



AGRA
Earth & Environmental

September 17, 1996
6-024-01173-1 Task 05

Seekins Ford-Lincoln-Mercury
1625 Old Steese Highway
Fairbanks, Alaska 99712

Attention: Al Haynes

RE: GROUNDWATER SAMPLING RESULTS, AUGUST 1996
SEEKINS FORD-LINCOLN-MERCURY, NRO File No. 100.26.131

Dear Al:

In August 1996, AGRA Earth & Environmental, Inc. (AEE) completed the second quarterly sampling event under the *Interim Corrective Action Plan* (ICAP) approved for Seekins Ford-Lincoln-Mercury in Fairbanks, Alaska. The plan was approved by the Alaska Department of Environmental Conservation (ADEC) and the Environmental Protection Agency (EPA) in April 1996. Groundwater sampling of the monitoring well network under the ICAP will again be conducted in November 1996 and February 1997. This letter summarizes the results of the second sampling event. The locations of the monitoring wells are shown on the attached Figure 1.

FIELD METHODS

Prior to sampling, AEE field personnel measured the depth to water in each well using an Associated Remedial Technologies, Inc. Model 15101-E Hydrocarbon Interface Probe. This measurement was then subtracted from the surveyed elevation of the top of the well casing to yield the elevation of the water surface within the well. The survey data and measurements obtained during sample collection efforts are included in the attached Table 1.

During well sampling, AEE personnel used the decontamination, purging, and sampling procedures outlined in the *ADEC Underground Storage Tanks Procedures Manual*. Disposable polyethylene bailers were used to retrieve the water samples. One sample was collected as a Quality Assurance (QA) duplicate sample. The water samples and QA duplicate were placed in a chilled cooler and shipped to the AEE Environmental Chemistry Laboratory in Portland, Oregon.

RESULTS

The original samples and the QA duplicate were analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX) by Alaska Test Method AK101, gasoline range petroleum hydrocarbons (GRPH) by Alaska Test Method AK101, diesel range petroleum hydrocarbons (DRPH) by Alaska Test

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DEPT. OF ENVIRONMENTAL
CONSERVATION
NRO

AGRA Earth &
Environmental, Inc.
3504 Industrial Avenue
Suite 5
Fairbanks, Alaska
U.S.A. 99701
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Method AK102, and volatile organic compounds (VOCs) by EPA Method 624. Additionally, select samples were analyzed for polynuclear aromatic hydrocarbons (PAHs) based on the proximity of the monitoring wells to the former injection well area. Copies of the laboratory analytical reports for these samples are included with this letter. In addition to the above samples, AEE field personnel submitted a trip blank sample, which accompanied the samples throughout the sampling event. This sample exhibited non-detectable concentrations of all tested compounds, except toluene which was detected at a concentration of 0.55 µg/L. Sampling data and analytical results are summarized in Tables 1 and 2.

Sample MW-8 was analyzed for BTEX, GRPH, DRPH, and VOCs as marked on the chain-of-custody attached to the laboratory report. However, the DRPH analysis for that sample was completed outside the required holding time for testing. Therefore, the result given for the DRPH compounds is an estimate of the diesel range concentration in the sample.

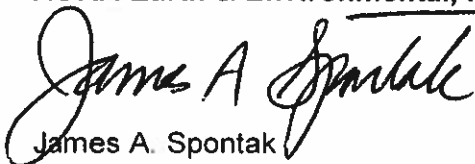
The QA duplicate (DUP-1) from monitoring well MW-1 was submitted as a quality control indicator. The analytical results for the two samples showed close agreement for all tested compounds. The reported results indicated a relative percent difference (RPD) for the two samples that is within the allowable RPD limit of 30 percent for all tested compounds.

CLOSURE

AEE is pleased to be of continued service to Seekins. We are currently collecting water level measurements at each of the well locations on a monthly basis. These data will be included in future quarterly letter reports. Our next sampling event is scheduled to occur in November 1996. We will forward the results of testing as soon as we have compiled that information. If you have any questions or comments regarding this letter, please contact our office.

Sincerely,

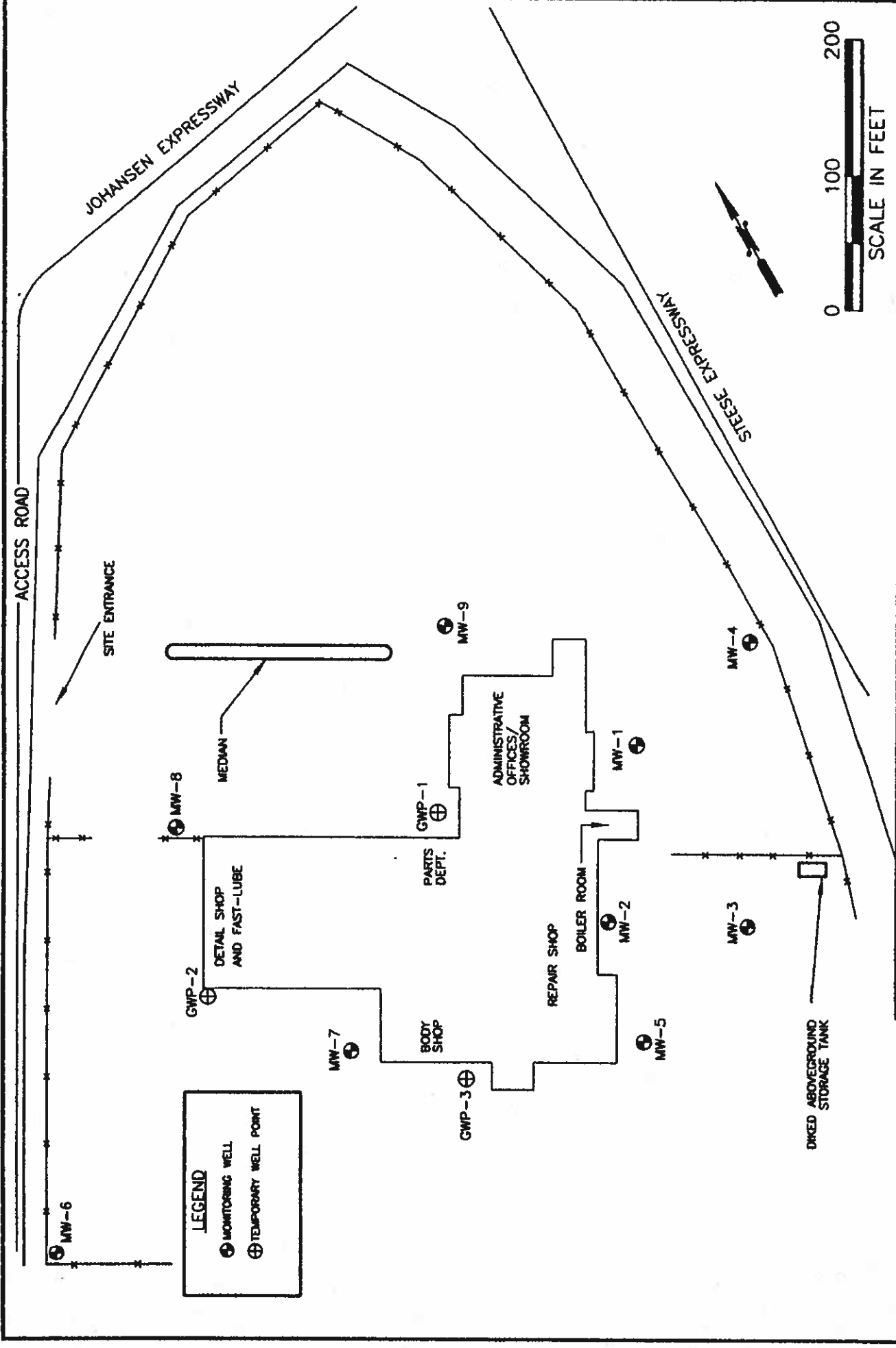
AGRA Earth & Environmental, Inc.



