	0.0100	U	0.0200	0.00620	ug/L	2.5		05/18/16 09:35
Sodium	15300		100	31.0	ug/L	2.5		05/18/16 09:35
Thallium	0.0100	U	0.0200	0.00620	ug/L	2.5		05/18/16 09:35
Tin	0.100	U	0.200	0.0620	ug/L	2.5		05/18/16 09:35
Vanadium	0.500	U	1.00	0.310	ug/L	2.5		05/18/16 09:35
Zinc	1.88	J	3.10	0.400	ug/L	2.5		05/18/16 09:35

Batch Information

Analytical Batch: MMS9354
Analytical Method: 200.8 Low Level
Analyst: VDL
Analytical Date/Time: 05/18/16 09:35
Container ID: 1161876008-A

Prep Batch: MXX29752
Prep Method: E200.2
Prep Date/Time: 05/17/16 08:07
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 10 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Hardness as CaCO3	73.3		1.00	1.00	mg/L	2.5		05/18/16 09:35

Print Date: 06/01/2016 2:30:35PM

J flagging is activated

Results of **MW82B-0416**

Client Sample ID: **MW82B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161876008
Lab Project ID: 1161876

Collection Date: 04/20/16 13:05
Received Date: 04/21/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

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

Batch Information

Analytical Batch: MMS9354
Analytical Method: SM21 2340B
Analyst: VDL
Analytical Date/Time: 05/18/16 09:35
Container ID: 1161876008-A

Prep Batch: MXX29752
Prep Method: E200.2
Prep Date/Time: 05/17/16 08:07
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 10 mL

Results of **MW50A-0416**

Client Sample ID: **MW50A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161876009
Lab Project ID: 1161876

Collection Date: 04/20/16 16:25
Received Date: 04/21/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

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

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Aluminum	1720		8.00	2.48	ug/L	10		05/18/16 09:38
Antimony	0.194		0.0500	0.0150	ug/L	2.5		05/18/16 09:41
Arsenic	18.0		0.800	0.200	ug/L	2.5		05/18/16 09:41
Barium	37.4		0.250	0.0400	ug/L	2.5		05/18/16 09:41
Beryllium	0.0250	U	0.0500	0.0250	ug/L	2.5		05/18/16 09:41
Bismuth	0.0250	U	0.0500	0.0150	ug/L	2.5		05/18/16 09:41
Boron	20.7		5.00	1.50	ug/L	2.5		05/18/16 09:41
Cadmium	0.0250	U	0.0500	0.0150	ug/L	2.5		05/18/16 09:41
Calcium	28700		50.0	15.0	ug/L	2.5		05/18/16 09:41
Chromium	3.89		0.500	0.150	ug/L	2.5		05/18/16 09:41
Cobalt	0.720		0.0200	0.0100	ug/L	2.5		05/18/16 09:41
Copper	3.59		0.500	0.200	ug/L	2.5		05/18/16 09:41
Iron	1680		20.0	6.20	ug/L	2.5		05/18/16 09:41
Lead	1.07		0.100	0.0310	ug/L	2.5		05/18/16 09:41
Magnesium	8230		20.0	6.20	ug/L	2.5		05/18/16 09:41
Manganese	129		0.100	0.0310	ug/L	2.5		05/18/16 09:41
Molybdenum	0.898		0.0500	0.0150	ug/L	2.5		05/18/16 09:41
Nickel	3.35		0.620	0.0620	ug/L	2.5		05/18/16 09:41
Potassium	4900		50.0	15.0	ug/L	2.5		05/18/16 09:41
Selenium	0.500	U	1.00	0.310	ug/L	2.5		05/18/16 09:41
Silicon	19300		100	31.0	ug/L	2.5		05/18/16 09:41
Silver	0.0100	U	0.0200	0.00620	ug/L	2.5		05/18/16 09:41
Sodium	7720		100	31.0	ug/L	2.5		05/18/16 09:41
Thallium	0.0100	U	0.0200	0.00620	ug/L	2.5		05/18/16 09:41
Tin	0.268		0.200	0.0620	ug/L	2.5		05/18/16 09:41
Vanadium	4.16		1.00	0.310	ug/L	2.5		05/18/16 09:41
Zinc	7.91		3.10	0.400	ug/L	2.5		05/18/16 09:41

Batch Information

Analytical Batch: MMS9354
Analytical Method: 200.8 Low Level
Analyst: VDL
Analytical Date/Time: 05/18/16 09:38
Container ID: 1161876009-A

Prep Batch: MXX29752
Prep Method: E200.2
Prep Date/Time: 05/17/16 08:07
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 10 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Hardness as CaCO3	105		1.00	1.00	mg/L	2.5		05/18/16 09:41

Print Date: 06/01/2016 2:30:35PM

J flagging is activated

Results of **MW50A-0416**

Client Sample ID: **MW50A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161876009
Lab Project ID: 1161876

Collection Date: 04/20/16 16:25
Received Date: 04/21/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

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

Batch Information

Analytical Batch: MMS9354
Analytical Method: SM21 2340B
Analyst: VDL
Analytical Date/Time: 05/18/16 09:41
Container ID: 1161876009-A

Prep Batch: MXX29752
Prep Method: E200.2
Prep Date/Time: 05/17/16 08:07
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 10 mL

Print Date: 06/01/2016 2:30:35PM

J flagging is activated

Results of **MW50B-0416**

Client Sample ID: **MW50B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161876010
Lab Project ID: 1161876

Collection Date: 04/20/16 18:40
Received Date: 04/21/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

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

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Aluminum	2.35		2.00	0.620	ug/L	2.5		05/18/16 09:44
Antimony	0.0707		0.0500	0.0150	ug/L	2.5		05/18/16 09:44
Arsenic	0.400	U	0.800	0.200	ug/L	2.5		05/18/16 09:44
Barium	23.5		0.250	0.0400	ug/L	2.5		05/18/16 09:44
Beryllium	0.0250	U	0.0500	0.0250	ug/L	2.5		05/18/16 09:44
Bismuth	0.0250	U	0.0500	0.0150	ug/L	2.5		05/18/16 09:44
Boron	3.72	J	5.00	1.50	ug/L	2.5		05/18/16 09:44
Cadmium	0.0250	U	0.0500	0.0150	ug/L	2.5		05/18/16 09:44
Calcium	13500		50.0	15.0	ug/L	2.5		05/18/16 09:44
Chromium	0.250	U	0.500	0.150	ug/L	2.5		05/18/16 09:44
Cobalt	0.804		0.0200	0.0100	ug/L	2.5		05/18/16 09:44
Copper	0.303	J	0.500	0.200	ug/L	2.5		05/18/16 09:44
Iron	470		20.0	6.20	ug/L	2.5		05/18/16 09:44
Lead	0.0500	U	0.100	0.0310	ug/L	2.5		05/18/16 09:44
Magnesium	5330		20.0	6.20	ug/L	2.5		05/18/16 09:44
Manganese	38.7		0.100	0.0310	ug/L	2.5		05/18/16 09:44
Molybdenum	0.496		0.0500	0.0150	ug/L	2.5		05/18/16 09:44
Nickel	2.98		0.620	0.0620	ug/L	2.5		05/18/16 09:44
Potassium	2150		50.0	15.0	ug/L	2.5		05/18/16 09:44
Selenium	0.500	U	1.00	0.310	ug/L	2.5		05/18/16 09:44
Silicon	16100		100	31.0	ug/L	2.5		05/18/16 09:44
Silver	0.0100	U	0.0200	0.00620	ug/L	2.5		05/18/16 09:44
Sodium	7140		100	31.0	ug/L	2.5		05/18/16 09:44
Thallium	0.0100	U	0.0200	0.00620	ug/L	2.5		05/18/16 09:44
Tin	0.100	U	0.200	0.0620	ug/L	2.5		05/18/16 09:44
Vanadium	0.500	U	1.00	0.310	ug/L	2.5		05/18/16 09:44
Zinc	0.748	J	3.10	0.400	ug/L	2.5		05/18/16 09:44

Batch Information

Analytical Batch: MMS9354
Analytical Method: 200.8 Low Level
Analyst: VDL
Analytical Date/Time: 05/18/16 09:44
Container ID: 1161876010-A

Prep Batch: MXX29752
Prep Method: E200.2
Prep Date/Time: 05/17/16 08:07
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 10 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Hardness as CaCO3	55.8		1.00	1.00	mg/L	2.5		05/18/16 09:44

Print Date: 06/01/2016 2:30:35PM

J flagging is activated

Results of **MW50B-0416**

Client Sample ID: **MW50B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161876010
Lab Project ID: 1161876

Collection Date: 04/20/16 18:40
Received Date: 04/21/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

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

Batch Information

Analytical Batch: MMS9354
Analytical Method: SM21 2340B
Analyst: VDL
Analytical Date/Time: 05/18/16 09:44
Container ID: 1161876010-A

Prep Batch: MXX29752
Prep Method: E200.2
Prep Date/Time: 05/17/16 08:07
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 10 mL

Print Date: 06/01/2016 2:30:35PM

J flagging is activated

Method Blank

Blank ID: MB for HBN 1734140 [MXX/29752]
Blank Lab ID: 1324619

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161876001, 1161876002, 1161876003, 1161876004, 1161876007, 1161876008, 1161876009, 1161876010

Results by **200.8 Low Level**

Parameter	Results	LOQ/CL	DL	Units
Aluminum	1.27J	2.00	0.620	ug/L
Antimony	0.0250U	0.0500	0.0150	ug/L
Arsenic	0.400U	0.800	0.200	ug/L
Barium	0.125U	0.250	0.0400	ug/L
Beryllium	0.0250U	0.0500	0.0250	ug/L
Bismuth	0.0250U	0.0500	0.0150	ug/L
Boron	2.50U	5.00	1.50	ug/L
Cadmium	0.0250U	0.0500	0.0150	ug/L
Calcium	24.8J	50.0	15.0	ug/L
Chromium	0.250U	0.500	0.150	ug/L
Cobalt	0.0100U	0.0200	0.0100	ug/L
Copper	0.250U	0.500	0.200	ug/L
Iron	10.0U	20.0	6.20	ug/L
Lead	0.0500U	0.100	0.0310	ug/L
Magnesium	10.0U	20.0	6.20	ug/L
Manganese	0.0326J	0.100	0.0310	ug/L
Molybdenum	0.0250U	0.0500	0.0150	ug/L
Nickel	0.310U	0.620	0.0620	ug/L
Potassium	25.0U	50.0	15.0	ug/L
Selenium	0.500U	1.00	0.310	ug/L
Silicon	50.0U	100	31.0	ug/L
Silver	0.0140J	0.0200	0.00620	ug/L
Sodium	50.0U	100	31.0	ug/L
Thallium	0.0100U	0.0200	0.00620	ug/L
Tin	0.100U	0.200	0.0620	ug/L
Vanadium	0.500U	1.00	0.310	ug/L
Zinc	1.09J	3.10	0.400	ug/L

Batch Information

Analytical Batch: MMS9353
Analytical Method: 200.8 Low Level
Instrument: Perkin Elmer Nexlon P5
Analyst: VDL
Analytical Date/Time: 5/17/2016 6:06:51PM

Prep Batch: MXX29752
Prep Method: E200.2
Prep Date/Time: 5/17/2016 8:07:44AM
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 10 mL

SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
t 907.562.2343 f 907.561.5301 www.us.sgs.com

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161876 [MXX29752]
Blank Spike Lab ID: 1324620
Date Analyzed: 05/17/2016 18:09

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161876001, 1161876002, 1161876003, 1161876004, 1161876007, 1161876008, 1161876009, 1161876010

Results by **200.8 Low Level**

Blank Spike (ug/L)

Parameter	Spike	Result	Rec (%)	CL
Aluminum	50	51.2	102	(85-115)
Antimony	5	5.52	110	(85-115)
Arsenic	25	25.8	103	(85-115)
Barium	25	25.8	103	(85-115)
Beryllium	12.5	12.6	101	(85-115)
Bismuth	12.5	12.6	101	(85-115)
Boron	50	49.9	100	(85-115)
Cadmium	12.5	13.2	105	(85-115)
Calcium	5000	4660	93	(85-115)
Chromium	12.5	12.1	97	(85-115)
Cobalt	12.5	13.3	106	(85-115)
Copper	25	24.6	98	(85-115)
Iron	500	515	103	(85-115)
Lead	5	5.14	103	(85-115)
Magnesium	5000	4880	98	(85-115)
Manganese	50	51.3	103	(85-115)
Molybdenum	12.5	12.7	102	(85-115)
Nickel	12.5	12.9	103	(85-115)
Potassium	5000	5040	101	(85-115)
Selenium	25	26.3	105	(85-115)
Silicon	2500	2470	99	(85-115)
Silver	5	5.35	107	(85-115)
Sodium	5000	4970	99	(85-115)
Thallium	2.5	2.59	103	(85-115)
Tin	12.5	13.3	106	(85-115)
Vanadium	25	24.0	96	(85-115)
Zinc	50	49.9	100	(85-115)

Batch Information

Analytical Batch: **MMS9353**
Analytical Method: **200.8 Low Level**
Instrument: **Perkin Elmer Nexlon P5**
Analyst: **VDL**

Prep Batch: **MXX29752**
Prep Method: **E200.2**
Prep Date/Time: **05/17/2016 08:07**
Spike Init Wt./Vol.: 50 ug/L Extract Vol: 10 mL
Dupe Init Wt./Vol.: Extract Vol:

Print Date: 06/01/2016 2:30:42PM

Matrix Spike Summary

Original Sample ID: 1161853001
MS Sample ID: 1324621 MS
MSD Sample ID: 1324622 MSD

Analysis Date: 05/17/2016 18:12
Analysis Date: 05/17/2016 18:15
Analysis Date: 05/17/2016 18:18
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161876001, 1161876002, 1161876003, 1161876004, 1161876007, 1161876008, 1161876009, 1161876010

Results by **200.8 Low Level**

		Matrix Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Aluminum	6.51	50.0	57.5	102	50.0	54.5	96	70-130	5.30	(< 20)
Antimony	0.0250U	5.00	5.74	115	5.00	5.17	103	70-130	10.40	(< 20)
Arsenic	0.400U	25.0	25.4	102	25.0	23.8	95	70-130	6.60	(< 20)
Barium	0.207J	25.0	27.8	110	25.0	25.0	99	70-130	10.60	(< 20)
Beryllium	0.0250U	12.5	12.5	100	12.5	11.8	95	70-130	5.30	(< 20)
Bismuth	0.0250U	12.5	13.2	105	12.5	12.2	98	70-130	7.50	(< 20)
Boron	2.50U	50.0	49.3	99	50.0	47.4	95	70-130	4.10	(< 20)
Cadmium	0.0250U	12.5	13.7	110	12.5	12.3	98	70-130	10.80	(< 20)
Calcium	25.0U	5000	4930	99	5000	4550	91	70-130	7.90	(< 20)
Chromium	0.250U	12.5	13.1	105	12.5	11.9	95	70-130	9.20	(< 20)
Cobalt	0.0100U	12.5	13.2	105	12.5	12.5	100	70-130	4.90	(< 20)
Copper	0.208J	25.0	25.5	101	25.0	24.0	95	70-130	5.90	(< 20)
Iron	12.6J	500	549	107	500	533	104	70-130	3.00	(< 20)
Lead	0.0500U	5.00	5.38	108	5.00	5.02	100	70-130	6.80	(< 20)
Magnesium	10.0U	5000	5100	102	5000	4720	94	70-130	7.80	(< 20)
Manganese	0.120	50.0	51.7	103	50.0	49.6	99	70-130	4.20	(< 20)
Molybdenum	0.0250U	12.5	13.2	105	12.5	12.6	101	70-130	4.60	(< 20)
Nickel	0.310U	12.5	13.7	110	12.5	12.4	99	70-130	10.60	(< 20)
Potassium	25.0U	5000	5340	107	5000	5050	101	70-130	5.60	(< 20)
Selenium	0.500U	25.0	25.4	102	25.0	24.5	98	70-130	4.00	(< 20)
Silver	0.00738J	5.00	5.55	111	5.00	4.97	99	70-130	11.10	(< 20)
Sodium	50.0U	5000	4980	100	5000	4740	95	70-130	5.00	(< 20)
Thallium	0.0100U	2.50	2.69	107	2.50	2.51	100	70-130	6.90	(< 20)
Tin	0.100U	12.5	14	112	12.5	12.5	100	70-130	11.20	(< 20)
Vanadium	0.347J	25.0	26.3	104	25.0	24.6	97	70-130	6.50	(< 20)
Zinc	0.622J	50.0	49.8	98	50.0	47.1	93	70-130	5.60	(< 20)

Batch Information

Analytical Batch: MMS9353
Analytical Method: 200.8 Low Level
Instrument: Perkin Elmer Nexion P5
Analyst: VDL
Analytical Date/Time: 5/17/2016 6:15:32PM

Prep Batch: MXX29752
Prep Method: LL Digest for Metals on ICP-MS
Prep Date/Time: 5/17/2016 8:07:44AM
Prep Initial Wt./Vol.: 50.00mL
Prep Extract Vol: 10.00mL

Print Date: 06/01/2016 2:30:48PM

Method Blank

Blank ID: MB for HBN 1732272 [STS/5019]
Blank Lab ID: 1321132

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161876001, 1161876002, 1161876003, 1161876004

Results by **SM21 2540D**

Parameter	Results	LOQ/CL	DL	Units
Total Suspended Solids	0.500U	1.00	0.310	mg/L

Batch Information

Analytical Batch: STS5019
Analytical Method: SM21 2540D
Instrument:
Analyst: MBS
Analytical Date/Time: 4/25/2016 3:51:48PM

Print Date: 06/01/2016 2:30:53PM

Duplicate Sample Summary

Original Sample ID: 1161861009
Duplicate Sample ID: 1321135
QC for Samples:

Analysis Date: 04/25/2016 15:51
Matrix: Water (Surface, Eff., Ground)

Results by **SM21 2540D**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
Total Suspended Solids	7550	7450	mg/L	1.30	(< 5)

Batch Information

Analytical Batch: STS5019
Analytical Method: SM21 2540D
Instrument:
Analyst: MBS

Print Date: 06/01/2016 2:30:54PM

Duplicate Sample Summary

Original Sample ID: 1161861010
Duplicate Sample ID: 1321136
QC for Samples:
1161876001, 1161876002, 1161876003, 1161876004

Analysis Date: 04/25/2016 15:51
Matrix: Water (Surface, Eff., Ground)

Results by **SM21 2540D**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
Total Suspended Solids	8450	8500	mg/L	0.59	(< 5)

Batch Information

Analytical Batch: STS5019
Analytical Method: SM21 2540D
Instrument:
Analyst: MBS

Print Date: 06/01/2016 2:30:54PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161876 [STS5019]
Blank Spike Lab ID: 1321133
Date Analyzed: 04/25/2016 15:51

Spike Duplicate ID: LCSD for HBN 1161876 [STS5019]
Spike Duplicate Lab ID: 1321134
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161876001, 1161876002, 1161876003, 1161876004

Results by **SM21 2540D**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Total Suspended Solids	50	49.2	98	50	45.7	91	(75-125)	7.40 *	(< 5)

Batch Information

Analytical Batch: **STS5019**
Analytical Method: **SM21 2540D**
Instrument:
Analyst: **MBS**

Prep Batch:
Prep Method:
Prep Date/Time:
Spike Init Wt./Vol.: 50 mg/L Extract Vol: 1000 mL
Dupe Init Wt./Vol.: 50 mg/L Extract Vol: 1000 mL

Print Date: 06/01/2016 2:30:55PM

Method Blank

Blank ID: MB for HBN 17323[2 ST/ T5[0209
Blank] aL ID: 13212b7

Ma4ti : x a4er W(rfaue8c ffB. ro(nGd

QC for Tamples:
11b167b001811b167b002811b167b003811b167b00,

) es(l4s LR SM21 2540C

Oarame4er	) es(l4s	] UQ5C]	D]	y nt4s
/ o4al DtssolPeG ToltGs	[E0y	10E0	3E10	mg5]

Batch Information

AnalR4tual Ba4uh: T/ T[020
AnalR4tual Me4hoG: TM21 2[, 0C
Ins4(men4
AnalRs4 MBT
AnalR4tual Da4e5 tme: , 52b5201b v:[6:[bAM

Ortn4Da4e: 0b5015201b 2:30:[6OM

Duplicate Sample Summary

Original Sample ID: 1161806991
Duplicate Sample ID: 1321209

5nalAyiy Date: 9s42642916 9/ :M8
x atriW (ater fSur,aceE. ,,GEo rdun) R

CP ,dr Sampley:

1161806991E1161806992

b eyulty QA **SM21 2540C**

U5x .	Original	Duplicate	L nity	b %D fN R	b %D P7
Tdtal Diyydl<e) Sdli) y	121	122	mg47	9G32	fB MR

Batch Information

5nalAtical h atcv: STSM929
5nalAtical x etvd) : Sx 21 2Ms9P
Inytrument:
5nalAyt: x h S

%rint Date: 964914291 6 2:39:M %x

Duplicate Sample Summary

Original Sample ID: 1161806992
Duplicate Sample ID: 1321201

5nalAyiy Date: 9s42642916 9/ :M8
x atriW (ater fSur,aceE. ,,GEo rdun) R

CP ,dr Sampley:

1161806992E1161806993E116180699s

b eyulty QA SM21 2540C

U5x .	Original	Duplicate	L nity	b %D fN R	b %D P7
Tdtal Diyydl<e) Sdli) y	161	16s	mg47	1C89	fB MR

Batch Information

5nalAtical h atcv: STSM929
5nalAtical x etvd) : Sx 21 2Ms9P
Inytrument:
5nalAyt: x h S

%rint Date: 964914-2916 2:39:M %x

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161876 [STS5020]
Blank Spike Lab ID: 1321268
Date Analyzed: 04/26/2016 09:58

Spike Duplicate ID: LCSD for HBN 1161876 [STS5020]
Spike Duplicate Lab ID: 1321269
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161876001, 1161876002, 1161876003, 1161876004

Results by **SM21 2540C**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Total Dissolved Solids	330	330	100	330	329	100	(75-125)	0.30	(< 5)

Batch Information

Analytical Batch: **STS5020**
Analytical Method: **SM21 2540C**
Instrument:
Analyst: **MBS**

Prep Batch:
Prep Method:
Prep Date/Time:
Spike Init Wt./Vol.: 330 mg/L Extract Vol: 100 mL
Dupe Init Wt./Vol.: 330 mg/L Extract Vol: 100 mL

Print Date: 06/01/2016 2:31:01PM

Method Blank

Blank ID: MB for HBN 1732364 [VXX/28737]
Blank Lab ID: 1321330

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161876001, 1161876002, 1161876003, 1161876004

Results by **AK101**

Parameter	Results	LOQ/CL	DL	Units
Gasoline Range Organics	0.0315J	0.100	0.0310	mg/L
Surrogates				
4-Bromofluorobenzene (surr)	83.5	50-150		%

Batch Information

Analytical Batch: VFC12971
Analytical Method: AK101
Instrument: Agilent 7890A PID/FID
Analyst: S.P
Analytical Date/Time: 4/23/2016 2:36:00PM

Prep Batch: VXX28737
Prep Method: SW5030B
Prep Date/Time: 4/23/2016 8:00:00AM
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 06/01/2016 2:31:02PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161876 [VXX28737]
Blank Spike Lab ID: 1321333
Date Analyzed: 04/23/2016 15:34

Spike Duplicate ID: LCSD for HBN 1161876 [VXX28737]
Spike Duplicate Lab ID: 1321334
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161876001, 1161876002, 1161876003, 1161876004

Results by **AK101**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Gasoline Range Organics	1.00	1.04	104	1.00	1.03	103	(60-120)	1.10	(< 20)
Surrogates									
4-Bromofluorobenzene (surr)	0.0500	93.6	94	0.0500	85.2	85	(50-150)	9.40	

Batch Information

Analytical Batch: **VFC12971**
Analytical Method: **AK101**
Instrument: **Agilent 7890A PID/FID**
Analyst: **S.P**

Prep Batch: **VXX28737**
Prep Method: **SW5030B**
Prep Date/Time: **04/23/2016 08:00**
Spike Init Wt./Vol.: 1.00 mg/L Extract Vol: 5 mL
Dupe Init Wt./Vol.: 1.00 mg/L Extract Vol: 5 mL

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Method Blank

Blank ID: MB for HBN 1732405 [VXX/28742]
Blank Lab ID: 1321527

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161876006

Results by **AK101**

Parameter	Results	LOQ/CL	DL	Units
Gasoline Range Organics	0.0500U	0.100	0.0310	mg/L
Surrogates				
4-Bromofluorobenzene (surr)	83.3	50-150		%

Batch Information

Analytical Batch: VFC12974
Analytical Method: AK101
Instrument: Agilent 7890A PID/FID
Analyst: S.P
Analytical Date/Time: 4/26/2016 10:46:00AM

Prep Batch: VXX28742
Prep Method: SW5030B
Prep Date/Time: 4/26/2016 8:00:00AM
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 06/01/2016 2:31:07PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161876 [VXX28732]
Blank Spike Lab ID: 1t 21At y
Daze dnal04e/ : y35265 2y16 11:3t

Spike Duplicaze ID: LCSD for HBN 1161876 [VXX28732]
Spike Duplicaze Lab ID: 1t 21At 1
Mazrix: Wazer (Surface, Eff., Groun/)

QC for Samples: 1161876yy6

Resulzs b0 **AK101**

	Blank Spike (mg5L)			Spike Duplicaze (mg5L)					
Parameter	Spike	Resulz	Rec (%)	Spike	Resulz	Rec (%)	CL	RPD (%)	RPD CL
Gasoline Range Organics	1.yy	1.y2	1y2	1.yy	1.yt	1yt	(6y-12y)	y.83	(< 2y)
Surrogates									
3-Bromofluoroben4ene (surr)	y.yAyy	96.9	97	y.yAyy	9y.9	91	(Ay-1Ay)	6.t y	

Batch Information

dnal0zical Bazch: **VFC12978**
dnal0zical Mezho/ : **AK101**
Inszrumenz **Agilent 7P90A DI/ .FI/**
dnal0sz **SXD**

Prep Bazch: **V332P782**
Prep Mezho/ : **SW5040B**
Prep Daze5Time: **08.26.2016 0P:00**
Spike InizWz5Vol.: 1.yy mg5L ExzraczVol: A mL
Dupe InizWz5Vol.: 1.yy mg5L ExzraczVol: A mL

PrinzDaze: y65y152y16 2:t 1:y9PM

Method Blank

Blank ID: MB for HBN 1732500 [VXX/28746]
Blank Lab ID: 1321730

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161876001, 1161876002, 1161876003, 1161876004, 1161876006

Results by **SW8260B**

Parameter	Results	LOQ/CL	DL	Units
1,1,1,2-Tetrachloroethane	0.250U	0.500	0.150	ug/L
1,1,1-Trichloroethane	0.500U	1.00	0.310	ug/L
1,1,2,2-Tetrachloroethane	0.250U	0.500	0.150	ug/L
1,1,2-Trichloroethane	0.500U	1.00	0.310	ug/L
1,1-Dichloroethane	0.500U	1.00	0.310	ug/L
1,1-Dichloroethene	0.500U	1.00	0.310	ug/L
1,1-Dichloropropene	0.500U	1.00	0.310	ug/L
1,2,3-Trichlorobenzene	0.500U	1.00	0.310	ug/L
1,2,3-Trichloropropane	0.500U	1.00	0.310	ug/L
1,2,4-Trichlorobenzene	0.500U	1.00	0.310	ug/L
1,2,4-Trimethylbenzene	0.500U	1.00	0.310	ug/L
1,2-Dibromo-3-chloropropane	5.00U	10.0	3.10	ug/L
1,2-Dibromoethane	0.500U	1.00	0.310	ug/L
1,2-Dichlorobenzene	0.500U	1.00	0.310	ug/L
1,2-Dichloroethane	0.250U	0.500	0.150	ug/L
1,2-Dichloropropane	0.500U	1.00	0.310	ug/L
1,3,5-Trimethylbenzene	0.500U	1.00	0.310	ug/L
1,3-Dichlorobenzene	0.500U	1.00	0.310	ug/L
1,3-Dichloropropane	0.250U	0.500	0.150	ug/L
1,4-Dichlorobenzene	0.250U	0.500	0.150	ug/L
2,2-Dichloropropane	0.500U	1.00	0.310	ug/L
2-Butanone (MEK)	5.00U	10.0	3.10	ug/L
2-Chlorotoluene	0.500U	1.00	0.310	ug/L
2-Hexanone	5.00U	10.0	3.10	ug/L
4-Chlorotoluene	0.500U	1.00	0.310	ug/L
4-Isopropyltoluene	0.500U	1.00	0.310	ug/L
4-Methyl-2-pentanone (MIBK)	5.00U	10.0	3.10	ug/L
Benzene	0.200U	0.400	0.120	ug/L
Bromobenzene	0.500U	1.00	0.310	ug/L
Bromochloromethane	0.500U	1.00	0.310	ug/L
Bromodichloromethane	0.250U	0.500	0.150	ug/L
Bromoform	0.500U	1.00	0.310	ug/L
Bromomethane	5.00U	10.0	3.10	ug/L
Carbon disulfide	5.00U	10.0	3.10	ug/L
Carbon tetrachloride	0.500U	1.00	0.310	ug/L
Chlorobenzene	0.250U	0.500	0.150	ug/L
Chloroethane	0.500U	1.00	0.310	ug/L
Chloroform	0.500U	1.00	0.300	ug/L

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Method Blank

Blank ID: MB for HBN 1732500 [VXX/28746]
Blank Lab ID: 1321730

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161876001, 1161876002, 1161876003, 1161876004, 1161876006

Results by **SW8260B**

Parameter	Results	LOQ/CL	DL	Units
Chloromethane	0.500U	1.00	0.310	ug/L
cis-1,2-Dichloroethene	0.500U	1.00	0.310	ug/L
cis-1,3-Dichloropropene	0.250U	0.500	0.150	ug/L
Dibromochloromethane	0.250U	0.500	0.150	ug/L
Dibromomethane	0.500U	1.00	0.310	ug/L
Dichlorodifluoromethane	0.500U	1.00	0.310	ug/L
Ethylbenzene	0.500U	1.00	0.310	ug/L
Freon-113	5.00U	10.0	3.10	ug/L
Hexachlorobutadiene	0.500U	1.00	0.310	ug/L
Isopropylbenzene (Cumene)	0.500U	1.00	0.310	ug/L
Methylene chloride	2.50U	5.00	1.00	ug/L
Methyl-t-butyl ether	5.00U	10.0	3.10	ug/L
Naphthalene	5.00U	10.0	3.10	ug/L
n-Butylbenzene	0.500U	1.00	0.310	ug/L
n-Propylbenzene	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
sec-Butylbenzene	0.500U	1.00	0.310	ug/L
Styrene	0.500U	1.00	0.310	ug/L
tert-Butylbenzene	0.500U	1.00	0.310	ug/L
Tetrachloroethene	0.500U	1.00	0.310	ug/L
Toluene	0.500U	1.00	0.310	ug/L
trans-1,2-Dichloroethene	0.500U	1.00	0.310	ug/L
trans-1,3-Dichloropropene	0.500U	1.00	0.310	ug/L
Trichloroethene	0.500U	1.00	0.310	ug/L
Trichlorofluoromethane	0.500U	1.00	0.310	ug/L
Vinyl acetate	5.00U	10.0	3.10	ug/L
Vinyl chloride	0.500U	1.00	0.310	ug/L
Xylenes (total)	1.50U	3.00	1.00	ug/L
Surrogates				
1,2-Dichloroethane-D4 (surr)	109	81-118		%
4-Bromofluorobenzene (surr)	97.7	85-114		%
Toluene-d8 (surr)	99.9	89-112		%

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Method Blank

Blank ID: MB for HBN 1732500 [VXX/28746]
Blank Lab ID: 1321730

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161876001, 1161876002, 1161876003, 1161876004, 1161876006

Results by **SW8260B**

Parameter	Results	LOQ/CL	DL	Units

Batch Information

Analytical Batch: VMS15744
Analytical Method: SW8260B
Instrument: VPA 780/5975 GC/MS
Analyst: NRB
Analytical Date/Time: 4/27/2016 9:59:00AM

Prep Batch: VXX28746
Prep Method: SW5030B
Prep Date/Time: 4/27/2016 8:00:00AM
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 06/01/2016 2:31:11PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161876 [VXX28746]
Blank Spike Lab ID: 1321731
Date Analyzed: 04/27/2016 10:38

Spike Duplicate ID: LCSD for HBN 1161876 [VXX28746]
Spike Duplicate Lab ID: 1321732
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161876001, 1161876002, 1161876003, 1161876004, 1161876006

Results by **SW8260B**

	Blank Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
1,1,1,2-Tetrachloroethane	30	32.6	109	30	32.0	107	(78-124)	2.00	(< 20)
1,1,1-Trichloroethane	30	32.5	108	30	32.6	109	(74-131)	0.15	(< 20)
1,1,2,2-Tetrachloroethane	30	30.8	103	30	28.9	96	(71-121)	6.40	(< 20)
1,1,2-Trichloroethane	30	31.9	106	30	31.2	104	(80-119)	2.20	(< 20)
1,1-Dichloroethane	30	32.4	108	30	33.0	110	(77-125)	1.80	(< 20)
1,1-Dichloroethene	30	31.5	105	30	31.5	105	(71-131)	0.03	(< 20)
1,1-Dichloropropene	30	31.8	106	30	31.2	104	(79-125)	1.70	(< 20)
1,2,3-Trichlorobenzene	30	33.8	113	30	32.5	108	(69-129)	3.90	(< 20)
1,2,3-Trichloropropane	30	31.3	104	30	29.0	97	(73-122)	7.60	(< 20)
1,2,4-Trichlorobenzene	30	33.0	110	30	32.9	110	(69-130)	0.27	(< 20)
1,2,4-Trimethylbenzene	30	29.7	99	30	29.6	99	(79-124)	0.27	(< 20)
1,2-Dibromo-3-chloropropane	30	31.0	103	30	27.1	90	(62-128)	13.40	(< 20)
1,2-Dibromoethane	30	33.0	110	30	31.9	106	(77-121)	3.40	(< 20)
1,2-Dichlorobenzene	30	31.1	104	30	31.2	104	(80-119)	0.10	(< 20)
1,2-Dichloroethane	30	32.7	109	30	32.7	109	(73-128)	0.03	(< 20)
1,2-Dichloropropane	30	34.2	114	30	34.2	114	(78-122)	0.06	(< 20)
1,3,5-Trimethylbenzene	30	29.7	99	30	29.4	98	(75-124)	0.88	(< 20)
1,3-Dichlorobenzene	30	31.2	104	30	31.3	104	(80-119)	0.06	(< 20)
1,3-Dichloropropane	30	31.2	104	30	30.4	101	(80-119)	2.50	(< 20)
1,4-Dichlorobenzene	30	32.0	107	30	31.6	105	(79-118)	1.10	(< 20)
2,2-Dichloropropane	30	32.2	107	30	32.3	108	(60-139)	0.25	(< 20)
2-Butanone (MEK)	90	106	118	90	85.6	95	(56-143)	21.50	* (< 20)
2-Chlorotoluene	30	31.2	104	30	31.6	105	(79-122)	1.20	(< 20)
2-Hexanone	90	103	115	90	88.7	99	(57-139)	14.90	(< 20)
4-Chlorotoluene	30	31.3	104	30	32.0	107	(78-122)	2.40	(< 20)
4-Isopropyltoluene	30	30.2	101	30	29.6	99	(77-127)	2.20	(< 20)
4-Methyl-2-pentanone (MIBK)	90	102	113	90	90.7	101	(67-130)	11.60	(< 20)
Benzene	30	32.0	107	30	31.7	106	(79-120)	0.97	(< 20)
Bromobenzene	30	31.9	106	30	31.7	106	(80-120)	0.57	(< 20)
Bromochloromethane	30	32.3	108	30	33.0	110	(78-123)	2.00	(< 20)
Bromodichloromethane	30	31.8	106	30	31.9	106	(79-125)	0.19	(< 20)
Bromoform	30	33.2	111	30	32.0	107	(66-130)	3.80	(< 20)
Bromomethane	30	24.0	80	30	28.5	95	(53-141)	16.90	(< 20)
Carbon disulfide	45	43.5	97	45	43.7	97	(64-133)	0.39	(< 20)

Print Date: 06/01/2016 2:31:14PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161876 [VXX28746]
Blank Spike Lab ID: 1321731
Date Analyzed: 04/27/2016 10:38

Spike Duplicate ID: LCSD for HBN 1161876 [VXX28746]
Spike Duplicate Lab ID: 1321732
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161876001, 1161876002, 1161876003, 1161876004, 1161876006

Results by **SW8260B**

	Blank Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Carbon tetrachloride	30	33.2	111	30	32.9	110	(72-136)	0.79	(< 20)
Chlorobenzene	30	32.2	107	30	31.7	106	(82-118)	1.40	(< 20)
Chloroethane	30	25.2	84	30	29.2	97	(60-138)	14.80	(< 20)
Chloroform	30	29.5	98	30	29.9	100	(79-124)	1.30	(< 20)
Chloromethane	30	32.4	108	30	34.3	114	(50-139)	5.60	(< 20)
cis-1,2-Dichloroethene	30	31.7	106	30	32.5	108	(78-123)	2.60	(< 20)
cis-1,3-Dichloropropene	30	30.6	102	30	30.5	102	(75-124)	0.43	(< 20)
Dibromochloromethane	30	33.3	111	30	33.0	110	(74-126)	0.93	(< 20)
Dibromomethane	30	31.0	103	30	31.0	103	(79-123)	0.03	(< 20)
Dichlorodifluoromethane	30	31.5	105	30	30.7	102	(32-152)	2.40	(< 20)
Ethylbenzene	30	32.9	110	30	32.5	108	(79-121)	1.20	(< 20)
Freon-113	45	48.3	107	45	47.7	106	(70-136)	1.30	(< 20)
Hexachlorobutadiene	30	32.9	110	30	32.8	109	(66-134)	0.24	(< 20)
Isopropylbenzene (Cumene)	30	32.5	108	30	32.6	109	(72-131)	0.15	(< 20)
Methylene chloride	30	28.4	95	30	28.8	96	(74-124)	1.30	(< 20)
Methyl-t-butyl ether	45	47.7	106	45	46.7	104	(71-124)	2.30	(< 20)
Naphthalene	30	31.6	105	30	28.9	96	(61-128)	9.20	(< 20)
n-Butylbenzene	30	29.8	99	30	29.4	98	(75-128)	1.50	(< 20)
n-Propylbenzene	30	32.3	108	30	31.9	106	(76-126)	1.30	(< 20)
o-Xylene	30	33.9	113	30	34.0	113	(78-122)	0.03	(< 20)
P & M -Xylene	60	66.9	111	60	66.9	112	(80-121)	0.06	(< 20)
sec-Butylbenzene	30	32.3	108	30	32.3	108	(77-126)	0.09	(< 20)
Styrene	30	33.1	110	30	33.5	112	(78-123)	1.00	(< 20)
tert-Butylbenzene	30	32.5	108	30	32.7	109	(78-124)	0.77	(< 20)
Tetrachloroethene	30	33.0	110	30	32.8	109	(74-129)	0.85	(< 20)
Toluene	30	30.5	102	30	29.9	100	(80-121)	1.80	(< 20)
trans-1,2-Dichloroethene	30	31.9	106	30	32.3	108	(75-124)	1.10	(< 20)
trans-1,3-Dichloropropene	30	29.3	98	30	29.8	99	(73-127)	1.80	(< 20)
Trichloroethene	30	33.4	111	30	33.0	110	(79-123)	1.40	(< 20)
Trichlorofluoromethane	30	30.9	103	30	30.8	103	(65-141)	0.52	(< 20)
Vinyl acetate	30	33.0	110	30	31.7	106	(54-146)	4.00	(< 20)
Vinyl chloride	30	32.7	109	30	32.3	108	(58-137)	1.30	(< 20)
Xylenes (total)	90	101	112	90	101	112	(79-121)	0.05	(< 20)

Print Date: 06/01/2016 2:31:14PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161876 [VXX28746]
Blank Spike Lab ID: 1321731
Date Analyzed: 04/27/2016 10:38

Spike Duplicate ID: LCSD for HBN 1161876 [VXX28746]
Spike Duplicate Lab ID: 1321732
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161876001, 1161876002, 1161876003, 1161876004, 1161876006

Results by **SW8260B**

	Blank Spike (%)			Spike Duplicate (%)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Surrogates									
1,2-Dichloroethane-D4 (surr)	30	103	103	30	104	104	(81-118)	0.71	
4-Bromofluorobenzene (surr)	30	95.4	95	30	97.2	97	(85-114)	1.80	
Toluene-d8 (surr)	30	102	102	30	102	102	(89-112)	0.36	

Batch Information

Analytical Batch: **VMS15744**
Analytical Method: **SW8260B**
Instrument: **VPA 780/5975 GC/MS**
Analyst: **NRB**

Prep Batch: **VXX28746**
Prep Method: **SW5030B**
Prep Date/Time: **04/27/2016 08:00**
Spike Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL
Dupe Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL

SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
t 907.562.2343 f 907.561.5301 www.us.sgs.com

Method Blank

Blank ID: MB for HBN 1732124 [WAT/10632]
Blank Lab ID: 1320896

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161876001, 1161876002, 1161876003, 1161876004

Results by **SM21 2130B**

Parameter	Results	LOQ/CL	DL	Units
Turbidity	0.100J	0.200	0.100	NTU

Batch Information

Analytical Batch: WAT10632
Analytical Method: SM21 2130B
Instrument: Turbidimeter
Analyst: MBS
Analytical Date/Time: 4/22/2016 9:30:00AM

Print Date: 06/01/2016 2:31:16PM

Duplicate Sample Summary

Original Sample ID: 1161806991
Duplicate Sample ID: 1329855
QC for Samples:
1161806991, 1161806992, 1161806993, 1161806994

Analysis Date: 94/22/2916 95:39
Matrix: Water (Surface, Eff., Ground)

Results by **SM21 2130B**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
Turbidity	6.69	0.99	NTU	7.59	(< 29)

Batch Information

Analytical Batch: WAT19632
Analytical Method: SM21 2139B
Instrument: Turbidimeter
Analyst: MBS

Print Date: 96/91/2916 2:31:10PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161876 [WAT10632]
Blank Spike Lab ID: 1320897
Date Analyzed: 04/22/2016 09:30

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161876001, 1161876002, 1161876003, 1161876004

Results by **SM21 2130B**

Blank Spike (NTU)

Parameter	Spike	Result	Rec (%)	CL
Turbidity	10	11.0	110	(90-110)

Batch Information

Analytical Batch: **WAT10632**
Analytical Method: **SM21 2130B**
Instrument: **Turbidimeter**
Analyst: **MBS**

Prep Batch:
Prep Method:
Prep Date/Time:
Spike Init Wt./Vol.: 10 NTU Extract Vol: 1 mL
Dupe Init Wt./Vol.: Extract Vol:

Print Date: 06/01/2016 2:31:18PM

Method Blank

Blank ID: MB for HBN 1732376 [WFI/2469]
Blank Lab ID: 1321405

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161876001, 1161876002, 1161876003, 1161876004

Results by **SM21 4500NO3-F**

Parameter	Results	LOQ/CL	DL	Units
Nitrate-N	0.0572J	0.100	0.0300	mg/L
Nitrite-N	0.0500U	0.100	0.0300	mg/L
Total Nitrate/Nitrite-N	0.0636J	0.100	0.0300	mg/L

Batch Information

Analytical Batch: WFI2469
Analytical Method: SM21 4500NO3-F
Instrument: Astoria segmented flow
Analyst: NEG
Analytical Date/Time: 4/21/2016 2:14:18PM

SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
t 907.562.2343 f 907.561.5301 www.us.sgs.com

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161876 [WFI2469]
Blank Spike Lab ID: 1321403
Date Analyzed: 04/21/2016 14:12

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161876001, 1161876002, 1161876003, 1161876004

Results by **SM21 4500NO3-F**

Blank Spike (mg/L)

Parameter	Spike	Result	Rec (%)	CL
Nitrate-N	2.5	2.54	102	(70-130)
Nitrite-N	2.5	2.53	101	(90-110)
Total Nitrate/Nitrite-N	5	5.07	101	(90-110)

Batch Information

Analytical Batch: **WFI2469**
Analytical Method: **SM21 4500NO3-F**
Instrument: **Astoria segmented flow**
Analyst: **NEG**

Prep Batch:
Prep Method:
Prep Date/Time:
Spike Init Wt./Vol.: 2.5 mg/L Extract Vol: 5 mL
Dupe Init Wt./Vol.: Extract Vol:

Print Date: 06/01/2016 2:31:22PM

Matrix Spike Summary

Original Sample ID: 1161853005
MS Sample ID: 1321398 MS
MSD Sample ID: 1321399 MSD

Analysis Date: 04/21/2016 12:29
Analysis Date: 04/21/2016 12:30
Analysis Date: 04/21/2016 12:32
Matrix: Water (Surface, Eff., Ground)

QC for Samples:

Results by **SM21 4500NO3-F**

		Matrix Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Nitrate-N	0.0500U	2.50	2.21	89	2.50	2.19	88	70-130	1.00	(< 25)
Nitrite-N	0.0500U	2.50	2.53	101	2.50	2.54	102	90-110	0.18	(< 25)

Batch Information

Analytical Batch: WFI2469
Analytical Method: SM21 4500NO3-F
Instrument: Astoria segmented flow
Analyst: NEG
Analytical Date/Time: 4/21/2016 12:30:49PM

Prep Batch:
Prep Method:
Prep Date/Time:
Prep Initial Wt./Vol.: 5.00mL
Prep Extract Vol: 5.00mL

Print Date: 06/01/2016 2:31:22PM

Matrix Spike Summary

Original Sample ID: 1161860001
MS Sample ID: 1321406 MS
MSD Sample ID: 1321407 MSD

Analysis Date: 04/21/2016 14:30
Analysis Date: 04/21/2016 14:31
Analysis Date: 04/21/2016 14:33
Matrix: Drinking Water

QC for Samples: 1161876001, 1161876002, 1161876003, 1161876004

Results by **SM21 4500NO3-F**

		Matrix Spike (mg/L)				Spike Duplicate (mg/L)					
Parameter	Sample	Spike	Result	Rec (%)		Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Total Nitrate/Nitrite-N	0.722	5.00	5.09	87	*	5.00	5.29	91	90-110	3.90	(< 25)

Batch Information

Analytical Batch: WFI2469
Analytical Method: SM21 4500NO3-F
Instrument: Astoria segmented flow
Analyst: NEG
Analytical Date/Time: 4/21/2016 2:31:48PM

Prep Batch:
Prep Method:
Prep Date/Time:
Prep Initial Wt./Vol.: 5.00mL
Prep Extract Vol: 5.00mL

Print Date: 06/01/2016 2:31:22PM

Duplicate Sample Summary

Original Sample ID: 1161876001
Duplicate Sample ID: 1321380
QC for Samples:
1161876001, 1161876002, 1161876003, 1161876004

Analysis Date: 04/25/2016 17:11
Matrix: Water (Surface, Eff., Ground)

Results by **SM21 4500-H B**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
pH	7.90	7.90	pH units	0.00	(< 5)

Batch Information

Analytical Batch: WTI4443
Analytical Method: SM21 4500-H B
Instrument: Titration
Analyst: ACF

Print Date: 06/01/2016 2:31:24PM

Duplicate Sample Summary

Original Sample ID: 1161922003
Duplicate Sample ID: 1321381
QC for Samples:
1161876001, 1161876002, 1161876003, 1161876004

Analysis Date: 04/25/2016 16:18
Matrix: Water (Surface, Eff., Ground)

Results by **SM21 4500-H B**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
pH	6.70	6.70	pH units	0.00	(< 5)

Batch Information

Analytical Batch: WTI4443
Analytical Method: SM21 4500-H B
Instrument: Titration
Analyst: ACF

Print Date: 06/01/2016 2:31:24PM

Duplicate Sample Summary

Original Sample ID: 1161885003
Duplicate Sample ID: 1321385
QC for Samples:
1161876001, 1161876002, 1161876003, 1161876004

Analysis Date: 04/25/2016 20:15
Matrix: Drinking Water

Results by **SM21 4500-H B**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
pH	7.50	7.50	pH units	0.00	(< 5)

Batch Information

Analytical Batch: WTI4443
Analytical Method: SM21 4500-H B
Instrument: Titration
Analyst: ACF

Print Date: 06/01/2016 2:31:24PM

Duplicate Sample Summary

Original Sample ID: 1161885004
Duplicate Sample ID: 1321386
QC for Samples:
1161876001, 1161876002, 1161876003, 1161876004

Analysis Date: 04/25/2016 20:32
Matrix: Drinking Water

Results by **SM21 4500-H B**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
pH	7.30	7.30	pH units	0.00	(< 5)

Batch Information

Analytical Batch: WTI4443
Analytical Method: SM21 4500-H B
Instrument: Titration
Analyst: ACF

Print Date: 06/01/2016 2:31:24PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161876 [WTI4443]
Blank Spike Lab ID: 1321377
Date Analyzed: 04/25/2016 14:47

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161876001, 1161876002, 1161876003, 1161876004

Results by **SM21 4500-H B**

Blank Spike (pH units)

Parameter	Spike	Result	Rec (%)	CL
pH	7	7.01	100	(99-101)

Batch Information

Analytical Batch: **WTI4443**
Analytical Method: **SM21 4500-H B**
Instrument: **Titration**
Analyst: **ACF**

Prep Batch:
Prep Method:
Prep Date/Time:
Spike Init Wt./Vol.: 7 pH units Extract Vol: 1 mL
Dupe Init Wt./Vol.: Extract Vol:

Print Date: 06/01/2016 2:31:25PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161876 [WTI4443]
Blank Spike Lab ID: 1321382
Date Analyzed: 04/25/2016 19:16

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161876001, 1161876002, 1161876003, 1161876004

Results by **SM21 4500-H B**

Blank Spike (pH units)

Parameter	Spike	Result	Rec (%)	CL
pH	7	7.01	100	(99-101)

Batch Information

Analytical Batch: **WTI4443**
Analytical Method: **SM21 4500-H B**
Instrument: **Titration**
Analyst: **ACF**

Prep Batch:
Prep Method:
Prep Date/Time:
Spike Init Wt./Vol.: 7 pH units Extract Vol: 1 mL
Dupe Init Wt./Vol.: Extract Vol:

Print Date: 06/01/2016 2:31:25PM

Method Blank

Blank ID: MB for HBN 1732387 [WTI/4445]
Blank Lab ID: 1321456

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161876001, 1161876002, 1161876003, 1161876004

Results by **SM21 2320B**

Parameter	Results	LOQ/CL	DL	Units
Alkalinity	5.00U	10.0	3.10	mg/L

Batch Information

Analytical Batch: WTI4445
Analytical Method: SM21 2320B
Instrument: Titration
Analyst: ACF
Analytical Date/Time: 4/25/2016 3:39:27PM

Print Date: 06/01/2016 2:31:27PM

Duplicate Sample Summary

Original Sample ID: 1161876001
Duplicate Sample ID: 1321458
QC for Samples:
1161876001, 1161876002, 1161876003, 1161876004

Analysis Date: 04/25/2016 17:11
Matrix: Water (Surface, Eff., Ground)

Results by **SM21 2320B**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
Alkalinity	61.3	61.6	mg/L	0.49	(< 25)

Batch Information

Analytical Batch: WTI4445
Analytical Method: SM21 2320B
Instrument: Titration
Analyst: ACF

Print Date: 06/01/2016 2:31:28PM

Duplicate Sample Summary

Original Sample ID: 1161922003
Duplicate Sample ID: 1321459
QC for Samples:
1161876001

Analysis Date: 04/25/2016 16:18
Matrix: Water (Surface, Eff., Ground)

Results by **SM21 2320B**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
Alkalinity	44.8	45.2	mg/L	0.91	(< 25)

Batch Information

Analytical Batch: WTI4445
Analytical Method: SM21 2320B
Instrument: Titration
Analyst: ACF

Print Date: 06/01/2016 2:31:28PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161876 [WTI4443]
Blank Spike Lab ID: 12t 1437
DaAe y nalzde0: / 45 35 / 16 13:48

MaAix: WaAer (Surface, Eff., Groun0)

9 C for Samples: 1161876/ / 1, 1161876/ / t , 1161876/ / 2, 1161876/ / 4

ResulAs bz **SM21 2320B**

Blank Spike (mQL)

ParameAer	Spike	ResulA	Rec (%)	CL
y lkaliniAz	t 3/	t 22	- 2	(83h113)

Batch Information

y nalzAcal BaAcV: **WTI4445**
y nalzAcal MeAo0: **SM21 2320B**
InsAumenA **Titration**
y nalzsA **ACF**

Prep BaAcV:
Prep MeAo0:
Prep DaAe5Time:
Spike IniAWA5v ol.: t 3/ mQL ExAracAv ol: 3/ mL
Dupe IniAWA5v ol.: ExAracAv ol:

PrinADaAe: / 65 15 / 16 t :21:t - PM

Method Blank

Blank ID: MB for HBN 1732132 [WXX/11476]
Blank Lab ID: 1320921

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161876001, 1161876003, 1161876004

Results by **EPA 300.0**

Parameter	Results	LOQ/CL	DL	Units
Chloride	0.0420J	0.100	0.0310	mg/L
Fluoride	0.0500U	0.100	0.0310	mg/L
Sulfate	0.0500U	0.100	0.0310	mg/L

Batch Information

Analytical Batch: WIC5531
Analytical Method: EPA 300.0
Instrument: Metrohm 733 DX2
Analyst: ACF
Analytical Date/Time: 4/21/2016 5:15:42PM

Prep Batch: WXX11476
Prep Method: METHOD
Prep Date/Time: 4/21/2016 3:05:00PM
Prep Initial Wt./Vol.: 10 mL
Prep Extract Vol: 10 mL

Print Date: 06/01/2016 2:31:31PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161876 [WXX11476]
Blank Spike Lab ID: 1320922
Date Analyzed: 04/21/2016 19:07

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161876001, 1161876003, 1161876004

Results by **EPA 300.0**

Blank Spike (mg/L)

Parameter	Spike	Result	Rec (%)	CL
Chloride	10	10.0	100	(90-110)
Fluoride	10	10.4	104	(90-110)
Sulfate	10	9.62	96	(90-110)

Batch Information

Analytical Batch: **WIC5531**
Analytical Method: **EPA 300.0**
Instrument: **Metrohm 733 DX2**
Analyst: **ACF**

Prep Batch: **WXX11476**
Prep Method: **METHOD**
Prep Date/Time: **04/21/2016 15:05**
Spike Init Wt./Vol.: 10 mg/L Extract Vol: 10 mL
Dupe Init Wt./Vol.: Extract Vol:

Print Date: 06/01/2016 2:31:33PM

Matrix Spike Summary

Original Sample ID: 1320929
MS Sample ID: 1320936 MS
MSD Sample ID: 1320937 MSD

Analysis Date: 04/21/2016 18:00
Analysis Date: 04/21/2016 18:22
Analysis Date: 04/21/2016 18:44
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161876001, 1161876003, 1161876004

Results by **EPA 300.0**

		Matrix Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Chloride	11.0	10.0	21.3	103	10.0	21.7	107	90-110	1.70	(< 15)
Fluoride	0.0930J	10.0	10.9	108	10.0	11.3	112 *	90-110	3.20	(< 15)
Sulfate	14.1	10.0	24	99	10.0	24.4	103	90-110	1.40	(< 15)

Batch Information

Analytical Batch: WIC5531
Analytical Method: EPA 300.0
Instrument: Metrohm 733 DX2
Analyst: ACF
Analytical Date/Time: 4/21/2016 6:22:34PM

Prep Batch: WXX11476
Prep Method: EPA 300.0 Extraction Waters/Liquids
Prep Date/Time: 4/21/2016 3:05:00PM
Prep Initial Wt./Vol.: 10.00mL
Prep Extract Vol: 10.00mL

Print Date: 06/01/2016 2:31:34PM

Method Blank

Blank ID: MB for HBN 1735075 [WXX/11516]
Blank Lab ID: 1327119

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161876002

Results by **EPA 300.0**

Parameter	Results	LOQ/CL	DL	Units
Chloride	0.0500U	0.100	0.0310	mg/L
Fluoride	0.0500U	0.100	0.0310	mg/L
Sulfate	0.0500U	0.100	0.0310	mg/L

Batch Information

Analytical Batch: WIC5543
Analytical Method: EPA 300.0
Instrument: Metrohm 733 DX2
Analyst: ACF
Analytical Date/Time: 5/31/2016 3:30:44PM

Prep Batch: WXX11516
Prep Method: METHOD
Prep Date/Time: 5/31/2016 1:23:00PM
Prep Initial Wt./Vol.: 10 mL
Prep Extract Vol: 10 mL

Print Date: 06/01/2016 2:31:35PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161876 [WXX11416]
Blank Spike Lab ID: 1327120
Da9e t nalAyez: 04c81c2016 14:43

u a9riM Wa9er xSsrfa(ec, ffEc. rosnzG

g C for SaP pleR 1161876002

/ eRsl9RbA EPA 300.0

Blank Spike xP %dLG

) araP e9er	Spike	/ eRsl9	/ e(xmG	CL
CQlorize	10	hE43	h4	xh0-110 G
Flsorize	10	10E1	101	xh0-110 G
Sslfa9e	10	hED3	h0	xh0-110 G

Batch Information

t nalA9(al Ba9(Q: **WIC5513**
t nalA9(al u e9Qoz: **EPA 300.0**
InR9rsP en9 **Metrohm 733 DX2**
t nalAR9 **ACF**

) rep Ba9(Q: **WXX44546**
) rep u e9Qoz: **METHOD**
) rep Da9edTiP e: **05/34/2046 43:23**
Spike Ini9W9EVolE: 10 P %dL , M9ra(9Vol: 10 P L
Dspe Ini9W9EVolE: , M9ra(9Vol:

) rin9Da9e: 06d01c2016 2:31:37) u

Matrix Spike Summary

Original Sample ID: 1162676001
MS Sample ID: 1327121 MS
MSD Sample ID: 1327122 MSD

Analysis Date: 05/31/2016 17:44
Analysis Date: 05/31/2016 18:06
Analysis Date: 05/31/2016 18:28
Matrix: Drinking Water

QC for Samples: 1161876002

Results by **EPA 300.0**

		Matrix Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)		CL	RPD (%)	RPD CL
Chloride	0.686	10.0	11.2	105	10.0	11.6	109		90-110	3.30	
Fluoride	0.345	10.0	11	107	10.0	11.4	111	*	90-110	3.60	
Sulfate	6.52	10.0	16.9	104	10.0	17.3	108		90-110	2.20	

Batch Information

Analytical Batch: WIC5543
Analytical Method: EPA 300.0
Instrument: Metrohm 733 DX2
Analyst: ACF
Analytical Date/Time: 5/31/2016 6:06:39PM

Prep Batch: WXX11516
Prep Method: EPA 300.0 Extraction Waters/Liquids
Prep Date/Time: 5/31/2016 1:23:00PM
Prep Initial Wt./Vol.: 10.00mL
Prep Extract Vol: 10.00mL

Print Date: 06/01/2016 2:31:38PM

Method Blank

Blank ID: MB for HBN 1732110 [XXX/35198]
Blank Lab ID: 1320850

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161876001, 1161876002, 1161876003, 1161876004

Results by **AK102**

Parameter	Results	LOQ/CL	DL	Units
Diesel Range Organics	0.300U	0.600	0.180	mg/L
Surrogates				
5a Androstane (surr)	99.3	60-120		%

Batch Information

Analytical Batch: XFC12346
Analytical Method: AK102
Instrument: Agilent 7890B R
Analyst: S.G
Analytical Date/Time: 4/25/2016 1:52:00PM

Prep Batch: XXX35198
Prep Method: SW3520C
Prep Date/Time: 4/22/2016 9:00:40AM
Prep Initial Wt./Vol.: 250 mL
Prep Extract Vol: 1 mL

Print Date: 06/01/2016 2:31:39PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161876 [VVVX2138]
Blank Spike Lab ID: 1Xt A821
Daye z nald0e4: A/ 5t 25t A16 1/ :At

Spike Duplicaye ID: LCSD for HBN 1161876 [VVVX2138]
Spike Duplicaye Lab ID: 1Xt A82t
Mayrix: Wayer (Surface, Eff., Groun4)

QC for Samples: 1161876AA1, 1161876AAt , 1161876AAX, 1161876AA/

Resulys bd **AK102**

	Blank Spike (mg5L)			Spike Duplicaye (mg5L)					
Parameyer	Spike	Resuly	Rec (%)	Spike	Resuly	Rec (%)	CL	RPD (%)	RPD CL
Diesel Range Organics	t A	t A./	1At	t A	18.7	3/	(72-1t 2)	8.2A	(< t A)
Surrogates									
2a z n4rosyane (surr)	A./	116	116	A./	1A3	1A3	(6A-1t A)	7.AA	

Batch Information

z naldyical Bayc9: **XFC12346**
z naldyical Mey9o4: **AK102**
Insyrumeny: **Agilent 7890B R**
z naldsy: **S.G**

Prep Bayc9: **XXX35198**
Prep Mey9o4: **SW3520C**
Prep Daye5nime: **04/22/2016 09:00**
Spike IniyWy.5Tol.: t A mg5L ExyracyTol: 1 mL
Dupe IniyWy.5Tol.: t A mg5L ExyracyTol: 1 mL

PrinyDaye: A65A15t A16 t :X1:/ 1PM

Method Blank

Blank ID: MB for HBN 1732110 [XXX/35198]
Blank Lab ID: 1320850

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161876001, 1161876002, 1161876003, 1161876004

Results by **AK103**

Parameter	Results	LOQ/CL	DL	Units
Residual Range Organics	0.250U	0.500	0.150	mg/L
Surrogates				
nA riacontaneAd62 (surr)	94.8	60A120		%

Batch Information

hnalytical BatcF: XKC12346
hnalytical MetFod: hT103
Instrument: hgilent 7890B R
hnalyst: S.G
hnalytical Date/- ime: 4/25/2016 1:52:00PM

Prep BatcF: XXX35198
Prep MetFod: SW3520C
Prep Date/- ime: 4/22/2016 9:00:40hM
Prep Initial Wt./Vol.: 250 mL
Prep Extract Vol: 1 mL

Print Date: 06/01/2016 2:31:43PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161876 [VVVX2138]
Blank Spike Lab ID: 1Xt A821
Daye z nald0e4: A/ 5t 25t A16 1/ :At

Spike Duplicaye ID: LCSD for HBN 1161876 [VVVX2138]
Spike Duplicaye Lab ID: 1Xt A82t
Mayrix: Wayer (Surface, Eff., Groun4)

QC for Samples: 1161876AA1, 1161876AAt , 1161876AAX, 1161876AA/

Resulys bd **AK102**

	Blank Spike (mg5L)			Spike Duplicaye (mg5L)					
Parameyer	Spike	Resuly	Rec (%)	Spike	Resuly	Rec (%)	CL	RPD (%)	RPD CL
Resi4ual Range Organics	t A	13.1	36	t A	18.X	3t	(6A-1t A)	/ .t A	(< t A)
Surrogates									
n-9riaconyane-46t (surr)	A./	3X.7	3/	A./	83.7	3A	(6A-1t A)	/ ./ A	

Batch Information

z naldyical Baych: **XFC13246**
z naldyical Meyho4: **AK102**
Insyrumeny: **Agilent 7890B R**
z naldsy: **S.G**

Prep Baych: **XXX25198**
Prep Meyho4: **SW2530C**
Prep Daye59ime: **04/33/3016 09:00**
Spike IniyWy.5Tol.: t A mg5L ExyracyTol: 1 mL
Dupe IniyWy.5Tol.: t A mg5L ExyracyTol: 1 mL

PrinyDaye: A65A15t A16 t :X1:/ 2PM

Method Blank

Blank ID: MB for HBN 1732350 [VVVX8/ 2138
Blank 4a6 ID: 13212/ 1

Ma,rti : x a,Sr W(rfauSscffEs. ro(nGd

] L for b aQ CSm
11p107pee1s11p107pee2s11p107pee3s11p107pee5

) Sm(l,m6R **SW8270D**

OaraQS,Sr	) Sm(l,m	4U] XL4	D4	y nt,m
1s2s5P rtuTloro6SnhSnS	eEee/ eey	eEe1ee	eEee31e	QgX4
1s2PDtuTloro6SnhSnS	eEee/ eey	eEe1ee	eEee31e	QgX4
1s3PDtuTloro6SnhSnS	eEee/ eey	eEe1ee	eEee31e	QgX4
1s5PDtuTloro6SnhSnS	eEee/ eey	eEe1ee	eEee31e	QgX4
1PL TloronaCT,TalSnS	eEee/ eey	eEe1ee	eEee31e	QgX4
1PMS,TRnaCT,TalSnS	eEee/ eey	eEe1ee	eEee31e	QgX4
2s5s/ P rtuTloroCTSnol	eEee/ eey	eEe1ee	eEee31e	QgX4
2s5spP rtuTloroCTSnol	eEee/ eey	eEe1ee	eEee31e	QgX4
2s5PDtuTloroCTSnol	eEee/ eey	eEe1ee	eEee31e	QgX4
2s5PDtQS,TRCTSnol	eEee/ eey	eEe1ee	eEee31e	QgX4
2s5PDtnt,roCTSnol	eEe2/ ey	eEe/ ee	eEe1/ e	QgX4
2s5PDtnt,ro,ol(SnS	eEee/ eey	eEe1ee	eEee31e	QgX4
2spPDtuTloroCTSnol	eEee/ eey	eEe1ee	eEee31e	QgX4
2spPDtnt,ro,ol(SnS	eEee/ eey	eEe1ee	eEee31e	QgX4
2PL TloronaCT,TalSnS	eEee/ eey	eEe1ee	eEee31e	QgX4
2PL TloroCTSnol	eEee/ eey	eEe1ee	eEee31e	QgX4
2PMS,TRP5spPGtnt,roCTSnol	eEe2/ ey	eEe/ ee	eEe1/ e	QgX4
2PMS,TRnaCT,TalSnS	eEee/ eey	eEe1ee	eEee31e	QgX4
2PMS,TRCTSnol WPL rSnold	eEee/ eey	eEe1ee	eEee31e	QgX4
2PNt,roantltnS	eEee/ eey	eEe1ee	eEee31e	QgX4
2PNt,roCTSnol	eEee/ eey	eEe1ee	eEee31e	QgX4
3z 5PMS,TRCTSnol WQz QPL rSnold	eEe1eey	eEe2ee	eEeep2e	QgX4
3s3PDtuTloro6SnhtGtnS	eEee/ eey	eEe1ee	eEee31e	QgX4
3PNt,roantltnS	eEee/ eey	eEe1ee	eEee31e	QgX4
5PBroQoCTSnRPCTSnRS,TSr	eEee/ eey	eEe1ee	eEee31e	QgX4
5PL TloroP3PQS,TRCTSnol	eEee/ eey	eEe1ee	eEee31e	QgX4
5PL TloroantltnS	eEee/ eey	eEe1ee	eEee31e	QgX4
5PL TloroCTSnRPCTSnRS,TSr	eEee/ eey	eEe1ee	eEee31e	QgX4
5PNt,roantltnS	eEee/ eey	eEe1ee	eEee31e	QgX4
5PNt,roCTSnol	eEe2/ ey	eEe/ ee	eEe1/ e	QgX4
KuSnaCT,TSnS	eEee/ eey	eEe1ee	eEee31e	QgX4
KuSnaCT,TRSnS	eEee/ eey	eEe1ee	eEee31e	QgX4
KntltnS	eEe2/ ey	eEe/ ee	eEe1/ e	QgX4
Kn,TrauSnS	eEee/ eey	eEe1ee	eEee31e	QgX4
Kho6SnhSnS	eEee/ eey	eEe1ee	eEee31e	QgX4
BSnhoWdKn,TrauSnS	eEee/ eey	eEe1ee	eEee31e	QgX4
BSnho[a8CRtSnS	eEee/ eey	eEe1ee	eEee31e	QgX4
BSnho[68Al(oran,TSnS	eEee/ eey	eEe1ee	eEee31e	QgX4

Method Blank

Blank ID: MB for HBN 1732350 [VVVX8/ 2138
Blank 4a6 ID: 13212/ 1

Ma,rti : x a,Sr W(rfauSscffEs. ro(nGd

] L for b aQ.CtSm
11p107pee1s11p107pee2s11p107pee3s11p107pee5

) Sm(l,m6R **SW8270D**

OaraQ.S,Sr	) Sm(l,m	4U] XL4	D4	y nt,m
BSnho[gsTst8CSrRtSnS	eEee/ eey	eEe1ee	eEee31e	QgX4
BSnho[k8tl(oran,TSnS	eEee/ eey	eEe1ee	eEee31e	QgX4
BSnhotu autG	eEe2/ ey	eEe/ ee	eEe1/ e	QgX4
BSnhtRl aluoTol	eEee/ eey	eEe1ee	eEee31e	QgX4
BtmW2uTloro1Q.S,TRtS,TRdc:,TSr	eEee/ eey	eEe1ee	eEee31e	QgX4
BtmW2PL TloroS,Toi RdQ.S,TanS	eEee/ eey	eEe1ee	eEee31e	QgX4
BtmW2PL TloroS,TRdS,TSr	eEee/ eey	eEe1ee	eEee31e	QgX4
6tmW2Pc:,TRtTSi RdCT,Tala,S	eEee/ eey	eEe1ee	eEee31e	QgX4
B(,Rt6SnhRtCT,Tala,S	eEee/ eey	eEe1ee	eEee31e	QgX4
L ar6aholS	eEee/ eey	eEe1ee	eEee31e	QgX4
L TrRmSnS	eEee/ eey	eEe1ee	eEee31e	QgX4
Dt6Snho[asT8an,TrauSnS	eEee/ eey	eEe1ee	eEee31e	QgX4
Dt6Snhof(ran	eEee/ eey	eEe1ee	eEee31e	QgX4
DtS,TRtCT,Tala,S	eEee/ eey	eEe1ee	eEee31e	QgX4
DtQ.S,TRtCT,Tala,S	eEee/ eey	eEe1ee	eEee31e	QgX4
DtPmP6(,RtCT,Tala,S	eEee/ eey	eEe1ee	eEee31e	QgX4
GtPmPUu,RtCT,Tala,S	eEee/ eey	eEe1ee	eEee31e	QgX4
Al(oran,TSnS	eEee/ eey	eEe1ee	eEee31e	QgX4
Al(orSnS	eEee/ eey	eEe1ee	eEee31e	QgX4
HSi auTloro6SnhSnS	eEee/ eey	eEe1ee	eEee31e	QgX4
HSi auTloro6(,aGtSnS	eEee/ eey	eEe1ee	eEee31e	QgX4
HSi auTlorouRuloCSn,aGtSnS	eEe1/ ey	eEe3ee	eEeew5e	QgX4
HSi auTloroS,TanS	eEee/ eey	eEe1ee	eEee31e	QgX4
InGSno[1s2s3RusG8CRtSnS	eEee/ eey	eEe1ee	eEee31e	QgX4
ImoCToronS	eEee/ eey	eEe1ee	eEee31e	QgX4
NaCT,TalSnS	eEee/ eey	eEe1ee	eEee31e	QgX4
Nt,ro6SnhSnS	eEee/ eey	eEe1ee	eEee31e	QgX4
NPNt,romoGtQ.S,TRaQtnS	eEee/ eey	eEe1ee	eEee31e	QgX4
NPNt,romoPGtPmPCroCRaQtnS	eEee/ eey	eEe1ee	eEee31e	QgX4
NPNt,romoGtCTSnRaQtnS	eEee/ eey	eEe1ee	eEee31e	QgX4
OSn,auTloroCTSnol	eEe2/ ey	eEe/ ee	eEe1/ e	QgX4
OTSnan,TrSnS	eEee/ eey	eEe1ee	eEee31e	QgX4
OTSnol	eEee/ eey	eEe1ee	eEee31e	QgX4
ORtSnS	eEee/ eey	eEe1ee	eEee31e	QgX4
Surrogates				
2s5spP rt6roQ.oCTSnol W(rrd	7pEp	53P15e		&
2PAl(oro6tCTSnRt W(rrd	7/ Ep	55P11w		&
2PAl(oroCTSnol W(rrd	/ 7E2	1wP11w		&

Ortn, Da,S: epXe1X2e1p 2:31:57OM

Method Blank

Blank ID: MB for HBN 1732350 [VVVX8/ 2138
Blank 4a6 ID: 13212/ 1

] L for baQCtSm
11p107pee1s11p107pee2s11p107pee3s11p107pee5

Ma,rti : x a,Sr W(rfauSscffEs. ro(nGd

) Sm(l,m6R SW8270D

OaraQS,Sr	) Sm(l,m	4U] XL4	D4	y nt,m
Nt,ro6SnhSnSRG/ W(rrd	p7E7	55P12e		&
OTSnolRQp W(rrd	p2E3	1eP11/		&
- SrCTSnRRG15 W(rrd	weE	/ eP135		&

Batch Information

KnalR,tual Ba,uT: VMbw275
KnalR,tual MS,ToG bx 027eD
Inm,r(QSn,: HO p0weX w73 bbK
KnalRm: N44
KnalR,tual Da,SX tQS: / X2X2e1p 3:3/ :eeOM

OrSC Ba,uT: VVV3/ 213
OrSC MS,ToG bx 3/ 2eL
OrSC Da,SX tQS: 5X2pX2e1p w.ee:27KM
OrSC Int,tal x ,E%olE 1eee Q4
OrSC ci ,rau, %ol: 1 Q4

Ortn, Da,S: epXe1X2e1p 2:31:57OM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161876 [XXX35213]
Blank Spike Lab ID: 1321252
Date Analyzed: 05/02/2016 18:07

Spike Duplicate ID: LCSD for HBN 1161876 [XXX35213]
Spike Duplicate Lab ID: 1321253
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161876001, 1161876002, 1161876003, 1161876004

Results by **SW8270D**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
1,2,4-Trichlorobenzene	0.1	0.0701	70	0.1	0.0679	68	(29-116)	3.20	(< 20)
1,2-Dichlorobenzene	0.1	0.0621	62	0.1	0.0591	59	(32-111)	5.10	(< 20)
1,3-Dichlorobenzene	0.1	0.0616	62	0.1	0.0585	59	(28-110)	5.30	(< 20)
1,4-Dichlorobenzene	0.1	0.0629	63	0.1	0.0596	60	(29-112)	5.40	(< 20)
1-Chloronaphthalene	0.04	0.0384	96	0.04	0.0391	98	(58-111)	1.80	(< 20)
1-Methylnaphthalene	0.1	0.0762	76	0.1	0.0773	77	(41-119)	1.40	(< 20)
2,4,5-Trichlorophenol	0.1	0.0876	88	0.1	0.0853	85	(53-123)	2.60	(< 20)
2,4,6-Trichlorophenol	0.1	0.0872	87	0.1	0.0854	85	(50-125)	2.00	(< 20)
2,4-Dichlorophenol	0.1	0.0749	75	0.1	0.0726	73	(47-121)	3.10	(< 20)
2,4-Dimethylphenol	0.1	0.0592	59	0.1	0.0575	58	(31-124)	2.90	(< 20)
2,4-Dinitrophenol	0.18	0.164	91	0.18	0.155	86	(23-143)	5.30	(< 20)
2,4-Dinitrotoluene	0.1	0.0945	95	0.1	0.0928	93	(57-128)	1.80	(< 20)
2,6-Dichlorophenol	0.04	0.0283	71	0.04	0.0282	71	(50-118)	0.50	(< 20)
2,6-Dinitrotoluene	0.1	0.0974	97	0.1	0.0952	95	(57-124)	2.20	(< 20)
2-Chloronaphthalene	0.1	0.0799	80	0.1	0.0805	81	(40-116)	0.70	(< 20)
2-Chlorophenol	0.1	0.0610	61	0.1	0.0569	57	(38-117)	7.10	(< 20)
2-Methyl-4,6-dinitrophenol	0.18	0.185	103	0.18	0.176	98	(44-137)	5.10	(< 20)
2-Methylnaphthalene	0.1	0.0712	71	0.1	0.0728	73	(40-121)	2.30	(< 20)
2-Methylphenol (o-Cresol)	0.1	0.0617	62	0.1	0.0585	59	(30-117)	5.30	(< 20)
2-Nitroaniline	0.1	0.0951	95	0.1	0.0920	92	(55-117)	3.30	(< 20)
2-Nitrophenol	0.1	0.0803	80	0.1	0.0792	79	(47-123)	1.50	(< 20)
3&4-Methylphenol (p&m-Cresol)	0.14	0.0987	71	0.14	0.0920	66	(29-110)	7.00	(< 20)
3,3-Dichlorobenzidine	0.1	0.0833	83	0.1	0.0793	79	(27-129)	4.90	(< 20)
3-Nitroaniline	0.1	0.0917	92	0.1	0.0868	87	(41-128)	5.50	(< 20)
4-Bromophenyl-phenylether	0.1	0.0987	99	0.1	0.0956	96	(55-124)	3.20	(< 20)
4-Chloro-3-methylphenol	0.1	0.0801	80	0.1	0.0787	79	(52-119)	1.80	(< 20)
4-Chloroaniline	0.1	0.0693	69	0.1	0.0654	65	(33-117)	5.80	(< 20)
4-Chlorophenyl-phenylether	0.1	0.0907	91	0.1	0.0897	90	(53-121)	1.00	(< 20)
4-Nitroaniline	0.1	0.0976	98	0.1	0.0921	92	(74-118)	5.90	(< 20)
4-Nitrophenol	0.14	0.106	76	0.14	0.0958	68	(52-111)	10.30	(< 20)
Acenaphthene	0.1	0.0841	84	0.1	0.0850	85	(47-122)	1.10	(< 20)
Acenaphthylene	0.1	0.0838	84	0.1	0.0835	84	(41-130)	0.38	(< 20)
Aniline	0.1	0.0444J	44	0.1	0.0360J	36	(10-87)	20.90	* (< 20)
Anthracene	0.1	0.0949	95	0.1	0.0917	92	(57-123)	3.50	(< 20)

Print Date: 06/01/2016 2:31:48PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161876 [XXX35213]
Blank Spike Lab ID: 1321252
Date Analyzed: 05/02/2016 18:07

Spike Duplicate ID: LCSD for HBN 1161876 [XXX35213]
Spike Duplicate Lab ID: 1321253
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161876001, 1161876002, 1161876003, 1161876004

Results by **SW8270D**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Azobenzene	0.1	0.0958	96	0.1	0.0946	95	(61-116)	1.20	(< 20)
Benzo(a)Anthracene	0.1	0.0995	100	0.1	0.0940	94	(58-125)	5.70	(< 20)
Benzo[a]pyrene	0.1	0.0909	91	0.1	0.0860	86	(54-128)	5.50	(< 20)
Benzo[b]Fluoranthene	0.1	0.0956	96	0.1	0.0914	91	(53-131)	4.40	(< 20)
Benzo[g,h,i]perylene	0.1	0.105	105	0.1	0.102	102	(50-134)	3.10	(< 20)
Benzo[k]fluoranthene	0.1	0.0892	89	0.1	0.0884	88	(57-129)	0.93	(< 20)
Benzoic acid	0.14	0.0826	59	0.14	0.0681	49	(21-107)	19.30	(< 20)
Benzyl alcohol	0.1	0.0634	63	0.1	0.0606	61	(31-112)	4.60	(< 20)
Bis(2chloro1methylethyl)Ether	0.1	0.0663	66	0.1	0.0662	66	(37-130)	0.21	(< 20)
Bis(2-Chloroethoxy)methane	0.1	0.0757	76	0.1	0.0770	77	(48-120)	1.70	(< 20)
Bis(2-Chloroethyl)ether	0.1	0.0591	59	0.1	0.0562	56	(43-118)	4.90	(< 20)
bis(2-Ethylhexyl)phthalate	0.1	0.102	102	0.1	0.0993	99	(55-135)	2.80	(< 20)
Butylbenzylphthalate	0.1	0.107	107	0.1	0.103	103	(53-134)	4.10	(< 20)
Carbazole	0.1	0.0985	99	0.1	0.0962	96	(60-122)	2.30	(< 20)
Chrysene	0.1	0.103	103	0.1	0.100	100	(59-123)	2.90	(< 20)
Dibenzo[a,h]anthracene	0.1	0.104	104	0.1	0.0996	100	(51-134)	4.40	(< 20)
Dibenzofuran	0.1	0.0843	84	0.1	0.0847	85	(53-118)	0.52	(< 20)
Diethylphthalate	0.1	0.0911	91	0.1	0.0884	88	(56-125)	3.00	(< 20)
Dimethylphthalate	0.1	0.0909	91	0.1	0.0877	88	(45-127)	3.60	(< 20)
Di-n-butylphthalate	0.1	0.0990	99	0.1	0.0947	95	(59-127)	4.40	(< 20)
di-n-Octylphthalate	0.1	0.0969	97	0.1	0.0920	92	(51-140)	5.20	(< 20)
Fluoranthene	0.1	0.0891	89	0.1	0.0853	85	(57-128)	4.40	(< 20)
Fluorene	0.1	0.0874	87	0.1	0.0872	87	(52-124)	0.13	(< 20)
Hexachlorobenzene	0.1	0.0958	96	0.1	0.0926	93	(53-125)	3.40	(< 20)
Hexachlorobutadiene	0.1	0.0764	76	0.1	0.0731	73	(22-124)	4.40	(< 20)
Hexachlorocyclopentadiene	0.1	0.0478	48	0.1	0.0463	46	(10-93)	3.10	(< 20)
Hexachloroethane	0.1	0.0605	61	0.1	0.0573	57	(21-115)	5.40	(< 20)
Indeno[1,2,3-c,d] pyrene	0.1	0.0981	98	0.1	0.0955	96	(52-134)	2.60	(< 20)
Isophorone	0.1	0.0709	71	0.1	0.0717	72	(42-124)	1.10	(< 20)
Naphthalene	0.1	0.0714	71	0.1	0.0695	70	(40-121)	2.80	(< 20)
Nitrobenzene	0.1	0.0722	72	0.1	0.0709	71	(45-121)	1.80	(< 20)
N-Nitrosodimethylamine	0.1	0.0554	55	0.1	0.0483	48	(41-117)	13.80	(< 20)
N-Nitroso-di-n-propylamine	0.1	0.0719	72	0.1	0.0745	75	(49-119)	3.70	(< 20)
N-Nitrosodiphenylamine	0.1	0.0806	81	0.1	0.0794	79	(51-123)	1.60	(< 20)

Print Date: 06/01/2016 2:31:48PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161876 [XXX35213]
Blank Spike Lab ID: 1321252
Date Analyzed: 05/02/2016 18:07

Spike Duplicate ID: LCSD for HBN 1161876 [XXX35213]
Spike Duplicate Lab ID: 1321253
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161876001, 1161876002, 1161876003, 1161876004

Results by **SW8270D**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Pentachlorophenol	0.14	0.145	103	0.14	0.137	98	(35-138)	5.40	(< 20)
Phenanthrene	0.1	0.0960	96	0.1	0.0935	94	(59-120)	2.70	(< 20)
Phenol	0.1	0.0542	54	0.1	0.0485	49	(39-84)	11.10	(< 20)
Pyrene	0.1	0.114	114	0.1	0.110	110	(57-126)	4.30	(< 20)
Surrogates									
2,4,6-Tribromophenol (surr)	0.2	95.2	95	0.2	96.5	97	(43-140)	1.30	
2-Fluorobiphenyl (surr)	0.1	75.7	76	0.1	78.9	79	(44-119)	4.20	
2-Fluorophenol (surr)	0.2	54.1	54	0.2	54.2	54	(19-119)	0.07	
Nitrobenzene-d5 (surr)	0.1	72	72	0.1	70.3	70	(44-120)	2.50	
Phenol-d6 (surr)	0.2	62.6	63	0.2	61.1	61	(10-115)	2.50	
Terphenyl-d14 (surr)	0.1	110	110	0.1	110	110	(50-134)	0.36	

Batch Information

Analytical Batch: **XMS9274**
Analytical Method: **SW8270D**
Instrument: **HP 6890/5973 SSA**
Analyst: **NLL**

Prep Batch: **XXX35213**
Prep Method: **SW3520C**
Prep Date/Time: **04/26/2016 09:00**
Spike Init Wt./Vol.: 0.1 mg/L Extract Vol: 1 mL
Dupe Init Wt./Vol.: 0.1 mg/L Extract Vol: 1 mL

Print Date: 06/01/2016 2:31:48PM

Nelson, Justin (Anchorage)

From: Jason Gray [jgray@slrconsulting.com]
Sent: Thursday, April 21, 2016 3:14 PM
To: Nelson, Justin (Anchorage)
Subject: RE: Kenai Wells, added task quote needed

Justin-

We need to cancel the analysis of sample fraction 1161876-05 (MW50Z-0416) for TDS, Alkainity, Turbidity and pH. I presume this is a 500ml container, right?

I also noticed that there is not a separate trip blank included & requested for GRO analysis on today or yesterdays COC. Would it be possible to utilize one of the three 8260B VOA vial trip blanks and analyze it for GRO? Is there any difference in how the VOC and GRO trip blanks are prepared that prevent a vial being used for either analysis?

Thanks-

From: Nelson, Justin (Anchorage) [mailto:Justin.Nelson@sgs.com]
Sent: April 21, 2016 2:07 PM
To: Jason Gray
Subject: RE: Kenai Wells, added task quote needed

They are a little heavy on the ice, but nothing was frozen.

Justin A. Nelson
Environment, Health, and Safety
Project Manager

Phone: +00 1 907 550-3205

From: Jason Gray [mailto:jgray@slrconsulting.com]
Sent: Thursday, April 21, 2016 11:29 AM
To: Nelson, Justin (Anchorage)
Subject: RE: Kenai Wells, added task quote needed

Airbill number for todays shipment of 3 coolers is 8087023251 and they listed SGS as the consignee so pickup should be easier.

The field guys didn't get my new-improved COC form printed out in time for todays shipment so same general corrections to the COC as with yesterdays delivery,

- Please add request for calculation of Hardness for the dissolved metals sample fraction
- Just need a level II report, not Level IV as might be indicated on the COC.

We are trying to figure out if we will need to ship samples on Saturday AM, there is a decent chance that they will be able to get the last samples collected on Friday, early enough to make the last Friday flight, I will let you know as soon as we figure out.

Thanks-

From: Nelson, Justin (Anchorage) [mailto:Justin.Nelson@sgs.com]
Sent: April 21, 2016 11:10 AM
To: Jason Gray
Subject: RE: Kenai Wells, added task quote needed

Do you have an airbill number? Yesterday it was addressed to SLR, so there was some difficulty in getting it from Ravn.

Justin A. Nelson
Environment, Health, and Safety
Project Manager

Phone: +00 1 907 550-3205

From: Jason Gray [mailto:jgray@slrconsulting.com]
Sent: Thursday, April 21, 2016 11:07 AM
To: Nelson, Justin (Anchorage)
Subject: RE: Kenai Wells, added task quote needed

Justin-
Incase you have not already received an arrival notification; there should be three coolers of Kenai Wells project samples arriving this AM via RAVN.

Please send me a quick note once the coolers arrive at the lab, ahead of the engage log-in notification.

Thanks-

From: Nelson, Justin (Anchorage) [mailto:Justin.Nelson@sgs.com]
Sent: April 20, 2016 1:51 PM
To: Jason Gray
Subject: RE: Kenai Wells, added task quote needed

Coolers are here, Jason. Temperatures are good, there was one issue with the sample containers:

- The 500-mL HDPE Unpreserved for sample “MW87B-0416” was received empty. The sample was open, and has clearly spilled in the cooler. The bag containing this particular container was on top of another group of bottles, on its side; I would recommend against shipping any bottles on their side, the caps are usually fine, but if they are cross threaded even a little bit, any bump can unseat them.
- I can still perform all analyses, I will just reduce the amount used for TSS to 500-mL and take the rest of the analyses (TDS, Alkalinity, Turbidity, pH) from the TSS containter. This will raise the TSS LOQ from 0.5 mg/L to 1.0 mg/L. If this is unacceptable, you will need to resample TSS only.

Let me know if there are any questions, the COC should be coming through on Engage once login is completed.

Justin A. Nelson
Environment, Health, and Safety
Project Manager

Phone: +00 1 907 550-3205

From: Jason Gray [mailto:jgray@slrconsulting.com]
Sent: Wednesday, April 20, 2016 1:07 PM
To: Nelson, Justin (Anchorage)
Subject: RE: Kenai Wells, added task quote needed

I think our preference would be to have it reported via 624 & 625 in order to comply with the methods specified by DEC for TAH/TAqH.
Works for me if you can add this to the existing Kenai wells quote.

Do you have todays coolers at the lab yet? It would be helpful if you can send me the COC prior to your full login review.

Thanks-

From: Nelson, Justin (Anchorage) [mailto:Justin.Nelson@sgs.com]
Sent: April 20, 2016 1:00 PM
To: Jason Gray
Subject: RE: Kenai Wells, added task quote needed

Do you have a method preference? Pricing will be the same for TAH/BTEX and TAqH/PAH, so as far as the method goes, the price is the same. Do you need a separate quote from the existing Kenai Wells Quote?

Justin A. Nelson
Environment, Health, and Safety
Project Manager

Phone: +00 1 907 550-3205

From: Jason Gray [mailto:jgray@slrconsulting.com]
Sent: Wednesday, April 20, 2016 12:12 PM
To: Nelson, Justin (Anchorage)
Subject: Kenai Wells, added task quote needed

Justin-
A new task has been added to the Kenai Wells project, I need to get a pricing quote for performing analysis of 10 water samples via either methods 624 & 625 or 8260B & 8270D (only one method pair will be used).

Parameter	Method
TAH	624
TAqH	625
BTEX	8260B
PAH	8270D SIM

Thanks-

Jason Gray
Associate Scientist
SLR International Corporation

Direct: 907-264-6965
Office: 907-222-1112
Fax: 907-222-1113
Email: jgray@slrconsulting.com
2700 Gambell Street, Suite 200, Anchorage, AK, 99503, United States

www.slrconsulting.com

SLR
global environmental solutions

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SGS

1161876

CHAIN OF CUSTODY RECORD

SGS Environmental Services Inc.

SM 21 2340B Hardness

SM21

CLIENT:	SLR Consulting
CONTACT:	Jason Gray, SLR PHONE NO: (office) 264-6965
PROJECT: Name	Kenai Wells PROJECT No. 105.00148.16001
REPORTS TO:	Jason Gray, SLR email jgray@slrconsulting.com
INVOICE TO:	Wendy Hansen, SLR QUOTE #: 332060 2700 Gambell Street Anchorage, Alaska 99503

SGS Reference #:

page 1 of 1

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	# CONTAINERS	Preserv Used	SAMPLE TYPE C = COMP G = GRAB	E1631E - Low-level Hg (dissolved) HCl	E200.8 - Dissolved Metals HNO3	E1631E - Low-level Hg (total) HCl	E200.8 - Total Metals HNO3	SW 8260B - VOC HCl	AK101 - GRO HCl	SW 8270D - SVOC HCl	AK102/AK103 - DRO/RRO HCl	2540D - TSS None	2540C - TDS, 2320B - Alkalinity, 2130B - Turbidity, 4500H+B - pH None	E300.0 - Cl, FI,SO4 4500NO3-F - Nitrate, Nitrite None						
(1) A-D	MW 82A -0416	4-20-16	1105	GW	15		G		X		X	X	X	X	X	X	X	X	(7) A					
(2) A-D	MW 82B -0416		1305		15				X		X	X	X	X	X	X	X	X	(8) A					
(3) A-D	MW 50A -0416		1625		15				X		X	X	X	X	X	X	X	X	(9) A					
(4) A-D	MW 50B -0416		1840		15				X		X	X	X	X	X	X	X	X	(10) A					
(5) A	MW 50Z -0416		1840		1											X								
(6) A-C																								
	Trip Blank TB2	4-20-16	1105	—	3							X												

Collected/Relinquished By: (1) Kyle Johnson	Date 4-21-16	Time 0810	Received By:
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date 4/24/16	Time 13:07	Received For Laboratory By:

Shipping Carrier:

Shipping Ticket No:

Samples Received Cold? YES NO

Temperature °C: ____.____

Special Deliverable Req: **Level IV**

EDD: PDF, Access

Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT

Requested Turnaround Time and-or Special Instructions:

Total and Dissolved Metals:
As, Ba, Be, Ca, Cd, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Na, Ni, Sb, Se, Tl, V, Zn

1.) 0.4 #07
2.) 0.0 #241
3.) -0.2 #238

200 W. Potter Drive **Anchorage, AK 99518** Tel: (907) 562-2343 Fax: (907) 561-5301
3180 Peger Road **Fairbanks, AK 99701** Tel: (907) 474-8656 Fax: (907) 474-9685
5500 Business Drive **Wilmington, NC 28405** Tel: (910) 350-1903 Fax: (910) 350-1557

AIRPORT OF DEPARTURE ENA 04/21/16 08:34 090363 808 7023251 Frgt

SHIPPER'S NAME, ADDRESS & PHONE
SLR BEN SIWICE
KENAI AK 99611 9072238578

SHIPPER'S ACCOUNT NUMBER
H7752

NOT AIR WAYBILL (AIR CONSIGNMENT NOTE)

Ravn ALASKA
4700 Old International Airport Road
Anchorage, Alaska 99502

It is agreed that the goods described herein are accepted in apparent good order and condition (except as noted) for carriage SUBJECT TO THE CONDITIONS OF CONTRACT AS LISTED IN THE COMPANIES TARIFFS. THE SHIPPER'S ATTENTION IS DRAWN TO THE NOTICE CONCERNING CARRIERS' LIMITATION OF LIABILITY. Shipper may increase such limitation of liability by declaring a higher value for carriage and paying a supplemental charge if required.

Received in Good Condition

Place Date

TO EXPEDITE MOVEMENT, SHIPMENT MAY BE DIVERTED TO MOTOR OR OTHER CARRIER AS PER TARIFF RULE UNLESS SHIPPER GIVES OTHER INSTRUCTION HEREON

CONSIGNEE'S NAME, ADDRESS & PHONE
SGS LABS
200 WEST POTTER RD
ANCHORAGE AK 99518 9075622343

CONSIGNEE'S ACCOUNT NUMBER

ISSUING CARRIER'S AGENT NAME, CITY & PHONE

ALSO NOTIFY NAME & ADDRESS

AGENT'S IATA CODE

ACCOUNT NO.

ACCOUNTING INFORMATION 7093623
Acc#: H7752 SLR INTERNATIONAL CORP.

AIRPORT OF DEPARTURE
Kenai

Declared Value
$ 0.00

Insured Amount
$ 0.00

BY FIRST

AIRPORT OF DESTINATION
Anchorage

COMMENTS
project no#105.00148.16001 task 10

No. Of Pieces Rcp	Gross Weight	kg lb	Rate Class	Commodity Item No.	Chargeable Weight	Rate/Charge	Total	Nature and Quantity of Goods
3	118	l..	M		118	$0.32	$37.76	3-coolers water samples
3	118						$37.76	

1161876

PREPAID	WEIGHT CHARGE	COLLECT
$37.76		

VALUATION CHARGE	
$0.00	

FEDERAL EXCISE TAX	
$2.74	

TOTAL OTHER CHARGES DUE AGENT	
$0.00	

TOTAL OTHER CHARGES DUE CARRIER	
$6.04	

TOTAL PREPAID	TOTAL COLLECT
$46.54	

OTHER CHARGES AND DESCRIPTION

AMOUNT	DESCRIPTION
$6.04	FQ

HAZMAT
No

STATION NUMBERS
ANCHORAGE - (907) 243-2761
ANIAK - (907) 675-4572
BARROW - (907) 852-5300
BETHEL -(907) 543-3825
DEADHORSE - (907) 659-9222
FAIRBANKS - (907) 450-7250
GALENA -(907) 656-1875
KOTZEBUE - (907) 442-3020
NOME - (907) 443-7595
ST. MARYS - (907) 438-2247
UNALAKLEET - (907) 624-3595

Printed at 08:44:44 on 4/21/2016 at ENA-FRTMGR 10.106.2.15

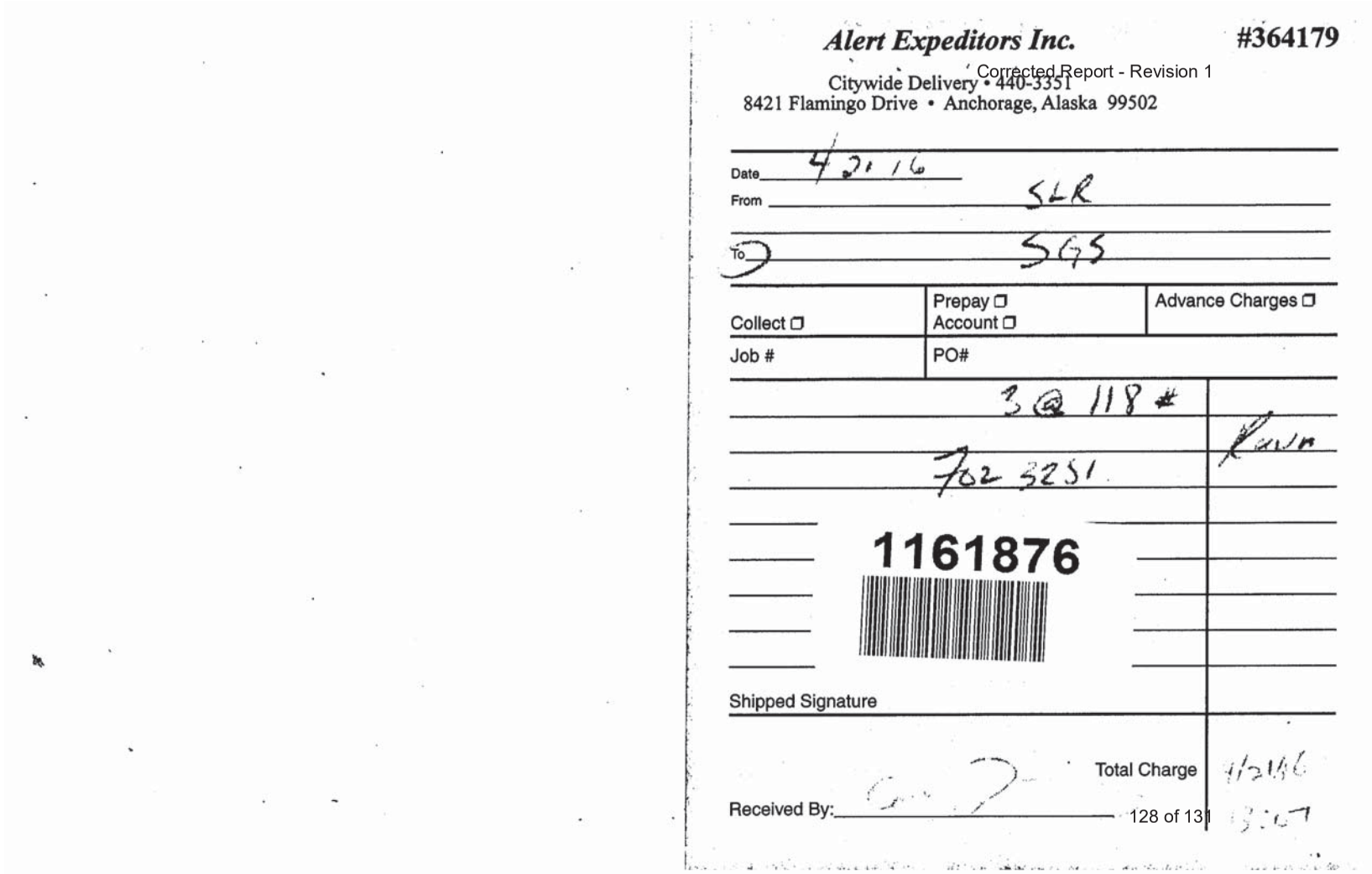
Shipper certifies that the particulars on the face hereof are correct, agrees to the CONDITIONS AS LISTED IN THE COMPANIES TARIFFS, accepts that carrier's liability is limited as stated in the companies tariffs and accepts such value unless a higher value for carriage is declared on the face hereof subject to an additional charge and that insofar as any part of the consignment contains restricted articles, such part is described by name and is in proper condition for carriage by air according to applicable national governmental regulations, and for international shipments, the current International Air Transport Association's Restricted Articles Regulations.

Paid By Shipper

Printed Name and Title

Signature

Consignee Copy



Alert Expeditors Inc. #364179

Corrected Report - Revision 1

Citywide Delivery • 440-3351
8421 Flamingo Drive • Anchorage, Alaska 99502

Date 4/21/16

From SLR

To SGS

Collect ☐	Prepay ☐ Account ☐	Advance Charges ☐
Job #	PO#	

3 @ 118 #

Rush

702 3251

1161876

Shipped Signature

Total Charge 4/21/16

Received By: 128 of 131

SGS

1161876

1 1 6 1 8 7 6

SAMPLE RECEIPT FORM

Review Criteria:	Yes	N/A	No	Comments/Action Taken:
Were **custody seals** intact? Note # & location, if applicable.	☐	☑	☐	***Exemption permitted if sampler hand carries/delivers.***
COC accompanied samples?	☑	☐	☐	absent
Temperature blank compliant* (i.e., 0-6°C after CF)?	☐	☐	☑	***Exemption permitted if chilled & collected <8 hrs ago.***
If >6°C, were samples collected <8 hours ago?	☐	☑	☐	
If <0°C, were all sample containers ice free?	☑	☐	☐	
Cooler ID: 1 @ 0.4 w/ Therm.ID: D7				
Cooler ID: 2 @ 0.0 w/ Therm.ID: 241				
Cooler ID: 3 @ -0.2 w/ Therm.ID: 238				
Cooler ID: _____ @ _____ w/ Therm.ID: _____				
Cooler ID: _____ @ _____ w/ Therm.ID: _____				
If samples are received without a temperature blank, the "cooler temperature" will be documented in lieu of the temperature blank & "**COOLER TEMP**" will be noted to the right. In cases where neither a temp blank nor cooler temp can be obtained, note "ambient" or "chilled."				***Note: Identify containers received at non-compliant temperature. Use form FS-0029 if more space is needed.***
Delivery method (specify all that apply): ☐Client (hand carried) ☐USPS ☐Lynden ☐AK Air ☑Alert Courier ☐UPS ☐FedEx ☑RAVN ☐C&D Delivery ☐Carlile ☐Pen Air ☐Warp Speed ☐Other: _____				
→ *For WO# with airbills, was the WO# & airbill info recorded in the Front Counter eLog?*	☑	☐	☐	
	Yes	N/A	No	
Were samples received within hold time?	☑	☐	☐	***Note: Refer to form F-083 "Sample Guide" for hold times.***
Do samples **match COC*** (i.e., sample IDs, dates/times collected)?	☑	☐	☐	***Note: If times differ <1hr, record details and login per COC.***
Were analyses requested unambiguous?	☑	☐	☐	
Were samples in **good condition** (no leaks/cracks/breakage)?	☑	☐	☐	
Packing material used (specify all that apply): ☑Bubble Wrap ☐Separate plastic bags ☐Vermiculite ☐Other:				
Were **proper containers** (type/mass/volume/preservative*) used?	☑	☐	☐	☐ ***Exemption permitted for metals (e.g., 200.8/6020A).***
Were **Trip Blanks** (i.e., VOAs, LL-Hg) in cooler with samples?	☑	☐	☐	
Were all VOA vials **free of headspace** (i.e., bubbles ≤6 mm)?	☑	☐	☐	
Were all soil VOAs **field extracted** with MeOH+BFB?	☐	☑	☐	
For preserved waters (other than VOA vials, LL-Mercury or microbiological analyses), was **pH verified and compliant**?	☑	☐	☐	
If pH was adjusted, were bottles flagged (i.e., stickers)?	☐	☑	☐	
For **special handling** (e.g., "MI" soils, foreign soils, lab filter for dissolved…, lab extract for volatiles, Ref Lab, limited volume), were bottles/paperwork flagged (e.g., sticker)?	☐	☑	☐	
For **RUSH/SHORT Hold Time**, were COC/Bottles flagged accordingly? Was Rush/Short HT email sent, if applicable?	☑	☐	☐	
For **SITE-SPECIFIC QC, e.g. BMS/BMSD/BDUP**, were containers / paperwork flagged accordingly?	☐	☑	☐	
For any question answered "No," has the PM been notified and the problem resolved (or paperwork put in their bin)?	☐	☑	☐	SRF Completed by: ANY 4/21/16 PM notified:
Was **PEER REVIEW** of ***sample numbering/labeling completed?***	☐	☑	☐	Peer Reviewed by:
Additional notes (if applicable):				

Note to Client: *Any "no" answer above indicates non-compliance with standard procedures and may impact data quality.*

Sample Containers and Preservatives

Container Id	Preservative	Container Condition	Container Id	Preservative	Container Condition
1161876001-A	HNO3 to pH < 2	OK	1161876004-A	HNO3 to pH < 2	OK
1161876001-B	HCL to pH < 2	OK	1161876004-B	HCL to pH < 2	OK
1161876001-C	HCL to pH < 2	OK	1161876004-C	HCL to pH < 2	OK
1161876001-D	HCL to pH < 2	OK	1161876004-D	HCL to pH < 2	OK
1161876001-E	HCL to pH < 2	OK	1161876004-E	HCL to pH < 2	OK
1161876001-F	HCL to pH < 2	OK	1161876004-F	HCL to pH < 2	OK
1161876001-G	HCL to pH < 2	OK	1161876004-G	HCL to pH < 2	OK
1161876001-H	No Preservative Required	OK	1161876004-H	No Preservative Required	OK
1161876001-I	No Preservative Required	OK	1161876004-I	No Preservative Required	OK
1161876001-J	HCL to pH < 2	OK	1161876004-J	HCL to pH < 2	OK
1161876001-K	HCL to pH < 2	OK	1161876004-K	HCL to pH < 2	OK
1161876001-L	No Preservative Required	OK	1161876004-L	No Preservative Required	OK
1161876001-M	No Preservative Required	OK	1161876004-M	No Preservative Required	OK
1161876001-N	No Preservative Required	OK	1161876004-N	No Preservative Required	OK
1161876002-A	HNO3 to pH < 2	OK	1161876005-A	No Preservative Required	OK
1161876002-B	HCL to pH < 2	OK	1161876006-A	HCL to pH < 2	OK
1161876002-C	HCL to pH < 2	OK	1161876006-B	HCL to pH < 2	OK
1161876002-D	HCL to pH < 2	OK	1161876006-C	HCL to pH < 2	OK
1161876002-E	HCL to pH < 2	OK	1161876007-A	HNO3 to pH < 2	OK
1161876002-F	HCL to pH < 2	OK	1161876008-A	HNO3 to pH < 2	OK
1161876002-G	HCL to pH < 2	OK	1161876009-A	HNO3 to pH < 2	OK
1161876002-H	No Preservative Required	OK	1161876010-A	HNO3 to pH < 2	OK
1161876002-I	No Preservative Required	OK			
1161876002-J	HCL to pH < 2	OK			
1161876002-K	HCL to pH < 2	OK			
1161876002-L	No Preservative Required	OK			
1161876002-M	No Preservative Required	OK			
1161876002-N	No Preservative Required	OK			
1161876003-A	HNO3 to pH < 2	OK			
1161876003-B	HCL to pH < 2	OK			
1161876003-C	HCL to pH < 2	OK			
1161876003-D	HCL to pH < 2	OK			
1161876003-E	HCL to pH < 2	OK			
1161876003-F	HCL to pH < 2	OK			
1161876003-G	HCL to pH < 2	OK			
1161876003-H	No Preservative Required	OK			
1161876003-I	No Preservative Required	OK			
1161876003-J	HCL to pH < 2	OK			
1161876003-K	HCL to pH < 2	OK			
1161876003-L	No Preservative Required	OK			
1161876003-M	No Preservative Required	OK			
1161876003-N	No Preservative Required	OK			

Container Id	Preservative	Container Condition	Container Id	Preservative	Container Condition

Container Condition Glossary

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

OK - The container was received at an acceptable pH for the analysis requested.
BU - The container was received with headspace greater than 6mm.
DM- The container was received damaged.
FR- The container was received frozen and not usable for Bacteria or BOD analyses.
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.

Laboratory Report of Analysis

To: SLR Alaska-Anchorage
2700 Gambell St Suite 200
Anchorage, AK 99503
(907)222-1112

Report Number: **1161901**

Client Project: **105.00148.16001 Kenai Wells**

Dear Jason Gray,

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.

SGS North America Inc.
Environmental Services – Alaska Division
Project Manager

Justin Nelson
2016.05.19
13:48:11 -08'00'

Justin Nelson Date
Project Manager
Justin.Nelson@sgs.com

Print Date: 05/19/2016 12:05:43PM

Case Narrative

SGS Client: **SLR Alaska-Anchorage**
SGS Project: **1161901**
Project Name/Site: **105.00148.16001 Kenai Wells**
Project Contact: **Jason Gray**

Refer to sample receipt form for information on sample condition.

MW39A-0416 (1161901001) PS

200.8LL - Barium was detected in the MB above the LOQ. The associated sample concentrations are 10 times greater than the concentration in the MB.

MW39B-0416 (1161901002) PS

200.8LL - Barium was detected in the MB above the LOQ. The associated sample concentrations are 10 times greater than the concentration in the MB.

MW91A-0416 (1161901003) PS

200.8LL - Barium was detected in the MB above the LOQ. The associated sample concentrations are 10 times greater than the concentration in the MB.

MW91Z-0416 (1161901004) PS

200.8LL - Barium was detected in the MB above the LOQ. The associated sample concentrations are 10 times greater than the concentration in the MB.

MW39A-0416 (1161901017) PS

200.8LL - Barium was detected in the MB above the LOQ. The associated sample concentrations are 10 times greater than the concentration in the MB.

MW39B-0416 (1161901018) PS

200.8LL - Barium was detected in the MB above the LOQ. The associated sample concentrations are 10 times greater than the concentration in the MB.

MW91A-0416 (1161901026) PS

200.8LL - Barium was detected in the MB above the LOQ. The associated sample concentrations are 10 times greater than the concentration in the MB.

MW91Z-0416 (1161901027) PS

200.8LL - Barium was detected in the MB above the LOQ. The associated sample concentrations are 10 times greater than the concentration in the MB.

LCS for HBN 1733533 [WXX/11492 (1323585) LCS

300.0 - Anions - LCS recovery for fluoride (112%) did not meet QC criteria. All associated sample concentrations are less than the LOQ.

LCSD for HBN 1732272 [STS/5019 (1321134) LCSD

2540D - Total Suspended Solids - LCSD is not needed for batch QC. Refer to sample duplicate RPD for precision.

LCSD for HBN 1732348 [XXX/3521 (1321253) LCSD

8270D - LCS/LCSD RPD for aniline (20.9%) does not meet QC criteria. The associated sample concentrations for this analyte are less than the LOQ.

MB for HBN 1734141 [MXX/29753] (1324624) MB

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Case Narrative

SGS Client: **SLR Alaska-Anchorage**
SGS Project: **1161901**
Project Name/Site: **105.00148.16001 Kenai Wells**
Project Contact: **Jason Gray**

200.8LL - Barium was detected in the MB above the LOQ. The associated sample concentrations are 10 times greater than the concentration in the MB.

1161932001MS (1323593) MS

300.0 - Recovery for fluoride (112%) did not meet QC criteria. Sample concentration are less than the LOQ.

1161923001(1324889MS) (1324647) MS

200.8LL - Recoveries for iron (-42%) and zinc (-18%) do not meet QC criteria. Post digestion spike was successful.

1162159001MS (1324698) MS

1631E - Recovery is outside of QC criteria due to possible matrix interference. Refer to LCS for accuracy requirements.

1162311001MS (1324703) MS

1631E - Recovery is outside of QC criteria due to possible matrix interference. Refer to LCS for accuracy requirements.

1161932001MSD (1323594) MSD

300.0 - Recovery for fluoride (111%) did not meet QC criteria. Sample concentration are less than the LOQ.

1161923001(1324889MSD) (1324648) MSD

200.8LL - Recoveries for iron (29%) and zinc (14%) do not meet QC criteria. Post digestion spike was successful.

1162159001MSD (1324699) MSD

1631E - Recovery is outside of QC criteria due to possible matrix interference. Refer to LCS for accuracy requirements.

1162311001MSD (1324704) MSD

1631E - Recovery is outside of QC criteria due to possible matrix interference. Refer to LCS for accuracy requirements.

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

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Report of Manual Integrations

Laboratory ID	Client Sample ID	Analytical Batch	Analyte	Reason
SW8270D				
1321252	LCS for HBN 1732348 [XXX/35213	XMS9274	1-Chloronaphthalene	BLC
1321253	LCSD for HBN 1732348 [XXX/3521	XMS9274	1-Chloronaphthalene	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: 05/19/2016 12:05:49PM

Laboratory Qualifiers

Enclosed are the analytical results associated with the above work order. 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, indenmification 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) & UST-005 (CS) for ADEC and 2944.01 for DOD ELAP/ISO17025 (RCRA methods: 1020B, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035A, 6020A, 7470A, 7471B, 8021B, 8082A, 8260B, 8270D, 8270D-SIM, 9040C, 9045D, 9056A, 9060A, AK101 and AK102/103). 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
D	The analyte concentration is the result of a dilution.
DF	Dilution Factor
DL	Detection Limit (i.e., maximum method detection limit)
E	The analyte result is above the calibrated range.
F	Indicates value that is greater than or equal to the DL
GT	Greater Than
IB	Instrument Blank
ICV	Initial Calibration Verification
J	The quantitation is an estimation.
JL	The analyte was positively identified, but the quantitation is a low estimation.
LCS(D)	Laboratory Control Spike (Duplicate)
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
M	A matrix effect was present.
MB	Method Blank
MS(D)	Matrix Spike (Duplicate)
ND	Indicates the analyte is not detected.
Q	QC parameter out of acceptance range.
R	Rejected
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.

Print Date: 05/19/2016 12:05:52PM

Sample Summary

Client Sample ID	Lab Sample ID	Collected	Received	Matrix
MW39A-0416	1161901001	04/21/2016	04/22/2016	Water (Surface, Eff., Ground)
MW39B-0416	1161901002	04/21/2016	04/22/2016	Water (Surface, Eff., Ground)
MW91A-0416	1161901003	04/21/2016	04/22/2016	Water (Surface, Eff., Ground)
MW91Z-0416	1161901004	04/21/2016	04/22/2016	Water (Surface, Eff., Ground)
MW87B-0416	1161901005	04/19/2016	04/22/2016	Water (Surface, Eff., Ground)
MW27-0416	1161901006	04/19/2016	04/22/2016	Water (Surface, Eff., Ground)
MW87Z-0416	1161901007	04/19/2016	04/22/2016	Water (Surface, Eff., Ground)
MW82A-0416	1161901008	04/20/2016	04/22/2016	Water (Surface, Eff., Ground)
MW82B-0416	1161901009	04/20/2016	04/22/2016	Water (Surface, Eff., Ground)
MW50A-0416	1161901010	04/20/2016	04/22/2016	Water (Surface, Eff., Ground)
MW50B-0416	1161901011	04/20/2016	04/22/2016	Water (Surface, Eff., Ground)
TB-3	1161901012	04/21/2016	04/22/2016	Water (Surface, Eff., Ground)
TB-4	1161901013	04/21/2016	04/22/2016	Water (Surface, Eff., Ground)
TBHG-1	1161901014	04/19/2016	04/22/2016	Water (Surface, Eff., Ground)
EBT-0416	1161901015	04/19/2016	04/22/2016	Water (Surface, Eff., Ground)
EBF-Lot#L1456	1161901016	04/19/2016	04/22/2016	Water (Surface, Eff., Ground)
MW39A-0416	1161901017	04/21/2016	04/22/2016	Water (Surface, Eff., Ground)
MW39B-0416	1161901018	04/21/2016	04/22/2016	Water (Surface, Eff., Ground)
MW87B-0416	1161901019	04/19/2016	04/22/2016	Water (Surface, Eff., Ground)
MW27-0416	1161901020	04/19/2016	04/22/2016	Water (Surface, Eff., Ground)
MW87Z-0416	1161901021	04/19/2016	04/22/2016	Water (Surface, Eff., Ground)
MW82A-0416	1161901022	04/20/2016	04/22/2016	Water (Surface, Eff., Ground)
MW82B-0416	1161901023	04/20/2016	04/22/2016	Water (Surface, Eff., Ground)
MW50A-0416	1161901024	04/20/2016	04/22/2016	Water (Surface, Eff., Ground)
MW50B-0416	1161901025	04/20/2016	04/22/2016	Water (Surface, Eff., Ground)
MW91A-0416	1161901026	04/21/2016	04/22/2016	Water (Surface, Eff., Ground)
MW91Z-0416	1161901027	04/21/2016	04/22/2016	Water (Surface, Eff., Ground)

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Sample Summary

Client Sample ID	Lab Sample ID	Collected	Received	Matrix
Method	Method Description			
SM21 2320B	Alkalinity as CaCO3 QC			
SM21 2340B	Dissolved Hardness as CaCO3 ICP-MS-LowLv			
EPA 1631 E	Dissolved Low Level Mercury EPA 1631			
AK102	DRO/RRO Low Volume Water			
AK103	DRO/RRO Low Volume Water			
SM21 4500NO3-F	Flow Injection Analysis			
AK101	Gasoline Range Organics (W)			
EPA 300.0	Ion Chromatographic Analysis (W)			
EPA 1631 E	Low Level Mercury EPA 1631			
200.8 Low Level	Metals in Water by 200.8 ICP-MS LL			
200.8 Low Level	Metals in Water by 200.8 ICP-MS LL DIS			
SM21 4500-H B	pH Analysis			
SW8270D	SW846-8270 SVOC by GC/MS (W) Liq/Liq ext			
SM21 2540C	Total Dissolved Solids SM18 2540C			
SM21 2540D	Total Suspended Solids SM20 2540D			
SM21 2130B	Turbidity Analysis			
SW8260B	Volatile Organic Compounds (W) FULL			

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Detectable Results Summary

Client Sample ID: **MW39A-0416**
Lab Sample ID: 1161901001

Metals by ICP/MS

Metals Department
Volatile Fuels
Waters Department

Parameter	Result	Units
Aluminum	1750	ug/L
Antimony	0.171	ug/L
Arsenic	28.3	ug/L
Barium	45.6	ug/L
Beryllium	0.110	ug/L
Bismuth	0.0429J	ug/L
Boron	134	ug/L
Cadmium	0.0317J	ug/L
Calcium	11700	ug/L
Chromium	23.7	ug/L
Cobalt	1.72	ug/L
Copper	8.68	ug/L
Iron	4020	ug/L
Lead	1.99	ug/L
Magnesium	5190	ug/L
Manganese	138	ug/L
Molybdenum	3.51	ug/L
Nickel	14.7	ug/L
Potassium	5770	ug/L
Silver	0.0164J	ug/L
Sodium	11800	ug/L
Thallium	0.0245	ug/L
Tin	0.269	ug/L
Vanadium	8.67	ug/L
Zinc	12.2	ug/L
Mercury	5.43	ng/L
Gasoline Range Organics	0.0539J	mg/L
Alkalinity	93.4	mg/L
Chloride	4.66	mg/L
Fluoride	0.222	mg/L
Nitrate-N	0.0786J	mg/L
Nitrite-N	0.0340J	mg/L
pH	8.30	pH units
Sulfate	2.22	mg/L
Total Dissolved Solids	173	mg/L
Total Suspended Solids	82.5	mg/L
Turbidity	60.0	NTU

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Detectable Results Summary

Client Sample ID: **MW39B-0416**
Lab Sample ID: 1161901002

	Parameter	Result	Units
Metals by ICP/MS	Aluminum	463	ug/L
	Antimony	0.0866	ug/L
	Arsenic	2.06	ug/L
	Barium	64.5	ug/L
	Beryllium	0.0379J	ug/L
	Boron	7.08	ug/L
	Cadmium	0.0600	ug/L
	Calcium	31100	ug/L
	Chromium	1.94	ug/L
	Cobalt	13.7	ug/L
	Copper	1.63	ug/L
	Iron	7910	ug/L
	Lead	0.289	ug/L
	Magnesium	11100	ug/L
	Manganese	941	ug/L
	Molybdenum	0.419	ug/L
	Nickel	22.1	ug/L
	Potassium	3270	ug/L
	Selenium	0.710J	ug/L
	Sodium	14700	ug/L
	Thallium	0.0113J	ug/L
	Vanadium	3.09	ug/L
	Zinc	15.6	ug/L
Metals Department	Mercury	1.12	ng/L
Volatile Fuels	Gasoline Range Organics	0.0388J	mg/L
Waters Department	Alkalinity	40.6	mg/L
	Chloride	113	mg/L
	Fluoride	0.0710J	mg/L
	Nitrite-N	0.0490J	mg/L
	pH	6.30	pH units
	Sulfate	15.8	mg/L
	Total Dissolved Solids	301	mg/L
	Total Suspended Solids	170	mg/L
	Turbidity	150	NTU

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Detectable Results Summary

Client Sample ID: **MW91A-0416**
Lab Sample ID: 1161901003

	Parameter	Result	Units
Metals by ICP/MS	Aluminum	1500	ug/L
	Antimony	0.0511	ug/L
	Arsenic	8.73	ug/L
	Barium	34.6	ug/L
	Beryllium	0.0340J	ug/L
	Boron	19.5	ug/L
	Cadmium	0.0150J	ug/L
	Calcium	30700	ug/L
	Chromium	6.76	ug/L
	Cobalt	0.728	ug/L
	Copper	2.33	ug/L
	Iron	3800	ug/L
	Lead	0.569	ug/L
	Magnesium	7260	ug/L
	Manganese	1030	ug/L
	Molybdenum	0.896	ug/L
	Nickel	4.97	ug/L
	Potassium	3400	ug/L
	Sodium	7110	ug/L
	Thallium	0.00838J	ug/L
	Tin	0.114J	ug/L
	Vanadium	3.61	ug/L
	Zinc	14.8	ug/L
Waters Department	Alkalinity	93.7	mg/L
	Chloride	10.4	mg/L
	Fluoride	0.0800J	mg/L
	Nitrate-N	0.0654J	mg/L
	pH	7.60	pH units
	Sulfate	8.12	mg/L
	Total Dissolved Solids	169	mg/L
	Total Suspended Solids	39.5	mg/L
	Turbidity	35.0	NTU

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Detectable Results Summary

Client Sample ID: **MW91Z-0416**
Lab Sample ID: 1161901004

	Parameter	Result	Units
Metals by ICP/MS	Aluminum	1280	ug/L
	Antimony	0.0536	ug/L
	Arsenic	8.57	ug/L
	Barium	36.6	ug/L
	Beryllium	0.0348J	ug/L
	Boron	20.1	ug/L
	Calcium	30500	ug/L
	Chromium	7.36	ug/L
	Cobalt	0.787	ug/L
	Copper	2.57	ug/L
	Iron	3760	ug/L
	Lead	0.589	ug/L
	Magnesium	7090	ug/L
	Manganese	1040	ug/L
	Molybdenum	1.15	ug/L
	Nickel	5.32	ug/L
	Potassium	3490	ug/L
	Sodium	7120	ug/L
	Thallium	0.00928J	ug/L
	Tin	0.129J	ug/L
	Vanadium	4.01	ug/L
	Zinc	14.6	ug/L
Waters Department	Alkalinity	92.7	mg/L
	Chloride	10.4	mg/L
	Fluoride	0.0800J	mg/L
	Nitrate-N	0.0648J	mg/L
	pH	7.70	pH units
	Sulfate	8.03	mg/L
	Total Dissolved Solids	169	mg/L
	Total Suspended Solids	43.0	mg/L
	Turbidity	32.0	NTU

Client Sample ID: **MW87B-0416**
Lab Sample ID: 1161901005

	Parameter	Result	Units
Metals Department	Mercury	0.949J	ng/L

Client Sample ID: **MW27-0416**
Lab Sample ID: 1161901006

	Parameter	Result	Units
Metals Department	Mercury	2.82	ng/L

Client Sample ID: **MW87Z-0416**
Lab Sample ID: 1161901007

	Parameter	Result	Units
Metals Department	Mercury	0.581J	ng/L

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Detectable Results Summary

Client Sample ID: **MW82A-0416**
Lab Sample ID: 1161901008
Metals Department

Parameter	Result	Units
Mercury	1.31	ng/L

Client Sample ID: **MW82B-0416**
Lab Sample ID: 1161901009
Metals Department

Parameter	Result	Units
Mercury	1.62	ng/L

Client Sample ID: **MW50A-0416**
Lab Sample ID: 1161901010
Metals Department

Parameter	Result	Units
Mercury	9.22	ng/L

Client Sample ID: **MW50B-0416**
Lab Sample ID: 1161901011
Metals Department

Parameter	Result	Units
Mercury	1.01	ng/L

Client Sample ID: **MW39A-0416**
Lab Sample ID: 1161901017
Dissolved Metals by ICP/MS

Parameter	Result	Units
Aluminum	4.90	ug/L
Antimony	0.0480J	ug/L
Arsenic	25.0	ug/L
Barium	9.51	ug/L
Boron	135	ug/L
Calcium	10500	ug/L
Chromium	1.11	ug/L
Cobalt	0.0832	ug/L
Copper	0.200J	ug/L
Hardness as CaCO3	42.9	mg/L
Iron	37.3	ug/L
Magnesium	4050	ug/L
Manganese	61.3	ug/L
Molybdenum	1.86	ug/L
Nickel	1.83	ug/L
Potassium	5100	ug/L
Silicon	14100	ug/L
Sodium	21200	ug/L
Vanadium	0.620J	ug/L

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Detectable Results Summary

Client Sample ID: **MW39B-0416**
Lab Sample ID: 1161901018
Dissolved Metals by ICP/MS

Parameter	Result	Units
Aluminum	24.4	ug/L
Antimony	0.0627	ug/L
Arsenic	1.13	ug/L
Barium	59.0	ug/L
Beryllium	0.0299J	ug/L
Boron	6.97	ug/L
Cadmium	0.0574	ug/L
Calcium	30000	ug/L
Chromium	0.557	ug/L
Cobalt	13.1	ug/L
Copper	0.843	ug/L
Hardness as CaCO3	118	mg/L
Iron	7430	ug/L
Magnesium	10500	ug/L
Manganese	916	ug/L
Molybdenum	0.335	ug/L
Nickel	20.8	ug/L
Potassium	3110	ug/L
Selenium	0.843J	ug/L
Silicon	14100	ug/L
Sodium	24500	ug/L
Thallium	0.00648J	ug/L
Vanadium	0.877J	ug/L
Zinc	15.3	ug/L

Client Sample ID: **MW87B-0416**
Lab Sample ID: 1161901019
Dissolved Metals

Parameter	Result	Units
Mercury	0.519J	ng/L

Client Sample ID: **MW27-0416**
Lab Sample ID: 1161901020
Dissolved Metals

Parameter	Result	Units
Mercury	0.510J	ng/L

Client Sample ID: **MW87Z-0416**
Lab Sample ID: 1161901021
Dissolved Metals

Parameter	Result	Units
Mercury	0.768J	ng/L

Client Sample ID: **MW82A-0416**
Lab Sample ID: 1161901022
Dissolved Metals

Parameter	Result	Units
Mercury	0.579J	ng/L

Client Sample ID: **MW50A-0416**
Lab Sample ID: 1161901024
Dissolved Metals

Parameter	Result	Units
Mercury	2.15	ng/L

Client Sample ID: **MW50B-0416**
Lab Sample ID: 1161901025
Dissolved Metals

Parameter	Result	Units
Mercury	0.708J	ng/L

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Detectable Results Summary

Client Sample ID: **MW91A-0416**
Lab Sample ID: 1161901026
Dissolved Metals by ICP/MS

Parameter	Result	Units
Aluminum	11.3	ug/L
Arsenic	7.70	ug/L
Barium	22.0	ug/L
Boron	18.7	ug/L
Calcium	29700	ug/L
Chromium	0.190J	ug/L
Cobalt	0.0948	ug/L
Copper	0.306J	ug/L
Hardness as CaCO3	101	mg/L
Iron	1990	ug/L
Magnesium	6530	ug/L
Manganese	965	ug/L
Molybdenum	0.543	ug/L
Nickel	1.71	ug/L
Potassium	3210	ug/L
Silicon	15700	ug/L
Sodium	6740	ug/L
Zinc	2.40J	ug/L

Client Sample ID: **MW91Z-0416**
Lab Sample ID: 1161901027
Dissolved Metals by ICP/MS

Parameter	Result	Units
Aluminum	13.7	ug/L
Arsenic	7.63	ug/L
Barium	21.8	ug/L
Boron	19.1	ug/L
Calcium	30000	ug/L
Cobalt	0.104	ug/L
Copper	0.250J	ug/L
Hardness as CaCO3	102	mg/L
Iron	2070	ug/L
Magnesium	6620	ug/L
Manganese	982	ug/L
Molybdenum	0.574	ug/L
Nickel	1.67	ug/L
Potassium	3170	ug/L
Silicon	16200	ug/L
Sodium	6690	ug/L
Zinc	1.76J	ug/L

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Results of **MW39A-0416**

Client Sample ID: **MW39A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901001
Lab Project ID: 1161901

Collection Date: 04/21/16 11:30
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Metals by ICP/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Aluminum	1750		40.0	12.4	ug/L	50		05/18/16 12:57
Antimony	0.171		0.0500	0.0150	ug/L	2.5		05/18/16 12:12
Arsenic	28.3		0.800	0.200	ug/L	2.5		05/18/16 12:12
Barium	45.6		0.250	0.0400	ug/L	2.5		05/18/16 12:12
Beryllium	0.110		0.0500	0.0250	ug/L	2.5		05/18/16 12:12
Bismuth	0.0429	J	0.0500	0.0150	ug/L	2.5		05/18/16 12:12
Boron	134		5.00	1.50	ug/L	2.5		05/18/16 12:12
Cadmium	0.0317	J	0.0500	0.0150	ug/L	2.5		05/18/16 12:12
Calcium	11700		50.0	15.0	ug/L	2.5		05/18/16 12:12
Chromium	23.7		0.500	0.150	ug/L	2.5		05/18/16 12:12
Cobalt	1.72		0.0200	0.0100	ug/L	2.5		05/18/16 12:12
Copper	8.68		0.500	0.200	ug/L	2.5		05/18/16 12:12
Iron	4020		20.0	6.20	ug/L	2.5		05/18/16 12:12
Lead	1.99		0.100	0.0310	ug/L	2.5		05/18/16 12:12
Magnesium	5190		20.0	6.20	ug/L	2.5		05/18/16 12:12
Manganese	138		0.100	0.0310	ug/L	2.5		05/18/16 12:12
Molybdenum	3.51		0.0500	0.0150	ug/L	2.5		05/18/16 12:12
Nickel	14.7		0.620	0.0620	ug/L	2.5		05/18/16 12:12
Potassium	5770		50.0	15.0	ug/L	2.5		05/18/16 12:12
Selenium	0.500	U	1.00	0.310	ug/L	2.5		05/18/16 12:12
Silver	0.0164	J	0.0200	0.00620	ug/L	2.5		05/18/16 12:12
Sodium	11800		2000	620	ug/L	50		05/18/16 12:57
Thallium	0.0245		0.0200	0.00620	ug/L	2.5		05/18/16 12:12
Tin	0.269		0.200	0.0620	ug/L	2.5		05/18/16 12:12
Vanadium	8.67		1.00	0.310	ug/L	2.5		05/18/16 12:12
Zinc	12.2		3.10	0.400	ug/L	2.5		05/18/16 12:12

Batch Information

Analytical Batch: MMS9355
Analytical Method: 200.8 Low Level
Analyst: EAB
Analytical Date/Time: 05/18/16 12:57
Container ID: 1161901001-A

Prep Batch: MXX29753
Prep Method: E200.2
Prep Date/Time: 05/17/16 08:37
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 10 mL

Print Date: 05/19/2016 12:06:02PM

J flagging is activated

Results of **MW39A-0416**

Client Sample ID: **MW39A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901001
Lab Project ID: 1161901

Collection Date: 04/21/16 11:30
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Metals Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Mercury	5.43		1.00	0.500	ng/L	1		04/27/16 17:54

Batch Information

Analytical Batch: MCV5700
Analytical Method: EPA 1631 E
Analyst: NEG
Analytical Date/Time: 04/27/16 17:54
Container ID: 1161901001-O

Prep Batch: MXX29689
Prep Method: METHOD
Prep Date/Time: 04/21/16 17:45
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

Print Date: 05/19/2016 12:06:02PM

J flagging is activated

Results of **MW39A-0416**

Client Sample ID: **MW39A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901001
Lab Project ID: 1161901

Collection Date: 04/21/16 11:30
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	0.288	U	0.577	0.173	mg/L	1		05/02/16 15:05
Surrogates								
5a Androstane (surr)	94.4		50-150		%	1		05/02/16 15:05

Batch Information

Analytical Batch: XFC12356
Analytical Method: AK102
Analyst: CJSW
Analytical Date/Time: 05/02/16 15:05
Container ID: 1161901001-B

Prep Batch: XXX35229
Prep Method: SW3520C
Prep Date/Time: 04/28/16 09:48
Prep Initial Wt./Vol.: 260 mL
Prep Extract Vol: 1 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Residual Range Organics	0.240	U	0.481	0.144	mg/L	1		05/02/16 15:05
Surrogates								
n-Triacontane-d62 (surr)	94		50-150		%	1		05/02/16 15:05

Batch Information

Analytical Batch: XFC12356
Analytical Method: AK103
Analyst: CJSW
Analytical Date/Time: 05/02/16 15:05
Container ID: 1161901001-B

Prep Batch: XXX35229
Prep Method: SW3520C
Prep Date/Time: 04/28/16 09:48
Prep Initial Wt./Vol.: 260 mL
Prep Extract Vol: 1 mL

Print Date: 05/19/2016 12:06:02PM

J flagging is activated

Results of **MW39A-0416**

Client Sample ID: **MW39A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901001
Lab Project ID: 1161901

Collection Date: 04/21/16 11:30
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,2,4-Trichlorobenzene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:14
1,2-Dichlorobenzene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:14
1,3-Dichlorobenzene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:14
1,4-Dichlorobenzene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:14
1-Chloronaphthalene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:14
1-Methylnaphthalene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:14
2,4,5-Trichlorophenol	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:14
2,4,6-Trichlorophenol	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:14
2,4-Dichlorophenol	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:14
2,4-Dimethylphenol	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:14
2,4-Dinitrophenol	0.0255	U	0.0510	0.0153	mg/L	1		05/02/16 19:14
2,4-Dinitrotoluene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:14
2,6-Dichlorophenol	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:14
2,6-Dinitrotoluene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:14
2-Chloronaphthalene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:14
2-Chlorophenol	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:14
2-Methyl-4,6-dinitrophenol	0.0255	U	0.0510	0.0153	mg/L	1		05/02/16 19:14
2-Methylnaphthalene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:14
2-Methylphenol (o-Cresol)	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:14
2-Nitroaniline	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:14
2-Nitrophenol	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:14
3&4-Methylphenol (p&m-Cresol)	0.0102	U	0.0204	0.00633	mg/L	1		05/02/16 19:14
3,3-Dichlorobenzidine	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:14
3-Nitroaniline	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:14
4-Bromophenyl-phenylether	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:14
4-Chloro-3-methylphenol	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:14
4-Chloroaniline	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:14
4-Chlorophenyl-phenylether	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:14
4-Nitroaniline	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:14
4-Nitrophenol	0.0255	U	0.0510	0.0153	mg/L	1		05/02/16 19:14
Acenaphthene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:14
Acenaphthylene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:14
Aniline	0.0255	U	0.0510	0.0153	mg/L	1		05/02/16 19:14
Anthracene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:14
Azobenzene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:14
Benzo(a)Anthracene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:14
Benzo[a]pyrene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:14

Print Date: 05/19/2016 12:06:02PM

J flagging is activated

Results of **MW39A-0416**

Client Sample ID: **MW39A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901001
Lab Project ID: 1161901

Collection Date: 04/21/16 11:30
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Benzo[b]Fluoranthene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:14
Benzo[g,h,i]perylene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:14
Benzo[k]fluoranthene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:14
Benzoic acid	0.0255	U	0.0510	0.0153	mg/L	1		05/02/16 19:14
Benzyl alcohol	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:14
Bis(2chloro1methylethyl)Ether	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:14
Bis(2-Chloroethoxy)methane	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:14
Bis(2-Chloroethyl)ether	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:14
bis(2-Ethylhexyl)phthalate	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:14
Butylbenzylphthalate	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:14
Carbazole	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:14
Chrysene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:14
Dibenzo[a,h]anthracene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:14
Dibenzofuran	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:14
Diethylphthalate	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:14
Dimethylphthalate	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:14
Di-n-butylphthalate	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:14
di-n-Octylphthalate	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:14
Fluoranthene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:14
Fluorene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:14
Hexachlorobenzene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:14
Hexachlorobutadiene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:14
Hexachlorocyclopentadiene	0.0153	U	0.0306	0.00959	mg/L	1		05/02/16 19:14
Hexachloroethane	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:14
Indeno[1,2,3-c,d] pyrene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:14
Isophorone	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:14
Naphthalene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:14
Nitrobenzene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:14
N-Nitrosodimethylamine	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:14
N-Nitroso-di-n-propylamine	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:14
N-Nitrosodiphenylamine	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:14
Pentachlorophenol	0.0255	U	0.0510	0.0153	mg/L	1		05/02/16 19:14
Phenanthrene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:14
Phenol	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:14
Pyrene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:14
Surrogates								
2,4,6-Tribromophenol (surr)	66.5		43-140		%	1		05/02/16 19:14

Print Date: 05/19/2016 12:06:02PM

J flagging is activated

Results of **MW39A-0416**

Client Sample ID: **MW39A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901001
Lab Project ID: 1161901

Collection Date: 04/21/16 11:30
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
2-Fluorobiphenyl (surr)	68.6		44-119		%	1		05/02/16 19:14
2-Fluorophenol (surr)	47.4		19-119		%	1		05/02/16 19:14
Nitrobenzene-d5 (surr)	61.6		44-120		%	1		05/02/16 19:14
Phenol-d6 (surr)	49.5		10-115		%	1		05/02/16 19:14
Terphenyl-d14 (surr)	90.6		50-134		%	1		05/02/16 19:14

Batch Information

Analytical Batch: XMS9274
Analytical Method: SW8270D
Analyst: NLL
Analytical Date/Time: 05/02/16 19:14
Container ID: 1161901001-D

Prep Batch: XXX35213
Prep Method: SW3520C
Prep Date/Time: 04/26/16 09:00
Prep Initial Wt./Vol.: 980 mL
Prep Extract Vol: 1 mL

Print Date: 05/19/2016 12:06:02PM

J flagging is activated

Results of **MW39A-0416**

Client Sample ID: **MW39A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901001
Lab Project ID: 1161901

Collection Date: 04/21/16 11:30
Received Date: 04/22/16 13:07
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	0.0539	J	0.100	0.0310	mg/L	1		04/23/16 17:09
Surrogates								
4-Bromofluorobenzene (surr)	83.2		50-150		%	1		04/23/16 17:09

Batch Information

Analytical Batch: VFC12971
Analytical Method: AK101
Analyst: S.P
Analytical Date/Time: 04/23/16 17:09
Container ID: 1161901001-I

Prep Batch: VXX28737
Prep Method: SW5030B
Prep Date/Time: 04/23/16 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/19/2016 12:06:02PM

J flagging is activated

Results of **MW39A-0416**

Client Sample ID: **MW39A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901001
Lab Project ID: 1161901

Collection Date: 04/21/16 11:30
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		05/02/16 13:49
1,1,1-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		05/02/16 13:49
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		05/02/16 13:49
1,1,2-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		05/02/16 13:49
1,1-Dichloroethane	0.500	U	1.00	0.310	ug/L	1		05/02/16 13:49
1,1-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		05/02/16 13:49
1,1-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		05/02/16 13:49
1,2,3-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		05/02/16 13:49
1,2,3-Trichloropropane	0.500	U	1.00	0.310	ug/L	1		05/02/16 13:49
1,2,4-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		05/02/16 13:49
1,2,4-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		05/02/16 13:49
1,2-Dibromo-3-chloropropane	5.00	U	10.0	3.10	ug/L	1		05/02/16 13:49
1,2-Dibromoethane	0.500	U	1.00	0.310	ug/L	1		05/02/16 13:49
1,2-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		05/02/16 13:49
1,2-Dichloroethane	0.250	U	0.500	0.150	ug/L	1		05/02/16 13:49
1,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		05/02/16 13:49
1,3,5-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		05/02/16 13:49
1,3-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		05/02/16 13:49
1,3-Dichloropropane	0.250	U	0.500	0.150	ug/L	1		05/02/16 13:49
1,4-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1		05/02/16 13:49
2,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		05/02/16 13:49
2-Butanone (MEK)	5.00	U	10.0	3.10	ug/L	1		05/02/16 13:49
2-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		05/02/16 13:49
2-Hexanone	5.00	U	10.0	3.10	ug/L	1		05/02/16 13:49
4-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		05/02/16 13:49
4-Isopropyltoluene	0.500	U	1.00	0.310	ug/L	1		05/02/16 13:49
4-Methyl-2-pentanone (MIBK)	5.00	U	10.0	3.10	ug/L	1		05/02/16 13:49
Benzene	0.200	U	0.400	0.120	ug/L	1		05/02/16 13:49
Bromobenzene	0.500	U	1.00	0.310	ug/L	1		05/02/16 13:49
Bromochloromethane	0.500	U	1.00	0.310	ug/L	1		05/02/16 13:49
Bromodichloromethane	0.250	U	0.500	0.150	ug/L	1		05/02/16 13:49
Bromoform	0.500	U	1.00	0.310	ug/L	1		05/02/16 13:49
Bromomethane	5.00	U	10.0	3.10	ug/L	1		05/02/16 13:49
Carbon disulfide	5.00	U	10.0	3.10	ug/L	1		05/02/16 13:49
Carbon tetrachloride	0.500	U	1.00	0.310	ug/L	1		05/02/16 13:49
Chlorobenzene	0.250	U	0.500	0.150	ug/L	1		05/02/16 13:49
Chloroethane	0.500	U	1.00	0.310	ug/L	1		05/02/16 13:49

Print Date: 05/19/2016 12:06:02PM

J flagging is activated

Results of **MW39A-0416**

Client Sample ID: **MW39A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901001
Lab Project ID: 1161901

Collection Date: 04/21/16 11:30
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroform	0.500	U	1.00	0.300	ug/L	1		05/02/16 13:49
Chloromethane	0.500	U	1.00	0.310	ug/L	1		05/02/16 13:49
cis-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		05/02/16 13:49
cis-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		05/02/16 13:49
Dibromochloromethane	0.250	U	0.500	0.150	ug/L	1		05/02/16 13:49
Dibromomethane	0.500	U	1.00	0.310	ug/L	1		05/02/16 13:49
Dichlorodifluoromethane	0.500	U	1.00	0.310	ug/L	1		05/02/16 13:49
Ethylbenzene	0.500	U	1.00	0.310	ug/L	1		05/02/16 13:49
Freon-113	5.00	U	10.0	3.10	ug/L	1		05/02/16 13:49
Hexachlorobutadiene	0.500	U	1.00	0.310	ug/L	1		05/02/16 13:49
Isopropylbenzene (Cumene)	0.500	U	1.00	0.310	ug/L	1		05/02/16 13:49
Methylene chloride	2.50	U	5.00	1.00	ug/L	1		05/02/16 13:49
Methyl-t-butyl ether	5.00	U	10.0	3.10	ug/L	1		05/02/16 13:49
Naphthalene	5.00	U	10.0	3.10	ug/L	1		05/02/16 13:49
n-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		05/02/16 13:49
n-Propylbenzene	0.500	U	1.00	0.310	ug/L	1		05/02/16 13:49
o-Xylene	0.500	U	1.00	0.310	ug/L	1		05/02/16 13:49
P & M -Xylene	1.00	U	2.00	0.620	ug/L	1		05/02/16 13:49
sec-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		05/02/16 13:49
Styrene	0.500	U	1.00	0.310	ug/L	1		05/02/16 13:49
tert-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		05/02/16 13:49
Tetrachloroethene	0.500	U	1.00	0.310	ug/L	1		05/02/16 13:49
Toluene	0.500	U	1.00	0.310	ug/L	1		05/02/16 13:49
trans-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		05/02/16 13:49
trans-1,3-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		05/02/16 13:49
Trichloroethene	0.500	U	1.00	0.310	ug/L	1		05/02/16 13:49
Trichlorofluoromethane	0.500	U	1.00	0.310	ug/L	1		05/02/16 13:49
Vinyl acetate	5.00	U	10.0	3.10	ug/L	1		05/02/16 13:49
Vinyl chloride	0.500	U	1.00	0.310	ug/L	1		05/02/16 13:49
Xylenes (total)	1.50	U	3.00	1.00	ug/L	1		05/02/16 13:49
Surrogates								
1,2-Dichloroethane-D4 (surr)	110		81-118		%	1		05/02/16 13:49
4-Bromofluorobenzene (surr)	95.5		85-114		%	1		05/02/16 13:49
Toluene-d8 (surr)	100		89-112		%	1		05/02/16 13:49

Print Date: 05/19/2016 12:06:02PM

J flagging is activated

Results of **MW39A-0416**

Client Sample ID: **MW39A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901001
Lab Project ID: 1161901

Collection Date: 04/21/16 11:30
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS15753
Analytical Method: SW8260B
Analyst: NRB
Analytical Date/Time: 05/02/16 13:49
Container ID: 1161901001-L

Prep Batch: VXX28756
Prep Method: SW5030B
Prep Date/Time: 05/02/16 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/19/2016 12:06:02PM

J flagging is activated

Results of **MW39A-0416**

Client Sample ID: **MW39A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901001
Lab Project ID: 1161901

Collection Date: 04/21/16 11:30
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloride	4.66		0.100	0.0310	mg/L	1		04/24/16 06:18
Fluoride	0.222		0.100	0.0310	mg/L	1		04/24/16 06:18
Sulfate	2.22		0.100	0.0310	mg/L	1		04/24/16 06:18

Batch Information

Analytical Batch: WIC5532
Analytical Method: EPA 300.0
Analyst: ACF
Analytical Date/Time: 04/24/16 06:18
Container ID: 1161901001-H

Prep Batch: WXX11480
Prep Method: METHOD
Prep Date/Time: 04/24/16 01:11
Prep Initial Wt./Vol.: 10 mL
Prep Extract Vol: 10 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Turbidity	60.0		0.200	0.100	NTU	1		04/22/16 16:30

Batch Information

Analytical Batch: WAT10634
Analytical Method: SM21 2130B
Analyst: MBS
Analytical Date/Time: 04/22/16 16:30
Container ID: 1161901001-G

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Alkalinity	93.4		10.0	3.10	mg/L	1		04/25/16 18:22

Batch Information

Analytical Batch: WTI4445
Analytical Method: SM21 2320B
Analyst: ACF
Analytical Date/Time: 04/25/16 18:22
Container ID: 1161901001-G

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Dissolved Solids	173		10.0	3.10	mg/L	1		04/26/16 09:58

Print Date: 05/19/2016 12:06:02PM

J flagging is activated

Results of **MW39A-0416**

Client Sample ID: **MW39A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901001
Lab Project ID: 1161901

Collection Date: 04/21/16 11:30
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Batch Information

Analytical Batch: STS5020
Analytical Method: SM21 2540C
Analyst: MBS
Analytical Date/Time: 04/26/16 09:58
Container ID: 1161901001-G

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Suspended Solids	82.5		5.00	1.55	mg/L	1		04/25/16 15:51

Batch Information

Analytical Batch: STS5019
Analytical Method: SM21 2540D
Analyst: MBS
Analytical Date/Time: 04/25/16 15:51
Container ID: 1161901001-F

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
pH	8.30		0.100	0.100	pH units	1		04/25/16 18:22

Batch Information

Analytical Batch: WTI4443
Analytical Method: SM21 4500-H B
Analyst: ACF
Analytical Date/Time: 04/25/16 18:22
Container ID: 1161901001-G

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Nitrate-N	0.0786	J	0.100	0.0300	mg/L	2		04/22/16 17:08
Nitrite-N	0.0340	J	0.100	0.0300	mg/L	2		04/22/16 17:08

Batch Information

Analytical Batch: WFI2470
Analytical Method: SM21 4500NO3-F
Analyst: NEG
Analytical Date/Time: 04/22/16 17:08
Container ID: 1161901001-H

Print Date: 05/19/2016 12:06:02PM

J flagging is activated

Results of **MW39B-0416**

Client Sample ID: **MW39B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901002
Lab Project ID: 1161901

Collection Date: 04/21/16 14:00
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Metals by ICP/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Aluminum	463		2.00	0.620	ug/L	2.5		05/18/16 12:15
Antimony	0.0866		0.0500	0.0150	ug/L	2.5		05/18/16 12:15
Arsenic	2.06		0.800	0.200	ug/L	2.5		05/18/16 12:15
Barium	64.5		0.250	0.0400	ug/L	2.5		05/18/16 12:15
Beryllium	0.0379	J	0.0500	0.0250	ug/L	2.5		05/18/16 12:15
Bismuth	0.0250	U	0.0500	0.0150	ug/L	2.5		05/18/16 12:15
Boron	7.08		5.00	1.50	ug/L	2.5		05/18/16 12:15
Cadmium	0.0600		0.0500	0.0150	ug/L	2.5		05/18/16 12:15
Calcium	31100		50.0	15.0	ug/L	2.5		05/18/16 12:15
Chromium	1.94		0.500	0.150	ug/L	2.5		05/18/16 12:15
Cobalt	13.7		0.0200	0.0100	ug/L	2.5		05/18/16 12:15
Copper	1.63		0.500	0.200	ug/L	2.5		05/18/16 12:15
Iron	7910		20.0	6.20	ug/L	2.5		05/18/16 12:15
Lead	0.289		0.100	0.0310	ug/L	2.5		05/18/16 12:15
Magnesium	11100		20.0	6.20	ug/L	2.5		05/18/16 12:15
Manganese	941		0.100	0.0310	ug/L	2.5		05/18/16 12:15
Molybdenum	0.419		0.0500	0.0150	ug/L	2.5		05/18/16 12:15
Nickel	22.1		0.620	0.0620	ug/L	2.5		05/18/16 12:15
Potassium	3270		50.0	15.0	ug/L	2.5		05/18/16 12:15
Selenium	0.710	J	1.00	0.310	ug/L	2.5		05/18/16 12:15
Silver	0.0100	U	0.0200	0.00620	ug/L	2.5		05/18/16 12:15
Sodium	14700		2000	620	ug/L	50		05/18/16 12:59
Thallium	0.0113	J	0.0200	0.00620	ug/L	2.5		05/18/16 12:15
Tin	0.100	U	0.200	0.0620	ug/L	2.5		05/18/16 12:15
Vanadium	3.09		1.00	0.310	ug/L	2.5		05/18/16 12:15
Zinc	15.6		3.10	0.400	ug/L	2.5		05/18/16 12:15

Batch Information

Analytical Batch: MMS9355
Analytical Method: 200.8 Low Level
Analyst: EAB
Analytical Date/Time: 05/18/16 12:15
Container ID: 1161901002-A

Prep Batch: MXX29753
Prep Method: E200.2
Prep Date/Time: 05/17/16 08:37
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 10 mL

Print Date: 05/19/2016 12:06:02PM

J flagging is activated

Results of **MW39B-0416**

Client Sample ID: **MW39B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901002
Lab Project ID: 1161901

Collection Date: 04/21/16 14:00
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Metals Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Mercury	1.12		1.00	0.500	ng/L	1		04/27/16 18:00

Batch Information

Analytical Batch: MCV5700
Analytical Method: EPA 1631 E
Analyst: NEG
Analytical Date/Time: 04/27/16 18:00
Container ID: 1161901002-O

Prep Batch: MXX29689
Prep Method: METHOD
Prep Date/Time: 04/21/16 17:45
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

Print Date: 05/19/2016 12:06:02PM

J flagging is activated

Results of **MW39B-0416**

Client Sample ID: **MW39B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901002
Lab Project ID: 1161901

Collection Date: 04/21/16 14:00
Received Date: 04/22/16 13:07
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	0.283	U	0.566	0.170	mg/L	1		05/02/16 15:26
Surrogates								
5a Androstane (surr)	92.8		50-150		%	1		05/02/16 15:26

Batch Information

Analytical Batch: XFC12356
Analytical Method: AK102
Analyst: CJSW
Analytical Date/Time: 05/02/16 15:26
Container ID: 1161901002-B

Prep Batch: XXX35229
Prep Method: SW3520C
Prep Date/Time: 04/28/16 09:48
Prep Initial Wt./Vol.: 265 mL
Prep Extract Vol: 1 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Residual Range Organics	0.236	U	0.472	0.142	mg/L	1		05/02/16 15:26
Surrogates								
n-Triacontane-d62 (surr)	92.3		50-150		%	1		05/02/16 15:26

Batch Information

Analytical Batch: XFC12356
Analytical Method: AK103
Analyst: CJSW
Analytical Date/Time: 05/02/16 15:26
Container ID: 1161901002-B

Prep Batch: XXX35229
Prep Method: SW3520C
Prep Date/Time: 04/28/16 09:48
Prep Initial Wt./Vol.: 265 mL
Prep Extract Vol: 1 mL

Print Date: 05/19/2016 12:06:02PM

J flagging is activated

Results of **MW39B-0416**

Client Sample ID: **MW39B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901002
Lab Project ID: 1161901

Collection Date: 04/21/16 14:00
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,2,4-Trichlorobenzene	0.00530	U	0.0106	0.00330	mg/L	1		05/02/16 19:31
1,2-Dichlorobenzene	0.00530	U	0.0106	0.00330	mg/L	1		05/02/16 19:31
1,3-Dichlorobenzene	0.00530	U	0.0106	0.00330	mg/L	1		05/02/16 19:31
1,4-Dichlorobenzene	0.00530	U	0.0106	0.00330	mg/L	1		05/02/16 19:31
1-Chloronaphthalene	0.00530	U	0.0106	0.00330	mg/L	1		05/02/16 19:31
1-Methylnaphthalene	0.00530	U	0.0106	0.00330	mg/L	1		05/02/16 19:31
2,4,5-Trichlorophenol	0.00530	U	0.0106	0.00330	mg/L	1		05/02/16 19:31
2,4,6-Trichlorophenol	0.00530	U	0.0106	0.00330	mg/L	1		05/02/16 19:31
2,4-Dichlorophenol	0.00530	U	0.0106	0.00330	mg/L	1		05/02/16 19:31
2,4-Dimethylphenol	0.00530	U	0.0106	0.00330	mg/L	1		05/02/16 19:31
2,4-Dinitrophenol	0.0266	U	0.0532	0.0160	mg/L	1		05/02/16 19:31
2,4-Dinitrotoluene	0.00530	U	0.0106	0.00330	mg/L	1		05/02/16 19:31
2,6-Dichlorophenol	0.00530	U	0.0106	0.00330	mg/L	1		05/02/16 19:31
2,6-Dinitrotoluene	0.00530	U	0.0106	0.00330	mg/L	1		05/02/16 19:31
2-Chloronaphthalene	0.00530	U	0.0106	0.00330	mg/L	1		05/02/16 19:31
2-Chlorophenol	0.00530	U	0.0106	0.00330	mg/L	1		05/02/16 19:31
2-Methyl-4,6-dinitrophenol	0.0266	U	0.0532	0.0160	mg/L	1		05/02/16 19:31
2-Methylnaphthalene	0.00530	U	0.0106	0.00330	mg/L	1		05/02/16 19:31
2-Methylphenol (o-Cresol)	0.00530	U	0.0106	0.00330	mg/L	1		05/02/16 19:31
2-Nitroaniline	0.00530	U	0.0106	0.00330	mg/L	1		05/02/16 19:31
2-Nitrophenol	0.00530	U	0.0106	0.00330	mg/L	1		05/02/16 19:31
3&4-Methylphenol (p&m-Cresol)	0.0107	U	0.0213	0.00660	mg/L	1		05/02/16 19:31
3,3-Dichlorobenzidine	0.00530	U	0.0106	0.00330	mg/L	1		05/02/16 19:31
3-Nitroaniline	0.00530	U	0.0106	0.00330	mg/L	1		05/02/16 19:31
4-Bromophenyl-phenylether	0.00530	U	0.0106	0.00330	mg/L	1		05/02/16 19:31
4-Chloro-3-methylphenol	0.00530	U	0.0106	0.00330	mg/L	1		05/02/16 19:31
4-Chloroaniline	0.00530	U	0.0106	0.00330	mg/L	1		05/02/16 19:31
4-Chlorophenyl-phenylether	0.00530	U	0.0106	0.00330	mg/L	1		05/02/16 19:31
4-Nitroaniline	0.00530	U	0.0106	0.00330	mg/L	1		05/02/16 19:31
4-Nitrophenol	0.0266	U	0.0532	0.0160	mg/L	1		05/02/16 19:31
Acenaphthene	0.00530	U	0.0106	0.00330	mg/L	1		05/02/16 19:31
Acenaphthylene	0.00530	U	0.0106	0.00330	mg/L	1		05/02/16 19:31
Aniline	0.0266	U	0.0532	0.0160	mg/L	1		05/02/16 19:31
Anthracene	0.00530	U	0.0106	0.00330	mg/L	1		05/02/16 19:31
Azobenzene	0.00530	U	0.0106	0.00330	mg/L	1		05/02/16 19:31
Benzo(a)Anthracene	0.00530	U	0.0106	0.00330	mg/L	1		05/02/16 19:31
Benzo[a]pyrene	0.00530	U	0.0106	0.00330	mg/L	1		05/02/16 19:31

Print Date: 05/19/2016 12:06:02PM

J flagging is activated

Results of **MW39B-0416**

Client Sample ID: **MW39B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901002
Lab Project ID: 1161901

Collection Date: 04/21/16 14:00
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Benzo[b]Fluoranthene	0.00530	U	0.0106	0.00330	mg/L	1		05/02/16 19:31
Benzo[g,h,i]perylene	0.00530	U	0.0106	0.00330	mg/L	1		05/02/16 19:31
Benzo[k]fluoranthene	0.00530	U	0.0106	0.00330	mg/L	1		05/02/16 19:31
Benzoic acid	0.0266	U	0.0532	0.0160	mg/L	1		05/02/16 19:31
Benzyl alcohol	0.00530	U	0.0106	0.00330	mg/L	1		05/02/16 19:31
Bis(2chloro1methylethyl)Ether	0.00530	U	0.0106	0.00330	mg/L	1		05/02/16 19:31
Bis(2-Chloroethoxy)methane	0.00530	U	0.0106	0.00330	mg/L	1		05/02/16 19:31
Bis(2-Chloroethyl)ether	0.00530	U	0.0106	0.00330	mg/L	1		05/02/16 19:31
bis(2-Ethylhexyl)phthalate	0.00530	U	0.0106	0.00330	mg/L	1		05/02/16 19:31
Butylbenzylphthalate	0.00530	U	0.0106	0.00330	mg/L	1		05/02/16 19:31
Carbazole	0.00530	U	0.0106	0.00330	mg/L	1		05/02/16 19:31
Chrysene	0.00530	U	0.0106	0.00330	mg/L	1		05/02/16 19:31
Dibenzo[a,h]anthracene	0.00530	U	0.0106	0.00330	mg/L	1		05/02/16 19:31
Dibenzofuran	0.00530	U	0.0106	0.00330	mg/L	1		05/02/16 19:31
Diethylphthalate	0.00530	U	0.0106	0.00330	mg/L	1		05/02/16 19:31
Dimethylphthalate	0.00530	U	0.0106	0.00330	mg/L	1		05/02/16 19:31
Di-n-butylphthalate	0.00530	U	0.0106	0.00330	mg/L	1		05/02/16 19:31
di-n-Octylphthalate	0.00530	U	0.0106	0.00330	mg/L	1		05/02/16 19:31
Fluoranthene	0.00530	U	0.0106	0.00330	mg/L	1		05/02/16 19:31
Fluorene	0.00530	U	0.0106	0.00330	mg/L	1		05/02/16 19:31
Hexachlorobenzene	0.00530	U	0.0106	0.00330	mg/L	1		05/02/16 19:31
Hexachlorobutadiene	0.00530	U	0.0106	0.00330	mg/L	1		05/02/16 19:31
Hexachlorocyclopentadiene	0.0159	U	0.0319	0.0100	mg/L	1		05/02/16 19:31
Hexachloroethane	0.00530	U	0.0106	0.00330	mg/L	1		05/02/16 19:31
Indeno[1,2,3-c,d] pyrene	0.00530	U	0.0106	0.00330	mg/L	1		05/02/16 19:31
Isophorone	0.00530	U	0.0106	0.00330	mg/L	1		05/02/16 19:31
Naphthalene	0.00530	U	0.0106	0.00330	mg/L	1		05/02/16 19:31
Nitrobenzene	0.00530	U	0.0106	0.00330	mg/L	1		05/02/16 19:31
N-Nitrosodimethylamine	0.00530	U	0.0106	0.00330	mg/L	1		05/02/16 19:31
N-Nitroso-di-n-propylamine	0.00530	U	0.0106	0.00330	mg/L	1		05/02/16 19:31
N-Nitrosodiphenylamine	0.00530	U	0.0106	0.00330	mg/L	1		05/02/16 19:31
Pentachlorophenol	0.0266	U	0.0532	0.0160	mg/L	1		05/02/16 19:31
Phenanthrene	0.00530	U	0.0106	0.00330	mg/L	1		05/02/16 19:31
Phenol	0.00530	U	0.0106	0.00330	mg/L	1		05/02/16 19:31
Pyrene	0.00530	U	0.0106	0.00330	mg/L	1		05/02/16 19:31
Surrogates								
2,4,6-Tribromophenol (surr)	81.2		43-140		%	1		05/02/16 19:31

Print Date: 05/19/2016 12:06:02PM

J flagging is activated

Results of **MW39B-0416**

Client Sample ID: **MW39B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901002
Lab Project ID: 1161901

Collection Date: 04/21/16 14:00
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
2-Fluorobiphenyl (surr)	77.1		44-119		%	1		05/02/16 19:31
2-Fluorophenol (surr)	57.5		19-119		%	1		05/02/16 19:31
Nitrobenzene-d5 (surr)	70.8		44-120		%	1		05/02/16 19:31
Phenol-d6 (surr)	59.1		10-115		%	1		05/02/16 19:31
Terphenyl-d14 (surr)	95.1		50-134		%	1		05/02/16 19:31

Batch Information

Analytical Batch: XMS9274
Analytical Method: SW8270D
Analyst: NLL
Analytical Date/Time: 05/02/16 19:31
Container ID: 1161901002-D

Prep Batch: XXX35213
Prep Method: SW3520C
Prep Date/Time: 04/26/16 09:00
Prep Initial Wt./Vol.: 940 mL
Prep Extract Vol: 1 mL

Print Date: 05/19/2016 12:06:02PM

J flagging is activated

Results of **MW39B-0416**

Client Sample ID: **MW39B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901002
Lab Project ID: 1161901

Collection Date: 04/21/16 14:00
Received Date: 04/22/16 13:07
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	0.0388	J	0.100	0.0310	mg/L	1		04/23/16 17:28
Surrogates								
4-Bromofluorobenzene (surr)	79.1		50-150		%	1		04/23/16 17:28

Batch Information

Analytical Batch: VFC12971
Analytical Method: AK101
Analyst: S.P
Analytical Date/Time: 04/23/16 17:28
Container ID: 1161901002-I

Prep Batch: VXX28737
Prep Method: SW5030B
Prep Date/Time: 04/23/16 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/19/2016 12:06:02PM

J flagging is activated

Results of **MW39B-0416**

Client Sample ID: **MW39B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901002
Lab Project ID: 1161901

Collection Date: 04/21/16 14:00
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		04/29/16 23:14
1,1,1-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:14
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		04/29/16 23:14
1,1,2-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:14
1,1-Dichloroethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:14
1,1-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:14
1,1-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:14
1,2,3-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:14
1,2,3-Trichloropropane	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:14
1,2,4-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:14
1,2,4-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:14
1,2-Dibromo-3-chloropropane	5.00	U	10.0	3.10	ug/L	1		04/29/16 23:14
1,2-Dibromoethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:14
1,2-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:14
1,2-Dichloroethane	0.250	U	0.500	0.150	ug/L	1		04/29/16 23:14
1,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:14
1,3,5-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:14
1,3-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:14
1,3-Dichloropropane	0.250	U	0.500	0.150	ug/L	1		04/29/16 23:14
1,4-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1		04/29/16 23:14
2,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:14
2-Butanone (MEK)	5.00	U	10.0	3.10	ug/L	1		04/29/16 23:14
2-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:14
2-Hexanone	5.00	U	10.0	3.10	ug/L	1		04/29/16 23:14
4-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:14
4-Isopropyltoluene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:14
4-Methyl-2-pentanone (MIBK)	5.00	U	10.0	3.10	ug/L	1		04/29/16 23:14
Benzene	0.200	U	0.400	0.120	ug/L	1		04/29/16 23:14
Bromobenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:14
Bromochloromethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:14
Bromodichloromethane	0.250	U	0.500	0.150	ug/L	1		04/29/16 23:14
Bromoform	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:14
Bromomethane	5.00	U	10.0	3.10	ug/L	1		04/29/16 23:14
Carbon disulfide	5.00	U	10.0	3.10	ug/L	1		04/29/16 23:14
Carbon tetrachloride	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:14
Chlorobenzene	0.250	U	0.500	0.150	ug/L	1		04/29/16 23:14
Chloroethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:14

Print Date: 05/19/2016 12:06:02PM

J flagging is activated

Results of **MW39B-0416**

Client Sample ID: **MW39B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901002
Lab Project ID: 1161901

