

Travis/Peterson Environmental Consulting, Inc.

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

Michael D. Travis P.E.

3305 Arctic Boulevard, Suite 102

Anchorage, Alaska 99503

e-mail: mtravis@tpeci.com

Phone: 907-522-4337

Fax: 907-522-4313

Principal

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

Laurence A. Peterson Operations Manager

329 2nd Street Fairbanks, Alaska 99701

Phone: 907-455-7225 Fax: 907-455-7228 e-mall: larry@tpecl.com Table 2. 2014 Analytical Results

Sample	μg/L)					
			trichlorofluoromethane	2.91	n-propylbenzene:	68.7
			benzene:	1.65	1,3,5-trimethylbenzene:	164
MW-1	0.362	25.0	toluene:	1,340	sec-butylbenzene:	6.04
TAT AA - T	0.302	25.9	ethylbenzene;	1,080	4-isopropyltoluene:	
			xylenes (total):	6,480	1,2,4-trimethylbenzene:	
			isopropylbenzene(cumene):	40.7	naphthalene:	45.6
			trichlorofluoromethane:	2.71	1,3,5-trimethylbenzene:	209
			benzene:	1.74	4-chlorotoluene:	22.6
			1,2-dichloropropane:	1.39	tert-butylbenzene:	1.10
MW-1	0.355	24.7	toluene:	1,220	sec-butylbenzene:	6.03
duplicate	0.555	44.1	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	парпшателе.	47.0
			toluene:	1.12	xylenes (total):	6.11
MW-2	0.0307J	0.0192J	tetrachloroethene:	1.29	1,2,4-trimethylbenzene:	1.34
			ethylbenzene:	1.43	1,2,4-umiethyroenzene.	1.57
			tetrachloroethene:	1.39	1,2-dichlorobenzene:	7.87
MW-3	0.118J	0.0344Ј	1,3,5-trimethylbenzene:	1.37	1,2,4-trimethylbenzene:	3.25
11111 3	0.1103	0.05	4-isopropyltoluene:	4.47	naphthalene:	2.78
			n-butylbenzene:	1.32	·	
MW-6	ND	0.0109J	trichlorofluoromethane:	8.13	tetrachloroethene:	2.31
<u>MW-7</u>	ND	0.0201J	trichlorofluoromethane:	11.3		
	,		trichlorofluoromethane:	11,000	1,3,5-trimethylbenzene:	1,800
			benzene	5.0	4-chlorotoluene:	n/a
			1,2-dichloropropane:	5.0	tert-butylbenzene:	370
Cleanup			toluene:	1,000	sec-butylbenzene:	370
Level ^a	1.5	2.2	tetrachloroethene:	5.0 ^C	4-isopropyltoluene:	n/a
LCYCI			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		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 even 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,

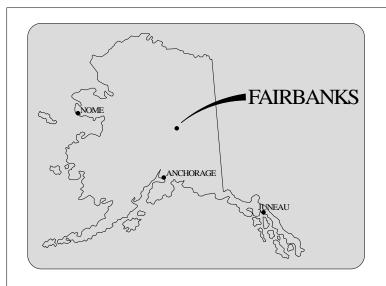
Melissa S. Shippey Senior Scientist ce: Mr. Jim Fish, State of Alaska, Department of Environmental Conservation.

Figures 1 and 2 Attachments: 1)

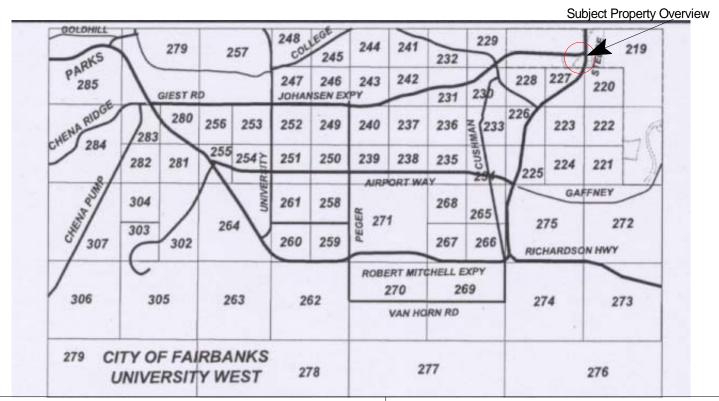
Historical Groundwater Data Table 2)

Laboratory Data Report and ADEC Laboratory Data Review Checklist 3)

ATTACHMENT 1 FIGURES



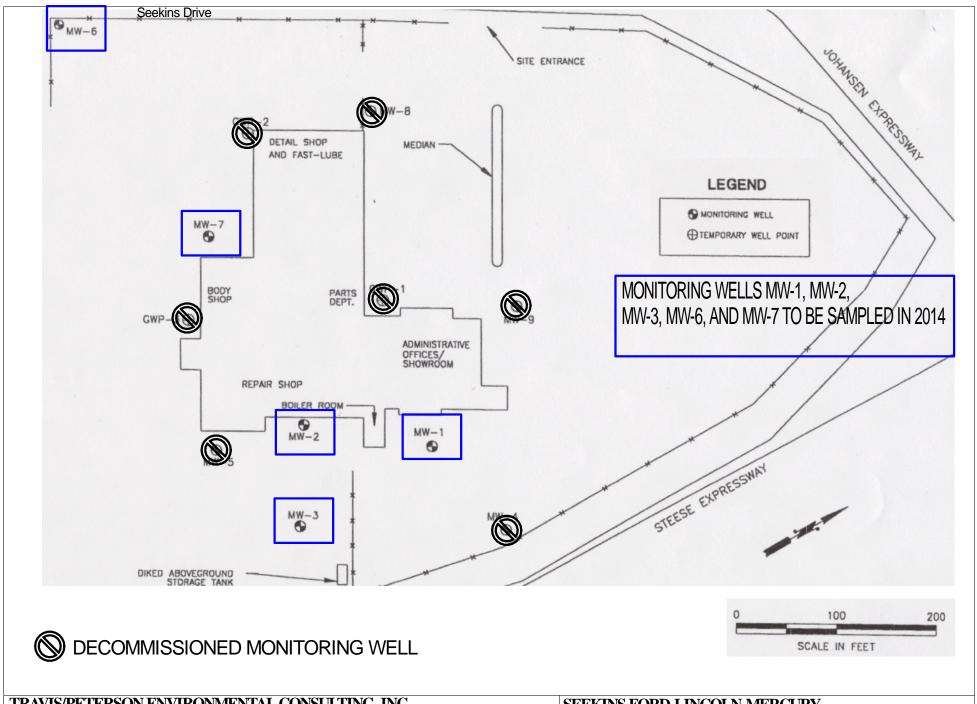




TRAVIS/PETERSON ENVIRONMENTAL CONSULTING, INC. 329 2ND STREET FAIRBANKS, ALASKA 99701

FIGURE 1
SEEKINS FORD-LINCOLN-MERCURY LOCATION & VICINITY

PROJECT No: 1197-02 FILE: 1197/02/2014/Figure 1-Location & Vicinity.SKF DATE: 09/22/2014 SCALE: AS SHOWN



TRAVIS/PETERSON E 329 2ND STREET FAIRBANKS, ALASKA 99	INVIRONMENTAL CONSULTING, INC. 701	SEEKINS FORD-LINCOLN-ME	RCURY 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

