REPORT

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Quarterly Ground Water Sampling Event Spring 2001

Sullivan's Ledge Superfund Site
New Bedford, Massachusetts

September 2001

O'BRIEN & GERE ENGINEERS, INC.

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Vice President

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O'BRIEN & GERE
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1. Introduction

1.1. Purpose and objective

Consistent with Post-Construction Environmental Monitoring Plan and the schedule established in O'Brien & Gere's letter to USEPA dated June 26, 2000, a round of ground water monitoring was conducted at Operable Unit 1 of the Sullivan's Ledge Superfund Site from March 2001 to April 2001. Assisting O'Brien & Gere Engineers, Inc. (O'Brien & Gere) with this program were Mabbett & Associates, Inc. (M&A) and Alpha Analytical Labs (Alpha). M&A provided field sampling services and related consultation while Alpha provided analytical services. Sampling was conducted in accordance with the Final Field Sampling Plan (FSP) submitted to Metcalf & Eddy (M&E) in January 2000 as amended by M&A letters dated March 14 and March 16, 2001 which are included in Appendix A.

1.2. Deviations from field sampling plan (FSP)

The following deviations from the FSP were made during the Spring 2001 sampling event:

- Monitoring well MW-12 and sampling ports ECJ-3-146', ECJ-3-236', and ECJ-3-271' were not sampled due to integrity issues as discussed in Section 2.2.

- Monitoring wells MW-10AR and MW-17 were sampled with precleaned disposable bailers due to integrity issues as outlined in Appendix B. Prior to sample collection, three well volumes of ground water were bailed from each well.

- The quantity of water sampled from each well was decreased by two liters. One liter of ground water was submitted to the laboratory for Polychlorinated Biphenyls (PCBs) and one liter of groundwater was submitted to the laboratory for Semi-volatile Organic Compounds (SVOCs) analyses.

- Low flow sampling wells exhibiting turbidity levels above the desired 5 NTU were purged for approximately 60 minutes, generally allowing stabilization of all other indicator field parameters prior to the collection of samples. Past experience with these wells indicated that longer purge times would not reduce the turbidity to 5 NTU. This applied to six of twenty low flow wells sampled (i.e., MW-2, MW-8, MW-10, MW-10B, MW-12AR, and MW-22A).

- In addition to collecting samples from monitoring wells, groundwater samples were also collected from the six bedrock recovery wells and the shallow collection trench from ports within the groundwater treatment plant. Samples were analyzed for VOCs, PCBs, SVOCs, and TAL metals.

2. Summary of field activities

2.1. Well locations

The location of overburden, shallow bedrock, intermediate bedrock, and deep bedrock monitoring wells and Westbay ports are shown on Figures 1, 2, 3, and 4, respectively.

2.2. Quantitative well integrity testing

In accordance with Section 2.3 of the FSP, M&A conducted a series of qualitative well integrity tests prior to ground water sampling. The purpose of the qualitative well integrity testing was to identify monitoring wells which would require repair prior to monitoring. Testing proceeded from the less contaminated wells to the more highly contaminated wells, based on historical ground water quality at the Site. A letter by M&A dated March 19, 2001 documenting results of the ground water monitoring well integrity inspections is included in Appendix B. It should be noted that several of the discrepancies noted in the March 19, 2001 letter have been addressed. Discrepancies that have been addressed are annotated on the March 19, 2001 letter.

During landfill cap construction, Westbay wells ECJ-1 and ECJ-3 were extended approximately 4 feet and 12 feet, respectively. The current depths and previous depths of ports are summarized in the following table.

Table 2-1. ***Current depths and previous depths of ports***

Current Depth	Previous Depth
ECJ-1 (41')	ECJ-1 (37')
ECJ-1 (66')	ECJ-1 (62')
ECJ-1 (76')	ECJ-1 (72')
ECJ-1 (126')	ECJ-1 (122')
ECJ-1 (151')	ECJ-1 (148')
ECJ-1 (271')	ECJ-1 (267')
ECJ-3 (63')	ECJ-3 (51')
ECJ-3 (103')	ECJ-3 (91')
ECJ-3 (138')	ECJ-3 (126')
ECJ-3 (158')	ECJ-3 (146')
ECJ-3 (248')	ECJ-3 (236')
ECJ-3 (283')	ECJ-3 (271')

As a result of performing the qualitative well integrity testing, obstructions in some wells were identified which prevented the collection of depth to water measurements and samples. As a result, wells that were not sampled during this monitoring event are described below:

MW-12

Monitoring well MW-12 was not sampled during this sampling event due to the presence of tubing associated with a bladder pump in the well. This tubing could not be removed at the time of sampling, and no analysis was completed at this location.

ECJ-3

During the previous round of ground water sampling conducted by O'Brien & Gere during December 1999 to January 2000, well ECJ-3 was not sampled due to an obstruction discovered in the well. Harding Lawson Associates, Inc. (HLA) observed an obstruction in the well at approximately 50 feet below the top of casing in February 2001 and attempted to identify and clear the obstruction. In March 2001, HLA reported that the obstruction had been pushed to the bottom of the well, but that approximately 50 feet of rod used in removing the obstruction remained in the well with a snapped rope attached to the rod.

M&A and HLA observed videotaping of well ECJ-3 on March 29, 2001. The videotaping indicated that the well casing was intact. A coil of rope, however, was observed obstructing the well at 160 feet below the current top of casing.

Based on the results from the videotaping of well ECJ-3, on April 3, 2001, M&A sampled three Westbay ports located in the well at depths of 63, 103, and 138 feet below the current top of casing. The three sampling ports currently located at 158, 248, and 283 feet below the top of casing were not sampled on April 3, 2001 due to the presence of the coil of rope observed at 160 feet below the current top of casing. The sampling port located at 158 feet below the current top of casing was not sampled April 3, 2001 due to the proximity of the coil of rope in the well and the approximate 10 foot length of the Westbay sample bottles required to collect a sample.

HLA indicated on July 18, 2001 that a segment of the coil of rope had been removed and well ECJ-3 was cleared to a current depth of 220 feet. This should enable future sampling of four ECJ-3 ports (i.e., 63', 103', 138', and 158').

2.3. Water levels

A letter by M&A dated March 20, 2001 reporting the measured depths to ground water is included in Appendix C. Ground water contour maps are included as Figures 5 through 8 and Table 1 contains ground water

elevation data prepared by O'Brien & Gere. A confirmatory survey of the top of casing elevations mentioned in the letter attached as Appendix C has not been completed as of July 30, 2001. It should also be noted that field observations by M&A indicate a disparity exists between the surveyed elevations of the top of casings for the east and west interim recovery wells as compared to the top of the shallow collection trench pump station elevation. This disparity was brought to the attention of HLA, which is having the wells resurveyed.

2.4. Conventional ground water monitoring wells

Following completion of the qualitative well integrity testing, a total of twenty conventional ground water monitoring wells were identified, characterized, and sampled in accordance with the FSP and the QAPP through the use of an EPA-approved low-flow bladder pump system dedicated to each well. Additionally, two wells (MW-10AR, MW-17) were sampled using bailers due to integrity issues outlined in Appendix B.

Prior to sampling, purged ground water was characterized and tested in a flow-through cell on-site for the parameters described in Section 2.5 of the FSP. Equipment used to perform the characterization was calibrated and used in accordance with the standards and protocols provided in Section 3.6 of the QAPP. Mr. David Ceppetelli of Metcalf & Eddy observed characterization and sampling procedures on March 26, 2001.

Following characterization, sampling of the conventional wells was completed using procedures described in Section 2.6 of the FSP. Sampling logs are provided in Appendix D of this report.

Samples were packed on ice and sent to Alpha Analytical Labs under a chain-of-custody (COC) for VOCs, SVOCs, PCBs, and selected metals analyses by methods described in Section 2.1 of the FSP and as amended by M&A letter dated March 14, 2001 included in Appendix A. Temperature and trip blanks were shipped with each cooler submitted to the laboratory in accordance with Section 3.5 of the QAPP.

Quality Assurance/Quality Control (QA/QC) samples were also collected in accordance with Section 3.5 of the QAPP, which included two duplicate samples, a matrix spike (MS), and a matrix spike duplicate (MSD). Duplicate samples #1 and #2 were collected at MW-6A and MW-5A, respectively. Additionally, a MS/MSD sample was collected at MW-6A.

2.5. Westbay monitoring wells

In addition to the sampling performed on the twenty conventional ground water monitoring wells, four Westbay bedrock wells (ECJ-1, ECJ-2, ECJ-3 and ECJ-4) were also sampled as part of the Spring 2001 ground water sampling event. Westbay wells were constructed in such a manner that several discrete sampling ports provide independent ground water samples. Sampling ports were selected for each well and are summarized in the Westbay field sampling logs provided in Appendix E.

Consistent with Section 2.6 of the FSP, ground water from these Westbay ports was directly sampled without characterization. Samples collected from the Westbay bedrock wells were packed on ice and shipped under a COC to Alpha Analytical Labs for VOC, SVOCs, PCBs, and selected metals analyses in accordance with the procedures outlined in Section 2.1 of the FSP and as amended by the M&A letter dated March 14, 2001 included in Appendix A. Temperature and trip blanks were shipped with each cooler submitted to the laboratory in accordance with Section 3.5 of the QAPP.

QA/QC samples from the Westbay sampling were also collected which included a single duplicate and one MS/MSD sample. The duplicate sample was collected at ECJ-4 (130'), and the MS/MSD sample was taken at ECJ-4 (60').

2.6. Groundwater recovery samples

Samples were collected on March 21, 2001, from the six bedrock recovery wells and the shallow collection trench using the installed taps in the groundwater treatment plant. Prior to filling sample bottles the taps were purged of standing water. Samples were packed on ice and shipped under a COC to Alpha Analytical Labs for VOC, SVOC, PCB, and TAL metals analyses.

2.7. Results

Validated data from each sampling round is included in the data validation report provided in Appendix F. The baseline data has been downloaded into a Microsoft FoxPro relational database management system (DBMS) to facilitate future data management and trend analysis.

2.8. Qualitative comparison to historical data

Tables 2 through 5 present the range of detected constituents in the groundwater monitoring wells for VOC's, PCB's, SVOC's, and TAL metals, respectfully. A review of the tables suggests the following:

- Consistent with previous investigations, the following VOC constituents were detected most frequently: trichloroethene, 1,2 dichloroethene, vinyl chloride, chlorobenzene, benzene, toluene, ethylbenzene and xylene.

- Consistent with previous investigations, PCB's were detected infrequently during the Spring 2001 sampling event.

- Consistent with previous investigations, SVOC's were detected infrequently and in low concentrations during the Spring 2001 sampling event.

- The following metals were not detected in any of the 42 groundwater samples: antimony, beryllium, cadmium, mercury, molybdenum, silver, and thallium. The following metals were detected in fewer than 10% of the samples: arsenic, cobalt, copper, lead, nickel, selenium, vanadium, and zinc. Only aluminum, barium, chromium, iron, magnesium, manganese, potassium, and sodium were detected in more than 10% of the samples.

Tables 6 through 9 present the range of detected constituents at the recovery points (i.e., shallow collection trench and six bedrock recovery wells). A review of the tables suggests the following:

- Consistent with previous investigations, constituents with the highest concentrations continue to be trichloroethene, 1,2 dichloroethene, vinyl chloride, benzene, and toluene.

- PCB's were detected in OBG-1 at 29.6 ug/l. All other recovery point concentrations were less than 1.0 ug/l.

- SVOC's were detected infrequently and in low concentrations.

- The following metals were not detected in any of the seven samples: antimony, arsenic, beryllium, cadmium, chromium, cobalt, mercury, molybdenum, nickel, selenium, silver, thallium, and vanadium. Aluminum, copper, and lead were detected in one of seven samples. Only barium, calcium, iron, magnesium, manganese, potassium, sodium and zinc were detected in more than one of seven samples.

Tables 10 and 11 present VOC and PCB data from certain wells which spans the remedial investigations, pre-design investigations, design investigations, and post-construction investigations. Review of these tables suggests that the concentrations of constituents in the identified

wells for the Spring 2001 sampling event were generally similar to or lower than concentrations observed during previous sampling events.

Table 12 presents recent recovery point data collected during groundwater treatment plant start up and during the Spring 2001 event. Although the results are generally consistent with previous rounds conducted on December 15, 2000, January 27, 2001, and June 29, 2001, some observations of the data are as follows:

- The concentrations of organic constituents appear to be declining in bedrock recovery well BEI-2;

- The concentration of PCB's in the collection trench and four of the recovery wells (i.e., OBG-2, BEI-1, BEI-2, BEI-3) were lower for the March 2001 round than the June 2000 round. There appears, however, to be a gradual increase in PCB concentration in recovery well OBG-1.

- The concentration of TCE appears to be declining in four bedrock recovery wells (i.e., OBG-2, OBG-3, BEI-2, BEI-3).

These observations are primarily provided as points of interest. None of these observations are significant enough to warrant a revision to the recovery strategy, or modification to groundwater treatment plant operation.

A summary of groundwater monitoring data for VOC's, PCB's, and SVOC's from the Spring 2001 Round are presented on Table 13. For comparative purposes, the results from the Winter 1999 round are also presented. Although the results of the two rounds are generally consistent, some observations of the data are as follows:

- In the Set A and C wells, the concentrations of total VOC's detected during Spring 2001 tended to be lower than those detected during Winter 1999, with the exception of two intermediate bedrock wells.

- In the Set B wells, the concentrations of total VOC's detected in some wells during Spring 2001 tended to be slightly higher than those detected during Winter 1999. The change, however, if present, is slight, and may be due to variability (seasonal or temporal) in the data.

- In the Set D wells, the concentrations of total VOC's detected were consistent between the two events, and were low.

- During Spring 2001, PCB's were detected in only 5 of 20 on-site wells, and 0 of 22 off-site wells. The highest concentrations of PCB's detected continue to be in MW-24.

- Consistent with previous sampling events, SVOC's in Spring 2001 were generally not detected or were detected in very low concentrations relative to VOC's.

As with the recovery data, these observations are primarily provided as points of interest. None of these observations are significant enough to warrant a revision to the recovery strategy, or modification to groundwater treatment plant operation.

3. Summary, conclusions, and recommendations

3.1. Summary

A total of twenty-two conventional wells, twenty ports from four Westbay wells, the shallow collection trench and six bedrock recovery wells were sampled and analyzed for VOCs, SVOCs, PCBs, and TAL metals. Monitoring well MW-12 and sampling ports ECJ-3-146', ECJ-3-236', and ECJ-3-271' were not sampled due to integrity issues. Analytical results were validated and downloaded into a Microsoft FoxPro relational database management system to facilitate future data management and trend analysis. Sample results from select wells deemed to be representative of ground water quality to the GWTP were also compared to historical results.

3.2 Conclusions

Some conclusions which can be drawn based on the Spring 2001 round are as follows:

Groundwater Treatment Plant Operability:

Site groundwater quality has bearing on treatment plant operability (i.e., consistency of groundwater quality with the basis of design, and capability of the groundwater treatment plant to meet discharge limitations).

A review of groundwater treatment plant operational logs indicated that between the Winter 1999 Baseline Round and the Spring 2001 Annual Round, the groundwater treatment plant has operated relatively continuously since March 2000. Data concerning groundwater treatment plant operation was provided to USEPA on August 25, 2000 and in greater detail on April 30, 2001. The conclusions of these evaluations have been that influent groundwater quality is consistent with the basis of design, and that the groundwater treatment plant is capable of meeting discharge limitations. Moreover, no trends in the data have been observed that would change these conclusions.

VOC's as a Broad Indication of Groundwater Contamination

VOC's continue to be a broad indication of groundwater contamination, and based on mobility, continue to be a good indicator of potential changes in off-site migration patterns. A review of Table 13 confirms

that at no well during either sampling event were PCBs or SVOC's detected without the co-detection of VOC's.

Infrequent Detection of PCB's and SVOC's

A review of Table 13 confirms that PCB's and SVOC's continue to be detected infrequently and in low concentrations relative to VOC's. As indicated in Section 2, during the Spring 2001 round, PCB's were detected in only 5 of 20 on-site wells, and 0 of 22 off-site wells. Similarly, during the Spring 2001 Round, SVOC's were only detected in 12 of 42 wells.

Metals

A comprehensive list of TAL metals were analyzed in Spring 2001; only 8 of 24 metals were detected in more than 10% of the samples. Those metals detected in more than 10% of samples were as follows: aluminum, barium, chromium, iron, magnesium, manganese, potassium, and sodium.

Redistribution of Constituents

At a meeting on November 30, 2000, USEPA indicated that an assessment should be conducted to evaluate whether site constituents had become re-distributed as a result of groundwater recovery efforts. A comparative review of the Winter 1999 data to the Spring 2001 data indicates no significant changes in groundwater quality, other than a general decline in total VOC concentrations in Set A and C wells, and a potential increase in VOC concentration in some Set B wells, despite the fact that over 18 million gallons of groundwater has been extracted over that period.

3.3 Recommendations

Based on the Spring 2001 results, O'Brien & Gere had recommended to USEPA in a letter dated May 18, 2001 that the scope of the Summer 2001 groundwater monitoring event be modified. In a letter dated June 22, 2001, USEPA approved one of the recommendations (i.e. the deletion of SVOC's from the Summer 2001 round). It is recommended that the results of future monitoring events continue to be evaluated with the intent of identifying potential trends in the data and of focusing the scope of future monitoring events.

TABLES

Table 1
Sullivan's Ledge Superfund Site First Operable Unit
Ground Water Elevation Data

Well Number	1999 Casing Elevation (ft msl)	2001 Casing Elevation (ft msl)	Ground Water Elevation (ft msl) 11/99-12/99	2/22-23/01	3/1/01	Elevation Change (ft)
Overburden						
MW-4A	90.18	90.18	81.90	81.81	nm	-0.09
MW-5A	82.82	82.82	75.92	76.24	nm	0.32
MW-6A	73.33	73.33	69.33	67.51	nm	-1.82
MW-8A	76.19	76.19	69.09	72.22	nm	3.13
MW-10A	69.72	70.54	na	nm	nm	na
MW-12A	84.15	84.15	na	70.37	nm	na
MW-12AR	na	85.04	na	70.42	nm	na
MW-13A	89.48	89.48	77.58	72.94	nm	-4.64
MW-14	100.32	101.46	83.83	84.36	nm	0.53
MW-15	110.56	112.31	91.41	93.00	nm	1.59
MW-16	117.13	120.55	99.48	99.70	nm	0.22
MW-17	92.56	92.56	na	70.41	nm	na
MW-22A	85.00	85.00	76.70	67.23	nm	-9.47
PZ-1	na	66.73	na	nm	62.87	na
PZ-2	na	65.91	na	nm	62.83	na
PZ-3	72.25	65.91	na	nm	62.51	na
PZ-6	65.95	68.06	na	nm	63.13	na
PZ-10	na	85.72	na	66.42	nm	na
PZ-11	na	73.79	na	68.36	nm	na
PZ-12	na	82.46	na	66.43	nm	na
PZ-13	na	73.28	na	68.20	nm	na
PZ-14A	na	86.73	na	75.45	nm	na
PZ-15A	na	85.98	na	74.27	nm	na
Shallow Bedrock						
GCA-1	84.06	84.06	77.26	69.24	nm	-8.02
MW-2	99.81	101.81	83 36	83.99	nm	0.63
MW-4	90.23	90.23	81.72	81.86	nm	0.14
MW-5	82.34	82.34	74.64	74.72	nm	0.08
MW-6	73.89	73.89	69.61	67.79	nm	-1.82
MW-8	70.05	70.05	64.61	66.90	nm	2.29
MW-10	68.28	68.28	na	66.53	nm	na
MW-10B	68.42	68.42	na	66.52	nm	na
MW-12	83.91	83.91	na	nm	nm	na
MW-13	89.49	89.49	77.47	72.95	nm	-4.52
MW-24	110.90	112.23	91.44	94.26	nm	2.82
ECJ-1 37' (53 ft msl)	89.81	89.81	77.44	nm	61.53	-15.91
ECJ-1 62' (28 ft msl)	89.81	89.81	77.38	nm	68.59	-8.79
ECJ-1 72' (18 ft msl)	89.81	89.81	78.04	nm	68.13	-9.91
ECJ-2 47' (25 ft msl)	72.38	72.38	69.61	nm	57.70	-11.91
ECJ-4 62' (9 ft msl)	70.59	70.59	na	nm	65.58	na
Intermediate Bedrock Wells						
ECJ-1 122' (-32 ft msl)	89.81	89.81	78.10	nm	50.64	-27.46
ECJ-1 148' (-58 ft msl)	89.81	89.81	78.17	nm	48.13	-30.04
ECJ-2 82' (-10 ft msl)	72.38	72.38	70.21	nm	68.77	-1.44
ECJ-2 117' (-45 ft msl)	72.38	72.38	70.20	nm	94.77	**
ECJ-2 152' (-80 ft msl)	72.38	72.38	76.92	nm	63.93	-12.99
ECJ-4 87' (-16 ft msl)	70.59	70.59	na	nm	65.58	na
ECJ-4 132' (-61 ft msl)	70.59	70.59	na	nm	65.69	na
ECJ-4 162' (-91 ft msl)	70.59	70.59	na	nm	65.58	na
Deep Bedrock Wells						
ECJ-1 267' (-177 ft msl)	89.81	89.81	87.48	nm	78.78	-8.70
ECJ-2 187' (-115 ft msl)	72.38	72.38	76.97	nm	64.23	-12.74
ECJ-4 227' (-156 ft msl)	70.59	70.59	na	nm	65.51	na
ECJ-4 245' (-174 ft msl)	70.59	70.59	na	nm	65.46	na

** The May 2001 ground water elevation for this port is anomolous and is not considered valid.
na - not available
nm - not measured

Table 2
Sullivan's Ledge Superfund Site
Groundwater Data Summary
Spring 2001 Monitoring Event
Volatile Organic Compounds[1]

Constituent	Number of Samples	Number of Detects	Range (µg/L)	
			Low	High
Benzene, 1,2,4-trimethyl	42	2	2.5U	10
1,4-Dichlorobenzene	42	4	2.5U	28
2-Butanone (MEK)	42	1	5U	6.7
4-Methyl-2-pentanone	42	1	5U	880
Acrylonitrile	42	1	5U	17
Benzene	42	12	0.5U	5700
Chlorobenzene	42	8	1.8U	220
Chloroethane	42	3	1.0U	13
Chloroform	42	1	0.75U	15
Ethylbenzene	42	13	0.5U	3200
Isopropylbenzene	42	2	2.5U	18
Methyl tert butyl ether	42	1	2.0U	6.8
Naphthalene	42	3	2.5U	93
Styrene	42	1	0.5U	6
Tetrahydrofuran	42	1	10U	29
Toluene	42	11	0.75U	2700
Trichloroethene	42	7	0.5U	650
Vinyl chloride	42	20	1.0U	18000
cis-1,2-Dichloroethene	42	23	0.5U	64000
0-Xylene	42	4	0.5U	23
m,p-Xylenes	42	5	0.5U	27

Notes:
1. A total of 74 volatile organic compounds analyzed for using method 8260B. Only detected compounds shown.

Table 3
Sullivan's Ledge Superfund Site
Groundwater Data Summary
Spring 2001 Monitoring Event
PCBs[1]

Constituent	Number of Samples	Number of Detects	Range (µg/L)	
			Low	High
Aroclor 1242/1016	42	3	0.319U	8.61J
Aroclor 1254	42	2	0.319U	2.85J

Notes:
1. A total of 6 PCB compounds analyzed using method 8082B. Only detected compounds shown.

Table 4
Sullivan's Ledge Superfund Site
Groundwater Data Summary
Spring 2001 Monitoring Event
Semivolatile Organic Compounds[1+2]

Constituent	Number of Samples	Number of Detects	Range (µg/L)	
			Low	High
1,2,4-Trichlorobenzene	41	2	3.8U	62
1,3-Dichlorobenzene	41	3	3.8U	17
1,4-Dichlorobenzene	41	8	3.8U	33
1-Chloronaphthalene	41	2	3.8U	19
1-Methylnaphthalane	41	3	3.8U	8.6
2-Methylnaphthalene	41	1	3.8U	6
2,4-Dimethylphenol	41	1	7.5U	21
2-Methylphenol	41	1	3.8U	24
3-Methylphenol/4-Methylphenol	41	1	3.8U	46
Acenaphthene	41	1	3.8U	9.1
Acetophenone	41	1	15U	20
2,2-oxybis(1-Chloropropane)	41	1	3.8U	53
Isophorone	41	2	3.8U	43
NDPA/DPA (Diphenylamine)	41	3	3.8U	14
Naphthalene	41	6	3.8U	120
Phenol	41	2	3.8U	34

Notes:
1. A total of 99 semivolatile organic compounds analyzed using method 8270C. Only detected compounds shown.

Table 5
Sullivan's Ledge Superfund Site
Groundwater Data Summary
Spring 2001 Monitoring Event
Metals[1]

Constituent	Number of Samples	Number of Detects	Range (µg/L)	
			Low	High
Aluminum	42	19	100U	7,000
Antimony	42	0	50U	50U
Arsenic	42	1	5U	43
Barium	42	36	10U	1,200
Beryllium	42	0	5U	5U
Cadmium	42	0	5U	5U
Calcium	42	42	18,000	440,000
Chromium (total)	42	5	10U	130
Cobalt	42	1	20U	90
Copper	42	2	10U	20
Iron	42	41	50U	360,000
Lead	42	3	5U	23
Magnesium	42	41	100U	120,000
Manganese	42	41	10U	10,000
Mercury	42	0	0.5U	0.5U
Molybdenum	0	0	0	0
Nickel	42	1	25U	294
Potassium	42	33	2,000U	57,000
Selenium	42	1	5U	9
Silver	42	0	10U	10U
Sodium	42	42	14,000	220,000
Thallium	42	0	5U	5U
Vanadium	42	3	10U	30
Zinc	42	4	50U	570

Notes:
1. A total of 23 metals analyzed using method 6010B/7470A. All analytes shown.

Table 6
Sullivan's Ledge Superfund Site
Groundwater Data Summary from Recovery Systems[1]
Spring 2001 Monitoring Event
Volatile Organic Compounds[2]

Constituent	Number of Samples	Number of Detects	Range (µg/L)	
			Low	High
Benzene, 1,2,4-trimethyl	7	1	2.5U	11[10]
1,4-Dichlorobenzene	7	1	2.5U	10[10]
Benzene	7	5	50U	390[10]
Chlorobenzene	7	2	180U[11]	250[10]
Chloroethane	7	1	50U[11]	12[10]
Ethylbenzene	7	5	50U[11]	1100
Isopropylbenzene	7	1	120U[11]	11[10]
Naphthalene	7	2	250U[11]	140[10]
Toluene	7	4	1.5U	960
Trichloroethene	7	7	1.40	13000
Vinyl chloride	7	5	2.0U	840
cis-1,2-Dichloroethene	7	7	3.10	13000
0-xylene	7	1	25U	2.8
m,p-xylenes	7	2	50U	42

Notes:
1. Samples collected from the following recovery systems: Shallow collection trench pump station and bedrock recovery wells BEI-1, BEI-2, BEI-3, OBG-1, OBG-2 and OBG-3.
2. A total of 74 volatile organic compounds analyzed for using method 8260B. Only detected compounds shown.

Table 7
Sullivan's Ledge Superfund Site
Groundwater Data Summary from Recovery Systems[1]
Spring 2001 Monitoring Event
PCBs[2]

Constituent	Number of Samples	Number of Detects	Range (µg/L)	
			Low	High
Aroclor 1254	7	43	0.5U	29.6

Notes:
1. Samples collected from the following recovery systems: Shallow collection trench pump station and bedrock recovery wells BEI-1, BEI-2, BEI-3, OBG-1, OBG-2 and OBG-3.
2. A total of 6 PCB compounds analyzed using method 8082B. Only detected compounds shown.
3. High value shown is for OBG-1. All other concentrations are less than 1ug/l.

Table 8
Sullivan's Ledge Superfund Site
Groundwater Data Summary from Recovery Systems[1]
Spring 2001 Monitoring Event
Semivolatile Organic Compounds[2]

Constituent	Number of Samples	Number of Detects	Range (µg/L)	
			Low	High
1,2,4-Trichlorobenzene	7	4	5.0U	44
1,3-Dichlorobenzene	7	1	5.0U	11J
1,4-Dichlorobenzene	7	4	5.0U	33J
1-Chloronaphthalene	7	4	5.0U	25J
1-Methylnaphthalane	7	3	5.0U	26J
2-Methylnaphthalene	7	2	5.0U	25J
Acenaphthene	7	2	5.0U	5.7J
Isophorone	7	2	4.6UJ	7.8
NDPA/DPA (Diphenylamine)	7	4	5.0U	47
Naphthalene	7	6	4.3U	190J

Notes:
1. Samples collected from the following recovery systems: Shallow collection trench pump station and bedrock recovery wells BEI-1, BEI-2, BEI-3, OBG-1, OBG-2 and OBG-3.
2. A total of 99 semivolatile organic comounds analyzed using method 8270C. Only detected compounds shown.

Table 9
Sullivan's Ledge Superfund Site
Groundwater Data Summary from Recovery Systems[1]
Spring 2001 Monitoring Event
Metals[2]

Constituent	Number of Samples	Number of Detects	Range (µg/L)	
			Low	High
Aluminum	7	1	100U	110
Antimony	7	0	50U	50U
Arsenic	7	0	5U	5U
Barium	7	7	90	840
Beryllium	7	0	5U	5U
Cadmium	7	0	5U	5U
Calcium	7	7	61,000	110,000
Chromium (total)	7	0	10U	10U
Cobalt	7	0	20U	20U
Copper	7	1	10U	30
Iron	7	7	1,300	83,000
Lead	7	1	5U	16
Magnesium	7	7	5,300	25,000
Manganese	7	7	1,800	10,000
Mercury	7	0	0.5U	0.5U
Molybdenum	7	0	50U	50U
Nickel	7	0	25U	25U
Potassium	7	7	4,200	12,000
Selenium	7	0	5U	5U
Silver	7	0	10U	10U
Sodium	7	7	32,000	99,000
Thallium	7	0	5U	5U
Vanadium	7	0	10U	10U
Zinc	7	4	50U	150

Notes:
1. Samples collected from the following recovery systems: Shallow collection trench pump station and bedrock recovery wells BEI-1, BEI-2, BEI-3, OBG-1, OBG-2 and OBG-3.
2. A total of 24 metal compounds analyzed using method 6010B/7470A. All analysis shown.

TABLE 10

SULLIVAN'S LEDGE SUPERFUND SITE FIRST OPERABLE UNIT
HISTORICAL GROUNDWATER DATA

VOLATILE ORGANICS GROUP 4: OVERBURDEN WELLS

WELL NUMBER	MW-22A	MW-22A	MW-22A	MW-22A	MW-22A	MW-22A	MW-22A	MW-22A	MW-22A	MW-22A
DEPTH										
COMPOUND	5 FEB 86	18 MAR 86	24 FEB 88	23 AUG 92	2 DEC 92	11 FEB 93	28 APR 93	21 MAR 95	17 NOV 99	27 MAR 01
1,1,1-Trichloroethane	U	U	U	25 U	25 U	50 U	50 U	10 J	12 U	5.0U
1,1,2,2-Tetrachloroethane	U	U	U	25 U	25 U	50 U	50 U	50 U	12 U	5.0U
1,1,2-Trichloroethane	U	U	U	25 U	25 U	50 U	50 U	50 U	12 U	7.5U
1,1-Dichloroethane	U	U	U	25 U	25 U	50 U	50 U	50 U	12 U	7.5U
1,1-Dichloroethene	U	U	U	25 U	25 U	50 U	50 U	50 U	12 U	7.5U
1,2-Dichloroethane	U	U	U	25 U	25 U	50 U	50 U	50 U	12 U	5.0U
1,2-Dichloroethene (total)	2300	1200	84	16 J	25 U	50 U	3 J	50 U	24 U	5.2
1,2-Dichloropropane	U	U	U	25 U	25 U	50 U	50 U	50 U	12 U	18U
2-Butanone	U	U	U	25 U	25 U	50 U	50 U	50 U	250 U	50U
2-Hexanone	U	U	U	25 U	25 U	50 U	50 U	50 U	120 U	50U
4-Methyl-2-Pentanone	U	U	U	25 U	25 U	50 U	50 U	50 U	120 U	50U
Acetone	U	U	U	25 UJ	25 U	50 U	50 U	50 U	250 U	130
Benzene	120	160	87	190	160	200	230	200	670	120
Bromodichloromethane	U	U	U	25 U	25 U	50 U	50 U	50 U	12 U	5.0U
Bromoform	U	U	U	25 U	25 U	50 U	50 U	50 U	12 U	5.0U
Bromomethane	U	U	U	25 U	25 U	50 U	50 U	50 U	25 U	10UJ
Carbon Disulfide	U	U	U	25 U	25 U	50 U	50 U	50 U	12 U	50U
Carbon Tetrachloride	U	U	U	25 U	25 U	50 U	50 U	50 U	12 U	5.0U
Chlorobenzene	140	230	340	460	390	430	410	730	42	140
Chloroethane	U	U	U	25 U	25 U	50 U	50 U	50 U	25 U	10UJ
Chloroform	U	U	U	25 U	25 U	50 U	50 U	50 U	12 U	7.5U
Chloromethane	U	U	U	25 U	25 U	50 U	50 U	50 U	25 UJ	50U
cis-1,3-Dichloropropene	U	U	U	25 U	25 U	50 U	50 U	50 U	12 U	5.0U
Dibromochloromethane	U	U	U	25 U	25 U	50 U	50 U	50 U	12 U	5.0U
Ethylbezene	3600	3500	3200	310	330	300	140	59	190	11
Methylene Chloride	81 J	U	U	5 J	25 U	50 U	50 U	50 U	50 U	25U
Styrene	U	U	U	25 U	25 U	50 U	50 U	50 U	12 U	5.0U
Tetrachloroethene	U	U	U	25 U	25 U	50 U	50 U	50 U	12 U	5.0U
Toluene	93 J	42 J	8	25 U	4 J	50 U	50 U	50 U	240	98
trans-1,3-Dichloropropene	U	U	U	25 U	25 U	50 U	50 U	50 U	12 U	5.0U
Trichloroethene	U	U	U	25 U	25 U	50 U	50 U	50 U	12 U	5.0U
Vinyl Chloride	1800	360	190	23 J	14 J	50 U	50 U	50 U	25 U	10UJ
Xylene (total)	U	U	32	27	25	30 J	30 J	23 J	640	35

Units: ug/L
U = non-detected
J = estimated

TABLE 10

SULLIVAN'S LEDGE SUPERFUND SITE FIRST OPERABLE UNIT
HISTORICAL GROUNDWATER DATA

VOLATILE ORGANICS GROUP 4: OVERBURDEN WELLS

WELL NUMBER	MW-13A	MW-13A	MW-13A	MW-13A	MW-13A	MW-13A	MW-13A	MW-13A	MW-13A	MW-13A
DEPTH										
COMPOUND	17 JAN 85	13 MAR 86	25 FEB 88	21 AUG 92	18 NOV 92	12 FEB 93	28 APR 93	22 MAR 95	17 NOV 99	23 MAR 01
1,1,1-Trichloroethane	U	U	U	10 U	10 U	10 U	10 U	10 U	0.50 U	0.5U
1,1,2,2-Tetrachloroethane	U	U	U	10 U	10 U	10 U	10 U	10 U	0.50 U	0.5U
1,1,2-Trichloroethane	U	U	U	10 U	10 U	10 U	10 U	10 U	0.50 U	0.75U
1,1-Dichloroethane	U	U	U	10 U	10 U	10 U	10 U	10 U	0.50 U	0.75U
1,1-Dichloroethene	U	U	U	10 U	10 U	10 U	10 U	10 U	0.50 U	0.75U
1,2-Dichloroethane	U	U	90	10 U	10 U	10 U	10 U	10 U	0.50 U	0.5U
1,2-Dichloroethene (total)	U	97 J	U	10 U	17	8 J	25	72	15.22 J	5.2
1,2-Dichloropropane	U	U	U	10 U	10 U	10 U	10 U	10 U	0.50 U	1.8U
2-Butanone	U	U	230 J	10 U	10 U	10 U	10 U	10 U	10 U	5.0U
2-Hexanone	U	U	U	10 U	10 U	10 U	10 U	10 U	5.0 U	5.0U
4-Methyl-2-Pentanone	380	U	U	10 U	10 U	10 U	10 U	10 U	5.0 U	5.0U
Acetone	U	U	U	10 U	10 U	10 U	10 U	10 U	10 U	5.0UJ
Benzene	140	120 J	75	10 U	72	67	32	30	0.65	0.5U
Bromodichloromethane	U	U	U	10 U	10 U	10 U	10 U	10 U	0.50 U	0.5U
Bromoform	U	U	U	10 U	10 U	10 U	10 U	10 U	0.50 U	0.5U
Bromomethane	U	U	U	10 U	10 U	10 U	10 U	10 U	1.0 U	1.0UJ
Carbon Disulfide	U	U	U	10 U	10 U	10 U	10 U	10 U	0.50 U	5.0U
Carbon Tetrachloride	U	U	U	10 U	10 U	10 U	10 U	10 U	0.50 U	0.5U
Chlorobenzene	110	76 J	54	10 U	47	36	21	16	1.7	1.8U
Chloroethane	U	U	U	10 U	10 U	10 U	10 U	10 U	1.0 UJ	1.0U
Chloroform	80	U	U	10 U	10 U	10 U	10 U	10 U	0.50 U	0.75U
Chloromethane	U	U	U	10 U	10 U	10 U	10 U	10 U	1.0 U	5.0U
cis-1,3-Dichloropropene	U	U	U	10 U	10 U	10 U	10 U	10 U	0.50 U	0.5U
Dibromochloromethane	U	U	U	10 U	10 U	10 U	10 U	10 U	0.50 U	0.5U
Ethylbezene	U	5.1 J	8	10 U	10 U	1 J	0.4 J	10 U	0.50 U	0.5U
Methylene Chloride	470	U	U	10 U	10 U	10 U	10 U	10 U	2.0 U	2.5U
Styrene	U	U	U	10 U	10 U	10 U	10 U	10 U	0.50 U	0.5U
Tetrachloroethene	U	U	U	10 U	10 U	10 U	10 U	10 U	0.50 U	0.5U
Toluene	U	2.7 J	U	10 U	1 J	1 J	10 U	10 U	0.10 J	0.75U
trans-1,3-Dichloropropene	U	U	U	10 U	10 U	10 U	10 U	10 U	0.50 U	0.5U
Trichloroethene	U	4.4 J	U	10 U	10 U	8 J	10 U	5 J	0.17 J	0.5U
Vinyl Chloride	U	64 J	U	10 U	62	23	38	10 U	11	5
Xylene (total)	U	U	U	10 U	1 J	10 U	10 U	10 U	0.50 U	0.5U

Units: ug/L
U = non-detected
J = estimated

TABLE 10

SULLIVAN'S LEDGE SUPERFUND SITE FIRST OPERABLE UNIT
HISTORICAL GROUNDWATER DATA

VOLATILE ORGANICS GROUP 4: OVERBURDEN WELLS

WELL NUMBER	MW-6A	MW-6A	MW-6A	MW-6A	MW-6A	MW-6A	MW-6A	MW-6A	MW-6A	MW-6A	MW-6A	MW-6A	MW-6A
DEPTH													
COMPOUND	17 JAN 85	17 JAN 85	21 MAY 85	12 MAR 86	24 FEB 88	24 FEB 88	27 AUG 92	17 NOV 92	17 FEB 93	29 APR 93	24 MAR 95	16 NOV 99	20 MAR 01
1,1,1-Trichloroethane	U	U	U	U	U	U	10 U	10 U	10 UJ	20 U	290	0.50 U	2.5U
1,1,2,2-Tetrachloroethane	U	U	U	U	U	U	10 U	10 U	10 UJ	20 U	50 U	0.50 U	2.5U
1,1,2-Trichloroethane	U	U	U	U	U	U	10 U	10 U	10 UJ	20 U	50 U	0.50 U	3.8U
1,1-Dichloroethane	U	U	U	U	U	U	10 U	10 U	10 UJ	20 U	50 U	0.96	3.8U
1,1-Dichloroethene	U	U	U	U	U	U	10 U	10 U	10 UJ	20 U	50 U	4.3	3.8U
1,2-Dichloroethane	U	U	U	U	U	U	5 J	10 U	10 UJ	20 U	50 U	0.50 U	2.5U
1,2-Dichloroethene (total)	320	360	26	15	490	470	85	98	270 J	260	730	1216	180J
1,2-Dichloropropane	U	U	U	U	U	U	10 U	10 U	10 UJ	20 U	50 U	0.50 U	8.8U
2-Butanone	U	U	U	U	U	34 J	10 U	10 U	10 UJ	20 U	50 U	10 U	25U
2-Hexanone	U	U	U	U	U	U	10 U	10 U	10 UJ	20 U	50 U	5.0 U	25U
4-Methyl-2-Pentanone	U	430	U	U	U	U	10 U	10 U	10 UJ	20 U	50 U	5.0 U	25U
Acetone	U	U	U	U	U	U	10 U	10 U	10 UJ	20 U	50 U	10 U	25U
Benzene	U	66 J	26	19	36	36	45	34	21 J	19 J	27 J	30	7.5
Bromodichloromethane	U	U	U	U	U	U	10 U	10 U	10 UJ	20 U	50 U	0.50 U	2.5U
Bromoform	U	U	U	U	U	U	10 U	10 U	10 UJ	20 U	50 U	0.50 U	2.5U
Bromomethane	U	U	U	U	U	U	10 U	10 U	10 UJ	20 U	50 U	1.0 U	5.0UJ
Carbon Disulfide	U	U	U	U	U	U	10 U	10 U	10 UJ	20 U	50 U	0.50 U	25U
Carbon Tetrachloride	U	U	U	U	U	U	10 U	10 U	10 UJ	20 U	50 U	0.50 U	2.5U
Chlorobenzene	U	85	30	25	29	28	36	36	24 J	23	30 J	60	27
Chloroethane	U	U	U	U	U	U	10 U	10 U	10 UJ	20 U	50 U	11	5.0U
Chloroform	67	90	U	U	U	U	10 U	10 U	10 UJ	20 U	50 U	0.50 U	3.8U
Chloromethane	U	U	U	U	U	U	10 U	10 U	10 UJ	20 U	50 U	1.0 U	25U
cis-1,3-Dichloropropene	U	U	U	U	U	U	10 U	10 U	10 UJ	20 U	50 U	0.50 U	2.5U
Dibromochloromethane	U	U	U	U	U	U	10 U	10 U	10 UJ	20 U	50 U	0.50 U	2.5U
Ethylbenzene	U	U	U	U	U	U	10 U	10 U	10 UJ	1 J	50 U	0.11 J	2.5U
Methylene Chloride	U	U	U	U	U	U	10 U	10 U	10 UJ	20 U	50 U	2.0 U	12U
Styrene	U	U	U	U	U	U	10 U	10 U	10 UJ	20 U	50 U	0.50 U	2.5U
Tetrachloroethene	U	U	U	U	U	U	10 U	10 U	10 UJ	20 U	50 U	0.50 U	2.5U
Toluene	U	U	U	U	U	U	10 U	0.6 J	10 UJ	20 U	50 U	1.6	3.8U
trans-1,3-Dichloropropene	U	U	U	U	U	U	10 U	10 U	10 UJ	20 U	50 U	0.50 U	2.5U
Trichloroethene	U	52	8	U	29	32	8 J	10 U	72 J	63	230	30	2.5U
Vinyl Chloride	U	U	7	U	200	87	45	24	61 J	75	200	480	100
Xylene (total)	U	U	U	U	U	U	10 U	10 U	10 UJ	20 U	50 U	1.1	2.5U

Units: ug/L
U = non-detected
J = estimated

TABLE 10

SULLIVAN'S LEDGE SUPERFUND SITE FIRST OPERABLE UNIT
HISTORICAL GROUNDWATER DATA

VOLATILE ORGANICS GROUP 3: SHALLOW BEDROCK WELLS

WELL NUMBER	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12
DEPTH											
COMPOUND	17 JAN 85	17 JAN 85	13 MAR 86	25 FEB 88	20 AUG 92	2 DEC 92	11 FEB 93	4 MAY 93	22 MAR 95	18 NOV 99	23 MAR 01
1,1,1-Trichloroethane	U	U	U	150	200 UJ	500 U	500 U	500 U	1000 U	1.0 U	NS
1,1,2,2-Tetrachloroethane	540	U	U	U	200 UJ	500 U	500 U	500 U	1000 U	1.0 U	NS
1,1,2-Trichloroethane	U	U	U	U	200 UJ	500 U	500 U	500 U	1000 U	1.0 U	NS
1,1-Dichloroethane	U	U	U	7	200 UJ	500 U	500 U	500 U	1000 U	0.40 J	NS
1,1-Dichloroethene	U	U	U	87	200 UJ	500 U	500 U	500 U	1000 U	1.0 U	NS
1,2-Dichloroethane	U	U	U	U	200 UJ	500 U	500 U	500 U	1000 U	1.0 U	NS
1,2-Dichloroethene (total)	120	130	2900	30000	2300 J	6100	15000 J	8000	13000	2.0 U	NS
1,2-Dichloropropane	U	U	U	U	200 UJ	500 U	500 U	500 U	1000 U	1.0 U	NS
2-Butanone	U	U	U	U	200 UJ	500 U	500 U	500 U	1000 U	20 U	NS
2-Hexanone	U	U	U	U	200 UJ	500 U	500 U	500 U	1000 U	10 U	NS
4-Methyl-2-Pentanone	170 J	380	U	U	200 UJ	500 U	500 UJ	500 U	1000 U	10 U	NS
Acetone	U	U	U	U	540 J	500 U	500 U	500 U	1000 U	20 U	NS
Benzene	540	600	300	340 J	150 J	99 J	390 J	270 J	320 J	61	NS
Bromodichloromethane	U	U	U	U	200 UJ	500 U	500 U	500 U	1000 U	1.0 U	NS
Bromoform	U	U	U	U	200 UJ	500 U	500 U	500 U	1000 U	1.0 U	NS
Bromomethane	U	U	U	U	200 UJ	500 U	500 U	500 U	1000 U	2.0 U	NS
Carbon Disulfide	U	U	U	U	200 UJ	500 U	500 U	500 U	1000 U	1.0 U	NS
Carbon Tetrachloride	U	U	U	U	200 UJ	500 U	500 U	500 U	1000 U	1.0 U	NS
Chlorobenzene	230	260	110	220 J	64 J	500 U	200 J	120 J	180 J	37	NS
Chloroethane	U	U	U	U	200 UJ	500 U	500 U	500 U	1000 U	2.0 UJ	NS
Chloroform	74 J	190 J	U	U	200 UJ	500 U	500 U	500 U	1000 U	1.0 U	NS
Chloromethane	U	U	U	U	200 UJ	500 U	500 U	500 U	1000 U	2.0 U	NS
cis-1,3-Dichloropropene	U	U	U	U	200 UJ	500 U	500 U	500 U	1000 U	1.0 U	NS
Dibromochloromethane	U	U	U	U	200 UJ	500 U	500 U	500 U	1000 U	1.0 U	NS
Ethylbezene	U	56	53 J	290 J	30 J	20 J	300 J	170 J	170 J	1.0 U	NS
Methylene Chloride	480	550	U	U	200 UJ	500 U	500 U	500 U	1000 U	4.0 U	NS
Styrene	U	U	U	U	200 UJ	500 U	500 U	500 U	1000 U	1.0 U	NS
Tetrachloroethene	U	U	U	U	200 UJ	500 U	500 U	500 U	1000 U	1.0 U	NS
Toluene	U	U	40 J	280 J	200 UJ	9 J	160 J	500 U	130 J	0.26 J	NS
trans-1,3-Dichloropropene	U	U	U	U	200 UJ	500 U	500 U	500 U	1000 U	1.0 U	NS
Trichloroethene	U	U	U	U	200 UJ	430 J	390 J	31 J	1000 U	1.0 U	NS
Vinyl Chloride	U	U	620	6400	300 J	520	1900 J	1400	2100	2.0 U	NS
Xylene (total)	U	U	57 J	67	200 UJ	500 U	89 J	31 J	1000 U	5.4	NS

Units: ug/L
U = non-detected
J = estimated
NS= Not sampled

TABLE 10

SULLIVAN'S LEDGE SUPERFUND SITE FIRST OPERABLE UNIT
HISTORICAL GROUNDWATER DATA

VOLATILE ORGANICS GROUP 3: SHALLOW BEDROCK WELLS

WELL NUMBER DEPTH COMPOUND	GCA-1 15 JAN 85	GCA-1 15 MAY 85	GCA-1 13 MAR 86	GCA-1 25 FEB 88	GCA-1 25 AUG 92	GCA-1 2 DEC 92	GCA-1 12 FEB 93	GCA-1 28 APR 93	GCA-1 21 MAR 95	GCA-1 18 NOV 99	GCA-1 23 MAR 01
1,1,1-Trichloroethane	U	U	U	U	200 U	200 U	200 UJ	200 U	45 J	50 U	0.5U
1,1,2,2-Tetrachloroethane	U	U	U	U	200 U	200 U	200 UJ	200 U	250 U	50 U	0.5U
1,1,2-Trichloroethane	U	U	U	U	200 U	200 U	200 UJ	200 U	250 U	50 U	0.75U
1,1-Dichloroethane	U	U	U	U	200 U	200 U	200 UJ	200 U	250 U	50 U	0.75U
1,1-Dichloroethene	U	U	U	20	200 U	200 U	200 UJ	18 J	250 U	18 J	0.75U
1,2-Dichloroethane	U	U	U	U	200 U	200 U	200 UJ	200 U	250 U	50 U	0.5U
1,2-Dichloroethene (total)	2300	8400	3000	4000	2500	3100	3900 J	4800	4500	11052	45
1,2-Dichloropropane	U	U	U	U	200 U	200 U	200 UJ	200 U	250 U	50 U	2.5U
2-Butanone	U	U	U	U	200 U	200 U	200 UJ	200 U	250 U	1000 U	5.0U
2-Hexanone	U	U	U	U	200 U	200 U	200 UJ	200 U	250 U	500 U	5.0U
4-Methyl-2-Pentanone	U	U	U	U	200 U	200 U	200 UJ	200 U	250 U	500 U	5.0U
Acetone	U	U	U	U	200 U	200 U	200 UJ	200 U	250 U	1000 U	5.0UJ
Benzene	210	200	130	100	41 J	31 J	43 J	48 J	77 J	470	56
Bromodichloromethane	U	U	U	U	200 U	200 U	200 UJ	200 U	250 U	50 U	0.5U
Bromoform	U	U	U	U	200 U	200 U	200 UJ	200 U	250 U	50 U	0.5U
Bromomethane	U	U	U	U	200 U	200 U	200 UJ	200 U	250 U	100 U	1.0UJ
Carbon Disulfide	U	U	U	U	200 U	200 U	200 UJ	200 U	250 U	50 U	5.0U
Carbon Tetrachloride	U	U	U	U	200 U	200 U	200 UJ	200 U	250 U	50 U	0.5U
Chlorobenzene	110	100	69 J	53	25 J	25 J	200 UJ	200 U	36 J	320	40
Chloroethane	U	U	U	U	200 U	200 U	200 UJ	200 U	250 U	100 UJ	5.3
Chloroform	29	U	U	U	200 U	200 U	200 UJ	200 U	250 U	50 U	0.75U
Chloromethane	U	U	U	U	200 U	200 U	200 UJ	200 U	250 U	100 U	5.0U
cis-1,3-Dichloropropene	U	U	U	U	200 U	200 U	200 UJ	200 U	250 U	50 U	0.5U
Dibromochloromethane	U	U	U	U	200 U	200 U	200 UJ	200 U	250 U	50 U	0.5U
Ethylbezene	190	330	72	160	200 U	85 J	98 J	99 J	86 J	93	2.3
Methylene Chloride	790	U	U	U	200 U	200 U	200 UJ	200 U	250 U	200 U	2.5U
Styrene	U	U	U	23	200 U	200 U	200 UJ	200 U	250 U	50 U	0.5U
Tetrachloroethene	U	U	U	U	200 U	200 U	200 UJ	200 U	250 U	50 U	0.5U
Toluene	110	190	44 J	130	200 U	40 J	32 J	200 U	250 U	74	0.92
trans-1,3-Dichloropropene	U	U	U	U	200 U	200 U	200 UJ	200 U	250 U	50 U	0.5U
Trichloroethene	1900	2400	240 J	1800	56 J	1300	1000 J	750	370	160	0.5U
Vinyl Chloride	260	430	110 J	92	120 J	150 J	200 J	210	290	1700	19
Xylene (total)	30	U	U	6	66 J	200 U	200 UJ	200 U	250 U	59	4.4

Units: ug/L
U = non-detected
J = estimated

TABLE 10

SULLIVAN'S LEDGE SUPERFUND SITE FIRST OPERABLE UNIT
HISTORICAL GROUNDWATER DATA

VOLATILE ORGANICS GROUP 3: SHALLOW BEDROCK WELLS

WELL NUMBER DEPTH COMPOUND	ECJ-1 72' 15 MAR 88	ECJ-1 72' 20 AUG 92	ECJ-1 72' 9 DEC 92	ECJ-1 72' 10 FEB 93	ECJ-1 72' 4 MAY 93	ECJ-1 72' 23 MAR 95	ECJ-1 72' 18 DEC 99	ECJ-1 72' 24 MAR 01
1,1,1-Trichloroethane	U	5000 U	5000 UJ	5000 UJ	10000 U	10000 U	0.50 U	200U
1,1,2,2-Tetrachloroethane	U	5000 U	5000 UJ	5000 UJ	10000 U	10000 U	0.50 U	200U
1,1,2-Trichloroethane	U	5000 U	5000 UJ	5000 UJ	10000 U	10000 U	43	300U
1,1-Dichloroethane	U	5000 U	5000 UJ	5000 UJ	10000 U	10000 U	0.50 U	300U
1,1-Dichloroethene	U	530 J	450 J	5000 UJ	10000 U	10000 U	480 J	300U
1,2-Dichloroethane	U	5000 U	5000 UJ	5000 UJ	10000 U	10000 U	15	200U
1,2-Dichloroethene (total)	6900	77000	67000 J	59000 J	110000	200000	120620 J	21000
1,2-Dichloropropane	U	5000 U	5000 UJ	5000 UJ	10000 U	10000 U	0.50 U	700U
2-Butanone	U	5000 U	5000 UJ	5000 UJ	10000 U	10000 U	10 U	2000U
2-Hexanone	U	5000 U	5000 UJ	5000 UJ	10000 U	10000 U	5.0 U	2000U
4-Methyl-2-Pentanone	U	5000 U	5000 UJ	5000 UJ	10000 U	10000 U	5.0 U	2000U
Acetone	U	5000 UJ	5000 UJ	5000 UJ	10000 U	10000 U	10 U	2000UJ
Benzene	U	5000 U	5000 UJ	5000 UJ	450 J	10000 U	140 J	200U
Bromodichloromethane	U	5000 U	5000 UJ	5000 UJ	10000 U	10000 U	0.50 U	200U
Bromoform	U	5000 U	5000 UJ	5000 UJ	10000 U	10000 U	0.50 U	200U
Bromomethane	U	5000 U	5000 UJ	5000 UJ	10000 U	10000 U	1.0 U	400UJ
Carbon Disulfide	U	5000 U	5000 UJ	5000 UJ	10000 U	10000 U	0.50 U	2000U
Carbon Tetrachloride	U	5000 U	5000 UJ	5000 UJ	10000 U	10000 U	0.50 U	200U
Chlorobenzene	U	5000 U	5000 UJ	5000 UJ	10000 U	10000 U	2.2	700U
Chloroethane	U	5000 U	5000 UJ	5000 UJ	10000 U	10000 U	1.0 UJ	400U
Chloroform	U	5000 U	5000 UJ	5000 UJ	10000 U	10000 U	0.50 U	300U
Chloromethane	U	5000 U	5000 UJ	5000 UJ	10000 U	10000 U	1.0 U	2000U
cis-1,3-Dichloropropene	U	5000 U	5000 UJ	5000 UJ	10000 U	10000 U	0.50 U	200U
Dibromochloromethane	U	5000 U	5000 UJ	5000 UJ	10000 U	10000 U	0.50 U	200U
Ethylbezene	U	5000 U	670 J	1100 J	5100 J	5100 J	1900	680
Methylene Chloride	U	5000 U	5000 UJ	5000 UJ	10000 U	10000 U	2.0 U	1000U
Styrene	U	5000 U	5000 UJ	5000 UJ	10000 U	10000 U	1.8	200U
Tetrachloroethene	U	5000 U	5000 UJ	5000 UJ	10000 U	10000 U	3.1	200U
Toluene	U	5000 U	440 J	5000 UJ	10000 U	10000 U	360 J	300U
trans-1,3-Dichloropropene	U	5000 U	5000 UJ	5000 UJ	10000 U	10000 U	0.50 U	200U
Trichloroethene	57000	15000	36000 J	22000 J	100000	10000 U	19000	200U
Vinyl Chloride	U	3700 J	1400 J	1800 J	3000 J	6200 J	2700	5100
Xylene (total)	U	870 J	5000 UJ	5000 UJ	10000 U	10000 U	72	200U

Units: ug/L
U = non-detected
J = estimated

TABLE 10

SULLIVAN'S LEDGE SUPERFUND SITE FIRST OPERABLE UNIT
HISTORICAL GROUNDWATER DATA

VOLATILE ORGANICS GROUP 2: INTERMEDIATE BEDROCK WELLS

WELL NUMBER	ECJ-2	ECJ-2	ECJ-2	ECJ-2	ECJ-2	ECJ-2	ECJ-2	ECJ-2	ECJ-2
DEPTH	82'	82'	82'	82'	82'	82'	82'	82'	82'
COMPOUND	3 MAR 88	3 MAR 88	31 AUG 92	7 DEC 92	12 FEB 93	7 MAY 93	24 MAR 95	3 JAN 00	28 MAR 01
1,1,1-Trichloroethane	U	U	1000 U	1000 UJ	2000 U	1200 U	5000 U	120 U	100U
1,1,2,2-Tetrachloroethane	U	U	1000 U	1000 UJ	2000 U	1200 U	5000 U	120 U	100U
1,1,2-Trichloroethane	U	U	1000 U	1000 UJ	2000 U	1200 U	5000 U	120 U	150U
1,1-Dichloroethane	U	5	1000 U	1000 UJ	2000 U	1200 U	5000 U	120 U	150U
1,1-Dichloroethene	42	53	1000 U	71 J	2000 U	49 J	5000 U	120 U	150U
1,2-Dichloroethane	U	8	1000 U	1000 UJ	2000 U	1200 U	5000 U	120 U	100U
1,2-Dichloroethene (total)	10000 J	13000 J	7900	24000 J	21000	27000	51000	922 J	530
1,2-Dichloropropane	U	U	1000 U	1000 UJ	2000 U	1200 U	5000 U	120 U	350U
2-Butanone	U	U	1000 U	1000 UJ	2000 U	1200 U	5000 U	2500 U	1000U
2-Hexanone	U	U	1000 U	1000 UJ	2000 U	1200 U	5000 U	1200 U	1000U
4-Methyl-2-Pentanone	1000	3200	1000 U	2100 J	2000 U	2300	5000 U	1200 U	1000U
Acetone	U	U	1000 U	1000 UJ	2000 U	1200 U	5000 U	2500 U	1000U
Benzene	60	77	1000 U	85 J	2000 U	190 J	5000 U	80 J	100U
Bromodichloromethane	U	U	1000 U	1000 UJ	2000 U	1200 U	5000 U	120 U	500U
Bromoform	U	U	1000 U	1000 UJ	2000 U	1200 U	5000 U	120 U	100U
Bromomethane	U	U	1000 U	1000 UJ	2000 U	1200 U	5000 U	250 U	200UJ
Carbon Disulfide	U	U	1000 U	1000 UJ	2000 U	1200 U	5000 U	120 U	1000U
Carbon Tetrachloride	U	U	1000 U	1000 UJ	2000 U	1200 U	5000 U	120 U	100U
Chlorobenzene	17	22	1000 U	4 J	2000 U	1200 U	5000 U	120 U	350U
Chloroethane	U	U	1000 U	1000 UJ	2000 U	1200 U	5000 U	250 UJ	200UJ
Chloroform	U	U	1000 U	1000 UJ	2000 U	1200 U	5000 U	120 U	150U
Chloromethane	U	U	1000 U	1000 UJ	2000 U	1200 U	5000 U	250 U	1000U
cis-1,3-Dichloropropene	U	U	1000 U	1000 UJ	2000 U	1200 U	5000 U	120 U	100U
Dibromochloromethane	U	U	1000 U	1000 UJ	2000 U	1200 U	5000 U	120 U	100U
Ethylbezene	270	410	570 J	990 J	960 J	660 J	1300 J	1000 U	710
Methylene Chloride	U	U	1000 U	1000 UJ	2000 U	1200 U	5000 U	500 U	500U
Styrene	220	320	1000 U	1000 UJ	2000 U	1200 U	5000 U	120 U	100U
Tetrachloroethene	14	16	1000 U	1000 UJ	2000 U	1200 U	5000 U	120 U	100U
Toluene	580	900	1000 U	1400 J	1500 J	1200 U	2100 J	940	740
trans-1,3-Dichloropropene	U	U	1000 U	1000 UJ	2000 U	1200 U	5000 U	120 U	100U
Trichloroethene	9500	14000	1000 U	12000 J	15000	9000	4500 J	120 U	100U
Vinyl Chloride	560	1000	11000	3600 J	2000 U	5800	13000 J	14000	14000
Xylene (total)	12	14	660 J	1000 UJ	2000 U	1200 U	5000 U	120 U	100U

Units: ug/L
U = non-detected
J = estimated

TABLE 10

SULLIVAN'S LEDGE SUPERFUND SITE FIRST OPERABLE UNIT
HISTORICAL GROUNDWATER DATA

VOLATILE ORGANICS GROUP 2: INTERMEDIATE BEDROCK WELLS

WELL NUMBER DEPTH COMPOUND	ECJ-1 122' 15 MAR 88	ECJ-1 122' 20 AUG 92	ECJ-1 122' 9 DEC 92	ECJ-1 122' 10 FEB 93	ECJ-1 122' 3 MAY 93	ECJ-1 122' 23 MAR 95	ECJ-1 122' 18 DEC 99	ECJ-1 122' 24 MAR 01
1,1,1-Trichloroethane	U	2000 UJ	5000 UJ	5000 UJ	10000 U	10000 U	0.50 U	50U
1,1,2,2-Tetrachloroethane	U	2000 UJ	5000 UJ	5000 UJ	10000 U	10000 U	0.50 U	50U
1,1,2-Trichloroethane	U	2000 UJ	5000 UJ	5000 UJ	10000 U	10000 U	0.50 U	75U
1,1-Dichloroethane	U	2000 UJ	5000 UJ	5000 UJ	10000 U	10000 U	0.50 U	75U
1,1-Dichloroethene	U	2000 UJ	260 J	5000 UJ	10000 U	10000 U	170 J	75U
1,2-Dichloroethane	U	2000 UJ	5000 UJ	5000 UJ	10000 U	10000 U	11	50U
1,2-Dichloroethene (total)	12000	22000 J	110000 J	130000 J	150000 J	140000	62320 J	6500
1,2-Dichloropropane	U	2000 UJ	5000 UJ	5000 UJ	10000 U	10000 U	0.50 U	180U
2-Butanone	U	2000 UJ	5000 UJ	5000 UJ	10000 U	10000 U	10 U	500U
2-Hexanone	U	2000 UJ	5000 UJ	5000 UJ	10000 U	10000 U	5.0 U	500U
4-Methyl-2-Pentanone	U	2000 UJ	1700 J	5000 UJ	10000 U	10000 U	5.0 U	500U
Acetone	U	2000 UJ	5000 UJ	5000 UJ	10000 U	10000 U	10 U	500UJ
Benzene	U	2000 UJ	5000 UJ	5000 UJ	440 J	10000 U	150 J	290
Bromodichloromethane	U	2000 UJ	5000 UJ	5000 UJ	10000 U	10000 U	0.50 U	50U
Bromoform	U	2000 UJ	5000 UJ	5000 UJ	10000 U	10000 U	0.50 U	50U
Bromomethane	U	2000 UJ	5000 UJ	5000 UJ	10000 U	10000 U	1.0 U	100UJ
Carbon Disulfide	U	2000 UJ	5000 UJ	5000 UJ	10000 U	10000 U	0.50 U	500U
Carbon Tetrachloride	U	2000 UJ	5000 UJ	5000 UJ	10000 U	10000 U	0.50 U	50U
Chlorobenzene	U	2000 UJ	5000 UJ	5000 UJ	10000 U	10000 U	2.6	180U
Chloroethane	U	2000 UJ	5000 UJ	5000 UJ	10000 U	10000 U	1.0 UJ	100U
Chloroform	U	2000 UJ	5000 UJ	5000 UJ	10000 U	10000 U	0.50 U	75U
Chloromethane	U	2000 UJ	5000 UJ	5000 UJ	10000 U	10000 U	1.0 U	500U
cis-1,3-Dichloropropene	U	2000 UJ	5000 UJ	5000 UJ	10000 U	10000 U	0.50 U	50U
Dibromochloromethane	U	2000 UJ	5000 UJ	5000 UJ	10000 U	10000 U	0.50 U	50U
Ethylbezene	U	2000 UJ	3300 J	4000 J	10000 U	3900 J	2000	450
Methylene Chloride	U	2000 UJ	5000 UJ	5000 UJ	10000 U	10000 U	2.0 U	250U
Styrene	U	2000 UJ	5000 UJ	5000 UJ	10000 U	10000 U	0.91	50U
Tetrachloroethene	U	2000 UJ	5000 UJ	5000 UJ	10000 U	10000 U	0.50 U	50U
Toluene	U	2000 UJ	2400 J	2900 J	10000 U	3100 J	1100	92
trans-1,3-Dichloropropene	U	2000 UJ	5000 UJ	5000 UJ	10000 U	10000 U	0.50 U	50U
Trichloroethene	74000	5300 J	29000 J	5000 UJ	690 J	10000 U	11	50U
Vinyl Chloride	U	2000 UJ	2100 J	4700 J	6600 J	13000	6100	1200
Xylene (total)	U	180 J	96 J	5000 UJ	10000 U	10000 U	46	50U

