NAS7.010353
NASA-JPL
SSIC No: 9661

FINAL

ANNUAL SOIL VAPOR MONITORING REPORT
OPERABLE UNIT 2

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
JET PROPULSION LABORATORY
PASADENA, CALIFORNIA

EPA ID#CA9800013030

PREPARED FOR:

National Aeronautics and Space Administration
Management Office, Jet Propulsion Laboratory
4800 Oak Grove Drive
Pasadena, California 91109

February 2005

Appendices ii
Figures iii
Tables iii
Abbreviations iv

Section 1.0: INTRODUCTION 1

Section 2.0: SOIL VAPOR SAMPLING PROCEDURES 2

Section 3.0: ANALYTICAL RESULTS 3

Section 4.0: CONCLUSIONS 4

Section 5.0: QUALITY ASSURANCE AND QUALITY CONTROL 5

Section 6.0: REFERENCES 6

Appendices

APPENDIX A: SOIL VAPOR DATA VALIDATION REPORTS
APPENDIX B-1: RESULTS OF SOIL VAPOR ANALYSES
APPENDIX B-2: CHAIN-OF-CUSTODY FORMS
APPENDIX B-3: DAILY OPENING, CLOSING, AND CONTINUING CALIBRATION VERIFICATION REPORTS
APPENDIX C: SUMMARY OF SOIL VAPOR RESULTS, ALL PERIODIC SAMPLING EVENTS COMPLETED TO DATE

Figures

Figure 1-1: Location of Soil Vapor Monitoring Wells
Figure 3-1: Carbon Tetrachloride Concentrations at Depth
Figure 3-2: Freon 113 Concentrations at Depth
Figure 3-3: Trichloroethene Concentrations at Depth
Figure 3-4: 1,1-Dichloroethene Concentrations at Depth
Figure 3-5: Total VOC Concentrations at Depth

Tables

Table 1-1: Summary of Soil Vapor Sampling Frequency
Table 2-1: Summary of Construction Details for Soil Vapor Monitoring Wells
Table 2-2: Summary of Primary Target Compounds for Analyses Performed on Soil Vapor Samples
Table 3-1: Summary of Soil Vapor Results, Sixteenth Periodic Sampling Event, February 2004
Table 3-2: Summary of Soil Vapor Results, Seventeenth Periodic Sampling Event, April 2004
Table 3-3: Summary of Soil Vapor Results, Eighteenth Periodic Sampling Event, July 2004
Table 3-4: Summary of Soil Vapor Results, Nineteenth Periodic Sampling Event, October-November 2004

amsl	above mean sea level
bgs	below ground surface
cc	cubic centimeter
CCl_4	carbon tetrachloride
CDHS	California Department Health Services
CRWQCB	California Regional Water Quality Control Board
1,1-DCE	1,1-dichloroethene
GC	gas chromatograph
Freon™113	1,1,2-trichloro-1,2,2-trifluoroethane
JPL	Jet Propulsion Laboratory
NA	not applicable
NASA	National Aeronautics and Space Administration
ND	not detected
NS	not sampled
OD	outside diameter
OU	operable unit
PQL	practical quantitation limit
RI	remedial investigation
QA/QC	quality assurance/quality control
TCE	trichloroethene
VOC	volatile organic compounds

This annual soil vapor monitoring report presents the results of four periodic monitoring events completed in February, April, July, and October-November 2004 at the National Aeronautics and Space Administration (NASA) Jet Propulsion Laboratory (JPL) for Operable Unit 2 (OU-2) (on-facility soils). The purpose of this monitoring program is to monitor the horizontal and vertical distributions of volatile organic compound (VOC) vapors in the vadose zone beneath the JPL site.

Four field monitoring events were conducted by GEOFON, Inc. (GEOFON) personnel on February 2, April 6-9, July 14, and October 25 through November 3. The soil vapor monitoring wells were sampled during each event based on the soil vapor sampling frequency developed for the periodic monitoring program. A summary of the soil vapor sampling frequency is presented in Table 1-1, and a summary of each periodic monitoring event in 2004 is provided below:

- February (Quarterly event). Soil vapor samples were collected from all available sampling points located in soil vapor monitoring wells No. 4, 32, 33, 34, 36, and 37. Ten (10) depth-specific samples, including one duplicate sample, were collected.

- April (Semi-Annual event). Soil vapor samples were collected from all available sampling points located in soil vapor monitoring wells No. 4, 17, 26, 27, 33, 36, 37, 38, and 39. Thirty-seven (37) depth-specific samples, including four duplicate samples, were collected.

- July (Quarterly event). Soil vapor samples were collected from all available sampling points located in soil vapor monitoring wells No. 4, 7, 33, 36, 37, and 39. Ten (10) depth-specific vapor samples, including one duplicate sample, were collected.

- October-November (Annual event). Soil vapor samples were collected from all available sampling points located in soil vapor monitoring wells No. 1 through 12, 14, 15, 19A, 25 through 28, and 30 through 39. One hundred three (103) depth-specific samples, including nine duplicate samples, were collected.

The locations of all soil vapor monitoring wells are shown on Figure 1-1. All samples collected for these events were analyzed for VOCs using an on-site laboratory operated by HP Labs, who is certified by the California Department of Health Services (CDHS). The analyses were performed in accordance with EPA Method 8260B and the California Regional Water Quality Control Board (CRWQCB), Los Angeles Region, protocols and guidance.

Sampling procedures are described in Section 2.0, and a summary of all VOCs detected during each of the four soil vapor sampling events, including locations and depths, is contained in Section 3.0. Conclusions are provided in Section 4.0. Soil vapor data validation reports for all samples analyzed during the sampling events are included in Appendix A and summarized in Section 5.0. Cited references are listed in Section 6.0. Laboratory reports for all samples analyzed, along with chain-of-custody forms, are included in Appendix B. The daily calibration verification standards for each day's sampling are also included in Appendix B. Appendix C contains a summary of soil vapor sampling results from all events conducted during the duration of this periodic monitoring program.

A description of the soil vapor well construction procedures was presented in the first long-term soil vapor sampling report prepared for OU-2 (Foster Wheeler Environmental Corporation, 2000a). Soil vapor well construction details are summarized in Table 2-1 of this report.

Soil vapor samples were withdrawn from the soil through sampling tips and 1/8-inch-outside diameter (OD) Nylaflow® tubing using calibrated, gas-tight, 60-cubic-centimeter (cc) sterile syringes fitted with three-way on/off valves. Prior to collecting the soil vapor samples, four volumes of the length of the tubing were purged to flush the tubing and fill it with in-situ vapor. Because each foot of tubing has an internal volume of 1 cc, the total volume purged was easily measured with the calibrated syringes. Following purging, a 60-cc soil vapor sample was collected in the syringe, the valve was turned to the off position, and the sample was immediately transferred to the on-site mobile laboratory for analysis. During sampling, neither water vapor nor condensation was observed in the transparent sampling syringes. Because the purge and sample volumes were small, a vacuum pump was not required to evacuate the tubing or to collected a soil vapor sample. To demonstrate reproducibility of results, a duplicate soil vapor sample was collected and analyzed after every 10 environmental samples. The previous one in five (20%) duplicate sampling regimen was reduced during the twelfth quarter to one in ten (10%) duplicates collected.

The samples were analyzed on-site in a CDHS-certified mobile laboratory (Certification No. 1667) using EPA Method 8260B and presented in the 8021 format for the parameters listed in Table 2-2. The time between sample collection and analysis was, at most, only a few minutes.

Deviations from the planned sampling are noted as follows:

- February – A sample was not collected from soil vapor monitoring well No. 34 at a depth of 118 ft due to an unidentified blockage in the line below the surface.

- October-November – Due to an unidentified blockage in the line below the surface, samples were not collected from several monitoring points scheduled to be sampled during this annual event, including all monitoring points at soil vapor wells No. 13, 16, and 17, as well as other monitoring points as indicated in Section 3.0.

The results from the previous remedial investigation (RI) for OU-2 (Foster Wheeler Environmental Corporation, 1999) indicated that four VOCs were more frequently detected in soil vapor samples at elevated concentrations relative to other VOCs. These four VOCs are carbon tetrachloride (CCl_4), 1,1,2-trichloro-trifluoroethane (Freon 113), trichloroethene (TCE), and 1,1-dichloroethene (1,1-DCE). These four compounds, CCl_4, Freon 113, TCE, and 1,1-DCE, were also the most frequently detected VOCs during the four periodic monitoring events conducted in 2004. The following discussion summarizes the data obtained during these four monitoring events.

CCl_4 was detected three times in three different soil vapor monitoring locations at concentrations ranging from 2.0 to 3.4 µg/L-vapor. Detections of CCl_4 were identified at soil vapor monitoring wells No. 33 at 105 ft, No. 39 at 100 ft, and No. 26 at 105 ft. Freon 113 was detected seven times in seven different soil vapor monitoring locations at concentrations ranging from 1.0 to 8.1 µg/L-vapor. Detections of Freon 113 were identified at soil vapor monitoring wells No. 10 at 35 and 69 ft, No. 33 at 105 ft, No. 35 at 140 ft, No. 38 at 170 ft, and No. 39 at 85 and 100 ft.

TCE was the most frequently detected compound. It was detected 13 times in seven different soil vapor monitoring locations at concentrations ranging from 1.1 to 35 µg/L-vapor. Detections of TCE were identified at soil vapor monitoring wells No. 4 at 20 and 56 ft, No. 17 at 36 ft, No. 38 at 170 ft, and at No. 39 at 85, 100, and 130 ft. 1,1-DCE was detected three times at two different soil vapor monitoring locations at concentrations ranging from 1.0 to 2.6 µg/L-vapor. Detections of 1,1-DCE were identified at soil vapor monitoring wells No. 33 at 105 and 120 ft.

Other detections include the following:

- TCE (5.9 µg/L-vapor), 1,2-DCE (7.8 µg/L-vapor), benzene (76 µg/L-vapor), ethylbenzene (2.9 ug/L-vapor), and m&p-xylenes (11 µg/L-vapor) in soil vapor monitoring well No. 17 at 36 ft during the April monitoring event;
- Benzene (1.2 µg/L-vapor) in soil vapor monitoring well No. 17 at 36 ft during the July monitoring event;
- Freon 11 (3.4 and 2.2 µg/L-vapor) in soil vapor monitoring well No. 25 at 180 and 190 ft, during the October-November monitoring event; and
- Toluene (1.9 µg/L-vapor) in soil vapor monitoring well No. 38 at 170 ft during the October-November monitoring event.

A summary of the analytical results for all samples collected during the four periodic monitoring events conducted in 2004 is presented in Tables 3-1 through 3-4, and the analytical laboratory reports are presented in Appendix B-1. Chain-of-custody forms are included in Appendix B-2. Daily opening, closing, and continuing calibration reports are included in Appendix B-3. Data from all periodic monitoring events conducted to date have been tabulated and are presented in Appendix C. Location maps for soil vapor monitoring wells with detections at depth for CCl_4, Freon 113, TCE and 1,1-DCE are shown in Figures 3-1 through 3-4, respectively. Total VOC concentrations for soil vapor monitoring wells where chemicals were detected are presented in Figure 3-5.

The following conclusions are based on the results of the soil vapor sample laboratory analyses obtained from the four monitoring events conducted in 2004.

- TCE was the most frequently detected compound, being detected in 13 of 145 samples (not including duplicate analyses).

- TCE concentrations appear to be generally decreasing. For example, the TCE concentration was 14 µg/L-vapor in February, 14 µg/L-vapor in April, and 6.9 µg/L-vapor in July at soil vapor monitoring well No. 4 (56 ft); and at soil vapor monitoring well No. 39 (100 ft) the concentration was 9.2 µg/L-vapor in April and 4.4 µg/L-vapor in November.

- Tetrachloroethene, 1,2-dichloroethane, benzene, ethylbenzene, and m&p-xylenes were detected in soil vapor monitoring well No. 17 (36 ft) during the April monitoring event. During the July monitoring event, only benzene (1.2 µg/L-vapor) was detected in this location, and the concentration was lower than that detected in April (76 µg/L-vapor). This location was not sampled during the final 2004 monitoring event conducted in October-November.

