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DATE: August 11, 2006

TO: Jeff Catanzarita, U.S. EPA/ERT Work Assignment Manager

THROUGH: Parry Bhambra, REAC Operations Section Leader *PBH*

FROM: Christopher Sklaney, REAC Task Leader *CS*

SUBJECT: VAPOR EXTRACTION WELL INSTALLATION AND AIR SAMPLING
 LITTLE VALLEY SUPERFUND SITE (CATTARAUGUS CUTLERY AREA)
 LITTLE VALLEY, NEW YORK
 WORK ASSIGNMENT 0-165 - TRIP REPORT

INTRODUCTION

The Little Valley Superfund Site is underlain by a plume of trichloroethene (TCE)-contaminated groundwater that extends several miles between Little Valley and Salamanca, Cattaraugus County, New York (NY). This trip report presents the results of an environmental investigation conducted at a potential source area of the plume by personnel from the Lockheed Martin Response Engineering and Analytical Contract (REAC) in consultation with the U.S. Environmental Protection Agency (EPA) Environmental Response Team (ERT) Work Assignment Manager (WAM).

The work summarized in this report was conducted at a potential source area of the plume known as the Cattaraugus Cutlery Area (CCA) during three separate site visits in April, May, and June 2006. The CCA is located at 300-306 Sixth Street in Little Valley. Specifically, the work was conducted at one of the property parcels comprising the CCA, the former Cattaraugus Cutlery. Vapor extraction wells were installed in April and June 2006 and air sampling was conducted in May 2006. The wells installed in April 2006 were subsequently connected to an on-site soil vapor extraction (SVE) system in order to perform air flow testing and air sampling during system operation in May 2006. Primary site features are outlined on Figure 1.

SITE BACKGROUND

The property parcels comprising the CCA were historically and are currently zoned for commercial and industrial use. Activities conducted at the site began around 1900, and included the manufacture of cutlery and voting machines, stamping of metal automobile and window parts, and more recently, the storage of commercial and industrial goods. Past owners or operators have included the W.W. Wilson Cutlery Company, Cattaraugus Cutlery, Knowles-Fischer, American Voting Machines (AVM), and according to property records, possibly King Windows. Former employees of AVM and King Windows reportedly alleged that improper disposal of chemicals occurred at the site during manufacturing processes (Tetra Tech FW, 2005).

The parcel on which the Cattaraugus Department of Public Works (CDPW) formerly operated is located immediately east of the existing on-site buildings. The Korn Razor Manufacturing Company was built on this parcel in approximately 1890 and operated as a cutlery, producing straight razors until the mid-1930s. In 1939, the

building reverted to Cattaraugus County for non-payment of taxes and had been used for storage and equipment repair until being demolished at some time in the 1990s (Tetra Tech FW, 2005). The parcel is currently undeveloped.

In the 1980s, TCE was first detected in groundwater samples collected from the production well of the Luminite Products Corporation (Luminite), an industrial property located approximately four miles southeast and down gradient of the site. Subsequent sampling indicated that a plume of TCE extended down gradient several miles from Little Valley to Salamanca and was impacting as many as 200 drinking water wells. The plume was also found to extend up gradient of the Luminite property, and is currently believed to consist of several contributing sources that may also include the CCA, Bush Industries, the Great Triangle Area (also known as the Drum Storage Area), and the Ninth Street Landfill Area. Analytical results of the majority of soil samples collected from the CCA north of the central portion of the manufacturing building between 1998 and 2003 revealed TCE at concentrations of up to 550 micrograms per kilogram ($\mu\text{g}/\text{kg}$), although TCE was also reported at concentrations up to 72,000 $\mu\text{g}/\text{kg}$ in isolated locations (Tetra Tech FW, 2005).

REAC conducted soil sampling at the CCA during several field events from August 2005 through April 2006. The initial event, conducted in August 2005, focused on establishing a sampling grid and collecting soil samples for volatile organic compound (VOC) analysis in an area on the former Cattaraugus Cutlery parcel from which elevated concentrations of TCE were reported during historical sampling activities. The grid was expanded during two subsequent investigations to include the collection of soil samples in areas north of Little Valley Creek and east of the manufacturing buildings. Analytical results indicated that TCE was present on the former Cattaraugus Cutlery parcel at numerous locations above the recommended soil cleanup objective (SCO) of 700 $\mu\text{g}/\text{kg}$, as outlined by New York State Department of Environmental Conservation (NYSDEC) (1994) Technical and Administrative Guidance Memorandum (TAGM) #4046.

In April 2006, soil sampling was conducted on the former Cattaraugus Department of Public Works (CDPW) parcel located immediately east of the former Cattaraugus Cutlery buildings. Analytical results of samples collected from the former CDPW parcel indicated TCE was not present above the SCO.

METHODS

Vapor Well Installation

Twenty-six wells were installed at the CCA during two separate field events. In April 2006, six wells (designated SVE-1 through SVE-6, consecutively) were installed near the northwest corner of the central manufacturing building. The remaining 20 wells were installed in June 2006. Well locations are presented in tabular form on Table 1 and graphically on Figure 2. Soil borings were advanced at several locations, although no samples were collected for laboratory analysis. Soil boring logs are presented in Appendix A.

The wells were installed in a cased borehole using a hydraulic direct-push device. Seventeen of the 25 wells were installed to a depth of 7 feet below the ground surface (bgs) with 5-foot-long screen (transmissive) sections. The remaining eight wells were installed to a depth of 12 feet bgs and were constructed with 10-foot-long screen sections. Primary construction details of all wells are presented on Table 1. The screen section of each well was pre-fabricated by the manufacturer using 10-slot (0.010-inch) Schedule 40 polyvinyl chloride (PVC) and 20/40-mesh silica sand encased in wire mesh containing a 0.011-inch pore size. The inner diameter of all well components was 1.5 inches. The outer diameter of each screen section including the wire mesh and manufacturer's sand pack was 2.5 inches. Silica sand (#0 mesh) was used to fill backfill the borehole to a depth about 0.5 to 1 foot above the top of the well screen. A 1-foot-thick annular seal was constructed using granular bentonite, and native material was used as backfill at the surface. No protective casing was installed and no concrete surface seals were poured.

In May 2006, an EPA Region 2 contractor mobilized a portable SVE system to the site in order to perform air flow testing. The six wells installed in April 2006 were connected to the system. The contractor additionally installed and connected to the system perforated PVC piping laid in a horizontal trench approximately 20 feet long and 2 feet bgs. The approximate location of the horizontal trench is presented on Figure 2.

Air Sampling

On May 15 and 16, 2006, 11 air samples and one trip blank were collected from various locations during air flow testing and operation of the SVE system. Seven samples were collected while the system extracted air individually from the six wells and the horizontal trench. Four samples were collected while the system extracted air in various in-line combinations. Sample descriptions are presented in Table 2.

The samples were collected over a period of approximately 3 minutes into pre-evacuated 6-liter SUMMA[®] canisters. Sampling was performed following guidelines in modified U.S. EPA Method TO-15, *Determination of VOCs in Ambient Air Using SUMMA Passivated Canister Sampling and Gas Chromatographic Analysis*. At the end of the sampling period, the canister valve was closed, and the sampling time and final canister pressure were recorded on the identification tag attached to the canister. Sample documentation and chain of custody records were prepared and the canisters were stored in their respective containers. All samples were hand-delivered to the REAC Laboratory in Edison, New Jersey (NJ) for analysis of volatile organic compounds (VOCs) by modified EPA Method TO-15.

RESULTS

Data validation was not conducted, and therefore, the results should be considered as equivalent to screening data. Preliminary analytical results indicate that 11 compounds were detected in the field samples at concentrations above the sample-or compound-specific reporting limit (RL): acetone, trichlorofluoromethane, trans-1,2-dichloroethene, cis-1,2-dichloroethene, 2-butanone, chloroform, tetrahydrofuran, 1,2-dichloropropane, TCE, 1,1,2-trichloroethane, and tetrachloroethene. The compound detected at the highest concentration was TCE, at 60,000 parts per billion by volume (ppbv), or 322,000 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) in the sample collected during isolation of well SVE-3. TCE was detected in all field samples. The minimum reported concentration of TCE was 9,400 $\mu\text{g}/\text{m}^3$ in the sample collected during isolation of the horizontal trench. TCE results are presented on Figure 3. A summary of all compounds detected above RLs is presented in Table 3. Complete preliminary results, including tentatively identified compounds (TICs) are provided in Appendix B.

REFERENCES

- Lockheed Martin. 2005. Field Logbook, Little Valley, REAC IV-B-0140.
- New York State Department of Environmental Conservation. 1994. Determination of soil cleanup objectives and cleanup levels. Technical and Administrative Guidance Memorandum #4046.
- Tetra Tech FW, Inc. 2005. Remedial Investigation Report for OU-2 Remedial Investigation and Feasibility Study, Little Valley Superfund Site, Cattaraugus County, New York. EPA Region II Response Action Contract, Contract No. 68-W-98-214.

TABLES

**Little Valley Superfund Site
Cattaraugus Cutlery Area
Trip Report**

TABLE 1
WELL POSITIONING AND CONSTRUCTION DATA
SOIL VAPOR EXTRACTION SYSTEM WELLS
LITTLE VALLEY SUPERFUND SITE
CATTARAUGUS CUTLERY AREA
LITTLE VALLEY, NEW YORK

Location	Easting	Northing	Well Depth	Screen Interval
SVE-1	186763.444	4684787.275	7	2-7
SVE-2	186760.927	4684789.016	7	2-7
SVE-3	186757.068	4684791.918	7	2-7
SVE-4	186749.888	4684794.645	7	2-7
SVE-5	186745.696	4684788.580	12	2-12
SVE-6	186741.309	4684780.383	12	2-12
SVE-7	186765.042	4684766.425	7	2-7
SVE-8	186764.480	4684770.470	7	2-7
SVE-9	186764	4684774	7	2-7
SVE-10	186762	4684780	7	2-7
SVE-11	186769.573	4684791.460	12	2-12
SVE-12	186739.165	4684772.186	7	2-7
SVE-13	186739.387	4684775.926	7	2-8
SVE-16	186764.677	4684784.493	12	2-12
SVE-18	186744.855	4684802.117	12	2-12
SVE-19	186736.012	4684810.014	7	2-7
SVE-20	186739.215	4684812.299	12	2-12
SVE-24	186723.593	4684793.022	7	2-7
SVE-25	186729.153	4684797.684	12	2-12
SVE-26	186732.643	4684794.523	7	2-7
SVE-27	186727.964	4684790.285	7	2-7
SVE-28	186740.064	4684795.501	7	2-7
SVE-29	186716.001	4684785.831	7	2-7
SVE-30	186718.630	4684790.561	7	2-7
SVE-32	186776	4684765	7	2-7
SVE-33	186755.350	4684797.776	12	2-12

Data recorded June 21, 2006

Unable to record spatial location of wells SVE-9, SVE-10, and SVE-32 with global positioning system (GPS) technology due to interference from on-site buildings. Spatial location interpolated through ground-truthing from wells located through use of GPS technology.

Well depths and screen intervals in feet below the ground surface.

Coordinate System: UTM, Zone 18 North, NAD1983 (CONUS), meters

TABLE 2
 AIR SAMPLING SUMMARY
 SOIL VAPOR EXTRACTION SYSTEM
 LITTLE VALLEY SUPERFUND SITE
 CATTARAUGUS CUTLERY AREA
 LITTLE VALLEY, NEW YORK

Sample ID	Description
SVE-1	Air sample collected from well SVE-1 during operation of SVE system.
SVE-2	Air sample collected from well SVE-2 during operation of SVE system.
SVE-3	Air sample collected from well SVE-3 during operation of SVE system.
SVE-4	Air sample collected from well SVE-4 during operation of SVE system.
SVE-5	Air sample collected from well SVE-5 during operation of SVE system.
SVE-6	Air sample collected from well SVE-6 during operation of SVE system.
TREN-1	Air sample collected from 20-foot horizontal trench during operation of SVE system.
SVE-1234	Air sample collected from composite of wells SVE-1, SVE-2, SVE-3, and SVE-4 during operation of SVE system.
SVE-56	Air sample collected from composite of wells SVE-5 and SVE-6 during operation of SVE system.
COMP-1A	Air sample collected from composite of wells SVE-1, SVE-2, SVE-3, SVE-4, SVE-5, SVE-6 and 20-foot horizontal trench during operation of SVE system.
COMP-1B	Air sample collected from composite of wells SVE-1, SVE-2, SVE-3, SVE-4, SVE-5, SVE-6 and 20-foot horizontal trench during operation of SVE system.

TABLE 3
VOLATILE ORGANIC COMPOUNDS DETECTED ABOVE REPORTING LIMITS
IN AIR SAMPLES COLLECTED DURING OPERATION OF SOIL VAPOR EXTRACTION SYSTEM
MAY 15-16, 2006
LITTLE VALLEY SUPERFUND SITE
CATTARAUGUS CUTLERY AREA
LITTLE VALLEY, NEW YORK

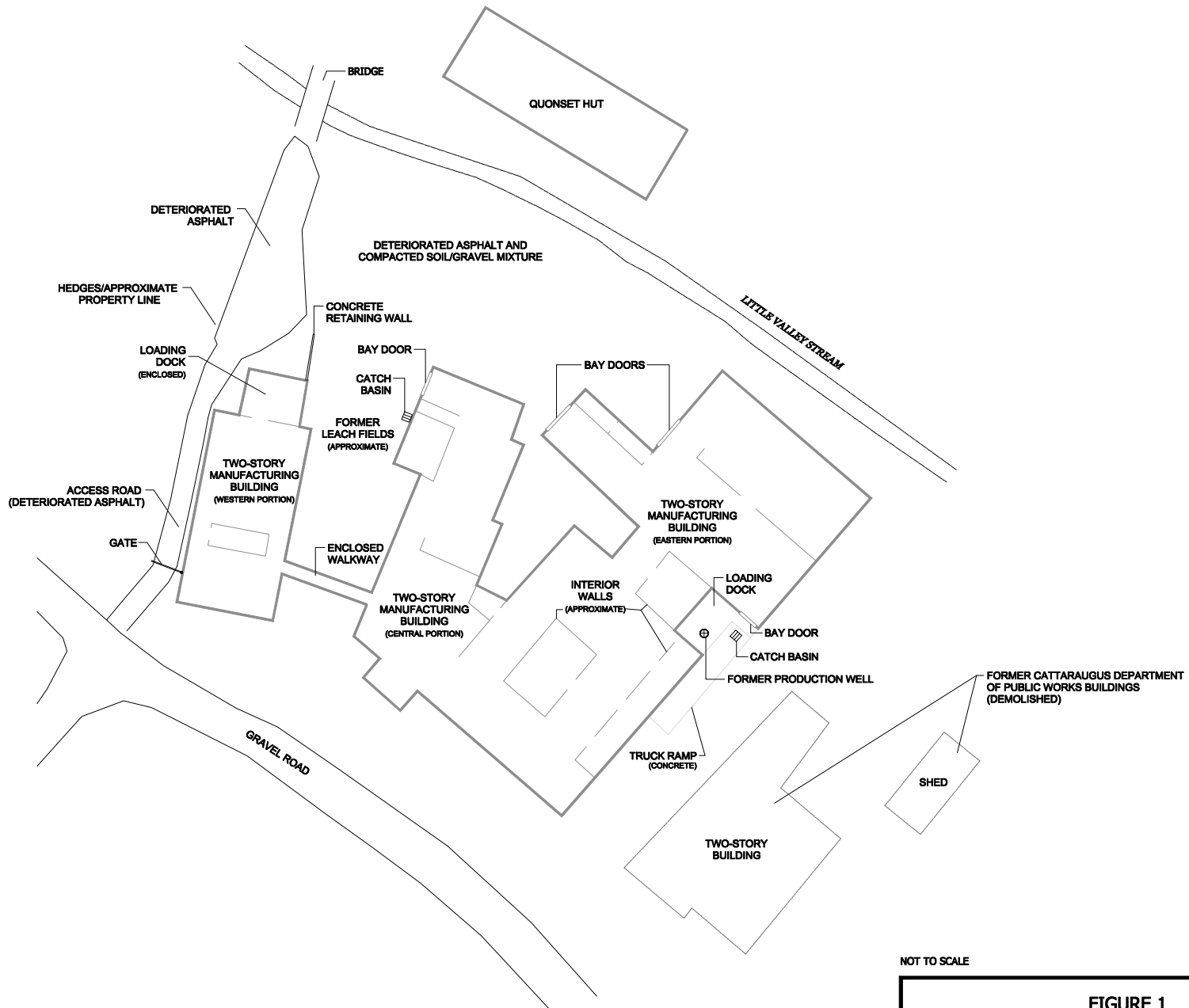
Compound	SVE-1	SVE-2	SVE-3	SVE-4	SVE-5	SVE-6	TREN-1	SVE-1234	SVE-56	COMP-1A	COMP-1B
Acetone	140	123	55.7	99.2	77.4	96.8	21.8	24.2	38.7	16.9	24.2
trans-1,2-Dichloroethene	242	202	135	--	--	--	--	31.7	--	15.8	31.7
2-Butanone	1,180	1,340	939	702	486	519	60.0	147	393	81.0	174
cis-1,2-Dichloroethene	685	289	166	--	51.5	27.7	15.8	115	23.8	51.5	103
Chloroform	9.8	9.8	19.5	14.6	34.2	9.8	--	--	19.5	--	--
Tetrahydrofuran	4,410	1,460	1,390	918	450	639	690	192	303	216.0	162
1,2-Dichloropropane	--	--	--	--	--	--	32.9	--	--	--	--
Trichloroethene	168,000	90,200	322,000	173,000	114,000	37,300	9,400	87,600	47,600	33,400	56,400
1,1,2-Trichloroethane	--	--	21.8	--	--	--	--	--	--	--	--
Tetrachloroethene	224	149	129	163	74.6	27.1	190	108	61.0	142	102

Notes: All results in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$).
Compounds included in this table restricted to those detected above the reporting limit.
Refer to Table 2 for description of sample locations.