HISTORIC GROUNDWATER ANALYTICAL DATA FOR SEEKINS FORD-LINCOLN-MERCURY MONITORING WELLS

Well Number Date	e to V	tance GR Vater (µg	RO DRO		Benzene (µg/L)	2-Butanone (MEK) (μg/L)	benzene	sec-Butyl benzene	benzene	Tetrachlorid		4- chlorotolu	Chloroform (µg/L)	Chloro- methane	1,2-DCB 1 (µg/L)	,4-DCB 1,1- (μg/L) (μ	-DCE 1,2-D g/L) (μg/	CA Dichloro	Dichloro difluoro methane	Ethylbenzene (µg/L)	Isopropyl Benzene	Methyl-t- butyl- ether	4-Isopropyl toluene	Isopropylto	Naphthalene (µg/L)	n-Propyl benzene	Styrene PCE (µg/L) (µg/L)	Toluene 1,2	,3-TCB 1,2,4 μg/L) (μ	1,1,1 I-TCB Trichlo	roe Flouro-	TCE	1,2,3- Trichloro propane		1,3,5-TMB (µg/L)	Total Xylenes (μg/L)	Fluorene (µg/L)	Phenanthrene (µg/L)	Fluoranthene (µg/L)	Acenaph- thylene
ADEC MCL	(In	reet)	300 1,500		5.0	22,000	γ (μg/L) 370	(μg/L) 370	(μg/L) N/A	(μg/L) 5.0	(μg/L) 3,650	ene (µg/L)	100	(μg/L)	600		650 5.0	(µg/L)		700	(μg/L) 3,650	(μg/L) N/A	(μg/L) N/A	luene (µg/L)	700	(μg/L) 370	100 5.0			(μg/L 70 200	.) (μg/L)		(μg/L)	1,800	1,800	10,000	1,460	11.000		(µg/L) (µg/L)
(ug/L) MW-1 7/21/1	995 1	4.2 18	80 5.4		12,000			-	ND		ND	N/A						5.0		NA NA	-	ND	IN/A				-	NA	1	ND		-								
	996 15	5 28 25	40 6.2 50 11			ND 	ND 	ND 	ND ND	ND 	ND ND		ND 	ND 	ND 		ND NE)	ND 	NA NA	ND 	ND ND	ND 	-		420		NA NA	1	ND ND	ND 	ND 	ND 	3,000	740			-		
11/21/1 5/25/2	005 14	5.57 33 4.64 1,1	30 9.6 120 0.363	 B ND	11,000 ND	 ND	ND	 ND	ND ND	 ND	ND ND		 ND	 ND	 ND	 ND N	 ND NE	,	 ND	NA NA	 ND	ND ND	1.2	-	 ND	 ND	 ND	NA 2.24		ND ND ND	 ND	 ND	 ND	69	19.3	317	 ND	 ND		 ND ND
7/17/2 9/13/2	007 14	1.74 47, 6	600 3,620	ND ND ND	25.6	ND ND	ND 10.1	9.71	ND ND ND	ND ND ND	ND ND		ND ND	ND ND ND	ND ND ND	ND I	ND NE	5	ND 	368 1,590 1,080	ND 85.4	ND ND ND	ND 8.02		ND 76.8	ND 146 ND	ND	755 13,000 1,750	1	ND ND ND ND ND	1.78	ND ND	ND ND ND	370 1,310 735	ND 356	1,420 15,670	ND 	ND 	ND 	ND ND
9/16/2 11/8/2	010	2.65 15, 5				84.4					ND 		ND 	ND 		ND I	ND NE	,		1,080	56			4.24	51.2		ND	1,750			ND 	ND 		735	1/5	5,790 		-		
9/4/20 8/14/2)12 14	1.93 75,3	300 670	20.5	4.7 ND	ND ND	15.3 ND	7.5 ND	 ND	ND ND	 ND		ND ND	ND ND	ND ND		ND NE		ND ND	3,090 2,130	117 96.4	 ND	 ND	7.4 ND	90.9 ND	176 166			4.2 ND 1	ND ND ND		ND ND	ND ND	2,200 1,440	587 383	18,400 13,400		-	-	
Duplicate 8/14/2				ND ND ND		ND	ND	ND	ND ND	ND ND	ND ND	ND	ND ND	ND	ND	ND N	ND NE)	ND ND	2,150	95.5 40.7	ND	ND	ND .	ND 45.6	168	ND ND ND ND	3,440		ND ND	ND	ND		1,450	385	13,500 6,480		-	-	
Duplicate 8/27/2	014 10	0.82 24,7	700 355	ND ND	1.74	ND	ND	6.03	1.1	ND ND	ND ND	22.6	ND	ND ND	ND	ND I	ND NE	1.39	ND	1,110	49.3		4.79	-	47.0	85.1			ND I	ND ND	2.71	ND	ND ND	889	209	6,510	-	-		
MW-2 7/21/1 5/1/19	996 16	5.13 0.2	15 0.35 26 0.74	ND	ND 2	ND ND	 ND	 ND	ND ND	8.2 ND	ND ND		ND ND	ND ND	ND ND	ND 1)	ND ND	ND ND	3.53	ND ND	1.3	-	 ND	9.59		ND ND	1	ND 57		ND ND		22.2	16.2	ND ND	 ND	 ND		 ND ND
8/7/19 11/21/1	996 15 1996 16	5.72 0.1 6.02 0.1	16 3.4 105 2.1	ND ND ND	ND ND	ND ND	ND	ND	ND ND	ND ND	ND ND		ND ND	ND	ND	ND ND 1	.11 NE)	ND ND ND	ND ND	ND 1.69	ND	ND	-	ND ND	ND 4.74	28.4	ND ND	1	ND 180 ND 48.3	7.19	ND	ND	8.55	6.61	ND ND	ND ND	ND ND	ND	ND ND ND ND ND ND
7/17/2	006 Well	was obstru	ıcted.	ND	ND	ND	ND		ND	ND	ND		ND	ND	ND		ND NE		ND	ND	ND	ND	ND	-	ND	ND	ND	ND	1	ID ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND ND
9/13/2 9/16/2	800	5.18 Ni	D 950		ND 	ND 	ND 	ND 	ND 	ND 	ND 		ND 	9.5	ND 	-	ND NE)		ND 	ND 	ND 	ND 		ND 	ND 	2.03	ND 	1	ND 2.36	ND	ND 	ND 	ND 	ND 	ND 				
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MW-3 7/21/1	014 1	1.29 19.	.2J 0.030	J ND	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND N	ND NE)	ND	1.43	ND	ND	ND	-	ND	ND	ND 1.3	1.12	ND N	ID ND	ND	ND	ND	1.34	ND	6.11	-		-	
	995 1	5.18 0.9 4.78 0.2	99 5.4	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND		ND ND	ND ND	90 86	ND I	ND NE)	230	ND ND	ND	ND ND	7.6	-	9	6.4	29 23 15	ND ND		ND ND	ND	22	ND ND	49 10.5	18	ND ND	1.4 ND	1.7 ND		0.3 ND ND ND
11/21/1	1996 14	1.29 0.1	16 5.4		ND ND	ND ND ND	ND ND 1.18	ND 4.04	ND 1.09	ND ND	ND ND ND		ND ND	ND ND	36.6	1.65 N	ND NE		26.3	ND 1.59	1.2 1.22	ND ND	5.76	-	11	2.39	13.8	ND		ID ND	2.33 ND	3.55	ND ND	19.5 19.9	9.6 9.07	ND ND 12.4	ND 0.9 ND	0.8 ND	0.1	0.1 0.3
7/17/2 9/13/2	006 14	1.13 N	17 1.05 D 0.583 D 995	ND ND		ND ND	ND ND	1.04 ND ND	ND ND	ND ND	1.72 ND		ND ND	ND ND		ND I)	ND ND		ND ND ND	ND ND	3.71 ND 1.54	-	ND 4.56	ND ND	1.41	ND ND ND	1	ID ND	ND	ND ND	ND	15.9 ND 5.35	5.92 ND 2.16	ND ND	ND ND	ND ND		ND ND
duplicate 9/13/2 9/16/2	007 N	VA N)	ND 	ND	ND	ND	ND	ND	ND 		ND	2.32	12.2	ND N	ND NE			ND	ND	ND	1.53	-	4.35	ND	1.89	1.94		ND ND		ND 	ND	5.09	2.07	1.26		-	-	
11/8/2 9/5/20	010 15	5.49 13. 4.35 0.04	.9J 227J	ND	ND	ND ND	ND ND	ND ND	ND 	ND ND	ND 		ND ND	ND ND	8.9 4.8	ND N	ND NE)	ND	ND ND	ND ND	ND 	4.0	4.0	4.0	ND	1.3 ND 1.4	ND	ND	ND ND		ND ND	ND ND	6.1 1.7	2.4 ND	ND ND	ND 	ND 	ND 	ND ND
8/14/2 8/27/2				ND ND ND ND		ND ND ND	ND ND 1.32		ND ND	ND ND	ND ND	ND	ND ND	ND ND	8.0 7.9	ND DN	ND NE		ND ND ND	ND ND	ND ND ND	ND ND	ND 4.47	6.2	ND 2.78	ND ND ND	ND 1.6 ND 1.39			ND ND			ND ND	4.1 3.25	ND 1.4 1.37	ND ND ND	-	-	-	
MW-4 7/21/1		2.93 NI	D ND	ND	ND	ND	-		ND	ND	ND		5.5	ND	ND	ND I	ND NE)	ND	ND		ND		-			ND	ND	,	ID ND	ND	ND	-		-	ND				
5/1/19 8/7/19	996 14	1.02 NI	D 0.24	ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND		ND ND	ND ND	ND ND	ND N			ND 1.08	ND ND	ND ND	ND ND	ND ND			ND ND		ND	1	ID ND		ND ND	ND	ND ND	ND ND	ND ND	1 1	-		
11/21/1 5/25/2	005 13	3.36 NI	ID ND	ND ND	ND ND	ND ND ND	ND ND ND	ND ND	ND ND	ND ND	ND ND		ND ND	ND ND	ND ND	ND ND N	ND NE ND NE ND NE		ND ND ND	ND ND	ND ND ND	ND ND	ND ND		 ND	ND ND	ND ND	ND ND ND	1	ND ND ND ND ND	ND ND ND	ND ND	ND	ND ND ND	ND ND	ND ND	 ND	 ND		 ND ND ND ND
7/18/2 9/13/2			D ND	ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	1.33 ND		ND ND	ND ND	ND ND	ND ND	ND NE)	ND 	ND ND	ND ND	ND ND	ND ND	-	ND ND	ND ND	ND ND	ND 3.03	1	ID ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND 3.71	ND 	ND 	ND 	ND ND
MW-5 5/1/19	996 15	5.68 0.1	17 1.1	ND	2.49	ND	ND	2.68 ND	ND	ND ND	ND		ND	ND	2.71	ND 1	.45 NE		ND	ND ND	1.85	ND	3.5			4.43	ND	ND	!	ID ND	ND	ND	ND	36.2	15	ND				
8/7/19 11/21/1	996 15 1996 15	5.27 NI 5.61 NI	D 0.99	ND 20 ND	1.24	ND ND	ND ND	ND ND	ND ND		ND ND		ND ND	ND ND	1.45	ND 1 ND 1 ND 0	1.2 NE .78 NE		1.09 ND	ND ND	1.85 ND ND	ND ND	0.9	-		0.7 0.65	1.1 ND	ND ND	i	ND ND	ND ND ND	ND ND	ND ND ND	7.8 6.52	2.38	ND ND		-		
MW-6 5/1/10	996 1F			27.2		ND	11	4.73	ND	ND	ND		1.01	ND	ND	ND 2	.93 NF		ND	ND	3.11	ND	8.89			8.96	5.22	ND		ND 2.28	3 10.1		ND	37.7	11.7	ND		_		
8/7/19 11/21/1		5.35 NI	D 0.56	ND ND	ND	ND ND	ND ND	ND	ND ND	ND ND	ND ND		ND ND	ND ND	ND	ND 2	.86 NE		ND ND	ND ND	ND ND	ND ND	0.5 ND	-	-	ND ND	5.17	ND ND		ND 1.11	5	0.7	ND ND	1.2 ND	0.7 ND	ND ND	-	-		
5/25/2 7/14/2	005 14		D ND	ND	ND ND	ND ND	ND ND	ND	ND ND	ND ND	ND		ND ND	ND ND	ND ND	ND N	ND NE)	ND	ND	ND ND	ND ND	ND ND		ND ND	ND	9.24	ND ND	1	ID ND	4.81	ND ND	ND	ND ND	ND	ND ND	ND ND	ND ND	ND ND	ND ND ND ND
7/17/2 9/13/2	006 14		ID ND	ND	ND ND	ND ND	ND	ND	ND ND	ND ND	ND ND ND		ND ND	ND 3.85	ND	ND 1	ND NE)	ND ND	ND ND	ND ND	ND ND	ND ND		ND ND	ND ND ND	6.66	ND 1.76	1	ND ND		ND ND	ND ND	ND ND	ND ND	ND ND	ND 	ND 	ND 	ND ND ND
9/16/2 duplicate 9/16/2	008 12 008 12	2.74 NI 2.74 NI	D ND	ND ND	ND ND	ND ND	ND ND ND	ND	ND ND	ND ND	ND ND		ND ND	ND ND	ND ND	ND ND N	ND NE)		1.33	ND ND	ND ND		ND ND	ND ND	ND ND	3.07 2.71	2.35 1.97	1	ND ND	3.9 3.57	ND ND	ND ND	ND ND	ND ND ND	6.35 5.13	-	-		
11/8/2 9/4/20	012 15		D ND 47J 0.0160	ND NJ ND	ND ND	ND ND	ND ND ND	ND ND	ND 	ND ND	ND 		ND ND	ND ND	ND ND	ND 4	1.4 NE ND NE		ND ND	ND ND	ND ND	ND	ND 	ND ND	ND ND	ND ND	2.2 ND 1.6	ND ND	ND D	ID ND	8.8 3.8	ND ND	ND ND	ND ND	ND ND	ND ND	ND 	ND 	ND 	ND ND
8/14/2 8/27/2	010	3.30 NI 0.95 10.		ND ND	ND ND	ND ND	ND ND		ND ND	ND ND	ND ND	ND	ND ND	ND ND	ND ND		ND NE	_	ND ND	ND ND	ND ND	ND ND	ND ND	ND -	ND ND	ND ND	ND 1.3 ND 2.31	ND ND	ND I	ND ND	4.4 8.13	ND ND	ND ND	ND ND	ND ND	ND ND	-		-	
MW-7 5/1/19		5.29 0.2	26 0.47	ND	ND	ND	2.42	1.33	ND	ND	ND		ND	ND	ND		ND NE)	ND	ND	2.5	ND	2.47		-	5.78	ND ND			ID ND	13.4	ND	ND	25.8	7.45	ND		-		
8/7/19 11/21/1	1996 16	5.14 NI	D 0.2	287 451	ND ND	ND ND	ND ND	ND	ND ND	ND ND	ND ND		ND ND	ND ND	ND		ND NE		3.2 2.97	ND ND	ND ND	ND ND	ND ND	-	 ND	ND ND	ND ND	ND ND	1	ID ND	69	ND ND	ND	ND ND	ND ND	ND ND	 	 	 	
5/25/2 7/17/2 9/13/2	006 Well	was frozen	at 6 ft bgs.	ND	ND ND	ND ND	ND ND		ND ND	ND	ND ND		ND ND	ND ND	ND		ND NE		ND 	ND	ND ND	ND	ND		ND 2.E	ND ND		ND 6.52		ID ND	18.6	ND ND	ND ND	ND	ND ND	ND 11.81	ND	ND	ND	ND ND
9/13/2 9/16/2 11/8/2	800	5.35 NI 	D 326	 ND	 ND	 ND	 ND	ND ND	 ND	 IND	 ND		ND ND	ND ND	 ND		 ND NE		 ND	ND ND	 ND	 ND	 ND	 ND	3.5 ND	 ND	 ND	6.52 ND		 ID ND	3.6	 ND	 ND	ND ND	 ND	11.81 ND	 ND	 ND	 ND	 ND ND
DUPLICATE 11/8/2 9/5/20	010 16	5.67 NI 5.59 0.02	D ND 26.1 ND	ND	ND	ND	ND	ND	ND ND	ND ND	ND ND		ND ND	ND ND	ND	ND 1	1.0 NE)	ND		ND	ND ND	ND ND	ND ND	ND ND	ND	ND	ND	i	ID ND	3.2 13.4	ND	ND	ND	ND	ND ND	ND ND	ND ND	ND ND	ND ND
8/14/2				ND 9 ND ND		ND ND	ND ND ND	ND ND	ND ND	ND ND	ND ND	ND	ND ND	ND ND	ND ND	ND N	ND NE) ND	ND 1.9 ND	ND ND	ND ND ND	ND ND	ND ND	ND ND	ND ND	ND ND ND	ND ND ND	ND ND ND	ND I	ID ND	4.2		ND ND ND	ND ND ND	ND ND ND	ND ND	-		-	
JETTE		, 20.	710														- 110							-			,,,,			1,0	2.10									