James A. Spontak
Project Manager

Atch: Figure 1, Site Plan
 Tables 1 and 2, Summary of Groundwater Analytical Data
 Laboratory Report

c: Steve Bainbridge, ADEC - Fairbanks
 Jonathan Williams, EPA - Seattle



SEEKINS FORD-LINCOLN-MERCURY
1625 OLD STEESE HIGHWAY
FAIRBANKS, ALASKA

SITE PLAN
FIGURE 1

W.O.	6-024-01173-1
DESIGN	MPP
DRAWN	MPP / LOCWELL
DATE	06/06/96
SCALE	1"=100'

AGRA
Earth & Environmental
3504 Industrial Ave. Suite 5
Fairbanks, Alaska 99701

TABLE 1
Summary of Groundwater Analytical Data for Seekins Ford-Lincoln-Mercury
BTEX, GRPH, and DRPH Results

Well Number	Date	MP Elevation	DTW	Ground Water Elevation	EPA 8020 (ug/L)		EPA 8100/AK102 (mg/L)	
					AK101	Total BTEX	GRPH	DRPH
Maximum Contaminant Level (ug/L)					5			
MW-1	7/21/95	97.13	14.20	82.93	12,000	71,300	180	5.4
	5/1/96	97.11	15.70	81.41	7,500	97,300	240	6.2
	8/7/96	97.11	15.28	81.83	8,500	96,300	250	11
MW-2	7/21/95	97.57	14.64	82.93	ND(0.5)	6.8	0.15	0.35
	5/1/96	97.57	16.13	81.44	1.69	26.3	0.26	0.74
	8/7/96	97.57	15.72	81.85	ND(1)	ND	0.16	3.4
MW-3	7/21/95	96.62	13.70	82.92	8	NT	2.8	13
	5/1/96	96.62	15.18	81.44	ND(1)	151	0.99	5.4
	8/7/96	96.64	14.78	81.86	ND(1)	29.4	0.27	3.6
MW-4	7/21/95	95.88	12.93	82.95	ND(0.5)	ND	ND(0.05)	ND(0.1)
	5/1/96	95.88	14.43	81.45	ND(1)	ND	ND(0.05)	0.24
	8/7/96	95.88	14.02	81.86	ND(0.5)	ND	ND(0.05)	0.23
MW-5	7/21/95	---	---	---	MONITORING WELL INSTALLED IN APRIL 1996.			
	5/1/96	97.08	15.68	81.40	2.49	33.9	0.17	1.1
	8/7/96	97.11	15.27	81.84	1.24	7.9	ND(0.05)	0.99
MW-6	7/21/95	---	---	---	MONITORING WELL INSTALLED IN APRIL 1996.			
	5/1/96	97.14	15.78	81.36	ND(1)	23.3	0.12	0.94
	8/7/96	97.14	15.35	81.79	ND(0.5)	0.5	ND(0.05)	0.56
MW-7	7/21/95	---	---	---	MONITORING WELL INSTALLED IN APRIL 1996.			
	5/1/96	97.70	16.29	81.41	ND(1)	48.3	0.26	0.47
	8/7/96	97.70	15.86	81.84	ND(1)	ND	ND(0.05)	0.3
MW-8	7/21/95	---	---	---	MONITORING WELL INSTALLED IN APRIL 1996.			
	5/1/96	97.85	16.49	81.36	8.39	110.2	0.35	0.69
	8/7/96	97.85	16.04	81.81	1.36	1.36	ND(0.05)	0.38
MW-9	7/21/95	---	---	---	MONITORING WELL INSTALLED IN APRIL 1996.			
	5/1/96	97.37	15.95	81.42	ND(1)	8.8	0.06	0.84
	8/7/96	97.39	15.53	81.86	ND(0.5)	ND	ND(0.05)	0.64
GWP-1	7/21/95	97.47	14.62	82.85	1,500	1,722	4	0.19
	5/1/96	97.53	16.11	81.42	117	134.3	0.34	0.48
	8/7/96	97.54	15.69	81.85	230	240.3	0.84	0.72
GWP-2	7/21/95	97.75	15.02	82.73	ND(0.5)	ND	ND(0.05)	ND(0.1)
	5/1/96	97.91	16.54	81.37	ND(1)	ND	ND(0.05)	0.35
	8/7/96	97.91	16.1	81.81	ND(0.5)	ND	ND(0.05)	0.16
GWP-3	7/21/95	97.02	14.18	82.84	ND(0.5)	NT	ND(0.05)	ND(0.1)
	5/1/96	97.14	15.71	81.43	ND(1)	ND	ND(0.05)	0.17
	8/7/96	97.14	15.31	81.83	ND(0.5)	ND	ND(0.05)	0.29
DUP-1	5/1/96	---	---	---	10,000	124,600	220	5.6
	8/7/96	---	---	---	9,700	110,000	250	9.4

NT INDICATES THAT THESE MONITORING WELLS WERE NOT TESTED FOR THIS PARAMETER.
 ND INDICATES THAT THE RESULT WAS NON-DETECTABLE ABOVE THE LIMIT SHOWN.



AGRA Earth & Environmental, Inc.
7477 SW Tech Center Drive
Portland, Oregon
U.S.A. 97223-8025
Tel (503) 639-3400
Fax (503) 620-7892

August 23, 1996

AGRA Earth & Environmental
3504 Industrial Way, Suite 5
Fairbanks, AK 99701

Attention: Mr. James Spontak

Dear Mr. Spontak:

RE: Analytical Results For Project 6-024-01173-0 T05

Attached are the results for the samples submitted on August 7, 1996 from the above referenced project. For your reference, our project number associated with these samples is AK960548.

The samples were analyzed for VOCs, gasoline range organics, and diesel range organics at the AGRA Earth & Environmental Portland Chemistry Laboratory, and were subcontracted to North Creek Analytical (NCA) for PAH analysis. The NCA data is included as Appendix A of this report.

All analyses were conducted in accordance with applicable QA/QC guidelines. The results apply only to the samples submitted.

Please feel free to contact me if you have any questions regarding this report, or if I can be of any assistance in any other matter.

Respectfully submitted,

AGRA Earth & Environmental

A handwritten signature in black ink, appearing to read 'Sean Gormley', written over a horizontal line.

Sean Gormley
Laboratory Manager
Laboratory ID # UST-008

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Project: Seekins
 Project No.: 6-024-01173-1T05
 Project Manager: James Spontak
 Sample Matrix: Water

Service Request No.: AK960548
 Report Date: 8/10/96
 Report No.: 96054801
 C.O.C. No.: 02946/02947

Volatile Organic Compounds by GC/MSD
EPA Methods 5030/624 Modified
Low Level Method
ug/L(ppb)