-- = Compound not detected above reporting limit

FIGURES

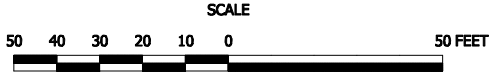
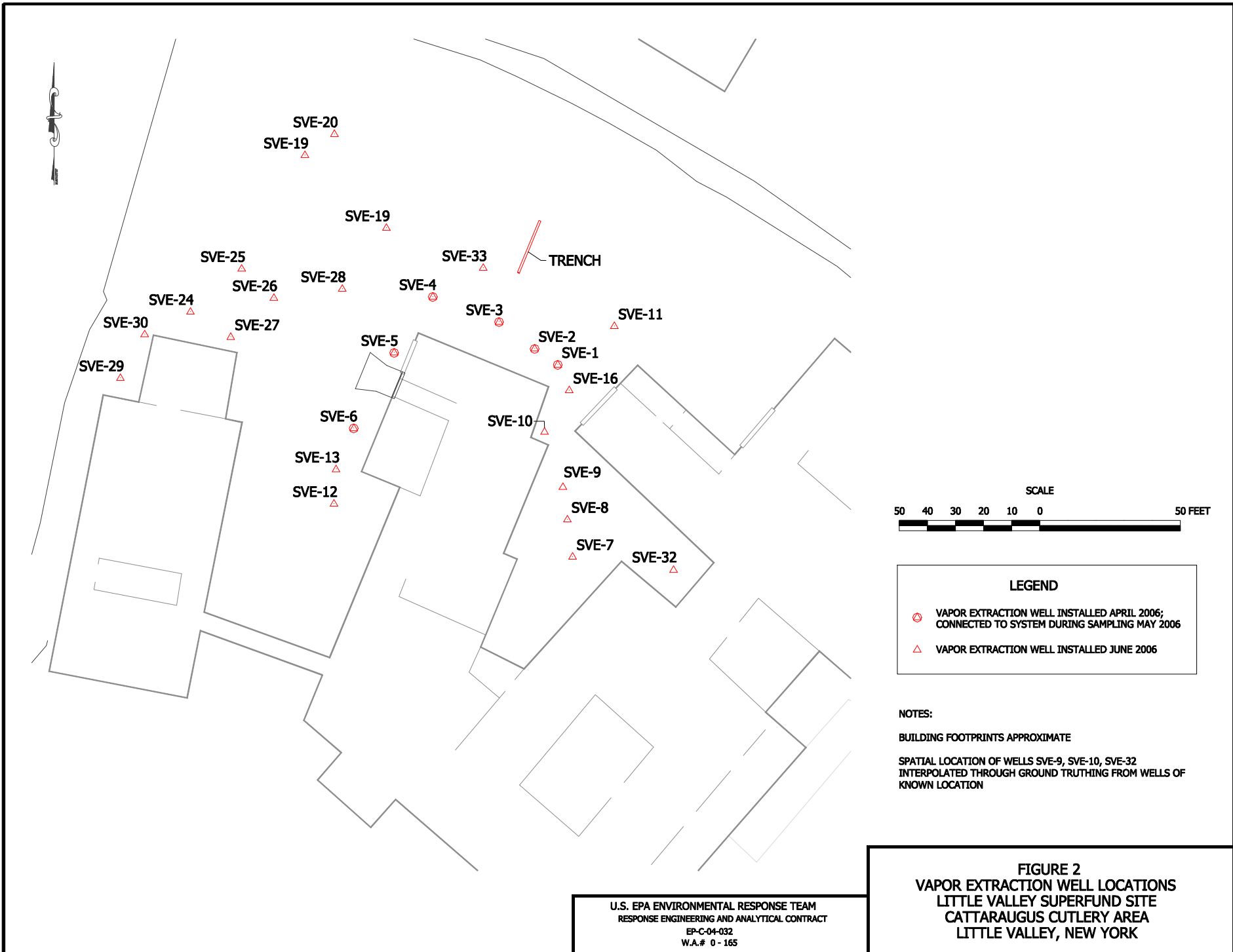
Little Valley Superfund Site
Cattaraugus Cutlery Area
Trip Report



NOT TO SCALE

U.S. EPA ENVIRONMENTAL RESPONSE TEAM
 RESPONSE ENGINEERING AND ANALYTICAL CONTRACT
 EP-C-04-032
 W.A.# 0 - 165

FIGURE 1
SITE SKETCH
LITTLE VALLEY SUPERFUND SITE
CATTARAUGUS CUTLERY AREA
LITTLE VALLEY, NEW YORK



LEGEND

- VAPOR EXTRACTION WELL INSTALLED APRIL 2006; CONNECTED TO SYSTEM DURING SAMPLING MAY 2006
- VAPOR EXTRACTION WELL INSTALLED JUNE 2006

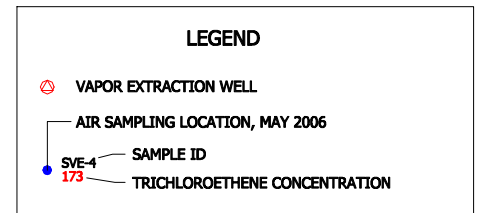
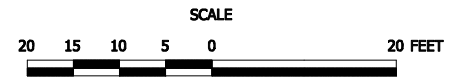
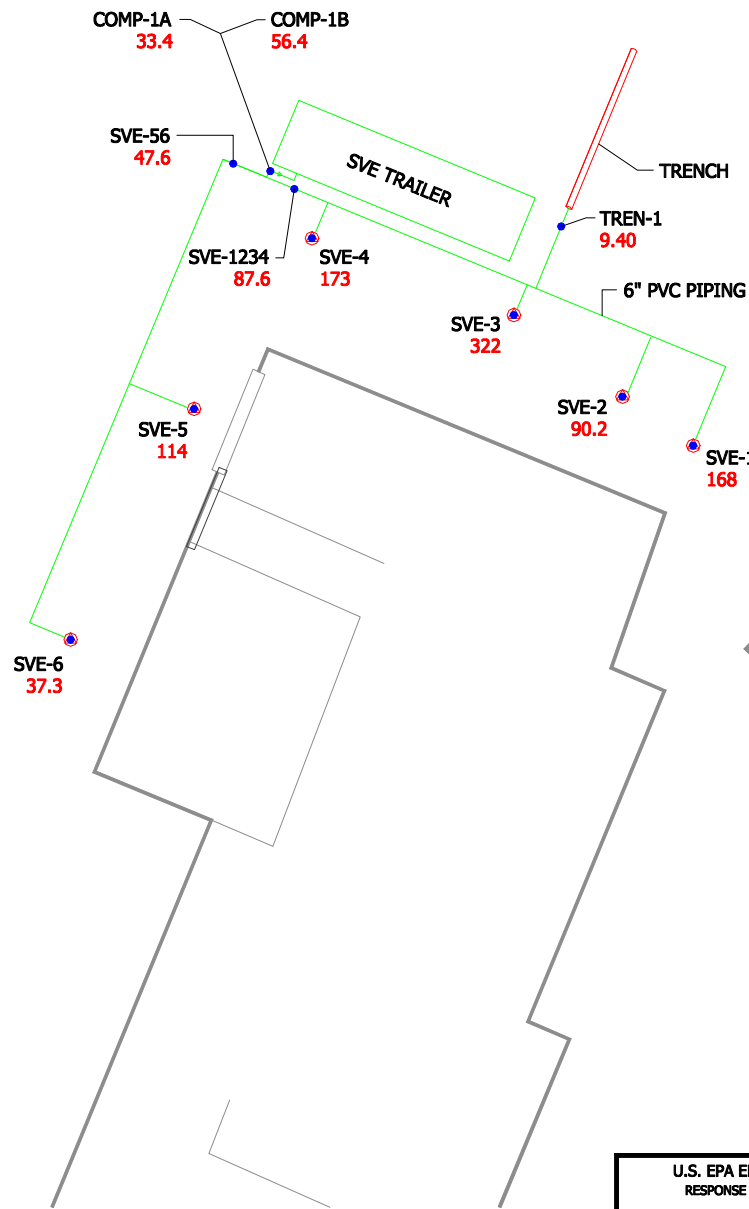
NOTES:

- BUILDING FOOTPRINTS APPROXIMATE
- SPATIAL LOCATION OF WELLS SVE-9, SVE-10, SVE-32 INTERPOLATED THROUGH GROUND TRUTHING FROM WELLS OF KNOWN LOCATION

U.S. EPA ENVIRONMENTAL RESPONSE TEAM
 RESPONSE ENGINEERING AND ANALYTICAL CONTRACT
 EP-C-04-032
 W.A.# 0 - 165

FIGURE 2
VAPOR EXTRACTION WELL LOCATIONS
LITTLE VALLEY SUPERFUND SITE
CATTARAUGUS CUTLERY AREA
LITTLE VALLEY, NEW YORK

I:\GEO\165 LITTLE VALLEY\MAPS\TR-SVE_FIGURE2.DWG



NOTES:

RESULTS IN MILLIGRAMS PER CUBIC METER (mg/m³).

SPATIAL LOCATION OF VAPOR EXTRACTION WELLS DETERMINED USING GLOBAL POSITIONING SYSTEM TECHNOLOGY

BUILDING FOOTPRINTS AND SVE SYSTEM LOCATION AND PIPING APPROXIMATE

FIGURE 3
TRICHLOROETHENE AIR ANALYTICAL RESULTS
LITTLE VALLEY SUPERFUND SITE
CATTARAUGUS CUTLERY AREA
LITTLE VALLEY, NEW YORK

U.S. EPA ENVIRONMENTAL RESPONSE TEAM
RESPONSE ENGINEERING AND ANALYTICAL CONTRACT
EP-C-04-032
W.A.# 0 - 165

APPENDIX A

**Soil Boring Logs
Collected During Vapor Well Installation
April/June 2006
Little Valley Superfund Site
Cattaraugus Cutlery Area
Trip Report**



CLIENT: U.S. Environmental Response Team

CONTRACT/NO.: REAC/EP-C-04-032

DATE: 04/11/06

PROJECT: Little Valley Superfund Site

RIG: Geoprobe Model 6620

SHEET NO.: 1 OF 1

JOB NO.: EAC4-0-EAC00165

OPERATOR: B. Pullen

INSPECTOR: C. Skloney

COORDINATES: 186763.444 E / 4684787.275 N

WELL CONSTRUCTION

PROTECTIVE CASING

NONE

1.5" THREADLESS PVC
CAP, UNLOCKED

SURFACE SEAL

NONE

BACKFILL

NATIVE SOILS

ANNULAR SEAL

GRANULAR BENTONITE
(16 MESH, 0.5-1.5')

RISER

1.0" SCH. 40 PVC
(0-2')

SAND

20/40 GRADE
OTTAWA SAND
ADDED DURING
CONSTRUCTION
AS NEEDED

SCREEN FACTORY-
PACKED WITH 20/40
GRADE OTTAWA SAND

SCREEN

1.5" SCH. 80 PVC,
0.011-INCH SLOT
(2-7')

DEPTH
(FEET)

REC.
(Rec/
48 in.)

TEXTURAL DESCRIPTION

NO BORING COLLECTED

NOTES:

1. Used 5-foot long, 3.25-inch-diameter drive rods and expendable point to advance casing before installing monitor well.
2. Well construction diagram not to scale.
3. GPS coordinate system UTM Zone 18 North, NAD1983 (CONUS) meters.
4. Elevation survey not conducted.

CLIENT: U.S. Environmental Response Team	CONTRACT/NO.: REAC/EP-C-04-032	DATE: 04/11/06
PROJECT: Little Valley Superfund Site	RIG: Geoprobe Model 6620	SHEET NO.: 1 OF 1
JOB NO.: EAC4-0-EAC00165	OPERATOR: B. Pullen	INSPECTOR: C. Skloney
COORDINATES: 186760.927 E / 4684789.016 N		

WELL CONSTRUCTION

PROTECTIVE CASING

NONE
1.5" THREADLESS PVC
CAP, UNLOCKED

SURFACE SEAL

NONE

BACKFILL

NATIVE SOILS

ANNULAR SEAL

GRANULAR BENTONITE
(16 MESH, 0.5-1.5')

RISER

1.0" SCH. 40 PVC
(0-2')

SAND

20/40 GRADE
OTTAWA SAND
ADDED DURING
CONSTRUCTION
AS NEEDED

SCREEN FACTORY-
PACKED WITH 20/40
GRADE OTTAWA SAND

SCREEN

1.5" SCH. 80 PVC,
0.011-INCH SLOT
(2-7')

DEPTH
(FEET)



REC.
(Rec/
48 in.)

