

**Travis/Peterson
Environmental Consulting, Inc.**

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September 24, 2014
1197-02

Seekins Ford-Lincoln, Inc.
1625 Seekins Ford Drive
Fairbanks, Alaska 99701

Attention: Al Haynes-Service Manager

Re: 2014 Annual Groundwater Monitoring Report, File No. 100.26.131

Dear Mr. Haynes:

Travis/Peterson Environmental Consulting, Inc. (TPECI) is pleased to present our letter report summarizing data obtained from the groundwater sampling event conducted on August 27, 2014 at Seekins Ford – Lincoln, Inc. (Figures 1 and 2 in Attachment 1).

On August 27, 2014 monitoring wells MW-1, MW-2, MW-3, MW-6 and MW-7 were sampled. The sample labeled MW-8 is a duplicate of MW-1. The samples were submitted to Alaska Analytical Laboratory and Freemont Analytical for analysis by the following methods:

- Gasoline range organics (GRO) by Method AK101
- Diesel range organics (DRO) by Method AK102; and
- Volatile organic compounds (VOCs) by EPA Method 8260B.

Field Measurements

Depth to groundwater and well depths were measured from the top of each well casing prior to sampling (Table 1). All of the wells sampled were flush mount wells so measurements below top of casing are considered to be below ground surface. The analytical results from this sampling event appear in Table 2. For historic trends in all wells, see Attachment 2. Complete laboratory analytical reports and quality assurance checklists are included as Attachment 3.

Table 1. Well Measurement Data

Well	Depth to Water (ft)	Total Depth (ft)	Casing Height(ft)
MW-1	10.82	24.59	flush mount
MW-2	11.29	24.46	flush mount
MW-3	10.24	22.58	flush mount
MW-6	10.95	22.12	flush mount
MW-7	11.26	21.21	flush mount

Table 2. 2014 Analytical Results

Sample	DRO (mg/L)	GRO (mg/L)	VOCs (µg/L)			
MW-1	0.362	25.9	trichlorofluoromethane:	2.91	n-propylbenzene:	68.7
			benzene:	1.65	1,3,5-trimethylbenzene:	164
			toluene:	1,340	sec-butylbenzene:	6.04
			ethylbenzene:	1,080	4-isopropyltoluene:	5.02
			xylenes (total):	6,480	1,2,4-trimethylbenzene:	923
			isopropylbenzene(cumene):	40.7	naphthalene:	45.6
			trichlorofluoromethane:	2.71	1,3,5-trimethylbenzene:	209
			benzene:	1.74	4-chlorotoluene:	22.6
MW-1 duplicate	0.355	24.7	1,2-dichloropropane:	1.39	tert-butylbenzene:	1.10
			toluene:	1,220	sec-butylbenzene:	6.03
			ethylbenzene:	1,110	4-isopropyltoluene:	4.79
			xylenes (total):	6,510	1,2,4-trimethylbenzene:	889
			isopropylbenzene(cumene):	49.3	naphthalene:	47.0
			n-propylbenzene:	85.1		
			toluene:	1.12	xylenes (total):	6.11
			tetrachloroethene:	1.29	1,2,4-trimethylbenzene:	1.34
MW-2	0.0307J	0.0192J	ethylbenzene:	1.43		
			tetrachloroethene:	1.39	1,2-dichlorobenzene:	7.87
			1,3,5-trimethylbenzene:	1.37	1,2,4-trimethylbenzene:	3.25
			4-isopropyltoluene:	4.47	naphthalene:	2.78
			n-butylbenzene:	1.32		
MW-6	ND	0.0109J	trichlorofluoromethane:	8.13	tetrachloroethene:	2.31
MW-7	ND	0.0201J	trichlorofluoromethane:	11.3		
Cleanup Level ^a	1.5	2.2	trichlorofluoromethane:	11,000	1,3,5-trimethylbenzene:	1,800
			benzene:	5.0	4-chlorotoluene:	n/a
			1,2-dichloropropane:	5.0	tert-butylbenzene:	370
			toluene:	1,000	sec-butylbenzene:	370
			tetrachloroethene:	5.0 ^c	4-isopropyltoluene:	n/a
			ethylbenzene:	700	n-butylbenzene:	370
			xylenes (total):	10,000	1,2-dichlorobenzene:	600
			isopropylbenzene (cumene):	3,750	1,2,4-trimethylbenzene:	1,800
			n-propylbenzene:	370	naphthalene:	730

^a18 AAC 75 Table C: Groundwater Cleanup Levels. Only detected VOCs are listed in the table. Cleanup levels are not established for all VOCs. Measurements exceeding ADEC cleanup levels are indicated in bold type. ^bOther sources. ^cMCL established by the EPA for drinking water. n/a – cleanup standard not available.

Discussion

Detections in MW-1

GRO was detected at 25.9 mg/L (and 24.7 mg/L in the MW-1 duplicate sample) during the 2014 sampling event (2.2 mg/L cleanup standard). This result represents a decrease from the 2013 detected GRO value in MW-1 of 59.2 mg/L. GRO was detected in both the project sample and the duplicate above the ADEC groundwater cleanup level.

DRO was detected at 0.362 mg/L (and 0.355 mg/L in the MW-1 duplicate sample) during the 2014 sampling event (1.5 mg/L cleanup standard). This result represents a decrease from the 2013 detected DRO value in MW-1 of 0.589 mg/L.

Several VOCs were detected in 2014 which were not detected during the 2013 sampling event. These analytes include: trichlorofluoromethane, benzene, sec-butylbenzene, 4-isopropyltoluene, and naphthalene. Each of these new analytes was detected below their respective ADEC groundwater cleanup level. The detected concentrations of each of the analytes which were detected in the 2013 and 2014 sampling event had lower concentrations in 2014 than 2013, by approximately half. These analytes included: ethylbenzene, isopropylbenzene, n-propylbenzene, toluene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, and xylenes (total). Of all the detected analytes, only toluene and ethylbenzene remain above their respective ADEC groundwater cleanup level. The concentrations of each of these compounds are presented in Table 2 and in Attachment 2 for comparison to historic trends.

Detections in MW-2

GRO was detected at 0.0192 mg/L during the 2014 sampling event (2.2 mg/L cleanup standard). This result represents an increase from the 2013 non-detect GRO result in MW-2.

DRO was detected at 0.0307 mg/L during the 2014 sampling event (1.5 mg/L cleanup standard). This result represents a decrease from the 2013 detected DRO value in MW-2 of 0.217 mg/L.

Several VOCs were detected in 2014 which were not detected during the 2013 sampling event. These analytes include: toluene, ethylbenzene, xylenes (total), and 1,2,4-trimethylbenzene. Each of these new analytes was detected below their respective ADEC groundwater cleanup level. 1,1,1-trichloroethane was detected in 2013 but was not detected in 2014. Tetrachloroethane is the only analyte detected in both 2013 and 2014. The 2014 concentration has decreased since the 2013 sampling event. The concentrations of each of these compounds are presented in Table 2 and in Attachment 2 for comparison to historic trends.

Detections in MW-3

GRO was detected at 0.0344 mg/L during the 2014 sampling event (2.2 mg/L cleanup standard). This result represents a decrease from the 2013 detected GRO value in MW-3 of 0.0657 mg/L.

DRO was detected at 0.118 mg/L during the 2014 sampling event (1.5 mg/L cleanup standard). This result represents a decrease from the 2013 detected DRO value in MW-3 of 0.219 mg/L.

N-butylbenzene was detected during the 2014 sampling event but was not detected in 2013. N-butylbenzene was detected below its ADEC groundwater cleanup level. All other analytes detected during the 2014 sampling event were also detected in 2013. All 2014 results are less than their 2013 levels. The concentrations of each of these compounds are presented in Table 2 and in Attachment 2 for comparison to historic trends.

Detections in MW-6

GRO was detected at 0.0109 during the 2014 sampling event (2.2 mg/L cleanup standard). This result represents an increase from the 2013 non-detect GRO result in MW-6.

DRO was non-detect during the 2014 sampling event (1.5 mg/L cleanup standard). This result represents a decrease from the 2013 detected DRO value in MW-6 of 0.0638 mg/L.

Tetrachloroethene and trichlorofluoromethane were both detected in 2013 and 2014. The 2014 results for both analytes exceed the concentrations observed in 2013. All detected VOCs were

below their respective cleanup standards. The concentrations of each of these compounds are presented in Table 2 and in Attachment 2 for comparison to historic trends.

Detections in MW-7

GRO was detected at 0.0201 during the 2014 sampling event (2.2 mg/L cleanup standard). This result represents an increase from the 2013 non-detect GRO result in MW-7.

DRO was non-detect during the 2014 sampling event (1.5 mg/L cleanup standard). This result represents a decrease from the 2013 detected DRO value in MW-7 of 0.0529 mg/L.

Trichlorofluormethane was the only analyte detected in 2014. Compared to its 2013 value, the concentration has increased but still below its ADEC groundwater cleanup level. The concentrations of each of these compounds are presented in Table 2 and in Attachment 2 for comparison to historic trends.

Conclusions

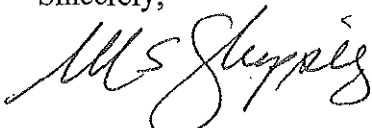
DRO and GRO concentrations varied from decreasing concentrations in MW-1, MW-3, and MW-7 and MW-6 for DRO only to increases in concentrations observed in MW-2 for DRO and GRO, and MW-6 and MW-7 for GRO only.

An overall increase or evidence of new detections of various VOCs was documented in MW-1, MW-2, MW-3, and MW-6 since the 2013 sampling event. Toluene and ethylbenzene were detected above applicable cleanup levels in the primary and duplicate samples for MW-1 and several new VOC analytes were detected in MW-1 in 2014 below applicable cleanup levels.

This sampling event occurred during high groundwater, approximately two to three feet above the normal measured water level for this time of year. Fluctuating concentrations of contaminants in addition to new detections of contaminants could be related to the high water table during a year with extended record rainfall events. It is possible the increase in groundwater flow has picked up residual contaminants left in shallower soils. The next scheduled sampling event is August, 2015.

If you have any questions regarding this report please contact me at (907) 455-7225.

Sincerely,



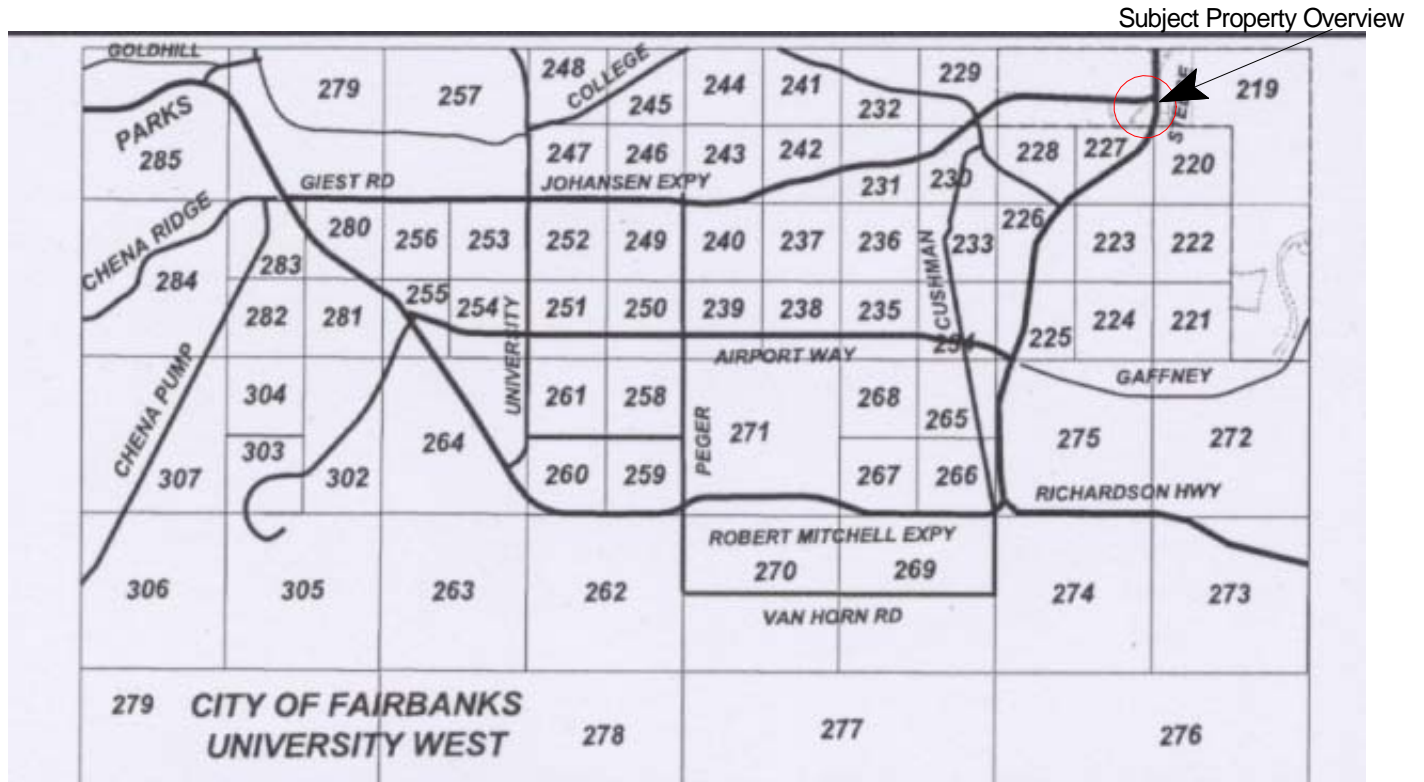
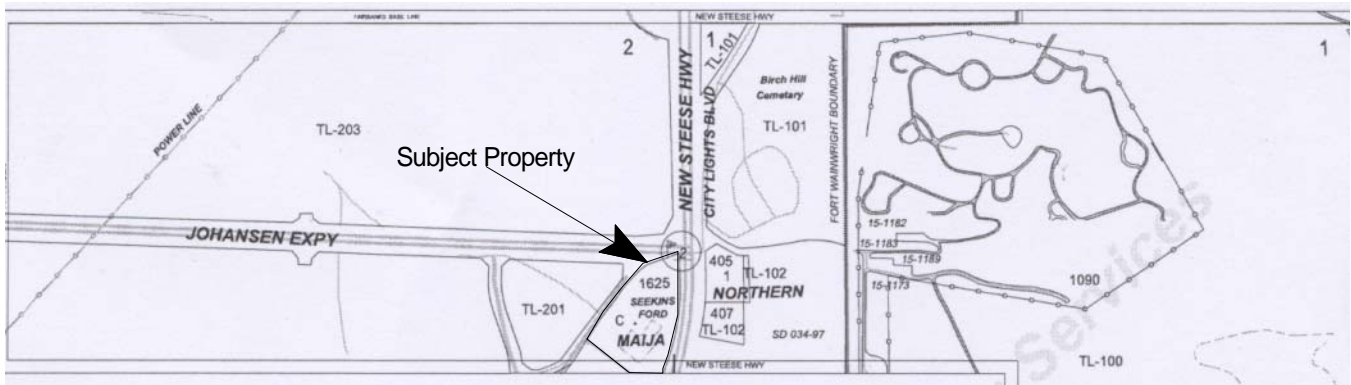
Melissa S. Shippey
Senior Scientist

cc: Mr. Jim Fish, State of Alaska, Department of Environmental Conservation.