Sample Name: Lab Code:	MW-4	MW-5	MW-6	MW-8	MW-9	GWP-3	Lab Blank	Reporting Limit
	0548-4	0548-5	0548-6	0548-8	0548-9	0548-12	0548-MB	
Dichlorodifluoromethane	ND	ND	ND	ND	ND	ND	ND	0.5
Chloromethane	ND	ND	ND	ND	ND	ND	ND	0.5
Vinyl Chloride	ND	ND	ND	ND	ND	ND	ND	0.5
Bromomethane	ND	ND	ND	ND	ND	ND	ND	0.5
Chloroethane	ND	ND	ND	ND	ND	ND	ND	0.5
Trichlorofluoromethane	ND	ND	4.98	10.8	ND	1.24	ND	0.5
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	0.5
Acetone	ND	19.9	ND	ND	ND	ND	ND	10
Carbon Disulfide	ND	ND	ND	ND	ND	ND	ND	0.5
Methylene Chloride	1.08B	1.09B	ND	1.44B	1.25B	ND	1.07	0.5
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	0.5
1,1-Dichloroethane	ND	1.19	2.58	ND	ND	0.76	ND	0.5
2,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	0.5
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	0.5
2-Butanone(MEK)	ND	ND	ND	ND	ND	ND	ND	10
Bromochloromethane	ND	ND	ND	ND	ND	ND	ND	0.5
Chloroform	ND	ND	ND	ND	ND	ND	ND	0.5
1,1,1-Trichloroethane	ND	ND	1.11	ND	ND	0.71	ND	0.5
Carbon Tetrachloride	ND	ND	ND	ND	ND	ND	ND	0.5
1,1-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	0.5
Benzene	ND	1.24	ND	1.36	ND	ND	ND	0.5
1,2-Dichloroethane	0.77	ND	ND	ND	ND	ND	ND	0.5
Trichloroethene	ND	ND	0.74	ND	ND	ND	ND	0.5
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	0.5
Dibromomethane	ND	ND	ND	ND	ND	ND	ND	0.5
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND	0.5
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	0.5
4-Methyl-2-Pentanone(MIBK)	ND	ND	ND	ND	ND	ND	ND	10
Toluene	ND	2.06	ND	ND	ND	ND	ND	0.5
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	0.5
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	0.5
Tetrachloroethene	ND	1.05	5.17	ND	ND	ND	ND	0.5
2-Hexanone	ND	ND	ND	ND	ND	ND	ND	10
1,3-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	0.5
Dibromochloromethane	ND	ND	ND	ND	ND	ND	ND	0.5
1,2-Dibromoethane	ND	ND	ND	ND	ND	ND	ND	0.5
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	0.5
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	0.5
Ethylbenzene	ND	0.76	ND	ND	ND	ND	ND	0.5
m,p-Xylene	ND	1.65	ND	ND	ND	ND	ND	0.5
o-Xylene	ND	2.21	0.50	ND	ND	ND	ND	0.5
Styrene	ND	ND	ND	ND	ND	ND	ND	0.5

ND Not Detected

B - Estimated value because the analyte was detected in the associated lab blank.

Project: Seekins
 Project No.: 6-024-01173-1T05
 Project Manager: James Spontak
 Sample Matrix: Water

Service Request No.: AK960548
 Report Date: 8/10/96
 Report No.: 96054801
 C.O.C. No.: 02946/02947

Volatile Organic Compounds by GC/MSD
EPA Methods 5030/624 Modified
Low Level Method
ug/L(ppb)

Sample Name:	MW-4	MW-5	MW-6	MW-8	MW-9	GWP-3	Lab Blank	Reporting Limit
Lab Code:	0548-4	0548-5	0548-6	0548-8	0548-9	0548-12	0548-MB	
Bromoform	ND	ND	ND	ND	ND	ND	ND	0.5
Isopropylbenzene	ND	ND	ND	ND	ND	ND	ND	0.5
Bromobenzene	ND	ND	ND	ND	ND	ND	ND	0.5
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	0.5
1,2,3-Trichloropropane	ND	ND	ND	ND	ND	ND	ND	0.5
n-Propylbenzene	ND	0.69	ND	ND	ND	ND	ND	0.5
2-Chlorotoluene	ND	ND	ND	ND	ND	ND	ND	0.5
4-Chlorotoluene	ND	ND	ND	ND	ND	ND	ND	0.5
1,3,5-Trimethylbenzene	ND	3.29	0.69	ND	ND	ND	ND	0.5
tert-Butylbenzene	ND	ND	ND	ND	ND	ND	ND	0.5
1,2,4-Trimethylbenzene	ND	7.81	1.18	ND	ND	ND	ND	0.5
sec-Butylbenzene	ND	ND	ND	ND	ND	ND	ND	0.5
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	0.5
4-Isopropyltoluene	ND	0.87	0.50	ND	ND	ND	ND	0.5
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	0.5
1,2-Dichlorobenzene	ND	3.32	ND	ND	ND	ND	ND	0.5
n-Butylbenzene	ND	ND	ND	ND	ND	ND	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	ND	ND	ND	ND	ND	ND	0.5
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	ND	ND	0.5
Hexachlorobutadiene	ND	ND	ND	ND	ND	ND	ND	0.5
Naphthalene	ND	7.26	ND	ND	ND	ND	ND	5.0
1,2,3-Trichlorobenzene	ND	ND	ND	ND	ND	ND	ND	5.0

Sample Date: 8/7/96 8/7/96 8/7/96 8/7/96 8/7/96 8/7/96 8/19/96
 Analysis Date: 8/19/96 8/19/96 8/19/96 8/19/96 8/19/96 8/19/96 8/19/96

Surrogate Recoveries:

								EPA %Recovery Acceptance
Dibromofluoromethane:	99.2%	100%	99.7%	99.5%	98.5%	98.2%	97.2%	86%-118%
Toluene-d8:	99.7%	98.9%	100%	98.4%	99.4%	99.2%	99.2%	88%-110%
4-Bromofluorobenzene:	103%	96.6%	98.3%	102%	100%	107%	110%	86%-115%

ND Not Detected

Signature of Chemist
 Signature of Chemist

Signature of Laboratory Manager
 Laboratory Manager

Project: Seekins
 Project No.: 6-024-01173-1T05
 Project Manager: James Spontak
 Sample Matrix: Water

Service Request No.: AK960548
 Report Date: 8/10/96
 Report No.: 96054802
 C.O.C. No.: 02946/02947

Volatile Organic Compounds by GC/MSD
EPA Methods 5030/624 Modified
 ug/L(ppb)

Sample Name: Lab Code:	(a)					Reporting Limit
	MW-2 0548-2	MW-3 0548-3	MW-7 0548-7	DUP-1 0548-13	Lab Blank 0548-MB	
Dichlorodifluoromethane	ND	ND	ND	<500	ND	1.0
Chloromethane	ND	1.56	ND	<500	ND	1.0
Vinyl Chloride	ND	ND	ND	<500	ND	1.0
Bromomethane	ND	ND	ND	<500	ND	1.0
Chloroethane	ND	ND	ND	<500	ND	1.0
Trichlorofluoromethane	8.94	14.3	70.2	<500	ND	1.0
1,1-Dichloroethene	ND	ND	ND	<500	ND	1.0
Acetone	ND	24.9	287	<10,000	ND	20
Carbon Disulfide	ND	ND	ND	<500	ND	1.0
Methylene Chloride	ND	16.8	3.19	630	ND	1.0
trans-1,2-Dichloroethene	ND	ND	ND	<500	ND	1.0
1,1-Dichloroethane	ND	ND	ND	<500	ND	1.0
2,2-Dichloropropane	ND	ND	ND	<500	ND	1.0
cis-1,2-Dichloroethene	ND	ND	ND	<500	ND	1.0
2-Butanone(MEK)	ND	ND	ND	<5000	ND	20
Bromochloromethane	ND	ND	ND	<500	ND	1.0
Chloroform	ND	ND	ND	<500	ND	1.0
1,1,1-Trichloroethane	180	ND	ND	<500	ND	1.0
Carbon Tetrachloride	ND	ND	ND	<500	ND	1.0
1,1-Dichloropropene	ND	ND	ND	<500	ND	1.0
Benzene	ND	ND	ND	9700	ND	1.0
1,2-Dichloroethane	ND	ND	ND	<500	ND	1.0
Trichloroethene	ND	2.09	ND	<500	ND	1.0
1,2-Dichloropropane	ND	ND	ND	<500	ND	1.0
Dibromomethane	ND	ND	ND	<500	ND	1.0
Bromodichloromethane	ND	ND	ND	<500	ND	1.0
cis-1,3-Dichloropropene	ND	ND	ND	<500	ND	1.0
4 Methyl-2-Pentanone(MIBK)	ND	ND	ND	<5000	ND	20
Toluene	ND	5.42	ND	61,000	ND	1.0
trans-1,3-Dichloropropene	ND	ND	ND	<500	ND	1.0
1,1,2-Trichloroethane	ND	ND	ND	<500	ND	1.0
Tetrachloroethene	57.0	15.0	ND	<500	ND	1.0
2-Hexanone	ND	ND	ND	<5000	ND	20
1,3-Dichloropropane	ND	ND	ND	<500	ND	1.0
Dibromochloromethane	ND	ND	ND	<500	ND	1.0
1,2-Dibromoethane	ND	ND	ND	<500	ND	1.0
Chlorobenzene	ND	ND	ND	<500	ND	1.0
1,1,1,2-Tetrachloroethane	ND	ND	ND	<500	ND	1.0
Ethylbenzene	ND	2.66	ND	4300	ND	1.0
m,p-Xylene	ND	13.3	ND	24,000	ND	1.0
o-Xylene	ND	8.04	ND	11,000	ND	1.0
Styrene	ND	ND	ND	<500	ND	1.0

