June 4, 1999

Mr. Kevin Jasper
U.S. Army Corps of Engineers
ATTN: CEORL-ED-GS
600 Martin Luther King, Jr. Place
P.O. Box 59
Louisville, KY 40201-0059

Reference: **Contract No. DACA27-97-D-0025, Delivery Order No. 003: Ramsdell Quarry Landfill Groundwater Investigation, Ravenna Army Ammunition Plant, Ravenna, Ohio**

Subject: **April 1999 Quarterly Monitoring Report**

Dear Mr. Jasper:

This letter report is the third and final of three quarterly reports for the Ramsdell Quarry Groundwater Investigation at Ravenna Army Ammunition Plant (RVAAP) in Ravenna, Ohio. This report summarizes the field and analytical activities performed during the fourth scheduled quarterly monitoring event. Analytical data for all groundwater and surface water samples, potentiometric data collected from groundwater monitoring wells, and stage levels for the Ramsdell Quarry pond are also presented. Monitoring information for the first quarterly sampling event (July 1998) was previously presented in *Initial Phase Report, Groundwater Investigation, Ramsdell Quarry Landfill*, dated January 1999. Data from the second quarterly sampling event (October 1998) and the scheduled dry season event (September 1998) were provided in my letter report to you entitled *October 1998 Quarterly Monitoring Report*, dated December 30, 1998. Data from the third quarterly sampling event (February 1999) were provided in my letter report to you entitled *February 1999 Quarterly Monitoring Report*, dated April 15, 1999.

The fourth quarterly sampling event incorporated additional analytical parameters for consistency with OAC 3745-27-10 as directed by the U.S. Army Corps of Engineers during our site meeting on 01 December 1998 and subsequent contract modification in April 1999. The planned date for this sampling event was also changed from March 1999 to April 1999 to coincide with closure monitoring requirements at Ramsdell Quarry Landfill (RQL). This letter report is a presentation of data only and, as such, no interpretation of the results herein is provided. The Draft Final Report for the Ramsdell Quarry Landfill Groundwater Investigation (to be submitted in October 1999) will include an analysis of trends, a statistical summary, and a site conceptual model based upon the results of six sampling events (four quarterly and two hydrogeologic events).

All four of the quarterly sampling events planned for the Groundwater Investigation have been completed. The remaining sampling event is wet weather/storm event sampling to monitor potential storm-induced contaminant flux from the landfill. Sampling to complete the storm event monitoring was conducted the week of May 24, and these results will be reported in the Draft Final Report.

FIELD ACTIVITIES

Sampling for the fourth quarterly event was performed from 10 April to 11 April 1999. Groundwater samples were collected from RQL monitoring wells RQLmw-006 through RQLmw-011, and at surface water sampling location RQLsw-015 (see Attachment A). Station RQLsw-015 was sampled because the planned station, RQLsw-013 (see Attachment A), was dry. Sampling of each monitoring well was performed using micropurging techniques and dedicated equipment to obtain representative samples. The previously installed wells MW-1 through MW-5 at Ramsdell Quarry Landfill were not sampled.

Groundwater levels were measured within a 1-hour period prior to sampling at each monitoring well using a hand-held water level indicator. Additional water level data were collected at monthly intervals in both new and previously installed wells MW-1 through MW-5, using a hand-held water level indicator. Continuous (every 2 hours) water levels were recorded at wells RQLmw-006 through RQLmw-011 using automated data loggers that were downloaded monthly using a notebook computer. Visual readings of the staff gauge at the Ramsdell Quarry pond were taken on the same day as the manual well water level readings. Automated continuous water level readings from the pond were not collected during the monitoring period because the instrumentation was removed during the winter to prevent freeze damage. Precipitation events were measured using a rain gauge located at the Ramsdell Quarry Landfill and checked daily by site personnel at RVAAP.

All liquid investigation-derived waste (IDW) from micropurging was stored in a closed-top 55-gallon drum. The drum was staged at Building 1036 pending analyses (Drum Number RQLQS-03).

RESULTS

The results of the April 1999 sampling event are presented as attachments to this letter report. These attachments include the following:

- Attachment A – potentiometric surface maps for previously existing wells MW-1 through MW-5 (Figure A-1) and new wells RQLmw-006 through RQLmw-011 (Figure A-2);
- Attachment B – Hydrographs of water levels for each of the new wells and for Ramsdell Quarry pond encompassing the period from 01 March 1999 through 10 April 1999;
- Attachment C – Automated and manual water level data in tabular format for the period from 01 March 1999 through 10 April 1999;
- Attachment D – Precipitation data in tabular format for March and April 1999; and
- Attachment E – Analytical results, by sampling station, in tabular format (includes QA/QC data).

The potentiometric surface maps were constructed using manual water levels. All groundwater and surface water elevations are based on surveyed elevations of the top of casing at the monitoring wells and the stilling well at the staff gauge in the pond. The potentiometric maps (Figures A-1 and A-2) were derived from manual data recorded on 10 April 1999 prior to the sampling event. Water level data collected 10 April 1999 for both new and existing wells are shown on Figure A-2 for reference, although only those from the new wells were used to derive the potentiometric map.

Hydrographs were constructed using all of the available automated data. Because of space limitations, the tabulated automated water level data in Attachment C present four representative readings per day, rather than every reading taken at 2-hour intervals; complete electronic data files are available upon request. Review of the hydrographs from the Ramsdell Quarry Landfill monitoring wells shows a decline in water levels during the reporting period due to lack of rainfall after 10 March 1999. Water levels within Ramsdell Quarry pond also decreased 0.4 foot since the end of February.

Analytical data show low detectable concentrations of arsenic in several wells; no results exceeded the Ohio EPA primary drinking water standard. Trace levels of mercury near the practical quantitation limit (PQL) were present at several stations during the third quarterly sampling event; however, no samples contained detectable levels of mercury during the fourth quarterly sampling event. Nickel concentrations exceeded primary Ohio EPA drinking water standards in wells RQLmw-006 and RQLmw-011. Iron and manganese concentrations routinely exceeded secondary Ohio EPA drinking water standards. Aluminum exceeded its secondary standard in wells RQLmw-009 and RQLmw-011.

Estimated levels of 2,4-dinitrotoluene (0.76 µg/L) and nitrobenzene (0.13 µg/L) below the reporting limit were observed in well RQLmw-008. Well RQLmw-006 contained RDX at concentrations below reporting limits (0.38 µg/L). Well RQLmw-007 contained nitrobenzene at concentrations below reporting limits (0.044 µg/L). All volatile and semivolatile organic compounds, pesticides, and PCBs were below detection limits, with the exception of one carbon disulfide result in well RQLmw-008 (0.67 µg/L). Water quality parameter and anion data show no values exceeding drinking water standards, with the exception of total dissolved solids in wells RQLmw-006 and RQLmw-007 and sulfate in well RQLmw-008, which exceeded secondary criteria. Values for pH in RQLmw-011 (4.6) were lower than the expected range for the site for the second consecutive quarter.

PROBLEMS ENCOUNTERED

At Ramsdell Quarry pond, the transducer was removed from the stilling well at the staff gauge for the winter to prevent damage to the electronics as a result of freezing. Visual readings of the staff gauge were made in order to obtain water level data during each monthly manual measurement event. The transducer was placed back into the stilling well on 12 April 1999 to resume continuous water level measurements.

If you have any questions or would like to discuss these results, please call me at 423-481-8761 or Kathy Dominic at 937-431-2239.

Sincerely,
SCIENCE APPLICATIONS INTERNATIONAL CORPORATION

Steve Selecman
Project Manager

Attachments: A through E

cc: Kathy Dominic, SAIC
Bill Ingold, IR
Kevin Jago, SAIC
John Jent, USACE
Diane Kurlich, OEPA
Stan Levenger, R&R
Eileen Mohr, OEPA
Mark Patterson, RVAAP (2 copies)
Jarnel Singh, OEPA
Project File

ATTACHMENT A

POTENTIOMETRIC SURFACE MAPS
RAMSDELL QUARRY LANDFILL GROUNDWATER INVESTIGATION
APRIL 1999 QUARTERLY REPORT

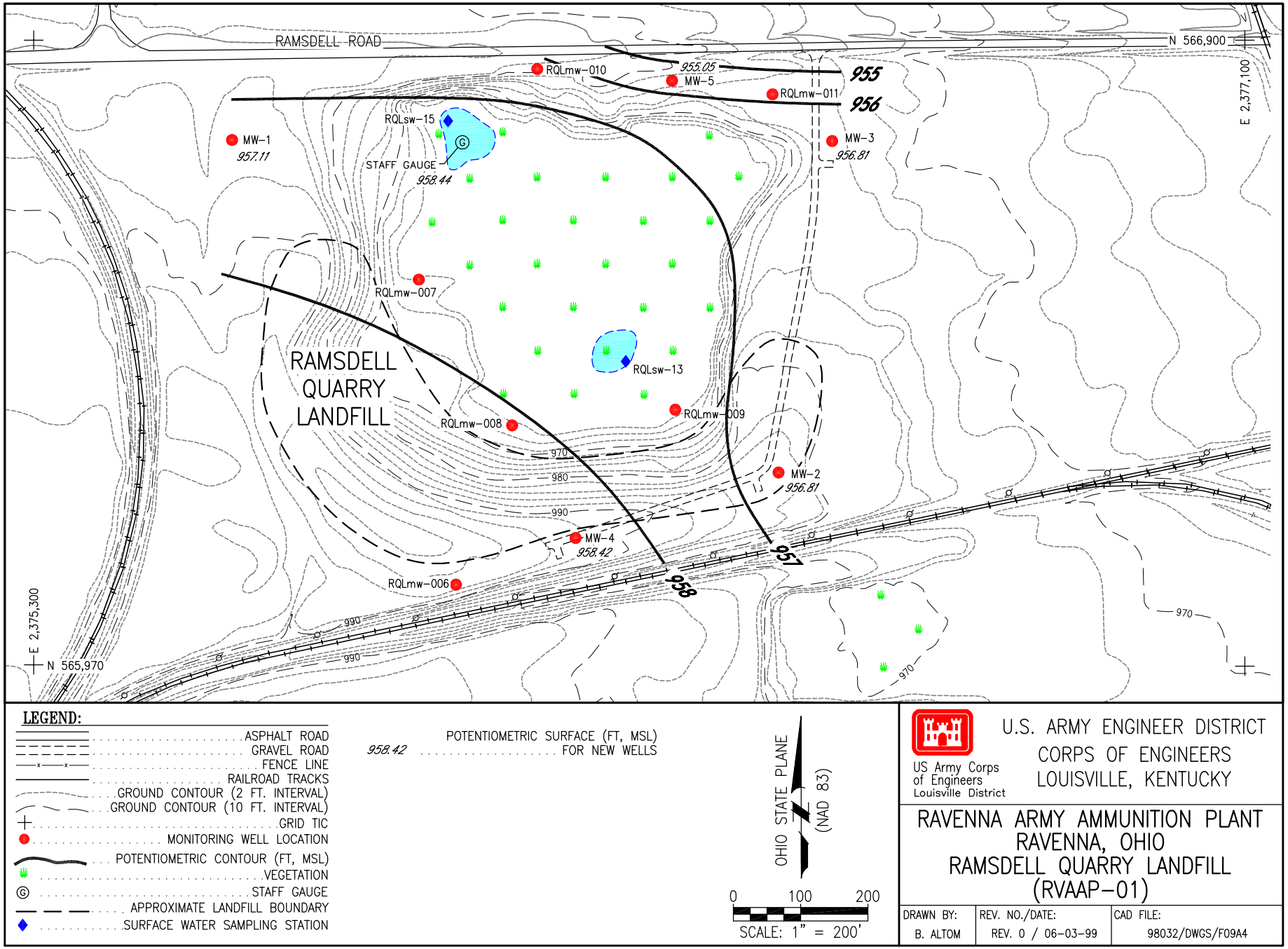


Figure A-1 RQL Groundwater Potentiometric Surface in Existing Wells During the April Quarterly Sampling Event (March 22, 1999)

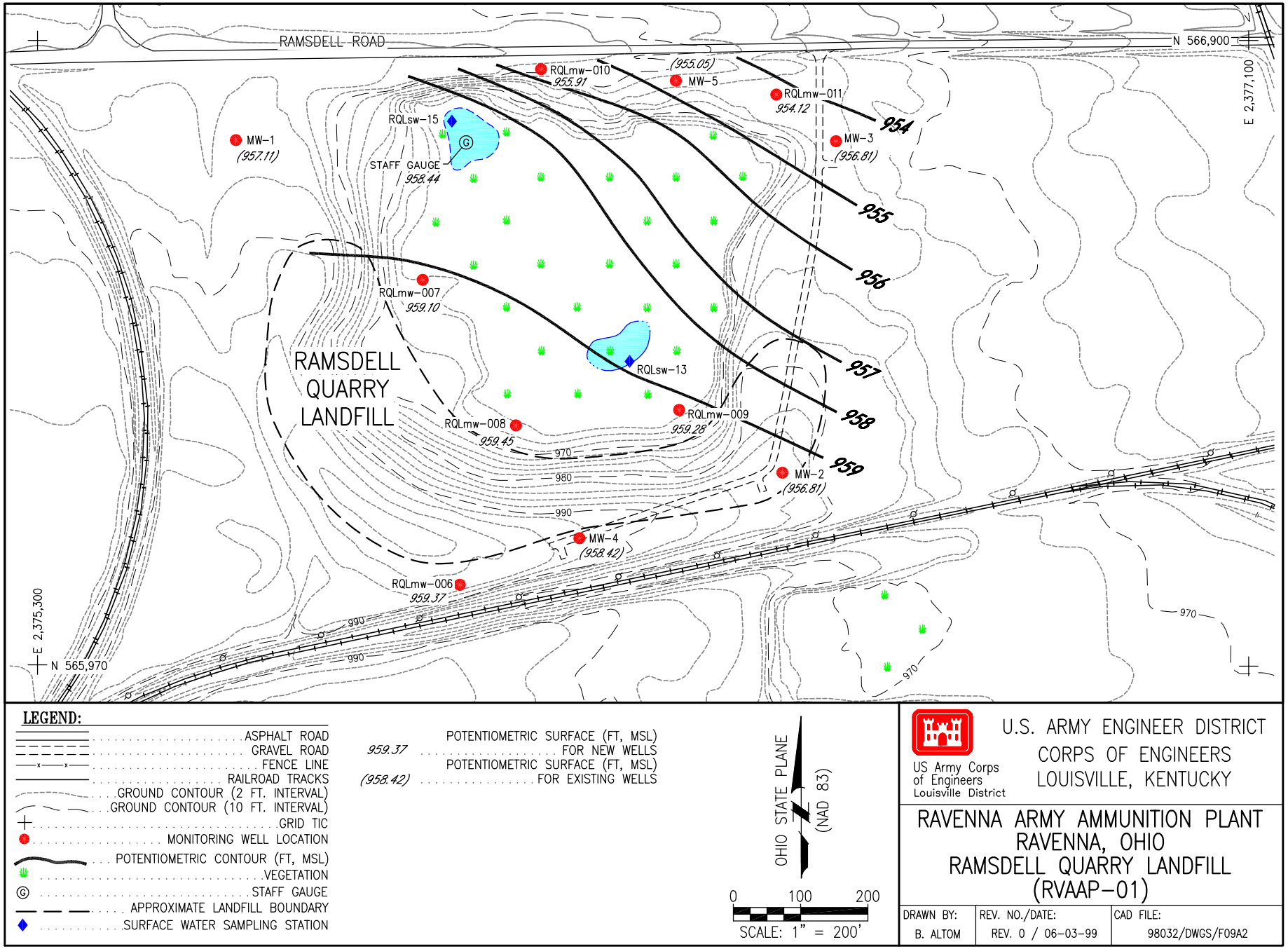
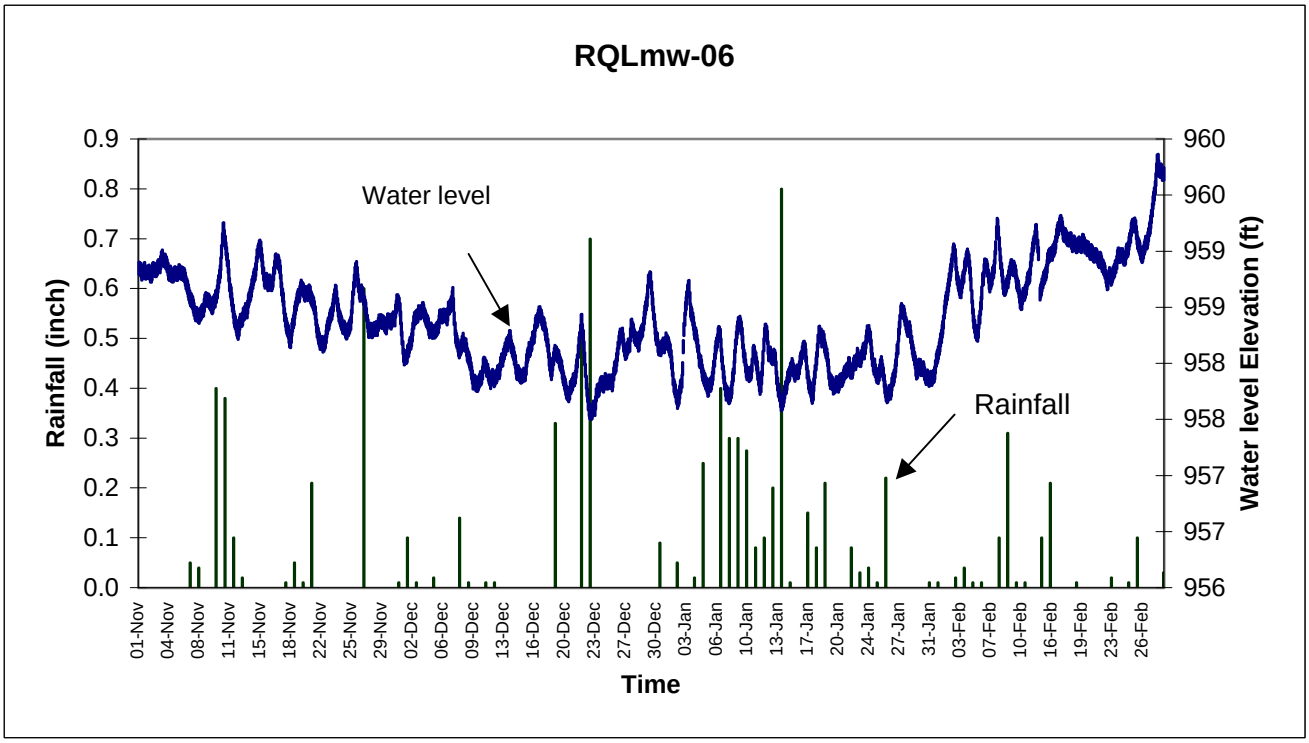


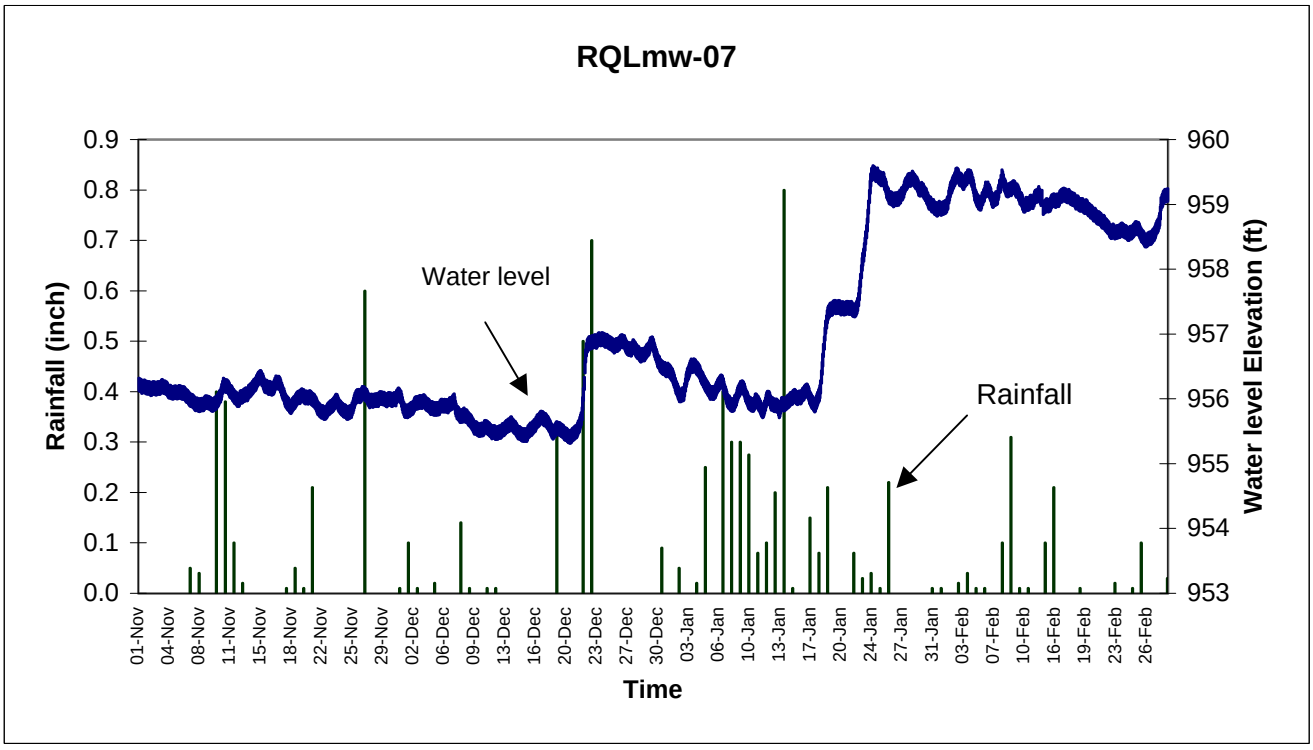
Figure A-2 RQL Groundwater Potentiometric Surface in New Wells During the April Quarterly Sampling Event (April 10, 1999)

ATTACHMENT B

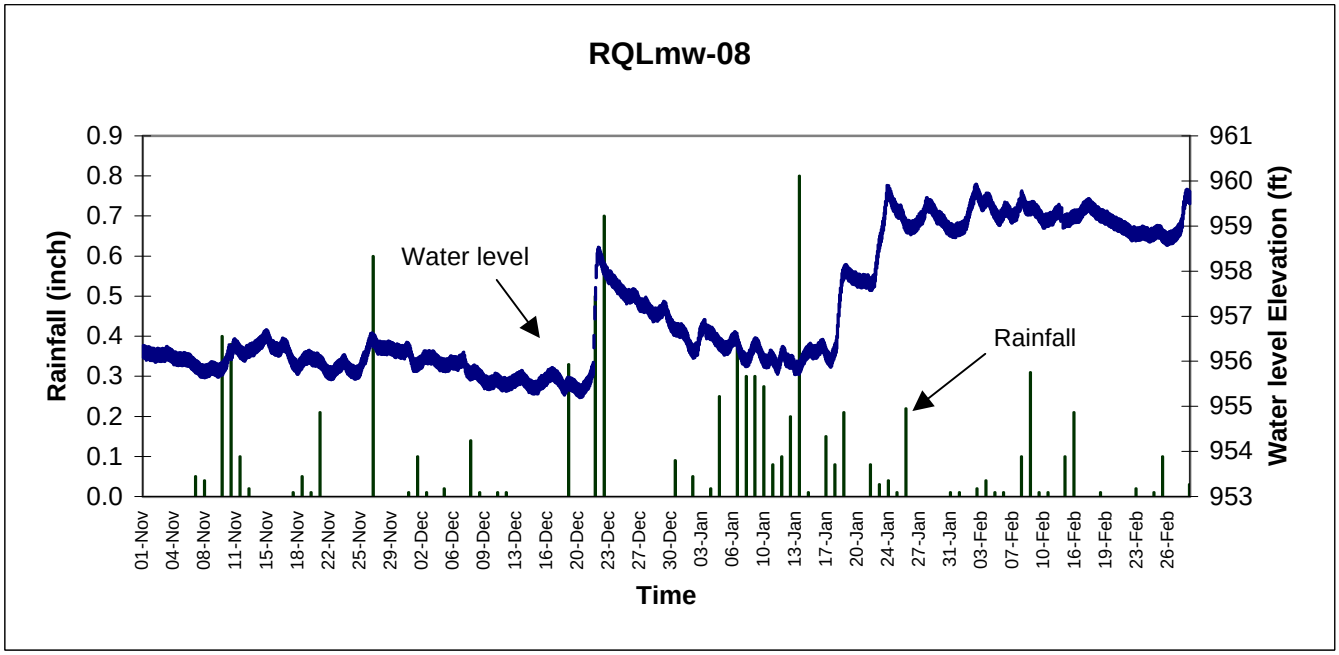
HYDROGRAPHS
RAMSDELL QUARRY LANDFILL GROUNDWATER INVESTIGATION
APRIL 1999 QUARTERLY REPORT

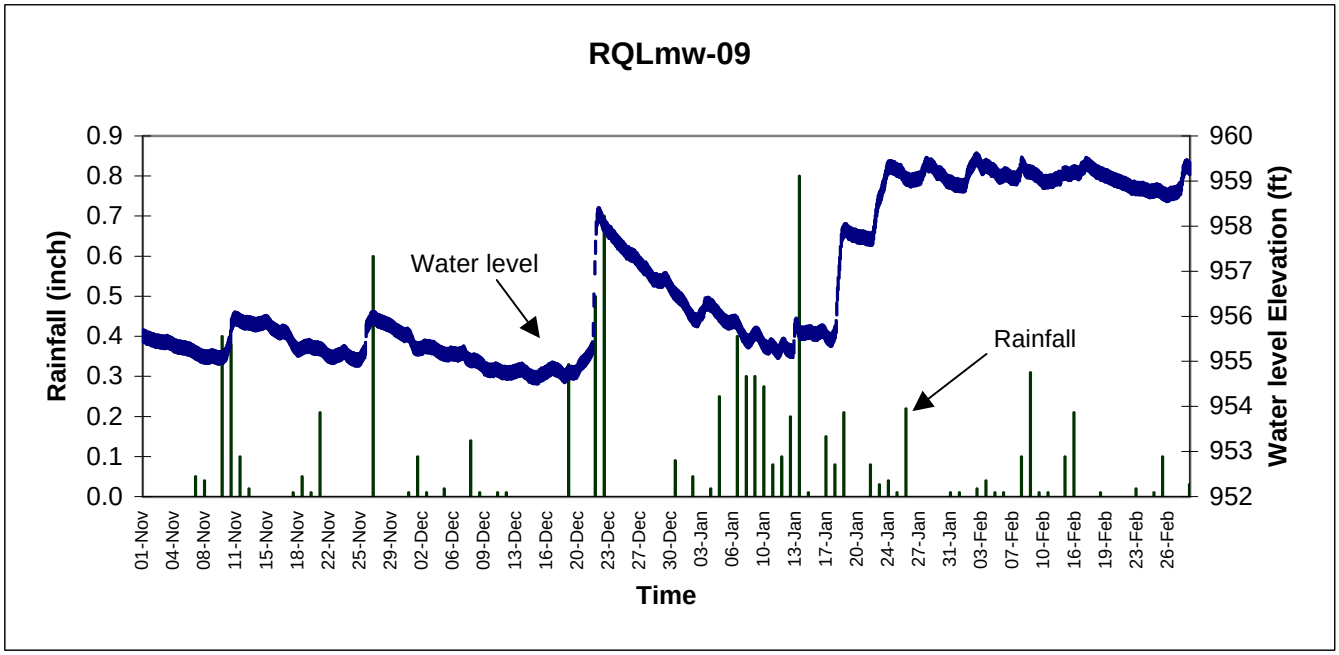
Ramsdell Quarry Groundwater Monitoring Well Hydrographs



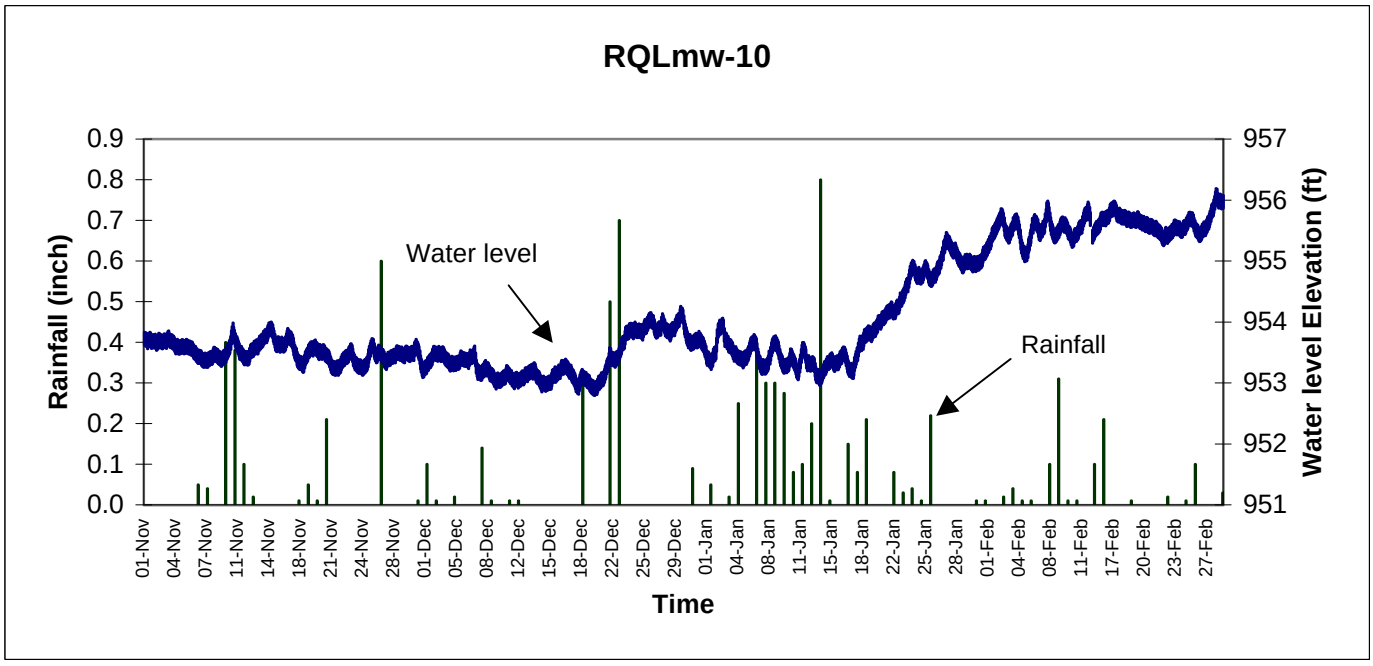


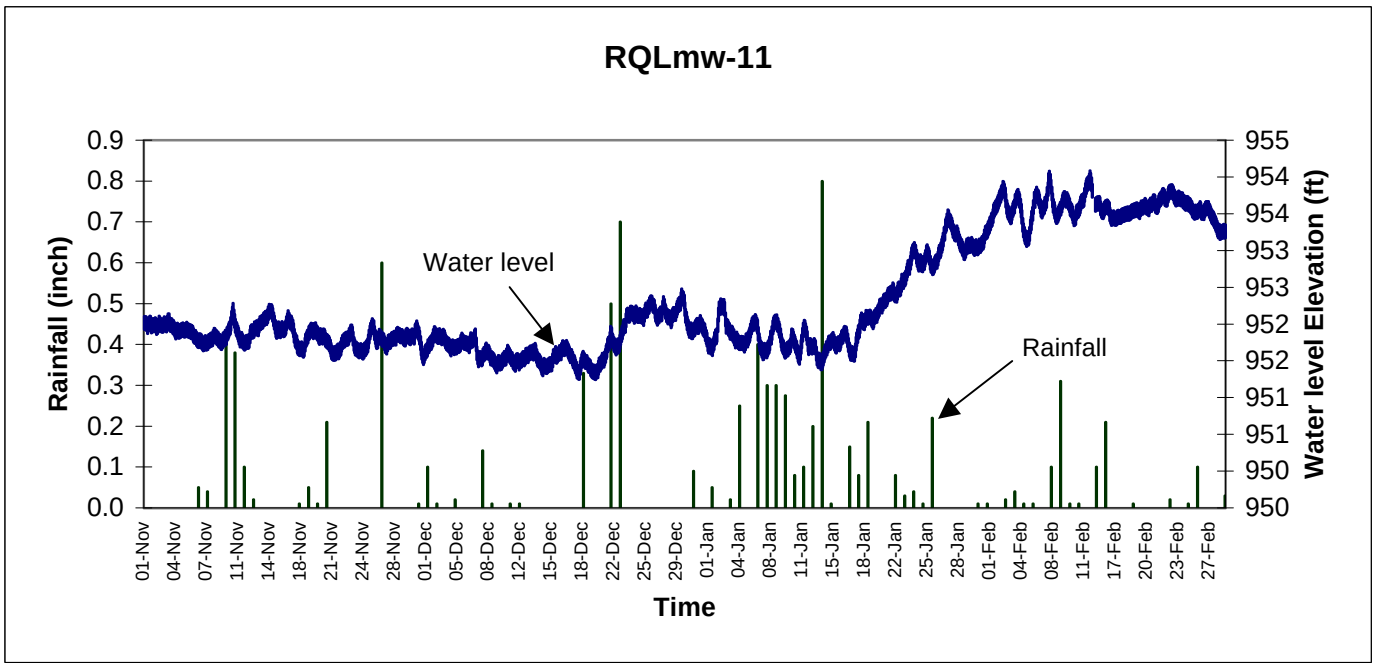
Ramsdell Quarry Groundwater Monitoring Well Hydrographs





Ramsdell Quarry Groundwater Monitoring Well Hydrographs





ATTACHMENT C

WATER LEVEL DATA
RAMSDELL QUARRY LANDFILL GROUNDWATER INVESTIGATION
APRIL 1999 QUARTERLY REPORT

Table C-1. Automated Water Level Readings from New Wells at Ramsdell Quarry Landfill, RVAAP

Date/Time	MW-06 Elev. (feet)	MW-07 Elev. (feet)	MW-08 Elev. (feet)	MW-09 Elev. (feet)	MW-10 Elev. (feet)	MW-11 Elev. (feet)
03/01/99 00:00	959.71	959.16	959.62	959.27	956.00	953.26
03/01/99 06:00	959.66	959.11	959.53	959.20	955.95	953.27
03/01/99 12:00	959.50	959.01	959.39	959.13	955.81	953.26
03/01/99 18:00	959.41	958.98	959.33	959.11	955.75	953.30
03/02/99 00:00	959.34	958.95	959.29	959.08	955.71	953.33
03/02/99 06:00	959.26	958.89	959.23	959.03	955.65	953.38
03/02/99 12:00	959.18	958.86	959.17	959.00	955.61	953.35
03/02/99 18:00	959.25	958.93	959.22	959.05	955.69	953.39
03/03/99 00:00	959.37	959.07	959.36	959.18	955.82	953.42
03/03/99 06:00	959.61	959.27	959.65	959.35	956.03	953.40
03/03/99 12:00	959.69	959.51	960.15	959.56	956.08	953.39
03/03/99 18:00	959.54	959.66	960.17	959.63	955.99	953.45
03/04/99 00:00	959.51	959.70	960.02	959.56	956.02	953.50
03/04/99 06:00	959.35	959.57	959.81	959.42	955.88	953.56
03/04/99 12:00	959.10	959.41	959.61	959.30	955.69	953.59
03/04/99 18:00	958.96	959.34	959.51	959.26	955.61	953.68
03/05/99 00:00	958.89	959.30	959.46	959.23	955.60	953.78
03/05/99 06:00	958.84	959.23	959.39	959.17	955.58	953.84
03/05/99 12:00	958.84	959.22	959.37	959.16	955.62	953.81
03/05/99 18:00	958.97	959.27	959.42	959.20	955.74	953.87
03/06/99 00:00	959.12	959.33	959.47	959.23	955.88	953.89
03/06/99 06:00	959.31	959.40	959.54	959.27	956.05	953.89
03/06/99 12:00	959.38	959.37	959.52	959.26	956.07	953.87
03/06/99 18:00	959.08	959.16	959.34	959.15	955.78	953.94
03/07/99 00:00	958.84	959.06	959.24	959.10	955.61	954.01
03/07/99 06:00	958.69	959.00	959.19	959.07	955.52	954.12
03/07/99 12:00	958.58	958.95	959.14	959.04	955.47	954.08
03/07/99 18:00	958.57	958.94	959.13	959.03	955.48	954.20
03/08/99 00:00	958.57	958.93	959.13	959.02	955.51	954.32
03/08/99 06:00	958.63	958.94	959.13	959.02	955.56	954.38
03/08/99 12:00	958.63	958.93	959.11	959.00	955.59	954.28
03/08/99 18:00	958.81	959.00	959.18	959.03	955.74	954.32
03/09/99 00:00	959.01	959.10	959.27	959.08	955.93	954.30
03/09/99 06:00	959.21	959.16	959.32	959.09	956.07	954.28
03/09/99 12:00	959.35	959.19	959.35	959.11	956.16	954.24
03/09/99 18:00	959.48	959.22	959.37	959.12	956.24	954.18
03/10/99 00:00	959.47	959.17	959.34	959.09	956.20	954.14
03/10/99 06:00	959.40	959.09	959.27	959.05	956.11	954.13
03/10/99 12:00	959.31	959.04	959.22	959.03	956.03	954.06
03/10/99 18:00	959.26	958.98	959.18	959.01	955.98	954.10
03/11/99 00:00	959.21	958.95	959.15	959.00	955.94	954.14
03/11/99 06:00	959.22	958.95	959.15	958.99	955.95	954.16
03/11/99 12:00	959.21	958.93	959.13	958.99	955.94	954.04
03/11/99 18:00	959.22	958.92	959.12	958.98	955.94	954.11
03/12/99 00:00	959.18	958.90	959.10	958.98	955.91	954.15
03/12/99 06:00	959.18	958.88	959.09	958.96	955.91	954.16
03/12/99 12:00	959.12	958.84	959.06	958.93	955.86	954.07

Table C-1 (continued)

Date/Time	MW-06 Elev. (feet)	MW-07 Elev. (feet)	MW-08 Elev. (feet)	MW-09 Elev. (feet)	MW-10 Elev. (feet)	MW-11 Elev. (feet)
03/12/99 18:00	959.14	958.85	959.07	958.95	955.88	954.15
03/13/99 00:00	959.09	958.83	959.05	958.94	955.84	954.21
03/13/99 06:00	959.09	958.81	959.04	958.92	955.84	954.25
03/13/99 12:00	959.11	958.82	959.05	958.92	955.87	954.15
03/13/99 18:00	959.22	958.86	959.09	958.94	955.96	954.19
03/14/99 00:00	959.27	958.88	959.10	958.94	956.00	954.20
03/14/99 06:00	959.39	958.92	959.14	958.96	956.09	954.18
03/14/99 12:00	959.46	958.94	959.16	958.96	956.13	954.10
03/14/99 18:00	959.55	958.96	959.18	958.96	956.18	954.09
03/15/99 00:00	959.56	958.95	959.17	958.95	956.17	954.09
03/15/99 06:00	959.53	958.90	959.13	958.92	956.12	954.08
03/15/99 12:00	959.45	958.84	959.08	958.89	956.05	953.98
03/15/99 18:00	959.40	958.88	959.07	958.90	955.99	954.03
03/16/99 00:00	959.37	958.88	959.08	958.91	955.98	954.08
03/16/99 06:00	959.41	958.89	959.10	958.90	956.02	954.09
03/16/99 12:00	959.48	958.91	959.13	958.92	956.08	953.97
03/16/99 18:00	959.59	959.11	959.22	959.06	956.16	953.97
03/17/99 00:00	959.55	959.14	959.28	959.05	956.12	954.00
03/17/99 06:00	959.55	959.13	959.30	959.03	956.12	954.05
03/17/99 12:00	959.60	959.18	959.33	959.09	956.17	953.91
03/17/99 18:00	959.73	959.33	960.03	959.44	956.28	953.92
03/18/99 00:00	959.72	959.35	959.92	959.43	956.27	953.92
03/18/99 06:00	959.58	959.28	959.73	959.33	956.14	954.00
03/18/99 12:00	959.46	959.21	959.58	959.24	956.05	954.01
03/18/99 18:00	959.34	959.13	959.46	959.17	955.96	954.07
03/19/99 00:00	959.23	959.08	959.37	959.12	955.89	954.12
03/19/99 06:00	959.17	959.04	959.31	959.09	955.86	954.19
03/19/99 12:00	959.10	958.99	959.25	959.06	955.82	954.21
03/19/99 18:00	959.12	959.00	959.25	959.06	955.85	954.24
03/20/99 00:00	959.14	959.00	959.24	959.05	955.88	954.32
03/20/99 06:00	959.17	958.99	959.22	959.04	955.91	954.36
03/20/99 12:00	959.22	959.00	959.23	959.04	955.96	954.24
03/20/99 18:00	959.42	959.09	959.29	959.08	956.12	954.26
03/21/99 00:00	959.54	959.13	959.33	959.09	956.21	954.30
03/21/99 06:00	959.70	959.17	959.36	959.11	956.31	954.25
03/21/99 12:00	959.77	959.17	959.36	959.10	956.34	954.12
03/21/99 18:00	959.66	959.06	959.27	959.05	956.22	954.16
03/22/99 00:00	959.65	959.05	959.26	959.05	956.21	954.17
03/22/99 06:00	959.70	959.06	959.27	959.05	956.24	954.16
03/22/99 12:00	959.63	958.99	959.21	959.01	956.16	954.14
03/22/99 18:00	959.51	958.91	959.15	958.97	956.06	954.13
03/23/99 00:00	959.45	958.87	959.11	958.96	956.02	954.07
03/23/99 06:00	959.40	958.83	959.08	958.93	955.98	954.03
03/23/99 12:00	959.40	958.84	959.08	958.94	956.00	954.05
03/23/99 18:00	959.49	958.87	959.11	958.95	956.07	954.13
03/24/99 00:00	959.52	958.86	959.10	958.95	956.08	954.15
03/24/99 06:00	959.55	958.86	959.10	958.94	956.10	954.17

Table C-1 (continued)

Date/Time	MW-06 Elev. (feet)	MW-07 Elev. (feet)	MW-08 Elev. (feet)	MW-09 Elev. (feet)	MW-10 Elev. (feet)	MW-11 Elev. (feet)
03/24/99 12:00	959.60	958.87	959.10	958.95	956.13	954.20
03/24/99 18:00	959.51	958.78	959.04	958.90	956.02	954.09
03/25/99 00:00	959.41	958.73	959.00	958.89	955.96	954.01
03/25/99 06:00	959.38	958.70	958.97	958.87	955.93	953.98
03/25/99 12:00	959.29	958.64	958.93	958.84	955.86	953.90
03/25/99 18:00	959.30	958.64	958.93	958.84	955.87	953.92
03/26/99 00:00	959.27	958.62	958.91	958.83	955.86	953.90
03/26/99 06:00	959.27	958.60	958.90	958.82	955.85	953.90
03/26/99 12:00	959.24	958.58	958.88	958.81	955.84	953.88
03/26/99 18:00	959.34	958.62	958.91	958.83	955.91	953.97
03/27/99 00:00	959.32	958.59	958.89	958.82	955.89	953.94
03/27/99 06:00	959.31	958.58	958.88	958.80	955.88	953.93
03/27/99 12:00	959.31	958.57	958.87	958.80	955.89	953.93
03/27/99 18:00	959.40	958.60	958.90	958.80	955.94	954.00
03/28/99 00:00	959.41	958.59	958.89	958.80	955.94	953.99
03/28/99 06:00	959.42	958.58	958.88	958.78	955.94	953.99
03/28/99 12:00	959.46	958.60	958.89	958.79	955.97	954.02
03/28/99 18:00	959.54	958.62	958.91	958.79	956.02	954.08
03/29/99 00:00	959.50	958.58	958.88	958.77	955.97	954.02
03/29/99 06:00	959.46	958.55	958.85	958.75	955.93	953.98
03/29/99 12:00	959.38	958.51	958.81	958.72	955.87	953.90
03/29/99 18:00	959.43	958.51	958.82	958.72	955.90	953.94
03/30/99 00:00	959.32	958.45	958.76	958.68	955.80	953.82
03/30/99 06:00	959.28	958.42	958.74	958.67	955.77	953.79
03/30/99 12:00	959.23	958.40	958.71	958.66	955.75	953.77
03/30/99 18:00	959.37	958.45	958.77	958.69	955.86	953.89
03/31/99 00:00	959.34	958.43	958.74	958.67	955.83	953.86
03/31/99 06:00	959.39	958.44	958.75	958.67	955.85	953.89
03/31/99 12:00	959.46	958.47	958.78	958.68	955.92	953.96
03/31/99 18:00	959.58	958.52	958.82	958.69	956.00	954.05
04/01/99 00:00	959.59	958.51	958.81	958.68	955.98	954.04
04/01/99 06:00	959.61	958.51	958.81	958.68	955.99	954.03
04/01/99 12:00	959.63	958.51	958.82	958.69	956.00	954.04
04/01/99 18:00	959.62	958.49	958.81	958.67	955.97	954.01
04/02/99 00:00	959.55	958.45	958.77	958.65	955.91	953.94
04/02/99 06:00	959.51	958.43	958.75	958.63	955.87	953.90
04/02/99 12:00	959.51	958.43	958.76	958.63	955.88	953.90
04/02/99 18:00	959.55	958.44	958.77	958.64	955.91	953.95
04/03/99 00:00	959.55	958.43	958.75	958.63	955.90	953.93
04/03/99 06:00	959.52	958.41	958.74	958.61	955.87	953.91
04/03/99 12:00	959.57	958.44	958.75	958.62	955.93	953.96
04/03/99 18:00	959.62	958.44	958.77	958.62	955.95	953.99
04/04/99 00:00	959.62	958.44	958.76	958.62	955.95	953.99
04/04/99 06:00	959.62	958.43	958.75	958.61	955.94	953.98
04/04/99 12:00	959.65	958.44	958.77	958.62	955.96	954.00
04/04/99 18:00	959.58	958.41	958.74	958.62	955.89	953.93
04/05/99 00:00	959.46	958.36	958.70	958.60	955.80	953.84

Table C-1 (continued)

Date/Time	MW-06 Elev. (feet)	MW-07 Elev. (feet)	MW-08 Elev. (feet)	MW-09 Elev. (feet)	MW-10 Elev. (feet)	MW-11 Elev. (feet)
04/05/99 06:00	959.31	958.28	958.65	958.55	955.68	953.71
04/05/99 12:00	959.27	958.27	958.62	958.55	955.69	953.71
04/05/99 18:00	959.34	958.30	958.69	958.57	955.76	953.79
04/06/99 00:00	959.42	958.35	958.71	958.60	955.84	953.89
04/06/99 06:00	959.51	958.38	958.74	958.60	955.91	953.97
04/06/99 12:00	959.65	958.45	958.79	958.64	956.02	954.09
04/06/99 18:00	959.64	958.41	958.78	958.59	955.96	954.05
04/07/99 00:00	959.41	958.30	958.65	958.52	955.78	953.84
04/07/99 06:00	959.29	958.24	958.60	958.48	955.69	953.75
04/07/99 12:00	959.30	958.24	958.61	958.50	955.74	953.78
04/07/99 18:00	959.46	958.32	958.68	958.54	955.87	953.94
04/08/99 00:00	959.58	958.38	958.71	958.57	955.97	954.06
04/08/99 06:00	959.57	958.35	958.69	958.53	955.93	954.02
04/08/99 12:00	959.56	958.34	958.67	958.52	955.92	954.00
04/08/99 18:00	959.63	958.36	958.70	958.53	955.97	954.05
04/09/99 00:00	959.67	958.37	958.70	958.53	955.98	954.07
04/09/99 06:00	959.94	958.53	958.85	958.78	956.23	954.33
04/09/99 12:00	960.03	958.98	959.65	959.30	956.30	954.42
04/09/99 18:00	959.84	959.15	959.74	959.52	956.15	954.26
04/10/99 00:00	959.57	959.19	959.69	959.52	956.00	954.09
04/10/99 06:00	959.39	959.11	959.51	959.36	955.93	954.00

Table C-2. Manual Water Level Readings at Ramsdell Quarry Landfill, April 1999 Quarterly Reporting Period

Station	Date	Time	Reference Elevation[a]	Depth to Water (feet)	Water Level Elevation[b]
RQLmw-001	3/22/1998	1249	986.13	28.79	957.34
RQLmw-002	3/22/1998	1223	981.90	24.70	957.20
RQLmw-003	3/22/1998	1219	975.54	18.00	957.54
RQLmw-004	3/22/1998	1234	991.80	32.97	958.83
RQLmw-005	3/22/1998	1214	977.38	22.11	955.27
RQLmw-006	3/22/1998	1238	995.39	35.75	959.64
RQLmw-007	3/22/1998	1244	965.91	6.91	959.00
RQLmw-008	3/22/1998	1229	966.08	6.85	959.23
RQLmw-009	3/22/1998	1226	964.58	5.55	959.03
RQLmw-010	3/22/1998	1210	982.14	25.93	956.21
RQLmw-011	3/22/1998	1217	976.57	22.02	954.55
Staff Gauge	3/22/1998	1255	955.69/961.66[c]	3.00 (AGS)[d]	958.69
RQLmw-001	4/10/1999		986.13	29.02	957.11
RQLmw-002	4/10/1999	0851	981.90	31.09	950.81
RQLmw-003	4/10/1999	0848	975.54	18.73	956.81
RQLmw-004	4/10/1999	0908	991.80	33.38	958.42
RQLmw-005	4/10/1999	0836	977.38	22.33	955.05
RQLmw-006	4/10/1999	0914	995.39	36.02	959.37
RQLmw-007	4/10/1999	0924	965.91	6.81	959.10
RQLmw-008	4/10/1999	0904	966.08	6.63	959.45
RQLmw-009	4/10/1999	0858	964.58	5.30	959.28
RQLmw-010	4/10/1999	0822	982.14	26.23	955.91
RQLmw-011	4/10/1999	0845	976.57	22.45	954.12
Staff Gauge	4/10/1999	0930	955.69/961.66[c]	2.75 (AGS)[d]	958.44

[a]Reference elevations at top of casing (feet above mean sea level).
[b]Elevation in feet above mean sea level.
[c]Reference elevations for the quarry pond staff gauge are 955.69 for ground surface and 961.66 for the top of the transducer stilling well. Ground surface elevation is a calculated value relative to the surveyed elevation of the top of the stilling well.
[d]Visual reading of staff gauge in feet above ground surface.
N/A = Not applicable.

ATTACHMENT D

PRECIPITATION DATA
RAMSDELL QUARRY LANDFILL GROUNDWATER INVESTIGATION
APRIL 1999 QUARTERLY REPORT

Table D-1. Precipitation Data from Ramsdell Quarry Landfill, April 1999 Quarterly Reporting Period

Day	March	April
1	0.09	0.17
2	0.00	0.00
3	0.66	0.00
4	3.00	0.26
5	0.00	0.02
6	3.00	0.00
7	3.00	0.00
8	0.60*	0.00
9	0.10	1.18
10	0.30	0.15
11	0.00	0.47
12	0.00	0.80
13	0.00	TR
14	0.00	0.00
15	0.00	0.01
16	TR	0.26
17	TR	0.43
18	0.00	0.10
19	0.00	0.17
20	0.00	0.11
21	0.00	0.00
22	0.00	0.21
23	0.00	0.56
24	0.00	0.00
25	0.00	0.00
26	TR	0.00
27	TR	0.00
28	0.00	0.00
29	TR	0.00
30	0.00	0.00
31	0.00	
Total	10.75	4.90

* = Equivalent value calculated from snowfall measurement (0.1 inch liquid precipitation = 1 inch snowfall).
TR = trace

ATTACHMENT E

ANALYTICAL DATA
RAMSDELL QUARRY LANDFILL GROUNDWATER INVESTIGATION
APRIL 1999 QUARTERLY REPORT

Table E-1. April Quarterly Monitoring Report for Ramsdell Quarry Landfill Groundwater Investigation, Groundwater Analytical Results - Total and Filtered Metals and Cyanide

Media		Groundwater	Groundwater	Groundwater	Groundwater
Station		RQLmw-006	RQLmw-006	RQLmw-007	RQLmw-007
Sample ID		RQ0110	RQ0110	RQ0111	RQ0111
Customer ID		RQLmw-006-0110-GW	RQLmw-006-0110-GW	RQLmw-007-0111-GW	RQLmw-007-0111-GW
Date		04/10/99	04/10/99	04/11/99	04/11/99
Filtered		Dissolved	Total	Dissolved	Total
Analyte	Units				
Aluminum	UG/L	200 UJ	200 UJ	200 UJ	66.8 J
Antimony	UG/L	5 U	5 U	5 U	5 U
Arsenic	UG/L	24.5 =	25.5 =	23.1 =	25.3 =
Barium	UG/L	18.9 J	18.8 J	31.8 J	32 J
Beryllium	UG/L	4 U	4 U	4 U	4 U
Cadmium	UG/L	5 U	5 U	5 U	5 U
Calcium	UG/L	101000 =	102000 =	88600 =	88000 =
Chromium	UG/L	10 UJ	10 UJ	10 UJ	10 UJ
Cobalt	UG/L	62.3 =	59.7 J	50 U	50 UJ
Copper	UG/L	25 UJ	25 UJ	25 UJ	25 UJ
Iron	UG/L	6150 =	6350 J	25500 =	26300 J
Lead	UG/L	3 U	3 U	3 U	3 U
Magnesium	UG/L	39400 =	39900 =	115000 =	115000 =
Manganese	UG/L	4000 =	4030 J	1180 =	1150 J
Mercury	UG/L	0.2 UJ	0.2 UJ	0.2 UJ	0.2 UJ
Nickel	UG/L	334 =	326 =	18.2 J	17.8 J
Potassium	UG/L	2220 J	2210 J	7330 =	7200 =
Selenium	UG/L	5 U	5 U	5 U	5 U
Silver	UG/L	10 U	0.82 U	0.84 U	0.6 U
Sodium	UG/L	1440 J	1490 J	8420 =	8130 =
Thallium	UG/L	2 U	2 U	2 U	2 U
Vanadium	UG/L	50 U	50 U	50 U	50 U
Zinc	UG/L	20 U	20 U	55.2 J	55.6 J

Table E-1 (continued)

Media		Groundwater	Groundwater	Groundwater	Groundwater
Station		RQLmw-008	RQLmw-008	RQLmw-009	RQLmw-009
Sample ID		RQ0112	RQ0112	RQ0075	RQ0075
Customer ID		RQLmw-008-0112-GW	RQLmw-008-0112-GW	RQLmw-009-0075-FD	RQLmw-009-0075-FD
Date		04/11/99	04/11/99	04/11/99	04/11/99
Filtered		Dissolved	Total	Dissolved	Total
Analyte	Units				
Aluminum	UG/L	200 UJ	200 UJ	229 J	635 J
Antimony	UG/L	5 U	5 U	5 U	5 U
Arsenic	UG/L	5.6 =	6.3 =	5 U	5 U
Barium	UG/L	33.4 J	33.6 J	25.5 J	27.2 J
Beryllium	UG/L	4 U	4 U	4 U	4 U
Cadmium	UG/L	5 U	5 U	5 U	5 U
Calcium	UG/L	40400 =	40700 =	22900 =	21300 =
Chromium	UG/L	10 UJ	10 UJ	10 UJ	10 UJ
Cobalt	UG/L	50 U	50 UJ	50 U	50 UJ
Copper	UG/L	25 UJ	25 UJ	13.1 J	11.3 J
Iron	UG/L	50600 =	52100 J	333 =	1290 J
Lead	UG/L	3 U	3 U	3 U	3.4 =
Magnesium	UG/L	71800 =	71900 =	22100 =	16300 =
Manganese	UG/L	660 =	655 J	417 =	257 J
Mercury	UG/L	0.2 UJ	0.2 UJ	0.2 UJ	0.2 UJ
Nickel	UG/L	40 U	40 U	40 U	40 U
Potassium	UG/L	4920 J	4880 J	3420 J	3360 J
Selenium	UG/L	5 U	5 U	5 U	5 U
Silver	UG/L	1 U	0.8 U	10 U	10 U
Sodium	UG/L	4730 J	4500 J	2810 J	4650 J
Thallium	UG/L	2 U	2 U	2 U	2 U
Vanadium	UG/L	50 U	50 U	50 U	50 U
Zinc	UG/L	19.5 J	18.7 J	24.5 J	17.2 J

Table E-1 (continued)

Media		Groundwater	Groundwater	Groundwater	Groundwater
Station		RQLmw-009	RQLmw-009	RQLmw-010	RQLmw-010
Sample ID		RQ0113	RQ0113	RQ0114	RQ0114
Customer ID		RQLmw-009-0113-GW	RQLmw-009-0113-GW	RQLmw-010-0114-GW	RQLmw-010-0114-GW
Date		04/11/99	04/11/99	04/10/99	04/10/99
Filtered		Dissolved	Total	Dissolved	Total
Analyte	Units				
Aluminum	UG/L	206 J	594 J	200 UJ	200 UJ
Antimony	UG/L	5 U	5 U	5 U	5 U
Arsenic	UG/L	5 U	5 U	5 U	5 U
Barium	UG/L	25 J	27.3 J	4 J	4.6 J
Beryllium	UG/L	4 U	4 U	4 U	4 U
Cadmium	UG/L	5 U	5 U	5 U	5 U
Calcium	UG/L	22100 =	22200 =	60600 =	62400 =
Chromium	UG/L	10 UJ	10 UJ	10 UJ	10 UJ
Cobalt	UG/L	50 U	50 UJ	50 U	50 UJ
Copper	UG/L	6.7 J	11.3 J	25 UJ	25 UJ
Iron	UG/L	453 =	1330 J	66.6 J	100 UJ
Lead	UG/L	3 U	3.2 =	3 U	3 U
Magnesium	UG/L	21200 =	18600 =	26400 =	26300 =
Manganese	UG/L	409 =	326 J	664 =	651 J
Mercury	UG/L	0.2 UJ	0.2 UJ	0.2 UJ	0.2 UJ
Nickel	UG/L	40 U	40 U	40 U	16.3 J
Potassium	UG/L	3320 J	3310 J	2880 J	2900 J
Selenium	UG/L	5 U	5 U	5 U	5 U
Silver	UG/L	1.2 U	0.61 U	10 U	10 U
Sodium	UG/L	2620 J	4320 J	5640 =	6750 =
Thallium	UG/L	2 U	2 U	2 U	2 U
Vanadium	UG/L	50 U	50 U	50 U	50 U
Zinc	UG/L	52.7 J	33.3 J	24.3 UJ	34.4 J

Table E-1 (continued)

Media		Groundwater	Groundwater	Surface Water	Surface Water
Station		RQLmw-011	RQLmw-011	RQLsw-015	RQLsw-015
Sample ID		RQ0115	RQ0115	RQ0116	RQ0116
Customer ID		RQLmw-011-0115-GW	RQLmw-011-0115-GW	RQLsw-013(p)-0116-SW	RQLsw-013(p)-0116-SW
Date		04/10/99	04/10/99	04/10/99	04/10/99
Filtered		Dissolved	Total	Dissolved	Total
Analyte	Units				
Aluminum	UG/L	1310 J	1580 J	200 UJ	340 J
Antimony	UG/L	5 U	5 U	5 U	5 U
Arsenic	UG/L	5 U	5 U	5 U	5 U
Barium	UG/L	29.6 J	30.3 J	31 J	33 J
Beryllium	UG/L	1.1 U	1.3 U	4 U	4 U
Cadmium	UG/L	5 U	5 U	5 U	5 U
Calcium	UG/L	12600 =	12100 =	59000 =	55600 =
Chromium	UG/L	10 UJ	10 UJ	10 UJ	10 UJ
Cobalt	UG/L	35.2 J	35.1 J	50 U	50 UJ
Copper	UG/L	25 UJ	25 UJ	25 UJ	5 J
Iron	UG/L	1990 =	2710 J	226 =	2180 J
Lead	UG/L	3 U	3 U	3 U	3.2 =
Magnesium	UG/L	8170 =	8470 =	37100 =	34300 =
Manganese	UG/L	1200 =	1220 J	549 =	570 J
Mercury	UG/L	0.2 UJ	0.2 UJ	0.2 UJ	0.2 UJ
Nickel	UG/L	105 =	111 =	40 U	40 U
Potassium	UG/L	3930 J	4040 J	3170 J	3020 J
Selenium	UG/L	5 U	5 U	5 U	5 U
Silver	UG/L	0.8 U	10 U	0.79 U	10 U
Sodium	UG/L	2060 J	2010 J	2430 J	4120 J
Thallium	UG/L	2 U	2 U	2 UJ	2 U
Vanadium	UG/L	50 U	50 U	50 U	50 U
Zinc	UG/L	114 J	105 J	44.2 J	63.6 J

Table E-2. April Quarterly Monitoring Report for Ramsdell Quarry
Groundwater Analytical Results-Explosive Compounds Landfill Groundwater Investigation,

Media		Groundwater	Groundwater	Groundwater	Groundwater
Station		RQLmw-006	RQLmw-007	RQLmw-008	RQLmw-009
Sample ID		RQ0110	RQ0111	RQ0112	RQ0075
Customer ID		RQLmw-006-0110-GW	RQLmw-007-0111-GW	RQLmw-008-0112-GW	RQLmw-009-0075-FD
Date		04/10/99	04/11/99	04/11/99	04/11/99
Filtered		Total	Total	Total	Total
Field Type		Grab	Grab	Grab	Field Duplicate
Analyte	Units				
1,3,5-Trinitrobenzene	UG/L	0.2 U	0.2 U	0.2 UJ	0.2 UJ
1,3-Dinitrobenzene	UG/L	0.092 J	0.2 U	0.2 UJ	0.2 UJ
2,4,6-Trinitrotoluene	UG/L	0.2 U	0.2 U	0.2 UJ	0.2 UJ
2,4-Dinitrotoluene	UG/L	0.13 U	0.13 U	0.076 J	0.13 UJ
2,6-Dinitrotoluene	UG/L	0.13 U	0.13 U	0.13 UJ	0.13 UJ
2-Nitrotoluene	UG/L	0.2 U	0.2 U	0.2 UJ	0.2 UJ
3-Nitrotoluene	UG/L	0.2 U	0.2 U	0.2 UJ	0.2 UJ
4-Nitrotoluene	UG/L	0.2 U	0.2 U	0.2 UJ	0.2 UJ
HMX	UG/L	0.5 U	0.5 U	0.5 UJ	0.5 UJ
Nitrobenzene	UG/L	0.2 U	0.044 J	0.13 J	0.2 UJ
Nitrocellulose as N	MG/L	0.5 U	0.5 U	0.5 U	0.5 U
Nitroglycerin	UG/L	2.5 U	2.5 U	2.5 UJ	2.5 UJ
Nitroguanidine	UG/L	20 U	20 U	20 U	20 U
RDX	UG/L	0.38 J	0.49 J	0.5 UJ	0.5 UJ
Tetryl	UG/L	0.2 U	0.2 U	0.2 UJ	0.2 UJ

Table E-2 (continued)

Media		Groundwater	Groundwater	Groundwater	Surface Water
Station		RQLmw-009	RQLmw-010	RQLmw-011	RQLsw-015
Sample ID		RQ0113	RQ0114	RQ0115	RQ0116
Customer ID		RQLmw-009-0113-GW	RQLmw-010-0114-GW	RQLmw-011-0115-GW	RQLsw-013(p)-0116-SW
Date		04/11/99	04/10/99	04/10/99	04/10/99
Filtered		Total	Total	Total	Total
Field Type		Grab	Grab	Grab	Grab
Analyte	Units				
1,3,5-Trinitrobenzene	UG/L	0.2 U	0.2 U	0.2 U	0.2 UJ
1,3-Dinitrobenzene	UG/L	0.2 U	0.2 U	0.2 U	0.2 UJ
2,4,6-Trinitrotoluene	UG/L	0.2 U	0.2 U	0.2 U	0.2 UJ
2,4-Dinitrotoluene	UG/L	0.13 U	0.13 U	0.13 U	0.13 UJ
2,6-Dinitrotoluene	UG/L	0.13 U	0.13 U	0.13 U	0.13 UJ
2-Nitrotoluene	UG/L	0.2 U	0.2 U	0.2 U	0.2 UJ
3-Nitrotoluene	UG/L	0.2 U	0.2 U	0.2 U	0.2 UJ
4-Nitrotoluene	UG/L	0.2 U	0.2 U	0.2 U	0.2 UJ
HMX	UG/L	0.5 U	0.5 U	0.5 U	0.5 UJ
Nitrobenzene	UG/L	0.2 U	0.2 U	0.2 U	0.2 UJ
Nitrocellulose as N	MG/L	0.5 U	0.5 U	0.5 U	0.5 U
Nitroglycerin	UG/L	2.5 U	2.5 U	2.5 U	2.5 UJ
Nitroguanidine	UG/L	20 U	20 U	20 U	20 U
RDX	UG/L	0.5 U	0.5 U	0.5 U	0.5 UJ
Tetryl	UG/L	0.2 U	0.2 U	0.2 U	0.2 UJ

Table E-3. April Quarterly Monitoring Report for Ramsdell Quarry
Landfill Groundwater Investigation, Groundwater Analytical Results - Volatile Organic Compounds

Media		Groundwater	Groundwater	Groundwater	Groundwater
Station		RQLmw-006	RQLmw-007	RQLmw-008	RQLmw-009
Sample ID		RQ0110	RQ0111	RQ0112	RQ0075
Customer ID		RQLmw-006-0110-GW	RQLmw-007-0111-GW	RQLmw-008-0112-GW	RQLmw-009-0075-FD
Date		04/10/99	04/11/99	04/11/99	04/11/99
Filtered		Total	Total	Total	Total
Analyte	Units				
1,1,1-Trichloroethane	UG/L	5 U	5 U	5 U	5 U
1,1,2,2-Tetrachloroethane	UG/L	5 U	5 U	5 U	5 U
1,1,2-Trichloroethane	UG/L	5 U	5 U	5 U	5 U
1,1-Dichloroethane	UG/L	5 U	5 U	5 U	5 U
1,1-Dichloroethene	UG/L	5 U	5 U	5 U	5 U
1,2,3-Trichloropropane	UG/L	5 U	5 U	5 U	5 U
1,2-Dichloroethane	UG/L	5 U	5 U	5 U	5 U
1,2-Dichloroethene	UG/L	5 U	5 U	5 U	5 U
1,2-Dichloropropane	UG/L	5 U	5 U	5 U	5 U
1,3-cis-Dichloropropene	UG/L	5 U	5 U	5 U	5 U
1,3-trans-Dichloropropene	UG/L	5 U	5 U	5 U	5 U
2-Butanone	UG/L	10 U	10 U	10 U	10 U
2-Chloroethylvinylether	UG/L	10 UJ	10 UJ	10 UJ	10 UJ
2-Hexanone	UG/L	10 U	10 U	10 U	10 U
4-Methyl-2-pentanone	UG/L	10 U	10 U	10 U	10 U
Acetone	UG/L	10 UJ	10 UJ	10 UJ	10 UJ
Acrolein	UG/L	100 UJ	100 UJ	100 UJ	100 UJ
Acrylonitrile	UG/L	100 U	100 U	100 U	100 U
Benzene	UG/L	5 U	5 U	5 U	5 U
Bromodichloromethane	UG/L	5 U	5 U	5 U	5 U
Bromoform	UG/L	5 U	5 U	5 U	5 U
Bromomethane	UG/L	10 U	10 U	10 U	10 U
Carbon Disulfide	UG/L	5 U	5 U	0.67 J	5 U
Carbon Tetrachloride	UG/L	5 U	5 U	5 U	5 U
Chlorobenzene	UG/L	5 U	5 U	5 U	5 U
Chloroethane	UG/L	10 U	10 U	10 U	10 U
Chloroform	UG/L	5 U	5 U	5 U	5 U
Chloromethane	UG/L	10 U	10 U	10 U	10 U
Dibromochloromethane	UG/L	5 U	5 U	5 U	5 U
Dichlorodifluoromethane	UG/L	10 U	10 U	10 U	10 U
Ethyl methacrylate	UG/L	5 U	5 U	5 U	5 U
Ethylbenzene	UG/L	5 U	5 U	5 U	5 U
Methylene Chloride	UG/L	5 U	5 U	5 U	5 U
Styrene	UG/L	5 U	5 U	5 U	5 U
Tetrachloroethene	UG/L	5 U	5 U	5 U	5 U
Toluene	UG/L	5 U	5 U	5 U	5 U
Trichloroethene	UG/L	5 U	5 U	5 U	5 U
Trichlorofluoromethane	UG/L	10 U	10 U	10 U	10 U
Vinyl Acetate	UG/L	10 U	10 U	10 U	10 U
Vinyl Chloride	UG/L	10 U	10 U	10 U	10 U
Xylenes, Total	UG/L	5 U	5 U	5 U	5 U

Table E-3 (continued)

Media		Groundwater	Groundwater	Groundwater	Surface Water
Station		RQLmw-009	RQLmw-010	RQLmw-011	RQLsw-015
Sample ID		RQ0113	RQ0114	RQ0115	RQ0116
Customer ID		RQLmw-009-0113-GW	RQLmw-010-0114-GW	RQLmw-011-0115-GW	RQLsw-013(p)-0116-SW
Date		04/11/99	04/10/99	04/10/99	04/10/99
Filtered		Total	Total	Total	Total
Analyte	Units				
1,1,1-Trichloroethane	UG/L	5 U	5 U	5 U	5 U
1,1,2,2-Tetrachloroethane	UG/L	5 U	5 U	5 U	5 U
1,1,2-Trichloroethane	UG/L	5 U	5 U	5 U	5 U
1,1-Dichloroethane	UG/L	5 U	5 U	5 U	5 U
1,1-Dichloroethene	UG/L	5 U	5 U	5 U	5 U
1,2,3-Trichloropropane	UG/L	5 U	5 U	5 U	5 U
1,2-Dichloroethane	UG/L	5 U	5 U	5 U	5 U
1,2-Dichloroethene	UG/L	5 U	5 U	5 U	5 U
1,2-Dichloropropane	UG/L	5 U	5 U	5 U	5 U
1,3-cis-Dichloropropene	UG/L	5 U	5 U	5 U	5 U
1,3-trans-Dichloropropene	UG/L	5 U	5 U	5 U	5 U
2-Butanone	UG/L	10 U	10 U	10 U	10 U
2-Chloroethylvinylether	UG/L	10 UJ	10 UJ	10 UJ	10 UJ
2-Hexanone	UG/L	10 U	10 U	10 U	10 U
4-Methyl-2-pentanone	UG/L	10 U	10 U	10 U	10 U
Acetone	UG/L	10 UJ	10 UJ	10 UJ	10 UJ
Acrolein	UG/L	100 UJ	100 UJ	100 UJ	100 UJ
Acrylonitrile	UG/L	100 U	100 U	100 U	100 U
Benzene	UG/L	5 U	5 U	5 U	5 U
Bromodichloromethane	UG/L	5 U	5 U	5 U	5 U
Bromoform	UG/L	5 U	5 U	5 U	5 U
Bromomethane	UG/L	10 U	10 U	10 U	10 U
Carbon Disulfide	UG/L	5 U	5 U	5 U	5 U
Carbon Tetrachloride	UG/L	5 U	5 U	5 U	5 U
Chlorobenzene	UG/L	5 U	5 U	5 U	5 U
Chloroethane	UG/L	10 U	10 U	10 U	10 U
Chloroform	UG/L	5 U	5 U	5 U	5 U
Chloromethane	UG/L	10 U	10 U	10 U	10 U
Dibromochloromethane	UG/L	5 U	5 U	5 U	5 U
Dichlorodifluoromethane	UG/L	10 U	10 U	10 U	10 U
Ethyl methacrylate	UG/L	5 U	5 U	5 U	5 U
Ethylbenzene	UG/L	5 U	5 U	5 U	5 U
Methylene Chloride	UG/L	5 U	5 U	5 U	5 U
Styrene	UG/L	5 U	5 U	5 U	5 U
Tetrachloroethene	UG/L	5 U	5 U	5 U	5 U
Toluene	UG/L	5 U	5 U	5 U	5 U
Trichloroethene	UG/L	5 U	5 U	5 U	5 U
Trichlorofluoromethane	UG/L	10 U	10 U	10 U	10 U
Vinyl Acetate	UG/L	10 U	10 U	10 U	10 U
Vinyl Chloride	UG/L	10 U	10 U	10 U	10 U
Xylenes, Total	UG/L	5 U	5 U	5 U	5 U

Table E-4. April Quarterly Monitoring Report for Ramsdell Quarry
Landfill Groundwater Investigation, Groundwater Analytical Results - Semivolatile Roganic Compounds

Media		Groundwater	Groundwater	Groundwater	Groundwater
Station		RQLmw-006	RQLmw-007	RQLmw-008	RQLmw-009
Sample ID		RQ0110	RQ0111	RQ0112	RQ0075
Customer ID		RQLmw-006-0110-GW	RQLmw-007-0111-GW	RQLmw-008-0112-GW	RQLmw-009-0075-FD
Date		04/10/99	04/11/99	04/11/99	04/11/99
Filtered		Total	Total	Total	Total
Analyte	Units				
1,2,4-Trichlorobenzene	UG/L	10 U	10 U	10 U	10 U
1,2-Dichlorobenzene	UG/L	10 U	10 U	10 U	10 U
1,3-Dichlorobenzene	UG/L	10 U	10 U	10 U	10 U
1,4-Dichlorobenzene	UG/L	10 U	10 U	10 U	10 U
2,2'-oxybis (1-chloropropane)	UG/L	10 U	10 U	10 U	10 U
2,4,5-Trichlorophenol	UG/L	25 U	25 U	25 U	25 U
2,4,6-Trichlorophenol	UG/L	10 U	10 U	10 U	10 U
2,4-Dichlorophenol	UG/L	10 U	10 U	10 U	10 U
2,4-Dimethylphenol	UG/L	10 U	10 U	10 U	10 U
2,4-Dinitrophenol	UG/L	25 U	25 U	25 U	25 U
2,4-Dinitrotoluene	UG/L	10 U	10 U	10 U	10 U
2,6-Dinitrotoluene	UG/L	10 U	10 U	10 U	10 U
2-Chloronaphthalene	UG/L	10 U	10 U	10 U	10 U
2-Chlorophenol	UG/L	10 U	10 U	10 U	10 U
2-Methylnaphthalene	UG/L	10 U	10 U	10 U	10 U
2-Methylphenol	UG/L	10 U	10 U	10 U	10 U
2-Nitroaniline	UG/L	25 U	25 U	25 U	25 U
2-Nitrophenol	UG/L	10 U	10 U	10 U	10 U
3,3'-Dichlorobenzidine	UG/L	10 U	10 U	10 U	10 U
3-Nitroaniline	UG/L	25 U	25 U	25 U	25 U
4,6-Dinitro-o-Cresol	UG/L	25 U	25 U	25 U	25 U
4-Bromophenyl-phenyl Ether	UG/L	10 U	10 U	10 U	10 U
4-Chloroaniline	UG/L	10 U	10 U	10 U	10 U
4-Chlorophenyl-phenylether	UG/L	10 U	10 U	10 U	10 U
4-Methylphenol	UG/L	10 U	10 U	10 U	10 U
4-Nitroaniline	UG/L	25 U	25 U	25 U	25 U
4-Nitrophenol	UG/L	25 U	25 U	25 U	25 U
4-chloro-3-methylphenol	UG/L	10 U	10 U	10 U	10 U
Acenaphthene	UG/L	10 U	10 U	10 U	10 U
Acenaphthylene	UG/L	10 U	10 U	10 U	10 U
Anthracene	UG/L	10 U	10 U	10 U	10 U
Benzo(a)anthracene	UG/L	10 U	10 U	10 U	10 U

Table E-4 (continued)

Media		Groundwater	Groundwater	Groundwater	Groundwater
Station		RQLmw-006	RQLmw-007	RQLmw-008	RQLmw-009
Sample ID		RQ0110	RQ0111	RQ0112	RQ0075
Customer ID		RQLmw-006-0110-GW	RQLmw-007-0111-GW	RQLmw-008-0112-GW	RQLmw-009-0075-FD
Date		04/10/99	04/11/99	04/11/99	04/11/99
Filtered		Total	Total	Total	Total
Analyte	Units				
Benzo(a)pyrene	UG/L	10 U	10 U	10 U	10 U
Benzo(b)fluoranthene	UG/L	10 U	10 U	10 U	10 U
Benzo(g,h,i)perylene	UG/L	10 U	10 U	10 U	10 U
Benzo(k)fluoranthene	UG/L	10 U	10 U	10 U	10 U
Bis(2-chloroethoxy)methane	UG/L	10 U	10 U	10 U	10 U
Bis(2-chloroethyl)ether	UG/L	10 U	10 U	10 U	10 U
Bis(2-ethylhexyl)phthalate	UG/L	10 U	10 U	10 U	10 U
Butyl Benzyl Phthalate	UG/L	10 U	10 U	10 U	10 U
Carbazole	UG/L	10 U	10 U	10 U	10 U
Chrysene	UG/L	10 U	10 U	10 U	10 U
Di-n-butyl Phthalate	UG/L	10 U	10 U	10 U	10 U
Di-n-octyl Phthalate	UG/L	10 U	10 U	10 U	10 U
Dibenzo(a,h)anthracene	UG/L	10 U	10 U	10 U	10 U
Dibenzofuran	UG/L	10 U	10 U	10 U	10 U
Diethyl Phthalate	UG/L	10 U	10 U	10 U	10 U
Dimethyl Phthalate	UG/L	10 U	10 U	10 U	10 U
Fluoranthene	UG/L	10 U	10 U	10 U	10 U
Fluorene	UG/L	10 U	10 U	10 U	10 U
Hexachlorobenzene	UG/L	10 U	10 U	10 U	10 U
Hexachlorobutadiene	UG/L	10 U	10 U	10 U	10 U
Hexachlorocyclopentadiene	UG/L	10 U	10 U	10 U	10 U
Hexachloroethane	UG/L	10 U	10 U	10 U	10 U
Indeno(1,2,3-cd)pyrene	UG/L	10 U	10 U	10 U	10 U
Isophorone	UG/L	10 U	10 U	10 U	10 U
N-Nitroso-di-n-propylamine	UG/L	10 U	10 U	10 U	10 U
N-Nitrosodiphenylamine	UG/L	10 U	10 U	10 U	10 U
Naphthalene	UG/L	10 U	10 U	10 U	10 U
Nitrobenzene	UG/L	10 U	10 U	10 U	10 U
Pentachlorophenol	UG/L	25 U	25 U	25 U	25 U
Phenanthrene	UG/L	10 U	10 U	10 U	10 U
Phenol	UG/L	10 U	10 U	10 U	10 U
Pyrene	UG/L	10 U	10 U	10 U	10 U

Table E-4 (continued)

Media		Groundwater	Groundwater	Groundwater	Surface Water
Station		RQLmw-009	RQLmw-010	RQLmw-011	RQLsw-015
Sample ID		RQ0113	RQ0114	RQ0115	RQ0116
Customer ID		RQLmw-009-0113-GW	RQLmw-010-0114-GW	RQLmw-011-0115-GW	RQLsw-013(p)-0116-SW
Date		04/11/99	04/10/99	04/10/99	04/10/99
Filtered		Total	Total	Total	Total
Analyte	Units				
1,2,4-Trichlorobenzene	UG/L	10 U	10 U	10 U	10 U
1,2-Dichlorobenzene	UG/L	10 U	10 U	10 U	10 U
1,3-Dichlorobenzene	UG/L	10 U	10 U	10 U	10 U
1,4-Dichlorobenzene	UG/L	10 U	10 U	10 U	10 U
2,2'-oxybis (1-chloropropane)	UG/L	10 U	10 U	10 U	10 U
2,4,5-Trichlorophenol	UG/L	25 U	25 U	25 U	25 U
2,4,6-Trichlorophenol	UG/L	10 U	10 U	10 U	10 U
2,4-Dichlorophenol	UG/L	10 U	10 U	10 U	10 U
2,4-Dimethylphenol	UG/L	10 U	10 U	10 U	10 U
2,4-Dinitrophenol	UG/L	25 U	25 U	25 U	25 U
2,4-Dinitrotoluene	UG/L	10 U	10 U	10 U	10 U
2,6-Dinitrotoluene	UG/L	10 U	10 U	10 U	10 U
2-Chloronaphthalene	UG/L	10 U	10 U	10 U	10 U
2-Chlorophenol	UG/L	10 U	10 U	10 U	10 U
2-Methylnaphthalene	UG/L	10 U	10 U	10 U	10 U
2-Methylphenol	UG/L	10 U	10 U	10 U	10 U
2-Nitroaniline	UG/L	25 U	25 U	25 U	25 U
2-Nitrophenol	UG/L	10 U	10 U	10 U	10 U
3,3'-Dichlorobenzidine	UG/L	10 U	10 U	10 U	10 U
3-Nitroaniline	UG/L	25 U	25 U	25 U	25 U
4,6-Dinitro-o-Cresol	UG/L	25 U	25 U	25 U	25 U
4-Bromophenyl-phenyl Ether	UG/L	10 U	10 U	10 U	10 U
4-Chloroaniline	UG/L	10 U	10 U	10 U	10 U
4-Chlorophenyl-phenylether	UG/L	10 U	10 U	10 U	10 U
4-Methylphenol	UG/L	10 U	10 U	10 U	10 U
4-Nitroaniline	UG/L	25 U	25 U	25 U	25 U
4-Nitrophenol	UG/L	25 U	25 U	25 U	25 U
4-chloro-3-methylphenol	UG/L	10 U	10 U	10 U	10 U
Acenaphthene	UG/L	10 U	10 U	10 U	10 U
Acenaphthylene	UG/L	10 U	10 U	10 U	10 U
Anthracene	UG/L	10 U	10 U	10 U	10 U
Benzo(a)anthracene	UG/L	10 U	10 U	10 U	10 U

Table E-4 (continued)

Media		Groundwater	Groundwater	Groundwater	Surface Water
Station		RQLmw-009	RQLmw-010	RQLmw-011	RQLsw-015
Sample ID		RQ0113	RQ0114	RQ0115	RQ0116
Customer ID		RQLmw-009-0113-GW	RQLmw-010-0114-GW	RQLmw-011-0115-GW	RQLsw-013(p)-0116-SW
Date		04/11/99	04/10/99	04/10/99	04/10/99
Filtered		Total	Total	Total	Total
Analyte	Units				
Benzo(a)pyrene	UG/L	10 U	10 U	10 U	10 U
Benzo(b)fluoranthene	UG/L	10 U	10 U	10 U	10 U
Benzo(g,h,i)perylene	UG/L	10 U	10 U	10 U	10 U
Benzo(k)fluoranthene	UG/L	10 U	10 U	10 U	10 U
Bis(2-chloroethoxy)methane	UG/L	10 U	10 U	10 U	10 U
Bis(2-chloroethyl)ether	UG/L	10 U	10 U	10 U	10 U
Bis(2-ethylhexyl)phthalate	UG/L	10 U	10 U	10 U	10 U
Butyl Benzyl Phthalate	UG/L	10 U	10 U	10 U	10 U
Carbazole	UG/L	10 U	10 U	10 U	10 U
Chrysene	UG/L	10 U	10 U	10 U	10 U
Di-n-butyl Phthalate	UG/L	10 U	10 U	10 U	10 U
Di-n-octyl Phthalate	UG/L	10 U	10 U	10 U	10 U
Dibenzo(a,h)anthracene	UG/L	10 U	10 U	10 U	10 U
Dibenzofuran	UG/L	10 U	10 U	10 U	10 U
Diethyl Phthalate	UG/L	10 U	10 U	10 U	10 U
Dimethyl Phthalate	UG/L	10 U	10 U	10 U	10 U
Fluoranthene	UG/L	10 U	10 U	10 U	10 U
Fluorene	UG/L	10 U	10 U	10 U	10 U
Hexachlorobenzene	UG/L	10 U	10 U	10 U	10 U
Hexachlorobutadiene	UG/L	10 U	10 U	10 U	10 U
Hexachlorocyclopentadiene	UG/L	10 U	10 U	10 U	10 U
Hexachloroethane	UG/L	10 U	10 U	10 U	10 U
Indeno(1,2,3-cd)pyrene	UG/L	10 U	10 U	10 U	10 U
Isophorone	UG/L	10 U	10 U	10 U	10 U
N-Nitroso-di-n-propylamine	UG/L	10 U	10 U	10 U	10 U
N-Nitrosodiphenylamine	UG/L	10 U	10 U	10 U	10 U
Naphthalene	UG/L	10 U	10 U	10 U	10 U
Nitrobenzene	UG/L	10 U	10 U	10 U	10 U
Pentachlorophenol	UG/L	25 U	25 U	25 U	25 U
Phenanthrene	UG/L	10 U	10 U	10 U	10 U
Phenol	UG/L	10 U	10 U	10 U	10 U
Pyrene	UG/L	10 U	10 U	10 U	10 U

Table E-5. April Quarterly Monitoring Report for Ramsdell Quarry Landfill Groundwater Investigation,
Groundwater Analytical Results - Pesticides and PCBs

Media		Groundwater	Groundwater	Groundwater	Groundwater
Station		RQLmw-006	RQLmw-007	RQLmw-008	RQLmw-009
Sample ID		RQ0110	RQ0111	RQ0112	RQ0075
Customer ID		RQLmw-006-0110-GW	RQLmw-007-0111-GW	RQLmw-008-0112-GW	RQLmw-009-0075-FD
Date		04/10/99	04/11/99	04/11/99	04/11/99
Filtered		Total	Total	Total	Total
Analyte	Units				
4,4'-DDD	UG/L	0.05 U	0.05 U	0.05 U	0.05 U
4,4'-DDE	UG/L	0.05 U	0.05 U	0.05 U	0.05 U
4,4'-DDT	UG/L	0.05 U	0.05 U	0.05 U	0.05 U
Aldrin	UG/L	0.05 U	0.05 U	0.05 U	0.05 U
Alpha Chlordane	UG/L	0.05 U	0.05 U	0.05 U	0.05 U
Alpha-BHC	UG/L	0.05 U	0.05 U	0.05 U	0.05 U
Aroclor-1016	UG/L	1 U	1 U	1 U	1 U
Aroclor-1221	UG/L	1 U	1 U	1 U	1 U
Aroclor-1232	UG/L	1 U	1 U	1 U	1 U
Aroclor-1242	UG/L	1 U	1 U	1 U	1 U
Aroclor-1248	UG/L	1 U	1 U	1 U	1 U
Aroclor-1254	UG/L	1 U	1 U	1 U	1 U
Aroclor-1260	UG/L	1 U	1 U	1 U	1 U
Beta-BHC	UG/L	0.05 U	0.05 U	0.05 U	0.05 J
Delta-BHC	UG/L	0.05 U	0.05 U	0.05 U	0.05 U
Dieldrin	UG/L	0.05 U	0.05 U	0.05 U	0.05 U
Endosulfan I	UG/L	0.05 U	0.05 U	0.05 U	0.05 U
Endosulfan II	UG/L	0.05 U	0.05 U	0.05 U	0.05 U
Endosulfan Sulfate	UG/L	0.05 U	0.05 U	0.05 U	0.05 U
Endrin	UG/L	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
Endrin Aldehyde	UG/L	0.05 U	0.05 U	0.05 U	0.05 U
Endrin Ketone	UG/L	0.05 U	0.05 U	0.05 U	0.05 U
Gamma Chlordane	UG/L	0.05 U	0.05 U	0.05 U	0.05 U
Gamma-BHC (Lindane)	UG/L	0.05 U	0.05 U	0.05 U	0.05 U
Heptachlor	UG/L	0.05 U	0.05 U	0.05 U	0.05 U
Heptachlor Epoxide	UG/L	0.05 U	0.05 U	0.05 U	0.05 U
Methoxychlor	UG/L	0.1 UJ	0.1 U	0.1 U	0.1 U
Toxaphene	UG/L	2 UJ	2 UJ	2 UJ	2 UJ

Table E-5 (continued)

Media		Groundwater	Groundwater	Groundwater	Surface Water
Station		RQLmw-009	RQLmw-010	RQLmw-011	RQLsw-015
Sample ID		RQ0113	RQ0114	RQ0115	RQ0116
Customer ID		RQLmw-009-0113-GW	RQLmw-010-0114-GW	RQLmw-011-0115-GW	RQLsw-013(p)-0116-SW
Date		04/11/99	04/10/99	04/10/99	04/10/99
Filtered		Total	Total	Total	Total
Analyte	Units				
4,4'-DDD	UG/L	0.05 U	0.05 U	0.05 U	0.05 U
4,4'-DDE	UG/L	0.05 U	0.05 U	0.05 U	0.05 U
4,4'-DDT	UG/L	0.05 U	0.05 U	0.05 U	0.05 U
Aldrin	UG/L	0.05 U	0.05 U	0.05 U	0.05 U
Alpha Chlordane	UG/L	0.05 U	0.05 U	0.05 U	0.05 U
Alpha-BHC	UG/L	0.05 U	0.05 U	0.05 U	0.05 U
Aroclor-1016	UG/L	1 U	1 U	1 U	1 U
Aroclor-1221	UG/L	1 U	1 U	1 U	1 U
Aroclor-1232	UG/L	1 U	1 U	1 U	1 U
Aroclor-1242	UG/L	1 U	1 U	1 U	1 U
Aroclor-1248	UG/L	1 U	1 U	1 U	1 U
Aroclor-1254	UG/L	1 U	1 U	1 U	1 U
Aroclor-1260	UG/L	1 U	1 U	1 U	1 U
Beta-BHC	UG/L	0.05 U	0.05 U	0.05 U	0.05 U
Delta-BHC	UG/L	0.05 U	0.05 UJ	0.05 UJ	0.05 UJ
Dieldrin	UG/L	0.05 U	0.05 U	0.05 U	0.05 U
Endosulfan I	UG/L	0.05 U	0.05 UJ	0.05 UJ	0.05 UJ
Endosulfan II	UG/L	0.05 U	0.05 U	0.05 U	0.05 U
Endosulfan Sulfate	UG/L	0.05 U	0.05 U	0.05 U	0.05 U
Endrin	UG/L	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ
Endrin Aldehyde	UG/L	0.05 U	0.05 U	0.05 U	0.05 U
Endrin Ketone	UG/L	0.05 U	0.05 U	0.05 U	0.05 U
Gamma Chlordane	UG/L	0.05 U	0.05 U	0.05 U	0.05 U
Gamma-BHC (Lindane)	UG/L	0.05 U	0.05 U	0.05 U	0.05 U
Heptachlor	UG/L	0.05 U	0.05 U	0.05 U	0.05 U
Heptachlor Epoxide	UG/L	0.05 U	0.05 U	0.05 U	0.05 U
Methoxychlor	UG/L	0.1 U	0.1 UJ	0.1 UJ	0.1 UJ
Toxaphene	UG/L	2 UJ	2 UJ	2 UJ	2 UJ

Table E-6. April Quarterly Monitoring Report for Ramsdell Quarry Landfill Groundwater Investigation, Groundwater Analytical Results - Water Quality Parameters and Anions

Media		Groundwater	Groundwater	Groundwater	Groundwater
Station		RQLmw-006	RQLmw-007	RQLmw-008	RQLmw-009
Sample ID		RQ0110	RQ0111	RQ0112	RQ0075
Customer ID		RQLmw-006-0110-GW	RQLmw-007-0111-GW	RQLmw-008-0112-GW	RQLmw-009-0075-FD
Date		04/10/99	04/11/99	04/11/99	04/11/99
Filtered		Total	Total	Total	Total
Analyte	Units				
Alkalinity, Total	mg/L	280 =	170 =	410 =	130 =
Chloride	mg/L	2.4 =	3.7 =	1.8 =	1.5 =
Chemical Oxygen Demand (COD)	mg/L	60 =	29 =	19 =	22 =
Conductivity	umhos/cm	670 =	1000 =	660 =	230 =
Cyanide	mg/L	0.01 U	0.01 U	0.01 U	0.01 U
Nitrate/Nitrite	mg/L	0.1 U	0.1 U	0.1 U	0.1 U
Nitrogen	mg/L	1 U	1 U	1 U	1 U
pH	std. units	6.2 =	6.6 =	6.6 =	6.2 =
Phenols, Total	mg/L	0.02 U	0.02 U	0.02 U	0.02 U
Sulfate	mg/L	184 =	128 =	95.5 =	29.6 =
Total Dissolved Solids	mg/L	550 =	800 =	440 =	170 =
Total Organic Carbon	mg/L	7 =	7 =	6 =	7 =

Table E-6 (continued)

Media		Groundwater	Groundwater	Groundwater	Surface Water
Station		**RQLmw-009**	**RQLmw-010**	**RQLmw-011**	**RQLsw-015**
Sample ID		**RQ0113**	**RQ0114**	**RQ0115**	**RQ0116**
Customer ID		**RQLmw-009-0113-GW**	**RQLmw-010-0114-GW**	**RQLmw-011-0115-GW**	**RQLsw-013(p)-0116-SW**
Date		**04/11/99**	**04/10/99**	**04/10/99**	**04/10/99**
Filtered		**Total**	**Total**	**Total**	**Total**
Analyte	**Units**				
Alkalinity, Total	mg/L	130 =	130 =	5 U	62 =
Chloride	mg/L	1.3 =	12.4 =	3.2 =	2.2 =
Chemical Oxygen Demand (COD)	mg/L	190 =	10 U	10 UJ	26 =
Conductivity	umhos/cm	250 =	480 =	180 =	550 =
Cyanide	mg/L	0.01 U	0.01 U	0.01 U	0.01 U
Nitrate/Nitrite	mg/L	0.1 U	0.3 =	0.1 UJ	0.1 U
Nitrogen	mg/L	1 U	1 U	1 UJ	1 U
pH	std. units	6.3 =	6.5 =	4.6 =	6.7 =
Phenols, Total	mg/L	0.02 U	0.02 U	0.024 =	0.02 U
Sulfate	mg/L	31.1 =	165 =	89 =	286 =
Total Dissolved Solids	mg/L	170 =	400 =	160 =	470 =
Total Organic Carbon	mg/L	5 =	1 =	1 U	9 =

Table E-7. April Quarterly Monitoring Report for Ramsdell Quarry Landfill Groundwater Investigation, Groundwater Analytical Results - QA/QC Sample Analytical Results

Media		Quality Control	Quality Control	Quality Control
Station		QC	QC-2	QC-2
Sample ID		RQ0088	RQ0081	RQ0081
Customer ID			RQmw-0081-ER	RQLmw-0081-ER
Date		04/10/99	04/10/99	04/10/99
Filtered		Total	Dissolved	Total
Field Type		Trip Blank	Equipment Rinsate	Equipment Rinsate
Analyte	Units			
Explosives				
1,3,5-Trinitrobenzene	ug/L			0.2 U
1,3-Dinitrobenzene	ug/L			0.2 U
2,4,6-Trinitrotoluene	ug/L			0.2 U
2,4-Dinitrotoluene	ug/L			0.13 U
2,6-Dinitrotoluene	ug/L			0.13 U
2-Nitrotoluene	ug/L			0.2 U
3-Nitrotoluene	ug/L			0.2 U
4-Nitrotoluene	ug/L			0.2 U
HMX	ug/L			0.5 U
Nitrobenzene	ug/L			0.2 U
Nitrocellulose as N	mg/L			0.5 U
Nitroglycerin	ug/L			2.5 U
Nitroguanidine	ug/L			20 U
RDX	ug/L			0.5 U
Tetryl	ug/L			0.2 U
Metals				
Aluminum	ug/L		200 UJ	200 UJ
Antimony	ug/L		5 U	5 U
Arsenic	ug/L		5 U	5 U
Barium	ug/L		200 U	200 U
Beryllium	ug/L		4 U	4 U
Cadmium	ug/L		5 U	5 U
Calcium	ug/L		246 J	300 J
Chromium	ug/L		10 UJ	10 UJ
Cobalt	ug/L		50 U	50 UJ
Copper	ug/L		25 UJ	25 UJ
Iron	ug/L		100 U	100 UJ
Lead	ug/L		3 U	3 U
Magnesium	ug/L		5000 U	5000 U
Manganese	ug/L		3.7 U	15 UJ
Mercury	ug/L		0.2 UJ	0.2 UJ
Nickel	ug/L		40 U	40 U
Potassium	ug/L		5000 U	5000 U
Selenium	ug/L		5 U	5 U
Silver	ug/L		10 U	10 U
Sodium	ug/L		5000 U	407 U
Thallium	ug/L		2 U	2 U
Vanadium	ug/L		50 U	50 U
Zinc	ug/L		22.6 UJ	33.7 J

Table E-7 (continued)

Media		Quality Control	Quality Control	Quality Control
Station		QC	QC-2	QC-2
Sample ID		RQ0088	RQ0081	RQ0081
Customer ID			RQmw-0081-ER	RQLmw-0081-ER
Date		04/10/99	04/10/99	04/10/99
Filtered		Total	Dissolved	Total
Field Type		Trip Blank	Equipment Rinsate	Equipment Rinsate
Analyte	Units			
Inorganics, Water Quality Compounds, and Anions				
Chloride	mg/L			1 U
Nitrate/Nitrite	mg/L			0.1 U
Sulfate	mg/L			1 U
Alkalinity, Total	mg/L			5 U
Chemical Oxygen Demand (C	mg/L			10 U
Conductivity	umhos/cm			1 =
Cyanide	mg/L			0.01 U
Nitrogen	mg/L			1 U
Phenols, Total	mg/L			0.02 U
Total Dissolved Solids	mg/L			10 U
Total Organic Carbon	mg/L			1 U
pH	std. units			5.7 =
Pesticides and PCBs				
4,4'-DDD	ug/L			0.05 U
4,4'-DDE	ug/L			0.05 U
4,4'-DDT	ug/L			0.05 U
Aldrin	ug/L			0.05 U
Alpha Chlordane	ug/L			0.05 U
Alpha-BHC	ug/L			0.05 U
Aroclor-1016	ug/L			1 U
Aroclor-1221	ug/L			1 U
Aroclor-1232	ug/L			1 U
Aroclor-1242	ug/L			1 U
Aroclor-1248	ug/L			1 U
Aroclor-1254	ug/L			1 U
Aroclor-1260	ug/L			1 U
Beta-BHC	ug/L			0.05 U
Delta-BHC	ug/L			0.05 UJ
Dieldrin	ug/L			0.05 U
Endosulfan I	ug/L			0.05 UJ
Endosulfan II	ug/L			0.05 U
Endosulfan Sulfate	ug/L			0.05 U
Endrin	ug/L			0.05 UJ
Endrin Aldehyde	ug/L			0.05 U
Endrin Ketone	ug/L			0.05 U
Gamma Chlordane	ug/L			0.05 U
Gamma-BHC (Lindane)	ug/L			0.05 U
Heptachlor	ug/L			0.05 U
Heptachlor Epoxide	ug/L			0.05 U
Methoxychlor	ug/L			0.1 UJ
Toxaphene	ug/L			2 UJ

Table E-7 (continued)

Media		Quality Control	Quality Control	Quality Control
Station		QC	QC-2	QC-2
Sample ID		RQ0088	RQ0081	RQ0081
Customer ID			RQmw-0081-ER	RQLmw-0081-ER
Date		04/10/99	04/10/99	04/10/99
Filtered		Total	Dissolved	Total
Field Type		Trip Blank	Equipment Rinsate	Equipment Rinsate
Analyte	Units			
Semivolatile Organic Compounds				
1,2,4-Trichlorobenzene	ug/L			10 U
1,2-Dichlorobenzene	ug/L			10 U
1,3-Dichlorobenzene	ug/L			10 U
1,4-Dichlorobenzene	ug/L			10 U
2,2'-oxybis (1-chloropropane)	ug/L			10 U
2,4,5-Trichlorophenol	ug/L			25 U
2,4,6-Trichlorophenol	ug/L			10 U
2,4-Dichlorophenol	ug/L			10 U
2,4-Dimethylphenol	ug/L			10 U
2,4-Dinitrophenol	ug/L			25 U
2,4-Dinitrotoluene	ug/L			10 U
2,6-Dinitrotoluene	ug/L			10 U
2-Chloronaphthalene	ug/L			10 U
2-Chlorophenol	ug/L			10 U
2-Methylnaphthalene	ug/L			10 U
2-Methylphenol	ug/L			10 U
2-Nitroaniline	ug/L			25 U
2-Nitrophenol	ug/L			10 U
3,3'-Dichlorobenzidine	ug/L			10 U
3-Nitroaniline	ug/L			25 U
4,6-Dinitro-o-Cresol	ug/L			25 U
4-Bromophenyl-phenyl Ether	ug/L			10 U
4-Chloroaniline	ug/L			10 U
4-Chlorophenyl-phenylether	ug/L			10 U
4-Methylphenol	ug/L			10 U
4-Nitroaniline	ug/L			25 U
4-Nitrophenol	ug/L			25 U
4-chloro-3-methylphenol	ug/L			10 U
Acenaphthene	ug/L			10 U
Acenaphthylene	ug/L			10 U
Anthracene	ug/L			10 U
Benzo(a)anthracene	ug/L			10 U
Benzo(a)pyrene	ug/L			10 U
Benzo(b)fluoranthene	ug/L			10 U
Benzo(g,h,i)perylene	ug/L			10 U
Benzo(k)fluoranthene	ug/L			10 U
Bis(2-chloroethoxy)methane	ug/L			10 U
Bis(2-chloroethyl)ether	ug/L			10 U
Bis(2-ethylhexyl)phthalate	ug/L			10 U
Butyl Benzyl Phthalate	ug/L			10 U
Carbazole	ug/L			10 U

Table E-7 (continued)

Media		Quality Control	Quality Control	Quality Control
Station		QC	QC-2	QC-2
Sample ID		RQ0088	RQ0081	RQ0081
Customer ID			RQmw-0081-ER	RQLmw-0081-ER
Date		04/10/99	04/10/99	04/10/99
Filtered		Total	Dissolved	Total
Field Type		Trip Blank	Equipment Rinsate	Equipment Rinsate
Analyte	Units			
Chrysene	ug/L			10 U
Di-n-butyl Phthalate	ug/L			10 U
Di-n-octyl Phthalate	ug/L			10 U
Dibenzo(a,h)anthracene	ug/L			10 U
Dibenzofuran	ug/L			10 U
Diethyl Phthalate	ug/L			10 U
Dimethyl Phthalate	ug/L			10 U
Fluoranthene	ug/L			10 U
Fluorene	ug/L			10 U
Hexachlorobenzene	ug/L			10 U
Hexachlorobutadiene	ug/L			10 U
Hexachlorocyclopentadiene	ug/L			10 U
Hexachloroethane	ug/L			10 U
Indeno(1,2,3-cd)pyrene	ug/L			10 U
Isophorone	ug/L			10 U
N-Nitroso-di-n-propylamine	ug/L			10 U
N-Nitrosodiphenylamine	ug/L			10 U
Naphthalene	ug/L			10 U
Nitrobenzene	ug/L			10 U
Pentachlorophenol	ug/L			25 U
Phenanthrene	ug/L			10 U
Phenol	ug/L			10 U
Pyrene	ug/L			10 U
Volatile Organic Compounds				
1,1,1-Trichloroethane	ug/L	5 U		5 U
1,1,2,2-Tetrachloroethane	ug/L	5 U		5 U
1,1,2-Trichloroethane	ug/L	5 U		5 U
1,1-Dichloroethane	ug/L	5 U		5 U
1,1-Dichloroethene	ug/L	5 U		5 U
1,2,3-Trichloropropane	ug/L	5 U		5 U
1,2-Dichloroethane	ug/L	5 U		5 U
1,2-Dichloroethene	ug/L	5 U		5 U
1,2-Dichloropropane	ug/L	5 U		5 U
1,3-cis-Dichloropropene	ug/L	5 U		5 U
1,3-trans-Dichloropropene	ug/L	5 U		5 U
2-Butanone	ug/L	10 U		10 U
2-Chloroethylvinylether	ug/L	10 UJ		10 UJ
2-Hexanone	ug/L	10 U		10 U
4-Methyl-2-pentanone	ug/L	10 U		10 U
Acetone	ug/L	10 UJ		10 UJ
Acrolein	ug/L	100 UJ		100 UJ
Acrylonitrile	ug/L	100 U		100 U

Table E-7 (continued)

Media		Quality Control	Quality Control	Quality Control
Station		QC	QC-2	QC-2
Sample ID		RQ0088	RQ0081	RQ0081
Customer ID			RQmw-0081-ER	RQLmw-0081-ER
Date		04/10/99	04/10/99	04/10/99
Filtered		Total	Dissolved	Total
Field Type		Trip Blank	Equipment Rinsate	Equipment Rinsate
Analyte	Units			
Benzene	ug/L	5 U		5 U
Bromodichloromethane	ug/L	5 U		5 U
Bromoform	ug/L	5 U		5 U
Bromomethane	ug/L	10 U		10 U
Carbon Disulfide	ug/L	5 U		5 U
Carbon Tetrachloride	ug/L	5 U		5 U
Chlorobenzene	ug/L	5 U		5 U
Chloroethane	ug/L	10 U		10 U
Chloroform	ug/L	5 U		5 U
Chloromethane	ug/L	10 U		10 U
Dibromochloromethane	ug/L	5 U		5 U
Dichlorodifluoromethane	ug/L	10 U		10 U
Ethyl methacrylate	ug/L	5 U		5 U
Ethylbenzene	ug/L	5 U		5 U
Methylene Chloride	ug/L	5 U		1.1 J
Styrene	ug/L	5 U		5 U
Tetrachloroethene	ug/L	5 U		5 U
Toluene	ug/L	5 U		5 U
Trichloroethene	ug/L	5 U		5 U
Trichlorofluoromethane	ug/L	10 U		10 U
Vinyl Acetate	ug/L	10 U		10 U
Vinyl Chloride	ug/L	10 U		10 U
Xylenes, Total	ug/L	5 U		5 U