Collection Date: 04/21/16 14:00
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroform	0.500	U	1.00	0.300	ug/L	1		04/29/16 23:14
Chloromethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:14
cis-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:14
cis-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		04/29/16 23:14
Dibromochloromethane	0.250	U	0.500	0.150	ug/L	1		04/29/16 23:14
Dibromomethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:14
Dichlorodifluoromethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:14
Ethylbenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:14
Freon-113	5.00	U	10.0	3.10	ug/L	1		04/29/16 23:14
Hexachlorobutadiene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:14
Isopropylbenzene (Cumene)	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:14
Methylene chloride	2.50	U	5.00	1.00	ug/L	1		04/29/16 23:14
Methyl-t-butyl ether	5.00	U	10.0	3.10	ug/L	1		04/29/16 23:14
Naphthalene	5.00	U	10.0	3.10	ug/L	1		04/29/16 23:14
n-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:14
n-Propylbenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:14
o-Xylene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:14
P & M -Xylene	1.00	U	2.00	0.620	ug/L	1		04/29/16 23:14
sec-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:14
Styrene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:14
tert-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:14
Tetrachloroethene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:14
Toluene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:14
trans-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:14
trans-1,3-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:14
Trichloroethene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:14
Trichlorofluoromethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:14
Vinyl acetate	5.00	U	10.0	3.10	ug/L	1		04/29/16 23:14
Vinyl chloride	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:14
Xylenes (total)	1.50	U	3.00	1.00	ug/L	1		04/29/16 23:14
Surrogates								
1,2-Dichloroethane-D4 (surr)	108		81-118		%	1		04/29/16 23:14
4-Bromofluorobenzene (surr)	95.9		85-114		%	1		04/29/16 23:14
Toluene-d8 (surr)	99.9		89-112		%	1		04/29/16 23:14

Print Date: 05/19/2016 12:06:02PM

J flagging is activated

Results of **MW39B-0416**

Client Sample ID: **MW39B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901002
Lab Project ID: 1161901

Collection Date: 04/21/16 14:00
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS15749
Analytical Method: SW8260B
Analyst: NRB
Analytical Date/Time: 04/29/16 23:14
Container ID: 1161901002-L

Prep Batch: VXX28753
Prep Method: SW5030B
Prep Date/Time: 04/29/16 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/19/2016 12:06:02PM

J flagging is activated

Results of **MW39B-0416**

Client Sample ID: **MW39B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901002
Lab Project ID: 1161901

Collection Date: 04/21/16 14:00
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloride	113		1.00	0.310	mg/L	10		05/08/16 02:44
Fluoride	0.0710	J	0.100	0.0310	mg/L	1		04/24/16 06:40
Sulfate	15.8		0.100	0.0310	mg/L	1		04/24/16 06:40

Batch Information

Analytical Batch: WIC5532
Analytical Method: EPA 300.0
Analyst: ACF
Analytical Date/Time: 04/24/16 06:40
Container ID: 1161901002-H

Prep Batch: WXX11480
Prep Method: METHOD
Prep Date/Time: 04/24/16 01:11
Prep Initial Wt./Vol.: 10 mL
Prep Extract Vol: 10 mL

Analytical Batch: WIC5534
Analytical Method: EPA 300.0
Analyst: ACF
Analytical Date/Time: 05/08/16 02:44
Container ID: 1161901002-H

Prep Batch: WXX11492
Prep Method: METHOD
Prep Date/Time: 05/07/16 19:47
Prep Initial Wt./Vol.: 10 mL
Prep Extract Vol: 10 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Turbidity	150		0.200	0.100	NTU	1		04/22/16 16:30

Batch Information

Analytical Batch: WAT10634
Analytical Method: SM21 2130B
Analyst: MBS
Analytical Date/Time: 04/22/16 16:30
Container ID: 1161901002-G

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Alkalinity	40.6		10.0	3.10	mg/L	1		04/25/16 18:31

Batch Information

Analytical Batch: WTI4445
Analytical Method: SM21 2320B
Analyst: ACF
Analytical Date/Time: 04/25/16 18:31
Container ID: 1161901002-G

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed

Print Date: 05/19/2016 12:06:02PM

J flagging is activated

Results of **MW39B-0416**

Client Sample ID: **MW39B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901002
Lab Project ID: 1161901

Collection Date: 04/21/16 14:00
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Dissolved Solids	301		10.0	3.10	mg/L	1		04/26/16 09:58

Batch Information

Analytical Batch: STS5020
Analytical Method: SM21 2540C
Analyst: MBS
Analytical Date/Time: 04/26/16 09:58
Container ID: 1161901002-G

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Suspended Solids	170		16.7	5.17	mg/L	1		04/25/16 15:51

Batch Information

Analytical Batch: STS5019
Analytical Method: SM21 2540D
Analyst: MBS
Analytical Date/Time: 04/25/16 15:51
Container ID: 1161901002-F

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
pH	6.30		0.100	0.100	pH units	1		04/25/16 18:31

Batch Information

Analytical Batch: WTI4443
Analytical Method: SM21 4500-H B
Analyst: ACF
Analytical Date/Time: 04/25/16 18:31
Container ID: 1161901002-G

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Nitrate-N	0.0500	U	0.100	0.0300	mg/L	2		04/22/16 17:10
Nitrite-N	0.0490	J	0.100	0.0300	mg/L	2		04/22/16 17:10

Print Date: 05/19/2016 12:06:02PM

J flagging is activated

Results of **MW39B-0416**

Client Sample ID: **MW39B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901002
Lab Project ID: 1161901

Collection Date: 04/21/16 14:00
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Batch Information

Analytical Batch: WFI2470
Analytical Method: SM21 4500NO3-F
Analyst: NEG
Analytical Date/Time: 04/22/16 17:10
Container ID: 1161901002-H

Print Date: 05/19/2016 12:06:02PM

J flagging is activated

Results of **MW91A-0416**

Client Sample ID: **MW91A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901003
Lab Project ID: 1161901

Collection Date: 04/21/16 18:10
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Metals by ICP/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Aluminum	1500		8.00	2.48	ug/L	10		05/18/16 13:08
Antimony	0.0511		0.0500	0.0150	ug/L	2.5		05/18/16 12:18
Arsenic	8.73		0.800	0.200	ug/L	2.5		05/18/16 12:18
Barium	34.6		0.250	0.0400	ug/L	2.5		05/18/16 12:18
Beryllium	0.0340	J	0.0500	0.0250	ug/L	2.5		05/18/16 12:18
Bismuth	0.0250	U	0.0500	0.0150	ug/L	2.5		05/18/16 12:18
Boron	19.5		5.00	1.50	ug/L	2.5		05/18/16 12:18
Cadmium	0.0150	J	0.0500	0.0150	ug/L	2.5		05/18/16 12:18
Calcium	30700		50.0	15.0	ug/L	2.5		05/18/16 12:18
Chromium	6.76		0.500	0.150	ug/L	2.5		05/18/16 12:18
Cobalt	0.728		0.0200	0.0100	ug/L	2.5		05/18/16 12:18
Copper	2.33		0.500	0.200	ug/L	2.5		05/18/16 12:18
Iron	3800		20.0	6.20	ug/L	2.5		05/18/16 12:18
Lead	0.569		0.100	0.0310	ug/L	2.5		05/18/16 12:18
Magnesium	7260		20.0	6.20	ug/L	2.5		05/18/16 12:18
Manganese	1030		0.100	0.0310	ug/L	2.5		05/18/16 12:18
Molybdenum	0.896		0.0500	0.0150	ug/L	2.5		05/18/16 12:18
Nickel	4.97		0.620	0.0620	ug/L	2.5		05/18/16 12:18
Potassium	3400		50.0	15.0	ug/L	2.5		05/18/16 12:18
Selenium	0.500	U	1.00	0.310	ug/L	2.5		05/18/16 12:18
Silver	0.0100	U	0.0200	0.00620	ug/L	2.5		05/18/16 12:18
Sodium	7110		100	31.0	ug/L	2.5		05/18/16 12:18
Thallium	0.00838	J	0.0200	0.00620	ug/L	2.5		05/18/16 12:18
Tin	0.114	J	0.200	0.0620	ug/L	2.5		05/18/16 12:18
Vanadium	3.61		1.00	0.310	ug/L	2.5		05/18/16 12:18
Zinc	14.8		3.10	0.400	ug/L	2.5		05/18/16 12:18

Batch Information

Analytical Batch: MMS9355
Analytical Method: 200.8 Low Level
Analyst: EAB
Analytical Date/Time: 05/18/16 13:08
Container ID: 1161901003-A

Prep Batch: MXX29753
Prep Method: E200.2
Prep Date/Time: 05/17/16 08:37
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 10 mL

Print Date: 05/19/2016 12:06:02PM

J flagging is activated

Results of **MW91A-0416**

Client Sample ID: **MW91A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901003
Lab Project ID: 1161901

Collection Date: 04/21/16 18:10
Received Date: 04/22/16 13:07
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	0.283	U	0.566	0.170	mg/L	1		05/02/16 15:15
Surrogates								
5a Androstane (surr)	101		50-150		%	1		05/02/16 15:15

Batch Information

Analytical Batch: XFC12356
Analytical Method: AK102
Analyst: CJSW
Analytical Date/Time: 05/02/16 15:15
Container ID: 1161901003-B

Prep Batch: XXX35229
Prep Method: SW3520C
Prep Date/Time: 04/28/16 09:48
Prep Initial Wt./Vol.: 265 mL
Prep Extract Vol: 1 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Residual Range Organics	0.236	U	0.472	0.142	mg/L	1		05/02/16 15:15
Surrogates								
n-Triacontane-d62 (surr)	101		50-150		%	1		05/02/16 15:15

Batch Information

Analytical Batch: XFC12356
Analytical Method: AK103
Analyst: CJSW
Analytical Date/Time: 05/02/16 15:15
Container ID: 1161901003-B

Prep Batch: XXX35229
Prep Method: SW3520C
Prep Date/Time: 04/28/16 09:48
Prep Initial Wt./Vol.: 265 mL
Prep Extract Vol: 1 mL

Print Date: 05/19/2016 12:06:02PM

J flagging is activated

Results of **MW91A-0416**

Client Sample ID: **MW91A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901003
Lab Project ID: 1161901

Collection Date: 04/21/16 18:10
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,2,4-Trichlorobenzene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:48
1,2-Dichlorobenzene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:48
1,3-Dichlorobenzene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:48
1,4-Dichlorobenzene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:48
1-Chloronaphthalene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:48
1-Methylnaphthalene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:48
2,4,5-Trichlorophenol	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:48
2,4,6-Trichlorophenol	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:48
2,4-Dichlorophenol	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:48
2,4-Dimethylphenol	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:48
2,4-Dinitrophenol	0.0255	U	0.0510	0.0153	mg/L	1		05/02/16 19:48
2,4-Dinitrotoluene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:48
2,6-Dichlorophenol	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:48
2,6-Dinitrotoluene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:48
2-Chloronaphthalene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:48
2-Chlorophenol	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:48
2-Methyl-4,6-dinitrophenol	0.0255	U	0.0510	0.0153	mg/L	1		05/02/16 19:48
2-Methylnaphthalene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:48
2-Methylphenol (o-Cresol)	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:48
2-Nitroaniline	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:48
2-Nitrophenol	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:48
3&4-Methylphenol (p&m-Cresol)	0.0102	U	0.0204	0.00633	mg/L	1		05/02/16 19:48
3,3-Dichlorobenzidine	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:48
3-Nitroaniline	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:48
4-Bromophenyl-phenylether	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:48
4-Chloro-3-methylphenol	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:48
4-Chloroaniline	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:48
4-Chlorophenyl-phenylether	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:48
4-Nitroaniline	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:48
4-Nitrophenol	0.0255	U	0.0510	0.0153	mg/L	1		05/02/16 19:48
Acenaphthene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:48
Acenaphthylene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:48
Aniline	0.0255	U	0.0510	0.0153	mg/L	1		05/02/16 19:48
Anthracene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:48
Azobenzene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:48
Benzo(a)Anthracene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:48
Benzo[a]pyrene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:48

Print Date: 05/19/2016 12:06:02PM

J flagging is activated

Results of **MW91A-0416**

Client Sample ID: **MW91A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901003
Lab Project ID: 1161901

Collection Date: 04/21/16 18:10
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Benzo[b]Fluoranthene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:48
Benzo[g,h,i]perylene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:48
Benzo[k]fluoranthene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:48
Benzoic acid	0.0255	U	0.0510	0.0153	mg/L	1		05/02/16 19:48
Benzyl alcohol	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:48
Bis(2chloro1methylethyl)Ether	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:48
Bis(2-Chloroethoxy)methane	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:48
Bis(2-Chloroethyl)ether	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:48
bis(2-Ethylhexyl)phthalate	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:48
Butylbenzylphthalate	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:48
Carbazole	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:48
Chrysene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:48
Dibenzo[a,h]anthracene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:48
Dibenzofuran	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:48
Diethylphthalate	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:48
Dimethylphthalate	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:48
Di-n-butylphthalate	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:48
di-n-Octylphthalate	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:48
Fluoranthene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:48
Fluorene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:48
Hexachlorobenzene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:48
Hexachlorobutadiene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:48
Hexachlorocyclopentadiene	0.0153	U	0.0306	0.00959	mg/L	1		05/02/16 19:48
Hexachloroethane	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:48
Indeno[1,2,3-c,d] pyrene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:48
Isophorone	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:48
Naphthalene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:48
Nitrobenzene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:48
N-Nitrosodimethylamine	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:48
N-Nitroso-di-n-propylamine	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:48
N-Nitrosodiphenylamine	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:48
Pentachlorophenol	0.0255	U	0.0510	0.0153	mg/L	1		05/02/16 19:48
Phenanthrene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:48
Phenol	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:48
Pyrene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 19:48
Surrogates								
2,4,6-Tribromophenol (surr)	62.9		43-140		%	1		05/02/16 19:48

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J flagging is activated

Results of **MW91A-0416**

Client Sample ID: **MW91A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901003
Lab Project ID: 1161901

Collection Date: 04/21/16 18:10
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
2-Fluorobiphenyl (surr)	67.2		44-119		%	1		05/02/16 19:48
2-Fluorophenol (surr)	46.8		19-119		%	1		05/02/16 19:48
Nitrobenzene-d5 (surr)	60.7		44-120		%	1		05/02/16 19:48
Phenol-d6 (surr)	47.9		10-115		%	1		05/02/16 19:48
Terphenyl-d14 (surr)	95		50-134		%	1		05/02/16 19:48

Batch Information

Analytical Batch: XMS9274
Analytical Method: SW8270D
Analyst: NLL
Analytical Date/Time: 05/02/16 19:48
Container ID: 1161901003-D

Prep Batch: XXX35213
Prep Method: SW3520C
Prep Date/Time: 04/26/16 09:00
Prep Initial Wt./Vol.: 980 mL
Prep Extract Vol: 1 mL

Print Date: 05/19/2016 12:06:02PM

J flagging is activated

Results of **MW91A-0416**

Client Sample ID: **MW91A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901003
Lab Project ID: 1161901

Collection Date: 04/21/16 18:10
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.0500	U	0.100	0.0310	mg/L	1		04/23/16 16:31
Surrogates								
4-Bromofluorobenzene (surr)	75.7		50-150		%	1		04/23/16 16:31

Batch Information

Analytical Batch: VFC12971
Analytical Method: AK101
Analyst: S.P
Analytical Date/Time: 04/23/16 16:31
Container ID: 1161901003-I

Prep Batch: VXX28737
Prep Method: SW5030B
Prep Date/Time: 04/23/16 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/19/2016 12:06:02PM

J flagging is activated

Results of **MW91A-0416**

Client Sample ID: **MW91A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901003
Lab Project ID: 1161901

Collection Date: 04/21/16 18:10
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		04/29/16 23:30
1,1,1-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:30
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		04/29/16 23:30
1,1,2-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:30
1,1-Dichloroethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:30
1,1-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:30
1,1-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:30
1,2,3-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:30
1,2,3-Trichloropropane	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:30
1,2,4-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:30
1,2,4-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:30
1,2-Dibromo-3-chloropropane	5.00	U	10.0	3.10	ug/L	1		04/29/16 23:30
1,2-Dibromoethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:30
1,2-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:30
1,2-Dichloroethane	0.250	U	0.500	0.150	ug/L	1		04/29/16 23:30
1,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:30
1,3,5-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:30
1,3-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:30
1,3-Dichloropropane	0.250	U	0.500	0.150	ug/L	1		04/29/16 23:30
1,4-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1		04/29/16 23:30
2,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:30
2-Butanone (MEK)	5.00	U	10.0	3.10	ug/L	1		04/29/16 23:30
2-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:30
2-Hexanone	5.00	U	10.0	3.10	ug/L	1		04/29/16 23:30
4-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:30
4-Isopropyltoluene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:30
4-Methyl-2-pentanone (MIBK)	5.00	U	10.0	3.10	ug/L	1		04/29/16 23:30
Benzene	0.200	U	0.400	0.120	ug/L	1		04/29/16 23:30
Bromobenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:30
Bromochloromethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:30
Bromodichloromethane	0.250	U	0.500	0.150	ug/L	1		04/29/16 23:30
Bromoform	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:30
Bromomethane	5.00	U	10.0	3.10	ug/L	1		04/29/16 23:30
Carbon disulfide	5.00	U	10.0	3.10	ug/L	1		04/29/16 23:30
Carbon tetrachloride	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:30
Chlorobenzene	0.250	U	0.500	0.150	ug/L	1		04/29/16 23:30
Chloroethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:30

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J flagging is activated

Results of **MW91A-0416**

Client Sample ID: **MW91A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901003
Lab Project ID: 1161901

Collection Date: 04/21/16 18:10
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroform	0.500	U	1.00	0.300	ug/L	1		04/29/16 23:30
Chloromethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:30
cis-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:30
cis-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		04/29/16 23:30
Dibromochloromethane	0.250	U	0.500	0.150	ug/L	1		04/29/16 23:30
Dibromomethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:30
Dichlorodifluoromethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:30
Ethylbenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:30
Freon-113	5.00	U	10.0	3.10	ug/L	1		04/29/16 23:30
Hexachlorobutadiene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:30
Isopropylbenzene (Cumene)	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:30
Methylene chloride	2.50	U	5.00	1.00	ug/L	1		04/29/16 23:30
Methyl-t-butyl ether	5.00	U	10.0	3.10	ug/L	1		04/29/16 23:30
Naphthalene	5.00	U	10.0	3.10	ug/L	1		04/29/16 23:30
n-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:30
n-Propylbenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:30
o-Xylene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:30
P & M -Xylene	1.00	U	2.00	0.620	ug/L	1		04/29/16 23:30
sec-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:30
Styrene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:30
tert-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:30
Tetrachloroethene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:30
Toluene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:30
trans-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:30
trans-1,3-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:30
Trichloroethene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:30
Trichlorofluoromethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:30
Vinyl acetate	5.00	U	10.0	3.10	ug/L	1		04/29/16 23:30
Vinyl chloride	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:30
Xylenes (total)	1.50	U	3.00	1.00	ug/L	1		04/29/16 23:30
Surrogates								
1,2-Dichloroethane-D4 (surr)	112		81-118		%	1		04/29/16 23:30
4-Bromofluorobenzene (surr)	97.5		85-114		%	1		04/29/16 23:30
Toluene-d8 (surr)	99.9		89-112		%	1		04/29/16 23:30

Print Date: 05/19/2016 12:06:02PM

J flagging is activated

Results of **MW91A-0416**

Client Sample ID: **MW91A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901003
Lab Project ID: 1161901

Collection Date: 04/21/16 18:10
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS15749
Analytical Method: SW8260B
Analyst: NRB
Analytical Date/Time: 04/29/16 23:30
Container ID: 1161901003-L

Prep Batch: VXX28753
Prep Method: SW5030B
Prep Date/Time: 04/29/16 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/19/2016 12:06:02PM

J flagging is activated

Results of **MW91A-0416**

Client Sample ID: **MW91A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901003
Lab Project ID: 1161901

Collection Date: 04/21/16 18:10
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloride	10.4		0.100	0.0310	mg/L	1		04/24/16 07:02
Fluoride	0.0800	J	0.100	0.0310	mg/L	1		04/24/16 07:02
Sulfate	8.12		0.100	0.0310	mg/L	1		04/24/16 07:02

Batch Information

Analytical Batch: WIC5532
Analytical Method: EPA 300.0
Analyst: ACF
Analytical Date/Time: 04/24/16 07:02
Container ID: 1161901003-H

Prep Batch: WXX11480
Prep Method: METHOD
Prep Date/Time: 04/24/16 01:11
Prep Initial Wt./Vol.: 10 mL
Prep Extract Vol: 10 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Turbidity	35.0		0.200	0.100	NTU	1		04/22/16 16:30

Batch Information

Analytical Batch: WAT10634
Analytical Method: SM21 2130B
Analyst: MBS
Analytical Date/Time: 04/22/16 16:30
Container ID: 1161901003-G

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Alkalinity	93.7		10.0	3.10	mg/L	1		04/25/16 18:40

Batch Information

Analytical Batch: WTI4445
Analytical Method: SM21 2320B
Analyst: ACF
Analytical Date/Time: 04/25/16 18:40
Container ID: 1161901003-G

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Dissolved Solids	169		10.0	3.10	mg/L	1		04/26/16 09:58

Print Date: 05/19/2016 12:06:02PM

J flagging is activated

Results of **MW91A-0416**

Client Sample ID: **MW91A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901003
Lab Project ID: 1161901

Collection Date: 04/21/16 18:10
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Batch Information

Analytical Batch: STS5020
Analytical Method: SM21 2540C
Analyst: MBS
Analytical Date/Time: 04/26/16 09:58
Container ID: 1161901003-G

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Suspended Solids	39.5		2.50	0.775	mg/L	1		04/25/16 15:51

Batch Information

Analytical Batch: STS5019
Analytical Method: SM21 2540D
Analyst: MBS
Analytical Date/Time: 04/25/16 15:51
Container ID: 1161901003-F

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
pH	7.60		0.100	0.100	pH units	1		04/25/16 18:40

Batch Information

Analytical Batch: WTI4443
Analytical Method: SM21 4500-H B
Analyst: ACF
Analytical Date/Time: 04/25/16 18:40
Container ID: 1161901003-G

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Nitrate-N	0.0654	J	0.100	0.0300	mg/L	2		04/22/16 17:12
Nitrite-N	0.0500	U	0.100	0.0300	mg/L	2		04/22/16 17:12

Batch Information

Analytical Batch: WFI2470
Analytical Method: SM21 4500NO3-F
Analyst: NEG
Analytical Date/Time: 04/22/16 17:12
Container ID: 1161901003-H

Print Date: 05/19/2016 12:06:02PM

J flagging is activated

Results of **MW91Z-0416**

Client Sample ID: **MW91Z-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901004
Lab Project ID: 1161901

Collection Date: 04/21/16 18:10
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Metals by ICP/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Aluminum	1280		8.00	2.48	ug/L	10		05/18/16 13:11
Antimony	0.0536		0.0500	0.0150	ug/L	2.5		05/18/16 12:21
Arsenic	8.57		0.800	0.200	ug/L	2.5		05/18/16 12:21
Barium	36.6		0.250	0.0400	ug/L	2.5		05/18/16 12:21
Beryllium	0.0348	J	0.0500	0.0250	ug/L	2.5		05/18/16 12:21
Bismuth	0.0250	U	0.0500	0.0150	ug/L	2.5		05/18/16 12:21
Boron	20.1		5.00	1.50	ug/L	2.5		05/18/16 12:21
Cadmium	0.0250	U	0.0500	0.0150	ug/L	2.5		05/18/16 12:21
Calcium	30500		50.0	15.0	ug/L	2.5		05/18/16 12:21
Chromium	7.36		0.500	0.150	ug/L	2.5		05/18/16 12:21
Cobalt	0.787		0.0200	0.0100	ug/L	2.5		05/18/16 12:21
Copper	2.57		0.500	0.200	ug/L	2.5		05/18/16 12:21
Iron	3760		20.0	6.20	ug/L	2.5		05/18/16 12:21
Lead	0.589		0.100	0.0310	ug/L	2.5		05/18/16 12:21
Magnesium	7090		20.0	6.20	ug/L	2.5		05/18/16 12:21
Manganese	1040		0.100	0.0310	ug/L	2.5		05/18/16 12:21
Molybdenum	1.15		0.0500	0.0150	ug/L	2.5		05/18/16 12:21
Nickel	5.32		0.620	0.0620	ug/L	2.5		05/18/16 12:21
Potassium	3490		50.0	15.0	ug/L	2.5		05/18/16 12:21
Selenium	0.500	U	1.00	0.310	ug/L	2.5		05/18/16 12:21
Silver	0.0100	U	0.0200	0.00620	ug/L	2.5		05/18/16 12:21
Sodium	7120		100	31.0	ug/L	2.5		05/18/16 12:21
Thallium	0.00928	J	0.0200	0.00620	ug/L	2.5		05/18/16 12:21
Tin	0.129	J	0.200	0.0620	ug/L	2.5		05/18/16 12:21
Vanadium	4.01		1.00	0.310	ug/L	2.5		05/18/16 12:21
Zinc	14.6		3.10	0.400	ug/L	2.5		05/18/16 12:21

Batch Information

Analytical Batch: MMS9355
Analytical Method: 200.8 Low Level
Analyst: EAB
Analytical Date/Time: 05/18/16 13:11
Container ID: 1161901004-A

Prep Batch: MXX29753
Prep Method: E200.2
Prep Date/Time: 05/17/16 08:37
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 10 mL

Print Date: 05/19/2016 12:06:02PM

J flagging is activated

Results of **MW91Z-0416**

Client Sample ID: **MW91Z-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901004
Lab Project ID: 1161901

Collection Date: 04/21/16 18:10
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	0.288	U	0.577	0.173	mg/L	1		05/02/16 15:36
Surrogates								
5a Androstane (surr)	91.4		50-150		%	1		05/02/16 15:36

Batch Information

Analytical Batch: XFC12356
Analytical Method: AK102
Analyst: CJSW
Analytical Date/Time: 05/02/16 15:36
Container ID: 1161901004-B

Prep Batch: XXX35229
Prep Method: SW3520C
Prep Date/Time: 04/28/16 09:48
Prep Initial Wt./Vol.: 260 mL
Prep Extract Vol: 1 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Residual Range Organics	0.240	U	0.481	0.144	mg/L	1		05/02/16 15:36
Surrogates								
n-Triacontane-d62 (surr)	94.2		50-150		%	1		05/02/16 15:36

Batch Information

Analytical Batch: XFC12356
Analytical Method: AK103
Analyst: CJSW
Analytical Date/Time: 05/02/16 15:36
Container ID: 1161901004-B

Prep Batch: XXX35229
Prep Method: SW3520C
Prep Date/Time: 04/28/16 09:48
Prep Initial Wt./Vol.: 260 mL
Prep Extract Vol: 1 mL

Print Date: 05/19/2016 12:06:02PM

J flagging is activated

Results of **MW91Z-0416**

Client Sample ID: **MW91Z-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901004
Lab Project ID: 1161901

Collection Date: 04/21/16 18:10
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,2,4-Trichlorobenzene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:05
1,2-Dichlorobenzene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:05
1,3-Dichlorobenzene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:05
1,4-Dichlorobenzene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:05
1-Chloronaphthalene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:05
1-Methylnaphthalene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:05
2,4,5-Trichlorophenol	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:05
2,4,6-Trichlorophenol	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:05
2,4-Dichlorophenol	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:05
2,4-Dimethylphenol	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:05
2,4-Dinitrophenol	0.0255	U	0.0510	0.0153	mg/L	1		05/02/16 20:05
2,4-Dinitrotoluene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:05
2,6-Dichlorophenol	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:05
2,6-Dinitrotoluene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:05
2-Chloronaphthalene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:05
2-Chlorophenol	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:05
2-Methyl-4,6-dinitrophenol	0.0255	U	0.0510	0.0153	mg/L	1		05/02/16 20:05
2-Methylnaphthalene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:05
2-Methylphenol (o-Cresol)	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:05
2-Nitroaniline	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:05
2-Nitrophenol	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:05
3&4-Methylphenol (p&m-Cresol)	0.0102	U	0.0204	0.00633	mg/L	1		05/02/16 20:05
3,3-Dichlorobenzidine	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:05
3-Nitroaniline	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:05
4-Bromophenyl-phenylether	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:05
4-Chloro-3-methylphenol	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:05
4-Chloroaniline	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:05
4-Chlorophenyl-phenylether	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:05
4-Nitroaniline	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:05
4-Nitrophenol	0.0255	U	0.0510	0.0153	mg/L	1		05/02/16 20:05
Acenaphthene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:05
Acenaphthylene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:05
Aniline	0.0255	U	0.0510	0.0153	mg/L	1		05/02/16 20:05
Anthracene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:05
Azobenzene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:05
Benzo(a)Anthracene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:05
Benzo[a]pyrene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:05

Print Date: 05/19/2016 12:06:02PM

J flagging is activated

Results of **MW91Z-0416**

Client Sample ID: **MW91Z-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901004
Lab Project ID: 1161901

Collection Date: 04/21/16 18:10
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Benzo[b]Fluoranthene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:05
Benzo[g,h,i]perylene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:05
Benzo[k]fluoranthene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:05
Benzoic acid	0.0255	U	0.0510	0.0153	mg/L	1		05/02/16 20:05
Benzyl alcohol	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:05
Bis(2chloro1methylethyl)Ether	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:05
Bis(2-Chloroethoxy)methane	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:05
Bis(2-Chloroethyl)ether	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:05
bis(2-Ethylhexyl)phthalate	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:05
Butylbenzylphthalate	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:05
Carbazole	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:05
Chrysene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:05
Dibenzo[a,h]anthracene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:05
Dibenzofuran	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:05
Diethylphthalate	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:05
Dimethylphthalate	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:05
Di-n-butylphthalate	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:05
di-n-Octylphthalate	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:05
Fluoranthene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:05
Fluorene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:05
Hexachlorobenzene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:05
Hexachlorobutadiene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:05
Hexachlorocyclopentadiene	0.0153	U	0.0306	0.00959	mg/L	1		05/02/16 20:05
Hexachloroethane	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:05
Indeno[1,2,3-c,d] pyrene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:05
Isophorone	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:05
Naphthalene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:05
Nitrobenzene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:05
N-Nitrosodimethylamine	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:05
N-Nitroso-di-n-propylamine	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:05
N-Nitrosodiphenylamine	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:05
Pentachlorophenol	0.0255	U	0.0510	0.0153	mg/L	1		05/02/16 20:05
Phenanthrene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:05
Phenol	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:05
Pyrene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:05
Surrogates								
2,4,6-Tribromophenol (surr)	72		43-140		%	1		05/02/16 20:05

Print Date: 05/19/2016 12:06:02PM

J flagging is activated

Results of **MW91Z-0416**

Client Sample ID: **MW91Z-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901004
Lab Project ID: 1161901

Collection Date: 04/21/16 18:10
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
2-Fluorobiphenyl (surr)	73.9		44-119		%	1		05/02/16 20:05
2-Fluorophenol (surr)	55		19-119		%	1		05/02/16 20:05
Nitrobenzene-d5 (surr)	69.2		44-120		%	1		05/02/16 20:05
Phenol-d6 (surr)	55.9		10-115		%	1		05/02/16 20:05
Terphenyl-d14 (surr)	94.7		50-134		%	1		05/02/16 20:05

Batch Information

Analytical Batch: XMS9274
Analytical Method: SW8270D
Analyst: NLL
Analytical Date/Time: 05/02/16 20:05
Container ID: 1161901004-D

Prep Batch: XXX35213
Prep Method: SW3520C
Prep Date/Time: 04/26/16 09:00
Prep Initial Wt./Vol.: 980 mL
Prep Extract Vol: 1 mL

Print Date: 05/19/2016 12:06:02PM

J flagging is activated

Results of **MW91Z-0416**

Client Sample ID: **MW91Z-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901004
Lab Project ID: 1161901

Collection Date: 04/21/16 18:10
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.0500	U	0.100	0.0310	mg/L	1		04/23/16 16:50
Surrogates								
4-Bromofluorobenzene (surr)	76.4		50-150		%	1		04/23/16 16:50

Batch Information

Analytical Batch: VFC12971
Analytical Method: AK101
Analyst: S.P
Analytical Date/Time: 04/23/16 16:50
Container ID: 1161901004-I

Prep Batch: VXX28737
Prep Method: SW5030B
Prep Date/Time: 04/23/16 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/19/2016 12:06:02PM

J flagging is activated

Results of **MW91Z-0416**

Client Sample ID: **MW91Z-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901004
Lab Project ID: 1161901

Collection Date: 04/21/16 18:10
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		04/29/16 23:47
1,1,1-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:47
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		04/29/16 23:47
1,1,2-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:47
1,1-Dichloroethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:47
1,1-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:47
1,1-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:47
1,2,3-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:47
1,2,3-Trichloropropane	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:47
1,2,4-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:47
1,2,4-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:47
1,2-Dibromo-3-chloropropane	5.00	U	10.0	3.10	ug/L	1		04/29/16 23:47
1,2-Dibromoethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:47
1,2-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:47
1,2-Dichloroethane	0.250	U	0.500	0.150	ug/L	1		04/29/16 23:47
1,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:47
1,3,5-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:47
1,3-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:47
1,3-Dichloropropane	0.250	U	0.500	0.150	ug/L	1		04/29/16 23:47
1,4-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1		04/29/16 23:47
2,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:47
2-Butanone (MEK)	5.00	U	10.0	3.10	ug/L	1		04/29/16 23:47
2-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:47
2-Hexanone	5.00	U	10.0	3.10	ug/L	1		04/29/16 23:47
4-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:47
4-Isopropyltoluene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:47
4-Methyl-2-pentanone (MIBK)	5.00	U	10.0	3.10	ug/L	1		04/29/16 23:47
Benzene	0.200	U	0.400	0.120	ug/L	1		04/29/16 23:47
Bromobenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:47
Bromochloromethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:47
Bromodichloromethane	0.250	U	0.500	0.150	ug/L	1		04/29/16 23:47
Bromoform	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:47
Bromomethane	5.00	U	10.0	3.10	ug/L	1		04/29/16 23:47
Carbon disulfide	5.00	U	10.0	3.10	ug/L	1		04/29/16 23:47
Carbon tetrachloride	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:47
Chlorobenzene	0.250	U	0.500	0.150	ug/L	1		04/29/16 23:47
Chloroethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:47

Print Date: 05/19/2016 12:06:02PM

J flagging is activated

Results of **MW91Z-0416**

Client Sample ID: **MW91Z-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901004
Lab Project ID: 1161901

Collection Date: 04/21/16 18:10
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroform	0.500	U	1.00	0.300	ug/L	1		04/29/16 23:47
Chloromethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:47
cis-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:47
cis-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		04/29/16 23:47
Dibromochloromethane	0.250	U	0.500	0.150	ug/L	1		04/29/16 23:47
Dibromomethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:47
Dichlorodifluoromethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:47
Ethylbenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:47
Freon-113	5.00	U	10.0	3.10	ug/L	1		04/29/16 23:47
Hexachlorobutadiene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:47
Isopropylbenzene (Cumene)	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:47
Methylene chloride	2.50	U	5.00	1.00	ug/L	1		04/29/16 23:47
Methyl-t-butyl ether	5.00	U	10.0	3.10	ug/L	1		04/29/16 23:47
Naphthalene	5.00	U	10.0	3.10	ug/L	1		04/29/16 23:47
n-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:47
n-Propylbenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:47
o-Xylene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:47
P & M -Xylene	1.00	U	2.00	0.620	ug/L	1		04/29/16 23:47
sec-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:47
Styrene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:47
tert-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:47
Tetrachloroethene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:47
Toluene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:47
trans-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:47
trans-1,3-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:47
Trichloroethene	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:47
Trichlorofluoromethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:47
Vinyl acetate	5.00	U	10.0	3.10	ug/L	1		04/29/16 23:47
Vinyl chloride	0.500	U	1.00	0.310	ug/L	1		04/29/16 23:47
Xylenes (total)	1.50	U	3.00	1.00	ug/L	1		04/29/16 23:47
Surrogates								
1,2-Dichloroethane-D4 (surr)	108		81-118		%	1		04/29/16 23:47
4-Bromofluorobenzene (surr)	96.1		85-114		%	1		04/29/16 23:47
Toluene-d8 (surr)	100		89-112		%	1		04/29/16 23:47

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J flagging is activated

Results of **MW91Z-0416**

Client Sample ID: **MW91Z-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901004
Lab Project ID: 1161901

Collection Date: 04/21/16 18:10
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS15749
Analytical Method: SW8260B
Analyst: NRB
Analytical Date/Time: 04/29/16 23:47
Container ID: 1161901004-L

Prep Batch: VXX28753
Prep Method: SW5030B
Prep Date/Time: 04/29/16 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/19/2016 12:06:02PM

J flagging is activated

Results of **MW91Z-0416**

Client Sample ID: **MW91Z-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901004
Lab Project ID: 1161901

Collection Date: 04/21/16 18:10
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloride	10.4		0.100	0.0310	mg/L	1		04/24/16 07:25
Fluoride	0.0800	J	0.100	0.0310	mg/L	1		04/24/16 07:25
Sulfate	8.03		0.100	0.0310	mg/L	1		04/24/16 07:25

Batch Information

Analytical Batch: WIC5532
Analytical Method: EPA 300.0
Analyst: ACF
Analytical Date/Time: 04/24/16 07:25
Container ID: 1161901004-H

Prep Batch: WXX11480
Prep Method: METHOD
Prep Date/Time: 04/24/16 01:11
Prep Initial Wt./Vol.: 10 mL
Prep Extract Vol: 10 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Turbidity	32.0		0.200	0.100	NTU	1		04/22/16 16:30

Batch Information

Analytical Batch: WAT10634
Analytical Method: SM21 2130B
Analyst: MBS
Analytical Date/Time: 04/22/16 16:30
Container ID: 1161901004-G

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Alkalinity	92.7		10.0	3.10	mg/L	1		04/25/16 18:50

Batch Information

Analytical Batch: WTI4445
Analytical Method: SM21 2320B
Analyst: ACF
Analytical Date/Time: 04/25/16 18:50
Container ID: 1161901004-G

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Dissolved Solids	169		10.0	3.10	mg/L	1		04/26/16 09:58

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J flagging is activated

Results of **MW91Z-0416**

Client Sample ID: **MW91Z-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901004
Lab Project ID: 1161901

Collection Date: 04/21/16 18:10
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Batch Information

Analytical Batch: STS5020
Analytical Method: SM21 2540C
Analyst: MBS
Analytical Date/Time: 04/26/16 09:58
Container ID: 1161901004-G

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Suspended Solids	43.0		2.50	0.775	mg/L	1		04/25/16 15:51

Batch Information

Analytical Batch: STS5019
Analytical Method: SM21 2540D
Analyst: MBS
Analytical Date/Time: 04/25/16 15:51
Container ID: 1161901004-F

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
pH	7.70		0.100	0.100	pH units	1		04/25/16 18:50

Batch Information

Analytical Batch: WTI4443
Analytical Method: SM21 4500-H B
Analyst: ACF
Analytical Date/Time: 04/25/16 18:50
Container ID: 1161901004-G

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Nitrate-N	0.0648	J	0.100	0.0300	mg/L	2		04/22/16 17:14
Nitrite-N	0.0500	U	0.100	0.0300	mg/L	2		04/22/16 17:14

Batch Information

Analytical Batch: WFI2470
Analytical Method: SM21 4500NO3-F
Analyst: NEG
Analytical Date/Time: 04/22/16 17:14
Container ID: 1161901004-H

Print Date: 05/19/2016 12:06:02PM

J flagging is activated

Results of **MW87B-0416**

Client Sample ID: **MW87B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901005
Lab Project ID: 1161901

Collection Date: 04/19/16 14:02
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Metals Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Mercury	0.949	J	1.00	0.500	ng/L	1		04/27/16 18:04

Batch Information

Analytical Batch: MCV5700
Analytical Method: EPA 1631 E
Analyst: NEG
Analytical Date/Time: 04/27/16 18:04
Container ID: 1161901005-A

Prep Batch: MXX29689
Prep Method: METHOD
Prep Date/Time: 04/21/16 17:45
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

Print Date: 05/19/2016 12:06:02PM

J flagging is activated

Results of **MW27-0416**

Client Sample ID: **MW27-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901006
Lab Project ID: 1161901

Collection Date: 04/19/16 17:15
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Metals Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Mercury	2.82		1.00	0.500	ng/L	1		04/27/16 18:09

Batch Information

Analytical Batch: MCV5700
Analytical Method: EPA 1631 E
Analyst: NEG
Analytical Date/Time: 04/27/16 18:09
Container ID: 1161901006-A

Prep Batch: MXX29689
Prep Method: METHOD
Prep Date/Time: 04/21/16 17:45
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

Print Date: 05/19/2016 12:06:02PM

J flagging is activated

Results of **MW87Z-0416**

Client Sample ID: **MW87Z-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901007
Lab Project ID: 1161901

Collection Date: 04/19/16 14:02
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Metals Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Mercury	0.581	J	1.00	0.500	ng/L	1		04/27/16 18:18

Batch Information

Analytical Batch: MCV5700
Analytical Method: EPA 1631 E
Analyst: NEG
Analytical Date/Time: 04/27/16 18:18
Container ID: 1161901007-A

Prep Batch: MXX29689
Prep Method: METHOD
Prep Date/Time: 04/21/16 17:45
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

Print Date: 05/19/2016 12:06:02PM

J flagging is activated

Results of **MW82A-0416**

Client Sample ID: **MW82A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901008
Lab Project ID: 1161901

Collection Date: 04/20/16 11:05
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Metals Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Mercury	1.31		1.00	0.500	ng/L	1		04/27/16 18:22

Batch Information

Analytical Batch: MCV5700
Analytical Method: EPA 1631 E
Analyst: NEG
Analytical Date/Time: 04/27/16 18:22
Container ID: 1161901008-A

Prep Batch: MXX29689
Prep Method: METHOD
Prep Date/Time: 04/21/16 17:45
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

Print Date: 05/19/2016 12:06:02PM

J flagging is activated

Results of **MW82B-0416**

Client Sample ID: **MW82B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901009
Lab Project ID: 1161901

Collection Date: 04/20/16 13:05
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Metals Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Mercury	1.62		1.00	0.500	ng/L	1		04/27/16 18:27

Batch Information

Analytical Batch: MCV5700
Analytical Method: EPA 1631 E
Analyst: NEG
Analytical Date/Time: 04/27/16 18:27
Container ID: 1161901009-A

Prep Batch: MXX29689
Prep Method: METHOD
Prep Date/Time: 04/21/16 17:45
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

Print Date: 05/19/2016 12:06:02PM

J flagging is activated

Results of **MW50A-0416**

Client Sample ID: **MW50A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901010
Lab Project ID: 1161901

Collection Date: 04/20/16 16:25
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Metals Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Mercury	9.22		1.00	0.500	ng/L	1		04/27/16 18:31

Batch Information

Analytical Batch: MCV5700
Analytical Method: EPA 1631 E
Analyst: NEG
Analytical Date/Time: 04/27/16 18:31
Container ID: 1161901010-A

Prep Batch: MXX29689
Prep Method: METHOD
Prep Date/Time: 04/21/16 17:45
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

Print Date: 05/19/2016 12:06:02PM

J flagging is activated

Results of **MW50B-0416**

Client Sample ID: **MW50B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901011
Lab Project ID: 1161901

Collection Date: 04/20/16 18:40
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Metals Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Mercury	1.01		1.00	0.500	ng/L	1		04/27/16 18:36

Batch Information

Analytical Batch: MCV5700
Analytical Method: EPA 1631 E
Analyst: NEG
Analytical Date/Time: 04/27/16 18:36
Container ID: 1161901011-A

Prep Batch: MXX29689
Prep Method: METHOD
Prep Date/Time: 04/21/16 17:45
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

Print Date: 05/19/2016 12:06:02PM

J flagging is activated

Results of **TB-3**

Client Sample ID: **TB-3**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901012
Lab Project ID: 1161901

Collection Date: 04/21/16 11:30
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		04/29/16 20:12
1,1,1-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:12
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		04/29/16 20:12
1,1,2-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:12
1,1-Dichloroethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:12
1,1-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:12
1,1-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:12
1,2,3-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:12
1,2,3-Trichloropropane	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:12
1,2,4-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:12
1,2,4-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:12
1,2-Dibromo-3-chloropropane	5.00	U	10.0	3.10	ug/L	1		04/29/16 20:12
1,2-Dibromoethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:12
1,2-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:12
1,2-Dichloroethane	0.250	U	0.500	0.150	ug/L	1		04/29/16 20:12
1,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:12
1,3,5-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:12
1,3-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:12
1,3-Dichloropropane	0.250	U	0.500	0.150	ug/L	1		04/29/16 20:12
1,4-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1		04/29/16 20:12
2,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:12
2-Butanone (MEK)	5.00	U	10.0	3.10	ug/L	1		04/29/16 20:12
2-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:12
2-Hexanone	5.00	U	10.0	3.10	ug/L	1		04/29/16 20:12
4-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:12
4-Isopropyltoluene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:12
4-Methyl-2-pentanone (MIBK)	5.00	U	10.0	3.10	ug/L	1		04/29/16 20:12
Benzene	0.200	U	0.400	0.120	ug/L	1		04/29/16 20:12
Bromobenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:12
Bromochloromethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:12
Bromodichloromethane	0.250	U	0.500	0.150	ug/L	1		04/29/16 20:12
Bromoform	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:12
Bromomethane	5.00	U	10.0	3.10	ug/L	1		04/29/16 20:12
Carbon disulfide	5.00	U	10.0	3.10	ug/L	1		04/29/16 20:12
Carbon tetrachloride	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:12
Chlorobenzene	0.250	U	0.500	0.150	ug/L	1		04/29/16 20:12
Chloroethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:12

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Results of **TB-3**

Client Sample ID: **TB-3**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901012
Lab Project ID: 1161901

Collection Date: 04/21/16 11:30
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroform	0.500	U	1.00	0.300	ug/L	1		04/29/16 20:12
Chloromethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:12
cis-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:12
cis-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		04/29/16 20:12
Dibromochloromethane	0.250	U	0.500	0.150	ug/L	1		04/29/16 20:12
Dibromomethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:12
Dichlorodifluoromethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:12
Ethylbenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:12
Freon-113	5.00	U	10.0	3.10	ug/L	1		04/29/16 20:12
Hexachlorobutadiene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:12
Isopropylbenzene (Cumene)	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:12
Methylene chloride	2.50	U	5.00	1.00	ug/L	1		04/29/16 20:12
Methyl-t-butyl ether	5.00	U	10.0	3.10	ug/L	1		04/29/16 20:12
Naphthalene	5.00	U	10.0	3.10	ug/L	1		04/29/16 20:12
n-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:12
n-Propylbenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:12
o-Xylene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:12
P & M -Xylene	1.00	U	2.00	0.620	ug/L	1		04/29/16 20:12
sec-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:12
Styrene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:12
tert-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:12
Tetrachloroethene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:12
Toluene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:12
trans-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:12
trans-1,3-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:12
Trichloroethene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:12
Trichlorofluoromethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:12
Vinyl acetate	5.00	U	10.0	3.10	ug/L	1		04/29/16 20:12
Vinyl chloride	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:12
Xylenes (total)	1.50	U	3.00	1.00	ug/L	1		04/29/16 20:12
Surrogates								
1,2-Dichloroethane-D4 (surr)	109		81-118		%	1		04/29/16 20:12
4-Bromofluorobenzene (surr)	96.6		85-114		%	1		04/29/16 20:12
Toluene-d8 (surr)	99.8		89-112		%	1		04/29/16 20:12

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Results of **TB-3**

Client Sample ID: **TB-3**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901012
Lab Project ID: 1161901

Collection Date: 04/21/16 11:30
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS15749
Analytical Method: SW8260B
Analyst: NRB
Analytical Date/Time: 04/29/16 20:12
Container ID: 1161901012-A

Prep Batch: VXX28753
Prep Method: SW5030B
Prep Date/Time: 04/29/16 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/19/2016 12:06:02PM

J flagging is activated

Results of **TB-4**

Client Sample ID: **TB-4**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901013
Lab Project ID: 1161901

Collection Date: 04/21/16 11:30
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.0500	U	0.100	0.0310	mg/L	1		04/26/16 00:38
Surrogates								
4-Bromofluorobenzene (surr)	79.9		50-150		%	1		04/26/16 00:38

Batch Information

Analytical Batch: VFC12973
Analytical Method: AK101
Analyst: S.P
Analytical Date/Time: 04/26/16 00:38
Container ID: 1161901013-A

Prep Batch: VXX28738
Prep Method: SW5030B
Prep Date/Time: 04/25/16 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/19/2016 12:06:02PM

J flagging is activated

Results of **TBHG-1**

Client Sample ID: **TBHG-1**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901014
Lab Project ID: 1161901

Collection Date: 04/19/16 14:02
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Metals Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Mercury	0.500	U	1.00	0.500	ng/L	1		04/27/16 19:07

Batch Information

Analytical Batch: MCV5701
Analytical Method: EPA 1631 E
Analyst: NEG
Analytical Date/Time: 04/27/16 19:07
Container ID: 1161901014-A

Prep Batch: MXX29690
Prep Method: METHOD
Prep Date/Time: 04/25/16 17:00
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

Print Date: 05/19/2016 12:06:02PM

J flagging is activated

Results of **EBT-0416**

Client Sample ID: **EBT-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901015
Lab Project ID: 1161901

Collection Date: 04/19/16 12:35
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Metals Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Mercury	0.500	U	1.00	0.500	ng/L	1		04/27/16 18:40

Batch Information

Analytical Batch: MCV5700
Analytical Method: EPA 1631 E
Analyst: NEG
Analytical Date/Time: 04/27/16 18:40
Container ID: 1161901015-A

Prep Batch: MXX29689
Prep Method: METHOD
Prep Date/Time: 04/21/16 17:45
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

Print Date: 05/19/2016 12:06:02PM

J flagging is activated

Results of **EBF-Lot#L1456**

Client Sample ID: **EBF-Lot#L1456**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901016
Lab Project ID: 1161901

Collection Date: 04/19/16 12:35
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Dissolved Metals**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Mercury	0.500	U	1.00	0.500	ng/L	1		04/27/16 19:12

Batch Information

Analytical Batch: MCV5701
Analytical Method: EPA 1631 E
Analyst: NEG
Analytical Date/Time: 04/27/16 19:12
Container ID: 1161901016-A

Prep Batch: MXX29690
Prep Method: METHOD
Prep Date/Time: 04/25/16 17:00
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

Print Date: 05/19/2016 12:06:02PM

J flagging is activated

Results of **MW39A-0416**

Client Sample ID: **MW39A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901017
Lab Project ID: 1161901

Collection Date: 04/21/16 11:30
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Dissolved Metals**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Mercury	0.500	U	1.00	0.500	ng/L	1		04/27/16 19:16

Batch Information

Analytical Batch: MCV5701
Analytical Method: EPA 1631 E
Analyst: NEG
Analytical Date/Time: 04/27/16 19:16
Container ID: 1161901017-B

Prep Batch: MXX29690
Prep Method: METHOD
Prep Date/Time: 04/25/16 17:00
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

Print Date: 05/19/2016 12:06:02PM

J flagging is activated

Results of **MW39A-0416**

Client Sample ID: **MW39A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901017
Lab Project ID: 1161901

Collection Date: 04/21/16 11:30
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

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

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Aluminum	4.90		2.00	0.620	ug/L	2.5		05/18/16 12:36
Antimony	0.0480	J	0.0500	0.0150	ug/L	2.5		05/18/16 12:36
Arsenic	25.0		0.800	0.200	ug/L	2.5		05/18/16 12:36
Barium	9.51		0.250	0.0400	ug/L	2.5		05/18/16 12:36
Beryllium	0.0250	U	0.0500	0.0250	ug/L	2.5		05/18/16 12:36
Bismuth	0.0250	U	0.0500	0.0150	ug/L	2.5		05/18/16 12:36
Boron	135		5.00	1.50	ug/L	2.5		05/18/16 12:36
Cadmium	0.0250	U	0.0500	0.0150	ug/L	2.5		05/18/16 12:36
Calcium	10500		50.0	15.0	ug/L	2.5		05/18/16 12:36
Chromium	1.11		0.500	0.150	ug/L	2.5		05/18/16 12:36
Cobalt	0.0832		0.0200	0.0100	ug/L	2.5		05/18/16 12:36
Copper	0.200	J	0.500	0.200	ug/L	2.5		05/18/16 12:36
Iron	37.3		20.0	6.20	ug/L	2.5		05/18/16 12:36
Lead	0.0500	U	0.100	0.0310	ug/L	2.5		05/18/16 12:36
Magnesium	4050		20.0	6.20	ug/L	2.5		05/18/16 12:36
Manganese	61.3		0.100	0.0310	ug/L	2.5		05/18/16 12:36
Molybdenum	1.86		0.0500	0.0150	ug/L	2.5		05/18/16 12:36
Nickel	1.83		0.620	0.0620	ug/L	2.5		05/18/16 12:36
Potassium	5100		50.0	15.0	ug/L	2.5		05/18/16 12:36
Selenium	0.500	U	1.00	0.310	ug/L	2.5		05/18/16 12:36
Silicon	14100		100	31.0	ug/L	2.5		05/18/16 12:36
Silver	0.0100	U	0.0200	0.00620	ug/L	2.5		05/18/16 12:36
Sodium	21200		200	62.0	ug/L	5		05/18/16 13:14
Thallium	0.0100	U	0.0200	0.00620	ug/L	2.5		05/18/16 12:36
Tin	0.100	U	0.200	0.0620	ug/L	2.5		05/18/16 12:36
Vanadium	0.620	J	1.00	0.310	ug/L	2.5		05/18/16 12:36
Zinc	1.55	U	3.10	0.400	ug/L	2.5		05/18/16 12:36

Batch Information

Analytical Batch: MMS9355
Analytical Method: 200.8 Low Level
Analyst: EAB
Analytical Date/Time: 05/18/16 12:36
Container ID: 1161901017-A

Prep Batch: MXX29753
Prep Method: E200.2
Prep Date/Time: 05/17/16 08:37
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 10 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Hardness as CaCO3	42.9		1.00	1.00	mg/L	2.5		05/18/16 12:36

Print Date: 05/19/2016 12:06:02PM

J flagging is activated

Results of **MW39A-0416**

Client Sample ID: **MW39A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901017
Lab Project ID: 1161901

Collection Date: 04/21/16 11:30
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

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

Batch Information

Analytical Batch: MMS9355
Analytical Method: SM21 2340B
Analyst: EAB
Analytical Date/Time: 05/18/16 12:36
Container ID: 1161901017-A

Prep Batch: MXX29753
Prep Method: E200.2
Prep Date/Time: 05/17/16 08:37
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 10 mL

Print Date: 05/19/2016 12:06:02PM

J flagging is activated

Results of **MW39B-0416**

Client Sample ID: **MW39B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901018
Lab Project ID: 1161901

Collection Date: 04/21/16 14:00
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Dissolved Metals**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Mercury	0.500	U	1.00	0.500	ng/L	1		04/27/16 19:21

Batch Information

Analytical Batch: MCV5701
Analytical Method: EPA 1631 E
Analyst: NEG
Analytical Date/Time: 04/27/16 19:21
Container ID: 1161901018-B

Prep Batch: MXX29690
Prep Method: METHOD
Prep Date/Time: 04/25/16 17:00
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

Print Date: 05/19/2016 12:06:02PM

J flagging is activated

Results of **MW39B-0416**

Client Sample ID: **MW39B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901018
Lab Project ID: 1161901

Collection Date: 04/21/16 14:00
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

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

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Aluminum	24.4		2.00	0.620	ug/L	2.5		05/18/16 12:38
Antimony	0.0627		0.0500	0.0150	ug/L	2.5		05/18/16 12:38
Arsenic	1.13		0.800	0.200	ug/L	2.5		05/18/16 12:38
Barium	59.0		0.250	0.0400	ug/L	2.5		05/18/16 12:38
Beryllium	0.0299	J	0.0500	0.0250	ug/L	2.5		05/18/16 12:38
Bismuth	0.0250	U	0.0500	0.0150	ug/L	2.5		05/18/16 12:38
Boron	6.97		5.00	1.50	ug/L	2.5		05/18/16 12:38
Cadmium	0.0574		0.0500	0.0150	ug/L	2.5		05/18/16 12:38
Calcium	30000		50.0	15.0	ug/L	2.5		05/18/16 12:38
Chromium	0.557		0.500	0.150	ug/L	2.5		05/18/16 12:38
Cobalt	13.1		0.0200	0.0100	ug/L	2.5		05/18/16 12:38
Copper	0.843		0.500	0.200	ug/L	2.5		05/18/16 12:38
Iron	7430		20.0	6.20	ug/L	2.5		05/18/16 12:38
Lead	0.0500	U	0.100	0.0310	ug/L	2.5		05/18/16 12:38
Magnesium	10500		20.0	6.20	ug/L	2.5		05/18/16 12:38
Manganese	916		0.100	0.0310	ug/L	2.5		05/18/16 12:38
Molybdenum	0.335		0.0500	0.0150	ug/L	2.5		05/18/16 12:38
Nickel	20.8		0.620	0.0620	ug/L	2.5		05/18/16 12:38
Potassium	3110		50.0	15.0	ug/L	2.5		05/18/16 12:38
Selenium	0.843	J	1.00	0.310	ug/L	2.5		05/18/16 12:38
Silicon	14100		100	31.0	ug/L	2.5		05/18/16 12:38
Silver	0.0100	U	0.0200	0.00620	ug/L	2.5		05/18/16 12:38
Sodium	24500		200	62.0	ug/L	5		05/18/16 13:17
Thallium	0.00648	J	0.0200	0.00620	ug/L	2.5		05/18/16 12:38
Tin	0.100	U	0.200	0.0620	ug/L	2.5		05/18/16 12:38
Vanadium	0.877	J	1.00	0.310	ug/L	2.5		05/18/16 12:38
Zinc	15.3		3.10	0.400	ug/L	2.5		05/18/16 12:38

Batch Information

Analytical Batch: MMS9355
Analytical Method: 200.8 Low Level
Analyst: EAB
Analytical Date/Time: 05/18/16 12:38
Container ID: 1161901018-A

Prep Batch: MXX29753
Prep Method: E200.2
Prep Date/Time: 05/17/16 08:37
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 10 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Hardness as CaCO3	118		1.00	1.00	mg/L	2.5		05/18/16 12:38

Print Date: 05/19/2016 12:06:02PM

J flagging is activated

Results of **MW39B-0416**

Client Sample ID: **MW39B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901018
Lab Project ID: 1161901

Collection Date: 04/21/16 14:00
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

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

Batch Information

Analytical Batch: MMS9355
Analytical Method: SM21 2340B
Analyst: EAB
Analytical Date/Time: 05/18/16 12:38
Container ID: 1161901018-A

Prep Batch: MXX29753
Prep Method: E200.2
Prep Date/Time: 05/17/16 08:37
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 10 mL

SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
t 907.562.2343 **f** 907.561.5301 www.us.sgs.com

Results of **MW87B-0416**

Client Sample ID: **MW87B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901019
Lab Project ID: 1161901

Collection Date: 04/19/16 14:02
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Dissolved Metals**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Mercury	0.519	J	1.00	0.500	ng/L	1		04/27/16 19:25

Batch Information

Analytical Batch: MCV5701
Analytical Method: EPA 1631 E
Analyst: NEG
Analytical Date/Time: 04/27/16 19:25
Container ID: 1161901019-A

Prep Batch: MXX29690
Prep Method: METHOD
Prep Date/Time: 04/25/16 17:00
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

Print Date: 05/19/2016 12:06:02PM

J flagging is activated

Results of **MW27-0416**

Client Sample ID: **MW27-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901020
Lab Project ID: 1161901

Collection Date: 04/19/16 17:15
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Dissolved Metals**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Mercury	0.510	J	1.00	0.500	ng/L	1		04/27/16 19:30

Batch Information

Analytical Batch: MCV5701
Analytical Method: EPA 1631 E
Analyst: NEG
Analytical Date/Time: 04/27/16 19:30
Container ID: 1161901020-A

Prep Batch: MXX29690
Prep Method: METHOD
Prep Date/Time: 04/25/16 17:00
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

Print Date: 05/19/2016 12:06:02PM

J flagging is activated

Results of **MW87Z-0416**

Client Sample ID: **MW87Z-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901021
Lab Project ID: 1161901

Collection Date: 04/19/16 14:02
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Dissolved Metals**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Mercury	0.768	J	1.00	0.500	ng/L	1		04/27/16 19:34

Batch Information

Analytical Batch: MCV5701
Analytical Method: EPA 1631 E
Analyst: NEG
Analytical Date/Time: 04/27/16 19:34
Container ID: 1161901021-A

Prep Batch: MXX29690
Prep Method: METHOD
Prep Date/Time: 04/25/16 17:00
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

Print Date: 05/19/2016 12:06:02PM

J flagging is activated

Results of **MW82A-0416**

Client Sample ID: **MW82A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901022
Lab Project ID: 1161901

Collection Date: 04/20/16 11:05
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Dissolved Metals**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Mercury	0.579	J	1.00	0.500	ng/L	1		04/27/16 19:43

Batch Information

Analytical Batch: MCV5701
Analytical Method: EPA 1631 E
Analyst: NEG
Analytical Date/Time: 04/27/16 19:43
Container ID: 1161901022-A

Prep Batch: MXX29690
Prep Method: METHOD
Prep Date/Time: 04/25/16 17:00
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

Print Date: 05/19/2016 12:06:02PM

J flagging is activated

Results of **MW82B-0416**

Client Sample ID: **MW82B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901023
Lab Project ID: 1161901

Collection Date: 04/20/16 13:05
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Dissolved Metals**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Mercury	0.500	U	1.00	0.500	ng/L	1		04/27/16 19:48

Batch Information

Analytical Batch: MCV5701
Analytical Method: EPA 1631 E
Analyst: NEG
Analytical Date/Time: 04/27/16 19:48
Container ID: 1161901023-A

Prep Batch: MXX29690
Prep Method: METHOD
Prep Date/Time: 04/25/16 17:00
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

Print Date: 05/19/2016 12:06:02PM

J flagging is activated

Results of **MW50A-0416**

Client Sample ID: **MW50A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901024
Lab Project ID: 1161901

Collection Date: 04/20/16 16:25
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Dissolved Metals**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Mercury	2.15		1.00	0.500	ng/L	1		05/13/16 16:55

Batch Information

Analytical Batch: MCV5707
Analytical Method: EPA 1631 E
Analyst: NEG
Analytical Date/Time: 05/13/16 16:55
Container ID: 1161901024-A

Prep Batch: MXX29757
Prep Method: METHOD
Prep Date/Time: 05/11/16 12:45
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

Print Date: 05/19/2016 12:06:02PM

J flagging is activated

Results of **MW50B-0416**

Client Sample ID: **MW50B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901025
Lab Project ID: 1161901

Collection Date: 04/20/16 18:40
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Dissolved Metals**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Mercury	0.708	J	1.00	0.500	ng/L	1		04/27/16 20:15

Batch Information

Analytical Batch: MCV5701
Analytical Method: EPA 1631 E
Analyst: NEG
Analytical Date/Time: 04/27/16 20:15
Container ID: 1161901025-A

Prep Batch: MXX29690
Prep Method: METHOD
Prep Date/Time: 04/25/16 17:00
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

Print Date: 05/19/2016 12:06:02PM

J flagging is activated

Results of **MW91A-0416**

Client Sample ID: **MW91A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901026
Lab Project ID: 1161901

Collection Date: 04/21/16 18:10
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

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

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Aluminum	11.3		2.00	0.620	ug/L	2.5		05/18/16 12:41
Antimony	0.0250	U	0.0500	0.0150	ug/L	2.5		05/18/16 12:41
Arsenic	7.70		0.800	0.200	ug/L	2.5		05/18/16 12:41
Barium	22.0		0.250	0.0400	ug/L	2.5		05/18/16 12:41
Beryllium	0.0250	U	0.0500	0.0250	ug/L	2.5		05/18/16 12:41
Bismuth	0.0250	U	0.0500	0.0150	ug/L	2.5		05/18/16 12:41
Boron	18.7		5.00	1.50	ug/L	2.5		05/18/16 12:41
Cadmium	0.0250	U	0.0500	0.0150	ug/L	2.5		05/18/16 12:41
Calcium	29700		50.0	15.0	ug/L	2.5		05/18/16 12:41
Chromium	0.190	J	0.500	0.150	ug/L	2.5		05/18/16 12:41
Cobalt	0.0948		0.0200	0.0100	ug/L	2.5		05/18/16 12:41
Copper	0.306	J	0.500	0.200	ug/L	2.5		05/18/16 12:41
Iron	1990		20.0	6.20	ug/L	2.5		05/18/16 12:41
Lead	0.0500	U	0.100	0.0310	ug/L	2.5		05/18/16 12:41
Magnesium	6530		20.0	6.20	ug/L	2.5		05/18/16 12:41
Manganese	965		0.100	0.0310	ug/L	2.5		05/18/16 12:41
Molybdenum	0.543		0.0500	0.0150	ug/L	2.5		05/18/16 12:41
Nickel	1.71		0.620	0.0620	ug/L	2.5		05/18/16 12:41
Potassium	3210		50.0	15.0	ug/L	2.5		05/18/16 12:41
Selenium	0.500	U	1.00	0.310	ug/L	2.5		05/18/16 12:41
Silicon	15700		100	31.0	ug/L	2.5		05/18/16 12:41
Silver	0.0100	U	0.0200	0.00620	ug/L	2.5		05/18/16 12:41
Sodium	6740		100	31.0	ug/L	2.5		05/18/16 12:41
Thallium	0.0100	U	0.0200	0.00620	ug/L	2.5		05/18/16 12:41
Tin	0.100	U	0.200	0.0620	ug/L	2.5		05/18/16 12:41
Vanadium	0.500	U	1.00	0.310	ug/L	2.5		05/18/16 12:41
Zinc	2.40	J	3.10	0.400	ug/L	2.5		05/18/16 12:41

Batch Information

Analytical Batch: MMS9355
Analytical Method: 200.8 Low Level
Analyst: EAB
Analytical Date/Time: 05/18/16 12:41
Container ID: 1161901026-A

Prep Batch: MXX29753
Prep Method: E200.2
Prep Date/Time: 05/17/16 08:37
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 10 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Hardness as CaCO3	101		1.00	1.00	mg/L	2.5		05/18/16 12:41

Print Date: 05/19/2016 12:06:02PM

J flagging is activated

Results of **MW91A-0416**

Client Sample ID: **MW91A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901026
Lab Project ID: 1161901

Collection Date: 04/21/16 18:10
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

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

Batch Information

Analytical Batch: MMS9355
Analytical Method: SM21 2340B
Analyst: EAB
Analytical Date/Time: 05/18/16 12:41
Container ID: 1161901026-A

Prep Batch: MXX29753
Prep Method: E200.2
Prep Date/Time: 05/17/16 08:37
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 10 mL

Print Date: 05/19/2016 12:06:02PM

J flagging is activated

Results of **MW91Z-0416**

Client Sample ID: **MW91Z-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901027
Lab Project ID: 1161901

Collection Date: 04/21/16 18:10
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

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

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Aluminum	13.7		2.00	0.620	ug/L	2.5		05/18/16 12:44
Antimony	0.0250	U	0.0500	0.0150	ug/L	2.5		05/18/16 12:44
Arsenic	7.63		0.800	0.200	ug/L	2.5		05/18/16 12:44
Barium	21.8		0.250	0.0400	ug/L	2.5		05/18/16 12:44
Beryllium	0.0250	U	0.0500	0.0250	ug/L	2.5		05/18/16 12:44
Bismuth	0.0250	U	0.0500	0.0150	ug/L	2.5		05/18/16 12:44
Boron	19.1		5.00	1.50	ug/L	2.5		05/18/16 12:44
Cadmium	0.0250	U	0.0500	0.0150	ug/L	2.5		05/18/16 12:44
Calcium	30000		50.0	15.0	ug/L	2.5		05/18/16 12:44
Chromium	0.250	U	0.500	0.150	ug/L	2.5		05/18/16 12:44
Cobalt	0.104		0.0200	0.0100	ug/L	2.5		05/18/16 12:44
Copper	0.250	J	0.500	0.200	ug/L	2.5		05/18/16 12:44
Iron	2070		20.0	6.20	ug/L	2.5		05/18/16 12:44
Lead	0.0500	U	0.100	0.0310	ug/L	2.5		05/18/16 12:44
Magnesium	6620		20.0	6.20	ug/L	2.5		05/18/16 12:44
Manganese	982		0.100	0.0310	ug/L	2.5		05/18/16 12:44
Molybdenum	0.574		0.0500	0.0150	ug/L	2.5		05/18/16 12:44
Nickel	1.67		0.620	0.0620	ug/L	2.5		05/18/16 12:44
Potassium	3170		50.0	15.0	ug/L	2.5		05/18/16 12:44
Selenium	0.500	U	1.00	0.310	ug/L	2.5		05/18/16 12:44
Silicon	16200		100	31.0	ug/L	2.5		05/18/16 12:44
Silver	0.0100	U	0.0200	0.00620	ug/L	2.5		05/18/16 12:44
Sodium	6690		100	31.0	ug/L	2.5		05/18/16 12:44
Thallium	0.0100	U	0.0200	0.00620	ug/L	2.5		05/18/16 12:44
Tin	0.100	U	0.200	0.0620	ug/L	2.5		05/18/16 12:44
Vanadium	0.500	U	1.00	0.310	ug/L	2.5		05/18/16 12:44
Zinc	1.76	J	3.10	0.400	ug/L	2.5		05/18/16 12:44

Batch Information

Analytical Batch: MMS9355
Analytical Method: 200.8 Low Level
Analyst: EAB
Analytical Date/Time: 05/18/16 12:44
Container ID: 1161901027-A

Prep Batch: MXX29753
Prep Method: E200.2
Prep Date/Time: 05/17/16 08:37
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 10 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Hardness as CaCO3	102		1.00	1.00	mg/L	2.5		05/18/16 12:44

Print Date: 05/19/2016 12:06:02PM

J flagging is activated

Results of **MW91Z-0416**

Client Sample ID: **MW91Z-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161901027
Lab Project ID: 1161901

Collection Date: 04/21/16 18:10
Received Date: 04/22/16 13:07
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

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

Batch Information

Analytical Batch: MMS9355
Analytical Method: SM21 2340B
Analyst: EAB
Analytical Date/Time: 05/18/16 12:44
Container ID: 1161901027-A

Prep Batch: MXX29753
Prep Method: E200.2
Prep Date/Time: 05/17/16 08:37
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 10 mL

SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
t 907.562.2343 **f** 907.561.5301 www.us.sgs.com

Method Blank

Blank ID: MB for HBN 1732609 [MXX/29689]
Blank Lab ID: 1321965

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161901001, 1161901002, 1161901005, 1161901006, 1161901007, 1161901008, 1161901009, 1161901010, 1161901011, 1161901015

Results by **EPA 1631 E**

Parameter	Results	LOQ/CL	DL	Units
Mercury	0.500U	1.00	0.500	ng/L

Batch Information

Analytical Batch: MCV5700
Analytical Method: EPA 1631 E
Instrument:
Analyst: NEG
Analytical Date/Time: 4/27/2016 4:25:16PM

Prep Batch: MXX29689
Prep Method: METHOD
Prep Date/Time: 4/21/2016 5:45:00PM
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

Print Date: 05/19/2016 12:07:52PM

Method Blank

Blank ID: MB for HBN 1732609 [MXX/29689]
Blank Lab ID: 1321966

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161901001, 1161901002, 1161901005, 1161901006, 1161901007, 1161901008, 1161901009, 1161901010, 1161901011, 1161901015

Results by **EPA 1631 E**

Parameter	Results	LOQ/CL	DL	Units
Mercury	0.500U	1.00	0.500	ng/L

Batch Information

Analytical Batch: MCV5700
Analytical Method: EPA 1631 E
Instrument:
Analyst: NEG
Analytical Date/Time: 4/27/2016 5:01:06PM

Prep Batch: MXX29689
Prep Method: METHOD
Prep Date/Time: 4/21/2016 5:45:00PM
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

Print Date: 05/19/2016 12:07:52PM

Method Blank

Blank ID: MB for HBN 1732609 [MXX/29689]
Blank Lab ID: 1321969

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161901001, 1161901002, 1161901005, 1161901006, 1161901007, 1161901008, 1161901009, 1161901010, 1161901011, 1161901015

Results by **EPA 1631 E**

Parameter	Results	LOQ/CL	DL	Units
Mercury	0.500U	1.00	0.500	ng/L

Batch Information

Analytical Batch: MCV5700
Analytical Method: EPA 1631 E
Instrument:
Analyst: NEG
Analytical Date/Time: 4/27/2016 5:27:58PM

Prep Batch: MXX29689
Prep Method: METHOD
Prep Date/Time: 4/21/2016 5:45:00PM
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

Print Date: 05/19/2016 12:07:52PM

Method Blank

Blank ID: MB for HBN 1732609 [MXX/29689]
Blank Lab ID: 1321971

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161901001, 1161901002, 1161901005, 1161901006, 1161901007, 1161901008, 1161901009, 1161901010, 1161901011, 1161901015

Results by **EPA 1631 E**

Parameter	Results	LOQ/CL	DL	Units
Mercury	0.500U	1.00	0.500	ng/L

Batch Information

Analytical Batch: MCV5700
Analytical Method: EPA 1631 E
Instrument:
Analyst: NEG
Analytical Date/Time: 4/27/2016 6:13:42PM

Prep Batch: MXX29689
Prep Method: METHOD
Prep Date/Time: 4/21/2016 5:45:00PM
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

Print Date: 05/19/2016 12:07:52PM

Method Blank

Blank ID: MB for HBN 1732609 [MXX/29689]
Blank Lab ID: 1321974

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161901001, 1161901002, 1161901005, 1161901006, 1161901007, 1161901008, 1161901009, 1161901010, 1161901011, 1161901015

Results by **EPA 1631 E**

Parameter	Results	LOQ/CL	DL	Units
Mercury	0.500U	1.00	0.500	ng/L

Batch Information

Analytical Batch: MCV5700
Analytical Method: EPA 1631 E
Instrument:
Analyst: NEG
Analytical Date/Time: 4/27/2016 6:54:10PM

Prep Batch: MXX29689
Prep Method: METHOD
Prep Date/Time: 4/21/2016 5:45:00PM
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

Print Date: 05/19/2016 12:07:52PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161901 [MXX29689]
Blank Spike Lab ID: 1321963
Date Analyzed: 04/27/2016 16:16

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161901001, 1161901002, 1161901005, 1161901006, 1161901007, 1161901008, 1161901009, 1161901010, 1161901011, 1161901015

Results by **EPA 1631 E**

Blank Spike (ng/L)

Parameter	Spike	Result	Rec (%)	CL
Mercury	25	26.5	106	(77-123)

Batch Information

Analytical Batch: **MCV5700**
Analytical Method: **EPA 1631 E**
Instrument:
Analyst: **NEG**

Prep Batch: **MXX29689**
Prep Method: **METHOD**
Prep Date/Time: **04/21/2016 17:45**
Spike Init Wt./Vol.: 25 ng/L Extract Vol: 50 mL
Dupe Init Wt./Vol.: Extract Vol:

Print Date: 05/19/2016 12:07:57PM

Matrix Spike Summary

Original Sample ID: 1161898001
MS Sample ID: 1321967 MS
MSD Sample ID: 1321968 MSD

Analysis Date: 04/27/2016 17:14
Analysis Date: 04/27/2016 17:19
Analysis Date: 04/27/2016 17:23
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161901001, 1161901002, 1161901005, 1161901006, 1161901007, 1161901008, 1161901009, 1161901010, 1161901011, 1161901015

Results by **EPA 1631 E**

		Matrix Spike (ng/L)			Spike Duplicate (ng/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Mercury	1.33	25.0	21	79	25.0	20.7	78	71-125	1.40	(< 24)

Batch Information

Analytical Batch: MCV5700
Analytical Method: EPA 1631 E
Instrument:
Analyst: NEG
Analytical Date/Time: 4/27/2016 5:19:02PM

Prep Batch: MXX29689
Prep Method: Digestion Low Level Mercury (W)
Prep Date/Time: 4/21/2016 5:45:00PM
Prep Initial Wt./Vol.: 50.00mL
Prep Extract Vol: 50.00mL

Print Date: 05/19/2016 12:08:00PM

Matrix Spike Summary

Original Sample ID: 1161901015
MS Sample ID: 1321972 MS
MSD Sample ID: 1321973 MSD

Analysis Date: 04/27/2016 18:40
Analysis Date: 04/27/2016 18:45
Analysis Date: 04/27/2016 18:49
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161901001, 1161901002, 1161901005, 1161901006, 1161901007, 1161901008, 1161901009, 1161901010, 1161901011, 1161901015

Results by **EPA 1631 E**

		Matrix Spike (ng/L)			Spike Duplicate (ng/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Mercury	0.500U	25.0	20.7	83	25.0	21.0	84	71-125	1.60	(< 24)

Batch Information

Analytical Batch: MCV5700
Analytical Method: EPA 1631 E
Instrument:
Analyst: NEG
Analytical Date/Time: 4/27/2016 6:45:11PM

Prep Batch: MXX29689
Prep Method: Digestion Low Level Mercury (W)
Prep Date/Time: 4/21/2016 5:45:00PM
Prep Initial Wt./Vol.: 50.00mL
Prep Extract Vol: 50.00mL

Print Date: 05/19/2016 12:08:00PM

Method Blank

Blank ID: MB for HBN 1732610 9M[[X2/ 6/ 8]
Blank Lab ID: 1321/ / 5

MairxW (aier uScrfaEe, . ffGd rocn) R

QC for Samples:
1161/ 81810, 1161/ 81816, 1161/ 81817, 1161/ 81815, 1161/ 8181/ , 1161/ 81828, 1161/ 81821, 1161/ 81822, 1161/ 81823, 1161/ 8182t

y esclis bU **EPA 1631 E**

garameier	y esclis	LPQXCL	DL	Onxis
MerEcrU	8G88O	1G88	8G88	nAXL

Batch Information

hnalUxEal BaiEV: MCTt 781
hnalUxEal MeiVo): . gh 1631 .
Insircmeni:
hnalUsi: N. d
hnalUxEal DaieX4xme: 0X27X2816 7:83:85gM

grep BaiEV: M[[2/ 6/ 8
grep MeiVo): M. 4HPD
grep DaieX4xme: 0X2t X2816 t :88:88gM
grep InxixaI (iGXTolG t 8 mL
grep . WraEi Tol: t 8 mL

grxni Daie: 8t Xl/ X2816 12:85:82gM

Method Blank

Blank ID: MB for HBN 1732610 9M[[X2/ 6/ 8]
Blank Lab ID: 1321/ / /

MairxW (aier uScrfaEe, . ffGd rocn) R

QC for Samples:
1161/ 81810, 1161/ 81816, 1161/ 81817, 1161/ 81815, 1161/ 8181/ , 1161/ 81828, 1161/ 81821, 1161/ 81822, 1161/ 81823, 1161/ 8182t

y esclis bU **EPA 1631 E**

garameier	y esclis	LPQXCL	DL	Onxis
MerEcrU	8G88O	1G88	8G88	nAXL

Batch Information

hnalUxEal BaiEV: MCTt 781
hnalUxEal MeiVo): . gh 1631 .
Insircmeni:
hnalUsi: N. d
hnalUxEal DaieX4xme: 0X27X2816 7:3/ :13gM

grep BaiEV: M[[2/ 6/ 8
grep MeiVo): M. 4HPD
grep DaieX4xme: 0X2t X2816 t :88:88gM
grep InxixaI (iGXTolG t 8 mL
grep . WraEi Tol: t 8 mL

grxni Daie: 8t Xl/ X2816 12:85:82gM

Method Blank

Blank ID: MB for HBN 1732610 9M[[X2/ 6/ 8]
Blank Lab ID: 1322882

MairxW (aier uScrfaEe, . ffGd rocn) R

QC for Samples:
1161/ 81810, 1161/ 81816, 1161/ 81817, 1161/ 81815, 1161/ 8181/ , 1161/ 81828, 1161/ 81821, 1161/ 81822, 1161/ 81823, 1161/ 8182t

y esclis bU **EPA 1631 E**

garameier	y esclis	LPQXCL	DL	Onxis
MerEcrU	8G88O	1G88	8G88	nAXL

Batch Information

hnalUxEal BaiEV: MCTt 781
hnalUxEal MeiVo): . gh 1631 .
Insircmeni:
hnalUsi: N. d
hnalUxEal DaieX4xme: 0X27X2816 5:86:10gM

grep BaiEV: M[[2/ 6/ 8
grep MeiVo): M. 4HPD
grep DaieX4xme: 0X2t X2816 t :88:88gM
grep InxixaI (iGXTolG t 8 mL
grep . WraEi Tol: t 8 mL

grxni Daie: 8t Xl/ X2816 12:85:82gM

Method Blank

Blank ID: MB for HBN 1732610 9M[[X2/ 6/ 8]
Blank Lab ID: 1322880

MairxW (aier uScrfaEe, . ffGd rocn) R

QC for Samples:
1161/ 81810, 1161/ 81816, 1161/ 81817, 1161/ 81815, 1161/ 8181/ , 1161/ 81828, 1161/ 81821, 1161/ 81822, 1161/ 81823, 1161/ 8182t

y esclis bU EPA 1631 E

garameier	y esclis	LPQXCL	DL	Onxis
MerEcrU	8G88O	1G88	8G88	nAXL

Batch Information

hnalUxEal BaiEV: MCTt 781
hnalUxEal MeiVo): . gh 1631 .
Insircmeni:
hnalUsi: N. d
hnalUxEal DaieX4xme: 0X27X2816 5:02:28gM

grep BaiEV: M[[2/ 6/ 8
grep MeiVo): M. 4HPD
grep DaieX4xme: 0X2t X2816 t :88:88gM
grep InxixaI (iGXTolG t 8 mL
grep . WraEi Tol: t 8 mL

grxni Daie: 8t X/ X2816 12:85:82gM

Method Blank

Blank ID: MB for HBN 1732610 9M[[X2/ 6/ 8]
Blank Lab ID: 1322887

MairxW(aier uScrfaEe, . ffGd rocn) R

QC for Samples:
1161/ 81810, 1161/ 81816, 1161/ 81817, 1161/ 81815, 1161/ 8181/ , 1161/ 81828, 1161/ 81821, 1161/ 81822, 1161/ 81823, 1161/ 8182t

y esclis bU EPA 1631 E

garameier	y esclis	LPQXCL	DL	Onxis
MerEcrU	8G88O	1G88	8G88	nAXL

Batch Information

hnalUxEal BaiEV: MCTt 781
hnalUxEal MeiVo): . gh 1631 .
Insircmeni:
hnalUsi: N. d
hnalUxEal DaieX4xme: 0X27X2816 / :13:t / gM

grep BaiEV: M[[2/ 6/ 8
grep MeiVo): M. 4HPD
grep DaieX4xme: 0X2t X2816 t :88:88gM
grep InxixaI (iGXTolG t 8 mL
grep . WraEi Tol: t 8 mL

grxni Daie: 8t Xl/ X2816 12:85:82gM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161901 [MXX296908
Blank Spike La] ID: 1b21996
Da3e t nalAyez: 0d42/ 42016 16:16

Ma3iu: x a3er W8srfa(ec, ffEc. rosnzG

g C for SaP pleR 116190101dc1161901016c116190101/ c116190101Qc1161901019c1161901020c1161901021c 1161901022c116190102bc1161901025

7 eRsl3R] A EPA 1631 E

Blank Spike W%4LG

) araP e3er	Spike	7 eRsl3	7 e(Wh G	CL
Mer(srA	25	26E5	106	W / -12b G

Batch Information

t nalA3(al Ba3(h: **MCV5701**
t nalA3(al Me3noz: **EPA 1631 E**
InR3sP en3
t nalAR3 **NEG**

) rep Ba3(h: **MXX29690**
) rep Me3noz: **METHOD**
) rep Da3e4TiP e: **04/25/2016 17:00**
Spike Ini3x 34VolE 25 n%4L , u3a(3Vol: 50 P L
Dspe Ini3x 34VolE , u3a(3Vol:

) rin3Da3e: 0541942016 12:0Q0/) M

Matrix Spike Summary

Original Sample ID: 1161924007
MS Sample ID: 1322000 MS
MSD Sample ID: 1322001 MSD

Analysis Date: 04/27/2016 19:52
Analysis Date: 04/27/2016 19:57
Analysis Date: 04/27/2016 20:01
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161901014, 1161901016, 1161901017, 1161901018, 1161901019, 1161901020, 1161901021, 1161901022, 1161901023, 1161901025

Results by **EPA 1631 E**

		Matrix Spike (ng/L)			Spike Duplicate (ng/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Mercury	3.33	25.0	24.6	85	25.0	23.9	82	71-125	3.10	(< 24)

Batch Information

Analytical Batch: MCV5701
Analytical Method: EPA 1631 E
Instrument: PSA Millennium mercury AF
Analyst: NEG
Analytical Date/Time: 4/27/2016 7:57:00PM

Prep Batch: MXX29690
Prep Method: Digestion Low Level Mercury (W)
Prep Date/Time: 4/25/2016 5:00:00PM
Prep Initial Wt./Vol.: 50.00mL
Prep Extract Vol: 50.00mL

Print Date: 05/19/2016 12:08:08PM

Matrix Spike Summary

Original Sample ID: 1161924014
MS Sample ID: 1322005 MS
MSD Sample ID: 1322006 MSD

Analysis Date: 04/27/2016 21:00
Analysis Date: 04/27/2016 21:04
Analysis Date: 04/27/2016 21:09
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161901014, 1161901016, 1161901017, 1161901018, 1161901019, 1161901020, 1161901021, 1161901022, 1161901023, 1161901025

Results by **EPA 1631 E**

		Matrix Spike (ng/L)			Spike Duplicate (ng/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Mercury	0.500U	25.0	22.3	89	25.0	22.5	90	71-125	0.84	(< 24)

Batch Information

Analytical Batch: MCV5701
Analytical Method: EPA 1631 E
Instrument: PSA Millennium mercury AF
Analyst: NEG
Analytical Date/Time: 4/27/2016 9:04:00PM

Prep Batch: MXX29690
Prep Method: Digestion Low Level Mercury (W)
Prep Date/Time: 4/25/2016 5:00:00PM
Prep Initial Wt./Vol.: 50.00mL
Prep Extract Vol: 50.00mL

Print Date: 05/19/2016 12:08:08PM

Method Blank

Blank ID: MB for HBN 1734141 [MXX/29753]
Blank Lab ID: 1324624

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161901001, 1161901002, 1161901003, 1161901004, 1161901017, 1161901018, 1161901026, 1161901027

Results by **200.8 Low Level**

Parameter	Results	LOQ/CL	DL	Units
Aluminum	1.00U	2.00	0.620	ug/L
Antimony	0.0250U	0.0500	0.0150	ug/L
Arsenic	0.400U	0.800	0.200	ug/L
Barium	0.942*	0.250	0.0400	ug/L
Beryllium	0.0250U	0.0500	0.0250	ug/L
Bismuth	0.0250U	0.0500	0.0150	ug/L
Boron	2.50U	5.00	1.50	ug/L
Cadmium	0.0250U	0.0500	0.0150	ug/L
Calcium	25.0U	50.0	15.0	ug/L
Chromium	0.250U	0.500	0.150	ug/L
Cobalt	0.0100U	0.0200	0.0100	ug/L
Copper	0.250U	0.500	0.200	ug/L
Iron	10.0U	20.0	6.20	ug/L
Lead	0.0500U	0.100	0.0310	ug/L
Magnesium	10.0U	20.0	6.20	ug/L
Manganese	0.0500U	0.100	0.0310	ug/L
Molybdenum	0.0250U	0.0500	0.0150	ug/L
Nickel	0.310U	0.620	0.0620	ug/L
Potassium	25.0U	50.0	15.0	ug/L
Selenium	0.500U	1.00	0.310	ug/L
Silicon	50.0U	100	31.0	ug/L
Silver	0.0100U	0.0200	0.00620	ug/L
Sodium	50.0U	100	31.0	ug/L
Thallium	0.0100U	0.0200	0.00620	ug/L
Tin	0.100U	0.200	0.0620	ug/L
Vanadium	0.500U	1.00	0.310	ug/L
Zinc	1.55U	3.10	0.400	ug/L

Batch Information

Analytical Batch: MMS9355
Analytical Method: 200.8 Low Level
Instrument: Perkin Elmer Nexlon P5
Analyst: EAB
Analytical Date/Time: 5/18/2016 11:55:01AM

Prep Batch: MXX29753
Prep Method: E200.2
Prep Date/Time: 5/17/2016 8:37:25AM
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 10 mL

SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
t 907.562.2343 f 907.561.5301 www.us.sgs.com

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161901 [MXX29753]
Blank Spike Lab ID: 1324625
Date Analyzed: 05/18/2016 11:57

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161901001, 1161901002, 1161901003, 1161901004, 1161901017, 1161901018, 1161901026, 1161901027

Results by **200.8 Low Level**

Blank Spike (ug/L)

Parameter	Spike	Result	Rec (%)	CL
Aluminum	50	52.8	106	(85-115)
Antimony	5	5.40	108	(85-115)
Arsenic	25	25.4	102	(85-115)
Barium	25	24.3	97	(85-115)
Beryllium	12.5	12.8	102	(85-115)
Bismuth	12.5	12.9	103	(85-115)
Boron	50	50.3	101	(85-115)
Cadmium	12.5	12.7	102	(85-115)
Calcium	5000	4770	95	(85-115)
Chromium	12.5	13.0	104	(85-115)
Cobalt	12.5	12.8	102	(85-115)
Copper	25	24.9	100	(85-115)
Iron	500	521	104	(85-115)
Lead	5	5.09	102	(85-115)
Magnesium	5000	5150	103	(85-115)
Manganese	50	50.6	101	(85-115)
Molybdenum	12.5	13.0	104	(85-115)
Nickel	12.5	12.8	103	(85-115)
Potassium	5000	4890	98	(85-115)
Selenium	25	25.4	102	(85-115)
Silicon	2500	2520	101	(85-115)
Silver	5	5.02	100	(85-115)
Sodium	5000	5210	104	(85-115)
Thallium	2.5	2.54	102	(85-115)
Tin	12.5	12.9	104	(85-115)
Vanadium	25	25.6	103	(85-115)
Zinc	50	51.3	103	(85-115)

Batch Information

Analytical Batch: **MMS9355**
Analytical Method: **200.8 Low Level**
Instrument: **Perkin Elmer Nexlon P5**
Analyst: **EAB**

Prep Batch: **MXX29753**
Prep Method: **E200.2**
Prep Date/Time: **05/17/2016 08:37**
Spike Init Wt./Vol.: 50 ug/L Extract Vol: 10 mL
Dupe Init Wt./Vol.: Extract Vol:

Print Date: 05/19/2016 12:08:13PM

Matrix Spike Summary

Original Sample ID: 1324889
MS Sample ID: 1324647 MS
MSD Sample ID: 1324648 MSD

Analysis Date: 05/18/2016 10:25
Analysis Date: 05/18/2016 10:28
Analysis Date: 05/18/2016 10:31
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161901001, 1161901002, 1161901003, 1161901004, 1161901017, 1161901018, 1161901026, 1161901027

Results by **200.8 Low Level**

		Matrix Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Aluminum	29.4	50.0	82.4	106	50.0	87.7	117	70-130	6.20	(< 20)
Antimony	0.0580	5.00	5.63	111	5.00	5.61	111	70-130	0.41	(< 20)
Arsenic	0.400U	25.0	25.8	103	25.0	26.2	105	70-130	1.50	(< 20)
Barium	1.73	25.0	28.3	106	25.0	28.3	106	70-130	0.09	(< 20)
Beryllium	0.0250U	12.5	12	96	12.5	12.2	97	70-130	1.40	(< 20)
Bismuth	0.0250U	12.5	12.5	100	12.5	12.6	101	70-130	1.30	(< 20)
Boron	33.3	50.0	80	93	50.0	79.2	92	70-130	1.10	(< 20)
Cadmium	0.186	12.5	13.4	106	12.5	13.3	105	70-130	0.97	(< 20)
Calcium	7230	5000	11700	90	5000	12000	95	70-130	2.20	(< 20)
Chromium	1.76	12.5	14.3	101	12.5	15.4	109	70-130	7.20	(< 20)
Cobalt	0.347	12.5	13.3	104	12.5	13.9	108	70-130	4.50	(< 20)
Copper	7.66	25.0	31.9	97	25.0	33.4	103	70-130	4.70	(< 20)
Iron	5980	500	5770	-42 *	500	6120	29 *	70-130	5.90	(< 20)
Lead	6.50	5.00	11.1	93	5.00	11.3	96	70-130	1.60	(< 20)
Magnesium	3380	5000	8110	95	5000	8160	96	70-130	0.68	(< 20)
Manganese	147	50.0	189	83	50.0	199	103	70-130	5.20	(< 20)
Molybdenum	0.330	12.5	13.6	107	12.5	14.1	110	70-130	3.50	(< 20)
Nickel	2.40	12.5	15.2	102	12.5	15.8	107	70-130	3.80	(< 20)
Potassium	7410	5000	12300	97	5000	12600	104	70-130	2.70	(< 20)
Selenium	0.500U	25.0	24.2	97	25.0	24.9	100	70-130	2.60	(< 20)
Silver	0.0100U	5.00	5.4	108	5.00	5.43	109	70-130	0.52	(< 20)
Sodium	9930	5000	14600	92	5000	14500	91	70-130	0.40	(< 20)
Thallium	0.0100U	2.50	2.57	103	2.50	2.61	105	70-130	1.80	(< 20)
Tin	0.0699J	12.5	13.2	105	12.5	13.3	106	70-130	0.65	(< 20)
Vanadium	0.500U	25.0	25.5	102	25.0	26.0	104	70-130	2.10	(< 20)
Zinc	950	50.0	941	-18 *	50.0	957	14 *	70-130	1.70	(< 20)

Batch Information

Analytical Batch: MMS9354
Analytical Method: 200.8 Low Level
Instrument: Perkin Elmer NexIon P5
Analyst: VDL
Analytical Date/Time: 5/18/2016 10:28:25AM

Prep Batch: MXX29753
Prep Method: LL Digest for Metals on ICP-MS
Prep Date/Time: 5/17/2016 8:37:25AM
Prep Initial Wt./Vol.: 50.00mL
Prep Extract Vol: 10.00mL

Print Date: 05/19/2016 12:08:16PM

Bench Spike Summary

Original Sample ID: 1324889
MS Sample ID: 1324649 BND
MSD Sample ID:

Analysis Date: 05/18/2016 10:12
Analysis Date: 05/18/2016 10:22
Analysis Date:
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161901001, 1161901002, 1161901003, 1161901004, 1161901017, 1161901018, 1161901026, 1161901027

Results by **200.8 Low Level**

		Matrix Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Iron	5980	2000	8090	105				70-130		
Zinc	950	200	1160	105				70-130		

Batch Information

Analytical Batch: MMS9354
Analytical Method: 200.8 Low Level
Instrument: Perkin Elmer NexIon P5
Analyst: VDL
Analytical Date/Time: 5/18/2016 10:22:37AM

Prep Batch: MXX29753
Prep Method: LL Digest for Metals on ICP-MS
Prep Date/Time: 5/17/2016 8:37:25AM
Prep Initial Wt./Vol.: 50.00mL
Prep Extract Vol: 10.00mL

Print Date: 05/19/2016 12:08:16PM

Method Blank

Blank ID: MB for HBN 1734158 [MXX/29757]
Blank Lab ID: 1324696

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161901024

Results by **EPA 1631 E**

Parameter	Results	LOQ/CL	DL	Units
Mercury	0.500U	1.00	0.500	ng/L

Batch Information

Analytical Batch: MCV5707
Analytical Method: EPA 1631 E
Instrument:
Analyst: NEG
Analytical Date/Time: 5/13/2016 4:50:31PM

Prep Batch: MXX29757
Prep Method: METHOD
Prep Date/Time: 5/11/2016 12:45:00PM
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

Print Date: 05/19/2016 12:08:25PM

Method Blank

Blank ID: MB for HBN 1734158 [MXX/29757]
Blank Lab ID: 1324697

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161901024

Results by **EPA 1631 E**

Parameter	Results	LOQ/CL	DL	Units
Mercury	0.500U	1.00	0.500	ng/L

Batch Information

Analytical Batch: MCV5707
Analytical Method: EPA 1631 E
Instrument:
Analyst: NEG
Analytical Date/Time: 5/13/2016 5:26:20PM

Prep Batch: MXX29757
Prep Method: METHOD
Prep Date/Time: 5/11/2016 12:45:00PM
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

Print Date: 05/19/2016 12:08:25PM

Method Blank

Blank ID: MB for HBN 1734158 [MXX/29757]
Blank Lab ID: 1324701

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161901024

Results by **EPA 1631 E**

Parameter	Results	LOQ/CL	DL	Units
Mercury	0.500U	1.00	0.500	ng/L

Batch Information

Analytical Batch: MCV5707
Analytical Method: EPA 1631 E
Instrument:
Analyst: NEG
Analytical Date/Time: 5/13/2016 6:06:39PM

Prep Batch: MXX29757
Prep Method: METHOD
Prep Date/Time: 5/11/2016 12:45:00PM
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

Print Date: 05/19/2016 12:08:25PM

Method Blank

Blank ID: MB for HBN 1734158 [MXX/29757]
Blank Lab ID: 1324702

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161901024

Results by **EPA 1631 E**

Parameter	Results	LOQ/CL	DL	Units
Mercury	0.500U	1.00	0.500	ng/L

Batch Information

Analytical Batch: MCV5707
Analytical Method: EPA 1631 E
Instrument:
Analyst: NEG
Analytical Date/Time: 5/13/2016 6:29:48PM

Prep Batch: MXX29757
Prep Method: METHOD
Prep Date/Time: 5/11/2016 12:45:00PM
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

Print Date: 05/19/2016 12:08:25PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161901 [MXX298] 8b
Blank Spike La3 ID: 1t 2A69A
Daye z nald4e/ : 0] 7\t 72016 16:A1

Mayrix: Wayer (Surface, Eff., Groun/)

QC for Samples: 116190102A

Resulys 3d **EPA 1631 E**

Blank Spike (ng7L)

Parameyer	Spike	Resuly	Rec (%)	CL
Mercurd	2]	2] .8	10t	(88512t)

Batch Information

z naldyical Bayc- : **MCV5707**
z naldyical Mey- o/ : **EPA 1631 E**
Insyrumeny.
z naldsy. **NEG**

Prep Bayc- : **MXX29757**
Prep Mey- o/ : **METHOD**
Prep Daye7hime: **054\14\2016 12/: 5**
Spike IniyWy.7Tol.: 2] ng7L ExyracyTol:] 0 mL
Dupe IniyWy.7Tol.: ExyracyTol:

PrinyDaye: 0] 7\97\2016 12:0V:2VPM

Matrix Spike Summary

Original Sample ID: 1162159001
MS Sample ID: 1324698 MS
MSD Sample ID: 1324699 MSD

QC for Samples: 1161901024

Analysis Date: 05/13/2016 18:47
Analysis Date: 05/13/2016 18:52
Analysis Date: 05/13/2016 18:56
Matrix: Water (Surface, Eff., Ground)

Results by **EPA 1631 E**

		Matrix Spike (ng/L)			Spike Duplicate (ng/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Mercury	91.7	25.0	137	182 *	25.0	137	182 *	71-125	0.04	(< 24)

Batch Information

Analytical Batch: MCV5707
Analytical Method: EPA 1631 E
Instrument:
Analyst: NEG
Analytical Date/Time: 5/13/2016 6:52:14PM

Prep Batch: MXX29757
Prep Method: Digestion Low Level Mercury (W)
Prep Date/Time: 5/11/2016 12:45:00PM
Prep Initial Wt./Vol.: 50.00mL
Prep Extract Vol: 50.00mL

Print Date: 05/19/2016 12:08:30PM

Matrix Spike Summary

Original Sample ID: 1162311001
MS Sample ID: 1324703 MS
MSD Sample ID: 1324704 MSD

QC for Samples: 1161901024

Analysis Date: 05/13/2016 18:34
Analysis Date: 05/13/2016 18:38
Analysis Date: 05/13/2016 18:43
Matrix: Water (Surface, Eff., Ground)

Results by **EPA 1631 E**

		Matrix Spike (ng/L)				Spike Duplicate (ng/L)					
Parameter	Sample	Spike	Result	Rec (%)		Spike	Result	Rec (%)		RPD (%)	RPD CL
Mercury	9.14	25.0	18.4	37	*	25.0	18.6	38	*	0.92	(< 24)

CL
71-125

Batch Information

Analytical Batch: MCV5707
Analytical Method: EPA 1631 E
Instrument:
Analyst: NEG
Analytical Date/Time: 5/13/2016 6:38:46PM

Prep Batch: MXX29757
Prep Method: Digestion Low Level Mercury (W)
Prep Date/Time: 5/11/2016 12:45:00PM
Prep Initial Wt./Vol.: 50.00mL
Prep Extract Vol: 50.00mL

Print Date: 05/19/2016 12:08:30PM

Method Blank

Blank ID: MB for HBN 1732272 [STS/5019]
Blank Lab ID: 1321132

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161901001, 1161901002, 1161901003, 1161901004

Results by **SM21 2540D**

Parameter	Results	LOQ/CL	DL	Units
Total Suspended Solids	0.500U	1.00	0.310	mg/L

Batch Information

Analytical Batch: STS5019
Analytical Method: SM21 2540D
Instrument:
Analyst: MBS
Analytical Date/Time: 4/25/2016 3:51:48PM

Print Date: 05/19/2016 12:08:31PM

Duplicate Sample Summary

Original Sample ID: 1161861009
Duplicate Sample ID: 1321135
QC for Samples:

Analysis Date: 04/25/2016 15:51
Matrix: Water (Surface, Eff., Ground)

Results by **SM21 2540D**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
Total Suspended Solids	7550	7450	mg/L	1.30	(< 5)

Batch Information

Analytical Batch: STS5019
Analytical Method: SM21 2540D
Instrument:
Analyst: MBS

Print Date: 05/19/2016 12:08:33PM

Duplicate Sample Summary

Original Sample ID: 1161861010
Duplicate Sample ID: 1321136
QC for Samples:
1161901001, 1161901002, 1161901003, 1161901004

Analysis Date: 04/25/2016 15:51
Matrix: Water (Surface, Eff., Ground)

Results by **SM21 2540D**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
Total Suspended Solids	8450	8500	mg/L	0.59	(< 5)

Batch Information

Analytical Batch: STS5019
Analytical Method: SM21 2540D
Instrument:
Analyst: MBS

Print Date: 05/19/2016 12:08:33PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161901 [STS5019]
Blank Spike Lab ID: 1321133
Date Analyzed: 04/25/2016 15:51

Spike Duplicate ID: LCSD for HBN 1161901 [STS5019]
Spike Duplicate Lab ID: 1321134
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161901001, 1161901002, 1161901003, 1161901004

Results by **SM21 2540D**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Total Suspended Solids	50	49.2	98	50	45.7	91	(75-125)	7.40 *	(< 5)

Batch Information

Analytical Batch: **STS5019**
Analytical Method: **SM21 2540D**
Instrument:
Analyst: **MBS**

Prep Batch:
Prep Method:
Prep Date/Time:
Spike Init Wt./Vol.: 50 mg/L Extract Vol: 1000 mL
Dupe Init Wt./Vol.: 50 mg/L Extract Vol: 1000 mL

Print Date: 05/19/2016 12:08:35PM

Method Blank

Blank ID: MB for HBN 17323[2 S/ T5[0209
Blank] aL ID: 13212b7

Matrix: Water (Turface, Eff., Ground)

QC for Tamples:
11b1601001, 11b1601002, 11b1601003, 11b1601004

Results Ly **SM21 2540C**

Parameter	Results	] OQ5C]	D]	Units
/ otal Dissolged Tolids	[.00U	10.0	3.10	mA5]

Batch Information

hnalytical Batc8: T/ T[020
hnalytical Met8od: TM21 2[40C
Instrument:
hnalyst: MBT
hnalytical Date5/ ime: 452b5201b 6:[v:[bhM

Print Date: 0[5165201b 12:0v:3vPM

Duplicate Sample Summary

Original Sample ID: 116180699u
Dcplit a3e Sample ID: 12u1u01

5nalAyiy Da3e: 9s4u64u916 9/ :M8
x a3iW (a3er fScr,at eE. ,,GEo rdcn) R

CP ,dr Sampley:

1161/ 91991E1161/ 9199uE1161/ 91992E1161/ 9199s

b eycl3y QA **SM21 2540C**

U5x .	Original	Dcplit a3e	L ni3y	b %D fN R	b %D P7
Td3al Diyydl<e) Sdli) y	161	16s	mg47	1G89	fB MR

Batch Information

5nalA3tal ha3tv: STSM9u9
5nalA3tal x e3yd) : Sx u1 uMs9P
lny3rcmen3
5nalAy3 x hS

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161901 [STS5020]
Blank Spike Lab ID: 1321268
Date Analyzed: 04/26/2016 09:58

Spike Duplicate ID: LCSD for HBN 1161901 [STS5020]
Spike Duplicate Lab ID: 1321269
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161901001, 1161901002, 1161901003, 1161901004

Results by **SM21 2540C**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Total Dissolved Solids	330	330	100	330	329	100	(75-125)	0.30	(< 5)

Batch Information

Analytical Batch: **STS5020**
Analytical Method: **SM21 2540C**
Instrument:
Analyst: **MBS**

Prep Batch:
Prep Method:
Prep Date/Time:
Spike Init Wt./Vol.: 330 mg/L Extract Vol: 100 mL
Dupe Init Wt./Vol.: 330 mg/L Extract Vol: 100 mL

Print Date: 05/19/2016 12:08:42PM

Method Blank

Blank ID: MB for HBN 1732364 [VXX/28737]
Blank Lab ID: 1321330

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161901001, 1161901002, 1161901003, 1161901004

Results by **AK101**

Parameter	Results	LOQ/CL	DL	Units
Gasoline Range Organics	0.0315J	0.100	0.0310	mg/L
Surrogates				
4-Bromofluorobenzene (surr)	83.5	50-150		%

Batch Information

Analytical Batch: VFC12971
Analytical Method: AK101
Instrument: Agilent 7890A PID/FID
Analyst: S.P
Analytical Date/Time: 4/23/2016 2:36:00PM

Prep Batch: VXX28737
Prep Method: SW5030B
Prep Date/Time: 4/23/2016 8:00:00AM
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/19/2016 12:08:46PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161901 [VXX28737]
Blank Spike Lab ID: 1321333
Date Analyzed: 04/23/2016 15:34

Spike Duplicate ID: LCSD for HBN 1161901 [VXX28737]
Spike Duplicate Lab ID: 1321334
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161901001, 1161901002, 1161901003, 1161901004

Results by **AK101**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Gasoline Range Organics	1.00	1.04	104	1.00	1.03	103	(60-120)	1.10	(< 20)
Surrogates									
4-Bromofluorobenzene (surr)	0.0500	93.6	94	0.0500	85.2	85	(50-150)	9.40	

Batch Information

Analytical Batch: **VFC12971**
Analytical Method: **AK101**
Instrument: **Agilent 7890A PID/FID**
Analyst: **S.P**

Prep Batch: **VXX28737**
Prep Method: **SW5030B**
Prep Date/Time: **04/23/2016 08:00**
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: 05/19/2016 12:08:50PM

Method Blank

Blank ID: MB for HBN 1732377 [VXX/28738]
Blank Lab ID: 1321412

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161901013

Results by **AK101**

Parameter	Results	LOQ/CL	DL	Units
Gasoline Range Organics	0.0500U	0.100	0.0310	mg/L
Surrogates				
4-Bromofluorobenzene (surr)	80.5	50-150		%

Batch Information

Analytical Batch: VFC12973
Analytical Method: AK101
Instrument: Agilent 7890A PID/FID
Analyst: S.P
Analytical Date/Time: 4/26/2016 12:19:00AM

Prep Batch: VXX28738
Prep Method: SW5030B
Prep Date/Time: 4/25/2016 8:00:00AM
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/19/2016 12:08:53PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161901 [VXX28738]
Blank Spike Lab ID: 1321t 1A
Daye z nald4e/ : 0t 52A52016 23:t 1

Spike Duplicaye ID: LCSD for HBN 1161901 [VXX28738]
Spike Duplicaye Lab ID: 1321t 16
Mayrix: Wayer (Surface, Eff., Groun/)

QC for Samples: 1161901013

Resulys bd **AK101**

	Blank Spike (mg5L)			Spike Duplicaye (mg5L)					
Parameyer	Spike	Resuly	Rec (%)	Spike	Resuly	Rec (%)	CL	RPD (%)	RPD CL
Gasoline Range Organics	1.00	1.00	100	1.00	1.01	101	(60-120)	1.20	(< 20)
Surrogates									
t -Bromofluoroben4ene (surr)	0.0A00	89.6	90	0.0A00	87.2	87	(A0-1A0)	2.70	

Batch Information

z naldyical Baych: **VFC12978**
z naldyical Meyho/ : **AK101**
Insyrumeny: **Agilent 7P90A DI/ .FI/**
z naldsy: **SXD**

Prep Baych: **V332P78P**
Prep Meyho/ : **SW5080B**
Prep Daye5Time: **04.25.2016 0P:00**
Spike IniyWy.5Vol.: 1.00 mg5L ExyracyVol: A mL
Dupe IniyWy.5Vol.: 1.00 mg5L ExyracyVol: A mL

PrinyDaye: 0A5195 2016 12:08:AAPM

Method Blank

Blank ID: MB for HBN 1732644 [VXX/28753]
Blank Lab ID: 1322176

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161901002, 1161901003, 1161901004, 1161901012

Results by **SW8260B**

Parameter	Results	LOQ/CL	DL	Units
1,1,1,2-Tetrachloroethane	0.250U	0.500	0.150	ug/L
1,1,1-Trichloroethane	0.500U	1.00	0.310	ug/L
1,1,2,2-Tetrachloroethane	0.250U	0.500	0.150	ug/L
1,1,2-Trichloroethane	0.500U	1.00	0.310	ug/L
1,1-Dichloroethane	0.500U	1.00	0.310	ug/L
1,1-Dichloroethene	0.500U	1.00	0.310	ug/L
1,1-Dichloropropene	0.500U	1.00	0.310	ug/L
1,2,3-Trichlorobenzene	0.500U	1.00	0.310	ug/L
1,2,3-Trichloropropane	0.500U	1.00	0.310	ug/L
1,2,4-Trichlorobenzene	0.500U	1.00	0.310	ug/L
1,2,4-Trimethylbenzene	0.500U	1.00	0.310	ug/L
1,2-Dibromo-3-chloropropane	5.00U	10.0	3.10	ug/L
1,2-Dibromoethane	0.500U	1.00	0.310	ug/L
1,2-Dichlorobenzene	0.500U	1.00	0.310	ug/L
1,2-Dichloroethane	0.250U	0.500	0.150	ug/L
1,2-Dichloropropane	0.500U	1.00	0.310	ug/L
1,3,5-Trimethylbenzene	0.500U	1.00	0.310	ug/L
1,3-Dichlorobenzene	0.500U	1.00	0.310	ug/L
1,3-Dichloropropane	0.250U	0.500	0.150	ug/L
1,4-Dichlorobenzene	0.250U	0.500	0.150	ug/L
2,2-Dichloropropane	0.500U	1.00	0.310	ug/L
2-Butanone (MEK)	5.00U	10.0	3.10	ug/L
2-Chlorotoluene	0.500U	1.00	0.310	ug/L
2-Hexanone	5.00U	10.0	3.10	ug/L
4-Chlorotoluene	0.500U	1.00	0.310	ug/L
4-Isopropyltoluene	0.500U	1.00	0.310	ug/L
4-Methyl-2-pentanone (MIBK)	5.00U	10.0	3.10	ug/L
Benzene	0.200U	0.400	0.120	ug/L
Bromobenzene	0.500U	1.00	0.310	ug/L
Bromochloromethane	0.500U	1.00	0.310	ug/L
Bromodichloromethane	0.250U	0.500	0.150	ug/L
Bromoform	0.500U	1.00	0.310	ug/L
Bromomethane	5.00U	10.0	3.10	ug/L
Carbon disulfide	5.00U	10.0	3.10	ug/L
Carbon tetrachloride	0.500U	1.00	0.310	ug/L
Chlorobenzene	0.250U	0.500	0.150	ug/L
Chloroethane	0.500U	1.00	0.310	ug/L
Chloroform	0.500U	1.00	0.300	ug/L

Method Blank

Blank ID: MB for HBN 1732644 [VXX/28753]
Blank Lab ID: 1322176

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161901002, 1161901003, 1161901004, 1161901012

Results by **SW8260B**

Parameter	Results	LOQ/CL	DL	Units
Chloromethane	0.500U	1.00	0.310	ug/L
cis-1,2-Dichloroethene	0.500U	1.00	0.310	ug/L
cis-1,3-Dichloropropene	0.250U	0.500	0.150	ug/L
Dibromochloromethane	0.250U	0.500	0.150	ug/L
Dibromomethane	0.500U	1.00	0.310	ug/L
Dichlorodifluoromethane	0.500U	1.00	0.310	ug/L
Ethylbenzene	0.500U	1.00	0.310	ug/L
Freon-113	5.00U	10.0	3.10	ug/L
Hexachlorobutadiene	0.500U	1.00	0.310	ug/L
Isopropylbenzene (Cumene)	0.500U	1.00	0.310	ug/L
Methylene chloride	2.50U	5.00	1.00	ug/L
Methyl-t-butyl ether	5.00U	10.0	3.10	ug/L
Naphthalene	5.00U	10.0	3.10	ug/L
n-Butylbenzene	0.500U	1.00	0.310	ug/L
n-Propylbenzene	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
sec-Butylbenzene	0.500U	1.00	0.310	ug/L
Styrene	0.500U	1.00	0.310	ug/L
tert-Butylbenzene	0.500U	1.00	0.310	ug/L
Tetrachloroethene	0.500U	1.00	0.310	ug/L
Toluene	0.500U	1.00	0.310	ug/L
trans-1,2-Dichloroethene	0.500U	1.00	0.310	ug/L
trans-1,3-Dichloropropene	0.500U	1.00	0.310	ug/L
Trichloroethene	0.500U	1.00	0.310	ug/L
Trichlorofluoromethane	0.500U	1.00	0.310	ug/L
Vinyl acetate	5.00U	10.0	3.10	ug/L
Vinyl chloride	0.500U	1.00	0.310	ug/L
Xylenes (total)	1.50U	3.00	1.00	ug/L
Surrogates				
1,2-Dichloroethane-D4 (surr)	109	81-118		%
4-Bromofluorobenzene (surr)	95.4	85-114		%
Toluene-d8 (surr)	99.9	89-112		%

SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
t 907.562.2343 f 907.561.5301 www.us.sgs.com

Method Blank

Blank ID: MB for HBN 1732644 [VXX/28753]
Blank Lab ID: 1322176

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161901002, 1161901003, 1161901004, 1161901012

Results by **SW8260B**

Parameter	Results	LOQ/CL	DL	Units

Batch Information

Analytical Batch: VMS15749
Analytical Method: SW8260B
Instrument: VPA 780/5975 GC/MS
Analyst: NRB
Analytical Date/Time: 4/29/2016 5:42:00PM

Prep Batch: VXX28753
Prep Method: SW5030B
Prep Date/Time: 4/29/2016 8:00:00AM
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/19/2016 12:08:58PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161901 [VXX28753]
Blank Spike Lab ID: 1322177
Date Analyzed: 04/29/2016 18:19

Spike Duplicate ID: LCSD for HBN 1161901 [VXX28753]
Spike Duplicate Lab ID: 1322178
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161901002, 1161901003, 1161901004, 1161901012

Results by **SW8260B**

	Blank Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
1,1,1,2-Tetrachloroethane	30	32.3	108	30	32.8	109	(78-124)	1.40	(< 20)
1,1,1-Trichloroethane	30	31.3	104	30	32.8	109	(74-131)	4.60	(< 20)
1,1,2,2-Tetrachloroethane	30	29.2	97	30	30.5	102	(71-121)	4.20	(< 20)
1,1,2-Trichloroethane	30	31.5	105	30	31.6	105	(80-119)	0.32	(< 20)
1,1-Dichloroethane	30	31.3	104	30	32.2	107	(77-125)	2.70	(< 20)
1,1-Dichloroethene	30	29.5	98	30	30.9	103	(71-131)	4.50	(< 20)
1,1-Dichloropropene	30	30.4	101	30	31.6	105	(79-125)	3.80	(< 20)
1,2,3-Trichlorobenzene	30	32.3	108	30	33.6	112	(69-129)	4.00	(< 20)
1,2,3-Trichloropropane	30	29.8	99	30	31.2	104	(73-122)	4.60	(< 20)
1,2,4-Trichlorobenzene	30	31.7	106	30	33.4	111	(69-130)	5.10	(< 20)
1,2,4-Trimethylbenzene	30	28.4	95	30	29.5	98	(79-124)	3.70	(< 20)
1,2-Dibromo-3-chloropropane	30	28.6	95	30	30.2	101	(62-128)	5.20	(< 20)
1,2-Dibromoethane	30	33.0	110	30	33.2	111	(77-121)	0.60	(< 20)
1,2-Dichlorobenzene	30	30.3	101	30	31.2	104	(80-119)	3.10	(< 20)
1,2-Dichloroethane	30	32.0	107	30	33.2	111	(73-128)	3.90	(< 20)
1,2-Dichloropropane	30	33.0	110	30	33.9	113	(78-122)	2.50	(< 20)
1,3,5-Trimethylbenzene	30	28.3	94	30	29.2	97	(75-124)	3.30	(< 20)
1,3-Dichlorobenzene	30	29.4	98	30	31.3	104	(80-119)	6.30	(< 20)
1,3-Dichloropropane	30	30.7	102	30	30.6	102	(80-119)	0.36	(< 20)
1,4-Dichlorobenzene	30	30.3	101	30	31.9	106	(79-118)	5.00	(< 20)
2,2-Dichloropropane	30	29.6	99	30	32.3	108	(60-139)	8.50	(< 20)
2-Butanone (MEK)	90	105	117	90	107	119	(56-143)	2.20	(< 20)
2-Chlorotoluene	30	29.6	99	30	30.6	102	(79-122)	3.20	(< 20)
2-Hexanone	90	101	112	90	102	113	(57-139)	1.40	(< 20)
4-Chlorotoluene	30	30.2	101	30	31.5	105	(78-122)	4.10	(< 20)
4-Isopropyltoluene	30	28.0	93	30	29.9	100	(77-127)	6.60	(< 20)
4-Methyl-2-pentanone (MIBK)	90	102	113	90	105	116	(67-130)	2.70	(< 20)
Benzene	30	31.1	104	30	31.4	105	(79-120)	0.90	(< 20)
Bromobenzene	30	30.3	101	30	31.4	105	(80-120)	3.40	(< 20)
Bromochloromethane	30	32.0	107	30	33.5	112	(78-123)	4.50	(< 20)
Bromodichloromethane	30	31.2	104	30	32.2	107	(79-125)	3.30	(< 20)
Bromoform	30	33.2	111	30	33.6	112	(66-130)	1.30	(< 20)
Bromomethane	30	24.4	81	30	27.2	91	(53-141)	10.90	(< 20)
Carbon disulfide	45	39.9	89	45	42.1	94	(64-133)	5.20	(< 20)

Print Date: 05/19/2016 12:09:02PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161901 [VXX28753]
Blank Spike Lab ID: 1322177
Date Analyzed: 04/29/2016 18:19

Spike Duplicate ID: LCSD for HBN 1161901 [VXX28753]
Spike Duplicate Lab ID: 1322178
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161901002, 1161901003, 1161901004, 1161901012

Results by **SW8260B**

	Blank Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Carbon tetrachloride	30	32.2	107	30	33.5	112	(72-136)	4.20	(< 20)
Chlorobenzene	30	31.5	105	30	32.1	107	(82-118)	1.90	(< 20)
Chloroethane	30	26.1	87	30	27.5	92	(60-138)	5.20	(< 20)
Chloroform	30	28.9	96	30	30.0	100	(79-124)	3.60	(< 20)
Chloromethane	30	26.1	87	30	28.7	96	(50-139)	9.50	(< 20)
cis-1,2-Dichloroethene	30	31.8	106	30	32.8	109	(78-123)	3.00	(< 20)
cis-1,3-Dichloropropene	30	29.6	99	30	30.4	101	(75-124)	2.60	(< 20)
Dibromochloromethane	30	33.1	110	30	33.3	111	(74-126)	0.54	(< 20)
Dibromomethane	30	31.0	103	30	31.2	104	(79-123)	0.90	(< 20)
Dichlorodifluoromethane	30	30.2	101	30	31.1	104	(32-152)	3.00	(< 20)
Ethylbenzene	30	32.5	108	30	32.9	110	(79-121)	1.20	(< 20)
Freon-113	45	45.0	100	45	47.6	106	(70-136)	5.60	(< 20)
Hexachlorobutadiene	30	31.8	106	30	34.6	115	(66-134)	8.30	(< 20)
Isopropylbenzene (Cumene)	30	31.7	106	30	32.6	109	(72-131)	3.10	(< 20)
Methylene chloride	30	27.4	91	30	28.2	94	(74-124)	2.80	(< 20)
Methyl-t-butyl ether	45	46.4	103	45	47.2	105	(71-124)	1.80	(< 20)
Naphthalene	30	30.0	100	30	30.3	101	(61-128)	1.20	(< 20)
n-Butylbenzene	30	27.9	93	30	29.8	99	(75-128)	6.70	(< 20)
n-Propylbenzene	30	30.1	100	30	31.6	105	(76-126)	5.00	(< 20)
o-Xylene	30	33.1	110	30	34.0	113	(78-122)	2.60	(< 20)
P & M -Xylene	60	64.8	108	60	67.3	112	(80-121)	3.70	(< 20)
sec-Butylbenzene	30	30.3	101	30	32.0	107	(77-126)	5.30	(< 20)
Styrene	30	33.0	110	30	33.8	113	(78-123)	2.40	(< 20)
tert-Butylbenzene	30	30.5	102	30	32.2	107	(78-124)	5.50	(< 20)
Tetrachloroethene	30	32.9	110	30	33.5	112	(74-129)	1.80	(< 20)
Toluene	30	29.7	99	30	30.0	100	(80-121)	1.20	(< 20)
trans-1,2-Dichloroethene	30	30.8	103	30	32.2	107	(75-124)	4.50	(< 20)
trans-1,3-Dichloropropene	30	28.7	96	30	29.0	97	(73-127)	1.00	(< 20)
Trichloroethene	30	32.7	109	30	33.4	111	(79-123)	2.10	(< 20)
Trichlorofluoromethane	30	30.3	101	30	31.1	104	(65-141)	2.60	(< 20)
Vinyl acetate	30	32.7	109	30	33.7	112	(54-146)	3.00	(< 20)
Vinyl chloride	30	30.9	103	30	31.6	105	(58-137)	2.40	(< 20)
Xylenes (total)	90	98.0	109	90	101	113	(79-121)	3.30	(< 20)

Print Date: 05/19/2016 12:09:02PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161901 [VXX28753]
Blank Spike Lab ID: 1322177
Date Analyzed: 04/29/2016 18:19

Spike Duplicate ID: LCSD for HBN 1161901 [VXX28753]
Spike Duplicate Lab ID: 1322178
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161901002, 1161901003, 1161901004, 1161901012

Results by **SW8260B**

	Blank Spike (%)			Spike Duplicate (%)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Surrogates									
1,2-Dichloroethane-D4 (surr)	30	102	102	30	104	104	(81-118)	2.20	
4-Bromofluorobenzene (surr)	30	93.2	93	30	94.7	95	(85-114)	1.60	
Toluene-d8 (surr)	30	102	102	30	101	101	(89-112)	0.66	

Batch Information

Analytical Batch: **VMS15749**
Analytical Method: **SW8260B**
Instrument: **VPA 780/5975 GC/MS**
Analyst: **NRB**

Prep Batch: **VXX28753**
Prep Method: **SW5030B**
Prep Date/Time: **04/29/2016 08:00**
Spike Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL
Dupe Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL

Print Date: 05/19/2016 12:09:02PM

Method Blank

Blank ID: MB for HBN 1732764 [VXX/267485
Blank] aL ID: 1322347

Ma0r,t : i a0pr xCWffa(puc ffEu. roWhGd

b Q for CaS mpe:
1181s91991

) peW0e LR **SW8260B**

OaraS p0pr	) peW0e	] Ub /Q]	D]	y n,0e
1uIuIu2P p0ra(TloropOTanp	9E249y	9E499	9E149	Wh/]
1uIuIP r,(TloropOTanp	9E499y	1E99	9E319	Wh/]
1uIu2u2P p0ra(TloropOTanp	9E249y	9E499	9E149	Wh/]
1uIu2P r,(TloropOTanp	9E499y	1E99	9E319	Wh/]
1uIPD,(TloropOTanp	9E499y	1E99	9E319	Wh/]
1uIPD,(TloropOTpnp	9E499y	1E99	9E319	Wh/]
1uIPD,(TloromrompnpE	9E499y	1E99	9E319	Wh/]
1u2u8P r,(TloroLpngpnp	9E499y	1E99	9E319	Wh/]
1u2u8P r,(TloromromanpE	9E499y	1E99	9E319	Wh/]
1u2uzP r,(TloroLpngpnp	9E499y	1E99	9E319	Wh/]
1u2uzP r,S p0TRLpngpnp	9E499y	1E99	9E319	Wh/]
1u2PD,LroS oP3P(TloromromanpE	4E99y	19E9	3E19	Wh/]
1u2PD,LroS op0TanpE	9E499y	1E99	9E319	Wh/]
1u2PD,(TloroLpngpnp	9E499y	1E99	9E319	Wh/]
1u2PD,(TloropOTanp	9E249y	9E499	9E149	Wh/]
1u2PD,(TloromromanpE	9E499y	1E99	9E319	Wh/]
1u3u4P r,S p0TRLpngpnp	9E499y	1E99	9E319	Wh/]
1u3PD,(TloroLpngpnp	9E499y	1E99	9E319	Wh/]
1u3PD,(TloromromanpE	9E249y	9E499	9E149	Wh/]
1uzPD,(TloroLpngpnp	9E249y	9E499	9E149	Wh/]
2u2PD,(TloromromanpE	9E499y	1E99	9E319	Wh/]
2PBW0anonp xMc Kd	4E99y	19E9	3E19	Wh/]
2PQTloro0olWpnp	9E499y	1E99	9E319	Wh/]
2PHpt anonp	4E99y	19E9	3E19	Wh/]
zPQTloro0olWpnp	9E499y	1E99	9E319	Wh/]
zPreomromR0olWpnp	9E499y	1E99	9E319	Wh/]
zPMp0TRlP2PmpnQanonp xMIBKd	4E99y	19E9	3E19	Wh/]
BpngpnpE	9E299y	9Ez99	9E129	Wh/]
BroS oLpngpnp	9E499y	1E99	9E319	Wh/]
BroS o(TloroS p0TanpE	9E499y	1E99	9E319	Wh/]
BroS oG(TloroS p0TanpE	9E249y	9E499	9E149	Wh/]
BroS oforS	9E499y	1E99	9E319	Wh/]
BroS oS p0TanpE	4E99y	19E9	3E19	Wh/]
QarLon G,eWf,Gp	4E99y	19E9	3E19	Wh/]
QarLon 0p0ra(Tlor,Gp	9E499y	1E99	9E319	Wh/]
QTloroLpngpnp	9E249y	9E499	9E149	Wh/]
QTloropOTanp	9E499y	1E99	9E319	Wh/]
QTloroforS	9E499y	1E99	9E399	Wh/]

Method Blank

Blank ID: MB for HBN 1732764 [VXX/267485
Blank] aL ID: 1322347

Ma0r,t : i a0pr xCWffa(puc ffEu. roWhGd

b Q for CaS mlpe:
1181s91991

) peW0e LR SW8260B

OaraS p0pr	) peW0e	] Ub /Q]	D]	y n,0e
QTloroS p0Tanp	9E499y	1E99	9E319	Wh/]
(,eP1u2PD,(Tloropt0Tpnp	9E499y	1E99	9E319	Wh/]
(,eP1u3PD,(Tloromrompnp	9E249y	9E499	9E149	Wh/]
D,LroS o(TloroS p0Tanp	9E249y	9E499	9E149	Wh/]
D,LroS oS p0Tanp	9E499y	1E99	9E319	Wh/]
D,(TloroG;flWbroS p0Tanp	9E499y	1E99	9E319	Wh/]
c 0TRLpngpnp	9E499y	1E99	9E319	Wh/]
FrponP1 13	4E99y	19E9	3E19	Wh/]
Hpt a(TloroLW0aG;pnp	9E499y	1E99	9E319	Wh/]
Ieomromf RLpngpnp xQWS pnpd	9E499y	1E99	9E319	Wh/]
Mp0TRpnp (Tlor,Gp	2E49y	4E99	1E99	Wh/]
Mp0TRP0RLW0R p0Tpr	4E99y	19E9	3E19	Wh/]
NamT0Talpnp	4E99y	19E9	3E19	Wh/]
nPBW0RLpngpnp	9E499y	1E99	9E319	Wh/]
nPOromRLpngpnp	9E499y	1E99	9E319	Wh/]
oPXRpnp	9E499y	1E99	9E319	Wh/]
O & M PXRpnp	1E99y	2E99	9EB29	Wh/]
ep(PBW0RLpngpnp	9E499y	1E99	9E319	Wh/]
C0Rpnp	9E499y	1E99	9E319	Wh/]
0pr0PBW0RLpngpnp	9E499y	1E99	9E319	Wh/]
- p0ra(Tloropt0Tpnp	9E499y	1E99	9E319	Wh/]
- olWpnp	9E499y	1E99	9E319	Wh/]
0ranePlu2PD,(Tloropt0Tpnp	9E499y	1E99	9E319	Wh/]
0ranePlu3PD,(Tloromrompnp	9E499y	1E99	9E319	Wh/]
- r,(Tloropt0Tpnp	9E499y	1E99	9E319	Wh/]
- r,(TlorofIWbroS p0Tanp	9E499y	1E99	9E319	Wh/]
V,nRa(p0a0p	4E99y	19E9	3E19	Wh/]
V,nR (Tlor,Gp	9E499y	1E99	9E319	Wh/]
XRpnpe x0b0ald	1E49y	3E99	1E99	Wh/]
Surrogates				
1u2PD,(TloropTanpPDz xeWrd	196	61P116		%
zPBroS ofIWbroLpngpnp xeWrd	s8E2	64P11z		%
- olWpnpP36 xeWrd	191	6sP112		%

Or,n0Da0p: 94/1s/2918 12:9s:94OM

Method Blank

Blank ID: MB for HBN 1732764 [VXX/267485
Blank] aL ID: 1322347

Ma0r,t : i a0pr xCWffa(puc ffEu. roWnGd

b Q for CaS mpe:
1181s91991

) peW0e LR SW8260B

OaraS p0pr	) peW0e	] Ub /Q]	D]	y n,0e

Batch Information

AnalR0(al Ba0(T: VMC14743
AnalR0(al Mp0ToG: Ci 6289B
Ine0WS pn0 VOA 769/4s74 . Q/MC
AnalRe0 N) B
AnalR0(al Da0p/- ,S p: 4/2/2918 19:96:99AM

OrpmBa0(T: VXX26748
OrpmMp0ToG: Ci 4939B
OrpmDa0p/- ,S p: 4/2/2918 6:99:99AM
OrpmIn,0al i 0EVolE 4 S]
Orpmc t 0ra(0Vol: 4 S]

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161901 [VXX287563
Blank Spike La] ID: 1b22b58
Date Analyzed: 054024 2016 10:b1

Spike D/ pliuate ID: LCSD for HBN 1161901 [VXX287563
Spike D/ pliuate La] ID: 1b22b59
s atriM x ater W8/ rfaue(, ffE . ro/ ndG

g C for SaP pleR 1161901001

c eR/ ltR] y **SW8260B**

	Blank Spike W%4LG			Spike D/ pliuate W%4LG					
) araP eter	Spike	c eR/ lt	c eu WhG	Spike	c eR/ lt	c eu WhG	CL	c) D WhG	c) D CL
1(1(1(2Q etrauTloroetTane	b0	b1E7	106	b0	b1EB	106	W78C12h G	0E25	W 20 G
1(1(1Q riuTloroetTane	b0	b1E9	106	b0	b1Eh	105	W7hC1b1 G	1E50	W 20 G
1(1(2(2Q etrauTloroetTane	b0	27E6	92	b0	28E0	9b	W71C121 G	1Eh0	W 20 G
1(1(2Q riuTloroetTane	b0	b0E0	100	b0	29EB	99	W80C119 G	0E70	W 20 G
1(1D iuTloroetTane	b0	b1E5	105	b0	b0EB	10b	W77C125 G	2E50	W 20 G
1(1D iuTloroetTene	b0	29E5	99	b0	28E6	95	W71C1b1 G	bEh0	W 20 G
1(1D iuTloropropene	b0	b0E3	100	b0	b0E0	100	W79C125 G	0Eb0	W 20 G
1(2(bQ riuTloro] enzene	b0	b1E2	10h	b0	b2E5	108	W69C129 G	bE90	W 20 G
1(2(bQ riuTloropropane	b0	28E2	9h	b0	28E7	96	W7bC122 G	1Eb0	W 20 G
1(2(hQ riuTloro] enzene	b0	b2E0	107	b0	b2E0	107	W69C1b0 G	0E16	W 20 G
1(2(hQ riP etTyl] enzene	b0	28E0	9b	b0	27E9	9b	W79C12h G	0Eb2	W 20 G
1(2D i] roP oQbQTloropropane	b0	27E0	90	b0	27E6	92	W62C128 G	2E10	W 20 G
1(2D i] roP oetTane	b0	b1E2	10h	b0	b1E2	10h	W77C121 G	0E0b	W 20 G
1(2D iuTloro] enzene	b0	29EB	99	b0	29E6	99	W80C119 G	0E57	W 20 G
1(2D iuTloroetTane	b0	b1E7	106	b0	b0EB	10b	W7bC128 G	2E70	W 20 G
1(2D iuTloropropane	b0	b2E9	110	b0	b2E5	108	W78C122 G	1E00	W 20 G
1(b(5Q riP etTyl] enzene	b0	27E6	92	b0	28E3	9h	W75C12h G	1E70	W 20 G
1(bD iuTloro] enzene	b0	29E9	100	b0	29EB	99	W80C119 G	0E2b	W 20 G
1(bD iuTloropropane	b0	29E2	98	b0	29E3	97	W80C119 G	0E65	W 20 G
1(hD iuTloro] enzene	b0	b0Eh	101	b0	b0E3	100	W79C118 G	1E20	W 20 G
2(2D iuTloropropane	b0	b2E0	107	b0	b1E5	10h	W60C1b9 G	2E50	W 20 G
2B/ tanone W , KG	90	92E7	10b	90	97E5	108	W56C1hb G	5E10	W 20 G
2C Tlorotol/ ene	b0	28EB	96	b0	29E3	97	W79C122 G	0EBb	W 20 G
2H eManone	90	89E5	99	90	92E6	10b	W57C1b9 G	bEh0	W 20 G
hC Tlorotol/ ene	b0	28E3	9h	b0	b0E2	101	W78C122 G	7E20	W 20 G
hR opropyltol/ ene	b0	28E5	95	b0	28E6	95	W77C127 G	0E07	W 20 G
hG etTyl2Q entanone W IBKG	90	9bEh	10h	90	96E6	107	W67C1b0 G	bEh0	W 20 G
Benzene	b0	b0Eh	101	b0	b0E3	100	W79C120 G	0E92	W 20 G
BroP o] enzene	b0	b0Eh	101	b0	b0E2	101	W80C120 G	0E6b	W 20 G
BroP ouTloroP etTane	b0	b2E6	109	b0	b1Eh	105	W78C12b G	bEB0	W 20 G
BroP odiTloroP etTane	b0	b1E5	10h	b0	b0E7	102	W79C125 G	2E10	W 20 G
BroP oforP	b0	b2E6	109	b0	b2E2	107	W66C1b0 G	1E10	W 20 G
BroP oP etTane	b0	2hE2	81	b0	2bE6	79	W5bC1h1 G	2E60	W 20 G
Car] on diR/ lfide	h5	b9EB	89	h5	b8E5	86	W6hC1bb G	bEh0	W 20 G

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161901 [VXX287563
Blank Spike La] ID: 1b22b58
Date Analyzed: 054024 2016 10:b1

Spike D/ pliuate ID: LCSD for HBN 1161901 [VXX287563
Spike D/ pliuate La] ID: 1b22b59
s atriM x ater W8/ rfaue(, ffE . ro/ ndG

g C for SaP pleR 1161901001

c eR/ ltR] y **SW8260B**

	Blank Spike W%4LG			Spike D/ pliuate W%4LG					
) araP eter	Spike	c eR/ lt	c eu W%G	Spike	c eR/ lt	c eu W%G	CL	c) D W%G	c) D CL
Car] on tetrauTloride	b0	b2E5	108	b0	b2E2	107	W72C1b6 G	0E%0	W4 20 G
CTloro] enzene	b0	b0E6	102	b0	b0E7	102	W82C118 G	0E5b	W4 20 G
CTloroetTane	b0	27E%	92	b0	2%E7	82	W60C1b8 G	10E70	W4 20 G
CTloroforP	b0	29E3	97	b0	28E2	9%	W79C12% G	b%E0	W4 20 G
CTloroP etTane	b0	2%E%	81	b0	28E3	9%	W50C1b9 G	1%E20	W4 20 G
uiRC1(20DiuTloroetTene	b0	b1E7	106	b0	b0E7	102	W78C12b G	b%E0	W4 20 G
uiRC1(bODiuTloropropene	b0	29EB	100	b0	29E5	98	W75C12% G	1E20	W4 20 G
Di] roP ouTloroP etTane	b0	b2E5	108	b0	b1EB	106	W7%C126 G	1E%0	W4 20 G
Di] roP oP etTane	b0	b0E5	101	b0	29E7	99	W79C12b G	2E00	W4 20 G
DiuTlorodifl/ oroP etTane	b0	b1E0	10b	b0	b0E2	101	W62C152 G	2E60	W4 20 G
, tTyl] enzene	b0	b1E6	105	b0	b1E5	105	W79C121 G	0Eb2	W4 20 G
FreonC11b	h5	h5E5	101	h5	%%E0	98	W70C1b6 G	2EB0	W4 20 G
HeMauTloro] / tadiene	b0	b1E5	10%	b0	b2E3	107	W66C1b% G	2E50	W4 20 G
IRopropyl] enzene WC/ P eneG	b0	b1E3	10%	b0	b1E3	10%	W72C1b1 G	0E3b	W4 20 G
s etTylene uTloride	b0	27E6	92	b0	26E5	88	W7%C12% G	b%E0	W4 20 G
s etTylC1Q/ tyl etTer	h5	h6E%	10b	h5	h6E5	10b	W71C12% G	0E37	W4 20 G
NapTtTalene	b0	27E7	92	b0	29E6	99	W61C128 G	6E%0	W4 20 G
nCB/ tyl] enzene	b0	27E7	92	b0	27E9	9b	W75C128 G	0E68	W4 20 G
nQ ropyl] enzene	b0	b0E0	100	b0	29E9	100	W76C126 G	0E30	W4 20 G
oQXylene	b0	b2E5	108	b0	b2E5	108	W78C122 G	0E0b	W4 20 G
) & s QXylene	60	6%E%	107	60	6bE7	106	W80C121 G	1E30	W4 20 G
ReuCB/ tyl] enzene	b0	b0E2	101	b0	b0E5	101	W77C126 G	0E37	W4 20 G
Styrene	b0	b2E2	107	b0	b1E9	106	W78C12b G	0E91	W4 20 G
tertCB/ tyl] enzene	b0	b0E9	10b	b0	b0E9	10b	W78C12% G	0E0b	W4 20 G
- etrauTloroetTene	b0	b2E2	107	b0	b2E2	107	W7%C129 G	0E06	W4 20 G
- ol/ ene	b0	28E6	95	b0	28E6	95	W80C121 G	0E3%	W4 20 G
tranRC1(20DiuTloroetTene	b0	b1E2	10%	b0	b0E5	101	W75C12% G	2E70	W4 20 G
tranRC1(bODiuTloropropene	b0	28E%	95	b0	28E5	9%	W7bC127 G	0E%2	W4 20 G
- riuTloroetTene	b0	b2E2	107	b0	b2E2	107	W79C12b G	0E0b	W4 20 G
- riuTlorofl/ oroP etTane	b0	b1E5	10%	b0	b0E2	101	W65C1%1 G	b%E0	W4 20 G
Vinyl auetate	b0	b2E5	108	b0	b2E7	109	W5%C1%6 G	1E50	W4 20 G
Vinyl uTloride	b0	b1E0	10b	b0	b0E9	10b	W58C1b7 G	0E29	W4 20 G
XyleneRWotalG	90	96E7	107	90	96E0	107	W79C121 G	0E75	W4 20 G

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161901 [VXX287563
Blank Spike La] ID: 1b22b58
Date Analyzed: 054024 2016 10:b1

Spike D/ pliuate ID: LCSD for HBN 1161901 [VXX287563
Spike D/ pliuate La] ID: 1b22b59
s atriM x ater W8/ rfaue(, ffE . ro/ ndG

g C for SaP pleR 1161901001

c eR/ ltR] y **SW8260B**

) araP eter	Blank Spike WhG Spike	c eR/ lt	c eu WhG	Spike D/ pliuate WhG Spike	c eR/ lt	c eu WhG	CL	c) D WhG	c) D CL
Surrogates									
1(2D DiuTloroetTaneD h W/ rrG	b0	10h	10h	b0	102	102	W81C118 G	2E10	
hB roP ofl/ oro] enzene W/ rrG	b0	95E	95	b0	9hE7	95	W85C11h G	0B1	
- ol/ eneD8 W/ rrG	b0	101	101	b0	101	101	W89C112 G	0E59	

Batch Information

Analytiual BatuT: **VMS15753**
Analytiual s etTod: **SW8260B**
InR r/ P ent: **VPA 780/5975 GC/MS**
AnalyR t: **NRB**

) rep BatuT: **VXX28756**
) rep s etTod: **SW5030B**
) rep Date4 iP e: **05/02/2016 08:00**
Spike Init x tE VolE b0 / %L , Mraut Vol: 5 P L
D/ pe Init x tE VolE b0 / %L , Mraut Vol: 5 P L

) rint Date: 054194 2016 12:09:11) s

Method Blank

Blank ID: MB for HBN 1732379 [WAT/10634]
Blank Lab ID: 1321417

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161901001, 1161901002, 1161901003, 1161901004

Results by **SM21 2130B**

Parameter	Results	LOQ/CL	DL	Units
Turbidity	0.100J	0.200	0.100	NTU

Batch Information

Analytical Batch: WAT10634
Analytical Method: SM21 2130B
Instrument: Turbidimeter
Analyst: MBS
Analytical Date/Time: 4/22/2016 4:30:00PM

Print Date: 05/19/2016 12:09:13PM

Duplicate Sample Summary

Original Sample ID: 1161801001
D9pliuace Sample ID: 1t 31230

5nalAyiy Dace: 02s33s3016 16:t 0
4 acri/: Macer xS9rWaue(f WW Er. 9nGo

Rb Wr Sampley:

1161801001(1161801003(116180100t (1161801002

d ey9loy) A SM21 2130B

P54 f	Original	D9pliuace	%nioy	d QD xC o	d QD b N
U9r) iGcA	60,0	60,0	PU%	0,00	xL 30 o

Batch Information

5nalAcual 7acuT: M5U106t 2
5nalAcual 4 ecT. G S4 31 31t 07
Inyc9menc U9r) iGmecer
5nalAyc 4 7S

QrincDace: 0<s18s3016 13:08:1<Q4

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161901 [WAT10634]
Blank Spike Lab ID: 1321418
Date Analyzed: 04/22/2016 16:30

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161901001, 1161901002, 1161901003, 1161901004

Results by **SM21 2130B**

Blank Spike (NTU)

Parameter	Spike	Result	Rec (%)	CL
Turbidity	10	11.0	110	(90-110)

Batch Information

Analytical Batch: **WAT10634**
Analytical Method: **SM21 2130B**
Instrument: **Turbidimeter**
Analyst: **MBS**

Prep Batch:
Prep Method:
Prep Date/Time:
Spike Init Wt./Vol.: 10 NTU Extract Vol: 1 mL
Dupe Init Wt./Vol.: Extract Vol:

Print Date: 05/19/2016 12:09:17PM

Method Blank

Blank ID: MB for HBN 1732382 [WFI/2470]
Blank Lab ID: 1321432

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161901001, 1161901002, 1161901003, 1161901004

Results by **SM21 4500NO3-F**

Parameter	Results	LOQ/CL	DL	Units
Nitrate-N	0.0794J	0.100	0.0300	mg/L
Nitrite-N	0.0500U	0.100	0.0300	mg/L
Total Nitrate/Nitrite-N	0.0866J	0.100	0.0300	mg/L

Batch Information

Analytical Batch: WFI2470
Analytical Method: SM21 4500NO3-F
Instrument: Astoria segmented flow
Analyst: NEG
Analytical Date/Time: 4/22/2016 5:24:37PM

Print Date: 05/19/2016 12:09:20PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161901 [WFI2470]
Blank Spike Lab ID: 1321429
Date Analyzed: 04/22/2016 17:01

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161901001, 1161901002, 1161901003, 1161901004

Results by **SM21 4500NO3-F**

Blank Spike (mg/L)

Parameter	Spike	Result	Rec (%)	CL
Nitrate-N	2.5	2.75	110	(70-130)
Nitrite-N	2.5	2.55	102	(90-110)
Total Nitrate/Nitrite-N	5	5.30	106	(90-110)

Batch Information

Analytical Batch: **WFI2470**
Analytical Method: **SM21 4500NO3-F**
Instrument: **Astoria segmented flow**
Analyst: **NEG**

Prep Batch:
Prep Method:
Prep Date/Time:
Spike Init Wt./Vol.: 2.5 mg/L Extract Vol: 5 mL
Dupe Init Wt./Vol.: Extract Vol:

Print Date: 05/19/2016 12:09:23PM

Matrix Spike Summary

Original Sample ID: 1161901004
MS Sample ID: 1321434 MS
MSD Sample ID: 1321435 MSD

Analysis Date: 04/22/2016 17:14
Analysis Date: 04/22/2016 17:15
Analysis Date: 04/22/2016 17:17
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161901001, 1161901002, 1161901003, 1161901004

Results by **SM21 4500NO3-F**

		Matrix Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Nitrate-N	0.0648J	2.50	2.63	103	2.50	2.54	99	70-130	3.60	(< 25)
Nitrite-N	0.0500U	2.50	2.68	107	2.50	2.64	106	90-110	1.60	(< 25)

Batch Information

Analytical Batch: WFI2470
Analytical Method: SM21 4500NO3-F
Instrument: Astoria segmented flow
Analyst: NEG
Analytical Date/Time: 4/22/2016 5:15:51PM

Prep Batch:
Prep Method:
Prep Date/Time:
Prep Initial Wt./Vol.: 5.00mL
Prep Extract Vol: 5.00mL

Print Date: 05/19/2016 12:09:25PM

Duplicate Sample Summary

Original Sample ID: 1161876001
Duplicate Sample ID: 1321380
QC for Samples:
1161901001, 1161901002, 1161901003, 1161901004

Analysis Date: 04/25/2016 17:11
Matrix: Water (Surface, Eff., Ground)

Results by **SM21 4500-H B**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
pH	7.90	7.90	pH units	0.00	(< 5)

Batch Information

Analytical Batch: WTI4443
Analytical Method: SM21 4500-H B
Instrument: Titration
Analyst: ACF

Print Date: 05/19/2016 12:09:29PM

Duplicate Sample Summary

Original Sample ID: 1161922003
Duplicate Sample ID: 1321381
QC for Samples:
1161901001, 1161901002, 1161901003, 1161901004

Analysis Date: 04/25/2016 16:18
Matrix: Water (Surface, Eff., Ground)

Results by **SM21 4500-H B**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
pH	6.70	6.70	pH units	0.00	(< 5)

Batch Information

Analytical Batch: WTI4443
Analytical Method: SM21 4500-H B
Instrument: Titration
Analyst: ACF

Print Date: 05/19/2016 12:09:29PM

Duplicate Sample Summary

Original Sample ID: 1161885003
Duplicate Sample ID: 1321385
QC for Samples:
1161901001, 1161901002, 1161901003, 1161901004

Analysis Date: 04/25/2016 20:15
Matrix: Drinking Water

Results by **SM21 4500-H B**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
pH	7.50	7.50	pH units	0.00	(< 5)

Batch Information

Analytical Batch: WTI4443
Analytical Method: SM21 4500-H B
Instrument: Titration
Analyst: ACF

Print Date: 05/19/2016 12:09:29PM

Duplicate Sample Summary

Original Sample ID: 1161885004
Duplicate Sample ID: 1321386
QC for Samples:
1161901001, 1161901002, 1161901003, 1161901004

Analysis Date: 04/25/2016 20:32
Matrix: Drinking Water

Results by **SM21 4500-H B**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
pH	7.30	7.30	pH units	0.00	(< 5)

Batch Information

Analytical Batch: WTI4443
Analytical Method: SM21 4500-H B
Instrument: Titration
Analyst: ACF

Print Date: 05/19/2016 12:09:29PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161901 [WTI4443]
Blank Spike Lab ID: 1321377
Date Analyzed: 04/25/2016 14:47

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161901001, 1161901002, 1161901003, 1161901004

Results by **SM21 4500-H B**

Blank Spike (pH units)

Parameter	Spike	Result	Rec (%)	CL
pH	7	7.01	100	(99-101)

Batch Information

Analytical Batch: **WTI4443**
Analytical Method: **SM21 4500-H B**
Instrument: **Titration**
Analyst: **ACF**

Prep Batch:
Prep Method:
Prep Date/Time:
Spike Init Wt./Vol.: 7 pH units Extract Vol: 1 mL
Dupe Init Wt./Vol.: Extract Vol:

Print Date: 05/19/2016 12:09:31PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161901 [WTI4443]
Blank Spike Lab ID: 1321382
Date Analyzed: 04/25/2016 19:16

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161901001, 1161901002, 1161901003, 1161901004

Results by **SM21 4500-H B**

Blank Spike (pH units)

Parameter	Spike	Result	Rec (%)	CL
pH	7	7.01	100	(99-101)

Batch Information

Analytical Batch: **WTI4443**
Analytical Method: **SM21 4500-H B**
Instrument: **Titration**
Analyst: **ACF**

Prep Batch:
Prep Method:
Prep Date/Time:
Spike Init Wt./Vol.: 7 pH units Extract Vol: 1 mL
Dupe Init Wt./Vol.: Extract Vol:

Print Date: 05/19/2016 12:09:31PM

Method Blank

Blank ID: MB for HBN 1732387 [WTI/4445]
Blank Lab ID: 1321456

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161901001, 1161901002, 1161901003, 1161901004

Results by **SM21 2320B**

Parameter	Results	LOQ/CL	DL	Units
Alkalinity	5.00U	10.0	3.10	mg/L

Batch Information

Analytical Batch: WTI4445
Analytical Method: SM21 2320B
Instrument: Titration
Analyst: ACF
Analytical Date/Time: 4/25/2016 3:39:27PM

Print Date: 05/19/2016 12:09:34PM

Duplicate Sample Summary

Original Sample ID: 1161876001
Duplicate Sample ID: 1321458
QC for Samples:
1161901001, 1161901002, 1161901003, 1161901004

Analysis Date: 04/25/2016 17:11
Matrix: Water (Surface, Eff., Ground)

Results by **SM21 2320B**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
Alkalinity	61.3	61.6	mg/L	0.49	(< 25)

Batch Information

Analytical Batch: WTI4445
Analytical Method: SM21 2320B
Instrument: Titration
Analyst: ACF

Print Date: 05/19/2016 12:09:36PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161901 [WTI4443]
Blank Spike Lab ID: 127143t
DaAe y nalzde/ : 045735\7016 13:4R

x aAi(: WaAer cSMfa, eE. ffGE) roMh/ P

h C for Sa%pleu: 1161901001E1161901007E1161901002E1161901004

s euMAu bz **SM21 2320B**

Blank Spike c%- 5LP

mara%eAer	Spike	s euMA	s e, cQP	CL
y lkaliniAz	730	722	92	cR3VI13 P

Batch Information

y nalzA, al BaA v: **WTI4445**
y nalzA, al x eAvo/ : **SM21 2320B**
InuAM%enA **Titration**
y nalzuA **ACF**

mrep BaA v:
mrep x eAvo/ :
mrep DaAe5Ti%e:
Spike IniAWAGgolG 730 %- 5L . (Aa, Agol: 30 %L
DMpe IniAWAGgolG . (Aa, Agol:

mrinADaAe: 035\95\7016 17:09:2Rmx

Method Blank

Blank ID: MB for HBN 1732415 [WXX/11480]
Blank Lab ID: 1321585

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161901001, 1161901002, 1161901003, 1161901004

Results by **EPA 300.0**

Parameter	Results	LOQ/CL	DL	Units
Chloride	0.0500U	0.100	0.0310	mg/L
Fluoride	0.0500U	0.100	0.0310	mg/L
Sulfate	0.0500U	0.100	0.0310	mg/L

Batch Information

Analytical Batch: WIC5532
Analytical Method: EPA 300.0
Instrument: Metrohm 733 DX2
Analyst: ACF
Analytical Date/Time: 4/24/2016 3:20:11AM

Prep Batch: WXX11480
Prep Method: METHOD
Prep Date/Time: 4/24/2016 1:11:00AM
Prep Initial Wt./Vol.: 10 mL
Prep Extract Vol: 10 mL

Print Date: 05/19/2016 12:09:43PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161901 [WXX11480]
Blank Spike Lab ID: 1321586
Date Analyzed: 04/24/2016 03:42

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161901001, 1161901002, 1161901003, 1161901004

Results by **EPA 300.0**

Blank Spike (mg/L)

Parameter	Spike	Result	Rec (%)	CL
Chloride	10	10.2	102	(90-110)
Fluoride	10	10.8	108	(90-110)
Sulfate	10	9.91	99	(90-110)

Batch Information

Analytical Batch: **WIC5532**
Analytical Method: **EPA 300.0**
Instrument: **Metrohm 733 DX2**
Analyst: **ACF**

Prep Batch: **WXX11480**
Prep Method: **METHOD**
Prep Date/Time: **04/24/2016 01:11**
Spike Init Wt./Vol.: 10 mg/L Extract Vol: 10 mL
Dupe Init Wt./Vol.: Extract Vol:

Print Date: 05/19/2016 12:09:46PM

Matrix Spike Summary

Original Sample ID: 1161922003
MS Sample ID: 1321587 MS
MSD Sample ID: 1321588 MSD

Analysis Date: 04/24/2016 4:27
Analysis Date: 04/24/2016 4:49
Analysis Date: 04/24/2016 5:11
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161901001, 1161901002, 1161901003, 1161901004

Results by **EPA 300.0**

		Matrix Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Chloride	11.8	10.0	22	103	10.0	22.1	104	90-110	0.43	(< 15)
Fluoride	0.0640J	10.0	10.9	108	10.0	11.0	109	90-110	0.72	(< 15)
Sulfate	5.19	10.0	15.7	105	10.0	15.8	106	90-110	0.81	(< 15)

Batch Information

Analytical Batch: WIC5532
Analytical Method: EPA 300.0
Instrument: Metrohm 733 DX2
Analyst: ACF
Analytical Date/Time: 4/24/2016 4:49:17AM

Prep Batch: WXX11480
Prep Method: EPA 300.0 Extraction Waters/Liquids
Prep Date/Time: 4/24/2016 1:11:00AM
Prep Initial Wt./Vol.: 10.00mL
Prep Extract Vol: 10.00mL

Print Date: 05/19/2016 12:09:47PM

Method Blank

Blank ID: MB for HBN 1733533 [WXX/11492]
Blank Lab ID: 1323584

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161901002

Results by **EPA 300.0**

Parameter	Results	LOQ/CL	DL	Units
Chloride	0.0430J	0.100	0.0310	mg/L

Batch Information

Analytical Batch: WIC5534
Analytical Method: EPA 300.0
Instrument: Metrohm 733 DX2
Analyst: ACF
Analytical Date/Time: 5/7/2016 9:32:06PM

Prep Batch: WXX11492
Prep Method: METHOD
Prep Date/Time: 5/7/2016 7:47:00PM
Prep Initial Wt./Vol.: 10 mL
Prep Extract Vol: 10 mL

Print Date: 05/19/2016 12:09:50PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161901 [MXX11298]
Blank Spike Lab ID: 1383t At
Daye z nald4e/ : 0t 70R78016 81:t 2

Wayri(: Mayer cSxrfa, eE. ffGE) roxn/ P

5 C for Sa%pleu: 1161901008

s euxlyu bd **EPA 300.0**

Blank Spike c%QZLP

mara%eyer	Spike	s euxly	s e, cg P	CL
C- lori/ e	10	10G2	102	c90h110 P

Batch Information

z naldyi, al Bay, - : **WIC5534**
z naldyi, al Wey- o/ : **EPA 300.0**
Inuyrx%eny. **Metrohm 733 DX2**
z nalduy. **ACF**

mrep Bay, - : **WXX11492**
mrep Wey- o/ : **METHOD**
mrep Daye7Ti%e: **05/07/2016 19:47**
Spike IniyMyG3VolG 10 %QZL . (yra, yVol: 10 %L
Dxpe IniyMyG3VolG . (yra, yVol:

mrinyDaye: 0t 7l978016 18:09:t 3mW

Matrix Spike Summary

Original Sample ID: 1161932001
MS Sample ID: 1323593 MS
MSD Sample ID: 1323594 MSD

QC for Samples: 1161901002

Analysis Date: 05/07/2016 22:16
Analysis Date: 05/07/2016 22:38
Analysis Date: 05/07/2016 23:01
Matrix: Drinking Water

Results by **EPA 300.0**

		Matrix Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Chloride	9.33	10.0	20.1	108	10.0	20.0	107	90-110	0.50	

Batch Information

Analytical Batch: WIC5534
Analytical Method: EPA 300.0
Instrument: Metrohm 733 DX2
Analyst: ACF
Analytical Date/Time: 5/7/2016 10:38:55PM

Prep Batch: WXX11492
Prep Method: EPA 300.0 Extraction Waters/Liquids
Prep Date/Time: 5/7/2016 7:47:00PM
Prep Initial Wt./Vol.: 10.00mL
Prep Extract Vol: 10.00mL

Print Date: 05/19/2016 12:09:54PM

Method Blank

Blank ID: MB for HBN 1732364 [VVVX8/ 2138
Blank 5a] ID: 13212/ 1

Ma,rti : x a,mr WQ(rfaum0c ffE. ro(nGd

L b for QaC Slmp:
11e1s91991011e1s91992011e1s91993011e1s91996

) mp(l,p] R SW8270D

QaraC mmr	) mp(l,p	5UL X6 5	D5	y nt,p
1026P rtuTloro] mnhmmm	9E99/ 99y	9E9199	9E99319	CgX6
102PDtuTloro] mnhmmm	9E99/ 99y	9E9199	9E99319	CgX6
103PDtuTloro] mnhmmm	9E99/ 99y	9E9199	9E99319	CgX6
106PDtuTloro] mnhmmm	9E99/ 99y	9E9199	9E99319	CgX6
1Pb TloronaST,Talmmm	9E99/ 99y	9E9199	9E99319	CgX6
1PMm,TRnaST,Talmmm	9E99/ 99y	9E9199	9E99319	CgX6
2060 P rtuTloroSTmmol	9E99/ 99y	9E9199	9E99319	CgX6
2060eP rtuTloroSTmmol	9E99/ 99y	9E9199	9E99319	CgX6
206PDtuTloroSTmmol	9E99/ 99y	9E9199	9E99319	CgX6
206PDtC m,TRSTmmol	9E99/ 99y	9E9199	9E99319	CgX6
206PDtnt,roSTmmol	9E92/ 9y	9E9/ 99	9E91/ 9	CgX6
206PDtnt,ro,ol(mmm	9E99/ 99y	9E9199	9E99319	CgX6
20ePDtuTloroSTmmol	9E99/ 99y	9E9199	9E99319	CgX6
20ePDtnt,ro,ol(mmm	9E99/ 99y	9E9199	9E99319	CgX6
2Pb TloronaST,Talmmm	9E99/ 99y	9E9199	9E99319	CgX6
2Pb TloroSTmmol	9E99/ 99y	9E9199	9E99319	CgX6
2PMm,TRP60ePCtnt,roSTmmol	9E92/ 9y	9E9/ 99	9E91/ 9	CgX6
2PMm,TRnaST,Talmmm	9E99/ 99y	9E9199	9E99319	CgX6
2PMm,TRSTmmol WPb rmpold	9E99/ 99y	9E9199	9E99319	CgX6
2PNt,roantltnm	9E99/ 99y	9E9199	9E99319	CgX6
2PNt,roSTmmol	9E99/ 99y	9E9199	9E99319	CgX6
3z 6PMm,TRSTmmol WSz C Pb rmpold	9E9199y	9E9299	9E99e29	CgX6
303PDtuTloro] mnhtGtnm	9E99/ 99y	9E9199	9E99319	CgX6
3PNt,roantltnm	9E99/ 99y	9E9199	9E99319	CgX6
6PBroC oSTmnRPSTmnRm,Tmr	9E99/ 99y	9E9199	9E99319	CgX6
6Pb TloroP3PC m,TRSTmmol	9E99/ 99y	9E9199	9E99319	CgX6
6Pb Tloroantltnm	9E99/ 99y	9E9199	9E99319	CgX6
6Pb TloroSTmnRPSTmnRm,Tmr	9E99/ 99y	9E9199	9E99319	CgX6
6PNt,roantltnm	9E99/ 99y	9E9199	9E99319	CgX6
6PNt,roSTmmol	9E92/ 9y	9E9/ 99	9E91/ 9	CgX6
KumnaST,Tmnm	9E99/ 99y	9E9199	9E99319	CgX6
KumnaST,TRmmm	9E99/ 99y	9E9199	9E99319	CgX6
Kntltnm	9E92/ 9y	9E9/ 99	9E91/ 9	CgX6
Kn,Traummm	9E99/ 99y	9E9199	9E99319	CgX6
Kho] mnhmmm	9E99/ 99y	9E9199	9E99319	CgX6
BmnhoVdKn,Traummm	9E99/ 99y	9E9199	9E99319	CgX6
Bmnho[a8SRmmm	9E99/ 99y	9E9199	9E99319	CgX6
Bmnho[] 8Al(oran,Tmmm	9E99/ 99y	9E9199	9E99319	CgX6

Ortn, Da,m 9/ XlsX291e 12:9s:/ eOM

Method Blank

Blank ID: MB for HBN 1732364 [VVVX8/ 2138
Blank 5a] ID: 13212/ 1

Ma,rti : x a,mr WQ(rfaum0c ffE. ro(nGd

L b for QaC Slmp:
11e1s91991011e1s91992011e1s91993011e1s91996

) mp(l,p] R SW8270D

OaraC m,mr	) mp(l,p	5UL X6 5	D5	y nt,p
Bmnho[g0T8SmrRmnm	9E99/ 99y	9E9199	9E99319	CgX6
Bmnho[k8l(oran,Tmnm	9E99/ 99y	9E9199	9E99319	CgX6
Bmnhotu autG	9E92/ 9y	9E9/ 99	9E91/ 9	CgX6
BmnhR aluoTol	9E99/ 99y	9E9199	9E99319	CgX6
BtpW2uTloro1C m,TRm,TRdc ,Tmr	9E99/ 99y	9E9199	9E99319	CgX6
BtpW2Pb Tlorom,Toi RdC m,Tanm	9E99/ 99y	9E9199	9E99319	CgX6
BtpW2Pb Tlorom,TRdm,Tmr	9E99/ 99y	9E9199	9E99319	CgX6
] tpW2Pc ,TRTmi RdST,Tala,m	9E99/ 99y	9E9199	9E99319	CgX6
B(,R] mnhRST,Tala,m	9E99/ 99y	9E9199	9E99319	CgX6
b ar] aholm	9E99/ 99y	9E9199	9E99319	CgX6
b TrRpmnm	9E99/ 99y	9E9199	9E99319	CgX6
Dt] mnho[a0T8an,Traumnm	9E99/ 99y	9E9199	9E99319	CgX6
Dt] mnhof(ran	9E99/ 99y	9E9199	9E99319	CgX6
Dtm,TRST,Tala,m	9E99/ 99y	9E9199	9E99319	CgX6
DtC m,TRST,Tala,m	9E99/ 99y	9E9199	9E99319	CgX6
DtPnP] (,RST,Tala,m	9E99/ 99y	9E9199	9E99319	CgX6
GtPnPUu,RST,Tala,m	9E99/ 99y	9E9199	9E99319	CgX6
Al(oran,Tmnm	9E99/ 99y	9E9199	9E99319	CgX6
Al(ormnm	9E99/ 99y	9E9199	9E99319	CgX6
Hmi auTloro] mnhmnm	9E99/ 99y	9E9199	9E99319	CgX6
Hmi auTloro] (,aGmnm	9E99/ 99y	9E9199	9E99319	CgX6
Hmi auTlorouRuloSmn,aGmnm	9E91/ 9y	9E9399	9E99s69	CgX6
Hmi auTlorom,Tanm	9E99/ 99y	9E9199	9E99319	CgX6
InGmno[1020 3RuOG8SRmnm	9E99/ 99y	9E9199	9E99319	CgX6
IpoSToronm	9E99/ 99y	9E9199	9E99319	CgX6
NaST,Talmnm	9E99/ 99y	9E9199	9E99319	CgX6
Nt,ro] mnhmnm	9E99/ 99y	9E9199	9E99319	CgX6
NPNt,ropoGtC m,TRaC tnm	9E99/ 99y	9E9199	9E99319	CgX6
NPNt,ropoPGtPnPSroSRaC tnm	9E99/ 99y	9E9199	9E99319	CgX6
NPNt,ropoGtSTmnRaC tnm	9E99/ 99y	9E9199	9E99319	CgX6
Omn,auTloroSTmnol	9E92/ 9y	9E9/ 99	9E91/ 9	CgX6
OTmnan,Trmnm	9E99/ 99y	9E9199	9E99319	CgX6
OTmnol	9E99/ 99y	9E9199	9E99319	CgX6
ORmnm	9E99/ 99y	9E9199	9E99319	CgX6
Surrogates				
2060eP rt] roC oSTmnol Wp(rrd	7eEe	63P169		&
2PAl(oro] tSTmnR Wp(rrd	7/ Ee	66P11s		&
2PAl(oroSTmnol Wp(rrd	/ 7E2	1sP11s		&

Ortn, Da,m 9/ XIsX291e 12:9s:/ eOM

Method Blank

Blank ID: MB for HBN 1732364 [VVVX8/ 2138
Blank 5a] ID: 13212/ 1

Ma,rti : x a,mr WQ(rfaum0cffE. ro(nGd

L b for QaC Slmp:
11e1s91991011e1s91992011e1s91993011e1s91996

) mp(l,p] R SW8270D

QaraC mmr	) mp(l,p	5UL X6 5	D5	y nt,p
Nt,ro] mnhmmnRG/ Wp(rrd	e7E7	66P129		&
OTmnolRGe Wp(rrd	e2E3	19P11/		&
- mrSTmnRRG16 Wp(rrd	s9E	/ 9P136		&

Batch Information

KnalR,tual Ba,uT: VMQs276
KnalR,tual MmToG Qx 4279D
Inp,r(C mn,: HO e4s9X s73 QQK
KnalRp,: N55
KnalR,tual Da,mX tC m / X2X291e 3:3/ :99OM

OrmS Ba,uT: VVV3/ 213
OrmS MmToG Qx 3/ 29b
OrmS Da,mX tC m 6X2eX291e s:99:27KM
OrmS Int,tal x ,E%olE 1999 C5
OrmS c i ,rau, %ol: 1 C5

Ortn, Da,m 9/ XlsX291e 12:9s:/ eOM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161901 [XXX35213]
Blank Spike Lab ID: 1321252
Date Analyzed: 05/02/2016 18:07

Spike Duplicate ID: LCSD for HBN 1161901 [XXX35213]
Spike Duplicate Lab ID: 1321253
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161901001, 1161901002, 1161901003, 1161901004

Results by **SW8270D**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
1,2,4-Trichlorobenzene	0.1	0.0701	70	0.1	0.0679	68	(29-116)	3.20	(< 20)
1,2-Dichlorobenzene	0.1	0.0621	62	0.1	0.0591	59	(32-111)	5.10	(< 20)
1,3-Dichlorobenzene	0.1	0.0616	62	0.1	0.0585	59	(28-110)	5.30	(< 20)
1,4-Dichlorobenzene	0.1	0.0629	63	0.1	0.0596	60	(29-112)	5.40	(< 20)
1-Chloronaphthalene	0.04	0.0384	96	0.04	0.0391	98	(58-111)	1.80	(< 20)
1-Methylnaphthalene	0.1	0.0762	76	0.1	0.0773	77	(41-119)	1.40	(< 20)
2,4,5-Trichlorophenol	0.1	0.0876	88	0.1	0.0853	85	(53-123)	2.60	(< 20)
2,4,6-Trichlorophenol	0.1	0.0872	87	0.1	0.0854	85	(50-125)	2.00	(< 20)
2,4-Dichlorophenol	0.1	0.0749	75	0.1	0.0726	73	(47-121)	3.10	(< 20)
2,4-Dimethylphenol	0.1	0.0592	59	0.1	0.0575	58	(31-124)	2.90	(< 20)
2,4-Dinitrophenol	0.18	0.164	91	0.18	0.155	86	(23-143)	5.30	(< 20)
2,4-Dinitrotoluene	0.1	0.0945	95	0.1	0.0928	93	(57-128)	1.80	(< 20)
2,6-Dichlorophenol	0.04	0.0283	71	0.04	0.0282	71	(50-118)	0.50	(< 20)
2,6-Dinitrotoluene	0.1	0.0974	97	0.1	0.0952	95	(57-124)	2.20	(< 20)
2-Chloronaphthalene	0.1	0.0799	80	0.1	0.0805	81	(40-116)	0.70	(< 20)
2-Chlorophenol	0.1	0.0610	61	0.1	0.0569	57	(38-117)	7.10	(< 20)
2-Methyl-4,6-dinitrophenol	0.18	0.185	103	0.18	0.176	98	(44-137)	5.10	(< 20)
2-Methylnaphthalene	0.1	0.0712	71	0.1	0.0728	73	(40-121)	2.30	(< 20)
2-Methylphenol (o-Cresol)	0.1	0.0617	62	0.1	0.0585	59	(30-117)	5.30	(< 20)
2-Nitroaniline	0.1	0.0951	95	0.1	0.0920	92	(55-117)	3.30	(< 20)
2-Nitrophenol	0.1	0.0803	80	0.1	0.0792	79	(47-123)	1.50	(< 20)
3&4-Methylphenol (p&m-Cresol)	0.14	0.0987	71	0.14	0.0920	66	(29-110)	7.00	(< 20)
3,3-Dichlorobenzidine	0.1	0.0833	83	0.1	0.0793	79	(27-129)	4.90	(< 20)
3-Nitroaniline	0.1	0.0917	92	0.1	0.0868	87	(41-128)	5.50	(< 20)
4-Bromophenyl-phenylether	0.1	0.0987	99	0.1	0.0956	96	(55-124)	3.20	(< 20)
4-Chloro-3-methylphenol	0.1	0.0801	80	0.1	0.0787	79	(52-119)	1.80	(< 20)
4-Chloroaniline	0.1	0.0693	69	0.1	0.0654	65	(33-117)	5.80	(< 20)
4-Chlorophenyl-phenylether	0.1	0.0907	91	0.1	0.0897	90	(53-121)	1.00	(< 20)
4-Nitroaniline	0.1	0.0976	98	0.1	0.0921	92	(74-118)	5.90	(< 20)
4-Nitrophenol	0.14	0.106	76	0.14	0.0958	68	(52-111)	10.30	(< 20)
Acenaphthene	0.1	0.0841	84	0.1	0.0850	85	(47-122)	1.10	(< 20)
Acenaphthylene	0.1	0.0838	84	0.1	0.0835	84	(41-130)	0.38	(< 20)
Aniline	0.1	0.0444J	44	0.1	0.0360J	36	(10-87)	20.90	* (< 20)
Anthracene	0.1	0.0949	95	0.1	0.0917	92	(57-123)	3.50	(< 20)

Print Date: 05/19/2016 12:10:00PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161901 [XXX35213]
Blank Spike Lab ID: 1321252
Date Analyzed: 05/02/2016 18:07

Spike Duplicate ID: LCSD for HBN 1161901 [XXX35213]
Spike Duplicate Lab ID: 1321253
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161901001, 1161901002, 1161901003, 1161901004

Results by **SW8270D**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Azobenzene	0.1	0.0958	96	0.1	0.0946	95	(61-116)	1.20	(< 20)
Benzo(a)Anthracene	0.1	0.0995	100	0.1	0.0940	94	(58-125)	5.70	(< 20)
Benzo[a]pyrene	0.1	0.0909	91	0.1	0.0860	86	(54-128)	5.50	(< 20)
Benzo[b]Fluoranthene	0.1	0.0956	96	0.1	0.0914	91	(53-131)	4.40	(< 20)
Benzo[g,h,i]perylene	0.1	0.105	105	0.1	0.102	102	(50-134)	3.10	(< 20)
Benzo[k]fluoranthene	0.1	0.0892	89	0.1	0.0884	88	(57-129)	0.93	(< 20)
Benzoic acid	0.14	0.0826	59	0.14	0.0681	49	(21-107)	19.30	(< 20)
Benzyl alcohol	0.1	0.0634	63	0.1	0.0606	61	(31-112)	4.60	(< 20)
Bis(2chloro1methylethyl)Ether	0.1	0.0663	66	0.1	0.0662	66	(37-130)	0.21	(< 20)
Bis(2-Chloroethoxy)methane	0.1	0.0757	76	0.1	0.0770	77	(48-120)	1.70	(< 20)
Bis(2-Chloroethyl)ether	0.1	0.0591	59	0.1	0.0562	56	(43-118)	4.90	(< 20)
bis(2-Ethylhexyl)phthalate	0.1	0.102	102	0.1	0.0993	99	(55-135)	2.80	(< 20)
Butylbenzylphthalate	0.1	0.107	107	0.1	0.103	103	(53-134)	4.10	(< 20)
Carbazole	0.1	0.0985	99	0.1	0.0962	96	(60-122)	2.30	(< 20)
Chrysene	0.1	0.103	103	0.1	0.100	100	(59-123)	2.90	(< 20)
Dibenzo[a,h]anthracene	0.1	0.104	104	0.1	0.0996	100	(51-134)	4.40	(< 20)
Dibenzofuran	0.1	0.0843	84	0.1	0.0847	85	(53-118)	0.52	(< 20)
Diethylphthalate	0.1	0.0911	91	0.1	0.0884	88	(56-125)	3.00	(< 20)
Dimethylphthalate	0.1	0.0909	91	0.1	0.0877	88	(45-127)	3.60	(< 20)
Di-n-butylphthalate	0.1	0.0990	99	0.1	0.0947	95	(59-127)	4.40	(< 20)
di-n-Octylphthalate	0.1	0.0969	97	0.1	0.0920	92	(51-140)	5.20	(< 20)
Fluoranthene	0.1	0.0891	89	0.1	0.0853	85	(57-128)	4.40	(< 20)
Fluorene	0.1	0.0874	87	0.1	0.0872	87	(52-124)	0.13	(< 20)
Hexachlorobenzene	0.1	0.0958	96	0.1	0.0926	93	(53-125)	3.40	(< 20)
Hexachlorobutadiene	0.1	0.0764	76	0.1	0.0731	73	(22-124)	4.40	(< 20)
Hexachlorocyclopentadiene	0.1	0.0478	48	0.1	0.0463	46	(10-93)	3.10	(< 20)
Hexachloroethane	0.1	0.0605	61	0.1	0.0573	57	(21-115)	5.40	(< 20)
Indeno[1,2,3-c,d] pyrene	0.1	0.0981	98	0.1	0.0955	96	(52-134)	2.60	(< 20)
Isophorone	0.1	0.0709	71	0.1	0.0717	72	(42-124)	1.10	(< 20)
Naphthalene	0.1	0.0714	71	0.1	0.0695	70	(40-121)	2.80	(< 20)
Nitrobenzene	0.1	0.0722	72	0.1	0.0709	71	(45-121)	1.80	(< 20)
N-Nitrosodimethylamine	0.1	0.0554	55	0.1	0.0483	48	(41-117)	13.80	(< 20)
N-Nitroso-di-n-propylamine	0.1	0.0719	72	0.1	0.0745	75	(49-119)	3.70	(< 20)
N-Nitrosodiphenylamine	0.1	0.0806	81	0.1	0.0794	79	(51-123)	1.60	(< 20)

Print Date: 05/19/2016 12:10:00PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161901 [XXX35213]
Blank Spike Lab ID: 1321252
Date Analyzed: 05/02/2016 18:07

Spike Duplicate ID: LCSD for HBN 1161901 [XXX35213]
Spike Duplicate Lab ID: 1321253
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161901001, 1161901002, 1161901003, 1161901004

Results by **SW8270D**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Pentachlorophenol	0.14	0.145	103	0.14	0.137	98	(35-138)	5.40	(< 20)
Phenanthrene	0.1	0.0960	96	0.1	0.0935	94	(59-120)	2.70	(< 20)
Phenol	0.1	0.0542	54	0.1	0.0485	49	(39-84)	11.10	(< 20)
Pyrene	0.1	0.114	114	0.1	0.110	110	(57-126)	4.30	(< 20)
Surrogates									
2,4,6-Tribromophenol (surr)	0.2	95.2	95	0.2	96.5	97	(43-140)	1.30	
2-Fluorobiphenyl (surr)	0.1	75.7	76	0.1	78.9	79	(44-119)	4.20	
2-Fluorophenol (surr)	0.2	54.1	54	0.2	54.2	54	(19-119)	0.07	
Nitrobenzene-d5 (surr)	0.1	72	72	0.1	70.3	70	(44-120)	2.50	
Phenol-d6 (surr)	0.2	62.6	63	0.2	61.1	61	(10-115)	2.50	
Terphenyl-d14 (surr)	0.1	110	110	0.1	110	110	(50-134)	0.36	

Batch Information

Analytical Batch: **XMS9274**
Analytical Method: **SW8270D**
Instrument: **HP 6890/5973 SSA**
Analyst: **NLL**

Prep Batch: **XXX35213**
Prep Method: **SW3520C**
Prep Date/Time: **04/26/2016 09:00**
Spike Init Wt./Vol.: 0.1 mg/L Extract Vol: 1 mL
Dupe Init Wt./Vol.: 0.1 mg/L Extract Vol: 1 mL

Print Date: 05/19/2016 12:10:00PM

Method Blank

Blank ID: MB for HBN 1732490 [XXX/35229]
Blank Lab ID: 1321704

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161901001, 1161901002, 1161901003, 1161901004

Results by **AK102**

Parameter	Results	LOQ/CL	DL	Units
Diesel Range Organics	0.300U	0.600	0.180	mg/L
Surrogates				
5a Androstane (surr)	97.2	60-120		%

Batch Information

Analytical Batch: XFC12356
Analytical Method: AK102
Instrument: Agilent 7890B R
Analyst: CJSW
Analytical Date/Time: 5/2/2016 1:53:00PM

Prep Batch: XXX35229
Prep Method: SW3520C
Prep Date/Time: 4/28/2016 9:48:03AM
Prep Initial Wt./Vol.: 250 mL
Prep Extract Vol: 1 mL

Print Date: 05/19/2016 12:10:03PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161901 [VVVX28897
Blank Spike La3 ID: 1X81] 02
Date t nalAyez: 02d08d8016 14:04

Spike D/ pli5abe ID: LCSD for HBN 1161901 [VVVX28897
Spike D/ pli5abe La3 ID: 1X81] 06
Rabris: Maber xS/ rfa5eW(ff,WEro/ nz.

