23 February 2006

Mr. Barney Chan
Alameda County Health Care Services Agency
Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Subject: Transmittal of Work Plan for Phase III Investigation, 751-785 Seventh Street, Oakland, Toxics Case RO0002586

Dear Mr. Chan:

This letter transmits a work plan for a focused Phase III Investigation at the 751-785 Seventh Street site in Oakland prepared by BASELINE Environmental Consulting. I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge.

Sincerely,

Tom McCoy
Brush Street Parners, LLC

BASELINE
ENVIRONMENTAL CONSULTING

24 February 2006
Y0323-02.00367

Mr. Barney Chan
Alameda County Health Care Services Agency
Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Subject: Work Plan for Phase III Investigation, 751-785 Seventh Street, Oakland, Toxics Case RO0002586

Dear Mr. Chan:

This letter presents a work plan prepared in response to your letter dated 15 February 2006, in which you commented on a work plan proposed in our memorandum dated 20 January 2006. Our memorandum proposed a focused Phase III work plan to investigate the presence of chlorinated volatile organic compounds (cVOCs) in the southwestern corner of the 751-785 Seventh Street site (Site) in the vicinity of the "Frog Pond" which were identified during the Phase II investigation conducted in November 2005.

An asphalt patch with the approximate dimensions of the "Frog Pond" can be seen on the ground. Two of the Phase II borings were to be located within the "Frog Pond". During drilling of both of these borings, a uniform pea gravel was observed from below the asphalt to about four feet below the ground surface ("bgs"), where refusal was encountered. The asphalt patch, and the uniform shallow fill and refusal at the same depth in the two borings suggest that the "Frog Pond" was a below ground structure. Refusal may have been caused by encountering the bottom of the "Frog Pond." Available historic documents contain no record of any party having filled and paved over the "Frog Pond" since it was cleaned out during the U.S. EPA-directed emergency response action conducted in 1998/1999.

A grab groundwater sample collected from the Phase II boring B-FP14 (Figure 1) contained trichloroethene ("TCE") at 1,000 µg/L and cis-1,2-dichloroethene (cis-DCE) at 2,200 µg/L (Table 1). This boring was originally intended to be within the "Frog Pond", but was moved just outside of the southwestern corner of the asphalt patch because of refusal. The TCE concentration is above the Environmental Screening Level ("ESL") for indoor air concerns published by the San Francisco Bay Regional Water Quality Control Board for residential land use with high permeability soils. This finding was unexpected since grab groundwater samples

collected from other borings in this portion of the Site (B-FP4, B-FP13, and SS-FP9) contained significantly lower concentrations of both TCE and cis-DCE compounds, all well below ESLs; among these three other groundwater samples, the maximum TCE concentration was 21 µg/L in B-FP4 and the maximum cis-DCE concentration was 11 µg/L in B-FP13 (Table 1). With two minor exceptions, soil samples collected from borings in this part of the Site that were analyzed for VOCs did not contain any compounds above laboratory reporting limits. The exceptions were the sample collected from 0.5 to 1.0 feet bgs from boring B-FP14 which contained TCE at 0.0094 mg/kg, near the laboratory reporting limit of 0.0047 mg/kg, and the 1.5-foot bgs sample from B-FP3 which contained TCE at 0.024 mg/kg (Table 2). The elevated TCE and cis-DCE concentrations in the Phase II B-FP14 grab groundwater sample therefore seem inconsistent with available soil and groundwater data.

These results from the Phase II investigation results raised several questions:

- Is the soil in the unsaturated zone near B-FP14 a source of the cVOCs?
- Regardless of whether on-site soil is a source, are the cVOCs that may underlie the Site in soil and/or groundwater present in the soil gas at concentrations that represent an unacceptable health risk to future users of the Site?
- If the on-site soil is a source, what is the extent and severity of cVOCs contamination in the soil? Is soil remediation needed? What are the actual concentrations of cVOCs in the groundwater underlying this portion of the Site?

We propose a focused Phase III investigation to address these questions.

Proposed Phase III Work Plan

The Phase III investigation will consist of a soil gas survey, and soil and groundwater sampling. Groundwater flow direction in the southwestern corner of the Site is inferred from the groundwater behavior observed on the adjacent Shell service station Site, where groundwater extraction and treatment has been conducted for several years. The November 2005 quarterly monitoring report for the Shell station, prepared by Cambria Environmental Technology, Inc., suggests that the groundwater flow direction in the southwestern corner of the Site is toward the southwest, as indicated in Figure 1.[1]

Soil and Groundwater Sampling

A total of six soil borings are proposed as shown on Figure 1. One boring, B-FP18 will be located adjacent to and in the presumed downgradient direction from the Phase II boring B-FP14. Three borings, B-FP19 through B-FP21, will be located about 15 feet apart along a transect about 15 feet downgradient of B-FP14. One boring will be located just outside the

[1] Third Quarter 2005 Monitoring Report, Shell-branded Service Station, 610 Market Street, Oakland, California, Incident #99895750, Cambria Project #247-0594-002, ACHCSA Case #RO-0493, prepared by Cambria Environmental Technology, dated November 2005.

northern corner of the "Frog Pond". And the sixth boring, B-FP23, will be attempted within the "Frog Pond" itself, but may be relocated if drilling through the presumed bottom of the "Frog Pond" is unsuccessful; this boring may be relocated just beyond the southern edge of the "Frog Pond" if the auger rig cannot penetrate the bottom.[2]

