

**HARTCROWSER***Earth and Environmental Technologies*

Hart Crowser, Inc.
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A-8397-05

August 29, 1996

Mr. Jon Clark
Municipality of Anchorage
Department of Property and Facilities Management
3640 East Tudor Road
Anchorage, Alaska 99519-6650

Re: Remediation System Operation and Monitoring
May 11, 1996 through August 6, 1996
Anchorage Fire Department Station No. 4

Dear Mr. Clark:

This letter report presents the hydrocarbon recovery activities and results of groundwater sampling at the Municipality of Anchorage (MOA) Fire Department Station No. 4 (AFD-4) for the period of May 11, 1996 through August 6, 1996. AFD-4 is located at 4350 MacInnes Road in Anchorage, Alaska.

In January 1995, two recovery wells were installed at the site to collect floating hydrocarbons (Figure 1) using Petro-trap passive hydrocarbon pumps. Work was conducted in accordance with the Corrective Action Plan for this site dated October 19, 1994. This plan was approved by the Alaska Department of Environmental Conservation in a meeting with the MOA - Department of Property and Facility Management and Hart Crowser on January 13, 1995.

WORK PERFORMED BY HART CROWSER

Product thickness measurements were made in the monitoring well MW-1 (Figure 1) on July 3, July 31, and August 6, 1996. Groundwater elevation measurements were made in monitoring wells MW-2 through MW-4 on August 6, 1996 (Appendix A - Field Methods). Monitoring wells MW-2, MW-3, and MW-4 were purged and sampled on August 6, 1996. Prior to measurement and sampling of MW-3, a large puddle which had submerged MW-3 was pumped from the area. Samples were submitted to North Creek Analytical (NCA) laboratory for analyses of benzene, toluene, ethylbenzene, and xylenes (BTEX; EPA Method 8020) and diesel-range organics (DRO; EPA Method 8100M).





Mr. Jon Clark
August 29, 1996

A-8397-05
Page 2

WATER TABLE CONDITIONS

Groundwater elevations in the monitoring wells, in general, rose by an average of 0.3 feet in MW-2 and MW-4 over the monitoring period and by 2.3 feet in MW-3 (Figure 2). The inferred groundwater contours for this site for August 6, 1996 are presented on Figure 1. The groundwater flow direction is inferred to the east-northeast and the average hydraulic gradient was 0.04 feet/foot.

The inferred flow direction is somewhat more easterly and the gradient slightly higher than previous observations. This was due to a higher relative groundwater elevation measured at MW-3. The groundwater elevation change observed at MW-3 over the monitoring period was over 2 feet whereas the elevation change in the other wells was on the order of 0.3 feet. This was likely due to recent rainfall prior to the sampling event, and the presence of an area of gravel fill located immediately (within 3 feet) to the west of MW-3 while MW-2 and MW-4 are located in paved areas. This would allow for greater and more rapid infiltration immediately following a precipitation event. Eventhough the ponded water around MW-3 was pumped away prior to opening the well, the presence of the puddle in the area of MW-3 suggests that additional water was available for infiltration in that area prior to measurements. Therefore, the observed change in flow direction and gradient is likely a short-term phenomenon related to a precipitation event rather than a shift in the overall site hydrology.

HYDROCARBON THICKNESS AND RECOVERY

The hydrocarbon thickness in MW-1 is presented in Table 1 and a comparison between hydrocarbon thickness and groundwater elevation is presented in Figure 3. Hydrocarbon thickness ranged from 0.26 to 0.30 feet over this period.

Product recovery began during this period after the hoarfrost which had formed within the recovery well walls and prevented removal of the Petro-traps, melted in June. On July 3, 1996, the Petro-trap hydrophobic collection filters were replaced. Over this period, 3.2 gallons of product were recovered, and a total of 20.0 gallons of fuel has been collected since the inception of hydrocarbon recovery.

PURGE WATER OBSERVATIONS

No odor or sheen was observed in the purge water from MW-2, MW-3, or MW-4.

LABORATORY ANALYSES RESULTS

The results of BTEX laboratory analyses are summarized in Table 3a. No BTEX was detected in any of the monitoring wells sampled. The DRO results (Table 3b) ranged from 0.21 mg/L in MW-3 to 0.11 mg/L in MW-4. All laboratory reports are presented in Appendix B.





Mr. Jon Clark
August 29, 1996

A-8397-05
Page 3

Data Validation

Laboratory Quality Control Data provided by NCA on groundwater samples collected at AFD-4 indicated that reported results met the data quality objectives outlined in the Hart Crowser Quality Assurance Program Plan. All data is accepted for the purposes of this report.

