December 30, 1998

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

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

Re: October 1998 Quarterly Monitoring Report

Dear Mr. Jasper:

This letter report is the first 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 second quarter of monitoring, and provides the analytical and potentiometric data for all groundwater and surface water samples. The details of the initial phase (first quarter) of the Groundwater Investigation, including the locations and construction details of all monitoring wells, will be presented in the final version of the *Initial Phase Report, Groundwater Investigation, Ramsdell Quarry*, which will be submitted in January 1999.

This letter report is a presentation of data only and, as such, no interpretation of the results herein is provided. The Final Report for the Ramsdell Quarry Groundwater Investigation (to be submitted in August 1999) will include an analysis of trends, a statistical summary, and site conceptual model based upon the results of six sampling events (four quarterly and two hydrogeologic events).

FIELD ACTIVITIES

Sampling was performed in two events during the second quarter. Dry season hydrogeologic event sampling was conducted on September 19 and 20, 1998, and second quarter sampling was conducted October 19 through 20, 1998.

Groundwater samples were collected in both events at Ramsdell Quarry Landfill (RQL) monitoring wells RQLmw-006 through RQLmw-011, and at surface water sampling location RQLsw-015. Station RQLsw-015 was sampled because the planned station, RQLsw-013 (see Attachment A), was dry. Sampling was preceded by micropurging (using dedicated equipment)

each monitoring well in order to obtain representative samples. The previously installed wells MW-1 through MW-5 at Ramsdell Quarry 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. Throughout the second quarter, water level data were additionally collected as follows:

- Monthly at the previously installed wells MW-1 through MW-5, using a hand-held water level indicator;
- Continuously (every 2 hours) at wells RQLmw-006 through –011, and at the staff gauge in RQL pond, using automated data loggers that were downloaded monthly using a notebook computer;
- Visually at RQL pond on the same day as the well water level readings.

Precipitation events were measured using a rain gauge located at Ramsdell Quarry and checked daily by site personnel at RVAAP. Data from the Ramsdell Quarry rain gauge were available beginning only in October. Rainfall data for September were obtained from the U.S. Army Corps of Engineers (USACE) as measured from the precipitation gauge located at the Micheal Kirwan Reservoir.

All liquid investigation-derived waste (IDW) from micropurging was stored in a closed-top 55-gallon drum. The contents of the drum were removed from the site and disposed in December 1998 by a licensed waste disposal contractor.

RESULTS

The results of the September and October 1998 sampling events are presented as attachments to this letter report. These attachments include the following:

- Attachment A – potentiometric surface maps:
  - Figure A-1: Previously existing wells MW-1 through MW-5 (September 18, 1998)
  - Figure A-2: New wells RQLmw-006 through -011 (September 18, 1998)
  - Figure A-3: Previously existing wells (October 19, 1998)
  - Figure A-4: New wells (October 19, 1998)
- Attachment B – Hydrographs of water levels for each of the new wells and for RQL pond
- Attachment C – Automated and manual water level data in tabular format
- Attachment D – Precipitation data in tabular format
- Attachment E – Analytical results, by sampling station, in tabular format (includes QA/QC data)

The potentiometric surface maps were constructed using manual water level measurements that were recorded prior to each sampling event. 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. All groundwater and surface water elevations are based on surveyed elevations of the top of casing at the wells and the stilling well at the staff gauge in the pond.

It should be noted that the analytical data provided in this document are results for the chemical parameters identified in the *Sampling and Analysis Plan Addendum for RQL Groundwater Investigation* issued by USACE in 1998. However, future sampling events conducted under the Groundwater Investigation will incorporate an expanded parameters list including indicator parameters and additional volatile organic compounds. These analytes will be added to ensure consistency with the March 1995 Groundwater Monitoring Plan for RQL, per direction from the Ohio Environmental Protection Agency.

PROBLEMS ENCOUNTERED

On 20 September 1998 at 20:00 hours, a sudden water level elevation decrease was noted in the data logger file for well RQLmw-006 (see Attachment B). The water level elevations measured manually on 19 October 1998 differ by 1.13 ft as compared to those measured automatically. A loss of transducer calibration may have produced this anomaly; however, elevations taken with a dip meter show exact correlation (to the hundredth of a foot) to those measured by the data logger. Examination and recalibration (if required) of the transducer will be conducted to attempt to correct any identified problems with the equipment.

Due to extreme dry weather conditions, water levels within the RQL pond dropped below the transducer level within the stilling well on 23 September 1998 at 18:00 hours. However, corresponding visual readings of the staff gauge were made; thus, water level data are available that correspond to both sampling events. Also, four days of continuous water level measurements were lost during October 21 through 25, 1998 due to a computer cable malfunction.

Because of the identified anomaly in well RQLmw-006 and the lack of electronic water level data for the RQL pond, manual measurements were used to generate the potentiometric map included in Attachment A.

Three of six groundwater/surface water sampling events planned for the Groundwater Investigation have been completed. The next quarterly sampling event will take place in February 1999.

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

Ramsdell Quarry Groundwater Investigation
October 1998 Quarterly Report

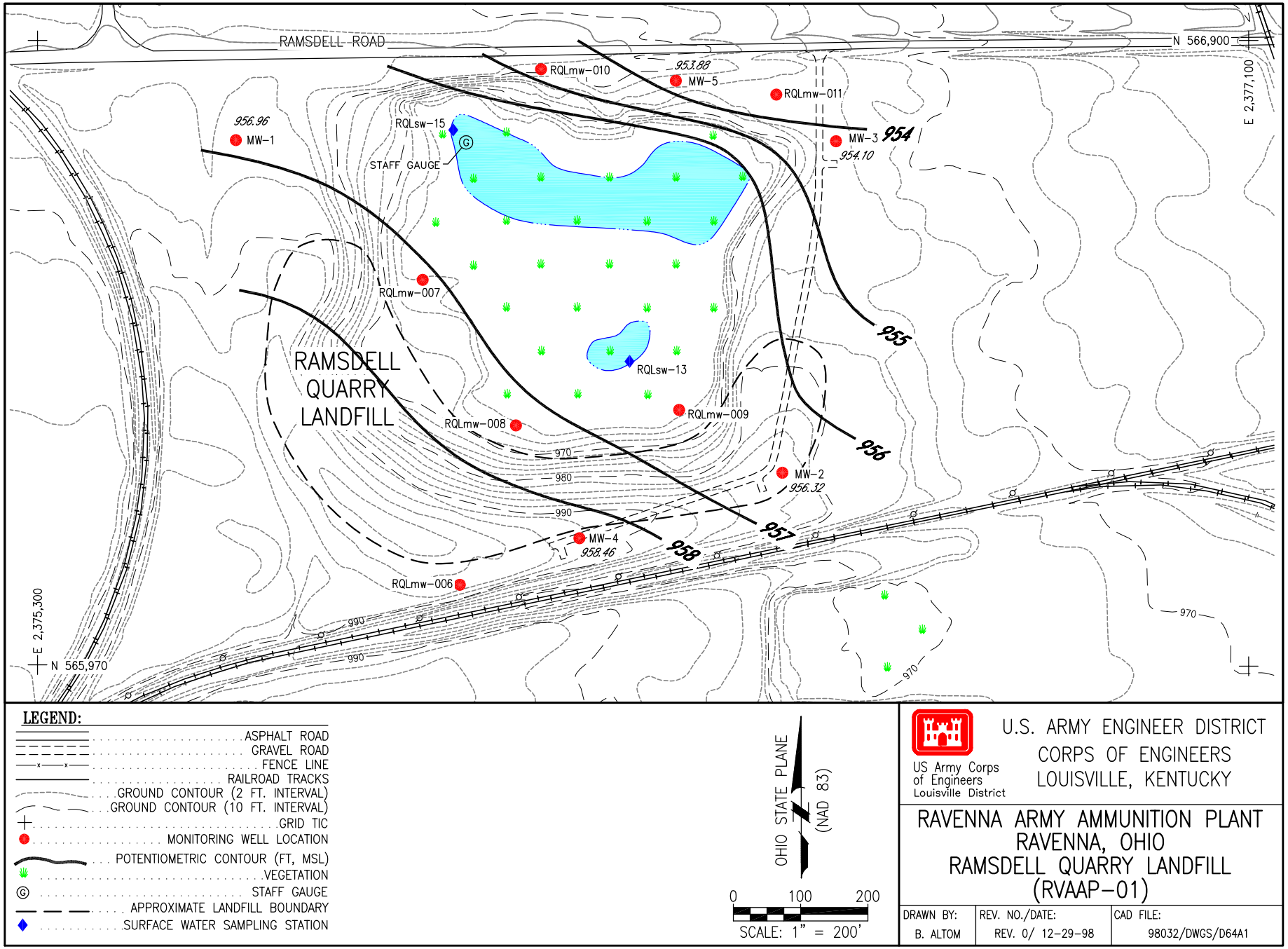


Figure A-1. RQL Groundwater Potentiometric Surface in Existing Wells During the Dry Season Sampling Event (September 18, 1998).

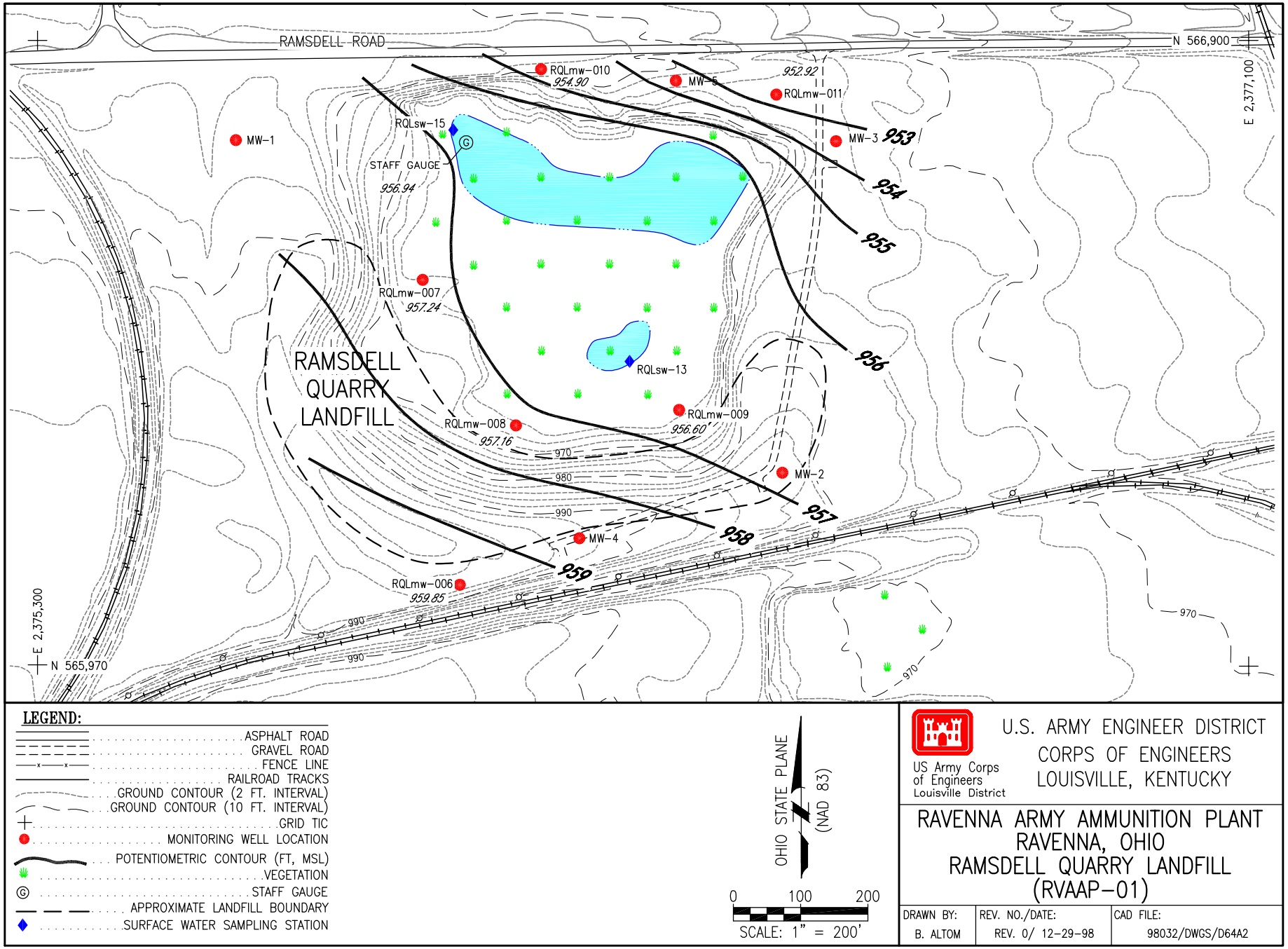


Figure A-2. RQL Groundwater Potentiometric Surface in New Wells During the Dry Season Sampling Event (September 18, 1998).

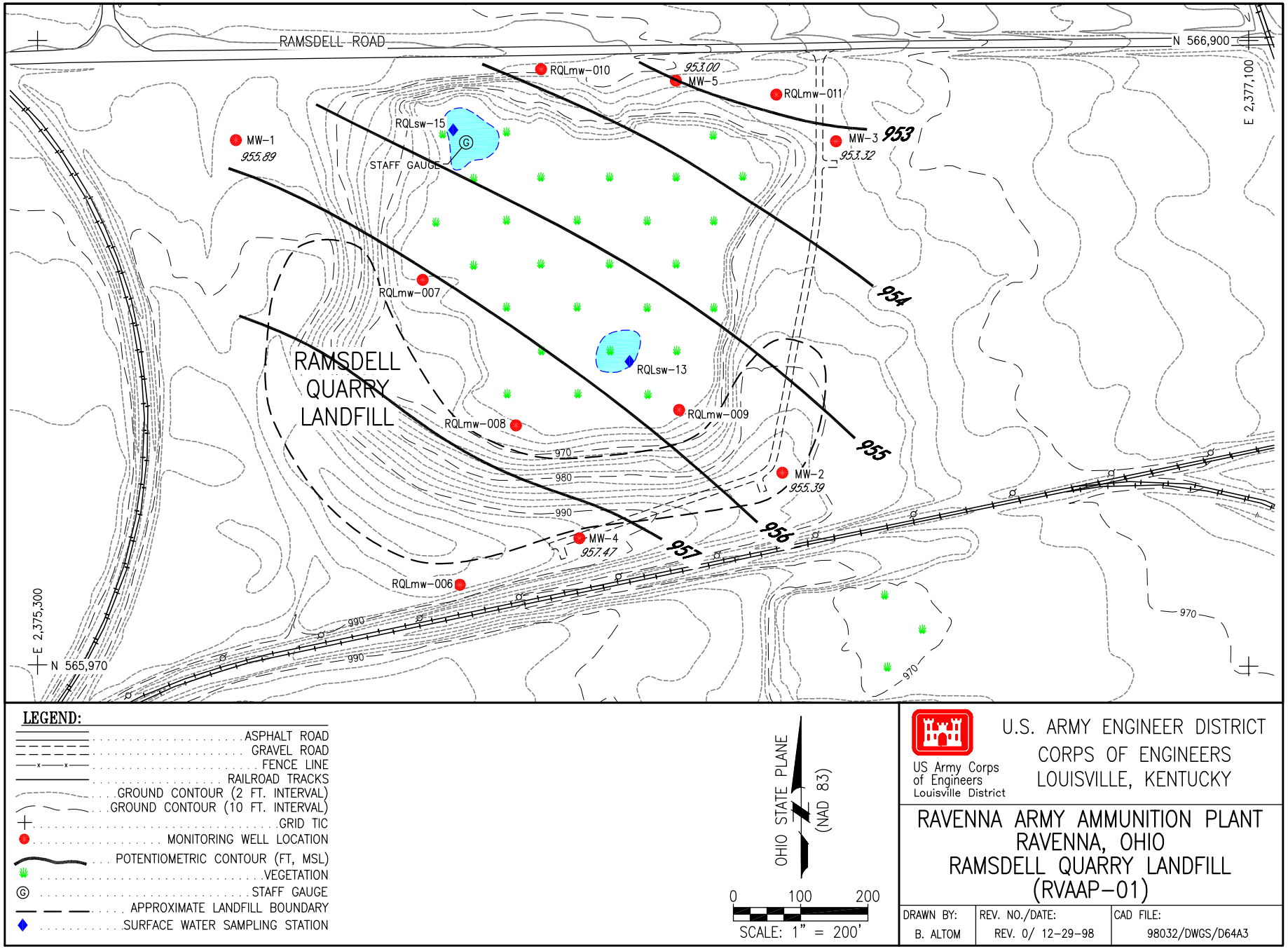


Figure A-3. RQL Groundwater Potentiometric Surface in Existing Wells During the Second Quarter Sampling Event (October 19, 1998).

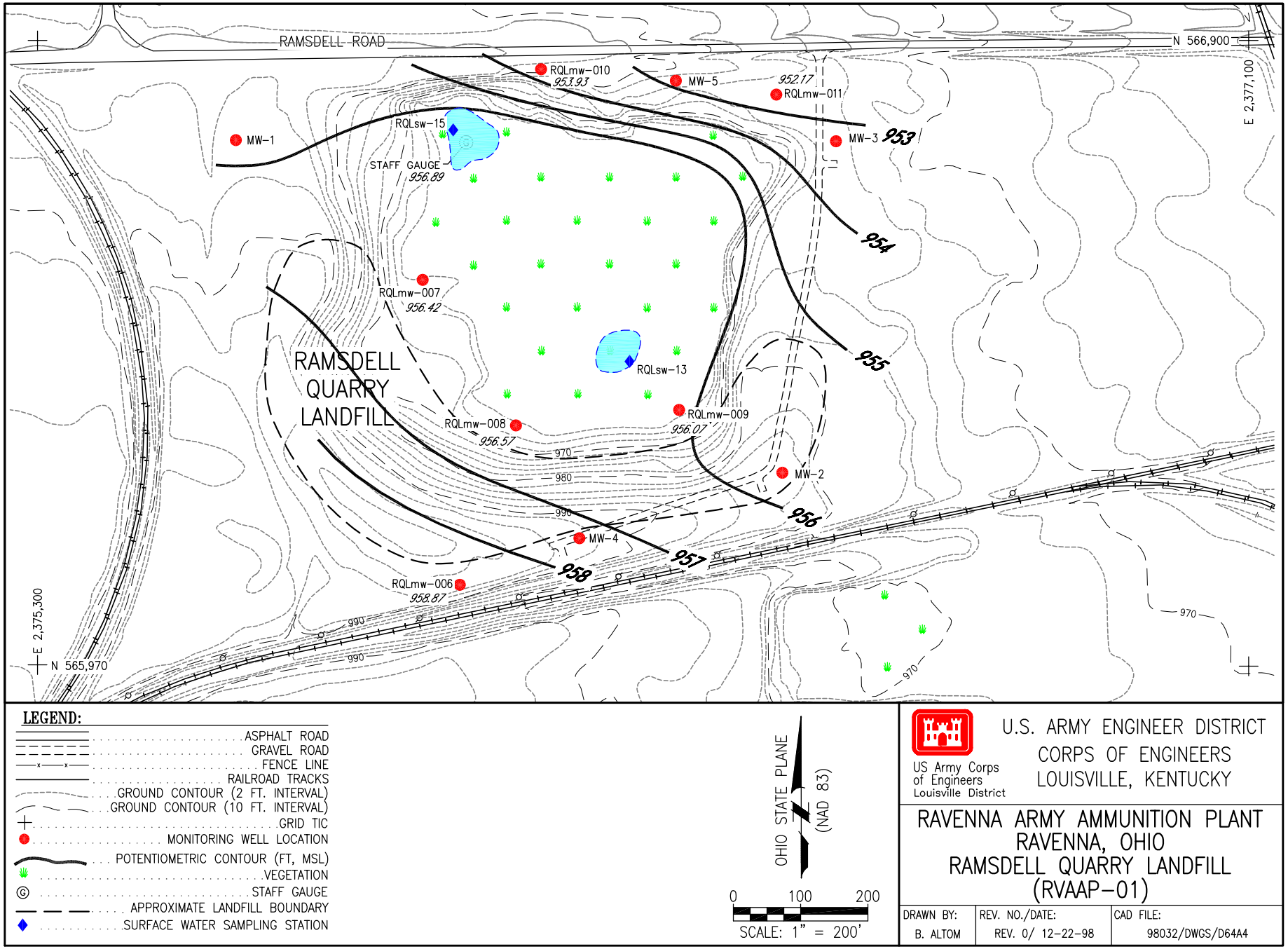
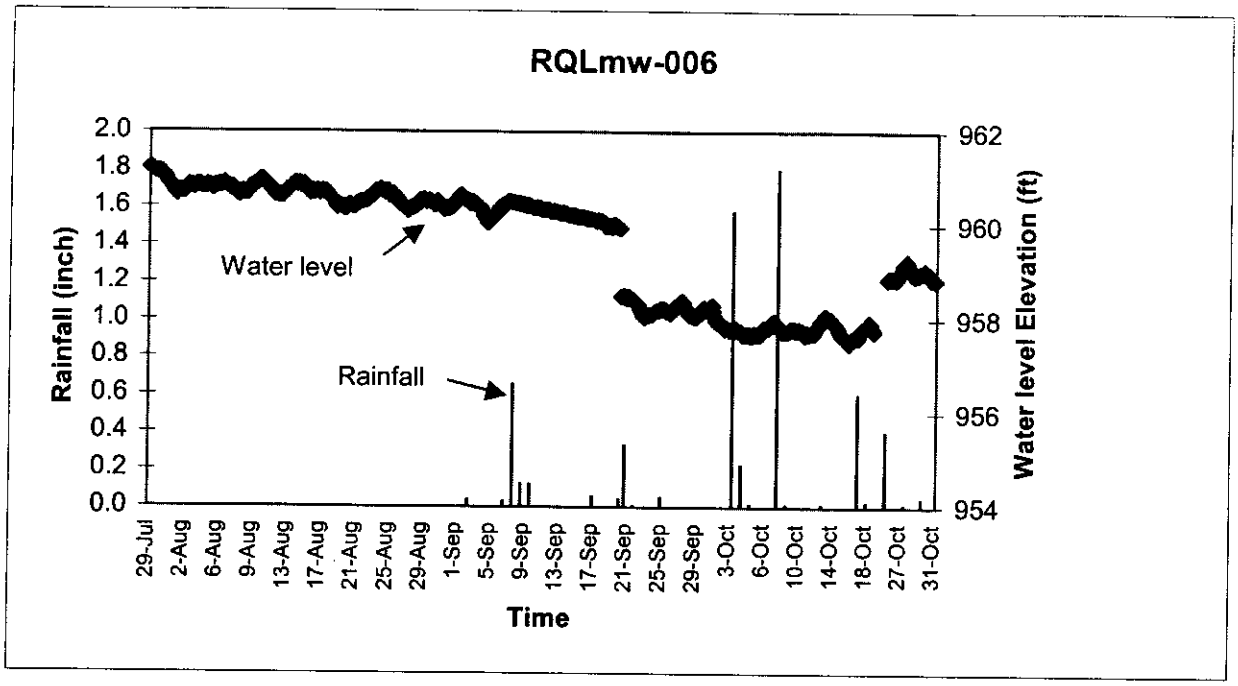


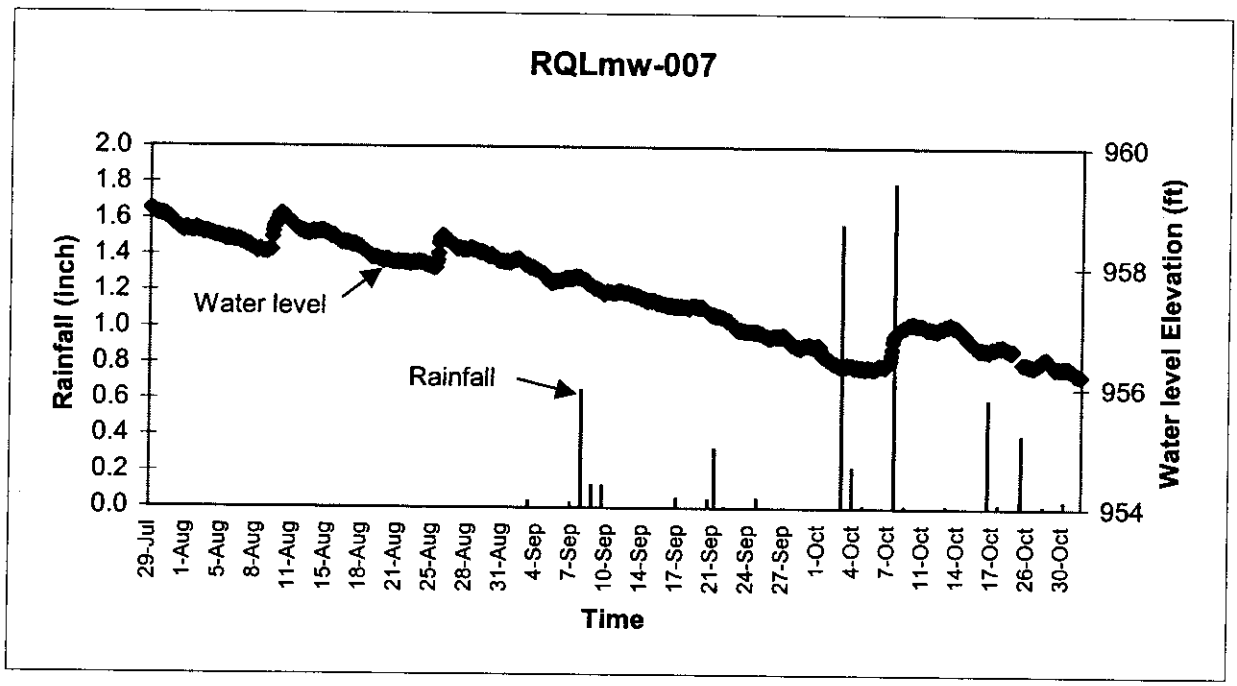
Figure A-4. RQL Groundwater Potentiometric Surface in New Wells During the Second Quarter Sampling Event (October 19, 1998).

Attachment B

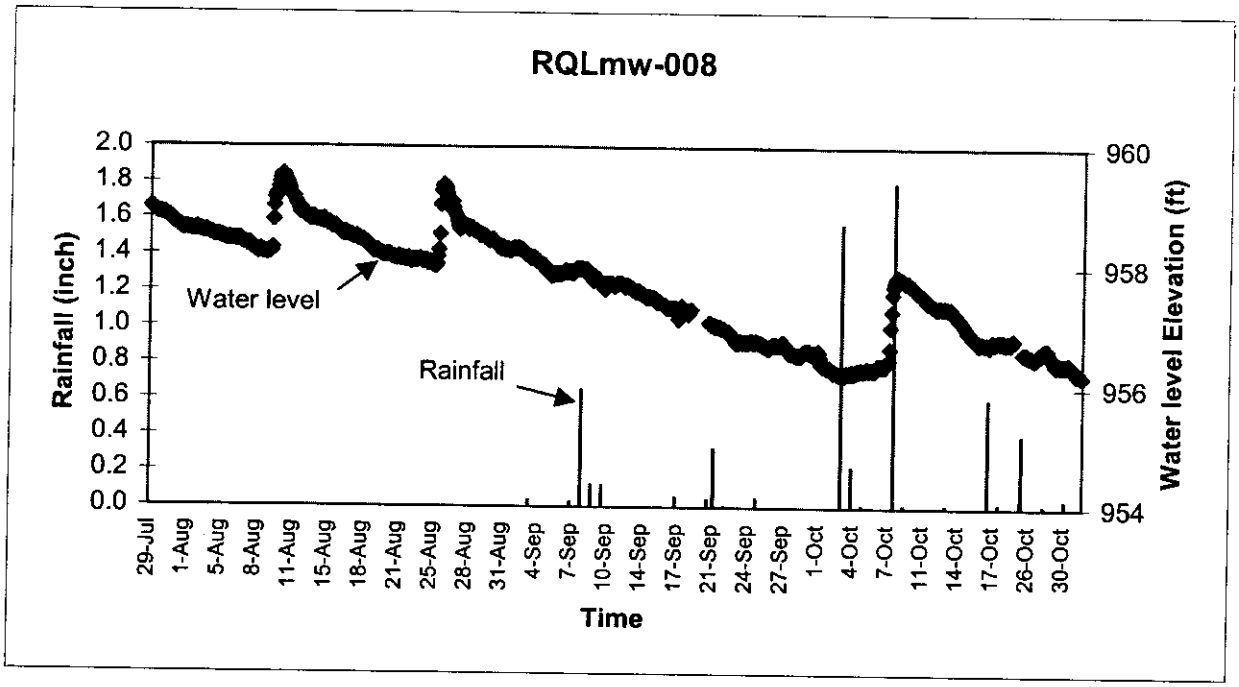
Ramsdell Quarry Groundwater Investigation
October 1998 Quarterly Report

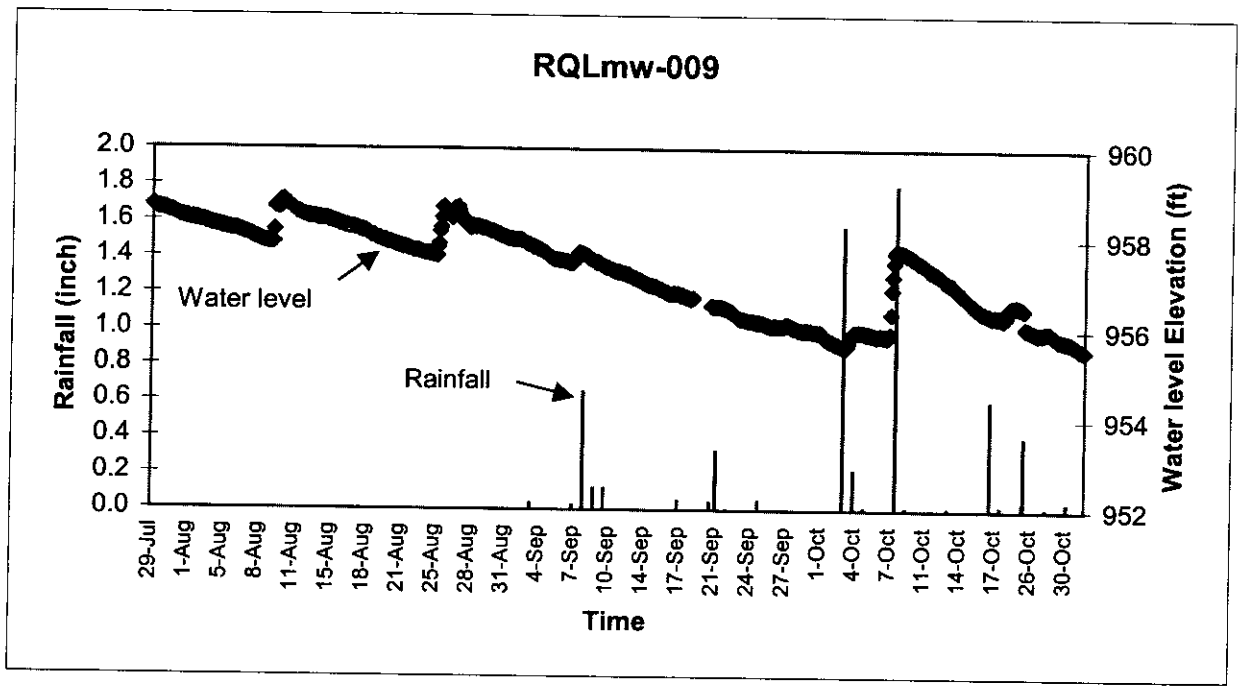
Ramsdell Quarry Groundwater Monitoring Well and Pond Staff Gauge Hydrographs



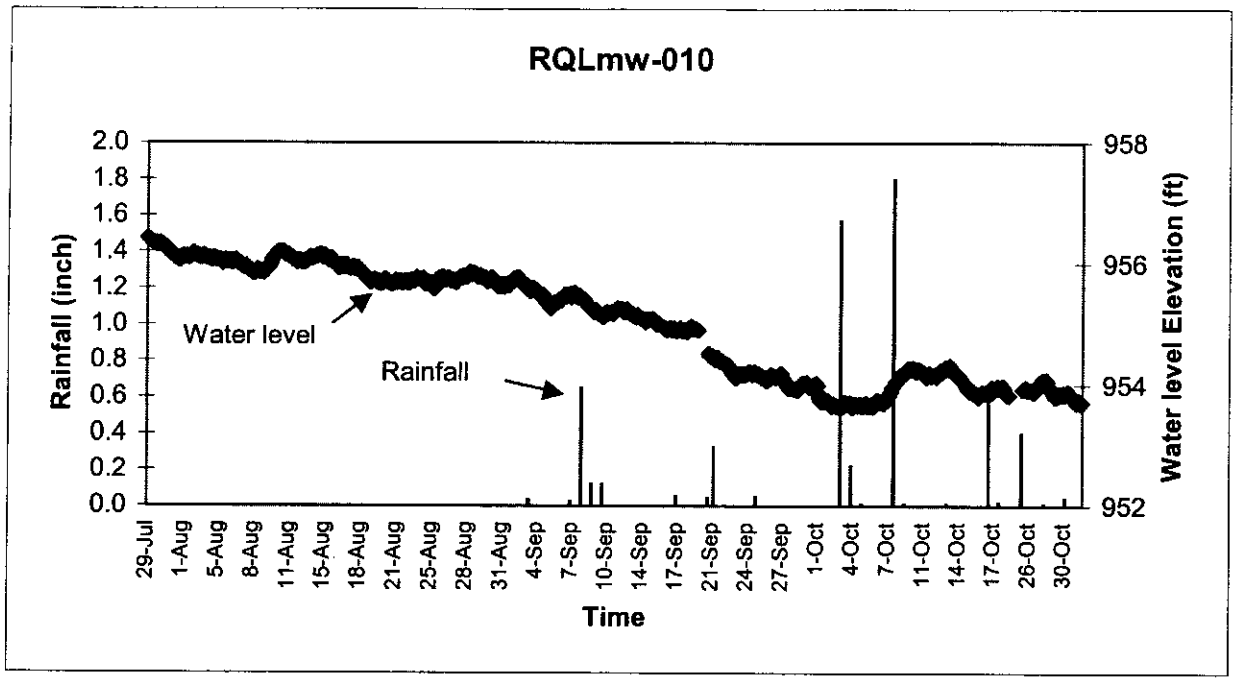


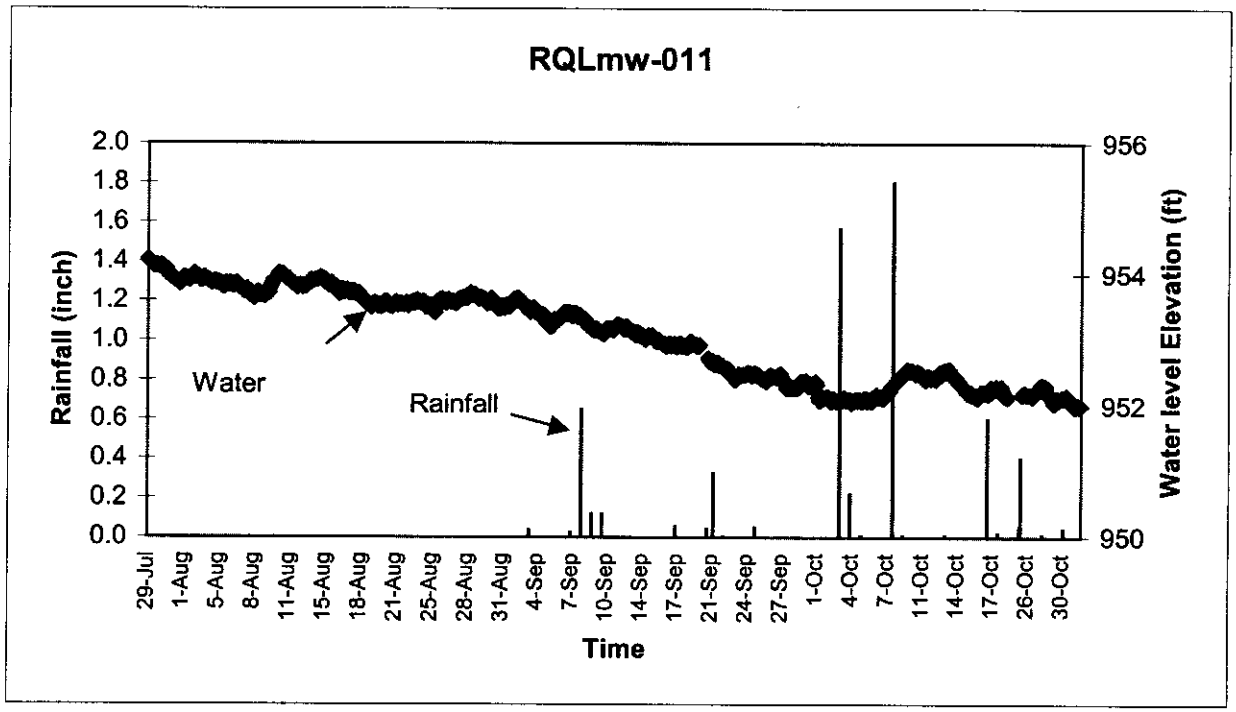
Ramsdell Quarry Groundwater Monitoring Well and Pond Staff Gauge Hydrographs



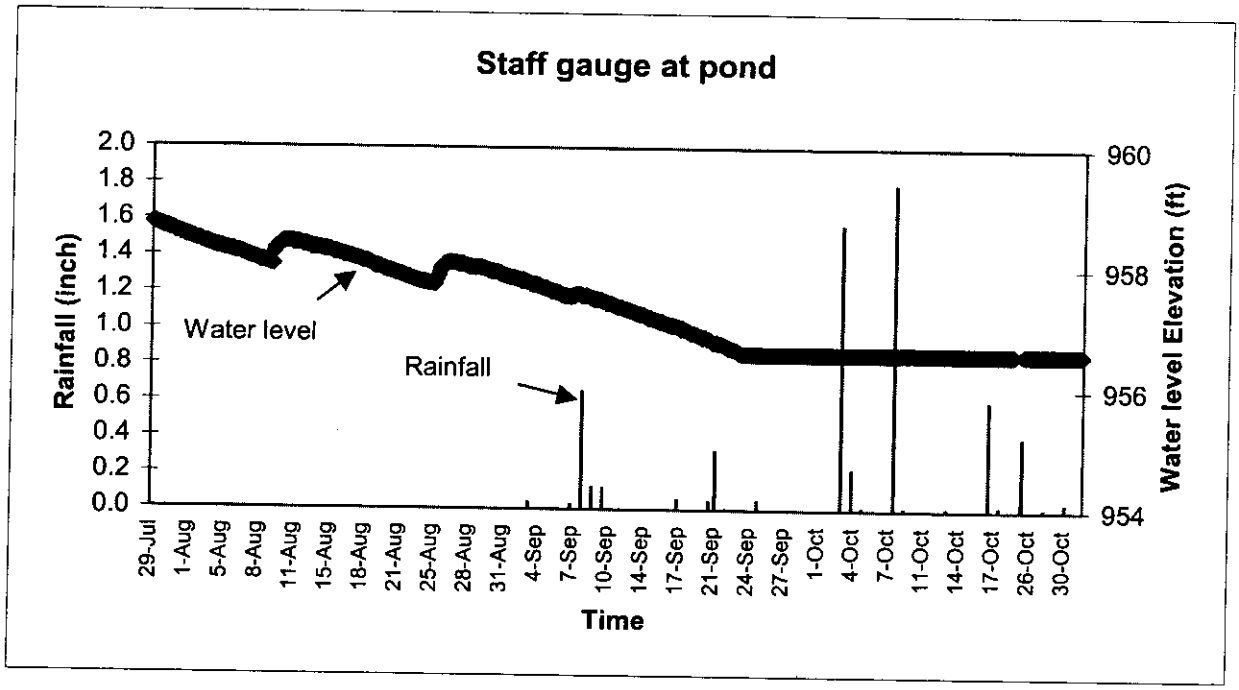


Ramsdell Quarry Groundwater Monitoring Well and Pond Staff Gauge Hydrographs





Ramsdell Quarry Groundwater Monitoring Well and Pond Staff Gauge Hydrographs



Attachment C

Ramsdell Quarry Groundwater Investigation
October 1998 Quarterly Report

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

Date/Time	MW-06 ELEV. ft	MW-07 ELEV. ft	MW-08 ELEV. ft	MW-09 ELEV. ft	MW-10 ELEV. ft	MW-11 ELEV. ft	STAFF GAUGE ELEV. ft
8/1/98 00:00	960.76	958.66	958.66	958.49	956.10	953.90	958.56
8/1/98 06:00	960.68	958.63	958.63	958.48	956.07	953.88	958.54
8/1/98 12:00	960.68	958.60	958.61	958.46	956.05	953.86	958.51
8/1/98 18:00	960.73	958.63	958.63	958.45	956.12	953.95	958.51
8/2/98 00:00	960.72	958.61	958.61	958.43	956.10	953.92	958.49
8/2/98 06:00	960.71	958.60	958.60	958.43	956.10	953.92	958.47
8/2/98 12:00	960.77	958.60	958.60	958.42	956.11	953.94	958.45
8/2/98 18:00	960.85	958.63	958.63	958.41	956.17	954.01	958.45
8/3/98 00:00	960.82	958.60	958.59	958.38	956.13	953.95	958.43
8/3/98 06:00	960.80	958.59	958.58	958.38	956.12	953.95	958.41
8/3/98 12:00	960.83	958.57	958.57	958.36	956.10	953.92	958.40
8/3/98 18:00	960.86	958.58	958.57	958.33	956.13	953.95	958.38
8/4/98 00:00	960.84	958.55	958.54	958.32	956.10	953.91	958.36
8/4/98 06:00	960.81	958.54	958.53	958.31	956.09	953.90	958.35
8/4/98 12:00	960.82	958.52	958.51	958.29	956.07	953.87	958.34
8/4/98 18:00	960.85	958.52	958.51	958.27	956.08	953.90	958.33
8/5/98 00:00	960.84	958.51	958.49	958.26	956.07	953.88	958.32
8/5/98 06:00	960.82	958.49	958.48	958.25	956.06	953.87	958.30
8/5/98 12:00	960.77	958.45	958.45	958.22	956.00	953.80	958.29
8/5/98 18:00	960.84	958.48	958.47	958.22	956.06	953.88	958.28
8/6/98 00:00	960.85	958.46	958.45	958.21	956.04	953.85	958.27
8/6/98 06:00	960.84	958.46	958.45	958.21	956.05	953.86	958.26
8/6/98 12:00	960.86	958.44	958.44	958.18	956.02	953.83	958.25
8/6/98 18:00	960.90	958.45	958.45	958.16	956.06	953.87	958.23
8/7/98 00:00	960.85	958.41	958.40	958.13	956.00	953.80	958.22
8/7/98 06:00	960.81	958.40	958.39	958.12	955.99	953.79	958.20
8/7/98 12:00	960.79	958.36	958.35	958.09	955.94	953.74	958.19
8/7/98 18:00	960.80	958.36	958.36	958.07	955.96	953.78	958.17
8/8/98 00:00	960.71	958.31	958.30	958.03	955.89	953.69	958.15
8/8/98 06:00	960.66	958.29	958.27	958.01	955.87	953.67	958.14
8/8/98 12:00	960.66	958.26	958.24	957.98	955.84	953.65	958.11
8/8/98 18:00	960.72	958.29	958.27	957.96	955.90	953.73	958.11
8/9/98 00:00	960.69	958.25	958.24	957.94	955.87	953.68	958.09
8/9/98 06:00	960.68	958.25	958.23	957.93	955.86	953.68	958.08

Table C-1. Automated Water Level Readings from New Wells at Ramsdell Quarry Landfill, RVAAP (Cont'd)

Date/Time	MW-06 ELEV. ft	MW-07 ELEV. ft	MW-08 ELEV. ft	MW-09 ELEV. ft	MW-10 ELEV. ft	MW-11 ELEV. ft	STAFF GAUGE ELEV. ft
08/09/1998 12:00	960.75	958.25	958.23	957.92	955.87	953.69	958.07
08/09/1998 18:00	960.78	958.28	958.25	957.92	955.94	953.76	958.05
08/10/1998 0:00	960.83	958.59	959	958.72	955.99	953.82	958.32
08/10/1998 6:00	960.88	958.71	959.21	958.69	956.09	953.91	958.34
08/10/1998 12:00	960.92	958.8	959.39	958.81	956.13	953.94	958.4
08/10/1998 18:00	960.98	958.88	959.54	958.83	956.19	954.02	958.42
08/11/1998 0:00	960.96	958.85	959.47	958.78	956.19	954	958.43
08/11/1998 6:00	960.91	958.81	959.36	958.73	956.17	953.97	958.43
08/11/1998 12:00	960.88	958.76	959.2	958.68	956.14	953.93	958.43
08/11/1998 18:00	960.84	958.73	959.18	958.64	956.14	953.93	958.41
08/12/1998 0:00	960.76	958.67	959.06	958.59	956.08	953.86	958.4
08/12/1998 6:00	960.7	958.64	958.99	958.57	956.06	953.84	958.4
08/12/1998 12:00	960.65	958.6	958.96	958.54	956.03	953.8	958.39
08/12/1998 18:00	960.66	958.6	958.91	958.52	956.05	953.84	958.38
08/13/1998 0:00	960.63	958.56	958.83	958.49	956.02	953.8	958.36
08/13/1998 6:00	960.62	958.56	958.81	958.49	956.04	953.82	958.35
08/13/1998 12:00	960.68	958.56	958.79	958.48	956.06	953.85	958.33
08/13/1998 18:00	960.76	958.59	958.8	958.47	956.11	953.91	958.33
08/14/1998 0:00	960.78	958.58	958.77	958.46	956.09	953.9	958.32
08/14/1998 6:00	960.82	958.58	958.77	958.45	956.12	953.92	958.32
08/14/1998 12:00	960.87	958.58	958.77	958.44	956.13	953.93	958.31
08/14/1998 18:00	960.91	958.59	958.75	958.43	956.14	953.94	958.3
08/15/1998 0:00	960.88	958.56	958.71	958.41	956.1	953.88	958.29
08/15/1998 6:00	960.87	958.55	958.71	958.4	956.1	953.89	958.28
08/15/1998 12:00	960.85	958.51	958.66	958.38	956.05	953.83	958.25
08/15/1998 18:00	960.85	958.52	958.67	958.36	956.08	953.87	958.26
08/16/1998 0:00	960.79	958.47	958.61	958.33	956.01	953.78	958.24
08/16/1998 6:00	960.71	958.44	958.58	958.31	955.98	953.75	958.22
08/16/1998 12:00	960.7	958.4	958.54	958.29	955.93	953.71	958.21
08/16/1998 18:00	960.73	958.41	958.56	958.28	955.98	953.77	958.2
08/17/1998 0:00	960.73	958.4	958.53	958.26	955.95	953.74	958.19
08/17/1998 6:00	960.71	958.39	958.52	958.26	955.96	953.75	958.18
08/17/1998 12:00	960.7	958.36	958.49	958.23	955.92	953.71	958.16
08/17/1998 18:00	960.74	958.37	958.5	958.21	955.95	953.75	958.15

Table C-1. Automated Water Level Readings from New Wells at Ramsdell Quarry Landfill, RVAAP (Cont'd)

Date/Time	MW-06 ELEV. ft	MW-07 ELEV. ft	MW-08 ELEV. ft	MW-09 ELEV. ft	MW-10 ELEV. ft	MW-11 ELEV. ft	STAFF GAUGE ELEV. ft
08/18/1998 0:00	960.72	958.34	958.46	958.19	955.92	953.7	958.14
08/18/1998 6:00	960.71	958.34	958.45	958.18	955.93	953.72	958.12
08/18/1998 12:00	960.62	958.29	958.41	958.15	955.86	953.64	958.12
08/18/1998 18:00	960.57	958.26	958.37	958.11	955.83	953.62	958.1
08/19/1998 0:00	960.51	958.21	958.32	958.08	955.77	953.55	958.08
08/19/1998 6:00	960.43	958.19	958.3	958.06	955.74	953.55	958.05
08/19/1998 12:00	960.4	958.16	958.26	958.02	955.71	953.51	958.02
08/19/1998 18:00	960.42	958.16	958.26	958.01	955.74	953.57	958.03
08/20/1998 0:00	960.38	958.14	958.23	957.98	955.72	953.54	958.01
08/20/1998 6:00	960.35	958.13	958.21	957.97	955.7	953.53	957.99
08/20/1998 12:00	960.37	958.1	958.19	957.94	955.68	953.52	957.97
08/20/1998 18:00	960.45	958.13	958.21	957.93	955.74	953.59	957.96
08/21/1998 0:00	960.41	958.1	958.18	957.9	955.7	953.54	957.95
08/21/1998 6:00	960.4	958.08	958.16	957.88	955.68	953.52	957.93
08/21/1998 12:00	960.42	958.07	958.15	957.86	955.68	953.52	957.91
08/21/1998 18:00	960.48	958.09	958.17	957.84	955.72	953.58	957.9
08/22/1998 0:00	960.49	958.08	958.14	957.82	955.7	953.54	957.89
08/22/1998 6:00	960.5	958.08	958.13	957.81	955.71	953.55	957.88
08/22/1998 12:00	960.52	958.07	958.11	957.79	955.69	953.53	957.85
08/22/1998 18:00	960.57	958.07	958.13	957.77	955.71	953.56	957.84
08/23/1998 0:00	960.57	958.05	958.1	957.74	955.68	953.52	957.82
08/23/1998 6:00	960.63	958.07	958.11	957.75	955.73	953.57	957.81
08/23/1998 12:00	960.66	958.06	958.11	957.72	955.71	953.55	957.79
08/23/1998 18:00	960.73	958.09	958.13	957.71	955.77	953.61	957.78
08/24/1998 0:00	960.74	958.07	958.1	957.69	955.74	953.57	957.77
08/24/1998 6:00	960.78	958.07	958.1	957.69	955.74	953.58	957.76
08/24/1998 12:00	960.73	958.03	958.06	957.66	955.67	953.5	957.75
08/24/1998 18:00	960.74	958.04	958.08	957.66	955.7	953.53	957.75
08/25/1998 0:00	960.74	958	958.03	957.64	955.64	953.47	957.74
08/25/1998 6:00	960.65	957.98	958.02	957.62	955.62	953.46	957.73
08/25/1998 12:00	960.67	958.07	958.17	958.17	955.69	953.54	957.86
08/25/1998 18:00	960.67	958.41	959.03	958.7	955.74	953.58	957.98
08/26/1998 0:00	960.61	958.52	959.37	958.67	955.77	953.61	958.05
08/26/1998 6:00	960.52	958.5	959.29	958.59	955.77	953.61	958.07

Table C-1. Automated Water Level Readings from New Wells at Ramsdell Quarry Landfill, RVAAP (Cont'd)

Date/Time	MW-06 ELEV. ft	MW-07 ELEV. ft	MW-08 ELEV. ft	MW-09 ELEV. ft	MW-10 ELEV. ft	MW-11 ELEV. ft	STAFF GAUGE ELEV. ft
08/26/1998 12:00	960.46	958.44	959.08	958.53	955.73	953.57	958.1
08/26/1998 18:00	960.44	958.42	958.99	958.5	955.75	953.6	958.09
08/27/1998 0:00	960.38	958.38	958.92	958.68	955.73	953.58	958.08
08/27/1998 6:00	960.33	958.34	958.83	958.71	955.71	953.56	958.08
08/27/1998 12:00	960.33	958.3	958.64	958.5	955.71	953.57	958.07
08/27/1998 18:00	960.38	958.31	958.71	958.42	955.77	953.64	958.06
08/28/1998 0:00	960.4	958.29	958.68	958.37	955.77	953.63	958.05
08/28/1998 6:00	960.4	958.29	958.66	958.35	955.78	953.64	958.04
08/28/1998 12:00	960.47	958.29	958.66	958.27	955.8	953.66	958.03
08/28/1998 18:00	960.54	958.31	958.64	958.29	955.86	953.72	958.01
08/29/1998 0:00	960.55	958.29	958.59	958.27	955.83	953.68	958.01
08/29/1998 6:00	960.53	958.28	958.58	958.27	955.83	953.68	958.01
08/29/1998 12:00	960.51	958.25	958.53	958.25	955.78	953.63	958
08/29/1998 18:00	960.53	958.26	958.53	958.24	955.8	953.65	957.99
08/30/1998 0:00	960.5	958.23	958.49	958.21	955.76	953.61	957.99
08/30/1998 6:00	960.45	958.2	958.47	958.19	955.74	953.58	957.97
08/30/1998 12:00	960.47	958.18	958.44	958.17	955.73	953.58	957.95
08/30/1998 18:00	960.51	958.21	958.46	958.16	955.77	953.63	957.95
08/31/1998 0:00	960.44	958.16	958.4	958.12	955.71	953.55	957.93
08/31/1998 6:00	960.38	958.14	958.37	958.11	955.68	953.53	957.93
08/31/1998 12:00	960.35	958.1	958.32	958.07	955.63	953.48	957.9
08/31/1998 18:00	960.38	958.1	958.33	958.05	955.66	953.52	957.89
09/01/1998 0:00	960.37	958.07	958.28	958.02	955.62	953.48	957.87
09/01/1998 6:00	960.38	958.08	958.29	958.02	955.66	953.52	957.86
09/01/1998 12:00	960.44	958.07	958.27	958	955.65	953.52	957.84
09/01/1998 18:00	960.53	958.11	958.3	957.99	955.72	953.59	957.84
09/02/1998 0:00	960.58	958.11	958.3	957.99	955.73	953.6	957.83
09/02/1998 6:00	960.63	958.14	958.32	957.99	955.77	953.64	957.81
09/02/1998 12:00	960.62	958.11	958.28	957.96	955.73	953.59	957.79
09/02/1998 18:00	960.56	958.07	958.25	957.92	955.68	953.55	957.79
09/03/1998 0:00	960.55	958.04	958.22	957.89	955.64	953.51	957.78
09/03/1998 6:00	960.49	958.02	958.18	957.87	955.61	953.48	957.76
09/03/1998 12:00	960.49	957.99	958.15	957.84	955.57	953.45	957.74
09/03/1998 18:00	960.5	957.99	958.16	957.81	955.6	953.49	957.73

Table C-1. Automated Water Level Readings from New Wells at Ramsdell Quarry Landfill, RVAAP (Cont'd)

Date/Time	MW-06 ELEV. ft	MW-07 ELEV. ft	MW-08 ELEV. ft	MW-09 ELEV. ft	MW-10 ELEV. ft	MW-11 ELEV. ft	STAFF GAUGE ELEV. ft
09/04/1998 0:00	960.47	957.96	958.11	957.78	955.55	953.43	957.72
09/04/1998 6:00	960.4	957.94	958.08	957.76	955.52	953.41	957.7
09/04/1998 12:00	960.37	957.9	958.03	957.72	955.47	953.36	957.68
09/04/1998 18:00	960.3	957.87	958.01	957.67	955.45	953.35	957.67
09/05/1998 0:00	960.18	957.81	957.93	957.62	955.35	953.26	957.66
09/05/1998 6:00	960.09	957.77	957.89	957.59	955.31	953.23	957.63
09/05/1998 12:00	960.07	957.74	957.86	957.56	955.28	953.21	957.62
09/05/1998 18:00	960.15	957.76	957.9	957.55	955.36	953.31	957.61
09/06/1998 0:00	960.17	957.76	957.88	957.53	955.36	953.31	957.6
09/06/1998 6:00	960.21	957.77	957.89	957.53	955.4	953.34	957.58
09/06/1998 12:00	960.29	957.78	957.9	957.51	955.42	953.36	957.55
09/06/1998 18:00	960.39	957.81	957.94	957.5	955.49	953.43	957.54
09/07/1998 0:00	960.42	957.81	957.92	957.47	955.47	953.4	957.54
09/07/1998 6:00	960.41	957.82	957.92	957.47	955.5	953.42	957.53
09/07/1998 12:00	960.49	957.83	957.93	957.59	955.5	953.41	957.55
09/07/1998 18:00	960.51	957.84	957.96	957.7	955.51	953.41	957.58
09/08/1998 0:00	960.51	957.82	957.96	957.69	955.45	953.35	957.57
09/08/1998 6:00	960.5	957.82	957.98	957.68	955.46	953.37	957.55
09/08/1998 12:00	960.48	957.79	957.97	957.65	955.41	953.32	957.55
09/08/1998 18:00	960.48	957.77	957.97	957.6	955.37	953.28	957.54
09/09/1998 0:00	960.46	957.72	957.88	957.56	955.3	953.22	957.52
09/09/1998 6:00	960.46	957.69	957.86	957.53	955.27	953.2	957.51
09/09/1998 12:00	960.44	957.65	957.85	957.48	955.21	953.15	957.49
09/09/1998 18:00	960.43	957.65	957.82	957.49	955.23	953.18	957.49
09/10/1998 0:00	960.43	957.62	957.77	957.44	955.18	953.14	957.48
09/10/1998 6:00	960.42	957.59	957.73	957.4	955.15	953.11	957.46
09/10/1998 12:00	960.38	957.56	957.63	957.37	955.14	953.11	957.43
09/10/1998 18:00	960.38	957.59	957.74	957.36	955.2	953.18	957.42
09/11/1998 0:00	960.38	957.58	957.71	957.32	955.19	953.16	957.42
09/11/1998 6:00	960.37	957.57	957.71	957.3	955.2	953.17	957.4
09/11/1998 12:00	960.34	957.57	957.7	957.28	955.21	953.18	957.37
09/11/1998 18:00	960.34	957.6	957.74	957.28	955.27	953.24	957.37
09/12/1998 0:00	960.34	957.59	957.73	957.26	955.26	953.22	957.36
09/12/1998 6:00	960.34	957.58	957.7	957.23	955.23	953.19	957.34

Table C-1. Automated Water Level Readings from New Wells at Ramsdell Quarry Landfill, RVAAP (Cont'd)

Date/Time	MW-06 ELEV. ft	MW-07 ELEV. ft	MW-08 ELEV. ft	MW-09 ELEV. ft	MW-10 ELEV. ft	MW-11 ELEV. ft	STAFF GAUGE ELEV. ft
09/12/1998 12:00	960.3	957.57	957.68	957.21	955.21	953.17	957.32
09/12/1998 18:00	960.31	957.57	957.69	957.19	955.23	953.19	957.31
09/13/1998 0:00	960.3	957.55	957.65	957.15	955.18	953.14	957.29
09/13/1998 6:00	960.3	957.54	957.63	957.13	955.17	953.13	957.28
09/13/1998 12:00	960.26	957.51	957.59	957.1	955.12	953.08	957.25
09/13/1998 18:00	960.27	957.51	957.6	957.08	955.15	953.12	957.25
09/14/1998 0:00	960.26	957.48	957.55	957.04	955.1	953.06	957.24
09/14/1998 6:00	960.26	957.47	957.53	957.02	955.09	953.06	957.22
09/14/1998 12:00	960.22	957.44	957.49	956.99	955.05	953.03	957.18
09/14/1998 18:00	960.22	957.45	957.51	956.98	955.09	953.07	957.19
09/15/1998 0:00	960.21	957.45	957.5	956.97	955.09	953.07	957.16
09/15/1998 6:00	960.21	957.44	957.48	956.94	955.07	953.05	957.15
09/15/1998 12:00	960.19	957.41	957.41	956.9	955	952.98	957.12
09/15/1998 18:00	960.18	957.41	957.42	956.88	955.01	953	957.13
09/16/1998 0:00	960.18	957.39	957.38	956.85	954.97	952.96	957.1
09/16/1998 6:00	960.17	957.38	957.36	956.82	954.95	952.95	957.09
09/16/1998 12:00	960.15	957.36	957.32	956.8	954.91	952.92	957.07
09/16/1998 18:00	960.14	957.37	957.33	956.81	954.94	952.95	957.07
09/17/1998 0:00	960.14	957.35	957.31	956.8	954.91	952.92	957.05
09/17/1998 6:00	960.13	957.35	957.32	956.8	954.93	952.94	957.04
09/17/1998 12:00	960.1	957.34	957.13	956.77	954.9	952.91	957
09/17/1998 18:00	960.11	957.35	957.35	956.77	954.94	952.95	957.01
09/18/1998 0:00	960.1	957.34	957.28	956.73	954.9	952.91	956.99
09/18/1998 6:00	960.1	957.34	957.28	956.71	954.91	952.92	956.97
09/18/1998 12:00	960.06	957.33	957.23	956.69	954.9	952.92	956.93
09/18/1998 18:00	959.99	957.36			954.97	952.98	956.94
09/19/1998 0:00	959.98	957.35			954.93	952.94	956.92
09/19/1998 6:00	959.98	957.35			954.93	952.94	956.89
09/19/1998 12:00	959.99	957.33				952.91	956.87
09/19/1998 18:00	960	957.34					956.87
09/20/1998 0:00	959.98						956.85
09/20/1998 6:00	959.95						956.83
09/20/1998 20:00	958.5	957.24	957.08	956.54	954.52	952.73	956.8
09/21/1998 0:00	958.51	957.22	957.05	956.52	954.47	952.68	956.78

Table C-1. Automated Water Level Readings from New Wells at Ramsdell Quarry Landfill, RVAAP (Cont'd)

Date/Time	MW-06 ELEV. ft	MW-07 ELEV. ft	MW-08 ELEV. ft	MW-09 ELEV. ft	MW-10 ELEV. ft	MW-11 ELEV. ft	STAFF GAUGE ELEV. ft
09/21/1998 6:00	958.5	957.22	957.05	956.52	954.48	952.69	956.78
09/21/1998 12:00	958.47	957.19	957.01	956.51	954.43	952.64	956.76
09/21/1998 18:00	958.48	957.19	957.02	956.51	954.45	952.66	956.76
09/22/1998 0:00	958.45	957.17	956.98	956.49	954.39	952.62	956.74
09/22/1998 6:00	958.41	957.16	956.97	956.47	954.38	952.6	956.72
09/22/1998 12:00	958.35	957.12	956.93	956.43	954.33	952.56	956.69
09/22/1998 18:00	958.32	957.11	956.91	956.41	954.31	952.56	956.68
09/23/1998 0:00	958.2	957.06	956.84	956.34	954.21	952.47	956.67
09/23/1998 6:00	958.1	957.01	956.78	956.3	954.16	952.43	956.65
09/23/1998 12:00	958.06	956.97	956.73	956.25	954.12	952.41	956.61
09/23/1998 18:00	958.11	956.97	956.77	956.25	954.19	952.49	956.59
09/24/1998 0:00	958.11	956.96	956.76	956.22	954.18	952.48	956.59
09/24/1998 6:00	958.11	956.94	956.75	956.21	954.18	952.47	956.59
09/24/1998 12:00	958.17	956.94	956.76	956.2	954.19	952.49	956.59
09/24/1998 18:00	958.19	956.95	956.77	956.19	954.21	952.51	956.59
09/25/1998 0:00	958.2	956.93	956.74	956.17	954.18	952.47	956.59
09/25/1998 6:00	958.24	956.94	956.77	956.17	954.21	952.51	956.59
09/25/1998 12:00	958.23	956.92	956.74	956.16	954.17	952.47	956.59
09/25/1998 18:00	958.22	956.91	956.73	956.15	954.17	952.46	956.59
09/26/1998 0:00	958.18	956.88	956.7	956.12	954.12	952.42	956.59
09/26/1998 6:00	958.15	956.86	956.68	956.1	954.1	952.4	956.59
09/26/1998 12:00	958.17	956.83	956.65	956.08	954.08	952.39	956.59
09/26/1998 18:00	958.26	956.86	956.72	956.1	954.17	952.48	956.59
09/27/1998 0:00	958.28	956.86	956.71	956.09	954.15	952.46	956.59
09/27/1998 6:00	958.3	956.86	956.7	956.08	954.13	952.44	956.59
09/27/1998 12:00	958.36	956.86	956.72	956.08	954.16	952.46	956.59
09/27/1998 18:00	958.37	956.89	956.76	956.12	954.19	952.49	956.59
09/28/1998 0:00	958.27	956.84	956.67	956.12	954.07	952.37	956.59
09/28/1998 6:00	958.16	956.79	956.62	956.09	954.01	952.31	956.59
09/28/1998 12:00	958.11	956.74	956.57	956.06	953.95	952.27	956.59
09/28/1998 18:00	958.09	956.72	956.57	956.04	953.97	952.3	956.59
09/29/1998 0:00	958.07	956.7	956.55	956.01	953.94	952.28	956.59
09/29/1998 6:00	958.06	956.69	956.55	956	953.96	952.31	956.59
09/29/1998 12:00	958.13	956.68	956.55	955.99	953.96	952.33	956.59

Table C-1. Automated Water Level Readings from New Wells at Ramsdell Quarry Landfill, RVAAP (Cont'd)

Date/Time	MW-06 ELEV. ft	MW-07 ELEV. ft	MW-08 ELEV. ft	MW-09 ELEV. ft	MW-10 ELEV. ft	MW-11 ELEV. ft	STAFF GAUGE ELEV. ft
09/29/1998 18:00	958.21	956.71	956.6	956	954.02	952.38	956.59
09/30/1998 0:00	958.25	956.71	956.61	955.99	954.02	952.37	956.59
09/30/1998 6:00	958.23	956.72	956.61	955.98	954.02	952.36	956.59
09/30/1998 12:00	958.22	956.69	956.57	955.96	953.97	952.32	956.59
09/30/1998 18:00	958.25	956.7	956.59	955.96	954	952.35	956.59
10/01/1998 0:00	958.32	956.71	956.6	955.95	954.01	952.35	956.59
10/01/1998 6:00	958.11	956.65	956.5	955.91	953.87	952.21	956.59
10/01/1998 12:00	957.95	956.54	956.37	955.83	953.73	952.09	956.59
10/01/1998 18:00	957.93	956.52	956.36	955.8	953.74	952.13	956.59
10/02/1998 0:00	957.92	956.48	956.34	955.77	953.73	952.13	956.59
10/02/1998 6:00	957.88	956.47	956.33	955.75	953.73	952.14	956.59
10/02/1998 12:00	957.81	956.42	956.26	955.7	953.66	952.07	956.59
10/02/1998 18:00	957.82	956.41	956.27	955.69	953.68	952.1	956.59
10/03/1998 0:00	957.79	956.38	956.23	955.65	953.65	952.07	956.59
10/03/1998 6:00	957.77	956.37	956.23	955.64	953.66	952.09	956.59
10/03/1998 12:00	957.77	956.36	956.21	955.63	953.65	952.08	956.59
10/03/1998 18:00	957.81	956.39	956.25	955.74	953.72	952.14	956.59
10/04/1998 0:00	957.77	956.38	956.25	955.89	953.69	952.09	956.59
10/04/1998 6:00	957.73	956.39	956.27	955.95	953.71	952.11	956.59
10/04/1998 12:00	957.68	956.35	956.24	955.95	953.64	952.05	956.59
10/04/1998 18:00	957.69	956.36	956.29	955.97	953.69	952.1	956.59
10/05/1998 0:00	957.7	956.35	956.28	955.96	953.66	952.08	956.59
10/05/1998 6:00	957.67	956.35	956.3	955.95	953.67	952.08	956.59
10/05/1998 12:00	957.67	956.33	956.29	955.93	953.66	952.08	956.59
10/05/1998 18:00	957.69	956.35	956.32	955.93	953.7	952.12	956.59
10/06/1998 0:00	957.7	956.33	956.31	955.9	953.66	952.08	956.59
10/06/1998 6:00	957.68	956.33	956.31	955.89	953.66	952.09	956.59
10/06/1998 12:00	957.75	956.33	956.31	955.87	953.67	952.09	956.59
10/06/1998 18:00	957.83	956.37	956.37	955.89	953.75	952.17	956.59
10/07/1998 0:00	957.82	956.38	956.37	955.88	953.73	952.14	956.59
10/07/1998 6:00	957.84	956.37	956.37	955.87	953.72	952.13	956.59
10/07/1998 12:00	957.91	956.38	956.38	955.86	953.73	952.14	956.59
10/07/1998 18:00	957.96	956.42	956.43	955.93	953.79	952.19	956.59
10/08/1998 0:00	957.94	956.56	957.01	957.2	953.87	952.24	956.59

Table C-1. Automated Water Level Readings from New Wells at Ramsdell Quarry Landfill, RVAAP (Cont'd)

Date/Time	MW-06 ELEV. ft	MW-07 ELEV. ft	MW-08 ELEV. ft	MW-09 ELEV. ft	MW-10 ELEV. ft	MW-11 ELEV. ft	STAFF GAUGE ELEV. ft
10/08/1998 6:00	957.9	956.85	957.7	957.77	953.97	952.32	956.59
10/08/1998 12:00	957.82	956.92	957.84	957.75	954.02	952.34	956.59
10/08/1998 18:00	957.76	956.96	957.85	957.74	954.08	952.38	956.59
10/09/1998 0:00	957.75	956.99	957.82	957.73	954.13	952.44	956.59
10/09/1998 6:00	957.74	957.02	957.79	957.7	954.18	952.48	956.59
10/09/1998 12:00	957.77	957.04	957.76	957.66	954.21	952.5	956.59
10/09/1998 18:00	957.79	957.07	957.74	957.64	954.26	952.55	956.6
10/10/1998 0:00	957.81	957.08	957.71	957.6	954.27	952.55	956.6
10/10/1998 6:00	957.79	957.07	957.66	957.55	954.26	952.53	956.59
10/10/1998 12:00	957.78	957.05	957.61	957.5	954.23	952.5	956.59
10/10/1998 18:00	957.78	957.06	957.59	957.48	954.26	952.52	956.59
10/11/1998 0:00	957.78	957.04	957.55	957.44	954.23	952.5	956.59
10/11/1998 6:00	957.72	957.02	957.5	957.39	954.19	952.46	956.59
10/11/1998 12:00	957.7	956.99	957.43	957.34	954.14	952.41	956.59
10/11/1998 18:00	957.71	957	957.43	957.32	954.19	952.46	956.59
10/12/1998 0:00	957.72	956.98	957.39	957.28	954.16	952.44	956.59
10/12/1998 6:00	957.71	956.98	957.36	957.25	954.16	952.43	956.59
10/12/1998 12:00	957.77	956.97	957.34	957.21	954.16	952.44	956.59
10/12/1998 18:00	957.85	957.01	957.36	957.15	954.24	952.51	956.59
10/13/1998 0:00	957.92	957.01	957.34	957.09	954.24	952.51	956.59
10/13/1998 6:00	957.99	957.04	957.35	957.06	954.29	952.54	956.59
10/13/1998 12:00	958.05	957.05	957.32	957.02	954.28	952.53	956.59
10/13/1998 18:00	958.06	957.06	957.31	956.99	954.29	952.53	956.59
10/14/1998 0:00	958.03	957.03	957.25	956.92	954.21	952.45	956.59
10/14/1998 6:00	958.02	957.02	957.21	956.88	954.2	952.45	956.59
10/14/1998 12:00	957.96	956.98	957.14	956.81	954.12	952.37	956.59
10/14/1998 18:00	957.89	956.95	957.1	956.77	954.09	952.35	956.59
10/15/1998 0:00	957.84	956.91	957.05	956.71	954.05	952.31	956.59
10/15/1998 6:00	957.73	956.85	956.97	956.65	953.96	952.24	956.59
10/15/1998 12:00	957.67	956.79	956.9	956.58	953.9	952.19	956.59
10/15/1998 18:00	957.64	956.77	956.88	956.56	953.92	952.22	956.59
10/16/1998 0:00	957.57	956.71	956.82	956.5	953.86	952.16	956.59
10/16/1998 6:00	957.51	956.68	956.76	956.45	953.82	952.14	956.59
10/16/1998 12:00	957.55	956.65	956.73	956.4	953.82	952.15	956.59

Table C-1. Automated Water Level Readings from New Wells at Ramsdell Quarry Landfill, RVAAP (Cont'd)

Date/Time	MW-06 ELEV. ft	MW-07 ELEV. ft	MW-08 ELEV. ft	MW-09 ELEV. ft	MW-10 ELEV. ft	MW-11 ELEV. ft	STAFF GAUGE ELEV. ft
10/16/1998 18:00	957.59	956.66	956.76	956.4	953.88	952.21	956.59
10/17/1998 0:00	957.61	956.64	956.74	956.36	953.87	952.2	956.59
10/17/1998 6:00	957.61	956.64	956.73	956.34	953.88	952.21	956.59
10/17/1998 12:00	957.7	956.64	956.73	956.32	953.89	952.22	956.59
10/17/1998 18:00	957.77	956.67	956.77	956.32	953.95	952.27	956.59
10/18/1998 0:00	957.82	956.68	956.77	956.3	953.94	952.26	956.59
10/18/1998 6:00	957.88	956.7	956.79	956.3	953.97	952.29	956.59
10/18/1998 12:00	957.9	956.69	956.77	956.27	953.95	952.26	956.59
10/18/1998 18:00	957.92	956.7	956.76	956.31	953.95	952.26	956.59
10/19/1998 0:00	957.79	956.67	956.75	956.49	953.86	952.15	956.59
10/19/1998 6:00		956.65	956.78	956.53	953.83	952.14	956.59
10/19/1998 12:00		956.62	956.76	956.53			956.59
10/19/1998 18:00				956.55			
10/20/1998 0:00				956.53			
10/20/1998 6:00				956.51			
10/26/1998 8:00	958.87	956.42	956.59	956.07	953.93	952.17	956.59
10/26/1998 12:00	958.87	956.41	956.58	956.05	953.94	952.18	956.59
10/26/1998 18:00	958.89	956.41	956.57	956.03	953.93	952.18	956.59
10/27/1998 0:00	958.88	956.4	956.54	955.99	953.92	952.17	956.59
10/27/1998 6:00	958.88	956.38	956.51	955.97	953.9	952.15	956.59
10/27/1998 12:00	958.89	956.38	956.51	955.94	953.91	952.17	956.59
10/27/1998 18:00	958.99	956.41	956.55	955.95	953.97	952.23	956.59
10/28/1998 0:00	959.07	956.44	956.58	955.95	954.02	952.27	956.59
10/28/1998 6:00	959.2	956.49	956.64	955.98	954.08	952.32	956.59
10/28/1998 12:00	959.24	956.51	956.65	955.98	954.08	952.31	956.59
10/28/1998 18:00	959.2	956.48	956.59	955.95	954	952.22	956.59
10/29/1998 0:00	959.11	956.43	956.52	955.9	953.93	952.15	956.59
10/29/1998 6:00	959.03	956.39	956.45	955.86	953.86	952.09	956.59
10/29/1998 12:00	958.95	956.35	956.4	955.81	953.83	952.08	956.59
10/29/1998 18:00	959	956.36	956.41	955.81	953.86	952.12	956.59
10/30/1998 0:00	958.98	956.34	956.39	955.78	953.85	952.11	956.59
10/30/1998 6:00	959.02	956.35	956.4	955.77	953.86	952.13	956.59
10/30/1998 12:00	959.04	956.35	956.4	955.75	953.87	952.14	956.59
10/30/1998 18:00	959.05	956.35	956.39	955.74	953.86	952.12	956.59

Table C-1. Automated Water Level Readings from New Wells at Ramsdell Quarry Landfill, RVAAP (Cont'd)

Date/Time	MW-06 ELEV. ft	MW-07 ELEV. ft	MW-08 ELEV. ft	MW-09 ELEV. ft	MW-10 ELEV. ft	MW-11 ELEV. ft	STAFF GAUGE ELEV. ft
10/31/1998 0:00	958.99	956.32	956.35	955.69	953.82	952.07	956.59
10/31/1998 6:00	958.94	956.29	956.3	955.65	953.77	952.03	956.59
10/31/1998 12:00	958.86	956.25	956.24	955.6	953.73	952	956.59
10/31/1998 18:00	958.85	956.23	956.22	955.58	953.71	952	956.59
11/01/1998 12:00	958.48	956.02	956.21	955.55	953.49	951.82	956.59

Table C-2. Manual Water Level Readings at Ramsdell Quarry, Dry Weather and October 1998 Quarterly Sampling Events

Station	Date	Time	Reference Elevation[a]	Depth to Water (feet)	Water Level Elevation[b]
RQLMW-001	9/18/98	1715	986.13	8.42	977.71
RQLMW-002	9/18/98	1726	981.90	7.98	973.92
RQLMW-003	9/18/98	1733	975.54	8.67	986.87
RQLMW-004	9/18/98	1736	991.80	29.17	962.63
RQLMW-005	9/18/98	1739	977.38	35.54	941.84
RQLMW-006	9/18/98	1741	995.39	33.34	962.05
RQLMW-007	9/18/98	1744	965.91	25.58	940.33
RQLMW-008	9/18/98	1747	966.08	21.44	944.64
RQLMW-009	9/18/98	1749	964.58	23.65	940.93
RQLMW-010	9/18/98	1750	982.14	23.50	958.64
RQLMW-011	9/18/98	1752	976.57	27.24	949.33
Staff Gauge	9/18/98	1754	955.69/961.66[c]	1.25 (AGS)[d]	956.94
RQLMW-001	10/19/98	0735	986.13	30.24	955.89
RQLMW-002	10/19/98	0745	981.90	26.51	955.39
RQLMW-003	10/19/98	0742	975.54	22.22	953.32
RQLMW-004	10/19/98	0740	991.80	34.33	957.47
RQLMW-005	10/19/98	0752	977.38	24.38	953.00
RQLMW-006	10/19/98	0738	995.39	36.52	958.87
RQLMW-007	10/19/98	0757	965.91	9.49	956.42
RQLMW-008	10/19/98	0759	966.08	9.49	956.59
RQLMW-009	10/19/98	0800	964.58	8.51	956.07
RQLMW-010	10/19/98	0754	982.14	28.21	953.93
RQLMW-011	10/19/98	0749	976.57	24.40	952.17
Staff Gauge	10/19/98	NR	955.69/961.66[c]	1.20 (AGS)[d]	956.89

[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.
NR = not recorded.

Attachment D

Ramsdell Quarry Groundwater Investigation
October 1998 Quarterly Report

Table D-1. Precipitation Data for September and October 1998[a]

Day	September	October
1	0.000	0.000
2	0.000	0.000
3	0.034	1.570
4	0.000	0.220
5	0.000	0.010
6	0.000	TR
7	0.024	TR
8	0.650	1.800
9	.0120	0.010
10	0.119	0.000
11	0.000	0.000
12	0.000	TR
13	0.000	0.010
14	0.000	0.000
15	0.000	TR
16	0.000	0.000
17	0.053	0.600
18	0.000	0.020
19	0.000	0.000
20	0.042	0.040
21	0.326	0.400
22	0.004	0.000
23	0.000	0.000
24	0.000	0.000
25	0.050	TR
26	0.000	0.000
27	0.000	0.000
28	0.000	0.010
29	0.000	0.000
30	0.000	0.040
31	---	0.000
Total	1.422	4.370

[a]September data obtained from USACE Michael Kirwan Reservoir Station.
October data from the Ramsdell Quarry rain gauge.
TR = trace.

Attachment E

Ramsdell Quarry Groundwater Investigation
October 1998 Quarterly Report

Table E-1. October Quarterly Monitoring Report for Ramsdell Quarry Groundwater Investigation, Groundwater Analytical Results - Total Metals and Inorganics

Analyte		S___1	S___7	S___2	S___8	S___1	S___3	S___9
Media		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Station		RQLmw-006	RQLmw-006	RQLmw-007	RQLmw-007	RQLmw-007FD	RQLmw-008	RQLmw-008
Sample ID		RQ0067	RQ0096	RQ0068	RQ0097	RQ0074	RQ0069	RQ0098
Date		09/20/98	10/19/98	09/20/98	10/20/98	09/20/98	09/19/98	10/20/98
Filtered	Units	Total	Total	Total	Total	Total	Total	Total
Cyanide	MG/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Aluminum	UG/L	56 U	200 U	77.6 U	100 U	73.6 U	103 U	121 U
Antimony	UG/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Arsenic	UG/L	35 =	37.8 =	53 =	56.8 =	50.9 =	60.6 =	58.6 =
Barium	UG/L	35.4 J	32.7 J	57.1 J	42.3 J	54.5 J	28.2 J	31.3 J
Beryllium	UG/L	4 U	4 U	4 U	4 U	4 U	2 U	1.3 U
Cadmium	UG/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Calcium	UG/L	104000 =	110000 J	152000 =	130000 J	144000 =	146000 =	110000 J
Chromium	UG/L	4 J	10 =	10 U	10 U	10 U	10 U	10 U
Cobalt	UG/L	159 =	96.3 =	19.5 J	23 J	18.2 J	64.5 =	26.3 J
Copper	UG/L	4.2 J	25 R	25 U	25 R	25 U	25 U	25 R
Iron	UG/L	6060 =	10700 =	83500 =	71300 =	79900 =	120000 =	132000 =
Lead	UG/L	3 U	3 U	3 U	3 U	3 U	3 U	3 U
Magnesium	UG/L	41500 =	42300 J	62000 =	56900 J	59300 =	65700 =	44600 J
Manganese	UG/L	5740 =	4770 =	4560 =	4490 =	4380 =	7140 =	4200 =
Mercury	UG/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Nickel	UG/L	858 =	506 =	47.3 =	54.8 =	45.6 =	226 =	82 =
Potassium	UG/L	3300 J	2590 J	11400 =	8890 J	10800 =	7120 =	7760 J
Selenium	UG/L	5 U	5 U	5 U	5 U	5 U	4.2 J	5 U
Silver	UG/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Sodium	UG/L	2020 J	1690 J	26100 =	22900 =	24400 =	21500 =	15800 =
Thallium	UG/L	2 U	2 U	2 U	2 U	1 J	1.3 J	1.6 J
Vanadium	UG/L	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Zinc	UG/L	71.8 U	42.6 U	178 J	291 J	211 J	920 J	234 J

Table E-1. October Quarterly Monitoring Report for Ramsdell Quarry Groundwater Investigation, Groundwater Analytical Results - Total Metals and Inorganics (Cont'd)

Analyte		S____4	S___10	S____5	S___11	S____6	S___12
Media		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Station		RQLmw-009	RQLmw-009	RQLmw-010	RQLmw-010	RQLmw-011	RQLmw-011
Sample ID		RQ0070	RQ0099	RQ0071	RQ0100	RQ0072	RQ0101
Date		09/19/98	10/20/98	09/19/98	10/19/98	09/19/98	10/19/98
Filtered	Units	Total	Total	Total	Total	Total	Total
Cyanide	MG/L	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Aluminum	UG/L	59.2 U	119 U	77.6 U	54.2 U	313 =	83.7 U
Antimony	UG/L	5 U	5 U	5 U	5 U	5 U	5 U
Arsenic	UG/L	11.2 =	4.9 J	5 U	5 U	3.1 J	5 U
Barium	UG/L	46.1 J	55.5 J	6 J	4.4 J	31.7 J	29 J
Beryllium	UG/L	4 U	4 U	4 U	4 U	1.7 U	0.95 U
Cadmium	UG/L	5 U	5 U	5 U	5 U	5 U	5 U
Calcium	UG/L	37100 =	41800 J	65200 =	63500 J	23300 =	28100 J
Chromium	UG/L	10 U	10 U	10 U	10 U	10 U	10 U
Cobalt	UG/L	50 U	50 U	50 U	50 U	45.1 J	43 J
Copper	UG/L	4.2 J	25 R	25 U	25 R	25 U	25 R
Iron	UG/L	18300 =	7510 =	148 =	336 U	3660 =	1920 =
Lead	UG/L	3 U	3 U	3 U	3 U	3 U	3 U
Magnesium	UG/L	45600 =	52700 J	31200 =	28200 J	13400 =	15200 J
Manganese	UG/L	3200 =	2220 =	1000 =	910 =	2610 =	3190 =
Mercury	UG/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Nickel	UG/L	18.6 J	40 U	40 U	40 U	143 =	134 =
Potassium	UG/L	4360 J	4020 J	3850 J	3270 J	4930 J	4360 J
Selenium	UG/L	5 U	5 U	3.9 J	5 U	3.9 J	5 U
Silver	UG/L	10 U	10 U	10 U	10 U	10 U	10 U
Sodium	UG/L	6380 =	3240 J	4150 J	4310 J	2520 J	2850 J
Thallium	UG/L	2 U	2 U	2 U	2 U	2 U	2 U
Vanadium	UG/L	50 U	50 U	50 U	50 U	50 U	50 U
Zinc	UG/L	52.5 U	58 U		32 U	126 U	389 J

Table E-2. October Quarterly Monitoring Report for Ramsdell Quarry Groundwater Investigation, Groundwater Analytical Results - Filtered Metals

Analyte		S___1	S___7	S___2	S___8	S___1	S___3	S___9
Media		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Station		RQLmw-006	RQLmw-006	RQLmw-007	RQLmw-007	RQLmw-007FD	RQLmw-008	RQLmw-008
Sample ID		RQ0067	RQ0096	RQ0068	RQ0097	RQ0074	RQ0069	RQ0098
Date		09/20/98	10/19/98	09/20/98	10/20/98	09/20/98	09/19/98	10/20/98
Filtered	Units	Dissolved	Dissolved	Dissolved	Dissolved	Dissolved	Dissolved	Dissolved
Aluminum	UG/L	200 U	69 U	72.8 U	80.4 U	81.6 U	108 U	87.8 U
Antimony	UG/L	5 U	5 U	5 U	5 U	5 U	5 U	6 U
Arsenic	UG/L	28.4 =	21.8 =	50.2 =	54.3 =	51 =	53.2 =	57.5 =
Barium	UG/L	34 J	31.8 J	56.5 J	42.4 J	56.9 J	25.5 J	30 J
Beryllium	UG/L	4 U	4 U	4 U	4 U	4 U	2 U	1.4 U
Cadmium	UG/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Calcium	UG/L	97300 =	106000 J	151000 =	129000 J	153000 =	137000 =	111000 J
Chromium	UG/L	10 U	9.4 J	10 U	10 U	10 U	10 U	10 U
Cobalt	UG/L	156 =	109 =	20.5 J	25 J	19.3 J	64.5 =	31.7 J
Copper	UG/L	5.4 J	7.5 R	25 U	25 R	8.9 J	25 U	6.9 R
Iron	UG/L	5520 =	6520 =	82500 =	71400 =	82600 =	110000 =	124000 =
Lead	UG/L	3 U	3 U	3 U	3 U	3 U	3 U	3 U
Magnesium	UG/L	39000 =	420000 J	62000 =	57300 J	62500 =	61800 =	47500 J
Manganese	UG/L	5440 =	5370 =	4570 =	4530 =	4610 =	6760 =	4520 =
Mercury	UG/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Nickel	UG/L	823 =	599 =	49.5 =	56.2 =	50.6 =	220 =	94.1 =
Potassium	UG/L	3240 J	2810 J	11300 =	8820 J	11300 =	6600 =	7400 J
Selenium	UG/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Silver	UG/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Sodium	UG/L	2070 J	2030 J	25600 =	22700 =	25500 =	20600 =	16800 =
Thallium	UG/L	2 U	2 U	1.1 J	2 U	1.2 J	2 =	1.5 J
Vanadium	UG/L	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Zinc	UG/L	66.3 U	61.2 U	158 U	261 J	184 J	941 J	197 J

Table E-2. October Quarterly Monitoring Report for Ramsdell Quarry Groundwater Investigation, Groundwater Analytical Results - Filtered Metals (Cont'd)

Analyte		S____4	S___10	S____5	S___11	S____6	S___12
Media		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Station		RQLmw-009	RQLmw-009	RQLmw-010	RQLmw-010	RQLmw-011	RQLmw-011
Sample ID		RQ0070	RQ0099	RQ0071	RQ0100	RQ0072	RQ0101
Date		09/19/98	10/20/98	09/19/98	10/19/98	09/19/98	10/19/98
Filtered	Units	Dissolved	Dissolved	Dissolved	Dissolved	Dissolved	Dissolved
Aluminum	UG/L	200 U	200 U	83.2 U	200 U	192 U	150 U
Antimony	UG/L	5 U	5 U	5 U	5 U	5 U	5 U
Arsenic	UG/L	10.7 =	3.9 J	5 U	5 U	5 U	5 U
Barium	UG/L	46.3 J	52.6 J	6.5 J	4 J	32.8 J	28.4 J
Beryllium	UG/L	4 U	4 U	4 U	4 U	1.6 U	1.1 U
Cadmium	UG/L	5 U	5 U	5 U	5 U	5 U	5 U
Calcium	UG/L	37100 =	38200 J	63500 =	63100 J	24100 =	26600 J
Chromium	UG/L	10 U	10 U	10 U	10 U	10 U	10 U
Cobalt	UG/L	50 U	50 U	50 U	50 U	48.3 J	39.2 J
Copper	UG/L	25 U	25 R	25 U	25 R	25 U	25 R
Iron	UG/L	18500 =	6670 =	86.3 U	139 U	2470 =	1550 =
Lead	UG/L	3 U	3 U	3 U	3 U	3 U	3 U
Magnesium	UG/L	45800 =	48800 J	29000 =	24200 J	13600 =	14400 J
Manganese	UG/L	3250 =	2040 =	871 =	481 =	2620 =	3020 =
Mercury	UG/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Nickel	UG/L	15.5 J	40 U	40 U	17.2 J	150 =	118 =
Potassium	UG/L	4470 J	3940 J	3540 J	2920 J	5050 =	4080 J
Selenium	UG/L	5 U	5 U	5 U	5 U	5 J	5 U
Silver	UG/L	10 U	10 U	10 U	10 U	10 U	10 U
Sodium	UG/L	6220 =	3340 J	3880 J	4520 J	2750 J	2530 J
Thallium	UG/L	2 U	2 U	2 U	2 U	2 U	2 U
Vanadium	UG/L	50 U	50 U	50 U	50 U	50 U	50 U
Zinc	UG/L	106 U	80.5 U		47 U	133 U	89.5 U

Table E-3. October Quarterly Monitoring Report for Ramsdell Quarry Groundwater Investigation, Groundwater Analytical Results - Explosive Compounds

Analyte		S____1	S____7	S____2	S____8	S____1	S____3	S____9
Media		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Station		RQLmw-006	RQLmw-006	RQLmw-007	RQLmw-007	RQLmw-007FD	RQLmw-008	RQLmw-008
Sample ID		RQ0067	RQ0096	RQ0068	RQ0097	RQ0074	RQ0069	RQ0098
Date		09/20/98	10/19/98	09/20/98	10/20/98	09/20/98	09/19/98	10/20/98
Filtered	Units	Total	Total	Total	Total	Total	Total	Total
1,3,5-Trinitrobenzene	UG/L	0.2 UJ	0.2 R	0.2 UJ	0.2 R	0.2 UJ	0.2 UJ	0.2 R
1,3-Dinitrobenzene	UG/L	0.072 J	0.2 R	0.2 UJ	0.2 R	0.2 UJ	0.2 UJ	0.2 R
2,4,6-Trinitrotoluene	UG/L	0.2 UJ	0.2 R	0.2 UJ	0.2 R	0.2 UJ	0.2 UJ	0.2 R
2,4-Dinitrotoluene	UG/L	0.13 UJ	0.2 R	0.13 UJ	0.46 U	0.13 UJ	0.13 UJ	0.42 U
2,6-Dinitrotoluene	UG/L	0.13 UJ	0.13 R	0.13 UJ	0.13 R	0.13 UJ	0.13 UJ	0.13 R
2-Nitrotoluene	UG/L	0.2 UJ	0.2 R	0.2 UJ	0.2 R	0.2 UJ	0.16 J	0.2 R
3-Nitrotoluene	UG/L	0.2 UJ	0.2 R	4.9 UJ		4.6 UJ	5.5 UJ	
4-Nitrotoluene	UG/L	0.2 UJ	0.2 R	0.2 UJ	0.2 R	0.2 UJ	0.2 UJ	0.2 R
HMX	UG/L	0.5 UJ	0.5 R	0.5 UJ	0.5 R	0.5 UJ	0.5 UJ	0.5 R
Nitrobenzene	UG/L	0.2 UJ	0.3 J	0.2 UJ	0.62 J	0.2 UJ	0.2 UJ	0.58 J
Nitrocellulose as N	MG/L	0.2 UJ	0.2 U	0.2 UJ	0.2 U	0.2 UJ	0.2 UJ	0.2 U
Nitroglycerin	UG/L	2.5 UJ	1.5 J	2.5 UJ	2.5 R	2.5 UJ	2.5 UJ	2.5 R
Nitroguanidine	UG/L	20 UJ	20 U	20 UJ	20 U	20 UJ	20 UJ	20 U
RDX	UG/L	0.5 UJ	0.5 R	0.5 UJ	0.5 R	0.5 UJ	0.5 UJ	0.5 R
Tetryl	UG/L	0.2 UJ	0.2 R	0.2 UJ	0.2 R	0.2 UJ	0.2 UJ	0.2 R

Table E-3. October Quarterly Monitoring Report for Ramsdell Quarry Groundwater Investigation, Groundwater Analytical Results - Explosive Compounds (Cont'd)

Analyte		S____4	S___10	S____5	S___11	S____6	S___12
Media		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Station		RQLmw-009	RQLmw-009	RQLmw-010	RQLmw-010	RQLmw-011	RQLmw-011
Sample ID		RQ0070	RQ0099	RQ0071	RQ0100	RQ0072	RQ0101
Date		09/19/98	10/20/98	09/19/98	10/19/98	09/19/98	10/19/98
Filtered	Units	Total	Total	Total	Total	Total	Total
1,3,5-Trinitrobenzene	UG/L	0.2 R	0.2 R	0.2 UJ	0.2 U	0.2 UJ	0.2 U
1,3-Dinitrobenzene	UG/L	0.2 R	0.2 R	0.2 UJ	0.2 U	0.2 UJ	0.2 U
2,4,6-Trinitrotoluene	UG/L	0.2 R	0.2 R	0.2 UJ	0.2 U	0.2 UJ	0.2 U
2,4-Dinitrotoluene	UG/L	0.13 R	0.2 R	0.13 UJ	0.13 U	0.13 UJ	0.13 U
2,6-Dinitrotoluene	UG/L	0.13 R	0.13 R	0.13 UJ	0.13 U	0.13 UJ	0.13 U
2-Nitrotoluene	UG/L	0.2 R	0.2 R	0.2 UJ	0.2 U	0.2 UJ	0.2 U
3-Nitrotoluene	UG/L	0.2 R	0.2 R	0.2 UJ	0.2 U	0.2 UJ	0.2 U
4-Nitrotoluene	UG/L	0.2 R	0.2 R	0.2 UJ	0.2 U	0.2 UJ	0.2 U
HMX	UG/L	0.09 J	0.5 R	0.5 UJ	0.5 U	0.5 UJ	0.5 U
Nitrobenzene	UG/L	0.29 J	0.41 J	0.2 UJ	0.2 U	0.2 UJ	0.2 U
Nitrocellulose as N	MG/L	0.2 UJ	0.2 U	0.2 UJ	0.2 U	0.2 UJ	
Nitroglycerin	UG/L	2.5 R	2.5 R	2.5 UJ	2.5 U	2.5 UJ	2.5 U
Nitroguanidine	UG/L	20 UJ	20 U	20 UJ	20 U	20 UJ	
RDX	UG/L	0.5 R	0.5 R	0.5 UJ	0.5 U	0.5 UJ	0.5 U
Tetryl	UG/L	0.2 R	0.2 R	0.2 UJ	0.2 U	0.2 UJ	0.2 U

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

Analyte		S____1	S____7	S____2	S____8	S____1	S____3
Media		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Station		RQLmw-006	RQLmw-006	RQLmw-007	RQLmw-007	RQLmw-007FD	RQLmw-008
Sample ID		RQ0067	RQ0096	RQ0068	RQ0097	RQ0074	RQ0069
Date		09/20/98	10/19/98	09/20/98	10/20/98	09/20/98	09/19/98
Filtered	Units	Total	Total	Total	Total	Total	Total
1,2,4-Trichlorobenzene	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 UJ
1,2-Dichlorobenzene	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 UJ
1,3-Dichlorobenzene	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 UJ
1,4-Dichlorobenzene	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 UJ
2,2'-oxybis (1-chloropropane)	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 UJ
2,4,5-Trichlorophenol	UG/L	25 UJ	25 U	25 UJ	25 U	25 UJ	25 UJ
2,4,6-Trichlorophenol	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 UJ
2,4-Dichlorophenol	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 UJ
2,4-Dimethylphenol	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 UJ
2,4-Dinitrophenol	UG/L	25 UJ	25 U	25 UJ	25 U	25 UJ	25 UJ
2,4-Dinitrotoluene	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 UJ
2,6-Dinitrotoluene	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 UJ
2-Chloronaphthalene	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 UJ
2-Chlorophenol	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 UJ
2-Methylnaphthalene	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 UJ
2-Methylphenol	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 UJ
2-Nitroaniline	UG/L	25 UJ	25 U	25 UJ	25 U	25 UJ	25 UJ
2-Nitrophenol	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 UJ
3,3'-Dichlorobenzidine	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 UJ
3-Nitroaniline	UG/L	25 UJ	25 U	25 UJ	25 U	25 UJ	25 UJ
4,6-Dinitro-o-Cresol	UG/L	25 UJ	25 U	25 UJ	25 U	25 UJ	25 UJ
4-Bromophenyl-phenyl Ether	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 UJ
4-Chloroaniline	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 UJ
4-Chlorophenyl-phenylether	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 UJ
4-Methylphenol	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 UJ
4-Nitroaniline	UG/L	25 UJ	25 U	25 UJ	25 U	25 UJ	25 UJ
4-Nitrophenol	UG/L	25 UJ	25 U	25 UJ	25 U	25 UJ	25 UJ
4-chloro-3-methylphenol	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 UJ
Acenaphthene	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 UJ
Acenaphthylene	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 UJ
Anthracene	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 UJ
Benzo(a)anthracene	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 UJ
Benzo(a)pyrene	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 UJ
Benzo(b)fluoranthene	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 UJ
Benzo(g,h,i)perylene	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 UJ
Benzo(k)fluoranthene	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 UJ
Bis(2-chloroethoxy)methane	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 UJ
Bis(2-chloroethyl)ether	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 UJ
Bis(2-ethylhexyl)phthalate	UG/L	3.4 J	10 U	10 UJ	10 U	10 UJ	10 UJ
Butyl Benzyl Phthalate	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 UJ
Carbazole	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 UJ
Chrysene	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 UJ
Di-n-butyl Phthalate	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 UJ

Table E-4. October Quarterly Monitoring Report for Ramsdell Quarry Groundwater Investigation, Groundwater Analytical Results - Semivolatile Compounds (Cont'd)

Analyte		S____1	S____7	S____2	S____8	S____1	S____3
Media		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Station		RQLmw-006	RQLmw-006	RQLmw-007	RQLmw-007	RQLmw-007FD	RQLmw-008
Sample ID		RQ0067	RQ0096	RQ0068	RQ0097	RQ0074	RQ0069
Date		09/20/98	10/19/98	09/20/98	10/20/98	09/20/98	09/19/98
Filtered	Units	Total	Total	Total	Total	Total	Total
Di-n-octyl Phthalate	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 UJ
Dibenzo(a,h)anthracene	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 UJ
Dibenzofuran	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 UJ
Diethyl Phthalate	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 UJ
Dimethyl Phthalate	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 UJ
Fluoranthene	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 UJ
Fluorene	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 UJ
Hexachlorobenzene	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 UJ
Hexachlorobutadiene	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 UJ
Hexachlorocyclopentadiene	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 UJ
Hexachloroethane	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 UJ
Indeno(1,2,3-cd)pyrene	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 UJ
Isophorone	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 UJ
N-Nitroso-di-n-propylamine	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 UJ
N-Nitrosodiphenylamine	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 UJ
Naphthalene	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 UJ
Nitrobenzene	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 UJ
Pentachlorophenol	UG/L	25 UJ	25 U	25 UJ	25 U	25 UJ	25 UJ
Phenanthrene	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 UJ
Phenol	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 UJ
Pyrene	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 UJ

Table E-4. October Quarterly Monitoring Report for Ramsdell Quarry Groundwater Investigation, Groundwater Analytical Results - Semivolatile Compounds (Cont'd)

Analyte		S____9	S____4	S___10	S____5	S___11	S____6	S___12
Media		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Station		RQLmw-008	RQLmw-009	RQLmw-009	RQLmw-010	RQLmw-010	RQLmw-011	RQLmw-011
Sample ID		RQ0098	RQ0070	RQ0099	RQ0071	RQ0100	RQ0072	RQ0101
Date		10/20/98	09/19/98	10/20/98	09/19/98	10/19/98	09/19/98	10/19/98
Filtered	Units	Total	Total	Total	Total	Total	Total	Total
1,2,4-Trichlorobenzene	UG/L	10 U	10 UJ	10 U	10 UJ	10 U	10 UJ	10 U
1,2-Dichlorobenzene	UG/L	10 U	10 UJ	10 U	10 UJ	10 U	10 UJ	10 U
1,3-Dichlorobenzene	UG/L	10 U	10 UJ	10 U	10 UJ	10 U	10 UJ	10 U
1,4-Dichlorobenzene	UG/L	10 U	10 UJ	10 U	10 UJ	10 U	10 UJ	10 U
2,2'-oxybis (1-chloropropane	UG/L	10 U	10 UJ	10 U	10 UJ	10 U	10 UJ	10 U
2,4,5-Trichlorophenol	UG/L	25 U	25 UJ	25 U	25 UJ	25 U	25 UJ	25 U
2,4,6-Trichlorophenol	UG/L	10 U	10 UJ	10 U	10 UJ	10 U	10 UJ	10 U
2,4-Dichlorophenol	UG/L	10 U	10 UJ	10 U	10 UJ	10 U	10 UJ	10 U
2,4-Dimethylphenol	UG/L	10 U	10 UJ	10 U	10 UJ	10 U	10 UJ	10 U
2,4-Dinitrophenol	UG/L	25 U	25 UJ	25 U	25 UJ	25 U	25 UJ	25 U
2,4-Dinitrotoluene	UG/L	10 U	10 UJ	10 U	10 UJ	10 U	10 UJ	10 U
2,6-Dinitrotoluene	UG/L	10 U	10 UJ	10 U	10 UJ	10 U	10 UJ	10 U
2-Chloronaphthalene	UG/L	10 U	10 UJ	10 U	10 UJ	10 U	10 UJ	10 U
2-Chlorophenol	UG/L	10 U	10 UJ	10 U	10 UJ	10 U	10 UJ	10 U
2-Methylnaphthalene	UG/L	10 U	10 UJ	10 U	10 UJ	10 U	10 UJ	10 U
2-Methylphenol	UG/L	10 U	10 UJ	10 U	10 UJ	10 U	10 UJ	10 U
2-Nitroaniline	UG/L	25 U	25 UJ	25 U	25 UJ	25 U	25 UJ	25 U
2-Nitrophenol	UG/L	10 U	10 UJ	10 U	10 UJ	10 U	10 UJ	10 U
3,3'-Dichlorobenzidine	UG/L	10 U	10 UJ	10 U	10 UJ	10 U	10 UJ	10 U
3-Nitroaniline	UG/L	25 U	25 UJ	25 U	25 UJ	25 U	25 UJ	25 U
4,6-Dinitro-o-Cresol	UG/L	25 U	25 UJ	25 U	25 UJ	25 U	25 UJ	25 U
4-Bromophenyl-phenyl Ethe	UG/L	10 U	10 UJ	10 U	10 UJ	10 U	10 UJ	10 U
4-Chloroaniline	UG/L	10 U	10 UJ	10 U	10 UJ	10 U	10 UJ	10 U
4-Chlorophenyl-phenylether	UG/L	10 U	10 UJ	10 U	10 UJ	10 U	10 UJ	10 U
4-Methylphenol	UG/L	10 U	10 UJ	10 U	10 UJ	10 U	10 UJ	10 U
4-Nitroaniline	UG/L	25 U	25 UJ	25 U	25 UJ	25 U	25 UJ	25 U
4-Nitrophenol	UG/L	25 U	25 UJ	25 U	25 UJ	25 U	25 UJ	25 U
4-chloro-3-methylphenol	UG/L	10 U	10 UJ	10 U	10 UJ	10 U	10 UJ	10 U
Acenaphthene	UG/L	10 U	10 UJ	10 U	10 UJ	10 U	10 UJ	10 U
Acenaphthylene	UG/L	10 U	10 UJ	10 U	10 UJ	10 U	10 UJ	10 U
Anthracene	UG/L	10 U	10 UJ	10 U	10 UJ	10 U	10 UJ	10 U
Benzo(a)anthracene	UG/L	10 U	10 UJ	10 U	10 UJ	10 U	10 UJ	10 U
Benzo(a)pyrene	UG/L	10 U	10 UJ	10 U	10 UJ	10 U	10 UJ	10 U
Benzo(b)fluoranthene	UG/L	10 U	10 UJ	10 U	10 UJ	10 U	10 UJ	10 U
Benzo(g,h,i)perylene	UG/L	10 U	10 UJ	10 U	10 UJ	10 U	10 UJ	10 U
Benzo(k)fluoranthene	UG/L	10 U	10 UJ	10 U	10 UJ	10 U	10 UJ	10 U
Bis(2-chloroethoxy)methane	UG/L	10 U	10 UJ	10 U	10 UJ	10 U	10 UJ	10 U
Bis(2-chloroethyl)ether	UG/L	10 U	10 UJ	10 U	10 UJ	10 U	10 UJ	10 U
Bis(2-ethylhexyl)phthalate	UG/L	10 U	10 UJ	10 U	10 UJ	10 U	4.1 J	10 U
Butyl Benzyl Phthalate	UG/L	10 U	10 UJ	10 U	10 UJ	10 U	10 UJ	10 U
Carbazole	UG/L	10 U	10 UJ	10 U	10 UJ	10 U	10 UJ	10 U
Chrysene	UG/L	10 U	10 UJ	10 U	10 UJ	10 U	10 UJ	10 U
Di-n-butyl Phthalate	UG/L	10 U	10 UJ	10 U	10 UJ	10 U	10 UJ	10 U
Di-n-octyl Phthalate	UG/L	10 U	10 UJ	10 U	10 UJ	10 U	10 UJ	10 U
Dibenzo(a,h)anthracene	UG/L	10 U	10 UJ	10 U	10 UJ	10 U	10 UJ	10 U
Dibenzofuran	UG/L	10 U	10 UJ	10 U	10 UJ	10 U	10 UJ	10 U
Diethyl Phthalate	UG/L	10 U	10 UJ	10 U	10 UJ	10 U	10 UJ	10 U
Dimethyl Phthalate	UG/L	10 U	10 UJ	10 U	10 UJ	10 U	10 UJ	10 U
Fluoranthene	UG/L	10 U	10 UJ	10 U	10 UJ	10 U	10 UJ	10 U
Fluorene	UG/L	10 U	10 UJ	10 U	10 UJ	10 U	10 UJ	10 U
Hexachlorobenzene	UG/L	10 U	10 UJ	10 U	10 UJ	10 U	10 UJ	10 U
Hexachlorobutadiene	UG/L	10 U	10 UJ	10 U	10 UJ	10 U	10 UJ	10 U
Hexachlorocyclopentadiene	UG/L	10 U	10 UJ	10 U	10 UJ	10 U	10 UJ	10 U

Table E-4. October Quarterly Monitoring Report for Ramsdell Quarry Groundwater Investigation, Groundwater Analytical Results - Semivolatile Compounds (Cont'd)

Analyte		S____9	S____4	S___10	S____5	S___11	S____6	S___12
Media		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Station		RQLmw-008	RQLmw-009	RQLmw-009	RQLmw-010	RQLmw-010	RQLmw-011	RQLmw-011
Sample ID		RQ0098	RQ0070	RQ0099	RQ0071	RQ0100	RQ0072	RQ0101
Date		10/20/98	09/19/98	10/20/98	09/19/98	10/19/98	09/19/98	10/19/98
Filtered	Units	Total	Total	Total	Total	Total	Total	Total
Hexachloroethane	UG/L	10 U	10 UJ	10 U	10 UJ	10 U	10 UJ	10 U
Indeno(1,2,3-cd)pyrene	UG/L	10 U	10 UJ	10 U	10 UJ	10 U	10 UJ	10 U
Isophorone	UG/L	10 U	10 UJ	10 U	10 UJ	10 U	10 UJ	10 U
N-Nitroso-di-n-propylamine	UG/L	10 U	10 UJ	10 U	10 UJ	10 U	10 UJ	10 U
N-Nitrosodiphenylamine	UG/L	10 U	10 UJ	10 U	10 UJ	10 U	10 UJ	10 U
Naphthalene	UG/L	10 U	10 UJ	10 U	10 UJ	10 U	10 UJ	10 U
Nitrobenzene	UG/L	10 U	10 UJ	10 U	10 UJ	10 U	10 UJ	10 U
Pentachlorophenol	UG/L	25 U	25 UJ	25 U	25 UJ	25 U	25 UJ	25 U
Phenanthrene	UG/L	10 U	10 UJ	10 U	10 UJ	10 U	10 UJ	10 U
Phenol	UG/L	10 U	10 UJ	10 U	10 UJ	10 U	10 UJ	10 U
Pyrene	UG/L	10 U	10 UJ	10 U	10 UJ	10 U	10 UJ	10 U

Table E-5. October Quarterly Monitoring Report for Ramsdell Quarry Groundwater Investigation, Groundwater Analytical Results - Volatile Organics

Analyte		S____1	S____7	S____2	S____8	S____1	S____3	S____9
Media		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Station		RQLmw-006	RQLmw-006	RQLmw-007	RQLmw-007	RQLmw-007FD	RQLmw-008	RQLmw-008
Sample ID		RQ0067	RQ0096	RQ0068	RQ0097	RQ0074	RQ0069	RQ0098
Date		09/20/98	10/19/98	09/20/98	10/20/98	09/20/98	09/19/98	10/20/98
Filtered	Units	Total	Total	Total	Total	Total	Total	Total
1,1,1-Trichloroethane	UG/L	5 UJ	5 U	5 UJ	5 U	5 UJ	5 UJ	5 U
1,1,2,2-Tetrachloroethane	UG/L	5 UJ	5 U	5 UJ	5 U	5 UJ	5 UJ	5 U
1,1,2-Trichloroethane	UG/L	5 UJ	5 U	5 UJ	5 U	5 UJ	5 UJ	5 U
1,1-Dichloroethane	UG/L	5 UJ	5 U	5 UJ	5 U	5 UJ	5 UJ	5 U
1,1-Dichloroethene	UG/L	5 UJ	5 U	5 UJ	5 U	5 UJ	5 UJ	5 U
1,2-Dichloroethane	UG/L	5 UJ	5 U	5 UJ	5 U	5 UJ	5 UJ	5 U
1,2-Dichloroethene	UG/L	5 UJ	5 U	5 UJ	5 U	5 UJ	5 UJ	5 U
1,2-Dichloropropane	UG/L	5 UJ	5 U	5 UJ	5 U	5 UJ	5 UJ	5 U
1,3-cis-Dichloropropene	UG/L	5 UJ	5 U	5 UJ	5 U	5 UJ	5 UJ	5 U
1,3-trans-Dichloropropene	UG/L	5 UJ	5 U	5 UJ	5 U	5 UJ	5 UJ	5 U
2-Butanone	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 UJ	10 U
2-Hexanone	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 UJ	10 U
4-Methyl-2-pentanone	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 UJ	10 U
Acetone	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 UJ	10 U
Benzene	UG/L	5 UJ	5 U	5 UJ	5 U	5 UJ	5 UJ	5 U
Bromodichloromethane	UG/L	5 UJ	5 U	5 UJ	5 U	5 UJ	5 UJ	5 U
Bromoform	UG/L	5 UJ	5 U	5 UJ	5 U	5 UJ	5 UJ	5 U
Bromomethane	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 UJ	10 U
Carbon Disulfide	UG/L	5 UJ	5 U	5 UJ	5 U	5 UJ	5 UJ	5 U
Carbon Tetrachloride	UG/L	5 UJ	5 U	5 UJ	5 U	5 UJ	5 UJ	5 U
Chlorobenzene	UG/L	5 UJ	5 U	5 UJ	5 U	5 UJ	5 UJ	5 U
Chloroethane	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 UJ	10 U
Chloroform	UG/L	5 UJ	5 U	5 UJ	5 U	5 UJ	5 UJ	5 U
Chloromethane	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 UJ	10 U
Dibromochloromethane	UG/L	5 UJ	5 U	5 UJ	5 U	5 UJ	5 UJ	5 U
Ethylbenzene	UG/L	5 UJ	5 U	5 UJ	5 U	5 UJ	5 UJ	5 U
Methylene Chloride	UG/L	5 UJ	0.63 J	5 UJ	3.7 J	5 UJ	5 UJ	0.58 J
Styrene	UG/L	5 UJ	5 U	5 UJ	5 U	5 UJ	5 UJ	5 U
Tetrachloroethene	UG/L	5 UJ	5 U	5 UJ	5 U	5 UJ	5 UJ	5 U
Toluene	UG/L	0.54 J	5 U	5 UJ	5 U	5 UJ	5 UJ	5 U
Trichloroethene	UG/L	5 UJ	5 U	5 UJ	5 U	5 UJ	5 UJ	5 U
Vinyl Chloride	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 UJ	10 U
Xylenes, Total	UG/L	5 UJ	5 U	5 UJ	5 U	5 UJ	5 UJ	5 U

Table E-5. October Quarterly Monitoring Report for Ramsdell Quarry Groundwater Investigation, Groundwater Analytical Results - Volatile Organics (Cont'd)

Analyte		S____4	S___10	S____5	S___11	S____6	S___12
Media		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Station		RQLmw-009	RQLmw-009	RQLmw-010	RQLmw-010	RQLmw-011	RQLmw-011
Sample ID		RQ0070	RQ0099	RQ0071	RQ0100	RQ0072	RQ0101
Date		09/19/98	10/20/98	09/19/98	10/19/98	09/19/98	10/19/98
Filtered	Units	Total	Total	Total	Total	Total	Total
1,1,1-Trichloroethane	UG/L	5 UJ	5 U	5 UJ	5 U	5 UJ	5 U
1,1,2,2-Tetrachloroethane	UG/L	5 UJ	5 U	5 UJ	5 U	5 UJ	5 U
1,1,2-Trichloroethane	UG/L	5 UJ	5 U	5 UJ	5 U	5 UJ	5 U
1,1-Dichloroethane	UG/L	5 UJ	5 U	5 UJ	5 U	5 UJ	5 U
1,1-Dichloroethene	UG/L	5 UJ	5 U	5 UJ	5 U	5 UJ	5 U
1,2-Dichloroethane	UG/L	5 UJ	5 U	5 UJ	5 U	5 UJ	5 U
1,2-Dichloroethene	UG/L	5 UJ	5 U	5 UJ	5 U	5 UJ	5 U
1,2-Dichloropropane	UG/L	5 UJ	5 U	5 UJ	5 U	5 UJ	5 U
1,3-cis-Dichloropropene	UG/L	5 UJ	5 U	5 UJ	5 U	5 UJ	5 U
1,3-trans-Dichloropropene	UG/L	5 UJ	5 U	5 UJ	5 U	5 UJ	5 U
2-Butanone	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 U
2-Hexanone	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 U
4-Methyl-2-pentanone	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 U
Acetone	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 U
Benzene	UG/L	5 UJ	5 U	5 UJ	5 U	5 UJ	5 U
Bromodichloromethane	UG/L	5 UJ	5 U	5 UJ	5 U	5 UJ	5 U
Bromoform	UG/L	5 UJ	5 U	5 UJ	5 U	5 UJ	5 U
Bromomethane	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 U
Carbon Disulfide	UG/L	5 UJ	5 U	5 UJ	5 U	5 UJ	5 U
Carbon Tetrachloride	UG/L	5 UJ	5 U	5 UJ	5 U	5 UJ	5 U
Chlorobenzene	UG/L	5 UJ	5 U	5 UJ	5 U	5 UJ	5 U
Chloroethane	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 U
Chloroform	UG/L	5 UJ	5 U	5 UJ	5 U	5 UJ	5 U
Chloromethane	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 U
Dibromochloromethane	UG/L	5 UJ	5 U	5 UJ	5 U	5 UJ	5 U
Ethylbenzene	UG/L	5 UJ	5 U	5 UJ	5 U	5 UJ	5 U
Methylene Chloride	UG/L	5 UJ	0.67 J	5 UJ	0.67 J	5 UJ	0.74 J
Styrene	UG/L	5 UJ	5 U	5 UJ	5 U	5 UJ	5 U
Tetrachloroethene	UG/L	5 UJ	5 U	5 UJ	5 U	5 UJ	5 U
Toluene	UG/L	5 UJ	5 U	5 UJ	5 U	5 UJ	5 U
Trichloroethene	UG/L	5 UJ	5 U	5 UJ	5 U	5 UJ	5 U
Vinyl Chloride	UG/L	10 UJ	10 U	10 UJ	10 U	10 UJ	10 U
Xylenes, Total	UG/L	5 UJ	5 U	5 UJ	5 U	5 UJ	5 U

Table E-6. October Quarterly Monitoring Report for Ramsdell Quarry Groundwater Investigation, Surface Water Analytical Results - Metals and Inorganics

Analyte		S___14	S___13	S___14	S___13
Media		Surface Water	Surface Water	Surface Water	Surface Water
Station		RQLsw-015	RQLsw-015	RQLsw-015	RQLsw-015
Sample ID		RQ0102	RQ0073	RQ0102	RQ0073
Date		10/19/98	09/20/98	10/19/98	09/20/98
Filtered		Total	Total	Dissolved	Dissolved
Field Type	Units	Grab	Grab	Grab	Grab
Cyanide	MG/L	0.01 U	0.01 U		
Aluminum	UG/L	21500 =	2390 =	117 U	138 U
Antimony	UG/L	6.5 U	5 U	6.9 U	5 U
Arsenic	UG/L	31.6 =	11.4 =	4 J	5.5 =
Barium	UG/L	290 =	163 J	114 J	124 J
Beryllium	UG/L	1.1 U	4 U	4 U	4 U
Cadmium	UG/L	4.2 J	5 U	5 U	5 U
Calcium	UG/L	96700 J	31100 =	98000 J	31500 =
Chromium	UG/L	28.2 =	3.6 J	10 U	10 U
Cobalt	UG/L	28.6 J	50 U	50 U	50 U
Copper	UG/L	103 R	11 J	25 R	17.4 J
Iron	UG/L	78300 =	7110 =	12300 =	223 =
Lead	UG/L	143 =	8 =	3 U	3 U
Magnesium	UG/L	42800 J	29100 =	40100 J	31100 =
Manganese	UG/L	5620 =	1820 =	5180 =	1140 =
Mercury	UG/L	0.16 J	0.2 U	0.2 U	0.2 U
Nickel	UG/L	70.1 =	40 U	40 U	40 U
Potassium	UG/L	8000 J	6530 =	6680 J	6370 =
Selenium	UG/L	4.6 J	5 U	5 U	4.6 J
Silver	UG/L	10 U	10 U	10 U	10 U
Sodium	UG/L	6150 =	6060 =	2480 J	3860 J
Thallium	UG/L	1.3 J	2 U	2 U	2 U
Vanadium	UG/L	38.1 J	50 U	50 U	50 U
Zinc	UG/L	1570 J	102 U	28.9 U	77.8 U

Table E-7. October Quarterly Monitoring Report for Ramsdell Quarry Groundwater Investigation, Surface Water Analytical Results - Explosive Compounds

Analyte		S___14	S___13
Media		Surface Water	Surface Water
Station		RQLsw-015	RQLsw-015
Sample ID		RQ0102	RQ0073
Date		10/19/98	09/20/98
Filtered		Total	Total
Field Type	Units	Grab	Grab
1,3,5-Trinitrobenzene	UG/L	0.2 U	0.2 UJ
1,3-Dinitrobenzene	UG/L	0.2 U	0.2 UJ
2,4,6-Trinitrotoluene	UG/L	0.2 U	0.2 UJ
2,4-Dinitrotoluene	UG/L	0.13 U	0.13 UJ
2,6-Dinitrotoluene	UG/L	0.13 U	0.13 UJ
2-Nitrotoluene	UG/L	0.2 U	0.2 UJ
3-Nitrotoluene	UG/L	0.2 U	0.2 UJ
4-Nitrotoluene	UG/L	0.24 =	0.2 UJ
HMX	UG/L	0.5 U	0.5 UJ
Nitrobenzene	UG/L	0.2 U	0.2 UJ
Nitrocellulose as N	MG/L		0.2 UJ
Nitrocellulose as N	UG/L	0.2 U	
Nitroglycerin	UG/L	2.5 U	2.5 UJ
Nitroguanidine	UG/L	20 U	20 UJ
RDX	UG/L	0.5 U	0.5 UJ
Tetryl	UG/L	0.2 U	0.2 UJ

Table E-8. October Quarterly Monitoring Report for Ramsdell Quarry Groundwater Investigation, Surface Water Analytical Results - Semivolatile Compounds

Analyte		S___14	S___13
Media		Surface Water	Surface Water
Station		RQLsw-015	RQLsw-015
Sample ID		RQ0102	RQ0073
Date		10/19/98	09/20/98
Filtered		Total	Total
Field Type	Units	Grab	Grab
1,2,4-Trichlorobenzene	UG/L	10 U	10 UJ
1,2-Dichlorobenzene	UG/L	10 U	10 UJ
1,3-Dichlorobenzene	UG/L	10 U	10 UJ
1,4-Dichlorobenzene	UG/L	10 U	10 UJ
2,2'-oxybis (1-chloropropane)	UG/L	10 U	10 UJ
2,4,5-Trichlorophenol	UG/L	25 U	25 UJ
2,4,6-Trichlorophenol	UG/L	10 U	10 UJ
2,4-Dichlorophenol	UG/L	10 U	10 UJ
2,4-Dimethylphenol	UG/L	10 U	10 UJ
2,4-Dinitrophenol	UG/L	25 U	25 UJ
2,4-Dinitrotoluene	UG/L	10 U	10 UJ
2,6-Dinitrotoluene	UG/L	10 U	10 UJ
2-Chloronaphthalene	UG/L	10 U	10 UJ
2-Chlorophenol	UG/L	10 U	10 UJ
2-Methylnaphthalene	UG/L	10 U	10 UJ
2-Methylphenol	UG/L	10 U	10 UJ
2-Nitroaniline	UG/L	25 U	25 UJ
2-Nitrophenol	UG/L	10 U	10 UJ
3,3'-Dichlorobenzidine	UG/L	10 U	10 UJ
3-Nitroaniline	UG/L	25 U	25 UJ
4,6-Dinitro-o-Cresol	UG/L	25 U	25 UJ
4-Bromophenyl-phenyl Ether	UG/L	10 U	10 UJ
4-Chloroaniline	UG/L	10 U	10 UJ
4-Chlorophenyl-phenylether	UG/L	10 U	10 UJ
4-Methylphenol	UG/L	10 U	10 UJ
4-Nitroaniline	UG/L	25 U	25 UJ
4-Nitrophenol	UG/L	25 U	25 UJ
4-chloro-3-methylphenol	UG/L	10 U	10 UJ
Acenaphthene	UG/L	10 U	10 UJ
Acenaphthylene	UG/L	10 U	10 UJ
Anthracene	UG/L	10 U	10 UJ
Benzo(a)anthracene	UG/L	10 U	10 UJ
Benzo(a)pyrene	UG/L	10 U	10 UJ
Benzo(b)fluoranthene	UG/L	10 U	10 UJ
Benzo(g,h,i)perylene	UG/L	10 U	10 UJ
Benzo(k)fluoranthene	UG/L	10 U	10 UJ
Bis(2-chloroethoxy)methane	UG/L	10 U	10 UJ
Bis(2-chloroethyl)ether	UG/L	10 U	10 UJ
Bis(2-ethylhexyl)phthalate	UG/L	10 U	10 UJ
Butyl Benzyl Phthalate	UG/L	10 U	10 UJ
Carbazole	UG/L	10 U	10 UJ
Chrysene	UG/L	10 U	10 UJ
Di-n-butyl Phthalate	UG/L	10 U	10 UJ
Di-n-octyl Phthalate	UG/L	10 U	10 UJ

Table E-8. October Quarterly Monitoring Report for Quarry Groundwater Investigation, Surface Water Analytical Results - Semivolatile Compounds (Cont'd)

Analyte		S___14	S___13
Media		Surface Water	Surface Water
Station		RQLsw-015	RQLsw-015
Sample ID		RQ0102	RQ0073
Date		10/19/98	09/20/98
Filtered		Total	Total
Field Type	Units	Grab	Grab
Dibenzo(a,h)anthracene	UG/L	10 U	10 UJ
Dibenzofuran	UG/L	10 U	10 UJ
Diethyl Phthalate	UG/L	10 U	10 UJ
Dimethyl Phthalate	UG/L	10 U	10 UJ
Fluoranthene	UG/L	10 U	10 UJ
Fluorene	UG/L	10 U	10 UJ
Hexachlorobenzene	UG/L	10 U	10 UJ
Hexachlorobutadiene	UG/L	10 U	10 UJ
Hexachlorocyclopentadiene	UG/L	10 U	10 UJ
Hexachloroethane	UG/L	10 U	10 UJ
Indeno(1,2,3-cd)pyrene	UG/L	10 U	10 UJ
Isophorone	UG/L	10 U	10 UJ
N-Nitroso-di-n-propylamine	UG/L	10 U	10 UJ
N-Nitrosodiphenylamine	UG/L	10 U	10 UJ
Naphthalene	UG/L	10 U	10 UJ
Nitrobenzene	UG/L	10 U	10 UJ
Pentachlorophenol	UG/L	25 U	25 UJ
Phenanthrene	UG/L	10 U	10 UJ
Phenol	UG/L	10 U	10 UJ
Pyrene	UG/L	10 U	10 UJ

Table E-9. October Quarterly Monitoring Report for Ramsdell Quarry Groundwater Investigation, Surface Water Analytical Results - Volatile Organic Compounds

Analyte		S___14	S___13
Media		Surface Water	Surface Water
Station		RQLsw-015	RQLsw-015
Sample ID		RQ0102	RQ0073
Date		10/19/98	09/20/98
Filtered		Total	Total
Field Type	Units	Grab	Grab
1,1,1-Trichloroethane	UG/L	5 U	5 UJ
1,1,2,2-Tetrachloroethane	UG/L	5 U	5 UJ
1,1,2-Trichloroethane	UG/L	5 U	5 UJ
1,1-Dichloroethane	UG/L	5 U	5 UJ
1,1-Dichloroethene	UG/L	5 U	5 UJ
1,2-Dichloroethane	UG/L	5 U	5 UJ
1,2-Dichloroethene	UG/L	5 U	5 UJ
1,2-Dichloropropane	UG/L	5 U	5 UJ
1,3-cis-Dichloropropene	UG/L	5 U	5 UJ
1,3-trans-Dichloropropene	UG/L	5 U	5 UJ
2-Butanone	UG/L	10 U	10 UJ
2-Hexanone	UG/L	10 U	10 UJ
4-Methyl-2-pentanone	UG/L	10 U	10 UJ
Acetone	UG/L	6.3 J	10 UJ
Benzene	UG/L	5 U	5 UJ
Bromodichloromethane	UG/L	5 U	5 UJ
Bromoform	UG/L	5 U	5 UJ
Bromomethane	UG/L	10 U	10 UJ
Carbon Disulfide	UG/L	5 U	5 UJ
Carbon Tetrachloride	UG/L	5 U	5 UJ
Chlorobenzene	UG/L	5 U	5 UJ
Chloroethane	UG/L	10 U	10 UJ
Chloroform	UG/L	5 U	5 UJ
Chloromethane	UG/L	10 U	10 UJ
Dibromochloromethane	UG/L	5 U	5 UJ
Ethylbenzene	UG/L	5 U	5 UJ
Methylene Chloride	UG/L	12 =	5 UJ
Styrene	UG/L	5 U	5 UJ
Tetrachloroethene	UG/L	5 U	5 UJ
Toluene	UG/L	5 U	5 UJ
Trichloroethene	UG/L	5 U	5 UJ
Vinyl Chloride	UG/L	10 U	10 UJ
Xylenes, Total	UG/L	5 U	5 UJ

Table E-10. October Quarterly Monitoring Report for Ramsdell Quarry Groundwater Investigation, QA/QC Sample Analytical Results

Analyte		S___53	S___54	S___55	S___56	S___57	S___58	S___59	S___60	S___61
Media		Quality Control	Quality Control	Quality Control	Quality Control	Quality Control	Quality Control	Quality Control	Quality Control	Quality Control
Station		QC	QC	QC	QC	QC	QC	QC	QC-2	QC-2
Sample ID		RQ0049	RQ0050	RQ0057	RQ0059	RQ0060	RQ0061	RQ0063	RQ0084	RQ0086
Date		07/17/98	07/17/98	07/08/98	07/13/98	07/22/98	07/25/98	07/27/98	09/19/98	10/19/98
QA/QC Sample Type	Units	Source Water Blank	Equip. Rinsate	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank
Inorganics (mg/L)										
Cyanide	MG/L	0.01 U	0.01 U							
Explosives (mg/L)										
1,3,5-Trinitrobenzene	UG/L	0.2 U	0.2 UJ							
1,3-Dinitrobenzene	UG/L	0.2 U	0.2 UJ							
2,4,6-Trinitrotoluene	UG/L	0.2 U	0.2 UJ							
2,4-Dinitrotoluene	UG/L	0.16 =	0.13 UJ							
2,6-Dinitrotoluene	UG/L	0.13 U	0.13 UJ							
2-Nitrotoluene	UG/L	0.2 U	0.2 UJ							
3-Nitrotoluene	UG/L	0.2 U	0.2 UJ							
4-Nitrotoluene	UG/L	0.2 U	0.2 UJ							
HMX	UG/L	0.5 U	0.5 UJ							
Nitrobenzene	UG/L	0.2 U	0.2 UJ							
Nitrocellulose as N	MG/L	0.2 U	0.2 U							
Nitroglycerin	UG/L	2.5 U	2.5 U							
Nitroguanidine	UG/L	20 U	20 U							
RDX	UG/L	0.5 U	0.5 UJ							
Tetryl	UG/L	0.2 U	0.2 UJ							
Metals (mg/L)										
Aluminum	UG/L	200 U	200 U							
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	211 J	289 J							
Chromium	UG/L	10 U	10 U							
Cobalt	UG/L	50 U	50 U							
Copper	UG/L	25 U	3.6 J							
Iron	UG/L	100 U	53.7 J							
Lead	UG/L	3 U	3 U							

Table E-10. October Quarterly Monitoring Report for Ramsdell Quarry Groundwater Investigation, QA/QC Sample Analytical Results (Cont'd)

Analyte		S___53	S___54	S___55	S___56	S___57	S___58	S___59	S___60	S___61
Media		Quality Control	Quality Control	Quality Control	Quality Control	Quality Control	Quality Control	Quality Control	Quality Control	Quality Control
Station		QC	QC	QC	QC	QC	QC	QC	QC-2	QC-2
Sample ID		RQ0049	RQ0050	RQ0057	RQ0059	RQ0060	RQ0061	RQ0063	RQ0084	RQ0086
Date		07/17/98	07/17/98	07/08/98	07/13/98	07/22/98	07/25/98	07/27/98	09/19/98	10/19/98
QA/QC Sample Type	Units	Source Water Blank	Equip. Rinsate	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank
Magnesium	UG/L	5000 U	5000 U							
Manganese	UG/L	15 U	15 U							
Mercury	UG/L	0.09 J	0.098 J							
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	358 U	5000 U							
Thallium	UG/L	2 U	2 U							
Vanadium	UG/L	50 U	50 U							
Zinc	UG/L	20 U	20 U							
Semivolatile Organic Compounds (mg/L)										
1,2,4-Trichlorobenzene	UG/L	10 U	10 U							
1,2-Dichlorobenzene	UG/L	10 U	10 U							
1,3-Dichlorobenzene	UG/L	10 U	10 U							
1,4-Dichlorobenzene	UG/L	10 U	10 U							
2,2'-oxybis (1-chloroprop	UG/L	10 U	10 U							
2,4,5-Trichlorophenol	UG/L	25 U	25 U							
2,4,6-Trichlorophenol	UG/L	10 U	10 U							
2,4-Dichlorophenol	UG/L	10 U	10 U							
2,4-Dimethylphenol	UG/L	10 U	10 U							
2,4-Dinitrophenol	UG/L	25 U	25 U							
2,4-Dinitrotoluene	UG/L	10 U	10 U							
2,6-Dinitrotoluene	UG/L	10 U	10 U							
2-Chloronaphthalene	UG/L	10 U	10 U							
2-Chlorophenol	UG/L	10 U	10 U							
2-Methylnaphthalene	UG/L	10 U	10 U							
2-Methylphenol	UG/L	10 U	10 U							
2-Nitroaniline	UG/L	25 U	25 U							
2-Nitrophenol	UG/L	10 U	10 U							
3,3'-Dichlorobenzidine	UG/L	10 U	10 U							
3-Nitroaniline	UG/L	25 U	25 U							
4,6-Dinitro-o-Cresol	UG/L	25 U	25 U							
4-Bromophenyl-phenyl E	UG/L	10 U	10 U							
4-Chloroaniline	UG/L	10 U	10 U							
4-Chlorophenyl-phenylet	UG/L	10 U	10 U							
4-Methylphenol	UG/L	10 U	10 U							

Table E-10. October Quarterly Monitoring Report for Ramsdell Quarry Groundwater Investigation, QA/QC Sample Analytical Results (Cont'd)

Analyte		S___53	S___54	S___55	S___56	S___57	S___58	S___59	S___60	S___61
Media		Quality Control	Quality Control	Quality Control	Quality Control	Quality Control	Quality Control	Quality Control	Quality Control	Quality Control
Station		QC	QC	QC	QC	QC	QC	QC	QC-2	QC-2
Sample ID		RQ0049	RQ0050	RQ0057	RQ0059	RQ0060	RQ0061	RQ0063	RQ0084	RQ0086
Date		07/17/98	07/17/98	07/08/98	07/13/98	07/22/98	07/25/98	07/27/98	09/19/98	10/19/98
QA/QC Sample Type	Units	Source Water Blank	Equip. Rinsate	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank
4-Nitroaniline	UG/L	25 U	25 U							
4-Nitrophenol	UG/L	25 U	25 U							
4-chloro-3-methylphenol	UG/L	10 U	10 U							
Acenaphthene	UG/L	10 U	10 U							
Acenaphthylene	UG/L	10 U	10 U							
Anthracene	UG/L	10 U	10 U							
Benzo(a)anthracene	UG/L	10 U	10 U							
Benzo(a)pyrene	UG/L	10 U	10 U							
Benzo(b)fluoranthene	UG/L	10 U	10 U							
Benzo(g,h,i)perylene	UG/L	10 U	10 U							
Benzo(k)fluoranthene	UG/L	10 U	10 U							
Bis(2-chloroethoxy)meth	UG/L	10 U	10 U							
Bis(2-chloroethyl)ether	UG/L	10 U	10 U							
Bis(2-ethylhexyl)phthala	UG/L	10 U	40 =							
Butyl Benzyl Phthalate	UG/L	10 U	10 U							
Carbazole	UG/L	10 U	10 U							
Chrysene	UG/L	10 U	10 U							
Di-n-butyl Phthalate	UG/L	10 U	10 U							
Di-n-octyl Phthalate	UG/L	10 U	10 U							
Dibenzo(a,h)anthracene	UG/L	10 U	10 U							
Dibenzofuran	UG/L	10 U	10 U							
Diethyl Phthalate	UG/L	10 U	10 U							
Dimethyl Phthalate	UG/L	10 U	10 U							
Fluoranthene	UG/L	10 U	10 U							
Fluorene	UG/L	10 U	10 U							
Hexachlorobenzene	UG/L	10 U	10 U							
Hexachlorobutadiene	UG/L	10 U	10 U							
Hexachlorocyclopentadie	UG/L	10 U	10 U							
Hexachloroethane	UG/L	10 U	10 U							
Indeno(1,2,3-cd)pyrene	UG/L	10 U	10 U							
Isophorone	UG/L	10 U	10 U							
N-Nitroso-di-n-propylam	UG/L	10 U	10 U							
N-Nitrosodiphenylamine	UG/L	10 U	10 U							
Naphthalene	UG/L	10 U	10 U							
Nitrobenzene	UG/L	10 U	10 U							
Pentachlorophenol	UG/L	25 U	25 U							
Phenanthrene	UG/L	10 U	10 U							

Table E-10. October Quarterly Monitoring Report for Ramsdell Quarry Groundwater Investigation, QA/QC Sample Analytical Results (Cont'd)

Analyte		S___53	S___54	S___55	S___56	S___57	S___58	S___59	S___60	S___61
Media		Quality Control	Quality Control	Quality Control	Quality Control	Quality Control	Quality Control	Quality Control	Quality Control	Quality Control
Station		QC	QC	QC	QC	QC	QC	QC	QC-2	QC-2
Sample ID		RQ0049	RQ0050	RQ0057	RQ0059	RQ0060	RQ0061	RQ0063	RQ0084	RQ0086
Date		07/17/98	07/17/98	07/08/98	07/13/98	07/22/98	07/25/98	07/27/98	09/19/98	10/19/98
QA/QC Sample Type	Units	Source Water Blank	Equip. Rinsate	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank
Phenol	UG/L	10 U	10 U							
Pyrene	UG/L	10 U	10 U							
Volatile Organic Compounds (mg/L)										
1,1,1-Trichloroethane	UG/L	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ	5 UJ	5 U
1,1,2,2-Tetrachloroethan	UG/L	5 U	5 U	0.83 J	5 U	5 U	1 =	5 UJ	5 UJ	5 U
1,1,2-Trichloroethane	UG/L	5 U	0.44 J	5 U	5 U	5 U	0.45 =	5 UJ	5 UJ	5 U
1,1-Dichloroethane	UG/L	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ	5 UJ	5 U
1,1-Dichloroethene	UG/L	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ	5 UJ	5 U
1,2-Dichloroethane	UG/L	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ	5 UJ	5 U
1,2-Dichloroethene	UG/L	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ	5 UJ	5 U
1,2-Dichloropropane	UG/L	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ	5 UJ	5 U
1,3-cis-Dichloropropene	UG/L	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ	5 UJ	5 U
1,3-trans-Dichloroproper	UG/L	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ	5 UJ	5 U
2-Butanone	UG/L	10 U	10 U	10 U	10 U	10 U	10 U	10 UJ	15 J	10 U
2-Hexanone	UG/L	10 U	10 U	10 U	10 U	10 U	10 U	10 UJ	10 UJ	10 U
4-Methyl-2-pentanone	UG/L	10 U	10 U	10 U	10 U	10 U	10 U	10 UJ	10 UJ	10 U
Acetone	UG/L	10 U	10 U	6.9 J	8.3 J	7.3 J	10 U	10 UJ	19 J	10 U
Benzene	UG/L	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ	5 UJ	5 U
Bromodichloromethane	UG/L	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ	5 UJ	5 U
Bromoform	UG/L	5 U	5 U	5 U	5 U	0.43 J	0.38 =	0.65 J	5 UJ	5 U
Bromomethane	UG/L	10 U	10 U	10 U	10 U	10 U	10 U	10 UJ	10 UJ	10 U
Carbon Disulfide	UG/L	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ	5 UJ	5 U
Carbon Tetrachloride	UG/L	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ	5 UJ	5 U
Chlorobenzene	UG/L	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ	5 UJ	5 U
Chloroethane	UG/L	10 U	10 U	10 U	10 U	10 U	10 U	10 UJ	10 UJ	10 U
Chloroform	UG/L	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ	5 UJ	5 U
Chloromethane	UG/L	10 U	10 U	10 U	10 U	10 U	10 U	10 UJ	10 UJ	10 U
Dibromochloromethane	UG/L	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ	5 UJ	5 U
Ethylbenzene	UG/L	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ	0.48 J	5 U
Methylene Chloride	UG/L	0.89 J	0.94 J	5 U	5 U	5 U	0.73 =	0.78 J	5 UJ	1.2 J
Styrene	UG/L	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ	5 UJ	5 U
Tetrachloroethene	UG/L	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ	5 UJ	5 U
Toluene	UG/L	5 U	5 U	5 U	5 U	5 U	5 U	0.49 J	3.3 J	5 U
Trichloroethene	UG/L	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ	5 UJ	5 U
Vinyl Chloride	UG/L	10 U	10 U	10 U	10 U	10 U	10 U	10 UJ	10 UJ	10 U
Xylenes, Total	UG/L	5 U	5 U	5 U	5 U	5 U	5 U	5 UJ	2.3 J	5 U