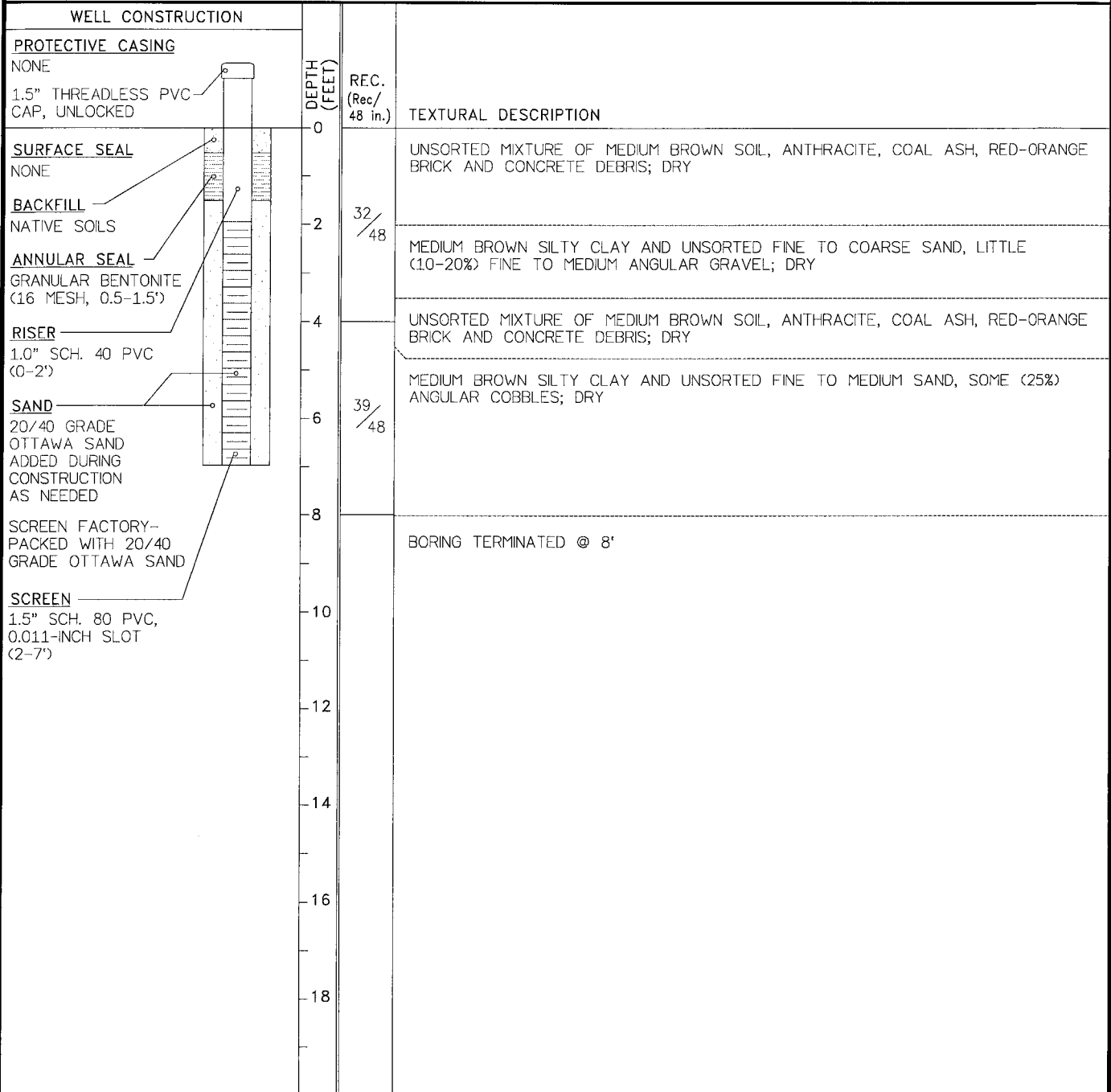
TEXTURAL DESCRIPTION

NO BORING COLLECTED

NOTES:

1. Used 5-foot long, 3.25-inch-diameter drive rods and expendable point to advance casing before installing monitor well.
2. Well construction diagram not to scale.
3. GPS coordinate system UTM Zone 18 North, NAD1983 (CONUS) meters.
4. Elevation survey not conducted.

CLIENT: U.S. Environmental Response Team	CONTRACT/NO.: REAC/EP-C-04-032	DATE: 04/11/06
PROJECT: Little Valley Superfund Site	RIG: Geoprobe Model 6620	SHEET NO.: 1 OF 1
JOB NO.: EAC4-0-EAC00165	OPERATOR: B. Pullen	INSPECTOR: C. Skloney
COORDINATES: 186757.068 E / 4684791.918 N		



NOTES:

1. Used 4-foot long, carbon steel Macro-core™ tube with dedicated PETG liner in open-piston configuration to collect boring.
2. Used 5-foot long, 3.25-inch-diameter drive rods and expendable point to advance casing before installing monitor well.
3. No soil samples collected for laboratory analyses.
4. Well construction diagram not to scale.
5. Non-qualitative terms used to describe soil color.
6. GPS coordinate system UTM Zone 18 North, NAD1983 (CONUS) meters.
7. Elevation survey not conducted.



BORING/WELL ID:
SVE-4

CLIENT: U.S. Environmental Response Team

CONTRACT/NO.: REAC/EP-C-04-032

DATE: 04/11/06

PROJECT: Little Valley Superfund Site

RIG: Geoprobe Model 6620

SHEET NO.: 1 OF 1

JOB NO.: EAC4-0-EAC00165

OPERATOR: B. Pullen

INSPECTOR: C. Skloney

COORDINATES: 186749.888 E / 4684794.645 N

WELL CONSTRUCTION

PROTECTIVE CASING

NONE

1.5" THREADLESS PVC
CAP, UNLOCKED

SURFACE SEAL

NONE

BACKFILL

NATIVE SOILS

ANNULAR SEAL

GRANULAR BENTONITE
(16 MESH, 0.5-1.5')

RISER

1.0" SCH. 40 PVC
(0-2')

SAND

20/40 GRADE
OTTAWA SAND
ADDED DURING
CONSTRUCTION
AS NEEDED

SCREEN FACTORY-
PACKED WITH 20/40
GRADE OTTAWA SAND

SCREEN

1.5" SCH. 80 PVC,
0.011-INCH SLOT
(2-7')

DEPTH
(FEET)

REC.
(Rec/
48 in.)

TEXTURAL DESCRIPTION

NO BORING COLLECTED

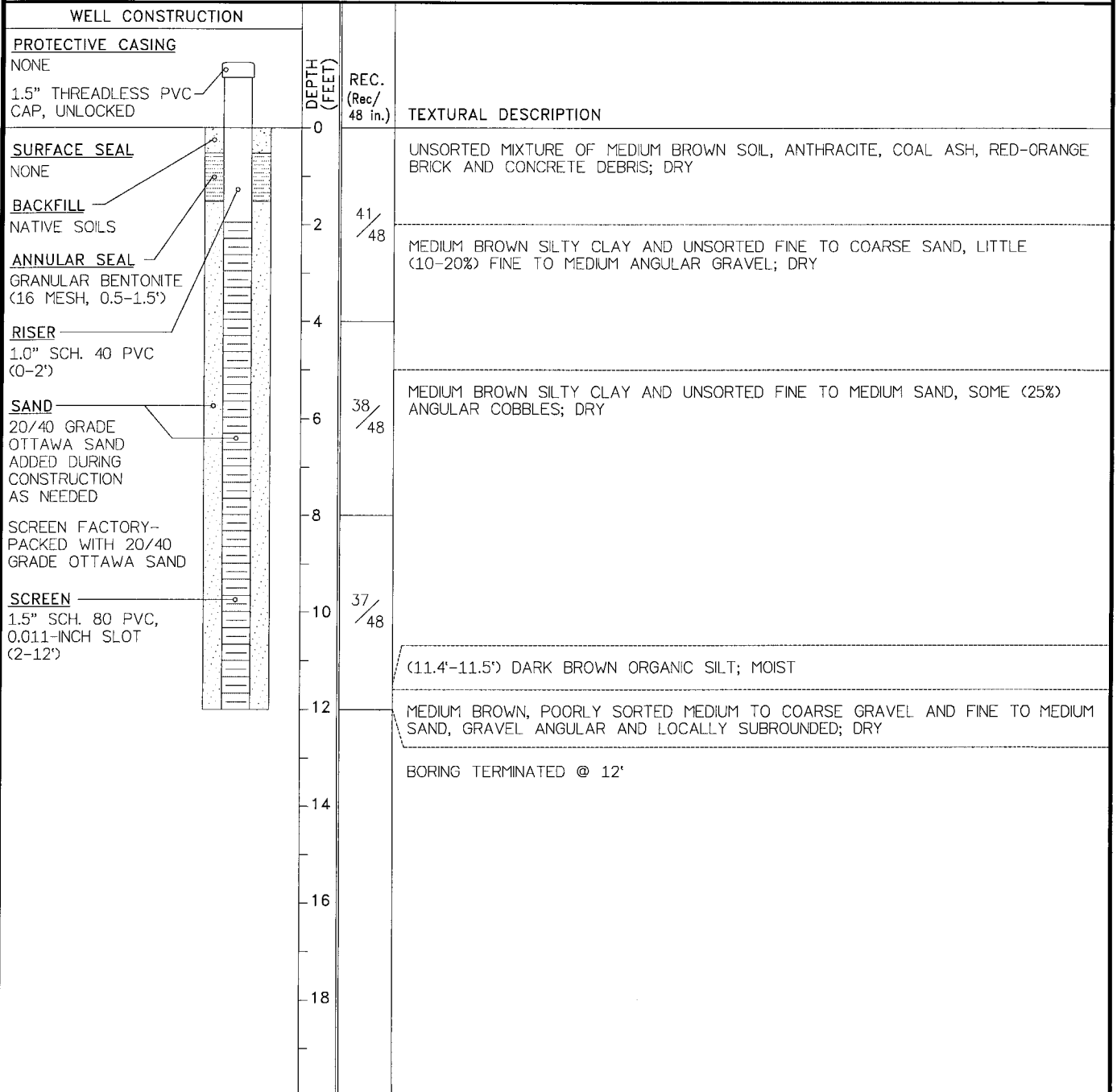


NOTES:

1. Used 5-foot long, 3.25-inch-diameter drive rods and expendable point to advance casing before installing monitor well.
2. Well construction diagram not to scale.
3. GPS coordinate system UTM Zone 18 North, NAD1983 (CONUS) meters.
4. Elevation survey not conducted.

I:\GEO\165 LITTLE VALLEY\LOGS\SVE-4.DWG

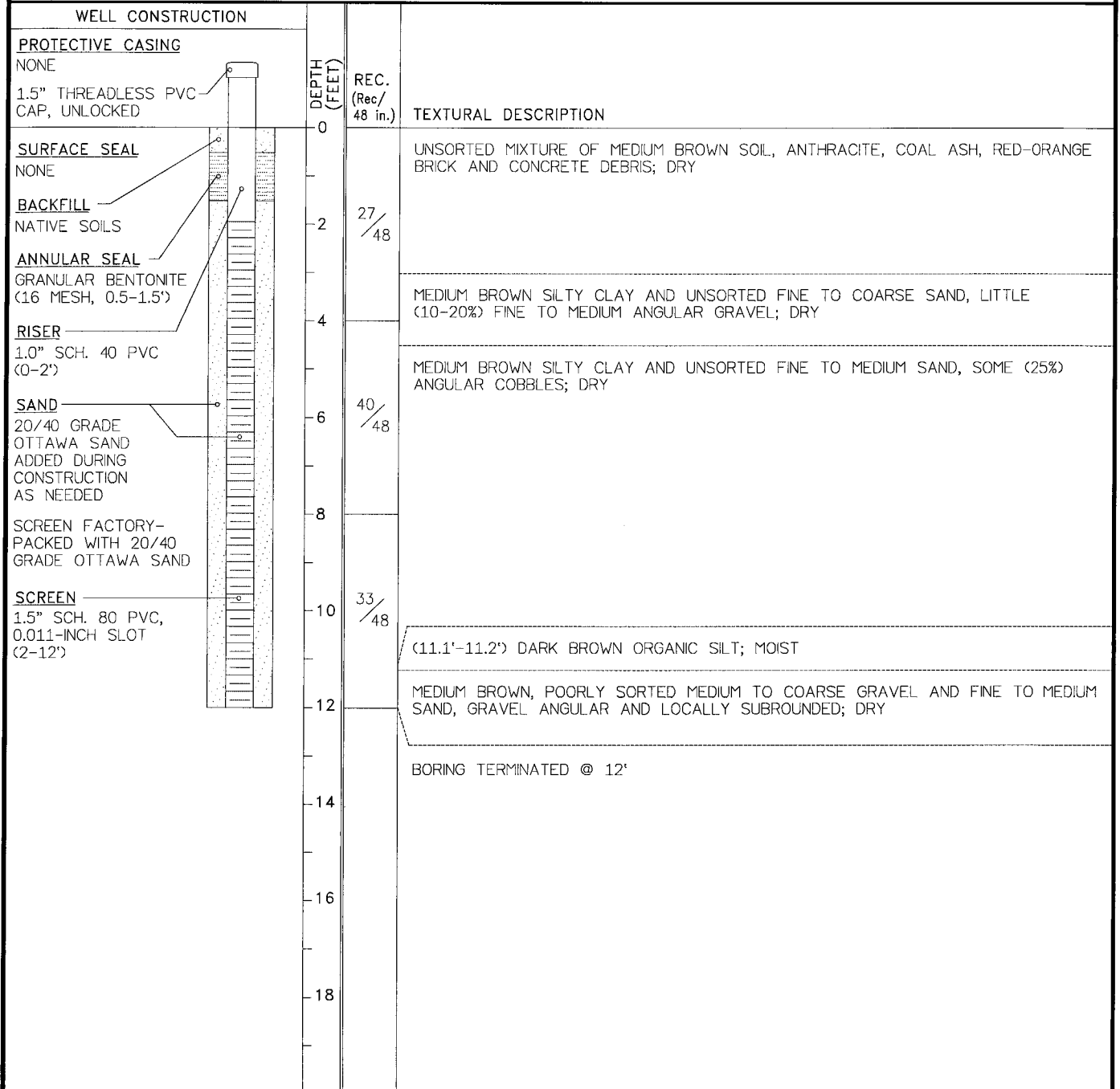
CLIENT: U.S. Environmental Response Team	CONTRACT/NO.: REAC/EP-C-04-032	DATE: 04/11/06
PROJECT: Little Valley Superfund Site	RIG: Geoprobe Model 6620	SHEET NO.: 1 OF 1
JOB NO.: EAC4-0-EAC00165	OPERATOR: B. Pullen	INSPECTOR: C. Sklaney
COORDINATES: 186745.696 E / 4684788.580 N		



NOTES:

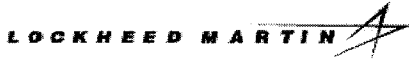
1. Used 4-foot long, carbon steel Macro-core™ tube with dedicated PETG liner in open-piston configuration to collect boring.
2. Used 5-foot long, 3.25-inch-diameter drive rods and expendable point to advance casing before installing monitor well.
3. No soil samples collected for laboratory analyses.
4. Well construction diagram not to scale.
5. Non-qualitative terms used to describe soil color.
6. GPS coordinate system UTM Zone 18 North, NAD1983 (CONUS) meters.
7. Elevation survey not conducted.

CLIENT: U.S. Environmental Response Team	CONTRACT/NO.: REAC/EP-C-04-032	DATE: 04/11/06
PROJECT: Little Valley Superfund Site	RIG: Geoprobe Model 6620	SHEET NO.: 1 OF 1
JOB NO.: EAC4-0-EAC00165	OPERATOR: B. Pullen	INSPECTOR: C. Skloney
COORDINATES: 186741.309 E / 4684780.383 N		



NOTES:

1. Used 4-foot long, carbon steel Macro-core™ tube with dedicated PETG liner in open-piston configuration to collect boring.
2. Used 5-foot long, 3.25-inch-diameter drive rods and expendable point to advance casing before installing monitor well.
3. No soil samples collected for laboratory analyses.
4. Well construction diagram not to scale.
5. Non-qualitative terms used to describe soil color.
6. GPS coordinate system UTM Zone 18 North, NAD1983 (CONUS) meters.
7. Elevation survey not conducted.



BORING/WELL ID:
SVE-7

CLIENT: U.S. Environmental Response Team	CONTRACT/NO.: REAC/EP-C-04-032	DATE: 06/21/06
PROJECT: Little Valley Superfund Site	RIG: Geoprobe Model 6620	SHEET NO.: 1 OF 1
JOB NO.: EAC4-0-EAC00165	OPERATOR: B. Pullen	INSPECTOR: C. Skloney
COORDINATES: 186765.042 E / 4684766.425 N		

WELL CONSTRUCTION

PROTECTIVE CASING

NONE

1.5" THREADLESS PVC
CAP, UNLOCKED

SURFACE SEAL

NONE

BACKFILL

NATIVE SOILS

ANNULAR SEAL

GRANULAR BENTONITE
(16 MESH, 0.5-1.5')

RISER

1.0" SCH. 40 PVC
(0-2')

SAND

20/40 GRADE
OTTAWA SAND
ADDED DURING
CONSTRUCTION
AS NEEDED

SCREEN FACTORY-
PACKED WITH 20/40
GRADE OTTAWA SAND

SCREEN

1.5" SCH. 80 PVC,
0.011-INCH SLOT
(2-12')

DEPTH
(FEET)

REC.
(Rec/
48 in.)