CONCLUSIONS

Hydrocarbon recovery should be continued until the hydrocarbon thickness in the wells becomes less than 0.1 feet as observed in MW-1. At that time, a soil vapor extraction test should be run to evaluate this method for removing the residual hydrocarbons from the subsurface soils.

Dissolved BTEX constituents do not appear to be migrating from the former excavation area. DRO concentrations detected in the monitoring wells are low (less than or equal to 0.21 mg/L). The DRO concentrations observed in the wells do not appear to be significant because they are below 0.5 mg/L, and no sheen or odor was observed in the purge water.

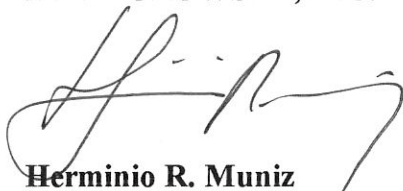
INFORMATION LIMITATIONS

Work for this project was performed, and this letter report prepared, in accordance with generally accepted professional practices for the nature and conditions of the work completed in the same and similar localities at the time the work was performed. It is intended for the exclusive use of MOA. This letter report is not meant to represent a legal opinion, and no other warranty, express or implied, is made.

We trust that this report meets your needs. Any questions regarding the field work and this letter report, the presentation of the information, and the interpretation of the data are welcome and should be referred to Nino Muniz at (907) 276-7475.

Sincerely,

HART CROWSER, INC.



Herminio R. Muniz
Sr. Project Hydrogeologist



Mark G. Madden, P.E.
Senior Associate





Mr. Jon Clark
August 29, 1996

A-8397-05
Page 4

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Attachments:

Table 1	Groundwater Elevations and Hydrocarbon Thickness in MW-1
Table 2	Hydrocarbon Recovery Record for RW-1 and RW-2
Table 3a	Groundwater Laboratory Analyses Results - BTEX
Table 3b	Groundwater Laboratory Analyses Results - DRO
Figure 1	Site Plan and Water Table Elevations on August 6, 1996
Figure 2	Monitoring Well Hydrographs
Figure 3	Hydrocarbon Thickness and Groundwater Elevation in MW-1
Appendix A	Field Explorations Methods and Analyses
Appendix B	Laboratory Reports



A-8397-05

**TABLE 1: Groundwater Elevations and Hydrocarbon Thickness in MW-1
AFD - 4
Anchorage, Alaska**

Date	Depth to Hydrocarbon (Feet)	Depth to Groundwater (Feet)	Corrected Groundwater Elev. (Feet) {1} {2}	Hydrocarbon Thickness (Feet)
8/1/94	Not Observed	10.30	89.07	0.00
8/10/94	9.73	10.58	89.50	0.85
9/8/94	9.99	11.86	89.08	1.87
1/24/95	10.69	13.43	88.24	2.74
1/27/95	10.77	13.33	88.19	2.56
2/3/95	10.99	12.19	88.19	1.20
2/10/95	10.97	12.15	88.21	1.18
2/15/95	10.85	11.97	88.34	1.12
2/24/95	10.88	12.09	88.30	1.21
3/9/95	11.03	12.33	88.13	1.30
3/27/95	11.20	12.56	87.95	1.36
4/21/95	9.34	9.92	89.94	0.58
5/22/95	7.86	8.19	91.46	0.33
6/12/95	8.29	8.60	91.03	0.31
7/7/95	8.83	9.19	90.48	0.36
7/17/95	9.02	9.35	90.30	0.33
7/27/95	8.57	8.96	90.74	0.39
8/3/95	8.08	8.44	91.23	0.36
8/29/95	8.60	8.95	90.71	0.35
9/28/95	8.43	8.81	90.88	0.38
10/25/95	8.68	9.05	90.63	0.37
11/21/95	9.11	9.51	90.20	0.40
12/22/95	9.74	10.47	89.51	0.73
1/24/96	10.15	10.85	89.11	0.70
4/18/96	9.56	10.35	89.68	0.79
5/10/96	8.90	9.27	90.41	0.37
7/3/96	7.92	8.18	91.41	0.26
7/31/96	7.54	7.84	91.78	0.30
8/6/96	7.46	7.75	91.86	0.29

Notes:

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{1} Vertical Survey conducted on 7/2/94; elevation of 100.00 assumed at northeast corner of concrete flagpole footing.

MW-1 measuring point elevation = 99.37

{2} Groundwater elevation corrected using measured hydrocarbon specific gravity of 0.84 as determined by laboratory.