- Based on the results of soil vapor samples collected during the 2004 period, VOC concentrations generally continue to decline throughout the site.

This section briefly summarizes the quality assurance and quality control (QA/QC) procedures followed during each of the periodic soil-vapor-sampling events. Analytical data reports for all soil vapor samples were sent to Laboratory Data Consultants, located in Carlsbad, California, for independent data evaluation. All data were usable as qualified. The validated data reports are presented in Appendix A.

All sample analyses were performed using an external, three-point standard calibration method. For most target analytes, both detectors on the gas chromatograph (GC) were calibrated over a range equivalent of 5.0 to 200.0 μg/L of analyte in soil vapor. Analytical system performance was verified at the beginning of each analytical day with an "opening standard" and a "closing standard" after the last environmental sample analysis for the day. A "continuing standard" was analyzed after the tenth environmental sample run that day. If 10 or fewer samples were analyzed during the day, the closing standard was substituted for the continuing standard. Results of daily opening, closing, and continuing (if applicable) standards are presented in Appendix B-3.

During each analytical day, the environmental sample analyses were bracketed by check standards, which verified acceptable system performance for the analytes listed in the daily calibration data summary tables (Appendix B-3). The percent difference of calibration factors in continuing standard mixtures were all within the validation criteria of 25% (see Appendix A).

Field blanks of ambient air from inside the field laboratory trailer were analyzed immediately after the opening verification standard and were clean in all cases. No matrix spikes or laboratory replicates were required.

Surrogate compounds (dibromofluoromethane, 1,2-dichloroethane-d4, and 4-bromofluorobenzene) were injected into the GC along with the environmental samples as a QA/QC check on recovery limits. In accordance with CRWQCB (1997) protocols, surrogate recoveries should be in the range of 75 to 125%. All surrogate recoveries obtained during these sampling events satisfied this criteria (see Appendix B-1).

No sample analysis data obtained during these sampling events were rejected as unusable. Overall, the assessment of soil vapor and corresponding control sample data indicate that data quality objectives were achieved in terms of precision, accuracy, representativeness, comparability, and completeness for all analytes sampled.

Battelle. 2001. *Technical Memorandum, Design, Construction, Operation, Optimization, and Monitoring Recommendations for the Soil Vapor Extraction (SVE) System, Operable Unit 2 (OU-2), Jet Propulsion Laboratory.* October.

California Regional Water Quality Control Board, Los Angeles Region. 1997. *Interim Guidance for Active Soil Gas Investigation.* February 25.

CRWQCB, see California Regional Water Quality Control Board.

Foster Wheeler Environmental Corporation. 1999. *Final Remedial Investigation Report for Operable Unit 2: Potential On-Site Contaminant Source Areas.* Volume 1. November.

Foster Wheeler Environmental Corporation. 2000a. *First Long-Term Soil Vapor Sampling Results, October 1998*. February.

Foster Wheeler Environmental Corporation. 2000b. *Second Long-Term Soil Vapor Sampling Results, October 1998*. February.

Foster Wheeler Environmental Corporation. 2000c. *Third Long-Term Soil Vapor Sampling Results, October 1998*. March.

Foster Wheeler Environmental Corporation. 2000d. *Fourth Long-Term Soil Vapor Sampling Results, January 2000*. April.

Foster Wheeler Environmental Corporation. 2000e. *Fifth Long-Term Soil Vapor Sampling Results, June 2000*. September.

GEOFON, Inc. 2001a. *Sixth Long-Term Soil Vapor Sampling Results, January 2001.* February.

GEOFON, Inc. 2001b. *Seventh Long-Term Soil Vapor Sampling Results, July 2001.* November.

GEOFON, Inc. 2001c. *Eighth Long-Term Soil Vapor Sampling Results, November 2001.* January.

GEOFON, Inc. 2002a. *Ninth Long-Term Soil Vapor Sampling Results, February 2002.* April.

GEOFON, Inc. 2002b. *Tenth Long-Term Soil Vapor Sampling Results, May 2002.* July.

GEOFON, Inc. 2003a. *Fourteenth Long-Term Soil Vapor Sampling Results, May 2003.* August.

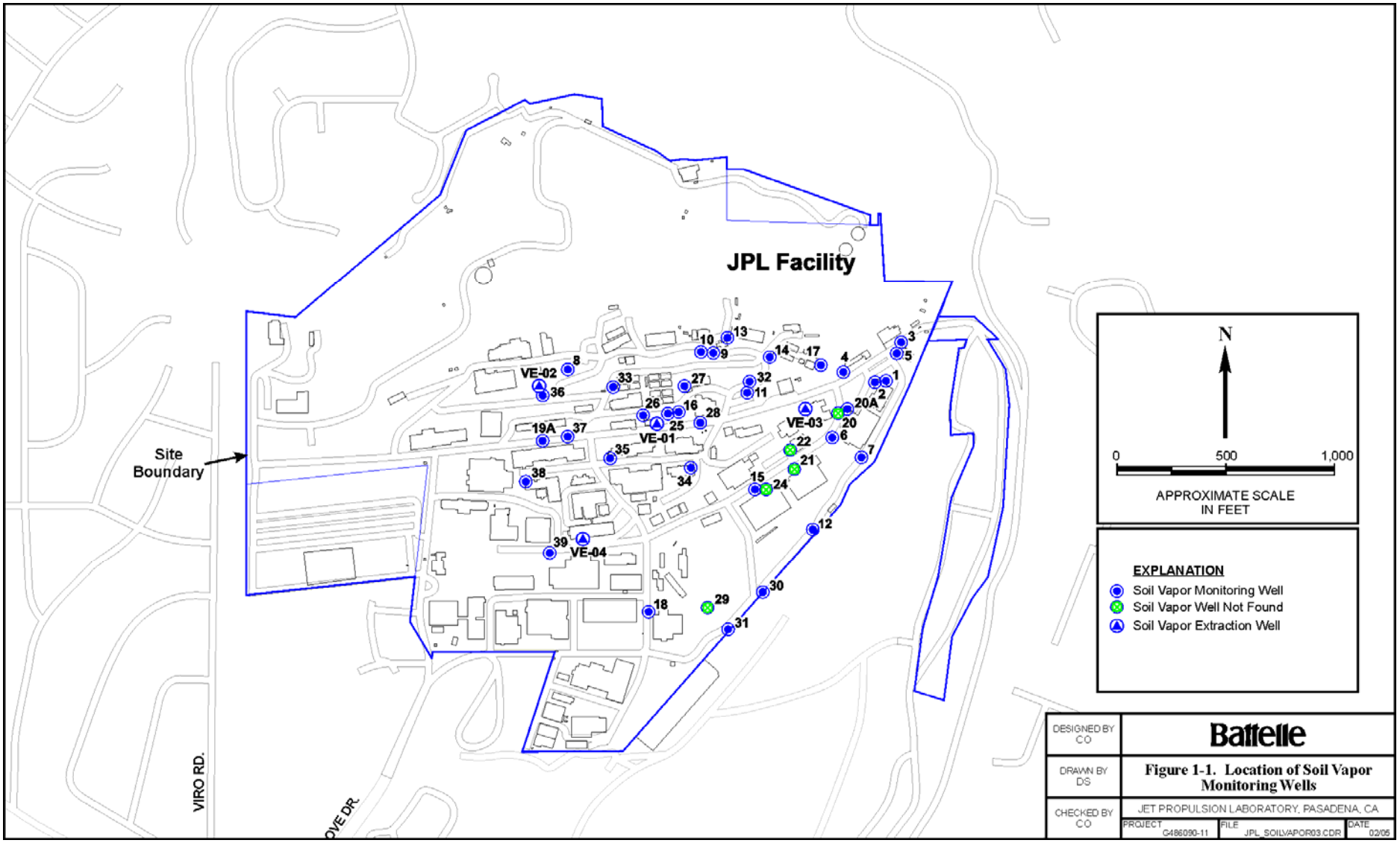
GEOFON, Inc. 2003b. *Fifteenth Long-Term Soil Vapor Sampling Results, August 2003.* September.

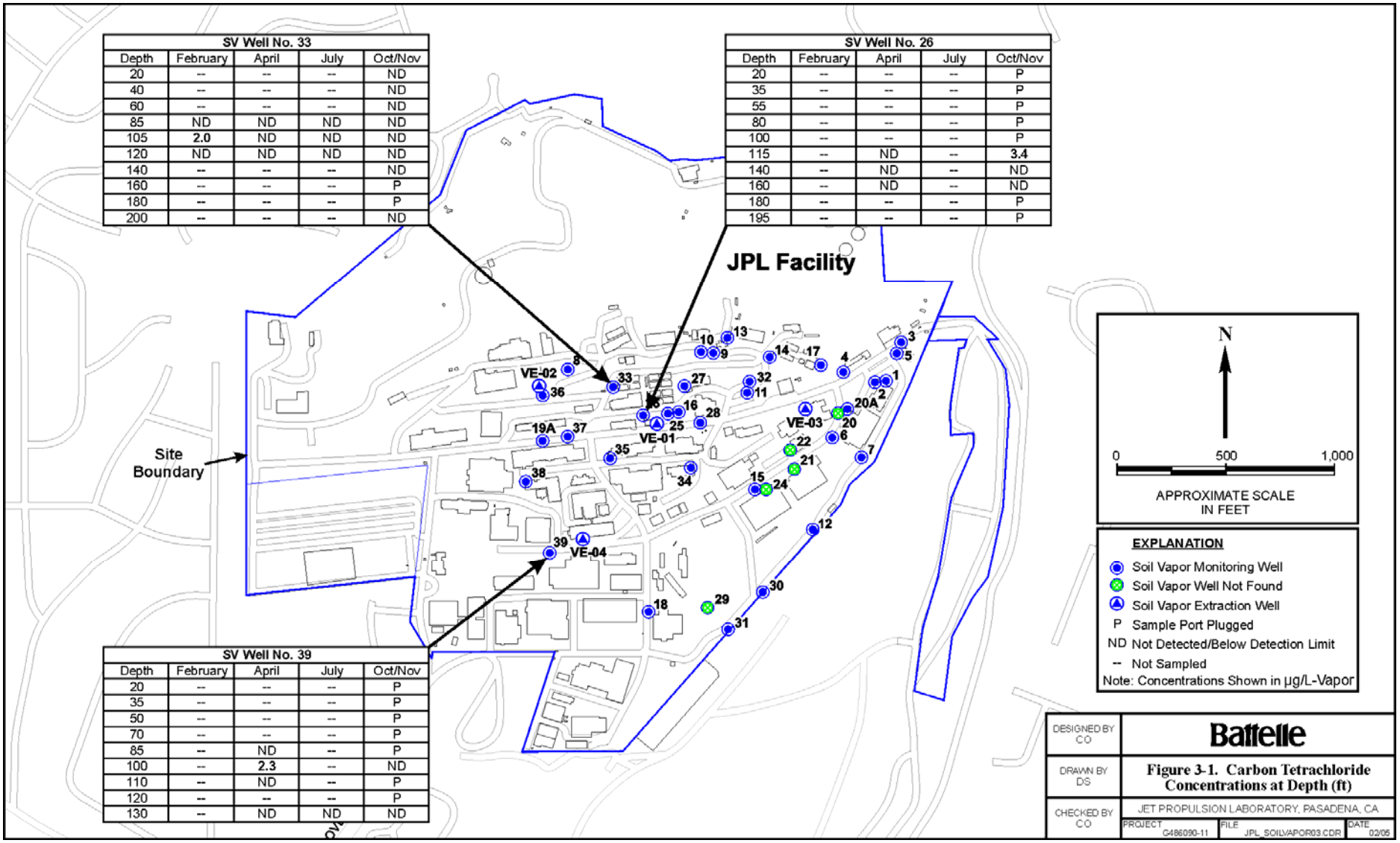
GEOFON, Inc. 2004a. *Sixteenth Long-Term Soil Vapor Sampling Results, February 2004.* April.

GEOFON, Inc. 2004b. *Seventeenth Long-Term Soil Vapor Sampling Results, April 2004.* October.

GEOFON, Inc. 2004c. *Eighteenth Long-Term Soil Vapor Sampling Results, July 2004.* October.