- Attachments:
- 1) Figures 1 and 2
 - 2) Historical Groundwater Data Table
 - 3) Laboratory Data Report and ADEC Laboratory Data Review Checklist

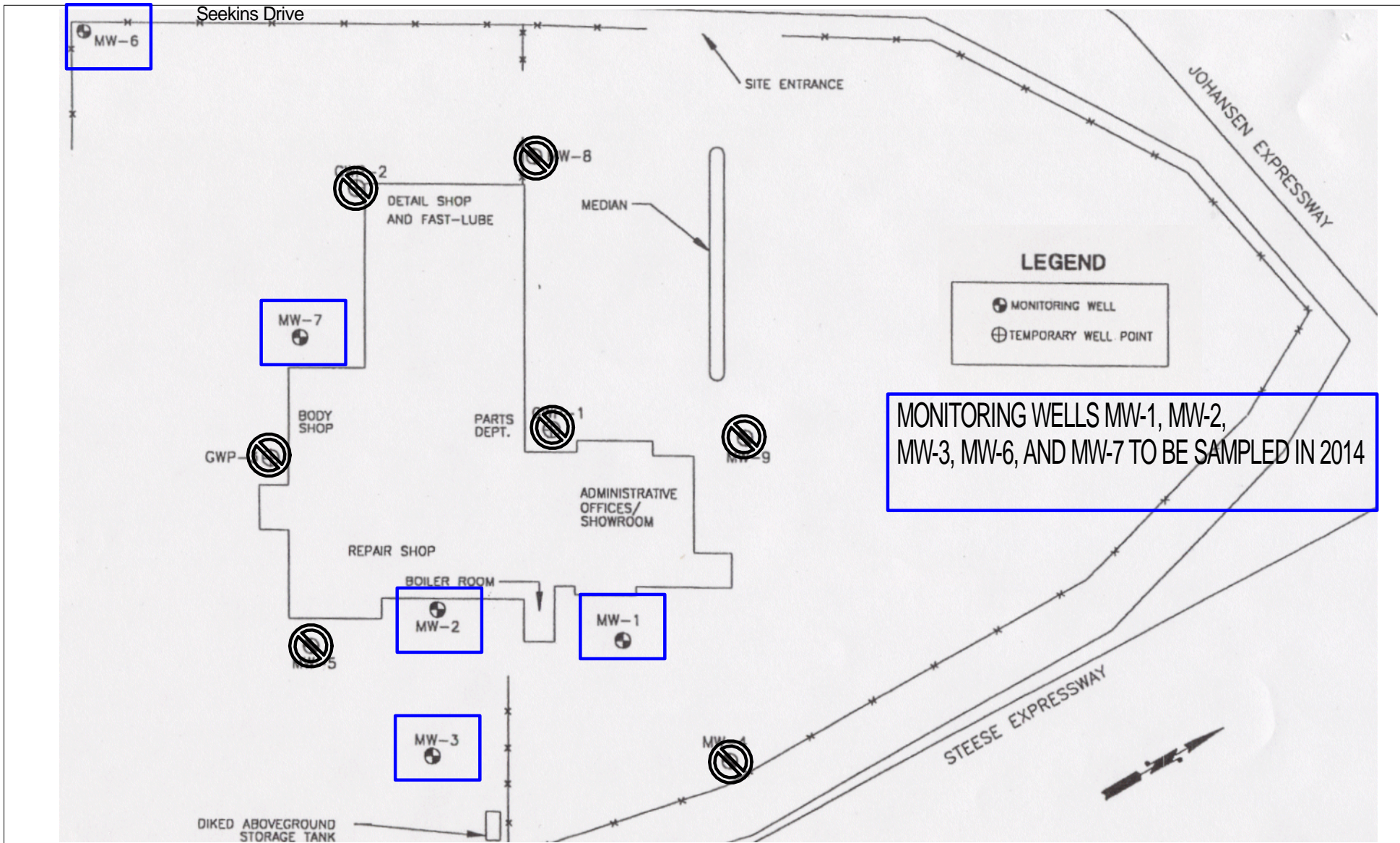
ATTACHMENT 1

FIGURES



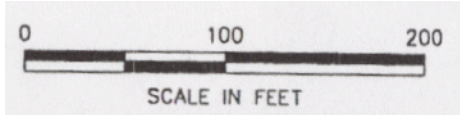
TRAVIS/PETERSON ENVIRONMENTAL CONSULTING, INC.
 329 2ND STREET
 FAIRBANKS, ALASKA 99701

FIGURE 1
SEEKINS FORD-LINCOLN-MERCURY LOCATION & VICINITY



MONITORING WELLS MW-1, MW-2, MW-3, MW-6, AND MW-7 TO BE SAMPLED IN 2014

 DECOMMISSIONED MONITORING WELL



TRAVIS/PETERSON ENVIRONMENTAL CONSULTING, INC.
 329 2ND STREET
 FAIRBANKS, ALASKA 99701

SEEKINS FORD-LINCOLN-MERCURY

FIGURE 2
 SITE PLAN

PROJECT No: 1197-02

FILE: S:\Projects\1197\02\2014\Figure 2-Site Plan.SKF

DATE: 09/22/14

SCALE: AS SHOWN

ATTACHMENT 2
HISTORICAL GROUNDWATER DATA

ATTACHMENT 3

**LABORATORY DATA REPORT AND
ADEC LABORATORY DATA REVIEW CHECKLIST**



3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Alaska Analytical Laboratory
Kelley Lovejoy
1956 Richardson Hwy
North Pole, AK 99705

RE: Seekins Ford 1197-02
Lab ID: 1408286

September 08, 2014

Attention Kelley Lovejoy:

Fremont Analytical, Inc. received 7 sample(s) on 8/29/2014 for the analyses presented in the following report.

Volatile Organic Compounds by EPA Method 8260

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

A handwritten signature in black ink, appearing to read "Mike Ridgeway", written in a cursive style.

Mike Ridgeway
President



Date: 09/08/2014

CLIENT: Alaska Analytical Laboratory
Project: Seekins Ford 1197-02
Lab Order: 1408286

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1408286-001	MW-1	08/27/2014 10:45 AM	08/29/2014 12:09 PM
1408286-002	MW-8	08/27/2014 11:00 AM	08/29/2014 12:09 PM
1408286-003	MW-2	08/27/2014 1:10 PM	08/29/2014 12:09 PM
1408286-004	MW-3	08/27/2014 2:15 PM	08/29/2014 12:09 PM
1408286-005	MW-7	08/27/2014 3:30 PM	08/29/2014 12:09 PM
1408286-006	MW-6	08/27/2014 4:30 PM	08/29/2014 12:09 PM
1408286-007	Trip Blank - 8260	08/27/2014 5:00 PM	08/29/2014 12:09 PM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

CLIENT: Alaska Analytical Laboratory**Project:** Seekins Ford 1197-02

I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.



Analytical Report

WO#: 1408286

Date Reported: 9/8/2014

Client: Alaska Analytical Laboratory

Collection Date: 8/27/2014 10:45:00 AM

Project: Seekins Ford 1197-02

Lab ID: 1408286-001

Matrix: Water

Client Sample ID: MW-1

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: R16509

Analyst: BC

Dichlorodifluoromethane (CFC-12)	ND	1.00	*	µg/L	1	8/30/2014 2:12:00 AM
Chloromethane	ND	1.00		µg/L	1	8/30/2014 2:12:00 AM
Vinyl chloride	ND	0.200		µg/L	1	8/30/2014 2:12:00 AM
Bromomethane	ND	1.00		µg/L	1	8/30/2014 2:12:00 AM
Trichlorofluoromethane (CFC-11)	2.91	1.00		µg/L	1	8/30/2014 2:12:00 AM
Chloroethane	ND	1.00		µg/L	1	8/30/2014 2:12:00 AM
1,1-Dichloroethene	ND	1.00		µg/L	1	8/30/2014 2:12:00 AM
Methylene chloride	ND	1.00		µg/L	1	8/30/2014 2:12:00 AM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	8/30/2014 2:12:00 AM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	8/30/2014 2:12:00 AM
1,1-Dichloroethane	ND	1.00		µg/L	1	8/30/2014 2:12:00 AM
2,2-Dichloropropane	ND	2.00		µg/L	1	8/30/2014 2:12:00 AM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	8/30/2014 2:12:00 AM
Chloroform	ND	1.00		µg/L	1	8/30/2014 2:12:00 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	8/30/2014 2:12:00 AM
1,1-Dichloropropene	ND	1.00		µg/L	1	8/30/2014 2:12:00 AM
Carbon tetrachloride	ND	1.00		µg/L	1	8/30/2014 2:12:00 AM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	8/30/2014 2:12:00 AM
Benzene	1.65	1.00		µg/L	1	8/30/2014 2:12:00 AM
Trichloroethene (TCE)	ND	0.500		µg/L	1	8/30/2014 2:12:00 AM
1,2-Dichloropropane	ND	1.00		µg/L	1	8/30/2014 2:12:00 AM
Bromodichloromethane	ND	1.00		µg/L	1	8/30/2014 2:12:00 AM
Dibromomethane	ND	1.00		µg/L	1	8/30/2014 2:12:00 AM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	8/30/2014 2:12:00 AM
Toluene	1,340	100	D	µg/L	100	9/5/2014 11:59:00 AM
trans-1,3-Dichloropropene	ND	1.00		µg/L	1	8/30/2014 2:12:00 AM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	8/30/2014 2:12:00 AM
1,3-Dichloropropane	ND	1.00		µg/L	1	8/30/2014 2:12:00 AM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	8/30/2014 2:12:00 AM
Dibromochloromethane	ND	1.00		µg/L	1	8/30/2014 2:12:00 AM
1,2-Dibromoethane (EDB)	ND	0.0600		µg/L	1	8/30/2014 2:12:00 AM
Chlorobenzene	ND	1.00		µg/L	1	8/30/2014 2:12:00 AM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	8/30/2014 2:12:00 AM
Ethylbenzene	1,080	100	D	µg/L	100	9/5/2014 11:59:00 AM
m,p-Xylene	4,000	100	D	µg/L	100	9/5/2014 11:59:00 AM

Qualifiers: B Analyte detected in the associated Method Blank
 E Value above quantitation range
 J Analyte detected below quantitation limits
 RL Reporting Limit

D Dilution was required
 H Holding times for preparation or analysis exceeded
 ND Not detected at the Reporting Limit
 S Spike recovery outside accepted recovery limits



Analytical Report

WO#: 1408286

Date Reported: 9/8/2014

Client: Alaska Analytical Laboratory

Collection Date: 8/27/2014 10:45:00 AM

Project: Seekins Ford 1197-02

Lab ID: 1408286-001

Matrix: Water

Client Sample ID: MW-1

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: R16509

Analyst: BC

o-Xylene	2,480	100	D	µg/L	100	9/5/2014 11:59:00 AM
Styrene	ND	1.00		µg/L	1	8/30/2014 2:12:00 AM
Isopropylbenzene	40.7	10.0	D	µg/L	10	9/5/2014 9:42:00 AM
Bromoform	ND	1.00		µg/L	1	8/30/2014 2:12:00 AM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	8/30/2014 2:12:00 AM
n-Propylbenzene	68.7	10.0	D	µg/L	10	9/5/2014 9:42:00 AM
Bromobenzene	ND	1.00		µg/L	1	8/30/2014 2:12:00 AM
1,3,5-Trimethylbenzene	164	10.0	D	µg/L	10	9/5/2014 9:42:00 AM
2-Chlorotoluene	ND	1.00		µg/L	1	8/30/2014 2:12:00 AM
4-Chlorotoluene	ND	1.00		µg/L	1	8/30/2014 2:12:00 AM
tert-Butylbenzene	ND	1.00		µg/L	1	8/30/2014 2:12:00 AM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	8/30/2014 2:12:00 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	8/30/2014 2:12:00 AM
sec-Butylbenzene	6.04	1.00		µg/L	1	8/30/2014 2:12:00 AM
4-Isopropyltoluene	5.02	1.00		µg/L	1	8/30/2014 2:12:00 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	8/30/2014 2:12:00 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	8/30/2014 2:12:00 AM
n-Butylbenzene	ND	1.00		µg/L	1	8/30/2014 2:12:00 AM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	8/30/2014 2:12:00 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	8/30/2014 2:12:00 AM
1,2,4-Trimethylbenzene	923	100	D	µg/L	100	9/5/2014 11:59:00 AM
Hexachlorobutadiene	ND	4.00		µg/L	1	8/30/2014 2:12:00 AM
Naphthalene	45.6	1.00		µg/L	1	8/30/2014 2:12:00 AM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	8/30/2014 2:12:00 AM
Surr: Dibromofluoromethane	93.3	61.7-130		%REC	1	8/30/2014 2:12:00 AM
Surr: Toluene-d8	104	40.1-139		%REC	1	8/30/2014 2:12:00 AM
Surr: 1-Bromo-4-fluorobenzene	107	68.2-127		%REC	1	8/30/2014 2:12:00 AM

NOTES:

* - Flagged value is not within established control limits.

Qualifiers:	B	Analyte detected in the associated Method Blank	D	Dilution was required
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



Analytical Report

WO#: 1408286

Date Reported: 9/8/2014

Client: Alaska Analytical Laboratory

Collection Date: 8/27/2014 11:00:00 AM

Project: Seekins Ford 1197-02

Lab ID: 1408286-002

Matrix: Water

Client Sample ID: MW-8

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: R16509

Analyst: BC

Dichlorodifluoromethane (CFC-12)	ND	1.00	*	µg/L	1	8/30/2014 3:11:00 AM
Chloromethane	ND	1.00		µg/L	1	8/30/2014 3:11:00 AM
Vinyl chloride	ND	0.200		µg/L	1	8/30/2014 3:11:00 AM
Bromomethane	ND	1.00		µg/L	1	8/30/2014 3:11:00 AM
Trichlorofluoromethane (CFC-11)	2.71	1.00		µg/L	1	8/30/2014 3:11:00 AM
Chloroethane	ND	1.00		µg/L	1	8/30/2014 3:11:00 AM
1,1-Dichloroethene	ND	1.00		µg/L	1	8/30/2014 3:11:00 AM
Methylene chloride	ND	1.00		µg/L	1	8/30/2014 3:11:00 AM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	8/30/2014 3:11:00 AM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	8/30/2014 3:11:00 AM
1,1-Dichloroethane	ND	1.00		µg/L	1	8/30/2014 3:11:00 AM
2,2-Dichloropropane	ND	2.00		µg/L	1	8/30/2014 3:11:00 AM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	8/30/2014 3:11:00 AM
Chloroform	ND	1.00		µg/L	1	8/30/2014 3:11:00 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	8/30/2014 3:11:00 AM
1,1-Dichloropropene	ND	1.00		µg/L	1	8/30/2014 3:11:00 AM
Carbon tetrachloride	ND	1.00		µg/L	1	8/30/2014 3:11:00 AM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	8/30/2014 3:11:00 AM
Benzene	1.74	1.00		µg/L	1	8/30/2014 3:11:00 AM
Trichloroethene (TCE)	ND	0.500		µg/L	1	8/30/2014 3:11:00 AM
1,2-Dichloropropane	1.39	1.00		µg/L	1	8/30/2014 3:11:00 AM
Bromodichloromethane	ND	1.00		µg/L	1	8/30/2014 3:11:00 AM
Dibromomethane	ND	1.00		µg/L	1	8/30/2014 3:11:00 AM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	8/30/2014 3:11:00 AM
Toluene	1,220	100	D	µg/L	100	9/5/2014 12:27:00 PM
trans-1,3-Dichloropropene	ND	1.00		µg/L	1	8/30/2014 3:11:00 AM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	8/30/2014 3:11:00 AM
1,3-Dichloropropane	ND	1.00		µg/L	1	8/30/2014 3:11:00 AM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	8/30/2014 3:11:00 AM
Dibromochloromethane	ND	1.00		µg/L	1	8/30/2014 3:11:00 AM
1,2-Dibromoethane (EDB)	ND	0.0600		µg/L	1	8/30/2014 3:11:00 AM
Chlorobenzene	ND	1.00		µg/L	1	8/30/2014 3:11:00 AM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	8/30/2014 3:11:00 AM
Ethylbenzene	1,110	100	D	µg/L	100	9/5/2014 12:27:00 PM
m,p-Xylene	4,080	100	D	µg/L	100	9/5/2014 12:27:00 PM

Qualifiers: B Analyte detected in the associated Method Blank
 E Value above quantitation range
 J Analyte detected below quantitation limits
 RL Reporting Limit

D Dilution was required
 H Holding times for preparation or analysis exceeded
 ND Not detected at the Reporting Limit
 S Spike recovery outside accepted recovery limits



Analytical Report

WO#: 1408286

Date Reported: 9/8/2014

Client: Alaska Analytical Laboratory

Collection Date: 8/27/2014 11:00:00 AM

Project: Seekins Ford 1197-02

Lab ID: 1408286-002

Matrix: Water

Client Sample ID: MW-8

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: R16509

Analyst: BC

o-Xylene	2,430	100	D	µg/L	100	9/5/2014 12:27:00 PM
Styrene	ND	1.00		µg/L	1	8/30/2014 3:11:00 AM
Isopropylbenzene	49.3	10.0	D	µg/L	10	9/5/2014 10:10:00 AM
Bromoform	ND	1.00		µg/L	1	8/30/2014 3:11:00 AM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	8/30/2014 3:11:00 AM
n-Propylbenzene	85.1	10.0	D	µg/L	10	9/5/2014 10:10:00 AM
Bromobenzene	ND	1.00		µg/L	1	8/30/2014 3:11:00 AM
1,3,5-Trimethylbenzene	209	10.0	D	µg/L	10	9/5/2014 10:10:00 AM
2-Chlorotoluene	ND	1.00		µg/L	1	8/30/2014 3:11:00 AM
4-Chlorotoluene	22.6	1.00		µg/L	1	8/30/2014 3:11:00 AM
tert-Butylbenzene	1.10	1.00		µg/L	1	8/30/2014 3:11:00 AM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	8/30/2014 3:11:00 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	8/30/2014 3:11:00 AM
sec-Butylbenzene	6.03	1.00		µg/L	1	8/30/2014 3:11:00 AM
4-Isopropyltoluene	4.79	1.00		µg/L	1	8/30/2014 3:11:00 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	8/30/2014 3:11:00 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	8/30/2014 3:11:00 AM
n-Butylbenzene	ND	1.00		µg/L	1	8/30/2014 3:11:00 AM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	8/30/2014 3:11:00 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	8/30/2014 3:11:00 AM
1,2,4-Trimethylbenzene	889	100	D	µg/L	100	9/5/2014 12:27:00 PM
Hexachlorobutadiene	ND	4.00		µg/L	1	8/30/2014 3:11:00 AM
Naphthalene	47.0	1.00		µg/L	1	8/30/2014 3:11:00 AM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	8/30/2014 3:11:00 AM
Surr: Dibromofluoromethane	91.7	61.7-130		%REC	1	8/30/2014 3:11:00 AM
Surr: Toluene-d8	106	40.1-139		%REC	1	8/30/2014 3:11:00 AM
Surr: 1-Bromo-4-fluorobenzene	100	68.2-127		%REC	1	8/30/2014 3:11:00 AM

NOTES:

* - Flagged value is not within established control limits.