Units: ug/L
U = non-detected
J = estimated

TABLE 11

SULLIVAN'S LEDGE SUPERFUND SITE FIRST OPERABLE UNIT
HISTORICAL GROUNDWATER DATA

PCBs GROUP 4: OVERBURDEN WELLS

WELL NUMBER DEPTH COMPOUND	MW-22A 5 FEB 86	MW-22A 18 MAR 86	MW-22A 24 FEB 88	MW-22A 23 AUG 92	MW-22A 2 DEC 92	MW-22A 11 FEB 93	MW-22A 28 APR 93	MW-22A 21 MAR 95	MW-22A 17 NOV 99	MW-22A 27 MAR 01
Aroclor-1016	U	U	U	1.0 UJ	500 U	1000 UJ	100.0 U	20 U	2.6 U	4.64U
Aroclor-1221	U	U	U	2.0 UJ	1000 U	2000 UJ	200.0 U	20 U	2.6 U	4.64U
Aroclor-1232	U	U	U	1.0 UJ	500 U	1000 UJ	100.0 U	20 U	2.6 U	4.64U
Aroclor-1242	U	U	U	1.0 UJ	500 U	1000 UJ	100.0 U	20 U	22*	4.64U
Aroclor-1248	U	U	65.0 J	1.0 UJ	500 U	1000 UJ	100.0 U	20 U	2.6 U	4.64U
Aroclor-1254	150.0 C	U	93.0 J	1.0 UJ	3100 J	5000 J	410 J	37	2.6 U	4.64U
Aroclor-1260	U	U	U	1.0 UJ	500 U	1000 UJ	100.0 U	20 U	3.2	4.64U

Units: ug/L
U= non-detected
J= estimated
*= altered 1242 pattern

TABLE 11

SULLIVAN'S LEDGE SUPERFUND SITE FIRST OPERABLE UNIT
HISTORICAL GROUNDWATER DATA

PCBs GROUP 4: OVERBURDEN WELLS

WELL NUMBER DEPTH COMPOUND	MW-6A 17 JAN 85	MW-6A 17 JAN 85	MW-6A 21 MAY 85	MW-6A 12 MAR 86	MW-6A 24 FEB 88	MW-6A 24 FEB 88	MW-6A 27 AUG 92	MW-6A 17 NOV 92	MW-6A 17 FEB 93	MW-6A 29 APR 93	MW-6A 24 MAR 95	MW-6A 24 MAR 95	MW-6A 16 NOV 99	MW-6A 20 MAR 01
Aroclor-1016	U	U	U	U	U	U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	0.53 U	2.5U
Aroclor-1221	U	U	U	U	U	U	2.0 U	2.0 U	2.0 UJ	2.0 U	1.0 U	1.0 U	0.53 U	2.5U
Aroclor-1232	U	U	U	U	U	U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	0.53 U	2.5U
Aroclor-1242	U	U	U	U	U	U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	0.53 U	2.5U
Aroclor-1248	U	U	U	U	U	U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	0.53 U	2.5U
Aroclor-1254	1.6	1.39	1.0	U	U	U	0.014 J	0.87 J	2.1 J	1.0 U	1.7	1.5	0.12 J	2.5U
Aroclor-1260	U	U	U	U	U	U	1.0 U	1.0 U	1.0 UJ	1.0 U	1.0 U	1.0 U	0.53 U	2.5U

Units: ug/L
U = non-detected
J = estimated

TABLE 12
SULLIVAN'S LEDGE SUPERFUND SITE
SUMMARY OF INFLUENT LABORATORY ANALYTICAL RESULTS[1]

	GROUND WATER COLLECTION TRENCH				RECOVERY WELL OBG-1				RECOVERY WELL OBG-2				RECOVERY WELL OBG-3				RECOVERY WELL BEI-1				RECOVERY WELL BEI-2				RECOVERY WELL BEI-3			
	Event #1	Event #2	Event #3	Event #4	Event #1	Event #2	Event #3	Event #4	Event #1	Event #2	Event #3	Event #4	Event #1	Event #2	Event #3	Event #4	Event #1	Event #2	Event #3	Event #4	Event #1	Event #2	Event #3	Event #4	Event #1	Event #2	Event #3	Event #4
Sample Date	12/15/99	1/27/00	6/29/00	3/21/01	12/29/99	1/27/00	6/29/00	3/21/01	12/29/99	1/28/00	6/29/00	3/21/01	12/29/99	1/27/00	6/29/00	3/21/01	(2)	1/27/00	6/29/00	3/21/01	12/29/99	1/27/00	6/29/00	3/21/01	12/29/99	1/27/00	6/29/00	3/21/01
PCBs (ug/l)	2.4	3.2	4.5	LT 0.50	3.7	4.9	10	29.6	5.9	7.6	5.3	1.01	LT 0.50	LT 0.50	LT 0.51	LT 0.50	(2)	2.0	5.2	0.953	8.2	7.8	3.[illegible]	LT 0.5	3.3	3.4	4.5	0.867
Benzene (ug/l)	110	110	140	90	290	360	LT 500	270	LT 500	LT 500	400	390	LT 500	66	LT 120	56	(2)	68	LT 500	LT 100	230	LT 250	LT [illegible]	120	LT 5	LT 500	LT 250	LT 50
Toluene (ug/l)	70	190	53	LT 1.5	650	620	970	770	LT 500	LT 500	120	140	LT 500	36	LT 120	LT 75	(2)	360	990	960	2200	940	24[illegible]	76	LT 5.0	LT 500	LT 250	LT 75
E-Benzene (ug/l)	12	12	21	3.8	750	610	920	720	LT 500	LT 500	86	140	LT 500	LT 25	LT 120	LT 50	(2)	700	1000	1100	4000	1700	43[illegible]	290	6.7	LT 500	LT 250	LT 50
Xylene (ug/l)	16	16	23	12.1	LT 50	LT 50	LT 500	LT 100	LT 500	LT 500	LT 50	42	LT 500	LT 25	LT 120	LT 50	(2)	LT 50	LT 500	LT 100	87	LT 250	LT 1[illegible]	LT 50	LT 5.0	LT 500	LT 250	LT 50
TCE (ug/l)	LT 0.5	LT 5.0	LT 5.0	1.4	4000	5400	7400	2100	670	540	350	82	7100	4300	1800	450	(2)	7500	17000	13000	3800	4200	80[illegible]	160	14000	13000	7200	2600
1,2 DCE (ug/l)	1.9	LT 5.0	LT 5.0	3.1	26000	16000	13000	13000	19000	11000	3200	4800	9200	4900	3500	3600	(2)	21000	11000	12000	77000	30000	840[illegible]	7400	590	1400	2900	3400
V.Chloride (ug/l)	LT 1.0	LT 10	LT 10	LT 2.0	1200	820	LT 1000	550	2300	1100	390	430	LT 1000	180	LT 250	180	(2)	650	LT 1000	490	8200	3900	100[illegible]	840	17	LT 1000	LT 500	LT 100
Chlorobenzene (ug/l)	100	120	110	72	LT 50	LT 50	LT 500	LT 350	LT 500	LT 500	220	250	LT 500	44	LT 120	LT 180	(2)	LT 50	LT 500	LT 350	80	LT 250	LT 1[illegible]	LT 180	LT 5.0	LT 500	LT 250	LT 180
Chloroform (ug/l)	LT 0.50	LT 5.0	LT 5.0	LT 1.5	LT 50	LT 50	LT 500	LT 150	LT 500	LT 500	LT 50	LT 38	LT 500	LT 25	LT 120	LT 75	(2)	LT 50	LT 500	LT 150	LT 50	LT 250	LT 1[illegible]	LT 75	LT 5.0	LT 500	LT 250	LT 75
Acetone (ug/l)	LT 10	LT 100	LT 100	LT 10	LT 1000	LT 1000	LT 10000	LT 1000	LT 10000	LT 10000	LT 1000	LT 250	LT 10000	LT 500	LT 2500	LT 500	(2)	LT 1000	LT 10000	LT 1000	LT 1000	LT 5000	LT 2[illegible]	LT 500	LT 100	LT 10000	LT 5000	LT 500
Acrolein (ug/l)	NA	NA	LT 5.0	LT 25	NA	NA	LT 500	LT 2500	NA	NA	LT 50	LT 620	NA	NA	LT 120	LT 1200	(2)	NA	LT 500	LT 2500	NA	NA	LT 1[illegible]	LT 1200	NA	NA	LT 250	LT 1200
Arsenic (mg/l)	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	(2)	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	0.01[illegible]	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005
Cadmium (mg/l)	LT 0.01	LT 0.01	LT 0.01	LT 0.005	LT 0.01	LT 0.01	LT 0.01	LT 0.005	LT 0.01	LT 0.01	LT 0.01	LT 0.005	LT 0.01	LT 0.01	LT 0.01	LT 0.005	(2)	LT 0.01	LT 0.01	LT 0.005	LT 0.01	LT 0.01	LT 0.[illegible]	LT 0.005	LT 0.01	LT 0.01	LT 0.01	LT 0.005
Chromium (mg/l)	LT 0.01	LT 0.01	LT 0.01	LT 0.01	LT 0.01	LT 0.01	LT 0.01	LT 0.01	0.01	LT 0.01	LT 0.01	LT 0.01	LT 0.01	LT 0.01	LT 0.01	LT 0.01	(2)	LT 0.01	LT 0.01	LT 0.01	LT 0.01	LT 0.01	0.0[illegible]	LT 0.01	LT 0.01	LT 0.01	LT 0.01	LT 0.01
Chromium (VI) (mg/l)	LT 0.02	LT 0.01	NA	NA	LT 0.01	LT 0.01	NA	NA	LT 0.01	LT 0.01	NA	NA	LT 0.01	LT 0.01	NA	NA	(2)	LT 0.01	NA	NA	LT 0.01	LT 0.01	NA	NA	LT 0.01	LT 0.01	NA	NA
Copper (mg/l)	LT 0.01	LT 0.01	LT 0.01	LT 0.01	LT 0.01	LT 0.01	LT 0.01	LT 0.01	LT 0.01	LT 0.01	LT 0.01	LT 0.01	LT 0.01	LT 0.01	LT 0.01	0.03	(2)	LT 0.01	LT 0.01	LT 0.01	LT 0.01	LT 0.01	LT 0.[illegible]	LT 0.01	LT 0.01	LT 0.01	LT 0.01	LT 0.01
Cyanide (mg/l)	0.09	0.062	NA	NA	0.16	0.16	NA	NA	0.18	0.12	NA	NA	0.02	0.028	NA	NA	(2)	0.019	NA	NA	0.01	0.049	NA	NA	NA	LT 0.01	LT 0.01	NA
Iron (mg/l)	NA	86	79	83	NA	41	40	46	NA	71	74	73	NA	41	53	53	(2)	26	47	45	NA	55	210	58	NA	1.4	0.86	1.3
Lead (mg/l)	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	0.016	(2)	LT 0.005	LT 0.005	LT 0.005	LT 0.005	0.022	0.00[illegible]	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005
Manganese (mg/l)	NA	1.8	1.4	1.8	NA	9.7	8.6	7.9	NA	6.9	5.8	6.5	NA	9.9	9.8	8.3	(2)	4.4	10	10	NA	9.2	7.9	7.8	NA	1.6	3.5	5.3
Mercury (mg/l)	LT 0.0002	LT 0.0002	NA	LT 0.0005	LT 0.0002	LT 0.0002	NA	LT 0.0005	LT 0.0002	LT 0.0002	NA	LT 0.0005	LT 0.0002	LT 0.0002	NA	LT 0.0005	(2)	LT 0.0002	NA	LT 0.0005	LT 0.0002	LT 0.0002	NA	LT 0.0005	LT 0.0002	LT 0.0002	NA	LT 0.0005
Molybdenum (mg/l)	LT 0.05	LT 0.05	LT 0.05	LT 0.05	LT 0.05	LT 0.05	LT 0.05	LT 0.05	LT 0.05	LT 0.05	LT 0.05	LT 0.05	LT 0.05	LT 0.05	LT 0.05	LT 0.05	(2)	LT 0.05	LT 0.05	LT 0.05	LT 0.05	LT 0.05	0.06	LT 0.05	LT 0.05	LT 0.05	LT 0.05	LT 0.05
Nickel (mg/l)	LT 0.05	LT 0.05	LT 0.05	LT 0.025	LT 0.05	LT 0.05	LT 0.05	LT 0.025	LT 0.05	LT 0.05	LT 0.05	LT 0.025	LT 0.05	LT 0.05	LT 0.05	LT 0.025	(2)	LT 0.05	LT 0.05	LT 0.025	LT 0.05	LT 0.05	LT 0.0[illegible]	LT 0.025	LT 0.05	LT 0.05	LT 0.05	LT 0.025
Silver (mg/l)	LT 0.01	LT 0.01	LT 0.01	LT 0.01	LT 0.01	LT 0.01	LT 0.01	LT 0.01	LT 0.01	LT 0.01	LT 0.01	LT 0.01	LT 0.01	LT 0.01	LT 0.01	LT 0.01	(2)	LT 0.01	LT 0.01	LT 0.01	LT 0.01	LT 0.01	LT 0.0[illegible]	LT 0.01	LT 0.01	LT 0.01	LT 0.01	LT 0.01
Zinc (mg/l)	LT 0.01	LT 0.01	0.01	0.07	LT 0.01	0.02	0.02	LT 0.05	LT 0.01	LT 0.01	LT 0.01	LT 0.05	LT 0.01	0.01	LT 0.01	0.15	(2)	LT 0.01	LT 0.01	0.06	LT 0.01	LT 0.01	LT 0.0[illegible]	LT 0.05	0.01	0.02	0.01	0.14
SVOC'S (ug/l)	63	70	NA	73.1	79	55	NA	122.5	217	255	NA	371.3	ND	18	NA	16	(2)	68	NA	67.9	101	72	NA	74.2	ND	ND	NA	ND
Pesticides	NA	NA	ND	NA	NA	NA	ND	NA	NA	NA	ND	NA	NA	NA	ND	NA	(2)	NA	ND	NA	NA	NA	ND	NA	NA	NA	ND	NA

Notes:
1. Samples for events 1, 2, and 3 collected by OBG Operations and analyzed by OBG Laboratories.
   Samples for event 4 collected by Mabbett & Associates, Inc. and analyzed by Alpha Analytical Labs.
2. Well inoperative on day of sampling
3. TTO less than 2000 ug/l
4. Constituent specific
5. ND = Not Detected
6. NA = Not Analyzed
7. LT = Less Than

Compiled by Mabbett & Associates, Inc. for
O'Brien & Gere Engineers, Inc.
j:\users\admina\20015\Spring01 Table 12.xls

8/27/01

TABLE 13
SULLIVAN'S LEDGE SUPERFUND SITE
GROUNDWATER ANALYSIS
ORGANIC COMPOUND SUMMARY[1]

Monitoring Well	Location		Total Volatile Organic Compounds (ug/l)		Total PCBs (ug/l)		Total Semivolatile Organic Compounds (ug/l)	
	Set[2]	Group	Winter 1999	Spring 2001	Winter 1999	Spring 2001	Winter 1999	Spring 2001
MW - 16	B	Overburden	5.1	ND	0.90	ND	ND	ND
MW - 15	B	Overburden	14.5	126.9	1.50	3.70	8.8	6.0
MW - 14	B	Overburden	639.5	965.0	0.83	ND	91.6	63.1
ECJ-3 (51)	B	Shallow Bedrock	NS	15.0	NS	ND	NS	ND
ECJ-3 (91)	B	Shallow Bedrock	NS	ND	NS	ND	NS	ND
MW - 24	B	Shallow Bedrock	3843.3	6530.0	47.00	36.70	66.9	39.8
MW - 2	B	Shallow Bedrock	3440.0	2181.0	17.00	8.61	134.6	47.5
ECJ-3 (126)	B	Intermed Bedrock	NS	ND	NS	ND	NS	ND
MW - 13A	A	Overburden	28.8	10.2	0.31	ND	ND	ND
MW-12AR	A	Overburden	NS	205.5	NS	ND	NS	47.9
MW - 22A	A	Overburden	1782.0	539.2	25.20	ND	2231.3	229.7
MW - 13	A	Shallow Bedrock	991.6	7.1	0.26	ND	ND	ND
MW - 17	A	Shallow Bedrock	36.4	1.2	ND	ND	15.0	ND
MW - 12	A	Shallow Bedrock	104.1	NS	0.27	NS	25.8	NS
GCA - 1	A	Shallow Bedrock	13946.0	172.9	14.00	ND	247.4	26.6
ECJ 1 (37)	A	Shallow Bedrock	2297.6	109.0	1.10	2.85	36.1	ND
ECJ 1 (62)	A	Shallow Bedrock	72950.1	9410.0	0.52	0.75	118.0	ND
ECJ 1 (72)	A	Shallow Bedrock	145337.1	26780.0	ND	ND	152.4	21.0
ECJ 1 (122)	A	Intermed Bedrock	71911.5	8532.0	ND	ND	100.5	188.9
ECJ 1 (148)	A	Intermed Bedrock	36477.2	74600.0	0.44	ND	109.4	182.6
ECJ 1 (267)	A	Deep Bedrock	160.5	52.1	ND	ND	5.9	ND
MW - 6A	C	Overburden	1835.1	314.5	0.12	ND	4.6	ND
MW - 4A	C	Overburden	1.8	ND	ND	ND	ND	ND
MW - 5A	C	Overburden	ND	ND	ND	ND	ND	ND
MW - 6	C	Shallow Bedrock	4837.2	2950.0	ND	ND	5.6	ND
ECJ 2 (47)	C	Shallow Bedrock	2533.0	1920.0	ND	ND	3.2	ND
MW - 4	C	Shallow Bedrock	1271.9	1034.2	ND	ND	ND	ND
MW - 5	C	Shallow Bedrock	ND	6.8	ND	ND	ND	ND
ECJ 2 (82)	C	Intermed Bedrock	15942.0	16080.0	ND	ND	4.4	ND
ECJ 2 (117)	C	Intermed Bedrock	55380.0	29730.0	ND	ND	8.8	ND
ECJ 2 (152)	C	Intermed Bedrock	400.4	4594.0	ND	ND	ND	9.0
ECJ 2 (187)	C	Deep Bedrock	3605.8	4440.0	ND	ND	2.6	9.8
MW-10A	D	Overburden	NS	8.6	NS	ND	NS	ND
MW - 8A	D	Overburden	ND	ND	ND	ND	ND	ND
MW-10	D	Shallow Bedrock	NS	12.9	NS	ND	NS	ND
MW-10B	D	Shallow Bedrock	NS	13.6	NS	ND	NS	ND
MW - 8	D	Shallow Bedrock	ND	ND	ND	ND	ND	ND
ECJ 4 (62)	D	Shallow Bedrock	0.6	ND	ND	ND	ND	ND
ECJ 4 (87)	D	Intermed Bedrock	0.6	0.7	ND	ND	ND	ND
ECJ 4 (132)	D	Intermed Bedrock	1.5	ND	ND	ND	ND	ND
ECJ 4 (162)	D	Intermed Bedrock	16.7	11.8	ND	ND	3.5	ND
ECJ 4 (227)	D	Deep Bedrock	7.0	4.3	ND	ND	ND	ND
ECJ 4 (245)	D	Deep Bedrock	15.4	5.1	ND	ND	ND	ND

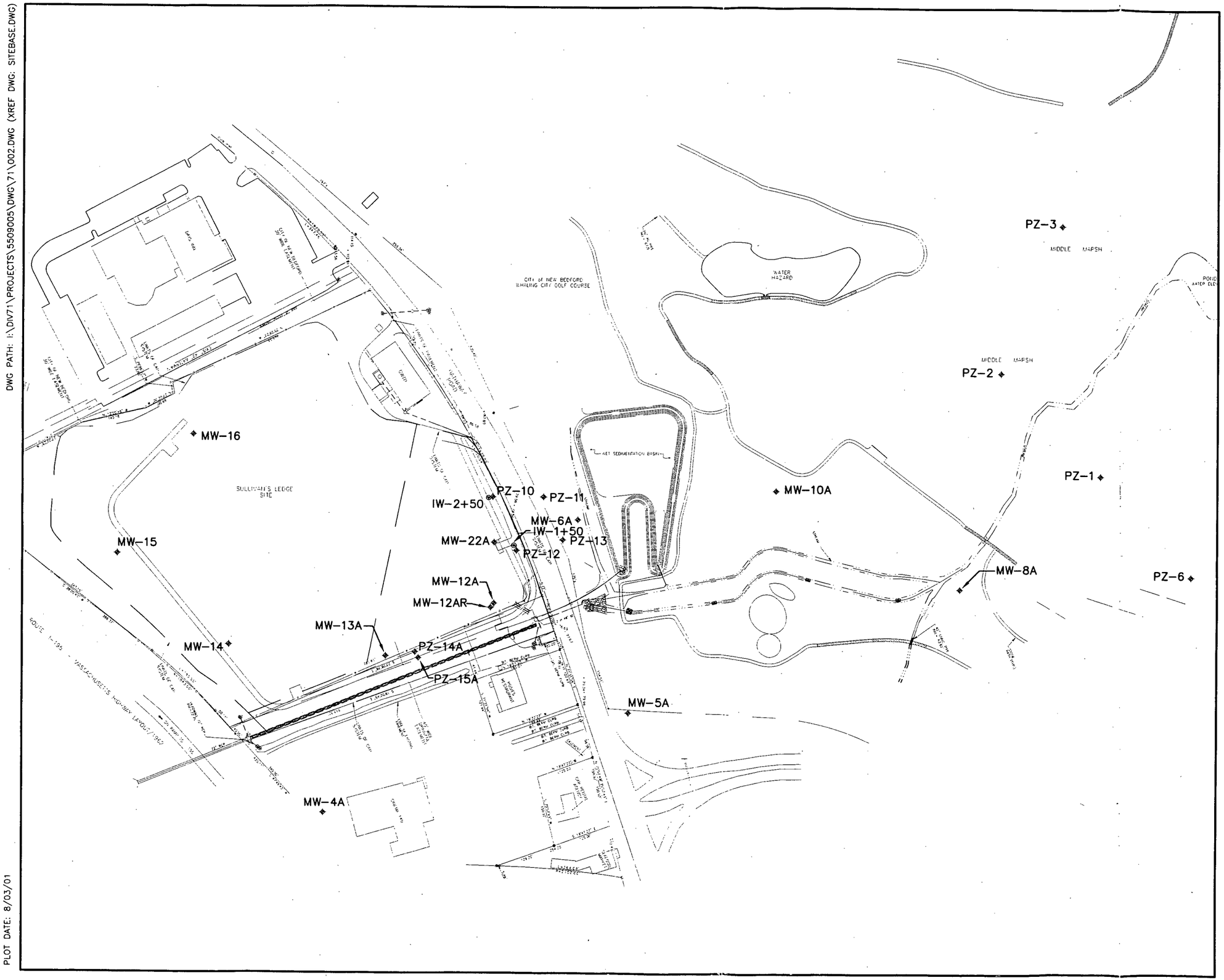
Notes:

1. Winter 1999 samples collected by O'Brien & Gere Engineers, Inc. and analyzed by OBG Laboratories.
   Spring 2001 samples collected by Mabbett & Associates, Inc. and analyzed by Alpha Analytical, Inc.

2. Set A = Inside Disposal Area, immediately downgradient of disposal pit.
   Set B = Inside Disposal Area, immediately upgradient of disposal pit.
   Set C = Outside Disposal Area, within 300 feet of Disposal Area.
   Set D = Outside Disposal Area, greater than 300 feet from Disposal Area (downgradient).

FIGURES

DWG PATH: I:\DIV71\PROJECTS\5509005\DWG\71\002.DWG (XREF DWG: SITEBASE.DWG)



PLOT DATE: 8/03/01

FIGURE-1

LEGEND

- MONITORING WELL LOCATION
- RECOVERY WELL LOCATION
- [62.51] GROUND WATER ELEVATION
- 70 EQUIPOTENTIAL CONTOUR LINE (DASHED WHERE INFERRED)

ELEVATIONS IN FEET RELATIVE TO MEAN SEA LEVEL

SULLIVAN'S LEDGE SUPERFUND SITE
NEW BEDFORD, MASS.

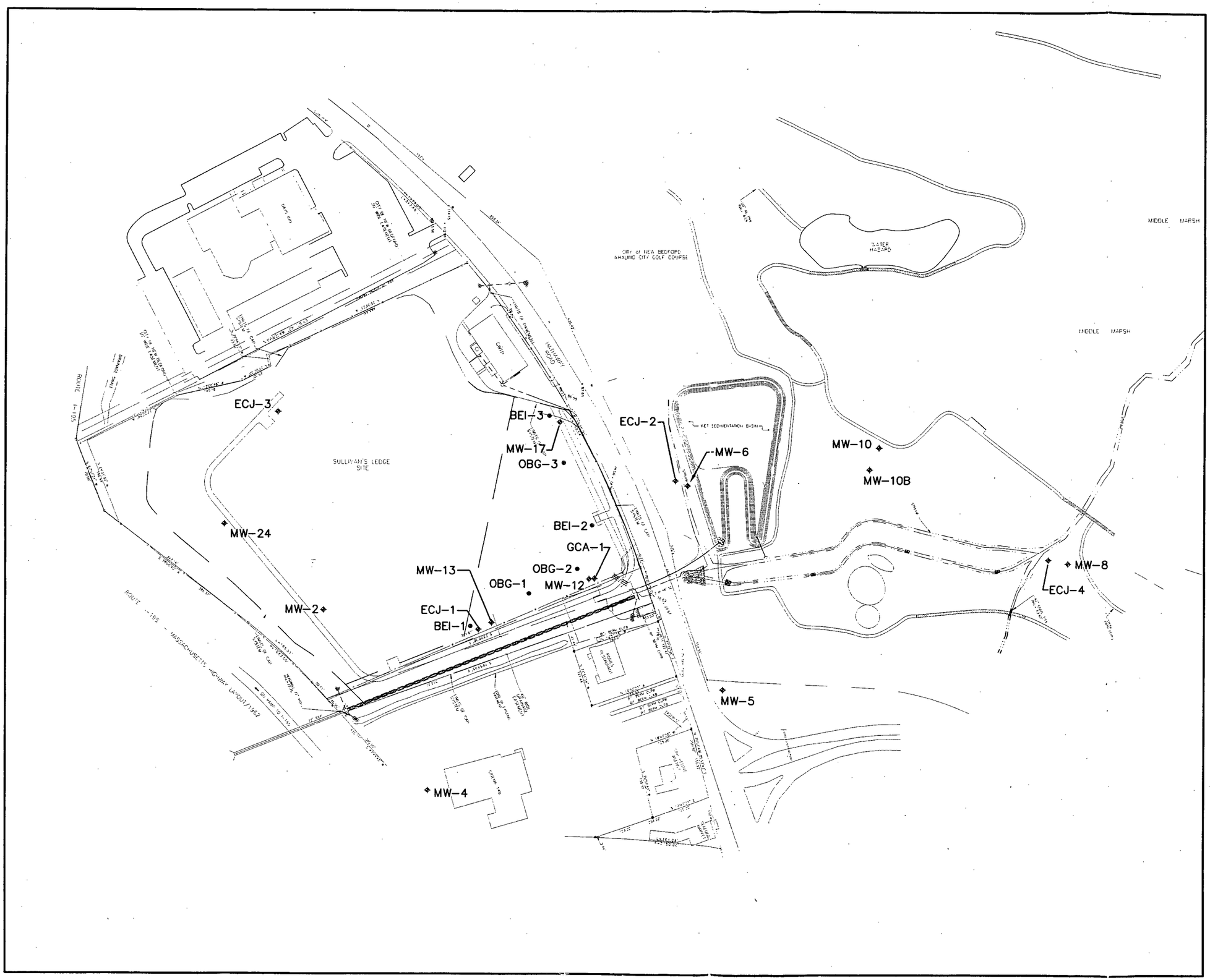
OVERBURDEN WELL LOCATION MAP

200 0 200
SCALE IN FEET

FILE NO. 5509.005-002
AUGUST 2001

O'BRIEN & GERE ENGINEERS INC.

DWG PATH: I:\DIV71\PROJECTS\5509005\DWG\71\003.DWG (XREF DWG: SITEBASE.DWG)



PLOT DATE: 8/03/01

FIGURE-2

LEGEND

- MONITORING WELL LOCATION
- RECOVERY WELL LOCATION
- [67.79] GROUND WATER ELEVATION
- (47') ECJ MONITORING PORT DEPTH (FT)

ELEVATIONS IN FEET RELATIVE TO MEAN SEA LEVEL

SULLIVAN'S LEDGE SUPERFUND SITE
NEW BEDFORD, MASS.

SHALLOW BEDROCK WELL LOCATION MAP

200 0 200
SCALE IN FEET

FILE NO. 5509.005-003
AUGUST 2001

O'BRIEN & GERE ENGINEERS INC.

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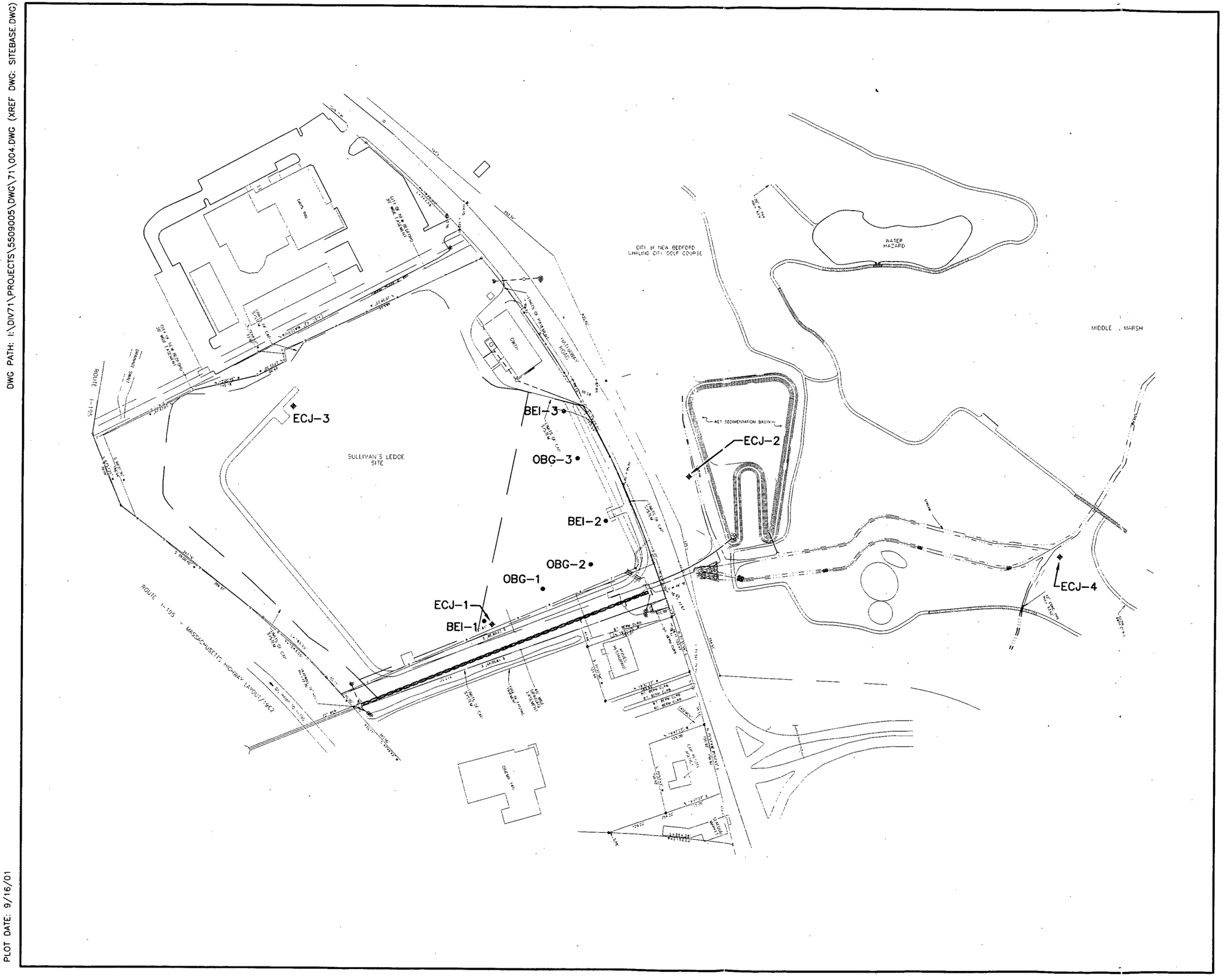


PLOT DATE: 9/16/01

FIGURE-3

LEGEND

ECJ WELL LOCATION

RECOVERY WELL LOCATION

ELEVATIONS IN FEET RELATIVE TO MEAN SEA LEVEL

SULLIVAN'S LEDGE SUPERFUND SITE NEW BEDFORD, MASS.

INTERMEDIATE BEDROCK WELL LOCATION MAP

200 0 200

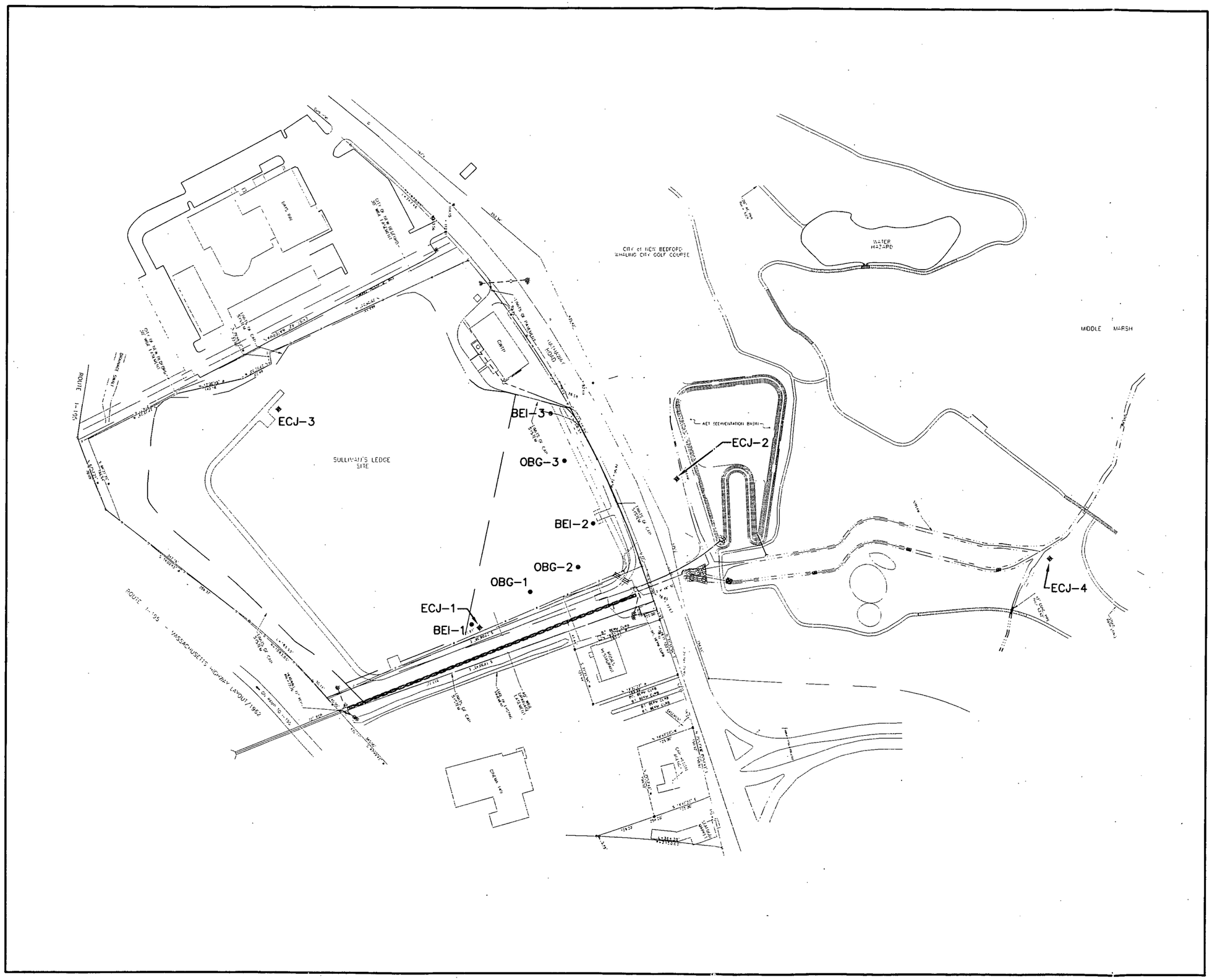
SCALE IN FEET

FILE NO. 5509.005-004

AUGUST 2001

O'BRIEN & GERE ENGINEERS INC.

FIGURE–4



LEGEND

ECJ WELL LOCATION

RECOVERY WELL LOCATION

ELEVATIONS IN FEET RELATIVE TO MEAN SEA LEVEL

SULLIVAN'S LEDGE SUPERFUND SITE
NEW BEDFORD, MASS.

DEEP BEDROCK WELL LOCATION MAP

200 0 200

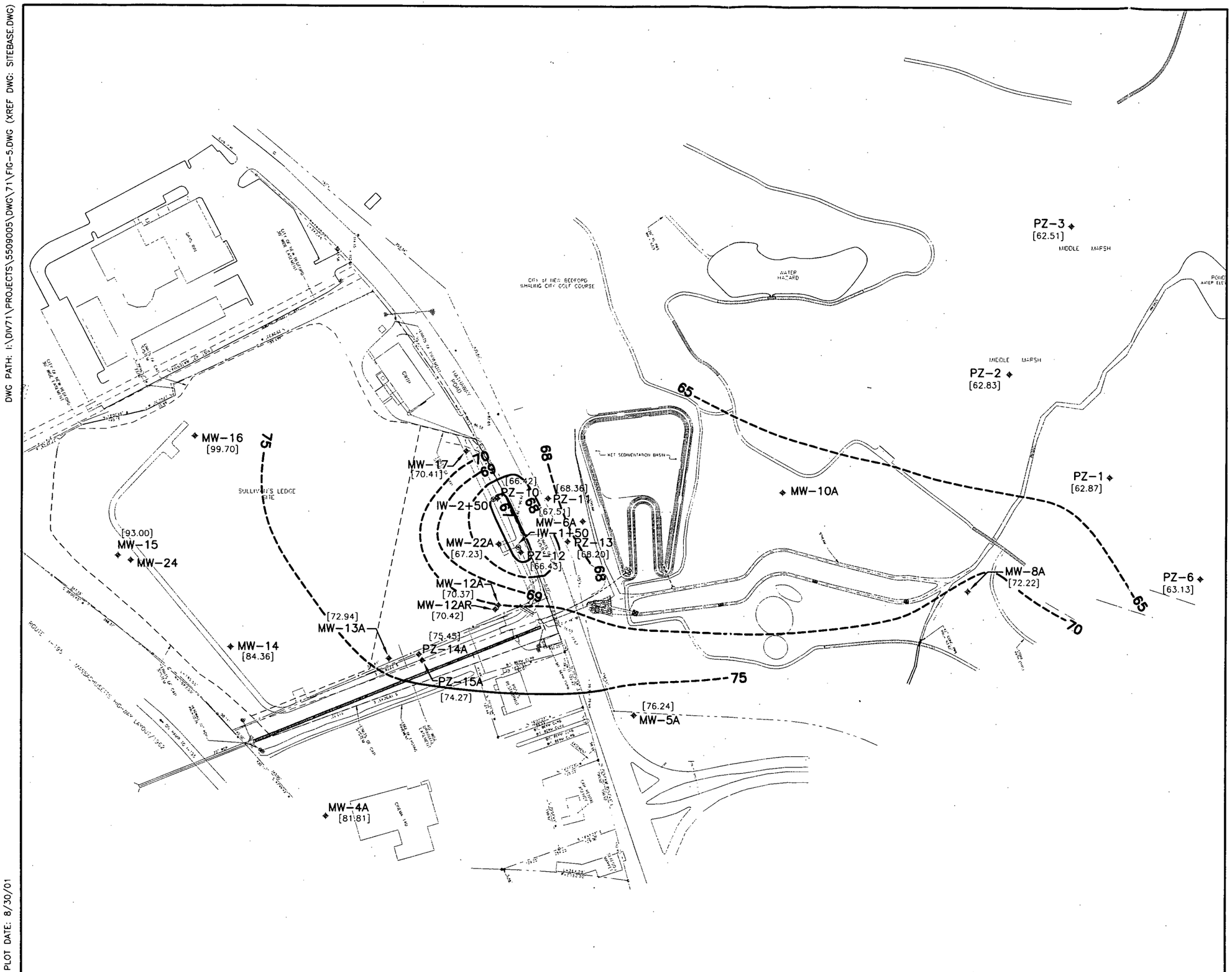
SCALE IN FEET

FILE NO. 5509.005–004
AUGUST 2001

O'BRIEN & GERE ENGINEERS INC.

DWG PATH: I:\DIV71\PROJECTS\5509005\DWG\71\FIG-5.DWG (XREF DWG: SITEBASE.DWG)

FIGURE-5



LEGEND

- MONITORING WELL LOCATION
- RECOVERY WELL LOCATION
- [62.51] GROUND WATER ELEVATION
- 70 EQUIPOTENTIAL CONTOUR LINE (DASHED WHERE INFERRED)

ELEVATIONS IN FEET RELATIVE TO MEAN SEA LEVEL

SULLIVAN'S LEDGE SUPERFUND SITE
NEW BEDFORD, MASS.

OVERBURDEN GROUND WATER ELEVATION MAP FEBRUARY 2001

200 0 200

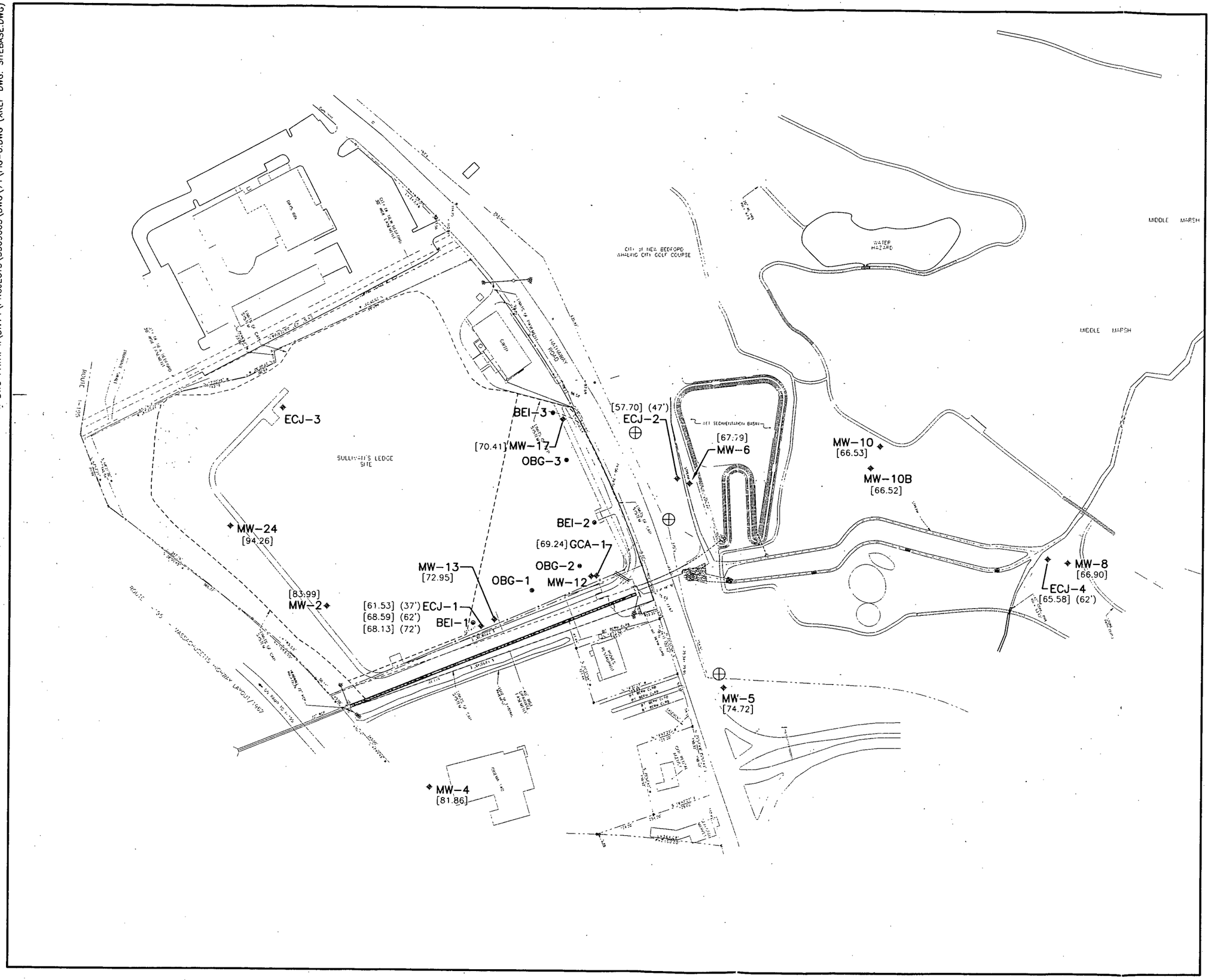
SCALE IN FEET

FILE NO. 5509.005-002
AUGUST 2001

O'BRIEN & GERE ENGINEERS INC.

PLOT DATE: 8/30/01

FIGURE-6



LEGEND

- MONITORING WELL LOCATION
- RECOVERY WELL LOCATION
- [67.79] GROUND WATER ELEVATION
- (47') ECJ MONITORING PORT DEPTH (FT)
- PROPOSED MULTI-LEVEL PIEZOMETERS

ELEVATIONS IN FEET RELATIVE TO MEAN SEA LEVEL

SULLIVAN'S LEDGE
SUPERFUND SITE
NEW BEDFORD, MASS.

SHALLOW BEDROCK GROUND WATER ELEVATION MAP FEBRUARY-MARCH 2001

200 0 200
SCALE IN FEET

FILE NO. 5509.005-003
AUGUST 2001

O'BRIEN & GERE ENGINEERS INC.

DWG PATH: I:\DIV71\PROJECTS\5509005\DWG\71\FIG-6.DWG (XREF DWG: SITEBASE.DWG)

PLOT DATE: 8/30/01

DWG PATH: I:\DIV71\PROJECTS\5509005\DWG\71\FIG-7.DWG (XREF DWG: SITEBASE.DWG)

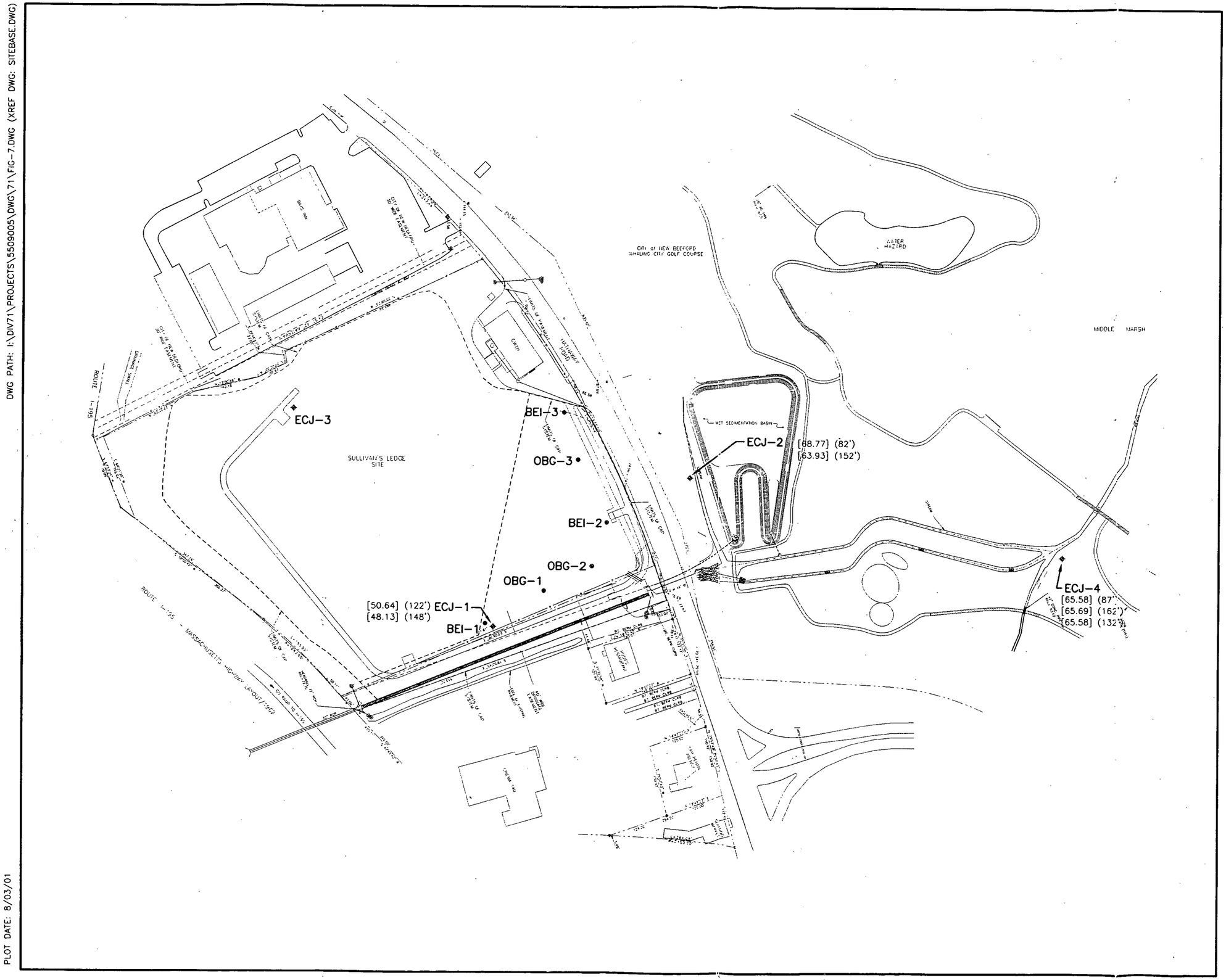


FIGURE-7

LEGEND

- ECJ WELL LOCATION
- RECOVERY WELL LOCATION
- [68.77] GROUND WATER ELEVATION
- (82') ECJ MONITORING PORT DEPTH (FT)

ELEVATIONS IN FEET RELATIVE TO MEAN SEA LEVEL

SULLIVAN'S LEDGE SUPERFUND SITE NEW BEDFORD, MASS.

INTERMEDIATE BEDROCK GROUND WATER ELEVATION MAP MARCH 1, 2001

200 0 200

SCALE IN FEET

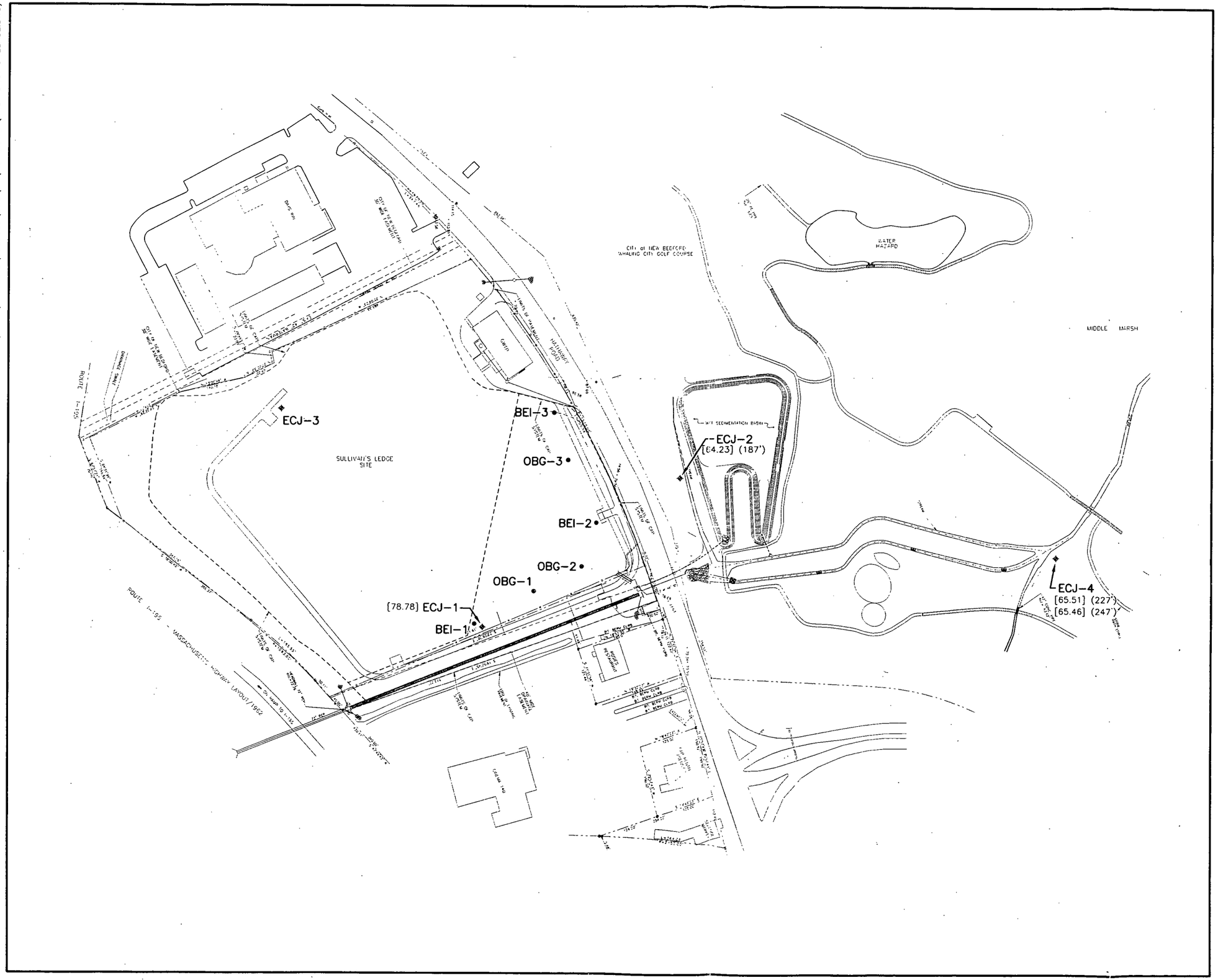
FILE NO. 5509.005-004
AUGUST 2001

O'BRIEN & GERE ENGINEERS INC.

PLOT DATE: 8/03/01

DWG PATH: I:\DIV71\PROJECTS\5509005\DWG\71\FIG-8.DWG (XREF DWG: SITEBASE.DWG)

FIGURE-8



LEGEND

- ECJ WELL LOCATION
- RECOVERY WELL LOCATION
- [65.51] GROUND WATER ELEVATION
- (227') ECJ MONITORING PORT DEPTH (FT)

ELEVATIONS IN FEET RELATIVE TO MEAN SEA LEVEL

SULLIVAN'S LEDGE SUPERFUND SITE
NEW BEDFORD, MASS.

DEEP BEDROCK GROUND WATER ELEVATION MAP MARCH 1, 2001

200 0 200

SCALE IN FEET

FILE NO. 5509.005-005
AUGUST 2001

O'BRIEN & GERE ENGINEERS INC.

PLOT DATE: 8/30/01

Amendments to Field Sampling Plan

Mabbett & Associates, Inc.
Environmental Consultants & Engineers

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March 14, 2001

Mr. David O. Lederer
Remedial Project Manager
Environmental Protection Agency (HBO)
Region 1
1 Congress Street, Suite 1100
Boston, MA 02114-2023

Re: Sullivan's Ledge Superfund Site
Spring 2001 Groundwater Sampling Event
O'Brien & Gere Engineers, Inc.
Syracuse, NY
Project No. 20015.01

Dear Dave:

On behalf of O'Brien & Gere Engineers, Inc., this letter presents clarifications and modifications to the January 2000 Field Sampling Plan for the Spring 2001 groundwater sampling event at the Sullivan's Ledge Superfund Site, and is consistent with my e-mail to you dated February 26, 2001.

Schedule: The Spring 2001 sampling event is scheduled for the weeks of March 19 and March 26, 2001, consistent with O'Brien & Gere's letter to EPA dated June 26, 2000.

Analytical Scope: The analytical scope for the Spring 2001 round will consist of an annual round. Samples from conventional wells and Westbay well ports will be analyzed for VOCs, PCBs, SVOCs, and metals. The scope of the metals analysis will be increased from RCRA 8 metals to TAL metals. The modifications to the program recommended in O'Brien & Gere's June 26, 2000 letter will not be implemented.

Filtering of Samples for Metals: Samples will be collected for total metals analysis only. As we discussed, this approach is consistent with Massachusetts Contingency Plan Guidance. (See MCP Master Q&A 1993-1997 #Q164 "Water to be collected from a tap should not be filtered, nor should water collected with a low flow sampling pump that is designed to minimize turbidity...").

Laboratory: Laboratory analysis for the project will be completed by Alpha Analytical, Inc. (Alpha). On March 12, 2001, O'Brien & Gere forwarded to EPA Alpha's Laboratory Quality Assurance Manual, and a letter from Alpha dated March 7, 2001 which summarizes laboratory reporting limits and standard laboratory control limits.

ECJ-3: ECJ-3 is the upgradient Westbay well. This well was found plugged during the 1999/2000 sampling event. HLA has indicated that it has removed the blockages, but was unable to remove a 50-ft rod which had been used for clearing from the lower portion of the well (approximately 210 ft from top of casing). At a minimum, the rod will preclude sampling the lower two ports of the well. HLA has been requested to videotape the well, to evaluate well integrity and the potential for getting Westbay sampling equipment hung up in the well. Based on the above, ECJ-3 will not be sampled until the well is videotaped and found to be suitable for sampling. We will keep you apprised of the situation.

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Project Organization: Samples will be collected by Mabbett & Associates, Inc. The overall project organization will be as follows:

Title	Name	Firm
Project Coordinator:	James R. Heckathorne, PE	OBG
Project Manager:	James M. O'Loughlin, PE, LSP	M&A
Project Hydrogeologist:	Guy A. Swenson, CPG	OBG
Data Validator:	Melissa S. Listman	OBG
Site Manager:	Melissa A. Smith	M&A
Health & Safety Officer:	Gregory C. Guimond	M&A
Sampling Personnel:	Melissa A. Smith	M&A
	Gregory C. Guimond	M&A
	Darren J. Andrews	M&A
	Ryan E. Hill	M&A
	Theodore A. Nawn	M&A

We appreciated the opportunity to discuss the program with you on March 1, 2001, and look forward to completing it. Please contact Jim Heckathorne or me if we can provide any additional information.

Very truly yours,

MABBETT & ASSOCIATES, INC.

BY:

James M O'Loughlin

James M. O'Loughlin, P.E., LSP
Senior Project Manager

JMO/tw

cc: S. Wood, E. Bertaut, R. Connors, D. Allen, D. Buckley, D. Dwight, R. Carey, J. Johnson, M. Wade, J. Heckathorne, M. Listman, G. Swenson

DJA, GCG, REH , JMO, TAN, MAS, (MF/RF)

df: JEB, DAC, ANM, PDS

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March 16, 2001

Mr. David O. Lederer
Remedial Project Manager
Environmental Protection Agency (HBO)
Region 1
1 Congress Street, Suite 1100
Boston, MA 02114-2023

Re: Sullivan's Ledge Superfund Site
Health and Safety Plan
O'Brien & Gere Engineers, Inc.
Syracuse, NY
Project No. 20015.01

Dear Dave:

To complete the groundwater, landfill gas, and surface water/sediment sampling at Sullivan's Ledge, Mabbett & Associates, Inc. will be adopting the Health & Safety Plan developed by O'Brien & Gere for that purpose (provided to EPA on July 30, 1999). This plan was reviewed by M&A and found to be acceptable, subject to the following updates and clarifications:

Project Organization (Update to Section 1.4 and Table 1.1)

Title	Name	Telephone
Project Management Committee	Steven B. Wood	401-421-0398
Project Coordinator	James R. Heckathorne, PE	315-437-6100
Project Manager	James M. O'Loughlin, PE	781-275-6050
Technical Director of Environmental Health*	Ronald S. Ratney, Ph.D, CIH	781-275-6050
Site Health and Safety Coordinator	Gregory C. Guimond	781-275-6050
Field Team Leader	Melissa A. Smith	781-275-6050
Field Team Member	Darren J. Andrews	781-275-6050
Field Team Leader	Ryan E. Hill	781-275-6050
Field Team Member	Theodore A. Nawn	781-275-6050

* Will assume duties delineated for Associate for Health and Safety

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Protective Equipment (Modification to Sections 2.2 and 4.2)

Gloves: Nitrile inner gloves will be used in place of latex inner gloves.

Boots: For Level D, Modified Level D, and Modified Level C, footwear will consist of leather steel toe boots with rubber overboots. Because site soils have been remediated, and due to the slip hazard associated with mud and snow, disposable outerboots (i.e., tyvek booties) will not be worn.

Respirators: If the during groundwater sampling the concentration of VOCs in the breathing zone is 25 parts per million (ppm) above background, as measured by a PID, the well will be capped and the Project Manager will be contacted before upgrading to full face air purifying respirators with organic vapor cartridges.

Emergency Telephone Numbers (Update to Table 9-1)

Agency	Phone
Ambulance	911
St Lukes Hospital (General)	(508) 997-1515
St Lukes Hospital (Emergency Room)	(508) 961-5388
New Bedford Fire Department	(508) 991-6100
New Bedford Police Department	(508) 991-6340
New Bedford Public Works Department (Robert Carey, City Project Coordinator)	(508) 979-1527
Sullivan's Ledge Groundwater Treatment Plant	(508) 961-3160
U.S. Environmental Protection Agency (David Lederer, USEPA Project Manager)	(617) 918-1325
Massachusetts Department of Environmental Protection (Dorothy Allen, MADEP Project Manager)	(617) 292-5795
State Poison Center	(800) 682-9211
State Police	(617) 523-1212
State Emergency Response	(888) 304-1133
National Emergency Response	(800) 424-8802
Mabbett & Associates, Inc.	(800) 877-6050

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Map to Hospital (Update to Figure 9-1)

An updated map to St Luke's hospital is attached.

Personal Training (Modification to Section 3.2)

Replace text in Section 3.2 with the following:

On-site management and supervisors directly responsible for or who supervise employees engaged in hazardous waste operations must have completed 40 hours of initial training, three days of supervised field experience, and at least 8 additional hours of specialized training.

Medical Surveillance Program (Modification to Section 5.1)

Replace text in Section 5.1 with the following:

All employees who are or may be exposed to hazardous substances or health hazards at or above the established permissible exposure limit, above the published exposure levels for these substances, without regard to the use of respirators, for 30 days or more a year; who wear a respirator for 30 days or more a year; or are injured, become ill or develop signs or symptoms due to possible overexposure involving hazardous substances or health hazards from an emergency response or hazardous waste operation are subject to the medical surveillance requirements outlined herein.

Medical examinations and consultations shall be made available by the employer to each employee prior to assignment; at least once every twelve months for each employee covered unless the attending physician believes a longer interval (not greater than biennially) is appropriate; at termination of employment or reassignment to an area where the employee would not be covered if the employee has not had an examination within the last six months; as soon as possible upon notification by an employee that the employee has developed signs or symptoms indicating possible overexposure to hazardous substances or health hazards, or that the employee has been injured or exposed above the permissible exposure limits or published exposure levels in an emergency situation; or at more frequent times, if the examining physician determines that an increased frequency of examination is medically necessary.