ND Not Detected

(a) Results are from a 1:500 dilution. Note elevated reporting limits.

Project: Seekins
 Project No.: 6-024-01173-1T05
 Project Manager: James Spontak
 Sample Matrix: Water

Service Request No.: AK960548
 Report Date: 8/10/96
 Report No.: 96054802
 C.O.C. No.: 02946/02947

**Volatile Organic Compounds by GC/MSD
 EPA Methods 5030/624 Modified
 ug/L(ppb)**

Sample Name: Lab Code:	(a)					Reporting Limit
	MW-2 0548-2	MW-3 0548-3	MW-7 0548-7	DUP-1 0548-13	Lab Blank 0548-MB	
Bromoform	ND	ND	ND	<500	ND	1.0
Isopropylbenzene	ND	1.15	ND	<500	ND	1.0
Bromobenzene	ND	ND	ND	<500	ND	1.0
1,1,2,2-Tetrachloroethane	ND	ND	ND	<500	ND	1.0
1,2,3-Trichloropropane	ND	ND	ND	<500	ND	1.0
n-Propylbenzene	ND	2.36	ND	<500	ND	1.0
2-Chlorotoluene	ND	ND	ND	<500	ND	1.0
4-Chlorotoluene	ND	ND	ND	<500	ND	1.0
1,3,5-Trimethylbenzene	ND	9.64	ND	710	ND	1.0
tert-Butylbenzene	ND	ND	ND	<500	ND	1.0
1,2,4-Trimethylbenzene	ND	19.5	ND	2300	ND	1.0
sec-Butylbenzene	ND	ND	ND	<500	ND	1.0
1,3-Dichlorobenzene	ND	ND	ND	<500	ND	1.0
4-Isopropyltoluene	ND	6.47	ND	<500	ND	1.0
1,4-Dichlorobenzene	ND	1.81	ND	<500	ND	1.0
1,2-Dichlorobenzene	ND	39.0	ND	<500	ND	1.0
n-Butylbenzene	ND	ND	ND	<500	ND	1.0
1,2-Dibromo-3-Chloropropane	ND	ND	ND	<500	ND	1.0
1,2,4-Trichlorobenzene	ND	ND	ND	<500	ND	1.0
Hexachlorobutadiene	ND	ND	ND	<500	ND	1.0
Naphthalene	ND	27.4	ND	<10,000	ND	10
1,2,3-Trichlorobenzene	ND	ND	ND	<10,000	ND	10

Sample Date: 8/7/96 8/7/96 8/7/96 8/7/96 8/16/96
 Analysis Date: 8/16/96 8/16/96 8/16/96 8/16/96 8/16/96

**EPA
 %Recovery
 Acceptance**

Surrogate Recoveries:						
Dibromofluoromethane:	101%	99.3%	99.9%	101%	101%	86%-118%
Toluene-d ₈ :	100%	99.6%	100%	101%	99.1%	88%-110%
4-Bromofluorobenzene:	100%	98.2%	101%	99.6%	108%	86%-115%

ND Not Detected

San H. H. H.
 Signature of Chemist For Brian Johnson

San H. H. H.
 Laboratory Manager

Project: Seekins
 Project No.: 6-024-01173-1T05
 Project Manager: James Spontak
 Sample Matrix: Water

Service Request No.: AK960548
 Report Date: 8/10/96
 Report No.: 96054803
 C.O.C.: 02946/02947

**QC Data Report
 MS/MSD Summary
 Volatile Organic Compounds by GC/MS
 EPA Methods 5030/8260A
 ug/L(ppb)**

Sample Name:	MW-4	Spike Level (ug/L)	Matrix Spike	Percent Recovery (MS)	Matrix Spike Duplicate	Percent Recovery (DMS)	EPA % Recovery Acceptance Criteria (a)	Relative Percent Difference (RPD)
1,1 - Dichloroethene	ND	10	10.8	108	10.4	104	75% - 113%	3.8
Benzene	ND	10	10.9	109	10.5	105	77% - 117%	3.7
Trichloroethene	ND	10	10.5	105	10.3	103	70% - 110%	1.9
Toluene	ND	10	10.6	106	10.4	104	77% - 126%	1.9
Chlorobenzene	ND	10	10.8	108	10.6	106	80% - 116%	1.9

Sample Date: 8/7/96 ~ 8/7/96 ~ 8/7/96 ~ ~
 Analysis Date: 8/19/96 ~ 8/19/96 ~ 8/19/96 ~ ~

Surrogate Recovery:						Control Limits	
Dibromofluoromethane:	99.2%	~	101%	~	100%	~	86%-118%
Toluene-d ₈ :	99.7%	~	100%	~	99.2%	~	88%-110%
4-Bromofluorobenzene:	103%	~	104%	~	102%	~	86%-115%

ND Not Detected

(a) Criteria from EPA Method 8260A, Table 6.

Lee Houbly For Brian Johnson
 Signature of Chemist

Lee Houbly
 Laboratory Manager

Project: Seekins
 Project No.: 6-024-01173-1T05
 Project Manager: James Spontak
 Sample Matrix: Water

Service Request No.: AK960548
 Report Date: 8/22/96
 Report No.: 96054804
 C.O.C. No.: 02946/02947

**Gasoline Range Organics & BTEX
 ADEC Method AK101
 ug/L(ppb)**

	(a)						Method Reporting
Sample Name:	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	Limit
Lab Code:	0548-1	0548-2	0548-3	0548-4	0548-5	0548-6	
Gasoline:	250,000	115	274	ND	ND	ND	50.0
Benzene:	8500	~	~	~	~	~	0.50
Toluene:	56,000	~	~	~	~	~	0.50
Ethylbenzene:	3800	~	~	~	~	~	0.50
Total Xylenes:	28,000	~	~	~	~	~	0.50
Sample Date:	8/7/96	8/7/96	8/7/96	8/7/96	8/7/96	8/7/96	
Analysis Date:	8/19/96	8/19/96	8/19/96	8/19/96	8/19/96	8/19/96	

Surrogate Recovery: (a,a,a-Trifluorotoluene):							Control Limits
Gasoline Analysis(FID):	92.2%	93.8%	92.3%	94.2%	93.5%	94.9%	50%-150%
BTEX Analysis(PID):	90.4%	~	~	~	~	~	80%-113%

ND Not Detected

(a) Results are from a 1:1000 dilution.