**Table 2: Hydrocarbon Recovery Record for RW-1 and RW-2
AFD- 4
Anchorage, Alaska**

Dates	Recovery		Recovery		Recovery	
	Well RW-1 (Ounces)	Cumulative (Ounces)	Cumulative (Gallons)	Well RW-2 (Ounces)	Cumulative (Ounces)	Cumulative (Gallons)
1/25/95 - 2/15/95	328	328	2.6	0	0	0
2/16/95 - 3/9/95	55	383	3.0	0	0	0
3/10/95 - 3/24/95	7	390	3.0	0	0	0
3/25/95 - 3/29/95	Frozen	390	3.0	0	0	0
3/30/95 - 4/21/95	0	390	3.0	0	0	0
9/22/95-9/28/95	23	413	3.2	436	436	3.4
9/29/95-10/25/95	4	417	3.3	216	652	5.1
10/25/95-11/21/95	18	435	3.4	388	1040	8.1
11/22/95-12/22/95	72	507	4.0	463	1503	11.7
12/23/95-1/24/96	32	539	4.2	108	1611	12.6
6/28/96-7/31/96	45	584	4.6	360	1971	15.4

NOTE: Hydrocarbon recovery system was out of service from April 22 through September 15, 1995 due to high water levels.
System was down from February through May 1996 due to pumps being frozen into recovery wells.

A-8397-05

Table 3a: Groundwater Laboratory Analysis Results - BTEX
AFD-4
Anchorage, Alaska

Monitoring Well	Benzene (mg/L) - EPA 5030/8020							
	8/1/94	1/25/95	4/21/95	7/27/95	10/26/95	1/24/96	5/10/96	8/6/96
MW-1 Field Duplicate	2.3 2.2	N/S {2}	N/S	N/S	N/S	N/S	N/S	N/S
MW-2 Field Duplicate	ND(0.0005) {1}	N/S {3}	ND(0.0005) ND(0.0005)	ND(0.0005) ND(0.0005)	ND(0.0005) ND(0.0005)	ND(0.0005) ND(0.0005)	ND(0.0005) ND(0.0005)	ND(0.0005) ND(0.0005)
MW-3 Field Duplicate	ND(0.0005)	ND(0.0005) ND(0.0005)	N/S {4}	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
MW-4	0.0005	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
Trip Blank	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
Total BTEX (mg/L) - EPA 5030/8020								
Monitoring Well	8/1/94	1/25/95	4/21/95	7/27/95	10/26/95	1/24/96	5/10/96	8/6/96
MW-1 Field Duplicate	40 38	N/S	N/S	N/S	N/S	N/S	N/S	N/S
MW-2 Field Duplicate	0.003	N/S	ND ND	ND ND	ND ND	0.0006 ND	ND ND	ND ND
MW-3 Field Duplicate	0.006	ND ND	N/S	ND	ND	ND	ND	ND
MW-4	0.004	ND	ND	ND	ND	ND	ND	ND
Trip Blank	ND	ND	ND	ND	ND	ND	ND	ND

NOTES: {1} ND(0.0005) - Not Detected (Detection Limit)

{2} N/S - Not sampled due to floating hydrocarbons in well.

{3} N/S - Not sampled due to large snowpile over well.

{4} N/S - Not sampled due to ice blockage in well riser.

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A-8397-05

Table 3b: Groundwater Laboratory Analysis Results - DRO
AFD-4
Anchorage, Alaska

Monitoring Well	DRO (mg/L) - EPA 3510/8100M					
	4/21/95	7/27/95	10/26/95	1/24/96	5/10/96	8/6/96
MW-1	N/S {1}	N/S {1}	N/S {1}	N/S {1}	N/S {1}	N/S {1}
MW-2	ND(0.25)	0.17	0.14	0.30	ND(0.25)	0.15
Field Duplicate	ND(0.25)	0.17	0.16	0.17	0.47	0.12
MW-3	N/S {2}	0.27	0.16	0.16	ND(0.25)	0.21
MW-4	ND(0.25)	0.16	0.13	0.14	ND(0.25)	0.11

NOTES:

ND(0.0005) - Not Detected (Detection Limit)

{1} N/S - Not sampled due to floating hydrocarbon in well.

{2} N/S - Not sampled due to ice blockage in well riser.

