FINAL REPORT

OPERABLE UNIT B

POLELINE ROAD DISPOSAL AREA

July 2001

LONG-TERM GROUNDWATER MONITORING REPORT

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TABLE OF CONTENTS

TABLE OF CONTENTS

LIST OF TABLES

TABLE OF CONTENTS

LIST OF FIGURES

APPENDICES

Army	United States Army, Public Works
bgs	below ground surface
CRREL	Cold Region Research and Engineering Laboratory
EB	equipment blank
ERA	ecological risk assessment
ESE	Environmental Science & Engineering, Inc.
FS	feasibility study
ft^2	feet squared
HHRA	human health risk assessment
HVE	high vacuum extraction
IDW	investigation-derived wastes
MCL	maximum contaminant level
mg/L	milligram per liter
OHM	OHM Remediation Services Corporation
OUB	Operable Unit B
PCA	1,1,2,2-Tetrachloroethane
PCE	tetrachloroethene
PID	photoionization detector
ppm	parts per million
RAO	remedial action objective
RI	Remedial Investigation
SPH	six-phase heating
SVE	soil vapor extraction
TCE	trichloroethene
URS	URS Corporation
VOC	volatile organic compound
WC	Woodward-Clyde

URS Corporation (URS), formerly URS Greiner Woodward-Clyde, was contracted by the United States Army Corps of Engineers on behalf of the United States Army, Public Works (Army) to conduct long-term groundwater monitoring at Operable Unit B (OUB), Poleline Road Disposal Area, Fort Richardson, Alaska. OUB is a former Army disposal area for chemical warfare training materials. OUB has been the subject of several environmental investigations, a feasibility study (FS), and a treatability study.

Long-term groundwater monitoring has two objectives, 1) collect data on groundwater contaminant trends, and 2) devise an appropriate long-term site monitoring plan. According to the *Long-Term Groundwater Monitoring Work Plan, Operable Unit B, Poleline Road Disposal Area, Fort Richardson, Alaska* (WC, 1997), eight rounds of sampling will be performed initially to evaluate groundwater contaminants over time. The final round, Round eight, has been completed. The sampling dates were: November 1997, June 1998, October 1998, March 1999, October 1999, March 2000, October 2000, and April 2001. This report summarizes the eighth round of sampling conducted in April 2001.

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Tasks to be completed under the *Long-Term Groundwater Monitoring Work Plan, Operable Unit B, Poleline Road Disposal Area, Fort Richardson, Alaska* (WC, 1997) include the following:

- Conduct eight rounds of biannual groundwater monitoring for volatile organic compounds (VOCs) in up to 20 monitoring wells at OUB; sample for natural attenuation parameters during the first two rounds.
- After each sampling round, prepare a technical memorandum that includes the results of the sampling event, a description of changes in contaminant concentrations since the previous sampling event, and recommendations for the next round of sampling.
- Evaluate natural attenuation data after the first two rounds of sampling, and revise the sampling plan based on the evaluation.
- Re-evaluate natural attenuation parameters and VOC results in a final sampling event scheduled for October 2001. This data will be used to identify trends in concentration levels (increasing or decreasing) for the contaminants of interest.
- Provide recommendations for future long-term monitoring needs.

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3.1 LOCATION

The Fort Richardson Army Post occupies 61,500 acres of land (Figure 3-1). OUB is located on the Fort Richardson Army Post approximately ten miles northeast of Anchorage, Alaska, one mile south of the Eagle River, and 0.6 miles north of the Anchorage Regional Landfill (Figure 3-2). Access to the area is by Poleline Road, a gravel road that runs northeast southwest along a powerline route and the Eklutna Water Line. OUB is bisected by Barrs Boulevard, a gravel road extending from the Glenn Highway to Poleline Road.

3.2 SITE DESCRIPTION

OUB is a low-lying, relatively flat area, bordered by a wooded, 80-foot hill to the west, wetlands directly south and southwest of the main disposal area (Area 3 and Area 4), and low, wooded hills on the remaining borders (Figure 3-3). The area where buried waste was detected by the geophysical survey is approximately 1.5 acres in size. The main disposal area was cleared of vegetation during a 1994 removal action. No significant re-vegetation has occurred.

3.3 GEOLOGY

Regional surficial deposits are fluvially reworked glacial sediments and glacial tills. These deposits appear to be up to 30 feet thick at the site and consist of unstratified to poorly stratified clays, silts, sands, gravels, and boulders. A basal till lies below the surficial deposits and overlies an advance moraine/till complex. Underlying the glacial sediments is bedrock composed of hard, black fissile claystone.

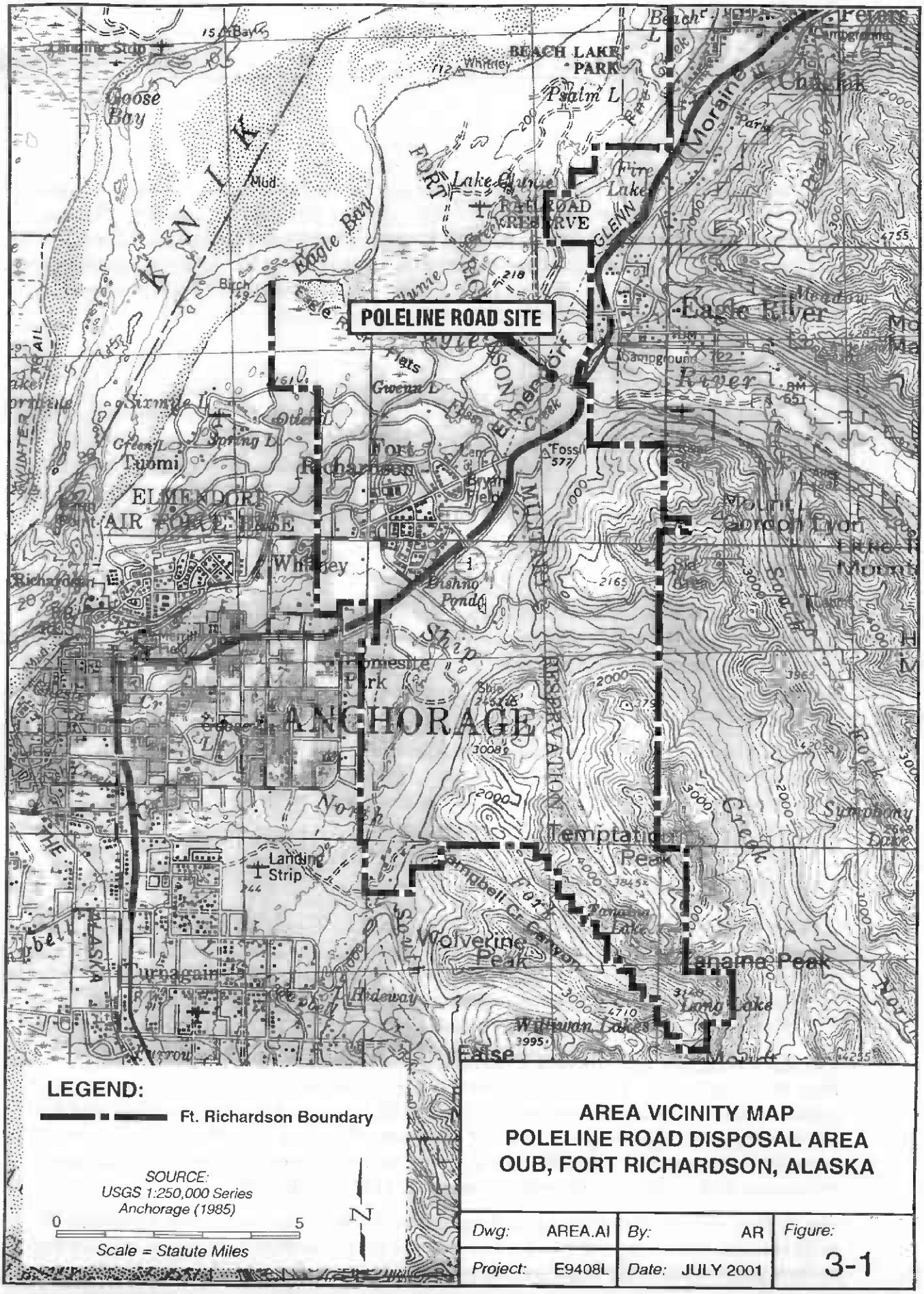
The subsurface soils are dense glacial tills and generally silty sands with some gravel. Thin, discontinuous clay lenses were observed rarely. Observations during drilling confirm a typical fluvio-glacial setting; a heterogeneous system of discontinuous, relatively permeable channels with intervening denser, less permeable sediments.

3.4 HYDROGEOLOGY

Four water-bearing intervals have been identified at OUB, 1) a perched interval, 2) a shallow interval, 3) an intermediate interval, and 4) a deep aquifer. The detection of contaminants in all four intervals suggests they are interconnected to some degree. Observations made while drilling indicate that the saturated intervals are separated by zones of very dense, low porosity, compact tills. The compact tills are dry or slightly moist.

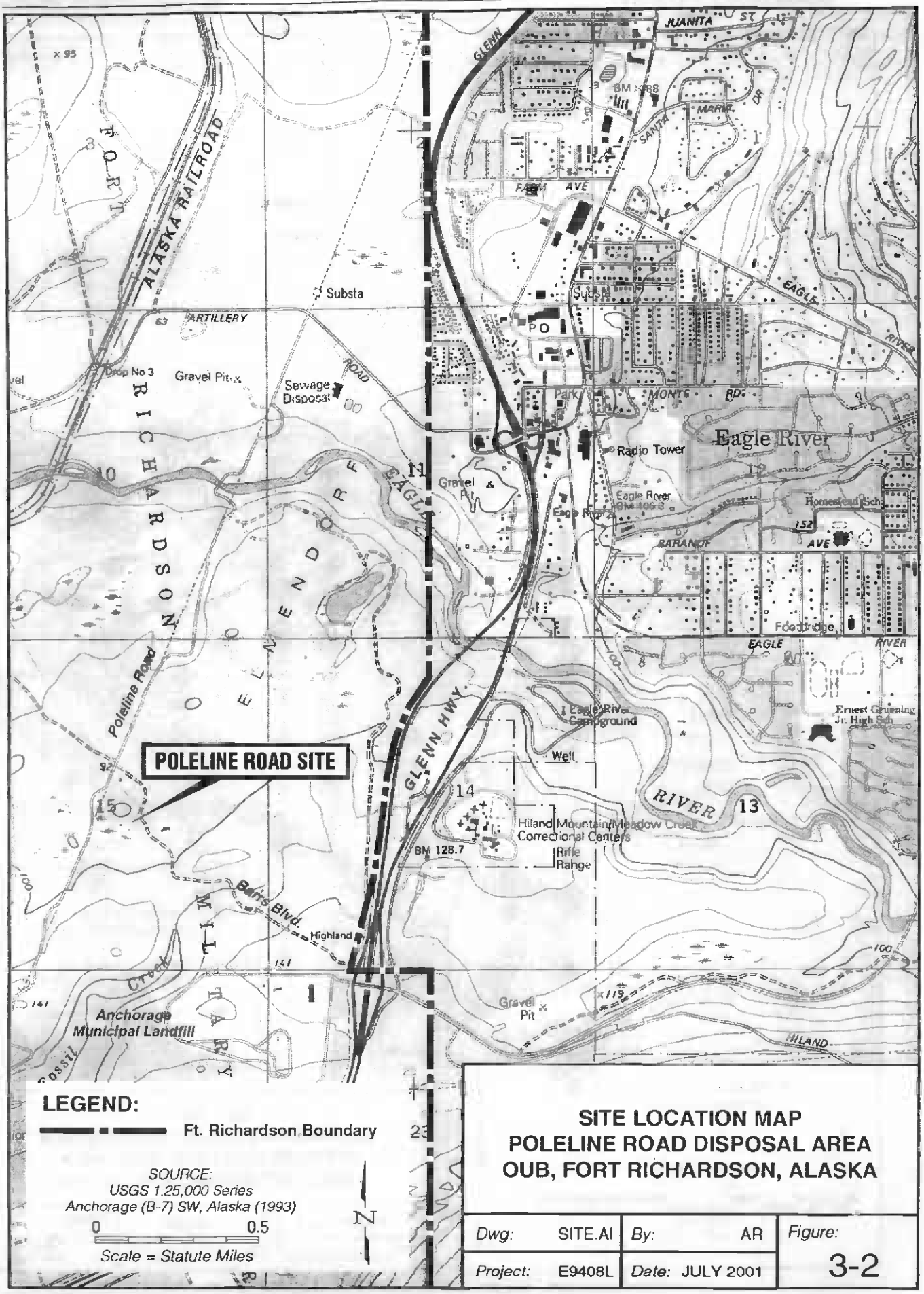
The perched interval was observed in borings drilled between Area A-2 and the wetlands, and in Area A-3 (Figure 3-3). The top of the perched interval was encountered at four to ten feet below ground surface (bgs), and the bottom was at six to 12 feet bgs. The average thickness of the perched interval is approximately five feet. The perched interval is recharged mainly by surface water from the wetlands, although some recharge also occurs from precipitation. The only monitoring well installed in the perched interval is MW-14 (AP-3746).

The shallow, saturated interval is an average of ten feet thick; the top was encountered at 20 to 25 feet bgs, and the bottom was at 28 to 36 feet bgs. Groundwater elevations indicate that shallow groundwater is flowing in a north-northeast direction. Because of the localized nature of



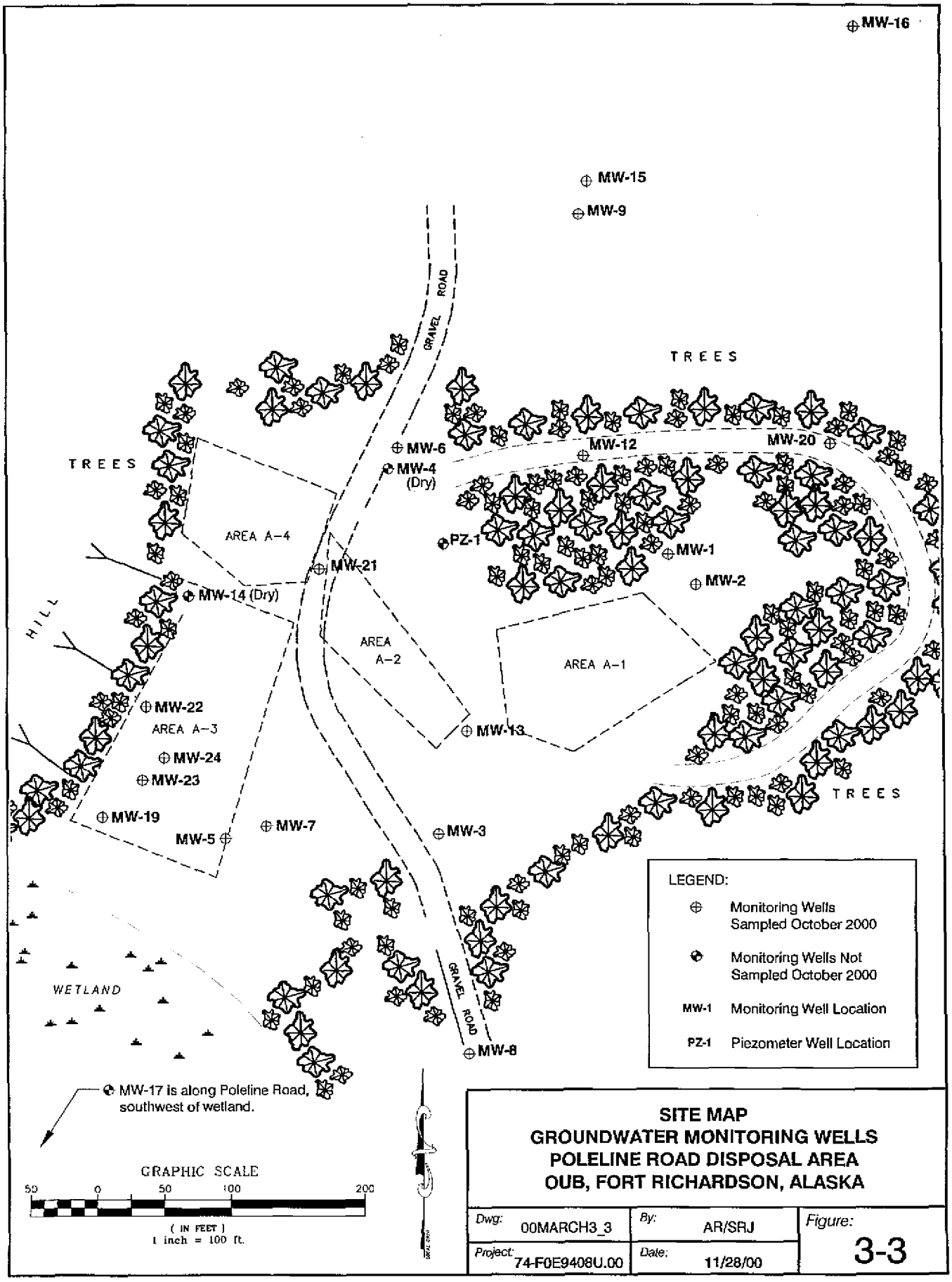
AREA VICINITY MAP
POLELINE ROAD DISPOSAL AREA
OUB, FORT RICHARDSON, ALASKA

Dwg:	AREA.AI	*By:*	AR	*Figure:*	3-1
Project:	E9408L	*Date:*	JULY 2001		



SITE LOCATION MAP
POLELINE ROAD DISPOSAL AREA
OUB, FORT RICHARDSON, ALASKA

Dwg:	SITE.AI	*By:*	AR	*Figure:*	3-2
Project:	E9408L	*Date:*	JULY 2001		



SITE MAP
GROUNDWATER MONITORING WELLS
POLELINE ROAD DISPOSAL AREA
OUB, FORT RICHARDSON, ALASKA

Dwg: 00MARCH3_3	By: AR/SRJ	Figure: 3-3
Project: 74-F0E9408U.00	Date: 11/28/00	

water-bearing zones at this site, it is difficult to determine whether the water-bearing units are hydraulically connected between wells. The shallow interval is recharged by water from the discontinuous perched interval and by infiltration of precipitation.

The intermediate interval was observed while drilling monitoring well MW-16 (AP-3748). The saturated portion of the intermediate interval was encountered at approximately 65 to 95 feet bgs in MW-16 (AP-3748). The intermediate saturated interval does not correlate with the other deep wells on site, suggesting that it is an isolated lens with limited continuity. There may be several isolated lenses of saturated material within the intermediate interval.

Five monitoring wells at OUB penetrate the deep aquifer, the top of which was encountered from approximately 80 to 125 feet bgs. The deep aquifer is an advance moraine/till complex with thickness varying from three to 40 feet. Groundwater elevations indicate that the flow direction in the deep aquifer is locally to the northeast and regionally to the northwest. Available data indicate that the deep aquifer below the site is not connected with deep aquifers used for drinking water wells in the community of Eagle River (over one mile northeast).

The deep aquifer overlies a claystone bedrock unit with unknown thickness. Four of the five deep wells at OUB penetrate the bedrock unit, and the well screens extend slightly into the bedrock. The top of bedrock was encountered from 120 to 170 feet beneath the site.

The ultimate discharge area of the water-bearing intervals at OUB is probably the Eagle River, approximately one mile north of the site (Figure 3-2). The Eagle River flows into the Knik Arm of Cook Inlet approximately five miles northwest of OUB. The river is not used as a drinking water source.

3.5 LAND USE

The land surrounding OUB currently is used for Army training activities and recreational purposes. The Eklutna Water Line, a pipeline which supplies Anchorage and part of the Eagle River community with drinking water from Eklutna Lake (over 15 miles from the site), runs immediately west of the site.

At present, there are no plans for development of the OUB. The deep aquifer may provide sufficient yield for drinking water wells; however, future development of the deep aquifer for this purpose is unlikely, due to the proximity of the Eklutna Water Line.

3.6 HISTORY OF INVESTIGATION ACTIVITIES

Several investigations and a removal action have been conducted at OUB since its discovery in 1990. A brief summary of these activities is presented as follows:

- In 1990 and in 1992, Environmental Science & Engineering, Inc. (ESE) conducted site investigations that included a geophysical survey, soil borings, a soil gas survey, monitoring well installation, groundwater sampling, a water level survey, and aquifer (slug) tests (ESE, 1990, 1991, and 1993).
- In 1993, OHM Remediations Services Corporation (OHM) conducted a rapid response removal action within areas A-3 and A-4 (OHM, 1993).

- In 1994 and in 1995, the Cold Region Research and Engineering Laboratory (CRREL) conducted geophysical surveys (CRREL, 1994, 1995).
- In 1995, URS (then Woodward-Clyde) performed a Remedial Investigation (RI) that consisted of surface and subsurface soil sampling, groundwater sampling, and installation of several new monitoring wells (WC, 1996a).
- In 1995, URS conducted a human health risk assessment (HHRA) that included groundwater sampling and modeling (WC, 1996b).
- In 1996, URS prepared an FS to determine remedial alternatives (URS, 1996).
- In 1996, URS performed an ecological risk assessment (ERA) in conjunction with an HHRA (WC, 1997).
- In 1996, URS conducted a treatability study that provided data concerning soil vapor extraction (SVE) and air sparging. The study also included groundwater sampling and soil borings. (WC, 1997).
- For several days in 1996, URS conducted an SVE evaluation study that included installing additional soil borings and soil/groundwater sampling (WC, 1997).
- In 1997, URS conducted a design verification study to evaluate the applicability of six-phase heating (SPH) as an in situ technology for remediating solvent-contaminated soils. The study included soil borings and surface and subsurface soil sampling (WC, 1998).
- In 1998, URS performed a duel-phased, high vacuum extraction (HVE) treatability study that included groundwater sampling, installing additional soil borings and monitoring wells, and subsurface sampling. (WC, 1999).

Based on the success of SPH on soils, an additional design verification study was conducted in 1999. This recent design verification study evaluated the applicability of SPH as an in situ technology for remediating solvent-contaminated groundwater. New soil borings, surface and subsurface soil samples, and groundwater samples were collected (URS, 2000).

Monitoring wells selected for sampling during the initial eight rounds of the Long-Term Groundwater Monitoring Program are shown on the site map (Figure 3-3). The rationale for sampling each well is presented in the *Long-Term Groundwater Monitoring Work Plan, Operable Unit B, Poleline Road Disposal Area, Fort Richardson, Alaska* (WC, 1997). Standard operating procedures were used for sample collection, containerization, labeling, packaging, and sample transport. The procedures follow the guidelines established within the Groundwater Monitoring Plan (WC, 1997).

Field tasks for this round of groundwater monitoring included the following:

- measure initial headspace readings of organic vapors in each monitoring well;
- measure static water levels;
- collect field measurements for dissolved oxygen, pH, salinity, specific conductivity, temperature, and turbidity; and
- purge and sample up to 20 monitoring wells for VOCs.

4.1 FIELD MEASUREMENTS

Initial headspace measurements for VOC were collected using a photoionization detector (PID) with an 11.7 lamp. Measurements of depth-to-water, pH, specific conductance, salinity, temperature, turbidity, and dissolved oxygen were recorded at each groundwater sampling location. Field measurements collected at each location are summarized in Table 4-1. Results of the field measurements are presented in Section 5 of this report.

4.2 GROUNDWATER SAMPLING

Groundwater samples were collected in accordance with procedures and protocols presented in Sections four through seven of the *Long-Term Groundwater Monitoring Work Plan* and *Addendum No. 1*. Samples were collected using dedicated tubing and a submersible pump. Results of the laboratory analyses performed on groundwater are presented in Section 5 of this report. Laboratory reports are provided in Appendix A.

4.3 INVESTIGATION-DERIVED WASTE

All investigation-derived waste (IDW) generated during the field investigation (e.g., equipment decontamination fluids, well purge water, and miscellaneous wastes) was containerized during sampling activities and transported to a U.S. Army Corps of Engineers designated treatment area. Handling and final disposal of all wastes were managed by the contractor under guidance from the U.S. Army Corps of Engineers.