 Signature of Chemist

Ken Humley

 Laboratory Manager

Project: Seekins
 Project No.: 6-024-01173-1T05
 Project Manager: James Spontak
 Sample Matrix: Water

Service Request No.: AK960548
 Report Date: 8/22/96
 Report No.: 96054804
 C.O.C. No.: 02946/02947

**Gasoline Range Organics & BTEX
 ADEC Method AK101
 ug/L(ppb)**

Sample Name:	MW-7	MW-8	MW-9	GWP-1	GWP-2	GWP-3	Method Reporting Limit
Lab Code:	0548-7	0548-8	0548-9	0548-10	0548-11	0548-12	
Gasoline:	ND	ND	ND	836	ND	ND	50.0
Benzene:	~	~	~	230(a)	ND	~	0.50
Toluene:	~	~	~	ND	ND	~	0.50
Ethylbenzene:	~	~	~	0.89	ND	~	0.50
Total Xylenes:	~	~	~	9.41(b)	ND(b)	~	0.50
Sample Date:	8/7/96	8/7/96	8/7/96	8/7/96	8/7/96	8/7/96	
Analysis Date:	8/19/96	8/19/96	8/19/96	8/19/96	8/19/96	8/19/96	

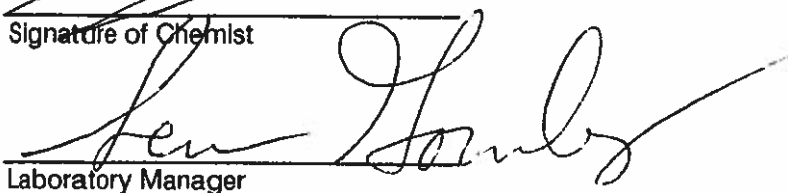
Surrogate Recovery: (a,a,a-Trifluorotoluene):							Control Limits
Gasoline Analysis(FID):	93.3%	93.3%	94.2%	94.2%	94.0%	92.2%	50%-150%
BTEX Analysis(PID):	~	~	~	80.6%	87.3%	~	80%-113%
				(8/20/96)			
Gasoline Analysis(FID):				94.4%			50%-150%
BTEX Analysis(PID):				85.7%			80%-113%
				(1:10)			
Gasoline Analysis(FID):				93.3%			50%-150%
BTEX Analysis(PID):				90.1%			80%-113%

ND Not Detected

(a) Result is from a 1:10 dilution analyzed on 8/20/96.

(b) Result is from an analysis on 8/20/96.

Signature of Chemist



Laboratory Manager

Project: Seekins
 Project No.: 6-024-01173-1T05
 Project Manager: James Spontak
 Sample Matrix: Water

Service Request No.: AK960548
 Report Date: 8/22/96
 Report No.: 96054804
 C.O.C. No.: 02946/02947

**Gasoline Range Organics & BTEX
 ADEC Method AK101
 ug/L(ppb)**

Sample Name: Lab Code:	(a)				Method Reporting Limit
	DUP-1 0548-13	Trip Blank 0548-14	Lab Blank 0548-MB	Lab Blank 0548-MB	
Gasoline:	250,000	ND	ND	ND	50.0
Benzene:	~	ND	ND	ND	0.50
Toluene:	~	0.55	ND	ND	0.50
Ethylbenzene:	~	ND	ND	ND	0.50
Total Xylenes:	~	ND(c)	ND	ND	0.50
Sample Date:	8/7/96	8/7/96	8/19/96	8/21/96	
Analysis Date:	8/19/96	8/19/96	8/19/96	8/21/96	

Surrogate Recovery: (a,a,a-Trifluorotoluene):					Control Limits
Gasoline Analysis(FID):	93.9%	93.9%	94.1%	93.6%	50%-150%
BTEX Analysis(PID):	~	86.0%	94.3%	94.3%	80%-113%
	(8/21/96)				
Gasoline Analysis(FID):	93.6%				50%-150%

ND Not Detected

- (a) Results are from a 1:1000 dilution.
- (b) Result is from a 1:1000 dilution analyzed on 8/21/96.
- (c) Estimated concentration because the value is derived from a result more than 10% outside the calibration range on 8/19/96. Insufficient sample remained for further analysis.

 Signature of Chemist

Ken Hawley

 Laboratory Manager

Project: Seekins
 Project No.: 6-024-01173-1T05
 Project Manager: James Spontak
 Sample Matrix: Water

Service Request No.: AK960548
 Report Date: 8/22/96
 Report No.: 96054805
 C.O.C. No.: 02946/02947

**QC Data Report
 Blank Spike Recoveries
 Gasoline Range Organics & BTEX
 ADEC Method AK101
 ug/L(ppb)**

Sample Name:	Lab Blank	Spike Level (ug/L)	Blank Spike (BS)	Percent Recovery (BS)	Blank Spike Duplicate (BSD)	Percent Recovery (BSD)	Relative Percent Difference
Gasoline:	ND	488	491	101	502	103	2.22
Benzene:	ND	5.02	4.41	87.8	4.40	87.6	<1.00
Toluene:	ND	37.0	33.6	90.8	34.1	92.2	1.48
Ethylbenzene:	ND	12.7	11.9	93.7	12.1	95.3	1.67
Total xylene:	ND	48.8	40.9	83.8	41.4	84.8	1.22

Acceptance Limits: ~ ~ ~ 75%-125% ~ 75%-125% <25

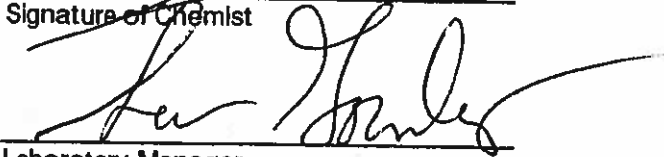
Sample Date: 8/19/96 ~ 8/19/96 ~ 8/19/96 ~ ~
Analysis Date: 8/19/96 ~ 8/19/96 ~ 8/19/96 ~ ~

Surrogate Recovery (a,a,a-Trifluorotoluene):							Control Limits
Gasoline Analysis(FID):	94.1%	~	104%	~	104%	~	50% - 150%
BTEX Analysis(PID):	94.3%	~	93.5%	~	92.1%	~	80% - 113%

ND Not Detected

Spike Source: ERA Gasoline Standard, Lot # 50007.

Signature of Chemist



Laboratory Manager

Project: Seekins
Project No.: 6-024-01173-1T05
Project Manager: James Spontak
Sample Matrix: Water

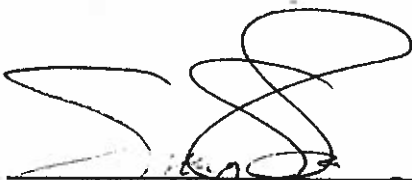
Service Request No.: AK960548
Report Date: 8/27/96
Report No.: 96054806
C.O.C. No.: 02946/02947

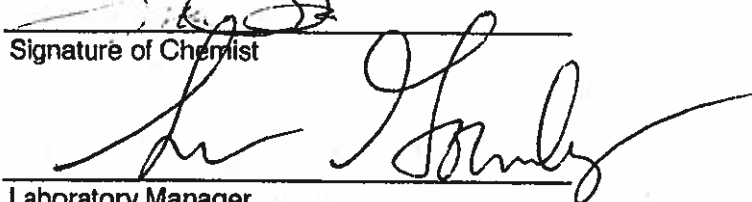
Diesel Range Organics
ADEC Method AK 102
mg/L (ppm)