For employees who may have been injured, received a health impairment, developed signs or symptoms which may have resulted from exposure to hazardous substances resulting from an emergency incident, or exposed during an emergency incident to hazardous substances at concentrations above the permissible exposure limits or the published exposure levels without the necessary personal protective equipment being used, medical examinations and consultations shall be made available as soon as possible following the emergency incident or development of signs or symptoms and at additional times, if the examining physician determines that follow-up examinations or consultations are medically necessary.

Please contact the undersigned if you have any comments or if we can provide any further information.

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Very truly yours,

MABBETT & ASSOCIATES, INC.

BY:

James M O'Loughlin

James M. O'Loughlin, P.E., LSP
Senior Project Manager

JMO/tw

cc: S. Wood, E. Bertaut, R. Connors, D. Allen, D. Buckley, D. Dwight, R. Carey, J. Heckathorne

DJA, GCG, REH , JMO, TAN, RSR, MAS, (MF/RF)

df: JEB, DAC, ANM, PDS

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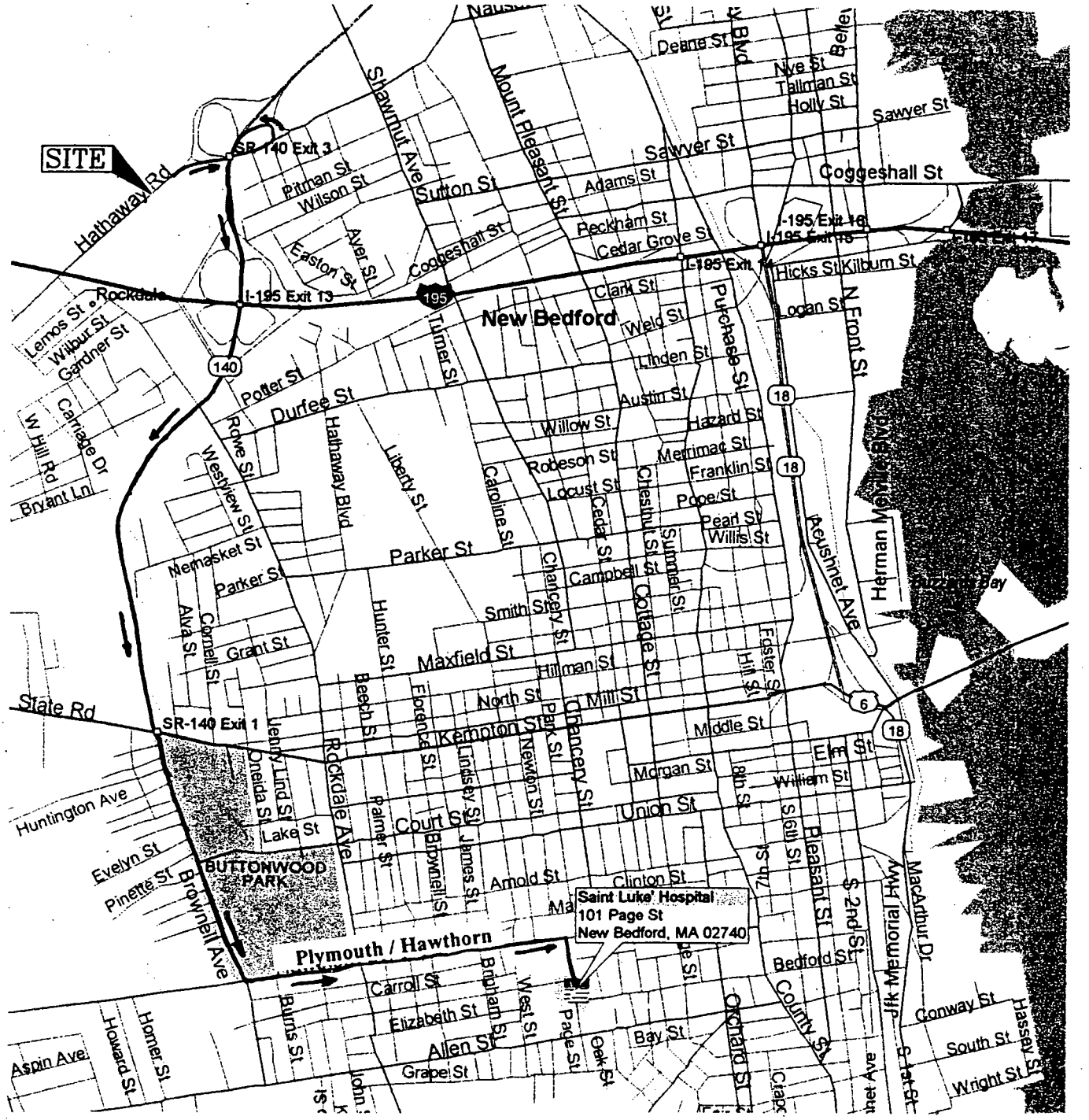

Directions to Saint Luke's Hospital, 101 Page Street, New Bedford, Ma.

Take Route 140 south. Continue straight onto Brownall Avenue, at the 140/Route 6 intersection. Turn left after Buttonwood Park, onto Plymouth. Follow Plymouth for approximately 0.9 miles to Page Street. Turn right onto Page St., and travel 1 1/2 blocks to Saint Luke's Hospital (on your right). The route described also has signs to assist in locating Saint Luke's Hospital.

SULLIVAN'S LEDGE NEW BEDFORD, MASSACHUSETTS	SAINT LUKE'S HOSPITAL DIRECTION MAP	DWG NO. M-1
Mabbett & Associates, Inc. Environmental Consultants & Engineers	SCALE: AS NOTED / DR BY: DJA DATE: 3/15/01 / AP BY: JMO	PROJ NO. 20015.07

Appendix B

Qualitative Well Integrity Testing

Mabbett & Associates, Inc.
Environmental Consultants & Engineers

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March 19, 2001

Mr. Stephen B. Wood
Sullivan's Ledge Site Group
c/o ESS
272 West Exchange Street, Suite 101
Providence, RI 02903

Re: Sullivan's Ledge Superfund Site
Well Integrity Inspections
O'Brien & Gere Engineers, Inc.
Syracuse, NY
Project No. 20015.01

Dear Steve:

On behalf of O'Brien & Gere Engineers, Inc., this letter provides the results of groundwater monitoring well integrity inspections at the Sullivan's Ledge site which were performed pursuant to O'Brien & Gere's letter to the PMC dated February 16, 2001. The groundwater monitoring wells were inspected by Mabbett & Associates, Inc. (M&A) on February 22, 2001 and February 23, 2001. Observations made at each well are listed on Attachment 1; items of concern regarding the wells are summarized as follows:

- Since the installation of the low flow equipment in 1999, bladder pumps were removed from two wells and one well was re-installed and contains no low flow equipment. It will be necessary to install low flow equipment in these wells prior to sampling. Similarly, a number of the wells were extended since the installation of the low flow equipment in 1999. It will be necessary to extend the low flow hoses in these wells prior to sampling.

- A number of the wells do not have a steel sleeve on the casing or an arm to fasten a lock to. Similarly, the installation of low flow equipment in a number of the wells has interfered with or precluded the ability to lock the wells. Modifications to the casing or new casings will be necessary to lock the wells.

- A number of the wells do not have a steel casing, leaving the PVC cap and tubing associated with the low flow equipment exposed. Casings are recommended at these wells. At a number of wells, the steel casing cover rests directly on the PVC cap and tubing associated with the low flow equipment, which could result in cracking of the PVC cap. Modifications to the casing or new casings are recommended.

- A number of the wells are not plumb, restricting the removal and installation of low flow equipment. These wells may need to be replaced over time.

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- A uniform lock system for the wells and piezometers is recommended. HLA is providing M&A with padlocks of the same make as those used by HLA. M&A will install these padlocks on wells which can be locked.

- Almost all of the protective casings are rusted, and many are badly corroded. Repainting well casings, especially those that have badly corroded, is recommended. A uniform color (e.g., safety green) is recommended, to facilitate locating the wells and to lower the potential for the wells to be damaged by site maintenance equipment.

- A uniform method for labeling the wells is recommended. The existing labeling on the wells consists of either painted labels, written labels, or metal dog tag type labels fastened around the exterior steel casing. A number of the wells are not labeled. Either stenciling labels with black paint or metal dog tags is recommended, with stenciling being less susceptible to vandalism for the wells which are outside the Disposal Area.

Please contact me or Jim Heckathorne after you have reviewed this letter to discuss potential corrective measures.

Very truly yours,

MABBETT & ASSOCIATES, INC.

BY:

James M O'Loughlin

James M. O'Loughlin, P.E., LSP
Senior Project Manager

JMO/tw

Enclosure: Attachment 1

cc: E. Bertaut J. Heckathorne
B. Connors

JMO, MAS, TAN (MF/RF)

df: DAC, PDS

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ATTACHMENT 1
SULLIVAN'S LEDGE SUPERFUND SITE
RESULTS OF FEBRUARY 2001 WELL INTEGRITY INSPECTIONS[1]

Observations of deficiencies at each well are listed below. Deficiencies listed in bold type will require repair prior to the sampling activities scheduled to begin March 19, 2001.

Conventional Wells

GCA-1
- No protective casing. PVC cap from low flow equipment exposed.
- No lock

MW-2
- No protective casing. PVC cap from low flow equipment exposed.
- No lock
- Not labeled
- **Casing has been extended an additional 24 inches, the low flow tubing will require an extension of 24 inches as well** → tubing extended 3-14-01 MHS

MW-4
- No lock
- Not labeled
- Rusted steel casing
- The top of steel casing sits directly on the PVC cap from low flow equipment, preventing locking and potentially damaging low flow equipment.

MW-4A
- No lock
- Not labeled
- Rusted steel casing
- The low flow equipment was removed from the well to measure depth to water. Upon re-insertion the pump became stuck in the well. The tubing and pump remain in the well. Rods will be used to move the pump to its previous position prior to groundwater sampling.

MW-5
- No lock
- Rusted steel casing
- The top of steel casing sits directly on the PVC cap from low flow equipment, preventing locking and potentially damaging low flow equipment.

MW-5A
- No lock
- Rusted steel casing

Notes: 1. General description only; not intended for bidding or construction.
2. All casings generally rusted, whether noted or not.

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ATTACHMENT 1
SULLIVAN'S LEDGE SUPERFUND SITE
RESULTS OF FEBRUARY 2001 WELL INTEGRITY INSPECTIONS[1]

MW-6
- No lock
- Rusted steel casing
- The top of steel casing sits directly on the PVC cap from low flow equipment, preventing locking and potentially damaging low flow equipment.

MW-6A
- No lock
- Rusted steel casing

MW-8
- No lock
- Not labeled
- Rusted steel casing
- The top of steel casing sits directly on the PVC cap from low flow equipment, preventing locking and potentially damaging low flow equipment.

MW-8A
- No lock
- Rusted steel casing
- The top of steel casing sits directly on the PVC cap from low flow equipment, preventing locking and potentially damaging low flow equipment.
- A concrete pad was previously poured around the steel casing. Erosion has occurred beneath concrete pad exposing additional steel casing located beneath the concrete pad.

MW-10
- No lock
- Rusted steel casing
- The top of steel casing sits directly on the PVC cap from low flow equipment, preventing locking and potentially damaging low flow equipment.
- **The well does not contain a piece of connector tubing for the low flow equipment.**

MW-10AR
- No steel casing surrounding the PVC stick-up
- No lock
- Not labeled
- **Low flow pump and tubing have not been installed in this well. The low flow pump removed from well MW-10*A* will require decontamination and re-installation.**

Notes: 1. General description only; not intended for bidding or construction.
2. All casings generally rusted, whether noted or not.

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ATTACHMENT 1
SULLIVAN'S LEDGE SUPERFUND SITE
RESULTS OF FEBRUARY 2001 WELL INTEGRITY INSPECTIONS[1]

MW-10B
- No lock
- Rusted steel casing
- The top of steel casing sits directly on the PVC cap from low flow equipment, preventing locking and potentially damaging low flow equipment.
- **The well does not contain a piece of connector tubing for the low flow equipment.**

MW-12
- No PVC cap for the low flow tubes in the well
- The depth to water probe could not be lowered down the well. The low flow sampling tubes obstructed the well.

MW-12A
- M&A confirmed that the low flow pump and tubing could not be pulled out of the well.

MW-12AR
- Not labeled
- **Low flow pump and tubing have not been installed in this well, which was a replacement well for MW-12A**

Pump and tubing installed 3-14-01 MAS

MW-13
- No protective casing. PVC cap from low flow equipment exposed.
- No lock

MW-13A
- Rusted steel casing

MW-14
- **The casing has been extended 17 inches; the low flow tubing will require an extension of 17 inches as well.**

Tubing extended 3-14-01 MAS

MW-15
- **The casing has been extended 21 inches; the low flow tubing will require an extension of 21 inches as well.**
- **No PVC cap for the low flow tubes in the well**
- Bladder pump remains stuck in the well

Tubing extended and PVC cap installed 3-14-01 MAS

Notes: 1. General description only; not intended for bidding or construction.
2. All casings generally rusted, whether noted or not.

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ATTACHMENT 1
SULLIVAN'S LEDGE SUPERFUND SITE
RESULTS OF FEBRUARY 2001 WELL INTEGRITY INSPECTIONS[1]

MW-16

- No lock
- Protective casing?
- **The steel casing has been extended; the low flow tubing will require an extension as well.**
- **The low flow pump removed from well MW-16 will require decontamination and re-installation.**

Tubing extended and ~~the~~ decontaminate low flow pump Reinstalled. 3-14-01 MAS

MW-17

- No lock
- **The low flow pump not present.**

MW-22A

- No deficiencies observed

MW-24

- No protective casing. PVC cap from low flow equipment exposed.
- No lock
- **Casing has been extended 16 inches, the low flow tubing will require an extension of 16 inches as well.**

Tubing extended 3-14-01 MAS

<u>Westbay Wells</u>

ECJ-1

- No deficiencies observed

ECJ-2

- The steel top of casing has been damaged and a new one is required. There is a lock on the cap but it currently does not prevent access to the well. There is no arm on the casing to fasten a lock.
- Rusted steel casing

ECJ-3

- The well remains obstructed. HLA was trying to identify and remove the obstruction during M&A's site visit.

ECJ-4

- No lock
- Rusted steel casing

Notes: 1. General description only; not intended for bidding or construction.
2. All casings generally rusted, whether noted or not.

ATTACHMENT 1
SULLIVAN'S LEDGE SUPERFUND SITE
RESULTS OF FEBRUARY 2001 WELL INTEGRITY INSPECTIONS[1]

Piezometers

PZ-1
- No steel casing
- No lock

PZ-2
- No steel casing
- No lock

PZ-3
- No steel casing
- No lock

PZ-6
- No steel casing
- No lock

PZ-10
- No deficiencies observed

PZ-11
- Not labeled
- Standing water was observed in the annular space between the steel casing and the PVC casing

PZ-12
- No deficiencies observed

PZ-13
- Not labeled
- Standing water was observed in the annular space between the steel casing and the PVC casing

PZ-West or PZ-14A
- Not properly labeled, labeled as EB-4

PZ-East or PZ-15A
- Not properly labeled, labeled as EB-2

Notes: 1. General description only; not intended for bidding or construction.
2. All casings generally rusted, whether noted or not.

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Appendix C

Ground Water Elevation Data

Mabbett & Associates, Inc.
Environmental Consultants & Engineers

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March 20, 2001

Mr. James Heckathorne, P.E.
Vice President
O'Brien & Gere Engineers, Inc.
P.O. Box 4873
Syracuse, NY 13221

Re: Sullivan's Ledge Superfund Site
Groundwater Elevation Data
O'Brien & Gere Engineers, Inc.
Syracuse, NY
Project No. 20015.08

Dear Jim:

Pursuant to O'Brien & Gere's letter to the PMC dated February 16, 2001, Mabbett & Associates, Inc. (M&A) collected a round of groundwater elevation data at the Sullivan's Ledge Superfund Site between February 22 and March 1, 2001.

Measured depths to groundwater for conventional wells are shown on Table 1. Groundwater elevations for the conventional wells were calculated as shown on Table 2, using survey information provided by HLA and included in Attachment 1. Note that top of casing elevations were provided by two surveyors (Danson and SITEC), and that we have not confirmed that the elevations are comparable. HLA was requested to have SITEC obtain top of casing elevations for all wells in November 2000, and again in March 2001.

Measurements and calculations for the Westbay wells are provided on Table 3. Note that Westbay well ECJ-3 was not available for measurement during the indicated period, as HLA was attempting to clear obstructions from it.

Please call me if I can provide any further information, or if you have any questions concerning the collected data.

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Very truly yours,

MABBETT & ASSOCIATES, INC.

BY:

James M. O'Loughlin, P.E., LSP
Senior Project Manager

JMO/tw

Enclosure: Table 1 – Depth to Groundwater – Conventional Wells
Table 2 – Groundwater Elevations – Conventional Wells
Table 3 – Westbay Well Groundwater Elevations
Attachment 1 – Survey Data from HLA

cc: S. Wood
E. Bertaut
R. Connors
G. Swenson
JMO, MAS (MF/RF)

df: DAC, PDS

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Table 1
Sullivan's Ledge Superfund Site
Depth to Groundwater - Conventional Wells

Well ID	Date of Measurement	Depth to Water (ft)		Well Stick-up (ft)	Notes and Comments
		PVC	Casing		
GCA-1	2/23/01	N/A	14.82	2.00	No PVC
MW-2	2/23/01	N/A	17.82	2.30	No PVC
MW-4	2/22/01	N/A	8.37	2.40	No PVC
MW-4A	2/22/01	8.37	8.64	2.30	
MW-5	2/23/01	N/A	7.62	2.70	No PVC
MW-5A	2/23/01	6.58	7.92	2.10	
MW-6	2/22/01	N/A	6.10	2.90	No PVC
MW-6A	2/23/01	5.82	6.57	3.30	
MW-6A	3/1/01	-	9.32		
MW-8	2/22/01	N/A	3.15	1.60	No PVC
MW-8	3/1/01	N/A	2.86		No PVC
MW-8A	2/22/01	3.97	4.05	2.20	
MW-10	2/22/01	N/A	1.75	1.10	No PVC
MW-10A	2/22/01	-	N/A	3.30	No depth to water measured. The water appears frozen in the PVC pipe
MW-10A	3/1/01	-	N/A	3.30	No depth to water measured. The water appears frozen in the PVC pipe
MW-10B	2/22/01	N/A	1.90	1.20	No PVC
MW-12	2/23/01	N/A	-	1.90	No DTW measurement taken. Installed tubing prevents measurement.
MW-12A	2/23/01	13.78	13.86	2.00	
MW-12AR	2/23/01	14.62	14.92	3.10	
MW-13	2/23/01	N/A	16.54	2.80	No PVC
MW-13	3/1/01	N/A	16.48		No PVC
MW-13A	2/23/01	16.54	16.76	2.90	
MW-14	2/23/01	17.10	17.52	2.60	
MW-15	2/23/01	19.31	19.61	2.70	
MW-16	2/22/01	20.85	20.95	2.60	
MW-17	2/23/01	22.15	22.15	3.20	LNAPL in well detected at 22.00 ft. Estimated product thickness = 0.15 ft.
MW-22A	2/23/01	-	-	1.40	No water in the well. Bottom of well is 17.77 ft from top of PVC casing.
MW-24	2/22/01	N/A	17.97	2.40	No PVC
PZ-1	3/1/01	3.86	N/A	-	
PZ-2	3/1/01	3.08	N/A	-	
PZ-3	3/1/01	3.40	N/A	-	
PZ-6	3/1/01	4.93	N/A	-	
PZ-10	2/23/01	19.30	19.99	2.30	
PZ-11	2/22/01	5.43	5.70	2.00	
PZ-12	2/23/01	16.03	16.37	1.50	
PZ-13	2/22/01	5.08	6.50	2.50	
PZ-14A	2/23/01	11.28	11.50	2.40	
PZ-15A	2/23/01	11.71	12.01	2.40	

Notes: 1. Measured by Mabbett & Associates, Inc. on dates indicated.

Prepared for O'Brien & Gere Engineers, Inc. by
Mabbett & Associates, Inc.
20015.08 j:\users\admina\20015\GWE Table 1.xls

3/20/01

Table 2
Sullivan's Ledge Superfund Site
Groundwater Elevations - Conventional Wells

Well	Top of Casing Elevation	Reference Point	Source	Depth to Water	Date	Groundwater Elevation	Notes
GCA-1	84.06	Plastic Cap	SITEC 3/06/01	14.82	2/23/01	69.24	(1)
MW-2	101.81	Plastic Cap	SITEC 3/06/01	17.82	2/23/01	83.99	(1)
MW-4	90.23	Top pipe	DANSON 98	8.37	2/22/01	81.86	
MW-4A	90.18	Top of PVC	DANSON 98	8.37	2/22/01	81.81	
MW-5	82.34	Top pipe	DANSON 98	7.62	2/23/01	75.20	
MW-5A	82.82	Top of PVC	DANSON 98	6.58	2/23/01	75.76	
MW-6	73.89	Top pipe	DANSON 98	6.10	2/22/01	67.79	
MW-6A	73.33	Top of PVC	DANSON 98	5.82	2/23/01	67.51	
MW-8	70.05	Top pipe	DANSON 98	3.15	2/22/01	66.90	
MW-8A	76.19	Top of PVC	DANSON 98	3.97	2/22/01	72.22	
MW-10	68.28	Top pipe	DANSON 98	1.75	2/22/01	66.53	
MW-10A	70.54	Top of PVC	SITEC 3/06/01	-	2/22/01	-	(2)
MW-10B	68.42	Top pipe	DANSON 98	1.90	2/22/01	66.52	
MW-12	83.91	Top of PVC	SITEC 3/06/01	-	2/23/01	-	(3)
MW-12A	84.15	Top of PVC	SITEC 3/06/01	13.78	2/23/01	70.37	
MW-12AR	85.04	Top of PVC	SITEC 3/06/01	14.62	2/23/01	70.42	
MW-13	89.49	Plastic Cap	SITEC 3/06/01	16.54	2/23/01	72.95	(1)
MW-13A	89.48	Top of PVC	SITEC 3/06/01	16.54	2/23/01	72.94	
MW-14	101.46	Top of PVC	SITEC 3/06/01	17.10	2/23/01	84.36	
MW-15	112.31	Top of PVC	SITEC 3/06/01	19.31	2/23/01	93.00	
MW-16	120.55	Top of PVC	SITEC 3/06/01	20.85	2/22/01	99.70	
MW-17	92.56	Top of PVC	SITEC 3/06/01	22.15	2/23/01	70.41	(4)
MW-22A	85.00	Top of PVC	SITEC 3/06/01	17.77	2/23/01	67.23	(5)
MW-24	112.23	Plastic Cap	SITEC 3/06/01	17.97	2/22/01	94.26	(1)
PZ-1	66.73	Top of PVC	SITEC 3/06/01	3.86	3/1/01	62.87	
PZ-2	65.91	Top of PVC	SITEC 3/06/01	3.08	3/1/01	62.83	
PZ-3	65.91	Top of PVC	SITEC 3/06/01	3.40	3/1/01	62.51	
PZ-6	68.06	Top of PVC	SITEC 3/06/01	4.93	3/1/01	63.13	
PZ-10	85.72	Top of PVC	SITEC 3/06/01	19.30	2/23/01	66.42	
PZ-11	73.79	Top of PVC	SITEC 3/06/01	5.43	2/22/01	68.36	
PZ-12	82.46	Top of PVC	SITEC 3/06/01	16.03	2/23/01	66.43	
PZ-13	73.28	Top of PVC	SITEC 3/06/01	5.08	2/22/01	68.20	
PZ-West (14A)	86.73	Top of PVC	SITEC 3/06/01	11.28	2/23/01	75.45	
PZ-East (15A)	85.98	Top of PVC	SITEC 3/06/01	11.71	2/23/01	74.27	
ECJ-1	89.81	Top of PVC	SITEC 3/06/01	-	-	-	(6)
ECJ-2	72.38	Top of PVC	DANSON 98	-	-	-	(6)
ECJ-3	120.74	Top of PVC	SITEC 3/06/01	-	-	-	(6)
ECJ-4	70.59	Top of PVC	DANSON 98	-	-	-	(6)

Notes:
1. Survey elevation is top of PVC cap associated with low flow equipment; depth to groundwater is from top of casing. As a result, actual groundwater elevation is 0.05 to 0.01 ft lower than shown.
2. Depth to groundwater not obtained. Well frozen.
3. No DTW measurement taken. Installed tubing prevents measurement.
4. DTW is 22.15. Depth to LNAPL is 22.00 ft.
5. Well dry. 17.77 is depth to bottom of well. Actual groundwater elevation would be lower.
6. See Table 3 for information on Westbay wells.

Table 3
Sullivan's Ledge Superfund Site
Westbay Well Groundwater Elevations

Well locatio	P_i (psi)[1]	P_o (psi)[1]	ΔH (ft)	D_{MP} (ft)[1]	D_z (ft)	E_{MP} (ft)[2]	PL (ft)[3]
ECJ-1 37'	14.59	15.37	1.80	30.08	28.28	89.81	61.53
ECJ-1 62'	24.13	27.97	8.86	30.08	21.22	89.81	68.59
ECJ-1 72'	28.50	32.14	8.40	30.08	21.68	89.81	68.13
ECJ-1 122'	56.86	52.92	-9.09	30.08	39.17	89.81	50.64
ECJ-1 148'	67.79	62.76	-11.60	30.08	41.68	89.81	48.13
ECJ-1 267'	120.03	128.29	19.05	30.08	11.03	89.81	78.78
ECJ-2 47'	22.54	24.95	5.56	20.24	14.68	72.38	57.70
ECJ-2 82'	37.79	45.00	16.63	20.24	3.61	72.38	68.77
ECJ-2 117'	52.82	71.30	42.63	20.24	-22.39	72.38	94.77
ECJ-2 152'	71.57	76.68	11.79	20.24	8.45	72.38	63.93
ECJ-2 187'	85.44	90.68	12.09	20.24	8.15	72.38	64.23
ECJ-4 62'	33.99	40.27	14.49	19.50	5.01	70.59	65.58
ECJ-4 87'	44.89	51.17	14.49	19.50	5.01	70.59	65.58
ECJ-4 132'	64.51	70.84	14.60	19.50	4.90	70.59	65.69
ECJ-4 162'	77.55	83.83	14.49	19.50	5.01	70.59	65.58
ECJ-4 227'	105.58	111.83	14.42	19.50	5.08	70.59	65.51
ECJ-4 245'	114.15	120.38	14.37	19.50	5.13	70.59	65.46

Notes:

1. Measured by Mabbett & Associates on March 1, 2001.
2. Top of casing provided by HLA based on SITEC survey for ECJ-1 and ECJ-3, and based on Danson survey for ECJ-2 and ECJ-4.
3. Calculated by Mabbett & Associates, Inc. based on procedure provided by Westbay.
4. ECJ-3 not available for measurement on March 1, 2001.

P_i = Pressure reading inside measuring port casing

P_o = Pressure reading outside measuring port casing

$\Delta H = (P_o - P_i)/w$ w=0.4335 psi/ft

D_{MP} = Depth to water inside monitoring port casing (below top of monitoring port)

D_z = Depth to static level for monitoring zone = $D_{MP} - \Delta H$

E_{MP} = Elevation of measuring port casing

PL = piezometric level = $E_{MP} - D_z$

ATTACHMENT 1

SURVEY DATA FROM HLA

Harding ESE
A MACTEC Company

Day / Date: 3/6/01
TU

FACSIMILE

① Jim O'Loughlin, Mabbett

To: ② Tom Bold, OB&G
③ Marilyn Wade, URS
④ Paul Stanley, URS

From: Travis Canon
Harding ESE

FAX #:

Project #: OU-1 & OU-2
Sullivan's

Subject: Well Survey Data

Number of Pages (Including this Cover Sheet) = 3

Additional Message: Final Survey Compilation list for all wells associated w/ OU-1 & OU-2 construction work.

MF
DO NOT REMOVE
Project No: 20015.01
Project Name: SULLIVAN'S LEDGE
DF
CC

CC:

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SULLIVAN'S LEDGE
WELL COORDINATES

Rec'd 3/6/01

Description	Northing(Y)	Easting(X)	Elevation(Z)	
GCA-1	239540.5	748563.0	84.06	Plastic Cap
MW-2	238966.6	748635.3	101.81	Plastic Cap
MW-10A	240141.5	748297.2	70.54	PVC
MW-12A	239535.8	748556.0	84.15	PVC
MW-12AR	239537.0	748550.8	85.04	PVC
MW-12	239529.8	748564.4	83.91	PVC
MW-13	239311.5	748666.7	89.49	Top Cover
MW-13A	239304.0	748668.1	89.48	PVC
MW-14	238967.0	748641.8	101.46	PVC
MW-14A	239367.5	748658.8	86.73	PVC
MW-15	238730.4	748452.2	112.31	PVC
MW-15A	239374.4	748670.9	85.98	PVC
MW-16	238893.0	748196.9	120.55	PVC
MW-17	239466.3	748227.6	92.56	PVC
MW-22A	239524.5	748391.7	85.00	PVC
MW-24	238757.9	748460.6	112.23	Plastic Cap
EXTRACTION WELL 2+50	239524.0	748328.7	84.49	Top Cover
EXTRACTION WELL 1+50	239577.4	748431.2	89.17	Top Cover
PZ-1	240829.9	748278.8	66.73	PVC
PZ-2	240614.7	748060.5	65.91	PVC
PZ-3	240746.0	747750.1	65.91	PVC
PZ-6	241024.9	748494.5	68.06	PVC
PZ-10	239532.8	748326.8	85.72	PVC
PZ-11	239640.1	748312.3	73.79	PVC
PZ-12	239582.9	748441.5	82.46	PVC
PZ-13	239681.6	748418.7	73.28	PVC
PZ-14A	239367.2	748658.5	86.73	PVC
PZ-15A	239374.6	748670.9	85.98	PVC
ECJ-1	239297.1	748670.9	89.81	PVC
ECJ-3	238868.3	748207.6	120.74	PVC
GMW-1	238556.9	748222.1	120.52	PVC
GMW-1R	238583.9	748219.9	119.43	PVC
GMW-2R	238651.6	748186.5	118.79	PVC
GMW-3R	238748.5	748164.2	120.54	PVC
GMW-4R	238839.7	748128.9	121.84	PVC
GMW-2	238645.6	748173.4	120.85	PVC
GMW-3	238742.1	748140.3	120.95	PVC
GMW-4	238826.5	748103.9	119.53	PVC
GMW-5	238929.5	748060.4	120.41	PVC
GMW-6	239020.2	748015.1	119.03	PVC
GMW-7	239100.7	747980.0	117.26	PVC
GMW-8	239180.0	747967.4	111.95	PVC
GMW-9	239223.1	748021.2	104.88	PVC

SULLIVAN'S LEDGE
WELL COORDINATES

3/6/01

Description	Northing(Y)	Easting(X)	Elevation(Z)	
GMW-10	239274.4	748114.6	97.70	PVC
GMW-11	239322.2	748167.9	97.07	PVC
GMW-12	239416.1	748188.1	91.11	PVC
GMW-13	239500.7	748243.2	84.69	PVC
GMW-15	239621.2	748500.8	77.02	PVC
GMW-16	239647.9	748610.6	78.51	PVC
GMW-17	239535.4	748658.2	79.70	PVC
GMW-18	239431.6	748702.7	81.22	PVC
GMW-19	239338.1	748739.1	82.13	PVC
GMW-20	239252.5	748770.4	84.26	PVC
GMW-21	239147.4	748811.0	85.95	PVC
GMW-22	239059.4	748841.0	85.18	PVC
GMW-23	238726.6	748590.4	89.85	PVC
OBG-1	239400.4	748595.1	88.96	Top Cover
OBG-2	239503.6	748540.4	85.65	Top Cover
OBG-3	239474.2	748314.2	90.56	Top Cover
BEI-1	239278.2	748663.4	91.40	Top Cover
BEI-2	239535.1	748448.1	88.06	Top Cover
BEI-3	239444.0	748213.9	92.71	Top Cover

Sullivan's Ledge, Phase III: Rec'd 3/6/01
– Dennis Fowle, Sitec Eng., New Bedford MA

From: Travis Canon, Harding ESE 3/6/01

DO NOT REMOVE

Project No: 20015.01

Project Name: OTG

DF:

CC: JMO

(~~Fax~~) 781-275-5651

≈ 9:45 am

Jim O'Loughlin

Mabbit Assoc

Sat, 2/24/01

- Well Survey Data: Sullivan's Ledge.
  - Jim: this is what I have. I talked to Dennis (Sitec) yesterday and requested a typed 1-2 page list of all wells showing elev., Northings, & Eastings. Hopefully in 1-2 weeks.

FAX #2 ≈ 9:55

	Elev.	
MW-10A	70.54 ft	Verbal elev. from Dennis yesterday.
PZ-6	68.06 ft	

Travis Canon

Harding ESE

MF
DO NOT REMOVE
Project No: 20015.01
Project Name: 64-6
DP
CC: JMO

(Fax) 781-275-5651

Jim O'Loughlin

Mabbit Assoc

Sat, 2/24/01

- Well Survey Data: Sullivan's Ledge.
  - Jim: this is what I have. I talked to Dennis (Sitec) yesterday and requested a typed 1-2 page list of all wells showing elev., Northings, & Eastings. Hopefully in 1-2 weeks.

Travis Canon
Harding ESE

4 pages

Northing(Y)	Easting(X)	Description
240829.9403	748278.8474	PZ-1
240614.7969	748060.5762	PZ-2
240746.0909	747750.1668	PZ-3

PZ-1, 2, 3

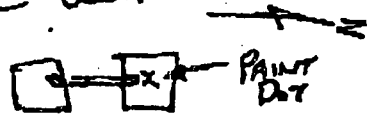
↑
2

Well Survey
File

Faxed from Sitec 2/13/01
Dennis Fowle

CORRECT ELEVATIONS

		ELEV.	2/13/01
PZ-1	t.o. PVC	66.73	Sitec Eng.
PZ-2	"	65.91	Well Survey File
PZ-3	"	65.91	
MW-9A	"	66.53	
H_2O @ POLE BRIDGE		61.36	
MW-7A	"	66.91	
MW-5A	1" PVC	67.01	
PAINT SPOT @ USGR	top CONC.	68.27	



2/13/01

Site Survey
per Dennis Fowle

GCA-1	N:239540.5	E:748583.0
MW-12A	N:239535.8	E:748556.0
MW-12AR	N:239537.0	E:748550.8
MW-12	N:239529.8	E:748564.4
MW-22A	N:239524.5	E:748391.7
EXTRACTION WELL 2+50	N:239524.0	E:748328.7
EXTRACTION WELL 1+50	N:239577.4	E:748431.2
PZ-10	N:239532.8	E:748328.8
PZ-11	N:239640.1	E:748312.3
PZ-12	N:239582.9	E:748441.5
PZ-13	N:239681.6	E:748418.7
ECJ-1	N:239297.1	E:748670.9
MW-13	N:239311.5	E:748866.7
MW-13A	N:239304.0	E:748868.1
MW-14A	N:239387.5	E:748658.8
MW-15A	N:239374.4	E:748570.9
MW-14	N:238967.0	E:748641.6
MW-2	N:238966.6	E:748635.3
MW-16	N:238893.0	E:748196.9
ECJ-3	N:238868.3	E:748207.6
MW-24	N:238757.9	E:748480.6
MW-15	N:238730.4	E:748452.2
GMW-1	N:238556.9	E:748222.1
GMW-2	N:238845.6	E:748173.4
GMW-3	N:238742.1	E:748140.3
GMW-4	N:238828.5	E:748103.9
GMW-5	N:238929.5	E:748060.4
GMW-6	N:239020.2	E:748015.1
GMW-7	N:239100.7	E:747980.0
GMW-8	N:239180.0	E:747967.4
GMW-9	N:239223.1	E:748021.2
GMW-10	N:239274.4	E:748114.6
GMW-11	N:239322.2	E:748167.9
GMW-12	N:239415.1	E:748188.1
GMW-13	N:239500.7	E:748243.2
GMW-15	N:239621.2	E:748500.8
GMW-16	N:239647.9	E:748610.6
GMW-17	N:239535.4	E:748658.2
GMW-18	N:239431.6	E:748702.7
GMW-19	N:239338.1	E:748739.1
GMW-20	N:239252.5	E:748770.4
GMW-21	N:239147.4	E:748811.0
GMW-22	N:239059.4	E:748841.0
GMW-23	N:238728.6	E:748590.4
MW-17	N:238466.3	E:748227.6
OBG-1	N:239400.4	E:748595.1
OBG-2	N:239503.6	E:748540.4
OBG-3	N:239474.2	E:748314.2
BEI-1	N:239278.2	E:748663.4
BEI-2	N:239535.1	E:748448.1
BEI-3	N:239444.0	E:748213.9

Well Survey
File

Well Survey file

SULIVAN'S LEDGE -- MONITORING WELL ELEVATIONS

WELL No.	ELEV.	REMARKS
GMW-1	120.85 120.52	RIM OF BOLTED COVER TOP OF 1-1/2" PVC
GMW-2	121.22 120.85	RIM OF BOLTED COVER TOP OF 1-1/2" PVC
GMW-3	121.11 120.95	RIM OF BOLTED COVER TOP OF 1-1/2" PVC
GMW-4	119.77 119.53	RIM OF BOLTED COVER TOP OF 1-1/2" PVC
GMW-5	120.80 120.41	RIM OF BOLTED COVER TOP OF 1-1/2" PVC
GMW-6	119.23 119.03	RIM OF BOLTED COVER TOP OF 1-1/2" PVC
GMW-7	117.48 117.26	RIM OF BOLTED COVER TOP OF 1-1/2" PVC
GMW-8	112.24 111.95	RIM OF BOLTED COVER TOP OF 1-1/2" PVC
GMW-11	97.34 97.07	RIM OF BOLTED COVER TOP OF 1-1/2" PVC
GMW-12	91.30 91.11	RIM OF BOLTED COVER TOP OF 1-1/2" PVC
GMW-16	78.86 78.51	RIM OF BOLTED COVER TOP OF 1-1/2" PVC
PZ-10	86.37 85.72	TOP OF ALUM. COVER RIM TOP OF 2" PVC
PZ-11	74.08 73.79	TOP OF ALUM. COVER RIM TOP OF 2" PVC
PZ-12	82.76 82.46	TOP OF ALUM. COVER RIM TOP OF 2" PVC
PZ-13	74.70 73.28	TOP OF ALUM. COVER RIM TOP OF 2" PVC
MW-12AR	85.31 85.04	TOP OF ALUM. COVER RIM TOP OF 2" PVC

WELL No.	ELEV.	REMARKS
ECJ-3	120.92 120.74	TOP OF ALUM. COVER RIM TOP OF 2" PVC
MW-16	120.46 120.55	TOP OF ALUM. COVER RIM TOP OF 2" PVC
MW-15	112.55 112.31	TOP OF ALUM. COVER RIM TOP OF 2" PVC
MW-2	101.81 n/a	TOP OF ALUM. COVER RIM NO PVC (3/8" TUBING)
MW-14	101.61 101.46	TOP OF ALUM. COVER RIM TOP OF 2" PVC
MW-24	112.23 n/a	TOP OF PLASTIC TEST CAP NO ACCESS

ELEVATIONS AS OF 1/18/2001

SITEC

Well Survey File

SULIVAN'S LEDGE – MONITORING WELL ELEVATIONS

WELL No.	ELEV.	REMARKS
GMW-9	105.31 104.88	RIM OF BOLTED COVER TOP OF 2" PVC
GMW-10	98.12 97.70	RIM OF BOLTED COVER TOP OF 2" PVC
GMW-13	85.15 84.69	RIM OF BOLTED COVER TOP OF 2" PVC
GMW-15	~~77.41~~ ~~77.02~~	RIM OF BOLTED COVER TOP OF 2" PVC
GMW-17	80.12 79.70	RIM OF BOLTED COVER TOP OF 2" PVC
GMW-18	81.48 81.22	RIM OF BOLTED COVER TOP OF 2" PVC
GMW-19	82.72 82.13	RIM OF BOLTED COVER TOP OF 2" PVC
GMW-20	84.75 84.26	RIM OF BOLTED COVER TOP OF 2" PVC
GMW-21	86.35 85.95	RIM OF BOLTED COVER TOP OF 2" PVC
GMW-22	85.61 85.18	RIM OF BOLTED COVER TOP OF 2" PVC
GMW-23	90.24 89.85	RIM OF BOLTED COVER TOP OF 2" PVC
MW-12	84.26 83.91	TOP OF ALUM. COVER RIM TOP OF 2" PVC
MW-12A	84.23 84.15	TOP OF ALUM. COVER RIM TOP OF 2" PVC
MW-13	89.49 n/a	TOP OF ALUM. COVER RIM no pvc liner
MW-13A	89.62 89.48	TOP OF ALUM. COVER RIM TOP OF 2" PVC
MW-17	92.66 92.56	TOP OF ALUM. COVER RIM TOP OF 2" PVC

changed

WELL No.	ELEV.	REMARKS
CGA-1	84.06 n/a	TOP OF PLASTIC TEST CAP no access
MW-12A	84.23 84.15	TOP OF ALUM. COVER RIM TOP OF 2" PVC
ECJ-1	89.95 89.81	TOP OF ALUM. COVER RIM TOP OF 2" PVC
EXTRACT WELL "WEST" 2+50	84.49 n/a	TOP OF ALUM. COVER RIM no access
EXTRACT WELL "EAST"	89.17 n/a	TOP OF ALUM. COVER RIM no access
PIEZOMETER "EAST"	86.17 85.98	TOP OF ALUM. COVER RIM TOP OF 2" PVC
PIEZOMETER "WEST"	87.03 86.73	TOP OF ALUM. COVER RIM TOP OF 2" PVC
OBG-1	88.96	TOP OF BOLTED BLUE CAP
OBG-2	85.65	TOP OF ALUM. COVER RIM
OBG-3	90.56	TOP OF ALUM. COVER RIM
BEI-1	91.40	TOP OF ALUM. COVER RIM
BEI-2	88.06	TOP OF ALUM. COVER RIM
BEI-3	92.71	TOP OF ALUM. COVER RIM

ELEVATIONS AS OF 3/22/2000

SITEC

NOTE.

Well #'s information taken from Plan dated June 1992 for BAKER ENVIRONMENTAL, INC. called Figure 4-1 Existing Monitoring Well Locations.

From Danson, Summer '98

ROUTE 196

MONITORING WELL ELEVATIONS

DESCRIPTION	ELEVATION	REMARKS
2" PVC	86.35	GCA-1A
2" PVC	86.03	MW-13
2" PVC	86.91	MW-13A
2" PVC	86.74	ECJ-1
Top pipe	87.97	MW-1
2" PVC	87.67	MW-1A
2" PVC	81.14	MW-12
Top pipe	80.68	MW-12A
2" PVC	81.71	GCA-1
Top pipe	81.67	MW-22
2" PVC	81.61	MW-22A
TP/ 2" PVC	80.95	MW-22B
Top pipe	87.93	MW-23
Top pipe	88.13	MW-3
2" PVC	88.69	MW-17
Top pipe	105.49	MW-11
2" PVC	107.94	MW-16
2" PVC	109.46	ECJ-3
Top pipe	108.66	GCA-2A
2" PVC	112.90	GCA-2
2" Cast Iron	113.65	MW-25
2" PVC	107.99	MW-15
Top pipe	106.51	MW-24
2" PVC	91.77	MW-14
Top pipe	91.35	MW-2
2" PVC	90.18	MW-4A
Top pipe	90.23	MW-4
2" PVC	72.38	ECJ-2
2" PVC	73.33	MW-6A
Top pipe	73.89	MW-6
Top pipe	82.82	MW-5A

MONITORING WELL ELEVATIONS

DESCRIPTION	ELEVATION	REMARKS
2" PVC	82.34	MW-5
Top pipe	68.73	MW-19
2" PVC	69.72	MW-10A
Top pipe	68.28	MW-10
Top pipe	68.42	MW-10B
2" Cast Iron	66.59	MW-20
Top pipe	70.05	MW-8
2" PVC	76.19	MW-8A
2" PVC	70.59	ECJ-4
2" PVC	76.62	MW-26
2" PVC	62.95	MW by Tracks
2" PVC	65.11	MW-9A
2" PVC	73.58	MW-30
Top pipe	68.20	MW-7A
Top pipe	86.63	BEI-1
Top pipe	81.50	BEI-2
Top pipe	89.15	BEI-3
Top of Riser	72.25	PZ-3
Top of Riser	70.37	PZ-4
Top of Riser	65.95	PZ-6

NOTE: TOP PIPE = BLACK MARK ON TOP OF WELL CASING.

Harding ESE
A MACTEC Company

Day / Date: 3/7/01

FACSIMILE

To: Jim O'Loughlin
Mabbett

From: Travis Canon
Harding ESE

FAX #: 781-275-5651

Project #: Sullivan's MF

DO NOT REMOVE
Project No: 20015.01
Project Name: SULLIVAN'S LOOP
DF:
CC: JMO

Subject: Ph. III Well extensions

Number of Pages (Including this Cover Sheet) = 2

Additional Message: 6 wells, as best I know, ~~not~~ were extended during Phase III: Group #1: ECJ-3 + MW-16; #2: MW-15 + 24, and #3: MW-2 + 14. Daily report #119 (attached) is my only written reference to any extension, and it is not precise: ECJ-3 extended ≈ 3 ft; MW-2 extended ≈ 2½ ft. From memory, MW-16 was raised ≈ 4 ft, also in Sept. '00. The weld marks on these wells are covered. The other 3 wells were extended ≈ 1.0 ft each; this extension could be measured in the field. Tom Bold may have more accurate measurements, as he requested the extensions.

CC:

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If you experience any problems receiving this fax, please call us at 303.221.1360 Phone

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HLA

QA/QC DAILY FIELD REPORT

OU-I Phase III and OU-2 Phase II
Sullivan's Ledge #47968, New Bedford MA

Mon Tu Wed Th (Fri) Sat Sun Date: 9/8/00 Report #: 119

WEATHER

Morning: 52 °F: clear; windy-breezy; 25 mph SW wind
Afternoon: high 70°F: clear; " " ; " " " "
Weather Delays: None

ATTACHMENTS

[•] Attachment requested
[X] Attachment submitted

OB&G	D&M	EPA	
[•]	[ ]	[•]	GWTP
[X]	[ ]	[X]	H & S Daily Report
[X]	[X]	[ ]	Daily Tailgate/Sign-In Sheet
[X]	[X]	[ ]	Visitor Sign-In Log (supplied weekly on Fri.)
[X]	[X]	[ ]	Daily Weather Report
[ ]	[ ]	[ ]	Other:
[ ]	[ ]	[ ]	Other:
{4}	{3}	{1}	Total Attachments

Dust Monitoring conducted? (Yes) No

SITE ACTIVITIES

- Composite Cap (ALCO): No activity.
- Bar Pro3, Lifts # 3 + 4: Lopes trucks delivered sandy silt to the NE edge of Cap. Material dozed + ~~[illegible]~~ rolled/compacted.
- NW Corner, Bar Pro3, GeoComposite: With 5 laborers + the excavator operator, crew continued to scrape off + remove soil from top of geocomposite. Crew worked on the E. end of the NW corner area.
- Sitec Survey: Set grade on South Swale + Berm.
- Monitoring Well extensions: Three wells were extended:
  1. MW-9A at N. side of Middle Marsh: Protective casing welded back in place.
  2. ECJ-3 (W. side of Cap): Extended ≈ 3 ft
  3. MW-2 (SE corner of Cap): Extended ≈ 2 ½ ft
- Tributary 2 (S. side of Sed. Basin): 4-man NEE crew planted bushes + trees on S. side of Sed. Basin.

Density/Moisture Testing: (No) Yes: Lift(s) #

Proctor and/or Grain Size Sample(s) Collected: (No) Yes: Sample #

- RTC not on-site today; in Denver, CO on weekend home.

R. Travis Canon, QA/QC Eng. Signed: R. Travis Canon

Harding Lawson Associates
Engineering and Environmental Services

SHEET 1 OF 3
JOB NO.
DATE Wed, 3/22/00
COMPUTED BY RTC
CHECKED BY

PROJECT Sullivan's
SUBJECT

To: Ryan Hill
FAX: 781-849-2949

From: Travis Canon

RE: ① Extensions: List of wells extended
② June '92 Danson survey: Wells survey

MONITORING WELL EXTENSIONS

Spec. #02142

Daily Field Report # Extension-Only Final **Day/Date:** Mon, 12/21/98

P. 2/2

HLA Construction
Sullivan's Ledge #39625
New Bedford MA

Drilling Company: Layne Christensen
Driller: Mel Hafford
Helper: Roger Carrier

Wells Extended Today:

Well #	Date Extended	Diameter Steel*	Diameter PVC	Comments
MW-2	12/17/98	6"	X	8.50 ft steel added
MW-12	12/16/98	6"	1½" sch. 80	2.78 ft steel added
MW-12A	12/16/98	6"	1½" sch. 80	2.94 ft " "
MW-13	12/16/98	4"	X	3.61 ft " "
MW-13A	12/17/98	6"	1½" sch. 80	2.86 ft " "
MW-14	12/17/98	6"	1½" sch. 80	8.55 ft " "
MW-15	12/18/98	6"	1½" sch. 80	2.65 ft " "
MW-16	12/21/98	6"	1½" sch. 80	9.00 ft " "
MW-17	12/18/98	6"	1½" sch. 80	3.98 ft " "
MW-22A	2/16/99		2" sch. 80	New well; original well replaced
RTC 2/16/99				
MW-24	12/18/98	6"	X	4.43 ft " "
ECJ-1	12/17/98	4"	1½" sch. 80	3.32 ft steel added
ECJ-3	12/21/98	4"	1½" sch. 80	10.40 ft " " (*)
BEI-1	12/17/98	6"	X	6.00 ft " "
BEI-2	12/21/98	6"	X	9.31 ft " "
BEI-3	12/18/98	6"	X	3.80 ft steel added
GCA-1	12/16/98	4"	X	3.60 ft " "

17 wells extended

* ASTM A 53 Carbon Steel Pipe

Summary of Activities

(*) ECJ-3: This well was buried by SRS and re-located by an excavator. The top 1.4 ft of well head was knocked off by the excavator. Layne welded this piece back on (9.00 + 1.40 = 10.40 ft steel). Less than ½ cup of soil, if any, is estimated to have fallen down the PVC casing.

OBG-1: Extended 8.25 ft
OBG-2: " 4.30 ft
OBG-3: Not extended; tall stickup; stickup = 5.03 ft

Geologist: R. Travis Canon Signed: R. Travis Canon

ROUTE 6

NOTE:

Well #'s information taken from Plan dated June 1992 for BAKER ENVIRONMENTAL, INC. called Figure 4-1 Existing Monitoring Well Locations.

MONITORING WELL ELEVATIONS

DESCRIPTION	ELEVATION	REMARKS
2" PVC	86.35	GCA-1A
2" PVC	86.03	MW-13
2" PVC	86.91	MW-13A
2" PVC	86.74	ECJ-1
Top pipe	87.97	MW-1
2" PVC	87.67	MW-1A
2" PVC	81.14	MW-12
Top pipe	80.68	MW-12A
2" PVC	81.71	GCA-1
Top pipe	81.67	MW-22
2" PVC	81.61	MW-22A
TP/ 2" PVC	80.95	MW-22B
Top pipe	87.93	MW-23
Top pipe	88.13	MW-3
2" PVC	88.69	MW-17
Top pipe	105.49	MW-11
2" PVC	107.94	MW-16
2" PVC	109.46	ECJ-3
Top pipe	108.66	GCA-2A
2" PVC	112.90	GCA-2
2" Cast Iron	113.65	MW-25
2" PVC	107.99	MW-15
Top pipe	106.51	MW-24
2" PVC	91.77	MW-14
Top pipe	91.35	MW-2
2" PVC	90.18	MW-4A
Top pipe	90.23	MW-4
2" PVC	72.38	ECJ-2
2" PVC	73.33	MW-6A
Top pipe	73.89	MW-6
Top pipe	82.82	MW-5A

MONITORING WELL ELEVATIONS

DESCRIPTION	ELEVATION	REMARKS
2" PVC	82.34	MW-5
Top pipe	65.73	MW-19
2" PVC	69.72	MW-10A
Top pipe	68.28	MW-10
Top pipe	68.42	MW-10B
2" Cast Iron	66.59	MW-20
Top pipe	70.05	MW-8
2" PVC	76.19	MW-8A
2" PVC	70.59	ECJ-4
2" PVC	76.62	MW-26
2" PVC	62.95	MW by Tracks
2" PVC	65.11	MW-9A
2" PVC	73.58	MW-30
Top pipe	68.20	MW-7A
Top pipe	86.63	BEI-1
Top pipe	81.50	BEI-2
Top pipe	89.15	BEI-3
Top of Riser	72.25	PZ-3
Top of Riser	70.37	PZ-4
Top of Riser	65.95	PZ-6

From Dawson, Summer '98

Extension File

NOTE: TOP PIPE = BLACK MARK ON TOP OF WELL CASING

HARDING ESE
A MACTEC COMPANY

Day / Date: 3/7/01

FACSIMILE

To: Jim O'Loughlin
Mabbett

From: Travis Canon
Harding ESE

FAX #: 781-275-5651

Project #: Sullivan's

Subject: Ph. III Well extensions

Number of Pages (Including this Cover Sheet) = 2

Additional Message: 6 wells, as best I know, ~~not~~ were extended during Phase III: Group #1: ECJ-3 + MW-16; #2: MW-15 + 24, and #3: MW-2 + 14. Daily report #119 (attached) is my only written reference to any extension, and it is not precise: ECJ-3 extended ≈ 3 ft; MW-2 extended ≈ 2½ ft. From memory, MW-16 was raised ≈ 4 ft, also in Sept. '00. The weld marks on these wells are covered. The other 3 wells were extended ≈ 1.0 ft each; this extension could be measured in the field. Tom Bold may have more accurate measurements, as he requested the extensions.

CC:

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HLA

QA/QC DAILY FIELD REPORT

OU-I Phase III and OU-2 Phase II
Sullivan's Ledge #47968, New Bedford MA

Mon Tu Wed Th (Fri) Sat Sun Date: 9/8/00 Report #: 119

WEATHER

Morning: 52 °F: clear; windy-breezy; 25 mph SW wind
Afternoon: high 70°F: clear; " " ; " " " "
Weather Delays: None

ATTACHMENTS

QB&G	D&M	EPA	
[•]	[ ]	[•]	GWTP
[X]	[ ]	[X]	H & S Daily Report
[X]	[X]	[ ]	Daily Tailgate/Sign-In Sheet
[X]	[X]	[ ]	Visitor Sign-In Log (supplied weekly on Fri.)
[X]	[X]	[ ]	Daily Weather Report
[ ]	[ ]	[ ]	Other:
[ ]	[ ]	[ ]	Other:
{4}	{3}	{1}	Total Attachments

[•] Attachment requested
[X] Attachment submitted

Dust Monitoring conducted? (Yes) No

SITE ACTIVITIES

- Composite Cap (ALCO): No activity.
- Bar Pro3, Lifts #3 + 4: Lopes trucks delivered sandy silt to the NE edge of Cap. Material dozed + ~~rolled~~ rolled/compacted.
- NW Corner, Bar Pro3, GeoComposite: With 5 laborers + the excavator operator, crew continued to scrape off + remove soil from top of geocomposite. Crew worked on the E. end of the NW corner area.
- Sitec Survey: Set grade on South Swale + Berm.
- Monitoring Well extensions: Three wells were extended:
  1. MW-9A at N. side of Middle Marsh: Protective casing welded back in place.
  2. ECJ-3 (W. side of Cap): Extended ≈ 3 ft
  3. MW-2 (SE corner of Cap): Extended ≈ 2 1/2 ft
- Tributary 2 (S. side of Sed. Basin): 4-man NEE crew planted bushes + trees on S. side of Sed. Basin.

Density/Moisture Testing: (No) Yes: Lift(s) #

Proctor and/or Grain Size Sample(s) Collected: (No) Yes: Sample #

- RTC not on-site today; in Denver, CO on weekend home.

R. Travis Canon, QA/QC Eng. Signed: R. Travis Canon

Harding ESE
A MACTEC COMPANY

Wed.
Day / Date: 3/7/01

MF
DO NOT REMOVE
Project No: 20015.01
OTG
MAS, JMO

FACSIMILE

To: Melissa Smith
Mabbett

From: Travis Canon
Harding ESE

FAX #: 781-275-5651

Project #: Sullivan's

Subject: MW-10A and MW-12AR

Number of Pages (Including this Cover Sheet) = 6

Additional Message: Attached:

(1) MW-10A (A) Well repair diagram by RTC, HLA.
(2) Copy of NUS/OBG drill Log

(2) MW-12AR (A) Copy of submittal HLA-T-179
(B) Boxelog by RTC, HLA. (10/5/00)
(C) Well log by RTC, HLA (10/5/00)

- Site keys: Ron Piloneo is in today: 508-990-8831

CC:

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Phone

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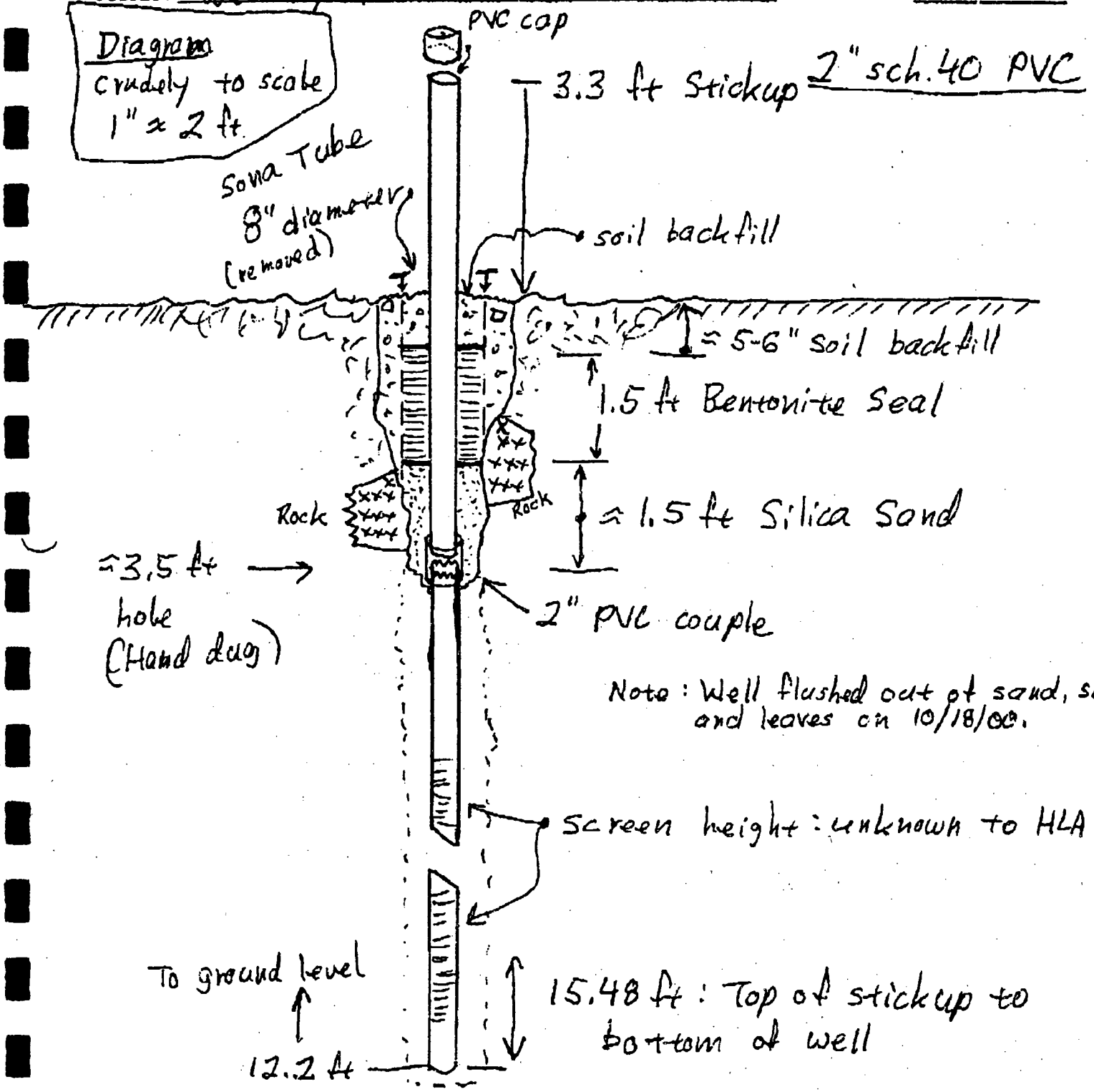
Harding Lawson Associates
Engineering and Environmental Services

SHEET 1 OF 1
JOB NO. 47968
DATE Fri, 10/20/00
COMPUTED BY RTe
CHECKED BY

PROJECT MW-10A
SUBJECT well repair

Diagram
crudely to scale
1" = 2 ft.



15.5 (rounded)
− 3.3 − stickup
12.2 ft Depth ground level to bottom of well

Auger

MW-10A

NUS CORPORATION
A Halliburton Company

PROJECT SULLIVAN'S LEDGE
PROJECT NO. #729 1003 BORING MW 10A
ELEVATION 67.01 DATE 3-10-86
FIELD GEOLOGIST M.G. COCHRAN

SAMPLE NO. TYPE & DEPTH (ft)	BLOWS/SIX INCHES OR RQD (%)	SAMPLE RECOVERY/SAMPLE LENGTH (ft)	MATERIAL MOISTURE & WATER DEPTH (ft)	MATERIAL DESCRIPTION* SOIL DENSITY/CONSISTENCY OR ROCK HARDNESS	COLOR	MATERIAL CLASSIFICATION	USCS OR ROCK BROKENNESS	REMARKS
				M. DENSE	BR.	SILTY SAND LITTLE FINE	SM	H2O 1.0'
						GRAVEL		
1	N/A	.9/						
(3-5)		2.0			DK.	BR. PEAT (UPPER 0.7')		
5.0					DK.	GRAY SILT LITTLE SAND	SM	(LOWER 0.2')
2	N/A	1.1/			DK.	BR. PEAT (UPPER 0.6') INTERBEDDED		
(4-6.8)		1.8			WITH	DK. GRAY SILTS & SANDS		
3						WOOD CHIPS @ 7.0'	SM	END OF FILL 7.0'
8.5-10.5	26 21	1/			DENSE	LT. GRAY-BROWN SILTY		
10.0	19 20	2			FINE	SAND TR. COARSE SAND &		
4	[illegible]	1.4/			ANGULAR	GRAVEL LIMONITE STAINED LAMINA		
10.5-12.5	19 19	2			IN	SAMPLE		
					LT.	BROWN SANDY SILT W/INTERBEDDED		
					FINE	SAND LENSES		
15.0						BEDROCK 14.9' ?		
						AUGER REFUSAL		
20.0								
25.0								

REMARKS

BORING MW 10A

*SEE LEGEND ON BACK

PAGE 1 OF 1

Harding Lawson Associates
Construction Division
7000 E. Belleview Ave., Suite 209
Greenwood Village CO 80111
(303) 221-1360 Fax (303) 221-1361

Borelog HW 12AR File

LETTER OF TRANSMITTAL

To: O'BRIEN & GERE, Attn: Tom Bold
5000 Brittonfield Pkwy
E. Syracuse NY 13057

Date: 1/8/2001
Transmittal No.: HLA - T - 179 - 010801
Job Number: OB&G - 5509 / HLA - 47968.03
RE: 02143, Ground Water Piezometers (plus MW-12AR)
Address reply to:
HARDING LAWSON ASSOCIATES, Attn: R. Travis Canon
7000 E. Belleview Ave. #209
Greenwood Village CO 80111 Phone: 303-221-1360

We Are Sending:
- [x] Attached
- [ ] Under Separate Cover Via the Following:

- [ ] Specifications
- [ ] Certificates of Compliance
- [ ] Manufacturer Instructions
- [ ] O&M Manuals and Data
- [ ] Electronic Copy
- [ ] Prints
- [ ] Original Drawing(s)
- [ ] Subcontract
- [ ] Copy of Letter
- [ ] Records
- [ ] Work Plans
- [ ] Samples
- [ ] Report
- [x] Submittals
- [ ] Other

Copies	Date	Spec. Number	Description
6	1/8/2001	02143-5, Part 3.5.A	Piezometer Wells PZ-10, 11, 12, & 13
			A. Borelog & well diagram (one form)
6	1/8/2001	02143-4, Part 3.2.A	Piezometer Wells PZ-10, 11, 12, & 13
			A. Well development log
6	1/8/2001	None listed	Monitoring Well MW-12AR
			A. Borelog/well diagram & well development log

These are transmitted as checked below:
- [x] For Approval
- [ ] For Your Use
- [ ] As Requested
- [ ] For Review & Comment
- [ ] Approved as Submitted
- [ ] Approved as Noted
- [ ] Returned for Corrections
- [ ] Issued for Construction
- [ ] Resubmit ____ Copies for Approval
- [ ] Submit ____ Copies for Distribution
- [ ] Return ____ Corrected Prints
- [ ] Preliminary/For Reference Only
- [ ] Other
- [ ] Prints Returned After Loan to Us
- [ ] For bids due: _____

Remarks:

Please review the attached submittal on Spec. 02143-4&5, Piezometers. Borelogs/Well Diagram & Well Development Logs and replacement Monitoring Well MW-12AR. Borelog/Well Diagram & Well Development Log (no specification number).