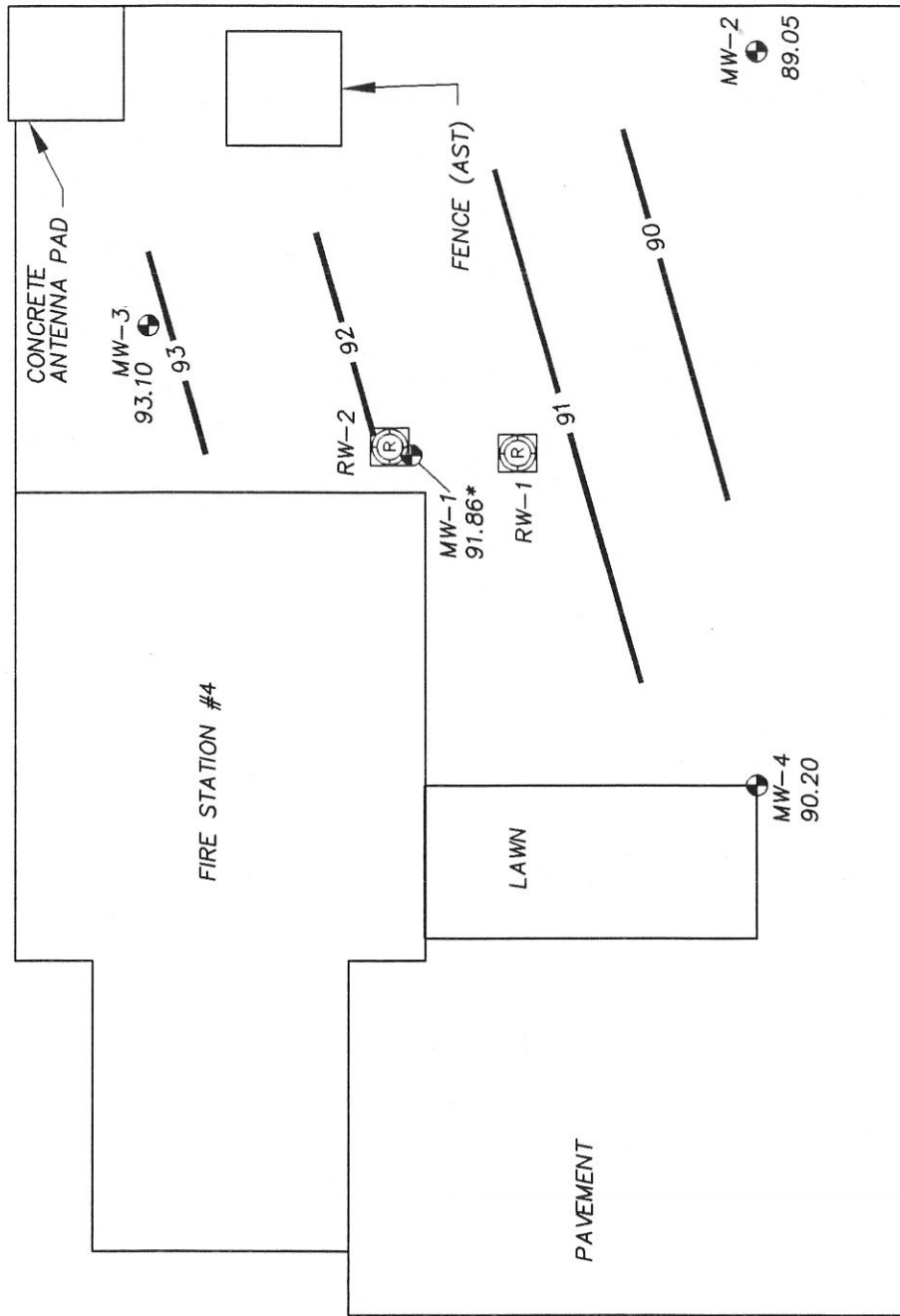
Site Plan and Water Table Elevations on August 6, 1996

AFD-4

Anchorage, Alaska



TUDOR ROAD



LEGEND

MW-1	Monitoring Well
90.40	Water Table Elevation
89.5	Inferred Groundwater Contour
—○—	Chain Link Fence
(R)	Recovery Well

*Corrected for 0.29 feet of free-phase hydrocarbon.