Sample Name	Lab Code	Sample Date	Extraction Date	Analysis Date	Diesel Result	Surrogate Recovery 2-Fluorobiphenyl
MW-1	0548-1	8/7/96	8/13/96	8/24/96	11(a)(b)	(c)
MW-2	0548-2	8/7/96	8/13/96	8/18/96	3.4(d)	(c)
MW-3	0548-3	8/7/96	8/13/96	8/18/96	3.6	(c)
MW-4	0548-4	8/7/96	8/13/96	8/18/96	0.23	(c)
MW-5	0548-5	8/7/96	8/13/96	8/18/96	0.99	(c)
MW-6	0548-6	8/7/96	8/13/96	8/18/96	0.56	(c)
MW-7	0548-7	8/7/96	8/13/96	8/18/96	0.30	(c)
MW-9	0548-9	8/7/96	8/13/96	8/18/96	0.64	(c)
GWP-1	0548-10	8/7/96	8/13/96	8/18/96	0.72	(c)
GWP-2	0548-11	8/7/96	8/13/96	8/18/96	0.16(d)	(c)
GWP-3	0548-12	8/7/96	8/13/96	8/18/96	0.29(d)	(c)
DUP-1	0548-13	8/7/96	8/13/96	8/24/96	9.4(a)(b)	(c)
Lab Blank	0548-MB	8/7/96	8/13/96	8/18/96	<0.05	96

Acceptance Criteria: 50%-150%

- (a) Result is from a 1:10 dilution.
(b) Chromatographic peaks were quantified as diesel; however, the chromatographic peak pattern indicates the gasoline range organics are eluting within the diesel range.
(c) Surrogate recovery cannot be determined due to the presence of target and non-target analytes within the retention time window of 2-Fluorobiphenyl.
(d) Chromatographic peaks were quantified as diesel; however, the chromatographic peak patterns indicate a heavier product such as light motor oil is eluting within the diesel range.


Signature of Chemist


Laboratory Manager

Project: Seekins
Project No.: 6-024-01173-1T05
Project Manager: James Spontak
Sample Matrix: Water


Service Request No.: AK960548
Report Date: 8/30/96
Report No.: 96054808
C.O.C. No.: 02946/02947

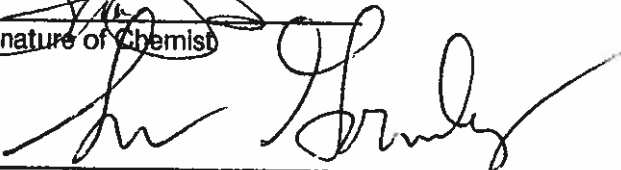
Diesel Range Organics
ADEC Method AK 102
mg/L (ppm)

Sample Name	Lab Code	Sample Date	Extraction Date	Analysis Date	Diesel Result	Surrogate Recovery 2-Fluorobiphenyl
MW-8	0548-8	8/7/96	8/28/96(a)	8/30/96	0.38	(b)
Lab Blank	0548-MB	8/28/96	8/28/96	8/30/96	<0.10	78

Acceptance Criteria: 50%-150%

- (a) Sample was extracted outside of holding time.
(b) Surrogate recovery cannot be determined due to the presence of target and non-target analytes within the retention time window of 2-Fluorobiphenyl.


Signature of Chemist


Laboratory Manager

Project: Seekins
 Project No.: 6-024-01173-1T05
 Project Manager: James Spontak
 Sample Matrix: Water

Service Request No.: AK960548
 Report Date: 8/27/96
 Report No.: 96054807
 C.O.C. No.: 02946/02947

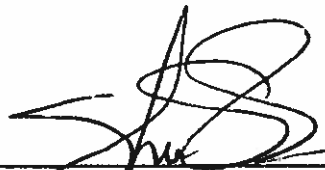
**Quality Assurance Data Report
 Laboratory Control Sample Summary
 Diesel Range Organics
 ADEC Method AK 102
 mg/L(ppm)**

Standard Source	Lab Code	True Value	LCS Result	LCS Recovery	LCS Dup Result	LCS Dup Recovery	% Recovery Acceptance Limits	RPD LCS/LCS Dup
* Restek	0548-LCS	1.0	1.2	120	1.1	110	60%-120%	8.7


Date Extracted: ~ ~ 8/13/96 ~ 8/13/96 ~
Date Analyzed: ~ ~ 8/18/96 ~ 8/18/96 ~

Surrogate Recovery: 2-Fluorobiphenyl: ~ ~ 95% ~ 88% ~ **ADEC Acceptance Criteria** 50%-150%

* Restek Diesel Fuel (Lot #A005769).



 Signature of Chemist



 Laboratory Manager



AGRA
Earth & Environmental
 3504 Industrial Avenue, Suite 5
 Fairbanks, Alaska, U.S.A. 99701
 Tel (907) 479-7586 Fax (907) 479-0193

U 2 0 4 0

CHAIN OF CUSTODY

PROJECT	PROJECT No.		ANALYSIS REQUESTED (circle, check box or write preferred method in box)													
	SEEKINS	6-024-01173-1 TDS	PCB by 8080	Base/Neu/ack/Organics GC/MS by 625 or 8270	Purgeable Organics GC/MS by 8240 or 8241	Total Metals by ICP AA	Total Halogens (TOX) by 9076	Polyuclear Aromatics by 610 or 8310	Aromatics by 602	WTPH-418:1 MODIFIED	Halogenated Volatiles by 5030 / 8010	TPH by 3550 / 418.1	BTEX/GRPH Combo by 5030 / 8020-8015	DRPH by 3550 / 8100	GRPH by 5030 / 8015	BTEX by 5030 / 8020
CLIENT	PHONE No. 6-024-01173-1 TDS															
PROJECT MANAGER	PHONE No. (907) 479-7586															
SAMPLER'S NAME (please print)	PHONE No.															
ANN FARRIS / STEPHANIE FORESTER																
SAMPLER'S SIGNATURE																
Stephanie Forester																
SAMPLE I.D.	DATE	TIME	MATRIX	PRESERVATIVE	CONTAINERS No.	VOL.										
1. MW-1	8/7/96	1350	H ₂ O	HCl / chll	2	40 ml										
2. MW-2		1120														
3. MW-3		1115														
4. MW-4		1400														
5. MW-5		1445														
6. MW-6		1545														
7. MW-7		1530														
8. MW-8		1610														
9. MW-9		1630														
10. GWP-1		1640														

SAMPLE RECEIPT	LABORATORY		TURNAROUND TIME		SPECIAL INSTRUCTIONS / ADDITIONAL COMMENTS		
	AEE - Portland	Shipping ID. / AIRBILL #	<input type="checkbox"/> 8 HOUR	<input type="checkbox"/> 24 HOUR	James Spontak will contact contact you regarding which samples he wants PAH analyses on		
TOTAL # CONTAINERS			<input type="checkbox"/> 1 WEEK	<input checked="" type="checkbox"/> 2 WEEK (standard)			
CONDITION OF CONTAINERS			<input type="checkbox"/> OTHER				
CONDITION OF SEALS							
RELINQUISHED BY / AFFILIATION		DATE	TIME	ACCEPTED BY / AFFILIATION		DATE	TIME
Stephanie D. Forester / AEE		8/8/96	1045	Cynthia Jewell		8/8/96	10am



**NORTH
CREEK
ANALYTICAL**

Environmental Laboratory Services

Offices:

BOTHELL ■ (206) 481-9200 ■ FAX 485-2992
SPOKANE ■ (509) 924-9200 ■ FAX 924-9290
PORTLAND ■ (503) 643-9200 ■ FAX 644-2202

Correspondence to: 18939 - 120th Ave. NE, #101, Bothell, WA 98011

August 20, 1996

AGRA Earth & Environmental, Inc.
7477 S.W. Tech Center Drive
Portland, OR 97223-8024

Attention: Sean Gormley

RE: JOB # 6-024-01173-1, TO5
P.O.#
PROJECT - SEEKINS

Enclosed are test results for your samples received in this lab on Aug. 09, 1996. For your reference, these analyses have been assigned our NCA # P608201.