%C for Sa) plec: 1161901001W1161901008W116190100XW1161901004

u ec/ lbc 3A **AK102**

	Blank Spike x) mdL.			Spike D/ pli5abe x) mdL.					
Gara) eber	Spike	u ec/ lb	u e5 xP.	Spike	u ec/ lb	u e5 xP.	CL	u GD xP.	u GD CL
Diecel u anme g rmani5c	80	19,4	9]	80	19,1	92	x] 2C182.	1,60	xO80.
Surrogates									
2a t nzrocbane xc/ rr.	0,4	11-	11-	0,4	112	112	x60C180.	8,-0	

Batch Information

t nalAbi5al Bab5<: **XFC12356**
t nalAbi5al Reb<oz: **AK102**
Incb/) enb **Agilent 7890B R**
t nalAcb **CJSW**

Grep Bab5<: **XXX35229**
Grep Reb<oz: **SW3520C**
Grep Dabedhi) e: **04/28/2016 09:48**
Spike InibMbdTol,: 80) mdL (sbra5bTol: 1) L
D/ pe InibMbdTol,: 80) mdL (sbra5bTol: 1) L

GrinbDabe: 02df9d8016 18:10:06GR

Method Blank

Blank ID: MB for HBN 1732490 [XXX/35229]
Blank Lab ID: 1321704

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161901001, 1161901002, 1161901003, 1161901004

Results by **AK103**

Parameter	Results	LOQ/CL	DL	Units
Residual Range Organics	0.250U	0.500	0.150	mg/L
Surrogates				
n8Ariacontane8d62 (surr)	93.6	608l20		-

Batch Information

%nalytical Batch: XFC12356
%nalytical Method: %K103
Instrument: %gilent 7J90B R
%nalyst: CTSW
%nalytical Date/Aime: 5/2/2016 1:53:00PM

Prep Batch: XXX35229
Prep Method: SW3520C
Prep Date/Aime: 4/2J/2016 9:4J:03%M
Prep Initial Wt./Vol.: 250 mL
Prep Extract Vol: 1 mL

Print Date: 05/19/2016 12:10:09PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161901 [VVVX28897
Blank Spike La3 ID: 1X81] 02
Date t nalAyez: 02d08d8016 14:04

Spike D/ pli5abe ID: LCSD for HBN 1161901 [VVVX28897
Spike D/ pli5abe La3 ID: 1X81] 06
Rabris: Maber xS/ rfa5eW(ff,WEro/ nz.

%C for Sa) plec: 1161901001W1161901008W116190100XW1161901004

u ec/ lbc 3A **AK102**

	Blank Spike x) mdL.			Spike D/ pli5abe x) mdL.					
Gara) eber	Spike	u ec/ lb	u e5 xP.	Spike	u ec/ lb	u e5 xP.	CL	u GD xP.	u GD CL
u eciz/ al u anme g rmani5c	80	88,2	11X	80	88,8	111	x60C180.	1,60	xO80.
Surrogates									
nQ ria5onbaneQ268 xc/ rr.	0,4	100	100	0,4	96,X	96	x60C180.	X,<0	

Batch Information

t nalAbi5al Bat5h: **XFC13256**
t nalAbi5al Rebhoz: **AK102**
Incb/) enb **Agilent 7890B R**
t nalAcb **CJSW**

Grep Bat5h: **XXX25339**
Grep Rebhoz: **SW2530C**
Grep Dabed-i) e: **04/38/3016 09:48**
Spike InibMbdTol,: 80) mdL (sbra5bTol: 1) L
D/ pe InibMbdTol,: 80) mdL (sbra5bTol: 1) L

CHAIN OF CUSTODY RECORD

SGS Environmental Services Inc.

1161901

CLIENT: SLR Consulting

CONTACT: Jason Gray, SLR PHONE NO: (office) 264-6965

PROJECT: Name Kenai Wells PROJECT No. 105.00148.16001

REPORTS TO: Jason Gray, SLR email jgray@slrconsulting.com

INVOICE TO: Wendy Hansen, SLR QUOTE #: 332060
2700 Gambell Street Anchorage, Alaska 99503

SGS Reference #:

page 1 of 2

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	# CONTAINERS	Preserv Used	SAMPLE TYPE C = COMP G = GRAB	E1631E - Low-level Hg (dissolved) HCl	E200.8 - Dissolved Metals SM21 2340B - Hardness HNO3	E1631E - Low-level Hg (total) HCl	E200.8 - Total Metals HNO3	SW 8260B - VOC HCl	AK101 -GRO HCl	SW 8270D - SVOC HCl	AK102/AK103 - DRO/RRO HCl	SM21 2540D - TSS None	E300.0 - Cl, Fl,SO4 SM21 4500NO3-F - Nitrate, Nitrite None	SM21 2540C TDS, SM21 2320B Alkalinity, SM2130B Turbidity, SM21 4500H+B pH None
(1) A-0(17) A-B	MW39A-0416	4-21-16	1130	GW	~~17~~		G	X	X	X	X	X	X	X	X	X	X	X
(2) A-0(18)	MW39B-0416	4-21-16	1400	GW	~~15~~ 17		G	X	X	X	X	X	X	X	X	X	X	X
(3) A-0(19)	MW91A-0416	4-21-16	1810	GW	15		G		X		X	X	X	X	X	X	X	X
(4) A-0(20)	MW91Z-0416	4-21-16	1810	GW	15		G		X		X	X	X	X	X	X	X	X
(5) A (19) A	MW87B-0416	4-19-16	1402	GW	2		G	X		X								
(6) A (20) A	MW27-0416	4-19-16	1715	GW	2		G	X		X								
(7) A (21) A	MW87Z-0416	4-19-16	1402	GW	2		G	X		X								
(8) A (22) A	MW82A-0416	4-20-16	1105	GW	2		G	X		X								
(9) A (23) A	MW82B-0416	4-20-16	1305	GW	2		G	X		X								
(12) A-C	~~Trip Blank~~ TB-3	4-21-16	1130	—	3							X	(X) <ND					

Collected/Relinquished By: (1) Kyle Johnson	Date 4-21-16	Time 2210	Received By:
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date 4/22/16	Time 13:07	Received For Laboratory By:

Shipping Carrier:

Shipping Ticket No:

Samples Received Cold? (YES) NO 2) 1.0 #09 1) 0.9 #09 3) 0.5 #09

Temperature °C:

Special Deliverable Req: **Level II**

EDD: PDF, Access

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

Requested Turnaround Time and-or Special Instructions:

Total and Dissolved Metals:
As, Ba, Be, Ca, Cd, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Na, Ni, Sb, Se, Tl, V, Zn

200 W. Potter Drive **Anchorage, AK 99518** Tel: (907) 562-2343 Fax: (907) 561-5301
3180 Peger Road **Fairbanks, AK 99701** Tel: (907) 474-8656 Fax: (907) 474-9685
5500 Business Drive **Wilmington, NC 28405** Tel: (910) 350-1903 Fax: (910) 350-1557

CHAIN OF CUSTODY RECORD

SGS Environmental Services Inc.

1161901

CLIENT: SLR Consulting

CONTACT: Jason Gray, SLR PHONE NO: (office) 264-6965

PROJECT: Name: Kenai Wells PROJECT No.: 105.00148.16001

REPORTS TO: Jason Gray, SLR email jgray@slrconsulting.com

INVOICE TO: Wendy Hansen, SLR QUOTE #: 332060
2700 Gambell Street Anchorage, Alaska 99503

SGS Reference #:

page 2 of 2

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	# CONTAINERS	Preserv Used	SAMPLE TYPE C = COMP G = GRAB	E1631E - Low-level Hg (dissolved)	E200.8 - Dissolved Metals SM21 2340B - Hardness	E1631E - Low-level Hg (total)	E200.8 - Total Metals	SW 8260B - VOC	AK101 -GRO	SW 8270D - SVOC	AK102/AK103 - DRO/RRO	SM21 2540D - TSS	E300.0 - Cl, Fl, SO4 SM21 4500NO3-F - Nitrate, Nitrite	SM21 2540C TDS, SM21 2320B Alkalinity, SM2130B Turbidity, SM21 4500H+B pH
						HCl		HCl	HNO3	HCl	HNO3	HCl	HCl	HCl	HCl	None	None	None
(10) A (24) A	MW 50A - 0416	4-20-16	1625	GW	2		G	X		X								
(11) A (25) A	MW 50B - 0416	4-20-16	1840	GW	2		G	X		X								
(13) A-C	TB-4	4-21-16	1130	—	3								X					
(14) A	TBHG-1	4-19-16	1402	—	1					X								
(15) A	EBT -0416	4-19-16	1235	DI H_2O	1					X								
(16) A	EBF -Lot# L1456	4-19-16	1235	DI H_2O	1			X										
	~~Trip Blank~~											X	X					

Collected/Relinquished By: (1) Kyle Jonnson	Date 4-21-16	Time 2210	Received By:
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	~~Received~~ By:
Relinquished By: (4)	Date 4/22/16	Time 13:07	Received For Laboratory By: Cory

Shipping Carrier:

Shipping Ticket No:

Samples Received Cold? YES NO

Temperature °C: ____.____

Special Deliverable Req: **Level II**

EDD: PDF, Access

Chain of Custody Seal: (Circle)
INTACT BROKEN ABSENT

Requested Turnaround Time and-or Special Instructions:

Total and Dissolved Metals:
As, Ba, Be, Ca, Cd, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Na, Ni, Sb, Se, Tl, V, Zn

200 W. Potter Drive **Anchorage, AK 99518** Tel: (907) 562-2343 Fax: (907) 561-5301
3180 Peger Road **Fairbanks, AK 99701** Tel: (907) 474-8656 Fax: (907) 474-9685
5500 Business Drive **Wilmington, NC 28405** Tel: (910) 350-1903 Fax: (910) 350-1557

AIRPORT OF DEPARTURE ENA 04/22/16 08:13 097165 808 7023830 Frgt

20-Sep-16

SHIPPER'S NAME, ADDRESS & PHONE
SLR INTERNATION CORP
KENAI AK 9072238578

SHIPPER'S ACCOUNT NUMBER
H7752

NOT AIR WAYBILL (AIR CONSIGNMENT NOTE)

Ravn ALASKA
4700 Old International Airport Road
Anchorage, Alaska 99502

It is agreed that the goods described herein are accepted in apparent good order and condition (except as noted) for carriage SUBJECT TO THE CONDITIONS OF CONTRACT AS LISTED IN THE COMPANIES TARIFFS. THE SHIPPER'S ATTENTION IS DRAWN TO THE NOTICE CONCERNING CARRIERS' LIMITATION OF LIABILITY. Shipper may increase such limitation of liability by declaring a higher value for carriage and paying a supplemental charge if required.

Received in Good Condition

Place Date

TO EXPEDITE MOVEMENT, SHIPMENT MAY BE DIVERTED TO MOTOR OR OTHER CARRIER AS PER TARIFF RULE UNLESS SHIPPER GIVES OTHER INSTRUCTION HEREON

CONSIGNEE'S NAME, ADDRESS & PHONE
SGS LABS
200 WEST POTTER RD
ANCHORAGE AK 99518 9075622343

CONSIGNEE'S ACCOUNT NUMBER

ISSUING CARRIER'S AGENT NAME, CITY & PHONE

ALSO NOTIFY NAME & ADDRESS

AGENT'S IATA CODE

ACCOUNT NO.

ACCOUNTING INFORMATION 7094017
Acc#: H7752 SLR INTERNATIONAL CORP.

AIRPORT OF DEPARTURE
Kenai

Declared Value
$ 0.00

Insured Amount
$ 0.00

ROUTING AND DESTINATION

TO	BY FIRST	TO	BY	TO	BY

AIRPORT OF DESTINATION
Anchorage

FOR CARRIER USE ONLY
FLIGHT/DATE 0
FLIGHT/DATE

COMMENTS
noa

No. Of Pieces Rcp	Gross Weight	kg lb	Rate Class	Commodity Item No.	Chargeable Weight	Rate/Charge	Total	Nature and Quantity of Goods
3	148	l..	S	gen	148	$0.32	$47.36	water samples
3	148						$47.36	

PREPAID	WEIGHT CHARGE	COLLECT
$47.36		

VALUATION CHARGE
$0.00

FEDERAL EXCISE TAX
$3.43

TOTAL OTHER CHARGES DUE AGENT
$0.00

TOTAL OTHER CHARGES DUE CARRIER
$7.58

TOTAL PREPAID	TOTAL COLLECT
$58.37	

OTHER CHARGES AND DESCRIPTION

AMOUNT	DESCRIPTION
$7.58	FQ

HAZMAT
No

Shipper certifies that the particulars on the face hereof are correct, agrees to the CONDITIONS AS LISTED IN THE COMPANIES TARIFFS, accepts that carrier's liability is limited as stated in the companies tariffs and accepts such value unless a higher value for carriage is declared on the face hereof subject to an additional charge and that insofar as any part of the consignment contains restricted articles, such part is described by name and is in proper condition for carriage by air according to applicable national governmental regulations, and for international shipments, the current International Air Transport Association's Restricted Articles Regulations.

Paid By Shipper

Printed Name and Title

Signature

STATION NUMBERS
ANCHORAGE - (907) 243-2761
ANIAK - (907) 675-4572
BARROW - (907) 852-5300
BETHEL -(907) 543-3825
DEADHORSE - (907) 659-9222
FAIRBANKS - (907) 450-7250
GALENA -(907) 656-1875
KOTZEBUE - (907) 442-3020
NOME - (907) 443-7595
ST. MARYS - (907) 438-2247
UNALAKLEET - (907) 624-3595

Printed at 12:32:01 on 4/22/2016 at ANC-FRT2 10.14.14.3

Customer Copy

Alert Expeditors Inc #364190

Citywide Delivery • 440-3351
8421 Flamingo Drive • Anchorage, Alaska 99502

Date 4 22 16

From SLR

To SGS

Collect ☐	Prepay ☐ Account ☐	Advance Charges ☐
Job #	PO#	

3@14# ± Lawn

7023830

Shipped Signature

Total Charge 4/22/16 13:07

Received By:

SGS

1161901

1 1 6 1 9 0 1

SAMPLE RECEIPT FORM

Review Criteria:	Yes	N/A	No	Comments/Action Taken:
Were **custody seals** intact? Note # & location, if applicable.	☐	☑	☐	***Exemption permitted if sampler hand carries/delivers.***
COC accompanied samples?	☑	☐	☐	
Temperature blank compliant* (i.e., 0-6°C after CF)?	☑	☐	☐	***Exemption permitted if chilled & collected <8 hrs ago.***
If >6°C, were samples collected <8 hours ago?	☐	☑	☐	
If <0°C, were all sample containers ice free?	☐	☑	☐	
Cooler ID: 1 @ 0.9 w/ Therm.ID: D9 Cooler ID: 2 @ 1.0 w/ Therm.ID: D12 Cooler ID: 3 @ 0.5 w/ Therm.ID: D9 Cooler ID: _____ @ _____ w/ Therm.ID: _____ Cooler ID: _____ @ _____ w/ Therm.ID: _____ If samples are received without a temperature blank, the "cooler temperature" will be documented in lieu of the temperature blank & "**COOLER TEMP**" will be noted to the right. In cases where neither a temp blank nor cooler temp can be obtained, note "ambient" or "chilled."				***Note: Identify containers received at non-compliant temperature. Use form FS-0029 if more space is needed.***
Delivery method (specify all that apply): ☐Client (hand carried) ☐USPS ☐Lynden ☐AK Air ☑Alert Courier ☐UPS ☐FedEx ☐RAVN ☐C&D Delivery ☐Carlile ☐Pen Air ☐Warp Speed ☐Other: _____				
→ *For WO# with airbills, was the WO# & airbill info recorded in the Front Counter eLog?*	☑	☐	☐	
	Yes	N/A	No	
Were samples received within hold time?	☑	☐	☐	***Note: Refer to form F-083 "Sample Guide" for hold times.***
Do samples **match COC*** (i.e., sample IDs, dates/times collected)?	☑	☐	☐	***Note: If times differ <1hr, record details and login per COC.***
Were analyses requested unambiguous?	☑	☐	☐	
Were samples in **good condition** (no leaks/cracks/breakage)?	☑	☐	☐	
Packing material used (specify all that apply): ☑Bubble Wrap ☐Separate plastic bags ☐Vermiculite ☐Other:				
Were **proper containers** (type/mass/volume/preservative*) used?	☑	☐	☐	☐ ***Exemption permitted for metals (e.g., 200.8/6020A).***
Were **Trip Blanks** (i.e., VOAs, LL-Hg) in cooler with samples?	☑	☐	☐	
Were all VOA vials **free of headspace** (i.e., bubbles ≤6 mm)?	☑	☐	☐	
Were all soil VOAs **field extracted** with MeOH+BFB?	☐	☑	☐	
For preserved waters (other than VOA vials, LL-Mercury or microbiological analyses), was **pH verified and compliant**?	☑	☐	☐	
If pH was adjusted, were bottles flagged (i.e., stickers)?	☐	☑	☐	
For **special handling** (e.g., "MI" soils, foreign soils, lab filter for dissolved…, lab extract for volatiles, Ref Lab, limited volume), were bottles/paperwork flagged (e.g., sticker)?	☐	☑	☐	
For **RUSH/SHORT Hold Time**, were COC/Bottles flagged accordingly? Was Rush/Short HT email sent, if applicable?	☑	☐	☐	Turbidity, Nitrate (unpres.)
For **SITE-SPECIFIC QC, e.g. BMS/BMSD/BDUP**, were containers / paperwork flagged accordingly?	☐	☑	☐	
For any question answered "No," has the PM been notified and the problem resolved (or paperwork put in their bin)?	☐	☑	☐	SRF Completed by: CRD PM notified:
Was **PEER REVIEW** of ***sample numbering/labeling completed?***	☐	☑	☐	Peer Reviewed by:
Additional notes (if applicable):				

Note to Client: *Any "no" answer above indicates non-compliance with standard procedures and may impact data quality.*

F102_eSRF_2015_03_31

Sample Containers and Preservatives

Container Id	Preservative	Container Condition	Container Id	Preservative	Container Condition
1161901001-A	HNO3 to pH < 2	OK	1161901003-M	HCL to pH < 2	OK
1161901001-B	HCL to pH < 2	OK	1161901003-N	HCL to pH < 2	OK
1161901001-C	HCL to pH < 2	OK	1161901004-A	HNO3 to pH < 2	OK
1161901001-D	No Preservative Required	OK	1161901004-B	HCL to pH < 2	OK
1161901001-E	No Preservative Required	OK	1161901004-C	HCL to pH < 2	OK
1161901001-F	No Preservative Required	OK	1161901004-D	No Preservative Required	OK
1161901001-G	No Preservative Required	OK	1161901004-E	No Preservative Required	OK
1161901001-H	No Preservative Required	OK	1161901004-F	No Preservative Required	OK
1161901001-I	HCL to pH < 2	OK	1161901004-G	No Preservative Required	OK
1161901001-J	HCL to pH < 2	OK	1161901004-H	No Preservative Required	OK
1161901001-K	HCL to pH < 2	OK	1161901004-I	HCL to pH < 2	OK
1161901001-L	HCL to pH < 2	OK	1161901004-J	HCL to pH < 2	OK
1161901001-M	HCL to pH < 2	OK	1161901004-K	HCL to pH < 2	OK
1161901001-N	HCL to pH < 2	OK	1161901004-L	HCL to pH < 2	OK
1161901001-O	HCL to pH < 2	OK	1161901004-M	HCL to pH < 2	OK
1161901002-A	HNO3 to pH < 2	OK	1161901004-N	HCL to pH < 2	OK
1161901002-B	HCL to pH < 2	OK	1161901005-A	HCL to pH < 2	OK
1161901002-C	HCL to pH < 2	OK	1161901006-A	HCL to pH < 2	OK
1161901002-D	No Preservative Required	OK	1161901007-A	HCL to pH < 2	OK
1161901002-E	No Preservative Required	OK	1161901008-A	HCL to pH < 2	OK
1161901002-F	No Preservative Required	OK	1161901009-A	HCL to pH < 2	OK
1161901002-G	No Preservative Required	OK	1161901010-A	HCL to pH < 2	OK
1161901002-H	No Preservative Required	OK	1161901011-A	HCL to pH < 2	OK
1161901002-I	HCL to pH < 2	OK	1161901012-A	HCL to pH < 2	OK
1161901002-J	HCL to pH < 2	OK	1161901012-B	HCL to pH < 2	OK
1161901002-K	HCL to pH < 2	OK	1161901012-C	HCL to pH < 2	OK
1161901002-L	HCL to pH < 2	OK	1161901013-A	HCL to pH < 2	OK
1161901002-M	HCL to pH < 2	OK	1161901013-B	HCL to pH < 2	OK
1161901002-N	HCL to pH < 2	OK	1161901013-C	HCL to pH < 2	OK
1161901002-O	HCL to pH < 2	OK	1161901014-A	HCL to pH < 2	OK
1161901003-A	HNO3 to pH < 2	OK	1161901015-A	HCL to pH < 2	OK
1161901003-B	HCL to pH < 2	OK	1161901016-A	HCL to pH < 2	OK
1161901003-C	HCL to pH < 2	OK	1161901017-A	HNO3 to pH < 2	OK
1161901003-D	No Preservative Required	OK	1161901017-B	HCL to pH < 2	OK
1161901003-E	No Preservative Required	OK	1161901018-A	HNO3 to pH < 2	OK
1161901003-F	No Preservative Required	OK	1161901018-B	HCL to pH < 2	OK
1161901003-G	No Preservative Required	OK	1161901019-A	HCL to pH < 2	OK
1161901003-H	No Preservative Required	OK	1161901020-A	HCL to pH < 2	OK
1161901003-I	HCL to pH < 2	OK	1161901021-A	HCL to pH < 2	OK
1161901003-J	HCL to pH < 2	OK	1161901022-A	HCL to pH < 2	OK
1161901003-K	HCL to pH < 2	OK	1161901023-A	HCL to pH < 2	OK
1161901003-L	HCL to pH < 2	OK	1161901024-A	HCL to pH < 2	OK

Container Id	Preservative	Container Condition
1161901025-A	HCL to pH < 2	OK
1161901026-A	HNO3 to pH < 2	OK
1161901027-A	HNO3 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.
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.

Laboratory Report of Analysis

To: SLR Alaska-Anchorage
2700 Gambell St Suite 200
Anchorage, AK 99503
(907)222-1112

Revised Report - Revision 1 - This report has been reissued to correct the case narrative. No data has changed.

Report Number: **1161922**

Client Project: **105.00148.16001 Kenai Wells**

Dear Jason Gray,

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.

SGS North America Inc.
Environmental Services – Alaska Division
Project Manager

Justin Nelson
2016.05.31
08:32:37 -08'00'

Justin Nelson Date
Project Manager
Justin.Nelson@sgs.com

Print Date: 05/19/2016 12:13:36PM

Case Narrative

SGS Client: **SLR Alaska-Anchorage**
SGS Project: **1161922**
Project Name/Site: **105.00148.16001 Kenai Wells**
Project Contact: **Jason Gray**

Refer to sample receipt form for information on sample condition.

MW74B-0416 (1161922003) PS

2540D - Total Suspended Solids - Sample duplicate RPD was outside of acceptance limits. The difference between sample and duplicate results is less than the LOQ.

MW74B-0416 DUP (1161922012) BDUP

2540D - Total Suspended Solids - Sample duplicate RPD was outside of acceptance limits. The difference between sample and duplicate results is less than the LOQ.

MW74B-0416 MS (1161922004) BMS

200.8LL - MS recoveries for multiple analytes do not meet QC criteria. Post digestion spike was successful.

MW74B-0416 MS (1161922008) BMS

200.8LL - MS recoveries for multiple analytes do not meet QC criteria. Post digestion spike was successful.

MW74B-0416 MSD (1161922005) BMSD

8270D - BMS/BMSD RPD for aniline (29.2%) does not meet QC criteria. The associated sample concentrations for this analyte are less than the LOQ.
200.8LL - MS recoveries for multiple analytes do not meet QC criteria. Post digestion spike was successful.

MW74B-0416 MSD (1161922009) BMSD

200.8LL - MS recoveries for multiple analytes do not meet QC criteria. Post digestion spike was successful.

LCSD for HBN 1732272 [STS/5019 (1321134) LCSD

2540D - Total Suspended Solids - LCSD is not needed for batch QC. Refer to sample duplicate RPD for precision.

LCSD for HBN 1732348 [XXX/3521 (1321253) LCSD

8270D - LCS/LCSD RPD for aniline (20.9%) does not meet QC criteria. The associated sample concentrations for this analyte are less than the LOQ.

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

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Report of Manual Integrations

Laboratory ID	Client Sample ID	Analytical Batch	Analyte	Reason
SW8270D				
1161922004	MW74B-0416 MS	XMS9274	1-Chloronaphthalene	BLC
1161922005	MW74B-0416 MSD	XMS9274	1-Chloronaphthalene	BLC
1321252	LCS for HBN 1732348 [XXX/35213	XMS9274	1-Chloronaphthalene	BLC
1321253	LCSD for HBN 1732348 [XXX/3521	XMS9274	1-Chloronaphthalene	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: 05/19/2016 12:13:43PM

Laboratory Qualifiers

Enclosed are the analytical results associated with the above work order. 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, indenmification 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) & UST-005 (CS) for ADEC and 2944.01 for DOD ELAP/ISO17025 (RCRA methods: 1020B, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035A, 6020A, 7470A, 7471B, 8021B, 8082A, 8260B, 8270D, 8270D-SIM, 9040C, 9045D, 9056A, 9060A, AK101 and AK102/103). 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
D	The analyte concentration is the result of a dilution.
DF	Dilution Factor
DL	Detection Limit (i.e., maximum method detection limit)
E	The analyte result is above the calibrated range.
F	Indicates value that is greater than or equal to the DL
GT	Greater Than
IB	Instrument Blank
ICV	Initial Calibration Verification
J	The quantitation is an estimation.
JL	The analyte was positively identified, but the quantitation is a low estimation.
LCS(D)	Laboratory Control Spike (Duplicate)
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
M	A matrix effect was present.
MB	Method Blank
MS(D)	Matrix Spike (Duplicate)
ND	Indicates the analyte is not detected.
Q	QC parameter out of acceptance range.
R	Rejected
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.

Print Date: 05/19/2016 12:13:46PM

Sample Summary

Client Sample ID	Lab Sample ID	Collected	Received	Matrix
MW74A-0416	1161922001	04/22/2016	04/23/2016	Water (Surface, Eff., Ground)
MW74Z-0416	1161922002	04/22/2016	04/23/2016	Water (Surface, Eff., Ground)
MW74B-0416	1161922003	04/22/2016	04/23/2016	Water (Surface, Eff., Ground)
MW74B-0416 MS	1161922004	04/22/2016	04/23/2016	Water (Surface, Eff., Ground)
MW74B-0416 MSD	1161922005	04/22/2016	04/23/2016	Water (Surface, Eff., Ground)
MW74A-0416	1161922006	04/22/2016	04/23/2016	Water (Surface, Eff., Ground)
MW74B-0416	1161922007	04/22/2016	04/23/2016	Water (Surface, Eff., Ground)
MW74B-0416 MS	1161922008	04/22/2016	04/23/2016	Water (Surface, Eff., Ground)
MW74B-0416 MSD	1161922009	04/22/2016	04/23/2016	Water (Surface, Eff., Ground)
TB-5	1161922010	04/22/2016	04/23/2016	Water (Surface, Eff., Ground)
TB-6	1161922011	04/22/2016	04/23/2016	Water (Surface, Eff., Ground)
MW74B-0416 DUP	1161922012	04/22/2016	04/23/2016	Water (Surface, Eff., Ground)

Method	Method Description
SM21 2320B	Alkalinity as CaCO3 QC
SM21 2340B	Dissolved Hardness as CaCO3 ICP-MS-LowLv
AK102	DRO/RRO Low Volume Water
AK103	DRO/RRO Low Volume Water
AK101	Gasoline Range Organics (W)
EPA 300.0	Ion Chromatographic Analysis
EPA 300.0	Ion Chromatographic Analysis (W)
200.8 Low Level	Metals in Water by 200.8 ICP-MS LL
200.8 Low Level	Metals in Water by 200.8 ICP-MS LL DIS
SM21 4500-H B	pH Analysis
SW8270D	SW846-8270 SVOC by GC/MS (W) Liq/Liq ext
SM21 2540C	Total Dissolved Solids SM18 2540C
SM21 2540D	Total Suspended Solids SM20 2540D
SM21 2130B	Turbidity Analysis
SW8260B	Volatile Organic Compounds (W) FULL

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Detectable Results Summary

Client Sample ID: **MW74A-0416**
Lab Sample ID: 1161922001

	Parameter	Result	Units
Metals by ICP/MS	Aluminum	1710	ug/L
	Antimony	0.128	ug/L
	Arsenic	63.4	ug/L
	Barium	28.4	ug/L
	Beryllium	0.0694	ug/L
	Bismuth	0.0320J	ug/L
	Boron	170	ug/L
	Cadmium	0.0286J	ug/L
	Calcium	4970	ug/L
	Chromium	14.5	ug/L
	Cobalt	1.55	ug/L
	Copper	6.35	ug/L
	Iron	3030	ug/L
	Lead	1.24	ug/L
	Magnesium	3000	ug/L
	Manganese	89.1	ug/L
	Molybdenum	3.13	ug/L
	Nickel	10.1	ug/L
	Potassium	10000	ug/L
	Silver	0.0237	ug/L
	Sodium	37200	ug/L
	Thallium	0.0179J	ug/L
	Tin	0.115J	ug/L
	Vanadium	7.49	ug/L
	Zinc	13.6	ug/L
Semivolatile Organic Fuels	Residual Range Organics	0.352J	mg/L
Waters Department	Alkalinity	81.8	mg/L
	Chloride	4.33	mg/L
	Fluoride	0.193	mg/L
	pH	8.40	pH units
	Sulfate	1.24	mg/L
	Total Dissolved Solids	131	mg/L
	Total Suspended Solids	24.7	mg/L
	Turbidity	15.0	NTU

Client Sample ID: **MW74Z-0416**
Lab Sample ID: 1161922002

	Parameter	Result	Units
Waters Department	Total Suspended Solids	21.3	mg/L

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Detectable Results Summary

Client Sample ID: **MW74B-0416**
Lab Sample ID: 1161922003

	Parameter	Result	Units
Metals by ICP/MS	Aluminum	430	ug/L
	Antimony	0.110	ug/L
	Arsenic	1.54	ug/L
	Barium	41.4	ug/L
	Boron	8.84	ug/L
	Calcium	16800	ug/L
	Chromium	2.48	ug/L
	Cobalt	1.73	ug/L
	Copper	0.973	ug/L
	Iron	5810	ug/L
	Lead	0.222	ug/L
	Magnesium	6200	ug/L
	Manganese	220	ug/L
	Molybdenum	0.445	ug/L
	Nickel	3.29	ug/L
	Potassium	2450	ug/L
	Silver	0.0106J	ug/L
	Sodium	9860	ug/L
	Vanadium	1.91	ug/L
	Zinc	2.39J	ug/L
Semivolatile Organic Fuels	Residual Range Organics	0.823	mg/L
Waters Department	Alkalinity	44.8	mg/L
	Chloride	11.8	mg/L
	Fluoride	0.0640J	mg/L
	Nitrite-N	0.0560J	mg/L
	pH	6.70	pH units
	Sulfate	5.19	mg/L
	Total Dissolved Solids	106	mg/L
	Total Suspended Solids	4.14	mg/L
	Turbidity	1.60	NTU

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Detectable Results Summary

Client Sample ID: **MW74A-0416**
Lab Sample ID: 1161922006
Dissolved Metals by ICP/MS

Parameter	Result	Units
Aluminum	8.81	ug/L
Antimony	0.0412J	ug/L
Arsenic	56.6	ug/L
Barium	3.94	ug/L
Boron	156	ug/L
Calcium	3690	ug/L
Chromium	0.688	ug/L
Cobalt	0.0633	ug/L
Hardness as CaCO3	17.0	mg/L
Iron	31.5	ug/L
Magnesium	1890	ug/L
Manganese	25.4	ug/L
Molybdenum	1.99	ug/L
Nickel	0.954	ug/L
Potassium	8870	ug/L
Silicon	13900	ug/L
Sodium	33300	ug/L
Zinc	0.557J	ug/L

Client Sample ID: **MW74B-0416**
Lab Sample ID: 1161922007
Dissolved Metals by ICP/MS

Parameter	Result	Units
Aluminum	3.57	ug/L
Antimony	0.0214J	ug/L
Arsenic	1.44	ug/L
Barium	32.7	ug/L
Boron	7.56	ug/L
Calcium	14900	ug/L
Chromium	0.697	ug/L
Cobalt	1.38	ug/L
Hardness as CaCO3	58.0	mg/L
Iron	4740	ug/L
Magnesium	5030	ug/L
Manganese	191	ug/L
Molybdenum	0.381	ug/L
Nickel	2.60	ug/L
Potassium	2180	ug/L
Silicon	19100	ug/L
Sodium	8040	ug/L
Vanadium	0.477J	ug/L
Zinc	1.12J	ug/L

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Results of **MW74A-0416**

Client Sample ID: **MW74A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161922001
Lab Project ID: 1161922

Collection Date: 04/22/16 11:50
Received Date: 04/23/16 10:00
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Metals by ICP/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Aluminum	1710		20.0	6.20	ug/L	25		05/18/16 14:02
Antimony	0.128		0.0500	0.0150	ug/L	2.5		05/18/16 13:45
Arsenic	63.4		0.800	0.200	ug/L	2.5		05/18/16 13:45
Barium	28.4		0.250	0.0400	ug/L	2.5		05/18/16 13:45
Beryllium	0.0694		0.0500	0.0250	ug/L	2.5		05/18/16 13:45
Bismuth	0.0320	J	0.0500	0.0150	ug/L	2.5		05/18/16 13:45
Boron	170		5.00	1.50	ug/L	2.5		05/18/16 13:45
Cadmium	0.0286	J	0.0500	0.0150	ug/L	2.5		05/18/16 13:45
Calcium	4970		50.0	15.0	ug/L	2.5		05/18/16 13:45
Chromium	14.5		0.500	0.150	ug/L	2.5		05/18/16 13:45
Cobalt	1.55		0.0200	0.0100	ug/L	2.5		05/18/16 13:45
Copper	6.35		0.500	0.200	ug/L	2.5		05/18/16 13:45
Iron	3030		20.0	6.20	ug/L	2.5		05/18/16 13:45
Lead	1.24		0.100	0.0310	ug/L	2.5		05/18/16 13:45
Magnesium	3000		20.0	6.20	ug/L	2.5		05/18/16 13:45
Manganese	89.1		0.100	0.0310	ug/L	2.5		05/18/16 13:45
Molybdenum	3.13		0.0500	0.0150	ug/L	2.5		05/18/16 13:45
Nickel	10.1		0.620	0.0620	ug/L	2.5		05/18/16 13:45
Potassium	10000		50.0	15.0	ug/L	2.5		05/18/16 13:45
Selenium	0.500	U	1.00	0.310	ug/L	2.5		05/18/16 13:45
Silver	0.0237		0.0200	0.00620	ug/L	2.5		05/18/16 13:45
Sodium	37200		1000	310	ug/L	25		05/18/16 14:02
Thallium	0.0179	J	0.0200	0.00620	ug/L	2.5		05/18/16 13:45
Tin	0.115	J	0.200	0.0620	ug/L	2.5		05/18/16 13:45
Vanadium	7.49		1.00	0.310	ug/L	2.5		05/18/16 13:45
Zinc	13.6		3.10	0.400	ug/L	2.5		05/18/16 13:45

Batch Information

Analytical Batch: MMS9355
Analytical Method: 200.8 Low Level
Analyst: EAB
Analytical Date/Time: 05/18/16 14:02
Container ID: 1161922001-A

Prep Batch: MXX29754
Prep Method: E200.2
Prep Date/Time: 05/17/16 08:56
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 10 mL

Print Date: 05/19/2016 12:13:56PM

J flagging is activated

Results of **MW74A-0416**

Client Sample ID: **MW74A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161922001
Lab Project ID: 1161922

Collection Date: 04/22/16 11:50
Received Date: 04/23/16 10:00
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	0.288	U	0.577	0.173	mg/L	1		05/02/16 15:46
Surrogates								
5a Androstane (surr)	94.9		50-150		%	1		05/02/16 15:46

Batch Information

Analytical Batch: XFC12356
Analytical Method: AK102
Analyst: CJSW
Analytical Date/Time: 05/02/16 15:46
Container ID: 1161922001-J

Prep Batch: XXX35229
Prep Method: SW3520C
Prep Date/Time: 04/28/16 09:48
Prep Initial Wt./Vol.: 260 mL
Prep Extract Vol: 1 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Residual Range Organics	0.352	J	0.481	0.144	mg/L	1		05/02/16 15:46
Surrogates								
n-Triacontane-d62 (surr)	97.8		50-150		%	1		05/02/16 15:46

Batch Information

Analytical Batch: XFC12356
Analytical Method: AK103
Analyst: CJSW
Analytical Date/Time: 05/02/16 15:46
Container ID: 1161922001-J

Prep Batch: XXX35229
Prep Method: SW3520C
Prep Date/Time: 04/28/16 09:48
Prep Initial Wt./Vol.: 260 mL
Prep Extract Vol: 1 mL

Print Date: 05/19/2016 12:13:56PM

J flagging is activated

Results of **MW74A-0416**

Client Sample ID: **MW74A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161922001
Lab Project ID: 1161922

Collection Date: 04/22/16 11:50
Received Date: 04/23/16 10:00
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,2,4-Trichlorobenzene	0.00520	U	0.0104	0.00323	mg/L	1		05/02/16 20:22
1,2-Dichlorobenzene	0.00520	U	0.0104	0.00323	mg/L	1		05/02/16 20:22
1,3-Dichlorobenzene	0.00520	U	0.0104	0.00323	mg/L	1		05/02/16 20:22
1,4-Dichlorobenzene	0.00520	U	0.0104	0.00323	mg/L	1		05/02/16 20:22
1-Chloronaphthalene	0.00520	U	0.0104	0.00323	mg/L	1		05/02/16 20:22
1-Methylnaphthalene	0.00520	U	0.0104	0.00323	mg/L	1		05/02/16 20:22
2,4,5-Trichlorophenol	0.00520	U	0.0104	0.00323	mg/L	1		05/02/16 20:22
2,4,6-Trichlorophenol	0.00520	U	0.0104	0.00323	mg/L	1		05/02/16 20:22
2,4-Dichlorophenol	0.00520	U	0.0104	0.00323	mg/L	1		05/02/16 20:22
2,4-Dimethylphenol	0.00520	U	0.0104	0.00323	mg/L	1		05/02/16 20:22
2,4-Dinitrophenol	0.0261	U	0.0521	0.0156	mg/L	1		05/02/16 20:22
2,4-Dinitrotoluene	0.00520	U	0.0104	0.00323	mg/L	1		05/02/16 20:22
2,6-Dichlorophenol	0.00520	U	0.0104	0.00323	mg/L	1		05/02/16 20:22
2,6-Dinitrotoluene	0.00520	U	0.0104	0.00323	mg/L	1		05/02/16 20:22
2-Chloronaphthalene	0.00520	U	0.0104	0.00323	mg/L	1		05/02/16 20:22
2-Chlorophenol	0.00520	U	0.0104	0.00323	mg/L	1		05/02/16 20:22
2-Methyl-4,6-dinitrophenol	0.0261	U	0.0521	0.0156	mg/L	1		05/02/16 20:22
2-Methylnaphthalene	0.00520	U	0.0104	0.00323	mg/L	1		05/02/16 20:22
2-Methylphenol (o-Cresol)	0.00520	U	0.0104	0.00323	mg/L	1		05/02/16 20:22
2-Nitroaniline	0.00520	U	0.0104	0.00323	mg/L	1		05/02/16 20:22
2-Nitrophenol	0.00520	U	0.0104	0.00323	mg/L	1		05/02/16 20:22
3&4-Methylphenol (p&m-Cresol)	0.0104	U	0.0208	0.00646	mg/L	1		05/02/16 20:22
3,3-Dichlorobenzidine	0.00520	U	0.0104	0.00323	mg/L	1		05/02/16 20:22
3-Nitroaniline	0.00520	U	0.0104	0.00323	mg/L	1		05/02/16 20:22
4-Bromophenyl-phenylether	0.00520	U	0.0104	0.00323	mg/L	1		05/02/16 20:22
4-Chloro-3-methylphenol	0.00520	U	0.0104	0.00323	mg/L	1		05/02/16 20:22
4-Chloroaniline	0.00520	U	0.0104	0.00323	mg/L	1		05/02/16 20:22
4-Chlorophenyl-phenylether	0.00520	U	0.0104	0.00323	mg/L	1		05/02/16 20:22
4-Nitroaniline	0.00520	U	0.0104	0.00323	mg/L	1		05/02/16 20:22
4-Nitrophenol	0.0261	U	0.0521	0.0156	mg/L	1		05/02/16 20:22
Acenaphthene	0.00520	U	0.0104	0.00323	mg/L	1		05/02/16 20:22
Acenaphthylene	0.00520	U	0.0104	0.00323	mg/L	1		05/02/16 20:22
Aniline	0.0261	U	0.0521	0.0156	mg/L	1		05/02/16 20:22
Anthracene	0.00520	U	0.0104	0.00323	mg/L	1		05/02/16 20:22
Azobenzene	0.00520	U	0.0104	0.00323	mg/L	1		05/02/16 20:22
Benzo(a)Anthracene	0.00520	U	0.0104	0.00323	mg/L	1		05/02/16 20:22
Benzo[a]pyrene	0.00520	U	0.0104	0.00323	mg/L	1		05/02/16 20:22

Print Date: 05/19/2016 12:13:56PM

J flagging is activated

Results of **MW74A-0416**

Client Sample ID: **MW74A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161922001
Lab Project ID: 1161922

Collection Date: 04/22/16 11:50
Received Date: 04/23/16 10:00
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Benzo[b]Fluoranthene	0.00520	U	0.0104	0.00323	mg/L	1		05/02/16 20:22
Benzo[g,h,i]perylene	0.00520	U	0.0104	0.00323	mg/L	1		05/02/16 20:22
Benzo[k]fluoranthene	0.00520	U	0.0104	0.00323	mg/L	1		05/02/16 20:22
Benzoic acid	0.0261	U	0.0521	0.0156	mg/L	1		05/02/16 20:22
Benzyl alcohol	0.00520	U	0.0104	0.00323	mg/L	1		05/02/16 20:22
Bis(2chloro1methylethyl)Ether	0.00520	U	0.0104	0.00323	mg/L	1		05/02/16 20:22
Bis(2-Chloroethoxy)methane	0.00520	U	0.0104	0.00323	mg/L	1		05/02/16 20:22
Bis(2-Chloroethyl)ether	0.00520	U	0.0104	0.00323	mg/L	1		05/02/16 20:22
bis(2-Ethylhexyl)phthalate	0.00520	U	0.0104	0.00323	mg/L	1		05/02/16 20:22
Butylbenzylphthalate	0.00520	U	0.0104	0.00323	mg/L	1		05/02/16 20:22
Carbazole	0.00520	U	0.0104	0.00323	mg/L	1		05/02/16 20:22
Chrysene	0.00520	U	0.0104	0.00323	mg/L	1		05/02/16 20:22
Dibenzo[a,h]anthracene	0.00520	U	0.0104	0.00323	mg/L	1		05/02/16 20:22
Dibenzofuran	0.00520	U	0.0104	0.00323	mg/L	1		05/02/16 20:22
Diethylphthalate	0.00520	U	0.0104	0.00323	mg/L	1		05/02/16 20:22
Dimethylphthalate	0.00520	U	0.0104	0.00323	mg/L	1		05/02/16 20:22
Di-n-butylphthalate	0.00520	U	0.0104	0.00323	mg/L	1		05/02/16 20:22
di-n-Octylphthalate	0.00520	U	0.0104	0.00323	mg/L	1		05/02/16 20:22
Fluoranthene	0.00520	U	0.0104	0.00323	mg/L	1		05/02/16 20:22
Fluorene	0.00520	U	0.0104	0.00323	mg/L	1		05/02/16 20:22
Hexachlorobenzene	0.00520	U	0.0104	0.00323	mg/L	1		05/02/16 20:22
Hexachlorobutadiene	0.00520	U	0.0104	0.00323	mg/L	1		05/02/16 20:22
Hexachlorocyclopentadiene	0.0157	U	0.0313	0.00979	mg/L	1		05/02/16 20:22
Hexachloroethane	0.00520	U	0.0104	0.00323	mg/L	1		05/02/16 20:22
Indeno[1,2,3-c,d] pyrene	0.00520	U	0.0104	0.00323	mg/L	1		05/02/16 20:22
Isophorone	0.00520	U	0.0104	0.00323	mg/L	1		05/02/16 20:22
Naphthalene	0.00520	U	0.0104	0.00323	mg/L	1		05/02/16 20:22
Nitrobenzene	0.00520	U	0.0104	0.00323	mg/L	1		05/02/16 20:22
N-Nitrosodimethylamine	0.00520	U	0.0104	0.00323	mg/L	1		05/02/16 20:22
N-Nitroso-di-n-propylamine	0.00520	U	0.0104	0.00323	mg/L	1		05/02/16 20:22
N-Nitrosodiphenylamine	0.00520	U	0.0104	0.00323	mg/L	1		05/02/16 20:22
Pentachlorophenol	0.0261	U	0.0521	0.0156	mg/L	1		05/02/16 20:22
Phenanthrene	0.00520	U	0.0104	0.00323	mg/L	1		05/02/16 20:22
Phenol	0.00520	U	0.0104	0.00323	mg/L	1		05/02/16 20:22
Pyrene	0.00520	U	0.0104	0.00323	mg/L	1		05/02/16 20:22
Surrogates								
2,4,6-Tribromophenol (surr)	60.1		43-140		%	1		05/02/16 20:22

Print Date: 05/19/2016 12:13:56PM

J flagging is activated

Results of **MW74A-0416**

Client Sample ID: **MW74A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161922001
Lab Project ID: 1161922

Collection Date: 04/22/16 11:50
Received Date: 04/23/16 10:00
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
2-Fluorobiphenyl (surr)	56.3		44-119		%	1		05/02/16 20:22
2-Fluorophenol (surr)	35.9		19-119		%	1		05/02/16 20:22
Nitrobenzene-d5 (surr)	48.7		44-120		%	1		05/02/16 20:22
Phenol-d6 (surr)	38.3		10-115		%	1		05/02/16 20:22
Terphenyl-d14 (surr)	93.8		50-134		%	1		05/02/16 20:22

Batch Information

Analytical Batch: XMS9274
Analytical Method: SW8270D
Analyst: NLL
Analytical Date/Time: 05/02/16 20:22
Container ID: 1161922001-H

Prep Batch: XXX35213
Prep Method: SW3520C
Prep Date/Time: 04/26/16 09:00
Prep Initial Wt./Vol.: 960 mL
Prep Extract Vol: 1 mL

Print Date: 05/19/2016 12:13:56PM

J flagging is activated

Results of **MW74A-0416**

Client Sample ID: **MW74A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161922001
Lab Project ID: 1161922

Collection Date: 04/22/16 11:50
Received Date: 04/23/16 10:00
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.0500	U	0.100	0.0310	mg/L	1		04/26/16 01:54
Surrogates								
4-Bromofluorobenzene (surr)	78.6		50-150		%	1		04/26/16 01:54

Batch Information

Analytical Batch: VFC12973
Analytical Method: AK101
Analyst: S.P
Analytical Date/Time: 04/26/16 01:54
Container ID: 1161922001-E

Prep Batch: VXX28738
Prep Method: SW5030B
Prep Date/Time: 04/25/16 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/19/2016 12:13:56PM

J flagging is activated

Results of **MW74A-0416**

Client Sample ID: **MW74A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161922001
Lab Project ID: 1161922

Collection Date: 04/22/16 11:50
Received Date: 04/23/16 10:00
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		04/30/16 00:03
1,1,1-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:03
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		04/30/16 00:03
1,1,2-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:03
1,1-Dichloroethane	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:03
1,1-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:03
1,1-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:03
1,2,3-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:03
1,2,3-Trichloropropane	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:03
1,2,4-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:03
1,2,4-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:03
1,2-Dibromo-3-chloropropane	5.00	U	10.0	3.10	ug/L	1		04/30/16 00:03
1,2-Dibromoethane	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:03
1,2-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:03
1,2-Dichloroethane	0.250	U	0.500	0.150	ug/L	1		04/30/16 00:03
1,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:03
1,3,5-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:03
1,3-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:03
1,3-Dichloropropane	0.250	U	0.500	0.150	ug/L	1		04/30/16 00:03
1,4-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1		04/30/16 00:03
2,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:03
2-Butanone (MEK)	5.00	U	10.0	3.10	ug/L	1		04/30/16 00:03
2-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:03
2-Hexanone	5.00	U	10.0	3.10	ug/L	1		04/30/16 00:03
4-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:03
4-Isopropyltoluene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:03
4-Methyl-2-pentanone (MIBK)	5.00	U	10.0	3.10	ug/L	1		04/30/16 00:03
Benzene	0.200	U	0.400	0.120	ug/L	1		04/30/16 00:03
Bromobenzene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:03
Bromochloromethane	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:03
Bromodichloromethane	0.250	U	0.500	0.150	ug/L	1		04/30/16 00:03
Bromoform	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:03
Bromomethane	5.00	U	10.0	3.10	ug/L	1		04/30/16 00:03
Carbon disulfide	5.00	U	10.0	3.10	ug/L	1		04/30/16 00:03
Carbon tetrachloride	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:03
Chlorobenzene	0.250	U	0.500	0.150	ug/L	1		04/30/16 00:03
Chloroethane	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:03

Print Date: 05/19/2016 12:13:56PM

J flagging is activated

Results of **MW74A-0416**

Client Sample ID: **MW74A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161922001
Lab Project ID: 1161922

Collection Date: 04/22/16 11:50
Received Date: 04/23/16 10:00
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroform	0.500	U	1.00	0.300	ug/L	1		04/30/16 00:03
Chloromethane	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:03
cis-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:03
cis-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		04/30/16 00:03
Dibromochloromethane	0.250	U	0.500	0.150	ug/L	1		04/30/16 00:03
Dibromomethane	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:03
Dichlorodifluoromethane	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:03
Ethylbenzene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:03
Freon-113	5.00	U	10.0	3.10	ug/L	1		04/30/16 00:03
Hexachlorobutadiene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:03
Isopropylbenzene (Cumene)	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:03
Methylene chloride	2.50	U	5.00	1.00	ug/L	1		04/30/16 00:03
Methyl-t-butyl ether	5.00	U	10.0	3.10	ug/L	1		04/30/16 00:03
Naphthalene	5.00	U	10.0	3.10	ug/L	1		04/30/16 00:03
n-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:03
n-Propylbenzene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:03
o-Xylene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:03
P & M -Xylene	1.00	U	2.00	0.620	ug/L	1		04/30/16 00:03
sec-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:03
Styrene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:03
tert-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:03
Tetrachloroethene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:03
Toluene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:03
trans-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:03
trans-1,3-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:03
Trichloroethene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:03
Trichlorofluoromethane	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:03
Vinyl acetate	5.00	U	10.0	3.10	ug/L	1		04/30/16 00:03
Vinyl chloride	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:03
Xylenes (total)	1.50	U	3.00	1.00	ug/L	1		04/30/16 00:03
Surrogates								
1,2-Dichloroethane-D4 (surr)	108		81-118		%	1		04/30/16 00:03
4-Bromofluorobenzene (surr)	95.7		85-114		%	1		04/30/16 00:03
Toluene-d8 (surr)	100		89-112		%	1		04/30/16 00:03

Print Date: 05/19/2016 12:13:56PM

J flagging is activated

Results of **MW74A-0416**

Client Sample ID: **MW74A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161922001
Lab Project ID: 1161922

Collection Date: 04/22/16 11:50
Received Date: 04/23/16 10:00
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS15749
Analytical Method: SW8260B
Analyst: NRB
Analytical Date/Time: 04/30/16 00:03
Container ID: 1161922001-C

Prep Batch: VXX28753
Prep Method: SW5030B
Prep Date/Time: 04/29/16 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/19/2016 12:13:56PM

J flagging is activated

Results of **MW74A-0416**

Client Sample ID: **MW74A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161922001
Lab Project ID: 1161922

Collection Date: 04/22/16 11:50
Received Date: 04/23/16 10:00
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloride	4.33		0.100	0.0310	mg/L	1		04/24/16 04:04
Fluoride	0.193		0.100	0.0310	mg/L	1		04/24/16 04:04
Nitrate-N	0.0500	U	0.100	0.0310	mg/L	1		04/24/16 04:04
Nitrite-N	0.0500	U	0.100	0.0310	mg/L	1		04/24/16 04:04
Sulfate	1.24		0.100	0.0310	mg/L	1		04/24/16 04:04

Batch Information

Analytical Batch: WIC5532
Analytical Method: EPA 300.0
Analyst: ACF
Analytical Date/Time: 04/24/16 04:04
Container ID: 1161922001-M

Prep Batch: WXX11480
Prep Method: METHOD
Prep Date/Time: 04/24/16 01:11
Prep Initial Wt./Vol.: 10 mL
Prep Extract Vol: 10 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Turbidity	15.0		0.200	0.100	NTU	1		04/22/16 12:15

Batch Information

Analytical Batch: WAT10635
Analytical Method: SM21 2130B
Analyst: MBS
Analytical Date/Time: 04/22/16 12:15
Container ID: 1161922001-N

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Alkalinity	81.8		10.0	3.10	mg/L	1		04/26/16 22:44

Batch Information

Analytical Batch: WTI4448
Analytical Method: SM21 2320B
Analyst: ACF
Analytical Date/Time: 04/26/16 22:44
Container ID: 1161922001-N

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Dissolved Solids	131		10.0	3.10	mg/L	1		04/26/16 09:58

Print Date: 05/19/2016 12:13:56PM

J flagging is activated

Results of **MW74A-0416**

Client Sample ID: **MW74A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161922001
Lab Project ID: 1161922

Collection Date: 04/22/16 11:50
Received Date: 04/23/16 10:00
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Batch Information

Analytical Batch: STS5020
Analytical Method: SM21 2540C
Analyst: MBS
Analytical Date/Time: 04/26/16 09:58
Container ID: 1161922001-N

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Suspended Solids	24.7		1.01	0.313	mg/L	1		04/25/16 15:51

Batch Information

Analytical Batch: STS5019
Analytical Method: SM21 2540D
Analyst: MBS
Analytical Date/Time: 04/25/16 15:51
Container ID: 1161922001-L

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
pH	8.40		0.100	0.100	pH units	1		04/25/16 20:59

Batch Information

Analytical Batch: WTI4443
Analytical Method: SM21 4500-H B
Analyst: ACF
Analytical Date/Time: 04/25/16 20:59
Container ID: 1161922001-N

Print Date: 05/19/2016 12:13:56PM

J flagging is activated

Results of **MW74Z-0416**

Client Sample ID: **MW74Z-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161922002
Lab Project ID: 1161922

Collection Date: 04/22/16 11:50
Received Date: 04/23/16 10:00
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Suspended Solids	21.3		1.01	0.313	mg/L	1		04/25/16 15:51

Batch Information

Analytical Batch: STS5019
Analytical Method: SM21 2540D
Analyst: MBS
Analytical Date/Time: 04/25/16 15:51
Container ID: 1161922002-A

Print Date: 05/19/2016 12:13:56PM

J flagging is activated

Results of **MW74B-0416**

Client Sample ID: **MW74B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161922003
Lab Project ID: 1161922

Collection Date: 04/22/16 13:50
Received Date: 04/23/16 10:00
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Metals by ICP/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Aluminum	430		2.00	0.620	ug/L	2.5		05/18/16 13:27
Antimony	0.110		0.0500	0.0150	ug/L	2.5		05/18/16 13:27
Arsenic	1.54		0.800	0.200	ug/L	2.5		05/18/16 13:27
Barium	41.4		0.250	0.0400	ug/L	2.5		05/18/16 13:27
Beryllium	0.0250	U	0.0500	0.0250	ug/L	2.5		05/18/16 13:27
Bismuth	0.0250	U	0.0500	0.0150	ug/L	2.5		05/18/16 13:27
Boron	8.84		5.00	1.50	ug/L	2.5		05/18/16 13:27
Cadmium	0.0250	U	0.0500	0.0150	ug/L	2.5		05/18/16 13:27
Calcium	16800		50.0	15.0	ug/L	2.5		05/18/16 13:27
Chromium	2.48		0.500	0.150	ug/L	2.5		05/18/16 13:27
Cobalt	1.73		0.0200	0.0100	ug/L	2.5		05/18/16 13:27
Copper	0.973		0.500	0.200	ug/L	2.5		05/18/16 13:27
Iron	5810		20.0	6.20	ug/L	2.5		05/18/16 13:27
Lead	0.222		0.100	0.0310	ug/L	2.5		05/18/16 13:27
Magnesium	6200		20.0	6.20	ug/L	2.5		05/18/16 13:27
Manganese	220		0.100	0.0310	ug/L	2.5		05/18/16 13:27
Molybdenum	0.445		0.0500	0.0150	ug/L	2.5		05/18/16 13:27
Nickel	3.29		0.620	0.0620	ug/L	2.5		05/18/16 13:27
Potassium	2450		50.0	15.0	ug/L	2.5		05/18/16 13:27
Selenium	0.500	U	1.00	0.310	ug/L	2.5		05/18/16 13:27
Silver	0.0106	J	0.0200	0.00620	ug/L	2.5		05/18/16 13:27
Sodium	9860		100	31.0	ug/L	2.5		05/18/16 13:27
Thallium	0.0100	U	0.0200	0.00620	ug/L	2.5		05/18/16 13:27
Tin	0.100	U	0.200	0.0620	ug/L	2.5		05/18/16 13:27
Vanadium	1.91		1.00	0.310	ug/L	2.5		05/18/16 13:27
Zinc	2.39	J	3.10	0.400	ug/L	2.5		05/18/16 13:27

Batch Information

Analytical Batch: MMS9355
Analytical Method: 200.8 Low Level
Analyst: EAB
Analytical Date/Time: 05/18/16 13:27
Container ID: 1161922003-A

Prep Batch: MXX29754
Prep Method: E200.2
Prep Date/Time: 05/17/16 08:56
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 10 mL

Print Date: 05/19/2016 12:13:56PM

J flagging is activated

Results of **MW74B-0416**

Client Sample ID: **MW74B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161922003
Lab Project ID: 1161922

Collection Date: 04/22/16 13:50
Received Date: 04/23/16 10:00
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	0.288	U	0.577	0.173	mg/L	1		05/02/16 16:57
Surrogates								
5a Androstane (surr)	95.9		50-150		%	1		05/02/16 16:57

Batch Information

Analytical Batch: XFC12356
Analytical Method: AK102
Analyst: CJSW
Analytical Date/Time: 05/02/16 16:57
Container ID: 1161922003-L

Prep Batch: XXX35229
Prep Method: SW3520C
Prep Date/Time: 04/28/16 09:48
Prep Initial Wt./Vol.: 260 mL
Prep Extract Vol: 1 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Residual Range Organics	0.823		0.481	0.144	mg/L	1		05/02/16 16:57
Surrogates								
n-Triacontane-d62 (surr)	97.8		50-150		%	1		05/02/16 16:57

Batch Information

Analytical Batch: XFC12356
Analytical Method: AK103
Analyst: CJSW
Analytical Date/Time: 05/02/16 16:57
Container ID: 1161922003-L

Prep Batch: XXX35229
Prep Method: SW3520C
Prep Date/Time: 04/28/16 09:48
Prep Initial Wt./Vol.: 260 mL
Prep Extract Vol: 1 mL

Print Date: 05/19/2016 12:13:56PM

J flagging is activated

Results of **MW74B-0416**

Client Sample ID: **MW74B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161922003
Lab Project ID: 1161922

Collection Date: 04/22/16 13:50
Received Date: 04/23/16 10:00
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,2,4-Trichlorobenzene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 20:56
1,2-Dichlorobenzene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 20:56
1,3-Dichlorobenzene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 20:56
1,4-Dichlorobenzene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 20:56
1-Chloronaphthalene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 20:56
1-Methylnaphthalene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 20:56
2,4,5-Trichlorophenol	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 20:56
2,4,6-Trichlorophenol	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 20:56
2,4-Dichlorophenol	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 20:56
2,4-Dimethylphenol	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 20:56
2,4-Dinitrophenol	0.0253	U	0.0505	0.0152	mg/L	1		05/02/16 20:56
2,4-Dinitrotoluene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 20:56
2,6-Dichlorophenol	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 20:56
2,6-Dinitrotoluene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 20:56
2-Chloronaphthalene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 20:56
2-Chlorophenol	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 20:56
2-Methyl-4,6-dinitrophenol	0.0253	U	0.0505	0.0152	mg/L	1		05/02/16 20:56
2-Methylnaphthalene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 20:56
2-Methylphenol (o-Cresol)	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 20:56
2-Nitroaniline	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 20:56
2-Nitrophenol	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 20:56
3&4-Methylphenol (p&m-Cresol)	0.0101	U	0.0202	0.00626	mg/L	1		05/02/16 20:56
3,3-Dichlorobenzidine	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 20:56
3-Nitroaniline	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 20:56
4-Bromophenyl-phenylether	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 20:56
4-Chloro-3-methylphenol	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 20:56
4-Chloroaniline	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 20:56
4-Chlorophenyl-phenylether	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 20:56
4-Nitroaniline	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 20:56
4-Nitrophenol	0.0253	U	0.0505	0.0152	mg/L	1		05/02/16 20:56
Acenaphthene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 20:56
Acenaphthylene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 20:56
Aniline	0.0253	U	0.0505	0.0152	mg/L	1		05/02/16 20:56
Anthracene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 20:56
Azobenzene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 20:56
Benzo(a)Anthracene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 20:56
Benzo[a]pyrene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 20:56

Print Date: 05/19/2016 12:13:56PM

J flagging is activated

Results of **MW74B-0416**

Client Sample ID: **MW74B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161922003
Lab Project ID: 1161922

Collection Date: 04/22/16 13:50
Received Date: 04/23/16 10:00
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Benzo[b]Fluoranthene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 20:56
Benzo[g,h,i]perylene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 20:56
Benzo[k]fluoranthene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 20:56
Benzoic acid	0.0253	U	0.0505	0.0152	mg/L	1		05/02/16 20:56
Benzyl alcohol	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 20:56
Bis(2chloro1methylethyl)Ether	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 20:56
Bis(2-Chloroethoxy)methane	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 20:56
Bis(2-Chloroethyl)ether	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 20:56
bis(2-Ethylhexyl)phthalate	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 20:56
Butylbenzylphthalate	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 20:56
Carbazole	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 20:56
Chrysene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 20:56
Dibenzo[a,h]anthracene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 20:56
Dibenzofuran	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 20:56
Diethylphthalate	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 20:56
Dimethylphthalate	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 20:56
Di-n-butylphthalate	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 20:56
di-n-Octylphthalate	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 20:56
Fluoranthene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 20:56
Fluorene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 20:56
Hexachlorobenzene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 20:56
Hexachlorobutadiene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 20:56
Hexachlorocyclopentadiene	0.0152	U	0.0303	0.00949	mg/L	1		05/02/16 20:56
Hexachloroethane	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 20:56
Indeno[1,2,3-c,d] pyrene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 20:56
Isophorone	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 20:56
Naphthalene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 20:56
Nitrobenzene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 20:56
N-Nitrosodimethylamine	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 20:56
N-Nitroso-di-n-propylamine	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 20:56
N-Nitrosodiphenylamine	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 20:56
Pentachlorophenol	0.0253	U	0.0505	0.0152	mg/L	1		05/02/16 20:56
Phenanthrene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 20:56
Phenol	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 20:56
Pyrene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 20:56
Surrogates								
2,4,6-Tribromophenol (surr)	65.3		43-140		%	1		05/02/16 20:56

Print Date: 05/19/2016 12:13:56PM

J flagging is activated

Results of **MW74B-0416**

Client Sample ID: **MW74B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161922003
Lab Project ID: 1161922

Collection Date: 04/22/16 13:50
Received Date: 04/23/16 10:00
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
2-Fluorobiphenyl (surr)	69.2		44-119		%	1		05/02/16 20:56
2-Fluorophenol (surr)	52.1		19-119		%	1		05/02/16 20:56
Nitrobenzene-d5 (surr)	63.2		44-120		%	1		05/02/16 20:56
Phenol-d6 (surr)	50.2		10-115		%	1		05/02/16 20:56
Terphenyl-d14 (surr)	94.2		50-134		%	1		05/02/16 20:56

Batch Information

Analytical Batch: XMS9274
Analytical Method: SW8270D
Analyst: NLL
Analytical Date/Time: 05/02/16 20:56
Container ID: 1161922003-J

Prep Batch: XXX35213
Prep Method: SW3520C
Prep Date/Time: 04/26/16 09:00
Prep Initial Wt./Vol.: 990 mL
Prep Extract Vol: 1 mL

Print Date: 05/19/2016 12:13:56PM

J flagging is activated

Results of **MW74B-0416**

Client Sample ID: **MW74B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161922003
Lab Project ID: 1161922

Collection Date: 04/22/16 13:50
Received Date: 04/23/16 10:00
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.0500	U	0.100	0.0310	mg/L	1		04/26/16 02:14
Surrogates								
4-Bromofluorobenzene (surr)	82.3		50-150		%	1		04/26/16 02:14

Batch Information

Analytical Batch: VFC12973
Analytical Method: AK101
Analyst: S.P
Analytical Date/Time: 04/26/16 02:14
Container ID: 1161922003-G

Prep Batch: VXX28738
Prep Method: SW5030B
Prep Date/Time: 04/25/16 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/19/2016 12:13:56PM

J flagging is activated

Results of **MW74B-0416**

Client Sample ID: **MW74B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161922003
Lab Project ID: 1161922

Collection Date: 04/22/16 13:50
Received Date: 04/23/16 10:00
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		04/29/16 21:02
1,1,1-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 21:02
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		04/29/16 21:02
1,1,2-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 21:02
1,1-Dichloroethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 21:02
1,1-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		04/29/16 21:02
1,1-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		04/29/16 21:02
1,2,3-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 21:02
1,2,3-Trichloropropane	0.500	U	1.00	0.310	ug/L	1		04/29/16 21:02
1,2,4-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 21:02
1,2,4-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 21:02
1,2-Dibromo-3-chloropropane	5.00	U	10.0	3.10	ug/L	1		04/29/16 21:02
1,2-Dibromoethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 21:02
1,2-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 21:02
1,2-Dichloroethane	0.250	U	0.500	0.150	ug/L	1		04/29/16 21:02
1,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		04/29/16 21:02
1,3,5-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 21:02
1,3-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 21:02
1,3-Dichloropropane	0.250	U	0.500	0.150	ug/L	1		04/29/16 21:02
1,4-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1		04/29/16 21:02
2,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		04/29/16 21:02
2-Butanone (MEK)	5.00	U	10.0	3.10	ug/L	1		04/29/16 21:02
2-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		04/29/16 21:02
2-Hexanone	5.00	U	10.0	3.10	ug/L	1		04/29/16 21:02
4-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		04/29/16 21:02
4-Isopropyltoluene	0.500	U	1.00	0.310	ug/L	1		04/29/16 21:02
4-Methyl-2-pentanone (MIBK)	5.00	U	10.0	3.10	ug/L	1		04/29/16 21:02
Benzene	0.200	U	0.400	0.120	ug/L	1		04/29/16 21:02
Bromobenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 21:02
Bromochloromethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 21:02
Bromodichloromethane	0.250	U	0.500	0.150	ug/L	1		04/29/16 21:02
Bromoform	0.500	U	1.00	0.310	ug/L	1		04/29/16 21:02
Bromomethane	5.00	U	10.0	3.10	ug/L	1		04/29/16 21:02
Carbon disulfide	5.00	U	10.0	3.10	ug/L	1		04/29/16 21:02
Carbon tetrachloride	0.500	U	1.00	0.310	ug/L	1		04/29/16 21:02
Chlorobenzene	0.250	U	0.500	0.150	ug/L	1		04/29/16 21:02
Chloroethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 21:02

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J flagging is activated

Results of **MW74B-0416**

Client Sample ID: **MW74B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161922003
Lab Project ID: 1161922

Collection Date: 04/22/16 13:50
Received Date: 04/23/16 10:00
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroform	0.500	U	1.00	0.300	ug/L	1		04/29/16 21:02
Chloromethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 21:02
cis-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		04/29/16 21:02
cis-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		04/29/16 21:02
Dibromochloromethane	0.250	U	0.500	0.150	ug/L	1		04/29/16 21:02
Dibromomethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 21:02
Dichlorodifluoromethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 21:02
Ethylbenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 21:02
Freon-113	5.00	U	10.0	3.10	ug/L	1		04/29/16 21:02
Hexachlorobutadiene	0.500	U	1.00	0.310	ug/L	1		04/29/16 21:02
Isopropylbenzene (Cumene)	0.500	U	1.00	0.310	ug/L	1		04/29/16 21:02
Methylene chloride	2.50	U	5.00	1.00	ug/L	1		04/29/16 21:02
Methyl-t-butyl ether	5.00	U	10.0	3.10	ug/L	1		04/29/16 21:02
Naphthalene	5.00	U	10.0	3.10	ug/L	1		04/29/16 21:02
n-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 21:02
n-Propylbenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 21:02
o-Xylene	0.500	U	1.00	0.310	ug/L	1		04/29/16 21:02
P & M -Xylene	1.00	U	2.00	0.620	ug/L	1		04/29/16 21:02
sec-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 21:02
Styrene	0.500	U	1.00	0.310	ug/L	1		04/29/16 21:02
tert-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 21:02
Tetrachloroethene	0.500	U	1.00	0.310	ug/L	1		04/29/16 21:02
Toluene	0.500	U	1.00	0.310	ug/L	1		04/29/16 21:02
trans-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		04/29/16 21:02
trans-1,3-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		04/29/16 21:02
Trichloroethene	0.500	U	1.00	0.310	ug/L	1		04/29/16 21:02
Trichlorofluoromethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 21:02
Vinyl acetate	5.00	U	10.0	3.10	ug/L	1		04/29/16 21:02
Vinyl chloride	0.500	U	1.00	0.310	ug/L	1		04/29/16 21:02
Xylenes (total)	1.50	U	3.00	1.00	ug/L	1		04/29/16 21:02
Surrogates								
1,2-Dichloroethane-D4 (surr)	110		81-118		%	1		04/29/16 21:02
4-Bromofluorobenzene (surr)	96		85-114		%	1		04/29/16 21:02
Toluene-d8 (surr)	99.9		89-112		%	1		04/29/16 21:02

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J flagging is activated

Results of **MW74B-0416**

Client Sample ID: **MW74B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161922003
Lab Project ID: 1161922

Collection Date: 04/22/16 13:50
Received Date: 04/23/16 10:00
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS15749
Analytical Method: SW8260B
Analyst: NRB
Analytical Date/Time: 04/29/16 21:02
Container ID: 1161922003-E

Prep Batch: VXX28753
Prep Method: SW5030B
Prep Date/Time: 04/29/16 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/19/2016 12:13:56PM

J flagging is activated

Results of **MW74B-0416**

Client Sample ID: **MW74B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161922003
Lab Project ID: 1161922

Collection Date: 04/22/16 13:50
Received Date: 04/23/16 10:00
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloride	11.8		0.100	0.0310	mg/L	1		04/24/16 04:27
Fluoride	0.0640	J	0.100	0.0310	mg/L	1		04/24/16 04:27
Nitrate-N	0.0500	U	0.100	0.0310	mg/L	1		04/24/16 04:27
Nitrite-N	0.0560	J	0.100	0.0310	mg/L	1		04/24/16 04:27
Sulfate	5.19		0.100	0.0310	mg/L	1		04/24/16 04:27

Batch Information

Analytical Batch: WIC5532
Analytical Method: EPA 300.0
Analyst: ACF
Analytical Date/Time: 04/24/16 04:27
Container ID: 1161922003-Q

Prep Batch: WXX11480
Prep Method: METHOD
Prep Date/Time: 04/24/16 01:11
Prep Initial Wt./Vol.: 10 mL
Prep Extract Vol: 10 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Turbidity	1.60		0.200	0.100	NTU	1		04/22/16 12:15

Batch Information

Analytical Batch: WAT10635
Analytical Method: SM21 2130B
Analyst: MBS
Analytical Date/Time: 04/22/16 12:15
Container ID: 1161922003-T

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Alkalinity	44.8		10.0	3.10	mg/L	1		04/25/16 16:07

Batch Information

Analytical Batch: WTI4445
Analytical Method: SM21 2320B
Analyst: ACF
Analytical Date/Time: 04/25/16 16:07
Container ID: 1161922003-T

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Dissolved Solids	106		10.0	3.10	mg/L	1		04/26/16 09:58

Print Date: 05/19/2016 12:13:56PM

J flagging is activated

Results of **MW74B-0416**

Client Sample ID: **MW74B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161922003
Lab Project ID: 1161922

Collection Date: 04/22/16 13:50
Received Date: 04/23/16 10:00
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Batch Information

Analytical Batch: STS5020
Analytical Method: SM21 2540C
Analyst: MBS
Analytical Date/Time: 04/26/16 09:58
Container ID: 1161922003-T

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Suspended Solids	4.14		1.01	0.313	mg/L	1		04/25/16 15:51

Batch Information

Analytical Batch: STS5019
Analytical Method: SM21 2540D
Analyst: MBS
Analytical Date/Time: 04/25/16 15:51
Container ID: 1161922003-N

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
pH	6.70		0.100	0.100	pH units	1		04/25/16 16:07

Batch Information

Analytical Batch: WTI4443
Analytical Method: SM21 4500-H B
Analyst: ACF
Analytical Date/Time: 04/25/16 16:07
Container ID: 1161922003-T

Print Date: 05/19/2016 12:13:56PM

J flagging is activated

Results of **MW74A-0416**

Client Sample ID: **MW74A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161922006
Lab Project ID: 1161922

Collection Date: 04/22/16 11:50
Received Date: 04/23/16 10:00
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

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

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Bismuth	0.0250	U	0.0500	0.0150	ug/L	2.5		05/18/16 13:48
Aluminum	8.81		2.00	0.620	ug/L	2.5		05/18/16 13:48
Antimony	0.0412	J	0.0500	0.0150	ug/L	2.5		05/18/16 13:48
Arsenic	56.6		0.800	0.200	ug/L	2.5		05/18/16 13:48
Barium	3.94		0.250	0.0400	ug/L	2.5		05/18/16 13:48
Beryllium	0.0250	U	0.0500	0.0250	ug/L	2.5		05/18/16 13:48
Boron	156		5.00	1.50	ug/L	2.5		05/18/16 13:48
Cadmium	0.0250	U	0.0500	0.0150	ug/L	2.5		05/18/16 13:48
Calcium	3690		50.0	15.0	ug/L	2.5		05/18/16 13:48
Chromium	0.688		0.500	0.150	ug/L	2.5		05/18/16 13:48
Cobalt	0.0633		0.0200	0.0100	ug/L	2.5		05/18/16 13:48
Copper	0.250	U	0.500	0.200	ug/L	2.5		05/18/16 13:48
Iron	31.5		20.0	6.20	ug/L	2.5		05/18/16 13:48
Lead	0.0500	U	0.100	0.0310	ug/L	2.5		05/18/16 13:48
Magnesium	1890		20.0	6.20	ug/L	2.5		05/18/16 13:48
Manganese	25.4		0.100	0.0310	ug/L	2.5		05/18/16 13:48
Molybdenum	1.99		0.0500	0.0150	ug/L	2.5		05/18/16 13:48
Nickel	0.954		0.620	0.0620	ug/L	2.5		05/18/16 13:48
Potassium	8870		50.0	15.0	ug/L	2.5		05/18/16 13:48
Selenium	0.500	U	1.00	0.310	ug/L	2.5		05/18/16 13:48
Silicon	13900		100	31.0	ug/L	2.5		05/18/16 13:48
Silver	0.0100	U	0.0200	0.00620	ug/L	2.5		05/18/16 13:48
Sodium	33300		400	124	ug/L	10		05/18/16 14:05
Thallium	0.0100	U	0.0200	0.00620	ug/L	2.5		05/18/16 13:48
Tin	0.100	U	0.200	0.0620	ug/L	2.5		05/18/16 13:48
Vanadium	0.500	U	1.00	0.310	ug/L	2.5		05/18/16 13:48
Zinc	0.557	J	3.10	0.400	ug/L	2.5		05/18/16 13:48

Batch Information

Analytical Batch: MMS9355
Analytical Method: 200.8 Low Level
Analyst: EAB
Analytical Date/Time: 05/18/16 13:48
Container ID: 1161922006-A

Prep Batch: MXX29754
Prep Method: E200.2
Prep Date/Time: 05/17/16 08:56
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 10 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Hardness as CaCO3	17.0		1.00	1.00	mg/L	2.5		05/18/16 13:48

Print Date: 05/19/2016 12:13:56PM

J flagging is activated

Results of **MW74A-0416**

Client Sample ID: **MW74A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161922006
Lab Project ID: 1161922

Collection Date: 04/22/16 11:50
Received Date: 04/23/16 10:00
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

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

Batch Information

Analytical Batch: MMS9355
Analytical Method: SM21 2340B
Analyst: EAB
Analytical Date/Time: 05/18/16 13:48
Container ID: 1161922006-A

Prep Batch: MXX29754
Prep Method: E200.2
Prep Date/Time: 05/17/16 08:56
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 10 mL

Print Date: 05/19/2016 12:13:56PM

J flagging is activated

Results of **MW74B-0416**

Client Sample ID: **MW74B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161922007
Lab Project ID: 1161922

Collection Date: 04/22/16 13:50
Received Date: 04/23/16 10:00
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

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

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Aluminum	3.57		2.00	0.620	ug/L	2.5		05/18/16 13:51
Antimony	0.0214	J	0.0500	0.0150	ug/L	2.5		05/18/16 13:51
Arsenic	1.44		0.800	0.200	ug/L	2.5		05/18/16 13:51
Barium	32.7		0.250	0.0400	ug/L	2.5		05/18/16 13:51
Beryllium	0.0250	U	0.0500	0.0250	ug/L	2.5		05/18/16 13:51
Bismuth	0.0250	U	0.0500	0.0150	ug/L	2.5		05/18/16 13:51
Boron	7.56		5.00	1.50	ug/L	2.5		05/18/16 13:51
Cadmium	0.0250	U	0.0500	0.0150	ug/L	2.5		05/18/16 13:51
Calcium	14900		50.0	15.0	ug/L	2.5		05/18/16 13:51
Chromium	0.697		0.500	0.150	ug/L	2.5		05/18/16 13:51
Cobalt	1.38		0.0200	0.0100	ug/L	2.5		05/18/16 13:51
Copper	0.250	U	0.500	0.200	ug/L	2.5		05/18/16 13:51
Iron	4740		20.0	6.20	ug/L	2.5		05/18/16 13:51
Lead	0.0500	U	0.100	0.0310	ug/L	2.5		05/18/16 13:51
Magnesium	5030		20.0	6.20	ug/L	2.5		05/18/16 13:51
Manganese	191		0.100	0.0310	ug/L	2.5		05/18/16 13:51
Molybdenum	0.381		0.0500	0.0150	ug/L	2.5		05/18/16 13:51
Nickel	2.60		0.620	0.0620	ug/L	2.5		05/18/16 13:51
Potassium	2180		50.0	15.0	ug/L	2.5		05/18/16 13:51
Selenium	0.500	U	1.00	0.310	ug/L	2.5		05/18/16 13:51
Silicon	19100		100	31.0	ug/L	2.5		05/18/16 13:51
Silver	0.0100	U	0.0200	0.00620	ug/L	2.5		05/18/16 13:51
Sodium	8040		100	31.0	ug/L	2.5		05/18/16 13:51
Thallium	0.0100	U	0.0200	0.00620	ug/L	2.5		05/18/16 13:51
Tin	0.100	U	0.200	0.0620	ug/L	2.5		05/18/16 13:51
Vanadium	0.477	J	1.00	0.310	ug/L	2.5		05/18/16 13:51
Zinc	1.12	J	3.10	0.400	ug/L	2.5		05/18/16 13:51

Batch Information

Analytical Batch: MMS9355
Analytical Method: 200.8 Low Level
Analyst: EAB
Analytical Date/Time: 05/18/16 13:51
Container ID: 1161922007-A

Prep Batch: MXX29754
Prep Method: E200.2
Prep Date/Time: 05/17/16 08:56
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 10 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Hardness as CaCO3	58.0		1.00	1.00	mg/L	2.5		05/18/16 13:51

Print Date: 05/19/2016 12:13:56PM

J flagging is activated

Results of **MW74B-0416**

Client Sample ID: **MW74B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161922007
Lab Project ID: 1161922

Collection Date: 04/22/16 13:50
Received Date: 04/23/16 10:00
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

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

Batch Information

Analytical Batch: MMS9355
Analytical Method: SM21 2340B
Analyst: EAB
Analytical Date/Time: 05/18/16 13:51
Container ID: 1161922007-A

Prep Batch: MXX29754
Prep Method: E200.2
Prep Date/Time: 05/17/16 08:56
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 10 mL

Print Date: 05/19/2016 12:13:56PM

J flagging is activated

Results of **TB-5**

Client Sample ID: **TB-5**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161922010
Lab Project ID: 1161922

Collection Date: 04/22/16 11:50
Received Date: 04/23/16 10:00
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.0500	U	0.100	0.0310	mg/L	1		04/26/16 00:57
Surrogates								
4-Bromofluorobenzene (surr)	76.4		50-150		%	1		04/26/16 00:57

Batch Information

Analytical Batch: VFC12973
Analytical Method: AK101
Analyst: S.P
Analytical Date/Time: 04/26/16 00:57
Container ID: 1161922010-A

Prep Batch: VXX28738
Prep Method: SW5030B
Prep Date/Time: 04/25/16 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/19/2016 12:13:56PM

J flagging is activated

Results of **TB-6**

Client Sample ID: **TB-6**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161922011
Lab Project ID: 1161922

Collection Date: 04/22/16 11:50
Received Date: 04/23/16 10:00
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		04/29/16 19:56
1,1,1-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 19:56
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		04/29/16 19:56
1,1,2-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 19:56
1,1-Dichloroethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 19:56
1,1-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		04/29/16 19:56
1,1-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		04/29/16 19:56
1,2,3-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 19:56
1,2,3-Trichloropropane	0.500	U	1.00	0.310	ug/L	1		04/29/16 19:56
1,2,4-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 19:56
1,2,4-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 19:56
1,2-Dibromo-3-chloropropane	5.00	U	10.0	3.10	ug/L	1		04/29/16 19:56
1,2-Dibromoethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 19:56
1,2-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 19:56
1,2-Dichloroethane	0.250	U	0.500	0.150	ug/L	1		04/29/16 19:56
1,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		04/29/16 19:56
1,3,5-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 19:56
1,3-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 19:56
1,3-Dichloropropane	0.250	U	0.500	0.150	ug/L	1		04/29/16 19:56
1,4-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1		04/29/16 19:56
2,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		04/29/16 19:56
2-Butanone (MEK)	5.00	U	10.0	3.10	ug/L	1		04/29/16 19:56
2-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		04/29/16 19:56
2-Hexanone	5.00	U	10.0	3.10	ug/L	1		04/29/16 19:56
4-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		04/29/16 19:56
4-Isopropyltoluene	0.500	U	1.00	0.310	ug/L	1		04/29/16 19:56
4-Methyl-2-pentanone (MIBK)	5.00	U	10.0	3.10	ug/L	1		04/29/16 19:56
Benzene	0.200	U	0.400	0.120	ug/L	1		04/29/16 19:56
Bromobenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 19:56
Bromochloromethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 19:56
Bromodichloromethane	0.250	U	0.500	0.150	ug/L	1		04/29/16 19:56
Bromoform	0.500	U	1.00	0.310	ug/L	1		04/29/16 19:56
Bromomethane	5.00	U	10.0	3.10	ug/L	1		04/29/16 19:56
Carbon disulfide	5.00	U	10.0	3.10	ug/L	1		04/29/16 19:56
Carbon tetrachloride	0.500	U	1.00	0.310	ug/L	1		04/29/16 19:56
Chlorobenzene	0.250	U	0.500	0.150	ug/L	1		04/29/16 19:56
Chloroethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 19:56

Print Date: 05/19/2016 12:13:56PM

J flagging is activated

Results of **TB-6**

Client Sample ID: **TB-6**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161922011
Lab Project ID: 1161922

Collection Date: 04/22/16 11:50
Received Date: 04/23/16 10:00
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroform	0.500	U	1.00	0.300	ug/L	1		04/29/16 19:56
Chloromethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 19:56
cis-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		04/29/16 19:56
cis-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		04/29/16 19:56
Dibromochloromethane	0.250	U	0.500	0.150	ug/L	1		04/29/16 19:56
Dibromomethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 19:56
Dichlorodifluoromethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 19:56
Ethylbenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 19:56
Freon-113	5.00	U	10.0	3.10	ug/L	1		04/29/16 19:56
Hexachlorobutadiene	0.500	U	1.00	0.310	ug/L	1		04/29/16 19:56
Isopropylbenzene (Cumene)	0.500	U	1.00	0.310	ug/L	1		04/29/16 19:56
Methylene chloride	2.50	U	5.00	1.00	ug/L	1		04/29/16 19:56
Methyl-t-butyl ether	5.00	U	10.0	3.10	ug/L	1		04/29/16 19:56
Naphthalene	5.00	U	10.0	3.10	ug/L	1		04/29/16 19:56
n-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 19:56
n-Propylbenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 19:56
o-Xylene	0.500	U	1.00	0.310	ug/L	1		04/29/16 19:56
P & M -Xylene	1.00	U	2.00	0.620	ug/L	1		04/29/16 19:56
sec-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 19:56
Styrene	0.500	U	1.00	0.310	ug/L	1		04/29/16 19:56
tert-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 19:56
Tetrachloroethene	0.500	U	1.00	0.310	ug/L	1		04/29/16 19:56
Toluene	0.500	U	1.00	0.310	ug/L	1		04/29/16 19:56
trans-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		04/29/16 19:56
trans-1,3-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		04/29/16 19:56
Trichloroethene	0.500	U	1.00	0.310	ug/L	1		04/29/16 19:56
Trichlorofluoromethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 19:56
Vinyl acetate	5.00	U	10.0	3.10	ug/L	1		04/29/16 19:56
Vinyl chloride	0.500	U	1.00	0.310	ug/L	1		04/29/16 19:56
Xylenes (total)	1.50	U	3.00	1.00	ug/L	1		04/29/16 19:56
Surrogates								
1,2-Dichloroethane-D4 (surr)	114		81-118		%	1		04/29/16 19:56
4-Bromofluorobenzene (surr)	98.4		85-114		%	1		04/29/16 19:56
Toluene-d8 (surr)	103		89-112		%	1		04/29/16 19:56

Print Date: 05/19/2016 12:13:56PM

J flagging is activated

Results of **TB-6**

Client Sample ID: **TB-6**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161922011
Lab Project ID: 1161922

Collection Date: 04/22/16 11:50
Received Date: 04/23/16 10:00
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS15749
Analytical Method: SW8260B
Analyst: NRB
Analytical Date/Time: 04/29/16 19:56
Container ID: 1161922011-C

Prep Batch: VXX28753
Prep Method: SW5030B
Prep Date/Time: 04/29/16 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/19/2016 12:13:56PM

J flagging is activated

Method Blank

Blank ID: MB for HBN 1734142 [MXX/29754]
Blank Lab ID: 1324629

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161922001, 1161922003, 1161922006, 1161922007

Results by **200.8 Low Level**

Parameter	Results	LOQ/CL	DL	Units
Aluminum	1.13J	2.00	0.620	ug/L
Antimony	0.0250U	0.0500	0.0150	ug/L
Arsenic	0.400U	0.800	0.200	ug/L
Barium	0.125U	0.250	0.0400	ug/L
Beryllium	0.0250U	0.0500	0.0250	ug/L
Bismuth	0.0250U	0.0500	0.0150	ug/L
Boron	2.50U	5.00	1.50	ug/L
Cadmium	0.0250U	0.0500	0.0150	ug/L
Calcium	25.0U	50.0	15.0	ug/L
Chromium	0.250U	0.500	0.150	ug/L
Cobalt	0.0100U	0.0200	0.0100	ug/L
Copper	0.250U	0.500	0.200	ug/L
Iron	10.0U	20.0	6.20	ug/L
Lead	0.0500U	0.100	0.0310	ug/L
Magnesium	10.0U	20.0	6.20	ug/L
Manganese	0.0500U	0.100	0.0310	ug/L
Molybdenum	0.0250U	0.0500	0.0150	ug/L
Nickel	0.310U	0.620	0.0620	ug/L
Potassium	25.0U	50.0	15.0	ug/L
Selenium	0.500U	1.00	0.310	ug/L
Silicon	50.0U	100	31.0	ug/L
Silver	0.0100U	0.0200	0.00620	ug/L
Sodium	50.0U	100	31.0	ug/L
Thallium	0.0100U	0.0200	0.00620	ug/L
Tin	0.100U	0.200	0.0620	ug/L
Vanadium	0.500U	1.00	0.310	ug/L
Zinc	1.55U	3.10	0.400	ug/L

Batch Information

Analytical Batch: MMS9355
Analytical Method: 200.8 Low Level
Instrument: Perkin Elmer Nexlon P5
Analyst: EAB
Analytical Date/Time: 5/18/2016 2:23:16PM

Prep Batch: MXX29754
Prep Method: E200.2
Prep Date/Time: 5/17/2016 8:56:09AM
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 10 mL

Print Date: 05/19/2016 12:14:51PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161922 [MXX29754]
Blank Spike Lab ID: 1324630
Date Analyzed: 05/18/2016 14:26

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161922001, 1161922003, 1161922006, 1161922007

Results by **200.8 Low Level**

Blank Spike (ug/L)

Parameter	Spike	Result	Rec (%)	CL
Aluminum	50	55.2	110	(85-115)
Antimony	5	5.38	108	(85-115)
Arsenic	25	25.5	102	(85-115)
Barium	25	24.8	99	(85-115)
Beryllium	12.5	13.1	105	(85-115)
Bismuth	12.5	12.3	99	(85-115)
Boron	50	51.0	102	(85-115)
Cadmium	12.5	12.8	103	(85-115)
Calcium	5000	4800	96	(85-115)
Chromium	12.5	13.0	104	(85-115)
Cobalt	12.5	12.6	101	(85-115)
Copper	25	26.0	104	(85-115)
Iron	500	523	105	(85-115)
Lead	5	4.91	98	(85-115)
Magnesium	5000	5310	106	(85-115)
Manganese	50	51.2	102	(85-115)
Molybdenum	12.5	13.0	104	(85-115)
Nickel	12.5	12.8	102	(85-115)
Potassium	5000	4980	100	(85-115)
Selenium	25	24.6	99	(85-115)
Silicon	2500	2680	107	(85-115)
Silver	5	4.76	95	(85-115)
Sodium	5000	5440	109	(85-115)
Thallium	2.5	2.43	97	(85-115)
Tin	12.5	12.5	100	(85-115)
Vanadium	25	25.8	103	(85-115)
Zinc	50	51.2	102	(85-115)

Batch Information

Analytical Batch: **MMS9355**
Analytical Method: **200.8 Low Level**
Instrument: **Perkin Elmer Nexlon P5**
Analyst: **EAB**

Prep Batch: **MXX29754**
Prep Method: **E200.2**
Prep Date/Time: **05/17/2016 08:56**
Spike Init Wt./Vol.: 50 ug/L Extract Vol: 10 mL
Dupe Init Wt./Vol.: Extract Vol:

Print Date: 05/19/2016 12:14:56PM

Bench Spike Summary

Original Sample ID: 1161922003
MS Sample ID: 1324631 BND
MSD Sample ID:

Analysis Date: 05/18/2016 13:27
Analysis Date: 05/18/2016 13:36
Analysis Date:
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161922001, 1161922003, 1161922006, 1161922007

Results by **200.8 Low Level**

		Matrix Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Aluminum	430	50.0	488	115				70-130		
Antimony	0.110	5.00	4.91	96				70-130		
Arsenic	1.54	25.0	26.7	101				70-130		
Barium	41.4	25.0	65.1	95				70-130		
Beryllium	0.0250U	12.5	13.1	105				70-130		
Bismuth	0.0250U	12.5	11.9	96				70-130		
Boron	8.84	50.0	61.4	105				70-130		
Cadmium	0.0250U	12.5	11.8	95				70-130		
Calcium	16800	1250	17800	79				70-130		
Chromium	2.48	12.5	16.3	111				70-130		
Cobalt	1.73	12.5	14.5	102				70-130		
Copper	0.973	25.0	25.8	100				70-130		
Iron	5810	500	6210	80				70-130		
Lead	0.222	5.00	5.06	97				70-130		
Magnesium	6200	1250	7330	90				70-130		
Manganese	220	50.0	276	111				70-130		
Molybdenum	0.445	12.5	12.7	98				70-130		
Nickel	3.29	12.5	16.2	103				70-130		
Potassium	2450	1250	3600	92				70-130		
Selenium	0.500U	25.0	23.5	94				70-130		
Silver	0.0106J	5.00	4.29	86				70-130		
Sodium	9860	1250	11100	100				70-130		
Thallium	0.0100U	2.50	2.4	96				70-130		
Tin	0.100U	12.5	12.3	99				70-130		
Vanadium	1.91	25.0	29	108				70-130		
Zinc	2.39J	50.0	51.2	98				70-130		

Batch Information

Analytical Batch: MMS9355
Analytical Method: 200.8 Low Level
Instrument: Perkin Elmer NexIon P5
Analyst: EAB
Analytical Date/Time: 5/18/2016 1:36:36PM

Prep Batch: MXX29754
Prep Method: LL Digest for Metals on ICP-MS
Prep Date/Time: 5/17/2016 8:56:09AM
Prep Initial Wt./Vol.: 50.00mL
Prep Extract Vol: 10.00mL

Print Date: 05/19/2016 12:14:59PM

Bench Spike Summary

Original Sample ID: 1161922007
MS Sample ID: 1324632 BND
MSD Sample ID:

Analysis Date: 05/18/2016 13:51
Analysis Date: 05/18/2016 13:59
Analysis Date:
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161922001, 1161922003, 1161922006, 1161922007

Results by **200.8 Low Level**

		Matrix Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Aluminum	3.57	50.0	65.4	124				70-130		
Antimony	0.0214J	5.00	5.1	101				70-130		
Arsenic	1.44	25.0	26.9	102				70-130		
Barium	32.7	25.0	59.4	107				70-130		
Beryllium	0.0250U	12.5	12.3	98				70-130		
Bismuth	0.0250U	12.5	12.5	100				70-130		
Boron	7.56	50.0	56.6	98				70-130		
Cadmium	0.0250U	12.5	12.4	99				70-130		
Calcium	14900	1250	15900	77				70-130		
Chromium	0.697	12.5	14.5	111				70-130		
Cobalt	1.38	12.5	14.1	102				70-130		
Copper	0.250U	25.0	26	104				70-130		
Iron	4740	500	5090	70				70-130		
Lead	0.0500U	5.00	5.39	108				70-130		
Magnesium	5030	1250	6260	99				70-130		
Manganese	191	50.0	242	101				70-130		
Molybdenum	0.381	12.5	12.8	100				70-130		
Nickel	2.60	12.5	15.2	101				70-130		
Potassium	2180	1250	3310	91				70-130		
Selenium	0.500U	25.0	23.9	96				70-130		
Silicon	19100	1250	20400	103				70-130		
Silver	0.0100U	5.00	4.61	92				70-130		
Sodium	8040	1250	9440	112				70-130		
Thallium	0.0100U	2.50	2.51	100				70-130		
Tin	0.100U	12.5	12.6	101				70-130		
Vanadium	0.477J	25.0	27.1	107				70-130		
Zinc	1.12J	50.0	53.6	105				70-130		

Batch Information

Analytical Batch: MMS9355
Analytical Method: 200.8 Low Level
Instrument: Perkin Elmer Nexlon P5
Analyst: EAB
Analytical Date/Time: 5/18/2016 1:59:48PM

Prep Batch: MXX29754
Prep Method: LL Digest for Metals on ICP-MS
Prep Date/Time: 5/17/2016 8:56:09AM
Prep Initial Wt./Vol.: 50.00mL
Prep Extract Vol: 10.00mL

Print Date: 05/19/2016 12:14:59PM

Billable Matrix Spike Summary

Original Sample ID: 1161922003
MS Sample ID: 1161922004 BMS
MSD Sample ID: 1161922005 BMSD

Analysis Date: 05/18/2016 13:27
Analysis Date: 05/18/2016 13:30
Analysis Date: 05/18/2016 13:33
Matrix: Water (Surface, Eff., Ground)

QC for Samples:

Results by **200.8 Low Level**

		Matrix Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Aluminum	430	50.0	562	264 *	50.0	565	269 *	70-130	0.49	(< 20)
Antimony	0.110	5.00	6.88	135 *	5.00	6.71	132 *	70-130	2.40	(< 20)
Arsenic	1.54	25.0	34.1	130	25.0	32.9	125	70-130	3.60	(< 20)
Barium	41.4	25.0	71	119	25.0	73.2	128	70-130	3.10	(< 20)
Beryllium	0.0250U	12.5	16.1	129	12.5	16.1	129	70-130	0.16	(< 20)
Bismuth	0.0250U	12.5	15.5	124	12.5	15.6	125	70-130	0.21	(< 20)
Boron	8.84	50.0	68.5	119	50.0	68.2	119	70-130	0.42	(< 20)
Cadmium	0.0250U	12.5	16.1	129	12.5	16.0	128	70-130	0.72	(< 20)
Calcium	16800	5000	22100	106	5000	21200	89	70-130	3.90	(< 20)
Chromium	2.48	12.5	19.4	136 *	12.5	18.9	131 *	70-130	2.70	(< 20)
Cobalt	1.73	12.5	18.7	136 *	12.5	17.9	130	70-130	4.40	(< 20)
Copper	0.973	25.0	32.7	127	25.0	31.8	123	70-130	2.70	(< 20)
Iron	5810	500	5980	33 *	500	5820	2 *	70-130	2.60	(< 20)
Lead	0.222	5.00	6.61	128	5.00	6.64	128	70-130	0.35	(< 20)
Magnesium	6200	5000	12100	119	5000	11700	110	70-130	3.80	(< 20)
Manganese	220	50.0	268	95	50.0	261	81	70-130	2.70	(< 20)
Molybdenum	0.445	12.5	17.7	138 *	12.5	17.0	133 *	70-130	4.00	(< 20)
Nickel	3.29	12.5	19.9	133 *	12.5	18.9	125	70-130	5.10	(< 20)
Potassium	2450	5000	8850	128	5000	8420	119	70-130	5.00	(< 20)
Selenium	0.500U	25.0	30.9	123	25.0	30.7	123	70-130	0.44	(< 20)
Silver	0.0106J	5.00	6.03	120	5.00	5.88	117	70-130	2.60	(< 20)
Sodium	9860	5000	15500	113	5000	15200	107	70-130	1.70	(< 20)
Thallium	0.0100U	2.50	3.22	129	2.50	3.20	128	70-130	0.75	(< 20)
Tin	0.100U	12.5	16.1	129	12.5	16.0	128	70-130	1.20	(< 20)
Vanadium	1.91	25.0	36.5	138 *	25.0	35.1	133 *	70-130	3.70	(< 20)
Zinc	2.39J	50.0	64.8	125	50.0	62.7	121	70-130	3.30	(< 20)

Batch Information

Analytical Batch: MMS9355
Analytical Method: 200.8 Low Level
Instrument: Perkin Elmer NexIon P5
Analyst: EAB
Analytical Date/Time: 5/18/2016 1:30:49PM

Prep Batch: MXX29754
Prep Method: LL Digest for Metals on ICP-MS
Prep Date/Time: 5/17/2016 8:56:09AM
Prep Initial Wt./Vol.: 50.00mL
Prep Extract Vol: 10.00mL

Print Date: 05/19/2016 12:14:59PM

Billable Matrix Spike Summary

Original Sample ID: 1161922007
MS Sample ID: 1161922008 BMS
MSD Sample ID: 1161922009 BMSD

Analysis Date: 05/18/2016 13:51
Analysis Date: 05/18/2016 13:54
Analysis Date: 05/18/2016 13:56
Matrix: Water (Surface, Eff., Ground)

QC for Samples:

Results by **200.8 Low Level**

		Matrix Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Aluminum	3.57	50.0	70.2	133 *	50.0	77.5	148 *	70-130	9.80	(< 20)
Antimony	0.0214J	5.00	7.05	141 *	5.00	7.03	140 *	70-130	0.27	(< 20)
Arsenic	1.44	25.0	33.1	127	25.0	33.3	127	70-130	0.43	(< 20)
Barium	32.7	25.0	68.4	143 *	25.0	66.0	133 *	70-130	3.60	(< 20)
Beryllium	0.0250U	12.5	16	128	12.5	17.7	142 *	70-130	10.10	(< 20)
Bismuth	0.0250U	12.5	15.6	125	12.5	15.2	122	70-130	2.50	(< 20)
Boron	7.56	50.0	69.5	124	50.0	77.9	141 *	70-130	11.30	(< 20)
Cadmium	0.0250U	12.5	16.4	131 *	12.5	16.1	129	70-130	1.70	(< 20)
Calcium	14900	5000	21500	132 *	5000	21000	122	70-130	2.30	(< 20)
Chromium	0.697	12.5	17.5	134 *	12.5	19.6	151 *	70-130	11.50	(< 20)
Cobalt	1.38	12.5	17.6	130	12.5	18.2	135 *	70-130	3.20	(< 20)
Copper	0.250U	25.0	31	124	25.0	32.3	129	70-130	4.20	(< 20)
Iron	4740	500	5460	145 *	500	5800	213 *	70-130	6.10	(< 20)
Lead	0.0500U	5.00	6.47	129	5.00	6.26	125	70-130	3.30	(< 20)
Magnesium	5030	5000	11800	136 *	5000	12700	154 *	70-130	7.30	(< 20)
Manganese	191	50.0	258	134 *	50.0	267	153 *	70-130	3.70	(< 20)
Molybdenum	0.381	12.5	16.8	131 *	12.5	16.9	133 *	70-130	0.78	(< 20)
Nickel	2.60	12.5	18.1	124	12.5	18.9	131 *	70-130	4.60	(< 20)
Potassium	2180	5000	8600	128	5000	8470	126	70-130	1.50	(< 20)
Selenium	0.500U	25.0	29.7	119	25.0	29.8	119	70-130	0.21	(< 20)
Silicon	19100	2500	23800	189 *	2500	25800	271 *	70-130	8.30	(< 20)
Silver	0.0100U	5.00	6.09	122	5.00	5.52	110	70-130	9.80	(< 20)
Sodium	8040	5000	15400	147 *	5000	16600	172 *	70-130	7.70	(< 20)
Thallium	0.0100U	2.50	3.19	127	2.50	3.10	124	70-130	2.80	(< 20)
Tin	0.100U	12.5	16.8	135 *	12.5	16.9	135 *	70-130	0.38	(< 20)
Vanadium	0.477J	25.0	34.6	136 *	25.0	36.8	145 *	70-130	6.10	(< 20)
Zinc	1.12J	50.0	60.6	119	50.0	62.5	123	70-130	3.00	(< 20)

Batch Information

Analytical Batch: MMS9355
Analytical Method: 200.8 Low Level
Instrument: Perkin Elmer Nexlon P5
Analyst: EAB
Analytical Date/Time: 5/18/2016 1:54:01PM

Prep Batch: MXX29754
Prep Method: LL Digest for Metals on ICP-MS
Prep Date/Time: 5/17/2016 8:56:09AM
Prep Initial Wt./Vol.: 50.00mL
Prep Extract Vol: 10.00mL

Print Date: 05/19/2016 12:14:59PM

Method Blank

Blank ID: MB for HBN 1732272 [STS/5019]
Blank Lab ID: 1321132

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161922001, 1161922002, 1161922003

Results by **SM21 2540D**

Parameter	Results	LOQ/CL	DL	Units
Total Suspended Solids	0.500U	1.00	0.310	mg/L

Batch Information

Analytical Batch: STS5019
Analytical Method: SM21 2540D
Instrument:
Analyst: MBS
Analytical Date/Time: 4/25/2016 3:51:48PM

Print Date: 05/19/2016 12:15:06PM

Duplicate Sample Summary

Original Sample ID: 1161861009
Duplicate Sample ID: 1321135
QC for Samples:

Analysis Date: 04/25/2016 15:51
Matrix: Water (Surface, Eff., Ground)

Results by **SM21 2540D**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
Total Suspended Solids	7550	7450	mg/L	1.30	(< 5)

Batch Information

Analytical Batch: STS5019
Analytical Method: SM21 2540D
Instrument:
Analyst: MBS

Print Date: 05/19/2016 12:15:08PM

Duplicate Sample Summary

Original Sample ID: 1161861010
Duplicate Sample ID: 1321136
QC for Samples:
1161922001, 1161922002, 1161922003

Analysis Date: 04/25/2016 15:51
Matrix: Water (Surface, Eff., Ground)

Results by **SM21 2540D**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
Total Suspended Solids	8450	8500	mg/L	0.59	(< 5)

Batch Information

Analytical Batch: STS5019
Analytical Method: SM21 2540D
Instrument:
Analyst: MBS

Print Date: 05/19/2016 12:15:08PM

Duplicate Sample Summary

Original Sample ID: 1161922003
Duplicate Sample ID: 1161922012
QC for Samples:

Analysis Date: 04/25/2016 15:51
Matrix: Water (Surface, Eff., Ground)

Results by **SM21 2540D**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
Total Suspended Solids	4.14	3.64	mg/L	13.00*	(< 5)

Batch Information

Analytical Batch: STS5019
Analytical Method: SM21 2540D
Instrument:
Analyst: MBS

Print Date: 05/19/2016 12:15:08PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161922 [STS5019]
Blank Spike Lab ID: 1321133
Date Analyzed: 04/25/2016 15:51

Spike Duplicate ID: LCSD for HBN 1161922 [STS5019]
Spike Duplicate Lab ID: 1321134
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161922001, 1161922002, 1161922003

Results by **SM21 2540D**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Total Suspended Solids	50	49.2	98	50	45.7	91	(75-125)	7.40 *	(< 5)

Batch Information

Analytical Batch: **STS5019**
Analytical Method: **SM21 2540D**
Instrument:
Analyst: **MBS**

Prep Batch:
Prep Method:
Prep Date/Time:
Spike Init Wt./Vol.: 50 mg/L Extract Vol: 1000 mL
Dupe Init Wt./Vol.: 50 mg/L Extract Vol: 1000 mL

Print Date: 05/19/2016 12:15:10PM

Method Blank

Blank ID: MB for HBN 17323[2 S/ T5[0209
Blank] aL ID: 13212b7

Matrix: Water (Turface, Eff., Ground)

QC for Tamples:
11b1622001, 11b1622003

Results Ly **SM21 2540C**

Parameter	Results	] OQ5C]	D]	Units
/ otal Dissolged Tolids	[.00U	10.0	3.10	mA5]

Batch Information

hnalytical Batc4: T/ T[020
hnalytical Met4od: TM21 2[80C
Instrument:
hnalyst: MBT
hnalytical Date5/ ime: 852b5201b 6:[v:[bhM

Print Date: 0[5165201b 12:1[:18PM

Duplicate Sample Summary

Original Sample ID: 1161876002
Duplicate Sample ID: 1321271
QC for Samples:
1161922001, 1161922003

Analysis Date: 04/26/2016 09:58
Matrix: Water (Surface, Eff., Ground)

Results by **SM21 2540C**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
Total Dissolved Solids	161	164	mg/L	1.80	(< 5)

Batch Information

Analytical Batch: STS5020
Analytical Method: SM21 2540C
Instrument:
Analyst: MBS

Print Date: 05/19/2016 12:15:16PM

Duplicate Sample Summary

Original Sample ID: 1161922003
Duplicate Sample ID: 1161922012
QC for Samples:

Analysis Date: 04/26/2016 09:58
Matrix: Water (Surface, Eff., Ground)

Results by **SM21 2540C**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
Total Dissolved Solids	106	111	mg/L	4.60	(< 5)

Batch Information

Analytical Batch: STS5020
Analytical Method: SM21 2540C
Instrument:
Analyst: MBS

Print Date: 05/19/2016 12:15:16PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161922 [STS5020]
Blank Spike Lab ID: 1321268
Date Analyzed: 04/26/2016 09:58

Spike Duplicate ID: LCSD for HBN 1161922 [STS5020]
Spike Duplicate Lab ID: 1321269
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161922001, 1161922003

Results by **SM21 2540C**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Total Dissolved Solids	330	330	100	330	329	100	(75-125)	0.30	(< 5)

Batch Information

Analytical Batch: **STS5020**
Analytical Method: **SM21 2540C**
Instrument:
Analyst: **MBS**

Prep Batch:
Prep Method:
Prep Date/Time:
Spike Init Wt./Vol.: 330 mg/L Extract Vol: 100 mL
Dupe Init Wt./Vol.: 330 mg/L Extract Vol: 100 mL

Print Date: 05/19/2016 12:15:18PM

Method Blank

Blank ID: MB for HBN 1732377 [VXX/28738]
Blank Lab ID: 1321412

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161922001, 1161922003, 1161922010

Results by **AK101**

Parameter	Results	LOQ/CL	DL	Units
Gasoline Range Organics	0.0500U	0.100	0.0310	mg/L
Surrogates				
4-Bromofluorobenzene (surr)	80.5	50-150		%

Batch Information

Analytical Batch: VFC12973
Analytical Method: AK101
Instrument: Agilent 7890A PID/FID
Analyst: S.P
Analytical Date/Time: 4/26/2016 12:19:00AM

Prep Batch: VXX28738
Prep Method: SW5030B
Prep Date/Time: 4/25/2016 8:00:00AM
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/19/2016 12:15:21PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161922 [VXX28738]
Blank Spike Lab ID: 1321415
Date Analyzed: 04/25/2016 23:41

Spike Duplicate ID: LCSD for HBN 1161922 [VXX28738]
Spike Duplicate Lab ID: 1321416
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161922001, 1161922003, 1161922010

Results by **AK101**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Gasoline Range Organics	1.00	1.00	100	1.00	1.01	101	(60-120)	1.20	(< 20)
Surrogates									
4-Bromofluorobenzene (surr)	0.0500	89.6	90	0.0500	87.2	87	(50-150)	2.70	

Batch Information

Analytical Batch: **VFC12973**
Analytical Method: **AK101**
Instrument: **Agilent 7890A PID/FID**
Analyst: **S.P**

Prep Batch: **VXX28738**
Prep Method: **SW5030B**
Prep Date/Time: **04/25/2016 08:00**
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: 05/19/2016 12:15:26PM

Billable Matrix Spike Summary

Original Sample ID: 1161922003
MS Sample ID: 1161922004 BMS
MSD Sample ID: 1161922005 BMSD

Analysis Date: 04/26/2016 2:14
Analysis Date: 04/26/2016 2:33
Analysis Date: 04/26/2016 2:52
Matrix: Water (Surface, Eff., Ground)

QC for Samples:

Results by **AK101**

		Matrix Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Gasoline Range Organics	0.0500U	1.00	0.984	98	1.00	0.972	97	60-120	1.20	(< 20)
Surrogates										
4-Bromofluorobenzene (surr)		0.0500	0.0427	85	0.0500	0.0405	81	50-150	5.10	

Batch Information

Analytical Batch: VFC12973
Analytical Method: AK101
Instrument: Agilent 7890A PID/FID
Analyst: S.P
Analytical Date/Time: 4/26/2016 2:33:00AM

Prep Batch: VXX28738
Prep Method: Volatile Fuels Extraction (W)
Prep Date/Time: 4/25/2016 8:00:00AM
Prep Initial Wt./Vol.: 5.00mL
Prep Extract Vol: 5.00mL

Print Date: 05/19/2016 12:15:28PM

Method Blank

Blank ID: MB for HBN 1732644 [VXX/28753]
Blank Lab ID: 1322176

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161922001, 1161922003, 1161922011

Results by **SW8260B**

Parameter	Results	LOQ/CL	DL	Units
1,1,1,2-Tetrachloroethane	0.250U	0.500	0.150	ug/L
1,1,1-Trichloroethane	0.500U	1.00	0.310	ug/L
1,1,2,2-Tetrachloroethane	0.250U	0.500	0.150	ug/L
1,1,2-Trichloroethane	0.500U	1.00	0.310	ug/L
1,1-Dichloroethane	0.500U	1.00	0.310	ug/L
1,1-Dichloroethene	0.500U	1.00	0.310	ug/L
1,1-Dichloropropene	0.500U	1.00	0.310	ug/L
1,2,3-Trichlorobenzene	0.500U	1.00	0.310	ug/L
1,2,3-Trichloropropane	0.500U	1.00	0.310	ug/L
1,2,4-Trichlorobenzene	0.500U	1.00	0.310	ug/L
1,2,4-Trimethylbenzene	0.500U	1.00	0.310	ug/L
1,2-Dibromo-3-chloropropane	5.00U	10.0	3.10	ug/L
1,2-Dibromoethane	0.500U	1.00	0.310	ug/L
1,2-Dichlorobenzene	0.500U	1.00	0.310	ug/L
1,2-Dichloroethane	0.250U	0.500	0.150	ug/L
1,2-Dichloropropane	0.500U	1.00	0.310	ug/L
1,3,5-Trimethylbenzene	0.500U	1.00	0.310	ug/L
1,3-Dichlorobenzene	0.500U	1.00	0.310	ug/L
1,3-Dichloropropane	0.250U	0.500	0.150	ug/L
1,4-Dichlorobenzene	0.250U	0.500	0.150	ug/L
2,2-Dichloropropane	0.500U	1.00	0.310	ug/L
2-Butanone (MEK)	5.00U	10.0	3.10	ug/L
2-Chlorotoluene	0.500U	1.00	0.310	ug/L
2-Hexanone	5.00U	10.0	3.10	ug/L
4-Chlorotoluene	0.500U	1.00	0.310	ug/L
4-Isopropyltoluene	0.500U	1.00	0.310	ug/L
4-Methyl-2-pentanone (MIBK)	5.00U	10.0	3.10	ug/L
Benzene	0.200U	0.400	0.120	ug/L
Bromobenzene	0.500U	1.00	0.310	ug/L
Bromochloromethane	0.500U	1.00	0.310	ug/L
Bromodichloromethane	0.250U	0.500	0.150	ug/L
Bromoform	0.500U	1.00	0.310	ug/L
Bromomethane	5.00U	10.0	3.10	ug/L
Carbon disulfide	5.00U	10.0	3.10	ug/L
Carbon tetrachloride	0.500U	1.00	0.310	ug/L
Chlorobenzene	0.250U	0.500	0.150	ug/L
Chloroethane	0.500U	1.00	0.310	ug/L
Chloroform	0.500U	1.00	0.300	ug/L

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Method Blank

Blank ID: MB for HBN 1732644 [VXX/28753]
Blank Lab ID: 1322176

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161922001, 1161922003, 1161922011

Results by **SW8260B**

Parameter	Results	LOQ/CL	DL	Units
Chloromethane	0.500U	1.00	0.310	ug/L
cis-1,2-Dichloroethene	0.500U	1.00	0.310	ug/L
cis-1,3-Dichloropropene	0.250U	0.500	0.150	ug/L
Dibromochloromethane	0.250U	0.500	0.150	ug/L
Dibromomethane	0.500U	1.00	0.310	ug/L
Dichlorodifluoromethane	0.500U	1.00	0.310	ug/L
Ethylbenzene	0.500U	1.00	0.310	ug/L
Freon-113	5.00U	10.0	3.10	ug/L
Hexachlorobutadiene	0.500U	1.00	0.310	ug/L
Isopropylbenzene (Cumene)	0.500U	1.00	0.310	ug/L
Methylene chloride	2.50U	5.00	1.00	ug/L
Methyl-t-butyl ether	5.00U	10.0	3.10	ug/L
Naphthalene	5.00U	10.0	3.10	ug/L
n-Butylbenzene	0.500U	1.00	0.310	ug/L
n-Propylbenzene	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
sec-Butylbenzene	0.500U	1.00	0.310	ug/L
Styrene	0.500U	1.00	0.310	ug/L
tert-Butylbenzene	0.500U	1.00	0.310	ug/L
Tetrachloroethene	0.500U	1.00	0.310	ug/L
Toluene	0.500U	1.00	0.310	ug/L
trans-1,2-Dichloroethene	0.500U	1.00	0.310	ug/L
trans-1,3-Dichloropropene	0.500U	1.00	0.310	ug/L
Trichloroethene	0.500U	1.00	0.310	ug/L
Trichlorofluoromethane	0.500U	1.00	0.310	ug/L
Vinyl acetate	5.00U	10.0	3.10	ug/L
Vinyl chloride	0.500U	1.00	0.310	ug/L
Xylenes (total)	1.50U	3.00	1.00	ug/L
Surrogates				
1,2-Dichloroethane-D4 (surr)	109	81-118		%
4-Bromofluorobenzene (surr)	95.4	85-114		%
Toluene-d8 (surr)	99.9	89-112		%

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Method Blank

Blank ID: MB for HBN 1732644 [VXX/28753]
Blank Lab ID: 1322176

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161922001, 1161922003, 1161922011

Results by **SW8260B**

Parameter	Results	LOQ/CL	DL	Units

Batch Information

Analytical Batch: VMS15749
Analytical Method: SW8260B
Instrument: VPA 780/5975 GC/MS
Analyst: NRB
Analytical Date/Time: 4/29/2016 5:42:00PM

Prep Batch: VXX28753
Prep Method: SW5030B
Prep Date/Time: 4/29/2016 8:00:00AM
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/19/2016 12:15:30PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161922 [VXX28753]
Blank Spike Lab ID: 1322177
Date Analyzed: 04/29/2016 18:19

Spike Duplicate ID: LCSD for HBN 1161922 [VXX28753]
Spike Duplicate Lab ID: 1322178
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161922001, 1161922003, 1161922011

Results by **SW8260B**

	Blank Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
1,1,1,2-Tetrachloroethane	30	32.3	108	30	32.8	109	(78-124)	1.40	(< 20)
1,1,1-Trichloroethane	30	31.3	104	30	32.8	109	(74-131)	4.60	(< 20)
1,1,2,2-Tetrachloroethane	30	29.2	97	30	30.5	102	(71-121)	4.20	(< 20)
1,1,2-Trichloroethane	30	31.5	105	30	31.6	105	(80-119)	0.32	(< 20)
1,1-Dichloroethane	30	31.3	104	30	32.2	107	(77-125)	2.70	(< 20)
1,1-Dichloroethene	30	29.5	98	30	30.9	103	(71-131)	4.50	(< 20)
1,1-Dichloropropene	30	30.4	101	30	31.6	105	(79-125)	3.80	(< 20)
1,2,3-Trichlorobenzene	30	32.3	108	30	33.6	112	(69-129)	4.00	(< 20)
1,2,3-Trichloropropane	30	29.8	99	30	31.2	104	(73-122)	4.60	(< 20)
1,2,4-Trichlorobenzene	30	31.7	106	30	33.4	111	(69-130)	5.10	(< 20)
1,2,4-Trimethylbenzene	30	28.4	95	30	29.5	98	(79-124)	3.70	(< 20)
1,2-Dibromo-3-chloropropane	30	28.6	95	30	30.2	101	(62-128)	5.20	(< 20)
1,2-Dibromoethane	30	33.0	110	30	33.2	111	(77-121)	0.60	(< 20)
1,2-Dichlorobenzene	30	30.3	101	30	31.2	104	(80-119)	3.10	(< 20)
1,2-Dichloroethane	30	32.0	107	30	33.2	111	(73-128)	3.90	(< 20)
1,2-Dichloropropane	30	33.0	110	30	33.9	113	(78-122)	2.50	(< 20)
1,3,5-Trimethylbenzene	30	28.3	94	30	29.2	97	(75-124)	3.30	(< 20)
1,3-Dichlorobenzene	30	29.4	98	30	31.3	104	(80-119)	6.30	(< 20)
1,3-Dichloropropane	30	30.7	102	30	30.6	102	(80-119)	0.36	(< 20)
1,4-Dichlorobenzene	30	30.3	101	30	31.9	106	(79-118)	5.00	(< 20)
2,2-Dichloropropane	30	29.6	99	30	32.3	108	(60-139)	8.50	(< 20)
2-Butanone (MEK)	90	105	117	90	107	119	(56-143)	2.20	(< 20)
2-Chlorotoluene	30	29.6	99	30	30.6	102	(79-122)	3.20	(< 20)
2-Hexanone	90	101	112	90	102	113	(57-139)	1.40	(< 20)
4-Chlorotoluene	30	30.2	101	30	31.5	105	(78-122)	4.10	(< 20)
4-Isopropyltoluene	30	28.0	93	30	29.9	100	(77-127)	6.60	(< 20)
4-Methyl-2-pentanone (MIBK)	90	102	113	90	105	116	(67-130)	2.70	(< 20)
Benzene	30	31.1	104	30	31.4	105	(79-120)	0.90	(< 20)
Bromobenzene	30	30.3	101	30	31.4	105	(80-120)	3.40	(< 20)
Bromochloromethane	30	32.0	107	30	33.5	112	(78-123)	4.50	(< 20)
Bromodichloromethane	30	31.2	104	30	32.2	107	(79-125)	3.30	(< 20)
Bromoform	30	33.2	111	30	33.6	112	(66-130)	1.30	(< 20)
Bromomethane	30	24.4	81	30	27.2	91	(53-141)	10.90	(< 20)
Carbon disulfide	45	39.9	89	45	42.1	94	(64-133)	5.20	(< 20)

Print Date: 05/19/2016 12:15:35PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161922 [VXX28753]
Blank Spike Lab ID: 1322177
Date Analyzed: 04/29/2016 18:19

Spike Duplicate ID: LCSD for HBN 1161922 [VXX28753]
Spike Duplicate Lab ID: 1322178
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161922001, 1161922003, 1161922011

Results by **SW8260B**

	Blank Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Carbon tetrachloride	30	32.2	107	30	33.5	112	(72-136)	4.20	(< 20)
Chlorobenzene	30	31.5	105	30	32.1	107	(82-118)	1.90	(< 20)
Chloroethane	30	26.1	87	30	27.5	92	(60-138)	5.20	(< 20)
Chloroform	30	28.9	96	30	30.0	100	(79-124)	3.60	(< 20)
Chloromethane	30	26.1	87	30	28.7	96	(50-139)	9.50	(< 20)
cis-1,2-Dichloroethene	30	31.8	106	30	32.8	109	(78-123)	3.00	(< 20)
cis-1,3-Dichloropropene	30	29.6	99	30	30.4	101	(75-124)	2.60	(< 20)
Dibromochloromethane	30	33.1	110	30	33.3	111	(74-126)	0.54	(< 20)
Dibromomethane	30	31.0	103	30	31.2	104	(79-123)	0.90	(< 20)
Dichlorodifluoromethane	30	30.2	101	30	31.1	104	(32-152)	3.00	(< 20)
Ethylbenzene	30	32.5	108	30	32.9	110	(79-121)	1.20	(< 20)
Freon-113	45	45.0	100	45	47.6	106	(70-136)	5.60	(< 20)
Hexachlorobutadiene	30	31.8	106	30	34.6	115	(66-134)	8.30	(< 20)
Isopropylbenzene (Cumene)	30	31.7	106	30	32.6	109	(72-131)	3.10	(< 20)
Methylene chloride	30	27.4	91	30	28.2	94	(74-124)	2.80	(< 20)
Methyl-t-butyl ether	45	46.4	103	45	47.2	105	(71-124)	1.80	(< 20)
Naphthalene	30	30.0	100	30	30.3	101	(61-128)	1.20	(< 20)
n-Butylbenzene	30	27.9	93	30	29.8	99	(75-128)	6.70	(< 20)
n-Propylbenzene	30	30.1	100	30	31.6	105	(76-126)	5.00	(< 20)
o-Xylene	30	33.1	110	30	34.0	113	(78-122)	2.60	(< 20)
P & M -Xylene	60	64.8	108	60	67.3	112	(80-121)	3.70	(< 20)
sec-Butylbenzene	30	30.3	101	30	32.0	107	(77-126)	5.30	(< 20)
Styrene	30	33.0	110	30	33.8	113	(78-123)	2.40	(< 20)
tert-Butylbenzene	30	30.5	102	30	32.2	107	(78-124)	5.50	(< 20)
Tetrachloroethene	30	32.9	110	30	33.5	112	(74-129)	1.80	(< 20)
Toluene	30	29.7	99	30	30.0	100	(80-121)	1.20	(< 20)
trans-1,2-Dichloroethene	30	30.8	103	30	32.2	107	(75-124)	4.50	(< 20)
trans-1,3-Dichloropropene	30	28.7	96	30	29.0	97	(73-127)	1.00	(< 20)
Trichloroethene	30	32.7	109	30	33.4	111	(79-123)	2.10	(< 20)
Trichlorofluoromethane	30	30.3	101	30	31.1	104	(65-141)	2.60	(< 20)
Vinyl acetate	30	32.7	109	30	33.7	112	(54-146)	3.00	(< 20)
Vinyl chloride	30	30.9	103	30	31.6	105	(58-137)	2.40	(< 20)
Xylenes (total)	90	98.0	109	90	101	113	(79-121)	3.30	(< 20)

Print Date: 05/19/2016 12:15:35PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161922 [VXX28753]
Blank Spike Lab ID: 1322177
Date Analyzed: 04/29/2016 18:19

Spike Duplicate ID: LCSD for HBN 1161922 [VXX28753]
Spike Duplicate Lab ID: 1322178
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161922001, 1161922003, 1161922011

Results by **SW8260B**

	Blank Spike (%)			Spike Duplicate (%)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Surrogates									
1,2-Dichloroethane-D4 (surr)	30	102	102	30	104	104	(81-118)	2.20	
4-Bromofluorobenzene (surr)	30	93.2	93	30	94.7	95	(85-114)	1.60	
Toluene-d8 (surr)	30	102	102	30	101	101	(89-112)	0.66	

Batch Information

Analytical Batch: **VMS15749**
Analytical Method: **SW8260B**
Instrument: **VPA 780/5975 GC/MS**
Analyst: **NRB**

Prep Batch: **VXX28753**
Prep Method: **SW5030B**
Prep Date/Time: **04/29/2016 08:00**
Spike Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL
Dupe Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL

Print Date: 05/19/2016 12:15:35PM

Billable Matrix Spike Summary

Original Sample ID: 1161922003
MS Sample ID: 1161922004 BMS
MSD Sample ID: 1161922005 BMSD

Analysis Date: 04/29/2016 21:02
Analysis Date: 04/29/2016 21:18
Analysis Date: 04/29/2016 21:35
Matrix: Water (Surface, Eff., Ground)

QC for Samples:

Results by **SW8260B**

		Matrix Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
1,1,1,2-Tetrachloroethane	0.250U	30.0	33.7	112	30.0	33.8	113	78-124	0.50	(< 20)
1,1,1-Trichloroethane	0.500U	30.0	33.1	110	30.0	33.1	110	74-131	0.03	(< 20)
1,1,2,2-Tetrachloroethane	0.250U	30.0	29.8	99	30.0	30.2	101	71-121	1.20	(< 20)
1,1,2-Trichloroethane	0.500U	30.0	32.2	107	30.0	32.3	108	80-119	0.16	(< 20)
1,1-Dichloroethane	0.500U	30.0	32.7	109	30.0	32.8	109	77-125	0.34	(< 20)
1,1-Dichloroethene	0.500U	30.0	31.5	105	30.0	31.4	105	71-131	0.29	(< 20)
1,1-Dichloropropene	0.500U	30.0	32.2	107	30.0	32.2	107	79-125	0.19	(< 20)
1,2,3-Trichlorobenzene	0.500U	30.0	33.7	112	30.0	33.8	113	69-129	0.56	(< 20)
1,2,3-Trichloropropane	0.500U	30.0	30.6	102	30.0	30.5	102	73-122	0.36	(< 20)
1,2,4-Trichlorobenzene	0.500U	30.0	33.9	113	30.0	33.8	113	69-130	0.03	(< 20)
1,2,4-Trimethylbenzene	0.500U	30.0	29.1	97	30.0	29.5	98	79-124	1.40	(< 20)
1,2-Dibromo-3-chloropropane	5.00U	30.0	28.5	95	30.0	29.1	97	62-128	2.40	(< 20)
1,2-Dibromoethane	0.500U	30.0	33.3	111	30.0	33.4	111	77-121	0.21	(< 20)
1,2-Dichlorobenzene	0.500U	30.0	31.6	105	30.0	31.7	106	80-119	0.32	(< 20)
1,2-Dichloroethane	0.250U	30.0	33.5	112	30.0	33.2	111	73-128	0.84	(< 20)
1,2-Dichloropropane	0.500U	30.0	34.8	116	30.0	34.6	115	78-122	0.72	(< 20)
1,3,5-Trimethylbenzene	0.500U	30.0	28.9	96	30.0	29.4	98	75-124	1.60	(< 20)
1,3-Dichlorobenzene	0.500U	30.0	31.4	105	30.0	31.9	106	80-119	1.80	(< 20)
1,3-Dichloropropane	0.250U	30.0	31.3	104	30.0	31.4	105	80-119	0.45	(< 20)
1,4-Dichlorobenzene	0.250U	30.0	31.8	106	30.0	32.4	108	79-118	1.60	(< 20)
2,2-Dichloropropane	0.500U	30.0	31.6	105	30.0	31.9	106	60-139	0.72	(< 20)
2-Butanone (MEK)	5.00U	90.0	103	115	90.0	105	117	56-143	2.00	(< 20)
2-Chlorotoluene	0.500U	30.0	31	103	30.0	31.0	103	79-122	0.26	(< 20)
2-Hexanone	5.00U	90.0	98.1	109	90.0	99.6	111	57-139	1.50	(< 20)
4-Chlorotoluene	0.500U	30.0	31.1	104	30.0	30.3	101	78-122	2.50	(< 20)
4-Isopropyltoluene	0.500U	30.0	29.4	98	30.0	30.2	101	77-127	2.50	(< 20)
4-Methyl-2-pentanone (MIBK)	5.00U	90.0	101	112	90.0	103	114	67-130	1.40	(< 20)
Benzene	0.200U	30.0	32.6	109	30.0	32.6	109	79-120	0.03	(< 20)
Bromobenzene	0.500U	30.0	32	107	30.0	32.3	108	80-120	1.10	(< 20)
Bromochloromethane	0.500U	30.0	34	113	30.0	33.6	112	78-123	1.20	(< 20)
Bromodichloromethane	0.250U	30.0	32.8	109	30.0	32.5	108	79-125	0.77	(< 20)
Bromoform	0.500U	30.0	33.8	113	30.0	33.7	112	66-130	0.41	(< 20)
Bromomethane	5.00U	30.0	27.5	92	30.0	27.7	92	53-141	0.65	(< 20)
Carbon disulfide	5.00U	45.0	42.7	95	45.0	42.5	95	64-133	0.52	(< 20)
Carbon tetrachloride	0.500U	30.0	34.2	114	30.0	34.3	114	72-136	0.23	(< 20)
Chlorobenzene	0.250U	30.0	32.7	109	30.0	33.0	110	82-118	0.70	(< 20)
Chloroethane	0.500U	30.0	28.5	95	30.0	26.4	88	60-138	7.80	(< 20)

Print Date: 05/19/2016 12:15:37PM

Billable Matrix Spike Summary

Original Sample ID: 1161922003
MS Sample ID: 1161922004 BMS
MSD Sample ID: 1161922005 BMSD

Analysis Date: 04/29/2016 21:02
Analysis Date: 04/29/2016 21:18
Analysis Date: 04/29/2016 21:35
Matrix: Water (Surface, Eff., Ground)

QC for Samples:

Results by **SW8260B**

		Matrix Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Chloroform	0.500U	30.0	30.5	102	30.0	30.3	101	79-124	0.66	(< 20)
Chloromethane	0.500U	30.0	24.7	82	30.0	29.1	97	50-139	16.30	(< 20)
cis-1,2-Dichloroethene	0.500U	30.0	32.9	110	30.0	32.8	109	78-123	0.55	(< 20)
cis-1,3-Dichloropropene	0.250U	30.0	30.9	103	30.0	30.7	102	75-124	0.58	(< 20)
Dibromochloromethane	0.250U	30.0	33.6	112	30.0	33.9	113	74-126	0.80	(< 20)
Dibromomethane	0.500U	30.0	32.3	108	30.0	31.4	105	79-123	2.80	(< 20)
Dichlorodifluoromethane	0.500U	30.0	32.5	108	30.0	32.4	108	32-152	0.31	(< 20)
Ethylbenzene	0.500U	30.0	33.4	111	30.0	34.0	113	79-121	1.80	(< 20)
Freon-113	5.00U	45.0	48.4	107	45.0	48.2	107	70-136	0.27	(< 20)
Hexachlorobutadiene	0.500U	30.0	32.5	108	30.0	33.7	112	66-134	3.60	(< 20)
Isopropylbenzene (Cumene)	0.500U	30.0	32.9	110	30.0	33.3	111	72-131	1.10	(< 20)
Methylene chloride	2.50U	30.0	29.3	98	30.0	28.5	95	74-124	2.60	(< 20)
Methyl-t-butyl ether	5.00U	45.0	47.7	106	45.0	47.5	106	71-124	0.36	(< 20)
Naphthalene	5.00U	30.0	30	100	30.0	31.0	103	61-128	3.00	(< 20)
n-Butylbenzene	0.500U	30.0	28.8	96	30.0	29.6	99	75-128	2.70	(< 20)
n-Propylbenzene	0.500U	30.0	31.7	106	30.0	32.1	107	76-126	1.30	(< 20)
o-Xylene	0.500U	30.0	33.8	113	30.0	34.6	115	78-122	2.30	(< 20)
P & M -Xylene	1.00U	60.0	68	113	60.0	68.1	113	80-121	0.07	(< 20)
sec-Butylbenzene	0.500U	30.0	32.1	107	30.0	32.6	109	77-126	1.40	(< 20)
Styrene	0.500U	30.0	33	110	30.0	33.1	110	78-123	0.39	(< 20)
tert-Butylbenzene	0.500U	30.0	32.4	108	30.0	32.9	110	78-124	1.60	(< 20)
Tetrachloroethene	0.500U	30.0	34.1	114	30.0	34.5	115	74-129	1.40	(< 20)
Toluene	0.500U	30.0	30.6	102	30.0	31.0	103	80-121	1.40	(< 20)
trans-1,2-Dichloroethene	0.500U	30.0	32.9	110	30.0	32.7	109	75-124	0.37	(< 20)
trans-1,3-Dichloropropene	0.500U	30.0	29.4	98	30.0	29.0	97	73-127	1.30	(< 20)
Trichloroethene	0.500U	30.0	34.4	115	30.0	34.5	115	79-123	0.41	(< 20)
Trichlorofluoromethane	0.500U	30.0	32.7	109	30.0	32.3	108	65-141	1.10	(< 20)
Vinyl acetate	5.00U	30.0	32.2	107	30.0	32.4	108	54-146	0.53	(< 20)
Vinyl chloride	0.500U	30.0	32.9	110	30.0	33.1	110	58-137	0.48	(< 20)
Xylenes (total)	1.50U	90.0	102	113	90.0	103	114	79-121	0.80	(< 20)
Surrogates										
1,2-Dichloroethane-D4 (surr)		30.0	30.9	103	30.0	30.7	102	81-118	0.55	
4-Bromofluorobenzene (surr)		30.0	28.1	94	30.0	28.7	96	85-114	2.40	
Toluene-d8 (surr)		30.0	30.3	101	30.0	30.4	101	89-112	0.33	

Print Date: 05/19/2016 12:15:37PM

Billable Matrix Spike Summary

Original Sample ID: 1161922003
MS Sample ID: 1161922004 BMS
MSD Sample ID: 1161922005 BMSD

Analysis Date:
Analysis Date: 04/29/2016 21:18
Analysis Date: 04/29/2016 21:35
Matrix: Water (Surface, Eff., Ground)

QC for Samples:

Results by **SW8260B**

		Matrix Spike (%)			Spike Duplicate (%)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL

Batch Information

Analytical Batch: VMS15749
Analytical Method: SW8260B
Instrument: VPA 780/5975 GC/MS
Analyst: NRB
Analytical Date/Time: 4/29/2016 9:18:00PM

Prep Batch: VXX28753
Prep Method: Volatiles Extraction 8240/8260 FULL
Prep Date/Time: 4/29/2016 8:00:00AM
Prep Initial Wt./Vol.: 5.00mL
Prep Extract Vol: 5.00mL

Print Date: 05/19/2016 12:15:37PM

Method Blank

Blank ID: MB for HBN 1732380 [WAT/10635]
Blank Lab ID: 1321421

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161922001, 1161922003

Results by **SM21 2130B**

Parameter	Results	LOQ/CL	DL	Units
Turbidity	0.100J	0.200	0.100	NTU

Batch Information

Analytical Batch: WAT10635
Analytical Method: SM21 2130B
Instrument: Turbidimeter
Analyst: MBS
Analytical Date/Time: 4/22/2016 12:15:00PM

Print Date: 05/19/2016 12:15:39PM

Duplicate Sample Summary

Original Sample ID: 1161877002
Duplicate Sample ID: 1161877017

3nalAyiy Date: 0s4774 7016 17:1/
9 atri5: Mater xSurWace(f WW Er. unGo

Rb Wr Sampley:

d eyulty) A SM21 2130B

P39 f	Original	Duplicate	%nity	d QD xC o	d QD b N
Lur) iGtA	1,60	1,U0	PL%	6,10	xT 70 o

Batch Information

3nalAtical v atc<: M3L1062/
3nalAtical 9 et<. G S9 71 7120v
Inytrument: Lur) iGmeter
3nalAyt: 9 v S

Qrint Date: 0/ 4184 7016 17:1/ :s1Q9

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161922 [WAT10635]
Blank Spike Lab ID: 1321422
Date Analyzed: 04/22/2016 12:15

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161922001, 1161922003

Results by **SM21 2130B**

Blank Spike (NTU)

Parameter	Spike	Result	Rec (%)	CL
Turbidity	10	11.0	110	(90-110)

Batch Information

Analytical Batch: **WAT10635**
Analytical Method: **SM21 2130B**
Instrument: **Turbidimeter**
Analyst: **MBS**

Prep Batch:
Prep Method:
Prep Date/Time:
Spike Init Wt./Vol.: 10 NTU Extract Vol: 1 mL
Dupe Init Wt./Vol.: Extract Vol:

Print Date: 05/19/2016 12:15:43PM

Duplicate Sample Summary

Original Sample ID: 1161876001
Duplicate Sample ID: 1321380
QC for Samples:
1161922001, 1161922003

Analysis Date: 04/25/2016 17:11
Matrix: Water (Surface, Eff., Ground)

Results by **SM21 4500-H B**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
pH	7.90	7.90	pH units	0.00	(< 5)

Batch Information

Analytical Batch: WTI4443
Analytical Method: SM21 4500-H B
Instrument: Titration
Analyst: ACF

Print Date: 05/19/2016 12:15:48PM

Duplicate Sample Summary

Original Sample ID: 1161922003
Duplicate Sample ID: 1321381
QC for Samples:
1161922001, 1161922003

Analysis Date: 04/25/2016 16:18
Matrix: Water (Surface, Eff., Ground)

Results by **SM21 4500-H B**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
pH	6.70	6.70	pH units	0.00	(< 5)

Batch Information

Analytical Batch: WTI4443
Analytical Method: SM21 4500-H B
Instrument: Titration
Analyst: ACF

Print Date: 05/19/2016 12:15:48PM

Duplicate Sample Summary

Original Sample ID: 1161885003
Duplicate Sample ID: 1321385
QC for Samples:
1161922001, 1161922003

Analysis Date: 04/25/2016 20:15
Matrix: Drinking Water

Results by **SM21 4500-H B**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
pH	7.50	7.50	pH units	0.00	(< 5)

Batch Information

Analytical Batch: WTI4443
Analytical Method: SM21 4500-H B
Instrument: Titration
Analyst: ACF

Print Date: 05/19/2016 12:15:48PM

Duplicate Sample Summary

Original Sample ID: 1161885004
Duplicate Sample ID: 1321386
QC for Samples:
1161922001, 1161922003

Analysis Date: 04/25/2016 20:32
Matrix: Drinking Water

Results by **SM21 4500-H B**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
pH	7.30	7.30	pH units	0.00	(< 5)

Batch Information

Analytical Batch: WTI4443
Analytical Method: SM21 4500-H B
Instrument: Titration
Analyst: ACF

Print Date: 05/19/2016 12:15:48PM

Duplicate Sample Summary

Original Sample ID: 1161922003
Duplicate Sample ID: 1161922012
QC for Samples:

Analysis Date: 04/25/2016 16:18
Matrix: Water (Surface, Eff., Ground)

Results by **SM21 4500-H B**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
pH	6.70	6.70	pH units	0.00	(< 5)

Batch Information

Analytical Batch: WTI4443
Analytical Method: SM21 4500-H B
Instrument: Titration
Analyst: ACF

Print Date: 05/19/2016 12:15:48PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161922 [WTI4443]
Blank Spike Lab ID: 1321377
Date Analyzed: 04/25/2016 14:47

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161922001, 1161922003

Results by **SM21 4500-H B**

Blank Spike (pH units)

Parameter	Spike	Result	Rec (%)	CL
pH	7	7.01	100	(99-101)

Batch Information

Analytical Batch: **WTI4443**
Analytical Method: **SM21 4500-H B**
Instrument: **Titration**
Analyst: **ACF**

Prep Batch:
Prep Method:
Prep Date/Time:
Spike Init Wt./Vol.: 7 pH units Extract Vol: 1 mL
Dupe Init Wt./Vol.: Extract Vol:

Print Date: 05/19/2016 12:15:50PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161922 [WTI4443]
Blank Spike Lab ID: 1321382
Date Analyzed: 04/25/2016 19:16

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161922001, 1161922003

Results by **SM21 4500-H B**

Blank Spike (pH units)

Parameter	Spike	Result	Rec (%)	CL
pH	7	7.01	100	(99-101)

Batch Information

Analytical Batch: **WTI4443**
Analytical Method: **SM21 4500-H B**
Instrument: **Titration**
Analyst: **ACF**

Prep Batch:
Prep Method:
Prep Date/Time:
Spike Init Wt./Vol.: 7 pH units Extract Vol: 1 mL
Dupe Init Wt./Vol.: Extract Vol:

Print Date: 05/19/2016 12:15:50PM

Method Blank

Blank ID: MB for HBN 1732387 [WTI/4445]
Blank Lab ID: 1321456

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161922003

Results by **SM21 2320B**

Parameter	Results	LOQ/CL	DL	Units
Alkalinity	5.00U	10.0	3.10	mg/L

Batch Information

Analytical Batch: WTI4445
Analytical Method: SM21 2320B
Instrument: Titration
Analyst: ACF
Analytical Date/Time: 4/25/2016 3:39:27PM

Print Date: 05/19/2016 12:15:54PM

Duplicate Sample Summary

Original Sample ID: 1161876001
Duplicate Sample ID: 1321458
QC for Samples:

Analysis Date: 04/25/2016 17:11
Matrix: Water (Surface, Eff., Ground)

Results by **SM21 2320B**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
Alkalinity	61.3	61.6	mg/L	0.49	(< 25)

Batch Information

Analytical Batch: WTI4445
Analytical Method: SM21 2320B
Instrument: Titration
Analyst: ACF

Print Date: 05/19/2016 12:15:56PM

Duplicate Sample Summary

Original Sample ID: 1161922003
Duplicate Sample ID: 1321459
QC for Samples:
1161922003

Analysis Date: 04/25/2016 16:18
Matrix: Water (Surface, Eff., Ground)

Results by **SM21 2320B**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
Alkalinity	44.8	45.2	mg/L	0.91	(< 25)

Batch Information

Analytical Batch: WTI4445
Analytical Method: SM21 2320B
Instrument: Titration
Analyst: ACF

Print Date: 05/19/2016 12:15:56PM

Duplicate Sample Summary

Original Sample ID: 1161922003
Duplicate Sample ID: 1161922012
QC for Samples:

Analysis Date: 04/25/2016 16:18
Matrix: Water (Surface, Eff., Ground)

Results by **SM21 2320B**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
Alkalinity	44.8	45.2	mg/L	0.91	(< 25)

Batch Information

Analytical Batch: WTI4445
Analytical Method: SM21 2320B
Instrument: Titration
Analyst: ACF

Print Date: 05/19/2016 12:15:56PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161922 [WTI4443]
Blank Spike Lab ID: 172143t
DaAe y nalzde0: / 45235 2/ 16 13:4R

x aAi(: WaAer cSMfa, eE. ffGE) roMh0P

h C for Sa%pleu: 1161922/ / 7

s euMAu bz SM21 2320B

Blank Spike c%- 5LP

mara%eAer	Spike	s euMA	s e, cQP	CL
y lkaliniAz	23/	277	97	cR3VM13 P

Batch Information

y nalzA, al BaA, v: **WTI4445**
y nalzA, al x eAvo0: **SM21 2320B**
InuAM%enA **Titration**
y nalzuA **ACF**

mrep BaA, v:
mrep x eAvo0:
mrep DaAe5Ti%e:
Spike IniAWAGgolG 23/ %- 5L . (Aka, Agol: 3/ %L
DMpe IniAWAGgolG . (Aka, Agol:

Method Blank

Blank ID: MB for HBN 173282[WT / I4555] L
Blank ba6 ID: 1322[5[

QC for Samples:
1181922[[1

Ma0rti : T a0er xS(rfauec, ffEc. ro(nGd

) es(l0s 6R SM21 2320B

OarameOer	) es(l0s	bUQ4Cb	Db	y nt0s
PlkaltntOR	gE[[y	1[E	3E[	mA4b

Batch Information

PnalR0ual Ba0uh: T / I555]
PnalR0ual Me0hoG SM21 232[B
Ins0(men0 / t0ra0ion
PnalRs0 PCF
PnalR0ual Da0e4/ tme: 54284 2[18] :21:11OM

Ortn0Da0e: [g4194 2[18 12:18:[1OM

Duplicate Sample Summary

Original Sample ID: 116188700u
Dcplit a3e Sample ID: 12uu04u
, E .Gr Sampley:

5nalAyiy Da3e: 04su6su016 u0:72
/ a3iM Drinxing Wa3er

(eycl3y f A SM21 2320B

b5/ Q	Original	Dcplit a3e	Cni3y	(oD d) R	(oD EP
5lxalini3A	78N8	72N7	mgsP	%N40	dJ u7 R

Batch Information

5nalA3tal La3t9: Wkl4448
5nalA3tal / e39G<: S/ u1 u2u0L
Iny3rcmen3 ki3ra3Gn
5nalAy3 5EB

orin3Da3e: 07s1%su016 1u:16:02o/

Duplicate Sample Summary

Original Sample ID: 1161887002
Dcplit a3e Sample ID: 12uu042
, E .Gr Sampley:
1161%uu001

5nalAyiy Da3e: 04su6su016 u1:0K
/ a3iM Drinxing Wa3er

(eycl3y f A SM21 2320B

b5/ Q	Original	Dcplit a3e	Cni3y	(oD d) R	(oD EP
5lxalini3A	60N8	62N6	mgsP	4N60	dJ u7 R

Batch Information

5nalA3tal La3t9: Wkl4448
5nalA3tal / e39G<: S/ u1 u2u0L
Iny3rcmen3 ki3ra3Gn
5nalAy3 5EB

orin3Da3e: 07s1%u016 1u:16:02o/

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161922 [WTI4443]
Blank Spike Lab ID: 1722t 41
DaAe y nalzde0: t 4/26/2t 16 2t :7t

u aAiM WaAer xSsrfa(ec, ffEc. rosn0G

QC for SaP pleR 1161922t t 1

5 eRslARbz **SM21 2320B**

Blank Spike xP %LG

) araP eAer	Spike	5 eRslA	5 e(xmG	CL
y lkaliniAz	2- t	21h	3h	x3- V1- G

Batch Information

y nalzA(al BaA(v: **WTI4448**
y nalzA(al u eAvo0: **SM21 2320B**
InRAsP enA **Titration**
y nalzRA **ACF**

) rep BaA(v:
) rep u eAvo0:
) rep DaAe/TiP e:
Spike IniAWAEgolE 2- t P %L , MAka(Agol: - t P L
Dspe IniAWAEgolE , MAka(Agol:

) rinADaAe: t - /19/2t 16 12:16:t -) u

Method Blank

Blank ID: MB for HBN 1732415 [WXX/11480]
Blank Lab ID: 1321585

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161922001, 1161922003

Results by **EPA 300.0**

Parameter	Results	LOQ/CL	DL	Units
Chloride	0.0500U	0.100	0.0310	mg/L
Fluoride	0.0500U	0.100	0.0310	mg/L
Nitrate-N	0.0580J	0.100	0.0310	mg/L
Nitrite-N	0.0500U	0.100	0.0310	mg/L
Sulfate	0.0500U	0.100	0.0310	mg/L
Total Nitrate/Nitrite-N	0.0580J	0.100	0.0310	mg/L

Batch Information

Analytical Batch: WIC5532
Analytical Method: EPA 300.0
Instrument: Metrohm 733 DX2
Analyst: ACF
Analytical Date/Time: 4/24/2016 3:20:11AM

Prep Batch: WXX11480
Prep Method: METHOD
Prep Date/Time: 4/24/2016 1:11:00AM
Prep Initial Wt./Vol.: 10 mL
Prep Extract Vol: 10 mL

SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
t 907.562.2343 f 907.561.5301 www.us.sgs.com

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161922 [WXX11480]
Blank Spike Lab ID: 1321586
Date Analyzed: 04/24/2016 03:42

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161922001, 1161922003

Results by **EPA 300.0**

Blank Spike (mg/L)

Parameter	Spike	Result	Rec (%)	CL
Chloride	10	10.2	102	(90-110)
Fluoride	10	10.8	108	(90-110)
Nitrate-N	10	10.5	105	(90-110)
Nitrite-N	10	10.4	104	(90-110)
Sulfate	10	9.91	99	(90-110)
Total Nitrate/Nitrite-N	20	20.9	104	(90-110)

Batch Information

Analytical Batch: **WIC5532**
Analytical Method: **EPA 300.0**
Instrument: **Metrohm 733 DX2**
Analyst: **ACF**

Prep Batch: **WXX11480**
Prep Method: **METHOD**
Prep Date/Time: **04/24/2016 01:11**
Spike Init Wt./Vol.: 10 mg/L Extract Vol: 10 mL
Dupe Init Wt./Vol.: Extract Vol:

Print Date: 05/19/2016 12:16:13PM

Billable Matrix Spike Summary

Original Sample ID: 1161922003
MS Sample ID: 1161922004 BMS
MSD Sample ID: 1161922005 BMSD

Analysis Date: 04/24/2016 4:27
Analysis Date: 04/24/2016 4:49
Analysis Date: 04/24/2016 5:11
Matrix: Water (Surface, Eff., Ground)

QC for Samples:

Results by **EPA 300.0**

		Matrix Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Chloride	11.8	10.0	22	103	10.0	22.1	104	90-110	0.43	(< 15)
Fluoride	0.0640J	10.0	10.9	108	10.0	11.0	109	90-110	0.72	(< 15)
Nitrate-N	0.0500U	10.0	10.6	106				90-110		
Nitrite-N	0.0560J	10.0	11.1	110				90-110		
Sulfate	5.19	10.0	15.7	105	10.0	15.8	106	90-110	0.81	(< 15)