TABLE 4-1

Field Measurement Results for the April 2001 Groundwater Sampling Event
Summary of Results

OPERABLE UNIT B, POLELINE ROAD DISPOSAL AREA
FORT RICHARDSON, ALASKA

Well ID	API No.	Date Sampled	Dissolved Oxygen (mg/l)	pH	Salinity (%)	Conductivity (mS/cm)	Temperature (oC)	Turbidity (NTU)
WELLS SCREENED IN SHALLOW AQUIFER								
MW-2	AP-4012	4/3/01	7.67	7.41	0.0	0.21	5.4	1.8
MW-3	AP-4013	4/4/01	7.64	7.37	0.0	0.19	3.6	1.2
MW-8	AP-4018	4/4/01	3.93	6.54	0.0	0.19	3.3	1.2
MW-12	AP-3744	4/3/01	8.39	7.00	0.0	0.21	6.2	-10
MW-13	AP-3745	4/4/01	7.78	7.39	0.0	0.20	5.2	2.3
MW-15*	AP-3747	4/2/01	NR	NR	NR	NR	NR	NR
MW-17*	AP-3749	4/3/01	NR	NR	NR	NR	NR	NR
MW-19	AP-3981	4/4/01	1.16	6.75	0.0	0.28	8.1	28.4
MW-20	AP-3982	4/3/01	8.30	7.07	0.0	0.18	4.4	2.2
MW-21*	AP-3983	4/5/01	NR	7.14	0.0	0.38	6.5	236
MW-22*	AP-3984	4/5/01	NR	6.65	0.0	0.23	9.7	824
MW-23	AP-3985	4/6/01	1.41	6.99	0.0	0.33	11.1	4
MW-24	AP-3986	4/6/01	0.80	6.93	0.0	0.35	13.3	6.4
PZ-1	AP-3989	--	--	--	--	--	--	--
WELL SCREENED IN PERCHED AQUIFER								
MW-14	AP-3746	--	--	--	--	--	--	--
WELL SCREENED IN SHALLOW-INTERMEDIATE AQUIFER								
MW-5	AP-4015	4/5/01	0.85	6.48	0.0	0.28	9.3	11.4
WELL SCREENED IN INTERMEDIATE AQUIFER								
MW-4	AP-4014	--	--	--	--	--	--	--
WELL SCREENED IN DEEP AQUIFER								
MW-1	AP-4011	4/3/01	10.80	7.83	0.0	0.23	5.9	1.8
MW-6*	AP-4016	4/4/01	NR	9.43	0.0	0.36	4.7	77.5
MW-7	AP-4017	4/5/01	1.88	7.13	0.0	0.36	9.0	7
MW-9	AP-4019	4/2/01	7.43	7.90	0.0	0.17	3.9	-2
MW-16	AP-3748	4/2/01	7.08	7.42	0.0	0.26	4.9	-2

NOTES: MW-14 was dry in 1997, 1998, 1999, 2000, and had insufficient water for sampling in 2001
NR = Not Reported
-- = Not Sampled
* = Well pumped dry before collecting groundwater sample

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4.4 DEVIATIONS FROM THE LONG-TERM GROUNDWATER MONITORING WORK PLAN

This section lists and describes conditions or actions that resulted in deviations from the work plan. In general, changes and problems encountered during sampling activities include insufficient groundwater for sampling, changes to sampling procedures due to field conditions, and damaged monitoring wells. The following deviations from the work plan occurred during this sampling event:

- No groundwater was encountered in MW-4 (AP-4014); this monitoring well has been dry previously, during sampling activities performed in 1996,1997, 1998, 1999 and 2000.
- MW-14 (AP-3746) contained 0.25 feet of water; this is less water than necessary to operate the submersible pump; therefore, it was not sampled. Previously this monitoring well had been dry during 1997, 1998, and 1999 sampling rounds.
- No dissolved oxygen readings were available for MW-17 (AP-3749).
- MW-22 (AP-3784) did not have sufficient water in it. The purge water was very muddy therefore the hose was decontaminated after purging the well dry. This hose was then reintroduced into well and the sample collected from the end of the spool hose.
- Monitoring wells MW-6 (AP-4016), MW-15 (AP-3747), MW-17 (AP-3749), MW-21 (AP-3983) and MW-22 (AP-3984) were pumped dry. Groundwater samples were collected when the wells had sufficiently recharged, not after the field parameters had re-stabilized.

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Field work at OUB commenced on March 29, 2001. At this time headspace readings and static water level measurements were taken at each well. These results are presented in Tables 5-13 and 5-14

Groundwater sampling activities began on April 2, 2001 and continued through April 6, 2001. Nineteen of the 22 wells were sampled. MW-4 (AP-4014) was dry and could not be sampled MW-14 (AP-3746) did not have enough water in it to operate the submersible pump for sample collection; therefore this well was not sampled. Two quality control duplicate samples, one matrix spike/matrix spike duplicate sample and an equipment rinsate sample were collected.

Analytical laboratory results for VOCs are summarized in Table 5-1 through 5-10. These tables also present historic VOC data from previous sampling events.

Table 5-11 provides a sample identification cross-reference. Tables 5-12 presents a list of the groundwater samples that contain VOCs at concentrations that exceed the maximum contaminant levels (MCLs) and/or the remedial action objectives (RAOs).

5.1 VOLATILE ORGANIC COMPOUNDS

The primary VOCs at this site are 1,1,2,2-Tetrachloroethane (PCA), Tetrachloroethene (PCE) and Trichloroethene (TCE). Figure 5-1 presents the degradation pathways for these chemicals.

Table 5-1 presents a summary of the analytical results for PCA. This compound was detected in 12 of the 19 wells sampled. PCA concentrations ranged from 0.003 to 3.40 milligram per liter (mg/L). The concentrations of PCA decreased in all but wells MW-7 (AP-4017) and MW-15 (AP-3747) since the last sampling round. MW-15 (AP-3747) is screened in the shallow aquifer while MW-7 (AP-4017) is screened in the deep aquifer. This compound was also detected in the equipment blank at a concentration of 0.00050 mg/L. Monitoring wells MW-21 (AP-3983) and MW-22 (AP-3984) are the only monitoring wells that did not have dedicated equipment and could be affected by the equipment blank results. The concentrations of PCA detected in these wells was more than ten times the concentration in the equipment blank and therefore the data was not flagged.

PCE was detected in six of the 19 wells sampled. Concentrations of PCE ranged from 0.0052 to 0.054 mg/L. PCE concentrations decreased in all but one well, MW-15 (AP-3747). This monitoring well is screened in the shallow aquifer. All wells (MW-5, MW-15, MW-21, MW-22, MW-23 and MW-24) with PCE reported exceeded the MCL of 0.005 mg/L. Note that none of these wells are located in the deep aquifer. No PCE was detected in the equipment blank.

TCE was detected in 13 of the wells sampled. TCE concentrations ranged from 0.00081to 2.80 mg/L. In the shallow aquifer, TCE concentrations decreased in all but one well, MW-15 (AP-3747). In the shallow–intermediate aquifer, the TCE concentration decreased. Three of the five monitoring wells in the deep aquifer had TCE detected. TCE concentrations decreased in all but MW-7 (AP-4017) where it increased from 0.73 to 1.300 mg/L. The MCL for Trichloroethene (0.005 mg/L) was exceeded in all wells where it was detected. This compound was also detected in the equipment blank at a concentration of 0.0016 mg/L. Monitoring wells MW-21 (AP-3783) and MW-22 (AP-3784) are the only monitoring wells that did not have dedicated equipment and could be affected by the equipment blank results. The concentrations

TABLE 5-1

1,1,2,2-TETRACHLOROETHANE
SUMMARY OF ANALYTICAL RESULTS
OPERABLE UNIT B, FORT RICHARDSON, ALASKA

Volatile Organic Compounds Detected (mg/l) in Groundwater Samples Using EPA Method 8260B

Well ID	API No.	Oct 1995	Nov 1996	Nov 1997	June 1998	Oct 1998	Mar 1999	Oct 1999	April 2000	Oct 2000	April 2001
WELLS SCREENED IN SHALLOW AQUIFER											
MW-2	AP-4012	ND (0.50)	ND (0.0010)	0.003	0.001	0.004	ND (0.001)	0.0017	ND (0.001)	0.00066	ND (0.0005)
MW-3	AP-4013	0.54	--	0.45	0.035	0.059	0.08	0.41	0.14	0.048	0.038
MW-8	AP-4018	ND (0.50)	--	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	0.002	ND (0.0002)	ND (0.0005)
MW-12	AP-3744	0.49	0.024	0.065	0.014	0.13	0.019	0.036	0.035	0.029	0.016
MW-13	AP-3745	0.0011	0.0011	0.009	0.058	0.056	0.004	0.13	0.023	0.28 D	0.0063
MW-15	AP-3747	0.0063	--	0.004	0.002	0.004	0.012	0.013	0.027	0.0057	0.031
MW-17	AP-3749	--	--	ND (0.001)	--	--	0.001	--	--	--	ND (0.0005)
MW-19	AP-3981	--	--	1.40	0.34	0.63	0.69	0.85	0.04	0.0003 J	ND (0.0005)
MW-20	AP-3982	--	--	0.01	0.15	0.12	0.059	0.04	0.024	ND (0.0002)	ND (0.0005)
MW-21	AP-3983	--	--	62.00	24.00	3.80	26.00	15.00	16.00	3.50 D	3.400 D
MW-22	AP-3984	--	--	11.00	3.70	15.00	2.80	0.81	1.10	0.92 D	0.260 D
MW-23	AP-3985	--	--	--	17.00	18.00	17.00	0.10	0.32	0.42 D	0.340 D
MW-24	AP-3986	--	--	--	--	47.00	--	0.026	0.14	0.23 D	0.200 D
PZ-1	AP-3989	--	1.40	19.00	1.00	3.30	1.80	0.83	--	--	--
WELL SCREENED IN PERCHED AQUIFER											
MW-14	AP-3746	1900	1000	--	--	--	--	--	--	--	--
WELL SCREENED IN SHALLOW-INTERMEDIATE AQUIFER											
MW-5	AP-4015	21	9.1	19.00	15.00	6.00	10.00	14.00	2.60	3.20 D	0.550 D
WELL SCREENED IN INTERMEDIATE AQUIFER											
MW-4	AP-4014	71	--	--	6.00	--	--	--	--	--	--
WELL SCREENED IN DEEP AQUIFER											
MW-1	AP-4011	0.082	--	0.047	0.054	0.029	0.018	0.047	0.071	0.033	0.018
MW-6	AP-4016	0.52	--	0.006	0.013	0.019	0.005	0.013	0.006	0.008	0.003
MW-7	AP-4017	3.10	--	1.50	1.80	1.50	0.95	1.50	0.69	1.00 D	1.200 D
MW-9	AP-4019	ND (0.50)	--	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.0002)	ND (0.0005)
MW-16	AP-3748	ND (0.002)	ND (0.0010)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.0002)	ND (0.0005)

NOTES: MW-14 was dry in 1997, 1998, 1999, 2000, had insufficient water for sampling in 2001
-- = Not Sampled
ND = Analyte Not Detected (Detection Limit in Parentheses)
D = The reported result is from a dilution.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

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TABLE 5-2

TETRACHLOROETHENE
SUMMARY OF ANALYTICAL RESULTS
OPERABLE UNIT B, FORT RICHARDSON, ALASKA

Volatile Organic Compounds Detected (mg/l) in Groundwater Samples Using EPA Method 8260B

Well ID	API No.	Oct 1995	Nov 1996	Nov 1997	June 1998	Oct 1998	Mar 1999	Oct 1999	April 2000	Oct 2000	April 2001
WELLS SCREENED IN SHALLOW AQUIFER											
MW-2	AP-4012	ND (0.0002)	ND (0.0010)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.0002)	ND (0.0005)
MW-3	AP-4013	ND (0.0002)	--	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	0.0003 J	ND (0.0005)
MW-8	AP-4018	ND (0.0002)	--	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.0002)	ND (0.0005)
MW-12	AP-3744	0.00035	ND (0.0010)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	0.0002 J	ND (0.0005)
MW-13	AP-3745	ND (0.0002)	ND (0.0010)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	0.0004 J	ND (0.0005)
MW-15	AP-3747	0.0021	--	0.002	0.001	0.003	0.006	0.006	0.009	0.0028	0.0078
MW-17	AP-3749	--	--	ND (0.001)	--	--	ND (0.001)	--	--	--	ND (0.0005)
MW-19	AP-3981	--	--	0.018	0.002	0.005	0.007	ND (0.001)	ND (0.001)	ND (0.0002)	ND (0.0005)
MW-20	AP-3982	--	--	ND (0.001)	0.001	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.0002)	ND (0.0005)
MW-21	AP-3983	--	--	0.39	0.17	0.14	0.16	0.12	0.13	0.068	0.054 D
MW-22	AP-3984	--	--	0.30	0.084	0.15	0.062	0.029	0.096	0.06	0.018 D
MW-23	AP-3985	--	--	--	0.052	0.086	0.072	0.01	0.007	0.015	0.0052 D
MW-24	AP-3986	--	--	--	--	0.15	--	0.0092	0.013	0.013	0.0071 D
PZ-1	AP-3989	--	ND (0.10)	0.073	0.01	0.01	0.013	0.005	--	--	--
WELL SCREENED IN PERCHED AQUIFER											
MW-14	AP-3746	11	12.3	--	--	--	--	--	--	--	--
WELL SCREENED IN SHALLOW-INTERMEDIATE AQUIFER											
MW-5	AP-4015	ND (0.2)	0.067	0.13	0.029	0.032	0.059	0.038	0.05	0.032	0.020 D
WELL SCREENED IN INTERMEDIATE AQUIFER											
MW-4	AP-4014	0.31	--	--	0.084	--	--	--	--	--	--
WELL SCREENED IN DEEP AQUIFER											
MW-1	AP-4011	ND (0.002)	--	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.0002)	ND (0.0005)
MW-6	AP-4016	ND (0.002)	--	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.0002)	ND (0.0005)
MW-7	AP-4017	ND (0.02)	--	0.004	0.005	0.003	0.004	0.002	0.002	0.0021	ND (0.005)
MW-9	AP-4019	ND (0.0002)	--	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.0002)	ND (0.0005)
MW-16	AP-3748	ND (0.0002)	ND (0.0010)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.0002)	ND (0.0005)

NOTES: MW-14 was dry in 1997, 1998, 1999, 2000, had insufficient water for sampling 2001
MW-7 detection limit and MCl are the same value
-- = Not Sampled
ND = Analyte Not Detected (Detection Limit in Parentheses)
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

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TABLE 5-3

CIS-1,2-DICHLOROETHENE
SUMMARY OF ANALYTICAL RESULTS
OPERABLE UNIT B, FORT RICHARDSON, ALASKA

Volatile Organic Compounds Detected (mg/l) in Groundwater Samples Using EPA Method 8260B

Well ID	API No.	Oct 1995	Nov 1996	Nov 1997	June 1998	Oct 1998	Mar 1999	Oct 1999	April 2000	Oct 2000	April 2001
WELLS SCREENED IN SHALLOW AQUIFER											
MW-2	AP-4012	ND (0.0002)	ND (0.0010)	*(0.38)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.0002)	ND (0.0005)
MW-3	AP-4013	0.028	--	* (0.046)	0.005	0.01	0.013	0.034	0.021	0.011	0.0089
MW-8	AP-4018	ND (0.0002)	--	ND *(0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.0002)	ND (0.0005)
MW-12	AP-3744	0.0091	0.0029	* (0.015)	0.003	0.004	0.002	0.0034	0.003	0.0032	0.0028
MW-13	AP-3745	ND (0.0002)	ND (0.0010)	* (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	0.027	0.0020
MW-15	AP-3747	0.015	--	* (0.028)	0.008	0.017	0.034	0.04	0.054	0.016	0.044
MW-17	AP-3749	--	--	ND *(0.001)	--	--	ND (0.001)	--	--	--	ND (0.0005)
MW-19	AP-3981	--	--	* (0.076)	0.014	0.011	0.014	0.01	0.004	0.001	ND (0.0005)
MW-20	AP-3982	--	--	ND *(0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.0002)	ND (0.0005)
MW-21	AP-3983	--	--	* (5.100)	1.50	2.20	2.40	2.50	3.10	1.40 D	1.20 D
MW-22	AP-3984	--	--	* (0.730)	0.16	0.73	0.18	0.058	0.16	0.08	0.260 D
MW-23	AP-3985	--	--	--	0.14	0.15	0.23	0.30	1.40	0.28 D	0.092 D
MW-24	AP-3986	--	--	--	--	0.22	--	0.34	0.76	0.28 D	0.150 D
PZ-1	AP-3989	--	0.17	* (1.100)	0.097	0.26	0.16	0.098	--	--	--
WELL SCREENED IN PERCHED AQUIFER											
MW-14	AP-3746	37.00	4.30	--	--	--	--	--	--	--	--
WELL SCREENED IN SHALLOW-INTERMEDIATE AQUIFER											
MW-5	AP-4015	ND (0.2)	0.26	* (0.650)	0.19	0.39	0.64	1.20	2.00	0.50 D	0.470 D
WELL SCREENED IN INTERMEDIATE AQUIFER											
MW-4	AP-4014	1.60	--	--	0.33	--	--	--	--	--	--
WELL SCREENED IN DEEP AQUIFER											
MW-1	AP-4011	0.0053	--	ND *(0.001)	0.005	0.006	0.004	0.0041	0.004	0.006	0.0048
MW-6	AP-4016	0.0035	--	* (0.004)	0.002	0.002	0.002	ND (0.001)	0.001	0.0011	0.00086
MW-7	AP-4017	0.28	--	ND *(0.001)	0.30	0.31	0.38	0.29	0.18	0.26 D	0.390 D
MW-9	AP-4019	ND (0.0002)	--	ND *(0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.0002)	ND (0.0005)
MW-16	AP-3748	ND (0.0002)	ND (0.0010)	ND *(0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.0002)	ND (0.0005)

NOTES: MW-14 was dry in 1997, 1998, 1999, 2000, insufficient water for sampling in 2001
-- = Not Sampled
ND = Analyte Not Detected (Detection Limit in Parentheses)
* = Samples Analyzed for 1,2-Dichloroethene Total only(including cis-1,2-DCE, trans-1,2-DCE, and 1,1-DCE)
D = The reported result is from a dilution.

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TABLE 5-4

TRANS-1,2-DICHLOROETHENE
SUMMARY OF ANALYTICAL RESULTS
OPERABLE UNIT B, FORT RICHARDSON, ALASKA

Volatile Organic Compounds Detected (mg/l) in Groundwater Samples Using EPA Method 8260B

Well ID	API No.	Oct 1995	Nov 1996	Nov 1997	June 1998	Oct 1998	Mar 1999	Oct 1999	April 2000	Oct 2000	April 2001
WELLS SCREENED IN SHALLOW AQUIFER											
MW-2	AP-4012	ND (0.0002)	ND (0.0010)	* (0.38)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.0002)	ND (0.0005)
MW-3	AP-4013	0.0038	--	* (0.046)	ND (0.001)	0.01	0.002	0.0042	0.002	0.0013	0.0012
MW-8	AP-4018	ND (0.0002)	--	ND *(0.001)	ND (0.001)	0.002	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.0002)	ND (0.0005)
MW-12	AP-3744	0.001	ND (0.0010)	* (0.015)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	0.00073	0.00054
MW-13	AP-3745	ND (0.0002)	ND (0.0010)	* (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	0.0016	ND (0.0005)
MW-15	AP-3747	0.0041	--	* (0.028)	0.002	0.004	0.01	0.0093	0.015	0.0046	0.013
MW-17	AP-3749	--	--	ND *(0.001)	--	--	ND (0.001)	--	--	--	ND (0.0005)
MW-19	AP-3981	--	--	* (0.076)	0.006	0.005	0.006	0.0013	ND (0.001)	ND (0.0002)	ND (0.0005)
MW-20	AP-3982	--	--	ND *(0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.0002)	ND (0.0005)
MW-21	AP-3983	--	--	* (5.100)	0.47	0.72	1.10	0.48	0.51	0.22 D	0.180 D
MW-22	AP-3984	--	--	* (0.730)	0.048	0.19	0.06	0.015	0.044	0.020	0.022 D
MW-23	AP-3985	--	--	--	0.053	0.058	0.094	0.036	0.07	0.03	0.012 D
MW-24	AP-3986	--	--	--	--	0.087	--	0.04	0.064	0.043	0.022 D
PZ-1	AP-3989	--	ND (0.10)	* (1.100)	0.031	0.065	0.06	0.028	--	--	--
WELL SCREENED IN PERCHED AQUIFER											
MW-14	AP-3746	12.00	1.60	--	--	--	--	--	--	--	--
WELL SCREENED IN SHALLOW-INTERMEDIATE AQUIFER											
MW-5	AP-4015	ND (0.2)	0.067	* (0.650)	0.066	0.11	0.34	0.11	0.19	0.091 D	0.075 D
WELL SCREENED IN INTERMEDIATE AQUIFER											
MW-4	AP-4014	0.41	--	--	0.075	--	--	--	--	--	--
WELL SCREENED IN DEEP AQUIFER											
MW-1	AP-4011	ND (0.002)	--	ND *(0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	0.00056	ND (0.0005)
MW-6	AP-4016	ND (0.002)	--	* (0.004)	ND (0.001)	ND (0.001)	0.001	ND (0.001)	ND (0.001)	ND (0.0002)	ND (0.0005)
MW-7	AP-4017	0.058	--	ND *(0.001)	0.082	0.074	0.075	0.059	0.049	0.056	0.100 D
MW-9	AP-4019	ND (0.0002)	--	ND *(0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.0002)	ND (0.0005)
MW-16	AP-3748	ND (0.0002)	ND (0.0010)	ND *(0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.0002)	ND (0.0005)

NOTES: MW-14 was dry in 1997, 1998, 1999, 2000, had insufficient water for sampling in 2001
-- = Not Sampled
ND = Analyte Not Detected (Detection Limit in Parentheses)
* = Samples Analyzed for 1,2-Dichloroethene Total only(including cis-1,2-DCE, trans-1,2-DCE, and 1,1-DCE)
D = The reported result is from a dilution.