Solid samples are reported on a dry weight basis except for Oregon DEQ Fuels Methods and where otherwise noted.

This report will be accompanied by a separate Quality Control Data Report, unless omitted by client request.

Please call if you have any questions.

Respectfully,


Philip Nerenberg
Laboratory Manager



NORTH CREEK ANALYTICAL

Environmental Laboratory Services

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Correspondence to: 18939 - 120th Ave. NE, #101, Bothell, WA 98011

PAH'S per EPA 8310 Results In ug/L (ppb)

Client: AGRA Earth & Environmental, Inc.
 Project: SEEKINS

NCA Project #: P608201
 Matrix: water
 Sampled: 08/07/96
 Received: 08/09/96

Client ID	Lab ID	Analyte	Results	MRL	Date Prepared	Date Analyzed
MW-2	P608201-2	Acenaphthene	ND	5.0	08/12/96	08/14/96
		Acenaphthylene	ND	5.0		
		Anthracene	ND	5.0		
		Benzo(a)anthracene	ND	0.10		
		Benzo(a)pyrene	ND	0.10		
		Benzo(b)fluoranthene	ND	0.10		
		Benzo(g,h,i)perylene	ND	0.10		
		Benzo(k)fluoranthene	ND	0.10		
		Chrysene	ND	0.10		
		Dibenzo(a,h)anthracene	ND	0.10		
		Fluoranthene	ND	0.10		
		Fluorene	ND	5.0		
		Indeno(1,2,3-cd)pyrene	ND	0.10		
		Naphthalene	ND	5.0		
		Phenanthrene	ND	5.0		
Pyrene	ND	0.50				
MW-3	P608201-3	Acenaphthene	ND	5.0	08/12/96	08/14/96
		Acenaphthylene	ND	5.0		
		Anthracene	ND	5.0		
		Benzo(a)anthracene	ND	0.10		
		Benzo(a)pyrene	ND	0.10		
		Benzo(b)fluoranthene	ND	0.10		
		Benzo(g,h,i)perylene	ND	0.10		
		Benzo(k)fluoranthene	ND	0.10		
		Chrysene	ND	0.10		
		Dibenzo(a,h)anthracene	ND	0.10		
		Fluoranthene	ND	0.10		
		Fluorene	ND	5.0		
		Indeno(1,2,3-cd)pyrene	ND	0.10		
		Naphthalene	8.8	5.0		
		Phenanthrene	ND	5.0		
Pyrene	ND	0.50				

MRL Method Reporting Level
 ND None Detected at or above the method reporting level
 * See Comment Section at end of report



NORTH CREEK ANALYTICAL

Environmental Laboratory Services

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 PORTLAND ■ (503) 643-9200 ■ FAX 644-2202

Correspondence to: 18939 - 120th Ave. NE, #101, Bothell, WA 98011

PAH'S per EPA 8310 Results In ug/L (ppb)

Client: AGRA Earth & Environmental, Inc.
 Project: SEEKINS

NCA Project #: P608201
 Matrix: water
 Sampled: 08/07/96
 Received: 08/09/96

Client ID	Lab ID	Analyte	Results	MRL	Date Prepared	Date Analyzed
GWP-3	P608201-12	Acenaphthene	ND	5.0	08/12/96	08/14/96
		Acenaphthylene	ND	5.0		
		Anthracene	ND	5.0		
		Benzo(a)anthracene	ND	0.10		
		Benzo(a)pyrene	ND	0.10		
		Benzo(b)fluoranthene	ND	0.10		
		Benzo(g,h,i)perylene	ND	0.10		
		Benzo(k)fluoranthene	ND	0.10		
		Chrysene	ND	0.10		
		Dibenzo(a,h)anthracene	ND	0.10		
		Fluoranthene	ND	0.10		
		Fluorene	ND	5.0		
		Indeno(1,2,3-cd)pyrene	ND	0.10		
		Naphthalene	ND	5.0		
		Phenanthrene	ND	5.0		
		Pyrene	ND	0.50		

MRL Method Reporting Level
 ND None Detected at or above the method reporting level
 * See Comment Section at end of report



NORTH CREEK ANALYTICAL

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Correspondence to: 18939 - 120th Ave. NE, #101, Bothell, WA 98011

SURROGATE RECOVERIES (%)

Client: AGRA Earth & Environmental, Inc.
Project: SEEKINS

NCA Number: P608201
Received: 08/09/1996

Sample Name	Analyte	Result	Control Limits
PAH'S per EPA 8310			
MW-2	2-Fluorobiphenyl	69	30-100
MW-3	2-Fluorobiphenyl	90	30-100
GWP-3	2-Fluorobiphenyl	71	30-100

MRL Method Reporting Level
 ND None Detected at or above the method reporting level
 * See Comment Section at end of report



Offices:

BOTHELL ■ (206) 481-9200 ■ FAX 485-2992
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PORTLAND ■ (503) 643-9200 ■ FAX 644-2202

Correspondence to: 18939 - 120th Ave. NE, #101, Bothell, WA 98011

August 20, 1996

AGRA Earth & Environmental, Inc.
7477 S.W. Tech Center Drive
Portland, OR 97223-8024

Attention: Sean Gormley

Re: Quality Control Data
JOB # 6-024-01173-1, TO5
P.O.#
PROJECT - SEEKINS

NCA project number P608201.

Note: Surrogate Recoveries are included in the final report.

QUALITY CONTROL DEFINITIONS

METHOD BLANK RESULTS

The method blank is an analyte-free matrix which is carried through the same analytical process as the samples. It is used to document contamination that may result from the analytical process.

SURROGATE STANDARD

A surrogate standard (i.e., a chemical compound not expected to occur in an environmental sample) is added to each sample, blank, and matrix spike sample just prior to extraction or processing. The recovery of the surrogate standard is used to monitor for unusual matrix effects, gross sample processing errors, etc. Surrogate recovery is evaluated for acceptance by determining whether the measured concentration falls within accepted limits.



NORTH CREEK ANALYTICAL

Environmental Laboratory Services

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PORTLAND ■ (503) 643-9200 ■ FAX 644-2202

Correspondence to: 18939 - 120th Ave. NE, #101, Bothell, WA 98011

Accuracy is measured by percent recovery as in:

$$\% \text{ Recovery} = \frac{(\text{Measured Concentration})}{(\text{Actual Concentration})} \times 100$$

Precision is measured using duplicate tests by relative percent difference.

$$\text{RPD} = \frac{(\text{Result of Test 1} - \text{Result of Test 2})}{(\text{Result of Test 1} + \text{Result of Test 2})/2} \times 100$$

If you should have any questions concerning this report, please contact me.