Qualifiers:	B	Analyte detected in the associated Method Blank	D	Dilution was required
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



Analytical Report

WO#: 1408286

Date Reported: 9/8/2014

Client: Alaska Analytical Laboratory

Collection Date: 8/27/2014 1:10:00 PM

Project: Seekins Ford 1197-02

Lab ID: 1408286-003

Matrix: Water

Client Sample ID: MW-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: R16509

Analyst: BC

Dichlorodifluoromethane (CFC-12)	ND	1.00	*	µg/L	1	8/30/2014 5:09:00 AM
Chloromethane	ND	1.00		µg/L	1	8/30/2014 5:09:00 AM
Vinyl chloride	ND	0.200		µg/L	1	8/30/2014 5:09:00 AM
Bromomethane	ND	1.00		µg/L	1	8/30/2014 5:09:00 AM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	8/30/2014 5:09:00 AM
Chloroethane	ND	1.00		µg/L	1	8/30/2014 5:09:00 AM
1,1-Dichloroethene	ND	1.00		µg/L	1	8/30/2014 5:09:00 AM
Methylene chloride	ND	1.00		µg/L	1	8/30/2014 5:09:00 AM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	8/30/2014 5:09:00 AM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	8/30/2014 5:09:00 AM
1,1-Dichloroethane	ND	1.00		µg/L	1	8/30/2014 5:09:00 AM
2,2-Dichloropropane	ND	2.00		µg/L	1	8/30/2014 5:09:00 AM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	8/30/2014 5:09:00 AM
Chloroform	ND	1.00		µg/L	1	8/30/2014 5:09:00 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	8/30/2014 5:09:00 AM
1,1-Dichloropropene	ND	1.00		µg/L	1	8/30/2014 5:09:00 AM
Carbon tetrachloride	ND	1.00		µg/L	1	8/30/2014 5:09:00 AM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	8/30/2014 5:09:00 AM
Benzene	ND	1.00		µg/L	1	8/30/2014 5:09:00 AM
Trichloroethene (TCE)	ND	0.500		µg/L	1	8/30/2014 5:09:00 AM
1,2-Dichloropropane	ND	1.00		µg/L	1	8/30/2014 5:09:00 AM
Bromodichloromethane	ND	1.00		µg/L	1	8/30/2014 5:09:00 AM
Dibromomethane	ND	1.00		µg/L	1	8/30/2014 5:09:00 AM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	8/30/2014 5:09:00 AM
Toluene	1.12	1.00		µg/L	1	8/30/2014 5:09:00 AM
trans-1,3-Dichloropropene	ND	1.00		µg/L	1	8/30/2014 5:09:00 AM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	8/30/2014 5:09:00 AM
1,3-Dichloropropane	ND	1.00		µg/L	1	8/30/2014 5:09:00 AM
Tetrachloroethene (PCE)	1.29	1.00		µg/L	1	8/30/2014 5:09:00 AM
Dibromochloromethane	ND	1.00		µg/L	1	8/30/2014 5:09:00 AM
1,2-Dibromoethane (EDB)	ND	0.0600		µg/L	1	8/30/2014 5:09:00 AM
Chlorobenzene	ND	1.00		µg/L	1	8/30/2014 5:09:00 AM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	8/30/2014 5:09:00 AM
Ethylbenzene	1.43	1.00		µg/L	1	8/30/2014 5:09:00 AM
m,p-Xylene	4.30	1.00		µg/L	1	8/30/2014 5:09:00 AM

Qualifiers: B Analyte detected in the associated Method Blank
 E Value above quantitation range
 J Analyte detected below quantitation limits
 RL Reporting Limit

D Dilution was required
 H Holding times for preparation or analysis exceeded
 ND Not detected at the Reporting Limit
 S Spike recovery outside accepted recovery limits



Analytical Report

WO#: 1408286

Date Reported: 9/8/2014

Client: Alaska Analytical Laboratory

Collection Date: 8/27/2014 1:10:00 PM

Project: Seekins Ford 1197-02

Lab ID: 1408286-003

Matrix: Water

Client Sample ID: MW-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: R16509

Analyst: BC

o-Xylene	1.81	1.00		µg/L	1	8/30/2014 5:09:00 AM
Styrene	ND	1.00		µg/L	1	8/30/2014 5:09:00 AM
Isopropylbenzene	ND	1.00		µg/L	1	8/30/2014 5:09:00 AM
Bromoform	ND	1.00		µg/L	1	8/30/2014 5:09:00 AM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	8/30/2014 5:09:00 AM
n-Propylbenzene	ND	1.00		µg/L	1	8/30/2014 5:09:00 AM
Bromobenzene	ND	1.00		µg/L	1	8/30/2014 5:09:00 AM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	8/30/2014 5:09:00 AM
2-Chlorotoluene	ND	1.00		µg/L	1	8/30/2014 5:09:00 AM
4-Chlorotoluene	ND	1.00		µg/L	1	8/30/2014 5:09:00 AM
tert-Butylbenzene	ND	1.00		µg/L	1	8/30/2014 5:09:00 AM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	8/30/2014 5:09:00 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	8/30/2014 5:09:00 AM
sec-Butylbenzene	ND	1.00		µg/L	1	8/30/2014 5:09:00 AM
4-Isopropyltoluene	ND	1.00		µg/L	1	8/30/2014 5:09:00 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	8/30/2014 5:09:00 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	8/30/2014 5:09:00 AM
n-Butylbenzene	ND	1.00		µg/L	1	8/30/2014 5:09:00 AM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	8/30/2014 5:09:00 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	8/30/2014 5:09:00 AM
1,2,4-Trimethylbenzene	1.34	1.00		µg/L	1	8/30/2014 5:09:00 AM
Hexachlorobutadiene	ND	4.00		µg/L	1	8/30/2014 5:09:00 AM
Naphthalene	ND	1.00		µg/L	1	8/30/2014 5:09:00 AM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	8/30/2014 5:09:00 AM
Surr: Dibromofluoromethane	91.1	61.7-130		%REC	1	8/30/2014 5:09:00 AM
Surr: Toluene-d8	100	40.1-139		%REC	1	8/30/2014 5:09:00 AM
Surr: 1-Bromo-4-fluorobenzene	95.9	68.2-127		%REC	1	8/30/2014 5:09:00 AM

NOTES:

* - Flagged value is not within established control limits.

Qualifiers:	B	Analyte detected in the associated Method Blank	D	Dilution was required
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



Analytical Report

WO#: 1408286

Date Reported: 9/8/2014

Client: Alaska Analytical Laboratory

Collection Date: 8/27/2014 2:15:00 PM

Project: Seekins Ford 1197-02

Lab ID: 1408286-004

Matrix: Water

Client Sample ID: MW-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: R16509

Analyst: BC

Dichlorodifluoromethane (CFC-12)	ND	1.00	*	µg/L	1	8/30/2014 5:38:00 AM
Chloromethane	ND	1.00		µg/L	1	8/30/2014 5:38:00 AM
Vinyl chloride	ND	0.200		µg/L	1	8/30/2014 5:38:00 AM
Bromomethane	ND	1.00		µg/L	1	8/30/2014 5:38:00 AM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	8/30/2014 5:38:00 AM
Chloroethane	ND	1.00		µg/L	1	8/30/2014 5:38:00 AM
1,1-Dichloroethene	ND	1.00		µg/L	1	8/30/2014 5:38:00 AM
Methylene chloride	ND	1.00		µg/L	1	8/30/2014 5:38:00 AM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	8/30/2014 5:38:00 AM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	8/30/2014 5:38:00 AM
1,1-Dichloroethane	ND	1.00		µg/L	1	8/30/2014 5:38:00 AM
2,2-Dichloropropane	ND	2.00		µg/L	1	8/30/2014 5:38:00 AM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	8/30/2014 5:38:00 AM
Chloroform	ND	1.00		µg/L	1	8/30/2014 5:38:00 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	8/30/2014 5:38:00 AM
1,1-Dichloropropene	ND	1.00		µg/L	1	8/30/2014 5:38:00 AM
Carbon tetrachloride	ND	1.00		µg/L	1	8/30/2014 5:38:00 AM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	8/30/2014 5:38:00 AM
Benzene	ND	1.00		µg/L	1	8/30/2014 5:38:00 AM
Trichloroethene (TCE)	ND	0.500		µg/L	1	8/30/2014 5:38:00 AM
1,2-Dichloropropane	ND	1.00		µg/L	1	8/30/2014 5:38:00 AM
Bromodichloromethane	ND	1.00		µg/L	1	8/30/2014 5:38:00 AM
Dibromomethane	ND	1.00		µg/L	1	8/30/2014 5:38:00 AM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	8/30/2014 5:38:00 AM
Toluene	ND	1.00		µg/L	1	9/5/2014 5:09:00 PM
trans-1,3-Dichloropropene	ND	1.00		µg/L	1	8/30/2014 5:38:00 AM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	8/30/2014 5:38:00 AM
1,3-Dichloropropane	ND	1.00		µg/L	1	8/30/2014 5:38:00 AM
Tetrachloroethene (PCE)	1.39	1.00		µg/L	1	8/30/2014 5:38:00 AM
Dibromochloromethane	ND	1.00		µg/L	1	8/30/2014 5:38:00 AM
1,2-Dibromoethane (EDB)	ND	0.0600		µg/L	1	8/30/2014 5:38:00 AM
Chlorobenzene	ND	1.00		µg/L	1	8/30/2014 5:38:00 AM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	8/30/2014 5:38:00 AM
Ethylbenzene	ND	1.00		µg/L	1	9/5/2014 5:09:00 PM
m,p-Xylene	ND	1.00		µg/L	1	9/5/2014 5:09:00 PM

Qualifiers: B Analyte detected in the associated Method Blank
 E Value above quantitation range
 J Analyte detected below quantitation limits
 RL Reporting Limit

D Dilution was required
 H Holding times for preparation or analysis exceeded
 ND Not detected at the Reporting Limit
 S Spike recovery outside accepted recovery limits



Analytical Report

WO#: 1408286

Date Reported: 9/8/2014

Client: Alaska Analytical Laboratory

Collection Date: 8/27/2014 2:15:00 PM

Project: Seekins Ford 1197-02

Lab ID: 1408286-004

Matrix: Water

Client Sample ID: MW-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: R16509

Analyst: BC

o-Xylene	ND	1.00		µg/L	1	9/5/2014 5:09:00 PM
Styrene	ND	1.00		µg/L	1	8/30/2014 5:38:00 AM
Isopropylbenzene	ND	1.00		µg/L	1	8/30/2014 5:38:00 AM
Bromoform	ND	1.00		µg/L	1	8/30/2014 5:38:00 AM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	8/30/2014 5:38:00 AM
n-Propylbenzene	ND	1.00		µg/L	1	8/30/2014 5:38:00 AM
Bromobenzene	ND	1.00		µg/L	1	8/30/2014 5:38:00 AM
1,3,5-Trimethylbenzene	1.37	1.00		µg/L	1	8/30/2014 5:38:00 AM
2-Chlorotoluene	ND	1.00		µg/L	1	8/30/2014 5:38:00 AM
4-Chlorotoluene	ND	1.00		µg/L	1	8/30/2014 5:38:00 AM
tert-Butylbenzene	ND	1.00		µg/L	1	8/30/2014 5:38:00 AM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	8/30/2014 5:38:00 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	8/30/2014 5:38:00 AM
sec-Butylbenzene	ND	1.00		µg/L	1	8/30/2014 5:38:00 AM
4-Isopropyltoluene	4.47	1.00		µg/L	1	8/30/2014 5:38:00 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	8/30/2014 5:38:00 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	8/30/2014 5:38:00 AM
n-Butylbenzene	1.32	1.00		µg/L	1	8/30/2014 5:38:00 AM
1,2-Dichlorobenzene	7.87	1.00		µg/L	1	8/30/2014 5:38:00 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	8/30/2014 5:38:00 AM
1,2,4-Trimethylbenzene	3.25	1.00		µg/L	1	8/30/2014 5:38:00 AM
Hexachlorobutadiene	ND	4.00		µg/L	1	8/30/2014 5:38:00 AM
Naphthalene	2.78	1.00		µg/L	1	8/30/2014 5:38:00 AM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	8/30/2014 5:38:00 AM
Surr: Dibromofluoromethane	96.1	61.7-130		%REC	1	8/30/2014 5:38:00 AM
Surr: Toluene-d8	94.2	40.1-139		%REC	1	8/30/2014 5:38:00 AM
Surr: 1-Bromo-4-fluorobenzene	96.8	68.2-127		%REC	1	8/30/2014 5:38:00 AM

NOTES:

* - Flagged value is not within established control limits.