Please sign and return ACKNOWLEDGMENT FORM for our records.

File: HLA
Copy to:

Sent by: R. Travis Canon, HLA RTC
Received by: Tom Bold OB&G

C:\sullivans\edge\obg\trans016a.xls

1/8/2001

Appendix D

Conventional Low-Flow Ground Water Sampling Logs

Low Flow Ground Water Sampling Log

Date	3-19-01 14:00	Personnel	MAS, REH	Weather	Sunny breezy 50°C
Site Name	Sullivan's Ledge	Evacuation Method	Low Flow Bladder	Well #	MW-2
Site Location	New Bedford, MA	Sampling Method	Low Flow Bladder	Project #	20015.09

Well information:

Depth of Well * _____ ft.

Depth to Water * 16.5 ft. top of PVC cap

Length of Water Column _____ ft.

* Measurements taken from

- [ ] Top of Well Casing
- [ ] Top of Protective Casing
- [ ] (Other, Specify)

Water parameters: Lower submersible pump slowly through stagnant water column
Position pump in center of screened interval & maximum pumping rate of 0.5 liters/minute
Collect readings at every three minute intervals

Elapsed Time	Depth To Water	Temperature	pH	Sp Cond Conductivity	Oxidation Reduction Potential	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Flow Rate (ml/min).
0	16.58	12.2	6.9	601	-31.3	2.75	14	400
5	16.60	11.9	6.73	685	-52.2	1.62	6.9	350
10	16.6	11.68	6.72	684	-50.0	1.78	9.0	350
15	16.6	11.81	6.69	685	-49.9	4.88	22	350
20		11.84	6.69	684	-50.0	3.81	26	
25		11.90	6.72	684	-52.4	3.03	28	
30		11.83	6.75	685	-52.4	2.33	21	
35		11.89	6.70	685	-52.6	2.11	15	
40	16.6	11.71	6.72	685	-52.8	1.82	12	350
50		11.97	6.71	684	-54.4	1.92	10	
55		11.73	6.62	685	-54.7	1.33	10	

Water sample:

Time collected: _____

Total volume of purged water removed: 4.5 gal

Physical appearance at start
- Color: clear
- Odor: organic
- Sheen/Free Product: none

Physical appearance at sampling
- Color: clear
- Odor: organic
- Sheen/Free Product: none

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40mL	VOA vial	2	—	HCl	
1L	P.E - total metals	1	—	HNO_3	
1L	SVOC - Amber Glass	1	—	—	
1L	PCB's - Amber Glass	1	—	—	

Notes: Turbidity High - other parameters stabilized

April 25, 1997
Form developed by
O'Brien & Gere Engineers, Inc.

Low Flow Ground Water Sampling Log

Date	3/24/00	Personnel	RBH, DJA	Weather	Snowing 34°F
Site Name	Sullivan's Lodge	Evacuation Method	Bladder	Well #	[illegible]
Site Location	near Redford	Sampling Method	Low Flow	Project #	

Well information:

Depth of Well * _____ ft.

Depth to Water * 8.04 ft.

Length of Water Column _____ ft.

* Measurements taken from

	Top of Well Casing
8.04	Top of Protective Casing PVC Cap
	(Other, Specify)

Water parameters: Lower submersible pump slowly through stagnant water column
Position pump in center of screened interval & maximum pumping rate of 0.5 liters/minute
Collect readings at every three minute intervals

Elapsed Time	Depth To Water	Temperature	pH	Sp Cond uS/cm Conductivity	Oxidation Reduction Potential	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Flow Rate (ml/min).
0		6.46	7.44	541.0	1.9	6.80	11	350
5		9.59	6.75	772	~~4.61~~ -21.2	4.61	0.8	
10	8.1	9.93	6.66	761.0	-27.6	2.17	0.00	350
15		10.01	6.67	588.8	-31.9	1.74	0.00	
20	8.1	9.97	6.67	566.6	-32.4	1.42		
25		9.98	6.68	559.0	-32.7	3.07	0.00	350
30		9.93	6.65	556.0	-33.1	9.20		
35		9.94	6.65	556.0	-33.8	1.18		
40	8.11	9.93	6.64	553.0	-33.3	7.27		
45		10.01	6.64	554.0	-34.1	7.97		
50		10.02	6.64	553	-34.1	1.97	0.00	350
55		9.97	6.64	552	-33.9	1.81	0.00	
60	8.1	9.98	6.64	550	-32.9	5.47	0.00	

Water sample:

Time collected: 6:10

Total volume of purged water removed: 5 gal

Physical appearance at start
Color: clear
Odor: none
Sheen/Free Product: none

Physical appearance at sampling
Color: clear
Odor: none
Sheen/Free Product: none

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH

Notes:

April 25, 1997
Form developed by
O'Brien & Gere Engineers, Inc.

Low Flow Ground Water Sampling Log

Date	3/24/01	Personnel	RFH, GCG	Weather	Sunny 45°F
Site Name	Sullivan's Ledge	Evacuation Method	Bladder	Well #	MW-4
Site Location	New Bedford	Sampling Method	Low Flow	Project #	

Well information:

Depth of Well * _____ ft.

Depth to Water * 7.86 ft.

Length of Water Column _____ ft.

* Measurements taken from

	Top of Well Casing
7.86	Top of Protective Casing
	(Other, Specify)

Water parameters: Lower submersible pump slowly through stagnant water column
Position pump in center of screened interval & maximum pumping rate of 0.5 liters/minute
Collect readings at every three minute intervals

Elapsed Time	Depth To Water	Temperature	pH	Conductivity	Oxidation Reduction Potential	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Flow Rate (ml/min).
0		10.25	6.27	558.01	-44.7	2.35	0.00	400
5	7.94	10.66	6.28	871.0	-57.7	1.65	0.00	
10		10.56	6.30	672.0	-57.0	4.14		
15		10.42	6.47	607.0	-55.7	3.53		350
20								
Stop								

Water sample:

Time collected: N/A

Total volume of purged water removed: _____

Physical appearance at start

Color clear

Odor none

Sheen/Free Product none

Physical appearance at sampling

Color _____

Odor _____

Sheen/Free Product _____

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH

Notes: YSI malfunction, could not continue purge

April 25, 1997
Form developed by
O'Brien & Gere Engineers, Inc.

Low Flow Ground Water Sampling Log

Date	3/24/01	Personnel	REH, GCG	Weather	Sunny 45°F
Site Name	Sullivan's Ledge	Evacuation Method	Bladder	Well #	MW 4A
Site Location	New Bedford	Sampling Method	low Flow	Project #	

Well information:

Depth of Well * _____ ft.

Depth to Water * 7.12 ft.

Length of Water Column _____ ft.

* Measurements taken from

7.12	Top of Well Casing PVC
	Top of Protective Casing
	(Other, Specify)

Water parameters: Lower submersible pump slowly through stagnant water column
Position pump in center of screened interval & maximum pumping rate of 0.5 liters/minute
Collect readings at every three minute intervals

Elapsed Time	Depth To Water	Temperature	pH	Sp Cond uS/cm Conductivity	Oxidation Reduction Potential	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Flow Rate (ml/min).
0	7.12	6.49	5.40	278.0	117.8	4.80	<2	500
5		6.18	5.44	326.0	83.7	3.19	8.0	400
10		6.16	5.46	345.0	76.6	2.66	8.3	
15		6.16	5.47	355.0	70.0	2.84	2.7	400
20	7.12	6.24	5.41	369.0	63.6	2.68	2.5	
25		6.21	5.49	372.0	60.6	2.94	2.8	400
30		6.27	5.51	373.0	57.4	2.80	1.3	

Water sample:

Time collected: 9:35

Total volume of purged water removed: 4 gal

Physical appearance at start
Color: clear
Odor: none
Sheen/Free Product: none

Physical appearance at sampling
Color: clear
Odor: none
Sheen/Free Product: none

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
	VOA	3	n	HCl	
	Glass	1	↓	—	
	PE	1		HNO_3	

Notes:

April 25, 1997
Form developed by
O'Brien & Gere Engineers, Inc.

Low Flow Ground Water Sampling Log

Date	3/26/01	Personnel	REH DJA	Weather	Cloudy 40°F
Site Name	Sullivans Ledge	Evacuation Method	Bladder	Well #	MW-5
Site Location	New Bedford	Sampling Method	low Flow	Project #	

Well information:

Depth of Well * _____ ft.

Depth to Water * 6.98 ft.

Length of Water Column _____ ft.

* Measurements taken from

	Top of Well Casing
6.98	Top of Protective Casing PVC Cap
	(Other, Specify)

Water parameters: Lower submersible pump slowly through stagnant water column
Position pump in center of screened interval & maximum pumping rate of 0.5 liters/minute
Collect readings at every three minute intervals

Elapsed Time	Depth To Water	Temperature	pH	Sp Cond uS/cm Conductivity	Oxidation Reduction Potential	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Flow Rate (ml/min).
0		9.67	6.80	1242	162.3	4.36	2.6	250
5	7.3	10.40	7.01	1318	149.4	2.73	.7	
10		10.33	7.06	1369	149.5	3.07	0.00	300
15	7.6	10.38	7.07	1374	150.8	2.49	0.00	
20		10.32	7.09	1385	151.8	3.05	0.00	
25	7.88	10.35	7.07	1384	155.8	2.47		
30		10.26	7.06	1384	158.1	2.39	0.00	250
35		10.36	7.07	1383	161.1	2.52		
40		10.30	7.10	1383	161.9	2.28	0.00	
45	8.1	10.24	7.17	1383	161.5	2.25	0.00	250

Water sample:

Time collected: 15:15

Total volume of purged water removed: 3 gal

Physical appearance at start
Color clear
Odor none
Sheen/Free Product none

Physical appearance at sampling
Color clear
Odor none
Sheen/Free Product none

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH

Notes:

April 25, 1997
Form developed by
O'Brien & Gere Engineers, Inc.

Low Flow Ground Water Sampling Log

Date	3/26/01	Personnel	BEH, MTA	Weather	Cloudy 45°F
Site Name	Sullivan's Ledge	Evacuation Method	Bladder	Well #	MW-5A
Site Location	New Bedford	Sampling Method	Low Flow	Project #	

Well information:

Depth of Well * _____ ft.

Depth to Water * 6.32 ft.

Length of Water Column _____ ft.

* Measurements taken from

6.32	Top of Well Casing PVC
	Top of Protective Casing
	(Other, Specify)

Water parameters: Lower submersible pump slowly through stagnant water column
Position pump in center of screened interval & maximum pumping rate of 0.5 liters/minute
Collect readings at every three minute intervals

Elapsed Time	Depth To Water	Temperature	pH	Sp Cond ug/cm Conductivity	Oxidation Reduction Potential	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Flow Rate (ml/min).
0		7.58	6.74	1382	185.7	10.31	60	
5	6.52	7.71	5.91	1385	207.9	9.17	16	250
10		7.58	5.69	1412	218.1	8.88	8.8	250
15	~~7.92~~ 6.52	7.52	5.62	1433	226.6	8.17	5.0	
20		7.53	5.59	1438	229.5	7.84	3.6	
25	6.49	7.49	5.64	1438	232.7	7.66	2.2	250
30		7.59	5.59	1440	235.7	9.99	1.6	
35	6.52	7.57	5.59	1437	238.5	7.41	1.0	
40		7.58	5.59	1437	235.9	7.41	.9	250
45		7.58	5.58	1435	241.0	7.35	.55	

Water sample:

Time collected: 12:40

Total volume of purged water removed: 3 gal

Physical appearance at start
Color: clear
Odor: none
Sheen/Free Product: none

Physical appearance at sampling
Color: clear
Odor: none
Sheen/Free Product: none

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH

Notes: 0 ppm ovm Dup-2 taken

April 25, 1997
Form developed by
O'Brien & Gere Engineers, Inc.

Low Flow Ground Water Sampling Log

Date	3/20/01	Personnel	REN, PDS	Weather	Sunny 55°F
Site Name	Sullivan's Lake	Evacuation Method	Bladder	Well #	MW-6
Site Location	New Bedford	Sampling Method	Low Flow	Project #	

Well information:

Depth of Well * _____ ft.

Depth to Water * 5.68 ft.

Length of Water Column _____ ft.

* Measurements taken from

	Top of Well Casing
5.68	Top of Protective Casing (cap)
	(Other, Specify)

Water parameters: Lower submersible pump slowly through stagnant water column
Position pump in center of screened interval & maximum pumping rate of 0.5 liters/minute
Collect readings at every three minute intervals

Elapsed Time	Depth To Water	Temperature	pH	Sp Cond Conductivity	Oxidation Reduction Potential	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Flow Rate (ml/min).
0	5.78	11.01	6.78	867	-41.2	1.65	6.5	350
5	5.78	10.83	6.58	1014.0	-72.1	.85	1.8	375
10	5.80	10.82	6.57	1023	-76.1	1.05	1.0	
15		10.81	6.54	1022	-78.1	1.13	.05	
20	5.82	10.82	6.58	1023	-82.5	2.30	0.00	
25		10.78	6.56	1023	-83.5	1.32	.25	325
30		10.73	6.57	1022	-84.0	1.04	0.00	

Water sample:

Time collected: 16:10

Total volume of purged water removed: 4 gal

Physical appearance at start
- Color: clear
- Odor: none
- Sheen/Free Product: none

Physical appearance at sampling
- Color: clear
- Odor: none
- Sheen/Free Product: none

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH

Notes:

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Form developed by
O'Brien & Gere Engineers, Inc.

Low Flow Ground Water Sampling Log

Date	3/20/01	Personnel	REH, PDS	Weather	Sunny 55°F
Site Name	Sullivan's Lake	Evacuation Method	Bladder	Well #	MW-6A
Site Location	New Bedford	Sampling Method	Low Flow	Project #	

Well information:

Depth of Well * _____ ft.

Depth to Water * 5.34 ft.

Length of Water Column _____ ft.

* Measurements taken from

5.34	Top of Well Casing (PVC)
	Top of Protective Casing
	(Other, Specify)

Water parameters: Lower submersible pump slowly through stagnant water column
Position pump in center of screened interval & maximum pumping rate of 0.5 liters/minute
Collect readings at every three minute intervals

Elapsed Time	Depth To Water	Temperature	pH	Conductivity	Oxidation Reduction Potential	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Flow Rate (ml/min).
0	5.5	9.05	6.34	1058.0	-8.8	2.54	14	400
5	5.5	8.54	6.24	1067.0	-19.9	.80	6.2	
10	5.5	8.55	6.24	1075.0	-23.6	.40	2.3	300
15		8.91	6.23	1076	-22.8	.44	1.7	
20	5.52	8.93	6.20	1077	-22.5	1.21	1.4	
25		8.97	6.18	1072	-21.0	.64	.7	
30		9.02	6.23	1077	-21.0	2.01	.6	

Water sample:

Time collected: 1500

Total volume of purged water removed: ≈ 5 gal

Physical appearance at start
Color: clear
Odor: organic (slight)
Sheen/Free Product: none

Physical appearance at sampling
Color: clear
Odor: none
Sheen/Free Product: none

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH

Notes: MS, MSD, Dup-1 taken.

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Form developed by
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Low Flow Ground Water Sampling Log

Date	3/20/01	Personnel	REH, PDS	Weather	Sunny 50°F
Site Name	Sullivan's Ledge	Evacuation Method	Bladder	Well #	MW-8
Site Location	New Bedford	Sampling Method	Low Flow	Project #	

Well information:

Depth of Well * _____ ft.

Depth to Water * 2.90 ft.

Length of Water Column _____ ft.

* Measurements taken from

	Top of Well Casing
2.90	Top of Protective Casing
	(Other, Specify)

Water parameters: Lower submersible pump slowly through stagnant water column
Position pump in center of screened interval & maximum pumping rate of 0.5 liters/minute
Collect readings at every three minute intervals

Elapsed Time	Depth To Water	Temperature	pH	Spcond Conductivity	Oxidation Reduction Potential	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Flow Rate (ml/min).
0		10.05	6.40	1255.0	157.3	3.03	offscale	200
5	2.52	9.47	6.17	1316.0	42.3	3.54	offscale	200
15		10.64	6.46	1304.0	-48.5	.40	offscale	400
20	3.0	10.54	6.55	1295.0	-22.1	.35	offscale	400
25	3.0	10.62	6.47	1276	-37	.75	offscale	400
30	3.0	10.71	6.44	1267	-20	1.02	offscale	400
35	3.0	10.76	6.44	1257	-2.1	1.37	~~offscale~~ 1000	400
40	3.0	10.71	6.45	1244	28.1	5.67	500	400
45		10.80	6.42	1238	41.8	3.03	210	
50		10.82	6.4	1232	56.4	4.06	110	
55		10.88	6.41	1231	63.8	2.54	85	
60		10.86	6.43	1230	71.3	6.01	68	

Water sample:

Time collected: 10:40

Total volume of purged water removed: 10 gal

Physical appearance at start
Color: thick red (moldy)
Odor: none
Sheen/Free Product: none

Physical appearance at sampling
Color: slight cloudy
Odor: none
Sheen/Free Product: none

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
VOA	VOA	3	–	HCl	
	PE	1	–	HNO_3	
	glass	2	–	–	

Notes:

April 25, 1997
Form developed by
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Low Flow Ground Water Sampling Log

Date	3/20/01	Personnel	REH, PDS	Weather	Sunny 50°F
Site Name	Sullivan's Ledge	Evacuation Method	Bladder	Well #	MW-8A
Site Location	New Bedford	Sampling Method	Low Flow	Project #	

Well information:

Depth of Well * _____ ft.

Depth to Water * 5.60 ft.

Length of Water Column _____ ft.

* Measurements taken from

5.60	Top of Well Casing
	Top of Protective Casing
	(Other, Specify)

Water parameters: Lower submersible pump slowly through stagnant water column
Position pump in center of screened interval & maximum pumping rate of 0.5 liters/minute
Collect readings at every three minute intervals

Elapsed Time	Depth To Water	Temperature	pH	Conductivity	Oxidation Reduction Potential	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Flow Rate (ml/min).
0	5.64	8.30	5.97	1207.0	157.7	1.93	1000	500
5	7.1	8.51	6.05	1180.0	166.0	2.29	100	450
10	6.9	8.85	5.96	1172.0	172.0	2.01	200	400
15		9.00	5.93	1153.0	179.0	2.41	500	400
20		9.20	5.94	1200	181.0	1.70	360	
25	6.26	9.28	5.95	1208	182.0	2.30	950	
30	6.20	9.31	5.92	1206	184.4	2.14	650	
35		9.32	5.92	1209	184.9	2.39	450	

Water sample:

Time collected: 11:55

Total volume of purged water removed: 6 gal

Physical appearance at start
- Color: very muddy
- Odor: none
- Sheen/Free Product: none

Physical appearance at sampling
- Color: cloudy
- Odor: none
- Sheen/Free Product: none

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
	VOA	3	—	HCl	
	1E	1	—	HNO3	
	Glass	2	—	—	

Notes:

April 25, 1997
Form developed by
O'Brien & Gere Engineers, Inc.

Low Flow Ground Water Sampling Log

Date	3/21/01	Personnel	REK, JDC	Weather	Cloudy 40°F
Site Name	Sullivan's Ledge	Evacuation Method	Bladder	Well #	MW-70
Site Location	New Bedford	Sampling Method	Low Flow	Project #	

Well information:

Depth of Well * _____ ft.

Depth to Water * 1.35 ft.

Length of Water Column _____ ft.

* Measurements taken from

	Top of Well Casing
1.35	Top of Protective Casing
	(Other, Specify)

Water parameters: Lower submersible pump slowly through stagnant water column
Position pump in center of screened interval & maximum pumping rate of 0.5 liters/minute
Collect readings at every three minute intervals

Elapsed Time	Depth To Water	Temperature	pH	Conductivity	Oxidation Reduction Potential	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Flow Rate (ml/min).
0		8.83	6.2	5970	62.4	1.95	off scale	
5		9.56	6.18	1179	-33.8	.25	off scale	600
10	1.46	10.1	6.2	1106	-16.4	.17	1000	400
15	1.4	9.73	6.11	1103	3.6	.18	600	380
20		9.74	6.10	1102	5.9	.17	450	
25		9.73	6.1	1102	6.1	.21	550	
30		9.74	6.08	1100	7.7	.16	650	300
35		9.7	6.11	1095	9.4	.14	400	
40	1.4	9.7	6.1	1097	9.9	.14	300	
45		9.7	6.04	1096	11.0	.14	240	
50		9.7	6.1	1095	12.0	.13	210	
55	1.4	9.7	6.11	1094	12.5	.15	190	
60		9.76	6.08	1093	11.7	.12	150	
65		9.73	6.09	1092	12.4	.13	130	350
70		9.7	6.05	1090	15.3	.12	120	
75		9.73	6.06	1089	16.1	.12	110	
80		9.73	6.05	1087	17.8	.12	95	
85		9.71	6.06	1086	18.8	.13	90	
90		9.68	6.04	1086	19.7	.13	95	
95		9.59	6.01	1086	21.8	.12	100	

Water sample:

Time collected: 14:45

Total volume of purged water removed: 13 gal

Physical appearance at start
- Color: muddy
- Odor: none
- Sheen/Free Product: none

Physical appearance at sampling
- Color: Slightly cloudy
- Odor: none
- Sheen/Free Product: none

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH

Notes:

April 25, 1997
Form developed by
O'Brien & Gere Engineers, Inc.

Low Flow Ground Water Sampling Log

Date	3/21/01	Personnel	BEH, JOI	Weather	cloudy 40°F
Site Name	Sullivan's Ledge	Evacuation Method	bladder	Well #	MW-10X B
Site Location	New Bedford	Sampling Method	low flow	Project #	

Well information:

Depth of Well * _____ ft.

Depth to Water * 1.54 ft.

Length of Water Column _____ ft.

* Measurements taken from

	Top of Well Casing
1.54	Top of Protective Casing
	(Other, Specify)

Water parameters: Lower submersible pump slowly through stagnant water column
Position pump in center of screened interval & maximum pumping rate of 0.5 liters/minute
Collect readings at every three minute intervals

Elapsed Time	Depth To Water	Temperature	pH	SpCond uS/cm Conductivity	Oxidation Reduction Potential	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Flow Rate (ml/min).
0		8.41	6.49	1179	-62.9	.51	250	400
5		8.58	6.42	1172	-67.9	.32		
10	1.6	8.56	6.39	1170	-62.2	.26	800	
15		8.92	6.49	1171	-78.3	.22	280	450
20		8.89	6.31	1154	-52.9	.21	160	400
25		8.9	6.22	1146	-45.5	.19	120	
30	1.6	8.89	6.22	1137	-37.9	.18		
35		8.9	6.22	1135	-35.9	.17	120	400
40		8.91	6.20	1134	-36.2	.17	140	
45	1.6	8.89	6.19	1128	-32.9	.16	220	400
50		8.92	6.23	1132	-38.1	.17	140	
55		8.89	6.21	1128	-35.2	.16	130	
60		8.89	6.21	1123	-29.2	.17	130	
65		8.95	6.16	1123	-30.3	.16	120	

Water sample:

Time collected: ~~[illegible]~~ 12:00

Total volume of purged water removed: 9 gal

Physical appearance at start

Color: cloudy

Odor: organic (slight)

Sheen/Free Product: none

Physical appearance at sampling

Color: slight cloudy

Odor: none

Sheen/Free Product: none

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
	VOA	3	—	HCl	
	PE	1	—	HNO3	
	Glass	2	—	—	

Notes:

April 25, 19[illegible]
Form developed
O'Brien & Gere Engineers,

Low Flow Ground Water Sampling Log

Date	3/26/01	Personnel	RFH, DJA	Weather	Sunny 40°F
Site Name	Sullivan's Ledge	Evacuation Method	Bladder	Well #	mw 1,2
Site Location	New Bedford	Sampling Method	Low Flow	Project #	

Well information:

Depth of Well * _____ ft.

Depth to Water * n/A ft. *

Length of Water Column _____ ft.

* Measurements taken from

- [ ] Top of Well Casing
- [ ] Top of Protective Casing
- [ ] (Other, Specify)

Water parameters: Lower submersible pump slowly through stagnant water column
Position pump in center of screened interval & maximum pumping rate of 0.5 liters/minute
Collect readings at every three minute intervals

Elapsed Time	Depth To Water	Temperature	pH	Conductivity	Oxidation Reduction Potential	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Flow Rate (ml/min).

Water sample:

Time collected: _____

Total volume of purged water removed: _____

Physical appearance at start

Color _____

Odor _____

Sheen/Free Product _____

Physical appearance at sampling

Color _____

Odor _____

Sheen/Free Product _____

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH

Notes:

* - no DTW could be taken Bladder in the well

April 25, 1997
Form developed by

Low Flow Ground Water Sampling Log

Date	3/26/01	Personnel	KEH, DJA	Weather	Sunny 40°F
Site Name	Sullivan's Ledge	Evacuation Method	Bladder	Well #	MW-12AR
Site Location	New Bedford	Sampling Method	Low Flow	Project #	

Well information:

Depth of Well * _____ ft.

Depth to Water * N/A ft. *

Length of Water Column _____ ft.

* Measurements taken from

- [ ] Top of Well Casing
- [ ] Top of Protective Casing
- [ ] (Other, Specify)

Water parameters: Lower submersible pump slowly through stagnant water column
Position pump in center of screened interval & maximum pumping rate of 0.5 liters/minute
Collect readings at every three minute intervals

Elapsed Time	Depth To Water	Temperature	pH	SpCond uS/cm Conductivity	Oxidation Reduction Potential	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Flow Rate (ml/min).
0		9.70	6.58	1136	-11.2	8.03	27	400
5		10.44	6.54	1213	-60.2	5.01	55	
10		10.54	6.57	1215	-67.2	4.68	24	250
15		10.45	6.60	1222	-69.2	6.28	20	
20		10.68	6.62	1209	-72.0	6.87	11	250
25		10.67	6.62	1216	-73.8	6.01	11	
30		10.75	6.61	1215	-81.4	6.63	5.7	
35		10.70	6.63	1225	-81.9	6.62	4.8	200
40		10.65	6.61	1235	81.8	4.78	3.2	
45		10.76	6.62	1233	-82.7	4.22	5.2	225
50		10.46	6.62	1220	-80.1	6.07	3.4	
55		10.42	6.61	1205	-81.5	4.98	6.6	
60		10.51	6.60	1192	-86.1	4.50	6.5	
65		10.68	6.61	1200	-88.1	3.60	8.4	
70		10.70	6.61	1187	-88.7	3.06	5.8	
75		10.75	6.61	1194	-91.8	.91	5.9	
80		10.85	6.61	1190	-92.5	2.58	5.9	
85		11.07	6.62	1187	-93.0	2.70	7.2	
90		11.16	6.62	1185	-93.9	2.19	1.0	

Water sample:

Time collected: 10:40

Total volume of purged water removed: 6 gal

Physical appearance at start
- Color: clear
- Odor: none
- Sheen/Free Product: none

Physical appearance at sampling
- Color: clear
- Odor: none
- Sheen/Free Product: non

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
	VOA	2	N	HCl	
	Glass	1		–	
	PE	1	↓	HNO3	

Notes:

Bladder in the way. No DTW could be taken
DO parameter would not stabilize due to introduced

April 25, 1997
Form developed by
O'Brien & Gere Engineers, Inc.

Low Flow Ground Water Sampling Log

Date	3/23/01	Personnel	REH DJA	Weather	40°F cloudy
Site Name	Sullivan's Ledge	Evacuation Method	Bladder	Well #	MW-13
Site Location	New Bedford	Sampling Method	Low Flow	Project #	

Well information:

Depth of Well * _____ ft.

Depth to Water * 15.64 ft.

Length of Water Column _____ ft.

* Measurements taken from

	Top of Well Casing
15.64	Top of Protective Casing
	(Other, Specify)

Water parameters: Lower submersible pump slowly through stagnant water column
Position pump in center of screened interval & maximum pumping rate of 0.5 liters/minute
Collect readings at every three minute intervals

Elapsed Time	Depth To Water	Temperature	pH	Spcond us/cm Conductivity	Oxidation Reduction Potential	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Flow Rate (ml/min).
0	~~15.64~~ 15.64	10.64	6.03	762.0	-38.6	1.03	4.5	400
5	15.64	10.27	6.01	768.0	-48.7	.48	.55	400
10		10.23	6.01	768.0	-51.3	.48	0.00	400
15	15.64	10.16	6.01	768.0	-54.3	.42	0.00	400
20		10.10	6.02	768.0	-47.4	.55	0.00	
25		10.11	6.02	767	-50.9	.76	0.00	
30	15.64	10.09	6.00	768	-52.0	.64	0.00	400
35		10.05	6.01	768	-53.0	.87	0.00	
40		10.02	6.03	768	-53.6	.79	0.00	

Water sample:

Time collected: 13:50

Total volume of purged water removed: 4 gal

Physical appearance at start
Color: clear
Odor: none
Sheen/Free Product: none

Physical appearance at sampling
Color: clear
Odor: none
Sheen/Free Product: none

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
	VOA	3	n	HCl	
	Glass	1	↓	—	
	PE	1	↓	HNO_3	

Notes: 0 VOM 0 ppm

April 25, 1997
Form developed by
O'Brien & Gere Engineers, Inc.

Low Flow Ground Water Sampling Log

Date	3/23/01	Personnel	REH, DJA	Weather	Cloudy 40°F
Site Name	Sullivan's Ledge	Evacuation Method	Bladder	Well #	MW-13A
Site Location	New Bedford	Sampling Method	Low Flow	Project #	

Well information:

Depth of Well * _____ ft.

Depth to Water * 15.68 ft.

Length of Water Column _____ ft.

* Measurements taken from

15.68	Top of Well Casing PVC
	Top of Protective Casing
	(Other, Specify)

Water parameters: Lower submersible pump slowly through stagnant water column
Position pump in center of screened interval & maximum pumping rate of 0.5 liters/minute
Collect readings at every three minute intervals

Elapsed Time	Depth To Water	Temperature	pH	Conductivity	Oxidation Reduction Potential	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Flow Rate (ml/min).
0	15.68	8.29	6.7	678	-29.6	7.82	7.3	350
5	15.68	9.04	6.11	779	-15.8	.86	2.0	325
10		9.15	6.08	782	-25.0	.64	0.25	325
15		9.18	6.05	782	-27.2	.88	0.00	
20	15.68	9.19	6.07	781	-29.5	.63	0.00	350
25		9.19	6.04	779	-32.4	.95	0.00	
30		9.18	6.01	779	-34.3	.54	0.00	
35	15.68	9.18	6.08	778	-36.1	.47	0.00	350
40		9.19	6.08	776.8	-38.2	.52	0.00	
45		9.22	6.04	776.8	-38.8	.52	0.00	

Water sample:

Time collected: 15:05

Total volume of purged water removed: 4 gal

Physical appearance at start
- Color: slightly cloudy
- Odor: none
- Sheen/Free Product: none

Physical appearance at sampling
- Color: none (clear)
- Odor: none
- Sheen/Free Product: none

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
	VOA	3	n	HCl	
	glass	1		—	
	BZ	1	↓	H_2SO_4	

Notes: 0 ppm (OVM)

April 25, 1997
Form developed by
O'Brien & Gere Engineers, Inc.

Low Flow Ground Water Sampling Log

Date	3 19-01 1120	Personnel	MAS REH	Weather	Sunny Breezy 50°C
Site Name	Sullivan's Ledge	Evacuation Method	Low Flow Purge	Well #	MW-14
Site Location	New Bedford MA	Sampling Method	Low Flow Bladder Pump	Project #	20015.09

Well information:

Depth of Well * _____ ft.

Depth to Water * _____ ft.

Length of Water Column _____ ft.

* Measurements taken from

- [ ] Top of Well Casing
- [ ] Top of Protective Casing
- [ ] (Other, Specify)

Water parameters: Lower submersible pump slowly through stagnant water column
Position pump in center of screened interval & maximum pumping rate of 0.5 liters/minute
Collect readings at every three minute intervals

Elapsed Time	Depth To Water	Temperature	pH	Sp. Conductivity	Oxidation Reduction Potential	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Flow Rate (ml/min).
0		11.32	6.60	1032	-44.2	3.64	4.3	600
5		11.28	6.56	1032	-47.3	2.49	1.6	400
10		11.40	6.57	1034	-48.0	2.40	0.4	425
15		11.37	6.56	1033	-48.3	3.04	0.05	400
20		11.36	6.54	1032	-47.2	3.05	0.15	375
25		11.47	6.56	1030	-46.5	2.50	0.10	375
30		11.75	6.56	1029	-44.8	2.54	0.10	

Water sample:

Time collected: 1400

Total volume of purged water removed: 4.0 gal

Physical appearance at start

Color: Slightly Muddy

Odor: Very organic

Sheen/Free Product: none

Physical appearance at sampling

Color: ~~Slight~~ clear

Odor: organic

Sheen/Free Product: —

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40 mL	VOA Vial	3	no	HCl	
1L	PE - Total Metals	1	no	HNO_3	
1L	SVOC - Amber glass	1	no	—	
1L	PCB - Amber glass	1	no	—	

Notes: No Depth to water L.E. tubing in the way

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Low Flow Ground Water Sampling Log

Date	3-19-01 8:45	Personnel	MAS, REH	Weather	Sunny, Breezy - 45°F
Site Name	Sully's Lodge	Evacuation Method	L.F. Purge	Well #	MW-15
Site Location	New Bedford MA	Sampling Method		Project #	2001509

Well information:

Depth of Well * _____ ft.

Depth to Water * _____ ft.

Length of Water Column _____ ft.

* Measurements taken from

- [ ] Top of Well Casing
- [ ] Top of Protective Casing
- [ ] (Other, Specify)

Water parameters: Lower submersible pump slowly through stagnant water column
Position pump in center of screened interval & maximum pumping rate of 0.5 liters/minute
Collect readings at every three minute intervals

Elapsed Time min	Depth To Water	Temperature	pH	Sp. Conductivity	Oxidation Reduction Potential	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Flow Rate (ml/min).
0		11.11	6.85	800.00	-36.6	5.16	27	400
5 min		12.33	6.43	903.00	-41.2	3.41	15	400
10 min		12.31	6.43	904.00	-38.2	3.02	9	400
15 min		12.39	6.43	905.00	-29.5	3.57	5.2	400
20		12.32	6.44	905.00	-34.1	4.49	5.0	
25		12.30	6.45	906.00	-34.5	2.69	3.5	
30		12.26	6.44	904.00	-29.9	3.79	2.7	
35		12.2	6.44	904.00	-26.1	2.32	1.6	

Water sample:

Time collected: 9:45-10:00

Total volume of purged water removed: 5.5 gal

Physical appearance at start
Color: clear
Odor: none
Sheen/Free Product: none

Physical appearance at sampling
Color: clear
Odor: none
Sheen/Free Product: none

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
	VOA vials	3	no	HCl	
1L	Metals-PE	1	no	HNO_3	
1L	SVOC's - Glass Amber	1	no	—	
1L	PCB's - Glass Amber	1	no	—	

Notes: D.O. within 2.96 - 3.20 during each purge

Can not measure DTW Low Flow tubes in the way

April 25, 1997
Form developed by
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Low Flow Ground Water Sampling Log

Date	3/21/01	Personnel	REH, SDL	Weather	cloudy 40°F
Site Name	Sullivan's Ledge	Evacuation Method	Bladder	Well #	MW-16
Site Location	New Bedford	Sampling Method	Low Flow	Project #	

Well information:

Depth of Well * _____ ft.

Depth to Water * 2.18 ft.

Length of Water Column _____ ft.

* Measurements taken from

2.18	Top of Well Casing PVC
	Top of Protective Casing
	(Other, Specify)

Water parameters: Lower submersible pump slowly through stagnant water column
Position pump in center of screened interval & maximum pumping rate of 0.5 liters/minute
Collect readings at every three minute intervals

Elapsed Time	Depth To Water	Temperature	pH	Sp Cond uS/cm Conductivity	Oxidation Reduction Potential	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Flow Rate (ml/min).
0		12.61	5.42	1313	158	1.41	3.3	
5	2.1	12.86	5.46	1324	141.7	.48	2.2	450
10		12.88	5.45	1327	138.9	.35	.15	300
15	2.1	12.3	5.46	1327	138.7	2.24	0.00	
20		12.25	5.46	1329	138.1	2.25	0.00	225
25	2.1	12.25	5.47	1329	137.4	1.79	0.00	
30		12.26	5.47	1330	137.1	1.35	0.00	225
35		12.28	5.47	1331	136.0	1.49	0.00	

Water sample:

Time collected: 8:45

Total volume of purged water removed: 5 gal

Physical appearance at start

Color: clear

Odor: none

Sheen/Free Product: none

Physical appearance at sampling

Color: clear

Odor: none

Sheen/Free Product: none

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
	VOA	3	n	HCl	
	PE	1		HNO3	
1L	Glass	1		—	

Notes:

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Low Flow Ground Water Sampling Log

Date	3/27/01	Personnel	REH	Weather	Sunny 35°F
Site Name	Sullivan's Lodge	Evacuation Method	Bladder	Well #	MW-27A
Site Location	New Bedford	Sampling Method	Low Flow	Project #	

Well information:

Depth of Well * _____ ft.

Depth to Water * N/A ft. *

Length of Water Column _____ ft.

* Measurements taken from

- [ ] Top of Well Casing
- [ ] Top of Protective Casing
- [ ] (Other, Specify)

Water parameters: Lower submersible pump slowly through stagnant water column
Position pump in center of screened interval & maximum pumping rate of 0.5 liters/minute
Collect readings at every three minute intervals

Elapsed Time	Depth To Water	Temperature	pH	Specond us/cm Conductivity	Oxidation Reduction Potential	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Flow Rate (ml/min).
0		12.45	6.61	3883	-134.9	4.3		
5		12.10	6.71	3500	-147.8	1.76	75	
10		12.00	6.73	3853	-154.0	1.84	85	100
15		12.05	6.70	3822	-145.0	2.34		100
20		11.93	6.70	3814	-147.2	2.07	55	
25		12.11	6.65	3755	-143.0	2.20	80	
30		11.88	6.66	3780	-137.8	2.45		
35		11.94	6.63	3762	-133.5	2.41	60	
40		12.06	6.62	3752	-130.3	2.57	38	
50		12.21	6.62	3735	-126.1	2.18	21	100
55		12.33	6.60	3715	-121.7	2.36	21	
60		13.37	6.60	3716	-118.4	2.39	14	

Water sample:

Time collected: 1220

Total volume of purged water removed: 3 gal

Physical appearance at start

Color: cloudy

Odor: very organic/solvent

Sheen/Free Product: none

Physical appearance at sampling

Color: cloudy

Odor: very organic/solvent

Sheen/Free Product: Suds

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH

Notes: OVM malfunction. No OVM reading. Sample @ 1215. Fumes over powering

* Bladder in the way. No DTW could take

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Low Flow Ground Water Sampling Log

Date	3-19-01	Personnel	REH, MAS	Weather	45°F Sunny, Breezy
Site Name	Sullivan	Evacuation Method	Low Flow Bladder Pump	Well #	MW-24
Site Location	New Bedford	Sampling Method	Low Flow	Project #	20015.09

Well information:

Depth of Well * _____ ft.

Depth to Water * 17.10 ft.

Length of Water Column _____ ft.

* Measurements taken from

- [ ] Top of Well Casing
- [ ] Top of Protective Casing
- [ ] (Other, Specify)

Water parameters: Lower submersible pump slowly through stagnant water column
Position pump in center of screened interval & maximum pumping rate of 0.5 liters/minute
Collect readings at every three minute intervals

Elapsed Time	Depth To Water	Temperature	pH	Sp Cond Conductivity	Oxidation Reduction Potential	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Flow Rate (ml/min).
0	17.26	11.89	6.76	827.00	-72.3	1.22	9.5	500
5	17.28	11.94	6.66	921	-78.6	0.84	7.4	275
10	17.30	12.01	6.63	918	-74.9	1.06	0.1	275
15	17.31	11.71	6.61	913	-75.5	.82	.05	<275
20	17.32	11.72	6.62	913	-74.6	.85	2.2	—
25	17.36	11.91	6.61	912	-75.1	.42	2.9	—

Water sample:

Time collected: 10:55

Total volume of purged water removed: 40 gal

Physical appearance at start
Color: clear
Odor: organic
Sheen/Free Product: none

Physical appearance at sampling
Color: clear
Odor: organic
Sheen/Free Product: —

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH
40mL	VOA vial	3	NO	HCL	
1L	PE - metals	1	no	HNO_3	
1L	Amber Glass - PCB	1	—	—	
1L	Amber Glass - SVOCS	1	—	—	

Notes:

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Low Flow Ground Water Sampling Log

Date	3/23/01	Personnel	REH, DJA	Weather	cloudy 40°F
Site Name	Sullivan's Lake	Evacuation Method	Bladder	Well #	GCA-1
Site Location	New Bedford	Sampling Method	Low Flow	Project #	

Well information:

Depth of Well * _____ ft.

Depth to Water * 13.54 ft.

Length of Water Column _____ ft.

* Measurements taken from

	Top of Well Casing
13.54	Top of Protective Casing PVC cap
	(Other, Specify)

Water parameters: Lower submersible pump slowly through stagnant water column
Position pump in center of screened interval & maximum pumping rate of 0.5 liters/minute
Collect readings at every three minute intervals

Elapsed Time	Depth To Water	Temperature	pH	Conductivity	Oxidation Reduction Potential	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Flow Rate (ml/min).
0		8.86	6.48	1155	-78.0	4.53	2.0	
5		10.01	6.37	1113	-70.1	.80	7.6	400
10		10.54	6.31	1106	-72.0	.77	31	
15		10.42	6.4	1105	-72.3	.84		
35	13.66	10.61	6.32	1105	-78.5	.67	23	300
40		10.53	6.36	1107	-77.7	.64		
45	13.62	10.48	6.33	1107	-79.2	.61	18	300
50		10.46	6.32	1107	-79.6	.55	14	
55	13.62	10.45	6.34	1106	-79.9	.49	12	300
60		10.38	6.24	1106	-80.1	.45	9.6	
65		10.38	6.36	1105	-80.5	.73	7.4	
70		10.39	6.32	1106	-78.5	.78	7.3	300
75	13.67	10.37	6.31	1104	-81.7	.55	5.7	
80		10.37	6.31	1103	-82.2	.65	4.5	
85		10.34	6.30	1104	-82.1	.66	4.7	
90		10.36	6.32	1105	-82.0	.66	5.7	

Water sample:

Time collected: 17:30

Total volume of purged water removed: 8 gal

Physical appearance at start

Color Clear

Odor none

Sheen/Free Product none

Physical appearance at sampling

Color Clear

Odor none

Sheen/Free Product none

Samples collected:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Container pH

Notes: 0 ppm (OVM)

*: Time lost due to sample pick-up. System continued to run during period

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Appendix E

Westbay Well Sampling Logs

Westbay Instruments Inc.

Groundwater Sampling

Field Data Sheet

Project Sullivan's Ledge Location New Bedford, MA Date 3-24-01
Monitoring Well No. ECJ-1 Sampling Zone No. 35' Start Time 1624 End Time 1800
Water Level In MP Casing: (start)_____ (end)_____ Technicians MAS, JAN
Sampler Probe Preparation - See Sampling Plan Collection Bottle Preparation - See Sampling Plan

Run No.	Surface Function Checks: Activate Shoe	Close Valve	Check Vacuum	Open Valve	Evacuate Container	Close Valve	Position Sampler: Locate port release arm land probe	Sample Collection Checks: Pressure in MP (psi)	Activate Shoe	Pressure in Zone (psi)	Open Valve	Final Zone Pressure (psi)	Close Valve	Retract Shoe	Pressure in MP (psi)	Volume Retrieved (L)	Comments
1	✓	✓	✓	✓	✓	✓	✓	28.72	✓	24.42	✓	24.39	✓	✓	28.72	1	VOC and SVOC's
2	✓	✓	✓	✓	✓	✓	✓	28.70	✓	24.42	✓	24.26	✓	✓	28.68	1	SVOC's and
3	✓	✓	✓	✓	✓	✓	✓	28.66	✓	24.43	✓	4.34	✓				
~~4~~								~~24.62~~									
4	✓	✓	✓	✓	✓	✓	—	27.90		24.46		24.39			27.88	1	1730
5	✓	✓	✓	✓	✓	✓	—	27.82		24.44		24.36			27.82	1	1800
																	Total Volume 4L

Field Determinations (Appearance, pH,S.C.,etc.)

Downpour of rain during 3rd run - 3rd Run water from inside well casing entered sample bottle (pink) disconnect decon and send down again

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Groundwater Sampling

Field Data Sheet

Project Sullivan's Ledge Location New Bedford, MA Date 3-24-01
Monitoring Well No. ECJ-1 Sampling Zone No. 60' Start Time 1515 End Time 1620
Water Level In MP Casing: (start)_____ (end)_____ Technicians MAS, TAN
Sampler Probe Preparation - See Sampling Plan Collection Bottle Preparation - See Sampling Plan

Run No.	Surface Function Checks						Position Sampler	Sample Collection Checks									Comments
	Activate Shoe	Close Valve	Check Vacuum	Open Valve	Evacuate Container	Close Valve	Locate port release arm land probe	Pressure in MP (psi)	Activate Shoe	Pressure in Zone (psi)	Open Valve	Final Zone Pressure (psi)	Close Valve	Retract Shoe	Pressure in MP (psi)	Volume Retrieved (L)	
1	✓	✓	✓	✓	✓	✓	✓	39.81	✓	34.87	✓	34.79	✓	✓	39.80	1	VOA : SVOC's
2	✓	✓	✓	✓	✓	✓	✓	39.75	✓	34.86	✓	34.73	✓	✓	39.75	1	SVOC's : ~~metals~~ PCB's
3	✓	✓	✓	✓	✓	✓	✓	39.69	✓	34.89	✓	34.78	✓	✓	39.68	1	PCB's : metals
																	Total Volume 3L

Field Determinations (Appearance, pH,S.C.,etc.)

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Groundwater Sampling

Field Data Sheet

Project Sullivan's Ledge Location New Bedford, MA Date 3-24-01
Monitoring Well No. ECJ-1 Sampling Zone No. 70' Start Time 1340 End Time 1515
Water Level In MP Casing: (start)_____ (end)_____ Technicians MAS, TAW
Sampler Probe Preparation - See Sampling Plan Collection Bottle Preparation - See Sampling Plan

Run No.	Surface Function Checks						Position Sampler	Sample Collection Checks									Comments
	Activate Shoe	Close Valve	Check Vacuum	Open Valve	Evacuate Container	Close Valve	Locate port release arm land probe	Pressure in MP (psi)	Activate Shoe	Pressure in Zone (psi)	Open Valve	Final Zone Pressure (psi)	Close Valve	Retract Shoe	Pressure in MP (psi)	Volume Retrieved (L)	
1	✓	✓	✓	✓	✓	✓	✓	44.48	✓	35.26	✓	35.18	✓	✓	44.45	1	Labeled 15a 1400
2	✓	✓	✓	✓	✓	✓	✓	44.40	✓	35.27	✓	35.16	✓	✓	44.38	1	VOA: partial PCB
3	✓	✓	✓	✓	✓	✓	✓	44.33	✓	35.24	✓	35.18	✓	✓	44.32	1	PCB: partial metals
4	✓	✓	✓	✓	✓	✓	✓	42.79	✓	35.24	✓	35.20	✓	✓	42.77	250ml	metals: SVOC's
																	SVOC's
																	Total Volume 3.25L

Field Determinations (Appearance, pH,S.C.,etc.)

Sulfur smell

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Groundwater Sampling

Field Data Sheet

Project Sullivan's Ledge Location New Bedford, MA Date 3-24-01
Monitoring Well No. ECS-1 Sampling Zone No. 120' Start Time 1100 End Time 1215
Water Level In MP Casing: (start)_____ (end)_____ Technicians MAS, JAN
Sampler Probe Preparation - See Sampling Plan Collection Bottle Preparation - See Sampling Plan

Run No.	Surface Function Checks						Position Sampler	Sample Collection Checks									Comments
	Activate Shoe	Close Valve	Check Vacuum	Open Valve	Evacuate Container	Close Valve	Locate port release arm land probe	Pressure in MP (psi)	Activate Shoe	Pressure in Zone (psi)	Open Valve	Final Zone Pressure (psi)	Close Valve	Retract Shoe	Pressure in MP (psi)	Volume Retrieved (~~psi~~)	
1	✓	✓	✓	✓	✓	✓	✓	66.55	~~54.48~~	56.48	✓	56.45	✓	~~66.5~~	66.54	1	11:00 VOA & PCB
2	✓	✓	✓	✓	✓	✓	✓	66.46	✓	56.50	✓	56.45	✓	✓	66.45	1	1120 PCB & SVOC
3	✓	✓	✓	✓	✓	✓	✓	66.38	✓	56.49	✓	56.45	✓	✓	66.38	1	1200 SVOC & metals
																	Total Volume 3L

Field Determinations (Appearance, pH,S.C.,etc.)

Pink water

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Groundwater Sampling

Field Data Sheet

Project Sullivan's Ledge Location New Bedford, MA Date 3-23-01
Monitoring Well No. LCT-1 Sampling Zone No. 1/5' Start Time 1320 End Time 3-24-01 1040
Water Level In MP Casing: (start)_____ (end)_____ Technicians MAS, TAN
Sampler Probe Preparation - See Sampling Plan Collection Bottle Preparation - See Sampling Plan

Run No.	Surface Function Checks: Activate Shoe	Close Valve	Check Vacuum	Open Valve	Evacuate Container	Close Valve	Position Sampler: Locate port release arm land probe	Sample Collection Checks: Pressure in MP (psi)	Activate Shoe	Pressure in Zone (psi)	Open Valve	Final Zone Pressure (psi)	Close Valve	Retract Shoe	Pressure in MP (psi)	Volume Retrieved (L)	Comments
1	✓	✓	✓	✓	✓	✓	✓	77.72	~~77~~	66.77	✓	66.60	✓	✓	77.69	1	PCB sample
2	✓	✓	✓	✓	✓	✓	✓	77.72	✓	66.97	✓	66.89	✓	✓	77.70	1	0930 3-24-01
3	✓	✓	✓	✓	✓	✓	✓	77.68	✓	66.97	✓	66.91	✓	✓	77.66	1	0955 metals
4	✓	✓	✓	✓	✓	✓	✓	77.57	✓	66.97	✓	66.88	✓	✓	77.54	1	1015 SVOC's
																	Total Volume 4 L

Field Determinations (Appearance, pH,S.C.,etc.)

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Groundwater Sampling

Field Data Sheet

Project Sullivan's Lodge Location New Bedford, MA Date 3-25-01
Monitoring Well No. ICJ-1 Sampling Zone No. 265' Start Time 1330 End Time 1630
Water Level In MP Casing: (start)_____ (end)_____ Technicians MAS, TAN
Sampler Probe Preparation - See Sampling Plan Collection Bottle Preparation - See Sampling Plan

	Run No.	Surface Function Checks: Activate Shoe	Close Valve	Check Vacuum	Open Valve	Evacuate Container	Close Valve	Position Sampler: Locate port release arm land probe	Sample Collection Checks: Pressure in MP (psi)	Activate Shoe	Pressure in Zone (psi)	Open Valve	Final Zone Pressure (psi)	Close Valve	Retract Shoe	Pressure in MP (psi)	Volume Retrieved (L)	Comments
350	1	✓	✓	✓	✓	✓	✓	✓	131.94	✓	129.07	✓	128.86	✓	✓	131.63	1L	
430	2	✓	✓	✓	✓	✓	✓	✓	131.31	✓	129.22	✓	128.88	✓	✓	131.07	1	
455	3	✓	✓	✓	✓	✓	✓	✓	130.81	✓	129.12	✓	128.90	✓	✓	130.60	0.5	
600	4	✓	✓	✓	✓	✓	✓	✓	130.38	✓	129.11	✓	128.73	✓	✓	130.05	1	
																		Total Volume 3.5L

Field Determinations (Appearance, pH,S.C.,etc.)

Sample water has a pink color

Westbay Instruments Inc.

Groundwater Sampling

Field Data Sheet

Project Sullivan's Ledge Location New Bedford Date 3-21-01
Monitoring Well No. ECJ-2J Sampling Zone No. 47' Start Time 0900 End Time 1120
Water Level In MP Casing: (start)_____ (end)_____ Technicians MH, MW
Sampler Probe Preparation - See Sampling Plan Collection Bottle Preparation - See Sampling Plan

Run No.	Surface Function Checks: Activate Shoe	Close Valve	Check Vacuum	Open Valve	Evacuate Container	Close Valve	Position Sampler: Locate port release arm land probe	Sample Collection Checks: Pressure in MP (psi)	Activate Shoe	Pressure in Zone (psi)	Open Valve	Final Zone Pressure (psi)	Close Valve	Retract Shoe	Pressure in MP (psi)	Volume Retrieved (L)	Comments	
1	✓	✓	✓	✓	✓	✓	✓	28.85	~~38.63~~	33.63	✓	33.62	✓	✓	28.90	1	VOC's : SVOCS	0910
2	✓	✓	✓	✓	✓	✓	✓	28.89	✓	33.64	✓	33.63	✓	✓	28.93	1	PCB's	0925
3	✓	✓	✓	✓	✓	✓	✓	28.91	✓	33.64	✓	33.64	✓	✓	28.94	1	Metals	0940
4	✓	✓	✓	✓	✓	✓	✓	28.91	✓	33.64	✓	33.61	✓	✓	28.96	1	VOC's : SVOC's Dup #4	0955
5	✓	✓	✓	✓	✓	✓	✓	28.92	✓	33.64	✓	33.63	✓	✓	28.96	1	SVOC's : PCB's Dup #4	1015
6	✓	✓	✓	✓	✓	✓	✓	28.95	✓	33.63	✓	33.63	✓	✓	28.97	1	PCB's : Metals Dup #4	1030
7	✓	✓	✓	✓	✓	✓	✓	28.97	✓	33.63	✓	33.64	✓	✓	29.06	1	Metals Dup #4	1050
																	Total Volume 7 L	

Field Determinations (Appearance, pH,S.C.,etc.)

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Oct. 96

Westbay Instruments Inc.

Groundwater Sampling

Field Data Sheet

Project Sullivan's Ledge Location New Bedford Date 3-28-01
Monitoring Well No. EM-2 Sampling Zone No. 82' Start Time 1450 End Time 1630
Water Level In MP Casing: (start)_____ (end)_____ Technicians MAS, JMD
Sampler Probe Preparation - See Sampling Plan Collection Bottle Preparation - See Sampling Plan

Run No.	Surface Function Checks						Position Sampler	Sample Collection Checks									Comments	
	Activate Shoe	Close Valve	Check Vacuum	Open Valve	Evacuate Container	Close Valve	Locate port release arm land probe	Pressure in MP (psi)	Activate Shoe	Pressure in Zone (psi)	Open Valve	Final Zone Pressure (psi)	Close Valve	Retract Shoe	Pressure in MP (psi)	Volume Retrieved (L)		
1	✓	✓	✓	✓	✓	✓	✓	44.12	✓	49.13	✓	48.55	✓	✓	44.14	1	VOC's & SVOC's	1510
2	✓	✓	✓	✓	✓	✓	✓	44.10	✓	49.12	✓	48.99	✓	✓	44.10	250ml	PCB's	1525
3	✓	✓	✓	✓	✓	✓	✓	44.08	✓	49.12	✓	48.67	✓	✓	44.08	1	PCB's	1545
4	✓	✓	✓	✓	✓	✓	✓	44.02	✓	49.11	✓	48.47	✓	✓	44.04	1	metals	1610
																	Total Volume 3.25 L	

Field Determinations (Appearance, pH,S.C.,etc.)

Westbay Instruments Inc.

Groundwater Sampling

Field Data Sheet

Project Sullivan's Ledge Location New Bedford Date 3-28-01
Monitoring Well No. ECT-2 Sampling Zone No. 117' Start Time 1215 End Time 1430
Water Level In MP Casing: (start)_____ (end)_____ Technicians MAS, DJA
Sampler Probe Preparation - See Sampling Plan Collection Bottle Preparation - See Sampling Plan

Run No.	Surface Function Checks						Position Sampler	Sample Collection Checks									Comments
	Activate Shoe	Close Valve	Check Vacuum	Open Valve	Evacuate Container	Close Valve	Locate port release arm land probe	Pressure in MP (psi)	Activate Shoe	Pressure in Zone (psi)	Open Valve	Final Zone Pressure (psi)	Close Valve	Retract Shoe	Pressure in MP (psi)	Volume Retrieved (L)	
1	✓	✓	✓	✓	✓	✓	✓	58.97	✓	63.92	✓	63.35	✓	✓	58.96	1	VOC & SVOC
2	✓	✓	✓	✓	✓	✓	✓	58.80	✓	63.87	✓	63.06	✓	✓	58.90	1	PCB
3	✓	✓	✓	✓	✓	✓	✓	59.15	✓	63.82	✓	63.16	✓	✓	59.18	1	Metals
																	Total Volume 3L

1225
1245 1:2 Sam
1400

Field Determinations (Appearance, pH,S.C.,etc.)

Run #2 Difficulty Locating port

MXSAMPLE2.sam
Oct. 96

Westbay Instruments Inc.

Groundwater Sampling

Field Data Sheet

Project Sullivan's Ledge Location New Bedford Date 3-28-01
Monitoring Well No. ECI-2 Sampling Zone No. 152' Start Time 1035 End Time 1200
Water Level In MP Casing: (start)_____ (end)_____ Technicians MAS, DJA
Sampler Probe Preparation - See Sampling Plan Collection Bottle Preparation - See Sampling Plan

Run No.	Surface Function Checks: Activate Shoe	Close Valve	Check Vacuum	Open Valve	Evacuate Container	Close Valve	Position Sampler: Locate port release arm land probe	Sample Collection Checks: Pressure in MP (psi)	Activate Shoe	Pressure in Zone (psi)	Open Valve	Final Zone Pressure (psi)	Close Valve	Retract Shoe	Pressure in MP (psi)	Volume Retrieved (L)	Comments	
1	✓	✓	✓	✓	✓	✓	✓	73.56	✓	77.40	✓	76.40	✓	✓	73.57	1	VOC's: SVOC	1035
2	✓	✓	✓	✓	✓	✓	✓	73.54	✓	77.20	✓	75.80	✓	✓	73.54	1	PCB	1120
3	✓	✓	✓	✓	✓	✓	✓	73.49	✓	76.98	✓	75.35	✓	✓	73.49	1	Metals	1145
																	Total Volume 3L	

Field Determinations (Appearance, pH,S.C.,etc.)

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Westbay Instruments Inc.

Groundwater Sampling

Field Data Sheet

Project Sullivan's Ledge Location New Bedford Date 3-28-01
Monitoring Well No. ECJ-2 Sampling Zone No. 187' Start Time 0845 End Time 1030
Water Level In MP Casing: (start)_____ (end)_____ Technicians MAS, DJA
Sampler Probe Preparation - See Sampling Plan Collection Bottle Preparation - See Sampling Plan

Run No.	Surface Function Checks: Activate Shoe	Close Valve	Check Vacuum	Open Valve	Evacuate Container	Close Valve	Position Sampler: Locate port release arm land probe	Sample Collection Checks: Pressure in MP (psi) 87.55	Activate Shoe	Pressure in Zone (psi)	Open Valve	Final Zone Pressure (psi)	Close Valve	Retract Shoe	Pressure in MP (psi)	Volume Retrieved (L)	Comments	
1	✓	✓	✓	✓	✓	✓	✓	93.80	✓	91.88	✓	90.57	✓	✓	87.56	1	VOC's: SVOC's	0855
2	✓	✓	✓	✓	✓	✓	✓	87.53	✓	91.41	✓	90.06	✓	✓	87.53	1	PCB's	0930
3	✓	✓	✓	✓	✓	✓	✓	87.48	✓	91.10	✓	89.92	✓	✓	87.48	1	Metals	1000
																	Total Volume 3L	

Field Determinations (Appearance, pH,S.C.,etc.)

MXSAMPLE2.sam
Oct. 96

Westbay Instruments Inc.

Groundwater Sampling

Field Data Sheet

Project Sullivan's Ledge Location New Bedford Date 3-27

Monitoring Well No. [illegible] Sampling Zone No. 60 Start Time 1115 End Time 1630

Water Level In MP Casing: (start)_____ (end)_____ Technicians [illegible]

Sampler Probe Preparation - See Sampling Plan Collection Bottle Preparation - See Sampling Plan

Run No.	Surface Function Checks						Position Sampler	Sample Collection Checks									Comments
	Activate Shoe	Close Valve	Check Vacuum	Open Valve	Evacuate Container	Close Valve	Locate port release arm land probe	Pressure in MP (psi)	Activate Shoe	Pressure in Zone ( )	Open Valve	Final Zone Pressure (psi)	Close Valve	Retract Shoe	Pressure in MP (psi)	Volume Retrieved (L)	
1	✓	—	—	—	—	—	—	35.44	40.5	40.50	✓	40.50	✓	✓	35.44	1	VOC's all 1120
2	✓	—	—	✓	✓	✓	✓	35.40	✓	40.49	✓	40.50	✓	✓	35.41	1	SVOC 1150
3	—	—	—	✓	—	✓	✓	35.38	✓	40.49	✓	40.49	✓	✓	35.40	1	SVOC 1215
4	✓	—	—	—	—	—	✓	35.34	✓	40.49	✓	40.49	✓	—	35.32	1	SVOC 1400
5	✓	✓	—	—	✓	✓	—	35.34	✓	40.50	✓	40.49	✓	✓	35.33	1	PCB 1420
6	✓	✓	✓	✓	✓	✓	✓	35.30	✓	40.50	✓	40.49	✓	✓	35.31	1	PCB 1500
7	✓	—	✓	✓	✓	—	—	35.28	✓	40.50	✓	40.49	✓	✓	35.30	1	PCB 1520
8	✓	—	—	—	—	—	✓	35.26	✓	40.50	✓	40.49	✓	✓	35.29	1	Metals 1545
9	✓	—	—	—	—	—	—	35.25	✓	40.50	✓	40.50	✓	✓	35.27	1	Metals 1605
10	—	—	—	—		—	—	35.23	✓	40.50	✓	40.50	—	✓	35.25	1	Total metals 1630 Volume 10L

Field Determinations (Appearance, pH,S.C.,etc.)

MXSAMPLE2.sam
Oct. 96

Westbay Instruments Inc.

Groundwater Sampling

Field Data Sheet

Project Sullivan's Ledge Location New Bedford Date 3-27-01
Monitoring Well No. [illegible] Sampling Zone No. 85' Start Time 0940 End Time 1100
Water Level In MP Casing: (start)_____ (end)_____ Technicians GCG, MAS
Sampler Probe Preparation - See Sampling Plan Collection Bottle Preparation - See Sampling Plan

Run No.	Surface Function Checks						Position Sampler	Sample Collection Checks									Comments
	Activate Shoe	Close Valve	Check Vacuum	Open Valve	Evacuate Container	Close Valve	Locate port release arm land probe	Pressure in MP (psi)	Activate Shoe	Pressure in Zone (psi)	Open Valve	Final Zone Pressure (psi)	Close Valve	Retract Shoe	Pressure in MP (psi)	Volume Retrieved (L)	
1	—	—	—	—	—	—	—	46.43	✓	51.40	✓	51.39	✓	✓	46.41	1	Shoe 0950
2	—	—	—	—	—	—		46.41	✓	51.40	✓	51.39	✓	✓	46.41	1	~~Shoe~~ + PCB 1000
3	✓	—	—	—	—	—	—	46.39	✓	51.40	✓	51.40	✓	✓	46.40	1	metals 1045
																	Total Volume 3L

Field Determinations (Appearance, pH,S.C.,etc.)

MXSAMPLE2.sam
Oct. 96

Westbay Instruments Inc.