FIGURES

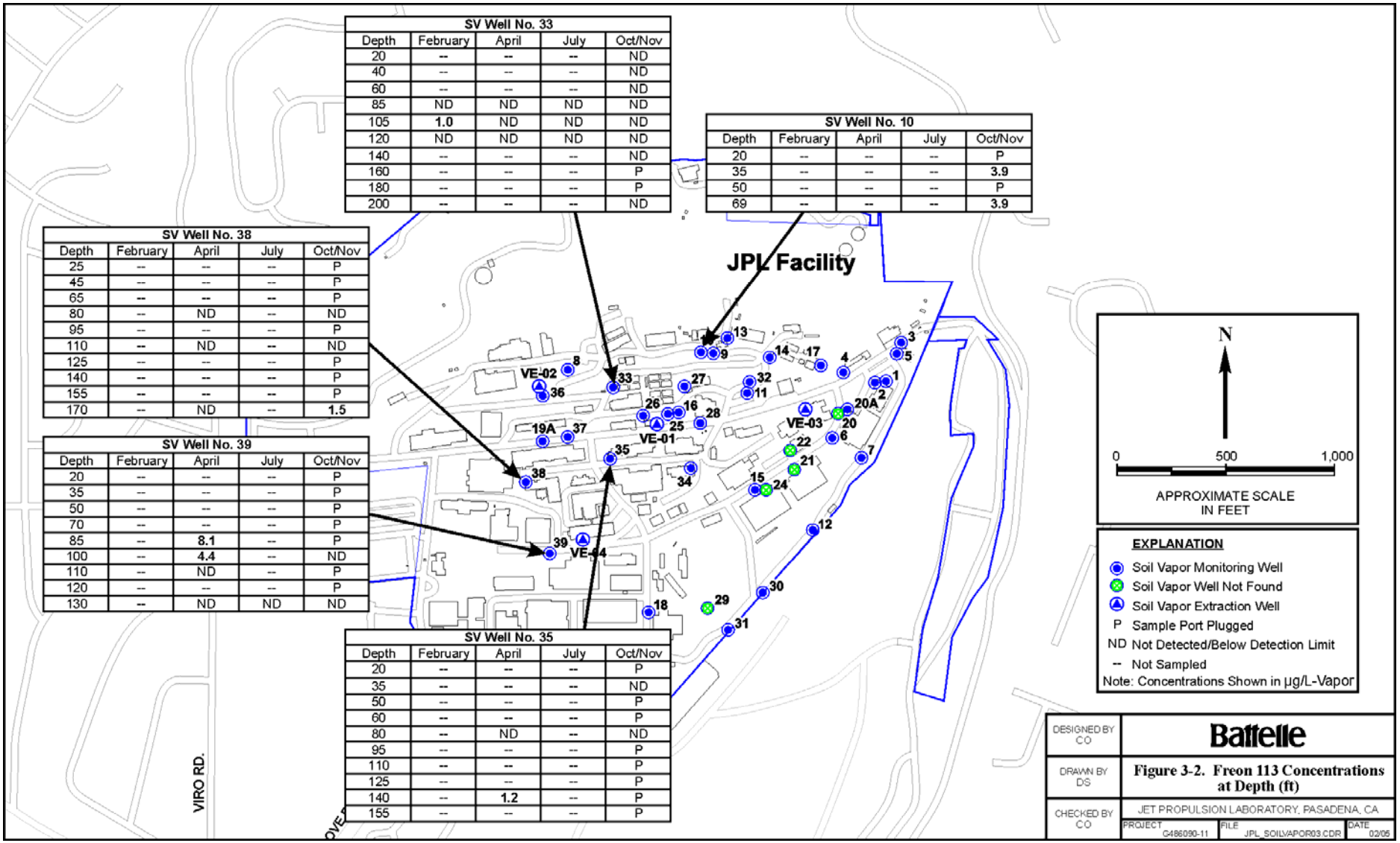

JPL Facility
Site Boundary
VIRO RD.
VE-01
VE-02
VE-03
VE-04
N
0
500
1,000
APPROXIMATE SCALE IN FEET
EXPLANATION
Soil Vapor Monitoring Well
Soil Vapor Well Not Found
Soil Vapor Extraction Well
DESIGNED BY CO
DRAWN BY DS
CHECKED BY CO
Battelle
Figure 1-1. Location of Soil Vapor Monitoring Wells
JET PROPULSION LABORATORY, PASADENA, CA
PROJECT G486090-11
FILE JPL_SOILVAPOR03.CDR
DATE 02/05



SV Well No. 33				
Depth	February	April	July	Oct/Nov
20	--	--	--	ND
40	--	--	--	ND
60	--	--	--	ND
85	ND	ND	ND	ND
105	**2.0**	ND	ND	ND
120	ND	ND	ND	ND
140	--	--	--	ND
160	--	--	--	P
180	--	--	--	P
200	--	--	--	ND

SV Well No. 26				
Depth	February	April	July	Oct/Nov
20	--	--	--	P
35	--	--	--	P
55	--	--	--	P
80	--	--	--	P
100	--	--	--	P
115	--	ND	--	**3.4**
140	--	ND	--	ND
160	--	ND	--	ND
180	--	--	--	P
195	--	--	--	P

SV Well No. 39				
Depth	February	April	July	Oct/Nov
20	--	--	--	P
35	--	--	--	P
50	--	--	--	P
70	--	--	--	P
85	--	ND	--	P
100	--	**2.3**	--	ND
110	--	ND	--	P
120	--	--	--	P
130	--	ND	ND	ND



SV Well No. 33

Depth	February	April	July	Oct/Nov
20	--	--	--	ND
40	--	--	--	ND
60	--	--	--	ND
85	ND	ND	ND	ND
105	**1.0**	ND	ND	ND
120	ND	ND	ND	ND
140	--	--	--	ND
160	--	--	--	P
180	--	--	--	P
200	--	--	--	ND

SV Well No. 10

Depth	February	April	July	Oct/Nov
20	--	--	--	P
35	--	--	--	**3.9**
50	--	--	--	P
69	--	--	--	**3.9**

SV Well No. 38

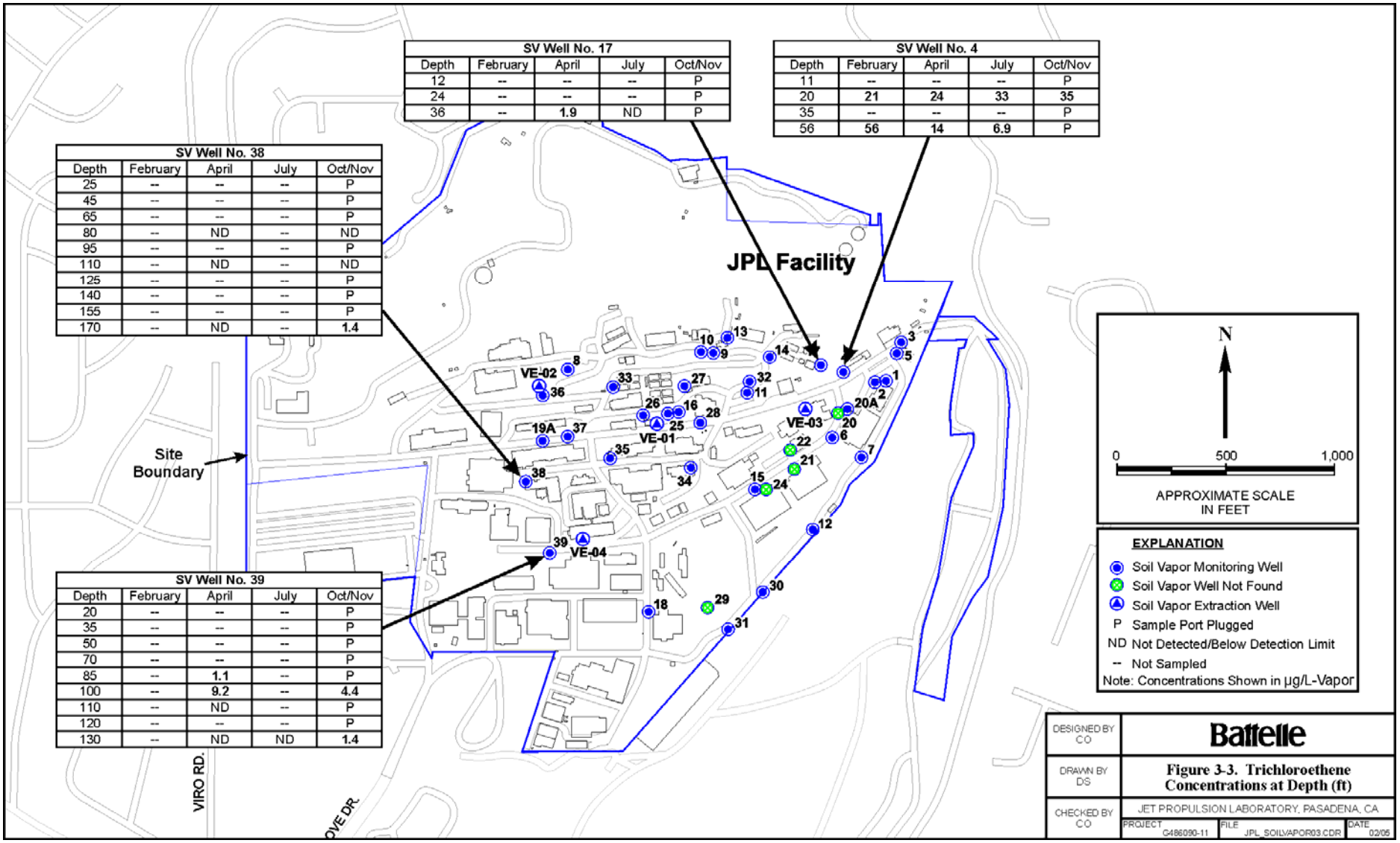
Depth	February	April	July	Oct/Nov
25	--	--	--	P
45	--	--	--	P
65	--	--	--	P
80	--	ND	--	ND
95	--	--	--	P
110	--	ND	--	ND
125	--	--	--	P
140	--	--	--	P
155	--	--	--	P
170	--	ND	--	**1.5**

SV Well No. 39

Depth	February	April	July	Oct/Nov
20	--	--	--	P
35	--	--	--	P
50	--	--	--	P
70	--	--	--	P
85	--	**8.1**	--	P
100	--	**4.4**	--	ND
110	--	ND	--	P
120	--	--	--	P
130	--	ND	ND	ND

SV Well No. 35

Depth	February	April	July	Oct/Nov
20	--	--	--	P
35	--	--	--	ND
50	--	--	--	P
60	--	--	--	P
80	--	ND	--	ND
95	--	--	--	P
110	--	--	--	P
125	--	--	--	P
140	--	**1.2**	--	P
155	--	--	--	P