TEXTURAL DESCRIPTION

NO BORING COLLECTED



NOTES:

1. No soil samples collected for laboratory analyses.
2. Well construction diagram not to scale.
3. GPS coordinate system UTM Zone 18 North, NAD1983 (CONUS) meters.
4. Elevation survey not conducted.

I:\GEO\165 LITTLE VALLEY\LOGS\SVE-7.DWG

CLIENT: U.S. Environmental Response Team

CONTRACT/NO.: REAC/EP-C-04-032

DATE: 06/21/06

PROJECT: Little Valley Superfund Site

RIG: Geoprobe Model 6620

SHEET NO.: 1 OF 1

JOB NO.: EAC4-0-EAC00165

OPERATOR: B. Pullen

INSPECTOR: C. Sklaney

COORDINATES: 186764.480 E / 4684770.470 N

WELL CONSTRUCTION

PROTECTIVE CASING
NONE

1.5" THREADLESS PVC
CAP, UNLOCKED

SURFACE SEAL
NONE

BACKFILL
NATIVE SOILS

ANNULAR SEAL
GRANULAR BENTONITE
(16 MESH, 0.5-1.5')

RISER
1.0" SCH. 40 PVC
(0-2')

SAND
20/40 GRADE
OTTAWA SAND
ADDED DURING
CONSTRUCTION
AS NEEDED

SCREEN FACTORY-
PACKED WITH 20/40
GRADE OTTAWA SAND

SCREEN
1.5" SCH. 80 PVC,
0.011-INCH SLOT
(2-12')

DEPTH
(FEET)

REC.
(Rec/
48 in.)

TEXTURAL DESCRIPTION

UNSORTED MIXTURE OF MEDIUM BROWN SOIL, ANTHRACITE, COAL ASH, RED-ORANGE BRICK AND CONCRETE DEBRIS; DRY

32/
60

LIGHT YELLOWISH-BROWN AND LOCALLY MEDIUM BROWN, UNSORTED, ANGULAR MEDIUM TO COARSE GRAVEL, FINE TO COARSE SAND, AND SILT

18/
24

BORING TERMINATED @ 7'

NOTES:

1. Used 5-foot long, 3.25-inch-diameter drive rods and expendable point to collect boring and advance casing before installing monitor well.
2. No soil samples collected for laboratory analyses.
3. Well construction diagram not to scale.
4. Non-qualitative terms used to describe soil color.
5. GPS coordinate system UTM Zone 18 North, NAD1983 (CONUS) meters.
6. Elevation survey not conducted.



CLIENT: U.S. Environmental Response Team	CONTRACT/NO.: REAC/EP-C-04-032	DATE: 06/21/06
PROJECT: Little Valley Superfund Site	RIG: Geoprobe Model 6620	SHEET NO.: 1 OF 1
JOB NO.: EAC4-0-EAC00165	OPERATOR: B. Pullen	INSPECTOR: C. Sklaney
COORDINATES: 186764 E / 4684774 N		

WELL CONSTRUCTION

PROTECTIVE CASING

NONE
1.5" THREADLESS PVC
CAP, UNLOCKED

SURFACE SEAL

NONE

BACKFILL

NATIVE SOILS

ANNULAR SEAL

GRANULAR BENTONITE
(16 MESH, 0.5-1.5')

RISER

1.0" SCH. 40 PVC
(0-2')

SAND

20/40 GRADE
OTTAWA SAND
ADDED DURING
CONSTRUCTION
AS NEEDED

SCREEN FACTORY-
PACKED WITH 20/40
GRADE OTTAWA SAND

SCREEN

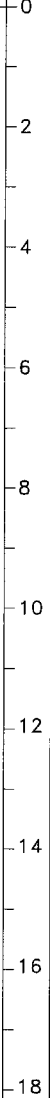
1.5" SCH. 80 PVC,
0.011-INCH SLOT
(2-12')

DEPTH
(FEET)

REC.
(Rec/
48 in.)

TEXTURAL DESCRIPTION

NO BORING COLLECTED



NOTES:

1. No soil samples collected for laboratory analyses.
2. Well construction diagram not to scale.
3. GPS coordinate system UTM Zone 18 North, NAD1983 (CONUS) meters.
4. Elevation survey not conducted.

CLIENT: U.S. Environmental Response Team

CONTRACT/NO.: REAC/EP-C-04-032

DATE: 06/21/06

PROJECT: Little Valley Superfund Site

RIG: Geoprobe Model 6620

SHEET NO.: 1 OF 1

JOB NO.: EAC4-0-EAC00165

OPERATOR: B. Pullen

INSPECTOR: C. Sklaney

COORDINATES: 186762 E / 4684780 N

WELL CONSTRUCTION

PROTECTIVE CASING

NONE

1.5" THREADLESS PVC
CAP, UNLOCKED

SURFACE SEAL

NONE

BACKFILL

NATIVE SOILS

ANNULAR SEAL

GRANULAR BENTONITE
(16 MESH, 0.5-1.5')

RISER

1.0" SCH. 40 PVC
(0-2')

SAND

20/40 GRADE
OTTAWA SAND
ADDED DURING
CONSTRUCTION
AS NEEDED

SCREEN FACTORY-
PACKED WITH 20/40
GRADE OTTAWA SAND

SCREEN

1.5" SCH. 80 PVC,
0.011-INCH SLOT
(2-12')

DEPTH
(FEET)

REC.
(Rec/
48 in.)

TEXTURAL DESCRIPTION

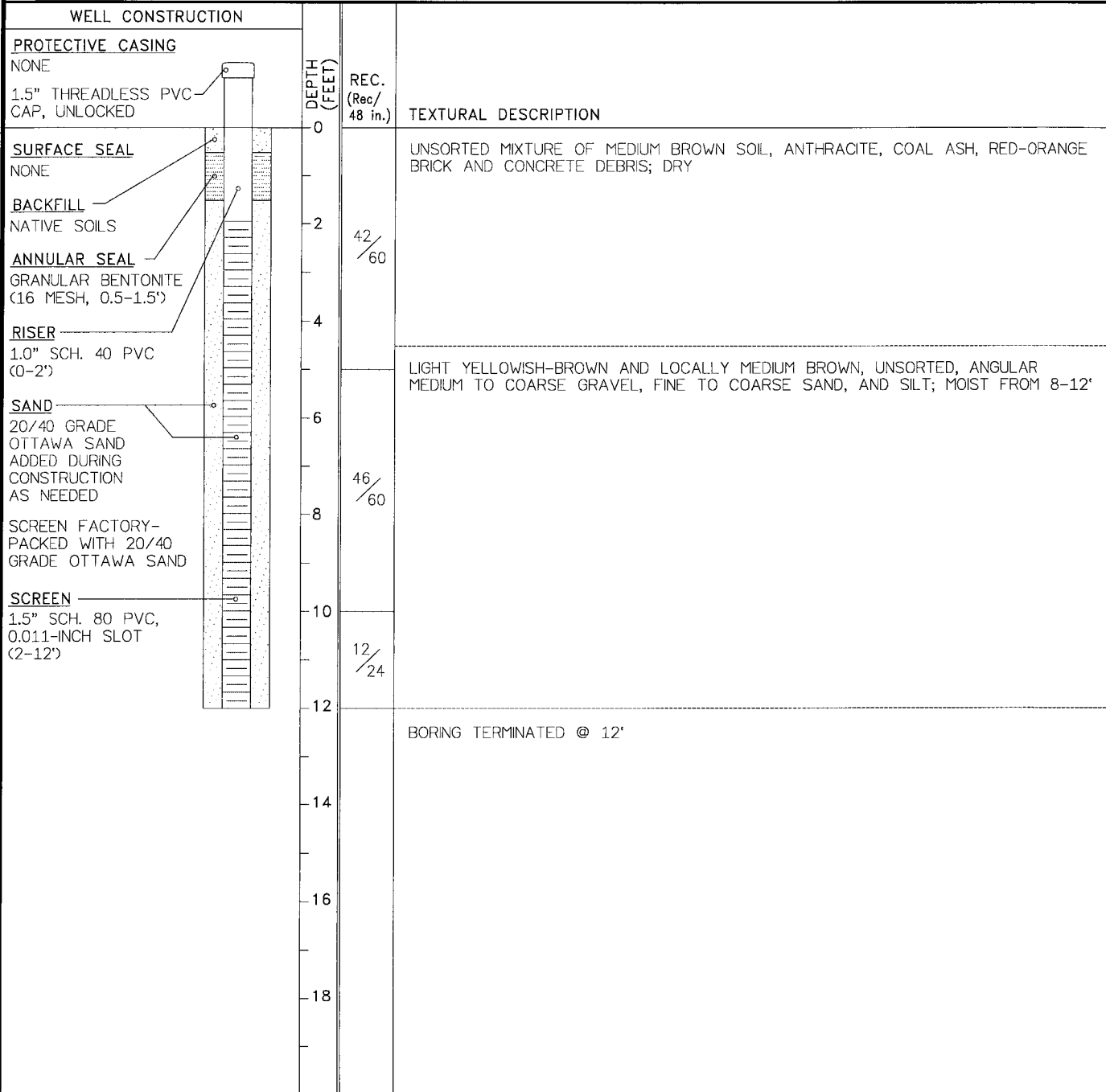
NO BORING COLLECTED



NOTES:

1. No soil samples collected for laboratory analyses.
2. Well construction diagram not to scale.
3. GPS coordinate system UTM Zone 18 North, NAD1983 (CONUS) meters.
4. Elevation survey not conducted.

CLIENT: U.S. Environmental Response Team	CONTRACT/NO.: REAC/EP-C-04-032	DATE: 06/21/06
PROJECT: Little Valley Superfund Site	RIG: Geoprobe Model 6620	SHEET NO.: 1 OF 1
JOB NO.: EAC4-0-EAC00165	OPERATOR: B. Pulten	INSPECTOR: C. Skloney
COORDINATES: 186769.573 E / 4684791.460 N		



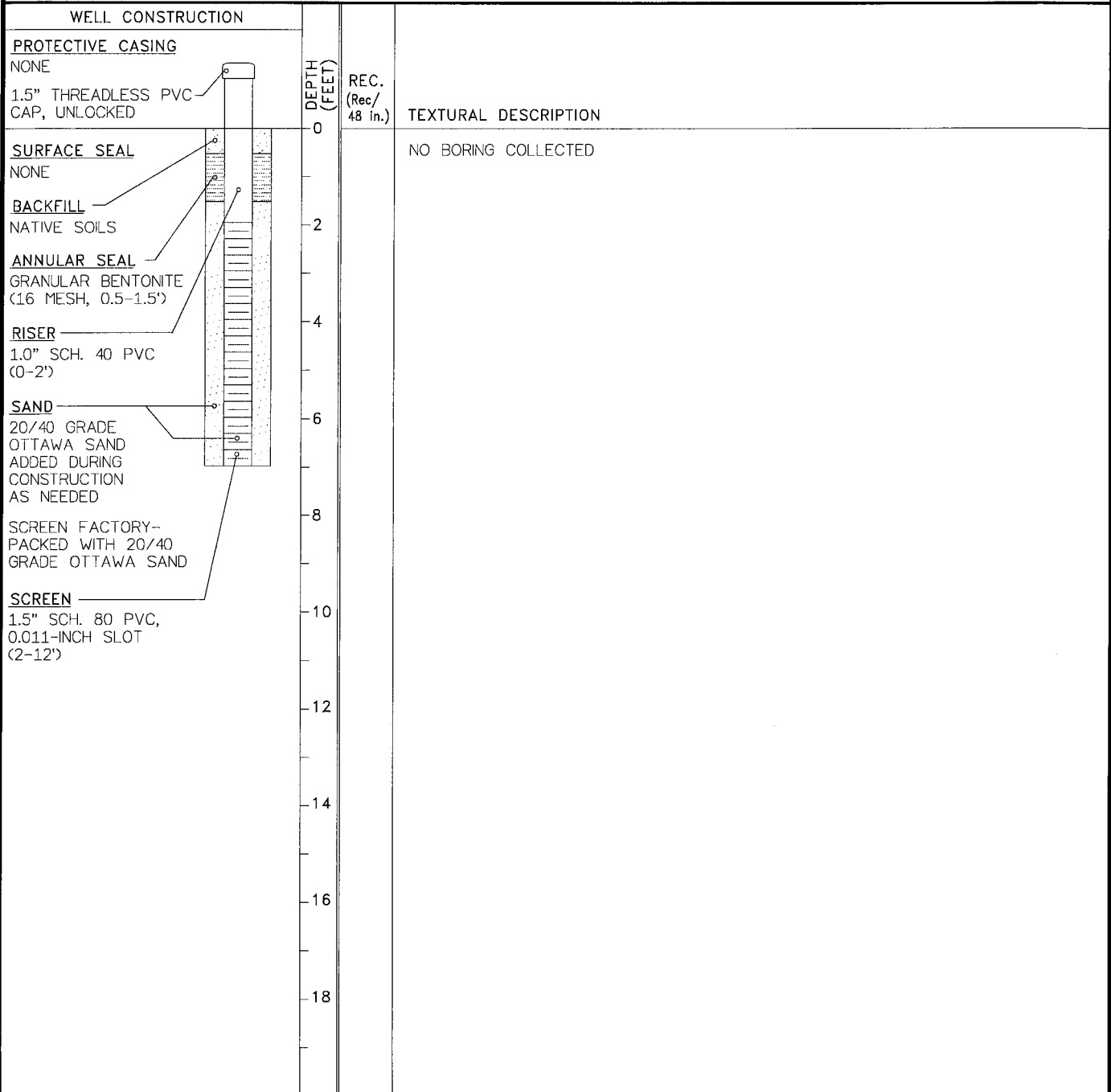
- NOTES:
1. Used 5-foot long, 3.25-inch-diameter drive rods and expendable point to collect boring and advance casing before installing monitor well.
 2. No soil samples collected for laboratory analyses.
 3. Well construction diagram not to scale.
 4. Non-qualitative terms used to describe soil color.
 5. GPS coordinate system UTM Zone 18 North, NAD1983 (CONUS) meters.
 6. Elevation survey not conducted.

I:\GEO\165 LITTLE VALLEY\LOGS\SVE-11.DWG



BORING/WELL ID:
SVE-12

CLIENT: U.S. Environmental Response Team	CONTRACT/NO.: REAC/EP-C-04-032	DATE: 06/21/06
PROJECT: Little Valley Superfund Site	RIG: Geoprobe Model 6620	SHEET NO.: 1 OF 1
JOB NO.: EAC4-0-EAC00165	OPERATOR: B. Pullen	INSPECTOR: C. Sklaney
COORDINATES: 186739.165 E / 4684772.186 N		



- NOTES:
1. No soil samples collected for laboratory analyses.
 2. Well construction diagram not to scale.
 3. GPS coordinate system UTM Zone 18 North, NAD1983 (CONUS) meters.
 4. Elevation survey not conducted.

I:\GEO\165 LITTLE VALLEY\LOGS\SVE-12.DWG

CLIENT: U.S. Environmental Response Team

CONTRACT/NO.: REAC/EP-C-04-032

DATE: 06/21/06

PROJECT: Little Valley Superfund Site

RIG: Geoprobe Model 6620

SHEET NO.: 1 OF 1

JOB NO.: EAC4-0-EAC00165

OPERATOR: B. Pullen

INSPECTOR: C. Sklaney

COORDINATES: 186739.387 E / 4684775.926 N

WELL CONSTRUCTION

PROTECTIVE CASING

NONE

1.5" THREADLESS PVC
CAP, UNLOCKED

SURFACE SEAL

NONE

BACKFILL
NATIVE SOILS

ANNULAR SEAL

GRANULAR BENTONITE
(16 MESH, 0.5-1.5')

RISER

1.0" SCH. 40 PVC
(0-2')

SAND

20/40 GRADE
OTTAWA SAND
ADDED DURING
CONSTRUCTION
AS NEEDED

SCREEN FACTORY-
PACKED WITH 20/40
GRADE OTTAWA SAND

SCREEN

1.5" SCH. 80 PVC,
0.011-INCH SLOT
(2-12')

DEPTH
(FEET)

REC.
(Rec/
48 in.)