	Die	ance					n-Butyl	sec-Butyl	tort-Butyl	Carbon-	Carbon	4-		Chloro-					Dichloro		Isopropy	Methyl-	4-Isopropy	l p-		n-Propyl						Trichloro-		1,2,3-				\top			Α.	cenaph-
Well Number Date	e to V	/ater Feet) GR((µg/				2-Butanone (MEK) (µg/L	honzono	benzene (µg/L)			le disulfide	ene (µg/L)		methane (µg/L)			1,1-DCE 1 (µg/L)	,2-DCA Dichlor (µg/L) ropar (µg/L	e methane		ne Benzene (μg/L)		toluene	Isopropylto luene (µg/L)	Naphthalene (µg/L)		Styrene PCE (µg/L) (µg/L)	Toluene 1 (µg/L)	1,2,3-TCB 1 (μg/L)	1,2,4-TCB (µg/L)	Trichloroe thane (µg/L)			Trichloro propane (µg/L)	1,2,4-TMB (µg/L)	1,3,5-TMB (μg/L)	Total Xylene (µg/L)	Fluorene (μg/L)	Phenanthrene (µg/L)	Fluoranthene (µg/L)	Pyrene	hylene (µg/L)
MW-8 5/1/19	96 16	.49 0.3	0.69	36.2	8.39	18	5.06	2.64	ND	ND	ND		ND	ND	ND	ND	ND	ND	4.01	ND	3.84	ND	4.06			9.67	ND	ND		ND	ND	16.4	ND	1.14	41.8	13	ND				-	
8/7/19		.04 NE		ND			ND		ND		ND		ND		ND			ND	1.4	ND	ND	ND	ND			ND		ND		ND	ND		ND		ND		ND		-			
11/21/1	996 16	.33 NE	0.15	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-		ND	ND	ND		ND	ND	9.5	ND	ND	ND	ND	ND		-			-
5/25/20	005 15	.43 NE	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Well De	comissio	ned 10/28/20	05																					-															-	-	-	
MW-9 5/1/19	96 15	.95 0.0	0.84	ND	ND	ND	3.72	1.67	ND	ND	ND		ND	ND	ND	ND	ND	ND	3.56	ND	1.08	ND	2.11			2.95	ND	ND		ND	ND	ND	ND	ND	11.32	3.43	ND					-
8/7/19	96 15	.53 NE	0.64	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	1.3	ND	ND	ND	ND	-		ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND					
				ND				ND	ND		ND		ND	ND	ND			ND	ND	ND			ND	-		ND		ND		ND	ND	ND	ND			ND	ND	-				-
		.04 NE		ND	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Well De	comissio	ned 10/28/20	05																																				+	-	+	
GWP-1 7/21/19	995 14	.62 4	0.19		1.500				ND		ND			-					-	ND		ND		-			-	ND		ND				-			ND		-			
5/1/19		.11 0.3			117	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	3.63	ND	ND	ND	ND			1.53	ND			ND	ND	ND	ND	ND	ND	ND	ND					
8/7/19	96 15	.69 0.8	1 0.72		230				ND		ND				-		-			ND		ND		-			-	ND		ND				-		-	ND					-
11/21/1	996 15	.97 0.49	9 0.29		160				ND		ND									ND		ND					-	ND		ND				-		-	ND					-
5/25/20	005 15	.03 NE	ND	ND	ND	ND	ND	ND	ND	ND			ND	ND	ND	ND	ND	ND	ND	ND	2.03	5.65	ND	-	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Well De	comissio	ned 10/28/20	05																											-									-	 	++	
GWP-2 7/21/19	995 15	.02 NE	ND		ND				ND		ND		-	-	-					ND		ND					-	ND		ND				-		-	ND				-	
5/1/19		.54 NE		ND	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	3.87	ND.	ND	ND	ND	-		ND	ND			ND	ND	33.4	ND	ND	ND	ND	ND					
8/7/19		6.1 NE			ND				ND		ND									ND		ND		-				ND		ND							ND					-
11/21/1	996 1	6.4 NE	0.11	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND			ND	ND	ND		ND	ND	44.3	ND	ND	ND	ND	ND					
5/25/20	005 15	.42 NE	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	ND		ND	ND	9.99	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
9/16/20	008 13	.53 53	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND		1.82	ND	ND		ND	ND	ND	ND	3.97		ND	ND	5.14	ND	ND	ND	ND	9.84					
GWP-3 7/21/19		.18 NE	ND		ND				ND		ND									ND		ND								ND						-	ND					
5/1/19		.71 NE					ND		ND		ND		ND					ND	4.91			ND			ND	ND		ND		ND		2.22		ND		ND		ND		ND	ND	
8/7/19		.31 NL	0.29	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	0.8	ND	ND	ND	ND	ND	ND	-	ND	ND	ND			ND	0.7	1.24	ND	ND	ND	ND	ND	ND	ND	ND		ND
11/21/1		.58 NE			ND	ND	ND	ND	ND ND	ND ND	ND ND		ND ND		ND ND			ND	ND ND		ND		ND	-	ND	ND		ND ND		ND	0.69		ND	ND	ND	ND	ND	ND	ND ND	ND ND	ND ND	ND
7/17/20		.67 NE		ND ND		ND ND	ND ND	ND ND	ND ND	ND ND	ND ND		ND ND					ND ND	ND ND		ND ND		ND ND		ND ND	ND ND		ND ND		ND ND	ND ND	1.18 ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND		ND ND
9/13/20								ND ND	ND ND		ND ND				ND ND				ND 				ND ND	-	5.89	ND ND		22.7		ND						1.12				ND 	ND 	
9/13/20	J07 I	+.O INL	491	-	IND	IND	IND	IND	IND	ND	IND	-	ND	IND	IND	IND	IND	IND		0.13	IND	IND	IND	-	3.69	IND	IND	22.1		IND	IND	1.40	IND	IND	3.03	1.12	43.3	+			+	
DUP-1 5/1/19	96 N	/A 220	5.6	ND	10.000	ND		ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-		410	ND	ND		ND	ND	ND	ND	ND	3.100	780	ND					
8/7/19		/A 250	9.4		9,700	ND		ND	ND	ND	ND		ND					ND	630		ND	ND	ND			ND		ND		ND	ND	ND	ND		2,300	710	ND		-			
11/21/1	996 N	/A 0.23	1 4.8		ND				ND	-	ND									ND		ND		-			-			ND						-	ND		-			
5/25/20		/A NE			ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND		ND	ND		ND	ND	ND	-	ND	ND		ND		ND	ND	ND	ND	ND	ND	ND	ND	ND		ND		ND
7/5/20		/A NE				ND	ND		ND	ND	ND		ND					ND	ND		ND		ND	-	110	ND		ND		ND	ND		ND		ND	ND	ND	ND		ND		ND
7/17/20	006 1	/A NE	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND	6.49	ND		ND	ND	4.29	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
NOTE	S:	dic	hloroethene	-1			PCE	tetrachi	loroethene			Analysis	not performed	-			2013 results						1							- +								+			+-+	
DCE		dic	hloroethane				DCB		robenzene	ND		Analyte	not detected																			2013 results										
DCA	١.	tric	hloroethene				TCB	trichlor	obenzene	BOLD		Analyte det	ected above N	1CL																											T	
TCE	max	mum contam	nant level				TMB	trimethy	ylbenzene																																	
MCL										nants/index.html																															\bot	'
			CL could be in	lentified for th	is compou	nd. TPECI per	sonnel have	consulted wit	th ADEC per	sonnel on 9/12/0	8 but to date	have not rece	eived a respon	se on whethe	r an MCL exi	ts						1																+			++	'
**	for th	is compound					1			,				1																											\bot	
						1	1		1	1											_															1					++	
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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.