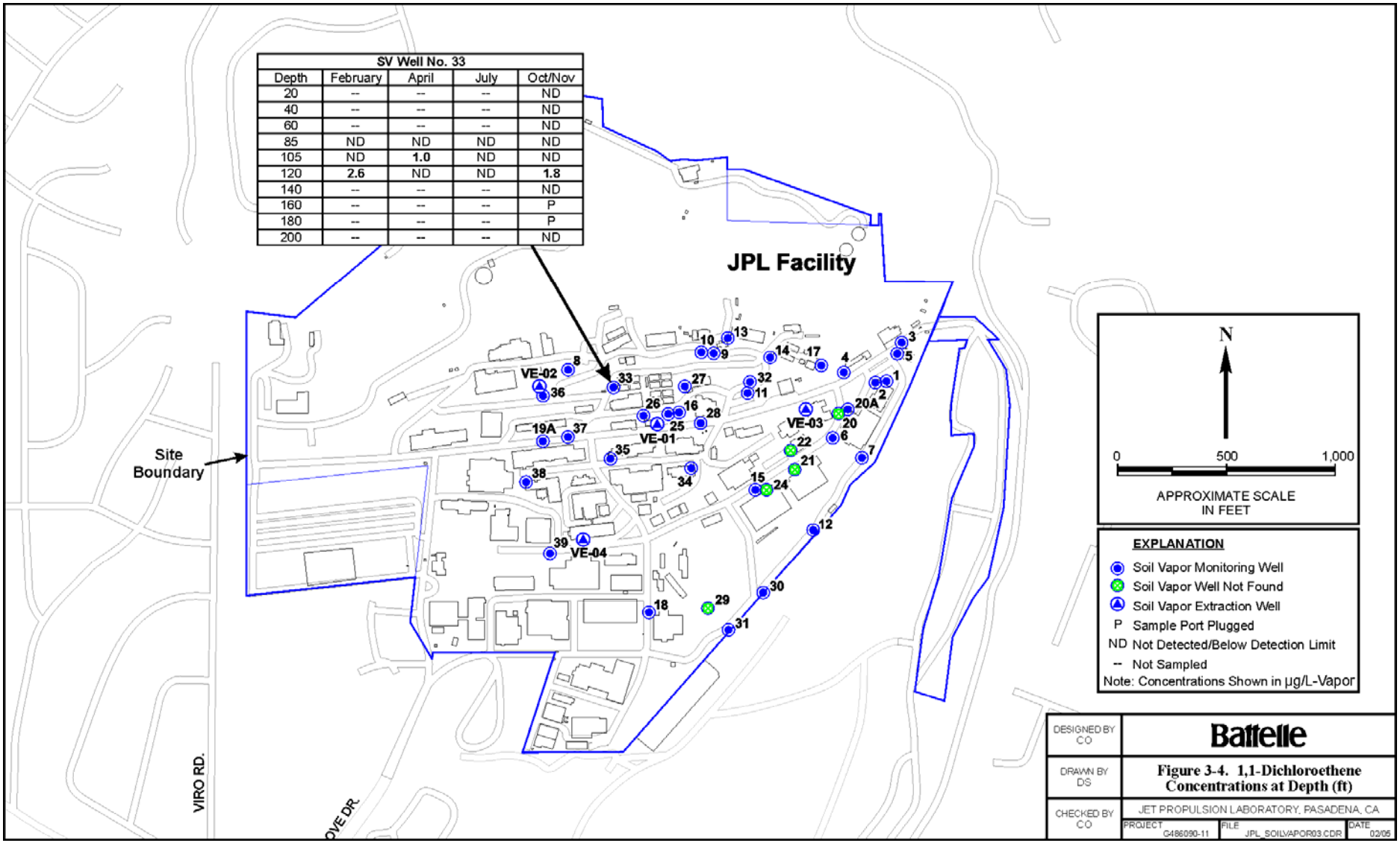
SV Well No. 17				
Depth	February	April	July	Oct/Nov
12	--	--	--	P
24	--	--	--	P
36	--	1.9	ND	P

SV Well No. 4				
Depth	February	April	July	Oct/Nov
11	--	--	--	P
20	21	24	33	35
35	--	--	--	P
56	56	14	6.9	P

SV Well No. 38				
Depth	February	April	July	Oct/Nov
25	--	--	--	P
45	--	--	--	P
65	--	--	--	P
80	--	ND	--	ND
95	--	--	--	P
110	--	ND	--	ND
125	--	--	--	P
140	--	--	--	P
155	--	--	--	P
170	--	ND	--	1.4

SV Well No. 39				
Depth	February	April	July	Oct/Nov
20	--	--	--	P
35	--	--	--	P
50	--	--	--	P
70	--	--	--	P
85	--	1.1	--	P
100	--	9.2	--	4.4
110	--	ND	--	P
120	--	--	--	P
130	--	ND	ND	1.4

SV Well No. 33				
Depth	February	April	July	Oct/Nov
20	--	--	--	ND
40	--	--	--	ND
60	--	--	--	ND
85	ND	ND	ND	ND
105	ND	**1.0**	ND	ND
120	**2.6**	ND	ND	**1.8**
140	--	--	--	ND
160	--	--	--	P
180	--	--	--	P
200	--	--	--	ND



DESIGNED BY CO

DRAWN BY DS

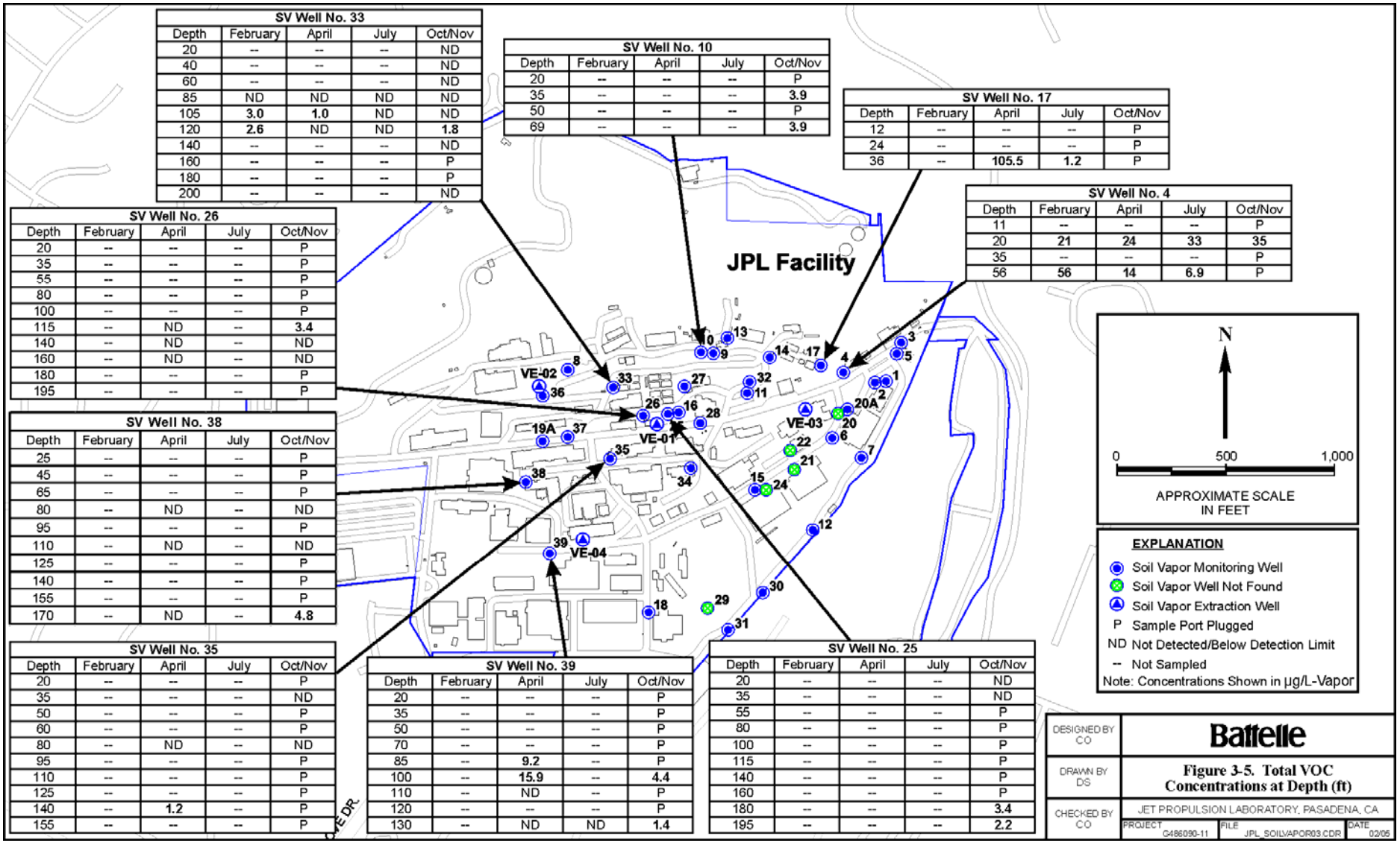
CHECKED BY CO

Battelle

Figure 3-4. 1,1-Dichloroethene Concentrations at Depth (ft)

JET PROPULSION LABORATORY, PASADENA, CA

PROJECT G486090-11 | FILE JPL_SOILVAPOR03.CDR | DATE 02/05



SV Well No. 33

Depth	February	April	July	Oct/Nov
20	--	--	--	ND
40	--	--	--	ND
60	--	--	--	ND
85	ND	ND	ND	ND
105	**3.0**	**1.0**	ND	ND
120	**2.6**	ND	ND	**1.8**
140	--	--	--	ND
160	--	--	--	P
180	--	--	--	P
200	--	--	--	ND

SV Well No. 10

Depth	February	April	July	Oct/Nov
20	--	--	--	P
35	--	--	--	**3.9**
50	--	--	--	P
69	--	--	--	**3.9**

SV Well No. 17

Depth	February	April	July	Oct/Nov
12	--	--	--	P
24	--	--	--	P
36	--	**105.5**	**1.2**	P

SV Well No. 4

Depth	February	April	July	Oct/Nov
11	--	--	--	P
20	**21**	**24**	**33**	**35**
35	--	--	--	P
56	**56**	**14**	**6.9**	P

SV Well No. 26

Depth	February	April	July	Oct/Nov
20	--	--	--	P
35	--	--	--	P
55	--	--	--	P
80	--	--	--	P
100	--	--	--	P
115	--	ND	--	**3.4**
140	--	ND	--	ND
160	--	ND	--	ND
180	--	--	--	P
195	--	--	--	P

SV Well No. 38

Depth	February	April	July	Oct/Nov
25	--	--	--	P
45	--	--	--	P
65	--	--	--	P
80	--	ND	--	ND
95	--	--	--	P
110	--	ND	--	ND
125	--	--	--	P
140	--	--	--	P
155	--	--	--	P
170	--	ND	--	**4.8**

SV Well No. 35

Depth	February	April	July	Oct/Nov
20	--	--	--	P
35	--	--	--	ND
50	--	--	--	P
60	--	--	--	P
80	--	ND	--	ND
95	--	--	--	P
110	--	--	--	P
125	--	--	--	P
140	--	**1.2**	--	P
155	--	--	--	P

SV Well No. 39

Depth	February	April	July	Oct/Nov
20	--	--	--	P
35	--	--	--	P
50	--	--	--	P
70	--	--	--	P
85	--	**9.2**	--	P
100	--	**15.9**	--	**4.4**
110	--	ND	--	P
120	--	--	--	P
130	--	ND	ND	**1.4**

SV Well No. 25

Depth	February	April	July	Oct/Nov
20	--	--	--	ND
35	--	--	--	ND
55	--	--	--	P
80	--	--	--	P
100	--	--	--	P
115	--	--	--	P
140	--	--	--	P
160	--	--	--	P
180	--	--	--	**3.4**
195	--	--	--	**2.2**

DESIGNED BY CO	Battelle
DRAWN BY DS	**Figure 3-5. Total VOC Concentrations at Depth (ft)**
CHECKED BY CO	JET PROPULSION LABORATORY, PASADENA, CA
	PROJECT G486090-11 · FILE JPL_SOILVAPOR03.CDR · DATE 02/05

TABLES

Table 1-1. Summary of Soil Vapor Sampling Frequency

Monitoring Point	Sampling Frequency
VP-1	Annual
VP-2	Quarterly
VP-3	Annual
VP-4	Quarterly
VP-5, VP-6, VP-7, and VP-8	Annual
VP-9	Semiannual
VP-10	Quarterly
VP-11, VP-12, VP-13, VP-14, VP-15, and VP-16	Annual
VP-17	Quarterly
VP-18, VP-19A, VP-20A, VP-20, VP-21, VP-22, VP-23B, and VP-24	Soil Vapor Wells Plugged or Not Found
VP-25	Annual
VP-26	Semiannual
VP-27	Semiannual
VP-28	Annual
VP-29	Soil Vapor Well Not Found
VP-30 and VP-31	Annual
VP-32	Quarterly at 155 feet bgs, else Annual
VP-33	Quarterly at 85 to 120 feet bgs, else Annual
VP-34	Quarterly at 118 feet bgs, else Annual
VP-35	Semiannual
VP-36	Quarterly at 35 to 55 feet bgs, else Semiannual
VP-37	Quarterly at 185 feet bgs, else Semiannual
VP-38	Semiannual
VP-39	Quarterly at 130 feet bgs, else Semiannual

Note: The sample frequency is based on an evaluation of periodic soil vapor monitoring data collected between July 2001 and February 2002.