Qualifiers:	B	Analyte detected in the associated Method Blank	D	Dilution was required
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



Analytical Report

WO#: 1408286

Date Reported: 9/8/2014

Client: Alaska Analytical Laboratory

Collection Date: 8/27/2014 3:30:00 PM

Project: Seekins Ford 1197-02

Lab ID: 1408286-005

Matrix: Water

Client Sample ID: MW-7

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: R16509

Analyst: BC

Dichlorodifluoromethane (CFC-12)	ND	1.00	*	µg/L	1	8/30/2014 6:08:00 AM
Chloromethane	ND	1.00		µg/L	1	8/30/2014 6:08:00 AM
Vinyl chloride	ND	0.200		µg/L	1	8/30/2014 6:08:00 AM
Bromomethane	ND	1.00		µg/L	1	8/30/2014 6:08:00 AM
Trichlorofluoromethane (CFC-11)	11.3	1.00		µg/L	1	8/30/2014 6:08:00 AM
Chloroethane	ND	1.00		µg/L	1	8/30/2014 6:08:00 AM
1,1-Dichloroethene	ND	1.00		µg/L	1	8/30/2014 6:08:00 AM
Methylene chloride	ND	1.00		µg/L	1	8/30/2014 6:08:00 AM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	8/30/2014 6:08:00 AM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	8/30/2014 6:08:00 AM
1,1-Dichloroethane	ND	1.00		µg/L	1	8/30/2014 6:08:00 AM
2,2-Dichloropropane	ND	2.00		µg/L	1	8/30/2014 6:08:00 AM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	8/30/2014 6:08:00 AM
Chloroform	ND	1.00		µg/L	1	8/30/2014 6:08:00 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	8/30/2014 6:08:00 AM
1,1-Dichloropropene	ND	1.00		µg/L	1	8/30/2014 6:08:00 AM
Carbon tetrachloride	ND	1.00		µg/L	1	8/30/2014 6:08:00 AM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	8/30/2014 6:08:00 AM
Benzene	ND	1.00		µg/L	1	8/30/2014 6:08:00 AM
Trichloroethene (TCE)	ND	0.500		µg/L	1	8/30/2014 6:08:00 AM
1,2-Dichloropropane	ND	1.00		µg/L	1	8/30/2014 6:08:00 AM
Bromodichloromethane	ND	1.00		µg/L	1	8/30/2014 6:08:00 AM
Dibromomethane	ND	1.00		µg/L	1	8/30/2014 6:08:00 AM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	8/30/2014 6:08:00 AM
Toluene	ND	1.00		µg/L	1	9/5/2014 5:38:00 PM
trans-1,3-Dichloropropene	ND	1.00		µg/L	1	8/30/2014 6:08:00 AM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	8/30/2014 6:08:00 AM
1,3-Dichloropropane	ND	1.00		µg/L	1	8/30/2014 6:08:00 AM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	8/30/2014 6:08:00 AM
Dibromochloromethane	ND	1.00		µg/L	1	8/30/2014 6:08:00 AM
1,2-Dibromoethane (EDB)	ND	0.0600		µg/L	1	8/30/2014 6:08:00 AM
Chlorobenzene	ND	1.00		µg/L	1	8/30/2014 6:08:00 AM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	8/30/2014 6:08:00 AM
Ethylbenzene	ND	1.00		µg/L	1	9/5/2014 5:38:00 PM
m,p-Xylene	ND	1.00		µg/L	1	9/5/2014 5:38:00 PM

Qualifiers: B Analyte detected in the associated Method Blank
 E Value above quantitation range
 J Analyte detected below quantitation limits
 RL Reporting Limit

D Dilution was required
 H Holding times for preparation or analysis exceeded
 ND Not detected at the Reporting Limit
 S Spike recovery outside accepted recovery limits



Analytical Report

WO#: 1408286

Date Reported: 9/8/2014

Client: Alaska Analytical Laboratory

Collection Date: 8/27/2014 3:30:00 PM

Project: Seekins Ford 1197-02

Lab ID: 1408286-005

Matrix: Water

Client Sample ID: MW-7

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: R16509

Analyst: BC

o-Xylene	ND	1.00		µg/L	1	9/5/2014 5:38:00 PM
Styrene	ND	1.00		µg/L	1	8/30/2014 6:08:00 AM
Isopropylbenzene	ND	1.00		µg/L	1	8/30/2014 6:08:00 AM
Bromoform	ND	1.00		µg/L	1	8/30/2014 6:08:00 AM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	8/30/2014 6:08:00 AM
n-Propylbenzene	ND	1.00		µg/L	1	9/5/2014 5:38:00 PM
Bromobenzene	ND	1.00		µg/L	1	8/30/2014 6:08:00 AM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	9/5/2014 5:38:00 PM
2-Chlorotoluene	ND	1.00		µg/L	1	8/30/2014 6:08:00 AM
4-Chlorotoluene	ND	1.00		µg/L	1	8/30/2014 6:08:00 AM
tert-Butylbenzene	ND	1.00		µg/L	1	8/30/2014 6:08:00 AM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	8/30/2014 6:08:00 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	8/30/2014 6:08:00 AM
sec-Butylbenzene	ND	1.00		µg/L	1	8/30/2014 6:08:00 AM
4-Isopropyltoluene	ND	1.00		µg/L	1	8/30/2014 6:08:00 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	8/30/2014 6:08:00 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	8/30/2014 6:08:00 AM
n-Butylbenzene	ND	1.00		µg/L	1	8/30/2014 6:08:00 AM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	9/5/2014 5:38:00 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	8/30/2014 6:08:00 AM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	9/5/2014 5:38:00 PM
Hexachlorobutadiene	ND	4.00		µg/L	1	8/30/2014 6:08:00 AM
Naphthalene	ND	1.00		µg/L	1	8/30/2014 6:08:00 AM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	8/30/2014 6:08:00 AM
Surr: Dibromofluoromethane	94.0	61.7-130		%REC	1	8/30/2014 6:08:00 AM
Surr: Toluene-d8	97.1	40.1-139		%REC	1	8/30/2014 6:08:00 AM
Surr: 1-Bromo-4-fluorobenzene	95.5	68.2-127		%REC	1	8/30/2014 6:08:00 AM

NOTES:

* - Flagged value is not within established control limits.

Qualifiers:	B	Analyte detected in the associated Method Blank	D	Dilution was required
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



Analytical Report

WO#: 1408286

Date Reported: 9/8/2014

Client: Alaska Analytical Laboratory

Collection Date: 8/27/2014 4:30:00 PM

Project: Seekins Ford 1197-02

Lab ID: 1408286-006

Matrix: Water

Client Sample ID: MW-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: R16509

Analyst: BC

Dichlorodifluoromethane (CFC-12)	ND	1.00	*	µg/L	1	8/30/2014 6:37:00 AM
Chloromethane	ND	1.00		µg/L	1	8/30/2014 6:37:00 AM
Vinyl chloride	ND	0.200		µg/L	1	8/30/2014 6:37:00 AM
Bromomethane	ND	1.00		µg/L	1	8/30/2014 6:37:00 AM
Trichlorofluoromethane (CFC-11)	8.13	1.00		µg/L	1	8/30/2014 6:37:00 AM
Chloroethane	ND	1.00		µg/L	1	8/30/2014 6:37:00 AM
1,1-Dichloroethene	ND	1.00		µg/L	1	8/30/2014 6:37:00 AM
Methylene chloride	ND	1.00		µg/L	1	8/30/2014 6:37:00 AM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	8/30/2014 6:37:00 AM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	8/30/2014 6:37:00 AM
1,1-Dichloroethane	ND	1.00		µg/L	1	8/30/2014 6:37:00 AM
2,2-Dichloropropane	ND	2.00		µg/L	1	8/30/2014 6:37:00 AM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	8/30/2014 6:37:00 AM
Chloroform	ND	1.00		µg/L	1	8/30/2014 6:37:00 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	8/30/2014 6:37:00 AM
1,1-Dichloropropene	ND	1.00		µg/L	1	8/30/2014 6:37:00 AM
Carbon tetrachloride	ND	1.00		µg/L	1	8/30/2014 6:37:00 AM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	8/30/2014 6:37:00 AM
Benzene	ND	1.00		µg/L	1	8/30/2014 6:37:00 AM
Trichloroethene (TCE)	ND	0.500		µg/L	1	8/30/2014 6:37:00 AM
1,2-Dichloropropane	ND	1.00		µg/L	1	8/30/2014 6:37:00 AM
Bromodichloromethane	ND	1.00		µg/L	1	8/30/2014 6:37:00 AM
Dibromomethane	ND	1.00		µg/L	1	8/30/2014 6:37:00 AM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	8/30/2014 6:37:00 AM
Toluene	ND	1.00		µg/L	1	9/5/2014 6:06:00 PM
trans-1,3-Dichloropropene	ND	1.00		µg/L	1	8/30/2014 6:37:00 AM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	8/30/2014 6:37:00 AM
1,3-Dichloropropane	ND	1.00		µg/L	1	8/30/2014 6:37:00 AM
Tetrachloroethene (PCE)	2.31	1.00		µg/L	1	8/30/2014 6:37:00 AM
Dibromochloromethane	ND	1.00		µg/L	1	8/30/2014 6:37:00 AM
1,2-Dibromoethane (EDB)	ND	0.0600		µg/L	1	8/30/2014 6:37:00 AM
Chlorobenzene	ND	1.00		µg/L	1	8/30/2014 6:37:00 AM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	8/30/2014 6:37:00 AM
Ethylbenzene	ND	1.00		µg/L	1	9/5/2014 6:06:00 PM
m,p-Xylene	ND	1.00		µg/L	1	9/5/2014 6:06:00 PM

Qualifiers: B Analyte detected in the associated Method Blank
 E Value above quantitation range
 J Analyte detected below quantitation limits
 RL Reporting Limit

D Dilution was required
 H Holding times for preparation or analysis exceeded
 ND Not detected at the Reporting Limit
 S Spike recovery outside accepted recovery limits



Analytical Report

WO#: 1408286

Date Reported: 9/8/2014

Client: Alaska Analytical Laboratory

Collection Date: 8/27/2014 4:30:00 PM

Project: Seekins Ford 1197-02

Lab ID: 1408286-006

Matrix: Water

Client Sample ID: MW-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: R16509

Analyst: BC

o-Xylene	ND	1.00		µg/L	1	9/5/2014 6:06:00 PM
Styrene	ND	1.00		µg/L	1	8/30/2014 6:37:00 AM
Isopropylbenzene	ND	1.00		µg/L	1	8/30/2014 6:37:00 AM
Bromoform	ND	1.00		µg/L	1	8/30/2014 6:37:00 AM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	8/30/2014 6:37:00 AM
n-Propylbenzene	ND	1.00		µg/L	1	8/30/2014 6:37:00 AM
Bromobenzene	ND	1.00		µg/L	1	8/30/2014 6:37:00 AM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	8/30/2014 6:37:00 AM
2-Chlorotoluene	ND	1.00		µg/L	1	8/30/2014 6:37:00 AM
4-Chlorotoluene	ND	1.00		µg/L	1	8/30/2014 6:37:00 AM
tert-Butylbenzene	ND	1.00		µg/L	1	8/30/2014 6:37:00 AM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	8/30/2014 6:37:00 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	8/30/2014 6:37:00 AM
sec-Butylbenzene	ND	1.00		µg/L	1	8/30/2014 6:37:00 AM
4-Isopropyltoluene	ND	1.00		µg/L	1	8/30/2014 6:37:00 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	8/30/2014 6:37:00 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	8/30/2014 6:37:00 AM
n-Butylbenzene	ND	1.00		µg/L	1	8/30/2014 6:37:00 AM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	8/30/2014 6:37:00 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	8/30/2014 6:37:00 AM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	9/5/2014 6:06:00 PM
Hexachlorobutadiene	ND	4.00		µg/L	1	8/30/2014 6:37:00 AM
Naphthalene	ND	1.00		µg/L	1	8/30/2014 6:37:00 AM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	8/30/2014 6:37:00 AM
Surr: Dibromofluoromethane	95.0	61.7-130		%REC	1	8/30/2014 6:37:00 AM
Surr: Toluene-d8	93.5	40.1-139		%REC	1	8/30/2014 6:37:00 AM
Surr: 1-Bromo-4-fluorobenzene	93.6	68.2-127		%REC	1	8/30/2014 6:37:00 AM

NOTES:

* - Flagged value is not within established control limits.

Qualifiers:	B	Analyte detected in the associated Method Blank	D	Dilution was required
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits



Analytical Report

WO#: 1408286

Date Reported: 9/8/2014

Client: Alaska Analytical Laboratory

Collection Date: 8/27/2014 5:00:00 PM

Project: Seekins Ford 1197-02

Lab ID: 1408286-007

Matrix: Water

Client Sample ID: Trip Blank - 8260

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: R16509

Analyst: BC

Dichlorodifluoromethane (CFC-12)	ND	1.00	*	µg/L	1	8/30/2014 1:43:00 AM
Chloromethane	ND	1.00		µg/L	1	8/30/2014 1:43:00 AM
Vinyl chloride	ND	0.200		µg/L	1	8/30/2014 1:43:00 AM
Bromomethane	ND	1.00		µg/L	1	8/30/2014 1:43:00 AM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	8/30/2014 1:43:00 AM
Chloroethane	ND	1.00		µg/L	1	8/30/2014 1:43:00 AM
1,1-Dichloroethene	ND	1.00		µg/L	1	8/30/2014 1:43:00 AM
Methylene chloride	ND	1.00		µg/L	1	8/30/2014 1:43:00 AM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	8/30/2014 1:43:00 AM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	8/30/2014 1:43:00 AM
1,1-Dichloroethane	ND	1.00		µg/L	1	8/30/2014 1:43:00 AM
2,2-Dichloropropane	ND	2.00		µg/L	1	8/30/2014 1:43:00 AM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	8/30/2014 1:43:00 AM
Chloroform	ND	1.00		µg/L	1	8/30/2014 1:43:00 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	8/30/2014 1:43:00 AM
1,1-Dichloropropene	ND	1.00		µg/L	1	8/30/2014 1:43:00 AM
Carbon tetrachloride	ND	1.00		µg/L	1	8/30/2014 1:43:00 AM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	8/30/2014 1:43:00 AM
Benzene	ND	1.00		µg/L	1	8/30/2014 1:43:00 AM
Trichloroethene (TCE)	ND	0.500		µg/L	1	8/30/2014 1:43:00 AM
1,2-Dichloropropane	ND	1.00		µg/L	1	8/30/2014 1:43:00 AM
Bromodichloromethane	ND	1.00		µg/L	1	8/30/2014 1:43:00 AM
Dibromomethane	ND	1.00		µg/L	1	8/30/2014 1:43:00 AM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	8/30/2014 1:43:00 AM
Toluene	ND	1.00		µg/L	1	8/30/2014 1:43:00 AM
trans-1,3-Dichloropropene	ND	1.00		µg/L	1	8/30/2014 1:43:00 AM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	8/30/2014 1:43:00 AM
1,3-Dichloropropane	ND	1.00		µg/L	1	8/30/2014 1:43:00 AM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	8/30/2014 1:43:00 AM
Dibromochloromethane	ND	1.00		µg/L	1	8/30/2014 1:43:00 AM
1,2-Dibromoethane (EDB)	ND	0.0600		µg/L	1	8/30/2014 1:43:00 AM
Chlorobenzene	ND	1.00		µg/L	1	8/30/2014 1:43:00 AM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	8/30/2014 1:43:00 AM
Ethylbenzene	ND	1.00		µg/L	1	8/30/2014 1:43:00 AM
m,p-Xylene	ND	1.00		µg/L	1	8/30/2014 1:43:00 AM

Qualifiers: B Analyte detected in the associated Method Blank
 E Value above quantitation range
 J Analyte detected below quantitation limits
 RL Reporting Limit

D Dilution was required
 H Holding times for preparation or analysis exceeded
 ND Not detected at the Reporting Limit
 S Spike recovery outside accepted recovery limits



Analytical Report

WO#: 1408286

Date Reported: 9/8/2014

Client: Alaska Analytical Laboratory

Collection Date: 8/27/2014 5:00:00 PM

Project: Seekins Ford 1197-02

Lab ID: 1408286-007

Matrix: Water

Client Sample ID: Trip Blank - 8260

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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Volatile Organic Compounds by EPA Method 8260

Batch ID: R16509

Analyst: BC

o-Xylene	ND	1.00		µg/L	1	8/30/2014 1:43:00 AM
Styrene	ND	1.00		µg/L	1	8/30/2014 1:43:00 AM
Isopropylbenzene	ND	1.00		µg/L	1	8/30/2014 1:43:00 AM
Bromoform	ND	1.00		µg/L	1	8/30/2014 1:43:00 AM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	8/30/2014 1:43:00 AM
n-Propylbenzene	ND	1.00		µg/L	1	8/30/2014 1:43:00 AM
Bromobenzene	ND	1.00		µg/L	1	8/30/2014 1:43:00 AM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	8/30/2014 1:43:00 AM
2-Chlorotoluene	ND	1.00		µg/L	1	8/30/2014 1:43:00 AM
4-Chlorotoluene	ND	1.00		µg/L	1	8/30/2014 1:43:00 AM
tert-Butylbenzene	ND	1.00		µg/L	1	8/30/2014 1:43:00 AM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	8/30/2014 1:43:00 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	8/30/2014 1:43:00 AM
sec-Butylbenzene	ND	1.00		µg/L	1	8/30/2014 1:43:00 AM
4-Isopropyltoluene	ND	1.00		µg/L	1	8/30/2014 1:43:00 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	8/30/2014 1:43:00 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	8/30/2014 1:43:00 AM
n-Butylbenzene	ND	1.00		µg/L	1	8/30/2014 1:43:00 AM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	8/30/2014 1:43:00 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	8/30/2014 1:43:00 AM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	8/30/2014 1:43:00 AM
Hexachlorobutadiene	ND	4.00		µg/L	1	8/30/2014 1:43:00 AM
Naphthalene	ND	1.00		µg/L	1	8/30/2014 1:43:00 AM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	8/30/2014 1:43:00 AM
Surr: Dibromofluoromethane	95.2	61.7-130		%REC	1	8/30/2014 1:43:00 AM
Surr: Toluene-d8	97.9	40.1-139		%REC	1	8/30/2014 1:43:00 AM
Surr: 1-Bromo-4-fluorobenzene	94.6	68.2-127		%REC	1	8/30/2014 1:43:00 AM

NOTES:

* - Flagged value is not within established control limits.