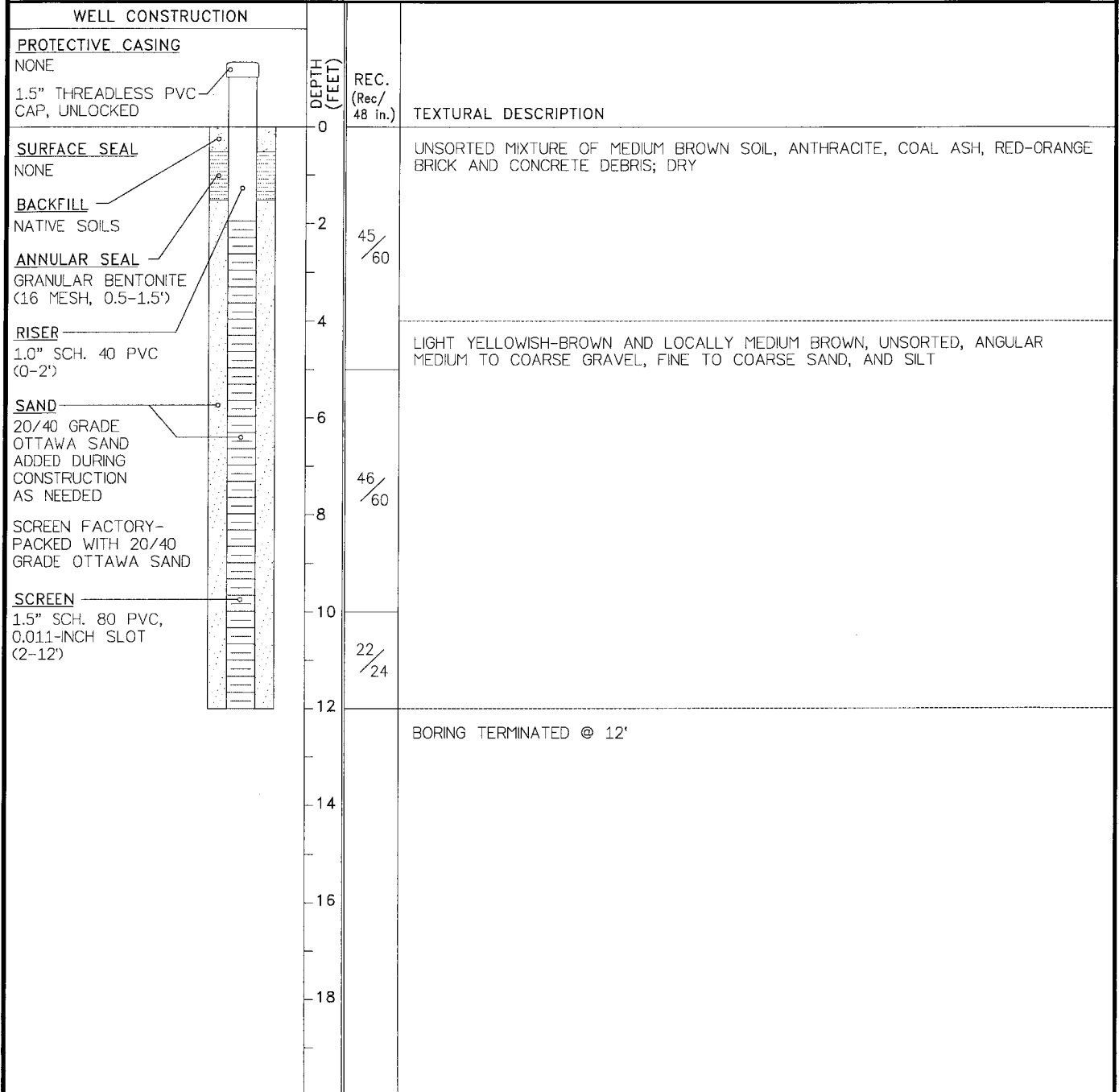
TEXTURAL DESCRIPTION

NO BORING COLLECTED

NOTES:

1. No soil samples collected for laboratory analyses.
2. Well construction diagram not to scale.
3. GPS coordinate system UTM Zone 18 North, NAD1983 (CONUS) meters.
4. Elevation survey not conducted.

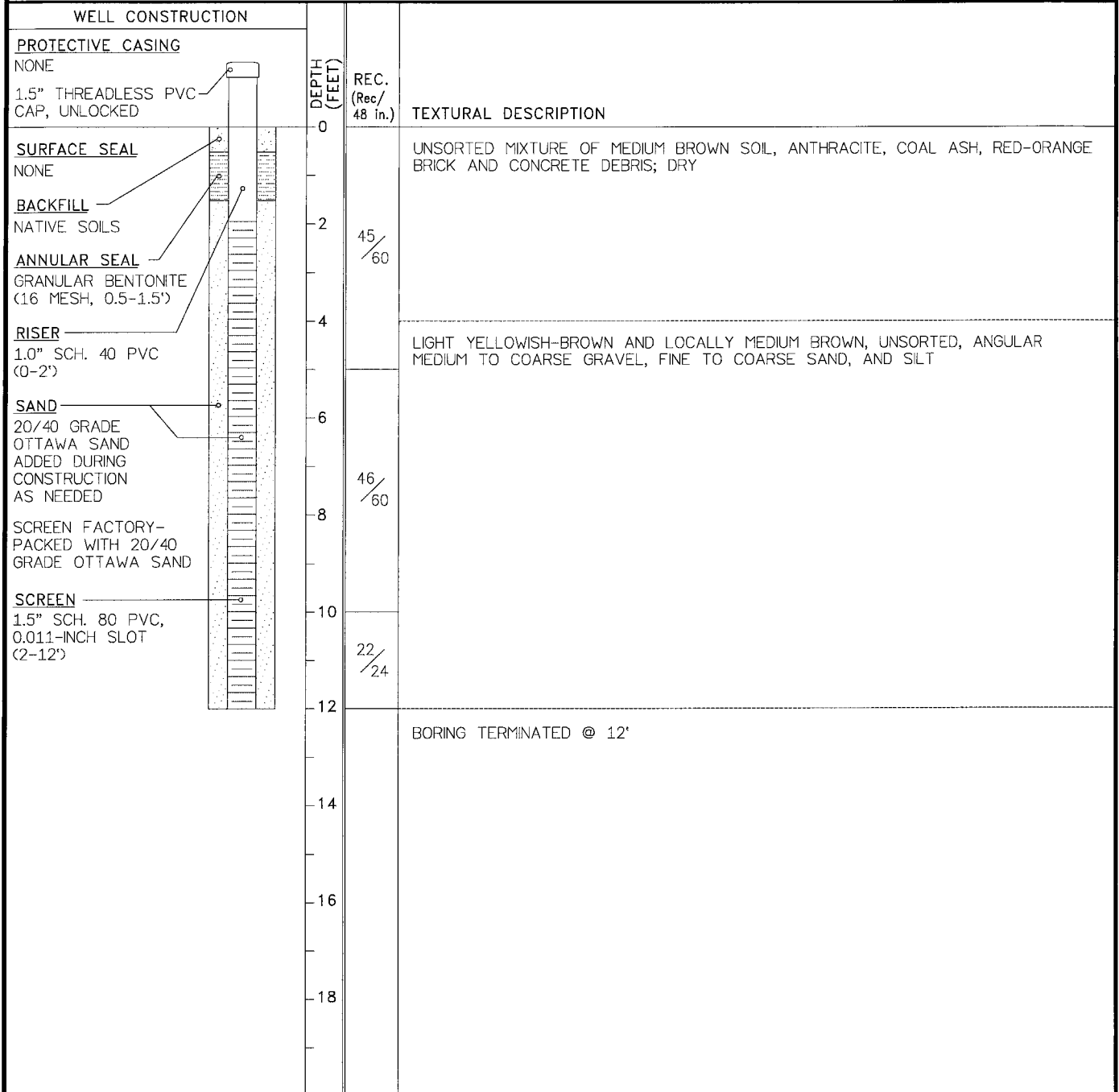
CLIENT: U.S. Environmental Response Team	CONTRACT/NO.: REAC/EP-C-04-032	DATE: 06/21/06
PROJECT: Little Valley Superfund Site	RIG: Geoprobe Model 6620	SHEET NO.: 1 OF 1
JOB NO.: EAC4-0-EAC00165	OPERATOR: B. Pullen	INSPECTOR: C. Sklaney
COORDINATES: 186764.677 E / 4684784.493 N		



NOTES:

1. Used 5-foot long, 3.25-inch-diameter drive rods and expendable point to collect boring and advance casing before installing monitor well.
2. No soil samples collected for laboratory analyses.
3. Well construction diagram not to scale.
4. Non-qualitative terms used to describe soil color.
5. GPS coordinate system UTM Zone 18 North, NAD1983 (CONUS) meters.
6. Elevation survey not conducted.

CLIENT: U.S. Environmental Response Team	CONTRACT/NO.: REAC/EP-C-04-032	DATE: 06/21/06
PROJECT: Little Valley Superfund Site	RIG: Geoprobe Model 6620	SHEET NO.: 1 OF 1
JOB NO.: EAC4-0-EAC00165	OPERATOR: B. Pullen	INSPECTOR: C. Sklaney
COORDINATES: 186744.855 E / 4684802.117 N		

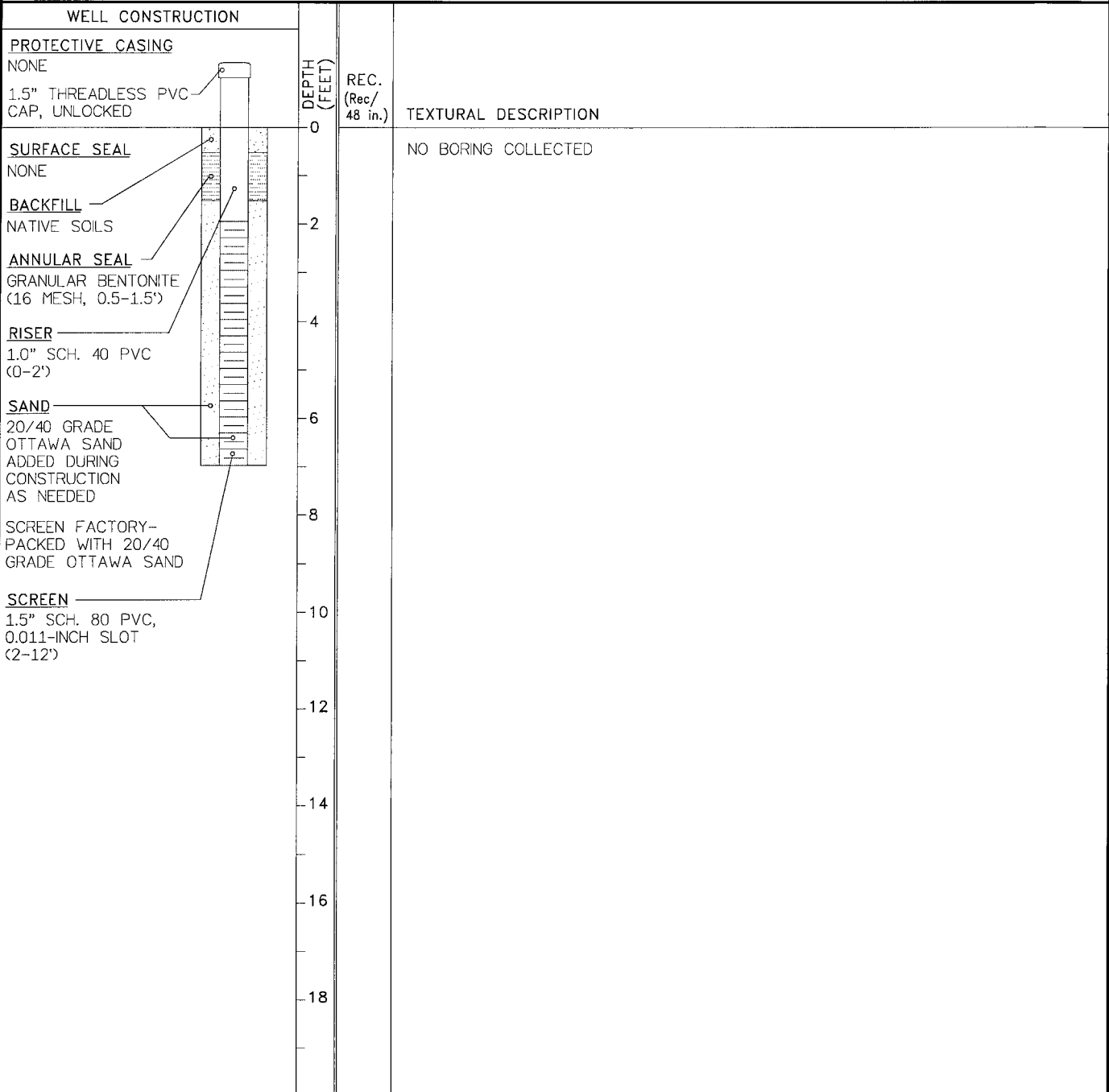


- NOTES:
1. No soil samples collected for laboratory analyses.
 2. Well construction diagram not to scale.
 3. Non-qualitative terms used to describe soil color.
 4. GPS coordinate system UTM Zone 18 North, NAD1983 (CONUS) meters.
 5. Elevation survey not conducted.

I:\GEO165 LITTLE VALLEY\LOGS\SVE-18.DWG



CLIENT: U.S. Environmental Response Team	CONTRACT/NO.: REAC/EP-C-04-032	DATE: 06/21/06
PROJECT: Little Valley Superfund Site	RIG: Geoprobe Model 6620	SHEET NO.: 1 OF 1
JOB NO.: EAC4-0-EAC00165	OPERATOR: B. Pullen	INSPECTOR: C. Sklaney
COORDINATES: 186736.012 E / 4684810.014 N		

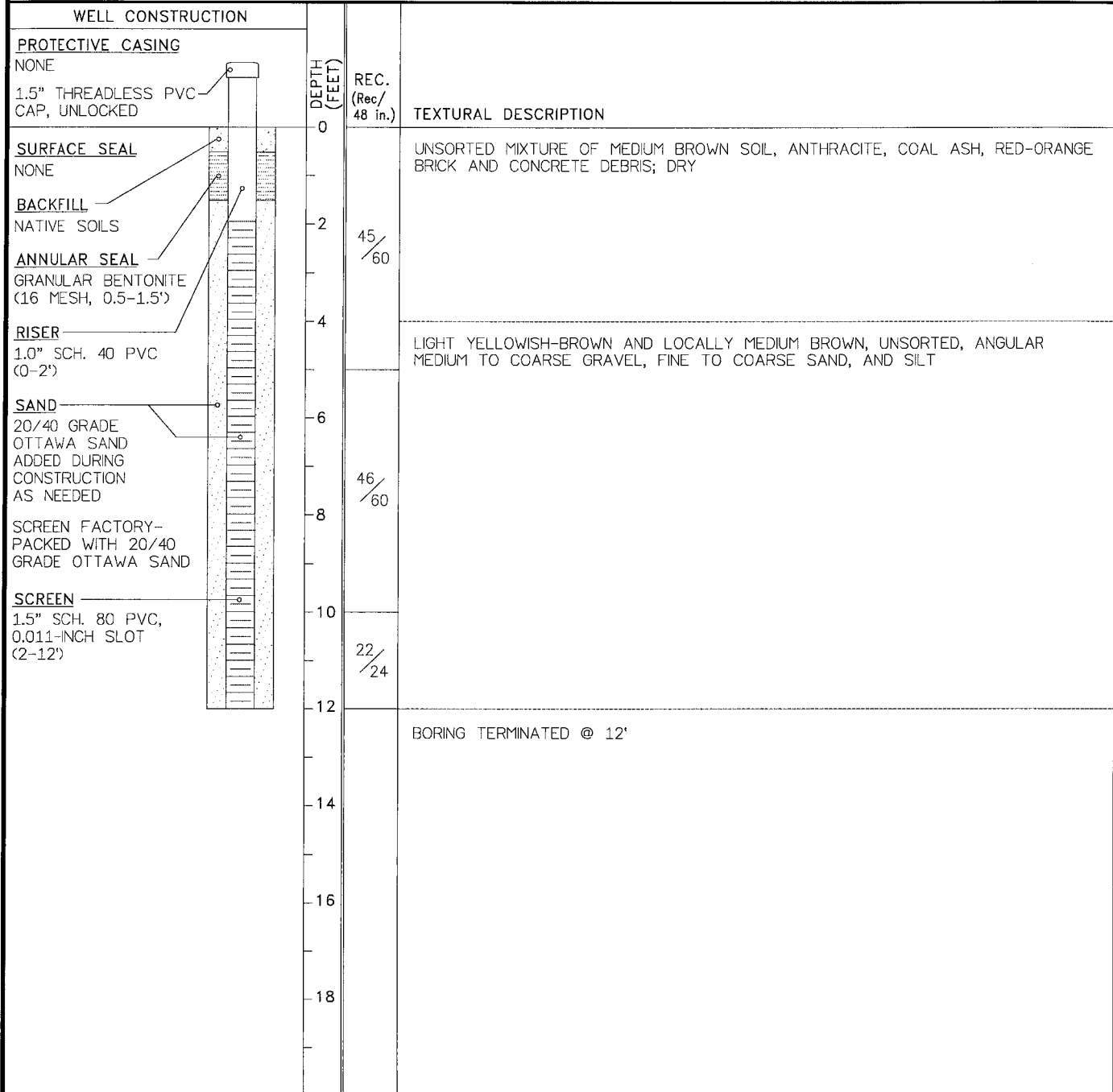


- NOTES:
1. No soil samples collected for laboratory analyses.
 2. Well construction diagram not to scale.
 3. GPS coordinate system UTM Zone 18 North, NAD1983 (CONUS) meters.
 4. Elevation survey not conducted.