Batch Information

Analytical Batch: WIC5532
Analytical Method: EPA 300.0
Instrument: Metrohm 733 DX2
Analyst: ACF
Analytical Date/Time: 4/24/2016 4:49:17AM

Prep Batch: WXX11480
Prep Method: EPA 300.0 Extraction Waters/Liquids
Prep Date/Time: 4/24/2016 1:11:00AM
Prep Initial Wt./Vol.: 10.00mL
Prep Extract Vol: 10.00mL

Print Date: 05/19/2016 12:16:15PM

Method Blank

Blank ID: MB for HBN 1732364 [VVVX8/ 2138
Blank 5a] ID: 13212/ 1

Ma,rti : x a,mr WQ(rfaum0c ffE. ro(nGd

L b for QaC Slmp:
11e1s22991011e1s22993

) mp(l,p] R SW8270D

OaraC mmr	) mp(l,p	5UL X6 5	D5	y nt,p
1026P rtuTloro] mnhmmm	9E99/ 99y	9E9199	9E99319	CgX6
102PDtuTloro] mnhmmm	9E99/ 99y	9E9199	9E99319	CgX6
103PDtuTloro] mnhmmm	9E99/ 99y	9E9199	9E99319	CgX6
106PDtuTloro] mnhmmm	9E99/ 99y	9E9199	9E99319	CgX6
1Pb TloronaST,Talmmm	9E99/ 99y	9E9199	9E99319	CgX6
1PMm,TRnaST,Talmmm	9E99/ 99y	9E9199	9E99319	CgX6
2060 P rtuTloroSTmmol	9E99/ 99y	9E9199	9E99319	CgX6
2060eP rtuTloroSTmmol	9E99/ 99y	9E9199	9E99319	CgX6
206PDtuTloroSTmmol	9E99/ 99y	9E9199	9E99319	CgX6
206PDtC m,TRSTmmol	9E99/ 99y	9E9199	9E99319	CgX6
206PDtnt,roSTmmol	9E92/ 9y	9E9/ 99	9E91/ 9	CgX6
206PDtnt,ro,ol(mmm	9E99/ 99y	9E9199	9E99319	CgX6
20ePDtuTloroSTmmol	9E99/ 99y	9E9199	9E99319	CgX6
20ePDtnt,ro,ol(mmm	9E99/ 99y	9E9199	9E99319	CgX6
2Pb TloronaST,Talmmm	9E99/ 99y	9E9199	9E99319	CgX6
2Pb TloroSTmmol	9E99/ 99y	9E9199	9E99319	CgX6
2PMm,TRP60eP3nt,roSTmmol	9E92/ 9y	9E9/ 99	9E91/ 9	CgX6
2PMm,TRnaST,Talmmm	9E99/ 99y	9E9199	9E99319	CgX6
2PMm,TRSTmmol VoPb rmpold	9E99/ 99y	9E9199	9E99319	CgX6
2PNt,roantltnm	9E99/ 99y	9E9199	9E99319	CgX6
2PNt,roSTmmol	9E99/ 99y	9E9199	9E99319	CgX6
3z 6PMm,TRSTmmol VSz C Pb rmpold	9E9199y	9E9299	9E99e29	CgX6
303PDtuTloro] mnhtGtnm	9E99/ 99y	9E9199	9E99319	CgX6
3PNt,roantltnm	9E99/ 99y	9E9199	9E99319	CgX6
6PBroC oSTmnRPSTmnRm,Tmr	9E99/ 99y	9E9199	9E99319	CgX6
6Pb TloroP3PC m,TRSTmmol	9E99/ 99y	9E9199	9E99319	CgX6
6Pb Tloroantltnm	9E99/ 99y	9E9199	9E99319	CgX6
6Pb TloroSTmnRPSTmnRm,Tmr	9E99/ 99y	9E9199	9E99319	CgX6
6PNt,roantltnm	9E99/ 99y	9E9199	9E99319	CgX6
6PNt,roSTmmol	9E92/ 9y	9E9/ 99	9E91/ 9	CgX6
KumnaST,Tmnm	9E99/ 99y	9E9199	9E99319	CgX6
KumnaST,TRmnm	9E99/ 99y	9E9199	9E99319	CgX6
Kntltnm	9E92/ 9y	9E9/ 99	9E91/ 9	CgX6
Kn,Traumnm	9E99/ 99y	9E9199	9E99319	CgX6
Kho] mnhmmm	9E99/ 99y	9E9199	9E99319	CgX6
BmnhoVdKn,Traumnm	9E99/ 99y	9E9199	9E99319	CgX6
Bmnho[a8SRmnm	9E99/ 99y	9E9199	9E99319	CgX6
Bmnho[] 8Al(oran,Tmnm	9E99/ 99y	9E9199	9E99319	CgX6

Ortn, Da,m 9/ XlsX291e 12:1e:14OM

Method Blank

Blank ID: MB for HBN 1732364 [VVVX8/ 2138
Blank 5a] ID: 13212/ 1

Ma,rti : x a,mr WQ(rfaum0c ffE. ro(nGd

L b for QaC Slmp:
11e1s22991011e1s22993

) mp(l,p] R SW8270D

QaraC m,mr	) mp(l,p	5UL X6 5	D5	y nt,p
Bmnho[g0T08SmrRmnm	9E99/ 99y	9E9199	9E99319	CgX6
Bmnho[k8l(oran,Tmnm	9E99/ 99y	9E9199	9E99319	CgX6
Bmnhotu autG	9E92/ 9y	9E9/ 99	9E91/ 9	CgX6
BmnhR aluoTol	9E99/ 99y	9E9199	9E99319	CgX6
BtpW2uTloro1C m,TRm,TRdc ,Tmr	9E99/ 99y	9E9199	9E99319	CgX6
BtpW2Pb Tlorom,Toi RdC m,Tanm	9E99/ 99y	9E9199	9E99319	CgX6
BtpW2Pb Tlorom,TRdm,Tmr	9E99/ 99y	9E9199	9E99319	CgX6
] tpW2Pc ,TRTmi RdST,Tala,m	9E99/ 99y	9E9199	9E99319	CgX6
B(,R] mnhRST,Tala,m	9E99/ 99y	9E9199	9E99319	CgX6
b ar] aholm	9E99/ 99y	9E9199	9E99319	CgX6
b TrRpmnm	9E99/ 99y	9E9199	9E99319	CgX6
Dt] mnho[a0T8an,Traumnm	9E99/ 99y	9E9199	9E99319	CgX6
Dt] mnhof(ran	9E99/ 99y	9E9199	9E99319	CgX6
Dtm,TRST,Tala,m	9E99/ 99y	9E9199	9E99319	CgX6
DtC m,TRST,Tala,m	9E99/ 99y	9E9199	9E99319	CgX6
DtPnP] (,RST,Tala,m	9E99/ 99y	9E9199	9E99319	CgX6
GtPnPUu,RST,Tala,m	9E99/ 99y	9E9199	9E99319	CgX6
Al(oran,Tmnm	9E99/ 99y	9E9199	9E99319	CgX6
Al(ormnm	9E99/ 99y	9E9199	9E99319	CgX6
Hmi auTloro] mnhmnm	9E99/ 99y	9E9199	9E99319	CgX6
Hmi auTloro] (,aGmnm	9E99/ 99y	9E9199	9E99319	CgX6
Hmi auTlorouRuloSmn,aGmnm	9E91/ 9y	9E9399	9E99s69	CgX6
Hmi auTlorom,Tanm	9E99/ 99y	9E9199	9E99319	CgX6
InGmno[1020 3RuC8SRmnm	9E99/ 99y	9E9199	9E99319	CgX6
IpoSToronm	9E99/ 99y	9E9199	9E99319	CgX6
NaST,Talmnm	9E99/ 99y	9E9199	9E99319	CgX6
Nt,ro] mnhmnm	9E99/ 99y	9E9199	9E99319	CgX6
NPNt,ropoGtC m,TRaC tnm	9E99/ 99y	9E9199	9E99319	CgX6
NPNt,ropoPGtPnPSroSRaC tnm	9E99/ 99y	9E9199	9E99319	CgX6
NPNt,ropoGtSTmnRaC tnm	9E99/ 99y	9E9199	9E99319	CgX6
Omn,auTloroSTmnol	9E92/ 9y	9E9/ 99	9E91/ 9	CgX6
OTmnan,Trmnm	9E99/ 99y	9E9199	9E99319	CgX6
OTmnol	9E99/ 99y	9E9199	9E99319	CgX6
ORmnm	9E99/ 99y	9E9199	9E99319	CgX6
Surrogates				
2060eP rt] roC oSTmnol Wp(rrd	7eEe	63P169		&
2PAl(oro] tSTmnR Wp(rrd	7/ Ee	66P11s		&
2PAl(oroSTmnol Wp(rrd	/ 7E2	1sP11s		&

Ortn, Da,m 9/ XlsX291e 12:1e:14OM

Method Blank

Blank ID: MB for HBN 1732364 [VVVX8/ 2138
Blank 5a] ID: 13212/ 1

Ma,rti : x a,mr WQ(rfaum0cffE. ro(nGd

L b for QaC Slmp:
11e1s22991011e1s22993

) mp(l,p] R SW8270D

QaraC mmr	) mp(l,p	5UL X6 5	D5	y nt,p
Nt,ro] mnhmmnRG/ Wp(rrd	e7E7	66P129		&
OTmnolRGe Wp(rrd	e2E3	19P11/		&
- mrSTmnRRG16 Wp(rrd	s9E	/ 9P136		&

Batch Information

KnalR,tual Ba,uT: VMQs276
KnalR,tual MmToG Qx 4279D
Inp,r(C mn,: HO e4s9X s73 QQK
KnalRp,: N55
KnalR,tual Da,mX tC m / X2X291e 3:3/ :99OM

OrmS Ba,uT: VVV3/ 213
OrmS MmToG Qx 3/ 29b
OrmS Da,mX tC m 6X2eX291e s:99:27KM
OrmS Int,tal x ,E%olE 1999 C5
OrmS c i ,rau, %ol: 1 C5

Ortn, Da,m 9/ XlsX291e 12:1e:14OM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161922 [XXX35213]
Blank Spike Lab ID: 1321252
Date Analyzed: 05/02/2016 18:07

Spike Duplicate ID: LCSD for HBN 1161922 [XXX35213]
Spike Duplicate Lab ID: 1321253
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161922001, 1161922003

Results by **SW8270D**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
1,2,4-Trichlorobenzene	0.1	0.0701	70	0.1	0.0679	68	(29-116)	3.20	(< 20)
1,2-Dichlorobenzene	0.1	0.0621	62	0.1	0.0591	59	(32-111)	5.10	(< 20)
1,3-Dichlorobenzene	0.1	0.0616	62	0.1	0.0585	59	(28-110)	5.30	(< 20)
1,4-Dichlorobenzene	0.1	0.0629	63	0.1	0.0596	60	(29-112)	5.40	(< 20)
1-Chloronaphthalene	0.04	0.0384	96	0.04	0.0391	98	(58-111)	1.80	(< 20)
1-Methylnaphthalene	0.1	0.0762	76	0.1	0.0773	77	(41-119)	1.40	(< 20)
2,4,5-Trichlorophenol	0.1	0.0876	88	0.1	0.0853	85	(53-123)	2.60	(< 20)
2,4,6-Trichlorophenol	0.1	0.0872	87	0.1	0.0854	85	(50-125)	2.00	(< 20)
2,4-Dichlorophenol	0.1	0.0749	75	0.1	0.0726	73	(47-121)	3.10	(< 20)
2,4-Dimethylphenol	0.1	0.0592	59	0.1	0.0575	58	(31-124)	2.90	(< 20)
2,4-Dinitrophenol	0.18	0.164	91	0.18	0.155	86	(23-143)	5.30	(< 20)
2,4-Dinitrotoluene	0.1	0.0945	95	0.1	0.0928	93	(57-128)	1.80	(< 20)
2,6-Dichlorophenol	0.04	0.0283	71	0.04	0.0282	71	(50-118)	0.50	(< 20)
2,6-Dinitrotoluene	0.1	0.0974	97	0.1	0.0952	95	(57-124)	2.20	(< 20)
2-Chloronaphthalene	0.1	0.0799	80	0.1	0.0805	81	(40-116)	0.70	(< 20)
2-Chlorophenol	0.1	0.0610	61	0.1	0.0569	57	(38-117)	7.10	(< 20)
2-Methyl-4,6-dinitrophenol	0.18	0.185	103	0.18	0.176	98	(44-137)	5.10	(< 20)
2-Methylnaphthalene	0.1	0.0712	71	0.1	0.0728	73	(40-121)	2.30	(< 20)
2-Methylphenol (o-Cresol)	0.1	0.0617	62	0.1	0.0585	59	(30-117)	5.30	(< 20)
2-Nitroaniline	0.1	0.0951	95	0.1	0.0920	92	(55-117)	3.30	(< 20)
2-Nitrophenol	0.1	0.0803	80	0.1	0.0792	79	(47-123)	1.50	(< 20)
3&4-Methylphenol (p&m-Cresol)	0.14	0.0987	71	0.14	0.0920	66	(29-110)	7.00	(< 20)
3,3-Dichlorobenzidine	0.1	0.0833	83	0.1	0.0793	79	(27-129)	4.90	(< 20)
3-Nitroaniline	0.1	0.0917	92	0.1	0.0868	87	(41-128)	5.50	(< 20)
4-Bromophenyl-phenylether	0.1	0.0987	99	0.1	0.0956	96	(55-124)	3.20	(< 20)
4-Chloro-3-methylphenol	0.1	0.0801	80	0.1	0.0787	79	(52-119)	1.80	(< 20)
4-Chloroaniline	0.1	0.0693	69	0.1	0.0654	65	(33-117)	5.80	(< 20)
4-Chlorophenyl-phenylether	0.1	0.0907	91	0.1	0.0897	90	(53-121)	1.00	(< 20)
4-Nitroaniline	0.1	0.0976	98	0.1	0.0921	92	(74-118)	5.90	(< 20)
4-Nitrophenol	0.14	0.106	76	0.14	0.0958	68	(52-111)	10.30	(< 20)
Acenaphthene	0.1	0.0841	84	0.1	0.0850	85	(47-122)	1.10	(< 20)
Acenaphthylene	0.1	0.0838	84	0.1	0.0835	84	(41-130)	0.38	(< 20)
Aniline	0.1	0.0444J	44	0.1	0.0360J	36	(10-87)	20.90	* (< 20)
Anthracene	0.1	0.0949	95	0.1	0.0917	92	(57-123)	3.50	(< 20)

Print Date: 05/19/2016 12:16:21PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161922 [XXX35213]
Blank Spike Lab ID: 1321252
Date Analyzed: 05/02/2016 18:07

Spike Duplicate ID: LCSD for HBN 1161922 [XXX35213]
Spike Duplicate Lab ID: 1321253
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161922001, 1161922003

Results by **SW8270D**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Azobenzene	0.1	0.0958	96	0.1	0.0946	95	(61-116)	1.20	(< 20)
Benzo(a)Anthracene	0.1	0.0995	100	0.1	0.0940	94	(58-125)	5.70	(< 20)
Benzo[a]pyrene	0.1	0.0909	91	0.1	0.0860	86	(54-128)	5.50	(< 20)
Benzo[b]Fluoranthene	0.1	0.0956	96	0.1	0.0914	91	(53-131)	4.40	(< 20)
Benzo[g,h,i]perylene	0.1	0.105	105	0.1	0.102	102	(50-134)	3.10	(< 20)
Benzo[k]fluoranthene	0.1	0.0892	89	0.1	0.0884	88	(57-129)	0.93	(< 20)
Benzoic acid	0.14	0.0826	59	0.14	0.0681	49	(21-107)	19.30	(< 20)
Benzyl alcohol	0.1	0.0634	63	0.1	0.0606	61	(31-112)	4.60	(< 20)
Bis(2chloro1methylethyl)Ether	0.1	0.0663	66	0.1	0.0662	66	(37-130)	0.21	(< 20)
Bis(2-Chloroethoxy)methane	0.1	0.0757	76	0.1	0.0770	77	(48-120)	1.70	(< 20)
Bis(2-Chloroethyl)ether	0.1	0.0591	59	0.1	0.0562	56	(43-118)	4.90	(< 20)
bis(2-Ethylhexyl)phthalate	0.1	0.102	102	0.1	0.0993	99	(55-135)	2.80	(< 20)
Butylbenzylphthalate	0.1	0.107	107	0.1	0.103	103	(53-134)	4.10	(< 20)
Carbazole	0.1	0.0985	99	0.1	0.0962	96	(60-122)	2.30	(< 20)
Chrysene	0.1	0.103	103	0.1	0.100	100	(59-123)	2.90	(< 20)
Dibenzo[a,h]anthracene	0.1	0.104	104	0.1	0.0996	100	(51-134)	4.40	(< 20)
Dibenzofuran	0.1	0.0843	84	0.1	0.0847	85	(53-118)	0.52	(< 20)
Diethylphthalate	0.1	0.0911	91	0.1	0.0884	88	(56-125)	3.00	(< 20)
Dimethylphthalate	0.1	0.0909	91	0.1	0.0877	88	(45-127)	3.60	(< 20)
Di-n-butylphthalate	0.1	0.0990	99	0.1	0.0947	95	(59-127)	4.40	(< 20)
di-n-Octylphthalate	0.1	0.0969	97	0.1	0.0920	92	(51-140)	5.20	(< 20)
Fluoranthene	0.1	0.0891	89	0.1	0.0853	85	(57-128)	4.40	(< 20)
Fluorene	0.1	0.0874	87	0.1	0.0872	87	(52-124)	0.13	(< 20)
Hexachlorobenzene	0.1	0.0958	96	0.1	0.0926	93	(53-125)	3.40	(< 20)
Hexachlorobutadiene	0.1	0.0764	76	0.1	0.0731	73	(22-124)	4.40	(< 20)
Hexachlorocyclopentadiene	0.1	0.0478	48	0.1	0.0463	46	(10-93)	3.10	(< 20)
Hexachloroethane	0.1	0.0605	61	0.1	0.0573	57	(21-115)	5.40	(< 20)
Indeno[1,2,3-c,d] pyrene	0.1	0.0981	98	0.1	0.0955	96	(52-134)	2.60	(< 20)
Isophorone	0.1	0.0709	71	0.1	0.0717	72	(42-124)	1.10	(< 20)
Naphthalene	0.1	0.0714	71	0.1	0.0695	70	(40-121)	2.80	(< 20)
Nitrobenzene	0.1	0.0722	72	0.1	0.0709	71	(45-121)	1.80	(< 20)
N-Nitrosodimethylamine	0.1	0.0554	55	0.1	0.0483	48	(41-117)	13.80	(< 20)
N-Nitroso-di-n-propylamine	0.1	0.0719	72	0.1	0.0745	75	(49-119)	3.70	(< 20)
N-Nitrosodiphenylamine	0.1	0.0806	81	0.1	0.0794	79	(51-123)	1.60	(< 20)

Print Date: 05/19/2016 12:16:21PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161922 [XXX35213]
Blank Spike Lab ID: 1321252
Date Analyzed: 05/02/2016 18:07

Spike Duplicate ID: LCSD for HBN 1161922 [XXX35213]
Spike Duplicate Lab ID: 1321253
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161922001, 1161922003

Results by **SW8270D**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Pentachlorophenol	0.14	0.145	103	0.14	0.137	98	(35-138)	5.40	(< 20)
Phenanthrene	0.1	0.0960	96	0.1	0.0935	94	(59-120)	2.70	(< 20)
Phenol	0.1	0.0542	54	0.1	0.0485	49	(39-84)	11.10	(< 20)
Pyrene	0.1	0.114	114	0.1	0.110	110	(57-126)	4.30	(< 20)
Surrogates									
2,4,6-Tribromophenol (surr)	0.2	95.2	95	0.2	96.5	97	(43-140)	1.30	
2-Fluorobiphenyl (surr)	0.1	75.7	76	0.1	78.9	79	(44-119)	4.20	
2-Fluorophenol (surr)	0.2	54.1	54	0.2	54.2	54	(19-119)	0.07	
Nitrobenzene-d5 (surr)	0.1	72	72	0.1	70.3	70	(44-120)	2.50	
Phenol-d6 (surr)	0.2	62.6	63	0.2	61.1	61	(10-115)	2.50	
Terphenyl-d14 (surr)	0.1	110	110	0.1	110	110	(50-134)	0.36	

Batch Information

Analytical Batch: **XMS9274**
Analytical Method: **SW8270D**
Instrument: **HP 6890/5973 SSA**
Analyst: **NLL**

Prep Batch: **XXX35213**
Prep Method: **SW3520C**
Prep Date/Time: **04/26/2016 09:00**
Spike Init Wt./Vol.: 0.1 mg/L Extract Vol: 1 mL
Dupe Init Wt./Vol.: 0.1 mg/L Extract Vol: 1 mL

Print Date: 05/19/2016 12:16:21PM

Billable Matrix Spike Summary

Original Sample ID: 1161922003
MS Sample ID: 1161922004 BMS
MSD Sample ID: 1161922005 BMSD

Analysis Date: 05/02/2016 20:56
Analysis Date: 05/02/2016 21:12
Analysis Date: 05/02/2016 21:29
Matrix: Water (Surface, Eff., Ground)

QC for Samples:

Results by **SW8270D**

		Matrix Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
1,2,4-Trichlorobenzene	0.00505U	0.102	.0626	61	0.101	0.0568	56	29-116	9.70	(< 20)
1,2-Dichlorobenzene	0.00505U	0.102	.0533	52	0.101	0.0480	48	32-111	10.40	(< 20)
1,3-Dichlorobenzene	0.00505U	0.102	.0496	49	0.101	0.0453	45	28-110	9.10	(< 20)
1,4-Dichlorobenzene	0.00505U	0.102	.0527	52	0.101	0.0478	47	29-112	9.80	(< 20)
1-Chloronaphthalene	0.00505U	0.0408	.0365	90	0.0404	0.0347	86	58-111	5.00	(< 20)
1-Methylnaphthalene	0.00505U	0.102	.0709	69	0.101	0.0664	66	41-119	6.50	(< 20)
2,4,5-Trichlorophenol	0.00505U	0.102	.0798	78	0.101	0.0717	71	53-123	10.70	(< 20)
2,4,6-Trichlorophenol	0.00505U	0.102	.0779	76	0.101	0.0684	68	50-125	12.90	(< 20)
2,4-Dichlorophenol	0.00505U	0.102	.0683	67	0.101	0.0605	60	47-121	12.00	(< 20)
2,4-Dimethylphenol	0.00505U	0.102	.0581	57	0.101	0.0474	47	31-124	20.30	* (< 20)
2,4-Dinitrophenol	0.0253U	0.184	.14	76	0.182	0.137	75	23-143	2.20	(< 20)
2,4-Dinitrotoluene	0.00505U	0.102	.0906	89	0.101	0.0886	88	57-128	2.20	(< 20)
2,6-Dichlorophenol	0.00505U	0.0408	.0268	66	0.0404	0.0226	56	50-118	16.90	(< 20)
2,6-Dinitrotoluene	0.00505U	0.102	.0916	90	0.101	0.0896	89	57-124	2.30	(< 20)
2-Chloronaphthalene	0.00505U	0.102	.0757	74	0.101	0.0712	71	40-116	6.10	(< 20)
2-Chlorophenol	0.00505U	0.102	.0602	59	0.101	0.0541	54	38-117	10.60	(< 20)
2-Methyl-4,6-dinitrophenol	0.0253U	0.184	.152	83	0.182	0.147	81	44-137	3.20	(< 20)
2-Methylnaphthalene	0.00505U	0.102	.0674	66	0.101	0.0620	61	40-121	8.40	(< 20)
2-Methylphenol (o-Cresol)	0.00505U	0.102	.0623	61	0.101	0.0536	53	30-117	15.00	(< 20)
2-Nitroaniline	0.00505U	0.102	.0886	87	0.101	0.0826	82	55-117	7.00	(< 20)
2-Nitrophenol	0.00505U	0.102	.0716	70	0.101	0.0678	67	47-123	5.50	(< 20)
3&4-Methylphenol (p&m-Cresol)	0.0101U	0.143	.0977	68	0.141	0.0851	60	29-110	13.70	(< 20)
3,3-Dichlorobenzidine	0.00505U	0.102	.0794	78	0.101	0.0754	75	27-129	5.20	(< 20)
3-Nitroaniline	0.00505U	0.102	.089	87	0.101	0.0829	82	41-128	7.00	(< 20)
4-Bromophenyl-phenylether	0.00505U	0.102	.0933	91	0.101	0.0941	93	55-124	0.84	(< 20)
4-Chloro-3-methylphenol	0.00505U	0.102	.0742	73	0.101	0.0646	64	52-119	13.80	(< 20)
4-Chloroaniline	0.00505U	0.102	.0642	63	0.101	0.0559	55	33-117	13.70	(< 20)
4-Chlorophenyl-phenylether	0.00505U	0.102	.0861	84	0.101	0.0843	84	53-121	2.10	(< 20)
4-Nitroaniline	0.00505U	0.102	.0922	90	0.101	0.0879	87	74-118	4.70	(< 20)
4-Nitrophenol	0.0253U	0.143	.0998	70	0.141	0.0929	66	52-111	7.10	(< 20)
Acenaphthene	0.00505U	0.102	.0815	80	0.101	0.0765	76	47-122	6.30	(< 20)
Acenaphthylene	0.00505U	0.102	.08	78	0.101	0.0756	75	41-130	5.60	(< 20)
Aniline	0.0253U	0.102	.0434J	43	0.101	0.0323J	32	10-87	29.20	* (< 20)
Anthracene	0.00505U	0.102	.0869	85	0.101	0.0889	88	57-123	2.30	(< 20)
Azobenzene	0.00505U	0.102	.0884	87	0.101	0.0907	90	61-116	2.60	(< 20)
Benzo(a)Anthracene	0.00505U	0.102	.0911	89	0.101	0.0921	91	58-125	1.10	(< 20)
Benzo[a]pyrene	0.00505U	0.102	.0844	83	0.101	0.0852	84	54-128	0.98	(< 20)

Print Date: 05/19/2016 12:16:24PM

Billable Matrix Spike Summary

Original Sample ID: 1161922003
MS Sample ID: 1161922004 BMS
MSD Sample ID: 1161922005 BMSD

Analysis Date: 05/02/2016 20:56
Analysis Date: 05/02/2016 21:12
Analysis Date: 05/02/2016 21:29
Matrix: Water (Surface, Eff., Ground)

QC for Samples:

Results by **SW8270D**

		Matrix Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Benzo[b]Fluoranthene	0.00505U	0.102	.0855	84	0.101	0.0840	83	53-131	1.80	(< 20)
Benzo[g,h,i]perylene	0.00505U	0.102	.0937	92	0.101	0.0989	98	50-134	5.40	(< 20)
Benzo[k]fluoranthene	0.00505U	0.102	.0877	86	0.101	0.0881	87	57-129	0.36	(< 20)
Benzoic acid	0.0253U	0.143	.0704	49	0.141	0.0685	48	21-107	2.90	(< 20)
Benzyl alcohol	0.00505U	0.102	.0667	65	0.101	0.0578	57	31-112	14.30	(< 20)
Bis(2chloro1methylethyl)Ether	0.00505U	0.102	.0664	65	0.101	0.0594	59	37-130	11.10	(< 20)
Bis(2-Chloroethoxy)methane	0.00505U	0.102	.0757	74	0.101	0.0681	67	48-120	10.60	(< 20)
Bis(2-Chloroethyl)ether	0.00505U	0.102	.0596	58	0.101	0.0527	52	43-118	12.40	(< 20)
bis(2-Ethylhexyl)phthalate	0.00505U	0.102	.0934	92	0.101	0.0942	93	55-135	0.75	(< 20)
Butylbenzylphthalate	0.00505U	0.102	.0973	95	0.101	0.0990	98	53-134	1.70	(< 20)
Carbazole	0.00505U	0.102	.0951	93	0.101	0.0937	93	60-122	1.50	(< 20)
Chrysene	0.00505U	0.102	.0948	93	0.101	0.0967	96	59-123	2.00	(< 20)
Dibenzo[a,h]anthracene	0.00505U	0.102	.0945	93	0.101	0.0980	97	51-134	3.60	(< 20)
Dibenzofuran	0.00505U	0.102	.0813	80	0.101	0.0771	76	53-118	5.40	(< 20)
Diethylphthalate	0.00505U	0.102	.0858	84	0.101	0.0842	83	56-125	1.90	(< 20)
Dimethylphthalate	0.00505U	0.102	.0813	80	0.101	0.0769	76	45-127	5.60	(< 20)
Di-n-butylphthalate	0.00505U	0.102	.0929	91	0.101	0.0921	91	59-127	0.87	(< 20)
di-n-Octylphthalate	0.00505U	0.102	.0893	88	0.101	0.0884	88	51-140	0.91	(< 20)
Fluoranthene	0.00505U	0.102	.0863	85	0.101	0.0867	86	57-128	0.39	(< 20)
Fluorene	0.00505U	0.102	.0831	81	0.101	0.0830	82	52-124	0.13	(< 20)
Hexachlorobenzene	0.00505U	0.102	.0889	87	0.101	0.0906	90	53-125	1.90	(< 20)
Hexachlorobutadiene	0.00505U	0.102	.0652	64	0.101	0.0612	61	22-124	6.30	(< 20)
Hexachlorocyclopentadiene	0.0152U	0.102	.0389	38	0.101	0.0421	42	10-93	7.70	(< 20)
Hexachloroethane	0.00505U	0.102	.0474	47	0.101	0.0425	42	21-115	11.00	(< 20)
Indeno[1,2,3-c,d] pyrene	0.00505U	0.102	.0891	87	0.101	0.0920	91	52-134	3.20	(< 20)
Isophorone	0.00505U	0.102	.0699	69	0.101	0.0617	61	42-124	12.40	(< 20)
Naphthalene	0.00505U	0.102	.0654	64	0.101	0.0612	61	40-121	6.60	(< 20)
Nitrobenzene	0.00505U	0.102	.0717	70	0.101	0.0676	67	45-121	5.90	(< 20)
N-Nitrosodimethylamine	0.00505U	0.102	.0583	57	0.101	0.0477	47	41-117	19.90	(< 20)
N-Nitroso-di-n-propylamine	0.00505U	0.102	.0718	70	0.101	0.0626	62	49-119	13.70	(< 20)
N-Nitrosodiphenylamine	0.00505U	0.102	.0762	75	0.101	0.0761	75	51-123	0.14	(< 20)
Pentachlorophenol	0.0253U	0.143	.125	88	0.141	0.119	84	35-138	5.30	(< 20)
Phenanthrene	0.00505U	0.102	.0895	88	0.101	0.0916	91	59-120	2.40	(< 20)
Phenol	0.00505U	0.102	.0561	55	0.101	0.0489	48	39-84	13.60	(< 20)
Pyrene	0.00505U	0.102	.101	99	0.101	0.108	106	57-126	6.60	(< 20)
Surrogates										
2,4,6-Tribromophenol (surr)		0.204	.184	90	0.202	0.188	93	43-140	2.00	

Print Date: 05/19/2016 12:16:24PM

Billable Matrix Spike Summary

Original Sample ID: 1161922003
MS Sample ID: 1161922004 BMS
MSD Sample ID: 1161922005 BMSD

Analysis Date:
Analysis Date: 05/02/2016 21:12
Analysis Date: 05/02/2016 21:29
Matrix: Water (Surface, Eff., Ground)

QC for Samples:

Results by **SW8270D**

		Matrix Spike (%)			Spike Duplicate (%)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
2-Fluorobiphenyl (surr)		0.102	.0802	79	0.101	0.0775	77	44-119	3.40	
2-Fluorophenol (surr)		0.204	.117	57	0.202	0.104	51	19-119	11.90	
Nitrobenzene-d5 (surr)		0.102	.0709	70	0.101	0.0689	68	44-120	2.80	
Phenol-d6 (surr)		0.204	.122	60	0.202	0.107	53	10-115	12.80	
Terphenyl-d14 (surr)		0.102	.108	106	0.101	0.116	115	50-134	7.20	

Batch Information

Analytical Batch: XMS9274
Analytical Method: SW8270D
Instrument: HP 6890/5973 SSA
Analyst: NLL
Analytical Date/Time: 5/2/2016 9:12:00PM

Prep Batch: XXX35213
Prep Method: Liquid/Liquid Extraction for SW8270
Prep Date/Time: 4/26/2016 9:00:27AM
Prep Initial Wt./Vol.: 980.00mL
Prep Extract Vol: 1.00mL

Print Date: 05/19/2016 12:16:24PM

Method Blank

Blank ID: MB for HBN 1732490 [XXX/35229]
Blank Lab ID: 1321704

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161922001, 1161922003

Results by **AK102**

Parameter	Results	LOQ/CL	DL	Units
Diesel Range Organics	0.300U	0.600	0.180	mg/L
Surrogates				
5a Androstane (surr)	97.2	60-120		%

Batch Information

Analytical Batch: XFC12356
Analytical Method: AK102
Instrument: Agilent 7890B R
Analyst: CJSW
Analytical Date/Time: 5/2/2016 1:53:00PM

Prep Batch: XXX35229
Prep Method: SW3520C
Prep Date/Time: 4/28/2016 9:48:03AM
Prep Initial Wt./Vol.: 250 mL
Prep Extract Vol: 1 mL

Print Date: 05/19/2016 12:16:26PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161922 [VVVX82297
Blank Spike La3 ID: 1X21] b8
Da4e 5nalt Aey: b8zb2z2b16 1d:bd

Spike D0pli/ a4e ID: LCSD for HBN 1161922 [VVVX82297
Spike D0pli/ a4e La3 ID: 1X21] b6
Ra4is: Ma4er xS0rfa/ eW(ff,WEro0ny.

%C for Sa) plec: 1161922bb1W1161922bbX

u ec0l4c 3t **AK102**

	Blank Spike x) mL.			Spike D0pli/ a4e x) mL.					
Gara) e4er	Spike	u ec0l4	u e/ xP.	Spike	u ec0l4	u e/ xP.	CL	u GD xP.	u GD CL
Diecel u anme g rmani/ c	2b	19,d	9]	2b	19,1	98	x] 8C128.	1,6b	xO2b.
Surrogates									
8a 5nyroc4ane xc0rr.	b,d	11-	11-	b,d	118	118	x6bC12b.	2,-b	

Batch Information

5nalt 4/ al Ba4'<: **XFC12356**
5nalt 4/ al Re4<oy: **AK102**
Inc40) en4 **Agilent 7890B R**
5nalt c4 **CJSW**

Grep Ba4'<: **XXX35229**
Grep Re4<oy: **SW3520C**
Grep Da4ezhi) e: **04/28/2016 09:48**
Spike Ini4M4zTol,: 2b) mL (s4ra/ 4Tol: 1) L
D0pe Ini4M4zTol,: 2b) mL (s4ra/ 4Tol: 1) L

Grin4Da4e: b8z19z2b16 12:16:XbGR

Billable Matrix Spike Summary

Original Sample ID: 1161922003
MS Sample ID: 1161922004 BMS
MSD Sample ID: 1161922005 BMSD

Analysis Date: 05/02/2016 16:57
Analysis Date: 05/02/2016 17:0x
Analysis Date: 05/02/2016 17:1x
MatriW (ater uSf rca, eE. ccEo rdf n) R

CP cdr Samples:

b esf lts ky **AK102**

		MatriWSpiLe umg/QR			SpiLe Df pli, ate umg/QR					
%arameter	Sample	SpiLe	b esf lt	b e, uh R	SpiLe	b esf lt	b e, uh R	PQ	b %D uh R	b %D PQ
Diesel b ange Organi, s	0Q2xx8	1xG9	1xG3	96	19G2	1xG7	97	75-125	3G10	u< 30 R
Surrogates										
5a An) rdstane usf rrR		0G377	G436	115	0G3x5	0G452	11x	50-150	3Q10	

Batch Information

Analyti, al Bat, F: J VP12356
Analyti, al MetFd) : AU102
Instrf ment: Agilent 7x90B b
Analyst: PvS(
Analyti, al Date/Time: 5/2/2016 5:0x:00%M

%rep Bat, F: J J J 35229
%rep MetFd) : PntGQNVQN . WGcdr AU102/3 QdX qdl
%rep Date/Time: 4/2x/2016 9:4x:03AM
%rep Initial (tQqdlG 265G0mQ
%rep . Wra, t qdl: 10G0mQ

%rint Date: 05/19/2016 12:16:34%M

Method Blank

Blank ID: MB for HBN 1732490 [XXX/35229]
Blank Lab ID: 1321704

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161922001, 1161922003

Results by **AK103**

Parameter	Results	LOQ/CL	DL	Units
Residual Range Organics	0.250U	0.500	0.150	mg/L
Surrogates				
n-Triacontane-d62 (surr)	93.6	60-120		-

Batch Information

Analytical Batch: XFC12356
Analytical Method: AK103
Instrument: Agilent 7890B R
Analyst: CTSW
Analytical Date/Time: 5/2/2016 1:53:00PM

Prep Batch: XXX35229
Prep Method: SW3520C
Prep Date/Time: 4/29/2016 9:45:00AM
Prep Initial Wt./Vol.: 250 mL
Prep Extract Vol: 1 mL

Print Date: 05/19/2016 12:16:35PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161922 [VVVX82297
Blank Spike La3 ID: 1X21] b8
Da4e 5nalt Aey: b8zb2z2b16 1d:bd

Spike D0pli/ a4e ID: LCSD for HBN 1161922 [VVVX82297
Spike D0pli/ a4e La3 ID: 1X21] b6
Ra4is: Ma4er xS0rfa/ eW(ff,WEro0ny.

%C for Sa) plec: 1161922bb1W1161922bbX

u ec0l4c 3t **AK102**

	Blank Spike x) mL.			Spike D0pli/ a4e x) mL.					
Gara) e4er	Spike	u ec0l4	u e/ xP .	Spike	u ec0l4	u e/ xP .	CL	u GD xP .	u GD CL
u eciy0al u anme g rmani/ c	2b	22,8	11X	2b	22,2	111	x6bC12b .	1,6b	xO2b .
Surrogates									
nQ ria/ on4aneQy62 xc0rr.	b,d	1bb	1bb	b,d	96,X	96	x6bC12b .	X,<b	

Batch Information

5nalt 4/ al Ba4/ h: **XFC13256**
5nalt 4/ al Re4hoy: **AK102**
Inc40) en4 **Agilent 7890B R**
5nalt c4 **CJSW**

Grep Ba4/ h: **XXX25339**
Grep Re4hoy: **SW2530C**
Grep Da4ez- i) e: **04/38/3016 09:48**
Spike Ini4M4zTol,: 2b) mL (s4a/ 4Tol: 1) L
D0pe Ini4M4zTol,: 2b) mL (s4a/ 4Tol: 1) L

Grin4Da4e: b8z19z2b16 12:16:X9GR

Billable Matrix Spike Summary

Original Sample ID: 1161922003
MS Sample ID: 1161922004 BMS
MSD Sample ID: 1161922005 BMSD

Analysis Date: 05/02/2016 16:57
Analysis Date: 05/02/2016 17:08
Analysis Date: 05/02/2016 17:18
Matrix: Water (Surface, Eff., Ground)

QC for Samples:

Results by **AK103**

		Matrix Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Residual Range Organics	0.823	18.9	22.1	113	19.2	22.9	115	60-140	3.80	(< 30)
Surrogates										
n-Triacontane-d62 (surr)		0.377	.371	98	0.385	0.384	100	50-150	3.70	

Batch Information

Analytical Batch: XFC12356
Analytical Method: AK103
Instrument: Agilent 7890B R
Analyst: CJSW
Analytical Date/Time: 5/2/2016 5:08:00PM

Prep Batch: XXX35229
Prep Method: Cnt. Liq/Liq Ext. for AK102/3 Low Vol
Prep Date/Time: 4/28/2016 9:48:03AM
Prep Initial Wt./Vol.: 265.00mL
Prep Extract Vol: 1.00mL

Print Date: 05/19/2016 12:16:41PM

SGS

CHAIN OF CUSTODY RECORD

SGS Environmental Services Inc.

1161922

CLIENT: SLR Consulting

CONTACT: Jason Gray, SLR PHONE NO: (office) 264-6965

PROJECT Name: Kenai Wells PROJECT No.: 105.00148.16001

REPORTS TO: Jason Gray, SLR email jgray@slrconsulting.com

INVOICE TO: Wendy Hansen, SLR QUOTE #: 332060
2700 Gambell Street Anchorage, Alaska 99503

SGS Reference #:

page 1 of 1

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	# CONTAINERS	Preserv Used / SAMPLE TYPE C = COMP G = GRAB	E1631E - Low-level Hg (dissolved)	E200.8 - Dissolved Metals SM21 2340B - Hardness	E1631E - Low-level Hg (total)	E200.8 - Total Metals	SW 8260B - VOC	AK101 -GRO	SW 8270D - SVOC	AK102/AK103 - DRO/RRO	SM21 2540D - TSS	E300.0 - Cl, Fl,SO4 SM21 4500NO3-F - Nitrate, Nitrite	SM21 2540C TDS, SM21 2320B Alkalinity, SM2130B Turbidity, SM21 4500H+B pH					
						Preserv Used	HCl	HNO3	HCl	HNO3	HCl	HCl	HCl	HCl	None	None	None					
1 A-N (6) A-V	MW74A-0416	4-22-16	1150	GW	15	G		X		X	X	X	X	X	X	X	X					
2 A	MW74Z-0416	4-22-16	1150	GW	1										X							
3 A-V (7) A-C	MW74B-0416	4-22-16	1350	GW	4 5 4 5	↓		X		X	X	X	X	X	X	X	X	MS	MSD			
10 A-C	TB-5	4-22-16	1150	~~GW~~	3	—						X										
11 A-C	TB-6	4-22-16	1150	~~GW~~	3	—					X											
4 A-V (8) A-C (MS)																						
5 A-V (9) A-C (MSD)																						
12 A-F (Dup)																						
	~~Trip Blank~~										X	X										

	Date	Time	Received By:
Collected/Relinquished By: (1) Kyle Johnson	4-22-16	2005	
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	4/22/16	10:00	Received For Laboratory By:

Shipping Carrier: Grant
Shipping Ticket No: 3617784
Special Deliverable Req: Level II
EDD: PDF, Access

Samples Received Cold? YES NO
Temperature °C: 1-0.7#DI/ 2-0.7#DI/ 3-0.1#DI
Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT IF,IR NA

Requested Turnaround Time and-or Special Instructions:

Total and Dissolved Metals:
As, Ba, Be, Ca, Cd, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Na, Ni, Sb, Se, Tl, V, Zn

200 W. Potter Drive **Anchorage, AK 99518** Tel: (907) 562-2343 Fax: (907) 561-5301
3180 Peger Road **Fairbanks, AK 99701** Tel: (907) 474-8656 Fax: (907) 474-9685
5500 Business Drive **Wilmington, NC 28405** Tel: (910) 350-1903 Fax: (910) 350-1557

1161922

AIRBILL 3617784

I hereby declare that the goods contained herein do not contain dangerous goods.

Signed.....Date.....

GRANT AVIATION

4451 Aircra

F.

Email: res@flygrant.com

Web: http://www.flygrant.com/

FREIGHT DETAILS

FROM/TO: Kenai -> Anchorage International

Flight Departs: Apr 23 16 8:40 AM

Receiver: Sgs labratory
907-562-2343

Sender: ben siwiec
907-223-8578

Description & Comment	Quan.	Wgt.	Handle Fee	Danger Fee	Total
coolers	3	110	-	-	$70.24
				Total Tax:	$4.39
				Total Payments made:	$74.63
				Total Unpaid:	**$0.00**

Received by: .....

CUSTOMER COPY

AIRBILL 3617784

GRANT AVIATION

Grant Aviation
4451 Aircraft Drive Anchorage, AK 99502
Phone: 1 (888) 359-4726
Freephone: 1 (888) 359-4726
Email: res@flygrant.com
Web: http://www.flygrant.com/

FREIGHT DETAILS

FROM/TO: Kenai -> Anchorage International

Flight Departs: Apr 23 16 8:40 AM

Receiver: Sgs labratory
907-562-2343

Sender: ben siwiec
907-223-8578

Description & Comment	Quan.	Wgt.	Handle Fee	Danger Fee	Total
coolers	3	110	-	-	$70.24
TAX: Federal Excise Tax					$4.39
				Total Payments made:	$74.63
				Total Unpaid:	**$0.00**

TERMS AND CONDITIONS

Consignemnt Note Text

SGS

1161922

1 1 6 1 9 2 2

SAMPLE RECEIPT FORM

Review Criteria:	Yes	N/A	No	Comments/Action Taken:
Were **custody seals** intact? Note # & location, if applicable. COC accompanied samples?	☑ ☑	☐ ☐	☐ ☐	***Exemption permitted if sampler hand carries/delivers.*** 1F, 1R
Temperature blank compliant* (i.e., 0-6°C after CF)? *If >6°C, were samples collected <8 hours ago?* *If <0°C, were all sample containers ice free?* Cooler ID: 1 @ 0.7 w/ Therm.ID: D11 Cooler ID: 2 @ 0.7 w/ Therm.ID: D11 Cooler ID: 3 @ 0.1 w/ Therm.ID: D11 Cooler ID: _____ @ _____ w/ Therm.ID: _____ Cooler ID: _____ @ _____ w/ Therm.ID: _____ If samples are received without a temperature blank, the "cooler temperature" will be documented in lieu of the temperature blank & "**COOLER TEMP**" will be noted to the right. In cases where neither a temp blank nor cooler temp can be obtained, note "ambient" or "chilled."	☑ ☐ ☐	☐ ☑ ☑	☐ ☐ ☐	***Exemption permitted if chilled & collected <8 hrs ago.*** ***Note: Identify containers received at non-compliant temperature. Use form FS-0029 if more space is needed.***
Delivery method (specify all that apply): ☐Client (hand carried) ☐USPS ☐Lynden ☐AK Air ☐Alert Courier ☐UPS ☐FedEx ☐RAVN ☐C&D Delivery ☐Carlile ☐Pen Air ☐Warp Speed ☑Other: Grant → *For WO# with airbills, was the WO# & airbill info recorded in the Front Counter eLog?*	☐	☑	☐	
	Yes	**N/A**	**No**	
Were samples received within hold time? Do samples **match COC*** (i.e., sample IDs, dates/times collected)? Were analyses requested unambiguous?	☑ ☐ ☑	☐ ☐ ☐	☐ ☑ ☐	***Note: Refer to form F-083 "Sample Guide" for hold times.*** ***Note: If times differ <1hr, record details and login per COC.*** *
Were samples in **good condition** (no leaks/cracks/breakage)? Packing material used (specify all that apply): ☑Bubble Wrap ☐Separate plastic bags ☐Vermiculite ☐Other:	☑	☐	☐	
Were **proper containers** (type/mass/volume/preservative*) used? Were **Trip Blanks** (i.e., VOAs, LL-Hg) in cooler with samples? Were all VOA vials **free of headspace** (i.e., bubbles ≤6 mm)? Were all soil VOAs **field extracted** with MeOH+BFB?	☑ ☑ ☑ ☐	☐ ☐ ☐ ☑	☐ ☐ ☐ ☐	☐ ***Exemption permitted for metals (e.g., 200.8/6020A).***
For preserved waters (other than VOA vials, LL-Mercury or microbiological analyses), was **pH verified and compliant**? If pH was adjusted, were bottles flagged (i.e., stickers)?	☑ ☐	☐ ☑	☐ ☐	
For **special handling** (e.g., "MI" soils, foreign soils, lab filter for dissolved…, lab extract for volatiles, Ref Lab, limited volume), were bottles/paperwork flagged (e.g., sticker)?	☐	☑	☐	
For **RUSH/SHORT Hold Time**, were COC/Bottles flagged accordingly? Was Rush/Short HT email sent, if applicable?	☑	☐	☐	Turbidity/Nitrate/Nitrite
For **SITE-SPECIFIC QC, e.g. BMS/BMSD/BDUP**, were containers / paperwork flagged accordingly?	☑	☐	☐	
For any question answered "No," has the PM been notified and the problem resolved (or paperwork put in their bin)?	☐	☑	☐	SRF Completed by: JAN PM notified:
Was **PEER REVIEW** of ***sample numbering/labeling completed?***	☐	☑	☐	Peer Reviewed by:

Additional notes (if applicable):

* 3 x preserved VOA vials received w/no labels. All samples on COC are accounted for, so these vials will be disposed of, per Jason Gray. JN 4/23/2016.

Note to Client: *Any "no" answer above indicates non-compliance with standard procedures and may impact data quality.*

F102_eSRF_2015_03_31

Sample Containers and Preservatives

Container Id	Preservative	Container Condition	Container Id	Preservative	Container Condition
1161922001-A	HNO3 to pH < 2	OK	1161922004-F	HCL to pH < 2	OK
1161922001-B	HCL to pH < 2	OK	1161922004-G	HCL to pH < 2	OK
1161922001-C	HCL to pH < 2	OK	1161922004-H	HCL to pH < 2	OK
1161922001-D	HCL to pH < 2	OK	1161922004-I	HCL to pH < 2	OK
1161922001-E	HCL to pH < 2	OK	1161922004-J	No Preservative Required	OK
1161922001-F	HCL to pH < 2	OK	1161922004-K	No Preservative Required	OK
1161922001-G	HCL to pH < 2	OK	1161922004-L	HCL to pH < 2	OK
1161922001-H	No Preservative Required	OK	1161922004-M	HCL to pH < 2	OK
1161922001-I	No Preservative Required	OK	1161922004-N	No Preservative Required	OK
1161922001-J	HCL to pH < 2	OK	1161922004-O	No Preservative Required	OK
1161922001-K	HCL to pH < 2	OK	1161922004-P	No Preservative Required	OK
1161922001-L	No Preservative Required	OK	1161922005-A	HNO3 to pH < 2	OK
1161922001-M	No Preservative Required	OK	1161922005-B	HNO3 to pH < 2	OK
1161922001-N	No Preservative Required	OK	1161922005-C	HNO3 to pH < 2	OK
1161922002-A	No Preservative Required	OK	1161922005-D	HCL to pH < 2	OK
1161922003-A	HNO3 to pH < 2	OK	1161922005-E	HCL to pH < 2	OK
1161922003-B	HNO3 to pH < 2	OK	1161922005-F	HCL to pH < 2	OK
1161922003-C	HNO3 to pH < 2	OK	1161922005-G	HCL to pH < 2	OK
1161922003-D	HCL to pH < 2	OK	1161922005-H	HCL to pH < 2	OK
1161922003-E	HCL to pH < 2	OK	1161922005-I	HCL to pH < 2	OK
1161922003-F	HCL to pH < 2	OK	1161922005-J	No Preservative Required	OK
1161922003-G	HCL to pH < 2	OK	1161922005-K	No Preservative Required	OK
1161922003-H	HCL to pH < 2	OK	1161922005-L	HCL to pH < 2	OK
1161922003-I	HCL to pH < 2	OK	1161922005-M	HCL to pH < 2	OK
1161922003-J	No Preservative Required	OK	1161922005-N	No Preservative Required	OK
1161922003-K	No Preservative Required	OK	1161922005-O	No Preservative Required	OK
1161922003-L	HCL to pH < 2	OK	1161922005-P	No Preservative Required	OK
1161922003-M	HCL to pH < 2	OK	1161922006-A	HNO3 to pH < 2	OK
1161922003-N	No Preservative Required	OK	1161922007-A	HNO3 to pH < 2	OK
1161922003-O	No Preservative Required	OK	1161922007-B	HNO3 to pH < 2	OK
1161922003-P	No Preservative Required	OK	1161922007-C	HNO3 to pH < 2	OK
1161922003-Q	No Preservative Required	OK	1161922008-A	HNO3 to pH < 2	OK
1161922003-R	No Preservative Required	OK	1161922008-B	HNO3 to pH < 2	OK
1161922003-S	No Preservative Required	OK	1161922008-C	HNO3 to pH < 2	OK
1161922003-T	No Preservative Required	OK	1161922009-A	HNO3 to pH < 2	OK
1161922003-U	No Preservative Required	OK	1161922009-B	HNO3 to pH < 2	OK
1161922003-V	No Preservative Required	OK	1161922009-C	HNO3 to pH < 2	OK
1161922004-A	HNO3 to pH < 2	OK	1161922010-A	HCL to pH < 2	OK
1161922004-B	HNO3 to pH < 2	OK	1161922010-B	HCL to pH < 2	OK
1161922004-C	HNO3 to pH < 2	OK	1161922010-C	HCL to pH < 2	OK
1161922004-D	HCL to pH < 2	OK	1161922011-A	HCL to pH < 2	OK
1161922004-E	HCL to pH < 2	OK	1161922011-B	HCL to pH < 2	OK

Container Id	Preservative	Container Condition
1161922011-C	HCL to pH < 2	OK
1161922012-A	No Preservative Required	OK
1161922012-B	No Preservative Required	OK
1161922012-C	No Preservative Required	OK
1161922012-D	No Preservative Required	OK
1161922012-E	No Preservative Required	OK
1161922012-F	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.
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.

Laboratory Report of Analysis

To: SLR Alaska-Anchorage
2700 Gambell St Suite 200
Anchorage, AK 99503
(907)222-1112

Report Number: **1161924**

Client Project: **105.00148.16001 Kenai Wells**

Dear Jason Gray,

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.

SGS North America Inc.
Environmental Services – Alaska Division
Project Manager

Justin Nelson
2016.05.19
14:18:13 -08'00'

Justin Nelson Date
Project Manager
Justin.Nelson@sgs.com

Print Date: 05/19/2016 8:37:31AM

Case Narrative

SGS Client: **SLR Alaska-Anchorage**
SGS Project: **1161924**
Project Name/Site: **105.00148.16001 Kenai Wells**
Project Contact: **Jason Gray**

Refer to sample receipt form for information on sample condition.

LCSD for HBN 1732348 [XXX/3521 (1321253) LCSD

8270D - LCS/LCSD RPD for pyridine (42.2%) and aniline (20.9%) does not meet QC criteria. The associated sample concentrations for this analyte are less than the LOQ.

1162159001MS (1324698) MS

1631E - LL Mercury - MS recovery is outside of QC criteria due to possible matrix interference. Refer to LCS for accuracy requirements.

1162311001MS (1324703) MS

1631E - LL Mercury - MS recovery is outside of QC criteria due to possible matrix interference. Refer to LCS for accuracy requirements.

1162159001MSD (1324699) MSD

1631E - LL Mercury - MSD recovery is outside of QC criteria due to possible matrix interference. Refer to LCS for accuracy requirements.

1162311001MSD (1324704) MSD

1631E - LL Mercury - MSD recovery is outside of QC criteria due to possible matrix interference. Refer to LCS for accuracy requirements.

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

SGS North America Inc.
200 West Potter Drive, Anchorage, AK 99518
t 907.562.2343 f 907.561.5301 www.us.sgs.com

Report of Manual Integrations

Laboratory ID	Client Sample ID	Analytical Batch	Analyte	Reason
SW8270D				
1321252	LCS for HBN 1732348 [XXX/35213	XMS9274	1-Chloronaphthalene	BLC
1321253	LCSD for HBN 1732348 [XXX/3521	XMS9274	1-Chloronaphthalene	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: 05/19/2016 8:37:33AM

Laboratory Qualifiers

Enclosed are the analytical results associated with the above work order. 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, indenmification 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) & UST-005 (CS) for ADEC and 2944.01 for DOD ELAP/ISO17025 (RCRA methods: 1020B, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035A, 6020A, 7470A, 7471B, 8021B, 8082A, 8260B, 8270D, 8270D-SIM, 9040C, 9045D, 9056A, 9060A, AK101 and AK102/103). 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
D	The analyte concentration is the result of a dilution.
DF	Dilution Factor
DL	Detection Limit (i.e., maximum method detection limit)
E	The analyte result is above the calibrated range.
F	Indicates value that is greater than or equal to the DL
GT	Greater Than
IB	Instrument Blank
ICV	Initial Calibration Verification
J	The quantitation is an estimation.
JL	The analyte was positively identified, but the quantitation is a low estimation.
LCS(D)	Laboratory Control Spike (Duplicate)
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
M	A matrix effect was present.
MB	Method Blank
MS(D)	Matrix Spike (Duplicate)
ND	Indicates the analyte is not detected.
Q	QC parameter out of acceptance range.
R	Rejected
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.

Print Date: 05/19/2016 8:37:34AM

Sample Summary

Client Sample ID	Lab Sample ID	Collected	Received	Matrix
MW62A-0416	1161924001	04/23/2016	04/24/2016	Water (Surface, Eff., Ground)
TB-7	1161924002	04/23/2016	04/24/2016	Water (Surface, Eff., Ground)
TB-8	1161924003	04/23/2016	04/24/2016	Water (Surface, Eff., Ground)
MW62A-0416	1161924004	04/23/2016	04/24/2016	Water (Surface, Eff., Ground)
MW91A-0416	1161924005	04/21/2016	04/24/2016	Water (Surface, Eff., Ground)
MW91Z-0416	1161924006	04/21/2016	04/24/2016	Water (Surface, Eff., Ground)
MW74B-0416	1161924007	04/22/2016	04/24/2016	Water (Surface, Eff., Ground)
MW74B-0416 MS	1161924008	04/22/2016	04/24/2016	Water (Surface, Eff., Ground)
MW74B-0416 MSD	1161924009	04/22/2016	04/24/2016	Water (Surface, Eff., Ground)
MW74A-0416	1161924010	04/22/2016	04/24/2016	Water (Surface, Eff., Ground)
TBHG2	1161924011	04/21/2016	04/24/2016	Water (Surface, Eff., Ground)
MW91A-0416	1161924012	04/21/2016	04/24/2016	Water (Surface, Eff., Ground)
MW91Z-0416	1161924013	04/21/2016	04/24/2016	Water (Surface, Eff., Ground)
MW74B-0416	1161924014	04/21/2016	04/24/2016	Water (Surface, Eff., Ground)
MW74B-0416 MS	1161924015	04/21/2016	04/24/2016	Water (Surface, Eff., Ground)
MW74B-0416 MSD	1161924016	04/21/2016	04/24/2016	Water (Surface, Eff., Ground)
MW74A-0416	1161924017	04/22/2016	04/24/2016	Water (Surface, Eff., Ground)

Method	Method Description
SM21 2320B	Alkalinity as CaCO3 QC
SM21 2340B	Dissolved Hardness as CaCO3 ICP-MS-LowLv
EPA 1631 E	Dissolved Low Level Mercury EPA 1631
AK102	DRO/RRO Low Volume Water
AK103	DRO/RRO Low Volume Water
AK101	Gasoline Range Organics (W)
EPA 300.0	Ion Chromatographic Analysis
EPA 300.0	Ion Chromatographic Analysis (W)
EPA 1631 E	Low Level Mercury EPA 1631
200.8 Low Level	Metals in Water by 200.8 ICP-MS LL
200.8 Low Level	Metals in Water by 200.8 ICP-MS LL DIS
SM21 4500-H B	pH Analysis
SW8270D	SW846-8270 SVOC by GC/MS (W) Liq/Liq ext
SM21 2540C	Total Dissolved Solids SM18 2540C
SM21 2540D	Total Suspended Solids SM20 2540D
SM21 2130B	Turbidity Analysis
SW8260B	Volatile Organic Compounds (W) FULL

SGS North America Inc.
200 West Potter Drive, Anchorage, AK 99518
t 907.562.2343 f 907.561.5301 www.us.sgs.com

Detectable Results Summary

Client Sample ID: **MW62A-0416**
Lab Sample ID: 1161924001

Metals by ICP/MS

Metals Department
Waters Department

Parameter	Result	Units
Aluminum	523	ug/L
Antimony	0.0276J	ug/L
Arsenic	16.9	ug/L
Barium	21.7	ug/L
Boron	39.0	ug/L
Calcium	16600	ug/L
Chromium	4.31	ug/L
Cobalt	0.452	ug/L
Copper	1.36	ug/L
Iron	711	ug/L
Lead	0.287	ug/L
Magnesium	9370	ug/L
Manganese	145	ug/L
Molybdenum	0.892	ug/L
Nickel	4.33	ug/L
Potassium	8560	ug/L
Sodium	6140	ug/L
Vanadium	1.68	ug/L
Zinc	8.72	ug/L
Mercury	1.44	ng/L
Alkalinity	76.3	mg/L
Chloride	5.39	mg/L
Fluoride	0.0860J	mg/L
Nitrite-N	0.0560J	mg/L
pH	8.10	pH units
Sulfate	3.39	mg/L
Total Dissolved Solids	125	mg/L
Total Suspended Solids	41.1	mg/L
Turbidity	4.40	NTU

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t 907.562.2343 **f** 907.561.5301 www.us.sgs.com

Detectable Results Summary

Client Sample ID: **MW62A-0416**
Lab Sample ID: 1161924004
Dissolved Metals
Dissolved Metals by ICP/MS

Parameter	Result	Units
Mercury	0.513J	ng/L
Aluminum	4.42	ug/L
Arsenic	15.1	ug/L
Barium	14.7	ug/L
Boron	34.1	ug/L
Calcium	14300	ug/L
Chromium	0.792	ug/L
Cobalt	0.0860	ug/L
Hardness as CaCO3	69.7	mg/L
Iron	21.3	ug/L
Magnesium	8280	ug/L
Manganese	120	ug/L
Molybdenum	0.596	ug/L
Nickel	1.05	ug/L
Potassium	7530	ug/L
Silicon	14900	ug/L
Sodium	5320	ug/L
Zinc	1.35J	ug/L

Client Sample ID: **MW91A-0416**
Lab Sample ID: 1161924005
Metals Department

Parameter	Result	Units
Mercury	2.64	ng/L

Client Sample ID: **MW91Z-0416**
Lab Sample ID: 1161924006
Metals Department

Parameter	Result	Units
Mercury	2.99	ng/L

Client Sample ID: **MW74B-0416**
Lab Sample ID: 1161924007
Metals Department

Parameter	Result	Units
Mercury	3.33	ng/L

Client Sample ID: **MW74A-0416**
Lab Sample ID: 1161924010
Metals Department

Parameter	Result	Units
Mercury	4.90	ng/L

Client Sample ID: **TBHG2**
Lab Sample ID: 1161924011
Metals Department

Parameter	Result	Units
Mercury	0.506J	ng/L

Client Sample ID: **MW91A-0416**
Lab Sample ID: 1161924012
Dissolved Metals

Parameter	Result	Units
Mercury	0.599J	ng/L

Client Sample ID: **MW91Z-0416**
Lab Sample ID: 1161924013
Dissolved Metals

Parameter	Result	Units
Mercury	0.536J	ng/L

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Detectable Results Summary

Client Sample ID: **MW74A-0416**
Lab Sample ID: 1161924017
Dissolved Metals

Parameter	Result	Units
Mercury	0.547J	ng/L

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Results of **MW62A-0416**

Client Sample ID: **MW62A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161924001
Lab Project ID: 1161924

Collection Date: 04/23/16 11:40
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Metals by ICP/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Aluminum	523		8.00	2.48	ug/L	10		05/18/16 10:09
Antimony	0.0276	J	0.0500	0.0150	ug/L	2.5		05/18/16 09:47
Arsenic	16.9		0.800	0.200	ug/L	2.5		05/18/16 09:47
Barium	21.7		0.250	0.0400	ug/L	2.5		05/18/16 09:47
Beryllium	0.0250	U	0.0500	0.0250	ug/L	2.5		05/18/16 09:47
Bismuth	0.0250	U	0.0500	0.0150	ug/L	2.5		05/18/16 09:47
Boron	39.0		5.00	1.50	ug/L	2.5		05/18/16 09:47
Cadmium	0.0250	U	0.0500	0.0150	ug/L	2.5		05/18/16 09:47
Calcium	16600		50.0	15.0	ug/L	2.5		05/18/16 09:47
Chromium	4.31		0.500	0.150	ug/L	2.5		05/18/16 09:47
Cobalt	0.452		0.0200	0.0100	ug/L	2.5		05/18/16 09:47
Copper	1.36		0.500	0.200	ug/L	2.5		05/18/16 09:47
Iron	711		20.0	6.20	ug/L	2.5		05/18/16 09:47
Lead	0.287		0.100	0.0310	ug/L	2.5		05/18/16 09:47
Magnesium	9370		20.0	6.20	ug/L	2.5		05/18/16 09:47
Manganese	145		0.100	0.0310	ug/L	2.5		05/18/16 09:47
Molybdenum	0.892		0.0500	0.0150	ug/L	2.5		05/18/16 09:47
Nickel	4.33		0.620	0.0620	ug/L	2.5		05/18/16 09:47
Potassium	8560		50.0	15.0	ug/L	2.5		05/18/16 09:47
Selenium	0.500	U	1.00	0.310	ug/L	2.5		05/18/16 09:47
Silver	0.0100	U	0.0200	0.00620	ug/L	2.5		05/18/16 09:47
Sodium	6140		100	31.0	ug/L	2.5		05/18/16 09:47
Thallium	0.0100	U	0.0200	0.00620	ug/L	2.5		05/18/16 09:47
Tin	0.100	U	0.200	0.0620	ug/L	2.5		05/18/16 09:47
Vanadium	1.68		1.00	0.310	ug/L	2.5		05/18/16 09:47
Zinc	8.72		3.10	0.400	ug/L	2.5		05/18/16 09:47

Batch Information

Analytical Batch: MMS9354
Analytical Method: 200.8 Low Level
Analyst: VDL
Analytical Date/Time: 05/18/16 10:09
Container ID: 1161924001-B

Prep Batch: MXX29752
Prep Method: E200.2
Prep Date/Time: 05/17/16 08:07
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 10 mL

Print Date: 05/19/2016 8:37:37AM

J flagging is activated

Results of **MW62A-0416**

Client Sample ID: **MW62A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161924001
Lab Project ID: 1161924

Collection Date: 04/23/16 11:40
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Metals Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Mercury	1.44		1.00	0.500	ng/L	1		04/27/16 20:55

Batch Information

Analytical Batch: MCV5701
Analytical Method: EPA 1631 E
Analyst: NEG
Analytical Date/Time: 04/27/16 20:55
Container ID: 1161924001-A

Prep Batch: MXX29690
Prep Method: METHOD
Prep Date/Time: 04/25/16 17:00
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

Print Date: 05/19/2016 8:37:37AM

J flagging is activated

Results of **MW62A-0416**

Client Sample ID: **MW62A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161924001
Lab Project ID: 1161924

Collection Date: 04/23/16 11:40
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	0.288	U	0.577	0.173	mg/L	1		05/02/16 17:59
Surrogates								
5a Androstane (surr)	91.4		50-150		%	1		05/02/16 17:59

Batch Information

Analytical Batch: XFC12356
Analytical Method: AK102
Analyst: CJSW
Analytical Date/Time: 05/02/16 17:59
Container ID: 1161924001-K

Prep Batch: XXX35229
Prep Method: SW3520C
Prep Date/Time: 04/28/16 09:48
Prep Initial Wt./Vol.: 260 mL
Prep Extract Vol: 1 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Residual Range Organics	0.240	U	0.481	0.144	mg/L	1		05/02/16 17:59
Surrogates								
n-Triacontane-d62 (surr)	93.7		50-150		%	1		05/02/16 17:59

Batch Information

Analytical Batch: XFC12356
Analytical Method: AK103
Analyst: CJSW
Analytical Date/Time: 05/02/16 17:59
Container ID: 1161924001-K

Prep Batch: XXX35229
Prep Method: SW3520C
Prep Date/Time: 04/28/16 09:48
Prep Initial Wt./Vol.: 260 mL
Prep Extract Vol: 1 mL

Print Date: 05/19/2016 8:37:37AM

J flagging is activated

Results of **MW62A-0416**

Client Sample ID: **MW62A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161924001
Lab Project ID: 1161924

Collection Date: 04/23/16 11:40
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,2,4-Trichlorobenzene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 23:27
1,2-Dichlorobenzene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 23:27
1,3-Dichlorobenzene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 23:27
1,4-Dichlorobenzene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 23:27
1-Chloronaphthalene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 23:27
1-Methylnaphthalene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 23:27
2,4,5-Trichlorophenol	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 23:27
2,4,6-Trichlorophenol	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 23:27
2,4-Dichlorophenol	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 23:27
2,4-Dimethylphenol	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 23:27
2,4-Dinitrophenol	0.0253	U	0.0505	0.0152	mg/L	1		05/02/16 23:27
2,4-Dinitrotoluene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 23:27
2,6-Dichlorophenol	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 23:27
2,6-Dinitrotoluene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 23:27
2-Chloronaphthalene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 23:27
2-Chlorophenol	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 23:27
2-Methyl-4,6-dinitrophenol	0.0253	U	0.0505	0.0152	mg/L	1		05/02/16 23:27
2-Methylnaphthalene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 23:27
2-Methylphenol (o-Cresol)	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 23:27
2-Nitroaniline	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 23:27
2-Nitrophenol	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 23:27
3&4-Methylphenol (p&m-Cresol)	0.0101	U	0.0202	0.00626	mg/L	1		05/02/16 23:27
3,3-Dichlorobenzidine	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 23:27
3-Nitroaniline	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 23:27
4-Bromophenyl-phenylether	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 23:27
4-Chloro-3-methylphenol	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 23:27
4-Chloroaniline	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 23:27
4-Chlorophenyl-phenylether	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 23:27
4-Nitroaniline	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 23:27
4-Nitrophenol	0.0253	U	0.0505	0.0152	mg/L	1		05/02/16 23:27
Acenaphthene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 23:27
Acenaphthylene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 23:27
Aniline	0.0253	U	0.0505	0.0152	mg/L	1		05/02/16 23:27
Anthracene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 23:27
Azobenzene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 23:27
Benzo(a)Anthracene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 23:27
Benzo[a]pyrene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 23:27

Print Date: 05/19/2016 8:37:37AM

J flagging is activated

Results of **MW62A-0416**

Client Sample ID: **MW62A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161924001
Lab Project ID: 1161924

Collection Date: 04/23/16 11:40
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Benzo[b]Fluoranthene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 23:27
Benzo[g,h,i]perylene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 23:27
Benzo[k]fluoranthene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 23:27
Benzoic acid	0.0253	U	0.0505	0.0152	mg/L	1		05/02/16 23:27
Benzyl alcohol	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 23:27
Bis(2chloro1methylethyl)Ether	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 23:27
Bis(2-Chloroethoxy)methane	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 23:27
Bis(2-Chloroethyl)ether	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 23:27
bis(2-Ethylhexyl)phthalate	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 23:27
Butylbenzylphthalate	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 23:27
Carbazole	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 23:27
Chrysene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 23:27
Dibenzo[a,h]anthracene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 23:27
Dibenzofuran	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 23:27
Diethylphthalate	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 23:27
Dimethylphthalate	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 23:27
Di-n-butylphthalate	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 23:27
di-n-Octylphthalate	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 23:27
Fluoranthene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 23:27
Fluorene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 23:27
Hexachlorobenzene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 23:27
Hexachlorobutadiene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 23:27
Hexachlorocyclopentadiene	0.0152	U	0.0303	0.00949	mg/L	1		05/02/16 23:27
Hexachloroethane	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 23:27
Indeno[1,2,3-c,d] pyrene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 23:27
Isophorone	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 23:27
Naphthalene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 23:27
Nitrobenzene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 23:27
N-Nitrosodimethylamine	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 23:27
N-Nitroso-di-n-propylamine	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 23:27
N-Nitrosodiphenylamine	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 23:27
Pentachlorophenol	0.0253	U	0.0505	0.0152	mg/L	1		05/02/16 23:27
Phenanthrene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 23:27
Phenol	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 23:27
Pyrene	0.00505	U	0.0101	0.00313	mg/L	1		05/02/16 23:27
Surrogates								
2,4,6-Tribromophenol (surr)	70		43-140		%	1		05/02/16 23:27

Print Date: 05/19/2016 8:37:37AM

J flagging is activated

Results of **MW62A-0416**

Client Sample ID: **MW62A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161924001
Lab Project ID: 1161924

Collection Date: 04/23/16 11:40
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
2-Fluorobiphenyl (surr)	68.8		44-119		%	1		05/02/16 23:27
2-Fluorophenol (surr)	51.7		19-119		%	1		05/02/16 23:27
Nitrobenzene-d5 (surr)	63.9		44-120		%	1		05/02/16 23:27
Phenol-d6 (surr)	56.6		10-115		%	1		05/02/16 23:27
Terphenyl-d14 (surr)	95.1		50-134		%	1		05/02/16 23:27

Batch Information

Analytical Batch: XMS9274
Analytical Method: SW8270D
Analyst: NLL
Analytical Date/Time: 05/02/16 23:27
Container ID: 1161924001-I

Prep Batch: XXX35213
Prep Method: SW3520C
Prep Date/Time: 04/26/16 09:00
Prep Initial Wt./Vol.: 990 mL
Prep Extract Vol: 1 mL

Print Date: 05/19/2016 8:37:37AM

J flagging is activated

Results of **MW62A-0416**

Client Sample ID: **MW62A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161924001
Lab Project ID: 1161924

Collection Date: 04/23/16 11:40
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.0500	U	0.100	0.0310	mg/L	1		04/26/16 04:08
Surrogates								
4-Bromofluorobenzene (surr)	83.4		50-150		%	1		04/26/16 04:08

Batch Information

Analytical Batch: VFC12973
Analytical Method: AK101
Analyst: S.P
Analytical Date/Time: 04/26/16 04:08
Container ID: 1161924001-F

Prep Batch: VXX28738
Prep Method: SW5030B
Prep Date/Time: 04/25/16 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/19/2016 8:37:37AM

J flagging is activated

Results of **MW62A-0416**

Client Sample ID: **MW62A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161924001
Lab Project ID: 1161924

Collection Date: 04/23/16 11:40
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		04/30/16 00:20
1,1,1-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:20
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		04/30/16 00:20
1,1,2-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:20
1,1-Dichloroethane	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:20
1,1-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:20
1,1-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:20
1,2,3-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:20
1,2,3-Trichloropropane	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:20
1,2,4-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:20
1,2,4-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:20
1,2-Dibromo-3-chloropropane	5.00	U	10.0	3.10	ug/L	1		04/30/16 00:20
1,2-Dibromoethane	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:20
1,2-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:20
1,2-Dichloroethane	0.250	U	0.500	0.150	ug/L	1		04/30/16 00:20
1,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:20
1,3,5-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:20
1,3-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:20
1,3-Dichloropropane	0.250	U	0.500	0.150	ug/L	1		04/30/16 00:20
1,4-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1		04/30/16 00:20
2,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:20
2-Butanone (MEK)	5.00	U	10.0	3.10	ug/L	1		04/30/16 00:20
2-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:20
2-Hexanone	5.00	U	10.0	3.10	ug/L	1		04/30/16 00:20
4-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:20
4-Isopropyltoluene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:20
4-Methyl-2-pentanone (MIBK)	5.00	U	10.0	3.10	ug/L	1		04/30/16 00:20
Benzene	0.200	U	0.400	0.120	ug/L	1		04/30/16 00:20
Bromobenzene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:20
Bromochloromethane	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:20
Bromodichloromethane	0.250	U	0.500	0.150	ug/L	1		04/30/16 00:20
Bromoform	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:20
Bromomethane	5.00	U	10.0	3.10	ug/L	1		04/30/16 00:20
Carbon disulfide	5.00	U	10.0	3.10	ug/L	1		04/30/16 00:20
Carbon tetrachloride	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:20
Chlorobenzene	0.250	U	0.500	0.150	ug/L	1		04/30/16 00:20
Chloroethane	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:20

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J flagging is activated

Results of **MW62A-0416**

Client Sample ID: **MW62A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161924001
Lab Project ID: 1161924

Collection Date: 04/23/16 11:40
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroform	0.500	U	1.00	0.300	ug/L	1		04/30/16 00:20
Chloromethane	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:20
cis-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:20
cis-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		04/30/16 00:20
Dibromochloromethane	0.250	U	0.500	0.150	ug/L	1		04/30/16 00:20
Dibromomethane	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:20
Dichlorodifluoromethane	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:20
Ethylbenzene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:20
Freon-113	5.00	U	10.0	3.10	ug/L	1		04/30/16 00:20
Hexachlorobutadiene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:20
Isopropylbenzene (Cumene)	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:20
Methylene chloride	2.50	U	5.00	1.00	ug/L	1		04/30/16 00:20
Methyl-t-butyl ether	5.00	U	10.0	3.10	ug/L	1		04/30/16 00:20
Naphthalene	5.00	U	10.0	3.10	ug/L	1		04/30/16 00:20
n-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:20
n-Propylbenzene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:20
o-Xylene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:20
P & M -Xylene	1.00	U	2.00	0.620	ug/L	1		04/30/16 00:20
sec-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:20
Styrene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:20
tert-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:20
Tetrachloroethene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:20
Toluene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:20
trans-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:20
trans-1,3-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:20
Trichloroethene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:20
Trichlorofluoromethane	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:20
Vinyl acetate	5.00	U	10.0	3.10	ug/L	1		04/30/16 00:20
Vinyl chloride	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:20
Xylenes (total)	1.50	U	3.00	1.00	ug/L	1		04/30/16 00:20
Surrogates								
1,2-Dichloroethane-D4 (surr)	110		81-118		%	1		04/30/16 00:20
4-Bromofluorobenzene (surr)	95.4		85-114		%	1		04/30/16 00:20
Toluene-d8 (surr)	102		89-112		%	1		04/30/16 00:20

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J flagging is activated

Results of **MW62A-0416**

Client Sample ID: **MW62A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161924001
Lab Project ID: 1161924

Collection Date: 04/23/16 11:40
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS15749
Analytical Method: SW8260B
Analyst: NRB
Analytical Date/Time: 04/30/16 00:20
Container ID: 1161924001-D

Prep Batch: VXX28753
Prep Method: SW5030B
Prep Date/Time: 04/29/16 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

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J flagging is activated

Results of **MW62A-0416**

Client Sample ID: **MW62A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161924001
Lab Project ID: 1161924

Collection Date: 04/23/16 11:40
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloride	5.39		0.100	0.0310	mg/L	1		04/24/16 13:21
Fluoride	0.0860	J	0.100	0.0310	mg/L	1		04/24/16 13:21
Nitrate-N	0.0500	U	0.100	0.0310	mg/L	1		04/24/16 13:21
Nitrite-N	0.0560	J	0.100	0.0310	mg/L	1		04/24/16 13:21
Sulfate	3.39		0.100	0.0310	mg/L	1		04/24/16 13:21

Batch Information

Analytical Batch: WIC5532
Analytical Method: EPA 300.0
Analyst: ACF
Analytical Date/Time: 04/24/16 13:21
Container ID: 1161924001-N

Prep Batch: WXX11480
Prep Method: METHOD
Prep Date/Time: 04/24/16 01:11
Prep Initial Wt./Vol.: 10 mL
Prep Extract Vol: 10 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Turbidity	4.40		0.200	0.100	NTU	1		04/24/16 12:35

Batch Information

Analytical Batch: WAT10636
Analytical Method: SM21 2130B
Analyst: MBS
Analytical Date/Time: 04/24/16 12:35
Container ID: 1161924001-O

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Alkalinity	76.3		10.0	3.10	mg/L	1		05/05/16 15:19

Batch Information

Analytical Batch: WTI4451
Analytical Method: SM21 2320B
Analyst: ACF
Analytical Date/Time: 05/05/16 15:19
Container ID: 1161924001-O

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Dissolved Solids	125		10.0	3.10	mg/L	1		04/26/16 09:58

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J flagging is activated

Results of **MW62A-0416**

Client Sample ID: **MW62A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161924001
Lab Project ID: 1161924

Collection Date: 04/23/16 11:40
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Batch Information

Analytical Batch: STS5020
Analytical Method: SM21 2540C
Analyst: MBS
Analytical Date/Time: 04/26/16 09:58
Container ID: 1161924001-O

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Suspended Solids	41.1		1.00	0.310	mg/L	1		04/25/16 12:19

Batch Information

Analytical Batch: STS5018
Analytical Method: SM21 2540D
Analyst: MBS
Analytical Date/Time: 04/25/16 12:19
Container ID: 1161924001-M

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
pH	8.10		0.100	0.100	pH units	1		04/25/16 21:35

Batch Information

Analytical Batch: WTI4443
Analytical Method: SM21 4500-H B
Analyst: ACF
Analytical Date/Time: 04/25/16 21:35
Container ID: 1161924001-O

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J flagging is activated

Results of **TB-7**

Client Sample ID: **TB-7**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161924002
Lab Project ID: 1161924

Collection Date: 04/23/16 11:40
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.0500	U	0.100	0.0310	mg/L	1		04/26/16 01:35
Surrogates								
4-Bromofluorobenzene (surr)	78.1		50-150		%	1		04/26/16 01:35

Batch Information

Analytical Batch: VFC12973
Analytical Method: AK101
Analyst: S.P
Analytical Date/Time: 04/26/16 01:35
Container ID: 1161924002-A

Prep Batch: VXX28738
Prep Method: SW5030B
Prep Date/Time: 04/25/16 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/19/2016 8:37:37AM

J flagging is activated

Results of **TB-8**

Client Sample ID: **TB-8**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161924003
Lab Project ID: 1161924

Collection Date: 04/23/16 11:40
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		04/29/16 20:29
1,1,1-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:29
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		04/29/16 20:29
1,1,2-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:29
1,1-Dichloroethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:29
1,1-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:29
1,1-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:29
1,2,3-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:29
1,2,3-Trichloropropane	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:29
1,2,4-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:29
1,2,4-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:29
1,2-Dibromo-3-chloropropane	5.00	U	10.0	3.10	ug/L	1		04/29/16 20:29
1,2-Dibromoethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:29
1,2-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:29
1,2-Dichloroethane	0.250	U	0.500	0.150	ug/L	1		04/29/16 20:29
1,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:29
1,3,5-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:29
1,3-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:29
1,3-Dichloropropane	0.250	U	0.500	0.150	ug/L	1		04/29/16 20:29
1,4-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1		04/29/16 20:29
2,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:29
2-Butanone (MEK)	5.00	U	10.0	3.10	ug/L	1		04/29/16 20:29
2-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:29
2-Hexanone	5.00	U	10.0	3.10	ug/L	1		04/29/16 20:29
4-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:29
4-Isopropyltoluene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:29
4-Methyl-2-pentanone (MIBK)	5.00	U	10.0	3.10	ug/L	1		04/29/16 20:29
Benzene	0.200	U	0.400	0.120	ug/L	1		04/29/16 20:29
Bromobenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:29
Bromochloromethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:29
Bromodichloromethane	0.250	U	0.500	0.150	ug/L	1		04/29/16 20:29
Bromoform	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:29
Bromomethane	5.00	U	10.0	3.10	ug/L	1		04/29/16 20:29
Carbon disulfide	5.00	U	10.0	3.10	ug/L	1		04/29/16 20:29
Carbon tetrachloride	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:29
Chlorobenzene	0.250	U	0.500	0.150	ug/L	1		04/29/16 20:29
Chloroethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:29

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Results of **TB-8**

Client Sample ID: **TB-8**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161924003
Lab Project ID: 1161924

Collection Date: 04/23/16 11:40
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroform	0.500	U	1.00	0.300	ug/L	1		04/29/16 20:29
Chloromethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:29
cis-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:29
cis-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		04/29/16 20:29
Dibromochloromethane	0.250	U	0.500	0.150	ug/L	1		04/29/16 20:29
Dibromomethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:29
Dichlorodifluoromethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:29
Ethylbenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:29
Freon-113	5.00	U	10.0	3.10	ug/L	1		04/29/16 20:29
Hexachlorobutadiene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:29
Isopropylbenzene (Cumene)	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:29
Methylene chloride	2.50	U	5.00	1.00	ug/L	1		04/29/16 20:29
Methyl-t-butyl ether	5.00	U	10.0	3.10	ug/L	1		04/29/16 20:29
Naphthalene	5.00	U	10.0	3.10	ug/L	1		04/29/16 20:29
n-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:29
n-Propylbenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:29
o-Xylene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:29
P & M -Xylene	1.00	U	2.00	0.620	ug/L	1		04/29/16 20:29
sec-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:29
Styrene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:29
tert-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:29
Tetrachloroethene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:29
Toluene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:29
trans-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:29
trans-1,3-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:29
Trichloroethene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:29
Trichlorofluoromethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:29
Vinyl acetate	5.00	U	10.0	3.10	ug/L	1		04/29/16 20:29
Vinyl chloride	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:29
Xylenes (total)	1.50	U	3.00	1.00	ug/L	1		04/29/16 20:29
Surrogates								
1,2-Dichloroethane-D4 (surr)	109		81-118		%	1		04/29/16 20:29
4-Bromofluorobenzene (surr)	96.2		85-114		%	1		04/29/16 20:29
Toluene-d8 (surr)	100		89-112		%	1		04/29/16 20:29

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J flagging is activated

Results of **TB-8**

Client Sample ID: **TB-8**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161924003
Lab Project ID: 1161924

Collection Date: 04/23/16 11:40
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS15749
Analytical Method: SW8260B
Analyst: NRB
Analytical Date/Time: 04/29/16 20:29
Container ID: 1161924003-C

Prep Batch: VXX28753
Prep Method: SW5030B
Prep Date/Time: 04/29/16 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/19/2016 8:37:37AM

J flagging is activated

Results of **MW62A-0416**

Client Sample ID: **MW62A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161924004
Lab Project ID: 1161924

Collection Date: 04/23/16 11:40
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Dissolved Metals**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Mercury	0.513	J	1.00	0.500	ng/L	1		05/13/16 16:59

Batch Information

Analytical Batch: MCV5707
Analytical Method: EPA 1631 E
Analyst: NEG
Analytical Date/Time: 05/13/16 16:59
Container ID: 1161924004-B

Prep Batch: MXX29757
Prep Method: METHOD
Prep Date/Time: 05/11/16 12:45
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

Print Date: 05/19/2016 8:37:37AM

J flagging is activated

Results of **MW62A-0416**

Client Sample ID: **MW62A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161924004
Lab Project ID: 1161924

Collection Date: 04/23/16 11:40
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

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

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Aluminum	4.42		2.00	0.620	ug/L	2.5		05/18/16 09:49
Antimony	0.0250	U	0.0500	0.0150	ug/L	2.5		05/18/16 09:49
Arsenic	15.1		0.800	0.200	ug/L	2.5		05/18/16 09:49
Barium	14.7		0.250	0.0400	ug/L	2.5		05/18/16 09:49
Beryllium	0.0250	U	0.0500	0.0250	ug/L	2.5		05/18/16 09:49
Bismuth	0.0250	U	0.0500	0.0150	ug/L	2.5		05/18/16 09:49
Boron	34.1		5.00	1.50	ug/L	2.5		05/18/16 09:49
Cadmium	0.0250	U	0.0500	0.0150	ug/L	2.5		05/18/16 09:49
Calcium	14300		50.0	15.0	ug/L	2.5		05/18/16 09:49
Chromium	0.792		0.500	0.150	ug/L	2.5		05/18/16 09:49
Cobalt	0.0860		0.0200	0.0100	ug/L	2.5		05/18/16 09:49
Copper	0.250	U	0.500	0.200	ug/L	2.5		05/18/16 09:49
Iron	21.3		20.0	6.20	ug/L	2.5		05/18/16 09:49
Lead	0.0500	U	0.100	0.0310	ug/L	2.5		05/18/16 09:49
Magnesium	8280		20.0	6.20	ug/L	2.5		05/18/16 09:49
Manganese	120		0.100	0.0310	ug/L	2.5		05/18/16 09:49
Molybdenum	0.596		0.0500	0.0150	ug/L	2.5		05/18/16 09:49
Nickel	1.05		0.620	0.0620	ug/L	2.5		05/18/16 09:49
Potassium	7530		50.0	15.0	ug/L	2.5		05/18/16 09:49
Selenium	0.500	U	1.00	0.310	ug/L	2.5		05/18/16 09:49
Silicon	14900		100	31.0	ug/L	2.5		05/18/16 09:49
Silver	0.0100	U	0.0200	0.00620	ug/L	2.5		05/18/16 09:49
Sodium	5320		100	31.0	ug/L	2.5		05/18/16 09:49
Thallium	0.0100	U	0.0200	0.00620	ug/L	2.5		05/18/16 09:49
Tin	0.100	U	0.200	0.0620	ug/L	2.5		05/18/16 09:49
Vanadium	0.500	U	1.00	0.310	ug/L	2.5		05/18/16 09:49
Zinc	1.35	J	3.10	0.400	ug/L	2.5		05/18/16 09:49

Batch Information

Analytical Batch: MMS9354
Analytical Method: 200.8 Low Level
Analyst: VDL
Analytical Date/Time: 05/18/16 09:49
Container ID: 1161924004-A

Prep Batch: MXX29752
Prep Method: E200.2
Prep Date/Time: 05/17/16 08:07
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 10 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Hardness as CaCO3	69.7		1.00	1.00	mg/L	2.5		05/18/16 09:49

Print Date: 05/19/2016 8:37:37AM

J flagging is activated

Results of **MW62A-0416**

Client Sample ID: **MW62A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161924004
Lab Project ID: 1161924

Collection Date: 04/23/16 11:40
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

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

Batch Information

Analytical Batch: MMS9354
Analytical Method: SM21 2340B
Analyst: VDL
Analytical Date/Time: 05/18/16 09:49
Container ID: 1161924004-A

Prep Batch: MXX29752
Prep Method: E200.2
Prep Date/Time: 05/17/16 08:07
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 10 mL

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Results of **MW91A-0416**

Client Sample ID: **MW91A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161924005
Lab Project ID: 1161924

Collection Date: 04/21/16 18:10
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Metals Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Mercury	2.64		1.00	0.500	ng/L	1		05/13/16 17:03

Batch Information

Analytical Batch: MCV5707
Analytical Method: EPA 1631 E
Analyst: NEG
Analytical Date/Time: 05/13/16 17:03
Container ID: 1161924005-B

Prep Batch: MXX29757
Prep Method: METHOD
Prep Date/Time: 05/11/16 12:45
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

Print Date: 05/19/2016 8:37:37AM

J flagging is activated

Results of **MW91Z-0416**

Client Sample ID: **MW91Z-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161924006
Lab Project ID: 1161924

Collection Date: 04/21/16 18:10
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Metals Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Mercury	2.99		1.00	0.500	ng/L	1		05/13/16 17:08

Batch Information

Analytical Batch: MCV5707
Analytical Method: EPA 1631 E
Analyst: NEG
Analytical Date/Time: 05/13/16 17:08
Container ID: 1161924006-B

Prep Batch: MXX29757
Prep Method: METHOD
Prep Date/Time: 05/11/16 12:45
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

Print Date: 05/19/2016 8:37:37AM

J flagging is activated

Results of **MW74B-0416**

Client Sample ID: **MW74B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161924007
Lab Project ID: 1161924

Collection Date: 04/22/16 13:50
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Metals Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Mercury	3.33		1.00	0.500	ng/L	1		04/27/16 19:52

Batch Information

Analytical Batch: MCV5701
Analytical Method: EPA 1631 E
Analyst: NEG
Analytical Date/Time: 04/27/16 19:52
Container ID: 1161924007-A

Prep Batch: MXX29690
Prep Method: METHOD
Prep Date/Time: 04/25/16 17:00
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

Print Date: 05/19/2016 8:37:37AM

J flagging is activated

Results of **MW74A-0416**

Client Sample ID: **MW74A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161924010
Lab Project ID: 1161924

Collection Date: 04/22/16 11:50
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Metals Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Mercury	4.90		1.00	0.500	ng/L	1		05/13/16 17:12

Batch Information

Analytical Batch: MCV5707
Analytical Method: EPA 1631 E
Analyst: NEG
Analytical Date/Time: 05/13/16 17:12
Container ID: 1161924010-A

Prep Batch: MXX29757
Prep Method: METHOD
Prep Date/Time: 05/11/16 12:45
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

Print Date: 05/19/2016 8:37:37AM

J flagging is activated

Results of **TBHG2**

Client Sample ID: **TBHG2**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161924011
Lab Project ID: 1161924

Collection Date: 04/21/16 18:10
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Metals Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Mercury	0.506	J	1.00	0.500	ng/L	1		05/13/16 17:17

Batch Information

Analytical Batch: MCV5707
Analytical Method: EPA 1631 E
Analyst: NEG
Analytical Date/Time: 05/13/16 17:17
Container ID: 1161924011-A

Prep Batch: MXX29757
Prep Method: METHOD
Prep Date/Time: 05/11/16 12:45
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

Print Date: 05/19/2016 8:37:37AM

J flagging is activated

Results of **MW91A-0416**

Client Sample ID: **MW91A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161924012
Lab Project ID: 1161924

Collection Date: 04/21/16 18:10
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Dissolved Metals**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Mercury	0.599	J	1.00	0.500	ng/L	1		05/13/16 17:21

Batch Information

Analytical Batch: MCV5707
Analytical Method: EPA 1631 E
Analyst: NEG
Analytical Date/Time: 05/13/16 17:21
Container ID: 1161924012-A

Prep Batch: MXX29757
Prep Method: METHOD
Prep Date/Time: 05/11/16 12:45
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

Print Date: 05/19/2016 8:37:37AM

J flagging is activated

Results of **MW91Z-0416**

Client Sample ID: **MW91Z-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161924013
Lab Project ID: 1161924

Collection Date: 04/21/16 18:10
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Dissolved Metals**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Mercury	0.536	J	1.00	0.500	ng/L	1		05/13/16 17:30

Batch Information

Analytical Batch: MCV5707
Analytical Method: EPA 1631 E
Analyst: NEG
Analytical Date/Time: 05/13/16 17:30
Container ID: 1161924013-A

Prep Batch: MXX29757
Prep Method: METHOD
Prep Date/Time: 05/11/16 12:45
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

Print Date: 05/19/2016 8:37:37AM

J flagging is activated

Results of **MW74B-0416**

Client Sample ID: **MW74B-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161924014
Lab Project ID: 1161924

Collection Date: 04/21/16 18:10
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Dissolved Metals**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Mercury	0.500	U	1.00	0.500	ng/L	1		04/27/16 21:00

Batch Information

Analytical Batch: MCV5701
Analytical Method: EPA 1631 E
Analyst: NEG
Analytical Date/Time: 04/27/16 21:00
Container ID: 1161924014-A

Prep Batch: MXX29690
Prep Method: METHOD
Prep Date/Time: 04/25/16 17:00
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

Print Date: 05/19/2016 8:37:37AM

J flagging is activated

Results of **MW74A-0416**

Client Sample ID: **MW74A-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161924017
Lab Project ID: 1161924

Collection Date: 04/22/16 11:50
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Dissolved Metals**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Mercury	0.547	J	1.00	0.500	ng/L	1		05/13/16 17:35

Batch Information

Analytical Batch: MCV5707
Analytical Method: EPA 1631 E
Analyst: NEG
Analytical Date/Time: 05/13/16 17:35
Container ID: 1161924017-A

Prep Batch: MXX29757
Prep Method: METHOD
Prep Date/Time: 05/11/16 12:45
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

Print Date: 05/19/2016 8:37:37AM

J flagging is activated

Method Blank

Blank ID: MB for HBN 1732614 [MXX/29690]
Blank Lab ID: 1321998

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161924001, 1161924007, 1161924014

Results by **EPA 1631 E**

Parameter	Results	LOQ/CL	DL	Units
Mercury	0.500U	1.00	0.500	ng/L

Batch Information

Analytical Batch: MCV5701
Analytical Method: EPA 1631 E
Instrument:
Analyst: NEG
Analytical Date/Time: 4/27/2016 7:03:08PM

Prep Batch: MXX29690
Prep Method: METHOD
Prep Date/Time: 4/25/2016 5:00:00PM
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

Print Date: 05/19/2016 8:37:40AM

Method Blank

Blank ID: MB for HBN 1732614 [MXX/29690]
Blank Lab ID: 1321999

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161924001, 1161924007, 1161924014

Results by **EPA 1631 E**

Parameter	Results	LOQ/CL	DL	Units
Mercury	0.500U	1.00	0.500	ng/L

Batch Information

Analytical Batch: MCV5701
Analytical Method: EPA 1631 E
Instrument:
Analyst: NEG
Analytical Date/Time: 4/27/2016 7:39:13PM

Prep Batch: MXX29690
Prep Method: METHOD
Prep Date/Time: 4/25/2016 5:00:00PM
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

Print Date: 05/19/2016 8:37:40AM

Method Blank

Blank ID: MB for HBN 1732614 [MXX/29690]
Blank Lab ID: 1322002

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161924001, 1161924007, 1161924014

Results by **EPA 1631 E**

Parameter	Results	LOQ/CL	DL	Units
Mercury	0.500U	1.00	0.500	ng/L

Batch Information

Analytical Batch: MCV5701
Analytical Method: EPA 1631 E
Instrument:
Analyst: NEG
Analytical Date/Time: 4/27/2016 8:06:14PM

Prep Batch: MXX29690
Prep Method: METHOD
Prep Date/Time: 4/25/2016 5:00:00PM
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

Print Date: 05/19/2016 8:37:40AM

Method Blank

Blank ID: MB for HBN 1732614 [MXX/29690]
Blank Lab ID: 1322004

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161924001, 1161924007, 1161924014

Results by **EPA 1631 E**

Parameter	Results	LOQ/CL	DL	Units
Mercury	0.500U	1.00	0.500	ng/L

Batch Information

Analytical Batch: MCV5701
Analytical Method: EPA 1631 E
Instrument:
Analyst: NEG
Analytical Date/Time: 4/27/2016 8:42:20PM

Prep Batch: MXX29690
Prep Method: METHOD
Prep Date/Time: 4/25/2016 5:00:00PM
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

Print Date: 05/19/2016 8:37:40AM

Method Blank

Blank ID: MB for HBN 1732614 [MXX/29690]
Blank Lab ID: 1322007

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161924001, 1161924007, 1161924014

Results by **EPA 1631 E**

Parameter	Results	LOQ/CL	DL	Units
Mercury	0.500U	1.00	0.500	ng/L

Batch Information

Analytical Batch: MCV5701
Analytical Method: EPA 1631 E
Instrument:
Analyst: NEG
Analytical Date/Time: 4/27/2016 9:13:59PM

Prep Batch: MXX29690
Prep Method: METHOD
Prep Date/Time: 4/25/2016 5:00:00PM
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

Print Date: 05/19/2016 8:37:40AM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161924 [MXX29690]
Blank Spike Lab ID: 1321996
Date Analyzed: 04/27/2016 16:16

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161924001, 1161924007, 1161924014

Results by **EPA 1631 E**

Blank Spike (ng/L)

Parameter	Spike	Result	Rec (%)	CL
Mercury	25	26.5	106	(77-123)

Batch Information

Analytical Batch: **MCV5701**
Analytical Method: **EPA 1631 E**
Instrument:
Analyst: **NEG**

Prep Batch: **MXX29690**
Prep Method: **METHOD**
Prep Date/Time: **04/25/2016 17:00**
Spike Init Wt./Vol.: 25 ng/L Extract Vol: 50 mL
Dupe Init Wt./Vol.: Extract Vol:

Print Date: 05/19/2016 8:37:42AM

Billable Matrix Spike Summary

Original Sample ID: 1161924007
MS Sample ID: 1161924008 BMS
MSD Sample ID: 1161924009 BMSD

Analysis Date: 04/27/2016 19:52
Analysis Date: 04/27/2016 19:57
Analysis Date: 04/27/2016 20:01
Matrix: Water (Surface, Eff., Ground)

QC for Samples:

Results by **EPA 1631 E**

		Matrix Spike (ng/L)			Spike Duplicate (ng/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Mercury	3.33	25.0	24.6	85	25.0	23.9	82	71-125	3.10	(< 24)

Batch Information

Analytical Batch: MCV5701
Analytical Method: EPA 1631 E
Instrument:
Analyst: NEG
Analytical Date/Time: 4/27/2016 7:57:14PM

Prep Batch: MXX29690
Prep Method: Digestion Low Level Mercury (W)
Prep Date/Time: 4/25/2016 5:00:00PM
Prep Initial Wt./Vol.: 50.00mL
Prep Extract Vol: 50.00mL

Print Date: 05/19/2016 8:37:43AM

Billable Matrix Spike Summary

Original Sample ID: 1161924014
MS Sample ID: 1161924015 BMS
MSD Sample ID: 1161924016 BMSD

Analysis Date: 04/27/2016 21:00
Analysis Date: 04/27/2016 21:04
Analysis Date: 04/27/2016 21:09
Matrix: Water (Surface, Eff., Ground)

QC for Samples:

Results by **EPA 1631 E**

		Matrix Spike (ng/L)			Spike Duplicate (ng/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Mercury	0.500U	25.0	22.3	89	25.0	22.5	90	71-125	0.84	(< 24)

Batch Information

Analytical Batch: MCV5701
Analytical Method: EPA 1631 E
Instrument:
Analyst: NEG
Analytical Date/Time: 4/27/2016 9:04:57PM

Prep Batch: MXX29690
Prep Method: Digestion Dissolved Low Level Mercury W
Prep Date/Time: 4/25/2016 5:00:00PM
Prep Initial Wt./Vol.: 50.00mL
Prep Extract Vol: 50.00mL

Print Date: 05/19/2016 8:37:43AM

Method Blank

Blank ID: MB for HBN 1734140 [MXX/29752]
Blank Lab ID: 1324619

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161924001, 1161924004

Results by **200.8 Low Level**

Parameter	Results	LOQ/CL	DL	Units
Aluminum	1.27J	2.00	0.620	ug/L
Antimony	0.0250U	0.0500	0.0150	ug/L
Arsenic	0.400U	0.800	0.200	ug/L
Barium	0.125U	0.250	0.0400	ug/L
Beryllium	0.0250U	0.0500	0.0250	ug/L
Bismuth	0.0250U	0.0500	0.0150	ug/L
Boron	2.50U	5.00	1.50	ug/L
Cadmium	0.0250U	0.0500	0.0150	ug/L
Calcium	24.8J	50.0	15.0	ug/L
Chromium	0.250U	0.500	0.150	ug/L
Cobalt	0.0100U	0.0200	0.0100	ug/L
Copper	0.250U	0.500	0.200	ug/L
Iron	10.0U	20.0	6.20	ug/L
Lead	0.0500U	0.100	0.0310	ug/L
Magnesium	10.0U	20.0	6.20	ug/L
Manganese	0.0326J	0.100	0.0310	ug/L
Molybdenum	0.0250U	0.0500	0.0150	ug/L
Nickel	0.310U	0.620	0.0620	ug/L
Potassium	25.0U	50.0	15.0	ug/L
Selenium	0.500U	1.00	0.310	ug/L
Silicon	50.0U	100	31.0	ug/L
Silver	0.0140J	0.0200	0.00620	ug/L
Sodium	50.0U	100	31.0	ug/L
Thallium	0.0100U	0.0200	0.00620	ug/L
Tin	0.100U	0.200	0.0620	ug/L
Vanadium	0.500U	1.00	0.310	ug/L
Zinc	1.09J	3.10	0.400	ug/L

Batch Information

Analytical Batch: MMS9353
Analytical Method: 200.8 Low Level
Instrument: Perkin Elmer Nexlon P5
Analyst: VDL
Analytical Date/Time: 5/17/2016 6:06:51PM

Prep Batch: MXX29752
Prep Method: E200.2
Prep Date/Time: 5/17/2016 8:07:44AM
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 10 mL

SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
t 907.562.2343 f 907.561.5301 www.us.sgs.com

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161924 [MXX29752]
Blank Spike Lab ID: 1324620
Date Analyzed: 05/17/2016 18:09

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161924001, 1161924004

Results by **200.8 Low Level**

Blank Spike (ug/L)

Parameter	Spike	Result	Rec (%)	CL
Aluminum	50	51.2	102	(85-115)
Antimony	5	5.52	110	(85-115)
Arsenic	25	25.8	103	(85-115)
Barium	25	25.8	103	(85-115)
Beryllium	12.5	12.6	101	(85-115)
Bismuth	12.5	12.6	101	(85-115)
Boron	50	49.9	100	(85-115)
Cadmium	12.5	13.2	105	(85-115)
Calcium	5000	4660	93	(85-115)
Chromium	12.5	12.1	97	(85-115)
Cobalt	12.5	13.3	106	(85-115)
Copper	25	24.6	98	(85-115)
Iron	500	515	103	(85-115)
Lead	5	5.14	103	(85-115)
Magnesium	5000	4880	98	(85-115)
Manganese	50	51.3	103	(85-115)
Molybdenum	12.5	12.7	102	(85-115)
Nickel	12.5	12.9	103	(85-115)
Potassium	5000	5040	101	(85-115)
Selenium	25	26.3	105	(85-115)
Silicon	2500	2470	99	(85-115)
Silver	5	5.35	107	(85-115)
Sodium	5000	4970	99	(85-115)
Thallium	2.5	2.59	103	(85-115)
Tin	12.5	13.3	106	(85-115)
Vanadium	25	24.0	96	(85-115)
Zinc	50	49.9	100	(85-115)

Batch Information

Analytical Batch: **MMS9353**
Analytical Method: **200.8 Low Level**
Instrument: **Perkin Elmer Nexlon P5**
Analyst: **VDL**

Prep Batch: **MXX29752**
Prep Method: **E200.2**
Prep Date/Time: **05/17/2016 08:07**
Spike Init Wt./Vol.: 50 ug/L Extract Vol: 10 mL
Dupe Init Wt./Vol.: Extract Vol:

Print Date: 05/19/2016 8:37:48AM

Matrix Spike Summary

Original Sample ID: 1161853001
MS Sample ID: 1324621 MS
MSD Sample ID: 1324622 MSD

Analysis Date: 05/17/2016 18:12
Analysis Date: 05/17/2016 18:15
Analysis Date: 05/17/2016 18:18
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161924001, 1161924004

Results by **200.8 Low Level**

		Matrix Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Aluminum	6.51	50.0	57.5	102	50.0	54.5	96	70-130	5.30	(< 20)
Antimony	0.0250U	5.00	5.74	115	5.00	5.17	103	70-130	10.40	(< 20)
Arsenic	0.400U	25.0	25.4	102	25.0	23.8	95	70-130	6.60	(< 20)
Barium	0.207J	25.0	27.8	110	25.0	25.0	99	70-130	10.60	(< 20)
Beryllium	0.0250U	12.5	12.5	100	12.5	11.8	95	70-130	5.30	(< 20)
Bismuth	0.0250U	12.5	13.2	105	12.5	12.2	98	70-130	7.50	(< 20)
Boron	2.50U	50.0	49.3	99	50.0	47.4	95	70-130	4.10	(< 20)
Cadmium	0.0250U	12.5	13.7	110	12.5	12.3	98	70-130	10.80	(< 20)
Calcium	25.0U	5000	4930	99	5000	4550	91	70-130	7.90	(< 20)
Chromium	0.250U	12.5	13.1	105	12.5	11.9	95	70-130	9.20	(< 20)
Cobalt	0.0100U	12.5	13.2	105	12.5	12.5	100	70-130	4.90	(< 20)
Copper	0.208J	25.0	25.5	101	25.0	24.0	95	70-130	5.90	(< 20)
Iron	12.6J	500	549	107	500	533	104	70-130	3.00	(< 20)
Lead	0.0500U	5.00	5.38	108	5.00	5.02	100	70-130	6.80	(< 20)
Magnesium	10.0U	5000	5100	102	5000	4720	94	70-130	7.80	(< 20)
Manganese	0.120	50.0	51.7	103	50.0	49.6	99	70-130	4.20	(< 20)
Molybdenum	0.0250U	12.5	13.2	105	12.5	12.6	101	70-130	4.60	(< 20)
Nickel	0.310U	12.5	13.7	110	12.5	12.4	99	70-130	10.60	(< 20)
Potassium	25.0U	5000	5340	107	5000	5050	101	70-130	5.60	(< 20)
Selenium	0.500U	25.0	25.4	102	25.0	24.5	98	70-130	4.00	(< 20)
Silver	0.00738J	5.00	5.55	111	5.00	4.97	99	70-130	11.10	(< 20)
Sodium	50.0U	5000	4980	100	5000	4740	95	70-130	5.00	(< 20)
Thallium	0.0100U	2.50	2.69	107	2.50	2.51	100	70-130	6.90	(< 20)
Tin	0.100U	12.5	14	112	12.5	12.5	100	70-130	11.20	(< 20)
Vanadium	0.347J	25.0	26.3	104	25.0	24.6	97	70-130	6.50	(< 20)
Zinc	0.622J	50.0	49.8	98	50.0	47.1	93	70-130	5.60	(< 20)

Batch Information

Analytical Batch: MMS9353
Analytical Method: 200.8 Low Level
Instrument: Perkin Elmer NexIon P5
Analyst: VDL
Analytical Date/Time: 5/17/2016 6:15:32PM

Prep Batch: MXX29752
Prep Method: LL Digest for Metals on ICP-MS
Prep Date/Time: 5/17/2016 8:07:44AM
Prep Initial Wt./Vol.: 50.00mL
Prep Extract Vol: 10.00mL

Print Date: 05/19/2016 8:37:49AM

Method Blank

Blank ID: MB for HBN 1734158 [MXX/29757]
Blank Lab ID: 1324696

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161924004, 1161924005, 1161924006, 1161924010, 1161924011, 1161924012, 1161924013, 1161924017

Results by **EPA 1631 E**

Parameter	Results	LOQ/CL	DL	Units
Mercury	0.500U	1.00	0.500	ng/L

Batch Information

Analytical Batch: MCV5707
Analytical Method: EPA 1631 E
Instrument:
Analyst: NEG
Analytical Date/Time: 5/13/2016 4:50:31PM

Prep Batch: MXX29757
Prep Method: METHOD
Prep Date/Time: 5/11/2016 12:45:00PM
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

Print Date: 05/19/2016 8:37:52AM

Method Blank

Blank ID: MB for HBN 1734158 [MXX/29757]
Blank Lab ID: 1324697

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161924004, 1161924005, 1161924006, 1161924010, 1161924011, 1161924012, 1161924013, 1161924017

Results by **EPA 1631 E**

Parameter	Results	LOQ/CL	DL	Units
Mercury	0.500U	1.00	0.500	ng/L

Batch Information

Analytical Batch: MCV5707
Analytical Method: EPA 1631 E
Instrument:
Analyst: NEG
Analytical Date/Time: 5/13/2016 5:26:20PM

Prep Batch: MXX29757
Prep Method: METHOD
Prep Date/Time: 5/11/2016 12:45:00PM
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

Print Date: 05/19/2016 8:37:52AM

Method Blank

Blank ID: MB for HBN 1734158 [MXX/29757]
Blank Lab ID: 1324701

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161924004, 1161924005, 1161924006, 1161924010, 1161924011, 1161924012, 1161924013, 1161924017

Results by **EPA 1631 E**

Parameter	Results	LOQ/CL	DL	Units
Mercury	0.500U	1.00	0.500	ng/L

Batch Information

Analytical Batch: MCV5707
Analytical Method: EPA 1631 E
Instrument:
Analyst: NEG
Analytical Date/Time: 5/13/2016 6:06:39PM

Prep Batch: MXX29757
Prep Method: METHOD
Prep Date/Time: 5/11/2016 12:45:00PM
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

Print Date: 05/19/2016 8:37:52AM

Method Blank

Blank ID: MB for HBN 1734158 [MXX/29757]
Blank Lab ID: 1324702

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161924004, 1161924005, 1161924006, 1161924010, 1161924011, 1161924012, 1161924013, 1161924017

Results by **EPA 1631 E**

Parameter	Results	LOQ/CL	DL	Units
Mercury	0.500U	1.00	0.500	ng/L

Batch Information

Analytical Batch: MCV5707
Analytical Method: EPA 1631 E
Instrument:
Analyst: NEG
Analytical Date/Time: 5/13/2016 6:29:48PM

Prep Batch: MXX29757
Prep Method: METHOD
Prep Date/Time: 5/11/2016 12:45:00PM
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

Print Date: 05/19/2016 8:37:52AM

Method Blank

Blank ID: MB for HBN 1734158 [MXX/29757]
Blank Lab ID: 1324706

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161924004, 1161924005, 1161924006, 1161924010, 1161924011, 1161924012, 1161924013, 1161924017

Results by **EPA 1631 E**

Parameter	Results	LOQ/CL	DL	Units
Mercury	0.587J	1.00	0.500	ng/L

Batch Information

Analytical Batch: MCV5707
Analytical Method: EPA 1631 E
Instrument:
Analyst: NEG
Analytical Date/Time: 5/13/2016 7:24:36PM

Prep Batch: MXX29757
Prep Method: METHOD
Prep Date/Time: 5/11/2016 12:45:00PM
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

Print Date: 05/19/2016 8:37:52AM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161924 [MXX290] 0b
Blank Spike La3 ID: 1t 24694
DaAe y nalzde/ : 7] Rt R2716 16:41

MaAiW (aAer cSxrfa, eE. ffGE) roxn/ P

5 C for Sa%pleu: 1161924774E116192477] E1161924776E1161924717E1161924711E1161924712E116192471t E 1161924710

s euxlAu 3z **EPA 1631 E**

Blank Spike cnQRLP

marа%eAer	Spike	s euxlA	s e, cg P	CL
Mer, xrz	2]	2] G	17t	c00-12t P

Batch Information

y nalzA, al BaA,h: **MCV5707**
y nalzA, al MeAno/ : **EPA 1631 E**
InuAx%enA
y nalzuA **NEG**

mrep BaA,h: **MXX29757**
mrep MeAno/ : **METHOD**
mrep DaAeRTi%e: **054142016 12/: 5**
Spike IniA(AGVolG 2] nQRL . Wka, AVol:] 7 %L
Dxpe IniA(AGVolG . Wka, AVol:

Matrix Spike Summary

Original Sample ID: 1162159001
MS Sample ID: 1324698 MS
MSD Sample ID: 1324699 MSD

Analysis Date: 05/13/2016 18:47
Analysis Date: 05/13/2016 18:52
Analysis Date: 05/13/2016 18:56
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161924004, 1161924005, 1161924006, 1161924010, 1161924011, 1161924012, 1161924013, 1161924017

Results by **EPA 1631 E**

		Matrix Spike (ng/L)			Spike Duplicate (ng/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Mercury	91.7	25.0	137	182 *	25.0	137	182 *	71-125	0.04	(< 24)

Batch Information

Analytical Batch: MCV5707
Analytical Method: EPA 1631 E
Instrument:
Analyst: NEG
Analytical Date/Time: 5/13/2016 6:52:14PM

Prep Batch: MXX29757
Prep Method: Digestion Low Level Mercury (W)
Prep Date/Time: 5/11/2016 12:45:00PM
Prep Initial Wt./Vol.: 50.00mL
Prep Extract Vol: 50.00mL

Print Date: 05/19/2016 8:37:55AM

Matrix Spike Summary

Original Sample ID: 1162311001
MS Sample ID: 1324703 MS
MSD Sample ID: 1324704 MSD

Analysis Date: 05/13/2016 18:34
Analysis Date: 05/13/2016 18:38
Analysis Date: 05/13/2016 18:43
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161924004, 1161924005, 1161924006, 1161924010, 1161924011, 1161924012, 1161924013, 1161924017

Results by **EPA 1631 E**

		Matrix Spike (ng/L)				Spike Duplicate (ng/L)					
Parameter	Sample	Spike	Result	Rec (%)		Spike	Result	Rec (%)		RPD (%)	RPD CL
Mercury	9.14	25.0	18.4	37	*	25.0	18.6	38	*	0.92	(< 24)

CL: 71-125

Batch Information

Analytical Batch: MCV5707
Analytical Method: EPA 1631 E
Instrument:
Analyst: NEG
Analytical Date/Time: 5/13/2016 6:38:46PM

Prep Batch: MXX29757
Prep Method: Digestion Low Level Mercury (W)
Prep Date/Time: 5/11/2016 12:45:00PM
Prep Initial Wt./Vol.: 50.00mL
Prep Extract Vol: 50.00mL

Print Date: 05/19/2016 8:37:55AM

Method Blank

Blank ID: MB for HBN 1732271 [STS/5018]
Blank Lab ID: 1321127

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161924001

Results by **SM21 2540D**

Parameter	Results	LOQ/CL	DL	Units
Total Suspended Solids	0.500U	1.00	0.310	mg/L

Batch Information

Analytical Batch: STS5018
Analytical Method: SM21 2540D
Instrument:
Analyst: MBS
Analytical Date/Time: 4/25/2016 12:19:31PM

SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
t 907.562.2343 **f** 907.561.5301 www.us.sgs.com

Duplicate Sample Summary

Original Sample ID: 1161861007
Duplicate Sample ID: 1321130
QC for Samples:

Analysis Date: 04/25/2016 12:19
Matrix: Water (Surface, Eff., Ground)

Results by **SM21 2540D**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
Total Suspended Solids	6300	6200	mg/L	1.60	(< 5)

Batch Information

Analytical Batch: STS5018
Analytical Method: SM21 2540D
Instrument:
Analyst: MBS

Print Date: 05/19/2016 8:37:57AM

Duplicate Sample Summary

Original Sample ID: 1161861008
Duplicate Sample ID: 1321131
QC for Samples:
1161924001

Analysis Date: 04/25/2016 12:19
Matrix: Water (Surface, Eff., Ground)

Results by **SM21 2540D**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
Total Suspended Solids	6450	6350	mg/L	1.60	(< 5)

Batch Information

Analytical Batch: STS5018
Analytical Method: SM21 2540D
Instrument:
Analyst: MBS

Print Date: 05/19/2016 8:37:57AM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161924 [STS5018]
Blank Spike Lab ID: 1321128
Date Analyzed: 04/25/2016 12:19

Spike Duplicate ID: LCSD for HBN 1161924 [STS5018]
Spike Duplicate Lab ID: 1321129
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161924001

Results by **SM21 2540D**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Total Suspended Solids	50	49.3	99	50	49.6	99	(75-125)	0.61	(< 5)

Batch Information

Analytical Batch: **STS5018**
Analytical Method: **SM21 2540D**
Instrument:
Analyst: **MBS**

Prep Batch:
Prep Method:
Prep Date/Time:
Spike Init Wt./Vol.: 50 mg/L Extract Vol: 1000 mL
Dupe Init Wt./Vol.: 50 mg/L Extract Vol: 1000 mL

Print Date: 05/19/2016 8:37:58AM

Method Blank

Blank ID: MB for HBN 17323[2 ST/ T5[0208
Blank] aL ID: 13212b7

Ma4ti : x a4er W(rfauec, ffEc. ro(nGd

QC for Tamples:
11b1629001

) es(l4s LR SM21 2540C

Oarame4er	) es(l4s	] UQ5C]	D]	y nt4s
/ o4al DtssolPeG ToltGs	[E0y	10E0	3E10	mg5]

Batch Information

AnalR4tual Ba4uh: T/ T[020
AnalR4tual Me4hoG: TM21 2[90C
Ins4(men4:
AnalRs4: MBT
AnalR4tual Da4e5 tme: 952b5201b 6:[v:[bAM

Ortn4Da4e: 0[5165201b v:37:[6AM

Duplicate Sample Summary

Original Sample ID: 116180677u
Dcplit a3e Sample ID: 12u1u01
QC for Samples:
11615u4771

Analysis Da3e: 74/u6/u716 75:98
Ma3ix: Wa3er (Scrfat e, Eff., Grocnd)

Rescl3s by **SM21 2540C**

NAME	Original	Dcplit a3e	Uni3s	RPD (%)	RPD CL
To3al Dissol<ed Solids	161	164	mg/L	1.87	(B 9)

Batch Information

Analy3t al ha3 v: STS97u7
Analy3t al Me3vod: SMu1 u947C
Ins3rcmen3
Analys3 MhS

Prin3Da3e: 79/15/u716 8:28:71AM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161924 [STS50208
Blank Spike La] ID: 1b21263
Date Analyzed: 04/26/2016 09:53

Spike Duplicate ID: LCSD for HBN 1161924 [STS50208
Spike Duplicate La] ID: 1b21269
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161924001

Results] y **SM21 2540C**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Total Dissol7ed Solids	bb0	bb0	100	bb0	b29	100	(- 5<125)	0.b0	(h 5)

Batch Information

Analytical BatcV: **STS5020**
Analytical MetVod: **SM21 2540C**
Instrument:
Analyst: **MBS**

Prep BatcV:
Prep MetVod:
Prep Date/Time:
Spike Init Wt./v ol.: bb0 mg/L Extract v ol: 100 mL
Dupe Init Wt./v ol.: bb0 mg/L Extract v ol: 100 mL

Print Date: 05/19/2016 3:b3:01AM

Method Blank

Blank ID: MB for HBN 1732377 [VXX/28738]
Blank Lab ID: 1321412

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161924001, 1161924002

Results by **AK101**

Parameter	Results	LOQ/CL	DL	Units
Gasoline Range Organics	0.0500U	0.100	0.0310	mg/L
Surrogates				
4-Bromofluorobenzene (surr)	80.5	50-150		%

Batch Information

Analytical Batch: VFC12973
Analytical Method: AK101
Instrument: Agilent 7890A PID/FID
Analyst: S.P
Analytical Date/Time: 4/26/2016 12:19:00AM

Prep Batch: VXX28738
Prep Method: SW5030B
Prep Date/Time: 4/25/2016 8:00:00AM
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/19/2016 8:38:03AM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161924 [VXX28738]
Blank Spike Lab ID: 1321415
Date Analyzed: 04/25/2016 23:41

Spike Duplicate ID: LCSD for HBN 1161924 [VXX28738]
Spike Duplicate Lab ID: 1321416
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161924001, 1161924002

Results by **AK101**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Gasoline Range Organics	1.00	1.00	100	1.00	1.01	101	(60-120)	1.20	(< 20)
Surrogates									
4-Bromofluorobenzene (surr)	0.0500	89.6	90	0.0500	87.2	87	(50-150)	2.70	

Batch Information

Analytical Batch: **VFC12973**
Analytical Method: **AK101**
Instrument: **Agilent 7890A PID/FID**
Analyst: **S.P**

Prep Batch: **VXX28738**
Prep Method: **SW5030B**
Prep Date/Time: **04/25/2016 08:00**
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: 05/19/2016 8:38:05AM

Method Blank

Blank ID: MB for HBN 1732644 [VXX/28753]
Blank Lab ID: 1322176

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161924001, 1161924003

Results by **SW8260B**

Parameter	Results	LOQ/CL	DL	Units
1,1,1,2-Tetrachloroethane	0.250U	0.500	0.150	ug/L
1,1,1-Trichloroethane	0.500U	1.00	0.310	ug/L
1,1,2,2-Tetrachloroethane	0.250U	0.500	0.150	ug/L
1,1,2-Trichloroethane	0.500U	1.00	0.310	ug/L
1,1-Dichloroethane	0.500U	1.00	0.310	ug/L
1,1-Dichloroethene	0.500U	1.00	0.310	ug/L
1,1-Dichloropropene	0.500U	1.00	0.310	ug/L
1,2,3-Trichlorobenzene	0.500U	1.00	0.310	ug/L
1,2,3-Trichloropropane	0.500U	1.00	0.310	ug/L
1,2,4-Trichlorobenzene	0.500U	1.00	0.310	ug/L
1,2,4-Trimethylbenzene	0.500U	1.00	0.310	ug/L
1,2-Dibromo-3-chloropropane	5.00U	10.0	3.10	ug/L
1,2-Dibromoethane	0.500U	1.00	0.310	ug/L
1,2-Dichlorobenzene	0.500U	1.00	0.310	ug/L
1,2-Dichloroethane	0.250U	0.500	0.150	ug/L
1,2-Dichloropropane	0.500U	1.00	0.310	ug/L
1,3,5-Trimethylbenzene	0.500U	1.00	0.310	ug/L
1,3-Dichlorobenzene	0.500U	1.00	0.310	ug/L
1,3-Dichloropropane	0.250U	0.500	0.150	ug/L
1,4-Dichlorobenzene	0.250U	0.500	0.150	ug/L
2,2-Dichloropropane	0.500U	1.00	0.310	ug/L
2-Butanone (MEK)	5.00U	10.0	3.10	ug/L
2-Chlorotoluene	0.500U	1.00	0.310	ug/L
2-Hexanone	5.00U	10.0	3.10	ug/L
4-Chlorotoluene	0.500U	1.00	0.310	ug/L
4-Isopropyltoluene	0.500U	1.00	0.310	ug/L
4-Methyl-2-pentanone (MIBK)	5.00U	10.0	3.10	ug/L
Benzene	0.200U	0.400	0.120	ug/L
Bromobenzene	0.500U	1.00	0.310	ug/L
Bromochloromethane	0.500U	1.00	0.310	ug/L
Bromodichloromethane	0.250U	0.500	0.150	ug/L
Bromoform	0.500U	1.00	0.310	ug/L
Bromomethane	5.00U	10.0	3.10	ug/L
Carbon disulfide	5.00U	10.0	3.10	ug/L
Carbon tetrachloride	0.500U	1.00	0.310	ug/L
Chlorobenzene	0.250U	0.500	0.150	ug/L
Chloroethane	0.500U	1.00	0.310	ug/L
Chloroform	0.500U	1.00	0.300	ug/L

Method Blank

Blank ID: MB for HBN 1732644 [VXX/28753]
Blank Lab ID: 1322176

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161924001, 1161924003

Results by **SW8260B**

Parameter	Results	LOQ/CL	DL	Units
Chloromethane	0.500U	1.00	0.310	ug/L
cis-1,2-Dichloroethene	0.500U	1.00	0.310	ug/L
cis-1,3-Dichloropropene	0.250U	0.500	0.150	ug/L
Dibromochloromethane	0.250U	0.500	0.150	ug/L
Dibromomethane	0.500U	1.00	0.310	ug/L
Dichlorodifluoromethane	0.500U	1.00	0.310	ug/L
Ethylbenzene	0.500U	1.00	0.310	ug/L
Freon-113	5.00U	10.0	3.10	ug/L
Hexachlorobutadiene	0.500U	1.00	0.310	ug/L
Isopropylbenzene (Cumene)	0.500U	1.00	0.310	ug/L
Methylene chloride	2.50U	5.00	1.00	ug/L
Methyl-t-butyl ether	5.00U	10.0	3.10	ug/L
Naphthalene	5.00U	10.0	3.10	ug/L
n-Butylbenzene	0.500U	1.00	0.310	ug/L
n-Propylbenzene	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
sec-Butylbenzene	0.500U	1.00	0.310	ug/L
Styrene	0.500U	1.00	0.310	ug/L
tert-Butylbenzene	0.500U	1.00	0.310	ug/L
Tetrachloroethene	0.500U	1.00	0.310	ug/L
Toluene	0.500U	1.00	0.310	ug/L
trans-1,2-Dichloroethene	0.500U	1.00	0.310	ug/L
trans-1,3-Dichloropropene	0.500U	1.00	0.310	ug/L
Trichloroethene	0.500U	1.00	0.310	ug/L
Trichlorofluoromethane	0.500U	1.00	0.310	ug/L
Vinyl acetate	5.00U	10.0	3.10	ug/L
Vinyl chloride	0.500U	1.00	0.310	ug/L
Xylenes (total)	1.50U	3.00	1.00	ug/L
Surrogates				
1,2-Dichloroethane-D4 (surr)	109	81-118		%
4-Bromofluorobenzene (surr)	95.4	85-114		%
Toluene-d8 (surr)	99.9	89-112		%

SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
t 907.562.2343 f 907.561.5301 www.us.sgs.com

Method Blank

Blank ID: MB for HBN 1732644 [VXX/28753]
Blank Lab ID: 1322176

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161924001, 1161924003

Results by **SW8260B**

Parameter	Results	LOQ/CL	DL	Units

Batch Information

Analytical Batch: VMS15749
Analytical Method: SW8260B
Instrument: VPA 780/5975 GC/MS
Analyst: NRB
Analytical Date/Time: 4/29/2016 5:42:00PM

Prep Batch: VXX28753
Prep Method: SW5030B
Prep Date/Time: 4/29/2016 8:00:00AM
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/19/2016 8:38:07AM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161924 [VXX28753]
Blank Spike Lab ID: 1322177
Date Analyzed: 04/29/2016 18:19

Spike Duplicate ID: LCSD for HBN 1161924 [VXX28753]
Spike Duplicate Lab ID: 1322178
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161924001, 1161924003

Results by **SW8260B**

	Blank Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
1,1,1,2-Tetrachloroethane	30	32.3	108	30	32.8	109	(78-124)	1.40	(< 20)
1,1,1-Trichloroethane	30	31.3	104	30	32.8	109	(74-131)	4.60	(< 20)
1,1,2,2-Tetrachloroethane	30	29.2	97	30	30.5	102	(71-121)	4.20	(< 20)
1,1,2-Trichloroethane	30	31.5	105	30	31.6	105	(80-119)	0.32	(< 20)
1,1-Dichloroethane	30	31.3	104	30	32.2	107	(77-125)	2.70	(< 20)
1,1-Dichloroethene	30	29.5	98	30	30.9	103	(71-131)	4.50	(< 20)
1,1-Dichloropropene	30	30.4	101	30	31.6	105	(79-125)	3.80	(< 20)
1,2,3-Trichlorobenzene	30	32.3	108	30	33.6	112	(69-129)	4.00	(< 20)
1,2,3-Trichloropropane	30	29.8	99	30	31.2	104	(73-122)	4.60	(< 20)
1,2,4-Trichlorobenzene	30	31.7	106	30	33.4	111	(69-130)	5.10	(< 20)
1,2,4-Trimethylbenzene	30	28.4	95	30	29.5	98	(79-124)	3.70	(< 20)
1,2-Dibromo-3-chloropropane	30	28.6	95	30	30.2	101	(62-128)	5.20	(< 20)
1,2-Dibromoethane	30	33.0	110	30	33.2	111	(77-121)	0.60	(< 20)
1,2-Dichlorobenzene	30	30.3	101	30	31.2	104	(80-119)	3.10	(< 20)
1,2-Dichloroethane	30	32.0	107	30	33.2	111	(73-128)	3.90	(< 20)
1,2-Dichloropropane	30	33.0	110	30	33.9	113	(78-122)	2.50	(< 20)
1,3,5-Trimethylbenzene	30	28.3	94	30	29.2	97	(75-124)	3.30	(< 20)
1,3-Dichlorobenzene	30	29.4	98	30	31.3	104	(80-119)	6.30	(< 20)
1,3-Dichloropropane	30	30.7	102	30	30.6	102	(80-119)	0.36	(< 20)
1,4-Dichlorobenzene	30	30.3	101	30	31.9	106	(79-118)	5.00	(< 20)
2,2-Dichloropropane	30	29.6	99	30	32.3	108	(60-139)	8.50	(< 20)
2-Butanone (MEK)	90	105	117	90	107	119	(56-143)	2.20	(< 20)
2-Chlorotoluene	30	29.6	99	30	30.6	102	(79-122)	3.20	(< 20)
2-Hexanone	90	101	112	90	102	113	(57-139)	1.40	(< 20)
4-Chlorotoluene	30	30.2	101	30	31.5	105	(78-122)	4.10	(< 20)
4-Isopropyltoluene	30	28.0	93	30	29.9	100	(77-127)	6.60	(< 20)
4-Methyl-2-pentanone (MIBK)	90	102	113	90	105	116	(67-130)	2.70	(< 20)
Benzene	30	31.1	104	30	31.4	105	(79-120)	0.90	(< 20)
Bromobenzene	30	30.3	101	30	31.4	105	(80-120)	3.40	(< 20)
Bromochloromethane	30	32.0	107	30	33.5	112	(78-123)	4.50	(< 20)
Bromodichloromethane	30	31.2	104	30	32.2	107	(79-125)	3.30	(< 20)
Bromoform	30	33.2	111	30	33.6	112	(66-130)	1.30	(< 20)
Bromomethane	30	24.4	81	30	27.2	91	(53-141)	10.90	(< 20)
Carbon disulfide	45	39.9	89	45	42.1	94	(64-133)	5.20	(< 20)

Print Date: 05/19/2016 8:38:09AM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161924 [VXX28753]
Blank Spike Lab ID: 1322177
Date Analyzed: 04/29/2016 18:19

Spike Duplicate ID: LCSD for HBN 1161924 [VXX28753]
Spike Duplicate Lab ID: 1322178
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161924001, 1161924003

Results by **SW8260B**

	Blank Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Carbon tetrachloride	30	32.2	107	30	33.5	112	(72-136)	4.20	(< 20)
Chlorobenzene	30	31.5	105	30	32.1	107	(82-118)	1.90	(< 20)
Chloroethane	30	26.1	87	30	27.5	92	(60-138)	5.20	(< 20)
Chloroform	30	28.9	96	30	30.0	100	(79-124)	3.60	(< 20)
Chloromethane	30	26.1	87	30	28.7	96	(50-139)	9.50	(< 20)
cis-1,2-Dichloroethene	30	31.8	106	30	32.8	109	(78-123)	3.00	(< 20)
cis-1,3-Dichloropropene	30	29.6	99	30	30.4	101	(75-124)	2.60	(< 20)
Dibromochloromethane	30	33.1	110	30	33.3	111	(74-126)	0.54	(< 20)
Dibromomethane	30	31.0	103	30	31.2	104	(79-123)	0.90	(< 20)
Dichlorodifluoromethane	30	30.2	101	30	31.1	104	(32-152)	3.00	(< 20)
Ethylbenzene	30	32.5	108	30	32.9	110	(79-121)	1.20	(< 20)
Freon-113	45	45.0	100	45	47.6	106	(70-136)	5.60	(< 20)
Hexachlorobutadiene	30	31.8	106	30	34.6	115	(66-134)	8.30	(< 20)
Isopropylbenzene (Cumene)	30	31.7	106	30	32.6	109	(72-131)	3.10	(< 20)
Methylene chloride	30	27.4	91	30	28.2	94	(74-124)	2.80	(< 20)
Methyl-t-butyl ether	45	46.4	103	45	47.2	105	(71-124)	1.80	(< 20)
Naphthalene	30	30.0	100	30	30.3	101	(61-128)	1.20	(< 20)
n-Butylbenzene	30	27.9	93	30	29.8	99	(75-128)	6.70	(< 20)
n-Propylbenzene	30	30.1	100	30	31.6	105	(76-126)	5.00	(< 20)
o-Xylene	30	33.1	110	30	34.0	113	(78-122)	2.60	(< 20)
P & M -Xylene	60	64.8	108	60	67.3	112	(80-121)	3.70	(< 20)
sec-Butylbenzene	30	30.3	101	30	32.0	107	(77-126)	5.30	(< 20)
Styrene	30	33.0	110	30	33.8	113	(78-123)	2.40	(< 20)
tert-Butylbenzene	30	30.5	102	30	32.2	107	(78-124)	5.50	(< 20)
Tetrachloroethene	30	32.9	110	30	33.5	112	(74-129)	1.80	(< 20)
Toluene	30	29.7	99	30	30.0	100	(80-121)	1.20	(< 20)
trans-1,2-Dichloroethene	30	30.8	103	30	32.2	107	(75-124)	4.50	(< 20)
trans-1,3-Dichloropropene	30	28.7	96	30	29.0	97	(73-127)	1.00	(< 20)
Trichloroethene	30	32.7	109	30	33.4	111	(79-123)	2.10	(< 20)
Trichlorofluoromethane	30	30.3	101	30	31.1	104	(65-141)	2.60	(< 20)
Vinyl acetate	30	32.7	109	30	33.7	112	(54-146)	3.00	(< 20)
Vinyl chloride	30	30.9	103	30	31.6	105	(58-137)	2.40	(< 20)
Xylenes (total)	90	98.0	109	90	101	113	(79-121)	3.30	(< 20)

Print Date: 05/19/2016 8:38:09AM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161924 [VXX28753]
Blank Spike Lab ID: 1322177
Date Analyzed: 04/29/2016 18:19

Spike Duplicate ID: LCSD for HBN 1161924 [VXX28753]
Spike Duplicate Lab ID: 1322178
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161924001, 1161924003

Results by **SW8260B**

	Blank Spike (%)			Spike Duplicate (%)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Surrogates									
1,2-Dichloroethane-D4 (surr)	30	102	102	30	104	104	(81-118)	2.20	
4-Bromofluorobenzene (surr)	30	93.2	93	30	94.7	95	(85-114)	1.60	
Toluene-d8 (surr)	30	102	102	30	101	101	(89-112)	0.66	

Batch Information

Analytical Batch: **VMS15749**
Analytical Method: **SW8260B**
Instrument: **VPA 780/5975 GC/MS**
Analyst: **NRB**

Prep Batch: **VXX28753**
Prep Method: **SW5030B**
Prep Date/Time: **04/29/2016 08:00**
Spike Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL
Dupe Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL

Print Date: 05/19/2016 8:38:09AM

Method Blank

Blank ID: MB for HBN 1732381 [WAT/10636]
Blank Lab ID: 1321424

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161924001

Results by **SM21 2130B**

Parameter	Results	LOQ/CL	DL	Units
Turbidity	0.100J	0.200	0.100	NTU

Batch Information

Analytical Batch: WAT10636
Analytical Method: SM21 2130B
Instrument: Turbidimeter
Analyst: MBS
Analytical Date/Time: 4/24/2016 12:35:00PM

Print Date: 05/19/2016 8:38:11AM

Duplicate Sample Summary

Original Sample ID: 1161807uu7
Dcplit a3e Sample ID: 170120A
b Q (Gr Sample4:
1161802uu1

y nals4i4 Da3e: u2/02/0u16 10:75
9 a3iM x a3er WScr(at ef , ((Ef . rGcnod

) e4cl34 Rs **SM21 2130B**

%y 9 ,	Original	Dcplit a3e	Nni34	) CD WP d	) CD QU
LcrRioi3s	uE2uu	uE2uu	%LN	uEuu	WT 0u d

Batch Information

y nals3t al <a3t B: x y L1u676
y nals3t al 9 e3BGo: S9 01 017u<
In43rcmen3 LcrRoime3er
y nals43 9 <S

Crin3Da3e: u5/18/0u16 h:7h:10y 9

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161924 [WAT10636]
Blank Spike Lab ID: 1321425
Date Analyzed: 04/24/2016 12:35

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161924001

Results by **SM21 2130B**

Blank Spike (NTU)

Parameter	Spike	Result	Rec (%)	CL
Turbidity	10	11.0	110	(90-110)

Batch Information

Analytical Batch: **WAT10636**
Analytical Method: **SM21 2130B**
Instrument: **Turbidimeter**
Analyst: **MBS**

Prep Batch:
Prep Method:
Prep Date/Time:
Spike Init Wt./Vol.: 10 NTU Extract Vol: 1 mL
Dupe Init Wt./Vol.: Extract Vol:

Print Date: 05/19/2016 8:38:13AM

Duplicate Sample Summary

Original Sample ID: 1161876001
Duplicate Sample ID: 1321380
QC for Samples:
1161924001

Analysis Date: 04/25/2016 17:11
Matrix: Water (Surface, Eff., Ground)

Results by **SM21 4500-H B**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
pH	7.90	7.90	pH units	0.00	(< 5)

Batch Information

Analytical Batch: WTI4443
Analytical Method: SM21 4500-H B
Instrument: Titration
Analyst: ACF

Print Date: 05/19/2016 8:38:16AM

Duplicate Sample Summary

Original Sample ID: 1161922003
Duplicate Sample ID: 1321381
QC for Samples:
1161924001

Analysis Date: 04/25/2016 16:18
Matrix: Water (Surface, Eff., Ground)

Results by **SM21 4500-H B**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
pH	6.70	6.70	pH units	0.00	(< 5)

Batch Information

Analytical Batch: WTI4443
Analytical Method: SM21 4500-H B
Instrument: Titration
Analyst: ACF

Print Date: 05/19/2016 8:38:16AM

Duplicate Sample Summary

Original Sample ID: 1161885003
Duplicate Sample ID: 1321385
QC for Samples:
1161924001

Analysis Date: 04/25/2016 20:15
Matrix: Drinking Water

Results by **SM21 4500-H B**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
pH	7.50	7.50	pH units	0.00	(< 5)

Batch Information

Analytical Batch: WTI4443
Analytical Method: SM21 4500-H B
Instrument: Titration
Analyst: ACF

Print Date: 05/19/2016 8:38:16AM

Duplicate Sample Summary

Original Sample ID: 1161885004
Duplicate Sample ID: 1321386
QC for Samples:
1161924001

Analysis Date: 04/25/2016 20:32
Matrix: Drinking Water

Results by **SM21 4500-H B**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
pH	7.30	7.30	pH units	0.00	(< 5)

Batch Information

Analytical Batch: WTI4443
Analytical Method: SM21 4500-H B
Instrument: Titration
Analyst: ACF

Print Date: 05/19/2016 8:38:16AM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161924 [WTI4443]
Blank Spike Lab ID: 1321377
Date Analyzed: 04/25/2016 14:47

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161924001

Results by **SM21 4500-H B**

Blank Spike (pH units)

Parameter	Spike	Result	Rec (%)	CL
pH	7	7.01	100	(99-101)

Batch Information

Analytical Batch: **WTI4443**
Analytical Method: **SM21 4500-H B**
Instrument: **Titration**
Analyst: **ACF**

Prep Batch:
Prep Method:
Prep Date/Time:
Spike Init Wt./Vol.: 7 pH units Extract Vol: 1 mL
Dupe Init Wt./Vol.: Extract Vol:

Print Date: 05/19/2016 8:38:17AM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161924 [WTI4443]
Blank Spike Lab ID: 1321382
Date Analyzed: 04/25/2016 19:16

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161924001

Results by **SM21 4500-H B**

Blank Spike (pH units)

Parameter	Spike	Result	Rec (%)	CL
pH	7	7.01	100	(99-101)

Batch Information

Analytical Batch: **WTI4443**
Analytical Method: **SM21 4500-H B**
Instrument: **Titration**
Analyst: **ACF**

Prep Batch:
Prep Method:
Prep Date/Time:
Spike Init Wt./Vol.: 7 pH units Extract Vol: 1 mL
Dupe Init Wt./Vol.: Extract Vol:

Print Date: 05/19/2016 8:38:17AM

Method Blank

Blank ID: MB for HBN 1733191 [WTI/4451]
Blank Lab ID: 1322865

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161924001

Results by **SM21 2320B**

Parameter	Results	LOQ/CL	DL	Units
Alkalinity	5.00U	10.0	3.10	mg/L

Batch Information

Analytical Batch: WTI4451
Analytical Method: SM21 2320B
Instrument: Titration
Analyst: ACF
Analytical Date/Time: 5/5/2016 2:03:33PM

Print Date: 05/19/2016 8:38:19AM

Duplicate Sample Summary

Original Sample ID: 1161971001
Duplicate Sample ID: 1322867
QC for Samples:
1161924001

Analysis Date: 05/05/2016 14:29
Matrix: Drinking Water

Results by **SM21 2320B**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
Alkalinity	52.9	53.0	mg/L	0.32	(< 25)

Batch Information

Analytical Batch: WTI4451
Analytical Method: SM21 2320B
Instrument: Titration
Analyst: ACF

Print Date: 05/19/2016 8:38:20AM

Duplicate Sample Summary

Original Sample ID: 1162082001
Duplicate Sample ID: 1322868
QC for Samples:
1161924001

Analysis Date: 05/05/2016 15:37
Matrix: Drinking Water

Results by **SM21 2320B**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
Alkalinity	114	115	mg/L	1.40	(< 25)

Batch Information

Analytical Batch: WTI4451
Analytical Method: SM21 2320B
Instrument: Titration
Analyst: ACF

Print Date: 05/19/2016 8:38:20AM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161924 [WTI4431]
Blank Spike Lab ID: 1722t 66
DaAe y nalzde0: / 35/ 352/ 16 14:12

MaAix: WaAer (Surface, Eff., Groun0)

- C for Samples: 1161924/ / 1

ResulAs bz **SM21 2320B**

Blank Spike (mQ3L)

ParameAer	Spike	ResulA	Rec (%)	CL
y lkaliniAz	23/	27t	93	(t 3h113)

Batch Information

y nalzAcal BaAcV: **WTI4451**
y nalzAcal MeAo0: **SM21 2320B**
InsAumenA **Titration**
y nalzsA **ACF**

Prep BaAcV:
Prep MeAo0:
Prep DaAe5Time:
Spike IniAWA53ol.: 23/ mQ3L ExAracA8ol: 3/ mL
Dupe IniAWA53ol.: ExAracA8ol:

PrinADaAe: / 35195 2/ 16 t :7t :22y M

Method Blank

Blank ID: MB for HBN 1732415 [WXX/11480]
Blank Lab ID: 1321585

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161924001

Results by **EPA 300.0**

Parameter	Results	LOQ/CL	DL	Units
Chloride	0.0500U	0.100	0.0310	mg/L
Fluoride	0.0500U	0.100	0.0310	mg/L
Nitrate-N	0.0580J	0.100	0.0310	mg/L
Nitrite-N	0.0500U	0.100	0.0310	mg/L
Sulfate	0.0500U	0.100	0.0310	mg/L
Total Nitrate/Nitrite-N	0.0580J	0.100	0.0310	mg/L

Batch Information

Analytical Batch: WIC5532
Analytical Method: EPA 300.0
Instrument: Metrohm 733 DX2
Analyst: ACF
Analytical Date/Time: 4/24/2016 3:20:11AM

Prep Batch: WXX11480
Prep Method: METHOD
Prep Date/Time: 4/24/2016 1:11:00AM
Prep Initial Wt./Vol.: 10 mL
Prep Extract Vol: 10 mL

Print Date: 05/19/2016 8:38:24AM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161924 [WXX11480]
Blank Spike Lab ID: 1321586
Date Analyzed: 04/24/2016 03:42

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161924001

Results by **EPA 300.0**

Blank Spike (mg/L)

Parameter	Spike	Result	Rec (%)	CL
Chloride	10	10.2	102	(90-110)
Fluoride	10	10.8	108	(90-110)
Nitrate-N	10	10.5	105	(90-110)
Nitrite-N	10	10.4	104	(90-110)
Sulfate	10	9.91	99	(90-110)
Total Nitrate/Nitrite-N	20	20.9	104	(90-110)

Batch Information

Analytical Batch: **WIC5532**
Analytical Method: **EPA 300.0**
Instrument: **Metrohm 733 DX2**
Analyst: **ACF**

Prep Batch: **WXX11480**
Prep Method: **METHOD**
Prep Date/Time: **04/24/2016 01:11**
Spike Init Wt./Vol.: 10 mg/L Extract Vol: 10 mL
Dupe Init Wt./Vol.: Extract Vol:

Print Date: 05/19/2016 8:38:26AM

Matrix Spike Summary

Original Sample ID: 1161922003
MS Sample ID: 1321587 MS
MSD Sample ID: 1321588 MSD

QC for Samples: 1161924001

Analysis Date: 04/24/2016 4:27
Analysis Date: 04/24/2016 4:49
Analysis Date: 04/24/2016 5:11
Matrix: Water (Surface, Eff., Ground)

Results by **EPA 300.0**

		Matrix Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Chloride	11.8	10.0	22	103	10.0	22.1	104	90-110	0.43	(< 15)
Fluoride	0.0640J	10.0	10.9	108	10.0	11.0	109	90-110	0.72	(< 15)
Sulfate	5.19	10.0	15.7	105	10.0	15.8	106	90-110	0.81	(< 15)

Batch Information

Analytical Batch: WIC5532
Analytical Method: EPA 300.0
Instrument: Metrohm 733 DX2
Analyst: ACF
Analytical Date/Time: 4/24/2016 4:49:17AM

Prep Batch: WXX11480
Prep Method: EPA 300.0 Extraction Waters/Liquids
Prep Date/Time: 4/24/2016 1:11:00AM
Prep Initial Wt./Vol.: 10.00mL
Prep Extract Vol: 10.00mL

Print Date: 05/19/2016 8:38:27AM

Method Blank

Blank ID: MB for HBN 1732364 [VVVX8/ 2138
Blank 5a] ID: 13212/ 1

Ma0r,t : i a0mr xQWffa(muc ffEu. roWhGd

L b for QaC Slmp:
11e1s26991

) mpWQp] R **SW8270D**

QaraC m0mr	) mpWQp	5UL X6 5	D5	y n,0p
1u2u6P² r,(Tloro] mnhmmm	9E99/ 99y	9E9199	9E99319	CgX6
1u2PD,(Tloro] mnhmmm	9E99/ 99y	9E9199	9E99319	CgX6
1u3PD,(Tloro] mnhmmm	9E99/ 99y	9E9199	9E99319	CgX6
1u6PD,(Tloro] mnhmmm	9E99/ 99y	9E9199	9E99319	CgX6
1Pb TloronaST0Talmmm	9E99/ 99y	9E9199	9E99319	CgX6
1PMm0TRnaST0Talmmm	9E99/ 99y	9E9199	9E99319	CgX6
2u6u P² r,(TloroSTmmol	9E99/ 99y	9E9199	9E99319	CgX6
2u6ueP² r,(TloroSTmmol	9E99/ 99y	9E9199	9E99319	CgX6
2u6PD,(TloroSTmmol	9E99/ 99y	9E9199	9E99319	CgX6
2u6PD,C m0TRSTmmol	9E99/ 99y	9E9199	9E99319	CgX6
2u6PD,n,0roSTmmol	9E92/ 9y	9E9/ 99	9E91/ 9	CgX6
2u6PD,n,0ro0olWmmm	9E99/ 99y	9E9199	9E99319	CgX6
2uePD,(TloroSTmmol	9E99/ 99y	9E9199	9E99319	CgX6
2uePD,n,0ro0olWmmm	9E99/ 99y	9E9199	9E99319	CgX6
2Pb TloronaST0Talmmm	9E99/ 99y	9E9199	9E99319	CgX6
2Pb TloroSTmmol	9E99/ 99y	9E9199	9E99319	CgX6
2PMm0TRPSueRGn,0roSTmmol	9E92/ 9y	9E9/ 99	9E91/ 9	CgX6
2PMm0TRnaST0Talmmm	9E99/ 99y	9E9199	9E99319	CgX6
2PMm0TRSTmmol xoPb rmpold	9E99/ 99y	9E9199	9E99319	CgX6
2PN,0roan,l,nm	9E99/ 99y	9E9199	9E99319	CgX6
2PN,0roSTmmol	9E99/ 99y	9E9199	9E99319	CgX6
3z 6PMm0TRSTmmol xSz C Pb rmpold	9E9199y	9E9299	9E99e29	CgX6
3u3PD,(Tloro] mnh,Gnm	9E99/ 99y	9E9199	9E99319	CgX6
3PN,0roan,l,nm	9E99/ 99y	9E9199	9E99319	CgX6
6PBroC oSTmnRPSTmnRm0Tmr	9E99/ 99y	9E9199	9E99319	CgX6
6Pb TloroP³PC m0TRSTmmol	9E99/ 99y	9E9199	9E99319	CgX6
6Pb Tloroan,l,nm	9E99/ 99y	9E9199	9E99319	CgX6
6Pb TloroSTmnRPSTmnRm0Tmr	9E99/ 99y	9E9199	9E99319	CgX6
6PN,0roan,l,nm	9E99/ 99y	9E9199	9E99319	CgX6
6PN,0roSTmmol	9E92/ 9y	9E9/ 99	9E91/ 9	CgX6
K(mnaST0Tmmm	9E99/ 99y	9E9199	9E99319	CgX6
K(mnaST0TRmmm	9E99/ 99y	9E9199	9E99319	CgX6
Kn,l,nm	9E92/ 9y	9E9/ 99	9E91/ 9	CgX6
Kn0Tra(mnm	9E99/ 99y	9E9199	9E99319	CgX6
Kho] mnhmmm	9E99/ 99y	9E9199	9E99319	CgX6
Bmnhoxac Kn0Tra(mnm	9E99/ 99y	9E9199	9E99319	CgX6
Bmnho[a8SRmmm	9E99/ 99y	9E9199	9E99319	CgX6
Bmnho[] 8AlWoran0Tmmm	9E99/ 99y	9E9199	9E99319	CgX6

Method Blank

Blank ID: MB for HBN 1732364 [VVVX8/ 2138
Blank 5a] ID: 13212/ 1

Ma0r,t : i a0mr xQWffa(muc ffEu. roWhGd

L b for QaC Slmp:
11e1s26991

) mpWQp] R **SW8270D**

QaraC m0mr	) mpWQp	5UL X6 5	D5	y n,0p
Bmnho[guTu,8SmrRmnm	9E99/ 99y	9E9199	9E99319	CgX6
Bmnho[k8lWoran0Tmnm	9E99/ 99y	9E9199	9E99319	CgX6
Bmnho,(a(,G	9E92/ 9y	9E9/ 99	9E91/ 9	CgX6
BmnhRl al(oTol	9E99/ 99y	9E9199	9E99319	CgX6
B,px2(Tloro1C m0TRm0TRdc 0Tmr	9E99/ 99y	9E9199	9E99319	CgX6
B,px2Pb Tlorom0Tot RdC m0Tanm	9E99/ 99y	9E9199	9E99319	CgX6
B,px2Pb Tlorom0TRdm0Tmr	9E99/ 99y	9E9199	9E99319	CgX6
] ,px2Pc 0TRTmt RdST0Tala0m	9E99/ 99y	9E9199	9E99319	CgX6
BW0R] mnhRST0Tala0m	9E99/ 99y	9E9199	9E99319	CgX6
b ar] aholm	9E99/ 99y	9E9199	9E99319	CgX6
b TrRpmnm	9E99/ 99y	9E9199	9E99319	CgX6
D,] mnho[auT8an0Tra(mnm	9E99/ 99y	9E9199	9E99319	CgX6
D,] mnhofWan	9E99/ 99y	9E9199	9E99319	CgX6
D,m0TRST0Tala0m	9E99/ 99y	9E9199	9E99319	CgX6
D,C m0TRST0Tala0m	9E99/ 99y	9E9199	9E99319	CgX6
D,PhP] W0RST0Tala0m	9E99/ 99y	9E9199	9E99319	CgX6
G,PhPU (0RST0Tala0m	9E99/ 99y	9E9199	9E99319	CgX6
AlWoran0Tmnm	9E99/ 99y	9E9199	9E99319	CgX6
AlWormnm	9E99/ 99y	9E9199	9E99319	CgX6
Hmt a(Tloro] mnhmnm	9E99/ 99y	9E9199	9E99319	CgX6
Hmt a(Tloro] W0aG,mnm	9E99/ 99y	9E9199	9E99319	CgX6
Hmt a(Tloro(R(loSmm0aG,mnm	9E91/ 9y	9E9399	9E99s69	CgX6
Hmt a(Tlorom0Tanm	9E99/ 99y	9E9199	9E99319	CgX6
InGmno[1u2u8R(uG8SRmnm	9E99/ 99y	9E9199	9E99319	CgX6
IpoSToronm	9E99/ 99y	9E9199	9E99319	CgX6
NaST0Talmnm	9E99/ 99y	9E9199	9E99319	CgX6
N,0ro] mnhmnm	9E99/ 99y	9E9199	9E99319	CgX6
NPN,0ropoG,C m0TRaC ,nm	9E99/ 99y	9E9199	9E99319	CgX6
NPN,0ropoPG,PhPSroSRaC ,nm	9E99/ 99y	9E9199	9E99319	CgX6
NPN,0ropoG,STmnRaC ,nm	9E99/ 99y	9E9199	9E99319	CgX6
Omn0a(TloroSTmnol	9E92/ 9y	9E9/ 99	9E91/ 9	CgX6
OTmnan0Trmnm	9E99/ 99y	9E9199	9E99319	CgX6
OTmnol	9E99/ 99y	9E9199	9E99319	CgX6
ORmnm	9E99/ 99y	9E9199	9E99319	CgX6
Surrogates				
2u6ueP r,] roC oSTmnol xpWrd	7eEe	63P169		&
2PAlWoro] ,STmnRl xpWrd	7/ Ee	66P11s		&
2PAlWoroSTmnol xpWrd	/ 7E2	1sP11s		&

Method Blank

Blank ID: MB for HBN 1732364 [VVVX8/ 2138
Blank 5a] ID: 13212/ 1

Ma0r,t : i a0mr xQWffa(muc ffEu. roWhGd

L b for QaC Slmp:
11e1s26991

) mpWQp] R SW8270D

QaraCm0mr	) mpWQp	5UL X6 5	D5	y n,0p
N,0ro] mnhmmnRG/ xpWrd	e7E7	66P129		&
OTmnolRGe xpWrd	e2E3	19P11/		&
- mrSTmnRRG16 xpWrd	s9E	/ 9P136		&

Batch Information

KnalR0(al Ba0(T: VMQs276
KnalR0(al Mm0ToG: Qi 4279D
Inp0WCmn0 HO e4s9X s73 QQK
KnalRp0 N55
KnalR0(al Da0mX ,Cm / X2X291e 3:3/ :99OM

OrmS Ba0(T: VVV3/ 213
OrmS Mm0ToG: Qi 3/ 29b
OrmS Da0mX ,Cm 6X2eX291e s:99:27KM
OrmS In,0al i 0E%olE 1999 C5
OrmS ct 0ra(0%ol: 1 C5

Or,n0Da0m 9/ XlsX291e 4:34:27KM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161924 [XXX35213]
Blank Spike Lab ID: 1321252
Date Analyzed: 05/02/2016 18:07

Spike Duplicate ID: LCSD for HBN 1161924 [XXX35213]
Spike Duplicate Lab ID: 1321253
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161924001

Results by **SW8270D**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
1,2,4-Trichlorobenzene	0.1	0.0701	70	0.1	0.0679	68	(29-116)	3.20	(< 20)
1,2-Dichlorobenzene	0.1	0.0621	62	0.1	0.0591	59	(32-111)	5.10	(< 20)
1,3-Dichlorobenzene	0.1	0.0616	62	0.1	0.0585	59	(28-110)	5.30	(< 20)
1,4-Dichlorobenzene	0.1	0.0629	63	0.1	0.0596	60	(29-112)	5.40	(< 20)
1-Chloronaphthalene	0.04	0.0384	96	0.04	0.0391	98	(58-111)	1.80	(< 20)
1-Methylnaphthalene	0.1	0.0762	76	0.1	0.0773	77	(41-119)	1.40	(< 20)
2,4,5-Trichlorophenol	0.1	0.0876	88	0.1	0.0853	85	(53-123)	2.60	(< 20)
2,4,6-Trichlorophenol	0.1	0.0872	87	0.1	0.0854	85	(50-125)	2.00	(< 20)
2,4-Dichlorophenol	0.1	0.0749	75	0.1	0.0726	73	(47-121)	3.10	(< 20)
2,4-Dimethylphenol	0.1	0.0592	59	0.1	0.0575	58	(31-124)	2.90	(< 20)
2,4-Dinitrophenol	0.18	0.164	91	0.18	0.155	86	(23-143)	5.30	(< 20)
2,4-Dinitrotoluene	0.1	0.0945	95	0.1	0.0928	93	(57-128)	1.80	(< 20)
2,6-Dichlorophenol	0.04	0.0283	71	0.04	0.0282	71	(50-118)	0.50	(< 20)
2,6-Dinitrotoluene	0.1	0.0974	97	0.1	0.0952	95	(57-124)	2.20	(< 20)
2-Chloronaphthalene	0.1	0.0799	80	0.1	0.0805	81	(40-116)	0.70	(< 20)
2-Chlorophenol	0.1	0.0610	61	0.1	0.0569	57	(38-117)	7.10	(< 20)
2-Methyl-4,6-dinitrophenol	0.18	0.185	103	0.18	0.176	98	(44-137)	5.10	(< 20)
2-Methylnaphthalene	0.1	0.0712	71	0.1	0.0728	73	(40-121)	2.30	(< 20)
2-Methylphenol (o-Cresol)	0.1	0.0617	62	0.1	0.0585	59	(30-117)	5.30	(< 20)
2-Nitroaniline	0.1	0.0951	95	0.1	0.0920	92	(55-117)	3.30	(< 20)
2-Nitrophenol	0.1	0.0803	80	0.1	0.0792	79	(47-123)	1.50	(< 20)
3&4-Methylphenol (p&m-Cresol)	0.14	0.0987	71	0.14	0.0920	66	(29-110)	7.00	(< 20)
3,3-Dichlorobenzidine	0.1	0.0833	83	0.1	0.0793	79	(27-129)	4.90	(< 20)
3-Nitroaniline	0.1	0.0917	92	0.1	0.0868	87	(41-128)	5.50	(< 20)
4-Bromophenyl-phenylether	0.1	0.0987	99	0.1	0.0956	96	(55-124)	3.20	(< 20)
4-Chloro-3-methylphenol	0.1	0.0801	80	0.1	0.0787	79	(52-119)	1.80	(< 20)
4-Chloroaniline	0.1	0.0693	69	0.1	0.0654	65	(33-117)	5.80	(< 20)
4-Chlorophenyl-phenylether	0.1	0.0907	91	0.1	0.0897	90	(53-121)	1.00	(< 20)
4-Nitroaniline	0.1	0.0976	98	0.1	0.0921	92	(74-118)	5.90	(< 20)
4-Nitrophenol	0.14	0.106	76	0.14	0.0958	68	(52-111)	10.30	(< 20)
Acenaphthene	0.1	0.0841	84	0.1	0.0850	85	(47-122)	1.10	(< 20)
Acenaphthylene	0.1	0.0838	84	0.1	0.0835	84	(41-130)	0.38	(< 20)
Aniline	0.1	0.0444J	44	0.1	0.0360J	36	(10-87)	20.90	* (< 20)
Anthracene	0.1	0.0949	95	0.1	0.0917	92	(57-123)	3.50	(< 20)

Print Date: 05/19/2016 8:38:30AM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161924 [XXX35213]
Blank Spike Lab ID: 1321252
Date Analyzed: 05/02/2016 18:07

Spike Duplicate ID: LCSD for HBN 1161924 [XXX35213]
Spike Duplicate Lab ID: 1321253
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161924001

Results by **SW8270D**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Azobenzene	0.1	0.0958	96	0.1	0.0946	95	(61-116)	1.20	(< 20)
Benzo(a)Anthracene	0.1	0.0995	100	0.1	0.0940	94	(58-125)	5.70	(< 20)
Benzo[a]pyrene	0.1	0.0909	91	0.1	0.0860	86	(54-128)	5.50	(< 20)
Benzo[b]Fluoranthene	0.1	0.0956	96	0.1	0.0914	91	(53-131)	4.40	(< 20)
Benzo[g,h,i]perylene	0.1	0.105	105	0.1	0.102	102	(50-134)	3.10	(< 20)
Benzo[k]fluoranthene	0.1	0.0892	89	0.1	0.0884	88	(57-129)	0.93	(< 20)
Benzoic acid	0.14	0.0826	59	0.14	0.0681	49	(21-107)	19.30	(< 20)
Benzyl alcohol	0.1	0.0634	63	0.1	0.0606	61	(31-112)	4.60	(< 20)
Bis(2chloro1methylethyl)Ether	0.1	0.0663	66	0.1	0.0662	66	(37-130)	0.21	(< 20)
Bis(2-Chloroethoxy)methane	0.1	0.0757	76	0.1	0.0770	77	(48-120)	1.70	(< 20)
Bis(2-Chloroethyl)ether	0.1	0.0591	59	0.1	0.0562	56	(43-118)	4.90	(< 20)
bis(2-Ethylhexyl)phthalate	0.1	0.102	102	0.1	0.0993	99	(55-135)	2.80	(< 20)
Butylbenzylphthalate	0.1	0.107	107	0.1	0.103	103	(53-134)	4.10	(< 20)
Carbazole	0.1	0.0985	99	0.1	0.0962	96	(60-122)	2.30	(< 20)
Chrysene	0.1	0.103	103	0.1	0.100	100	(59-123)	2.90	(< 20)
Dibenzo[a,h]anthracene	0.1	0.104	104	0.1	0.0996	100	(51-134)	4.40	(< 20)
Dibenzofuran	0.1	0.0843	84	0.1	0.0847	85	(53-118)	0.52	(< 20)
Diethylphthalate	0.1	0.0911	91	0.1	0.0884	88	(56-125)	3.00	(< 20)
Dimethylphthalate	0.1	0.0909	91	0.1	0.0877	88	(45-127)	3.60	(< 20)
Di-n-butylphthalate	0.1	0.0990	99	0.1	0.0947	95	(59-127)	4.40	(< 20)
di-n-Octylphthalate	0.1	0.0969	97	0.1	0.0920	92	(51-140)	5.20	(< 20)
Fluoranthene	0.1	0.0891	89	0.1	0.0853	85	(57-128)	4.40	(< 20)
Fluorene	0.1	0.0874	87	0.1	0.0872	87	(52-124)	0.13	(< 20)
Hexachlorobenzene	0.1	0.0958	96	0.1	0.0926	93	(53-125)	3.40	(< 20)
Hexachlorobutadiene	0.1	0.0764	76	0.1	0.0731	73	(22-124)	4.40	(< 20)
Hexachlorocyclopentadiene	0.1	0.0478	48	0.1	0.0463	46	(10-93)	3.10	(< 20)
Hexachloroethane	0.1	0.0605	61	0.1	0.0573	57	(21-115)	5.40	(< 20)
Indeno[1,2,3-c,d] pyrene	0.1	0.0981	98	0.1	0.0955	96	(52-134)	2.60	(< 20)
Isophorone	0.1	0.0709	71	0.1	0.0717	72	(42-124)	1.10	(< 20)
Naphthalene	0.1	0.0714	71	0.1	0.0695	70	(40-121)	2.80	(< 20)
Nitrobenzene	0.1	0.0722	72	0.1	0.0709	71	(45-121)	1.80	(< 20)
N-Nitrosodimethylamine	0.1	0.0554	55	0.1	0.0483	48	(41-117)	13.80	(< 20)
N-Nitroso-di-n-propylamine	0.1	0.0719	72	0.1	0.0745	75	(49-119)	3.70	(< 20)
N-Nitrosodiphenylamine	0.1	0.0806	81	0.1	0.0794	79	(51-123)	1.60	(< 20)

Print Date: 05/19/2016 8:38:30AM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161924 [XXX35213]
Blank Spike Lab ID: 1321252
Date Analyzed: 05/02/2016 18:07

Spike Duplicate ID: LCSD for HBN 1161924 [XXX35213]
Spike Duplicate Lab ID: 1321253
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161924001

Results by **SW8270D**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Pentachlorophenol	0.14	0.145	103	0.14	0.137	98	(35-138)	5.40	(< 20)
Phenanthrene	0.1	0.0960	96	0.1	0.0935	94	(59-120)	2.70	(< 20)
Phenol	0.1	0.0542	54	0.1	0.0485	49	(39-84)	11.10	(< 20)
Pyrene	0.1	0.114	114	0.1	0.110	110	(57-126)	4.30	(< 20)
Surrogates									
2,4,6-Tribromophenol (surr)	0.2	95.2	95	0.2	96.5	97	(43-140)	1.30	
2-Fluorobiphenyl (surr)	0.1	75.7	76	0.1	78.9	79	(44-119)	4.20	
2-Fluorophenol (surr)	0.2	54.1	54	0.2	54.2	54	(19-119)	0.07	
Nitrobenzene-d5 (surr)	0.1	72	72	0.1	70.3	70	(44-120)	2.50	
Phenol-d6 (surr)	0.2	62.6	63	0.2	61.1	61	(10-115)	2.50	
Terphenyl-d14 (surr)	0.1	110	110	0.1	110	110	(50-134)	0.36	

Batch Information

Analytical Batch: **XMS9274**
Analytical Method: **SW8270D**
Instrument: **HP 6890/5973 SSA**
Analyst: **NLL**

Prep Batch: **XXX35213**
Prep Method: **SW3520C**
Prep Date/Time: **04/26/2016 09:00**
Spike Init Wt./Vol.: 0.1 mg/L Extract Vol: 1 mL
Dupe Init Wt./Vol.: 0.1 mg/L Extract Vol: 1 mL

Print Date: 05/19/2016 8:38:30AM

Method Blank

Blank ID: MB for HBN 1732490 [XXX/35229]
Blank Lab ID: 1321704

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161924001

Results by **AK102**

Parameter	Results	LOQ/CL	DL	Units
Diesel Range Organics	0.300U	0.600	0.180	mg/L
Surrogates				
5a Androstane (surr)	97.2	60-120		%

Batch Information

Analytical Batch: XFC12356
Analytical Method: AK102
Instrument: Agilent 7890B R
Analyst: CJSW
Analytical Date/Time: 5/2/2016 1:53:00PM

Prep Batch: XXX35229
Prep Method: SW3520C
Prep Date/Time: 4/28/2016 9:48:03AM
Prep Initial Wt./Vol.: 250 mL
Prep Extract Vol: 1 mL

Print Date: 05/19/2016 8:38:31AM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161924 [VVVX82297
Blank Spike La3 ID: 1X21] b8
Da5e t nalAyez: b8db2d2b16 14:b4

Spike D0pli/ a5e ID: LCSD for HBN 1161924 [VVVX82297
Spike D0pli/ a5e La3 ID: 1X21] b6
Ra5is: Ma5er xS0rfa/ eW(ff,WEro0nz.