Groundwater Sampling

Field Data Sheet

Project Sullivan's Ledge Location New Bedford Date 3-26-01

Monitoring Well No. ECJ-4 Sampling Zone No. 130' Start Time 1550 End Time [illegible]

Water Level In MP Casing: (start)_____ (end)_____ Technicians MASTAN

Sampler Probe Preparation - See Sampling Plan Collection Bottle Preparation - See Sampling Plan

Run No.	Surface Function Checks: Activate Shoe	Close Valve	Check Vacuum	Open Valve	Evacuate Container	Close Valve	Position Sampler: Locate port release arm land probe	Sample Collection Checks: Pressure in MP (psi)	Activate Shoe	Pressure in Zone (psi)	Open Valve	Final Zone Pressure (psi)	Close Valve	Retract Shoe	Pressure in MP (psi)	Volume Retrieved (L)	Comments	
1	✓	✓	✓	✓	✓	✓	✓	66.11	~~71.03~~	71.03	✓	71.00	✓	✓	66.11	1	VOC & PCB	1600
2	✓	✓	✓	✓	✓	✓	✓	66.07	✓	71.01	✓	71.00	✓	✓	66.08	1	SVOC's	1615
3	✓	✓	✓	✓	✓	✓	✓	66.06	✓	71.02	✓	70.98	✓	✓	66.07	1	Metals	1635
4	✓	✓	✓	✓	✓	✓	✓	66.05	✓	71.02	✓	71.00	✓	✓	66.07	1	VOC's PCB	1700
5	✓	✓	✓	✓	✓	✓	✓	66.05	✓	71.04	✓	70.97	✓	✓	[illegible]	1	[illegible]	[illegible]
6	✓	✓	✓	✓	✓	✓	✓	66.05	✓	71.03	✓	70.99	✓	✓	66.08	1	[illegible]	[illegible]
																	Total Volume 6L	

Field Determinations (Appearance, pH,S.C.,etc.)

Cup # 3 [illegible] here
Runs 4-6
[illegible] storm
[illegible] around
[illegible]

MXSAMPLE2.sam
Oct. 96

Westbay Instruments Inc.

Groundwater Sampling

Field Data Sheet

Project Sullivan's Ledge Location New Bedford Date 3-26-01
Monitoring Well No. ECJ-4 Sampling Zone No. 168' Start Time 1430 End Time 1540
Water Level In MP Casing: (start)_____ (end)_____ Technicians MAS, JAN
Sampler Probe Preparation - See Sampling Plan Collection Bottle Preparation - See Sampling Plan

Run No.	Surface Function Checks						Position Sampler	Sample Collection Checks									Comments	
	Activate Shoe	Close Valve	Check Vacuum	Open Valve	Evacuate Container	Close Valve	Locate port release arm land probe	Pressure in MP (psi)	Activate Shoe	Pressure in Zone (psi)	Open Valve	Final Zone Pressure (psi)	Close Valve	Retract Shoe	Pressure in MP (psi)	Volume Retrieved (L)		
1	✓	✓	✓	✓	✓	✓	✓	79.26	✓	84.03	✓	83.92	✓	✓	79.26	1	VOC's & PCB	1440
2	✓	✓	✓	✓	✓	✓	✓	79.22	✓	84.00	✓	83.90	✓	✓	79.23	1	SVOC's	1500
3	✓	✓	✓	✓	✓	✓	✓	79.18	✓	83.99	✓	83.80	✓	✓	79.20	1	Metals	1530
																	Total Volume 3L	

Field Determinations (Appearance, pH,S.C.,etc.)

MXSAMPLE2.sam
Oct. 96

Westbay Instruments Inc.

Groundwater Sampling

Field Data Sheet

Project Sullivan's Ledge Location New Bedford Date 3-26-01
Monitoring Well No. ECJ-4 Sampling Zone No. 228' Start Time 1130 End Time 1300
Water Level In MP Casing: (start)_____ (end)_____ Technicians MAS, JAN
Sampler Probe Preparation - See Sampling Plan Collection Bottle Preparation - See Sampling Plan

Run No.	Surface Function Checks						Position Sampler	Sample Collection Checks									Comments
	Activate Shoe	Close Valve	Check Vacuum	Open Valve	Evacuate Container	Close Valve	Locate port release arm land probe	Pressure in MP (psi)	Activate Shoe	Pressure in Zone (psi)	Open Valve	Final Zone Pressure (psi)	Close Valve	Retract Shoe	Pressure in MP (psi)	Volume Retrieved (L)	
1	✓	✓	✓	✓	✓	✓	✓	107.48	✓	111.69	✓	110.94	✓	✓	107.48	1	VOC : PCB
2	✓	✓	✓	✓	✓	✓	✓	107.44	✓	111.68	✓	110.97	✓	✓	107.44	1	SVOC
3	✓	✓	✓	✓	✓	✓	✓	107.40	✓	111.63	✓	110.94	✓	✓	107.40	1	Metals
																	Total Volume 3L

Start sample
1140
1210
1240

Field Determinations (Appearance, pH,S.C.,etc.)

Sulfur Odor

MXSAMPLE2.

Westbay Instruments Inc.

Groundwater Sampling

Field Data Sheet

Project Sullivan's Ledge Location New Bedford Date 3-26-01
Monitoring Well No. ECJ-40 Sampling Zone No. 245 Start Time 950 End Time 1120
Water Level In MP Casing: (start) 19.3 (end) _____ Technicians MAS, TAN
Sampler Probe Preparation - See Sampling Plan Collection Bottle Preparation - See Sampling Plan

Run No.	Surface Function Checks						Position Sampler	Sample Collection Checks									Comments	Start Sample
	Activate Shoe	Close Valve	Check Vacuum	Open Valve	Evacuate Container	Close Valve	Locate port release arm land probe	Pressure in MP (psi)	Activate Shoe	Pressure in Zone (psi)	Open Valve	Final Zone Pressure (psi)	Close Valve	Retract Shoe	Pressure in MP (psi)	Volume Retrieved (L)		
1	✓	✓	✓	✓	✓	✓	✓	116.20	✓	120.55	✓	119.97	✓	✓	116.20	1	VOB + PCB	1000
2	✓	✓	✓	✓	✓	✓	✓	116.13	✓	120.40	✓	119.91	✓	✓	116.13	1	SVOC's	1040
3	✓	✓	✓	✓	✓	✓	✓	116.09	✓	120.32	✓	119.48	✓	✓	116.10	1	Metals	1115
																	Total Volume 3L	

Field Determinations (Appearance, pH,S.C.,etc.)

Sulfur odor

MXSAMPLE2.sam
Oct. 96

Westbay Instruments Inc.

Groundwater Sampling

Field Data Sheet

Project Sullivan's Ledge Location New Bedford Date 4-3-01
Monitoring Well No. ECJ-3U Sampling Zone No. 63' Start Time 1315 End Time 1545
Water Level In MP Casing: (start)_____ (end)_____ Technicians MAS, TAN
Sampler Probe Preparation - See Sampling Plan Collection Bottle Preparation - See Sampling Plan

Run No.	Surface Function Checks: Activate Shoe	Close Valve	Check Vacuum	Open Valve	Evacuate Container	Close Valve	Position Sampler: Locate port release arm land probe	Sample Collection Checks: Pressure in MP (psi)	Activate Shoe	Pressure in Zone (psi)	Open Valve	Final Zone Pressure (psi)	Close Valve	Retract Shoe	Pressure in MP (psi)	Volume Retrieved (L)	Comments	
1	✓	✓	✓	✓	✓	✓	✓	18.57	✓	31.45	✓	30.65	✓	[illegible]	21.38	.75	VOC's ; SVOC's	1335-1415
2	✓	✓	✓	✓	✓	✓	—	21.44	✓	31.44	✓	31.40	✓	✓	21.43	1	SVOC's ; PCB's	1440
3	✓	✓	✓	✓	✓	✓	—	21.39	✓	31.43	✓	31.42	✓	✓	21.41	1	PCB's ; Metals	1500
4	✓	✓	✓	✓	✓	✓	✓	21.37	✓	31.42	✓	31.36	✓	✓	21.41	1	metals	1535
																	Total Volume 3.75L	

Field Determinations (Appearance, pH,S.C.,etc.)

1st Run - Top connection not tight

MXSAMPLE2.sam
Oct. 96

Westbay Instruments Inc.

Groundwater Sampling

Field Data Sheet

Project Sullivan's ledge Location New Bedford Date 4-3-01
Monitoring Well No. ECJ-3 Sampling Zone No. ~~ECJ~~ 103' Start Time 1115 End Time 1155
Water Level In MP Casing: (start)_____ (end)_____ Technicians MAS, DJA
Sampler Probe Preparation - See Sampling Plan Collection Bottle Preparation - See Sampling Plan

Run No.	Surface Function Checks						Position Sampler	Sample Collection Checks									Comments	
	Activate Shoe	Close Valve	Check Vacuum	Open Valve	Evacuate Container	Close Valve	Locate port release arm land probe	Pressure in MP (psi)	Activate Shoe	Pressure in Zone (psi)	Open Valve	Final Zone Pressure (psi)	Close Valve	Retract Shoe	Pressure in MP (psi)	Volume Retrieved (L)		
1	✓	✓	✓	✓	✓	✓	✓	36.41	✓	48.65	✓	48.60	✓	✓	36.41	1	VOC's & SVOC's	1115
2	✓	✓	✓	✓	✓	✓	✓	36.39	✓	48.63	✓	48.59	✓	✓	36.41	1	PCB's	1135
3	✓	✓	✓	✓	✓	✓	✓	36.38	✓	48.62	✓	48.58	✓	✓	36.40	1	Metals	1155
																	Total Volume 3L	

Field Determinations (Appearance, pH,S.C.,etc.)

MXSAMPLE2.sam
Oct. 96

Westbay instruments Inc.

Groundwater Sampling

Field Data Sheet

Project Sullivan's Ledge Location New Bedford Date 4-3-01

Monitoring Well No. ECJ-3 Sampling Zone No. 138' Start Time 0955 End Time 1100

Water Level In MP Casing: (start)_____ (end)_____ Technicians MAS DJA

Sampler Probe Preparation - See Sampling Plan Collection Bottle Preparation - See Sampling Plan

Run No.	Surface Function Checks: Activate Shoe	Close Valve	Check Vacuum	Open Valve	Evacuate Container	Close Valve	Position Sampler: Locate port release arm land probe	Sample Collection Checks: Pressure in MP (psi)	Activate Shoe	Pressure in Zone (psi)	Open Valve	Final Zone Pressure (psi)	Close Valve	Retract Shoe	Pressure in MP (psi)	Volume Retrieved (L)	Comments	
~~4~~	~~✓~~	~~✓~~	~~✓~~	~~✓~~	~~✓~~	~~✓~~	~~✓~~	~~[illegible]~~	~~✓~~	~~[illegible]~~								
~~4~~	~~✓~~	~~✓~~	~~✓~~	~~✓~~	~~✓~~	~~✓~~	~~✓~~	~~[illegible]~~	~~[illegible]~~									
1	✓	✓	✓	✓	✓	✓	✓	51.76	✓	63.76	✓	63.73	✓	✓	51.77	1	VOC's & SVOC's	1010
2	✓	✓	✓	✓	✓	✓	✓	51.74	✓	63.76	✓	63.72	✓	✓	51.75	1	SVOC's & PCB's	1030
3	✓	✓	✓	✓	✓	✓	✓	51.69	✓	63.75	✓	63.70	✓	✓	51.70	1	Metals	1050
																	Total Volume 3L	

Field Determinations (Appearance, pH,S.C.,etc.)

MXSAMPLE2.sam
Oct. 96

Appendix F

Data Validation Report

REPORT

SULLIVAN'S LEDGE SUPERFUND SITE GROUND WATER DATA VALIDATION MARCH - APRIL 2001

SULLIVAN'S LEDGE PROJECT MANAGEMENT COMMITTEE

JUNE 2001

5509/28602

REPORT

SULLIVAN'S LEDGE SUPERFUND SITE GROUND WATER DATA VALIDATION MARCH - APRIL 2001

SULLIVAN'S LEDGE PROJECT MANAGEMENT COMMITTEE

JAMES R. HECKATHORNE, P.E.
VICE PRESIDENT

JUNE 2001

O'BRIEN & GERE ENGINEERS, INC.

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A Validated results

1. Introduction

Data validation was performed for the ground water samples and ground water plant treatment influent samples collected from the Sullivan's Ledge Site in New Bedford, Massachusetts between March 19 and April 3, 2001. Mabbett & Associates (M&A) performed sample collection activities. Samples were validated for volatile and semivolatile organic compounds, polychlorinated biphenyls (PCBs) and metals. Data validation was performed in accordance with Section 3 of the Field Sampling Plan (FSP) and Quality Assurance Project Plan (QAPP) First Operable Unit (O'Brien & Gere Engineers, January 2000), an M&A letter dated March 14, 2001, presenting modifications and classifications to the FSP, and Alpha Analytical Laboratory's (Alpha) Quality Manual (QM).

1.1. General considerations

Validation is a process of determining the suitability of a measurement system for providing useful analytical data. Although the term is frequently used in discussing analytical methods, it applies to all aspects of the process and especially to the samples, their measurement, and the actual data generated. Accordingly, this report outlines excursions from the applicable quality control outlined in the following documents:

- Field Sampling Plan (FSP) and Quality Assurance Project and Quality Assurance Project Plan (QAPP) First Operable Unit, Sullivan's Ledge Site, New Bedford, Massachusetts (O'Brien & Gere, January 2000) as modified by M&A's letter dated March 14, 2001 and Alpha Analytical Laboratory Quality Manual (Alpha Analytical, October 2000).

- Test Methods for Evaluating Solid Wastes: Physical and Chemical Methods, SW-846, Final Update III, (USEPA, December 1996).

- Region I USEPA-New England (NE) Data Validation Functional Guidelines for Evaluating Environmental Analyses, Part II, Volatile/Semivolatile Data Validation Functional Guidelines (USEPA Region I, December 1996).

- USEPA Region I Laboratory Data Validation Functional Guidelines for Evaluation of Organic Analyses (USEPA Region I, November 1988).

- USEPA Region I Laboratory Data Validation Functional Guidelines for Evaluation of Inorganic Analyses (USEPA Region I, February 1989).

- USEPA Risk Assessment Guidance for Superfund, Volume I, Human Health Evaluation Manual (Part A), 540/1-89/002 (USEPA, revised 1992).

The following sections of this document address distinct aspects of the validation process. Section 2 lists the analytical methodology employed in sample analysis. Section 3 lists the data quality assurance/quality control (QA/QC) protocols used to validate the sample data. Specific QA/QC excursions and qualifications performed on the sample data are discussed in Section 4. Data usability with respect to the intended purposes of the data is discussed in Section 5.

2. Analytical methods

Samples were analyzed by Alpha Analytical Laboratories for selected target compounds utilizing the USEPA methods presented in Test Methods for Evaluating Solid Waste (USEPA, December 1996) shown in Table 2.1.

Table 2.1 Analytical methods.

Parameter	Analytical Method
Volatile organic compounds (74 target)	8260B
Semivolatile organic compounds (99 target)	8270C
PCBs	8082
Metals (23 target)	6010B
Molybendum (ground water treatment influent only)	6010B
Mercury	7470A

Source: O'Brien & Gere Engineers, Inc.

It should be noted that the following compounds were reported as volatile organic and semivolatile organic compounds: 1,2,4-trichlorobenzene, 1,2-dichlorobenzene, 1,3-dichlorobenzene, 1,4-dichlorobenzene, hexachlorobutadiene, and naphthalene. The results reported from the semivolatile fraction for these compounds should be used in place of the data reported for volatile fraction based on large sample dilutions performed for the volatile fraction, and since these compounds are more semivolatile in nature.

Analytical results are presented in Appendix A. The letters found immediately to the right of individual sample results serve to qualify the sample data. When the data validation process identified more than one quality control deficiency, the qualifier added to the sample result represents the cumulative effect of the individual QC excursions. Consistent with the listed guidance document, the following qualifiers may be used during the data validation:

U Indicates that the compound was analyzed for, but was not detected. The quantitation limit is presented and adjusted for dilution. This qualifier is also used when the quantitation limit is raised due to presence of blank contamination.

J Indicates that the detected sample result should be considered approximate. This qualifier is used when the data validation process identifies a deficiency in the data generation process.

UJ Indicates that the detection limit for the analyte in this sample should be considered approximate. This qualifier is used when the data validation process identifies a deficiency in the data generation process.

R Indicates that the previously reported detection limits or sample result was rejected due to a major deficiency in the data generation procedure. The data should not be used for qualitative or quantitative purposes.

3. Data validation protocols

Quality control data were evaluated based on accuracy and precision criteria specified in Section 3.3 of the site specific FSP and QAPP and Alpha's QM. The following are method specific QA/QC parameters used in the validation of sample data generated for this investigation:

Volatile, semivolatile, and PCB analyses

- Holding times and sample preservation
- GC/MS tuning criteria (as applicable)
- Initial and continuing calibration
- Blank analysis
- Surrogate recovery
- Internal standard performance (as applicable)
- Matrix spike/matrix spike duplicate (MS/MSD) analysis
- Field duplicate analysis
- Laboratory control sample (LCS) analysis
- System performance
- Target compound identification, quantitation, and reporting limits
- Documentation completeness
- Overall data assessment

Metals analyses

- Holding times and sample preservation
- Initial and continuing calibration
- Interference check standard analysis
- Blank analysis
- Matrix spike (MS) analysis
- Laboratory duplicate analysis
- Serial dilution analysis
- Field duplicate analysis
- LCS analysis
- Analyte quantitation and reporting limits
- Documentation completeness
- Overall data assessment

In accordance with the QAPP, laboratory control limits were used to assess MS/MSD, LCS, surrogate, and laboratory

duplicate data. Field duplicate data were assessed based requirements specified in the QAPP. Based on guidance provided in EPA Region I's validation guidelines (USEPA Region I, November 1988, February 1989, December 1996), analytical data were qualified in the following manner when laboratory control limits were not met:

- If percent recoveries were less than laboratory control limits but greater than ten percent, non-detected and detected results were qualified as approximate (UJ, J).
- If percent recoveries were greater than laboratory control limits, detected results were qualified as approximate (J).
- If percent recoveries were less than ten percent, detected results were qualified as approximate (J) and non-detected results were qualified as rejected (R).
- If relative percent differences (RPDs) for MSDs and laboratory duplicates were outside of laboratory control limits, detected results greater than the laboratory reporting limit were qualified as approximate (J).
- If RPDs were >50% (>± 2xMRL for results <5xMRL) for field duplicates, detected results greater than the MRL were qualified as approximate (J).

It should be noted that qualification of data for MS/MSD analyses was performed only when both MS and MSD percent recoveries were outside of laboratory control limits. Qualification of data was not performed if MS/MSD or surrogate recoveries were outside of laboratory control limits due to sample dilution. Additionally, for MS/MSD and field duplicate excursions for organic analyses qualifications of data was limited for the unspiked sample or the field duplicate pair unless otherwise stated.

4. Data quality evaluation

This section summarizes the QA/QC parameters which met validation criteria and describes qualifications performed on sample data when QA/QC criteria were not met. Samples that required qualification are identified in the following sections by the sample location documented on the field chain of custody record. Equipment and trip blank data were used to assess contamination that may have been introduced during field sampling and sample shipment and were not qualified with respect to QA/QC excursions.

Overall, field chain of custody records were accurate and complete. One field chain of custody record was revised by the sampling team as follows:

- The field sampling identification was revised from MW-10A to MW-10B for the ground water sample collected on March 21, 2001.

The laboratory noted that sample cooler temperature was thirteen degrees Centigrade for sample shipment received March 28, 2001. According to the sampling team, the samples in this shipment were placed on ice and picked up by laboratory courier on March 28, 2001. Therefore, qualification of data was not required.

A total of forty-two ground water locations were sampled. In addition, seven ground water treatment plant influent samples were collected. Field duplicate (ten percent), MS/MSD (five percent), equipment blanks (EB) and trip blanks (TB) were collected at the frequency specified in Section 2.6.6 of the site specific FSP and QAPP with one exception. A field duplicate sample was not collected for the ground water treatment plant influent samples. Two complete sample volumes were also analyzed for ECJ-4-60' for metals, PCBs, and semivolatiles. Since these samples were analyzed as independent samples, they were treated as laboratory duplicates during the validation. Dedicated sampling equipment was used to collect the ground water samples with the exception of the Westbay wells. An equipment blank was collected from the Westbay sampling equipment as required. Table 4.1 summarizes the field QC samples that were collected.

Table 4.1 Field QC sample Collection			
Field Duplicate IDs	MS/MSD ID	Equipment Blanks	Trip Blanks
DUP1 = MW-6A DUP2 = MW-5A DUP3 = ECJ-4-130' DUP4= ECJ-2-47' ECJ-4-60' (metals, SVOCs, PCBs)	MW-6A ECJ-4-60' BEI-1 (SVOC, PCB, Metals) MW-13 (VOCs) ECJ-2-47'(VOCs) MW-4A (PCBs) MW-13A (SVOC, Metals) ECJ-3-138' (Metals)	Equipment Blank collected 3/29/01 (associated with the Westbay wells labeled as ECJ)	3/20/01 3/21/01 (two) 3/23/01 3/26/01 (four) 3/27/01 3/28/01 (two) 3/29/01 4/4/01

Table Notes:

1. Trip blanks were identified by date received. A trip blank was present in each sample cooler containing volatile organic samples as required.

2. Additonal MS/MSD samples were analyzed by the laboratory to meet internal QA/QC batch requirements.

Source: O'Brien & Gere Engineers, Inc.

4.1. Volatile organic analyses

The following QA/QC parameters met validation criteria or did not result in qualification of data:

- Holding times and sample preservation
- GC/MS tuning criteria
- Initial calibration
- Surrogate recovery
- Internal standard performance
- System performance
- Documentation completeness

Continuing calibration/LCS analysis. It should be noted that the LCS and continuing calibration standards are the same analytical run. Since continuing calibration standards were prepared from a source independent from the initial calibration standards, additional LCS analyses were not required. Continuing calibration %Ds were evaluated in place of LCS recoveries. %D criterion (<25%) was exceeded in several instances. Table 4.2 is a summary of the data qualified. Laboratory corrective actions were not required since method-specified requirements were met for system performance check compounds (SPCCs) and calibration check compounds (CCCs). It should be noted that for bromomethane, the sensitivity increased.

Table 4.2 Qualification of volatile data: continuing calibration criteria				
Analysis Date	**Compound**	**%D**	**Action**	**Samples Affected**
3/29/01 17:42	bromomethane	29.9	UJ	MW-15, MW-24, MW-14, MW-2M MW-6A, MW-8, MW-8A, DUP1(MW-6A), MW-6, MW-16
	methyl iodine	28.9	UJ	
3/30/01 10:34	bromomethane	105	UJ	BEI-1, OBG-1, OBG-2
	trichlorofluoromethane	36.6	UJ	
3/30/01 17:15	bromomethane	84.9	UJ	BEI-2, OBG-3, BEI-3, TRENCH, MW-13, MW-13A, ECJ-1-265',
	acetone	37.8	UJ	
4/2/01 15:47	bromomethane	97.9	UJ	MW-10B, MW-10, ECJ-1-120', ECJ-1-70', ECJ-1-35', MW-4A, ECJ-4-245', ECJ-4-225', ECJ-4-160'
	acetone	92.6	UJ	
	methyl iodine	26.9	UJ	
4/2/01 10:28	bromomethane	97.3	UJ	ECJ-1-145'
	2-butanone	27.7	UJ	
4/3/01 16:17	bromomethane	86.9	UJ	MW-5A, DUP2(MW-5A), ECJ-4-130', MW-4, MW-10A, MW-22A, MW-17, DUP3(ECJ-4-130'), ECJ-4-85', ECJ-4-60'
	methyl iodine	30.2	UJ	
4/3/01 10:56	bromomethane	78.5	UJ	ECJ-1-60', GCA-1, MW-12AR, MW-5
	acetone	28.0	UJ	
	methyl iodine	27.4	UJ	
4/4/01 10:17	bromomethane	34.4	UJ	ECJ-2-82'
4/4/01 17:18	bromomethane	78.0	UJ	ECJ-2-187', ECJ-2-152', ECJ-2-117', ECJ-2-47', DUP4(ECJ-2-47')
	acetone	37.0	UJ	
	methyl iodine	34.0	UJ	
4/12/01 09:22	bromomethane	85.7	UJ	ECJ-3-138', ECJ-3-103', ECJ-3-63'
	acrolein	36.1	UJ	
	acetone	47.4	UJ	
	2-butanone	52.7	UJ	
	2-hexanone	60.8	UJ	
Source: O'Brien & Gere Engineers, Inc.				

MS/MSD analyses. Percent recoveries were above laboratory control limits for bromomethane in the four MS/MSD samples analyzed. Qualification of data was not required since recoveries were biased high and bromomethane was not detected in the samples. It should be noted that excursions for bromomethane were the result of continuing calibration issues previously discussed. RPD criteria was exceeded for cis-1,2-dichloroethene in MS/MSD sample MW-6A. The detected result for this compound was qualified as approximate (J) in sample MW-6A.

Field Duplicate analysis. Precision requirement (results not within 2xMRL) was not met for trichloroethene in field duplicate pairs ECJ-2-47' and DUP4 collected on March 29, 2001. Sample results for trichloroethene were qualified as approixmate (J) in the samples ECJ-2-47' and DUP4. The difference in trichloroethene results in these samples was may be due to sample dilutions that were performed to obtain target compounds with the linear range, since precision criteria (RPD <30%) were met for vinyl chloride and cis-1,2-dichloroethene, which were also detected in these samples.

Blank analyses. An equipment blank was collected for the Westbay (ECJ) wells on March 29, 2001. Cis-1,2-dichloroethene was detected at 1.2 ug/L in the equipment blank. A blank action level was calculated at five times the equipment blank concentration. Detected results less than laboratory MRLs and the calculated blank action level were replaced with the MRL and qualified as nondetected (U). Detected results greater than laboratory MRLs but less than the calculated blank action level were qualified as nondetected (U). Table 4.3 is a summary of the data qualified.

Table 4.3 Qualification of volatile data: blank criteria

Blank ID	Compound	Concentration (ug/L)	Action	Samples Affected
Equipment Blank 3/29/01	cis-1,2-dichloroethene	1.2	Qualify U	ECJ-4-85', ECJ-4-225', ECJ-4-245', ECJ-4-160'

Source: O'Brien & Gere Engineers, Inc.

Target compound identification, quantitation, and reporting limits. Elevated reporting limits were reported for several ground water samples based on sample dilutions performed prior to analysis. Dilutions were performed by the laboratory based on historical data and are documented on the data validation summary tables. Overall, sample dilutions were performed at the appropriate levels. However, samples ECJ-1-35' and ECJ-3-63' should have been reanalyzed at lesser dilutions based on the concentrations of the target compounds detected.

Overall data assessment. Volatile analyses and QA/QC procedures were performed in accordance with analytical method and QAPP requirements. Volatile data are useable for qualitative and quantitative purposes. Detected and nondetected results were qualified as approximate (UJ or J) for several compounds and samples based on minor excursions from continuing calibration, MS/MSD recovery, and compound quantitation requirements.

4.2. Semivolatile analyses

The following QA/QC parameters met criteria or did not result in qualfication of data:

- Sample preservation
- GC/MS tuning criteria
- Initial and continuing calibration
- Blank analysis
- LCS analysis
- MS/MSD analysis
- Internal standard performance
- Field duplicate analysis

- System performance
- Target compound identification, quantitation, and reporting limits
- Documentation completeness

Holding times. Extraction holding time requirement was exceeded by six to seven days for six samples. These samples were originally extracted within holding time requirements but required re-extraction due to surrogate recoveries that were less than ten percent. Since surrogate recoveries met criteria with re-extraction, the re-extracted results were reported. Table 4.4 is a summary of the samples that were qualified due to holding time excursions.

Table 4.4 Qualification of semivolatile data: holding time criteria.

Sample ID	Date Collected	Date Extracted	Days over Holding Time	Action
MW-8	3/20/01	4/3/01	7	UJ all targets
MW-8A	3/20/01	4/3/01	7	UJ all targets
OBG-2	3/21/01	4/3/01	6	UJ or J all targets
BEI-2	3/21/01	4/3/01	6	UJ or J all targets
TRENCH	3/21/01	4/3/01	6	UJ or J all targets
MW-10B	3/21/01	4/3/01	6	UJ all targets

Source: O'Brien & Gere Engineers, Inc.

Surrogate recovery. Surrogate recoveries were outside of laboratory control limits in eleven samples. Six of these were re-extracted with compliant surrogate recoveries. Qualification of data was required only if two surrogates were outside of control limits for a fraction or if any one surrogate had a recovery less than ten percent. Table 4.5 is a summary of the data qualified.

Table 4.5 Qualification of semivolatile data: surrogate recovery criteria.

Sample ID	Surrogate	%Recovery	Action	Compounds Affected
ECJ-4-245'	nitrobenzene-d5 2-fluorobiphenyl 2,4,6-tribromophenyl	6 5 6	R	All target compounds

Source: O'Brien & Gere Engineers, Inc.

Overall data assessment. Overall semivolatile analyses and QA/QC procedures were performed in accordance with analytical method and QAPP requirements. The majority of semivolatile data are useable for qualitative and quantitative purposes. Nondetected results were rejected (R) for target compounds in sample ECJ-4-245' based on surrogate recoveries less than ten percent. This sample could not be re-extracted due to insufficient sample volume. Semivolatile data were qualified as approximate (UJ or J) in six samples based on minor excursions from extraction holding time requirements.

4.3. PCB analyses

The following QA/QC parameters met criteria or did not result in qualification of data:

- Holding times and sample preservation
- Initial and continuing calibration
- Blank analysis
- MS/MSD analysis
- Field duplicate analysis
- LCS analysis
- System performance
- Documentation completeness

Surrogate recovery. Surrogate recoveries were not within laboratory control limits in several instances. Qualification of data was performed only when both surrogates compounds did not meet recovery criteria or if any one surrogate had recovery less than ten percent. Table 4.6 is a summary of the data qualified.

Table 4.6 Qualification of PCB data: surrogate recovery criteria

Sample ID	Surrogate	%Recovery	Action
BEI-2	TCMX DCB	12 10	UJ
DUP4 (ECJ-2-47')	TCMX DCB	21 19	UJ

Table Notes:
TCMX- surrogate compound, tetrachloro-m-xylene
DCB – surrogate compound, decacachlorobiphenyl

Source: O'Brien & Gere Engineers, Inc.

Target compound identification, quantitation, and reporting limits. For the majority of samples in which PCBs were detected, the laboratory documented that the PCB Aroclors that were identified exhibited an altered pattern. Based on review of the raw data, peaks were present within retention time windows established for the identified PCB Arcolors on both primary and confirmation columns utilized by the laboratory. The pattern did not match with respect to peak ratios. The Aroclors that were identified by the laboratory represent the closest match. Therefore qualification of data with respect to PCB Aroclor identification was not required. However, due to the alternation of the PCB Aroclor pattern and weathering affects, quantitation of the identified PCB Aroclors was in several instances performed utlizing only two to three peaks instead of the required five peaks. This method of quantitation is a conservative approach by the laboratory and may have resulted in PCB Aroclor concentrations that are biased high. Therefore, detected PCB results were qualified as approximate in the samples in which the laboratory did not utilize five peaks for quantitation. Detected results were also qualified as approximate if the percent difference (%D)

was greater than 40% between the reported result and the confirmation result. Table 4.7 is a summary of the data qualified.

Table 4.7. Qualification of PCB data: quantitation

Sample ID	PCB Aroclor	Comments	Action
MW-24	altered 1016/1242	2 peaks used for quantitation.	J, may be biased high
MW-15	altered 1016/1242	2 peaks used for quantitation.	J, may be biased high
MW-2	altered 1016/1242	2 peaks used for quantitation.	J, may be biased high
BEI-1	altered 1254	3 peaks used for quantitation	J, may be biased high
OBG-2	altered 1254	3 peaks used for quantitation; %D 58	J, may be biased high
BEI-3	altered 1254	3 peaks used for quantitation; %D 48	J, may be biased high
ECJ-1-60'	altered 1254	2 peaks used for quantitation.	J, may be biased high
ECJ-1-35'	altered 1254	%D 53 (all five peaks used)	J

Table Notes:
TCMX- surrogate compound, tetrachloro-m-xylene
DCB – surrogate compound, decacachlorobiphenyl

Source: O'Brien & Gere Engineers, Inc.

Elevated reporting limits were reported for several ground water samples. Ground water samples MW-2, MW-24, OBG-1, and MW-22A were diluted to obtain target PCB concentrations within the linear calibration range or minimize matrix interferences from non-target compounds. The laboratory extracted a total of ten samples and one field duplicate sample before they were notified that a 0.50 ug/L reporting limit was required. The 0.50 ug/L reporting limit will be met for future sampling events unless dilution is required to obtain target concentrations within the linear range.

Overall data assessment. PCB analyses and QA/QC procedures were performed in accordance with analytical method and QAPP requirements. PCB data are usable for qualitative and quantitative purposes. Nondetected results were qualified as approximate in two samples based on excursions from surrogate recovery limits. Detected PCB results were qualified as approximate and may be biased high in seven samples based on the conservative approach used by the laboratory for quantitation.

4.4. Metal analyses

The following QA/QC parameters met criteria or did not result in qualification of data:

- Holding times and sample preservation
- Initial and continuing calibration
- Blank analysis
- Interference check standard analysis
- Laboratory duplicate analysis
- Serial dilution analysis
- LCS analysis
- Field duplicate analysis
- Analyte quantitation and reporting limits
- Documentation completeness

MS analysis. Percent recoveries were below laboratory control limits for silver in two of the five MS samples. Qualification of data was performed for samples within the same digestion batch as the affected MS samples. Post spikes were performed as required and met recovery criteria. Table 4.8 is a summary of the data qualified.

Table 4.8. Qualification of metals data: matrix spike criteria.

MS ID	Analyte	Percent Recovery (%)	Action	Samples Affected
MW-6A	silver	68	UJ	MW-15, MW-24, MW-14, MW-2, MW-6A, MW-8, MW-8A, MW-6, DUP1(MW-6A)
BEI-1	silver	56	UJ	BEI-1, OBG-1, OBG-2, BEI-2, OBG-3, BEI-3, TRENCH

Source: O'Brien & Gere Engineers, Inc.

Overall data assessment. The laboratory performed metal analyses and QA/QC procedures in accordance with analytical method and QAPP requirements. Metals data are usable for qualitative and quantitative purposes. Nondetected results were qualified as approximate for silver in sixteen samples based on minor excursions from MS recovery requirements.

5. Data usability

Analytical data were validated for samples collected from the Sullivan's Ledge Site in New Bedford, Massachusetts. Ground water samples and ground water treatment plant influent samples were validated for volatile and semivolatile organic compounds, PCBs, and metals based on accuracy and precision criteria specified in documents referenced in Section 1. When excursions were observed from QA/QC requirements, the analytical data were qualified based on guidance provided in the USEPA Region I validation guidelines (USEPA Region I, November 1988, February 1989, December 1996).

Rejected data resulted from a major excursion from QA/QC criteria and should not be used for either qualitative or quantitative purposes. Minor deficiencies in the data generation process resulted in approximation of sample data. Approximation of a data point indicates uncertainty in the reported concentration of the analyte, but not its assigned identity. The conservative assumptions used in the development of conclusions based on the analytical data verifies that approximated analytical data adheres to the project data quality objectives. This approach to the use of analytical data is consistent with the guidance presented in the *USEPA Risk Assessment Guidance for Superfund, Volume I, Human Health Evaluation Manual (Part A), 540/1-89/002* (USEPA, December 1992).

This section summarizes the adherence of the analytical data to the data quality objectives (DQOs) established in the QAPP for precision, accuracy, representativeness, comparability, completeness, and sensitivity. A detailed discussion of the analytes and samples which were qualified is presented in Section 4. Summary tables of validated sample results with data validation qualifiers have been provided in Appendix A of this report.

Data quality objectives were evaluated using percent usability, defined as the percentage of sample results that are usable for qualitative and quantitative purposes.

Precision was assessed from laboratory MSD and field duplicate analyses. Data usability with respect to precision was calculated as 100%. Detected results were qualified as approximate for cis-1,2-dichloroethene in sample MW-6A and for trichloroethene in samples ECJ-2-47' and DUP4(ECJ-2-47') and based on minor excursions from precision requirements.

Accuracy was assessed from GC/MS tuning, calibration, surrogate recovery, internal standard performance MS/MSD, and LCS data. Data usability with respect to accuracy was calculated as 100% for volatile, PCB, and metals data and as 99% for semivolatile data. Nondetected results were rejected for target semivolatile compounds in sample ECJ-4-

245' based on surrogate recoveries less than ten percent. Minor excursions from continuing calibration, matrix spike recovery requirements resulted in approximation of sample data as follows:

- Nondetected results for bromomethane (all samples), methyl iodine (34 samples), acetone (24 samples), 2-butanone (4 samples) and for trichlorofluormethane, acrolein, and 2-hexanone (3 samples).
- Nondetetected results for the PCB Aroclors in samples BEI-2 and DUP4(ECJ-2-47').
- Nondetected results for silver in sixteen samples.

Representativeness was assessed from holding times, sample preservation, blank analysis, target compound identification and quantitation, and sampling and analytical methodologies used. Data usability with respect to representativeness was 100%. Semivolatile data were qualified as approximate in six samples based on minor excursions from holding time requirements. PCB Aroclor results were identified as altered PCB patterns and were qualified as approximate in eight samples.

Comparability is a qualitative measure, therefore, usability calculations were not performed. Comparability requirements were met since standard analytical methods, reporting units, reference materials, and data deliverables were utilized by the laboratory. It should be noted that the following compounds were reported as volatile organics and semivolatile organic compounds: 1,2,4-trichlorobenzene, 1,2-dichlorobenzene, 1,3-dichlorobenzene, 1,4-dichlorobenzene, hexachlorobutadiene, and naphthalene. The results reported from the semivolatile fraction for these compounds should be used in place of the data reported for volatile fraction based on large sample dilutions performed for the volatile fraction and since these compounds are more semivolatile in nature.

Sensitivity requirements were met for metal analyses. Laboratory reporting limits were elevated for volatile organic compounds in twenty-one samples and for PCBs in three samples based on the laboratory dilutions performed to obtain concentrations within the linear calibration range. Overall, sample dilutions were performed in accordance with method requirements and were based on historical data.

Data completeness was calculated as 99%, exceeding the 95% requirement established in the QAPP.

O'BRIEN & GERE ENGINEERS, INC.

Table 1
Sullivan's Ledge Superfund Site
Ground Water Samples
Method 8260B Volatile Organic Compound Data

Compound	Sample ID	BEI-1	BEI-2	BEI-3	ECJ-1-120' 1100	ECJ-1-145' 0930	ECJ-1-265' 1350	ECJ-1-35' 1635	ECJ-1-60' 1520	ECJ-1-70' 1500	ECJ-2-117' 12:25
	SDG ID	L0102477	L0102477	L0102477	L0102625	L0102625	L0102597	L0102627	L0102627	L0102625	L0102727
	Dilution Factor	200	100	100	100	1000	2	20	100	400	400
	Sample Date	03/21/01	03/21/01	03/21/01	03/24/01	03/24/01	03/23/01	03/24/01	03/24/01	03/24/01	03/28/01
	Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
	Matrix	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
1,1,1,2-Tetrachloroethane		500 U	250 U	250 U	250 U	2500 U	5.0 U	50 U	250 U	1000 U	1000 U
1,1,1-Trichloroethane		100 U	50 U	50 U	50 U	500 U	1.0 U	10 U	50 U	200 U	200 U
1,1,2,2-Tetrachloroethane		100 U	50 U	50 U	50 U	500 U	1.0 U	10 U	50 U	200 U	200 U
1,1,2-Trichloroethane		150 U	75 U	75 U	75 U	750 U	1.5 U	15 U	75 U	300 U	300 U
1,1-Dichloroethane		150 U	75 U	75 U	75 U	750 U	1.5 U	15 U	75 U	300 U	300 U
1,1-Dichloroethene		150 U	75 U	75 U	75 U	750 U	1.5 U	15 U	75 U	300 U	300 U
1,1-Dichloropropene		500 U	250 U	250 U	250 U	2500 U	5.0 U	50 U	250 U	1000 U	1000 U
1,2,3-Trichlorobenzene		500 U	250 U	250 U	250 U	2500 U	5.0 U	50 U	250 U	1000 U	1000 U
1,2,3-Trichloropropane		1000 U	500 U	500 U	500 U	5000 U	10 U	100 U	500 U	2000 U	2000 U
1,2,4-Trichlorobenzene		500 U	250 U	250 U	250 U	2500 U	5.0 U	50 U	250 U	1000 U	1000 U
Benzene, 1,2,4-trimethyl		500 U	250 U	250 U	250 U	2500 U	5.0 U	50 U	250 U	1000 U	1000 U
Dibromochloropropane		500 U	250 U	250 U	250 U	2500 U	5.0 U	50 U	250 U	1000 U	1000 U
1,2-Dibromoethane (EDB)		500 U	250 U	250 U	250 U	2500 U	5.0 U	50 U	250 U	1000 U	1000 U
1,2-Dichlorobenzene		500 U	250 U	250 U	250 U	2500 U	5.0 U	50 U	250 U	1000 U	1000 U
1,2-Dichloroethane		100 U	50 U	50 U	50 U	500 U	1.0 U	10 U	50 U	200 U	200 U
1,2-Dichloropropane		350 U	180 U	180 U	180 U	1800 U	3.5 U	35 U	180 U	700 U	700 U
Benzene, 1,3,5-trimethyl-		500 U	250 U	250 U	250 U	2500 U	5.0 U	50 U	250 U	1000 U	1000 U
1,3-Dichlorobenzene		500 U	250 U	250 U	250 U	2500 U	5.0 U	50 U	250 U	1000 U	1000 U
1,3-Dichloropropane		500 U	250 U	250 U	250 U	2500 U	5.0 U	50 U	250 U	1000 U	1000 U
1,4-Dichlorobenzene		500 U	250 U	250 U	250 U	2500 U	5.0 U	50 U	250 U	1000 U	1000 U
1,4-Dichlorobutane		1000 U	500 U	500 U	500 U	5000 U	10 U	100 U	500 U	2000 U	2000 U
2,2-Dichloropropane		500 U	250 U	250 U	250 U	2500 U	5.0 U	50 U	250 U	1000 U	1000 U
2-Butanone (MEK)		1000 U	500 U	500 U	500 U	5000 UJ	10 U	100 U	500 U	2000 U	2000 U
2-Hexanone		1000 U	500 U	500 U	500 U	5000 U	10 U	100 U	500 U	2000 U	2000 U
4-Methyl-2-pentanone (MIBK)		1000 U	500 U	500 U	500 U	5000 U	10 U	100 U	500 U	2000 U	2000 U
Acetone		1000 U	500 UJ	500 UJ	500 UJ	5000 U	10 UJ	100 UJ	500 UJ	2000 UJ	2000 UJ
Acrolein		2500 U	1200 U	1200 U	1200 U	12000 U	25 U	250 U	1200 U	5000 U	5000 U
Acrylonitrile		1000 U	500 U	500 U	500 U	5000 U	10 U	100 U	500 U	2000 U	2000 U
Benzene		100 U	120	50 U	290	500 U	1.0 U	10 U	50 U	200 U	200 U
Bromobenzene		500 U	250 U	250 U	250 U	2500 U	5.0 U	50 U	250 U	1000 U	1000 U
Bromochloromethane		500 U	250 U	250 U	250 U	2500 U	5.0 U	50 U	250 U	1000 U	1000 U
Bromodichloromethane		100 U	50 U	50 U	50 U	500 U	1.0 U	10 U	50 U	200 U	200 U
Bromoform		100 U	50 U	50 U	50 U	500 U	1.0 U	10 U	50 U	200 U	200 U
Bromomethane		200 UJ	100 UJ	100 UJ	100 UJ	1000 UJ	2.0 UJ	20 UJ	100 UJ	400 UJ	400 UJ
Carbon disulfide		1000 U	500 U	500 U	500 U	5000 U	10 U	100 U	500 U	2000 U	2000 U

NOTES: U - not detected, J - estimated value, R - unusable, — - not analyzed.
Dup - references blind field duplicate sample that was collected. Lab Dup - laboratory duplicate analyses conducted.

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O'BRIEN & GERE ENGINEERS, INC.

Table 1
Sullivan's Ledge Superfund Site
Ground Water Samples
Method 8260B Volatile Organic Compound Data

	Sample ID	BEI-1	BEI-2	BEI-3	ECJ-1-120' 1100	ECJ-1-145' 0930	ECJ-1-265' 1350	ECJ-1-35' 1635	ECJ-1-60' 1520	ECJ-1-70' 1500	ECJ-2-117' 12:25
	SDG ID	L0102477	L0102477	L0102477	L0102625	L0102625	L0102597	L0102627	L0102627	L0102625	L0102727
	Dilution Factor	200	100	100	100	1000	2	20	100	400	400
	Sample Date	03/21/01	03/21/01	03/21/01	03/24/01	03/24/01	03/23/01	03/24/01	03/24/01	03/24/01	03/28/01
	Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Compound	Matrix	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Carbon tetrachloride		100 U	50 U	50 U	50 U	500 U	1.0 U	10 U	50 U	200 U	200 U
Chlorobenzene		350 U	180 U	180 U	180 U	1800 U	3.5 U	35 U	180 U	700 U	700 U
Chloroethane		200 U	100 U	100 U	100 U	1000 U	2.0 U	20 U	100 U	400 U	400 U
Chloroform		150 U	75 U	75 U	75 U	750 U	1.5 U	15 U	75 U	300 U	300 U
Chloromethane		1000 U	500 U	500 U	500 U	5000 U	10 U	100 U	500 U	2000 U	2000 U
Dibromochloromethane		100 U	50 U	50 U	50 U	500 U	1.0 U	10 U	50 U	200 U	200 U
Dibromomethane		1000 U	500 U	500 U	500 U	5000 U	10 U	100 U	500 U	2000 U	2000 U
Dichlorodifluoromethane		1000 U	500 U	500 U	500 U	5000 U	10 U	100 U	500 U	2000 U	2000 U
Diethyl ether		2500 U	1200 U	1200 U	1200 U	12000 U	25 U	250 U	1200 U	5000 U	5000 U
Ethyl methacrylate		1000 U	500 U	500 U	500 U	5000 U	10 U	100 U	500 U	2000 U	2000 U
Ethylbenzene		1100	290	50 U	450	3200	2.9	10 U	50 U	680	850
Hexachlorobutadiene		500 U	250 U	250 U	250 U	2500 U	5.0 U	50 U	250 U	1000 U	1000 U
Methyl iodide		1000 U	500 U	500 U	500 UJ	5000 U	10 U	100 UJ	500 UJ	2000 UJ	2000 UJ
Isopropylbenzene		500 U	250 U	250 U	250 U	2500 U	5.0 U	50 U	250 U	1000 U	1000 U
Methyl tert butyl ether		400 U	200 U	200 U	200 U	2000 U	4.0 U	40 U	200 U	800 U	800 U
Methylene chloride		500 U	250 U	250 U	250 U	2500 U	5.0 U	50 U	250 U	1000 U	1000 U
Naphthalene		500 U	250 U	250 U	250 U	2500 U	5.0 U	50 U	250 U	1000 U	1000 U
Styrene		100 U	50 U	50 U	50 U	500 U	1.0 U	10 U	50 U	200 U	200 U
Tetrachloroethene		100 U	50 U	50 U	50 U	500 U	1.0 U	10 U	50 U	200 U	200 U
Tetrahydrofuran		2000 U	1000 U	1000 U	1000 U	10000 U	20 U	200 U	1000 U	4000 U	4000 U
Toluene		960	76	75 U	92	2700	2.2	15 U	75 U	300 U	880
Trichloroethene		13000	160	2600	50 U	500 U	33	10 U	50 U	200 U	200 U
Trichlorofluoromethane		500 UJ	250 U	250 U	250 U	2500 U	5.0 U	50 U	250 U	1000 U	1000 U
Vinyl acetate		1000 U	500 U	500 U	500 U	5000 U	10 U	100 U	500 U	2000 U	2000 U
Vinyl chloride		490	840	100 U	1200	4700	2.0 U	23	1600	5100	18000
cis-1,2-Dichloroethene		12000	7400	3400	6500	64000	12	86	7700	21000	10000
cis-1,3-Dichloropropylene		100 U	50 U	50 U	50 U	500 U	1.0 U	10 U	50 U	200 U	200 U
n-Butylbenzene		500 U	250 U	250 U	250 U	2500 U	5.0 U	50 U	250 U	1000 U	1000 U
n-Propylbenzene		500 U	250 U	250 U	250 U	2500 U	5.0 U	50 U	250 U	1000 U	1000 U
2-Chlorotoluene		500 U	250 U	250 U	250 U	2500 U	5.0 U	50 U	250 U	1000 U	1000 U
o-Xylene		100 U	50 U	50 U	50 U	500 U	1.0 U	10 U	50 U	200 U	200 U
4-Chlorotoluene		500 U	250 U	250 U	250 U	2500 U	5.0 U	50 U	250 U	1000 U	1000 U
p-Isopropyltoluene		500 U	250 U	250 U	250 U	2500 U	5.0 U	50 U	250 U	1000 U	1000 U
m,p-Xylenes		100 U	50 U	50 U	50 U	500 U	1.0 U	10 U	50 U	200 U	200 U
sec-Butylbenzene		500 U	250 U	250 U	250 U	2500 U	5.0 U	50 U	250 U	1000 U	1000 U

NOTES: U - not detected, J - estimated value, R - unusable, --- - not analyzed.
Dup - references blind field duplicate sample that was collected. Lab Dup - laboratory duplicate analyses conducted.

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O'BRIEN & GERE ENGINEERS, INC.

Table 1
Sullivan's Ledge Superfund Site
Ground Water Samples
Method 8260B Volatile Organic Compound Data

	Sample ID	BEI-1	BEI-2	BEI-3	ECJ-1-120' 1100	ECJ-1-145' 0930	ECJ-1-265' 1350	ECJ-1-35' 1635	ECJ-1-60' 1520	ECJ-1-70' 1500	ECJ-2-117' 12:25
	SDG ID	L0102477	L0102477	L0102477	L0102625	L0102625	L0102597	L0102627	L0102627	L0102625	L0102727
	Dilution Factor	200	100	100	100	1000	2	20	100	400	400
	Sample Date	03/21/01	03/21/01	03/21/01	03/24/01	03/24/01	03/23/01	03/24/01	03/24/01	03/24/01	03/28/01
	Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Compound	Matrix	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
tert-Butylbenzene		500 U	250 U	250 U	250 U	2500 U	5.0 U	50 U	250 U	1000 U	1000 U
trans-1,2-Dichloroethene		150 U	75 U	75 U	75 U	750 U	1.5 U	15 U	110	300 U	300 U
trans-1,3-Dichloropropene		100 U	50 U	50 U	50 U	500 U	1.0 U	10 U	50 U	200 U	200 U
trans-1,4-Dichloro-2-butene		500 U	250 U	250 U	250 U	2500 U	5.0 U	50 U	250 U	1000 U	1000 U

NOTES: U - not detected, J - estimated value, R - unusable, — - not analyzed.
Dup - references blind field duplicate sample that was collected. Lab Dup - laboratory duplicate analyses conducted.

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O'BRIEN & GERE ENGINEERS, INC.

Table 1
Sullivan's Ledge Superfund Site
Ground Water Samples
Method 8260B Volatile Organic Compound Data

Compound	Sample ID	ECJ-2-152' 10:35	ECJ-2-187' 8:55	ECJ-2-47' 0910	ECJ-2-47' Dup	ECJ-2-82' 15:10	ECJ-3-103' 11:15	ECJ-3-138' 10:10	ECJ-3-63' 14:15	ECJ-4-130' 16:00	ECJ-4-130' Dup
	SDG ID	L0102727	L0102727	L0102765	L0102765	L0102727	L0102960	L0102960	L0102960	L0102674	L0102674
	Dilution Factor	50	100	40	40	200	1	1	10	1	1
	Sample Date	03/28/01	03/28/01	03/29/01	03/29/01	03/28/01	04/03/01	04/03/01	04/03/01	03/26/01	03/26/01
	Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
	Matrix	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
1,1,1,2-Tetrachloroethane		120 U	250 U	100 U	100 U	500 U	2.5 U	2.5 U	25 U	2.5 U	2.5 U
1,1,1-Trichloroethane		25 U	50 U	20 U	20 U	100 U	0.50 U	0.50 U	5.0 U	0.50 U	0.50 U
1,1,2,2-Tetrachloroethane		25 U	50 U	20 U	20 U	100 U	0.50 U	0.50 U	5.0 U	0.50 U	0.50 U
1,1,2-Trichloroethane		38 U	75 U	30 U	30 U	150 U	0.75 U	0.75 U	7.5 U	0.75 U	0.75 U
1,1-Dichloroethane		38 U	75 U	30 U	30 U	150 U	0.75 U	0.75 U	7.5 U	0.75 U	0.75 U
1,1-Dichloroethene		38 U	75 U	30 U	30 U	150 U	0.75 U	0.75 U	7.5 U	0.75 U	0.75 U
1,1-Dichloropropene		120 U	250 U	100 U	100 U	500 U	2.5 U	2.5 U	25 U	2.5 U	2.5 U
1,2,3-Trichlorobenzene		120 U	250 U	100 U	100 U	500 U	2.5 U	2.5 U	25 U	2.5 U	2.5 U
1,2,3-Trichloropropane		250 U	500 U	200 U	200 U	1000 U	5.0 U	5.0 U	50 U	5.0 U	5.0 U
1,2,4-Trichlorobenzene		120 U	250 U	100 U	100 U	500 U	2.5 U	2.5 U	25 U	2.5 U	2.5 U
Benzene, 1,2,4-trimethyl		120 U	250 U	100 U	100 U	500 U	2.5 U	2.5 U	25 U	2.5 U	2.5 U
Dibromochloropropane		120 U	250 U	100 U	100 U	500 U	2.5 U	2.5 U	25 U	2.5 U	2.5 U
1,2-Dibromoethane (EDB)		120 U	250 U	100 U	100 U	500 U	2.5 U	2.5 U	25 U	2.5 U	2.5 U
1,2-Dichlorobenzene		120 U	250 U	100 U	100 U	500 U	2.5 U	2.5 U	25 U	2.5 U	2.5 U
1,2-Dichloroethane		25 U	50 U	20 U	20 U	100 U	0.50 U	0.50 U	5.0 U	0.50 U	0.50 U
1,2-Dichloropropane		88 U	180 U	70 U	70 U	350 U	1.8 U	1.8 U	18 U	1.8 U	1.8 U
Benzene, 1,3,5-trimethyl-		120 U	250 U	100 U	100 U	500 U	2.5 U	2.5 U	25 U	2.5 U	2.5 U
1,3-Dichlorobenzene		120 U	250 U	100 U	100 U	500 U	2.5 U	2.5 U	25 U	2.5 U	2.5 U
1,3-Dichloropropane		120 U	250 U	100 U	100 U	500 U	2.5 U	2.5 U	25 U	2.5 U	2.5 U
1,4-Dichlorobenzene		120 U	250 U	100 U	100 U	500 U	2.5 U	2.5 U	25 U	2.5 U	2.5 U
1,4-Dichlorobutane		250 U	500 U	200 U	200 U	1000 U	5.0 U	5.0 U	50 U	5.0 U	5.0 U
2,2-Dichloropropane		120 U	250 U	100 U	100 U	500 U	2.5 U	2.5 U	25 U	2.5 U	2.5 U
2-Butanone (MEK)		250 U	500 U	200 U	200 U	1000 U	5.0 UJ	5.0 UJ	50 UJ	5.0 U	5.0 U
2-Hexanone		250 U	500 U	200 U	200 U	1000 U	5.0 UJ	5.0 UJ	50 UJ	5.0 U	5.0 U
4-Methyl-2-pentanone (MIBK)		880	500 U	200 U	200 U	1000 U	5.0 U	5.0 U	50 U	5.0 U	5.0 U
Acetone		250 UJ	500 UJ	200 UJ	200 UJ	1000 U	5.0 UJ	5.0 UJ	50 UJ	5.0 U	5.0 U
Acrolein		620 U	1200 U	500 U	500 U	2500 U	12 UJ	12 UJ	120 UJ	12 U	12 U
Acrylonitrile		250 U	500 U	200 U	200 U	1000 U	5.0 U	5.0 U	50 U	5.0 U	5.0 U
Benzene		35	50 U	20 U	20 U	100 U	0.50 U	0.50 U	5.0 U	0.50 U	0.50 U
Bromobenzene		120 U	250 U	100 U	100 U	500 U	2.5 U	2.5 U	25 U	2.5 U	2.5 U
Bromochloromethane		120 U	250 U	100 U	100 U	500 U	2.5 U	2.5 U	25 U	2.5 U	2.5 U
Bromodichloromethane		25 U	50 U	20 U	20 U	100 U	0.50 U	0.50 U	5.0 U	0.50 U	0.50 U
Bromoform		25 U	50 U	20 U	20 U	100 U	0.50 U	0.50 U	5.0 U	0.50 U	0.50 U
Bromomethane		50 UJ	100 UJ	40 UJ	40 UJ	200 UJ	1.0 UJ	1.0 UJ	10 UJ	1.0 UJ	1.0 UJ
Carbon disulfide		250 U	500 U	200 U	200 U	1000 U	5.0 U	5.0 U	50 U	5.0 U	5.0 U

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O'BRIEN & GERE ENGINEERS, INC.

Table 1
Sullivan's Ledge Superfund Site
Ground Water Samples
Method 8260B Volatile Organic Compound Data

Compound	Sample ID	ECJ-2-152' 10:35	ECJ-2-187' 8:55	ECJ-2-47' 0910	ECJ-2-47' Dup	ECJ-2-82' 15:10	ECJ-3-103' 11:15	ECJ-3-138' 10:10	ECJ-3-63' 14:15	ECJ-4-130' 16:00	ECJ-4-130' Dup
	SDG ID	L0102727	L0102727	L0102765	L0102765	L0102727	L0102960	L0102960	L0102960	L0102674	L0102674
	Dilution Factor	50	100	40	40	200	1	1	10	1	1
	Sample Date	03/28/01	03/28/01	03/29/01	03/29/01	03/28/01	04/03/01	04/03/01	04/03/01	03/26/01	03/26/01
	Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
	Matrix	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Carbon tetrachloride		25 U	50 U	20 U	20 U	100 U	0.50 U	0.50 U	5.0 U	0.50 U	0.50 U
Chlorobenzene		88 U	180 U	70 U	70 U	350 U	1.8 U	1.8 U	18 U	1.8 U	1.8 U
Chloroethane		50 U	100 U	40 U	40 U	200 U	1.0 U	1.0 U	10 U	1.0 U	1.0 U
Chloroform		38 U	75 U	30 U	30 U	150 U	0.75 U	0.75 U	15	0.75 U	0.75 U
Chloromethane		250 U	500 U	200 U	200 U	1000 U	5.0 U	5.0 U	50 U	5.0 U	5.0 U
Dibromochloromethane		25 U	50 U	20 U	20 U	100 U	0.50 U	0.50 U	5.0 U	0.50 U	0.50 U
Dibromomethane		250 U	500 U	200 U	200 U	1000 U	5.0 U	5.0 U	50 U	5.0 U	5.0 U
Dichlorodifluoromethane		250 U	500 U	200 U	200 U	1000 U	5.0 U	5.0 U	50 U	5.0 U	5.0 U
Diethyl ether		620 U	1200 U	500 U	500 U	2500 U	12 U	12 U	120 U	12 U	12 U
Ethyl methacrylate		250 U	500 U	200 U	200 U	1000 U	5.0 U	5.0 U	50 U	5.0 U	5.0 U
Ethylbenzene		69	130	20 U	20 U	710	0.50 U	0.50 U	5.0 U	0.50 U	0.50 U
Hexachlorobutadiene		120 U	250 U	100 U	100 U	500 U	2.5 U	2.5 U	25 U	2.5 U	2.5 U
Methyl iodide		250 UJ	500 UJ	200 UJ	200 UJ	1000 U	5.0 U	5.0 U	50 U	5.0 UJ	5.0 UJ
Isopropylbenzene		120 U	250 U	100 U	100 U	500 U	2.5 U	2.5 U	25 U	2.5 U	2.5 U
Methyl tert butyl ether		100 U	200 U	80 U	80 U	400 U	2.0 U	2.0 U	20 U	2.0 U	2.0 U
Methylene chloride		120 U	250 U	100 U	100 U	500 U	2.5 U	2.5 U	25 U	2.5 U	2.5 U
Naphthalene		120 U	250 U	100 U	100 U	500 U	2.5 U	2.5 U	25 U	2.5 U	2.5 U
Styrene		25 U	50 U	20 U	20 U	100 U	0.50 U	0.50 U	5.0 U	0.50 U	0.50 U
Tetrachloroethene		25 U	50 U	20 U	20 U	100 U	0.50 U	0.50 U	5.0 U	0.50 U	0.50 U
Tetrahydrofuran		500 U	1000 U	400 U	400 U	2000 U	10 U	10 U	100 U	10 U	10 U
Toluene		230	110	30 U	30 U	740	0.75 U	0.75 U	7.5 U	0.75 U	0.75 U
Trichloroethene		25 U	50 U	20 J	89 J	100 U	0.50 U	0.50 U	5.0 U	0.50 U	0.50 U
Trichlorofluoromethane		120 U	250 U	100 U	100 U	500 U	2.5 U	2.5 U	25 U	2.5 U	2.5 U
Vinyl acetate		250 U	500 U	200 U	200 U	1000 U	5.0 U	5.0 U	50 U	5.0 U	5.0 U
Vinyl chloride		3200	1300	200	210	14000	1.0 U	1.0 U	10 U	1.0 U	1.0 U
cis-1,2-Dichloroethene		180	2900	1700	1700	530	0.50 U	0.50 U	5.0 U	0.50 U	0.50 U
cis-1,3-Dichloropropylene		25 U	50 U	20 U	20 U	100 U	0.50 U	0.50 U	5.0 U	0.50 U	0.50 U
n-Butylbenzene		120 U	250 U	100 U	100 U	500 U	2.5 U	2.5 U	25 U	2.5 U	2.5 U
n-Propylbenzene		120 U	250 U	100 U	100 U	500 U	2.5 U	2.5 U	25 U	2.5 U	2.5 U
2-Chlorotoluene		120 U	250 U	100 U	100 U	500 U	2.5 U	2.5 U	25 U	2.5 U	2.5 U
o-Xylene		25 U	50 U	20 U	20 U	100 U	0.50 U	0.50 U	5.0 U	0.50 U	0.50 U
4-Chlorotoluene		120 U	250 U	100 U	100 U	500 U	2.5 U	2.5 U	25 U	2.5 U	2.5 U
p-Isopropyltoluene		120 U	250 U	100 U	100 U	500 U	2.5 U	2.5 U	25 U	2.5 U	2.5 U
m,p-Xylenes		25 U	50 U	20 U	20 U	100 U	0.50 U	0.50 U	5.0 U	0.50 U	0.50 U
sec-Butylbenzene		120 U	250 U	100 U	100 U	500 U	2.5 U	2.5 U	25 U	2.5 U	2.5 U

NOTES: U - not detected, J - estimated value, R - unusable, — - not analyzed.
Dup - references blind field duplicate sample that was collected. Lab Dup - laboratory duplicate analyses conducted.

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O'BRIEN & GERE ENGINEERS, INC.

Table 1
Sullivan's Ledge Superfund Site
Ground Water Samples
Method 8260B Volatile Organic Compound Data

Compound	Sample ID	ECJ-2-152' 10:35	ECJ-2-187' 8:55	ECJ-2-47' 0910	ECJ-2-47' Dup	ECJ-2-82' 15:10	ECJ-3-103' 11:15	ECJ-3-138' 10:10	ECJ-3-63' 14:15	ECJ-4-130' 16:00	ECJ-4-130' Dup
	SDG ID	L0102727	L0102727	L0102765	L0102765	L0102727	L0102960	L0102960	L0102960	L0102674	L0102674
	Dilution Factor	50	100	40	40	200	1	1	10	1	1
	Sample Date	03/28/01	03/28/01	03/29/01	03/29/01	03/28/01	04/03/01	04/03/01	04/03/01	03/26/01	03/26/01
	Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
	Matrix	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
tert-Butylbenzene		120 U	250 U	100 U	100 U	500 U	2.5 U	2.5 U	25 U	2.5 U	2.5 U
trans-1,2-Dichloroethene		38 U	75 U	30 U	30 U	150 U	0.75 U	0.75 U	7.5 U	0.75 U	0.75 U
trans-1,3-Dichloropropene		25 U	50 U	20 U	20 U	100 U	0.50 U	0.50 U	5.0 U	0.50 U	0.50 U
trans-1,4-Dichloro-2-butene		120 U	250 U	100 U	100 U	500 U	2.5 U	2.5 U	25 U	2.5 U	2.5 U

NOTES: U - not detected, J - estimated value, R - unusable, --- - not analyzed.
Dup - references blind field duplicate sample that was collected. Lab Dup - laboratory duplicate analyses conducted.

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O'BRIEN & GERE ENGINEERS, INC.