Male Redom

Sincerely,

Mike Ridgeway President

Date: 09/08/2014



CLIENT: Alaska Analytical Laboratory Work Order Sample Summary

Project: Seekins Ford 1197-02

Lab Order: 1408286

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



Case Narrative

WO#: **1408286** Date: **9/8/2014**

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.



DF

Units

WO#: **1408286**

Date Reported: 9/8/2014

Date Analyzed

Client: Alaska Analytical Laboratory Collection Date: 8/27/2014 10:45:00 AM

RL

Qual

Project: Seekins Ford 1197-02

Lab ID: 1408286-001 **Matrix**: Water

Result

Client Sample ID: MW-1

Analyses

anary 3e3	Result	INL	Quai	Office	Di	Date Allalyzed
Volatile Organic Compounds by	/ EPA Method 8	<u>3260</u>		Bato	ch ID: R1	6509 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
• •	•					

- 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



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 Volatile Organic Compounds by EPA Method 8260** Batch ID: R16509 Analyst: BC 9/5/2014 11:59:00 AM 2.480 100 D μg/L 100 o-Xylene Styrene ND 1.00 μg/L 1 8/30/2014 2:12:00 AM D Isopropylbenzene 40.7 10.0 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 10 9/5/2014 9:42:00 AM μg/L Bromobenzene ND 1.00 μg/L 1 8/30/2014 2:12:00 AM 164 10.0 D 10 9/5/2014 9:42:00 AM 1,3,5-Trimethylbenzene μg/L 2-Chlorotoluene ND 1.00 8/30/2014 2:12:00 AM μg/L 4-Chlorotoluene ND 1.00 8/30/2014 2:12:00 AM μg/L 1 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 5.02 1.00 μg/L 1 8/30/2014 2:12:00 AM 4-Isopropyltoluene 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 ND 1.00 8/30/2014 2:12:00 AM n-Butylbenzene μg/L 1 ND 1.00 8/30/2014 2:12:00 AM 1,2-Dichlorobenzene μg/L 1 ND 1.00 8/30/2014 2:12:00 AM 1,2-Dibromo-3-chloropropane μg/L 1 923 D 100 1,2,4-Trimethylbenzene 100 μg/L 9/5/2014 11:59:00 AM Hexachlorobutadiene ND 4.00 μg/L 1 8/30/2014 2:12:00 AM 45.6 Naphthalene 1.00 μg/L 1 8/30/2014 2:12:00 AM 1,2,3-Trichlorobenzene ND 4.00 1 8/30/2014 2:12:00 AM μg/L Surr: Dibromofluoromethane 93.3 61.7-130 %REC 1 8/30/2014 2:12:00 AM Surr: Toluene-d8 104 40.1-139 %REC 8/30/2014 2:12:00 AM 1 Surr: 1-Bromo-4-fluorobenzene 107 68.2-127 %REC 1 8/30/2014 2:12:00 AM

NOTES:

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

^{* -} Flagged value is not within established control limits.



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

nalyses	Result	Qual	Units	DF	Date Analyzed	
Volatile Organic Compounds by	/ EPA Method 8	<u>3260</u>		Bato	ch ID: R1	6509 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

- 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



WO#: 1408286

Date Reported: 9/8/2014

Alaska Analytical Laboratory Collection Date: 8/27/2014 11:00:00 AM Client:

Project: Seekins Ford 1197-02

Lab ID: 1408286-002 Matrix: Water

Client Sample ID: MW-8

Analyses	Result RL Q				DF	Date Analyzed
Volatile Organic Compounds b	y EPA Method	<u>8260</u>		Bato	h ID: R1	6509 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:

Analyte detected in the associated Method Blank Qualifiers:

> Ε Value above quantitation range

J Analyte detected below quantitation limits

Reporting Limit

D Dilution was required

Н Holding times for preparation or analysis exceeded

ND Not detected at the Reporting Limit

^{* -} Flagged value is not within established control limits.



DF

Units

WO#: **1408286**

Date Reported: 9/8/2014

Date Analyzed

Client: Alaska Analytical Laboratory Collection Date: 8/27/2014 1:10:00 PM

RL

Qual

Project: Seekins Ford 1197-02

Lab ID: 1408286-003 **Matrix**: Water

Result

Client Sample ID: MW-2

Analyses

Allalyses	Result	IXL	Quai	Office	<u> </u>	Date Analyzed
Volatile Organic Compounds by	/ EPA Method 8	<u>3260</u>		Bato	h ID: R	16509 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

- 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



WO#: 1408286

Date Reported: 9/8/2014

Alaska Analytical Laboratory Collection Date: 8/27/2014 1:10:00 PM Client:

Project: Seekins Ford 1197-02

Lab ID: 1408286-003 Matrix: Water

Client Sample ID: MW-2

Analyses	Result RL			Units	DF	Da	te Analyzed
Volatile Organic Compounds b	y EPA Method	8260		Bato	h ID: R1	6509	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:

Qualifiers: Analyte detected in the associated Method Blank

> Ε Value above quantitation range

J Analyte detected below quantitation limits

Reporting Limit

D Dilution was required

Н Holding times for preparation or analysis exceeded

ND Not detected at the Reporting Limit

^{* -} Flagged value is not within established control limits.



DF

Units

WO#: **1408286**

Date Reported: 9/8/2014

Date Analyzed

Client: Alaska Analytical Laboratory Collection Date: 8/27/2014 2:15:00 PM

RL

Qual

Project: Seekins Ford 1197-02

Lab ID: 1408286-004 **Matrix**: Water

Result

Client Sample ID: MW-3

Analyses

-tilaly 903	Result	IXL	Quai	Office	<u> </u>	Date Analyzed
Volatile Organic Compounds by	y EPA Method 8	<u>3260</u>		Bato	h ID: R	16509 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
•						

- 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



WO#: 1408286

Date Reported: 9/8/2014

Alaska Analytical Laboratory Collection Date: 8/27/2014 2:15:00 PM Client:

Project: Seekins Ford 1197-02

Lab ID: 1408286-004 Matrix: Water

Client Sample ID: MW-3

Analyses	Result	RL	Qual	Units	DF	Da	te Analyzed
Volatile Organic Compounds by	y EPA Method	<u>8260</u>		Bato	h ID: R1	6509	Analyst: BC
o-Xylene	ND	1.00		μg/L	1	9/5/2	014 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:

Qualifiers: Analyte detected in the associated Method Blank

> Ε Value above quantitation range

J Analyte detected below quantitation limits

RL Reporting Limit

D Dilution was required

Н Holding times for preparation or analysis exceeded

ND Not detected at the Reporting Limit

^{* -} Flagged value is not within established control limits.



DF

Units

WO#: **1408286**

Date Reported: 9/8/2014

Date Analyzed

Client: Alaska Analytical Laboratory Collection Date: 8/27/2014 3:30:00 PM

RL

Qual

Project: Seekins Ford 1197-02

Lab ID: 1408286-005 **Matrix**: Water

Result

Client Sample ID: MW-7

Analyses

Allalyses	Nesuit	IXL	Quai	Office	<u> </u>	Date Allalyzed
Volatile Organic Compounds by	/ EPA Method 8	<u>3260</u>		Bato	h ID: R	16509 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

- 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



DF

Units

WO#: **1408286**

Date Reported: 9/8/2014

Date Analyzed

Client: Alaska Analytical Laboratory Collection Date: 8/27/2014 3:30:00 PM

RL

Qual

Project: Seekins Ford 1197-02

Lab ID: 1408286-005 **Matrix**: Water

Result

Client Sample ID: MW-7

Analyses

-tialy 3 c 3	Nesuit	IXL	Quai	Units	וט	Date Analyzed
Volatile Organic Compounds b	y EPA Method	8260		Batc	h ID: R	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:						

NOTES:

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

^{* -} Flagged value is not within established control limits.



DF

Units

WO#: **1408286**

Date Reported: 9/8/2014

Date Analyzed

Client: Alaska Analytical Laboratory Collection Date: 8/27/2014 4:30:00 PM

RL

Qual

Project: Seekins Ford 1197-02

Lab ID: 1408286-006 **Matrix**: Water

Result

Client Sample ID: MW-6

Analyses

Allalyses	Result	IXL	Quai	Office	וט	Date Analyzed
Volatile Organic Compounds by	EPA Method 8	<u> 260</u>		Batc	h ID: R	16509 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

- 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



WO#: 1408286

Date Reported: 9/8/2014

Alaska Analytical Laboratory Collection Date: 8/27/2014 4:30:00 PM Client:

Project: Seekins Ford 1197-02

Lab ID: 1408286-006 Matrix: Water

Client Sample ID: MW-6

Analyses	Result	RL	Qual	Units	DF	Da	te Analyzed
Volatile Organic Compounds by	y EPA Method	8260		Bato	h ID: R1	6509	Analyst: BC
o-Xylene	ND	1.00		μg/L	1	9/5/2	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	9/5/2	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:

Analyte detected in the associated Method Blank Qualifiers:

> Ε Value above quantitation range

J Analyte detected below quantitation limits

Reporting Limit

D Dilution was required

Н Holding times for preparation or analysis exceeded

ND Not detected at the Reporting Limit

^{* -} Flagged value is not within established control limits.