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TABLE 5-5

1,1-DICHLOROETHENE
SUMMARY OF ANALYTICAL RESULTS
OPERABLE UNIT B, FORT RICHARDSON, ALASKA

Volatile Organic Compounds Detected (mg/l) in Groundwater Samples Using EPA Method 8260B

Well ID	API No.	Oct 1995	Nov 1996	Nov 1997	June 1998	Oct 1998	Mar 1999	Oct 1999	April 2000	Oct 2000	April 2001
WELLS SCREENED IN SHALLOW AQUIFER											
MW-2	AP-4012	ND (0.0002)	ND (0.0010)	* (0.380)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.0002)	ND (0.0005)
MW-3	AP-4013	ND (0.00019)	--	* (0.046)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.0002)	ND (0.0005)
MW-8	AP-4018	ND (0.0002)	--	ND *(0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.0002)	ND (0.0005)
MW-12	AP-3744	0.00014	ND (0.0010)	* (0.015)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.0002)	ND (0.0005)
MW-13	AP-3745	0.00026	ND (0.0010)	* (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	0.00052	ND (0.0005)
MW-15	AP-3747	0.00071	--	* (0.028)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	0.003	0.0006	0.0025
MW-17	AP-3749	--	--	ND *(0.001)	--	--	ND (0.001)	--	--	--	ND (0.0005)
MW-19	AP-3981	--	--	* (0.076)	ND (0.001)	ND (0.001)	ND (0.001)	0.003	ND (0.001)	ND (0.0002)	ND (0.0005)
MW-20	AP-3982	--	--	ND *(0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.0002)	ND (0.0005)
MW-21	AP-3983	--	--	* (5.100)	0.014	0.019	0.018	0.033	0.038	0.018	0.011 D
MW-22	AP-3984	--	--	* (0.730)	ND (0.001)	0.007	ND (0.010)	ND (0.001)	0.002	0.0019	0.0014 D
MW-23	AP-3985	--	--	--	ND (0.001)	0.004	ND (0.010)	0.001	0.028	0.0095	0.0039 D
MW-24	AP-3986	--	--	--	--	0.005	--	0.014	0.02	0.0074	0.0048 D
PZ-1	AP-3989	--	ND (0.10)	* (1.100)	ND (0.001)	0.003	0.002	ND (0.001)	--	--	--
WELL SCREENED IN PERCHED AQUIFER											
MW-14	AP-3746	ND (0.5)	ND (1.0)	--	--	--	--	--	--	--	--
WELL SCREENED IN SHALLOW-INTERMEDIATE AQUIFER											
MW-5	AP-4015	ND (0.2)	ND (0.0010)	* (0.650)	ND (0.001)	0.005	ND (0.010)	0.01	0.021	0.0057	0.0081 D
WELL SCREENED IN INTERMEDIATE AQUIFER											
MW-4	AP-4014	ND (0.2)	--	--	0.003	--	--	--	--	--	--
WELL SCREENED IN DEEP AQUIFER											
MW-1	AP-4011	ND (0.002)	--	ND *(0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.0002)	ND (0.0005)
MW-6	AP-4016	ND (0.002)	--	* (0.004)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.0002)	ND (0.0005)
MW-7	AP-4017	ND (0.02)	--	ND *(0.001)	0.003	0.005	0.005	0.003	0.003	0.0035	0.0095
MW-9	AP-4019	0.0012	--	ND *(0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.0002)	ND (0.0005)
MW-16	AP-3748	ND (0.0002)	ND (0.0010)	ND *(0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.0002)	ND (0.0005)

NOTES: MW-14 was dry in 1997, 1998, 1999, 2000, had insufficient water for sampling in 2001
-- = Not Sampled
ND = Analyte Not Detected (Detection Limit in Parentheses)
* = Samples Analyzed for 1,2-Dichloroethene Total only (including cis-1,2-DCE, trans-1,2-DCE, and 1,1-DCE)

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TABLE 5-6

BENZENE
SUMMARY OF ANALYTICAL RESULTS
OPERABLE UNIT B, FORT RICHARDSON, ALASKA

Organic Compounds Detected (mg/l) in Groundwater Samples Using EPA Method 8260B											
Well ID	**API No.**	**Oct 1995**	**Nov 1996**	**Nov 1997**	**June 1998**	**Oct 1998**	**Mar 1999**	**Oct 1999**	**April 2000**	**Oct 2000**	**April 2001**
WELLS SCREENED IN SHALLOW AQUIFER											
MW-2	AP-4012	ND (0.0002)	ND (0.0010)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.0002)	ND (0.0005)
MW-3	AP-4013	ND (0.0002)	--	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.0002)	ND (0.0005)
MW-8	AP-4018	ND (0.0002)	--	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.0002)	ND (0.0005)
MW-12	AP-3744	ND (0.0002)	ND (0.0010)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.0002)	ND (0.0005)
MW-13	AP-3745	**0.00034**	ND (0.0010)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.0002)	ND (0.0005)
MW-15	AP-3747	ND (0.0002)	--	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.0002)	ND (0.0005)
MW-17	AP-3749	--	--	ND (0.001)	--	--	ND (0.001)	--	--	--	ND (0.0005)
MW-19	AP-3981	--	--	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.0002)	ND (0.0005)
MW-20	AP-3982	--	--	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.0002)	ND (0.0005)
MW-21	AP-3983	--	--	**0.094**	**0.021**	**0.021**	**0.033**	**0.012**	**0.017**	**0.0061**	**0.0053 D**
MW-22	AP-3984	--	--	**0.009**	**0.004**	**0.017**	ND (0.010)	ND (0.001)	**0.004**	**0.002 B**	**0.0019 D**
MW-23	AP-3985	--	--	--	**0.001**	**0.002**	ND (0.010)	ND (0.001)	ND (0.001)	**0.0003 J,B**	ND (0.001)
MW-24	AP-3986	--	--	--	--	**0.004**	--	ND (0.001)	ND (0.001)	**0.0004 J,B**	ND (0.001)
PZ-1	AP-3989	--	ND (0.10)	**0.022**	**0.002**	**0.003**	**0.002**	ND (0.001)	--	--	--
WELL SCREENED IN PERCHED AQUIFER											
MW-14	AP-3746	**2.9**	**3.3**	--	--	--	--	--	--	--	--
WELL SCREENED IN SHALLOW-INTERMEDIATE AQUIFER											
MW-5	AP-4015	ND (0.2)	**0.0013**	**0.004**	ND (0.001)	ND (0.001)	ND (0.010)	ND (0.001)	ND (0.001)	**0.00053 B**	ND (0.005)
WELL SCREENED IN INTERMEDIATE AQUIFER											
MW-4	AP-4014	ND (0.2)	--	--	**0.002**	--	--	--	--	--	--
WELL SCREENED IN DEEP AQUIFER											
MW-1	AP-4011	ND (0.002)	--	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.0002)	ND (0.0005)
MW-6	AP-4016	ND (0.002)	--	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.0002)	ND (0.0005)
MW-7	AP-4017	ND (0.02)	--	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	**0.0003 J,B**	ND (0.0050)
MW-9	AP-4019	**0.00073**	--	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.0002)	ND (0.0005)
MW-16	AP-3748	ND (0.0002)	ND (0.0010)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.0002)	ND (0.0005)

NOTES: MW-14 was dry in 1997, 1998, 1999, 2000, had insufficient water for sampling in 2001
MW-5 detection limit and MCL are the same value
-- = Not Sampled
ND = Analyte Not Detected (Detection Limit in Parentheses)
B = Analyte was found in the blank at a level that is significant relative to the sample result.
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

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TABLE 5-7

CARBON TETRACHLORIDE
SUMMARY OF ANALYTICAL RESULTS
OPERABLE UNIT B, FORT RICHARDSON, ALASKA

Well ID	API No.	Oct 1995	Nov 1996	Nov 1997	June 1998	Oct 1998	Mar 1999	Oct 1999	April 2000	Oct 2000	April 2001
		Volatile Organic Compounds Detected (mg/l) in Groundwater Samples Using EPA Method 8260B									
WELLS SCREENED IN SHALLOW AQUIFER											
MW-2	AP-4012	ND (0.0002)	ND (0.0010)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.0002)	ND (0.0005)
MW-3	AP-4013	ND (0.0002)	--	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.0002)	ND (0.0005)
MW-8	AP-4018	ND (0.0002)	--	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.0002)	ND (0.0005)
MW-12	AP-3744	**0.022**	**0.0011**	**0.002**	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	**0.00071**	ND (0.0005)
MW-13	AP-3745	**0.00038**	ND (0.0010)	**0.003**	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	**0.0003 J**	ND (0.0005)
MW-15	AP-3747	**0.0014**	--	ND (0.001)	ND (0.001)	ND (0.001)	**0.003**	**0.003**	**0.004**	**0.001**	**0.0032**
MW-17	AP-3749	--	--	ND (0.001)	--	--	ND (0.001)	--	--	--	ND (0.0005)
MW-19	AP-3981	--	--	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.0002)	ND (0.0005)
MW-20	AP-3982	--	--	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.0002)	ND (0.0005)
MW-21	AP-3983	--	--	ND (0.020)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.0002)	ND (0.0025)
MW-22	AP-3984	--	--	**0.011**	**0.01**	**0.006**	ND (0.010)	**0.0037**	**0.007**	**0.005**	ND (0.001)
MW-23	AP-3985	--	--	--	ND (0.001)	ND (0.001)	ND (0.010)	ND (0.001)	ND (0.001)	ND (0.0002)	ND (0.001)
MW-24	AP-3986	--	--	--	--	ND (0.001)	--	ND (0.001)	ND (0.001)	ND (0.0002)	ND (0.001)
PZ-1	AP-3989	--	ND (0.10)	ND (0.020)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	--	--	--
WELL SCREENED IN PERCHED AQUIFER											
MW-14	AP-3746	**2.6**	**2.7**	--	--	--	--	--	--	--	--
WELL SCREENED IN SHALLOW-INTERMEDIATE AQUIFER											
MW-5	AP-4015	ND (0.2)	ND (0.0010)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.010)	ND (0.001)	ND (0.001)	**0.0003 J**	ND (0.005)
WELL SCREENED IN INTERMEDIATE AQUIFER											
MW-4	AP-4014	ND (0.2)	--	--	**0.009**	--	--	--	--	--	--
WELL SCREENED IN DEEP AQUIFER											
MW-1	AP-4011	ND (0.002)	--	ND (0.001)	**0.001**	ND (0.001)	ND (0.001)	**0.001**	**0.001**	**0.0012**	**0.00085**
MW-6	AP-4016	ND (0.002)	--	**0.001**	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.0002)	ND (0.0005)
MW-7	AP-4017	ND (0.02)	--	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.0002)	ND (0.005)
MW-9	AP-4019	ND (0.0002)	--	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.0002)	ND (0.0005)
MW-16	AP-3748	ND (0.0002)	ND (0.0010)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.0002)	ND (0.0005)

NOTES: MW-14 was dry in 1997, 1998, 1999, 2000, had insufficient water for sampling in 2001
MW-4 detection limit and MCL are the same value
-- = Not Sampled
ND = Analyte Not Detected (Detection Limit in Parentheses)
J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

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TABLE 5-8

1,1,2-TRICHLOROETHANE
SUMMARY OF ANALYTICAL RESULTS
OPERABLE UNIT B, FORT RICHARDSON, ALASKA

Volatile Organic Compounds Detected (mg/l) in Groundwater Samples Using EPA Method 8260B

Well ID	API No.	Oct 1995	Nov 1996	Nov 1997	June 1998	Oct 1998	Mar 1999	Oct 1999	April 2000	Oct 2000	April 2001
WELLS SCREENED IN SHALLOW AQUIFER											
MW-2	AP-4012	ND (0.50)	ND (0.0010)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.0001)	ND (0.0005)
MW-3	AP-4013	0.0023	--	0.004	ND (0.001)	ND (0.001)	ND (0.001)	0.002	0.001	0.001	0.00066
MW-8	AP-4018	ND (0.50)	--	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.0001)	ND (0.0005)
MW-12	AP-3744	0.00078	ND (0.0010)	0.002	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	0.0005 J	ND (0.0005)
MW-13	AP-3745	ND (0.50)	ND (0.0010)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	0.003	ND (0.0005)
MW-15	AP-3747	0.0013	--	0.003	ND (0.001)	0.002	0.005	0.004	0.005	0.002	0.0052 D
MW-17	AP-3749	--	--	ND (0.001)	--	--	ND (0.001)	--	--	--	ND (0.0005)
MW-19	AP-3981	--	--	0.014	ND (0.001)	0.003	0.005	0.02	ND (0.001)	ND (0.0001)	ND (0.0005)
MW-20	AP-3982	--	--	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.0001)	ND (0.0005)
MW-21	AP-3983	--	--	0.42	0.19	0.20	0.18	0.12	0.12	0.04	0.0047 D
MW-22	AP-3984	--	--	0.043	0.011	0.41	ND (0.010)	0.004	0.007	0.007	0.0086 D
MW-23	AP-3985	--	--	--	0.076	0.077	0.07	0.001	0.011	0.005	0.0030 D
MW-24	AP-3986	--	--	--	--	0.15	--	0.008	0.006	0.005	0.0031 D
PZ-1	AP-3989	--	ND (0.10)	0.12	0.009	0.022	0.015	0.008	--	--	--
WELL SCREENED IN PERCHED AQUIFER											
MW-14	AP-3746	ND (1.3)	1.0	--	--	--	--	--	--	--	--
WELL SCREENED IN SHALLOW-INTERMEDIATE AQUIFER											
MW-5	AP-4015	ND (0.50)	0.45	0.10	0.025	0.031	0.059	0.021	0.031	0.013	0.013
WELL SCREENED IN INTERMEDIATE AQUIFER											
MW-4	AP-4014	ND (0.50)	--	--	0.036	--	--	--	--	--	--
WELL SCREENED IN DEEP AQUIFER											
MW-1	AP-4011	ND (0.005)	--	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	0.001	0.00069
MW-6	AP-4016	ND (0.005)	--	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	0.0002 J	ND (0.0005)
MW-7	AP-4017	ND (0.05)	--	0.024	0.028	0.02	0.021	0.021	0.012	0.018	0.027 D
MW-9	AP-4019	ND (0.50)	--	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.0001)	ND (0.0005)
MW-16	AP-3748	ND (0.50)	ND (0.0010)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.0001)	ND (0.0005)

NOTES: MW-14 was dry in 1997, 1998, 1999, 2000, had insufficient water for sampling in 2001

-- = Not Sampled

ND = Analyte Not Detected (Detection Limit in Parentheses)

D = The reported result is from a dilution.

J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

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TABLE 5-9

TRICHLOROETHENE
SUMMARY OF ANALYTICAL RESULTS
OPERABLE UNIT B, FORT RICHARDSON, ALASKA

Volatile Organic Compounds Detected (mg/l) in Groundwater Samples Using EPA Method 8260B

Well ID	API No.	Oct 1995	Nov 1996	Nov 1997	June 1998	Oct 1998	Mar 1999	Oct 1999	April 2000	Oct 2000	April 2001
WELLS SCREENED IN SHALLOW AQUIFER											
MW-2	AP-4012	ND (0.0002)	ND (0.0010)	0.001	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.0002)	ND (0.0005)
MW-3	AP-4013	0.26	--	0.27	0.037	0.062	0.11	0.24	0.13	0.062	0.061
MW-8	AP-4018	ND (0.0002)	--	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.0002)	ND (0.0005)
MW-12	AP-3744	0.16	0.07	0.19	0.058	0.063	0.058	0.079	0.058	0.054	0.040
MW-13	AP-3745	0.0067	0.0041	0.018	0.008	0.01	0.007	0.012	0.008	0.11 D	0.015
MW-15	AP-3747	0.27	--	0.32	0.14	0.26	0.73	0.87	1.2	0.25 D	0.860 D
MW-17	AP-3749	--	--	ND (0.001)	--	--	ND (0.001)	--	--	--	ND (0.0005)
MW-19	AP-3981	--	--	0.95	0.11	0.17	0.28	0.021	0.016	0.0013 B	0.00081
MW-20	AP-3982	--	--	0.012	0.018	0.012	0.017	0.001	ND (0.001)	ND (0.0002)	ND (0.0005)
MW-21	AP-3983	--	--	22.00	12.00	1.10	12.00	9.10	11	3.10 D	2.80 D
MW-22	AP-3984	--	--	8.70	2.10	7.800	1.70	1.60	4.6	2.30 D	0.260 D
MW-23	AP-3985	--	--	--	2.20	3.20	3.10	0.97	1.7	0.68 D	0.440 D
MW-24	AP-3986	--	--	--	--	3.70	--	0.97	0.87	0.53 D	0.380 D
PZ-1	AP-3989	--	0.94	5.40	0.93	1.30	0.74	0.68	--	--	--
WELL SCREENED IN PERCHED AQUIFER											
MW-14	AP-3746	220	186	--	--	--	--	--	--	--	--
WELL SCREENED IN SHALLOW-INTERMEDIATE AQUIFER											
MW-5	AP-4015	4.8	3.1	8.00	3.00	3.70	5.40	3.40	4.5	2.20 D	1.400 D
WELL SCREENED IN INTERMEDIATE AQUIFER											
MW-4	AP-4014	14.00	--	--	4.10	--	--	--	--	--	--
WELL SCREENED IN DEEP AQUIFER											
MW-1	AP-4011	0.043	--	0.03	0.034	0.029	0.035	0.034	0.038	0.038	0.037
MW-6	AP-4016	0.13	--	0.086	0.025	0.026	0.073	0.02	0.025	0.013	0.013
MW-7	AP-4017	1.00	--	1.30	0.92	0.85	1.10	0.86	0.66	0.73 D	1.300 D
MW-9	AP-4019	0.00091	--	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	0.0002 J,B	ND (0.0005)
MW-16	AP3748	0.00031	ND (0.0010)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.0002)	ND (0.0005)

NOTES: MW-14 was dry in 1997, 1998, 1999, 2000, had insufficient water for sampling in 2001

-- = Not Sampled

ND = Analyte Not Detected (Detection Limit in Parentheses)

B = Analyte was found in the blank at a level that is significant relative to the sample result.

D = The reported result is from a dilution.

J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

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TABLE 5-10

VINYL CHLORIDE
SUMMARY OF ANALYTICAL RESULTS
OPERABLE UNIT B, FORT RICHARDSON, ALASKA

Volatile Organic Compounds Detected (mg/l) in Groundwater Samples Using EPA Method 8260B

Well ID	API No.	June 1998	Oct 1998	Mar 1999	Oct 1999	April 2000	Oct 2000	April 2001
WELLS SCREENED IN SHALLOW AQUIFER								
MW-2	AP-4012	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.0003)	ND (0.0005)
MW-3	AP-4013	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.0003)	ND (0.0005)
MW-8	AP-4018	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.0003)	ND (0.0005)
MW-12	AP-3744	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.0003)	ND (0.0005)
MW-13	AP-3745	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.0003)	ND (0.0005)
MW-15	AP-3747	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.0003)	ND (0.0005)
MW-17	AP-3749	--	--	ND (0.001)	--	--	--	ND (0.0005)
MW-19	AP-3981	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.0003)	ND (0.0005)
MW-20	AP-3982	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.0003)	ND (0.0005)
MW-21	AP-3983	ND (0.001)	**0.009**	**0.002**	**0.004**	**0.005**	**0.0028**	**0.0047 D**
MW-22	AP-3984	ND (0.001)	ND (0.001)	ND (0.010)	ND (0.001)	ND (0.001)	ND (0.0003)	**0.0022 D**
MW-23	AP-3985	ND (0.001)	ND (0.001)	ND (0.010)	**0.003**	**0.005**	**0.0017**	ND (0.001)
MW-24	AP-3986	ND (0.001)	ND (0.001)	--	**0.002**	**0.004**	**0.0016**	ND (0.001)
PZ-1	AP-3989	ND (0.001)	ND (0.100)	ND (0.001)	ND (0.001)	--	--	--
WELL SCREENED IN PERCHED AQUIFER								
MW-14	AP-3746	--	--	--	--	--	--	--
WELL SCREENED IN SHALLOW-INTERMEDIATE AQUIFER								
MW-5	AP-4015	ND (0.001)	ND (0.001)	ND (0.010)	**0.001**	**0.003**	**0.00097**	ND (0.005)
WELL SCREENED IN INTERMEDIATE AQUIFER								
MW-4	AP-4014	ND (0.001)	--	--	--	--	--	--
WELL SCREENED IN DEEP AQUIFER								
MW-1	AP-4011	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.0003)	ND (0.0005)
MW-6	AP-4016	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.0003)	ND (0.0005)
MW-7	AP-4017	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	**0.00089**	ND (0.005)
MW-9	AP-4019	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.0003)	ND (0.0005)
MW-16	AP-3748	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.001)	ND (0.0003)	ND (0.0005)

NOTES: MW-14 was dry in 1997, 1998, 1999, 2000, had insufficient water for sampling 2001
MW-7 detection limit is above the MCL
-- = Not Sampled
D = The reported result is from a dilution.
ND = Analyte Not Detected (Detection Limit in Parentheses)

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TABLE 5-11

SAMPLE CROSS REFERENCE SHEET
APRIL 2001 GROUNDWATER SAMPLES

OPERABLE UNIT B, POLELINE ROAD DISPOSAL AREA
FORT RICHARDSON, ALASKA

Well ID	API Number	Field Sample ID	Laboratory Sample ID	Sample Type
MW-01	AP-4011	01-PRDA-001-GW	K21246107	ES
MW-02	AP-4012	01-PRDA-002-GW	K21246108	ES
MW-03	AP-4013	01-PRDA-003-GW	K21246111	ES
MW-05	AP-4015	01-PRDA-005-GW	K21246003	ES
MW-06	AP-4016	01-PRDA-006-GW	K21246114	ES
MW-07	AP-4017	01-PRDA-007-GW	K21246004	ES
MW-08	AP-4018	01-PRDA-008-GW	K21246110	ES
MW-09	AP-4019	01-PRDA-009-GW	K21246103	ES
MW-12	AP-3744	01-PRDA-012-GW	K21246106	ES
MW-13	AP-3745	01-PRDA-013-GW	K21246112	ES
MW-13	AP-3745	01-PRDA-033-GW	K21246115	Dup
MW-15	AP-3747	01-PRDA-015-GW	K21246104	ES
MW-16	AP-3748	01-PRDA-016-GW	K21246102	ES
MW-17	AP-3749	01-PRDA-017-GW	K21246109	ES
MW-19	AP-3981	01-PRDA-019-GW	K21246113	ES
MW-20	AP-3982	01-PRDA-020-GW	K21246105	ES
MW-21	AP-3983	01-PRDA-021-GW	K21246006	ES
MW-21	AP-3983	01-PRDA-031-GW	K21246007	Dup
MW-22	AP-3984	01-PRDA-022-GW	K21246005	ES
MW-23	AP-3985	01-PRDA-023-GW	K21246009	ES
MW-24	AP-3986	01-PRDA-024-GW	K21246008	ES
EB		01-PRDA-0EB1	K21246002	QA/QC

Notes: Dup = Duplicate
ES = Environmental sample
EB = Equipment blank
QA/QC = Quality control / quality assurance sample

TABLE 5-12

VOLATILE ORGANIC COMPOUNDS THAT EXCEEDED MCLs and/or RAOs
APRIL 2001 GROUNDWATER SAMPLES

OPERABLE UNIT B, POLELINE ROAD DISPOSAL AREA FORT RICHARDSON, ALASKA					
Compound	MCL (mg/L)	RAO* (mg/L)	Concentration (mg/L)	Monitoring Well ID	API No.
Benzene	0.005	0.005	0.0053	MW-21	AP-3983
Carbon Tetrachloride	0.005	0.005			
1,1-Dichloroethene	0.007		0.0081	MW-5	AP-4015
			0.0095	MW-7	AP-4017
			0.011	MW-21	AP-3983
cis-1,2-Dichloroethene	0.07	0.07	0.47	MW-5	AP-4015
			0.39	MW-7	AP-4017
			1.20	MW-21	AP-3983
			0.260	MW-22	AP-3984
			0.092	MW-23	AP-3985
			0.150	MW-24	AP-3986
trans-1,2-Dichloroethene	0.1	0.1	0.100	MW-7	AP-4017
			0.180	MW-21	AP-3983
Tetrachloroethene	0.005	0.005	0.020	MW-5	AP-4015
			0.0078	MW-15	AP-3747
			0.054	MW-21	AP-3983
			0.018	MW-22	AP-3984
			0.0052	MW-23	AP-3985
			0.0071	MW-24	AP-3986
1,1,2,2-Tetrachloroethane		0.052	0.550	MW-5	AP-4015
			1.20	MW-7	AP-4017
			3.40	MW-21	AP-3983
			0.260	MW-22	AP-3984
			0.340	MW-23	AP-3985
			0.200	MW-24	AP-3986
1,1,2-Trichloroethane	0.005		0.013	MW-5	AP-4015
			0.018	MW-7	AP-4017
			0.0052	MW-15	AP-3747
			0.0086	MW-22	AP-3984
Trichloroethene	0.005	0.005	0.037	MW-1	AP-4011
			0.061	MW-3	AP-4013
			1.400	MW-5	AP-4015
			0.013	MW-6	AP-4016
			1.300	MW-7	AP-4017
			0.040	MW-12	AP-3744
			0.015	MW-13	AP-3745
			0.860	MW-15	AP-3747
			2.80	MW-21	AP-3983
			0.260	MW-22	AP-3984
			0.440	MW-23	AP-3985
			0.380	MW-24	AP-3986
Vinyl Chloride	0.002		0.0047	MW-21	AP-3983
			0.0022	MW-22	AP-3984

NOTES:
mg/L = milligram per liter
* Remedial Action Objective

TABLE 5-13

MONITORING WELL HEADSPACE VALUES
APRIL 2001 GROUNDWATER SAMPLES

OPERABLE UNIT B FORT RICHARDSON, ALASKA			
Monitoring Well	API No.	Saturated Interval	Headspace Measurement (ppm)
MW-2	AP-4012	Shallow	0.0
MW-3	AP-4013	Shallow	0.0
MW-8	AP-4018	Shallow	0.0
MW-12	AP-3744	Shallow	0.0
MW-13	AP-3745	Shallow	0.0
MW-15	AP-3747	Shallow	28.1
MW-17	AP-3749	Shallow	0.0
MW-19	AP-3981	Shallow	0.0
MW-20	AP-3982	Shallow	0.0
MW-21	AP-3983	Shallow	3.8
MW-22	AP-3984	Shallow	26.5
MW-23	AP-3985	Shallow	4.6
MW-24	AP-3986	Shallow	3.6
PZ-1	AP-3989	Shallow	Not Sampled
MW-14	AP-3746	Perched	23.4
MW-5	AP-4015	Shallow-Intermediate	9.3
MW-4	AP-4014	Intermediate	29.7
MW-1	AP-4011	Deep	0.0
MW-6	AP-4016	Deep	0.0
MW-7	AP-4017	Deep	0.0
MW-9	AP-4019	Deep	0.0
MW-16	AP-3748	Deep	0.0