Sincerely,


Philip Nerenberg
Laboratory Manager



NORTH CREEK ANALYTICAL

Environmental Laboratory Services

Offices:

BOTHELL ■ (206) 481-9200 ■ FAX 485-2992
 SPOKANE ■ (509) 924-9200 ■ FAX 924-9290
 PORTLAND ■ (503) 643-9200 ■ FAX 644-2202

Correspondence to: 18939 - 120th Ave. NE, #101, Bothell, WA 98011
BATCH QUALITY CONTROL RESULTS
 PAH'S per EPA 8310

Client: AGRA Earth & Environmental, Inc.
Project: SEEKINS

NCA Project #: P608201
Received: 08/09/96

METHOD BLANK
 Batch # LP96035b
 Results In ug/L (ppb)

Compound	Result	MRL
Acenaphthene	ND	5.0
Acenaphthylene	ND	5.0
Anthracene	ND	5.0
Benzo(a)anthracene	ND	0.10
Benzo(a)pyrene	ND	0.10
Benzo(b)fluoranthene	ND	0.10
Benzo(g,h,i)perylene	ND	0.10
Benzo(k)fluoranthene	ND	0.10
Chrysene	ND	0.10
Dibenzo(a,h)anthracene	ND	0.10
Fluoranthene	ND	0.10
Fluorene	ND	5.0
Indeno(1,2,3-cd)pyrene	ND	0.10
Naphthalene	ND	5.0
Phenanthrene	ND	5.0
Pyrene	ND	0.50
Date Prepared	08/12/96	
Date Analyzed	08/14/96	

Surrogate Recovery (%)	Result	Control Limit
2-Fluorobiphenyl	79	30-100



NORTH CREEK ANALYTICAL

Environmental Laboratory Services

Offices:

BOTHELL ■ (206) 481-9200 ■ FAX 485-2992
SPOKANE ■ (509) 924-9200 ■ FAX 924-9290
PORTLAND ■ (503) 643-9200 ■ FAX 644-2202

Correspondence to: 18939 - 120th Ave. NE, #101, Bothell, WA 98011
BATCH QUALITY CONTROL RESULTS
PAH'S per EPA 8310

Client: AGRA Earth & Environmental, Inc.
Project: SEEKINS

NCA Project #: P608201
Received: 08/09/96

LABORATORY CONTROL SAMPLE

Batch # LP96035b

Results In ug/L (ppb)

Compound	True	Found	% Rec	QC Limit % Rec
Acenaphthylene	10	7.97	80	20-124
Benzo(k)fluoranthene	0.50	0.476	95	20-159
Chrysene	0.50	0.523	105	47-150
Fluoranthene	1.0	0.933	93	20-123
Fluorene	1.0	1.04	104	20-120



NORTH CREEK ANALYTICAL

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Correspondence to: 18939 - 120th Ave. NE, #101, Bothell, WA 98011
BATCH QUALITY CONTROL RESULTS
 PAH'S per EPA 8310

Client: AGRA Earth & Environmental, Inc.
Project: SEEKINS

NCA Project #: P608201
Received: 08/09/96

LABORATORY CONTROL SAMPLE AND LABORATORY CONTROL SAMPLE DUPLICATE

Batch # LP96035a
 Results In ug/L (ppb)

Compound	True	Found	% Rec			
Acenaphthylene	10	7.72	77			
Benzo(k)fluoranthene	0.50	0.514	103			
Chrysene	0.50	0.515	103			
Fluoranthene	1.0	0.980	98			
Fluorene	1.0	0.807	81			

Compound	Dup True	Dup Found	Dup % Rec	RPD	QC Limit RPD	% Rec
Acenaphthylene	10	7.63	76	1.3	60	20-124
Benzo(k)fluoranthene	0.50	0.525	105	1.9	60	20-159
Chrysene	0.50	0.525	105	1.9	60	47-150
Fluoranthene	1.0	0.979	98	0	60	20-123
Fluorene	1.0	0.828	83	2.4	60	20-120

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18939 120th Avenue N.E., Suite 101, Bothell, WA 98011-4508 (206) 481-9200 FAX 485-2992
East 11115 Montgomery, Suite B, Spokane, WA 99206-4779 (509) 924-9200 FAX 924-9280
9405 S.W. Nimbus Avenue, Beaverton, OR 97008-7112 (503) 643-9200 FAX 644-2803

SEP-16-1996 08:37 AGRA 503 620 7892 P.03/04



CHAIN OF CUSTODY REPORT

Work Order

REPORT TO: Sean Gormley INVOICE TO: AGRA

ATTENTION: Sean Gormley ANALYST: AGRA

ADDRESS: 7479 SW Tech Center Drive

Portland, OR 97223

PHONE: 652-3400 FAX: AGRA

PROJECT NAME: Skins

PROJECT NUMBER: 6-024-0113-1,105

SAMPLED BY:	CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	ANALYSIS REQUEST		P.O. NUMBER:	NCA ORDER #	ANALYST	DATE	TIME	RECEIVED BY	DATE	TIME	PRINT NAME	FROM
			Metals	Organic										
1. MW-1		8/16 1550	X											
2. MW-2		1120	X											
3. MW-3		1115	X											
4. MW-4		1400	X											
5. MW-5		1445	X											
6. MW-6		1545	X											
7. MW-7		1530	X											
8. MW-8		1600	X											
9. MW-9		1600	X											
10. GWP-1		1600	X											
REQUISITIONED BY:	<u>Cynthia Duceau</u>		DATE:	<u>8/16/96</u>	RECEIVED BY:	<u>Sean Gormley</u>	DATE:	<u>8/16/96</u>	TIME:	<u>1333</u>	PRINT NAME:	<u>Sean Gormley</u>	FROM:	<u>NCA</u>
RELINQUISHED BY:	<u>Cynthia Duceau</u>		DATE:	<u>8/16/96</u>	RECEIVED BY:	<u>Sara McClung</u>	DATE:	<u>8/16/96</u>	TIME:	<u>1911</u>	PRINT NAME:	<u>Sara McClung</u>	FROM:	<u>NCA</u>
ADDITIONAL REMARKS:	<u>PHI folder</u>													

OTHER: Timmered Request See also numbered any other Bulk Charges.

THIRTEEN BUSINESS DAYS

Page 1 of 2

AGRA

18739 126th Avenue N.E., Suite 101, Redmond, WA 98041-9508 (360) 481-9200 FAX 481-2597
 East 11115 Montgomery, Suite B, Spokane, WA 99205-4779 (509) 924-9200 FAX 924-9298
 9400 S.W. Nimbus Avenue, Beaverton, OR 97008-7132 (503) 641-9200 FAX 641-2292

SEP-16-1996 08:37

AGRA

503 620 7892 P. 04/04



CHAIN OF CUSTODY REPORT

Work Order #

INVOICE TO: **Sean Gornberg**

REPORT TO: **AGRA**

ATTENTION: **Sean Gornberg**

ADDRESS: **7411 SwTech Center Drive
Portland, OR 97123**

PHONE: **6393400** FAX:

PROJECT NAME: **Seekins**

PROJECT NUMBER: **6-024-0113-1, 105**

SAMPLED BY:

CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	ANALYSIS REQUEST	SCA QUOTE #	RECEIVED BY (PRINT NAME)	DATE	TIME	PRINT NAME	DATE	TIME
1. GWP-2	8/16 1510			<i>Sarah McCarty</i>	8/16		<i>Sarah McCarty</i>	8/16	
2. GWP-3	1446			<i>Sara McChery</i>			<i>Sara McChery</i>		
3. DUP-1									
4. Trip Blank									
5.									
6.									
7.									
8.									
9.									
10.									

RECEIVED BY (PRINT NAME): *Sarah McCarty* DATE: *8/16* TIME:

RECEIVED BY (PRINT NAME): *Sara McChery* DATE: TIME:

RECEIVED BY (PRINT NAME): *Sara McChery* DATE: TIME:

RECEIVED BY (PRINT NAME): *Sara McChery* DATE: TIME:

ADDITIONAL REMARKS:

TURNAROUND REQUEST - Business Days

7	5	4	3	2	1
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Dep. of. & Municipal Analysis

Each & Hydrocarbon Analysis

5	3-4	2	1
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OTHER Specify:

* Turnaround Request for this material may incur Peak Charge.