Table 2-1. Summary of Construction Details for Soil Vapor Monitoring Wells

Soil Vapor Well Number	Date Drilling Complete	Date Vapor Well Installed	Drilling Method	Total Boring Depth (ft bgs)	Sampling Tip Number	Depth to Sampling Tip (ft bgs)	Elevation of Ground Surface (ft amsl)	Elevation of Soil Vapor Sampling Tip (ft amsl)
1	8/30/1994	8/30/1994	Percussion Hammer	38.0	1	10	1124.5	1114.5
					2	21		1103.5
					3	33		1091.5
2	8/30/1994	8/30/1994	Percussion Hammer	38.5	1	10	1126.2	1116.2
					2	22		1104.2
					3	37		1089.2
3	9/1/1994	9/1/1994	Percussion Hammer	52.0	1	16	1133.9	1117.9
					2	29		1104.9
					3	40		1093.9
					4	47		1086.9
4	9/2/1994	9/2/1994	Percussion Hammer	60.5	1	11	1137.6	1126.6
					2	20		1117.6
					3	35		1102.6
					4	56		1081.6
5	9/3/1994	9/3/1994	Percussion Hammer	12.0	1	5	1126.8	1121.8
					2	9		1117.8
6	9/5/1994	9/5/1994	Percussion Hammer	100.5	1	20	1137.5	1117.5
					2	40		1097.5
					3	60		1077.5
					4	77		1060.5
					5	96		1041.5
7	9/8/1994	9/8/1994	Percussion Hammer	60.5	1	20	1115.8	1095.8
					2	35		1080.8
8	9/9/1994	9/9/1994	Percussion Hammer	101.5	1	20	1256.6	1236.6
					2	30		1226.6
					3	50		1206.6
					4	70		1186.6
					5	90		1166.6

Table 2-1. Summary of Construction Details for Soil Vapor Monitoring Wells (cont'd)

Soil Vapor Well Number	Date Drilling Complete	Date Vapor Well Installed	Drilling Method	Total Boring Depth (ft bgs)	Sampling Tip Number	Depth to Sampling Tip (ft bgs)	Elevation of Ground Surface (ft amsl)	Elevation of Soil Vapor Sampling Tip (ft amsl)
9	9/10/1994	9/11/1994	Percussion Hammer	90.0	1	20	1230.8	1210.8
					2	35		1195.8
					4	70		1160.8
					5	87		1143.8
10	9/13/1994	9/13/1994	Percussion Hammer	72.0	1	20	1232.8	1212.8
					2	35		1197.8
					3	50		1182.8
					4	69		1163.8
11	9/17/1994	9/18/1994	Percussion Hammer	100.0	1	20	1193.1	1173.1
					2	40		1153.1
					3	60		1133.1
					4	80		1113.1
					5	96		1097.1
12	9/19/1994	9/19/1994	Percussion Hammer	81.0	1	20	1097.9	1077.9
					2	40		1057.9
					3	60		1037.9
					4	76		1021.9
13	9/20/1994	9/21/1994	Percussion Hammer	48.0	1	10	1239.2	1229.2
					2	20		1219.2
					3	30		1209.2
					4	40		1199.2
14	9/22/1994	9/22/1994	Percussion Hammer	18.0	1	5	1213.0	1208.0
					2	10		1203.0
					3	13		1200.0
15	9/24/1994	9/24/1994	Percussion Hammer	95.0	1	20	1123.5	1103.5
					2	40		1083.5
					3	60		1063.5
					4	75		1048.5
					5	90		1033.5
16	9/29/2001	9/29/2001	Percussion Hammer	101.5	1	20	1199.2	1179.2
					2	40		1159.2
					3	60		1139.2
					4	80		1119.2
					5	95		1104.2
17	9/30/1994	9/30/1994	Percussion Hammer	40.0	1	12	1214.1	1202.1
					2	24		1190.1
					3	36		1178.1

Table 2-1. Summary of Construction Details for Soil Vapor Monitoring Wells (cont'd)

Soil Vapor Well Number	Date Drilling Complete	Date Vapor Well Installed	Drilling Method	Total Boring Depth (ft bgs)	Sampling Tip Number	Depth to Sampling Tip (ft bgs)	Elevation of Ground Surface (ft amsl)	Elevation of Soil Vapor Sampling Tip (ft amsl)
18	10/2/1994	10/2/1994	Percussion Hammer	89.5	1	20	1109.4	1089.4
					2	40		1069.4
					3	55		1054.4
					4	70		1039.4
					5	85		1024.4
19A	10/4/1994	10/4/1994	Percussion Hammer	101.0	1	20	1196.4	1176.4
					2	40		1156.4
					3	60		1136.4
					4	80		1116.4
					5	96		1100.4
20	***Well Was Not Located***							
20A	10/23/1994	10/23/1994	Percussion Hammer	72.0	1	20	1142.7	1122.7
					2	30		1112.7
					3	47		1095.7
					4	60		1082.7
21	***Well Was Not Located***							
22	***Well Was Not Located***							
23B	***Well Was Not Located***							
24	***Well Was Not Located***							
25	3/31/1997	3/31/1997	Sonic	202.0	1	20	1199.6	1179.6
					2	40		1159.6
					3	60		1139.6
					4	85		1114.6
					5	100		1099.6
					6	120		1079.6
					7	145		1054.6
					8	165		1034.6
					9	180		1019.6
					10	190		1009.6
26	3/27/1997	3/28/1997	Sonic	206.0	1	20	1201.8	1181.8

Table 2-1. Summary of Construction Details for Soil Vapor Monitoring Wells (cont'd)

Soil Vapor Well Number	Date Drilling Complete	Date Vapor Well Installed	Drilling Method	Total Boring Depth (ft bgs)	Sampling Tip Number	Depth to Sampling Tip (ft bgs)	Elevation of Ground Surface (ft amsl)	Elevation of Soil Vapor Sampling Tip (ft amsl)
26					2	35		1166.8
					3	55		1146.8
					4	80		1121.8
					5	100		1101.8
					6	115		1086.8
					7	140		1061.8
					8	160		1041.8
					9	180		1021.8
					10	195		1006.8
27	3/18/1997	3/18/1997	Sonic	214.0	1	20	1214.2	1194.2
					2	35		1179.2
					3	60		1154.2
					4	85		1129.2
					5	100		1114.2
					6	120		1094.2
					7	140		1074.2
					8	160		1054.2
					9	180		1034.2
					10	205		1009.2
28	3/13/1997	3/14/1997	Sonic	179.0	1	20	1176.7	1156.7
					2	45		1131.7
					3	65		1111.7
					4	80		1096.7
					5	105		1071.7
					6	120		1056.7
					7	140		1036.7
					8	160		1016.7
29	***Well Was Not Located***							
30	4/2/1997	4/2/1997	Sonic	68.9	1	17	1088.9	1071.9
					2	30		1058.9
					3	40		1048.9
					4	50		1038.9
					5	65		1023.9
31	4/9/1997	4/9/1997	Sonic	73.0	1	20	1083.1	1063.1
					2	35		1048.1
					3	45		1038.1
					4	55		1028.1

Table 2-1. Summary of Construction Details for Soil Vapor Monitoring Wells (cont'd)

Soil Vapor Well Number	Date Drilling Complete	Date Vapor Well Installed	Drilling Method	Total Boring Depth (ft bgs)	Sampling Tip Number	Depth to Sampling Tip (ft bgs)	Elevation of Ground Surface (ft amsl)	Elevation of Soil Vapor Sampling Tip (ft amsl)
31					5	65		1018.1
32	3/29/1998	3/29/1998	Sonic	210.0	1	25	1206.6	1181.6
					2	40		1166.6
					3	55		1151.6
					4	70		1136.6
					5	90		1116.6
					6	115		1091.6
					7	135		1071.6
					8	155		1051.6
					9	180		1026.6
					10	195		1011.6
33	3/31/1998	4/1/1998	Sonic	213.0	1	20	1214.0	1194.0
					2	40		1174.0
					3	60		1154.0
					4	85		1129.0
					5	105		1109.0
					6	120		1094.0
					7	140		1074.0
					8	160		1054.0
					9	180		1034.0
					10	200		1014.0
34	4/8/1998	4/8/1998	Sonic	135.0	1	20	1164.3	1144.3
					2	35		1129.3
					3	50		1114.3
					4	65		1099.3
					5	80		1084.3
					6	95		1069.3
					7	108		1056.3
					8	118		1046.3
35	4/14/1998	4/14/1998	Sonic	162.5	1	20	1183.2	1163.2
					2	35		1148.2
					3	50		1133.2
					4	60		1123.2
					5	80		1103.2
					6	95		1088.2
					7	110		1073.2
					8	125		1058.2

Table 2-1. Summary of Construction Details for Soil Vapor Monitoring Wells (cont'd)

Soil Vapor Well Number	Date Drilling Complete	Date Vapor Well Installed	Drilling Method	Total Boring Depth (ft bgs)	Sampling Tip Number	Depth to Sampling Tip (ft bgs)	Elevation of Ground Surface (ft amsl)	Elevation of Soil Vapor Sampling Tip (ft amsl)
					9	140		1043.2
					10	155		1028.2
36	3/27/1998	3/27/1998	Sonic	117.0	1	20	1232.8	1212.8
					2	35		1197.8
					3	55		1177.8
					4	75		1157.8
					5	92		1140.8
37	4/7/1998	4/7/1998	Sonic	193.0	1	25	1195.7	1170.7
					2	40		1155.7
					3	60		1135.7
					4	80		1115.7
					5	100		1095.7
					6	120		1075.7
					7	140		1055.7
					8	155		1040.7
					9	170		1025.7
					10	185		1010.7
38	4/15/1998	4/15/1998	Sonic	178.5	1	25	1185.6	1160.6
					2	45		1140.6
					3	65		1120.6
					4	80		1105.6
					5	95		1090.6
					6	110		1075.6
					7	125		1060.6
					8	140		1045.6
					9	155		1030.6
					10	170		1015.6
39	4/17/1998	4/17/1998	Sonic	138.0	1	20	1144.1	1124.1
					2	35		1109.1
					3	50		1094.1
					4	70		1074.1
					5	85		1059.1
					6	100		1044.1
					7	110		1034.1
					8	120		1024.1
					9	130		1014.1

Table 2-2. Summary of Primary Target Compounds for Analyses Performed on Soil Vapor Samples

Parameter	EPA Method	Container	Maximum Holding Time	Detection Limits
Volatile Organic Compounds	8260B	60-cc Syringe	15 minutes	
Benzene				1.0 µg/L-vapor
Vinyl chloride				1.0 µg/L-vapor
Carbon tetrachloride				1.0 µg/L-vapor
1,2-Dichloroethane				1.0 µg/L-vapor
Trichloroethene				1.0 µg/L-vapor
1,1,1-Trichloroethane				1.0 µg/L-vapor
Bromomethane				1.0 µg/L-vapor
Chloromethane				1.0 µg/L-vapor
Chloroform				1.0 µg/L-vapor
trans-1,2-Dichloroethene				1.0 µg/L-vapor
cis-1,2-Dichloroethene				1.0 µg/L-vapor
Dichloromethane				1.0 µg/L-vapor
1,1-Dichloroethane				1.0 µg/L-vapor
Ethylbenzene				1.0 µg/L-vapor
1,1,2-Trichloroethane				1.0 µg/L-vapor
1,1,1,2-Tetrachloroethane				1.0 µg/L-vapor
1,1,2,2-Tetrachloroethane				1.0 µg/L-vapor
Tetrachloroethene				1.0 µg/L-vapor
Toluene				1.0 µg/L-vapor
m,p-Xylenes				1.0 µg/L-vapor
o-Xylene				1.0 µg/L-vapor
Trichlorofluoromethane (Freon 11)				1.0 µg/L-vapor
Dichlorodifluoromethane (Freon 12)				1.0 µg/L-vapor
Trichlorotrifluoroethane (Freon 113)				1.0 µg/L-vapor

Table 3-1. Summary of Soil Vapor Results, Sixteenth Periodic Sampling Event, February 2004
(Concentrations in µg/L-vapor)