Qualifiers:	B	Analyte detected in the associated Method Blank	D	Dilution was required
	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Work Order: 1408286
CLIENT: Alaska Analytical Laboratory
Project: Seekins Ford 1197-02

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260

Sample ID: 1408286-001ADUP	SampType: DUP	Units: µg/L	Prep Date: 8/30/2014	RunNo: 16509							
Client ID: MW-1	Batch ID: R16509		Analysis Date: 8/30/2014	SeqNo: 332126							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	1.00						0		30	*
Chloromethane	ND	1.00						0		30	
Vinyl chloride	ND	0.200						0		30	
Bromomethane	ND	1.00						0		30	
Trichlorofluoromethane (CFC-11)	2.82	1.00						2.908	3.13	30	
Chloroethane	ND	1.00						0		30	
1,1-Dichloroethene	ND	1.00						0		30	
Methylene chloride	ND	1.00						0		30	
trans-1,2-Dichloroethene	ND	1.00						0		30	
Methyl tert-butyl ether (MTBE)	ND	1.00						0		30	
1,1-Dichloroethane	ND	1.00						0		30	
2,2-Dichloropropane	ND	2.00						0		30	
cis-1,2-Dichloroethene	ND	1.00						0		30	
Chloroform	ND	1.00						0		30	
1,1,1-Trichloroethane (TCA)	ND	1.00						0		30	
1,1-Dichloropropene	ND	1.00						0		30	
Carbon tetrachloride	ND	1.00						0		30	
1,2-Dichloroethane (EDC)	ND	1.00						0		30	
Benzene	1.77	1.00						1.648	6.98	30	
Trichloroethene (TCE)	ND	0.500						0		30	
1,2-Dichloropropane	ND	1.00						0		30	
Bromodichloromethane	ND	1.00						0		30	
Dibromomethane	ND	1.00						0		30	
cis-1,3-Dichloropropene	ND	1.00						0		30	
Toluene	448	1.00						480.9	7.16	30	E
trans-1,3-Dichloropropene	ND	1.00						0		30	
1,1,2-Trichloroethane	ND	1.00						0		30	
1,3-Dichloropropane	ND	1.00						0		30	
Tetrachloroethene (PCE)	ND	1.00						0		30	

Qualifiers: B Analyte detected in the associated Method Blank D Dilution was required E Value above quantitation range
H Holding times for preparation or analysis exceeded J Analyte detected below quantitation limits ND Not detected at the Reporting Limit
R RPD outside accepted recovery limits RL Reporting Limit S Spike recovery outside accepted recovery limits

Work Order: 1408286
CLIENT: Alaska Analytical Laboratory
Project: Seekins Ford 1197-02

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260

Sample ID: 1408286-001ADUP	SampType: DUP	Units: µg/L	Prep Date: 8/30/2014	RunNo: 16509
Client ID: MW-1	Batch ID: R16509		Analysis Date: 8/30/2014	SeqNo: 332126

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dibromochloromethane	ND	1.00						0		30	
1,2-Dibromoethane (EDB)	ND	0.0600						0		30	
Chlorobenzene	ND	1.00						0		30	
1,1,1,2-Tetrachloroethane	ND	1.00						0		30	
Ethylbenzene	448	1.00						503.6	11.7	30	E
m,p-Xylene	1,680	1.00						1,902	12.6	30	E
o-Xylene	1,320	1.00						1,481	11.5	30	E
Styrene	ND	1.00						0		30	
Isopropylbenzene	50.5	1.00						52.68	4.31	30	E
Bromoform	ND	1.00						0		30	
1,1,2,2-Tetrachloroethane	ND	1.00						0		30	
n-Propylbenzene	82.8	1.00						86.47	4.35	30	E
Bromobenzene	ND	1.00						0		30	
1,3,5-Trimethylbenzene	173	1.00						182.4	5.01	30	E
2-Chlorotoluene	ND	1.00						0		30	
4-Chlorotoluene	ND	1.00						0		30	
tert-Butylbenzene	ND	1.00						0		30	
1,2,3-Trichloropropane	ND	1.00						0		30	
1,2,4-Trichlorobenzene	ND	2.00						0		30	
sec-Butylbenzene	5.89	1.00						6.043	2.54	30	
4-Isopropyltoluene	4.72	1.00						5.019	6.03	30	
1,3-Dichlorobenzene	ND	1.00						0		30	
1,4-Dichlorobenzene	ND	1.00						0		30	
n-Butylbenzene	ND	1.00						0		30	
1,2-Dichlorobenzene	ND	1.00						0		30	
1,2-Dibromo-3-chloropropane	ND	1.00						0		30	
1,2,4-Trimethylbenzene	440	1.00						507.2	14.2	30	E
Hexachlorobutadiene	ND	4.00						0		30	
Naphthalene	45.6	1.00						45.64	0.149	30	

Qualifiers: B Analyte detected in the associated Method Blank D Dilution was required E Value above quantitation range
H Holding times for preparation or analysis exceeded J Analyte detected below quantitation limits ND Not detected at the Reporting Limit
R RPD outside accepted recovery limits RL Reporting Limit S Spike recovery outside accepted recovery limits

Work Order: 1408286
CLIENT: Alaska Analytical Laboratory
Project: Seekins Ford 1197-02

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260

Sample ID: 1408286-001ADUP	SampType: DUP	Units: µg/L	Prep Date: 8/30/2014	RunNo: 16509							
Client ID: MW-1	Batch ID: R16509		Analysis Date: 8/30/2014	SeqNo: 332126							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,2,3-Trichlorobenzene	ND	4.00						0		30	
Surr: Dibromofluoromethane	45.8		50.00		91.6	61.7	130		0		
Surr: Toluene-d8	52.1		50.00		104	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	50.3		50.00		101	68.2	127		0		

NOTES:

E - Estimated value. The amount exceeds the linear working range of the instrument.

* - Flagged value is not within established control limits.

Sample ID: 1408286-002AMS	SampType: MS	Units: µg/L	Prep Date: 8/30/2014	RunNo: 16509							
Client ID: MW-8	Batch ID: R16509		Analysis Date: 8/30/2014	SeqNo: 332127							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Dichlorodifluoromethane (CFC-12)	8.59	1.00	20.00	0	43.0	33.3	122				*
Chloromethane	14.6	1.00	20.00	0	73.2	48.2	145				
Vinyl chloride	12.8	0.200	20.00	0	63.8	58.1	158				
Bromomethane	18.9	1.00	20.00	0	94.7	31.5	135				
Trichlorofluoromethane (CFC-11)	23.7	1.00	20.00	2.714	105	54.7	138				
Chloroethane	18.2	1.00	20.00	0	91.1	49.9	143				
1,1-Dichloroethene	25.1	1.00	20.00	0	125	63	141				
Methylene chloride	24.2	1.00	20.00	0	121	61.6	135				
trans-1,2-Dichloroethene	19.6	1.00	20.00	0	98.0	63.5	138				
Methyl tert-butyl ether (MTBE)	17.7	1.00	20.00	0	88.4	60.9	132				
1,1-Dichloroethane	18.8	1.00	20.00	0	94.2	67.8	136				
2,2-Dichloropropane	15.5	2.00	20.00	0	77.6	31.5	121				
cis-1,2-Dichloroethene	20.5	1.00	20.00	0	103	67.1	123				
Chloroform	17.9	1.00	20.00	0	89.4	66.7	136				
1,1,1-Trichloroethane (TCA)	18.5	1.00	20.00	0	92.5	64.2	146				
1,1-Dichloropropene	19.5	1.00	20.00	0	97.6	73.8	136				
Carbon tetrachloride	18.8	1.00	20.00	0	93.9	62.7	146				

Qualifiers:	B	Analyte detected in the associated Method Blank	D	Dilution was required	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
	R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Work Order: 1408286
CLIENT: Alaska Analytical Laboratory
Project: Seekins Ford 1197-02

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260

Sample ID: 1408286-002AMS	SampType: MS	Units: µg/L	Prep Date: 8/30/2014	RunNo: 16509
Client ID: MW-8	Batch ID: R16509		Analysis Date: 8/30/2014	SeqNo: 332127

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dichloroethane (EDC)	17.1	1.00	20.00	0	85.7	63.4	137				
Benzene	22.7	1.00	20.00	1.740	105	65.4	138				
Trichloroethene (TCE)	20.2	0.500	20.00	0	101	60.4	134				
1,2-Dichloropropane	23.0	1.00	20.00	1.390	108	62.6	138				
Bromodichloromethane	21.8	1.00	20.00	0.6358	106	59.4	139				
Dibromomethane	20.6	1.00	20.00	0	103	63.6	139				
cis-1,3-Dichloropropene	23.8	1.00	20.00	0	119	63.8	132				
Toluene	445	1.00	20.00	0	2,220	64	139				SE
trans-1,3-Dichloropropene	22.9	1.00	20.00	0	114	57.7	125				
1,1,2-Trichloroethane	24.3	1.00	20.00	0	121	59.4	127				
1,3-Dichloropropane	20.7	1.00	20.00	0	104	64.3	135				
Tetrachloroethene (PCE)	21.9	1.00	20.00	0	109	50.3	133				
Dibromochloromethane	22.4	1.00	20.00	0	112	61.6	139				
1,2-Dibromoethane (EDB)	21.5	0.0600	20.00	0	108	63.2	134				
Chlorobenzene	21.0	1.00	20.00	0	105	65.8	134				
1,1,1,2-Tetrachloroethane	21.4	1.00	20.00	0	107	65.4	135				
Ethylbenzene	423	1.00	20.00	0	2,110	64.5	136				SE
m,p-Xylene	1,580	1.00	40.00	0	3,940	63.3	135				SE
o-Xylene	1,270	1.00	20.00	0	6,330	65.4	134				SE
Styrene	68.4	1.00	20.00	0	342	59.1	134				S
Isopropylbenzene	66.7	1.00	20.00	50.50	81.0	56	147				
Bromoform	20.2	1.00	20.00	0	101	57.7	139				
1,1,2,2-Tetrachloroethane	19.9	1.00	20.00	0	99.7	59.8	146				
n-Propylbenzene	97.1	1.00	20.00	83.07	70.0	57.6	142				
Bromobenzene	21.2	1.00	20.00	0	106	63.6	130				
1,3,5-Trimethylbenzene	182	1.00	20.00	171.6	53.3	59.9	136				SE
2-Chlorotoluene	17.5	1.00	20.00	0	87.3	61.7	134				
4-Chlorotoluene	15.2	1.00	20.00	22.59	-36.8	58.4	134				S
tert-Butylbenzene	23.0	1.00	20.00	1.103	109	66.8	141				

Qualifiers:	B	Analyte detected in the associated Method Blank	D	Dilution was required	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
	R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Work Order: 1408286
CLIENT: Alaska Analytical Laboratory
Project: Seekins Ford 1197-02

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260

Sample ID: 1408286-002AMS	SampType: MS	Units: µg/L	Prep Date: 8/30/2014	RunNo: 16509
Client ID: MW-8	Batch ID: R16509		Analysis Date: 8/30/2014	SeqNo: 332127

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,3-Trichloropropane	17.5	1.00	20.00	0	87.4	62.4	129				
1,2,4-Trichlorobenzene	23.3	2.00	20.00	0	116	50.9	133				
sec-Butylbenzene	27.3	1.00	20.00	6.034	106	56	146				
4-Isopropyltoluene	25.3	1.00	20.00	4.793	102	56.4	136				
1,3-Dichlorobenzene	21.8	1.00	20.00	0	109	58.2	128				
1,4-Dichlorobenzene	21.5	1.00	20.00	0	107	60.1	123				
n-Butylbenzene	31.8	1.00	20.00	0	159	54.6	135				S
1,2-Dichlorobenzene	22.4	1.00	20.00	0	112	65.4	133				
1,2-Dibromo-3-chloropropane	19.5	1.00	20.00	0	97.6	51.8	142				
1,2,4-Trimethylbenzene	423	1.00	20.00	0	2,120	63.7	132				S
Hexachlorobutadiene	18.8	4.00	20.00	0	93.9	58.1	130				
Naphthalene	60.3	1.00	20.00	46.98	66.7	54.5	132				
1,2,3-Trichlorobenzene	21.5	4.00	20.00	0	107	57	131				
Surr: Dibromofluoromethane	45.9		50.00		91.8	61.7	130				
Surr: Toluene-d8	53.8		50.00		108	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	49.6		50.00		99.1	68.2	127				

NOTES:

- E - Estimated value. The amount exceeds the linear working range of the instrument.
- S - Outlying QC recoveries were observed. The method is in control as indicated by the LCS.
- * - Flagged value is not within established control limits.

Sample ID: LCS-R16509	SampType: LCS	Units: µg/L	Prep Date: 8/30/2014	RunNo: 16509
Client ID: LCSW	Batch ID: R16509		Analysis Date: 8/30/2014	SeqNo: 332135

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	7.65	1.00	20.00	0	38.3	43	136				S
Chloromethane	11.9	1.00	20.00	0	59.7	43.9	139				
Vinyl chloride	14.6	0.200	20.00	0	73.1	53.6	139				
Bromomethane	18.0	1.00	20.00	0	90.1	44.8	148				

Qualifiers:	B Analyte detected in the associated Method Blank	D Dilution was required	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	ND Not detected at the Reporting Limit
	R RPD outside accepted recovery limits	RL Reporting Limit	S Spike recovery outside accepted recovery limits

Work Order: 1408286
CLIENT: Alaska Analytical Laboratory
Project: Seekins Ford 1197-02

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260

Sample ID: LCS-R16509	SampType: LCS	Units: µg/L	Prep Date: 8/30/2014	RunNo: 16509
Client ID: LCSW	Batch ID: R16509		Analysis Date: 8/30/2014	SeqNo: 332135

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Trichlorofluoromethane (CFC-11)	22.1	1.00	20.00	0	111	63.7	133				
Chloroethane	20.4	1.00	20.00	0	102	53	141				
1,1-Dichloroethene	22.1	1.00	20.00	0	111	65.6	136				
Methylene chloride	22.5	1.00	20.00	0	113	67.1	131				
trans-1,2-Dichloroethene	18.4	1.00	20.00	0	91.8	71.7	129				
Methyl tert-butyl ether (MTBE)	17.6	1.00	20.00	0	87.9	67.7	131				
1,1-Dichloroethane	18.8	1.00	20.00	0	94.0	67.9	134				
2,2-Dichloropropane	17.7	2.00	20.00	0	88.7	33.7	152				
cis-1,2-Dichloroethene	18.9	1.00	20.00	0	94.4	71.1	130				
Chloroform	18.7	1.00	20.00	0	93.3	76.7	124				
1,1,1-Trichloroethane (TCA)	18.9	1.00	20.00	0	94.5	71	131				
1,1-Dichloropropene	19.0	1.00	20.00	0	94.9	74.5	126				
Carbon tetrachloride	19.7	1.00	20.00	0	98.3	66.2	134				
1,2-Dichloroethane (EDC)	18.0	1.00	20.00	0	89.9	70	129				
Benzene	19.4	1.00	20.00	0	97.1	73.1	126				
Trichloroethene (TCE)	17.4	0.500	20.00	0	86.9	65.2	136				
1,2-Dichloropropane	19.0	1.00	20.00	0	94.8	70.5	130				
Bromodichloromethane	20.3	1.00	20.00	0	102	74.6	127				
Dibromomethane	19.4	1.00	20.00	0	96.8	75.5	126				
cis-1,3-Dichloropropene	20.6	1.00	20.00	0	103	62.6	137				
Toluene	19.1	1.00	20.00	0	95.7	61.3	145				
trans-1,3-Dichloropropene	20.6	1.00	20.00	0	103	58.5	142				
1,1,2-Trichloroethane	18.8	1.00	20.00	0	93.9	76	124				
1,3-Dichloropropane	18.6	1.00	20.00	0	93.1	73.5	127				
Tetrachloroethene (PCE)	18.2	1.00	20.00	0	91.2	47.5	147				
Dibromochloromethane	21.4	1.00	20.00	0	107	67.2	134				
1,2-Dibromoethane (EDB)	19.6	0.0600	20.00	0	98.2	73.6	125				
Chlorobenzene	19.9	1.00	20.00	0	99.6	73.9	126				
1,1,1,2-Tetrachloroethane	21.3	1.00	20.00	0	107	76.8	124				