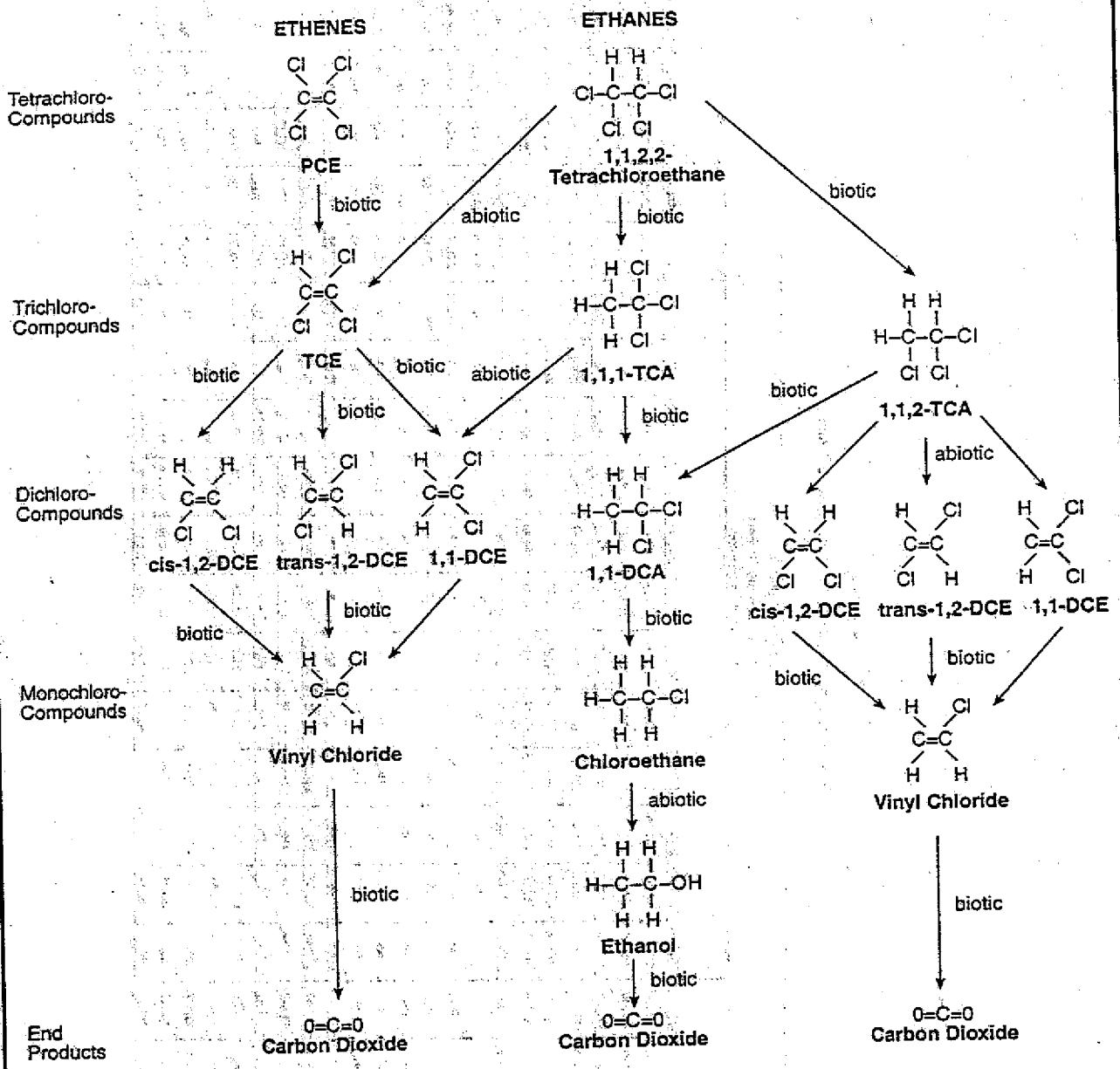
TABLE 5-14

GROUNDWATER ELEVATIONS POLELINE ROAD DIPOSAL AREA

OPERABLE UNIT B
Groundwater Elevation in Feet
FORT RICHARDSON, ALASKA

Monitoring Well	API No.	Saturated Interval	11/1/1995	12/4/1995	1/3/1996	2/1/1996	3/1/1996	4/1/1996	5/1/1996	6/3/1996	7/1/1996	8/2/1996	9/3/1996	10/2/1996	11/4/1996	11/10/97	6/8/98	10/21/98	3/11/1999	########	3/13/2000	10/9/2000	03/29/01
MW-2	AP-4012	Shallow	274.11	273.43	272.69	272.30	272.06	271.88	271.62	271.80	271.76	271.61	271.37	271.22	271.01	273.31	276.22	273.97	273.48	272.69	271.85	273.81	271.98
MW-3	AP-4013	Shallow	274.01	272.64	271.55	270.78	269.97	269.49	269.33	269.42	269.41	269.38	269.28	269.26	NS	272.56	275.05	274.30	271.06	271.86	270.32	274.12	271.18
MW-8	AP-4018	Shallow	276.67	276.04	275.20	274.61	274.15	273.84	273.59	273.65	273.60	273.53	273.45	273.34	NS	275.35	277.16	276.45	273.56	274.69	273.72	276.50	274.04
MW-12	AP-3744	Shallow	273.75	273.04	272.24	271.76	271.38	271.10	270.70	270.92	270.82	270.57	270.29	270.13	269.94	272.64	274.62	273.62	271.50	271.96	270.94	273.46	271.21
MW-13	AP-3745	Shallow	275.88	275.21	274.46	273.90	273.52	273.22	272.98	273.02	272.99	272.96	272.91	272.83	272.73	274.79	276.27	275.72	272.96	274.09	273.16	276.70	273.42
MW-15	AP-3747	Shallow	271.92	270.83	269.83	269.29	268.36	268.22	267.17	267.20	267.03	266.89	266.21	265.74	265.03	271.68	274.67	272.12	268.66	270.00	268.8	271.72	268.83
MW-17	AP-3749	Shallow	285.40	284.54	283.69	283.06	282.59	282.28	282.36	282.70	282.64	282.37	282.15	281.97	281.80	284.86	281.06	284.97	282.33	284.28	NS	NS	282.44
MW-19	AP-3981	Shallow	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	276.82	276.29	277.48	274.64	275.88	274.84	277.6	274.95
MW-20	AP-3982	Shallow	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	272.33	274.44	273.31	271.4	271.78	271.04	273.12	271.2
MW-21	AP-3983	Shallow	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	274.15	275.40	275.09	272.4	273.45	272.27	275.07	272.72
MW-22	AP-3984	Shallow	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	277.27	276.55	277.43	275.51	275.71	274.96	276.94	274.69
MW-23	AP-3985	Shallow	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	276.05	277.44	274.88	275.88	274.36	277.21	274.66
MW-24	AP-3988	Shallow	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	276.13	277.27	NS	275.77	274.3	276.99	274.45
PZ-1	AP-3989	Shallow	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	271.61	273.91	275.07	274.54	272.34	272.79	272.2	274.66	NA
MW-14	AP-3746	Perched	290.93	289.93	289.05	288.37	287.71	287.28	288.80	290.38	289.69	289.37	289.08	288.72	288.91	Dry	Dry	285.07	Dry	Dry	285.28	Dry	Dry
MW-5	AP-4015	Shallow-Intermediate	277.44	276.59	275.33	276.15	274.60	274.24	273.85	274.10	274.16	274.00	273.88	273.76	273.64	276.30	276.52	276.93	272.82	275.72	274.06	276.79	274.22
MW-4	AP-4014	Intermediate	237.77	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	238.33	NS	Dry	243.25	Dry	Dry	Dry	Dry	236.90	Dry
MW-1	AP-4011	Deep	173.27	173.26	173.22	173.26	173.18	173.32	Dry	173.29	173.18	173.24	173.18	173.32	NS	173.39	173.35	173.12	173.43	173.62	173.27	173.01	173.25
MW-6	AP-4016	Deep	177.36	177.24	177.40	177.53	177.32	177.66	177.35	177.63	177.33	177.44	177.42	177.71	NS	177.54	177.64	177.28	177.76	177.92	177.61	177.22	177.55
MW-7	AP-4017	Deep	226.71	226.37	226.30	226.38	226.12	226.40	226.08	226.30	225.97	226.09	226.09	226.33	NS	226.53	226.85	227.09	226.65	227.54	227.61	227.97	228.04
MW-9	AP-4019	Deep	Dry	160.16	160.13	159.94	Dry	159.09	Dry	Dry	158.08	158.10	158.08	158.02	NS	NS	157.82	160.21	159.35	158.37	158.08	159.90	158.99
MW-16	AP-3748	Deep	162.38	162.19	162.11	162.11	161.56	161.39	160.51	160.41	160.00	160.17	160.12	160.30	160.00	159.46	160.02	162.20	161.47	160.54	160.22	161.82	161.17

S:\Projects\Federal\74-F0E9406U.00\Long Term-GW-Monitoring\Round 8 (Apr01Sampling)\Round8.xls



DEGRADATION PATHWAYS OF CHEMICALS OF CONCERN
POLELINE ROAD DISPOSAL AREA
OUB, FORT RICHARDSON, ALASKA

Dwg: PATH.AI	*By:* AR	*Figure:* 5-1
Project: E9408U	*Date:* 11-28-00	

of TCE detected in these wells was more than ten times the concentration in the equipment blank and therefore the data was not flagged.

Benzene was detected in two monitoring wells MW-21 (AP-3783) and MW-22 (AP-3784) at concentrations of 0.0053 and 0.0019 mg/L, respectively. Monitoring well MW-21 (AP-3783) had benzene concentrations above the MCL (0.005mg/L). Both wells are screened in the shallow aquifer.

Carbon Tetrachloride was detected in two monitoring wells, MW-1 (AP-4011) and MW-15 (AP-3747). The concentrations in these wells were measured at 0.00085 mg/L and 0.0032 mg/L, respectively. The MCL for Carbon Tetrachloride is 0.005 mg/L, there were no exceedances reported this sampling round.

The compound 1,1,2 Trichloroethane was detected in nine of the nineteen wells sampled. Concentrations of this compound increased in monitoring wells MW-7 (AP-4017), MW-15 (AP-3747) and MW-22 (AP-3984). The MCL for 1,1,2 Trichloroethane is 0.005 mg/L. This value was exceeded in four wells, MW-5 (AP-4015), MW-7 (AP-4017), MW-15 (AP-3747) and MW-22 (AP-3984). These wells are screened in all of the different aquifer zones.

Seven monitoring wells had 1,1-Dichloroethene detected in them. The concentrations ranged from 0.0014 to 0.011 mg/L. Concentrations of 1,1-Dichloroethene increased in MW-5 (AP-4015), MW-7 (AP-4017) and MW-15 (AP-3747). Monitoring wells MW-5 (AP-4015), screened in the shallow-intermediate aquifer, MW-7 (AP-4017), screened in the deep aquifer, and MW-21 (AP-3983), screened in the shallow aquifer, had concentrations of 1,1 Dichloroethene above the 0.007 mg/L MCL reported.

Twelve monitoring wells had cis-1,2-Dichloroethene detected in them. Concentrations ranged from 0.00086 to 1.20 mg/L. Concentrations of this compound increased in MW-7 (AP-4017), MW-15 (AP-3747), and MW-22 (AP-3984). Six monitoring wells had concentrations above the MCL of 0.07 mg/L (MW-5, MW-7, MW-21, MW-22, MW-23 and MW-24). These wells are screened in all aquifer zones.

Trans-1,2-Dichloroethene was detected in nine of the nineteen monitoring wells sampled. Concentrations ranged from 0.00054 to 0.180 mg/L. Concentrations of this compound increased in MW-7 (AP-4017), MW-15 (AP-3747), and MW-22 (AP-3984). Two monitoring, wells MW-7 (AP-4017) and MW-21 (AP-3983), had values that exceeded the MCL of 0.100 mg/L. MW-7 (AP-4017) is screened in the deep aquifer, while MW-21 (AP-3783) is screened in the shallow aquifer.

Vinyl chloride was detected in two wells. Monitoring well MW-21 (AP-3983) had 0.0047 mg/L Vinyl Chloride while MW-22 (AP-3984) had 0.0022 mg/L reported. The concentrations of Vinyl Chloride in both wells exceeded the MCL of 0.002 mg/L. These wells are screened in the shallow aquifer.

Chloroform was detected in Monitoring wells MW-15 (AP-3747), MW-21 (AP-3983), and MW-22 (AP-3984) and the equipment blank. MW-15 (AP-3747) had a concentration of 0.0040 mg/L reported. This is the same concentration as reported from April 2000. The MCL for chloroform is 0.1 mg/L; therefore there was no exceedence. The equipment blank had a concentration of 0.0012 mg/L Chloroform reported. The concentrations in MW-21 (AP-3983) and MW-22 (AP-3984) were 0.0045 mg/L and 0.0023 mg/L, respectively. The environmental

sample concentrations are within ten times the concentration reported in the equipment blank (EB); these samples will be reported with a B flag.

Some anomalous compounds were reported in MW-15 (AP-3747) and MW-22 (AP-3984). In addition to chloroform, MW-15 (AP-3747) had 0.00055 mg/L of 1,2-Dichloroethane (EDC) detected. The MCL for this compound is 0.005 mg/L. Monitoring well MW-22 (AP-3984) had 0.0010 mg/L of Carbon Disulfide, and 0.0050 mg/L of 1,2-Dichloropropane reported. No MCL was listed for Carbon Disulfide. The MCL for 1,2 Dichloropropane is 0.005 mg/L.

The equipment rinsate sample, designated as EB had four compounds detected in it. This sample is collected and analyzed to assess the adequacy of decontamination procedures in preventing cross contamination between sampling locations and samples. This sample was handled and analyzed in the same manner as the environmental samples. Laboratory results for the compounds detected in the EB sample were compared to results of environmental samples to determine if there could have been cross contamination between sampling points.

Chloroform, TCE, Toluene and 1,1,2,2-Tetrachloroethane were detected in the EB. Results from monitoring wells MW-21 and MW-22 were the only locations that could have been impacted by the EB; all other wells have dedicated pumps and tubing. The results from these two wells were compared with the EB concentrations. Any contaminant levels in the environmental samples within a range ten times the EB reported levels were flagged with a B in Table 5-1 through 5-10. As stated above, Chloroform was detected in the EB at 0.0012 mg/L, MW-21 had 0.0023 mg/L, MW-22 had 0.0045mg/L detected and MW-33 (a duplicate sample collected from MW-21) had no chloroform detected. The results for MW-21 and MW-22 are within the B flag limits. The EB had TCE at 0.0016 mg/L detected. MW-21 had 2.80 mg/L, MW-22 had 0.260 mg/L detected and MW-33 (duplicate sample) had 0.260 mg/L of TCE detected. All environmental sample concentrations were above ten times the EB concentrations, therefore these results were not B flagged. Toluene was detected in the EB, however, it was not detected in any of the environmental samples. Note that the detection limits in the environmental samples were above the level detected in the EB. For the compound 1,1,2,2-Tetrachloroethane, the EB had 0.0005 mg/L reported. All environmental samples had concentrations greater than 0.260 mg/L therefore these results were not B flagged.

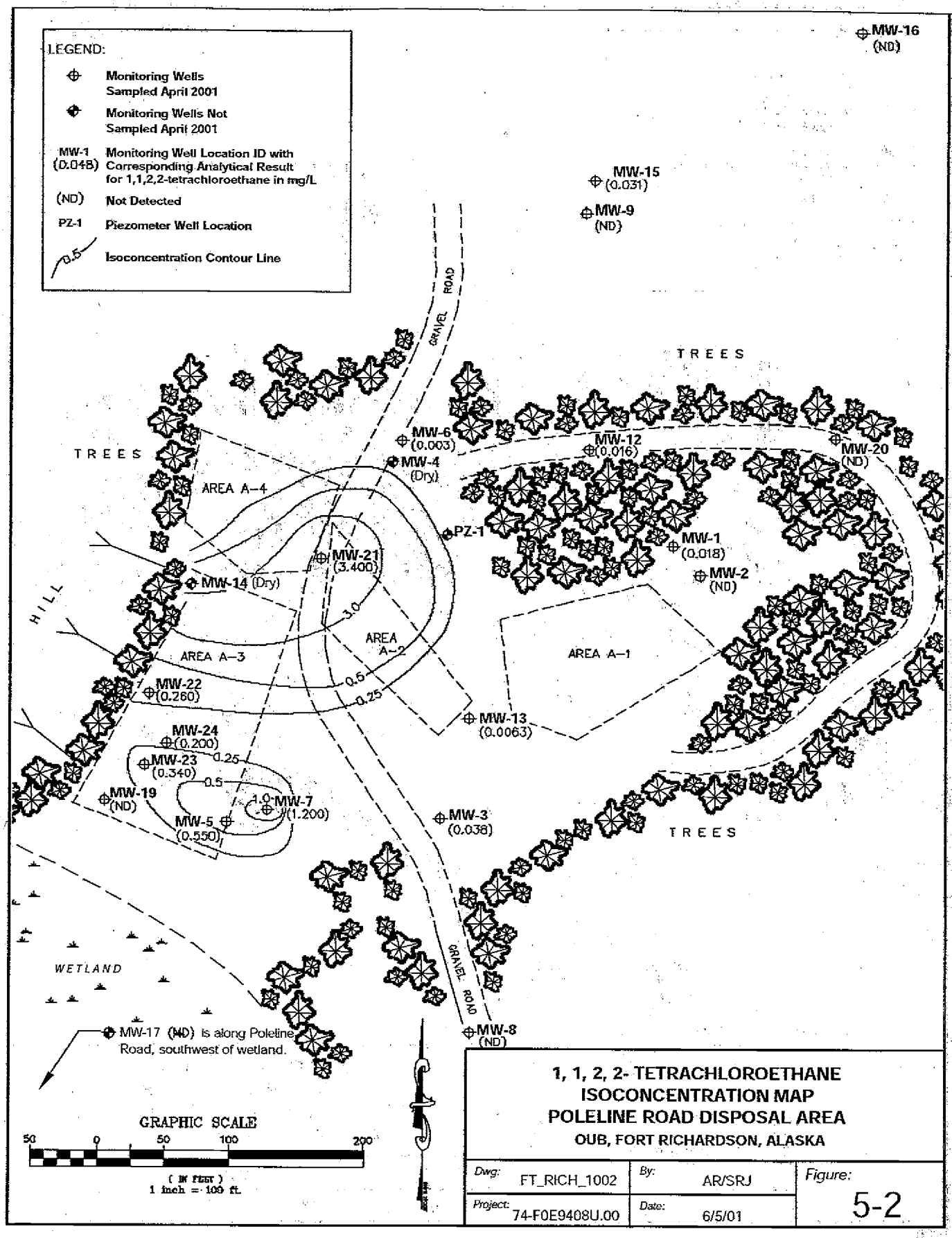
Isoconcentration maps for PCA, PCE, and TCE are presented in Figures 5-2, 5-3, and 5-4, respectively. Figure 5-5 presents a spider map illustrating history concentration of several key contaminants of concern.

5.2 HEADSPACE MEASUREMENTS

Headspace measurements were recorded at 21 monitoring wells. The measurements are presented on Table 5-13. Measurements were taken using an organic vapor monitor. Volatile organic vapors were detected in eight wells. The headspace values ranged from 0.0 to 29.7 parts per million (ppm).

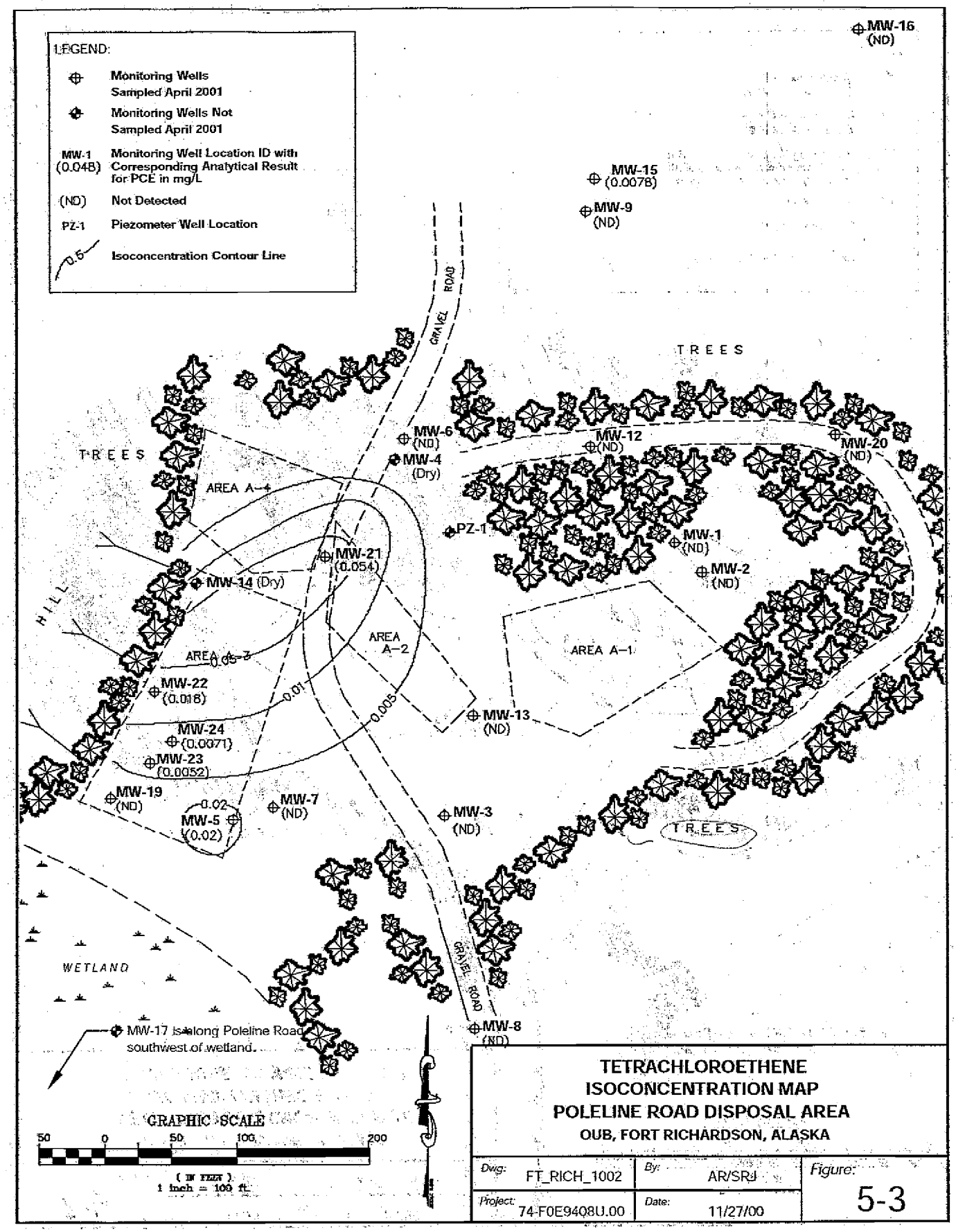
5.3 GROUNDWATER ELEVATIONS

The depth to water was measured during well gauging, prior to purging each well for sampling. These measurements and the elevation of the top of casing were used to calculate the water level elevation at each monitoring location. Table 5-14 summarizes OUB monitoring well water level measurements.