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 Volatile Organic Compounds by EPA Method 8260** Batch ID: R16509 Analyst: BC ND 1.00 8/30/2014 1:43:00 AM Dichlorodifluoromethane (CFC-12) μg/L 1 Chloromethane ND 1.00 8/30/2014 1:43:00 AM μg/L 1 Vinyl chloride ND 0.200 8/30/2014 1:43:00 AM μg/L 1 Bromomethane ND 1.00 8/30/2014 1:43:00 AM μg/L 1 Trichlorofluoromethane (CFC-11) ND 1.00 μg/L 1 8/30/2014 1:43:00 AM Chloroethane ND 1.00 8/30/2014 1:43:00 AM μg/L 1 1,1-Dichloroethene ND 1.00 μg/L 1 8/30/2014 1:43:00 AM ND 1.00 8/30/2014 1:43:00 AM Methylene chloride μg/L 1 ND trans-1,2-Dichloroethene 1.00 μg/L 8/30/2014 1:43:00 AM Methyl tert-butyl ether (MTBE) ND 1.00 8/30/2014 1:43:00 AM μg/L 1 μg/L 1,1-Dichloroethane ND 1.00 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 1 8/30/2014 1:43:00 AM μg/L 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 NΠ 1.00 μg/L 1 8/30/2014 1:43:00 AM 1,2-Dichloroethane (EDC) ND 1.00 8/30/2014 1:43:00 AM μg/L ND 8/30/2014 1:43:00 AM Benzene 1.00 μg/L 1 Trichloroethene (TCE) 0.500 ND 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 ND Dibromomethane 1.00 μg/L 1 8/30/2014 1:43:00 AM cis-1,3-Dichloropropene ND 1.00 1 8/30/2014 1:43:00 AM μg/L Toluene ND 1.00 μg/L 1 8/30/2014 1:43:00 AM ND 1.00 μg/L 8/30/2014 1:43:00 AM trans-1,3-Dichloropropene 1 1,1,2-Trichloroethane ND 1.00 μg/L 1 8/30/2014 1:43:00 AM 1,3-Dichloropropane ND 1.00 1 8/30/2014 1:43:00 AM μg/L Tetrachloroethene (PCE) ND 1.00 8/30/2014 1:43:00 AM μg/L 1 ND 1 8/30/2014 1:43:00 AM Dibromochloromethane 1.00 μg/L 0.0600 1,2-Dibromoethane (EDB) ND μg/L 1 8/30/2014 1:43:00 AM Chlorobenzene ND 1.00 μg/L 1 8/30/2014 1:43:00 AM μg/L 1,1,1,2-Tetrachloroethane ND 1.00 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 8/30/2014 1:43:00 AM μg/L

- 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



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 Volatile Organic Compounds by EPA Method 8260** Batch ID: R16509 Analyst: BC ND 1.00 μg/L 8/30/2014 1:43:00 AM o-Xylene 1 Styrene ND 1.00 8/30/2014 1:43:00 AM μg/L 1 Isopropylbenzene ND 1.00 8/30/2014 1:43:00 AM μg/L 1 Bromoform ND 1.00 8/30/2014 1:43:00 AM μg/L 1 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 8/30/2014 1:43:00 AM 1 Bromobenzene ND 1.00 μg/L 1 8/30/2014 1:43:00 AM ND 1.00 8/30/2014 1:43:00 AM 1,3,5-Trimethylbenzene μg/L 1 2-Chlorotoluene ND 8/30/2014 1:43:00 AM 1.00 μg/L 4-Chlorotoluene ND 1.00 8/30/2014 1:43:00 AM μg/L 1 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 ND 1.00 μg/L 1 8/30/2014 1:43:00 AM 4-Isopropyltoluene 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 ND 1.00 8/30/2014 1:43:00 AM n-Butylbenzene μg/L ND 8/30/2014 1:43:00 AM 1,2-Dichlorobenzene 1.00 μg/L 1 ND 8/30/2014 1:43:00 AM 1,2-Dibromo-3-chloropropane 1.00 μg/L 1 1,2,4-Trimethylbenzene ND 1.00 μg/L 1 8/30/2014 1:43:00 AM Hexachlorobutadiene ND 4.00 μg/L 8/30/2014 1:43:00 AM ND Naphthalene 1.00 μg/L 1 8/30/2014 1:43:00 AM 1,2,3-Trichlorobenzene ND 4.00 1 8/30/2014 1:43:00 AM μg/L 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 8/30/2014 1:43:00 AM 1 Surr: 1-Bromo-4-fluorobenzene 94.6 68.2-127 %REC 1 8/30/2014 1:43:00 AM

NOTES:

Qualifiers: B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

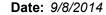
RL Reporting Limit

D Dilution was required

H Holding times for preparation or analysis exceeded

ND Not detected at the Reporting Limit

^{* -} Flagged value is not within established control limits.





Project:

QC SUMMARY REPORT

CLIENT: Alaska Analytical Laboratory

Seekins Ford 1197-02

Volatile Organic Compounds by EPA Method 8260

Sample ID: 1408286-001ADUP	SampType: DUP			Units: µg/L		Prep Da	ite: 8/30/20)14	RunNo: 16	509	
Client ID: MW-1	Batch ID: R16509					Analysis Da	te: 8/30/2 0)14	SeqNo: 332	2126	
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

H Holding times for preparation or analysis exceeded

R RPD outside accepted recovery limits

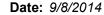
D Dilution was required

Analyte detected below quantitation limits

RL Reporting Limit

E Value above quantitation range

ND Not detected at the Reporting Limit





Project:

QC SUMMARY REPORT

CLIENT: Alaska Analytical Laboratory

Seekins Ford 1197-02

Volatile Organic Compounds by EPA Method 8260

Sample ID: 1408286-001ADUP	SampType: DUP			Units: µg/L		Prep Da	ite: 8/30/20	14	RunNo: 16	509	
Client ID: MW-1	Batch ID: R16509					Analysis Da	te: 8/30/2 0	14	SeqNo: 332	2126	
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	Е
Bromobenzene	ND	1.00						0		30	
1,3,5-Trimethylbenzene	173	1.00						182.4	5.01	30	Ε
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

Holding times for preparation or analysis exceeded

R RPD outside accepted recovery limits

D Dilution was required

Analyte detected below quantitation limits

RL Reporting Limit

E Value above quantitation range

ND Not detected at the Reporting Limit

Date: 9/8/2014



Work Order: 1408286

QC SUMMARY REPORT

CLIENT: Alaska Analytical Laboratory

Seekins Ford 1197-02

Volatile Organic Compounds by EPA Method 8260

Sample ID: 1408286-001ADUP	SampType: DUP	Units: µg/L				Prep Da	te: 8/30/20	114	RunNo: 16		
Client ID: MW-1	Batch ID: R16509					Analysis Da	te: 8/30/20	114	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 NOTES:	50.3		50.00		101	68.2	127		0		

Project:

^{* -} Flagged value is not within established control limits.

Sample ID: 1408286-002AMS	SampType: MS			Units: µg/L		Prep Da	te: 8/30/2014	RunNo: 165	09	
Client ID: MW-8	Batch ID: R16509					Analysis Dat	te: 8/30/2014	SeqNo: 332	127	
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: Analyte detected in the associated Method Blank

Holding times for preparation or analysis exceeded

RPD outside accepted recovery limits

Dilution was required

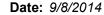
Analyte detected below quantitation limits

Reporting Limit

Value above quantitation range

Not detected at the Reporting Limit

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





Project:

QC SUMMARY REPORT

CLIENT: Alaska Analytical Laboratory

Seekins Ford 1197-02

Volatile Organic Compounds by EPA Method 8260

Sample ID: 1408286-002AMS	SampType: MS			Units: µg/L		Prep Da	te: 8/30/20	14	RunNo: 16	509	
Client ID: MW-8	Batch ID: R16509					Analysis Da	te: 8/30/20	14	SeqNo: 332	2127	
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

Holding times for preparation or analysis exceeded

R RPD outside accepted recovery limits

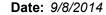
D Dilution was required

Analyte detected below quantitation limits

RL Reporting Limit

E Value above quantitation range

ND Not detected at the Reporting Limit





Project:

QC SUMMARY REPORT

CLIENT: Alaska Analytical Laboratory

Seekins Ford 1197-02

Volatile Organic Compounds by EPA Method 8260

Sample ID: 1408286-002AMS	SampType	MS			Units: µg/L		Prep Da	te: 8/30/2 0	14	RunNo: 16	509	
Client ID: MW-8	Batch ID:	R16509					Analysis Da	te: 8/30/20	14	SeqNo: 33	2127	
Analyte	I	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:												

NOTES:

^{* -} Flagged value is not within established control limits.

Sample ID: LCS-R16509	SampType: LCS		Units: µg/L			Prep Dat	te: 8/30/20	14	RunNo: 16		
Client ID: LCSW	Batch ID: R16509				Analysis Dat	te: 8/30/20	14	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: Analyte detected in the associated Method Blank

D Dilution was required Holding times for preparation or analysis exceeded

Analyte detected below quantitation limits

RPD outside accepted recovery limits

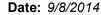
Reporting Limit

Ε Value above quantitation range

Not detected at the Reporting Limit

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.





Project:

QC SUMMARY REPORT

CLIENT: Alaska Analytical Laboratory

Seekins Ford 1197-02

Volatile Organic Compounds by EPA Method 8260

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

B Analyte detected in the associated Method Blank

Holding times for preparation or analysis exceeded

R RPD outside accepted recovery limits

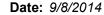
D Dilution was required

Analyte detected below quantitation limits

RL Reporting Limit

E Value above quantitation range

ND Not detected at the Reporting Limit





Project:

QC SUMMARY REPORT

CLIENT: Alaska Analytical Laboratory

Seekins Ford 1197-02

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: 8/30/20)14	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

Holding times for preparation or analysis exceeded

RPD outside accepted recovery limits

D Dilution was required

Analyte detected below quantitation limits

RL Reporting Limit

E Value above quantitation range

ND Not detected at the Reporting Limit

Date: 9/8/2014



Work Order: 1408286

Sample ID: LCS-R16509

QC SUMMARY REPORT

CLIENT: Alaska Analytical Laboratory

Volatile Organic Compounds by EPA Method 8260

Project: Seekins Ford 1197-02

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 *.

SampType: LCS

Sample ID: MB-R16509	SampType: MBLK			Units: µg/L		Prep Da	ate: 8/29/201	4	RunNo: 165	509	
Client ID: MBLKW	Batch ID: R16509					Analysis Da	ate: 8/29/201	4	SeqNo: 332	2136	
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	e associated Method Blank		D Dilution wa	e required			F Value a	above quantitation ra	ange		

Qualifiers: B Analyte detected in the associated Method Blank

Holding times for preparation or analysis exceeded

R RPD outside accepted recovery limits

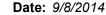
D Dilution was required

Analyte detected below quantitation limits

RL Reporting Limit

E Value above quantitation range

ND Not detected at the Reporting Limit





Work Order: 1408286

Project:

QC SUMMARY REPORT

CLIENT: Alaska Analytical Laboratory

Seekins Ford 1197-02

Volatile Organic Compounds by EPA Method 8260

Sample ID: MB-R16509	SampType: MBLK			Units: µg/L		Prep Da	te: 8/29/2 0	014	RunNo: 16	509	
Client ID: MBLKW	Batch ID: R16509					Analysis Da	te: 8/29/2 0)14	SeqNo: 332	2136	
Analyte	Result	RL S	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qua
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

Holding times for preparation or analysis exceeded

RPD outside accepted recovery limits

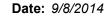
D Dilution was required

Analyte detected below quantitation limits

L Reporting Limit

E Value above quantitation range

ND Not detected at the Reporting Limit





Work Order: 1408286

Project:

QC SUMMARY REPORT

CLIENT: Alaska Analytical Laboratory

Seekins Ford 1197-02

Volatile Organic Compounds by EPA Method 8260

Sample ID: MB-R16509	SampType: MBLK			Units: µg/L		Prep Dat	e: 8/29/2014	RunNo: 1650 9	9	
Client ID: MBLKW	Batch ID: R16509					Analysis Dat	e: 8/29/2014	SeqNo: 3321 3	36	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit RPD Ref Val	%RPD F	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:										
# F 1 1 1 1 1 1 1 1 1 1 1	1 2 1 1 1 1 2 2									

* - Flagged value is not within established control limits.