Qualifiers:	B Analyte detected in the associated Method Blank	D Dilution was required	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	ND Not detected at the Reporting Limit
	R RPD outside accepted recovery limits	RL Reporting Limit	S Spike recovery outside accepted recovery limits

Work Order: 1408286
CLIENT: Alaska Analytical Laboratory
Project: Seekins Ford 1197-02

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260

Sample ID: LCS-R16509	SampType: LCS	Units: µg/L	Prep Date: 8/30/2014	RunNo: 16509
Client ID: LCSW	Batch ID: R16509		Analysis Date: 8/30/2014	SeqNo: 332135

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ethylbenzene	19.3	1.00	20.00	0	96.6	72	130				
m,p-Xylene	39.2	1.00	40.00	0	98.1	73	131				
o-Xylene	19.9	1.00	20.00	0	99.5	72.1	131				
Styrene	20.1	1.00	20.00	0	100	64.3	140				
Isopropylbenzene	20.6	1.00	20.00	0	103	73.9	128				
Bromoform	22.7	1.00	20.00	0	113	63.8	135				
1,1,2,2-Tetrachloroethane	20.3	1.00	20.00	0	101	62.9	132				
n-Propylbenzene	19.9	1.00	20.00	0	99.3	74.5	127				
Bromobenzene	20.1	1.00	20.00	0	101	71	131				
1,3,5-Trimethylbenzene	19.7	1.00	20.00	0	98.7	73.1	128				
2-Chlorotoluene	19.5	1.00	20.00	0	97.7	70.8	130				
4-Chlorotoluene	18.9	1.00	20.00	0	94.7	70.1	131				
tert-Butylbenzene	20.5	1.00	20.00	0	102	68.2	131				
1,2,3-Trichloropropane	19.2	1.00	20.00	0	96.2	67.7	131				
1,2,4-Trichlorobenzene	19.9	2.00	20.00	0	99.7	72.4	127				
sec-Butylbenzene	20.2	1.00	20.00	0	101	72	129				
4-Isopropyltoluene	19.6	1.00	20.00	0	97.9	69.2	130				
1,3-Dichlorobenzene	20.3	1.00	20.00	0	101	72.4	129				
1,4-Dichlorobenzene	19.9	1.00	20.00	0	99.4	70.6	128				
n-Butylbenzene	19.3	1.00	20.00	0	96.3	73.8	127				
1,2-Dichlorobenzene	20.2	1.00	20.00	0	101	74.2	129				
1,2-Dibromo-3-chloropropane	21.9	1.00	20.00	0	110	63.1	136				
1,2,4-Trimethylbenzene	19.3	1.00	20.00	0	96.7	73.4	127				
Hexachlorobutadiene	18.9	4.00	20.00	0	94.3	58.6	138				
Naphthalene	20.0	1.00	20.00	0	99.9	62	136				
1,2,3-Trichlorobenzene	20.2	4.00	20.00	0	101	66.4	132				
Surr: Dibromofluoromethane	49.9		50.00		99.8	61.7	130				
Surr: Toluene-d8	49.0		50.00		97.9	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	50.7		50.00		101	68.2	127				

Qualifiers:	B Analyte detected in the associated Method Blank	D Dilution was required	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	ND Not detected at the Reporting Limit
	R RPD outside accepted recovery limits	RL Reporting Limit	S Spike recovery outside accepted recovery limits

Work Order: 1408286
CLIENT: Alaska Analytical Laboratory
Project: Seekins Ford 1197-02

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260

Sample ID: LCS-R16509	SampType: LCS	Units: µg/L	Prep Date: 8/30/2014	RunNo: 16509							
Client ID: LCSW	Batch ID: R16509		Analysis Date: 8/30/2014	SeqNo: 332135							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

NOTES:

S - Outlying QC recoveries were observed (Dichlorodifluoromethane; low bias). The following samples will be qualified with an *.

Sample ID: MB-R16509	SampType: MBLK	Units: µg/L	Prep Date: 8/29/2014	RunNo: 16509							
Client ID: MBLKW	Batch ID: R16509		Analysis Date: 8/29/2014	SeqNo: 332136							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Dichlorodifluoromethane (CFC-12)	ND	1.00									*
Chloromethane	ND	1.00									
Vinyl chloride	ND	0.200									
Bromomethane	ND	1.00									
Trichlorofluoromethane (CFC-11)	ND	1.00									
Chloroethane	ND	1.00									
1,1-Dichloroethene	ND	1.00									
Methylene chloride	ND	1.00									
trans-1,2-Dichloroethene	ND	1.00									
Methyl tert-butyl ether (MTBE)	ND	1.00									
1,1-Dichloroethane	ND	1.00									
2,2-Dichloropropane	ND	2.00									
cis-1,2-Dichloroethene	ND	1.00									
Chloroform	ND	1.00									
1,1,1-Trichloroethane (TCA)	ND	1.00									
1,1-Dichloropropene	ND	1.00									
Carbon tetrachloride	ND	1.00									
1,2-Dichloroethane (EDC)	ND	1.00									
Benzene	ND	1.00									
Trichloroethene (TCE)	ND	0.500									
1,2-Dichloropropane	ND	1.00									
Bromodichloromethane	ND	1.00									

Qualifiers:	B	Analyte detected in the associated Method Blank	D	Dilution was required	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
	R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Work Order: 1408286
CLIENT: Alaska Analytical Laboratory
Project: Seekins Ford 1197-02

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260

Sample ID: MB-R16509	SampType: MBLK	Units: µg/L	Prep Date: 8/29/2014	RunNo: 16509							
Client ID: MBLKW	Batch ID: R16509		Analysis Date: 8/29/2014	SeqNo: 332136							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dibromomethane	ND	1.00									
cis-1,3-Dichloropropene	ND	1.00									
Toluene	ND	1.00									
trans-1,3-Dichloropropene	ND	1.00									
1,1,2-Trichloroethane	ND	1.00									
1,3-Dichloropropane	ND	1.00									
Tetrachloroethene (PCE)	ND	1.00									
Dibromochloromethane	ND	1.00									
1,2-Dibromoethane (EDB)	ND	0.0600									
Chlorobenzene	ND	1.00									
1,1,1,2-Tetrachloroethane	ND	1.00									
Ethylbenzene	ND	1.00									
m,p-Xylene	ND	1.00									
o-Xylene	ND	1.00									
Styrene	ND	1.00									
Isopropylbenzene	ND	1.00									
Bromoform	ND	1.00									
1,1,2,2-Tetrachloroethane	ND	1.00									
n-Propylbenzene	ND	1.00									
Bromobenzene	ND	1.00									
1,3,5-Trimethylbenzene	ND	1.00									
2-Chlorotoluene	ND	1.00									
4-Chlorotoluene	ND	1.00									
tert-Butylbenzene	ND	1.00									
1,2,3-Trichloropropane	ND	1.00									
1,2,4-Trichlorobenzene	ND	2.00									
sec-Butylbenzene	ND	1.00									
4-Isopropyltoluene	ND	1.00									
1,3-Dichlorobenzene	ND	1.00									

Qualifiers:	B Analyte detected in the associated Method Blank	D Dilution was required	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits	ND Not detected at the Reporting Limit
	R RPD outside accepted recovery limits	RL Reporting Limit	S Spike recovery outside accepted recovery limits

Work Order: 1408286
CLIENT: Alaska Analytical Laboratory
Project: Seekins Ford 1197-02

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260

Sample ID: MB-R16509	SampType: MBLK	Units: µg/L	Prep Date: 8/29/2014	RunNo: 16509							
Client ID: MBLKW	Batch ID: R16509		Analysis Date: 8/29/2014	SeqNo: 332136							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,4-Dichlorobenzene	ND	1.00									
n-Butylbenzene	ND	1.00									
1,2-Dichlorobenzene	ND	1.00									
1,2-Dibromo-3-chloropropane	ND	1.00									
1,2,4-Trimethylbenzene	ND	1.00									
Hexachlorobutadiene	ND	4.00									
Naphthalene	ND	1.00									
1,2,3-Trichlorobenzene	ND	4.00									
Surr: Dibromofluoromethane	46.3		50.00		92.6	61.7	130				
Surr: Toluene-d8	46.9		50.00		93.7	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	47.1		50.00		94.2	68.2	127				

NOTES:

* - Flagged value is not within established control limits.

Sample ID: CCV-R16509B	SampType: CCV	Units: µg/L	Prep Date: 9/4/2014	RunNo: 16509							
Client ID: CCV	Batch ID: R16509		Analysis Date: 9/4/2014	SeqNo: 333785							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Isopropylbenzene	19.4	1.00	20.00	0	96.8	80	120				
n-Propylbenzene	18.5	1.00	20.00	0	92.7	80	120				
1,3,5-Trimethylbenzene	18.9	1.00	20.00	0	94.6	80	120				
Surr: Dibromofluoromethane	47.3		50.00		94.5	72.1	122				
Surr: Toluene-d8	48.4		50.00		96.9	62.1	129				
Surr: 1-Bromo-4-fluorobenzene	48.5		50.00		97.0	66.8	124				

Qualifiers:	B	Analyte detected in the associated Method Blank	D	Dilution was required	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
	R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Work Order: 1408286
CLIENT: Alaska Analytical Laboratory
Project: Seekins Ford 1197-02

QC SUMMARY REPORT
Volatile Organic Compounds by EPA Method 8260

Sample ID: CCV-R16509C	SampType: CCV	Units: µg/L	Prep Date: 9/5/2014	RunNo: 16509							
Client ID: CCV	Batch ID: R16509		Analysis Date: 9/5/2014	SeqNo: 333862							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Toluene	20.0	1.00	20.00	0	100	80	120				
Ethylbenzene	20.6	1.00	20.00	0	103	80	120				
m,p-Xylene	41.3	1.00	40.00	0	103	80	120				
o-Xylene	21.7	1.00	20.00	0	108	80	120				
1,3,5-Trimethylbenzene	19.6	1.00	20.00	0	98.2	80	120				
1,2-Dichlorobenzene	19.7	1.00	20.00	0	98.5	80	120				
1,2,4-Trimethylbenzene	20.8	1.00	20.00	0	104	80	120				
Surr: Dibromofluoromethane	48.8		50.00		97.6	72.1	122				
Surr: Toluene-d8	47.7		50.00		95.4	62.1	129				
Surr: 1-Bromo-4-fluorobenzene	52.1		50.00		104	66.8	124				

Qualifiers:
B Analyte detected in the associated Method Blank
D Dilution was required
E Value above quantitation range

H Holding times for preparation or analysis exceeded
J Analyte detected below quantitation limits
ND Not detected at the Reporting Limit

R RPD outside accepted recovery limits
RL Reporting Limit
S Spike recovery outside accepted recovery limits

Client Name: AAL	Work Order Number: 1408286
Logged by: Clare Griggs	Date Received: 8/29/2014 12:09:00 PM

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
2. How was the sample delivered? Courier

Log In

3. Coolers are present? Yes No NA
4. Shipping container/cooler in good condition? Yes No
5. Custody seals intact on shipping container/cooler? Yes No Not Required
6. Was an attempt made to cool the samples? Yes No NA
7. Were all coolers received at a temperature of >0°C to 10.0°C Yes No NA
8. Sample(s) in proper container(s)? Yes No
9. Sufficient sample volume for indicated test(s)? Yes No
10. Are samples properly preserved? Yes No
11. Was preservative added to bottles? Yes No NA
12. Is the headspace in the VOA vials? Yes No NA
13. Did all samples containers arrive in good condition(unbroken)? Yes No
14. Does paperwork match bottle labels? Yes No
15. Are matrices correctly identified on Chain of Custody? Yes No
16. Is it clear what analyses were requested? Yes No
17. Were all holding times able to be met? Yes No

Special Handling (if applicable)

18. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: <input style="width: 90%;" type="text"/>	Date: <input style="width: 90%;" type="text"/>
By Whom: <input style="width: 90%;" type="text"/>	Via: <input type="checkbox"/> eMail <input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> In Person
Regarding: <input style="width: 90%;" type="text"/>	
Client Instructions: <input style="width: 90%;" type="text"/>	

19. Additional remarks:

Item Information

Item #	Temp °C	Condition
Cooler	4.8	Good
Sample	2.2	Good
Temp Blank	1.4	Good



CHAIN OF CUSTODY RECORD

Omega COCID 71

Page 1 of 1

ADDRESS

Alaska Analytical Laboratory
 1956 Richardson Highway
 North Pole, Alaska 99705
 TEL: (907) 488-1271
 FAX: (907) 488-0772
 Website: www.alaska-analytical.com

Project: Seekins Ford 1197-02

14082286

SUB CONTRACTOR: Fremont Analytical COMPANY: Fremont Analytical

ADDRESS: 3600 Fremont Ave

CITY, STATE, ZIP: Seattle, WA 98103

PHONE: (206) 352-3790

ACCOUNT #: EMAIL:

SPECIAL INSTRUCTIONS / COMMENTS:
 Please analyze these samples on a standard turnaround. After analysis, the samples do not need to be returned and can be disposed per your standard laboratory practices. Thank you!

ANALYTICAL PARAMETERS

ITEM #	(AHL SAMPLE ID)	Client Sample ID	Bottle Type	MATRIX	DATE COLLECTED	NUMBER OF CONTAINERS	SW680B	SW680B	SW680B	SW680B	SW680B	SW680B	SW680B	SW680B	SW680B	SW680B	SW680B	SW680B	SW680B		
1		1408013-001C	MW-1	Water	8/27/2014 10:45:00 AM	3															
2		1408013-002C	MW-8	Water	8/27/2014 11:00:00 AM	3															
3		1408013-003C	MW-2	Water	8/27/2014 1:10:00 PM	3															
4		1408013-004C	MW-3	Water	8/27/2014 2:15:00 PM	3															
5		1408013-005C	MW-7	Water	8/27/2014 3:30:00 PM	3															
6		1408013-006C	MW-6	Water	8/27/2014 4:30:00 PM	3															
7		1408013-006A	Trip Blank - 8260	Water	8/27/2014 5:00:00 PM	3															

COMMENTS:
 Molecular Preserved Weights
 PROT Sample Solution
 Additional Sample Description
 or
 Please use client ID.

Relinquished By: *Kelsey Sawyer* Date: 8/28/2014 Time: 11:06 AM Received By: *[Signature]* Date: 8/29 Time: 12:00

Relinquished By: Date: Time: Received By: Date: Time:

Relinquished By: Date: Time: Received By: Date: Time:

TAT: Standard RUSH Next BD 2nd BD 3rd BD

Note: RUSH requests will have surcharges!

REPORT TRANSMITTAL DESIRED: HARDCOPY (extra cost) FAX EMAIL ONLINE

FOR LAB USE ONLY: Temp of samples _____ °C Attempt to Cool? _____

Comments: _____

Laboratory Data Review Checklist

Completed by:

Title: Date:

CS Report Name: Report Date:

Consultant Firm:

Laboratory Name: Laboratory Report Number:

ADEC File Number: ADEC RecKey Number:

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:

All samples were transferred from Alaska Analytical in North Pole, Alaska to Fremont Analytical, in Seattle Washington.

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 ($4^{\circ} \pm 2^{\circ} \text{C}$)?
 Yes No NA (Please explain.) Comments:

Upon receipt at Fremont Analytical, the temperature blank for the small cooler was below the acceptable temperature range (1.2°C). Since the temperature was above freezing temperature and samples were reportedly received in good condition, no data were qualified.