Table 1
Sullivan's Ledge Superfund Site
Ground Water Samples
Method 8260B Volatile Organic Compound Data

Compound	Sample ID	ECJ-4-160' 14:40	ECJ-4-225' 11:40	ECJ-4-245' 10:00	ECJ-4-60' 11:30	ECJ-4-85' 9:50	EQUIPMENT BLANK	GCA-1	MW-10	MW-10A	MW-10B
	SDG ID	L0102629	L0102629	L0102629	L0102730	L0102730	L0102765	L0102627	L0102479	L0102674	L0102479
	Dilution Factor	1	1	1	1	1	1	1	1	1	1
	Sample Date	03/26/01	03/26/01	03/26/01	03/27/01	03/27/01	03/29/01	03/23/01	03/21/01	03/27/01	03/21/01
	Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
	Matrix	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
1,1,1,2-Tetrachloroethane		2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
1,1,1-Trichloroethane		0.5 U	0.5 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,1,2,2-Tetrachloroethane		0.5 U	0.5 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,1,2-Trichloroethane		0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1-Dichloroethane		0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1-Dichloroethene		0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1-Dichloropropene		2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
1,2,3-Trichlorobenzene		2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
1,2,3-Trichloropropane		5 U	5 U	5 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
1,2,4-Trichlorobenzene		2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Benzene, 1,2,4-trimethyl		2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Dibromochloropropane		2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
1,2-Dibromoethane (EDB)		2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
1,2-Dichlorobenzene		2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
1,2-Dichloroethane		0.5 U	0.5 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
1,2-Dichloropropane		1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U
Benzene, 1,3,5-trimethyl-		2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
1,3-Dichlorobenzene		2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
1,3-Dichloropropane		2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
1,4-Dichlorobenzene		2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	7.8	2.5 U	2.5 U	2.5 U
1,4-Dichlorobutane		5 U	5 U	5 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2,2-Dichloropropane		2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
2-Butanone (MEK)		5 U	5 U	5 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	6.7	5.0 U
2-Hexanone		5 U	5 U	5 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
4-Methyl-2-pentanone (MIBK)		5 U	5 U	5 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Acetone		5 UJ	5 UJ	5 UJ	5.0 U	5.0 U	5.0 U	5.0 UJ	5.0 UJ	5.0 U	5.0 UJ
Acrolein		12 U	12 U	12 U	12 U	12 U	12 U	12 U	12 U	12 U	12 U
Acrylonitrile		17	5 U	5 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Benzene		0.52	0.5 U	0.5 U	0.50 U	0.50 U	0.50 U	56	0.50 U	0.50 U	0.50 U
Bromobenzene		2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Bromochloromethane		2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Bromodichloromethane		0.5 U	0.5 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Bromoform		0.5 U	0.5 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Bromomethane		1 UJ	1 UJ	1 UJ	1.0 UJ	1.0 UJ	1.0 U	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ
Carbon disulfide		5 U	5 U	5 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U

NOTES: U - not detected, J - estimated value, R - unusable, — - not analyzed.
Dup - references blind field duplicate sample that was collected. Lab Dup - laboratory duplicate analyses conducted.

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O'BRIEN & GERE ENGINEERS, INC.

Table 1
Sullivan's Ledge Superfund Site
Ground Water Samples
Method 8260B Volatile Organic Compound Data

Compound	Sample ID	ECJ-4-160' 14:40	ECJ-4-225' 11:40	ECJ-4-245' 10:00	ECJ-4-60' 11:30	ECJ-4-85' 9:50	EQUIPMENT BLANK	GCA-1	MW-10	MW-10A	MW-10B
	SDG ID	L0102629	L0102629	L0102629	L0102730	L0102730	L0102765	L0102627	L0102479	L0102674	L0102479
	Dilution Factor	1	1	1	1	1	1	1	1	1	1
	Sample Date	03/26/01	03/26/01	03/26/01	03/27/01	03/27/01	03/29/01	03/23/01	03/21/01	03/27/01	03/21/01
	Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
	Matrix	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Carbon tetrachloride		0.5 U	0.5 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Chlorobenzene		1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	40	1.8 U	1.8 U	1.8 U
Chloroethane		1 U	1 U	1 U	1.0 U	1.0 U	1.0 U	5.3	1.0 U	1.0 U	1.0 U
Chloroform		0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
Chloromethane		5 U	5 U	5 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Dibromochloromethane		0.5 U	0.5 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Dibromomethane		5 U	5 U	5 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Dichlorodifluoromethane		5 U	5 U	5 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Diethyl ether		12 U	12 U	12 U	12 U	12 U	12 U	12 U	12 U	12 U	12 U
Ethyl methacrylate		5 U	5 U	5 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Ethylbenzene		2.7	1.7	2.3	0.50 U	0.50 U	0.50 U	2.3	0.50 U	0.50 U	0.50 U
Hexachlorobutadiene		2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Methyl iodide		5 UJ	5 UJ	5 UJ	5.0 UJ	5.0 UJ	5.0 U	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ
Isopropylbenzene		2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	10	2.5 U	2.5 U	2.5 U
Methyl tert butyl ether		2 U	2 U	2 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Methylene chloride		2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Naphthalene		2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Styrene		6	0.5 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Tetrachloroethene		0.5 U	0.5 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Tetrahydrofuran		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	29	10 U
Toluene		0.75 U	0.75	0.75 U	0.75 U	0.75 U	0.75 U	0.92	0.75 U	0.75 U	0.75 U
Trichloroethene		0.5 U	0.5 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	4.1	0.50 U	4.4
Trichlorofluoromethane		2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Vinyl acetate		5 U	5 U	5 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Vinyl chloride		1.7	1.2	1 U	1.0 U	1.0 U	1.0 U	19	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene		0.92 U	0.68 U	2.8 U	0.66 U	0.50 U	1.2	45	8.8	1.1	9.2
cis-1,3-Dichloropropylene		0.5 U	0.5 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
n-Butylbenzene		2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
n-Propylbenzene		2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
2-Chlorotoluene		2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
o-Xylene		0.5 U	0.5 U	0.5 U	0.50 U	0.50 U	0.50 U	1.1	0.50 U	0.50 U	0.50 U
4-Chlorotoluene		2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
p-Isopropyltoluene		2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
m,p-Xylenes		0.5 U	0.5 U	0.5 U	0.50 U	0.50 U	0.50 U	3.3	0.50 U	0.50 U	0.50 U
sec-Butylbenzene		2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U

NOTES: U - not detected, J - estimated value, R - unusable, — - not analyzed.
Dup - references blind field duplicate sample that was collected. Lab Dup - laboratory duplicate analyses conducted.

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O'BRIEN & GERE ENGINEERS, INC.

Table 1
Sullivan's Ledge Superfund Site
Ground Water Samples
Method 8260B Volatile Organic Compound Data

	Sample ID	ECJ-4-160' 14:40	ECJ-4-225' 11:40	ECJ-4-245' 10:00	ECJ-4-60' 11:30	ECJ-4-85' 9:50	EQUIPMENT BLANK	GCA-1	MW-10	MW-10A	MW-10B
	SDG ID	L0102629	L0102629	L0102629	L0102730	L0102730	L0102765	L0102627	L0102479	L0102674	L0102479
	Dilution Factor	1	1	1	1	1	1	1	1	1	1
	Sample Date	03/26/01	03/26/01	03/26/01	03/27/01	03/27/01	03/29/01	03/23/01	03/21/01	03/27/01	03/21/01
	Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Compound	Matrix	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
tert-Butylbenzene		2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
trans-1,2-Dichloroethene		0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U
trans-1,3-Dichloropropene		0.5 U	0.5 U	0.5 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
trans-1,4-Dichloro-2-butene		2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U

NOTES: U - not detected, J - estimated value, R - unusable, --- - not analyzed.
Dup - references blind field duplicate sample that was collected. Lab Dup - laboratory duplicate analyses conducted.

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O'BRIEN & GERE ENGINEERS, INC.

Table 1
Sullivan's Ledge Superfund Site
Ground Water Samples
Method 8260B Volatile Organic Compound Data

	Sample ID	MW-12AR	MW-13	MW-13A	MW-14	MW-15	MW-16	MW-17	MW-2	MW-22A	MW-24
	SDG ID	L0102630	L0102597	L0102597	L0102408	L0102408	L0102479	L0102674	L0102408	L0102674	L0102408
	Dilution Factor	2	1	1	20	2	1	1	20	10	100
	Sample Date	03/26/01	03/23/01	03/23/01	03/19/01	03/19/01	03/21/01	03/27/01	03/19/01	03/27/01	03/19/01
	Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Compound	Matrix	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
1,1,1,2-Tetrachloroethane		5.0 U	2.5 U	2.5 U	50 U	5.0 U	2.5 U	2.5 U	50 U	25 U	250 U
1,1,1-Trichloroethane		1.0 U	0.50 U	0.50 U	10 U	1.0 U	0.50 U	0.50 U	10 U	5.0 U	50 U
1,1,2,2-Tetrachloroethane		1.0 U	0.50 U	0.50 U	10 U	1.0 U	0.50 U	0.50 U	10 U	5.0 U	50 U
1,1,2-Trichloroethane		1.5 U	0.75 U	0.75 U	15 U	1.5 U	0.75 U	0.75 U	15 U	7.5 U	75 U
1,1-Dichloroethane		1.5 U	0.75 U	0.75 U	15 U	1.5 U	0.75 U	0.75 U	15 U	7.5 U	75 U
1,1-Dichloroethene		1.5 U	0.75 U	0.75 U	15 U	1.5 U	0.75 U	0.75 U	15 U	7.5 U	75 U
1,1-Dichloropropene		5.0 U	2.5 U	2.5 U	50 U	5.0 U	2.5 U	2.5 U	50 U	25 U	250 U
1,2,3-Trichlorobenzene		5.0 U	2.5 U	2.5 U	50 U	5.0 U	2.5 U	2.5 U	50 U	25 U	250 U
1,2,3-Trichloropropane		10 U	5.0 U	5.0 U	100 U	10 U	5.0 U	5.0 U	100 U	50 U	500 U
1,2,4-Trichlorobenzene		5.0 U	2.5 U	2.5 U	50 U	5.0 U	2.5 U	2.5 U	50 U	25 U	250 U
Benzene, 1,2,4-trimethyl		5.8	2.5 U	2.5 U	50 U	10	2.5 U	2.5 U	50 U	25 U	250 U
Dibromochloropropane		5.0 U	2.5 U	2.5 U	50 U	5.0 U	2.5 U	2.5 U	50 U	25 U	250 U
1,2-Dibromoethane (EDB)		5.0 U	2.5 U	2.5 U	50 U	5.0 U	2.5 U	2.5 U	50 U	25 U	250 U
1,2-Dichlorobenzene		5.0 U	2.5 U	2.5 U	50 U	5.0 U	2.5 U	2.5 U	50 U	25 U	250 U
* 1,2-Dichloroethane		1.0 U	0.50 U	0.50 U	10 U	1.0 U	0.50 U	0.50 U	10 U	5.0 U	50 U
1,2-Dichloropropane		3.5 U	1.8 U	1.8 U	35 U	3.5 U	1.8 U	1.8 U	35 U	18 U	180 U
Benzene, 1,3,5-trimethyl-		5.0 U	2.5 U	2.5 U	50 U	5.0 U	2.5 U	2.5 U	50 U	25 U	250 U
1,3-Dichlorobenzene		5.0 U	2.5 U	2.5 U	50 U	5.0 U	2.5 U	2.5 U	50 U	25 U	250 U
1,3-Dichloropropane		5.0 U	2.5 U	2.5 U	50 U	5.0 U	2.5 U	2.5 U	50 U	25 U	250 U
1,4-Dichlorobenzene		12	2.5 U	2.5 U	50 U	5.9	2.5 U	2.5 U	50 U	28	250 U
1,4-Dichlorobutane		10 U	5.0 U	5.0 U	100 U	10 U	5.0 U	5.0 U	100 U	50 U	500 U
2,2-Dichloropropane		5.0 U	2.5 U	2.5 U	50 U	5.0 U	2.5 U	2.5 U	50 U	25 U	250 U
2-Butanone (MEK)		10 U	5.0 U	5.0 U	100 U	10 U	5.0 U	5.0 U	100 U	50 U	500 U
2-Hexanone		10 U	5.0 U	5.0 U	100 U	10 U	5.0 U	5.0 U	100 U	50 U	500 U
4-Methyl-2-pentanone (MIBK)		10 U	5.0 U	5.0 U	100 U	10 U	5.0 U	5.0 U	100 U	50 U	500 U
Acetone		10 UJ	5.0 UJ	5.0 UJ	100 U	10 U	5.0 U	5.0 U	100 U	130	500 U
Acrolein		25 U	12 U	12 U	250 U	25 U	12 U	12 U	250 U	120 U	1200 U
Acrylonitrile		10 U	5.0 U	5.0 U	100 U	10 U	5.0 U	5.0 U	100 U	50 U	500 U
Benzene		100	0.50 U	0.50 U	870	100	0.50 U	0.50 U	310	120	5700
Bromobenzene		5.0 U	2.5 U	2.5 U	50 U	5.0 U	2.5 U	2.5 U	50 U	25 U	250 U
Bromochloromethane		5.0 U	2.5 U	2.5 U	50 U	5.0 U	2.5 U	2.5 U	50 U	25 U	250 U
Bromodichloromethane		1.0 U	0.50 U	0.50 U	10 U	1.0 U	0.50 U	0.50 U	10 U	5.0 U	50 U
Bromoform		1.0 U	0.50 U	0.50 U	10 U	1.0 U	0.50 U	0.50 U	10 U	5.0 U	50 U
Bromomethane		2.0 UJ	1.0 UJ	1.0 UJ	20 UJ	2.0 UJ	1.0 UJ	1.0 UJ	20 UJ	10 UJ	100 UJ
Carbon disulfide		10 U	5.0 U	5.0 U	100 U	10 U	5.0 U	5.0 U	100 U	50 U	500 U

NOTES: U - not detected, J - estimated value, R - unusable, --- - not analyzed.
Dup - references blind field duplicate sample that was collected. Lab Dup - laboratory duplicate analyses conducted.

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O'BRIEN & GERE ENGINEERS, INC.

Table 1
Sullivan's Ledge Superfund Site
Ground Water Samples
Method 8260B Volatile Organic Compound Data

Compound	Sample ID	MW-12AR	MW-13	MW-13A	MW-14	MW-15	MW-16	MW-17	MW-2	MW-22A	MW-24
	SDG ID	L0102630	L0102597	L0102597	L0102408	L0102408	L0102479	L0102674	L0102408	L0102674	L0102408
	Dilution Factor	2	1	1	20	2	1	1	20	10	100
	Sample Date	03/26/01	03/23/01	03/23/01	03/19/01	03/19/01	03/21/01	03/27/01	03/19/01	03/27/01	03/19/01
	Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
	Matrix	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Carbon tetrachloride		1.0 U	0.50 U	0.50 U	10 U	1.0 U	0.50 U	0.50 U	10 U	5.0 U	50 U
Chlorobenzene		70	1.8 U	1.8 U	68	4.3	1.8 U	1.8 U	81	140	220
Chloroethane		13	1.0 U	1.0 U	20 U	12	1.0 U	1.0 U	20 U	10 U	100 U
Chloroform		1.5 U	0.75 U	0.75 U	15 U	1.5 U	0.75 U	0.75 U	15 U	7.5 U	75 U
Chloromethane		10 U	5.0 U	5.0 U	100 U	10 U	5.0 U	5.0 U	100 U	50 U	500 U
Dibromochloromethane		1.0 U	0.50 U	0.50 U	10 U	1.0 U	0.50 U	0.50 U	10 U	5.0 U	50 U
Dibromomethane		10 U	5.0 U	5.0 U	100 U	10 U	5.0 U	5.0 U	100 U	50 U	500 U
Dichlorodifluoromethane		10 U	5.0 U	5.0 U	100 U	10 U	5.0 U	5.0 U	100 U	50 U	500 U
Diethyl ether		25 U	12 U	12 U	250 U	25 U	12 U	12 U	250 U	120 U	1200 U
Ethyl methacrylate		10 U	5.0 U	5.0 U	100 U	10 U	5.0 U	5.0 U	100 U	50 U	500 U
Ethylbenzene		1.0 U	0.50 U	0.50 U	10 U	1.0 U	0.50 U	0.50 U	10 U	11	50 U
Hexachlorobutadiene		5.0 U	2.5 U	2.5 U	50 U	5.0 U	2.5 U	2.5 U	50 U	25 U	250 U
Methyl iodide		10 UJ	5.0 U	5.0 U	100 UJ	10 UJ	5.0 UJ	5.0 UJ	100 UJ	50 UJ	500 UJ
Isopropylbenzene		18	2.5 U	2.5 U	50 U	5.0 U	2.5 U	2.5 U	50 U	25 U	250 U
Methyl tert butyl ether		4.0 U	2.0 U	2.0 U	40 U	4.0 U	2.0 U	2.0 U	40 U	20 U	200 U
Methylene chloride		5.0 U	2.5 U	2.5 U	50 U	5.0 U	2.5 U	2.5 U	50 U	25 U	250 U
Naphthalene		5.0 U	2.5 U	2.5 U	93	9.7	2.5 U	2.5 U	50 U	40	250 U
Styrene		1.0 U	0.50 U	0.50 U	10 U	1.0 U	0.50 U	0.50 U	10 U	5.0 U	50 U
Tetrachloroethene		1.0 U	0.50 U	0.50 U	10 U	1.0 U	0.50 U	0.50 U	10 U	5.0 U	50 U
Tetrahydrofuran		20 U	10 U	10 U	200 U	20 U	10 U	10 U	200 U	100 U	1000 U
Toluene		1.5 U	0.75 U	0.75 U	15 U	1.7	0.75 U	0.75 U	15 U	98	75 U
Trichloroethene		1.0 U	0.50 U	0.50 U	10 U	1.0 U	0.50 U	1.2	560	5.0 U	150
Trichlorofluoromethane		5.0 U	2.5 U	2.5 U	50 U	5.0 U	2.5 U	2.5 U	50 U	25 U	250 U
Vinyl acetate		10 U	5.0 U	5.0 U	100 U	10 U	5.0 U	5.0 U	100 U	50 U	500 U
Vinyl chloride		2.0 U	3.8	5.0	20 U	2.0 U	1.0 U	1.0 U	230	10 U	170
cis-1,2-Dichloroethene		1.0 U	3.3	5.2	10 U	1.0 U	0.50 U	0.50 U	1000	5.2	290
cis-1,3-Dichloropropylene		1.0 U	0.50 U	0.50 U	10 U	1.0 U	0.50 U	0.50 U	10 U	5.0 U	50 U
n-Butylbenzene		5.0 U	2.5 U	2.5 U	50 U	5.0 U	2.5 U	2.5 U	50 U	25 U	250 U
n-Propylbenzene		5.0 U	2.5 U	2.5 U	50 U	5.0 U	2.5 U	2.5 U	50 U	25 U	250 U
2-Chlorotoluene		5.0 U	2.5 U	2.5 U	50 U	5.0 U	2.5 U	2.5 U	50 U	25 U	250 U
o-Xylene		2.1	0.50 U	0.50 U	10 U	2.4	0.50 U	0.50 U	10 U	23	50 U
4-Chlorotoluene		5.0 U	2.5 U	2.5 U	50 U	5.0 U	2.5 U	2.5 U	50 U	25 U	250 U
p-Isopropyltoluene		5.0 U	2.5 U	2.5 U	50 U	5.0 U	2.5 U	2.5 U	50 U	25 U	250 U
m,p-Xylenes		8.4	0.50 U	0.50 U	27	6.5	0.50 U	0.50 U	10 U	12	50 U
sec-Butylbenzene		5.0 U	2.5 U	2.5 U	50 U	5.0 U	2.5 U	2.5 U	50 U	25 U	250 U

NOTES: U - not detected, J - estimated value, R - unusable, --- - not analyzed.
Dup - references blind field duplicate sample that was collected. Lab Dup - laboratory duplicate analyses conducted.

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O'BRIEN & GERE ENGINEERS, INC.

Table 1
Sullivan's Ledge Superfund Site
Ground Water Samples
Method 8260B Volatile Organic Compound Data

	Sample ID	MW-12AR	MW-13	MW-13A	MW-14	MW-15	MW-16	MW-17	MW-2	MW-22A	MW-24
	SDG ID	L0102630	L0102597	L0102597	L0102408	L0102408	L0102479	L0102674	L0102408	L0102674	L0102408
	Dilution Factor	2	1	1	20	2	1	1	20	10	100
	Sample Date	03/26/01	03/23/01	03/23/01	03/19/01	03/19/01	03/21/01	03/27/01	03/19/01	03/27/01	03/19/01
	Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Compound	Matrix	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
tert-Butylbenzene		5.0 U	2.5 U	2.5 U	50 U	5.0 U	2.5 U	2.5 U	50 U	25 U	250 U
trans-1,2-Dichloroethene		1.5 U	0.75 U	0.75 U	15 U	1.5 U	0.75 U	0.75 U	15 U	7.5 U	75 U
trans-1,3-Dichloropropene		1.0 U	0.50 U	0.50 U	10 U	1.0 U	0.50 U	0.50 U	10 U	5.0 U	50 U
trans-1,4-Dichloro-2-butene		5.0 U	2.5 U	2.5 U	50 U	5.0 U	2.5 U	2.5 U	50 U	25 U	250 U

NOTES: U - not detected, J - estimated value, R - unusable, --- - not analyzed.
Dup - references blind field duplicate sample that was collected. Lab Dup - laboratory duplicate analyses conducted.

O'BRIEN & GERE ENGINEERS, INC.

Table 1
Sullivan's Ledge Superfund Site
Ground Water Samples
Method 8260B Volatile Organic Compound Data

Compound	Sample ID	MW-4	MW-4A	MW-5	MW-5A	MW-5A Dup	MW-6	MW-6A	MW-6A Dup	MW-8	MW-8A
	SDG ID	L0102674	L0102627	L0102630	L0102630	L0102630	L0102437	L0102437	L0102437	L0102437	L0102437
	Dilution Factor	10	1	1	1	1	40	5	5	1	1
	Sample Date	03/26/01	03/24/01	03/26/01	03/26/01	03/26/01	03/20/01	03/20/01	03/20/01	03/20/01	03/20/01
	Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
	Matrix	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
1,1,1,2-Tetrachloroethane		25 U	2.5 U	2.5 U	2.5 U	2.5 U	100 U	12 U	12 U	2.5 U	2.5 U
1,1,1-Trichloroethane		5.0 U	0.50 U	0.50 U	0.50 U	0.50 U	20 U	2.5 U	2.5 U	0.50 U	0.50 U
1,1,2,2-Tetrachloroethane		5.0 U	0.50 U	0.50 U	0.50 U	0.50 U	20 U	2.5 U	2.5 U	0.50 U	0.50 U
1,1,2-Trichloroethane		7.5 U	0.75 U	0.75 U	0.75 U	0.75 U	30 U	3.8 U	3.8 U	0.75 U	0.75 U
1,1-Dichloroethane		7.5 U	0.75 U	0.75 U	0.75 U	0.75 U	30 U	3.8 U	3.8 U	0.75 U	0.75 U
1,1-Dichloroethene		7.5 U	0.75 U	0.75 U	0.75 U	0.75 U	30 U	3.8 U	3.8 U	0.75 U	0.75 U
1,1-Dichloropropene		25 U	2.5 U	2.5 U	2.5 U	2.5 U	100 U	12 U	12 U	2.5 U	2.5 U
1,2,3-Trichlorobenzene		25 U	2.5 U	2.5 U	2.5 U	2.5 U	100 U	12 U	12 U	2.5 U	2.5 U
1,2,3-Trichloropropane		50 U	5.0 U	5.0 U	5.0 U	5.0 U	200 U	25 U	25 U	5.0 U	5.0 U
1,2,4-Trichlorobenzene		25 U	2.5 U	2.5 U	2.5 U	2.5 U	100 U	12 U	12 U	2.5 U	2.5 U
Benzene, 1,2,4-trimethyl		25 U	2.5 U	2.5 U	2.5 U	2.5 U	100 U	12 U	12 U	2.5 U	2.5 U
Dibromochloropropane		25 U	2.5 U	2.5 U	2.5 U	2.5 U	100 U	12 U	12 U	2.5 U	2.5 U
1,2-Dibromoethane (EDB)		25 U	2.5 U	2.5 U	2.5 U	2.5 U	100 U	12 U	12 U	2.5 U	2.5 U
1,2-Dichlorobenzene		25 U	2.5 U	2.5 U	2.5 U	2.5 U	100 U	12 U	12 U	2.5 U	2.5 U
1,2-Dichloroethane		5.0 U	0.50 U	0.50 U	0.50 U	0.50 U	20 U	2.5 U	2.5 U	0.50 U	0.50 U
1,2-Dichloropropane		18 U	1.8 U	1.8 U	1.8 U	1.8 U	70 U	8.8 U	8.8 U	1.8 U	1.8 U
Benzene, 1,3,5-trimethyl-		25 U	2.5 U	2.5 U	2.5 U	2.5 U	100 U	12 U	12 U	2.5 U	2.5 U
1,3-Dichlorobenzene		25 U	2.5 U	2.5 U	2.5 U	2.5 U	100 U	12 U	12 U	2.5 U	2.5 U
1,3-Dichloropropane		25 U	2.5 U	2.5 U	2.5 U	2.5 U	100 U	12 U	12 U	2.5 U	2.5 U
1,4-Dichlorobenzene		25 U	2.5 U	2.5 U	2.5 U	2.5 U	100 U	12 U	12 U	2.5 U	2.5 U
1,4-Dichlorobutane		50 U	5.0 U	5.0 U	5.0 U	5.0 U	200 U	25 U	25 U	5.0 U	5.0 U
2,2-Dichloropropane		25 U	2.5 U	2.5 U	2.5 U	2.5 U	100 U	12 U	12 U	2.5 U	2.5 U
2-Butanone (MEK)		50 U	5.0 U	5.0 U	5.0 U	5.0 U	200 U	25 U	25 U	5.0 U	5.0 U
2-Hexanone		50 U	5.0 U	5.0 U	5.0 U	5.0 U	200 U	25 U	25 U	5.0 U	5.0 U
4-Methyl-2-pentanone (MIBK)		50 U	5.0 U	5.0 U	5.0 U	5.0 U	200 U	25 U	25 U	5.0 U	5.0 U
Acetone		50 U	5.0 UJ	5.0 UJ	5.0 U	5.0 U	200 U	25 U	25 U	5.0 U	5.0 U
Acrolein		120 U	12 U	12 U	12 U	12 U	500 U	62 U	62 U	12 U	12 U
Acrylonitrile		50 U	5.0 U	5.0 U	5.0 U	5.0 U	200 U	25 U	25 U	5.0 U	5.0 U
Benzene		8.2	0.50 U	0.50 U	0.50 U	0.50 U	20 U	7.5	6.9	0.50 U	0.50 U
Bromobenzene		25 U	2.5 U	2.5 U	2.5 U	2.5 U	100 U	12 U	12 U	2.5 U	2.5 U
Bromochloromethane		25 U	2.5 U	2.5 U	2.5 U	2.5 U	100 U	12 U	12 U	2.5 U	2.5 U
Bromodichloromethane		5.0 U	0.50 U	0.50 U	0.50 U	0.50 U	20 U	2.5 U	2.5 U	0.50 U	0.50 U
Bromoform		5.0 U	0.50 U	0.50 U	0.50 U	0.50 U	20 U	2.5 U	2.5 U	0.50 U	0.50 U
Bromomethane		10 UJ	1.0 UJ	1.0 UJ	1.0 UJ	1.0 UJ	40 UJ	5.0 UJ	5.0 UJ	1.0 UJ	1.0 UJ
Carbon disulfide		50 U	5.0 U	5.0 U	5.0 U	5.0 U	200 U	25 U	25 U	5.0 U	5.0 U

NOTES: U - not detected, J - estimated value, R - unusable, --- - not analyzed.
Dup - references blind field duplicate sample that was collected. Lab Dup - laboratory duplicate analyses conducted.

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O'BRIEN & GERE ENGINEERS, INC.

Table 1
Sullivan's Ledge Superfund Site
Ground Water Samples
Method 8260B Volatile Organic Compound Data

Compound	Sample ID	MW-4	MW-4A	MW-5	MW-5A	MW-5A Dup	MW-6	MW-6A	MW-6A Dup	MW-8	MW-8A
	SDG ID	L0102674	L0102627	L0102630	L0102630	L0102630	L0102437	L0102437	L0102437	L0102437	L0102437
	Dilution Factor	10	1	1	1	1	40	5	5	1	1
	Sample Date	03/26/01	03/24/01	03/26/01	03/26/01	03/26/01	03/20/01	03/20/01	03/20/01	03/20/01	03/20/01
	Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
	Matrix	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Carbon tetrachloride		5.0 U	0.50 U	0.50 U	0.50 U	0.50 U	20 U	2.5 U	2.5 U	0.50 U	0.50 U
Chlorobenzene		18 U	1.8 U	1.8 U	1.8 U	1.8 U	70 U	27	25	1.8 U	1.8 U
Chloroethane		10 U	1.0 U	1.0 U	1.0 U	1.0 U	40 U	5.0 U	5.0 U	1.0 U	1.0 U
Chloroform		7.5 U	0.75 U	0.75 U	0.75 U	0.75 U	30 U	3.8 U	3.8 U	0.75 U	0.75 U
Chloromethane		50 U	5.0 U	5.0 U	5.0 U	5.0 U	200 U	25 U	25 U	5.0 U	5.0 U
Dibromochloromethane		5.0 U	0.50 U	0.50 U	0.50 U	0.50 U	20 U	2.5 U	2.5 U	0.50 U	0.50 U
Dibromomethane		50 U	5.0 U	5.0 U	5.0 U	5.0 U	200 U	25 U	25 U	5.0 U	5.0 U
Dichlorodifluoromethane		50 U	5.0 U	5.0 U	5.0 U	5.0 U	200 U	25 U	25 U	5.0 U	5.0 U
Diethyl ether		120 U	12 U	12 U	12 U	12 U	500 U	62 U	62 U	12 U	12 U
Ethyl methacrylate		50 U	5.0 U	5.0 U	5.0 U	5.0 U	200 U	25 U	25 U	5.0 U	5.0 U
Ethylbenzene		5.0 U	0.50 U	0.50 U	0.50 U	0.50 U	20 U	2.5 U	2.5 U	0.50 U	0.50 U
Hexachlorobutadiene		25 U	2.5 U	2.5 U	2.5 U	2.5 U	100 U	12 U	12 U	2.5 U	2.5 U
Methyl iodide		50 UJ	5.0 UJ	5.0 UJ	5.0 UJ	5.0 UJ	200 UJ	25 UJ	25 UJ	5.0 UJ	5.0 UJ
Isopropylbenzene		25 U	2.5 U	2.5 U	2.5 U	2.5 U	100 U	12 U	12 U	2.5 U	2.5 U
Methyl tert butyl ether		20 U	2.0 U	6.8	2.0 U	2.0 U	80 U	10 U	10 U	2.0 U	2.0 U
Methylene chloride		25 U	2.5 U	2.5 U	2.5 U	2.5 U	100 U	12 U	12 U	2.5 U	2.5 U
Naphthalene		25 U	2.5 U	2.5 U	2.5 U	2.5 U	100 U	12 U	12 U	2.5 U	2.5 U
Styrene		5.0 U	0.50 U	0.50 U	0.50 U	0.50 U	20 U	2.5 U	2.5 U	0.50 U	0.50 U
Tetrachloroethene		5.0 U	0.50 U	0.50 U	0.50 U	0.50 U	20 U	2.5 U	2.5 U	0.50 U	0.50 U
Tetrahydrofuran		100 U	10 U	10 U	10 U	10 U	400 U	50 U	50 U	10 U	10 U
Toluene		7.5 U	0.75 U	0.75 U	0.75 U	0.75 U	30 U	3.8 U	3.8 U	0.75 U	0.75 U
Trichloroethene		650	0.50 U	0.50 U	0.50 U	0.50 U	20 U	2.5 U	2.5 U	0.50 U	0.50 U
Trichlorofluoromethane		25 U	2.5 U	2.5 U	2.5 U	2.5 U	100 U	12 U	12 U	2.5 U	2.5 U
Vinyl acetate		50 U	5.0 U	5.0 U	5.0 U	5.0 U	200 U	25 U	25 U	5.0 U	5.0 U
Vinyl chloride		36	1.0 U	1.0 U	1.0 U	1.0 U	750	100	99	1.0 U	1.0 U
cis-1,2-Dichloroethene		340	0.50 U	0.50 U	0.50 U	0.50 U	2200	180 J	160	0.50 U	0.50 U
cis-1,3-Dichloropropylene		5.0 U	0.50 U	0.50 U	0.50 U	0.50 U	20 U	2.5 U	2.5 U	0.50 U	0.50 U
n-Butylbenzene		25 U	2.5 U	2.5 U	2.5 U	2.5 U	100 U	12 U	12 U	2.5 U	2.5 U
n-Propylbenzene		25 U	2.5 U	2.5 U	2.5 U	2.5 U	100 U	12 U	12 U	2.5 U	2.5 U
2-Chlorotoluene		25 U	2.5 U	2.5 U	2.5 U	2.5 U	100 U	12 U	12 U	2.5 U	2.5 U
o-Xylene		5.0 U	0.50 U	0.50 U	0.50 U	0.50 U	20 U	2.5 U	2.5 U	0.50 U	0.50 U
4-Chlorotoluene		25 U	2.5 U	2.5 U	2.5 U	2.5 U	100 U	12 U	12 U	2.5 U	2.5 U
p-Isopropyltoluene		25 U	2.5 U	2.5 U	2.5 U	2.5 U	100 U	12 U	12 U	2.5 U	2.5 U
m,p-Xylenes		5.0 U	0.50 U	0.50 U	0.50 U	0.50 U	20 U	2.5 U	2.5 U	0.50 U	0.50 U
sec-Butylbenzene		25 U	2.5 U	2.5 U	2.5 U	2.5 U	100 U	12 U	12 U	2.5 U	2.5 U

NOTES: U - not detected, J - estimated value, R - unusable, — - not analyzed.
Dup - references blind field duplicate sample that was collected. Lab Dup - laboratory duplicate analyses conducted.

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O'BRIEN & GERE ENGINEERS, INC.

Table 1
Sullivan's Ledge Superfund Site
Ground Water Samples
Method 8260B Volatile Organic Compound Data

	Sample ID	MW-4	MW-4A	MW-5	MW-5A	MW-5A Dup	MW-6	MW-6A	MW-6A Dup	MW-8	MW-8A
	SDG ID	L0102674	L0102627	L0102630	L0102630	L0102630	L0102437	L0102437	L0102437	L0102437	L0102437
	Dilution Factor	10	1	1	1	1	40	5	5	1	1
	Sample Date	03/26/01	03/24/01	03/26/01	03/26/01	03/26/01	03/20/01	03/20/01	03/20/01	03/20/01	03/20/01
	Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Compound	Matrix	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
tert-Butylbenzene		25 U	2.5 U	2.5 U	2.5 U	2.5 U	100 U	12 U	12 U	2.5 U	2.5 U
trans-1,2-Dichloroethene		7.5 U	0.75 U	0.75 U	0.75 U	0.75 U	30 U	3.8 U	3.8 U	0.75 U	0.75 U
trans-1,3-Dichloropropene		5.0 U	0.50 U	0.50 U	0.50 U	0.50 U	20 U	2.5 U	2.5 U	0.50 U	0.50 U
trans-1,4-Dichloro-2-butene		25 U	2.5 U	2.5 U	2.5 U	2.5 U	100 U	12 U	12 U	2.5 U	2.5 U

NOTES: U - not detected, J - estimated value, R - unusable, --- - not analyzed.
Dup - references blind field duplicate sample that was collected. Lab Dup - laboratory duplicate analyses conducted.

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O'BRIEN & GERE ENGINEERS, INC.

Table 1
Sullivan's Ledge Superfund Site
Ground Water Samples
Method 8260B Volatile Organic Compound Data

Compound	Sample ID	OBG-1	OBG-2	OBG-3	TRENCH	TRIP BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK 3-19
	SDG ID	L0102477	L0102477	L0102477	L0102477	L0102437	L0102477	L0102629	L0102408
	Dilution Factor	200	50	100	2	1	1	1	1
	Sample Date	03/21/01	03/21/01	03/21/01	03/21/01	03/13/01	03/14/01	03/14/01	03/13/01
	Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
	Matrix	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
1,1,1,2-Tetrachloroethane		500 U	120 U	250 U	5.0 U	2.5 U	2.5 U	2.5 U	2.5 U
1,1,1-Trichloroethane		100 U	25 U	50 U	1.0 U	0.50 U	0.50 U	0.5 U	0.50 U
1,1,2,2-Tetrachloroethane		100 U	25 U	50 U	1.0 U	0.50 U	0.50 U	0.5 U	0.50 U
1,1,2-Trichloroethane		150 U	38 U	75 U	1.5 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1-Dichloroethane		150 U	38 U	75 U	1.5 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1-Dichloroethene		150 U	38 U	75 U	1.5 U	0.75 U	0.75 U	0.75 U	0.75 U
1,1-Dichloropropene		500 U	120 U	250 U	5.0 U	2.5 U	2.5 U	2.5 U	2.5 U
1,2,3-Trichlorobenzene		500 U	120 U	250 U	5.0 U	2.5 U	2.5 U	2.5 U	2.5 U
1,2,3-Trichloropropane		1000 U	250 U	500 U	10 U	5.0 U	5.0 U	5 U	5.0 U
1,2,4-Trichlorobenzene		500 U	120 U	250 U	5.0 U	2.5 U	2.5 U	2.5 U	2.5 U
Benzene, 1,2,4-trimethyl		500 U	120 U	250 U	11	2.5 U	2.5 U	2.5 U	2.5 U
Dibromochloropropane		500 U	120 U	250 U	5.0 U	2.5 U	2.5 U	2.5 U	2.5 U
1,2-Dibromoethane (EDB)		500 U	120 U	250 U	5.0 U	2.5 U	2.5 U	2.5 U	2.5 U
1,2-Dichlorobenzene		500 U	120 U	250 U	5.0 U	2.5 U	2.5 U	2.5 U	2.5 U
1,2-Dichloroethane		100 U	25 U	50 U	1.0 U	0.50 U	0.50 U	0.5 U	0.50 U
1,2-Dichloropropane		350 U	88 U	180 U	3.5 U	1.8 U	1.8 U	1.8 U	1.8 U
Benzene, 1,3,5-trimethyl-		500 U	120 U	250 U	5.0 U	2.5 U	2.5 U	2.5 U	2.5 U
1,3-Dichlorobenzene		500 U	120 U	250 U	5.0 U	2.5 U	2.5 U	2.5 U	2.5 U
1,3-Dichloropropane		500 U	120 U	250 U	5.0 U	2.5 U	2.5 U	2.5 U	2.5 U
1,4-Dichlorobenzene		500 U	120 U	250 U	10	2.5 U	2.5 U	2.5 U	2.5 U
1,4-Dichlorobutane		1000 U	250 U	500 U	10 U	5.0 U	5.0 U	5 U	5.0 U
2,2-Dichloropropane		500 U	120 U	250 U	5.0 U	2.5 U	2.5 U	2.5 U	2.5 U
2-Butanone (MEK)		1000 U	250 U	500 U	10 U	5.0 U	5.0 U	5 U	5.0 U
2-Hexanone		1000 U	250 U	500 U	10 U	5.0 U	5.0 U	5 U	5.0 U
4-Methyl-2-pentanone (MIBK)		1000 U	250 U	500 U	10 U	5.0 U	5.0 U	5 U	5.0 U
Acetone		1000 U	250 U	500 UJ	10 UJ	5.0 U	5.0 U	5 U	5.0 U
Acrolein		2500 U	620 U	1200 U	25 U	12 U	12 U	12 U	12 U
Acrylonitrile		1000 U	250 U	500 U	10 U	5.0 U	5.0 U	5 U	5.0 U
Benzene		270	390	56	90	0.50 U	0.50 U	0.5 U	0.50 U
Bromobenzene		500 U	120 U	250 U	5.0 U	2.5 U	2.5 U	2.5 U	2.5 U
Bromochloromethane		500 U	120 U	250 U	5.0 U	2.5 U	2.5 U	2.5 U	2.5 U
Bromodichloromethane		100 U	25 U	50 U	1.0 U	0.50 U	0.50 U	0.5 U	0.50 U
Bromoform		100 U	25 U	50 U	1.0 U	0.50 U	0.50 U	0.5 U	0.50 U
Bromomethane		200 UJ	50 UJ	100 UJ	2.0 UJ	1.0 UJ	1.0 UJ	1 UJ	1.0 UJ
Carbon disulfide		1000 U	250 U	500 U	10 U	5.0 U	5.0 U	5 U	5.0 U

NOTES: U - not detected, J - estimated value, R - unusable, --- - not analyzed.
Dup - references blind field duplicate sample that was collected. Lab Dup - laboratory duplicate analyses conducted.

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O'BRIEN & GERE ENGINEERS, INC.

Table 1
Sullivan's Ledge Superfund Site
Ground Water Samples
Method 8260B Volatile Organic Compound Data

Compound	Sample ID	OBG-1	OBG-2	OBG-3	TRENCH	TRIP BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK 3-19
	SDG ID	L0102477	L0102477	L0102477	L0102477	L0102437	L0102477	L0102629	L0102408
	Dilution Factor	200	50	100	2	1	1	1	1
	Sample Date	03/21/01	03/21/01	03/21/01	03/21/01	03/13/01	03/14/01	03/14/01	03/13/01
	Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
	Matrix	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Carbon tetrachloride		100 U	25 U	50 U	1.0 U	0.50 U	0.50 U	0.5 U	0.50 U
Chlorobenzene		350 U	250	180 U	72	1.8 U	1.8 U	1.8 U	1.8 U
Chloroethane		200 U	50 U	100 U	12	1.0 U	1.0 U	1 U	1.0 U
Chloroform		150 U	38 U	75 U	1.5 U	0.75 U	0.75 U	0.75 U	0.75 U
Chloromethane		1000 U	250 U	500 U	10 U	5.0 U	5.0 U	5 U	5.0 U
Dibromochloromethane		100 U	25 U	50 U	1.0 U	0.50 U	0.50 U	0.5 U	0.50 U
Dibromomethane		1000 U	250 U	500 U	10 U	5.0 U	5.0 U	5 U	5.0 U
Dichlorodifluoromethane		1000 U	250 U	500 U	10 U	5.0 U	5.0 U	5 U	5.0 U
Diethyl ether		2500 U	620 U	1200 U	25 U	12 U	12 U	12 U	12 U
Ethyl methacrylate		1000 U	250 U	500 U	10 U	5.0 U	5.0 U	5 U	5.0 U
Ethylbenzene		720	140	50 U	3.8	0.50 U	0.50 U	0.5 U	0.50 U
Hexachlorobutadiene		500 U	120 U	250 U	5.0 U	2.5 U	2.5 U	2.5 U	2.5 U
Methyl iodide		1000 U	250 U	500 U	10 U	5.0 U	5.0 U	5 U	5.0 U
Isopropylbenzene		500 U	120 U	250 U	11	2.5 U	2.5 U	2.5 U	2.5 U
Methyl tert butyl ether		400 U	100 U	200 U	4.0 U	2.0 U	2.0 U	2 U	2.0 U
Methylene chloride		500 U	120 U	250 U	5.0 U	2.5 U	2.5 U	2.5 U	2.5 U
Naphthalene		500 U	140	250 U	31	2.5 U	2.5 U	2.5 U	2.5 U
Styrene		100 U	25 U	50 U	1.0 U	0.50 U	0.50 U	0.5 U	0.50 U
Tetrachloroethene		140	25 U	50 U	1.0 U	0.50 U	0.50 U	0.5 U	0.50 U
Tetrahydrofuran		2000 U	500 U	1000 U	20 U	10 U	10 U	10 U	10 U
Toluene		770	140	75 U	1.5 U	0.75 U	0.75 U	0.75 U	0.75 U
Trichloroethene		2100	82	450	1.4	0.50 U	0.50 U	0.5 U	0.50 U
Trichlorofluoromethane		500 UJ	120 UJ	250 U	5.0 U	2.5 U	2.5 U	2.5 U	2.5 U
Vinyl acetate		1000 U	250 U	500 U	10 U	5.0 U	5.0 U	5 U	5.0 U
Vinyl chloride		550	430	180	2.0 U	1.0 U	1.0 U	1 U	1.0 U
cis-1,2-Dichloroethene		13000	4800	3600	3.1	0.50 U	0.50 U	0.5 U	0.50 U
cis-1,3-Dichloropropylene		100 U	25 U	50 U	1.0 U	0.50 U	0.50 U	0.5 U	0.50 U
n-Butylbenzene		500 U	120 U	250 U	5.0 U	2.5 U	2.5 U	2.5 U	2.5 U
n-Propylbenzene		500 U	120 U	250 U	5.0 U	2.5 U	2.5 U	2.5 U	2.5 U
2-Chlorotoluene		500 U	120 U	250 U	5.0 U	2.5 U	2.5 U	2.5 U	2.5 U
o-Xylene		100 U	25 U	50 U	2.8	0.50 U	0.50 U	0.5 U	0.50 U
4-Chlorotoluene		500 U	120 U	250 U	5.0 U	2.5 U	2.5 U	2.5 U	2.5 U
p-Isopropyltoluene		500 U	120 U	250 U	5.0 U	2.5 U	2.5 U	2.5 U	2.5 U
m,p-Xylenes		100 U	42	50 U	9.3	0.50 U	0.50 U	0.5 U	0.50 U
sec-Butylbenzene		500 U	120 U	250 U	5.0 U	2.5 U	2.5 U	2.5 U	2.5 U

NOTES: U - not detected, J - estimated value, R - unusable, --- - not analyzed.
Dup - references blind field duplicate sample that was collected. Lab Dup - laboratory duplicate analyses conducted.

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O'BRIEN & GERE ENGINEERS, INC.

Table 1
Sullivan's Ledge Superfund Site
Ground Water Samples
Method 8260B Volatile Organic Compound Data

	Sample ID	OBG-1	OBG-2	OBG-3	TRENCH	TRIP BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK 3-19
	SDG ID	L0102477	L0102477	L0102477	L0102477	L0102437	L0102477	L0102629	L0102408
	Dilution Factor	200	50	100	2	1	1	1	1
	Sample Date	03/21/01	03/21/01	03/21/01	03/21/01	03/13/01	03/14/01	03/14/01	03/13/01
	Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Compound	Matrix	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
tert-Butylbenzene		500 U	120 U	250 U	5.0 U	2.5 U	2.5 U	2.5 U	2.5 U
trans-1,2-Dichloroethene		150 U	38 U	75 U	1.5 U	0.75 U	0.75 U	0.75 U	0.75 U
trans-1,3-Dichloropropene		100 U	25 U	50 U	1.0 U	0.50 U	0.50 U	0.5 U	0.50 U
trans-1,4-Dichloro-2-butene		500 U	120 U	250 U	5.0 U	2.5 U	2.5 U	2.5 U	2.5 U

NOTES: U - not detected, J - estimated value, R - unusable, — - not analyzed.
Dup - references blind field duplicate sample that was collected. Lab Dup - laboratory duplicate analyses conducted.

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O'BRIEN & GERE ENGINEERS, INC.

Table 2
Sullivan's Ledge Superfund Site
Ground Water Samples
Method 8270C Semivolatile Organic Compound Data

Compound	Sample ID	BEI-1	BEI-2	BEI-3	ECJ-1-120' 1200	ECJ-1-145'	ECJ-1-265' 1620	ECJ-1-35' 1635	ECJ-1-60' 1545	ECJ-1-70' 1430	ECJ-2-117' 12:25
	SDG ID	L0102477	L0102477	L0102477	L0102625	L0102625	L0102597	L0102627	L0102627	L0102625	L0102727
	Dilution Factor	1	1	1	1	1	1	1	1	1	1
	Sample Date	03/21/01	03/21/01	03/21/01	03/24/01	03/23/01	03/23/01	03/24/01	03/24/01	03/24/01	03/28/01
	Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
	Matrix	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
1,2,4,5-Tetrachlorobenzene		20 U	20 UJ	20 U	17 U	16 U	15 U	16 U	17 U	18 U	18 U
1,2,4-Trichlorobenzene		44	9.3 J	5.0 U	4.2 U	62	3.8 U	4.0 U	4.3 U	4.6 U	4.5 U
1,2-Dichlorobenzene		5.0 U	5.0 UJ	5.0 U	4.2 U	4.0 U	3.8 U	4.0 U	4.3 U	4.6 U	4.5 U
1,3-Dichlorobenzene		5.0 U	5.0 UJ	5.0 U	9.4	17	3.8 U	4.0 U	4.3 U	4.6 U	4.5 U
1,4-Dichlorobenzene		5.1	11 J	5.0 U	33	29	3.8 U	4.0 U	4.3 U	21	4.5 U
1-Chloronaphthalene		5.0 U	7.0 J	5.0 U	4.2 U	4.0 U	3.8 U	4.0 U	4.3 U	4.6 U	4.5 U
1-Methylnaphthalene		5.0 U	9.9 J	5.0 U	6.5	4.0 U	3.8 U	4.0 U	4.3 U	4.6 U	4.5 U
2,4,5-Trichlorophenol		5.0 U	5.0 UJ	5.0 U	4.2 U	4.0 U	3.8 U	4.0 U	4.3 U	4.6 U	4.5 U
2,4,6-Trichlorophenol		5.0 U	5.0 UJ	5.0 U	4.2 U	4.0 U	3.8 U	4.0 U	4.3 U	4.6 U	4.5 U
2,4-Dichlorophenol		10 U	10 UJ	10 U	8.4 U	8.1 U	7.5 U	8.1 U	8.7 U	9.2 U	9.1 U
2,4-Dimethylphenol		10 U	10 UJ	10 U	8.4 U	8.1 U	7.5 U	8.1 U	8.7 U	9.2 U	9.1 U
2,4-Dinitrophenol		20 U	20 UJ	20 U	17 U	16 U	15 U	16 U	17 U	18 U	18 U
2,4-Dinitrotoluene		5.0 U	5.0 UJ	5.0 U	4.2 U	4.0 U	3.8 U	4.0 U	4.3 U	4.6 U	4.5 U
2,6-Dichlorophenol		10 U	10 UJ	10 U	8.4 U	8.1 U	7.5 U	8.1 U	8.7 U	9.2 U	9.1 U
2,6-Dinitrotoluene		5.0 U	5.0 UJ	5.0 U	4.2 U	4.0 U	3.8 U	4.0 U	4.3 U	4.6 U	4.5 U
2-Chloronaphthalene		5.0 U	5.0 UJ	5.0 U	4.2 U	4.0 U	3.8 U	4.0 U	4.3 U	4.6 U	4.5 U
2-Chlorophenol		5.0 U	5.0 UJ	5.0 U	4.2 U	4.0 U	3.8 U	4.0 U	4.3 U	4.6 U	4.5 U
2-Methylnaphthalene		5.0 U	5.0 UJ	5.0 U	6.0	4.0 U	3.8 U	4.0 U	4.3 U	4.6 U	4.5 U
2-Methylphenol		5.0 U	5.0 UJ	5.0 U	4.2 U	4.0 U	3.8 U	4.0 U	4.3 U	4.6 U	4.5 U
2-Nitroaniline		5.0 U	5.0 UJ	5.0 U	4.2 U	4.0 U	3.8 U	4.0 U	4.3 U	4.6 U	4.5 U
2-Nitrophenol		10 U	10 UJ	10 U	8.4 U	8.1 U	7.5 U	8.1 U	8.7 U	9.2 U	9.1 U
2-Picoline		20 U	20 UJ	20 U	17 U	16 U	15 U	16 U	17 U	18 U	18 U
3,3-Dichlorobenzidine		50 U	50 UJ	50 U	42 U	40 U	38 U	40 U	43 U	46 U	45 U
3-Methylcholanthrene		20 U	20 UJ	20 U	17 U	16 U	15 U	16 U	17 U	18 U	18 U
3-Methylphenol/4-Methylphenol		5.0 U	5.0 UJ	5.0 U	4.2 U	4.6	3.8 U	4.0 U	4.3 U	4.6 U	4.5 U
3-Nitroaniline		5.0 U	5.0 UJ	5.0 U	4.2 U	4.0 U	3.8 U	4.0 U	4.3 U	4.6 U	4.5 U
4,6-Dinitro-2-methylphenol		20 U	20 UJ	20 U	17 U	16 U	15 U	16 U	17 U	18 U	18 U
4-Aminobiphenyl		10 U	10 UJ	10 U	8.4 U	8.1 U	7.5 U	8.1 U	8.7 U	9.2 U	9.1 U
4-Bromophenyl phenyl ether		5.0 U	5.0 UJ	5.0 U	4.2 U	4.0 U	3.8 U	4.0 U	4.3 U	4.6 U	4.5 U
4-Chloroaniline		5.0 U	5.0 UJ	5.0 U	4.2 U	4.0 U	3.8 U	4.0 U	4.3 U	4.6 U	4.5 U
4-Chlorophenyl phenyl ether		5.0 U	5.0 UJ	5.0 U	4.2 U	4.0 U	3.8 U	4.0 U	4.3 U	4.6 U	4.5 U
4-Nitroaniline		5.0 U	5.0 UJ	5.0 U	4.2 U	4.0 U	3.8 U	4.0 U	4.3 U	4.6 U	4.5 U
4-Nitrophenol		10 U	10 UJ	10 U	8.4 U	8.1 U	7.5 U	8.1 U	8.7 U	9.2 U	9.1 U
7,12-Dimethylbenz(a)anthracene		10 U	10 UJ	10 U	8.4 U	8.1 U	7.5 U	8.1 U	8.7 U	9.2 U	9.1 U
Acenaphthene		5.0 U	5.0 UJ	5.0 U	4.2 U	4.0 U	3.8 U	4.0 U	4.3 U	4.6 U	4.5 U

NOTES: U - not detected, J - estimated value, R - unusable, — - not analyzed.
Dup - references blind field duplicate sample that was collected. Lab Dup - laboratory duplicate analyses conducted.
Samples were analyzed undiluted.

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O'BRIEN & GERE ENGINEERS, INC.

Table 2
Sullivan's Ledge Superfund Site
Ground Water Samples
Method 8270C Semivolatile Organic Compound Data

Compound	Sample ID	BEI-1	BEI-2	BEI-3	ECJ-1-120' 1200	ECJ-1-145'	ECJ-1-265' 1620	ECJ-1-35' 1635	ECJ-1-60' 1545	ECJ-1-70' 1430	ECJ-2-117' 12:25
	SDG ID	L0102477	L0102477	L0102477	L0102625	L0102625	L0102597	L0102627	L0102627	L0102625	L0102727
	Dilution Factor	1	1	1	1	1	1	1	1	1	1
	Sample Date	03/21/01	03/21/01	03/21/01	03/24/01	03/23/01	03/23/01	03/24/01	03/24/01	03/24/01	03/28/01
	Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
	Matrix	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Acenaphthylene		5.0 U	5.0 UJ	5.0 U	4.2 U	4.0 U	3.8 U	4.0 U	4.3 U	4.6 U	4.5 U
Acetophenone		20 U	20 UJ	20 U	17 U	16 U	15 U	16 U	17 U	18 U	18 U
Aniline		10 U	10 UJ	10 U	8.4 U	8.1 U	7.5 U	8.1 U	8.7 U	9.2 U	9.1 U
Anthracene		5.0 U	5.0 UJ	5.0 U	4.2 U	4.0 U	3.8 U	4.0 U	4.3 U	4.6 U	4.5 U
Azobenzene		5.0 U	5.0 UJ	5.0 U	4.2 U	4.0 U	3.8 U	4.0 U	4.3 U	4.6 U	4.5 U
Benzidine		50 U	50 UJ	50 U	42 U	40 U	38 U	40 U	43 U	46 U	45 U
Benzo(a)anthracene		5.0 U	5.0 UJ	5.0 U	4.2 U	4.0 U	3.8 U	4.0 U	4.3 U	4.6 U	4.5 U
Benzo[a]pyrene		5.0 U	5.0 UJ	5.0 U	4.2 U	4.0 U	3.8 U	4.0 U	4.3 U	4.6 U	4.5 U
Benzo(b)fluoranthene		5.0 U	5.0 UJ	5.0 U	4.2 U	4.0 U	3.8 U	4.0 U	4.3 U	4.6 U	4.5 U
Benzo(e)pyrene		5.0 U	5.0 UJ	5.0 U	4.2 U	4.0 U	3.8 U	4.0 U	4.3 U	4.6 U	4.5 U
Benzo(ghi)perylene		5.0 U	5.0 UJ	5.0 U	4.2 U	4.0 U	3.8 U	4.0 U	4.3 U	4.6 U	4.5 U
Benzo(k)fluoranthene		5.0 U	5.0 UJ	5.0 U	4.2 U	4.0 U	3.8 U	4.0 U	4.3 U	4.6 U	4.5 U
Benzoic acid		50 U	50 UJ	50 U	42 U	40 U	38 U	40 U	43 U	46 U	45 U
Benzyl alcohol		10 U	10 UJ	10 U	8.4 U	8.1 U	7.5 U	8.1 U	8.7 U	9.2 U	9.1 U
Biphenyl		5.0 U	5.0 UJ	5.0 U	4.2 U	4.0 U	3.8 U	4.0 U	4.3 U	4.6 U	4.5 U
bis(2-Chloroethoxy)methane		5.0 U	5.0 UJ	5.0 U	4.2 U	4.0 U	3.8 U	4.0 U	4.3 U	4.6 U	4.5 U
bis(2-Chloroethyl)ether		5.0 U	5.0 UJ	5.0 U	4.2 U	4.0 U	3.8 U	4.0 U	4.3 U	4.6 U	4.5 U
2,2'-oxybis(1-Chloropropane)		5.0 U	5.0 UJ	5.0 U	4.2 U	4.0 U	3.8 U	4.0 U	4.3 U	4.6 U	4.5 U
bis(2-Ethylhexyl)phthalate (BEHP)		10 U	10 UJ	10 U	8.4 U	8.1 U	7.5 U	8.1 U	8.7 U	9.2 U	9.1 U
Butyl benzyl phthalate		5.0 U	5.0 UJ	5.0 U	4.2 U	4.0 U	3.8 U	4.0 U	4.3 U	4.6 U	4.5 U
Carbazole		5.0 U	5.0 UJ	5.0 U	4.2 U	4.0 U	3.8 U	4.0 U	4.3 U	4.6 U	4.5 U
Chlorobenzilate		20 U	20 UJ	20 U	17 U	16 U	15 U	16 U	17 U	18 U	18 U
Chrysene		5.0 U	5.0 UJ	5.0 U	4.2 U	4.0 U	3.8 U	4.0 U	4.3 U	4.6 U	4.5 U
Di-n-butyl phthalate		5.0 U	5.0 UJ	5.0 U	4.2 U	4.0 U	3.8 U	4.0 U	4.3 U	4.6 U	4.5 U
Di-n-octyl phthalate		5.0 U	5.0 UJ	5.0 U	4.2 U	4.0 U	3.8 U	4.0 U	4.3 U	4.6 U	4.5 U
Dibenzo(a,h)anthracene		5.0 U	5.0 UJ	5.0 U	4.2 U	4.0 U	3.8 U	4.0 U	4.3 U	4.6 U	4.5 U
Dibenzofuran		5.0 U	5.0 UJ	5.0 U	4.2 U	4.0 U	3.8 U	4.0 U	4.3 U	4.6 U	4.5 U
Diethyl phthalate		5.0 U	5.0 UJ	5.0 U	4.2 U	4.0 U	3.8 U	4.0 U	4.3 U	4.6 U	4.5 U
Dimethoate		20 U	20 UJ	20 U	17 U	16 U	15 U	16 U	17 U	18 U	18 U
Dimethyl phthalate		5.0 U	5.0 UJ	5.0 U	4.2 U	4.0 U	3.8 U	4.0 U	4.3 U	4.6 U	4.5 U
Ethyl methanesulfonate		15 U	15 UJ	15 U	12 U	12 U	11 U	12 U	13 U	14 U	14 U
Fluoranthene		5.0 U	5.0 UJ	5.0 U	4.2 U	4.0 U	3.8 U	4.0 U	4.3 U	4.6 U	4.5 U
Fluorene		5.0 U	5.0 UJ	5.0 U	4.2 U	4.0 U	3.8 U	4.0 U	4.3 U	4.6 U	4.5 U
Hexachlorobenzene		5.0 U	5.0 UJ	5.0 U	4.2 U	4.0 U	3.8 U	4.0 U	4.3 U	4.6 U	4.5 U
Hexachlorobutadiene		10 U	10 UJ	10 U	8.4 U	8.1 U	7.5 U	8.1 U	8.7 U	9.2 U	9.1 U

NOTES: U - not detected, J - estimated value, R - unusable, --- - not analyzed.
Dup - references blind field duplicate sample that was collected. Lab Dup - laboratory duplicate analyses conducted.
Samples were analyzed undiluted.

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O'BRIEN & GERE ENGINEERS, INC.

Table 2
Sullivan's Ledge Superfund Site
Ground Water Samples
Method 8270C Semivolatile Organic Compound Data

Compound	Sample ID	BEI-1	BEI-2	BEI-3	ECJ-1-120' 1200	ECJ-1-145'	ECJ-1-265' 1620	ECJ-1-35' 1635	ECJ-1-60' 1545	ECJ-1-70' 1430	ECJ-2-117' 12:25
	SDG ID	L0102477	L0102477	L0102477	L0102625	L0102625	L0102597	L0102627	L0102627	L0102625	L0102727
	Dilution Factor	1	1	1	1	1	1	1	1	1	1
	Sample Date	03/21/01	03/21/01	03/21/01	03/24/01	03/23/01	03/23/01	03/24/01	03/24/01	03/24/01	03/28/01
	Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
	Matrix	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Hexachlorocyclopentadiene		10 U	10 UJ	10 U	8.4 U	8.1 U	7.5 U	8.1 U	8.7 U	9.2 U	9.1 U
Hexachloroethane		5.0 U	5.0 UJ	5.0 U	4.2 U	4.0 U	3.8 U	4.0 U	4.3 U	4.6 U	4.5 U
Hexachloropropene		50 U	50 UJ	50 U	42 U	40 U	38 U	40 U	43 U	46 U	45 U
Indeno(1,2,3-cd)pyrene		5.0 U	5.0 UJ	5.0 U	4.2 U	4.0 U	3.8 U	4.0 U	4.3 U	4.6 U	4.5 U
Isodrin		10 U	10 UJ	10 U	8.4 U	8.1 U	7.5 U	8.1 U	8.7 U	9.2 U	9.1 U
Isophorone		7.8	5.0 UJ	5.0 U	4.2 U	43	3.8 U	4.0 U	4.3 U	4.6 U	4.5 U
Methyl methanesulfonate		20 U	20 UJ	20 U	17 U	16 U	15 U	16 U	17 U	18 U	18 U
NDPA/DPA		5.0 U	11 J	5.0 U	14	4.0 U	3.8 U	4.0 U	4.3 U	4.6 U	4.5 U
Naphthalene		11	26 J	5.0 U	120	27	3.8 U	4.0 U	4.3 U	4.6 U	4.5 U
Nitrobenzene		5.0 U	5.0 UJ	5.0 U	4.2 U	4.0 U	3.8 U	4.0 U	4.3 U	4.6 U	4.5 U
Nitrosodi-n-butylamine		10 U	10 UJ	10 U	8.4 U	8.1 U	7.5 U	8.1 U	8.7 U	9.2 U	9.1 U
Nitrosodipiperidine		20 U	20 UJ	20 U	17 U	16 U	15 U	16 U	17 U	18 U	18 U
Pentachlorobenzene		20 U	20 UJ	20 U	17 U	16 U	15 U	16 U	17 U	18 U	18 U
PCNB		10 U	10 UJ	10 U	8.4 U	8.1 U	7.5 U	8.1 U	8.7 U	9.2 U	9.1 U
Pentachlorophenol		20 U	20 UJ	20 U	17 U	16 U	15 U	16 U	17 U	18 U	18 U
Perylene		5.0 U	5.0 UJ	5.0 U	4.2 U	4.0 U	3.8 U	4.0 U	4.3 U	4.6 U	4.5 U
Phenacetin		10 U	10 UJ	10 U	8.4 U	8.1 U	7.5 U	8.1 U	8.7 U	9.2 U	9.1 U
Phenanthrene		5.0 U	5.0 UJ	5.0 U	4.2 U	4.0 U	3.8 U	4.0 U	4.3 U	4.6 U	4.5 U
Phenol		5.0 U	5.0 UJ	5.0 U	4.2 U	4.0 U	3.8 U	4.0 U	4.3 U	4.6 U	4.5 U
Pronamide		20 U	20 UJ	20 U	17 U	16 U	15 U	16 U	17 U	18 U	18 U
Pyrene		5.0 U	5.0 UJ	5.0 U	4.2 U	4.0 U	3.8 U	4.0 U	4.3 U	4.6 U	4.5 U
Pyridine		50 U	50 UJ	50 U	42 U	40 U	38 U	40 U	43 U	46 U	45 U
a,a-Dimethylphenethylamine		50 U	50 UJ	50 U	42 U	40 U	38 U	40 U	43 U	46 U	45 U
a-Naphthylamine		20 U	20 UJ	20 U	17 U	16 U	15 U	16 U	17 U	18 U	18 U
b-Naphthylamine		20 U	20 UJ	20 U	17 U	16 U	15 U	16 U	17 U	18 U	18 U
N-Nitrosodipropylamine		5.0 U	5.0 UJ	5.0 U	4.2 U	4.0 U	3.8 U	4.0 U	4.3 U	4.6 U	4.5 U
N-Nitrosodimethylamine		50 U	50 UJ	50 U	42 U	40 U	38 U	40 U	43 U	46 U	45 U
4-Chloro-3-methylphenol		5.0 U	5.0 UJ	5.0 U	4.2 U	4.0 U	3.8 U	4.0 U	4.3 U	4.6 U	4.5 U
p-Dimethylaminoazobenzene		10 U	10 UJ	10 U	8.4 U	8.1 U	7.5 U	8.1 U	8.7 U	9.2 U	9.1 U

NOTES: U - not detected, J - estimated value, R - unusable, --- - not analyzed.
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Samples were analyzed undiluted.

