



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

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Principal

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September 24, 2012
1197-02

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

Attention: Al Haynes-Service Manager

Re: 2012 Annual Groundwater Monitoring Report, File No. 100.26.131

Dear Mr. Haynes:

Travis/Peterson Environmental Consulting, Inc. (TPECI) is pleased to present our letter report summarizing data obtained from the groundwater sampling event conducted on September 4 and 5, 2012 at Seekins Ford – Lincoln, Inc. (Figures 1 and 2 in Attachment 1).

On September 4 and 5, 2012 monitoring wells MW-1, MW-2, MW-3, MW-6 and MW-7 were sampled. The sample labeled MW-5 is a duplicate of MW-2. The samples were submitted to Alaska Analytical Laboratory and Pace Analytical Laboratory 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	14.93	24.60	flush mount
MW-2	15.38	24.47	flush mount
MW-3	14.35	22.64	flush mount
MW-6	15.00	22.10	flush mount
MW-7	15.59	21.45	flush mount

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OCT 05 2012

**CONTAMINATED
SITES
FAIRBANKS**

Table 2. 2012 Analytical Results

Sample	DRO (mg/L)	GRO (mg/L)	VOC (µg/L)
MW-1	0.670	75.3	acetone: 20.5 benzene: 4.7 n-butylbenzene: 15.3 sec-butylbenzene: 7.5 1,4-dichlorobenzene: 1.3 ethylbenzene: 3,090 isopropylbenzene(cumene): 117 p-isopropyltoluene: 7.4 naphthalene: 90.9 n-propylbenzene: 176 styrene: 183 toluene: 3,670 1,2,3-trichlorobenzene: 4.2 1,2,4-trichlorobenzene: 4.5 Trichlorofluoromethane: 1.5 1,2,4-trimethylbenzene: 2,220 1,3,5-trimethylbenzene: 587 Xylenes (total): 18,400 m&p xylene: 12,200 o-xylene: 6,190
MW-2	0.144	0.0566J	tetrachloroethene: 5.2 1,1,1-trichloroethane: 3.8 trichlorofluoromethane: 1.4
MW-2 duplicate	0.127J	0.0374J	tetrachloroethene: 5.3 1,1,1-trichloroethane: 3.7 trichlorofluoromethane: 1.3
MW-3	0.172	0.0408J	1,2-dichlorobenzene: 4.8 p-Isopropyltoluene: 2.2 naphthalene: 4.7 tetrachloroethene: 1.4 1,2,4-trimethylbenzene: 1.7
MW-6	0.0160J	0.0347J	tetrachloroethene: 1.6 trichlorofluoromethane: 3.8
MW-7	ND (<0.135)	0.026J	trichlorofluoromethane: 13.4
Cleanup Level ^a	1.5	2.2	acetone: 33,000 benzene: 5.0 n-butylbenzene: 370 1,4-dichlorobenzene: 75 ethylbenzene: 700 isopropylbenzene: 3,700 p-isopropyltoluene: n/a naphthalene: 730 ^a Styrene: 100 tetrachloroethene: 5.0 ^c trichlorofluoromethane: 11,000 ^a 1,1,1-trichloroethane: 200 1,3,5-Trimethylbenzene: 1,800 ^a 1,2,4-Trimethylbenzene: 1,800 ^a

^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

Results indicate low to non-detect levels of GRO compounds in all wells except in MW-1 where GRO was detected at 75.3 mg/L (2.2 mg/L cleanup standard). In 2008, GRO was detected in MW-1 at 15.5 mg/L and in 2007 at 47.6 mg/L. The 2012 detection of GRO in MW-1 represents a fourfold increase in GRO levels. DRO was either non-detect or detected at J-flagged (estimated) concentrations in all wells except MW-1 where it was detected at 0.67 mg/L and the cleanup standard is 1.5 mg/L. The most recent past results for DRO in MW-1 are from the 2008 sampling event where DRO was detected at 1.68 mg/L. The possibility exists that the increased GRO in MW-1 is a breakdown product of DRO.

However, GRO was not the only petroleum related product to have increased in MW-1. Toluene was detected in 2008 at 1.75 mg/L and in 2012 at 3.67 mg/L with a cleanup standard of 1.0 mg/L. Ethylbenzene was detected in 2008 at 1.08 mg/L and in 2012 at 3.09 mg/L, while benzene concentrations decreased from 6.3 mg/L in 2008 to 4.7 mg/L in 2012 which is just below the cleanup level of 5.0 mg/L. Total xylenes were detected in MW-1 at 18.4 mg/L above the cleanup standard of 10 mg/L. Total xylenes were detected at 5.79 mg/L in 2008.

The VOC 1,2,4-trimethylbenzene increased since 2008 when it was detected at 735 µg/L to 2,200 µg/L in 2012 and has a cleanup standard of 1,800 µg/L. Other VOCs detected in MW-1 include naphthalene, acetone, trichlorofluoromethane, 1,4-dichlorobenzene, isopropylbenzene, n-propylbenzene, 1,3,5-trimethylbenzene, sec-butylbenzene, p-isopropyltoluene, styrene, and n-butylbenzene. The concentrations of each of these compounds are presented in Table 2 and in Attachment 2 for comparison to historic trends.

Remaining Wells

Concentrations of DRO in most samples were non-detect or detected just above the method detection limit and below the practical quantitation limit and were therefore J-flagged as estimated values by the laboratory.

BTEX constituents were not detected in the remaining wells in 2012. Some VOCs were detected in the other wells however most were below cleanup standards. Tetrachloroethene (PCE) was detected in MW-2 and its duplicate sample at 5.2 µg/L and 5.3 µg/L respectively. The cleanup standard for PCE is 5.0 µg/L.

In 2010, Sample MW-7 was also analyzed for sulfolane by EPA method 8270 and results were non-detect at 0.010 mg/L reporting limit.

Conclusions

The increased concentrations observed in MW-1 could be due to the breakdown of larger hydrocarbons such as DRO. However, this is not certain. TPECI recommends sampling MW-1 again in 2013 to get back to back annual monitoring data for this well only. This should help determine if an increasing trend in concentrations is evident or not. TPECI also requests to waive the DRO sampling requirement in all wells except MW-1 since it was either non-detect or detected below the cleanup standard at all wells. The next scheduled sampling event for the entire project is September 2014.

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

Sincerely,

A handwritten signature in black ink that reads "Melissa S. Shippey". The signature is written in a cursive style with a large, looping 'M' and 'S'.

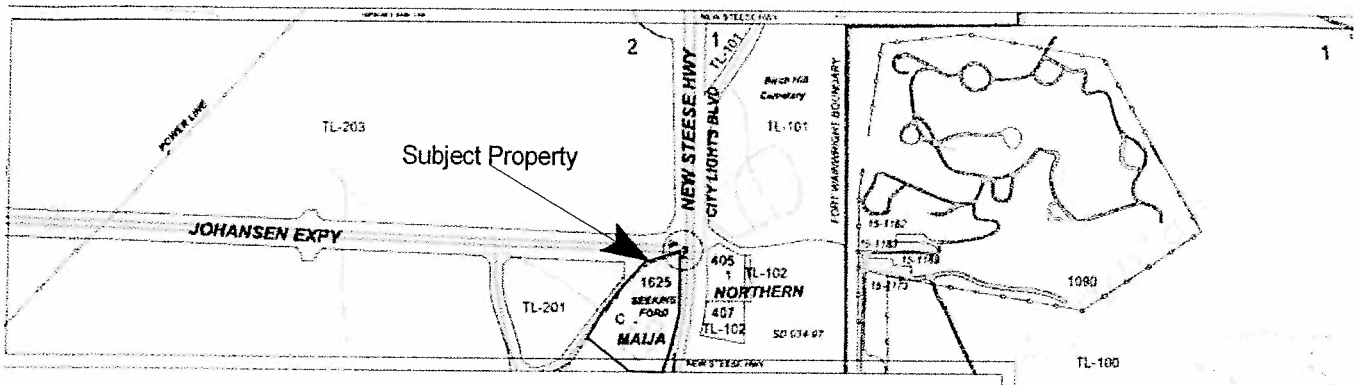
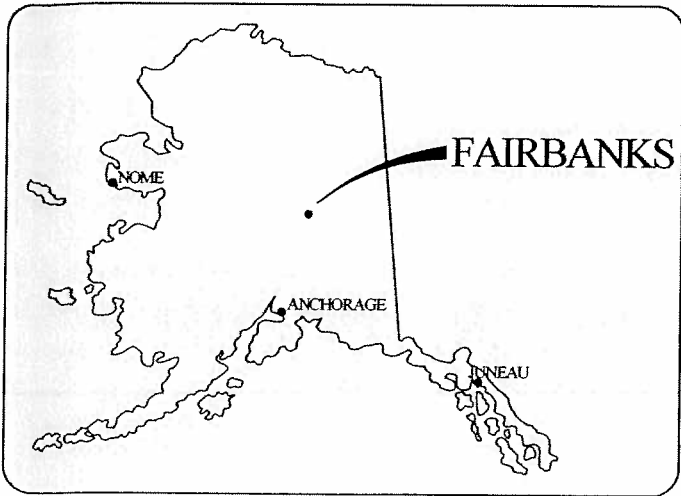
Melissa S. Shippey
Senior Scientist

Cc: Tamara Cardona-Marek, Environmental Program Specialist III, State of Alaska, Department of Environmental Conservation.

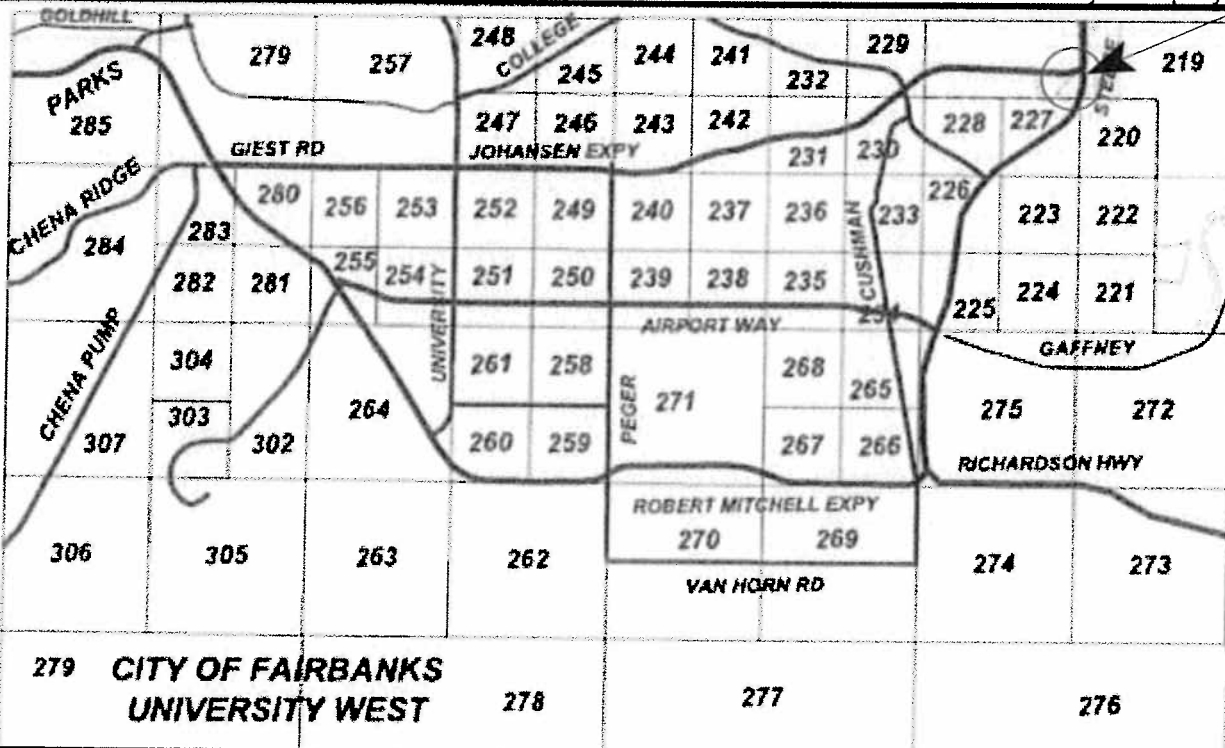
Attachments: Figures 1 and 2
Historical Groundwater Data Table
Laboratory Data Report

ATTACHMENT 1

FIGURES



Subject Property Overview



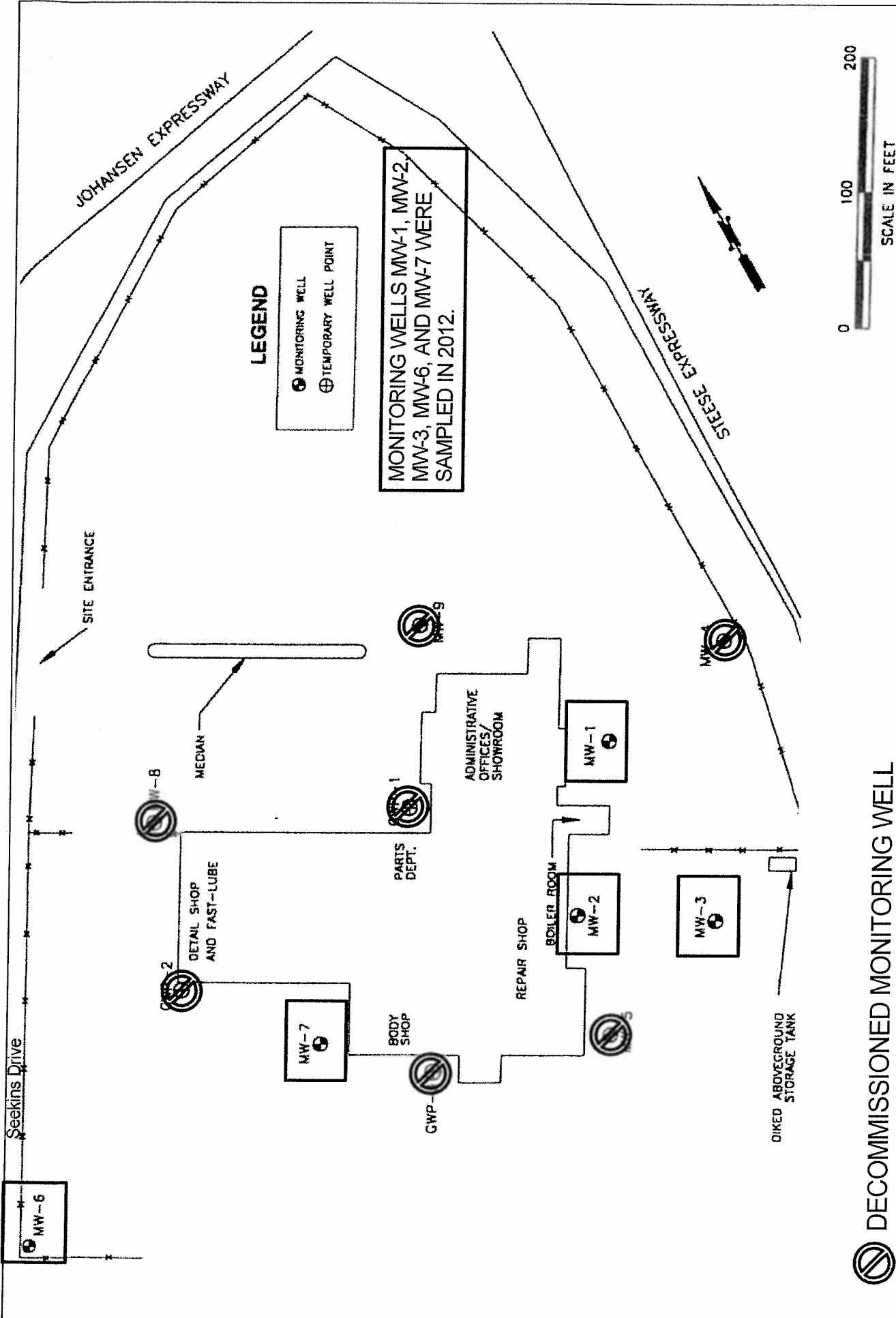
TRAVIS/PETERSON ENVIRONMENTAL CONSULTING, INC.
 329 2ND STREET
 FAIRBANKS, ALASKA 99701

FIGURE 1
 SEEKINS FORD-LINCOLN-MERCURY LOCATION & VICINITY

PROJECT No: 1197-02 FILE: 1197/02/2012/Figure 1-Location & Vicinity.SKF

DATE: 09/24/2012

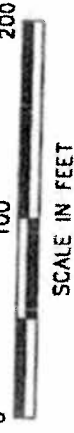
SCALE: AS SHOWN



MONITORING WELLS MW-1, MW-2, MW-3, MW-6, AND MW-7 WERE SAMPLED IN 2012.

LEGEND

- ⊕ MONITORING WELL
- ⊙ TEMPORARY WELL POINT



DECOMMISSIONED MONITORING WELL

SEEKINS FORD-LINCOLN-MERCURY		FIGURE 2 SITE PLAN
TRAVIS/PETERSON ENVIRONMENTAL CONSULTING, INC. 329 2ND STREET FAIRBANKS, ALASKA 99701		SCALE: AS SHOWN
PROJECT No: 1197-02	FILE: S:\Projects\1197\02\2012\Figure 2-Site Plan.SKF	DATE: 09/24/12

ATTACHMENT 2
HISTORICAL GROUNDWATER DATA

ATTACHMENT 3
LABORATORY DATA REPORT



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

September 20, 2012

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

RE: Seekins Ford 1197-02

Order No.: 1209003

Dear Melissa Shippey:

Alaska Analytical Laboratory received 8 sample(s) on 9/5/2012 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 7 water samples. The analyses were performed by Pace Analytical Services, Inc. of Seattle, WA. Their report is attached for your use.

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

Sincerely,

Kelley Lovejoy
Chief Chemist
1956 Richardson Highway
North Pole, Alaska 99705



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

Case Narrative

WO#: 1209003
Date: 9/20/2012

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.

1209003-001C SW8260BW was subcontracted
1209003-002C SW8260BW was subcontracted
1209003-003C SW8260BW was subcontracted
1209003-004C SW8260BW was subcontracted
1209003-005C SW8260BW was subcontracted
1209003-006C SW8260BW was subcontracted
1209003-008A SW8260BW was subcontracted



Alaska Analytical Laboratory
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 North Pole, Alaska 99705
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Analytical Report

(consolidated)

WO#: 1209003

Date Reported: 9/20/2012

CLIENT: Travis/Peterson Environmental Consulting Inc. **Collection Date:** 9/4/2012 1:20:00 PM
Project: Seekins Ford 1197-02
Lab ID: 1209003-001 **Matrix:** WATER
Client Sample ID MW-1

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
AK102SVW					AK102	SW3510 Analyst: KL
Diesel Range Organics C10-C25	0.670	0.273		mg/L	2	9/12/2012 12:20:16 AM
Surr: o-Terphenyl	45.0	50-150	S01	%REC	2	9/12/2012 12:20:16 AM

NOTES:

S01 - Dilution used resulted in surrogate values outside the established control Limits.

GASOLINE RANGE ORGANICS					AK101	Analyst: KL
Gasoline Range Organics C6-C10	75,300	5,000		µg/L	50	9/11/2012 9:53:45 PM
Surr: 4-Bromofluorobenzene	92.1	50-150		%REC	50	9/11/2012 9:53:45 PM
Surr: a,a,a-trifluorotoluene	108	50-150		%REC	50	9/11/2012 9:53:45 PM

Qualifiers:

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



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Analytical Report

(consolidated)

WO#: 1209003

Date Reported: 9/20/2012

CLIENT: Travis/Peterson Environmental Consulting Inc. **Collection Date:** 9/4/2012 2:32:00 PM
Project: Seekins Ford 1197-02
Lab ID: 1209003-002 **Matrix:** WATER
Client Sample ID MW-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
AK102SVW					AK102	SW3510 Analyst: KL
Diesel Range Organics C10-C25	0.0160	0.137	J	mg/L	1	9/12/2012 1:22:20 AM
Surr: o-Terphenyl	89.8	50-150		%REC	1	9/12/2012 1:22:20 AM
GASOLINE RANGE ORGANICS					AK101	Analyst: KL
Gasoline Range Organics C6-C10	34.7	100	J	µg/L	1	9/11/2012 10:46:56 PM
Surr: 4-Bromofluorobenzene	93.8	50-150		%REC	1	9/11/2012 10:46:56 PM
Surr: a,a,a-trifluorotoluene	104	50-150		%REC	1	9/11/2012 10:46:56 PM

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



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Analytical Report

(consolidated)

WO#: 1209003

Date Reported: 9/20/2012

CLIENT: Travis/Peterson Environmental Consulting Inc. **Collection Date:** 9/5/2012 10:45:00 AM
Project: Seekins Ford 1197-02
Lab ID: 1209003-003 **Matrix:** WATER
Client Sample ID MW-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
AK102SVW					AK102	SW3510 Analyst: KL
Diesel Range Organics C10-C25	0.144	0.136		mg/L	1	9/12/2012 1:53:23 AM
Surr: o-Terphenyl	102	50-150		%REC	1	9/12/2012 1:53:23 AM
GASOLINE RANGE ORGANICS					AK101	Analyst: KL
Gasoline Range Organics C6-C10	56.6	100	J	µg/L	1	9/6/2012 8:46:47 PM
Surr: 4-Bromofluorobenzene	119	50-150		%REC	1	9/6/2012 8:46:47 PM
Surr: a,a,a-trifluorotoluene	84.8	50-150		%REC	1	9/6/2012 8:46:47 PM

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



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Analytical Report

(consolidated)

WO#: 1209003

Date Reported: 9/20/2012

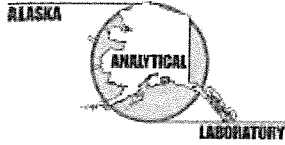
CLIENT: Travis/Peterson Environmental Consulting Inc. **Collection Date:** 9/5/2012 11:30:00 AM
Project: Seekins Ford 1197-02
Lab ID: 1209003-004 **Matrix:** WATER
Client Sample ID MW-5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
AK102SVW					AK102	SW3510 Analyst: KL
Diesel Range Organics C10-C25	0.127	0.135	J	mg/L	1	9/12/2012 2:24:44 AM
Surr: o-Terphenyl	87.5	50-150		%REC	1	9/12/2012 2:24:44 AM
GASOLINE RANGE ORGANICS					AK101	Analyst: KL
Gasoline Range Organics C6-C10	37.4	100	J	µg/L	1	9/6/2012 9:13:16 PM
Surr: 4-Bromofluorobenzene	120	50-150		%REC	1	9/6/2012 9:13:16 PM
Surr: a,a,a-trifluorotoluene	85.0	50-150		%REC	1	9/6/2012 9:13:16 PM

DRO:
$$\frac{(0.144 - 0.127J)}{[(0.144 + 0.127J)/2]} \times 100 = \frac{0.017}{0.135} \times 100 = 0.125 \times 100 = 12.5\% \text{ RPD}$$

GRO:
$$\frac{(56.6J - 37.4J)}{[(56.6J + 37.4J)/2]} \times 100 = \frac{19.2}{47} \times 100 = 0.40 \times 100 = 40\% \text{ RPD}$$

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



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Analytical Report

(consolidated)

WO#: 1209003

Date Reported: 9/20/2012

CLIENT: Travis/Peterson Environmental Consulting Inc. **Collection Date:** 9/5/2012 12:00:00 PM
Project: Seekins Ford 1197-02
Lab ID: 1209003-005 **Matrix:** WATER
Client Sample ID MW-7

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
AK102SVW					AK102	SW3510 Analyst: KL
Diesel Range Organics C10-C25	ND	0.135		mg/L	1	9/12/2012 2:55:52 AM
Surr: o-Terphenyl	92.2	50-150		%REC	1	9/12/2012 2:55:52 AM
GASOLINE RANGE ORGANICS					AK101	Analyst: KL
Gasoline Range Organics C6-C10	26.0	100	J	µg/L	1	9/6/2012 9:39:41 PM
Surr: 4-Bromofluorobenzene	122	50-150		%REC	1	9/6/2012 9:39:41 PM
Surr: a,a,a-trifluorotoluene	83.5	50-150		%REC	1	9/6/2012 9:39:41 PM

Qualifiers:

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



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Analytical Report

(consolidated)

WO#: 1209003

Date Reported: 9/20/2012

CLIENT: Travis/Peterson Environmental Consulting Inc. **Collection Date:** 9/5/2012 1:00:00 PM
Project: Seekins Ford 1197-02
Lab ID: 1209003-006 **Matrix:** WATER
Client Sample ID MW-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
AK102SVW					AK102	SW3510 Analyst: KL
Diesel Range Organics C10-C25	0.172	0.135		mg/L	1	9/12/2012 3:26:31 AM
Surr: o-Terphenyl	104	50-150		%REC	1	9/12/2012 3:26:31 AM
GASOLINE RANGE ORGANICS					AK101	Analyst: KL
Gasoline Range Organics C6-C10	40.8	100	J	µg/L	1	9/11/2012 11:39:51 PM
Surr: 4-Bromofluorobenzene	94.0	50-150		%REC	1	9/11/2012 11:39:51 PM
Surr: a,a,a-trifluorotoluene	106	50-150		%REC	1	9/11/2012 11:39:51 PM

Qualifiers:	<ul style="list-style-type: none"> * Value exceeds Maximum Contaminant Level E Value above quantitation range M Manual Integration used to determine area response PL Permit Limit S Spike Recovery outside accepted recovery limits 	<ul style="list-style-type: none"> B Analyte detected in the associated Method Blank H Holding times for preparation or analysis exceeded ND Not Detected at the Method Detection Limit RL Reporting Detection Limit
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Analytical Report

(consolidated)

WO#: 1209003

Date Reported: 9/20/2012

CLIENT: Travis/Peterson Environmental Consulting Inc. **Collection Date:** 9/5/2012 1:20:00 PM
Project: Seekins Ford 1197-02
Lab ID: 1209003-007 **Matrix:** WATER
Client Sample ID Trip Blank - GRO

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
GASOLINE RANGE ORGANICS					AK101	Analyst: KL
Gasoline Range Organics C6-C10	14.1	100	J	µg/L	1	9/6/2012 7:27:21 PM
Surr: 4-Bromofluorobenzene	119	50-150		%REC	1	9/6/2012 7:27:21 PM
Surr: a,a,a-trifluorotoluene	85.0	50-150		%REC	1	9/6/2012 7:27:21 PM

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



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 Website: www.alaska-analytical.com

QC SUMMARY REPORT

WO#: 1209003
 20-Sep-12

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

MDL # 10.0

TestCode: AK101W

Sample ID: MB-R619	SampType: MBLK	TestCode: AK101W	Units: µg/L	Prep Date:	RunNo: 619						
Client ID: PBW	Batch ID: R619	TestNo: AK101		Analysis Date: 9/6/2012	SeqNo: 5910						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline Range Organics C6-C10	16.5	100									
Surr: 4-Bromofluorobenzene	50.9				102	60	120				
Surr: a,a,a-trifluorotoluene	50.7				101	60	120				J

Above MDL below PQL

Sample ID: LCS-R619	SampType: LCS	TestCode: AK101W	Units: µg/L	Prep Date:	RunNo: 619						
Client ID: LCSW	Batch ID: R619	TestNo: AK101		Analysis Date: 9/6/2012	SeqNo: 5918						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline Range Organics C6-C10	2,520	100			101	60	120				
Surr: 4-Bromofluorobenzene	50.9				102	60	120				
Surr: a,a,a-trifluorotoluene	51.8				104	60	120				

Sample ID: LCSD-R619	SampType: LCSD	TestCode: AK101W	Units: µg/L	Prep Date:	RunNo: 619						
Client ID: LCSS02	Batch ID: R619	TestNo: AK101		Analysis Date: 9/6/2012	SeqNo: 5919						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

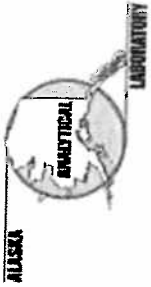
Gasoline Range Organics C6-C10	2,510	100			101	60	120	2,517	0.0994	20	
Surr: 4-Bromofluorobenzene	50.6				101	60	120		0	0	
Surr: a,a,a-trifluorotoluene	51.6				103	60	120		0	0	

Sample ID: MB-R620	SampType: MBLK	TestCode: AK101W	Units: µg/L	Prep Date:	RunNo: 620						
Client ID: PBW	Batch ID: R620	TestNo: AK101		Analysis Date: 9/11/2012	SeqNo: 5920						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline Range Organics C6-C10	32.5	100									J
--------------------------------	------	-----	--	--	--	--	--	--	--	--	---

Qualifiers:

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



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 Website: www.alaska-analytical.com

QC SUMMARY REPORT

WO#: 1209003
 20-Sep-12

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

TestCode: AK101W

Sample ID:	MBLK	SampType:	TestCode:	AK101W	Units:	µg/L	Prep Date:	RunNo:	620		
Client ID:	PBW	Batch ID:	R620	TestNo:	AK101	Analysis Date:	9/11/2012	SeqNo:	5920		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	51.0		50.00		102	60	120				
Surr: a,a,-trifluorotoluene	49.9		50.00		99.8	60	120				

Sample ID:	LCS-R620	SampType:	LCS	TestCode:	AK101W	Units:	µg/L	Prep Date:	RunNo:	620	
Client ID:	LCSW	Batch ID:	R620	TestNo:	AK101	Analysis Date:	9/11/2012	SeqNo:	5929		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics C6-C10	2,540	100	2,500	0	102	60	120				
Surr: 4-Bromofluorobenzene	50.4		50.00		101	60	120				
Surr: a,a,-trifluorotoluene	51.5		50.00		103	60	120				

Sample ID:	LCSD-R620	SampType:	LCSD	TestCode:	AK101W	Units:	µg/L	Prep Date:	RunNo:	620	
Client ID:	LCSS02	Batch ID:	R620	TestNo:	AK101	Analysis Date:	9/11/2012	SeqNo:	5930		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics C6-C10	2,570	100	2,500	0	103	60	120	2,538	1,12	20	
Surr: 4-Bromofluorobenzene	50.2		50.00		100	60	120		0	0	
Surr: a,a,-trifluorotoluene	51.2		50.00		102	60	120		0	0	

Qualifiers:

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



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QC SUMMARY REPORT

WO#: 1209003
 20-Sep-12

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

TestCode: AK102SVW

Sample ID:	LCS-299	SampType:	LCS	TestCode:	AK102SVW	Units:	mg/L	Prep Date:	9/6/2012	RunNo:	617
Client ID:	LCSW	Batch ID:	299	TestNo:	AK102	SW3510		Analysis Date:	9/11/2012	SeqNo:	5894
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics C10-C25	2.54	0.135	2.500	0	102	75	125				
Surr: o-Terphenyl	0.0521		0.05000		104	60	120				

Sample ID:	LCSD-299	SampType:	LCSD	TestCode:	AK102SVW	Units:	mg/L	Prep Date:	9/6/2012	RunNo:	617
Client ID:	LCSS02	Batch ID:	299	TestNo:	AK102	SW3510		Analysis Date:	9/11/2012	SeqNo:	5895
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics C10-C25	2.52	0.135	2.500	0	101	75	125	2.543	0.938	20	
Surr: o-Terphenyl	0.0526		0.05000		105	60	120		0	0	

Sample ID:	MB-299	SampType:	MBLK	TestCode:	AK102SVW	Units:	mg/L	Prep Date:	9/6/2012	RunNo:	617
Client ID:	PBW	Batch ID:	299	TestNo:	AK102	SW3510		Analysis Date:	9/11/2012	SeqNo:	5896
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics C10-C25	ND	0.135	0.05000		93.0	60	120				
Surr: o-Terphenyl	0.0465										

Qualifiers:

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



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Sample Receipt Checklist

Client Name: **TPECI01**

Work Order Number **1209003**

Sample Details

SampID	ContainerID	Type	Org pH	Adj pH	Req Min pH	Req Max pH
1209003-001A	Container-01 of 02	Bottle				
1209003-001A	Container-02 of 02	Bottle				
1209003-001B	Container-01 of 03	Bottle				
1209003-001B	Container-02 of 03	Bottle				
1209003-001B	Container-03 of 03	Bottle				
1209003-001C	Container-01 of 03	Bottle				
1209003-001C	Container-02 of 03	Bottle				
1209003-001C	Container-03 of 03	Bottle				
1209003-002A	Container-01 of 02	Bottle				
1209003-002A	Container-02 of 02	Bottle				
1209003-002B	Container-01 of 03	Bottle				
1209003-002B	Container-02 of 03	Bottle				
1209003-002B	Container-03 of 03	Bottle				
1209003-002C	Container-01 of 03	Bottle				
1209003-002C	Container-02 of 03	Bottle				
1209003-002C	Container-03 of 03	Bottle				
1209003-003A	Container-01 of 02	Bottle				
1209003-003A	Container-02 of 02	Bottle				
1209003-003B	Container-01 of 03	Bottle				
1209003-003B	Container-02 of 03	Bottle				
1209003-003B	Container-03 of 03	Bottle				
1209003-003C	Container-01 of 03	Bottle				
1209003-003C	Container-02 of 03	Bottle				
1209003-003C	Container-03 of 03	Bottle				
1209003-004A	Container-01 of 02	Bottle				
1209003-004A	Container-02 of 02	Bottle				
1209003-004B	Container-01 of 03	Bottle				
1209003-004B	Container-02 of 03	Bottle				
1209003-004B	Container-03 of 03	Bottle				



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Sample Receipt Checklist

Client Name: TPECI01

Work Order Number 1209003

1209003-004C	Container-01 of 03	Bottle
1209003-004C	Container-02 of 03	Bottle
1209003-004C	Container-03 of 03	Bottle
1209003-005A	Container-01 of 02	Bottle
1209003-005A	Container-02 of 02	Bottle
1209003-005B	Container-01 of 03	Bottle
1209003-005B	Container-02 of 03	Bottle
1209003-005B	Container-03 of 03	Bottle
1209003-005C	Container-01 of 03	Bottle
1209003-005C	Container-02 of 03	Bottle
1209003-005C	Container-03 of 03	Bottle
1209003-006A	Container-01 of 02	Bottle
1209003-006A	Container-02 of 02	Bottle
1209003-006B	Container-01 of 03	Bottle
1209003-006B	Container-02 of 03	Bottle
1209003-006B	Container-03 of 03	Bottle
1209003-006C	Container-01 of 03	Bottle
1209003-006C	Container-02 of 03	Bottle
1209003-006C	Container-03 of 03	Bottle
1209003-007A	Container-01 of 03	Bottle
1209003-007A	Container-02 of 03	Bottle
1209003-007A	Container-03 of 03	Bottle
1209003-008A	Container-01 of 03	Bottle
1209003-008A	Container-02 of 03	Bottle
1209003-008A	Container-03 of 03	Bottle

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Chain of Custody Record



Client Contact Information		Client Project Manager (PM): M. S. Soper		Date: 9/4/12		COC No: 12-0067	
PM Tel/Fax: 907-455-9225		Lab Contact: Kelley Lovejoy		Carrier:		Page 1 of 1	
Analysis Turnaround Time		Requested Turnaround Time if different from below:		Comments:		AAL Job No. 67	
<input checked="" type="checkbox"/> 10 business days (Standard) <input type="checkbox"/> 3 business days <input type="checkbox"/> 2 Business Days <input type="checkbox"/> 1 Business Day				VOC by EM 8260 GPO by AK101 DROBY AK102			
Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Sample Specific Notes:	
NAW-1	9/4/12	1:20P	G	W	8	X	
NAW-4	9/4/12	2:32P	G	W	8	X	
NAW-2	9/5/12	8:04A	G	W	8	X	
NAW-5	9/5/12	11:30A	G	W	8	X	
NAW-7	9/5/12	12:00P	G	W	8	X	
NAW-3	9/5/12	1:00P	G	W	8	X	
TRIP BLANK	9/5/12	1:20P	G	W	0	X	
Preservation Used: <input checked="" type="checkbox"/> Ice, <input type="checkbox"/> 2 = Methanol, <input type="checkbox"/> 3 = Other		Possible Hazard Identification: <input type="checkbox"/> Non-Hazard, <input type="checkbox"/> Flammable, <input type="checkbox"/> Skin Irritant, <input type="checkbox"/> Poison B, <input type="checkbox"/> Unknown		Special Instructions/QC Requirements & Comments [Please note if there is Mercury in the sample.]		<input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months	
Relinquished by (Print/Signature): <i>Melissa S. Soper</i>		Company: _____		Received by (Print/Signature): <i>Kelley Lovejoy</i>		Company: <i>AAI</i>	
Relinquished by (Print/Signature): _____		Company: _____		Received by (Print/Signature): _____		Company: _____	
Relinquished by (Print/Signature): _____		Company: _____		Received by (Print/Signature): _____		Company: _____	
				Temp Blanks 31°C		Cooler Temp 3.0°C	
				Date/Time: 9/5/12		Date/Time: 9/5/12 2:30AM	
				Date/Time: _____		Date/Time: _____	

TPEC101
12-0067
915112

CUSTODY SEAL



ENVIRONMENTAL SAMPLING SUPPLY
9601 San Leandro St. Oakland, CA 946-233-8425

Date

Signature

to: 9/5/12

re: *M/S Supply*

CUSTODY SEAL



ENVIRONMENTAL SAMPLING SUPPLY
9601 San Leandro St. Oakland, CA 946-233-8425

Date: 9/5/12

Signature: *M/S Supply*



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Sample Receipt Checklist

Client Name: **TPECI01**

Work Order Number **1209003**

RcptNo: **1**

Date and Time Received: **9/5/2012 2:42:56 PM**

Received by: **Kelley Lovejoy**

Completed by: *Kelley Lovejoy*

Reviewed by: *Kelley Lovejoy*

Completed Date: 9/5/2012 2:44:03 PM

Reviewed Date: 9/5/2012 2:44:06 PM

Carrier name: Client

- Chain of custody present? Yes No
- Chain of custody signed when relinquished and received? Yes No
- Chain of custody agrees with sample labels? Yes No Not Present
- Are matrices correctly identified on Chain of custody? Yes No
- Is it clear what analyses were requested? Yes No
- Custody seals intact on sample bottles? Yes No Not Present
- Samples in proper container/bottle? Yes No
- Were correct preservatives used and noted? Yes No
- Sample containers intact? Yes No
- Sufficient sample volume for indicated test? Yes No
- Were container labels complete (ID, Pres, Date)? Yes No
- All samples received within holding time? Yes No
- Was an attempt made to cool the samples? Yes No
- All samples received at a temp. of > 0° C to 6.0° C? Yes No
- Response when temperature is outside of range:
- Preservative added to bottles:
- Sample Temp. taken and recorded upon receipt? Yes No 3.1 To 3.1°
- Water - Were bubbles absent in VOC vials? Yes No No Vials
- Water - Was there Chlorine Present? Yes No NA
- Water - pH acceptable upon receipt? Yes No No Water
- Are Samples considered acceptable? Yes No
- Custody Seals present? Yes No
- Traffic Report or Packing Lists present? Yes No
- Airbill or Sticker? Air Bill Sticker Not Present
- Airbill No:
- Sample Tags Present? Yes No
- Sample Tags Listed on COC? Yes No
- Tag Numbers:
- Sample Condition? Intact Broken Leaking

Case Number: _____ SDG: _____ SAS: _____

Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.2	Good	Yes		9/5/2012	Melissa S Shippe

Adjusted? _____ Checked by _____

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



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North Pole, Alaska 99705
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Website: www.alaska-analytical.com

Sample Receipt Checklist

Client Name: **TPECI01**

Work Order Number **1209003**

Client Contacted? Yes No NA Person Contacted:

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

Client Instructions:

Date Contacted:

Contacted By:

Regarding:

CorrectiveAction:

Comments:

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

Laboratory Data Review Checklist

Completed by:

Title:

Melissa S. Shippey

Date:

September 24, 2012

CS Report Name:

Seekins Ford

Report Date:

July 9, 2010

Consultant Firm:

Travis/Peterson Environmental Consulting, Inc.

Laboratory Name:

Alaska Analytical and Pace Analytical Laboratory

Laboratory Report Number:1209003

ADEC File Number: 100.26.131

ADEC RecKey Number:

1. Laboratory

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

Yes No

Comments:

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

Yes No

Comments:

The VOC samples were transferred to Pace in Seattle, WA.

2. Chain of Custody (COC)

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

Yes No

Comments:

b. Correct analyses requested?

Yes No

Comments:

3. Laboratory Sample Receipt Documentation

a. Sample/cooler temperature documented and within range at receipt ($4^{\circ} \pm 2^{\circ} \text{C}$)?

Yes No Comments:

Cooler temp was 3.2°C and the temperature blank was 3.1°C.

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

Yes No Comments:

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

Yes No Comments:

Samples were all in good condition.

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

Yes No Comments:

e. Data quality or usability affected? Explain.

Comments:

N/A

4. Case Narrative

a. Present and understandable?

Yes No Comments:

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

Yes No Comments:

There were no discrepancies or errors or failures in the data.

c. Were all corrective actions documented?

Yes No Comments:

N/A

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

Comments:

N/A no effect since there were no issues.

5. Samples Results

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

Yes No

Comments:

b. All applicable holding times met?

Yes No

Comments:

c. All soils reported on a dry weight basis?

Yes No

Comments:

No soils only groundwater.

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

Yes No

Comments:

The Reporting Limit (PQL) for sample MW-1 for GRO was 5,000 ug/L. The cleanup standard is 2,200 ug/L. The sample had a dilution factor of 50 since the contamination was so high. All other GRO samples had an RL (PQL) of 100 ug/L.

e. Data quality or usability affected?

Comments:

No. sample results biased high.

6. QC Samples

a. Method Blank

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

Yes No

Comments:

ii. All method blank results less than PQL?

Yes No

Comments:

The method blanks for GRO had detections above the MDL of 10.0 ug/L but were below the PQL 100.0 ug/L.

iii. If above PQL, what samples are affected?

Comments:

N/A

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

Yes No

Comments:

The GRO method blank results were J-flagged in the qualifiers column.

v. Data quality or usability affected? Explain.

Comments:

N/A

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

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

Yes No

Comments:

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

Yes No

Comments:

No metals samples.

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

Yes No

Comments:

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

Yes No

Comments:

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

Comments:

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

Yes No

Comments:

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

Comments:

N/A all LCS LCSD combinations were within sampling criteria.

c. Surrogates – Organics Only

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

Yes No

Comments:

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

Yes No

Comments:

Sample MW-1 had a low surrogate recovery as a result of the dilution used for this sample.

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

Yes No

Comments:

S01- is the data flag associated with this sample. It can be found on page 2 of the report.

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

Comments:

N/A

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

i. One trip blank reported per matrix, analysis and cooler?

Yes No

Comments:

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

Yes No

Comments:

iii. All results less than PQL?

Yes No

Comments:

However, the trip blank had a detection of 14.1 ug/L GRO, a J-flagged result since it was below the PQL but above the MDL.

iv. If above PQL, what samples are affected?

Comments:

GRO sample results would be biased slightly high in this report.

v. Data quality or usability affected? Explain.

Comments:

No, overall data quality is still usable for decision making on this site.

e. Field Duplicate

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

Yes No

Comments:

Sample MW-5 is the duplicate for MW-2.

ii. Submitted blind to lab?

Yes No

Comments:

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

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

Where R_1 = Sample Concentration

R_2 = Field Duplicate Concentration

Yes No

Comments:

The RPD for DRO between primary and duplicate was 12.5%. The DRO result for MW-5 was a J-flagged estimated result. The RPD for GRO was 40% which is above the recommended 30% for water samples. Some imprecision is expected when comparing J-flagged (estimated) analytical results.

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

Comments:

DRO RPD was within acceptable range. GRO RPD was high and is likely due to comparing estimated results.

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

Yes No Not Applicable

i. All results less than PQL?

Yes No Comments:

Decontamination blank not required since sampling equipment (i.e. tubing) was not reused from sampling station to sampling station. All new sampling equipment, nitrile gloves etc..were used at each sample location.

ii. If above PQL, what samples are affected?

Comments:

N/A

iii. Data quality or usability affected? Explain.

Comments:

N/A

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

a. Defined and appropriate?

Yes No Comments:

N/A



Pace Analytical Services, Inc.
940 South Harney
Seattle, WA 98108
(206)767-5060

September 20, 2012

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

RE: Project: Seekins Ford 1197-02
Pace Project No.: 2513481

Dear Kelley Lovejoy:

Enclosed are the analytical results for sample(s) received by the laboratory on September 06, 2012. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

D. Ely Bair

Ely Bair for
Dan Gossett
dan.gossett@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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Page 1 of 29



Pace Analytical Services, Inc.
940 South Harney
Seattle, WA 98108
(206)767-5060

CERTIFICATIONS

Project: Seekins Ford 1197-02

Pace Project No.: 2513481

Washington Certification IDs

940 South Harney Street, Seattle, WA 98108

Alaska CS Certification #: UST-025

Arizona Certification #: AZ0770

California Certification #: 01153CA

Florida/NELAP Certification #: E87617

Oregon Certification #: WA200007

Washington Certification #: C555

REPORT OF LABORATORY ANALYSIS

Page 2 of 29

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Seattle, WA 98108
(206)767-5060

SAMPLE ANALYTE COUNT

Project: Seekins Ford 1197-02
Pace Project No.: 2513481

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2513481001	MW-1	EPA 5030B/8260	BAG	71	PASI-S
2513481002	MW-6	EPA 5030B/8260	LPM	71	PASI-S
2513481003	MW-2	EPA 5030B/8260	LPM	71	PASI-S
2513481004	MW-5	EPA 5030B/8260	LPM	71	PASI-S
2513481005	MW-7	EPA 5030B/8260	LPM	71	PASI-S
2513481006	MW-3	EPA 5030B/8260	LPM	71	PASI-S
2513481007	Trip Blank - 8260	EPA 5030B/8260	BAG	71	PASI-S

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: Seekins Ford 1197-02
Pace Project No.: 2513481

Method: EPA 5030B/8260
Description: 8260 MSV
Client: Alaska Analytical Lab
Date: September 20, 2012

General Information:

7 samples were analyzed for EPA 5030B/8260. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: MSV/7730

A matrix spike and matrix spike duplicate (MS/MSD) were performed on the following sample(s): 2513398054

D6: The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.

- MSD (Lab ID: 129995)
 - 1,1,2,2-Tetrachloroethane
 - 1,2,3-Trichloropropane
 - n-Butylbenzene

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 129994)
 - 2,2-Dichloropropane
- MSD (Lab ID: 129995)
 - 2,2-Dichloropropane

QC Batch: MSV/7758

A matrix spike and matrix spike duplicate (MS/MSD) were performed on the following sample(s): 2513398065

D6: The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.

- MSD (Lab ID: 130094)

REPORT OF LABORATORY ANALYSIS

PROJECT NARRATIVE

Project: Seekins Ford 1197-02
Pace Project No.: 2513481

Method: EPA 5030B/8260
Description: 8260 MSV
Client: Alaska Analytical Lab
Date: September 20, 2012

QC Batch: MSV/7758

A matrix spike and matrix spike duplicate (MS/MSD) were performed on the following sample(s): 2513398065

D6: The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.

- Acetone

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 130093)
- Acetone

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

Page 5 of 29

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ANALYTICAL RESULTS

Project: Seekins Ford 1197-02
 Pace Project No.: 2513481

Sample: MW-1 Lab ID: 2513481001 Collected: 09/04/12 13:20 Received: 09/06/12 08:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
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8260 MSV

Analytical Method: EPA 5030B/8260

Acetone	20.5 ug/L		5.0	1		09/13/12 01:08	67-64-1	
Benzene	4.7 ug/L		1.0	1		09/13/12 01:08	71-43-2	
Bromobenzene	ND ug/L		1.0	1		09/13/12 01:08	108-86-1	
Bromochloromethane	ND ug/L		1.0	1		09/13/12 01:08	74-97-5	
Bromodichloromethane	ND ug/L		1.0	1		09/13/12 01:08	75-27-4	
Bromoform	ND ug/L		1.0	1		09/13/12 01:08	75-25-2	
Bromomethane	ND ug/L		1.0	1		09/13/12 01:08	74-83-9	
2-Butanone (MEK)	ND ug/L		5.0	1		09/13/12 01:08	78-93-3	
n-Butylbenzene	15.3 ug/L		1.0	1		09/13/12 01:08	104-51-8	
sec-Butylbenzene	7.5 ug/L		1.0	1		09/13/12 01:08	135-98-8	
tert-Butylbenzene	ND ug/L		1.0	1		09/13/12 01:08	98-06-6	
Carbon disulfide	ND ug/L		1.0	1		09/13/12 01:08	75-15-0	
Carbon tetrachloride	ND ug/L		1.0	1		09/13/12 01:08	56-23-5	
Chlorobenzene	ND ug/L		1.0	1		09/13/12 01:08	108-90-7	
Chloroethane	ND ug/L		1.0	1		09/13/12 01:08	75-00-3	
Chloroform	ND ug/L		1.0	1		09/13/12 01:08	67-66-3	
Chloromethane	ND ug/L		1.0	1		09/13/12 01:08	74-87-3	
2-Chlorotoluene	ND ug/L		1.0	1		09/13/12 01:08	95-49-8	
4-Chlorotoluene	ND ug/L		1.0	1		09/13/12 01:08	106-43-4	
1,2-Dibromo-3-chloropropane	ND ug/L		5.0	1		09/13/12 01:08	96-12-8	
Dibromochloromethane	ND ug/L		1.0	1		09/13/12 01:08	124-48-1	
1,2-Dibromoethane (EDB)	ND ug/L		1.0	1		09/13/12 01:08	106-93-4	
Dibromomethane	ND ug/L		1.0	1		09/13/12 01:08	74-95-3	
1,2-Dichlorobenzene	ND ug/L		1.0	1		09/13/12 01:08	95-50-1	
1,3-Dichlorobenzene	ND ug/L		1.0	1		09/13/12 01:08	541-73-1	
1,4-Dichlorobenzene	1.3 ug/L		1.0	1		09/13/12 01:08	106-46-7	
Dichlorodifluoromethane	ND ug/L		1.0	1		09/13/12 01:08	75-71-8	
1,1-Dichloroethane	ND ug/L		1.0	1		09/13/12 01:08	75-34-3	
1,2-Dichloroethane	ND ug/L		1.0	1		09/13/12 01:08	107-06-2	
1,2-Dichloroethene (Total)	ND ug/L		2.0	1		09/13/12 01:08	540-59-0	
1,1-Dichloroethene	ND ug/L		1.0	1		09/13/12 01:08	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		1.0	1		09/13/12 01:08	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		1.0	1		09/13/12 01:08	156-60-5	
1,2-Dichloropropane	ND ug/L		1.0	1		09/13/12 01:08	78-87-5	
1,3-Dichloropropane	ND ug/L		1.0	1		09/13/12 01:08	142-28-9	
2,2-Dichloropropane	ND ug/L		1.0	1		09/13/12 01:08	594-20-7	
1,1-Dichloropropene	ND ug/L		1.0	1		09/13/12 01:08	563-58-6	
cis-1,3-Dichloropropene	ND ug/L		1.0	1		09/13/12 01:08	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		1.0	1		09/13/12 01:08	10061-02-6	
Ethylbenzene	3090 ug/L		50.0	50		09/13/12 15:24	100-41-4	
Hexachloro-1,3-butadiene	ND ug/L		1.0	1		09/13/12 01:08	87-68-3	
2-Hexanone	ND ug/L		5.0	1		09/13/12 01:08	591-78-6	
Isopropylbenzene (Cumene)	117 ug/L		1.0	1		09/13/12 01:08	98-82-8	
p-Isopropyltoluene	7.4 ug/L		1.0	1		09/13/12 01:08	99-87-6	
Methylene chloride	ND ug/L		5.0	1		09/13/12 01:08	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/L		5.0	1		09/13/12 01:08	108-10-1	
Methyl-tert-butyl ether	ND ug/L		1.0	1		09/13/12 01:08	1634-04-4	

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REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Seekins Ford 1197-02
Pace Project No.: 2513481

Sample: MW-1		Lab ID: 2513481001	Collected: 09/04/12 13:20	Received: 09/06/12 08:20	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260						
Naphthalene	90.9 ug/L		1.0	1		09/13/12 01:08	91-20-3	
n-Propylbenzene	176 ug/L		1.0	1		09/13/12 01:08	103-65-1	
Styrene	183 ug/L		1.0	1		09/13/12 01:08	100-42-5	
1,1,1,2-Tetrachloroethane	ND ug/L		1.0	1		09/13/12 01:08	630-20-6	
1,1,2,2-Tetrachloroethane	ND ug/L		1.0	1		09/13/12 01:08	79-34-5	
Tetrachloroethene	ND ug/L		1.0	1		09/13/12 01:08	127-18-4	
Toluene	3670 ug/L		50.0	50		09/13/12 15:24	108-88-3	
1,2,3-Trichlorobenzene	4.2 ug/L		1.0	1		09/13/12 01:08	87-61-6	
1,2,4-Trichlorobenzene	4.5 ug/L		1.0	1		09/13/12 01:08	120-82-1	
1,1,1-Trichloroethane	ND ug/L		1.0	1		09/13/12 01:08	71-55-6	
1,1,2-Trichloroethane	ND ug/L		1.0	1		09/13/12 01:08	79-00-5	
Trichloroethene	ND ug/L		1.0	1		09/13/12 01:08	79-01-6	
Trichlorofluoromethane	1.5 ug/L		1.0	1		09/13/12 01:08	75-69-4	
1,2,3-Trichloropropane	ND ug/L		1.0	1		09/13/12 01:08	96-18-4	
1,2,4-Trimethylbenzene	2220 ug/L		50.0	50		09/13/12 15:24	95-63-6	
1,3,5-Trimethylbenzene	587 ug/L		50.0	50		09/13/12 15:24	108-67-8	
Vinyl chloride	ND ug/L		1.0	1		09/13/12 01:08	75-01-4	
Xylene (Total)	18400 ug/L		150	50		09/13/12 15:24	1330-20-7	
m&p-Xylene	12200 ug/L		100	50		09/13/12 15:24	179601-23-1	
o-Xylene	6190 ug/L		50.0	50		09/13/12 15:24	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	84 %		79-121	1		09/13/12 01:08	460-00-4	
Dibromofluoromethane (S)	100 %		81-119	1		09/13/12 01:08	1868-53-7	
1,2-Dichloroethane-d4 (S)	101 %		72-127	1		09/13/12 01:08	17060-07-0	
Toluene-d8 (S)	95 %		77-120	1		09/13/12 01:08	2037-26-5	

Sample: MW-6		Lab ID: 2513481002	Collected: 09/04/12 14:32	Received: 09/06/12 08:20	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260						
Acetone	ND ug/L		5.0	1		09/14/12 10:54	67-64-1	
Benzene	ND ug/L		1.0	1		09/14/12 10:54	71-43-2	
Bromobenzene	ND ug/L		1.0	1		09/14/12 10:54	108-86-1	
Bromochloromethane	ND ug/L		1.0	1		09/14/12 10:54	74-97-5	
Bromodichloromethane	ND ug/L		1.0	1		09/14/12 10:54	75-27-4	
Bromoform	ND ug/L		1.0	1		09/14/12 10:54	75-25-2	
Bromomethane	ND ug/L		1.0	1		09/14/12 10:54	74-83-9	
2-Butanone (MEK)	ND ug/L		5.0	1		09/14/12 10:54	78-93-3	
n-Butylbenzene	ND ug/L		1.0	1		09/14/12 10:54	104-51-8	
sec-Butylbenzene	ND ug/L		1.0	1		09/14/12 10:54	135-98-8	
tert-Butylbenzene	ND ug/L		1.0	1		09/14/12 10:54	98-06-6	
Carbon disulfide	ND ug/L		1.0	1		09/14/12 10:54	75-15-0	
Carbon tetrachloride	ND ug/L		1.0	1		09/14/12 10:54	56-23-5	
Chlorobenzene	ND ug/L		1.0	1		09/14/12 10:54	108-90-7	
Chloroethane	ND ug/L		1.0	1		09/14/12 10:54	75-00-3	

Date: 09/20/2012 04:41 PM

REPORT OF LABORATORY ANALYSIS

Page 7 of 29

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ANALYTICAL RESULTS

Project: Seekins Ford 1197-02
 Pace Project No.: 2513481

Sample: MW-6 Lab ID: 2513481002 Collected: 09/04/12 14:32 Received: 09/06/12 08:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260						
Chloroform	ND	ug/L	1.0	1		09/14/12 10:54	67-66-3	
Chloromethane	ND	ug/L	1.0	1		09/14/12 10:54	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		09/14/12 10:54	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		09/14/12 10:54	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		09/14/12 10:54	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		09/14/12 10:54	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		09/14/12 10:54	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		09/14/12 10:54	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		09/14/12 10:54	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		09/14/12 10:54	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		09/14/12 10:54	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		09/14/12 10:54	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		09/14/12 10:54	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		09/14/12 10:54	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/L	2.0	1		09/14/12 10:54	540-59-0	
1,1-Dichloroethene	ND	ug/L	1.0	1		09/14/12 10:54	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		09/14/12 10:54	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		09/14/12 10:54	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		09/14/12 10:54	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		09/14/12 10:54	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		09/14/12 10:54	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		09/14/12 10:54	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		09/14/12 10:54	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		09/14/12 10:54	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		09/14/12 10:54	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		09/14/12 10:54	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		09/14/12 10:54	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		09/14/12 10:54	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		09/14/12 10:54	99-87-6	
Methylene chloride	ND	ug/L	5.0	1		09/14/12 10:54	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		09/14/12 10:54	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		09/14/12 10:54	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		09/14/12 10:54	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		09/14/12 10:54	103-65-1	
Styrene	ND	ug/L	1.0	1		09/14/12 10:54	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		09/14/12 10:54	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		09/14/12 10:54	79-34-5	
Tetrachloroethene	1.6	ug/L	1.0	1		09/14/12 10:54	127-18-4	
Toluene	ND	ug/L	1.0	1		09/14/12 10:54	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		09/14/12 10:54	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		09/14/12 10:54	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		09/14/12 10:54	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		09/14/12 10:54	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		09/14/12 10:54	79-01-6	
Trichlorofluoromethane	3.8	ug/L	1.0	1		09/14/12 10:54	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		09/14/12 10:54	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		09/14/12 10:54	95-63-6	

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ANALYTICAL RESULTS

Project: Seekins Ford 1197-02
Pace Project No.: 2513481

Sample: MW-6		Lab ID: 2513481002	Collected: 09/04/12 14:32	Received: 09/06/12 08:20	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 5030B/8260								
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		09/14/12 10:54	108-67-8	
Vinyl chloride	ND	ug/L	1.0	1		09/14/12 10:54	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		09/14/12 10:54	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		09/14/12 10:54	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		09/14/12 10:54	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	109 %		79-121	1		09/14/12 10:54	460-00-4	
Dibromofluoromethane (S)	97 %		81-119	1		09/14/12 10:54	1868-53-7	
1,2-Dichloroethane-d4 (S)	101 %		72-127	1		09/14/12 10:54	17060-07-0	
Toluene-d8 (S)	101 %		77-120	1		09/14/12 10:54	2037-26-5	

Sample: MW-2		Lab ID: 2513481003	Collected: 09/05/12 10:45	Received: 09/06/12 08:20	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	5.0	1		09/14/12 11:12	67-64-1	
Benzene	ND	ug/L	1.0	1		09/14/12 11:12	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		09/14/12 11:12	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		09/14/12 11:12	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		09/14/12 11:12	75-27-4	
Bromoform	ND	ug/L	1.0	1		09/14/12 11:12	75-25-2	
Bromomethane	ND	ug/L	1.0	1		09/14/12 11:12	74-83-9	
2-Butanone (MEK)	ND	ug/L	5.0	1		09/14/12 11:12	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	1		09/14/12 11:12	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	1		09/14/12 11:12	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	1		09/14/12 11:12	98-06-6	
Carbon disulfide	ND	ug/L	1.0	1		09/14/12 11:12	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		09/14/12 11:12	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		09/14/12 11:12	108-90-7	
Chloroethane	ND	ug/L	1.0	1		09/14/12 11:12	75-00-3	
Chloroform	ND	ug/L	1.0	1		09/14/12 11:12	67-66-3	
Chloromethane	ND	ug/L	1.0	1		09/14/12 11:12	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		09/14/12 11:12	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		09/14/12 11:12	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		09/14/12 11:12	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		09/14/12 11:12	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		09/14/12 11:12	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		09/14/12 11:12	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		09/14/12 11:12	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		09/14/12 11:12	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		09/14/12 11:12	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		09/14/12 11:12	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		09/14/12 11:12	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		09/14/12 11:12	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/L	2.0	1		09/14/12 11:12	540-59-0	

Date: 09/20/2012 04:41 PM

REPORT OF LABORATORY ANALYSIS

Page 9 of 29

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ANALYTICAL RESULTS

Project: Seekins Ford 1197-02
Pace Project No.: 2513481

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
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8260 MSV								
Analytical Method: EPA 5030B/8260								
1,1-Dichloroethene	ND	ug/L	1.0	1		09/14/12 11:12	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		09/14/12 11:12	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		09/14/12 11:12	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		09/14/12 11:12	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		09/14/12 11:12	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		09/14/12 11:12	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		09/14/12 11:12	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		09/14/12 11:12	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		09/14/12 11:12	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		09/14/12 11:12	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		09/14/12 11:12	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		09/14/12 11:12	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		09/14/12 11:12	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		09/14/12 11:12	99-87-6	
Methylene chloride	ND	ug/L	5.0	1		09/14/12 11:12	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		09/14/12 11:12	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		09/14/12 11:12	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		09/14/12 11:12	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		09/14/12 11:12	103-65-1	
Styrene	ND	ug/L	1.0	1		09/14/12 11:12	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		09/14/12 11:12	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		09/14/12 11:12	79-34-5	
Tetrachloroethene	5.2	ug/L	1.0	1		09/14/12 11:12	127-18-4	
Toluene	ND	ug/L	1.0	1		09/14/12 11:12	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		09/14/12 11:12	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		09/14/12 11:12	120-82-1	
1,1,1-Trichloroethane	3.8	ug/L	1.0	1		09/14/12 11:12	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		09/14/12 11:12	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		09/14/12 11:12	79-01-6	
Trichlorofluoromethane	1.4	ug/L	1.0	1		09/14/12 11:12	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		09/14/12 11:12	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		09/14/12 11:12	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		09/14/12 11:12	108-67-8	
Vinyl chloride	ND	ug/L	1.0	1		09/14/12 11:12	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		09/14/12 11:12	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		09/14/12 11:12	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		09/14/12 11:12	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	108 %		79-121	1		09/14/12 11:12	460-00-4	
Dibromofluoromethane (S)	98 %		81-119	1		09/14/12 11:12	1868-53-7	
1,2-Dichloroethane-d4 (S)	99 %		72-127	1		09/14/12 11:12	17060-07-0	
Toluene-d8 (S)	103 %		77-120	1		09/14/12 11:12	2037-26-5	



ANALYTICAL RESULTS

Project: Seekins Ford 1197-02
 Pace Project No.: 2513481

Sample: MW-5	Lab ID: 2513481004	Collected: 09/05/12 11:30	Received: 09/06/12 08:20	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual

8260 MSV

Analytical Method: EPA 5030B/8260

Acetone	ND ug/L		5.0	1		09/14/12 11:31	67-64-1	
Benzene	ND ug/L		1.0	1		09/14/12 11:31	71-43-2	
Bromobenzene	ND ug/L		1.0	1		09/14/12 11:31	108-86-1	
Bromochloromethane	ND ug/L		1.0	1		09/14/12 11:31	74-97-5	
Bromodichloromethane	ND ug/L		1.0	1		09/14/12 11:31	75-27-4	
Bromoform	ND ug/L		1.0	1		09/14/12 11:31	75-25-2	
Bromomethane	ND ug/L		1.0	1		09/14/12 11:31	74-83-9	
2-Butanone (MEK)	ND ug/L		5.0	1		09/14/12 11:31	78-93-3	
n-Butylbenzene	ND ug/L		1.0	1		09/14/12 11:31	104-51-8	
sec-Butylbenzene	ND ug/L		1.0	1		09/14/12 11:31	135-98-8	
tert-Butylbenzene	ND ug/L		1.0	1		09/14/12 11:31	98-06-6	
Carbon disulfide	ND ug/L		1.0	1		09/14/12 11:31	75-15-0	
Carbon tetrachloride	ND ug/L		1.0	1		09/14/12 11:31	56-23-5	
Chlorobenzene	ND ug/L		1.0	1		09/14/12 11:31	108-90-7	
Chloroethane	ND ug/L		1.0	1		09/14/12 11:31	75-00-3	
Chloroform	ND ug/L		1.0	1		09/14/12 11:31	67-66-3	
Chloromethane	ND ug/L		1.0	1		09/14/12 11:31	74-87-3	
2-Chlorotoluene	ND ug/L		1.0	1		09/14/12 11:31	95-49-8	
4-Chlorotoluene	ND ug/L		1.0	1		09/14/12 11:31	106-43-4	
1,2-Dibromo-3-chloropropane	ND ug/L		5.0	1		09/14/12 11:31	96-12-8	
Dibromochloromethane	ND ug/L		1.0	1		09/14/12 11:31	124-48-1	
1,2-Dibromoethane (EDB)	ND ug/L		1.0	1		09/14/12 11:31	106-93-4	
Dibromomethane	ND ug/L		1.0	1		09/14/12 11:31	74-95-3	
1,2-Dichlorobenzene	ND ug/L		1.0	1		09/14/12 11:31	95-50-1	
1,3-Dichlorobenzene	ND ug/L		1.0	1		09/14/12 11:31	541-73-1	
1,4-Dichlorobenzene	ND ug/L		1.0	1		09/14/12 11:31	106-46-7	
Dichlorodifluoromethane	ND ug/L		1.0	1		09/14/12 11:31	75-71-8	
1,1-Dichloroethane	ND ug/L		1.0	1		09/14/12 11:31	75-34-3	
1,2-Dichloroethane	ND ug/L		1.0	1		09/14/12 11:31	107-06-2	
1,2-Dichloroethene (Total)	ND ug/L		2.0	1		09/14/12 11:31	540-59-0	
1,1-Dichloroethene	ND ug/L		1.0	1		09/14/12 11:31	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		1.0	1		09/14/12 11:31	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		1.0	1		09/14/12 11:31	156-60-5	
1,2-Dichloropropane	ND ug/L		1.0	1		09/14/12 11:31	78-87-5	
1,3-Dichloropropane	ND ug/L		1.0	1		09/14/12 11:31	142-28-9	
2,2-Dichloropropane	ND ug/L		1.0	1		09/14/12 11:31	594-20-7	
1,1-Dichloropropene	ND ug/L		1.0	1		09/14/12 11:31	563-58-6	
cis-1,3-Dichloropropene	ND ug/L		1.0	1		09/14/12 11:31	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		1.0	1		09/14/12 11:31	10061-02-6	
Ethylbenzene	ND ug/L		1.0	1		09/14/12 11:31	100-41-4	
Hexachloro-1,3-butadiene	ND ug/L		1.0	1		09/14/12 11:31	87-68-3	
2-Hexanone	ND ug/L		5.0	1		09/14/12 11:31	591-78-6	
Isopropylbenzene (Cumene)	ND ug/L		1.0	1		09/14/12 11:31	98-82-8	
p-Isopropyltoluene	ND ug/L		1.0	1		09/14/12 11:31	99-87-6	
Methylene chloride	ND ug/L		5.0	1		09/14/12 11:31	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/L		5.0	1		09/14/12 11:31	108-10-1	
Methyl-tert-butyl ether	ND ug/L		1.0	1		09/14/12 11:31	1634-04-4	

Date: 09/20/2012 04:41 PM

REPORT OF LABORATORY ANALYSIS

Page 11 of 29

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ANALYTICAL RESULTS

Project: Seekins Ford 1197-02
 Pace Project No.: 2513481

Sample: MW-5	Lab ID: 2513481004	Collected: 09/05/12 11:30	Received: 09/06/12 08:20	Matrix: Water
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Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260						
Naphthalene	ND	ug/L	1.0	1		09/14/12 11:31	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		09/14/12 11:31	103-65-1	
Styrene	ND	ug/L	1.0	1		09/14/12 11:31	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		09/14/12 11:31	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		09/14/12 11:31	70-34-5	
Tetrachloroethene	5.3	ug/L						
Toluene	ND	ug/L						
1,2,3-Trichlorobenzene	ND	ug/L						
1,2,4-Trichlorobenzene	ND	ug/L						
1,1,1-Trichloroethane	3.7	ug/L						
1,1,2-Trichloroethane	ND	ug/L						
Trichloroethene	ND	ug/L						
Trichlorofluoromethane	1.3	ug/L						
1,2,3-Trichloropropane	ND	ug/L						
1,2,4-Trimethylbenzene	ND	ug/L						
1,3,5-Trimethylbenzene	ND	ug/L						
Vinyl chloride	ND	ug/L						
Xylene (Total)	ND	ug/L						
m&p-Xylene	ND	ug/L						
o-Xylene	ND	ug/L						
Surrogates								
4-Bromofluorobenzene (S)	109	%						
Dibromofluoromethane (S)	98	%						
1,2-Dichloroethane-d4 (S)	98	%						
Toluene-d8 (S)	103	%						

MW2 & MWS

PCE $\frac{(5.2 - 5.3)}{[(5.2 + 5.3)/2]} \times 100 = \frac{0.1}{5.25}$

$0.0190 \times 100 = 1.90\% \text{ RPD}$

1,1,1-TCE $\frac{(3.8 - 3.7)}{[(3.8 + 3.7)/2]} \times 100 = \frac{0.1}{3.75}$

$0.1 \times 100 = 2.66\% \text{ RPD}$

TCFM: $\frac{(1.4 - 1.3)}{[(1.4 + 1.3)/2]} \times 100 = \frac{0.1}{1.35}$

$0.074 \times 100 = 7.40\% \text{ RPD}$

Sample: MW-7	Lab ID: 2513481005	Collected:
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Parameters	Results	Units	Report
8260 MSV		Analytical Method: EPA 5030B/8260	
Acetone	ND	ug/L	
Benzene	ND	ug/L	
Bromobenzene	ND	ug/L	
Bromochloromethane	ND	ug/L	
Bromodichloromethane	ND	ug/L	
Bromoform	ND	ug/L	
Bromomethane	ND	ug/L	
2-Butanone (MEK)	ND	ug/L	
n-Butylbenzene	ND	ug/L	
sec-Butylbenzene	ND	ug/L	
tert-Butylbenzene	ND	ug/L	
Carbon disulfide	ND	ug/L	
Carbon tetrachloride	ND	ug/L	
Chlorobenzene	ND	ug/L	
Chloroethane	ND	ug/L	

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ANALYTICAL RESULTS

Project: Seekins Ford 1197-02

Pace Project No.: 2513481

Sample: MW-7 Lab ID: 2513481005 Collected: 09/05/12 12:00 Received: 09/06/12 08:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260						
Chloroform	ND	ug/L	1.0	1		09/14/12 11:49	67-66-3	
Chloromethane	ND	ug/L	1.0	1		09/14/12 11:49	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		09/14/12 11:49	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		09/14/12 11:49	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	5.0	1		09/14/12 11:49	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		09/14/12 11:49	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		09/14/12 11:49	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		09/14/12 11:49	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		09/14/12 11:49	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		09/14/12 11:49	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		09/14/12 11:49	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		09/14/12 11:49	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		09/14/12 11:49	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		09/14/12 11:49	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/L	2.0	1		09/14/12 11:49	540-59-0	
1,1-Dichloroethene	ND	ug/L	1.0	1		09/14/12 11:49	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		09/14/12 11:49	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		09/14/12 11:49	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		09/14/12 11:49	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		09/14/12 11:49	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		09/14/12 11:49	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		09/14/12 11:49	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		09/14/12 11:49	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		09/14/12 11:49	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		09/14/12 11:49	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		09/14/12 11:49	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		09/14/12 11:49	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		09/14/12 11:49	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		09/14/12 11:49	99-87-6	
Methylene chloride	ND	ug/L	5.0	1		09/14/12 11:49	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		09/14/12 11:49	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		09/14/12 11:49	1634-04-4	
Naphthalene	ND	ug/L	1.0	1		09/14/12 11:49	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		09/14/12 11:49	103-65-1	
Styrene	ND	ug/L	1.0	1		09/14/12 11:49	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		09/14/12 11:49	630-20-6	
1,1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		09/14/12 11:49	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		09/14/12 11:49	127-18-4	
Toluene	ND	ug/L	1.0	1		09/14/12 11:49	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		09/14/12 11:49	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		09/14/12 11:49	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		09/14/12 11:49	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		09/14/12 11:49	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		09/14/12 11:49	79-01-6	
Trichlorofluoromethane	13.4	ug/L	1.0	1		09/14/12 11:49	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		09/14/12 11:49	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		09/14/12 11:49	95-63-6	

Date: 09/20/2012 04:41 PM

REPORT OF LABORATORY ANALYSIS

Page 13 of 29

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ANALYTICAL RESULTS

Project: Seekins Ford 1197-02
 Pace Project No.: 2513481

Sample: MW-7		Lab ID: 2513481005	Collected: 09/05/12 12:00	Received: 09/06/12 08:20	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV								
Analytical Method: EPA 5030B/8260								
1,3,5-Trimethylbenzene	ND ug/L		1.0	1		09/14/12 11:49	108-67-8	
Vinyl chloride	ND ug/L		1.0	1		09/14/12 11:49	75-01-4	
Xylene (Total)	ND ug/L		3.0	1		09/14/12 11:49	1330-20-7	
m&p-Xylene	ND ug/L		2.0	1		09/14/12 11:49	179601-23-1	
o-Xylene	ND ug/L		1.0	1		09/14/12 11:49	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	110 %		79-121	1		09/14/12 11:49	460-00-4	
Dibromofluoromethane (S)	97 %		81-119	1		09/14/12 11:49	1868-53-7	
1,2-Dichloroethane-d4 (S)	100 %		72-127	1		09/14/12 11:49	17060-07-0	
Toluene-d8 (S)	102 %		77-120	1		09/14/12 11:49	2037-26-5	

Sample: MW-3		Lab ID: 2513481006	Collected: 09/05/12 13:00	Received: 09/06/12 08:20	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV								
Analytical Method: EPA 5030B/8260								
Acetone	ND ug/L		5.0	1		09/14/12 12:07	67-64-1	
Benzene	ND ug/L		1.0	1		09/14/12 12:07	71-43-2	
Bromobenzene	ND ug/L		1.0	1		09/14/12 12:07	108-86-1	
Bromochloromethane	ND ug/L		1.0	1		09/14/12 12:07	74-97-5	
Bromodichloromethane	ND ug/L		1.0	1		09/14/12 12:07	75-27-4	
Bromoform	ND ug/L		1.0	1		09/14/12 12:07	75-25-2	
Bromomethane	ND ug/L		1.0	1		09/14/12 12:07	74-83-9	
2-Butanone (MEK)	ND ug/L		5.0	1		09/14/12 12:07	78-93-3	
n-Butylbenzene	ND ug/L		1.0	1		09/14/12 12:07	104-51-8	
sec-Butylbenzene	ND ug/L		1.0	1		09/14/12 12:07	135-98-8	
tert-Butylbenzene	ND ug/L		1.0	1		09/14/12 12:07	98-06-6	
Carbon disulfide	ND ug/L		1.0	1		09/14/12 12:07	75-15-0	
Carbon tetrachloride	ND ug/L		1.0	1		09/14/12 12:07	56-23-5	
Chlorobenzene	ND ug/L		1.0	1		09/14/12 12:07	108-90-7	
Chloroethane	ND ug/L		1.0	1		09/14/12 12:07	75-00-3	
Chloroform	ND ug/L		1.0	1		09/14/12 12:07	67-66-3	
Chloromethane	ND ug/L		1.0	1		09/14/12 12:07	74-87-3	
2-Chlorotoluene	ND ug/L		1.0	1		09/14/12 12:07	95-49-8	
4-Chlorotoluene	ND ug/L		1.0	1		09/14/12 12:07	106-43-4	
1,2-Dibromo-3-chloropropane	ND ug/L		5.0	1		09/14/12 12:07	96-12-8	
Dibromochloromethane	ND ug/L		1.0	1		09/14/12 12:07	124-48-1	
1,2-Dibromoethane (EDB)	ND ug/L		1.0	1		09/14/12 12:07	106-93-4	
Dibromomethane	ND ug/L		1.0	1		09/14/12 12:07	74-95-3	
1,2-Dichlorobenzene	4.8 ug/L		1.0	1		09/14/12 12:07	95-50-1	
1,3-Dichlorobenzene	ND ug/L		1.0	1		09/14/12 12:07	541-73-1	
1,4-Dichlorobenzene	ND ug/L		1.0	1		09/14/12 12:07	106-46-7	
Dichlorodifluoromethane	ND ug/L		1.0	1		09/14/12 12:07	75-71-8	
1,1-Dichloroethane	ND ug/L		1.0	1		09/14/12 12:07	75-34-3	
1,2-Dichloroethane	ND ug/L		1.0	1		09/14/12 12:07	107-06-2	
1,2-Dichloroethene (Total)	ND ug/L		2.0	1		09/14/12 12:07	540-59-0	

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ANALYTICAL RESULTS

Project: Seekins Ford 1197-02

Pace Project No.: 2513481

Sample: MW-3 Lab ID: 2513481006 Collected: 09/05/12 13:00 Received: 09/06/12 08:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
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8260 MSV

Analytical Method: EPA 5030B/8260

1,1-Dichloroethene	ND	ug/L	1.0	1		09/14/12 12:07	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		09/14/12 12:07	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		09/14/12 12:07	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		09/14/12 12:07	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		09/14/12 12:07	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		09/14/12 12:07	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		09/14/12 12:07	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		09/14/12 12:07	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		09/14/12 12:07	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		09/14/12 12:07	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		09/14/12 12:07	87-68-3	
2-Hexanone	ND	ug/L	5.0	1		09/14/12 12:07	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		09/14/12 12:07	98-82-8	
p-Isopropyltoluene	2.2	ug/L	1.0	1		09/14/12 12:07	99-87-6	
Methylene chloride	ND	ug/L	5.0	1		09/14/12 12:07	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	1		09/14/12 12:07	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		09/14/12 12:07	1634-04-4	
Naphthalene	4.7	ug/L	1.0	1		09/14/12 12:07	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		09/14/12 12:07	103-65-1	
Styrene	ND	ug/L	1.0	1		09/14/12 12:07	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		09/14/12 12:07	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		09/14/12 12:07	79-34-5	
Tetrachloroethene	1.4	ug/L	1.0	1		09/14/12 12:07	127-18-4	
Toluene	ND	ug/L	1.0	1		09/14/12 12:07	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		09/14/12 12:07	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		09/14/12 12:07	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		09/14/12 12:07	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		09/14/12 12:07	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		09/14/12 12:07	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		09/14/12 12:07	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		09/14/12 12:07	96-18-4	
1,2,4-Trimethylbenzene	1.7	ug/L	1.0	1		09/14/12 12:07	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		09/14/12 12:07	108-67-8	
Vinyl chloride	ND	ug/L	1.0	1		09/14/12 12:07	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		09/14/12 12:07	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1		09/14/12 12:07	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		09/14/12 12:07	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	102 %		79-121	1		09/14/12 12:07	460-00-4	
Dibromofluoromethane (S)	98 %		81-119	1		09/14/12 12:07	1868-53-7	
1,2-Dichloroethane-d4 (S)	100 %		72-127	1		09/14/12 12:07	17060-07-0	
Toluene-d8 (S)	101 %		77-120	1		09/14/12 12:07	2037-26-5	



ANALYTICAL RESULTS

Project: Seekins Ford 1197-02
 Pace Project No.: 2513481

Sample: Trip Blank - 8260 Lab ID: 2513481007 Collected: 09/05/12 13:20 Received: 09/06/12 08:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
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8260 MSV

Analytical Method: EPA 5030B/8260

Acetone	ND ug/L		5.0	1		09/13/12 00:50	67-64-1	
Benzene	ND ug/L		1.0	1		09/13/12 00:50	71-43-2	
Bromobenzene	ND ug/L		1.0	1		09/13/12 00:50	108-86-1	
Bromochloromethane	ND ug/L		1.0	1		09/13/12 00:50	74-97-5	
Bromodichloromethane	ND ug/L		1.0	1		09/13/12 00:50	75-27-4	
Bromoform	ND ug/L		1.0	1		09/13/12 00:50	75-25-2	
Bromomethane	ND ug/L		1.0	1		09/13/12 00:50	74-83-9	
2-Butanone (MEK)	ND ug/L		5.0	1		09/13/12 00:50	78-93-3	
n-Butylbenzene	ND ug/L		1.0	1		09/13/12 00:50	104-51-8	
sec-Butylbenzene	ND ug/L		1.0	1		09/13/12 00:50	135-98-8	
tert-Butylbenzene	ND ug/L		1.0	1		09/13/12 00:50	98-06-6	
Carbon disulfide	ND ug/L		1.0	1		09/13/12 00:50	75-15-0	
Carbon tetrachloride	ND ug/L		1.0	1		09/13/12 00:50	56-23-5	
Chlorobenzene	ND ug/L		1.0	1		09/13/12 00:50	108-90-7	
Chloroethane	ND ug/L		1.0	1		09/13/12 00:50	75-00-3	
Chloroform	ND ug/L		1.0	1		09/13/12 00:50	67-66-3	
Chloromethane	ND ug/L		1.0	1		09/13/12 00:50	74-87-3	
2-Chlorotoluene	ND ug/L		1.0	1		09/13/12 00:50	95-49-8	
4-Chlorotoluene	ND ug/L		1.0	1		09/13/12 00:50	106-43-4	
1,2-Dibromo-3-chloropropane	ND ug/L		5.0	1		09/13/12 00:50	96-12-8	
Dibromochloromethane	ND ug/L		1.0	1		09/13/12 00:50	124-48-1	
1,2-Dibromoethane (EDB)	ND ug/L		1.0	1		09/13/12 00:50	106-93-4	
Dibromomethane	ND ug/L		1.0	1		09/13/12 00:50	74-95-3	
1,2-Dichlorobenzene	ND ug/L		1.0	1		09/13/12 00:50	95-50-1	
1,3-Dichlorobenzene	ND ug/L		1.0	1		09/13/12 00:50	541-73-1	
1,4-Dichlorobenzene	ND ug/L		1.0	1		09/13/12 00:50	106-46-7	
Dichlorodifluoromethane	ND ug/L		1.0	1		09/13/12 00:50	75-71-8	
1,1-Dichloroethane	ND ug/L		1.0	1		09/13/12 00:50	75-34-3	
1,2-Dichloroethane	ND ug/L		1.0	1		09/13/12 00:50	107-06-2	
1,2-Dichloroethene (Total)	ND ug/L		2.0	1		09/13/12 00:50	540-59-0	
1,1-Dichloroethene	ND ug/L		1.0	1		09/13/12 00:50	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		1.0	1		09/13/12 00:50	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		1.0	1		09/13/12 00:50	156-60-5	
1,2-Dichloropropane	ND ug/L		1.0	1		09/13/12 00:50	78-87-5	
1,3-Dichloropropane	ND ug/L		1.0	1		09/13/12 00:50	142-28-9	
2,2-Dichloropropane	ND ug/L		1.0	1		09/13/12 00:50	594-20-7	
1,1-Dichloropropene	ND ug/L		1.0	1		09/13/12 00:50	563-58-6	
cis-1,3-Dichloropropene	ND ug/L		1.0	1		09/13/12 00:50	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		1.0	1		09/13/12 00:50	10061-02-6	
Ethylbenzene	ND ug/L		1.0	1		09/13/12 00:50	100-41-4	
Hexachloro-1,3-butadiene	ND ug/L		1.0	1		09/13/12 00:50	87-68-3	
2-Hexanone	ND ug/L		5.0	1		09/13/12 00:50	591-78-6	
Isopropylbenzene (Cumene)	ND ug/L		1.0	1		09/13/12 00:50	98-82-8	
p-Isopropyltoluene	ND ug/L		1.0	1		09/13/12 00:50	99-87-6	
Methylene chloride	ND ug/L		5.0	1		09/13/12 00:50	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND ug/L		5.0	1		09/13/12 00:50	108-10-1	
Methyl-tert-butyl ether	ND ug/L		1.0	1		09/13/12 00:50	1634-04-4	

Date: 09/20/2012 04:41 PM

REPORT OF LABORATORY ANALYSIS

Page 16 of 29

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ANALYTICAL RESULTS

Project: Seekins Ford 1197-02
Pace Project No.: 2513481

Sample: Trip Blank - 8260	Lab ID: 2513481007	Collected: 09/05/12 13:20	Received: 09/06/12 08:20	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual

8260 MSV

Analytical Method: EPA 5030B/8260

Naphthalene	ND ug/L		1.0	1		09/13/12 00:50	91-20-3	
n-Propylbenzene	ND ug/L		1.0	1		09/13/12 00:50	103-65-1	
Styrene	ND ug/L		1.0	1		09/13/12 00:50	100-42-5	
1,1,1,2-Tetrachloroethane	ND ug/L		1.0	1		09/13/12 00:50	630-20-6	
1,1,2,2-Tetrachloroethane	ND ug/L		1.0	1		09/13/12 00:50	79-34-5	
Tetrachloroethene	ND ug/L		1.0	1		09/13/12 00:50	127-18-4	
Toluene	ND ug/L		1.0	1		09/13/12 00:50	108-88-3	
1,2,3-Trichlorobenzene	ND ug/L		1.0	1		09/13/12 00:50	87-61-6	
1,2,4-Trichlorobenzene	ND ug/L		1.0	1		09/13/12 00:50	120-82-1	
1,1,1-Trichloroethane	ND ug/L		1.0	1		09/13/12 00:50	71-55-6	
1,1,2-Trichloroethane	ND ug/L		1.0	1		09/13/12 00:50	79-00-5	
Trichloroethene	ND ug/L		1.0	1		09/13/12 00:50	79-01-6	
Trichlorofluoromethane	ND ug/L		1.0	1		09/13/12 00:50	75-69-4	
1,2,3-Trichloropropane	ND ug/L		1.0	1		09/13/12 00:50	96-18-4	
1,2,4-Trimethylbenzene	ND ug/L		1.0	1		09/13/12 00:50	95-63-6	
1,3,5-Trimethylbenzene	ND ug/L		1.0	1		09/13/12 00:50	108-67-8	
Vinyl chloride	ND ug/L		1.0	1		09/13/12 00:50	75-01-4	
Xylene (Total)	ND ug/L		3.0	1		09/13/12 00:50	1330-20-7	
m&p-Xylene	ND ug/L		2.0	1		09/13/12 00:50	179601-23-1	
o-Xylene	ND ug/L		1.0	1		09/13/12 00:50	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	100 %		79-121	1		09/13/12 00:50	460-00-4	
Dibromofluoromethane (S)	100 %		81-119	1		09/13/12 00:50	1868-53-7	
1,2-Dichloroethane-d4 (S)	101 %		72-127	1		09/13/12 00:50	17060-07-0	
Toluene-d8 (S)	103 %		77-120	1		09/13/12 00:50	2037-26-5	



QUALITY CONTROL DATA

Project: Seekins Ford 1197-02
 Pace Project No.: 2513481

QC Batch: MSV/7730 Analysis Method: EPA 5030B/8260
 QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
 Associated Lab Samples: 2513481001, 2513481007

METHOD BLANK: 129603 Matrix: Water
 Associated Lab Samples: 2513481001, 2513481007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	09/13/12 00:31	
1,1,1-Trichloroethane	ug/L	ND	1.0	09/13/12 00:31	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	09/13/12 00:31	
1,1,2-Trichloroethane	ug/L	ND	1.0	09/13/12 00:31	
1,1-Dichloroethane	ug/L	ND	1.0	09/13/12 00:31	
1,1-Dichloroethene	ug/L	ND	1.0	09/13/12 00:31	
1,1-Dichloropropene	ug/L	ND	1.0	09/13/12 00:31	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	09/13/12 00:31	
1,2,3-Trichloropropane	ug/L	ND	1.0	09/13/12 00:31	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	09/13/12 00:31	
1,2,4-Trimethylbenzene	ug/L	ND	1.0	09/13/12 00:31	
1,2-Dibromo-3-chloropropane	ug/L	ND	5.0	09/13/12 00:31	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	09/13/12 00:31	
1,2-Dichlorobenzene	ug/L	ND	1.0	09/13/12 00:31	
1,2-Dichloroethane	ug/L	ND	1.0	09/13/12 00:31	
1,2-Dichloroethene (Total)	ug/L	ND	2.0	09/13/12 00:31	
1,2-Dichloropropane	ug/L	ND	1.0	09/13/12 00:31	
1,3,5-Trimethylbenzene	ug/L	ND	1.0	09/13/12 00:31	
1,3-Dichlorobenzene	ug/L	ND	1.0	09/13/12 00:31	
1,3-Dichloropropane	ug/L	ND	1.0	09/13/12 00:31	
1,4-Dichlorobenzene	ug/L	ND	1.0	09/13/12 00:31	
2,2-Dichloropropane	ug/L	ND	1.0	09/13/12 00:31	
2-Butanone (MEK)	ug/L	ND	5.0	09/13/12 00:31	
2-Chlorotoluene	ug/L	ND	1.0	09/13/12 00:31	
2-Hexanone	ug/L	ND	5.0	09/13/12 00:31	
4-Chlorotoluene	ug/L	ND	1.0	09/13/12 00:31	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	09/13/12 00:31	
Acetone	ug/L	ND	5.0	09/13/12 00:31	
Benzene	ug/L	ND	1.0	09/13/12 00:31	
Bromobenzene	ug/L	ND	1.0	09/13/12 00:31	
Bromochloromethane	ug/L	ND	1.0	09/13/12 00:31	
Bromodichloromethane	ug/L	ND	1.0	09/13/12 00:31	
Bromoform	ug/L	ND	1.0	09/13/12 00:31	
Bromomethane	ug/L	ND	1.0	09/13/12 00:31	
Carbon disulfide	ug/L	ND	1.0	09/13/12 00:31	
Carbon tetrachloride	ug/L	ND	1.0	09/13/12 00:31	
Chlorobenzene	ug/L	ND	1.0	09/13/12 00:31	
Chloroethane	ug/L	ND	1.0	09/13/12 00:31	
Chloroform	ug/L	ND	1.0	09/13/12 00:31	
Chloromethane	ug/L	ND	1.0	09/13/12 00:31	
cis-1,2-Dichloroethene	ug/L	ND	1.0	09/13/12 00:31	
cis-1,3-Dichloropropene	ug/L	ND	1.0	09/13/12 00:31	
Dibromochloromethane	ug/L	ND	1.0	09/13/12 00:31	

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QUALITY CONTROL DATA

Project: Seekins Ford 1197-02

Pace Project No.: 2513481

METHOD BLANK: 129603

Matrix: Water

Associated Lab Samples: 2513481001, 2513481007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dibromomethane	ug/L	ND	1.0	09/13/12 00:31	
Dichlorodifluoromethane	ug/L	ND	1.0	09/13/12 00:31	
Ethylbenzene	ug/L	ND	1.0	09/13/12 00:31	
Hexachloro-1,3-butadiene	ug/L	ND	1.0	09/13/12 00:31	
Isopropylbenzene (Cumene)	ug/L	ND	1.0	09/13/12 00:31	
m&p-Xylene	ug/L	ND	2.0	09/13/12 00:31	
Methyl-tert-butyl ether	ug/L	ND	1.0	09/13/12 00:31	
Methylene chloride	ug/L	ND	5.0	09/13/12 00:31	
n-Butylbenzene	ug/L	ND	1.0	09/13/12 00:31	
n-Propylbenzene	ug/L	ND	1.0	09/13/12 00:31	
Naphthalene	ug/L	ND	1.0	09/13/12 00:31	
o-Xylene	ug/L	ND	1.0	09/13/12 00:31	
p-Isopropyltoluene	ug/L	ND	1.0	09/13/12 00:31	
sec-Butylbenzene	ug/L	ND	1.0	09/13/12 00:31	
Styrene	ug/L	ND	1.0	09/13/12 00:31	
tert-Butylbenzene	ug/L	ND	1.0	09/13/12 00:31	
Tetrachloroethene	ug/L	ND	1.0	09/13/12 00:31	
Toluene	ug/L	ND	1.0	09/13/12 00:31	
trans-1,2-Dichloroethene	ug/L	ND	1.0	09/13/12 00:31	
trans-1,3-Dichloropropene	ug/L	ND	1.0	09/13/12 00:31	
Trichloroethene	ug/L	ND	1.0	09/13/12 00:31	
Trichlorofluoromethane	ug/L	ND	1.0	09/13/12 00:31	
Vinyl chloride	ug/L	ND	1.0	09/13/12 00:31	
Xylene (Total)	ug/L	ND	3.0	09/13/12 00:31	
1,2-Dichloroethane-d4 (S)	%	103	72-127	09/13/12 00:31	
4-Bromofluorobenzene (S)	%	115	79-121	09/13/12 00:31	
Dibromofluoromethane (S)	%	103	81-119	09/13/12 00:31	
Toluene-d8 (S)	%	102	77-120	09/13/12 00:31	

LABORATORY CONTROL SAMPLE: 129604

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	19.8	99	70-122	
1,1,1-Trichloroethane	ug/L	20	19.7	98	67-131	
1,1,2,2-Tetrachloroethane	ug/L	20	20.4	102	62-133	
1,1,2-Trichloroethane	ug/L	20	21.0	105	68-122	
1,1-Dichloroethane	ug/L	20	18.8	94	70-125	
1,1-Dichloroethene	ug/L	20	19.2	96	69-142	
1,1-Dichloropropene	ug/L	20	19.1	95	67-129	
1,2,3-Trichlorobenzene	ug/L	20	14.6	73	60-132	
1,2,3-Trichloropropane	ug/L	20	20.0	100	65-120	
1,2,4-Trichlorobenzene	ug/L	20	14.6	73	62-127	
1,2,4-Trimethylbenzene	ug/L	20	19.4	97	71-122	
1,2-Dibromo-3-chloropropane	ug/L	20	18.0	90	55-118	
1,2-Dibromoethane (EDB)	ug/L	20	19.9	99	65-123	

Date: 09/20/2012 04:41 PM

REPORT OF LABORATORY ANALYSIS

Page 19 of 29

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QUALITY CONTROL DATA

Project: Seekins Ford 1197-02

Pace Project No.: 2513481

LABORATORY CONTROL SAMPLE: 129604

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichlorobenzene	ug/L	20	19.7	99	71-118	
1,2-Dichloroethane	ug/L	20	20.1	101	63-131	
1,2-Dichloroethene (Total)	ug/L	40	39.4	98	73-134	
1,2-Dichloropropane	ug/L	20	20.0	100	70-125	
1,3,5-Trimethylbenzene	ug/L	20	18.5	93	70-123	
1,3-Dichlorobenzene	ug/L	20	18.8	94	72-119	
1,3-Dichloropropane	ug/L	20	20.3	101	69-122	
1,4-Dichlorobenzene	ug/L	20	18.2	91	70-116	
2,2-Dichloropropane	ug/L	20	16.5	83	52-149	
2-Butanone (MEK)	ug/L	40	26.9	67	45-155	
2-Chlorotoluene	ug/L	20	18.6	93	69-119	
2-Hexanone	ug/L	40	27.1	68	50-151	
4-Chlorotoluene	ug/L	20	17.7	88	70-122	
4-Methyl-2-pentanone (MIBK)	ug/L	40	37.6	94	61-145	
Acetone	ug/L	40	28.0	70	40-160	
Benzene	ug/L	20	18.5	93	66-123	
Bromobenzene	ug/L	20	17.8	89	68-118	
Bromochloromethane	ug/L	20	19.9	99	72-128	
Bromodichloromethane	ug/L	20	19.5	98	68-129	
Bromoform	ug/L	20	21.5	107	54-118	
Bromomethane	ug/L	20	19.8	99	43-151	
Carbon disulfide	ug/L	20	18.1	90	52-142	
Carbon tetrachloride	ug/L	20	19.5	98	67-135	
Chlorobenzene	ug/L	20	19.4	97	72-116	
Chloroethane	ug/L	20	20.1	100	48-139	
Chloroform	ug/L	20	18.3	91	71-124	
Chloromethane	ug/L	20	20.5	103	40-152	
cis-1,2-Dichloroethene	ug/L	20	19.7	98	74-133	
cis-1,3-Dichloropropene	ug/L	20	20.8	104	64-132	
Dibromochloromethane	ug/L	20	19.5	98	60-121	
Dibromomethane	ug/L	20	19.6	98	69-131	
Dichlorodifluoromethane	ug/L	20	22.2	111	40-160	
Ethylbenzene	ug/L	20	19.3	97	67-122	
Hexachloro-1,3-butadiene	ug/L	20	17.2	86	55-139	
Isopropylbenzene (Cumene)	ug/L	20	19.1	95	67-124	
m&p-Xylene	ug/L	40	38.7	97	66-122	
Methyl-tert-butyl ether	ug/L	20	19.8	99	65-138	
Methylene chloride	ug/L	20	19.5	98	58-137	
n-Butylbenzene	ug/L	20	18.6	93	68-129	
n-Propylbenzene	ug/L	20	19.7	98	66-126	
Naphthalene	ug/L	20	12.6	63	59-133	
o-Xylene	ug/L	20	19.2	96	69-123	
p-Isopropyltoluene	ug/L	20	19.3	97	69-127	
sec-Butylbenzene	ug/L	20	18.4	92	68-129	
Styrene	ug/L	20	20.6	103	72-125	
tert-Butylbenzene	ug/L	20	18.0	90	58-120	
Tetrachloroethene	ug/L	20	18.4	92	40-115	
Toluene	ug/L	20	18.6	93	64-118	

Date: 09/20/2012 04:41 PM

REPORT OF LABORATORY ANALYSIS

Page 20 of 29

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QUALITY CONTROL DATA

Project: Seekins Ford 1197-02
Pace Project No.: 2513481

LABORATORY CONTROL SAMPLE: 129604

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
trans-1,2-Dichloroethene	ug/L	20	19.7	99	70-134	
trans-1,3-Dichloropropene	ug/L	20	16.5	82	52-115	
Trichloroethene	ug/L	20	18.7	93	69-125	
Trichlorofluoromethane	ug/L	20	20.2	101	57-155	
Vinyl chloride	ug/L	20	20.8	104	53-132	
Xylene (Total)	ug/L	60	57.9	97	68-122	
1,2-Dichloroethane-d4 (S)	%			104	72-127	
4-Bromofluorobenzene (S)	%			97	79-121	
Dibromofluoromethane (S)	%			103	81-119	
Toluene-d8 (S)	%			99	77-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 129994 129995

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
		2513398054 Result	Spike Conc.	Spike Conc.	MS Result					
1,1,1,2-Tetrachloroethane	ug/L	ND	20	20	20.6	20.1	103	101	67-132	2
1,1,1-Trichloroethane	ug/L	ND	20	20	20.9	20.2	105	101	67-145	3
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	27.0	20.8	135	104	65-135	26 D6
1,1,2-Trichloroethane	ug/L	ND	20	20	20.8	20.9	104	105	67-126	.6
1,1-Dichloroethane	ug/L	ND	20	20	23.1	20.4	115	102	69-138	12
1,1-Dichloroethene	ug/L	ND	20	20	22.6	22.0	113	110	68-160	3
1,1-Dichloropropene	ug/L	ND	20	20	21.6	20.9	108	105	68-145	3
1,2,3-Trichlorobenzene	ug/L	ND	20	20	16.0	17.9	80	89	57-131	11
1,2,3-Trichloropropane	ug/L	ND	20	20	15.0	19.6	75	98	61-123	26 D6
1,2,4-Trichlorobenzene	ug/L	ND	20	20	16.6	17.2	83	86	58-130	3
1,2,4-Trimethylbenzene	ug/L	1.1	20	20	22.6	20.9	108	99	60-136	8
1,2-Dibromo-3-chloropropane	ug/L	ND	20	20	19.8	21.2	99	106	48-127	7
1,2-Dibromoethane (EDB)	ug/L	ND	20	20	21.9	21.2	110	106	61-127	3
1,2-Dichlorobenzene	ug/L	ND	20	20	18.1	21.3	90	105	67-126	16
1,2-Dichloroethane	ug/L	ND	20	20	21.1	19.6	106	98	60-138	7
1,2-Dichloroethene (Total)	ug/L	ND	40	40	45.4	41.0	114	103	70-146	10
1,2-Dichloropropane	ug/L	ND	20	20	22.1	21.6	111	108	67-138	3
1,3,5-Trimethylbenzene	ug/L	ND	20	20	21.6	20.2	107	100	64-135	6
1,3-Dichlorobenzene	ug/L	ND	20	20	19.8	21.2	99	106	69-128	7
1,3-Dichloropropane	ug/L	ND	20	20	20.4	19.6	102	98	65-128	4
1,4-Dichlorobenzene	ug/L	ND	20	20	18.6	18.6	93	93	66-124	.2
2,2-Dichloropropane	ug/L	ND	20	20	8.7	8.2	44	41	46-160	5 M1
2-Butanone (MEK)	ug/L	ND	40	40	37.4	29.2	94	73	40-140	25
2-Chlorotoluene	ug/L	ND	20	20	22.0	19.2	110	96	67-129	13
2-Hexanone	ug/L	ND	40	40	38.1	37.6	95	94	42-141	1
4-Chlorotoluene	ug/L	ND	20	20	21.1	18.5	105	92	67-133	13
4-Methyl-2-pentanone (MIBK)	ug/L	ND	40	40	45.3	45.5	113	114	54-151	.5
Acetone	ug/L	ND	40	40	42.3	38.3	105	95	40-155	10
Benzene	ug/L	ND	20	20	22.5	21.6	112	108	63-138	4
Bromobenzene	ug/L	ND	20	20	21.1	18.4	106	92	64-127	14
Bromochloromethane	ug/L	ND	20	20	21.9	19.9	109	100	66-136	9
Bromodichloromethane	ug/L	ND	20	20	20.7	19.5	104	97	65-138	6

Date: 09/20/2012 04:41 PM

REPORT OF LABORATORY ANALYSIS

Page 21 of 29

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QUALITY CONTROL DATA

Project: Seekins Ford 1197-02

Pace Project No.: 2513481

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 129994											
Parameter	Units	129995									
		2513398054 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Bromofom	ug/L	ND	20	20	19.6	18.9	98	95	51-119	4	
Bromomethane	ug/L	ND	20	20	21.7	20.1	109	101	40-158	8	
Carbon disulfide	ug/L	ND	20	20	21.3	19.6	106	98	56-158	8	
Carbon tetrachloride	ug/L	ND	20	20	20.8	20.7	104	104	66-152	.5	
Chlorobenzene	ug/L	ND	20	20	20.6	20.5	103	103	68-128	.4	
Chloroethane	ug/L	ND	20	20	25.3	23.4	127	117	49-154	8	
Chloroform	ug/L	ND	20	20	19.3	18.9	96	94	69-137	2	
Chloromethane	ug/L	ND	20	20	24.9	21.3	125	106	40-160	16	
cis-1,2-Dichloroethene	ug/L	ND	20	20	21.9	20.4	109	102	69-147	7	
cis-1,3-Dichloropropene	ug/L	ND	20	20	19.1	19.3	96	97	60-141	1	
Dibromochloromethane	ug/L	ND	20	20	18.9	20.4	94	102	56-125	8	
Dibromomethane	ug/L	ND	20	20	21.0	21.1	105	105	63-137	.3	
Dichlorodifluoromethane	ug/L	ND	20	20	22.2	20.8	111	104	40-160	7	
Ethylbenzene	ug/L	1.4	20	20	22.1	21.9	104	102	65-135	1	
Hexachloro-1,3-butadiene	ug/L	ND	20	20	17.7	18.0	88	90	50-149	2	
Isopropylbenzene (Cumene)	ug/L	ND	20	20	19.2	18.6	96	93	64-137	3	
m&p-Xylene	ug/L	40	40	40	44.5	44.2	96	95	63-134	.6	
Methyl-tert-butyl ether	ug/L	ND	20	20	24.7	20.2	123	101	59-143	20	
Methylene chloride	ug/L	ND	20	20	23.2	20.6	116	103	52-133	12	
n-Butylbenzene	ug/L	ND	20	20	16.4	20.2	82	101	65-143	21 D6	
n-Propylbenzene	ug/L	ND	20	20	22.2	19.2	110	95	64-141	15	
Naphthalene	ug/L	ND	20	20	17.2	17.6	86	88	48-141	2	
o-Xylene	ug/L	20	20	20	20.4	19.7	88	84	68-131	4	
p-Isopropyltoluene	ug/L	ND	20	20	20.2	20.2	101	101	69-137	.3	
sec-Butylbenzene	ug/L	ND	20	20	20.9	19.4	104	97	69-139	7	
Styrene	ug/L	ND	20	20	19.1	18.6	95	93	67-135	3	
tert-Butylbenzene	ug/L	ND	20	20	20.3	19.2	102	96	61-129	6	
Tetrachloroethene	ug/L	ND	20	20	17.8	17.8	89	89	40-122	.05	
Toluene	ug/L	1.7	20	20	19.2	20.1	88	92	64-128	4	
trans-1,2-Dichloroethene	ug/L	ND	20	20	23.5	20.6	118	103	66-150	13	
trans-1,3-Dichloropropene	ug/L	ND	20	20	14.9	16.3	74	81	51-116	9	
Trichloroethene	ug/L	ND	20	20	20.5	20.1	102	100	68-135	2	
Trichlorofluoromethane	ug/L	ND	20	20	22.3	21.9	112	110	54-160	2	
Vinyl chloride	ug/L	ND	20	20	25.5	20.5	127	103	45-155	22	
Xylene (Total)	ug/L	8.9	60	60	64.9	63.9	93	92	65-133	2	
1,2-Dichloroethane-d4 (S)	%						98	98	72-127		
4-Bromofluorobenzene (S)	%						96	97	79-121		
Dibromofluoromethane (S)	%						100	99	81-119		
Toluene-d8 (S)	%						92	99	77-120		

QUALITY CONTROL DATA

Project: Seekins Ford 1197-02
Pace Project No.: 2513481

QC Batch: MSV/7758 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 2513481002, 2513481003, 2513481004, 2513481005, 2513481006

METHOD BLANK: 130091 Matrix: Water
Associated Lab Samples: 2513481002, 2513481003, 2513481004, 2513481005, 2513481006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	09/14/12 06:19	
1,1,1-Trichloroethane	ug/L	ND	1.0	09/14/12 06:19	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	09/14/12 06:19	
1,1,2-Trichloroethane	ug/L	ND	1.0	09/14/12 06:19	
1,1-Dichloroethane	ug/L	ND	1.0	09/14/12 06:19	
1,1-Dichloroethene	ug/L	ND	1.0	09/14/12 06:19	
1,1-Dichloropropene	ug/L	ND	1.0	09/14/12 06:19	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	09/14/12 06:19	
1,2,3-Trichloropropane	ug/L	ND	1.0	09/14/12 06:19	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	09/14/12 06:19	
1,2,4-Trimethylbenzene	ug/L	ND	1.0	09/14/12 06:19	
1,2-Dibromo-3-chloropropane	ug/L	ND	5.0	09/14/12 06:19	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	09/14/12 06:19	
1,2-Dichlorobenzene	ug/L	ND	1.0	09/14/12 06:19	
1,2-Dichloroethane	ug/L	ND	1.0	09/14/12 06:19	
1,2-Dichloroethene (Total)	ug/L	ND	2.0	09/14/12 06:19	
1,2-Dichloropropane	ug/L	ND	1.0	09/14/12 06:19	
1,3,5-Trimethylbenzene	ug/L	ND	1.0	09/14/12 06:19	
1,3-Dichlorobenzene	ug/L	ND	1.0	09/14/12 06:19	
1,3-Dichloropropane	ug/L	ND	1.0	09/14/12 06:19	
1,4-Dichlorobenzene	ug/L	ND	1.0	09/14/12 06:19	
2,2-Dichloropropane	ug/L	ND	1.0	09/14/12 06:19	
2-Butanone (MEK)	ug/L	ND	5.0	09/14/12 06:19	
2-Chlorotoluene	ug/L	ND	1.0	09/14/12 06:19	
2-Hexanone	ug/L	ND	5.0	09/14/12 06:19	
4-Chlorotoluene	ug/L	ND	1.0	09/14/12 06:19	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	09/14/12 06:19	
Acetone	ug/L	ND	5.0	09/14/12 06:19	
Benzene	ug/L	ND	1.0	09/14/12 06:19	
Bromobenzene	ug/L	ND	1.0	09/14/12 06:19	
Bromochloromethane	ug/L	ND	1.0	09/14/12 06:19	
Bromodichloromethane	ug/L	ND	1.0	09/14/12 06:19	
Bromoform	ug/L	ND	1.0	09/14/12 06:19	
Bromomethane	ug/L	ND	1.0	09/14/12 06:19	
Carbon disulfide	ug/L	ND	1.0	09/14/12 06:19	
Carbon tetrachloride	ug/L	ND	1.0	09/14/12 06:19	
Chlorobenzene	ug/L	ND	1.0	09/14/12 06:19	
Chloroethane	ug/L	ND	1.0	09/14/12 06:19	
Chloroform	ug/L	ND	1.0	09/14/12 06:19	
Chloromethane	ug/L	ND	1.0	09/14/12 06:19	
cis-1,2-Dichloroethene	ug/L	ND	1.0	09/14/12 06:19	
cis-1,3-Dichloropropene	ug/L	ND	1.0	09/14/12 06:19	
Dibromochloromethane	ug/L	ND	1.0	09/14/12 06:19	

Date: 09/20/2012 04:41 PM

REPORT OF LABORATORY ANALYSIS

Page 23 of 29

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QUALITY CONTROL DATA

Project: Seekins Ford 1197-02
 Pace Project No.: 2513481

METHOD BLANK: 130091 Matrix: Water
 Associated Lab Samples: 2513481002, 2513481003, 2513481004, 2513481005, 2513481006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dibromomethane	ug/L	ND	1.0	09/14/12 06:19	
Dichlorodifluoromethane	ug/L	ND	1.0	09/14/12 06:19	
Ethylbenzene	ug/L	ND	1.0	09/14/12 06:19	
Hexachloro-1,3-butadiene	ug/L	ND	1.0	09/14/12 06:19	
Isopropylbenzene (Cumene)	ug/L	ND	1.0	09/14/12 06:19	
m&p-Xylene	ug/L	ND	2.0	09/14/12 06:19	
Methyl-tert-butyl ether	ug/L	ND	1.0	09/14/12 06:19	
Methylene chloride	ug/L	ND	5.0	09/14/12 06:19	
n-Butylbenzene	ug/L	ND	1.0	09/14/12 06:19	
n-Propylbenzene	ug/L	ND	1.0	09/14/12 06:19	
Naphthalene	ug/L	ND	1.0	09/14/12 06:19	
o-Xylene	ug/L	ND	1.0	09/14/12 06:19	
p-Isopropyltoluene	ug/L	ND	1.0	09/14/12 06:19	
sec-Butylbenzene	ug/L	ND	1.0	09/14/12 06:19	
Styrene	ug/L	ND	1.0	09/14/12 06:19	
tert-Butylbenzene	ug/L	ND	1.0	09/14/12 06:19	
Tetrachloroethene	ug/L	ND	1.0	09/14/12 06:19	
Toluene	ug/L	ND	1.0	09/14/12 06:19	
trans-1,2-Dichloroethene	ug/L	ND	1.0	09/14/12 06:19	
trans-1,3-Dichloropropene	ug/L	ND	1.0	09/14/12 06:19	
Trichloroethene	ug/L	ND	1.0	09/14/12 06:19	
Trichlorofluoromethane	ug/L	ND	1.0	09/14/12 06:19	
Vinyl chloride	ug/L	ND	1.0	09/14/12 06:19	
Xylene (Total)	ug/L	ND	3.0	09/14/12 06:19	
1,2-Dichloroethane-d4 (S)	%	100	72-127	09/14/12 06:19	
4-Bromofluorobenzene (S)	%	110	79-121	09/14/12 06:19	
Dibromofluoromethane (S)	%	97	81-119	09/14/12 06:19	
Toluene-d8 (S)	%	101	77-120	09/14/12 06:19	

LABORATORY CONTROL SAMPLE: 130092

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	18.9	94	70-122	
1,1,1-Trichloroethane	ug/L	20	16.9	84	67-131	
1,1,2,2-Tetrachloroethane	ug/L	20	19.9	100	62-133	
1,1,2-Trichloroethane	ug/L	20	19.7	99	68-122	
1,1-Dichloroethane	ug/L	20	15.9	80	70-125	
1,1-Dichloroethene	ug/L	20	15.6	78	69-142	
1,1-Dichloropropene	ug/L	20	16.2	81	67-129	
1,2,3-Trichlorobenzene	ug/L	20	17.0	85	60-132	
1,2,3-Trichloropropane	ug/L	20	19.0	95	65-120	
1,2,4-Trichlorobenzene	ug/L	20	15.8	79	62-127	
1,2,4-Trimethylbenzene	ug/L	20	17.5	87	71-122	
1,2-Dibromo-3-chloropropane	ug/L	20	18.0	90	55-118	
1,2-Dibromoethane (EDB)	ug/L	20	20.0	100	65-123	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Seekins Ford 1197-02

Pace Project No.: 2513481

LABORATORY CONTROL SAMPLE: 130092

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichlorobenzene	ug/L	20	19.4	97	71-118	
1,2-Dichloroethane	ug/L	20	18.6	93	63-131	
1,2-Dichloroethene (Total)	ug/L	40	33.0	82	73-134	
1,2-Dichloropropane	ug/L	20	18.7	93	70-125	
1,3,5-Trimethylbenzene	ug/L	20	16.8	84	70-123	
1,3-Dichlorobenzene	ug/L	20	18.9	94	72-119	
1,3-Dichloropropane	ug/L	20	19.9	100	69-122	
1,4-Dichlorobenzene	ug/L	20	17.4	87	70-116	
2,2-Dichloropropane	ug/L	20	10.7	53	52-149	
2-Butanone (MEK)	ug/L	40	33.0	83	45-155	
2-Chlorotoluene	ug/L	20	18.8	94	69-119	
2-Hexanone	ug/L	40	34.3	86	50-151	
4-Chlorotoluene	ug/L	20	18.0	90	70-122	
4-Methyl-2-pentanone (MIBK)	ug/L	40	35.2	88	61-145	
Acetone	ug/L	40	30.2	75	40-160	
Benzene	ug/L	20	18.0	90	66-123	
Bromobenzene	ug/L	20	18.6	93	68-118	
Bromochloromethane	ug/L	20	18.3	92	72-128	
Bromodichloromethane	ug/L	20	18.1	90	68-129	
Bromoform	ug/L	20	16.8	84	54-118	
Bromomethane	ug/L	20	16.3	81	43-151	
Carbon disulfide	ug/L	20	13.9	70	52-142	
Carbon tetrachloride	ug/L	20	17.0	85	67-135	
Chlorobenzene	ug/L	20	17.6	88	72-116	
Chloroethane	ug/L	20	14.8	74	48-139	
Chloroform	ug/L	20	16.4	82	71-124	
Chloromethane	ug/L	20	16.8	84	40-152	
cis-1,2-Dichloroethene	ug/L	20	17.9	89	74-133	
cis-1,3-Dichloropropene	ug/L	20	16.1	81	64-132	
Dibromochloromethane	ug/L	20	17.2	86	60-121	
Dibromomethane	ug/L	20	18.7	93	69-131	
Dichlorodifluoromethane	ug/L	20	14.8	74	40-160	
Ethylbenzene	ug/L	20	18.8	94	67-122	
Hexachloro-1,3-butadiene	ug/L	20	17.3	87	55-139	
Isopropylbenzene (Cumene)	ug/L	20	17.0	85	67-124	
m&p-Xylene	ug/L	40	33.4	84	66-122	
Methyl-tert-butyl ether	ug/L	20	17.3	87	65-138	
Methylene chloride	ug/L	20	14.6	73	58-137	
n-Butylbenzene	ug/L	20	17.1	85	68-129	
n-Propylbenzene	ug/L	20	17.0	85	66-126	
Naphthalene	ug/L	20	15.7	79	59-133	
o-Xylene	ug/L	20	16.9	85	69-123	
p-Isopropyltoluene	ug/L	20	18.6	93	69-127	
sec-Butylbenzene	ug/L	20	16.5	83	68-129	
Styrene	ug/L	20	17.3	87	72-125	
tert-Butylbenzene	ug/L	20	17.7	89	58-120	
Tetrachloroethene	ug/L	20	17.2	86	40-115	
Toluene	ug/L	20	17.4	87	64-118	

Date: 09/20/2012 04:41 PM

REPORT OF LABORATORY ANALYSIS

Page 25 of 29

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QUALITY CONTROL DATA

Project: Seekins Ford 1197-02
Pace Project No.: 2513481

LABORATORY CONTROL SAMPLE: 130092

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
trans-1,2-Dichloroethene	ug/L	20	15.1	75	70-134	
trans-1,3-Dichloropropene	ug/L	20	14.1	70	52-115	
Trichloroethene	ug/L	20	17.1	85	69-125	
Trichlorofluoromethane	ug/L	20	16.2	81	57-155	
Vinyl chloride	ug/L	20	15.0	75	53-132	
Xylene (Total)	ug/L	60	50.3	84	68-122	
1,2-Dichloroethane-d4 (S)	%			102	72-127	
4-Bromofluorobenzene (S)	%			101	79-121	
Dibromofluoromethane (S)	%			98	81-119	
Toluene-d8 (S)	%			100	77-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 130093 130094

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
		2513398065 Result	Spike Conc.	Spike Conc.	MS Result					
1,1,1,2-Tetrachloroethane	ug/L	ND	20	20	20.3	21.2	101	106	67-132	4
1,1,1-Trichloroethane	ug/L	ND	20	20	20.0	20.7	100	103	67-145	4
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	22.4	22.5	112	113	65-135	.3
1,1,2-Trichloroethane	ug/L	ND	20	20	21.2	21.3	106	107	67-126	.4
1,1-Dichloroethane	ug/L	ND	20	20	17.4	18.0	87	90	69-138	4
1,1-Dichloroethene	ug/L	ND	20	20	17.2	18.5	86	92	68-160	7
1,1-Dichloropropene	ug/L	ND	20	20	20.2	20.1	101	100	68-145	.4
1,2,3-Trichlorobenzene	ug/L	ND	20	20	21.0	20.4	105	102	57-131	3
1,2,3-Trichloropropane	ug/L	ND	20	20	20.3	20.8	101	104	61-123	2
1,2,4-Trichlorobenzene	ug/L	ND	20	20	20.3	19.6	102	98	58-130	4
1,2,4-Trimethylbenzene	ug/L	ND	20	20	21.6	21.4	108	107	60-136	.7
1,2-Dibromo-3-chloropropane	ug/L	ND	20	20	18.2	18.8	91	94	48-127	3
1,2-Dibromoethane (EDB)	ug/L	ND	20	20	21.6	21.6	108	108	61-127	.1
1,2-Dichlorobenzene	ug/L	ND	20	20	22.2	22.5	111	112	67-126	1
1,2-Dichloroethane	ug/L	ND	20	20	19.2	19.8	96	99	60-138	3
1,2-Dichloroethene (Total)	ug/L	ND	40	40	37.1	38.1	93	95	70-146	3
1,2-Dichloropropane	ug/L	ND	20	20	21.8	22.2	109	111	67-138	2
1,3,5-Trimethylbenzene	ug/L	ND	20	20	20.1	20.4	100	102	64-135	2
1,3-Dichlorobenzene	ug/L	ND	20	20	21.8	22.1	109	111	69-128	1
1,3-Dichloropropane	ug/L	ND	20	20	21.6	21.8	108	109	65-128	.8
1,4-Dichlorobenzene	ug/L	ND	20	20	19.7	20.1	99	100	66-124	2
2,2-Dichloropropane	ug/L	ND	20	20	17.2	17.7	86	88	46-160	3
2-Butanone (MEK)	ug/L	ND	40	40	36.6	36.1	91	90	40-140	1
2-Chlorotoluene	ug/L	ND	20	20	22.3	22.5	111	113	67-129	1
2-Hexanone	ug/L	ND	40	40	37.9	37.6	95	94	42-141	.8
4-Chlorotoluene	ug/L	ND	20	20	20.9	21.3	105	106	67-133	2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	40	40	39.0	38.9	97	97	54-151	.3
Acetone	ug/L	ND	40	40	151	33.3	373	80	40-155	128 D6,M1
Benzene	ug/L	ND	20	20	21.5	21.6	108	108	63-138	.3
Bromobenzene	ug/L	ND	20	20	21.9	21.9	109	109	64-127	.07
Bromochloromethane	ug/L	ND	20	20	20.3	20.4	101	102	66-136	.7
Bromodichloromethane	ug/L	ND	20	20	19.3	20.2	97	101	65-138	4

Date: 09/20/2012 04:41 PM

REPORT OF LABORATORY ANALYSIS

Page 26 of 29

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QUALITY CONTROL DATA

Project: Seekins Ford 1197-02
Pace Project No.: 2513481

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 130093 130094												
Parameter	Units	2513398065 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	Limits	RPD	Qual
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec				
Bromoform	ug/L	ND	20	20	15.9	16.8	80	84	51-119	6		
Bromomethane	ug/L	ND	20	20	11.9	14.6	60	73	40-158	20		
Carbon disulfide	ug/L	ND	20	20	15.7	16.8	79	84	56-158	6		
Carbon tetrachloride	ug/L	ND	20	20	19.3	20.4	97	102	66-152	6		
Chlorobenzene	ug/L	ND	20	20	19.8	20.0	99	100	68-128	1		
Chloroethane	ug/L	ND	20	20	16.5	17.8	83	89	49-154	7		
Chloroform	ug/L	ND	20	20	18.5	18.7	93	94	69-137	1		
Chloromethane	ug/L	ND	20	20	18.9	19.5	94	98	40-160	3		
cis-1,2-Dichloroethene	ug/L	ND	20	20	20.6	20.6	103	103	69-147	.09		
cis-1,3-Dichloropropene	ug/L	ND	20	20	18.8	19.2	94	96	60-141	2		
Dibromochloromethane	ug/L	ND	20	20	17.4	18.1	87	91	56-125	4		
Dibromomethane	ug/L	ND	20	20	19.7	19.8	99	99	63-137	.6		
Dichlorodifluoromethane	ug/L	ND	20	20	14.7	17.4	74	87	40-160	17		
Ethylbenzene	ug/L	ND	20	20	22.0	22.3	110	112	65-135	1		
Hexachloro-1,3-butadiene	ug/L	ND	20	20	21.0	21.3	105	106	50-149	1		
Isopropylbenzene (Cumene)	ug/L	ND	20	20	19.9	20.2	100	101	64-137	1		
m&p-Xylene	ug/L	ND	40	40	39.3	39.4	98	98	63-134	.2		
Methyl-tert-butyl ether	ug/L	ND	20	20	18.1	18.8	90	94	59-143	4		
Methylene chloride	ug/L	ND	20	20	15.3	16.0	76	80	52-133	4		
n-Butylbenzene	ug/L	ND	20	20	21.7	21.3	109	107	65-143	2		
n-Propylbenzene	ug/L	ND	20	20	20.8	21.0	104	105	64-141	1		
Naphthalene	ug/L	ND	20	20	27.9	22.1	140	110	48-141	24		
o-Xylene	ug/L	ND	20	20	19.8	20.0	99	100	68-131	.9		
p-Isopropyltoluene	ug/L	ND	20	20	22.5	22.7	113	113	69-137	.6		
sec-Butylbenzene	ug/L	ND	20	20	20.2	20.5	101	103	69-139	2		
Styrene	ug/L	ND	20	20	19.2	19.5	96	98	67-135	1		
tert-Butylbenzene	ug/L	ND	20	20	21.7	22.1	108	111	61-129	2		
Tetrachloroethene	ug/L	ND	20	20	20.3	20.8	101	104	40-122	2		
Toluene	ug/L	ND	20	20	20.1	20.6	101	103	64-128	2		
trans-1,2-Dichloroethene	ug/L	ND	20	20	16.4	17.4	82	87	66-150	6		
trans-1,3-Dichloropropene	ug/L	ND	20	20	16.0	16.6	80	83	51-116	3		
Trichloroethene	ug/L	ND	20	20	20.1	20.5	100	103	68-135	2		
Trichlorofluoromethane	ug/L	ND	20	20	17.3	18.8	86	94	54-160	8		
Vinyl chloride	ug/L	ND	20	20	17.1	17.2	85	86	45-155	1		
Xylene (Total)	ug/L	ND	60	60	59.1	59.3	98	99	65-133	.4		
1,2-Dichloroethane-d4 (S)	%						101	100	72-127			
4-Bromofluorobenzene (S)	%						104	104	79-121			
Dibromofluoromethane (S)	%						97	97	81-119			
Toluene-d8 (S)	%						99	100	77-120			

QUALIFIERS

Project: Seekins Ford 1197-02
Pace Project No.: 2513481

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel Clean-Up

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-S Pace Analytical Services - Seattle

ANALYTE QUALIFIERS

D6 The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.
M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Seekins Ford 1197-02
Pace Project No.: 2513481

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2513481001	MW-1	EPA 5030B/8260	MSV/7730		
2513481002	MW-6	EPA 5030B/8260	MSV/7758		
2513481003	MW-2	EPA 5030B/8260	MSV/7758		
2513481004	MW-5	EPA 5030B/8260	MSV/7758		
2513481005	MW-7	EPA 5030B/8260	MSV/7758		
2513481006	MW-3	EPA 5030B/8260	MSV/7758		
2513481007	Trip Blank - 8260	EPA 5030B/8260	MSV/7730		



Sample Condition Upon Receipt

Client Name: Alaska Analytical Project # 2513481

Courier: Fed Ex UPS USPS Client Commercial Pace Other _____
 Tracking #: 8649 0902
 Custody Seal on Cooler/Box Present: Yes No Seals Intact: Yes No
 Packing Material: Bubble Wrap Bubble Bags None Other _____ Temp. Blank Yes No
 Thermometer Used 132016 or 101731962 or 226099 Type of Ice: Wet Blue None Samples on ice, cooling process has begun
 Cooler Temperature 0.9c Biological Tissue is Frozen: Yes No
 Temp should be above freezing $\leq 6^{\circ}\text{C}$ Comments: Date and initials of person examining contents: D90612 CW

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Follow Up / Hold Analysis Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	8.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	11.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	12.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
-Includes date/time/ID/Analysis Matrix:	<u>WI</u>	
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Exceptions: <u>VOA</u> , coliform, TOC, O&G	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Initial when completed
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Lot # of added preservative
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	15.
Trip Blanks Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	17.
Pace Trip Blank Creation Date:		<u>not PACE created.</u>

Client Notification/ Resolution: _____ Field Data Required? Y / - N
 Person Contacted: _____ Date/Time: _____
 Comments/ Resolution: _____

Project Manager Review: D. Elybin Date: 9/10/2002

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)



ALASKA AIRLINES & HORIZON AIR

2513481

P. O. BOX 68900 SEATTLE, WA 98168
800-225-2752 ALASKACARGO.COM

SHIPPER

MAPPA INC
1956 RICHARDSON HWY
NORTH POLE, AK 99705

CONSIGNEE

Pace Analytical Services Inc
940 South Harney St
Seattle, WA 98108

AWB Number	Pieces	Weight	Origin / Dest	Nature of Goods	Arriving Flight Details	Customs
027-86490902	1	26.0 Lb	FAI-SEA	CHILL WATER SA	AS 128 06-Sep-2012	

Storage Locations: GSX2 1

LOCAL CHARGES :

Bonded Warehouse

Total Local Charges:	USD
VAT 1.34%:	USD
Grand Total:	USD

 Pace Analytical
CUSTODY SEAL

SIGNATURE Kelly Boyer

DATE 9/5/12

 Pace Analytical
CUSTODY SEAL

SIGNATURE

DATE 9/5/12

Delivered to
Sample Receiving
9/6/12 08:20AM
Ron Boyer

RECEIPT STATEMENT

The undersigned acknowledge the receipt of above mentioned consignment complete and in good condition.

Date: 06-Sep-2012

Time: 07:38

Driver: RON

Registration:

Signature: Ron Boyer

027 FAI 8649 0902

2513481

027-8649 0902

Shipper's Name and Address
MAPPA INC
 1956 RICHARDSON HWY
 NORTH POLE, AK 99705
 USA

Shipper's Account Number
27440067686
 Customer's ID Number
10564

Not Negotiable
Air Waybill
 Issued By

Alaska Air Cargo
 ALASKA AIRLINES & HORIZON AIR
 P.O. BOX 68900 SEATTLE, WA 98168
 800-225-2752 ALASKACARGO.COM

Tel: 9074881266

Consignee's Name and Address
Pace Analytical Services I
 940 South Harney St
 Seattle, WA 98108
 USA

Consignee's Account Number
27442470086

Also notify

Tel: 2069572439

Tel:

Issuing Carrier's Agent and City

Accounting Information
MAPPA INC
 1956 RICHARDSON HWY
 NORTH POLE, AK 99705
 USA

10564

Agent's IATA Code

Account No.

Airport of Departure (Addr. of First Carrier) and Requested Routing

Fairbanks

GoldStreak

To By First Carrier
SEA Alaska Airlines

To / By

To / By

Currency

WT/VAL

Other

Declared Value For Carriage

Declared Value For Customs

USD PX

X

X

NVD

NCV

Airport of Destination

Flight/Date

Flight/Date

Amount of Insurance

Seattle

AS 128/06

XXX

Handling Information

DANGEROUS GOODS IN EXCEPTED QUANTITIES CLASS 8
 NOA 206-767-5060

SCI

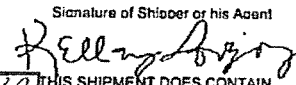
No of Pieces	Gross Weight	kg	lb	Commodity Item No.	Chargeable Weight	Rate / Charge	Total	Nature and Quantity of Goods (Incl. Dimensions or Volume)
1	26.0	L			26.0		AS AGREED	CHILL WATER SAMPLES Dims: 24 x 13 x14 x 1
1	26.0						AS AGREED	REQ GSX PER Volume: 2.528

Prepaid	Weight Charge	Collect
AS AGREED		
	Valuation Charge	
	Tax	
	Total Other Charges Due Agent	
	Total Other Charges Due Carrier	
	Total Prepaid	Total Collect
	AS AGREED	

Other Charges	MYC 5.20
	SCC 2.00

Shipper certifies that the particulars on the face hereof are correct and that insofar as any part of the consignment contains dangerous goods, such part is properly described by name and is in proper condition for carriage by air according to the applicable Dangerous Goods Regulations. I consent to the inspection of this cargo.

For: **MAPPA INC**

Signature of Shipper or his Agent


THIS SHIPMENT DOES NOT CONTAIN DANGEROUS GOODS

THIS SHIPMENT DOES CONTAIN DANGEROUS GOODS

05 Sep 2012 17:17 Fairbanks Alaska Airlines

Executed On (Date) at (Place) Signature of Issuing Carrier or its Agent

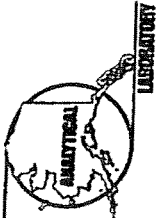
027-8649 0902

CHAIN OF CUSTODY RECORD

COC ID: PAGE: 1 OF: 1

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

2513481
Project: Seekins Ford 1197-02



Please Include Email Address of Report Recipient Whenever Possible!!!

SUB CONTRACTOR: **Pace Analytical** COMPANY: **Pace Analytical Services**
 ADDRESS: **940 S. Harney Street**
 CITY, STATE, ZIP: **Seattle, WA 98108-2744**
 PHONE: **(206) 767-5060** FAX: **(206) 767-5063**
 ACCOUNT #: _____ EMAIL: _____

SPECIAL INSTRUCTIONS / COMMENTS:

Please analyze these samples on a standard TAT. After analysis, the samples do not need to be returned and can be disposed per your standard laboratory practices. Thank You!

ANALYTICAL PARAMETERS

ITEM #	SAMPLE ID	Client Sample ID	Bottle Type	MATRIX	DATE COLLECTED	NUMBER OF CONTAINERS
1	1209003-001C	MW-1	VOCHCL	Water	9/4/2012 1:20:00 PM	3
2	1209003-002C	MW-6	VOCHCL	Water	9/4/2012 2:32:00 PM	3
3	1209003-003C	MW-2	VOCHCL	Water	9/5/2012 10:45:00 AM	3
4	1209003-004C	MW-5	VOCHCL	Water	9/5/2012 11:30:00 AM	3
5	1209003-005C	MW-7	VOCHCL	Water	9/5/2012 12:00:00 PM	3
6	1209003-006C	MW-3	VOCHCL	Water	9/5/2012 1:00:00 PM	3
7	1209003-008A	Trip Blank - 8260	VOCHCL	Water	9/5/2012 1:20:00 PM	3

0928 ha JDA

COMMENTS
Methanol Preserved Weights
HOT Sample Notation
Additional Sample Description,
etc.

Please use client ID.

Relinquished By: **Wesley Boufford** Date: **9/5/2012** Time: **2:55 PM** Received By: _____ Date: _____ Time: _____
 Relinquished By: **Goldstein** Date: **9/5/2012** Time: **0820** Received By: **Wesley Boufford** Date: **9/5/2012** Time: **0820**
 Relinquished By: _____ Date: _____ Time: _____ Received By: _____ Date: _____ Time: _____

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

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

Temp of samples: **0.9** °C Attempt to Cool? _____
 Comments: _____

FOR LAB USE ONLY

Sample Container Count

2513481

CLIENT: Alaska Analytical

COC PAGE 1 of 1
 COC ID# _____

Trip Blank(s) Provided?
 (Y) / N



Sample Line Item	VG9H	AG1H	AG1U	BP1U	BP2U	BP3U	BP3N	BP3S	WGKU	WG2U	DG9M	DG9B	VG9W	VSG	DAH	Comments
1																
2																
3															3	
4																
5																
6																
7																
8															3	
9																
10																
11																
12																

AG1H	1 liter HCL amber glass	BP2S	500mL H2SO4 plastic	JGFU	4 oz amber glass soil jar
AG1U	1 liter unpreserved amber glass	BP2U	500mL unpreserved plastic	WGKU	8 oz clear glass soil jar
AG2S	500mL H2SO4 amber glass	BP2Z	500mL NaOH, Zn Ac	WGFU	4 oz clear glass soil jar
AG2U	500mL unpreserved amber glass	BP3C	250mL NaOH plastic	WG2U	2 oz clear glass soil jar
AG3S	250mL H2SO4 amber glass	BP3N	250mL HNO3 plastic	JGFM	4 oz amber glass soil jar with MeOH
BG1H	1 liter HCL clear glass	BP3S	250mL H2SO4 plastic	VG9U	40mL unpreserved clear vial
BG1U	1 liter unpreserved glass	BP3U	250mL unpreserved plastic	VG9W	40mL clear vial pre-weighted with DI water
BP1N	1 liter HNO3 plastic	DG9B	40mL Na Bisulfate clear vial	VSG	Headspace septa vial
BP1S	1 liter H2SO4 plastic	DG9H	40mL HCL amber vial	VG9H	40mL HCL clear vial
BP1U	1 liter unpreserved plastic	DG9M	40mL MeOH clear vial	WGFU	4oz wide jar w/hexane wipe
BP1Z	1 liter NaOH, Zn, Ac	DG9T	40mL Na Thio amber vial	VG9T	40mL Na Thio, clear vial
BP2N	500mL HNO3 plastic	DG9U	40mL unpreserved amber vial	ZPLC	Ziploc Bag
BP2O	500mL NaOH plastic	I	Wipe/Swab	U	Summa Can

Laboratory Data Review Checklist

Completed by:

Title:

Melissa S. Shippey

Date:

September 24, 2012

CS Report Name:

Seekins Ford

Report Date:

July 9, 2010

Consultant Firm:

Travis/Peterson Environmental Consulting, Inc.

Laboratory Name:

Alaska Analytical and Pace Analytical Laboratory

Laboratory Report Number: 2513481

ADEC File Number: 100.26.131

ADEC RecKey Number:

1. Laboratory

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

Yes No

Comments:

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

Yes No

Comments:

The VOC samples were analyzed by Pace in Seattle, WA.

2. Chain of Custody (COC)

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

Yes No

Comments:

b. Correct analyses requested?

Yes No

Comments:

3. Laboratory Sample Receipt Documentation

a. Sample/cooler temperature documented and within range at receipt ($4^{\circ} \pm 2^{\circ} \text{C}$)?

Yes No Comments:

Cooler temp was 0.9°C

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

Yes No Comments:

Samples were all in acceptable condition. VOA vials had no headspace.

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

Yes No Comments:

Samples were all in good condition.

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

Yes No Comments:

No discrepancies with this batch of samples.

e. Data quality or usability affected? Explain.

Comments:

N/A

4. Case Narrative

a. Present and understandable?

Yes No Comments:

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

Yes No Comments:

In the batch of MS/MSD samples associated with this lab report the notes D6 and M1 are shown in the case narrative. The RPD between the MS and MSD for three compounds exceeded laboratory control limits. Also the matrix spike recovery exceeded QC limits for 2,2-dichloropropane.

c. Were all corrective actions documented?

Yes No Comments:

The sample QC batch was accepted for this report based on LCS recoveries.

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

Comments:

No effect. Sample batch accepted based upon the remaining QC samples that were run.

5. Samples Results

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

Yes No

Comments:

b. All applicable holding times met?

Yes No

Comments:

c. All soils reported on a dry weight basis?

Yes No

Comments:

No soils only groundwater.

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

Yes No

Comments:

e. Data quality or usability affected?

Comments:

6. QC Samples

a. Method Blank

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

Yes No

Comments:

ii. All method blank results less than PQL?

Yes No

Comments:

iii. If above PQL, what samples are affected?

Comments:

N/A

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

Yes No

Comments:

v. Data quality or usability affected? Explain.

Comments:

N/A

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

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

Yes No

Comments:

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

Yes No

Comments:

No metals samples.

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

Yes No

Comments:

Some of the MS/MSD RPD's were outside acceptance criteria. Sample batch accepted based upon LCS/LCSD recoveries.

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

Yes No

Comments:

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

Comments:

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

The affected compounds within the MS/MSD batch that had RPD results outside acceptable limits are flagged on page 21 and 22 of the report.

Yes No

Comments:

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

Comments:

N/A all LCS LCSD combinations were within sampling criteria.

c. Surrogates – Organics Only

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

Yes No

Comments:

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

Yes No

Comments:

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

Yes No

Comments:

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

Comments:

N/A

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

i. One trip blank reported per matrix, analysis and cooler?

Yes No

Comments:

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

Yes No

Comments:

Only one cooler used to transport VOC samples to Pace.

iii. All results less than PQL?

Yes No

Comments:

Trip blank results were non-detect.

iv. If above PQL, what samples are affected?

Comments:

N/A

v. Data quality or usability affected? Explain.

Comments:

N/A

e. Field Duplicate

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

Yes No

Comments:

Sample MW-5 is the duplicate for MW-2.

ii. Submitted blind to lab?

Yes No

Comments:

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

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

Where R_1 = Sample Concentration

R_2 = Field Duplicate Concentration

Yes No

Comments:

The RPD for PCE is 1.9%; The RPD for 1,1,1-TCE is 2.66% and the RPD for TCFM is 7.4%. these were the compounds detected in both the primary and duplicate samples.

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

Comments:

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

Yes No Not Applicable

i. All results less than PQL?

Decontamination blank not required since sampling equipment (i.e. tubing) was not reused from sampling station to sampling station. All new sampling equipment, nitrile gloves etc..were used at each sample location.

Yes No

Comments:

ii. If above PQL, what samples are affected?

Comments:

N/A

iii. Data quality or usability affected? Explain.

Comments:

N/A

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

a. Defined and appropriate?

Yes No

Comments:

N/A