I:\GEO\165 LITTLE VALLEY\LOGS\SVE-19.DWG



CLIENT: U.S. Environmental Response Team	CONTRACT/NO.: REAC/EP-C-04-032	DATE: 06/21/06
PROJECT: Little Valley Superfund Site	RIG: Geoprobe Model 6620	SHEET NO.: 1 OF 1
JOB NO.: EAC4-0-EAC00165	OPERATOR: B. Pullen	INSPECTOR: C. Sklaney
COORDINATES: 186739.215 E / 4684812.299 N		



NOTES:

1. No soil samples collected for laboratory analyses.
2. Well construction diagram not to scale.
3. Non-qualitative terms used to describe soil color.
4. GPS coordinate system UTM Zone 18 North, NAD1983 (CONUS) meters.
5. Elevation survey not conducted.



CLIENT: U.S. Environmental Response Team

CONTRACT/NO.: REAC/EP-C-04-032

DATE: 06/21/06

PROJECT: Little Valley Superfund Site

RIG: Geoprobe Model 6620

SHEET NO.: 1 OF 1

JOB NO.: EAC4-0-EAC00165

OPERATOR: B. Pullen

INSPECTOR: C. Sklaney

COORDINATES: 186723.593 E / 4684793.022 N

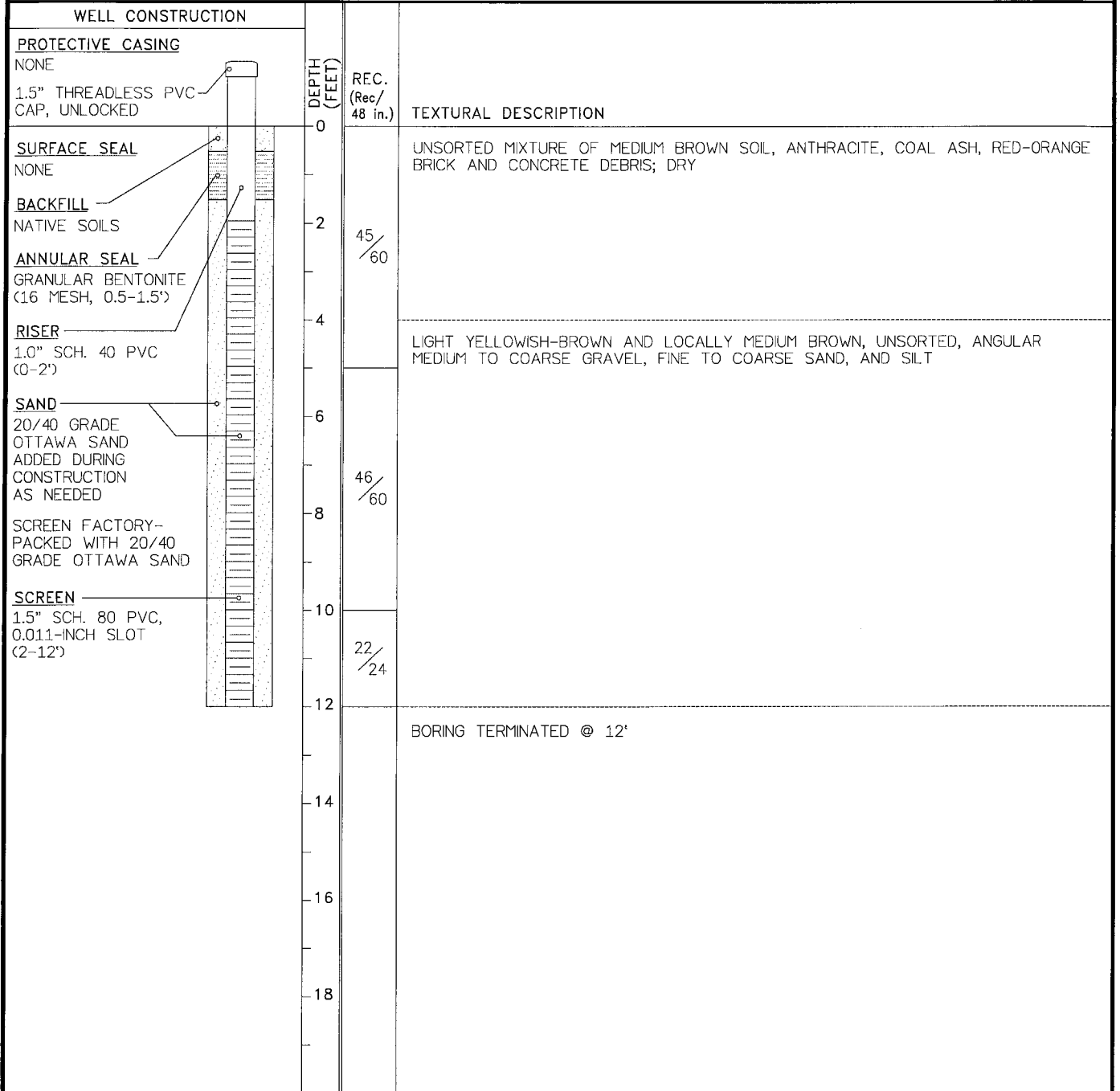
WELL CONSTRUCTION		DEPTH (FEET)	REC. (Rec/48 in.)	TEXTURAL DESCRIPTION
<p>PROTECTIVE CASING NONE</p> <p>1.5" THREADLESS PVC CAP, UNLOCKED</p> <p>SURFACE SEAL NONE</p> <p>BACKFILL NATIVE SOILS</p> <p>ANNULAR SEAL GRANULAR BENTONITE (16 MESH, 0.5-1.5')</p> <p>RISER 1.0" SCH. 40 PVC (0-2')</p> <p>SAND 20/40 GRADE OTTAWA SAND ADDED DURING CONSTRUCTION AS NEEDED</p> <p>SCREEN FACTORY-PACKED WITH 20/40 GRADE OTTAWA SAND</p> <p>SCREEN 1.5" SCH. 80 PVC, 0.011-INCH SLOT (2-12')</p>				

NOTES:

1. No soil samples collected for laboratory analyses.
2. Well construction diagram not to scale.
3. GPS coordinate system UTM Zone 18 North, NAD1983 (CONUS) meters.
4. Elevation survey not conducted.



CLIENT: U.S. Environmental Response Team	CONTRACT/NO.: REAC/EP-C-04-032	DATE: 06/21/06
PROJECT: Little Valley Superfund Site	RIG: Geoprobe Model 6620	SHEET NO.: 1 OF 1
JOB NO.: EAC4-0-EAC00165	OPERATOR: B. Pullen	INSPECTOR: C. Sklaney
COORDINATES: 186729.153 E / 4684797.684 N		



NOTES:

1. No soil samples collected for laboratory analyses.
2. Well construction diagram not to scale.
3. Non-qualitative terms used to describe soil color.
4. GPS coordinate system UTM Zone 18 North, NAD1983 (CONUS) meters.
5. Elevation survey not conducted.



CLIENT: U.S. Environmental Response Team

CONTRACT/NO.: REAC/EP-C-04-032

DATE: 06/21/06

PROJECT: Little Valley Superfund Site

RIG: Geoprobe Model 6620

SHEET NO.: 1 OF 1

JOB NO.: EAC4-0-EAC00165

OPERATOR: B. Pullen

INSPECTOR: C. Sklaney

COORDINATES: 186723.593 E / 4684793.022 N

WELL CONSTRUCTION		DEPTH (FEET)	REC. (Rec/48 in.)	TEXTURAL DESCRIPTION
<p>PROTECTIVE CASING NONE</p> <p>1.5" THREADLESS PVC CAP, UNLOCKED</p>				
<p>SURFACE SEAL NONE</p>		2		NO BORING COLLECTED
<p>BACKFILL NATIVE SOILS</p>		4		
<p>ANNULAR SEAL GRANULAR BENTONITE (16 MESH, 0.5-1.5')</p>		6		
<p>RISER 1.0" SCH. 40 PVC (0-2')</p>		8		
<p>SAND 20/40 GRADE OTTAWA SAND ADDED DURING CONSTRUCTION AS NEEDED</p>		10		
<p>SCREEN FACTORY-PACKED WITH 20/40 GRADE OTTAWA SAND</p>	12			
<p>SCREEN 1.5" SCH. 80 PVC, 0.011-INCH SLOT (2-12')</p>	14			
		16		
		18		

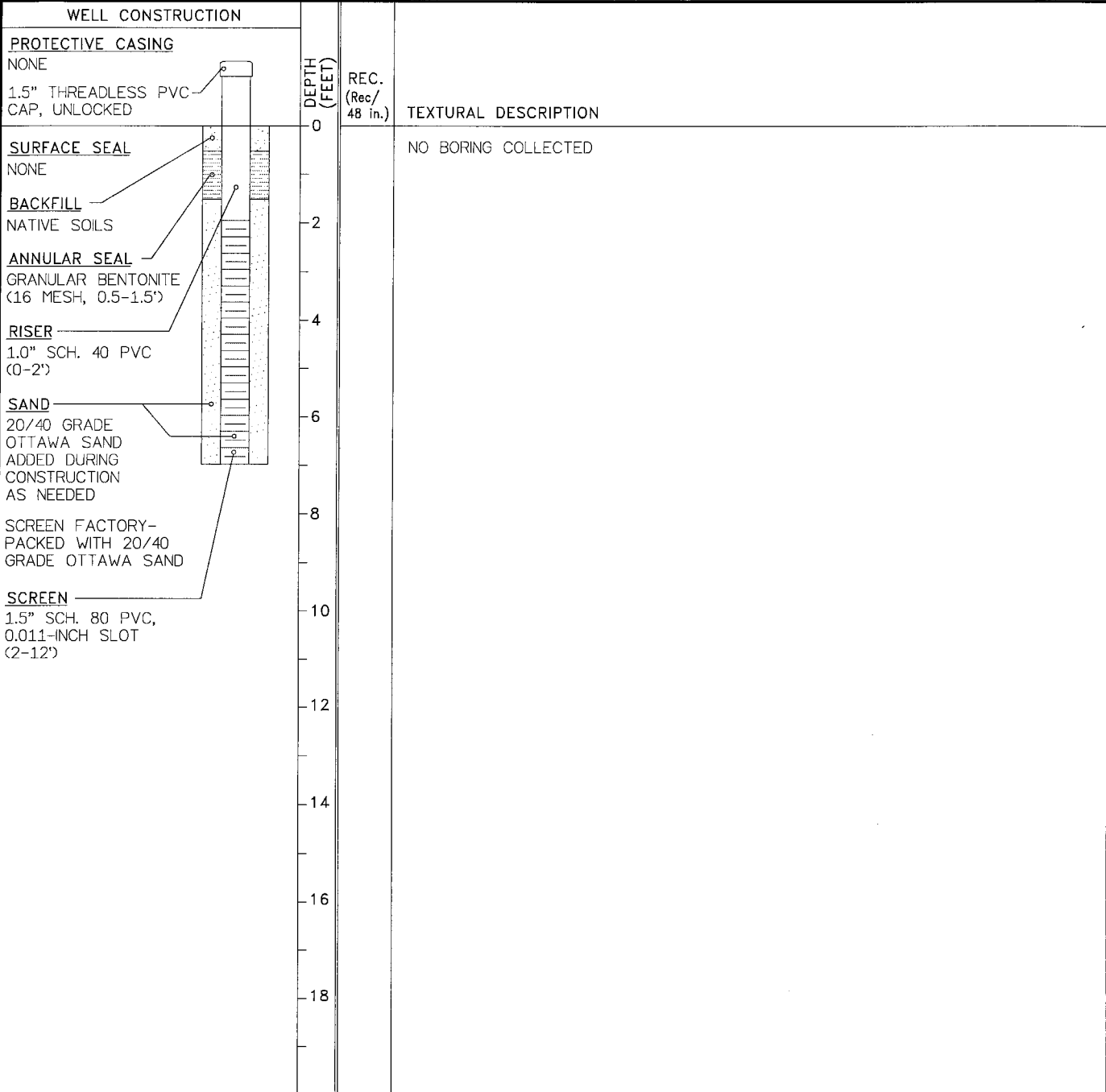
NOTES:

1. No soil samples collected for laboratory analyses.
2. Well construction diagram not to scale.
3. GPS coordinate system UTM Zone 18 North, NAD1983 (CONUS) meters.
4. Elevation survey not conducted.



BORING/WELL ID:
SVE-27

CLIENT: U.S. Environmental Response Team	CONTRACT/NO.: REAC/EP-C-04-032	DATE: 06/21/06
PROJECT: Little Valley Superfund Site	RIG: Geoprobe Model 6620	SHEET NO.: 1 OF 1
JOB NO.: EAC4-0-EAC00165	OPERATOR: B. Pullen	INSPECTOR: C. Sklaney
COORDINATES: 186727.694 E / 4684790.285 N		



- NOTES:
1. No soil samples collected for laboratory analyses.
 2. Well construction diagram not to scale.
 3. GPS coordinate system UTM Zone 18 North, NAD1983 (CONUS) meters.
 4. Elevation survey not conducted.

I:\GEO\165 LITTLE VALLEY\LOGS\SVE-27.DWG



CLIENT: U.S. Environmental Response Team

CONTRACT/NO.: REAC/EP-C-04-032

DATE: 06/21/06

PROJECT: Little Valley Superfund Site

RIG: Geoprobe Model 6620

SHEET NO.: 1 OF 1

JOB NO.: EAC4-0-EAC00165

OPERATOR: B. Pullen

INSPECTOR: C. Sklaney

COORDINATES: 186740.064 E / 4684795.501 N

WELL CONSTRUCTION

PROTECTIVE CASING

NONE

1.5" THREADLESS PVC
CAP, UNLOCKED

SURFACE SEAL

NONE

BACKFILL
NATIVE SOILS

ANNULAR SEAL

GRANULAR BENTONITE
(16 MESH, 0.5-1.5')

RISER

1.0" SCH. 40 PVC
(0-2')

SAND

20/40 GRADE
OTTAWA SAND
ADDED DURING
CONSTRUCTION
AS NEEDED

SCREEN FACTORY-
PACKED WITH 20/40
GRADE OTTAWA SAND

SCREEN

1.5" SCH. 80 PVC,
0.011-INCH SLOT
(2-12')

DEPTH
(FEET)

REC.
(Rec/
48 in.)