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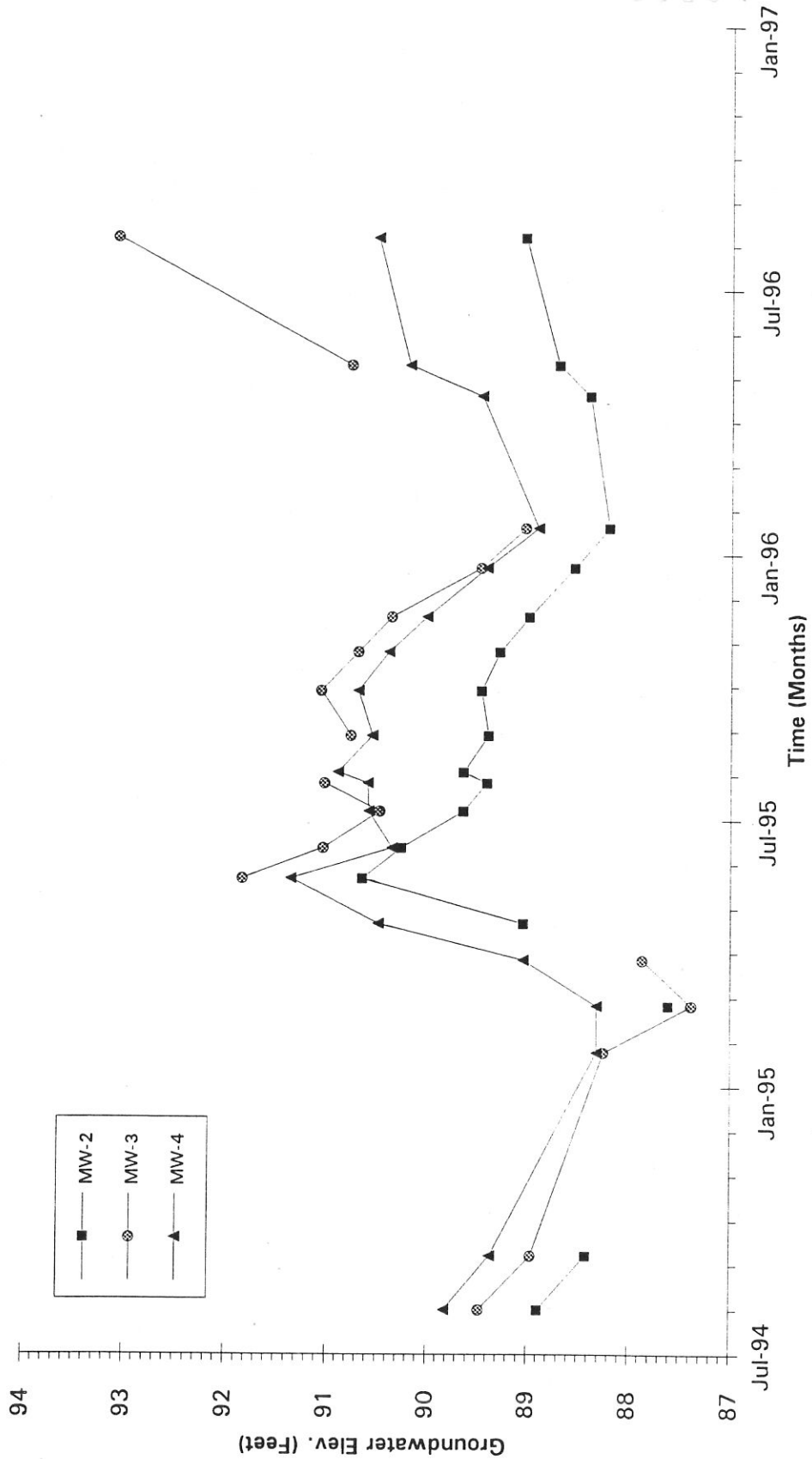


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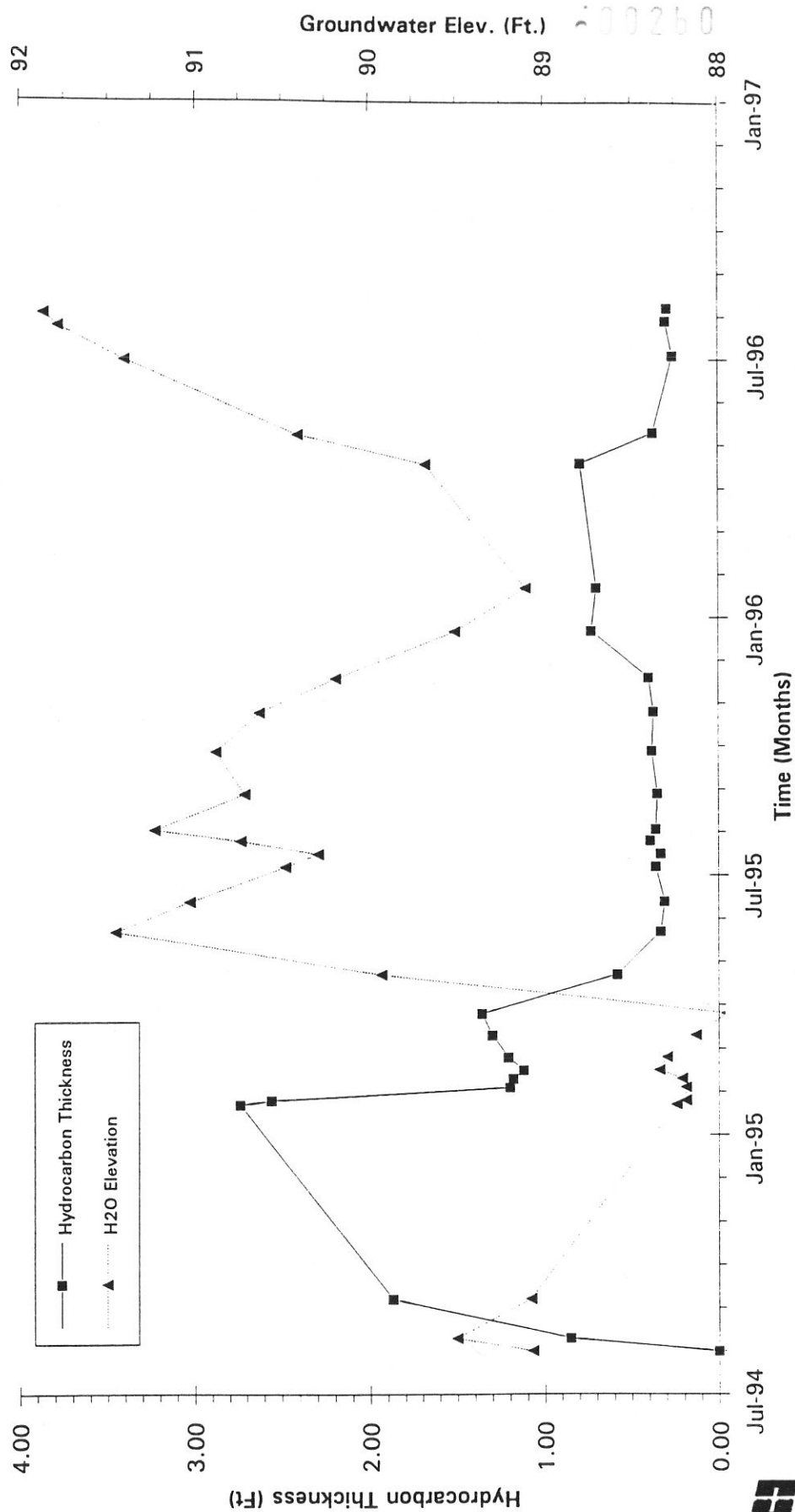
Monitoring Well Hydrographs