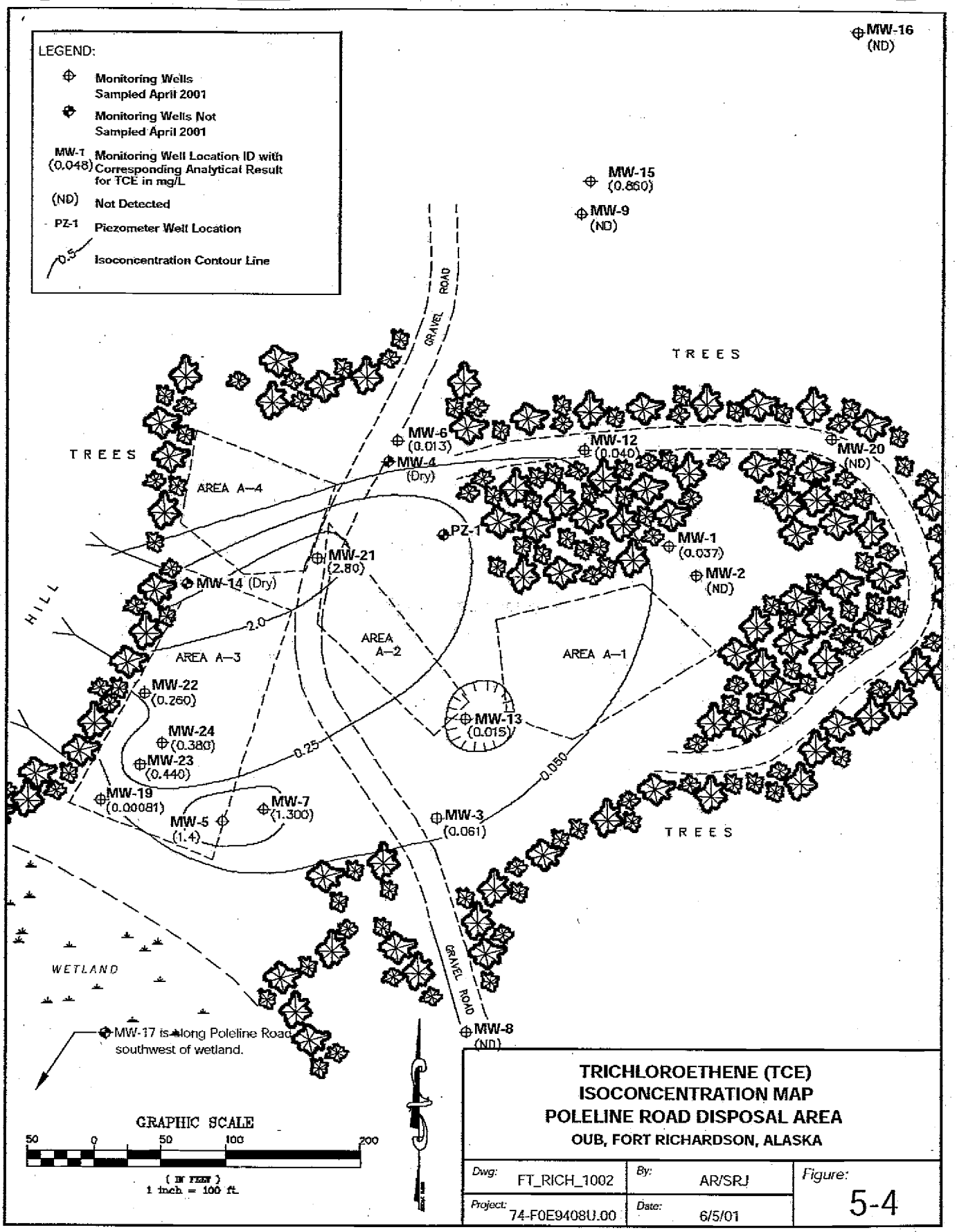
1, 1, 2, 2- TETRACHLOROETHANE ISOCONCENTRATION MAP POLELINE ROAD DISPOSAL AREA
OUB, FORT RICHARDSON, ALASKA

Dwg: FT_RICH_1002	By: AR/SRJ	Figure: 5-2
Project: 74-F0E9408U.00	Date: 6/5/01	



TETRACHLOROETHENE ISOCONCENTRATION MAP
POLELINE ROAD DISPOSAL AREA
OUB, FORT RICHARDSON, ALASKA

Dwg: FT_RICH_1002	By: AR/SRJ	Figure: 5-3
Project: 74-F0E9408U.00	Date: 11/27/00	


LEGEND:
Monitoring Wells Sampled April 2001
Monitoring Wells Not Sampled April 2001
MW-1 (0.048) Monitoring Well Location ID with Corresponding Analytical Result for TCE in mg/L
(ND) Not Detected
PZ-1 Piezometer Well Location
0.5 Isoconcentration Contour Line
MW-16 (ND)
MW-15 (0.860)
MW-9 (ND)
GRAVEL ROAD
TREES
MW-6 (0.013)
MW-12 (0.040)
MW-20 (ND)
MW-4 (Dry)
AREA A–4
PZ-1
MW-1 (0.037)
MW-2 (ND)
MW-21 (2.80)
MW-14 (Dry)
HILL
2.0
AREA A–3
AREA A–2
AREA A–1
MW-22 (0.260)
MW-13 (0.015)
MW-24 (0.380)
MW-23 (0.440)
0.25
0.050
MW-19 (0.00081)
MW-7 (1.300)
MW-5 (1.4)
MW-3 (0.061)
WETLAND
MW-17 is along Poleline Road southwest of wetland.
MW-8 (ND)
GRAPHIC SCALE
50 0 50 100 200
(IN FEET)
1 inch = 100 ft.
TRICHLOROETHENE (TCE)
ISOCONCENTRATION MAP
POLELINE ROAD DISPOSAL AREA
OUB, FORT RICHARDSON, ALASKA
Dwg: FT_RICH_1002
By: AR/SRJ
Figure: 5-4
Project: 74-F0E9408U.00
Date: 6/5/01

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Eight rounds of groundwater data have been collected from October 1995 through April 2001. During this time, several remedial activities occurred at the site that may have impacted the concentration of contaminants in the groundwater (see Section 3.6). Variability in the concentration of contaminants from one round to the next has made it difficult to identify clear trends. However, in groundwater collected from several wells, the concentrations of primary VOCs (PCA, TCE, and PCE) were reduced as a result of the 1999 SPH test. The impact of the 1999 test was limited to a small area (5,500 feet squared [ft^2]). Because of the slow groundwater flow at the site, it may take from several months to several years for the concentration of contaminants in groundwater to be impacted at wells away from the test area. Three rounds of groundwater samples have been collected since the system was shut off.

The concern has been raised that the solvents left in the soil, treated by SPH in 1999, may continue to impact the groundwater. The concentration of solvents that were observed in the groundwater samples collected for the October 2000 round generally were similar to the concentrations reported in the two previous sampling rounds. The concentration of PCA decreased significantly in MW-19 (AP-3981) (from 0.04 mg/L to 0.0003 mg/L) and slightly in MW-22 (AP-3984) (from 1.10 mg/L to 0.92 mg/L). Slight increases were observed in the concentration of PCA in MW-23 (AP-3985) (from 0.32 mg/L to 0.42 mg/L) and MW-24 (AP-3986) (0.14 mg/L to 0.23 mg/L). Wells MW-19 (AP-3981), MW-22 (AP-3984), MW-23 (AP-3985), and MW-24 (AP-3986) are located within or immediately adjacent to the area treated in 1999. The concentration of TCE was lower in the October 2000 samples collected from these wells compared those samples collected in March 2000. This data suggests that solvents remaining in the soil are not having a significant impact on groundwater concentrations.

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Environmental Science & Engineering, Inc (ESE). August 1990. *Surface Geophysical Investigation, U.S. Army Ft. Richardson, Anchorage, Alaska.*

Environmental Science & Engineering, Inc (ESE). February 1991. *Final Expanded Site Investigation, Poleline Disposal Area, Ft. Richardson, Alaska.*

Environmental Science & Engineering, Inc (ESE). April 1993. *PRDA Water Level Study, U.S. Army Ft. Richardson, Anchorage, Alaska.*

OHM Remediation Services Corporation (OHM). August 1993. *Project Work Plan, Rapid Response Removal Action, Poleline Road Disposal Area, Ft. Richardson, Alaska.*

URS Corporation. May 2000. *Long-Term Groundwater Monitoring Report, Operable Unit B, Poleline Road Disposal Area, Fort Richardson, Alaska.*

URS Greiner Woodward-Clyde (WC). 1996a. *Final Remedial Investigation Report, Operable Unit B, Poleline Road Disposal Area, Fort Richardson, Alaska.*

URS Greiner Woodward-Clyde (WC). 1996b. *Risk Assessment Report – Operable Unit B, Poleline Roadk Disposal Area. Ft. Richardson, Alaska.*

URS Greiner Woodward-Clyde (WC). 1996c. *Draft Final Feasibility Study Report, Operable Unit B, Poleline Road Disposal Area, Ft. Richardson, Alaska*

URS Greiner Woodward-Clyde (WC). January 1997. *Final Feasibility Study Report, Operable Unit B, Poleline Road Disposal Area, Fort Richardson, Alaska.*

URS Greiner Woodward-Clyde (WC). March 1997. *Final Treatability Study Report, Operable Unit B, Poleline Road Disposal Area, Fort Richardson, Alaska.*

URS Greiner Woodward-Clyde (WC). September 1997. *Long-Term Groundwater Monitoring Work Plan, Operable Unit B, Poleline Road Disposal Area, Fort Richardson, Alaska.*

URS Greiner Woodward-Clyde (WC). June 1998. *Design Verification Study Area 4, Operable Unit B, Poleline Road Disposal Area, Ft. Richardson, Alaska.*

URS Greiner Woodward-Clyde (WC). February 1999. *Draft HVE Treatability Study Report, Operable Unit B, Poleline Road Disposal Area, Fort Richardson, Alaska.*

U.S. Army Corps of Engineers, Alaska District, (CRREL). May 1994. *Daniel E. Lawson et al., Reconnaissance Ground Penetrating Radar and Electromagnetic Induction Surveys of the Poleline Road Site, Ft. Richardson, Alaska.*

Wiedemeier, T.H., M.A. Swanson, D.E. Moutoux, K. Gordon, J.T. Wilson, B.H. Wilson, D.H. Kampbell, J.E. Hansen, P. Haas, and F.H. Chapelle. 1996. Technical Protocol for Evaluating Natural Attenuation of Chlorinated Solvents in Groundwater. U.S. Air Force Center for Environmental Excellence. San Antonio, Texas.

Wilson, B.H., J.T. Wilson, and D. Luce. 1996. Design and Interpretation of Microcosm Studies for Chlorinated Compounds U. S. Environmental Protection Agency. Proceedings of the Symposium on Natural Attenuation of Chlorinated Organics in Ground Water, September 11-13, 1996. Dallas, Texas.

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Appendix A
Laboratory Reports

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Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
U	The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
i	The MRL/MDL has been elevated due to a matrix interference.
X	See case narrative.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
B	The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
E	The reported value is estimated because of the presence of matrix interference.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL has been elevated due to a matrix interference.
X	See case narrative.
*	The duplicate analysis not within control limits. See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results (25% for CLP Pesticides).
U	The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
i	The MRL/MDL has been elevated due to a chromatographic interference.
X	See case narrative.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

Case Narrative

COLUMBIA ANALYTICAL SERVICES, INC.

Client:	URS Corporation	**Service Request No.:**	K2102461
Project:	Poleline Road Disposal Area - OUB	**Date Received:**	April 10, 2001
Sample Matrix:	Water		

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier II data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Surrogate recoveries have been reported for all applicable organic analyses. Additional quality control analyses reported herein include: Matrix Spike (MS), Matrix/Duplicate Matrix Spike (MS/DMS), and Laboratory Control Sample (LCS).

Sample Receipt

Fifteen water samples were received for analysis at Columbia Analytical Services on April 10, 2001. The samples were received in good condition and consistent with the accompanying chain of custody. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

Volatile Organic Compounds by EPA Method 8260B

No QA/QC anomalies were encountered during the analysis of these samples.

Approved by mtl Date 4/30/01

Chain of Custody Documentation

Analytical Services INC.
An Employee-Owned Company

1317 South 13th Ave. • Kelso, WA 98626 • (360) 577-7222 • (800) 695-7222 • FAX (360) 636-1068

CHAIN OF CUSTODY

SR#: K2102461

PAGE 1 OF 2 COC #

000005

PROJECT NAME Pipeline Road Disposal Area - GUB
PROJECT NUMBER 74-FØE94058U.ØØ
PROJECT MANAGER James Dietzman
COMPANY/ADDRESS URS / 5600 B Street
Anchorage, AK 99518
PHONE # 907-562-0575 FAX # 907-562-9688
SAMPLER'S SIGNATURE Kim McWilliams-KW [signature] -RB

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	Semivolatile Organics by GC/MS 625 ☐ 8270 ☐	Volatile Organics 624 ☐ 8260 ☒	Hydrocarbons (*see below) Gas ☐ 8021 ☐ Diesel ☐ BTEX ☐	Fuel Fingerprint (FIQ) ☐ Oil ☐	NW-HCID Screen ☐ Oil & Grease/TRPH 413.1 ☐ 418.1 ☐ 1664 SGT ☐ 1664 HEM ☐	PCB's Aroclors ☐ Congeners ☐	Pesticides/Herbicides 608 ☐ 8081A ☐ 8141A ☐ 8151A ☐	Chlorophenolics - 8151M TiT ☐ Tetra ☐ PCP ☐	PAHS 8310 ☐ SIM ☐	GC/MS-SIM PAH ☐ Phenol ☐ Phthalates ☐	Metals, Total or Dissolved (See list below)	Cyanide ☐ Hex-Chrom ☐	pH, Cond., Cl, SO4, PO4, F, NO2, NO3, BOD, TSS, TDS (circle)	NH3-N, COD, Total-P, TKN, TOC, DOC (circle)	TOC 9020 ☐ AOX 1650 ☐ 506 ☐					REMARKS
Ø1PRDA-ØTB1-GW AK	4/2/01	1400	✓ 1	WR	2		X																		20405
Ø1PRDA-Ø16-GW	4/2/01	1450	✓ 2	WR	3		X																		
Ø1PRDA-Ø19-GW	4/2/01	1610	✓ 3	WR	3		X																		
Ø1PRDA-Ø15-GW	4/2/01	1710	✓ 4	WR	3		X																		
~~Ø1-PRDA~~ Ø1PRDA-ØØØ-GW KW	4/3/01	1150	✓ 5	WR	3		X																		
Ø1PRDA-Ø12-GW	4/3/01	1345	✓ 6	WR	3		X																		
Ø1PRDA-ØØ1-GW	4/3/01	1535	✓ 7	WR	3		X																		
Ø1PRDA-ØØ2-GW	4/3/01	1710	✓ 8	WR	3		X																		
Ø1PRDA-Ø17-GW	4/3/01	1745	✓ 9	WR	3		X																		
Ø1PRDA-ØØ8-GW	4/4/01	1055	✓ 10	WR	3		X																		

REPORT REQUIREMENTS

___ I. Routine Report: Method Blank, Surrogate, as required

✓ II. Report Dup., MS, MSD as required ACOE

___ III. Data Validation Report (includes all raw data)

___ IV. CLP Deliverable Report

✓ V. EDD Select

INVOICE INFORMATION

P.O. # AN10210

Bill To: URS - Accounts Payable 5600 B St Anch AK 99518

TURNAROUND REQUIREMENTS

___ 24 hr. ___ 48 hr.

___ 5 Day

X Standard (10-15 working days) 30 day

___ Provide FAX Results

___ Requested Report Date

Circle which metals are to be analyzed:

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORHTWEST OTHER:______ (CIRCLE ONE)

SPECIAL INSTRUCTIONS/COMMENTS: SDG: OUG040201

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature [signature] Date/Time 4/9/01 10:00	Signature [signature] Date/Time 4/10/01 1020	Signature Date/Time	Signature Date/Time
Printed Name Kim McWilliams Firm URS	Printed Name [illegible] Firm CAS	Printed Name Firm	Printed Name Firm

RCOC #1 12/00

Columbia Analytical Services, Inc. General Terms and Conditions

Laboratory Services

1. These Terms and Conditions embody the whole agreement of the parties in the absence of a signed and executed contract between the Laboratory ("LAB") and Client. They shall supersede all previous communications, representations, or agreements, either verbal or written, between the parties. The LAB specifically rejects all additional, inconsistent or conflicting terms, whether printed or otherwise set forth in any purchase order or other communication from the Client to LAB. The invalidity or unenforceability, in whole or in part of any provision, term or condition hereof shall not affect in any way the validity or enforceability of the remainder of the Terms and Conditions. No waiver by LAB of any provision, term or condition thereof or of any breach by or obligation of the Client hereunder shall constitute a waiver of such provision, term or condition on any other occasion or a waiver of any other breach by or obligation of the Client. This agreement shall be administered and interpreted under the laws of the state from which services are procured.

2. **Warranty.** Recognizing that the nature of many samples is unknown and that some may contain potentially hazardous components, LAB warrants only that it will perform testing services, obtain findings, and prepare reports in accordance with generally accepted analytical laboratory principles and practices at the time of performance of services. LAB makes no other warranty, express or implied.

At LAB sole discretion, preliminary results may be given in advance of the laboratory report. Such preliminary results are tentative, subject to confirmation and final review by LAB. Client's use of preliminary results in any manner shall be at Client's sole risk.

3. **Scope and Compensation.** LAB agrees to perform the services described in the proposal or agreement to which these Terms and Conditions are attached. Unless the parties agree in writing to the contrary, the duties of LAB shall not be construed to exceed the services specifically described.

Payment terms are net 30 days from the date of invoice. All overdue payments are subject to an interest charge of one and one-half percent (1 1/2%) per month or a portion thereof. Client shall also be responsible for costs of collection, including payment of reasonable attorney fees if such expense is incurred. The prices, unless stated, do not include any sales, use or other taxes. Such taxes will be added to invoice prices when required. LAB reserves the right to require payment prior to release of data. Until such time as Client invoices are paid in full, LAB has no obligation, and will not defend, reproduce, return, or supplement data results.

4. **Prices.** Compensation for services performed will be based on the current Lab Analytical Fee Schedule, or on verbal quotations agreed to in writing by the parties. Unless specifically indicated on the written confirmation of quotation, analytical turnaround times are not guaranteed. The minimum charge will be $100.00 unless otherwise noted.

5. **Methods.** Where applicable, LAB will use analytical methodologies which are in substantial conformity with U.S. Environmental Protection Agency (EPA), State Agency, American Society for Testing and Materials (ASTM), Association of Official Analytical Chemists (AOAC), Standard Methods for the Examination of Water and Wastewater, or other recognized methodologies. LAB reserves the right to deviate from these methodologies, if necessary or appropriate, due to the nature or composition of the sample or otherwise, based on the reasonable judgment of LAB. Deviations, if any, will be made on a basis consistent with recognized standards of the industry and/or LAB's standard operating procedures.

6. **Limitations of Liability.** In the event of any error, omission or other professional negligence, the sole and exclusive responsibility of LAB shall be to reperform the deficient work at its own expense, and LAB shall have no other liability whatsoever. All claims shall be deemed waived unless made in writing and received by LAB within ninety (90) days following completion of services.

LAB shall have no liability, obligation or responsibility of any kind for losses, costs, expenses or other damages (including but not limited to any special, indirect, incidental or consequential damages) with respect to LAB's services or results.

All results provided by LAB are strictly for the use of its clients, and LAB is in no way responsible for the use of such results by clients or third parties. All results should be considered in their entirety, and LAB is not responsible for the separation, detachment, or other use of any portion of the results.

7. **Hazard Disclosure.** Client represents and warrants that any sample delivered to LAB will be preceded or accompanied by complete written disclosure of the presence of any hazardous substances known or suspected by Client. Client further warrants that any sample containing any hazardous substance which is to be delivered to LAB will be packaged, labeled, transported and delivered properly and in accordance with applicable laws.

8. **Sample Handling.** Prior to LAB's acceptance of any sample (or after any revocation of acceptance), the entire risk of loss of or damage to such sample remains with Client. Samples are accepted when receipt is acknowledged on chain of custody documentation. In no event will LAB have any responsibility or liability for the action or inaction of any carrier shipping or delivering any sample to or from LAB's premises.

LAB will use its best efforts to arrange for the shipment of specially prepared sample bottles, sampling instructions per Client instruction by the readily available least cost method. Any other shipment arrangements will be at Client's expense.

Disposal of hazardous waste samples is the responsibility of the Client. If the Client does not wish such samples returned, LAB may add storage and disposal fees to the final invoice. Maximum storage time for samples is 30 days after completion of analysis, unless modified by applicable state or federal laws. Client will be required to give to LAB written instructions concerning disposal of these samples.

LAB reserves the absolute right, exercisable at any time, to refuse to receive delivery of, refuse to accept or revoke acceptance of any sample which, in the sole judgment of LAB, (a) is of unsuitable volume, (b) may be or become unsuitable for, or may pose a risk in handling, transport or processing for any health, safety, environmental or other reason, whether or not due to the presence in the sample of any hazardous substance, and whether or not such presence has been disclosed to LAB by Client, or (c) has been delivered to the LAB more than 72 hours after sampling or if one half or more of the recommended holding time for the analysis has lapsed.

9. **Legal Responsibility.** LAB is solely responsible for performance of this contract and no affiliated company, director, officer, employee or agent shall have any legal responsibility hereunder, whether in contract or tort, including negligence.

10. **Data Deliverables.** Where specifically requested by Client, LAB agrees to produce electronic data representing services performed hereunder, subject to the following specific understanding between the parties: LAB agrees to supply Client with electronic data as mutually defined, using an agreed medium. Client recognizes that LAB is not a software consultant, manufacturer or reseller; any transfer of electronic data pursuant to services provided by LAB is an accommodation to and strictly for the convenience of the client who is solely liable for the choice and maintenance of the medium utilized. Electronic data provided under this agreement is not deemed to be the project deliverable for the purpose of fulfilling obligations under the Agreement. The provision of electronic data does not in any way modify the intention of the parties that the Client rely on the written or hard copy form of the deliverable.

Except with regard to any limited warranty as specifically set forth below, LAB disclaims and excludes all warranties express or implied with regard to the creation, transmittal or use of electronic data hereunder. The limited warranty in this Agreement replaces all other warranties, express or implied, including any warranties of merchantability or fitness for a particular purpose. Professional warranties extend to written or hard copy deliverables only and do not extend to electronic data supplied to Client. Professional warranties in the Agreement which extend to written or hard copy deliverables shall be undisturbed by this Amendment. LAB's liability for medium failure shall be limited to replacement of the electronic data with a hard copy for a period of thirty days from the date of delivery. LAB's electronic data transfer is derived in part from or is created using third party software, and no such third party warrants or assumes any liability regarding use of or undertakes to provide support information relating to LAB's electronic data. LAB will utilize anti-virus programs on a best efforts basis in preparation of the electronic data transfer, but LAB makes no warranty as to the effectiveness of such screening. LAB will also use its best efforts to ensure that its electronic data will meet all criteria as specified by Client, including criteria regarding date/time data, if, and when, included, but LAB makes no warranty as to the appropriateness of the client specified criteria by accepting the same.

In addition to indemnities contained in the underlying agreement between LAB and Client, Client shall hold LAB harmless from any claims, suits or liability arising from or related to electronic data supplied pursuant to this Agreement. Any reuse of original or altered files by Client shall be at Client's risk and without liability or responsibility to LAB, but shall entitle LAB to additional compensation for such unauthorized reuse. In no event will LAB's liability for electronic data include any special, incidental or consequential damages, whether or not LAB has knowledge of the potential for loss or damage.

11. **Force Majeure.** LAB shall have no responsibility or liability to the Client for any failure or delay in performance by LAB which results in whole or in part from any cause or circumstance beyond the reasonable control of LAB. Such causes and circumstances shall include, but not be limited to, acts of God, acts of Client, acts or orders of any government authority, strikes or other labor disputes, natural disasters, accidents, wars, civil disturbances, difficulties or delays in transportation, mail or delivery services, inability to obtain sufficient services or supplies from LAB's usual suppliers, or any other cause beyond LAB's reasonable control.

Analytical Services INC.
An Employee-Owned Company

1317 South 13th Ave. • Kelso, WA 98626 • (360) 577-7222 • (800) 695-7222 • FAX (360) 636-1068

CHAIN OF CUSTODY

SR#: K2104461

PAGE 2 OF 2 COC #: ____

PROJECT NAME: Poleline Road Disposal Area - OUB

PROJECT NUMBER: 74-FØE94084.ØØ

PROJECT MANAGER: James Dietzman

COMPANY/ADDRESS: URS 5600 B Street, Anchorage, AK 99518

PHONE #: 907-562-0375

FAX #: 907-562-9688

SAMPLER'S SIGNATURE: Kim McWalberg - KW, [signature] - RB

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	Semivolatile Organics by GC/MS 625 ☐ 8270 ☐	Volatile Organics 624 ☐ 8260 ☒	Hydrocarbons (*see below) Gas ☐ Diesel ☐ Oil ☐ 8021 ☐ BTEX ☐	Fuel Fingerprint (FIQ) ☐ NW-HCID Screen ☐	Oil & Grease/TRPH 413.1 ☐ 418.1 ☐ 1664 SGT ☐ 1664 HEM ☐	PCB's Aroclors ☐ Congeners ☐	Pesticides/Herbicides 608 ☐ 8081A ☐ 8141A ☐ 8151A ☐	Chlorophenolics - 8151M Tri ☐ Tetra ☐ PCP ☐	PAHS 8310 ☐ SIM ☐	GC/MS-SIM PAH ☐ Phenol ☐ Phthalates ☐	Metals, Total or Dissolved (See list below)	Cyanide ☐ Hex-Chrom ☐	pH, Cond, Cl, SO4, PO4, F, NO2, NO3, BOD, TSS, TDS (circle)	NH3-N, COD, Total-P, TKN, TOC, DOC (circle)	TOC 9020 ☐ AOX 1650 ☐ 506 ☐	REMARKS
Ø1PRDA-ØØ3-GW	4/4/01	1245	11	WR	3		X														
Ø1PRDA-Ø13-GW	4/4/01	1340	12	WR	6		X														MS/MSD
~~Ø1PRDA-Ø13-GW MS/MSD~~	~~4/4/01~~	~~1340~~		~~WR~~	~~3~~		~~X~~														~~MS/MSD~~
Ø1PRDA-Ø19-GW	4/4/01	1705	13	WR	3		X														
Ø1PRDA-ØØ6-GW	4/4/01	1720	14	WR	3		X														
Ø1PRDA-Ø33-GW	4/4/01	1840	15	WR	2		X														1 broke

REPORT REQUIREMENTS

- ___ I. Routine Report: Method Blank, Surrogate, as required
- ✓ II. Report Dup., MS, MSD as required ACOE
- ___ III. Data Validation Report (includes all raw data)
- ___ IV. CLP Deliverable Report
- ✓ V. EDD COELT

INVOICE INFORMATION

P.O. # AN10210

Bill To: URS - Accts Payable, 5600 B St, Anch AK 99518

TURNAROUND REQUIREMENTS

- ___ 24 hr. ___ 48 hr.
- ___ 5 Day
- X Standard (10-15 working days) 30 day
- ___ Provide FAX Results

___ Requested Report Date

Circle which metals are to be analyzed:

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORHTWEST OTHER: ____ (CIRCLE ONE)

SPECIAL INSTRUCTIONS/COMMENTS:

Ø1PRDA-Ø13-GW - extra sample provided for MS/MSD

SDG: OUB040201

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature: [signature] Date/Time: 4/9/01 10:00	Signature: [signature] Date/Time: 4/10/01 1000	Signature: Date/Time:	Signature: Date/Time:
Printed Name: Kim McWalberg Firm: URS	Printed Name: [illegible] Firm: ASI	Printed Name: Firm:	Printed Name: Firm:

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FED-X

Columbia Analytical Services Inc.
Cooler Receipt And Preservation Form

Project/Client URS Work Order K21 02461

Cooler received on 4/10/01 and opened on 4/10/01 by UCH

1. Were custody seals on outside of cooler? YES NO
   If yes, how many and where? 2-Front
2. Were seals intact and signature & date correct? YES NO
3. COC #
   Temperature of cooler(s) upon receipt: 1.0°
   Temperature Blank: N/P
4. Were custody papers properly filled out (ink, signed, etc.)? YES NO
5. Type of packing material present B. WRAP
6. Did all bottles arrive in good condition (unbroken)? YES NO
7. Were all bottle labels complete (*i.e.* analysis, preservation, etc.)? YES NO
8. Did all bottle labels and tags agree with custody papers? YES NO
9. *Were the correct types of bottles used for the tests indicated?* YES NO
10. Were all of the preserved bottles received at the lab with the appropriate pH? ~~YES NO~~
11. Were VOA vials checked for absence of air bubbles, and if present, noted below? YES NO
12. Did the bottles originate from CAS/K or a branch laboratory? YES NO

Explain any discrepancies

Samples that required preservation or received out of temperature:

Sample ID	Reagent	Volume	Lot Number	Bottle Type	Rec'd out of Temperature	Initials

00007

CREREV.DOC1/2/01

Volatile Organic Compounds
EPA 8260B

Analytical Results

Client: URS Corporation
Project: Poleline Road Disposal Area-OUB/74-F0E9408U.00
Sample Matrix: Water

Service Request: K2102461
Date Collected: 04/02/2001
Date Received: 04/10/2001

Volatile Organic Compounds

Sample Name: 01PRDA-0TB2
Lab Code: K2102461-001

Extraction Method: EPA 5030B
Analysis Method: 8260B

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Chloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Vinyl Chloride	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromomethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Chloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Trichlorofluoromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Acetone	ND	U	20	1	04/13/01	04/13/01	KWG0101904	
1,1-Dichloroethene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Carbon Disulfide	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Methylene Chloride	ND	U	1.0	1	04/13/01	04/13/01	KWG0101904	
trans-1,2-Dichloroethene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1-Dichloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
2-Butanone (MEK)	ND	U	20	1	04/13/01	04/13/01	KWG0101904	
2,2-Dichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
cis-1,2-Dichloroethene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Chloroform	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromochloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1-Dichloropropene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Carbon Tetrachloride	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Benzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Trichloroethene (TCE)	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,2-Dichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromodichloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Dibromomethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
2-Hexanone	ND	U	20	1	04/13/01	04/13/01	KWG0101904	
cis-1,3-Dichloropropene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Toluene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
trans-1,3-Dichloropropene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1,2-Trichloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	04/13/01	04/13/01	KWG0101904	
1,3-Dichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Tetrachloroethene (PCE)	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Dibromochloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	

Comments:

011008

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: URS Corporation
Project: Poleline Road Disposal Area-OUB/74-F0E9408U.00
Sample Matrix: Water

Service Request: K2102461
Date Collected: 04/02/2001
Date Received: 04/10/2001

Volatile Organic Compounds

Sample Name: 01PRDA-0TB2
Lab Code: K2102461-001

Extraction Method: EPA 5030B
Analysis Method: 8260B

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Chloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Vinyl Chloride	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromomethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Chloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Trichlorofluoromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Acetone	ND	U	20	1	04/13/01	04/13/01	KWG0101904	
1,1-Dichloroethene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Carbon Disulfide	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Methylene Chloride	ND	U	1.0	1	04/13/01	04/13/01	KWG0101904	
trans-1,2-Dichloroethene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1-Dichloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
2-Butanone (MEK)	ND	U	20	1	04/13/01	04/13/01	KWG0101904	
2,2-Dichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
cis-1,2-Dichloroethene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Chloroform	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromochloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1-Dichloropropene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Carbon Tetrachloride	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Benzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Trichloroethene (TCE)	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,2-Dichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromodichloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Dibromomethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
2-Hexanone	ND	U	20	1	04/13/01	04/13/01	KWG0101904	
cis-1,3-Dichloropropene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Toluene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
trans-1,3-Dichloropropene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1,2-Trichloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	04/13/01	04/13/01	KWG0101904	
1,3-Dichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Tetrachloroethene (PCE)	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Dibromochloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	

Comments:

01008

Client: URS Corporation
Project: Poleline Road Disposal Area-OUB/74-F0E9408U.00
Sample Matrix: Water

Service Request: K2102461
Date Collected: 04/02/2001
Date Received: 04/10/2001

Volatile Organic Compounds

Sample Name: 01PRDA-0TB2
Lab Code: K2102461-001

Extraction Method: EPA 5030B
Analysis Method: 8260B

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
Chlorobenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Ethylbenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
m,p-Xylenes	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
o-Xylene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Styrene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromoform	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Isopropylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,2,3-Trichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromobenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
n-Propylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
2-Chlorotoluene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
4-Chlorotoluene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,3,5-Trimethylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
tert-Butylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,2,4-Trimethylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
sec-Butylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,3-Dichlorobenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
4-Isopropyltoluene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,4-Dichlorobenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
n-Butylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,2-Dichlorobenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,2,4-Trichlorobenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,2,3-Trichlorobenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
Naphthalene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
Hexachlorobutadiene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	

Comments:

00009

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	URS Corporation	**Service Request:**	K2102461
Project:	Poleline Road Disposal Area-OUB/74-F0E9408U.00	**Date Collected:**	04/02/2001
Sample Matrix:	Water	**Date Received:**	04/10/2001

Volatile Organic Compounds

Sample Name:	01PRDA-0TB2	**Units:**	ug/L
Lab Code:	K2102461-001	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	93	87-115	04/13/01	Acceptable
Toluene-d8	91	83-116	04/13/01	Acceptable
4-Bromofluorobenzene	91	75-120	04/13/01	Acceptable

Comments:

~~01010~~

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: URS Corporation
Project: Poleline Road Disposal Area-OUB/74-F0E9408U.00
Sample Matrix: Water

Service Request: K2102461
Date Collected: 04/02/2001
Date Received: 04/10/2001

Volatile Organic Compounds

Sample Name: 01PRDA-016-GW
Lab Code: K2102461-002

Extraction Method: EPA 5030B
Analysis Method: 8260B

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Chloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Vinyl Chloride	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromomethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Chloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Trichlorofluoromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Acetone	ND	U	20	1	04/13/01	04/13/01	KWG0101904	
1,1-Dichloroethene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Carbon Disulfide	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Methylene Chloride	ND	U	1.0	1	04/13/01	04/13/01	KWG0101904	
trans-1,2-Dichloroethene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1-Dichloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
2-Butanone (MEK)	ND	U	20	1	04/13/01	04/13/01	KWG0101904	
2,2-Dichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
cis-1,2-Dichloroethene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Chloroform	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromochloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1-Dichloropropene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Carbon Tetrachloride	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Benzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Trichloroethene (TCE)	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,2-Dichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromodichloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Dibromomethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
2-Hexanone	ND	U	20	1	04/13/01	04/13/01	KWG0101904	
cis-1,3-Dichloropropene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Toluene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
trans-1,3-Dichloropropene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1,2-Trichloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	04/13/01	04/13/01	KWG0101904	
1,3-Dichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Tetrachloroethene (PCE)	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Dibromochloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	

Comments:

00011

Client: URS Corporation
Project: Poleline Road Disposal Area-OUB/74-F0E9408U.00
Sample Matrix: Water

Service Request: K2102461
Date Collected: 04/02/2001
Date Received: 04/10/2001

Volatile Organic Compounds

Sample Name: 01PRDA-016-GW
Lab Code: K2102461-002

Extraction Method: EPA 5030B
Analysis Method: 8260B

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
Chlorobenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Ethylbenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
m,p-Xylenes	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
o-Xylene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Styrene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromoform	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Isopropylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,2,3-Trichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromobenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
n-Propylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
2-Chlorotoluene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
4-Chlorotoluene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,3,5-Trimethylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
tert-Butylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,2,4-Trimethylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
sec-Butylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,3-Dichlorobenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
4-Isopropyltoluene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,4-Dichlorobenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
n-Butylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,2-Dichlorobenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,2,4-Trichlorobenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,2,3-Trichlorobenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
Naphthalene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
Hexachlorobutadiene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	

Comments:

00012

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	URS Corporation	**Service Request:**	K2102461
Project:	Poleline Road Disposal Area-OUB/74-F0E9408U.00	**Date Collected:**	04/02/2001
Sample Matrix:	Water	**Date Received:**	04/10/2001

Volatile Organic Compounds

Sample Name:	01PRDA-016-GW	**Units:**	ug/L
Lab Code:	K2102461-002	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	93	87-115	04/13/01	Acceptable
Toluene-d8	93	83-116	04/13/01	Acceptable
4-Bromofluorobenzene	90	75-120	04/13/01	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: URS Corporation
Project: Poleline Road Disposal Area-OUB/74-F0E9408U.00
Sample Matrix: Water

Service Request: K2102461
Date Collected: 04/02/2001
Date Received: 04/10/2001

Volatile Organic Compounds

Sample Name: 01PRDA-009-GW
Lab Code: K2102461-003

Extraction Method: EPA 5030B
Analysis Method: 8260B

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Chloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Vinyl Chloride	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromomethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Chloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Trichlorofluoromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Acetone	ND	U	20	1	04/13/01	04/13/01	KWG0101904	
1,1-Dichloroethene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Carbon Disulfide	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Methylene Chloride	ND	U	1.0	1	04/13/01	04/13/01	KWG0101904	
trans-1,2-Dichloroethene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1-Dichloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
2-Butanone (MEK)	ND	U	20	1	04/13/01	04/13/01	KWG0101904	
2,2-Dichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
cis-1,2-Dichloroethene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Chloroform	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromochloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1-Dichloropropene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Carbon Tetrachloride	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Benzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Trichloroethene (TCE)	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,2-Dichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromodichloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Dibromomethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
2-Hexanone	ND	U	20	1	04/13/01	04/13/01	KWG0101904	
cis-1,3-Dichloropropene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Toluene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
trans-1,3-Dichloropropene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1,2-Trichloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	04/13/01	04/13/01	KWG0101904	
1,3-Dichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Tetrachloroethene (PCE)	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Dibromochloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	

Comments:

00014

Client: URS Corporation
Project: Poleline Road Disposal Area-OUB/74-F0E9408U.00
Sample Matrix: Water

Service Request: K2102461
Date Collected: 04/02/2001
Date Received: 04/10/2001

Volatile Organic Compounds

Sample Name: 01PRDA-009-GW
Lab Code: K2102461-003

Extraction Method: EPA 5030B
Analysis Method: 8260B

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
Chlorobenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Ethylbenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
m,p-Xylenes	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
o-Xylene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Styrene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromoform	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Isopropylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,2,3-Trichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromobenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
n-Propylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
2-Chlorotoluene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
4-Chlorotoluene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,3,5-Trimethylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
tert-Butylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,2,4-Trimethylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
sec-Butylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,3-Dichlorobenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
4-Isopropyltoluene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,4-Dichlorobenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
n-Butylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,2-Dichlorobenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,2,4-Trichlorobenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,2,3-Trichlorobenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
Naphthalene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
Hexachlorobutadiene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	

Comments:

04015

Client: URS Corporation
Project: Poleline Road Disposal Area-OUB/74-F0E9408U.00
Sample Matrix: Water

Service Request: K2102461
Date Collected: 04/02/2001
Date Received: 04/10/2001

Volatile Organic Compounds

Sample Name: 01PRDA-009-GW
Lab Code: K2102461-003

Units: ug/L
Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	94	87-115	04/13/01	Acceptable
Toluene-d8	92	83-116	04/13/01	Acceptable
4-Bromofluorobenzene	90	75-120	04/13/01	Acceptable

Comments:

00016

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: URS Corporation
Project: Poleline Road Disposal Area-OUB/74-F0E9408U.00
Sample Matrix: Water

Service Request: K2102461
Date Collected: 04/02/2001
Date Received: 04/10/2001

Volatile Organic Compounds

Sample Name: 01PRDA-015-GW
Lab Code: K2102461-004

Extraction Method: EPA 5030B
Analysis Method: 8260B

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Chloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Vinyl Chloride	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromomethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Chloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Trichlorofluoromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Acetone	ND	U	20	1	04/13/01	04/13/01	KWG0101904	
1,1-Dichloroethene	**2.5**		0.50	1	04/13/01	04/13/01	KWG0101904	
Carbon Disulfide	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Methylene Chloride	ND	U	1.0	1	04/13/01	04/13/01	KWG0101904	
trans-1,2-Dichloroethene	**13**		0.50	1	04/13/01	04/13/01	KWG0101904	
1,1-Dichloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
2-Butanone (MEK)	ND	U	20	1	04/13/01	04/13/01	KWG0101904	
2,2-Dichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
cis-1,2-Dichloroethene	**44**		0.50	1	04/13/01	04/13/01	KWG0101904	
Chloroform	**4.0**		0.50	1	04/13/01	04/13/01	KWG0101904	
Bromochloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1-Dichloropropene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Carbon Tetrachloride	**3.2**		0.50	1	04/13/01	04/13/01	KWG0101904	
1,2-Dichloroethane (EDC)	**0.55**		0.50	1	04/13/01	04/13/01	KWG0101904	
Benzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Trichloroethene (TCE)	**860**	D	10	20	04/13/01	04/13/01	KWG0101913	
1,2-Dichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromodichloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Dibromomethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
2-Hexanone	ND	U	20	1	04/13/01	04/13/01	KWG0101904	
cis-1,3-Dichloropropene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Toluene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
trans-1,3-Dichloropropene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1,2-Trichloroethane	**5.2**		0.50	1	04/13/01	04/13/01	KWG0101904	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	04/13/01	04/13/01	KWG0101904	
1,3-Dichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Tetrachloroethene (PCE)	**7.8**		0.50	1	04/13/01	04/13/01	KWG0101904	
Dibromochloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	

Comments:

01017

Client: URS Corporation
Project: Poleline Road Disposal Area-OUB/74-F0E9408U.00
Sample Matrix: Water

Service Request: K2102461
Date Collected: 04/02/2001
Date Received: 04/10/2001

Volatile Organic Compounds

Sample Name: 01PRDA-015-GW
Lab Code: K2102461-004

Extraction Method: EPA 5030B
Analysis Method: 8260B

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
Chlorobenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Ethylbenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
m,p-Xylenes	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
o-Xylene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Styrene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromoform	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Isopropylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,1,2,2-Tetrachloroethane	**31**		0.50	1	04/13/01	04/13/01	KWG0101904	
1,2,3-Trichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromobenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
n-Propylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
2-Chlorotoluene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
4-Chlorotoluene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,3,5-Trimethylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
tert-Butylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,2,4-Trimethylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
sec-Butylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,3-Dichlorobenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
4-Isopropyltoluene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,4-Dichlorobenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
n-Butylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,2-Dichlorobenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,2,4-Trichlorobenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,2,3-Trichlorobenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
Naphthalene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
Hexachlorobutadiene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	

Comments:

00018

Client: URS Corporation
Project: Poleline Road Disposal Area-OUB/74-F0E9408U.00
Sample Matrix: Water

Service Request: K2102461
Date Collected: 04/02/2001
Date Received: 04/10/2001

Volatile Organic Compounds

Sample Name: 01PRDA-015-GW
Lab Code: K2102461-004

Units: ug/L
Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	91	87-115	04/13/01	Acceptable
Toluene-d8	91	83-116	04/13/01	Acceptable
4-Bromofluorobenzene	90	75-120	04/13/01	Acceptable

Comments:

00019

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: URS Corporation
Project: Poleline Road Disposal Area-OUB/74-F0E9408U.00
Sample Matrix: Water

Service Request: K2102461
Date Collected: 04/03/2001
Date Received: 04/10/2001

Volatile Organic Compounds

Sample Name: 01PRDA-020-GW
Lab Code: K2102461-005

Extraction Method: EPA 5030B
Analysis Method: 8260B

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
Chloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
Vinyl Chloride	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
Bromomethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
Chloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
Trichlorofluoromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
Acetone	ND	U	20	1	04/13/01	04/13/01	KWG0101913	
1,1-Dichloroethene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
Carbon Disulfide	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
Methylene Chloride	ND	U	1.0	1	04/13/01	04/13/01	KWG0101913	
trans-1,2-Dichloroethene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
1,1-Dichloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
2-Butanone (MEK)	ND	U	20	1	04/13/01	04/13/01	KWG0101913	
2,2-Dichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
cis-1,2-Dichloroethene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
Chloroform	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
Bromochloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
1,1-Dichloropropene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
Carbon Tetrachloride	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
Benzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
Trichloroethene (TCE)	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
1,2-Dichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
Bromodichloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
Dibromomethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
2-Hexanone	ND	U	20	1	04/13/01	04/13/01	KWG0101913	
cis-1,3-Dichloropropene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
Toluene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
trans-1,3-Dichloropropene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
1,1,2-Trichloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	04/13/01	04/13/01	KWG0101913	
1,3-Dichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
Tetrachloroethene (PCE)	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
Dibromochloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	

Comments:

01020

Client: URS Corporation
Project: Poleline Road Disposal Area-OUB/74-F0E9408U.00
Sample Matrix: Water

Service Request: K2102461
Date Collected: 04/03/2001
Date Received: 04/10/2001

Volatile Organic Compounds

Sample Name: 01PRDA-020-GW
Lab Code: K2102461-005

Extraction Method: EPA 5030B
Analysis Method: 8260B

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	2.0	1	04/13/01	04/13/01	KWG0101913	
Chlorobenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
Ethylbenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
m,p-Xylenes	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
o-Xylene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
Styrene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
Bromoform	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
Isopropylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101913	
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
1,2,3-Trichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
Bromobenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101913	
n-Propylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101913	
2-Chlorotoluene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101913	
4-Chlorotoluene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101913	
1,3,5-Trimethylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101913	
tert-Butylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101913	
1,2,4-Trimethylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101913	
sec-Butylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101913	
1,3-Dichlorobenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
4-Isopropyltoluene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101913	
1,4-Dichlorobenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
n-Butylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101913	
1,2-Dichlorobenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	04/13/01	04/13/01	KWG0101913	
1,2,4-Trichlorobenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101913	
1,2,3-Trichlorobenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101913	
Naphthalene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101913	
Hexachlorobutadiene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101913	

Comments:

0#021

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: URS Corporation
Project: Poleline Road Disposal Area-OUB/74-F0E9408U.00
Sample Matrix: Water

Service Request: K2102461
Date Collected: 04/03/2001
Date Received: 04/10/2001

Volatile Organic Compounds

Sample Name: 01PRDA-020-GW
Lab Code: K2102461-005

Units: ug/L
Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	94	87-115	04/13/01	Acceptable
Toluene-d8	91	83-116	04/13/01	Acceptable
4-Bromofluorobenzene	91	75-120	04/13/01	Acceptable

Comments:

04022

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: URS Corporation
Project: Poleline Road Disposal Area-OUB/74-F0E9408U.00
Sample Matrix: Water

Service Request: K2102461
Date Collected: 04/03/2001
Date Received: 04/10/2001

Volatile Organic Compounds

Sample Name: 01PRDA-012-GW
Lab Code: K2102461-006

Extraction Method: EPA 5030B
Analysis Method: 8260B

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Chloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Vinyl Chloride	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromomethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Chloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Trichlorofluoromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Acetone	ND	U	20	1	04/13/01	04/13/01	KWG0101904	
1,1-Dichloroethene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Carbon Disulfide	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Methylene Chloride	ND	U	1.0	1	04/13/01	04/13/01	KWG0101904	
trans-1,2-Dichloroethene	**0.54**		0.50	1	04/13/01	04/13/01	KWG0101904	
1,1-Dichloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
2-Butanone (MEK)	ND	U	20	1	04/13/01	04/13/01	KWG0101904	
2,2-Dichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
cis-1,2-Dichloroethene	**2.8**		0.50	1	04/13/01	04/13/01	KWG0101904	
Chloroform	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromochloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1-Dichloropropene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Carbon Tetrachloride	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Benzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Trichloroethene (TCE)	**40**		0.50	1	04/13/01	04/13/01	KWG0101904	
1,2-Dichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromodichloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Dibromomethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
2-Hexanone	ND	U	20	1	04/13/01	04/13/01	KWG0101904	
cis-1,3-Dichloropropene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Toluene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
trans-1,3-Dichloropropene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1,2-Trichloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	04/13/01	04/13/01	KWG0101904	
1,3-Dichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Tetrachloroethene (PCE)	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Dibromochloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	

Comments:

00023

Client: URS Corporation
Project: Poleline Road Disposal Area-OUB/74-F0E9408U.00
Sample Matrix: Water

Service Request: K2102461
Date Collected: 04/03/2001
Date Received: 04/10/2001

Volatile Organic Compounds

Sample Name: 01PRDA-012-GW
Lab Code: K2102461-006

Extraction Method: EPA 5030B
Analysis Method: 8260B

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
Chlorobenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Ethylbenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
m,p-Xylenes	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
o-Xylene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Styrene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromoform	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Isopropylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,1,2,2-Tetrachloroethane	**16**		0.50	1	04/13/01	04/13/01	KWG0101904	
1,2,3-Trichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromobenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
n-Propylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
2-Chlorotoluene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
4-Chlorotoluene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,3,5-Trimethylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
tert-Butylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,2,4-Trimethylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
sec-Butylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,3-Dichlorobenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
4-Isopropyltoluene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,4-Dichlorobenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
n-Butylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,2-Dichlorobenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,2,4-Trichlorobenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,2,3-Trichlorobenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
Naphthalene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
Hexachlorobutadiene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	

Comments:

01024

Client: URS Corporation
Project: Poleline Road Disposal Area-OUB/74-F0E9408U.00
Sample Matrix: Water

Service Request: K2102461
Date Collected: 04/03/2001
Date Received: 04/10/2001

Volatile Organic Compounds

Sample Name: 01PRDA-012-GW
Lab Code: K2102461-006

Units: ug/L
Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	89	87-115	04/13/01	Acceptable
Toluene-d8	91	83-116	04/13/01	Acceptable
4-Bromofluorobenzene	90	75-120	04/13/01	Acceptable

Comments:

00025

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: URS Corporation
Project: Poleline Road Disposal Area-OUB/74-F0E9408U.00
Sample Matrix: Water

Service Request: K2102461
Date Collected: 04/03/2001
Date Received: 04/10/2001

Volatile Organic Compounds

Sample Name: 01PRDA-001-GW
Lab Code: K2102461-007

Extraction Method: EPA 5030B
Analysis Method: 8260B

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Chloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Vinyl Chloride	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromomethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Chloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Trichlorofluoromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Acetone	ND	U	20	1	04/13/01	04/13/01	KWG0101904	
1,1-Dichloroethene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Carbon Disulfide	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Methylene Chloride	ND	U	1.0	1	04/13/01	04/13/01	KWG0101904	
trans-1,2-Dichloroethene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1-Dichloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
2-Butanone (MEK)	ND	U	20	1	04/13/01	04/13/01	KWG0101904	
2,2-Dichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
cis-1,2-Dichloroethene	**4.8**		0.50	1	04/13/01	04/13/01	KWG0101904	
Chloroform	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromochloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1-Dichloropropene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Carbon Tetrachloride	**0.85**		0.50	1	04/13/01	04/13/01	KWG0101904	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Benzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Trichloroethene (TCE)	**37**		0.50	1	04/13/01	04/13/01	KWG0101904	
1,2-Dichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromodichloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Dibromomethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
2-Hexanone	ND	U	20	1	04/13/01	04/13/01	KWG0101904	
cis-1,3-Dichloropropene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Toluene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
trans-1,3-Dichloropropene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1,2-Trichloroethane	**0.69**		0.50	1	04/13/01	04/13/01	KWG0101904	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	04/13/01	04/13/01	KWG0101904	
1,3-Dichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Tetrachloroethene (PCE)	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Dibromochloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	

Comments:

Client: URS Corporation
Project: Poleline Road Disposal Area-OUB/74-F0E9408U.00
Sample Matrix: Water

Service Request: K2102461
Date Collected: 04/03/2001
Date Received: 04/10/2001

Volatile Organic Compounds

Sample Name: 01PRDA-001-GW
Lab Code: K2102461-007

Extraction Method: EPA 5030B
Analysis Method: 8260B

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
Chlorobenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Ethylbenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
m,p-Xylenes	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
o-Xylene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Styrene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromoform	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Isopropylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,1,2,2-Tetrachloroethane	**18**		0.50	1	04/13/01	04/13/01	KWG0101904	
1,2,3-Trichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromobenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
n-Propylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
2-Chlorotoluene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
4-Chlorotoluene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,3,5-Trimethylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
tert-Butylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,2,4-Trimethylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
sec-Butylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,3-Dichlorobenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
4-Isopropyltoluene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,4-Dichlorobenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
n-Butylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,2-Dichlorobenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,2,4-Trichlorobenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,2,3-Trichlorobenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
Naphthalene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
Hexachlorobutadiene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	

Comments:

Client: URS Corporation
Project: Poleline Road Disposal Area-OUB/74-F0E9408U.00
Sample Matrix: Water

Service Request: K2102461
Date Collected: 04/03/2001
Date Received: 04/10/2001

Volatile Organic Compounds

Sample Name: 01PRDA-001-GW
Lab Code: K2102461-007

Units: ug/L
Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	93	87-115	04/13/01	Acceptable
Toluene-d8	92	83-116	04/13/01	Acceptable
4-Bromofluorobenzene	91	75-120	04/13/01	Acceptable

Comments:

01028

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: URS Corporation
Project: Poleline Road Disposal Area-OUB/74-F0E9408U.00
Sample Matrix: Water

Service Request: K2102461
Date Collected: 04/03/2001
Date Received: 04/10/2001

Volatile Organic Compounds

Sample Name: 01PRDA-002-GW
Lab Code: K2102461-008

Extraction Method: EPA 5030B
Analysis Method: 8260B

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Chloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Vinyl Chloride	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromomethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Chloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Trichlorofluoromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Acetone	ND	U	20	1	04/13/01	04/13/01	KWG0101904	
1,1-Dichloroethene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Carbon Disulfide	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Methylene Chloride	ND	U	1.0	1	04/13/01	04/13/01	KWG0101904	
trans-1,2-Dichloroethene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1-Dichloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
2-Butanone (MEK)	ND	U	20	1	04/13/01	04/13/01	KWG0101904	
2,2-Dichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
cis-1,2-Dichloroethene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Chloroform	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromochloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1-Dichloropropene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Carbon Tetrachloride	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Benzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Trichloroethene (TCE)	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,2-Dichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromodichloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Dibromomethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
2-Hexanone	ND	U	20	1	04/13/01	04/13/01	KWG0101904	
cis-1,3-Dichloropropene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Toluene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
trans-1,3-Dichloropropene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1,2-Trichloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	04/13/01	04/13/01	KWG0101904	
1,3-Dichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Tetrachloroethene (PCE)	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Dibromochloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	

Comments:

Client: URS Corporation
Project: Poleline Road Disposal Area-OUB/74-F0E9408U.00
Sample Matrix: Water

Service Request: K2102461
Date Collected: 04/03/2001
Date Received: 04/10/2001

Volatile Organic Compounds

Sample Name: 01PRDA-002-GW
Lab Code: K2102461-008

Extraction Method: EPA 5030B
Analysis Method: 8260B

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
Chlorobenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Ethylbenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
m,p-Xylenes	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
o-Xylene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Styrene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromoform	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Isopropylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,2,3-Trichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromobenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
n-Propylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
2-Chlorotoluene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
4-Chlorotoluene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,3,5-Trimethylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
tert-Butylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,2,4-Trimethylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
sec-Butylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,3-Dichlorobenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
4-Isopropyltoluene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,4-Dichlorobenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
n-Butylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,2-Dichlorobenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,2,4-Trichlorobenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,2,3-Trichlorobenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
Naphthalene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
Hexachlorobutadiene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	

Comments:

00030

Client: URS Corporation
Project: Poleline Road Disposal Area-OUB/74-F0E9408U.00
Sample Matrix: Water

Service Request: K2102461
Date Collected: 04/03/2001
Date Received: 04/10/2001

Volatile Organic Compounds

Sample Name: 01PRDA-002-GW
Lab Code: K2102461-008

Units: ug/L
Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	92	87-115	04/13/01	Acceptable
Toluene-d8	90	83-116	04/13/01	Acceptable
4-Bromofluorobenzene	93	75-120	04/13/01	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: URS Corporation
Project: Poleline Road Disposal Area-OUB/74-F0E9408U.00
Sample Matrix: Water

Service Request: K2102461
Date Collected: 04/03/2001
Date Received: 04/10/2001

Volatile Organic Compounds

Sample Name: 01PRDA-017-GW
Lab Code: K2102461-009

Extraction Method: EPA 5030B
Analysis Method: 8260B

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Chloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Vinyl Chloride	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromomethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Chloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Trichlorofluoromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Acetone	ND	U	20	1	04/13/01	04/13/01	KWG0101904	
1,1-Dichloroethene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Carbon Disulfide	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Methylene Chloride	ND	U	1.0	1	04/13/01	04/13/01	KWG0101904	
trans-1,2-Dichloroethene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1-Dichloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
2-Butanone (MEK)	ND	U	20	1	04/13/01	04/13/01	KWG0101904	
2,2-Dichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
cis-1,2-Dichloroethene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Chloroform	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromochloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1-Dichloropropene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Carbon Tetrachloride	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Benzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Trichloroethene (TCE)	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,2-Dichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromodichloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Dibromomethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
2-Hexanone	ND	U	20	1	04/13/01	04/13/01	KWG0101904	
cis-1,3-Dichloropropene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Toluene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
trans-1,3-Dichloropropene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1,2-Trichloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	04/13/01	04/13/01	KWG0101904	
1,3-Dichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Tetrachloroethene (PCE)	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Dibromochloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	

Comments:

Client: URS Corporation
Project: Poleline Road Disposal Area-OUB/74-F0E9408U.00
Sample Matrix: Water

Service Request: K2102461
Date Collected: 04/03/2001
Date Received: 04/10/2001

Volatile Organic Compounds

Sample Name: 01PRDA-017-GW
Lab Code: K2102461-009

Extraction Method: EPA 5030B
Analysis Method: 8260B

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
Chlorobenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Ethylbenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
m,p-Xylenes	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
o-Xylene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Styrene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromoform	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Isopropylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,2,3-Trichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromobenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
n-Propylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
2-Chlorotoluene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
4-Chlorotoluene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,3,5-Trimethylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
tert-Butylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,2,4-Trimethylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
sec-Butylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,3-Dichlorobenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
4-Isopropyltoluene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,4-Dichlorobenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
n-Butylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,2-Dichlorobenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,2,4-Trichlorobenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,2,3-Trichlorobenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
Naphthalene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
Hexachlorobutadiene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	

Comments:

00033

Client: URS Corporation
Project: Poleline Road Disposal Area-OUB/74-F0E9408U.00
Sample Matrix: Water

Service Request: K2102461
Date Collected: 04/03/2001
Date Received: 04/10/2001

Volatile Organic Compounds

Sample Name: 01PRDA-017-GW
Lab Code: K2102461-009

Units: ug/L
Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	92	87-115	04/13/01	Acceptable
Toluene-d8	91	83-116	04/13/01	Acceptable
4-Bromofluorobenzene	91	75-120	04/13/01	Acceptable

Comments:

00034

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: URS Corporation
Project: Poleline Road Disposal Area-OUB/74-F0E9408U.00
Sample Matrix: Water

Service Request: K2102461
Date Collected: 04/04/2001
Date Received: 04/10/2001

Volatile Organic Compounds

Sample Name: 01PRDA-008-GW
Lab Code: K2102461-010

Extraction Method: EPA 5030B
Analysis Method: 8260B

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Chloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Vinyl Chloride	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromomethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Chloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Trichlorofluoromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Acetone	ND	U	20	1	04/13/01	04/13/01	KWG0101904	
1,1-Dichloroethene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Carbon Disulfide	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Methylene Chloride	ND	U	1.0	1	04/13/01	04/13/01	KWG0101904	
trans-1,2-Dichloroethene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1-Dichloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
2-Butanone (MEK)	ND	U	20	1	04/13/01	04/13/01	KWG0101904	
2,2-Dichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
cis-1,2-Dichloroethene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Chloroform	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromochloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1-Dichloropropene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Carbon Tetrachloride	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Benzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Trichloroethene (TCE)	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,2-Dichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromodichloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Dibromomethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
2-Hexanone	ND	U	20	1	04/13/01	04/13/01	KWG0101904	
cis-1,3-Dichloropropene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Toluene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
trans-1,3-Dichloropropene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1,2-Trichloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	04/13/01	04/13/01	KWG0101904	
1,3-Dichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Tetrachloroethene (PCE)	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Dibromochloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	

Comments:

00035

Client: URS Corporation
Project: Poleline Road Disposal Area-OUB/74-F0E9408U.00
Sample Matrix: Water

Service Request: K2102461
Date Collected: 04/04/2001
Date Received: 04/10/2001

Volatile Organic Compounds

Sample Name: 01PRDA-008-GW
Lab Code: K2102461-010

Extraction Method: EPA 5030B
Analysis Method: 8260B

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
Chlorobenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Ethylbenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
m,p-Xylenes	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
o-Xylene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Styrene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromoform	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Isopropylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,2,3-Trichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromobenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
n-Propylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
2-Chlorotoluene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
4-Chlorotoluene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,3,5-Trimethylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
tert-Butylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,2,4-Trimethylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
sec-Butylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,3-Dichlorobenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
4-Isopropyltoluene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,4-Dichlorobenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
n-Butylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,2-Dichlorobenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,2,4-Trichlorobenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,2,3-Trichlorobenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
Naphthalene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
Hexachlorobutadiene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	

Comments:

Client: URS Corporation
Project: Poleline Road Disposal Area-OUB/74-F0E9408U.00
Sample Matrix: Water

Service Request: K2102461
Date Collected: 04/04/2001
Date Received: 04/10/2001

Volatile Organic Compounds

Sample Name: 01PRDA-008-GW
Lab Code: K2102461-010

Units: ug/L
Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	93	87-115	04/13/01	Acceptable
Toluene-d8	91	83-116	04/13/01	Acceptable
4-Bromofluorobenzene	90	75-120	04/13/01	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: URS Corporation
Project: Poleline Road Disposal Area-OUB/74-F0E9408U.00
Sample Matrix: Water

Service Request: K2102461
Date Collected: 04/04/2001
Date Received: 04/10/2001

Volatile Organic Compounds

Sample Name: 01PRDA-003-GW
Lab Code: K2102461-011

Extraction Method: EPA 5030B
Analysis Method: 8260B

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Chloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Vinyl Chloride	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromomethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Chloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Trichlorofluoromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Acetone	ND	U	20	1	04/13/01	04/13/01	KWG0101904	
1,1-Dichloroethene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Carbon Disulfide	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Methylene Chloride	ND	U	1.0	1	04/13/01	04/13/01	KWG0101904	
trans-1,2-Dichloroethene	**1.2**		0.50	1	04/13/01	04/13/01	KWG0101904	
1,1-Dichloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
2-Butanone (MEK)	ND	U	20	1	04/13/01	04/13/01	KWG0101904	
2,2-Dichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
cis-1,2-Dichloroethene	**8.9**		0.50	1	04/13/01	04/13/01	KWG0101904	
Chloroform	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromochloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1-Dichloropropene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Carbon Tetrachloride	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Benzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Trichloroethene (TCE)	**61**		0.50	1	04/13/01	04/13/01	KWG0101904	
1,2-Dichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromodichloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Dibromomethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
2-Hexanone	ND	U	20	1	04/13/01	04/13/01	KWG0101904	
cis-1,3-Dichloropropene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Toluene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
trans-1,3-Dichloropropene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1,2-Trichloroethane	**0.66**		0.50	1	04/13/01	04/13/01	KWG0101904	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	04/13/01	04/13/01	KWG0101904	
1,3-Dichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Tetrachloroethene (PCE)	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Dibromochloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	

Comments:

00038

Client: URS Corporation
Project: Poleline Road Disposal Area-OUB/74-F0E9408U.00
Sample Matrix: Water

Service Request: K2102461
Date Collected: 04/04/2001
Date Received: 04/10/2001

Volatile Organic Compounds

Sample Name: 01PRDA-003-GW
Lab Code: K2102461-011

Extraction Method: EPA 5030B
Analysis Method: 8260B

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
Chlorobenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Ethylbenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
m,p-Xylenes	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
o-Xylene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Styrene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromoform	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Isopropylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,1,2,2-Tetrachloroethane	**38**		0.50	1	04/13/01	04/13/01	KWG0101904	
1,2,3-Trichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromobenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
n-Propylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
2-Chlorotoluene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
4-Chlorotoluene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,3,5-Trimethylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
tert-Butylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,2,4-Trimethylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
sec-Butylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,3-Dichlorobenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
4-Isopropyltoluene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,4-Dichlorobenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
n-Butylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,2-Dichlorobenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,2,4-Trichlorobenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,2,3-Trichlorobenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
Naphthalene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
Hexachlorobutadiene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	

Comments:

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COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: URS Corporation
Project: Poleline Road Disposal Area-OUB/74-F0E9408U.00
Sample Matrix: Water

Service Request: K2102461
Date Collected: 04/04/2001
Date Received: 04/10/2001

Volatile Organic Compounds

Sample Name: 01PRDA-003-GW
Lab Code: K2102461-011

Units: ug/L
Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	92	87-115	04/13/01	Acceptable
Toluene-d8	92	83-116	04/13/01	Acceptable
4-Bromofluorobenzene	90	75-120	04/13/01	Acceptable

Comments:

00040

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: URS Corporation
Project: Poleline Road Disposal Area-OUB/74-F0E9408U.00
Sample Matrix: Water

Service Request: K2102461
Date Collected: 04/04/2001
Date Received: 04/10/2001

Volatile Organic Compounds

Sample Name: 01PRDA-013-GW
Lab Code: K2102461-012

Extraction Method: EPA 5030B
Analysis Method: 8260B

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Chloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Vinyl Chloride	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromomethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Chloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Trichlorofluoromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Acetone	ND	U	20	1	04/13/01	04/13/01	KWG0101904	
1,1-Dichloroethene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Carbon Disulfide	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Methylene Chloride	ND	U	1.0	1	04/13/01	04/13/01	KWG0101904	
trans-1,2-Dichloroethene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1-Dichloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
2-Butanone (MEK)	ND	U	20	1	04/13/01	04/13/01	KWG0101904	
2,2-Dichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
cis-1,2-Dichloroethene	**2.0**		0.50	1	04/13/01	04/13/01	KWG0101904	
Chloroform	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromochloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1-Dichloropropene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Carbon Tetrachloride	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Benzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Trichloroethene (TCE)	**15**		0.50	1	04/13/01	04/13/01	KWG0101904	
1,2-Dichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromodichloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Dibromomethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
2-Hexanone	ND	U	20	1	04/13/01	04/13/01	KWG0101904	
cis-1,3-Dichloropropene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Toluene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
trans-1,3-Dichloropropene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1,2-Trichloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	04/13/01	04/13/01	KWG0101904	
1,3-Dichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Tetrachloroethene (PCE)	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Dibromochloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	

Comments:

00041

Client: URS Corporation
Project: Poleline Road Disposal Area-OUB/74-F0E9408U.00
Sample Matrix: Water

Service Request: K2102461
Date Collected: 04/04/2001
Date Received: 04/10/2001

Volatile Organic Compounds

Sample Name: 01PRDA-013-GW
Lab Code: K2102461-012

Extraction Method: EPA 5030B
Analysis Method: 8260B

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
Chlorobenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Ethylbenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
m,p-Xylenes	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
o-Xylene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Styrene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromoform	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Isopropylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,1,2,2-Tetrachloroethane	**6.3**		0.50	1	04/13/01	04/13/01	KWG0101904	
1,2,3-Trichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromobenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
n-Propylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
2-Chlorotoluene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
4-Chlorotoluene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,3,5-Trimethylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
tert-Butylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,2,4-Trimethylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
sec-Butylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,3-Dichlorobenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
4-Isopropyltoluene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,4-Dichlorobenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
n-Butylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,2-Dichlorobenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,2,4-Trichlorobenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,2,3-Trichlorobenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
Naphthalene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
Hexachlorobutadiene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	

Comments:

00042

Client: URS Corporation
Project: Poleline Road Disposal Area-OUB/74-F0E9408U.00
Sample Matrix: Water

Service Request: K2102461
Date Collected: 04/04/2001
Date Received: 04/10/2001

Volatile Organic Compounds

Sample Name: 01PRDA-013-GW
Lab Code: K2102461-012

Units: ug/L
Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	91	87-115	04/13/01	Acceptable
Toluene-d8	91	83-116	04/13/01	Acceptable
4-Bromofluorobenzene	92	75-120	04/13/01	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: URS Corporation
Project: Poleline Road Disposal Area-OUB/74-F0E9408U.00
Sample Matrix: Water

Service Request: K2102461
Date Collected: 04/04/2001
Date Received: 04/10/2001

Volatile Organic Compounds

Sample Name: 01PRDA-019-GW
Lab Code: K2102461-013

Extraction Method: EPA 5030B
Analysis Method: 8260B

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Chloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Vinyl Chloride	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromomethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Chloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Trichlorofluoromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Acetone	ND	U	20	1	04/13/01	04/13/01	KWG0101904	
1,1-Dichloroethene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Carbon Disulfide	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Methylene Chloride	ND	U	1.0	1	04/13/01	04/13/01	KWG0101904	
trans-1,2-Dichloroethene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1-Dichloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
2-Butanone (MEK)	ND	U	20	1	04/13/01	04/13/01	KWG0101904	
2,2-Dichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
cis-1,2-Dichloroethene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Chloroform	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromochloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1-Dichloropropene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Carbon Tetrachloride	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Benzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Trichloroethene (TCE)	**0.81**		0.50	1	04/13/01	04/13/01	KWG0101904	
1,2-Dichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromodichloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Dibromomethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
2-Hexanone	ND	U	20	1	04/13/01	04/13/01	KWG0101904	
cis-1,3-Dichloropropene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Toluene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
trans-1,3-Dichloropropene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1,2-Trichloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	04/13/01	04/13/01	KWG0101904	
1,3-Dichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Tetrachloroethene (PCE)	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Dibromochloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	

Comments:

01044

Client: URS Corporation
Project: Poleline Road Disposal Area-OUB/74-F0E9408U.00
Sample Matrix: Water

Service Request: K2102461
Date Collected: 04/04/2001
Date Received: 04/10/2001

Volatile Organic Compounds

Sample Name: 01PRDA-019-GW
Lab Code: K2102461-013

Extraction Method: EPA 5030B
Analysis Method: 8260B

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
Chlorobenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Ethylbenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
m,p-Xylenes	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
o-Xylene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Styrene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromoform	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Isopropylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,2,3-Trichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromobenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
n-Propylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
2-Chlorotoluene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
4-Chlorotoluene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,3,5-Trimethylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
tert-Butylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,2,4-Trimethylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
sec-Butylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,3-Dichlorobenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
4-Isopropyltoluene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,4-Dichlorobenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
n-Butylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,2-Dichlorobenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,2,4-Trichlorobenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,2,3-Trichlorobenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
Naphthalene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
Hexachlorobutadiene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	

Comments:

00045

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: URS Corporation
Project: Poleline Road Disposal Area-OUB/74-F0E9408U.00
Sample Matrix: Water

Service Request: K2102461
Date Collected: 04/04/2001
Date Received: 04/10/2001

Volatile Organic Compounds

Sample Name: 01PRDA-019-GW
Lab Code: K2102461-013

Units: ug/L
Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	93	87-115	04/13/01	Acceptable
Toluene-d8	91	83-116	04/13/01	Acceptable
4-Bromofluorobenzene	88	75-120	04/13/01	Acceptable

Comments:

00046

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: URS Corporation
Project: Poleline Road Disposal Area-OUB/74-F0E9408U.00
Sample Matrix: Water

Service Request: K2102461
Date Collected: 04/04/2001
Date Received: 04/10/2001

Volatile Organic Compounds

Sample Name: 01PRDA-006-GW
Lab Code: K2102461-014

Extraction Method: EPA 5030B
Analysis Method: 8260B

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Chloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Vinyl Chloride	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromomethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Chloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Trichlorofluoromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Acetone	ND	U	20	1	04/13/01	04/13/01	KWG0101904	
1,1-Dichloroethene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Carbon Disulfide	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Methylene Chloride	ND	U	1.0	1	04/13/01	04/13/01	KWG0101904	
trans-1,2-Dichloroethene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1-Dichloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
2-Butanone (MEK)	ND	U	20	1	04/13/01	04/13/01	KWG0101904	
2,2-Dichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
cis-1,2-Dichloroethene	**0.86**		0.50	1	04/13/01	04/13/01	KWG0101904	
Chloroform	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromochloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1-Dichloropropene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Carbon Tetrachloride	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Benzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Trichloroethene (TCE)	**13**		0.50	1	04/13/01	04/13/01	KWG0101904	
1,2-Dichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromodichloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Dibromomethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
2-Hexanone	ND	U	20	1	04/13/01	04/13/01	KWG0101904	
cis-1,3-Dichloropropene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Toluene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
trans-1,3-Dichloropropene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1,2-Trichloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	04/13/01	04/13/01	KWG0101904	
1,3-Dichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Tetrachloroethene (PCE)	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Dibromochloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	

Comments:

01047

Client: URS Corporation
Project: Poleline Road Disposal Area-OUB/74-F0E9408U.00
Sample Matrix: Water

Service Request: K2102461
Date Collected: 04/04/2001
Date Received: 04/10/2001

Volatile Organic Compounds

Sample Name: 01PRDA-006-GW
Lab Code: K2102461-014

Extraction Method: EPA 5030B
Analysis Method: 8260B

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
Chlorobenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Ethylbenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
m,p-Xylenes	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
o-Xylene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Styrene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromoform	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Isopropylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,1,2,2-Tetrachloroethane	**3.1**		0.50	1	04/13/01	04/13/01	KWG0101904	
1,2,3-Trichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromobenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
n-Propylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
2-Chlorotoluene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
4-Chlorotoluene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,3,5-Trimethylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
tert-Butylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,2,4-Trimethylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
sec-Butylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,3-Dichlorobenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
4-Isopropyltoluene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,4-Dichlorobenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
n-Butylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,2-Dichlorobenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,2,4-Trichlorobenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,2,3-Trichlorobenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
Naphthalene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
Hexachlorobutadiene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	

Comments:

Client: URS Corporation
Project: Poleline Road Disposal Area-OUB/74-F0E9408U.00
Sample Matrix: Water

Service Request: K2102461
Date Collected: 04/04/2001
Date Received: 04/10/2001

Volatile Organic Compounds

Sample Name: 01PRDA-006-GW
Lab Code: K2102461-014

Units: ug/L
Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	93	87-115	04/13/01	Acceptable
Toluene-d8	91	83-116	04/13/01	Acceptable
4-Bromofluorobenzene	89	75-120	04/13/01	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: URS Corporation
Project: Poleline Road Disposal Area-OUB/74-F0E9408U.00
Sample Matrix: Water

Service Request: K2102461
Date Collected: 04/04/2001
Date Received: 04/10/2001

Volatile Organic Compounds

Sample Name: 01PRDA-033-GW
Lab Code: K2102461-015

Extraction Method: EPA 5030B
Analysis Method: 8260B

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Chloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Vinyl Chloride	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromomethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Chloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Trichlorofluoromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Acetone	ND	U	20	1	04/13/01	04/13/01	KWG0101904	
1,1-Dichloroethene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Carbon Disulfide	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Methylene Chloride	ND	U	1.0	1	04/13/01	04/13/01	KWG0101904	
trans-1,2-Dichloroethene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1-Dichloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
2-Butanone (MEK)	ND	U	20	1	04/13/01	04/13/01	KWG0101904	
2,2-Dichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
cis-1,2-Dichloroethene	**1.8**		0.50	1	04/13/01	04/13/01	KWG0101904	
Chloroform	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromochloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1-Dichloropropene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Carbon Tetrachloride	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Benzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Trichloroethene (TCE)	**15**		0.50	1	04/13/01	04/13/01	KWG0101904	
1,2-Dichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromodichloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Dibromomethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
2-Hexanone	ND	U	20	1	04/13/01	04/13/01	KWG0101904	
cis-1,3-Dichloropropene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Toluene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
trans-1,3-Dichloropropene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1,2-Trichloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	04/13/01	04/13/01	KWG0101904	
1,3-Dichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Tetrachloroethene (PCE)	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Dibromochloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	

Comments:

04050

Client: URS Corporation
Project: Poleline Road Disposal Area-OUB/74-F0E9408U.00
Sample Matrix: Water

Service Request: K2102461
Date Collected: 04/04/2001
Date Received: 04/10/2001

Volatile Organic Compounds

Sample Name: 01PRDA-033-GW
Lab Code: K2102461-015

Extraction Method: EPA 5030B
Analysis Method: 8260B

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
Chlorobenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Ethylbenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
m,p-Xylenes	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
o-Xylene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Styrene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromoform	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Isopropylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,1,2,2-Tetrachloroethane	**6.5**		0.50	1	04/13/01	04/13/01	KWG0101904	
1,2,3-Trichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromobenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
n-Propylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
2-Chlorotoluene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
4-Chlorotoluene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,3,5-Trimethylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
tert-Butylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,2,4-Trimethylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
sec-Butylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,3-Dichlorobenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
4-Isopropyltoluene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,4-Dichlorobenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
n-Butylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,2-Dichlorobenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,2,4-Trichlorobenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,2,3-Trichlorobenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
Naphthalene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
Hexachlorobutadiene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	

Comments:

00051

Client: URS Corporation
Project: Poleline Road Disposal Area-OUB/74-F0E9408U.00
Sample Matrix: Water

Service Request: K2102461
Date Collected: 04/04/2001
Date Received: 04/10/2001

Volatile Organic Compounds

Sample Name: 01PRDA-033-GW
Lab Code: K2102461-015

Units: ug/L
Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	93	87-115	04/13/01	Acceptable
Toluene-d8	92	83-116	04/13/01	Acceptable
4-Bromofluorobenzene	92	75-120	04/13/01	Acceptable

Comments:

111052

Client: URS Corporation
Project: Poleline Road Disposal Area-OUB/74-F0E9408U.00
Sample Matrix: Water

Service Request: K2102461
Date Collected: NA
Date Received: NA

Volatile Organic Compounds

Sample Name: Method Blank
Lab Code: KWG0101904-4

Extraction Method: EPA 5030B
Analysis Method: 8260B

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Chloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Vinyl Chloride	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromomethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Chloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Trichlorofluoromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Acetone	ND	U	20	1	04/13/01	04/13/01	KWG0101904	
1,1-Dichloroethene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Carbon Disulfide	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Methylene Chloride	ND	U	1.0	1	04/13/01	04/13/01	KWG0101904	
trans-1,2-Dichloroethene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1-Dichloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
2-Butanone (MEK)	ND	U	20	1	04/13/01	04/13/01	KWG0101904	
2,2-Dichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
cis-1,2-Dichloroethene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Chloroform	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromochloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1-Dichloropropene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Carbon Tetrachloride	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Benzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Trichloroethene (TCE)	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,2-Dichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromodichloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Dibromomethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
2-Hexanone	ND	U	20	1	04/13/01	04/13/01	KWG0101904	
cis-1,3-Dichloropropene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Toluene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
trans-1,3-Dichloropropene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1,2-Trichloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	04/13/01	04/13/01	KWG0101904	
1,3-Dichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Tetrachloroethene (PCE)	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Dibromochloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	

Comments:

~~01053~~

Client: URS Corporation
Project: Poleline Road Disposal Area-OUB/74-F0E9408U.00
Sample Matrix: Water

Service Request: K2102461
Date Collected: NA
Date Received: NA

Volatile Organic Compounds

Sample Name: Method Blank
Lab Code: KWG0101904-4

Extraction Method: EPA 5030B
Analysis Method: 8260B

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
Chlorobenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Ethylbenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
m,p-Xylenes	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
o-Xylene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Styrene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromoform	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Isopropylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,2,3-Trichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
Bromobenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
n-Propylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
2-Chlorotoluene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
4-Chlorotoluene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,3,5-Trimethylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
tert-Butylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,2,4-Trimethylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
sec-Butylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,3-Dichlorobenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
4-Isopropyltoluene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,4-Dichlorobenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
n-Butylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,2-Dichlorobenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101904	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,2,4-Trichlorobenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
1,2,3-Trichlorobenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
Naphthalene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	
Hexachlorobutadiene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101904	

Comments:

00054

Client: URS Corporation
Project: Poleline Road Disposal Area-OUB/74-F0E9408U.00
Sample Matrix: Water

Service Request: K2102461
Date Collected: NA
Date Received: NA

Volatile Organic Compounds

Sample Name: Method Blank
Lab Code: KWG0101904-4

Units: ug/L
Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	92	87-115	04/13/01	Acceptable
Toluene-d8	92	83-116	04/13/01	Acceptable
4-Bromofluorobenzene	87	75-120	04/13/01	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: URS Corporation
Project: Poleline Road Disposal Area-OUB/74-F0E9408U.00
Sample Matrix: Water

Service Request: K2102461
Date Collected: NA
Date Received: NA

Volatile Organic Compounds

Sample Name: Method Blank
Lab Code: KWG0101913-4

Extraction Method: EPA 5030B
Analysis Method: 8260B

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
Chloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
Vinyl Chloride	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
Bromomethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
Chloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
Trichlorofluoromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
Acetone	ND	U	20	1	04/13/01	04/13/01	KWG0101913	
1,1-Dichloroethene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
Carbon Disulfide	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
Methylene Chloride	ND	U	1.0	1	04/13/01	04/13/01	KWG0101913	
trans-1,2-Dichloroethene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
1,1-Dichloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
2-Butanone (MEK)	ND	U	20	1	04/13/01	04/13/01	KWG0101913	
2,2-Dichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
cis-1,2-Dichloroethene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
Chloroform	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
Bromochloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
1,1-Dichloropropene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
Carbon Tetrachloride	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
Benzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
Trichloroethene (TCE)	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
1,2-Dichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
Bromodichloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
Dibromomethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
2-Hexanone	ND	U	20	1	04/13/01	04/13/01	KWG0101913	
cis-1,3-Dichloropropene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
Toluene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
trans-1,3-Dichloropropene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
1,1,2-Trichloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	04/13/01	04/13/01	KWG0101913	
1,3-Dichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
Tetrachloroethene (PCE)	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
Dibromochloromethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	

Comments:

00056

Client: URS Corporation
Project: Poleline Road Disposal Area-OUB/74-F0E9408U.00
Sample Matrix: Water

Service Request: K2102461
Date Collected: NA
Date Received: NA

Volatile Organic Compounds

Sample Name: Method Blank
Lab Code: KWG0101913-4

Extraction Method: EPA 5030B
Analysis Method: 8260B

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	2.0	1	04/13/01	04/13/01	KWG0101913	
Chlorobenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
Ethylbenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
m,p-Xylenes	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
o-Xylene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
Styrene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
Bromoform	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
Isopropylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101913	
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
1,2,3-Trichloropropane	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
Bromobenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101913	
n-Propylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101913	
2-Chlorotoluene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101913	
4-Chlorotoluene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101913	
1,3,5-Trimethylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101913	
tert-Butylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101913	
1,2,4-Trimethylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101913	
sec-Butylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101913	
1,3-Dichlorobenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
4-Isopropyltoluene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101913	
1,4-Dichlorobenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
n-Butylbenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101913	
1,2-Dichlorobenzene	ND	U	0.50	1	04/13/01	04/13/01	KWG0101913	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	04/13/01	04/13/01	KWG0101913	
1,2,4-Trichlorobenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101913	
1,2,3-Trichlorobenzene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101913	
Naphthalene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101913	
Hexachlorobutadiene	ND	U	2.0	1	04/13/01	04/13/01	KWG0101913	

Comments:

01057

Client: URS Corporation
Project: Poleline Road Disposal Area-OUB/74-F0E9408U.00
Sample Matrix: Water

Service Request: K2102461
Date Collected: NA
Date Received: NA

Volatile Organic Compounds

Sample Name: Method Blank
Lab Code: KWG0101913-4

Units: ug/L
Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	94	87-115	04/13/01	Acceptable
Toluene-d8	91	83-116	04/13/01	Acceptable
4-Bromofluorobenzene	90	75-120	04/13/01	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: URS Corporation
Project: Poleline Road Disposal Area-OUB/74-F0E9408U.00
Sample Matrix: Water

Service Request: K2102461

Surrogate Recovery Summary
Volatile Organic Compounds

Extraction Method: EPA 5030B
Analysis Method: 8260B

Units: PERCENT
Level: Low

Sample Name	Lab Code	Sur1	Sur2	Sur3
01PRDA-0TB2	K2102461-001	93	91	91
01PRDA-016-GW	K2102461-002	93	93	90
01PRDA-009-GW	K2102461-003	94	92	90
01PRDA-015-GW	K2102461-004	91	91	90
01PRDA-020-GW	K2102461-005	94	91	91
01PRDA-012-GW	K2102461-006	89	91	90
01PRDA-001-GW	K2102461-007	93	92	91
01PRDA-002-GW	K2102461-008	92	90	93
01PRDA-017-GW	K2102461-009	92	91	91
01PRDA-008-GW	K2102461-010	93	91	90
01PRDA-003-GW	K2102461-011	92	92	90
01PRDA-013-GW	K2102461-012	91	91	92
01PRDA-019-GW	K2102461-013	93	91	88
01PRDA-006-GW	K2102461-014	93	91	89
01PRDA-033-GW	K2102461-015	93	92	92
Method Blank	KWG0101904-4	92	92	87
Method Blank	KWG0101913-4	94	91	90
01PRDA-013-GWMS	KWG0101904-1	94	92	92
01PRDA-013-GWDMS	KWG0101904-2	93	92	93
Lab Control Sample	KWG0101904-3	91	91	90
Lab Control Sample	KWG0101913-3	94	94	91

Surrogate Recovery Control Limits (%)

Sur1 = Dibromofluoromethane	87-115
Sur2 = Toluene-d8	83-116
Sur3 = 4-Bromofluorobenzene	75-120

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: URS Corporation
Project: Poleline Road Disposal Area-OUB/74-F0E9408U.00
Sample Matrix: Water

Service Request: K2102461
Date Extracted: 04/13/2001
Date Analyzed: 04/13/2001

Matrix Spike/Duplicate Matrix Spike Summary
Volatile Organic Compounds

Sample Name: 01PRDA-013-GW
Lab Code: K2102461-012

Extraction Method: EPA 5030B
Analysis Method: 8260B

Units: ug/L
Basis: NA

Level: Low
Extraction Lot: KWG0101904

Analyte Name	Sample Result	01PRDA-013-GWMS KWG0101904-1 Matrix Spike			01PRDA-013-GWDMS KWG0101904-2 Duplicate Matrix Spike			%Rec Limits	RPD	RPD Limit
		Result	Expected	%Rec	Result	Expected	%Rec			
1,1-Dichloroethene	ND	11	10	110	9.7	10	97	42-178	13	30
Benzene	ND	9.8	10	98	9.4	10	94	65-138	4	30
Trichloroethene (TCE)	15	25	10	100	23	10	80	58-146	8	30
Toluene	ND	9.4	10	94	8.9	10	89	68-135	5	30
Chlorobenzene	ND	9.4	10	94	8.9	10	89	71-124	5	30
1,2-Dichlorobenzene	ND	9.7	10	97	9.2	10	92	71-121	5	30
Naphthalene	ND	8.5	10	85	8.8	10	88	50-145	3	30

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: URS Corporation
Project: Poleline Road Disposal Area-OUB/74-F0E9408U.00
Sample Matrix: Water

Service Request: K2102461
Date Extracted: 04/13/2001
Date Analyzed: 04/13/2001

Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method: EPA 5030B
Analysis Method: 8260B

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG0101904

Analyte Name	Lab Control Sample KWG0101904-3 Lab Control Spike Result	Expected	%Rec	%Rec Limits
Dichlorodifluoromethane	9.8	10	98	50-150
Chloromethane	9.3	10	93	50-150
Vinyl Chloride	11	10	110	50-150
Bromomethane	11	10	110	50-150
Chloroethane	11	10	110	50-150
Trichlorofluoromethane	10	10	100	50-150
Acetone	55	50	110	50-150
1,1-Dichloroethene	9.7	10	97	62-148
Carbon Disulfide	18	20	90	50-150
Methylene Chloride	9.6	10	96	50-150
trans-1,2-Dichloroethene	9.6	10	96	50-150
1,1-Dichloroethane	10	10	100	50-150
2-Butanone (MEK)	51	50	102	50-150
2,2-Dichloropropane	8.7	10	87	50-150
cis-1,2-Dichloroethene	9.4	10	94	50-150
Chloroform	10	10	100	50-150
Bromochloromethane	9.4	10	94	50-150
1,1,1-Trichloroethane (TCA)	9.7	10	97	50-150
1,1-Dichloropropene	10	10	100	50-150
Carbon Tetrachloride	9.6	10	96	50-150
1,2-Dichloroethane (EDC)	11	10	110	50-150
Benzene	9.4	10	94	77-114
Trichloroethene (TCE)	9.9	10	99	69-124
1,2-Dichloropropane	10	10	100	50-150
Bromodichloromethane	9.7	10	97	50-150
Dibromomethane	9.7	10	97	50-150
2-Hexanone	50	50	100	50-150
cis-1,3-Dichloropropene	9.1	10	91	50-150
Toluene	9.2	10	92	75-118
trans-1,3-Dichloropropene	9.1	10	91	50-150
1,1,2-Trichloroethane	9.7	10	97	50-150
4-Methyl-2-pentanone (MIBK)	45	50	90	50-150
1,3-Dichloropropane	9.8	10	98	50-150
Tetrachloroethene (PCE)	9.2	10	92	50-150
Dibromochloromethane	8.9	10	89	50-150

Results flagged with an asterisk (*) indicate values outside control criteria.

00061

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: URS Corporation
Project: Poleline Road Disposal Area-OUB/74-F0E9408U.00
Sample Matrix: Water

Service Request: K2102461
Date Extracted: 04/13/2001
Date Analyzed: 04/13/2001

Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method: EPA 5030B
Analysis Method: 8260B

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG0101904

Lab Control Sample
KWG0101904-3
Lab Control Spike

Analyte Name	Result	Expected	%Rec	%Rec Limits
1,2-Dibromoethane (EDB)	9.3	10	93	50-150
Chlorobenzene	9.4	10	94	79-110
1,1,1,2-Tetrachloroethane	9.3	10	93	50-150
Ethylbenzene	9.0	10	90	50-150
m,p-Xylenes	19	20	95	50-150
o-Xylene	9.7	10	97	50-150
Styrene	9.6	10	96	50-150
Bromoform	7.9	10	79	50-150
Isopropylbenzene	9.1	10	91	50-150
1,1,2,2-Tetrachloroethane	9.7	10	97	50-150
1,2,3-Trichloropropane	9.9	10	99	50-150
Bromobenzene	9.6	10	96	50-150
n-Propylbenzene	10	10	100	50-150
2-Chlorotoluene	9.8	10	98	50-150
4-Chlorotoluene	9.8	10	98	50-150
1,3,5-Trimethylbenzene	9.9	10	99	50-150
tert-Butylbenzene	9.8	10	98	50-150
1,2,4-Trimethylbenzene	10	10	100	50-150
sec-Butylbenzene	9.6	10	96	50-150
1,3-Dichlorobenzene	10	10	100	50-150
4-Isopropyltoluene	9.3	10	93	50-150
1,4-Dichlorobenzene	9.8	10	98	50-150
n-Butylbenzene	9.7	10	97	50-150
1,2-Dichlorobenzene	9.6	10	96	80-110
1,2-Dibromo-3-chloropropane	8.8	10	88	50-150
1,2,4-Trichlorobenzene	9.1	10	91	50-150
1,2,3-Trichlorobenzene	9.5	10	95	50-150
Naphthalene	9.3	10	93	64-125
Hexachlorobutadiene	9.2	10	92	50-150

Results flagged with an asterisk (*) indicate values outside control criteria.

00062

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: URS Corporation
Project: Poleline Road Disposal Area-OUB/74-F0E9408U.00
Sample Matrix: Water

Service Request: K2102461
Date Extracted: 04/13/2001
Date Analyzed: 04/13/2001

Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method: EPA 5030B
Analysis Method: 8260B

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG0101913

	Lab Control Sample KWG0101913-3 Lab Control Spike			
Analyte Name	**Result**	**Expected**	**%Rec**	**%Rec Limits**
Dichlorodifluoromethane	10	10	100	50-150
Chloromethane	10	10	100	50-150
Vinyl Chloride	12	10	120	50-150
Bromomethane	12	10	120	50-150
Chloroethane	12	10	120	50-150
Trichlorofluoromethane	11	10	110	50-150
Acetone	61	50	122	50-150
1,1-Dichloroethene	10	10	100	62-148
Carbon Disulfide	20	20	100	50-150
Methylene Chloride	9.9	10	99	50-150
trans-1,2-Dichloroethene	10	10	100	50-150
1,1-Dichloroethane	11	10	110	50-150
2-Butanone (MEK)	54	50	108	50-150
2,2-Dichloropropane	10	10	100	50-150
cis-1,2-Dichloroethene	9.7	10	97	50-150
Chloroform	11	10	110	50-150
Bromochloromethane	10	10	100	50-150
1,1,1-Trichloroethane (TCA)	11	10	110	50-150
1,1-Dichloropropene	11	10	110	50-150
Carbon Tetrachloride	10	10	100	50-150
1,2-Dichloroethane (EDC)	11	10	110	50-150
Benzene	10	10	100	77-114
Trichloroethene (TCE)	10	10	100	69-124
1,2-Dichloropropane	10	10	100	50-150
Bromodichloromethane	10	10	100	50-150
Dibromomethane	11	10	110	50-150
2-Hexanone	54	50	108	50-150
cis-1,3-Dichloropropene	9.8	10	98	50-150
Toluene	9.6	10	96	75-118
trans-1,3-Dichloropropene	10	10	100	50-150
1,1,2-Trichloroethane	9.7	10	97	50-150
4-Methyl-2-pentanone (MIBK)	49	50	98	50-150
1,3-Dichloropropane	9.9	10	99	50-150
Tetrachloroethene (PCE)	9.4	10	94	50-150
Dibromochloromethane	9.1	10	91	50-150

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: URS Corporation
Project: Poleline Road Disposal Area-OUB/74-F0E9408U.00
Sample Matrix: Water

Service Request: K2102461
Date Extracted: 04/13/2001
Date Analyzed: 04/13/2001

Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method: EPA 5030B
Analysis Method: 8260B

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG0101913

Lab Control Sample
KWG0101913-3

Analyte Name	Lab Control Spike Result	Expected	%Rec	%Rec Limits
1,2-Dibromoethane (EDB)	9.6	10	96	50-150
Chlorobenzene	9.6	10	96	79-110
1,1,1,2-Tetrachloroethane	9.4	10	94	50-150
Ethylbenzene	9.4	10	94	50-150
m,p-Xylenes	19	20	95	50-150
o-Xylene	9.7	10	97	50-150
Styrene	9.6	10	96	50-150
Bromoform	8.0	10	80	50-150
Isopropylbenzene	9.4	10	94	50-150
1,1,2,2-Tetrachloroethane	11	10	110	50-150
1,2,3-Trichloropropane	10	10	100	50-150
Bromobenzene	9.7	10	97	50-150
n-Propylbenzene	10	10	100	50-150
2-Chlorotoluene	10	10	100	50-150
4-Chlorotoluene	10	10	100	50-150
1,3,5-Trimethylbenzene	10	10	100	50-150
tert-Butylbenzene	10	10	100	50-150
1,2,4-Trimethylbenzene	10	10	100	50-150
sec-Butylbenzene	10	10	100	50-150
1,3-Dichlorobenzene	10	10	100	50-150
4-Isopropyltoluene	9.8	10	98	50-150
1,4-Dichlorobenzene	10	10	100	50-150
n-Butylbenzene	10	10	100	50-150
1,2-Dichlorobenzene	9.9	10	99	80-110
1,2-Dibromo-3-chloropropane	8.7	10	87	50-150
1,2,4-Trichlorobenzene	9.2	10	92	50-150
1,2,3-Trichlorobenzene	9.7	10	97	50-150
Naphthalene	9.3	10	93	64-125
Hexachlorobutadiene	9.5	10	95	50-150

Results flagged with an asterisk (*) indicate values outside control criteria.

00064

CAS Kelso 1317 S. 13th Avenue, P.O. Box 479, Kelso, WA 98626

Columbia Analytical Services inc.
An Employee-Owned Company

Date: 4/11/01

Number of pages including cover sheet: 3

To:
Elsie

Phone:
Fax phone:
CC:

From:
Jim Smith

Phone: (360) 577-7222
Fax phone: (360) 636-1068

REMARKS: ☐ Urgent ☐ For your review ☐ Reply ASAP ☐ Please comment

FED-X

Columbia Analytical Services Inc.
Cooler Receipt And Preservation Form

Project/Client URS Work Order K21 02460

Cooler received on 4/10/01 and opened on 4/10/01 by WBL

1.	Were custody seals on outside of cooler? If yes, how many and where? 2 - Front					(YES)	NO
2.	Were seals intact and signature & date correct?					YES	NO
3.	COC #						
	Temperature of cooler(s) upon receipt:	1.0°					
	Temperature Blank:	N/P					
4.	Were custody papers properly filled out (ink, signed, etc.)?					(YES)	NO
5.	Type of packing material present FOAM						
6.	Did all bottles arrive in good condition (unbroken)?					(YES)	NO
7.	Were all bottle labels complete (*i.e.* analysis, preservation, etc.)?					(YES)	NO
8.	Did all bottle labels and tags agree with custody papers?					(YES)	NO
9.	*Were the correct types of bottles used for the tests indicated?*					(YES)	NO
10.	Were all of the preserved bottles received at the lab with the appropriate pH?					~~YES~~	~~NO~~
11.	Were VOA vials checked for absence of air bubbles, and if present, noted below?					(YES)	NO
12.	Did the bottles originate from CAS/K or a branch laboratory?					YES	NO

Explain any discrepancies

Samples that required preservation or received out of temperature:

Sample ID	Reagent	Volume	Lot Number	Bottle Type	Rec'd out of Temperature	Initials

FED-X

Columbia Analytical Services Inc.
Cooler Receipt And Preservation Form

Project/Client URS Work Order K21 02461

Cooler received on 4/10/01 and opened on 4/10/01 by UEA

1.	Were custody seals on outside of cooler? If yes, how many and where? 2-Front						YES NO
2.	Were seals intact and signature & date correct?						YES NO
3.	COC #						
	Temperature of cooler(s) upon receipt:	1.0°					
	Temperature Blank:	N/P					
4.	Were custody papers properly filled out (ink, signed, etc.)?						YES NO
5.	Type of packing material present B. WRAP						
6.	Did all bottles arrive in good condition (unbroken)?						YES NO
7.	Were all bottle labels complete (*i.e.* analysis, preservation, etc.)?						YES NO
8.	Did all bottle labels and tags agree with custody papers?						YES NO
9.	*Were the correct types of bottles used for the tests indicated?*						YES NO
10.	Were all of the preserved bottles received at the lab with the appropriate pH?						~~YES NO~~
11.	Were VOA vials checked for absence of air bubbles, and if present, noted below?						YES NO
12.	Did the bottles originate from CAS/K or a branch laboratory?						YES NO

Explain any discrepancies

Samples that required preservation or received out of temperature:

Sample ID	Reagent	Volume	Lot Number	Bottle Type	Rec'd out of Temperature	Initials