%C for Sa) plec: 1161924bb1

u ec0l5c 3A **AK102**

	Blank Spike x) mdL.			Spike D0pli/ a5e x) mdL.					
Gara) e5er	Spike	u ec0l5	u e/ xP .	Spike	u ec0l5	u e/ xP .	CL	u GD xP .	u GD CL
Diecel u anme g rmani/ c	2b	19,4	9]	2b	19,1	98	x] 8C128 .	1,6b	xO2b .
Surrogates									
8a t nzroc5ane xc0rr.	b,4	11-	11-	b,4	118	118	x6bC12b .	2,- b	

Batch Information

t nalA5/ al Ba5 <: **XFC12356**
t nalA5/ al Re5<oz: **AK102**
Inc50) en5 **Agilent 7890B R**
t nalAc5 **CJSW**

Grep Ba5 <: **XXX35229**
Grep Re5<oz: **SW3520C**
Grep Da5edhi) e: **04/28/2016 09:48**
Spike Ini5M5dTol,: 2b) mdL (s5a/ 5Tol: 1) L
D0pe Ini5M5dTol,: 2b) mdL (s5a/ 5Tol: 1) L

Method Blank

Blank ID: MB for HBN 1732490 [XXX/35229]
Blank Lab ID: 1321704

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161924001

Results by **AK103**

Parameter	Results	LOQ/CL	DL	Units
Residual Range Organics	0.250U	0.500	0.150	mg/L
Surrogates				
n8Ariacontane8d62 (surr)	93.6	608l20		-

Batch Information

%nalytical Batch: XFC12356
%nalytical Method: %lK103
Instrument: %gilent 7J90B R
%nalyst: CTSW
%nalytical Date/Aime: 5/2/2016 1:53:00PM

Prep Batch: XXX35229
Prep Method: SW3520C
Prep Date/Aime: 4/2J/2016 9:4J:03%M
Prep Initial Wt./Vol.: 250 mL
Prep Extract Vol: 1 mL

Print Date: 05/19/2016 J:3J:34%M

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161924 [VVVX82297
Blank Spike La3 ID: 1X21] b8
Da5e t nalAyez: b8db2d2b16 14:b4

Spike D0pli/ a5e ID: LCSD for HBN 1161924 [VVVX82297
Spike D0pli/ a5e La3 ID: 1X21] b6
Ra5is: Ma5er xS0rfa/ eW(ff,WEro0nz.

%C for Sa) plec: 1161924bb1

u ec0l5c 3A **AK102**

	Blank Spike x) mdL.			Spike D0pli/ a5e x) mdL.					
Gara) e5er	Spike	u ec0l5	u e/ xP.	Spike	u ec0l5	u e/ xP.	CL	u GD xP.	u GD CL
u eciz0al u anme g rmani/ c	2b	22,8	11X	2b	22,2	111	x6bC12b.	1,6b	xO2b.
Surrogates									
nQ ria/ on5aneQ262 xc0rr.	b,4	1bb	1bb	b,4	96,X	96	x6bC12b.	X,<b	

Batch Information

t nalA5/ al Ba5h: **XFC13256**
t nalA5/ al Re5hoz: **AK102**
Inc50) en5 **Agilent 7890B R**
t nalAc5 **CJSW**

Grep Ba5h: **XXX25339**
Grep Re5hoz: **SW2530C**
Grep Da5ed- i) e: **04/38/3016 09:48**
Spike Ini5M5dTol,: 2b) mdL (s5a/ 5Tol: 1) L
D0pe Ini5M5dTol,: 2b) mdL (s5a/ 5Tol: 1) L

Nelson, Justin (Anchorage)

From: Bret Berglund [bberglund@slrconsulting.com]
Sent: Sunday, April 24, 2016 3:10 PM
To: Ben Siwiec; Nelson, Justin (Anchorage)
Cc: Kyle Johnson; Wendy Hansen; Jason Gray
Subject: RE: SLR COC for Shipment 4/22

Follow Up Flag: Follow Up
Due By: Sunday, April 24, 2016 3:24 PM
Flag Status: Flagged

Justin,

The 625M SIM PAH analysis for sample "MW62A-0416" can and should be disposed (tossed without analysis). There is no need to log them in, or make them part of the record. However, thanks for doing a thorough check.

Bret

Bret Berglund
Principal Geologist
SLR International Corporation

Email: mailto:bberglund@slrconsulting.com
Direct: 907-563-2128
Cell: 907-242-5137
Office: 907-222-1112
Fax: 907-222-1113
2700 Gambell Street, Suite 200, Anchorage, 99503, United States

www.slrconsulting.com

-----Original Message-----
From: Ben Siwiec
Sent: April 24, 2016 2:34 PM
To: Nelson, Justin (Anchorage)
Cc: Bret Berglund; Kyle Johnson; Wendy Hansen; Jason Gray
Subject: Re: SLR COC for Shipment 4/22

Thanks Justin. We collected those two extra containers mistakenly so we included them with the coolers in case someone wants to have them run.

> On Apr 24, 2016, at 11:20 AM, Nelson, Justin (Anchorage) <Justin.Nelson@sgs.com> wrote:
>
> I have received containers for 625M SIM PAH analysis for sample "MW62A-0416", but it is not noted on the COC. I will log them in to stay on the safe side, let me know whether the analysis is needed or not once you get this. Thanks!

>
> All else is well with the coolers received today.
>
> Justin
>
>

Ben Siwiec
Associate Geologist
SLR International Corporation

Email: mailto:bsiwiec@slrconsulting.com
Direct: 907-563-2126
Cell: 907-223-8578
Office: 907-222-1112
2700 Gambell Street, Suite 200, Anchorage,AK, 99503, United States

_____
> From: Ben Siwiec [bsiwiec@slrconsulting.com]
> Sent: Sunday, April 24, 2016 7:51 AM
> To: Nelson, Justin (Anchorage)
> Cc: Bret Berglund; Kyle Johnson; Wendy Hansen; Jason Gray
> Subject: Re: SLR COC for Shipment 4/22
>
> Also note that there are two separate Cocs (2 groups of coolers).
>
>> On Apr 24, 2016, at 7:50 AM, Ben Siwiec <bsiwiec@slrconsulting.com> wrote:
>>
>> We just dropped 6 coolers at Grant Aviation. They will leave Kenai at either 8:40 or 10:40. They don't know yet if the 8:40 flight will be canceled. Attaching shipping receipt.
>> [image1.JPG]
>>
>> On Apr 23, 2016, at 8:22 AM, Ben Siwiec <bsiwiec@slrconsulting.com<mailto:bsiwiec@slrconsulting.com>> wrote:
>>
>> Ok. We'll send the Coc when we have it, probably late afternoon. I expect to send 3 full sample suites and a larger number of LL Hg bottles. Plus trip blanks.
>>
>> On Apr 23, 2016, at 8:18 AM, Nelson, Justin (Anchorage) <Justin.Nelson@sgs.com<mailto:Justin.Nelson@sgs.com>> wrote:
>>
>> I'll need the coc for samples collected today as soon as you can send it, I'll need to check holding times to determine whether or not I need a Sunday analyst.
>>
>>
>>
>> Sent from my Verizon Wireless 4G LTE smartphone
>>
>>
>> -------- Original message --------
>> From: Ben Siwiec
>> <bsiwiec@slrconsulting.com<mailto:bsiwiec@slrconsulting.com>>
>> Date: 04/23/2016 8:12 AM (GMT-09:00)
>> To: Bret Berglund
>> <bberglund@slrconsulting.com<mailto:bberglund@slrconsulting.com>>
>> Cc: "Nelson, Justin (Anchorage)"
>> <Justin.Nelson@sgs.com<mailto:Justin.Nelson@sgs.com>>, Kyle Johnson

>> <kjohnson@slrconsulting.com<mailto:kjohnson@slrconsulting.com>>,
>> Wendy Hansen
>> <whansen@slrconsulting.com<mailto:whansen@slrconsulting.com>>, Jason
>> Gray <jgray@slrconsulting.com<mailto:jgray@slrconsulting.com>>
>> Subject: Re: SLR COC for Shipment 4/22
>>
>>
>> ALSO. Tomorrow (Sunday) we will ship all the samples we collect today on Grant on the same flight to arrive at 9:15.
>>
>> On Apr 22, 2016, at 8:09 AM, Bret Berglund <bberglund@slrconsulting.com<mailto:bberglund@slrconsulting.com>>
wrote:
>>
>> There will samples collected today (Friday) coming in Saturday by air shipment. Its possible, there may be a couple coolers driven back late Saturday or Sunday for dropoff on Sunday or first thing Monday if hold times are O.K (these would be samples collected Saturday). We can provide an update later in the day. Its little dynamic at the moment.
>>
>>
>>
>>
>> Bret Berglund
>>
>> Principal Geologist
>>
>> SLR International Corporation
>>
>>
>>
>> Direct: 907-563-2128
>> Cell: 907-242-5137
>> Office: 907-222-1112
>> Email:
>> bberglund@slrconsulting.com<mailto:bberglund@slrconsulting.com>
>>
>> 2700 Gambell Street, Suite 200, Anchorage, AK, 99503, United States
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>>
>> 2700 Gambell Street, Suite 200, Anchorage, AK, 99503, United States
>>
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>>
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>> <image3f62e0.JPG><http://www.slrconsulting.com/us>
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>>
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>> From: Nelson, Justin (Anchorage) [mailto:Justin.Nelson@sgs.com]
>> Sent: April 22, 2016 8:03 AM
>> To: Kyle Johnson; Bret Berglund; Wendy Hansen; Jason Gray
>> Cc: Ben Siwiec
>> Subject: RE: SLR COC for Shipment 4/22
>>
>> Thanks! I'll let the lab know they're on the way. Do we know plans for the weekend yet?
>>
>> Justin A. Nelson
>> Environment, Health, and Safety
>> Project Manager
>>
>> Phone: +00 1 907 550-3205
>>
>> From: Kyle Johnson [mailto:kjohnson@slrconsulting.com]
>> Sent: Thursday, April 21, 2016 10:44 PM
>> To: Bret Berglund; Wendy Hansen; Jason Gray
>> Cc: Nelson, Justin (Anchorage); Ben Siwiec
>> Subject: SLR COC for Shipment 4/22
>>
>> Attached is image of COC for shipment tomorrow 4/22
>>
>> It should be out on the 8-830 AM flight.
>>
>> Ben will send an Airway Bill number once submitted to airline.
>>
>> A total of 3 coolers
>>
>> · 2 coolers with complete sample suites for
>>
>>
>>
>> · MW39A-0416
>>
>> · MW39B-0416
>>
>> · MW91A-0416
>>
>> · MW91Z-0416
>>
>>
>>
>> · 1 cooler with Hg samples, total and dissolved for samples up to this point except (MW91A-0416 and MW91Z-0416)
>>
>> Trip Blank for VOC – TB-3
>> Trip Blank for GRO – TB-4
>> Trip Blank for Hg – TBHG-1
>>
>> Thanks,

>>
>> Kyle Johnson
>>
>>
>>
>> Kyle Johnson
>>
>> Project Scientist
>>
>> SLR International Corporation
>>
>>
>> Direct:
>>
>> 907-264-6956
>>
>> Office:
>>
>> 907-222-1112
>>
>> Fax:
>>
>> 907-222-1113
>>
>> Email:
>>
>> kjohnson@slrconsulting.com<mailto:kjohnson@slrconsulting.com>
>>
>>
>> 2700 Gambell Street, Suite 200, Anchorage, AK, 99503, United States
>>
>>
>>
>> www.slrconsulting.com<http://www.slrconsulting.com/us>
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>> <image001.jpg><http://www.slrconsulting.com/us>
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>> <image1.JPG>
>
>
> Ben Siwiec
> Associate Geologist
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SGS

CHAIN OF CUSTODY RECORD

SGS Environmental Services Inc.

1161924

CLIENT: SLR Consulting

CONTACT: Jason Gray, SLR PHONE NO: (office) 264-6965

PROJECT Name: Kenai Wells PROJECT No.: 105.00148.16001

REPORTS TO: Jason Gray, SLR email jgray@slrconsulting.com

INVOICE TO: Wendy Hansen, SLR QUOTE #: 332060
2700 Gambell Street Anchorage, Alaska 99503

SGS Reference #:

page 1 of 1

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	# CONTAINERS	Preserv Used / SAMPLE TYPE C = COMP G = GRAB	E1631E - Low-level Hg (dissolved) HCl	E200.8 - Dissolved Metals SM21 2340B - Hardness HNO3	E1631E - Low-level Hg (total) HCl	E200.8 - Total Metals HNO3	SW 8260B - VOC HCl	AK101 -GRO HCl	SW 8270D - SVOC HCl	AK102/AK103 - DRO/RRO HCl	SM21 2540D - TSS None	E300.0 - Cl, Fl,SO4 SM21 4500NO3-F - Nitrate, Nitrite None	SM21 2540C TDS, SM21 2320B Alkalinity, SM2130B Turbidity, SM21 4500H+B pH None
1 A-Q (F) A-H	MW62A-0416	4-23-16	1140	GW	17	G	X	X	X	X	X	X	X	X	X	X	X
2 A-C	TB-7	4-23-16	1140	~~GW~~	3	—						X					
3 A-C	TB-8	4-23-16	1140	—	3	—					X						
5 A	MW91A-0416	4-21-16	1810	GW	2	G	X		X	(13) A							
6 A	MW91Z-0416	4-21-16	1810	GW	2	G	X		X	(13) A							
7 (8) (F) A-C	MW74B-0416	4-22-16	1350	GW	2	G	X		X	(13) A							
10 A	MW74A-0416	4-22-16	1150	GW	2	G	X		X	(13) A							
11 A	TB HG2	4-21-16	1810	—	1	—			X								
	Trip Blank										X	X					

Collected/Relinquished By: (1) Kyle Johnson	Date 4-23-16	Time 2300	Received By:
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date 4/24/16	Time 10:30	Received For Laboratory By:

Shipping Carrier:

Shipping Ticket No:

Special Deliverable Req: **Level II**

EDD: PDF, Access

Samples Received Cold? YES NO

Temperature °C: ★

Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT

FIR AU

Requested Turnaround Time and-or Special Instructions:

Total and Dissolved Metals:
As, Ba, Be, Ca, Cd, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Na, Ni, Sb, Se, Tl, V, Zn

★ 1-0.5°# D9
2-3.7°# D9

200 W. Potter Drive **Anchorage, AK 99518** Tel: (907) 562-2343 Fax: (907) 561-5301
3180 Peger Road **Fairbanks, AK 99701** Tel: (907) 474-8656 Fax: (907) 474-9685
5500 Business Drive **Wilmington, NC 28405** Tel: (910) 350-1903 Fax: (910) 350-1557

AIRBILL 3618772

I hereby declare that the goods contained herein do not contain dangerous goods.

Signed.....Date.....

GRANT AVIATION

Grant Aviation
4451 Aircraft Drive Anchorage, AK 99502
Phone: 1 (888) 359-4726
Freephone: 1 (888) 359-4726
Email: res@flygrant.com
Web: http://www.flygrant.com/

FREIGHT DETAILS

FROM/TO: Kenai -> Anchorage International

Flight Departs: Apr 24 16 8:40 AM

Receiver: sgs labs
907-562-2343

Sender: ben siewiec
907-223-8578

Description & Comment	Quan.	Wgt.	Handle Fee	Danger Fee	Total
water samples in coolers	6	211	-	-	$124.84
				Total Tax:	$7.80
				Total Payments made:	$132.64
				Total Unpaid:	**$0.00**

Received by: .....

CUSTOMER COPY

AIRBILL 3618772

GRANT AVIATION

Grant Aviation
4451 Aircraft Drive Anchorage, AK 99502
Phone: 1 (888) 359-4726
Freephone: 1 (888) 359-4726
Email: res@flygrant.com
Web: http://www.flygrant.com/

FREIGHT DETAILS

FROM/TO: Kenai -> Anchorage International

Flight Departs: Apr 24 16 8:40 AM

Receiver: sgs labs
907-562-2343

Sender: ben siewiec
907-223-8578

Description & Comment	Quan.	Wgt.	Handle Fee	Danger Fee	Total
water samples in coolers	6	211	-	-	$124.84
TAX: Federal Excise Tax					$7.80
				Total Payments made:	$132.64
				Total Unpaid:	**$0.00**

TERMS AND CONDITIONS

Consignemnt Note Text

SGS

1161924

20-Sep-16

1 1 6 1 9 2 4

SAMPLE RECEIPT FORM

Review Criteria:	Yes	N/A	No	Comments/Action Taken:
Were **custody seals** intact? Note # & location, if applicable. COC accompanied samples?	☑ ☑	☐ ☐	☐ ☐	***Exemption permitted if sampler hand carries/delivers.*** 1F, 1R All
Temperature blank compliant* (i.e., 0-6°C after CF)? *If >6°C, were samples collected <8 hours ago?* *If <0°C, were all sample containers ice free?* Cooler ID: 1 @ 0.5 w/ Therm.ID: D9 Cooler ID: 2 @ 3.7 w/ Therm.ID: D9 Cooler ID: _____ @ _____ w/ Therm.ID: _____ Cooler ID: _____ @ _____ w/ Therm.ID: _____ Cooler ID: _____ @ _____ w/ Therm.ID: _____ If samples are received without a temperature blank, the "cooler temperature" will be documented in lieu of the temperature blank & "**COOLER TEMP**" will be noted to the right. In cases where neither a temp blank nor cooler temp can be obtained, note "ambient" or "chilled."	☑ ☐ ☐	☐ ☑ ☑	☐ ☐ ☐	***Exemption permitted if chilled & collected <8 hrs ago.*** ***Note: Identify containers received at non-compliant temperature. Use form FS-0029 if more space is needed.***
Delivery method (specify all that apply): ☐Client (hand carried) ☐USPS ☐Lynden ☐AK Air ☐Alert Courier ☐UPS ☐FedEx ☐RAVN ☐C&D Delivery ☐Carlile ☐Pen Air ☐Warp Speed ☑Other: Grant Aviation → *For WO# with airbills, was the WO# & airbill info recorded in the Front Counter eLog?*	☐	☑	☐	
	Yes	N/A	No	
Were samples received within hold time? Do samples **match COC*** (i.e., sample IDs, dates/times collected)? Were analyses requested unambiguous?	☑ ☐ ☑	☐ ☐ ☐	☐ ☑ ☐	***Note: Refer to form F-083 "Sample Guide" for hold times.*** ***Note: If times differ <1hr, record details and login per COC.*** *
Were samples in **good condition** (no leaks/cracks/breakage)? Packing material used (specify all that apply): ☑Bubble Wrap ☐Separate plastic bags ☐Vermiculite ☐Other:	☑	☐	☐	
Were **proper containers** (type/mass/volume/preservative*) used? Were **Trip Blanks** (i.e., VOAs, LL-Hg) in cooler with samples? Were all VOA vials **free of headspace** (i.e., bubbles ≤6 mm)? Were all soil VOAs **field extracted** with MeOH+BFB?	☑ ☑ ☑ ☐	☐ ☐ ☐ ☑	☐ ☐ ☐ ☐	☐ ***Exemption permitted for metals (e.g., 200.8/6020A).***
For preserved waters (other than VOA vials, LL-Mercury or microbiological analyses), was **pH verified and compliant**? If pH was adjusted, were bottles flagged (i.e., stickers)?	☑ ☐	☐ ☑	☐ ☐	
For **special handling** (e.g., "MI" soils, foreign soils, lab filter for dissolved…, lab extract for volatiles, Ref Lab, limited volume), were bottles/paperwork flagged (e.g., sticker)?	☑	☐	☐	
For **RUSH/SHORT Hold Time**, were COC/Bottles flagged accordingly? Was Rush/Short HT email sent, if applicable?	☑	☐	☐	
For **SITE-SPECIFIC QC, e.g. BMS/BMSD/BDUP**, were containers / paperwork flagged accordingly?	☑	☐	☐	
For any question answered "No," has the PM been notified and the problem resolved (or paperwork put in their bin)?	☑	☐	☐	SRF Completed by: JN PM notified: JN
Was **PEER REVIEW** of ***sample numbering/labeling completed?***	☐	☑	☐	Peer Reviewed by:

Additional notes (if applicable):

Received containers for 625 SIM PAH analysis on sample "MW62A-0416", but analysis is not requested on COC.

Note to Client: *Any "no" answer above indicates non-compliance with standard procedures and may impact data quality.*

F102_eSRF_2015_03_31

Sample Containers and Preservatives

Container Id	Preservative	Container Condition	Container Id	Preservative	Container Condition
1161924001-A	HCL to pH < 2	OK	1161924014-C	HCL to pH < 2	OK
1161924001-B	HNO3 to pH < 2	OK	1161924015-A	HCL to pH < 2	OK
1161924001-C	HCL to pH < 2	OK	1161924015-B	HCL to pH < 2	OK
1161924001-D	HCL to pH < 2	OK	1161924015-C	HCL to pH < 2	OK
1161924001-E	HCL to pH < 2	OK	1161924016-A	HCL to pH < 2	OK
1161924001-F	HCL to pH < 2	OK	1161924016-B	HCL to pH < 2	OK
1161924001-G	HCL to pH < 2	OK	1161924016-C	HCL to pH < 2	OK
1161924001-H	HCL to pH < 2	OK	1161924017-A	HCL to pH < 2	OK
1161924001-I	No Preservative Required	OK			
1161924001-J	No Preservative Required	OK			
1161924001-K	HCL to pH < 2	OK			
1161924001-L	HCL to pH < 2	OK			
1161924001-M	No Preservative Required	OK			
1161924001-N	No Preservative Required	OK			
1161924001-O	No Preservative Required	OK			
1161924001-P	No Preservative Required	OK			
1161924001-Q	No Preservative Required	OK			
1161924002-A	HCL to pH < 2	OK			
1161924002-B	HCL to pH < 2	OK			
1161924002-C	HCL to pH < 2	OK			
1161924003-A	HCL to pH < 2	OK			
1161924003-B	HCL to pH < 2	OK			
1161924003-C	HCL to pH < 2	OK			
1161924004-A	HNO3 to pH < 2	OK			
1161924004-B	HCL to pH < 2	OK			
1161924005-B	HCL to pH < 2	OK			
1161924006-B	HCL to pH < 2	OK			
1161924007-A	HCL to pH < 2	OK			
1161924007-B	HCL to pH < 2	OK			
1161924007-C	HCL to pH < 2	OK			
1161924008-A	HCL to pH < 2	OK			
1161924008-B	HCL to pH < 2	OK			
1161924008-C	HCL to pH < 2	OK			
1161924009-A	HCL to pH < 2	OK			
1161924009-B	HCL to pH < 2	OK			
1161924009-C	HCL to pH < 2	OK			
1161924010-A	HCL to pH < 2	OK			
1161924011-A	HCL to pH < 2	OK			
1161924012-A	HCL to pH < 2	OK			
1161924013-A	HCL to pH < 2	OK			
1161924014-A	HCL to pH < 2	OK			
1161924014-B	HCL to pH < 2	OK			

Container Id	Preservative	Container Condition	Container Id	Preservative	Container Condition

Container Condition Glossary

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

OK - The container was received at an acceptable pH for the analysis requested.
BU - The container was received with headspace greater than 6mm.
DM- The container was received damaged.
FR- The container was received frozen and not usable for Bacteria or BOD analyses.
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.

THIRD-PARTY WELLS

Laboratory Report of Analysis

To: SLR Alaska-Anchorage
2700 Gambell St Suite 200
Anchorage, AK 99503
(907)222-1112

Report Number: **1161923**

Client Project: **105.00148.16001 Kenai Wells**

Dear Jason Gray,

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.

SGS North America Inc.
Environmental Services – Alaska Division
Project Manager

Justin Nelson
2016.05.23
14:46:19 -08'00'

Justin Nelson Date
Project Manager
Justin.Nelson@sgs.com

Print Date: 05/23/2016 2:25:33PM

Case Narrative

SGS Client: **SLR Alaska-Anchorage**
SGS Project: **1161923**
Project Name/Site: **105.00148.16001 Kenai Wells**
Project Contact: **Jason Gray**

Refer to sample receipt form for information on sample condition.

PQW1-0416 (1161923002) PS

200.8LL - Barium is detected in the MB above the LOQ. The associated sample concentrations are 10 times greater than the concentration in the MB.

Decker-0416 (1161923003) PS

200.8LL - Barium is detected in the MB above the LOQ. The associated sample concentrations are 10 times greater than the concentration in the MB.

PQW1-0416 (1161923006) PS

200.8LL - Barium is detected in the MB above the LOQ. The associated sample concentrations are 10 times greater than the concentration in the MB.

Decker-0416 (1161923007) PS

200.8LL - Barium is detected in the MB above the LOQ. The associated sample concentrations are 10 times greater than the concentration in the MB.

LCSD for HBN 1732272 [STS/5019 (1321134) LCSD

2540D - Total Suspended Solids - LCSD is not needed for batch QC. Refer to sample duplicate RPD for precision.

LCSD for HBN 1732348 [XXX/3521 (1321253) LCSD

8270D - LCS/LCSD RPD for aniline (20.9%) does not meet QC criteria. The associated sample concentrations for this analyte are less than the LOQ.

MB for HBN 1734141 [MXX/29753] (1324624) MB

200.8LL - Barium is detected in the MB above the LOQ. The associated sample concentrations are 10 times greater than the concentration in the MB.

1161923001(1324889MS) (1324647) MS

200.8LL - MS recoveries for iron (-42%) and zinc (-18) do not meet QC criteria. Post digestion spike was successful.

1161923001(1324889MSD) (1324648) MSD

200.8LL - MSD recoveries for iron (29%) and zinc (14%) do not meet QC criteria. Post digestion spike was successful.

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

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Report of Manual Integrations

Laboratory ID	Client Sample ID	Analytical Batch	Analyte	Reason
EPA 625M SIM (PAH)				
1321049	LCS for HBN 1732246 [XXX/35207	XMS9268	Benzo[k]fluoranthene	RP
1321049	LCS for HBN 1732246 [XXX/35207	XMS9268	Chrysene	RP
1321050	LCSD for HBN 1732246 [XXX/3520	XMS9268	Benzo[k]fluoranthene	RP
1321050	LCSD for HBN 1732246 [XXX/3520	XMS9268	Chrysene	RP
1321345	CCV for HBN 1732367 [XMS/9268]	XMS9268	Benzo[k]fluoranthene	RP
1321345	CCV for HBN 1732367 [XMS/9268]	XMS9268	Chrysene	RP
SW8270D				
1321252	LCS for HBN 1732348 [XXX/35213	XMS9274	1-Chloronaphthalene	BLC
1321253	LCSD for HBN 1732348 [XXX/3521	XMS9274	1-Chloronaphthalene	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: 05/23/2016 2:25:35PM

Laboratory Qualifiers

Enclosed are the analytical results associated with the above work order. 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, indenmification 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) & UST-005 (CS) for ADEC and 2944.01 for DOD ELAP/ISO17025 (RCRA methods: 1020B, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035A, 6020A, 7470A, 7471B, 8021B, 8082A, 8260B, 8270D, 8270D-SIM, 9040C, 9045D, 9056A, 9060A, AK101 and AK102/103). 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
D	The analyte concentration is the result of a dilution.
DF	Dilution Factor
DL	Detection Limit (i.e., maximum method detection limit)
E	The analyte result is above the calibrated range.
F	Indicates value that is greater than or equal to the DL
GT	Greater Than
IB	Instrument Blank
ICV	Initial Calibration Verification
J	The quantitation is an estimation.
JL	The analyte was positively identified, but the quantitation is a low estimation.
LCS(D)	Laboratory Control Spike (Duplicate)
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
M	A matrix effect was present.
MB	Method Blank
MS(D)	Matrix Spike (Duplicate)
ND	Indicates the analyte is not detected.
Q	QC parameter out of acceptance range.
R	Rejected
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.

Print Date: 05/23/2016 2:25:37PM

Sample Summary

Client Sample ID	Lab Sample ID	Collected	Received	Matrix
TP1-0416	1161923001	04/23/2016	04/24/2016	Water (Surface, Eff., Ground)
PQW1-0416	1161923002	04/23/2016	04/24/2016	Water (Surface, Eff., Ground)
Decker-0416	1161923003	04/23/2016	04/24/2016	Water (Surface, Eff., Ground)
TP6-0416	1161923004	04/23/2016	04/24/2016	Water (Surface, Eff., Ground)
TP1-0416	1161923005	04/23/2016	04/24/2016	Water (Surface, Eff., Ground)
PQW1-0416	1161923006	04/23/2016	04/24/2016	Water (Surface, Eff., Ground)
Decker-0416	1161923007	04/23/2016	04/24/2016	Water (Surface, Eff., Ground)
TB-9	1161923008	04/23/2016	04/24/2016	Water (Surface, Eff., Ground)
TB-10	1161923009	04/23/2016	04/24/2016	Water (Surface, Eff., Ground)
TBHG3	1161923010	04/23/2016	04/24/2016	Water (Surface, Eff., Ground)

Method	Method Description
EPA 625M SIM (PAH)	625 Semi-Volatiles GC/MS Liq/Liq ext.
SM21 2320B	Alkalinity as CaCO3 QC
SM21 2340B	Dissolved Hardness as CaCO3 ICP-MS-LowLv
EPA 1631 E	Dissolved Low Level Mercury EPA 1631
AK102	DRO/RRO Low Volume Water
AK103	DRO/RRO Low Volume Water
AK101	Gasoline Range Organics (W)
EPA 300.0	Ion Chromatographic Analysis
EPA 300.0	Ion Chromatographic Analysis (W)
EPA 1631 E	Low Level Mercury EPA 1631
200.8 Low Level	Metals in Water by 200.8 ICP-MS LL
200.8 Low Level	Metals in Water by 200.8 ICP-MS LL DIS
SM21 4500-H B	pH Analysis
SW8270D	SW846-8270 SVOC by GC/MS (W) Liq/Liq ext
SM21 2540C	Total Dissolved Solids SM18 2540C
SM21 2540D	Total Suspended Solids SM20 2540D
SM21 2130B	Turbidity Analysis
SW8260B	Volatile Organic Compounds (W) FULL

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Detectable Results Summary

Client Sample ID: **TP1-0416**
Lab Sample ID: 1161923001

Metals by ICP/MS

Metals Department
Semivolatile Organic Fuels
Volatile GC/MS
Waters Department

Parameter	Result	Units
Aluminum	29.4	ug/L
Antimony	0.0580	ug/L
Barium	1.69	ug/L
Boron	33.3	ug/L
Cadmium	0.186	ug/L
Calcium	7230	ug/L
Chromium	1.76	ug/L
Cobalt	0.347	ug/L
Copper	7.66	ug/L
Iron	5980	ug/L
Lead	6.50	ug/L
Magnesium	3380	ug/L
Manganese	147	ug/L
Molybdenum	0.330	ug/L
Nickel	2.40	ug/L
Potassium	7410	ug/L
Sodium	9930	ug/L
Tin	0.0699J	ug/L
Zinc	950	ug/L
Mercury	0.646J	ng/L
Residual Range Organics	0.869	mg/L
Toluene	0.830J	ug/L
Alkalinity	47.0	mg/L
Chloride	4.20	mg/L
Fluoride	0.0780J	mg/L
Nitrate-N	0.0700J	mg/L
pH	8.10	pH units
Sulfate	0.576	mg/L
Total Dissolved Solids	66.0	mg/L
Total Suspended Solids	8.10	mg/L
Turbidity	14.0	NTU

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Detectable Results Summary

Client Sample ID: **PQW1-0416**
Lab Sample ID: 1161923002

	Parameter	Result	Units
Metals by ICP/MS	Aluminum	10.3	ug/L
	Arsenic	0.555J	ug/L
	Barium	21.5	ug/L
	Boron	3.07J	ug/L
	Calcium	15800	ug/L
	Chromium	0.369J	ug/L
	Cobalt	0.0952	ug/L
	Copper	0.683	ug/L
	Iron	7310	ug/L
	Lead	3.39	ug/L
	Magnesium	3650	ug/L
	Manganese	222	ug/L
	Molybdenum	0.408	ug/L
	Nickel	1.18	ug/L
	Potassium	3000	ug/L
	Sodium	12000	ug/L
	Zinc	1410	ug/L
Metals Department	Mercury	0.828J	ng/L
Polynuclear Aromatics GC/MS	Acenaphthylene	0.0412J	ug/L
	Naphthalene	0.406	ug/L
Semivolatile Organic Fuels	Residual Range Organics	0.419J	mg/L
Semivolatile Organics GC/MS	Benzoic acid	0.0334J	mg/L
Volatile Fuels	Gasoline Range Organics	0.204	mg/L
Volatile GC/MS	1,2,4-Trimethylbenzene	2.38	ug/L
	1,3,5-Trimethylbenzene	0.400J	ug/L
	Benzene	67.7	ug/L
	Ethylbenzene	0.560J	ug/L
	P & M -Xylene	4.93	ug/L
	Styrene	3.10	ug/L
	Toluene	14.6	ug/L
	Xylenes (total)	4.93	ug/L
Waters Department	Alkalinity	41.8	mg/L
	Chloride	24.1	mg/L
	Fluoride	0.0350J	mg/L
	Nitrate-N	0.0670J	mg/L
	pH	7.50	pH units
	Total Dissolved Solids	102	mg/L
	Total Suspended Solids	15.0	mg/L
	Turbidity	23.0	NTU

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Detectable Results Summary

Client Sample ID: **Decker-0416**
Lab Sample ID: 1161923003

	Parameter	Result	Units
Metals by ICP/MS	Aluminum	1.93J	ug/L
	Arsenic	14.3	ug/L
	Barium	9.85	ug/L
	Boron	23.1	ug/L
	Calcium	16700	ug/L
	Chromium	0.254J	ug/L
	Cobalt	0.0264	ug/L
	Copper	0.217J	ug/L
	Iron	61.3	ug/L
	Magnesium	5770	ug/L
	Manganese	79.7	ug/L
	Molybdenum	0.436	ug/L
	Nickel	0.297J	ug/L
	Potassium	4580	ug/L
	Sodium	7070	ug/L
Polynuclear Aromatics GC/MS	Naphthalene	0.129	ug/L
Semivolatile Organic Fuels	Residual Range Organics	0.221J	mg/L
Volatile GC/MS	1,2,4-Trimethylbenzene	0.310J	ug/L
Waters Department	Alkalinity	63.6	mg/L
	Chloride	11.4	mg/L
	Fluoride	0.0970J	mg/L
	Nitrite-N	0.0560J	mg/L
	pH	8.10	pH units
	Sulfate	1.75	mg/L
	Total Dissolved Solids	121	mg/L
	Turbidity	0.400	NTU

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Detectable Results Summary

Client Sample ID: **TP1-0416**
Lab Sample ID: 1161923005
Dissolved Metals
Dissolved Metals by ICP/MS

Parameter	Result	Units
Mercury	0.517J	ng/L
Aluminum	3.11	ug/L
Antimony	0.0222J	ug/L
Barium	0.568	ug/L
Boron	33.5	ug/L
Cadmium	0.0333J	ug/L
Calcium	6610	ug/L
Chromium	0.534	ug/L
Cobalt	0.0922	ug/L
Copper	0.653	ug/L
Hardness as CaCO3	29.6	mg/L
Iron	652	ug/L
Lead	0.623	ug/L
Magnesium	3180	ug/L
Manganese	80.0	ug/L
Molybdenum	0.525	ug/L
Nickel	0.620	ug/L
Potassium	6380	ug/L
Silicon	1540	ug/L
Sodium	9740	ug/L
Zinc	142	ug/L

Client Sample ID: **PQW1-0416**
Lab Sample ID: 1161923006
Dissolved Metals
Dissolved Metals by ICP/MS

Parameter	Result	Units
Mercury	0.854J	ng/L
Aluminum	0.823J	ug/L
Barium	20.8	ug/L
Boron	5.44	ug/L
Calcium	15800	ug/L
Cobalt	0.0325	ug/L
Hardness as CaCO3	55.4	mg/L
Iron	1080	ug/L
Lead	0.108	ug/L
Magnesium	3910	ug/L
Manganese	180	ug/L
Molybdenum	0.525	ug/L
Nickel	0.664	ug/L
Potassium	2950	ug/L
Silicon	575	ug/L
Sodium	12800	ug/L
Zinc	44.0	ug/L

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Detectable Results Summary

Client Sample ID: **Decker-0416**
Lab Sample ID: 1161923007
Dissolved Metals by ICP/MS

Parameter	Result	Units
Aluminum	2.31	ug/L
Arsenic	15.6	ug/L
Barium	10.4	ug/L
Boron	24.6	ug/L
Calcium	17900	ug/L
Chromium	0.185J	ug/L
Cobalt	0.0284	ug/L
Hardness as CaCO3	69.7	mg/L
Iron	62.4	ug/L
Lead	0.0688J	ug/L
Magnesium	6050	ug/L
Manganese	85.8	ug/L
Molybdenum	0.488	ug/L
Nickel	0.328J	ug/L
Potassium	4820	ug/L
Silicon	14500	ug/L
Sodium	7620	ug/L
Vanadium	0.322J	ug/L
Zinc	0.452J	ug/L

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Results of **TP1-0416**

Client Sample ID: **TP1-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161923001
Lab Project ID: 1161923

Collection Date: 04/23/16 14:25
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Metals by ICP/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Aluminum	29.4		2.00	0.620	ug/L	2.5		05/18/16 10:25
Antimony	0.0580		0.0500	0.0150	ug/L	2.5		05/18/16 10:25
Arsenic	0.400	U	0.800	0.200	ug/L	2.5		05/18/16 10:25
Barium	1.69		0.250	0.0400	ug/L	2.5		05/20/16 08:37
Beryllium	0.0250	U	0.0500	0.0250	ug/L	2.5		05/18/16 10:25
Bismuth	0.0250	U	0.0500	0.0150	ug/L	2.5		05/18/16 10:25
Boron	33.3		5.00	1.50	ug/L	2.5		05/18/16 10:25
Cadmium	0.186		0.0500	0.0150	ug/L	2.5		05/18/16 10:25
Calcium	7230		50.0	15.0	ug/L	2.5		05/18/16 10:25
Chromium	1.76		0.500	0.150	ug/L	2.5		05/18/16 10:25
Cobalt	0.347		0.0200	0.0100	ug/L	2.5		05/18/16 10:25
Copper	7.66		0.500	0.200	ug/L	2.5		05/18/16 10:25
Iron	5980		80.0	24.8	ug/L	10		05/18/16 10:12
Lead	6.50		0.100	0.0310	ug/L	2.5		05/18/16 10:25
Magnesium	3380		20.0	6.20	ug/L	2.5		05/18/16 10:25
Manganese	147		0.100	0.0310	ug/L	2.5		05/18/16 10:25
Molybdenum	0.330		0.0500	0.0150	ug/L	2.5		05/18/16 10:25
Nickel	2.40		0.620	0.0620	ug/L	2.5		05/18/16 10:25
Potassium	7410		50.0	15.0	ug/L	2.5		05/18/16 10:25
Selenium	0.500	U	1.00	0.310	ug/L	2.5		05/18/16 10:25
Silver	0.0100	U	0.0200	0.00620	ug/L	2.5		05/18/16 10:25
Sodium	9930		100	31.0	ug/L	2.5		05/18/16 10:25
Thallium	0.0100	U	0.0200	0.00620	ug/L	2.5		05/18/16 10:25
Tin	0.0699	J	0.200	0.0620	ug/L	2.5		05/18/16 10:25
Vanadium	0.500	U	1.00	0.310	ug/L	2.5		05/18/16 10:25
Zinc	950		12.4	1.60	ug/L	10		05/18/16 10:12

Print Date: 05/23/2016 2:25:39PM

J flagging is activated

Results of **TP1-0416**

Client Sample ID: **TP1-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161923001
Lab Project ID: 1161923

Collection Date: 04/23/16 14:25
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Metals by ICP/MS**

Batch Information

Analytical Batch: MMS9354
Analytical Method: 200.8 Low Level
Analyst: VDL
Analytical Date/Time: 05/18/16 10:25
Container ID: 1161923001-B

Prep Batch: MXX29753
Prep Method: E200.2
Prep Date/Time: 05/17/16 08:37
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 10 mL

Analytical Batch: MMS9360
Analytical Method: 200.8 Low Level
Analyst: VDL
Analytical Date/Time: 05/20/16 08:37
Container ID: 1161923001-B

Prep Batch: MXX29762
Prep Method: E200.2
Prep Date/Time: 05/19/16 07:50
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 10 mL

Print Date: 05/23/2016 2:25:39PM

J flagging is activated

Results of **TP1-0416**

Client Sample ID: **TP1-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161923001
Lab Project ID: 1161923

Collection Date: 04/23/16 14:25
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Metals Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Mercury	0.646	J	1.00	0.500	ng/L	1		04/27/16 20:19

Batch Information

Analytical Batch: MCV5701
Analytical Method: EPA 1631 E
Analyst: NEG
Analytical Date/Time: 04/27/16 20:19
Container ID: 1161923001-A

Prep Batch: MXX29690
Prep Method: METHOD
Prep Date/Time: 04/25/16 17:00
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

Print Date: 05/23/2016 2:25:39PM

J flagging is activated

Results of **TP1-0416**

Client Sample ID: **TP1-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161923001
Lab Project ID: 1161923

Collection Date: 04/23/16 14:25
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Polynuclear Aromatics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Acenaphthene	0.0255	U	0.0510	0.0153	ug/L	1		04/25/16 19:11
Acenaphthylene	0.0255	U	0.0510	0.0153	ug/L	1		04/25/16 19:11
Anthracene	0.0255	U	0.0510	0.0153	ug/L	1		04/25/16 19:11
Benzo(a)Anthracene	0.0255	U	0.0510	0.0153	ug/L	1		04/25/16 19:11
Benzo[a]pyrene	0.0102	U	0.0204	0.0153	ug/L	1		04/25/16 19:11
Benzo[b]Fluoranthene	0.0255	U	0.0510	0.0153	ug/L	1		04/25/16 19:11
Benzo[g,h,i]perylene	0.0255	U	0.0510	0.0153	ug/L	1		04/25/16 19:11
Benzo[k]fluoranthene	0.0255	U	0.0510	0.0153	ug/L	1		04/25/16 19:11
Chrysene	0.0255	U	0.0510	0.0153	ug/L	1		04/25/16 19:11
Dibenzo[a,h]anthracene	0.0102	U	0.0204	0.0153	ug/L	1		04/25/16 19:11
Fluoranthene	0.0255	U	0.0510	0.0153	ug/L	1		04/25/16 19:11
Fluorene	0.0255	U	0.0510	0.0153	ug/L	1		04/25/16 19:11
Indeno[1,2,3-c,d] pyrene	0.0255	U	0.0510	0.0153	ug/L	1		04/25/16 19:11
Naphthalene	0.0510	U	0.102	0.0316	ug/L	1		04/25/16 19:11
Phenanthrene	0.0255	U	0.0510	0.0153	ug/L	1		04/25/16 19:11
Pyrene	0.0255	U	0.0510	0.0153	ug/L	1		04/25/16 19:11
Surrogates								
2-Fluorobiphenyl (surr)	78.1		53-106		%	1		04/25/16 19:11
Terphenyl-d14 (surr)	96.7		58-132		%	1		04/25/16 19:11

Batch Information

Analytical Batch: XMS9268
Analytical Method: EPA 625M SIM (PAH)
Analyst: BRV
Analytical Date/Time: 04/25/16 19:11
Container ID: 1161923001-P

Prep Batch: XXX35207
Prep Method: SW3520C
Prep Date/Time: 04/25/16 10:30
Prep Initial Wt./Vol.: 980 mL
Prep Extract Vol: 1 mL

Print Date: 05/23/2016 2:25:39PM

J flagging is activated

Results of **TP1-0416**

Client Sample ID: **TP1-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161923001
Lab Project ID: 1161923

Collection Date: 04/23/16 14:25
Received Date: 04/24/16 10:30
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	0.283	U	0.566	0.170	mg/L	1		05/02/16 17:28
Surrogates								
5a Androstane (surr)	95.7		50-150		%	1		05/02/16 17:28

Batch Information

Analytical Batch: XFC12356
Analytical Method: AK102
Analyst: CJSW
Analytical Date/Time: 05/02/16 17:28
Container ID: 1161923001-K

Prep Batch: XXX35229
Prep Method: SW3520C
Prep Date/Time: 04/28/16 09:48
Prep Initial Wt./Vol.: 265 mL
Prep Extract Vol: 1 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Residual Range Organics	0.869		0.472	0.142	mg/L	1		05/02/16 17:28
Surrogates								
n-Triacontane-d62 (surr)	98.4		50-150		%	1		05/02/16 17:28

Batch Information

Analytical Batch: XFC12356
Analytical Method: AK103
Analyst: CJSW
Analytical Date/Time: 05/02/16 17:28
Container ID: 1161923001-K

Prep Batch: XXX35229
Prep Method: SW3520C
Prep Date/Time: 04/28/16 09:48
Prep Initial Wt./Vol.: 265 mL
Prep Extract Vol: 1 mL

Print Date: 05/23/2016 2:25:39PM

J flagging is activated

Results of **TP1-0416**

Client Sample ID: **TP1-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161923001
Lab Project ID: 1161923

Collection Date: 04/23/16 14:25
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,2,4-Trichlorobenzene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 21:46
1,2-Dichlorobenzene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 21:46
1,3-Dichlorobenzene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 21:46
1,4-Dichlorobenzene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 21:46
1-Chloronaphthalene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 21:46
1-Methylnaphthalene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 21:46
2,4,5-Trichlorophenol	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 21:46
2,4,6-Trichlorophenol	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 21:46
2,4-Dichlorophenol	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 21:46
2,4-Dimethylphenol	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 21:46
2,4-Dinitrophenol	0.0255	U	0.0510	0.0153	mg/L	1		05/02/16 21:46
2,4-Dinitrotoluene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 21:46
2,6-Dichlorophenol	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 21:46
2,6-Dinitrotoluene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 21:46
2-Chloronaphthalene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 21:46
2-Chlorophenol	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 21:46
2-Methyl-4,6-dinitrophenol	0.0255	U	0.0510	0.0153	mg/L	1		05/02/16 21:46
2-Methylnaphthalene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 21:46
2-Methylphenol (o-Cresol)	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 21:46
2-Nitroaniline	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 21:46
2-Nitrophenol	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 21:46
3&4-Methylphenol (p&m-Cresol)	0.0102	U	0.0204	0.00633	mg/L	1		05/02/16 21:46
3,3-Dichlorobenzidine	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 21:46
3-Nitroaniline	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 21:46
4-Bromophenyl-phenylether	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 21:46
4-Chloro-3-methylphenol	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 21:46
4-Chloroaniline	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 21:46
4-Chlorophenyl-phenylether	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 21:46
4-Nitroaniline	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 21:46
4-Nitrophenol	0.0255	U	0.0510	0.0153	mg/L	1		05/02/16 21:46
Acenaphthene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 21:46
Acenaphthylene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 21:46
Aniline	0.0255	U	0.0510	0.0153	mg/L	1		05/02/16 21:46
Anthracene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 21:46
Azobenzene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 21:46
Benzo(a)Anthracene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 21:46
Benzo[a]pyrene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 21:46

Print Date: 05/23/2016 2:25:39PM

J flagging is activated

Results of **TP1-0416**

Client Sample ID: **TP1-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161923001
Lab Project ID: 1161923

Collection Date: 04/23/16 14:25
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Benzo[b]Fluoranthene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 21:46
Benzo[g,h,i]perylene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 21:46
Benzo[k]fluoranthene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 21:46
Benzoic acid	0.0255	U	0.0510	0.0153	mg/L	1		05/02/16 21:46
Benzyl alcohol	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 21:46
Bis(2chloro1methylethyl)Ether	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 21:46
Bis(2-Chloroethoxy)methane	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 21:46
Bis(2-Chloroethyl)ether	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 21:46
bis(2-Ethylhexyl)phthalate	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 21:46
Butylbenzylphthalate	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 21:46
Carbazole	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 21:46
Chrysene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 21:46
Dibenzo[a,h]anthracene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 21:46
Dibenzofuran	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 21:46
Diethylphthalate	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 21:46
Dimethylphthalate	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 21:46
Di-n-butylphthalate	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 21:46
di-n-Octylphthalate	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 21:46
Fluoranthene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 21:46
Fluorene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 21:46
Hexachlorobenzene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 21:46
Hexachlorobutadiene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 21:46
Hexachlorocyclopentadiene	0.0153	U	0.0306	0.00959	mg/L	1		05/02/16 21:46
Hexachloroethane	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 21:46
Indeno[1,2,3-c,d] pyrene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 21:46
Isophorone	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 21:46
Naphthalene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 21:46
Nitrobenzene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 21:46
N-Nitrosodimethylamine	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 21:46
N-Nitroso-di-n-propylamine	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 21:46
N-Nitrosodiphenylamine	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 21:46
Pentachlorophenol	0.0255	U	0.0510	0.0153	mg/L	1		05/02/16 21:46
Phenanthrene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 21:46
Phenol	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 21:46
Pyrene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 21:46
Surrogates								
2,4,6-Tribromophenol (surr)	70.7		43-140		%	1		05/02/16 21:46

Print Date: 05/23/2016 2:25:39PM

J flagging is activated

Results of **TP1-0416**

Client Sample ID: **TP1-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161923001
Lab Project ID: 1161923

Collection Date: 04/23/16 14:25
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
2-Fluorobiphenyl (surr)	67.3		44-119		%	1		05/02/16 21:46
2-Fluorophenol (surr)	51.1		19-119		%	1		05/02/16 21:46
Nitrobenzene-d5 (surr)	62.4		44-120		%	1		05/02/16 21:46
Phenol-d6 (surr)	52		10-115		%	1		05/02/16 21:46
Terphenyl-d14 (surr)	94.9		50-134		%	1		05/02/16 21:46

Batch Information

Analytical Batch: XMS9274
Analytical Method: SW8270D
Analyst: NLL
Analytical Date/Time: 05/02/16 21:46
Container ID: 1161923001-I

Prep Batch: XXX35213
Prep Method: SW3520C
Prep Date/Time: 04/26/16 09:00
Prep Initial Wt./Vol.: 980 mL
Prep Extract Vol: 1 mL

Print Date: 05/23/2016 2:25:39PM

J flagging is activated

Results of **TP1-0416**

Client Sample ID: **TP1-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161923001
Lab Project ID: 1161923

Collection Date: 04/23/16 14:25
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.0500	U	0.100	0.0310	mg/L	1		04/26/16 03:11
Surrogates								
4-Bromofluorobenzene (surr)	77.3		50-150		%	1		04/26/16 03:11

Batch Information

Analytical Batch: VFC12973
Analytical Method: AK101
Analyst: S.P
Analytical Date/Time: 04/26/16 03:11
Container ID: 1161923001-F

Prep Batch: VXX28738
Prep Method: SW5030B
Prep Date/Time: 04/25/16 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/23/2016 2:25:39PM

J flagging is activated

Results of **TP1-0416**

Client Sample ID: **TP1-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161923001
Lab Project ID: 1161923

Collection Date: 04/23/16 14:25
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		04/30/16 00:37
1,1,1-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:37
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		04/30/16 00:37
1,1,2-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:37
1,1-Dichloroethane	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:37
1,1-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:37
1,1-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:37
1,2,3-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:37
1,2,3-Trichloropropane	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:37
1,2,4-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:37
1,2,4-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:37
1,2-Dibromo-3-chloropropane	5.00	U	10.0	3.10	ug/L	1		04/30/16 00:37
1,2-Dibromoethane	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:37
1,2-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:37
1,2-Dichloroethane	0.250	U	0.500	0.150	ug/L	1		04/30/16 00:37
1,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:37
1,3,5-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:37
1,3-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:37
1,3-Dichloropropane	0.250	U	0.500	0.150	ug/L	1		04/30/16 00:37
1,4-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1		04/30/16 00:37
2,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:37
2-Butanone (MEK)	5.00	U	10.0	3.10	ug/L	1		04/30/16 00:37
2-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:37
2-Hexanone	5.00	U	10.0	3.10	ug/L	1		04/30/16 00:37
4-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:37
4-Isopropyltoluene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:37
4-Methyl-2-pentanone (MIBK)	5.00	U	10.0	3.10	ug/L	1		04/30/16 00:37
Benzene	0.200	U	0.400	0.120	ug/L	1		04/30/16 00:37
Bromobenzene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:37
Bromochloromethane	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:37
Bromodichloromethane	0.250	U	0.500	0.150	ug/L	1		04/30/16 00:37
Bromoform	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:37
Bromomethane	5.00	U	10.0	3.10	ug/L	1		04/30/16 00:37
Carbon disulfide	5.00	U	10.0	3.10	ug/L	1		04/30/16 00:37
Carbon tetrachloride	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:37
Chlorobenzene	0.250	U	0.500	0.150	ug/L	1		04/30/16 00:37
Chloroethane	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:37

Print Date: 05/23/2016 2:25:39PM

J flagging is activated

Results of **TP1-0416**

Client Sample ID: **TP1-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161923001
Lab Project ID: 1161923

Collection Date: 04/23/16 14:25
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroform	0.500	U	1.00	0.300	ug/L	1		04/30/16 00:37
Chloromethane	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:37
cis-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:37
cis-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		04/30/16 00:37
Dibromochloromethane	0.250	U	0.500	0.150	ug/L	1		04/30/16 00:37
Dibromomethane	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:37
Dichlorodifluoromethane	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:37
Ethylbenzene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:37
Freon-113	5.00	U	10.0	3.10	ug/L	1		04/30/16 00:37
Hexachlorobutadiene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:37
Isopropylbenzene (Cumene)	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:37
Methylene chloride	2.50	U	5.00	1.00	ug/L	1		04/30/16 00:37
Methyl-t-butyl ether	5.00	U	10.0	3.10	ug/L	1		04/30/16 00:37
Naphthalene	5.00	U	10.0	3.10	ug/L	1		04/30/16 00:37
n-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:37
n-Propylbenzene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:37
o-Xylene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:37
P & M -Xylene	1.00	U	2.00	0.620	ug/L	1		04/30/16 00:37
sec-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:37
Styrene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:37
tert-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:37
Tetrachloroethene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:37
Toluene	0.830	J	1.00	0.310	ug/L	1		04/30/16 00:37
trans-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:37
trans-1,3-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:37
Trichloroethene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:37
Trichlorofluoromethane	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:37
Vinyl acetate	5.00	U	10.0	3.10	ug/L	1		04/30/16 00:37
Vinyl chloride	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:37
Xylenes (total)	1.50	U	3.00	1.00	ug/L	1		04/30/16 00:37
Surrogates								
1,2-Dichloroethane-D4 (surr)	109		81-118		%	1		04/30/16 00:37
4-Bromofluorobenzene (surr)	96.3		85-114		%	1		04/30/16 00:37
Toluene-d8 (surr)	101		89-112		%	1		04/30/16 00:37

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Results of **TP1-0416**

Client Sample ID: **TP1-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161923001
Lab Project ID: 1161923

Collection Date: 04/23/16 14:25
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS15749
Analytical Method: SW8260B
Analyst: NRB
Analytical Date/Time: 04/30/16 00:37
Container ID: 1161923001-D

Prep Batch: VXX28753
Prep Method: SW5030B
Prep Date/Time: 04/29/16 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

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Results of **TP1-0416**

Client Sample ID: **TP1-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161923001
Lab Project ID: 1161923

Collection Date: 04/23/16 14:25
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloride	4.20		0.100	0.0310	mg/L	1		04/24/16 12:14
Fluoride	0.0780	J	0.100	0.0310	mg/L	1		04/24/16 12:14
Nitrate-N	0.0700	J	0.100	0.0310	mg/L	1		04/24/16 12:14
Nitrite-N	0.0500	U	0.100	0.0310	mg/L	1		04/24/16 12:14
Sulfate	0.576		0.100	0.0310	mg/L	1		04/24/16 12:14

Batch Information

Analytical Batch: WIC5532
Analytical Method: EPA 300.0
Analyst: ACF
Analytical Date/Time: 04/24/16 12:14
Container ID: 1161923001-N

Prep Batch: WXX11480
Prep Method: METHOD
Prep Date/Time: 04/24/16 01:11
Prep Initial Wt./Vol.: 10 mL
Prep Extract Vol: 10 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Turbidity	14.0		0.200	0.100	NTU	1		04/24/16 12:35

Batch Information

Analytical Batch: WAT10636
Analytical Method: SM21 2130B
Analyst: MBS
Analytical Date/Time: 04/24/16 12:35
Container ID: 1161923001-O

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Alkalinity	47.0		10.0	3.10	mg/L	1		04/26/16 22:52

Batch Information

Analytical Batch: WTI4448
Analytical Method: SM21 2320B
Analyst: ACF
Analytical Date/Time: 04/26/16 22:52
Container ID: 1161923001-O

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Dissolved Solids	66.0		10.0	3.10	mg/L	1		04/26/16 09:58

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Results of **TP1-0416**

Client Sample ID: **TP1-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161923001
Lab Project ID: 1161923

Collection Date: 04/23/16 14:25
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Batch Information

Analytical Batch: STS5020
Analytical Method: SM21 2540C
Analyst: MBS
Analytical Date/Time: 04/26/16 09:58
Container ID: 1161923001-O

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Suspended Solids	8.10		1.00	0.310	mg/L	1		04/25/16 15:51

Batch Information

Analytical Batch: STS5019
Analytical Method: SM21 2540D
Analyst: MBS
Analytical Date/Time: 04/25/16 15:51
Container ID: 1161923001-M

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
pH	8.10		0.100	0.100	pH units	1		04/25/16 21:08

Batch Information

Analytical Batch: WTI4443
Analytical Method: SM21 4500-H B
Analyst: ACF
Analytical Date/Time: 04/25/16 21:08
Container ID: 1161923001-O

Print Date: 05/23/2016 2:25:39PM

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Results of **PQW1-0416**

Client Sample ID: **PQW1-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161923002
Lab Project ID: 1161923

Collection Date: 04/23/16 16:30
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Metals by ICP/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Aluminum	10.3		2.00	0.620	ug/L	2.5		05/18/16 10:34
Antimony	0.0250	U	0.0500	0.0150	ug/L	2.5		05/18/16 10:34
Arsenic	0.555	J	0.800	0.200	ug/L	2.5		05/18/16 10:34
Barium	21.5		0.250	0.0400	ug/L	2.5		05/18/16 10:34
Beryllium	0.0250	U	0.0500	0.0250	ug/L	2.5		05/18/16 10:34
Bismuth	0.0250	U	0.0500	0.0150	ug/L	2.5		05/18/16 10:34
Boron	3.07	J	5.00	1.50	ug/L	2.5		05/18/16 10:34
Cadmium	0.0250	U	0.0500	0.0150	ug/L	2.5		05/18/16 10:34
Calcium	15800		50.0	15.0	ug/L	2.5		05/18/16 10:34
Chromium	0.369	J	0.500	0.150	ug/L	2.5		05/18/16 10:34
Cobalt	0.0952		0.0200	0.0100	ug/L	2.5		05/18/16 10:34
Copper	0.683		0.500	0.200	ug/L	2.5		05/18/16 10:34
Iron	7310		20.0	6.20	ug/L	2.5		05/18/16 10:34
Lead	3.39		0.100	0.0310	ug/L	2.5		05/18/16 10:34
Magnesium	3650		20.0	6.20	ug/L	2.5		05/18/16 10:34
Manganese	222		0.100	0.0310	ug/L	2.5		05/18/16 10:34
Molybdenum	0.408		0.0500	0.0150	ug/L	2.5		05/18/16 10:34
Nickel	1.18		0.620	0.0620	ug/L	2.5		05/18/16 10:34
Potassium	3000		50.0	15.0	ug/L	2.5		05/18/16 10:34
Selenium	0.500	U	1.00	0.310	ug/L	2.5		05/18/16 10:34
Silver	0.0100	U	0.0200	0.00620	ug/L	2.5		05/18/16 10:34
Sodium	12000		100	31.0	ug/L	2.5		05/18/16 10:34
Thallium	0.0100	U	0.0200	0.00620	ug/L	2.5		05/18/16 10:34
Tin	0.100	U	0.200	0.0620	ug/L	2.5		05/18/16 10:34
Vanadium	0.500	U	1.00	0.310	ug/L	2.5		05/18/16 10:34
Zinc	1410		62.0	8.00	ug/L	50		05/18/16 12:53

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Results of **PQW1-0416**

Client Sample ID: **PQW1-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161923002
Lab Project ID: 1161923

Collection Date: 04/23/16 16:30
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Metals by ICP/MS**

Batch Information

Analytical Batch: MMS9354
Analytical Method: 200.8 Low Level
Analyst: VDL
Analytical Date/Time: 05/18/16 10:34
Container ID: 1161923002-B

Prep Batch: MXX29753
Prep Method: E200.2
Prep Date/Time: 05/17/16 08:37
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 10 mL

Analytical Batch: MMS9355
Analytical Method: 200.8 Low Level
Analyst: EAB
Analytical Date/Time: 05/18/16 12:53
Container ID: 1161923002-B

Prep Batch: MXX29753
Prep Method: E200.2
Prep Date/Time: 05/17/16 08:37
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 10 mL

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Results of **PQW1-0416**

Client Sample ID: **PQW1-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161923002
Lab Project ID: 1161923

Collection Date: 04/23/16 16:30
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Metals Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Mercury	0.828	J	1.00	0.500	ng/L	1		04/27/16 20:24

Batch Information

Analytical Batch: MCV5701
Analytical Method: EPA 1631 E
Analyst: NEG
Analytical Date/Time: 04/27/16 20:24
Container ID: 1161923002-A

Prep Batch: MXX29690
Prep Method: METHOD
Prep Date/Time: 04/25/16 17:00
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

Print Date: 05/23/2016 2:25:39PM

J flagging is activated

Results of **PQW1-0416**

Client Sample ID: **PQW1-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161923002
Lab Project ID: 1161923

Collection Date: 04/23/16 16:30
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Polynuclear Aromatics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Acenaphthene	0.0255	U	0.0510	0.0153	ug/L	1		04/25/16 19:30
Acenaphthylene	0.0412	J	0.0510	0.0153	ug/L	1		04/25/16 19:30
Anthracene	0.0255	U	0.0510	0.0153	ug/L	1		04/25/16 19:30
Benzo(a)Anthracene	0.0255	U	0.0510	0.0153	ug/L	1		04/25/16 19:30
Benzo[a]pyrene	0.0102	U	0.0204	0.0153	ug/L	1		04/25/16 19:30
Benzo[b]Fluoranthene	0.0255	U	0.0510	0.0153	ug/L	1		04/25/16 19:30
Benzo[g,h,i]perylene	0.0255	U	0.0510	0.0153	ug/L	1		04/25/16 19:30
Benzo[k]fluoranthene	0.0255	U	0.0510	0.0153	ug/L	1		04/25/16 19:30
Chrysene	0.0255	U	0.0510	0.0153	ug/L	1		04/25/16 19:30
Dibenzo[a,h]anthracene	0.0102	U	0.0204	0.0153	ug/L	1		04/25/16 19:30
Fluoranthene	0.0255	U	0.0510	0.0153	ug/L	1		04/25/16 19:30
Fluorene	0.0255	U	0.0510	0.0153	ug/L	1		04/25/16 19:30
Indeno[1,2,3-c,d] pyrene	0.0255	U	0.0510	0.0153	ug/L	1		04/25/16 19:30
Naphthalene	0.406		0.102	0.0316	ug/L	1		04/25/16 19:30
Phenanthrene	0.0255	U	0.0510	0.0153	ug/L	1		04/25/16 19:30
Pyrene	0.0255	U	0.0510	0.0153	ug/L	1		04/25/16 19:30
Surrogates								
2-Fluorobiphenyl (surr)	66.9		53-106		%	1		04/25/16 19:30
Terphenyl-d14 (surr)	82.5		58-132		%	1		04/25/16 19:30

Batch Information

Analytical Batch: XMS9268
Analytical Method: EPA 625M SIM (PAH)
Analyst: BRV
Analytical Date/Time: 04/25/16 19:30
Container ID: 1161923002-P

Prep Batch: XXX35207
Prep Method: SW3520C
Prep Date/Time: 04/25/16 10:30
Prep Initial Wt./Vol.: 980 mL
Prep Extract Vol: 1 mL

Print Date: 05/23/2016 2:25:39PM

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Results of **PQW1-0416**

Client Sample ID: **PQW1-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161923002
Lab Project ID: 1161923

Collection Date: 04/23/16 16:30
Received Date: 04/24/16 10:30
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	0.283	U	0.566	0.170	mg/L	1		05/02/16 17:38
Surrogates								
5a Androstane (surr)	87.2		50-150		%	1		05/02/16 17:38

Batch Information

Analytical Batch: XFC12356
Analytical Method: AK102
Analyst: CJSW
Analytical Date/Time: 05/02/16 17:38
Container ID: 1161923002-K

Prep Batch: XXX35229
Prep Method: SW3520C
Prep Date/Time: 04/28/16 09:48
Prep Initial Wt./Vol.: 265 mL
Prep Extract Vol: 1 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Residual Range Organics	0.419	J	0.472	0.142	mg/L	1		05/02/16 17:38
Surrogates								
n-Triacontane-d62 (surr)	92.5		50-150		%	1		05/02/16 17:38

Batch Information

Analytical Batch: XFC12356
Analytical Method: AK103
Analyst: CJSW
Analytical Date/Time: 05/02/16 17:38
Container ID: 1161923002-K

Prep Batch: XXX35229
Prep Method: SW3520C
Prep Date/Time: 04/28/16 09:48
Prep Initial Wt./Vol.: 265 mL
Prep Extract Vol: 1 mL

Print Date: 05/23/2016 2:25:39PM

J flagging is activated

Results of **PQW1-0416**

Client Sample ID: **PQW1-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161923002
Lab Project ID: 1161923

Collection Date: 04/23/16 16:30
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,2,4-Trichlorobenzene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:39
1,2-Dichlorobenzene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:39
1,3-Dichlorobenzene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:39
1,4-Dichlorobenzene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:39
1-Chloronaphthalene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:39
1-Methylnaphthalene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:39
2,4,5-Trichlorophenol	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:39
2,4,6-Trichlorophenol	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:39
2,4-Dichlorophenol	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:39
2,4-Dimethylphenol	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:39
2,4-Dinitrophenol	0.0255	U	0.0510	0.0153	mg/L	1		05/02/16 20:39
2,4-Dinitrotoluene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:39
2,6-Dichlorophenol	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:39
2,6-Dinitrotoluene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:39
2-Chloronaphthalene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:39
2-Chlorophenol	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:39
2-Methyl-4,6-dinitrophenol	0.0255	U	0.0510	0.0153	mg/L	1		05/02/16 20:39
2-Methylnaphthalene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:39
2-Methylphenol (o-Cresol)	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:39
2-Nitroaniline	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:39
2-Nitrophenol	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:39
3&4-Methylphenol (p&m-Cresol)	0.0102	U	0.0204	0.00633	mg/L	1		05/02/16 20:39
3,3-Dichlorobenzidine	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:39
3-Nitroaniline	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:39
4-Bromophenyl-phenylether	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:39
4-Chloro-3-methylphenol	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:39
4-Chloroaniline	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:39
4-Chlorophenyl-phenylether	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:39
4-Nitroaniline	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:39
4-Nitrophenol	0.0255	U	0.0510	0.0153	mg/L	1		05/02/16 20:39
Acenaphthene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:39
Acenaphthylene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:39
Aniline	0.0255	U	0.0510	0.0153	mg/L	1		05/02/16 20:39
Anthracene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:39
Azobenzene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:39
Benzo(a)Anthracene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:39
Benzo[a]pyrene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:39

Print Date: 05/23/2016 2:25:39PM

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Results of **PQW1-0416**

Client Sample ID: **PQW1-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161923002
Lab Project ID: 1161923

Collection Date: 04/23/16 16:30
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Benzo[b]Fluoranthene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:39
Benzo[g,h,i]perylene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:39
Benzo[k]fluoranthene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:39
Benzoic acid	0.0334	J	0.0510	0.0153	mg/L	1		05/02/16 20:39
Benzyl alcohol	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:39
Bis(2chloro1methylethyl)Ether	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:39
Bis(2-Chloroethoxy)methane	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:39
Bis(2-Chloroethyl)ether	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:39
bis(2-Ethylhexyl)phthalate	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:39
Butylbenzylphthalate	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:39
Carbazole	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:39
Chrysene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:39
Dibenzo[a,h]anthracene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:39
Dibenzofuran	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:39
Diethylphthalate	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:39
Dimethylphthalate	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:39
Di-n-butylphthalate	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:39
di-n-Octylphthalate	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:39
Fluoranthene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:39
Fluorene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:39
Hexachlorobenzene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:39
Hexachlorobutadiene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:39
Hexachlorocyclopentadiene	0.0153	U	0.0306	0.00959	mg/L	1		05/02/16 20:39
Hexachloroethane	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:39
Indeno[1,2,3-c,d] pyrene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:39
Isophorone	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:39
Naphthalene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:39
Nitrobenzene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:39
N-Nitrosodimethylamine	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:39
N-Nitroso-di-n-propylamine	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:39
N-Nitrosodiphenylamine	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:39
Pentachlorophenol	0.0255	U	0.0510	0.0153	mg/L	1		05/02/16 20:39
Phenanthrene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:39
Phenol	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:39
Pyrene	0.00510	U	0.0102	0.00316	mg/L	1		05/02/16 20:39
Surrogates								
2,4,6-Tribromophenol (surr)	66.7		43-140		%	1		05/02/16 20:39

Print Date: 05/23/2016 2:25:39PM

J flagging is activated

Results of **PQW1-0416**

Client Sample ID: **PQW1-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161923002
Lab Project ID: 1161923

Collection Date: 04/23/16 16:30
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
2-Fluorobiphenyl (surr)	57.4		44-119		%	1		05/02/16 20:39
2-Fluorophenol (surr)	39.4		19-119		%	1		05/02/16 20:39
Nitrobenzene-d5 (surr)	48.9		44-120		%	1		05/02/16 20:39
Phenol-d6 (surr)	37.7		10-115		%	1		05/02/16 20:39
Terphenyl-d14 (surr)	91		50-134		%	1		05/02/16 20:39

Batch Information

Analytical Batch: XMS9274
Analytical Method: SW8270D
Analyst: NLL
Analytical Date/Time: 05/02/16 20:39
Container ID: 1161923002-I

Prep Batch: XXX35213
Prep Method: SW3520C
Prep Date/Time: 04/26/16 09:00
Prep Initial Wt./Vol.: 980 mL
Prep Extract Vol: 1 mL

SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
t 907.562.2343 **f** 907.561.5301 www.us.sgs.com

Results of **PQW1-0416**

Client Sample ID: **PQW1-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161923002
Lab Project ID: 1161923

Collection Date: 04/23/16 16:30
Received Date: 04/24/16 10:30
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	0.204		0.100	0.0310	mg/L	1		04/26/16 03:30
Surrogates								
4-Bromofluorobenzene (surr)	82.3		50-150		%	1		04/26/16 03:30

Batch Information

Analytical Batch: VFC12973
Analytical Method: AK101
Analyst: S.P
Analytical Date/Time: 04/26/16 03:30
Container ID: 1161923002-F

Prep Batch: VXX28738
Prep Method: SW5030B
Prep Date/Time: 04/25/16 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/23/2016 2:25:39PM

J flagging is activated

Results of **PQW1-0416**

Client Sample ID: **PQW1-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161923002
Lab Project ID: 1161923

Collection Date: 04/23/16 16:30
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		04/30/16 00:53
1,1,1-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:53
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		04/30/16 00:53
1,1,2-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:53
1,1-Dichloroethane	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:53
1,1-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:53
1,1-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:53
1,2,3-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:53
1,2,3-Trichloropropane	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:53
1,2,4-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:53
1,2,4-Trimethylbenzene	2.38		1.00	0.310	ug/L	1		04/30/16 00:53
1,2-Dibromo-3-chloropropane	5.00	U	10.0	3.10	ug/L	1		04/30/16 00:53
1,2-Dibromoethane	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:53
1,2-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:53
1,2-Dichloroethane	0.250	U	0.500	0.150	ug/L	1		04/30/16 00:53
1,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:53
1,3,5-Trimethylbenzene	0.400	J	1.00	0.310	ug/L	1		04/30/16 00:53
1,3-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:53
1,3-Dichloropropane	0.250	U	0.500	0.150	ug/L	1		04/30/16 00:53
1,4-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1		04/30/16 00:53
2,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:53
2-Butanone (MEK)	5.00	U	10.0	3.10	ug/L	1		04/30/16 00:53
2-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:53
2-Hexanone	5.00	U	10.0	3.10	ug/L	1		04/30/16 00:53
4-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:53
4-Isopropyltoluene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:53
4-Methyl-2-pentanone (MIBK)	5.00	U	10.0	3.10	ug/L	1		04/30/16 00:53
Benzene	67.7		0.400	0.120	ug/L	1		04/30/16 00:53
Bromobenzene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:53
Bromochloromethane	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:53
Bromodichloromethane	0.250	U	0.500	0.150	ug/L	1		04/30/16 00:53
Bromoform	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:53
Bromomethane	5.00	U	10.0	3.10	ug/L	1		04/30/16 00:53
Carbon disulfide	5.00	U	10.0	3.10	ug/L	1		04/30/16 00:53
Carbon tetrachloride	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:53
Chlorobenzene	0.250	U	0.500	0.150	ug/L	1		04/30/16 00:53
Chloroethane	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:53

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J flagging is activated

Results of **PQW1-0416**

Client Sample ID: **PQW1-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161923002
Lab Project ID: 1161923

Collection Date: 04/23/16 16:30
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroform	0.500	U	1.00	0.300	ug/L	1		04/30/16 00:53
Chloromethane	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:53
cis-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:53
cis-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		04/30/16 00:53
Dibromochloromethane	0.250	U	0.500	0.150	ug/L	1		04/30/16 00:53
Dibromomethane	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:53
Dichlorodifluoromethane	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:53
Ethylbenzene	0.560	J	1.00	0.310	ug/L	1		04/30/16 00:53
Freon-113	5.00	U	10.0	3.10	ug/L	1		04/30/16 00:53
Hexachlorobutadiene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:53
Isopropylbenzene (Cumene)	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:53
Methylene chloride	2.50	U	5.00	1.00	ug/L	1		04/30/16 00:53
Methyl-t-butyl ether	5.00	U	10.0	3.10	ug/L	1		04/30/16 00:53
Naphthalene	5.00	U	10.0	3.10	ug/L	1		04/30/16 00:53
n-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:53
n-Propylbenzene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:53
o-Xylene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:53
P & M -Xylene	4.93		2.00	0.620	ug/L	1		04/30/16 00:53
sec-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:53
Styrene	3.10		1.00	0.310	ug/L	1		04/30/16 00:53
tert-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:53
Tetrachloroethene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:53
Toluene	14.6		1.00	0.310	ug/L	1		04/30/16 00:53
trans-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:53
trans-1,3-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:53
Trichloroethene	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:53
Trichlorofluoromethane	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:53
Vinyl acetate	5.00	U	10.0	3.10	ug/L	1		04/30/16 00:53
Vinyl chloride	0.500	U	1.00	0.310	ug/L	1		04/30/16 00:53
Xylenes (total)	4.93		3.00	1.00	ug/L	1		04/30/16 00:53
Surrogates								
1,2-Dichloroethane-D4 (surr)	105		81-118		%	1		04/30/16 00:53
4-Bromofluorobenzene (surr)	94.2		85-114		%	1		04/30/16 00:53
Toluene-d8 (surr)	101		89-112		%	1		04/30/16 00:53

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Results of **PQW1-0416**

Client Sample ID: **PQW1-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161923002
Lab Project ID: 1161923

Collection Date: 04/23/16 16:30
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS15749
Analytical Method: SW8260B
Analyst: NRB
Analytical Date/Time: 04/30/16 00:53
Container ID: 1161923002-E

Prep Batch: VXX28753
Prep Method: SW5030B
Prep Date/Time: 04/29/16 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/23/2016 2:25:39PM

J flagging is activated

Results of **PQW1-0416**

Client Sample ID: **PQW1-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161923002
Lab Project ID: 1161923

Collection Date: 04/23/16 16:30
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloride	24.1		0.100	0.0310	mg/L	1		04/24/16 12:37
Fluoride	0.0350	J	0.100	0.0310	mg/L	1		04/24/16 12:37
Nitrate-N	0.0670	J	0.100	0.0310	mg/L	1		04/24/16 12:37
Nitrite-N	0.0500	U	0.100	0.0310	mg/L	1		04/24/16 12:37
Sulfate	0.0500	U	0.100	0.0310	mg/L	1		04/24/16 12:37

Batch Information

Analytical Batch: WIC5532
Analytical Method: EPA 300.0
Analyst: ACF
Analytical Date/Time: 04/24/16 12:37
Container ID: 1161923002-N

Prep Batch: WXX11480
Prep Method: METHOD
Prep Date/Time: 04/24/16 01:11
Prep Initial Wt./Vol.: 10 mL
Prep Extract Vol: 10 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Turbidity	23.0		0.200	0.100	NTU	1		04/24/16 12:35

Batch Information

Analytical Batch: WAT10636
Analytical Method: SM21 2130B
Analyst: MBS
Analytical Date/Time: 04/24/16 12:35
Container ID: 1161923002-O

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Alkalinity	41.8		10.0	3.10	mg/L	1		04/26/16 22:59

Batch Information

Analytical Batch: WTI4448
Analytical Method: SM21 2320B
Analyst: ACF
Analytical Date/Time: 04/26/16 22:59
Container ID: 1161923002-O

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Dissolved Solids	102		10.0	3.10	mg/L	1		04/26/16 09:58

Print Date: 05/23/2016 2:25:39PM

J flagging is activated

Results of **PQW1-0416**

Client Sample ID: **PQW1-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161923002
Lab Project ID: 1161923

Collection Date: 04/23/16 16:30
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Batch Information

Analytical Batch: STS5020
Analytical Method: SM21 2540C
Analyst: MBS
Analytical Date/Time: 04/26/16 09:58
Container ID: 1161923002-O

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Suspended Solids	15.0		2.50	0.775	mg/L	1		04/25/16 15:51

Batch Information

Analytical Batch: STS5019
Analytical Method: SM21 2540D
Analyst: MBS
Analytical Date/Time: 04/25/16 15:51
Container ID: 1161923002-M

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
pH	7.50		0.100	0.100	pH units	1		04/25/16 21:17

Batch Information

Analytical Batch: WTI4443
Analytical Method: SM21 4500-H B
Analyst: ACF
Analytical Date/Time: 04/25/16 21:17
Container ID: 1161923002-O

Print Date: 05/23/2016 2:25:39PM

J flagging is activated

Results of **Decker-0416**

Client Sample ID: **Decker-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161923003
Lab Project ID: 1161923

Collection Date: 04/23/16 17:45
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Metals by ICP/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Aluminum	1.93	J	2.00	0.620	ug/L	2.5		05/18/16 12:00
Antimony	0.0250	U	0.0500	0.0150	ug/L	2.5		05/18/16 12:00
Arsenic	14.3		0.800	0.200	ug/L	2.5		05/18/16 12:00
Barium	9.85		0.250	0.0400	ug/L	2.5		05/18/16 12:00
Beryllium	0.0250	U	0.0500	0.0250	ug/L	2.5		05/18/16 12:00
Bismuth	0.0250	U	0.0500	0.0150	ug/L	2.5		05/18/16 12:00
Boron	23.1		5.00	1.50	ug/L	2.5		05/18/16 12:00
Cadmium	0.0250	U	0.0500	0.0150	ug/L	2.5		05/18/16 12:00
Calcium	16700		50.0	15.0	ug/L	2.5		05/18/16 12:00
Chromium	0.254	J	0.500	0.150	ug/L	2.5		05/18/16 12:00
Cobalt	0.0264		0.0200	0.0100	ug/L	2.5		05/18/16 12:00
Copper	0.217	J	0.500	0.200	ug/L	2.5		05/18/16 12:00
Iron	61.3		20.0	6.20	ug/L	2.5		05/18/16 12:00
Lead	0.0500	U	0.100	0.0310	ug/L	2.5		05/18/16 12:00
Magnesium	5770		20.0	6.20	ug/L	2.5		05/18/16 12:00
Manganese	79.7		0.100	0.0310	ug/L	2.5		05/18/16 12:00
Molybdenum	0.436		0.0500	0.0150	ug/L	2.5		05/18/16 12:00
Nickel	0.297	J	0.620	0.0620	ug/L	2.5		05/18/16 12:00
Potassium	4580		50.0	15.0	ug/L	2.5		05/18/16 12:00
Selenium	0.500	U	1.00	0.310	ug/L	2.5		05/18/16 12:00
Silver	0.0100	U	0.0200	0.00620	ug/L	2.5		05/18/16 12:00
Sodium	7070		100	31.0	ug/L	2.5		05/18/16 12:00
Thallium	0.0100	U	0.0200	0.00620	ug/L	2.5		05/18/16 12:00
Tin	0.100	U	0.200	0.0620	ug/L	2.5		05/18/16 12:00
Vanadium	0.500	U	1.00	0.310	ug/L	2.5		05/18/16 12:00
Zinc	1.55	U	3.10	0.400	ug/L	2.5		05/18/16 12:00

Batch Information

Analytical Batch: MMS9355
Analytical Method: 200.8 Low Level
Analyst: EAB
Analytical Date/Time: 05/18/16 12:00
Container ID: 1161923003-B

Prep Batch: MXX29753
Prep Method: E200.2
Prep Date/Time: 05/17/16 08:37
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 10 mL

Print Date: 05/23/2016 2:25:39PM

J flagging is activated

Results of **Decker-0416**

Client Sample ID: **Decker-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161923003
Lab Project ID: 1161923

Collection Date: 04/23/16 17:45
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Metals Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Mercury	0.500	U	1.00	0.500	ng/L	1		04/27/16 20:28

Batch Information

Analytical Batch: MCV5701
Analytical Method: EPA 1631 E
Analyst: NEG
Analytical Date/Time: 04/27/16 20:28
Container ID: 1161923003-A

Prep Batch: MXX29690
Prep Method: METHOD
Prep Date/Time: 04/25/16 17:00
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

Print Date: 05/23/2016 2:25:39PM

J flagging is activated

Results of **Decker-0416**

Client Sample ID: **Decker-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161923003
Lab Project ID: 1161923

Collection Date: 04/23/16 17:45
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Polynuclear Aromatics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Acenaphthene	0.0261	U	0.0521	0.0156	ug/L	1		04/25/16 19:49
Acenaphthylene	0.0261	U	0.0521	0.0156	ug/L	1		04/25/16 19:49
Anthracene	0.0261	U	0.0521	0.0156	ug/L	1		04/25/16 19:49
Benzo(a)Anthracene	0.0261	U	0.0521	0.0156	ug/L	1		04/25/16 19:49
Benzo[a]pyrene	0.0104	U	0.0208	0.0156	ug/L	1		04/25/16 19:49
Benzo[b]Fluoranthene	0.0261	U	0.0521	0.0156	ug/L	1		04/25/16 19:49
Benzo[g,h,i]perylene	0.0261	U	0.0521	0.0156	ug/L	1		04/25/16 19:49
Benzo[k]fluoranthene	0.0261	U	0.0521	0.0156	ug/L	1		04/25/16 19:49
Chrysene	0.0261	U	0.0521	0.0156	ug/L	1		04/25/16 19:49
Dibenzo[a,h]anthracene	0.0104	U	0.0208	0.0156	ug/L	1		04/25/16 19:49
Fluoranthene	0.0261	U	0.0521	0.0156	ug/L	1		04/25/16 19:49
Fluorene	0.0261	U	0.0521	0.0156	ug/L	1		04/25/16 19:49
Indeno[1,2,3-c,d] pyrene	0.0261	U	0.0521	0.0156	ug/L	1		04/25/16 19:49
Naphthalene	0.129		0.104	0.0323	ug/L	1		04/25/16 19:49
Phenanthrene	0.0261	U	0.0521	0.0156	ug/L	1		04/25/16 19:49
Pyrene	0.0261	U	0.0521	0.0156	ug/L	1		04/25/16 19:49
Surrogates								
2-Fluorobiphenyl (surr)	70.8		53-106		%	1		04/25/16 19:49
Terphenyl-d14 (surr)	90.5		58-132		%	1		04/25/16 19:49

Batch Information

Analytical Batch: XMS9268
Analytical Method: EPA 625M SIM (PAH)
Analyst: BRV
Analytical Date/Time: 04/25/16 19:49
Container ID: 1161923003-P

Prep Batch: XXX35207
Prep Method: SW3520C
Prep Date/Time: 04/25/16 10:30
Prep Initial Wt./Vol.: 960 mL
Prep Extract Vol: 1 mL

Print Date: 05/23/2016 2:25:39PM

J flagging is activated

Results of **Decker-0416**

Client Sample ID: **Decker-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161923003
Lab Project ID: 1161923

Collection Date: 04/23/16 17:45
Received Date: 04/24/16 10:30
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	0.300	U	0.600	0.180	mg/L	1		05/02/16 17:49
Surrogates								
5a Androstane (surr)	88.7		50-150		%	1		05/02/16 17:49

Batch Information

Analytical Batch: XFC12356
Analytical Method: AK102
Analyst: CJSW
Analytical Date/Time: 05/02/16 17:49
Container ID: 1161923003-K

Prep Batch: XXX35229
Prep Method: SW3520C
Prep Date/Time: 04/28/16 09:48
Prep Initial Wt./Vol.: 250 mL
Prep Extract Vol: 1 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Residual Range Organics	0.221	J	0.500	0.150	mg/L	1		05/02/16 17:49
Surrogates								
n-Triacontane-d62 (surr)	93		50-150		%	1		05/02/16 17:49

Batch Information

Analytical Batch: XFC12356
Analytical Method: AK103
Analyst: CJSW
Analytical Date/Time: 05/02/16 17:49
Container ID: 1161923003-K

Prep Batch: XXX35229
Prep Method: SW3520C
Prep Date/Time: 04/28/16 09:48
Prep Initial Wt./Vol.: 250 mL
Prep Extract Vol: 1 mL

Print Date: 05/23/2016 2:25:39PM

J flagging is activated

Results of **Decker-0416**

Client Sample ID: **Decker-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161923003
Lab Project ID: 1161923

Collection Date: 04/23/16 17:45
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,2,4-Trichlorobenzene	0.00515	U	0.0103	0.00320	mg/L	1		05/02/16 22:03
1,2-Dichlorobenzene	0.00515	U	0.0103	0.00320	mg/L	1		05/02/16 22:03
1,3-Dichlorobenzene	0.00515	U	0.0103	0.00320	mg/L	1		05/02/16 22:03
1,4-Dichlorobenzene	0.00515	U	0.0103	0.00320	mg/L	1		05/02/16 22:03
1-Chloronaphthalene	0.00515	U	0.0103	0.00320	mg/L	1		05/02/16 22:03
1-Methylnaphthalene	0.00515	U	0.0103	0.00320	mg/L	1		05/02/16 22:03
2,4,5-Trichlorophenol	0.00515	U	0.0103	0.00320	mg/L	1		05/02/16 22:03
2,4,6-Trichlorophenol	0.00515	U	0.0103	0.00320	mg/L	1		05/02/16 22:03
2,4-Dichlorophenol	0.00515	U	0.0103	0.00320	mg/L	1		05/02/16 22:03
2,4-Dimethylphenol	0.00515	U	0.0103	0.00320	mg/L	1		05/02/16 22:03
2,4-Dinitrophenol	0.0257	U	0.0515	0.0155	mg/L	1		05/02/16 22:03
2,4-Dinitrotoluene	0.00515	U	0.0103	0.00320	mg/L	1		05/02/16 22:03
2,6-Dichlorophenol	0.00515	U	0.0103	0.00320	mg/L	1		05/02/16 22:03
2,6-Dinitrotoluene	0.00515	U	0.0103	0.00320	mg/L	1		05/02/16 22:03
2-Chloronaphthalene	0.00515	U	0.0103	0.00320	mg/L	1		05/02/16 22:03
2-Chlorophenol	0.00515	U	0.0103	0.00320	mg/L	1		05/02/16 22:03
2-Methyl-4,6-dinitrophenol	0.0257	U	0.0515	0.0155	mg/L	1		05/02/16 22:03
2-Methylnaphthalene	0.00515	U	0.0103	0.00320	mg/L	1		05/02/16 22:03
2-Methylphenol (o-Cresol)	0.00515	U	0.0103	0.00320	mg/L	1		05/02/16 22:03
2-Nitroaniline	0.00515	U	0.0103	0.00320	mg/L	1		05/02/16 22:03
2-Nitrophenol	0.00515	U	0.0103	0.00320	mg/L	1		05/02/16 22:03
3&4-Methylphenol (p&m-Cresol)	0.0103	U	0.0206	0.00639	mg/L	1		05/02/16 22:03
3,3-Dichlorobenzidine	0.00515	U	0.0103	0.00320	mg/L	1		05/02/16 22:03
3-Nitroaniline	0.00515	U	0.0103	0.00320	mg/L	1		05/02/16 22:03
4-Bromophenyl-phenylether	0.00515	U	0.0103	0.00320	mg/L	1		05/02/16 22:03
4-Chloro-3-methylphenol	0.00515	U	0.0103	0.00320	mg/L	1		05/02/16 22:03
4-Chloroaniline	0.00515	U	0.0103	0.00320	mg/L	1		05/02/16 22:03
4-Chlorophenyl-phenylether	0.00515	U	0.0103	0.00320	mg/L	1		05/02/16 22:03
4-Nitroaniline	0.00515	U	0.0103	0.00320	mg/L	1		05/02/16 22:03
4-Nitrophenol	0.0257	U	0.0515	0.0155	mg/L	1		05/02/16 22:03
Acenaphthene	0.00515	U	0.0103	0.00320	mg/L	1		05/02/16 22:03
Acenaphthylene	0.00515	U	0.0103	0.00320	mg/L	1		05/02/16 22:03
Aniline	0.0257	U	0.0515	0.0155	mg/L	1		05/02/16 22:03
Anthracene	0.00515	U	0.0103	0.00320	mg/L	1		05/02/16 22:03
Azobenzene	0.00515	U	0.0103	0.00320	mg/L	1		05/02/16 22:03
Benzo(a)Anthracene	0.00515	U	0.0103	0.00320	mg/L	1		05/02/16 22:03
Benzo[a]pyrene	0.00515	U	0.0103	0.00320	mg/L	1		05/02/16 22:03

Print Date: 05/23/2016 2:25:39PM

J flagging is activated

Results of **Decker-0416**

Client Sample ID: **Decker-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161923003
Lab Project ID: 1161923

Collection Date: 04/23/16 17:45
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Benzo[b]Fluoranthene	0.00515	U	0.0103	0.00320	mg/L	1		05/02/16 22:03
Benzo[g,h,i]perylene	0.00515	U	0.0103	0.00320	mg/L	1		05/02/16 22:03
Benzo[k]fluoranthene	0.00515	U	0.0103	0.00320	mg/L	1		05/02/16 22:03
Benzoic acid	0.0257	U	0.0515	0.0155	mg/L	1		05/02/16 22:03
Benzyl alcohol	0.00515	U	0.0103	0.00320	mg/L	1		05/02/16 22:03
Bis(2chloro1methylethyl)Ether	0.00515	U	0.0103	0.00320	mg/L	1		05/02/16 22:03
Bis(2-Chloroethoxy)methane	0.00515	U	0.0103	0.00320	mg/L	1		05/02/16 22:03
Bis(2-Chloroethyl)ether	0.00515	U	0.0103	0.00320	mg/L	1		05/02/16 22:03
bis(2-Ethylhexyl)phthalate	0.00515	U	0.0103	0.00320	mg/L	1		05/02/16 22:03
Butylbenzylphthalate	0.00515	U	0.0103	0.00320	mg/L	1		05/02/16 22:03
Carbazole	0.00515	U	0.0103	0.00320	mg/L	1		05/02/16 22:03
Chrysene	0.00515	U	0.0103	0.00320	mg/L	1		05/02/16 22:03
Dibenzo[a,h]anthracene	0.00515	U	0.0103	0.00320	mg/L	1		05/02/16 22:03
Dibenzofuran	0.00515	U	0.0103	0.00320	mg/L	1		05/02/16 22:03
Diethylphthalate	0.00515	U	0.0103	0.00320	mg/L	1		05/02/16 22:03
Dimethylphthalate	0.00515	U	0.0103	0.00320	mg/L	1		05/02/16 22:03
Di-n-butylphthalate	0.00515	U	0.0103	0.00320	mg/L	1		05/02/16 22:03
di-n-Octylphthalate	0.00515	U	0.0103	0.00320	mg/L	1		05/02/16 22:03
Fluoranthene	0.00515	U	0.0103	0.00320	mg/L	1		05/02/16 22:03
Fluorene	0.00515	U	0.0103	0.00320	mg/L	1		05/02/16 22:03
Hexachlorobenzene	0.00515	U	0.0103	0.00320	mg/L	1		05/02/16 22:03
Hexachlorobutadiene	0.00515	U	0.0103	0.00320	mg/L	1		05/02/16 22:03
Hexachlorocyclopentadiene	0.0155	U	0.0309	0.00969	mg/L	1		05/02/16 22:03
Hexachloroethane	0.00515	U	0.0103	0.00320	mg/L	1		05/02/16 22:03
Indeno[1,2,3-c,d] pyrene	0.00515	U	0.0103	0.00320	mg/L	1		05/02/16 22:03
Isophorone	0.00515	U	0.0103	0.00320	mg/L	1		05/02/16 22:03
Naphthalene	0.00515	U	0.0103	0.00320	mg/L	1		05/02/16 22:03
Nitrobenzene	0.00515	U	0.0103	0.00320	mg/L	1		05/02/16 22:03
N-Nitrosodimethylamine	0.00515	U	0.0103	0.00320	mg/L	1		05/02/16 22:03
N-Nitroso-di-n-propylamine	0.00515	U	0.0103	0.00320	mg/L	1		05/02/16 22:03
N-Nitrosodiphenylamine	0.00515	U	0.0103	0.00320	mg/L	1		05/02/16 22:03
Pentachlorophenol	0.0257	U	0.0515	0.0155	mg/L	1		05/02/16 22:03
Phenanthrene	0.00515	U	0.0103	0.00320	mg/L	1		05/02/16 22:03
Phenol	0.00515	U	0.0103	0.00320	mg/L	1		05/02/16 22:03
Pyrene	0.00515	U	0.0103	0.00320	mg/L	1		05/02/16 22:03
Surrogates								
2,4,6-Tribromophenol (surr)	65.2		43-140		%	1		05/02/16 22:03

Print Date: 05/23/2016 2:25:39PM

J flagging is activated

Results of **Decker-0416**

Client Sample ID: **Decker-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161923003
Lab Project ID: 1161923

Collection Date: 04/23/16 17:45
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
2-Fluorobiphenyl (surr)	70.2		44-119		%	1		05/02/16 22:03
2-Fluorophenol (surr)	45.4		19-119		%	1		05/02/16 22:03
Nitrobenzene-d5 (surr)	59.2		44-120		%	1		05/02/16 22:03
Phenol-d6 (surr)	45.1		10-115		%	1		05/02/16 22:03
Terphenyl-d14 (surr)	95.4		50-134		%	1		05/02/16 22:03

Batch Information

Analytical Batch: XMS9274
Analytical Method: SW8270D
Analyst: NLL
Analytical Date/Time: 05/02/16 22:03
Container ID: 1161923003-I

Prep Batch: XXX35213
Prep Method: SW3520C
Prep Date/Time: 04/26/16 09:00
Prep Initial Wt./Vol.: 970 mL
Prep Extract Vol: 1 mL

Print Date: 05/23/2016 2:25:39PM

J flagging is activated

Results of **Decker-0416**

Client Sample ID: **Decker-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161923003
Lab Project ID: 1161923

Collection Date: 04/23/16 17:45
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.0500	U	0.100	0.0310	mg/L	1		04/26/16 03:49
Surrogates								
4-Bromofluorobenzene (surr)	81.7		50-150		%	1		04/26/16 03:49

Batch Information

Analytical Batch: VFC12973
Analytical Method: AK101
Analyst: S.P
Analytical Date/Time: 04/26/16 03:49
Container ID: 1161923003-F

Prep Batch: VXX28738
Prep Method: SW5030B
Prep Date/Time: 04/25/16 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/23/2016 2:25:39PM

J flagging is activated

Results of **Decker-0416**

Client Sample ID: **Decker-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161923003
Lab Project ID: 1161923

Collection Date: 04/23/16 17:45
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		04/30/16 01:10
1,1,1-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		04/30/16 01:10
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		04/30/16 01:10
1,1,2-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		04/30/16 01:10
1,1-Dichloroethane	0.500	U	1.00	0.310	ug/L	1		04/30/16 01:10
1,1-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		04/30/16 01:10
1,1-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		04/30/16 01:10
1,2,3-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/30/16 01:10
1,2,3-Trichloropropane	0.500	U	1.00	0.310	ug/L	1		04/30/16 01:10
1,2,4-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/30/16 01:10
1,2,4-Trimethylbenzene	0.310	J	1.00	0.310	ug/L	1		04/30/16 01:10
1,2-Dibromo-3-chloropropane	5.00	U	10.0	3.10	ug/L	1		04/30/16 01:10
1,2-Dibromoethane	0.500	U	1.00	0.310	ug/L	1		04/30/16 01:10
1,2-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/30/16 01:10
1,2-Dichloroethane	0.250	U	0.500	0.150	ug/L	1		04/30/16 01:10
1,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		04/30/16 01:10
1,3,5-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		04/30/16 01:10
1,3-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/30/16 01:10
1,3-Dichloropropane	0.250	U	0.500	0.150	ug/L	1		04/30/16 01:10
1,4-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1		04/30/16 01:10
2,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		04/30/16 01:10
2-Butanone (MEK)	5.00	U	10.0	3.10	ug/L	1		04/30/16 01:10
2-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		04/30/16 01:10
2-Hexanone	5.00	U	10.0	3.10	ug/L	1		04/30/16 01:10
4-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		04/30/16 01:10
4-Isopropyltoluene	0.500	U	1.00	0.310	ug/L	1		04/30/16 01:10
4-Methyl-2-pentanone (MIBK)	5.00	U	10.0	3.10	ug/L	1		04/30/16 01:10
Benzene	0.200	U	0.400	0.120	ug/L	1		04/30/16 01:10
Bromobenzene	0.500	U	1.00	0.310	ug/L	1		04/30/16 01:10
Bromochloromethane	0.500	U	1.00	0.310	ug/L	1		04/30/16 01:10
Bromodichloromethane	0.250	U	0.500	0.150	ug/L	1		04/30/16 01:10
Bromoform	0.500	U	1.00	0.310	ug/L	1		04/30/16 01:10
Bromomethane	5.00	U	10.0	3.10	ug/L	1		04/30/16 01:10
Carbon disulfide	5.00	U	10.0	3.10	ug/L	1		04/30/16 01:10
Carbon tetrachloride	0.500	U	1.00	0.310	ug/L	1		04/30/16 01:10
Chlorobenzene	0.250	U	0.500	0.150	ug/L	1		04/30/16 01:10
Chloroethane	0.500	U	1.00	0.310	ug/L	1		04/30/16 01:10

Print Date: 05/23/2016 2:25:39PM

J flagging is activated

Results of **Decker-0416**

Client Sample ID: **Decker-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161923003
Lab Project ID: 1161923

Collection Date: 04/23/16 17:45
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroform	0.500	U	1.00	0.300	ug/L	1		04/30/16 01:10
Chloromethane	0.500	U	1.00	0.310	ug/L	1		04/30/16 01:10
cis-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		04/30/16 01:10
cis-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		04/30/16 01:10
Dibromochloromethane	0.250	U	0.500	0.150	ug/L	1		04/30/16 01:10
Dibromomethane	0.500	U	1.00	0.310	ug/L	1		04/30/16 01:10
Dichlorodifluoromethane	0.500	U	1.00	0.310	ug/L	1		04/30/16 01:10
Ethylbenzene	0.500	U	1.00	0.310	ug/L	1		04/30/16 01:10
Freon-113	5.00	U	10.0	3.10	ug/L	1		04/30/16 01:10
Hexachlorobutadiene	0.500	U	1.00	0.310	ug/L	1		04/30/16 01:10
Isopropylbenzene (Cumene)	0.500	U	1.00	0.310	ug/L	1		04/30/16 01:10
Methylene chloride	2.50	U	5.00	1.00	ug/L	1		04/30/16 01:10
Methyl-t-butyl ether	5.00	U	10.0	3.10	ug/L	1		04/30/16 01:10
Naphthalene	5.00	U	10.0	3.10	ug/L	1		04/30/16 01:10
n-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		04/30/16 01:10
n-Propylbenzene	0.500	U	1.00	0.310	ug/L	1		04/30/16 01:10
o-Xylene	0.500	U	1.00	0.310	ug/L	1		04/30/16 01:10
P & M -Xylene	1.00	U	2.00	0.620	ug/L	1		04/30/16 01:10
sec-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		04/30/16 01:10
Styrene	0.500	U	1.00	0.310	ug/L	1		04/30/16 01:10
tert-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		04/30/16 01:10
Tetrachloroethene	0.500	U	1.00	0.310	ug/L	1		04/30/16 01:10
Toluene	0.500	U	1.00	0.310	ug/L	1		04/30/16 01:10
trans-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		04/30/16 01:10
trans-1,3-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		04/30/16 01:10
Trichloroethene	0.500	U	1.00	0.310	ug/L	1		04/30/16 01:10
Trichlorofluoromethane	0.500	U	1.00	0.310	ug/L	1		04/30/16 01:10
Vinyl acetate	5.00	U	10.0	3.10	ug/L	1		04/30/16 01:10
Vinyl chloride	0.500	U	1.00	0.310	ug/L	1		04/30/16 01:10
Xylenes (total)	1.50	U	3.00	1.00	ug/L	1		04/30/16 01:10
Surrogates								
1,2-Dichloroethane-D4 (surr)	110		81-118		%	1		04/30/16 01:10
4-Bromofluorobenzene (surr)	95		85-114		%	1		04/30/16 01:10
Toluene-d8 (surr)	99.6		89-112		%	1		04/30/16 01:10

Print Date: 05/23/2016 2:25:39PM

J flagging is activated

Results of **Decker-0416**

Client Sample ID: **Decker-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161923003
Lab Project ID: 1161923

Collection Date: 04/23/16 17:45
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS15749
Analytical Method: SW8260B
Analyst: NRB
Analytical Date/Time: 04/30/16 01:10
Container ID: 1161923003-D

Prep Batch: VXX28753
Prep Method: SW5030B
Prep Date/Time: 04/29/16 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
t 907.562.2343 **f** 907.561.5301 www.us.sgs.com

Results of **Decker-0416**

Client Sample ID: **Decker-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161923003
Lab Project ID: 1161923

Collection Date: 04/23/16 17:45
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloride	11.4		0.100	0.0310	mg/L	1		04/24/16 12:59
Fluoride	0.0970	J	0.100	0.0310	mg/L	1		04/24/16 12:59
Nitrate-N	0.0500	U	0.100	0.0310	mg/L	1		04/24/16 12:59
Nitrite-N	0.0560	J	0.100	0.0310	mg/L	1		04/24/16 12:59
Sulfate	1.75		0.100	0.0310	mg/L	1		04/24/16 12:59

Batch Information

Analytical Batch: WIC5532
Analytical Method: EPA 300.0
Analyst: ACF
Analytical Date/Time: 04/24/16 12:59
Container ID: 1161923003-N

Prep Batch: WXX11480
Prep Method: METHOD
Prep Date/Time: 04/24/16 01:11
Prep Initial Wt./Vol.: 10 mL
Prep Extract Vol: 10 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Turbidity	0.400		0.200	0.100	NTU	1		04/24/16 12:35

Batch Information

Analytical Batch: WAT10636
Analytical Method: SM21 2130B
Analyst: MBS
Analytical Date/Time: 04/24/16 12:35
Container ID: 1161923003-O

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Alkalinity	63.6		10.0	3.10	mg/L	1		04/26/16 23:06

Batch Information

Analytical Batch: WTI4448
Analytical Method: SM21 2320B
Analyst: ACF
Analytical Date/Time: 04/26/16 23:06
Container ID: 1161923003-O

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Dissolved Solids	121		10.0	3.10	mg/L	1		04/26/16 09:58

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J flagging is activated

Results of **Decker-0416**

Client Sample ID: **Decker-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161923003
Lab Project ID: 1161923

Collection Date: 04/23/16 17:45
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Waters Department**

Batch Information

Analytical Batch: STS5020
Analytical Method: SM21 2540C
Analyst: MBS
Analytical Date/Time: 04/26/16 09:58
Container ID: 1161923003-O

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Total Suspended Solids	0.498	U	0.995	0.308	mg/L	1		04/25/16 15:51

Batch Information

Analytical Batch: STS5019
Analytical Method: SM21 2540D
Analyst: MBS
Analytical Date/Time: 04/25/16 15:51
Container ID: 1161923003-M

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
pH	8.10		0.100	0.100	pH units	1		04/25/16 21:26

Batch Information

Analytical Batch: WTI4443
Analytical Method: SM21 4500-H B
Analyst: ACF
Analytical Date/Time: 04/25/16 21:26
Container ID: 1161923003-O

Print Date: 05/23/2016 2:25:39PM

J flagging is activated

Results of **TP6-0416**

Client Sample ID: **TP6-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161923004
Lab Project ID: 1161923

Collection Date: 04/23/16 14:25
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Polynuclear Aromatics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Acenaphthene	0.0255	U	0.0510	0.0153	ug/L	1		04/25/16 20:08
Acenaphthylene	0.0255	U	0.0510	0.0153	ug/L	1		04/25/16 20:08
Anthracene	0.0255	U	0.0510	0.0153	ug/L	1		04/25/16 20:08
Benzo(a)Anthracene	0.0255	U	0.0510	0.0153	ug/L	1		04/25/16 20:08
Benzo[a]pyrene	0.0102	U	0.0204	0.0153	ug/L	1		04/25/16 20:08
Benzo[b]Fluoranthene	0.0255	U	0.0510	0.0153	ug/L	1		04/25/16 20:08
Benzo[g,h,i]perylene	0.0255	U	0.0510	0.0153	ug/L	1		04/25/16 20:08
Benzo[k]fluoranthene	0.0255	U	0.0510	0.0153	ug/L	1		04/25/16 20:08
Chrysene	0.0255	U	0.0510	0.0153	ug/L	1		04/25/16 20:08
Dibenzo[a,h]anthracene	0.0102	U	0.0204	0.0153	ug/L	1		04/25/16 20:08
Fluoranthene	0.0255	U	0.0510	0.0153	ug/L	1		04/25/16 20:08
Fluorene	0.0255	U	0.0510	0.0153	ug/L	1		04/25/16 20:08
Indeno[1,2,3-c,d] pyrene	0.0255	U	0.0510	0.0153	ug/L	1		04/25/16 20:08
Naphthalene	0.0510	U	0.102	0.0316	ug/L	1		04/25/16 20:08
Phenanthrene	0.0255	U	0.0510	0.0153	ug/L	1		04/25/16 20:08
Pyrene	0.0255	U	0.0510	0.0153	ug/L	1		04/25/16 20:08
Surrogates								
2-Fluorobiphenyl (surr)	81		53-106		%	1		04/25/16 20:08
Terphenyl-d14 (surr)	97.8		58-132		%	1		04/25/16 20:08

Batch Information

Analytical Batch: XMS9268
Analytical Method: EPA 625M SIM (PAH)
Analyst: BRV
Analytical Date/Time: 04/25/16 20:08
Container ID: 1161923004-A

Prep Batch: XXX35207
Prep Method: SW3520C
Prep Date/Time: 04/25/16 10:30
Prep Initial Wt./Vol.: 980 mL
Prep Extract Vol: 1 mL

Print Date: 05/23/2016 2:25:39PM

J flagging is activated

Results of **TP1-0416**

Client Sample ID: **TP1-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161923005
Lab Project ID: 1161923

Collection Date: 04/23/16 14:25
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Dissolved Metals**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Mercury	0.517	J	1.00	0.500	ng/L	1		04/27/16 20:33

Batch Information

Analytical Batch: MCV5701
Analytical Method: EPA 1631 E
Analyst: NEG
Analytical Date/Time: 04/27/16 20:33
Container ID: 1161923005-B

Prep Batch: MXX29690
Prep Method: METHOD
Prep Date/Time: 04/25/16 17:00
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

Print Date: 05/23/2016 2:25:39PM

J flagging is activated

Results of **TP1-0416**

Client Sample ID: **TP1-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161923005
Lab Project ID: 1161923

Collection Date: 04/23/16 14:25
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

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

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Aluminum	3.11		2.00	0.620	ug/L	2.5		05/18/16 12:03
Antimony	0.0222	J	0.0500	0.0150	ug/L	2.5		05/18/16 12:03
Arsenic	0.400	U	0.800	0.200	ug/L	2.5		05/18/16 12:03
Barium	0.568		0.250	0.0400	ug/L	2.5		05/20/16 08:25
Beryllium	0.0250	U	0.0500	0.0250	ug/L	2.5		05/18/16 12:03
Bismuth	0.0250	U	0.0500	0.0150	ug/L	2.5		05/18/16 12:03
Boron	33.5		5.00	1.50	ug/L	2.5		05/18/16 12:03
Cadmium	0.0333	J	0.0500	0.0150	ug/L	2.5		05/18/16 12:03
Calcium	6610		50.0	15.0	ug/L	2.5		05/18/16 12:03
Chromium	0.534		0.500	0.150	ug/L	2.5		05/18/16 12:03
Cobalt	0.0922		0.0200	0.0100	ug/L	2.5		05/18/16 12:03
Copper	0.653		0.500	0.200	ug/L	2.5		05/18/16 12:03
Iron	652		20.0	6.20	ug/L	2.5		05/18/16 12:03
Lead	0.623		0.100	0.0310	ug/L	2.5		05/18/16 12:03
Magnesium	3180		20.0	6.20	ug/L	2.5		05/18/16 12:03
Manganese	80.0		0.100	0.0310	ug/L	2.5		05/18/16 12:03
Molybdenum	0.525		0.0500	0.0150	ug/L	2.5		05/18/16 12:03
Nickel	0.620		0.620	0.0620	ug/L	2.5		05/18/16 12:03
Potassium	6380		50.0	15.0	ug/L	2.5		05/18/16 12:03
Selenium	0.500	U	1.00	0.310	ug/L	2.5		05/18/16 12:03
Silicon	1540		100	31.0	ug/L	2.5		05/18/16 12:03
Silver	0.0100	U	0.0200	0.00620	ug/L	2.5		05/18/16 12:03
Sodium	9740		100	31.0	ug/L	2.5		05/18/16 12:03
Thallium	0.0100	U	0.0200	0.00620	ug/L	2.5		05/18/16 12:03
Tin	0.100	U	0.200	0.0620	ug/L	2.5		05/18/16 12:03
Vanadium	0.500	U	1.00	0.310	ug/L	2.5		05/18/16 12:03
Zinc	142		3.10	0.400	ug/L	2.5		05/18/16 12:03

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Results of **TP1-0416**

Client Sample ID: **TP1-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161923005
Lab Project ID: 1161923

Collection Date: 04/23/16 14:25
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

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

Batch Information

Analytical Batch: MMS9355
Analytical Method: 200.8 Low Level
Analyst: EAB
Analytical Date/Time: 05/18/16 12:03
Container ID: 1161923005-A

Prep Batch: MXX29753
Prep Method: E200.2
Prep Date/Time: 05/17/16 08:37
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 10 mL

Analytical Batch: MMS9360
Analytical Method: 200.8 Low Level
Analyst: VDL
Analytical Date/Time: 05/20/16 08:25
Container ID: 1161923005-A

Prep Batch: MXX29762
Prep Method: E200.2
Prep Date/Time: 05/19/16 07:50
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 10 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Hardness as CaCO3	29.6		1.00	1.00	mg/L	2.5		05/18/16 12:03

Batch Information

Analytical Batch: MMS9355
Analytical Method: SM21 2340B
Analyst: EAB
Analytical Date/Time: 05/18/16 12:03
Container ID: 1161923005-A

Prep Batch: MXX29753
Prep Method: E200.2
Prep Date/Time: 05/17/16 08:37
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 10 mL

Results of **PQW1-0416**

Client Sample ID: **PQW1-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161923006
Lab Project ID: 1161923

Collection Date: 04/23/16 16:30
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Dissolved Metals**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Mercury	0.854	J	1.00	0.500	ng/L	1		04/27/16 20:37

Batch Information

Analytical Batch: MCV5701
Analytical Method: EPA 1631 E
Analyst: NEG
Analytical Date/Time: 04/27/16 20:37
Container ID: 1161923006-B

Prep Batch: MXX29690
Prep Method: METHOD
Prep Date/Time: 04/25/16 17:00
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

Print Date: 05/23/2016 2:25:39PM

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Results of **PQW1-0416**

Client Sample ID: **PQW1-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161923006
Lab Project ID: 1161923

Collection Date: 04/23/16 16:30
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

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

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Aluminum	0.823	J	2.00	0.620	ug/L	2.5		05/18/16 12:06
Antimony	0.0250	U	0.0500	0.0150	ug/L	2.5		05/18/16 12:06
Arsenic	0.400	U	0.800	0.200	ug/L	2.5		05/18/16 12:06
Barium	20.8		0.250	0.0400	ug/L	2.5		05/18/16 12:06
Beryllium	0.0250	U	0.0500	0.0250	ug/L	2.5		05/18/16 12:06
Bismuth	0.0250	U	0.0500	0.0150	ug/L	2.5		05/18/16 12:06
Boron	5.44		5.00	1.50	ug/L	2.5		05/18/16 12:06
Cadmium	0.0250	U	0.0500	0.0150	ug/L	2.5		05/18/16 12:06
Calcium	15800		50.0	15.0	ug/L	2.5		05/18/16 12:06
Chromium	0.250	U	0.500	0.150	ug/L	2.5		05/18/16 12:06
Cobalt	0.0325		0.0200	0.0100	ug/L	2.5		05/18/16 12:06
Copper	0.250	U	0.500	0.200	ug/L	2.5		05/18/16 12:06
Iron	1080		20.0	6.20	ug/L	2.5		05/18/16 12:06
Lead	0.108		0.100	0.0310	ug/L	2.5		05/18/16 12:06
Magnesium	3910		20.0	6.20	ug/L	2.5		05/18/16 12:06
Manganese	180		0.100	0.0310	ug/L	2.5		05/18/16 12:06
Molybdenum	0.525		0.0500	0.0150	ug/L	2.5		05/18/16 12:06
Nickel	0.664		0.620	0.0620	ug/L	2.5		05/18/16 12:06
Potassium	2950		50.0	15.0	ug/L	2.5		05/18/16 12:06
Selenium	0.500	U	1.00	0.310	ug/L	2.5		05/18/16 12:06
Silicon	575		100	31.0	ug/L	2.5		05/18/16 12:06
Silver	0.0100	U	0.0200	0.00620	ug/L	2.5		05/18/16 12:06
Sodium	12800		100	31.0	ug/L	2.5		05/18/16 12:06
Thallium	0.0100	U	0.0200	0.00620	ug/L	2.5		05/18/16 12:06
Tin	0.100	U	0.200	0.0620	ug/L	2.5		05/18/16 12:06
Vanadium	0.500	U	1.00	0.310	ug/L	2.5		05/18/16 12:06
Zinc	44.0		3.10	0.400	ug/L	2.5		05/18/16 12:06

Batch Information

Analytical Batch: MMS9355
Analytical Method: 200.8 Low Level
Analyst: EAB
Analytical Date/Time: 05/18/16 12:06
Container ID: 1161923006-A

Prep Batch: MXX29753
Prep Method: E200.2
Prep Date/Time: 05/17/16 08:37
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 10 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Hardness as CaCO3	55.4		1.00	1.00	mg/L	2.5		05/18/16 12:06

Print Date: 05/23/2016 2:25:39PM

J flagging is activated

Results of **PQW1-0416**

Client Sample ID: **PQW1-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161923006
Lab Project ID: 1161923

Collection Date: 04/23/16 16:30
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

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

Batch Information

Analytical Batch: MMS9355
Analytical Method: SM21 2340B
Analyst: EAB
Analytical Date/Time: 05/18/16 12:06
Container ID: 1161923006-A

Prep Batch: MXX29753
Prep Method: E200.2
Prep Date/Time: 05/17/16 08:37
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 10 mL

Print Date: 05/23/2016 2:25:39PM

J flagging is activated

Results of **Decker-0416**

Client Sample ID: **Decker-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161923007
Lab Project ID: 1161923

Collection Date: 04/23/16 17:45
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Dissolved Metals**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Mercury	0.500	U	1.00	0.500	ng/L	1		04/27/16 20:46

Batch Information

Analytical Batch: MCV5701
Analytical Method: EPA 1631 E
Analyst: NEG
Analytical Date/Time: 04/27/16 20:46
Container ID: 1161923007-B

Prep Batch: MXX29690
Prep Method: METHOD
Prep Date/Time: 04/25/16 17:00
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

Print Date: 05/23/2016 2:25:39PM

J flagging is activated

Results of **Decker-0416**

Client Sample ID: **Decker-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161923007
Lab Project ID: 1161923

Collection Date: 04/23/16 17:45
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

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

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Aluminum	2.31		2.00	0.620	ug/L	2.5		05/18/16 12:09
Antimony	0.0250	U	0.0500	0.0150	ug/L	2.5		05/18/16 12:09
Arsenic	15.6		0.800	0.200	ug/L	2.5		05/18/16 12:09
Barium	10.4		0.250	0.0400	ug/L	2.5		05/18/16 12:09
Beryllium	0.0250	U	0.0500	0.0250	ug/L	2.5		05/18/16 12:09
Bismuth	0.0250	U	0.0500	0.0150	ug/L	2.5		05/18/16 12:09
Boron	24.6		5.00	1.50	ug/L	2.5		05/18/16 12:09
Cadmium	0.0250	U	0.0500	0.0150	ug/L	2.5		05/18/16 12:09
Calcium	17900		50.0	15.0	ug/L	2.5		05/18/16 12:09
Chromium	0.185	J	0.500	0.150	ug/L	2.5		05/18/16 12:09
Cobalt	0.0284		0.0200	0.0100	ug/L	2.5		05/18/16 12:09
Copper	0.250	U	0.500	0.200	ug/L	2.5		05/18/16 12:09
Iron	62.4		20.0	6.20	ug/L	2.5		05/18/16 12:09
Lead	0.0688	J	0.100	0.0310	ug/L	2.5		05/18/16 12:09
Magnesium	6050		20.0	6.20	ug/L	2.5		05/18/16 12:09
Manganese	85.8		0.100	0.0310	ug/L	2.5		05/18/16 12:09
Molybdenum	0.488		0.0500	0.0150	ug/L	2.5		05/18/16 12:09
Nickel	0.328	J	0.620	0.0620	ug/L	2.5		05/18/16 12:09
Potassium	4820		50.0	15.0	ug/L	2.5		05/18/16 12:09
Selenium	0.500	U	1.00	0.310	ug/L	2.5		05/18/16 12:09
Silicon	14500		100	31.0	ug/L	2.5		05/18/16 12:09
Silver	0.0100	U	0.0200	0.00620	ug/L	2.5		05/18/16 12:09
Sodium	7620		100	31.0	ug/L	2.5		05/18/16 12:09
Thallium	0.0100	U	0.0200	0.00620	ug/L	2.5		05/18/16 12:09
Tin	0.100	U	0.200	0.0620	ug/L	2.5		05/18/16 12:09
Vanadium	0.322	J	1.00	0.310	ug/L	2.5		05/18/16 12:09
Zinc	0.452	J	3.10	0.400	ug/L	2.5		05/18/16 12:09

Batch Information

Analytical Batch: MMS9355
Analytical Method: 200.8 Low Level
Analyst: EAB
Analytical Date/Time: 05/18/16 12:09
Container ID: 1161923007-A

Prep Batch: MXX29753
Prep Method: E200.2
Prep Date/Time: 05/17/16 08:37
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 10 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Hardness as CaCO3	69.7		1.00	1.00	mg/L	2.5		05/18/16 12:09

Print Date: 05/23/2016 2:25:39PM

J flagging is activated

Results of **Decker-0416**

Client Sample ID: **Decker-0416**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161923007
Lab Project ID: 1161923

Collection Date: 04/23/16 17:45
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

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

Batch Information

Analytical Batch: MMS9355
Analytical Method: SM21 2340B
Analyst: EAB
Analytical Date/Time: 05/18/16 12:09
Container ID: 1161923007-A

Prep Batch: MXX29753
Prep Method: E200.2
Prep Date/Time: 05/17/16 08:37
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 10 mL

SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
t 907.562.2343 **f** 907.561.5301 www.us.sgs.com

Results of **TB-9**

Client Sample ID: **TB-9**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161923008
Lab Project ID: 1161923

Collection Date: 04/23/16 14:25
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.0500	U	0.100	0.0310	mg/L	1		04/26/16 01:16
Surrogates								
4-Bromofluorobenzene (surr)	77.2		50-150		%	1		04/26/16 01:16

Batch Information

Analytical Batch: VFC12973
Analytical Method: AK101
Analyst: S.P
Analytical Date/Time: 04/26/16 01:16
Container ID: 1161923008-A

Prep Batch: VXX28738
Prep Method: SW5030B
Prep Date/Time: 04/25/16 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/23/2016 2:25:39PM

J flagging is activated

Results of **TB-10**

Client Sample ID: **TB-10**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161923009
Lab Project ID: 1161923

Collection Date: 04/23/16 14:25
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		04/29/16 20:45
1,1,1-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:45
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		04/29/16 20:45
1,1,2-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:45
1,1-Dichloroethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:45
1,1-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:45
1,1-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:45
1,2,3-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:45
1,2,3-Trichloropropane	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:45
1,2,4-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:45
1,2,4-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:45
1,2-Dibromo-3-chloropropane	5.00	U	10.0	3.10	ug/L	1		04/29/16 20:45
1,2-Dibromoethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:45
1,2-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:45
1,2-Dichloroethane	0.250	U	0.500	0.150	ug/L	1		04/29/16 20:45
1,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:45
1,3,5-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:45
1,3-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:45
1,3-Dichloropropane	0.250	U	0.500	0.150	ug/L	1		04/29/16 20:45
1,4-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1		04/29/16 20:45
2,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:45
2-Butanone (MEK)	5.00	U	10.0	3.10	ug/L	1		04/29/16 20:45
2-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:45
2-Hexanone	5.00	U	10.0	3.10	ug/L	1		04/29/16 20:45
4-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:45
4-Isopropyltoluene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:45
4-Methyl-2-pentanone (MIBK)	5.00	U	10.0	3.10	ug/L	1		04/29/16 20:45
Benzene	0.200	U	0.400	0.120	ug/L	1		04/29/16 20:45
Bromobenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:45
Bromochloromethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:45
Bromodichloromethane	0.250	U	0.500	0.150	ug/L	1		04/29/16 20:45
Bromoform	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:45
Bromomethane	5.00	U	10.0	3.10	ug/L	1		04/29/16 20:45
Carbon disulfide	5.00	U	10.0	3.10	ug/L	1		04/29/16 20:45
Carbon tetrachloride	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:45
Chlorobenzene	0.250	U	0.500	0.150	ug/L	1		04/29/16 20:45
Chloroethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:45

Print Date: 05/23/2016 2:25:39PM

J flagging is activated

Results of **TB-10**

Client Sample ID: **TB-10**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161923009
Lab Project ID: 1161923

Collection Date: 04/23/16 14:25
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroform	0.500	U	1.00	0.300	ug/L	1		04/29/16 20:45
Chloromethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:45
cis-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:45
cis-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		04/29/16 20:45
Dibromochloromethane	0.250	U	0.500	0.150	ug/L	1		04/29/16 20:45
Dibromomethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:45
Dichlorodifluoromethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:45
Ethylbenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:45
Freon-113	5.00	U	10.0	3.10	ug/L	1		04/29/16 20:45
Hexachlorobutadiene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:45
Isopropylbenzene (Cumene)	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:45
Methylene chloride	2.50	U	5.00	1.00	ug/L	1		04/29/16 20:45
Methyl-t-butyl ether	5.00	U	10.0	3.10	ug/L	1		04/29/16 20:45
Naphthalene	5.00	U	10.0	3.10	ug/L	1		04/29/16 20:45
n-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:45
n-Propylbenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:45
o-Xylene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:45
P & M -Xylene	1.00	U	2.00	0.620	ug/L	1		04/29/16 20:45
sec-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:45
Styrene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:45
tert-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:45
Tetrachloroethene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:45
Toluene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:45
trans-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:45
trans-1,3-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:45
Trichloroethene	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:45
Trichlorofluoromethane	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:45
Vinyl acetate	5.00	U	10.0	3.10	ug/L	1		04/29/16 20:45
Vinyl chloride	0.500	U	1.00	0.310	ug/L	1		04/29/16 20:45
Xylenes (total)	1.50	U	3.00	1.00	ug/L	1		04/29/16 20:45
Surrogates								
1,2-Dichloroethane-D4 (surr)	109		81-118		%	1		04/29/16 20:45
4-Bromofluorobenzene (surr)	95.8		85-114		%	1		04/29/16 20:45
Toluene-d8 (surr)	100		89-112		%	1		04/29/16 20:45

Print Date: 05/23/2016 2:25:39PM

J flagging is activated

Results of **TB-10**

Client Sample ID: **TB-10**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161923009
Lab Project ID: 1161923

Collection Date: 04/23/16 14:25
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS15749
Analytical Method: SW8260B
Analyst: NRB
Analytical Date/Time: 04/29/16 20:45
Container ID: 1161923009-C

Prep Batch: VXX28753
Prep Method: SW5030B
Prep Date/Time: 04/29/16 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/23/2016 2:25:39PM

J flagging is activated

Results of **TBHG3**

Client Sample ID: **TBHG3**
Client Project ID: **105.00148.16001 Kenai Wells**
Lab Sample ID: 1161923010
Lab Project ID: 1161923

Collection Date: 04/23/16 14:25
Received Date: 04/24/16 10:30
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Metals Department**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Mercury	0.500	U	1.00	0.500	ng/L	1		04/27/16 20:51

Batch Information

Analytical Batch: MCV5701
Analytical Method: EPA 1631 E
Analyst: NEG
Analytical Date/Time: 04/27/16 20:51
Container ID: 1161923010-A

Prep Batch: MXX29690
Prep Method: METHOD
Prep Date/Time: 04/25/16 17:00
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

Print Date: 05/23/2016 2:25:39PM

J flagging is activated

Method Blank

Blank ID: MB for HBN 1732614 [MXX/29690]
Blank Lab ID: 1321998

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161923001, 1161923002, 1161923003, 1161923005, 1161923006, 1161923007, 1161923010

Results by **EPA 1631 E**

Parameter	Results	LOQ/CL	DL	Units
Mercury	0.500U	1.00	0.500	ng/L

Batch Information

Analytical Batch: MCV5701
Analytical Method: EPA 1631 E
Instrument:
Analyst: NEG
Analytical Date/Time: 4/27/2016 7:03:08PM

Prep Batch: MXX29690
Prep Method: METHOD
Prep Date/Time: 4/25/2016 5:00:00PM
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

Print Date: 05/23/2016 2:25:45PM

Method Blank

Blank ID: MB for HBN 1732614 [MXX/29690]
Blank Lab ID: 1321999

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161923001, 1161923002, 1161923003, 1161923005, 1161923006, 1161923007, 1161923010

Results by **EPA 1631 E**

Parameter	Results	LOQ/CL	DL	Units
Mercury	0.500U	1.00	0.500	ng/L

Batch Information

Analytical Batch: MCV5701
Analytical Method: EPA 1631 E
Instrument:
Analyst: NEG
Analytical Date/Time: 4/27/2016 7:39:13PM

Prep Batch: MXX29690
Prep Method: METHOD
Prep Date/Time: 4/25/2016 5:00:00PM
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

Print Date: 05/23/2016 2:25:45PM

Method Blank

Blank ID: MB for HBN 1732614 [MXX/29690]
Blank Lab ID: 1322002

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161923001, 1161923002, 1161923003, 1161923005, 1161923006, 1161923007, 1161923010

Results by **EPA 1631 E**

Parameter	Results	LOQ/CL	DL	Units
Mercury	0.500U	1.00	0.500	ng/L

Batch Information

Analytical Batch: MCV5701
Analytical Method: EPA 1631 E
Instrument:
Analyst: NEG
Analytical Date/Time: 4/27/2016 8:06:14PM

Prep Batch: MXX29690
Prep Method: METHOD
Prep Date/Time: 4/25/2016 5:00:00PM
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

Print Date: 05/23/2016 2:25:45PM

Method Blank

Blank ID: MB for HBN 1732614 [MXX/29690]
Blank Lab ID: 1322004

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161923001, 1161923002, 1161923003, 1161923005, 1161923006, 1161923007, 1161923010

Results by **EPA 1631 E**

Parameter	Results	LOQ/CL	DL	Units
Mercury	0.500U	1.00	0.500	ng/L

Batch Information

Analytical Batch: MCV5701
Analytical Method: EPA 1631 E
Instrument:
Analyst: NEG
Analytical Date/Time: 4/27/2016 8:42:20PM

Prep Batch: MXX29690
Prep Method: METHOD
Prep Date/Time: 4/25/2016 5:00:00PM
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

Print Date: 05/23/2016 2:25:45PM

Method Blank

Blank ID: MB for HBN 1732614 [MXX/29690]
Blank Lab ID: 1322007

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161923001, 1161923002, 1161923003, 1161923005, 1161923006, 1161923007, 1161923010

Results by **EPA 1631 E**

Parameter	Results	LOQ/CL	DL	Units
Mercury	0.500U	1.00	0.500	ng/L

Batch Information

Analytical Batch: MCV5701
Analytical Method: EPA 1631 E
Instrument:
Analyst: NEG
Analytical Date/Time: 4/27/2016 9:13:59PM

Prep Batch: MXX29690
Prep Method: METHOD
Prep Date/Time: 4/25/2016 5:00:00PM
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 50 mL

Print Date: 05/23/2016 2:25:45PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161923 [MXX29690]
Blank Spike Lab ID: 1321996
Date Analyzed: 04/27/2016 16:16

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161923001, 1161923002, 1161923003, 1161923005, 1161923006, 1161923007, 1161923010

Results by **EPA 1631 E**

Blank Spike (ng/L)

Parameter	Spike	Result	Rec (%)	CL
Mercury	25	26.5	106	(77-123)

Batch Information

Analytical Batch: **MCV5701**
Analytical Method: **EPA 1631 E**
Instrument:
Analyst: **NEG**

Prep Batch: **MXX29690**
Prep Method: **METHOD**
Prep Date/Time: **04/25/2016 17:00**
Spike Init Wt./Vol.: 25 ng/L Extract Vol: 50 mL
Dupe Init Wt./Vol.: Extract Vol:

Print Date: 05/23/2016 2:25:46PM

Matrix Spike Summary

Original Sample ID: 1161924007
MS Sample ID: 1322000 MS
MSD Sample ID: 1322001 MSD

Analysis Date: 04/27/2016 19:52
Analysis Date: 04/27/2016 19:57
Analysis Date: 04/27/2016 20:01
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161923001, 1161923002, 1161923003, 1161923005, 1161923006, 1161923007, 1161923010

Results by **EPA 1631 E**

		Matrix Spike (ng/L)			Spike Duplicate (ng/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Mercury	3.33	25.0	24.6	85	25.0	23.9	82	71-125	3.10	(< 24)

Batch Information

Analytical Batch: MCV5701
Analytical Method: EPA 1631 E
Instrument: PSA Millennium mercury AF
Analyst: NEG
Analytical Date/Time: 4/27/2016 7:57:00PM

Prep Batch: MXX29690
Prep Method: Digestion Low Level Mercury (W)
Prep Date/Time: 4/25/2016 5:00:00PM
Prep Initial Wt./Vol.: 50.00mL
Prep Extract Vol: 50.00mL

Print Date: 05/23/2016 2:25:47PM

Matrix Spike Summary

Original Sample ID: 1161924014
MS Sample ID: 1322005 MS
MSD Sample ID: 1322006 MSD

Analysis Date: 04/27/2016 21:00
Analysis Date: 04/27/2016 21:04
Analysis Date: 04/27/2016 21:09
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161923001, 1161923002, 1161923003, 1161923005, 1161923006, 1161923007, 1161923010

Results by **EPA 1631 E**

		Matrix Spike (ng/L)			Spike Duplicate (ng/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Mercury	0.500U	25.0	22.3	89	25.0	22.5	90	71-125	0.84	(< 24)

Batch Information

Analytical Batch: MCV5701
Analytical Method: EPA 1631 E
Instrument: PSA Millennium mercury AF
Analyst: NEG
Analytical Date/Time: 4/27/2016 9:04:00PM

Prep Batch: MXX29690
Prep Method: Digestion Low Level Mercury (W)
Prep Date/Time: 4/25/2016 5:00:00PM
Prep Initial Wt./Vol.: 50.00mL
Prep Extract Vol: 50.00mL

Print Date: 05/23/2016 2:25:47PM

Method Blank

Blank ID: MB for HBN 1734141 [MXX/29753]
Blank Lab ID: 1324624

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161923001, 1161923002, 1161923003, 1161923005, 1161923006, 1161923007

Results by **200.8 Low Level**

Parameter	Results	LOQ/CL	DL	Units
Aluminum	1.00U	2.00	0.620	ug/L
Antimony	0.0250U	0.0500	0.0150	ug/L
Arsenic	0.400U	0.800	0.200	ug/L
Barium	0.942*	0.250	0.0400	ug/L
Beryllium	0.0250U	0.0500	0.0250	ug/L
Bismuth	0.0250U	0.0500	0.0150	ug/L
Boron	2.50U	5.00	1.50	ug/L
Cadmium	0.0250U	0.0500	0.0150	ug/L
Calcium	25.0U	50.0	15.0	ug/L
Chromium	0.250U	0.500	0.150	ug/L
Cobalt	0.0100U	0.0200	0.0100	ug/L
Copper	0.250U	0.500	0.200	ug/L
Iron	10.0U	20.0	6.20	ug/L
Lead	0.0500U	0.100	0.0310	ug/L
Magnesium	10.0U	20.0	6.20	ug/L
Manganese	0.0500U	0.100	0.0310	ug/L
Molybdenum	0.0250U	0.0500	0.0150	ug/L
Nickel	0.310U	0.620	0.0620	ug/L
Potassium	25.0U	50.0	15.0	ug/L
Selenium	0.500U	1.00	0.310	ug/L
Silicon	50.0U	100	31.0	ug/L
Silver	0.0100U	0.0200	0.00620	ug/L
Sodium	50.0U	100	31.0	ug/L
Thallium	0.0100U	0.0200	0.00620	ug/L
Tin	0.100U	0.200	0.0620	ug/L
Vanadium	0.500U	1.00	0.310	ug/L
Zinc	1.55U	3.10	0.400	ug/L

Batch Information

Analytical Batch: MMS9355
Analytical Method: 200.8 Low Level
Instrument: Perkin Elmer Nexlon P5
Analyst: EAB
Analytical Date/Time: 5/18/2016 11:55:01AM

Prep Batch: MXX29753
Prep Method: E200.2
Prep Date/Time: 5/17/2016 8:37:25AM
Prep Initial Wt./Vol.: 50 mL
Prep Extract Vol: 10 mL

Print Date: 05/23/2016 2:25:48PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161923 [MXX29753]
Blank Spike Lab ID: 1324625
Date Analyzed: 05/18/2016 11:57

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161923001, 1161923002, 1161923003, 1161923005, 1161923006, 1161923007

Results by **200.8 Low Level**

Blank Spike (ug/L)

Parameter	Spike	Result	Rec (%)	CL
Aluminum	50	52.8	106	(85-115)
Antimony	5	5.40	108	(85-115)
Arsenic	25	25.4	102	(85-115)
Barium	25	24.3	97	(85-115)
Beryllium	12.5	12.8	102	(85-115)
Bismuth	12.5	12.9	103	(85-115)
Boron	50	50.3	101	(85-115)
Cadmium	12.5	12.7	102	(85-115)
Calcium	5000	4770	95	(85-115)
Chromium	12.5	13.0	104	(85-115)
Cobalt	12.5	12.8	102	(85-115)
Copper	25	24.9	100	(85-115)
Iron	500	521	104	(85-115)
Lead	5	5.09	102	(85-115)
Magnesium	5000	5150	103	(85-115)
Manganese	50	50.6	101	(85-115)
Molybdenum	12.5	13.0	104	(85-115)
Nickel	12.5	12.8	103	(85-115)
Potassium	5000	4890	98	(85-115)
Selenium	25	25.4	102	(85-115)
Silicon	2500	2520	101	(85-115)
Silver	5	5.02	100	(85-115)
Sodium	5000	5210	104	(85-115)
Thallium	2.5	2.54	102	(85-115)
Tin	12.5	12.9	104	(85-115)
Vanadium	25	25.6	103	(85-115)
Zinc	50	51.3	103	(85-115)

Batch Information

Analytical Batch: **MMS9355**
Analytical Method: **200.8 Low Level**
Instrument: **Perkin Elmer Nexlon P5**
Analyst: **EAB**

Prep Batch: **MXX29753**
Prep Method: **E200.2**
Prep Date/Time: **05/17/2016 08:37**
Spike Init Wt./Vol.: 50 ug/L Extract Vol: 10 mL
Dupe Init Wt./Vol.: Extract Vol:

Print Date: 05/23/2016 2:25:49PM

Matrix Spike Summary

Original Sample ID: 1324889
MS Sample ID: 1324647 MS
MSD Sample ID: 1324648 MSD

Analysis Date: 05/18/2016 10:25
Analysis Date: 05/18/2016 10:28
Analysis Date: 05/18/2016 10:31
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161923001, 1161923002, 1161923003, 1161923005, 1161923006, 1161923007

Results by **200.8 Low Level**

		Matrix Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Aluminum	29.4	50.0	82.4	106	50.0	87.7	117	70-130	6.20	(< 20)
Antimony	0.0580	5.00	5.63	111	5.00	5.61	111	70-130	0.41	(< 20)
Arsenic	0.400U	25.0	25.8	103	25.0	26.2	105	70-130	1.50	(< 20)
Barium	1.73	25.0	28.3	106	25.0	28.3	106	70-130	0.09	(< 20)
Beryllium	0.0250U	12.5	12	96	12.5	12.2	97	70-130	1.40	(< 20)
Bismuth	0.0250U	12.5	12.5	100	12.5	12.6	101	70-130	1.30	(< 20)
Boron	33.3	50.0	80	93	50.0	79.2	92	70-130	1.10	(< 20)
Cadmium	0.186	12.5	13.4	106	12.5	13.3	105	70-130	0.97	(< 20)
Calcium	7230	5000	11700	90	5000	12000	95	70-130	2.20	(< 20)
Chromium	1.76	12.5	14.3	101	12.5	15.4	109	70-130	7.20	(< 20)
Cobalt	0.347	12.5	13.3	104	12.5	13.9	108	70-130	4.50	(< 20)
Copper	7.66	25.0	31.9	97	25.0	33.4	103	70-130	4.70	(< 20)
Iron	5980	500	5770	-42 *	500	6120	29 *	70-130	5.90	(< 20)
Lead	6.50	5.00	11.1	93	5.00	11.3	96	70-130	1.60	(< 20)
Magnesium	3380	5000	8110	95	5000	8160	96	70-130	0.68	(< 20)
Manganese	147	50.0	189	83	50.0	199	103	70-130	5.20	(< 20)
Molybdenum	0.330	12.5	13.6	107	12.5	14.1	110	70-130	3.50	(< 20)
Nickel	2.40	12.5	15.2	102	12.5	15.8	107	70-130	3.80	(< 20)
Potassium	7410	5000	12300	97	5000	12600	104	70-130	2.70	(< 20)
Selenium	0.500U	25.0	24.2	97	25.0	24.9	100	70-130	2.60	(< 20)
Silver	0.0100U	5.00	5.4	108	5.00	5.43	109	70-130	0.52	(< 20)
Sodium	9930	5000	14600	92	5000	14500	91	70-130	0.40	(< 20)
Thallium	0.0100U	2.50	2.57	103	2.50	2.61	105	70-130	1.80	(< 20)
Tin	0.0699J	12.5	13.2	105	12.5	13.3	106	70-130	0.65	(< 20)
Vanadium	0.500U	25.0	25.5	102	25.0	26.0	104	70-130	2.10	(< 20)
Zinc	950	50.0	941	-18 *	50.0	957	14 *	70-130	1.70	(< 20)

Batch Information

Analytical Batch: MMS9354
Analytical Method: 200.8 Low Level
Instrument: Perkin Elmer NexIon P5
Analyst: VDL
Analytical Date/Time: 5/18/2016 10:28:25AM

Prep Batch: MXX29753
Prep Method: LL Digest for Metals on ICP-MS
Prep Date/Time: 5/17/2016 8:37:25AM
Prep Initial Wt./Vol.: 50.00mL
Prep Extract Vol: 10.00mL

Print Date: 05/23/2016 2:25:50PM

Bench Spike Summary

Original Sample ID: 1324889
MS Sample ID: 1324649 BND
MSD Sample ID:

Analysis Date: 05/18/2016 10:12
Analysis Date: 05/18/2016 10:22
Analysis Date:
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161923001, 1161923002, 1161923003, 1161923005, 1161923006, 1161923007

Results by **200.8 Low Level**

		Matrix Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Iron	5980	2000	8090	105				70-130		
Zinc	950	200	1160	105				70-130		

Batch Information

Analytical Batch: MMS9354
Analytical Method: 200.8 Low Level
Instrument: Perkin Elmer NexIon P5
Analyst: VDL
Analytical Date/Time: 5/18/2016 10:22:37AM

Prep Batch: MXX29753
Prep Method: LL Digest for Metals on ICP-MS
Prep Date/Time: 5/17/2016 8:37:25AM
Prep Initial Wt./Vol.: 50.00mL
Prep Extract Vol: 10.00mL

Print Date: 05/23/2016 2:25:50PM

Method Blank

Blank ID: MB for HBN 1732676 4M[[X6/ 7960
Blank] aL ID: 1362b/ /

Matrix: Watpr (Curfacp, Eff., Ground)

8 Q for CaS mpe:
1191/ 63ss1, 1191/ 63ss5

Rpeulte Ly **200.8 Low Level**

ParaS ptpr	Rpeulte	] O8 XQ]	D]	Unite
BariuS	s.165U	s.65s	s.s2ss	ugX

Batch Information

Analytical Batch: MMC/ 39s
Analytical Mpthod: 6ss.b] oV] pTpl
InetruS pnt: Pprkin ElS pr NpxIon P5
Analyet: v D]
Analytical DatpXKiS p: 5X6sX6s19 b:1/ :59AM

PrpmBatch: M[[6/ 796
PrpmMpthod: E6ss.6
PrpmDatpXKiS p: 5X1/ X6s19 7:5s:s9AM
PrpmInitial Wt.X vol.: 5s S]
PrpmExtract v ol: 1s S]

Print Datp: s5X63X6s19 6:65:52PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161923 [MXX29062]
Blank Spike Lab ID: 132t 9AA
Daye z nald4e/ : A7R2AR2A16 As:22

Mayri(: c ayer ,SWfaEe. Gff). ProWh/ m

- C for Sag plex: 1161923AA1. 1161923AA7

u exWyx bd **200.8 Low Level**

Blank Spike ,W5R.m

%arag eyer	Spike	u exWy	u eE,Qm	CL
BariWg	27	2t)7	9s	, s7h117 m

Batch Information

z naldyiEal BayET: **MMS9360**
z naldyiEal MeyTo/ : **200.8 Low Level**
InxyrWg eny. **Perkin Elmer Nexlon P5**
z naldxy. **VDL**

%rep BayET: **MXX29762**
%rep MeyTo/ : **E200.2**
%rep DayeRVig e: **05/19/2016 07:50**
Spike Iniyc y)Rvol): 27 W5R. G(yraEyvol: 1A g L
DWbe Iniyc y)Rvol): G(yraEyvol:

%rinyDaye: A7R23R2A16 2:27:77%M

Matrix Spike Summary

Original Sample ID: 1161923005
MS Sample ID: 1324901 MS
MSD Sample ID: 1324902 MSD

Analysis Date: 05/20/2016 8:25
Analysis Date: 05/20/2016 8:28
Analysis Date: 05/20/2016 8:31
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161923001, 1161923005

Results by **200.8 Low Level**

		Matrix Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Barium	0.568	25.0	27.7	109	25.0	27.3	107	70-130	1.50	(< 20)

Batch Information

Analytical Batch: MMS9360
Analytical Method: 200.8 Low Level
Instrument: Perkin Elmer NexIon P5
Analyst: VDL
Analytical Date/Time: 5/20/2016 8:28:39AM

Prep Batch: MXX29762
Prep Method: LL Digest for Metals on ICP-MS
Prep Date/Time: 5/19/2016 7:50:06AM
Prep Initial Wt./Vol.: 50.00mL
Prep Extract Vol: 10.00mL

Print Date: 05/23/2016 2:25:56PM

Method Blank

Blank ID: MB for HBN 1732272 [STS/5019]
Blank Lab ID: 1321132

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161923001, 1161923002, 1161923003

Results by **SM21 2540D**

Parameter	Results	LOQ/CL	DL	Units
Total Suspended Solids	0.500U	1.00	0.310	mg/L

Batch Information

Analytical Batch: STS5019
Analytical Method: SM21 2540D
Instrument:
Analyst: MBS
Analytical Date/Time: 4/25/2016 3:51:48PM

Print Date: 05/23/2016 2:25:57PM

Duplicate Sample Summary

Original Sample ID: 1161861009
Duplicate Sample ID: 1321135
QC for Samples:

Analysis Date: 04/25/2016 15:51
Matrix: Water (Surface, Eff., Ground)

Results by **SM21 2540D**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
Total Suspended Solids	7550	7450	mg/L	1.30	(< 5)

Batch Information

Analytical Batch: STS5019
Analytical Method: SM21 2540D
Instrument:
Analyst: MBS

Print Date: 05/23/2016 2:25:58PM

Duplicate Sample Summary

Original Sample ID: 1161861010
Duplicate Sample ID: 1321136
QC for Samples:
1161923001, 1161923002, 1161923003

Analysis Date: 04/25/2016 15:51
Matrix: Water (Surface, Eff., Ground)

Results by **SM21 2540D**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
Total Suspended Solids	8450	8500	mg/L	0.59	(< 5)

Batch Information

Analytical Batch: STS5019
Analytical Method: SM21 2540D
Instrument:
Analyst: MBS

Print Date: 05/23/2016 2:25:58PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161923 [STS5019]
Blank Spike Lab ID: 1321133
Date Analyzed: 04/25/2016 15:51

Spike Duplicate ID: LCSD for HBN 1161923 [STS5019]
Spike Duplicate Lab ID: 1321134
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161923001, 1161923002, 1161923003

Results by **SM21 2540D**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Total Suspended Solids	50	49.2	98	50	45.7	91	(75-125)	7.40	* (< 5)

Batch Information

Analytical Batch: **STS5019**
Analytical Method: **SM21 2540D**
Instrument:
Analyst: **MBS**

Prep Batch:
Prep Method:
Prep Date/Time:
Spike Init Wt./Vol.: 50 mg/L Extract Vol: 1000 mL
Dupe Init Wt./Vol.: 50 mg/L Extract Vol: 1000 mL

Print Date: 05/23/2016 2:25:59PM

Method Blank

Blank ID: MB for HBN 17323[2 S/ T5[0209
Blank] aL ID: 13212b7

Matrix: Water (Turface, Eff., Ground)

QC for Tamples:
11b1623001, 11b1623002, 11b1623003

Results Ly **SM21 2540C**

Parameter	Results	] OQ5C]	D]	Units
/ otal Dissolged Tolids	[.00U	10.0	3.10	mA5]

Batch Information

hnalytical Batc4: T/ T[020
hnalytical Met4od: TM21 2[80C
Instrument:
hnalyst: MBT
hnalytical Date5/ ime: 852b5201b 6:[v:[bhM

Print Date: 0[5235201b 2:2b:01PM

Duplicate Sample Summary

Original Sample ID: 116180699u
Dcplit a3e Sample ID: 12u1u01

5nalAyiy Da3e: 9s4u64u916 9/ :M8
x a3iW (a3er fScr,at eE. ,,GEo rdcn) R

CP ,dr Sampley:

1161/ u2991E1161/ u299uE1161/ u2992

b eycl3y QA SM21 2540C

U5x .	Original	Dcplit a3e	L ni3y	b %D fN R	b %D P7
Td3al Diyydl<e) Sdli) y	161	16s	mg47	1G89	fB MR

Batch Information

5nalA3tal ha3tv: STSM9u9
5nalA3tal x e3yd) : Sx u1 uMs9P
lny3rcmen3
5nalAy3 x hS

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161923 [STS5020]
Blank Spike Lab ID: 1321268
Date Analyzed: 04/26/2016 09:58

Spike Duplicate ID: LCSD for HBN 1161923 [STS5020]
Spike Duplicate Lab ID: 1321269
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161923001, 1161923002, 1161923003

Results by **SM21 2540C**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Total Dissolved Solids	330	330	100	330	329	100	(75-125)	0.30	(< 5)

Batch Information

Analytical Batch: **STS5020**
Analytical Method: **SM21 2540C**
Instrument:
Analyst: **MBS**

Prep Batch:
Prep Method:
Prep Date/Time:
Spike Init Wt./Vol.: 330 mg/L Extract Vol: 100 mL
Dupe Init Wt./Vol.: 330 mg/L Extract Vol: 100 mL

Print Date: 05/23/2016 2:26:02PM

Method Blank

Blank ID: MB for HBN 1732377 [VXX/28738]
Blank Lab ID: 1321412

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161923001, 1161923002, 1161923003, 1161923008

Results by **AK101**

Parameter	Results	LOQ/CL	DL	Units
Gasoline Range Organics	0.0500U	0.100	0.0310	mg/L
Surrogates				
4-Bromofluorobenzene (surr)	80.5	50-150		%

Batch Information

Analytical Batch: VFC12973
Analytical Method: AK101
Instrument: Agilent 7890A PID/FID
Analyst: S.P
Analytical Date/Time: 4/26/2016 12:19:00AM

Prep Batch: VXX28738
Prep Method: SW5030B
Prep Date/Time: 4/25/2016 8:00:00AM
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/23/2016 2:26:04PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161923 [VXX28738]
Blank Spike Lab ID: 1321415
Date Analyzed: 04/25/2016 23:41

Spike Duplicate ID: LCSD for HBN 1161923 [VXX28738]
Spike Duplicate Lab ID: 1321416
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161923001, 1161923002, 1161923003, 1161923008

Results by **AK101**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Gasoline Range Organics	1.00	1.00	100	1.00	1.01	101	(60-120)	1.20	(< 20)
Surrogates									
4-Bromofluorobenzene (surr)	0.0500	89.6	90	0.0500	87.2	87	(50-150)	2.70	

Batch Information

Analytical Batch: **VFC12973**
Analytical Method: **AK101**
Instrument: **Agilent 7890A PID/FID**
Analyst: **S.P**

Prep Batch: **VXX28738**
Prep Method: **SW5030B**
Prep Date/Time: **04/25/2016 08:00**
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: 05/23/2016 2:26:05PM

Method Blank

Blank ID: MB for HBN 1732644 [VXX/28753]
Blank Lab ID: 1322176

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161923001, 1161923002, 1161923003, 1161923009

Results by **SW8260B**

Parameter	Results	LOQ/CL	DL	Units
1,1,1,2-Tetrachloroethane	0.250U	0.500	0.150	ug/L
1,1,1-Trichloroethane	0.500U	1.00	0.310	ug/L
1,1,2,2-Tetrachloroethane	0.250U	0.500	0.150	ug/L
1,1,2-Trichloroethane	0.500U	1.00	0.310	ug/L
1,1-Dichloroethane	0.500U	1.00	0.310	ug/L
1,1-Dichloroethene	0.500U	1.00	0.310	ug/L
1,1-Dichloropropene	0.500U	1.00	0.310	ug/L
1,2,3-Trichlorobenzene	0.500U	1.00	0.310	ug/L
1,2,3-Trichloropropane	0.500U	1.00	0.310	ug/L
1,2,4-Trichlorobenzene	0.500U	1.00	0.310	ug/L
1,2,4-Trimethylbenzene	0.500U	1.00	0.310	ug/L
1,2-Dibromo-3-chloropropane	5.00U	10.0	3.10	ug/L
1,2-Dibromoethane	0.500U	1.00	0.310	ug/L
1,2-Dichlorobenzene	0.500U	1.00	0.310	ug/L
1,2-Dichloroethane	0.250U	0.500	0.150	ug/L
1,2-Dichloropropane	0.500U	1.00	0.310	ug/L
1,3,5-Trimethylbenzene	0.500U	1.00	0.310	ug/L
1,3-Dichlorobenzene	0.500U	1.00	0.310	ug/L
1,3-Dichloropropane	0.250U	0.500	0.150	ug/L
1,4-Dichlorobenzene	0.250U	0.500	0.150	ug/L
2,2-Dichloropropane	0.500U	1.00	0.310	ug/L
2-Butanone (MEK)	5.00U	10.0	3.10	ug/L
2-Chlorotoluene	0.500U	1.00	0.310	ug/L
2-Hexanone	5.00U	10.0	3.10	ug/L
4-Chlorotoluene	0.500U	1.00	0.310	ug/L
4-Isopropyltoluene	0.500U	1.00	0.310	ug/L
4-Methyl-2-pentanone (MIBK)	5.00U	10.0	3.10	ug/L
Benzene	0.200U	0.400	0.120	ug/L
Bromobenzene	0.500U	1.00	0.310	ug/L
Bromochloromethane	0.500U	1.00	0.310	ug/L
Bromodichloromethane	0.250U	0.500	0.150	ug/L
Bromoform	0.500U	1.00	0.310	ug/L
Bromomethane	5.00U	10.0	3.10	ug/L
Carbon disulfide	5.00U	10.0	3.10	ug/L
Carbon tetrachloride	0.500U	1.00	0.310	ug/L
Chlorobenzene	0.250U	0.500	0.150	ug/L
Chloroethane	0.500U	1.00	0.310	ug/L
Chloroform	0.500U	1.00	0.300	ug/L

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200 West Potter Drive Anchorage, AK 95518
t 907.562.2343 f 907.561.5301 www.us.sgs.com

Method Blank

Blank ID: MB for HBN 1732644 [VXX/28753]
Blank Lab ID: 1322176

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161923001, 1161923002, 1161923003, 1161923009

Results by **SW8260B**

Parameter	Results	LOQ/CL	DL	Units
Chloromethane	0.500U	1.00	0.310	ug/L
cis-1,2-Dichloroethene	0.500U	1.00	0.310	ug/L
cis-1,3-Dichloropropene	0.250U	0.500	0.150	ug/L
Dibromochloromethane	0.250U	0.500	0.150	ug/L
Dibromomethane	0.500U	1.00	0.310	ug/L
Dichlorodifluoromethane	0.500U	1.00	0.310	ug/L
Ethylbenzene	0.500U	1.00	0.310	ug/L
Freon-113	5.00U	10.0	3.10	ug/L
Hexachlorobutadiene	0.500U	1.00	0.310	ug/L
Isopropylbenzene (Cumene)	0.500U	1.00	0.310	ug/L
Methylene chloride	2.50U	5.00	1.00	ug/L
Methyl-t-butyl ether	5.00U	10.0	3.10	ug/L
Naphthalene	5.00U	10.0	3.10	ug/L
n-Butylbenzene	0.500U	1.00	0.310	ug/L
n-Propylbenzene	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
sec-Butylbenzene	0.500U	1.00	0.310	ug/L
Styrene	0.500U	1.00	0.310	ug/L
tert-Butylbenzene	0.500U	1.00	0.310	ug/L
Tetrachloroethene	0.500U	1.00	0.310	ug/L
Toluene	0.500U	1.00	0.310	ug/L
trans-1,2-Dichloroethene	0.500U	1.00	0.310	ug/L
trans-1,3-Dichloropropene	0.500U	1.00	0.310	ug/L
Trichloroethene	0.500U	1.00	0.310	ug/L
Trichlorofluoromethane	0.500U	1.00	0.310	ug/L
Vinyl acetate	5.00U	10.0	3.10	ug/L
Vinyl chloride	0.500U	1.00	0.310	ug/L
Xylenes (total)	1.50U	3.00	1.00	ug/L
Surrogates				
1,2-Dichloroethane-D4 (surr)	109	81-118		%
4-Bromofluorobenzene (surr)	95.4	85-114		%
Toluene-d8 (surr)	99.9	89-112		%

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200 West Potter Drive Anchorage, AK 95518
t 907.562.2343 f 907.561.5301 www.us.sgs.com

Method Blank

Blank ID: MB for HBN 1732644 [VXX/28753]
Blank Lab ID: 1322176

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161923001, 1161923002, 1161923003, 1161923009

Results by **SW8260B**

Parameter	Results	LOQ/CL	DL	Units

Batch Information

Analytical Batch: VMS15749
Analytical Method: SW8260B
Instrument: VPA 780/5975 GC/MS
Analyst: NRB
Analytical Date/Time: 4/29/2016 5:42:00PM

Prep Batch: VXX28753
Prep Method: SW5030B
Prep Date/Time: 4/29/2016 8:00:00AM
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/23/2016 2:26:06PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161923 [VXX28753]
Blank Spike Lab ID: 1322177
Date Analyzed: 04/29/2016 18:19

Spike Duplicate ID: LCSD for HBN 1161923 [VXX28753]
Spike Duplicate Lab ID: 1322178
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161923001, 1161923002, 1161923003, 1161923009

Results by **SW8260B**

	Blank Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
1,1,1,2-Tetrachloroethane	30	32.3	108	30	32.8	109	(78-124)	1.40	(< 20)
1,1,1-Trichloroethane	30	31.3	104	30	32.8	109	(74-131)	4.60	(< 20)
1,1,2,2-Tetrachloroethane	30	29.2	97	30	30.5	102	(71-121)	4.20	(< 20)
1,1,2-Trichloroethane	30	31.5	105	30	31.6	105	(80-119)	0.32	(< 20)
1,1-Dichloroethane	30	31.3	104	30	32.2	107	(77-125)	2.70	(< 20)
1,1-Dichloroethene	30	29.5	98	30	30.9	103	(71-131)	4.50	(< 20)
1,1-Dichloropropene	30	30.4	101	30	31.6	105	(79-125)	3.80	(< 20)
1,2,3-Trichlorobenzene	30	32.3	108	30	33.6	112	(69-129)	4.00	(< 20)
1,2,3-Trichloropropane	30	29.8	99	30	31.2	104	(73-122)	4.60	(< 20)
1,2,4-Trichlorobenzene	30	31.7	106	30	33.4	111	(69-130)	5.10	(< 20)
1,2,4-Trimethylbenzene	30	28.4	95	30	29.5	98	(79-124)	3.70	(< 20)
1,2-Dibromo-3-chloropropane	30	28.6	95	30	30.2	101	(62-128)	5.20	(< 20)
1,2-Dibromoethane	30	33.0	110	30	33.2	111	(77-121)	0.60	(< 20)
1,2-Dichlorobenzene	30	30.3	101	30	31.2	104	(80-119)	3.10	(< 20)
1,2-Dichloroethane	30	32.0	107	30	33.2	111	(73-128)	3.90	(< 20)
1,2-Dichloropropane	30	33.0	110	30	33.9	113	(78-122)	2.50	(< 20)
1,3,5-Trimethylbenzene	30	28.3	94	30	29.2	97	(75-124)	3.30	(< 20)
1,3-Dichlorobenzene	30	29.4	98	30	31.3	104	(80-119)	6.30	(< 20)
1,3-Dichloropropane	30	30.7	102	30	30.6	102	(80-119)	0.36	(< 20)
1,4-Dichlorobenzene	30	30.3	101	30	31.9	106	(79-118)	5.00	(< 20)
2,2-Dichloropropane	30	29.6	99	30	32.3	108	(60-139)	8.50	(< 20)
2-Butanone (MEK)	90	105	117	90	107	119	(56-143)	2.20	(< 20)
2-Chlorotoluene	30	29.6	99	30	30.6	102	(79-122)	3.20	(< 20)
2-Hexanone	90	101	112	90	102	113	(57-139)	1.40	(< 20)
4-Chlorotoluene	30	30.2	101	30	31.5	105	(78-122)	4.10	(< 20)
4-Isopropyltoluene	30	28.0	93	30	29.9	100	(77-127)	6.60	(< 20)
4-Methyl-2-pentanone (MIBK)	90	102	113	90	105	116	(67-130)	2.70	(< 20)
Benzene	30	31.1	104	30	31.4	105	(79-120)	0.90	(< 20)
Bromobenzene	30	30.3	101	30	31.4	105	(80-120)	3.40	(< 20)
Bromochloromethane	30	32.0	107	30	33.5	112	(78-123)	4.50	(< 20)
Bromodichloromethane	30	31.2	104	30	32.2	107	(79-125)	3.30	(< 20)
Bromoform	30	33.2	111	30	33.6	112	(66-130)	1.30	(< 20)
Bromomethane	30	24.4	81	30	27.2	91	(53-141)	10.90	(< 20)
Carbon disulfide	45	39.9	89	45	42.1	94	(64-133)	5.20	(< 20)

Print Date: 05/23/2016 2:26:08PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161923 [VXX28753]
Blank Spike Lab ID: 1322177
Date Analyzed: 04/29/2016 18:19

Spike Duplicate ID: LCSD for HBN 1161923 [VXX28753]
Spike Duplicate Lab ID: 1322178
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161923001, 1161923002, 1161923003, 1161923009

Results by **SW8260B**

	Blank Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Carbon tetrachloride	30	32.2	107	30	33.5	112	(72-136)	4.20	(< 20)
Chlorobenzene	30	31.5	105	30	32.1	107	(82-118)	1.90	(< 20)
Chloroethane	30	26.1	87	30	27.5	92	(60-138)	5.20	(< 20)
Chloroform	30	28.9	96	30	30.0	100	(79-124)	3.60	(< 20)
Chloromethane	30	26.1	87	30	28.7	96	(50-139)	9.50	(< 20)
cis-1,2-Dichloroethene	30	31.8	106	30	32.8	109	(78-123)	3.00	(< 20)
cis-1,3-Dichloropropene	30	29.6	99	30	30.4	101	(75-124)	2.60	(< 20)
Dibromochloromethane	30	33.1	110	30	33.3	111	(74-126)	0.54	(< 20)
Dibromomethane	30	31.0	103	30	31.2	104	(79-123)	0.90	(< 20)
Dichlorodifluoromethane	30	30.2	101	30	31.1	104	(32-152)	3.00	(< 20)
Ethylbenzene	30	32.5	108	30	32.9	110	(79-121)	1.20	(< 20)
Freon-113	45	45.0	100	45	47.6	106	(70-136)	5.60	(< 20)
Hexachlorobutadiene	30	31.8	106	30	34.6	115	(66-134)	8.30	(< 20)
Isopropylbenzene (Cumene)	30	31.7	106	30	32.6	109	(72-131)	3.10	(< 20)
Methylene chloride	30	27.4	91	30	28.2	94	(74-124)	2.80	(< 20)
Methyl-t-butyl ether	45	46.4	103	45	47.2	105	(71-124)	1.80	(< 20)
Naphthalene	30	30.0	100	30	30.3	101	(61-128)	1.20	(< 20)
n-Butylbenzene	30	27.9	93	30	29.8	99	(75-128)	6.70	(< 20)
n-Propylbenzene	30	30.1	100	30	31.6	105	(76-126)	5.00	(< 20)
o-Xylene	30	33.1	110	30	34.0	113	(78-122)	2.60	(< 20)
P & M -Xylene	60	64.8	108	60	67.3	112	(80-121)	3.70	(< 20)
sec-Butylbenzene	30	30.3	101	30	32.0	107	(77-126)	5.30	(< 20)
Styrene	30	33.0	110	30	33.8	113	(78-123)	2.40	(< 20)
tert-Butylbenzene	30	30.5	102	30	32.2	107	(78-124)	5.50	(< 20)
Tetrachloroethene	30	32.9	110	30	33.5	112	(74-129)	1.80	(< 20)
Toluene	30	29.7	99	30	30.0	100	(80-121)	1.20	(< 20)
trans-1,2-Dichloroethene	30	30.8	103	30	32.2	107	(75-124)	4.50	(< 20)
trans-1,3-Dichloropropene	30	28.7	96	30	29.0	97	(73-127)	1.00	(< 20)
Trichloroethene	30	32.7	109	30	33.4	111	(79-123)	2.10	(< 20)
Trichlorofluoromethane	30	30.3	101	30	31.1	104	(65-141)	2.60	(< 20)
Vinyl acetate	30	32.7	109	30	33.7	112	(54-146)	3.00	(< 20)
Vinyl chloride	30	30.9	103	30	31.6	105	(58-137)	2.40	(< 20)
Xylenes (total)	90	98.0	109	90	101	113	(79-121)	3.30	(< 20)