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:

Aside from the temperature discrepancy noted above, no other discrepancies were noted upon sample login. Samples were otherwise all received in good condition.

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:

The temperature discrepancy noted above was documented.

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

Comments:

Data quality or usability not affected, see comments above.

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:

c. Were all corrective actions documented?

Yes No NA (Please explain.)

Comments:

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

Comments:

The case narrative only described the laboratory qualifications made to the data based on problems encountered during sample receiving and analysis. Any notable data quality issues mentioned in the Case Narrative are discussed within this ADEC checklist.

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:

No soils.

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:

Analytical sensitivity was evaluated to verify that the PQLs met the applicable cleanup levels. Two analytes, 1, 2, 3-trichloropropane and 1, 2-dibromomethane (EDB), did not meet applicable ADEC groundwater levels listed in 18AAC 75.345. Therefore, results of the aforementioned analytes (all non-detect) in all samples have limited usefulness.

e. Data quality or usability affected?

Comments:

Impact to data is minor as neither of the aforementioned analytes are contaminants of concern for this site.

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:

iii. If above PQL, what samples are affected?

Comments:

Not applicable. No analytes were detected in the method blank sample.

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

No samples were affected as no analytes were detected in the method blank sample.

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

Data quality or usability was not affected, see comments above.

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:

LCS and MS samples were performed for every VOC analytical batch. However, no LCSD or MSD samples were performed for any VOC analytical batch therefore VOC precision was not evaluated.

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

No metals or inorganic analysis requested.

- 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:

See comments below.

- 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:

Precision was not evaluated since no LCSD or MSD sample was analyzed.

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

Comments:

The MS recovery for toluene, ethylbenzene, m,p-xylenes, o-xylene, styrene, 1,3,5-trimethylbenzene, n-butylbenzene, and 1,2,4-trimethylbenzene exceeded the upper control limit for sample MW-8. However, the sample results were larger than the spike concentration, so the recovery criterion was not applicable and no data were qualified. Acceptable LCS recovery indicates that the laboratory was operating within adequate control limits.

The MS recovery for 4-chlorotoluene did not meet the lower control limit for sample MW-8. Consequently, the result of the aforementioned analyte is biased low. Impact to the data is likely minor as this analyte is not a contaminant of concern at this site.

The LCS recovery for dichlorodifluoromethane did not meet the lower acceptance limit. Consequently, the dichlorodifluoromethane results (all non-detect) are qualified low. Impact to data is minor as historically dichlorodifluoromethane has not been detected in wells associated with this site and is not a contaminant of concern for this site.

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

Yes No NA (Please explain.)

Comments:

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

Comments:

Impact to data quality is minor. See comments above.

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 samples had failed surrogate recoveries.

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

Data quality or usability not affected. See comment above.

Comments:

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:

iii. All results less than PQL?

Yes No NA (Please explain.)

Comments:

iv. If above PQL, what samples are affected?

Comments:

Not applicable. No analytes were detected in the trip blank sample.

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

Comments:

Data quality or usability was not affected. See comment above.

e. Field Duplicate

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

Yes No NA (Please explain.)

Comments:

MW-8 was the field duplicate sample for MW-1.

ii. Submitted blind to lab?

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:

All detected field duplicate results were comparable (RPD \leq 30), see table below.

Analyte	Method	Units	MW-1		MW-8		RPD
			Result	Qualifier	Result	Qualifier	
Trichlorofluoromethane (CFC-11)	8260	µg/L	2.91		2.71		7
Benzene	8260	µg/L	1.65		1.74		5
1,2-dichloropropane	8260	µg/L	ND		1.39		N/A
Toluene	8260	µg/L	1340	D	1220	D	9
Ethylbenzene	8260	µg/L	1080	D	1110	D	3
M,P-Xylenes	8260	µg/L	4000	D	4080	D	2
o-Xylene	8260	µg/L	2480	D	2430	D	2
Isopropylbenzene	8260	µg/L	40.7	D	49.3	D	19
n-Propylbenzene	8260	µg/L	68.7	D	85.1	D	21
1,3,5-Trimethylbenzene	8260	µg/L	164	D	209	D	24
4-chlorotoluene	8260	µg/L	ND		22.6		N/A
Tert-butylbenzene	8260	µg/L	ND		1.10		NA
sec-Butylbenzene	8260	µg/L	6.04		6.03		1
4-Isopropyltoluene	8260	µg/L	5.02		4.79		5
1,2,4-Trimethylbenzene	8260	µg/L	923	D	889	D	4
Naphthalene	8260	µg/L	45.6		47.0		3
D - dilution was required							
ND - non-detect							
N/A - not applicable							

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

Comments:

Data quality or usability not affected. See comment above.

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

Equipment blanks were not required in this sampling event since a peristaltic pump was employed to collect the groundwater samples. New, disposable sampling tubing was used for groundwater collection at each monitoring well.

Yes No NA (Please explain.)

Comments:

i. All results less than PQL?

Yes No NA (Please explain.)

Comments:

No decontamination blank was collected.

ii. If above PQL, what samples are affected?

Comments:

Not applicable, no decontamination blank was collected.

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

Comments:

Data quality not affected. See comment above.

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

a. Defined and appropriate?

Yes No NA (Please explain.)

Comments:



Alaska Analytical Laboratory
1956 Richardson Highway
North Pole, Alaska 99705
TEL: (907) 488-1271 FAX: (907) 488-0772
Website: www.alaska-analytical.com

September 09, 2014

Melissa Shippey
Travis/Peterson Environmental Consulting Inc.
329 Second Street
Fairbanks, AK 99701
TEL: (907) 455-7225
FAX: (907) 455-7228

RE: Seekins Ford 1197-02

Order No.: 1408013

Dear Melissa Shippey:

Alaska Analytical Laboratory received 8 sample(s) on 8/28/2014 for the analyses presented in the following report.

There were no problems with the analytical events associated with this report unless noted in the Case Narrative. Analytical results designated with a "J" qualifier are estimated and represent a detection above the Method Detection Limit (MDL) and less than the Reporting Limit (PQL). These analytes are not reviewed nor narrated as to whether they are laboratory artifacts.

Quality control data is within laboratory defined or method specified acceptance limits except if noted.

Alaska Analytical Laboratory, Inc. subcontracted water samples. The analyses were performed by Fremont Analytical. Their report is attached for your use.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

A handwritten signature in black ink that reads "Kelley Lovejoy". The signature is written in a cursive, slightly slanted style.

Kelley Lovejoy
Lab Director
1956 Richardson Highway
North Pole, Alaska 99705



Alaska Analytical Laboratory
1956 Richardson Highway
North Pole, Alaska 99705
TEL: (907) 488-1271 FAX: (907) 488-0772
Website: www.alaska-analytical.com

Case Narrative

WO#: 1408013
Date: 9/9/2014

CLIENT: Travis/Peterson Environmental Consulting
Project: Seekins Ford 1197-02

This report in its entirety consists of the documents listed below. All documents contain the Alaska Analytical Laboratory Work Order Number assigned to this report.

1. Paginated Report including: Case Narrative, Analytical Results and Applicable Quality Control Summary Reports.
2. A Cover Letter that immediately precedes the Paginated Report.

Concentrations reported with a J flag in the Qual field are values below the reporting limit (RL) but greater than the established method detection limit (MDL). There is greater uncertainty associated with these results and data should be considered as estimated.

Concentrations reported with an E flag in the Qual field are values that exceed the upper quantification range. There is greater uncertainty associated with these results and data should be considered as estimated.

Any comments or problems with the analytical events associated with this report are noted below.

1408013-001C SW8260BW was subcontracted
1408013-002C SW8260BW was subcontracted
1408013-003C SW8260BW was subcontracted
1408013-004C SW8260BW was subcontracted
1408013-005C SW8260BW was subcontracted
1408013-006C SW8260BW was subcontracted
1408013-008A SW8260BW was subcontracted



Alaska Analytical Laboratory
 1956 Richardson Highway
 North Pole, Alaska 99705
 TEL: (907) 488-1271 FAX: (907) 488-0772
 Website: www.alaska-analytical.com

Analytical Report

(consolidated)

WO#: **1408013**

Date Reported: **9/9/2014**

CLIENT: Travis/Peterson Environmental Consulting Inc. **Collection Date:** 8/27/2014 10:45:00 AM
Project: Seekins Ford 1197-02
Lab ID: 1408013-001 **Matrix:** WATER
Client Sample ID MW-1

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
AK102SVW					AK102	SW3510 Analyst: KL
Diesel Range Organics C10-C25	0.362	0.232		mg/L	1	9/3/2014 4:59:52 PM
Surr: o-Terphenyl	91.1	50 - 150		%REC	1	9/3/2014 4:59:52 PM
GASOLINE RANGE ORGANICS					AK101	Analyst: KL
Gasoline Range Organics C6-C10	25,900	1,000		µg/L	10	9/8/2014 7:21:54 PM
Surr: 4-Bromofluorobenzene	89.6	50 - 150		%REC	10	9/8/2014 7:21:54 PM
Surr: a,a,a-trifluorotoluene	107	50 - 150		%REC	10	9/8/2014 7:21:54 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
M	Manual Integration used to determine area response	ND	Not Detected at the Method Detection Limit
RL	Reporting Detection Limit	S	Spike Recovery outside accepted recovery limits



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 North Pole, Alaska 99705
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Analytical Report

(consolidated)

WO#: **1408013**

Date Reported: **9/9/2014**

CLIENT: Travis/Peterson Environmental Consulting Inc. **Collection Date:** 8/27/2014 11:00:00 AM
Project: Seekins Ford 1197-02
Lab ID: 1408013-002 **Matrix:** WATER
Client Sample ID MW-8

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
AK102SVW					AK102	SW3510 Analyst: KL
Diesel Range Organics C10-C25	0.355	0.232		mg/L	1	9/3/2014 5:29:06 PM
Surr: o-Terphenyl	93.0	50 - 150		%REC	1	9/3/2014 5:29:06 PM
GASOLINE RANGE ORGANICS					AK101	Analyst: KL
Gasoline Range Organics C6-C10	24,700	1,000		µg/L	10	9/8/2014 8:16:50 PM
Surr: 4-Bromofluorobenzene	87.7	50 - 150		%REC	10	9/8/2014 8:16:50 PM
Surr: a,a,a-trifluorotoluene	107	50 - 150		%REC	10	9/8/2014 8:16:50 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
M	Manual Integration used to determine area response	ND	Not Detected at the Method Detection Limit
RL	Reporting Detection Limit	S	Spike Recovery outside accepted recovery limits



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 Website: www.alaska-analytical.com

Analytical Report

(consolidated)

WO#: **1408013**

Date Reported: **9/9/2014**

CLIENT: Travis/Peterson Environmental Consulting Inc. **Collection Date:** 8/27/2014 1:10:00 PM
Project: Seekins Ford 1197-02
Lab ID: 1408013-003 **Matrix:** WATER
Client Sample ID MW-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
AK102SVW					AK102	SW3510 Analyst: KL
Diesel Range Organics C10-C25	0.0307	0.232	J	mg/L	1	9/3/2014 5:58:20 PM
Surr: o-Terphenyl	97.2	50 - 150		%REC	1	9/3/2014 5:58:20 PM
GASOLINE RANGE ORGANICS					AK101	Analyst: KL
Gasoline Range Organics C6-C10	19.2	100	J	µg/L	1	9/8/2014 9:11:53 PM
Surr: 4-Bromofluorobenzene	93.1	50 - 150		%REC	1	9/8/2014 9:11:53 PM
Surr: a,a,a-trifluorotoluene	106	50 - 150		%REC	1	9/8/2014 9:11:53 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
M	Manual Integration used to determine area response	ND	Not Detected at the Method Detection Limit
RL	Reporting Detection Limit	S	Spike Recovery outside accepted recovery limits



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 Website: www.alaska-analytical.com

Analytical Report

(consolidated)

WO#: **1408013**

Date Reported: **9/9/2014**

CLIENT: Travis/Peterson Environmental Consulting Inc. **Collection Date:** 8/27/2014 2:15:00 PM
Project: Seekins Ford 1197-02
Lab ID: 1408013-004 **Matrix:** WATER
Client Sample ID MW-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
AK102SVW					AK102	SW3510 Analyst: KL
Diesel Range Organics C10-C25	0.118	0.232	J	mg/L	1	9/3/2014 6:27:34 PM
Surr: o-Terphenyl	94.8	50 - 150		%REC	1	9/3/2014 6:27:34 PM
GASOLINE RANGE ORGANICS					AK101	Analyst: KL
Gasoline Range Organics C6-C10	34.4	100	J	µg/L	1	9/8/2014 10:06:33 PM
Surr: 4-Bromofluorobenzene	90.2	50 - 150		%REC	1	9/8/2014 10:06:33 PM
Surr: a,a,a-trifluorotoluene	104	50 - 150		%REC	1	9/8/2014 10:06:33 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
M	Manual Integration used to determine area response	ND	Not Detected at the Method Detection Limit
RL	Reporting Detection Limit	S	Spike Recovery outside accepted recovery limits



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Analytical Report

(consolidated)

WO#: **1408013**

Date Reported: **9/9/2014**

CLIENT: Travis/Peterson Environmental Consulting Inc. **Collection Date:** 8/27/2014 3:30:00 PM
Project: Seekins Ford 1197-02
Lab ID: 1408013-005 **Matrix:** WATER
Client Sample ID MW-7

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
AK102SVW					AK102	SW3510 Analyst: KL
Diesel Range Organics C10-C25	ND	0.232		mg/L	1	9/3/2014 6:56:43 PM
Surr: o-Terphenyl	81.9	50 - 150		%REC	1	9/3/2014 6:56:43 PM
GASOLINE RANGE ORGANICS					AK101	Analyst: KL
Gasoline Range Organics C6-C10	20.1	100	J	µg/L	1	9/8/2014 11:00:54 PM
Surr: 4-Bromofluorobenzene	92.7	50 - 150		%REC	1	9/8/2014 11:00:54 PM
Surr: a,a,a-trifluorotoluene	105	50 - 150		%REC	1	9/8/2014 11:00:54 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
M	Manual Integration used to determine area response	ND	Not Detected at the Method Detection Limit
RL	Reporting Detection Limit	S	Spike Recovery outside accepted recovery limits



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Analytical Report

(consolidated)

WO#: **1408013**

Date Reported: **9/9/2014**

CLIENT: Travis/Peterson Environmental Consulting Inc. **Collection Date:** 8/27/2014 4:30:00 PM
Project: Seekins Ford 1197-02
Lab ID: 1408013-006 **Matrix:** WATER
Client Sample ID MW-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
AK102SVW					AK102	SW3510 Analyst: KL
Diesel Range Organics C10-C25	ND	0.232		mg/L	1	9/3/2014 7:25:47 PM
Surr: o-Terphenyl	91.8	50 - 150		%REC	1	9/3/2014 7:25:47 PM
GASOLINE RANGE ORGANICS					AK101	Analyst: KL
Gasoline Range Organics C6-C10	10.9	100	J	µg/L	1	9/8/2014 11:54:41 PM
Surr: 4-Bromofluorobenzene	94.1	50 - 150		%REC	1	9/8/2014 11:54:41 PM
Surr: a,a,a-trifluorotoluene	105	50 - 150		%REC	1	9/8/2014 11:54:41 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
M	Manual Integration used to determine area response	ND	Not Detected at the Method Detection Limit
RL	Reporting Detection Limit	S	Spike Recovery outside accepted recovery limits



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Analytical Report

(consolidated)

WO#: **1408013**

Date Reported: **9/9/2014**

CLIENT: Travis/Peterson Environmental Consulting Inc. **Collection Date:** 8/27/2014 5:00:00 PM
Project: Seekins Ford 1197-02
Lab ID: 1408013-007 **Matrix:** WATER
Client Sample ID Trip Blank - GRO

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
----------	--------	----	------	-------	----	---------------

GASOLINE RANGE ORGANICS

AK101

Analyst: **KL**

Gasoline Range Organics C6-C10	11.8	100	J	µg/L	1	9/8/2014 6:25:55 PM
Surr: 4-Bromofluorobenzene	91.4	50 - 150		%REC	1	9/8/2014 6:25:55 PM
Surr: a,a,a-trifluorotoluene	104	50 - 150		%REC	1	9/8/2014 6:25:55 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	M	Manual Integration used to determine area response	ND	Not Detected at the Method Detection Limit
	RL	Reporting Detection Limit	S	Spike Recovery outside accepted recovery limits



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QC SUMMARY REPORT

WO#: 1408013
 09-Sep-14

Client: Travis/Peterson Environmental Consulting Inc.