Soil Vapor Well Number	Depth (Ft bgs)	Date	Sample Number	CCl_4	Freon 113	TCE	PCE	1,1-DCE	Chloroform	1,1,1-TCA	Freon 11
4	11	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
4	20	2/2/2004	SVW4-VPB-008	ND	ND	**21**	ND	ND	ND	ND	ND
4	35	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
4	56	2/2/2004	SVW4-VPD-009	ND	ND	**14**	ND	ND	ND	ND	ND
4	56	2/2/2004	SVW4-VPD-010(DUP)	ND	ND	**12**	ND	ND	ND	ND	ND
32	25	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
32	40	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
32	55	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
32	70	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
32	90	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
32	115	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
32	135	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
32	155	2/2/2004	SVW32-VPH-007	ND	ND	ND	ND	ND	ND	ND	ND
32	180	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
32	195	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
33	20	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
33	40	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
33	60	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
33	85	2/2/2004	SVW33-VPD-004	ND	ND	ND	ND	ND	ND	ND	ND
33	105	2/2/2004	SVW33-VPE-005	**2.0**	**1.0**	ND	ND	ND	ND	ND	ND
33	120	2/2/2004	SVW33-VPF-006	ND	ND	ND	ND	**2.6**	ND	ND	ND

Table 3-1. Summary of Soil Vapor Results, Sixteenth Periodic Sampling Event, February 2004 (cont'd)
(Concentrations in µg/L-vapor)

Soil Vapor Well Number	Depth (Ft bgs)	Date	Sample Number	CCl_4	Freon 113	TCE	PCE	1,1-DCE	Chloroform	1,1,1-TCA	Freon 11
33	140	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
33	160	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
33	180	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
33	200	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
34	20	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
34	35	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
34	50	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
34	65	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
34	80	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
34	95	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
34	108	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
34	118	2/2/2004	P	P	P	P	P	P	P	P	P
36	20	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
36	35	2/2/2004	SVW36-VPB-002	ND	ND	ND	ND	ND	ND	ND	ND
36	55	2/2/2004	SVW36-VPC-003	ND	ND	ND	ND	ND	ND	ND	ND
36	75	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
36	92	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
37	25	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
37	40	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
37	60	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
37	80	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
37	100	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
37	120	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
37	140	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
37	155	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
37	170	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
37	185	2/2/2004	SVW37-VPJ-001	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

Dup: Duplicate Sample
ND: Not Detected (Above the PQL)
PCE: Tetrachloroethene
1,1-DCE: 1,1-Dichloroethene
CCl_4: Carbon Tetrachloride
NS: Not Sampled
PQL: Practical Quantitation Limit
1,1,1-TCA: 1,1,1-Trichloroethane
Ft bgs: Feet Below Grade Surface
P: Sampling Port Plugged, Unable to Purge or Blow
TCE: Trichloroethene
µg/L: Micrograms per Liter (Vapor)

Table 3-2. Summary of Soil Vapor Results, Seventeenth Periodic Sampling Event, April 2004
(Concentrations in mg/L-vapor)

Soil Vapor Well Number	Depth (Ft bgs)	Date	Sample Number	CCl_4	Freon 113	TCE	PCE	1,1-DCE	Chloroform	1,1,1-TCA	Freon 11
4	11	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
4	20	4/6/2004	SVW4-VPB-005	ND	ND	**24**	ND	ND	ND	ND	ND
4	35	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
4	56	4/6/2004	SVW4-VPD-006	ND	ND	**14**	ND	ND	ND	ND	ND
17	12	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
17	24	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
17	36	4/6/2004	SVW17-VPC-004	ND	ND	**1.9**	**5.9**	ND	ND	ND	ND
26	20	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
26	35	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
26	55	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
26	80	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
26	100	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
26	115	4/9/2004	SVW26-VPF-033	ND	ND	ND	ND	ND	ND	ND	ND
26	140	4/9/2004	SVW26-VPG-034	ND	ND	ND	ND	ND	ND	ND	ND
26	160	4/9/2004	SVW26-VPH-035	ND	ND	ND	ND	ND	ND	ND	ND
26	180	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
26	195	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
27	20	4/7/2004	SVW27-VPA-014	ND	ND	ND	ND	ND	ND	ND	ND
27	35	4/7/2004	SVW27-VPB-015	ND	ND	ND	ND	ND	ND	ND	ND
27	60	4/7/2004	SVW27-VPC-016	ND	ND	ND	ND	ND	ND	ND	ND
27	85	4/7/2004	SVW27-VPD-017	ND	ND	ND	ND	ND	ND	ND	ND
27	100	4/7/2004	SVW27-VPE-018	ND	ND	ND	ND	ND	ND	ND	ND
27	120	4/7/2004	SVW27-VPF-019	ND	ND	ND	ND	ND	ND	ND	ND
27	140	4/7/2004	SVW27-VPG-020	ND	ND	ND	ND	ND	ND	ND	ND
27	160	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
27	180	4/7/2004	SVW27-VPI-021	ND	ND	ND	ND	ND	ND	ND	ND

Table 3-2. Summary of Soil Vapor Results, Seventeenth Periodic Sampling Event, April 2004
(Concentrations in mg/L-vapor)

Soil Vapor Well Number	Depth (Ft bgs)	Date	Sample Number	CCl_4	Freon 113	TCE	PCE	1,1-DCE	Chloroform	1,1,1-TCA	Freon 11
27	180	4/7/2004	SVW27-VPI-022(DUP)	ND	ND	ND	ND	ND	ND	ND	ND
27	205	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
33	20	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
33	40	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
33	60	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
33	85	4/6/2004	SVW33-VPD-001	ND	ND	ND	ND	ND	ND	ND	ND
33	105	4/6/2004	SVW33-VPE-002	ND	ND	ND	ND	**1.0**	ND	ND	ND
33	120	4/6/2004	SVW33-VPF-003	ND	ND	ND	ND	ND	ND	ND	ND
33	140	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
33	160	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
33	180	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
33	200	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
35	20	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
35	35	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
35	50	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
35	60	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
35	80	4/8/2004	SVW35-VPE-023	ND	ND	ND	ND	ND	ND	ND	ND
35	95	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
35	110	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
35	125	NS	NS	NS	**1.2**	NS	NS	NS	NS	NS	NS
35	140	4/8/2004	SVW35-VPI-024	ND	ND	ND	ND	ND	ND	ND	ND
35	155	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
36	20	4/9/2004	SVW36-VPA-036	ND	ND	ND	ND	ND	ND	ND	ND
36	35	4/9/2004	SVW36-VPB-037	ND	ND	ND	ND	ND	ND	ND	ND
36	55	4/9/2004	SVW36-VPC-038	ND	ND	ND	ND	ND	ND	ND	ND
36	75	4/9/2004	SVW36-VPD-039	ND	ND	ND	ND	ND	ND	ND	ND
36	92	4/9/2004	SVW36-VPE-040	ND	ND	ND	ND	ND	ND	ND	ND
36	92	4/9/2004	SVW36-VPE-041(DUP)	ND	ND	ND	ND	ND	ND	ND	ND
37	25	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Table 3-2. Summary of Soil Vapor Results, Seventeenth Periodic Sampling Event, April 2004
(Concentrations in mg/L-vapor)

Soil Vapor Well Number	Depth (Ft bgs)	Date	Sample Number	CCl_4	Freon 113	TCE	PCE	1,1-DCE	Chloroform	1,1,1-TCA	Freon 11
37	40	4/6/2004	SVW37-VPB-007	ND	ND	ND	ND	ND	ND	ND	ND
37	60	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
37	80	4/6/2004	SVW37-VPD-008	ND	ND	ND	ND	ND	ND	ND	ND
37	100	4/6/2004	SVW37-VPE-009	ND	ND	ND	ND	ND	ND	ND	ND
37	100	4/6/2004	SVW37-VPE-010(DUP)	ND	ND	ND	ND	ND	ND	ND	ND
37	120	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
37	140	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
37	155	4/7/2004	SVW37-VPH-011	ND	ND	ND	ND	ND	ND	ND	ND
37	170	4/7/2004	SVW37-VPI-012	ND	ND	ND	ND	ND	ND	ND	ND
37	185	4/7/2004	SVW37-VPJ-013	ND	ND	ND	ND	ND	ND	ND	ND
38	25	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
38	45	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
38	65	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
38	80	4/8/2004	SVW38-VPD-025	ND	ND	ND	ND	ND	ND	ND	ND
38	95	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
38	110	4/8/2004	SVW38-VPF-026	ND	ND	ND	ND	ND	ND	ND	ND
38	125	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
38	140	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
38	155	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
38	170	4/8/2004	SVW38-VPJ-027	ND	ND	ND	ND	ND	ND	ND	ND
39	20	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
39	35	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
39	50	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
39	70	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
39	85	4/8/2004	SVW39-VPE-028	ND	**8.1**	**1.1**	ND	ND	ND	ND	ND
39	100	4/8/2004	SVW39-VPF-029	**2.3**	**4.4**	**9.2**	ND	ND	ND	ND	ND
39	110	4/8/2004	SVW39-VPG-030	ND	ND	ND	ND	ND	ND	ND	ND
39	120	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
39	130	4/8/2004	SVW39-VPI-031	ND	ND	ND	ND	ND	ND	ND	ND
39	130	4/8/2004	SVW39-VPI-032(DUP)	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

*Soil vapor monitoring well No. 17 had concentrations of 1,2-DCE (7.8 ug/L-vapor), PCE (5,9 ug/L-vapor), benzene (76 ug/L-vapor), ethylbenzene (2.9 ug/L-vapor), and m&p-xylenes (11 ug/L-vapor) at a depth of 36 feet.

Dup: Duplicate Sample
ND: Not Detected (Above the PQL)
PCE: Tetrachloroethene
1,1-DCE: 1,1-Dichloroethene
CCl_4: Carbon Tetrachloride
NS: Not Sampled
PQL: Practical Quantitation Limit
1,1,1-TCA: 1,1,1-Trichloroethane
Ft bgs: Feet Below Grade Surface
P: Sampling Port Plugged, Unable to Purge or Blow
TCE: Trichloroethene
g/L: Micrograms per Liter (Vapor)

Table 3-3. Summary of Soil Vapor Results, Eighteenth Periodic Sampling Event, July 2004
(Concentrations in mg/L-vapor)

Soil Vapor Well Number	Depth (Ft bgs)	Date	Sample Number	CCl4	Freon 113	TCE	PCE	1,1-DCE	Chloroform	1,1,1-TCA	Freon 11
4	11	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
4	20	7/14/2004	SVW4-VPB-003	ND	ND	**33**	ND	ND	ND	ND	ND
4	35	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
4	56	7/14/2004	SVW4-VPD-004	ND	ND	**6.9**	ND	ND	ND	ND	ND
17	12	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
17	24	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
17	36	7/14/2004	SVW17-VPC-005	ND	ND	ND	ND	ND	ND	ND	ND
33	20	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
33	40	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
33	60	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
33	85	7/14/2004	SVW33-VPD-006	ND	ND	ND	ND	ND	ND	ND	ND
33	105	7/14/2004	SVW33-VPE-007	ND	ND	ND	ND	ND	ND	ND	ND
33	120	7/14/2004	SVW33-VPF-008	ND	ND	ND	ND	ND	ND	ND	ND
33	140	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
33	160	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
33	180	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
33	200	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
36	20	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
36	35	7/14/2004	SVW36-VPB-009	ND	ND	ND	ND	ND	ND	ND	ND
36	35	7/14/2004	SVW36-VPB-010(DUP)	ND	ND	ND	ND	ND	ND	ND	ND
36	55	7/14/2004	SVW36-VPC-011	ND	ND	ND	ND	ND	ND	ND	ND

Table 3-3. Summary of Soil Vapor Results, Eighteenth Periodic Sampling Event, July 2004 (cont'd)
(Concentrations in mg/L-vapor)