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Blank Spike Summary

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Blank Spike Lab ID: 1322177
Date Analyzed: 04/29/2016 18:19

Spike Duplicate ID: LCSD for HBN 1161923 [VXX28753]
Spike Duplicate Lab ID: 1322178
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161923001, 1161923002, 1161923003, 1161923009

Results by **SW8260B**

	Blank Spike (%)			Spike Duplicate (%)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Surrogates									
1,2-Dichloroethane-D4 (surr)	30	102	102	30	104	104	(81-118)	2.20	
4-Bromofluorobenzene (surr)	30	93.2	93	30	94.7	95	(85-114)	1.60	
Toluene-d8 (surr)	30	102	102	30	101	101	(89-112)	0.66	

Batch Information

Analytical Batch: **VMS15749**
Analytical Method: **SW8260B**
Instrument: **VPA 780/5975 GC/MS**
Analyst: **NRB**

Prep Batch: **VXX28753**
Prep Method: **SW5030B**
Prep Date/Time: **04/29/2016 08:00**
Spike Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL
Dupe Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL

Print Date: 05/23/2016 2:26:08PM

Method Blank

Blank ID: MB for HBN 1732381 [WAT/10636]
Blank Lab ID: 1321424

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161923001, 1161923002, 1161923003

Results by **SM21 2130B**

Parameter	Results	LOQ/CL	DL	Units
Turbidity	0.100J	0.200	0.100	NTU

Batch Information

Analytical Batch: WAT10636
Analytical Method: SM21 2130B
Instrument: Turbidimeter
Analyst: MBS
Analytical Date/Time: 4/24/2016 12:35:00PM

Print Date: 05/23/2016 2:26:10PM

Duplicate Sample Summary

Original Sample ID: 1161809uu9
Dcplit a3e Sample ID: 1901205
QC for Samples:
1161809uu1, 1161809uu0, 1161809uu9

Analysis Da3e: u24024u16 10:9/
Ma3ix: Wa3er (Scrfat e, Eff., Grocnd)

Rescl3s by **SM21 2130B**

NAME	Original	Dcplit a3e	Uni3s	RPD (%)	RPD CL
7crbidi3y	u.2uu	u.2uu	N7U	u.uu	(T 0u)

Batch Information

Analy3t al <a3 B: WA71u696
Analy3t al Me3Bod: SM01 019u<
Ins3rcmen3 7crbidime3er
Analys3 M<S

Prin3Da3e: u/ 4094u16 0:06:11PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161923 [WAT10636]
Blank Spike Lab ID: 1321425
Date Analyzed: 04/24/2016 12:35

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161923001, 1161923002, 1161923003

Results by **SM21 2130B**

Blank Spike (NTU)

Parameter	Spike	Result	Rec (%)	CL
Turbidity	10	11.0	110	(90-110)

Batch Information

Analytical Batch: **WAT10636**
Analytical Method: **SM21 2130B**
Instrument: **Turbidimeter**
Analyst: **MBS**

Prep Batch:
Prep Method:
Prep Date/Time:
Spike Init Wt./Vol.: 10 NTU Extract Vol: 1 mL
Dupe Init Wt./Vol.: Extract Vol:

Print Date: 05/23/2016 2:26:12PM

Duplicate Sample Summary

Original Sample ID: 1161876001
Duplicate Sample ID: 1321380
QC for Samples:
1161923001, 1161923002, 1161923003

Analysis Date: 04/25/2016 17:11
Matrix: Water (Surface, Eff., Ground)

Results by **SM21 4500-H B**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
pH	7.90	7.90	pH units	0.00	(< 5)

Batch Information

Analytical Batch: WTI4443
Analytical Method: SM21 4500-H B
Instrument: Titration
Analyst: ACF

Print Date: 05/23/2016 2:26:13PM

Duplicate Sample Summary

Original Sample ID: 1161922003
Duplicate Sample ID: 1321381
QC for Samples:
1161923001, 1161923002, 1161923003

Analysis Date: 04/25/2016 16:18
Matrix: Water (Surface, Eff., Ground)

Results by **SM21 4500-H B**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
pH	6.70	6.70	pH units	0.00	(< 5)

Batch Information

Analytical Batch: WTI4443
Analytical Method: SM21 4500-H B
Instrument: Titration
Analyst: ACF

Print Date: 05/23/2016 2:26:13PM

Duplicate Sample Summary

Original Sample ID: 1161885003
Duplicate Sample ID: 1321385
QC for Samples:
1161923001, 1161923002, 1161923003

Analysis Date: 04/25/2016 20:15
Matrix: Drinking Water

Results by **SM21 4500-H B**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
pH	7.50	7.50	pH units	0.00	(< 5)

Batch Information

Analytical Batch: WTI4443
Analytical Method: SM21 4500-H B
Instrument: Titration
Analyst: ACF

Print Date: 05/23/2016 2:26:13PM

Duplicate Sample Summary

Original Sample ID: 1161885004
Duplicate Sample ID: 1321386
QC for Samples:
1161923001, 1161923002, 1161923003

Analysis Date: 04/25/2016 20:32
Matrix: Drinking Water

Results by **SM21 4500-H B**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
pH	7.30	7.30	pH units	0.00	(< 5)

Batch Information

Analytical Batch: WTI4443
Analytical Method: SM21 4500-H B
Instrument: Titration
Analyst: ACF

Print Date: 05/23/2016 2:26:13PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161923 [WTI4443]
Blank Spike Lab ID: 1321377
Date Analyzed: 04/25/2016 14:47

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161923001, 1161923002, 1161923003

Results by **SM21 4500-H B**

Blank Spike (pH units)

Parameter	Spike	Result	Rec (%)	CL
pH	7	7.01	100	(99-101)

Batch Information

Analytical Batch: **WTI4443**
Analytical Method: **SM21 4500-H B**
Instrument: **Titration**
Analyst: **ACF**

Prep Batch:
Prep Method:
Prep Date/Time:
Spike Init Wt./Vol.: 7 pH units Extract Vol: 1 mL
Dupe Init Wt./Vol.: Extract Vol:

Print Date: 05/23/2016 2:26:14PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161923 [WTI4443]
Blank Spike Lab ID: 1321382
Date Analyzed: 04/25/2016 19:16

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161923001, 1161923002, 1161923003

Results by **SM21 4500-H B**

Blank Spike (pH units)

Parameter	Spike	Result	Rec (%)	CL
pH	7	7.01	100	(99-101)

Batch Information

Analytical Batch: **WTI4443**
Analytical Method: **SM21 4500-H B**
Instrument: **Titration**
Analyst: **ACF**

Prep Batch:
Prep Method:
Prep Date/Time:
Spike Init Wt./Vol.: 7 pH units Extract Vol: 1 mL
Dupe Init Wt./Vol.: Extract Vol:

Print Date: 05/23/2016 2:26:14PM

Method Blank

Blank ID: MB for HBN 1732620 [WTI/4448]
Blank Lab ID: 1322040

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161923001, 1161923002, 1161923003

Results by **SM21 2320B**

Parameter	Results	LOQ/CL	DL	Units
Alkalinity	5.00U	10.0	3.10	mg/L

Batch Information

Analytical Batch: WTI4448
Analytical Method: SM21 2320B
Instrument: Titration
Analyst: ACF
Analytical Date/Time: 4/26/2016 8:21:11PM

Print Date: 05/23/2016 2:26:15PM

Duplicate Sample Summary

Original Sample ID: 1161885002
Duplicate Sample ID: 1322042
QC for Samples:

Analysis Date: 04/26/2016 20:53
Matrix: Drinking Water

Results by **SM21 2320B**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
Alkalinity	58.8	53.5	mg/L	9.40	(< 25)

Batch Information

Analytical Batch: WTI4448
Analytical Method: SM21 2320B
Instrument: Titration
Analyst: ACF

Print Date: 05/23/2016 2:26:16PM

Duplicate Sample Summary

Original Sample ID: 1161885003
Duplicate Sample ID: 1322043
QC for Samples:
1161923001, 1161923002, 1161923003

Analysis Date: 04/26/2016 21:07
Matrix: Drinking Water

Results by **SM21 2320B**

NAME	Original	Duplicate	Units	RPD (%)	RPD CL
Alkalinity	60.8	63.6	mg/L	4.60	(< 25)

Batch Information

Analytical Batch: WTI4448
Analytical Method: SM21 2320B
Instrument: Titration
Analyst: ACF

Print Date: 05/23/2016 2:26:16PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161923 [WTI444] b
Blank Spike La7 ID: 1322t 41
DaAe y nalzde0: t 4/26/2t 16 2t :3t

u aAiM WaAer xSsrfa(ec, ffEc. rosn0G

QC for SaP pleR 1161923t t 1c1161923t t 2c1161923t t 3

5 eRslAR7z **SM21 2320B**

Blank Spike xP %LG

) araP eAer	Spike	5 eRslA	5 e(xmG	CL
y lkaliniAz	2- t	21h	] h	x] - V1- G

Batch Information

y nalzA(al BaA(v: **WTI4448**
y nalzA(al u eAvo0: **SM21 2320B**
InRAsP enA **Titration**
y nalzRA **ACF**

) rep BaA(v:
) rep u eAvo0:
) rep DaAe/TiP e:
Spike IniAWAEgolE 2- t P %L , MAa(Agol: - t P L
Dspe IniAWAEgolE , MAa(Agol:

) rinADaAe: t - /23/2t 16 2:26:16) u

Method Blank

Blank ID: MB for HBN 1732415 [WXX/11480]
Blank Lab ID: 1321585

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161923001, 1161923002, 1161923003

Results by **EPA 300.0**

Parameter	Results	LOQ/CL	DL	Units
Chloride	0.0500U	0.100	0.0310	mg/L
Fluoride	0.0500U	0.100	0.0310	mg/L
Nitrate-N	0.0580J	0.100	0.0310	mg/L
Nitrite-N	0.0500U	0.100	0.0310	mg/L
Sulfate	0.0500U	0.100	0.0310	mg/L
Total Nitrate/Nitrite-N	0.0580J	0.100	0.0310	mg/L

Batch Information

Analytical Batch: WIC5532
Analytical Method: EPA 300.0
Instrument: Metrohm 733 DX2
Analyst: ACF
Analytical Date/Time: 4/24/2016 3:20:11AM

Prep Batch: WXX11480
Prep Method: METHOD
Prep Date/Time: 4/24/2016 1:11:00AM
Prep Initial Wt./Vol.: 10 mL
Prep Extract Vol: 10 mL

Print Date: 05/23/2016 2:26:17PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161923 [WXX11480]
Blank Spike Lab ID: 1321586
Date Analyzed: 04/24/2016 03:42

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161923001, 1161923002, 1161923003

Results by **EPA 300.0**

Blank Spike (mg/L)

Parameter	Spike	Result	Rec (%)	CL
Chloride	10	10.2	102	(90-110)
Fluoride	10	10.8	108	(90-110)
Nitrate-N	10	10.5	105	(90-110)
Nitrite-N	10	10.4	104	(90-110)
Sulfate	10	9.91	99	(90-110)
Total Nitrate/Nitrite-N	20	20.9	104	(90-110)

Batch Information

Analytical Batch: **WIC5532**
Analytical Method: **EPA 300.0**
Instrument: **Metrohm 733 DX2**
Analyst: **ACF**

Prep Batch: **WXX11480**
Prep Method: **METHOD**
Prep Date/Time: **04/24/2016 01:11**
Spike Init Wt./Vol.: 10 mg/L Extract Vol: 10 mL
Dupe Init Wt./Vol.: Extract Vol:

Print Date: 05/23/2016 2:26:18PM

Matrix Spike Summary

Original Sample ID: 1161922003
MS Sample ID: 1321587 MS
MSD Sample ID: 1321588 MSD

Analysis Date: 04/24/2016 4:27
Analysis Date: 04/24/2016 4:49
Analysis Date: 04/24/2016 5:11
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161923001, 1161923002, 1161923003

Results by **EPA 300.0**

		Matrix Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Chloride	11.8	10.0	22	103	10.0	22.1	104	90-110	0.43	(< 15)
Fluoride	0.0640J	10.0	10.9	108	10.0	11.0	109	90-110	0.72	(< 15)
Sulfate	5.19	10.0	15.7	105	10.0	15.8	106	90-110	0.81	(< 15)

Batch Information

Analytical Batch: WIC5532
Analytical Method: EPA 300.0
Instrument: Metrohm 733 DX2
Analyst: ACF
Analytical Date/Time: 4/24/2016 4:49:17AM

Prep Batch: WXX11480
Prep Method: EPA 300.0 Extraction Waters/Liquids
Prep Date/Time: 4/24/2016 1:11:00AM
Prep Initial Wt./Vol.: 10.00mL
Prep Extract Vol: 10.00mL

Print Date: 05/23/2016 2:26:20PM

Method Blank

Blank ID: MB for HBN 17322[V X / / 83] 2L7b
Blank 4aQ ID: 1321L[C

Matrix: Wat6r (purfac6, Eff., Ground)

Sm for pae sl69:
11V1023LL1, 11V1023LL2, 11V1023LL3, 11V1023LL[

R69ult9 Qy EPA 625M SIM (PAH)

Parae 6t6r	R69ult9	4OS 8m4	D4	Unit9
gc6nas5t56n6	L.L2] LU	L.L] LL	L.L1] L	u-84
gc6nas5t5yl6n6	L.L2] LU	L.L] LL	L.L1] L	u-84
gnt5rac6n6	L.L2] LU	L.L] LL	L.L1] L	u-84
B6nzo(a)gnt5rac6n6	L.L2] LU	L.L] LL	L.L1] L	u-84
B6nzoXabsyr6n6	L.L1LLU	L.L2LL	L.L1] L	u-84
B6nzoXb%uorant56n6	L.L2] LU	L.L] LL	L.L1] L	u-84
B6nzoX,5,ibs6ryl6n6	L.L2] LU	L.L] LL	L.L1] L	u-84
B6nzoXkfluorant56n6	L.L2] LU	L.L] LL	L.L1] L	u-84
m5ry96n6	L.L2] LU	L.L] LL	L.L1] L	u-84
DiQ6nzoXa,5bant5rac6n6	L.L1LLU	L.L2LL	L.L1] L	u-84
%uorant56n6	L.L2] LU	L.L] LL	L.L1] L	u-84
%uor6n6	L.L2] LU	L.L] LL	L.L1] L	u-84
Ind6noX1,2,3Ac,dbsyr6n6	L.L2] LU	L.L] LL	L.L1] L	u-84
Nas5t5al6n6	L.L] LLU	L.1LL	L.L31L	u-84
P56nant5r6n6	L.L2] LU	L.L] LL	L.L1] L	u-84
Pyr6n6	L.L2] LU	L.L] LL	L.L1] L	u-84
Surrogates				
2A%uoroQs56nyl (9urr)	Q[.]	] 3A1LV		h
F6rs56nylAd1[(9urr)	00.1	] CA132		h

Batch Information

gnalytical Batc5: / Mp02VC
gnalytical M6t5od: EPg V2] M pIM (PgH)
In9true 6nt: pKg g-il6nt 7QL8] 07] Gm8Mp
gnaly9t: BRK
gnalytical Dat68Fie 6: [82] 82L1V] :3[:LLPM

Pr6s Batc5: / / / 3] 2L7
Pr6s M6t5od: pW3] 2Lm
Pr6s Dat68Fie 6: [82] 82L1V 1L:3L:33gM
Pr6s Initial Wt.8Kol.: 1LLL e 4
Pr6s Extract Kol: 1 e 4

Print Dat6: L] 8238 2L1V 2:2V:21PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161923 [XXX35207]
Blank Spike Lab ID: 1321049
Date Analyzed: 04/25/2016 17:54

Spike Duplicate ID: LCSD for HBN 1161923 [XXX35207]
Spike Duplicate Lab ID: 1321050
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161923001, 1161923002, 1161923003, 1161923004

Results by **EPA 625M SIM (PAH)**

	Blank Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Acenaphthene	0.5	0.401	80	0.5	0.391	78	(48-114)	2.50	(< 20)
Acenaphthylene	0.5	0.395	79	0.5	0.384	77	(35-121)	2.90	(< 20)
Anthracene	0.5	0.402	80	0.5	0.398	80	(53-119)	1.00	(< 20)
Benzo(a)Anthracene	0.5	0.360	72	0.5	0.362	73	(59-120)	0.56	(< 20)
Benzo[a]pyrene	0.5	0.343	69	0.5	0.336	67	(53-120)	2.20	(< 20)
Benzo[b]Fluoranthene	0.5	0.355	71	0.5	0.354	71	(53-126)	0.28	(< 20)
Benzo[g,h,i]perylene	0.5	0.291	58	0.5	0.288	58	(44-128)	1.20	(< 20)
Benzo[k]fluoranthene	0.5	0.384	77	0.5	0.387	77	(54-125)	0.71	(< 20)
Chrysene	0.5	0.455	91	0.5	0.439	88	(57-120)	3.60	(< 20)
Dibenzo[a,h]anthracene	0.5	0.238	48	0.5	0.238	48	(44-131)	0.20	(< 20)
Fluoranthene	0.5	0.419	84	0.5	0.414	83	(58-120)	1.00	(< 20)
Fluorene	0.5	0.403	81	0.5	0.396	79	(50-118)	1.80	(< 20)
Indeno[1,2,3-c,d] pyrene	0.5	0.253	51	0.5	0.252	50	(48-130)	0.59	(< 20)
Naphthalene	0.5	0.367	73	0.5	0.360	72	(43-114)	2.00	(< 20)
Phenanthrene	0.5	0.395	79	0.5	0.387	78	(53-115)	1.90	(< 20)
Pyrene	0.5	0.442	88	0.5	0.439	88	(53-121)	0.70	(< 20)
Surrogates									
2-Fluorobiphenyl (surr)	0.5	87.1	87	0.5	85.4	85	(53-106)	2.00	
Terphenyl-d14 (surr)	0.5	91.6	92	0.5	91.8	92	(58-132)	0.16	

Batch Information

Analytical Batch: **XMS9268**
Analytical Method: **EPA 625M SIM (PAH)**
Instrument: **SVA Agilent 780/5975 GC/MS**
Analyst: **BRV**

Prep Batch: **XXX35207**
Prep Method: **SW3520C**
Prep Date/Time: **04/25/2016 10:30**
Spike Init Wt./Vol.: 0.5 ug/L Extract Vol: 1 mL
Dupe Init Wt./Vol.: 0.5 ug/L Extract Vol: 1 mL

Print Date: 05/23/2016 2:26:22PM

Method Blank

Blank ID: MB for HBN 1732364 [VVVX8/ 2138
Blank 5a] ID: 13212/ 1

Ma,rti : x a,mr WQ(rfaum0c ffE. ro(nGd

L b for QaC Slmp:
11e1s23991011e1s23992011e1s23993

) mp(l,p] R SW8270D

QaraC mmr	) mp(l,p	5UL X6 5	D5	y nt,p
1020 6P rtuTloro] mnhmmm	9E99/ 99y	9E9199	9E99319	CgX6
102PDtuTloro] mnhmmm	9E99/ 99y	9E9199	9E99319	CgX6
103PDtuTloro] mnhmmm	9E99/ 99y	9E9199	9E99319	CgX6
106PDtuTloro] mnhmmm	9E99/ 99y	9E9199	9E99319	CgX6
1Pb TloronaST,Talmmm	9E99/ 99y	9E9199	9E99319	CgX6
1PMm,TRnaST,Talmmm	9E99/ 99y	9E9199	9E99319	CgX6
2060 P rtuTloroSTmmol	9E99/ 99y	9E9199	9E99319	CgX6
2060eP rtuTloroSTmmol	9E99/ 99y	9E9199	9E99319	CgX6
206PDtuTloroSTmmol	9E99/ 99y	9E9199	9E99319	CgX6
206PDtC m,TRSTmmol	9E99/ 99y	9E9199	9E99319	CgX6
206PDtnt,roSTmmol	9E92/ 9y	9E9/ 99	9E91/ 9	CgX6
206PDtnt,ro,ol(mmm	9E99/ 99y	9E9199	9E99319	CgX6
20ePDtuTloroSTmmol	9E99/ 99y	9E9199	9E99319	CgX6
20ePDtnt,ro,ol(mmm	9E99/ 99y	9E9199	9E99319	CgX6
2Pb TloronaST,Talmmm	9E99/ 99y	9E9199	9E99319	CgX6
2Pb TloroSTmmol	9E99/ 99y	9E9199	9E99319	CgX6
2PMm,TRP60ePCtnt,roSTmmol	9E92/ 9y	9E9/ 99	9E91/ 9	CgX6
2PMm,TRnaST,Talmmm	9E99/ 99y	9E9199	9E99319	CgX6
2PMm,TRSTmmol WPb rmpold	9E99/ 99y	9E9199	9E99319	CgX6
2PNt,roantltnm	9E99/ 99y	9E9199	9E99319	CgX6
2PNt,roSTmmol	9E99/ 99y	9E9199	9E99319	CgX6
3z 6PMm,TRSTmmol WSz C Pb rmpold	9E9199y	9E9299	9E99e29	CgX6
303PDtuTloro] mnhtGtnm	9E99/ 99y	9E9199	9E99319	CgX6
3PNt,roantltnm	9E99/ 99y	9E9199	9E99319	CgX6
6PBroC oSTmnRPSTmnRm,Tmr	9E99/ 99y	9E9199	9E99319	CgX6
6Pb TloroP3PC m,TRSTmmol	9E99/ 99y	9E9199	9E99319	CgX6
6Pb Tloroantltnm	9E99/ 99y	9E9199	9E99319	CgX6
6Pb TloroSTmnRPSTmnRm,Tmr	9E99/ 99y	9E9199	9E99319	CgX6
6PNt,roantltnm	9E99/ 99y	9E9199	9E99319	CgX6
6PNt,roSTmmol	9E92/ 9y	9E9/ 99	9E91/ 9	CgX6
KumnaST,Tmnm	9E99/ 99y	9E9199	9E99319	CgX6
KumnaST,TRmmm	9E99/ 99y	9E9199	9E99319	CgX6
Kntltnm	9E92/ 9y	9E9/ 99	9E91/ 9	CgX6
Kn,Traummm	9E99/ 99y	9E9199	9E99319	CgX6
Kho] mnhmmm	9E99/ 99y	9E9199	9E99319	CgX6
BmnhoWdKn,Traummm	9E99/ 99y	9E9199	9E99319	CgX6
Bmnho[a8SRmmm	9E99/ 99y	9E9199	9E99319	CgX6
Bmnho[] 8Al(oran,Tmmm	9E99/ 99y	9E9199	9E99319	CgX6

Method Blank

Blank ID: MB for HBN 1732364 [VVVX8/ 2138
Blank 5a] ID: 13212/ 1

Ma,rti : x a,mr WQ(rfaum0c ffE. ro(nGd

L b for QaC Slmp:
11e1s23991011e1s23992011e1s23993

) mp(l,p] R SW8270D

OaraC m,mr	) mp(l,p	5UL X6 5	D5	y nt,p
Bmnho[g0T8SmrRmnm	9E99/ 99y	9E9199	9E99319	CgX6
Bmnho[k8l(oran,Tmnm	9E99/ 99y	9E9199	9E99319	CgX6
Bmnhotu autG	9E92/ 9y	9E9/ 99	9E91/ 9	CgX6
BmnhR aluoTol	9E99/ 99y	9E9199	9E99319	CgX6
BtpW2uTloro1C m,TRm,TRdc ,Tmr	9E99/ 99y	9E9199	9E99319	CgX6
BtpW2Pb Tlorom,Toi RdC m,Tanm	9E99/ 99y	9E9199	9E99319	CgX6
BtpW2Pb Tlorom,TRdm,Tmr	9E99/ 99y	9E9199	9E99319	CgX6
] tpW2Pc ,TRTmi RdST,Tala,m	9E99/ 99y	9E9199	9E99319	CgX6
B(,R] mnhRST,Tala,m	9E99/ 99y	9E9199	9E99319	CgX6
b ar] aholm	9E99/ 99y	9E9199	9E99319	CgX6
b TrRpmnm	9E99/ 99y	9E9199	9E99319	CgX6
Dt] mnho[a0T8an,Traumnm	9E99/ 99y	9E9199	9E99319	CgX6
Dt] mnhof(ran	9E99/ 99y	9E9199	9E99319	CgX6
Dtm,TRST,Tala,m	9E99/ 99y	9E9199	9E99319	CgX6
DtC m,TRST,Tala,m	9E99/ 99y	9E9199	9E99319	CgX6
DtPnP] (,RST,Tala,m	9E99/ 99y	9E9199	9E99319	CgX6
GtPnPUu,RST,Tala,m	9E99/ 99y	9E9199	9E99319	CgX6
Al(oran,Tmnm	9E99/ 99y	9E9199	9E99319	CgX6
Al(ormnm	9E99/ 99y	9E9199	9E99319	CgX6
Hmi auTloro] mnhmnm	9E99/ 99y	9E9199	9E99319	CgX6
Hmi auTloro] (,aGmnm	9E99/ 99y	9E9199	9E99319	CgX6
Hmi auTlorouRuloSmn,aGmnm	9E91/ 9y	9E9399	9E99s69	CgX6
Hmi auTlorom,Tanm	9E99/ 99y	9E9199	9E99319	CgX6
InGmno[1020 3RuC8SRmnm	9E99/ 99y	9E9199	9E99319	CgX6
IpoSToronm	9E99/ 99y	9E9199	9E99319	CgX6
NaST,Talmnm	9E99/ 99y	9E9199	9E99319	CgX6
Nt,ro] mnhmnm	9E99/ 99y	9E9199	9E99319	CgX6
NPNt,ropoGtC m,TRaC tnm	9E99/ 99y	9E9199	9E99319	CgX6
NPNt,ropoPGtPnPSroSRaC tnm	9E99/ 99y	9E9199	9E99319	CgX6
NPNt,ropoGtSTmnRaC tnm	9E99/ 99y	9E9199	9E99319	CgX6
Omn,auTloroSTmnol	9E92/ 9y	9E9/ 99	9E91/ 9	CgX6
OTmnan,Trmnm	9E99/ 99y	9E9199	9E99319	CgX6
OTmnol	9E99/ 99y	9E9199	9E99319	CgX6
ORmnm	9E99/ 99y	9E9199	9E99319	CgX6
Surrogates				
2060eP rt] roC oSTmnol W(rrd	7eEe	63P169		&
2PAl(oro] tSTmnR W(rrd	7/ Ee	66P11s		&
2PAl(oroSTmnol W(rrd	/ 7E2	1sP11s		&

Method Blank

Blank ID: MB for HBN 1732364 [VVVX8/ 2138
Blank 5a] ID: 13212/ 1

Ma,rti : x a,mr WQ(rfaum0cffE. ro(nGd

L b for QaC Slmp:
11e1s23991011e1s23992011e1s23993

) mp(l,p] R SW8270D

QaraC mmr	) mp(l,p	5UL X6 5	D5	y nt,p
Nt,ro] mnhmmnRG/ Wp(rrd	e7E7	66P129		&
OTmnolRGe Wp(rrd	e2E3	19P11/		&
- mrSTmnRRG16 Wp(rrd	s9E	/ 9P136		&

Batch Information

KnalR,tual Ba,uT: VMQs276
KnalR,tual MmToG Qx 4279D
Inp,r(C mn,: HO e4s9X s73 QQK
KnalRp,: N55
KnalR,tual Da,mX tC m / X2X291e 3:3/ :99OM

OrmS Ba,uT: VVV3/ 213
OrmS MmToG Qx 3/ 29b
OrmS Da,mX tC m 6X2eX291e s:99:27KM
OrmS Int,tal x ,E%olE 1999 C5
OrmS c i ,rau, %ol: 1 C5

Ortn, Da,m 9/ X23X291e 2:2e:23OM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161923 [XXX35213]
Blank Spike Lab ID: 1321252
Date Analyzed: 05/02/2016 18:07

Spike Duplicate ID: LCSD for HBN 1161923 [XXX35213]
Spike Duplicate Lab ID: 1321253
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161923001, 1161923002, 1161923003

Results by **SW8270D**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
1,2,4-Trichlorobenzene	0.1	0.0701	70	0.1	0.0679	68	(29-116)	3.20	(< 20)
1,2-Dichlorobenzene	0.1	0.0621	62	0.1	0.0591	59	(32-111)	5.10	(< 20)
1,3-Dichlorobenzene	0.1	0.0616	62	0.1	0.0585	59	(28-110)	5.30	(< 20)
1,4-Dichlorobenzene	0.1	0.0629	63	0.1	0.0596	60	(29-112)	5.40	(< 20)
1-Chloronaphthalene	0.04	0.0384	96	0.04	0.0391	98	(58-111)	1.80	(< 20)
1-Methylnaphthalene	0.1	0.0762	76	0.1	0.0773	77	(41-119)	1.40	(< 20)
2,4,5-Trichlorophenol	0.1	0.0876	88	0.1	0.0853	85	(53-123)	2.60	(< 20)
2,4,6-Trichlorophenol	0.1	0.0872	87	0.1	0.0854	85	(50-125)	2.00	(< 20)
2,4-Dichlorophenol	0.1	0.0749	75	0.1	0.0726	73	(47-121)	3.10	(< 20)
2,4-Dimethylphenol	0.1	0.0592	59	0.1	0.0575	58	(31-124)	2.90	(< 20)
2,4-Dinitrophenol	0.18	0.164	91	0.18	0.155	86	(23-143)	5.30	(< 20)
2,4-Dinitrotoluene	0.1	0.0945	95	0.1	0.0928	93	(57-128)	1.80	(< 20)
2,6-Dichlorophenol	0.04	0.0283	71	0.04	0.0282	71	(50-118)	0.50	(< 20)
2,6-Dinitrotoluene	0.1	0.0974	97	0.1	0.0952	95	(57-124)	2.20	(< 20)
2-Chloronaphthalene	0.1	0.0799	80	0.1	0.0805	81	(40-116)	0.70	(< 20)
2-Chlorophenol	0.1	0.0610	61	0.1	0.0569	57	(38-117)	7.10	(< 20)
2-Methyl-4,6-dinitrophenol	0.18	0.185	103	0.18	0.176	98	(44-137)	5.10	(< 20)
2-Methylnaphthalene	0.1	0.0712	71	0.1	0.0728	73	(40-121)	2.30	(< 20)
2-Methylphenol (o-Cresol)	0.1	0.0617	62	0.1	0.0585	59	(30-117)	5.30	(< 20)
2-Nitroaniline	0.1	0.0951	95	0.1	0.0920	92	(55-117)	3.30	(< 20)
2-Nitrophenol	0.1	0.0803	80	0.1	0.0792	79	(47-123)	1.50	(< 20)
3&4-Methylphenol (p&m-Cresol)	0.14	0.0987	71	0.14	0.0920	66	(29-110)	7.00	(< 20)
3,3-Dichlorobenzidine	0.1	0.0833	83	0.1	0.0793	79	(27-129)	4.90	(< 20)
3-Nitroaniline	0.1	0.0917	92	0.1	0.0868	87	(41-128)	5.50	(< 20)
4-Bromophenyl-phenylether	0.1	0.0987	99	0.1	0.0956	96	(55-124)	3.20	(< 20)
4-Chloro-3-methylphenol	0.1	0.0801	80	0.1	0.0787	79	(52-119)	1.80	(< 20)
4-Chloroaniline	0.1	0.0693	69	0.1	0.0654	65	(33-117)	5.80	(< 20)
4-Chlorophenyl-phenylether	0.1	0.0907	91	0.1	0.0897	90	(53-121)	1.00	(< 20)
4-Nitroaniline	0.1	0.0976	98	0.1	0.0921	92	(74-118)	5.90	(< 20)
4-Nitrophenol	0.14	0.106	76	0.14	0.0958	68	(52-111)	10.30	(< 20)
Acenaphthene	0.1	0.0841	84	0.1	0.0850	85	(47-122)	1.10	(< 20)
Acenaphthylene	0.1	0.0838	84	0.1	0.0835	84	(41-130)	0.38	(< 20)
Aniline	0.1	0.0444J	44	0.1	0.0360J	36	(10-87)	20.90	* (< 20)
Anthracene	0.1	0.0949	95	0.1	0.0917	92	(57-123)	3.50	(< 20)

Print Date: 05/23/2016 2:26:24PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161923 [XXX35213]
Blank Spike Lab ID: 1321252
Date Analyzed: 05/02/2016 18:07

Spike Duplicate ID: LCSD for HBN 1161923 [XXX35213]
Spike Duplicate Lab ID: 1321253
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161923001, 1161923002, 1161923003

Results by **SW8270D**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Azobenzene	0.1	0.0958	96	0.1	0.0946	95	(61-116)	1.20	(< 20)
Benzo(a)Anthracene	0.1	0.0995	100	0.1	0.0940	94	(58-125)	5.70	(< 20)
Benzo[a]pyrene	0.1	0.0909	91	0.1	0.0860	86	(54-128)	5.50	(< 20)
Benzo[b]Fluoranthene	0.1	0.0956	96	0.1	0.0914	91	(53-131)	4.40	(< 20)
Benzo[g,h,i]perylene	0.1	0.105	105	0.1	0.102	102	(50-134)	3.10	(< 20)
Benzo[k]fluoranthene	0.1	0.0892	89	0.1	0.0884	88	(57-129)	0.93	(< 20)
Benzoic acid	0.14	0.0826	59	0.14	0.0681	49	(21-107)	19.30	(< 20)
Benzyl alcohol	0.1	0.0634	63	0.1	0.0606	61	(31-112)	4.60	(< 20)
Bis(2chloro1methylethyl)Ether	0.1	0.0663	66	0.1	0.0662	66	(37-130)	0.21	(< 20)
Bis(2-Chloroethoxy)methane	0.1	0.0757	76	0.1	0.0770	77	(48-120)	1.70	(< 20)
Bis(2-Chloroethyl)ether	0.1	0.0591	59	0.1	0.0562	56	(43-118)	4.90	(< 20)
bis(2-Ethylhexyl)phthalate	0.1	0.102	102	0.1	0.0993	99	(55-135)	2.80	(< 20)
Butylbenzylphthalate	0.1	0.107	107	0.1	0.103	103	(53-134)	4.10	(< 20)
Carbazole	0.1	0.0985	99	0.1	0.0962	96	(60-122)	2.30	(< 20)
Chrysene	0.1	0.103	103	0.1	0.100	100	(59-123)	2.90	(< 20)
Dibenzo[a,h]anthracene	0.1	0.104	104	0.1	0.0996	100	(51-134)	4.40	(< 20)
Dibenzofuran	0.1	0.0843	84	0.1	0.0847	85	(53-118)	0.52	(< 20)
Diethylphthalate	0.1	0.0911	91	0.1	0.0884	88	(56-125)	3.00	(< 20)
Dimethylphthalate	0.1	0.0909	91	0.1	0.0877	88	(45-127)	3.60	(< 20)
Di-n-butylphthalate	0.1	0.0990	99	0.1	0.0947	95	(59-127)	4.40	(< 20)
di-n-Octylphthalate	0.1	0.0969	97	0.1	0.0920	92	(51-140)	5.20	(< 20)
Fluoranthene	0.1	0.0891	89	0.1	0.0853	85	(57-128)	4.40	(< 20)
Fluorene	0.1	0.0874	87	0.1	0.0872	87	(52-124)	0.13	(< 20)
Hexachlorobenzene	0.1	0.0958	96	0.1	0.0926	93	(53-125)	3.40	(< 20)
Hexachlorobutadiene	0.1	0.0764	76	0.1	0.0731	73	(22-124)	4.40	(< 20)
Hexachlorocyclopentadiene	0.1	0.0478	48	0.1	0.0463	46	(10-93)	3.10	(< 20)
Hexachloroethane	0.1	0.0605	61	0.1	0.0573	57	(21-115)	5.40	(< 20)
Indeno[1,2,3-c,d] pyrene	0.1	0.0981	98	0.1	0.0955	96	(52-134)	2.60	(< 20)
Isophorone	0.1	0.0709	71	0.1	0.0717	72	(42-124)	1.10	(< 20)
Naphthalene	0.1	0.0714	71	0.1	0.0695	70	(40-121)	2.80	(< 20)
Nitrobenzene	0.1	0.0722	72	0.1	0.0709	71	(45-121)	1.80	(< 20)
N-Nitrosodimethylamine	0.1	0.0554	55	0.1	0.0483	48	(41-117)	13.80	(< 20)
N-Nitroso-di-n-propylamine	0.1	0.0719	72	0.1	0.0745	75	(49-119)	3.70	(< 20)
N-Nitrosodiphenylamine	0.1	0.0806	81	0.1	0.0794	79	(51-123)	1.60	(< 20)

Print Date: 05/23/2016 2:26:24PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161923 [XXX35213]
Blank Spike Lab ID: 1321252
Date Analyzed: 05/02/2016 18:07

Spike Duplicate ID: LCSD for HBN 1161923 [XXX35213]
Spike Duplicate Lab ID: 1321253
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1161923001, 1161923002, 1161923003

Results by **SW8270D**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Pentachlorophenol	0.14	0.145	103	0.14	0.137	98	(35-138)	5.40	(< 20)
Phenanthrene	0.1	0.0960	96	0.1	0.0935	94	(59-120)	2.70	(< 20)
Phenol	0.1	0.0542	54	0.1	0.0485	49	(39-84)	11.10	(< 20)
Pyrene	0.1	0.114	114	0.1	0.110	110	(57-126)	4.30	(< 20)
Surrogates									
2,4,6-Tribromophenol (surr)	0.2	95.2	95	0.2	96.5	97	(43-140)	1.30	
2-Fluorobiphenyl (surr)	0.1	75.7	76	0.1	78.9	79	(44-119)	4.20	
2-Fluorophenol (surr)	0.2	54.1	54	0.2	54.2	54	(19-119)	0.07	
Nitrobenzene-d5 (surr)	0.1	72	72	0.1	70.3	70	(44-120)	2.50	
Phenol-d6 (surr)	0.2	62.6	63	0.2	61.1	61	(10-115)	2.50	
Terphenyl-d14 (surr)	0.1	110	110	0.1	110	110	(50-134)	0.36	

Batch Information

Analytical Batch: **XMS9274**
Analytical Method: **SW8270D**
Instrument: **HP 6890/5973 SSA**
Analyst: **NLL**

Prep Batch: **XXX35213**
Prep Method: **SW3520C**
Prep Date/Time: **04/26/2016 09:00**
Spike Init Wt./Vol.: 0.1 mg/L Extract Vol: 1 mL
Dupe Init Wt./Vol.: 0.1 mg/L Extract Vol: 1 mL

Print Date: 05/23/2016 2:26:24PM

Method Blank

Blank ID: MB for HBN 1732490 [XXX/35229]
Blank Lab ID: 1321704

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161923001, 1161923002, 1161923003

Results by **AK102**

Parameter	Results	LOQ/CL	DL	Units
Diesel Range Organics	0.300U	0.600	0.180	mg/L
Surrogates				
5a Androstane (surr)	97.2	60-120		%

Batch Information

Analytical Batch: XFC12356
Analytical Method: AK102
Instrument: Agilent 7890B R
Analyst: CJSW
Analytical Date/Time: 5/2/2016 1:53:00PM

Prep Batch: XXX35229
Prep Method: SW3520C
Prep Date/Time: 4/28/2016 9:48:03AM
Prep Initial Wt./Vol.: 250 mL
Prep Extract Vol: 1 mL

Print Date: 05/23/2016 2:26:25PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161923 [VVV3X2298
Blank Spike La7 ID: 1321] bX
Da4e 5nalt Aey: bXzb2z2b16 1d:bd

Spike D0pli/ a4e ID: LCSD for HBN 1161923 [VVV3X2298
Spike D0pli/ a4e La7 ID: 1321] b6
Ra4is: Ma4er xS0rfa/ eW(ff,WEro0ny.

%C for Sa) plec: 1161923bb1W1161923bb2W1161923bb3

uec0l4c 7t **AK102**

	Blank Spike x) mL.			Spike D0pli/ a4e x) mL.					
Gara) e4er	Spike	uec0l4	ue/ xP.	Spike	uec0l4	ue/ xP.	CL	uGD xP.	uGD CL
Diecel uanme g rmani/ c	2b	19,d	9]	2b	19,1	9X	x] XC12X.	1,6b	xO2b.
Surrogates									
Xa 5nyroc4ane xc0rr.	b,d	11-	11-	b,d	11X	11X	x6bC12b.	2,-b	

Batch Information

5nalt 4/ al Ba4'<: **XFC12356**
5nalt 4/ al Re4<oy: **AK102**
Inc40) en4 **Agilent 7890B R**
5nalt c4 **CJSW**

Grep Ba4'<: **XXX35229**
Grep Re4<oy: **SW3520C**
Grep Da4ezhi) e: **04/28/2016 09:48**
Spike Ini4M4;zTol,: 2b) mL (s4ra/ 4Tol: 1) L
D0pe Ini4M4;zTol,: 2b) mL (s4ra/ 4Tol: 1) L

Method Blank

Blank ID: MB for HBN 1732490 [XXX/35229]
Blank Lab ID: 1321704

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1161923001, 1161923002, 1161923003

Results by **AK103**

Parameter	Results	LOQ/CL	DL	Units
Residual Range Organics	0.250U	0.500	0.150	mg/L
Surrogates				
n-Triacontane-d62 (surr)	93.6	60-120		-

Batch Information

Analytical Batch: XFC12356
Analytical Method: AK103
Instrument: Agilent 7890B R
Analyst: CTSW
Analytical Date/Time: 5/2/2016 1:53:00PM

Prep Batch: XXX35229
Prep Method: SW3520C
Prep Date/Time: 4/25/2016 9:45:00AM
Prep Initial Wt./Vol.: 250 mL
Prep Extract Vol: 1 mL

Print Date: 05/23/2016 2:26:30PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1161923 [VVV3X2298
Blank Spike La7 ID: 1321] bX
Da4e 5nalt Aey: bXzb2z2b16 1d:bd

Spike D0pli/ a4e ID: LCSD for HBN 1161923 [VVV3X2298
Spike D0pli/ a4e La7 ID: 1321] b6
Ra4is: Ma4er xS0rfa/ eW(ff,WEro0ny.

%C for Sa) plec: 1161923bb1W1161923bb2W1161923bb3

u ec0l4c 7t **AK102**

	Blank Spike x) mL.			Spike D0pli/ a4e x) mL.					
Gara) e4er	Spike	u ec0l4	u e/ xP.	Spike	u ec0l4	u e/ xP.	CL	u GD xP.	u GD CL
u eciy0al u anme g rmani/ c	2b	22,X	113	2b	22,2	111	x6bC12b.	1,6b	xO2b.
Surrogates									
nQ ria/ on4aneQy62 xc0rr.	b,d	1bb	1bb	b,d	96,3	96	x6bC12b.	3,<b	

Batch Information

5nalt 4/ al Ba4/ h: **XFC13256**
5nalt 4/ al Re4hoy: **AK102**
Inc40) en4 **Agilent 7890B R**
5nalt c4 **CJSW**

Grep Ba4/ h: **XXX25339**
Grep Re4hoy: **SW2530C**
Grep Da4ez i) e: **04/38/3016 09:48**
Spike Ini4M4zTol,: 2b) mL (s4a/ 4Tol: 1) L
D0pe Ini4M4zTol,: 2b) mL (s4a/ 4Tol: 1) L

SGS

CHAIN OF CUSTODY RECORD

SGS Environmental Services Inc.

1161923

CLIENT: SLR Consulting

CONTACT: Jason Gray, SLR PHONE NO: (office) 264-6965

PROJECT Name: Kenai Wells PROJECT No.: 105.00148.16001

REPORTS TO: Jason Gray, SLR email jgray@slrconsulting.com

INVOICE TO: Wendy Hansen, SLR QUOTE #: 332060
2700 Gambell Street Anchorage, Alaska 99503

SGS Reference #:

page 1 of 1

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	# CONTAINERS	Preserv Used	SAMPLE TYPE C = COMP G = GRAB	E1631E - Low-level Hg (dissolved) HCl	E200.8 - Dissolved Metals SM21 2340B - Hardness HNO3	E1631E - Low-level Hg (total) HCl	E200.8 - Total Metals HNO3	SW 8260B - VOC HCl	AK101 -GRO HCl	SW 8270D - SVOC HCl	AK102/AK103 - DRO/RRO HCl	SM21 2540D - TSS None	E300.0 - Cl, F, SO4 SM21 4500NO3-F - Nitrate, Nitrite None	SM21 2540C TDS, SM21 2320B Alkalinity, SM2130B Turbidity, SM21 4500H+B pH None	PAH SIMS 625 None					
1 A-B (5)	TP1-0416	4-23-16	1425	GW	19		G	X	X	X	X	X	X	X	X	X	X	X	X					
2 A-B (6)	PQW1-0416	↓	1630	↓	19		↓	X	X	X	X	X	X	X	X	X	X	X	X					
3 A-B (7)	Decker-0416	↓	1745	↓	19		↓	X	X	X	X	X	X	X	X	X	X	X	X					
4 A-B	TP6-0416	↓	1425	↓	2		↓												X					
8 A-C	TB-9	4-23-16	1425	—	3		—						X											
9 A-C	TB-10	4-23-16	1425	—	3		—					X												
10 A	TBH03	4-23-16	1425	—	1		—			X														
	~~Trip Blank~~											X	X											

Collected/Relinquished By: (1) Kyle Johnson	Date 4-23-16	Time 2300	Received By:
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date 4/29/16	Time 10:30	Received For Laboratory By:

Shipping Carrier:

Shipping Ticket No:

Samples Received Cold? YES NO

Temperature °C: *

Special Deliverable Req: **Level II**

EDD: PDF, Access

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

TF, IR
AH

Requested Turnaround Time and-or Special Instructions:

Total and Dissolved Metals:
As, Ba, Be, Ca, Cd, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Na, Ni, Sb, Se, Tl, V, Zn

* 1-Ambient
2-0.5°#D9
3-1.3°#D9
4-1.5°#D9

200 W. Potter Drive **Anchorage, AK 99518** Tel: (907) 562-2343 Fax: (907) 561-5301
3180 Peger Road **Fairbanks, AK 99701** Tel: (907) 474-8656 Fax: (907) 474-9685
5500 Business Drive **Wilmington, NC 28405** Tel: (910) 350-1903 Fax: (910) 350-1557

AIRBILL 3618772

I hereby declare that the goods contained herein do not contain dangerous goods.

Signed.....Date.....

GRANT AVIATION

Grant Aviation
4451 Aircraft Drive Anchorage, AK 99502
Phone: 1 (888) 359-4726
Freephone: 1 (888) 359-4726
Email: res@flygrant.com
Web: http://www.flygrant.com/

FREIGHT DETAILS

FROM/TO: Kenai -> Anchorage International

Flight Departs: Apr 24 16 8:40 AM

Receiver: sgs labs
907-562-2343

Sender: ben siewiec
907-223-8578

Description & Comment	Quan.	Wgt.	Handle Fee	Danger Fee	Total
water samples in coolers	6	211	-	-	$124.84
				Total Tax:	$7.80
				Total Payments made:	$132.64
				Total Unpaid:	**$0.00**

Received by: .....

CUSTOMER COPY

AIRBILL 3618772

GRANT AVIATION

Grant Aviation
4451 Aircraft Drive Anchorage, AK 99502
Phone: 1 (888) 359-4726
Freephone: 1 (888) 359-4726
Email: res@flygrant.com
Web: http://www.flygrant.com/

FREIGHT DETAILS

FROM/TO: Kenai -> Anchorage International

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Receiver: sgs labs
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Sender: ben siewiec
907-223-8578

Description & Comment	Quan.	Wgt.	Handle Fee	Danger Fee	Total
water samples in coolers	6	211	-	-	$124.84
TAX: Federal Excise Tax					$7.80
				Total Payments made:	$132.64
				Total Unpaid:	**$0.00**

TERMS AND CONDITIONS

Consignemnt Note Text

SGS

1161923

1 1 6 1 9 2 3

SAMPLE RECEIPT FORM

Review Criteria:	Yes	N/A	No	Comments/Action Taken:
Were **custody seals** intact? Note # & location, if applicable. COC accompanied samples?	☑ ☑	☐ ☐	☐ ☐	***Exemption permitted if sampler hand carries/delivers.*** 1F, 1R all
Temperature blank compliant* (i.e., 0-6°C after CF)? *If >6°C, were samples collected <8 hours ago?* *If <0°C, were all sample containers ice free?* Cooler ID: 1 @ Ambient* w/ Therm.ID: N/A Cooler ID: 2 @ 0.5 w/ Therm.ID: D9 Cooler ID: 3 @ 1.3 w/ Therm.ID: D9 Cooler ID: 4 @ 1.5 w/ Therm.ID: D9 Cooler ID: ____ @ ____ w/ Therm.ID: ____ If samples are received without a temperature blank, the "cooler temperature" will be documented in lieu of the temperature blank & "**COOLER TEMP**" will be noted to the right. In cases where neither a temp blank nor cooler temp can be obtained, note "ambient" or "chilled."	☑ ☐ ☐	☐ ☑ ☑	☐ ☐ ☐	***Exemption permitted if chilled & collected <8 hrs ago.*** Cooler #1 contained only samples for LL-Hg analysis, which is not temperature sensitive. ***Note: Identify containers received at non-compliant temperature. Use form FS-0029 if more space is needed.***
Delivery method (specify all that apply): ☐Client (hand carried) ☐USPS ☐Lynden ☐AK Air ☐Alert Courier ☐UPS ☐FedEx ☐RAVN ☐C&D Delivery ☐Carlile ☐Pen Air ☐Warp Speed ☑Other: Grant Aviation → *For WO# with airbills, was the WO# & airbill info recorded in the Front Counter eLog?*	☐	☑	☐	
	Yes	N/A	No	
Were samples received within hold time? Do samples **match COC*** (i.e., sample IDs, dates/times collected)? Were analyses requested unambiguous?	☑ ☐ ☑	☐ ☐ ☐	☐ ☑ ☐	***Note: Refer to form F-083 "Sample Guide" for hold times.*** ***Note: If times differ <1hr, record details and login per COC.*** *
Were samples in **good condition** (no leaks/cracks/breakage)? Packing material used (specify all that apply): ☑Bubble Wrap ☐Separate plastic bags ☐Vermiculite ☐Other:	☑	☐	☐	
Were **proper containers** (type/mass/volume/preservative*) used? Were **Trip Blanks** (i.e., VOAs, LL-Hg) in cooler with samples? Were all VOA vials **free of headspace** (i.e., bubbles ≤6 mm)? Were all soil VOAs **field extracted** with MeOH+BFB?	☑ ☑ ☑ ☐	☐ ☐ ☐ ☑	☐ ☐ ☐ ☐	☐ ***Exemption permitted for metals (e.g., 200.8/6020A).***
For preserved waters (other than VOA vials, LL-Mercury or microbiological analyses), was **pH verified and compliant**? If pH was adjusted, were bottles flagged (i.e., stickers)?	☑ ☐	☐ ☑	☐ ☐	
For **special handling** (e.g., "MI" soils, foreign soils, lab filter for dissolved…, lab extract for volatiles, Ref Lab, limited volume), were bottles/paperwork flagged (e.g., sticker)?	☐	☑	☐	
For **RUSH/SHORT Hold Time**, were COC/Bottles flagged accordingly? Was Rush/Short HT email sent, if applicable?	☑	☐	☐	
For **SITE-SPECIFIC QC, e.g. BMS/BMSD/BDUP**, were containers / paperwork flagged accordingly?	☐	☑	☐	
For any question answered "No," has the PM been notified and the problem resolved (or paperwork put in their bin)?	☑	☐	☐	SRF Completed by: JN PM notified: JN
Was **PEER REVIEW** of ***sample numbering/labeling completed?***	☐	☑	☐	Peer Reviewed by:

Additional notes (if applicable):

*Containers received for SVOC 8270 Analysis on sample "Decker-0416" have labels noting HCl preservation; front counter confirmed that the sample was at neutral pH JN 4/24/2016.

Note to Client: *Any "no" answer above indicates non-compliance with standard procedures and may impact data quality.*

Sample Containers and Preservatives

Container Id	Preservative	Container Condition	Container Id	Preservative	Container Condition
1161923001-A	HCL to pH < 2	OK	1161923003-I	No Preservative Required	OK
1161923001-B	HNO3 to pH < 2	OK	1161923003-J	No Preservative Required	OK
1161923001-C	HCL to pH < 2	OK	1161923003-K	HCL to pH < 2	OK
1161923001-D	HCL to pH < 2	OK	1161923003-L	HCL to pH < 2	OK
1161923001-E	HCL to pH < 2	OK	1161923003-M	No Preservative Required	OK
1161923001-F	HCL to pH < 2	OK	1161923003-N	No Preservative Required	OK
1161923001-G	HCL to pH < 2	OK	1161923003-O	No Preservative Required	OK
1161923001-H	HCL to pH < 2	OK	1161923003-P	No Preservative Required	OK
1161923001-I	No Preservative Required	OK	1161923003-Q	No Preservative Required	OK
1161923001-J	No Preservative Required	OK	1161923004-A	No Preservative Required	OK
1161923001-K	HCL to pH < 2	OK	1161923004-B	No Preservative Required	OK
1161923001-L	HCL to pH < 2	OK	1161923005-A	HNO3 to pH < 2	OK
1161923001-M	No Preservative Required	OK	1161923005-B	HCL to pH < 2	OK
1161923001-N	No Preservative Required	OK	1161923006-A	HNO3 to pH < 2	OK
1161923001-O	No Preservative Required	OK	1161923006-B	HCL to pH < 2	OK
1161923001-P	No Preservative Required	OK	1161923007-A	HNO3 to pH < 2	OK
1161923001-Q	No Preservative Required	OK	1161923007-B	HCL to pH < 2	OK
1161923002-A	HCL to pH < 2	OK	1161923008-A	HCL to pH < 2	OK
1161923002-B	HNO3 to pH < 2	OK	1161923008-B	HCL to pH < 2	OK
1161923002-C	HCL to pH < 2	OK	1161923008-C	HCL to pH < 2	OK
1161923002-D	HCL to pH < 2	OK	1161923009-A	HCL to pH < 2	OK
1161923002-E	HCL to pH < 2	OK	1161923009-B	HCL to pH < 2	OK
1161923002-F	HCL to pH < 2	OK	1161923009-C	HCL to pH < 2	OK
1161923002-G	HCL to pH < 2	OK	1161923010-A	HCL to pH < 2	OK
1161923002-H	HCL to pH < 2	OK			
1161923002-I	No Preservative Required	OK			
1161923002-J	No Preservative Required	OK			
1161923002-K	HCL to pH < 2	OK			
1161923002-L	HCL to pH < 2	OK			
1161923002-M	No Preservative Required	OK			
1161923002-N	No Preservative Required	OK			
1161923002-O	No Preservative Required	OK			
1161923002-P	No Preservative Required	OK			
1161923002-Q	No Preservative Required	OK			
1161923003-A	HCL to pH < 2	OK			
1161923003-B	HNO3 to pH < 2	OK			
1161923003-C	HCL to pH < 2	OK			
1161923003-D	HCL to pH < 2	OK			
1161923003-E	HCL to pH < 2	OK			
1161923003-F	HCL to pH < 2	OK			
1161923003-G	HCL to pH < 2	OK			
1161923003-H	HCL to pH < 2	OK			

Container Id	Preservative	Container Condition	Container Id	Preservative	Container Condition

Container Condition Glossary

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

OK - The container was received at an acceptable pH for the analysis requested.
BU - The container was received with headspace greater than 6mm.
DM- The container was received damaged.
FR- The container was received frozen and not usable for Bacteria or BOD analyses.
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.

Laboratory Report of Analysis

To: AECOM Environmental
700 G St. Ste. 500
Anchorage, AK 99501
(907)261-6785

Report Number: **1162930**

Client Project: **APT Task 4**

Dear Paul Myerchin,

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.

C. Homestead
SGS North America
Environmental Services – Alaska Division
General Manager

Charles Homestead
2016.06.15 16:13:58 -08'00'

Chuck Homestead — Date
Project Manager
Charles.Homestead@sgs.com

Print Date: 06/14/2016 2:42:34PM

Case Narrative

SGS Client: **AECOM Environmental**
SGS Project: **1162930**
Project Name/Site: **APT Task 4**
Project Contact: **Paul Myerchin**

Refer to sample receipt form for information on sample condition.

PQW-1 (1162930001) PS

8270D - Surrogate recovery for 2,4,6-tribromophenol (33.8%) and terphenyl-d14 (22.7%) does not meet QC criteria. Sample was re-extracted within hold time with surrogate nitrobenzene-d5 (43.2%) outside QC criteria. Sample results are comparable.

LCS for HBN 1735559 [XXX/35468 (1328590) LCS

8270D - Surrogate recovery for terphenyl-d14 (46%) does not meet QC criteria.

LCSD for HBN 1735559 [XXX/3546 (1328591) LCSD

8270D - Surrogate recovery for terphenyl-d14 (44.3%) does not meet QC criteria.

LCSD for HBN 1735612 [XXX/3547 (1328850) LCSD

8270D - LCS/LCSD RPD for benzoic acid (22.6) does not meet QC criteria. The associated sample concentrations for this analyte are less than the LOQ.

MB for HBN 1735559 [XXX/35468] (1328589) MB

8270D - Surrogate recovery for terphenyl-d14 (44.7%) does not meet QC criteria.
tes does not meet QC criteria. The associated parent sample concentrations for these analytes are less than the LOQ.

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

SGS North America Inc.
200 West Potter Drive, Anchorage, AK 99518
t 907.562.2343 f 907.561.5301 www.us.sgs.com

Report of Manual Integrations

Laboratory ID	Client Sample ID	Analytical Batch	Analyte	Reason
SW8270D				
1328590	LCS for HBN 1735559 [XXX/35468	XMS9329	1-Chloronaphthalene	RSP
1328591	LCSD for HBN 1735559 [XXX/3546	XMS9329	1-Chloronaphthalene	RSP
1328676	1162847006MS	XMS9329	1-Chloronaphthalene	RP
1328676	1162847006MS	XMS9329	Benzoic acid	BLC
1328677	1162847006MSD	XMS9329	1-Chloronaphthalene	RSP
1328677	1162847006MSD	XMS9329	Benzoic acid	BLC
1328849	LCS for HBN 1735612 [XXX/35474	XMS9335	1-Chloronaphthalene	RP
1328849	LCS for HBN 1735612 [XXX/35474	XMS9335	2-Chloronaphthalene	BLC
1328850	LCSD for HBN 1735612 [XXX/3547	XMS9335	1-Chloronaphthalene	RSP
1328850	LCSD for HBN 1735612 [XXX/3547	XMS9335	2-Chloronaphthalene	BLC
1328850	LCSD for HBN 1735612 [XXX/3547	XMS9335	Benzoic acid	BLC
1329685	CCV for HBN 1736121 [XMS/9335]	XMS9335	1-Chloronaphthalene	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.

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Laboratory Qualifiers

Enclosed are the analytical results associated with the above work order. 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, indenmification and jurisdiction issues defined therein.

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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) & UST-005 (CS) for ADEC and 2944.01 for DOD ELAP/ISO17025 (RCRA methods: 1020B, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035A, 6020A, 7470A, 7471B, 8021B, 8082A, 8260B, 8270D, 8270D-SIM, 9040C, 9045D, 9056A, 9060A, AK101 and AK102/103). 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
D	The analyte concentration is the result of a dilution.
DF	Dilution Factor
DL	Detection Limit (i.e., maximum method detection limit)
E	The analyte result is above the calibrated range.
F	Indicates value that is greater than or equal to the DL
GT	Greater Than
IB	Instrument Blank
ICV	Initial Calibration Verification
J	The quantitation is an estimation.
JL	The analyte was positively identified, but the quantitation is a low estimation.
LCS(D)	Laboratory Control Spike (Duplicate)
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
M	A matrix effect was present.
MB	Method Blank
MS(D)	Matrix Spike (Duplicate)
ND	Indicates the analyte is not detected.
Q	QC parameter out of acceptance range.
R	Rejected
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.

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Sample Summary

Client Sample ID	Lab Sample ID	Collected	Received	Matrix
PQW-1	1162930001	06/07/2016	06/08/2016	Water (Surface, Eff., Ground)
PQW-2	1162930002	06/07/2016	06/08/2016	Water (Surface, Eff., Ground)
Trip Blank	1162930003	06/07/2016	06/08/2016	Water (Surface, Eff., Ground)

Method	Method Description
AK102	DRO/RRO Low Volume Water
AK103	DRO/RRO Low Volume Water
AK101	Gasoline Range Organics (W)
SW8270D	SW846-8270 SVOC by GC/MS (W) Liq/Liq ext
SW8260B	Volatile Organic Compounds (W) FULL

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Detectable Results Summary

Client Sample ID: **PQW-1**
Lab Sample ID: 1162930001

	Parameter	Result	Units
Semivolatile Organic Fuels	Residual Range Organics	0.161J	mg/L
Semivolatile Organics GC/MS	Di-n-butylphthalate	0.00322J	mg/L
Volatile GC/MS	Benzene	0.730	ug/L

Client Sample ID: **PQW-2**
Lab Sample ID: 1162930002

	Parameter	Result	Units
Volatile GC/MS	Benzene	0.980	ug/L

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Results of **PQW-1**

Client Sample ID: **PQW-1**
Client Project ID: **APT Task 4**
Lab Sample ID: 1162930001
Lab Project ID: 1162930

Collection Date: 06/07/16 13:30
Received Date: 06/08/16 08:00
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	0.294	U	0.588	0.176	mg/L	1		06/09/16 19:32
Surrogates								
5a Androstane (surr)	96.5		50-150		%	1		06/09/16 19:32

Batch Information

Analytical Batch: XFC12426
Analytical Method: AK102
Analyst: S.G
Analytical Date/Time: 06/09/16 19:32
Container ID: 1162930001-D

Prep Batch: XXX35480
Prep Method: SW3520C
Prep Date/Time: 06/09/16 10:57
Prep Initial Wt./Vol.: 255 mL
Prep Extract Vol: 1 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Residual Range Organics	0.161	J	0.490	0.147	mg/L	1		06/09/16 19:32
Surrogates								
n-Triacontane-d62 (surr)	110		50-150		%	1		06/09/16 19:32

Batch Information

Analytical Batch: XFC12426
Analytical Method: AK103
Analyst: S.G
Analytical Date/Time: 06/09/16 19:32
Container ID: 1162930001-D

Prep Batch: XXX35480
Prep Method: SW3520C
Prep Date/Time: 06/09/16 10:57
Prep Initial Wt./Vol.: 255 mL
Prep Extract Vol: 1 mL

J flagging is activated

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Results of **PQW-1**

Client Sample ID: **PQW-1**
Client Project ID: **APT Task 4**
Lab Sample ID: 1162930001
Lab Project ID: 1162930

Collection Date: 06/07/16 13:30
Received Date: 06/08/16 08:00
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,2,4-Trichlorobenzene	0.00505	U	0.0101	0.00313	mg/L	1		06/08/16 23:33
1,2-Dichlorobenzene	0.00505	U	0.0101	0.00313	mg/L	1		06/08/16 23:33
1,3-Dichlorobenzene	0.00505	U	0.0101	0.00313	mg/L	1		06/08/16 23:33
1,4-Dichlorobenzene	0.00505	U	0.0101	0.00313	mg/L	1		06/08/16 23:33
1-Chloronaphthalene	0.00505	U	0.0101	0.00313	mg/L	1		06/08/16 23:33
1-Methylnaphthalene	0.00505	U	0.0101	0.00313	mg/L	1		06/08/16 23:33
2,4,5-Trichlorophenol	0.00505	U	0.0101	0.00313	mg/L	1		06/08/16 23:33
2,4,6-Trichlorophenol	0.00505	U	0.0101	0.00313	mg/L	1		06/08/16 23:33
2,4-Dichlorophenol	0.00505	U	0.0101	0.00313	mg/L	1		06/08/16 23:33
2,4-Dimethylphenol	0.00505	U	0.0101	0.00313	mg/L	1		06/08/16 23:33
2,4-Dinitrophenol	0.0253	U	0.0505	0.0152	mg/L	1		06/08/16 23:33
2,4-Dinitrotoluene	0.00505	U	0.0101	0.00313	mg/L	1		06/08/16 23:33
2,6-Dichlorophenol	0.00505	U	0.0101	0.00313	mg/L	1		06/08/16 23:33
2,6-Dinitrotoluene	0.00505	U	0.0101	0.00313	mg/L	1		06/08/16 23:33
2-Chloronaphthalene	0.00505	U	0.0101	0.00313	mg/L	1		06/08/16 23:33
2-Chlorophenol	0.00505	U	0.0101	0.00313	mg/L	1		06/08/16 23:33
2-Methyl-4,6-dinitrophenol	0.0253	U	0.0505	0.0152	mg/L	1		06/08/16 23:33
2-Methylnaphthalene	0.00505	U	0.0101	0.00313	mg/L	1		06/08/16 23:33
2-Methylphenol (o-Cresol)	0.00505	U	0.0101	0.00313	mg/L	1		06/08/16 23:33
2-Nitroaniline	0.00505	U	0.0101	0.00313	mg/L	1		06/08/16 23:33
2-Nitrophenol	0.00505	U	0.0101	0.00313	mg/L	1		06/08/16 23:33
3&4-Methylphenol (p&m-Cresol)	0.0101	U	0.0202	0.00626	mg/L	1		06/08/16 23:33
3,3-Dichlorobenzidine	0.00505	U	0.0101	0.00313	mg/L	1		06/08/16 23:33
3-Nitroaniline	0.00505	U	0.0101	0.00313	mg/L	1		06/08/16 23:33
4-Bromophenyl-phenylether	0.00505	U	0.0101	0.00313	mg/L	1		06/08/16 23:33
4-Chloro-3-methylphenol	0.00505	U	0.0101	0.00313	mg/L	1		06/08/16 23:33
4-Chloroaniline	0.00505	U	0.0101	0.00313	mg/L	1		06/08/16 23:33
4-Chlorophenyl-phenylether	0.00505	U	0.0101	0.00313	mg/L	1		06/08/16 23:33
4-Nitroaniline	0.00505	U	0.0101	0.00313	mg/L	1		06/08/16 23:33
4-Nitrophenol	0.0253	U	0.0505	0.0152	mg/L	1		06/08/16 23:33
Acenaphthene	0.00505	U	0.0101	0.00313	mg/L	1		06/08/16 23:33
Acenaphthylene	0.00505	U	0.0101	0.00313	mg/L	1		06/08/16 23:33
Aniline	0.0253	U	0.0505	0.0152	mg/L	1		06/08/16 23:33
Anthracene	0.00505	U	0.0101	0.00313	mg/L	1		06/08/16 23:33
Azobenzene	0.00505	U	0.0101	0.00313	mg/L	1		06/08/16 23:33
Benzo(a)Anthracene	0.00505	U	0.0101	0.00313	mg/L	1		06/08/16 23:33
Benzo[a]pyrene	0.00505	U	0.0101	0.00313	mg/L	1		06/08/16 23:33

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J flagging is activated

Results of **PQW-1**

Client Sample ID: **PQW-1**
Client Project ID: **APT Task 4**
Lab Sample ID: 1162930001
Lab Project ID: 1162930

Collection Date: 06/07/16 13:30
Received Date: 06/08/16 08:00
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Benzo[b]Fluoranthene	0.00505	U	0.0101	0.00313	mg/L	1		06/08/16 23:33
Benzo[g,h,i]perylene	0.00505	U	0.0101	0.00313	mg/L	1		06/08/16 23:33
Benzo[k]fluoranthene	0.00505	U	0.0101	0.00313	mg/L	1		06/08/16 23:33
Benzoic acid	0.0253	U	0.0505	0.0152	mg/L	1		06/08/16 23:33
Benzyl alcohol	0.00505	U	0.0101	0.00313	mg/L	1		06/08/16 23:33
Bis(2chloro1methylethyl)Ether	0.00505	U	0.0101	0.00313	mg/L	1		06/08/16 23:33
Bis(2-Chloroethoxy)methane	0.00505	U	0.0101	0.00313	mg/L	1		06/08/16 23:33
Bis(2-Chloroethyl)ether	0.00505	U	0.0101	0.00313	mg/L	1		06/08/16 23:33
bis(2-Ethylhexyl)phthalate	0.00505	U	0.0101	0.00313	mg/L	1		06/08/16 23:33
Butylbenzylphthalate	0.00505	U	0.0101	0.00313	mg/L	1		06/08/16 23:33
Carbazole	0.00505	U	0.0101	0.00313	mg/L	1		06/08/16 23:33
Chrysene	0.00505	U	0.0101	0.00313	mg/L	1		06/08/16 23:33
Dibenzo[a,h]anthracene	0.00505	U	0.0101	0.00313	mg/L	1		06/08/16 23:33
Dibenzofuran	0.00505	U	0.0101	0.00313	mg/L	1		06/08/16 23:33
Diethylphthalate	0.00505	U	0.0101	0.00313	mg/L	1		06/08/16 23:33
Dimethylphthalate	0.00505	U	0.0101	0.00313	mg/L	1		06/08/16 23:33
Di-n-butylphthalate	0.00322	J	0.0101	0.00313	mg/L	1		06/08/16 23:33
di-n-Octylphthalate	0.00505	U	0.0101	0.00313	mg/L	1		06/08/16 23:33
Fluoranthene	0.00505	U	0.0101	0.00313	mg/L	1		06/08/16 23:33
Fluorene	0.00505	U	0.0101	0.00313	mg/L	1		06/08/16 23:33
Hexachlorobenzene	0.00505	U	0.0101	0.00313	mg/L	1		06/08/16 23:33
Hexachlorobutadiene	0.00505	U	0.0101	0.00313	mg/L	1		06/08/16 23:33
Hexachlorocyclopentadiene	0.0152	U	0.0303	0.00949	mg/L	1		06/08/16 23:33
Hexachloroethane	0.00505	U	0.0101	0.00313	mg/L	1		06/08/16 23:33
Indeno[1,2,3-c,d] pyrene	0.00505	U	0.0101	0.00313	mg/L	1		06/08/16 23:33
Isophorone	0.00505	U	0.0101	0.00313	mg/L	1		06/08/16 23:33
Naphthalene	0.00505	U	0.0101	0.00313	mg/L	1		06/08/16 23:33
Nitrobenzene	0.00505	U	0.0101	0.00313	mg/L	1		06/08/16 23:33
N-Nitrosodimethylamine	0.00505	U	0.0101	0.00313	mg/L	1		06/08/16 23:33
N-Nitroso-di-n-propylamine	0.00505	U	0.0101	0.00313	mg/L	1		06/08/16 23:33
N-Nitrosodiphenylamine	0.00505	U	0.0101	0.00313	mg/L	1		06/08/16 23:33
Pentachlorophenol	0.0253	U	0.0505	0.0152	mg/L	1		06/08/16 23:33
Phenanthrene	0.00505	U	0.0101	0.00313	mg/L	1		06/08/16 23:33
Phenol	0.00505	U	0.0101	0.00313	mg/L	1		06/08/16 23:33
Pyrene	0.00505	U	0.0101	0.00313	mg/L	1		06/08/16 23:33
Surrogates								
2,4,6-Tribromophenol (surr)	33.8	*	43-140		%	1		06/08/16 23:33

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J flagging is activated

Results of **PQW-1**

Client Sample ID: **PQW-1**
Client Project ID: **APT Task 4**
Lab Sample ID: 1162930001
Lab Project ID: 1162930

Collection Date: 06/07/16 13:30
Received Date: 06/08/16 08:00
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
2-Fluorobiphenyl (surr)	45.7		44-119		%	1		06/08/16 23:33
2-Fluorophenol (surr)	31.6		19-119		%	1		06/08/16 23:33
Nitrobenzene-d5 (surr)	44.5		44-120		%	1		06/08/16 23:33
Phenol-d6 (surr)	31.4		10-115		%	1		06/08/16 23:33
Terphenyl-d14 (surr)	22.7	*	50-134		%	1		06/08/16 23:33

Batch Information

Analytical Batch: XMS9329
Analytical Method: SW8270D
Analyst: DSH
Analytical Date/Time: 06/08/16 23:33
Container ID: 1162930001-I

Prep Batch: XXX35468
Prep Method: SW3520C
Prep Date/Time: 06/08/16 12:14
Prep Initial Wt./Vol.: 990 mL
Prep Extract Vol: 1 mL

Print Date: 06/14/2016 2:42:40PM

J flagging is activated

Results of **PQW-1**

Client Sample ID: **PQW-1**
Client Project ID: **APT Task 4**
Lab Sample ID: 1162930001
Lab Project ID: 1162930

Collection Date: 06/07/16 13:30
Received Date: 06/08/16 08:00
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.0500	U	0.100	0.0310	mg/L	1		06/10/16 12:25
Surrogates								
4-Bromofluorobenzene (surr)	96.9		50-150		%	1		06/10/16 12:25

Batch Information

Analytical Batch: VFC13039
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 06/10/16 12:25
Container ID: 1162930001-A

Prep Batch: VXX28920
Prep Method: SW5030B
Prep Date/Time: 06/10/16 00:30
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 06/14/2016 2:42:40PM

J flagging is activated

Results of **PQW-1**

Client Sample ID: **PQW-1**
Client Project ID: **APT Task 4**
Lab Sample ID: 1162930001
Lab Project ID: 1162930

Collection Date: 06/07/16 13:30
Received Date: 06/08/16 08:00
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		06/10/16 00:24
1,1,1-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:24
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		06/10/16 00:24
1,1,2-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:24
1,1-Dichloroethane	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:24
1,1-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:24
1,1-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:24
1,2,3-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:24
1,2,3-Trichloropropane	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:24
1,2,4-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:24
1,2,4-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:24
1,2-Dibromo-3-chloropropane	5.00	U	10.0	3.10	ug/L	1		06/10/16 00:24
1,2-Dibromoethane	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:24
1,2-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:24
1,2-Dichloroethane	0.250	U	0.500	0.150	ug/L	1		06/10/16 00:24
1,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:24
1,3,5-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:24
1,3-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:24
1,3-Dichloropropane	0.250	U	0.500	0.150	ug/L	1		06/10/16 00:24
1,4-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1		06/10/16 00:24
2,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:24
2-Butanone (MEK)	5.00	U	10.0	3.10	ug/L	1		06/10/16 00:24
2-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:24
2-Hexanone	5.00	U	10.0	3.10	ug/L	1		06/10/16 00:24
4-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:24
4-Isopropyltoluene	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:24
4-Methyl-2-pentanone (MIBK)	5.00	U	10.0	3.10	ug/L	1		06/10/16 00:24
Benzene	0.730		0.400	0.120	ug/L	1		06/10/16 00:24
Bromobenzene	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:24
Bromochloromethane	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:24
Bromodichloromethane	0.250	U	0.500	0.150	ug/L	1		06/10/16 00:24
Bromoform	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:24
Bromomethane	5.00	U	10.0	3.10	ug/L	1		06/10/16 00:24
Carbon disulfide	5.00	U	10.0	3.10	ug/L	1		06/10/16 00:24
Carbon tetrachloride	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:24
Chlorobenzene	0.250	U	0.500	0.150	ug/L	1		06/10/16 00:24
Chloroethane	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:24

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Results of **PQW-1**

Client Sample ID: **PQW-1**
Client Project ID: **APT Task 4**
Lab Sample ID: 1162930001
Lab Project ID: 1162930

Collection Date: 06/07/16 13:30
Received Date: 06/08/16 08:00
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroform	0.500	U	1.00	0.300	ug/L	1		06/10/16 00:24
Chloromethane	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:24
cis-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:24
cis-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		06/10/16 00:24
Dibromochloromethane	0.250	U	0.500	0.150	ug/L	1		06/10/16 00:24
Dibromomethane	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:24
Dichlorodifluoromethane	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:24
Ethylbenzene	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:24
Freon-113	5.00	U	10.0	3.10	ug/L	1		06/10/16 00:24
Hexachlorobutadiene	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:24
Isopropylbenzene (Cumene)	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:24
Methylene chloride	2.50	U	5.00	1.00	ug/L	1		06/10/16 00:24
Methyl-t-butyl ether	5.00	U	10.0	3.10	ug/L	1		06/10/16 00:24
Naphthalene	5.00	U	10.0	3.10	ug/L	1		06/10/16 00:24
n-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:24
n-Propylbenzene	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:24
o-Xylene	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:24
P & M -Xylene	1.00	U	2.00	0.620	ug/L	1		06/10/16 00:24
sec-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:24
Styrene	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:24
tert-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:24
Tetrachloroethene	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:24
Toluene	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:24
trans-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:24
trans-1,3-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:24
Trichloroethene	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:24
Trichlorofluoromethane	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:24
Vinyl acetate	5.00	U	10.0	3.10	ug/L	1		06/10/16 00:24
Vinyl chloride	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:24
Xylenes (total)	1.50	U	3.00	1.00	ug/L	1		06/10/16 00:24
Surrogates								
1,2-Dichloroethane-D4 (surr)	100		81-118		%	1		06/10/16 00:24
4-Bromofluorobenzene (surr)	89.4		85-114		%	1		06/10/16 00:24
Toluene-d8 (surr)	102		89-112		%	1		06/10/16 00:24

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J flagging is activated

Results of **PQW-1**

Client Sample ID: **PQW-1**
Client Project ID: **APT Task 4**
Lab Sample ID: 1162930001
Lab Project ID: 1162930

Collection Date: 06/07/16 13:30
Received Date: 06/08/16 08:00
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS15856
Analytical Method: SW8260B
Analyst: NRB
Analytical Date/Time: 06/10/16 00:24
Container ID: 1162930001-C

Prep Batch: VXX28918
Prep Method: SW5030B
Prep Date/Time: 06/09/16 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 06/14/2016 2:42:40PM

J flagging is activated

Results of **PQW-2**

Client Sample ID: **PQW-2**
Client Project ID: **APT Task 4**
Lab Sample ID: 1162930002
Lab Project ID: 1162930

Collection Date: 06/07/16 13:35
Received Date: 06/08/16 08:00
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	0.283	U	0.566	0.170	mg/L	1		06/09/16 19:43
Surrogates								
5a Androstane (surr)	97		50-150		%	1		06/09/16 19:43

Batch Information

Analytical Batch: XFC12426
Analytical Method: AK102
Analyst: S.G
Analytical Date/Time: 06/09/16 19:43
Container ID: 1162930002-D

Prep Batch: XXX35480
Prep Method: SW3520C
Prep Date/Time: 06/09/16 10:57
Prep Initial Wt./Vol.: 265 mL
Prep Extract Vol: 1 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Residual Range Organics	0.236	U	0.472	0.142	mg/L	1		06/09/16 19:43
Surrogates								
n-Triacontane-d62 (surr)	111		50-150		%	1		06/09/16 19:43

Batch Information

Analytical Batch: XFC12426
Analytical Method: AK103
Analyst: S.G
Analytical Date/Time: 06/09/16 19:43
Container ID: 1162930002-D

Prep Batch: XXX35480
Prep Method: SW3520C
Prep Date/Time: 06/09/16 10:57
Prep Initial Wt./Vol.: 265 mL
Prep Extract Vol: 1 mL

Print Date: 06/14/2016 2:42:40PM

J flagging is activated

Results of **PQW-2**

Client Sample ID: **PQW-2**
Client Project ID: **APT Task 4**
Lab Sample ID: 1162930002
Lab Project ID: 1162930

Collection Date: 06/07/16 13:35
Received Date: 06/08/16 08:00
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,2,4-Trichlorobenzene	0.00530	U	0.0106	0.00330	mg/L	1		06/11/16 00:58
1,2-Dichlorobenzene	0.00530	U	0.0106	0.00330	mg/L	1		06/11/16 00:58
1,3-Dichlorobenzene	0.00530	U	0.0106	0.00330	mg/L	1		06/11/16 00:58
1,4-Dichlorobenzene	0.00530	U	0.0106	0.00330	mg/L	1		06/11/16 00:58
1-Chloronaphthalene	0.00530	U	0.0106	0.00330	mg/L	1		06/11/16 00:58
1-Methylnaphthalene	0.00530	U	0.0106	0.00330	mg/L	1		06/11/16 00:58
2,4,5-Trichlorophenol	0.00530	U	0.0106	0.00330	mg/L	1		06/11/16 00:58
2,4,6-Trichlorophenol	0.00530	U	0.0106	0.00330	mg/L	1		06/11/16 00:58
2,4-Dichlorophenol	0.00530	U	0.0106	0.00330	mg/L	1		06/11/16 00:58
2,4-Dimethylphenol	0.00530	U	0.0106	0.00330	mg/L	1		06/11/16 00:58
2,4-Dinitrophenol	0.0266	U	0.0532	0.0160	mg/L	1		06/11/16 00:58
2,4-Dinitrotoluene	0.00530	U	0.0106	0.00330	mg/L	1		06/11/16 00:58
2,6-Dichlorophenol	0.00530	U	0.0106	0.00330	mg/L	1		06/11/16 00:58
2,6-Dinitrotoluene	0.00530	U	0.0106	0.00330	mg/L	1		06/11/16 00:58
2-Chloronaphthalene	0.00530	U	0.0106	0.00330	mg/L	1		06/11/16 00:58
2-Chlorophenol	0.00530	U	0.0106	0.00330	mg/L	1		06/11/16 00:58
2-Methyl-4,6-dinitrophenol	0.0266	U	0.0532	0.0160	mg/L	1		06/11/16 00:58
2-Methylnaphthalene	0.00530	U	0.0106	0.00330	mg/L	1		06/11/16 00:58
2-Methylphenol (o-Cresol)	0.00530	U	0.0106	0.00330	mg/L	1		06/11/16 00:58
2-Nitroaniline	0.00530	U	0.0106	0.00330	mg/L	1		06/11/16 00:58
2-Nitrophenol	0.00530	U	0.0106	0.00330	mg/L	1		06/11/16 00:58
3&4-Methylphenol (p&m-Cresol)	0.0107	U	0.0213	0.00660	mg/L	1		06/11/16 00:58
3,3-Dichlorobenzidine	0.00530	U	0.0106	0.00330	mg/L	1		06/11/16 00:58
3-Nitroaniline	0.00530	U	0.0106	0.00330	mg/L	1		06/11/16 00:58
4-Bromophenyl-phenylether	0.00530	U	0.0106	0.00330	mg/L	1		06/11/16 00:58
4-Chloro-3-methylphenol	0.00530	U	0.0106	0.00330	mg/L	1		06/11/16 00:58
4-Chloroaniline	0.00530	U	0.0106	0.00330	mg/L	1		06/11/16 00:58
4-Chlorophenyl-phenylether	0.00530	U	0.0106	0.00330	mg/L	1		06/11/16 00:58
4-Nitroaniline	0.00530	U	0.0106	0.00330	mg/L	1		06/11/16 00:58
4-Nitrophenol	0.0266	U	0.0532	0.0160	mg/L	1		06/11/16 00:58
Acenaphthene	0.00530	U	0.0106	0.00330	mg/L	1		06/11/16 00:58
Acenaphthylene	0.00530	U	0.0106	0.00330	mg/L	1		06/11/16 00:58
Aniline	0.0266	U	0.0532	0.0160	mg/L	1		06/11/16 00:58
Anthracene	0.00530	U	0.0106	0.00330	mg/L	1		06/11/16 00:58
Azobenzene	0.00530	U	0.0106	0.00330	mg/L	1		06/11/16 00:58
Benzo(a)Anthracene	0.00530	U	0.0106	0.00330	mg/L	1		06/11/16 00:58
Benzo[a]pyrene	0.00530	U	0.0106	0.00330	mg/L	1		06/11/16 00:58

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J flagging is activated

Results of **PQW-2**

Client Sample ID: **PQW-2**
Client Project ID: **APT Task 4**
Lab Sample ID: 1162930002
Lab Project ID: 1162930

Collection Date: 06/07/16 13:35
Received Date: 06/08/16 08:00
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Benzo[b]Fluoranthene	0.00530	U	0.0106	0.00330	mg/L	1		06/11/16 00:58
Benzo[g,h,i]perylene	0.00530	U	0.0106	0.00330	mg/L	1		06/11/16 00:58
Benzo[k]fluoranthene	0.00530	U	0.0106	0.00330	mg/L	1		06/11/16 00:58
Benzoic acid	0.0266	U	0.0532	0.0160	mg/L	1		06/11/16 00:58
Benzyl alcohol	0.00530	U	0.0106	0.00330	mg/L	1		06/11/16 00:58
Bis(2chloro1methylethyl)Ether	0.00530	U	0.0106	0.00330	mg/L	1		06/11/16 00:58
Bis(2-Chloroethoxy)methane	0.00530	U	0.0106	0.00330	mg/L	1		06/11/16 00:58
Bis(2-Chloroethyl)ether	0.00530	U	0.0106	0.00330	mg/L	1		06/11/16 00:58
bis(2-Ethylhexyl)phthalate	0.00530	U	0.0106	0.00330	mg/L	1		06/11/16 00:58
Butylbenzylphthalate	0.00530	U	0.0106	0.00330	mg/L	1		06/11/16 00:58
Carbazole	0.00530	U	0.0106	0.00330	mg/L	1		06/11/16 00:58
Chrysene	0.00530	U	0.0106	0.00330	mg/L	1		06/11/16 00:58
Dibenzo[a,h]anthracene	0.00530	U	0.0106	0.00330	mg/L	1		06/11/16 00:58
Dibenzofuran	0.00530	U	0.0106	0.00330	mg/L	1		06/11/16 00:58
Diethylphthalate	0.00530	U	0.0106	0.00330	mg/L	1		06/11/16 00:58
Dimethylphthalate	0.00530	U	0.0106	0.00330	mg/L	1		06/11/16 00:58
Di-n-butylphthalate	0.00530	U	0.0106	0.00330	mg/L	1		06/11/16 00:58
di-n-Octylphthalate	0.00530	U	0.0106	0.00330	mg/L	1		06/11/16 00:58
Fluoranthene	0.00530	U	0.0106	0.00330	mg/L	1		06/11/16 00:58
Fluorene	0.00530	U	0.0106	0.00330	mg/L	1		06/11/16 00:58
Hexachlorobenzene	0.00530	U	0.0106	0.00330	mg/L	1		06/11/16 00:58
Hexachlorobutadiene	0.00530	U	0.0106	0.00330	mg/L	1		06/11/16 00:58
Hexachlorocyclopentadiene	0.0159	U	0.0319	0.0100	mg/L	1		06/11/16 00:58
Hexachloroethane	0.00530	U	0.0106	0.00330	mg/L	1		06/11/16 00:58
Indeno[1,2,3-c,d] pyrene	0.00530	U	0.0106	0.00330	mg/L	1		06/11/16 00:58
Isophorone	0.00530	U	0.0106	0.00330	mg/L	1		06/11/16 00:58
Naphthalene	0.00530	U	0.0106	0.00330	mg/L	1		06/11/16 00:58
Nitrobenzene	0.00530	U	0.0106	0.00330	mg/L	1		06/11/16 00:58
N-Nitrosodimethylamine	0.00530	U	0.0106	0.00330	mg/L	1		06/11/16 00:58
N-Nitroso-di-n-propylamine	0.00530	U	0.0106	0.00330	mg/L	1		06/11/16 00:58
N-Nitrosodiphenylamine	0.00530	U	0.0106	0.00330	mg/L	1		06/11/16 00:58
Pentachlorophenol	0.0266	U	0.0532	0.0160	mg/L	1		06/11/16 00:58
Phenanthrene	0.00530	U	0.0106	0.00330	mg/L	1		06/11/16 00:58
Phenol	0.00530	U	0.0106	0.00330	mg/L	1		06/11/16 00:58
Pyrene	0.00530	U	0.0106	0.00330	mg/L	1		06/11/16 00:58
Surrogates								
2,4,6-Tribromophenol (surr)	59		43-140		%	1		06/11/16 00:58

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J flagging is activated

Results of **PQW-2**

Client Sample ID: **PQW-2**
Client Project ID: **APT Task 4**
Lab Sample ID: 1162930002
Lab Project ID: 1162930

Collection Date: 06/07/16 13:35
Received Date: 06/08/16 08:00
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
2-Fluorobiphenyl (surr)	50.2		44-119		%	1		06/11/16 00:58
2-Fluorophenol (surr)	36.9		19-119		%	1		06/11/16 00:58
Nitrobenzene-d5 (surr)	43.5	*	44-120		%	1		06/11/16 00:58
Phenol-d6 (surr)	36.8		10-115		%	1		06/11/16 00:58
Terphenyl-d14 (surr)	103		50-134		%	1		06/11/16 00:58

Batch Information

Analytical Batch: XMS9335
Analytical Method: SW8270D
Analyst: DSH
Analytical Date/Time: 06/11/16 00:58
Container ID: 1162930002-J

Prep Batch: XXX35474
Prep Method: SW3520C
Prep Date/Time: 06/10/16 08:50
Prep Initial Wt./Vol.: 940 mL
Prep Extract Vol: 1 mL

Print Date: 06/14/2016 2:42:40PM

J flagging is activated

Results of **PQW-2**

Client Sample ID: **PQW-2**
Client Project ID: **APT Task 4**
Lab Sample ID: 1162930002
Lab Project ID: 1162930

Collection Date: 06/07/16 13:35
Received Date: 06/08/16 08:00
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.0500	U	0.100	0.0310	mg/L	1		06/10/16 12:44
Surrogates								
4-Bromofluorobenzene (surr)	90.3		50-150		%	1		06/10/16 12:44

Batch Information

Analytical Batch: VFC13039
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 06/10/16 12:44
Container ID: 1162930002-A

Prep Batch: VXX28920
Prep Method: SW5030B
Prep Date/Time: 06/10/16 00:30
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
t 907.562.2343 **f** 907.561.5301 www.us.sgs.com

Results of **PQW-2**

Client Sample ID: **PQW-2**
Client Project ID: **APT Task 4**
Lab Sample ID: 1162930002
Lab Project ID: 1162930

Collection Date: 06/07/16 13:35
Received Date: 06/08/16 08:00
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		06/10/16 00:41
1,1,1-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:41
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		06/10/16 00:41
1,1,2-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:41
1,1-Dichloroethane	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:41
1,1-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:41
1,1-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:41
1,2,3-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:41
1,2,3-Trichloropropane	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:41
1,2,4-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:41
1,2,4-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:41
1,2-Dibromo-3-chloropropane	5.00	U	10.0	3.10	ug/L	1		06/10/16 00:41
1,2-Dibromoethane	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:41
1,2-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:41
1,2-Dichloroethane	0.250	U	0.500	0.150	ug/L	1		06/10/16 00:41
1,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:41
1,3,5-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:41
1,3-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:41
1,3-Dichloropropane	0.250	U	0.500	0.150	ug/L	1		06/10/16 00:41
1,4-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1		06/10/16 00:41
2,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:41
2-Butanone (MEK)	5.00	U	10.0	3.10	ug/L	1		06/10/16 00:41
2-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:41
2-Hexanone	5.00	U	10.0	3.10	ug/L	1		06/10/16 00:41
4-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:41
4-Isopropyltoluene	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:41
4-Methyl-2-pentanone (MIBK)	5.00	U	10.0	3.10	ug/L	1		06/10/16 00:41
Benzene	0.980		0.400	0.120	ug/L	1		06/10/16 00:41
Bromobenzene	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:41
Bromochloromethane	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:41
Bromodichloromethane	0.250	U	0.500	0.150	ug/L	1		06/10/16 00:41
Bromoform	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:41
Bromomethane	5.00	U	10.0	3.10	ug/L	1		06/10/16 00:41
Carbon disulfide	5.00	U	10.0	3.10	ug/L	1		06/10/16 00:41
Carbon tetrachloride	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:41
Chlorobenzene	0.250	U	0.500	0.150	ug/L	1		06/10/16 00:41
Chloroethane	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:41

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J flagging is activated

Results of **PQW-2**

Client Sample ID: **PQW-2**
Client Project ID: **APT Task 4**
Lab Sample ID: 1162930002
Lab Project ID: 1162930

Collection Date: 06/07/16 13:35
Received Date: 06/08/16 08:00
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroform	0.500	U	1.00	0.300	ug/L	1		06/10/16 00:41
Chloromethane	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:41
cis-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:41
cis-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		06/10/16 00:41
Dibromochloromethane	0.250	U	0.500	0.150	ug/L	1		06/10/16 00:41
Dibromomethane	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:41
Dichlorodifluoromethane	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:41
Ethylbenzene	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:41
Freon-113	5.00	U	10.0	3.10	ug/L	1		06/10/16 00:41
Hexachlorobutadiene	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:41
Isopropylbenzene (Cumene)	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:41
Methylene chloride	2.50	U	5.00	1.00	ug/L	1		06/10/16 00:41
Methyl-t-butyl ether	5.00	U	10.0	3.10	ug/L	1		06/10/16 00:41
Naphthalene	5.00	U	10.0	3.10	ug/L	1		06/10/16 00:41
n-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:41
n-Propylbenzene	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:41
o-Xylene	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:41
P & M -Xylene	1.00	U	2.00	0.620	ug/L	1		06/10/16 00:41
sec-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:41
Styrene	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:41
tert-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:41
Tetrachloroethene	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:41
Toluene	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:41
trans-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:41
trans-1,3-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:41
Trichloroethene	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:41
Trichlorofluoromethane	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:41
Vinyl acetate	5.00	U	10.0	3.10	ug/L	1		06/10/16 00:41
Vinyl chloride	0.500	U	1.00	0.310	ug/L	1		06/10/16 00:41
Xylenes (total)	1.50	U	3.00	1.00	ug/L	1		06/10/16 00:41
Surrogates								
1,2-Dichloroethane-D4 (surr)	104		81-118		%	1		06/10/16 00:41
4-Bromofluorobenzene (surr)	89.5		85-114		%	1		06/10/16 00:41
Toluene-d8 (surr)	101		89-112		%	1		06/10/16 00:41

Print Date: 06/14/2016 2:42:40PM

J flagging is activated

Results of **PQW-2**

Client Sample ID: **PQW-2**
Client Project ID: **APT Task 4**
Lab Sample ID: 1162930002
Lab Project ID: 1162930

Collection Date: 06/07/16 13:35
Received Date: 06/08/16 08:00
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS15856
Analytical Method: SW8260B
Analyst: NRB
Analytical Date/Time: 06/10/16 00:41
Container ID: 1162930002-C

Prep Batch: VXX28918
Prep Method: SW5030B
Prep Date/Time: 06/09/16 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

J flagging is activated

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Results of **Trip Blank**

Client Sample ID: **Trip Blank**
Client Project ID: **APT Task 4**
Lab Sample ID: 1162930003
Lab Project ID: 1162930

Collection Date: 06/07/16 08:00
Received Date: 06/08/16 08:00
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.0500	U	0.100	0.0310	mg/L	1		06/10/16 12:05
Surrogates								
4-Bromofluorobenzene (surr)	96.9		50-150		%	1		06/10/16 12:05

Batch Information

Analytical Batch: VFC13039
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 06/10/16 12:05
Container ID: 1162930003-A

Prep Batch: VXX28920
Prep Method: SW5030B
Prep Date/Time: 06/10/16 00:30
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 06/14/2016 2:42:40PM

J flagging is activated

Results of **Trip Blank**

Client Sample ID: **Trip Blank**
Client Project ID: **APT Task 4**
Lab Sample ID: 1162930003
Lab Project ID: 1162930

Collection Date: 06/07/16 08:00
Received Date: 06/08/16 08:00
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		06/09/16 19:06
1,1,1-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		06/09/16 19:06
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		06/09/16 19:06
1,1,2-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		06/09/16 19:06
1,1-Dichloroethane	0.500	U	1.00	0.310	ug/L	1		06/09/16 19:06
1,1-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		06/09/16 19:06
1,1-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		06/09/16 19:06
1,2,3-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		06/09/16 19:06
1,2,3-Trichloropropane	0.500	U	1.00	0.310	ug/L	1		06/09/16 19:06
1,2,4-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		06/09/16 19:06
1,2,4-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		06/09/16 19:06
1,2-Dibromo-3-chloropropane	5.00	U	10.0	3.10	ug/L	1		06/09/16 19:06
1,2-Dibromoethane	0.500	U	1.00	0.310	ug/L	1		06/09/16 19:06
1,2-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		06/09/16 19:06
1,2-Dichloroethane	0.250	U	0.500	0.150	ug/L	1		06/09/16 19:06
1,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		06/09/16 19:06
1,3,5-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		06/09/16 19:06
1,3-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		06/09/16 19:06
1,3-Dichloropropane	0.250	U	0.500	0.150	ug/L	1		06/09/16 19:06
1,4-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1		06/09/16 19:06
2,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		06/09/16 19:06
2-Butanone (MEK)	5.00	U	10.0	3.10	ug/L	1		06/09/16 19:06
2-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		06/09/16 19:06
2-Hexanone	5.00	U	10.0	3.10	ug/L	1		06/09/16 19:06
4-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		06/09/16 19:06
4-Isopropyltoluene	0.500	U	1.00	0.310	ug/L	1		06/09/16 19:06
4-Methyl-2-pentanone (MIBK)	5.00	U	10.0	3.10	ug/L	1		06/09/16 19:06
Benzene	0.200	U	0.400	0.120	ug/L	1		06/09/16 19:06
Bromobenzene	0.500	U	1.00	0.310	ug/L	1		06/09/16 19:06
Bromochloromethane	0.500	U	1.00	0.310	ug/L	1		06/09/16 19:06
Bromodichloromethane	0.250	U	0.500	0.150	ug/L	1		06/09/16 19:06
Bromoform	0.500	U	1.00	0.310	ug/L	1		06/09/16 19:06
Bromomethane	5.00	U	10.0	3.10	ug/L	1		06/09/16 19:06
Carbon disulfide	5.00	U	10.0	3.10	ug/L	1		06/09/16 19:06
Carbon tetrachloride	0.500	U	1.00	0.310	ug/L	1		06/09/16 19:06
Chlorobenzene	0.250	U	0.500	0.150	ug/L	1		06/09/16 19:06
Chloroethane	0.500	U	1.00	0.310	ug/L	1		06/09/16 19:06

Print Date: 06/14/2016 2:42:40PM

J flagging is activated

Results of **Trip Blank**

Client Sample ID: **Trip Blank**
Client Project ID: **APT Task 4**
Lab Sample ID: 1162930003
Lab Project ID: 1162930

Collection Date: 06/07/16 08:00
Received Date: 06/08/16 08:00
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroform	0.500	U	1.00	0.300	ug/L	1		06/09/16 19:06
Chloromethane	0.500	U	1.00	0.310	ug/L	1		06/09/16 19:06
cis-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		06/09/16 19:06
cis-1,3-Dichloropropene	0.250	U	0.500	0.150	ug/L	1		06/09/16 19:06
Dibromochloromethane	0.250	U	0.500	0.150	ug/L	1		06/09/16 19:06
Dibromomethane	0.500	U	1.00	0.310	ug/L	1		06/09/16 19:06
Dichlorodifluoromethane	0.500	U	1.00	0.310	ug/L	1		06/09/16 19:06
Ethylbenzene	0.500	U	1.00	0.310	ug/L	1		06/09/16 19:06
Freon-113	5.00	U	10.0	3.10	ug/L	1		06/09/16 19:06
Hexachlorobutadiene	0.500	U	1.00	0.310	ug/L	1		06/09/16 19:06
Isopropylbenzene (Cumene)	0.500	U	1.00	0.310	ug/L	1		06/09/16 19:06
Methylene chloride	2.50	U	5.00	1.00	ug/L	1		06/09/16 19:06
Methyl-t-butyl ether	5.00	U	10.0	3.10	ug/L	1		06/09/16 19:06
Naphthalene	5.00	U	10.0	3.10	ug/L	1		06/09/16 19:06
n-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		06/09/16 19:06
n-Propylbenzene	0.500	U	1.00	0.310	ug/L	1		06/09/16 19:06
o-Xylene	0.500	U	1.00	0.310	ug/L	1		06/09/16 19:06
P & M -Xylene	1.00	U	2.00	0.620	ug/L	1		06/09/16 19:06
sec-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		06/09/16 19:06
Styrene	0.500	U	1.00	0.310	ug/L	1		06/09/16 19:06
tert-Butylbenzene	0.500	U	1.00	0.310	ug/L	1		06/09/16 19:06
Tetrachloroethene	0.500	U	1.00	0.310	ug/L	1		06/09/16 19:06
Toluene	0.500	U	1.00	0.310	ug/L	1		06/09/16 19:06
trans-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		06/09/16 19:06
trans-1,3-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		06/09/16 19:06
Trichloroethene	0.500	U	1.00	0.310	ug/L	1		06/09/16 19:06
Trichlorofluoromethane	0.500	U	1.00	0.310	ug/L	1		06/09/16 19:06
Vinyl acetate	5.00	U	10.0	3.10	ug/L	1		06/09/16 19:06
Vinyl chloride	0.500	U	1.00	0.310	ug/L	1		06/09/16 19:06
Xylenes (total)	1.50	U	3.00	1.00	ug/L	1		06/09/16 19:06
Surrogates								
1,2-Dichloroethane-D4 (surr)	103		81-118		%	1		06/09/16 19:06
4-Bromofluorobenzene (surr)	90.5		85-114		%	1		06/09/16 19:06
Toluene-d8 (surr)	100		89-112		%	1		06/09/16 19:06

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J flagging is activated

Results of **Trip Blank**

Client Sample ID: **Trip Blank**
Client Project ID: **APT Task 4**
Lab Sample ID: 1162930003
Lab Project ID: 1162930

Collection Date: 06/07/16 08:00
Received Date: 06/08/16 08:00
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS15856
Analytical Method: SW8260B
Analyst: NRB
Analytical Date/Time: 06/09/16 19:06
Container ID: 1162930003-B

Prep Batch: VXX28918
Prep Method: SW5030B
Prep Date/Time: 06/09/16 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 06/14/2016 2:42:40PM

J flagging is activated

Method Blank

Blank ID: MB for HBN 1735708 [VXX/28918]
Blank Lab ID: 1329263

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1162930001, 1162930002, 1162930003

Results by **SW8260B**

Parameter	Results	LOQ/CL	DL	Units
1,1,1,2-Tetrachloroethane	0.250U	0.500	0.150	ug/L
1,1,1-Trichloroethane	0.500U	1.00	0.310	ug/L
1,1,2,2-Tetrachloroethane	0.250U	0.500	0.150	ug/L
1,1,2-Trichloroethane	0.500U	1.00	0.310	ug/L
1,1-Dichloroethane	0.500U	1.00	0.310	ug/L
1,1-Dichloroethene	0.500U	1.00	0.310	ug/L
1,1-Dichloropropene	0.500U	1.00	0.310	ug/L
1,2,3-Trichlorobenzene	0.500U	1.00	0.310	ug/L
1,2,3-Trichloropropane	0.500U	1.00	0.310	ug/L
1,2,4-Trichlorobenzene	0.500U	1.00	0.310	ug/L
1,2,4-Trimethylbenzene	0.500U	1.00	0.310	ug/L
1,2-Dibromo-3-chloropropane	5.00U	10.0	3.10	ug/L
1,2-Dibromoethane	0.500U	1.00	0.310	ug/L
1,2-Dichlorobenzene	0.500U	1.00	0.310	ug/L
1,2-Dichloroethane	0.250U	0.500	0.150	ug/L
1,2-Dichloropropane	0.500U	1.00	0.310	ug/L
1,3,5-Trimethylbenzene	0.500U	1.00	0.310	ug/L
1,3-Dichlorobenzene	0.500U	1.00	0.310	ug/L
1,3-Dichloropropane	0.250U	0.500	0.150	ug/L
1,4-Dichlorobenzene	0.250U	0.500	0.150	ug/L
2,2-Dichloropropane	0.500U	1.00	0.310	ug/L
2-Butanone (MEK)	5.00U	10.0	3.10	ug/L
2-Chlorotoluene	0.500U	1.00	0.310	ug/L
2-Hexanone	5.00U	10.0	3.10	ug/L
4-Chlorotoluene	0.500U	1.00	0.310	ug/L
4-Isopropyltoluene	0.500U	1.00	0.310	ug/L
4-Methyl-2-pentanone (MIBK)	5.00U	10.0	3.10	ug/L
Benzene	0.200U	0.400	0.120	ug/L
Bromobenzene	0.500U	1.00	0.310	ug/L
Bromochloromethane	0.500U	1.00	0.310	ug/L
Bromodichloromethane	0.250U	0.500	0.150	ug/L
Bromoform	0.500U	1.00	0.310	ug/L
Bromomethane	5.00U	10.0	3.10	ug/L
Carbon disulfide	5.00U	10.0	3.10	ug/L
Carbon tetrachloride	0.500U	1.00	0.310	ug/L
Chlorobenzene	0.250U	0.500	0.150	ug/L
Chloroethane	0.500U	1.00	0.310	ug/L
Chloroform	0.500U	1.00	0.300	ug/L

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Method Blank

Blank ID: MB for HBN 1735708 [VXX/28918]
Blank Lab ID: 1329263

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1162930001, 1162930002, 1162930003

Results by **SW8260B**

Parameter	Results	LOQ/CL	DL	Units
Chloromethane	0.500U	1.00	0.310	ug/L
cis-1,2-Dichloroethene	0.500U	1.00	0.310	ug/L
cis-1,3-Dichloropropene	0.250U	0.500	0.150	ug/L
Dibromochloromethane	0.250U	0.500	0.150	ug/L
Dibromomethane	0.500U	1.00	0.310	ug/L
Dichlorodifluoromethane	0.500U	1.00	0.310	ug/L
Ethylbenzene	0.500U	1.00	0.310	ug/L
Freon-113	5.00U	10.0	3.10	ug/L
Hexachlorobutadiene	0.500U	1.00	0.310	ug/L
Isopropylbenzene (Cumene)	0.500U	1.00	0.310	ug/L
Methylene chloride	2.50U	5.00	1.00	ug/L
Methyl-t-butyl ether	5.00U	10.0	3.10	ug/L
Naphthalene	5.00U	10.0	3.10	ug/L
n-Butylbenzene	0.500U	1.00	0.310	ug/L
n-Propylbenzene	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
sec-Butylbenzene	0.500U	1.00	0.310	ug/L
Styrene	0.500U	1.00	0.310	ug/L
tert-Butylbenzene	0.500U	1.00	0.310	ug/L
Tetrachloroethene	0.500U	1.00	0.310	ug/L
Toluene	0.500U	1.00	0.310	ug/L
trans-1,2-Dichloroethene	0.500U	1.00	0.310	ug/L
trans-1,3-Dichloropropene	0.500U	1.00	0.310	ug/L
Trichloroethene	0.500U	1.00	0.310	ug/L
Trichlorofluoromethane	0.500U	1.00	0.310	ug/L
Vinyl acetate	5.00U	10.0	3.10	ug/L
Vinyl chloride	0.500U	1.00	0.310	ug/L
Xylenes (total)	1.50U	3.00	1.00	ug/L
Surrogates				
1,2-Dichloroethane-D4 (surr)	99.2	81-118		%
4-Bromofluorobenzene (surr)	91.8	85-114		%
Toluene-d8 (surr)	102	89-112		%

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Method Blank

Blank ID: MB for HBN 1735708 [VXX/28918]
Blank Lab ID: 1329263

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1162930001, 1162930002, 1162930003

Results by **SW8260B**

Parameter	Results	LOQ/CL	DL	Units

Batch Information

Analytical Batch: VMS15856
Analytical Method: SW8260B
Instrument: VPA 780/5975 GC/MS
Analyst: NRB
Analytical Date/Time: 6/9/2016 2:17:00PM

Prep Batch: VXX28918
Prep Method: SW5030B
Prep Date/Time: 6/9/2016 6:00:00AM
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 06/14/2016 2:42:42PM

Leaching Blank

Blank ID: LB for HBN 1735517 [TCLP/8341]
Blank Lab ID: 1328539

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1162930001, 1162930002, 1162930003

Results by **SW8260B**

Parameter	Results	LOQ/CL	DL	Units
1,1-Dichloroethene	25.0U	50.0	15.5	ug/L
1,2-Dichloroethane	12.5U	25.0	7.50	ug/L
1,4-Dichlorobenzene	12.5U	25.0	7.50	ug/L
2-Butanone (MEK)	250U	500	155	ug/L
Benzene	10.0U	20.0	6.00	ug/L
Carbon tetrachloride	25.0U	50.0	15.5	ug/L
Chlorobenzene	12.5U	25.0	7.50	ug/L
Chloroform	25.0U	50.0	15.0	ug/L
Hexachlorobutadiene	25.0U	50.0	15.5	ug/L
Tetrachloroethene	25.0U	50.0	15.5	ug/L
Trichloroethene	25.0U	50.0	15.5	ug/L
Vinyl chloride	25.0U	50.0	15.5	ug/L
Surrogates				
1,2-Dichloroethane-D4 (surr)	101	81-118		%
4-Bromofluorobenzene (surr)	92.5	85-114		%
Toluene-d8 (surr)	101	89-112		%

Batch Information

Analytical Batch: VMS15856
Analytical Method: SW8260B
Instrument: VPA 780/5975 GC/MS
Analyst: NRB
Analytical Date/Time: 6/9/2016 9:02:00PM

Prep Batch: VXX28918
Prep Method: SW5030B
Prep Date/Time: 6/9/2016 6:00:00AM
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

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t 907.562.2343 **f** 907.561.5301 www.us.sgs.com

Blank Spike Summary

Blank Spike ID: LCS for HBN 1162930 [VXX28918]
Blank Spike Lab ID: 1329264
Date Analyzed: 06/09/2016 14:39

Spike Duplicate ID: LCSD for HBN 1162930 [VXX28918]
Spike Duplicate Lab ID: 1329265
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1162930001, 1162930002, 1162930003

Results by **SW8260B**

	Blank Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
1,1,1,2-Tetrachloroethane	30	29.6	99	30	33.0	110	(78-124)	11.00	(< 20)
1,1,1-Trichloroethane	30	29.8	99	30	31.6	105	(74-131)	5.60	(< 20)
1,1,2,2-Tetrachloroethane	30	26.4	88	30	27.1	90	(71-121)	2.70	(< 20)
1,1,2-Trichloroethane	30	29.4	98	30	30.5	102	(80-119)	3.90	(< 20)
1,1-Dichloroethane	30	27.2	91	30	28.7	96	(77-125)	5.20	(< 20)
1,1-Dichloroethene	30	29.0	97	30	31.1	104	(71-131)	6.80	(< 20)
1,1-Dichloropropene	30	29.9	100	30	32.5	108	(79-125)	8.10	(< 20)
1,2,3-Trichlorobenzene	30	34.4	115	30	35.6	119	(69-129)	3.50	(< 20)
1,2,3-Trichloropropane	30	27.5	92	30	28.2	94	(73-122)	2.50	(< 20)
1,2,4-Trichlorobenzene	30	33.9	113	30	35.1	117	(69-130)	3.60	(< 20)
1,2,4-Trimethylbenzene	30	30.4	101	30	31.8	106	(79-124)	4.70	(< 20)
1,2-Dibromo-3-chloropropane	30	29.1	97	30	28.2	94	(62-128)	3.00	(< 20)
1,2-Dibromoethane	30	31.4	105	30	32.4	108	(77-121)	3.00	(< 20)
1,2-Dichlorobenzene	30	29.7	99	30	30.7	102	(80-119)	3.00	(< 20)
1,2-Dichloroethane	30	26.9	90	30	27.4	91	(73-128)	1.90	(< 20)
1,2-Dichloropropane	30	29.0	97	30	30.5	102	(78-122)	5.00	(< 20)
1,3,5-Trimethylbenzene	30	29.6	99	30	31.1	104	(75-124)	5.00	(< 20)
1,3-Dichlorobenzene	30	29.7	99	30	30.9	103	(80-119)	4.00	(< 20)
1,3-Dichloropropane	30	29.3	98	30	30.6	102	(80-119)	4.10	(< 20)
1,4-Dichlorobenzene	30	30.8	103	30	31.6	105	(79-118)	2.80	(< 20)
2,2-Dichloropropane	30	32.1	107	30	34.0	113	(60-139)	5.70	(< 20)
2-Butanone (MEK)	90	87.3	97	90	87.0	97	(56-143)	0.32	(< 20)
2-Chlorotoluene	30	27.6	92	30	28.6	95	(79-122)	3.40	(< 20)
2-Hexanone	90	87.3	97	90	86.9	97	(57-139)	0.45	(< 20)
4-Chlorotoluene	30	28.5	95	30	29.4	98	(78-122)	3.20	(< 20)
4-Isopropyltoluene	30	28.3	94	30	29.7	99	(77-127)	5.00	(< 20)
4-Methyl-2-pentanone (MIBK)	90	91.3	101	90	94.2	105	(67-130)	3.20	(< 20)
Benzene	30	29.8	100	30	31.5	105	(79-120)	5.40	(< 20)
Bromobenzene	30	30.2	101	30	31.1	104	(80-120)	2.90	(< 20)
Bromochloromethane	30	32.6	109	30	33.0	110	(78-123)	1.30	(< 20)
Bromodichloromethane	30	30.4	101	30	31.1	104	(79-125)	2.30	(< 20)
Bromoform	30	33.5	112	30	35.5	118	(66-130)	5.80	(< 20)
Bromomethane	30	24.1	80	30	27.4	91	(53-141)	12.90	(< 20)
Carbon disulfide	45	43.8	97	45	46.9	104	(64-133)	6.90	(< 20)

Print Date: 06/14/2016 2:42:43PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1162930 [VXX28918]
Blank Spike Lab ID: 1329264
Date Analyzed: 06/09/2016 14:39

Spike Duplicate ID: LCSD for HBN 1162930 [VXX28918]
Spike Duplicate Lab ID: 1329265
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1162930001, 1162930002, 1162930003

Results by **SW8260B**

	Blank Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Carbon tetrachloride	30	31.1	104	30	33.4	111	(72-136)	7.00	(< 20)
Chlorobenzene	30	29.4	98	30	31.8	106	(82-118)	7.90	(< 20)
Chloroethane	30	25.0	83	30	25.9	86	(60-138)	3.50	(< 20)
Chloroform	30	27.4	91	30	28.4	95	(79-124)	3.60	(< 20)
Chloromethane	30	28.7	96	30	33.5	112	(50-139)	15.30	(< 20)
cis-1,2-Dichloroethene	30	30.0	100	30	31.0	103	(78-123)	3.20	(< 20)
cis-1,3-Dichloropropene	30	32.8	109	30	34.2	114	(75-124)	4.20	(< 20)
Dibromochloromethane	30	31.8	106	30	33.0	110	(74-126)	3.60	(< 20)
Dibromomethane	30	30.1	100	30	30.6	102	(79-123)	1.40	(< 20)
Dichlorodifluoromethane	30	27.0	90	30	29.1	97	(32-152)	7.50	(< 20)
Ethylbenzene	30	31.6	105	30	32.8	109	(79-121)	3.80	(< 20)
Freon-113	45	48.3	107	45	51.5	115	(70-136)	6.50	(< 20)
Hexachlorobutadiene	30	31.6	105	30	33.1	110	(66-134)	4.70	(< 20)
Isopropylbenzene (Cumene)	30	33.1	110	30	34.2	114	(72-131)	3.50	(< 20)
Methylene chloride	30	29.4	98	30	29.6	99	(74-124)	0.92	(< 20)
Methyl-t-butyl ether	45	48.5	108	45	50.0	111	(71-124)	3.10	(< 20)
Naphthalene	30	30.0	100	30	30.7	102	(61-128)	2.50	(< 20)
n-Butylbenzene	30	27.2	91	30	28.9	96	(75-128)	6.20	(< 20)
n-Propylbenzene	30	27.7	92	30	29.3	98	(76-126)	5.50	(< 20)
o-Xylene	30	32.1	107	30	33.8	113	(78-122)	5.00	(< 20)
P & M -Xylene	60	64.9	108	60	67.0	112	(80-121)	3.30	(< 20)
sec-Butylbenzene	30	29.8	99	30	31.5	105	(77-126)	5.40	(< 20)
Styrene	30	30.4	101	30	31.1	104	(78-123)	2.60	(< 20)
tert-Butylbenzene	30	30.6	102	30	31.7	106	(78-124)	3.80	(< 20)
Tetrachloroethene	30	29.7	99	30	33.9	113	(74-129)	13.20	(< 20)
Toluene	30	26.5	88	30	29.7	99	(80-121)	11.50	(< 20)
trans-1,2-Dichloroethene	30	29.4	98	30	31.1	104	(75-124)	5.50	(< 20)
trans-1,3-Dichloropropene	30	31.1	104	30	32.8	109	(73-127)	5.40	(< 20)
Trichloroethene	30	29.9	100	30	32.0	107	(79-123)	6.80	(< 20)
Trichlorofluoromethane	30	27.5	92	30	29.6	99	(65-141)	7.20	(< 20)
Vinyl acetate	30	32.8	109	30	33.6	112	(54-146)	2.50	(< 20)
Vinyl chloride	30	26.8	89	30	29.3	98	(58-137)	8.90	(< 20)
Xylenes (total)	90	97.0	108	90	101	112	(79-121)	3.90	(< 20)

Print Date: 06/14/2016 2:42:43PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1162930 [VXX28918]
Blank Spike Lab ID: 1329264
Date Analyzed: 06/09/2016 14:39

Spike Duplicate ID: LCSD for HBN 1162930 [VXX28918]
Spike Duplicate Lab ID: 1329265
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1162930001, 1162930002, 1162930003

Results by **SW8260B**

	Blank Spike (%)			Spike Duplicate (%)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Surrogates									
1,2-Dichloroethane-D4 (surr)	30	94.7	95	30	93.3	93	(81-118)	1.50	
4-Bromofluorobenzene (surr)	30	94.2	94	30	91.7	92	(85-114)	2.80	
Toluene-d8 (surr)	30	94.2	94	30	101	101	(89-112)	7.00	

Batch Information

Analytical Batch: **VMS15856**
Analytical Method: **SW8260B**
Instrument: **VPA 780/5975 GC/MS**
Analyst: **NRB**

Prep Batch: **VXX28918**
Prep Method: **SW5030B**
Prep Date/Time: **06/09/2016 06:00**
Spike Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL
Dupe Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL

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200 West Potter Drive Anchorage, AK 95518
t 907.562.2343 f 907.561.5301 www.us.sgs.com

Method Blank

Blank ID: MB for HBN 1735732 [VXX/28920]
Blank Lab ID: 1329334

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1162930001, 1162930002, 1162930003

Results by **AK101**

Parameter	Results	LOQ/CL	DL	Units
Gasoline Range Organics	0.0500U	0.100	0.0310	mg/L
Surrogates				
4-Bromofluorobenzene (surr)	91.3	50-150		%

Batch Information

Analytical Batch: VFC13039
Analytical Method: AK101
Instrument: Agilent 7890A PID/FID
Analyst: ST
Analytical Date/Time: 6/10/2016 11:27:00AM

Prep Batch: VXX28920
Prep Method: SW5030B
Prep Date/Time: 6/10/2016 12:30:00AM
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 06/14/2016 2:42:45PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1162930 [VXX28920]
Blank Spike Lab ID: 1329337
Date Analyzed: 06/10/2016 10:49

Spike Duplicate ID: LCSD for HBN 1162930 [VXX28920]
Spike Duplicate Lab ID: 1329338
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1162930001, 1162930002, 1162930003

Results by **AK101**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Gasoline Range Organics	1.00	0.932	93	1.00	0.926	93	(60-120)	0.67	(< 20)
Surrogates									
4-Bromofluorobenzene (surr)	0.0500	104	104	0.0500	109	109	(50-150)	4.80	

Batch Information

Analytical Batch: **VFC13039**
Analytical Method: **AK101**
Instrument: **Agilent 7890A PID/FID**
Analyst: **ST**

Prep Batch: **VXX28920**
Prep Method: **SW5030B**
Prep Date/Time: **06/10/2016 00:30**
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: 06/14/2016 2:42:47PM

Method Blank

Blank ID: MB for HBN 1735559 [XXX/35468]
Blank Lab ID: 1328589

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1162930001

Results by **SW8270D**

Parameter	Results	LOQ/CL	DL	Units
1,2,4-Trichlorobenzene	0.00500U	0.0100	0.00310	mg/L
1,2-Dichlorobenzene	0.00500U	0.0100	0.00310	mg/L
1,3-Dichlorobenzene	0.00500U	0.0100	0.00310	mg/L
1,4-Dichlorobenzene	0.00500U	0.0100	0.00310	mg/L
1-Chloronaphthalene	0.00500U	0.0100	0.00310	mg/L
1-Methylnaphthalene	0.00500U	0.0100	0.00310	mg/L
2,4,5-Trichlorophenol	0.00500U	0.0100	0.00310	mg/L
2,4,6-Trichlorophenol	0.00500U	0.0100	0.00310	mg/L
2,4-Dichlorophenol	0.00500U	0.0100	0.00310	mg/L
2,4-Dimethylphenol	0.00500U	0.0100	0.00310	mg/L
2,4-Dinitrophenol	0.0250U	0.0500	0.0150	mg/L
2,4-Dinitrotoluene	0.00500U	0.0100	0.00310	mg/L
2,6-Dichlorophenol	0.00500U	0.0100	0.00310	mg/L
2,6-Dinitrotoluene	0.00500U	0.0100	0.00310	mg/L
2-Chloronaphthalene	0.00500U	0.0100	0.00310	mg/L
2-Chlorophenol	0.00500U	0.0100	0.00310	mg/L
2-Methyl-4,6-dinitrophenol	0.0250U	0.0500	0.0150	mg/L
2-Methylnaphthalene	0.00500U	0.0100	0.00310	mg/L
2-Methylphenol (o-Cresol)	0.00500U	0.0100	0.00310	mg/L
2-Nitroaniline	0.00500U	0.0100	0.00310	mg/L
2-Nitrophenol	0.00500U	0.0100	0.00310	mg/L
3&4-Methylphenol (p&m-Cresol)	0.0100U	0.0200	0.00620	mg/L
3,3-Dichlorobenzidine	0.00500U	0.0100	0.00310	mg/L
3-Nitroaniline	0.00500U	0.0100	0.00310	mg/L
4-Bromophenyl-phenylether	0.00500U	0.0100	0.00310	mg/L
4-Chloro-3-methylphenol	0.00500U	0.0100	0.00310	mg/L
4-Chloroaniline	0.00500U	0.0100	0.00310	mg/L
4-Chlorophenyl-phenylether	0.00500U	0.0100	0.00310	mg/L
4-Nitroaniline	0.00500U	0.0100	0.00310	mg/L
4-Nitrophenol	0.0250U	0.0500	0.0150	mg/L
Acenaphthene	0.00500U	0.0100	0.00310	mg/L
Acenaphthylene	0.00500U	0.0100	0.00310	mg/L
Aniline	0.0250U	0.0500	0.0150	mg/L
Anthracene	0.00500U	0.0100	0.00310	mg/L
Azobenzene	0.00500U	0.0100	0.00310	mg/L
Benzo(a)Anthracene	0.00500U	0.0100	0.00310	mg/L
Benzo[a]pyrene	0.00500U	0.0100	0.00310	mg/L
Benzo[b]Fluoranthene	0.00500U	0.0100	0.00310	mg/L

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200 West Potter Drive Anchorage, AK 95518
t 907.562.2343 **f** 907.561.5301 www.us.sgs.com

Method Blank

Blank ID: MB for HBN 1735559 [XXX/35468]
Blank Lab ID: 1328589

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1162930001

Results by **SW8270D**

Parameter	Results	LOQ/CL	DL	Units
Benzo[g,h,i]perylene	0.00500U	0.0100	0.00310	mg/L
Benzo[k]fluoranthene	0.00500U	0.0100	0.00310	mg/L
Benzoic acid	0.0250U	0.0500	0.0150	mg/L
Benzyl alcohol	0.00500U	0.0100	0.00310	mg/L
Bis(2chloro1methylethyl)Ether	0.00500U	0.0100	0.00310	mg/L
Bis(2-Chloroethoxy)methane	0.00500U	0.0100	0.00310	mg/L
Bis(2-Chloroethyl)ether	0.00500U	0.0100	0.00310	mg/L
bis(2-Ethylhexyl)phthalate	0.00500U	0.0100	0.00310	mg/L
Butylbenzylphthalate	0.00500U	0.0100	0.00310	mg/L
Carbazole	0.00500U	0.0100	0.00310	mg/L
Chrysene	0.00500U	0.0100	0.00310	mg/L
Dibenzo[a,h]anthracene	0.00500U	0.0100	0.00310	mg/L
Dibenzofuran	0.00500U	0.0100	0.00310	mg/L
Diethylphthalate	0.00500U	0.0100	0.00310	mg/L
Dimethylphthalate	0.00500U	0.0100	0.00310	mg/L
Di-n-butylphthalate	0.00500U	0.0100	0.00310	mg/L
di-n-Octylphthalate	0.00500U	0.0100	0.00310	mg/L
Fluoranthene	0.00500U	0.0100	0.00310	mg/L
Fluorene	0.00500U	0.0100	0.00310	mg/L
Hexachlorobenzene	0.00500U	0.0100	0.00310	mg/L
Hexachlorobutadiene	0.00500U	0.0100	0.00310	mg/L
Hexachlorocyclopentadiene	0.0150U	0.0300	0.00940	mg/L
Hexachloroethane	0.00500U	0.0100	0.00310	mg/L
Indeno[1,2,3-c,d] pyrene	0.00500U	0.0100	0.00310	mg/L
Isophorone	0.00500U	0.0100	0.00310	mg/L
Naphthalene	0.00500U	0.0100	0.00310	mg/L
Nitrobenzene	0.00500U	0.0100	0.00310	mg/L
N-Nitrosodimethylamine	0.00500U	0.0100	0.00310	mg/L
N-Nitroso-di-n-propylamine	0.00500U	0.0100	0.00310	mg/L
N-Nitrosodiphenylamine	0.00500U	0.0100	0.00310	mg/L
Pentachlorophenol	0.0250U	0.0500	0.0150	mg/L
Phenanthrene	0.00500U	0.0100	0.00310	mg/L
Phenol	0.00500U	0.0100	0.00310	mg/L
Pyrene	0.00500U	0.0100	0.00310	mg/L
Surrogates				
2,4,6-Tribromophenol (surr)	63.8	43-140		%
2-Fluorobiphenyl (surr)	76.1	44-119		%
2-Fluorophenol (surr)	57.3	19-119		%

SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
t 907.562.2343 **f** 907.561.5301 www.us.sgs.com
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Method Blank

Blank ID: MB for HBN 1735559 [XXX/35468]
Blank Lab ID: 1328589

QC for Samples:
1162930001

Matrix: Water (Surface, Eff., Ground)

Results by **SW8270D**

Parameter	Results	LOQ/CL	DL	Units
Nitrobenzene-d5 (surr)	73.2	44-120		%
Phenol-d6 (surr)	55	10-115		%
Terphenyl-d14 (surr)	44.7*	50-134		%

Batch Information

Analytical Batch: XMS9329
Analytical Method: SW8270D
Instrument: HP 6890/5973 SSA
Analyst: DSH
Analytical Date/Time: 6/8/2016 6:48:00PM

Prep Batch: XXX35468
Prep Method: SW3520C
Prep Date/Time: 6/8/2016 12:14:00PM
Prep Initial Wt./Vol.: 1000 mL
Prep Extract Vol: 1 mL

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t 907.562.2343 **f** 907.561.5301 www.us.sgs.com

Leaching Blank

Blank ID: LB for HBN 1735477 [TCLP/8337]
Blank Lab ID: 1328360

Matrix: Solid/Soil (Wet Weight)

QC for Samples:
1162930001

Results by **SW8270D**

Parameter	Results	LOQ/CL	DL	Units
2,4,5-Trichlorophenol	0.0500U	0.100	0.0310	mg/L
2,4,6-Trichlorophenol	0.0500U	0.100	0.0310	mg/L
2,4-Dinitrotoluene	0.0500U	0.100	0.0310	mg/L
2-Methylphenol (o-Cresol)	0.0500U	0.100	0.0310	mg/L
3&4-Methylphenol (p&m-Cresol)	0.100U	0.200	0.0620	mg/L
Hexachlorobenzene	0.0500U	0.100	0.0310	mg/L
Hexachlorobutadiene	0.0500U	0.100	0.0310	mg/L
Hexachloroethane	0.0500U	0.100	0.0310	mg/L
Nitrobenzene	0.0500U	0.100	0.0310	mg/L
Pentachlorophenol	0.250U	0.500	0.150	mg/L
Surrogates				
2,4,6-Tribromophenol (surr)	57.5	43-140		%
2-Fluorobiphenyl (surr)	54.5	44-119		%
2-Fluorophenol (surr)	40.1	19-119		%
Nitrobenzene-d5 (surr)	51.7	44-120		%
Phenol-d6 (surr)	39.5	10-115		%
Terphenyl-d14 (surr)	31*	50-134		%

Batch Information

Analytical Batch: XMS9329
Analytical Method: SW8270D
Instrument: HP 6890/5973 SSA
Analyst: DSH
Analytical Date/Time: 6/8/2016 7:42:00PM

Prep Batch: XXX35468
Prep Method: SW3520C
Prep Date/Time: 6/8/2016 12:14:00PM
Prep Initial Wt./Vol.: 100 mL
Prep Extract Vol: 1 mL

SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
t 907.562.2343 **f** 907.561.5301 www.us.sgs.com

Blank Spike Summary

Blank Spike ID: LCS for HBN 1162930 [XXX35468]
Blank Spike Lab ID: 1328590
Date Analyzed: 06/08/2016 19:06

Spike Duplicate ID: LCSD for HBN 1162930 [XXX35468]
Spike Duplicate Lab ID: 1328591
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1162930001

Results by **SW8270D**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
1,2,4-Trichlorobenzene	0.1	0.0725	73	0.1	0.0743	74	(29-116)	2.50	(< 20)
1,2-Dichlorobenzene	0.1	0.0698	70	0.1	0.0703	70	(32-111)	0.73	(< 20)
1,3-Dichlorobenzene	0.1	0.0704	70	0.1	0.0696	70	(28-110)	1.20	(< 20)
1,4-Dichlorobenzene	0.1	0.0698	70	0.1	0.0709	71	(29-112)	1.70	(< 20)
1-Chloronaphthalene	0.04	0.0344	86	0.04	0.0356	89	(58-111)	3.40	(< 20)
1-Methylnaphthalene	0.1	0.0752	75	0.1	0.0778	78	(41-119)	3.30	(< 20)
2,4,5-Trichlorophenol	0.1	0.0847	85	0.1	0.0851	85	(53-123)	0.38	(< 20)
2,4,6-Trichlorophenol	0.1	0.0797	80	0.1	0.0790	79	(50-125)	0.93	(< 20)
2,4-Dichlorophenol	0.1	0.0715	72	0.1	0.0757	76	(47-121)	5.80	(< 20)
2,4-Dimethylphenol	0.1	0.0635	64	0.1	0.0652	65	(31-124)	2.60	(< 20)
2,4-Dinitrophenol	0.18	0.125	69	0.18	0.146	81	(23-143)	15.80	(< 20)
2,4-Dinitrotoluene	0.1	0.0795	80	0.1	0.0854	85	(57-128)	7.20	(< 20)
2,6-Dichlorophenol	0.04	0.0283	71	0.04	0.0300	75	(50-118)	6.10	(< 20)
2,6-Dinitrotoluene	0.1	0.0805	81	0.1	0.0870	87	(57-124)	7.80	(< 20)
2-Chloronaphthalene	0.1	0.0775	78	0.1	0.0782	78	(40-116)	0.87	(< 20)
2-Chlorophenol	0.1	0.0657	66	0.1	0.0667	67	(38-117)	1.50	(< 20)
2-Methyl-4,6-dinitrophenol	0.18	0.136	76	0.18	0.153	85	(44-137)	11.70	(< 20)
2-Methylnaphthalene	0.1	0.0715	72	0.1	0.0739	74	(40-121)	3.30	(< 20)
2-Methylphenol (o-Cresol)	0.1	0.0660	66	0.1	0.0660	66	(30-117)	0.11	(< 20)
2-Nitroaniline	0.1	0.0839	84	0.1	0.0869	87	(55-117)	3.60	(< 20)
2-Nitrophenol	0.1	0.0702	70	0.1	0.0759	76	(47-123)	7.70	(< 20)
3&4-Methylphenol (p&m-Cresol)	0.14	0.101	72	0.14	0.103	73	(29-110)	2.10	(< 20)
3,3-Dichlorobenzidine	0.1	0.0814	81	0.1	0.0840	84	(27-129)	3.10	(< 20)
3-Nitroaniline	0.1	0.0815	82	0.1	0.0848	85	(41-128)	3.90	(< 20)
4-Bromophenyl-phenylether	0.1	0.0930	93	0.1	0.0913	91	(55-124)	1.90	(< 20)
4-Chloro-3-methylphenol	0.1	0.0726	73	0.1	0.0764	76	(52-119)	5.00	(< 20)
4-Chloroaniline	0.1	0.0665	67	0.1	0.0676	68	(33-117)	1.70	(< 20)
4-Chlorophenyl-phenylether	0.1	0.0876	88	0.1	0.0895	90	(53-121)	2.10	(< 20)
4-Nitroaniline	0.1	0.0880	88	0.1	0.0928	93	(74-118)	5.30	(< 20)
4-Nitrophenol	0.14	0.0907	65	0.14	0.0931	67	(52-111)	2.70	(< 20)
Acenaphthene	0.1	0.0855	86	0.1	0.0826	83	(47-122)	3.50	(< 20)
Acenaphthylene	0.1	0.0838	84	0.1	0.0819	82	(41-130)	2.40	(< 20)
Aniline	0.1	0.0435J	44	0.1	0.0451J	45	(10-87)	3.70	(< 20)
Anthracene	0.1	0.0841	84	0.1	0.0824	82	(57-123)	2.00	(< 20)

Print Date: 06/14/2016 2:42:49PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1162930 [XXX35468]
Blank Spike Lab ID: 1328590
Date Analyzed: 06/08/2016 19:06

Spike Duplicate ID: LCSD for HBN 1162930 [XXX35468]
Spike Duplicate Lab ID: 1328591
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1162930001

Results by **SW8270D**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Azobenzene	0.1	0.0921	92	0.1	0.0877	88	(61-116)	4.90	(< 20)
Benzo(a)Anthracene	0.1	0.0881	88	0.1	0.0891	89	(58-125)	1.10	(< 20)
Benzo[a]pyrene	0.1	0.0877	88	0.1	0.0846	85	(54-128)	3.60	(< 20)
Benzo[b]Fluoranthene	0.1	0.0911	91	0.1	0.0863	86	(53-131)	5.40	(< 20)
Benzo[g,h,i]perylene	0.1	0.0953	95	0.1	0.0904	90	(50-134)	5.30	(< 20)
Benzo[k]fluoranthene	0.1	0.0925	93	0.1	0.0902	90	(57-129)	2.50	(< 20)
Benzoic acid	0.14	0.0649	46	0.14	0.0749	54	(21-107)	14.40	(< 20)
Benzyl alcohol	0.1	0.0657	66	0.1	0.0677	68	(31-112)	3.00	(< 20)
Bis(2chloro1methylethyl)Ether	0.1	0.0760	76	0.1	0.0788	79	(37-130)	3.60	(< 20)
Bis(2-Chloroethoxy)methane	0.1	0.0769	77	0.1	0.0807	81	(48-120)	4.70	(< 20)
Bis(2-Chloroethyl)ether	0.1	0.0666	67	0.1	0.0686	69	(43-118)	3.00	(< 20)
bis(2-Ethylhexyl)phthalate	0.1	0.0867	87	0.1	0.0880	88	(55-135)	1.50	(< 20)
Butylbenzylphthalate	0.1	0.0906	91	0.1	0.0931	93	(53-134)	2.60	(< 20)
Carbazole	0.1	0.0934	93	0.1	0.0916	92	(60-122)	1.90	(< 20)
Chrysene	0.1	0.0944	94	0.1	0.0930	93	(59-123)	1.50	(< 20)
Dibenzo[a,h]anthracene	0.1	0.0956	96	0.1	0.0923	92	(51-134)	3.50	(< 20)
Dibenzofuran	0.1	0.0818	82	0.1	0.0802	80	(53-118)	1.90	(< 20)
Diethylphthalate	0.1	0.0852	85	0.1	0.0862	86	(56-125)	1.20	(< 20)
Dimethylphthalate	0.1	0.0831	83	0.1	0.0829	83	(45-127)	0.22	(< 20)
Di-n-butylphthalate	0.1	0.0934	93	0.1	0.0922	92	(59-127)	1.30	(< 20)
di-n-Octylphthalate	0.1	0.0862	86	0.1	0.0901	90	(51-140)	4.40	(< 20)
Fluoranthene	0.1	0.0881	88	0.1	0.0878	88	(57-128)	0.41	(< 20)
Fluorene	0.1	0.0851	85	0.1	0.0849	85	(52-124)	0.27	(< 20)
Hexachlorobenzene	0.1	0.0869	87	0.1	0.0854	85	(53-125)	1.70	(< 20)
Hexachlorobutadiene	0.1	0.0794	79	0.1	0.0810	81	(22-124)	2.10	(< 20)
Hexachlorocyclopentadiene	0.1	0.0422	42	0.1	0.0474	47	(10-93)	11.60	(< 20)
Hexachloroethane	0.1	0.0692	69	0.1	0.0700	70	(21-115)	1.20	(< 20)
Indeno[1,2,3-c,d] pyrene	0.1	0.0897	90	0.1	0.0863	86	(52-134)	3.80	(< 20)
Isophorone	0.1	0.0700	70	0.1	0.0722	72	(42-124)	3.20	(< 20)
Naphthalene	0.1	0.0748	75	0.1	0.0737	74	(40-121)	1.40	(< 20)
Nitrobenzene	0.1	0.0712	71	0.1	0.0755	76	(45-121)	5.90	(< 20)
N-Nitrosodimethylamine	0.1	0.0624	62	0.1	0.0632	63	(41-117)	1.30	(< 20)
N-Nitroso-di-n-propylamine	0.1	0.0770	77	0.1	0.0813	81	(49-119)	5.30	(< 20)
N-Nitrosodiphenylamine	0.1	0.0764	76	0.1	0.0757	76	(51-123)	0.91	(< 20)

Print Date: 06/14/2016 2:42:49PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1162930 [XXX35468]
Blank Spike Lab ID: 1328590
Date Analyzed: 06/08/2016 19:06

Spike Duplicate ID: LCSD for HBN 1162930 [XXX35468]
Spike Duplicate Lab ID: 1328591
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1162930001

Results by **SW8270D**

	Blank Spike (mg/L)				Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)		Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Pentachlorophenol	0.14	0.122	87		0.14	0.129	92	(35-138)	5.60	(< 20)
Phenanthrene	0.1	0.0911	91		0.1	0.0883	88	(59-120)	3.10	(< 20)
Phenol	0.1	0.0584	58		0.1	0.0579	58	(39-84)	0.91	(< 20)
Pyrene	0.1	0.0921	92		0.1	0.0926	93	(57-126)	0.56	(< 20)
Surrogates										
2,4,6-Tribromophenol (surr)	0.2	73.2	73		0.2	74.5	75	(43-140)	1.90	
2-Fluorobiphenyl (surr)	0.1	74.2	74		0.1	73.6	74	(44-119)	0.89	
2-Fluorophenol (surr)	0.2	53.5	54		0.2	52.9	53	(19-119)	1.20	
Nitrobenzene-d5 (surr)	0.1	68.8	69		0.1	72.5	73	(44-120)	5.30	
Phenol-d6 (surr)	0.2	52.6	53		0.2	52.8	53	(10-115)	0.45	
Terphenyl-d14 (surr)	0.1	46	46	*	0.1	44.3	44	* (50-134)	3.70	

Batch Information

Analytical Batch: **XMS9329**
Analytical Method: **SW8270D**
Instrument: **HP 6890/5973 SSA**
Analyst: **DSH**

Prep Batch: **XXX35468**
Prep Method: **SW3520C**
Prep Date/Time: **06/08/2016 12:14**
Spike Init Wt./Vol.: 0.1 mg/L Extract Vol: 1 mL
Dupe Init Wt./Vol.: 0.1 mg/L Extract Vol: 1 mL

Print Date: 06/14/2016 2:42:49PM

Matrix Spike Summary

Original Sample ID: 1162847006
MS Sample ID: 1328676 MS
MSD Sample ID: 1328677 MSD

Analysis Date: 06/09/2016 0:26
Analysis Date: 06/09/2016 0:44
Analysis Date: 06/09/2016 1:02
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1162930001

Results by **SW8270D**

		Matrix Spike (mg/L)				Spike Duplicate (mg/L)					
Parameter	Sample	Spike	Result	Rec (%)		Spike	Result	Rec (%)		CL	RPD (%)	RPD CL
2-Methylnaphthalene	0.0431U	0.413	.173	42		0.400	0.221	55		40-121	24.20	* (< 20)
Surrogates												
2,4,6-Tribromophenol (surr)		0.826	.535	65		0.800	0.477	60		43-140	11.50	
2-Fluorobiphenyl (surr)		0.413	.204	49		0.400	0.243	61		44-119	17.70	
2-Fluorophenol (surr)		0.826	.308	37		0.800	0.338	42		19-119	9.10	
Nitrobenzene-d5 (surr)		0.413	.2	49		0.400	0.243	61		44-120	19.50	
Phenol-d6 (surr)		0.826	.315	38		0.800	0.345	43		10-115	9.00	
Terphenyl-d14 (surr)		0.413	.106	26	*	0.400	0.0916	23	*	50-134	14.30	

Batch Information

Analytical Batch: XMS9329
Analytical Method: SW8270D
Instrument: HP 6890/5973 SSA
Analyst: DSH
Analytical Date/Time: 6/9/2016 12:44:00AM

Prep Batch: XXX35468
Prep Method: Liquid/Liquid Extraction for SW8270
Prep Date/Time: 6/8/2016 12:14:00PM
Prep Initial Wt./Vol.: 242.00mL
Prep Extract Vol: 1.00mL

Print Date: 06/14/2016 2:42:50PM

SGS

Method Blank

Blank ID: MB for HBN 1735018 [VVVX85/ 7/ 2
Blank 9a] ID: 138LL/ L

Ma,rti : x a,mr WQ(rfaumcEff.cGro(nd)

b 6 for QaC Slmp:
1108e3sss8

Rmp(l,p] y **SW8270D**

ParaC mmr	Rmp(l,p	9Ob X6 9	D9	Unt,p
1c8d -Trtuhloro] mngmmm	s.ss5ssU	s.s1ss	s.ss31s	CzX9
1c8-Dtuhloro] mngmmm	s.ss5ssU	s.s1ss	s.ss31s	CzX9
1c3-Dtuhloro] mngmmm	s.ss5ssU	s.s1ss	s.ss31s	CzX9
1d -Dtuhloro] mngmmm	s.ss5ssU	s.s1ss	s.ss31s	CzX9
1-6 hloronaSh,halmmm	s.ss5ssU	s.s1ss	s.ss31s	CzX9
1-Mm,hylnaSh,halmmm	s.ss5ssU	s.s1ss	s.ss31s	CzX9
8d c5-TrtuhloroShmmol	s.ss5ssU	s.s1ss	s.ss31s	CzX9
8d c0-TrtuhloroShmmol	s.ss5ssU	s.s1ss	s.ss31s	CzX9
8d -DtuhloroShmmol	s.ss5ssU	s.s1ss	s.ss31s	CzX9
8d -DtC m,hylShmmol	s.ss5ssU	s.s1ss	s.ss31s	CzX9
8d -Dtnt,roShmmol	s.s85sU	s.s5ss	s.s15s	CzX9
8d -Dtnt,ro,ol(mmm	s.ss5ssU	s.s1ss	s.ss31s	CzX9
8c0-DtuhloroShmmol	s.ss5ssU	s.s1ss	s.ss31s	CzX9
8c0-Dtnt,ro,ol(mmm	s.ss5ssU	s.s1ss	s.ss31s	CzX9
8-6 hloronaSh,halmmm	s.ss5ssU	s.s1ss	s.ss31s	CzX9
8-6 hloroShmmol	s.ss5ssU	s.s1ss	s.ss31s	CzX9
8-Mm,hyl-/ c0-dtnt,roShmmol	s.s85sU	s.s5ss	s.s15s	CzX9
8-Mm,hylnaSh,halmmm	s.ss5ssU	s.s1ss	s.ss31s	CzX9
8-Mm,hylShmmol W-6 rmpol)	s.ss5ssU	s.s1ss	s.ss31s	CzX9
8-Nt,roantltnm	s.ss5ssU	s.s1ss	s.ss31s	CzX9
8-Nt,roShmmol	s.ss5ssU	s.s1ss	s.ss31s	CzX9
34/ -Mm,hylShmmol W34 C -6 rmpol)	s.s1ssU	s.s8ss	s.ss08s	CzX9
3c3-Dtuhloro] mngtdtnm	s.ss5ssU	s.s1ss	s.ss31s	CzX9
3-Nt,roantltnm	s.ss5ssU	s.s1ss	s.ss31s	CzX9
/ -BroC oShmmyl-Shmmylm,hmr	s.ss5ssU	s.s1ss	s.ss31s	CzX9
/ -6 hloro-3-C m,hylShmmol	s.ss5ssU	s.s1ss	s.ss31s	CzX9
/ -6 hloroantltnm	s.ss5ssU	s.s1ss	s.ss31s	CzX9
/ -6 hloroShmmyl-Shmmylm,hmr	s.ss5ssU	s.s1ss	s.ss31s	CzX9
/ -Nt,roantltnm	s.ss5ssU	s.s1ss	s.ss31s	CzX9
/ -Nt,roShmmol	s.s85sU	s.s5ss	s.s15s	CzX9
KummaSh,hmmm	s.ss5ssU	s.s1ss	s.ss31s	CzX9
KummaSh,hylmmm	s.ss5ssU	s.s1ss	s.ss31s	CzX9
Kntltnm	s.s85sU	s.s5ss	s.s15s	CzX9
Kn,hraummm	s.ss5ssU	s.s1ss	s.ss31s	CzX9
Kgo] mngmmm	s.ss5ssU	s.s1ss	s.ss31s	CzX9
Bmngo(a)Kn,hraummm	s.ss5ssU	s.s1ss	s.ss31s	CzX9
Bmngo[a2Syrmmm	s.ss5ssU	s.s1ss	s.ss31s	CzX9
Bmngo[] 2Al(oran,hmmm	s.ss5ssU	s.s1ss	s.ss31s	CzX9

Method Blank

Blank ID: MB for HBN 1735018 [VVVX85/ 7/ 2
Blank 9a] ID: 138LL/ L

Ma,rti : x a,mr WQ(rfaumcEff.cGro(nd)

b 6 for QaC Slmp:
1108e3sss8

Rmp(l,p] y **SW8270D**

ParaC mmr	Rmp(l,p	9Ob X6 9	D9	Unt,p
Bmngo[zdhd2Smrylmnm	s.ss5ssU	s.s1ss	s.ss31s	CzX9
Bmngo[k2fl(oran,hmnm	s.ss5ssU	s.s1ss	s.ss31s	CzX9
Bmngotu autd	s.s85sU	s.s5ss	s.s15s	CzX9
Bmngyl aluohol	s.ss5ssU	s.s1ss	s.ss31s	CzX9
BtpW8uhloro1C m,hylm,hyl)E,hmr	s.ss5ssU	s.s1ss	s.ss31s	CzX9
BtpW8-6 hlorom,hoi y)C m,hanm	s.ss5ssU	s.s1ss	s.ss31s	CzX9
BtpW8-6 hlorom,hyl)m,hmr	s.ss5ssU	s.s1ss	s.ss31s	CzX9
] tpW8-E,hylhmi yl)Sh,hala,m	s.ss5ssU	s.s1ss	s.ss31s	CzX9
B(,yl] mngylSh,hala,m	s.ss5ssU	s.s1ss	s.ss31s	CzX9
6 ar] agolm	s.ss5ssU	s.s1ss	s.ss31s	CzX9
6 hrypmnm	s.ss5ssU	s.s1ss	s.ss31s	CzX9
Dt] mngo[adh2an,hraumnm	s.ss5ssU	s.s1ss	s.ss31s	CzX9
Dt] mngof(ran	s.ss5ssU	s.s1ss	s.ss31s	CzX9
Dtm,hylSh,hala,m	s.ss5ssU	s.s1ss	s.ss31s	CzX9
DtC m,hylSh,hala,m	s.ss5ssU	s.s1ss	s.ss31s	CzX9
Dt-n-] (,ylSh,hala,m	s.ss5ssU	s.s1ss	s.ss31s	CzX9
dt-n-Ou,ylSh,hala,m	s.ss5ssU	s.s1ss	s.ss31s	CzX9
Al(oran,hmnm	s.ss5ssU	s.s1ss	s.ss31s	CzX9
Al(ormnm	s.ss5ssU	s.s1ss	s.ss31s	CzX9
Hmi auhloro] mngmnm	s.ss5ssU	s.s1ss	s.ss31s	CzX9
Hmi auhloro] (,adtmnm	s.ss5ssU	s.s1ss	s.ss31s	CzX9
Hmi auhlorouyuloSmn,adtmnm	s.s15sU	s.s3ss	s.sse/ s	CzX9
Hmi auhlorom,hanm	s.ss5ssU	s.s1ss	s.ss31s	CzX9
Indmno[1c8c3-ucd2Syrmnm	s.ss5ssU	s.s1ss	s.ss31s	CzX9
IpoShoronm	s.ss5ssU	s.s1ss	s.ss31s	CzX9
NaSh,halmnm	s.ss5ssU	s.s1ss	s.ss31s	CzX9
Nt,ro] mngmnm	s.ss5ssU	s.s1ss	s.ss31s	CzX9
N-Nt,ropodtC m,hylaC tnm	s.ss5ssU	s.s1ss	s.ss31s	CzX9
N-Nt,ropo-dt-n-SroSylaC tnm	s.ss5ssU	s.s1ss	s.ss31s	CzX9
N-Nt,ropodtShmmylaC tnm	s.ss5ssU	s.s1ss	s.ss31s	CzX9
Pmn,auhloroShmnol	s.s85sU	s.s5ss	s.s15s	CzX9
Phmman,hrmnm	s.ss5ssU	s.s1ss	s.ss31s	CzX9
Phmnol	s.ss5ssU	s.s1ss	s.ss31s	CzX9
Pyrmnm	s.ss5ssU	s.s1ss	s.ss31s	CzX9
Surrogates				
8d c0-Trt] roC oShmnol Wp(rr)	L1.8	/ 3-1/ s		&
8-Al(oro] tShmmyl Wp(rr)	7L	/ / -11e		&
8-Al(oroShmnol Wp(rr)	08.0	1e-11e		&

Method Blank

Blank ID: MB for HBN 1735018 [VVVX35/ 7/ 2
Blank 9a] ID: 138LL/ L

Ma,rti : x a,mr WQ(rfaumcEff.cGro(nd)

b 6 for QaC Slmp:
1108e3sss8

Rmp(l,p] y **SW8270D**

ParaC mmr	Rmp(l,p	9Ob X6 9	D9	Unt,p
Nt,ro] mngmmmd5 Wp(rr)	7s.e	/ / -18s		&
Phmmol-d0 Wp(rr)	05.1	1s-115		&
TmrShmmyl-d1/ Wp(rr)	1s1	5s-13/		&

Batch Information

Knaly,tual Ba,uh: VMQe335
Knaly,tual Mmjhod: Qx L87sD
Inp,r(C mn,: HP 0LesX5e73 QQK
Knalyp,: DQH
Knaly,tual Da,mXTtC m 0X1sX8s10 7:s7:ssPM

PrmS Ba,uh: VVV35/ 7/
PrmS Mmjhod: Qx 358s6
PrmS Da,mXTtC m 0X1sX8s10 L:5s:s1KM
PrmS Int,tal x ,.X%ol.: 1sss C9
PrmS Ei ,rau, %ol: 1 C9

Prtn, Da,m s0X1/ X8s10 8:/ 8:58PM

Leaching Blank

Blank ID: 9B for HBN 1735510 [T6 9PXL3/ s2
Blank 9a] ID: 138L535

Ma,rti : QoltdXQotl Wr m, x mtzh,)

b 6 for QaC Slmp:
1108e3sss8

Rmp(l,p] y **SW8270D**

ParaC mmr	Rmp(l,p	9Ob X6 9	D9	Unt,p
8d c5-TrtuhloroShmmol	s.s5ssU	s.1ss	s.s31s	Cz%9
8d c0-TrtuhloroShmmol	s.s5ssU	s.1ss	s.s31s	Cz%9
8d -Dtnt,ro,ol(mmm	s.s5ssU	s.1ss	s.s31s	Cz%9
8-Mm,hylShmmol Wd-6 rmpol)	s.s5ssU	s.1ss	s.s31s	Cz%9
34/ -Mm,hylShmmol W34 C -6 rmpol)	s.1ssU	s.8ss	s.s08s	Cz%9
Hmi auhloro] mngmmm	s.s5ssU	s.1ss	s.s31s	Cz%9
Hmi auhloro] (,adtmnm	s.s5ssU	s.1ss	s.s31s	Cz%9
Hmi auhlorom,hanm	s.s5ssU	s.1ss	s.s31s	Cz%9
Nt,ro] mngmmm	s.s5ssU	s.1ss	s.s31s	Cz%9
Pmn,auhloroShmmol	s.85sU	s.5ss	s.15s	Cz%9
Surrogates				
8d c0-Trt] roC oShmmol W%(rr)	70.7	/ 3-1/ s		&%
8-Al(oro] tShmmyl W%(rr)	03.5	/ / -11e		&%
8-Al(oroShmmol W%(rr)	/ e.8	1e-11e		&%
Nt,ro] mngmmm-d5 W%(rr)	5L.7	/ / -18s		&%
Phmmol-d0 W%(rr)	51.1	1s-115		&%
TmrShmmyl-d1/ W%(rr)	1s/	5s-13/		&%

Batch Information

Knaly,tual Ba,uh: VMQe335
Knaly,tual Mm,hod: Qx L87sD
Inp,r(Cmn,: HP 0LesX5e73 QQK
Knalyp,: DQH
Knaly,tual Da,mXTtCm 0XlsX8s10 5:57:ssPM

PrmS Ba,uh: VVV35/ 7/
PrmS Mm,hod: Qx 358s6
PrmS Da,mXTtCm 0XlsX8s10 L:5s:s1KM
PrmS Int,tal x ,.X%ol.: 1ss C9
PrmS Ei ,rau, %ol: 1 C9

Prtn, Da,m s0Xl/ X8s10 8:/ 8:58PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1162930 [XXX35484]
Blank Spike Lab ID: 132t t 49
DaAe y nalzde/ : 06ul10u2016 20:34

Spike DcpliRaAe ID: LCSD for HBN 1162930 [XXX35484]
Spike DcpliRaAe Lab ID: 132t t 50
x aAiW (aAer ,ScrfaReE. ffGE) rocn/ P

- C for Sa%pleM 1162930002

s eMtclAMbz **SW8270D**

	Blank Spike ,%QLP			Spike DcpliRaAe ,%QLP					
mara%eAer	Spike	s eMtclA	s eR,g P	Spike	s eMtclA	s eR,g P	CL	s mD ,g P	s mD CL
1E2E4ThriR7lorobendene	0G3	0G685	6t	0G3	0G803	80	, 29T116 P	4G90	,< 20 P
1E2TDiR7lorobendene	0G3	0G64t	65	0G3	0G691	69	, 32T111 P	6G40	,< 20 P
1E3TDiR7lorobendene	0G3	0G642	64	0G3	0G680	68	, 2t T110 P	4G20	,< 20 P
1E4TDiR7lorobendene	0G3	0G653	65	0G3	0G6t 8	69	, 29T112 P	5G10	,< 20 P
1TC7loronap7AZalene	0G04	0G25t	65	0G04	0G248	62	, 5t T111 P	4G40	,< 20 P
1Tx eAZlnap7AZalene	0G3	0G826	83	0G3	0G841	84	, 41T119 P	2G90	,< 20 P
2E4E5ThriR7lorop7enol	0G3	0Gt 56	t 6	0G3	0Gt 63	t 6	, 53T123 P	0G64	,< 20 P
2E4E6ThriR7lorop7enol	0G3	0Gt 03	t 0	0G3	0Gt 2t	t 3	, 50T125 P	3G10	,< 20 P
2E4TDiR7lorop7enol	0G3	0G6t 8	69	0G3	0G814	81	, 48T121 P	4G90	,< 20 P
2E4TDi%eAZlp7enol	0G3	0G616	62	0G3	0G634	63	, 31T124 P	2G90	,< 20 P
2E4TDiniAop7enol	0G3t	0G35t	t t	0G3t	0G388	9t	, 23T143 P	11G50	,< 20 P
2E4TDiniAoAolcene	0G3	0G98t	9t	0G3	0G301	101	, 58T12t P	2G80	,< 20 P
2E6TDiR7lorop7enol	0G04	0G289	80	0G04	0G290	82	, 50T11t P	3G80	,< 20 P
2E6TDiniAoAolcene	0G3	0G911	91	0G3	0G938	94	, 58T124 P	2G60	,< 20 P
2TC7loronap7AZalene	0G3	0Gt 1t	t 2	0G3	0G8t 6	89	, 40T116 P	4G90	,< 20 P
2TC7lorop7enol	0G3	0G611	61	0G3	0G663	66	, 3t T118 P	t G90	,< 20 P
2Tx eAZlT4E6T iniAop7enol	0G3t	0G364	91	0G3t	0G383	96	, 44T138 P	5G10	,< 20 P
2Tx eAZlnap7AZalene	0G3	0G6t 2	6t	0G3	0G690	69	, 40T121 P	1G10	,< 20 P
2Tx eAZlp7enol ,oTCreMolP	0G3	0G610	61	0G3	0G669	68	, 30T118 P	9G30	,< 20 P
2TNiAoaniline	0G3	0Gt 99	90	0G3	0G90t	91	, 55T118 P	1G90	,< 20 P
2TNiAop7enol	0G3	0G804	80	0G3	0G850	85	, 48T123 P	6G40	,< 20 P
3&4Tx eAZlp7enol ,p&%TCreMolP	0G34	0G954	6t	0G34	0G304	84	, 29T110 P	t G60	,< 20 P
3E3TDiR7lorobendi/ ine	0G3	0Gt t t	t 9	0G3	0Gt 63	t 6	, 28T129 P	2G90	,< 20 P
3TNiAoaniline	0G3	0G980	98	0G3	0G985	9t	, 41T12t P	0G51	,< 20 P
4TBro%op7enzlTp7enzleAZer	0G3	0G958	96	0G3	0G923	92	, 55T124 P	3G80	,< 20 P
4TC7loroT3T%eAZlp7enol	0G3	0G852	85	0G3	0G8t 6	89	, 52T119 P	4G50	,< 20 P
4TC7loroaniline	0G3	0G64t	65	0G3	0G669	68	, 33T118 P	3G30	,< 20 P
4TC7lorop7enzlTp7enzleAZer	0G3	0G932	93	0G3	0Gt t 1	t t	, 53T121 P	5G60	,< 20 P
4TNiAoaniline	0G3	0G986	9t	0G3	0G96t	98	, 84T11t P	0G63	,< 20 P
4TNiAop7enol	0G34	0G303	84	0G34	0G315	t 2	, 52T111 P	11G20	,< 20 P
yRenap7AZene	0G3	0Gt 32	t 3	0G3	0Gt 12	t 1	, 48T122 P	2G40	,< 20 P
yRenap7AZzlene	0G3	0Gt 10	t 1	0G3	0G8t 6	89	, 41T130 P	3G90	,< 20 P
yniline	0G3	0G442J	44	0G3	0G512	51	, 10Tt 8 P	14G30	,< 20 P
ynAZraRene	0G3	0Gt 6t	t 8	0G3	0Gt 38	t 4	, 58T123 P	3G60	,< 20 P

mrinADaAe: 06ul4u2016 2:42:53mx

Blank Spike Summary

Blank Spike ID: LCS for HBN 1162930 [XXX35484]
Blank Spike Lab ID: 132t t 49
DaAe y nalzde/ : 06ul0u2016 20:34

Spike DcpliRaAe ID: LCSD for HBN 1162930 [XXX35484]
Spike DcpliRaAe Lab ID: 132t t 50
x aAiW (aAer ,ScrfaReE. ffGE) rocn/ P

- C for Sa%pleM 1162930002

s eMtclAMbz **SW8270D**

	Blank Spike ,%QLP			Spike DcpliRaAe ,%QLP					
mara%eAer	Spike	s eMtclA	s eR,g P	Spike	s eMtclA	s eR,g P	CL	s mD ,g P	s mD CL
y dobendene	0G	0G925	93	0G	0Gt t t	t 9	, 61T116 P	4G0	,< 20 P
Bendo,aRy nAraRene	0G	0G969	98	0G	0G949	95	, 5t T125 P	2G0	,< 20 P
Bendo[a]pzrene	0G	0G941	94	0G	0G924	92	, 54T12t P	1G0	,< 20 P
Bendo[b]FlcoranAene	0G	0G990	99	0G	0G988	9t	, 53T131 P	1G0	,< 20 P
Bendo[QE7EE]perzlene	0G	0G00	100	0G	0G983	98	, 50T134 P	2G0	,< 20 P
Bendo[k]flcoranAene	0G	0G994	99	0G	0G98t	9t	, 58T129 P	1G0	,< 20 P
BendoiRaR/	0G4	0G643	46	0G4	0Gt 06	5t	, 21T108 P	22G0	O,< 20 P
Bendzl alRo7ol	0G	0G621	62	0G	0G685	6t	, 31T112 P	t G0	,< 20 P
BiM,2R7loro1%eAzleAzlP. Aer	0G	0G816	82	0G	0G868	88	, 38T130 P	8G0	,< 20 P
BiM,2TC7loroeAoWzP%eAane	0G	0G849	85	0G	0G860	86	, 4t T120 P	1G0	,< 20 P
BiM,2TC7loroeAzlReAer	0G	0G620	62	0G	0G665	68	, 43T11t P	8G0	,< 20 P
biM,2T. AzzI7eWzlRp7AalaAe	0G	0G03	103	0G	0G02	102	, 55T135 P	1G0	,< 20 P
BcAzlbendzlp7AalaAe	0G	0G03	103	0G	0G04	104	, 53T134 P	1G0	,< 20 P
Carbadole	0G	0G9t 8	99	0G	0G938	94	, 60T122 P	5G0	,< 20 P
C7rzMene	0G	0G01	101	0G	0G998	100	, 59T123 P	1G0	,< 20 P
Dibendo[aE7]anAraRene	0G	0G01	101	0G	0G9t 5	99	, 51T134 P	3G0	,< 20 P
Dibendofcran	0G	0Gt 26	t 3	0G	0G89t	t 0	, 53T11t P	3G0	,< 20 P
DieAzlp7AalaAe	0G	0G912	91	0G	0G933	93	, 56T125 P	2G0	,< 20 P
Di%eAzlp7AalaAe	0G	0Gt t 6	t 9	0G	0G904	90	, 45T128 P	2G0	,< 20 P
DiTnTbcAzlp7AalaAe	0G	0G9t t	99	0G	0G961	96	, 59T128 P	2G0	,< 20 P
/ iTnT* RAzlp7AalaAe	0G	0G04	104	0G	0G991	99	, 51T140 P	4G0	,< 20 P
FlcoranAene	0G	0G985	9t	0G	0Gt 99	90	, 58T12t P	t G0	,< 20 P
Flcorene	0G	0Gt 6t	t 8	0G	0Gt 40	t 4	, 52T124 P	3G0	,< 20 P
HeWaR7lorobendene	0G	0G906	91	0G	0Gt t 0	t t	, 53T125 P	3G0	,< 20 P
HeWaR7lorobcAa/ iene	0G	0G830	83	0G	0G863	86	, 22T124 P	4G0	,< 20 P
HeWaR7loroRzRlopenAa/ iene	0G	0G461	46	0G	0G441	44	, 10T93 P	4G0	,< 20 P
HeWaR7loroeAane	0G	0G625	63	0G	0G656	66	, 21T115 P	4G0	,< 20 P
In/ eno[1E2E3TRE] pzrene	0G	0G954	95	0G	0G932	93	, 52T134 P	2G0	,< 20 P
IMop7orone	0G	0G6t 3	6t	0G	0G696	80	, 42T124 P	1G0	,< 20 P
Nap7AalaRene	0G	0G6t 0	6t	0G	0G800	80	, 40T121 P	2G0	,< 20 P
NiAobendene	0G	0G802	80	0G	0G819	82	, 45T121 P	2G0	,< 20 P
NTNiAoMo/ i%eAzla%ine	0G	0G594	59	0G	0G638	64	, 41T118 P	6G0	,< 20 P
NTNiAoMoT/ iTnTpropzla%ine	0G	0G84t	85	0G	0G881	88	, 49T119 P	3G0	,< 20 P
NTNiAoMo/ ip7enzla%ine	0G	0G84t	85	0G	0G856	86	, 51T123 P	0G8	,< 20 P

S) S NorAy %eriRa InRG
200 (eMAmoAer Drive y nR7oraQeEy K 9551t
t 908G562G2343 f 908G561G5301 wwwGMBQMBo%

Blank Spike Summary

Blank Spike ID: LCS for HBN 1162930 [XXX35484]
Blank Spike Lab ID: 132t t 49
DaAe y nalzde/ : 06ul10u2016 20:34

Spike DcpliRaAe ID: LCSD for HBN 1162930 [XXX35484]
Spike DcpliRaAe Lab ID: 132t t 50
x aAiW (aAer ,ScrfaReE. ffGE) rocn/ P

- C for Sa%pleM 1162930002

s eMclAMbz **SW8270D**

	Blank Spike ,%QLLP			Spike DcpliRaAe ,%QLLP					
mara%eAer	Spike	s eMclA	s eR,g P	Spike	s eMclA	s eR,g P	CL	s mD ,g P	s mD CL
menAaR7lorop7enol	0G34	0G33t	99	0G34	0G340	100	, 35T13t P	1G40	,< 20 P
m7enanA7rene	0G3	0G924	92	0G3	0Gtt 2	t t	, 59T120 P	4G30	,< 20 P
m7enol	0G3	0G538	54	0G3	0G595	60	, 39Tt 4 P	10G20	,< 20 P
mzrene	0G3	0G922	92	0G3	0G99t 2	9t	, 58T126 P	6G30	,< 20 P
Surrogates									
2E4E6Thribro%op7enol ,McrrP	0G2	92G2	92	0G2	91	91	, 43T140 P	1G30	
2TFlcorobip7enzl ,McrrP	0G3	82G3	83	0G3	82G3	82	, 44T119 P	0G50	
2TFlcorop7enol ,McrrP	0G2	58	58	0G2	58G5	5t	, 19T119 P	0G98	
NiAobendeneT7 5 ,McrrP	0G3	68G9	6t	0G3	80G3	80	, 44T120 P	3G50	
m7enolT7 6 ,McrrP	0G2	61G3	61	0G2	62G6	63	, 10T115 P	2G20	
herp7enzlT7 14 ,McrrP	0G3	95G5	96	0G3	103	103	, 50T134 P	tG50	

Batch Information

y nalzARal BaAR7: **XMS933H**
y nalzARal x eA7o/ : **SW8270D**
InMkc%enA **P6 / 8905-H973 SSA**
y nalzMA **DSP**

mrep BaAR7: **XXX3H474**
mrep x eA7o/ : **SW3H20C**
mrep DaAeuhi%e: **0/ 5105201/ 08:H0**
Spike IniA(AGVolG 0G3 %QLL . WkaRAVol: 1 %L
Dcpe IniA(AGVolG 0G3 %QLL . WkaRAVol: 1 %L

mrinADaAe: 06ul4u2016 2:42:53mx

Method Blank

Blank ID: MB for HBN 1735626 [XXX/35480]
Blank Lab ID: 1328899

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1162930001, 1162930002

Results by **AK102**

Parameter	Results	LOQ/CL	DL	Units
Diesel Range Organics	0.300U	0.600	0.180	mg/L
Surrogates				
5a Androstane (surr)	102	60-120		%

Batch Information

Analytical Batch: XFC12426
Analytical Method: AK102
Instrument: Agilent 7890B R
Analyst: S.G
Analytical Date/Time: 6/9/2016 5:08:00PM

Prep Batch: XXX35480
Prep Method: SW3520C
Prep Date/Time: 6/9/2016 10:57:34AM
Prep Initial Wt./Vol.: 250 mL
Prep Extract Vol: 1 mL

Print Date: 06/14/2016 2:42:55PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1162930 [VVV3X8] 0b
Blank Spike La7 ID: 132] 900
Date Analyzed: 06/09/2016 19:X3

Spike D4pliuate ID: LCSD for HBN 1162930 [VVV3X8] 0b
Spike D4pliuate La7 ID: 132] 901
s atriM x ater W84rfaue(, ffE . ro4ndG

g C for SaP pleR 1162930001(1162930002

c eR4ltR7y **AK102**

	Blank Spike W%LG			Spike D4pliuate W%LG					
) araP eter	Spike	c eR4lt	c eu Wh G	Spike	c eR4lt	c eu Wh G	CL	c) D Wh G	c) D CL
DieRel c an%e Qr%aniuR	20	19E9	99	20	19E	9X	WOX-12X G	8E30	W 20 G
Surrogates									
Xa AndroRtane W4rrG	0EB	11]	11]	0EB	11O	11O	W60-120 G	1E10	

Batch Information

Analytiual Batu5: **XFC12426**
Analytiual s et5od: **AK102**
InRtr4P ent: **Agilent 7890B R**
AnalyRt: **S.G**

) rep Batu5: **XXX35480**
) rep s et5od: **SW3520C**
) rep Date/hiP e: **06/09/2016 10:57**
Spike Init x tEToIE 20 P%L , Mraut Tol: 1 PL
D4pe Init x tEToIE 20 P%L , Mraut Tol: 1 PL

) rint Date: 06/18/2016 2:82:X6) s

Method Blank

Blank ID: MB for HBN 1735626 [XXX/35480]
Blank Lab ID: 1328899

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1162930001, 1162930002

Results by **AK103**

Parameter	Results	LOQ/CL	DL	Units
Residual Range Organics	0.250U	0.500	0.150	mg/L
Surrogates				
nA riacontaneAd62 (surr)	114	60A120		%

Batch Information

hnalytical BatcF: XKC12426
hnalytical MetFod: hT103
Instrument: hgilent 7890B R
hnalyst: S.G
hnalytical Date/- ime: 6/9/2016 5:08:00PM

Prep BatcF: XXX35480
Prep MetFod: SW3520C
Prep Date/- ime: 6/9/2016 10:57:34hM
Prep Initial Wt./Vol.: 250 mL
Prep Extract Vol: 1 mL

Print Date: 06/14/2016 2:42:58PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1162930 [VVV3X8] 0b
Blank Spike La7 ID: 132] 900
Date Analyzed: 06/09/2016 19:X3

Spike D4pliuate ID: LCSD for HBN 1162930 [VVV3X8] 0b
Spike D4pliuate La7 ID: 132] 901
s atriM x ater W84rfaue(, ffE . ro4ndG

g C for SaP pleR 1162930001(1162930002

c eR4ltR7y **AK102**

	Blank Spike W%LG			Spike D4pliuate W%LG					
) araP eter	Spike	c eR4lt	c eu Wh G	Spike	c eR4lt	c eu Wh G	CL	c) D Wh G	c) D CL
c eRd4al c an%e Qr%aniuR	20	20E9	108	20	19E2	96	W60C120 G	]E30	W 20 G
Surrogates									
nG riauontaneQ162 W4rrG	0EB	110	110	0EB	106	106	W60C120 G	3EB0	

Batch Information

Analytiual Batu5: **XFC14647**
Analytiual s et5od: **AK102**
InRtr4P ent: **Agilent 89R0B .**
AnalyRt: **SG**

) rep Batu5: **XXX25690**
) rep s et5od: **SW2540C**
) rep Date/<iP e: **07/0R/4017 10:58**
Spike Init x tEholE 20 P%L , Mraut hol: 1 PL
D4pe Init x tEholE 20 P%L , Mraut hol: 1 PL

) rint Date: 06/18/2016 2:82:X9) s

SGS

SGS North America Inc.
CHAIN OF CUSTODY RECORD

1162930

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

Page 1 of 1

Section 1

CLIENT: AECOM

CONTACT: Paul Myerchin — PHONE #: 907-261-6785

PROJECT NAME: APT Task 4 — Project/ PWSID/ PERMIT#:

REPORTS TO: Paul Myerchin — E-MAIL: paul.myerchin@aecom

INVOICE TO: AECOM — QUOTE #: — P.O. #:

Section 2

RESERVED for lab use	SAMPLE IDENTIFICATION	DATE mm/dd/yy	TIME HH:MM	MATRIX/ MATRIX CODE	# CONTAINERS	Pres: Type: Comp Grab MI (Multi-incremental)	GRO (AK101) HCL	VOC (8260B) HCL	DRO/RRO (AK102/AK103) LV HCL	SVOCs (8270D) None	REMARKS/ LOC ID
①A-J	PQW-1	06/07/16	13:30	~~W~~ W	10	G	X	X	X	X	
②A-J	PQW-2	06/07/16	13:35	W	10	G	X	X	X	X	
③A-F	Trip Blank	06/07/16	0800	W	3						
	Temp Blank	06/07/16	—	W	1						

Section 3 — Preservative

Section 4 — DOD Project? Yes No — Data Deliverable Requirements:

Cooler ID:

Requested Turnaround Time and/or Special Instructions:
RUSH 24-TAT or ASAP

Section 5

	Date	Time	
Relinquished By: (1)			Received By:
Relinquished By: (2)			Received By:
Relinquished By: (3)			Received By:
Relinquished By: (4)	6/8/16	8:00	Received For Laboratory By:

Temp Blank °C: 4.8 #D12
or Ambient [ ]
(See attached Sample Receipt Form)

Chain of Custody Seal: (Circle)
INTACT BROKEN ABSENT
(See attached Sample Receipt Form)

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

AIRPORT OF DEPARTURE ENA 06/07/16 17:38 097375 808 7058261 Frgt

SHIPPER'S NAME, ADDRESS & PHONE	SHIPPER'S ACCOUNT NUMBER	NOT AIR WAYBILL (AIR CONSIGNMENT NOTE)
AECOM AECOM Attn: Accounts Payable, 1 KENAI AK 99611 9077480338	A9254	Ravn ALASKA 4700 Old International Airport Road Anchorage, Alaska 99502

It is agreed that the goods described herein are accepted in apparent good order and condition (except as noted) for carriage SUBJECT TO THE CONDITIONS OF CONTRACT AS LISTED IN THE COMPANIES TARIFFS. THE SHIPPER'S ATTENTION IS DRAWN TO THE NOTICE CONCERNING CARRIERS' LIMITATION OF LIABILITY. Shipper may increase such limitation of liability by declaring a higher value for carriage and paying a supplemental charge if required.