AFD-4

Anchorage, Alaska



Hydrocarbon Thickness and Groundwater Elevation in MW-1 AFD-4 Anchorage, Alaska



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APPENDIX A
FIELD EXPLORATIONS METHODS AND ANALYSES

APPENDIX A FIELD EXPLORATIONS METHODS AND ANALYSES

This appendix documents the field methods used by Hart Crowser in determining the nature of the conditions underlying the project site addressed by this report. The discussion includes information on the following subjects:

- ▶ *Water/Floating Hydrocarbon Level Measurements*
- ▶ *Water Quality Sampling*
- ▶ *Petro-trap Operations*
- ▶ *Decontamination of Field Equipment*

Water/Floating Hydrocarbon Level Measurements

The water level and floating hydrocarbon in each well was measured from a reference point or "measuring point" marked on the PVC casing. A Flexidip electronic oil/water interface well sounder was used to make the measurements, which were recorded to an accuracy of ± 0.01 feet.

Water Quality Sampling

Monitoring wells were purged immediately prior to sampling, until a minimum of three casing volumes of water were removed, and two of the three parameters of pH, conductivity, and temperature had stabilized. All purge water was containerized. Purging and sampling was performed by lowering a factory-decontaminated disposable bailer into the well with single-use polypropylene rope. Samples were collected in 40-ml clear glass, VOA vials fitted with Teflon septa and 1-Liter brown bottles (when appropriate) provided by the laboratory. A duplicate sample was collected for each well sampling event. Immediately after collection, the samples were labeled and placed in a cooler with "blue-ice" for shipment to NCA laboratories under chain-of-custody procedures.

Petro-trap Operations

Petro-trap hydrocarbon collectors were placed in recovery wells, with their screened sections, within the floating hydrocarbon zone. Hydrocarbon collection was performed by slowly removing the Petro-trap from the recovery well and emptying the Petro-trap contents into a graduated container. The Petro-trap was then slowly lowered back into position in the well.

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The hydrocarbon quantity was read from the graduated container and recorded on a log sheet. Hydrocarbons were then placed in a 55-gallon drum.

Equipment Decontamination

The Flexi-dip interphase probe was cleaned prior to and between sampling attempts using an anionic detergent wash (Alconox) followed by two potable water rinses.

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**APPENDIX B
LABORATORY REPORTS**

APPENDIX B
QUALITY CONTROL NARRATIVE

All field and laboratory quality control criteria provided by NCA regarding the groundwater samples collected and analyzed for this project meet the quality control/quality assurance objectives as stated in Hart Crowser's Standard QAPP, dated September 7, 1994.