Soil Vapor Well Number	Depth (Ft bgs)	Date	Sample Number	CCl4	Freon 113	TCE	PCE	1,1-DCE	Chloroform	1,1,1-TCA	Freon 11
36	75	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
36	92	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
*Benzene was detected in soil vapor monitoring well No. 17 at a concentration of 1.2 ug/L-vapor at a depth of 36 feet.											
37	25	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
37	40	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
37	60	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
37	70	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
37	100	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
37	120	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
37	140	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
37	155	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
37	175	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
37	185	7/14/2004	SVW37-VPJ-002	ND	ND	ND	ND	ND	ND	ND	ND
39	20	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
39	35	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
39	50	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
39	70	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
39	85	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
39	100	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
39	110	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
39	120	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
39	130	7/14/2004	SVW39-VPI-001	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

Dup: Duplicate Sample
ND: Not Detected (Above the PQL)
PCE: Tetrachloroethene
1,1-DCE: 1,1-Dichloroethene
CCl_4: Carbon Tetrachloride
NS: Not Sampled
PQL: Practical Quantitation Limit
1,1,1-TCA: 1,1,1-Trichloroethane
Ft bgs: Feet Below Ground Surface
P: Sampling Port Plugged, Unable to Purge or Blow
TCE: Trichloroethene
µg/L: Micrograms per Liter (Vapor)

Table 3-4. Summary of Soil Vapor Results, Nineteenth Periodic Sampling Event, November 2004
(Concentrations in mg/L-vapor)

Soil Vapor Well Number	Depth (Ft bgs)	Date	Sample Number	CCl_4	Freon 113	TCE	PCE	1,1-DCE	Chloroform	1,1,1-TCA	Freon 11
1	10	10/26/2004	SVW1-VPA-016	ND	ND	ND	ND	ND	ND	ND	ND
1	21	10/26/2004	SVW1-VPB-017	ND	ND	ND	ND	ND	ND	ND	ND
1	33	10/26/2004	SVW1-VPC-018	ND	ND	ND	ND	ND	ND	ND	ND
2	10	10/26/2004	SVW2-VPA-019	ND	ND	ND	ND	ND	ND	ND	ND
2	22	NS	NS	P	P	P	P	P	P	P	P
2	37	NS	NS	P	P	P	P	P	P	P	P
3	16	NS	NS	P	P	P	P	P	P	P	P
3	29	10/26/2004	SVW3-VPB-020	ND	ND	ND	ND	ND	ND	ND	ND
3	29	10/26/2004	SVW3-VPB-021 (Dup)	ND	ND	ND	ND	ND	ND	ND	ND
3	40	10/26/2004	SVW3-VPC-022	ND	ND	ND	ND	ND	ND	ND	ND
3	47	NS	NS	P	P	P	P	P	P	P	P
4	11	NS	NS	P	P	P	P	P	P	P	P
4	20	10/26/2004	SVW4-VPB-025	ND	ND	35.0	ND	ND	ND	ND	ND
4	35	NS	NS	P	P	P	P	P	P	P	P
4	56	NS	NS	P	P	P	P	P	P	P	P
5	5	NS	NS	P	P	P	P	P	P	P	P
5	9	10/26/2004	SVW5-VPB-015	ND	ND	ND	ND	ND	ND	ND	ND
6	20	NS	NS	P	P	P	P	P	P	P	P
6	40	11/3/2004	SVW6-VPB-094	ND	ND	ND	ND	ND	ND	ND	ND
6	60	NS	NS	P	P	P	P	P	P	P	P

Table 3-4. Summary of Soil Vapor Results, Nineteenth Periodic Sampling Event, November 2004 (cont'd)
(Concentrations in mg/L-vapor)

Soil Vapor Well Number	Depth (Ft bgs)	Date	Sample Number	CCl_4	Freon 113	TCE	PCE	1,1-DCE	Chloroform	1,1,1-TCA	Freon 11
6	77	11/3/2004	SVW6-VPD-095	ND	ND	ND	ND	ND	ND	ND	ND
6	96	11/3/2004	SVW6-VPE-096	ND	ND	ND	ND	ND	ND	ND	ND
7	20	10/26/2004	SVW7-VPA-023	ND	ND	ND	ND	ND	ND	ND	ND
7	35	10/26/2004	SVW7-VPB-024	ND	ND	ND	ND	ND	ND	ND	ND
8	20	NS	NS	P	P	P	P	P	P	P	P
8	30	NS	NS	P	P	P	P	P	P	P	P
8	50	10/26/2004	SVW8-VPC-026	ND	ND	ND	ND	ND	ND	ND	ND
8	70	10/26/2004	SVW8-VPD-027	ND	ND	ND	ND	ND	ND	ND	ND
8	90	10/26/2004	SVW8-VPE-028	ND	ND	ND	ND	ND	ND	ND	ND
9	20	10/27/2004	SVW9-VPA-031	ND	ND	ND	ND	ND	ND	ND	ND
9	20	10/27/2004	SVW9-VPA-032 (Dup)	ND	ND	ND	ND	ND	ND	ND	ND
9	35	10/27/2004	SVW9-VPB-033	ND	ND	ND	ND	ND	ND	ND	ND
9	50	10/27/2004	SVW9-VPC-034	ND	ND	ND	ND	ND	ND	ND	ND
9	70	10/27/2004	SVW9-VPD-035	ND	ND	ND	ND	ND	ND	ND	ND
9	87	10/27/2004	SVW9-VPE-036	ND	ND	ND	ND	ND	ND	ND	ND
10	20	10/27/2004	NS	P	P	P	P	P	P	P	P
10	35	10/27/2004	SVW10-VPB-037	ND	3.9	ND	ND	ND	ND	ND	ND
10	50	NS	NS	P	P	P	P	P	P	P	P
10	69	10/27/2004	SVW10-VPD-038	ND	3.9	ND	ND	ND	ND	ND	ND
11	20	11/27/2004	SVW11-VPA-029	ND	ND	ND	ND	ND	ND	ND	ND
11	40	11/27/2004	SVW11-VPB-030	ND	ND	ND	ND	ND	ND	ND	ND
11	60	NS	NS	P	P	P	P	P	P	P	P
11	80	NS	NS	P	P	P	P	P	P	P	P
11	96	NS	NS	P	P	P	P	P	P	P	P
12	20	10/25/2004	SVW12-VPA-012	ND	ND	ND	ND	ND	ND	ND	ND
12	40	10/25/2004	SVW12-VPB-013	ND	ND	ND	ND	ND	ND	ND	ND
12	60	10/25/2004	SVW12-VPC-014	ND	ND	ND	ND	ND	ND	ND	ND
12	76	NS	NS	P	P	P	P	P	P	P	P
13	10	NS	NS	P	P	P	P	P	P	P	P
13	20	NS	NS	P	P	P	P	P	P	P	P

Table 3-4. Summary of Soil Vapor Results, Nineteenth Periodic Sampling Event, November 2004 (cont'd)
(Concentrations in mg/L-vapor)

Soil Vapor Well Number	Depth (Ft bgs)	Date	Sample Number	CCl_4	Freon 113	TCE	PCE	1,1-DCE	Chloroform	1,1,1-TCA	Freon 11
13	30	NS	NS	P	P	P	P	P	P	P	P
13	40	NS	NS	P	P	P	P	P	P	P	P
14	5	10/27/2004	SVW14-VPA-039	ND	ND	ND	ND	ND	ND	ND	ND
14	10	10/27/2004	SVW14-VPB-040	ND	ND	ND	ND	ND	ND	ND	ND
14	13	NS	NS	P	P	P	P	P	P	P	P
15	20	NS	NS	P	P	P	P	P	P	P	P
15	40	11/3/2004	SVW15-VPB-097	ND	ND	ND	ND	ND	ND	ND	ND
15	60	11/3/2004	SVW15-VPC-098	ND	ND	ND	ND	ND	ND	ND	ND
15	60	11/3/2004	SVW15-VPC-099 (Dup)	ND	ND	ND	ND	ND	ND	ND	ND
15	75	11/3/2004	SVW15-VPD-100	ND	ND	ND	ND	ND	ND	ND	ND
15	90	11/3/2004	SVW15-VPE-101	ND	ND	ND	ND	ND	ND	ND	ND
16	20	NS	NS	P	P	P	P	P	P	P	P
16	40	NS	NS	P	P	P	P	P	P	P	P
16	60	NS	NS	P	P	P	P	P	P	P	P
16	80	NS	NS	P	P	P	P	P	P	P	P
16	95	NS	NS	P	P	P	P	P	P	P	P
17	12	NS	NS	P	P	P	P	P	P	P	P
17	24	NS	NS	P	P	P	P	P	P	P	P
17	36	NS	NS	P	P	P	P	P	P	P	P
18	20	NS	NS	P	P	P	P	P	P	P	P
18	40	NS	NS	P	P	P	P	P	P	P	P
18	55	NS	NS	P	P	P	P	P	P	P	P
18	70	NS	NS	P	P	P	P	P	P	P	P
18	85	NS	NS	P	P	P	P	P	P	P	P
19A	20	NS	NS	P	P	P	P	P	P	P	P
19A	40	NS	NS	P	P	P	P	P	P	P	P
19A	60	11/2/2004	SVW19-VPC-081	ND	ND	ND	ND	ND	ND	ND	ND
19A	80	NS	NS	P	P	P	P	P	P	P	P
19A	96	NS	NS	P	P	P	P	P	P	P	P

Table 3-4. Summary of Soil Vapor Results, Nineteenth Periodic Sampling Event, November 2004 (cont'd)
(Concentrations in mg/L-vapor)

Soil Vapor Well Number	Depth (Ft bgs)	Date	Sample Number	CCl_4	Freon 113	TCE	PCE	1,1-DCE	Chloroform	1,1,1-TCA	Freon 11
20	10	NS	NS	***WELL WAS NOT LOCATED***							
20	20	NS	NS								
20	30	NS	NS								
20	37	NS	NS								
20A	20	NS	NS	P	P	P	P	P	P	P	P
20A	30	NS	NS	P	P	P	P	P	P	P	P
20A	47	NS	NS	P	P	P	P	P	P	P	P
20A	60	NS	NS	P	P	P	P	P	P	P	P
21	20	NS	NS	***WELL WAS NOT LOCATED***							
21	40	NS	NS								
21	55	NS	NS								
21	70	NS	NS								
21	85	NS	NS								
22	20	NS	NS	***WELL WAS NOT LOCATED***							
22	39	NS	NS								
22	60	NS	NS								
22	80	NS	NS								
22	95	NS	NS								
23B	5	NS	NS	***WELL WAS NOT LOCATED***							
23B	11	NS	NS								
23B	17	NS	NS								
24	20	NS	NS	***WELL WAS NOT LOCATED***							
24	40	NS	NS								
24	60	NS	NS								
24	80	NS	NS								
24	95	NS	NS								
25	20	11/1/2004	SVW25-VPA-077	ND	ND	ND	ND	ND	ND	ND	ND
25	40	11/2/2004	SVW25-VPB-078	ND	ND	ND	ND	ND	ND	ND	ND
25	60	NS	NS	P	P	P	P	P	P	P	P
25	85	NS	NS	P	P	P	P	P	P	P	P

Table 3-4. Summary of Soil Vapor Results, Nineteenth Periodic Sampling Event, November 2004 (cont'd)
(Concentrations in mg/L-vapor)