Sample ID: CCV-R16509B	SampType: CCV			Units: µg/L		Prep Da	te: 9/4/201	4	RunNo: 16	509	
Client ID: CCV	Batch ID: R16509					Analysis Da	te: 9/4/201	4	SeqNo: 333	3785	
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

Holding times for preparation or analysis exceeded

R RPD outside accepted recovery limits

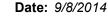
D Dilution was required

J Analyte detected below quantitation limits

RL Reporting Limit

E Value above quantitation range

ND Not detected at the Reporting Limit





Work Order: 1408286

Project:

QC SUMMARY REPORT

CLIENT: Alaska Analytical Laboratory

Seekins Ford 1197-02

Volatile Organic Compounds by EPA Method 8260

Sample ID: CCV-R16509C	SampType: CCV			Units: µg/L		Prep Da	te: 9/5/201	4	RunNo: 16	509	
Client ID: CCV	Batch ID: R16509					Analysis Da	te: 9/5/201	4	SeqNo: 333	3862	
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

Holding times for preparation or analysis exceeded

R RPD outside accepted recovery limits

D Dilution was required

J Analyte detected below quantitation limits

RL Reporting Limit

E Value above quantitation range

ND Not detected at the Reporting Limit



Sample Log-In Check List

С	lient Name:	AAL	Work Order N	lumber: 1408286	
Lo	ogged by:	Clare Griggs	Date Received	d: 8/29/201 4	4 12:09:00 PM
Cha	in of Custo	<u>ody</u>			
1.	Is Chain of Cu	ustody complete?	Yes 🗹	No \square	Not Present
2.	How was the	sample delivered?	<u>Courier</u>		
Log	ı İn				
	Coolers are p	resent?	Yes 🗹	No \square	NA \square
4.	Shipping cont	ainer/cooler in good condition?	Yes 🗸	No 🗌	
5.	Custody seals	s intact on shipping container/cooler?	Yes 🗸	No \square	Not Required
6.	Was an attem	npt made to cool the samples?	Yes 🗹	No 🗌	NA 🗌
7.	Were all coole	ers received at a temperature of >0°C to 10.0°C	Yes 🗹	No 🗌	NA 🗌
8.	Sample(s) in p	proper container(s)?	Yes 🗹	No 🗌	
9.	Sufficient san	nple volume for indicated test(s)?	Yes 🗹	No \square	
10.	Are samples p	properly preserved?	Yes 🗹	No 🗌	
11.	Was preserva	ative added to bottles?	Yes	No 🗹	NA \square
12.	Is the headsp	ace in the VOA vials?	Yes	No 🗹	NA 🗆
13.	Did all sample	es containers arrive in good condition(unbroken)?	Yes 🗸	No \square	
14.	Does paperwo	ork match bottle labels?	Yes 🗹	No 🗌	
15.	Are matrices	correctly identified on Chain of Custody?	Yes 🗸	No 🗆	
		t analyses were requested?	Yes 🗹	No 🗌	
17.	Were all holdi	ing times able to be met?	Yes 🗹	No \square	
<u>Spe</u>	cial Handl	ing (if applicable)			
18.	Was client no	tified of all discrepancies with this order?	Yes	No 🗌	NA 🗹
	Person I	Notified: Date	:		
	By Who	m: Via:	eMail	Phone Fax	☐ In Person
	Regardii	ng:			
	Client In	structions:			
19.	Additional ren	narks:			

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:

ADDRESS

Alaska Analytical Laboratory 1956 Richardson Highway North Pole, Alaska 99705

Website: www.alanka-analytical.com E4E (907) 488-0772

TEL: (907) 488-1271

Project: Seekins Ford 1197-02 1408286

ADDRESS: 3600 Fremont Analytical COMPANY: Fremont Analytical SPECIAL INSTRUCTIONS COMMENTS: 3600 Fremont Ave Please analyza these samples on a standard tunuround, After analyzis, the samples do not need to be returne und cam be disposed per your standard inboratory practices. Thank you! PHONE: (206) 352-3790 FAX: ANALYTICAL PARAMETERS ANALYTICAL PARAMETERS
PANY: Fremont Analytical Please analyza these samples on a and can be disposed per your stand on the disposed per your stan
Please analyza these samples on a and can be disposed per your stans of a second per your stans. ANALYTICAL PARAMETERS
SPECIAL INSTRUCTIONS COMMENTS Please analyza these samples on a and can be disposed per your stans ANALYTICAL PARAMETERS ANALYTICAL PARAMETERS
SPECIAL INSTRUCTIONS COMMENTS SPECIAL INSTRUCTIONS COMMENTS ANALYTICAL PARAMETERS ANALYTICAL PARAMETERS
leuse analyza these samples on a nd can be disposed per your stance. ANALYTICAL PARAMETERS

Retinquished By Colley Langer

Relinquished By: Rolinquished By:

TAT:

Steedard V

Laboratory Data Review Checklist

Completed by: As	shley Jaramillo	
Title: Ch	hemist	Date: September 12, 2014
CS Report Name:	Seekins Ford	Report Date:
Consultant Firm: T	Travis/Peterson Environmental Consulting, Inc.	c.
Laboratory Name: [Fremont Analytical Laborate	ory Report Number: 1408286
ADEC File Number:	100.26.131 ADEC Reck	Key Number:
	DEC CS approved laboratory receive and <u>perf</u> es \square No \square NA (Please explain.)	Form all of the submitted sample analyses? Comments:
laboratory □ ■ Ye	nples were transferred to another "network" laley, was the laboratory performing the analyses as \square No \square NA (Please explain.)	ADEC CS approved? Comments:
in Seattle W	s were transferred from Alaska Analytical in Nashington.	North Pole, Alaska to Fremont Analytical,
	y (COC) ormation completed, signed, and dated (includictions of the Nombre of the Nom	ing released/received by)? Comments:
	nalyses requested? es □ No □NA (Please explain.)	Comments:
a. Sample/co ☐Yes Upon receip acceptable to	ole Receipt Documentation ooler temperature documented and within rang a □ ■No □NA (Please explain.) pt at Fremont Analytical, the temperature blan emperature range (1.2° C). Since the temperature reportedly received in good condition, no data	Comments: k for the small cooler was below the ture was above freezing temperature and

	Volatile Chlorinated Solvents, etc.)? □■Yes□ No □NA (Please explain.)	Comments:
c.	Sample condition documented – broken, leaking (Met □ ■Yes □ No □NA (Please explain.)	thanol), zero headspace (VOC vials)? Comments:
	Aside from the temperature discrepancy noted above, neample login. Samples were otherwise all received in go	<u> </u>
d.	If there were any discrepancies, were they documente containers/preservation, sample temperature outside of samples, etc.?	of acceptable range, insufficient or missing
	□■Yes □ No □NA (Please explain.)	Comments:
	The temperature discrepancy noted above was documer	nted.
e.	Data quality or usability affected? (Please explain.)	Comments:
Ι	Data quality or usability not affected, see comments about	ove.
	Narrative Present and understandable? □■Yes□ No □NA (Please explain.)	Comments:
b.	Discrepancies, errors or QC failures identified by the □■Yes□No□NA (Please explain.)	lab? 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 qualification of the countered during sample receiving and analysis. Any	cations made to the data based on problem

b. Sample preservation acceptable – acidified waters, Methanol preserved VOC soil (GRO, BTEX,

a.		performed/reported as requested NA (Please explain.)	on COC? Comments:
b.	All applicable hol □■Yes □ No	ding times met? □NA (Please explain.)	Comments:
c.	-	on a dry weight basis? □■NA (Please explain.)	Comments:
	No soils.		
d.	Are the reported I project?	PQLs less than the Cleanup Leve	el or the minimum required detection level for
		O □NA (Please explain.)	Comments:
	_		Therefore, results of the aforementioned usefulness
A	analytes (all non-det	ect) in all samples have limited	usefulness.
e.	nalytes (all non-det Data quality or us	ect) in all samples have limited ability affected?	Comments:
e.	Data quality or us Impact to data is mi his site. amples Method Blank i. One metho	ect) in all samples have limited ability affected?	Comments: oned analytes are contaminants of concern for
e.	Data quality or us Impact to data is minhis site. amples Method Blank i. One methodology No ii. All methodology	ability affected? nor as neither of the aforemention od blank reported per matrix, an	Comments: oned analytes are contaminants of concern for allysis and 20 samples?
e.	Data quality or us Impact to data is mi his site. amples Method Blank i. One method Yes No ii. All method Yes No	ability affected? nor as neither of the aforemention of blank reported per matrix, an NA (Please explain.) d blank results less than PQL?	Comments: oned analytes are contaminants of concern for alysis and 20 samples? Comments: Comments:

iv. Do the affected sample(s) have data flags and \Box Yes \Box No \Box NA (Please explain.)	Comments:
No samples were affected as no analytes were detected	d in the method blank sample.
v. Data quality or usability affected? (Please e.	xplain.) Comments:
Data quality or usability was not affected, see comme	nts above.
b. Laboratory Control Sample/Duplicate (LCS/LCSD)	
 i. Organics – One LCS/LCSD reported per ma required per AK methods, LCS required per 	* * * * * * * * * * * * * * * * * * *
□Yes □ ■No □NA (Please explain.)	Comments:
LCS and MS samples were performed for every VOC MSD samples were performed for any VOC analytical evaluated.	
ii. Metals/Inorganics – one LCS and one sample samples?□Yes □ No □■NA (Please explain.)	le duplicate reported per matrix, analysis and 2 Comments:
No metals or inorganic analysis requested.	
iii. Accuracy – All percent recoveries (%R) report And project specified DQOs, if applicable. (AK102 75%-125%, AK103 60%-120%; all of Yes □ No □NA (Please explain.)	AK Petroleum methods: AK101 60%-120%,
See comments below.	
iv. Precision – All relative percent differences (laboratory limits? And project specified DQC LCS/LCSD, MS/MSD, and or sample/sampl other analyses see the laboratory QC pages)	, I
□Yes □ No □■NA (Please explain.)	Comments:
Precision was not evaluated since no LCSD or MSD s	sample was analyzed.