Received in Good Condition _____

Place _____ Date _____

TO EXPEDITE MOVEMENT, SHIPMENT MAY BE DIVERTED TO MOTOR OR OTHER CARRIER AS PER TARIFF RULE UNLESS SHIPPER GIVES OTHER INSTRUCTION HEREON

CONSIGNEE'S NAME, ADDRESS & PHONE	CONSIGNEE'S ACCOUNT NUMBER
SGS LABS 200 WEST POTTER RD ANCHORAGE AK 99518 9075622343	

ISSUING CARRIER'S AGENT NAME, CITY & PHONE

ALSO NOTIFY NAME & ADDRESS

AGENT'S IATA CODE

ACCOUNT NO.

ACCOUNTING INFORMATION 7110581
Acc#: A9254 AECOM Technical Services, Inc.

AIRPORT OF DEPARTURE: Kenai

Declared Value $ 0.00

Insured Amount $ 0.00

BY FIRST

AIRPORT OF DESTINATION: Anchorage

COMMENTS
job#60489694apt

No. Of Pieces Rcp	Gross Weight	kg lb	Rate Class	Commodity Item No.	Chargeable Weight	Rate/Charge	Total	Nature and Quantity of Goods
2	56	l..	M		1	$29.18	$29.18	lab samples
2	56						$29.18	

PREPAID	WEIGHT CHARGE	COLLECT
$29.18		

VALUATION CHARGE
$0.00

FEDERAL EXCISE TAX
$1.82

TOTAL OTHER CHARGES DUE AGENT
$0.00

TOTAL OTHER CHARGES DUE CARRIER
$0.00

TOTAL PREPAID	TOTAL COLLECT
$31.00	

OTHER CHARGES AND DESCRIPTION

AMOUNT	DESCRIPTION

HAZMAT
No

STATION NUMBERS
ANCHORAGE - (907) 243-2761
ANIAK - (907) 675-4572
BARROW - (907) 852-5300
BETHEL -(907) 543-3825
DEADHORSE - (907) 659-9222
FAIRBANKS - (907) 450-7250
GALENA -(907) 656-1875
KOTZEBUE - (907) 442-3020
NOME - (907) 443-7595
ST. MARYS - (907) 438-2247
UNALAKLEET - (907) 624-3595

Printed at 17:45:39 on 6/7/2016 at ENA-FRTMGR 10.106.2.15

Shipper certifies that the particulars on the face hereof are correct, agrees to the CONDITIONS AS LISTED IN THE COMPANIES TARIFFS, accepts that carrier's liability is limited as stated in the companies tariffs and accepts such value unless a higher value for carriage is declared on the face hereof subject to an additional charge and that insofar as any part of the consignment contains restricted articles, such part is described by name and is in proper condition for carriage by air according to applicable national governmental regulations, and for international shipments, the current International Air Transport Association's Restricted Articles Regulations.

Paid By Shipper

Printed Name and Title _____

Signature

Consignee Copy

Alert Expeditors Inc. #366020

Citywide Delivery • 440-3351
8421 Flamingo Drive • Anchorage, Alaska 99502

Date 6816

From AECOM

To 565

Collect ☐	Prepay ☐ Account ☐	Advance Charges ☐
Job #	PO#	

2056

Kevin

705 8261

Shipped Signature

Total Charge

Received By: F 0800

1162930

Review Criteria	Y/N (yes/no)	Exceptions Noted below
		exemption permitted if sampler hand carries/delivers.
Were Custody Seals intact? Note # & location		ABSENT
COC accompanied samples?	Y	
**exemption permitted if chilled & collected <8hrs ago or chlling not required (i.e., waste, oil)		
Temperature blank compliant* (i.e., 0-6 °C after CF)?	Y	Cooler ID: 1 @ 4.8 °C Therm ID: D12
		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?		
If <0°C, were sample containers ice free?		
If samples received without a temperature blank, the "cooler temperature" will be documented in lieu of the temperature blank & "**COOLER TEMP**" will be noted to the right. In cases where neither a temp blank nor cooler temp can be obtained, note "ambient" or "chilled".		
Note: Identify containers received at non-compliant temperature . Use form FS-0029 if more space is needed.		
		Note: Refer to form F-083 "Sample Guide" for hold times.
Were samples received within hold time?	Y	
Do samples **match COC**** (i.e.,sample IDs,dates/times collected)?	Y	
**Note: If times differ <1hr, record details & login per COC.		
Were analyses requested unambiguous?	Y	
		***Exemption permitted for metals (e.g,200.8/6020A).
Were proper containers (type/mass/volume/preservative***)used?	N	Only one set of VOA vials were provided to the client when they needed 2 sets. They received five 250 mL jars when they only *
IF APPLICABLE		
Were Trip Blanks (i.e., VOAs, LL-Hg) in cooler with samples?	Y	
Were all VOA vials free of headspace (i.e., bubbles ≤ 6mm)?	Y	
Were all soil VOAs field extracted with MeOH+BFB?		
Note to Client: Any "no" answer above indicates non-compliance with standard procedures and may impact data quality.		

Additional notes (if applicable):

*needed two 250 mL jars.

2 mL of HCl added to the 250 mL containers for preservation. Lot #: LW09-0463-12-10.

Sample Containers and Preservatives

Container Id	Preservative	Container Condition	Container Id	Preservative	Container Condition
1162930001-A	HCL to pH < 2	OK			
1162930001-B	HCL to pH < 2	OK			
1162930001-C	HCL to pH < 2	OK			
1162930001-D	HCL to pH < 2	PA			
1162930001-E	HCL to pH < 2	PA			
1162930001-F	HCL to pH < 2	PA			
1162930001-G	HCL to pH < 2	PA			
1162930001-H	HCL to pH < 2	PA			
1162930001-I	No Preservative Required	OK			
1162930001-J	No Preservative Required	OK			
1162930002-A	HCL to pH < 2	OK			
1162930002-B	HCL to pH < 2	OK			
1162930002-C	HCL to pH < 2	OK			
1162930002-D	HCL to pH < 2	PA			
1162930002-E	HCL to pH < 2	PA			
1162930002-F	HCL to pH < 2	PA			
1162930002-G	HCL to pH < 2	PA			
1162930002-H	HCL to pH < 2	PA			
1162930002-I	No Preservative Required	OK			
1162930002-J	No Preservative Required	OK			
1162930003-A	HCL to pH < 2	OK			
1162930003-B	HCL to pH < 2	OK			
1162930003-C	HCL to pH < 2	OK			
1162930003-D	HCL to pH < 2	OK			
1162930003-E	HCL to pH < 2	OK			
1162930003-F	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.
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.

ATTACHMENT D: LIQUEFACTION FACILITY GROUNDWATER QUALITY REPORT – EVENT 2

Confidential

Alaska LNG™

LNG FACILITIES GROUNDWATER QUALITY SAMPLING AND TESTING REPORT - EVENT 2

USAL-FG-GRZZZ-00-002016-004

Rev	Date	Revision Description	Originator	Reviewer / Endorser	Response Code	Approver
A	14-Nov-16	Issued for Review	J. Whearty / K. Emery	P. Wong	2	D. Sadoff / J. Alexander
0	16-Dec-16	Issued for Use	K. Emery			D. Sadoff / J. Alexander

Document Control No.	Country	Facility	Originator	Discipline	Type	Sub-Type	Location	Sequence	Identifier
	US	AL	FG	G	R	ZZZ	00	002016	004

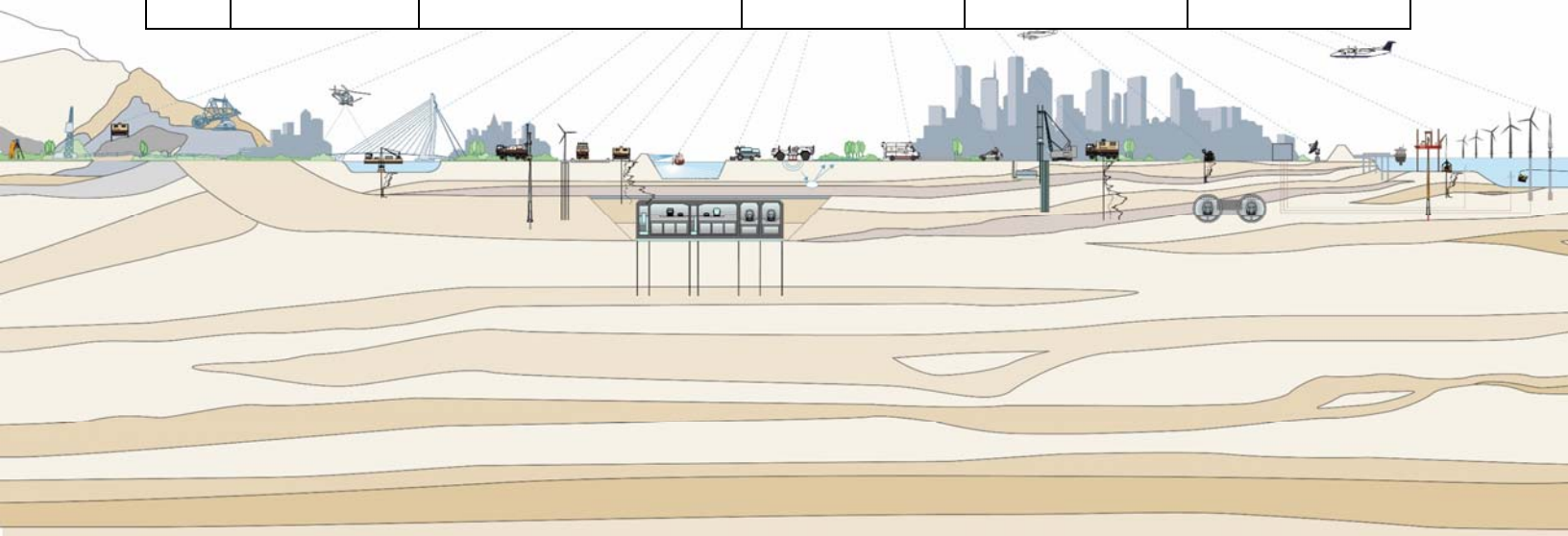
FUGRO CONSULTANTS, INC.

Alaska LNG™

LNG FACILITIES GROUNDWATER QUALITY SAMPLING AND TESTING REPORT - EVENT 2 ONSHORE LNG FACILITIES ALASKA LNG PROJECT NIKISKI, ALASKA

AKLNG DOCUMENT NO. USAL-FG-GRZZZ-00-002016-004
FUGRO REPORT NO. 04.10160001-3
EXXONMOBIL ALASKA LNG LLC (EMALL)
HOUSTON, TEXAS

Rev	Date	Revision Description	Originator	Reviewer	Approver
A	14-Nov-16	Issued for Review	J. Whearty / K. Emery	D. Sadoff	J. Alexander
0	16-Dec-16	Issued for Use	K. Emery		D. Sadoff / J. Alexander



REVISION MODIFICATION LOG

Revision	Section	Description

FUGRO CONSULTANTS, INC.

1777 Botelho Drive, Suite 262
Walnut Creek, California 94596
Tel: (925) 949-7100
Fax: (925) 949-7070

December 16, 2016
Report No. 04.10160001-3

ExxonMobil Alaska LNG LLC (EMALL)
10613 W. Sam Houston Pkwy N, Suite 500
Houston, Texas 77064

Attention: Patrick Wong
Geotechnical Engineering Advisor Alaska LNG/Technical POC

Subject: **LNG Facilities Groundwater Quality Sampling and Testing Report – Event 2, Onshore LNG Facilities, Alaska LNG Project, Nikiski, Alaska**

Fugro Consultants, Inc. (Fugro) is pleased to present this groundwater quality monitoring event report for the onshore facilities of the Alaska LNG Project (AKLNG) located in Nikiski, Alaska. Our services were authorized under Service Work Order No. AKLNG-FUG-US-005 Rev 0, dated March 2, 2016 in accordance with the Service Agreement No. A2275592 between Fugro and ExxonMobil Global Services Company, dated October 29, 2012. Fugro has been providing services for the proposed AKLNG Project since 2014.

We appreciate the opportunity to be of service to EMALL. Please call Mr. Abhishek Shethji, P.E., Fugro's Project Manager at (713) 369-5431, if you have any questions or comments concerning this report, or when we may be of further assistance.

Sincerely,

FUGRO CONSULTANTS, INC.
TBPE Firm Registration No. 299

Dave Sadoff, P.G. (CA), C.P.G
Associate Geologist/Hydrogeologist

Jeriann Alexander, P.E, R.E.P.A
Principal Engineer/Hydrologist

Copies Submitted: Aconex Document Control System

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1.0 INTRODUCTION

1.1 PROJECT DESCRIPTION

The Alaska Gasline Development Corporation, BP Alaska LNG LLC, ConocoPhillips Alaska LNG Company, and ExxonMobil Alaska LNG LLC (Applicants) plan to construct one integrated liquefied natural gas (LNG) Project (Project) with interdependent facilities for the purpose of liquefying supplies of natural gas from Alaska, in particular from the Point Thomson Unit (PTU) and Prudhoe Bay Unit (PBU) production fields on the Alaska North Slope (North Slope), for export in foreign commerce and opportunities for in-state deliveries of natural gas.

The Natural Gas Act (NGA), 15 U.S.C. § 717a(11) (2006), and Federal Energy Regulatory Commission (FERC) regulations, 18 C.F.R. § 153.2(d) (2014), define "LNG terminal" to include "all natural gas facilities located onshore or in State waters that are used to receive, unload, load, store, transport, gasify, liquefy, or process natural gas that is ... exported to a foreign country from the United States." With respect to this Project, the "LNG Terminal" includes the following: a liquefaction facility (Liquefaction Facility) in Southcentral Alaska; an approximately 804-mile gas pipeline (Mainline); a gas treatment plant (GTP) on the North Slope; an approximately 62-mile gas transmission line connecting the GTP to the PTU gas production facility (PTU Gas Transmission Line or PTTL); and an approximately 1-mile gas transmission line connecting the GTP to the PBU gas production facility (PBU Gas Transmission Line or PBTL). All of these facilities are essential to export natural gas in foreign commerce.

The new Liquefaction Facility would be constructed on the eastern shore of Cook Inlet just south of the existing Agrium fertilizer plant on the Kenai Peninsula, approximately 3 miles southwest of Nikiski and 8.5 miles north of Kenai (Plate 1). The Liquefaction Facility would include the structures, equipment, underlying access rights, and all other associated systems for final processing and liquefaction of natural gas, as well as storage and loading of LNG, including terminal facilities and auxiliary marine vessels used to support Marine Terminal operations (excluding LNG carriers [LNGCs]). The Liquefaction Facility would include three liquefaction trains combining to process up to approximately 20 million metric tons per annum (MMTPA) of LNG. Two 240,000-cubic-meter tanks would be constructed to store the LNG. The Liquefaction Facility would be capable of accommodating two LNG carriers. The size of LNGCs that the Liquefaction Facility would accommodate would range between 125,000–216,000-cubic-meter vessels.

EMALL contracted Fugro to investigate the site conditions of the onshore LNG facilities, marine LNG Terminal, and marine pipeline corridors. Overview of overall project facilities described above are presented on Plate 2. Completed onshore explorations and the proposed LNG Facilities plant layout are presented on Plate 3. This report presents the results of the second groundwater quality sampling and testing study for the onshore LNG facilities conducted during the 2016 geophysical and geotechnical site investigation (G&G) program at the Alaska LNG site (Site) near Nikiski, Alaska (Plate 1).

A list of the reports (including the superseded reports) that are generated by Fugro as part of 2014, 2015 and 2016 G&G programs are presented in the table below. A copy of the below table is also separately submitted to AKLNG under document number USAL-FG-BRCTL-00-000001-000[1].

Summary of Fugro Reports Developed for 2014, 2015 and 2016 G&G Programs

G&G Program	Report Title (Superseded Reports in Gray)	AKLNG Document Number	Fugro Report Number
2014	Project Execution Plan for 2014 Onshore and Marine G&G	USAL-FG-GPZZZ-00-000001-000	04.10140094-1
	Geologic Mapping Report	USAL-FG-GRZZZ-00-000001-000	04.10140094-2
	Marine Survey Report Pipeline Corridor Route 1	USAP-FG-GRZZZ-10-000001-000	04.10140094-3
	Marine Survey Report Pipeline Corridor Route 2	USAP-FG-GRZZZ-10-000002-000	04.10140094-4
	Marine Survey Report Nearshore LNG Facilities and Approach Channel	USAL-FG-GRZZZ-90-000003-000	04.10140094-5
	Probabilistic Seismic Hazard Analysis Report(1)	USAL-FG-GRHAZ-00-000001-000	04.10140094-6
	Geophysical Survey Report	USAL-FG-GRZZZ-00-000002-000	04.10140094-7
	Geotechnical Data Report Onshore LNG Facilities	USAL-FG-GRZZZ-00-000003-000	04.10140094-8
	Geologic Hazard Report(2)	USAL-FG-GRHAZ-00-000002-000	04.10140094-9
	Hydrogeologic Report(3)	USAL-FG-GRZZZ-00-000004-000	04.10140094-10
	Groundwater Monitoring Well Installation Report	USAL-FG-GRZZZ-00-000007-000	04.10140094-10A
	Liquefaction Potential Evaluation Report(4)	USAL-FG-GRZZZ-00-000005-000	04.10140094-11
	Integrated Site Characterization and Engineering Report(5)	USAL-FG-GRZZZ-00-000006-000	04.10140094-12

[1] Fugro Consultants, Inc. (Fugro), 2016, A Roadmap to Fugro G&G Reports Covering Site Investigation Campaigns in 2014, 2015 & 2016, Alaska LNG Project, Nikiski, Alaska, AKLNG Document No. USAL-FG-BRCTL-00-000001-000, Rev.0, dated December 22, 2016.

G&G Program	Report Title (Superseded Reports in Gray)	AKLNG Document Number	Fugro Report Number
2015	Project Execution Plan for 2015 Onshore and Marine G&G Program	USAL-FG-GPZZZ-00-000002-000	04.10140334-1
	LNG Facilities Onshore Geologic Field Mapping Report	USAL-FG-GRZZZ-00-002015-004	04.10140334-2
	Pipeline Marine Geophysical Survey Report - Route 1	USAP-FG-GRZZZ-10-002015-013	04.10140334-3
	Pipeline Marine Geophysical Survey Report - Route 2	USAP-FG-GRZZZ-10-002015-014	04.10140334-4
	LNG Facilities Marine Geophysical Survey Report	USAL-FG-GRZZZ-90-002015-010	04.10140334-5
	LNG Facilities Probabilistic Seismic Hazard Analysis (PSHA) Report(1)	USAL-FG-GRHAZ-00-002015-001	04.10140334-6
	LNG Facilities Onshore Geophysical Survey Report	USAL-FG-GRZZZ-00-002015-005	04.10140334-7
	LNG Facilities Onshore Geotechnical Data Report	USAL-FG-GRZZZ-00-002015-006	04.10140334-8
	LNG Facilities Marine Geotechnical Data Report	USAL-FG-GRZZZ-90-002015-011	04.10140334-9
	LNG Facilities Geologic Hazard Report(2)	USAL-FG-GRHAZ-00-002015-002	04.10140334-10
	LNG Facilities Onshore Groundwater Monitoring Well Installation Report	USAL-FG-GRZZZ-00-002015-007	04.10140334-11
	LNG Facilities Onshore Hydrogeologic Report(3)	USAL-FG-GRZZZ-00-002015-008	04.10140334-12
	LNG Facilities Seismic Engineering Report(4)	USAL-FG-GRZZZ-00-002015-003	04.10140334-13
	LNG Facilities Onshore Integrated Site Characterization and Geotechnical Engineering Report(5)	USAL-FG-GRZZZ-00-002015-009	04.10140334-14
	LNG Facilities Marine Integrated Site Characterization and Geotechnical Engineering Report	USAL-FG-GRZZZ-90-002015-012	04.10140334-15
2016	Project Execution Plan for 2016 Onshore and Marine G&G Program	USAL-FG-GPZZZ-00-002016-001	04.10160001-1
	LNG Facilities Groundwater Quality Sampling and Testing Report – Event 1	USAL-FG-GRZZZ-00-002016-003	04.10160001-2

G&G Program	Report Title (Superseded Reports in Gray)	AKLNG Document Number	Fugro Report Number
2016	LNG Facilities Groundwater Quality Sampling and Testing Report – Event 2	USAL-FG-GRZZZ-00-002016-004	04.10160001-3
	LNG Facilities Aquifer Pump Test Well and Groundwater Observation Well Installation Report	USAL-FG-GRZZZ-00-002016-002	04.10160001-4
	LNG Facilities Onshore Geotechnical Data Report	USAL-FG-GRZZZ-00-002016-001	04.10160001-5
	LNG Facilities Onshore Hydrogeologic Report(3)	USAL-FG-GRZZZ-00-002016-007	04.10160001-8
	LNG Facilities Seismic Engineering Report(4)	USAL-FG-GRZZZ-00-002016-008	04.10160001-9
	Pipeline Marine Shallow Geotechnical Report	USAP-FG-GRZZZ-10-002016-011	04.10160001-10
	LNG Facilities Marine Survey Report	USAL-FG-GRZZZ-90-002016-010	04.10160001-11
	LNG Facilities Onshore Integrated Site Characterization and Geotechnical Engineering Report(5)	USAL-FG-GRZZZ-00-002016-009	04.10160001-12
	LNG Facilities Rigs Tenders Wharf Siltation Survey Report	USAL-FG-CRZZZ-90-002016-001	04.10160001-13

Notes: (1) Fugro Report No. 04.10140334-6 supersedes Fugro Report No. 04.10140094-6.
(2) Fugro Report No. 04.10140334-10 supersedes Fugro Report No. 04.10140094-9.
(3) Fugro Report No. 04.10160001-8 supersedes Fugro Report Nos. 04.10140094-10 and 04.10140334-12.
(4) Fugro Report No. 04.10160001-9 supersedes Fugro Report Nos. 04.10140094-11 and 04.10140334-13.
(5) Fugro Report No. 04.10160001-12 supersedes Fugro Report Nos. 04.10140094-12 and 04.10140334-14.

1.2 GENERAL SCOPE OF WORK

Fugro prepared this report to document the sampling and analyses of groundwater in wells at the Alaska LNG site (Site) near Nikiski, Alaska (see Plate 1 – Vicinity Map). Since 2014, Fugro has completed multiple phases of investigations at the Site including the completion of 130 borings and the installation of twenty-six (26) groundwater monitoring wells, four (4) observation wells, and three (3) aquifer pump test wells. Locations of the borings and wells are depicted on Plate 3 – Plan of Explorations and Plate 4 – Investigation Plan.

The intent of the two water quality monitoring events was to collect baseline water quality data across the Site in support of the project.

For this event, water sampling and testing activities were conducted in accordance with an approved Project Execution Plan (PEP) (USAL-FG-GPZZZ-00-002016-001) and Well Sampling Method Statement (Appendix A). Specific deviations from the PEP, which were discussed with the Client prior to implementation included the following:

- Four (4) Third-Party wells were also sampled during this monitoring event.
- The event was conducted in two phases; one completed in August and one completed in September. The August phase of sampling followed the completion of the Observation Wells, and the data was used to address questions regarding water quality raised during discussions with the Alaska Department of Environmental Conservation (ADEC) for future aquifer pump testing water discharge. The September phase of the event included completing the testing program and allowed for additional testing to be conducted for specific wells to confirm previous results.
- ADEC-approved analytical laboratories were used to provide testing of select analytes in an effort to obtain analytical detection limits below ADEC screening criteria. Testing laboratories utilized during this investigation include SGS North America Inc. (SGS) in Anchorage, Alaska and Test America Laboratories (TA) in Tacoma, Washington or Denver, Colorado. Samples from wells OW-2, OW-4, and TPW-5 which were collected and submitted for Chlorophyll-A analyses were subcontracted by SGS to ALS Laboratory (ALS) in Kelso, Washington.

1.3 LIMITATIONS

Fugro makes no claim or representation concerning any activity or condition falling outside the specified purposes to which this report is directed. We have conducted our work using the standard level of care and diligence normally practiced by recognized engineering firms now performing similar services under similar circumstances. We intend for this report, including all illustrations, to be used in its entirety. The information presented in this report may not apply to locations not explored by borings or areas outside the project boundaries. This information should be made available to prospective users for information only, and not as a warranty of subsurface conditions.

1.4 ELEVATION DATUMS

All coordinates are reported in Zone AK4 North, NAD83 (NSRS 2007), and are in feet. Topographic elevations for onshore areas are referenced to NAVD88. It should be noted that the elevations in the marine report are referenced to Mean Lower Low Water (MLLW). The following conversion formula is used to convert the elevations from MLLW to NAVD88:

- Elevation, in feet (NAVD88) = Elevation, in feet (MLLW) – 7.32 feet

Please note that this conversion formula is only applicable at the Nikiski Area. Elevations presented in this report, and the corresponding illustrations and engineering plates are all referenced to the NAVD88 datum, unless noted otherwise.

2.0 GROUNDWATER SAMPLING AND TESTING ACTIVITIES

2.1 SAMPLING ACTIVITIES

On August 8 through 12, 2016, field personnel from Fugro and SLR International Corp (SLR, a subcontractor retained by Fugro to assist with sampling activities) visited the Site to conduct the August phase of groundwater monitoring event. On September 16 through 23, 2016, Fugro and SLR visited the Site to conduct the September phase of the monitoring event. This report presents a summary of the results from both phases of the monitoring event, herein referred to as Event 2. Wells which were sampled during Event 2 are summarized in Table 1, and included nine (9) wells completed into the first water bearing unit below the Site (Water Bearing Unit 1: MW-27B, MW-39B, MW-50B, MW-74B, MW-82B, MW-87B, MW-138B, OW-1, and OW-3), ten (10) wells completed into the second encountered water bearing unit (Water Bearing Unit 2: MW-39A, MW-50A, MW-62A. MW-74A, MW-82A, MW-91A, OW-2, OW-4, APT-1, and APT-2), and one (1) well completed into the third water bearing unit below the Site (Water Bearing Unit 3: APT-3). In addition, four (4) third-party wells were also sampled during this event (PQW-1, TPW-1, TPW-2, and TPW-5). The locations of all wells is shown on Plate 5 – Water Quality Well Sampling Locations – Event 2.

Depth to groundwater data was obtained on September 22, 2016 from all the Site wells by reviewing water level data collected by Micro-Diver water level data logger units previously installed in the wells. Prior to purging and sampling, the depth to groundwater was also measured in all monitoring wells to be sampled using a water level indicator probe. Groundwater depth measurements and elevations are summarized in Table 2.

Industry-standard sampling protocol was employed during Event 2 in accordance with ASTM D5903/4448 and with ADEC guidelines[2]. All wells were purged prior to drawing samples. With the exception of Third-Party well TPW-2, field personnel purged all wells using a low-flow submersible pump, maintaining a pumping rate between 0.1 to 0.5 liters per minute. During purging, water levels were periodically checked with a water level indicator to monitor drawdown. Wells were purged at the low-flow rates while continuously monitoring for changes in water pH, turbidity, dissolved oxygen (DO), conductivity, Oxidation-Reduction Potential (ORP), and temperature using a YSI 556 Multi-meter equipped with a flow-through cell, and a Scientific Micro TPN. Well TPW-2 was purged using the domestic well pump that is installed within the well. The TPW-2 well pump was activated and allowed to run for about 24 minutes, while obtaining water quality parameters. Water quality field parameters are summarized in Table 3.

Except for well TPW-2, once water quality parameters stabilized, purging was stopped, and water samples were obtained using low-flow pumping methods. Groundwater was collected from well TPW-2 through the existing hose connected to the well. Groundwater samples were retained in analyte-appropriate containers pre-cleaned by the laboratory in accordance with Environmental Protection Agency (EPA) protocols.

[2] ADEC Division of Spill Prevention and Response, Contaminated Sites Program, Field Sampling Guidance, March 2016. https://dec.alaska.gov/spar/csp/guidance_forms/docs/Field-Sampling-Guidance-Final-5-13-2016.pdf

Duplicate groundwater samples were also collected from randomly selected wells during the sampling event to provide quality assurance (QA) data. The duplicate samples were collected from wells MW-87B, APT-1, and TPW-1.

All sampling containers were uniquely labeled and placed in ice-filled coolers, pending delivery to the testing laboratory. Well sampling forms are presented in Appendix B.

Purge water and other investigation-derived waste liquids were containerized and temporarily stored at the ASRC Rig Tenders yard, until removed and disposed offsite on September 27, 2016. A copy of the non-hazardous waste manifest is presented in Appendix C.

2.2 CHEMICAL AND ANALYTE TESTING PROGRAM

Due to short hold time restrictions for select analytical testing methods, groundwater samples were packed and shipped daily under chain-of-custody documentation to ADEC-approved testing laboratories, SGS in Anchorage, Alaska and/or TA in Tacoma, Washington or Denver, Colorado. Groundwater samples from wells OW-2, OW-4, and TPW-5 which were collected and submitted for Chlorophyll-A analyses were subcontracted by SGS to ALS in Kelso, Washington.

Groundwater samples collected during this event were analyzed for some or all of the parameters summarized by Analytical Suite and Testing Methods in this section (see Table 1 for a listing of which well samples were tested for which analytical suite).

Analytical Suite and Methods

Parameter	Method
BASIC SUITE OF ANALYTES	
Water Quality Suite	
Hardness	SM2340B
Alkalinity	SM21 2320B
Nitrate/Nitrite	SM21 4500NO3-F
Total Dissolved Solids (TDS)	SM21 2340C
Total Suspended Solids (TSS)	SM21 2340D
Turbidity	SM21 2130B
Chloride, Sulfate, Fluoride, Nitrate, Nitrite	EPA 300.0
pH [2]	SM21 4500-H B
Metals (total and dissolved)	
Total and Dissolved Metals – Al, As, Ba, Be, Ca, Cd, Cr, Co, Cu, Fe, K, Pb, Mg, Mn, Mo, Na, Ni, Sb, Se, Tl, V, Zn	EPA 200.8
Total and Dissolved Mercury	EPA 1631E
Organics	
Volatile Organic Compounds	SW8260C
Semi-Volatile Organic Compounds	SW8270D
Petroleum Hydrocarbons	
Gasoline Range Organics	AK101
Diesel Range Organics	AK102
Residual Range Organics	AK103
ADDITIONAL ANALYTES ADDED TO THIS EVENT	
Water Quality Suite	
Total Solids	SM21 2540B
Chemical Oxygen Demand	EPA 410.4
Ammonia-N	SM21 4500-NH3 G
Total Kjeldahl Nitrogen	SM21 4500-N D
Total Phosphorus/Ortho phosphate	SM21 4500P-B,E
Total Organic Carbon/Dissolved Organic Carbon	SM21 5310B
Fecal Coliform	SM21 9222D
Chlorophyll A	SM21 10200H
Organics	
Volatile Organic Compounds	SW8011, LL VOC [1]
Pesticides	SW8270D SIM
Polychlorinated Biphenyls	SW8082A

Notes:
1 = Analytes 1,2,3-Trichloropropane and 1,2-Dibromoethane only
2 = Field pH values measured within about 15 minutes of collection are judged, in the environmental assessment practice, to be more representative than those measured in the laboratory. Field and laboratory measured pH values are both presented in Table 3.

3.0 SUBSURFACE CONDITIONS

Three distinct water bearing zones or units have been identified during the previous 2014 and 2015 field investigations. Activities completed between 2014 and 2016 included the installation of wells within all three water bearing units, of which select wells were included during this monitoring event.

The first encountered water bearing unit (Water Bearing Unit 1) is found within the Killey geologic unit, is unconfined, and was observed across the Site at elevations ranging between 99.21 feet (NAVD88) (at the location of well MW-82B) and 71.23 feet (NAVD88) (at the location of well MW-86BA). This groundwater unit was observed present at shallower depths in proximity to surface water bodies.

Groundwater elevations in Water Bearing Unit 1 wells located near the western face of the shoreline bluff are lower than groundwater elevations measured in wells located upgradient of the bluff face. As a result, four (4) of the wells (MW-62B, MW-77B, MW-91B, and MW-112B) targeting Water Bearing Unit 1 remain dry, consistent with observations made following well installation. The four dry wells are located in the western, coastal portion of the Site, and are dry as they were not seated deep enough into the Killey-Moosehorn transition zone.

Water Bearing Units 2 and 3 are present within the Moosehorn geologic unit. Water Bearing Unit 2 is semi-confined, and lies immediately beneath the Killey-Moosehorn transition zone. The potentiometric (i.e. piezometric) surface (the surface to which water in a confined aquifer will rise within a well) elevation in Water Bearing Unit 2 was observed ranging between 94.84 feet (NAVD88) (at the location of well MW-82A) and 15.71 feet (NAVD88) (at the location of well MW-91A). This elevation range is reflective of conditions at the most upgradient and most downgradient locations, respectively. Water Bearing Unit 3 is confined and the potentiometric surface was observed at 45.86 feet (NAVD88) at the location of well APT-3.

The wells installed at the Site cover a large spatial area, and top of well casing elevations vary from 97.75 feet (NAVD88) at well MW-39B in the southern portion of the Site to 136.24 feet (NAVD88) at well MW-14B about 5,000 feet to the north. Graphical depictions of the variation in groundwater elevations within the wells, as recorded by the Micro-Divers are presented on Plates 6 through 8. It should be noted that a 7.1M earthquake occurred in the Site vicinity on January 24, 2016. Groundwater levels and/or the well casing itself at select well locations showed a response to the earthquake as captured by the Micro-Divers. The top of casing elevations were not re-surveyed following the earthquake event.

We also note that groundwater within well MW-98B completed in Water Bearing Unit 1 was measured at 91.30 feet (NAVD88) during this event, which represents a higher elevation than groundwater levels within nearby wells. With the exception of the period between November 2015 and March 2016, groundwater within this well has measured anomalously high compared to the other wells since installation. Between November 2015 and March 2016, this well showed a decrease in groundwater elevation which may be attributed to local groundwater use. The exact cause of the anomalous changes in groundwater elevation at this well is unknown. The Micro-Diver in this well also stopped transmitting between the period of April 12 to September 22, 2016, and was subsequently changed out.

Graphical depictions of the groundwater contours of Water Bearing Units 1 and 2 for this event are presented as Plates 9 and 10. In general, groundwater flow within both water bearing units is in a westerly/southwesterly direction toward Cook Inlet. Groundwater gradients do fluctuate in both water bearing units as the water flows from east to west. The groundwater gradient within Water Bearing Unit 1 ranges between 0.008 to 0.01 feet per foot (ft/ft) and ranges between 0.008 to 0.06 ft/ft within Water Bearing Unit 2. Groundwater contours are not presented for Water Bearing Unit 3 as there is only one well installed within this unit.

4.0 DATA QUALITY ASSESSMENT

For this event, a quality assurance program was implemented which evaluated project administration, sampling, quality control, and data review. The analytical laboratory data was reviewed for consistency with project specific requirements[3], *ADEC Technical Memorandum, Environmental Laboratory Data and Quality Assurance* requirements, analytical method criteria, and internal laboratory criteria. The data review process included the following:

- Review of Chain of Custody (COC) records for completeness, signatures, and dates;
- Identification of any sample receipt or preservation anomalies that could impact data quality;
- Verification that quality control blanks (field blanks, equipment blanks, trip blanks, etc.) were properly prepared, identified, and analyzed;
- Evaluation of whether laboratory reporting limits met project goals;
- Review of calibration verification recoveries to confirm that the laboratory did not identify any Calibration Verifications (CCV) recovery outliers or other calibration related criteria outside applicable acceptance limits;
- Verification that surrogate analyses were within recovery acceptance limits;
- Verification that Laboratory Control Samples (LCS), Laboratory Control Sample Duplicates (LCSD), Matrix Spike (MS), and Matrix Spike Duplicates (MSD) were within recovery acceptance limits;
- Evaluation of the result relative percent difference between primary and duplicate field samples, LCS/LCSD, MS/MSD, and laboratory duplicates; and
- Providing an overall assessment of laboratory data quality and qualifying sample results if necessary.

SGS and TA, the chemical testing laboratories which conducted the testing for this event, each maintains an internal quality assurance program and standard operating procedures. SLR completed Quality Assurance Reviews (QARs) for the analytical data collected in August 2016, and two QARs for the September 2016 analytical data. SLR's findings are presented in *Laboratory Data Quality Assurance Review, Groundwater Monitoring Event A: August 2016, Nikiski, Alaska, Alaska LNG*, dated November 2016; *Laboratory Data Quality Assurance Review, Groundwater Monitoring Event 2: September 2016,*

[3] Method Statement, Alaska LNG Well Sampling, Issue 1 Rev 1, dated April 28, 2016 (presented in Appendix A).

Nikiski, Alaska, Alaska LNG, dated November 2016; and *Laboratory Data Quality Assurance Review, Groundwater Monitoring Event 2: September 2016, Test America Laboratory Reports, Nikiski, Alaska, Alaska LNG*, dated November 2016; (Appendix D) and are briefly summarized below.

4.1 QAR EVENT A: AUGUST 2016

For this event, samples were analyzed by SGS or by ALS (Chlorophyll-A analysis on samples from wells OW-2, OW-4, and TPW-5).

SLR adhered to required and established sampling and chain-of-custody (COC) protocols as observed in the field by Fugro and by review of all field documents prepared by SLR. It was noted that for one of the laboratory work orders, samples included on one COC were shipped in multiple coolers. The laboratory did not flag any of these samples as being received at a temperature that would suggest sample integrity was a concern. However, subsequent COC documentation included one COC for each cooler. This change allowed for better monitoring of the temperatures of each cooler.

Chlorophyll-A analytical testing documentation regarding samples from wells OW-2, OW-4, and TPW-5 (subcontracted to ALS) showed notations on the laboratory's sample receipt forms that COCs were not included in the coolers with the samples. The samples were transferred by SGS at the Anchorage airport from cargo shipper Ravn Air directly to Alaska Airlines for subsequent shipment to ALS within a limited timeframe due to a short method hold time and shipping logistics. ALS was aware of the samples arrival per e-mail notification by SGS which included the emailed COCs. As these samples were received at ALS with no noted discrepancies, we judge that the data collection methods were sufficient to provide representative samples for testing.

For non-detect results, limits of detection (LODs) were compared to applicable cleanup levels for the Site. For groundwater samples, LODs were compared to 18 AAC 75.345, Table C, groundwater cleanup levels. Table 6 of the QAR for Event A: August 2016 shows results of select non-detected analytes with LODs and Detection Limits (DL) not meeting project limits. All affected analytes were either select PCBs by SW8082, VOCs by SW8260, or SVOCs by SW8270D. For these affected analytes, typical methodology limitations caused the LOD and DL to not meet project goals, but in Fugro and SLR's opinion the data is still useable for this investigation. Additional laboratory testing was performed during the September 2016 sampling event to improve LOD compliance. Affected analytes are highlighted in Tables 5 through 11.

Based on these QAR findings, we judge that the data from this event is valid and can be relied upon for the purpose of this investigation.

4.2 QAR EVENT 2: SEPTEMBER 2016

For samples collected in September 2016, alternative analytical testing options were utilized for select analytes to improve LOD compliance. As a result, samples were analyzed by either SGS or TA based upon their limits of detection capabilities.

SLR generally adhered to required and established sampling and COC protocols as observed in the field by Fugro and by review of all field documents prepared by SLR with the exception of one work order. For that one work order, only two pages of the three page COC were signed as "Relinquished By" by SLR personnel. Samples were in SLR custody with the exception of shipping, from

the time of collection until delivery to the laboratory. All samples were analyzed by the methods and for the analytes intended and requested. In our opinion, the data collection methods were sufficient to provide representative samples for testing.

For non-detect results, LODs were compared to 18 AAC 75.345, Table C, groundwater cleanup levels. Table 6 of the Event 2: September 2016 QAR and Table 4 of the Event 2: September 2016, Test America Laboratory Reports QAR shows results of select non-detected analytes with LODs and DLs not meeting project limits. All affected analytes were either PCBs by SW8082, VOCs by SW8260, or SVOCs by SW8270D. It should be noted that utilizing alternative analytical testing laboratories was successful in improving overall LOD compliance. Affected analytes are highlighted in Tables 5 through 11.

Based on these QAR findings, we judge that the data from this event is valid and can be relied upon for the purpose of this investigation.

5.0 RESULTS OF GROUNDWATER QUALITY ANAYLSIS

Groundwater analytical results are summarized in Tables 5 through 11, and the analytical laboratory reports are presented in Appendix E. Table 4 is provided as a cross-reference between the site Well Identifications (ID) and laboratory and field sample IDs. Analytical results for well samples obtained were compared to ADEC groundwater cleanup levels from 18 AAC.75 Table C (May 8, 2016). Table 5 provides a summary of all well data. Tables 6, 7, and 8 provide a summary of analyses for wells located in Water Bearing Units 1, 2, and 3, respectively. Analytical results for samples collected from the Third-Party, OW, and APT wells were also compared to most conservative of ADEC's Water Quality Standards for Designated Uses criteria from 18 AAC.70 (February 19, 2016), and data is provided in Tables 9 and 10. Table 11 provides a summary of analytical results for samples collected from the former quarry area.

To provide a discussion of the water quality data, summaries of select data results compared within various well groupings are presented below.

5.1 WATER BEARING UNIT 1

No gasoline range organics, PCBs, pesticides, fecal coliform, Chlorophyll-A, or VOCs (including trichloroethene, see Plate 12) were detected during this monitoring event.

With the exception of bis(2-ethylhexyl)phthalate, no SVOCs were detected in any of the nine (9) wells sampled during this event. Analyses detected 0.0077 milligrams per liter (mg/L) of bis(2-ethylhexyl)phthalate in well MW-74B, exceeding the ADEC Table C groundwater cleanup level of 0.006 mg/L.

Detected petroleum hydrocarbon concentrations were well below respective ADEC Table C groundwater cleanup levels. Analyses detected diesel range organics in six (6) of the nine (9) wells (MW-27B, MW-39B, MW-50B, MW-74B, MW-82B, MW-87B) sampled at concentrations ranging between 0.278 mg/L (MW-74B) and 0.447 mg/L (MW-50B). Residual range organics were also detected in two (2) out of nine (9) wells at concentrations of 0.155 (OW-3) and 0.16 mg/L (OW-1).

Detected total and dissolved metal concentrations were below respective ADEC Table C groundwater cleanup levels, where established. Total arsenic concentrations ranged from 0.00073 mg/L (MW-50B) to 0.00336 mg/L (OW-3, see Plate 11). For OW-1 and OW-3, detected concentrations of select total and/or dissolved metals including aluminum, chromium, copper, iron, manganese, and/or nickel exceeded respective ADEC Water Quality Standards for Designated Uses.

pH values measured in the field (see Plate 13) varied from 4.82 to 6.34 Standard Units (SU).

No ADEC Table C groundwater cleanup levels have been established for the water quality parameters listed below:

- Chloride in all nine wells varying from 4.07 mg/L to 115 mg/L (Highest concentration detected in the sample from MW-39B.)
- Fluoride in all nine wells varying from 0.098 mg/L to 0.126 mg/L (OW-3)
- Alkalinity in all nine wells varying from 12 mg/L to 70.9 mg/L (OW-1)
- Hardness as $CaCO_3$ in all nine wells varying from 18.5 mg/L to 138 mg/L (MW-39B)

5.2 WATER BEARING UNIT 2

No PCBs, pesticides, or SVOCs were detected in the ten (10) wells sampled during this monitoring event.

Analyses detected fecal coliform in one sample (OW-2) at a concentration of 4.9 Col/100mL, exceeding the ADEC Water Quality Standards for designated uses of 1.0 Col/100mL. No Chlorophyll A was detected in any of the samples analyzed.

With the exception of trichloroethene, toluene, and chloromethane, no other VOCs were detected in any of the ten wells sampled during this event. Analyses detected trichloroethene in three (3) of ten (10) wells (OW-2, OW-4, and APT-1) at concentrations ranging between 0.00047 mg/L and 0.057 mg/L (see Plate 15), exceeding ADEC Table C groundwater cleanup level of 0.005 mg/L in OW-4 and APT-1. Analyses detected toluene at 0.0027 mg/L (APT-2) and chloromethane at a concentration of 0.00039 mg/L (OW-2 and OW-4), all below ADEC Table C groundwater cleanup criteria.

Detected petroleum hydrocarbon concentrations were well below respective ADEC Table C groundwater cleanup levels. Analyses detected gasoline range organics in one (1) of the ten (10) wells sampled (APT-1) at a concentration of 0.0497 mg/L. Diesel range organics were detected in eight (8) out of ten (10) samples (from wells MW-39A, MW-50A, MW-62A, MW-74A, MW82-A, OW-4, APT-1 and APT-2) at concentrations ranging between 0.24 mg/L and 0.486 mg/L. Residual range organics were detected in two (2) of the ten (10) wells at concentrations of 0.192 mg/L (OW-2) and 0.476 mg/L (OW-4), all below ADEC Table C groundwater cleanup criteria.

Various total metals were detected in all ten (10) wells sampled. With the exception of arsenic, detected total metals were well below respective ADEC Table C groundwater cleanup levels, where established. Analyses detected arsenic at concentrations ranging from 0.00883 mg/L to 0.131 mg/L (see Plate 14), exceeding the ADEC Table C groundwater cleanup level of 0.01 mg/L in MW-39A, MW-50A, MW-62A, MW-74A, OW-2, OW-4, APT-1, and APT-3. For OW-2, OW-4, APT-1, and APT-3, detected concentrations of select total and/or dissolved metals including aluminum, antimony, arsenic,

chromium, copper, iron, lead, manganese, nickel, vanadium, and/or zinc exceeded respective ADEC Water Quality Standards for designated uses.

pH values measured in the field (see Plate 16) varied from 7.08 to 8.67 SU.

No ADEC Table C groundwater cleanup levels have been established for the water quality parameters listed below:

- Chloride in all ten wells varying from 4.22 mg/L to 19.7 mg/L (APT-1)
- Fluoride in all ten wells varying from 0.13 mg/L to 0.345 mg/L (OW-2)
- Alkalinity in all ten wells varying from 70.3 mg/L to 106 mg/L (MW-50A)
- Hardness as $CaCO_3$ in all ten wells varying from 13.4 mg/L to 92.8 mg/L (MW-50A)

5.3 WATER BEARING UNIT 3

No gasoline range organics, PCBs, pesticides, fecal coliform, Chlorophyll-A, or SVOCs were detected in well APT-3 during this monitoring event.

With the exception of trichloroethene, no other VOCs were detected during this event. Analyses detected 0.015 mg/L of trichloroethene (see Plate 18), exceeding the ADEC Table C groundwater cleanup level of 0.005 mg/L.

Detected petroleum hydrocarbon concentrations were well below respective ADEC Table C groundwater cleanup levels. Analyses detected diesel range and residual range organics at concentrations of 0.518 mg/L and 0.165 mg/L, respectively.

Detected concentrations of select total and/or dissolved metals including, aluminum, arsenic, boron, chromium, copper, iron, lead, manganese, molybdenum, nickel, and/or zinc exceeded respective ADEC Water Quality Standards for designated uses. Total arsenic was detected at a concentration of 0.0798 mg/L (see Plate 17), exceeding ADEC screening criteria of 0.01 mg/L.

pH was measured in the field (see Plate 19) at 9.03 SU.

No ADEC Table C groundwater cleanup levels have been established for the water quality parameters listed below:

- Chloride at 41.6 mg/L
- Fluoride at 3.03 mg/L (exceeds ADEC Water Quality Standard of 1 mg/L)
- Alkalinity at 509 mg/L
- Total Dissolved Solids at 709 mg/L (exceeds ADEC Water Quality Standard of 500 mg/L)
- Hardness as $CaCO_3$ at 15.2 mg/L

5.4 THIRD-PARTY WELLS

No PCBs, pesticides, fecal coliform, Chlorophyll A, or SVOCs were detected in the third-party wells sampled during this monitoring event.

Analyses detected select VOCs including benzene, chloromethane, ethylbenzene, and xylenes in two (2) of the four (4) wells (PQW-1 and TPW-5) analyzed. With the exception of benzene, detected VOCs were below respective ADEC Water Quality Standards for Designated Uses. Benzene was detected in well PQW-1 at 0.0066 mg/L during the September 2016 sampling event, exceeding the ADEC Table C groundwater cleanup level of 0.005 mg/L.

Gasoline range organics were detected in well PQW-1 at 0.0359 mg/L. Analyses detected diesel range organics in all four (4) wells sampled at concentrations ranging from 0.228 mg/L (TPW-2) to 0.421 mg/L (TPW-5). Residual range organics were only detected in TPW-5 at a concentration of 0.326 mg/L. All detected hydrocarbons were well below respective ADEC Water Quality Standards for Designated Uses.

Various total and dissolved metals were detected in all four (4) wells sampled. With the exception of aluminum, arsenic, copper, iron, lead, manganese, and zinc, detected total metals were below respective ADEC Water Quality Standards for Designated Uses, where established. Analyses detected arsenic from 0.000302 mg/L (TPW-1) to 0.0149 mg/L (TPW-2), exceeding the ADEC Water Quality Standards for Designated Uses of 0.01 mg/L in TPW-2. Copper ranged from 0.00021 mg/L to 0.0247 (PQW-1); lead ranged from 0.00818 mg/L to 0.0265 mg/L (TPW-5); manganese ranged from 0.088 mg/L (TPW-2) to 0.751 mg/L (PQW-1); and zinc ranged from 0.00113 mg/L to 5.25 mg/L (TPW-5). With the exception of dissolved arsenic, lead, and zinc, detected total metals were well below respective ADEC Water Quality Standards for Designated Uses, where established. Dissolved arsenic ranged from 0.000418 mg/L to 0.0159 mg/L, exceeding ADEC Water Quality Standards for Designated Uses criteria in TPW-2; dissolved lead ranged from 0.0000328 mg/L to 0.00278 mg/L, exceeding ADEC Water Quality Standards for Designated Uses criteria in TPW-5; and dissolved zinc ranged from 0.00168 mg/L to 0.483 mg/L, exceeding ADEC Water Quality Standards for Designated Uses criteria in TPW-5.

pH values measured in the field varied from 6.83 to 8.68 SU.

No ADEC Table C groundwater cleanup levels have been established for the water quality parameters listed below:

- Chloride in four wells varying from 4.24 mg/L to 17.6 mg/L (PQW-1)
- Fluoride in four wells varying from 0.094 mg/L to 0.145 mg/L (TPW-1)
- Alkalinity in all four wells varying from 36.3 mg/L to 75.9 mg/L (TPW-2)
- Hardness as $CaCO_3$ in two wells at 26.8 mg/L to 73.2 mg/L (TPW-2)
- Turbidity in all four wells varying from 0.7 to 90 Nephelometric Turbidity Units (NTU)
- Total Dissolved Solids ranged from 30 to 140 mg/L (TPW-5).
- Total Suspended Soilds ranged from 0.7 to 75 mg/L (TPW-5).

5.5 AQUIFER PUMP TEST WELLS AND OBSERVATION WELLS

No PCBs, pesticides, fecal coliform, Chlorophyll A, or SVOCs were detected in the four OW or three APT wells sampled during this monitoring event.

With the exception of trichloroethene, detected VOCs were below respective ADEC Water Quality Standards for Designated Uses criteria. Analyses detected trichloroethene at concentrations ranging from 0.00047 mg/L (OW-2) to 0.057 mg/L (OW-4), exceeding the ADEC Water Quality Standard for Designated Use criteria of 0.005 mg/L in samples collected from OW-4, APT-1, APT-2, and APT-3.

Gasoline range organics were detected in well APT-1 at 0.0497 mg/L. Analyses detected diesel range organics in all three APT wells and in OW-4 at concentrations ranging from 0.24 mg/L (APT-2) to 0.518 mg/L (APT-3). Residual range organics were detected in all four OW wells and in APT-3 at concentrations ranging from 0.155 mg/L to 0.476 mg/L. All detected hydrocarbons were well below respective ADEC Water Quality Standards for Designated Uses.

Various total metals were detected in all wells sampled. Detected concentrations of most total metals, including aluminum, antimony, arsenic, boron, chromium, copper, iron, lead, manganese, molybdenum, nickel, and vanadium, exceeded ADEC Water Quality Standards for Designated Uses in most wells. Detected total arsenic concentrations varied between 0.00131 mg/L and 0.131 mg/L, exceeding ADEC Water Quality Standards for Designated Use criteria of 0.01 mg/L in samples obtained from OW-2, OW-4, and APT-1 through APT-3. For OW-2, OW-4, APT-1, APT-2, and APT-3, detected concentrations of select dissolved metals including arsenic, copper, lead, and zinc also exceeded respective ADEC Water Quality Standards for Designated Uses.

For the water quality testing suite, testing reported the following:

- Chloride in seven wells varying from 5.67 mg/L to 41.6 mg/L (APT-3)
- Fluoride in seven wells varying from 0.112 mg/L to 3.03 mg/L (exceeds ADEC Water Quality Standard of 1 mg/L in APT-3)
- Alkalinity in all four wells varying from 60 mg/L to 509 mg/L (APT-3)
- Total Dissolved Solids in all seven wells varying from 74 mg/L to 709 mg/L (exceeds ADEC Water Quality Standard of 500 mg/L in APT-3)
- Hardness as CaCO3 in all seven wells varying from 15.2 mg/L to 91.2 mg/L (APT-1)

5.6 CONDITIONS IN THE VICINITY OF THE FORMER QUARRY PIT

Groundwater monitoring wells MW-27B and MW-87B, and the three Third-party wells (PQW-1, TPW-1, and TPW-2) are located in the general vicinity (within 500 feet) of the former quarry pit. Data from these wells are used to evaluate conditions in the vicinity of the former quarry.

During this event, petroleum hydrocarbons including gasoline range (0.359 mg/L, PQW-1) and diesel range (up to 0.354 mg/L, MW-87B) were identified in groundwater samples collected within the quarry area. Analyses also detected the presence of benzene up to 0.0066 mg/L, exceeding ADEC's Table C groundwater cleanup level of 0.005 mg/L.

Various total metals were detected in all wells located in the vicinity of the quarry. With the exception of arsenic, detected total metals were well below respective ADEC Table C groundwater cleanup levels, where established. Analyses detected arsenic up to 0.0149 mg/L, exceeding ADEC's Table C groundwater cleanup level and APT General Discharge Permit criteria of 0.01 mg/L in TPW-2.

Various dissolved metals were also detected in the two monitoring and three third-party wells at concentrations below respective ADEC Table C groundwater cleanup levels, where established.

For the water quality testing suite, testing reported the following:

- Chloride up to 26.9 mg/L (MW-27B)
- Fluoride up to 0.145 mg/L (TPW-2)
- Alkalinity up to to 75.9 mg/L (TPW-2)
- Hardness as $CaCO_3$ up to 73.2 mg/L (TPW-2)

6.0 CONCLUSIONS

Groundwater quality at the Site is affected by natural and anthropogenic processes. It is difficult to draw meaningful conclusions with just two data sets (Event 1 - April and Event 2 - August/September 2016), however, differences in water quality do exist between water bearing units. We provide a general discussion of water quality trends observed during the two monitoring events below.

6.1 COMPARISON OF WATER QUALITY DATA BETWEEN WATER BEARING UNITS

In general, no PCBs or pesticides were identified in any of the groundwater samples analyzed from the three water bearing units underlying the site. Between the two monitoring events, gasoline range, diesel range, and residual range organics have been detected within all three water bearing units, at similar concentrations, and below ADEC groundwater cleanup levels.

With the exception of bis(2-ethylhexyl)phthalate in well MW-74B, detected analytes in groundwater samples within Water Bearing Unit 1 have all been below ADEC groundwater cleanup levels. During the September monitoring event, bis(2-ethylhexyl)phthalate was detected in MW-74B at 0.0077 mg/L, exceeding the ADEC groundwater cleanup level of 0.006 mg/L.

Groundwater within Water Bearing Units 2 and 3, including groundwater in the vicinity of the quarry and the APT wells, has been shown to contain total and dissolved metals and select VOCs at higher concentrations than values detected in Water Bearing Unit 1 wells. Of particular note is the presence of total arsenic and trichloroethene concentrations that were detected at an order of magnitude higher in Water Bearing Units 2 and 3 wells than in Water Bearing Unit 1 wells. Detected concentrations of these analytes in select wells screened within Water Bearing Units 2 and 3 exceed ADEC groundwater cleanup levels, whereas these analytes, if detected, are below ADEC levels in Water Bearing Unit 1. Additionally, Water Bearing Units 2 and 3 also have higher pH levels than Water Bearing Unit 1. For comparison purposes, arsenic, trichloroethene, and pH values (as measured in the field) are presented by Water Bearing Unit on Plates 11 through 19, which contain data for both Events 1 and 2. Differences between the Water Bearing Units for a few of the major analytes are summarized in the following table:

Comparison of Major Analytes by Water Bearing Unit

Analyte	Water Bearing Unit 1	Water Bearing Unit 2	Water Bearing Unit 3
Total Arsenic	0.000713 mg/L to 0.00336 mg/L	0.00883 mg/L to 0.0474 mg/L	0.0798 mg/L
Trichloroethene	Not Detected (ND)	ND to 0.057 mg/L	0.015 mg/L
pH	4.82 to 7.30 SU.	7.08 to 8.67 SU	9.03 SU
Alkalinity	12 mg/L to 70.9 mg/L	70.3 mg/L to 106 mg/L	509 mg/L

Note: Results from Third-Party wells are not included in the data comparison presented above as it is not known what water bearing unit the wells are screened within.

Cations and anions from wells sampled during the two monitoring events were plotted on Piper Diagrams by Water Bearing Unit wells (see Plates 20 through 22). Inferences regarding water type can be drawn by reviewing the Piper Diagrams. Findings are summarized below:

- With the exception of well MW-39B, water within Water Bearing Unit 1 is calcium bicarbonate rich, indicative of a shallow fresh water environment.
- Water in the vicinity of well MW-39B is slightly more calcium sulfate rich than other wells screened within Water Bearing Unit 1.
- With the exception of water in the vicinity of wells MW-50A, MW-82A, and OW-2, groundwater within Water Bearing Unit 2 is also calcium bicarbonate rich, indicative of a shallow fresh water environment.
- Water in the vicinity of wells MW-50A, MW-82A, and OW-2 tends to be more sodium bicarbonate rich, which may be indicative of a deep groundwater environment influenced by ion exchanges.
- Water in the vicinity of APT-3, screened within Water Bearing Unit 3, tends to be more sodium bicarbonate rich, indicative of a deep groundwater environment influenced by ion exchanges.

6.2 COMPARISION OF WATER QUALITY DATA BETWEEN MONITORING EVENTS

For most analytes, results were similar between the two events. However, significant fluctuations of hydrocarbon concentrations were noted between the events in April and August/September 2016. The cause of the fluctuations is unknown. Gasoline range organics were detected in wells MW-39A and MW-39B in the April event, but were not detected in those wells during the August/September event. Additionally, diesel range organics were identified in ten (10) wells during the August/September event, compared to only one (1) well during the April 2016 event. Fluctuations were also noted for residual range organics between the two events, and appear to be independent of water bearing unit.

Where ADEC screening criteria exceedances were noted in April (total arsenic and benzene), similar exceedances and similar concentrations were also noted during the August/September event.

7.0 RECOMMENDATIONS

Monitoring events conducted to date have identified a potential concern with respect to water quality in the area of the former quarry where aquifer pump test water is being considered to be discharged. Groundwater in the area of the quarry and in the observation and aquifer pump test wells has been shown to contain total arsenic and/or benzene at concentrations above ADEC's screening criteria. Additionally, trichloroethene has been detected in water sampled from aquifer pump test wells APT-1 and APT-3. This and other differences in quality, including higher arsenic, pH, and alkalinity in the deeper Water Bearing Units 2 and 3, compared to water samples from Water Bearing Unit 1, need to be considered when evaluating the overall effect of discharging water from one water bearing unit into another. Additional monitoring is required to provide comparative data for continued trend analysis in order to facilitate a formal evaluation of groundwater conditions within the aquifers underlying the site.

8.0 REFERENCES

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TABLES

Table 1 - Groundwater Quality Sampling Program
Alaska LNG
Nikiski, AK

Water Bearing Unit	Well Id	April 2016 Sampling Event (Event 1)	August 2016 Sampling Event (Event A)	September 2016 Sampling Event (Event 2)
Water Bearing Unit 1	MW-27B	**X1**	not sampled	**X**
	MW-39B	**X**	not sampled	**X**
	MW-50B	**X**	not sampled	**X**
	MW-74B	**X**	not sampled	**X**
	MW-82B	**X**	not sampled	**X**
	MW-87B	**X1**	not sampled	**X**
	MW-138B	not sampled	not sampled	**Z**
	OW-1	not available	**X**	**Y**
	OW-3	not available	**X**	**Y**
Water Bearing Unit 2	MW-39A	**X**	not sampled	**X**
	MW-50A	**X**	not sampled	**X**
	MW-62A	**X**	not sampled	**X**
	MW-74A	**X**	not sampled	**X**
	MW-82A	**X**	not sampled	**X**
	MW-91A	**X**	not sampled	**X**
	OW-2	not available	**Z**	**Y**
	OW-4	not available	**Z**	**Y**
	APT-1	not available	not available	**Z**
	APT-2	not available	not available	**Z**
Water Bearing Unit 3	APT-3	not available	not available	**Z**
Third-Party Wells†	TPW-1	**X1**	not sampled	**X**
	TPW-2	**X1**	not sampled	**X**
	TPW-5	not sampled	**Z**	**W**
	PQW-1	**X1**	not sampled	**X**

Notes:

X = Initial basic suite of analytes as shown in the table presented in Section 2.2 of the report.

1 = Samples additionally analyzed and reported per ADEC requirements for TAH (BTEX) and TAqH (PAH).

Z = Additional analytes added to the testing program as shown in the table presented in Section 2.2 of the report.

Y = Select additional analyte testing proposed including select chlorinated hydrocarbons, SVOC and 1,2,3-trichloropropane, and 1,2-Dibromoethane with lower detection limits, and Arsenic

W= Select additional analyte testing including SVOC with lower detection limits and Arsenic

† = Water Bearing Unit Unknown

Table 2 - Depth to Water Measurements
Alaska LNG
Nikiski, AK

Unit	Well ID	Date	Data Collector[‡]	Well Depth (Feet)	TOC (Feet NAVD88)	Depth to Water (Feet BTOC)	Groundwater Elevation [1] (Feet NAVD88)
Water Bearing Unit 1	MW-14B	11/7/2015	Micro Diver	55	136.24	41.60	94.64
		4/7/2016	Micro Diver			43.39	92.85
		9/22/2016	Micro Diver			44.60	91.64
	MW-27B	11/7/2015	Micro Diver	56	126.79	34.17	92.62
		4/7/2016	Micro Diver			33.70	93.09
		4/19/2016	SLR			33.62	93.17
		9/16/2016	SLR			36.60	90.19
		9/22/2016	Micro Diver			34.25	92.54
	MW-39B	11/7/2015	Micro Diver	39	97.75	25.24	72.51
		4/7/2016	Micro Diver			24.40	73.35
		4/21/2016	SLR			24.13	73.62
		9/19/2016	SLR			24.93	72.82
		9/22/2016	Micro Diver			25.13	72.62
	MW-50B	11/7/2015	Micro Diver	55	134.67	44.75	89.51
		4/7/2016	Micro Diver			43.37	91.30
		4/20/2016	SLR			43.34	91.33
		9/18/2016	SLR			45.20	89.47
		9/22/2016	Micro Diver			45.20	89.47
	MW-62B	11/7/2015	Micro Diver	46.5	130.44	Dry	Dry
		4/7/2016	Micro Diver			Dry	Dry
		9/22/2016	Micro Diver			Dry	Dry
	MW-74B	11/7/2015	Micro Diver	80.5	114.38	41.06	73.33
		4/7/2016	Micro Diver			40.45	73.93
		4/22/2016	SLR			40.48	73.90
		9/17/2016	SLR			41.51	72.87
		9/22/2016	Micro Diver			41.46	72.92
	MW-77B	11/7/2015	Micro Diver	60.5	119.04	Dry	Dry
		4/8/2016	Micro Diver			Dry	Dry
		9/22/2016	Micro Diver			Dry	Dry
	MW-80B	11/7/2015	Micro Diver	60.9	133.64	48.86	84.79
		4/7/2016	Micro Diver			47.72	85.92
		9/22/2016	Micro Diver			48.95	84.69
	MW-82B	11/7/2015	Micro Diver	51.3	122.45	22.93	99.50
		4/7/2016	Micro Diver			22.62	99.83
		4/20/2016	SLR			22.33	100.12
		9/16/2016	SLR			23.36	99.09
		9/22/2016	Micro Diver			23.24	99.21
	MW-86B	11/7/2015	Micro Diver	41	127.34	Dry	Dry
		4/7/2016	Micro Diver			Dry	Dry
	MW-86BA	9/22/2016	Micro Diver	62	126.98	55.75	71.23
	MW-87B	11/7/2015	Micro Diver	51	109.85	30.14	79.72
		4/7/2016	Micro Diver			29.38	80.47
		4/19/2016	SLR			29.38	80.47
		9/18/2016	SLR			30.24	79.61
		9/22/2016	Micro Diver			30.29	79.56
	MW-91B	11/7/2015	Micro Diver	63.6	119.87	Dry	Dry
		4/7/2016	Micro Diver			Dry	Dry
		9/22/2016	Micro Diver			Dry	Dry
	MW-98B	11/7/2015	Micro Diver	42	125.22	35.38	89.83
		4/7/2016	Micro Diver			35.22	90.00
		9/22/2016	Micro Diver			33.92	91.30
	MW-112B	11/7/2015	Micro Diver	61	118.67	Dry	Dry
		4/7/2016	Micro Diver			Dry	Dry
		9/22/2016	Micro Diver			Dry	Dry
	MW-138B	11/7/2015	Micro Diver	43.3	106.22	23.29	82.89
		4/7/2016	Micro Diver			22.57	83.65
		9/21/2016	SLR			23.50	82.72
		9/22/2016	Micro Diver			23.38	82.84
	OW-1	8/10/2016	Fugro	79.1	112.23	15.25	96.98
		9/22/2016	SLR			15.10	97.13
		9/22/2016	Micro Diver			15.29	96.94
	OW-3	8/10/2016	Fugro	67	131.26	34.62	96.64
		9/22/2016	SLR			34.42	96.84
		9/22/2016	Micro Diver			34.26	97.00

Table 2 - Depth to Water Measurements
Alaska LNG
Nikiski, AK

Unit	Well ID	Date	Data Collector‡	Well Depth (Feet)	TOC (Feet NAVD88)	Depth to Water (Feet BTOC)	Groundwater Elevation [1] (Feet NAVD88)
Water Bearing Unit 2	MW-39A	11/7/2015	Micro Diver	146	97.99	65.15	32.64
		4/7/2016	Micro Diver			64.86	33.13
		4/21/2016	SLR			65.00	32.99
		9/16/2016	SLR			65.42	32.57
		9/22/2016	Micro Diver			64.51	33.48
	MW-50A	11/7/2015	Micro Diver	145	135.12	67.09	68.03
		4/7/2016	Micro Diver			65.64	69.48
		4/20/2016	SLR			65.60	69.52
		9/18/2016	SLR			66.93	68.19
		9/22/2016	Micro Diver			66.12	69.00
	MW-62A	11/7/2015	Micro Diver	143.4	129.92	81.30	48.38
		4/7/2016	Micro Diver			79.37	50.55
		4/23/2016	SLR			79.55	50.37
		9/19/2016	SLR			81.38	48.54
		9/22/2016	Micro Diver			79.91	50.01
	MW-74A	11/7/2015	Micro Diver	159	114.50	52.26	62.13
		4/7/2016	Micro Diver			51.13	63.37
		4/22/2016	SLR			51.79	62.71
		9/17/2016	SLR			51.60	62.90
		9/22/2016	Micro Diver			51.14	63.36
	MW-77A	11/7/2015	MicroDiver	143.5	119.24	91.62	27.40
		4/8/2016	MicroDiver			90.41	28.83
		9/22/2016	Micro Diver			90.55	28.69
	MW-82A	11/7/2015	Micro Diver	143.5	121.68	26.76	94.88
		4/7/2016	Micro Diver			26.16	95.52
		4/20/2016	SLR			26.50	95.18
		9/16/2016	SLR			29.14	92.54
		9/22/2016	Micro Diver			26.84	94.84
	MW-86A	11/7/2015	Micro Diver	145	127.29	71.04	56.17
		4/7/2016	Micro Diver			69.54	57.75
		9/22/2016	Micro Diver			70.46	56.83
	MW-91A	11/7/2015	Micro Diver	144.5	119.98	106.25	13.68
		4/7/2016	Micro Diver			104.28	15.70
		4/21/2016	SLR			103.25	16.73
		9/21/2016	SLR			102.96	17.02
		9/22/2016	Micro Diver			104.27	15.71
	MW-98A	11/7/2015	Micro Diver	114.9	125.25	99.23	25.78
		4/7/2016	Micro Diver			98.87	26.38
		9/22/2016	Micro Diver			98.44	26.81
	MW-112AA	11/7/2015	Micro Diver	113	118.17	99.24	18.91
		4/7/2016	Micro Diver			98.64	19.53
		9/22/2016	Micro Diver			98.67	19.50
	MW-138A	11/7/2015	Micro Diver	147	106.24	45.72	60.41
		4/7/2016	Micro Diver			45.34	60.90
		9/22/2016	Micro Diver			44.96	61.28
	OW-2	8/10/2016	Fugro	140.9	112.09	38.45	73.64
		9/22/2016	SLR			37.64	74.45
		9/22/2016	Micro Diver			37.48	74.61
	OW-4	8/10/2016	Fugro	137.6	130.79	56.54	74.25
		9/22/2016	SLR			56.02	74.77
		9/22/2016	Micro Diver			55.70	75.09
	APT-1	9/20/2016	SLR	135	120.09	48.32	71.77
		9/22/2016	Micro Diver			47.87	72.22
	APT-2	9/21/2016	SLR	138.5	129.99	56.69	73.30
		9/22/2016	Micro Diver			55.64	74.35
Water Bearing Unit 3	APT-3	9/20/2016	SLR	286	118.83	74.26	44.57
		9/22/2016	Micro Diver			72.97	45.86
Third-Party Wells	TPW-1	4/23/2016	SLR	138.3	NM	44.20	NM
	TPW-2 [2]	4/23/2016	SLR	NM	NM	NM	NM
	PQW-1	4/23/2016	SLR	65.8	NM	23.76	NM
	TPW-5	8/11/2016	Fugro	118.5	NM	30.50	NM

Notes
1 = References to NAVD88 Datum
2 = Potable Well
‡ = For Fugro and SLR, depth to water measurements were collected using a water level indicator probe
SLR = SLR Consulting
NM = Not Measured
TOC = Top of Casing
BTOC = Below Top of Casing

Table 3 - Summary of Water Quality Parameters
Alaska LNG
Nikiski, Alaska

				Water Quality Parameters [1]											
Unit	Well ID	Date	Time	Flow rate (liters/min)	Purge Volume (gallons)	Temp (° C)	pH[3] (SU)	pH[4] (SU)	ORP (mV)	SC (µS/cm[3])	DO (mg/L)	Turbidity [3] (NTU)	Turbidity [5] (NTU)	Drawdown (feet)
Water Bearing Unit 1	MW-27B	4/19/2016	17:13	0.45	7.50	7.54	7.08	6.60	27.1	0.243	1.40	47.40	21	0.01
		9/16/2016	16:55	0.30	4.76	7.03	5.98	6.70	38.9	201	1.28	73.30	31.0	0.15
	MW-39B	4/21/2016	13:55	0.45	9.70	8.18	6.40	6.30	34.8	0.464	1.12	9.20	150	0.05
		9/19/2016	12:42	0.30	2.91	7.24	5.50	6.20	91.0	438	2.39	11.40	4.6	0.06
	MW-50B	4/20/2016	18:36	0.45	3.80	8.91	7.93	6.90	30.2	0.156	1.23	5.38	4.1	0.07
		9/18/2016	9:41	0.20	2.64	8.34	6.34	6.90	187.0	160	1.23	20.10	6.5	0.02
	MW-74B	4/22/2016	14:52	0.45	4.50	7.39	7.05	6.70	-2.7	0.140	1.05	8.00	1.6	0.00
		9/17/2016	12:41	0.30	2.91	5.97	6.18	6.70	56.4	131	2.03	19.70	7.6	0.00
	MW-82B	4/20/2016	13:02	0.45	5.50	7.52	7.32	6.40	43.0	0.264	4.86	28.50	10	0.00
		9/16/2016	13:31	0.40	3.17	7.32	5.74	6.40	136.1	209	6.76	14.50	11	0.01
	MW-87B	4/19/2016	13:50	0.50	3.80	7.10	7.05	6.70	55.0	0.197	1.31	3.32	9.9	0.01
		9/18/2016	15:10	0.25	1.45	8.99	5.62	7.00	7.5	175	2.94	52.10	6.9	0.00
	MW-138B	9/20/2016	10:25	0.32	3.70	5.13	4.82	6.00	169.2	0.63	2.97	60.10	16	0.02
	OW-1	8/10/2016	13:53	0.40	2.40	7.34	5.45	7.30	19.5	0.249	0.76	73.87	110	0.00
		9/22/2016	11:19	0.40	2.11	6.95	6.19	NA	47.8	251	1.49	5.44	NA	0.01
	OW-3	8/10/2016	17:50	0.40	2.50	5.37	6.09	7.10	19.8	0.184	0.91	37.49	26	0.00
		9/22/2016	14:58	0.36	3.17	5.81	6.13	NA	14.8	182	1.12	10.25	NA	0.01
Water Bearing Unit 2	MW-39A	4/21/2016	11:26	0.30	4.60	6.27	9.02	8.30	60.3	0.215	1.78	88.40	60	0.95
		9/19/2016	10:31	0.23	3.70	5.66	8.65	8.40	149.5	222	1.80	5.47	1.8	0.90
	MW-50A	4/20/2016	17:05	0.50	7.50	6.50	9.99	8.40	45	0.229	1.59	183.00	170	0.02
		9/18/2016	12:42	0.35	5.28	6.23	8.24	8.30	83.3	204	0.75	43.70	9.0	0.12
	MW-62A	4/23/2016	11:38	0.30	6.80	7.30	8.76	8.10	68.5	0.183	1.75	11.30	4.4	0.13
		9/19/2016	15:03	0.31	2.64	6.78	8.17	8.20	84.7	183	1.86	48.1 [6]	15	0.03
	MW-74A	4/22/2016	11:46	0.30	6.25	4.93	8.72	8.40	47.4	0.183	2.42	46.60	15	5.01
		9/17/2016	10:37	0.23	3.70	5.56	8.67	8.70	140	175	1.80	51.90	38	6.54
	MW-82A	4/20/2016	11:00	0.45	7.70	5.27	9.38	7.90	53.6	0.166	0.84	17.80	6.6	0.13
		9/16/2016	10:37	0.30	5.55	6.24	8.19	8.10	108.3	0.155	0.90	69.40	34	0.11
	MW-91A	4/21/2016	18:05	0.45	7.90	8.96	8.37	7.60	-17.8	0.244	1.06	38.70	35	0.03
		9/22/2016	18:00	0.40	1.45	8.95	7.08	7.80	-29.7	229	1.70	27.10	24	0.04
	OW-2	8/10/2016	11:45	0.40	4.00	6.67	7.80	8.80	160.1	0.188	0.90	113.10	120	0.39
		9/22/2016	13:10	0.35	3.17	6.60	8.51	NA	63.2	155	1.73	8.57	NA	0.35
	OW-4	8/10/2016	16:25	0.40	5.00	5.18	7.99	8.50	92.9	0.185	0.66	204.30	200	0.00
		9/22/2016	16:06	0.30	2.91	5.94	8.00	NA	36.3	179	1.31	16.40	NA	0.08
	APT-1	9/20/2016	10:32	0.40	3.17	6.25	8.16	8.30	171.8	223	1.35	13.40	16	0.08
	APT-2	9/21/2016	14:00	0.35	4.76	5.40	8.04	8.40	133.5	162	1.15	13.00	11	0.03
Water Bearing Unit 3	APT-3	9/20/2016	12:10	0.18	7.13	7.01	9.00	9.00	149.6	873	0.86	152.00	210	0.24
Third-Party Wells	TPW-1	4/23/2016	14:22	0.50	5.50	7.96	9.32	8.10	42.3	0.114	1.72	28.30	14	0.50
		9/12/2016	11:57	0.40	2.30	6.64	8.27	8.50	213.7	0.118	1.23	43.31	18	0.00
	TPW-2	4/23/2016	17:45	0.75 [2]	18.00	6.14	9.50	8.10	-49.8	0.173	1.16	0.48	0.4 B	NM
		9/12/2016	10:05	1.25 [2]	15.00	8.28	8.25	8.20	200.0	0.199	3.72	1.97	0.700	--
	TPW-5	8/11/2016	14:05	0.40	3.50	6.33	8.28	8.2	-343.7	0.104	0.54	63.01	75	0.00
		9/12/2016	16:49	0.40	2.00	7.46	8.68	NA	-134.3	0.110	1.10	38.09	NA	0.00
	PQW-1	4/23/2016	16:29	0.50	6.40	6.91	10.22	7.50	-98.5	0.177	0.68	18.20	23	0.01
		9/12/2016	15:10	0.40	2.20	7.08	6.83	7.00	-7.8	0.225	0.98	49.71	90	0.00
Screening Criteria [7]	Water Quality Standards for Designated Uses			--	--	15	6.0 ≤. pH ≤8.5		--	--	≥ 4	5 [8]		--

Notes:

MW = Monitoring Well
DTW = Depth to Water
° C = degrees Celsius
SU = Standard Units
ORP = Oxidation Reduction Potential
mV = millivolts
SC = Electrical Conductivity
µS/cm[3] = microSiemens per cubic centimeter
DO = Dissolved Oxygen
mg/L = milligrams per liter

NTU = Nephelometric Turbidity Unit
ft BTOC = Feet Below Top of Casing
NA = Not Available/Not Analyzed
NM = Not Measured Due to Closed System
-- = Not Established
[1] = Parameter readings recorded last purge
[2] = Measured in gallons/minute
[3] = Field Measured
[4] = Lab Analytical Result. Analyzed via Method SM21 4500-H B
[5] = Lab analytical result. Analyzed via method SM21 2130B

[6] = second to last reading taken prior to sampling.
[7] = This screening level corresponds to the most conservative values within ADEC Water Quality Standards 18 AAC 70. Amended 2/19/2016. https://dec.alaska.gov/commish/regulations/pdfs/18%20AAC%2070.pdf
[8] = May not exceed 5 NTUs above natural conditions (NC) when the natural turbidity is 50 NTU or less, and may not have more than 10% increase in turbidity when the natural turbidity is more than 50 NTU, not to exceed a maximum increase of 25 NTU. Turbidity screening levels corresponds to ADEC Alaska General Permit AKG003000 for Discharge of Aquifer Pump Test water (Table 4). http://dec.alaska.gov/water/wnpspc/stormwater/docs/AKG003000_Hydrostatic_GP_Permit.pdf
[B] = The reported concentration was less than five times that of the associated method blank and/or trip blank

Table 4 - Laboratory Report Cross-Reference
Alaska LNG
Nikiski, AK

Well ID	Sample ID	Sample Date	Lab Report ID	Lab Sample ID
MW-27B	MW27B-0916	9/16/2016	1165536	1165536003; 1165536008
	MW27B-0916	9/16/2016	1165550	1165550003; 1165550016
	MW27B-0916	9/16/2016	580-62627-1	580-62627-3
MW-39A	MW-39A-0916	9/19/2016	1165574	1165574001; 1165574004
	MW-39A-0916	9/19/2016	1165622	1165622006
	MW-39A-0916	9/19/2016	1165672	1165672001; 1165672019
	MW-39A-0916	9/19/2016	580-62712-1	580-62712-1
	MW-39A-0916	9/19/2016	280-88640-1	280-88640-1
MW-39B	MW-39B-0916	9/19/2016	1165574	1165574002; 1165574005
	MW-39B-0916	9/19/2016	1165622	1165622007
	MW-39B-0916	9/19/2016	1165672	1165672002; 1165672020
	MW-39B-0916	9/19/2016	580-62712-1	580-62712-2
	MW-39B-0916	9/19/2016	280-88640-1	280-88640-2
MW-50A	MW50A-0916	9/18/2016	1165550	1165550006; 1165550019
	MW-50A-0916	9/18/2016	580-62627-1	580-62627-6
MW-50B	MW50B-0916	9/18/2016	1165550	1165550007; 1165550018
	MW-50B-0916	9/18/2016	580-62627-1	580-62627-7
MW-62A	MW-62A-0916	9/19/2016	1165574	1165574003; 1165574006
	MW-62A-0916	9/19/2016	1165622	1165622008
	MW-62A-0916	9/19/2016	1165672	1165672003; 1165672021
	MW-62A-0916	9/19/2016	580-62712-1	580-62712-3
	MW-62A-0916	9/19/2016	280-88640-1	280-88640-3
MW-74A	MW74A-0916	9/17/2016	1165536	1165536004; 1165536009
	MW74A-0916	9/17/2016	1165550	1165550004
	MW-74A-0916	9/17/2016	580-62627-1	580-62627-4
MW-74B	MW74B-0916	9/17/2016	1165536	1165536005; 1165536010
	MW74B-0916	9/17/2016	1165550	1165550005
	MW-74B-0916	9/17/2016	580-62627-1	580-62627-5
MW-82A	MW82A-0916	9/16/2016	1165536	1165536001; 1165536006
	MW82A-0916	9/16/2016	1165550	1165550001; 1165550014
	MW-82A-0916	9/16/2016	580-62627-1	580-62627-1
MW-82B	MW82B-0916	9/16/2016	1165536	1165536002; 1165536007
	MW82B-0916	9/16/2016	1165550	1165550002; 1165550015
	MW-82B-0916	9/16/2016	580-62627-1	580-62627-2
MW-87B	MW87B-0916	9/18/2016	1165550	1165550009; 1165550022
	MW-87B-0916	9/18/2016	580-62627-1	580-62627-8
MW-87 (Duplicate)	MW-87Z-0916	9/18/2016	1165550	1165550008; 1165550021
	MW-87Z-0916	9/18/2016	580-62627-1	580-62627-9
MW-91A	MW-91A-0916	9/22/2016	1165672	1165672011; 1165672018
	MW-91A-0916	9/22/2016	580-62759-1	580-62759-7
	MW-91A-0916	9/22/2016	280-88640-1	280-88640-13
MW-138B	MW-138B-0916	9/21/2016	1165638	1165638001; 1165638003
	MW-138B-0916	9/21/2016	1165651	1165651002; 1165651005
	MW-138B-0916	9/21/2016	1165672	1165672010; 1165672028
	MW-138B-0916	9/23/2016	1165682	1165682001
	MW-138B-0916	9/21/2016	580-62759-1	627-62759-2
	MW-138B-0916	9/21/2016	280-88640-1	280-88640-8
TPW-1	TPW-1-0916	9/12/2016	1165399	1165399002; 1165399011
	TPW-1-0916	9/12/2016	580-62531-1	580-62531-2
TPW-1 (Duplicate)	TPW-1-0916 DUP	9/12/2016	1165399	1165399016
TPW-2	TPW-2-0916	9/12/2016	1165399	1165399001; 1165399010
	TPW-2-0916	9/12/2016	580-62531-1	580-62531-1
TPW-5	TPW-5-0816	8/11/2016	1164672	1164672001; 1164672002
	TPW-5-0816	8/12/2016	1164707	1164707003
	TPW-5-0916	9/12/2016	1165399	1165399007
	TPW-5-2016	9/12/2016	580-62531-1	580-62531-5
TPW-9	TPW-9-0916	9/12/2016	1165399	1165399005; 1165399014
	TPW-9-0916	9/12/2016	580-62531-1	580-62531-3
PQW-1	PQ-W1-0916	9/12/2016	1165399	1165399006; 1165399015
	PQ-W1-0916	9/12/2016	580-62531-1	580-62531-4
OW-1	OW-1-0816	8/10/2016	1164639	1164639009; 1164639016
	OW-1-0916	9/22/2016	1165672	1165672013
	OW-1-0916	9/22/2016	580-62759-1	580-62759-3
	OW-1-0916	9/22/2016	280-88640-1	280-88640-9
OW-2	OW-2-0816	8/10/2016	1164639	1164639002; 1164639007
	OW-2-0816	8/12/2016	1164707	1164707001
	OW-2-0916	9/22/2016	1165672	1165672014
	OW-2-0916	9/22/2016	580-62759-1	580-62759-4
	OW-2-0916	9/22/2016	280-88640-1	280-88640-10
OW-3	OW-3-0816	8/10/2016	1164639	1164639008; 1164639015
	OW-3-0916	9/22/2016	1165672	1165672015
	OW-3-0916	9/22/2016	580-62759-1	580-62759-5
	OW-3-0916	9/22/2016	280-88640-1	280-88640-11
OW-4	OW-4-0816	8/10/2016	1164639	1164639001; 1164639006
	OW-4-0816	8/12/2016	1164707	1164707002
	OW-4-0916	9/22/2016	1165672	1165672016
	OW-4-0916	9/22/2016	580-62759-1	580-62759-6
	OW-4-0916	9/22/2016	280-88640-1	280-88640-12
APT-1	APT-1-0916	9/20/2016	1165595	1165595001
	APT-1-0916	9/20/2016	1165622	1165622001; 1165622010
	APT-1-0916	9/20/2016	1165672	1165672004; 1165672022
	APT-1-0916	9/20/2016	580-62712-1	580-62712-4
	APT-1-0916	9/20/2016	280-88640-1	280-88640-4
APT-1 (Duplicate)	APT-9-0916	9/20/2016	1165622	1165622004; 1165622013
	APT-9-0916	9/20/2016	1165672	1165672007; 1165672025
	APT-9-0916	9/20/2016	580-62712-1	580-62712-5
	APT-9-0916	9/20/2016	280-88640-1	280-88640-5
APT-2	APT-2-0916	9/21/2016	1165638	1165638001
	APT-2-0916	9/21/2016	1165651	1165651001; 1165651004
	APT-2-0916	9/21/2016	1165672	1165672009; 1165672027
	APT-2-0916	9/23/2016	1165682	1165682002
	APT-2-0916	9/21/2016	580-62759-1	580-62759-1
	APT-2-0916	9/21/2016	280-88640-1	280-88640-7
APT-3	APT-3-0916	9/20/2016	1165595	1165595002
	APT-3-0916	9/20/2016	1165622	1165622005; 1165622014
	APT-3-0916	9/20/2016	1165672	1165672008; 11656720026
	APT-3-0916	9/20/2016	580-62712-1	580-62712-6
	APT-3-0916	9/20/2016	280-88640-1	280-88640-6

Table 5
Summary of Analytical Results - All Wells
Alaska Onshore LNG. 2016
Nikiski, AK

Method	Compound in milligrams per Liter (mg/L)	Screening Criteria		Sample Identification[3]															
		Water Quality Standards for Designated Uses [2]	ADEC Table C Groundwater Cleanup Level[1]	MW-27B				MW-39A				MW-39B				MW-50A				MW-50B			
				4/19/2016 17:15		09/16/2016 16:55		4/21/16 11:30		09/19/2016 10:31		4/21/16 14:00		09/19/2016 12:42		4/20/16 16:25		09/18/2016 12:46		4/20/16 18:40		09/18/2016 09:41	
				Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag
200.8 Metal, Dissolved	Aluminum, Dissolved	--	--	**0.00683**	=	**0.00946**	=, B	**0.0049**	=, B	**0.0105**	=, B	**0.0244**	=	**0.012**	=, B	**1.72**	=	**0.00338**	=, B	**0.00235**	=, B	**0.00158**	J,B
	Antimony, Dissolved	--	--	[0.000025]	ND	**0.0000682**	=	**0.000048**	J	**0.0000406**	J	**0.0000627**	=	**0.0000487**	J	**0.000194**	=	**0.000153**	=	**0.0000707**	=	**0.0000561**	=
	Arsenic, Dissolved	0.01	--	**0.00109**	=	**0.000824**	=	**0.025**	=	**0.0305**	=	**0.00113**	=	**0.00101**	=	**0.018**	=	**0.0167**	=	[0.0004]	ND	[0.0004]	ND
	Barium, Dissolved	--	--	**0.0687**	=	**0.0629**	=	**0.00951**	=	**0.00876**	=	**0.059**	=	**0.0633**	=	**0.0374**	=	**0.0198**	=	**0.0235**	=	**0.0256**	=
	Beryllium, Dissolved	--	--	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	**0.0000299**	J	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND
	Bismuth, Dissolved	--	--	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND
	Boron, Dissolved	--	--	**0.00383**	J	**0.00493**	J	**0.135**	=	**0.166**	=	**0.00697**	=	**0.00625**	=	**0.0207**	=	**0.0204**	=	**0.00372**	J	**0.00482**	J
	Cadmium, Dissolved [5]	0.06	--	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	**0.0000574**	=	**0.0000381**	J	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND
	Calcium, Dissolved	--	--	**19.6**	=	**18.1**	=	**10.5**	=	**9.68**	=	**30**	=	**33.1**	=	**28.7**	=	**24.9**	=	**13.5**	=	**13**	=
	Chromium, Dissolved	0.011	--	**0.000641**	=	**0.000199**	J	**0.00111**	=	**0.000299**	J	**0.000557**	=	**0.000441**	J	**0.00389**	=	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND
	Cobalt, Dissolved	--	--	**0.000356**	=	**0.000373**	=	**0.0000832**	=	**0.0000534**	=	**0.0131**	=	**0.0156**	=	**0.00072**	=	**0.0000616**	=	**0.000804**	=	**0.000837**	=
	Copper, Dissolved [5]	0.00161	--	**0.00102**	=	**0.000237**	J, B	**0.0002**	J	**0.000339**	J, B	**0.000843**	=	**0.000484**	J, B	**0.00359**	=	**0.000238**	J, B	**0.000303**	J	**0.000262**	J, B
	Iron, Dissolved	--	--	**9.4**	=	**7.83**	=	**0.0373**	=	**0.0477**	=	**7.43**	=	**11.7**	=	**1.68**	=	**0.0253**	=	**0.47**	=	**0.39**	=
	Lead, Dissolved [5]	0.00027	--	[0.00005]	ND	[0.00005]	ND	[0.00005]	ND	**0.0000423**	J	[0.00005]	ND	[0.00005]	ND	**0.00107**	=	[0.00005]	ND	[0.00005]	ND	[0.00005]	ND
	Magnesium, Dissolved	--	--	**6.86**	=	**6.16**	=	**4.05**	=	**3.71**	=	**10.5**	=	**13.3**	=	**8.23**	=	**7.4**	=	**5.33**	=	**5.07**	=
	Manganese, Dissolved	--	--	**0.459**	=	**0.394**	=	**0.0613**	=	**0.0623**	=	**0.916**	=	**1.19**	=	**0.129**	=	**0.101**	=	**0.0387**	=	**0.0494**	=
	Molybdenum, Dissolved	--	--	**0.000199**	=	**0.000103**	=	**0.00186**	=	**0.00137**	=	**0.000335**	=	**0.000252**	=	**0.000898**	=	**0.000598**	=	**0.000496**	=	**0.000596**	=
	Nickel, Dissolved [5]	0.0095	--	**0.00204**	=	**0.0019**	=	**0.00183**	=	**0.000589**	J, B	**0.0208**	=	**0.0225**	=	**0.00335**	=	**0.000585**	J, B	**0.00298**	=	**0.00749**	=
	Potassium, Dissolved	--	--	**2.14**	=	**2.04**	=	**5.1**	=	**5.22**	=	**3.11**	=	**3.07**	=	**4.9**	=	**4.14**	=	**2.15**	=	**1.93**	=
	Selenium, Dissolved	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	**0.000843**	J	**0.000611**	J	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Silicon, Dissolved	--	--	**16.6**	=, QH	**16.2**	=,QH	**14.1**	=	**14.3**	=,QH	**14.1**	=	**14.4**	=,QH	**19.3**	=, QH	**14.5**	=,QH	**16.1**	=, QH	**15.8**	=,QH
	Silver, Dissolved [5]	0.00011	--	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND
	Sodium, Dissolved	--	--	**7.52**	=	**8**	=	**21.2**	=	**30**	=	**24.5**	=	**21**	=	**7.72**	=	**7.16**	=	**7.14**	=	**6.75**	=
	Thallium, Dissolved	--	--	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	**0.00000648**	J	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND
	Tin, Dissolved	--	--	[0.0001]	ND	[0.0001]	ND	[0.0001]	ND	[0.0001]	ND	[0.0001]	ND	[0.0001]	ND	**0.000268**	=	[0.0001]	ND	[0.0001]	ND	[0.0001]	ND
	Vanadium, Dissolved	--	--	[0.0005]	ND	**0.000331**	J	**0.00062**	J	**0.000686**	J	**0.000877**	J	**0.000557**	J	**0.00416**	=	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Zinc, Dissolved [5]	0.02134	--	**0.00107**	J, B	**0.00387**	J,B	[0.00155]	ND	**0.00461**	= , B	**0.0153**	=	**0.0243**	= , B	**0.00791**	=	**0.00436**	=, B	**0.000748**	J, B	**0.00532**	=,B
200.8 Metal, Total	Aluminum, Total	0.087	--	**0.882**	=	**1.04**	=	**1.75**	=	**0.088**	=	**0.463**	=	**0.113**	=	**10.5**	=	**0.664**	=	**0.07**	=	**0.0449**	=
	Antimony, Total	0.006	0.006	**0.00011**	=	**0.00019**	=	**0.000171**	=	**0.000064**	=	**0.0000866**	=	**0.0000647**	=	**0.000513**	=	**0.000216**	=	**0.00012**	=	**0.0000879**	=
	Arsenic, Total	0.01	0.01	**0.00252**	=	**0.00201**	=	**0.0283**	=	**0.0269**	=	**0.00206**	=	**0.00166**	=	**0.023**	=	**0.0168**	=	**0.00106**	=	**0.000713**	J
	Barium, Total	2	2	**0.0833**	=	**0.0785**	=	**0.0456**	=	**0.0104**	=	**0.0645**	=	**0.0652**	=	**0.118**	=	**0.0265**	=	**0.0253**	=	**0.0274**	=
	Beryllium, Total	0.004	0.004	**0.000042**	J	**0.0000348**	J	**0.00011**	=	[0.000025]	ND	**0.0000379**	J	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND
	Bismuth, Total	--	--	[0.000025]	ND	**0.0000175**	J	**0.0000429**	J	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	**0.0000947**	=	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND
	Boron, Total	0.75	--	**0.0064**	=	**0.00498**	J	**0.134**	=	**0.14**	=	**0.00708**	=	**0.0061**	=	**0.0274**	=	**0.0201**	=	**0.00382**	J	**0.0049**	J
	Cadmium, Total	0.01	0.005	**0.0000309**	J	[0.000025]	ND	**0.0000317**	J	[0.000025]	ND	**0.00006**	=	**0.0000367**	J	**0.0000349**	J	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND
	Calcium, Total	--	--	**21**	=	**18.4**	=	**11.7**	=	**9.86**	=	**31.1**	=	**34.2**	=	**31.8**	=	**25.6**	=	**13.8**	=	**13.8**	=
	Chromium, Total	0.011	0.1	**0.00344**	=	**0.00371**	=	**0.0237**	=	**0.00221**	=	**0.00194**	=	**0.0093**	=	**0.0246**	=	**0.00211**	=	**0.00111**	=	**0.0565**	=
	Cobalt, Total	0.05	--	**0.000836**	=	**0.000916**	=	**0.00172**	=	**0.000137**	=	**0.0137**	=	**0.0149**	=	**0.00393**	=	**0.000425**	=	**0.000832**	=	**0.00148**	=
	Copper, Total	0.0031	1	**0.00403**	=	**0.00379**	=	**0.00868**	=	**0.00238**	=	**0.00163**	=	**0.00101**	=	**0.0198**	=	**0.00232**	=	**0.000813**	=	**0.00219**	=
	Iron, Total	1	--	**12.9**	=	**10.7**	=	**4.02**	=	**0.179**	=	**7.91**	=	**11.7**	=	**9.69**	=	**0.772**	=	**2.44**	=	**1.8**	=
	Lead, Total	0.0081	0.015	**0.000614**	=	**0.000969**	=	**0.00199**	=	**0.000336**	=	**0.000289**	=	**0.0000859**	J	**0.00622**	=	**0.00058**	=	**0.000124**	=	**0.0000792**	J
	Magnesium, Total	--	--	**6.99**	=	**6.5**	=	**5.19**	=	**3.66**	=	**11.1**	=	**14**	=	**11.6**	=	**7.82**	=	**5.38**	=	**5.19**	=
	Manganese, Total	0.05	--	**0.501**	=	**0.403**	=	**0.138**	=	**0.0619**	=	**0.941**	=	**1.27**	=	**0.374**	=	**0.129**	=	**0.0409**	=	**0.0615**	=
	Molybdenum, Total	0.01	--	**0.000343**	=	**0.000184**	=	**0.00351**	=	**0.00123**	=	**0.000419**	=	**0.00055**	=	**0.0015**	=	**0.000613**	=	**0.000491**	=	**0.00241**	=
	Nickel, Total	0.0082	0.1	**0.00363**	=	**0.0038**	=	**0.0147**	=	**0.00157**	=	**0.0221**	=	**0.0277**	=	**0.0161**	=	**0.00213**	=	**0.00291**	=	**0.0395**	=
	Potassium, Total	--	--	**2.41**	=	**2.34**	=	**5.77**	=	**5**	=	**3.27**	=	**3.21**	=	**6.63**	=	**4.13**	=	**2.14**	=	**2.12**	=
	Selenium, Total	0.005	0.05	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	**0.00071**	J	**0.000682**	J	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Silver, Total	0.0019	0.1	**0.00000744**	J, B	[0.00001]	ND	**0.0000164**	J	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	**0.0000457**	=, B	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND
	Sodium, Total	--	--	**7.95**	=	**8.36**	=	**11.8**	=	**23.9**	=	**14.7**	=	**22.4**	=	**8.23**	=	**7.06**	=	**7.18**	=	**6.99**	=
	Thallium, Total	0.0017	0.002	**0.00000694**	J	**0.00000726**	J	**0.0000245**	=	[0.00001]	ND	**0.0000113**	J	**0.0000078**	J	**0.0000598**	=	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND
	Tin, Total	--	--	**0.000121**	J	**0.000154**	J	**0.000269**	=	**0.0000718**	J	[0.0001]	ND	[0.0001]	ND	**0.00148**	=	**0.000188**	J	[0.0001]	ND	[0.0001]	ND
	Vanadium, Total	0.1	0.26	**0.00284**	=	**0.00374**	=	**0.00867**	=	**0.000888**	J	**0.00309**	=	**0.00165**	=	**0.0219**	=	**0.00176**	=	**0.00129**	=	**0.00107**	=
	Zinc, Total	0.081	5	**0.00398**	=, B	**0.00709**	= , B	**0.0122**	=	**0.00541**	= , B	**0.0156**	=	**0.0228**	=	**0.0451**	=	**0.00638**	= , B	**0.00104**	J, B	**0.00216**	J, B
EPA 1631 E, Dissolved	Mercury, Dissolved	0.00077	--	**0.00000051**	J	[0.0000005]	ND	[0.0000005]	ND	[0.0000005]	ND	[0.0000005]	ND	**0.000000522**	J	**0.00000215**	=	[0.0000005]	ND	**0.000000708**	=	[0.0000005]	ND
EPA 1631 E, Total	Mercury, Total	0.00005	0.002	**0.00000282**	=	**0.00000505**	=	**0.00000543**	=	**0.00000115**	=	**0.00000112**	=	**0.000000708**	J	**0.00000922**	=	**0.00000192**	=	**0.00000101**	=	**0.000000977**	J
AK101	Gasoline Range Organics	2.2	2.2	[0.05]	ND	[0.05]	ND	**0.0539**	J, B	[0.05]	ND	**0.0388**	J, B	[0.05]	ND	[0.05]	ND	[0.05]	ND	[0.05]	ND	[0.05]	ND
AK102	Diesel Range Organics	1.5	1.5	**0.197**	J	**0.282**	J, B	[0.288]	ND	**0.383**	J,B	[0.283]	ND	**0.361**	J,B	[0.283]	ND	**0.447**	J,B	[0.288]	ND	**0.447**	J,B
AK103	Residual Range Organics	1.1	1.1	**0.561**	=	[0.25]	ND	[0.24]	ND	[0.25]	ND	[0.236]	ND	[0.245]	ND	[0.236]	ND	[0.25]	ND	[0.24]	ND	[0.265]	ND
EPA 300.0	Chloride	230	--	**30.6**	=	**26.9**	=	**4.66**	=	**4.55**	=	**113**	=	**115**	=	**7.6**	=	**7.63**	=	**14.8**	=	**12.9**	=
	Fluoride	1	--	**0.056**	J, QH	**0.101**	J	**0.222**	=	**0.22**	=	**0.071**	J	**0.112**	J	**0.082**	J, QH	**0.13**	J	**0.069**	J, QH	**0.116**	J
	Nitrate-N	--	--	**--**	--	[0.1]	ND	**--**	--	[0.05]	ND	**--**	--	[0.05]	ND	**--**	--	[0.05]	ND	**--**	--	[0.05]	ND, QL
	Nitrite-N	--	--	**--**	--	[0.1]	ND	**--**	--	[0.05]	ND	**--**	--	[0.05]	ND	**--**	--	**0.0476**	J,B	**--**	--	**0.0512**	J,QL,B
	Sulfate	250	--	**5.31**	=	**5.63**	=	**2.22**	=	**1.9**	=	**15.8**	=	**9.9**	=	**4.55**	=	**4.97**	=	**4.85**	=	**6.29**	=
EPA 410.4	Chemical Oxygen Demand	--	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--			**--**	--			**--**	--
SM21 2130B	Turbidity (NTU)	See Note 6	--	**21**	=	**31**	=	**60**	=	**1.8**	=	**150**	=	**4.6**	=	**170**	=	**9**	=	**4.1**	=	**6.5**	=
SM21 2320B	Alkalinity	<20000	--	**58.2**	=	**53.8**	=	**93.4**	=	**87.3**	=	**40.6**	=	**51.7**	=	**97.4**	=	**106**	=	**47.2**	=	**52.6**	=
SM21 2340B	Hardness as CaCO3	--	--	**77.1**	=	**70.5**	=	**42.9**	=	**39.4**	=	**118**	=	**138**	=	**105**	=	**92.8**	=	**55.8**	=	**53.3**	=
SM21 2540B	Total Solids	--	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--
SM21 2540C	Total Dissolved Solids	500	--	**160**	=	**167**	=	**173**	=	**129**	=	**301**	=	**365**	=	**158**	=	**164**	=	**106**	=	**123**	=
SM21 2540D	Total Suspended Solids	--	--	**25**	=	**25.6**	=	**82.5**	=	**2.34**	=	**170**	=	**4**	=	**170**	=	**25.3**	=	**3.57**	=	**4.25**	=
SM21 4500-NH3 G	Ammonia-N	See Note 7	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--
SM21 4500-N D	Total Kjeldahl Nitrogen	--	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--
SM21 4500NO3-F	Nitrate-N	--	--	[0.05]	ND	**--**	--	**0.0786**	J, B	**--**	--	[0.05]	ND	**--**	--	**0.0486**	J, B	**--**	--	**0.0558**	J, B	**--**	--
	Nitrite-N	--	--	[0.05]	ND	**--**	--	**0.034**	J	**--**	--	**0.049**	J	**--**	--	[0.05]	ND	**--**	--	[0.05]	ND	**--**	--
SM21 4500P-B,E	Total Phosphorus	--	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--
	Ortho Phosphate-P	--	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--
SM21 5310B	Total Organic Carbon	--	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--
	Dissolved Organic Carbon	--	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--
SM21 9222D	Fecal Coliform (Col/100mL)	1	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--
SM21 10200H	Chlorophyll A (mg/m^3)	--	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--

Table 5
Summary of Analytical Results - All Wells
Alaska Onshore LNG. 2016
Nikiski, AK

Method	Compound in milligrams per Liter (mg/L)	Screening Criteria		Sample Identification[3]																	
		Water Quality Standards for Designated Uses [2]	ADEC Table C Groundwater Cleanup Level[1]	MW-27B				MW-39A				MW-39B				MW-50A				MW-50B			
				4/19/2016 17:15		09/16/2016 16:55		4/21/16 11:30		09/19/2016 10:31		4/21/16 14:00		09/19/2016 12:42		4/20/16 16:25		09/18/2016 12:46		4/20/16 18:40		09/18/2016 09:41	
				Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag
SW8082A PCB	Aroclor-1016	0.000014	0.0005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Aroclor-1221	0.000014	0.0005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Aroclor-1232	0.000014	0.0005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Aroclor-1242	0.000014	0.0005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Aroclor-1248	0.000014	0.0005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Aroclor-1254	0.000014	0.0005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Aroclor-1260	0.000014	0.0005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SW 8270D SIM (PESTICIDE)	4,4'-DDD	0.0035	0.0035	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4,4'-DDE	0.0025	0.0025	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4,4'-DDT	0.000001	0.0025	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Aldrin	0.003	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	alpha-BHC	0.00014	0.00014	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	alpha-Chlordane	0.000004	0.002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	beta-BHC	0.00047	0.00047	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	delta-BHC	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Dieldrin	0.0000019	0.000053	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Endosulfan I	0.0000087	0.22	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Endosulfan II	0.0000087	0.22	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Endosulfan sulfate	0.11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Endrin	0.0000023	0.002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Endrin aldehyde	0.00076	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Endrin ketone	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	gamma-BHC (Lindane)	0.00016	0.0002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	gamma-Chlordane	0.000004	0.002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Heptachlor	0.0000036	0.0004	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Heptachlor epoxide	0.0000036	0.0002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Methoxychlor	0.00003	0.04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Toxaphene	0.0000002	0.003	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SW8011, LL VOC	1,2,3-Trichloropropane	0.00012	0.00012	--	--	[0.00002]	ND	--	--	[0.00002]	ND	--	--	[0.00002]	ND	--	--	[0.00002]	ND	--	--	[0.00002]	ND
	1,2-Dibromoethane	0.00005	0.00005	--	--	[0.00002]	ND	--	--	[0.00002]	ND	--	--	[0.00002]	ND	--	--	[0.00002]	ND	--	--	[0.00002]	ND
SW8260C VOC	1,1,1,2-Tetrachloroethane	--	--	[0.00025]	ND	--	--	[0.00025]	ND	--	--	[0.00025]	ND	--	--	[0.00025]	ND	--	--	[0.00025]	ND	--	--
	1,1,1-Trichloroethane	0.2	0.2	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND
	1,1,2,2-Tetrachloroethane	0.0043	0.0043	[0.00025]	ND	[0.001]	ND	[0.00025]	ND	[0.001]	ND	[0.00025]	ND	[0.001]	ND	[0.00025]	ND	[0.001]	ND	[0.00025]	ND	[0.001]	ND
	1,1,2-Trichloroethane	0.005	0.005	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND
	1,1-Dichloroethane	7.3	7.3	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND
	1,1-Dichloroethene	0.007	0.007	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND
	1,1-Dichloropropene	--	--	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND
	1,2,3-Trichlorobenzene	--	--	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND
	1,2,3-Trichloropropane	0.00012	0.00012	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND
	1,2,4-Trichlorobenzene	0.07	0.07	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND
	1,2,4-Trimethylbenzene	1.8	1.8	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND
	1,2-Dibromo-3-Chloropropane	0.0002	--	[0.005]	ND	[0.01]	ND	[0.005]	ND	[0.01]	ND	[0.005]	ND	[0.01]	ND	[0.005]	ND	[0.01]	ND	[0.005]	ND	[0.01]	ND
	1,2-Dibromoethane	0.00005	0.00005	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND
	1,2-Dichlorobenzene	0.6	0.6	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND
	1,2-Dichloroethane	0.005	0.005	[0.00025]	ND	[0.001]	ND	[0.00025]	ND	[0.001]	ND	[0.00025]	ND	[0.001]	ND	[0.00025]	ND	[0.001]	ND	[0.00025]	ND	[0.001]	ND
	1,2-Dichloropropane	0.005	0.005	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND
	1,3,5-Trimethylbenzene	1.8	1.8	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND
	1,3-Dichlorobenzene	0.4	3.3	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND
	1,3-Dichloropropane	--	--	[0.00025]	ND	[0.001]	ND	[0.00025]	ND	[0.001]	ND	[0.00025]	ND	[0.001]	ND	[0.00025]	ND	[0.001]	ND	[0.00025]	ND	[0.001]	ND
	1,4-Dichlorobenzene	0.075	0.075	[0.00025]	ND	[0.004]	ND	[0.00025]	ND	[0.004]	ND	[0.00025]	ND	[0.004]	ND	[0.00025]	ND	[0.004]	ND	[0.00025]	ND	[0.004]	ND
	2,2-Dichloropropane	--	--	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND
	2-Butanone	22	22	[0.005]	ND	[0.02]	ND	[0.005]	ND	[0.02]	ND	[0.005]	ND	[0.02]	ND	[0.005]	ND	[0.02]	ND	[0.005]	ND	[0.02]	ND
	2-Chlorotoluene	--	--	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND
	2-Hexanone	--	--	[0.005]	ND	[0.02]	ND	[0.005]	ND	[0.02]	ND	[0.005]	ND	[0.02]	ND	[0.005]	ND	[0.02]	ND	[0.005]	ND	[0.02]	ND
	4-Chlorotoluene	--	--	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND
	4-Isopropyltoluene	--	--	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND
	4-Methyl-2-pentanone	2.9	2.9	[0.005]	ND	[0.015]	ND	[0.005]	ND	[0.015]	ND	[0.005]	ND	[0.015]	ND	[0.005]	ND	[0.015]	ND	[0.005]	ND	[0.015]	ND
	Acetone	--	--	--	--	[0.05]	ND	--	--	[0.05]	ND	--	--	[0.05]	ND	--	--	[0.05]	ND	--	--	[0.05]	ND
	Benzene	0.005	0.005	[0.0002]	ND	[0.002]	ND	[0.0002]	ND	[0.002]	ND	[0.0002]	ND	[0.002]	ND	[0.0002]	ND	[0.002]	ND	[0.0002]	ND	[0.002]	ND
	Bromobenzene	--	--	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND
	Bromochloromethane	--	--	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND
	Bromodichloromethane	0.014	0.014	[0.00025]	ND	[0.002]	ND	[0.00025]	ND	[0.002]	ND	[0.00025]	ND	[0.002]	ND	[0.00025]	ND	[0.002]	ND	[0.00025]	ND	[0.002]	ND
	Bromoform	0.08	0.11	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND
	Bromomethane	0.048	0.051	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND
	Carbon disulfide	3.7	3.7	[0.005]	ND	[0.001]	ND	[0.005]	ND	[0.001]	ND	[0.005]	ND	[0.001]	ND	[0.005]	ND	[0.001]	ND	[0.005]	ND	[0.001]	ND
	Carbon tetrachloride	0.005	0.005	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND
	Chlorobenzene	0.1	0.1	[0.00025]	ND	[0.002]	ND	[0.00025]	ND	[0.002]	ND	[0.00025]	ND	[0.002]	ND	[0.00025]	ND	[0.002]	ND	[0.00025]	ND	[0.002]	ND
	Chloroethane	0.29	0.29	[0.0005]	ND	[0.005]	ND	[0.0005]	ND	[0.005]	ND	[0.0005]	ND	[0.005]	ND	[0.0005]	ND	[0.005]	ND	[0.0005]	ND	[0.005]	ND
	Chloroform	0.08	0.14	[0.0005]	ND	[0.005]	ND	[0.0005]	ND	[0.005]	ND	[0.0005]	ND	[0.005]	ND	[0.0005]	ND	[0.005]	ND	[0.0005]	ND	[0.005]	ND
	Chloromethane	0.066	0.066	[0.0005]	ND	[0.005]	ND	[0.0005]	ND	[0.005]	ND	[0.0005]	ND	[0.005]	ND	[0.0005]	ND	[0.005]	ND	[0.0005]	ND	[0.005]	ND
	cis-1,2-Dichloroethene	0.07	0.07	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND
	cis-1,3-Dichloropropene	0.0085	0.0085	[0.00025]	ND	[0.001]	ND	[0.00025]	ND	[0.001]	ND	[0.00025]	ND	[0.001]	ND	[0.00025]	ND	[0.001]	ND	[0.00025]	ND	[0.001]	ND
	Dibromochloromethane	0.01	0.01	[0.00025]	ND	[0.001]	ND	[0.00025]	ND	[0.001]	ND	[0.00025]	ND	[0.001]	ND	[0.00025]	ND	[0.001]	ND	[0.00025]	ND	[0.001]	ND
	Dibromomethane	0.37	0.37	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND
	Dichlorodifluoromethane	7.3	7.3	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND
	Ethylbenzene	0.7	0.7	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND
	Freon-113	--	1100	[0.005]	ND	--	--	[0.005]	ND	--	--	[0.005]	ND	--	--	[0.005]	ND	--	--	[0.005]	ND	--	--

Table 5
Summary of Analytical Results - All Wells
Alaska Onshore LNG. 2016
Nikiski, AK

Method	Compound in milligrams per Liter (mg/L)	Screening Criteria		Sample Identification[3]																	
		Water Quality Standards for Designated Uses [2]	ADEC Table C Groundwater Cleanup Level[1]	MW-27B				MW-39A				MW-39B				MW-50A				MW-50B			
				4/19/2016 17:15		09/16/2016 16:55		4/21/16 11:30		09/19/2016 10:31		4/21/16 14:00		09/19/2016 12:42		4/20/16 16:25		09/18/2016 12:46		4/20/16 18:40		09/18/2016 09:41	
				Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag
SW8260C VOC	Hexachlorobutadiene	0.0073	0.0073	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND
	Isopropylbenzene	3.7	3.7	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND
	Methylene Chloride	0.005	0.005	[0.0025]	ND	[0.005]	ND	[0.0025]	ND	[0.005]	ND	[0.0025]	ND	[0.005]	ND	[0.0025]	ND	[0.005]	ND	[0.0025]	ND	[0.005]	ND
	Methyl tert-butyl ether	0.47	0.47	[0.005]	ND	[0.001]	ND	[0.005]	ND	[0.001]	ND	[0.005]	ND	[0.001]	ND	[0.005]	ND	[0.001]	ND	[0.005]	ND	[0.001]	ND
	Naphthalene	0.73	0.73	[0.005]	ND	[0.002]	ND	[0.005]	ND	[0.002]	ND	[0.005]	ND	[0.002]	ND	[0.005]	ND	[0.002]	ND	[0.005]	ND	[0.002]	ND
	n-Butylbenzene	0.37	0.37	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND
	N-Propylbenzene	0.37	0.37	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND
	o-Xylene	10	10	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND
	P & M -Xylene	--	10	[0.001]	ND	[0.003]	ND	[0.001]	ND	[0.003]	ND	[0.001]	ND	[0.003]	ND	[0.001]	ND	[0.003]	ND	[0.001]	ND	[0.003]	ND
	sec-Butylbenzene	0.37	0.37	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND
	Styrene	0.1	0.1	[0.0005]	ND	[0.005]	ND	[0.0005]	ND	[0.005]	ND	[0.0005]	ND	[0.005]	ND	[0.0005]	ND	[0.005]	ND	[0.0005]	ND	[0.005]	ND
	t-Butylbenzene	0.37	0.37	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND
	Tetrachloroethene	0.005	0.005	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND
	Toluene	1	1	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND
	trans-1,2-Dichloroethene	0.1	0.1	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND
	trans-1,3-Dichloropropene	0.0085	0.0085	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND
	Trichloroethene	0.005	0.005	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND
	Trichlorofluoromethane	11	11	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND
	Vinyl acetate	--	37	[0.005]	ND	--	--	[0.005]	ND	--	--	[0.005]	ND	--	--	[0.005]	ND	--	--	[0.005]	ND	--	--
	Vinyl chloride	0.002	0.002	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND
	Xylenes (total)	--	10	[0.0015]	ND	[0.005]	ND	[0.0015]	ND	[0.005]	ND	[0.0015]	ND	[0.005]	ND	[0.0015]	ND	[0.005]	ND	[0.0015]	ND	[0.005]	ND
EPA 625M SIM (PAH)	Acenaphthene	--	--	[0.0000254]	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Acenaphthylene	--	--	[0.0000254]	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Anthracene	--	--	[0.0000254]	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Benzo(a)Anthracene	--	--	[0.0000254]	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Benzo[a]pyrene	--	--	[0.0000101]	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Benzo[b]Fluoranthene	--	--	[0.0000254]	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Benzo[g,h,i]perylene	--	--	[0.0000254]	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Benzo[k]fluoranthene	--	--	[0.0000254]	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Chrysene	--	--	[0.0000254]	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Dibenzo[a,h]anthracene	--	--	[0.0000101]	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Fluoranthene	--	--	[0.0000254]	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Fluorene	--	--	[0.0000254]	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Indeno[1,2,3-c,d] pyrene	--	--	[0.0000254]	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Naphthalene	--	--	[0.000051]	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Phenanthrene	--	--	[0.0000254]	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Pyrene	--	--	[0.0000254]	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SW8270D SVOC	1,2,4-Trichlorobenzene	0.07	0.07	[0.00515]	ND	[0.00039]	ND	[0.0051]	ND	[0.0004]	ND	[0.0053]	ND	[0.00039]	ND	[0.0053]	ND	[0.00038]	ND	[0.0051]	ND	[0.0004]	ND
	1,2-Dichlorobenzene	0.6	0.6	[0.00515]	ND	[0.00039]	ND	[0.0051]	ND	[0.0004]	ND	[0.0053]	ND	[0.00039]	ND	[0.0053]	ND	[0.00038]	ND	[0.0051]	ND	[0.0004]	ND
	1,3-Dichlorobenzene	0.4	3.3	[0.00515]	ND	[0.00039]	ND	[0.0051]	ND	[0.0004]	ND	[0.0053]	ND	[0.00039]	ND	[0.0053]	ND	[0.00038]	ND	[0.0051]	ND	[0.0004]	ND
	1,4-Dichlorobenzene	0.075	0.075	[0.00515]	ND	[0.00039]	ND	[0.0051]	ND	[0.0004]	ND	[0.0053]	ND	[0.00039]	ND	[0.0053]	ND	[0.00038]	ND	[0.0051]	ND	[0.0004]	ND
	1-Chloronaphthalene	--	--	[0.00515]	ND	--	--	[0.0051]	ND	--	--	[0.0053]	ND	--	--	[0.0053]	ND	--	--	[0.0051]	ND	--	--
	1-Methylnaphthalene	0.15	0.15	[0.00515]	ND	[0.000059]	ND	[0.0051]	ND	[0.00006]	ND	[0.0053]	ND	[0.000058]	ND	[0.0053]	ND	[0.000058]	ND	[0.0051]	ND	[0.00006]	ND
	2,4,5-Trichlorophenol	2.6	3.7	[0.00515]	ND	[0.00039]	ND	[0.0051]	ND	[0.0004]	ND	[0.0053]	ND	[0.00039]	ND	[0.0053]	ND	[0.00038]	ND	[0.0051]	ND	[0.0004]	ND
	2,4,6-Trichlorophenol	0.077	0.077	[0.00515]	ND	[0.00059]	ND	[0.0051]	ND	[0.0006]	ND	[0.0053]	ND	[0.00058]	ND	[0.0053]	ND	[0.00058]	ND	[0.0051]	ND	[0.0006]	ND
	2,4-Dichlorophenol	0.093	0.11	[0.00515]	ND	[0.00039]	ND	[0.0051]	ND	[0.0004]	ND	[0.0053]	ND	[0.00039]	ND	[0.0053]	ND	[0.00038]	ND	[0.0051]	ND	[0.0004]	ND
	2,4-Dimethylphenol	0.54	0.73	[0.00515]	ND	[0.002]	ND	[0.0051]	ND	[0.002]	ND	[0.0053]	ND	[0.0019]	ND	[0.0053]	ND	[0.0019]	ND	[0.0051]	ND	[0.002]	ND
	2,4-Dinitrophenol	0.07	0.073	[0.0257]	ND	[0.0049]	ND	[0.0255]	ND	[0.005]	ND	[0.0266]	ND	[0.0049]	ND	[0.0265]	ND	[0.0048]	ND	[0.0255]	ND	[0.005]	ND
	2,4-Dinitrotoluene	0.0013	0.0013	[0.00515]	ND	[0.00039]	ND	[0.0051]	ND	[0.0004]	ND	[0.0053]	ND	[0.00039]	ND	[0.0053]	ND	[0.00038]	ND	[0.0051]	ND	[0.0004]	ND
	2,6-Dichlorophenol	--	--	[0.00515]	ND	--	--	[0.0051]	ND	--	--	[0.0053]	ND	--	--	[0.0053]	ND	--	--	[0.0051]	ND	--	--
	2,6-Dinitrotoluene	0.0013	0.0013	[0.00515]	ND	[0.00039]	ND	[0.0051]	ND	[0.0004]	ND	[0.0053]	ND	[0.00039]	ND	[0.0053]	ND	[0.00038]	ND	[0.0051]	ND	[0.0004]	ND
	2-Chloronaphthalene	1.7	2.9	[0.00515]	ND	[0.000059]	ND	[0.0051]	ND	[0.00006]	ND	[0.0053]	ND	[0.000058]	ND	[0.0053]	ND	[0.000058]	ND	[0.0051]	ND	[0.00006]	ND
	2-Chlorophenol	0.12	0.18	[0.00515]	ND	[0.00039]	ND	[0.0051]	ND	[0.0004]	ND	[0.0053]	ND	[0.00039]	ND	[0.0053]	ND	[0.00038]	ND	[0.0051]	ND	[0.0004]	ND
	2-Methyl-4,6-dinitrophenol	--	--	[0.0257]	ND	--	--	[0.0255]	ND	--	--	[0.0266]	ND	--	--	[0.0265]	ND	--	--	[0.0255]	ND	--	--
	2-Methylnaphthalene	0.15	0.15	[0.00515]	ND	[0.0002]	ND	[0.0051]	ND	[0.0002]	ND	[0.0053]	ND	[0.00019]	ND	[0.0053]	ND	[0.00019]	ND	[0.0051]	ND	[0.0002]	ND
	2-Methylphenol	1.8	1.8	[0.00515]	ND	[0.00039]	ND	[0.0051]	ND	[0.0004]	ND	[0.0053]	ND	[0.00039]	ND	[0.0053]	ND	[0.00038]	ND	[0.0051]	ND	[0.0004]	ND
	2-Nitroaniline	--	--	[0.00515]	ND	[0.00039]	ND	[0.0051]	ND	[0.0004]	ND	[0.0053]	ND	[0.00039]	ND	[0.0053]	ND	[0.00038]	ND	[0.0051]	ND	[0.0004]	ND
	2-Nitrophenol	--	--	[0.00515]	ND	[0.00039]	ND	[0.0051]	ND	[0.0004]	ND	[0.0053]	ND	[0.00039]	ND	[0.0053]	ND	[0.00038]	ND	[0.0051]	ND	[0.0004]	ND
	3 & 4 Methylphenol	--	--	[0.0103]	ND	[0.00078]	ND	[0.0102]	ND	[0.0008]	ND	[0.0107]	ND	[0.00078]	ND	[0.0106]	ND	[0.00077]	ND	[0.0102]	ND	[0.0008]	ND
	3,3'-Dichlorobenzidine	0.0019	0.0019	[0.00515]	ND	[0.002]	ND, QL	[0.0051]	ND	[0.002]	ND, QL	[0.0053]	ND	[0.0019]	ND, QL	[0.0053]	ND	[0.0019]	ND, QL	[0.0051]	ND	[0.002]	ND, QL
	3-Nitroaniline	--	--	[0.00515]	ND	[0.00039]	ND	[0.0051]	ND	[0.0004]	ND	[0.0053]	ND	[0.00039]	ND	[0.0053]	ND	[0.00038]	ND	[0.0051]	ND	[0.0004]	ND
	4,6-Dinitro-2-methylphenol	0.0134	--	--	--	[0.0039]	ND	--	--	[0.004]	ND	--	--	[0.0039]	ND	--	--	[0.0038]	ND	--	--	[0.004]	ND
	4-Bromophenyl phenyl ether	--	--	[0.00515]	ND	[0.00039]	ND	[0.0051]	ND	[0.0004]	ND	[0.0053]	ND	[0.00039]	ND	[0.0053]	ND	[0.00038]	ND	[0.0051]	ND	[0.0004]	ND
	4-Chloro-3-methylphenol	--	--	[0.00515]	ND	[0.00039]	ND	[0.0051]	ND	[0.0004]	ND	[0.0053]	ND	[0.00039]	ND	[0.0053]	ND	[0.00038]	ND	[0.0051]	ND	[0.0004]	ND
	4-Chloroaniline	0.016	0.016	[0.00515]	ND	[0.00039]	ND, R	[0.0051]	ND	[0.0004]	ND, R	[0.0053]	ND	[0.00039]	ND, R	[0.0053]	ND	[0.00038]	ND, R	[0.0051]	ND	[0.0004]	ND, R
	4-Chlorophenyl phenyl ether	--	--	[0.00515]	ND	[0.00039]	ND	[0.0051]	ND	[0.0004]	ND	[0.0053]	ND	[0.00039]	ND	[0.0053]	ND	[0.00038]	ND	[0.0051]	ND	[0.0004]	ND
	4-Nitroaniline	--	--	[0.00515]	ND	[0.00059]	ND	[0.0051]	ND	[0.0006]	ND	[0.0053]	ND	[0.00058]	ND	[0.0053]	ND	[0.00058]	ND	[0.0051]	ND	[0.0006]	ND
	4-Nitrophenol	--	--	[0.0257]	ND, QL	[0.0029]	ND	[0.0255]	ND	[0.003]	ND	[0.0266]	ND	[0.0029]	ND	[0.0265]	ND	[0.0029]	ND	[0.0255]	ND	[0.003]	ND
	Acenaphthene	1.2	2.2	[0.00515]	ND	[0.000098]	ND	[0.0051]	ND	[0.0001]	ND	[0.0053]	ND	[0.000097]	ND	[0.0053]	ND	[0.000096]	ND	[0.0051]	ND	[0.0001]	ND
	Acenaphthylene	2.2	2.2	[0.00515]	ND	[0.000078]	ND	[0.0051]	ND	[0.00008]	ND	[0.0053]	ND	[0.000078]	ND	[0.0053]	ND	[0.000077]	ND	[0.0051]	ND	[0.00008]	ND
	Aniline	--	--	[0.0257]	ND	--	--	[0.0255]	ND	--	--	[0.0266]	ND	--	--	[0.0265]	ND	--	--	[0.0255]	ND	--	--
	Anthracene	9.6	11	[0.00515]	ND	[0.000039]	ND	[0.0051]	ND	[0.00004]	ND	[0.0053]	ND	[0.000039]	ND	[0.0053]	ND	[0.000038]	ND	[0.0051]	ND	[0.00004]	ND
	Azobenzene	--	--	[0.00515]	ND	--	--	[0.0051]	ND	--	--	[0.0053]	ND	--	--	[0.0053]	ND	--	--	[0.0051]	ND	--	--
	Benzo[a]anthracene	0.0012	0.0012	[0.00515]	ND	[0.000059]	ND	[0.0051]	ND	[0.00006]	ND	[0.0053]	ND	[0.000058]	ND	[0.0053]	ND	[0.000058]	ND	[0.0051]	ND	[0.00006]	ND
	Benzo[a]pyrene	0.0002	0.0002	[0.00515]	ND	[0.000039]	ND	[0.0051]	ND	[0.00004]	ND	[0.0053]	ND	[0.000039]	ND	[0.0053]	ND	[0.000038]	ND	[0.0051]	ND	[0.00004]	ND
	Benzo[b]fluoranthene	0.0012	0.0012	[0.00515]	ND	[0.000078]	ND	[0.0051]	ND	[0.00008]	ND	[0.0053]	ND	[0.000078]	ND	[0.0053]	ND	[0.000077]	ND	[0.0051]	ND	[0.00008]	ND
	Benzo[g,h,i]perylene	1.1	1.1	[0.00515]	ND	[0.000059]	ND	[0.0051]	ND	[0.00006]	ND	[0.0053]	ND	[0.000058]	ND	[0.0053]	ND	[0.000058]	ND	[0.0051]	ND	[0.00006]	ND
	Benzo[k]fluoranthene	0.012	0.012	[0.00515]	ND	[0.000059]	ND	[0.0051]	ND	[0.00006]	ND	[0.0053]	ND	[0.000058]	ND	[0.0053]	ND	[0.000058]	ND	[0.0051]	ND	[0.00006]	ND

Table 5
Summary of Analytical Results - All Wells
Alaska Onshore LNG. 2016
Nikiski, AK

Method	Compound in milligrams per Liter (mg/L)	Screening Criteria		Sample Identification[3]															
				MW-27B				MW-39A				MW-39B				MW-50A			
		Water Quality Standards for Designated Uses [2]	ADEC Table C Groundwater Cleanup Level[1]	4/19/2016 17:15		09/16/2016 16:55		4/21/16 11:30		09/19/2016 10:31		4/21/16 14:00		09/19/2016 12:42		4/20/16 16:25		09/18/2016 12:46	
				Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag
SW8270D SVOC	Benzoic acid	150	150	[0.0257]	ND, QL	[0.0029]	ND	[0.0255]	ND	[0.003]	ND	[0.0266]	ND	[0.0029]	ND	[0.0265]	ND	[0.0029]	ND
	Benzyl alcohol	--	--	[0.00515]	ND	[0.00039]	ND	[0.0051]	ND	[0.0004]	ND	[0.0053]	ND	[0.0019]	ND	[0.0053]	ND	[0.00038]	ND
	Bis(2chloro1methylethyl)Ether	--	--	[0.00515]	ND	--	--	[0.0051]	ND	--	--	[0.0053]	ND	--	--	[0.0053]	ND	--	--
	Bis(2-chloroethoxy)methane	--	--	[0.00515]	ND	[0.00039]	ND	[0.0051]	ND	[0.0004]	ND	[0.0053]	ND	[0.00039]	ND	[0.0053]	ND	[0.00038]	ND
	Bis(2-chloroethyl)ether	0.00077	0.00077	[0.00515]	ND	[0.00039]	ND	[0.0051]	ND	[0.0004]	ND	[0.0053]	ND	[0.00039]	ND	[0.0053]	ND	[0.00038]	ND
	Bis(2-ethylhexyl) phthalate	0.006	0.006	[0.00515]	ND	[0.0029]	ND	[0.0051]	ND	[0.003]	ND	[0.0053]	ND	[0.0029]	ND	[0.0053]	ND	[0.0029]	ND
	bis(chloroisopropyl) ether	1.4	--	--	--	[0.00039]	ND	--	--	[0.0004]	ND	--	--	[0.00039]	ND	--	--	[0.00038]	ND
	Butyl benzyl phthalate	3	7.3	[0.00515]	ND	[0.00059]	ND	[0.0051]	ND	[0.0006]	ND	[0.0053]	ND	[0.00058]	ND	[0.0053]	ND	[0.00058]	ND
	Carbazole	0.043	0.043	[0.00515]	ND	[0.00039]	ND	[0.0051]	ND	[0.0004]	ND	[0.0053]	ND	[0.00039]	ND	[0.0053]	ND	[0.00038]	ND
	Chrysene	0.12	0.12	[0.00515]	ND	[0.000039]	ND	[0.0051]	ND	[0.00004]	ND	[0.0053]	ND	[0.000039]	ND	[0.0053]	ND	[0.000038]	ND
	Dibenz(a,h)anthracene	0.00012	0.00012	[0.00515]	ND	[0.000059]	ND	[0.0051]	ND	[0.00006]	ND	[0.0053]	ND	[0.000058]	ND	[0.0053]	ND	[0.000058]	ND
	Dibenzofuran	0.073	0.073	[0.00515]	ND	[0.00039]	ND	[0.0051]	ND	[0.0004]	ND	[0.0053]	ND	[0.00039]	ND	[0.0053]	ND	[0.00038]	ND
	Diethyl phthalate	23	29	[0.00515]	ND	[0.00039]	ND	[0.0051]	ND	[0.0004]	ND	[0.0053]	ND	[0.00039]	ND	[0.0053]	ND	[0.00038]	ND
	Dimethyl phthalate	313	370	[0.00515]	ND	[0.00039]	ND	[0.0051]	ND	[0.0004]	ND	[0.0053]	ND	[0.00039]	ND	[0.0053]	ND	[0.00038]	ND
	Di-n-butyl phthalate	2.7	3.7	[0.00515]	ND	[0.00039]	ND	[0.0051]	ND	[0.0004]	ND	[0.0053]	ND	[0.00039]	ND	[0.0053]	ND	[0.00038]	ND
	Di-n-octyl phthalate	1.5	1.5	[0.00515]	ND	[0.00039]	ND	[0.0051]	ND	[0.0004]	ND	[0.0053]	ND	[0.00039]	ND	[0.0053]	ND	[0.00038]	ND
	Fluoranthene	0.3	1.5	[0.00515]	ND	[0.000049]	ND	[0.0051]	ND	[0.00005]	ND	[0.0053]	ND	[0.000049]	ND	[0.0053]	ND	[0.000048]	ND
	Fluorene	1.3	1.5	[0.00515]	ND	[0.000059]	ND	[0.0051]	ND	[0.00006]	ND	[0.0053]	ND	[0.000058]	ND	[0.0053]	ND	[0.000058]	ND
	Hexachlorobenzene	0.001	0.001	[0.00515]	ND	[0.00039]	ND	[0.0051]	ND	[0.0004]	ND	[0.0053]	ND	[0.00039]	ND	[0.0053]	ND	[0.00038]	ND
	Hexachlorobutadiene	0.0073	0.0073	[0.00515]	ND	[0.00059]	ND	[0.0051]	ND	[0.0006]	ND, QL	[0.0053]	ND	[0.00058]	ND, QL	[0.0053]	ND	[0.00058]	ND
	Hexachlorocyclopentadiene	0.05	0.05	[0.0155]	ND	[0.002]	ND	[0.0153]	ND	[0.002]	ND	[0.0159]	ND	[0.0019]	ND	[0.0159]	ND	[0.0019]	ND
	Hexachloroethane	0.04	0.04	[0.00515]	ND	[0.00059]	ND	[0.0051]	ND	[0.0006]	ND	[0.0053]	ND	[0.00058]	ND	[0.0053]	ND	[0.00058]	ND
	Indeno[1,2,3-cd]pyrene	0.0012	0.0012	[0.00515]	ND	[0.000059]	ND	[0.0051]	ND	[0.00006]	ND	[0.0053]	ND	[0.000058]	ND	[0.0053]	ND	[0.000058]	ND
	Isophorone	0.9	0.9	[0.00515]	ND	[0.00039]	ND	[0.0051]	ND	[0.0004]	ND	[0.0053]	ND	[0.00039]	ND	[0.0053]	ND	[0.00038]	ND
	Naphthalene	0.73	0.73	[0.00515]	ND	[0.00039]	ND	[0.0051]	ND	[0.0004]	ND	[0.0053]	ND	[0.00039]	ND	[0.0053]	ND	[0.00038]	ND
	Nitrobenzene	0.017	0.018	[0.00515]	ND	[0.00039]	ND	[0.0051]	ND	[0.0004]	ND	[0.0053]	ND	[0.00039]	ND	[0.0053]	ND	[0.00038]	ND
	N-Nitrosodimethylamine	--	0.000017	[0.00515]	ND	--	--	[0.0051]	ND	--	--	[0.0053]	ND	--	--	[0.0053]	ND	--	--
	N-Nitrosodi-n-propylamine	0.00012	0.00012	[0.00515]	ND	[0.00039]	ND	[0.0051]	ND	[0.0004]	ND	[0.0053]	ND	[0.00039]	ND	[0.0053]	ND	[0.00038]	ND
	N-Nitrosodiphenylamine	0.17	0.17	[0.00515]	ND	[0.00039]	ND	[0.0051]	ND	[0.0004]	ND	[0.0053]	ND	[0.00039]	ND	[0.0053]	ND	[0.00038]	ND
	Pentachlorophenol	0.001	0.001	[0.0257]	ND	[0.00069]	ND	[0.0255]	ND	[0.0007]	ND	[0.0266]	ND	[0.00068]	ND	[0.0265]	ND	[0.00067]	ND
	Phenanthrene	11	11	[0.00515]	ND	[0.000078]	ND	[0.0051]	ND	[0.00008]	ND	[0.0053]	ND	[0.000078]	ND	[0.0053]	ND	[0.000077]	ND
	Phenol	11	11	[0.00515]	ND	[0.00059]	ND	[0.0051]	ND	[0.0006]	ND	[0.0053]	ND	[0.00058]	ND	[0.0053]	ND	[0.00058]	ND
	Pyrene	0.96	1.1	[0.00515]	ND	[0.000059]	ND	[0.0051]	ND	[0.00006]	ND	[0.0053]	ND	[0.000058]	ND	[0.0053]	ND	[0.000058]	ND

Method	Compound in milligrams per Liter (mg/L)	Sample Identification[3]							
		MW-50B							
		4/20/16 18:40		09/18/2016 09:41					
		Conc.[4]	Flag	Conc.[4]	Flag				
SW8270D SVOC	Benzoic acid	[0.0255]	ND	[0.003]	ND				
	Benzyl alcohol	[0.0051]	ND	[0.0004]	ND				
	Bis(2chloro1methylethyl)Ether	[0.0051]	ND	--	--				
	Bis(2-chloroethoxy)methane	[0.0051]	ND	[0.0004]	ND				
	Bis(2-chloroethyl)ether	[0.0051]	ND	[0.0004]	ND				
	Bis(2-ethylhexyl) phthalate	[0.0051]	ND	[0.003]	ND				
	bis(chloroisopropyl) ether	--	--	[0.0004]	ND				
	Butyl benzyl phthalate	[0.0051]	ND	[0.0006]	ND				
	Carbazole	[0.0051]	ND	[0.0004]	ND				
	Chrysene	[0.0051]	ND	[0.00004]	ND				
	Dibenz(a,h)anthracene	[0.0051]	ND	[0.00006]	ND				
	Dibenzofuran	[0.0051]	ND	[0.0004]	ND				
	Diethyl phthalate	[0.0051]	ND	[0.0004]	ND				
	Dimethyl phthalate	[0.0051]	ND	[0.0004]	ND				
	Di-n-butyl phthalate	[0.0051]	ND	[0.0004]	ND				
	Di-n-octyl phthalate	[0.0051]	ND	[0.0004]	ND				
	Fluoranthene	[0.0051]	ND	[0.00005]	ND				
	Fluorene	[0.0051]	ND	[0.00006]	ND				
	Hexachlorobenzene	[0.0051]	ND	[0.0004]	ND				
	Hexachlorobutadiene	[0.0051]	ND	[0.0006]	ND				
	Hexachlorocyclopentadiene	[0.0153]	ND	[0.002]	ND				
	Hexachloroethane	[0.0051]	ND	[0.0006]	ND				
	Indeno[1,2,3-cd]pyrene	[0.0051]	ND	[0.00006]	ND				
	Isophorone	[0.0051]	ND	[0.0004]	ND				
	Naphthalene	[0.0051]	ND	[0.0004]	ND				
	Nitrobenzene	[0.0051]	ND	[0.0004]	ND				
	N-Nitrosodimethylamine	[0.0051]	ND	--	--				
	N-Nitrosodi-n-propylamine	[0.0051]	ND	[0.0004]	ND				
	N-Nitrosodiphenylamine	[0.0051]	ND	[0.0004]	ND				
	Pentachlorophenol	[0.0255]	ND	[0.0007]	ND				
	Phenanthrene	[0.0051]	ND	[0.00008]	ND				
	Phenol	[0.0051]	ND	[0.0006]	ND				
	Pyrene	[0.0051]	ND	[0.00006]	ND				

Notes:

1 - This screening level corresponds to ADEC groundwater cleanup levels from 18 AAC 75.345 Table C. Revised 5/8/2016
http://dec.alaska.gov/commish/regulations/pdfs/18%20aac%2075.pdf
2 - This screening level corresponds to the most conservative values within ADEC Water Quality Standards 18 AAC 70. Amended 2/19/2016.
https://dec.alaska.gov/commish/regulations/pdfs/18%20AAC%2070.pdf
3 - The field sample identification number and date collected are provided.
4 - For detected results, the sample result is listed in this column. For results of non-detect, the LOD is listed in [ ] in this column.
5 - ADEC Calculator: http://dec.alaska.gov/water/cruise_ships/gp/2010/zinc_rpa_stationary.xls
6 - May not exceed 5 NTUs above natural conditions (NC) when the natural turbidity is 50 NTU or less, and may not have more than 10% increase in turbidity when the natural turbidity is more than 50 NTU, not to exceed a maximum increase of 25 NTU. Turbidity screening levels corresponds to ADEC Alaska General Permit AKG003000 for discharge of Aquifer Pump Test (Table 6).
http://dec.alaska.gov/water/wnpspc/stormwater/docs/AKG003000_Hydrostatic_GP_Permit.pdf
7 - Standards are specific to various factors, such as a receiving water body (e.g., freshwater or saltwater)
See ADEC Water Quality Criteria Manual for Toxic and other Deleterious Organic and Inorganic substances, as amended through December 12, 2008, Appendices C through g.