Project: Seekins Ford 1197-02

TestCode: AK101W

Sample ID: MB-R869	SampType: MBLK	TestCode: AK101W	Units: µg/L	Prep Date:	RunNo: 869						
Client ID: PBW	Batch ID: R869	TestNo: AK101		Analysis Date: 9/9/2014	SeqNo: 8278						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline Range Organics C6-C10
 Surr: 4-Bromofluorobenzene
 Surr: a,a,a-trifluorotoluene

ND
 100
 49.9
 55.0
 50.00
 50.00
 99.8
 110
 60
 60
 120
 120

Sample ID: LCS-R869	SampType: LCS	TestCode: AK101W	Units: µg/L	Prep Date:	RunNo: 869						
Client ID: LCSW	Batch ID: R869	TestNo: AK101		Analysis Date: 9/8/2014	SeqNo: 8279						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline Range Organics C6-C10
 Surr: 4-Bromofluorobenzene
 Surr: a,a,a-trifluorotoluene

2,700
 100
 2,500
 0
 108
 91.1
 99.7
 60
 60
 120
 120

Sample ID: LCSD-R869	SampType: LCSD	TestCode: AK101W	Units: µg/L	Prep Date:	RunNo: 869						
Client ID: LCSS02	Batch ID: R869	TestNo: AK101		Analysis Date: 9/8/2014	SeqNo: 8280						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline Range Organics C6-C10
 Surr: 4-Bromofluorobenzene
 Surr: a,a,a-trifluorotoluene

2,900
 100
 2,500
 0
 116
 90.8
 98.7
 60
 60
 120
 120
 2,697
 7.16
 0
 0
 20
 0
 0

Qualifiers:

E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
M	Manual Integration used to determine area response	ND	Not Detected at the Method Detection Limit	P	Second column confirmation exceeds
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	S	Spike Recovery outside accepted recovery limits



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QC SUMMARY REPORT

WO#: 1408013
 09-Sep-14

Client: Travis/Peterson Environmental Consulting Inc.
Project: Seekins Ford 1197-02

TestCode: AK102SVW

Sample ID: LCS-453	SampType: LCS	TestCode: AK102SVW	Units: mg/L	Prep Date: 8/28/2014	RunNo: 866						
Client ID: LCSW	Batch ID: 453	TestNo: AK102	SW3510	Analysis Date: 9/3/2014	SeqNo: 8241						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics C10-C25	2.11	0.232	2.500	0	84.4	75	125				
Surr: Octacosane	0.0512		0.05000		102	60	120				
Surr: o-Terphenyl	0.0489		0.05000		97.8	60	120				

Sample ID: LCSD-453	SampType: LCSD	TestCode: AK102SVW	Units: mg/L	Prep Date: 8/28/2014	RunNo: 866						
Client ID: LCSS02	Batch ID: 453	TestNo: AK102	SW3510	Analysis Date: 9/3/2014	SeqNo: 8242						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics C10-C25	1.98	0.232	2.500	0	79.1	75	125	2.111	6.47	20	
Surr: Octacosane	0.0468		0.05000		93.7	60	120		0	0	
Surr: o-Terphenyl	0.0455		0.05000		90.9	60	120		0	0	

Sample ID: MB-453	SampType: MBLK	TestCode: AK102SVW	Units: mg/L	Prep Date: 8/28/2014	RunNo: 866						
Client ID: PBW	Batch ID: 453	TestNo: AK102	SW3510	Analysis Date: 9/3/2014	SeqNo: 8243						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics C10-C25	ND	0.232									
Surr: Octacosane	0.0518		0.05000		104	60	120				
Surr: o-Terphenyl	0.0465		0.05000		93.0	60	120				

Qualifiers:

E	Value above quantitation range	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
M	Manual Integration used to determine area response	ND	Not Detected at the Method Detection Limit	P	Second column confirmation exceeds
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	S	Spike Recovery outside accepted recovery limits



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Sample Receipt Checklist

Client Name: **TPECI01**

Work Order Number **1408013**

RcptNo: **1**

Date and Time Received: **8/28/2014 10:15:29 AM**

Received by: **Kelley Lovejoy**

Completed by: *Kelley Lovejoy*

Reviewed by: *Kelley Lovejoy*

Completed Date: 8/28/2014 11:09:14 AM

Reviewed Date: 8/28/2014 11:09:17 AM

Carrier name: Client

- Chain of custody present? Yes No
- Chain of custody signed when relinquished and received? Yes No
- Chain of custody agrees with sample labels? Yes No Not Present
- Are matrices correctly identified on Chain of custody? Yes No
- Is it clear what analyses were requested? Yes No
- Custody seals intact on sample bottles? Yes No Not Present
- Samples in proper container/bottle? Yes No
- Were correct preservatives used and noted? Yes No NA
- Sample containers intact? Yes No
- Sufficient sample volume for indicated test? Yes No
- Were container labels complete (ID, Pres, Date)? Yes No
- All samples received within holding time? Yes No
- Was an attempt made to cool the samples? Yes No NA
- All samples received at a temp. of > 0° C to 6.0° C? Yes No NA
- Response when temperature is outside of range:
- Preservative added to bottles:
- Sample Temp. taken and recorded upon receipt? Yes No 1.2 To 3.4°
- Water - Were bubbles absent in VOC vials? Yes No No Vials
- Water - Was there Chlorine Present? Yes No NA
- Water - pH acceptable upon receipt? Yes No No Water
- Are Samples considered acceptable? Yes No
- Custody Seals present? Yes No
- Traffic Report or Packing Lists present? Yes No
- Airbill or Sticker? Air Bill Sticker Not Present
- Airbill No:
- Sample Tags Present? Yes No
- Sample Tags Listed on COC? Yes No
- Tag Numbers:
- Sample Condition? Intact Broken Leaking
- Case Number: _____ SDG: _____ SAS: _____

Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
Big Cooler	3.4	Good	Yes		8/28/2014	Melissa S Shippe
Small Cooler	1.3	Good	Yes		8/28/2014	Melissa S Shippe

Equipment Information

Adjusted? _____ Checked by _____



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Sample Receipt Checklist

Client Name: **TPECI01**

Work Order Number **1408013**

Any No and/or NA (not applicable) response must be detailed in the comments section below.

Client Contacted? Yes No NA Person Contacted:

Contact Mode: Phone: Fax: Email: In Person:

Client Instructions:

Date Contacted:

Contacted By:

Regarding:

CorrectiveAction:

Comments:

Was an attempt made to cool the sample?
The lab did not attempt to cool the samples.
Samples were received with gel ice in the cooler. Temp. Blank and Cooler were within the ADEC acceptable range.



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Sample Receipt Checklist

Client Name: **TPECI01**

Work Order Number **1408013**

Sample Details

SampleID	ContainerID	Type	Org pH	Adj pH	Req Min pH	Req Max pH
1408013-001A	Container-01 of 02	Bottle				
1408013-001A	Container-02 of 02	Bottle				
1408013-001B	Container-01 of 03	Bottle				
1408013-001B	Container-02 of 03	Bottle				
1408013-001B	Container-03 of 03	Bottle				
1408013-001C	Container-01 of 03	Bottle				
1408013-001C	Container-02 of 03	Bottle				
1408013-001C	Container-03 of 03	Bottle				
1408013-002A	Container-01 of 02	Bottle				
1408013-002A	Container-02 of 02	Bottle				
1408013-002B	Container-01 of 03	Bottle				
1408013-002B	Container-02 of 03	Bottle				
1408013-002B	Container-03 of 03	Bottle				
1408013-002C	Container-01 of 03	Bottle				
1408013-002C	Container-02 of 03	Bottle				
1408013-002C	Container-03 of 03	Bottle				
1408013-003A	Container-01 of 02	Bottle				
1408013-003A	Container-02 of 02	Bottle				
1408013-003B	Container-01 of 03	Bottle				
1408013-003B	Container-02 of 03	Bottle				
1408013-003B	Container-03 of 03	Bottle				
1408013-003C	Container-01 of 03	Bottle				
1408013-003C	Container-02 of 03	Bottle				
1408013-003C	Container-03 of 03	Bottle				
1408013-004A	Container-01 of 02	Bottle				
1408013-004A	Container-02 of 02	Bottle				
1408013-004B	Container-01 of 03	Bottle				
1408013-004B	Container-02 of 03	Bottle				
1408013-004B	Container-03 of 03	Bottle				



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Sample Receipt Checklist

Client Name: **TPECI01**

Work Order Number **1408013**

1408013-004C	Container-01 of 03	Bottle
1408013-004C	Container-02 of 03	Bottle
1408013-004C	Container-03 of 03	Bottle
1408013-005A	Container-01 of 02	Bottle
1408013-005A	Container-02 of 02	Bottle
1408013-005B	Container-01 of 03	Bottle
1408013-005B	Container-02 of 03	Bottle
1408013-005B	Container-03 of 03	Bottle
1408013-005C	Container-01 of 03	Bottle
1408013-005C	Container-02 of 03	Bottle
1408013-005C	Container-03 of 03	Bottle
1408013-006A	Container-01 of 02	Bottle
1408013-006A	Container-02 of 02	Bottle
1408013-006B	Container-01 of 03	Bottle
1408013-006B	Container-02 of 03	Bottle
1408013-006B	Container-03 of 03	Bottle
1408013-006C	Container-01 of 03	Bottle
1408013-006C	Container-02 of 03	Bottle
1408013-006C	Container-03 of 03	Bottle
1408013-007A	Container-01 of 03	Bottle
1408013-007A	Container-02 of 03	Bottle
1408013-007A	Container-03 of 03	Bottle
1408013-008A	Container-01 of 03	Bottle
1408013-008A	Container-02 of 03	Bottle
1408013-008A	Container-03 of 03	Bottle



Chain of Custody Record

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Office: (907) 488-1271
Cell: (907) 687-7394 Fax: (907) 488-0772

Client Contact Information

Transit Petroleum Env. Consulting
329 Second St
Fairbanks, AK 99701
Sampler Name: Melissa Skippy
Sampler Signature: *M. Skippy*
Project Name:
SEERINS FORD
Project Number: 1197-02

Client Project Manager (PM):

PM Tel/Fax: 907-455-7225

Analysis Turnaround Time

Requested Turnaround Time if different from below:

- 10 business days (Standard)
- 3 business days
- 2 Business Days
- 1 Business Day

Date: 8/27/14

Carrier:

Lab Contact: Kelley Lovejoy

COC No. 14-0032

Page 1 of 1

AAL Job No. 32

Comments:

Sample Specific Notes:

GRD AK101
EPH 8260 VOCs
DRD AK102

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.
MW-1	8/27	10:45a	G	W	8
MW-8	8/27	11:00a	G	W	8
MW-2	8/27	1:10P	G	W	8
MW-3	8/27	2:15P	G	W	8
MW-7	8/27	3:30P	G	W	8
MW-6	8/27	4:30P	G	W	8
TRIP BLANKS	8/27	5:00P	G	W	6

Preservation Used: 1 = Ice, 2 = Methanol, 3 = Other HCl

Possible Hazard Identification

- Non-Hazard
- Flammable
- Skin Irritant
- Poison B
- Unknown

Special Instructions/QC Requirements & Comments [Please note if there is Mercury in the sample.]

Custody Seals Intact

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

- Return To Client
- Disposal By Lab
- Archive For _____ Months

Big Cooler Temp Blank 3.4°C
Cooler Temp 3.4°C
Small Cooler Temp Blank 1.2°C
Cooler Temp 1.3°C

Relinquished by (Print/Signature):

Melissa Skippy

Company:

TPECI

Date/Time:

8/28/14

Received by (Print/Signature):

Kelley Lovejoy

Company:

AAL

Date/Time:

8/28/14 10:15AM

Relinquished by (Print/Signature):

Company:

Date/Time:

Received by (Print/Signature):

Company:

Date/Time:

110001
14-0032
8128114

Date: Aug 28, 2014
Signature: MCS Shippis

CUSTODY SEAL

ENVIRONMENTAL SAMPLING SUPPLY
9601 San Leandro St. Oakland, CA 94621-4425


Signature: MCS Shippis

CUSTODY SEAL
Date/Time: Aug 28, 2014


Signature: MCS Shippis

CUSTODY SEAL
Date/Time: Aug 28, 2014

Laboratory Data Review Checklist

Completed by:

Title: Date:

CS Report Name: Report Date:

Consultant Firm:

Laboratory Name: Laboratory Report Number:

ADEC File Number: ADEC RecKey Number:

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:

All VOC by 8260 samples were transferred from Alaska Analytical in North Pole, AK to Fremont Analytical in Seattle Washington.

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 ($4^{\circ} \pm 2^{\circ} \text{C}$)?
 Yes No NA (Please explain.) Comments:

Upon receipt at Alaska Analytical Laboratory, the temperature blank for the small cooler was below the acceptable temperature range (1.3°C). Since the temperature was above freezing temperature and samples were reportedly received in good condition, no data were qualified.

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:

Aside from the temperature discrepancy noted above, no other discrepancies were noted upon sample login. Samples were otherwise all received in good condition.

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:

The temperature discrepancy noted above was documented.

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

Comments:

Data quality or usability not affected, see comments above.

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:

c. Were all corrective actions documented?

Yes No NA (Please explain.)

Comments:

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

Comments:

The case narrative only described the laboratory qualifications made to the data based on problems encountered during sample receiving and analysis. Any notable data quality issues mentioned in the Case Narrative are discussed within this ADEC checklist.

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:

No soils.

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:

e. Data quality or usability affected?

Comments:

Data quality or usability not affected.

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:

iii. If above PQL, what samples are affected?

Comments:

Not applicable. No analytes were detected in the method blank samples.

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

Yes No NA (Please explain.)

Comments:

No samples were affected as no analytes were detected in the method blank sample.

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

Comments:

Data quality or usability was not affected, see comments above.

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:

No metals or inorganic analysis requested.

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:

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:

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

Comments:

Not applicable. All % Recoveries and RPDs were within acceptable limits.

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

Yes No NA (Please explain.)

Comments:

All % Recoveries and RPDs were within acceptable limits.

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

Comments:

Data quality or usability not affected. See comment above.

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 samples had failed surrogate recoveries.

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

Data quality or usability was not affected. See comment above.

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:

- iii. All results less than PQL?
 Yes No NA (Please explain.) Comments:

GRO was detected in the trip blank sample, however, it was detected below the PQL.

iv. If above PQL, what samples are affected?

Comments:

Not applicable. No analytes were detected above their respective PQLs.

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

Comments:

Data quality or usability not affected. See comments above.

e. Field Duplicate

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

Yes No NA (Please explain.)

Comments:

MW-8 was the field duplicate sample for MW-1.

ii. Submitted blind to lab?

Yes No NA (Please explain.)

Comments:

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

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

Where R_1 = Sample Concentration

R_2 = Field Duplicate Concentration

Yes No NA (Please explain.)

Comments:

All detected field duplicate results were comparable ($RPD \leq 30$), see table below.

Analyte	Method	Units	MW-1		MW-8		RPD
			Result	Qualifier	Result	Qualifier	
DRO	AK102	mg/L	0.362		0.355		2
GRO	AK101	µg/L	25900		24700		5

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

Comments:

Data quality or usability not affected. See comment above.

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

Yes No NA (Please explain.)

Comments:

Equipment blanks were not required in this sampling event since a peristaltic pump was employed to collect the groundwater samples. New, disposable sampling tubing was used for groundwater collection at each monitoring well.

i. All results less than PQL?

Yes No NA (Please explain.)

Comments:

No decontamination blank was collected.

ii. If above PQL, what samples are affected?

Comments:

Not applicable, no decontamination blank was collected.

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

Comments:

Data quality not affected. See comment above.

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

a. Defined and appropriate?

Yes No NA (Please explain.)

Comments: