100.26.131

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April 12, 2016
1197-02

Alaska Department of Environmental Conservation
Division of Spill Prevention and Response
Contaminated Sites Program
610 University Avenue
Fairbanks, Alaska 99709-3643

Attention: Laura Jacobs

Re: 2015 Annual Groundwater Monitoring Report Comments

Dear Ms Jacobs:

Please find below Travis/Peterson Environmental Consulting, Inc's response to comments received for the Seekins Ford-Lincoln-Mercury 2015 Annual Groundwater Monitoring Report. Comments received from you are bolded and our responses follow.

Fremont Analytical Laboratory Data Review Checklist:

- **Although the Sample Log-In Checklist indicated that no preservatives had been added to VOC sample bottles (Log in number 11) from your consultant, TPECI indicated on page 2 of the Laboratory Checklist that "Sample preservation acceptable, yes".**

TPECI employee Ryan Peterson spoke with staff at Fremont Analytical who explained that that question on the checklist is only marked "yes" if laboratory staff add preservative to the bottles during the check in process. Because question 10 on the Fremont Analytical Log-In Checklist ("Are samples properly preserved?") was checked "yes" it was not necessary for laboratory staff to add additional preservative.

- **There were several entries that were confusing, such as that for MS % Recoveries for several analytes. Your consultant commented that "The MS % recoveries for several VOC analytes were outside of control limits. However, the MS recoveries are not applicable to project samples as the MS analysis was performed on another client's**

samples. Data was not impacted as a result." Please have your consultant explain further.

TPECI employee Ryan Peterson spoke with laboratory staff regarding this question. Because TPECI did not specifically request an MS analysis, no such analysis was performed on these samples. The laboratory includes MS analysis for the sample batch (which included samples from more than one client) as a standard practice. When filling out the ADEC Laboratory Data Review Checklist the sample ID for the MS analysis was compared to the sample ID's of the samples we submitted. Because the MS sample ID does not match any of our submitted samples it was concluded that this MS analysis was not performed on one of our samples. Therefore it is impossible to rule out the possibility that a problem which only affects the other clients samples (such as improper sampling protocols, or improper preservation) caused the MS analysis failure. This causes the MS analysis to be of limited usefulness in determining the accuracy of the samples. Given that all other lab QC goals were met TPECI concludes that the MS analysis failures do not adversely affect the sample results.

The 2015 Annual Groundwater Monitoring Report was updated to clarify and better explain the TPECI conclusion.

2015 Annual Groundwater Monitoring Report Text

- **Cleanup levels were incorrectly reported for several analytes. Including:**
  - **Acetone, reported cleanup level of 3650 ug/L; should be 33,000 ug/L;**
  - **Tert-Butylbenzene, reported cleanup level of N/A should be 370 ug/L;**
  - **Chloroform, reported cleanup level of 100 ug/L, should be 140 ug/L;**
  - **Chloromethane, reported cleanup level of ** (No established MCL…" should be 66 ug/L;**
  - **1,1 DCE, reported cleanup level of 3650 ug/L, should be 7300 ug/L.**

Cleanup levels have been corrected in the updated 2015 Annual Groundwater Monitoring Report.

Additional Comments and Requests

- **DEC would like for your consultant to evaluate temporal and seasonal trends in the historical data using an approved technique such as the Mann-Kendall test, to demonstrate the plume stability and concentration changes in each well.**

Mann-Kendall analyses were performed on GRO and DRO in all five wells. Other parameters were also analyzed using the Mann-Kendall analysis where they are present, or have been present historically, in concentrations that exceed their ADEC Cleanup levels. Three trends were identified during Mann-Kendall analysis. A discussion of Mann-Kendall analysis and results has been added to the report.

- **DEC would like a vapor intrusion building survey form completed by your consultant, as well as an updated conceptual site model (CSM) in order to better understand the potential risk to human health at this location.**

TPECI employee Ryan Peterson completed an updated CSM as per request. The CSM, and a discussion of its conclusions has been added to the 2015 Annual Groundwater Monitoring Report.

TPECI employee Ryan Peterson completed an ADEC Building Inventory and Indoor Air Sampling Questionnaire as per request. The questionnaire and a discussion of its findings has been added to the 2015 Annual Groundwater monitoring report.

If you have any questions or comments, please do not hesitate to contact me directly.

Sincerely,

Ryan Peterson
Staff Scientist

Travis/Peterson
Environmental Consulting, Inc.

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April 12
1197-02

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

Attention: **Paul Austin**
Parts and Service Director

Re: 2015 Annual Groundwater Monitoring Report Version 2.0, File No. 100.26.131

Dear Mr. Austin:

Travis/Peterson Environmental Consulting, Inc. (TPECI) is pleased to present our updated letter report summarizing data obtained from the groundwater sampling event conducted on September 28, 2015 at Seekins Ford – Lincoln, Inc. (Figure 1, attached), and responding to comments/requests for more information from ADEC personnel.

On September 28, 2015 monitoring wells MW-1, MW-2, MW-3, MW-6 and MW-7 were sampled. The sample labeled MW-8 is a duplicate of MW-1. The samples were submitted to Alaska Analytical Laboratory and Freemont Analytical for analysis by the following methods:

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

Field Measurements
Depth to groundwater and well depths were measured from the top of each well casing prior to sampling (Table 1). All of the wells sampled were flush mount wells so measurements below top of casing are considered to be below ground surface. The analytical results from this sampling event appear in Table 2. Historic trends in all wells are attached. Complete laboratory analytical reports and quality assurance checklists are also attached.

Table 1. Well Measurement Data

Well	Depth to Water (ft)	Total Depth (ft)	Casing Height(ft)
MW-1	13.64	24.61	flush mount
MW-2	14.06	24.46	flush mount
MW-3	13.05	22.60	flush mount
MW-6	13.68	22.12	flush mount

ethylbenzene detected in 2015 was approximately the same as was detected in 2014.

Detections in MW-2
GRO was detected at 0.0312 mg/L during the 2015 sampling event (2.2 mg/L cleanup standard). This result represents an increase from the 2014 result of 0.0192 for GRO in MW-2.

DRO was detected at 0.0240 mg/L during the 2015 sampling event (1.5 mg/L cleanup standard). This result represents a decrease from the 2014 detected DRO value in MW-2 of 0.0307 mg/L.

No VOCs were detected in MW-2 during the 2015 sampling event.

Detections in MW-3
GRO was detected at 0.0215 mg/L during the 2015 sampling event (2.2 mg/L cleanup standard). This result represents a decrease from the 2014 detected GRO value in MW-3 of 0.0344 mg/L.

DRO was detected at 0.120 mg/L during the 2015 sampling event (1.5 mg/L cleanup standard). This result represents a slight increase from the 2014 detected DRO value in MW-3 of 0.118 mg/L.

Several VOCs were detected during the 2015 sampling event. All detected analytes were below their respective ADEC groundwater cleanup level.

Detections in MW-6
GRO was not detected during the 2015 sampling event (2.2 mg/L cleanup standard). This result represents a decrease from the 2014 0.0109 GRO result in MW-6.

DRO was non-detect during the 2015 sampling event (1.5 mg/L cleanup standard). DRO was also non-detect during the 2014 sampling event.

Tetrachloroethene and trichlorofluoromethane were both detected in 2014 and 2015. The 2015 results for both analytes show a decrease in concentration observed in 2014. All detected VOCs were below their respective cleanup standards.

Detections in MW-7
GRO was not detected 2015 sampling event (2.2 mg/L cleanup standard). This result represents a decrease from the 2014 0.0201 GRO result in MW-7.

DRO was detected at 0.0245 mg/L during the 2015 sampling event (1.5 mg/L cleanup standard). This result represents an increase from the non-detect 2014 DRO value in MW-7.

No VOCs were detected in MW-2 during the 2015 sampling event.

ADEC Laboratory Report Checklist Discussion
Laboratory analyses of the samples was performed by two laboratories, Alaska Analytical Laboratory, and Fremont Analytical. Samples were submitted to Alaska Analytical Laboratory, who performed the GRO and DRO analyses. VOC samples were transferred by Alaska Analytical Laboratory to Fremont Analytical for analyses. TPECI employee Ashley Jaramillo completed ADEC Laboratory Data Review Checklists for both analytical reports.

Alaska Analytical Laboratory Data Review Checklist
The only discrepancy noted in the ADEC checklist was the sample receipt temperature which was below the accepted range by 1° (sample receipt temperature was 1°, accepted range is 4° ± 2°. None of the samples were frozen, however, so data usability was determined to be not affected. No other discrepancies were noted.

Fremont Analytical Laboratory Data Review Checklist
Several discrepancies were noted during the Fremont Analytical review. Each discrepancy, and it's affect on the data usability is discussed below.

The sample receipt temperature was outside of the accepted range upon arrival at Fremont Laboratory by 1° C. None of the samples were frozen, however, and therefore sample preservation was determined to be adequate.

Two analytes were identified, 1,2,3-trichloropropane and 1,2-dibromomethane, which had PQL's that exceeded their applicable ADEC cleanup levels. Therefore the sample results for these two analytes (which were both below detection limits) are of limited usefulness. However, neither of these analytes are contaminants of concern at this site.

LCS and MS samples were performed for the VOC analytical batch. The MS % recoveries for several VOC analytes were outside control limits. TPECI did not request a MS analysis on the samples, however, so the MS analyses from another clients samples in the same batch of samples was included in the report. Due to the fact that the MS analysis was performed on another clients samples, the MS % recovery failures do not negatively impact the usability of the sample results for this project.

Based on these data reviews TPECI asserts that the laboratory results of both reports should be considered valid.

Mann-Kendall Analysis
TPECI employee Ryan Peterson performed a Mann-Kendall analysis on historical data for the following wells:

- MW-1;
- MW-2;
- MW-3;
- MW-6; and
- MW-7.

Only sampling events which have occurred in July, August, or September were used to avoid seasonal groundwater changes impacting the analysis. Results of ND (Non-Detect) were substituted as 0.001 to reflect that they were below the laboratory detection limit. Mann-Kendall analyses of DRO and GRO concentrations were evaluated in all five wells. Other contamiants were only evaluated if they had historically been detected in concentrations which exceed their ADEC cleanup level in a given well.

Trends
The Mann-Kendall analysis identified three trends in the data. Two trends were identified in well MW-1. One trend was identified in MW-2.

MW-1 Benzene
The analysis identified a shrinking plume trend in the benzene concentrations within well MW-1. A manual comparison of benzene concentrations confirms there does appear to be a decreasing trend. Event 1 (7/1995) had a concentration of 12,000 ug/L. This dropped to 8,500 in event 2 (8/1996). For the last three events concentrations have been below 2 ug/L. This is a significant reduction in benzene in well MW-1.

MW-1 GRO
The Mann-Kendall analysis identified an expanding plume trend in the the GRO concentrations in MW-1. After a manual comparison of the data, TPECI does not agree that this is the case. Events 1 and 2 had concentrations of 180 and 250 ug/L, respectively. This jumped way up in events 3 and 4 which had concentrations of 9,810, and 47,600 ug/L. Concentrations then dropped to 15,500 ug/L in event 5 before jumping to the peak concentration of 59,200 ug/L in event 6. TPECI asserts that the increasing trend is the result of the initial jump between events 2 and 3 (between 1996 and 2006), and that since 2006 there has been no observable trend. TPECI ran a Mann-Kendall analysis on the GRO data for MW-1 and excluded events 1 and 2. The result of this is no trend indicated. TPECI believes this is a more accurate analysis of the current state of the groundwater within MW-1.

MW-2 PCE
The analysis identified a shrinking trend in the PCE concentrations in MW-2. This appears consistent with the data, as the concentration peaked at 57 ug/L in event 2 and has been less than 8 ug/L for the past five consecutive events.

Conclusions
The Mann-Kendall analysis did not identify trends in wells MW-3, MW-6, or MW-7. Historically, none of these wells have had contaminants detected in them in concentrations that exceed the ADEC Cleanup Levels. Of the two trends identified in well MW-1, TPECI concludes that the benzene analysis conclusion of a shrinking trend is accurate. However, TPECI believes the expanding trend identified in well MW-1 is due to the large increase between 1996 and 2006, and does not accurately reflect the current site conditions. The PCE trend identified in well MW-2 appears to be consistent with the historic and current concentrations.

Conceptual Site Model Update
Using the latest data obtained, TPECI employee Ryan Peterson completed an updated Conceptual Site Model (CSM) for the Seekins property.

2008 Conceptual Site Model
In 2008 TPECI employee Melissa Shippey completed a CSM for the Seekins property. The CSM concluded that soil pathways (incidental soil ingestion and dermal absorption of contaminants from soil) are potential exposure pathways which could affect anyone performing sub-surface excavation or similar earth disturbing work on the subject property.

2015 Conceptual Site Model Update

TPECI employee Ryan Peterson completed an updated CSM for the Seekins property on March 31, 2016. The following exposure pathways were determined to be complete at this time:

- Incidental soil ingestion;
- Dermal absorption of contaminants from soil;
- Inhalation of outdoor air;
- Inhalation of indoor air;
- Dermal exposure to contaminants in groundwater and surface water

Incidental Soil Ingestion

Because contaminants are present within 0 and 15 feet of the surface the incidental soil ingestion pathway is considered complete. Because the initial release was at depth, contamination is not expected to be encountered within the top 2 feet of surface soil. Therefore potential receptors are limited to site workers and construction workers who are performing sub surface excavation on the subject property.

Dermal Absorption of Contaminants From Soil

Because contaminants are present within 0 and 15 feet of the surface and the specific contaminants can permeate skin, the dermal absorption of contaminants from soil pathway is considered complete. Because the initial release was at depth, contamination is not expected to be encountered within the top 2 feet of surface soil. Therefore potential receptors are limited to site workers and construction workers who are performing sub surface excavation on the subject property.

Inhalation of Outdoor Air

Because contaminants are present in soils between 0 and 15 feet below the ground surface, and because the contaminants are volatile, the inhalation of outdoor air pathway is considered complete.

Inhalation of Indoor Air

Because contamination exists within 30 horizontal feet and/or 100 vertical feet of occupied buildings on the subject property, and the contaminants are volatile, the inhalation of indoor air pathway is considered complete. The Seekins building utilizes a positive pressure heating and ventilation system in the showroom and administration offices. There is also an exhaust ventilation system which runs beneath the maintenance shop area which remains switched on while the shop is in use. TPECI believes that these systems provide adequate protection for site workers and visitors. Additionally the day to day use of the subject property would make it impossible to differentiate between contaminants detected in the air from the sub surface contamination, and those generated by vehicle maintenance and repair activities. For these reasons TPECI recommends that this pathway not be further investigated at this time.

Dermal Exposure to Contaminants in Groundwater and Surface Water

The dermal exposure to contaminants in groundwater and surface water may become complete if construction on the subject property would result in an excavation that reaches the depth of groundwater. In this instance the dermal exposure to contaminants in groundwater pathway may require further evaluation to ensure the safety of construction workers.

There is no surface water located on the subject property, and groundwater is not used for household or business purposes.

ADEC Building Inventory and Indoor Air Sampling Questionnaire

TPECI employee Ryan Peterson completed an ADEC Building Inventory and Indoor Air Sampling Questionnaire for the Seekins property. Seekins employee Tim Davis provided information and accompanied Ryan Peterson on a tour of the site in order to complete the questionnaire. The Seekins facility is a two story building which contains a vehicle showroom, a vehicle workshop, a body shop, a parts department, administrative offices, and storage. The building's large workshop houses multiple vehicle repair bays. Additionally the body repair shop contains a painting booth. There are no apartments or occupants of the building. Seekins employs approximately 100 employees. On a normal day an estimated 80 individuals work at a time.

Two solvents were identified, during the questionnaire completion, which are currently being used on the Seekins property. Brake cleaner is used regularly during vehicle repair and maintenance procedures. Additionally there are two solvent tanks on site which contain the solvent OzzyJuice. OzzyJuice is a proprietary solvent used in SmartWasher Bioremediating Parts Washers.

The Seekins property uses a positive pressure hot air circulation heating system which draws clean air from two exterior intakes. The intakes are both located near the roof of the building. At the time of the walkthrough the duct work appeared to be in good condition. No damaged or leaking duct work was observed. The heating system is fueled by waste oil. The furnace itself is located outside the building in a covered exterior area. There is also a hot water tank which is fueled by natural gas located in the exterior boiler/furnace room.

Several things were identified during the completion of the questionnaire which would impact the ability to collect an indoor air sample which is representative of chemicals entering the building through vapor intrusion. As the facility is an automotive sales and repair facility, vehicles are driven into and out of the buildings at all times during operating hours. Several chemicals including gasoline, diesel fuel, motor oil, transmission oil, differential oil, and other chemicals used in cars are all present within the building at any given time. Other chemicals are used regularly during maintenance and repair work such as brake clean, and other chemicals used in flushing, cleaning, or other maintenance activities. There is an active paint booth which is used regularly in the body shop.

TPECI believes there would be no way to differentiate between contaminants produced by automotive repair or maintenance, and those produced by vapor intrusion. TPECI further believes the positive pressure HVAC system, which utilizes two fresh air intakes, in combination with the various shop safe guards such as vacuum exhaust system, CO evacuation system, and paint booth sealing and ventilation system is sufficient to reduce the exposure of both vapor intrusion chemicals, and automotive repair and maintenance chemicals to acceptable work place levels.

Conclusions

No contaminants were detected above ADEC groundwater cleanup levels in MW-2, MW-3, MW-6, and MW-7. These wells have also experienced three consecutive annual sampling events with no detected analytes above ADEC groundwater cleanup levels.

MW-1 is the only well in which contaminants are present above applicable ADEC groundwater

cleanup levels. GRO and VOC analyte ethylbenzene are the two analytes present above applicable cleanup levels. The levels detected in 2015 appear consistent with historic results, indicating stabilization in the contaminant concentrations.

A review of the data, using the ADEC laboratory data review checklists identified minor problems in each of the laboratory reports. It was determined that none of these problems adversely affected the data obtained.

An updated conceptual site model was completed for the Seekins property which identified several exposure pathways. Due to the sub surface nature of the contamination and the fact that the groundwater is not used for household and/or business purposes, the potential receptors for most pathways is limited to construction workers involved in sub surface excavation on the subject property.

An ADEC Building Inventory and Indoor Air Sampling Questionnaire was completed for the Seekins property. During the completion of the Questionnaire, TPECI identified numerous factors which would negatively impact the ability to collect sample data that accurately reflects vapor intrusion into the building. Due to the positive pressure heating and ventilation systems, combined with the difficulty in obtaining usable data, TPECI recommends we do not further evaluate the indoor air inhalation pathway.

Based on the most recent and historical analytical results, Mann-Kendall analysis of historic groundwater sampling data, and the results of the updated CSM, TPECI recommends the removal of wells MW-2, MW-3, MW-6, and MW-7 after the transducer study has been completed. This would leave MW-1, the only well which has contaminants present in concentrations that exeed the ADEC cleanup level, the only well onsite. TPECI further recommends the continuation of groundwater monitoring from MW-1, at a reduced rate of one sampling event every three years.

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

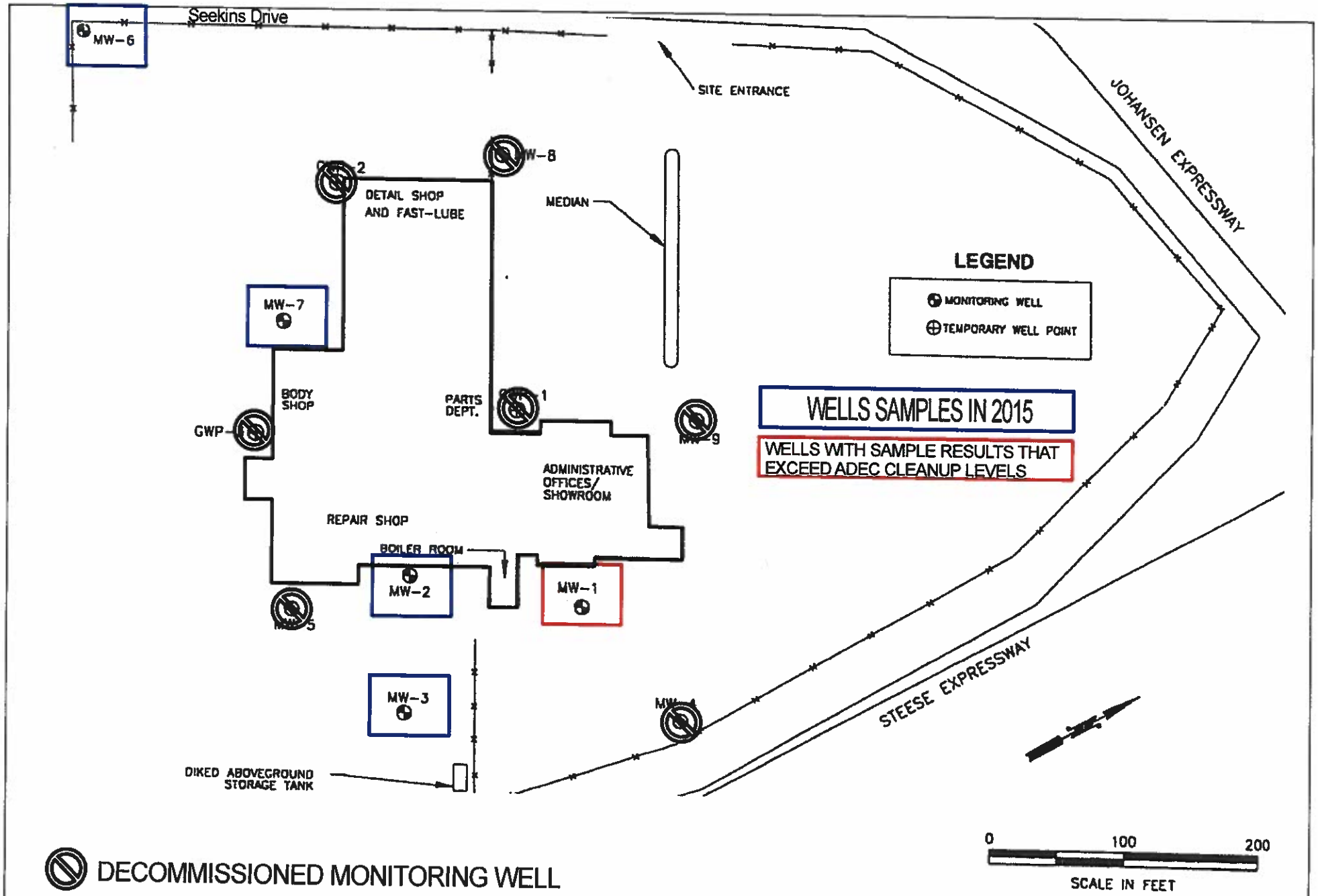
Sincerely,

Ryan Peterson
Staff Scientist

cc: Ms. Laura Jacobs, State of Alaska, Department of Environmental Conservation.

Attachments: Figure 1
Historical Groundwater Data Table
Laboratory Data Reports and ADEC Laboratory Data Review Checklist
Field Notes
Mann-Kendall Analysis
2008 Conceptual Site Model
2016 Conceptual Site Model
ADEC Building Inventory and Indoor Air Sampling Questionnaire

FIGURE 1



TRAVIS/PETERSON ENVIRONMENTAL CONSULTING, INC. 329 2ND STREET FAIRBANKS, ALASKA 99701		SEEKINS FORD-LINCOLN-MERCURY	FIGURE 1 SITE PLAN
PROJECT No: 1197-02	FILE: S:\Projects\1197\02\2015\Figure 1-Site Plan.SKF	DATE: 10/14/15	SCALE: AS SHOWN

HISTORICAL GROUNDWATER DATA TABLE

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

Well Number	Date	Depth to Water (Feet)	GRO (µg/L)	DRO (µg/L)	Acetone (µg/L)	Benzene (µg/L)	MEK (µg/L)	n-Butyl benzene (µg/L)	sec-Butyl benzene (µg/L)	tert-Butyl-benzene (µg/L)
ADEC MCL (ug/L)			2,200	1,500	3,650	5.0	22,000	370	370	N/A
MW-1	7/21/1995	14.2	180	5.4	--	12,000	--	--	--	ND
	5/1/1996	15.7	240	6.2	ND	7,500	ND	ND	ND	ND
	8/7/1996	15.28	250	11	--	8,500	--	--	--	ND
	11/21/1996	15.57	330	9.6	--	11,000	--	--	--	ND
	5/25/2005	14.64	1,120	0.363	ND	ND	ND	ND	ND	ND
	7/17/2006	14.62	9,810	0.843	ND	ND	ND	ND	245	ND
	9/13/2007	14.74	47,600	3,620	--	25.6	ND	10.1	9.71	ND
	9/16/2008	12.65	15,500	1,680	ND	6.3	84.4	ND	ND	ND
	11/8/2010	--	--	--	--	--	--	--	--	--
	2011	--	--	--	--	--	--	--	--	--
	9/4/2012	14.93	75,300	670	20.5	4.7	ND	15.3	7.5	--
	8/14/2013	9.8	59,200	582	ND	ND	ND	ND	ND	ND
Duplicate	8/14/2013	9.8	57,900	594	ND	ND	ND	ND	ND	ND
	8/27/2014	10.82	25,900	362	ND	1.65	ND	ND	6.04	ND
Duplicate	8/27/2014	10.82	24,700	355	ND	1.74	ND	ND	6.03	1.1
	9/28/2015	13.64	25,300	260	ND	1.45	ND	13.4	6.89	ND
Duplicate	9/28/2015	13.64	24,700	258	ND	1.40	ND	13.2	6.66	ND
MW-2	7/21/1995	14.64	0.15	0.35	ND	ND	ND	--	--	ND
	5/1/1996	16.13	0.26	0.74	ND	2	ND	ND	ND	ND
	8/7/1996	15.72	0.16	3.4	ND	ND	ND	ND	ND	ND
	11/21/1996	16.02	0.105	2.1	ND	ND	ND	ND	ND	ND
	5/25/2005	15.09	ND	ND	ND	ND	ND	ND	ND	ND
	7/17/2006	Well was obstructed.								
	9/13/2007	15.18	ND	950	--	ND	ND	ND	ND	ND
	9/16/2008	--	--	--	--	--	--	--	--	--
	11/8/2010	16.49	ND	232	ND	ND	ND	ND	ND	ND
	9/5/2012	15.38	0.0566J	0.144	ND	ND	ND	ND	ND	--
Duplicate	9/5/2012	15.38	0.0374J	0.127J	ND	ND	ND	ND	ND	--
	8/14/2013	14.6	ND	0.217	ND	ND	ND	ND	ND	ND
	8/27/2014	11.29	19.2J	30.7J	ND	ND	ND	ND	ND	ND
	9/28/2015	14.06	31.2J	24.0J	ND	ND	ND	ND	ND	ND
MW-3	7/21/1995	13.7	2.8	13	ND	8	ND	--	--	ND
	5/1/1996	15.18	0.99	5.4	ND	ND	ND	ND	ND	ND
	8/7/1996	14.78	0.27	3.6	25	ND	ND	ND	ND	ND
	11/21/1996	14.29	0.16	5.4	ND	ND	ND	ND	ND	ND
	5/25/2005	14.12	117	1.05	16.4	ND	ND	1.18	1.04	1.09
	7/17/2006	14.13	ND	0.583	ND	ND	ND	ND	ND	ND
	9/13/2007	14.22	ND	995	--	ND	ND	ND	ND	ND
Duplicate	9/13/2007	N/A	ND	1,760	--	ND	ND	ND	ND	ND
	9/16/2008	--	--	--	--	--	--	--	--	--
	11/8/2010	15.49	13.9J	227J	ND	ND	ND	ND	ND	ND
	9/5/2012	14.35	0.0408J	0.172	ND	ND	ND	ND	ND	--
	8/14/2013	13.1	0.0657J	0.219	ND	ND	ND	ND	ND	ND
	8/27/2014	10.24	34.4J	118J	ND	ND	ND	1.32	ND	ND
	9/28/2015	13.05	21.5J	120J	ND	ND	ND	ND	ND	ND
MW-4	7/21/1995	12.93	ND	ND	ND	ND	ND	--	--	ND
	5/1/1996	14.43	ND	0.24	ND	ND	ND	ND	ND	ND
	8/7/1996	14.02	ND	0.23	ND	ND	ND	ND	ND	ND
	11/21/1996	14.29	ND	0.24	ND	ND	ND	ND	ND	ND
	5/25/2005	13.36	ND	ND	ND	ND	ND	ND	ND	ND
	7/18/2006	13.33	ND	ND	ND	ND	ND	ND	ND	ND

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

Well Number	Date	Depth to Water (Feet)	GRO (µg/L)	DRO (µg/L)	Acetone (µg/L)	Benzene (µg/L)	MEK (µg/L)	n-Butyl benzene (µg/L)	sec-Butyl benzene (µg/L)	tert-Butyl-benzene (µg/L)
	9/13/2007	13.5	ND	ND	--	ND	ND	ND	ND	ND
MW-5	5/1/1996	15.68	0.17	1.1	ND	2.49	ND	ND	2.68	ND
	8/7/1996	15.27	ND	0.99	20	1.24	ND	ND	ND	ND
	11/21/1996	15.61	ND	1	ND	1.05	ND	ND	ND	ND
	Well Decomissioned 10/28/2005									
MW-6	5/1/1996	15.78	0.12	0.94	27.2	ND	ND	11	4.73	ND
	8/7/1996	15.35	ND	0.56	ND	ND	ND	ND	ND	ND
	11/21/1996	15.61	ND	0.59	ND	ND	ND	ND	ND	ND
	5/25/2005	14.63	ND	ND	ND	ND	ND	ND	ND	ND
	7/14/2005	13.39	--	--	ND	ND	ND	ND	ND	ND
	7/17/2006	14.64	ND	ND	ND	ND	ND	ND	ND	ND
	9/13/2007	14.8	ND	348	--	ND	ND	ND	ND	ND
	9/16/2008	12.74	ND	ND	ND	ND	ND	ND	ND	ND
Duplicate	9/16/2008	12.74	ND	ND	ND	ND	ND	ND	ND	ND
	11/8/2010	16.13	ND	ND	ND	ND	ND	ND	ND	ND
	9/4/2012	15.00	0.347J	0.0160J	ND	ND	ND	ND	ND	--
	8/14/2013	13.30	ND	0.0638J	ND	ND	ND	ND	ND	ND
	8/27/2014	10.95	10.8J	ND	ND	ND	ND	ND	ND	ND
	9/28/2015	13.68	ND	ND	ND	ND	ND	ND	ND	ND
MW-7	5/1/1996	16.29	0.26	0.47	ND	ND	ND	2.42	1.33	ND
	8/7/1996	15.86	ND	0.3	287	ND	ND	ND	ND	ND
	11/21/1996	16.14	ND	0.2	451	ND	ND	ND	ND	ND
	5/25/2005	15.28	ND	ND	ND	ND	ND	ND	ND	ND
	7/17/2006	Well was frozen at 6 ft bgs.								
	9/13/2007	15.35	ND	326	--	ND	ND	ND	ND	ND
	9/16/2008	--	--	--	--	--	--	--	--	--
	11/8/2010	16.67	ND	3.9J	ND	ND	ND	ND	ND	ND
Duplicate	11/8/2010	16.67	ND	ND	ND	ND	ND	ND	ND	ND
	9/5/2012	15.59	0.026J	ND	ND	ND	ND	ND	ND	--
	8/14/2013	13.3	ND	0.0529	ND	ND	ND	ND	ND	ND
	8/27/2014	11.26	20.1J	ND	ND	ND	ND	ND	ND	ND
	9/28/2015	14.05	ND	24.5J	ND	ND	ND	ND	ND	ND
MW-8	5/1/1996	16.49	0.35	0.69	36.2	**8.39**	18	5.06	2.64	ND
	8/7/1996	16.04	ND	0.38	ND	1.36	ND	ND	ND	ND
	11/21/1996	16.33	ND	0.15	ND	ND	ND	ND	ND	ND
	5/25/2005	15.43	ND	ND	ND	ND	ND	ND	ND	ND
	Well Decomissioned 10/28/2005									
MW-9	5/1/1996	15.95	0.06	0.84	ND	ND	ND	3.72	1.67	ND
	8/7/1996	15.53	ND	0.64	ND	ND	ND	ND	ND	ND
	11/21/1996	15.84	ND	0.68	ND	ND	ND	ND	ND	ND
	5/25/2005	15.04	ND	ND	ND	ND	ND	ND	ND	ND
	Well Decomissioned 10/28/2005									
GWP-1	7/21/1995	14.62	4	0.19	--	**1,500**	--	--	--	ND
	5/1/1996	16.11	0.34	0.48	ND	**117**	ND	ND	ND	ND
	8/7/1996	15.69	0.84	0.72	--	**230**	--	--	--	ND
	11/21/1996	15.97	0.499	0.29	--	**160**	--	--	--	ND
	5/25/2005	15.03	ND	ND	ND	ND	ND	ND	ND	ND
	Well Decomissioned 10/28/2005									
GWP-2	7/21/1995	15.02	ND	ND	--	ND	--	--	--	ND

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

Well Number	Date	Depth to Water (Feet)	GRO (µg/L)	DRO (µg/L)	Acetone (µg/L)	Benzene (µg/L)	MEK (µg/L)	n-Butyl benzene (µg/L)	sec-Butyl benzene (µg/L)	tert-Butyl-benzene (µg/L)
	5/1/1996	16.54	ND	0.35	ND	ND	ND	ND	ND	ND
	8/7/1996	16.1	ND	0.16	--	ND	--	--	--	ND
	11/21/1996	16.4	ND	0.11	ND	ND	ND	ND	ND	ND
	5/25/2005	15.42	ND	ND	ND	ND	ND	ND	ND	ND
	9/16/2008	13.53	53	ND	ND	ND	ND	ND	ND	ND
GWP-3	7/21/1995	14.18	ND	ND	--	ND	--	--	--	ND
	5/1/1996	15.71	ND	0.17	ND	ND	ND	ND	ND	ND
	8/7/1996	15.31	ND	0.29	ND	ND	ND	ND	ND	ND
	11/21/1996	15.58	ND	0.17	ND	ND	ND	ND	ND	ND
	5/25/2005	15.68	ND	ND	ND	ND	ND	ND	ND	ND
	7/17/2006	14.67	ND	ND	ND	ND	ND	ND	ND	ND
	9/13/2007	14.8	ND	491	--	ND	ND	ND	ND	ND
DUP-1	5/1/1996	N/A	220	5.6	ND	**10,000**	ND	--	ND	ND
	8/7/1996	N/A	250	9.4	ND	**9,700**	ND	--	ND	ND
	11/21/1996	N/A	0.231	4.8	--	ND	--	--	--	ND
	5/25/2005	N/A	ND	ND	ND	ND	ND	ND	ND	ND
	7/5/2005	N/A	ND	ND	ND	ND	ND	ND	ND	ND
	7/17/2006	N/A	ND	ND	ND	ND	ND	ND	ND	ND

NOTES

GRO	gasoline range organics
DRO	diesel range organics
MEK	2-butanone
µg/L	microgram per liter
DCB	dichlorobenzene
DCE	dichloroethene
DCA	dichloroethane
PCE	tetrachloroethene
TCB	trichlorobenzene
TCE	trichloroethene
TMB	trimethylbenzene
MCL	maximum contaminant level
Bold	analyte detected above MCL
ND	analyte not detected at respective reporting limit
- -	analysis not performed
*	Indicates the EPA established MCL goal for this compound. Found at: http://www.epa.gov/safewater/contaminants/index.html#organic
**	No established MCL could be identified for this compound. TPECI personnel have consulted with ADEC personnel on 9/12/08 but to date have not received a response on whether an MCL exists for this compound.
	2015 Results

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

Well Number	Date	Depth to Water (Feet)	Carbon Tetra-chloride (µg/L)	Carbon disulfide (µg/L)	4-chloro-toluene (µg/L)	Chloro-form (µg/L)	Chloro-methane (µg/L)	1,2-DCB (µg/L)	1,4-DCB (µg/L)	1,1-DCE (µg/L)
ADEC MCL (ug/L)			5.0	3,650	N/A	100	**	600	75	3,650
MW-1	7/21/1995	14.2	--	ND		--	--	--	--	--
	5/1/1996	15.7	ND	ND		ND	ND	ND	ND	ND
	8/7/1996	15.28	--	ND		--	--	--	--	--
	11/21/1996	15.57	--	ND		--	--	--	--	--
	5/25/2005	14.64	ND	ND		ND	ND	ND	ND	ND
	7/17/2006	14.62	ND	ND		ND	ND	ND	ND	ND
	9/13/2007	14.74	ND	ND		ND	ND	ND	ND	ND
	9/16/2008	12.65	ND	ND		ND	ND	ND	ND	ND
	11/8/2010	--	--	--		--	--	--	--	--
	2011	--	--	--		--	--	--	--	--
	9/4/2012	14.93	ND	--		ND	ND	ND	1.3	ND
	8/14/2013	9.8	ND	ND		ND	ND	ND	ND	ND
Duplicate	8/14/2013	9.8	ND	ND		ND	ND	ND	ND	ND
	8/27/2014	10.82	ND	ND	ND	ND	ND	ND	ND	ND
Duplicate	8/27/2014	10.82	ND	ND	22.6	ND	ND	ND	ND	ND
	9/28/2015	13.64	ND	ND	ND	ND	ND	ND	ND	ND
Duplicate	9/28/2015	13.64	ND	ND	ND	ND	ND	ND	ND	ND
MW-2	7/21/1995	14.64	8.2	ND		ND	ND	ND	ND	ND
	5/1/1996	16.13	ND	ND		ND	ND	ND	ND	1.88
	8/7/1996	15.72	ND	ND		ND	ND	ND	ND	ND
	11/21/1996	16.02	ND	ND		ND	ND	ND	ND	1.11
	5/25/2005	15.09	ND	ND		ND	ND	ND	ND	ND
	7/17/2006	Well was o								
	9/13/2007	15.18	ND	ND		ND	9.5	ND	ND	ND
	9/16/2008	--	--	--		--	--	--	--	--
	11/8/2010	16.49	ND	ND		ND	ND	ND	ND	ND
	9/5/2012	15.38	ND	--		ND	ND	ND	ND	ND
Duplicate	9/5/2012	15.38	ND	--		ND	ND	ND	ND	ND
	8/14/2013	14.6	ND	ND		ND	ND	ND	ND	ND
	8/27/2014	11.29	ND	ND		ND	ND	ND	ND	ND
	9/28/2015	14.06	ND	ND	ND	ND	ND	ND	ND	ND
MW-3	7/21/1995	13.7	ND	ND		ND	ND	90	ND	6.5
	5/1/1996	15.18	ND	ND		ND	ND	86	ND	ND
	8/7/1996	14.78	ND	ND		ND	1.6	39	1.8	ND
	11/21/1996	14.29	ND	ND		ND	ND	36.6	1.65	ND
	5/25/2005	14.12	ND	ND		ND	ND	31.8	1.48	ND
	7/17/2006	14.13	ND	1.72		ND	ND	5.1	ND	ND
	9/13/2007	14.22	ND	ND		ND	ND	13.4	ND	ND
Duplicate	9/13/2007	N/A	ND	ND		ND	2.32	12.2	ND	ND
	9/16/2008	--	--	--		--	--	--	--	--
	11/8/2010	15.49	ND	ND		ND	ND	8.9	ND	ND
	9/5/2012	14.35	ND	--		ND	ND	4.8	ND	ND
	8/14/2013	13.1	ND	ND		ND	ND	8.0	ND	ND
	8/27/2014	10.24	ND	ND	ND	ND	ND	7.9	ND	ND
	9/28/2015	13.05	ND	ND	ND	ND	ND	5.31	ND	ND
MW-4	7/21/1995	12.93	ND	ND		5.5	ND	ND	ND	ND
	5/1/1996	14.43	ND	ND		ND	ND	ND	ND	ND
	8/7/1996	14.02	ND	ND		ND	ND	ND	ND	ND
	11/21/1996	14.29	ND	ND		ND	ND	ND	ND	ND
	5/25/2005	13.36	ND	ND		ND	ND	ND	ND	ND
	7/18/2006	13.33	ND	1.33		ND	ND	ND	ND	ND

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

Well Number	Date	Depth to Water (Feet)	Carbon Tetra-chloride (µg/L)	Carbon disulfide (µg/L)	4-chloro-toluene (µg/L)	Chloro-form (µg/L)	Chloro-methane (µg/L)	1,2-DCB (µg/L)	1,4-DCB (µg/L)	1,1-DCE (µg/L)
	9/13/2007	13.5	ND	ND		ND	ND	ND	ND	ND
MW-5	5/1/1996	15.68	ND	ND		ND	ND	2.71	ND	1.45
	8/7/1996	15.27	ND	ND		ND	ND	3.3	ND	1.2
	11/21/1996	15.61	ND	ND		ND	ND	1.45	ND	0.78
	Well Decomissioned 10									
MW-6	5/1/1996	15.78	ND	ND		1.01	ND	ND	ND	2.93
	8/7/1996	15.35	ND	ND		ND	ND	ND	ND	2.6
	11/21/1996	15.61	ND	ND		ND	ND	ND	ND	1.86
	5/25/2005	14.63	ND	ND		ND	ND	ND	ND	ND
	7/14/2005	13.39	ND	ND		ND	ND	ND	ND	ND
	7/17/2006	14.64	ND	ND		ND	ND	ND	ND	ND
	9/13/2007	14.8	ND	ND		ND	3.85	ND	ND	ND
	9/16/2008	12.74	ND	ND		ND	ND	ND	ND	ND
Duplicate	9/16/2008	12.74	ND	ND		ND	ND	ND	ND	ND
	11/8/2010	16.13	ND	ND		ND	ND	ND	ND	4.4
	9/4/2012	15.00	ND	--		ND	ND	ND	ND	ND
	8/14/2013	13.30	ND	ND		ND	ND	ND	ND	ND
	8/27/2014	10.95	ND	ND	ND	ND	ND	ND	ND	ND
	9/28/2015	13.68	ND	ND	ND	ND	ND	ND	ND	ND
MW-7	5/1/1996	16.29	ND	ND		ND	ND	ND	ND	ND
	8/7/1996	15.86	ND	ND		ND	ND	ND	ND	ND
	11/21/1996	16.14	ND	ND		ND	ND	ND	ND	ND
	5/25/2005	15.28	ND	ND		ND	ND	ND	ND	ND
	7/17/2006	Well was fr								
	9/13/2007	15.35	ND	ND		ND	ND	ND	ND	ND
	9/16/2008	--	--	--		--	--	--	--	--
	11/8/2010	16.67	ND	ND		ND	ND	ND	ND	ND
Duplicate	11/8/2010	16.67	ND	ND		ND	ND	ND	ND	1.0
	9/5/2012	15.59	ND	--		ND	ND	ND	ND	ND
	8/14/2013	13.3	ND	ND		ND	ND	ND	ND	ND
	8/27/2014	11.26	ND	ND	ND	ND	ND	ND	ND	ND
	9/28/2015	14.05	ND	ND	ND	ND	ND	ND	ND	ND
MW-8	5/1/1996	16.49	ND	ND		ND	ND	ND	ND	ND
	8/7/1996	16.04	ND	ND		ND	ND	ND	ND	ND
	11/21/1996	16.33	ND	ND		ND	ND	ND	ND	ND
	5/25/2005	15.43	ND	ND		ND	ND	ND	ND	ND
	Well Decomissioned 10									
MW-9	5/1/1996	15.95	ND	ND		ND	ND	ND	ND	ND
	8/7/1996	15.53	ND	ND		ND	ND	ND	ND	ND
	11/21/1996	15.84	ND	ND		ND	ND	ND	ND	ND
	5/25/2005	15.04	ND	ND		ND	ND	ND	ND	ND
	Well Decomissioned 10									
GWP-1	7/21/1995	14.62	--	ND		--	--	--	--	--
	5/1/1996	16.11	ND	ND		ND	ND	ND	ND	ND
	8/7/1996	15.69	--	ND		--	--	--	--	--
	11/21/1996	15.97	--	ND		--	--	--	--	--
	5/25/2005	15.03	ND			ND	ND	ND	ND	ND
	Well Decomissioned 10									
GWP-2	7/21/1995	15.02	--	ND		--	--	--	--	--

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

Well Number	Date	Depth to Water (Feet)	Carbon Tetra-chloride (µg/L)	Carbon disulfide (µg/L)	4-chloro-toluene (µg/L)	Chloro-form (µg/L)	Chloro-methane (µg/L)	1,2-DCB (µg/L)	1,4-DCB (µg/L)	1,1-DCE (µg/L)
	5/1/1996	16.54	ND	ND		ND	ND	ND	ND	ND
	8/7/1996	16.1	--	ND		--	--	--	--	--
	11/21/1996	16.4	ND	ND		ND	ND	ND	ND	ND
	5/25/2005	15.42	ND	ND		ND	ND	ND	ND	ND
	9/16/2008	13.53	ND	ND		ND	ND	ND	ND	ND
GWP-3	7/21/1995	14.18	--	ND		--	--	--	--	--
	5/1/1996	15.71	ND	ND		ND	ND	ND	ND	ND
	8/7/1996	15.31	ND	ND		ND	ND	ND	ND	0.8
	11/21/1996	15.58	ND	ND		ND	ND	ND	ND	ND
	5/25/2005	15.68	ND	ND		ND	ND	ND	ND	ND
	7/17/2006	14.67	ND	ND		ND	ND	ND	ND	ND
	9/13/2007	14.8	ND	ND		ND	ND	ND	ND	ND
DUP-1	5/1/1996	N/A	ND	ND		ND	ND	ND	ND	ND
	8/7/1996	N/A	ND	ND		ND	ND	ND	ND	ND
	11/21/1996	N/A	--	ND		--	--	--	--	--
	5/25/2005	N/A	ND	ND		ND	ND	ND	ND	ND
	7/5/2005	N/A	ND	ND		ND	ND	ND	ND	ND
	7/17/2006	N/A	ND	ND		ND	ND	ND	ND	ND

NOTES

GRO	gasoline range organics
DRO	diesel range organics
MEK	2-butanone
µg/L	microgram per liter
DCB	dichlorobenzene
DCE	dichloroethene
DCA	dichloroethane
PCE	tetrachloroethene
TCB	trichlorobenzene
TCE	trichloroethene
TMB	trimethylbenzene
MCL	maximum contaminant level
Bold	analyte detected above MCL
ND	analyte not detected at resp
- -	analysis not performed
*	Indicates the EPA establishe http://www.epa.gov/safewate
**	No established MCL could b personnel on 9/12/08 but to
	2015 Results

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

Well Number	Date	Depth to Water (Feet)	1,2-DCA (µg/L)	1,2-Dichloro-propane (µg/L)	Dichloro-difluoro-methane (µg/L)	Ethyl-benzene (µg/L)	Isopropyl Benzene (µg/L)	Methyl-t-butyl-ether (µg/L)	4-Isopropyl toluene (µg/L)
ADEC MCL (ug/L)			5.0	5.0	5.0*	700	3,650	N/A	N/A
MW-1	7/21/1995	14.2	--		--	NA	--	ND	--
	5/1/1996	15.7	ND		ND	NA	ND	ND	ND
	8/7/1996	15.28	--		--	NA	--	ND	--
	11/21/1996	15.57	--		--	NA	--	ND	--
	5/25/2005	14.64	ND		ND	NA	ND	ND	1.2
	7/17/2006	14.62	ND		ND	368	ND	ND	ND
	9/13/2007	14.74	ND		--	1,590	85.4	ND	8.02
	9/16/2008	12.65	ND		--	1,080	56	ND	--
	11/8/2010	--	--		--	--	--	--	--
	2011	--	--		--	--	--	--	--
	9/4/2012	14.93	ND		ND	3,090	117	--	--
	8/14/2013	9.8	ND		ND	2,130	96.4	ND	ND
Duplicate	8/14/2013	9.8	ND		ND	2,150	95.5	ND	ND
	8/27/2014	10.82	ND	ND	ND	1,080	40.7	ND	5.02
Duplicate	8/27/2014	10.82	ND	1.39	ND	1,110	49.3	ND	4.79
	9/28/2015	13.64	ND	ND	ND	1,100	58.2	ND	5.47
Duplicate	9/28/2015	13.64	ND	ND	ND	1,220	62.8	ND	5.31
MW-2	7/21/1995	14.64	ND		ND	ND	--	ND	--
	5/1/1996	16.13	ND		ND	ND	3.53	ND	1.3
	8/7/1996	15.72	ND		ND	ND	ND	ND	ND
	11/21/1996	16.02	ND		ND	ND	1.69	ND	ND
	5/25/2005	15.09	ND		ND	ND	ND	ND	ND
	7/17/2006	Well was ol							
	9/13/2007	15.18	ND		--	ND	ND	ND	ND
	9/16/2008	--	--		--	--	--	--	--
	11/8/2010	16.49	ND		ND	ND	ND	ND	ND
	9/5/2012	15.38	ND		ND	ND	ND	--	--
Duplicate	9/5/2012	15.38	ND		ND	ND	ND	--	--
	8/14/2013	14.6	ND		ND	ND	ND	ND	ND
	8/27/2014	11.29	ND		ND	1.43	ND	ND	ND
	9/28/2015	14.06	ND	ND	ND	ND	ND	ND	ND
MW-3	7/21/1995	13.7	ND		240	ND	--	ND	--
	5/1/1996	15.18	ND		230	ND	ND	ND	7.6
	8/7/1996	14.78	ND		17	ND	1.2	ND	6.5
	11/21/1996	14.29	ND		26.3	ND	1.22	ND	5.76
	5/25/2005	14.12	ND		ND	1.59	ND	ND	3.71
	7/17/2006	14.13	ND		ND	ND	ND	ND	ND
	9/13/2007	14.22	ND		--	ND	ND	ND	1.54
Duplicate	9/13/2007	N/A	ND		--	ND	ND	ND	1.53
	9/16/2008	--	--		--	--	--	--	--
	11/8/2010	15.49	ND		ND	ND	ND	ND	4.0
	9/5/2012	14.35	ND		ND	ND	ND	--	--
	8/14/2013	13.1	ND		ND	ND	ND	ND	ND
	8/27/2014	10.24	ND	ND	ND	ND	ND	ND	4.47
	9/28/2015	13.05	ND	ND	ND	ND	ND	ND	5.03
MW-4	7/21/1995	12.93	ND		ND	ND	--	ND	--
	5/1/1996	14.43	ND		ND	ND	ND	ND	ND
	8/7/1996	14.02	0.77		1.08	ND	ND	ND	ND
	11/21/1996	14.29	ND		ND	ND	ND	ND	ND
	5/25/2005	13.36	ND		ND	ND	ND	ND	ND
	7/18/2006	13.33	ND		ND	ND	ND	ND	ND

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

Well Number	Date	Depth to Water (Feet)	1,2-DCA (µg/L)	1,2-Dichloro-propane (µg/L)	Dichloro-difluoro-methane (µg/L)	Ethyl-benzene (µg/L)	Isopropyl Benzene (µg/L)	Methyl-t-butyl-ether (µg/L)	4-Isopropyl toluene (µg/L)
	9/13/2007	13.5	ND		--	ND	ND	ND	ND
MW-5	5/1/1996	15.68	ND		ND	ND	1.85	ND	3.5
	8/7/1996	15.27	ND		1.09	ND	ND	ND	0.9
	11/21/1996	15.61	ND		ND	ND	ND	ND	0.6
	Well Decomissioned 10								
MW-6	5/1/1996	15.78	ND		ND	ND	3.11	ND	8.89
	8/7/1996	15.35	ND		ND	ND	ND	ND	0.5
	11/21/1996	15.61	ND		ND	ND	ND	ND	ND
	5/25/2005	14.63	ND		ND	ND	ND	ND	ND
	7/14/2005	13.39	ND		ND	ND	ND	ND	ND
	7/17/2006	14.64	ND		ND	ND	ND	ND	ND
	9/13/2007	14.8	ND		--	ND	ND	ND	ND
	9/16/2008	12.74	ND		--	1.33	ND	ND	--
Duplicate	9/16/2008	12.74	ND		--	1.12	ND	ND	--
	11/8/2010	16.13	ND		ND	ND	ND	ND	ND
	9/4/2012	15.00	ND		ND	ND	ND	--	--
	8/14/2013	13.30	ND		ND	ND	ND	ND	ND
	8/27/2014	10.95	ND	ND	ND	ND	ND	ND	ND
	9/28/2015	13.68	ND	ND	ND	ND	ND	ND	ND
MW-7	5/1/1996	16.29	ND		ND	ND	2.5	ND	2.47
	8/7/1996	15.86	ND		3.2	ND	ND	ND	ND
	11/21/1996	16.14	ND		2.97	ND	ND	ND	ND
	5/25/2005	15.28	ND		ND	ND	ND	ND	ND
	7/17/2006	Well was fr							
	9/13/2007	15.35	ND		--	ND	ND	ND	ND
	9/16/2008	--	--		--	--	--	--	--
	11/8/2010	16.67	ND		ND	ND	ND	ND	ND
Duplicate	11/8/2010	16.67	ND		ND	ND	ND	ND	ND
	9/5/2012	15.59	ND		ND	ND	ND	--	--
	8/14/2013	13.3	ND		1.9	ND	ND	ND	ND
	8/27/2014	11.26	ND	ND	ND	ND	ND	ND	ND
	9/28/2015	14.05	ND	ND	ND	ND	ND	ND	ND
MW-8	5/1/1996	16.49	ND		4.01	ND	3.84	ND	4.06
	8/7/1996	16.04	ND		1.4	ND	ND	ND	ND
	11/21/1996	16.33	ND		ND	ND	ND	ND	ND
	5/25/2005	15.43	ND		ND	ND	ND	ND	ND
	Well Decomissioned 10								
MW-9	5/1/1996	15.95	ND		3.56	ND	1.08	ND	2.11
	8/7/1996	15.53	ND		1.3	ND	ND	ND	ND
	11/21/1996	15.84	ND		ND	ND	ND	ND	ND
	5/25/2005	15.04	ND		ND	ND	ND	ND	ND
	Well Decomissioned 10								
GWP-1	7/21/1995	14.62	--		--	ND	--	ND	--
	5/1/1996	16.11	ND		3.63	ND	ND	ND	ND
	8/7/1996	15.69	--		--	ND	--	ND	--
	11/21/1996	15.97	--		--	ND	--	ND	--
	5/25/2005	15.03	ND		ND	ND	2.03	5.65	ND
	Well Decomissioned 10								
GWP-2	7/21/1995	15.02	--		--	ND	--	ND	--

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

Well Number	Date	Depth to Water (Feet)	1,2-DCA (µg/L)	1,2-Dichloro-propane (µg/L)	Dichloro-difluoro-methane (µg/L)	Ethyl-benzene (µg/L)	Isopropyl Benzene (µg/L)	Methyl-t-butyl-ether (µg/L)	4-Isopropyl toluene (µg/L)
	5/1/1996	16.54	ND		3.87	ND	ND	ND	ND
	8/7/1996	16.1	--		--	ND	--	ND	--
	11/21/1996	16.4	ND		ND	ND	ND	ND	ND
	5/25/2005	15.42	ND		ND	ND	ND	ND	ND
	9/16/2008	13.53	ND		--	1.82	ND	ND	--
GWP-3	7/21/1995	14.18	--		--	ND	--	ND	--
	5/1/1996	15.71	ND		4.91	ND	ND	ND	ND
	8/7/1996	15.31	ND		ND	ND	ND	ND	ND
	11/21/1996	15.58	ND		ND	ND	ND	ND	ND
	5/25/2005	15.68	ND		ND	ND	ND	ND	ND
	7/17/2006	14.67	ND		ND	ND	ND	ND	ND
	9/13/2007	14.8	ND		--	6.15	ND	ND	ND
DUP-1	5/1/1996	N/A	ND		ND	ND	ND	ND	ND
	8/7/1996	N/A	ND		630	ND	ND	ND	ND
	11/21/1996	N/A	--		--	ND	--	ND	--
	5/25/2005	N/A	ND		ND	ND	ND	ND	ND
	7/5/2005	N/A	ND		ND	ND	ND	ND	ND
	7/17/2006	N/A	ND		ND	ND	ND	ND	ND

NOTES

GRO	gasoline range organics
DRO	diesel range organics
MEK	2-butanone
µg/L	microgram per liter
DCB	dichlorobenzene
DCE	dichloroethene
DCA	dichloroethane
PCE	tetrachloroethene
TCB	trichlorobenzene
TCE	trichloroethene
TMB	trimethylbenzene
MCL	maximum contaminant level
Bold	analyte detected above MCL
ND	analyte not detected at resp
--	analysis not performed
*	Indicates the EPA establishe http://www.epa.gov/safewate
**	No established MCL could b personnel on 9/12/08 but to
	2015 Results

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

Well Number	Date	Depth to Water (Feet)	p-Isopropyl-toluene (µg/L)	Naphthalene (µg/L)	n-Propyl-benzene (µg/L)	Styrene (µg/L)	PCE (µg/L)	Toluene (µg/L)	1,2,3-TCB (µg/L)
ADEC MCL (ug/L)			N/A	700	370	100	5.0	1,000	N/A
MW-1	7/21/1995	14.2	--	--	--		--	NA	
	5/1/1996	15.7	--	--	420		ND	NA	
	8/7/1996	15.28	--	--	--		--	NA	
	11/21/1996	15.57	--	--	--		--	NA	
	5/25/2005	14.64	--	ND	ND		ND	2.24	
	7/17/2006	14.62	--	ND	ND		ND	755	
	9/13/2007	14.74	--	76.8	146		ND	13,000	
	9/16/2008	12.65	4.24	51.2	ND		ND	1,750	
	11/8/2010	--	--	--	--		--	--	
	2011	--	--	--	--		--	--	
	9/4/2012	14.93	7.4	90.9	176	183	ND	3,670	4.2
	8/14/2013	9.8	ND	ND	166	ND	ND	3,410	ND
Duplicate	8/14/2013	9.8	ND	ND	168	ND	ND	3,440	ND
	8/27/2014	10.82	-	45.6	68.7	ND	ND	1,340	ND
Duplicate	8/27/2014	10.82	-	47.0	85.1	ND	ND	1,220	ND
	9/28/2015	13.64	ND	46.3	112	ND	ND	684	ND
Duplicate	9/28/2015	13.64	ND	48.8	118	ND	ND	759	ND
MW-2	7/21/1995	14.64	--	--	--		20	ND	
	5/1/1996	16.13	--	ND	9.59		1.71	ND	
	8/7/1996	15.72	--	ND	ND		57	ND	
	11/21/1996	16.02	--	ND	4.74		28.4	ND	
	5/25/2005	15.09	--	ND	ND		ND	ND	
	7/17/2006	Well was ol							
	9/13/2007	15.18	--	ND	ND		2.03	ND	
	9/16/2008	--	--	--	--		--	--	
	11/8/2010	16.49	ND	ND	ND		7.0	ND	
	9/5/2012	15.38	ND	ND	ND	ND	5.2	ND	ND
Duplicate	9/5/2012	15.38	ND	ND	ND	ND	5.3	ND	ND
	8/14/2013	14.6	ND	ND	ND	ND	4.7	ND	ND
	8/27/2014	11.29	-	ND	ND	ND	1.3	1.12	ND
	9/28/2015	14.06	ND	ND	ND	ND	ND	ND	ND
MW-3	7/21/1995	13.7	--	--	--		29		
	5/1/1996	15.18	--	9	6.4		23	ND	
	8/7/1996	14.78	--	8.8	2.4		15	ND	
	11/21/1996	14.29	--	11	2.39		13.8	ND	
	5/25/2005	14.12	--	ND	1.17		2.46	ND	
	7/17/2006	14.13	--	ND	ND		1.41	ND	
	9/13/2007	14.22	--	4.56	ND		1.9	ND	
Duplicate	9/13/2007	N/A	--	4.35	ND		1.89	1.94	
	9/16/2008	--	--	--	--		--	--	
	11/8/2010	15.49	4.0	4.0	ND		1.3	ND	
	9/5/2012	14.35	2.2	4.7	ND	ND	1.4	ND	ND
	8/14/2013	13.1	6.2	ND	ND	ND	1.6	ND	ND
	8/27/2014	10.24	-	2.78	ND	ND	1.39	ND	ND
	9/28/2015	13.05	ND	2.17	ND	ND	1.28	ND	ND
MW-4	7/21/1995	12.93	--	--	--		ND	ND	
	5/1/1996	14.43	--	--	ND		ND	ND	
	8/7/1996	14.02	--	--	ND		ND	ND	
	11/21/1996	14.29	--	--	ND		ND	ND	
	5/25/2005	13.36	--	ND	ND		ND	ND	
	7/18/2006	13.33	--	ND	ND		ND	ND	

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

Well Number	Date	Depth to Water (Feet)	p-Isopropyl-toluene (µg/L)	Naphthalene (µg/L)	n-Propyl-benzene (µg/L)	Styrene (µg/L)	PCE (µg/L)	Toluene (µg/L)	1,2,3-TCB (µg/L)
	9/13/2007	13.5	--	ND	ND		ND	3.03	
MW-5	5/1/1996	15.68	--	--	4.43		ND	ND	
	8/7/1996	15.27	--	--	0.7		1.1	ND	
	11/21/1996	15.61	--	--	0.65		ND	ND	
	Well Decomissioned 10								
MW-6	5/1/1996	15.78	--	--	8.96		5.23	ND	
	8/7/1996	15.35	--	--	ND		5.17	ND	
	11/21/1996	15.61	--	--	ND		5.78	ND	
	5/25/2005	14.63	--	ND	ND		9.24	ND	
	7/14/2005	13.39	--	ND	ND		8.47	ND	
	7/17/2006	14.64	--	ND	ND		6.66	ND	
	9/13/2007	14.8	--	ND	ND		2.36	1.76	
	9/16/2008	12.74	ND	ND	ND		3.07	2.35	
Duplicate	9/16/2008	12.74	ND	ND	ND		2.71	1.97	
	11/8/2010	16.13	ND	ND	ND		2.2	ND	
	9/4/2012	15.00	ND	ND	ND	ND	1.6	ND	ND
	8/14/2013	13.30	ND	ND	ND	ND	1.3	ND	ND
	8/27/2014	10.95	-	ND	ND	ND	2.31	ND	ND
	9/28/2015	13.68	ND	ND	ND	ND	1.61	ND	ND
MW-7	5/1/1996	16.29	--	--	5.78		ND	ND	
	8/7/1996	15.86	--	--	ND		ND	ND	
	11/21/1996	16.14	--	--	ND		ND	ND	
	5/25/2005	15.28	--	ND	ND		ND	ND	
	7/17/2006	Well was fr	--						
	9/13/2007	15.35	--	3.5	ND		ND	6.52	
	9/16/2008	--	--	--	--		--	--	
	11/8/2010	16.67	ND	ND	ND		ND	ND	
Duplicate	11/8/2010	16.67	ND	ND	ND		ND	ND	
	9/5/2012	15.59	ND	ND	ND	ND	ND	ND	
	8/14/2013	13.3	ND	ND	ND	ND	ND	ND	ND
	8/27/2014	11.26	ND	ND	ND	ND	ND	ND	ND
	9/28/2015	14.05	ND	ND	ND	ND	ND	ND	ND
			--						
MW-8	5/1/1996	16.49	--	--	9.67		ND	ND	
	8/7/1996	16.04	--	--	ND		ND	ND	
	11/21/1996	16.33	--	--	ND		ND	ND	
	5/25/2005	15.43	--	ND	ND		ND	ND	
	Well Decomissioned 10		--						
			--						
MW-9	5/1/1996	15.95	--	--	2.95		ND	ND	
	8/7/1996	15.53	--	--	ND		ND	ND	
	11/21/1996	15.84	--	--	ND		ND	ND	
	5/25/2005	15.04	--	ND	ND		ND	ND	
	Well Decomissioned 10		--						
			--						
GWP-1	7/21/1995	14.62	--	--	--		--	ND	
	5/1/1996	16.11	--	--	1.53		ND	ND	
	8/7/1996	15.69	--	--	--		--	ND	
	11/21/1996	15.97	--	--	--		--	ND	
	5/25/2005	15.03	--	ND	ND		ND	ND	
	Well Decomissioned 10								
GWP-2	7/21/1995	15.02	--	--	--		--	ND	

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

Well Number	Date	Depth to Water (Feet)	p-Isopropyl-toluene (µg/L)	Naphthalene (µg/L)	n-Propyl-benzene (µg/L)	Styrene (µg/L)	PCE (µg/L)	Toluene (µg/L)	1,2,3-TCB (µg/L)
	5/1/1996	16.54	--	--	ND		ND	ND	
	8/7/1996	16.1	--	--	--		--	ND	
	11/21/1996	16.4	--	--	ND		ND	ND	
	5/25/2005	15.42	--	ND	ND		ND	ND	
	9/16/2008	13.53	ND	ND	ND		ND	3.97	
GWP-3	7/21/1995	14.18	--	--	--		--	ND	
	5/1/1996	15.71	--	ND	ND		ND	ND	
	8/7/1996	15.31	--	ND	ND		ND	ND	
	11/21/1996	15.58	--	ND	ND		ND	ND	
	5/25/2005	15.68	--	ND	ND		ND	ND	
	7/17/2006	14.67	--	ND	ND		ND	ND	
	9/13/2007	14.8	--	5.89	ND		ND	22.7	
DUP-1	5/1/1996	N/A	--	--	410		ND	ND	
	8/7/1996	N/A	--	--	ND		ND	ND	
	11/21/1996	N/A	--	--	--		--	ND	
	5/25/2005	N/A	--	ND	ND		ND	ND	
	7/5/2005	N/A	--	ND	ND		ND	ND	
	7/17/2006	N/A	--	ND	ND		6.49	ND	

NOTES

GRO	gasoline range organics
DRO	diesel range organics
MEK	2-butanone
µg/L	microgram per liter
DCB	dichlorobenzene
DCE	dichloroethene
DCA	dichloroethane
PCE	tetrachloroethene
TCB	trichlorobenzene
TCE	trichloroethene
TMB	trimethylbenzene
MCL	maximum contaminant level
Bold	analyte detected above MCL
ND	analyte not detected at resp
--	analysis not performed
*	Indicates the EPA establishe http://www.epa.gov/safewate
**	No established MCL could b personnel on 9/12/08 but to
	2015 Results

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

Well Number	Date	Depth to Water (Feet)	Total BTEX (ug/L)	1,2,4-TCB (µg/L)	1,1,1-Trichloro-ethane (µg/L)	Trichloro-flouro-methane (µg/L)	TCE (µg/L)	1,2,3-Trichloro-propane (µg/L)
ADEC MCL (ug/L)				70	200	11,000	5.0	0.4
MW-1	7/21/1995	14.2	71,300	ND	--	--	--	--
	5/1/1996	15.7	97,300	ND	ND	ND	ND	ND
	8/7/1996	15.28	96,300	ND	--	--	--	--
	11/21/1996	15.57	133,400	ND	--	--	--	--
	5/25/2005	14.64	N/A	ND	ND	ND	ND	ND
	7/17/2006	14.62	2,543	ND	ND	ND	ND	ND
	9/13/2007	14.74	30,285.6	ND	ND	1.78	ND	ND
	9/16/2008	12.65		ND	ND	ND	ND	ND
	11/8/2010	--	--	--	--	--	--	--
	2011	--	--	--	--	--	--	--
	9/4/2012	14.93		--	ND	1.5	ND	ND
	8/14/2013	9.8		ND	ND	ND	ND	ND
Duplicate	8/14/2013	9.8		ND	ND	ND	ND	ND
	8/27/2014	10.82		ND	ND	2.91	ND	ND
Duplicate	8/27/2014	10.82		ND	ND	2.71	ND	ND
	9/28/2015	13.64	6,725	ND	ND	ND	ND	ND
Duplicate	9/28/2015	13.64	8,450	ND	ND	ND	ND	ND
MW-2	7/21/1995	14.64	6.80	ND	57	6.3	ND	--
	5/1/1996	16.13	26	ND	9.39	ND	ND	ND
	8/7/1996	15.72	ND	ND	180	8.9	ND	ND
	11/21/1996	16.02	8.16	ND	48.3	7.19	ND	ND
	5/25/2005	15.09	ND	ND	ND	ND	ND	ND
	7/17/2006	Well was o						
	9/13/2007	15.18	ND	ND	2.36	ND	ND	ND
	9/16/2008	--	--	--	--	--	--	--
	11/8/2010	16.49		ND	11.7	3.3	ND	ND
	9/5/2012	15.38		--	3.8	1.4	ND	ND
Duplicate	9/5/2012	15.38		--	3.7	1.3	ND	ND
	8/14/2013	14.6		ND	2.6	ND	ND	ND
	8/27/2014	11.29		ND	ND	ND	ND	ND
	9/28/2015	14.06	ND	ND	ND	ND	ND	ND
MW-3	7/21/1995	13.7	NT	ND	ND	6.8	12	--
	5/1/1996	15.18	151	ND	ND	ND	22	ND
	8/7/1996	14.78	29.4	ND	ND	14	2.1	ND
	11/21/1996	14.29	43.4	ND	ND	2.33	3.55	ND
	5/25/2005	14.12	ND	1.59	ND	ND	2.86	ND
	7/17/2006	14.13	ND	ND	ND	ND	ND	ND
	9/13/2007	14.22	ND	ND	ND	ND	ND	ND
Duplicate	9/13/2007	N/A	3.2	ND	ND	ND	ND	ND
	9/16/2008	--	--	--	--	--	--	--
	11/8/2010	15.49		ND	ND	ND	ND	ND
	9/5/2012	14.35		--	ND	ND	ND	ND
	8/14/2013	13.1		ND	ND	ND	ND	ND
	8/27/2014	10.24		ND	ND	ND	ND	ND
	9/28/2015	13.05	ND	ND	ND	ND	ND	ND
MW-4	7/21/1995	12.93	ND	ND	ND	ND	ND	--
	5/1/1996	14.43	ND	ND	ND	ND	ND	ND
	8/7/1996	14.02	ND	ND	ND	ND	ND	ND
	11/21/1996	14.29	ND	ND	ND	ND	ND	ND
	5/25/2005	13.36	ND	ND	ND	ND	ND	ND
	7/18/2006	13.33	ND	ND	ND	ND	ND	ND

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

Well Number	Date	Depth to Water (Feet)	Total BTEX (ug/L)	1,2,4-TCB (µg/L)	1,1,1-Trichloro-ethane (µg/L)	Trichloro-flouro-methane (µg/L)	TCE (µg/L)	1,2,3-Trichloro-propane (µg/L)
	9/13/2007	13.5	6.74	ND	ND	ND	ND	ND
MW-5	5/1/1996	15.68	33.9	ND	ND	ND	ND	ND
	8/7/1996	15.27	7.9	ND	ND	ND	ND	ND
	11/21/1996	15.61	5	ND	ND	ND	ND	ND
	Well Decomissioned 10							
MW-6	5/1/1996	15.78	23.3	ND	2.28	10.1	ND	ND
	8/7/1996	15.35	0.5	ND	1.11	5	0.7	ND
	11/21/1996	15.61	0.67	ND	1.19	7.45	0.53	ND
	5/25/2005	14.63	ND	ND	ND	4.81	ND	ND
	7/14/2005	13.39	ND	ND	ND	4.7	ND	ND
	7/17/2006	14.64	ND	ND	ND	4.45	ND	ND
	9/13/2007	14.8	1.76	ND	ND	7.96	ND	ND
	9/16/2008	12.74		ND	ND	3.9	ND	ND
Duplicate	9/16/2008	12.74		ND	ND	3.57	ND	ND
	11/8/2010	16.13		ND	ND	8.8	ND	ND
	9/4/2012	15.00		--	ND	3.8	ND	ND
	8/14/2013	13.30		ND	ND	4.4	ND	ND
	8/27/2014	10.95		ND	ND	8.13	ND	ND
	9/28/2015	13.68	ND	ND	ND	3.26	ND	ND
MW-7	5/1/1996	16.29	48.3	ND	ND	13.4	ND	ND
	8/7/1996	15.86	ND	ND	ND	70	ND	ND
	11/21/1996	16.14	ND	ND	ND	69	ND	ND
	5/25/2005	15.28	ND	ND	ND	18.6	ND	ND
	7/17/2006	Well was fr						
	9/13/2007	15.35	18.33	ND	ND	15.7	ND	ND
	9/16/2008	--	--	--	--	--	--	--
	11/8/2010	16.67	ND	ND	ND	3.6	ND	ND
Duplicate	11/8/2010	16.67		ND	ND	3.2	ND	ND
	9/5/2012	15.59		--	ND	13.4	ND	ND
	8/14/2013	13.3		ND	ND	4.2	ND	ND
	8/27/2014	11.26		ND	ND	8.13	ND	ND
	9/28/2015	14.05	ND	ND	ND	ND	ND	ND
MW-8	5/1/1996	16.49	110.2	ND	ND	16.4	ND	1.14
	8/7/1996	16.04	1.36	ND	ND	10.8	ND	ND
	11/21/1996	16.33	ND	ND	ND	9.5	ND	ND
	5/25/2005	15.43	ND	ND	ND	ND	ND	ND
	Well Decomissioned 10							
MW-9	5/1/1996	15.95	8.8	ND	ND	ND	ND	ND
	8/7/1996	15.53	ND	ND	ND	ND	ND	ND
	11/21/1996	15.84	ND	ND	ND	ND	ND	ND
	5/25/2005	15.04	ND	ND	ND	ND	ND	ND
	Well Decomissioned 10							
GWP-1	7/21/1995	14.62	1,722	ND	--	--	--	--
	5/1/1996	16.11	134.3	ND	ND	ND	ND	ND
	8/7/1996	15.69	240.3	ND	--	--	--	--
	11/21/1996	15.97	165.62	ND	--	--	--	--
	5/25/2005	15.03	ND	ND	ND	ND	ND	ND
	Well Decomissioned 10							
GWP-2	7/21/1995	15.02	ND	ND	--	--	--	--

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

Well Number	Date	Depth to Water (Feet)	Total BTEX (ug/L)	1,2,4-TCB (µg/L)	1,1,1-Trichloro-ethane (µg/L)	Trichloro-flouro-methane (µg/L)	TCE (µg/L)	1,2,3-Trichloro-propane (µg/L)
	5/1/1996	16.54	ND	ND	ND	33.4	ND	ND
	8/7/1996	16.1	ND	ND	--	--	--	--
	11/21/1996	16.4	ND	ND	ND	44.3	ND	ND
	5/25/2005	15.42	ND	ND	ND	9.99	ND	ND
	9/16/2008	13.53		ND	ND	5.14	ND	ND
GWP-3	7/21/1995	14.18	NT	ND	--	--	--	--
	5/1/1996	15.71	ND	ND	ND	2.22	ND	ND
	8/7/1996	15.31	ND	ND	0.7	1.24	ND	ND
	11/21/1996	15.58	ND	ND	0.69	2.47	ND	ND
	5/25/2005	15.68	ND	ND	ND	1.18	ND	ND
	7/17/2006	14.67	ND	ND	ND	ND	ND	ND
	9/13/2007	14.8	72.15	ND	ND	1.45	ND	ND
DUP-1	5/1/1996	N/A	124,600	ND	ND	ND	ND	ND
	8/7/1996	N/A	110,000	ND	ND	ND	ND	ND
	11/21/1996	N/A	49.86	ND	--	--	--	--
	5/25/2005	N/A	ND	ND	ND	ND	ND	ND
	7/5/2005	N/A	ND	ND	ND	1.72	ND	ND
	7/17/2006	N/A	ND	ND	ND	4.29	ND	ND

NOTES

GRO	gasoline range organics
DRO	diesel range organics
MEK	2-butanone
µg/L	microgram per liter
DCB	dichlorobenzene
DCE	dichloroethene
DCA	dichloroethane
PCE	tetrachloroethene
TCB	trichlorobenzene
TCE	trichloroethene
TMB	trimethylbenzene
MCL	maximum contaminant level
Bold	analyte detected above MCL
ND	analyte not detected at resp
--	analysis not performed
*	Indicates the EPA establishe http://www.epa.gov/safewate
**	No established MCL could b personnel on 9/12/08 but to
	2015 Results

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

Well Number	Date	Depth to Water (Feet)	1,2,4-TMB (µg/L)	1,3,5-TMB (µg/L)	Total Xylenes (µg/L)	Fluorene (µg/L)	Phen-anthrene (µg/L)
ADEC MCL (ug/L)			1,800	1,800	10,000	1,460	11,000
MW-1	7/21/1995	14.2	--	--	--	--	--
	5/1/1996	15.7	3,000	740	--	--	--
	8/7/1996	15.28	--	--	--	--	--
	11/21/1996	15.57	--	--	--	--	--
	5/25/2005	14.64	69	19.3	317	ND	ND
	7/17/2006	14.62	370	ND	1,420	ND	ND
	9/13/2007	14.74	1,310	356	**15,670**	--	--
	9/16/2008	12.65	735	175	**5,790**	--	--
	11/8/2010	--	--	--	--	--	--
	2011	--	--	--	--	--	--
	9/4/2012	14.93	**2,200**	587	**18,400**	--	--
	8/14/2013	9.8	1,440	383	**13,400**	--	--
Duplicate	8/14/2013	9.8	1,450	385	**13,500**	--	--
	8/27/2014	10.82	923	164	6,480	--	--
Duplicate	8/27/2014	10.82	889	209	6,510	--	--
	9/28/2015	13.64	802	202	5,930	--	--
Duplicate	9/28/2015	13.64	848	210	6,470	--	--
MW-2	7/21/1995	14.64	--	--	ND	--	--
	5/1/1996	16.13	22.2	16.2	ND	ND	ND
	8/7/1996	15.72	ND	ND	ND	ND	ND
	11/21/1996	16.02	8.55	6.61	ND	ND	ND
	5/25/2005	15.09	ND	ND	ND	ND	ND
	7/17/2006	Well was ol					
	9/13/2007	15.18	ND	ND	ND	--	--
	9/16/2008	--	--	--	--	--	--
	11/8/2010	16.49	ND	ND	ND	ND	ND
	9/5/2012	15.38	ND	ND	ND	--	--
Duplicate	9/5/2012	15.38	ND	ND	ND	--	--
	8/14/2013	14.6	ND	ND	ND	--	--
	8/27/2014	11.29	1.34	ND	6.11	--	--
	9/28/2015	14.06	ND	ND	ND	--	--
MW-3	7/21/1995	13.7	--	--	ND	--	--
	5/1/1996	15.18	49	18	ND	1.4	1.7
	8/7/1996	14.78	19.5	9.6	ND	ND	ND
	11/21/1996	14.29	19.9	9.07	ND	0.9	0.8
	5/25/2005	14.12	15.9	5.92	12.4	ND	ND
	7/17/2006	14.13	ND	ND	ND	ND	ND
	9/13/2007	14.22	5.35	2.16	ND	--	--
Duplicate	9/13/2007	N/A	5.09	2.07	1.26	--	--
	9/16/2008	--	--	--	--	--	--
	11/8/2010	15.49	6.1	2.4	ND	ND	ND
	9/5/2012	14.35	1.7	ND	ND	--	--
	8/14/2013	13.1	4.1	1.4	ND	--	--
	8/27/2014	10.24	3.25	1.37	ND	--	--
	9/28/2015	13.05	2.97	ND	ND	--	--
MW-4	7/21/1995	12.93	--	--	ND	--	--
	5/1/1996	14.43	ND	ND	ND	--	--
	8/7/1996	14.02	ND	ND	ND	--	--
	11/21/1996	14.29	ND	ND	ND	--	--
	5/25/2005	13.36	ND	ND	ND	ND	ND
	7/18/2006	13.33	ND	ND	ND	ND	ND

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

Well Number	Date	Depth to Water (Feet)	1,2,4-TMB (µg/L)	1,3,5-TMB (µg/L)	Total Xylenes (µg/L)	Fluorene (µg/L)	Phen-anthrene (µg/L)
	9/13/2007	13.5	ND	ND	3.71	--	--
MW-5	5/1/1996	15.68	36.2	15	ND	--	--
	8/7/1996	15.27	7.8	3.3	ND	--	--
	11/21/1996	15.61	6.52	2.38	ND	--	--
	Well Decomissioned 10						
MW-6	5/1/1996	15.78	37.7	11.7	ND	--	--
	8/7/1996	15.35	1.2	0.7	ND	--	--
	11/21/1996	15.61	ND	ND	ND	--	--
	5/25/2005	14.63	ND	ND	ND	ND	ND
	7/14/2005	13.39	ND	ND	ND	ND	ND
	7/17/2006	14.64	ND	ND	ND	ND	ND
	9/13/2007	14.8	ND	ND	ND	--	--
	9/16/2008	12.74	ND	ND	6.35	--	--
Duplicate	9/16/2008	12.74	ND	ND	5.13	--	--
	11/8/2010	16.13	ND	ND	ND	ND	ND
	9/4/2012	15.00	ND	ND	ND	--	--
	8/14/2013	13.30	ND	ND	ND	--	--
	8/27/2014	10.95	ND	ND	ND	--	--
	9/28/2015	13.68	ND	ND	ND	--	--
MW-7	5/1/1996	16.29	25.8	7.45	ND	--	--
	8/7/1996	15.86	ND	ND	ND	--	--
	11/21/1996	16.14	ND	ND	ND	--	--
	5/25/2005	15.28	ND	ND	ND	ND	ND
	7/17/2006	Well was fr					
	9/13/2007	15.35	ND	ND	11.81	--	--
	9/16/2008	--	--	--	--	--	--
	11/8/2010	16.67	ND	ND	ND	ND	ND
Duplicate	11/8/2010	16.67	ND	ND	ND	ND	ND
	9/5/2012	15.59	ND	ND	ND	--	--
	8/14/2013	13.3	ND	ND	ND	--	--
	8/27/2014	11.26	ND	ND	ND	--	--
	9/28/2015	14.05	ND	ND	ND	--	--
MW-8	5/1/1996	16.49	41.8	13	ND	--	--
	8/7/1996	16.04	ND	ND	ND	--	--
	11/21/1996	16.33	ND	ND	ND	--	--
	5/25/2005	15.43	ND	ND	ND	ND	ND
	Well Decomissioned 10						
MW-9	5/1/1996	15.95	11.32	3.43	ND	--	--
	8/7/1996	15.53	ND	ND	ND	--	--
	11/21/1996	15.84	ND	ND	ND	--	--
	5/25/2005	15.04	ND	ND	ND	ND	ND
	Well Decomissioned 10						
GWP-1	7/21/1995	14.62	--	--	ND	--	--
	5/1/1996	16.11	ND	ND	ND	--	--
	8/7/1996	15.69	--	--	ND	--	--
	11/21/1996	15.97	--	--	ND	--	--
	5/25/2005	15.03	ND	ND	ND	ND	ND
	Well Decomissioned 10						
GWP-2	7/21/1995	15.02	--	--	ND	--	--

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

Well Number	Date	Depth to Water (Feet)	1,2,4-TMB (µg/L)	1,3,5-TMB (µg/L)	Total Xylenes (µg/L)	Fluorene (µg/L)	Phen-anthrene (µg/L)
	5/1/1996	16.54	ND	ND	ND	--	--
	8/7/1996	16.1	--	--	ND	--	--
	11/21/1996	16.4	ND	ND	ND	--	--
	5/25/2005	15.42	ND	ND	ND	ND	ND
	9/16/2008	13.53	ND	ND	9.84	--	--
GWP-3	7/21/1995	14.18	--	--	ND	--	--
	5/1/1996	15.71	ND	ND	ND	ND	ND
	8/7/1996	15.31	ND	ND	ND	ND	ND
	11/21/1996	15.58	ND	ND	ND	ND	ND
	5/25/2005	15.68	ND	ND	ND	ND	ND
	7/17/2006	14.67	ND	ND	ND	ND	ND
	9/13/2007	14.8	5.83	1.12	43.3	--	--
DUP-1	5/1/1996	N/A	3,100	780	ND	--	--
	8/7/1996	N/A	2,300	710	ND	--	--
	11/21/1996	N/A	--	--	ND	--	--
	5/25/2005	N/A	ND	ND	ND	ND	ND
	7/5/2005	N/A	ND	ND	ND	ND	ND
	7/17/2006	N/A	ND	ND	ND	ND	ND

NOTES

GRO	gasoline range organics
DRO	diesel range organics
MEK	2-butanone
µg/L	microgram per liter
DCB	dichlorobenzene
DCE	dichloroethene
DCA	dichloroethane
PCE	tetrachloroethene
TCB	trichlorobenzene
TCE	trichloroethene
TMB	trimethylbenzene
MCL	maximum contaminant level
Bold	analyte detected above MCL
ND	analyte not detected at resp
--	analysis not performed
*	Indicates the EPA establishe http://www.epa.gov/safewate
**	No established MCL could b personnel on 9/12/08 but to
	2015 Results

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

Well Number	Date	Depth to Water (Feet)	Fluor-anthene (µg/L)	Pyrene (µg/L)	Acenaph-thylene (µg/L)
ADEC MCL (ug/L)			1,460	1,100	2,200
MW-1	7/21/1995	14.2	--	--	--
	5/1/1996	15.7	--	--	--
	8/7/1996	15.28	--	--	--
	11/21/1996	15.57	--	--	--
	5/25/2005	14.64	ND	ND	ND
	7/17/2006	14.62	ND	ND	ND
	9/13/2007	14.74	--	--	--
	9/16/2008	12.65	--	--	--
	11/8/2010	--	--	--	--
	2011	--	--	--	--
	9/4/2012	14.93	--	--	--
	8/14/2013	9.8	--	--	--
Duplicate	8/14/2013	9.8	--	--	--
	8/27/2014	10.82	--	--	--
Duplicate	8/27/2014	10.82	--	--	--
	9/28/2015	13.64	--	--	--
Duplicate	9/28/2015	13.64	--	--	--
MW-2	7/21/1995	14.64	--	--	--
	5/1/1996	16.13	ND	ND	ND
	8/7/1996	15.72	ND	ND	ND
	11/21/1996	16.02	ND	ND	ND
	5/25/2005	15.09	ND	ND	ND
	7/17/2006	Well was ol			
	9/13/2007	15.18	--	--	--
	9/16/2008	--	--	--	--
	11/8/2010	16.49	ND	ND	ND
	9/5/2012	15.38	--	--	--
Duplicate	9/5/2012	15.38	--	--	--
	8/14/2013	14.6	--	--	--
	8/27/2014	11.29	--	--	--
	9/28/2015	14.06	--	--	--
MW-3	7/21/1995	13.7	--	--	--
	5/1/1996	15.18	1.1	0.3	ND
	8/7/1996	14.78	ND	ND	ND
	11/21/1996	14.29	0.1	0.1	0.3
	5/25/2005	14.12	ND	ND	ND
	7/17/2006	14.13	ND	ND	ND
	9/13/2007	14.22	--	--	--
Duplicate	9/13/2007	N/A	--	--	--
	9/16/2008	--	--	--	--
	11/8/2010	15.49	ND	ND	ND
	9/5/2012	14.35	--	--	--
	8/14/2013	13.1	--	--	--
	8/27/2014	10.24	--	--	--
	9/28/2015	13.05	--	--	--
MW-4	7/21/1995	12.93	--	--	--
	5/1/1996	14.43	--	--	--
	8/7/1996	14.02	--	--	--
	11/21/1996	14.29	--	--	--
	5/25/2005	13.36	ND	ND	ND
	7/18/2006	13.33	ND	ND	ND

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

Well Number	Date	Depth to Water (Feet)	Fluor-anthene (µg/L)	Pyrene (µg/L)	Acenaph-thylene (µg/L)
	9/13/2007	13.5	--	--	--
MW-5	5/1/1996	15.68	--	--	--
	8/7/1996	15.27	--	--	--
	11/21/1996	15.61	--	--	--
	Well Decomissioned 10				
MW-6	5/1/1996	15.78	--	--	--
	8/7/1996	15.35	--	--	--
	11/21/1996	15.61	--	--	--
	5/25/2005	14.63	ND	ND	ND
	7/14/2005	13.39	ND	ND	ND
	7/17/2006	14.64	ND	ND	ND
	9/13/2007	14.8	--	--	--
	9/16/2008	12.74	--	--	--
Duplicate	9/16/2008	12.74	--	--	--
	11/8/2010	16.13	ND	ND	ND
	9/4/2012	15.00	--	--	--
	8/14/2013	13.30	--	--	--
	8/27/2014	10.95	--	--	--
	9/28/2015	13.68	--	--	--
MW-7	5/1/1996	16.29	--	--	--
	8/7/1996	15.86	--	--	--
	11/21/1996	16.14	--	--	--
	5/25/2005	15.28	ND	ND	ND
	7/17/2006	Well was fr			
	9/13/2007	15.35	--	--	--
	9/16/2008	--	--	--	--
	11/8/2010	16.67	ND	ND	ND
Duplicate	11/8/2010	16.67	ND	ND	ND
	9/5/2012	15.59	--	--	--
	8/14/2013	13.3	--	--	--
	8/27/2014	11.26	--	--	--
	9/28/2015	14.05	--	--	--
MW-8	5/1/1996	16.49	--	--	--
	8/7/1996	16.04	--	--	--
	11/21/1996	16.33	--	--	--
	5/25/2005	15.43	ND	ND	ND
	Well Decomissioned 10				
MW-9	5/1/1996	15.95	--	--	--
	8/7/1996	15.53	--	--	--
	11/21/1996	15.84	--	--	--
	5/25/2005	15.04	ND	ND	ND
	Well Decomissioned 10				
GWP-1	7/21/1995	14.62	--	--	--
	5/1/1996	16.11	--	--	--
	8/7/1996	15.69	--	--	--
	11/21/1996	15.97	--	--	--
	5/25/2005	15.03	ND	ND	ND
	Well Decomissioned 10				
GWP-2	7/21/1995	15.02	--	--	--

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

Well Number	Date	Depth to Water (Feet)	Fluor-anthene (µg/L)	Pyrene (µg/L)	Acenaph-thylene (µg/L)
	5/1/1996	16.54	--	--	--
	8/7/1996	16.1	--	--	--
	11/21/1996	16.4	--	--	--
	5/25/2005	15.42	ND	ND	ND
	9/16/2008	13.53	--	--	--
GWP-3	7/21/1995	14.18	--	--	--
	5/1/1996	15.71	ND	ND	ND
	8/7/1996	15.31	ND	ND	ND
	11/21/1996	15.58	ND	ND	ND
	5/25/2005	15.68	ND	ND	ND
	7/17/2006	14.67	ND	ND	ND
	9/13/2007	14.8	--	--	--
DUP-1	5/1/1996	N/A	--	--	--
	8/7/1996	N/A	--	--	--
	11/21/1996	N/A	--	--	--
	5/25/2005	N/A	ND	ND	ND
	7/5/2005	N/A	ND	ND	ND
	7/17/2006	N/A	ND	ND	ND

NOTES

GRO	gasoline range organics
DRO	diesel range organics
MEK	2-butanone
µg/L	microgram per liter
DCB	dichlorobenzene
DCE	dichloroethene
DCA	dichloroethane
PCE	tetrachloroethene
TCB	trichlorobenzene
TCE	trichloroethene
TMB	trimethylbenzene
MCL	maximum contaminant level
Bold	analyte detected above MCL
ND	analyte not detected at resp
- -	analysis not performed
*	Indicates the EPA establishe http://www.epa.gov/safewate
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	2015 Results

MW-7	14.05	21.18	flush mount

Table 2. 2015 Analytical Results

Sample	DRO (mg/L)	GRO (mg/L)	VOCs (µg/L)			
MW-1	0.260	**25.3**	benzene:	1.45	1,3,5-trimethylbenzene:	202
			toluene:	684	sec-butylbenzene:	6.89
			ethylbenzene:	**1,100**	4-isopropyltoluene:	5.47
			xylenes (total):	5,930	1,2,4-trimethylbenzene:	802
			isopropylbenzene(cumene):	58.2	naphthalene:	46.3
			n-propylbenzene:	112	n-butylbenzene:	13.4
MW-1 duplicate	0.258	**24.7**	benzene:	1.40	1,3,5-trimethylbenzene:	210
			toluene:	759	sec-butylbenzene:	6.66
			ethylbenzene:	**1,220**	4-isopropyltoluene:	5.31
			xylenes (total):	6,470	1,2,4-trimethylbenzene:	848
			isopropylbenzene(cumene):	62.8	naphthalene:	48.8
			n-propylbenzene:	118	n-butylbenzene:	13.2
MW-2	0.0240J	0.0312J	All ND			All ND
MW-3	0.120J	0.0215J	tetrachloroethene:	1.28	1,2-dichlorobenzene:	5.31
			4-isopropyltoluene:	5.03	1,2,4-trimethylbenzene:	2.97
					naphthalene:	2.17
MW-6	ND	ND	trichlorofluoromethane:	3.26	tetrachloroethene:	1.61
MW-7	0.0245J	ND	All ND			All ND
Cleanup Level[a]	1.5	2.2	trichlorofluoromethane:	11,000	4-chlorotoluene:	n/a
			benzene	5.0	tert-butylbenzene:	370
			toluene:	1,000	sec-butylbenzene:	370
			tetrachloroethene:	5.0	4-isopropyltoluene:	n/a
			ethylbenzene:	700	n-butylbenzene:	370
			xylenes (total):	10,000	1,2-dichlorobenzene:	600
			isopropylbenzene (cumene):	3,700	1,2,4-trimethylbenzene:	1,800
			n-propylbenzene:	370	naphthalene:	730
			1,3,5-trimethylbenzene:	1,800		

[a]18 AAC 75 Table C: Groundwater Cleanup Levels. Only detected VOCs are listed in the table. Measurements exceeding ADEC cleanup levels are indicated in bold type. n/a – cleanup standard not available.

Sampling Discussion

Historic results for all wells sampled are attached for further reference.

Detections in MW-1

GRO was detected at 25.3 mg/L (and 24.7 mg/L in the MW-1 duplicate sample) during the 2015 sampling event (2.2 mg/L cleanup standard). This result represents a slight decrease from the 2014 detected GRO value in MW-1 of 25.9 mg/L. GRO was detected in both the project sample and the duplicate above the ADEC groundwater cleanup level.

DRO was detected at 0.260 mg/L (and 0.258 mg/L in the MW-1 duplicate sample) during the 2015 sampling event (1.5 mg/L cleanup standard). This result represents a decrease from the 2014 detected DRO value in MW-1 of 0.362 mg/L.

Several VOC analytes were detected in the MW-1 sample. Ethylbenzene was the only analyte detected (1,100 µg/L) above ADEC groundwater cleanup levels (700 µg/L). The concentration of

LABORATORY DATA REPORTS

AND

ADEC LABORATORY DATA REVIEW CHECKLIST

Laboratory Data Review Checklist

Completed by: Ashley Jaramillo

Title: Staff Chemist Date: October 12, 2015

CS Report Name: Seekins Ford-Lincoln-Mercury Report Date: October 6, 2015

Consultant Firm: Travis/Peterson Environmental Consulting, Inc.

Laboratory Name: Alaska Analytical Laboratory Laboratory Report Number: 1509017

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 ☐NA (Please explain.) Comments:

   b. If the samples were transferred to another "network" laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses ADEC CS approved?
      ☐Yes ☐ No ☐NA (Please explain.) Comments:

      VOC samples by SW8260 were transferred from Alaska Analytical Laboratory to Fremont Analytical.

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

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

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

      Upon receipt at Alaska Analytical Laboratory the temperature blank used in the white cooler was below the accepted temperature range (1.0° C). Since the temperature was above freezing temperature and samples were reportedly received in good condition, no data were qualified.

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

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

d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, etc.?
☐■Yes☐ No ☐NA (Please explain.) Comments:

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

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

Data quality or usability not affected.

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

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

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

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

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

5. Samples Results

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

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

b. All applicable holding times met?

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

c. All soils reported on a dry weight basis?

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

No soils.

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

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

e. Data quality or usability affected?

Comments:

Data quality or usability was not affected. All reported PQLs are less than the ADEC groundwater cleanup level.

6. QC Samples

a. Method Blank

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

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

ii. All method blank results less than PQL?

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

iii. If above PQL, what samples are affected?

Comments:

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

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

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

No analytes were detected in the method blank samples.

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

Data quality or usability not affected, see comment above.

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

i. Organics – One LCS/LCSD reported per matrix, analysis and 20 samples? (LCS/LCSD required per AK methods, LCS required per SW846)
☐■Yes☐ No ☐NA (Please explain.) Comments:

LCS/LCSDs were performed for every GRO and DRO analytical batch, therefore LCS precision was evaluated accordingly. MS/MSDs were not performed for any GRO or DRO analytical batch; therefore MS precision was not evaluated. However, batch precision was accepted based on acceptable LCS precision.

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

No metals or inorganic analyses requested as a part of this project.

iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages)
☐■Yes☐ No ☐NA (Please explain.) Comments:

iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits? And project specified DQOs, if applicable. RPD reported from LCS/LCSD, MS/MSD, and or sample/sample duplicate. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)
☐■Yes☐ No ☐NA (Please explain.) Comments:

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

Not applicable. No %Rs or RPDs were outside control limits.

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

No %Rs or RPDs were outside control limits.

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

Data quality or usability not affected. See comment above.

c. Surrogates – Organics Only

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

ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods 50-150 %R; all other analyses see the laboratory report pages)
☐■Yes☐ No ☐NA (Please explain.) Comments:

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

No samples had failed surrogate recoveries.

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

Data quality or usability not affected. See comment above.

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

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

ii. Is the cooler used to transport the trip blank and VOA samples clearly indicated on the COC? (If not, a comment explaining why must be entered below)
☐■Yes ☐ No ☐NA (Please explain.) Comments:

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

iv. If above PQL, what samples are affected?

Comments:

Not applicable, no analytes were detected in the trip blank sample.

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

Comments:

Data quality or usability not affected. See comment above.

e. Field Duplicate

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

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

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

ii. Submitted blind to lab?

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

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

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

Where R_1 = Sample Concentration

R_2 = Field Duplicate Concentration

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

All detected field duplicate results were comparable (RPD ≤ 30).

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

Comments:

Data quality or usability not affected. See comment above.

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

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

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

i. All results less than PQL?

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

No decontamination blank was collected.

ii. If above PQL, what samples are affected?

Comments:

Not applicable, no decontamination blank was collected.

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

Comments:

Data quality not affected. See comment above.

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

Alaska Analytical Laboratory
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October 06, 2015

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

RE: Seekins Annual 1197-02 Order No.: 1509017

Dear Ashley Jaramillo:

Alaska Analytical Laboratory received 8 sample(s) on 9/29/2015 for the analyses presented in the following report.

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

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

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

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

Sincerely,

Kelley Lovejoy

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

Alaska Analytical Laboratory
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Workorder Sample Summary

WO#: **1509017**

06-Oct-15

CLIENT: Travis/Peterson Environmental Consulting Inc.
Project: Seekins Annual 1197-02

Lab SampleID	Client Sample ID	Tag No	Date Collected	Date Received	Matrix
1509017-001	MW-1		9/28/2015 12:10:00 PM	9/29/2015 12:22:00 PM	Water
1509017-001	MW-1		9/28/2015 12:10:00 PM	9/29/2015 12:22:00 PM	Water
1509017-001	MW-1		9/28/2015 12:10:00 PM	9/29/2015 12:22:00 PM	Water
1509017-002	MW-2		9/28/2015 11:15:00 AM	9/29/2015 12:22:00 PM	Water
1509017-002	MW-2		9/28/2015 11:15:00 AM	9/29/2015 12:22:00 PM	Water
1509017-002	MW-2		9/28/2015 11:15:00 AM	9/29/2015 12:22:00 PM	Water
1509017-003	MW-3		9/28/2015 2:25:00 PM	9/29/2015 12:22:00 PM	Water
1509017-003	MW-3		9/28/2015 2:25:00 PM	9/29/2015 12:22:00 PM	Water
1509017-003	MW-3		9/28/2015 2:25:00 PM	9/29/2015 12:22:00 PM	Water
1509017-004	MW-6		9/28/2015 3:30:00 PM	9/29/2015 12:22:00 PM	Water
1509017-004	MW-6		9/28/2015 3:30:00 PM	9/29/2015 12:22:00 PM	Water
1509017-004	MW-6		9/28/2015 3:30:00 PM	9/29/2015 12:22:00 PM	Water
1509017-005	MW-7		9/28/2015 10:20:00 AM	9/29/2015 12:22:00 PM	Water
1509017-005	MW-7		9/28/2015 10:20:00 AM	9/29/2015 12:22:00 PM	Water
1509017-005	MW-7		9/28/2015 10:20:00 AM	9/29/2015 12:22:00 PM	Water
1509017-006	MW-8		9/28/2015 12:20:00 PM	9/29/2015 12:22:00 PM	Water
1509017-006	MW-8		9/28/2015 12:20:00 PM	9/29/2015 12:22:00 PM	Water
1509017-006	MW-8		9/28/2015 12:20:00 PM	9/29/2015 12:22:00 PM	Water
1509017-007	Trip Blank - GRO			9/29/2015 12:22:00 PM	Water
1509017-008	Trip Blank - 8260			9/29/2015 12:22:00 PM	Water

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Case Narrative

WO#: 1509017
Date: 10/6/2015

CLIENT: Travis/Peterson Environmental Consulting
Project: Seekins Annual 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.

1509017-001C SW8260BW was subcontracted
1509017-002C SW8260BW was subcontracted
1509017-003C SW8260BW was subcontracted
1509017-004C SW8260BW was subcontracted
1509017-005C SW8260BW was subcontracted
1509017-006C SW8260BW was subcontracted
1509017-008A SW8260BW was subcontracted

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Analytical Report

(consolidated)

WO#: **1509017**

Date Reported: **10/6/2015**

CLIENT: Travis/Peterson Environmental Consulting Inc. **Collection Date:** 9/28/2015 12:10:00 PM

Project: Seekins Annual 1197-02

Lab ID: 1509017-001 **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	0.260	0.232		mg/L	1	10/6/2015 8:43:09 AM
Surr: o-Terphenyl	85.8	50 - 150		%REC	1	10/6/2015 8:43:09 AM
GASOLINE RANGE ORGANICS				AK101		Analyst: KL
Gasoline Range Organics C6-C10	25,300	1,000		µg/L	10	10/5/2015 5:56:55 PM
Surr: 4-Bromofluorobenzene	91.6	50 - 150		%REC	10	10/5/2015 5:56:55 PM
Surr: a,a,a-trifluorotoluene	108	50 - 150		%REC	10	10/5/2015 5:56:55 PM

Qualifiers:

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

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Analytical Report

(consolidated)

WO#: **1509017**

Date Reported: **10/6/2015**

CLIENT: Travis/Peterson Environmental Consulting Inc. **Collection Date:** 9/28/2015 11:15:00 AM

Project: Seekins Annual 1197-02

Lab ID: 1509017-002 **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	0.0240	0.232	J	mg/L	1	10/6/2015 9:12:36 AM
Surr: o-Terphenyl	88.2	50 - 150		%REC	1	10/6/2015 9:12:36 AM
GASOLINE RANGE ORGANICS				AK101		Analyst: KL
Gasoline Range Organics C6-C10	31.2	100	J	µg/L	1	10/5/2015 2:20:30 PM
Surr: 4-Bromofluorobenzene	98.8	50 - 150		%REC	1	10/5/2015 2:20:30 PM
Surr: a,a,a-trifluorotoluene	104	50 - 150		%REC	1	10/5/2015 2:20:30 PM

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

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Analytical Report

(consolidated)

WO#: **1509017**

Date Reported: **10/6/2015**

CLIENT: Travis/Peterson Environmental Consulting Inc. **Collection Date:** 9/28/2015 2:25:00 PM

Project: Seekins Annual 1197-02

Lab ID: 1509017-003 **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	0.120	0.232	J	mg/L	1	10/6/2015 9:41:47 AM
Surr: o-Terphenyl	84.9	50 - 150		%REC	1	10/6/2015 9:41:47 AM
GASOLINE RANGE ORGANICS				**AK101**		Analyst: **KL**
Gasoline Range Organics C6-C10	21.5	100	J	µg/L	1	10/5/2015 3:14:29 PM
Surr: 4-Bromofluorobenzene	97.1	50 - 150		%REC	1	10/5/2015 3:14:29 PM
Surr: a,a,a-trifluorotoluene	103	50 - 150		%REC	1	10/5/2015 3:14:29 PM

Qualifiers:

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

Alaska Analytical Laboratory
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Analytical Report

(consolidated)

WO#: **1509017**

Date Reported: **10/6/2015**

CLIENT: Travis/Peterson Environmental Consulting Inc. **Collection Date:** 9/28/2015 3:30:00 PM

Project: Seekins Annual 1197-02

Lab ID: 1509017-004 **Matrix:** WATER

Client Sample ID MW-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
AK102SVW				**AK102**	**SW3510**	Analyst: **KL**
Diesel Range Organics C10-C25	ND	0.232		mg/L	1	10/6/2015 10:11:04 AM
Surr: o-Terphenyl	92.3	50 - 150		%REC	1	10/6/2015 10:11:04 AM
GASOLINE RANGE ORGANICS				**AK101**		Analyst: **KL**
Gasoline Range Organics C6-C10	ND	100		µg/L	1	10/5/2015 4:08:33 PM
Surr: 4-Bromofluorobenzene	102	50 - 150		%REC	1	10/5/2015 4:08:33 PM
Surr: a,a,a-trifluorotoluene	107	50 - 150		%REC	1	10/5/2015 4:08:33 PM

Qualifiers:

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

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Analytical Report

(consolidated)

WO#: **1509017**

Date Reported: **10/6/2015**

CLIENT: Travis/Peterson Environmental Consulting Inc. **Collection Date:** 9/28/2015 10:20:00 AM

Project: Seekins Annual 1197-02

Lab ID: 1509017-005 **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	0.0245	0.232	J	mg/L	1	10/6/2015 10:40:54 AM
Surr: o-Terphenyl	93.3	50 - 150		%REC	1	10/6/2015 10:40:54 AM
GASOLINE RANGE ORGANICS				**AK101**		Analyst: **KL**
Gasoline Range Organics C6-C10	ND	100		µg/L	1	10/5/2015 5:02:41 PM
Surr: 4-Bromofluorobenzene	100	50 - 150		%REC	1	10/5/2015 5:02:41 PM
Surr: a,a,a-trifluorotoluene	105	50 - 150		%REC	1	10/5/2015 5:02:41 PM

Qualifiers:

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

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Analytical Report

(consolidated)

WO#: 1509017

Date Reported: 10/6/2015

CLIENT: Travis/Peterson Environmental Consulting Inc. **Collection Date:** 9/28/2015 12:20:00 PM

Project: Seekins Annual 1197-02

Lab ID: 1509017-006 **Matrix:** WATER

Client Sample ID MW-8

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
AK102SVW				AK102	SW3510	Analyst: KL
Diesel Range Organics C10-C25	0.258	0.232		mg/L	1	10/6/2015 11:10:25 AM
Surr: o-Terphenyl	89.2	50 - 150		%REC	1	10/6/2015 11:10:25 AM
GASOLINE RANGE ORGANICS				AK101		Analyst: KL
Gasoline Range Organics C6-C10	24,700	1,000		µg/L	10	10/5/2015 7:17:56 PM
Surr: 4-Bromofluorobenzene	93.7	50 - 150		%REC	10	10/5/2015 7:17:56 PM
Surr: a,a,a-trifluorotoluene	110	50 - 150		%REC	10	10/5/2015 7:17:56 PM

Qualifiers:

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

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Analytical Report

(consolidated)

WO#: **1509017**

Date Reported: **10/6/2015**

CLIENT: Travis/Peterson Environmental Consulting Inc. **Collection Date:**

Project: Seekins Annual 1197-02

Lab ID: 1509017-007 **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	ND	100		µg/L	1	10/5/2015 1:53:45 PM
Surr: 4-Bromofluorobenzene	99.9	50 - 150		%REC	1	10/5/2015 1:53:45 PM
Surr: a,a,a-trifluorotoluene	104	50 - 150		%REC	1	10/5/2015 1:53:45 PM

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

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QC SUMMARY REPORT

WO#: **1509017**

06-Oct-15

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

TestCode: **AK101W**

Sample ID: **LCSD-R991**	SampType: **LCSD**	TestCode: **AK101W**	Units: **µg/L**	Prep Date:			RunNo: **991**			
Client ID: **LCSS02**	Batch ID: **R991**	TestNo: **AK101**		Analysis Date: **10/5/2015**			SeqNo: **9401**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics C6-C10	2,220	100	2,500	0	88.7	60	120	2,182	1.66	20	
Surr: 4-Bromofluorobenzene	46.5		50.00		93.0	60	120		0	0	
Surr: a,a,a-trifluorotoluene	51.5		50.00		103	60	120		0	0	

Sample ID: **MB-R991**	SampType: **MBLK**	TestCode: **AK101W**	Units: **µg/L**	Prep Date:			RunNo: **991**			
Client ID: **PBW**	Batch ID: **R991**	TestNo: **AK101**		Analysis Date: **10/5/2015**			SeqNo: **9402**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics C6-C10	ND	100									
Surr: 4-Bromofluorobenzene	48.1		50.00		96.3	60	120				
Surr: a,a,a-trifluorotoluene	51.8		50.00		104	60	120				

Sample ID: **LCS-R991**	SampType: **LCS**	TestCode: **AK101W**	Units: **µg/L**	Prep Date:			RunNo: **991**			
Client ID: **LCSW**	Batch ID: **R991**	TestNo: **AK101**		Analysis Date: **10/5/2015**			SeqNo: **9403**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics C6-C10	2,180	100	2,500	0	87.3	60	120				
Surr: 4-Bromofluorobenzene	46.5		50.00		93.1	60	120				
Surr: a,a,a-trifluorotoluene	52.1		50.00		104	60	120				

Qualifiers:

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

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QC SUMMARY REPORT

WO#: **1509017**

06-Oct-15

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

TestCode: **AK102SVW**

Sample ID: **MB-528**	SampType: **MBLK**	TestCode: **AK102SVW**	Units: **mg/L**	Prep Date: **10/5/2015**	RunNo: **993**
Client ID: **PBW**	Batch ID: **528**	TestNo: **AK102**	**SW3510**	Analysis Date: **10/6/2015**	SeqNo: **9424**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics C10-C25	ND	0.232									
Surr: o-Terphenyl	0.0451		0.05000		90.3	60.6	114				

Sample ID: **LCS-528**	SampType: **LCS**	TestCode: **AK102SVW**	Units: **mg/L**	Prep Date: **10/5/2015**	RunNo: **993**
Client ID: **LCSW**	Batch ID: **528**	TestNo: **AK102**	**SW3510**	Analysis Date: **10/6/2015**	SeqNo: **9425**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics C10-C25	1.84	0.232	2.500	0	73.7	63.9	113				
Surr: o-Terphenyl	0.0421		0.05000		84.3	69.6	123				

Sample ID: **LCSD-528**	SampType: **LCSD**	TestCode: **AK102SVW**	Units: **mg/L**	Prep Date: **10/5/2015**	RunNo: **993**
Client ID: **LCSS02**	Batch ID: **528**	TestNo: **AK102**	**SW3510**	Analysis Date: **10/6/2015**	SeqNo: **9426**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics C10-C25	1.94	0.232	2.500	0	77.6	63.8	115	1.843	5.12	20	
Surr: o-Terphenyl	0.0444		0.05000		88.8	68.9	127		0	0	

Qualifiers:

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

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

Sample Receipt Checklist

Client Name: **TPECI06** Work Order Number **1509017**

RcptNo: **1** Date and Time Received: **9/29/2015 12:22:00 PM** Received by: **Kelley Lovejoy**

Completed by: Kelley Lovejoy Reviewed by: Kelley Lovejoy

Completed Date: 9/29/2015 2:07:20 PM Reviewed Date: 9/29/2015 2:07:23 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 ☐	NA ☐
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
Were container lables complete (ID, Pres, Date)?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Was an attempt made to cool the samples?	Yes ☐	No ☑	NA ☐
All samples received at a temp. of > 0° C to 6.0° C?	Yes ☑	No ☐	NA ☐
Response when temperature is outside of range:			
Preservative added to bottles:			
Sample Temp. taken and recorded upon receipt?	Yes ☑	No ☐	1 To 3.3 °
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
Red Cooler	3.4	Good	Yes		9/29/2015	Ashley Jaramillo
White Cooer	1.0	Good	Yes		9/29/2015	Ashley Jaramillo

Equipment Information

Adjusted? _____ Checked by _____

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Sample Receipt Checklist

Client Name: **TPECI06** Work Order Number **1509017**

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

Client Contacted? ☐ Yes ☑ No ☐ NA Person Contacted:

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

Client Instructions:

Date Contacted: Contacted By:

Regarding:

CorrectiveAction:

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

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Sample Receipt Checklist

Client Name: **TPECI06** Work Order Number **1509017**

Sample Details

SampID	ContainerID	Type	Org pH	Temp.	RcptNo	Cooler No	Comments
1509017-001A	Container-01 of 02	Bottle					
1509017-001A	Container-02 of 02	Bottle					
1509017-001B	Container-01 of 03	Bottle					
1509017-001B	Container-02 of 03	Bottle					
1509017-001B	Container-03 of 03	Bottle					
1509017-001C	Container-01 of 03	Bottle					
1509017-001C	Container-02 of 03	Bottle					
1509017-001C	Container-03 of 03	Bottle					
1509017-002A	Container-01 of 02	Bottle					
1509017-002A	Container-02 of 02	Bottle					
1509017-002B	Container-01 of 03	Bottle					
1509017-002B	Container-02 of 03	Bottle					
1509017-002B	Container-03 of 03	Bottle					
1509017-002C	Container-01 of 03	Bottle					
1509017-002C	Container-02 of 03	Bottle					
1509017-002C	Container-03 of 03	Bottle					
1509017-003A	Container-01 of 02	Bottle					
1509017-003A	Container-02 of 02	Bottle					
1509017-003B	Container-01 of 03	Bottle					
1509017-003B	Container-02 of 03	Bottle					
1509017-003B	Container-03 of 03	Bottle					
1509017-003C	Container-01 of 03	Bottle					
1509017-003C	Container-02 of 03	Bottle					
1509017-003C	Container-03 of 03	Bottle					
1509017-004A	Container-01 of 02	Bottle					
1509017-004A	Container-02 of 02	Bottle					
1509017-004B	Container-01 of 03	Bottle					
1509017-004B	Container-02 of 03	Bottle					
1509017-004B	Container-03 of 03	Bottle					

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Sample Receipt Checklist

Client Name: **TPECI06** Work Order Number **1509017**

1509017-004C	Container-01 of 03	Bottle
1509017-004C	Container-02 of 03	Bottle
1509017-004C	Container-03 of 03	Bottle
1509017-005A	Container-01 of 02	Bottle
1509017-005A	Container-02 of 02	Bottle
1509017-005B	Container-01 of 03	Bottle
1509017-005B	Container-02 of 03	Bottle
1509017-005B	Container-03 of 03	Bottle
1509017-005C	Container-01 of 03	Bottle
1509017-005C	Container-02 of 03	Bottle
1509017-005C	Container-03 of 03	Bottle
1509017-006A	Container-01 of 02	Bottle
1509017-006A	Container-02 of 02	Bottle
1509017-006B	Container-01 of 03	Bottle
1509017-006B	Container-02 of 03	Bottle
1509017-006B	Container-03 of 03	Bottle
1509017-006C	Container-01 of 03	Bottle
1509017-006C	Container-02 of 03	Bottle
1509017-006C	Container-03 of 03	Bottle
1509017-007A	Container-01 of 03	Bottle
1509017-007A	Container-02 of 03	Bottle
1509017-007A	Container-03 of 03	Bottle
1509017-008A	Container-01 of 03	Bottle
1509017-008A	Container-02 of 03	Bottle
1509017-008A	Container-03 of 03	Bottle

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

Chain of Custody Record

Ashley Jaramillo ashley@tpeci.com

Client Contact Information	Client Project Manager (PM):	Client PM Email:	Date: 9/28/15	COC No: 15-065
TPECI	PM Tel/Fax: 907-455-7225	Lab Contact: Kelley Lovejoy	Carrier:	Page 1 of 1
329 2nd St.	**Analysis Turnaround Time**			AAL Job No: 55
Fox, AK 99701	Requested Turnaround Time if different from below			Comments
Sampler Name: AULT				
Sampler Signature:	☐ 10 business days (Standard)			
Project Name: Seekins Remodel	☐ 5 business days			
Project Number: 1197-02	☐ 2 Business Days			
	☐ 1 Business Day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	DRO AK102	GRO AK101	VOCs 8260	Sample Specific Notes:
MW-1	9/28/15	1210	G	W	8	2	3	3	
MW-2	9/28/15	1115	G	W	8	2	3	3	
MW-3	9/28/15	225	G	W	8	2	3	3	
MW-6	9/28/15	330	G	W	8	2	3	3	
MW-7	9/28/15	1020	G	W	8	2	3	3	
MW-8	9/28/15	1220	G	W	8	2	3	3	
Trip blank (VOCs)								X	White cooler
Trip blank (GRO)							X		red cooler

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

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

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

Custody Seals Intact

Red Temp Blank 3.3
Cooler Temp 3.4
White Temp Blank 1.0
Cooler Temp 1.0

Relinquished by (Print/Signature)	Company:	Date/Time	Received by (Print/Signature)	Company:	Date/Time
[signature]	TPECI	9/29/15 12p	Kelley Lovejoy	AAL	9/29/15 12:22pm
Relinquished by (Print/Signature)	Company	Date/Time	Received by (Print/Signature)	Company	Date/Time
Relinquished by (Print/Signature)	Company	Date/Time	Received by (Print/Signature)	Company	Date/Time

RECEIVED
15-0055
9/29/15

ALASKA ANALYTICAL LABORATORY **CUSTODY SEAL**

SIGNATURE [signature]
DATE 9/29/15

ALASKA ANALYTICAL LABORATORY **CUSTODY SEAL**

SIGNATURE [signature]
DATE 9/29/15

ALASKA ANALYTICAL LABORATORY **CUSTODY SEAL**

SIGNATURE [signature]
DATE 9/29/15

ALASKA ANALYTICAL LABORATORY **CUSTODY SEAL**

SIGNATURE [signature]
DATE 9/29/15

Laboratory Data Review Checklist

Completed by: Ashley Jaramillo

Title: Staff Chemist Date: October 12, 2015

CS Report Name: Seekins Ford-Lincoln-Mercury Report Date: October 6, 2015

Consultant Firm: Travis/Peterson Environmental Consulting, Inc.

Laboratory Name: Fremont Analytical Laboratory Report Number: 1509430

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 ☐NA (Please explain.) Comments:

   b. If the samples were transferred to another "network" laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses ADEC CS approved?
      ☐■Yes☐ No ☐NA (Please explain.) Comments:

      VOC samples by SW8260 were transferred from Alaska Analytical Laboratory to Fremont Analytical.

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

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

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

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

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

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

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

d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, etc.?
☐■Yes☐ No ☐NA (Please explain.) Comments:

The temperature discrepancy noted above was documented.

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

Data quality or usability not affected, see comments above.

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

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

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

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

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

5. Samples Results

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

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

b. All applicable holding times met?

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

c. All soils reported on a dry weight basis?

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

No soils.

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

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

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

e. Data quality or usability affected?

Comments:

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

6. QC Samples

a. Method Blank

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

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

ii. All method blank results less than PQL?

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

iii. If above PQL, what samples are affected?

Comments:

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

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

No analytes were detected in the method blank samples.

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

Data quality or usability not affected, see comment above.

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

i. Organics – One LCS/LCSD reported per matrix, analysis and 20 samples? (LCS/LCSD required per AK methods, LCS required per SW846)
☐Yes ☐ ■No ☐NA (Please explain.) Comments:

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

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

No metals or inorganic analysis requested.

iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages)
☐Yes ☐ ■No ☐NA (Please explain.) Comments:

See comments below.

iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits? And project specified DQOs, if applicable. RPD reported from LCS/LCSD, MS/MSD, and or sample/sample duplicate. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)
☐■Yes☐ No ☐NA (Please explain.) Comments:

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

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

The MS %recoveries for several VOC analytes were outside of control limits. However, the MS recoveries are not applicable top project samples as the MS analysis was performed on another client's sample. Data was not impacted as a result.

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

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

Data quality or usability not affected. See comment above.

c. Surrogates – Organics Only

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

ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods 50-150 %R; all other analyses see the laboratory report pages)
☐■Yes☐ No ☐NA (Please explain.) Comments:

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

No samples had failed surrogate recoveries.

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

Data quality or usability not affected. See comment above.

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

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

ii. Is the cooler used to transport the trip blank and VOA samples clearly indicated on the COC? (If not, a comment explaining why must be entered below)
☐■Yes ☐ No ☐NA (Please explain.) Comments:

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

iv. If above PQL, what samples are affected?
Comments:

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

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

Data quality or usability not affected. See comment above.

e. Field Duplicate

i. One field duplicate submitted per matrix, analysis and 10 project samples?
☐■Yes☐ No ☐NA (Please explain.) Comments:

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

ii. Submitted blind to lab?
☐■Yes☐ No ☐NA (Please explain.) Comments:

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

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

Where R_1 = Sample Concentration
R_2 = Field Duplicate Concentration
☐■Yes☐ No ☐NA (Please explain.) Comments:

All detected field duplicate results were comparable (RPD ≤ 30).

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

Data quality or usability not affected. See comment above.

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

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

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

i. All results less than PQL?

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

No decontamination blank was collected.

ii. If above PQL, what samples are affected?

Comments:

Not applicable, no decontamination blank was collected.

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

Comments:

Data quality not affected. See comment above.

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

a. Defined and appropriate?

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

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

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

RE: Seekins Annual 1197-02
Lab ID: 1509430

October 06, 2015

Attention Kelley Lovejoy:

Fremont Analytical, Inc. received 7 sample(s) on 9/30/2015 for the analyses presented in the following report.

Volatile Organic Compounds by EPA Method 8260

This report consists of the following:

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

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

Thank you for using Fremont Analytical.

Sincerely,

Mike Ridgeway
President

Fremont Analytical

Date: *10/06/2015*

CLIENT: Alaska Analytical Laboratory
Project: Seekins Annual 1197-02
Lab Order: 1509430

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1509430-001	MW-1	09/28/2015 12:10 PM	09/30/2015 12:28 PM
1509430-002	MW-2	09/28/2015 11:15 AM	09/30/2015 12:28 PM
1509430-003	MW-3	09/28/2015 2:25 PM	09/30/2015 12:28 PM
1509430-004	MW-6	09/28/2015 3:30 PM	09/30/2015 12:28 PM
1509430-005	MW-7	09/28/2015 10:20 AM	09/30/2015 12:28 PM
1509430-006	MW-8	09/28/2015 12:20 PM	09/30/2015 12:28 PM
1509430-007	Trip Blank - 8260	09/23/2015 11:00 AM	09/30/2015 12:28 PM

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

Case Narrative

WO#: **1509430**
Date: **10/6/2015**

CLIENT: Alaska Analytical Laboratory
Project: Seekins Annual 1197-02

I. SAMPLE RECEIPT:
Samples receipt information is recorded on the attached Sample Receipt Checklist.

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

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

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

Qualifiers:

* - Flagged value is not within established control limits
B - Analyte detected in the associated Method Blank
D - Dilution was required
E - Value above quantitation range
H - Holding times for preparation or analysis exceeded
I - Analyte with an internal standard that does not meet established acceptance criteria
J - Analyte detected below LOQ
N - Tentatively Identified Compound (TIC)
Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
S - Spike recovery outside accepted recovery limits
ND - Not detected at the Reporting Limit

Acronyms:

%Rec - Percent Recovery
CCB - Continued Calibration Blank
CCV - Continued Calibration Verification
DF - Dilution Factor
HEM - Hexane Extractable Material
ICV - Initial Calibration Verification
LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
MB or MBLANK - Method Blank
MDL - Method Detection Limit
MS/MSD - Matrix Spike / Matrix Spike Duplicate
PDS - Post Digestion Spike
Ref Val - Reference Value
RL - Reporting Limit
RPD - Relative Percent Difference
SD - Serial Dilution
SGT - Silica Gel Treatment
SPK - Spike
Surr - Surrogate

Client: Alaska Analytical Laboratory
Project: Seekins Annual 1197-02
Lab ID: 1509430-001
Client Sample ID: MW-1

Collection Date: 9/28/2015 12:10:00 PM
Matrix: Water

Volatile Organic Compounds by EPA Method 8260

Batch ID: R25264 Analyst: BC

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	1.00		µg/L	1	10/2/2015 3:02:00 AM
Chloromethane	ND	1.00		µg/L	1	10/2/2015 3:02:00 AM
Vinyl chloride	ND	0.200		µg/L	1	10/2/2015 3:02:00 AM
Bromomethane	ND	1.00		µg/L	1	10/2/2015 3:02:00 AM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	10/2/2015 3:02:00 AM
Chloroethane	ND	1.00		µg/L	1	10/2/2015 3:02:00 AM
1,1-Dichloroethene	ND	1.00		µg/L	1	10/2/2015 3:02:00 AM
Methylene chloride	ND	1.00		µg/L	1	10/2/2015 3:02:00 AM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	10/2/2015 3:02:00 AM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	10/2/2015 3:02:00 AM
1,1-Dichloroethane	ND	1.00		µg/L	1	10/2/2015 3:02:00 AM
2,2-Dichloropropane	ND	2.00		µg/L	1	10/2/2015 3:02:00 AM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	10/2/2015 3:02:00 AM
Chloroform	ND	1.00		µg/L	1	10/2/2015 3:02:00 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	10/2/2015 3:02:00 AM
1,1-Dichloropropene	ND	1.00		µg/L	1	10/2/2015 3:02:00 AM
Carbon tetrachloride	ND	1.00		µg/L	1	10/2/2015 3:02:00 AM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	10/2/2015 3:02:00 AM
Benzene	1.45	1.00		µg/L	1	10/2/2015 3:02:00 AM
Trichloroethene (TCE)	ND	0.500		µg/L	1	10/2/2015 3:02:00 AM
1,2-Dichloropropane	ND	1.00		µg/L	1	10/2/2015 3:02:00 AM
Bromodichloromethane	ND	1.00		µg/L	1	10/2/2015 3:02:00 AM
Dibromomethane	ND	1.00		µg/L	1	10/2/2015 3:02:00 AM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	10/2/2015 3:02:00 AM
Toluene	684	100	D	µg/L	100	10/2/2015 4:50:00 PM
trans-1,3-Dichloropropene	ND	1.00		µg/L	1	10/2/2015 3:02:00 AM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	10/2/2015 3:02:00 AM
1,3-Dichloropropane	ND	1.00		µg/L	1	10/2/2015 3:02:00 AM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	10/2/2015 3:02:00 AM
Dibromochloromethane	ND	1.00		µg/L	1	10/2/2015 3:02:00 AM
1,2-Dibromoethane (EDB)	ND	0.0600		µg/L	1	10/2/2015 3:02:00 AM
Chlorobenzene	ND	1.00		µg/L	1	10/2/2015 3:02:00 AM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	10/2/2015 3:02:00 AM
Ethylbenzene	1,100	100	D	µg/L	100	10/2/2015 4:50:00 PM
m,p-Xylene	4,130	100	D	µg/L	100	10/2/2015 4:50:00 PM
o-Xylene	1,800	100	D	µg/L	100	10/2/2015 4:50:00 PM
Styrene	ND	1.00		µg/L	1	10/2/2015 3:02:00 AM
Isopropylbenzene	58.2	100	D	µg/L	100	10/2/2015 4:50:00 PM
Bromoform	ND	1.00		µg/L	1	10/2/2015 3:02:00 AM

Client: Alaska Analytical Laboratory
Project: Seekins Annual 1197-02
Lab ID: 1509430-001
Client Sample ID: **MW-1**

Collection Date: 9/28/2015 12:10:00 PM
Matrix: Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260				Batch ID: R25264		Analyst: BC
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	10/2/2015 3:02:00 AM
n-Propylbenzene	112	100	D	µg/L	100	10/2/2015 4:50:00 PM
Bromobenzene	ND	1.00		µg/L	1	10/2/2015 3:02:00 AM
1,3,5-Trimethylbenzene	202	100	D	µg/L	100	10/2/2015 4:50:00 PM
2-Chlorotoluene	ND	1.00		µg/L	1	10/2/2015 3:02:00 AM
4-Chlorotoluene	ND	1.00		µg/L	1	10/2/2015 3:02:00 AM
tert-Butylbenzene	ND	1.00		µg/L	1	10/2/2015 3:02:00 AM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	10/2/2015 3:02:00 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	10/2/2015 3:02:00 AM
sec-Butylbenzene	6.89	1.00		µg/L	1	10/2/2015 3:02:00 AM
4-Isopropyltoluene	5.47	1.00		µg/L	1	10/2/2015 3:02:00 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	10/2/2015 3:02:00 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	10/2/2015 3:02:00 AM
n-Butylbenzene	13.4	1.00		µg/L	1	10/2/2015 3:02:00 AM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	10/2/2015 3:02:00 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	10/2/2015 3:02:00 AM
1,2,4-Trimethylbenzene	802	100	D	µg/L	100	10/2/2015 4:50:00 PM
Hexachlorobutadiene	ND	4.00		µg/L	1	10/2/2015 3:02:00 AM
Naphthalene	46.3	100	D	µg/L	100	10/2/2015 4:50:00 PM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	10/2/2015 3:02:00 AM
Surr: Dibromofluoromethane	102	45.4-152		%REC	1	10/2/2015 3:02:00 AM
Surr: Toluene-d8	103	40.1-139		%REC	1	10/2/2015 3:02:00 AM
Surr: 1-Bromo-4-fluorobenzene	102	64.2-128		%REC	1	10/2/2015 3:02:00 AM

Client: Alaska Analytical Laboratory
Project: Seekins Annual 1197-02
Lab ID: 1509430-002
Client Sample ID: MW-2

Collection Date: 9/28/2015 11:15:00 AM
Matrix: Water

Volatile Organic Compounds by EPA Method 8260

Batch ID: R25264 Analyst: BC

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	1.00		µg/L	1	10/2/2015 3:30:00 AM
Chloromethane	ND	1.00		µg/L	1	10/2/2015 3:30:00 AM
Vinyl chloride	ND	0.200		µg/L	1	10/2/2015 3:30:00 AM
Bromomethane	ND	1.00		µg/L	1	10/2/2015 3:30:00 AM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	10/2/2015 3:30:00 AM
Chloroethane	ND	1.00		µg/L	1	10/2/2015 3:30:00 AM
1,1-Dichloroethene	ND	1.00		µg/L	1	10/2/2015 3:30:00 AM
Methylene chloride	ND	1.00		µg/L	1	10/2/2015 3:30:00 AM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	10/2/2015 3:30:00 AM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	10/2/2015 3:30:00 AM
1,1-Dichloroethane	ND	1.00		µg/L	1	10/2/2015 3:30:00 AM
2,2-Dichloropropane	ND	2.00		µg/L	1	10/2/2015 3:30:00 AM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	10/2/2015 3:30:00 AM
Chloroform	ND	1.00		µg/L	1	10/2/2015 3:30:00 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	10/2/2015 3:30:00 AM
1,1-Dichloropropene	ND	1.00		µg/L	1	10/2/2015 3:30:00 AM
Carbon tetrachloride	ND	1.00		µg/L	1	10/2/2015 3:30:00 AM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	10/2/2015 3:30:00 AM
Benzene	ND	1.00		µg/L	1	10/2/2015 3:30:00 AM
Trichloroethene (TCE)	ND	0.500		µg/L	1	10/2/2015 3:30:00 AM
1,2-Dichloropropane	ND	1.00		µg/L	1	10/2/2015 3:30:00 AM
Bromodichloromethane	ND	1.00		µg/L	1	10/2/2015 3:30:00 AM
Dibromomethane	ND	1.00		µg/L	1	10/2/2015 3:30:00 AM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	10/2/2015 3:30:00 AM
Toluene	ND	1.00		µg/L	1	10/2/2015 3:30:00 AM
trans-1,3-Dichloropropene	ND	1.00		µg/L	1	10/2/2015 3:30:00 AM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	10/2/2015 3:30:00 AM
1,3-Dichloropropane	ND	1.00		µg/L	1	10/2/2015 3:30:00 AM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	10/2/2015 3:30:00 AM
Dibromochloromethane	ND	1.00		µg/L	1	10/2/2015 3:30:00 AM
1,2-Dibromoethane (EDB)	ND	0.0600		µg/L	1	10/2/2015 3:30:00 AM
Chlorobenzene	ND	1.00		µg/L	1	10/2/2015 3:30:00 AM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	10/2/2015 3:30:00 AM
Ethylbenzene	ND	1.00		µg/L	1	10/2/2015 2:56:00 PM
m,p-Xylene	ND	1.00		µg/L	1	10/2/2015 2:56:00 PM
o-Xylene	ND	1.00		µg/L	1	10/2/2015 2:56:00 PM
Styrene	ND	1.00		µg/L	1	10/2/2015 3:30:00 AM
Isopropylbenzene	ND	1.00		µg/L	1	10/2/2015 3:30:00 AM
Bromoform	ND	1.00		µg/L	1	10/2/2015 3:30:00 AM

Client: Alaska Analytical Laboratory
Project: Seekins Annual 1197-02
Lab ID: 1509430-002
Client Sample ID: MW-2

Collection Date: 9/28/2015 11:15:00 AM
Matrix: Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260				Batch ID: R25264		Analyst: BC
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	10/2/2015 3:30:00 AM
n-Propylbenzene	ND	1.00		µg/L	1	10/2/2015 3:30:00 AM
Bromobenzene	ND	1.00		µg/L	1	10/2/2015 3:30:00 AM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	10/2/2015 3:30:00 AM
2-Chlorotoluene	ND	1.00		µg/L	1	10/2/2015 3:30:00 AM
4-Chlorotoluene	ND	1.00		µg/L	1	10/2/2015 3:30:00 AM
tert-Butylbenzene	ND	1.00		µg/L	1	10/2/2015 3:30:00 AM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	10/2/2015 3:30:00 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	10/2/2015 3:30:00 AM
sec-Butylbenzene	ND	1.00		µg/L	1	10/2/2015 3:30:00 AM
4-Isopropyltoluene	ND	1.00		µg/L	1	10/2/2015 3:30:00 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	10/2/2015 3:30:00 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	10/2/2015 3:30:00 AM
n-Butylbenzene	ND	1.00		µg/L	1	10/2/2015 3:30:00 AM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	10/2/2015 3:30:00 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	10/2/2015 3:30:00 AM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	10/2/2015 2:56:00 PM
Hexachlorobutadiene	ND	4.00		µg/L	1	10/2/2015 3:30:00 AM
Naphthalene	ND	1.00		µg/L	1	10/2/2015 3:30:00 AM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	10/2/2015 3:30:00 AM
Surr: Dibromofluoromethane	96.0	45.4-152		%REC	1	10/2/2015 3:30:00 AM
Surr: Toluene-d8	101	40.1-139		%REC	1	10/2/2015 3:30:00 AM
Surr: 1-Bromo-4-fluorobenzene	96.6	64.2-128		%REC	1	10/2/2015 3:30:00 AM

Client: Alaska Analytical Laboratory
Project: Seekins Annual 1197-02
Lab ID: 1509430-003
Client Sample ID: MW-3

Collection Date: 9/28/2015 2:25:00 PM
Matrix: Water

Volatile Organic Compounds by EPA Method 8260

Batch ID: R25264 Analyst: BC

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	1.00		µg/L	1	10/2/2015 3:59:00 AM
Chloromethane	ND	1.00		µg/L	1	10/2/2015 3:59:00 AM
Vinyl chloride	ND	0.200		µg/L	1	10/2/2015 3:59:00 AM
Bromomethane	ND	1.00		µg/L	1	10/2/2015 3:59:00 AM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	10/2/2015 3:59:00 AM
Chloroethane	ND	1.00		µg/L	1	10/2/2015 3:59:00 AM
1,1-Dichloroethene	ND	1.00		µg/L	1	10/2/2015 3:59:00 AM
Methylene chloride	ND	1.00		µg/L	1	10/2/2015 3:59:00 AM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	10/2/2015 3:59:00 AM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	10/2/2015 3:59:00 AM
1,1-Dichloroethane	ND	1.00		µg/L	1	10/2/2015 3:59:00 AM
2,2-Dichloropropane	ND	2.00		µg/L	1	10/2/2015 3:59:00 AM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	10/2/2015 3:59:00 AM
Chloroform	ND	1.00		µg/L	1	10/2/2015 3:59:00 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	10/2/2015 3:59:00 AM
1,1-Dichloropropene	ND	1.00		µg/L	1	10/2/2015 3:59:00 AM
Carbon tetrachloride	ND	1.00		µg/L	1	10/2/2015 3:59:00 AM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	10/2/2015 3:59:00 AM
Benzene	ND	1.00		µg/L	1	10/2/2015 3:59:00 AM
Trichloroethene (TCE)	ND	0.500		µg/L	1	10/2/2015 3:59:00 AM
1,2-Dichloropropane	ND	1.00		µg/L	1	10/2/2015 3:59:00 AM
Bromodichloromethane	ND	1.00		µg/L	1	10/2/2015 3:59:00 AM
Dibromomethane	ND	1.00		µg/L	1	10/2/2015 3:59:00 AM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	10/2/2015 3:59:00 AM
Toluene	ND	1.00		µg/L	1	10/2/2015 3:59:00 AM
trans-1,3-Dichloropropene	ND	1.00		µg/L	1	10/2/2015 3:59:00 AM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	10/2/2015 3:59:00 AM
1,3-Dichloropropane	ND	1.00		µg/L	1	10/2/2015 3:59:00 AM
Tetrachloroethene (PCE)	1.28	1.00		µg/L	1	10/2/2015 3:59:00 AM
Dibromochloromethane	ND	1.00		µg/L	1	10/2/2015 3:59:00 AM
1,2-Dibromoethane (EDB)	ND	0.0600		µg/L	1	10/2/2015 3:59:00 AM
Chlorobenzene	ND	1.00		µg/L	1	10/2/2015 3:59:00 AM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	10/2/2015 3:59:00 AM
Ethylbenzene	ND	1.00		µg/L	1	10/2/2015 3:59:00 AM
m,p-Xylene	ND	1.00		µg/L	1	10/2/2015 3:24:00 PM
o-Xylene	ND	1.00		µg/L	1	10/2/2015 3:24:00 PM
Styrene	ND	1.00		µg/L	1	10/2/2015 3:59:00 AM
Isopropylbenzene	ND	1.00		µg/L	1	10/2/2015 3:59:00 AM
Bromoform	ND	1.00		µg/L	1	10/2/2015 3:59:00 AM

Client: Alaska Analytical Laboratory
Project: Seekins Annual 1197-02
Lab ID: 1509430-003
Client Sample ID: **MW-3**

Collection Date: 9/28/2015 2:25:00 PM
Matrix: Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260				Batch ID: R25264		Analyst: BC
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	10/2/2015 3:59:00 AM
n-Propylbenzene	ND	1.00		µg/L	1	10/2/2015 3:59:00 AM
Bromobenzene	ND	1.00		µg/L	1	10/2/2015 3:59:00 AM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	10/2/2015 3:24:00 PM
2-Chlorotoluene	ND	1.00		µg/L	1	10/2/2015 3:59:00 AM
4-Chlorotoluene	ND	1.00		µg/L	1	10/2/2015 3:59:00 AM
tert-Butylbenzene	ND	1.00		µg/L	1	10/2/2015 3:59:00 AM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	10/2/2015 3:59:00 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	10/2/2015 3:59:00 AM
sec-Butylbenzene	ND	1.00		µg/L	1	10/2/2015 3:59:00 AM
4-Isopropyltoluene	5.03	1.00		µg/L	1	10/2/2015 3:59:00 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	10/2/2015 3:59:00 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	10/2/2015 3:59:00 AM
n-Butylbenzene	ND	1.00		µg/L	1	10/2/2015 3:59:00 AM
1,2-Dichlorobenzene	5.31	1.00		µg/L	1	10/2/2015 3:59:00 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	10/2/2015 3:59:00 AM
1,2,4-Trimethylbenzene	2.97	1.00		µg/L	1	10/2/2015 3:59:00 AM
Hexachlorobutadiene	ND	4.00		µg/L	1	10/2/2015 3:59:00 AM
Naphthalene	2.17	1.00		µg/L	1	10/2/2015 3:59:00 AM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	10/2/2015 3:59:00 AM
Surr: Dibromofluoromethane	98.0	45.4-152		%REC	1	10/2/2015 3:59:00 AM
Surr: Toluene-d8	99.1	40.1-139		%REC	1	10/2/2015 3:59:00 AM
Surr: 1-Bromo-4-fluorobenzene	96.8	64.2-128		%REC	1	10/2/2015 3:59:00 AM

Client: Alaska Analytical Laboratory
Project: Seekins Annual 1197-02
Lab ID: 1509430-004
Client Sample ID: **MW-6**

Collection Date: 9/28/2015 3:30:00 PM
Matrix: Water

Volatile Organic Compounds by EPA Method 8260

Batch ID: R25264 Analyst: BC

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	1.00		µg/L	1	10/2/2015 4:27:00 AM
Chloromethane	ND	1.00		µg/L	1	10/2/2015 4:27:00 AM
Vinyl chloride	ND	0.200		µg/L	1	10/2/2015 4:27:00 AM
Bromomethane	ND	1.00		µg/L	1	10/2/2015 4:27:00 AM
Trichlorofluoromethane (CFC-11)	3.26	1.00		µg/L	1	10/2/2015 4:27:00 AM
Chloroethane	ND	1.00		µg/L	1	10/2/2015 4:27:00 AM
1,1-Dichloroethene	ND	1.00		µg/L	1	10/2/2015 4:27:00 AM
Methylene chloride	ND	1.00		µg/L	1	10/2/2015 4:27:00 AM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	10/2/2015 4:27:00 AM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	10/2/2015 4:27:00 AM
1,1-Dichloroethane	ND	1.00		µg/L	1	10/2/2015 4:27:00 AM
2,2-Dichloropropane	ND	2.00		µg/L	1	10/2/2015 4:27:00 AM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	10/2/2015 4:27:00 AM
Chloroform	ND	1.00		µg/L	1	10/2/2015 4:27:00 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	10/2/2015 4:27:00 AM
1,1-Dichloropropene	ND	1.00		µg/L	1	10/2/2015 4:27:00 AM
Carbon tetrachloride	ND	1.00		µg/L	1	10/2/2015 4:27:00 AM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	10/2/2015 4:27:00 AM
Benzene	ND	1.00		µg/L	1	10/2/2015 4:27:00 AM
Trichloroethene (TCE)	ND	0.500		µg/L	1	10/2/2015 4:27:00 AM
1,2-Dichloropropane	ND	1.00		µg/L	1	10/2/2015 4:27:00 AM
Bromodichloromethane	ND	1.00		µg/L	1	10/2/2015 4:27:00 AM
Dibromomethane	ND	1.00		µg/L	1	10/2/2015 4:27:00 AM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	10/2/2015 4:27:00 AM
Toluene	ND	1.00		µg/L	1	10/2/2015 4:27:00 AM
trans-1,3-Dichloropropene	ND	1.00		µg/L	1	10/2/2015 4:27:00 AM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	10/2/2015 4:27:00 AM
1,3-Dichloropropane	ND	1.00		µg/L	1	10/2/2015 4:27:00 AM
Tetrachloroethene (PCE)	1.61	1.00		µg/L	1	10/2/2015 4:27:00 AM
Dibromochloromethane	ND	1.00		µg/L	1	10/2/2015 4:27:00 AM
1,2-Dibromoethane (EDB)	ND	0.0600		µg/L	1	10/2/2015 4:27:00 AM
Chlorobenzene	ND	1.00		µg/L	1	10/2/2015 4:27:00 AM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	10/2/2015 4:27:00 AM
Ethylbenzene	ND	1.00		µg/L	1	10/2/2015 4:27:00 AM
m,p-Xylene	ND	1.00		µg/L	1	10/2/2015 3:53:00 PM
o-Xylene	ND	1.00		µg/L	1	10/2/2015 4:27:00 AM
Styrene	ND	1.00		µg/L	1	10/2/2015 4:27:00 AM
Isopropylbenzene	ND	1.00		µg/L	1	10/2/2015 4:27:00 AM
Bromoform	ND	1.00		µg/L	1	10/2/2015 4:27:00 AM

Client: Alaska Analytical Laboratory
Project: Seekins Annual 1197-02
Lab ID: 1509430-004
Client Sample ID: **MW-6**

Collection Date: 9/28/2015 3:30:00 PM
Matrix: Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260				Batch ID: R25264		Analyst: BC
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	10/2/2015 4:27:00 AM
n-Propylbenzene	ND	1.00		µg/L	1	10/2/2015 4:27:00 AM
Bromobenzene	ND	1.00		µg/L	1	10/2/2015 4:27:00 AM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	10/2/2015 4:27:00 AM
2-Chlorotoluene	ND	1.00		µg/L	1	10/2/2015 4:27:00 AM
4-Chlorotoluene	ND	1.00		µg/L	1	10/2/2015 4:27:00 AM
tert-Butylbenzene	ND	1.00		µg/L	1	10/2/2015 4:27:00 AM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	10/2/2015 4:27:00 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	10/2/2015 4:27:00 AM
sec-Butylbenzene	ND	1.00		µg/L	1	10/2/2015 4:27:00 AM
4-Isopropyltoluene	ND	1.00		µg/L	1	10/2/2015 4:27:00 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	10/2/2015 4:27:00 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	10/2/2015 4:27:00 AM
n-Butylbenzene	ND	1.00		µg/L	1	10/2/2015 4:27:00 AM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	10/2/2015 4:27:00 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	10/2/2015 4:27:00 AM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	10/2/2015 4:27:00 AM
Hexachlorobutadiene	ND	4.00		µg/L	1	10/2/2015 4:27:00 AM
Naphthalene	ND	1.00		µg/L	1	10/2/2015 4:27:00 AM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	10/2/2015 4:27:00 AM
Surr: Dibromofluoromethane	98.7	45.4-152		%REC	1	10/2/2015 4:27:00 AM
Surr: Toluene-d8	99.5	40.1-139		%REC	1	10/2/2015 4:27:00 AM
Surr: 1-Bromo-4-fluorobenzene	99.8	64.2-128		%REC	1	10/2/2015 4:27:00 AM

Client: Alaska Analytical Laboratory
Project: Seekins Annual 1197-02
Lab ID: 1509430-005
Client Sample ID: **MW-7**

Collection Date: 9/28/2015 10:20:00 AM
Matrix: Water

Volatile Organic Compounds by EPA Method 8260

Batch ID: R25264 Analyst: BC

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	1.00		µg/L	1	10/2/2015 4:56:00 AM
Chloromethane	ND	1.00		µg/L	1	10/2/2015 4:56:00 AM
Vinyl chloride	ND	0.200		µg/L	1	10/2/2015 4:56:00 AM
Bromomethane	ND	1.00		µg/L	1	10/2/2015 4:56:00 AM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	10/2/2015 4:56:00 AM
Chloroethane	ND	1.00		µg/L	1	10/2/2015 4:56:00 AM
1,1-Dichloroethene	ND	1.00		µg/L	1	10/2/2015 4:56:00 AM
Methylene chloride	ND	1.00		µg/L	1	10/2/2015 4:56:00 AM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	10/2/2015 4:56:00 AM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	10/2/2015 4:56:00 AM
1,1-Dichloroethane	ND	1.00		µg/L	1	10/2/2015 4:56:00 AM
2,2-Dichloropropane	ND	2.00		µg/L	1	10/2/2015 4:56:00 AM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	10/2/2015 4:56:00 AM
Chloroform	ND	1.00		µg/L	1	10/2/2015 4:56:00 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	10/2/2015 4:56:00 AM
1,1-Dichloropropene	ND	1.00		µg/L	1	10/2/2015 4:56:00 AM
Carbon tetrachloride	ND	1.00		µg/L	1	10/2/2015 4:56:00 AM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	10/2/2015 4:56:00 AM
Benzene	ND	1.00		µg/L	1	10/2/2015 4:56:00 AM
Trichloroethene (TCE)	ND	0.500		µg/L	1	10/2/2015 4:56:00 AM
1,2-Dichloropropane	ND	1.00		µg/L	1	10/2/2015 4:56:00 AM
Bromodichloromethane	ND	1.00		µg/L	1	10/2/2015 4:56:00 AM
Dibromomethane	ND	1.00		µg/L	1	10/2/2015 4:56:00 AM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	10/2/2015 4:56:00 AM
Toluene	ND	1.00		µg/L	1	10/2/2015 4:56:00 AM
trans-1,3-Dichloropropene	ND	1.00		µg/L	1	10/2/2015 4:56:00 AM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	10/2/2015 4:56:00 AM
1,3-Dichloropropane	ND	1.00		µg/L	1	10/2/2015 4:56:00 AM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	10/2/2015 4:56:00 AM
Dibromochloromethane	ND	1.00		µg/L	1	10/2/2015 4:56:00 AM
1,2-Dibromoethane (EDB)	ND	0.0600		µg/L	1	10/2/2015 4:56:00 AM
Chlorobenzene	ND	1.00		µg/L	1	10/2/2015 4:56:00 AM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	10/2/2015 4:56:00 AM
Ethylbenzene	ND	1.00		µg/L	1	10/2/2015 4:56:00 AM
m,p-Xylene	ND	1.00		µg/L	1	10/2/2015 4:22:00 PM
o-Xylene	ND	1.00		µg/L	1	10/2/2015 4:56:00 AM
Styrene	ND	1.00		µg/L	1	10/2/2015 4:56:00 AM
Isopropylbenzene	ND	1.00		µg/L	1	10/2/2015 4:56:00 AM
Bromoform	ND	1.00		µg/L	1	10/2/2015 4:56:00 AM

Client: Alaska Analytical Laboratory
Project: Seekins Annual 1197-02
Lab ID: 1509430-005
Client Sample ID: MW-7

Collection Date: 9/28/2015 10:20:00 AM
Matrix: Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260				Batch ID: R25264		Analyst: BC
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	10/2/2015 4:56:00 AM
n-Propylbenzene	ND	1.00		µg/L	1	10/2/2015 4:56:00 AM
Bromobenzene	ND	1.00		µg/L	1	10/2/2015 4:56:00 AM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	10/2/2015 4:56:00 AM
2-Chlorotoluene	ND	1.00		µg/L	1	10/2/2015 4:56:00 AM
4-Chlorotoluene	ND	1.00		µg/L	1	10/2/2015 4:56:00 AM
tert-Butylbenzene	ND	1.00		µg/L	1	10/2/2015 4:56:00 AM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	10/2/2015 4:56:00 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	10/2/2015 4:56:00 AM
sec-Butylbenzene	ND	1.00		µg/L	1	10/2/2015 4:56:00 AM
4-Isopropyltoluene	ND	1.00		µg/L	1	10/2/2015 4:56:00 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	10/2/2015 4:56:00 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	10/2/2015 4:56:00 AM
n-Butylbenzene	ND	1.00		µg/L	1	10/2/2015 4:56:00 AM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	10/2/2015 4:56:00 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	10/2/2015 4:56:00 AM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	10/2/2015 4:56:00 AM
Hexachlorobutadiene	ND	4.00		µg/L	1	10/2/2015 4:56:00 AM
Naphthalene	ND	1.00		µg/L	1	10/2/2015 4:56:00 AM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	10/2/2015 4:56:00 AM
Surr: Dibromofluoromethane	97.9	45.4-152		%REC	1	10/2/2015 4:56:00 AM
Surr: Toluene-d8	99.3	40.1-139		%REC	1	10/2/2015 4:56:00 AM
Surr: 1-Bromo-4-fluorobenzene	96.4	64.2-128		%REC	1	10/2/2015 4:56:00 AM

Analytical Report

WO#: **1509430**
Date Reported: **10/6/2015**

Client: Alaska Analytical Laboratory
Project: Seekins Annual 1197-02
Lab ID: 1509430-006
Client Sample ID: **MW-8**

Collection Date: 9/28/2015 12:20:00 PM
Matrix: Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260				Batch ID: R25264		Analyst: BC
Dichlorodifluoromethane (CFC-12)	ND	1.00		µg/L	1	10/2/2015 5:25:00 AM
Chloromethane	ND	1.00		µg/L	1	10/2/2015 5:25:00 AM
Vinyl chloride	ND	0.200		µg/L	1	10/2/2015 5:25:00 AM
Bromomethane	ND	1.00		µg/L	1	10/2/2015 5:25:00 AM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	10/2/2015 5:25:00 AM
Chloroethane	ND	1.00		µg/L	1	10/2/2015 5:25:00 AM
1,1-Dichloroethene	ND	1.00		µg/L	1	10/2/2015 5:25:00 AM
Methylene chloride	ND	1.00		µg/L	1	10/2/2015 5:25:00 AM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	10/2/2015 5:25:00 AM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	10/2/2015 5:25:00 AM
1,1-Dichloroethane	ND	1.00		µg/L	1	10/2/2015 5:25:00 AM
2,2-Dichloropropane	ND	2.00		µg/L	1	10/2/2015 5:25:00 AM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	10/2/2015 5:25:00 AM
Chloroform	ND	1.00		µg/L	1	10/2/2015 5:25:00 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	10/2/2015 5:25:00 AM
1,1-Dichloropropene	ND	1.00		µg/L	1	10/2/2015 5:25:00 AM
Carbon tetrachloride	ND	1.00		µg/L	1	10/2/2015 5:25:00 AM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	10/2/2015 5:25:00 AM
Benzene	1.40	1.00		µg/L	1	10/2/2015 5:25:00 AM
Trichloroethene (TCE)	ND	0.500		µg/L	1	10/2/2015 5:25:00 AM
1,2-Dichloropropane	ND	1.00		µg/L	1	10/2/2015 5:25:00 AM
Bromodichloromethane	ND	1.00		µg/L	1	10/2/2015 5:25:00 AM
Dibromomethane	ND	1.00		µg/L	1	10/2/2015 5:25:00 AM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	10/2/2015 5:25:00 AM
Toluene	759	100	D	µg/L	100	10/2/2015 5:19:00 PM
trans-1,3-Dichloropropene	ND	1.00		µg/L	1	10/2/2015 5:25:00 AM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	10/2/2015 5:25:00 AM
1,3-Dichloropropane	ND	1.00		µg/L	1	10/2/2015 5:25:00 AM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	10/2/2015 5:25:00 AM
Dibromochloromethane	ND	1.00		µg/L	1	10/2/2015 5:25:00 AM
1,2-Dibromoethane (EDB)	ND	0.0600		µg/L	1	10/2/2015 5:25:00 AM
Chlorobenzene	ND	1.00		µg/L	1	10/2/2015 5:25:00 AM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	10/2/2015 5:25:00 AM
Ethylbenzene	1,220	100	D	µg/L	100	10/2/2015 5:19:00 PM
m,p-Xylene	4,490	100	D	µg/L	100	10/2/2015 5:19:00 PM
o-Xylene	1,980	100	D	µg/L	100	10/2/2015 5:19:00 PM
Styrene	ND	1.00		µg/L	1	10/2/2015 5:25:00 AM
Isopropylbenzene	62.8	100	D	µg/L	100	10/2/2015 5:19:00 PM
Bromoform	ND	1.00		µg/L	1	10/2/2015 5:25:00 AM

Client: Alaska Analytical Laboratory
Collection Date: 9/28/2015 12:20:00 PM
Project: Seekins Annual 1197-02
Lab ID: 1509430-006
Matrix: Water
Client Sample ID: MW-8

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260				Batch ID: R25264		Analyst: BC
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	10/2/2015 5:25:00 AM
n-Propylbenzene	118	100	D	µg/L	100	10/2/2015 5:19:00 PM
Bromobenzene	ND	1.00		µg/L	1	10/2/2015 5:25:00 AM
1,3,5-Trimethylbenzene	210	100	D	µg/L	100	10/2/2015 5:19:00 PM
2-Chlorotoluene	ND	1.00		µg/L	1	10/2/2015 5:25:00 AM
4-Chlorotoluene	ND	1.00		µg/L	1	10/2/2015 5:25:00 AM
tert-Butylbenzene	ND	1.00		µg/L	1	10/2/2015 5:25:00 AM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	10/2/2015 5:25:00 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	10/2/2015 5:25:00 AM
sec-Butylbenzene	6.66	1.00		µg/L	1	10/2/2015 5:25:00 AM
4-Isopropyltoluene	5.31	1.00		µg/L	1	10/2/2015 5:25:00 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	10/2/2015 5:25:00 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	10/2/2015 5:25:00 AM
n-Butylbenzene	13.2	1.00		µg/L	1	10/2/2015 5:25:00 AM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	10/2/2015 5:25:00 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	10/2/2015 5:25:00 AM
1,2,4-Trimethylbenzene	848	100	D	µg/L	100	10/2/2015 5:19:00 PM
Hexachlorobutadiene	ND	4.00		µg/L	1	10/2/2015 5:25:00 AM
Naphthalene	48.8	100	D	µg/L	100	10/2/2015 5:19:00 PM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	10/2/2015 5:25:00 AM
Surr: Dibromofluoromethane	102	45.4-152		%REC	1	10/2/2015 5:25:00 AM
Surr: Toluene-d8	102	40.1-139		%REC	1	10/2/2015 5:25:00 AM
Surr: 1-Bromo-4-fluorobenzene	99.9	64.2-128		%REC	1	10/2/2015 5:25:00 AM

Client: Alaska Analytical Laboratory
Project: Seekins Annual 1197-02
Lab ID: 1509430-007
Client Sample ID: Trip Blank - 8260

Collection Date: 9/23/2015 11:00:00 AM
Matrix: Water

Volatile Organic Compounds by EPA Method 8260

Batch ID: R25264 Analyst: BC

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Dichlorodifluoromethane (CFC-12)	ND	1.00		µg/L	1	10/1/2015 6:26:00 PM
Chloromethane	ND	1.00		µg/L	1	10/1/2015 6:26:00 PM
Vinyl chloride	ND	0.200		µg/L	1	10/1/2015 6:26:00 PM
Bromomethane	ND	1.00		µg/L	1	10/1/2015 6:26:00 PM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	10/1/2015 6:26:00 PM
Chloroethane	ND	1.00		µg/L	1	10/1/2015 6:26:00 PM
1,1-Dichloroethene	ND	1.00		µg/L	1	10/1/2015 6:26:00 PM
Methylene chloride	ND	1.00		µg/L	1	10/1/2015 6:26:00 PM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	10/1/2015 6:26:00 PM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	10/1/2015 6:26:00 PM
1,1-Dichloroethane	ND	1.00		µg/L	1	10/1/2015 6:26:00 PM
2,2-Dichloropropane	ND	2.00		µg/L	1	10/1/2015 6:26:00 PM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	10/1/2015 6:26:00 PM
Chloroform	ND	1.00		µg/L	1	10/1/2015 6:26:00 PM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	10/1/2015 6:26:00 PM
1,1-Dichloropropene	ND	1.00		µg/L	1	10/1/2015 6:26:00 PM
Carbon tetrachloride	ND	1.00		µg/L	1	10/1/2015 6:26:00 PM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	10/1/2015 6:26:00 PM
Benzene	ND	1.00		µg/L	1	10/1/2015 6:26:00 PM
Trichloroethene (TCE)	ND	0.500		µg/L	1	10/1/2015 6:26:00 PM
1,2-Dichloropropane	ND	1.00		µg/L	1	10/1/2015 6:26:00 PM
Bromodichloromethane	ND	1.00		µg/L	1	10/1/2015 6:26:00 PM
Dibromomethane	ND	1.00		µg/L	1	10/1/2015 6:26:00 PM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	10/1/2015 6:26:00 PM
Toluene	ND	1.00		µg/L	1	10/1/2015 6:26:00 PM
trans-1,3-Dichloropropene	ND	1.00		µg/L	1	10/1/2015 6:26:00 PM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	10/1/2015 6:26:00 PM
1,3-Dichloropropane	ND	1.00		µg/L	1	10/1/2015 6:26:00 PM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	10/1/2015 6:26:00 PM
Dibromochloromethane	ND	1.00		µg/L	1	10/1/2015 6:26:00 PM
1,2-Dibromoethane (EDB)	ND	0.0600		µg/L	1	10/1/2015 6:26:00 PM
Chlorobenzene	ND	1.00		µg/L	1	10/1/2015 6:26:00 PM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	10/1/2015 6:26:00 PM
Ethylbenzene	ND	1.00		µg/L	1	10/1/2015 6:26:00 PM
m,p-Xylene	ND	1.00		µg/L	1	10/1/2015 6:26:00 PM
o-Xylene	ND	1.00		µg/L	1	10/1/2015 6:26:00 PM
Styrene	ND	1.00		µg/L	1	10/1/2015 6:26:00 PM
Isopropylbenzene	ND	1.00		µg/L	1	10/1/2015 6:26:00 PM
Bromoform	ND	1.00		µg/L	1	10/1/2015 6:26:00 PM

Analytical Report

WO#: **1509430**
Date Reported: **10/6/2015**

Client: Alaska Analytical Laboratory
Collection Date: 9/23/2015 11:00:00 AM
Project: Seekins Annual 1197-02
Lab ID: 1509430-007
Matrix: Water
Client Sample ID: Trip Blank - 8260

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260				Batch ID: R25264		Analyst: BC
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	10/1/2015 6:26:00 PM
n-Propylbenzene	ND	1.00		µg/L	1	10/1/2015 6:26:00 PM
Bromobenzene	ND	1.00		µg/L	1	10/1/2015 6:26:00 PM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	10/1/2015 6:26:00 PM
2-Chlorotoluene	ND	1.00		µg/L	1	10/1/2015 6:26:00 PM
4-Chlorotoluene	ND	1.00		µg/L	1	10/1/2015 6:26:00 PM
tert-Butylbenzene	ND	1.00		µg/L	1	10/1/2015 6:26:00 PM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	10/1/2015 6:26:00 PM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	10/1/2015 6:26:00 PM
sec-Butylbenzene	ND	1.00		µg/L	1	10/1/2015 6:26:00 PM
4-Isopropyltoluene	ND	1.00		µg/L	1	10/1/2015 6:26:00 PM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	10/1/2015 6:26:00 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	10/1/2015 6:26:00 PM
n-Butylbenzene	ND	1.00		µg/L	1	10/1/2015 6:26:00 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	10/1/2015 6:26:00 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	10/1/2015 6:26:00 PM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	10/1/2015 6:26:00 PM
Hexachlorobutadiene	ND	4.00		µg/L	1	10/1/2015 6:26:00 PM
Naphthalene	ND	1.00		µg/L	1	10/1/2015 6:26:00 PM
1,2,3-Trichlorobenzene	ND	4.00		µg/L	1	10/1/2015 6:26:00 PM
Surr: Dibromofluoromethane	99.1	45.4-152		%REC	1	10/1/2015 6:26:00 PM
Surr: Toluene-d8	97.8	40.1-139		%REC	1	10/1/2015 6:26:00 PM
Surr: 1-Bromo-4-fluorobenzene	97.8	64.2-128		%REC	1	10/1/2015 6:26:00 PM

Fremont Analytical

Date: *10/6/2015*

Work Order: 1509430
CLIENT: Alaska Analytical Laboratory
Project: Seekins Annual 1197-02

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260

Sample ID **LCS-R25264**	SampType: **LCS**	Units: **µg/L**	Prep Date: **10/1/2015**	RunNo: **25264**
Client ID: **LCSW**	Batch ID: **R25264**		Analysis Date: **10/1/2015**	SeqNo: **476371**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	20.7	1.00	20.00	0	104	43	136				
Chloromethane	19.9	1.00	20.00	0	99.3	43.9	139				
Vinyl chloride	20.0	0.200	20.00	0	100	53.6	139				
Bromomethane	22.4	1.00	20.00	0	112	42.5	152				
Trichlorofluoromethane (CFC-11)	19.9	1.00	20.00	0	99.7	63.7	133				
Chloroethane	18.6	1.00	20.00	0	92.8	53	141				
1,1-Dichloroethene	19.8	1.00	20.00	0	99.1	65.6	136				
Methylene chloride	19.2	1.00	20.00	0	96.0	67.1	131				
trans-1,2-Dichloroethene	19.2	1.00	20.00	0	96.1	71.7	129				
Methyl tert-butyl ether (MTBE)	16.7	1.00	20.00	0	83.6	67.7	131				
1,1-Dichloroethane	19.4	1.00	20.00	0	96.8	67.9	134				
2,2-Dichloropropane	21.2	2.00	20.00	0	106	33.7	152				
cis-1,2-Dichloroethene	19.0	1.00	20.00	0	95.0	71.1	130				
Chloroform	17.8	1.00	20.00	0	88.9	66.3	131				
1,1,1-Trichloroethane (TCA)	19.7	1.00	20.00	0	98.3	71	131				
1,1-Dichloropropene	17.7	1.00	20.00	0	88.5	74.5	126				
Carbon tetrachloride	19.1	1.00	20.00	0	95.4	66.2	134				
1,2-Dichloroethane (EDC)	16.2	1.00	20.00	0	81.0	68.8	123				
Benzene	19.8	1.00	20.00	0	99.1	69.3	132				
Trichloroethene (TCE)	18.0	0.500	20.00	0	90.0	65.2	136				
1,2-Dichloropropane	17.4	1.00	20.00	0	87.2	70.5	130				
Bromodichloromethane	18.6	1.00	20.00	0	93.2	67.2	137				
Dibromomethane	18.9	1.00	20.00	0	94.3	75.5	126				
cis-1,3-Dichloropropene	22.1	1.00	20.00	0	111	62.6	137				
Toluene	20.7	1.00	20.00	0	104	61.3	145				
trans-1,3-Dichloropropene	18.6	1.00	20.00	0	92.9	58.5	142				
1,1,2-Trichloroethane	17.2	1.00	20.00	0	85.9	71.7	131				
1,3-Dichloropropane	17.1	1.00	20.00	0	85.4	73.5	127				
Tetrachloroethene (PCE)	19.8	1.00	20.00	0	99.0	47.5	147				
Dibromochloromethane	22.5	1.00	20.00	0	113	67.2	134				
1,2-Dibromoethane (EDB)	19.1	0.0600	20.00	0	95.5	73.6	125				

Work Order: 1509430
CLIENT: Alaska Analytical Laboratory
Project: Seekins Annual 1197-02

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260

Sample ID **LCS-R25264** SampType: **LCS** Units: **µg/L** Prep Date: **10/1/2015** RunNo: **25264**
Client ID: **LCSW** Batch ID: **R25264** Analysis Date: **10/1/2015** SeqNo: **476371**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	18.4	1.00	20.00	0	91.9	73.9	126				
1,1,1,2-Tetrachloroethane	20.5	1.00	20.00	0	103	76.8	124				
Ethylbenzene	20.4	1.00	20.00	0	102	72	130				
m,p-Xylene	41.2	1.00	40.00	0	103	70.3	134				
o-Xylene	20.7	1.00	20.00	0	104	72.1	131				
Styrene	19.1	1.00	20.00	0	95.4	64.3	140				
Isopropylbenzene	19.1	1.00	20.00	0	95.7	73.9	128				
Bromoform	18.5	1.00	20.00	0	92.4	63.8	135				
1,1,2,2-Tetrachloroethane	17.0	1.00	20.00	0	84.9	62.9	132				
n-Propylbenzene	19.3	1.00	20.00	0	96.4	74.5	127				
Bromobenzene	18.2	1.00	20.00	0	90.8	71	131				
1,3,5-Trimethylbenzene	18.2	1.00	20.00	0	90.9	73.1	128				
2-Chlorotoluene	18.1	1.00	20.00	0	90.6	70.8	130				
4-Chlorotoluene	18.4	1.00	20.00	0	92.0	70.1	131				
tert-Butylbenzene	18.9	1.00	20.00	0	94.3	68.2	131				
1,2,3-Trichloropropane	16.5	1.00	20.00	0	82.6	67.7	131				
1,2,4-Trichlorobenzene	19.3	2.00	20.00	0	96.6	51.8	152				
sec-Butylbenzene	19.2	1.00	20.00	0	96.0	72	129				
4-Isopropyltoluene	19.6	1.00	20.00	0	97.8	69.2	130				
1,3-Dichlorobenzene	18.0	1.00	20.00	0	89.8	72.4	129				
1,4-Dichlorobenzene	21.0	1.00	20.00	0	105	70.6	128				
n-Butylbenzene	21.3	1.00	20.00	0	106	73.8	127				
1,2-Dichlorobenzene	17.2	1.00	20.00	0	86.1	74.2	129				
1,2-Dibromo-3-chloropropane	19.7	1.00	20.00	0	98.5	63.1	136				
1,2,4-Trimethylbenzene	18.3	1.00	20.00	0	91.4	73.4	127				
Hexachlorobutadiene	20.0	4.00	20.00	0	100	58.6	138				
Naphthalene	17.3	1.00	20.00	0	86.4	41.8	165				
1,2,3-Trichlorobenzene	18.1	4.00	20.00	0	90.3	48.7	156				
Surr: Dibromofluoromethane	24.8		25.00		99.1	45.4	152				
Surr: Toluene-d8	25.6		25.00		102	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	24.7		25.00		98.7	64.2	128				

Work Order: 1509430
CLIENT: Alaska Analytical Laboratory
Project: Seekins Annual 1197-02

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260

Sample ID	LCS-R25264	SampType:	LCS		Units: µg/L		Prep Date:	10/1/2015		RunNo:	25264	
Client ID:	LCSW	Batch ID:	R25264				Analysis Date:	10/1/2015		SeqNo:	476371	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Sample ID	MB-R25264	SampType:	MBLK		Units: µg/L		Prep Date:	10/1/2015		RunNo:	25264	
Client ID:	MBLKW	Batch ID:	R25264				Analysis Date:	10/1/2015		SeqNo:	476372	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Dichlorodifluoromethane (CFC-12)	ND	1.00										
Chloromethane	ND	1.00										
Vinyl chloride	ND	0.200										
Bromomethane	ND	1.00										
Trichlorofluoromethane (CFC-11)	ND	1.00										
Chloroethane	ND	1.00										
1,1-Dichloroethene	ND	1.00										
Methylene chloride	ND	1.00										
trans-1,2-Dichloroethene	ND	1.00										
Methyl tert-butyl ether (MTBE)	ND	1.00										
1,1-Dichloroethane	ND	1.00										
2,2-Dichloropropane	ND	2.00										
cis-1,2-Dichloroethene	ND	1.00										
Chloroform	ND	1.00										
1,1,1-Trichloroethane (TCA)	ND	1.00										
1,1-Dichloropropene	ND	1.00										
Carbon tetrachloride	ND	1.00										
1,2-Dichloroethane (EDC)	ND	1.00										
Benzene	ND	1.00										
Trichloroethene (TCE)	ND	0.500										
1,2-Dichloropropane	ND	1.00										
Bromodichloromethane	ND	1.00										
Dibromomethane	ND	1.00										
cis-1,3-Dichloropropene	ND	1.00										
Toluene	ND	1.00										
trans-1,3-Dichloropropene	ND	1.00										

Work Order: 1509430
CLIENT: Alaska Analytical Laboratory
Project: Seekins Annual 1197-02

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260

Sample ID **MB-R25264** SampType: **MBLK** Units: **µg/L** Prep Date: **10/1/2015** RunNo: **25264**
Client ID: **MBLKW** Batch ID: **R25264** Analysis Date: **10/1/2015** SeqNo: **476372**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,2-Trichloroethane	ND	1.00									
1,3-Dichloropropane	ND	1.00									
Tetrachloroethene (PCE)	ND	1.00									
Dibromochloromethane	ND	1.00									
1,2-Dibromoethane (EDB)	ND	0.0600									
Chlorobenzene	ND	1.00									
1,1,1,2-Tetrachloroethane	ND	1.00									
Ethylbenzene	ND	1.00									
m,p-Xylene	ND	1.00									
o-Xylene	ND	1.00									
Styrene	ND	1.00									
Isopropylbenzene	ND	1.00									
Bromoform	ND	1.00									
1,1,2,2-Tetrachloroethane	ND	1.00									
n-Propylbenzene	ND	1.00									
Bromobenzene	ND	1.00									
1,3,5-Trimethylbenzene	ND	1.00									
2-Chlorotoluene	ND	1.00									
4-Chlorotoluene	ND	1.00									
tert-Butylbenzene	ND	1.00									
1,2,3-Trichloropropane	ND	1.00									
1,2,4-Trichlorobenzene	ND	2.00									
sec-Butylbenzene	ND	1.00									
4-Isopropyltoluene	ND	1.00									
1,3-Dichlorobenzene	ND	1.00									
1,4-Dichlorobenzene	ND	1.00									
n-Butylbenzene	ND	1.00									
1,2-Dichlorobenzene	ND	1.00									
1,2-Dibromo-3-chloropropane	ND	1.00									
1,2,4-Trimethylbenzene	ND	1.00									
Hexachlorobutadiene	ND	4.00									

Work Order: 1509430
CLIENT: Alaska Analytical Laboratory
Project: Seekins Annual 1197-02

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260

Sample ID **MB-R25264** SampType: **MBLK** Units: **µg/L** Prep Date: **10/1/2015** RunNo: **25264**
Client ID: **MBLKW** Batch ID: **R25264** Analysis Date: **10/1/2015** SeqNo: **476372**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	ND	1.00									
1,2,3-Trichlorobenzene	ND	4.00									
Surr: Dibromofluoromethane	24.3		25.00		97.2	45.4	152				
Surr: Toluene-d8	24.4		25.00		97.7	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	24.9		25.00		99.6	64.2	128				

Sample ID **1509435-012BDUP** SampType: **DUP** Units: **µg/L** Prep Date: **10/1/2015** RunNo: **25264**
Client ID: **BATCH** Batch ID: **R25264** Analysis Date: **10/1/2015** SeqNo: **476364**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	1.00						0		30	
Chloromethane	ND	1.00						0		30	
Vinyl chloride	ND	0.200						0		30	
Bromomethane	ND	1.00						0		30	
Trichlorofluoromethane (CFC-11)	ND	1.00						0		30	
Chloroethane	ND	1.00						0		30	
1,1-Dichloroethene	ND	1.00						0		30	
Methylene chloride	ND	1.00						0		30	
trans-1,2-Dichloroethene	ND	1.00						0		30	
Methyl tert-butyl ether (MTBE)	ND	1.00						0		30	
1,1-Dichloroethane	ND	1.00						0		30	
2,2-Dichloropropane	ND	2.00						0		30	
cis-1,2-Dichloroethene	ND	1.00						0		30	
Chloroform	ND	1.00						0		30	
1,1,1-Trichloroethane (TCA)	ND	1.00						0		30	
1,1-Dichloropropene	ND	1.00						0		30	
Carbon tetrachloride	ND	1.00						0		30	
1,2-Dichloroethane (EDC)	ND	1.00						0		30	
Benzene	ND	1.00						0		30	
Trichloroethene (TCE)	ND	0.500						0		30	
1,2-Dichloropropane	ND	1.00						0		30	

Work Order: 1509430
CLIENT: Alaska Analytical Laboratory
Project: Seekins Annual 1197-02

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260

Sample ID **1509435-012BDUP** SampType: **DUP** Units: **µg/L** Prep Date: **10/1/2015** RunNo: **25264**
Client ID: **BATCH** Batch ID: **R25264** Analysis Date: **10/1/2015** SeqNo: **476364**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromodichloromethane	ND	1.00						0		30	
Dibromomethane	ND	1.00						0		30	
cis-1,3-Dichloropropene	ND	1.00						0		30	
Toluene	ND	1.00						0		30	
trans-1,3-Dichloropropene	ND	1.00						0		30	
1,1,2-Trichloroethane	ND	1.00						0		30	
1,3-Dichloropropane	ND	1.00						0		30	
Tetrachloroethene (PCE)	ND	1.00						0		30	
Dibromochloromethane	ND	1.00						0		30	
1,2-Dibromoethane (EDB)	ND	0.0600						0		30	
Chlorobenzene	ND	1.00						0		30	
1,1,1,2-Tetrachloroethane	ND	1.00						0		30	
Ethylbenzene	ND	1.00						0		30	
m,p-Xylene	ND	1.00						0		30	
o-Xylene	ND	1.00						0		30	
Styrene	ND	1.00						0		30	
Isopropylbenzene	ND	1.00						0		30	
Bromoform	ND	1.00						0		30	
1,1,2,2-Tetrachloroethane	ND	1.00						0		30	
n-Propylbenzene	ND	1.00						0		30	
Bromobenzene	ND	1.00						0		30	
1,3,5-Trimethylbenzene	ND	1.00						0		30	
2-Chlorotoluene	ND	1.00						0		30	
4-Chlorotoluene	ND	1.00						0		30	
tert-Butylbenzene	ND	1.00						0		30	
1,2,3-Trichloropropane	ND	1.00						0		30	
1,2,4-Trichlorobenzene	ND	2.00						0		30	
sec-Butylbenzene	ND	1.00						0		30	
4-Isopropyltoluene	ND	1.00						0		30	
1,3-Dichlorobenzene	ND	1.00						0		30	
1,4-Dichlorobenzene	ND	1.00						0		30	

Work Order: 1509430
CLIENT: Alaska Analytical Laboratory
Project: Seekins Annual 1197-02

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260

Sample ID 1509435-012BDUP	SampType: DUP			Units: µg/L		Prep Date: 10/1/2015		RunNo: 25264		
Client ID: BATCH	Batch ID: R25264					Analysis Date: 10/1/2015		SeqNo: 476364		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
n-Butylbenzene	ND	1.00						0		30	
1,2-Dichlorobenzene	ND	1.00						0		30	
1,2-Dibromo-3-chloropropane	ND	1.00						0		30	
1,2,4-Trimethylbenzene	ND	1.00						0		30	
Hexachlorobutadiene	ND	4.00						0		30	
Naphthalene	ND	1.00						0		30	
1,2,3-Trichlorobenzene	ND	4.00						0		30	
Surr: Dibromofluoromethane	24.7		25.00		98.7	45.4	152		0		
Surr: Toluene-d8	24.6		25.00		98.2	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	24.9		25.00		99.5	64.2	128		0		

Sample ID 1509434-001ADUP	SampType: DUP			Units: µg/L		Prep Date: 10/1/2015		RunNo: 25264		
Client ID: BATCH	Batch ID: R25264					Analysis Date: 10/1/2015		SeqNo: 476359		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	1.00						0		30	
Chloromethane	ND	1.00						0		30	
Vinyl chloride	ND	0.200						0		30	
Bromomethane	ND	1.00						0		30	
Trichlorofluoromethane (CFC-11)	ND	1.00						0		30	
Chloroethane	ND	1.00						0		30	
1,1-Dichloroethene	ND	1.00						0		30	
Methylene chloride	ND	1.00						0		30	
trans-1,2-Dichloroethene	ND	1.00						0		30	
Methyl tert-butyl ether (MTBE)	ND	1.00						0		30	
1,1-Dichloroethane	ND	1.00						0		30	
2,2-Dichloropropane	ND	2.00						0		30	
cis-1,2-Dichloroethene	ND	1.00						0		30	
Chloroform	ND	1.00						0		30	
1,1,1-Trichloroethane (TCA)	ND	1.00						0		30	
1,1-Dichloropropene	ND	1.00						0		30	

Work Order: 1509430
CLIENT: Alaska Analytical Laboratory
Project: Seekins Annual 1197-02

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260

Sample ID **1509434-001ADUP** SampType: **DUP** Units: **µg/L** Prep Date: **10/1/2015** RunNo: **25264**
Client ID: **BATCH** Batch ID: **R25264** Analysis Date: **10/1/2015** SeqNo: **476359**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbon tetrachloride	ND	1.00						0		30	
1,2-Dichloroethane (EDC)	ND	1.00						0		30	
Benzene	ND	1.00						0		30	
Trichloroethene (TCE)	ND	0.500						0		30	
1,2-Dichloropropane	ND	1.00						0		30	
Bromodichloromethane	ND	1.00						0		30	
Dibromomethane	ND	1.00						0		30	
cis-1,3-Dichloropropene	ND	1.00						0		30	
Toluene	ND	1.00						0		30	
trans-1,3-Dichloropropene	ND	1.00						0		30	
1,1,2-Trichloroethane	ND	1.00						0		30	
1,3-Dichloropropane	ND	1.00						0		30	
Tetrachloroethene (PCE)	ND	1.00						0		30	
Dibromochloromethane	ND	1.00						0		30	
1,2-Dibromoethane (EDB)	ND	0.0600						0		30	
Chlorobenzene	ND	1.00						0		30	
1,1,1,2-Tetrachloroethane	ND	1.00						0		30	
Ethylbenzene	ND	1.00						0		30	
m,p-Xylene	ND	1.00						0		30	
o-Xylene	ND	1.00						0		30	
Styrene	ND	1.00						0		30	
Isopropylbenzene	ND	1.00						0		30	
Bromoform	ND	1.00						0		30	
1,1,2,2-Tetrachloroethane	ND	1.00						0		30	
n-Propylbenzene	ND	1.00						0		30	
Bromobenzene	ND	1.00						0		30	
1,3,5-Trimethylbenzene	ND	1.00						0		30	
2-Chlorotoluene	ND	1.00						0		30	
4-Chlorotoluene	ND	1.00						0		30	
tert-Butylbenzene	ND	1.00						0		30	
1,2,3-Trichloropropane	ND	1.00						0		30	

Work Order: 1509430
CLIENT: Alaska Analytical Laboratory
Project: Seekins Annual 1197-02

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260

Sample ID 1509434-001ADUP	SampType: DUP			Units: µg/L		Prep Date: 10/1/2015		RunNo: 25264		
Client ID: BATCH	Batch ID: R25264					Analysis Date: 10/1/2015		SeqNo: 476359		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4-Trichlorobenzene	ND	2.00						0		30	
sec-Butylbenzene	ND	1.00						0		30	
4-Isopropyltoluene	ND	1.00						0		30	
1,3-Dichlorobenzene	ND	1.00						0		30	
1,4-Dichlorobenzene	ND	1.00						0		30	
n-Butylbenzene	ND	1.00						0		30	
1,2-Dichlorobenzene	ND	1.00						0		30	
1,2-Dibromo-3-chloropropane	ND	1.00						0		30	
1,2,4-Trimethylbenzene	ND	1.00						0		30	
Hexachlorobutadiene	ND	4.00						0		30	
Naphthalene	ND	1.00						0		30	
1,2,3-Trichlorobenzene	ND	4.00						0		30	
Surr: Dibromofluoromethane	24.8		25.00		99.2	45.4	152		0		
Surr: Toluene-d8	24.7		25.00		98.7	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	24.6		25.00		98.5	64.2	128		0		

Sample ID 1509427-004AMS	SampType: MS			Units: µg/L		Prep Date: 10/2/2015		RunNo: 25264		
Client ID: BATCH	Batch ID: R25264					Analysis Date: 10/2/2015		SeqNo: 476349		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	23.4	1.00	20.00	0	117	33.3	122				
Chloromethane	21.5	0.500	20.00	0	107	48.2	145				
Vinyl chloride	20.5	0.200	20.00	0	103	58.1	158				
Bromomethane	23.3	0.500	20.00	0	116	31.5	135				
Trichlorofluoromethane (CFC-11)	21.1	0.500	20.00	0	106	54.7	138				
Chloroethane	19.5	0.500	20.00	0	97.5	49.9	143				
1,1-Dichloroethene	22.6	0.500	20.00	0	113	63	141				
Methylene chloride	20.8	1.00	20.00	0	104	61.6	135				
trans-1,2-Dichloroethene	21.4	0.500	20.00	0	107	63.5	138				
Methyl tert-butyl ether (MTBE)	21.3	1.00	20.00	0	107	60.9	132				
1,1-Dichloroethane	24.0	0.500	20.00	0	120	67.8	136				

Work Order: 1509430
CLIENT: Alaska Analytical Laboratory
Project: Seekins Annual 1197-02

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260

Sample ID **1509427-004AMS** SampType: **MS** Units: **µg/L** Prep Date: **10/2/2015** RunNo: **25264**
Client ID: **BATCH** Batch ID: **R25264** Analysis Date: **10/2/2015** SeqNo: **476349**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,2-Dichloropropane	18.0	1.00	20.00	0	90.1	31.5	121				
cis-1,2-Dichloroethene	21.8	0.500	20.00	0	109	67.1	123				
Chloroform	21.8	1.00	20.00	0	109	66.7	136				
1,1,1-Trichloroethane (TCA)	21.6	0.500	20.00	0	108	64.2	146				
1,1-Dichloropropene	20.4	0.500	20.00	0	102	73.8	136				
Carbon tetrachloride	18.7	0.500	20.00	0	93.5	62.7	146				
1,2-Dichloroethane (EDC)	20.3	0.500	20.00	0	102	63.4	137				
Benzene	382	1.00	20.00	395.1	-64.4	65.4	138				SE
Trichloroethene (TCE)	26.3	0.500	20.00	0	132	60.4	134				
1,2-Dichloropropane	21.1	0.500	20.00	0	106	62.6	138				
Bromodichloromethane	28.1	0.500	20.00	0	140	59.4	139				S
Dibromomethane	23.2	0.500	20.00	0	116	63.6	139				
cis-1,3-Dichloropropene	24.8	0.500	20.00	0	124	63.8	132				
Toluene	298	1.00	20.00	280.9	85.5	64	139				E
trans-1,3-Dichloropropene	20.5	0.500	20.00	0	102	57.7	125				
1,1,2-Trichloroethane	21.7	0.500	20.00	0	109	59.4	127				
1,3-Dichloropropane	20.9	0.500	20.00	0	104	64.3	135				
Tetrachloroethene (PCE)	18.2	0.500	20.00	0	91.2	50.3	133				
Dibromochloromethane	23.0	0.500	20.00	0	115	61.6	139				
1,2-Dibromoethane (EDB)	22.9	0.200	20.00	0	114	63.2	134				
Chlorobenzene	18.0	0.500	20.00	0	90.2	65.8	134				
1,1,1,2-Tetrachloroethane	15.4	0.500	20.00	0	77.1	65.4	135				
Ethylbenzene	284	1.00	20.00	314.3	-150	64.5	136				SE
m,p-Xylene	1,060	1.00	40.00	1,192	-325	63.3	135				SE
o-Xylene	674	1.00	20.00	736.2	-310	65.4	134				SE
Styrene	69.5	1.00	20.00	0	347	59.1	134				S
Isopropylbenzene	89.4	1.00	20.00	100.6	-55.9	56	147				S
Bromoform	16.3	0.500	20.00	0	81.3	57.7	139				
1,1,2,2-Tetrachloroethane	19.5	0.500	20.00	0	97.4	59.8	146				
n-Propylbenzene	142	1.00	20.00	0	708	57.6	142				S
Bromobenzene	18.0	0.500	20.00	0	90.2	63.6	130				

Work Order: 1509430
CLIENT: Alaska Analytical Laboratory
Project: Seekins Annual 1197-02

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260

Sample ID **1509427-004AMS** SampType: **MS** Units: **µg/L** Prep Date: **10/2/2015** RunNo: **25264**
Client ID: **BATCH** Batch ID: **R25264** Analysis Date: **10/2/2015** SeqNo: **476349**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,3,5-Trimethylbenzene	217	1.00	20.00	250.2	-164	59.9	136				SE
2-Chlorotoluene	39.0	0.500	20.00	0	195	61.7	134				S
4-Chlorotoluene	79.7	0.500	20.00	0	398	58.4	134				S
tert-Butylbenzene	10.6	1.00	20.00	0	53.0	66.8	141				S
1,2,3-Trichloropropane	19.5	0.500	20.00	0	97.4	62.4	129				
1,2,4-Trichlorobenzene	12.0	1.00	20.00	0	59.9	50.9	133				
sec-Butylbenzene	18.9	1.00	20.00	0	94.6	56	146				
4-Isopropyltoluene	17.8	1.00	20.00	12.49	26.7	56.4	136				S
1,3-Dichlorobenzene	13.8	0.500	20.00	0	68.8	58.2	128				
1,4-Dichlorobenzene	16.5	0.500	20.00	0	82.4	60.1	123				
n-Butylbenzene	67.9	1.00	20.00	93.87	-130	54.6	135				SE
1,2-Dichlorobenzene	14.0	0.500	20.00	0	69.9	65.4	133				
1,2-Dibromo-3-chloropropane	54.0	0.500	20.00	0	270	51.8	142				S
1,2,4-Trimethylbenzene	339	1.00	20.00	416.4	-387	63.7	132				SE
Hexachlorobutadiene	5.30	2.00	20.00	0	26.5	58.1	130				S
Naphthalene	388	1.00	20.00	548.6	-803	54.5	132				SE
1,2,3-Trichlorobenzene	13.4	2.00	20.00	0	67.0	57	131				
Surr: Dibromofluoromethane	25.9		25.00		103	45.4	152				
Surr: Toluene-d8	29.8		25.00		119	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	26.6		25.00		106	64.2	128				

NOTES:
S - Spike recovery indicates a possible matrix effect. The method is in control as indicated by the Laboratory Control Sample (LCS).

Fremont Analytical

Sample Log-In Check List

Client Name:	**AAL**	Work Order Number:	**1509430**
Logged by:	**Erica Silva**	Date Received:	**9/30/2015 12:28:00 PM**

Chain of Custody

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

Log In

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

Special Handling (if applicable)

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

Person Notified: _____ Date _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

19. Additional remarks:

Item Information

Item #	Temp °C
Cooler	2.3
Sample	3.2
Temp Blank	1.2

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

CHAIN OF CUSTODY RECORD

Omega COCID 95 | PAGE 1 OF: 1

1509450

Project: SeeKins Annual 1197-02

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

SUB CONTRATOR: Fremont Analytical   COMPANY: Fremont Analytical
ADDRESS: 3600 Fremont Ave
CITY, STATE, ZIP: Seattle, WA 98103
PHONE: (206) 352-3790   FAX: EMAIL:
ACCOUNT #:

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 #	(AAL SAMPLE ID)	Client Sample ID	Bottle Type	MATRIX	DATE COLLECTED	NUMBER OF CONTAINERS	SW8260 Full List
1	1509017-001C	MW-1	VOCHCL	Water	9/28/2015 12:10:00 PM	3	√
2	1509017-002C	MW-2	VOCHCL	Water	9/28/2015 11:15:00 AM	3	√
3	1509017-003C	MW-3	VOCHCL	Water	9/28/2015 2:25:00 PM	3	√
4	1509017-004C	MW-6	VOCHCL	Water	9/28/2015 3:30:00 PM	3	√
5	1509017-005C	MW-7	VOCHCL	Water	9/28/2015 10:20:00 AM	3	√
5	1509017-006C	MW-8	VOCHCL	Water	9/28/2015 12:20:00 PM	3	√
7	1509017-008A	Trip Blank - 8260	VOCHCL	Water		3	√

COMMENTS
Method Preserved Weights
HOT Sample Notation
Additional Sample Descriptions,
etc.

Please use client ID.

Relinquished By: Kelley [signature]	Date: 9/29/2015	Time: 2:08 PM	Accepted By: [signature]	Date: 9.30.15	Time: 12:45
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

TAT: Standard ☑ RUSH Next BD ☐ 2nd BD ☐ 3rd BD ☐
Note: RUSH requests will incur surcharges!

REPORT TRANSMITTAL DESIRED
☐ HARDCOPY (extra cost) ☐ FAX ☑ EMAIL ☐ ONLINE

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

FIELD NOTES

1197-02 9/28/15 Seekins

Time: 945am

WellID: mw-7
DTW: 14.05 ft
Tot: 21.18 ft

7.13 ft x 0.163 gpf = 1.16 gal

3 well x 1.16 gal = 3.48 gal
min to purge

mw-7 primary for
GRO, DRO & VOCs

@ 1020

1197-02 9/28/15 Seekens

Time: 1045a

WellID: mw-2
DTW: 14.06 ft
Total: 24.46 ft

10.20 ft x 0.163 gpf = 1.66 gal

3 well x 1.66 gal = 4.98 gal
min to purge

mw-3 primary for
GRO, DRO, VOCs

@ 1115 pm

1197-02 9/28/15 Seekins

Time: 1130am

Well ID: MW-1
DTW: 13.64 ft
total: 24.61ft
10.97ft x 0.163 gpf = 1.78 gallons

3well x 1.78 gallons = 5.36 purge gal

MW-1 primary for GRO, DRO, VOCs

MW-8 duplicate for GRO, DRO, VOCs

@ 1215 MW-1
@ 1220 MW-8

1197-02 9/28/15 Seekins

Time: 145pm

WellID: MW-3
DTW: 13.05ft
total: 22.60ft
9.55 ft x 0.163 gpf = 1.56 gal

3well x 1.56 gal = 4.67 gal purge

MW-3 primary
GRO, DRO, VOCs

@ 225

1197-02 9/28/15 seekins

Time: 250

Well ID: MW-6
DTW: 13.68ft
TDtal: 22.12ft
8.44 ft x 0.163 = 1.37 gal

3 well volumes x 1.37 gal =

4.13 gal purge

mw-6 primary for
GRO, DRO, VOCs

@ 330

MANN-KENDALL ANALYSIS

MW-1

MANN-KENDALL ANALYSIS OF PLUME: Seekins **Facility No.** **Monitoring Well No.** MW-1 Run by: RCP

	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8	Event 9	Event 10	Sum Row
DRO(ug/L)	5.40	11.00	0.84	3,620.00	1680.00	582	362	260			
Row 1: *Compare to Event 1:*	1	-1	1	1	1	1	1	0	0	5	
Row 2: *Compare to Event 2:*		-1	1	1	1	1	1	0	0	4	
Row 3: *Compare to Event 3:*			1	1	1	1	1	0	0	5	
Row 4: *Compare to Event 4:*				-1	-1	-1	-1	0	0	-4	
Row 5: *Compare to Event 5:*					-1	-1	-1	0	0	-3	
Row 6: *Compare to Event 6:*						-1	-1	0	0	-2	
Row 7: *Compare to Event 7:*							-1	0	0	-1	
Row 8: *Compare to Event 8:*								0	0	0	
Row 9: *Compare to Event 9:*									0	0	
									Mann-Kendal Statistic (S) = Total		4

CONFIDENCE LEVEL CHART

S Value	Total Number of Sampling Events						
	4	5	6	7	8	9	10
0							
1							
2							
3							
4				NO TREND INDICATED			
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15		TREND INDICATED					
16							
17							
18							
19							
>20							

Number of Sampling Events:	8
Mann-Kendall S Value	4
Trend Indicated (Yes/No)?	No
Expanding Plume	
Shrinking Plume	

MANN-KENDALL ANALYSIS OF PLUME: Seekins **Facility No.** **Monitoring Well No.** MW-1 Run by: RCP

	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8	Event 9	Event 10	Sum Row
GRO(ug/L)	180.00	250.00	9,810.00	47,600.00	15500.00	59200	25900	25300			
Row 1: *Compare to Event 1:*	1	1	1	1	1	1	1	0	0	7
Row 2: *Compare to Event 2:*		1	1	1	1	1	1	0	0	6
Row 3: *Compare to Event 3:*			1	1	1	1	1	0	0	5
Row 4: *Compare to Event 4:*				-1	1	-1	-1	0	0	-2
Row 5: *Compare to Event 5:*					1	1	1	0	0	3
Row 6: *Compare to Event 6:*						-1	-1	0	0	-2
Row 7: *Compare to Event 7:*							-1	0	0	-1
Row 8: *Compare to Event 8:*								0	0	0
Row 9: *Compare to Event 9:*									0	0
									Mann-Kendal Statistic (S) = Total		16

CONFIDENCE LEVEL CHART

S Value	Total Number of Sampling Events						
	4	5	6	7	8	9	10
0							
1							
2							
3							
4				NO TREND INDICATED			
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15		TREND INDICATED					
16							
17							
18							
19							
>20							

Number of Sampling Events:	8
Mann-Kendall S Value	16
Trend Indicated (Yes/No)?	Yes
Expanding Plume	Yes
Shrinking Plume	

MANN-KENDALL ANALYSIS OF PLUME: Seekins **Facility No.** **Monitoring Well No.** MW-1 Run by: RCP

	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8	Event 9	Event 10	Sum Row
GRO(ug/L)	9,810.00	47,600.00	15,500.00	59,200.00	25900.00	25300					
Row 1: *Compare to Event 1:*	1	1	1	1	1	0	0	0	0	0	5
Row 2: *Compare to Event 2:*		-1	1	-1	-1	0	0	0	0	0	-2
Row 3: *Compare to Event 3:*			1	1	1	0	0	0	0	0	3
Row 4: *Compare to Event 4:*				-1	-1	0	0	0	0	0	-2
Row 5: *Compare to Event 5:*					-1	0	0	0	0	0	-1
Row 6: *Compare to Event 6:*						0	0	0	0	0	0
Row 7: *Compare to Event 7:*							0	0	0	0	0
Row 8: *Compare to Event 8:*								0	0	0	0
Row 9: *Compare to Event 9:*									0	0	0
										0	0
										Mann-Kendal Statistic (S) = Total	3

CONFIDENCE LEVEL CHART

S Value	Total Number of Sampling Events						
	4	5	6	7	8	9	10
0							
1							
2							
3							
4				NO TREND INDICATED			
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15		TREND INDICATED					
16							
17							
18							
19							
>20							

Number of Sampling Events:	6
Mann-Kendall S Value	3
Trend Indicated (Yes/No)?	Yes
Expanding Plume	Yes
Shrinking Plume	

MANN-KENDALL ANALYSIS OF PLUME: Seekins **Facility No.** **Monitoring Well No.** MW-1 Run by: RCP

	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8	Event 9	Event 10	Sum Row
Benzene(ug/L)	12,000.00	8,500.00	0.00	25.60	6.30	0.001	1.65	1.45			
Row 1: *Compare to Event 1:*	-1	-1	-1	-1	-1	-1	-1	0	0	-7	
Row 2: *Compare to Event 2:*		-1	-1	-1	-1	-1	-1	0	0	-6	
Row 3: *Compare to Event 3:*			1	1	0	1	1	0	0	4	
Row 4: *Compare to Event 4:*				-1	-1	-1	-1	0	0	-4	
Row 5: *Compare to Event 5:*					-1	-1	-1	0	0	-3	
Row 6: *Compare to Event 6:*						1	1	0	0	2	
Row 7: *Compare to Event 7:*							-1	0	0	-1	
Row 8: *Compare to Event 8:*								0	0	0	
Row 9: *Compare to Event 9:*									0	0	
									Mann-Kendal Statistic (S) = Total		-15

CONFIDENCE LEVEL CHART

S Value	Total Number of Sampling Events						
	4	5	6	7	8	9	10
0							
1							
2							
3							
4				NO TREND INDICATED			
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15		TREND INDICATED					
16							
17							
18							
19							
>20							

Number of Sampling Events:	8
Mann-Kendall S Value	-15
Trend Indicated (Yes/No)?	Yes
Expanding Plume	No
Shrinking Plume	Yes

MANN-KENDALL ANALYSIS OF PLUME: Seekins **Facility No.** **Monitoring Well No.** MW-1 Run by: RCP

Ethylbenzene(ug/L)	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8	Event 9	Event 10	Sum Row
	368.00	1,590.00	1,080.00	3,090.00	2130.00	1080	1100				
Row 1: *Compare to Event 1:*	1	1	1	1	1	1	0	0	0	6	
Row 2: *Compare to Event 2:*		-1	1	1	-1	-1	0	0	0	-1	
Row 3: *Compare to Event 3:*			1	1	0	1	0	0	0	3	
Row 4: *Compare to Event 4:*				-1	-1	-1	0	0	0	-3	
Row 5: *Compare to Event 5:*					-1	-1	0	0	0	-2	
Row 6: *Compare to Event 6:*						1	0	0	0	1	
Row 7: *Compare to Event 7:*							0	0	0	0	
Row 8: *Compare to Event 8:*								0	0	0	
Row 9: *Compare to Event 9:*									0	0	
										Mann-Kendal Statistic (S) = Total	4

CONFIDENCE LEVEL CHART

S Value	Total Number of Sampling Events						
	4	5	6	7	8	9	10
0							
1							
2							
3							
4				NO TREND INDICATED			
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15		TREND INDICATED					
16							
17							
18							
19							
>20							

Number of Sampling Events:	7
Mann-Kendall S Value	4
Trend Indicated (Yes/No)?	No
Expanding Plume	
Shrinking Plume	

MANN-KENDALL ANALYSIS OF PLUME: Seekins **Facility No.** **Monitoring Well No.** MW-1 Run by: RCP

	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8	Event 9	Event 10	Sum Row
Xylenes(ug/L)	1,420.00	15,670.00	5,790.00	18,400.00	13400.00	6480	5930				
Row 1: *Compare to Event 1:*	1	1	1	1	1	1	0	0	0	6	
Row 2: *Compare to Event 2:*		-1	1	-1	-1	-1	0	0	0	-3	
Row 3: *Compare to Event 3:*			1	1	1	1	0	0	0	4	
Row 4: *Compare to Event 4:*				-1	-1	-1	0	0	0	-3	
Row 5: *Compare to Event 5:*					-1	-1	0	0	0	-2	
Row 6: *Compare to Event 6:*						-1	0	0	0	-1	
Row 7: *Compare to Event 7:*							0	0	0	0	
Row 8: *Compare to Event 8:*								0	0	0	
Row 9: *Compare to Event 9:*									0	0	
									Mann-Kendal Statistic (S) = Total		1

CONFIDENCE LEVEL CHART

S Value	Total Number of Sampling Events						
	4	5	6	7	8	9	10
0							
1							
2							
3							
4				NO TREND INDICATED			
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15		TREND INDICATED					
16							
17							
18							
19							
>20							

Number of Sampling Events:	7
Mann-Kendall S Value	1
Trend Indicated (Yes/No)?	No
Expanding Plume	
Shrinking Plume	

MANN-KENDALL ANALYSIS OF PLUME: Seekins **Facility No.** **Monitoring Well No.** MW-1 Run by: RCP

Toluene(ug/L)	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8	Event 9	Event 10	Sum Row
	755.00	13,000.00	1,750.00	3,670.00	3410.00	1340	684				
Row 1: *Compare to Event 1:*	1	1	1	1	1	-1	0	0	0	4	
Row 2: *Compare to Event 2:*		-1	-1	-1	-1	-1	0	0	0	-5	
Row 3: *Compare to Event 3:*			1	1	-1	-1	0	0	0	0	
Row 4: *Compare to Event 4:*				-1	-1	-1	0	0	0	-3	
Row 5: *Compare to Event 5:*					-1	-1	0	0	0	-2	
Row 6: *Compare to Event 6:*						-1	0	0	0	-1	
Row 7: *Compare to Event 7:*							0	0	0	0	
Row 8: *Compare to Event 8:*								0	0	0	
Row 9: *Compare to Event 9:*									0	0	
										Mann-Kendal Statistic (S) = Total	-7

CONFIDENCE LEVEL CHART

S Value	Total Number of Sampling Events						
	4	5	6	7	8	9	10
0							
1							
2							
3							
4				NO TREND INDICATED			
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15		TREND INDICATED					
16							
17							
18							
19							
>20							

Number of Sampling Events:	7
Mann-Kendall S Value	-7
Trend Indicated (Yes/No)?	No
Expanding Plume	
Shrinking Plume	

MW-2

MANN-KENDALL ANALYSIS OF PLUME: Seekins **Facility No.** **Monitoring Well No.** MW-2 Run by: RCP

	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8	Event 9	Event 10	Sum Row
PCE(ug/L)	20.00	57.00	2.03	7.00	5.20	4.7	1.3				
Row 1: *Compare to Event 1:*	1	-1	-1	-1	-1	-1	0	0	0	-4	
Row 2: *Compare to Event 2:*		-1	-1	-1	-1	-1	0	0	0	-5	
Row 3: *Compare to Event 3:*			1	1	1	-1	0	0	0	2	
Row 4: *Compare to Event 4:*				-1	-1	-1	0	0	0	-3	
Row 5: *Compare to Event 5:*					-1	-1	0	0	0	-2	
Row 6: *Compare to Event 6:*						-1	0	0	0	-1	
Row 7: *Compare to Event 7:*							0	0	0	0	
Row 8: *Compare to Event 8:*								0	0	0	
Row 9: *Compare to Event 9:*									0	0	

Mann-Kendal Statistic (S) = Total -13

CONFIDENCE LEVEL CHART

S Value	Total Number of Sampling Events						
	4	5	6	7	8	9	10
0							
1							
2							
3							
4				NO TREND INDICATED			
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15		TREND INDICATED					
16							
17							
18							
19							
>20							

Number of Sampling Events:	7
Mann-Kendall S Value	-13
Trend Indicated (Yes/No)?	Yes
Expanding Plume	
Shrinking Plume	Yes

MANN-KENDALL ANALYSIS OF PLUME: Seekins **Facility No.** **Monitoring Well No.** MW-2 Run by: RCP

	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8	Event 9	Event 10	Sum Row
GRO(ug/L)	0.15	0.16	0.00	0.00	0.06	0.001	19.2				
Row 1: *Compare to Event 1:*	1	-1	-1	-1	-1	1	0	0	0	-2	
Row 2: *Compare to Event 2:*		-1	-1	-1	-1	1	0	0	0	-3	
Row 3: *Compare to Event 3:*			0	1	0	1	0	0	0	2	
Row 4: *Compare to Event 4:*				1	0	1	0	0	0	2	
Row 5: *Compare to Event 5:*					-1	1	0	0	0	0	
Row 6: *Compare to Event 6:*						1	0	0	0	1	
Row 7: *Compare to Event 7:*							0	0	0	0	
Row 8: *Compare to Event 8:*								0	0	0	
Row 9: *Compare to Event 9:*									0	0	
										Mann-Kendal Statistic (S) = Total	0

CONFIDENCE LEVEL CHART

S Value	Total Number of Sampling Events						
	4	5	6	7	8	9	10
0							
1							
2							
3							
4				NO TREND INDICATED			
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15		TREND INDICATED					
16							
17							
18							
19							
>20							

Number of Sampling Events:	8
Mann-Kendall S Value	0
Trend Indicated (Yes/No)?	No
Expanding Plume	
Shrinking Plume	

MANN-KENDALL ANALYSIS OF PLUME: Seekins **Facility No.** **Monitoring Well No.** MW-2 Run by: RCP

	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8	Event 9	Event 10	Sum Row
DRO(ug/L)	0.35	3.40	950.00	232.00	0.14	0.217	30.7				
Row 1: *Compare to Event 1:*	1	1	1	-1	-1	1	0	0	0	2	
Row 2: *Compare to Event 2:*		1	1	-1	-1	1	0	0	0	1	
Row 3: *Compare to Event 3:*			-1	-1	-1	-1	0	0	0	-4	
Row 4: *Compare to Event 4:*				-1	-1	-1	0	0	0	-3	
Row 5: *Compare to Event 5:*					1	1	0	0	0	2	
Row 6: *Compare to Event 6:*						1	0	0	0	1	
Row 7: *Compare to Event 7:*							0	0	0	0	
Row 8: *Compare to Event 8:*								0	0	0	
Row 9: *Compare to Event 9:*									0	0	
										Mann-Kendal Statistic (S) = Total	-1

CONFIDENCE LEVEL CHART

S Value	Total Number of Sampling Events						
	4	5	6	7	8	9	10
0							
1							
2							
3							
4				NO TREND INDICATED			
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15		TREND INDICATED					
16							
17							
18							
19							
>20							

Number of Sampling Events:	7
Mann-Kendall S Value	-1
Trend Indicated (Yes/No)?	No
Expanding Plume	
Shrinking Plume	

MW-3

MANN-KENDALL ANALYSIS OF PLUME: Seekins **Facility No.** **Monitoring Well No.** MW-3 Run by: RCP

	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8	Event 9	Event 10	Sum Row
GRO(ug/L)	2.80	0.27	0.00	0.00	0.04	0.0657	34.4	21.5			
Row 1: *Compare to Event 1:*	-1	-1	-1	-1	-1	1	1	0	0	-3	
Row 2: *Compare to Event 2:*		-1	-1	-1	-1	1	1	0	0	-2	
Row 3: *Compare to Event 3:*			0	1	1	1	1	0	0	4	
Row 4: *Compare to Event 4:*				1	1	1	1	0	0	4	
Row 5: *Compare to Event 5:*					1	1	1	0	0	3	
Row 6: *Compare to Event 6:*						1	1	0	0	2	
Row 7: *Compare to Event 7:*							-1	0	0	-1	
Row 8: *Compare to Event 8:*								0	0	0	
Row 9: *Compare to Event 9:*									0	0	

Mann-Kendal Statistic (S) = Total: 7

CONFIDENCE LEVEL CHART

S Value	Total Number of Sampling Events						
	4	5	6	7	8	9	10
0							
1							
2							
3							
4				NO TREND INDICATED			
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15		TREND INDICATED					
16							
17							
18							
19							
>20							

Number of Sampling Events:	8
Mann-Kendall S Value	7
Trend Indicated (Yes/No)?	No
Expanding Plume	
Shrinking Plume	

MANN-KENDALL ANALYSIS OF PLUME: Seekins **Facility No.** **Monitoring Well No.** MW-3 Run by: RCP

	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8	Event 9	Event 10	Sum Row
DRO(ug/L)	13.00	3.60	0.58	995.00	0.17	0.219	118	120			
Row 1: *Compare to Event 1:*	-1	-1	1	-1	-1	1	1	0	0	-1	
Row 2: *Compare to Event 2:*		-1	1	-1	-1	1	1	0	0	0	
Row 3: *Compare to Event 3:*			1	-1	-1	1	1	0	0	1	
Row 4: *Compare to Event 4:*				-1	-1	-1	-1	0	0	-4	
Row 5: *Compare to Event 5:*					1	1	1	0	0	3	
Row 6: *Compare to Event 6:*						1	1	0	0	2	
Row 7: *Compare to Event 7:*							1	0	0	1	
Row 8: *Compare to Event 8:*								0	0	0	
Row 9: *Compare to Event 9:*									0	0	
									Mann-Kendal Statistic (S) = Total		2

CONFIDENCE LEVEL CHART

S Value	Total Number of Sampling Events						
	4	5	6	7	8	9	10
0							
1							
2							
3							
4				NO TREND INDICATED			
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15		TREND INDICATED					
16							
17							
18							
19							
>20							

Number of Sampling Events:	8
Mann-Kendall S Value	2
Trend Indicated (Yes/No)?	No
Expanding Plume	
Shrinking Plume	

MW-6

MANN-KENDALL ANALYSIS OF PLUME: Seekins **Facility No.** **Monitoring Well No.** MW-6 Run by: RCP

	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8	Event 9	Event 10	Sum Row
GRO(ug/L)	0.00	0.00	0.00	0.00	0.35	0.001	10.8				
Row 1: *Compare to Event 1:*	0	0	0	1	0	1	0	0	0	2	
Row 2: *Compare to Event 2:*		0	0	1	0	1	0	0	0	2	
Row 3: *Compare to Event 3:*			0	1	0	1	0	0	0	2	
Row 4: *Compare to Event 4:*				1	0	1	0	0	0	2	
Row 5: *Compare to Event 5:*					-1	1	0	0	0	0	
Row 6: *Compare to Event 6:*						1	0	0	0	1	
Row 7: *Compare to Event 7:*							0	0	0	0	
Row 8: *Compare to Event 8:*								0	0	0	
Row 9: *Compare to Event 9:*									0	0	
										Mann-Kendal Statistic (S) = Total	9

CONFIDENCE LEVEL CHART

S Value	Total Number of Sampling Events						
	4	5	6	7	8	9	10
0							
1							
2							
3							
4				NO TREND INDICATED			
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15		TREND INDICATED					
16							
17							
18							
19							
>20							

Number of Sampling Events:	8
Mann-Kendall S Value	9
Trend Indicated (Yes/No)?	No
Expanding Plume	
Shrinking Plume	

MANN-KENDALL ANALYSIS OF PLUME: Seekins **Facility No.** **Monitoring Well No.** MW-6 Run by: RCP

	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8	Event 9	Event 10	Sum Row
DRO(ug/L)	0.56	0.00	348.00	0.00	0.02	0.0638	0.001	0.001			
Row 1: *Compare to Event 1:*	-1	1	-1	-1	-1	-1	-1	0	0	-5	
Row 2: *Compare to Event 2:*		1	0	1	1	0	0	0	0	3	
Row 3: *Compare to Event 3:*			-1	-1	-1	-1	-1	0	0	-5	
Row 4: *Compare to Event 4:*				1	1	0	0	0	0	2	
Row 5: *Compare to Event 5:*					1	-1	-1	0	0	-1	
Row 6: *Compare to Event 6:*						-1	-1	0	0	-2	
Row 7: *Compare to Event 7:*							0	0	0	0	
Row 8: *Compare to Event 8:*								0	0	0	
Row 9: *Compare to Event 9:*									0	0	
									Mann-Kendal Statistic (S) = Total		-8

CONFIDENCE LEVEL CHART

S Value	Total Number of Sampling Events						
	4	5	6	7	8	9	10
0							
1							
2							
3							
4				NO TREND INDICATED			
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15		TREND INDICATED					
16							
17							
18							
19							
>20							

Number of Sampling Events:	8
Mann-Kendall S Value	-8
Trend Indicated (Yes/No)?	No
Expanding Plume	
Shrinking Plume	

MW-7

MANN-KENDALL ANALYSIS OF PLUME: Seekins **Facility No.** **Monitoring Well No.** MW-7 Run by: RCP

	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8	Event 9	Event 10	Sum Row
GRO(ug/L)	0.00	0.00	0.03	0.00	20.10	0.001					
Row 1: *Compare to Event 1:*	0	1	0	1	0	0	0	0	0	0	2
Row 2: *Compare to Event 2:*		1	0	1	0	0	0	0	0	0	2
Row 3: *Compare to Event 3:*			-1	1	-1	0	0	0	0	0	-1
Row 4: *Compare to Event 4:*				1	0	0	0	0	0	0	1
Row 5: *Compare to Event 5:*					-1	0	0	0	0	0	-1
Row 6: *Compare to Event 6:*						0	0	0	0	0	0
Row 7: *Compare to Event 7:*							0	0	0	0	0
Row 8: *Compare to Event 8:*								0	0	0	0
Row 9: *Compare to Event 9:*									0	0	0
										0	0
Mann-Kendal Statistic (S) = Total											3

CONFIDENCE LEVEL CHART

S Value	Total Number of Sampling Events						
	4	5	6	7	8	9	10
0							
1							
2							
3							
4				NO TREND INDICATED			
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15		TREND INDICATED					
16							
17							
18							
19							
>20							

Number of Sampling Events:	6
Mann-Kendall S Value	3
Trend Indicated (Yes/No)?	No
Expanding Plume	
Shrinking Plume	

MANN-KENDALL ANALYSIS OF PLUME: Seekins | **Facility No.** | **Monitoring Well No.** MW-7 | Run by: RCP

DRO(ug/L)	Event 1	Event 2	Event 3	Event 4	Event 5	Event 6	Event 7	Event 8	Event 9	Event 10	Sum Row
	0.30	326.00	0.00	0.05	0.00	24.5					
Row 1: *Compare to Event 1:*		1	-1	-1	-1	1	0	0	0	0	-1
Row 2: *Compare to Event 2:*			-1	-1	-1	-1	0	0	0	0	-4
Row 3: *Compare to Event 3:*				1	0	1	0	0	0	0	2
Row 4: *Compare to Event 4:*					-1	1	0	0	0	0	0
Row 5: *Compare to Event 5:*						1	0	0	0	0	1
Row 6: *Compare to Event 6:*							0	0	0	0	0
Row 7: *Compare to Event 7:*								0	0	0	0
Row 8: *Compare to Event 8:*									0	0	0
Row 9: *Compare to Event 9:*										0	0
									Mann-Kendal Statistic (S) = Total		-2

CONFIDENCE LEVEL CHART

S Value	Total Number of Sampling Events						
	4	5	6	7	8	9	10
0							
1							
2							
3							
4				NO TREND INDICATED			
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15		TREND INDICATED					
16							
17							
18							
19							
>20							

Number of Sampling Events:	6
Mann-Kendall S Value	-2
Trend Indicated (Yes/No)?	No
Expanding Plume	
Shrinking Plume	

2008 CONCEPTUAL SITE MODEL

FILE COPY

Travis/Peterson
Environmental Consulting, Inc.

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November 21, 2008
1197-02

Alaska Department of Environmental Conservation
610 University Avenue
Fairbanks, Alaska 99709

Attention: **Tamara Cardona-Marek, PhD., Environmental Specialist**

Re: Conceptual Site Model for ADEC File No. 100.38.097

Dear Dr. Marek:

Travis/Peterson Environmental Consulting, Inc. (TPECI) presents the following updated Conceptual Site Model (CSM) for the Seekins Ford-Lincoln-Mercury dealership located at 1625 Seekins Drive, Fairbanks, Alaska. The attached documentation includes a completed CSM scoping form and documentation of the environmental cleanup actions completed at the site. TPECI personnel indicated that most of the exposure pathways have been rendered incomplete due to past remediation activities.

SOIL PATHWAY- COMPLETE
TPECI considers the direct contact - incidental soil ingestion pathway complete because there may be residual soil contamination underneath the building relating to former USTs located along the east side of the building. This pathway would only be complete once the current operations at the site become disturbed or altered. If the existing building is torn down and soil is excavated then the potential for exposure could exist.

GROUNDWATER PATHWAY- INCOMPLETE
The site is supplied with municipal drinking water and the groundwater at the site is not used as a domestic water source.

AIR QUALITY PATHWAY - INCOMPLETE
The inhalation of indoor air pathway is not considered complete even though there are detected contaminants in the groundwater. Larry Peterson of TPECI contacted Ralph Seekins on August 29, 2008 to discuss the status of ventilation within the building. Mr. Seekins confirmed that there is positive pressure in the showroom and administrative offices. There is also an exhaust ventilation system that runs underneath the maintenance shop to ventilate that area and it remains on while the shop is being used. Toxic vapor buildup in either of these locations is unlikely.

If you have any questions or regarding the contents of this documentation please contact me at 907-455-7225.

Sincerely,

Melissa S. Shippey

Mélissa S. Shippey
Staff Scientist

cc: Mr. Al Haynes, Seekins Ford-Lincoln-Mercury, Inc.

Attachments: Conceptual Site Model Scoping Form
Site Environmental History Documentation

DRAFT Human Health Conceptual Site Model Scoping Form

Site Name:	Seekins Ford-Lincoln-Mercury
File Number:	100.38.097
Completed by:	Travis/Peterson Environmental Consulting, Inc.

Introduction
The form should be used to reach agreement with the Alaska Department of Environmental Conservation (DEC) about which exposure pathways should be further investigated during site characterization. From this information, a CSM graphic and text must be submitted with the site characterization work plan.

General Instructions: Follow the italicized instructions in each section below.

1. *General Information:*

Sources *(check potential sources at the site)*

- ☐ USTs
- ☐ ASTs
- ☐ Dispensers/fuel loading racks
- ☐ Drums
- ☐ Vehicles
- ☐ Landfills
- ☐ Transformers
- ☑ Other: Former injection well

Release Mechanisms *(check potential release mechanisms at the site)*

- ☐ Spills
- ☐ Leaks
- ☑ Direct discharge
- ☐ Burning
- ☐ Other:

Impacted Media *(check potentially-impacted media at the site)*

- ☐ Surface soil (0-2 feet bgs*)
- ☑ Subsurface Soil (>2 feet bgs)
- ☐ Air
- ☑ Groundwater
- ☐ Surface water
- ☐ Other:

Receptors *(check receptors that could be affected by contamination at the site)*

- ☐ Residents (adult or child)
- ☐ Commercial or industrial worker
- ☐ Construction worker
- ☐ Site visitor
- ☐ Trespasser
- ☐ Recreational user
- ☐ Farmer
- ☐ Subsistence harvester
- ☐ Subsistence consumer
- ☑ Other: Subsurface work

* bgs – below ground surface

2. ***Exposure Pathways:*** *(The answers to the following questions will identify complete exposure pathways at the site. Place an "X" in each checkbox where the answer is "yes".)*

a) Direct Contact –

1 Incidental Soil Ingestion

Is soil contaminated anywhere between 0 and 15 feet bgs? ☑

Possibly some residual underneath the building.

Do people use the site or is there a chance they will use the site in the future? ☑

If both boxes are checked, label this pathway complete: Complete

2 Dermal Absorption of Contaminants from Soil

Is soil contaminated anywhere between 0 and 15 feet bgs? ☑

Do people use the site or is there a chance they will use the site in the future? ☑

Can the soil contaminants (see list below) permeate the skin? ☑

Arsenic	DDT
Cadmium	Lindane
Chlordane	PAHs
2,4-dichlorophenoxyacetic acid	Pentachlorophenol
Dioxins	PCBs
DDT	SVOCs
Lindane	

If all of the boxes are checked, label this pathway complete: Complete

b) Ingestion –

1 Ingestion of Groundwater

Have contaminants been detected or are they expected to be detected in the groundwater, OR are contaminants expected to migrate to groundwater in the future? ☑

Could the potentially affected groundwater be used as a current or future drinking water source? *Please note, only leave the box unchecked if ADEC has determined the groundwater is not a currently or reasonably expected future source of drinking water according to 18 AAC 75.346.* ☐

If both the boxes are checked, label this pathway complete: No - on city water.

2 Ingestion of Surface Water

Have contaminants been detected or are they expected to be detected in surface water OR are contaminants expected to migrate to surface water in the future? ☐ No

Could potentially affected surface water bodies be used, currently or in the future, as a drinking water source? *Consider both public water systems and private use (i.e., during residential, recreational or subsistence activities).* ☐ No

If both boxes are checked, label this pathway complete: Incomplete

3 Ingestion of Wild Foods

Is the site in an area that is used or reasonably could be used for hunting, fishing, or harvesting of wild food? ☐ No

Do the site contaminants have the potential to bioaccumulate (*see* Appendix A of the CSM Guidance)? ☐ No

Are site contaminants located where they would have the potential to be taken up into biota? (i.e. the top 6 feet of soil, in groundwater that **could** be connected to surface water, etc.) ☐ No

If all of the boxes are checked, label this pathway complete: Incomplete

c) Inhalation

1 Outdoor Air

Is soil contaminated anywhere between 0 and 15 feet bgs? ☐ No
Soil contaminants removed in 1994 by AGRA

Do people use the site or is there a chance they will use the site in the future? Yes

Are the contaminants in soil volatile (*See Appendix B, Table B-1 of the CSM Guidance*)? ☑

If all of the boxes are checked, label this pathway complete: Incomplete

2 Indoor Air

Are occupied buildings on the site or reasonably expected to be placed on the site in an area that could be affected by contaminant vapors? (i.e., within 100 feet, horizontally or vertically, of the contaminated soil or groundwater, or subject to "preferential pathways" that promote easy airflow, like utility conduits or rock fractures) ☑

Are volatile compounds present in soil or groundwater? ☑

If both boxes are checked, label this pathway complete: Complete

2008 groundwater data indicated DRO, GRO, benzene still above MCLs. However, concentrations have been reduced dramatically since sampling began in 1995.

3. Additional Exposure Pathways: *(Although there are no definitive questions provided in this section, these exposure pathways should also be considered at each site. Use the guidelines provided below to determine if further evaluation of each pathway is warranted.)*

Dermal Exposure to Contaminants in Groundwater and Surface Water

Exposure from this pathway may need to be assessed only in cases where DEC water-quality or drinking-water standards are not being applied as cleanup levels. Examples of conditions that may warrant further investigation include:

- Climate permits recreational use of waters for swimming,
- Climate permits exposure to groundwater during activities, such as construction, without protective clothing, or
- Groundwater or surface water is used for household purposes.

Check the box if further evaluation of this pathway is needed: ☐
Comments:

N/A

Inhalation of Volatile Compounds in Household Water

Exposure from this pathway may need to be assessed only in cases where DEC water-quality or drinking-water standards are not being applied as cleanup levels. Examples of conditions that may warrant further investigation include:

- The contaminated water is used for household purposes such as showering, laundering, and dish washing, and
- The contaminants of concern are volatile (common volatile contaminants are listed in Table B-1 of Appendix B)

Check the box if further evaluation of this pathway is needed: ☐
Comments:

N/A

Inhalation of Fugitive Dust

Generally DEC soil ingestion cleanup levels in Table B1 of 18 AAC 75 are protective of this pathway, although this is not true in the case of chromium. Examples of conditions that may warrant further investigation include:

- Nonvolatile compounds are found in the top 2 centimeters of soil. The top 2 centimeters of soil are likely to be dispersed in the wind as dust particles.
- Dust particles are less than 10 micrometers. This size can be inhaled and would be of concern for determining if this pathway is complete.

Check the box if further evaluation of this pathway is needed: ☐

Comments:

N/A

Direct Contact with Sediment

This pathway involves people's hands being exposed to sediment, such as during recreational or some types of subsistence activities. People then incidently **ingest** sediment from normal hand-to-mouth activities. In addition, **dermal absorption of contaminants** may be of concern if people come in contact with sediment and the contaminants are able to permeate the skin (see dermal exposure to soil section). This type of exposure is rare but it should be investigated if:

- Climate permits recreational activities around sediment, and/or
- Community has identified subsistence or recreational activities that would result in exposure to the sediment, such as clam digging.

ADEC soil ingestion cleanup levels are protective of direct contact with sediment. If they are determined to be over-protective for sediment exposure at a particular site, other screening levels could be adopted or developed.

Check the box if further evaluation of this pathway is needed: ☐

Comments:

N/A

4. Other Comments *(Provide other comments as necessary to support the information provided in this form.)*

PHASE I ENVIRONMENTAL SITE ASSESSMENT
Seekins Ford Lincoln Mercury, Inc.
1625 Old Steese Highway
Fairbanks, Alaska 99701

Performed for:
Ford Motor Credit Company
3201 C Street, Suite 303
Anchorage, Alaska 99503

December 31, 2004
URS Project No. 13648135

3.0 SITE HISTORY

3.1 Prior Site Ownership

The *Phase I Environmental Site Assessment* report, prepared for the subject property by AGRA Earth and Environment, Inc. (AGRA) and dated April 1996, included a fifty-year chain-of-title document. The chain-of-title document was prepared by Milliken Michaels Credit Services and dated March 6, 1996. According to the chain-of-title document, HT Bentley purchased the subject property from Charles Main, Executor of the Estate of John Munz (deceased), on September 16, 1930. The Bentley Family quit claimed the subject property's deed to the Bank of California, N.A. and Clifford C. Burglin (as Successor Co-Trustees of the Bentley Family Trust) on September 6, 1974. The Bank of California, N.A. and Clifford C. Burglin sold the subject property to C&S Enterprises on November 18, 1982. According to Mr. Haynes, C&S Enterprises currently owns the subject property and leases it to Seekins Ford Lincoln Mercury, Inc.

3.2 Prior Site Usage

URS reviewed a portion of *Soil and Foundation Study*, prepared for the subject property by Shannon & Wilson, dated May 1982. According to Shannon & Wilson's report, the subject property was originally part of the Bentley farm and was utilized as cleared pasture for cattle.

AGRA prepared an addendum to its *Phase I Environmental Site Assessment* report, dated May 21, 1996. As part of AGRA's research, AGRA interviewed Mr. Sidmor Stealy who served in the U.S. military during the late 1940s. Mr. Stealy stated that the subject property and eastern adjoining property were utilized by the military for dumping chemicals and other materials. Mr. Stealy also stated that he personally dumped several 55-gallon drums of carbon tetrachlorothene at the subject property. A buried 55-gallon drum was discovered during Shannon & Wilson's *Soil and Foundation Study* near the central portion of the current location of the showroom and office area. This drum was excavated, but no confirmatory sampling was conducted. Historical aerial photographs indicate that the military may have utilized this property until as recently as 1969.

According to the Phase I Environmental Site Assessment, prepared by AGRA and dated April 1996, the subject property was occupied by Northwest Construction from 1975 through 1979. Additional occupants at the subject property during this time may have included Surfcote, NC Machinery, British Petroleum, and Mukluk Freight Company. Information contained in Shannon

& Wilson's report indicated that Trans Alaskan Pipeline occupied the subject property between 1975 and 1979. Both AGRA's and Shannon & Wilson's reports stated that operations at the subject property during this time included vehicle maintenance and repair for heavy equipment. AGRA interviewed an individual (name not reported) who stated that used oil generated at the subject property between 1975 and 1979 was drained onto the ground. The specific location where this oil was allegedly drained was not indicated.

The subject property was developed with an automobile dealership in 1982 and is currently operating as an automobile dealership.

3.2.1 Historical Aerial Photographs

URS obtained historical aerial photographs of the subject property and its vicinity from the City of Fairbanks Engineering Department, a *Phase I Environmental Site Assessment* report, prepared for the subject property by AGRA and dated April 1996, and from TerraServer 6.0, an online mapping resource. The historical aerial photograph dated 1959 was provided by the City of Fairbanks Engineering Department. Copies of the historical aerial photographs dated 1960, 1969, 1976, 1982, 1984 and 1994 were provided in the previous environmental assessment. The 1996 aerial photograph was obtained from TerraServer 6.0. In addition, AGRA described 1954, 1972, 1974, 1979, and 1989 aerial photographs in its environmental report, but did not include copies of them in the appendices. Descriptions of each aerial photograph are summarized as follows:

1954

According to AGRA's description of the 1954 aerial photograph, portions of the subject property and its eastern adjoining property contained a 20-acre clearing. Mr. Haynes reported to AGRA that this clearing was used by the military, possibly as a munitions dump. The subject property was also reportedly improved with a building that overlapped the southwest edge of this clearing. A dirt track was evident traversing the clearing from Steese Highway to a small building or trailer situated adjacent to a cone-shaped mound in the southeastern portion of the clearing.

The western adjoining property appeared to be improved with a race track. AGRA interviewed Fairbanks residents who stated that this race track was formerly known as Rendezvous Racing and was used for automobile racing. A small building consistent with the size of a residence and several scattered outbuildings were described as being located in a clearing south of the race track.

4.0 ENVIRONMENTAL CONSIDERATIONS

4.1 Water Supply

According to Mr. Haynes, potable water is supplied to the subject property by Golden Heart Utilities.

AGRA prepared a *Water Well Inventory* report for the subject property and properties located within a 0.5-mile radius of the subject property, dated April 1996. AGRA identified three potable water wells formerly utilized at the subject property. Two wells were reportedly utilized at the subject property between 1975 and 1978 and supplied offices and a repair shop formerly associated with the Trans Alaskan Pipeline operations. The report did not indicate if these wells were properly abandoned.

The third well reportedly utilized at the subject property supplied the subject building. Mr. Haynes stated that this well was installed in 1982 when the subject property was developed as an automotive dealership. According to Mr. Haynes, this well was abandoned and the subject property was connected to the municipal potable water supply in 1989.

AGRA identified five potable water wells within a 0.5-mile radius of the subject property that were located crossgradient to the subject property and three potable water wells that were located downgradient to the subject property.

In addition, AGRA reported that Mr. Haynes stated that the eastern adjoining churches utilized potable water wells. Drinking water in these wells was allegedly impacted by an offsite groundwater plume originating from the Fort Wainwright Tank Farm located northeast of the subject property. Additional information regarding the Fort Wainwright Tank Farm is provided in Section 6.4 of this report.

4.2 Wastewater

Domestic sewerage from the subject building is discharged to the municipal sanitary sewer operated by Golden Heart Utilities. According to AGRA's *Results of Injection Wells Closure Sampling* report dated 1995, the subject property was connected to the municipal sewer system in 1994.

Wastewater currently generated in the subject building is limited to floor and automobile washwater and snow melt. The service garage, body shop and detailing area are equipped with trench-style floor drains. The floor drains discharge to an oil-water separator located in the service garage. Standing liquid observed in the trench-style drains had an oily sheen and sludge was apparent. Information regarding the oil-water separator is provided in Section 4.2.1 of this report.

Mr. Haynes stated that the subject property formerly utilized a septic system and a Class V injection well. The septic system was removed on August 31, 1994 and the injection well and associated leach field were removed in October 1994. Information regarding the septic system and injection well with its associated leach field is provided in Section 4.2.2 of this report.

4.2.1 Oil-Water Separators

At the time of the site reconnaissance, URS observed one oil-water separator at the subject property. The oil-water separator was centrally located in the service garage of the subject building. According to City of Fairbanks Building Department records, the oil-water separator was installed and connected to the municipal sanitary sewer system on July 5, 1994. The oil-water separator is of double-chamber steel construction and has an approximate capacity of 500-gallons. Mr. Haynes stated that the oil-water separator discharges to the municipal sanitary sewer system. Onsite documentation reports that the oil-water separator is inspected by Golden Heart Utilities monthly and the contents are emptied once every two to three years, as needed. The contents of the oil-water separator were most recently emptied on February 15, 2003. According to Mr. Haynes, the sludge collected in the trench-style floor drains is emptied two to three times per year, as needed, and more often for the drain in the automotive washing and detailing area. The sludge from the floor drains was most recently emptied on November 16, 2004.

4.2.2 Septic Systems

Domestic sewerage generated at the subject property is discharged to the municipal sanitary sewer system operated by Golden Heart Utilities. According to AGRA's *Results of Injection Wells Closure Sampling* report, the subject property was connected to the municipal sewer system in 1994.

Mr. Haynes stated that the subject property formerly utilized a septic system and a Class V injection well. The septic system was installed in 1982 when the subject property was developed as an automotive dealership. According to AGRA's *UST Closure Site Assessment*, a septic tank was removed on August 31, 1994.

AGRA's *Results of Injection Wells Closure Sampling* report stated that one Class V injection well and associated leach field were excavated from the subject property in October 1994. The injection well and associated leach field included one 2,000-gallon septic tank and two three-foot-by-three-foot septic cribs. The injection well and associated leach field accepted drainage from service garage floor drains until these drains were redirected to the municipal sanitary sewer system in August 1994.

According to AGRA's *Phase I Environmental Site Assessment* report, AGRA interviewed Mr. Ralph Seekins. Mr. R. Seekins stated that an injection well was also installed with the previous development of the subject property and may still be present at the subject property. Mr. R. Seekins did not know the exact location of the said injection well, but he believed that it was installed east of the current location of the subject building and south of the closed injection well. AGRA's review of Fairbanks North Star Borough Assessing Department records indicated that a septic system was associated with the previous development of the subject property, but it was not clear from these records whether a separate injection well was also present on the subject property.

Additional information regarding the septic tank and the injection well and associated leach field is provided in Section 6.7 of this report.

4.2.3 Cesspools and Dry Wells

URS did not observe cesspools or dry wells at the subject property at the time of the site reconnaissance.

4.2.4 Pits and Sumps

URS did not observe sumps at the subject property at the time of the site reconnaissance. URS observed one pit in the service garage of the subject building. The pit was approximately four feet below ground surface (bgs), and was utilized as an automobile alignment work station. URS

- ADEC Leaking Underground Storage Tank Information System (LUST), database of September 13, 2004.
- ADEC Underground Storage Tank Facilities (UST), database of September 13, 2004.
- ADEC Underground Storage Tanks on Indian Land (INDIAN UST), database of June 23, 2004.
- ADEC Voluntary Cleanup Program sites (VCP), database of September 13, 2004.

The results of the database review are as follows:

6.2 On-Site

Seekins Ford Lincoln Mercury, located at 1625 Old Steese Highway, was identified by the EDR-Radius Map report in the RCRA-SQG and UST databases. The subject property is registered as a conditionally exempt small quantity generator of hazardous waste. Twelve administrative RCRA violations were issued on September 20, 1991 and these were corrected on July 20, 1992. Eight administrative RCRA violations were issued on July 7, 1998 and these were corrected on September 14, 1998. One violation was issued on June 26, 2003 and this violation was corrected on October 6, 2003.

According to the EDR-Radius Map report, four USTs are permanently out-of-use at the subject property, and one UST in currently in use. Information from the ADEC, however, indicates that four USTs have been removed from the subject property and one UST in currently in use. The USTs were removed in August 1994 and included: one 5,000-gallon UST containing gasoline, one 2,000-gallon UST containing diesel fuel, and two 500-gallon USTs containing used oil. ADEC records indicate one 500-gallon UST containing heating oil is currently in use at the subject property. All of the USTs were installed in September 1982.

According to the ADEC UST database, a confirmed release was reported at the subject property on September 22, 1995. This LUST has not been granted closure status by the ADEC.

6.3 Adjacent Properties

The EDR-Radius Map report did not identify the adjoining properties in the databases researched.

- *Subsurface Investigation*, prepared for the subject property by AGRA and dated December 1995.

- *Phase I Environmental Site Assessment*, prepared for the subject property by AGRA and dated April 1996. A portion of *Remedial Investigation Report*, prepared for Fort Wainwright Tank Farm by Ecology and Environment and dated March 1994, was included as an appendix to the *Phase I Environmental Site Assessment*. AGRA prepared an addendum letter to the *Phase I Environmental Site Assessment* dated May 21, 1996.

- *Water Well Inventory*, prepared for the subject property by AGRA and dated April 1996.

- *Quarterly Groundwater Sampling Results*, prepared for the subject property by AGRA and dated May 1996.

UST Closure Site Assessment

According to AGRA's *UST Closure Site Assessment*, four USTs were installed at the subject property in 1982 and were removed from two excavation basins on August 31, 1994. Two 500-gallon USTs that contained used oil were removed from an excavation basin located east of the service garage of the subject building. A total of 115 cubic yards of impacted soil were removed from the used-oil USTs excavation basin. Four soil samples were collected from 12 feet bgs and analyzed for benzene, total benzene, toluene, ethylbenzene, and xylenes (BTEX), gasoline-range petroleum hydrocarbons (GRPH), diesel-range petroleum hydrocarbons (DRPH), halogenated volatile organic compounds (HVOs), arsenic, cadmium, chromium, and lead. Benzene, total BTEX, GRPH, DRPH, and HVOs were not detected in three of the four soil samples. Benzene was not detected in the fourth soil sample, but concentrations of total BTEX, GRPH, and DRPH detected in the fourth soil sample were 15.28 mg/kg, 250 mg/kg, and 860 mg/kg, respectively. The HVOs detected in this soil sample were tetrachloroethene and 1,1,1-trichloroethane at concentrations of 11 mg/kg and 0.46 mg/kg, respectively. ADEC soil clean-up criteria for benzene is 0.1 mg/kg, total BTEX is 10 mg/kg, GRPH is 50 mg/kg, DRPH is 100 mg/kg, tetrachloroethene is 6.0 mg/kg, and 1,1,1-trichloroethane is 5.6 mg/kg. Metals concentrations detected in the four samples ranged were 2 mg/kg for arsenic, between 0.2 mg/kg and 0.4 mg/kg for cadmium, between 5.7 mg/kg and 11 mg/kg for chromium, and between 3 mg/kg and 4 mg/kg for lead.

An additional soil sample was collected 4.5 feet beneath the soil sample in which BTEX, GRPH, DRPH, and HVOs were detected at the groundwater interface. This additional soil sample was

analyzed for benzene, total BTEX, GRPH, DRPH, HVOs, arsenic, cadmium, chromium, and lead. Benzene, total BTEX, and GRPH were not detected in this additional soil sample. Elevated concentrations of DRPH (290 mg/kg) were detected in this additional soil sample. The only HVO detected was tetrachloroethene at a concentration of 0.25 mg/kg (*i.e.*, below ADEC soil clean-up criteria). Concentrations of arsenic, cadmium, chromium, and lead were detected at 11 mg/kg, 0.1 mg/kg, 3.5 mg/kg, and 2 mg/kg, respectively.

One 5,000-gallon gasoline UST, one 2,000-gallon diesel UST; and a septic tank were removed from a second UST excavation basin located east of the administrative offices of the subject building. Approximately 1,000 cubic yards of impacted soil were removed from the second excavation basin. Floor soil samples from this excavation basin were collected at 16 feet bgs and sidewall soil samples were collected between 12 feet bgs and 14 feet bgs. Soil samples were analyzed for benzene, total BTEX, GRPH, and DRPH. Concentrations of these compounds ranged from 0.1 mg/kg to 9.7 mg/kg for benzene, 0.16 mg/kg to 1,147.7 mg/kg for total BTEX, non-detectable levels to 4,600 mg/kg for GRPH, and non-detectable levels to 860 mg/kg for DRPH. Three soil samples were collected from stockpiled soils removed from the excavation and analyzed for lead. Lead concentrations ranged from 5 mg/kg to 12 mg/kg in these soil samples.

Although groundwater was encountered at 17 feet bgs during the UST removals and confirmatory sampling, no groundwater samples were collected.

Results of Injection Wells Closure Sampling

According to AGRA's *Results of Injection Wells Closure Sampling* report, one Class V injection well and associated leach field were excavated from the subject property in October 1994. The injection well and associated leach field included one 2,000-gallon septic tank and two three-foot-by-three-foot septic cribs that were located east of the used-oil USTs excavation basin. The injection well and associated leach field accepted drainage from service garage floor drains until these drains were redirected to the municipal sanitary sewer system in August 1994.

A total of 925 cubic yards of impacted soils were removed from the injection well and associated leach field excavation basin. Two floor soil samples and one sidewall soil sample were collected near the septic tank and four floor soil samples and two sidewall soil samples were collected near the septic cribs. These soil samples were analyzed for benzene, total BTEX, GRPH, DRPH, HVOs, arsenic, cadmium, chromium, and lead. Benzene was not detected in the soil samples. Maximum concentrations of total BTEX, GRPH, and DRPH detected were 0.034 mg/kg, 3

mg/kg, and 19 mg/kg, respectively. The only HVO detect was 1,2-dichlorobenzene; the maximum concentration detected of this HVO was 0.044 mg/kg. ADEC soil clean-up criteria for 1,2-dichlorobenzene is 6.2 mg/kg. Maximum concentrations of arsenic, cadmium, chromium, and lead detected in the soil samples were 1.5 mg/kg, 2 mg/kg, 5.3 mg/kg, and 5 mg/kg.

AGRA stated that because concentrations of analytes detected in soil samples were below ADEC criteria, groundwater was not likely to be impacted. Therefore, groundwater samples were not collected.

Subsurface Investigation

AGRA conducted a subsurface investigation at the subject property between July 17 and August 1, 1995 to assess potential groundwater impacts, delineate impacts in the UST excavation basins and the injection well with its associated leach field excavation, and evaluate if the subsurface conditions at the subject property were affected by offsite sources. The findings of this investigation were summarized in a report, *Subsurface Investigation*, prepared by AGRA and dated December 1995.

Seven soil borings were advanced at the subject property; four of these borings were advanced to depths of 25 feet bgs and were converted to permanent monitoring wells. The permanent monitoring wells were located in the former gasoline UST and diesel UST excavation basin, former used oil USTs excavation basin, the former injection well with its associated leach field excavation, and along the eastern property boundary northeast of the former gasoline UST and diesel UST excavation basin (MW-1 through MW-4, respectively). Three of the borings were advanced to depths of 18 feet bgs and were converted to temporary monitoring wells. The temporary monitoring wells were located west of the service write-up area and north of the parts department; southwest of the corner of the automotive washing and detailing area, and south of the central portion of the body shop (GWP-1 through GWP-3).

Soil and groundwater samples were collected from the soil borings/monitoring wells. Samples collected from MW-1, GWP-1 and GWP-2 were analyzed for benzene, total BTEX, GRPH, and DRPH. Concentrations of benzene, total BTEX, GRPH, and DRPH detected in soil samples were below ADEC soil clean-up criteria. In the groundwater sample collected from MW-1, detected concentrations of benzene were 12,000 µg/L, of total BTEX were 71,300 µg/L, of GRPH were 180,000 µg/L, and of DRPH were 5,400 µg/L. In the groundwater sample collected from GWP-1, detected concentrations of benzene were 1,500 µg/L, of total BTEX were 1,722

µg/L, of GRPH were 4,000 µg/L, and of DRPH were 190 µg/L. Benzene, total BTEX, GRPH, and DRPH were not detected in the groundwater sample collected from GWP-2.

Samples collected from MW-2 were analyzed for benzene, total BTEX, GRPH, DRPH, total petroleum hydrocarbons (TPH), HVOs, volatile organic compounds (VOCs) total arsenic, cadmium, chromium, and lead; in addition, the soil sample collected from MW-2 was analyzed for toxic characteristic leaching procedure (TCLP) tetrachlororethene. Benzene, total BTEX, GRPH, DRPH, TPH, HVOs, arsenic, lead, and TCLP tetrachloroethene were not detected in the soil sample collected from MW-2. Cadmium and chromium were detected in soil at concentrations of 0.5 mg/kg and 12 mg/kg. Benzene, TPH, HVOs, and metals were not detected in the groundwater sample collected from MW-2. In the groundwater sample collected from MW-2, detected concentrations of total BTEX were 6.8 µg/L, of GRPH were 150 µg/L, and of DRPH were 350 µg/L. Concentrations of VOCs detected in the groundwater sample collected from MW-2 were limited to 6.3 µg/L of trichlorofluoromethane, 57 µg/L of 1,1,1-trichloroethane, 8.2 µg/L of carbon tetrachloride, and 20 µg/L of tetrachloroethene.

Samples collected from MW-3 and GWP-3 were analyzed for TCLP benzene, GRPH, DRPH, TPH, HVOs, and TCLP arsenic, cadmium, chromium, and lead. TCLP benzene, GRPH, and TCLP metals were not detected in the soil samples collected from MW-3 and GWP-3. DRPH was not detected in the soil sample collected from GWP-3 and was detected at 90 mg/kg in the soil sample collected from MW-3. Concentrations of HVOs detected in the soil samples were limited to 18 mg/kg of 1,4-dichlorobenzene in the soil sample collected from MW-3 and 11 mg/kg of 1,1,1-trichloroethane in the soil sample collected from GWP-3.

Total metals were not detected in the groundwater samples collected from MW-3 and GWP-3. HVOs were not detected in the groundwater sample collected from MW-3. In the groundwater sample collected from MW-3, detected concentrations of TCLP benzene were 8 µg/L, of GRPH were 2,800 µg/L, of DRPH were 13,000 µg/L, of TPH were 10 µg/L. Concentrations of VOCs detected in the groundwater sample collected from MW-3 were limited to 240 µg/L of dichloromethane, 6.8 µg/L of trichlorofluoromethane, 6.5 µg/L of 1,1-dichloroethane, 12 µg/L of trichloroethene, 3.7 µg/L of benzene, 29 µg/L of tetrachloroethene, 49 µg/L of toluene, 11 µg/L of ethylbenzene, 81 µg/L of xylenes, and 90 µg/L of 1,2-dichlorobenzene. TCLP benzene, GRPH, DRPH, TPH, and VOCs were not detected in the groundwater sample collected from GWP-3. Concentrations of HVOs detected in the groundwater sample collected from GWP-3 were limited to 4 µg/L of trifluoromethane, 4.3 µg/L of chloroform, 2.4 of 1,1,1,-trichloroethane, and 17 µg/L of tetrachloroethene.

Samples collected from MW-4 were analyzed for benzene, total BTEX, GRPH, and DRPH; in addition, the groundwater sample was analyzed for VOCs. Benzene, total BTEX, GRPH, and DRPH were not detected in the soil sample collected from MW-4. Benzene and GRPH were not detected in the groundwater sample collected from MW-4. Total BTEX was detected in the groundwater sample at a concentration of 0.5 µg/L and DRPH was detected at a concentration of 380 µg/L. Chloroform was the only VOC detected in the groundwater sample at a concentration of 5.5 µg/L.

Based on the above soil and groundwater sampling, AGRA concluded that:

- The majority of impacted soil had been removed from the UST excavation basins and the former injection well with associated leach field excavation basin. The vertical extent of soil impacts in these areas appeared to be between five and seven feet below the apparent groundwater table.

- A dissolved-phase hydrocarbon groundwater plume may be present and may extend further west than GWP-1.

- A dissolved-phase VOC/HVO groundwater plume may be present and may extend further west than GWP-2.

Quarterly Groundwater Sampling Results

AGRA prepared a *Quarterly Monitoring Report* for the subject property, dated July 18, 1996. According to the *Quarterly Monitoring Report*, five additional permanent monitoring wells were installed at the subject property immediately east of the southeastern corner of the service garage, in the southwestern corner of the subject property, between GWP-2 and GWP-3, immediately northwest of the northwestern corner of the automotive washing and detailing area, and immediately northwest of the showroom (MW-5 through MW-9). Groundwater samples were collected from these monitoring wells on May 1, 1996 and were analyzed for benzene, total BTEX, GRPH, DRPH, VOCs, and polynuclear aromatic hydrocarbons (PNAs). Benzene, total BTEX, GRPH, and DRPH were detected in groundwater samples; the highest concentrations of these compounds were detected in the groundwater sample collected from MW-1. In the groundwater sample collected from MW-1, detected concentrations of benzene were 7,500 µg/L, of total BTEX were 97,300 µg/L, of GRPH were 240 mg/L, and of DRPH were 6.2 mg/L. The following VOCs were detected in the monitoring wells:

2016 CONCEPTUAL SITE MODEL

Print Form

Appendix A - Human Health Conceptual Site Model Scoping Form and Standardized Graphic

Site Name: Seekins Ford-Lincoln-Mercury

File Number: 100.38.097

Completed by: Ryan Peterson

Introduction

The form should be used to reach agreement with the Alaska Department of Environmental Conservation (DEC) about which exposure pathways should be further investigated during site characterization. From this information, summary text about the CSM and a graphic depicting exposure pathways should be submitted with the site characterization work plan and updated as needed in later reports.

General Instructions: Follow the italicized instructions in each section below.

1. General Information:

Sources *(check potential sources at the site)*

- ☐ USTs
- ☐ ASTs
- ☐ Dispensers/fuel loading racks
- ☐ Drums
- ☐ Vehicles
- ☐ Landfills
- ☐ Transformers
- ☒ Other: Former Injection Well

Release Mechanisms *(check potential release mechanisms at the site)*

- ☐ Spills
- ☐ Leaks
- ☒ Direct discharge
- ☐ Burning
- ☐ Other:

Impacted Media *(check potentially-impacted media at the site)*

- ☐ Surface soil (0-2 feet bgs*)
- ☒ Subsurface soil (>2 feet bgs)
- ☐ Air
- ☐ Sediment
- ☒ Groundwater
- ☐ Surface water
- ☐ Biota
- ☐ Other:

Receptors *(check receptors that could be affected by contamination at the site)*

- ☐ Residents (adult or child)
- ☒ Commercial or industrial worker
- ☒ Construction worker
- ☐ Subsistence harvester (i.e. gathers wild foods)
- ☐ Subsistence consumer (i.e. eats wild foods)
- ☐ Site visitor
- ☐ Trespasser
- ☐ Recreational user
- ☐ Farmer
- ☒ Other: Sub Surface Work

* bgs - below ground surface

2. Exposure Pathways: *(The answers to the following questions will identify complete exposure pathways at the site. Check each box where the answer to the question is "yes".)*

a) Direct Contact -

1. Incidental Soil Ingestion

Are contaminants present or potentially present in surface soil between 0 and 15 feet below the ground surface? (Contamination at deeper depths may require evaluation on a site-specific basis.) ☒

If the box is checked, label this pathway complete: Complete

Comments:

2. Dermal Absorption of Contaminants from Soil

Are contaminants present or potentially present in surface soil between 0 and 15 feet below the ground surface? (Contamination at deeper depths may require evaluation on a site specific basis.) ☒

Can the soil contaminants permeate the skin (see Appendix B in the guidance document)? ☒

If both boxes are checked, label this pathway complete: Complete

Comments:

b) Ingestion -

1. Ingestion of Groundwater

Have contaminants been detected or are they expected to be detected in the groundwater, or are contaminants expected to migrate to groundwater in the future? ☒

Could the potentially affected groundwater be used as a current or future drinking water source? Please note, only leave the box unchecked if DEC has determined the groundwater is not a currently or reasonably expected future source of drinking water according to 18 AAC 75.350. ☐

If both boxes are checked, label this pathway complete: Incomplete

Comments:

The Seekins Ford-Lincoln-Mercury property, is connected to city utilities, and is not anticipated to install or utilize a well for drinking water in the future.

2. Ingestion of Surface Water

Have contaminants been detected or are they expected to be detected in surface water, or are contaminants expected to migrate to surface water in the future? ☐

Could potentially affected surface water bodies be used, currently or in the future, as a drinking water source? Consider both public water systems and private use (i.e., during residential, recreational or subsistence activities). ☐

If both boxes are checked, label this pathway complete: Incomplete

Comments:

There is no surface water on the subject property.

3. Ingestion of Wild and Farmed Foods

Is the site in an area that is used or reasonably could be used for hunting, fishing, or harvesting of wild or farmed foods? ☐

Do the site contaminants have the potential to bioaccumulate (see Appendix C in the guidance document)? ☐

Are site contaminants located where they would have the potential to be taken up into biota? (i.e. soil within the root zone for plants or burrowing depth for animals, in groundwater that could be connected to surface water, etc.) ☐

If all of the boxes are checked, label this pathway complete: Incomplete

Comments:

c) Inhalation-

1. Inhalation of Outdoor Air

Are contaminants present or potentially present in surface soil between 0 and 15 feet below the ground surface? (Contamination at deeper depths may require evaluation on a site specific basis.) ☒

Are the contaminants in soil volatile (see Appendix D in the guidance document)? ☒

If both boxes are checked, label this pathway complete: Complete

Comments:

2. Inhalation of Indoor Air

Are occupied buildings on the site or reasonably expected to be occupied or placed on the site in an area that could be affected by contaminant vapors? (within 30 horizontal or vertical feet of petroleum contaminated soil or groundwater; within 100 feet of non-petroleum contaminted soil or groundwater; or subject to "preferential pathways," which promote easy airflow like utility conduits or rock fractures) ☒

Are volatile compounds present in soil or groundwater (see Appendix D in the guidance document)? ☒

If both boxes are checked, label this pathway complete: Complete

Comments:

3. **Additional Exposure Pathways:** *(Although there are no definitive questions provided in this section, these exposure pathways should also be considered at each site. Use the guidelines provided below to determine if further evaluation of each pathway is warranted.)*

Dermal Exposure to Contaminants in Groundwater and Surface Water

Dermal exposure to contaminants in groundwater and surface water may be a complete pathway if:

- Climate permits recreational use of waters for swimming.
- Climate permits exposure to groundwater during activities, such as construction.
- Groundwater or surface water is used for household purposes, such as bathing or cleaning.

Generally, DEC groundwater cleanup levels in 18 AAC 75, Table C, are assumed to be protective of this pathway.

Check the box if further evaluation of this pathway is needed: ☒

Comments:

There is no surface water located on the subject property. Groundwater is not used for household or business purposes. If Construction on the subject property would result in an excavation that reaches the depth of groundwater, dermal exposure to construction workers may be pathway that needs to be further evaluated.

Inhalation of Volatile Compounds in Tap Water

Inhalation of volatile compounds in tap water may be a complete pathway if:

- The contaminated water is used for indoor household purposes such as showering, laundering, and dish washing.
- The contaminants of concern are volatile (common volatile contaminants are listed in Appendix D in the guidance document.)

Generally, DEC groundwater cleanup levels in 18 AAC 75, Table C, are assumed to be protective of this pathway.

Check the box if further evaluation of this pathway is needed: ☐

Comments:

Inhalation of Fugitive Dust

Inhalation of fugitive dust may be a complete pathway if:

- Nonvolatile compounds are found in the top 2 centimeters of soil. The top 2 centimeters of soil are likely to be dispersed in the wind as dust particles.
- Dust particles are less than 10 micrometers (Particulate Matter - PM_{10}). Particles of this size are called respirable particles and can reach the pulmonary parts of the lungs when inhaled.
- Chromium is present in soil that can be dispersed as dust particles of any size.

Generally, DEC direct contact soil cleanup levels in Table B1 of 18 AAC 75 are protective of this pathway because it is assumed most dust particles are incidentally ingested instead of inhaled to the lower lungs. The inhalation pathway only needs to be evaluated when very small dust particles are present (e.g., along a dirt roadway or where dusts are a nuisance). This is not true in the case of chromium. Site specific cleanup levels will need to be calculated in the event that inhalation of dust containing chromium is a complete pathway at a site.

Check the box if further evaluation of this pathway is needed: ☐

Comments:

Because the contamination on the subject property was caused by an injection well, there is no evidence that the top 2 centimeters of soil on the subject property is contaminated.

Direct Contact with Sediment

This pathway involves people's hands being exposed to sediment, such as during some recreational, subsistence, or industrial activity. People then incidentally ingest sediment from normal hand-to-mouth activities. In addition, dermal absorption of contaminants may be of concern if the the contaminants are able to permeate the skin (see Appendix B in the guidance document). This type of exposure should be investigated if:

- Climate permits recreational activities around sediment.
- The community has identified subsistence or recreational activities that would result in exposure to the sediment, such as clam digging.

Generally, DEC direct contact soil cleanup levels in 18 AAC 75, Table B1, are assumed to be protective of direct contact with sediment.

Check the box if further evaluation of this pathway is needed: ☐

Comments:

No recreational or subsistence activities occur on the subject property.

4. Other Comments *(Provide other comments as necessary to support the information provided in this form.)*

HUMAN HEALTH CONCEPTUAL SITE MODEL GRAPHIC FORM

Site: Seekins Ford-Lincoln-Mercury

Completed By: Ryan Peterson

Date Completed: 3/31/16

***Instructions*: Follow the numbered directions below. Do not consider contaminant concentrations or engineering/land use controls when describing pathways.**

(1) *Check the media that could be directly affected by the release.*

(2) *For each medium identified in (1), follow the top arrow and check possible transport mechanisms. Check additional media under (1) if the media acts as a secondary source.*

(3) *Check all exposure media identified in (2).*

(4) *Check all pathways that could be complete. The pathways identified in this column must agree with Sections 2 and 3 of the Human Health CSM Scoping Form.*

(5) *Identify the receptors potentially affected by each exposure pathway: Enter "C" for current receptors, "F" for future receptors, "C/F" for both current and future receptors, or "I" for insignificant exposure.*

Current & Future Receptors

Media	Transport Mechanisms	Exposure Media	Exposure Pathway/Route	Residents (adults or children)	Commercial or industrial workers	Site visitors, trespassers, or recreational users	Construction workers	Farmers or subsistence harvesters	Subsistence consumers	Other
☐ Surface Soil (0-2 ft bgs)	☐ Direct release to surface soil — check soil									
	☐ Migration to subsurface — check soil									
	☐ Migration to groundwater — check groundwater									
	☐ Volatilization — check air									
	☐ Runoff or erosion — check surface water									
	☐ Uptake by plants or animals — check biota									
	☐ Other (list):	☐ soil	☐ Incidental Soil Ingestion							
☑ Subsurface Soil (2-15 ft bgs)	☐ Direct release to subsurface soil — check soil		☐ Dermal Absorption of Contaminants from Soil							
	☑ Migration to groundwater — check groundwater		☐ Inhalation of Fugitive Dust							
	☑ Volatilization — check air	☑ groundwater	☐ Ingestion of Groundwater							
	☐ Uptake by plants or animals — check biota		☐ Dermal Absorption of Contaminants in Groundwater							
	☐ Other (list):		☐ Inhalation of Volatile Compounds in Tap Water							
☑ Ground-water	☑ Direct release to groundwater — check groundwater									
	☑ Volatilization — check air									
	☐ Flow to surface water body — check surface water	☐ air	☐ Inhalation of Outdoor Air							
	☑ Flow to sediment — check sediment		☐ Inhalation of Indoor Air							
	☐ Uptake by plants or animals — check biota		☐ Inhalation of Fugitive Dust							
	☐ Other (list):									
☐ Surface Water	☐ Direct release to surface water — check surface water									
	☐ Volatilization — check air		☐ Ingestion of Surface Water							
	☐ Sedimentation — check sediment	☐ surface water	☐ Dermal Absorption of Contaminants in Surface Water							
	☐ Uptake by plants or animals — check biota		☐ Inhalation of Volatile Compounds in Tap Water							
	☐ Other (list):									
☐ Sediment	☐ Direct release to sediment — check sediment	☐ sediment	☐ Direct Contact with Sediment							
	☐ Resuspension, runoff, or erosion — check surface water									
	☐ Uptake by plants or animals — check biota	☐ biota	☐ Ingestion of Wild or Farmed Foods							
	☐ Other (list):									

Revised, 10/01/2010

APPENDIX B

SOIL CONTAMINANTS EVALUATED FOR DERMAL EXPOSURE

Soil contaminants are evaluated for dermal exposure when a specific absorption factor is available (EPA, 2004c). If specific absorption factors are not available, chemicals with a Henry's constant below 1 x 10^{-5} atm-m^3/mol and molecular weight below 400 g/mol are evaluated as semi volatile organic compounds. It is generally thought volatile compounds evaporate from skin before significant absorption occurs and are addressed through the inhalation exposure pathway. Compounds with a molecular weight greater than 400 g/mol are considered too large to be absorbed through the skin.

2-Amino-4,6-Dinitrotoluene	2,4-Dichlorophenol	Methoxychlor
4-Amino-2,6-Dinitrotoluene	Dieldrin	Mercury (Methyl)
Acenaphthene	Diethyl phthalate	1-Methylnaphthalene
Acenaphthylene	2,4-Dimethylphenol	2-Methylnaphthalene
Aldrin	Dimethyl phthalate	2-Methylphenol (o-cresol)
Anthracene	1,2-Dinitrobenzene	3-Methylphenol (m-cresol)
Arsenic	1,3-Dinitrobenzene	4-Methylphenol (p-cresol)
Benzo(a)anthracene	1,4-Dinitrobenzene	Naphthalene
Benzo(b)fluoranthene	2,4-Dinitrophenol	Nitroglycerin
Benzo(k)fluoranthene	2,4-Dinitrotoluene	Nitroguanidine
Benzoic Acid	2,6-Dinitrotoluene	n-Nitrosodiphenylamine
Benzo(g,h,i)perylene	1,4-Dioxane	n-Nitroso-di-n-propylamine
Benzo(a)pyrene	2,3,7,8-TCDD (Dioxin)	2-Nitrotoluene
Bis(2-ethylhexyl)phthalate	Diphenylamine	3-Nitrotoluene
Butanol	Endrin	4-Nitrotoluene
Butyl Benzyl Phthalate	Ethylene glycol	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)
Cadmium	Fluoranthene	Pentachlorophenol
Carbazole	Fluorene	Phenanthrene
Carbon Disulfide	Heptachlor	Phenol
Chlordane	Heptachlor epoxide	PCB
p-Chloroaniline	Hexachlorobenzene	Propylene glycol
2-Chloronaphthalene	Hexachloro-1,3-butadiene	Pyrene
Chrysene	alpha-Hexachlorocyclohexane	Tributyltin (as Tributyltin Oxide)
DDD	beta-Hexachlorocyclohexane	2,4,5-Trichlorophenol
DDE	gamma-Hexachlorocyclohexane	2,4,6-Trichlorophenol
DDT	Hexachlorocyclopentadiene	2,4,5-TP
Dibenzo(a,h)anthracene	Hexachloroethane	1,3,5-Trinitrobenzene
Di-n-butyl phthalate	Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	2,4,6-Trinitrophenylmethylnitramine (Tetryl)
Di-n-octyl phthalate	Hydrazine	2,4,6-Trinitrotoluene (TNT)
2,4-D	Indeno(1,2,3-c,d)pyrene	
3,3-Dichlorobenzidine	Isophorone	

APPENDIX C

BIOACCUMULATIVE COMPOUNDS OF POTENTIAL CONCERN

Organic compounds are identified as bioaccumulative if they have a BCF equal to or greater than 1,000 or a log K_{ow} greater than 3.5. Inorganic compounds are identified as bioaccumulative if they are listed as such by EPA (2000). Those compounds in Table B-1 of 18 AAC 75.341 that are bioaccumulative, based on the definition above, are listed below.

Aldrin	DDT	Mercury
Arsenic	Dibenzo(a,h)anthracene	Methoxychlor
Benzo(a)anthracene	Dieldrin	Nickel
Benzo(a)pyrene	Dioxin	PCBs
Benzo(b)fluoranthene	Endrin	Pyrene
Benzo(k)fluoranthene	Fluoranthene	Selenium
Cadmium	Heptachlor	Silver
Chlordane	Heptachlor epoxide	Toxaphene
Chrysene	Hexachlorobenzene	Zinc
Copper	Hexachlorocyclopentadiene	
DDD	Indeno(1,2,3-c,d)pyrene	
DDE	Lead	

Because BCF values can relatively easily be measured or estimated, the BCF is frequently used to determine the potential for a chemical to bioaccumulate. A compound with a BCF greater than 1,000 is considered to bioaccumulate in tissue (EPA 2004b).

For inorganic compounds, the BCF approach has not been shown to be effective in estimating the compound's ability to bioaccumulate. Information available, either through scientific literature or site-specific data, regarding the bioaccumulative potential of an inorganic site contaminant should be used to determine if the pathway is complete.

The list was developed by including organic compounds that either have a BCF equal to or greater than 1,000 or a log K_{ow} greater than 3.5 and inorganic compounds that are listed by the United States Environmental Protection Agency (EPA) as being bioaccumulative (EPA 2000). The BCF can also be estimated from a chemical's physical and chemical properties. A chemical's octanol-water partitioning coefficient (K_{ow}) along with defined regression equations can be used to estimate the BCF. EPA's Persistent, Bioaccumulative, and Toxic (PBT) Profiler (EPA 2004) can be used to estimate the BCF using the K_{ow} and linear regressions presented by Meylan et al. (1996). The PBT Profiler is located at http://www.pbtprofiler.net/. For compounds not found in the PBT Profiler, DEC recommends using a log K_{ow} greater than 3.5 to determine if a compound is bioaccumulative.

APPENDIX D

VOLATILE COMPOUNDS OF POTENTIAL CONCERN

A chemical is identified here as sufficiently volatile and toxic for further evaluation if the Henry's Law constant is 1 x 10^{-5} atm-m^3/mol or greater, the molecular weight is less than 200 g/mole (EPA 2004a), and the vapor concentration of the pure component posed an incremental lifetime cancer risk greater than 10^{-6} or a non-cancer hazard quotient of 0.1, or other available scientific data indicates the chemical should be considered a volatile. Chemicals that are solid at typical soil temperatures and do not sublime are generally not considered volatile.

Acetone	Mercury (elemental)
Benzene	Methyl bromide (Bromomethane)
Bis(2-chloroethyl)ether	Methyl chloride (Chloromethane)
Bromodichloromethane	Methyl ethyl ketone (MEK)
Bromoform	Methyl isobutyl ketone (MIBK)
n-Butylbenzene	Methylene bromide
sec-Butylbenzene	Methylene chloride
tert-Buytlbenzene	**1-Methylnaphthalene**
Carbon disulfide	**2-Methylnaphthalene**
Carbon tetrachloride	Methyl *tert*-butyl ether (MTBE)
Chlorobenzene	**Naphthalene**
Chlorodibromomethane (Dibromochloromethane)	Nitrobenzene
Chloroethane	n-Nitrosodimethylamine
Chloroform	**n-Propylbenzene**
2-Chlorophenol	**Styrene**
1,2-Dichlorobenzene	1,1,2,2-Tetrachloroethane
1,3-Dichlorobenzene	Tetrachloroethylene (PCE)
1,4-Dichlorobenzene	**Toluene**
Dichlorodifluoromethane	1,2,4-Trichlorobenzene
1,1-Dichloroethane	1,1,1-Trichloroethane
1,2-Dichloroethane	1,1,2-Trichloroethane
1,1-Dichloroethylene	Trichloroethylene (TCE)
cis-1,2-Dichloroethylene	2,4,6-Trichlorophenol
trans-1,2-Dichloroethylene	1,2,3-Trichloropropane
1,2-Dichloropropane	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)
1,3-Dichloropropane	Trichlorofluoromethane (Freon-11)
Ethylbenzene	**1,2,4-Trimethylbenzene**
Ethylene dibromide (1,2-Dibromoethane)	**1,3,5-Trimethylbenzene**
Hexachlorobenzene	Vinyl acetate
Hexachloro-1,3-butadiene	Vinyl chloride (Chloroethene)
Hexachlorocyclopentadiene	**Xylenes (total)**
Hexachloroethane	GRO (see note 3 below)
Hydrazine	DRO (see note 3 below)
Isopropylbenzene (Cumene)	RRO (see note 3 below)

Notes:

1. Bolded chemicals should be investigated as volatile compounds when petroleum is present. If fuel containing additives (e.g., 1,2-dichloroethane, ethylene dibromide, methyl *tert*-butyl ether) were spilled, these chemicals should also be investigated.
2. If a chemical is not on this list, and not in Tables B of 18 AAC 75.345, the chemical has not been evaluated for volatility. Contact the DEC risk assessor to determine if the chemical is volatile.
3. At this time, DEC does not require evaluation of petroleum ranges GRO, DRO, or RRO for the indoor air inhalation (vapor intrusion) pathway.

APPENDIX E

CONTAMINANT PROPERTIES USED TO EVALUATE TRANSPORT MECHANISMS

These parameters describe chemical properties of the site contaminants. Important chemical parameters used to evaluate transport mechanisms are shown below. The values specific to each chemical determine how easily a chemical is transported by various mechanisms. The default values used by the DEC can be found in the DEC's Cleanup Levels Guidance (DEC, 2008).

Table D-1: Important Physical and Chemical Parameters Used to Evaluate Transport Mechanisms.

Purpose	Parameter	Symbol	Meaning
Does the contaminant cling to organic matter or does it move with water?	**Organic carbon partition coefficient**	K_{oc}	Provides a measure of the extent of chemical partitioning between organic carbon and water at equilibrium. The higher the K_{oc}, the more likely a chemical is to bind to soil or sediment than to remain in water.
	Soil/water partition coefficient	K_d	Provides a soil or sediment-specific measure of the extent of chemical partitioning between soil or sediment and water, unadjusted for dependence upon organic carbon. The higher the K_d, the more likely a chemical is to bind to soil or sediment than to remain in water.
	Octanol coefficient	K_{ow}	Provides a measure of the extent of chemical partitioning between water and octanol at equilibrium. The greater the K_{ow}, the more likely a chemical is to partition to octanol than to remain in water. Octanol is used as a surrogate for lipids (fat), and K_{ow} can be used to predict bioconcentration in aquatic organisms.
Does it dissolve in water?	**Solubility**		Is the upper limit on a chemical's dissolved concentration in water at a specified temperature? Aqueous concentrations in excess of solubility may indicate sorption onto sediments, the presence of solubilizing chemicals such as solvents, or the presence of a non-aqueous phase liquid.
Does it vaporize?	**Henry's Law Constant**	H_1	Provides a measure of the extent of chemical partitioning between air and water at equilibrium. The higher the Henry's Law constant, the more likely a chemical is to volatize than to remain in water.
Does it vaporize?	**Vapor Pressure**		Is the pressure exerted by a chemical vapor in equilibrium with its solid or liquid form at any given temperature? It is used to calculate the rate of volatilization of a pure substance from a surface or

Purpose	Parameter	Symbol	Meaning
			in estimating a Henry's Law constant for chemicals with low water solubility. The higher the vapor pressure, the more likely a chemical is to exist in a gaseous state.
Does it spread?	**Movement of molecules**	**Diffusivity**	Describes the movement of a molecule in a liquid or gas medium as a result of differences in concentration. It is used to calculate the dispersive component of chemical transport. The higher the diffusivity, the more likely a chemical is to move in response to concentration gradients.
Does it accumulate in living tissue?		**Bioconcentration Factor (BCF)**	Provides a measure of the extent of chemical partitioning at equilibrium between a biological medium such as fish tissue or plant tissue and an external medium such as water. The higher the BCF, the greater the accumulation in living tissue is likely to be.
How easily does it break down over time?	**Persistence**	**Media-Specific Half-Life**	Provides a relative measure of persistence of a chemical in a given medium, although actual values can vary greatly depending on site-specific conditions. The greater the half-life, the more persistent a chemical is likely to be.

Source: *Risk Assessment Guidance for Superfund, Volume 1, Part A*, Exhibit 6-4 (EPA 1989).

HUMAN HEALTH CONCEPTUAL SITE MODEL GRAPHIC FORM

Site: Seekins Ford-Lincoln-Mercury

Completed By: Ryan Peterson

Date Completed: 3/31/16

***Instructions*: Follow the numbered directions below. Do not consider contaminant concentrations or engineering/land use controls when describing pathways.**

(1) *Check the media that could be directly affected by the release.*

(2) *For each medium identified in (1), follow the top arrow and check possible transport mechanisms. Check additional media under (1) if the media acts as a secondary source.*

(3) *Check all exposure media identified in (2).*

(4) *Check all pathways that could be complete. The pathways identified in this column must agree with Sections 2 and 3 of the Human Health CSM Scoping Form.*

(5) *Identify the receptors potentially affected by each exposure pathway: Enter "C" for current receptors, "F" for future receptors, "C/F" for both current and future receptors, or "I" for insignificant exposure.*

Media	Transport Mechanisms	Exposure Media	Exposure Pathway/Route	Current & Future Receptors: Residents (adults or children)	Commercial or industrial workers	Site visitors, trespassers, or recreational users	Construction workers	Farmers or subsistence harvesters	Subsistence consumers	Other
☐ Surface Soil (0-2 ft bgs)	☐ Direct release to surface soil — check soil	☐ soil	☐ Incidental Soil Ingestion							
	☐ Migration to subsurface — check soil		☐ Dermal Absorption of Contaminants from Soil							
	☐ Migration to groundwater — check groundwater		☐ Inhalation of Fugitive Dust							
	☐ Volatilization — check air	☑ groundwater	☐ Ingestion of Groundwater							
	☐ Runoff or erosion — check surface water		☑ Dermal Absorption of Contaminants in Groundwater		X		X			
	☐ Uptake by plants or animals — check biota		☐ Inhalation of Volatile Compounds in Tap Water							
	☐ Other (list):	☑ air	☑ Inhalation of Outdoor Air		X	X				
☑ Subsurface Soil (2-15 ft bgs)	☑ Direct release to subsurface soil — check soil		☑ Inhalation of Indoor Air		X					
	☑ Migration to groundwater — check groundwater		☐ Inhalation of Fugitive Dust							
	☑ Volatilization — check air	☐ surface water	☐ Ingestion of Surface Water							
	☐ Uptake by plants or animals — check biota		☐ Dermal Absorption of Contaminants in Surface Water							
	☐ Other (list):		☐ Inhalation of Volatile Compounds in Tap Water							
☑ Ground-water	☑ Direct release to groundwater — check groundwater	☐ sediment	☐ Direct Contact with Sediment							
	☑ Volatilization — check air	☐ biota	☐ Ingestion of Wild or Farmed Foods							
	☐ Flow to surface water body — check surface water									
	☑ Flow to sediment — check sediment									
	☐ Uptake by plants or animals — check biota									
	☐ Other (list):									
☐ Surface Water	☐ Direct release to surface water — check surface water									
	☐ Volatilization — check air									
	☐ Sedimentation — check sediment									
	☐ Uptake by plants or animals — check biota									
	☐ Other (list):									
☐ Sediment	☐ Direct release to sediment — check sediment									
	☐ Resuspension, runoff, or erosion — check surface water									
	☐ Uptake by plants or animals — check biota									
	☐ Other (list):									

Revised, 10/01/2010

ADEC BUILDING INVENTORY AND INDOOR AIR SAMPLING QUESTIONNAIRE

ALASKA DEPARTMENT OF ENVIRONMENAL CONSERVATION
BUILDING INVENTORY AND INDOOR AIR SAMPLING QUESTIONNAIRE

This form should be prepared by a person familiar with indoor air assessments with assistance from a person knowledgeable about the building. Complete this form for each building in which interior samples (e.g., indoor air, crawl space, or subslab soil gas samples) will be collected. Section I of this form should be used to assist in choosing an investigative strategy during workplan development. Section II should be used to assist in identification of complicating factors during a presampling building walkthrough.

Preparer's Name Ryan Peterson Date/Time Prepared 4/6/16

Preparer's Affiliation Travis/Peterson Environmental Phone No. 907-455-7225

Purpose of Investigation Contamination in Groundwater

SECTION I: BUILDING INVENTORY

1. OCCUPANT OR BUILDING PERSONNEL:

Interviewed: Y / N

Last Name Davis First Name Tim

Address 1625 Seekins Ford Drive, Fairbanks, AK 99701

County Fairbanks North Star Borough

Phone No. 907-459-4000

Number of Occupants/persons at this location varies, approx 80 Age of Occupants varies, 20's to 60's

2. OWNER or LANDLORD: (Check if same as occupant ____)

C & S Enterprises

Interviewed: Y / N

Last Name _____ First Name _____

Address 1625 Seekins Ford Drive, Fairbanks, AK, 99701

County Fairbanks North Star Borough

Phone No. 907-459-4000

3. BUILDING CHARACTERISTICS

Type of Building: (Circle appropriate response)

Residential	School	Commercial/Multi-use
Industrial	Church	Other _____

If the property is residential, type? (Circle appropriate response)

Ranch	2-Family	3-Family
Raised Ranch	Split Level	Colonial
Cape Cod	Contemporary	Mobile Home
Duplex	Apartment House	Townhouses/Condos
Modular	Log Home	Other_____

If multiple units, how many?_____

If the property is commercial, type?

Business Types(s) Automotive sales and repair

Does it include residences (i.e., multi-use)? Y / N (circled N) If yes, how many?_____

Other characteristics:

Number of floors 2 Building age 34 years

Is the building insulated? Y / N How air tight? Tight / Average / Not Tight (circled Average)

Have occupants noticed chemical odors in the building? Y / N

If yes, please describe: Odors typical of those expected at an automotive repair facility

4. AIRFLOW

Use air current tubes, tracer smoke, or knowledge about the building to evaluate airflow patterns and qualitatively describe:

Airflow between floors Air is free to flow up and down stair ways

Airflow in building near suspected source Positive pressure heating and ventilation with air intake on exterior of building approximately 12 feet above ground surface

Outdoor air infiltration Outdoor air can enter HVAC system through one of two intakes Outdoor air can enter through any of several garage doors

Infiltration into air ducts Duct system appears tightly sealed

5. **BASEMENT AND CONSTRUCTION CHARACTERISTICS** (Circle all that apply)

No basement

a. Above grade construction:	wood frame	log	concrete	brick
	constructed on pilings with enclosed air space		constructed on pilings with open air space	
b. Basement type:	full	crawlspace	slab-on-grade	other_____
c. Basement floor:	concrete	dirt	stone	other _____
d. Basement floor:	unsealed	sealed	sealed with_____	
e. Foundation walls:	poured	block	stone	other _____
f. Foundation walls:	unsealed	sealed	sealed with _____	
g. The basement is:	wet	damp	dry	
h. The basement is:	finished	unfinished	partially finished	
i. Sump present?	Y / N			
j. Water in sump?	Y / N / not applicable			

Basement/Lowest level depth below grade_____(feet)

Identify potential soil vapor entry points and approximate size (e.g., cracks, utility ports, drains)

_____

_____

6. **HEATING, VENTING and AIR CONDITIONING** (Circle all that apply)

Type of heating system(s) used in this building: (Circle all that apply – not primary)

(Hot air circulation)	Heat pump	Hot water baseboard	
Space Heaters	Stream radiation	Radiant floor	
Electric baseboard	Wood stove	Outdoor wood boiler	Other_____

The primary type of fuel used is:

Natural Gas	Fuel Oil	Kerosene
Electric	Propane	Solar
Wood	Coal	

Domestic hot water tank fueled by natural gas

Boiler/furnace located in: Basement (Outdoors) Main Floor Other_____

Do any of the heating appliances have cold-air intakes? (Y) / N

Type of air conditioning or ventilation used in this building:

Central Air	Window units	Open Windows	None

(Commercial HVAC) Heat-recovery system Passive air system

Are there air distribution ducts present? (Y) N

Describe the ventilation system in the building, its condition where visible, and the tightness of duct joints. Indicate the locations of air supply and exhaust points on the floor plan.

There are 2 fresh air intakes which supply air to the HVAC system. HVAC ducts look to be in good condition

Is there a radon mitigation system for the building/structure? Y (N) Date of Installation_____

Is the system active or passive? Active/Passive

7. OCCUPANCY

Is basement/lowest level occupied? Full-time Occasionally Seldom Almost Never

Level	**General Use of Each Floor (e.g. family room, bedroom, laundry, workshop, storage)**
Basement	N/A
1st Floor	Automotive repair shop, parts shop, showroom, offices
2nd Floor	Offices, break area
3rd Floor	N/A

8. WATER AND SEWAGE

Water Supply: (Public Water) Drilled Well Driven Well Dug Well Other_____

Sewage Disposal: (Public Sewer) Septic Tank Leach Field Dry Well Other_____

10. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being sampled. If applicable, provide information on spill locations, potential air contamination sources (industries, gas stations, repair shops, landfills, etc.), outdoor air sampling location(s) and PID meter readings.

Also indicate compass direction, wind direction and speed during sampling, the locations of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.

SECTION II: INDOOR AIR SAMPLING QUESTIONNAIRE

This section should be completed during a presampling walkthrough. If indoor air sources of COCs are identified and removed, consider ventilating the building prior to sampling. However, ventilation and heating systems should be operating normally for 24 hours prior to sampling.

a) 1. **FACTORS THAT MAY INFLUENCE INDOOR AIR QUALITY**

Is there an attached garage? (Y) N

Does the garage have a separate heating unit? Y (N) NA

Are petroleum-powered machines or vehicles stored in the garage (e.g., lawnmower, ATV, car) (Y) N /NA

Please specify multiple vehicles

Has the building ever had a fire? Y (N) When?_____

Is a kerosene or unvented gas space heater present? Y (N) Where?_____

Is there a workshop or hobby/craft area? (Y) N Where & Type Auto repair and auto painting

Is there smoking in the building? Y (N) How frequently?_____

Has painting/staining been done in the last 6 months? (Y) N Where & When? Auto paint booth is used regularly

Is there new carpet, drapes or other textiles? Y (N) Where & When?_____

Is there a kitchen exhaust fan? Y (N) If yes, where vented?_____

Is there a bathroom exhaust fan? (Y) N If yes, where vented? Unknown

Is there a clothes dryer? Y (N) If yes, is it vented outside? Y / N

Are cleaning products, cosmetic products, or pesticides used that could interfere with indoor air sampling? Y / N

If yes, please describe Multiple cleaning products used throughout

Do any of the building occupants use solvents at work? (Y) N

(e.g., chemical manufacturing or laboratory, auto mechanic or auto body shop, painting, fuel oil delivery, boiler mechanic, pesticide application, cosmetologist

If yes, what types of solvents are used? brake cleaner, simple green, Ozzy Juice solvent

If yes, are their clothes washed at work? Y (N)

Do any of the building occupants regularly use or work at a dry-cleaning service? (Circle appropriate response)

(Yes, use dry-cleaning regularly (weekly)) No

Yes, use dry-cleaning infrequently (monthly or less) Unknown

Yes, work at a dry-cleaning services

2. **PRODUCT INVENTORY FORM** (For use during building walkthrough)

Make & Model of field instrument used_____

List specific products found in the residence that have the potential to affect indoor air quality:

Location	Product Description	Site (units)	Condition*	Chemical Ingredients	Field Instrument Reading (units)	Photo ** Y / N

* Describe the condition of the product containers as **Unopened (UO), Used (U), or Deteriorated (D)**

** Photographs of the front and back of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.

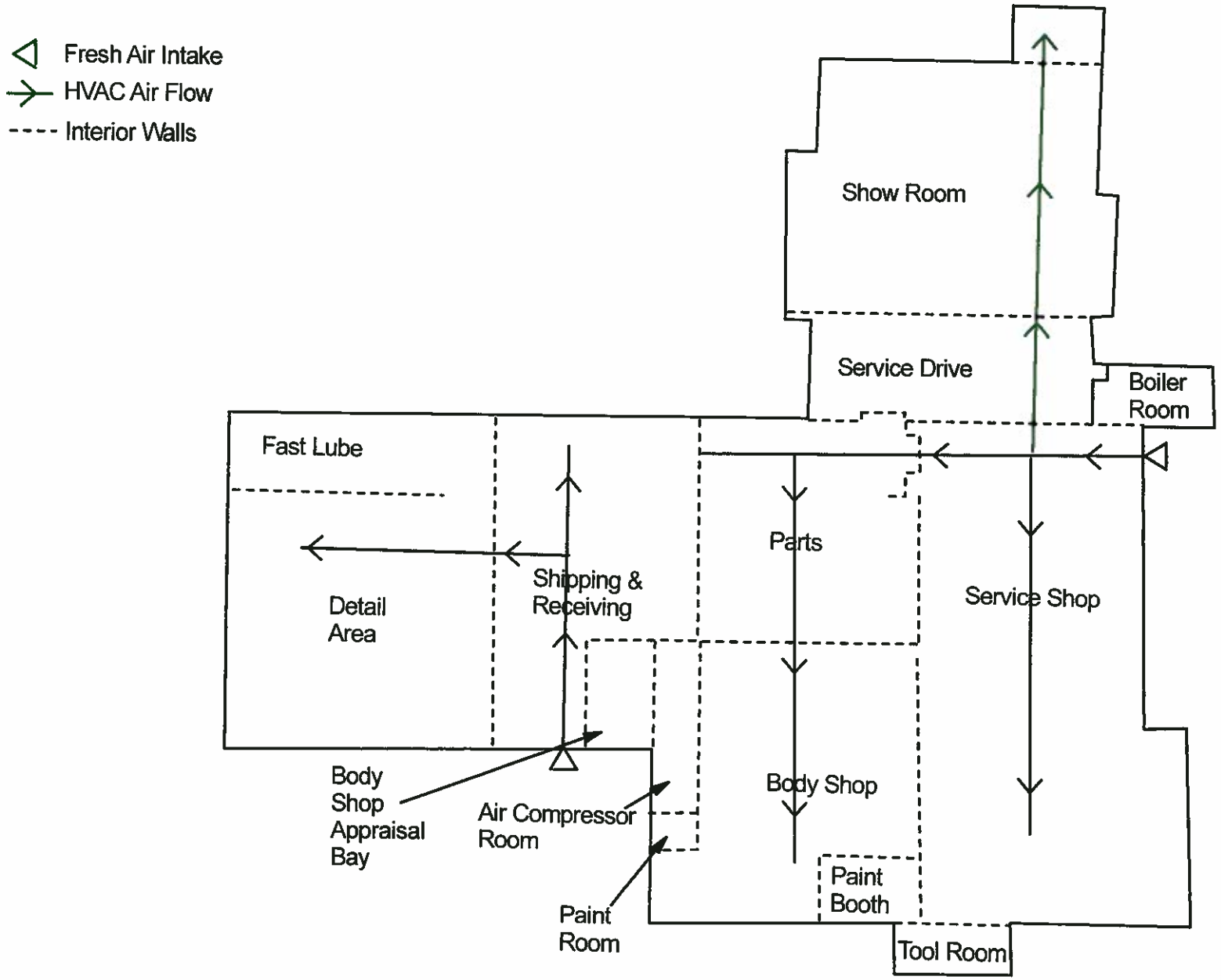
This form modified from:

ITRC (Interstate Technology & Regulatory Council). 2007. *Vapor Intrusion Pathway: A Practical Guideline*. VI-1. Washington, D.C.: Interstate Technology & Regulatory Council, Vapor Intrusion Team. www.itrcweb.org.

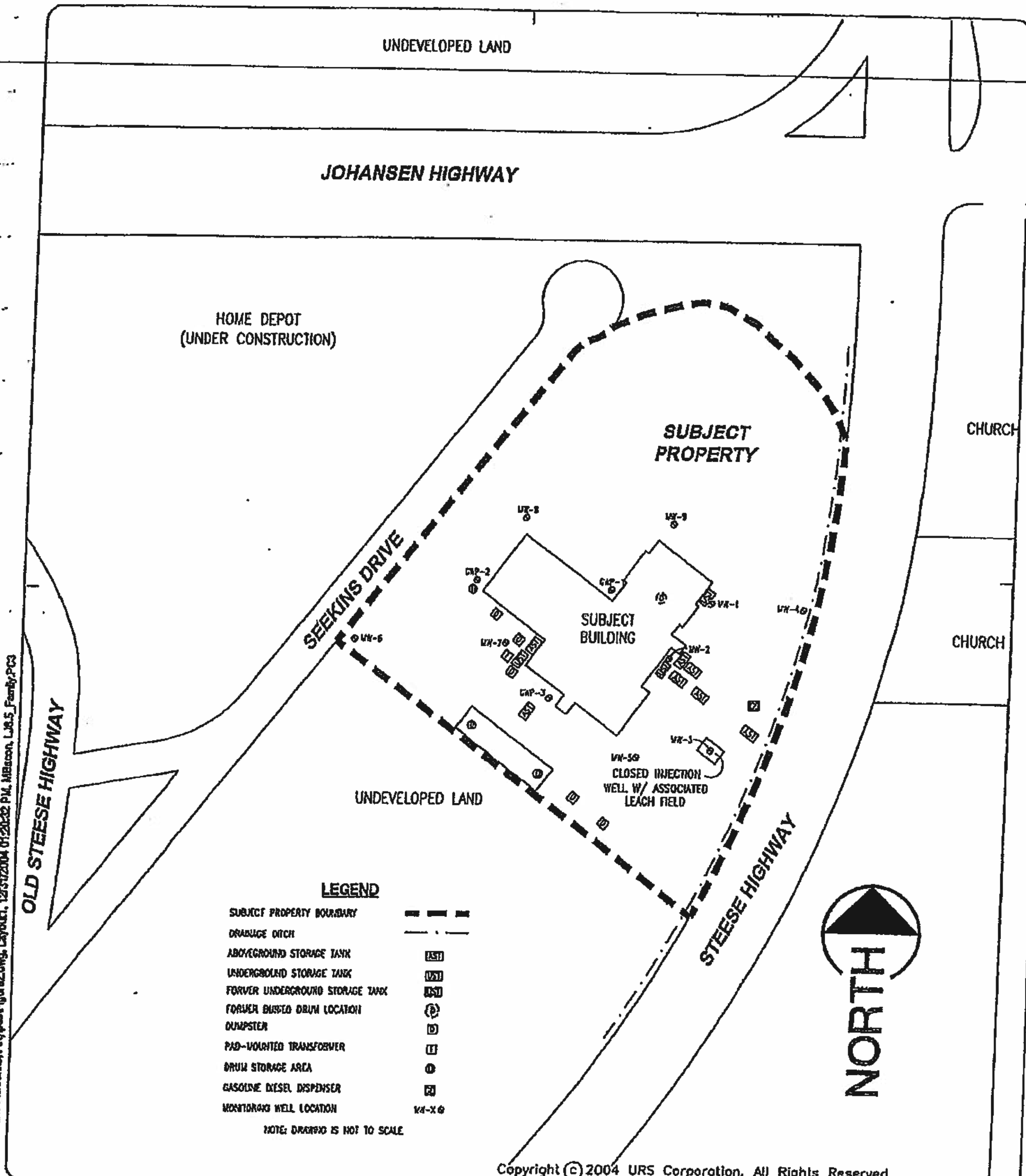
The Alaska Department of Environmental Conservation's Contaminated Sites Program protects human health and the environment by managing the cleanup of contaminated soil and groundwater in Alaska. For more information, please contact our staff at the Contaminated Site program closest to you:

Juneau: 907-465-5390 / Anchorage: 907-269-7503

Fairbanks: 907-451-2153 / Kenai: 907-262-5210



TRAVIS/PETERSON ENVIRONMENTAL CONSULTING, INC. 329 2ND STREET FAIRBANKS, ALASKA 99701	SEEKINS FORD-LINCOLN-MERCURY		FIGURE 2 INDOOR FLOOR PLAN
PROJECT No: 1197-02	FILE: 1197/02/2015/Figures/Air Flow.skf	DATE: 4/12/16	SCALE: NO SCALE



TITLE

SITE & SURROUNDING PROPERTIES MAP

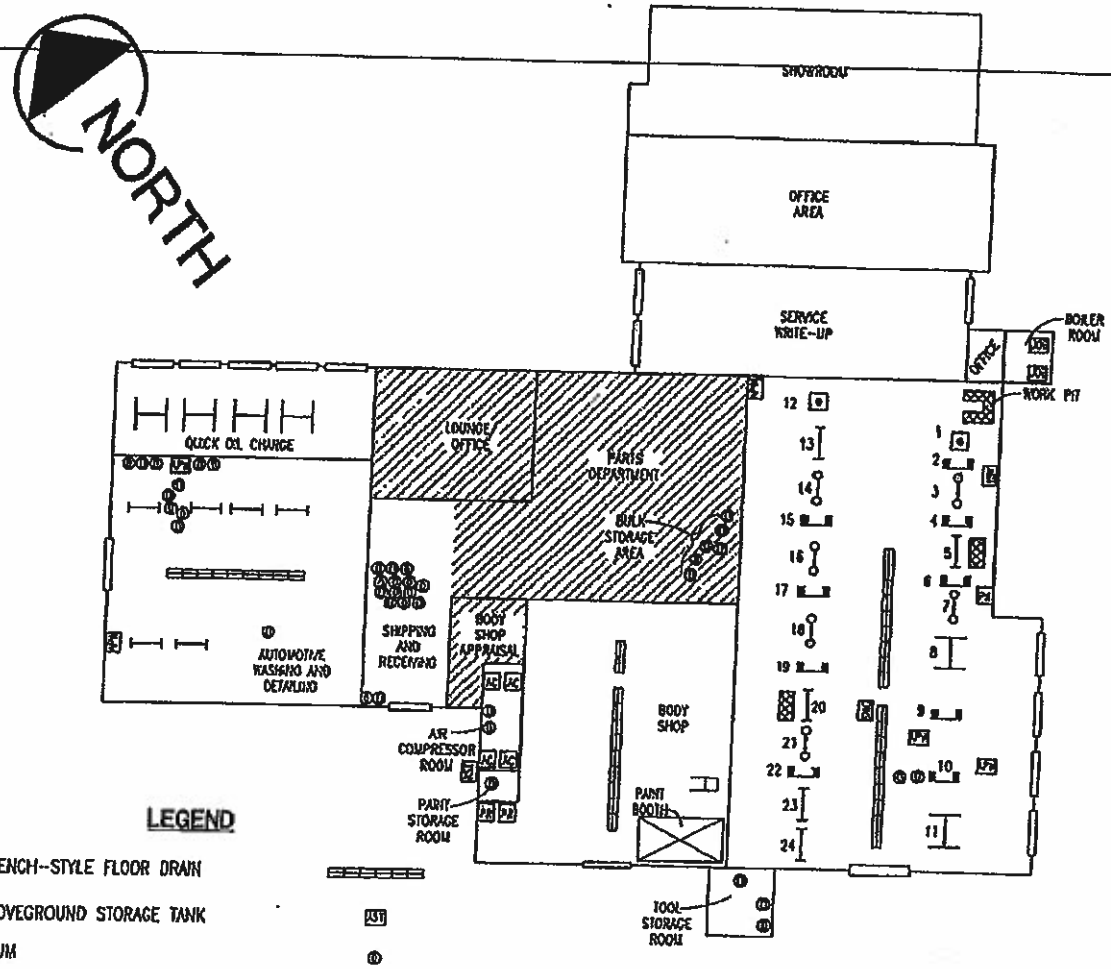
URS

URS CORPORATION,
FARMINGTON HILLS, MI.
248-553-9449

SEEKINS FORD LINCOLN MERCURY, INC.
625 OLD STEESE HIGHWAY
FAIRBANKS, AK 99701

DATE 12-31-04	JOB NO. 13648135
DR. MLB	SKETCH NO.
CK. AEC	FIGURE 2

J:\WstEnvProjects\13648135 (FMC-Seekins Ford LM-Fairbanks, AK)\pds\Figure2.dwg, Layout1, 12/31/2004 01:20:32 PM, MBacon, LJ8.5_Family.PC3



LEGEND

TRENCH-STYLE FLOOR DRAIN	
ABOVEGROUND STORAGE TANK	AST
DRUM	D
ABOVEGROUND LIFT	
ABOVEGROUND FOUR-POST LIFT	
ABOVEGROUND FRAME ADJUSTER	
IN-GROUND DUAL-POST LIFT	
IN-GROUND SINGLE-POST LIFT	
IN-GROUND FORE AND AFT LIFT	
FORMER IN-GROUND LIFT	
AIR COMPRESSOR	AC
PAINT THINNER RECYCLER	PR
AQUEOUS PARTS WASHER	APW
PARTS WASHER	PW
USED OIL BURNER	UOB
OIL-WATER SEPARATOR	OS
SECOND FLOOR / MEZZANINE LOCATION	

NOTE: DRAWING IS NOT TO SCALE

TITLE

SUBJECT BUILDING PLAN

URS
URS CORPORATION
FARMINGTON HILLS, MI
248-553-9449

SEEKINS FORD LINCOLN MERCURY INC.
1625 OLD STEESE HIGHWAY
FAIRBANKS, AK 99701

DATE 12-31-04	JOB NO. 13648135
DR. MLB	SKETCH NO.
CK. AEC	FIGURE 3