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O'BRIEN & GERE ENGINEERS, INC.

Table 2
Sullivan's Ledge Superfund Site
Ground Water Samples
Method 8270C Semivolatile Organic Compound Data

Compound	Sample ID	ECJ-2-152' 10:35	ECJ-2-187' 8:55	ECJ-2-47' 0910	ECJ-2-47' Dup	ECJ-2-82' 15:10	ECJ-3-103' 11:15	ECJ-3-138' 10:10	ECJ-3-63' 14:15	ECJ-4-130' 16:15	ECJ-4-130' Dup
	SDG ID	L0102727	L0102727	L0102765	L0102765	L0102727	L0102960	L0102960	L0102960	L0102674	L0102674
	Dilution Factor	1	1	1	1	1	1	1	1	1	1
	Sample Date	03/28/01	03/28/01	03/29/01	03/29/01	03/28/01	04/03/01	04/03/01	04/03/01	03/26/01	03/26/01
	Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
	Matrix	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
1,2,4,5-Tetrachlorobenzene		20 U	20 U	19 U	20 U	19 U	18 U	18 U	20 U	19 U	18 U
1,2,4-Trichlorobenzene		4.9 U	4.9 U	4.8 U	5.1 U	4.7 U	4.5 U	4.5 U	4.9 U	4.7 U	4.5 U
1,2-Dichlorobenzene		4.9 U	4.9 U	4.8 U	5.1 U	4.7 U	4.5 U	4.5 U	4.9 U	4.7 U	4.5 U
1,3-Dichlorobenzene		4.9 U	4.9 U	4.8 U	5.1 U	4.7 U	4.5 U	4.5 U	4.9 U	4.7 U	4.5 U
1,4-Dichlorobenzene		4.9 U	4.9 U	4.8 U	5.1 U	4.7 U	4.5 U	4.5 U	4.9 U	4.7 U	4.5 U
1-Chloronaphthalene		4.9 U	4.9 U	4.8 U	5.1 U	4.7 U	4.5 U	4.5 U	4.9 U	4.7 U	4.5 U
1-Methylnaphthalene		4.9 U	4.9 U	4.8 U	5.1 U	4.7 U	4.5 U	4.5 U	4.9 U	4.7 U	4.5 U
2,4,5-Trichlorophenol		4.9 U	4.9 U	4.8 U	5.1 U	4.7 U	4.5 U	4.5 U	4.9 U	4.7 U	4.5 U
2,4,6-Trichlorophenol		4.9 U	4.9 U	4.8 U	5.1 U	4.7 U	4.5 U	4.5 U	4.9 U	4.7 U	4.5 U
2,4-Dichlorophenol		9.8 U	9.8 U	9.7 U	10 U	9.4 U	9.1 U	9.0 U	9.8 U	9.5 U	9.1 U
2,4-Dimethylphenol		9.8 U	9.8 U	9.7 U	10 U	9.4 U	9.1 U	9.0 U	9.8 U	9.5 U	9.1 U
2,4-Dinitrophenol		20 U	20 U	19 U	20 U	19 U	18 U	18 U	20 U	19 U	18 U
2,4-Dinitrotoluene		4.9 U	4.9 U	4.8 U	5.1 U	4.7 U	4.5 U	4.5 U	4.9 U	4.7 U	4.5 U
2,6-Dichlorophenol		9.8 U	9.8 U	9.7 U	10 U	9.4 U	9.1 U	9.0 U	9.8 U	9.5 U	9.1 U
2,6-Dinitrotoluene		4.9 U	4.9 U	4.8 U	5.1 U	4.7 U	4.5 U	4.5 U	4.9 U	4.7 U	4.5 U
2-Chloronaphthalene		4.9 U	4.9 U	4.8 U	5.1 U	4.7 U	4.5 U	4.5 U	4.9 U	4.7 U	4.5 U
2-Chlorophenol		4.9 U	4.9 U	4.8 U	5.1 U	4.7 U	4.5 U	4.5 U	4.9 U	4.7 U	4.5 U
2-Methylnaphthalene		4.9 U	4.9 U	4.8 U	5.1 U	4.7 U	4.5 U	4.5 U	4.9 U	4.7 U	4.5 U
2-Methylphenol		4.9 U	4.9 U	4.8 U	5.1 U	4.7 U	4.5 U	4.5 U	4.9 U	4.7 U	4.5 U
2-Nitroaniline		4.9 U	4.9 U	4.8 U	5.1 U	4.7 U	4.5 U	4.5 U	4.9 U	4.7 U	4.5 U
2-Nitrophenol		9.8 U	9.8 U	9.7 U	10 U	9.4 U	9.1 U	9.0 U	9.8 U	9.5 U	9.1 U
2-Picoline		20 U	20 U	19 U	20 U	19 U	18 U	18 U	20 U	19 U	18 U
3,3-Dichlorobenzidine		49 U	49 U	48 U	51 U	47 U	45 U	45 U	49 U	47 U	45 U
3-Methylcholanthrene		20 U	20 U	19 U	20 U	19 U	18 U	18 U	20 U	19 U	18 U
3-Methylphenol/4-Methylphenol		4.9 U	4.9 U	4.8 U	5.1 U	4.7 U	4.5 U	4.5 U	4.9 U	4.7 U	4.5 U
3-Nitroaniline		4.9 U	4.9 U	4.8 U	5.1 U	4.7 U	4.5 U	4.5 U	4.9 U	4.7 U	4.5 U
4,6-Dinitro-2-methylphenol		20 U	20 U	19 U	20 U	19 U	18 U	18 U	20 U	19 U	18 U
4-Aminobiphenyl		9.8 U	9.8 U	9.7 U	10 U	9.4 U	9.1 U	9.0 U	9.8 U	9.5 U	9.1 U
4-Bromophenyl phenyl ether		4.9 U	4.9 U	4.8 U	5.1 U	4.7 U	4.5 U	4.5 U	4.9 U	4.7 U	4.5 U
4-Chloroaniline		4.9 U	4.9 U	4.8 U	5.1 U	4.7 U	4.5 U	4.5 U	4.9 U	4.7 U	4.5 U
4-Chlorophenyl phenyl ether		4.9 U	4.9 U	4.8 U	5.1 U	4.7 U	4.5 U	4.5 U	4.9 U	4.7 U	4.5 U
4-Nitroaniline		4.9 U	4.9 U	4.8 U	5.1 U	4.7 U	4.5 U	4.5 U	4.9 U	4.7 U	4.5 U
4-Nitrophenol		9.8 U	9.8 U	9.7 U	10 U	9.4 U	9.1 U	9.0 U	9.8 U	9.5 U	9.1 U
7,12-Dimethylbenz(a)anthracene		9.8 U	9.8 U	9.7 U	10 U	9.4 U	9.1 U	9.0 U	9.8 U	9.5 U	9.1 U
Acenaphthene		4.9 U	4.9 U	4.8 U	5.1 U	4.7 U	4.5 U	4.5 U	4.9 U	4.7 U	4.5 U

NOTES: U - not detected, J - estimated value, R - unusable, --- - not analyzed.
Dup - references blind field duplicate sample that was collected. Lab Dup - laboratory duplicate analyses conducted.
Samples were analyzed undiluted.

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Table 2
Sullivan's Ledge Superfund Site
Ground Water Samples
Method 8270C Semivolatile Organic Compound Data

Compound	Sample ID	ECJ-2-152' 10:35	ECJ-2-187' 8:55	ECJ-2-47' 0910	ECJ-2-47' Dup	ECJ-2-82' 15:10	ECJ-3-103' 11:15	ECJ-3-138' 10:10	ECJ-3-63' 14:15	ECJ-4-130' 16:15	ECJ-4-130' Dup
	SDG ID	L0102727	L0102727	L0102765	L0102765	L0102727	L0102960	L0102960	L0102960	L0102674	L0102674
	Dilution Factor	1	1	1	1	1	1	1	1	1	1
	Sample Date	03/28/01	03/28/01	03/29/01	03/29/01	03/28/01	04/03/01	04/03/01	04/03/01	03/26/01	03/26/01
	Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
	Matrix	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Acenaphthylene		4.9 U	4.9 U	4.8 U	5.1 U	4.7 U	4.5 U	4.5 U	4.9 U	4.7 U	4.5 U
Acetophenone		20 U	20 U	19 U	20 U	19 U	18 U	18 U	20 U	19 U	18 U
Aniline		9.8 U	9.8 U	9.7 U	10 U	9.4 U	9.1 U	9.0 U	9.8 U	9.5 U	9.1 U
Anthracene		4.9 U	4.9 U	4.8 U	5.1 U	4.7 U	4.5 U	4.5 U	4.9 U	4.7 U	4.5 U
Azobenzene		4.9 U	4.9 U	4.8 U	5.1 U	4.7 U	4.5 U	4.5 U	4.9 U	4.7 U	4.5 U
Benzidine		49 U	49 U	48 U	51 U	47 U	45 U	45 U	49 U	47 U	45 U
Benzo(a)anthracene		4.9 U	4.9 U	4.8 U	5.1 U	4.7 U	4.5 U	4.5 U	4.9 U	4.7 U	4.5 U
Benzo(a)pyrene		4.9 U	4.9 U	4.8 U	5.1 U	4.7 U	4.5 U	4.5 U	4.9 U	4.7 U	4.5 U
Benzo(b)fluoranthene		4.9 U	4.9 U	4.8 U	5.1 U	4.7 U	4.5 U	4.5 U	4.9 U	4.7 U	4.5 U
Benzo(e)pyrene		4.9 U	4.9 U	4.8 U	5.1 U	4.7 U	4.5 U	4.5 U	4.9 U	4.7 U	4.5 U
Benzo(ghi)perylene		4.9 U	4.9 U	4.8 U	5.1 U	4.7 U	4.5 U	4.5 U	4.9 U	4.7 U	4.5 U
Benzo(k)fluoranthene		4.9 U	4.9 U	4.8 U	5.1 U	4.7 U	4.5 U	4.5 U	4.9 U	4.7 U	4.5 U
Benzoic acid		49 U	49 U	48 U	51 U	47 U	45 U	45 U	49 U	47 U	45 U
Benzyl alcohol		9.8 U	9.8 U	9.7 U	10 U	9.4 U	9.1 U	9.0 U	9.8 U	9.5 U	9.1 U
Biphenyl		4.9 U	4.9 U	4.8 U	5.1 U	4.7 U	4.5 U	4.5 U	4.9 U	4.7 U	4.5 U
bis(2-Chloroethoxy)methane		4.9 U	4.9 U	4.8 U	5.1 U	4.7 U	4.5 U	4.5 U	4.9 U	4.7 U	4.5 U
bis(2-Chloroethyl)ether		4.9 U	4.9 U	4.8 U	5.1 U	4.7 U	4.5 U	4.5 U	4.9 U	4.7 U	4.5 U
2,2'-oxybis(1-Chloropropane)		4.9 U	4.9 U	4.8 U	5.1 U	4.7 U	4.5 U	4.5 U	4.9 U	4.7 U	4.5 U
bis(2-Ethylhexyl)phthalate (BEHP)		9.8 U	9.8 U	9.7 U	10 U	9.4 U	9.1 U	9.0 U	9.8 U	9.5 U	9.1 U
Butyl benzyl phthalate		4.9 U	4.9 U	4.8 U	5.1 U	4.7 U	4.5 U	4.5 U	4.9 U	4.7 U	4.5 U
Carbazole		4.9 U	4.9 U	4.8 U	5.1 U	4.7 U	4.5 U	4.5 U	4.9 U	4.7 U	4.5 U
Chlorobenzilate		20 U	20 U	19 U	20 U	19 U	18 U	18 U	20 U	19 U	18 U
Chrysene		4.9 U	4.9 U	4.8 U	5.1 U	4.7 U	4.5 U	4.5 U	4.9 U	4.7 U	4.5 U
Di-n-butyl phthalate		4.9 U	4.9 U	4.8 U	5.1 U	4.7 U	4.5 U	4.5 U	4.9 U	4.7 U	4.5 U
Di-n-octyl phthalate		4.9 U	4.9 U	4.8 U	5.1 U	4.7 U	4.5 U	4.5 U	4.9 U	4.7 U	4.5 U
Dibenzo(a,h)anthracene		4.9 U	4.9 U	4.8 U	5.1 U	4.7 U	4.5 U	4.5 U	4.9 U	4.7 U	4.5 U
Dibenzofuran		4.9 U	4.9 U	4.8 U	5.1 U	4.7 U	4.5 U	4.5 U	4.9 U	4.7 U	4.5 U
Diethyl phthalate		4.9 U	4.9 U	4.8 U	5.1 U	4.7 U	4.5 U	4.5 U	4.9 U	4.7 U	4.5 U
Dimethoate		20 U	20 U	19 U	20 U	19 U	18 U	18 U	20 U	19 U	18 U
Dimethyl phthalate		4.9 U	4.9 U	4.8 U	5.1 U	4.7 U	4.5 U	4.5 U	4.9 U	4.7 U	4.5 U
Ethyl methanesulfonate		15 U	15 U	14 U	15 U	14 U	14 U	13 U	15 U	14 U	14 U
Fluoranthene		4.9 U	4.9 U	4.8 U	5.1 U	4.7 U	4.5 U	4.5 U	4.9 U	4.7 U	4.5 U
Fluorene		4.9 U	4.9 U	4.8 U	5.1 U	4.7 U	4.5 U	4.5 U	4.9 U	4.7 U	4.5 U
Hexachlorobenzene		4.9 U	4.9 U	4.8 U	5.1 U	4.7 U	4.5 U	4.5 U	4.9 U	4.7 U	4.5 U
Hexachlorobutadiene		9.8 U	9.8 U	9.7 U	10 U	9.4 U	9.1 U	9.0 U	9.8 U	9.5 U	9.1 U

NOTES: U - not detected, J - estimated value, R - unusable, --- - not analyzed.
Dup - references blind field duplicate sample that was collected. Lab Dup - laboratory duplicate analyses conducted.
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Table 2
Sullivan's Ledge Superfund Site
Ground Water Samples
Method 8270C Semivolatile Organic Compound Data

Compound	Sample ID	ECJ-2-152' 10:35	ECJ-2-187' 8:55	ECJ-2-47' 0910	ECJ-2-47' Dup	ECJ-2-82' 15:10	ECJ-3-103' 11:15	ECJ-3-138' 10:10	ECJ-3-63' 14:15	ECJ-4-130' 16:15	ECJ-4-130' Dup
	SDG ID	L0102727	L0102727	L0102765	L0102765	L0102727	L0102960	L0102960	L0102960	L0102674	L0102674
	Dilution Factor	1	1	1	1	1	1	1	1	1	1
	Sample Date	03/28/01	03/28/01	03/29/01	03/29/01	03/28/01	04/03/01	04/03/01	04/03/01	03/26/01	03/26/01
	Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
	Matrix	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Hexachlorocyclopentadiene		9.8 U	9.8 U	9.7 U	10 U	9.4 U	9.1 U	9.0 U	9.8 U	9.5 U	9.1 U
Hexachloroethane		4.9 U	4.9 U	4.8 U	5.1 U	4.7 U	4.5 U	4.5 U	4.9 U	4.7 U	4.5 U
Hexachloropropene		49 U	49 U	48 U	51 U	47 U	45 U	45 U	49 U	47 U	45 U
Indeno(1,2,3-cd)pyrene		4.9 U	4.9 U	4.8 U	5.1 U	4.7 U	4.5 U	4.5 U	4.9 U	4.7 U	4.5 U
Isodrin		9.8 U	9.8 U	9.7 U	10 U	9.4 U	9.1 U	9.0 U	9.8 U	9.5 U	9.1 U
Isophorone		9.0	4.9 U	4.8 U	5.1 U	4.7 U	4.5 U	4.5 U	4.9 U	4.7 U	4.5 U
Methyl methanesulfonate		20 U	20 U	19 U	20 U	19 U	18 U	18 U	20 U	19 U	18 U
NDPA/DPA		4.9 U	4.9 U	4.8 U	5.1 U	4.7 U	4.5 U	4.5 U	4.9 U	4.7 U	4.5 U
Naphthalene		4.9 U	4.9 U	4.8 U	5.1 U	4.7 U	4.5 U	4.5 U	4.9 U	4.7 U	4.5 U
Nitrobenzene		4.9 U	4.9 U	4.8 U	5.1 U	4.7 U	4.5 U	4.5 U	4.9 U	4.7 U	4.5 U
Nitrosodi-n-butylamine		9.8 U	9.8 U	9.7 U	10 U	9.4 U	9.1 U	9.0 U	9.8 U	9.5 U	9.1 U
Nitrosodipiperidine		20 U	20 U	19 U	20 U	19 U	18 U	18 U	20 U	19 U	18 U
Pentachlorobenzene		20 U	20 U	19 U	20 U	19 U	18 U	18 U	20 U	19 U	18 U
PCNB		9.8 U	9.8 U	9.7 U	10 U	9.4 U	9.1 U	9.0 U	9.8 U	9.5 U	9.1 U
Pentachlorophenol		20 U	20 U	19 U	20 U	19 U	18 U	18 U	20 U	19 U	18 U
Perylene		4.9 U	4.9 U	4.8 U	5.1 U	4.7 U	4.5 U	4.5 U	4.9 U	4.7 U	4.5 U
Phenacetin		9.8 U	9.8 U	9.7 U	10 U	9.4 U	9.1 U	9.0 U	9.8 U	9.5 U	9.1 U
Phenanthrene		4.9 U	4.9 U	4.8 U	5.1 U	4.7 U	4.5 U	4.5 U	4.9 U	4.7 U	4.5 U
Phenol		4.9 U	4.9 U	4.8 U	5.1 U	4.7 U	4.5 U	4.5 U	4.9 U	4.7 U	4.5 U
Pronamide		20 U	20 U	19 U	20 U	19 U	18 U	18 U	20 U	19 U	18 U
Pyrene		4.9 U	4.9 U	4.8 U	5.1 U	4.7 U	4.5 U	4.5 U	4.9 U	4.7 U	4.5 U
Pyridine		49 U	49 U	48 U	51 U	47 U	45 U	45 U	49 U	47 U	45 U
a,a-Dimethylphenethylamine		49 U	49 U	48 U	51 U	47 U	45 U	45 U	49 U	47 U	45 U
a-Naphthylamine		20 U	20 U	19 U	20 U	19 U	18 U	18 U	20 U	19 U	18 U
b-Naphthylamine		20 U	20 U	19 U	20 U	19 U	18 U	18 U	20 U	19 U	18 U
N-Nitrosodipropylamine		4.9 U	4.9 U	4.8 U	5.1 U	4.7 U	4.5 U	4.5 U	4.9 U	4.7 U	4.5 U
N-Nitrosodimethylamine		49 U	49 U	48 U	51 U	47 U	45 U	45 U	49 U	47 U	45 U
4-Chloro-3-methylphenol		4.9 U	4.9 U	4.8 U	5.1 U	4.7 U	4.5 U	4.5 U	4.9 U	4.7 U	4.5 U
p-Dimethylaminoazobenzene		9.8 U	9.8 U	9.7 U	10 U	9.4 U	9.1 U	9.0 U	9.8 U	9.5 U	9.1 U

NOTES: U - not detected, J - estimated value, R - unusable, --- - not analyzed.
Dup - references blind field duplicate sample that was collected. Lab Dup - laboratory duplicate analyses conducted.
Samples were analyzed undiluted.

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O'BRIEN & GERE ENGINEERS, INC.

Table 2
Sullivan's Ledge Superfund Site
Ground Water Samples
Method 8270C Semivolatile Organic Compound Data

Compound	Sample ID	ECJ-4-160' 15:00	ECJ-4-225' 12:10	ECJ-4-245' 10:40	ECJ-4-60' 11:30	ECJ-4-60' Lab Dup	ECJ-4-85' 9:50	EQUIPMENT BLANK	GCA-1	MW-10	MW-10A
	SDG ID	L0102629	L0102629	L0102629	L0102730	L0102730	L0102730	L0102765	L0102627	L0102479	L0102674
	Dilution Factor	1	1	1	1	1	1	1	1	1	1
	Sample Date	04/03/01	04/03/01	04/03/01	03/27/01	03/27/01	03/27/01	03/29/01	03/23/01	03/21/01	03/27/01
	Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
	Matrix	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
1,2,4,5-Tetrachlorobenzene		17 U	16 U	R	20 U	20 U	19 U	21 U	16 U	20 U	19 U
1,2,4-Trichlorobenzene		4.2 U	4 U	R	5.0 U	5.0 U	4.8 U	5.3 U	4.0 U	5.0 U	4.7 U
1,2-Dichlorobenzene		4.2 U	4 U	R	5.0 U	5.0 U	4.8 U	5.3 U	4.0 U	5.0 U	4.7 U
1,3-Dichlorobenzene		4.2 U	4 U	R	5.0 U	5.0 U	4.8 U	5.3 U	4.0 U	5.0 U	4.7 U
1,4-Dichlorobenzene		4.2 U	4 U	R	5.0 U	5.0 U	4.8 U	5.3 U	4.0 U	5.0 U	4.7 U
1-Chloronaphthalene		4.2 U	4 U	R	5.0 U	5.0 U	4.8 U	5.3 U	13	5.0 U	4.7 U
1-Methylnaphthalene		4.2 U	4 U	R	5.0 U	5.0 U	4.8 U	5.3 U	5.2	5.0 U	4.7 U
2,4,5-Trichlorophenol		4.2 U	4 U	R	5.0 U	5.0 U	4.8 U	5.3 U	4.0 U	5.0 U	4.7 U
2,4,6-Trichlorophenol		4.2 U	4 U	R	5.0 U	5.0 U	4.8 U	5.3 U	4.0 U	5.0 U	4.7 U
2,4-Dichlorophenol		8.4 U	8.1 U	R	10 U	10 U	9.6 U	11 U	8.0 U	10 U	9.5 U
2,4-Dimethylphenol		8.4 U	8.1 U	R	10 U	10 U	9.6 U	11 U	8.0 U	10 U	9.5 U
2,4-Dinitrophenol		17 U	16 U	R	20 U	20 U	19 U	21 U	16 U	20 U	19 U
2,4-Dinitrotoluene		4.2 U	4 U	R	5.0 U	5.0 U	4.8 U	5.3 U	4.0 U	5.0 U	4.7 U
2,6-Dichlorophenol		8.4 U	8.1 U	R	10 U	10 U	9.6 U	11 U	8.0 U	10 U	9.5 U
2,6-Dinitrotoluene		4.2 U	4 U	R	5.0 U	5.0 U	4.8 U	5.3 U	4.0 U	5.0 U	4.7 U
2-Chloronaphthalene		4.2 U	4 U	R	5.0 U	5.0 U	4.8 U	5.3 U	4.0 U	5.0 U	4.7 U
2-Chlorophenol		4.2 U	4 U	R	5.0 U	5.0 U	4.8 U	5.3 U	4.0 U	5.0 U	4.7 U
2-Methylnaphthalene		4.2 U	4 U	R	5.0 U	5.0 U	4.8 U	5.3 U	4.0 U	5.0 U	4.7 U
2-Methylphenol		4.2 U	4 U	R	5.0 U	5.0 U	4.8 U	5.3 U	4.0 U	5.0 U	4.7 U
2-Nitroaniline		4.2 U	4 U	R	5.0 U	5.0 U	4.8 U	5.3 U	4.0 U	5.0 U	4.7 U
2-Nitrophenol		8.4 U	8.1 U	R	10 U	10 U	9.6 U	11 U	8.0 U	10 U	9.5 U
2-Picoline		17 U	16 U	R	20 U	20 U	19 U	21 U	16 U	20 U	19 U
3,3-Dichlorobenzidine		42 U	40 U	R	50 U	50 U	48 U	53 U	40 U	50 U	47 U
3-Methylcholanthrene		17 U	16 U	R	20 U	20 U	19 U	21 U	16 U	20 U	19 U
3-Methylphenol/4-Methylphenol		4.2 U	4 U	R	5.0 U	5.0 U	4.8 U	5.3 U	4.0 U	5.0 U	4.7 U
3-Nitroaniline		4.2 U	4 U	R	5.0 U	5.0 U	4.8 U	5.3 U	4.0 U	5.0 U	4.7 U
4,6-Dinitro-2-methylphenol		17 U	16 U	R	20 U	20 U	19 U	21 U	16 U	20 U	19 U
4-Aminobiphenyl		8.4 U	8.1 U	R	10 U	10 U	9.6 U	11 U	8.0 U	10 U	9.5 U
4-Bromophenyl phenyl ether		4.2 U	4 U	R	5.0 U	5.0 U	4.8 U	5.3 U	4.0 U	5.0 U	4.7 U
4-Chloroaniline		4.2 U	4 U	R	5.0 U	5.0 U	4.8 U	5.3 U	4.0 U	5.0 U	4.7 U
4-Chlorophenyl phenyl ether		4.2 U	4 U	R	5.0 U	5.0 U	4.8 U	5.3 U	4.0 U	5.0 U	4.7 U
4-Nitroaniline		4.2 U	4 U	R	5.0 U	5.0 U	4.8 U	5.3 U	4.0 U	5.0 U	4.7 U
4-Nitrophenol		8.4 U	8.1 U	R	10 U	10 U	9.6 U	11 U	8.0 U	10 U	9.5 U
7,12-Dimethylbenz(a)anthracene		8.4 U	8.1 U	R	10 U	10 U	9.6 U	11 U	8.0 U	10 U	9.5 U
Acenaphthene		4.2 U	4 U	R	5.0 U	5.0 U	4.8 U	5.3 U	4.0 U	5.0 U	4.7 U

NOTES: U - not detected, J - estimated value, R - unusable, --- - not analyzed.
Dup - references blind field duplicate sample that was collected. Lab Dup - laboratory duplicate analyses conducted.
Samples were analyzed undiluted.

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O'BRIEN & GERE ENGINEERS, INC.

Table 2
Sullivan's Ledge Superfund Site
Ground Water Samples
Method 8270C Semivolatile Organic Compound Data

Compound	Sample ID	ECJ-4-160' 15:00	ECJ-4-225' 12:10	ECJ-4-245' 10:40	ECJ-4-60' 11:30	ECJ-4-60' Lab Dup	ECJ-4-85' 9:50	EQUIPMENT BLANK	GCA-1	MW-10	MW-10A
	SDG ID	L0102629	L0102629	L0102629	L0102730	L0102730	L0102730	L0102765	L0102627	L0102479	L0102674
	Dilution Factor	1	1	1	1	1	1	1	1	1	1
	Sample Date	04/03/01	04/03/01	04/03/01	03/27/01	03/27/01	03/27/01	03/29/01	03/23/01	03/21/01	03/27/01
	Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
	Matrix	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Acenaphthylene		4.2 U	4 U	R	5.0 U	5.0 U	4.8 U	5.3 U	4.0 U	5.0 U	4.7 U
Acetophenone		17 U	16 U	R	20 U	20 U	19 U	21 U	16 U	20 U	19 U
Aniline		8.4 U	8.1 U	R	10 U	10 U	9.6 U	11 U	8.0 U	10 U	9.5 U
Anthracene		4.2 U	4 U	R	5.0 U	5.0 U	4.8 U	5.3 U	4.0 U	5.0 U	4.7 U
Azobenzene		4.2 U	4 U	R	5.0 U	5.0 U	4.8 U	5.3 U	4.0 U	5.0 U	4.7 U
Benzidine		42 U	40 U	R	50 U	50 U	48 U	53 U	40 U	50 U	47 U
Benzo(a)anthracene		4.2 U	4 U	R	5.0 U	5.0 U	4.8 U	5.3 U	4.0 U	5.0 U	4.7 U
Benzo[a]pyrene		4.2 U	4 U	R	5.0 U	5.0 U	4.8 U	5.3 U	4.0 U	5.0 U	4.7 U
Benzo(b)fluoranthene		4.2 U	4 U	R	5.0 U	5.0 U	4.8 U	5.3 U	4.0 U	5.0 U	4.7 U
Benzo(e)pyrene		4.2 U	4 U	R	5.0 U	5.0 U	4.8 U	5.3 U	4.0 U	5.0 U	4.7 U
Benzo(ghi)perylene		4.2 U	4 U	R	5.0 U	5.0 U	4.8 U	5.3 U	4.0 U	5.0 U	4.7 U
Benzo(k)fluoranthene		4.2 U	4 U	R	5.0 U	5.0 U	4.8 U	5.3 U	4.0 U	5.0 U	4.7 U
Benzoic acid		42 U	40 U	R	50 U	50 U	48 U	53 U	40 U	50 U	47 U
Benzyl alcohol		8.4 U	8.1 U	R	10 U	10 U	9.6 U	11 U	8.0 U	10 U	9.5 U
Biphenyl		4.2 U	4 U	R	5.0 U	5.0 U	4.8 U	5.3 U	4.0 U	5.0 U	4.7 U
bis(2-Chloroethoxy)methane		4.2 U	4 U	R	5.0 U	5.0 U	4.8 U	5.3 U	4.0 U	5.0 U	4.7 U
bis(2-Chloroethyl)ether		4.2 U	4 U	R	5.0 U	5.0 U	4.8 U	5.3 U	4.0 U	5.0 U	4.7 U
2,2'-oxybis(1-Chloropropane)		4.2 U	4 U	R	5.0 U	5.0 U	4.8 U	5.3 U	4.0 U	5.0 U	4.7 U
bis(2-Ethylhexyl)phthalate (BEHP)		8.4 U	8.1 U	R	10 U	10 U	9.6 U	11 U	8.0 U	10 U	9.5 U
Butyl benzyl phthalate		4.2 U	4 U	R	5.0 U	5.0 U	4.8 U	5.3 U	4.0 U	5.0 U	4.7 U
Carbazole		4.2 U	4 U	R	5.0 U	5.0 U	4.8 U	5.3 U	4.0 U	5.0 U	4.7 U
Chlorobenzilate		17 U	16 U	R	20 U	20 U	19 U	21 U	16 U	20 U	19 U
Chrysene		4.2 U	4 U	R	5.0 U	5.0 U	4.8 U	5.3 U	4.0 U	5.0 U	4.7 U
Di-n-butyl phthalate		4.2 U	4 U	R	5.0 U	5.0 U	4.8 U	5.3 U	4.0 U	5.0 U	4.7 U
Di-n-octyl phthalate		4.2 U	4 U	R	5.0 U	5.0 U	4.8 U	5.3 U	4.0 U	5.0 U	4.7 U
Dibenzo(a,h)anthracene		4.2 U	4 U	R	5.0 U	5.0 U	4.8 U	5.3 U	4.0 U	5.0 U	4.7 U
Dibenzofuran		4.2 U	4 U	R	5.0 U	5.0 U	4.8 U	5.3 U	4.0 U	5.0 U	4.7 U
Diethyl phthalate		4.2 U	4 U	R	5.0 U	5.0 U	4.8 U	5.3 U	4.0 U	5.0 U	4.7 U
Dimethoate		17 U	16 U	R	20 U	20 U	19 U	21 U	16 U	20 U	19 U
Dimethyl phthalate		4.2 U	4 U	R	5.0 U	5.0 U	4.8 U	5.3 U	4.0 U	5.0 U	4.7 U
Ethyl methanesulfonate		13 U	12 U	R	15 U	15 U	14 U	16 U	12 U	15 U	14 U
Fluoranthene		4.2 U	4 U	R	5.0 U	5.0 U	4.8 U	5.3 U	4.0 U	5.0 U	4.7 U
Fluorene		4.2 U	4 U	R	5.0 U	5.0 U	4.8 U	5.3 U	4.0 U	5.0 U	4.7 U
Hexachlorobenzene		4.2 U	4 U	R	5.0 U	5.0 U	4.8 U	5.3 U	4.0 U	5.0 U	4.7 U
Hexachlorobutadiene		8.4 U	8.1 U	R	10 U	10 U	9.6 U	11 U	8.0 U	10 U	9.5 U

NOTES: U - not detected, J - estimated value, R - unusable, --- - not analyzed.
Dup - references blind field duplicate sample that was collected. Lab Dup - laboratory duplicate analyses conducted.
Samples were analyzed undiluted.

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O'BRIEN & GERE ENGINEERS, INC.

Table 2
Sullivan's Ledge Superfund Site
Ground Water Samples
Method 8270C Semivolatile Organic Compound Data

Compound	Sample ID	ECJ-4-160' 15:00	ECJ-4-225' 12:10	ECJ-4-245' 10:40	ECJ-4-60' 11:30	ECJ-4-60' Lab Dup	ECJ-4-85' 9:50	EQUIPMENT BLANK	GCA-1	MW-10	MW-10A
	SDG ID	L0102629	L0102629	L0102629	L0102730	L0102730	L0102730	L0102765	L0102627	L0102479	L0102674
	Dilution Factor	1	1	1	1	1	1	1	1	1	1
	Sample Date	04/03/01	04/03/01	04/03/01	03/27/01	03/27/01	03/27/01	03/29/01	03/23/01	03/21/01	03/27/01
	Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
	Matrix	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Hexachlorocyclopentadiene		8.4 U	8.1 U	R	10 U	10 U	9.6 U	11 U	8.0 U	10 U	9.5 U
Hexachloroethane		4.2 U	4 U	R	5.0 U	5.0 U	4.8 U	5.3 U	4.0 U	5.0 U	4.7 U
Hexachloropropene		42 U	40 U	R	50 U	50 U	48 U	53 U	40 U	50 U	47 U
Indeno(1,2,3-cd)pyrene		4.2 U	4 U	R	5.0 U	5.0 U	4.8 U	5.3 U	4.0 U	5.0 U	4.7 U
Isodrin		8.4 U	8.1 U	R	10 U	10 U	9.6 U	11 U	8.0 U	10 U	9.5 U
Isophorone		4.2 U	4 U	R	5.0 U	5.0 U	4.8 U	5.3 U	4.0 U	5.0 U	4.7 U
Methyl methanesulfonate		17 U	16 U	R	20 U	20 U	19 U	21 U	16 U	20 U	19 U
NDPA/DPA		4.2 U	4 U	R	5.0 U	5.0 U	4.8 U	5.3 U	8.4	5.0 U	4.7 U
Naphthalene		4.2 U	4 U	R	5.0 U	5.0 U	4.8 U	5.3 U	4.0 U	5.0 U	4.7 U
Nitrobenzene		4.2 U	4 U	R	5.0 U	5.0 U	4.8 U	5.3 U	4.0 U	5.0 U	4.7 U
Nitrosodi-n-butylamine		8.4 U	8.1 U	R	10 U	10 U	9.6 U	11 U	8.0 U	10 U	9.5 U
Nitrosodipiperidine		17 U	16 U	R	20 U	20 U	19 U	21 U	16 U	20 U	19 U
Pentachlorobenzene		17 U	16 U	R	20 U	20 U	19 U	21 U	16 U	20 U	19 U
PCNB		8.4 U	8.1 U	R	10 U	10 U	9.6 U	11 U	8.0 U	10 U	9.5 U
Pentachlorophenol		17 U	16 U	R	20 U	20 U	19 U	21 U	16 U	20 U	19 U
Perylene		4.2 U	4 U	R	5.0 U	5.0 U	4.8 U	5.3 U	4.0 U	5.0 U	4.7 U
Phenacetin		8.4 U	8.1 U	R	10 U	10 U	9.6 U	11 U	8.0 U	10 U	9.5 U
Phenanthrene		4.2 U	4 U	R	5.0 U	5.0 U	4.8 U	5.3 U	4.0 U	5.0 U	4.7 U
Phenol		4.2 U	4 U	R	5.0 U	5.0 U	4.8 U	5.3 U	4.0 U	5.0 U	4.7 U
Pronamide		17 U	16 U	R	20 U	20 U	19 U	21 U	16 U	20 U	19 U
Pyrene		4.2 U	4 U	R	5.0 U	5.0 U	4.8 U	5.3 U	4.0 U	5.0 U	4.7 U
Pyridine		42 U	40 U	R	50 U	50 U	48 U	53 U	40 U	50 U	47 U
a,a-Dimethylphenethylamine		42 U	40 U	R	50 U	50 U	48 U	53 U	40 U	50 U	47 U
a-Naphthylamine		17 U	16 U	R	20 U	20 U	19 U	21 U	16 U	20 U	19 U
b-Naphthylamine		17 U	16 U	R	20 U	20 U	19 U	21 U	16 U	20 U	19 U
N-Nitrosodipropylamine		4.2 U	4 U	R	5.0 U	5.0 U	4.8 U	5.3 U	4.0 U	5.0 U	4.7 U
N-Nitrosodimethylamine		42 U	40 U	R	50 U	50 U	48 U	53 U	40 U	50 U	47 U
4-Chloro-3-methylphenol		4.2 U	4 U	R	5.0 U	5.0 U	4.8 U	5.3 U	4.0 U	5.0 U	4.7 U
p-Dimethylaminoazobenzene		8.4 U	8.1 U	R	10 U	10 U	9.6 U	11 U	8.0 U	10 U	9.5 U

NOTES: U - not detected, J - estimated value, R - unusable, --- - not analyzed.
Dup - references blind field duplicate sample that was collected. Lab Dup - laboratory duplicate analyses conducted.
Samples were analyzed undiluted.

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Table 2
Sullivan's Ledge Superfund Site
Ground Water Samples
Method 8270C Semivolatile Organic Compound Data

Compound	Sample ID	MW-10B	MW-12AR	MW-13	MW-13A	MW-14	MW-15	MW-16	MW-17	MW-2	MW-22A
	SDG ID	L0102479	L0102630	L0102597	L0102597	L0102408	L0102408	L0102479	L0102674	L0102408	L0102674
	Dilution Factor	1	1	1	1	1	1	1	1	1	1
	Sample Date	03/21/01	03/26/01	03/23/01	03/23/01	03/19/01	03/19/01	03/21/01	03/27/01	03/19/01	03/27/01
	Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
	Matrix	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
1,2,4,5-Tetrachlorobenzene		18 UJ	17 U	16 U	16 U	20 U	20 U	20 U	19 U	20 U	18 U
1,2,4-Trichlorobenzene		4.6 UJ	4.2 U	4.1 U	4.1 U	5.0 U	5.0 U	5.0 U	4.7 U	15	4.6 U
1,2-Dichlorobenzene		4.6 UJ	4.2 U	4.1 U	4.1 U	5.0 U	5.0 U	5.0 U	4.7 U	5.0 U	4.6 U
1,3-Dichlorobenzene		4.6 UJ	4.2 U	4.1 U	4.1 U	5.0 U	5.0 U	5.0 U	4.7 U	8.5	4.6 U
1,4-Dichlorobenzene		4.6 UJ	6.3	4.1 U	4.1 U	8.1	5.0 U	5.0 U	4.7 U	24	17
1-Chloronaphthalene		4.6 UJ	19	4.1 U	4.1 U	5.0 U	5.0 U	5.0 U	4.7 U	5.0 U	4.6 U
1-Methylnaphthalene		4.6 UJ	8.6	4.1 U	4.1 U	5.0 U	5.0 U	5.0 U	4.7 U	5.0 U	4.6 U
2,4,5-Trichlorophenol		4.6 UJ	4.2 U	4.1 U	4.1 U	5.0 U	5.0 U	5.0 U	4.7 U	5.0 U	4.6 U
2,4,6-Trichlorophenol		4.6 UJ	4.2 U	4.1 U	4.1 U	5.0 U	5.0 U	5.0 U	4.7 U	5.0 U	4.6 U
2,4-Dichlorophenol		9.3 UJ	8.3 U	8.2 U	8.2 U	10 U	10 U	10 U	9.4 U	10 U	9.3 U
2,4-Dimethylphenol		9.3 UJ	8.3 U	8.2 U	8.2 U	10 U	10 U	10 U	9.4 U	10 U	21
2,4-Dinitrophenol		18 UJ	17 U	16 U	16 U	20 U	20 U	20 U	19 U	20 U	18 U
2,4-Dinitrotoluene		4.6 UJ	4.2 U	4.1 U	4.1 U	5.0 U	5.0 U	5.0 U	4.7 U	5.0 U	4.6 U
2,6-Dichlorophenol		9.3 UJ	8.3 U	8.2 U	8.2 U	10 U	10 U	10 U	9.4 U	10 U	9.3 U
2,6-Dinitrotoluene		4.6 UJ	4.2 U	4.1 U	4.1 U	5.0 U	5.0 U	5.0 U	4.7 U	5.0 U	4.6 U
2-Chloronaphthalene		4.6 UJ	4.2 U	4.1 U	4.1 U	5.0 U	5.0 U	5.0 U	4.7 U	5.0 U	4.6 U
2-Chlorophenol		4.6 UJ	4.2 U	4.1 U	4.1 U	5.0 U	5.0 U	5.0 U	4.7 U	5.0 U	4.6 U
2-Methylnaphthalene		4.6 UJ	4.2 U	4.1 U	4.1 U	5.0 U	5.0 U	5.0 U	4.7 U	5.0 U	4.6 U
2-Methylphenol		4.6 UJ	4.2 U	4.1 U	4.1 U	5.0 U	5.0 U	5.0 U	4.7 U	5.0 U	24
2-Nitroaniline		4.6 UJ	4.2 U	4.1 U	4.1 U	5.0 U	5.0 U	5.0 U	4.7 U	5.0 U	4.6 U
2-Nitrophenol		9.3 UJ	8.3 U	8.2 U	8.2 U	10 U	10 U	10 U	9.4 U	10 U	9.3 U
2-Picoline		18 UJ	17 U	16 U	16 U	20 U	20 U	20 U	19 U	20 U	18 U
3,3-Dichlorobenzidine		46 UJ	42 U	41 U	41 U	50 U	50 U	50 U	47 U	50 U	46 U
3-Methylcholanthrene		18 UJ	17 U	16 U	16 U	20 U	20 U	20 U	19 U	20 U	18 U
3-Methylphenol/4-Methylphenol		4.6 UJ	4.2 U	4.1 U	4.1 U	5.0 U	5.0 U	5.0 U	4.7 U	5.0 U	46
3-Nitroaniline		4.6 UJ	4.2 U	4.1 U	4.1 U	5.0 U	5.0 U	5.0 U	4.7 U	5.0 U	4.6 U
4,6-Dinitro-2-methylphenol		18 UJ	17 U	16 U	16 U	20 U	20 U	20 U	19 U	20 U	18 U
4-Aminobiphenyl		9.3 UJ	8.3 U	8.2 U	8.2 U	10 U	10 U	10 U	9.4 U	10 U	9.3 U
4-Bromophenyl phenyl ether		4.6 UJ	4.2 U	4.1 U	4.1 U	5.0 U	5.0 U	5.0 U	4.7 U	5.0 U	4.6 U
4-Chloroaniline		4.6 UJ	4.2 U	4.1 U	4.1 U	5.0 U	5.0 U	5.0 U	4.7 U	5.0 U	4.6 U
4-Chlorophenyl phenyl ether		4.6 UJ	4.2 U	4.1 U	4.1 U	5.0 U	5.0 U	5.0 U	4.7 U	5.0 U	4.6 U
4-Nitroaniline		4.6 UJ	4.2 U	4.1 U	4.1 U	5.0 U	5.0 U	5.0 U	4.7 U	5.0 U	4.6 U
4-Nitrophenol		9.3 UJ	8.3 U	8.2 U	8.2 U	10 U	10 U	10 U	9.4 U	10 U	9.3 U
7,12-Dimethylbenz(a)anthracene		9.3 UJ	8.3 U	8.2 U	8.2 U	10 U	10 U	10 U	9.4 U	10 U	9.3 U
Acenaphthene		4.6 UJ	4.2 U	4.1 U	4.1 U	5.0 U	5.0 U	5.0 U	4.7 U	5.0 U	9.1

NOTES: U - not detected, J - estimated value, R - unusable, — - not analyzed.
Dup - references blind field duplicate sample that was collected. Lab Dup - laboratory duplicate analyses conducted.
Samples were analyzed undiluted.

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Table 2
Sullivan's Ledge Superfund Site
Ground Water Samples
Method 8270C Semivolatile Organic Compound Data

Compound	Sample ID	MW-10B	MW-12AR	MW-13	MW-13A	MW-14	MW-15	MW-16	MW-17	MW-2	MW-22A
	SDG ID	L0102479	L0102630	L0102597	L0102597	L0102408	L0102408	L0102479	L0102674	L0102408	L0102674
	Dilution Factor	1	1	1	1	1	1	1	1	1	1
	Sample Date	03/21/01	03/26/01	03/23/01	03/23/01	03/19/01	03/19/01	03/21/01	03/27/01	03/19/01	03/27/01
	Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
	Matrix	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Acenaphthylene		4.6 UJ	4.2 U	4.1 U	4.1 U	5.0 U	5.0 U	5.0 U	4.7 U	5.0 U	4.6 U
Acetophenone		18 UJ	17 U	16 U	16 U	20 U	20 U	20 U	19 U	20 U	20
Aniline		9.3 UJ	8.3 U	8.2 U	8.2 U	10 U	10 U	10 U	9.4 U	10 U	9.3 U
Anthracene		4.6 UJ	4.2 U	4.1 U	4.1 U	5.0 U	5.0 U	5.0 U	4.7 U	5.0 U	4.6 U
Azobenzene		4.6 UJ	4.2 U	4.1 U	4.1 U	5.0 U	5.0 U	5.0 U	4.7 U	5.0 U	4.6 U
Benzidine		46 UJ	42 U	41 U	41 U	50 U	50 U	50 U	47 U	50 U	46 U
Benzo(a)anthracene		4.6 UJ	4.2 U	4.1 U	4.1 U	5.0 U	5.0 U	5.0 U	4.7 U	5.0 U	4.6 U
Benzo[a]pyrene		4.6 UJ	4.2 U	4.1 U	4.1 U	5.0 U	5.0 U	5.0 U	4.7 U	5.0 U	4.6 U
Benzo(b)fluoranthene		4.6 UJ	4.2 U	4.1 U	4.1 U	5.0 U	5.0 U	5.0 U	4.7 U	5.0 U	4.6 U
Benzo(e)pyrene		4.6 UJ	4.2 U	4.1 U	4.1 U	5.0 U	5.0 U	5.0 U	4.7 U	5.0 U	4.6 U
Benzo(ghi)perylene		4.6 UJ	4.2 U	4.1 U	4.1 U	5.0 U	5.0 U	5.0 U	4.7 U	5.0 U	4.6 U
Benzo(k)fluoranthene		4.6 UJ	4.2 U	4.1 U	4.1 U	5.0 U	5.0 U	5.0 U	4.7 U	5.0 U	4.6 U
Benzoic acid		46 UJ	42 U	41 U	41 U	50 U	50 U	50 U	47 U	50 U	46 U
Benzyl alcohol		9.3 UJ	8.3 U	8.2 U	8.2 U	10 U	10 U	10 U	9.4 U	10 U	9.3 U
Biphenyl		4.6 UJ	4.2 U	4.1 U	4.1 U	5.0 U	5.0 U	5.0 U	4.7 U	5.0 U	4.6 U
bis(2-Chloroethoxy)methane		4.6 UJ	4.2 U	4.1 U	4.1 U	5.0 U	5.0 U	5.0 U	4.7 U	5.0 U	4.6 U
bis(2-Chloroethyl)ether		4.6 UJ	4.2 U	4.1 U	4.1 U	5.0 U	5.0 U	5.0 U	4.7 U	5.0 U	4.6 U
2,2'-oxybis(1-Chloropropane)		4.6 UJ	4.2 U	4.1 U	4.1 U	5.0 U	5.0 U	5.0 U	4.7 U	5.0 U	53
bis(2-Ethylhexyl)phthalate (BEHP)		9.3 UJ	8.3 U	8.2 U	8.2 U	10 U	10 U	10 U	9.4 U	10 U	9.3 U
Butyl benzyl phthalate		4.6 UJ	4.2 U	4.1 U	4.1 U	5.0 U	5.0 U	5.0 U	4.7 U	5.0 U	4.6 U
Carbazole		4.6 UJ	4.2 U	4.1 U	4.1 U	5.0 U	5.0 U	5.0 U	4.7 U	5.0 U	4.6 U
Chlorobenzilate		18 UJ	17 U	16 U	16 U	20 U	20 U	20 U	19 U	20 U	18 U
Chrysene		4.6 UJ	4.2 U	4.1 U	4.1 U	5.0 U	5.0 U	5.0 U	4.7 U	5.0 U	4.6 U
Di-n-butyl phthalate		4.6 UJ	4.2 U	4.1 U	4.1 U	5.0 U	5.0 U	5.0 U	4.7 U	5.0 U	4.6 U
Di-n-octyl phthalate		4.6 UJ	4.2 U	4.1 U	4.1 U	5.0 U	5.0 U	5.0 U	4.7 U	5.0 U	4.6 U
Dibenzo(a,h)anthracene		4.6 UJ	4.2 U	4.1 U	4.1 U	5.0 U	5.0 U	5.0 U	4.7 U	5.0 U	4.6 U
Dibenzofuran		4.6 UJ	4.2 U	4.1 U	4.1 U	5.0 U	5.0 U	5.0 U	4.7 U	5.0 U	4.6 U
Diethyl phthalate		4.6 UJ	4.2 U	4.1 U	4.1 U	5.0 U	5.0 U	5.0 U	4.7 U	5.0 U	4.6 U
Dimethoate		18 UJ	17 U	16 U	16 U	20 U	20 U	20 U	19 U	20 U	18 U
Dimethyl phthalate		4.6 UJ	4.2 U	4.1 U	4.1 U	5.0 U	5.0 U	5.0 U	4.7 U	5.0 U	4.6 U
Ethyl methanesulfonate		14 UJ	12 U	12 U	12 U	15 U	15 U	15 U	14 U	15 U	14 U
Fluoranthene		4.6 UJ	4.2 U	4.1 U	4.1 U	5.0 U	5.0 U	5.0 U	4.7 U	5.0 U	4.6 U
Fluorene		4.6 UJ	4.2 U	4.1 U	4.1 U	5.0 U	5.0 U	5.0 U	4.7 U	5.0 U	4.6 U
Hexachlorobenzene		4.6 UJ	4.2 U	4.1 U	4.1 U	5.0 U	5.0 U	5.0 U	4.7 U	5.0 U	4.6 U
Hexachlorobutadiene		9.3 UJ	8.3 U	8.2 U	8.2 U	10 U	10 U	10 U	9.4 U	10 U	9.3 U

NOTES: U - not detected, J - estimated value, R - unusable, --- - not analyzed.
Dup - references blind field duplicate sample that was collected. Lab Dup - laboratory duplicate analyses conducted.
Samples were analyzed undiluted.

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Table 2
Sullivan's Ledge Superfund Site
Ground Water Samples
Method 8270C Semivolatile Organic Compound Data

Compound	Sample ID	MW-10B	MW-12AR	MW-13	MW-13A	MW-14	MW-15	MW-16	MW-17	MW-2	MW-22A
	SDG ID	L0102479	L0102630	L0102597	L0102597	L0102408	L0102408	L0102479	L0102674	L0102408	L0102674
	Dilution Factor	1	1	1	1	1	1	1	1	1	1
	Sample Date	03/21/01	03/26/01	03/23/01	03/23/01	03/19/01	03/19/01	03/21/01	03/27/01	03/19/01	03/27/01
	Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
	Matrix	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Hexachlorocyclopentadiene		9.3 UJ	8.3 U	8.2 U	8.2 U	10 U	10 U	10 U	9.4 U	10 U	9.3 U
Hexachloroethane		4.6 UJ	4.2 U	4.1 U	4.1 U	5.0 U	5.0 U	5.0 U	4.7 U	5.0 U	4.6 U
Hexachloropropene		46 UJ	42 U	41 U	41 U	50 U	50 U	50 U	47 U	50 U	46 U
Indeno(1,2,3-cd)pyrene		4.6 UJ	4.2 U	4.1 U	4.1 U	5.0 U	5.0 U	5.0 U	4.7 U	5.0 U	4.6 U
Isodrin		9.3 UJ	8.3 U	8.2 U	8.2 U	10 U	10 U	10 U	9.4 U	10 U	9.3 U
Isophorone		4.6 UJ	4.2 U	4.1 U	4.1 U	5.0 U	5.0 U	5.0 U	4.7 U	5.0 U	4.6 U
Methyl methanesulfonate		18 UJ	17 U	16 U	16 U	20 U	20 U	20 U	19 U	20 U	18 U
NDPA/DPA		4.6 UJ	14	4.1 U	4.1 U	5.0 U	5.0 U	5.0 U	4.7 U	5.0 U	4.6 U
Naphthalene		4.6 UJ	4.2 U	4.1 U	4.1 U	55	6.0	5.0 U	4.7 U	5.0 U	5.6
Nitrobenzene		4.6 UJ	4.2 U	4.1 U	4.1 U	5.0 U	5.0 U	5.0 U	4.7 U	5.0 U	4.6 U
Nitrosodi-n-butylamine		9.3 UJ	8.3 U	8.2 U	8.2 U	10 U	10 U	10 U	9.4 U	10 U	9.3 U
Nitrosodipiperidine		18 UJ	17 U	16 U	16 U	20 U	20 U	20 U	19 U	20 U	18 U
Pentachlorobenzene		18 UJ	17 U	16 U	16 U	20 U	20 U	20 U	19 U	20 U	18 U
PCNB		9.3 UJ	8.3 U	8.2 U	8.2 U	10 U	10 U	10 U	9.4 U	10 U	9.3 U
Pentachlorophenol		18 UJ	17 U	16 U	16 U	20 U	20 U	20 U	19 U	20 U	18 U
Perylene		4.6 UJ	4.2 U	4.1 U	4.1 U	5.0 U	5.0 U	5.0 U	4.7 U	5.0 U	4.6 U
Phenacetin		9.3 UJ	8.3 U	8.2 U	8.2 U	10 U	10 U	10 U	9.4 U	10 U	9.3 U
Phenanthrene		4.6 UJ	4.2 U	4.1 U	4.1 U	5.0 U	5.0 U	5.0 U	4.7 U	5.0 U	4.6 U
Phenol		4.6 UJ	4.2 U	4.1 U	4.1 U	5.0 U	5.0 U	5.0 U	4.7 U	5.0 U	34
Pronamide		18 UJ	17 U	16 U	16 U	20 U	20 U	20 U	19 U	20 U	18 U
Pyrene		4.6 UJ	4.2 U	4.1 U	4.1 U	5.0 U	5.0 U	5.0 U	4.7 U	5.0 U	4.6 U
Pyridine		46 UJ	42 U	41 U	41 U	50 U	50 U	50 U	47 U	50 U	46 U
a,a-Dimethylphenethylamine		46 UJ	42 U	41 U	41 U	50 U	50 U	50 U	47 U	50 U	46 U
a-Naphthylamine		18 UJ	17 U	16 U	16 U	20 U	20 U	20 U	19 U	20 U	18 U
b-Naphthylamine		18 UJ	17 U	16 U	16 U	20 U	20 U	20 U	19 U	20 U	18 U
N-Nitrosodipropylamine		4.6 UJ	4.2 U	4.1 U	4.1 U	5.0 U	5.0 U	5.0 U	4.7 U	5.0 U	4.6 U
N-Nitrosodimethylamine		46 UJ	42 U	41 U	41 U	50 U	50 U	50 U	47 U	50 U	46 U
4-Chloro-3-methylphenol		4.6 UJ	4.2 U	4.1 U	4.1 U	5.0 U	5.0 U	5.0 U	4.7 U	5.0 U	4.6 U
p-Dimethylaminoazobenzene		9.3 UJ	8.3 U	8.2 U	8.2 U	10 U	10 U	10 U	9.4 U	10 U	9.3 U

NOTES: U - not detected, J - estimated value, R - unusable, --- - not analyzed.
Dup - references blind field duplicate sample that was collected. Lab Dup - laboratory duplicate analyses conducted.
Samples were analyzed undiluted.

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Table 2
Sullivan's Ledge Superfund Site
Ground Water Samples
Method 8270C Semivolatile Organic Compound Data

Compound	Sample ID	MW-24	MW-4	MW-4A	MW-5	MW-5A	MW-5A Dup	MW-6	MW-6A	MW-6A Dup	MW-8
	SDG ID	L0102408	L0102674	L0102627	L0102630	L0102630	L0102630	L0102437	L0102437	L0102437	L0102437
	Dilution Factor	1	1	1	1	1	1	1	1	1	1
	Sample Date	03/19/01	03/26/01	03/24/01	03/26/01	03/26/01	03/26/01	03/20/01	03/20/01	03/20/01	03/20/01
	Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
	Matrix	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
1,2,4,5-Tetrachlorobenzene		20 U	19 U	20 U	17 U	17 U	17 U	20 U	20 U	20 U	20 UJ
1,2,4-Trichlorobenzene		5.0 U	4.8 U	5.0 U	4.3 U	4.3 U	4.3 U	5.0 U	5.0 U	5.0 U	5.0 UJ
1,2-Dichlorobenzene		5.0 U	4.8 U	5.0 U	4.3 U	4.3 U	4.3 U	5.0 U	5.0 U	5.0 U	5.0 UJ
1,3-Dichlorobenzene		5.0 U	4.8 U	5.0 U	4.3 U	4.3 U	4.3 U	5.0 U	5.0 U	5.0 U	5.0 UJ
1,4-Dichlorobenzene		9.8	4.8 U	5.0 U	4.3 U	4.3 U	4.3 U	5.0 U	5.0 U	5.0 U	5.0 UJ
1-Chloronaphthalene		5.0 U	4.8 U	5.0 U	4.3 U	4.3 U	4.3 U	5.0 U	5.0 U	5.0 U	5.0 UJ
1-Methylnaphthalene		5.0 U	4.8 U	5.0 U	4.3 U	4.3 U	4.3 U	5.0 U	5.0 U	5.0 U	5.0 UJ
2,4,5-Trichlorophenol		5.0 U	4.8 U	5.0 U	4.3 U	4.3 U	4.3 U	5.0 U	5.0 U	5.0 U	5.0 UJ
2,4,6-Trichlorophenol		5.0 U	4.8 U	5.0 U	4.3 U	4.3 U	4.3 U	5.0 U	5.0 U	5.0 U	5.0 UJ
2,4-Dichlorophenol		10 U	9.6 U	10 U	8.7 U	8.6 U	8.7 U	10 U	10 U	10 U	10 UJ
2,4-Dimethylphenol		10 U	9.6 U	10 U	8.7 U	8.6 U	8.7 U	10 U	10 U	10 U	10 UJ
2,4-Dinitrophenol		20 U	19 U	20 U	17 U	17 U	17 U	20 U	20 U	20 U	20 UJ
2,4-Dinitrotoluene		5.0 U	4.8 U	5.0 U	4.3 U	4.3 U	4.3 U	5.0 U	5.0 U	5.0 U	5.0 UJ
2,6-Dichlorophenol		10 U	9.6 U	10 U	8.7 U	8.6 U	8.7 U	10 U	10 U	10 U	10 UJ
2,6-Dinitrotoluene		5.0 U	4.8 U	5.0 U	4.3 U	4.3 U	4.3 U	5.0 U	5.0 U	5.0 U	5.0 UJ
2-Chloronaphthalene		5.0 U	4.8 U	5.0 U	4.3 U	4.3 U	4.3 U	5.0 U	5.0 U	5.0 U	5.0 UJ
2-Chlorophenol		5.0 U	4.8 U	5.0 U	4.3 U	4.3 U	4.3 U	5.0 U	5.0 U	5.0 U	5.0 UJ
2-Methylnaphthalene		5.0 U	4.8 U	5.0 U	4.3 U	4.3 U	4.3 U	5.0 U	5.0 U	5.0 U	5.0 UJ
2-Methylphenol		5.0 U	4.8 U	5.0 U	4.3 U	4.3 U	4.3 U	5.0 U	5.0 U	5.0 U	5.0 UJ
2-Nitroaniline		5.0 U	4.8 U	5.0 U	4.3 U	4.3 U	4.3 U	5.0 U	5.0 U	5.0 U	5.0 UJ
2-Nitrophenol		10 U	9.6 U	10 U	8.7 U	8.6 U	8.7 U	10 U	10 U	10 U	10 UJ
2-Picoline		20 U	19 U	20 U	17 U	17 U	17 U	20 U	20 U	20 U	20 UJ
3,3-Dichlorobenzidine		50 U	48 U	50 U	43 U	43 U	43 U	50 U	50 U	50 U	50 UJ
3-Methylcholanthrene		20 U	19 U	20 U	17 U	17 U	17 U	20 U	20 U	20 U	20 UJ
3-Methylphenol/4-Methylphenol		5.0 U	4.8 U	5.0 U	4.3 U	4.3 U	4.3 U	5.0 U	5.0 U	5.0 U	5.0 UJ
3-Nitroaniline		5.0 U	4.8 U	5.0 U	4.3 U	4.3 U	4.3 U	5.0 U	5.0 U	5.0 U	5.0 UJ
4,6-Dinitro-2-methylphenol		20 U	19 U	20 U	17 U	17 U	17 U	20 U	20 U	20 U	20 UJ
4-Aminobiphenyl		10 U	9.6 U	10 U	8.7 U	8.6 U	8.7 U	10 U	10 U	10 U	10 UJ
4-Bromophenyl phenyl ether		5.0 U	4.8 U	5.0 U	4.3 U	4.3 U	4.3 U	5.0 U	5.0 U	5.0 U	5.0 UJ
4-Chloroaniline		5.0 U	4.8 U	5.0 U	4.3 U	4.3 U	4.3 U	5.0 U	5.0 U	5.0 U	5.0 UJ
4-Chlorophenyl phenyl ether		5.0 U	4.8 U	5.0 U	4.3 U	4.3 U	4.3 U	5.0 U	5.0 U	5.0 U	5.0 UJ
4-Nitroaniline		5.0 U	4.8 U	5.0 U	4.3 U	4.3 U	4.3 U	5.0 U	5.0 U	5.0 U	5.0 UJ
4-Nitrophenol		10 U	9.6 U	10 U	8.7 U	8.6 U	8.7 U	10 U	10 U	10 U	10 UJ
7,12-Dimethylbenz(a)anthracene		10 U	9.6 U	10 U	8.7 U	8.6 U	8.7 U	10 U	10 U	10 U	10 UJ
Acenaphthene		5.0 U	4.8 U	5.0 U	4.3 U	4.3 U	4.3 U	5.0 U	5.0 U	5.0 U	5.0 UJ

NOTES: U - not detected, J - estimated value, R - unusable, — - not analyzed.
Dup - references blind field duplicate sample that was collected. Lab Dup - laboratory duplicate analyses conducted.
Samples were analyzed undiluted.