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**NORTH
CREEK
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Environmental Laboratory Services

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

Hart Crowser, Inc. - Alaska 2550 Denali Street, Ste 705 Anchorage, AK 99503	Project: Firestation #4 Project Number: A-8397-05 Project Manager: Nino Muniz	Sampled: 8/6/96 Received: 8/7/96 Reported: 8/14/96
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Project Summary

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
MW-2	B608087-01	Water	8/6/96
MW-3	B608087-02	Water	8/6/96
MW-4	B608087-03	Water	8/6/96
Trip Blank	B608087-04	Water	7/26/96
MW-5	B608087-05	Water	8/6/96

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HART-CROWSER, INC

North Creek Analytical, Inc.


Matthew Essig, Project Manager

Hart Crowser, Inc. - Alaska 2550 Denali Street, Ste 705 Anchorage, AK 99503	Project: Firestation #4 Project Number: A-8397-05 Project Manager: Nino Muniz	Sampled: 8/6/96 Received: 8/7/96 Reported: 8/14/96
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Diesel Hydrocarbons (C10-C28) by EPA Method 8100 (modified)

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
MW-2				B608087-01				Water
Diesel Range Hydrocarbons	6080201	8/8/96	8/13/96		0.100	0.151	mg/l (ppm)	
<i>Surrogate: 2-FBP</i>	"	"	"	50.0-150		74.7	%	
MW-3				B608087-02				Water
Diesel Range Hydrocarbons	6080201	8/8/96	8/13/96		0.100	0.209	mg/l (ppm)	
<i>Surrogate: 2-FBP</i>	"	"	"	50.0-150		65.4	%	
MW-4				B608087-03				Water
Diesel Range Hydrocarbons	6080201	8/8/96	8/13/96		0.100	0.109	mg/l (ppm)	
<i>Surrogate: 2-FBP</i>	"	"	"	50.0-150		67.9	%	
MW-5				B608087-05				Water
Diesel Range Hydrocarbons	6080201	8/8/96	8/13/96		0.100	0.115	mg/l (ppm)	
<i>Surrogate: 2-FBP</i>	"	"	"	50.0-150		69.1	%	

North Creek Analytical, Inc.



Matthew Essig, Project Manager

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

Hart Crowser, Inc. - Alaska 2550 Denali Street, Ste 705 Anchorage, AK 99503	Project: Firestation #4 Project Number: A-8397-05 Project Manager: Nino Muniz	Sampled: 8/6/96 Received: 8/7/96 Reported: 8/14/96
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BTEX by EPA Method 8020A

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
				<u>B608087-01</u>				
							<u>Water</u>	
Benzene	6080297	8/12/96	8/12/96		0.500	ND	ug/l (ppb)	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		1.00	ND	"	
Surrogate: 4-BFB (PID)	"	"	"	53.0-136		88.7	%	
				<u>B608087-02</u>				
							<u>Water</u>	
Benzene	6080297	8/12/96	8/13/96		0.500	ND	ug/l (ppb)	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		1.00	ND	"	
Surrogate: 4-BFB (PID)	"	"	"	53.0-136		88.7	%	
				<u>B608087-03</u>				
							<u>Water</u>	
Benzene	6080297	8/12/96	8/13/96		0.500	ND	ug/l (ppb)	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		1.00	ND	"	
Surrogate: 4-BFB (PID)	"	"	"	53.0-136		88.7	%	
				<u>B608087-04</u>				
							<u>Water</u>	
Benzene	6080297	8/12/96	8/13/96		0.500	ND	ug/l (ppb)	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		1.00	ND	"	
Surrogate: 4-BFB (PID)	"	"	"	53.0-136		86.9	%	
				<u>B608087-05</u>				
							<u>Water</u>	
Benzene	6080297	8/12/96	8/13/96		0.500	ND	ug/l (ppb)	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		1.00	ND	"	
Surrogate: 4-BFB (PID)	"	"	"	53.0-136		88.7	%	

North Creek Analytical, Inc.


Matthew Essig, Project Manager



NORTH CREEK ANALYTICAL

Environmental Laboratory Services

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Hart Crowser, Inc. - Alaska 2550 Denali Street, Ste 705 Anchorage, AK 99503	Project: Firestation #4 Project Number: A-8397-05 Project Manager: Nino Muniz	Sampled: 8/6/96 Received: 8/7/96 Reported: 8/14/96
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Diesel Hydrocarbons (C10-C28) by EPA Method 8100 (modified) Quality Control

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Reporting Limit Units	Recov. %	RPD Limit	RPD %	Notes*
Batch: 6080201									
Blank									
Date Prepared: 8/8/96									
6080201-BLK1									
Diesel Range Hydrocarbons	8/13/96			ND	mg/l (ppm)	0.100			
Surrogate: 2-FBP	"	0.344		0.251	"	50.0-150	73.0		
Blank Spike									
6080201-BS1									
Diesel Range Hydrocarbons	8/13/96	2.04		1.63	mg/l (ppm)	54.0-121	79.9		
Surrogate: 2-FBP	"	0.344		0.204	"	50.0-150	59.3		
Blank Spike Dup									
6080201-BSD1									
Diesel Range Hydrocarbons	8/13/96	2.04		1.62	mg/l (ppm)	54.0-121	79.4	20.0	0.628
Surrogate: 2-FBP	"	0.344		0.213	"	50.0-150	61.9		

North Creek Analytical, Inc.