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

The MS recovery for toluene, ethylebenzene, m,p-xylenes, o-xylene, styrene, 1,3,5trimethylbenzene, n-butylbenzne, and 1,2,4-trimethylbenzne 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? \square Yes \square No \square 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? \square Yes \square No \square 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) \square Yes \square No \square NA (Please explain.) Comments: iii. Do the sample results with failed surrogate recoveries have data flags? If so, are the data flags clearly defined? \Box Yes \Box No \Box **•**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, V Soil 	Volatile Chlorinated Solvents, etc.): Water and
 i. One trip blank reported per matrix, analysis a (If not, enter explanation below.) □■Yes□ No □NA (Please explain.) 	and for each cooler containing volatile samples? Comments:
ii. Is the cooler used to transport the trip blank a (If not, a comment explaining why must be e □ ■Yes □ No □NA (Please explain.)	<u> </u>
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 be	blank sample.
v. Data quality or usability affected? (Please ex	plain.) Comments:
Data quality or usability was not affected. See comme	ent above.
e. Field Duplicate	
i. One field duplicate submitted per matrix, and □ ■Yes □ No □NA (Please explain.)	alysis and 10 project samples? Comments:
MW-8 was the field duplicate sample for MW-1.	
ii. Submitted blind to lab?	

□■Yes□ No □NA (Please explain	n.) Comments:
iii. Precision – All relative percent (Recommended: 30% water, 50%)	differences (RPD) less than specified DQOs? woil)
RPD (%) = Absolute value of:	$\frac{(R_1-R_2)}{((R_1+R_2)/2)} \times 100$
Where $R_1 = Sample$ Concer $R_2 = Field$ Duplicate	

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

□ ■ Yes □ No □ NA (Please explain.)

Analyte	Method	Units	N	1W-1	MW-8		RPD
Analyte	Method	Method Units		Qualifier	Result	Qualifier	KPD
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:

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.

	\Box Yes \Box \blacksquare No \Box 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	1?	
		Comments:	
	Not applicable, no decontamination blank was co	llected.	
	iii. Data quality or usability affected? (Plea	se explain.)	
		Comments:	
	Data quality not affected. See comment above.		
7. <u>Ot</u>	her Data Flags/Qualifiers (ACOE, AFCEE, Lab Spe a. Defined and appropriate?	cific, etc.)	
	□■Yes□ No □NA (Please explain.)	Comments:	



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,

Kelley Lovejoy

Lab Director

1956 Richardson Highway

North Pole, Alaska 99705

Kelley Loveyoy



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



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

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
AK102SVW			AK102	SW	3510 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

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- M Manual Integration used to determine area response
- RL Reporting Detection Limit

- E Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Method Detection Limit
- S Spike Recovery outside accepted recovery limits



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

Analyses	Result	RL Qu	al Units	DF	Date A	Analyzed
AK102SVW			AK10)2 SV	N3510	Analyst: KL
Diesel Range Organics C10-C25	0.355	0.232	mg/L	1	9/3/20	014 5:29:06 PM
Surr: o-Terphenyl	93.0	50 - 150	%REC	1	9/3/20	014 5:29:06 PM
GASOLINE RANGE ORGANICS			AK10)1		Analyst: KL
Gasoline Range Organics C6-C10	24,700	1,000	μg/L	10	9/8/20	014 8:16:50 PM
Surr: 4-Bromofluorobenzene	87.7	50 - 150	%REC	10	9/8/20	014 8:16:50 PM
Surr: a,a,a-trifluorotoluene	107	50 - 150	%REC	10	9/8/20	014 8:16:50 PM

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- M Manual Integration used to determine area response
- RL Reporting Detection Limit

- Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Method Detection Limit
- S Spike Recovery outside accepted recovery limits



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

Analyses	Result	RL	Qual	Units	DF	Date A	Analyzed
AK102SVW				AK102	sv	V3510	Analyst: KL
Diesel Range Organics C10-C25	0.0307	0.232	J	mg/L	1	9/3/20	014 5:58:20 PM
Surr: o-Terphenyl	97.2	50 - 150		%REC	1	9/3/20	014 5:58:20 PM
GASOLINE RANGE ORGANICS				AK101			Analyst: KL
Gasoline Range Organics C6-C10	19.2	100	J	μg/L	1	9/8/20	014 9:11:53 PM
Surr: 4-Bromofluorobenzene	93.1	50 - 150		%REC	1	9/8/20	014 9:11:53 PM
Surr: a,a,a-trifluorotoluene	106	50 - 150		%REC	1	9/8/20	014 9:11:53 PM

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- M Manual Integration used to determine area response
- RL Reporting Detection Limit

- Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Method Detection Limit
- S Spike Recovery outside accepted recovery limits



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

Analyses	Result	RL	Qual	Units	DF	Date A	analyzed
AK102SVW				AK102	sw	V 3510	Analyst: KL
Diesel Range Organics C10-C25	0.118	0.232	J	mg/L	1	9/3/20	14 6:27:34 PM
Surr: o-Terphenyl	94.8	50 - 150		%REC	1	9/3/20	14 6:27:34 PM
GASOLINE RANGE ORGANICS				AK101			Analyst: KL
Gasoline Range Organics C6-C10	34.4	100	J	μg/L	1	9/8/20	14 10:06:33 PM
Surr: 4-Bromofluorobenzene	90.2	50 - 150		%REC	1	9/8/20	14 10:06:33 PM
Surr: a,a,a-trifluorotoluene	104	50 - 150		%REC	1	9/8/20	14 10:06:33 PM

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- M Manual Integration used to determine area response
- RL Reporting Detection Limit

- E Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Method Detection Limit
- S Spike Recovery outside accepted recovery limits



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

Analyses	Result	RL Q	ual Units		DF	Date A	Analyzed
AK102SVW				AK102	SV	V3510	Analyst: KL
Diesel Range Organics C10-C25	ND	0.232	mg/L		1	9/3/20	014 6:56:43 PM
Surr: o-Terphenyl	81.9	50 - 150	%RE0		1	9/3/20	014 6:56:43 PM
GASOLINE RANGE ORGANICS				AK101			Analyst: KL
Gasoline Range Organics C6-C10	20.1	100	J μg/L		1	9/8/20	014 11:00:54 PM
Surr: 4-Bromofluorobenzene	92.7	50 - 150	%RE0	2	1	9/8/20	014 11:00:54 PM
Surr: a,a,a-trifluorotoluene	105	50 - 150	%RE0		1	9/8/20	014 11:00:54 PM

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- M Manual Integration used to determine area response
- RL Reporting Detection Limit

- E Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Method Detection Limit
- S Spike Recovery outside accepted recovery limits



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

Analyses	Result	RL Q	ual Units	1	DF	Date A	Analyzed
AK102SVW				AK102	sw	/3510	Analyst: KL
Diesel Range Organics C10-C25	ND	0.232	mg/L		1	9/3/20	014 7:25:47 PM
Surr: o-Terphenyl	91.8	50 - 150	%RE	С	1	9/3/20	014 7:25:47 PM
GASOLINE RANGE ORGANICS				AK101			Analyst: KL
Gasoline Range Organics C6-C10	10.9	100	J μg/L		1	9/8/20	014 11:54:41 PM
Surr: 4-Bromofluorobenzene	94.1	50 - 150	%RE	С	1	9/8/20	014 11:54:41 PM
Surr: a,a,a-trifluorotoluene	105	50 - 150	%RE	С	1	9/8/20	014 11:54:41 PM

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- M Manual Integration used to determine area response
- RL Reporting Detection Limit

- Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Method Detection Limit
- S Spike Recovery outside accepted recovery limits



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 Qu	al Units	DF	Date Analyzed
GASOLINE RANGE ORGANICS			AK10	01	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

- Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- M Manual Integration used to determine area response
- RL Reporting Detection Limit

- E Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Method Detection Limit
- S Spike Recovery outside accepted recovery limits



QC SUMMARY REPORT

WO#: **1408013**

09-Sep-14

Client: Travis/Peterson Environmental Consulting Inc.

Project: Seekins Ford 1197-02 TestCode: AK101W

669 1278 D RPDLimit Qua
) RPDLimit Qua
69
279
D RPDLimit Qua
69
280
D RPDLimit Qua
6 20
0 0
0 0
3: 3: 3: 5: 6: 6:

Qualifiers: E Value above quantitation range

M Manual Integration used to determine area response

R RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Method Detection Limit

RL Reporting Detection Limit

Analyte detected below quantitation limits

P Second column confirmation exceeds



QC SUMMARY REPORT

WO#: **1408013**

09-Sep-14

Client: Travis/Peterson Environmental Consulting Inc.

Project: Seekins Ford 1197-02 TestCode: AK102SVW

roject. Seeking ro	14 1197 02					resteo	de: 71111025 V VV	
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: 824 1	1
Analyte	Result	PQL SPK value S	PK Ref Val	%REC	LowLimit F	HighLimit RPD	Ref Val %RPD	RPDLimit C
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	2
Analyte	Result	PQL SPK value S	PK Ref Val	%REC	LowLimit F	HighLimit RPD	Ref Val %RPD	RPDLimit C
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: 824 3	3
Analyte	Result	PQL SPK value S	PK Ref Val	%REC	LowLimit F	HighLimit RPD	Ref Val %RPD	RPDLimit C
Diesel Range Organics C10-C25	ND	0.232						
Surr: Octacosane	0.0518	0.05000		104	60	120		
				_				

Qualifiers: E Value above quantitation range

M Manual Integration used to determine area response

R RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Method Detection Limit

RL Reporting Detection Limit

Analyte detected below quantitation limits

P Second column confirmation exceeds



Alaska Analytical Laboratory 1956 Richardson Highway North Pole, Alaska 99705

TEL: (907) 488-1271 FAX: (907) 488-0772 Website: <u>www.alaska-analytical.com</u>

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 Kelley Lovejoy Kelley Loveyoy Completed by: Reviewed by: Completed Date: 8/28/2014 11:09:14 AM Reviewed Date: 8/28/2014 11:09:17 AM Carrier name: Client No 🗌 **V** Chain of custody present? Yes **V** No 🗌 Chain of custody signed when relinquished and received? Yes **V** No 🗌 Not Present Chain of custody agrees with sample labels? Yes **V** No \square Are matrices correctly identified on Chain of custody? Yes **V** Is it clear what analyses were requested? No 🗌 No 🗌 Not Present Custody seals intact on sample bottles? Yes **V** Samples in proper container/bottle? Yes No \square **V** No \square NA Were correct preservatives used and noted? **V** No 🗌 Sample containers intact? Yes No 🗌 **V** Sufficient sample volume for indicated test? Yes No 🗌 **V** Were container lables complete (ID, Pres, Date)? Yes All samples received within holding time? Yes **V** No 🗌 No 🗸 Was an attempt made to cool the samples? Yes NA **V** 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: No 🗌 **V** Sample Temp. taken and recorded upon receipt? Yes 1.2 To 3.4 0 **V** No L Water - Were bubbles absent in VOC vials? Yes No Vials **~** No \square Water - Was there Chlorine Present? Yes NA **~** No 🗌 No Water Water - pH acceptable upon receipt? **V** Are Samples considered acceptable? No No 🗌 **V** Custody Seals present? Yes No 🗹 Traffic Report or Packing Lists present? Yes Air Bill 🔽 Sticker Not Present Airbill or Sticker? Airbill No: No 🗸 Sample Tags Present? Yes No 🗹 Sample Tags Listed on COC? Yes Tag Numbers: Intact 🗹 Broken Leaking Sample Condition? Case Number: SDG: SAS: **Cooler Information**