Sample results exceeding the ADEC Table C Groundwater screening criteria are shown in (**BOLD** with yellow shading).
Analyte was not detected, but the LOD was above the screening level (light blue shading).
Detected concentrations in **BOLD**

Data Flags

=	Analyte detected at concentration listed in column to the left.
B	The reported concentration was less than five times that of the associated method blank and/or trip blank.
J	Result is considered an estimated value because the level is below the laboratory LOQ, but above the DL.
ND	Non-detect, LOD is in brackets [ ] in the concentration column.
MH, ML, MN	The quantitation was an estimate due to a quality control failure. Where applicable, a "H", "L", or "N" was used to indicate possible high, low, or unknown bias.
QH, QL, QN	The quantitation was an estimate due to a sample matrix quality control failure. Where applicable, a "H", "L", or "N" was used to indicate possible high, low, or unknown bias.
H	Holding Time Exceeded
U	Analyte was analyzed for but not detected
*	Lab Control Sample or Lab Control Sample Duplicate outside of acceptance limits

Abbreviations

--	Not applicable or screening criteria does not exist for this compound
AAC	Alaska Administrative Code
ADEC	Alaska Department of Environmental Conservation
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
PAH	Polycyclic Aromatic Hydrocarbon
SVOCs	Semi-volatile Organic Compounds
VOCs	Volatile Organic Compounds

Table 5
Summary of Analytical Results - All Wells
Alaska Onshore LNG. 2016
Nikiski, AK

Method	Compound in milligrams per Liter (mg/L)	Screening Criteria		Sample Identification[3]															
				MW-62A				MW-74A				MW-74A (Duplicate)		MW-74B				MW-82A			
		Water Quality Standards for Designated Uses [2]	ADEC Table C Groundwater Cleanup Level[1]	4/23/16 11:40		09/19/2016 15:03		04/22/2016 11:50		09/17/2016 10:37		04/22/2016 11:50		04/21/2016 18:10		09/17/2016 12:41		04/20/2016 11:05		09/16/2016 10:37	
				Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag
200.8 Metal, Dissolved	Aluminum, Dissolved	--	--	**0.00442**	=, B	**0.00981**	=, B	**0.00881**	=	**0.0356**	=	--	--	**0.00357**	=, B, MH	**0.0256**	=	**0.123**	=	**0.00212**	=, B
	Antimony, Dissolved	--	--	[0.000025]	ND	**0.0000385**	J	**0.0000412**	J	**0.0000801**	=	--	--	**0.0000214**	J, MH	**0.0000363**	J	[0.000025]	ND	**0.000023**	J
	Arsenic, Dissolved	0.01	--	**0.0151**	=	**0.0156**	=	**0.0566**	=	**0.0488**	=	--	--	**0.00144**	=	**0.00108**	=	**0.00752**	=	**0.00787**	=
	Barium, Dissolved	--	--	**0.0147**	=	**0.0167**	=	**0.00394**	=, B	**0.00341**	=	--	--	**0.0327**	=, MH	**0.0256**	=	**0.01**	=	**0.00907**	=
	Beryllium, Dissolved	--	--	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	--	--	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND
	Bismuth, Dissolved	--	--	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	--	--	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND
	Boron, Dissolved	--	--	**0.0341**	=	**0.0353**	=	**0.156**	=	**0.122**	=	--	--	**0.00756**	=, MH	**0.00479**	J	**0.0123**	=	**0.0122**	=
	Cadmium, Dissolved [5]	0.06	--	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	--	--	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND
	Calcium, Dissolved	--	--	**14.3**	=	**16.1**	=	**3.69**	=	**2.93**	=	--	--	**14.9**	=	**11.1**	=	**19.3**	=	**18.5**	=
	Chromium, Dissolved	0.011	--	**0.000792**	=	**0.000195**	J	**0.000688**	=	[0.00025]	ND	--	--	**0.000697**	=, MH	**0.000294**	J	**0.000471**	J	[0.00025]	ND
	Cobalt, Dissolved	--	--	**0.000086**	=	**0.000102**	=	**0.0000633**	=	**0.0000501**	=	--	--	**0.00138**	=, MH	**0.00107**	=	**0.000101**	=	**0.0000357**	=
	Copper, Dissolved [5]	0.00161	--	[0.00025]	ND	**0.000251**	J, B	[0.00025]	ND	**0.000267**	J, B	--	--	[0.00025]	ND	[0.00025]	ND	**0.000392**	J	[0.00025]	ND
	Iron, Dissolved	--	--	**0.0213**	=	**0.0264**	=	**0.0315**	=	**0.0606**	=	--	--	**4.74**	=	**3.4**	=	**0.168**	=	**0.0324**	=
	Lead, Dissolved [5]	0.00027	--	[0.00005]	ND	[0.00005]	ND	[0.00005]	ND	**0.000033**	J	--	--	[0.00005]	ND	**0.0000365**	J	**0.0000706**	J	[0.00005]	ND
	Magnesium, Dissolved	--	--	**8.28**	=	**9.5**	=	**1.89**	=	**1.48**	=	--	--	**5.03**	=, MH	**3.68**	=	**4.93**	=	**4.51**	=
	Manganese, Dissolved	--	--	**0.12**	=	**0.145**	=	**0.0254**	=	**0.0218**	=	--	--	**0.191**	=	**0.141**	=	**0.0937**	=	**0.0916**	=
	Molybdenum, Dissolved	--	--	**0.000596**	=	**0.000503**	=	**0.00199**	=	**0.00119**	=	--	--	**0.000381**	=, MH	**0.000222**	=	**0.000696**	=	**0.000461**	=
	Nickel, Dissolved [5]	0.0095	--	**0.00105**	=	**0.00168**	=	**0.000954**	=	**0.000364**	J, B	--	--	**0.0026**	=, MH	**0.00172**	=	**0.00114**	=	**0.000426**	J, B
	Potassium, Dissolved	--	--	**7.53**	=	**7.6**	=	**8.87**	=	**7.07**	=	--	--	**2.18**	=	**1.71**	=	**2.87**	=	**2.56**	=
	Selenium, Dissolved	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Silicon, Dissolved	--	--	**14.9**	=, QH	**15.3**	=,QH	**13.9**	=	**11.5**	=,QH	--	--	**19.1**	=	**15.7**	=,QH	**16.8**	=, QH	**15.1**	=,QH
	Silver, Dissolved [5]	0.00011	--	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	--	--	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND
	Sodium, Dissolved	--	--	**5.32**	=	**5.8**	=	**33.3**	=	**31**	=	--	--	**8.04**	=, MH	**6.03**	=	**5.27**	=	**4.69**	=
	Thallium, Dissolved	--	--	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	--	--	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND
	Tin, Dissolved	--	--	[0.0001]	ND	[0.0001]	ND	[0.0001]	ND	[0.0001]	ND	--	--	[0.0001]	ND	[0.0001]	ND	[0.0001]	ND	[0.0001]	ND
	Vanadium, Dissolved	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	**0.00031**	J	--	--	**0.000477**	J, MH	**0.000546**	J	[0.0005]	ND	[0.0005]	ND
	Zinc, Dissolved [5]	0.02134	--	**0.00135**	J, B	**0.0054**	= , B	**0.000557**	J	**0.000941**	J,B	--	--	**0.00112**	J	**0.00237**	J,B	**0.00132**	J, B	**0.000551**	J, B
200.8 Metal, Total	Aluminum, Total	0.087	--	**0.523**	=	**0.802**	=	**1.71**	=	**1.42**	=	--	--	**0.43**	=, MH	**0.78**	=	**0.781**	=	**2.16**	=
	Antimony, Total	0.006	0.006	**0.0000276**	J	**0.0000767**	=	**0.000128**	=	**0.000126**	=	--	--	**0.00011**	=	**0.0000599**	=	**0.0000244**	J	**0.000111**	=
	Arsenic, Total	0.01	0.01	**0.0169**	=	**0.0167**	=	**0.0634**	=	**0.0474**	=	--	--	**0.00154**	=	**0.00118**	=	**0.0077**	=	**0.00883**	=
	Barium, Total	2	2	**0.0217**	=	**0.0242**	=	**0.0284**	=	**0.0165**	=	--	--	**0.0414**	=	**0.0311**	=	**0.0149**	=	**0.0212**	=
	Beryllium, Total	0.004	0.004	[0.000025]	ND	[0.000025]	ND	**0.0000694**	=	[0.000025]	ND	--	--	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	**0.0000332**	J
	Bismuth, Total	--	--	[0.000025]	ND	[0.000025]	ND	**0.000032**	J	**0.000021**	J	--	--	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	**0.0000169**	J
	Boron, Total	0.75	--	**0.039**	=	**0.0363**	=	**0.17**	=	**0.123**	=	--	--	**0.00884**	=	**0.00456**	J	**0.013**	=	**0.0126**	=
	Cadmium, Total	0.01	0.005	[0.000025]	ND	**0.0000163**	J	**0.0000286**	J	**0.0000199**	J	--	--	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	**0.0000683**	=
	Calcium, Total	--	--	**16.6**	=	**16.4**	=	**4.97**	=	**3.67**	=	--	--	**16.8**	=	**10.8**	=	**19.8**	=	**19.5**	=
	Chromium, Total	0.011	0.1	**0.00431**	=	**0.048**	=	**0.0145**	=	**0.00792**	=	--	--	**0.00248**	=, MH	**0.00325**	=	**0.00288**	=	**0.00407**	=
	Cobalt, Total	0.05	--	**0.000452**	=	**0.00095**	=	**0.00155**	=	**0.000902**	=	--	--	**0.00173**	=, MH	**0.00132**	=	**0.000399**	=	**0.000957**	=
	Copper, Total	0.0031	1	**0.00136**	=	**0.0033**	=	**0.00635**	=	**0.00366**	=	--	--	**0.000973**	=	**0.0013**	=	**0.00145**	=	**0.00326**	=
	Iron, Total	1	--	**0.711**	=	**1.59**	=	**3.03**	=	**1.86**	=	--	--	**5.81**	=	**3.8**	=	**0.823**	=	**2.56**	=
	Lead, Total	0.0081	0.015	**0.000287**	=	**0.000424**	=	**0.00124**	=	**0.000804**	=	--	--	**0.000222**	=	**0.000469**	=	**0.000313**	=	**0.000937**	=
	Magnesium, Total	--	--	**9.37**	=	**9.82**	=	**3**	=	**1.98**	=	--	--	**6.2**	=	**3.6**	=	**5.21**	=	**5.29**	=
	Manganese, Total	0.05	--	**0.145**	=	**0.181**	=	**0.0891**	=	**0.0611**	=	--	--	**0.22**	=	**0.14**	=	**0.109**	=	**0.136**	=
	Molybdenum, Total	0.01	--	**0.000892**	=	**0.0017**	=	**0.00313**	=	**0.00133**	=	--	--	**0.000445**	=, MH	**0.000304**	=	**0.000745**	=	**0.000529**	=
	Nickel, Total	0.0082	0.1	**0.00433**	=	**0.0229**	=	**0.0101**	=	**0.00543**	=	--	--	**0.00329**	=, MH	**0.003**	=	**0.00256**	=	**0.00353**	=
	Potassium, Total	--	--	**8.56**	=	**7.8**	=	**10**	=	**7.31**	=	--	--	**2.45**	=	**1.64**	=	**2.98**	=	**2.82**	=
	Selenium, Total	0.005	0.05	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Silver, Total	0.0019	0.1	[0.00001]	ND	[0.00001]	ND	**0.0000237**	=	[0.00001]	ND	--	--	**0.0000106**	J	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND
	Sodium, Total	--	--	**6.14**	=	**5.98**	=	**37.2**	=	**30.5**	=	--	--	**9.86**	=	**5.75**	=	**5.43**	=	**5.05**	=
	Thallium, Total	0.0017	0.002	[0.00001]	ND	[0.00001]	ND	**0.0000179**	J	**0.000009**	J	--	--	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	**0.0000084**	J
	Tin, Total	--	--	[0.0001]	ND	**0.000123**	J	**0.000115**	J	[0.0001]	ND	--	--	[0.0001]	ND	[0.0001]	ND	**0.0000749**	J	**0.000156**	J
	Vanadium, Total	0.1	0.26	**0.00168**	=	**0.00175**	=	**0.00749**	=	**0.00355**	=	--	--	**0.00191**	=, MH	**0.00179**	=	**0.00161**	=	**0.00419**	=
	Zinc, Total	0.081	5	**0.00872**	=	**0.0157**	= , B	**0.0136**	=	**0.0103**	= , B	--	--	**0.00239**	J	**0.00432**	= , B	**0.00703**	=	**0.0475**	= , B
EPA 1631 E, Dissolved	Mercury, Dissolved	0.00077	--	**0.00000513**	J, B	[0.0000005]	ND	**0.00000547**	J, B	**0.00000055**	J	--	--	[0.0000005]	ND	[0.0000005]	ND	**0.000000579**	=	[0.0000005]	ND
EPA 1631 E, Total	Mercury, Total	0.00005	0.002	**0.00000144**	=, B	**0.00000172**	=	**0.0000049**	=, B	**0.00000424**	=	--	--	**0.00000333**	=, B	**0.00000123**	=	**0.00000131**	=	**0.00000436**	=
AK101	Gasoline Range Organics	2.2	2.2	[0.05]	ND	[0.05]	ND	[0.05]	ND	[0.05]	ND	--	--	[0.05]	ND	[0.05]	ND	[0.05]	ND	[0.05]	ND
AK102	Diesel Range Organics	1.5	1.5	[0.288]	ND	**0.437**	J,B	[0.288]	ND	**0.287**	J, B	--	--	[0.288]	ND	**0.278**	J, B	[0.283]	ND	**0.314**	J, B
AK103	Residual Range Organics	1.1	1.1	[0.24]	ND	[0.256]	ND	**0.352**	J	[0.25]	ND	--	--	**0.823**	=	[0.265]	ND	[0.236]	ND	[0.252]	ND
EPA 300.0	Chloride	230	--	**5.39**	=	**5.74**	=	**4.33**	=	**4.22**	=	--	--	**11.8**	=	**11.2**	=	**9.29**	=	**9.05**	=
	Fluoride	1	--	**0.086**	J	**0.134**	J	**0.193**	=	**0.218**	=	--	--	**0.064**	J	**0.118**	J	**0.089**	J, QH	**0.133**	J
	Nitrate-N	--	--	**--**	--	[0.05]	ND	**--**	--	[0.1]	ND	--	--	**--**	--	[0.1]	ND	**--**	--	[0.1]	ND
	Nitrite-N	--	--	**--**	--	[0.05]	ND	**--**	--	[0.1]	ND	--	--	**--**	--	[0.1]	ND	**--**	--	[0.1]	ND
	Sulfate	250	--	**3.39**	=	**4.18**	=	**1.24**	=	**1.25**	=	--	--	**5.19**	=	**5.5**	=	**2.31**	=	**2.48**	=
EPA 410.4	Chemical Oxygen Demand	--	--	**--**	--	**--**	--	**--**	--	**--**	--			**--**	--	**--**	--	**--**	--	**--**	--
SM21 2130B	Turbidity (NTU)	See Note 6	--	**4.4**	=	**15**	=	**15**	=	**38**	=	--	--	**1.6**	=	**7.6**	=	**6.6**	=	**34**	=
SM21 2320B	Alkalinity	<20000	--	**76.3**	=	**90.5**	=	**81.8**	=	**89.9**	=	--	--	**44.8**	=	**42.5**	=	**61.3**	=	**70.3**	=
SM21 2340B	Hardness as CaCO3	--	--	**69.7**	=	**79.3**	=	**17**	=	**13.4**	=	--	--	**58**	=	**42.9**	=	**68.5**	=	**64.7**	=
SM21 2540B	Total Solids	--	--	**--**	--	**--**	--	**--**	--	**--**	--	--	--	**--**	--	**--**	--	**--**	--	**--**	--
SM21 2540C	Total Dissolved Solids	500	--	**125**	=	**124**	=	**131**	=	**141**	=	--	--	**106**	=	**115**	=	**121**	=	**144**	=
SM21 2540D	Total Suspended Solids	--	--	**41.1**	=	**110**	=	**24.7**	=	**78.3**	=	**21.3**	=	**4.14**	=, QN	**11.8**	=	**13.1**	=	**55.1**	=
SM21 4500-NH3 G	Ammonia-N	See Note 7	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--
SM21 4500-N D	Total Kjeldahl Nitrogen	--	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--
SM21 4500NO3-F	Nitrate-N	--	--	[0.05]	ND, QL	**--**	--	[0.05]	ND, QL	**--**	--	**--**	--	[0.05]	ND, QL	**--**	--	**0.0452**	J, B	**--**	--
	Nitrite-N	--	--	**0.056**	J, QL	**--**	--	[0.05]	ND, QL	**--**	--	**--**	--	**0.056**	J, QL	**--**	--	[0.05]	ND	**--**	--
SM21 4500P-B,E	Total Phosphorus	--	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--
	Ortho Phosphate-P	--	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--
SM21 5310B	Total Organic Carbon	--	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--
	Dissolved Organic Carbon	--	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--
SM21 9222D	Fecal Coliform (Col/100mL)	1	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--
SM21 10200H	Chlorophyll A (mg/m^3)	--	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--

Table 5
Summary of Analytical Results - All Wells
Alaska Onshore LNG. 2016
Nikiski, AK

Method	Compound in milligrams per Liter (mg/L)	Screening Criteria		Sample Identification[3]															
		Water Quality Standards for Designated Uses [2]	ADEC Table C Groundwater Cleanup Level[1]	MW-62A				MW-74A				MW-74A (Duplicate)		MW-74B				MW-82A			
				4/23/16 11:40		09/19/2016 15:03		04/22/2016 11:50		09/17/2016 10:37		04/22/2016 11:50		04/21/2016 18:10		09/17/2016 12:41		04/20/2016 11:05		09/16/2016 10:37	
				Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag
SW8082A PCB	Aroclor-1016	0.000014	0.0005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Aroclor-1221	0.000014	0.0005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Aroclor-1232	0.000014	0.0005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Aroclor-1242	0.000014	0.0005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Aroclor-1248	0.000014	0.0005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Aroclor-1254	0.000014	0.0005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Aroclor-1260	0.000014	0.0005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SW 8270D SIM (PESTICIDE)	4,4'-DDD	0.0035	0.0035	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4,4'-DDE	0.0025	0.0025	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	4,4'-DDT	0.000001	0.0025	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Aldrin	0.003	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	alpha-BHC	0.00014	0.00014	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	alpha-Chlordane	0.000004	0.002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	beta-BHC	0.00047	0.00047	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	delta-BHC	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Dieldrin	0.0000019	0.000053	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Endosulfan I	0.0000087	0.22	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Endosulfan II	0.0000087	0.22	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Endosulfan sulfate	0.11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Endrin	0.0000023	0.002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Endrin aldehyde	0.00076	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Endrin ketone	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	gamma-BHC (Lindane)	0.00016	0.0002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	gamma-Chlordane	0.000004	0.002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Heptachlor	0.0000036	0.0004	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Heptachlor epoxide	0.0000036	0.0002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Methoxychlor	0.00003	0.04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Toxaphene	0.0000002	0.003	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SW8011, LL VOC	1,2,3-Trichloropropane	0.00012	0.00012	--	--	[0.00002]	ND	--	--	--	--	--	--	--	--	[0.00002]	ND	--	--	[0.00002]	ND
	1,2-Dibromoethane	0.00005	0.00005	--	--	[0.00002]	ND	--	--	--	--	--	--	--	--	[0.00002]	ND	--	--	[0.00002]	ND
SW8260C VOC	1,1,1,2-Tetrachloroethane	--	--	[0.00025]	ND	--	--	[0.00025]	ND	--	--	--	--	[0.00025]	ND	--	--	[0.00025]	ND	--	--
	1,1,1-Trichloroethane	0.2	0.2	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	--	--	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND
	1,1,2,2-Tetrachloroethane	0.0043	0.0043	[0.00025]	ND	[0.001]	ND	[0.00025]	ND	[0.001]	ND	--	--	[0.00025]	ND	[0.001]	ND	[0.00025]	ND	[0.001]	ND
	1,1,2-Trichloroethane	0.005	0.005	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	--	--	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND
	1,1-Dichloroethane	7.3	7.3	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	--	--	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND
	1,1-Dichloroethene	0.007	0.007	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	--	--	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND
	1,1-Dichloropropene	--	--	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	--	--	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND
	1,2,3-Trichlorobenzene	--	--	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	--	--	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND
	1,2,3-Trichloropropane	0.00012	0.00012	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	--	--	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND
	1,2,4-Trichlorobenzene	0.07	0.07	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	--	--	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND
	1,2,4-Trimethylbenzene	1.8	1.8	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	--	--	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND
	1,2-Dibromo-3-Chloropropane	0.0002	--	[0.005]	ND	[0.01]	ND	[0.005]	ND	[0.01]	ND	--	--	[0.005]	ND	[0.01]	ND	[0.005]	ND	[0.01]	ND
	1,2-Dibromoethane	0.00005	0.00005	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	--	--	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND
	1,2-Dichlorobenzene	0.6	0.6	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	--	--	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND
	1,2-Dichloroethane	0.005	0.005	[0.00025]	ND	[0.001]	ND	[0.00025]	ND	[0.001]	ND	--	--	[0.00025]	ND	[0.001]	ND	[0.00025]	ND	[0.001]	ND
	1,2-Dichloropropane	0.005	0.005	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	--	--	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND
	1,3,5-Trimethylbenzene	1.8	1.8	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	--	--	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND
	1,3-Dichlorobenzene	0.4	3.3	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	--	--	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND
	1,3-Dichloropropane	--	--	[0.00025]	ND	[0.001]	ND	[0.00025]	ND	[0.001]	ND	--	--	[0.00025]	ND	[0.001]	ND	[0.00025]	ND	[0.001]	ND
	1,4-Dichlorobenzene	0.075	0.075	[0.00025]	ND	[0.004]	ND	[0.00025]	ND	[0.004]	ND	--	--	[0.00025]	ND	[0.004]	ND	[0.00025]	ND	[0.004]	ND
	2,2-Dichloropropane	--	--	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	--	--	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND
	2-Butanone	22	22	[0.005]	ND	[0.02]	ND	[0.005]	ND	[0.02]	ND	--	--	[0.005]	ND	[0.02]	ND	[0.005]	ND	[0.02]	ND
	2-Chlorotoluene	--	--	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	--	--	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND
	2-Hexanone	--	--	[0.005]	ND	[0.02]	ND	[0.005]	ND	[0.02]	ND	--	--	[0.005]	ND	[0.02]	ND	[0.005]	ND	[0.02]	ND
	4-Chlorotoluene	--	--	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	--	--	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND
	4-Isopropyltoluene	--	--	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	--	--	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND
	4-Methyl-2-pentanone	2.9	2.9	[0.005]	ND	[0.015]	ND	[0.005]	ND	[0.015]	ND	--	--	[0.005]	ND	[0.015]	ND	[0.005]	ND	[0.015]	ND
	Acetone	--	--	--	--	[0.05]	ND	--	--	[0.05]	ND	--	--	--	--	[0.05]	ND	--	--	[0.05]	ND
	Benzene	0.005	0.005	[0.0002]	ND	[0.002]	ND	[0.0002]	ND	[0.002]	ND	--	--	[0.0002]	ND	[0.002]	ND	[0.0002]	ND	[0.002]	ND
	Bromobenzene	--	--	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	--	--	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND
	Bromochloromethane	--	--	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	--	--	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND
	Bromodichloromethane	0.014	0.014	[0.00025]	ND	[0.002]	ND	[0.00025]	ND	[0.002]	ND	--	--	[0.00025]	ND	[0.002]	ND	[0.00025]	ND	[0.002]	ND
	Bromoform	0.08	0.11	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	--	--	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND
	Bromomethane	0.048	0.051	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	--	--	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND
	Carbon disulfide	3.7	3.7	[0.005]	ND	[0.001]	ND	[0.005]	ND	[0.001]	ND	--	--	[0.005]	ND	[0.001]	ND	[0.005]	ND	[0.001]	ND
	Carbon tetrachloride	0.005	0.005	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	--	--	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND
	Chlorobenzene	0.1	0.1	[0.00025]	ND	[0.002]	ND	[0.00025]	ND	[0.002]	ND	--	--	[0.00025]	ND	[0.002]	ND	[0.00025]	ND	[0.002]	ND
	Chloroethane	0.29	0.29	[0.0005]	ND	[0.005]	ND	[0.0005]	ND	[0.005]	ND	--	--	[0.0005]	ND	[0.005]	ND	[0.0005]	ND	[0.005]	ND
	Chloroform	0.08	0.14	[0.0005]	ND	[0.005]	ND	[0.0005]	ND	[0.005]	ND	--	--	[0.0005]	ND	[0.005]	ND	[0.0005]	ND	[0.005]	ND
	Chloromethane	0.066	0.066	[0.0005]	ND	[0.005]	ND	[0.0005]	ND	[0.005]	ND	--	--	[0.0005]	ND	[0.005]	ND	[0.0005]	ND	[0.005]	ND
	cis-1,2-Dichloroethene	0.07	0.07	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	--	--	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND
	cis-1,3-Dichloropropene	0.0085	0.0085	[0.00025]	ND	[0.001]	ND	[0.00025]	ND	[0.001]	ND	--	--	[0.00025]	ND	[0.001]	ND	[0.00025]	ND	[0.001]	ND
	Dibromochloromethane	0.01	0.01	[0.00025]	ND	[0.001]	ND	[0.00025]	ND	[0.001]	ND	--	--	[0.00025]	ND	[0.001]	ND	[0.00025]	ND	[0.001]	ND
	Dibromomethane	0.37	0.37	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	--	--	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND
	Dichlorodifluoromethane	7.3	7.3	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	--	--	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND
	Ethylbenzene	0.7	0.7	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	--	--	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND
	Freon-113	--	1100	[0.005]	ND	--	--	[0.005]	ND	--	--	--	--	[0.005]	ND	--	--	[0.005]	ND	--	--

Table 5
Summary of Analytical Results - All Wells
Alaska Onshore LNG. 2016
Nikiski, AK

Method	Compound in milligrams per Liter (mg/L)	Screening Criteria		Sample Identification[3]															
		Water Quality Standards for Designated Uses [2]	ADEC Table C Groundwater Cleanup Level[1]	MW-62A				MW-74A				MW-74A (Duplicate)		MW-74B				MW-82A			
				4/23/16 11:40		09/19/2016 15:03		04/22/2016 11:50		09/17/2016 10:37		04/22/2016 11:50		04/21/2016 18:10		09/17/2016 12:41		04/20/2016 11:05		09/16/2016 10:37	
				Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag
SW8260C VOC	Hexachlorobutadiene	0.0073	0.0073	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	--	--	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND
	Isopropylbenzene	3.7	3.7	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	--	--	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND
	Methylene Chloride	0.005	0.005	[0.0025]	ND	[0.005]	ND	[0.0025]	ND	[0.005]	ND	--	--	[0.0025]	ND	[0.005]	ND	[0.0025]	ND	[0.005]	ND
	Methyl tert-butyl ether	0.47	0.47	[0.005]	ND	[0.001]	ND	[0.005]	ND	[0.001]	ND	--	--	[0.005]	ND	[0.001]	ND	[0.005]	ND	[0.001]	ND
	Naphthalene	0.73	0.73	[0.005]	ND	[0.002]	ND	[0.005]	ND	[0.002]	ND	--	--	[0.005]	ND	[0.002]	ND	[0.005]	ND	[0.002]	ND
	n-Butylbenzene	0.37	0.37	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	--	--	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND
	N-Propylbenzene	0.37	0.37	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	--	--	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND
	o-Xylene	10	10	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	--	--	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND
	P & M -Xylene	--	10	[0.001]	ND	[0.003]	ND	[0.001]	ND	[0.003]	ND	--	--	[0.001]	ND	[0.003]	ND	[0.001]	ND	[0.003]	ND
	sec-Butylbenzene	0.37	0.37	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	--	--	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND
	Styrene	0.1	0.1	[0.0005]	ND	[0.005]	ND	[0.0005]	ND	[0.005]	ND	--	--	[0.0005]	ND	[0.005]	ND	[0.0005]	ND	[0.005]	ND
	t-Butylbenzene	0.37	0.37	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	--	--	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND
	Tetrachloroethene	0.005	0.005	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	--	--	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND
	Toluene	1	1	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	--	--	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND
	trans-1,2-Dichloroethene	0.1	0.1	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	--	--	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND
	trans-1,3-Dichloropropene	0.0085	0.0085	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	--	--	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND
	Trichloroethene	0.005	0.005	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	--	--	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND
	Trichlorofluoromethane	11	11	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	--	--	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND
	Vinyl acetate	--	37	[0.005]	ND	--	--	[0.005]	ND	--	--	--	--	[0.005]	ND	--	--	[0.005]	ND	--	--
	Vinyl chloride	0.002	0.002	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	--	--	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND
	Xylenes (total)	--	10	[0.0015]	ND	[0.005]	ND	[0.0015]	ND	[0.005]	ND	--	--	[0.0015]	ND	[0.005]	ND	[0.0015]	ND	[0.005]	ND
EPA 625M SIM (PAH)	Acenaphthene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Acenaphthylene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Anthracene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Benzo(a)Anthracene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Benzo[a]pyrene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Benzo[b]Fluoranthene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Benzo[g,h,i]perylene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Benzo[k]fluoranthene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Chrysene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Dibenzo[a,h]anthracene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Fluoranthene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Fluorene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Indeno[1,2,3-c,d] pyrene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Naphthalene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Phenanthrene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Pyrene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SW8270D SVOC	1,2,4-Trichlorobenzene	0.07	0.07	[0.00505]	ND	[0.00039]	ND	[0.0052]	ND	[0.00038]	ND	--	--	[0.00505]	ND	[0.00043]	ND	[0.0051]	ND	[0.00038]	ND
	1,2-Dichlorobenzene	0.6	0.6	[0.00505]	ND	[0.00039]	ND	[0.0052]	ND	[0.00038]	ND	--	--	[0.00505]	ND	[0.00043]	ND	[0.0051]	ND	[0.00038]	ND
	1,3-Dichlorobenzene	0.4	3.3	[0.00505]	ND	[0.00039]	ND	[0.0052]	ND	[0.00038]	ND	--	--	[0.00505]	ND	[0.00043]	ND	[0.0051]	ND	[0.00038]	ND
	1,4-Dichlorobenzene	0.075	0.075	[0.00505]	ND	[0.00039]	ND	[0.0052]	ND	[0.00038]	ND	--	--	[0.00505]	ND	[0.00043]	ND	[0.0051]	ND	[0.00038]	ND
	1-Chloronaphthalene	--	--	[0.00505]	ND	--	--	[0.0052]	ND	--	--	--	--	[0.00505]	ND	--	--	[0.0051]	ND	--	--
	1-Methylnaphthalene	0.15	0.15	[0.00505]	ND	[0.000058]	ND	[0.0052]	ND	[0.000057]	ND	--	--	[0.00505]	ND	[0.000065]	ND	[0.0051]	ND	[0.000057]	ND
	2,4,5-Trichlorophenol	2.6	3.7	[0.00505]	ND	[0.00039]	ND	[0.0052]	ND	[0.00038]	ND	--	--	[0.00505]	ND	[0.00043]	ND	[0.0051]	ND	[0.00038]	ND
	2,4,6-Trichlorophenol	0.077	0.077	[0.00505]	ND	[0.00058]	ND	[0.0052]	ND	[0.00057]	ND	--	--	[0.00505]	ND	[0.00065]	ND	[0.0051]	ND	[0.00057]	ND
	2,4-Dichlorophenol	0.093	0.11	[0.00505]	ND	[0.00039]	ND	[0.0052]	ND	[0.00038]	ND	--	--	[0.00505]	ND	[0.00043]	ND	[0.0051]	ND	[0.00038]	ND
	2,4-Dimethylphenol	0.54	0.73	[0.00505]	ND	[0.0019]	ND	[0.0052]	ND	[0.0019]	ND	--	--	[0.00505]	ND	[0.0022]	ND	[0.0051]	ND	[0.0019]	ND
	2,4-Dinitrophenol	0.07	0.073	[0.0253]	ND	[0.0048]	ND	[0.0261]	ND	[0.0048]	ND	--	--	[0.0253]	ND	[0.0054]	ND	[0.0255]	ND	[0.0048]	ND
	2,4-Dinitrotoluene	0.0013	0.0013	[0.00505]	ND	[0.00039]	ND	[0.0052]	ND	[0.00038]	ND	--	--	[0.00505]	ND	[0.00043]	ND	[0.0051]	ND	[0.00038]	ND
	2,6-Dichlorophenol	--	--	[0.00505]	ND	--	--	[0.0052]	ND	--	--	--	--	[0.00505]	ND	--	--	[0.0051]	ND	--	--
	2,6-Dinitrotoluene	0.0013	0.0013	[0.00505]	ND	[0.00039]	ND	[0.0052]	ND	[0.00038]	ND	--	--	[0.00505]	ND	[0.00043]	ND	[0.0051]	ND	[0.00038]	ND
	2-Chloronaphthalene	1.7	2.9	[0.00505]	ND	[0.000058]	ND	[0.0052]	ND	[0.000057]	ND	--	--	[0.00505]	ND	[0.000065]	ND	[0.0051]	ND	[0.000057]	ND
	2-Chlorophenol	0.12	0.18	[0.00505]	ND	[0.00039]	ND	[0.0052]	ND	[0.00038]	ND	--	--	[0.00505]	ND	[0.00043]	ND	[0.0051]	ND	[0.00038]	ND
	2-Methyl-4,6-dinitrophenol	--	--	[0.0253]	ND	--	--	[0.0261]	ND	--	--	--	--	[0.0253]	ND	--	--	[0.0255]	ND	--	--
	2-Methylnaphthalene	0.15	0.15	[0.00505]	ND	[0.00019]	ND	[0.0052]	ND	[0.00019]	ND	--	--	[0.00505]	ND	[0.00022]	ND	[0.0051]	ND	[0.00019]	ND
	2-Methylphenol	1.8	1.8	[0.00505]	ND	[0.00039]	ND	[0.0052]	ND	[0.00038]	ND	--	--	[0.00505]	ND	[0.00043]	ND	[0.0051]	ND	[0.00038]	ND
	2-Nitroaniline	--	--	[0.00505]	ND	[0.00039]	ND	[0.0052]	ND	[0.00038]	ND	--	--	[0.00505]	ND	[0.00043]	ND	[0.0051]	ND	[0.00038]	ND
	2-Nitrophenol	--	--	[0.00505]	ND	[0.00039]	ND	[0.0052]	ND	[0.00038]	ND	--	--	[0.00505]	ND	[0.00043]	ND	[0.0051]	ND	[0.00038]	ND
	3 & 4 Methylphenol	--	--	[0.0101]	ND	[0.00077]	ND	[0.0104]	ND	[0.00077]	ND	--	--	[0.0101]	ND	[0.00086]	ND	[0.0102]	ND	[0.00076]	ND
	3,3'-Dichlorobenzidine	0.0019	0.0019	[0.00505]	ND	[0.0019]	ND, QL	[0.0052]	ND	[0.0019]	ND, QL	--	--	[0.00505]	ND	[0.0022]	ND, QL	[0.0051]	ND	[0.0019]	ND, QL
	3-Nitroaniline	--	--	[0.00505]	ND	[0.00039]	ND	[0.0052]	ND	[0.00038]	ND	--	--	[0.00505]	ND	[0.00043]	ND	[0.0051]	ND	[0.00038]	ND
	4,6-Dinitro-2-methylphenol	0.0134	--	--	--	[0.0039]	ND	--	--	[0.0038]	ND	--	--	--	--	[0.0043]	ND	--	--	[0.0038]	ND
	4-Bromophenyl phenyl ether	--	--	[0.00505]	ND	[0.00039]	ND	[0.0052]	ND	[0.00038]	ND	--	--	[0.00505]	ND	[0.00043]	ND	[0.0051]	ND	[0.00038]	ND
	4-Chloro-3-methylphenol	--	--	[0.00505]	ND	[0.00039]	ND	[0.0052]	ND	[0.00038]	ND	--	--	[0.00505]	ND	[0.00043]	ND	[0.0051]	ND	[0.00038]	ND
	4-Chloroaniline	0.016	0.016	[0.00505]	ND	[0.00039]	ND, R	[0.0052]	ND	[0.00038]	ND, R	--	--	[0.00505]	ND	[0.00043]	ND, R	[0.0051]	ND	[0.00038]	ND, R
	4-Chlorophenyl phenyl ether	--	--	[0.00505]	ND	[0.00039]	ND	[0.0052]	ND	[0.00038]	ND	--	--	[0.00505]	ND	[0.00043]	ND	[0.0051]	ND	[0.00038]	ND
	4-Nitroaniline	--	--	[0.00505]	ND	[0.00058]	ND	[0.0052]	ND	[0.00057]	ND	--	--	[0.00505]	ND	[0.00065]	ND	[0.0051]	ND	[0.00057]	ND
	4-Nitrophenol	--	--	[0.0253]	ND	[0.0029]	ND	[0.0261]	ND	[0.0029]	ND	--	--	[0.0253]	ND	[0.0032]	ND	[0.0255]	ND	[0.0029]	ND
	Acenaphthene	1.2	2.2	[0.00505]	ND	[0.000096]	ND	[0.0052]	ND	[0.000096]	ND	--	--	[0.00505]	ND	[0.00011]	ND	[0.0051]	ND	[0.000095]	ND
	Acenaphthylene	2.2	2.2	[0.00505]	ND	[0.000077]	ND	[0.0052]	ND	[0.000077]	ND	--	--	[0.00505]	ND	[0.000086]	ND	[0.0051]	ND	[0.000076]	ND
	Aniline	--	--	[0.0253]	ND	--	--	[0.0261]	ND	--	--	--	--	[0.0253]	ND	--	--	[0.0255]	ND	--	--
	Anthracene	9.6	11	[0.00505]	ND	[0.000039]	ND	[0.0052]	ND	[0.000038]	ND	--	--	[0.00505]	ND	[0.000043]	ND	[0.0051]	ND	[0.000038]	ND
	Azobenzene	--	--	[0.00505]	ND	--	--	[0.0052]	ND	--	--	--	--	[0.00505]	ND	--	--	[0.0051]	ND	--	--
	Benzo[a]anthracene	0.0012	0.0012	[0.00505]	ND	[0.000058]	ND	[0.0052]	ND	[0.000057]	ND	--	--	[0.00505]	ND	[0.000065]	ND	[0.0051]	ND	[0.000057]	ND
	Benzo[a]pyrene	0.0002	0.0002	[0.00505]	ND	[0.000039]	ND	[0.0052]	ND	[0.000038]	ND	--	--	[0.00505]	ND	[0.000043]	ND	[0.0051]	ND	[0.000038]	ND
	Benzo[b]fluoranthene	0.0012	0.0012	[0.00505]	ND	[0.000077]	ND	[0.0052]	ND	[0.000077]	ND	--	--	[0.00505]	ND	[0.000086]	ND	[0.0051]	ND	[0.000076]	ND
	Benzo[g,h,i]perylene	1.1	1.1	[0.00505]	ND	[0.000058]	ND	[0.0052]	ND	[0.000057]	ND	--	--	[0.00505]	ND	[0.000065]	ND	[0.0051]	ND	[0.000057]	ND
	Benzo[k]fluoranthene	0.012	0.012	[0.00505]	ND	[0.000058]	ND	[0.0052]	ND	[0.000057]	ND	--	--	[0.00505]	ND	[0.000065]	ND	[0.0051]	ND	[0.000057]	ND

Table 5
Summary of Analytical Results - All Wells
Alaska Onshore LNG. 2016
Nikiski, AK

Method	Compound in milligrams per Liter (mg/L)	Screening Criteria		Sample Identification[3]															
				MW-62A				MW-74A				MW-74A (Duplicate)		MW-74B				MW-82A			
				4/23/16 11:40		09/19/2016 15:03		04/22/2016 11:50		09/17/2016 10:37		04/22/2016 11:50		04/21/2016 18:10		09/17/2016 12:41		04/20/2016 11:05		09/16/2016 10:37	
		Water Quality Standards for Designated Uses [2]	ADEC Table C Groundwater Cleanup Level[1]	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag
SW8270D SVOC	Benzoic acid	150	150	[0.0253]	ND	[0.0029]	ND	[0.0261]	ND	[0.0029]	ND	--	--	[0.0253]	ND	[0.0032]	ND	[0.0255]	ND	[0.0029]	ND
	Benzyl alcohol	--	--	[0.00505]	ND	[0.0019]	ND	[0.0052]	ND	[0.00038]	ND	--	--	[0.00505]	ND	[0.00043]	ND	[0.0051]	ND	[0.00038]	ND
	Bis(2chloro1methylethyl)Ether	--	--	[0.00505]	ND	--	--	[0.0052]	ND	--	--	--	--	[0.00505]	ND	--	--	[0.0051]	ND	--	--
	Bis(2-chloroethoxy)methane	--	--	[0.00505]	ND	[0.00039]	ND	[0.0052]	ND	[0.00038]	ND	--	--	[0.00505]	ND	[0.00043]	ND	[0.0051]	ND	[0.00038]	ND
	Bis(2-chloroethyl)ether	0.00077	0.00077	[0.00505]	ND	[0.00039]	ND	[0.0052]	ND	[0.00038]	ND	--	--	[0.00505]	ND	[0.00043]	ND	[0.0051]	ND	[0.00038]	ND
	Bis(2-ethylhexyl) phthalate	0.006	0.006	[0.00505]	ND	[0.0029]	ND	[0.0052]	ND	[0.0029]	ND	--	--	[0.00505]	ND	**0.0077**	=	[0.0051]	ND	[0.0029]	ND
	bis(chloroisopropyl) ether	1.4	--	--	--	[0.00039]	ND	--	--	[0.00038]	ND	--	--	--	--	[0.00043]	ND	--	--	[0.00038]	ND
	Butyl benzyl phthalate	3	7.3	[0.00505]	ND	[0.00058]	ND	[0.0052]	ND	[0.00057]	ND	--	--	[0.00505]	ND	[0.00065]	ND	[0.0051]	ND	[0.00057]	ND
	Carbazole	0.043	0.043	[0.00505]	ND	[0.00039]	ND	[0.0052]	ND	[0.00038]	ND	--	--	[0.00505]	ND	[0.00043]	ND	[0.0051]	ND	[0.00038]	ND
	Chrysene	0.12	0.12	[0.00505]	ND	[0.000039]	ND	[0.0052]	ND	[0.000038]	ND	--	--	[0.00505]	ND	[0.000043]	ND	[0.0051]	ND	[0.000038]	ND
	Dibenz(a,h)anthracene	0.00012	0.00012	[0.00505]	ND	[0.000058]	ND	[0.0052]	ND	[0.000057]	ND	--	--	[0.00505]	ND	[0.000065]	ND	[0.0051]	ND	[0.000057]	ND
	Dibenzofuran	0.073	0.073	[0.00505]	ND	[0.00039]	ND	[0.0052]	ND	[0.00038]	ND	--	--	[0.00505]	ND	[0.00043]	ND	[0.0051]	ND	[0.00038]	ND
	Diethyl phthalate	23	29	[0.00505]	ND	[0.00039]	ND	[0.0052]	ND	[0.00038]	ND	--	--	[0.00505]	ND	[0.00043]	ND	[0.0051]	ND	[0.00038]	ND
	Dimethyl phthalate	313	370	[0.00505]	ND	[0.00039]	ND	[0.0052]	ND	[0.00038]	ND	--	--	[0.00505]	ND	[0.00043]	ND	[0.0051]	ND	[0.00038]	ND
	Di-n-butyl phthalate	2.7	3.7	[0.00505]	ND	[0.00039]	ND	[0.0052]	ND	[0.00038]	ND	--	--	[0.00505]	ND	[0.00043]	ND	[0.0051]	ND	[0.00038]	ND
	Di-n-octyl phthalate	1.5	1.5	[0.00505]	ND	[0.00039]	ND	[0.0052]	ND	[0.00038]	ND	--	--	[0.00505]	ND	[0.00043]	ND	[0.0051]	ND	[0.00038]	ND
	Fluoranthene	0.3	1.5	[0.00505]	ND	[0.000048]	ND	[0.0052]	ND	[0.000048]	ND	--	--	[0.00505]	ND	[0.000054]	ND	[0.0051]	ND	[0.000048]	ND
	Fluorene	1.3	1.5	[0.00505]	ND	[0.000058]	ND	[0.0052]	ND	[0.000057]	ND	--	--	[0.00505]	ND	[0.000065]	ND	[0.0051]	ND	[0.000057]	ND
	Hexachlorobenzene	0.001	0.001	[0.00505]	ND	[0.00039]	ND	[0.0052]	ND	[0.00038]	ND	--	--	[0.00505]	ND	[0.00043]	ND	[0.0051]	ND	[0.00038]	ND
	Hexachlorobutadiene	0.0073	0.0073	[0.00505]	ND	[0.00058]	ND, QL	[0.0052]	ND	[0.00057]	ND	--	--	[0.00505]	ND	[0.00065]	ND	[0.0051]	ND	[0.00057]	ND
	Hexachlorocyclopentadiene	0.05	0.05	[0.0152]	ND	[0.0019]	ND	[0.0157]	ND	[0.0019]	ND	--	--	[0.0152]	ND	[0.0022]	ND	[0.0153]	ND	[0.0019]	ND
	Hexachloroethane	0.04	0.04	[0.00505]	ND	[0.00058]	ND	[0.0052]	ND	[0.00057]	ND	--	--	[0.00505]	ND	[0.00065]	ND	[0.0051]	ND	[0.00057]	ND
	Indeno[1,2,3-cd]pyrene	0.0012	0.0012	[0.00505]	ND	[0.000058]	ND	[0.0052]	ND	[0.000057]	ND	--	--	[0.00505]	ND	[0.000065]	ND	[0.0051]	ND	[0.000057]	ND
	Isophorone	0.9	0.9	[0.00505]	ND	[0.00039]	ND	[0.0052]	ND	[0.00038]	ND	--	--	[0.00505]	ND	[0.00043]	ND	[0.0051]	ND	[0.00038]	ND
	Naphthalene	0.73	0.73	[0.00505]	ND	[0.00039]	ND	[0.0052]	ND	[0.00038]	ND	--	--	[0.00505]	ND	[0.00043]	ND	[0.0051]	ND	[0.00038]	ND
	Nitrobenzene	0.017	0.018	[0.00505]	ND	[0.00039]	ND	[0.0052]	ND	[0.00038]	ND	--	--	[0.00505]	ND	[0.00043]	ND	[0.0051]	ND	[0.00038]	ND
	N-Nitrosodimethylamine	--	0.000017	[0.00505]	ND	--	--	[0.0052]	ND	--	--	--	--	[0.00505]	ND	--	--	[0.0051]	ND	--	--
	N-Nitrosodi-n-propylamine	0.00012	0.00012	[0.00505]	ND	[0.00039]	ND	[0.0052]	ND	[0.00038]	ND	--	--	[0.00505]	ND	[0.00043]	ND	[0.0051]	ND	[0.00038]	ND
	N-Nitrosodiphenylamine	0.17	0.17	[0.00505]	ND	[0.00039]	ND	[0.0052]	ND	[0.00038]	ND	--	--	[0.00505]	ND	[0.00043]	ND	[0.0051]	ND	[0.00038]	ND
	Pentachlorophenol	0.001	0.001	[0.0253]	ND	[0.00067]	ND	[0.0261]	ND	[0.00067]	ND	--	--	[0.0253]	ND	[0.00076]	ND	[0.0255]	ND	[0.00067]	ND
	Phenanthrene	11	11	[0.00505]	ND	[0.000077]	ND	[0.0052]	ND	[0.000077]	ND	--	--	[0.00505]	ND	[0.000086]	ND	[0.0051]	ND	[0.000076]	ND
	Phenol	11	11	[0.00505]	ND	[0.00058]	ND	[0.0052]	ND	[0.00057]	ND	--	--	[0.00505]	ND	[0.00065]	ND	[0.0051]	ND	[0.00057]	ND
	Pyrene	0.96	1.1	[0.00505]	ND	[0.000058]	ND	[0.0052]	ND	[0.000057]	ND	--	--	[0.00505]	ND	[0.000065]	ND	[0.0051]	ND	[0.000057]	ND

Notes:

1 - This screening level corresponds to ADEC groundwater cleanup levels from 18 AAC 75.345 Table C. Revised 5/8/2016
http://dec.alaska.gov/commish/regulations/pdfs/18%20aac%2075.pdf
2 - This screening level corresponds to the most conservative values within ADEC Water Quality Standards 18 AAC 70. Amended 2/19/2016.
https://dec.alaska.gov/commish/regulations/pdfs/18%20AAC%2070.pdf
3 - The field sample identification number and date collected are provided.
4 - For detected results, the sample result is listed in this column. For results of non-detect, the LOD is listed in [ ] in this column.
5 - ADEC Calculator: http://dec.alaska.gov/water/cruise_ships/gp/2010/zinc_rpa_stationary.xls
6 - May not exceed 5 NTUs above natural conditions (NC) when the natural turbidity is 50 NTU or less, and may not have more than
10% increase in turbidity when the natural turbidity is more than 50 NTU, not to exceed a maximum increase of 25 NTU. Turbidity screening
levels corresponds to ADEC Alaska General Permit AKG003000 for discharge of Aquifer Pump Test (Table 6).
http://dec.alaska.gov/water/wnpspc/stormwater/docs/AKG003000_Hydrostatic_GP_Permit.pdf
7 - Standards are specific to various factors, such as a receiving water body (e.g., freshwater or saltwater)
See ADEC Water Quality Criteria Manual for Toxic and other Deleterious Organic and Inorganic substances,
as amended through December 12, 2008, Appendices C through g.

Sample results exceeding the ADEC Table C Groundwater screening criteria are shown in (**BOLD** with yellow shading).
Analyte was not detected, but the LOD was above the screening level (light blue shading).
Detected concentrations in **BOLD**

Data Flags

=	Analyte detected at concentration listed in column to the left.
B	The reported concentration was less than five times that of the associated method blank and/or trip blank.
J	Result is considered an estimated value because the level is below the laboratory LOQ, but above the DL.
ND	Non-detect, LOD is in brackets [ ] in the concentration column.
MH, ML, MN	The quantitation was an estimate due to a quality control failure. Where applicable, a "H", "L", or "N" was used to indicate possible high, low, or unknown bias.
QH, QL, QN	The quantitation was an estimate due to a sample matrix quality control failure. Where applicable, a "H", "L", or "N" was used to indicate possible high, low, or unknown bias.
H	Holding Time Exceeded
U	Analyte was analyzed for but not detected
*	Lab Control Sample or Lab Control Sample Duplicate outside of acceptance limits

Abbreviations

--	Not applicable or screening criteria does not exist for this compound
AAC	Alaska Administrative Code
ADEC	Alaska Department of Environmental Conservation
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
PAH	Polycyclic Aromatic Hydrocarbon
SVOCs	Semi-volatile Organic Compounds
VOCs	Volatile Organic Compounds

Table 5
Summary of Analytical Results - All Wells
Alaska Onshore LNG. 2016
Nikiski, AK

Method	Compound in milligrams per Liter (mg/L)	Screening Criteria		Sample Identification[3]																	
		Water Quality Standards for Designated Uses [2]	ADEC Table C Groundwater Cleanup Level[1]	MW-82B				MW-87B				MW-87B (Duplicate)				MW-91A				MW-91A (Duplicate)		MW-138B	
				04/20/2016 13:05		09/16/2016 13:31		04/19/2016 14:02		09/18/2016 15:10		04/19/2016 14:02		09/18/2016 15:10		4/21/2016 18:10		09/22/2016 18:00		04/21/2016 18:10		09/21/2016 10:25	
				Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag
200.8 Metal, Dissolved	Aluminum, Dissolved	--	--	**0.00312**	=, B	**0.00845**	=, B	**0.00239**	=, B	**0.0137**	=, B	**0.00285**	=, B	**0.0125**	=, B	**0.0113**	=	**0.00194**	J,B	**0.0137**	=	**0.0711**	=
	Antimony, Dissolved	--	--	[0.000025]	ND	**0.000118**	=	[0.000025]	ND	**0.0000239**	J	[0.000025]	ND	**0.0000215**	J	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	**0.000255**	=
	Arsenic, Dissolved	0.01	--	[0.0004]	ND	[0.0004]	ND	**0.00143**	=	**0.00177**	=	**0.00132**	=	**0.00156**	=	**0.0077**	=	**0.00784**	=	**0.00763**	=	[0.0004]	ND
	Barium, Dissolved	--	--	**0.0234**	=	**0.00978**	=	**0.0411**	=	**0.0373**	=	**0.041**	=	**0.04**	=	**0.022**	=	**0.0223**	=	**0.0218**	=	**0.0126**	=
	Beryllium, Dissolved	--	--	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	**0.0000597**	=
	Bismuth, Dissolved	--	--	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND
	Boron, Dissolved	--	--	**0.0078**	=	**0.00836**	=	**0.00563**	=	**0.0058**	=	**0.00539**	=	**0.0059**	=	**0.0187**	=	**0.0191**	=	**0.0191**	=	**0.00471**	J
	Cadmium, Dissolved [5]	0.06	--	**0.0000811**	=	**0.0000391**	J	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	**0.0000184**	J	[0.000025]	ND	**0.0000986**	=
	Calcium, Dissolved	--	--	**20.7**	=	**19**	=	**15.7**	=	**14**	=	**15.6**	=	**14.5**	=	**29.7**	=	**27.8**	=	**30**	=	**5.69**	=
	Chromium, Dissolved	0.011	--	**0.000151**	J	[0.00025]	ND	**0.000783**	=	**0.00242**	=	**0.000922**	=	**0.00217**	=	**0.00019**	J	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND
	Cobalt, Dissolved	--	--	**0.000249**	=	**0.000291**	=	**0.000384**	=	**0.000467**	=	**0.000378**	=	**0.000473**	=	**0.0000948**	=	**0.000177**	=	**0.000104**	=	**0.0103**	=
	Copper, Dissolved [5]	0.00161	--	**0.00038**	J	**0.000403**	J, B	**0.00523**	=	**0.000232**	J, B	**0.00541**	=	**0.00022**	J, B	**0.000306**	J	**0.000389**	J, B	**0.00025**	J	**0.00143**	J, B
	Iron, Dissolved	--	--	**2.14**	=	**0.615**	=	**8.59**	=	**7.73**	=	**8.6**	=	**8.2**	=	**1.99**	=	**1.73**	=	**2.07**	=	**0.14**	=
	Lead, Dissolved [5]	0.00027	--	[0.00005]	ND	[0.00005]	ND	[0.00005]	ND	[0.00005]	ND	[0.00005]	ND	**0.0000323**	J	[0.00005]	ND	[0.00005]	ND	[0.00005]	ND	**0.000437**	=
	Magnesium, Dissolved	--	--	**5.24**	=	**4.66**	=	**6.23**	=	**5.55**	=	**6.17**	=	**5.68**	=	**6.53**	=	**6.37**	=	**6.62**	=	**1.04**	=
	Manganese, Dissolved	--	--	**0.124**	=	**0.0372**	=	**0.366**	=	**0.347**	=	**0.371**	=	**0.366**	=	**0.965**	=	**0.972**	=	**0.982**	=	**0.0996**	=
	Molybdenum, Dissolved	--	--	**0.000343**	=	**0.000119**	=	**0.000433**	=	**0.000499**	=	**0.000451**	=	**0.00048**	=	**0.000543**	=	**0.000908**	=	**0.000574**	=	**0.000598**	=
	Nickel, Dissolved [5]	0.0095	--	**0.00189**	=	**0.00157**	=	**0.003**	=	**0.00756**	=	**0.00314**	=	**0.00747**	=	**0.00171**	=	**0.00267**	=	**0.00167**	=	**0.0113**	=
	Potassium, Dissolved	--	--	**2.26**	=	**1.98**	=	**2.19**	=	**1.91**	=	**2.2**	=	**1.97**	=	**3.21**	=	**3.52**	=	**3.17**	=	**0.915**	=
	Selenium, Dissolved	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Silicon, Dissolved	--	--	**14.5**	=, QH	**14**	=,QH	**18.1**	=, QH	**16.6**	=,QH	**18.2**	=, QH	**17.2**	=,QH	**15.7**	=	**16.4**	=	**16.2**	=	**12.9**	=
	Silver, Dissolved [5]	0.00011	--	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND
	Sodium, Dissolved	--	--	**15.3**	=	**14**	=	**8.24**	=	**7.48**	=	**8.23**	=	**7.55**	=	**6.74**	=	**6.24**	=	**6.69**	=	**3.42**	=
	Thallium, Dissolved	--	--	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	**0.0000131**	J
	Tin, Dissolved	--	--	[0.0001]	ND	[0.0001]	ND	[0.0001]	ND	[0.0001]	ND	**0.000197**	J	[0.0001]	ND	[0.0001]	ND	[0.0001]	ND	[0.0001]	ND	[0.0001]	ND
	Vanadium, Dissolved	--	--	[0.0005]	ND	**0.000706**	J	[0.0005]	ND	**0.000316**	J	[0.0005]	ND	**0.000413**	J	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Zinc, Dissolved [5]	0.02134	--	**0.00188**	J, B	**0.00835**	= , B	**0.00077**	J, B	**0.00509**	= , B	**0.000769**	J, B	**0.00562**	= , B	**0.0024**	J	**0.00212**	J,B	**0.00176**	J	**0.02**	=, B
200.8 Metal, Total	Aluminum, Total	0.087	--	**0.37**	=	**0.496**	=	**0.0272**	=	**0.239**	=	**0.025**	=	**0.274**	=	**1.5**	=	**0.937**	=	**1.28**	=	**2.56**	=
	Antimony, Total	0.006	0.006	**0.0000448**	J	**0.000207**	=	**0.0000268**	J	**0.0000487**	J	**0.0000209**	J	**0.0000504**	=	**0.0000511**	=	**0.000129**	=	**0.0000536**	=	**0.00037**	=
	Arsenic, Total	0.01	0.01	**0.000786**	J	**0.00127**	=	**0.00139**	=	**0.00222**	=	**0.00162**	=	**0.00198**	=	**0.00873**	=	**0.00889**	=	**0.00857**	=	**0.00222**	=
	Barium, Total	2	2	**0.029**	=	**0.0151**	=	**0.0412**	=	**0.0415**	=	**0.0393**	=	**0.0412**	=	**0.0346**	=	**0.0335**	=	**0.0366**	=	**0.0303**	=
	Beryllium, Total	0.004	0.004	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	**0.000034**	J	**0.0000295**	J	**0.0000348**	J	**0.000132**	=
	Bismuth, Total	--	--	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	**0.0000174**	J
	Boron, Total	0.75	--	**0.00918**	=	**0.00795**	=	**0.00736**	=	**0.00611**	=	**0.0071**	=	**0.00559**	=	**0.0195**	=	**0.0207**	=	**0.0201**	=	**0.00493**	J
	Cadmium, Total	0.01	0.005	**0.0000842**	=	**0.0000472**	J	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	**0.000015**	J	**0.000027**	J	[0.000025]	ND	**0.00012**	=
	Calcium, Total	--	--	**23.5**	=	**19.5**	=	**15.4**	=	**14.7**	=	**14.8**	=	**14**	=	**30.7**	=	**29.9**	=	**30.5**	=	**5.94**	=
	Chromium, Total	0.011	0.1	**0.00237**	=	**0.00339**	=	**0.0012**	=	**0.0354**	=	**0.0013**	=	**0.0372**	=	**0.00676**	=	**0.0124**	=	**0.00736**	=	**0.00671**	=
	Cobalt, Total	0.05	--	**0.000462**	=	**0.000539**	=	**0.000405**	=	**0.000888**	=	**0.000382**	=	**0.000894**	=	**0.000728**	=	**0.000754**	=	**0.000787**	=	**0.0117**	=
	Copper, Total	0.0031	1	**0.00138**	=	**0.00226**	=	**0.00383**	=	**0.00219**	=	**0.00339**	=	**0.00257**	=	**0.00233**	=	**0.0106**	=	**0.00257**	=	**0.00673**	=
	Iron, Total	1	--	**3.82**	=	**1.89**	=	**8.4**	=	**9.46**	=	**8.36**	=	**9.5**	=	**3.8**	=	**3.01**	=	**3.76**	=	**3.34**	=
	Lead, Total	0.0081	0.015	**0.000257**	=	**0.00046**	=	**0.0000347**	J	**0.000469**	=, MN	[0.00005]	ND	**0.000296**	=, MN	**0.000569**	=	**0.000392**	=	**0.000589**	=	**0.00126**	=
	Magnesium, Total	--	--	**6**	=	**4.63**	=	**5.68**	=	**5.67**	=	**5.36**	=	**5.47**	=	**7.26**	=	**6.87**	=	**7.09**	=	**1.51**	=
	Manganese, Total	0.05	--	**0.141**	=	**0.0478**	=	**0.356**	=	**0.37**	=	**0.34**	=	**0.367**	=	**1.03**	=	**1.05**	=	**1.04**	=	**0.125**	=
	Molybdenum, Total	0.01	--	**0.000495**	=	**0.000326**	=	**0.000421**	=	**0.0016**	=	**0.000415**	=	**0.00163**	=	**0.000896**	=	**0.00217**	=	**0.00115**	=	**0.00152**	=
	Nickel, Total	0.0082	0.1	**0.00289**	=	**0.00328**	=	**0.00265**	=	**0.0258**	=	**0.00259**	=	**0.0249**	=	**0.00497**	=	**0.00899**	=	**0.00532**	=	**0.0153**	=
	Potassium, Total	--	--	**2.53**	=	**2.01**	=	**2.1**	=	**1.94**	=	**2.05**	=	**1.92**	=	**3.4**	=	**3.72**	=	**3.49**	=	**1.18**	=
	Selenium, Total	0.005	0.05	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND
	Silver, Total	0.0019	0.1	[0.00001]	ND	**0.0000596**	=	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND
	Sodium, Total	--	--	**17.6**	=	**13.8**	=	**7.64**	=	**7.5**	=	**7.18**	=	**7.38**	=	**7.11**	=	**6.62**	=	**7.12**	=	**3.47**	=
	Thallium, Total	0.0017	0.002	[0.00001]	ND	**0.0000096**	J	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	**0.00000838**	J	**0.0000082**	J	**0.00000928**	J	**0.0000285**	=
	Tin, Total	--	--	[0.0001]	ND	[0.0001]	ND	[0.0001]	ND	[0.0001]	ND	[0.0001]	ND	[0.0001]	ND	**0.000114**	J	**0.000133**	J	**0.000129**	J	**0.000232**	=
	Vanadium, Total	0.1	0.26	**0.00181**	=	**0.0027**	=	**0.000443**	J	**0.000377**	J	**0.000366**	J	**0.000844**	J	**0.00361**	=	**0.00266**	=	**0.00401**	=	**0.00783**	=
	Zinc, Total	0.081	5	**0.00416**	=, B	**0.0101**	= , B	**0.00122**	J, B	**0.00614**	= , B	**0.00115**	J, B	**0.00709**	= , B	**0.0148**	=	**0.00925**	= , B	**0.0146**	=	**0.0333**	=
EPA 1631 E, Dissolved	Mercury, Dissolved	0.00077	--	[0.0000005]	ND	[0.0000005]	ND	**0.000000519**	J	**0.0000000514**	J	**0.000000768**	J	[0.0000005]	ND	**0.000000599**	J, B	[0.0000005]	ND	**0.000000536**	J, B	**0.0000000809**	J
EPA 1631 E, Total	Mercury, Total	0.00005	0.002	**0.00000162**	=	**0.00000366**	=	**0.000000949**	J	**0.00000118**	=	**0.000000581**	J	**0.000000926**	J	**0.00000264**	=, B	**0.00000182**	=	**0.00000299**	=, B	**0.0000104**	=
AK101	Gasoline Range Organics	2.2	2.2	[0.05]	ND	[0.05]	ND	[0.05]	ND	[0.05]	ND	[0.05]	ND	[0.05]	ND	[0.05]	ND	[0.05]	ND	[0.05]	ND	[0.05]	ND
AK102	Diesel Range Organics	1.5	1.5	[0.283]	ND	**0.362**	J, B	[0.283]	ND	**0.354**	J,B	[0.294]	ND	**0.389**	J,B	[0.283]	ND	[0.294]	ND	[0.288]	ND	[0.3]	ND
AK103	Residual Range Organics	1.1	1.1	[0.236]	ND	[0.245]	ND	[0.236]	ND	[0.245]	ND	[0.245]	ND	[0.245]	ND	[0.236]	ND	[0.245]	ND	[0.24]	ND	[0.25]	ND
EPA 300.0	Chloride	230	--	**45.0**	=, QL	**43.1**	=	**18.3**	=	**17.5**	=	**18.3**	=	**17.5**	=	**10.4**	=	**10.1**	=	**10.4**	=	**4.07**	=
	Fluoride	1	--	**0.0530**	J, QL	**0.098**	J	**0.06**	J, QH	**0.115**	J	**0.06**	J, QH	**0.109**	J	**0.08**	J	**0.131**	J	**0.08**	J	**0.119**	J,B
	Nitrate-N	--	--	**--**	--	**1.14**	=	**--**	--	[0.05]	ND,QL	**--**	--	[0.05]	ND	**--**	--	[0.1]	ND	**--**	--	**0.877**	=, QN
	Nitrite-N	--	--	**--**	--	[0.1]	ND	**--**	--	[0.05]	ND,QL	**--**	--	[0.05]	ND	**--**	--	[0.1]	ND	**--**	--	[0.05]	ND,QN
	Sulfate	250	--	**3.85**	=, QL	**3.23**	=	**6.61**	=	**5.91**	=	**6.61**	=	**5.91**	=	**8.12**	=	**8.55**	=	**8.03**	=	**8.34**	=
EPA 410.4	Chemical Oxygen Demand	--	--	**--**	--	**--**	--	**--**	--	**--**	--			**--**	--	**--**	--	**--**	--	**--**	--	**30.1**	=
SM21 2130B	Turbidity (NTU)	See Note 6	--	**10**	=	**11**	=	**9.9**	=	**6.9**	=	**9**	=	**5.6**	=	**35**	=	**24**	=	**32**	=	**16**	=
SM21 2320B	Alkalinity	<20000	--	**44.7**	=	**35.5**	=	**55**	=	**53.9**	=	**50.9**	=	**57.4**	=	**93.7**	=	**100**	=	**92.7**	=	**12**	=
SM21 2340B	Hardness as CaCO3	--	--	**73.3**	=	**66.7**	=	**64.9**	=	**57.8**	=	**64.3**	=	**59.6**	=	**101**	=	**95.6**	=	**102**	=	**18.5**	=
SM21 2540B	Total Solids	--	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**76**	=
SM21 2540C	Total Dissolved Solids	500	--	**161**	=	**182**	=	**125**	=	**140**	=	**128**	=	**142**	=	**169**	=	**159**	=	**169**	=	**60**	=
SM21 2540D	Total Suspended Solids	--	--	**11**	=	**13.2**	=	**8**	=	**10.9**	=	**7.21**	=	**11.3**	=	**39.5**	=	**60.2**	=	**43**	=	**49.2**	=
SM21 4500-NH3 G	Ammonia-N	See Note 7	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	[0.05]	ND
SM21 4500-N D	Total Kjeldahl Nitrogen	--	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	[0.5]	ND
SM21 4500NO3-F	Nitrate-N	--	--	**0.563**	=	**--**	--	[0.05]	ND	**--**	--	[0.05]	ND	**--**	--	**0.0654**	J, B	**--**	--	**0.0648**	J, B	**--**	--
	Nitrite-N	--	--	[0.05]	ND	**--**	--	[0.05]	ND	**--**	--	[0.05]	ND	**--**	--	[0.05]	ND	**--**	--	[0.05]	ND	**--**	--
SM21 4500P-B,E	Total Phosphorus	--	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**0.0532**	=
	Ortho Phosphate-P	--	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**0.0303**	=, B
SM21 5310B	Total Organic Carbon	--	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**2.68**	=
	Dissolved Organic Carbon	--	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**1.77**	=
SM21 9222D	Fecal Coliform (Col/100mL)	1	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	[1.64]	ND
SM21 10200H	Chlorophyll A (mg/m^3)	--	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	**--**	--	[1.7]	ND

Table 5
Summary of Analytical Results - All Wells
Alaska Onshore LNG. 2016
Nikiski, AK

Method	Compound in milligrams per Liter (mg/L)	Screening Criteria		Sample Identification[3]																	
		Water Quality Standards for Designated Uses [2]	ADEC Table C Groundwater Cleanup Level[1]	MW-82B				MW-87B				MW-87B (Duplicate)				MW-91A				MW-91A (Duplicate)		MW-138B	
				04/20/2016 13:05		09/16/2016 13:31		04/19/2016 14:02		09/18/2016 15:10		04/19/2016 14:02		09/18/2016 15:10		4/21/2016 18:10		09/22/2016 18:00		04/21/2016 18:10		09/21/2016 10:25	
				Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag
SW8082A PCB	Aroclor-1016	0.000014	0.0005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	[0.000208]	ND
	Aroclor-1221	0.000014	0.0005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	[0.00052]	ND
	Aroclor-1232	0.000014	0.0005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	[0.000052]	ND
	Aroclor-1242	0.000014	0.0005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	[0.000052]	ND
	Aroclor-1248	0.000014	0.0005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	[0.000052]	ND
	Aroclor-1254	0.000014	0.0005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	[0.000052]	ND
	Aroclor-1260	0.000014	0.0005	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	[0.000052]	ND
SW 8270D SIM (PESTICIDE)	4,4'-DDD	0.0035	0.0035	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	[0.0000155]	ND
	4,4'-DDE	0.0025	0.0025	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	[0.0000155]	ND
	4,4'-DDT	0.000001	0.0025	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	[0.0000155]	ND
	Aldrin	0.003	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	[0.0000155]	ND
	alpha-BHC	0.00014	0.00014	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	[0.0000155]	ND
	alpha-Chlordane	0.000004	0.002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	[0.0000155]	ND
	beta-BHC	0.00047	0.00047	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	[0.0000155]	ND
	delta-BHC	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	[0.0000155]	ND
	Dieldrin	0.0000019	0.000053	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	[0.0000155]	ND
	Endosulfan I	0.0000087	0.22	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	[0.0000155]	ND, QL
	Endosulfan II	0.0000087	0.22	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	[0.0000155]	ND
	Endosulfan sulfate	0.11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	[0.0000155]	ND
	Endrin	0.0000023	0.002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	[0.0000155]	ND
	Endrin aldehyde	0.00076	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	[0.0000155]	ND
	Endrin ketone	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	[0.0000155]	ND
	gamma-BHC (Lindane)	0.00016	0.0002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	[0.0000155]	ND
	gamma-Chlordane	0.000004	0.002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	[0.0000155]	ND
	Heptachlor	0.0000036	0.0004	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	[0.0000155]	ND
	Heptachlor epoxide	0.0000036	0.0002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	[0.0000155]	ND
	Methoxychlor	0.00003	0.04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	[0.0000155]	ND
	Toxaphene	0.0000002	0.003	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	[0.00103]	ND
SW8011, LL VOC	1,2,3-Trichloropropane	0.00012	0.00012	--	--	[0.00002]	ND	--	--	[0.00002]	ND	--	--	[0.00002]	ND	--	--	[0.00002]	ND	--	--	[0.00002]	ND
	1,2-Dibromoethane	0.00005	0.00005	--	--	[0.00002]	ND	--	--	[0.00002]	ND	--	--	[0.00002]	ND	--	--	[0.00002]	ND	--	--	[0.00002]	ND
SW8260C VOC	1,1,1,2-Tetrachloroethane	--	--	[0.00025]	ND	--	--	[0.00025]	ND	--	--	[0.00025]	ND	--	--	[0.00025]	ND	--	--	[0.00025]	ND	--	--
	1,1,1-Trichloroethane	0.2	0.2	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND
	1,1,2,2-Tetrachloroethane	0.0043	0.0043	[0.00025]	ND	[0.001]	ND	[0.00025]	ND	[0.001]	ND	[0.00025]	ND	[0.001]	ND	[0.00025]	ND	[0.001]	ND	[0.00025]	ND	[0.001]	ND
	1,1,2-Trichloroethane	0.005	0.005	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND
	1,1-Dichloroethane	7.3	7.3	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND
	1,1-Dichloroethene	0.007	0.007	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND
	1,1-Dichloropropene	--	--	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND
	1,2,3-Trichlorobenzene	--	--	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND
	1,2,3-Trichloropropane	0.00012	0.00012	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND
	1,2,4-Trichlorobenzene	0.07	0.07	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND
	1,2,4-Trimethylbenzene	1.8	1.8	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND
	1,2-Dibromo-3-Chloropropane	0.0002	--	[0.005]	ND	[0.01]	ND	[0.005]	ND	[0.01]	ND	[0.005]	ND	[0.01]	ND	[0.005]	ND	[0.01]	ND	[0.005]	ND	[0.01]	ND
	1,2-Dibromoethane	0.00005	0.00005	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND
	1,2-Dichlorobenzene	0.6	0.6	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND
	1,2-Dichloroethane	0.005	0.005	[0.00025]	ND	[0.001]	ND	[0.00025]	ND	[0.001]	ND	[0.00025]	ND	[0.001]	ND	[0.00025]	ND	[0.001]	ND	[0.00025]	ND	[0.001]	ND
	1,2-Dichloropropane	0.005	0.005	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND
	1,3,5-Trimethylbenzene	1.8	1.8	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND
	1,3-Dichlorobenzene	0.4	3.3	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND
	1,3-Dichloropropane	--	--	[0.00025]	ND	[0.001]	ND	[0.00025]	ND	[0.001]	ND	[0.00025]	ND	[0.001]	ND	[0.00025]	ND	[0.001]	ND	[0.00025]	ND	[0.001]	ND
	1,4-Dichlorobenzene	0.075	0.075	[0.00025]	ND	[0.004]	ND	[0.00025]	ND	[0.004]	ND	[0.00025]	ND	[0.004]	ND	[0.00025]	ND	[0.004]	ND	[0.00025]	ND	[0.004]	ND
	2,2-Dichloropropane	--	--	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND
	2-Butanone	22	22	[0.005]	ND	[0.02]	ND	[0.005]	ND	[0.02]	ND	[0.005]	ND	[0.02]	ND	[0.005]	ND	[0.02]	ND	[0.005]	ND	[0.02]	ND
	2-Chlorotoluene	--	--	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND
	2-Hexanone	--	--	[0.005]	ND	[0.02]	ND	[0.005]	ND	[0.02]	ND	[0.005]	ND	[0.02]	ND	[0.005]	ND	[0.02]	ND	[0.005]	ND	[0.02]	ND
	4-Chlorotoluene	--	--	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND
	4-Isopropyltoluene	--	--	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND
	4-Methyl-2-pentanone	2.9	2.9	[0.005]	ND	[0.015]	ND	[0.005]	ND	[0.015]	ND	[0.005]	ND	[0.015]	ND	[0.005]	ND	[0.015]	ND	[0.005]	ND	[0.015]	ND
	Acetone	--	--	--	--	[0.05]	ND	--	--	[0.05]	ND	--	--	[0.05]	ND	--	--	[0.05]	ND	--	--	[0.05]	ND
	Benzene	0.005	0.005	[0.0002]	ND	[0.002]	ND	[0.0002]	ND	[0.002]	ND	[0.0002]	ND	[0.002]	ND	[0.0002]	ND	[0.002]	ND	[0.0002]	ND	[0.002]	ND
	Bromobenzene	--	--	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND
	Bromochloromethane	--	--	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND
	Bromodichloromethane	0.014	0.014	[0.00025]	ND	[0.002]	ND	[0.00025]	ND	[0.002]	ND	[0.00025]	ND	[0.002]	ND	[0.00025]	ND	[0.002]	ND	[0.00025]	ND	[0.002]	ND
	Bromoform	0.08	0.11	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND
	Bromomethane	0.048	0.051	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND
	Carbon disulfide	3.7	3.7	[0.005]	ND	[0.001]	ND	[0.005]	ND	[0.001]	ND	[0.005]	ND	[0.001]	ND	[0.005]	ND	[0.001]	ND	[0.005]	ND	[0.001]	ND
	Carbon tetrachloride	0.005	0.005	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND
	Chlorobenzene	0.1	0.1	[0.00025]	ND	[0.002]	ND	[0.00025]	ND	[0.002]	ND	[0.00025]	ND	[0.002]	ND	[0.00025]	ND	[0.002]	ND	[0.00025]	ND	[0.002]	ND
	Chloroethane	0.29	0.29	[0.0005]	ND	[0.005]	ND	[0.0005]	ND	[0.005]	ND	[0.0005]	ND	[0.005]	ND	[0.0005]	ND	[0.005]	ND	[0.0005]	ND	[0.005]	ND
	Chloroform	0.08	0.14	[0.0005]	ND	[0.005]	ND	[0.0005]	ND	[0.005]	ND	[0.0005]	ND	[0.005]	ND	[0.0005]	ND	[0.005]	ND	[0.0005]	ND	[0.005]	ND
	Chloromethane	0.066	0.066	[0.0005]	ND	[0.005]	ND	[0.0005]	ND	[0.005]	ND	[0.0005]	ND	[0.005]	ND	[0.0005]	ND	[0.005]	ND	[0.0005]	ND	[0.005]	ND
	cis-1,2-Dichloroethene	0.07	0.07	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND
	cis-1,3-Dichloropropene	0.0085	0.0085	[0.00025]	ND	[0.001]	ND	[0.00025]	ND	[0.001]	ND	[0.00025]	ND	[0.001]	ND	[0.00025]	ND	[0.001]	ND	[0.00025]	ND	[0.001]	ND
	Dibromochloromethane	0.01	0.01	[0.00025]	ND	[0.001]	ND	[0.00025]	ND	[0.001]	ND	[0.00025]	ND	[0.001]	ND	[0.00025]	ND	[0.001]	ND	[0.00025]	ND	[0.001]	ND
	Dibromomethane	0.37	0.37	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND
	Dichlorodifluoromethane	7.3	7.3	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND
	Ethylbenzene	0.7	0.7	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND
	Freon-113	--	1100	[0.005]	ND	--	--	[0.005]	ND	--	--	[0.005]	ND	--	--	[0.005]	ND	--	--	[0.005]	ND	--	--

Table 5
Summary of Analytical Results - All Wells
Alaska Onshore LNG. 2016
Nikiski, AK

Method	Compound in milligrams per Liter (mg/L)	Screening Criteria		Sample Identification[3]																	
		Water Quality Standards for Designated Uses [2]	ADEC Table C Groundwater Cleanup Level[1]	MW-82B				MW-87B				MW-87B (Duplicate)				MW-91A				MW-91A (Duplicate)		MW-138B	
				04/20/2016 13:05		09/16/2016 13:31		04/19/2016 14:02		09/18/2016 15:10		04/19/2016 14:02		09/18/2016 15:10		4/21/2016 18:10		09/22/2016 18:00		04/21/2016 18:10		09/21/2016 10:25	
				Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag
SW8260C VOC	Hexachlorobutadiene	0.0073	0.0073	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND
	Isopropylbenzene	3.7	3.7	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND
	Methylene Chloride	0.005	0.005	[0.0025]	ND	[0.005]	ND	[0.0025]	ND	[0.005]	ND	[0.0025]	ND	[0.005]	ND	[0.0025]	ND	[0.005]	ND	[0.0025]	ND	[0.005]	ND
	Methyl tert-butyl ether	0.47	0.47	[0.005]	ND	[0.001]	ND	[0.005]	ND	[0.001]	ND	[0.005]	ND	[0.001]	ND	[0.005]	ND	[0.001]	ND	[0.005]	ND	[0.001]	ND
	Naphthalene	0.73	0.73	[0.005]	ND	[0.002]	ND	[0.005]	ND	[0.002]	ND	[0.005]	ND	[0.002]	ND	[0.005]	ND	[0.002]	ND	[0.005]	ND	[0.002]	ND
	n-Butylbenzene	0.37	0.37	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND
	N-Propylbenzene	0.37	0.37	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND
	o-Xylene	10	10	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND
	P & M -Xylene	--	10	[0.001]	ND	[0.003]	ND	[0.001]	ND	[0.003]	ND	[0.001]	ND	[0.003]	ND	[0.001]	ND	[0.003]	ND	[0.001]	ND	[0.003]	ND
	sec-Butylbenzene	0.37	0.37	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND
	Styrene	0.1	0.1	[0.0005]	ND	[0.005]	ND	[0.0005]	ND	[0.005]	ND	[0.0005]	ND	[0.005]	ND	[0.0005]	ND	[0.005]	ND	[0.0005]	ND	[0.005]	ND
	t-Butylbenzene	0.37	0.37	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND
	Tetrachloroethene	0.005	0.005	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND
	Toluene	1	1	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND
	trans-1,2-Dichloroethene	0.1	0.1	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND
	trans-1,3-Dichloropropene	0.0085	0.0085	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND
	Trichloroethene	0.005	0.005	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND
	Trichlorofluoromethane	11	11	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND
	Vinyl acetate	--	37	[0.005]	ND	--	--	[0.005]	ND	--	--	[0.005]	ND	--	--	[0.005]	ND	--	--	[0.005]	ND	--	--
	Vinyl chloride	0.002	0.002	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND
	Xylenes (total)	--	10	[0.0015]	ND	[0.005]	ND	[0.0015]	ND	[0.005]	ND	[0.0015]	ND	[0.005]	ND	[0.0015]	ND	[0.005]	ND	[0.0015]	ND	[0.005]	ND
EPA 625M SIM (PAH)	Acenaphthene	--	--	--	--	--	--	[0.0000256]	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Acenaphthylene	--	--	--	--	--	--	[0.0000256]	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Anthracene	--	--	--	--	--	--	[0.0000256]	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Benzo(a)Anthracene	--	--	--	--	--	--	[0.0000256]	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Benzo[a]pyrene	--	--	--	--	--	--	[0.0000103]	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Benzo[b]Fluoranthene	--	--	--	--	--	--	[0.0000256]	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Benzo[g,h,i]perylene	--	--	--	--	--	--	[0.0000256]	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Benzo[k]fluoranthene	--	--	--	--	--	--	[0.0000256]	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Chrysene	--	--	--	--	--	--	[0.0000256]	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Dibenzo[a,h]anthracene	--	--	--	--	--	--	[0.0000103]	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Fluoranthene	--	--	--	--	--	--	[0.0000256]	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Fluorene	--	--	--	--	--	--	[0.0000256]	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Indeno[1,2,3-c,d] pyrene	--	--	--	--	--	--	[0.0000256]	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Naphthalene	--	--	--	--	--	--	[0.0000515]	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Phenanthrene	--	--	--	--	--	--	[0.0000256]	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Pyrene	--	--	--	--	--	--	[0.0000256]	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SW8270D SVOC	1,2,4-Trichlorobenzene	0.07	0.07	[0.00505]	ND	[0.00039]	ND	[0.00515]	ND	[0.00039]	ND	[0.0052]	ND	[0.00039]	ND	[0.0051]	ND	[0.00038]	ND	[0.0051]	ND	[0.00039]	ND
	1,2-Dichlorobenzene	0.6	0.6	[0.00505]	ND	[0.00039]	ND	[0.00515]	ND	[0.00039]	ND	[0.0052]	ND	[0.00039]	ND	[0.0051]	ND	[0.00038]	ND	[0.0051]	ND	[0.00039]	ND
	1,3-Dichlorobenzene	0.4	3.3	[0.00505]	ND	[0.00039]	ND	[0.00515]	ND	[0.00039]	ND	[0.0052]	ND	[0.00039]	ND	[0.0051]	ND	[0.00038]	ND	[0.0051]	ND	[0.00039]	ND
	1,4-Dichlorobenzene	0.075	0.075	[0.00505]	ND	[0.00039]	ND	[0.00515]	ND	[0.00039]	ND	[0.0052]	ND	[0.00039]	ND	[0.0051]	ND	[0.00038]	ND	[0.0051]	ND	[0.00039]	ND
	1-Chloronaphthalene	--	--	[0.00505]	ND	--	--	[0.00515]	ND	--	--	[0.0052]	ND	--	--	[0.0051]	ND	--	--	[0.0051]	ND	--	--
	1-Methylnaphthalene	0.15	0.15	[0.00505]	ND	[0.000058]	ND	[0.00515]	ND	[0.000058]	ND	[0.0052]	ND	[0.000058]	ND	[0.0051]	ND	[0.000058]	ND	[0.0051]	ND	[0.000058]	ND
	2,4,5-Trichlorophenol	2.6	3.7	[0.00505]	ND	[0.00039]	ND	[0.00515]	ND	[0.00039]	ND	[0.0052]	ND	[0.00039]	ND	[0.0051]	ND	[0.00038]	ND	[0.0051]	ND	[0.00039]	ND
	2,4,6-Trichlorophenol	0.077	0.077	[0.00505]	ND	[0.00058]	ND	[0.00515]	ND	[0.00058]	ND	[0.0052]	ND	[0.00058]	ND	[0.0051]	ND	[0.00058]	ND	[0.0051]	ND	[0.00058]	ND
	2,4-Dichlorophenol	0.093	0.11	[0.00505]	ND	[0.00039]	ND	[0.00515]	ND	[0.00039]	ND	[0.0052]	ND	[0.00039]	ND	[0.0051]	ND	[0.00038]	ND	[0.0051]	ND	[0.00039]	ND
	2,4-Dimethylphenol	0.54	0.73	[0.00505]	ND	[0.0019]	ND	[0.00515]	ND	[0.0019]	ND	[0.0052]	ND	[0.0019]	ND	[0.0051]	ND	[0.0019]	ND	[0.0051]	ND	[0.0019]	ND
	2,4-Dinitrophenol	0.07	0.073	[0.0253]	ND	[0.0048]	ND	[0.0256]	ND	[0.0049]	ND	[0.0261]	ND	[0.0049]	ND	[0.0255]	ND	[0.0048]	ND	[0.0255]	ND	[0.0048]	ND
	2,4-Dinitrotoluene	0.0013	0.0013	[0.00505]	ND	[0.00039]	ND	[0.00515]	ND	[0.00039]	ND	[0.0052]	ND	[0.00039]	ND	[0.0051]	ND	[0.00038]	ND	[0.0051]	ND	[0.00039]	ND
	2,6-Dichlorophenol	--	--	[0.00505]	ND	--	--	[0.00515]	ND	--	--	[0.0052]	ND	--	--	[0.0051]	ND	--	--	[0.0051]	ND	--	--
	2,6-Dinitrotoluene	0.0013	0.0013	[0.00505]	ND	[0.00039]	ND	[0.00515]	ND	[0.00039]	ND	[0.0052]	ND	[0.00039]	ND	[0.0051]	ND	[0.00038]	ND	[0.0051]	ND	[0.00039]	ND
	2-Chloronaphthalene	1.7	2.9	[0.00505]	ND	[0.000058]	ND	[0.00515]	ND	[0.000058]	ND	[0.0052]	ND	[0.000058]	ND	[0.0051]	ND	[0.000058]	ND	[0.0051]	ND	[0.000058]	ND
	2-Chlorophenol	0.12	0.18	[0.00505]	ND	[0.00039]	ND	[0.00515]	ND	[0.00039]	ND	[0.0052]	ND	[0.00039]	ND	[0.0051]	ND	[0.00038]	ND	[0.0051]	ND	[0.00039]	ND
	2-Methyl-4,6-dinitrophenol	--	--	[0.0253]	ND	--	--	[0.0256]	ND	--	--	[0.0261]	ND	--	--	[0.0255]	ND	--	--	[0.0255]	ND	--	--
	2-Methylnaphthalene	0.15	0.15	[0.00505]	ND	[0.00019]	ND	[0.00515]	ND	[0.00019]	ND	[0.0052]	ND	[0.00019]	ND	[0.0051]	ND	[0.00019]	ND	[0.0051]	ND	[0.00019]	ND
	2-Methylphenol	1.8	1.8	[0.00505]	ND	[0.00039]	ND	[0.00515]	ND	[0.00039]	ND	[0.0052]	ND	[0.00039]	ND	[0.0051]	ND	[0.00038]	ND	[0.0051]	ND	[0.00039]	ND
	2-Nitroaniline	--	--	[0.00505]	ND	[0.00039]	ND	[0.00515]	ND	[0.00039]	ND	[0.0052]	ND	[0.00039]	ND	[0.0051]	ND	[0.00038]	ND	[0.0051]	ND	[0.00039]	ND
	2-Nitrophenol	--	--	[0.00505]	ND	[0.00039]	ND	[0.00515]	ND	[0.00039]	ND	[0.0052]	ND	[0.00039]	ND	[0.0051]	ND	[0.00038]	ND	[0.0051]	ND	[0.00039]	ND
	3 & 4 Methylphenol	--	--	[0.0101]	ND	[0.00077]	ND	[0.0103]	ND	[0.00078]	ND	[0.0104]	ND	[0.00078]	ND	[0.0102]	ND	[0.00077]	ND	[0.0102]	ND	[0.00078]	ND
	3,3'-Dichlorobenzidine	0.0019	0.0019	[0.00505]	ND	[0.0019]	ND, QL	[0.00515]	ND	[0.0019]	ND, QL	[0.0052]	ND	[0.0019]	ND, QL	[0.0051]	ND	[0.0019]	ND, R	[0.0051]	ND	[0.0019]	ND, R
	3-Nitroaniline	--	--	[0.00505]	ND	[0.00039]	ND	[0.00515]	ND	[0.00039]	ND	[0.0052]	ND	[0.00039]	ND	[0.0051]	ND	[0.00038]	ND	[0.0051]	ND	[0.00039]	ND
	4,6-Dinitro-2-methylphenol	0.0134	--	--	--	[0.0039]	ND	--	--	[0.0039]	ND	--	--	[0.0039]	ND	--	--	[0.0038]	ND	--	--	[0.0039]	ND
	4-Bromophenyl phenyl ether	--	--	[0.00505]	ND	[0.00039]	ND	[0.00515]	ND	[0.00039]	ND	[0.0052]	ND	[0.00039]	ND	[0.0051]	ND	[0.00038]	ND	[0.0051]	ND	[0.00039]	ND
	4-Chloro-3-methylphenol	--	--	[0.00505]	ND	[0.00039]	ND	[0.00515]	ND	[0.00039]	ND	[0.0052]	ND	[0.00039]	ND	[0.0051]	ND	[0.00038]	ND	[0.0051]	ND	[0.00039]	ND
	4-Chloroaniline	0.016	0.016	[0.00505]	ND	[0.00039]	ND, R	[0.00515]	ND	[0.00039]	ND, R	[0.0052]	ND	[0.00039]	ND, R	[0.0051]	ND	[0.00038]	ND, R	[0.0051]	ND	[0.00039]	ND, R
	4-Chlorophenyl phenyl ether	--	--	[0.00505]	ND	[0.00039]	ND	[0.00515]	ND	[0.00039]	ND	[0.0052]	ND	[0.00039]	ND	[0.0051]	ND	[0.00038]	ND	[0.0051]	ND	[0.00039]	ND
	4-Nitroaniline	--	--	[0.00505]	ND	[0.00058]	ND	[0.00515]	ND	[0.00058]	ND	[0.0052]	ND	[0.00058]	ND	[0.0051]	ND	[0.00058]	ND	[0.0051]	ND	[0.00058]	ND
	4-Nitrophenol	--	--	[0.0253]	ND	[0.0029]	ND	[0.0256]	ND, QL	[0.0029]	ND	[0.0261]	ND, QL	[0.0029]	ND	[0.0255]	ND	[0.0029]	ND	[0.0255]	ND	[0.0029]	ND
	Acenaphthene	1.2	2.2	[0.00505]	ND	[0.000097]	ND	[0.00515]	ND	[0.000097]	ND	[0.0052]	ND	[0.000097]	ND	[0.0051]	ND	[0.000096]	ND	[0.0051]	ND	[0.000097]	ND
	Acenaphthylene	2.2	2.2	[0.00505]	ND	[0.000077]	ND	[0.00515]	ND	[0.000078]	ND	[0.0052]	ND	[0.000078]	ND	[0.0051]	ND	[0.000077]	ND	[0.0051]	ND	[0.000078]	ND
	Aniline	--	--	[0.0253]	ND	--	--	[0.0256]	ND	--	--	[0.0261]	ND	--	--	[0.0255]	ND	--	--	[0.0255]	ND	--	--
	Anthracene	9.6	11	[0.00505]	ND	[0.000039]	ND	[0.00515]	ND	[0.000039]	ND	[0.0052]	ND	[0.000039]	ND	[0.0051]	ND	[0.000038]	ND	[0.0051]	ND	[0.000039]	ND
	Azobenzene	--	--	[0.00505]	ND	--	--	[0.00515]	ND	--	--	[0.0052]	ND	--	--	[0.0051]	ND	--	--	[0.0051]	ND	--	--
	Benzo[a]anthracene	0.0012	0.0012	[0.00505]	ND	[0.000058]	ND	[0.00515]	ND	[0.000058]	ND	[0.0052]	ND	[0.000058]	ND	[0.0051]	ND	[0.000058]	ND	[0.0051]	ND	[0.000058]	ND
	Benzo[a]pyrene	0.0002	0.0002	[0.00505]	ND	[0.000039]	ND	[0.00515]	ND	[0.000039]	ND	[0.0052]	ND	[0.000039]	ND	[0.0051]	ND	[0.000038]	ND	[0.0051]	ND	[0.000039]	ND
	Benzo[b]fluoranthene	0.0012	0.0012	[0.00505]	ND	[0.000077]	ND	[0.00515]	ND	[0.000078]	ND	[0.0052]	ND	[0.000078]	ND	[0.0051]	ND	[0.000077]	ND	[0.0051]	ND	[0.000078]	ND
	Benzo[g,h,i]perylene	1.1	1.1	[0.00505]	ND	[0.000058]	ND	[0.00515]	ND	[0.000058]	ND	[0.0052]	ND	[0.000058]	ND	[0.0051]	ND	[0.000058]	ND	[0.0051]	ND	[0.000058]	ND
	Benzo[k]fluoranthene	0.012	0.012	[0.00505]	ND	[0.000058]	ND	[0.00515]	ND	[0.000058]	ND	[0.0052]	ND	[0.000058]	ND	[0.0051]	ND	[0.000058]	ND	[0.0051]	ND	[0.000058]	ND

Table 5
Summary of Analytical Results - All Wells
Alaska Onshore LNG. 2016
Nikiski, AK

Method	Compound in milligrams per Liter (mg/L)	Screening Criteria		Sample Identification[3]																	
		Water Quality Standards for Designated Uses [2]	ADEC Table C Groundwater Cleanup Level[1]	MW-82B				MW-87B				MW-87B (Duplicate)				MW-91A				MW-91A (Duplicate)		MW-138B	
				04/20/2016 13:05		09/16/2016 13:31		04/19/2016 14:02		09/18/2016 15:10		04/19/2016 14:02		09/18/2016 15:10		4/21/2016 18:10		09/22/2016 18:00		04/21/2016 18:10		09/21/2016 10:25	
				Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag
SW8270D SVOC	Benzoic acid	150	150	[0.0253]	ND	[0.0029]	ND	[0.0256]	ND, QL	[0.0029]	ND	[0.0261]	ND, QL	[0.0029]	ND	[0.0255]	ND	[0.0029]	ND	[0.0255]	ND	[0.0029]	ND
	Benzyl alcohol	--	--	[0.00505]	ND	[0.00039]	ND	[0.00515]	ND	[0.00039]	ND	[0.0052]	ND	[0.00039]	ND	[0.0051]	ND	[0.00038]	ND	[0.0051]	ND	[0.00039]	ND
	Bis(2chloro1methylethyl)Ether	--	--	[0.00505]	ND	--	--	[0.00515]	ND	--	--	[0.0052]	ND	--	--	[0.0051]	ND	--	--	[0.0051]	ND	--	--
	Bis(2-chloroethoxy)methane	--	--	[0.00505]	ND	[0.00039]	ND	[0.00515]	ND	[0.00039]	ND	[0.0052]	ND	[0.00039]	ND	[0.0051]	ND	[0.00038]	ND	[0.0051]	ND	[0.00039]	ND
	Bis(2-chloroethyl)ether	0.00077	0.00077	[0.00505]	ND	[0.00039]	ND	[0.00515]	ND	[0.00039]	ND	[0.0052]	ND	[0.00039]	ND	[0.0051]	ND	[0.00038]	ND	[0.0051]	ND	[0.00039]	ND
	Bis(2-ethylhexyl) phthalate	0.006	0.006	[0.00505]	ND	[0.0029]	ND	[0.00515]	ND	[0.0029]	ND	[0.0052]	ND	[0.0029]	ND	[0.0051]	ND	[0.0029]	ND	[0.0051]	ND	[0.0029]	ND
	bis(chloroisopropyl) ether	1.4	--	--	--	[0.00039]	ND	--	--	[0.00039]	ND	--	--	[0.00039]	ND	--	--	[0.00038]	ND	--	--	[0.00039]	ND
	Butyl benzyl phthalate	3	7.3	[0.00505]	ND	[0.00058]	ND	[0.00515]	ND	[0.00058]	ND	[0.0052]	ND	[0.00058]	ND	[0.0051]	ND	[0.00058]	ND	[0.0051]	ND	[0.00058]	ND
	Carbazole	0.043	0.043	[0.00505]	ND	[0.00039]	ND	[0.00515]	ND	[0.00039]	ND	[0.0052]	ND	[0.00039]	ND	[0.0051]	ND	[0.00038]	ND	[0.0051]	ND	[0.00039]	ND
	Chrysene	0.12	0.12	[0.00505]	ND	[0.000039]	ND	[0.00515]	ND	[0.000039]	ND	[0.0052]	ND	[0.000039]	ND	[0.0051]	ND	[0.000038]	ND	[0.0051]	ND	[0.000039]	ND
	Dibenz(a,h)anthracene	0.00012	0.00012	[0.00505]	ND	[0.000058]	ND	[0.00515]	ND	[0.000058]	ND	[0.0052]	ND	[0.000058]	ND	[0.0051]	ND	[0.000058]	ND	[0.0051]	ND	[0.000058]	ND
	Dibenzofuran	0.073	0.073	[0.00505]	ND	[0.00039]	ND	[0.00515]	ND	[0.00039]	ND	[0.0052]	ND	[0.00039]	ND	[0.0051]	ND	[0.00038]	ND	[0.0051]	ND	[0.00039]	ND
	Diethyl phthalate	23	29	[0.00505]	ND	[0.00039]	ND	[0.00515]	ND	[0.00039]	ND	[0.0052]	ND	[0.00039]	ND	[0.0051]	ND	[0.00038]	ND	[0.0051]	ND	[0.00039]	ND
	Dimethyl phthalate	313	370	[0.00505]	ND	[0.00039]	ND	[0.00515]	ND	[0.00039]	ND	[0.0052]	ND	[0.00039]	ND	[0.0051]	ND	[0.00038]	ND	[0.0051]	ND	[0.00039]	ND
	Di-n-butyl phthalate	2.7	3.7	[0.00505]	ND	[0.00039]	ND	[0.00515]	ND	[0.00039]	ND	[0.0052]	ND	[0.00039]	ND	[0.0051]	ND	[0.00038]	ND	[0.0051]	ND	[0.00039]	ND
	Di-n-octyl phthalate	1.5	1.5	[0.00505]	ND	[0.00039]	ND	[0.00515]	ND	[0.00039]	ND	[0.0052]	ND	[0.00039]	ND	[0.0051]	ND	[0.00038]	ND	[0.0051]	ND	[0.00039]	ND
	Fluoranthene	0.3	1.5	[0.00505]	ND	[0.000048]	ND	[0.00515]	ND	[0.000049]	ND	[0.0052]	ND	[0.000049]	ND	[0.0051]	ND	[0.000048]	ND	[0.0051]	ND	[0.000048]	ND
	Fluorene	1.3	1.5	[0.00505]	ND	[0.000058]	ND	[0.00515]	ND	[0.000058]	ND	[0.0052]	ND	[0.000058]	ND	[0.0051]	ND	[0.000058]	ND	[0.0051]	ND	[0.000058]	ND
	Hexachlorobenzene	0.001	0.001	[0.00505]	ND	[0.00039]	ND	[0.00515]	ND	[0.00039]	ND	[0.0052]	ND	[0.00039]	ND	[0.0051]	ND	[0.00038]	ND	[0.0051]	ND	[0.00039]	ND
	Hexachlorobutadiene	0.0073	0.0073	[0.00505]	ND	[0.00058]	ND	[0.00515]	ND	[0.00058]	ND	[0.0052]	ND	[0.00058]	ND	[0.0051]	ND	[0.00058]	ND, QL	[0.0051]	ND	[0.00058]	ND, QL
	Hexachlorocyclopentadiene	0.05	0.05	[0.0152]	ND	[0.0019]	ND	[0.0154]	ND	[0.0019]	ND	[0.0157]	ND	[0.0019]	ND	[0.0153]	ND	[0.0019]	ND	[0.0153]	ND	[0.0019]	ND
	Hexachloroethane	0.04	0.04	[0.00505]	ND	[0.00058]	ND	[0.00515]	ND	[0.00058]	ND	[0.0052]	ND	[0.00058]	ND	[0.0051]	ND	[0.00058]	ND	[0.0051]	ND	[0.00058]	ND
	Indeno[1,2,3-cd]pyrene	0.0012	0.0012	[0.00505]	ND	[0.000058]	ND	[0.00515]	ND	[0.000058]	ND	[0.0052]	ND	[0.000058]	ND	[0.0051]	ND	[0.000058]	ND	[0.0051]	ND	[0.000058]	ND
	Isophorone	0.9	0.9	[0.00505]	ND	[0.00039]	ND	[0.00515]	ND	[0.00039]	ND	[0.0052]	ND	[0.00039]	ND	[0.0051]	ND	[0.00038]	ND	[0.0051]	ND	[0.00039]	ND
	Naphthalene	0.73	0.73	[0.00505]	ND	[0.00039]	ND	[0.00515]	ND	[0.00039]	ND	[0.0052]	ND	[0.00039]	ND	[0.0051]	ND	[0.00038]	ND	[0.0051]	ND	[0.00039]	ND
	Nitrobenzene	0.017	0.018	[0.00505]	ND	[0.00039]	ND	[0.00515]	ND	[0.00039]	ND	[0.0052]	ND	[0.00039]	ND	[0.0051]	ND	[0.00038]	ND	[0.0051]	ND	[0.00039]	ND
	N-Nitrosodimethylamine	--	0.000017	[0.00505]	ND	--	--	[0.00515]	ND	--	--	[0.0052]	ND	--	--	[0.0051]	ND	--	--	[0.0051]	ND	--	--
	N-Nitrosodi-n-propylamine	0.00012	0.00012	[0.00505]	ND	[0.00039]	ND	[0.00515]	ND	[0.00039]	ND	[0.0052]	ND	[0.00039]	ND	[0.0051]	ND	[0.00038]	ND	[0.0051]	ND	[0.00039]	ND
	N-Nitrosodiphenylamine	0.17	0.17	[0.00505]	ND	[0.00039]	ND	[0.00515]	ND	[0.00039]	ND	[0.0052]	ND	[0.00039]	ND	[0.0051]	ND	[0.00038]	ND	[0.0051]	ND	[0.00039]	ND
	Pentachlorophenol	0.001	0.001	[0.0253]	ND	[0.00068]	ND	[0.0256]	ND	[0.00068]	ND	[0.0261]	ND	[0.00068]	ND	[0.0255]	ND	[0.00067]	ND	[0.0255]	ND	[0.00068]	ND
	Phenanthrene	11	11	[0.00505]	ND	[0.000077]	ND	[0.00515]	ND	[0.000078]	ND	[0.0052]	ND	[0.000078]	ND	[0.0051]	ND	[0.000077]	ND	[0.0051]	ND	[0.000078]	ND
	Phenol	11	11	[0.00505]	ND	[0.00058]	ND	[0.00515]	ND	[0.00058]	ND	[0.0052]	ND	[0.00058]	ND	[0.0051]	ND	[0.00058]	ND	[0.0051]	ND	[0.00058]	ND
	Pyrene	0.96	1.1	[0.00505]	ND	[0.000058]	ND	[0.00515]	ND	[0.000058]	ND	[0.0052]	ND	[0.000058]	ND	[0.0051]	ND	[0.000058]	ND	[0.0051]	ND	[0.000058]	ND

Notes:

1 - This screening level corresponds to ADEC groundwater cleanup levels from 18 AAC 75.345 Table C. Revised 5/8/2016
http://dec.alaska.gov/commish/regulations/pdfs/18%20aac%2075.pdf
2 - This screening level corresponds to the most conservative values within ADEC Water Quality Standards 18 AAC 70. Amended 2/19/2016.
https://dec.alaska.gov/commish/regulations/pdfs/18%20AAC%2070.pdf
3 - The field sample identification number and date collected are provided.
4 - For detected results, the sample result is listed in this column. For results of non-detect, the LOD is listed in [ ] in this column.
5 - ADEC Calculator: http://dec.alaska.gov/water/cruise_ships/gp/2010/zinc_rpa_stationary.xls
6 - May not exceed 5 NTUs above natural conditions (NC) when the natural turbidity is 50 NTU or less, and may not have more than 10% increase in turbidity when the natural turbidity is more than 50 NTU, not to exceed a maximum increase of 25 NTU. Turbidity screening levels corresponds to ADEC Alaska General Permit AKG003000 for discharge of Aquifer Pump Test (Table 6).
http://dec.alaska.gov/water/wnpspc/stormwater/docs/AKG003000_Hydrostatic_GP_Permit.pdf
7 - Standards are specific to various factors, such as a receiving water body (e.g., freshwater or saltwater)
See ADEC Water Quality Criteria Manual for Toxic and other Deleterious Organic and Inorganic substances, as amended through December 12, 2008, Appendices C through g.

Sample results exceeding the ADEC Table C Groundwater screening criteria are shown in (**BOLD** with yellow shading).
Analyte was not detected, but the LOD was above the screening level (light blue shading).
Detected concentrations in **BOLD**

Data Flags

=	Analyte detected at concentration listed in column to the left.
B	The reported concentration was less than five times that of the associated method blank and/or trip blank.
J	Result is considered an estimated value because the level is below the laboratory LOQ, but above the DL.
ND	Non-detect, LOD is in brackets [ ] in the concentration column.
MH, ML, MN	The quantitation was an estimate due to a quality control failure. Where applicable, a "H", "L", or "N" was used to indicate possible high, low, or unknown bias.
QH, QL, QN	The quantitation was an estimate due to a sample matrix quality control failure. Where applicable, a "H", "L", or "N" was used to indicate possible high, low, or unknown bias.
H	Holding Time Exceeded
U	Analyte was analyzed for but not detected
*	Lab Control Sample or Lab Control Sample Duplicate outside of acceptance limits

Abbreviations

--	Not applicable or screening criteria does not exist for this compound
AAC	Alaska Administrative Code
ADEC	Alaska Department of Environmental Conservation
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
PAH	Polycyclic Aromatic Hydrocarbon
SVOCs	Semi-volatile Organic Compounds
VOCs	Volatile Organic Compounds

Table 5
Summary of Analytical Results - All Wells
Alaska Onshore LNG. 2016
Nikiski, AK

Method	Compound in milligrams per Liter (mg/L)	Screening Criteria		Sample Identification[3]																						
				OW-1				OW-2				OW-3				OW-4				APT-1		APT-1 (Duplicate)		APT-2		APT-3		
		Water Quality Standards for Designated Uses [2]	ADEC Table C Groundwater Cleanup Level[1]	08/10/2016 13:53		09/22/2016 11:19		08/10/2016 11:45		09/22/2016 13:10		08/10/2016 17:50		09/22/2016 14:58		08/10/2016 16:25		09/22/2016 16:06		09/20/2016 10:32		09/20/2016 10:32		09/21/2016 14:00		09/20/2016 10:32		4/23/20
				Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]
200.8 Metal, Dissolved	Aluminum, Dissolved	--	--	**0.00123**	J,B	--	--	**0.0459**	=	--	--	**0.00253**	J,B	--	--	**0.0161**	J,B	--	--	**0.0188**	=	**0.0217**	=	**0.00387**	=, B	**0.38**	=	0.000823
	Antimony, Dissolved	--	--	**0.000135**	=	--	--	**0.00147**	=	--	--	**0.000377**	=	--	--	**0.00365**	=	--	--	**0.000913**	=	**0.000926**	=	**0.00277**	=	**0.0019**	=	[0.000025]
	Arsenic, Dissolved	0.01	--	**0.00127**	=	--	--	**0.0229**	=	--	--	**0.00276**	=	--	--	**0.0372**	=	--	--	**0.0142**	=	**0.0142**	=	**0.0172**	=	**0.0575**	=	[0.0004]
	Barium, Dissolved	--	--	**0.0824**	=	--	--	**0.00879**	=	--	--	**0.0469**	=	--	--	**0.0104**	=	--	--	**0.0207**	=	**0.0204**	=	**0.0164**	=	**0.0123**	=	**0.0208**
	Beryllium, Dissolved	--	--	[0.000025]	ND	--	--	[0.000025]	ND	--	--	[0.000025]	ND	--	--	[0.000025]	ND	--	--	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	**0.0000339**	J	[0.000025]
	Bismuth, Dissolved	--	--	[0.000025]	ND	--	--	[0.000025]	ND	--	--	[0.000025]	ND	--	--	[0.000025]	ND	--	--	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	**0.0000368**	J	[0.000025]
	Boron, Dissolved	--	--	**0.00423**	J,B	--	--	**0.126**	=	--	--	**0.00426**	J,B	--	--	**0.0278**	J,B	--	--	**0.0266**	=	**0.0276**	=	**0.0237**	=	**0.98**	=	**0.00544**
	Cadmium, Dissolved [5]	0.06	--	[0.000025]	ND	--	--	[0.000025]	ND	--	--	[0.000025]	ND	--	--	[0.000025]	ND	--	--	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	**0.0000341**	J	[0.000025]
	Calcium, Dissolved	--	--	**24.1**	=	--	--	**6.42**	=	--	--	**15.9**	=	--	--	**15**	=	--	--	**23.4**	=	**24**	=	**18**	=	**2.57**	=	**15.8**
	Chromium, Dissolved	0.011	--	[0.00025]	ND	--	--	**0.000223**	J	--	--	**0.0018**	=	--	--	[0.00025]	ND	--	--	[0.00025]	ND	[0.00025]	ND	[0.00025]	ND	**0.00426**	=	[0.00025]
	Cobalt, Dissolved	--	--	**0.000161**	=	--	--	**0.0000659**	=	--	--	**0.000386**	=	--	--	**0.00016**	=	--	--	**0.0000803**	=	**0.0000776**	=	**0.000114**	=	**0.000597**	=	**0.0000325**
	Copper, Dissolved [5]	0.00161	--	**0.000262**	J	--	--	**0.000327**	J	--	--	**0.000217**	J	--	--	**0.000447**	J	--	--	**0.000202**	J, B	**0.000216**	J, B	**0.00025**	J, B	**0.00736**	=	[0.00025]
	Iron, Dissolved	--	--	**5.95**	=	--	--	**0.36**	=	--	--	**6.2**	=	--	--	**0.486**	=	--	--	**0.647**	=	**0.631**	=	**0.0983**	=	**0.937**	=	**1.08**
	Lead, Dissolved [5]	0.00027	--	[0.00005]	ND	--	--	**0.00013**	=	--	--	[0.00005]	ND	--	--	**0.0000879**	J	--	--	**0.0000695**	J	[0.00005]	ND	[0.00005]	ND	**0.000861**	=	**0.000108**
	Magnesium, Dissolved	--	--	**6.12**	=	--	--	**3.37**	=	--	--	**6.15**	=	--	--	**6.49**	=	--	--	**7.98**	=	**7.84**	=	**4.41**	=	**2.13**	=	**3.91**
	Manganese, Dissolved	--	--	**0.957**	=	--	--	**0.0289**	=	--	--	**0.45**	=	--	--	**0.0412**	=	--	--	**0.103**	=	**0.103**	=	**0.0547**	=	**0.0353**	=	**0.18**
	Molybdenum, Dissolved	--	--	**0.0003**	=	--	--	**0.00553**	=	--	--	**0.000623**	=	--	--	**0.000882**	=	--	--	**0.0012**	=	**0.00121**	=	**0.00167**	=	**0.0431**	=	**0.000525**
	Nickel, Dissolved [5]	0.0095	--	**0.00228**	=	--	--	**0.000629**	=	--	--	**0.0053**	=	--	--	**0.00141**	=	--	--	**0.000823**	=, B	**0.000806**	=, B	**0.00219**	=	**0.00371**	=	**0.000664**
	Potassium, Dissolved	--	--	**2.39**	=	--	--	**7.03**	=	--	--	**2.1**	=	--	--	**6.76**	=	--	--	**6.26**	=	**6.16**	=	**3.69**	=	**6.99**	=	**2.95**
	Selenium, Dissolved	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]
	Silicon, Dissolved	--	--	**14.1**	=	--	--	**5.95**	=	--	--	**16**	=	--	--	**10.8**	=	--	--	**11.9**	=	**11.4**	=,QH	**10.5**	=	**5.85**	=,QH	**0.575**
	Silver, Dissolved [5]	0.00011	--	[0.00001]	ND	--	--	[0.00001]	ND	--	--	[0.00001]	ND	--	--	[0.00001]	ND	--	--	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	**0.0000129**	J	[0.00001]
	Sodium, Dissolved	--	--	**8.66**	=	--	--	**26.3**	=	--	--	**8.31**	=	--	--	**9.22**	=	--	--	**7.86**	=	**7.6**	=	**7.64**	=	**184**	=	**12.8**
	Thallium, Dissolved	--	--	[0.00001]	ND	--	--	[0.00001]	ND	--	--	[0.00001]	ND	--	--	[0.00001]	ND	--	--	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	[0.00001]
	Tin, Dissolved	--	--	[0.0001]	ND	--	--	[0.0001]	ND	--	--	[0.0001]	ND	--	--	[0.0001]	ND	--	--	[0.0001]	ND	[0.0001]	ND	[0.0001]	ND	[0.0001]	ND	[0.0001]
	Vanadium, Dissolved	--	--	**0.000479**	J	--	--	**0.00246**	=	--	--	**0.00179**	=	--	--	**0.00809**	=	--	--	**0.00119**	=	**0.00127**	=	**0.0147**	=	**0.0125**	=	[0.0005]
	Zinc, Dissolved [5]	0.02134	--	**0.00283**	J,B	--	--	**0.00139**	J,B	--	--	**0.00301**	J,B	--	--	**0.0016**	J,B	--	--	**0.0366**	=, B	**0.034**	=, B	**0.0773**	=	**0.114**	=	**0.044**
200.8 Metal, Total	Aluminum, Total	0.087	--	**1.94**	=	--	--	**3.8**	=	--	--	**0.661**	=	--	--	**2.66**	=	--	--	**0.242**	=	**0.185**	=	**0.225**	=	**12.7**	=	**0.0103**
	Antimony, Total	0.006	0.006	**0.000362**	=	--	--	**0.00171**	=	--	--	**0.000484**	=	--	--	**0.00775**	=	--	--	**0.000978**	=	**0.000987**	=	**0.00274**	=	**0.00154**	=	[0.000025]
	Arsenic, Total	0.01	0.01	**0.00683**	=	**0.00131**	=	**0.0495**	=	**0.0237**	=	**0.00381**	=	**0.00336**	=	**0.131**	=	**0.0323**	=	**0.0197**	=	**0.02**	=	**0.0206**	=	**0.0798**	=	**0.000555**
	Barium, Total	2	2	**0.12**	=	--	--	**0.0614**	=	--	--	**0.0564**	=	--	--	**0.0831**	=	--	--	**0.0253**	=	**0.0266**	=	**0.0203**	=	**0.0888**	=	**0.0215**
	Beryllium, Total	0.004	0.004	**0.0000615**	=	--	--	**0.000091**	=	--	--	[0.000025]	ND	--	--	**0.000215**	=	--	--	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	**0.000228**	=	[0.000025]
	Bismuth, Total	--	--	**0.0000314**	J	--	--	**0.0000971**	=	--	--	[0.000025]	ND	--	--	**0.000161**	=	--	--	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	**0.0003**	=	[0.000025]
	Boron, Total	0.75	--	**0.00565**	B	--	--	**0.121**	B	--	--	**0.00449**	J,B	--	--	**0.0301**	B	--	--	**0.0269**	=	**0.026**	=	**0.024**	=	**1.08**	=	**0.00307**
	Cadmium, Total	0.01	0.005	**0.0000507**	=	--	--	**0.0000738**	=	--	--	**0.0000229**	J	--	--	**0.0001**	=	--	--	[0.000025]	ND	[0.000025]	ND	[0.000025]	ND	**0.000125**	=	[0.000025]
	Calcium, Total	--	--	**26.7**	=	--	--	**7.2**	=	--	--	**17.1**	=	--	--	**18.5**	=	--	--	**24.3**	=	**24.1**	=	**18.2**	=	**5.19**	=	**15.8**
	Chromium, Total	0.011	0.1	**0.013**	=	--	--	**0.0168**	=	--	--	**0.0171**	=	--	--	**0.0215**	=	--	--	[0.00025]	ND	[0.00025]	ND	**0.000251**	J	**0.0283**	=	**0.000369**
	Cobalt, Total	0.05	--	**0.00113**	=	--	--	**0.00203**	=	--	--	**0.000893**	=	--	--	**0.00493**	=	--	--	**0.000167**	=	**0.000175**	=	**0.000237**	=	**0.00644**	=	**0.0000952**
	Copper, Total	0.0031	1	**0.00854**	=	--	--	**0.013**	=	--	--	**0.00765**	=	--	--	**0.0275**	=	--	--	**0.000682**	=	**0.0008**	=	**0.00233**	=	**0.0992**	=	**0.000683**
	Iron, Total	1	--	**19.2**	=	--	--	**16.5**	=	--	--	**9.57**	=	--	--	**55**	=	--	--	**2.71**	=	**2.97**	=	**1.34**	=	**20.7**	=	**7.31**
	Lead, Total	0.0081	0.015	**0.00146**	=	--	--	**0.00252**	=	--	--	**0.000517**	=	--	--	**0.0107**	=	--	--	**0.000204**	=, MN	**0.000355**	=, MN	**0.000321**	=	**0.0085**	=	**0.00339**
	Magnesium, Total	--	--	**7.15**	=	--	--	**4.53**	=	--	--	**6.13**	=	--	--	**7.75**	=	--	--	**8.63**	=	**8.24**	=	**4.47**	=	**5.47**	=	**3.65**
	Manganese, Total	0.05	--	**1.04**	=	--	--	**0.22**	=	--	--	**0.496**	=	--	--	**0.357**	=	--	--	**0.118**	=	**0.123**	=	**0.0656**	=	**0.335**	=	**0.222**
	Molybdenum, Total	0.01	--	**0.000456**	=	--	--	**0.00535**	=	--	--	**0.000982**	=	--	--	**0.00205**	=	--	--	**0.00116**	=	**0.00117**	=	**0.00167**	=	**0.0438**	=	**0.000408**
	Nickel, Total	0.0082	0.1	**0.00664**	=	--	--	**0.0136**	=	--	--	**0.0121**	=	--	--	**0.0202**	=	--	--	**0.00128**	=	**0.00134**	=	**0.00296**	=	**0.0235**	=	**0.00118**
	Potassium, Total	--	--	**2.92**	=	--	--	**7.61**	=	--	--	**2.16**	=	--	--	**7.26**	=	--	--	**6.39**	=	**6.53**	=	**3.66**	=	**8.32**	=	**3**
	Selenium, Total	0.005	0.05	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	**0.000575**	J	--	--	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]	ND	[0.0005]
	Silver, Total	0.0019	0.1	**0.0000158**	J	--	--	**0.0000429**	=	--	--	[0.00001]	ND	--	--	**0.00021**	=	--	--	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	**0.000162**	=	[0.00001]
	Sodium, Total	--	--	**9.82**	=	--	--	**25.7**	=	--	--	**7.92**	=	--	--	**10.7**	=	--	--	**8.16**	=	**7.91**	=	**7.63**	=	**195**	=	**12**
	Thallium, Total	0.0017	0.002	**0.0000131**	J	--	--	**0.0000275**	=	--	--	[0.00001]	ND	--	--	**0.0000393**	=	--	--	[0.00001]	ND	[0.00001]	ND	[0.00001]	ND	**0.0000563**	=	[0.00001]
	Tin, Total	--	--	**0.000104**	J	--	--	**0.000201**	=	--	--	**0.0000623**	J	--	--	**0.000219**	=	--	--	[0.0001]	ND	[0.0001]	ND	[0.0001]	ND	**0.000263**	=	[0.0001]
	Vanadium, Total	0.1	0.26	**0.00587**	J,B	--	--	**0.0193**	=	--	--	**0.00256**	J,B	--	--	**0.131**	=	--	--	**0.00412**	=	**0.00404**	=	**0.0183**	=	**0.0415**	=	[0.0005]
	Zinc, Total	0.081	5	**0.0158**	B	--	--	**0.012**	B	--	--	**0.00761**	B	--	--	**0.0324**	=	--	--	**0.277**	=	**0.287**	=	**0.402**	=	**2.94**	=	**1.41**
EPA 1631 E, Dissolved	Mercury, Dissolved	0.00077	--	**0.000000501**	J	--	--	**0.000000932**	J	--	--	**0.000000557**	J	--	--	**0.00000145**	=	--	--	[0.0000005]	ND	[0.0000005]	ND	[0.0000005]	ND	**0.00000241**	=	**0.000000854**
EPA 1631 E, Total	Mercury, Total	0.00005	0.002	**0.00000716**	=	--	--	**0.00000919**	=	--	--	**0.00000215**	=	--	--	**0.0000751**	=	--	--	**0.000000704**	J	**0.000000832**	J	**0.000001**	=	**0.0000258**	=	**0.000000828**
AK101	Gasoline Range Organics	2.2	2.2	[0.05]	ND	--	--	[0.05]	ND	--	--	[0.05]	ND	--	--	[0.05]	ND	--	--	**0.0497**	J	**0.0445**	J	[0.05]	ND	[0.05]	ND	**0.204**
AK102	Diesel Range Organics	1.5	1.5	[0.294]	ND	--	--	[0.278]	ND	--	--	[0.283]	ND	--	--	**0.395**	J, B	--	--	**0.486**	J	**0.427**	J,B	**0.24**	J	**0.518**	J,B	[0.283]
AK103	Residual Range Organics	1.1	1.1	**0.16**	J	--	--	**0.192**	J	--	--	**0.155**	J	--	--	**0.476**	J, B	--	--	[0.236]	ND	[0.236]	ND	[0.24]	ND	**0.165**	J	**0.419**
EPA 300.0	Chloride	230	--	**28.9**	=	--	--	**5.79**	=	--	--	**14.4**	=	--	--	**11**	=	--	--	**19.7**	=,QL	**19.7**	=	**5.67**	=	**41.6**	=	**24.1**
	Fluoride	1	--	**0.112**	J	--	--	**0.345**	=	--	--	**0.126**	J	--	--	**0.168**	J	--	--	**0.137**	J,B	**0.139**	J,B	**0.15**	J,B	**3.03**	=	**0.035**
	Nitrate-N	--	--	[0.1]	ND	--	--	[0.1]	ND	--	--	[0.1]	ND	--	--	**0.105**	J	--	--	[0.05]	ND	[0.05]	ND	[0.05]	ND,QN	[0.25]	ND	**--**
	Nitrite-N	--	--	**--**	--	--	--	[0.1]	ND	--	--	[0.1]	ND	--	--	[0.1]	ND	--	--	[0.05]	ND	[0.05]	ND	[0.05]	ND,QN	[0.25]	ND	**--**
	Sulfate	250	--	**3.48**	=	--	--	**0.652**	=	--	--	**5.29**	=	--	--	**2.73**	=	--	--	**1.73**	=	**1.7**	=	**4.02**	=	**3.88**	=	[0.05]
EPA 410.4	Chemical Oxygen Demand	--	--	**--**	--	--	--	**23.5**	=	--	--	**--**	--	--	--	**30.0**	=	--	--	[10]	ND	**13.6**	J	[10]	ND	**102**	=	**--**
SM21 2130B	Turbidity (NTU)	See Note 6	--	**110**	=	--	--	**120**	=	--	--	**26**	=	--	--	**200**	=	--	--	**16**	=	**16**	=	**11**	=	**210**	=	**23**
SM21 2320B	Alkalinity	<20000	--	**70.9**	=	--	--	**81**	=	--	--	**60**	=	--	--	**76.9**	=	--	--	**95.2**	=	**94.3**	=	**79.2**	=	**509**	=	**41.8**
SM21 2340B	Hardness as CaCO3	--	--	**85.5**	=	--	--	**29.9**	=	--	--	**65**	=	--	--	**64.1**	=	--	--	**91.2**	=	**92.2**	=	**63.1**	=	**15.2**	=	**55.4**
SM21 2540B	Total Solids	--	--	**--**	--	--	--	**201**	QN	--	--	**--**	--	--	--	**232**	QN	--	--	**172**	=	**184**	=	**128**	=	**732**	=	**--**
SM21 2540C	Total Dissolved Solids	500	--	**151**	=	--	--	**119**	=	--	--	**117**	=	--	--	**74**	=	--	--	**151**	=	**141**	=	**108**	=	**709**	=	**102**
SM21 2540D	Total Suspended Solids	--	--	**120**	=	--	--	**81.5**	=	--	--	**19.1**	=	--	--	**117**	=	--	--	**14**	=	**16.2**	=	**8.89**	=	**80.7**	=	**15**
SM21 4500-NH3 G	Ammonia-N	See Note 7	--	**--**	--	--	--	**0.164**	=	--	--	**--**	--	--	--	**0.186**	=	--	--	**0.0893**	J	**0.113**	=	**0.0661**	J	**0.309**	=	**--**
SM21 4500-N D	Total Kjeldahl Nitrogen	--	--	**--**	--	--	--	[0.5]	ND	--	--	**--**	--	--	--	[0.5]	ND	--	--	[0.5]	ND	[0.5]	ND	[0.5]	ND	**0.891**	J	**--**
SM21 4500NO3-F	Nitrate-N	--	--	**--**	--	--	--	**--**	--	--	--	**--**	--	--	--	**--**	--	--	--	**--**	--	**--**	--	**--**	--	**--**	--	**0.067**
	Nitrite-N	--	--	**--**	--	--	--	**--**	--	--	--	**--**	--	--	--	**--**	--	--	--	**--**	--	**--**	--	**--**	--	**--**	--	[0.05]
SM21 4500P-B,E	Total Phosphorus	--	--	**--**	--	--	--	**0.872**	=	--	--	**--**	--	--	--	**0.396**	=	--	--	**0.114**	=	**0.0905**	=	**0.0907**	=	**4.88**	=	**--**
	Ortho Phosphate-P	--	--	**--**	--	--	--	**0.554**	=	--	--	**--**	--	--	--	**0.059**	=	--	--	**0.0507**	=	**0.0488**	=	**0.0896**	=	**4.49**	=	**--**
SM21 5310B	Total Organic Carbon	--	--	**--**	--	--	--	**2.79**	=	--	--	**--**	--	--	--	**2.5**	=	--	--	**1.82**	=, B	**1.63**	=, B	**1.69**	=, B	**22.2**	=	**--**
	Dissolved Organic Carbon	--	--	**--**	--	--	--	**1.65**	=	--	--	**--**	--	--	--	**1.3**	=	--	--	**1.7**	=	**1.45**	=	**1.02**	=	**14.9**	=	**--**
SM21 9222D	Fecal Coliform (Col/100mL)	1	--	**--**	--	--	--	**4.9**	=	--	--	**--**	--	--	--	[2]	ND	--	--	[1.64]	ND	[1.64]	ND	[1.64]	ND	[1.64]	ND	**--**
SM21 10200H	Chlorophyll A (mg/m^3)	--	--	**--**	--	--	--	[2.2]	ND	--	--	**--**	--	--	--	[2.2]	ND	--	--	[1.6]	ND	[1.6]	ND	[1.6]	ND	[6.1]	ND	**--**

Table 5
Summary of Analytical Results - All Wells
Alaska Onshore LNG. 2016
Nikiski, AK

Method	Compound in milligrams per Liter (mg/L)	Screening Criteria		Sample Identification[3]																						
				OW-1				OW-2				OW-3				OW-4				APT-1		APT-1 (Duplicate)		APT-2		APT-3		
		Water Quality Standards for Designated Uses [2]	ADEC Table C Groundwater Cleanup Level[1]	08/10/2016 13:53		09/22/2016 11:19		08/10/2016 11:45		09/22/2016 13:10		08/10/2016 17:50		09/22/2016 14:58		08/10/2016 16:25		09/22/2016 16:06		09/20/2016 10:32		09/20/2016 10:32		09/21/2016 14:00		09/20/2016 10:32		4/23/20
				Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]
SW8082A PCB	Aroclor-1016	0.000014	0.0005	--	--	--	--	[0.000208]	ND	--	--	--	--	--	--	[0.0002]	ND	--	--	[0.000204]	ND	[0.000215]	ND	[0.000206]	ND	[0.000206]	ND	--
	Aroclor-1221	0.000014	0.0005	--	--	--	--	[0.00052]	ND	--	--	--	--	--	--	[0.0005]	ND	--	--	[0.00051]	ND	[0.00054]	ND	[0.000515]	ND	[0.000515]	ND	--
	Aroclor-1232	0.000014	0.0005	--	--	--	--	[0.000052]	ND	--	--	--	--	--	--	[0.00005]	ND	--	--	[0.000051]	ND	[0.000054]	ND	[0.0000515]	ND	[0.0000515]	ND	--
	Aroclor-1242	0.000014	0.0005	--	--	--	--	[0.000052]	ND	--	--	--	--	--	--	[0.00005]	ND	--	--	[0.000051]	ND	[0.000054]	ND	[0.0000515]	ND	[0.0000515]	ND	--
	Aroclor-1248	0.000014	0.0005	--	--	--	--	[0.000052]	ND	--	--	--	--	--	--	[0.00005]	ND	--	--	[0.000051]	ND	[0.000054]	ND	[0.0000515]	ND	[0.0000515]	ND	--
	Aroclor-1254	0.000014	0.0005	--	--	--	--	[0.000052]	ND	--	--	--	--	--	--	[0.00005]	ND	--	--	[0.000051]	ND	[0.000054]	ND	[0.0000515]	ND	[0.0000515]	ND	--
	Aroclor-1260	0.000014	0.0005	--	--	--	--	[0.000052]	ND	--	--	--	--	--	--	[0.00005]	ND	--	--	[0.000051]	ND	[0.000054]	ND	[0.0000515]	ND	[0.0000515]	ND	--
SW 8270D SIM (PESTICIDE)	4,4'-DDD	0.0035	0.0035	--	--	--	--	[0.0000155]	ND, QL	--	--	--	--	--	--	[0.0000153]	ND, QL	--	--	[0.0000155]	ND	[0.0000158]	ND	[0.0000153]	ND	[0.0000153]	ND, QL	--
	4,4'-DDE	0.0025	0.0025	--	--	--	--	[0.0000155]	ND, QL	--	--	--	--	--	--	[0.0000153]	ND	--	--	[0.0000155]	ND	[0.0000158]	ND	[0.0000153]	ND	[0.0000153]	ND, QL	--
	4,4'-DDT	0.000001	0.0025	--	--	--	--	[0.0000155]	ND, QL	--	--	--	--	--	--	[0.0000153]	ND, QL	--	--	[0.0000155]	ND	[0.0000158]	ND	[0.0000153]	ND	[0.0000153]	ND, QL	--
	Aldrin	0.003	--	--	--	--	--	[0.0000155]	ND, QL	--	--	--	--	--	--	[0.0000153]	ND	--	--	[0.0000155]	ND	[0.0000158]	ND	[0.0000153]	ND	[0.0000153]	ND, QL	--
	alpha-BHC	0.00014	0.00014	--	--	--	--	[0.0000155]	ND, QL	--	--	--	--	--	--	[0.0000153]	ND	--	--	[0.0000155]	ND	[0.0000158]	ND	[0.0000153]	ND	[0.0000153]	ND, QL	--
	alpha-Chlordane	0.000004	0.002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	[0.0000155]	ND	[0.0000158]	ND	[0.0000153]	ND	[0.0000153]	ND, QL	--
	beta-BHC	0.00047	0.00047	--	--	--	--	[0.0000155]	ND, QL	--	--	--	--	--	--	[0.0000153]	ND	--	--	[0.0000155]	ND	[0.0000158]	ND	[0.0000153]	ND	[0.0000153]	ND, QL	--
	delta-BHC	--	--	--	--	--	--	[0.0000155]	ND, QL	--	--	--	--	--	--	[0.0000153]	ND	--	--	[0.0000155]	ND	[0.0000158]	ND	[0.0000153]	ND	[0.0000153]	ND, QL	--
	Dieldrin	0.0000019	0.000053	--	--	--	--	[0.0000155]	ND, QL	--	--	--	--	--	--	[0.0000153]	ND, QL	--	--	[0.0000155]	ND	[0.0000158]	ND	[0.0000153]	ND	[0.0000153]	ND, QL	--
	Endosulfan I	0.0000087	0.22	--	--	--	--	[0.0000155]	ND, QL	--	--	--	--	--	--	[0.0000155]	ND, QL	--	--	[0.0000155]	ND, QL	[0.0000158]	ND, QL	[0.0000153]	ND, QL	[0.0000153]	ND, QL	--
	Endosulfan II	0.0000087	0.22	--	--	--	--	[0.0000155]	ND, QL	--	--	--	--	--	--	[0.0000153]	ND, QL	--	--	[0.0000155]	ND	[0.0000158]	ND	[0.0000153]	ND	[0.0000153]	ND, QL	--
	Endosulfan sulfate	0.11	--	--	--	--	--	[0.0000155]	ND, QL	--	--	--	--	--	--	[0.0000153]	ND, QL	--	--	[0.0000155]	ND	[0.0000158]	ND	[0.0000153]	ND	[0.0000153]	ND, QL	--
	Endrin	0.0000023	0.002	--	--	--	--	[0.0000155]	ND, QL	--	--	--	--	--	--	[0.0000153]	ND, QL	--	--	[0.0000155]	ND	[0.0000158]	ND	[0.0000153]	ND	[0.0000153]	ND, QL	--
	Endrin aldehyde	0.00076	--	--	--	--	--	[0.0000155]	ND, QL	--	--	--	--	--	--	[0.0000153]	ND, QL	--	--	[0.0000155]	ND	[0.0000158]	ND	[0.0000153]	ND	[0.0000153]	ND, QL	--
	Endrin ketone	--	--	--	--	--	--	[0.0000155]	ND, QL	--	--	--	--	--	--	[0.0000153]	ND, QL	--	--	[0.0000155]	ND	[0.0000158]	ND	[0.0000153]	ND	[0.0000153]	ND, QL	--
	gamma-BHC (Lindane)	0.00016	0.0002	--	--	--	--	[0.0000155]	ND, QL	--	--	--	--	--	--	[0.0000153]	ND	--	--	[0.0000155]	ND	[0.0000158]	ND	[0.0000153]	ND	[0.0000153]	ND, QL	--
	gamma-Chlordane	0.000004	0.002	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	[0.0000155]	ND	[0.0000158]	ND	[0.0000153]	ND	[0.0000153]	ND, QL	--
	Heptachlor	0.0000036	0.0004	--	--	--	--	[0.0000155]	ND, QL	--	--	--	--	--	--	[0.0000153]	ND	--	--	[0.0000155]	ND	[0.0000158]	ND	[0.0000153]	ND	[0.0000153]	ND, QL	--
	Heptachlor epoxide	0.0000036	0.0002	--	--	--	--	[0.0000155]	ND, QL	--	--	--	--	--	--	[0.0000153]	ND	--	--	[0.0000155]	ND	[0.0000158]	ND	[0.0000153]	ND	[0.0000153]	ND, QL	--
	Methoxychlor	0.00003	0.04	--	--	--	--	[0.0000155]	ND, QL	--	--	--	--	--	--	[0.0000153]	ND, QL	--	--	[0.0000155]	ND	[0.0000158]	ND	[0.0000153]	ND	[0.0000153]	ND, QL	--
	Toxaphene	0.0000002	0.003	--	--	--	--	[0.00103]	ND, QL	--	--	--	--	--	--	[0.00102]	ND	--	--	[0.00103]	ND	[0.00105]	ND	[0.00102]	ND	[0.00102]	ND	--
SW8011, LL VOC	1,2,3-Trichloropropane	0.00012	0.00012	--	--	[0.00002]	ND	--	--	[0.00002]	ND	--	--	[0.00002]	ND	--	--	[0.00002]	ND	[0.00002]	ND	[0.00002]	ND	[0.00002]	ND	[0.000019]	ND	--
	1,2-Dibromoethane	0.00005	0.00005	--	--	[0.00002]	ND	--	--	[0.00002]	ND	--	--	[0.00002]	ND	--	--	[0.00002]	ND	[0.00002]	ND	[0.00002]	ND	[0.00002]	ND	[0.00002]	ND	--
SW8260C VOC	1,1,1,2-Tetrachloroethane	--	--	[0.00025]	ND	--	--	[0.00025]	ND	--	--	[0.00025]	ND	--	--	[0.00025]	ND	--	--	--	--	--	--	--	--	--	--	[0.00025]
	1,1,1-Trichloroethane	0.2	0.2	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.003]	ND	[0.003]	ND	[0.003]	ND	[0.003]	ND	[0.0005]
	1,1,2,2-Tetrachloroethane	0.0043	0.0043	[0.00025]	ND	[0.001]	ND	[0.00025]	ND	[0.001]	ND	[0.00025]	ND	[0.001]	ND	[0.00025]	ND	[0.001]	ND	[0.001]	ND	[0.001]	ND	[0.001]	ND	[0.001]	ND	[0.00025]
	1,1,2-Trichloroethane	0.005	0.005	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	[0.001]	ND	[0.001]	ND	[0.001]	ND	[0.001]	ND	[0.0005]
	1,1-Dichloroethane	7.3	7.3	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.002]	ND	[0.002]	ND	[0.002]	ND	[0.002]	ND	[0.0005]
	1,1-Dichloroethene	0.007	0.007	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.0005]	ND	[0.002]	ND	[0.002]	ND	[0.002]	ND	[0.002]	ND	[0.002]	ND	[0.0005]
	1,1-Dichloropropene	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.003]	ND	[0.003]	ND	[0.003]	ND	[0.003]	ND	[0.0005]
	1,2,3-Trichlorobenzene	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.002]	ND	[0.002]	ND	[0.002]	ND	[0.002]	ND	[0.0005]
	1,2,3-Trichloropropane	0.00012	0.00012	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.002]	ND	[0.002]	ND	[0.002]	ND	[0.002]	ND	[0.0005]
	1,2,4-Trichlorobenzene	0.07	0.07	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.001]	ND	[0.001]	ND	[0.001]	ND	[0.001]	ND	[0.0005]
	1,2,4-Trimethylbenzene	1.8	1.8	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.003]	ND	[0.003]	ND	[0.003]	ND	[0.003]	ND	**0.00238**
	1,2-Dibromo-3-Chloropropane	0.0002	--	[0.005]	ND	--	--	[0.005]	ND	--	--	[0.005]	ND	--	--	[0.005]	ND	--	--	[0.01]	ND	[0.01]	ND	[0.01]	ND	[0.01]	ND	[0.005]
	1,2-Dibromoethane	0.00005	0.00005	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.001]	ND	[0.001]	ND	[0.001]	ND	[0.001]	ND	[0.0005]
	1,2-Dichlorobenzene	0.6	0.6	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.002]	ND	[0.002]	ND	[0.002]	ND	[0.002]	ND	[0.0005]
	1,2-Dichloroethane	0.005	0.005	[0.00025]	ND	[0.001]	ND	[0.00025]	ND	[0.001]	ND	[0.00025]	ND	[0.001]	ND	[0.00025]	ND	[0.001]	ND	[0.001]	ND	[0.001]	ND	[0.001]	ND	[0.001]	ND	[0.00025]
	1,2-Dichloropropane	0.005	0.005	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.001]	ND	[0.001]	ND	[0.001]	ND	[0.001]	ND	[0.0005]
	1,3,5-Trimethylbenzene	1.8	1.8	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.003]	ND	[0.003]	ND	[0.003]	ND	[0.003]	ND	**0.0004**
	1,3-Dichlorobenzene	0.4	3.3	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.002]	ND	[0.002]	ND	[0.002]	ND	[0.002]	ND	[0.0005]
	1,3-Dichloropropane	--	--	[0.00025]	ND	--	--	[0.00025]	ND	--	--	[0.00025]	ND	--	--	[0.00025]	ND	--	--	[0.001]	ND	[0.001]	ND	[0.001]	ND	[0.001]	ND	[0.00025]
	1,4-Dichlorobenzene	0.075	0.075	[0.00025]	ND	--	--	[0.00025]	ND	--	--	[0.00025]	ND	--	--	[0.00025]	ND	--	--	[0.004]	ND	[0.004]	ND	[0.004]	ND	[0.004]	ND	[0.00025]
	2,2-Dichloropropane	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.003]	ND	[0.003]	ND	[0.003]	ND	[0.003]	ND	[0.0005]
	2-Butanone	22	22	[0.005]	ND	--	--	[0.005]	ND	--	--	[0.005]	ND	--	--	[0.005]	ND	--	--	[0.02]	ND	[0.02]	ND	[0.02]	ND	[0.02]	ND	[0.005]
	2-Chlorotoluene	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.003]	ND	[0.003]	ND	[0.003]	ND	[0.003]	ND	[0.0005]
	2-Hexanone	--	--	[0.005]	ND	--	--	[0.005]	ND	--	--	[0.005]	ND	--	--	[0.005]	ND	--	--	[0.02]	ND	[0.02]	ND	[0.02]	ND	[0.02]	ND	[0.005]
	4-Chlorotoluene	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.002]	ND	[0.002]	ND	[0.002]	ND	[0.002]	ND	[0.0005]
	4-Isopropyltoluene	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.003]	ND	[0.003]	ND	[0.003]	ND	[0.003]	ND	[0.0005]
	4-Methyl-2-pentanone	2.9	2.9	[0.005]	ND	--	--	[0.005]	ND	--	--	[0.005]	ND	--	--	[0.005]	ND	--	--	[0.015]	ND	[0.015]	ND	[0.015]	ND	[0.015]	ND	[0.005]
	Acetone	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	[0.05]	ND	[0.05]	ND	[0.05]	ND	[0.05]	ND	--
	Benzene	0.005	0.005	[0.0002]	ND	--	--	[0.0002]	ND	--	--	[0.0002]	ND	--	--	[0.0002]	ND	--	--	[0.002]	ND	[0.002]	ND	[0.002]	ND	[0.002]	ND	**0.0677**
	Bromobenzene	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.002]	ND	[0.002]	ND	[0.002]	ND	[0.002]	ND	[0.0005]
	Bromochloromethane	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.002]	ND	[0.002]	ND	[0.002]	ND	[0.002]	ND	[0.0005]
	Bromodichloromethane	0.014	0.014	[0.00025]	ND	--	--	[0.00025]	ND	--	--	[0.00025]	ND	--	--	[0.00025]	ND	--	--	[0.002]	ND	[0.002]	ND	[0.002]	ND	[0.002]	ND	[0.00025]
	Bromoform	0.08	0.11	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.001]	ND	[0.001]	ND	[0.001]	ND	[0.001]	ND	[0.0005]
	Bromomethane	0.048	0.051	[0.005]	ND	--	--	[0.005]	ND	--	--	[0.005]	ND	--	--	[0.005]	ND	--	--	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]
	Carbon disulfide	3.7	3.7	[0.005]	ND	--	--	[0.005]	ND	--	--	[0.005]	ND	--	--	[0.005]	ND	--	--	[0.001]	ND	[0.001]	ND	[0.001]	ND	[0.001]	ND	[0.005]
	Carbon tetrachloride	0.005	0.005	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.003]	ND	[0.003]	ND	[0.003]	ND	[0.003]	ND	[0.0005]
	Chlorobenzene	0.1	0.1	[0.00025]	ND	--	--	[0.00025]	ND	--	--	[0.00025]	ND	--	--	[0.00025]	ND	--	--	[0.002]	ND	[0.002]	ND	[0.002]	ND	[0.002]	ND	[0.00025]
	Chloroethane	0.29	0.29	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.0005]
	Chloroform	0.08	0.14	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.0005]
	Chloromethane	0.066	0.066	[0.0005]	ND	[0.005]	ND	**0.00039**	J	[0.005]	ND	[0.0005]	ND	[0.005]	ND	**0.00039**	J	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.0005]
	cis-1,2-Dichloroethene	0.07	0.07	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	[0.001]	ND	[0.001]	ND	[0.001]	ND	[0.001]	ND	[0.0005]
	cis-1,3-Dichloropropene	0.0085	0.0085	[0.00025]	ND	--	--	[0.00025]	ND	--	--	[0.00025]	ND	--	--	[0.00025]	ND	--	--	[0.001]	ND	[0.001]	ND	[0.001]	ND	[0.001]	ND	[0.00025]
	Dibromochloromethane	0.01	0.01	[0.00025]	ND	--	--	[0.00025]	ND	--	--	[0.00025]	ND	--	--	[0.00025]	ND	--	--	[0.001]	ND	[0.001]	ND	[0.001]	ND	[0.001]	ND	[0.00025]
	Dibromomethane	0.37	0.37	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.001]	ND	[0.001]	ND	[0.001]	ND	[0.001]	ND	[0.0005]
	Dichlorodifluoromethane	7.3	7.3	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.002]	ND	[0.002]	ND	[0.002]	ND	[0.002]	ND	[0.0005]
	Ethylbenzene	0.7	0.7	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.003]	ND	[0.003]	ND	[0.003]	ND	[0.003]	ND	**0.00056**
	Freon-113	--	1100	[0.005]	ND	--	--	[0.005]	ND	--	--	[0.005]	ND	--	--	[0.005]	ND	--	--	--	--	--	--	--	--	--	--	[0.005]

Table 5
Summary of Analytical Results - All Wells
Alaska Onshore LNG. 2016
Nikiski, AK

Method	Compound in milligrams per Liter (mg/L)	Screening Criteria		Sample Identification[3]																						
				OW-1				OW-2				OW-3				OW-4				APT-1		APT-1 (Duplicate)		APT-2		APT-3		
				08/10/2016 13:53		09/22/2016 11:19		08/10/2016 11:45		09/22/2016 13:10		08/10/2016 17:50		09/22/2016 14:58		08/10/2016 16:25		09/22/2016 16:06		09/20/2016 10:32		09/20/2016 10:32		09/21/2016 14:00		09/20/2016 10:32		4/23/20
		Water Quality Standards for Designated Uses [2]	ADEC Table C Groundwater Cleanup Level[1]	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]
SW8260C VOC	Hexachlorobutadiene	0.0073	0.0073	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.002]	ND	[0.002]	ND	[0.002]	ND	[0.002]	ND	[0.0005]
	Isopropylbenzene	3.7	3.7	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.002]	ND	[0.002]	ND	[0.002]	ND	[0.002]	ND	[0.0005]
	Methylene Chloride	0.005	0.005	[0.0025]	ND	--	--	[0.0025]	ND	--	--	[0.0025]	ND	--	--	[0.0025]	ND	--	--	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.0025]
	Methyl tert-butyl ether	0.47	0.47	[0.005]	ND	--	--	[0.005]	ND	--	--	[0.005]	ND	--	--	[0.005]	ND	--	--	[0.001]	ND	[0.001]	ND	[0.001]	ND	[0.001]	ND	[0.005]
	Naphthalene	0.73	0.73	[0.005]	ND	--	--	[0.005]	ND	--	--	[0.005]	ND	--	--	[0.005]	ND	--	--	[0.002]	ND	[0.002]	ND	[0.002]	ND	[0.002]	ND	[0.005]
	n-Butylbenzene	0.37	0.37	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.003]	ND	[0.003]	ND	[0.003]	ND	[0.003]	ND	[0.0005]
	N-Propylbenzene	0.37	0.37	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.003]	ND	[0.003]	ND	[0.003]	ND	[0.003]	ND	[0.0005]
	o-Xylene	10	10	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.002]	ND	[0.002]	ND	[0.002]	ND	[0.002]	ND	[0.0005]
	P & M -Xylene	--	10	[0.001]	ND			[0.001]	ND			[0.001]	ND			[0.001]	ND			[0.003]	ND	[0.003]	ND	[0.003]	ND	[0.003]	ND	**0.00493**
	sec-Butylbenzene	0.37	0.37	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.003]	ND	[0.003]	ND	[0.003]	ND	[0.003]	ND	[0.0005]
	Styrene	0.1	0.1	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	**0.0031**
	t-Butylbenzene	0.37	0.37	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.003]	ND	[0.003]	ND	[0.003]	ND	[0.003]	ND	[0.0005]
	Tetrachloroethene	0.005	0.005	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.003]	ND	[0.003]	ND	[0.003]	ND	[0.003]	ND	[0.0005]
	Toluene	1	1	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.002]	ND	[0.002]	ND	**0.0027**	=	**0.0029**	=	**0.0146**
	trans-1,2-Dichloroethene	0.1	0.1	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.0005]	ND	[0.003]	ND	[0.003]	ND	[0.003]	ND	[0.003]	ND	[0.003]	ND	[0.0005]
	trans-1,3-Dichloropropene	0.0085	0.0085	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.001]	ND	[0.001]	ND	[0.001]	ND	[0.001]	ND	[0.0005]
	Trichloroethene	0.005	0.005	**0.00339**	=	[0.003]	ND	**0.00047**	J	[0.003]	ND	[0.0005]	ND	[0.003]	ND	**0.0131**	=	**0.057**	=	**0.039**	MH	**0.043**	=	[0.003]	ND	**0.015**	=	[0.0005]
	Trichlorofluoromethane	11	11	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.0005]	ND	--	--	[0.003]	ND	[0.003]	ND	[0.003]	ND	[0.003]	ND	[0.0005]
	Vinyl acetate	--	37	[0.005]	ND	--	--	[0.005]	ND	--	--	[0.005]	ND	--	--	[0.005]	ND	--	--	--	--	--	--	--	--	--	--	[0.005]
	Vinyl chloride	0.002	0.002	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	[0.0005]	ND	[0.001]	ND	[0.001]	ND	[0.001]	ND	[0.001]	ND	[0.001]	ND	[0.0005]
	Xylenes (total)	--	10	[0.0015]	ND	[0.005]	ND	[0.0015]	ND	[0.005]	ND	[0.0015]	ND	[0.005]	ND	[0.0015]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	[0.005]	ND	**0.00493**
EPA 625M SIM (PAH)	Acenaphthene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	[0.0000255]
	Acenaphthylene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.0000412**
	Anthracene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	[0.0000255]
	Benzo(a)Anthracene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	[0.0000255]
	Benzo[a]pyrene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	[0.0000102]
	Benzo[b]Fluoranthene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	[0.0000255]
	Benzo[g,h,i]perylene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	[0.0000255]
	Benzo[k]fluoranthene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	[0.0000255]
	Chrysene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	[0.0000255]
	Dibenzo[a,h]anthracene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	[0.0000102]
	Fluoranthene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	[0.0000255]
	Fluorene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	[0.0000255]
	Indeno[1,2,3-c,d] pyrene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	[0.0000255]
	Naphthalene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.000406**
	Phenanthrene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	[0.0000255]
	Pyrene	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	[0.0000255]
SW8270D SVOC	1,2,4-Trichlorobenzene	0.07	0.07	[0.0052]	ND	[0.00039]	ND	[0.0051]	ND	[0.00039]	ND	[0.00505]	ND	[0.00039]	ND	[0.00515]	ND	[0.0004]	ND	[0.0004]	ND	[0.00038]	ND	[0.00039]	ND	[0.00038]	ND	[0.0051]
	1,2-Dichlorobenzene	0.6	0.6	[0.0052]	ND	[0.00039]	ND	[0.0051]	ND	[0.00039]	ND	[0.00505]	ND	[0.00039]	ND	[0.00515]	ND	[0.0004]	ND	[0.0004]	ND	[0.00038]	ND	[0.00039]	ND	[0.00038]	ND	[0.0051]
	1,3-Dichlorobenzene	0.4	3.3	[0.0052]	ND	[0.00039]	ND	[0.0051]	ND	[0.00039]	ND	[0.00505]	ND	[0.00039]	ND	[0.00515]	ND	[0.0004]	ND	[0.0004]	ND	[0.00038]	ND	[0.00039]	ND	[0.00038]	ND	[0.0051]
	1,4-Dichlorobenzene	0.075	0.075	[0.0052]	ND	[0.00039]	ND	[0.0051]	ND	[0.00039]	ND	[0.00505]	ND	[0.00039]	ND	[0.00515]	ND	[0.0004]	ND	[0.0004]	ND	[0.00038]	ND	[0.00039]	ND	[0.00038]	ND	[0.0051]
	1-Chloronaphthalene	--	--	[0.0052]	ND	--	--	[0.0051]	ND	--	--	[0.00505]	ND	--	--	[0.00515]	ND	--	--	--	--	--	--	--	--	--	--	[0.0051]
	1-Methylnaphthalene	0.15	0.15	[0.0052]	ND	[0.000059]	ND	[0.0051]	ND	[0.000058]	ND	[0.00505]	ND	[0.000059]	ND	[0.00515]	ND	[0.000059]	ND	[0.00006]	ND	[0.000057]	ND	[0.000058]	ND	[0.000057]	ND	[0.0051]
	2,4,5-Trichlorophenol	2.6	3.7	[0.0052]	ND	[0.00039]	ND	[0.0051]	ND	[0.00039]	ND	[0.00505]	ND	[0.00039]	ND	[0.00515]	ND	[0.0004]	ND	[0.0004]	ND	[0.00038]	ND	[0.00039]	ND	[0.00038]	ND	[0.0051]
	2,4,6-Trichlorophenol	0.077	0.077	[0.0052]	ND	[0.00059]	ND	[0.0051]	ND	[0.00058]	ND	[0.00505]	ND	[0.00059]	ND	[0.00515]	ND	[0.00059]	ND	[0.0006]	ND	[0.00057]	ND	[0.00058]	ND	[0.00057]	ND	[0.0051]
	2,4-Dichlorophenol	0.093	0.11	[0.0052]	ND	[0.00039]	ND	[0.0051]	ND	[0.00039]	ND	[0.00505]	ND	[0.00039]	ND	[0.00515]	ND	[0.0004]	ND	[0.0004]	ND	[0.00038]	ND	[0.00039]	ND	[0.00038]	ND	[0.0051]
	2,4-Dimethylphenol	0.54	0.73	[0.0052]	ND	[0.002]	ND	[0.0051]	ND	[0.0019]	ND	[0.00505]	ND	[0.002]	ND	[0.00515]	ND	[0.002]	ND	[0.002]	ND	[0.0019]	ND	[0.0019]	ND	[0.0019]	ND	[0.0051]
	2,4-Dinitrophenol	0.07	0.073	[0.0261]	ND	[0.0049]	ND	[0.0255]	ND	[0.0048]	ND	[0.0253]	ND	[0.0049]	ND	[0.0257]	ND	[0.005]	ND	[0.005]	ND	[0.0047]	ND	[0.0048]	ND	[0.0048]	ND	[0.0255]
	2,4-Dinitrotoluene	0.0013	0.0013	[0.0052]	ND	[0.00039]	ND	[0.0051]	ND	[0.00039]	ND	[0.00505]	ND	[0.00039]	ND	[0.00515]	ND	[0.0004]	ND	[0.0004]	ND	[0.00038]	ND	[0.00039]	ND	[0.00038]	ND	[0.0051]
	2,6-Dichlorophenol	--	--	[0.0052]	ND	--	--	[0.0051]	ND	--	--	[0.00505]	ND	--	--	[0.00515]	ND	--	--	--	--	--	--	--	--	--	--	[0.0051]
	2,6-Dinitrotoluene	0.0013	0.0013	[0.0052]	ND	[0.00039]	ND	[0.0051]	ND	[0.00039]	ND	[0.00505]	ND	[0.00039]	ND	[0.00515]	ND	[0.0004]	ND	[0.0004]	ND	[0.00038]	ND	[0.00039]	ND	[0.00038]	ND	[0.0051]
	2-Chloronaphthalene	1.7	2.9	[0.0052]	ND	[0.000059]	ND	[0.0051]	ND	[0.000058]	ND	[0.00505]	ND	[0.000059]	ND	[0.00515]	ND	[0.000059]	ND	[0.00006]	ND	[0.000057]	ND	[0.000058]	ND	[0.000057]	ND	[0.0051]
	2-Chlorophenol	0.12	0.18	[0.0052]	ND	[0.00039]	ND	[0.0051]	ND	[0.00039]	ND	[0.00505]	ND	[0.00039]	ND	[0.00515]	ND	[0.0004]	ND	[0.0004]	ND	[0.00038]	ND	[0.00039]	ND	[0.00038]	ND	[0.0051]
	2-Methyl-4,6-dinitrophenol	--	--	[0.0261]	ND	--	--	[0.0255]	ND	--	--	[0.0253]	ND	--	--	[0.0257]	ND	--	--	--	--	--	--	--	--	--	--	[0.0255]
	2-Methylnaphthalene	0.15	0.15	[0.0052]	ND	[0.0002]	ND	[0.0051]	ND	[0.00019]	ND	[0.00505]	ND	[0.0002]	ND	[0.00515]	ND	[0.0002]	ND	[0.0002]	ND	[0.00019]	ND	[0.00019]	ND	[0.00019]	ND	[0.0051]
	2-Methylphenol	1.8	1.8	[0.0052]	ND	[0.00039]	ND	[0.0051]	ND	[0.00039]	ND	[0.00505]	ND	[0.00039]	ND	[0.00515]	ND	[0.0004]	ND	[0.0004]	ND	[0.00038]	ND	[0.00039]	ND	[0.00038]	ND	[0.0051]
	2-Nitroaniline	--	--	[0.0052]	ND	[0.00039]	ND	[0.0051]	ND	[0.00039]	ND	[0.00505]	ND	[0.00039]	ND	[0.00515]	ND	[0.0004]	ND	[0.0004]	ND	[0.00038]	ND	[0.00039]	ND	[0.00038]	ND	[0.0051]
	2-Nitrophenol	--	--	[0.0052]	ND	[0.00039]	ND	[0.0051]	ND	[0.00039]	ND	[0.00505]	ND	[0.00039]	ND	[0.00515]	ND	[0.0004]	ND	[0.0004]	ND	[0.00038]	ND	[0.00039]	ND	[0.00038]	ND	[0.0051]
	3 & 4 Methylphenol	--	--	[0.0104]	ND	[0.00078]	ND	[0.0102]	ND	[0.00077]	ND	[0.0101]	ND	[0.00078]	ND	[0.0103]	ND	[0.00079]	ND	[0.00081]	ND	[0.00076]	ND	[0.00077]	ND	[0.00076]	ND	[0.0102]
	3,3'-Dichlorobenzidine	0.0019	0.0019	[0.0052]	ND	[0.002]	ND, R	[0.0051]	ND	[0.0019]	ND, R	[0.00505]	ND	[0.002]	ND, R	[0.00515]	ND	[0.002]	ND, R	[0.002]	ND, QL	[0.0019]	ND, QL	[0.0019]	ND, R	[0.0019]	ND, QL	[0.0051]
	3-Nitroaniline	--	--	[0.0052]	ND	[0.00039]	ND	[0.0051]	ND	[0.00039]	ND	[0.00505]	ND	[0.00039]	ND	[0.00515]	ND	[0.0004]	ND	[0.0004]	ND, ML	[0.00038]	ND	[0.00039]	ND	[0.00038]	ND	[0.0051]
	4,6-Dinitro-2-methylphenol	0.0134	--	--	--	[0.0039]	ND	--	--	[0.0039]	ND	--	--	[0.0039]	ND	--	--	[0.004]	ND	[0.004]	ND	[0.0038]	ND	[0.0039]	ND	[0.0038]	ND	--
	4-Bromophenyl phenyl ether	--	--	[0.0052]	ND	[0.00039]	ND	[0.0051]	ND	[0.00039]	ND	[0.00505]	ND	[0.00039]	ND	[0.00515]	ND	[0.0004]	ND	[0.0004]	ND	[0.00038]	ND	[0.00039]	ND	[0.00038]	ND	[0.0051]
	4-Chloro-3-methylphenol	--	--	[0.0052]	ND	[0.00039]	ND	[0.0051]	ND	[0.00039]	ND	[0.00505]	ND	[0.00039]	ND	[0.00515]	ND	[0.0004]	ND	[0.0004]	ND	[0.00038]	ND	[0.00039]	ND	[0.00038]	ND	[0.0051]
	4-Chloroaniline	0.016	0.016	[0.0052]	ND	[0.00039]	ND, R	[0.0051]	ND	[0.00039]	ND, R	[0.00505]	ND	[0.00039]	ND, R	[0.00515]	ND	[0.0004]	ND, R	[0.0004]	ND, R	[0.00038]	ND, R	[0.00039]	ND, R	[0.00038]	ND, R	[0.0051]
	4-Chlorophenyl phenyl ether	--	--	[0.0052]	ND	[0.00039]	ND	[0.0051]	ND	[0.00039]	ND	[0.00505]	ND	[0.00039]	ND	[0.00515]	ND	[0.0004]	ND	[0.0004]	ND	[0.00038]	ND	[0.00039]	ND	[0.00038]	ND	[0.0051]
	4-Nitroaniline	--	--	[0.0052]	ND	[0.00059]	ND	[0.0051]	ND	[0.00058]	ND	[0.00505]	ND	[0.00059]	ND	[0.00515]	ND	[0.00059]	ND	[0.0006]	ND	[0.00057]	ND	[0.00058]	ND	[0.00057]	ND	[0.0051]
	4-Nitrophenol	--	--	[0.0261]	ND	[0.0029]	ND	[0.0255]	ND	[0.0029]	ND	[0.0253]	ND	[0.0029]	ND	[0.0257]	ND	[0.003]	ND	[0.003]	ND	[0.0028]	ND	[0.0029]	ND	[0.0029]	ND	[0.0255]
	Acenaphthene	1.2	2.2	[0.0052]	ND	[0.000098]	ND	[0.0051]	ND	[0.000097]	ND	[0.00505]	ND	[0.000098]	ND	[0.00515]	ND	[0.000099]	ND	[0.0001]	ND	[0.000095]	ND	[0.000096]	ND	[0.000095]	ND	[0.0051]
	Acenaphthylene	2.2	2.2	[0.0052]	ND	[0.000078]	ND	[0.0051]	ND	[0.000077]	ND	[0.00505]	ND	[0.000078]	ND	[0.00515]	ND	[0.000079]	ND	[0.000081]	ND	[0.000076]	ND	[0.000077]	ND	[0.000076]	ND	[0.0051]
	Aniline	--	--	[0.0261]	ND	--	--	[0.0255]	ND	--	--	[0.0253]	ND	--	--	[0.0257]	ND	--	--	--	--	--	--	--	--	--	--	[0.0255]
	Anthracene	9.6	11	[0.0052]	ND	[0.000039]	ND	[0.0051]	ND	[0.000039]	ND	[0.00505]	ND	[0.000039]	ND	[0.00515]	ND	[0.00004]	ND	[0.00004]	ND	[0.000038]	ND	[0.000039]	ND	[0.000038]	ND	[0.0051]
	Azobenzene	--	--	[0.0052]	ND	--	--	[0.0051]	ND	--	--	[0.00505]	ND	--	--	[0.00515]	ND	--	--	--	--	--	--	--	--	--	--	[0.0051]
	Benzo[a]anthracene	0.0012	0.0012	[0.0052]	ND	[0.000059]	ND	[0.0051]	ND	[0.000058]	ND	[0.00505]	ND	[0.000059]	ND	[0.00515]	ND	[0.000059]	ND	[0.00006]	ND	[0.000057]	ND	[0.000058]	ND	[0.000057]	ND	[0.0051]
	Benzo[a]pyrene	0.0002	0.0002	[0.0052]	ND	[0.000039]	ND	[0.0051]	ND	[0.000039]	ND	[0.00505]	ND	[0.000039]	ND	[0.00515]	ND	[0.00004]	ND	[0.00004]	ND	[0.000038]	ND	[0.000039]	ND	[0.000038]	ND	[0.0051]
	Benzo[b]fluoranthene	0.0012	0.0012	[0.0052]	ND	[0.000078]	ND	[0.0051]	ND	[0.000077]	ND	[0.00505]	ND	[0.000078]	ND	[0.00515]	ND	[0.000079]	ND	[0.000081]	ND	[0.000076]	ND	[0.000077]	ND	[0.000076]	ND	[0.0051]
	Benzo[g,h,i]perylene	1.1	1.1	[0.0052]	ND	[0.000059]	ND	[0.0051]	ND	[0.000058]	ND	[0.00505]	ND	[0.000059]	ND	[0.00515]	ND	[0.000059]	ND	[0.00006]	ND	[0.000057]	ND	[0.000058]	ND	[0.000057]	ND	[0.0051]
	Benzo[k]fluoranthene	0.012	0.012	[0.0052]	ND	[0.000059]	ND	[0.0051]	ND	[0.000058]	ND	[0.00505]	ND	[0.000059]	ND	[0.00515]	ND	[0.000059]	ND	[0.00006]	ND	[0.000057]	ND	[0.000058]	ND	[0.000057]	ND	[0.0051]

Table 5
Summary of Analytical Results - All Wells
Alaska Onshore LNG. 2016
Nikiski, AK

Method	Compound in milligrams per Liter (mg/L)	Screening Criteria		Sample Identification[3]																						
				OW-1				OW-2				OW-3				OW-4				APT-1		APT-1 (Duplicate)		APT-2		APT-3		
				08/10/2016 13:53		09/22/2016 11:19		08/10/2016 11:45		09/22/2016 13:10		08/10/2016 17:50		09/22/2016 14:58		08/10/2016 16:25		09/22/2016 16:06		09/20/2016 10:32		09/20/2016 10:32		09/21/2016 14:00		09/20/2016 10:32		4/23/20
		Water Quality Standards for Designated Uses [2]	ADEC Table C Groundwater Cleanup Level[1]	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]	Flag	Conc.[4]
SW8270D SVOC	Benzoic acid	150	150	[0.0261]	ND	[0.0029]	ND	[0.0255]	ND	[0.0029]	ND	[0.0253]	ND	[0.0029]	ND	[0.0257]	ND	[0.003]	ND	[0.003]	ND	**0.0045**	=	[0.0029]	ND	[0.0029]	ND	**0.0334**
	Benzyl alcohol	--	--	[0.0052]	ND	[0.00039]	ND	[0.0051]	ND	[0.00039]	ND	[0.00505]	ND	[0.00039]	ND	[0.00515]	ND	[0.0004]	ND	[0.002]	ND	[0.00038]	ND	[0.00039]	ND	[0.00038]	ND	[0.0051]
	Bis(2chloro1methylethyl)Ether	--	--	[0.0052]	ND	--	--	[0.0051]	ND	--	--	[0.00505]	ND	--	--	[0.00515]	ND	--	--	--	--	--	--	--	--	--	--	[0.0051]
	Bis(2-chloroethoxy)methane	--	--	[0.0052]	ND	[0.00039]	ND	[0.0051]	ND	[0.00039]	ND	[0.00505]	ND	[0.00039]	ND	[0.00515]	ND	[0.0004]	ND	[0.0004]	ND	[0.00038]	ND	[0.00039]	ND	[0.00038]	ND	[0.0051]
	Bis(2-chloroethyl)ether	0.00077	0.00077	[0.0052]	ND	[0.00039]	ND	[0.0051]	ND	[0.00039]	ND	[0.00505]	ND	[0.00039]	ND	[0.00515]	ND	[0.0004]	ND	[0.0004]	ND	[0.00038]	ND	[0.00039]	ND	[0.00038]	ND	[0.0051]
	Bis(2-ethylhexyl) phthalate	0.006	0.006	[0.0052]	ND	[0.0029]	ND	[0.0051]	ND	[0.0029]	ND	[0.00505]	ND	[0.0029]	ND	[0.00515]	ND	[0.003]	ND	[0.003]	ND	[0.0028]	ND	[0.0029]	ND	[0.0029]	ND	[0.0051]
	bis(chloroisopropyl) ether	1.4	--	--	--	[0.00039]	ND	--	--	[0.00039]	ND	--	--	[0.00039]	ND	--	--	[0.0004]	ND	[0.0004]	ND	[0.00038]	ND	[0.00039]	ND	[0.00038]	ND	--
	Butyl benzyl phthalate	3	7.3	[0.0052]	ND	[0.00059]	ND	[0.0051]	ND	[0.00058]	ND	[0.00505]	ND	[0.00059]	ND	[0.00515]	ND	[0.00059]	ND	**0.0006**	=	[0.00057]	ND	[0.00058]	ND	[0.00057]	ND	[0.0051]
	Carbazole	0.043	0.043	[0.0052]	ND	[0.00039]	ND	[0.0051]	ND	[0.00039]	ND	[0.00505]	ND	[0.00039]	ND	[0.00515]	ND	[0.0004]	ND	[0.0004]	ND	[0.00038]	ND	[0.00039]	ND	[0.00038]	ND	[0.0051]
	Chrysene	0.12	0.12	[0.0052]	ND	[0.000039]	ND	[0.0051]	ND	[0.000039]	ND	[0.00505]	ND	[0.000039]	ND	[0.00515]	ND	[0.00004]	ND	[0.00004]	ND	[0.000038]	ND	[0.000039]	ND	[0.000038]	ND	[0.0051]
	Dibenz(a,h)anthracene	0.00012	0.00012	[0.0052]	ND	[0.000059]	ND	[0.0051]	ND	[0.000058]	ND	[0.00505]	ND	[0.000059]	ND	[0.00515]	ND	[0.000059]	ND	[0.00006]	ND	[0.000057]	ND	[0.000058]	ND	[0.000057]	ND	[0.0051]
	Dibenzofuran	0.073	0.073	[0.0052]	ND	[0.00039]	ND	[0.0051]	ND	[0.00039]	ND	[0.00505]	ND	[0.00039]	ND	[0.00515]	ND	[0.0004]	ND	[0.0004]	ND	[0.00038]	ND	[0.00039]	ND	[0.00038]	ND	[0.0051]
	Diethyl phthalate	23	29	[0.0052]	ND	[0.00039]	ND	[0.0051]	ND	[0.00039]	ND	[0.00505]	ND	[0.00039]	ND	[0.00515]	ND	[0.0004]	ND	[0.0004]	ND	[0.00038]	ND	[0.00039]	ND	[0.00038]	ND	[0.0051]
	Dimethyl phthalate	313	370	[0.0052]	ND	[0.00039]	ND	[0.0051]	ND	[0.00039]	ND	[0.00505]	ND	[0.00039]	ND	[0.00515]	ND	[0.0004]	ND	[0.0004]	ND	[0.00038]	ND	[0.00039]	ND	[0.00038]	ND	[0.0051]
	Di-n-butyl phthalate	2.7	3.7	[0.0052]	ND	[0.00039]	ND	[0.0051]	ND	[0.00039]	ND	[0.00505]	ND	[0.00039]	ND	[0.00515]	ND	[0.0004]	ND	[0.0004]	ND	[0.00038]	ND	[0.00039]	ND	[0.00038]	ND	[0.0051]
	Di-n-octyl phthalate	1.5	1.5	[0.0052]	ND	[0.00039]	ND	[0.0051]	ND	[0.00039]	ND	[0.00505]	ND	[0.00039]	ND	[0.00515]	ND	[0.0004]	ND	[0.0004]	ND	[0.00038]	ND	[0.00039]	ND	[0.00038]	ND	[0.0051]
	Fluoranthene	0.3	1.5	[0.0052]	ND	[0.000049]	ND	[0.0051]	ND	[0.000048]	ND	[0.00505]	ND	[0.000049]	ND	[0.00515]	ND	[0.00005]	ND	[0.00005]	ND	[0.000047]	ND	[0.000048]	ND	[0.000048]	ND	[0.0051]
	Fluorene	1.3	1.5	[0.0052]	ND	[0.000059]	ND	[0.0051]	ND	[0.000058]	ND	[0.00505]	ND	[0.000059]	ND	[0.00515]	ND	[0.000059]	ND	[0.00006]	ND	[0.000057]	ND	[0.000058]	ND	[0.000057]	ND	[0.0051]
	Hexachlorobenzene	0.001	0.001	[0.0052]	ND	[0.00039]	ND	[0.0051]	ND	[0.00039]	ND	[0.00505]	ND	[0.00039]	ND	[0.00515]	ND	[0.0004]	ND	[0.0004]	ND	[0.00038]	ND	[0.00039]	ND	[0.00038]	ND	[0.0051]
	Hexachlorobutadiene	0.0073	0.0073	[0.0052]	ND	[0.00059]	ND, QL	[0.0051]	ND	[0.00058]	ND, QL	[0.00505]	ND	[0.00059]	ND, QL	[0.00515]	ND	[0.00059]	ND, QL	[0.0006]	ND, QL	[0.00057]	ND, QL	[0.00058]	ND, QL	[0.00057]	ND, QL	[0.0051]
	Hexachlorocyclopentadiene	0.05	0.05	[0.0157]	ND	[0.002]	ND	[0.0153]	ND	[0.0019]	ND	[0.0152]	ND	[0.002]	ND	[0.0155]	ND	[0.002]	ND	[0.002]	ND	[0.0019]	ND	[0.0019]	ND	[0.0019]	ND	[0.0153]
	Hexachloroethane	0.04	0.04	[0.0052]	ND	[0.00059]	ND	[0.0051]	ND	[0.00058]	ND	[0.00505]	ND	[0.00059]	ND	[0.00515]	ND	[0.00059]	ND	[0.0006]	ND	[0.00057]	ND	[0.00058]	ND	[0.00057]	ND	[0.0051]
	Indeno[1,2,3-cd]pyrene	0.0012	0.0012	[0.0052]	ND	[0.000059]	ND	[0.0051]	ND	[0.000058]	ND	[0.00505]	ND	[0.000059]	ND	[0.00515]	ND	[0.000059]	ND	[0.00006]	ND	[0.000057]	ND	[0.000058]	ND	[0.000057]	ND	[0.0051]
	Isophorone	0.9	0.9	[0.0052]	ND	[0.00039]	ND	[0.0051]	ND	[0.00039]	ND	[0.00505]	ND	[0.00039]	ND	[0.00515]	ND	[0.0004]	ND	[0.0004]	ND	[0.00038]	ND	[0.00039]	ND	[0.00038]	ND	[0.0051]
	Naphthalene	0.73	0.73	[0.0052]	ND	[0.00039]	ND	[0.0051]	ND	[0.00039]	ND	[0.00505]	ND	[0.00039]	ND	[0.00515]	ND	[0.0004]	ND	[0.0004]	ND	[0.00038]	ND	[0.00039]	ND	[0.00038]	ND	[0.0051]
	Nitrobenzene	0.017	0.018	[0.0052]	ND	[0.00039]	ND	[0.0051]	ND	[0.00039]	ND	[0.00505]	ND	[0.00039]	ND	[0.00515]	ND	[0.0004]	ND	[0.0004]	ND	[0.00038]	ND	[0.00039]	ND	[0.00038]	ND	[0.0051]
	N-Nitrosodimethylamine	--	0.000017	[0.0052]	ND	--	--	[0.0051]	ND	--	--	[0.00505]	ND	--	--	[0.00515]	ND	--	--	--	--	--	--	--	--	--	--	[0.0051]
	N-Nitrosodi-n-propylamine	0.00012	0.00012	[0.0052]	ND	[0.00039]	ND	[0.0051]	ND	[0.00039]	ND	[0.00505]	ND	[0.00039]	ND	[0.00515]	ND	[0.0004]	ND	[0.0004]	ND	[0.00038]	ND	[0.00039]	ND	[0.00038]	ND	[0.0051]
	N-Nitrosodiphenylamine	0.17	0.17	[0.0052]	ND	[0.00039]	ND	[0.0051]	ND	**0.00042**	=	[0.00505]	ND	[0.00039]	ND	[0.00515]	ND	[0.0004]	ND, ML	[0.0004]	ND	[0.00038]	ND	[0.00039]	ND	[0.00038]	ND	[0.0051]
	Pentachlorophenol	0.001	0.001	[0.0261]	ND	[0.00069]	ND	[0.0255]	ND	[0.00068]	ND	[0.0253]	ND	[0.00068]	ND	[0.0257]	ND	[0.00069]	ND	[0.00071]	ND	[0.00066]	ND	[0.00067]	ND	[0.00067]	ND	[0.0255]
	Phenanthrene	11	11	[0.0052]	ND	[0.000078]	ND	[0.0051]	ND	[0.000077]	ND	[0.00505]	ND	[0.000078]	ND	[0.00515]	ND	[0.000079]	ND	[0.000081]	ND	[0.000076]	ND	[0.000077]	ND	[0.000076]	ND	[0.0051]
	Phenol	11	11	[0.0052]	ND	[0.00059]	ND	[0.0051]	ND	[0.00058]	ND	[0.00505]	ND	[0.00059]	ND	[0.00515]	ND	[0.00059]	ND	[0.0006]	ND	[0.00057]	ND	[0.00058]	ND	[0.00057]	ND	[0.0051]
	Pyrene	0.96	1.1	[0.0052]	ND	[0.000059]	ND	[0.0051]	ND	[0.000058]	ND	[0.00505]	ND	[0.000059]	ND	[0.00515]	ND	[0.000059]	ND	[0.00006]	ND	[0.000057]	ND	[0.000058]	ND	[0.000057]	ND	[0.0051]

Notes:

1 - This screening level corresponds to ADEC groundwater cleanup levels from 18 AAC 75.345 Table C. Revised 5/8/2016
http://dec.alaska.gov/commish/regulations/pdfs/18%20aac%2075.pdf
2 - This screening level corresponds to the most conservative values within ADEC Water Quality Standards 18 AAC 70. Amended 2/19/2016.
https://dec.alaska.gov/commish/regulations/pdfs/18%20AAC%2070.pdf
3 - The field sample identification number and date collected are provided.
4 - For detected results, the sample result is listed in this column. For results of non-detect, the LOD is listed in [ ] in this column.
5 - ADEC Calculator: http://dec.alaska.gov/water/cruise_ships/gp/2010/zinc_rpa_stationary.xls
6 - May not exceed 5 NTUs above natural conditions (NC) when the natural turbidity is 50 NTU or less, and may not have more than
10% increase in turbidity when the natural turbidity is more than 50 NTU, not to exceed a maximum increase of 25 NTU. Turbidity screening
levels corresponds to ADEC Alaska General Permit AKG003000 for discharge of Aquifer Pump Test (Table 6).
http://dec.alaska.gov/water/wnpspc/stormwater/docs/AKG003000_Hydrostatic_GP_Permit.pdf
7 - Standards are specific to various factors, such as a receiving water body (e.g., freshwater or saltwater)
See ADEC Water Quality Criteria Manual for Toxic and other Deleterious Organic and Inorganic substances,
as amended through December 12, 2008, Appendices C through g.

Sample results exceeding the ADEC Table C Groundwater screening criteria are shown in (**BOLD** with yellow shading).
Analyte was not detected, but the LOD was above the screening level (light blue shading).
Detected concentrations in **BOLD**

Abbreviations

--	Not applicable or screening criteria does not exist for this compound
AAC	Alaska Administrative Code
ADEC	Alaska Department of Environmental Conservation
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
PAH	Polycyclic Aromatic Hydrocarbon
SVOCs	Semi-volatile Organic Compounds
VOCs	Volatile Organic Compounds

Data Flags

=	Analyte detected at concentration listed in column to the left.
B	The reported concentration was less than five times that of the associated method blank and/or trip blank.
J	Result is considered an estimated value because the level is below the laboratory LOQ, but above the DL.
ND	Non-detect, LOD is in brackets [ ] in the concentration column.
MH, ML, MN	The quantitation was an estimate due to a quality control failure. Where applicable, a "H", "L", or "N" was used to indicate possible high, low, or unknown bias.
QH, QL, QN	The quantitation was an estimate due to a sample matrix quality control failure. Where applicable, a "H", "L", or "N" was used to indicate possible high, low, or unknown bias.
H	Holding Time Exceeded
U	Analyte was analyzed for but not detected
*	Lab Control Sample or Lab Control Sample Duplicate outside of acceptance limits