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Table 2
Sullivan's Ledge Superfund Site
Ground Water Samples
Method 8270C Semivolatile Organic Compound Data

Compound	Sample ID	MW-24	MW-4	MW-4A	MW-5	MW-5A	MW-5A Dup	MW-6	MW-6A	MW-6A Dup	MW-8
	SDG ID	L0102408	L0102674	L0102627	L0102630	L0102630	L0102630	L0102437	L0102437	L0102437	L0102437
	Dilution Factor	1	1	1	1	1	1	1	1	1	1
	Sample Date	03/19/01	03/26/01	03/24/01	03/26/01	03/26/01	03/26/01	03/20/01	03/20/01	03/20/01	03/20/01
	Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
	Matrix	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Acenaphthylene		5.0 U	4.8 U	5.0 U	4.3 U	4.3 U	4.3 U	5.0 U	5.0 U	5.0 U	5.0 UJ
Acetophenone		20 U	19 U	20 U	17 U	17 U	17 U	20 U	20 U	20 U	20 UJ
Aniline		10 U	9.6 U	10 U	8.7 U	8.6 U	8.7 U	10 U	10 U	10 U	10 UJ
Anthracene		5.0 U	4.8 U	5.0 U	4.3 U	4.3 U	4.3 U	5.0 U	5.0 U	5.0 U	5.0 UJ
Azobenzene		5.0 U	4.8 U	5.0 U	4.3 U	4.3 U	4.3 U	5.0 U	5.0 U	5.0 U	5.0 UJ
Benzidine		50 U	48 U	50 U	43 U	43 U	43 U	50 U	50 U	50 U	50 UJ
Benzo(a)anthracene		5.0 U	4.8 U	5.0 U	4.3 U	4.3 U	4.3 U	5.0 U	5.0 U	5.0 U	5.0 UJ
Benzo[a]pyrene		5.0 U	4.8 U	5.0 U	4.3 U	4.3 U	4.3 U	5.0 U	5.0 U	5.0 U	5.0 UJ
Benzo(b)fluoranthene		5.0 U	4.8 U	5.0 U	4.3 U	4.3 U	4.3 U	5.0 U	5.0 U	5.0 U	5.0 UJ
Benzo(e)pyrene		5.0 U	4.8 U	5.0 U	4.3 U	4.3 U	4.3 U	5.0 U	5.0 U	5.0 U	5.0 UJ
Benzo(ghi)perylene		5.0 U	4.8 U	5.0 U	4.3 U	4.3 U	4.3 U	5.0 U	5.0 U	5.0 U	5.0 UJ
Benzo(k)fluoranthene		5.0 U	4.8 U	5.0 U	4.3 U	4.3 U	4.3 U	5.0 U	5.0 U	5.0 U	5.0 UJ
Benzoic acid		50 U	48 U	50 U	43 U	43 U	43 U	50 U	50 U	50 U	50 UJ
Benzyl alcohol		10 U	9.6 U	10 U	8.7 U	8.6 U	8.7 U	10 U	10 U	10 U	10 UJ
Biphenyl		5.0 U	4.8 U	5.0 U	4.3 U	4.3 U	4.3 U	5.0 U	5.0 U	5.0 U	5.0 UJ
bis(2-Chloroethoxy)methane		5.0 U	4.8 U	5.0 U	4.3 U	4.3 U	4.3 U	5.0 U	5.0 U	5.0 U	5.0 UJ
bis(2-Chloroethyl)ether		5.0 U	4.8 U	5.0 U	4.3 U	4.3 U	4.3 U	5.0 U	5.0 U	5.0 U	5.0 UJ
2,2'-oxybis(1-Chloropropane)		5.0 U	4.8 U	5.0 U	4.3 U	4.3 U	4.3 U	5.0 U	5.0 U	5.0 U	5.0 UJ
bis(2-Ethylhexyl)phthalate (BEHP)		10 U	9.6 U	10 U	8.7 U	8.6 U	8.7 U	10 U	10 U	10 U	10 UJ
Butyl benzyl phthalate		5.0 U	4.8 U	5.0 U	4.3 U	4.3 U	4.3 U	5.0 U	5.0 U	5.0 U	5.0 UJ
Carbazole		5.0 U	4.8 U	5.0 U	4.3 U	4.3 U	4.3 U	5.0 U	5.0 U	5.0 U	5.0 UJ
Chlorobenzilate		20 U	19 U	20 U	17 U	17 U	17 U	20 U	20 U	20 U	20 UJ
Chrysene		5.0 U	4.8 U	5.0 U	4.3 U	4.3 U	4.3 U	5.0 U	5.0 U	5.0 U	5.0 UJ
Di-n-butyl phthalate		5.0 U	4.8 U	5.0 U	4.3 U	4.3 U	4.3 U	5.0 U	5.0 U	5.0 U	5.0 UJ
Di-n-octyl phthalate		5.0 U	4.8 U	5.0 U	4.3 U	4.3 U	4.3 U	5.0 U	5.0 U	5.0 U	5.0 UJ
Dibenzo(a,h)anthracene		5.0 U	4.8 U	5.0 U	4.3 U	4.3 U	4.3 U	5.0 U	5.0 U	5.0 U	5.0 UJ
Dibenzofuran		5.0 U	4.8 U	5.0 U	4.3 U	4.3 U	4.3 U	5.0 U	5.0 U	5.0 U	5.0 UJ
Diethyl phthalate		5.0 U	4.8 U	5.0 U	4.3 U	4.3 U	4.3 U	5.0 U	5.0 U	5.0 U	5.0 UJ
Dimethoate		20 U	19 U	20 U	17 U	17 U	17 U	20 U	20 U	20 U	20 UJ
Dimethyl phthalate		5.0 U	4.8 U	5.0 U	4.3 U	4.3 U	4.3 U	5.0 U	5.0 U	5.0 U	5.0 UJ
Ethyl methanesulfonate		15 U	14 U	15 U	13 U	13 U	13 U	15 U	15 U	15 U	15 UJ
Fluoranthene		5.0 U	4.8 U	5.0 U	4.3 U	4.3 U	4.3 U	5.0 U	5.0 U	5.0 U	5.0 UJ
Fluorene		5.0 U	4.8 U	5.0 U	4.3 U	4.3 U	4.3 U	5.0 U	5.0 U	5.0 U	5.0 UJ
Hexachlorobenzene		5.0 U	4.8 U	5.0 U	4.3 U	4.3 U	4.3 U	5.0 U	5.0 U	5.0 U	5.0 UJ
Hexachlorobutadiene		10 U	9.6 U	10 U	8.7 U	8.6 U	8.7 U	10 U	10 U	10 U	10 UJ

NOTES: U - not detected, J - estimated value, R - unusable, --- - not analyzed.
Dup - references blind field duplicate sample that was collected. Lab Dup - laboratory duplicate analyses conducted.
Samples were analyzed undiluted.

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O'BRIEN & GERE ENGINEERS, INC.

Table 2
Sullivan's Ledge Superfund Site
Ground Water Samples
Method 8270C Semivolatile Organic Compound Data

Compound	Sample ID	MW-24	MW-4	MW-4A	MW-5	MW-5A	MW-5A Dup	MW-6	MW-6A	MW-6A Dup	MW-8
	SDG ID	L0102408	L0102674	L0102627	L0102630	L0102630	L0102630	L0102437	L0102437	L0102437	L0102437
	Dilution Factor	1	1	1	1	1	1	1	1	1	1
	Sample Date	03/19/01	03/26/01	03/24/01	03/26/01	03/26/01	03/26/01	03/20/01	03/20/01	03/20/01	03/20/01
	Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
	Matrix	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Hexachlorocyclopentadiene		10 U	9.6 U	10 U	8.7 U	8.6 U	8.7 U	10 U	10 U	10 U	10 UJ
Hexachloroethane		5.0 U	4.8 U	5.0 U	4.3 U	4.3 U	4.3 U	5.0 U	5.0 U	5.0 U	5.0 UJ
Hexachloropropene		50 U	48 U	50 U	43 U	43 U	43 U	50 U	50 U	50 U	50 UJ
Indeno(1,2,3-cd)pyrene		5.0 U	4.8 U	5.0 U	4.3 U	4.3 U	4.3 U	5.0 U	5.0 U	5.0 U	5.0 UJ
Isodrin		10 U	9.6 U	10 U	8.7 U	8.6 U	8.7 U	10 U	10 U	10 U	10 UJ
Isophorone		5.0 U	4.8 U	5.0 U	4.3 U	4.3 U	4.3 U	5.0 U	5.0 U	5.0 U	5.0 UJ
Methyl methanesulfonate		20 U	19 U	20 U	17 U	17 U	17 U	20 U	20 U	20 U	20 UJ
NDPA/DPA		5.0 U	4.8 U	5.0 U	4.3 U	4.3 U	4.3 U	5.0 U	5.0 U	5.0 U	5.0 UJ
Naphthalene		16	4.8 U	5.0 U	4.3 U	4.3 U	4.3 U	5.0 U	5.0 U	5.0 U	5.0 UJ
Nitrobenzene		5.0 U	4.8 U	5.0 U	4.3 U	4.3 U	4.3 U	5.0 U	5.0 U	5.0 U	5.0 UJ
Nitrosodi-n-butylamine		10 U	9.6 U	10 U	8.7 U	8.6 U	8.7 U	10 U	10 U	10 U	10 UJ
Nitrosodipiperidine		20 U	19 U	20 U	17 U	17 U	17 U	20 U	20 U	20 U	20 UJ
Pentachlorobenzene		20 U	19 U	20 U	17 U	17 U	17 U	20 U	20 U	20 U	20 UJ
PCNB		10 U	9.6 U	10 U	8.7 U	8.6 U	8.7 U	10 U	10 U	10 U	10 UJ
Pentachlorophenol		20 U	19 U	20 U	17 U	17 U	17 U	20 U	20 U	20 U	20 UJ
Perylene		5.0 U	4.8 U	5.0 U	4.3 U	4.3 U	4.3 U	5.0 U	5.0 U	5.0 U	5.0 UJ
Phenacetin		10 U	9.6 U	10 U	8.7 U	8.6 U	8.7 U	10 U	10 U	10 U	10 UJ
Phenanthrene		5.0 U	4.8 U	5.0 U	4.3 U	4.3 U	4.3 U	5.0 U	5.0 U	5.0 U	5.0 UJ
Phenol		14	4.8 U	5.0 U	4.3 U	4.3 U	4.3 U	5.0 U	5.0 U	5.0 U	5.0 UJ
Pronamide		20 U	19 U	20 U	17 U	17 U	17 U	20 U	20 U	20 U	20 UJ
Pyrene		5.0 U	4.8 U	5.0 U	4.3 U	4.3 U	4.3 U	5.0 U	5.0 U	5.0 U	5.0 UJ
Pyridine		50 U	48 U	50 U	43 U	43 U	43 U	50 U	50 U	50 U	50 UJ
a,a-Dimethylphenethylamine		50 U	48 U	50 U	43 U	43 U	43 U	50 U	50 U	50 U	50 UJ
a-Naphthylamine		20 U	19 U	20 U	17 U	17 U	17 U	20 U	20 U	20 U	20 UJ
b-Naphthylamine		20 U	19 U	20 U	17 U	17 U	17 U	20 U	20 U	20 U	20 UJ
N-Nitrosodipropylamine		5.0 U	4.8 U	5.0 U	4.3 U	4.3 U	4.3 U	5.0 U	5.0 U	5.0 U	5.0 UJ
N-Nitrosodimethylamine		50 U	48 U	50 U	43 U	43 U	43 U	50 U	50 U	50 U	50 UJ
4-Chloro-3-methylphenol		5.0 U	4.8 U	5.0 U	4.3 U	4.3 U	4.3 U	5.0 U	5.0 U	5.0 U	5.0 UJ
p-Dimethylaminoazobenzene		10 U	9.6 U	10 U	8.7 U	8.6 U	8.7 U	10 U	10 U	10 U	10 UJ

NOTES: U - not detected, J - estimated value, R - unusable, — - not analyzed.
Dup - references blind field duplicate sample that was collected. Lab Dup - laboratory duplicate analyses conducted.
Samples were analyzed undiluted.

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Table 2
Sullivan's Ledge Superfund Site
Ground Water Samples
Method 8270C Semivolatile Organic Compound Data

Compound	Sample ID	MW-8A	OBG-1	OBG-2	OBG-3	TRENCH
	SDG ID	L0102437	L0102477	L0102477	L0102477	L0102477
	Dilution Factor	1	1	1	1	1
	Sample Date	03/20/01	03/21/01	03/21/01	03/21/01	03/21/01
	Units	ug/L	ug/L	ug/L	ug/L	ug/L
	Matrix	WATER	WATER	WATER	WATER	WATER
1,2,4,5-Tetrachlorobenzene		20 UJ	20 U	18 UJ	20 U	20 UJ
1,2,4-Trichlorobenzene		5.0 UJ	21	8.6 J	5.0 U	4.9 UJ
1,2-Dichlorobenzene		5.0 UJ	5.0 U	4.6 UJ	5.0 U	4.9 UJ
1,3-Dichlorobenzene		5.0 UJ	5.0 U	11 J	5.0 U	4.9 UJ
1,4-Dichlorobenzene		5.0 UJ	5.0 U	33 J	5.0 U	8.6 J
1-Chloronaphthalene		5.0 UJ	5.8	25 J	5.0 U	6.6 J
1-Methylnaphthalene		5.0 UJ	7.4	26 J	5.0 U	13 J
2,4,5-Trichlorophenol		5.0 UJ	5.0 U	4.6 UJ	5.0 U	4.9 UJ
2,4,6-Trichlorophenol		5.0 UJ	5.0 U	4.6 UJ	5.0 U	4.9 UJ
2,4-Dichlorophenol		10 UJ	10 U	9.3 UJ	10 U	9.8 UJ
2,4-Dimethylphenol		10 UJ	10 U	9.3 UJ	10 U	9.8 UJ
2,4-Dinitrophenol		20 UJ	20 U	18 UJ	20 U	20 UJ
2,4-Dinitrotoluene		5.0 UJ	5.0 U	4.6 UJ	5.0 U	4.9 UJ
2,6-Dichlorophenol		10 UJ	10 U	9.3 UJ	10 U	9.8 UJ
2,6-Dinitrotoluene		5.0 UJ	5.0 U	4.6 UJ	5.0 U	4.9 UJ
2-Chloronaphthalene		5.0 UJ	5.0 U	4.6 UJ	5.0 U	4.9 UJ
2-Chlorophenol		5.0 UJ	5.0 U	4.6 UJ	5.0 U	4.9 UJ
2-Methylnaphthalene		5.0 UJ	5.0 U	25 J	5.0 U	6.5 J
2-Methylphenol		5.0 UJ	5.0 U	4.6 UJ	5.0 U	4.9 UJ
2-Nitroaniline		5.0 UJ	5.0 U	4.6 UJ	5.0 U	4.9 UJ
2-Nitrophenol		10 UJ	10 U	9.3 UJ	10 U	9.8 UJ
2-Picoline		20 UJ	20 U	18 UJ	20 U	20 UJ
3,3-Dichlorobenzidine		50 UJ	50 U	46 UJ	50 U	49 UJ
3-Methylcholanthrene		20 UJ	20 U	18 UJ	20 U	20 UJ
3-Methylphenol/4-Methylphenol		5.0 UJ	5.0 U	4.6 UJ	5.0 U	4.9 UJ
3-Nitroaniline		5.0 UJ	5.0 U	4.6 UJ	5.0 U	4.9 UJ
4,6-Dinitro-2-methylphenol		20 UJ	20 U	18 UJ	20 U	20 UJ
4-Aminobiphenyl		10 UJ	10 U	9.3 UJ	10 U	9.8 UJ
4-Bromophenyl phenyl ether		5.0 UJ	5.0 U	4.6 UJ	5.0 U	4.9 UJ
4-Chloroaniline		5.0 UJ	5.0 U	4.6 UJ	5.0 U	4.9 UJ
4-Chlorophenyl phenyl ether		5.0 UJ	5.0 U	4.6 UJ	5.0 U	4.9 UJ
4-Nitroaniline		5.0 UJ	5.0 U	4.6 UJ	5.0 U	4.9 UJ
4-Nitrophenol		10 UJ	10 U	9.3 UJ	10 U	9.8 UJ
7,12-Dimethylbenz(a)anthracene		10 UJ	10 U	9.3 UJ	10 U	9.8 UJ
Acenaphthene		5.0 UJ	5.0 U	5.7 J	5.0 U	7.4 J

NOTES: U - not detected, J - estimated value, R - unusable, --- - not analyzed.
Dup - references blind field duplicate sample that was collected. Lab Dup - laboratory duplicate analyses conducted.
Samples were analyzed undiluted.

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Table 2
Sullivan's Ledge Superfund Site
Ground Water Samples
Method 8270C Semivolatile Organic Compound Data

Compound	Sample ID	MW-8A	OBG-1	OBG-2	OBG-3	TRENCH
	SDG ID	L0102437	L0102477	L0102477	L0102477	L0102477
	Dilution Factor	1	1	1	1	1
	Sample Date	03/20/01	03/21/01	03/21/01	03/21/01	03/21/01
	Units	ug/L	ug/L	ug/L	ug/L	ug/L
	Matrix	WATER	WATER	WATER	WATER	WATER
Acenaphthylene		5.0 UJ	5.0 U	4.6 UJ	5.0 U	4.9 UJ
Acetophenone		20 UJ	20 U	18 UJ	20 U	20 UJ
Aniline		10 UJ	10 U	9.3 UJ	10 U	9.8 UJ
Anthracene		5.0 UJ	5.0 U	4.6 UJ	5.0 U	4.9 UJ
Azobenzene		5.0 UJ	5.0 U	4.6 UJ	5.0 U	4.9 UJ
Benzidine		50 UJ	50 U	46 UJ	50 U	49 UJ
Benzo(a)anthracene		5.0 UJ	5.0 U	4.6 UJ	5.0 U	4.9 UJ
Benzo[a]pyrene		5.0 UJ	5.0 U	4.6 UJ	5.0 U	4.9 UJ
Benzo(b)fluoranthene		5.0 UJ	5.0 U	4.6 UJ	5.0 U	4.9 UJ
Benzo(e)pyrene		5.0 UJ	5.0 U	4.6 UJ	5.0 U	4.9 UJ
Benzo(ghi)perylene		5.0 UJ	5.0 U	4.6 UJ	5.0 U	4.9 UJ
Benzo(k)fluoranthene		5.0 UJ	5.0 U	4.6 UJ	5.0 U	4.9 UJ
Benzoic acid		50 UJ	50 U	46 UJ	50 U	49 UJ
Benzyl alcohol		10 UJ	10 U	9.3 UJ	10 U	9.8 UJ
Biphenyl		5.0 UJ	5.0 U	4.6 UJ	5.0 U	4.9 UJ
bis(2-Chloroethoxy)methane		5.0 UJ	5.0 U	4.6 UJ	5.0 U	4.9 UJ
bis(2-Chloroethyl)ether		5.0 UJ	5.0 U	4.6 UJ	5.0 U	4.9 UJ
2,2'-oxybis(1-Chloropropane)		5.0 UJ	5.0 U	4.6 UJ	5.0 U	4.9 UJ
bis(2-Ethylhexyl)phthalate (BEHP)		10 UJ	10 U	9.3 UJ	10 U	9.8 UJ
Butyl benzyl phthalate		5.0 UJ	5.0 U	4.6 UJ	5.0 U	4.9 UJ
Carbazole		5.0 UJ	5.0 U	4.6 UJ	5.0 U	4.9 UJ
Chlorobenzilate		20 UJ	20 U	18 UJ	20 U	20 UJ
Chrysene		5.0 UJ	5.0 U	4.6 UJ	5.0 U	4.9 UJ
Di-n-butyl phthalate		5.0 UJ	5.0 U	4.6 UJ	5.0 U	4.9 UJ
Di-n-octyl phthalate		5.0 UJ	5.0 U	4.6 UJ	5.0 U	4.9 UJ
Dibenzo(a,h)anthracene		5.0 UJ	5.0 U	4.6 UJ	5.0 U	4.9 UJ
Dibenzofuran		5.0 UJ	5.0 U	4.6 UJ	5.0 U	4.9 UJ
Diethyl phthalate		5.0 UJ	5.0 U	4.6 UJ	5.0 U	4.9 UJ
Dimethoate		20 UJ	20 U	18 UJ	20 U	20 UJ
Dimethyl phthalate		5.0 UJ	5.0 U	4.6 UJ	5.0 U	4.9 UJ
Ethyl methanesulfonate		15 UJ	15 U	14 UJ	15 U	15 UJ
Fluoranthene		5.0 UJ	5.0 U	4.6 UJ	5.0 U	4.9 UJ
Fluorene		5.0 UJ	5.0 U	4.6 UJ	5.0 U	4.9 UJ
Hexachlorobenzene		5.0 UJ	5.0 U	4.6 UJ	5.0 U	4.9 UJ
Hexachlorobutadiene		10 UJ	10 U	9.3 UJ	10 U	9.8 UJ

NOTES: U - not detected, J - estimated value, R - unusable, — - not analyzed.
Dup - references blind field duplicate sample that was collected. Lab Dup - laboratory duplicate analyses conducted.
Samples were analyzed undiluted.

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O'BRIEN & GERE ENGINEERS, INC.

Table 2
Sullivan's Ledge Superfund Site
Ground Water Samples
Method 8270C Semivolatile Organic Compound Data

	Sample ID	MW-8A	OBG-1	OBG-2	OBG-3	TRENCH
	SDG ID	L0102437	L0102477	L0102477	L0102477	L0102477
	Dilution Factor	1	1	1	1	1
	Sample Date	03/20/01	03/21/01	03/21/01	03/21/01	03/21/01
	Units	ug/L	ug/L	ug/L	ug/L	ug/L
Compound	Matrix	WATER	WATER	WATER	WATER	WATER
Hexachlorocyclopentadiene		10 UJ	10 U	9.3 UJ	10 U	9.8 UJ
Hexachloroethane		5.0 UJ	5.0 U	4.6 UJ	5.0 U	4.9 UJ
Hexachloropropene		50 UJ	50 U	46 UJ	50 U	49 UJ
Indeno(1,2,3-cd)pyrene		5.0 UJ	5.0 U	4.6 UJ	5.0 U	4.9 UJ
Isodrin		10 UJ	10 U	9.3 UJ	10 U	9.8 UJ
Isophorone		5.0 UJ	6.6	4.6 UJ	5.0 U	4.9 UJ
Methyl methanesulfonate		20 UJ	20 U	18 UJ	20 U	20 UJ
NDPA/DPA		5.0 UJ	8.7	47 J	5.0 U	14 J
Naphthalene		5.0 UJ	73	190 J	16	17 J
Nitrobenzene		5.0 UJ	5.0 U	4.6 UJ	5.0 U	4.9 UJ
Nitrosodi-n-butylamine		10 UJ	10 U	9.3 UJ	10 U	9.8 UJ
Nitrosodipiperidine		20 UJ	20 U	18 UJ	20 U	20 UJ
Pentachlorobenzene		20 UJ	20 U	18 UJ	20 U	20 UJ
PCNB		10 UJ	10 U	9.3 UJ	10 U	9.8 UJ
Pentachlorophenol		20 UJ	20 U	18 UJ	20 U	20 UJ
Perylene		5.0 UJ	5.0 U	4.6 UJ	5.0 U	4.9 UJ
Phenacetin		10 UJ	10 U	9.3 UJ	10 U	9.8 UJ
Phenanthrene		5.0 UJ	5.0 U	4.6 UJ	5.0 U	4.9 UJ
Phenol		5.0 UJ	5.0 U	4.6 UJ	5.0 U	4.9 UJ
Pronamide		20 UJ	20 U	18 UJ	20 U	20 UJ
Pyrene		5.0 UJ	5.0 U	4.6 UJ	5.0 U	4.9 UJ
Pyridine		50 UJ	50 U	46 UJ	50 U	49 UJ
a,a-Dimethylphenethylamine		50 UJ	50 U	46 UJ	50 U	49 UJ
a-Naphthylamine		20 UJ	20 U	18 UJ	20 U	20 UJ
b-Naphthylamine		20 UJ	20 U	18 UJ	20 U	20 UJ
N-Nitrosodipropylamine		5.0 UJ	5.0 U	4.6 UJ	5.0 U	4.9 UJ
N-Nitrosodimethylamine		50 UJ	50 U	46 UJ	50 U	49 UJ
4-Chloro-3-methylphenol		5.0 UJ	5.0 U	4.6 UJ	5.0 U	4.9 UJ
p-Dimethylaminoazobenzene		10 UJ	10 U	9.3 UJ	10 U	9.8 UJ

NOTES: U - not detected, J - estimated value, R - unusable, --- - not analyzed.
Dup - references blind field duplicate sample that was collected. Lab Dup - laboratory duplicate analyses conducted.
Samples were analyzed undiluted.

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O'BRIEN & GERE ENGINEERS, INC.

Table 3
Sullivan's Ledge Superfund Site
Ground Water Samples
Method 8082 PCB Data

	Sample ID	BEI-1	BEI-2	BEI-3	ECJ-1-120' 1120	ECJ-1-145' 1030	ECJ-1-265' 1600	ECJ-1-35' 1715	ECJ-1-60' 1555	ECJ-1-70' 1500	ECJ-2-117' 13:25
	SDG ID	L0102477	L0102477	L0102477	L0102625	L0102625	L0102597	L0102627	L0102627	L0102625	L0102727
	Dilution Factor	1	1	1	1	1	1	1	1	1	1
	Sample Date	03/21/01	03/21/01	03/21/01	03/24/01	03/24/01	03/23/01	03/24/01	03/24/01	03/24/01	03/28/01
	Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Compound	Matrix	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Aroclor 1221		0.500 U	0.500 UJ	0.500 U	0.410 U	0.417 U	0.410 U	0.500 U	0.374 U	0.355 U	0.488 U
Aroclor 1232		0.500 U	0.500 UJ	0.500 U	0.410 U	0.417 U	0.410 U	0.500 U	0.374 U	0.355 U	0.488 U
Aroclor 1242/1016		0.500 U	0.500 UJ	0.500 U	0.410 U	0.417 U	0.410 U	0.500 U	0.374 U	0.355 U	0.488 U
Aroclor 1248		0.500 U	0.500 UJ	0.500 U	0.410 U	0.417 U	0.410 U	0.500 U	0.374 U	0.355 U	0.488 U
Aroclor 1254		0.953 J*	0.500 UJ	0.867 J*	0.410 U	0.417 U	0.410 U	2.85 J*	0.747 J*	0.355 U	0.488 U
Aroclor 1260		0.500 U	0.500 UJ	0.500 U	0.410 U	0.417 U	0.410 U	0.500 U	0.374 U	0.355 U	0.488 U

NOTES: U - not detected, J - estimated value, R - unusable, --- - not analyzed.
Dup - references blind field duplicate sample that was collected. Lab Dup - laboratory duplicate analyses conducted.
* - Altered PCB Aroclor.

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O'BRIEN & GERE ENGINEERS, INC.

Table 3
Sullivan's Ledge Superfund Site
Ground Water Samples
Method 8082 PCB Data

Compound	Sample ID	ECJ-2-152' 11:20	ECJ-2-187' 9:30	ECJ-2-47' 0925	ECJ-2-47' Dup	ECJ-2-82' 15:25	ECJ-3-103' 11:35	ECJ-3-138' 10:30	ECJ-3-63' 14:40	ECJ-4-130' 16:00	ECJ-4-130' Dup
	SDG ID	L0102727	L0102727	L0102765	L0102765	L0102727	L0102960	L0102960	L0102960	L0102674	L0102674
	Dilution Factor	1	1	1	1	1	1	1	1	1	1
	Sample Date	03/28/01	03/28/01	03/29/01	03/29/01	03/28/01	04/03/01	04/03/01	04/03/01	03/26/01	03/26/01
	Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
	Matrix	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Aroclor 1221		0.474 U	0.459 U	0.484 U	0.204 UJ	0.464 U	0.500 U	0.484 U	0.469 U	0.440 U	0.454 U
Aroclor 1232		0.474 U	0.459 U	0.484 U	0.204 UJ	0.464 U	0.500 U	0.484 U	0.469 U	0.440 U	0.454 U
Aroclor 1242/1016		0.474 U	0.459 U	0.484 U	0.204 UJ	0.464 U	0.500 U	0.484 U	0.469 U	0.440 U	0.454 U
Aroclor 1248		0.474 U	0.459 U	0.484 U	0.204 UJ	0.464 U	0.500 U	0.484 U	0.469 U	0.440 U	0.454 U
Aroclor 1254		0.474 U	0.459 U	0.484 U	0.204 UJ	0.464 U	0.500 U	0.484 U	0.469 U	0.440 U	0.454 U
Aroclor 1260		0.474 U	0.459 U	0.484 U	0.204 UJ	0.464 U	0.500 U	0.484 U	0.469 U	0.440 U	0.454 U

NOTES: U - not detected, J - estimated value, R - unusable, --- - not analyzed.
Dup - references blind field duplicate sample that was collected. Lab Dup - laboratory duplicate analyses conducted.
* - Altered PCB Aroclor.

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O'BRIEN & GERE ENGINEERS, INC.

Table 3
Sullivan's Ledge Superfund Site
Ground Water Samples
Method 8082 PCB Data

	Sample ID	ECJ-4-160' 14:40	ECJ-4-225' 11:40	ECJ-4-245' 10:00	ECJ-4-60' 11:30	ECJ-4-60' Lab Dup	ECJ-4-85' 10:20	EQUIPMENT BLANK	GCA-1	MW-10	MW-10A
	SDG ID	L0102629	L0102629	L0102629	L0102730	L0102730	L0102730	L0102765	L0102627	L0102479	L0102674
	Dilution Factor	1	1	1	1	1	1	1	1	1	1
	Sample Date	03/26/01	03/26/01	03/26/01	03/27/01	03/27/01	03/27/01	03/29/01	03/23/01	03/21/01	03/27/01
	Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Compound	Matrix	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Aroclor 1221		0.319 U	0.440 U	0.447 U	0.500 U	0.444 U	0.484 U	0.213 U	0.400 U	2.50 U	0.474 U
Aroclor 1232		0.319 U	0.440 U	0.447 U	0.500 U	0.444 U	0.484 U	0.213 U	0.400 U	2.50 U	0.474 U
Aroclor 1242/1016		0.319 U	0.440 U	0.447 U	0.500 U	0.444 U	0.484 U	0.213 U	0.400 U	2.50 U	0.474 U
Aroclor 1248		0.319 U	0.440 U	0.447 U	0.500 U	0.444 U	0.484 U	0.213 U	0.400 U	2.50 U	0.474 U
Aroclor 1254		0.319 U	0.440 U	0.447 U	0.500 U	0.444 U	0.484 U	0.213 U	0.400 U	2.50 U	0.474 U
Aroclor 1260		0.319 U	0.440 U	0.447 U	0.500 U	0.444 U	0.484 U	0.213 U	0.400 U	2.50 U	0.474 U

NOTES: U - not detected, J - estimated value, R - unusable, — - not analyzed.
Dup - references blind field duplicate sample that was collected. Lab Dup - laboratory duplicate analyses conducted.
* - Altered PCB Aroclor.

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Table 3
Sullivan's Ledge Superfund Site
Ground Water Samples
Method 8082 PCB Data

	Sample ID	MW-10B	MW-12AR	MW-13	MW-13A	MW-14	MW-15	MW-16	MW-17	MW-2	MW-22A
	SDG ID	L0102479	L0102630	L0102597	L0102597	L0102408	L0102408	L0102479	L0102674	L0102408	L0102674
	Dilution Factor	1	1	1	1	1	1	1	1	1	10
	Sample Date	03/21/01	03/26/01	03/23/01	03/23/01	03/19/01	03/19/01	03/21/01	03/27/01	03/19/01	03/27/01
	Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Compound	Matrix	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Aroclor 1221		2.50 U	0.417 U	0.408 U	0.408 U	2.50 U	2.50 U	2.50 U	0.469 U	2.50 U	4.64 U
Aroclor 1232		2.50 U	0.417 U	0.408 U	0.408 U	2.50 U	2.50 U	2.50 U	0.469 U	2.50 U	4.64 U
Aroclor 1242/1016		2.50 U	0.417 U	0.408 U	0.408 U	2.50 U	3.70 J*	2.50 U	0.469 U	8.61 J*	4.64 U
Aroclor 1248		2.50 U	0.417 U	0.408 U	0.408 U	2.50 U	2.50 U	2.50 U	0.469 U	2.50 U	4.64 U
Aroclor 1254		2.50 U	0.417 U	0.408 U	0.408 U	2.50 U	2.50 U	2.50 U	0.469 U	2.50 U	4.64 U
Aroclor 1260		2.50 U	0.417 U	0.408 U	0.408 U	2.50 U	2.50 U	2.50 U	0.469 U	2.50 U	4.64 U

NOTES: U - not detected, J - estimated value, R - unusable, --- - not analyzed.
Dup - references blind field duplicate sample that was collected. Lab Dup - laboratory duplicate analyses conducted.
* - Altered PCB Aroclor.

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Table 3
Sullivan's Ledge Superfund Site
Ground Water Samples
Method 8082 PCB Data

	Sample ID	MW-24	MW-4	MW-4A	MW-5	MW-5A	MW-5A Dup	MW-6	MW-6A	MW-6A Dup	MW-8
	SDG ID	L0102408	L0102674	L0102627	L0102630	L0102630	L0102630	L0102437	L0102437	L0102437	L0102437
	Dilution Factor	5	1	1	1	1	1	1	1	1	1
	Sample Date	03/19/01	03/26/01	03/24/01	03/26/01	03/26/01	03/26/01	03/20/01	03/20/01	03/20/01	03/20/01
	Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Compound	Matrix	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Aroclor 1221		12.5 U	0.479 U	0.500 U	0.435 U	0.430 U	0.435 U	2.50 U	2.50 U	2.50 U	2.50 U
Aroclor 1232		12.5 U	0.479 U	0.500 U	0.435 U	0.430 U	0.435 U	2.50 U	2.50 U	2.50 U	2.50 U
Aroclor 1242/1016		36.7 J*	0.479 U	0.500 U	0.435 U	0.430 U	0.435 U	2.50 U	2.50 U	2.50 U	2.50 U
Aroclor 1248		12.5 U	0.479 U	0.500 U	0.435 U	0.430 U	0.435 U	2.50 U	2.50 U	2.50 U	2.50 U
Aroclor 1254		12.5 U	0.479 U	0.500 U	0.435 U	0.430 U	0.435 U	2.50 U	2.50 U	2.50 U	2.50 U
Aroclor 1260		12.5 U	0.479 U	0.500 U	0.435 U	0.430 U	0.435 U	2.50 U	2.50 U	2.50 U	2.50 U

NOTES: U - not detected, J - estimated value, R - unusable, --- - not analyzed.
Dup - references blind field duplicate sample that was collected. Lab Dup - laboratory duplicate analyses conducted.
* - Altered PCB Aroclor.

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Table 3
Sullivan's Ledge Superfund Site
Ground Water Samples
Method 8082 PCB Data

	Sample ID	MW-8A	OBG-1	OBG-2	OBG-3	TRENCH
	SDG ID	L0102437	L0102477	L0102477	L0102477	L0102477
	Dilution Factor	1	5	1	1	1
	Sample Date	03/20/01	03/21/01	03/21/01	03/21/01	03/21/01
	Units	ug/L	ug/L	ug/L	ug/L	ug/L
Compound	Matrix	WATER	WATER	WATER	WATER	WATER
Aroclor 1221		2.50 U	2.50 U	0.500 U	0.500 U	0.500 U
Aroclor 1232		2.50 U	2.50 U	0.500 U	0.500 U	0.500 U
Aroclor 1242/1016		2.50 U	2.50 U	0.500 U	0.500 U	0.500 U
Aroclor 1248		2.50 U	2.50 U	0.500 U	0.500 U	0.500 U
Aroclor 1254		2.50 U	29.6	1.01 J*	0.500 U	0.500 U
Aroclor 1260		2.50 U	2.50 U	0.500 U	0.500 U	0.500 U

NOTES: U - not detected, J - estimated value, R - unusable, — - not analyzed.
Dup - references blind field duplicate sample that was collected. Lab Dup - laboratory duplicate analyses conducted.
* - Altered PCB Aroclor.

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Table 4
Sullivan's Ledge Superfund Site
Ground Water Samples
Method 6010B/7470A Inorganic Data

Compound	Sample ID	BEI-1	BEI-2	BEI-3	ECJ-1-120' 1215	ECJ-1-145' 0955	ECJ-1-265' 1350	ECJ-1-35' 1800	ECJ-1-60' 1615	ECJ-1-70' 1415	ECJ-2-117' 1400
	SDG ID	L0102477	L0102477	L0102477	L0102625	L0102625	L0102597	L0102627	L0102627	L0102625	L0102727
	Dilution Factor										
	Sample Date	03/21/01	03/21/01	03/21/01	03/24/01	03/24/01	03/23/01	03/24/01	03/24/01	03/24/01	03/28/01
	Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
	Matrix	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Aluminum		0.10 U	0.10 U	0.10 U	0.12	0.11	0.10 U	0.10	0.10 U	0.11	0.10 U
Antimony		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Arsenic		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Barium		0.51	0.71	0.09	1.2	0.08	0.03	0.39	0.30	0.27	0.01
Beryllium		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cadmium		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Calcium		61	93	85	130	75	23	52	63	62	76
Chromium		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Cobalt		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Copper		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Iron		45	58	1.3	72	3.1	0.09	47	28	31	1.8
Lead		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Magnesium		15	18	11	30	14	3.3	14	17	15	13
Manganese		10	7.8	5.3	4.7	1.3	0.21	7.5	5.9	5.7	0.33
Mercury		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
Molybdenum		0.05 U	0.05 U	0.05 U	---	---	---	---	---	---	---
Nickel		0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U
Potassium		6.8	8.1	4.2	10	2.0 U	2.0 U	6.8	5.7	4.9	2.0 U
Selenium		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Silver		0.01 UJ	0.01 UJ	0.01 UJ	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Sodium		57	89	32	64	25	14	62	58	53	48
Thallium		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Vanadium		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Zinc		0.06	0.05 U	0.14	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U

NOTES: U - not detected, J - estimated value, R - unusable, --- - not analyzed.
Dup - references blind field duplicate sample that was collected. Lab Dup - laboratory duplicate analyses conducted.

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Table 4
Sullivan's Ledge Superfund Site
Ground Water Samples
Method 6010B/7470A Inorganic Data

Compound	Sample ID	ECJ-2-152' 11:45	ECJ-2-187' 10:00	ECJ-2-47' 0940	ECJ-2-47' Dup	ECJ-2-82' 16:10	ECJ-3-103' 11:55	ECJ-3-138' 10:50	ECJ-3-63' 15:00	ECJ-4-130' 16:35	ECJ-4-130' Dup
	SDG ID	L0102727	L0102727	L0102765	L0102765	L0102727	L0102960	L0102960	L0102960	L0102674	L0102674
	Dilution Factor										
	Sample Date	03/28/01	03/28/01	03/29/01	03/29/01	03/28/01	04/03/01	04/03/01	04/03/01	03/26/01	03/26/01
	Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
	Matrix	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Aluminum		0.18	0.10 U	0.12	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Antimony		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Arsenic		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Barium		0.24	0.15	0.04	0.04	0.01	0.04	0.04	0.09	0.010 U	0.010 U
Beryllium		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cadmium		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Calcium		170	69	88	90	80	42	43	44	140	130
Chromium		0.01 U	0.01 U	0.01 U	0.01 U	0.01	0.01 U	0.01 U	0.01 U	0.02	0.01 U
Cobalt		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Copper		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Iron		7.0	1.4	5.1	3.6	1.1	0.07	0.06	8.5	0.23	0.16
Lead		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Magnesium		16	11	29	30	13	19	19	14	41	40
Manganese		2.6	1.2	5.0	5.1	0.33	0.01	0.01	0.64	0.16	0.15
Mercury		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
Molybdenum		—	—	—	—	—	—	—	—	—	—
Nickel		0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U
Potassium		5.5	2.0 U	6.9	6.9	2.2	8.4	6.7	10	3.5	3.6
Selenium		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Silver		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Sodium		56	56	35	36	43	120	120	150	40	40
Thallium		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Vanadium		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Zinc		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U

NOTES: U - not detected, J - estimated value, R - unusable, — - not analyzed.
Dup - references blind field duplicate sample that was collected. Lab Dup - laboratory duplicate analyses conducted.

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O'BRIEN & GERE ENGINEERS, INC.

Table 4
Sullivan's Ledge Superfund Site
Ground Water Samples
Method 6010B/7470A Inorganic Data

Compound	Sample ID	ECJ-4-160' 15:30	ECJ-4-225' 12:40	ECJ-4-245' 11:15	ECJ-4-60' 11:30	ECJ-4-60' Lab Dup	ECJ-4-85' 10:45	EQUIPMENT BLANK	GCA-1	MW-10	MW-10A
	SDG ID	L0102629	L0102629	L0102629	L0102730	L0102730	L0102730	L0102765	L0102627	L0102479	L0102674
	Dilution Factor										
	Sample Date	03/26/01	03/26/01	03/26/01	03/27/01	03/27/01	03/27/01	03/29/01	03/23/01	03/21/01	03/27/01
	Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
	Matrix	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Aluminum		0.1 U	0.1	0.1 U	0.10 U	0.10 U	0.10 U	0.10 U	0.77	0.12	4.1
Antimony		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Arsenic		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Barium		0.01 U	0.01 U	0.01 U	0.010 U	0.010 U	0.010 U	0.010 U	0.94	0.01	0.07
Beryllium		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cadmium		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Calcium		55	46	35	130	120	130	0.10 U	80	89	54
Chromium		0.01 U	0.01 U	0.01 U	0.02	0.01	0.01	0.01 U	0.01 U	0.01 U	0.01 U
Cobalt		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Copper		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Iron		0.36	0.14	0.08	0.09	0.06	0.05	0.050 U	60	13	15
Lead		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Magnesium		11	4.1	4	46	45	46	0.10 U	14	52	14
Manganese		0.12	0.11	0.07	0.010 U	0.010 U	0.03	0.010 U	3.2	0.07	2.2
Mercury		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
Molybdenum		—	—	—	—	—	—	—	—	—	—
Nickel		0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U
Potassium		2 U	2 U	2 U	3.5	3.6	3.6	2.0 U	8.8	3.7	3.5
Selenium		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Silver		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Sodium		22	24	23	50	49	51	2.0 U	84	27	22
Thallium		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Vanadium		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01
Zinc		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.07	0.05 U	0.05 U

NOTES: U - not detected, J - estimated value, R - unusable, — - not analyzed.
Dup - references blind field duplicate sample that was collected. Lab Dup - laboratory duplicate analyses conducted.

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O'BRIEN & GERE ENGINEERS, INC.

Table 4
Sullivan's Ledge Superfund Site
Ground Water Samples
Method 6010B/7470A Inorganic Data

Compound	Sample ID	MW-10B	MW-12AR	MW-13	MW-13A	MW-14	MW-15	MW-16	MW-17	MW-2	MW-22A
	SDG ID	L0102479	L0102630	L0102597	L0102597	L0102408	L0102408	L0102479	L0102674	L0102408	L0102674
	Dilution Factor										
	Sample Date	03/21/01	03/26/01	03/23/01	03/23/01	03/19/01	03/19/01	03/21/01	03/27/01	03/19/01	03/27/01
	Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
	Matrix	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Aluminum		0.13	0.32	0.19	0.21	0.10 U	0.10 U	0.17	0.29	0.10 U	0.10 U
Antimony		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Arsenic		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.043
Barium		0.04	1.2	0.24	0.25	0.09	0.12	0.15	0.07	0.03	0.11
Beryllium		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cadmium		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Calcium		86	98	40	42	82	60	59	58	50	440
Chromium		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Cobalt		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.09
Copper		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.02
Iron		63	70	42	38	31	52	0.67	0.80	22	360
Lead		0.005 U	0.010	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.023
Magnesium		50	16	9.9	10	20	10	14	7.9	17	120
Manganese		0.19	1.0	7.7	9.4	5.2	2.7	2.1	0.40	4.0	15
Mercury		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
Molybdenum		—	—	—	—	—	—	—	—	—	—
Nickel		0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.294
Potassium		3.8	9.2	6.3	6.3	12	9.5	7.2	5.1	5.2	57
Selenium		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.009
Silver		0.01 U	0.01 U	0.01 U	0.01 U	0.01 UJ	0.01 UJ	0.01 U	0.01 U	0.01 UJ	0.01 U
Sodium		34	90	62	62	91	88	180	33	52	150
Thallium		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Vanadium		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.03
Zinc		0.05 U	0.19	0.05 U	0.05 U	0.05 U	0.05 U	0.11	0.05 U	0.05 U	0.57

NOTES: U - not detected, J - estimated value, R - unusable, — - not analyzed.
Dup - references blind field duplicate sample that was collected. Lab Dup - laboratory duplicate analyses conducted.

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O'BRIEN & GERE ENGINEERS, INC.

Table 4
Sullivan's Ledge Superfund Site
Ground Water Samples
Method 6010B/7470A Inorganic Data

	Sample ID	MW-24	MW-4	MW-4A	MW-5	MW-5A	MW-5A Dup	MW-6	MW-6A	MW-6A Dup	MW-8
	SDG ID	L0102408	L0102674	L0102627	L0102630	L0102630	L0102630	L0102437	L0102437	L0102437	L0102437
	Dilution Factor										
	Sample Date	03/19/01	03/26/01	03/24/01	03/26/01	03/26/01	03/26/01	03/20/01	03/20/01	03/20/01	03/20/01
	Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Compound	Matrix	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Aluminum		0.10 U	0.10 U	0.34	0.10 U	0.21	0.23	0.10 U	0.10 U	0.10 U	0.10 U
Antimony		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Arsenic		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Barium		0.46	0.14	0.03	0.08	0.16	0.16	0.03	0.06	0.06	0.01
Beryllium		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cadmium		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Calcium		58	48	18	120	35	35	86	76	75	110
Chromium		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Cobalt		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Copper		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Iron		42	7.9	6.5	0.050 U	0.07	0.07	18	11	12	11
Lead		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Magnesium		16	9.6	2.7	24	8.4	8.5	28	24	23	45
Manganese		5.4	1.9	0.67	0.08	0.01	0.01	7.2	8.5	8.3	0.02
Mercury		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
Molybdenum		—	—	—	—	—	—	—	—	—	—
Nickel		0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U
Potassium		8.3	2.0 U	2.0 U	6.1	5.9	5.7	5.0	8.7	8.9	3.5
Selenium		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Silver		0.01 UJ	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 UJ	0.01 UJ	0.01 UJ	0.01 UJ
Sodium		75	33	42	100	220	220	63	94	94	44
Thallium		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Vanadium		0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Zinc		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U

NOTES: U - not detected, J - estimated value, R - unusable, — - not analyzed.
Dup - references blind field duplicate sample that was collected. Lab Dup - laboratory duplicate analyses conducted.

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O'BRIEN & GERE ENGINEERS, INC.

Table 4
Sullivan's Ledge Superfund Site
Ground Water Samples
Method 6010B/7470A Inorganic Data

Compound	Sample ID	MW-8A	OBG-1	OBG-2	OBG-3	TRENCH
	SDG ID	L0102437	L0102477	L0102477	L0102477	L0102477
	Dilution Factor					
	Sample Date	03/20/01	03/21/01	03/21/01	03/21/01	03/21/01
	Units	mg/L	mg/L	mg/L	mg/L	mg/L
	Matrix	WATER	WATER	WATER	WATER	WATER
Aluminum		7.0	0.11	0.10 U	0.10 U	0.10 U
Antimony		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Arsenic		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Barium		0.06	1.1	1.8	0.57	0.84
Beryllium		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cadmium		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Calcium		92	74	110	110	84
Chromium		0.13	0.01 U	0.01 U	0.01 U	0.01 U
Cobalt		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Copper		0.01	0.01 U	0.01 U	0.03	0.01 U
Iron		12	46	73	53	83
Lead		0.005	0.005 U	0.005 U	0.016	0.005 U
Magnesium		50	20	25	21	15
Manganese		0.14	7.9	6.5	8.3	1.8
Mercury		0.0005 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
Molybdenum		—	0.05 U	0.05 U	0.05 U	0.05 U
Nickel		0.025 U	0.025 U	0.025 U	0.025 U	0.025 U
Potassium		5.4	9.1	12	7.4	9.9
Selenium		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Silver		0.01 UJ	0.01 UJ	0.01 UJ	0.01 UJ	0.01 UJ
Sodium		49	61	78	60	99
Thallium		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Vanadium		0.01	0.01 U	0.01 U	0.01 U	0.01 U
Zinc		0.05 U	0.05 U	0.05 U	0.15	0.07

NOTES: U - not detected, J - estimated value, R - unusable, — - not analyzed.
Dup - references blind field duplicate sample that was collected. Lab Dup - laboratory duplicate analyses conducted.

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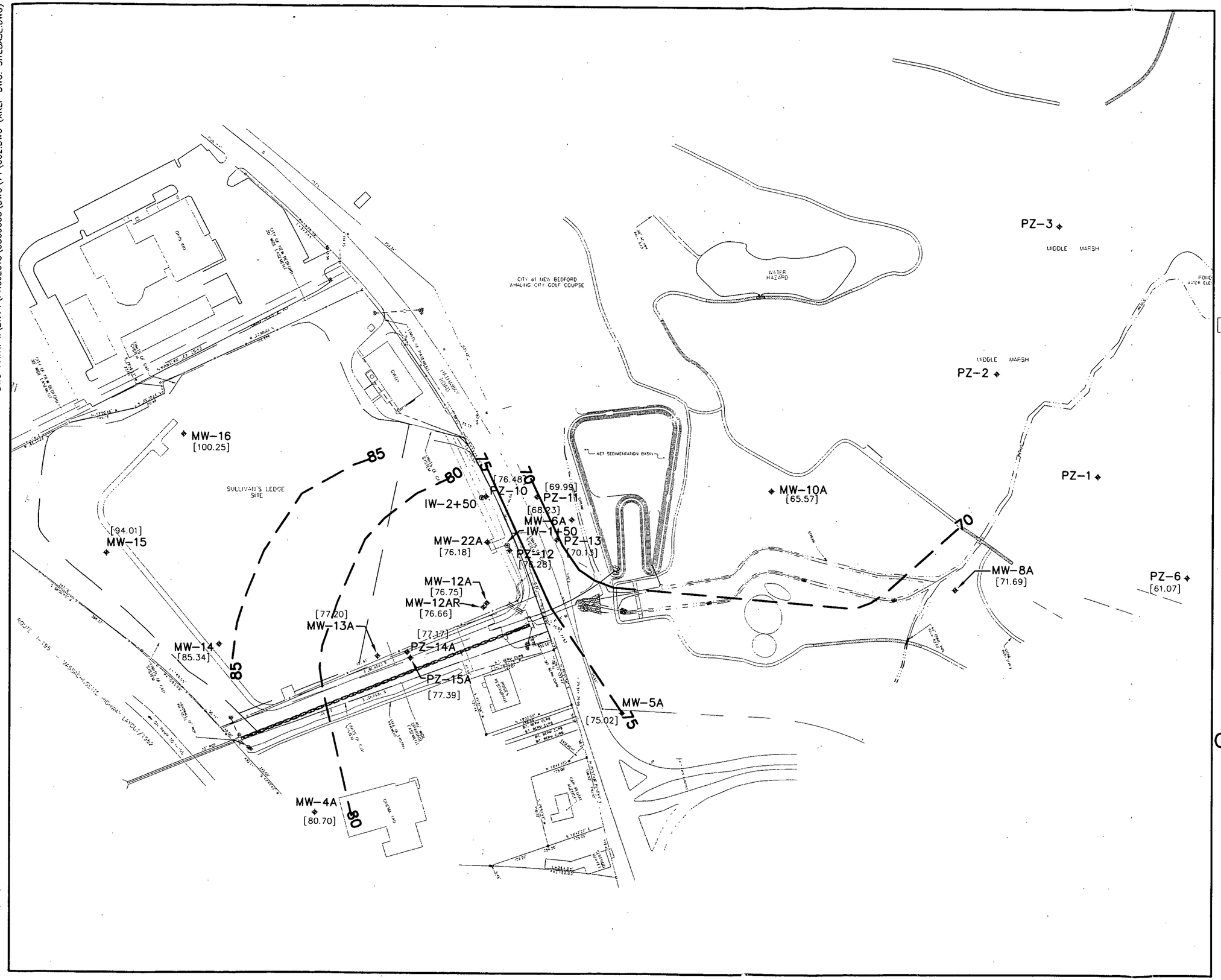
FIGURE 5



LEGEND

- MONITORING WELL LOCATION
- RECOVERY WELL LOCATION
- [61.07] GROUND WATER ELEVATION
- 70 EQUIPOTENTIAL CONTOUR LINE (DASHED WHERE INFERRED) INFERRED)

ELEVATIONS IN FEET RELATIVE TO MEAN SEA LEVEL

SULLIVAN'S LEDGE SUPERFUND SITE
NEW BEDFORD, MASS.

OVERBURDEN WELL GROUND WATER ELEVATION MAP JULY 10, 2001

200 0 200
SCALE IN FEET

FILE NO. 5509.005-002
AUGUST 2001

O'BRIEN & GERE ENGINEERS INC.

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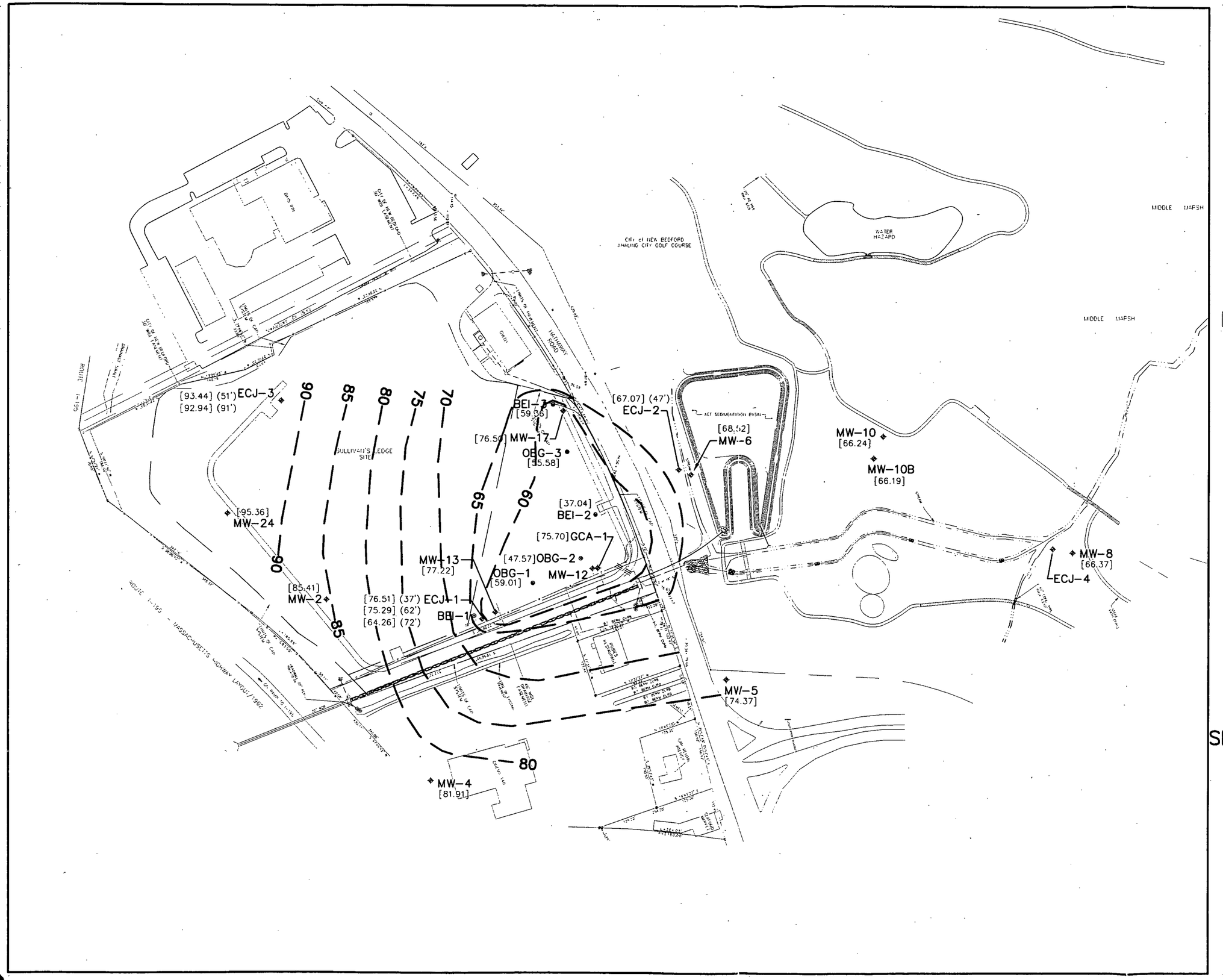
PLOT DATE: 9/12/01

DWG PATH: I:\DIV71\PROJECTS\5509005\DWG\71\003.DWG (XREF DWG: SITEBASE.DWG)

FIGURE–6



LEGEND

- MONITORING WELL LOCATION
- RECOVERY WELL LOCATION
- [61.07] GROUND WATER ELEVATION
- 70 EQUIPOTENTIAL CONTOUR LINE (DASHED WHERE INFERRED)

ELEVATIONS IN FEET RELATIVE TO MEAN SEA LEVEL

SULLIVAN'S LEDGE SUPERFUND SITE
NEW BEDFORD, MASS.

SHALLOW BEDROCK GROUND WATER ELEVATION MAP JULY 10, 2001

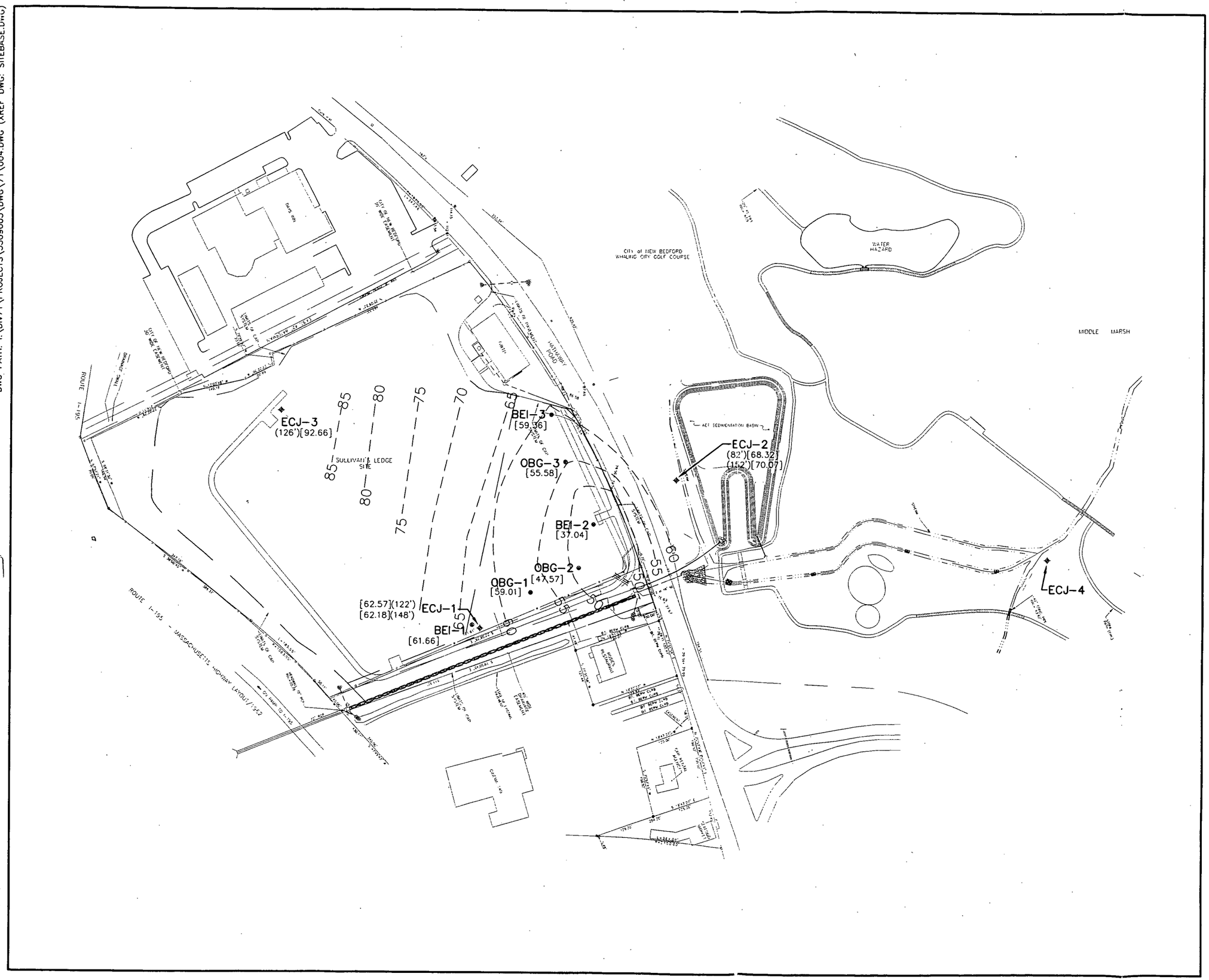
200 0 200
SCALE IN FEET

FILE NO. 5509.005–008
SEPTEMBER 2001

O'BRIEN & GERE ENGINEERS INC.

PLOT DATE:

FIGURE–7



LEGEND

- ECJ WELL LOCATION
- RECOVERY WELL LOCATION
- [61.07] GROUND WATER ELEVATION
- 70 EQUIPOTENTIAL CONTOUR LINE (DASHED WHERE INFERRED)
- PROPOSED MULTI–LEVEL PIEZOMETERS

ELEVATIONS IN FEET RELATIVE TO MEAN SEA LEVEL

SULLIVAN'S LEDGE SUPERFUND SITE NEW BEDFORD, MASS.

INTERMEDIATE BEDROCK GROUND WATER ELEVATION MAP JULY 10, 2001

200 0 200

SCALE IN FEET

FILE NO. 5509.005–004
AUGUST 2001

O'BRIEN & GERE ENGINEERS INC.

DWG PATH: I:\DIV71\PROJECTS\5509005\DWG\71\004.DWG (XREF DWG: SITEBASE.DWG)

PLOT DATE: 9/16/01

DWG PATH: I:\DIV71\PROJECTS\5509005\DWG\71\005.DWG (XREF DWG: SITEBASE.DWG)

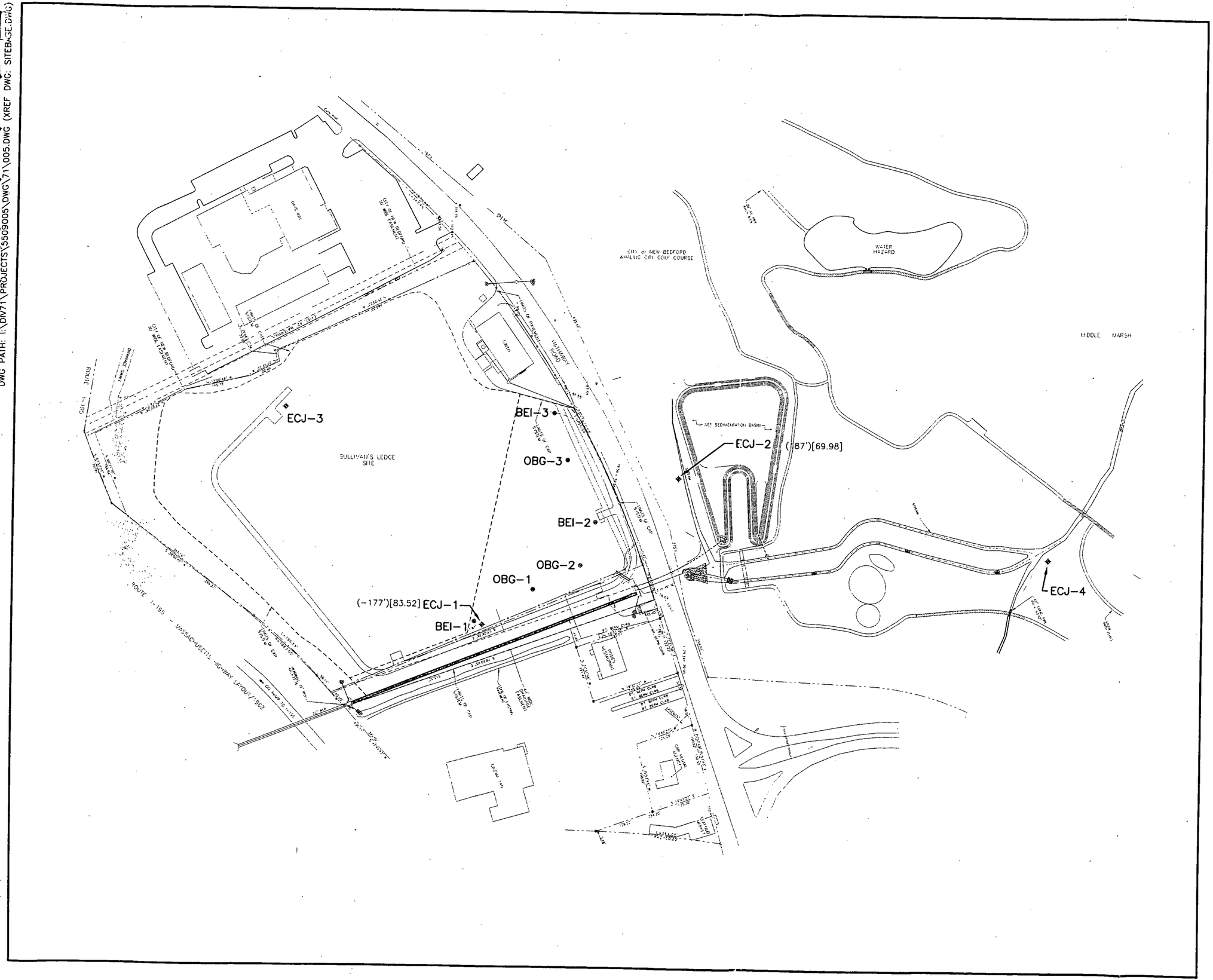


FIGURE-8

LEGEND

- ECJ WELL LOCATION
- RECOVERY WELL LOCATION
- [61.07] GROUND WATER ELEVATION
- 70 EQUIPOTENTIAL CONTOUR LINE (DASHED WHERE INFERRED)
- PROPOSED MULTI-LEVEL PIEZOMETERS

ELEVATIONS IN FEET RELATIVE TO MEAN SEA LEVEL

SULLIVAN'S LEDGE SUPERFUND SITE NEW BEDFORD, MASS.

DEEP BEDROCK GROUND WATER ELEVATION MAP JULY 10, 2001

200 0 200

SCALE IN FEET

FILE NO. 5509.005-005
AUGUST 2001

O'BRIEN & GERE ENGINEERS INC.

DATE: 9/18/01