TEXTURAL DESCRIPTION

NO BORING COLLECTED



NOTES:

1. No soil samples collected for laboratory analyses.
2. Well construction diagram not to scale.
3. GPS coordinate system UTM Zone 18 North, NAD1983 (CONUS) meters.
4. Elevation survey not conducted.

CLIENT: U.S. Environmental Response Team

CONTRACT/NO.: REAC/EP-C-04-032

DATE: 06/21/06

PROJECT: Little Valley Superfund Site

RIG: Geoprobe Model 6620

SHEET NO.: 1 OF 1

JOB NO.: EAC4-0-EAC00165

OPERATOR: B. Pullen

INSPECTOR: C. Sklaney

COORDINATES: 186716.001 E / 4684785.831 N

WELL CONSTRUCTION

PROTECTIVE CASING

NONE

1.5" THREADLESS PVC
CAP, UNLOCKED

SURFACE SEAL

NONE

BACKFILL
NATIVE SOILS

ANNULAR SEAL

GRANULAR BENTONITE
(16 MESH, 0.5-1.5')

RISER

1.0" SCH. 40 PVC
(0-2')

SAND

20/40 GRADE
OTTAWA SAND
ADDED DURING
CONSTRUCTION
AS NEEDED

SCREEN FACTORY-
PACKED WITH 20/40
GRADE OTTAWA SAND

SCREEN

1.5" SCH. 80 PVC,
0.011-INCH SLOT
(2-12')

DEPTH
(FEET)

REC.
(Rec/
48 in.)

TEXTURAL DESCRIPTION

NO BORING COLLECTED

NOTES:

1. No soil samples collected for laboratory analyses.
2. Well construction diagram not to scale.
3. GPS coordinate system UTM Zone 18 North, NAD1983 (CONUS) meters.
4. Elevation survey not conducted.



BORING/WELL ID:
SVE-30

CLIENT: U.S. Environmental Response Team

CONTRACT/NO.: REAC/EP-C-04-032

DATE: 06/21/06

PROJECT: Little Valley Superfund Site

RIG: Geoprobe Model 6620

SHEET NO.: 1 OF 1

JOB NO.: EAC4-0-EAC00165

OPERATOR: B. Pullen

INSPECTOR: C. Sklaney

COORDINATES: 186718.630 E / 4684790.561 N

WELL CONSTRUCTION

PROTECTIVE CASING

NONE

1.5" THREADLESS PVC
CAP, UNLOCKED

SURFACE SEAL

NONE

BACKFILL
NATIVE SOILS

ANNULAR SEAL

GRANULAR BENTONITE
(16 MESH, 0.5-1.5')

RISER

1.0" SCH. 40 PVC
(0-2')

SAND

20/40 GRADE
OTTAWA SAND
ADDED DURING
CONSTRUCTION
AS NEEDED

SCREEN FACTORY-
PACKED WITH 20/40
GRADE OTTAWA SAND

SCREEN

1.5" SCH. 80 PVC,
0.011-INCH SLOT
(2-12')

DEPTH
(FEET)

REC.
(Rec/
48 in.)

TEXTURAL DESCRIPTION

NO BORING COLLECTED

NOTES:

1. No soil samples collected for laboratory analyses.
2. Well construction diagram not to scale.
3. GPS coordinate system UTM Zone 18 North, NAD1983 (CONUS) meters.
4. Elevation survey not conducted.

I:\GEO\165 LITTLE VALLEY\LOGS\SVE-30.DWG

CLIENT: U.S. Environmental Response Team

CONTRACT/NO.: REAC/EP-C-04-032

DATE: 06/21/06

PROJECT: Little Valley Superfund Site

RIG: Geoprobe Model 6620

SHEET NO.: 1 OF 1

JOB NO.: EAC4-0-EAC00165

OPERATOR: B. Pulten

INSPECTOR: C. Sklaney

COORDINATES: 186776 E / 4684765 N

WELL CONSTRUCTION

PROTECTIVE CASING

NONE

1.5" THREADLESS PVC
CAP, UNLOCKED

SURFACE SEAL

NONE

BACKFILL
NATIVE SOILS

ANNULAR SEAL

GRANULAR BENTONITE
(16 MESH, 0.5-1.5')

RISER

1.0" SCH. 40 PVC
(0-2')

SAND

20/40 GRADE
OTTAWA SAND
ADDED DURING
CONSTRUCTION
AS NEEDED

SCREEN FACTORY-
PACKED WITH 20/40
GRADE OTTAWA SAND

SCREEN

1.5" SCH. 80 PVC,
0.011-INCH SLOT
(2-12')

DEPTH
(FEET)

REC.
(Rec/
48 in.)

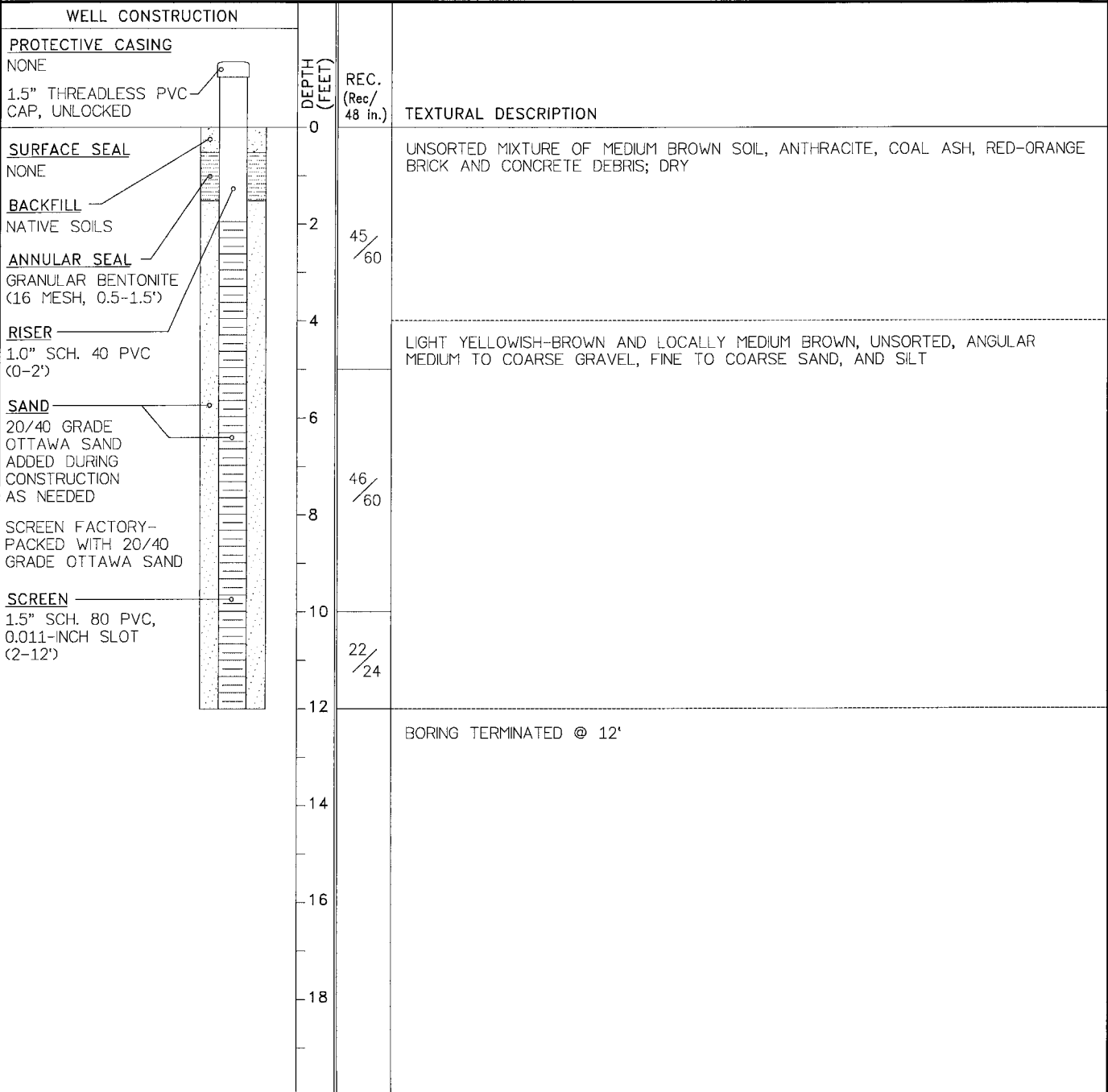
TEXTURAL DESCRIPTION

NO BORING COLLECTED

NOTES:

1. No soil samples collected for laboratory analyses.
2. Well construction diagram not to scale.
3. GPS coordinate system UTM Zone 18 North, NAD1983 (CONUS) meters.
4. Elevation survey not conducted.

CLIENT: U.S. Environmental Response Team	CONTRACT/NO.: REAC/EP-C-04-032	DATE: 06/21/06
PROJECT: Little Valley Superfund Site	RIG: Geoprobe Model 6620	SHEET NO.: 1 OF 1
JOB NO.: EAC4-0-EAC00165	OPERATOR: B. Pullen	INSPECTOR: C. Sklaney
COORDINATES: 186755.350 E / 4684797.776 N		



NOTES:

1. No soil samples collected for laboratory analyses.
2. Well construction diagram not to scale.
3. Non-qualitative terms used to describe soil color.
4. GPS coordinate system UTM Zone 18 North, NAD1983 (CONUS) meters.
5. Elevation survey not conducted.

APPENDIX B

**Preliminary Air Analytical Report
Volatile Organic Compounds
Samples Collected May 2006
Little Valley Superfund Site
Cattaraugus Cutlery Area
Trip Report**

Table 3 - Air Toxic Target Compound Results for Summa Canister Samples
Little Valley, Little Valley, New York, WA# R1A00165

Sample Number	Method Blank		44772		44761		44762		
	060530-1		TB-60516		SVE-5		SVE-6		
Sample Location	1		1		25		25		
Dilution Factor	Results	RL	Results	RL	Results	RL	Results	RL	
Compounds	ppbv	ppbv	ppbv	ppbv	ppbv	ppbv	ppbv	ppbv	
Propylene	U	0.160	0.240	0.160	U	4.00	U	4.00	
Dichlorodifluoromethane	U	0.160	U	0.160	U	4.00	U	4.00	
Chloromethane	U	0.160	U	0.160	U	4.00	U	4.00	
Dichlorotetrafluoroethane	U	0.160	U	0.160	U	4.00	U	4.00	
Vinyl Chloride	U	0.160	U	0.160	U	4.00	U	4.00	
1,3-Butadiene	U	0.160	U	0.160	U	4.00	U	4.00	
Bromomethane	U	0.160	U	0.160	U	4.00	U	4.00	
Chloroethane	U	0.160	U	0.160	U	4.00	U	4.00	
Acetone	0.160	0.160	0.600	0.160	32.0	4.00	40.0	4.00	
Trichlorofluoromethane	U	0.160	U	0.160	U	4.00	2.00	J	4.00
Isopropyl Alcohol	U	0.160	U	0.160	U	4.00	U	4.00	
1,1-Dichloroethene	U	0.160	U	0.160	U	4.00	U	4.00	
Methylene Chloride	U	0.160	0.200	0.160	U	4.00	U	4.00	
Trichlorotrifluoroethane	U	0.160	U	0.160	U	4.00	U	4.00	
trans-1,2-Dichloroethene	U	0.160	U	0.160	U	4.00	U	4.00	
1,1-Dichloroethane	U	0.160	U	0.160	U	4.00	U	4.00	
MTBE	U	0.160	U	0.160	U	4.00	U	4.00	
Vinyl Acetate	U	0.160	U	0.160	U	4.00	U	4.00	
2-Butanone	U	0.160	0.160	0.160	162	4.00	173	4.00	
cis-1,2-Dichloroethene	U	0.160	U	0.160	130	4.00	7.00	4.00	
Ethyl Acetate	U	0.160	U	0.160	U	4.00	U	4.00	
Hexane	U	0.160	U	0.160	U	4.00	U	4.00	
Chloroform	U	0.160	U	0.160	7.00	4.00	2.00	J	4.00
Tetrahydrofuran	U	0.160	U	0.160	150	4.00	213	4.00	
1,2-Dichloroethane	U	0.160	U	0.160	U	4.00	U	4.00	
1,1,1-Trichloroethane	U	0.160	U	0.160	U	4.00	U	4.00	
Benzene	U	0.160	U	0.160	U	4.00	U	4.00	
Carbon Tetrachloride	U	0.160	U	0.160	U	4.00	U	4.00	
Cyclohexane	U	0.160	U	0.160	U	4.00	U	4.00	
1,2-Dichloropropane	U	0.160	U	0.160	U	4.00	U	4.00	
1,4-Dioxane	U	0.160	U	0.160	U	4.00	U	4.00	
Trichloroethene	U	0.160	0.200	0.160	21300	200	6940	80.0	
Heptane	U	0.160	U	0.160	U	4.00	U	4.00	
cis-1,3-Dichloropropene	U	0.160	U	0.160	U	4.00	U	4.00	
Methyl Isobutyl Ketone	U	0.160	U	0.160	U	4.00	U	4.00	
trans-1,3-Dichloropropene	U	0.160	U	0.160	U	4.00	U	4.00	
1,1,2-Trichloroethane	U	0.160	U	0.160	U	4.00	U	4.00	
Toluene	U	0.160	U	0.160	U	4.00	U	4.00	
2-Hexanone	U	0.160	U	0.160	U	4.00	U	4.00	
Dibromochloromethane	U	0.160	U	0.160	U	4.00	U	4.00	
1,2-Dibromoethane	U	0.160	U	0.160	U	4.00	U	4.00	
Tetrachloroethene	U	0.160	U	0.160	11.0	4.00	4.00	4.00	
Chlorobenzene	U	0.160	U	0.160	U	4.00	U	4.00	
Ethylbenzene	U	0.160	0.0400	J	0.160	U	4.00	U	4.00
m&p-Xylene	U	0.160	0.120	J	0.160	U	4.00	U	4.00
Bromoform(Tribromomethane)	U	0.160	U	0.160	U	4.00	U	4.00	
Styrene	U	0.160	0.0400	J	0.160	U	4.00	U	4.00
1,1,2,2-Tetrachloroethane	U	0.160	U	0.160	U	4.00	U	4.00	
o-Xylene	U	0.160	0.0800	J	0.160	U	4.00	U	4.00
Ethyltoluene	U	0.160	0.0400	J	0.160	U	4.00	U	4.00
1,3,5-trimethylbenzene	U	0.160	0.0400	J	0.160	U	4.00	U	4.00
1,2,4-Trimethylbenzene	U	0.160	0.0400	J	0.160	U	4.00	U	4.00
1,3-Dichlorobenzene	U	0.160	0.0400	J	0.160	U	4.00	U	4.00
1,4-Dichlorobenzene	U	0.160	0.0400	J	0.160	U	4.00	U	4.00
1,2-Dichlorobenzene	U	0.160	0.0400	J	0.160	U	4.00	U	4.00

Preliminary Results
Data Not Validated

Results are in part per billion by volume (ppbv)
A = Assumed volume
U = None detected at or above the limit of quantitation
B = Concentration less than 5 times the reported blank result
J = Result is considered estimated

Table 3 - Air Toxic Target Compound Results for Summa Canister Samples
Little Valley, Little Valley, New York, WA# R1A00165