Matthew Essig, Project Manager

Hart Crowser, Inc. - Alaska 2550 Denali Street, Ste 705 Anchorage, AK 99503	Project: Firestation #4 Project Number: A-8397-05 Project Manager: Nino Muniz	Sampled: 8/6/96 Received: 8/7/96 Reported: 8/14/96
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**BTEX by EPA Method 8020A
Quality Control**

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Reporting Limit Units	Recov. %	RPD Limit	RPD %	Notes*
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Batch: 6080297

Date Prepared: 8/12/96

Blank

6080297-BLK1

Water

Benzene	8/12/96			ND	ug/l (ppb)	0.500			
Toluene	"			ND	"	0.500			
Ethylbenzene	"			ND	"	0.500			
Xylenes (total)	"			ND	"	1.00			

Surrogate: 4-BFB (PID)	"	16.0		14.6	"	53.0-136	91.3		
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Matrix Spike

6080297-MS1

B607549-04

Water

Benzene	8/12/96	10.0	ND	9.05	ug/l (ppb)	62.0-126	90.5		
Toluene	"	10.0	ND	8.80	"	72.0-120	88.0		
Ethylbenzene	"	10.0	ND	8.94	"	69.0-129	89.4		
Xylenes (total)	"	30.0	ND	27.6	"	73.0-126	92.0		

Surrogate: 4-BFB (PID)	"	16.0		15.5	"	53.0-136	96.9		
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Matrix Spike Dup

6080297-MSD1

B607549-04

Water

Benzene	8/12/96	10.0	ND	9.07	ug/l (ppb)	62.0-126	90.7	13.5	0.221
Toluene	"	10.0	ND	8.93	"	72.0-120	89.3	8.70	1.47
Ethylbenzene	"	10.0	ND	9.01	"	69.0-129	90.1	13.6	0.780
Xylenes (total)	"	30.0	ND	28.6	"	73.0-126	95.3	16.3	3.52

Surrogate: 4-BFB (PID)	"	16.0		15.7	"	53.0-136	98.1		
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6608087

Hart Crowser, Inc.
2550 Denali Street, Suite 705
Anchorage, AK 99503-2737
Phone: 907-276-7475 FAX: 907-276-2104



HARTCROWSER

Sample Custody Record

Samples Shipped to: North Creek Analytical

JOB NUMBER A-8397-05 LAB NUMBER _____
PROJECT NAME Firestation #4
HART CROWSER CONTACT Nino Muniz
SAMPLED BY: L. Maserjian

LAB NO.	SAMPLE ID	DESCRIPTION	DATE	TIME	MATRIX
01	MW-2		8/6/96	1300	water
02	MW-3		8/6/96	1145	water
03	MW-4		8/6/96	1340	water
04	Trip Blank		7/26/96	1800	water
05	MW-5		8/6/96	1330	water

REQUESTED ANALYSES	NO. OF CONTAINERS	OBSERVATIONS/COMMENTS/ COMPOSITING INSTRUCTIONS
Drx 8020 DRC 8100	3	vials labelled MW-3 Time corresponds to MW.
	3	
	3	
	1	
	3	

RELINQUISHED BY	DATE	RECEIVED BY	DATE
<u>Lisa Maserjian</u> SIGNATURE LISA Maserjian PRINT NAME Hart Crowser COMPANY	8/6/96 TIME 1420	<u>Lisa Hurler</u> SIGNATURE Lisa Hurler PRINT NAME NCA-B COMPANY	8-7-96 TIME 08:30
RELINQUISHED BY	DATE	RECEIVED BY	DATE
SIGNATURE	TIME	SIGNATURE	TIME
PRINT NAME	TIME	PRINT NAME	TIME
COMPANY	TIME	COMPANY	TIME

SPECIAL SHIPMENT/HANDLING OR STORAGE REQUIREMENTS:

COOLER NO.: C310 STORAGE LOCATION: _____

See Lab Work Order No. _____
for Other Contract Requirements

TOTAL NUMBER OF CONTAINERS: 13

SAMPLE RECEIPT INFORMATION
CUSTODY SEALS: YES NO N/A
GOOD CONDITION YES NO
TEMPERATURE: _____
SHIPMENT METHOD: HAND OVERNIGHT
 COURIER

TURNAROUND TIME:
 24 HOURS 1 WEEK
 48 HOURS STANDARD
 72 HOURS OTHER _____

000273