Cooler No	Temp ⁰C	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	



Alaska Analytical Laboratory 1956 Richardson Highway North Pole, Alaska 99705 TEL: (907) 488-1271 FAX: (907) 488-0772

Website: www.alaska-analytical.com

Sample Receipt Checklist

Client Name: TPECIO	01		Work	Order Number 1408013
Any No and/or NA (not	t applicable) response must be	detailed in the comments	section below.	
Client Contacted? Contact Mode: Client Instructions: Date Contacted:	Yes V No No Fax:		☐ In Person:	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.
Regarding: CorrectiveAction:				



Alaska Analytical Laboratory 1956 Richardson Highway North Pole, Alaska 99705

TEL: (907) 488-1271 FAX: (907) 488-0772 Website: <u>www.alaska-analytical.com</u>

Sample Receipt Checklist

Client Name: TPECI01 Work Order Number 1408013

Sample Details

Sample Details SampID	ContainerID	Туре	Org pH	Adj pH	Req Min pH	Req Max pH
1408013-001A	Container-01 of 02	Bottle	0.8 hr.	1103 P21		
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				
1408013-001B	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				



Alaska Analytical Laboratory 1956 Richardson Highway North Pole, Alaska 99705

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Sample Receipt Checklist

Client Name: TPE	CI01		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		

1956 Richardson Highway Vorth Pole, Alaska 99705 Office: (907) 488-1271

Chain of Custody Record

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Cell: (907) 687-7394 Fax: (907) 488-0772					mski	good atocii. wan	Date: 10 127 1 14	COC No. 14-5033
Client Contact Information	Client Proj	Client Project Manager (PM):	r (PM):		Chent F	Client PM Email:	100	
	PM Tel/Fa	PM Tel/Fax: QD7 - 455-	55-72	_5224	Lab Cor	Lab Contact: Kelley Lovejoy	Carrier:	Joh Mo
220 Court St		Analysis Turnaround Time	rnaround 3	ime	П			
Fairbooks AK 99701	Request	Requested Turnaround Time if different from below:	Time if differe	nt from below		5		33
0		,		1	1	50		Comments:
MISSILL	8	10 business days (Standard)	days (Stand	ard)		Λ		
Project Name: 0 01 O		3 bus	3 business days			C		
Scarrins Fords			2 Business Days 1 Business Day			7/H 7/728		
1 0	Sample Date	Sample	Sample Type	Matrix	# of Comt.			Sample Specific Notes:
1400 -	12/8	10.45	9	3	00	XXX		
2000	42/8	11:000	9	3	80	×		
11111-3	8/27	1:100	3	3	8	X		
MW-3	42/8	10	9	3	8	××××		
41111-7	8/27	3:30P	8	3	0	X		
MW - 6	8/27			3	90	X		
TRIP BLANKS	#2/8	5,000	P	3	e	X		
					T			
	-				T			
					П			
					-			
Preservation Used: 1= Ice 2 = Methanol 3 = Other	er HCI					Sample Disposal (A fee may,	be assessed if samples are	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Non-Hazard Flammable	Skin Irritant		Poison B		Uninoun	Return To Client	Disposal By Lab	Archive For Months
ions/QC Requirement	Comments	Please note	e if there	S Mercu	ry in the san Stock	cury in the sample.) Westedly Seals Intact		Big Cooler Temp Bloom 3, 40C
A NO.	Company:	PECI		Date/Ti	Date/Time: 10:00a.		Сопрану:	9/28/14 10:15Hm
Relinquished by (Prin/Signature):	Company:	56		Date/Time:	me:	Received by (Print/Signathfre):	Company:	Louis Line.
Relinquished by (Print/Signature):	Company.	y.		Date/Time:	me;	Received by (Print/Signature):	Company:	Date/Time:

CUSTODY SEAL

ENVIRONMENTAL SAMELING SUPPLY
9601 San Leandro St. Oakland, CA 800-233-8425

Signature: MS Physics

CUSTODY SEAL

STET STANTONING IN

Signature:

Date/Time: Cug 28, 2019

Signature:

CUSTODY SEAL

Date/Time: Cluy 28,2014

Laboratory Data Review Checklist

Completed by:	Ashley Jaramillo
Title:	Chemist Date: September 12, 2014
CS Report Name:	Seekins Ford Report Date: September 9, 2014
Consultant Firm:	Travis/Peterson Environmental Consulting, Inc.
Laboratory Name	: Alaska Analytical Laboratory Laboratory Report Number: 1408013
ADEC File Numb	per: 100.26.131 ADEC RecKey Number:
	ADEC CS approved laboratory receive and <u>perform</u> all of the submitted sample analyses? Yes \(\subseteq \text{No} \text{NA} \text{(Please explain.)} \) Comments:
laborat □ ■ All VOC	samples were transferred to another "network" laboratory or sub-contracted to an alternate tory, was the laboratory performing the analyses ADEC CS approved? Yes \(\text{No} \text{NA} \) (Please explain.) C by 8260 samples were transferred from Alaska Analytical in North Pole, AK to Fremont
2. Chain of Custo a. COC in	al in Seattle Washington. ody (COC) Information completed, signed, and dated (including released/received by)? IYes □ No □NA (Please explain.) Comments:
	t analyses requested? Yes \(\text{No} \text{NA (Please explain.)} \) Comments:
a. Sample	mple Receipt Documentation e/cooler temperature documented and within range at receipt (4° ± 2° C)? Yes □■ No □NA (Please explain.) Comments:
below the	ceipt at Alaska Analytical Laboratory, the temperature blank for the small cooler was acceptable temperature range (1.3° C). Since the temperature was above freezing are and samples were reportedly received in good condition, no data were qualified.

D.	Sample preservation acceptable – acidified waters, Me Volatile Chlorinated Solvents, etc.)? □■Yes□No□NA (Please explain.)	ethanol preserved VOC soil (GRO, BTE Comments:
c.	Sample condition documented – broken, leaking (Method Sample No □NA (Please explain.)	hanol), zero headspace (VOC vials)? Comments:
	Aside from the temperature discrepancy noted above, no ample login. Samples were otherwise all received in go	-
d.	If there were any discrepancies, were they documented containers/preservation, sample temperature outside of samples, etc.?	* · · *
	□ ■Yes □ No □NA (Please explain.)	Comments:
	The temperature discrepancy noted above was documen	ted.
_	Data quality on yeahility offerted 9 (Dlaces eventely)	
e.	Data quality or usability affected? (Please explain.)	Comments:
Γ	Data quality or usability not affected, see comments abo	ve.
_		
	Narrative Present and understandable? □■Yes□No□NA (Please explain.)	Comments:
1-	Discussion and OC failures identified by the 1	al O
υ.	Discrepancies, errors or QC failures identified by the l □■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 t	o the case narrative? Comments:

5. <u>Sam</u>	nples Results	
;	a. Correct analyses performed/reported as requested on C □■Yes□ No □NA (Please explain.)	COC? Comments:
1	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 t project?	the minimum required detection level for the
	☐■Yes☐ No☐NA (Please explain.)	Comments:
(e. Data quality or usability affected?	Comments:
	Data quality or usability not affected.	
	Samples a. Method Blank i. One method blank reported per matrix, analysis □■Yes□No□NA (Please explain.)	s and 20 samples? 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	l blank samples.
	iv. Do the affected sample(s) have data flags and if \Box Yes \Box No \Box \blacksquare NA (Please explain.)	f so, are the data flags clearly defined? Comments:
	No samples were affected as no analytes were detected in	n 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) \square Yes \square No \square NA (Please explain.) Comments: ii. Metals/Inorganics – one LCS and one sample duplicate reported per matrix, analysis and 20 samples? \square Yes \square No \square No \square 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) \square Yes \square No \square 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) \square Yes \square No \square 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? \square Yes \square No \square No \square 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.

i. Are surrogate recoveries reported for orga □■Yes□ No □NA (Please explain.)	anic analyses – field, QC and laboratory samples? Comments:
· · · · · · · · · · · · · · · · · · ·	reported and within method or laboratory limits? e. (AK Petroleum methods 50-150 %R; all other Comments:
iii. Do the sample results with failed surrogate flags clearly defined? □Yes □ No □■NA (Please explain.)	te recoveries have data flags? If so, are the data Comments:
Tes Two Tank (Flease explain.)	Comments.
No samples had failed surrogate recoveries.	
iv. Data quality or usability affected? (Use the	ne comment box to explain.) Comments:
Data quality or usability was not affected. See com	ment above.
 d. Trip blank – Volatile analyses only (GRO, BTEX Soil i. One trip blank reported per matrix, analys (If not, enter explanation below.) □ ■Yes □ No □NA (Please explain.) 	K, Volatile Chlorinated Solvents, etc.): Water and sis and for each cooler containing volatile samples? Comments:
ii. Is the cooler used to transport the trip blan (If not, a comment explaining why must b □■Yes □ No □NA (Please explain.)	
iii. All results less than PQL? □■Yes□ No □NA (Please explain.) GRO was detected in the trip blank sample, however	Comments:

c. Surrogates – Organics Only

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:									
Da	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:										
M	W-8 was the fi	ield duplica	ate sampl	e for MW	7-1.					
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) $ \begin{array}{l} \text{RPD (\%) = Absolute value of:} & \underline{(R_1 \text{-}R_2)} \\ \hline & \underline{(R_1 \text{-}R_2)} \\ \hline & \underline{x \ 100} \\ \hline & \underline{((R_1 \text{+}R_2)/2)} \\ \end{array} $ Where R_1 = Sample Concentration R_2 = Field Duplicate Concentration R_2 = Field Duplicate Concentration R_3 Comments:										
A	l detected field	ield duplicate results were comparable (RPD \leq 30), see table MW-1 MW-8			Delow.					
	Analyte	Method	Units	Result	Qualifier	Result	Qualifier	RPD		
	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 co	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:							