Sample Number Sample Location Dilution Factor	44763		44764		44765		44766		44767	
	SVE-4		SVE-3		SVE-2		SVE-1		TREN-1	
	25	25	25	25	25	25	25	25	25	25
Compounds	Results ppbv	RL ppbv	Results ppbv	RL ppbv	Results ppbv	RL ppbv	Results ppbv	RL ppbv	Results ppbv	RL ppbv
Propylene	U	4.00	U	4.00	U	4.00	U	4.00	U	4.00
Dichlorodifluoromethane	U	4.00	U	4.00	U	4.00	U	4.00	U	4.00
Chloromethane	U	4.00	U	4.00	U	4.00	U	4.00	U	4.00
Dichlorotetrafluoroethane	U	4.00	U	4.00	U	4.00	U	4.00	U	4.00
Vinyl Chloride	U	4.00	U	4.00	U	4.00	U	4.00	U	4.00
1,3-Butadiene	U	4.00	U	4.00	U	4.00	U	4.00	U	4.00
Bromomethane	U	4.00	U	4.00	U	4.00	U	4.00	U	4.00
Chloroethane	U	4.00	U	4.00	U	4.00	U	4.00	U	4.00
Acetone	41.0	4.00	23.0	4.00	51.0	4.00	58.0	4.00	9.00	4.00
Trichlorofluoromethane	2.00	J 4.00	U	4.00	U	4.00	U	4.00	U	4.00
Isopropyl Alcohol	U	4.00	U	4.00	U	4.00	U	4.00	U	4.00
1,1-Dichloroethene	U	4.00	3.00	J 4.00	U	4.00	3.00	J 4.00	U	4.00
Methylene Chloride	U	4.00	U	4.00	U	4.00	U	4.00	U	4.00
Trichlorotrifluoroethane	U	4.00	U	4.00	U	4.00	U	4.00	U	4.00
trans-1,2-Dichloroethene	U	4.00	34.0	4.00	51.0	4.00	61.0	4.00	U	4.00
1,1-Dichloroethane	U	4.00	U	4.00	U	4.00	U	4.00	U	4.00
MTBE	U	4.00	U	4.00	U	4.00	U	4.00	U	4.00
Vinyl Acetate	U	4.00	U	4.00	U	4.00	U	4.00	U	4.00
2-Butanone	234	4.00	313	4.00	446	4.00	391	4.00	20.0	4.00
cis-1,2-Dichloroethene	U	4.00	42.0	4.00	73.0	4.00	173	4.00	4.00	4.00
Ethyl Acetate	U	4.00	U	4.00	U	4.00	U	4.00	U	4.00
Hexane	U	4.00	1.00	J 4.00	U	4.00	U	4.00	U	4.00
Chloroform	3.00	J 4.00	4.00	4.00	2.00	4.00	2.00	J 4.00	U	4.00
Tetrahydrofuran	306	4.00	463	4.00	485	4.00	470	4.00	230	4.00
1,2-Dichloroethane	U	4.00	U	4.00	U	4.00	U	4.00	U	4.00
1,1,1-Trichloroethane	U	4.00	U	4.00	U	4.00	U	4.00	U	4.00
Benzene	U	4.00	3.00	J 4.00	U	4.00	U	4.00	U	4.00
Carbon Tetrachloride	U	4.00	U	4.00	U	4.00	U	4.00	U	4.00
Cyclohexane	U	4.00	U	4.00	U	4.00	U	4.00	U	4.00
1,2-Dichloropropane	U	4.00	U	4.00	U	4.00	U	4.00	7.00	4.00
1,4-Dioxane	U	4.00	U	4.00	U	4.00	U	4.00	U	4.00
Trichloroethene	32300	200	60000	200	16800	200	31300	200	1750	4.00
Heptane	U	4.00	3.00	J 4.00	U	4.00	U	4.00	U	4.00
cis-1,3-Dichloropropene	U	4.00	U	4.00	U	4.00	U	4.00	U	4.00
Methyl Isobutyl Ketone	U	4.00	U	4.00	U	4.00	U	4.00	U	4.00
trans-1,3-Dichloropropene	U	4.00	U	4.00	U	4.00	U	4.00	U	4.00
1,1,2-Trichloroethane	U	4.00	4.00	4.00	U	4.00	U	4.00	U	4.00
Toluene	U	4.00	U	4.00	U	4.00	U	4.00	U	4.00
2-Hexanone	U	4.00	U	4.00	U	4.00	U	4.00	U	4.00
Dibromochloromethane	U	4.00	U	4.00	U	4.00	U	4.00	U	4.00
1,2-Dibromoethane	U	4.00	U	4.00	U	4.00	U	4.00	U	4.00
Tetrachloroethene	24.0	4.00	19.0	4.00	22.0	4.00	33.0	4.00	28.0	4.00
Chlorobenzene	U	4.00	U	4.00	U	4.00	U	4.00	U	4.00
Ethylbenzene	U	4.00	U	4.00	U	4.00	U	4.00	U	4.00
m&p-Xylene	U	4.00	U	4.00	U	4.00	U	4.00	U	4.00
Bromoform(Tribromomethane)	U	4.00	U	4.00	U	4.00	U	4.00	U	4.00
Styrene	U	4.00	U	4.00	U	4.00	U	4.00	U	4.00
1,1,2,2-Tetrachloroethane	U	4.00	U	J 4.00	U	4.00	U	4.00	U	4.00
o-Xylene	U	4.00	U	4.00	U	4.00	U	4.00	U	4.00
Ethyltoluene	U	4.00	U	4.00	U	4.00	U	4.00	U	4.00
1,3,5-trimethylbenzene	U	4.00	U	4.00	U	4.00	U	4.00	U	4.00
1,2,4-Trimethylbenzene	U	4.00	U	4.00	U	4.00	U	4.00	U	4.00
1,3-Dichlorobenzene	U	4.00	U	4.00	U	4.00	U	4.00	U	4.00
1,4-Dichlorobenzene	U	4.00	U	4.00	U	4.00	U	4.00	U	4.00
1,2-Dichlorobenzene	U	4.00	U	4.00	U	4.00	U	4.00	U	4.00

Preliminary Results
Data Not Validated

Results are in part per billion by volume (ppbv)
A = Assumed volume
U = None detected at or above the limit of quantitation
B = Concentration less than 5 times the reported blank result
J = Result is considered estimated

**Table 3 - Air Toxic Target Compound Results for Summa Canister Samples
Little Valley, Little Valley, New York, WA# R1A00165**

Sample Number Sample Location Dilution Factor Compounds	44768 COMP-1A 25		44769 COMP-1B 25		44770 SVE-56 25		44771 SVE-1234 25	
	Results	RL	Results	RL	Results	RL	Results	RL
	ppbv	ppbv	ppbv	ppbv	ppbv	ppbv	ppbv	ppbv
Propylene	U	4.00	U	4.00	U	4.00	U	4.00
Dichlorodifluoromethane	U	4.00	U	4.00	U	4.00	U	4.00
Chloromethane	U	4.00	U	4.00	U	4.00	U	4.00
Dichlorotetrafluoroethane	U	4.00	U	4.00	U	4.00	U	4.00
Vinyl Chloride	U	4.00	U	4.00	U	4.00	U	4.00
1,3-Butadiene	U	4.00	U	4.00	U	4.00	U	4.00
Bromomethane	U	4.00	U	4.00	U	4.00	U	4.00
Chloroethane	U	4.00	U	4.00	U	4.00	U	4.00
Acetone	7.00	20.0	10.0	20.0	16.0	20.0	10.0	20.0
Trichlorofluoromethane	U	4.00	3.00	4.00	8.00	4.00	U	4.00
Isopropyl Alcohol	U	4.00	U	4.00	U	4.00	U	4.00
1,1-Dichloroethene	U	4.00	U	4.00	U	4.00	U	4.00
Methylene Chloride	U	20.0	U	20.0	U	20.0	U	20.0
Trichlorotrifluoroethane	U	4.00	U	4.00	U	4.00	U	4.00
trans-1,2-Dichloroethene	4.00	4.00	8.00	4.00	U	4.00	8.00	4.00
1,1-Dichloroethane	U	4.00	U	4.00	U	4.00	U	4.00
MTBE	U	4.00	U	4.00	U	4.00	U	4.00
Vinyl Acetate	U	4.00	U	4.00	U	4.00	U	4.00
2-Butanone	27.0	4.00	58.0	4.00	131	4.00	49.0	4.00
cis-1,2-Dichloroethene	13.0	4.00	26.0	4.00	6.00	4.00	29.0	4.00
Ethyl Acetate	U	4.00	U	4.00	U	4.00	U	4.00
Hexane	U	4.00	U	4.00	U	4.00	U	4.00
Chloroform	U	4.00	U	4.00	U	4.00	U	4.00
Tetrahydrofuran	72.0	4.00	54.0	4.00	10	4.00	64.0	4.00
1,2-Dichloroethane	U	4.00	U	4.00	U	4.00	U	4.00
1,1,1-Trichloroethane	U	4.00	U	4.00	U	4.00	U	4.00
Benzene	U	4.00	U	4.00	U	4.00	U	4.00
Carbon Tetrachloride	U	4.00	U	4.00	U	4.00	U	4.00
Cyclohexane	U	4.00	U	4.00	U	4.00	U	4.00
1,2-Dichloropropane	U	4.00	U	4.00	U	4.00	U	4.00
1,4-Dioxane	U	20.0	U	20.0	U	20.0	U	20.0
Trichloroethene	6220	80.0	10500	200	8850	200	16300	200
Heptane	U	4.00	U	4.00	U	4.00	U	4.00
cis-1,3-Dichloropropene	U	4.00	U	4.00	U	4.00	U	4.00
Methyl Isobutyl Ketone	U	4.00	U	4.00	U	4.00	U	4.00
trans-1,3-Dichloropropene	U	4.00	U	4.00	U	4.00	U	4.00
1,1,2-Trichloroethane	U	4.00	U	4.00	U	4.00	U	4.00
Toluene	U	4.00	U	4.00	U	4.00	U	4.00
2-Hexanone	U	4.00	U	4.00	U	4.00	U	4.00
Dibromochloromethane	U	4.00	U	4.00	U	4.00	U	4.00
1,2-Dibromoethane	U	4.00	U	4.00	U	4.00	U	4.00
Tetrachloroethene	21.0	4.00	15.0	4.00	9.00	4.00	16.0	4.00
Chlorobenzene	U	4.00	U	4.00	U	4.00	U	4.00
Ethylbenzene	U	4.00	U	4.00	U	4.00	U	4.00
m&p-Xylene	U	4.00	U	4.00	U	4.00	U	4.00
Bromoform(Tribromomethane)	U	4.00	U	4.00	U	4.00	U	4.00
Styrene	U	4.00	U	4.00	U	4.00	U	4.00
1,1,2,2-Tetrachloroethane	U	4.00	U	4.00	U	4.00	U	4.00
o-Xylene	U	4.00	U	4.00	U	4.00	U	4.00
Ethyltoluene	U	4.00	U	4.00	U	4.00	U	4.00
1,3,5-trimethylbenzene	U	4.00	U	4.00	U	4.00	U	4.00
1,2,4-Trimethylbenzene	U	4.00	U	4.00	U	4.00	U	4.00
1,3-Dichlorobenzene	U	4.00	U	4.00	U	4.00	U	4.00
1,4-Dichlorobenzene	U	4.00	U	4.00	U	4.00	U	4.00
1,2-Dichlorobenzene	U	4.00	U	4.00	U	4.00	U	4.00

Preliminary Results
Data Not Validated

**Table 4 - Air Toxic Non-Target Compound Result for Canister Samples
Little Valley, Little Valley, NY, WA # 0-165**

Sample Number: Method Blank
Sample Location: 060530-1
Data File: 2AT02035

	CAS	Compound Name	Q	Retention Time (mins)	Concentration *(ppbv)
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No non-targets were found

* Estimated Concentration

**Table 4 - Air Toxic Non-Target Compound Result for Canister Samples
Little Valley, Little Valley, NY, WA # 0-165**

Sample Number: 44772
Sample Location: TB-60516
Data File: 2AT02038

	CAS	Compound Name	Q	Retention Time (mins)	Concentration *(ppbv)
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No non-targets were found

* Estimated Concentration

**Table 4 - Air Toxic Non-Target Compound Result for Canister Samples
Little Valley, Little Valley, NY, WA # 0-165**

Sample Number: 44761
Sample Location: SVE-5
Data File: 2AT02039

	CAS	Compound Name	Q	Retention Time (mins)	Concentration *(ppbv)
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No non-targets were found

* Estimated Concentration

**Table 4 - Air Toxic Non-Target Compound Result for Canister Samples
Little Valley, Little Valley, NY, WA # 0-165**

Sample Number: 44762
Sample Location: SVE-6
Data File: 2AT02040

	CAS	Compound Name	Q	Retention Time (mins)	Concentration *(ppbv)
1		Unknown branched alkanes		25.01	10.0

* Estimated Concentration

**Table 4 - Air Toxic Non-Target Compound Result for Canister Samples
Little Valley, Little Valley, NY, WA # 0-165**

Sample Number: 44763
Sample Location: SVE-4
Data File: 2AT02041

	CAS	Compound Name	Q	Retention Time (mins)	Concentration *(ppbv)
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No non-targets were found

* Estimated Concentration

**Table 4 - Air Toxic Non-Target Compound Result for Canister Samples
Little Valley, Little Valley, NY, WA # 0-165**

Sample Number: 44764
 Sample Location: SVE-3
 Data File: 2AT02042

	CAS	Compound Name	Q	Retention Time (mins)	Concentration *(ppbv)
1		Unknown		13.81	10.0
2		Heptane + unknown		13.89	20.0
3		Cyclohexanone		18.95	30.0

* Estimated Concentration

**Table 4 - Air Toxic Non-Target Compound Result for Canister Samples
Little Valley, Little Valley, NY, WA # 0-165**

Sample Number: 44765
Sample Location: SVE-2
Data File: 2AT02043

	CAS	Compound Name	Q	Retention Time (mins)	Concentration *(ppbv)
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No non-targets were found

* Estimated Concentration

**Table 4 - Air Toxic Non-Target Compound Result for Canister Samples
Little Valley, Little Valley, NY, WA # 0-165**

Sample Number: 44766
Sample Location: SVE-1
Data File: 2AT02044

	CAS	Compound Name	Q	Retention Time (mins)	Concentration *(ppbv)
1		Cyclohexanone		18.93	60.0

* Estimated Concentration

**Table 4 - Air Toxic Non-Target Compound Result for Canister Samples
Little Valley, Little Valley, NY, WA # 0-165**

Sample Number: 44767
Sample Location: TREN-1
Data File: 2AT02045

	CAS	Compound Name	Q	Retention Time (mins)	Concentration *(ppbv)
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No non-targets were found

* Estimated Concentration

**Table 4 - Air Toxic Non-Target Compound Result for Canister Samples
Little Valley, Little Valley, NY, WA # 0-165**

Sample Number: 44768
Sample Location: COMP-1A
Data File: 2AT02047

	CAS	Compound Name	Q	Retention Time (mins)	Concentration *(ppbv)
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No non-targets were found

* Estimated Concentration

**Table 4 - Air Toxic Non-Target Compound Result for Canister Samples
Little Valley, Little Valley, NY, WA # 0-165**

Sample Number: 44767 Rep
Sample Location: TREN-1
Data File: 2AT02046

	CAS	Compound Name	Q	Retention Time (mins)	Concentration *(ppbv)
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No non-targets were found

* Estimated Concentration



**Table 4 - Air Toxic Non-Target Compound Result for Canister Samples
Little Valley, Little Valley, NY, WA # 0-165**

Sample Number: 44769
Sample Location: COMP-1B
Data File: 2AT02048

	CAS	Compound Name	Q	Retention Time (mins)	Concentration *(ppbv)
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No non-targets were found

* Estimated Concentration

Little Valley, Little Valley, NY, WA # 0-165

Sample Number: 44770
Sample Location: SVE-56
Data File: 2AT02049

	CAS	Compound Name	Q	Retention Time (mins)	Concentration *(ppbv)
1		Cyclohexanone		18.97	10.0

* Estimated Concentration

**Table 4 - Air Toxic Non-Target Compound Result for Canister Samples
Little Valley, Little Valley, NY, WA # 0-165**

Sample Number: 44771
Sample Location: SVE-1234
Data File: 2AT02050

	CAS	Compound Name	Q	Retention Time (mins)	Concentration *(ppbv)
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No non-targets were found

* Estimated Concentration