Soil Vapor Well Number	Depth (Ft bgs)	Date	Sample Number	CCl_4	Freon 113	TCE	PCE	1,1-DCE	Chloroform	1,1,1-TCA	Freon 11
25	100	NS	NS	P	P	P	P	P	P	P	P
25	120	NS	NS	P	P	P	P	P	P	P	P
25	145	NS	NS	P	P	P	P	P	P	P	P
25	165	NS	NS	P	P	P	P	P	P	P	P
25	180	11/2/2004	SVW25-VPI-079	ND	ND	ND	ND	ND	ND	ND	3.4
25	190	11/2/2004	SVW25-VPJ-080	ND	ND	ND	ND	ND	ND	ND	2.2
26	20	NS	NS	P	P	P	P	P	P	P	P
26	35	NS	NS	P	P	P	P	P	P	P	P
26	55	NS	NS	P	P	P	P	P	P	P	P
26	80	NS	NS	P	P	P	P	P	P	P	P
26	100	NS	NS	P	P	P	P	P	P	P	P
26	115	11/1/2004	SVW26-VPF-073	3.4	ND	ND	ND	ND	ND	ND	ND
26	140	11/1/2004	SVW26-VPG-074	ND	ND	ND	ND	ND	ND	ND	ND
26	160	11/1/2004	SVW26-VPH-075	ND	ND	ND	ND	ND	ND	ND	ND
26	160	11/1/2004	SVW26-VPH-076 (Dup)	ND	ND	ND	ND	ND	ND	ND	ND
26	180	NS	NS	P	P	P	P	P	P	P	P
26	195	NS	NS	P	P	P	P	P	P	P	P
27	20	10/29/2004	SVW27-VPA-059	ND	ND	ND	ND	ND	ND	ND	ND
27	35	10/29/2004	SVW27-VPB-060	ND	ND	ND	ND	ND	ND	ND	ND
27	60	10/29/2004	SVW27-VPC-061	ND	ND	ND	ND	ND	ND	ND	ND
27	85	10/29/2004	SVW27-VPD-062	ND	ND	ND	ND	ND	ND	ND	ND
27	100	10/29/2004	SVW27-VPE-063	ND	ND	ND	ND	ND	ND	ND	ND
27	120	10/29/2004	SVW27-VPF-064	ND	ND	ND	ND	ND	ND	ND	ND
27	120	10/29/2004	SVW27-VPF-065 (Dup)	ND	ND	ND	ND	ND	ND	ND	ND
27	140	10/29/2004	SVW27-VPG-066	ND	ND	ND	ND	ND	ND	ND	ND
27	160	NS	NS	P	P	P	P	P	P	P	P
27	180	10/29/2004	SVW27-VPI-067	ND	ND	ND	ND	ND	ND	ND	ND
27	205	NS	NS	P	P	P	P	P	P	P	P

Table 3-4. Summary of Soil Vapor Results, Nineteenth Periodic Sampling Event, November 2004 (cont'd)
(Concentrations in mg/L-vapor)

Soil Vapor Well Number	Depth (Ft bgs)	Date	Sample Number	CCl_4	Freon 113	TCE	PCE	1,1-DCE	Chloroform	1,1,1-TCA	Freon 11
28	20	11/1/2004	SVW28-VPA-070	ND	ND	ND	ND	ND	ND	ND	ND
28	45	NS	NS	P	P	P	P	P	P	P	P
28	65	NS	NS	P	P	P	P	P	P	P	P
28	80	11/1/2004	SVW28-VPD-071	ND	ND	ND	ND	ND	ND	ND	ND
28	105	11/1/2004	SVW28-VPE-072	ND	ND	ND	ND	ND	ND	ND	ND
28	120	NS	NS	P	P	P	P	P	P	P	P
28	140	NS	NS	P	P	P	P	P	P	P	P
28	160	NS	NS	P	P	P	P	P	P	P	P
29	20	NS	NS	***WELL WAS NOT LOCATED***							
29	35	NS	NS								
29	50	NS	NS								
29	60	NS	NS								
29	78	NS	NS								
30	17	10/25/2004	SVW30-VPA-006	ND	ND	ND	ND	ND	ND	ND	ND
30	30	10/25/2004	SVW30-VPB-007	ND	ND	ND	ND	ND	ND	ND	ND
30	40	10/25/2004	SVW30-VPC-008	ND	ND	ND	ND	ND	ND	ND	ND
30	50	10/25/2004	SVW30-VPD-009	ND	ND	ND	ND	ND	ND	ND	ND
30	50	10/25/2004	SVW30-VPD-010 (Dup)	ND	ND	ND	ND	ND	ND	ND	ND
30	65	10/25/2004	SVW30-VPE-011	ND	ND	ND	ND	ND	ND	ND	ND
31	20	10/25/2004	SVW31-VPA-001	ND	ND	ND	ND	ND	ND	ND	ND
31	35	10/25/2004	SVW31-VPB-002	ND	ND	ND	ND	ND	ND	ND	ND
31	45	10/25/2004	SVW31-VPC-003	ND	ND	ND	ND	ND	ND	ND	ND
31	55	10/25/2004	SVW31-VPD-004	ND	ND	ND	ND	ND	ND	ND	ND
31	65	10/25/2004	SVW31-VPE-005	ND	ND	ND	ND	ND	ND	ND	ND
32	25	NS	NS	P	P	P	P	P	P	P	P
32	40	10/28/2004	SVW32-VPB-056	ND	ND	ND	ND	ND	ND	ND	ND
32	55	NS	NS	P	P	P	P	P	P	P	P
32	70	NS	NS	P	P	P	P	P	P	P	P

Table 3-4. Summary of Soil Vapor Results, Nineteenth Periodic Sampling Event, November 2004 (cont'd)
(Concentrations in mg/L-vapor)

Soil Vapor Well Number	Depth (Ft bgs)	Date	Sample Number	CCl_4	Freon 113	TCE	PCE	1,1-DCE	Chloroform	1,1,1-TCA	Freon 11
32	90	NS	NS	P	P	P	P	P	P	P	P
32	115	NS	NS	P	P	P	P	P	P	P	P
32	135	NS	NS	P	P	P	P	P	P	P	P
32	155	NS	NS	P	P	P	P	P	P	P	P
32	180	10/28/2004	SVW32-VPI-057	ND	ND	ND	ND	ND	ND	ND	ND
32	195	10/29/2004	SVW32-VPJ-058	ND	ND	ND	ND	ND	ND	ND	ND
33	20	10/28/2004	SVW33-VPA-041	ND	ND	ND	ND	ND	ND	ND	ND
33	40	10/28/2004	SVW33-VPB-042	ND	ND	ND	ND	ND	ND	ND	ND
33	40	10/28/2004	SVW33-VPB-043 (Dup)	ND	ND	ND	ND	ND	ND	ND	ND
33	60	10/28/2004	SVW33-VPC-044	ND	ND	ND	ND	ND	ND	ND	ND
33	85	10/28/2004	SVW33-VPD-045	ND	ND	ND	ND	ND	ND	ND	ND
33	105	10/28/2004	SVW33-VPE-046	ND	ND	ND	ND	ND	ND	ND	ND
33	120	10/28/2004	SVW33-VPF-047	ND	ND	ND	ND	1.8	ND	ND	ND
33	140	10/28/2004	SVW33-VPG-048	ND	ND	ND	ND	ND	ND	ND	ND
33	160	NS	NS	P	P	P	P	P	P	P	P
33	180	NS	NS	P	P	P	P	P	P	P	P
33	200	10/28/2004	SVW33-VPJ-049	ND	ND	ND	ND	ND	ND	ND	ND
34	20	NS	NS	P	P	P	P	P	P	P	P
34	35	NS	NS	P	P	P	P	P	P	P	P
34	50	NS	NS	P	P	P	P	P	P	P	P
34	65	NS	NS	P	P	P	P	P	P	P	P
34	80	11/2/2004	SVW34-VPE-089	ND	ND	ND	ND	ND	ND	ND	ND
34	95	11/2/2004	SVW34-VPF-090	ND	ND	ND	ND	ND	ND	ND	ND
34	108	NS	NS	P	P	P	P	P	P	P	P
34	118	NS	NS	P	P	P	P	P	P	P	P
35	20	NS	NS	P	P	P	P	P	P	P	P
35	35	11/1/2004	SVW35-VPB-068	ND	ND	ND	ND	ND	ND	ND	ND
35	50	NS	NS	P	P	P	P	P	P	P	P

Table 3-4. Summary of Soil Vapor Results, Nineteenth Periodic Sampling Event, November 2004 (cont'd)
(Concentrations in mg/L-vapor)

Soil Vapor Well Number	Depth (Ft bgs)	Date	Sample Number	CCl_4	Freon 113	TCE	PCE	1,1-DCE	Chloroform	1,1,1-TCA	Freon 11
35	60	NS	NS	P	P	P	P	P	P	P	P
35	80	11/1/2004	SVW35-VPE-069	ND	ND	ND	ND	ND	ND	ND	ND
35	95	NS	NS	P	P	P	P	P	P	P	P
35	110	NS	NS	P	P	P	P	P	P	P	P
35	125	NS	NS	P	P	P	P	P	P	P	P
35	140	NS	NS	P	P	P	P	P	P	P	P
35	155	NS	NS	P	P	P	P	P	P	P	P
36	20	10/28/2004	SVW36-VPA-050	ND	ND	ND	ND	ND	ND	ND	ND
36	35	10/28/2004	SVW36-VPB-051	ND	ND	ND	ND	ND	ND	ND	ND
36	55	10/28/2004	SVW36-VPC-052	ND	ND	ND	ND	ND	ND	ND	ND
36	75	10/28/2004	SVW36-VPD-053	ND	ND	ND	ND	ND	ND	ND	ND
36	75	10/28/2004	SVW36-VPD-054 (Dup)	ND	ND	ND	ND	ND	ND	ND	ND
36	92	10/28/2004	SVW36-VPE-055	ND	ND	ND	ND	ND	ND	ND	ND
37	25	NS	NS	P	P	P	P	P	P	P	P
37	40	11/2/2004	SVW37-VPB-082	ND	ND	ND	ND	ND	ND	ND	ND
37	60	NS	NS	P	P	P	P	P	P	P	P
37	80	11/2/2004	SVW37-VPD-083	ND	ND	ND	ND	ND	ND	ND	ND
37	100	11/2/2004	SVW37-VPE-084	ND	ND	ND	ND	ND	ND	ND	ND
37	120	NS	NS	P	P	P	P	P	P	P	P
37	140	NS	NS	P	P	P	P	P	P	P	P
37	155	11/2/2004	SVW37-VPH-085	ND	ND	ND	ND	ND	ND	ND	ND
37	170	11/2/2004	SVW37-VPI-086	ND	ND	ND	ND	ND	ND	ND	ND
37	170	11/2/2004	SVW37-VPI-087 (Dup)	ND	ND	ND	ND	ND	ND	ND	ND
37	185	11/2/2004	SVW37-VPJ-088	ND	ND	ND	ND	ND	ND	ND	ND
38	25	NS	NS	P	P	P	P	P	P	P	P
38	45	NS	NS	P	P	P	P	P	P	P	P
38	65	NS	NS	P	P	P	P	P	P	P	P

Table 3-4. Summary of Soil Vapor Results, Nineteenth Periodic Sampling Event, November 2004 (cont'd)
(Concentrations in mg/L-vapor)

Soil Vapor Well Number	Depth (Ft bgs)	Date	Sample Number	CCl_4	Freon 113	TCE	PCE	1,1-DCE	Chloroform	1,1,1-TCA	Freon 11
38	80	11/2/2004	SVW38-VPD-091	ND	ND	ND	ND	ND	ND	ND	ND
38	95	NS	NS	P	P	P	P	P	P	P	P
38	110	11/2/2004	SVW38-VPF-092	ND	ND	ND	ND	ND	ND	ND	ND
38	125	NS	NS	P	P	P	P	P	P	P	P
38	140	NS	NS	P	P	P	P	P	P	P	P
38	155	NS	NS	P	P	P	P	P	P	P	P
38	170	11/2/2004	SVW38-VPJ-093	ND	1.5	1.4	ND	ND	ND	ND	ND
39	20	NS	NS	P	P	P	P	P	P	P	P
39	35	NS	NS	P	P	P	P	P	P	P	P
39	50	NS	NS	P	P	P	P	P	P	P	P
39	70	NS	NS	P	P	P	P	P	P	P	P
39	85	NS	NS	P	P	P	P	P	P	P	P
39	100	11/3/2004	SVW39-VPF-102	ND	ND	4.4	ND	ND	ND	ND	ND
39	110	NS	NS	P	P	P	P	P	P	P	P
39	120	NS	NS	P	P	P	P	P	P	P	P
39	130	11/3/2004	SVW39-VPI-103	ND	ND	1.4	ND	ND	ND	ND	ND

Notes:

Dup: Duplicate Sample
ND: Not Detected (Above the PQL)
PCE: Tetrachloroethene
1,1-DCE: 1,1-Dichloroethene
CCl_4: Carbon Tetrachloride
NS: Not Sampled
PQL: Practical Quantitation Limit
1,1,1-TCA: 1,1,1-Trichloroethane
Ft bgs: Feet Below Grade Surface
P: Sampling Port Plugged, Unable to Purge or Blow
TCE: Trichloroethene
µg/L: Micrograms per Liter (Vapor)