Each boring will be advanced to at least one foot below the groundwater table. Soil samples will be collected from five, ten, and 15 feet below the ground surface (bgs) in the vadose zone into Encore™ samplers and analyzed for VOCs by EPA Method 8260B.[3] One grab groundwater sample will be collected from each boring by inserting a temporary PVC casing in the borehole. Groundwater samples will be collected using a peristaltic pump with new disposable PVC tubing using a low-flow method. The temporary wells will be purged of at least one casing volume. Samples will be directly filled into laboratory-prepared VOA bottles containing hydrochloric acid as a preservative. The soil and groundwater sample containers will be labeled, placed in a cooler with ice, and transported to a certified laboratory under chain-of-custody procedures.

A permit for the borings will be obtained from the Alameda County Public Works Agency, and a site-specific health and safety plan will be prepared to protect field personnel. A BASELINE professional geologist will direct the proposed investigation using standard industry practices for drilling, decontamination, and sample collection to ensure collection of representative samples.

Drilling and soil sample collection will be performed using a direct-push rig equipped with a dual-core sampler. A hollow-stem auger rig will be used to attempt to drill through the presumed bottom of the "Frog Pond". Decontamination of sampler and corer will be performed by steam cleaning, or by scrubbing in an Alconox solution followed by potable water rinse/deionized water rinse. All boreholes will be grouted to the surface upon completion of field activities.

Soil Gas Survey

A soil gas survey will be conducted in the southwestern corner of the Site in compliance with the document, "Advisory - Active Soil Gas Investigations", dated 28 January 2003 established by the Department of Toxic Substances Control (DTSC) and Los Angeles Regional Water Quality Control Board (RWQCB).

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[2] The County letter dated 15 February 2006 also requested that a boring be placed adjacent to previous boring B-FP3. This is not being proposed since the proposed boring B-FP21 is located only about ten feet away from B-FP3 and in a downgradient direction.

[3] The County letter also requested soil samples to be collected from the capillary fringe, BASELINE believes that this is inappropriate because it would be unclear whether any compounds that may be identified in these samples are associated with the soil (e.g., associated with an on-site source) or with groundwater. These samples also do not seem necessary since groundwater sample collection is being proposed. Depending on where the groundwater table is during the investigation, it may be that the 15-foot bgs soil sample will be fairly near the top of the capillary fringe.

The lithology at the Site below the surface concrete or asphalt consists of fill down to a depth of three to five feet bgs. The fill is underlain by the fine-grained sands of the Merritt Sands unit of the San Antonio Formation. Groundwater has been observed in the range of about 12 to 19 feet bgs. The depth to water during the November 2005 Phase II investigation in boring B-FP14 was about 19 feet bgs. The water level is expected to be higher in March 2006 as a result of the winter rains.

Soil gas samples will be collected from all six borings from about seven and 15 feet bgs within the vadose zone. BASELINE will retain TEG of Rancho Cordova, California, who will install temporary soil gas probes and provide a mobile California-certified analytical laboratory to analyze the samples on-site using EPA Method 8260B. Hydrated bentonite will be used to seal around the drive rod at the surface to prevent ambient air from being drawn down into the subsurface. The initial soil gas samples will not be collected for at least 20 minutes following installation of the soil gas probes.

The first sample location will be B-FP18. Soil gas samples will be collected using calibrated glass syringes and analyzed on-site in the mobile laboratory. Sampling flow rates will be between 100 and 200 milliliters per minute. A multi-step purge test will be conducted at the seven foot bgs depth in B-FP18 to established the optimal purge volume for all subsequent samples. Three purge soil gas samples will be collected, one after purging one volume of the sample train, one after purging three volumes, and one after purging seven volumes. The sample that contains the highest concentration of TCE or cis-DCE will determined the purge volume to be removed from the sample train at all other locations and depths prior to actual sample collection. If none of the purge volumes produces a sample with detectable concentrations of cVOCs, then subsequent samples will be collected after three volumes have been purged.

During sampling, isopropanol will be sprayed on the aboveground fittings and connection points to identify possible leaks in the sampling train. Isopropanol is not expected to be present in the subsurface and will be included in the analytical list as a tracer indicator of leaks.

A duplicate soil gas sample will be collected in a one-liter Summa canister and sent to Air Toxics Laboratory in Folsom, California. This sample is expected to be collected from B-FP18, unless the samples collected from this location do not contain detectable concentrations of cVOCs as determined by the mobile laboratory.

Sampling handling, sample container decontamination, and quality assurance/quality control procedures will be performed by the mobile laboratory in accordance with the DTSC guidance. The boreholes will be grouted up to the surface with neat cement at the completion of soil gas sampling.

Following the completion of the field investigation, a comprehensive report presenting the results from both the Phase II and III investigations will be prepared and submitted to the County for review, as proposed previously in the Phase II investigation work plan.

We have scheduled the mobile laboratory to conduct the soil gas survey for mid-March, and a driller for the soil and groundwater sampling effort toward the end of March. Your expeditious review of this work plan would be very much appreciated to allow the investigation to proceed as scheduled. Please contact us at your convenience if you have any questions on this work plan.

Professional Certification

This work plan was prepared by myself or by other professionals directly under my supervision.

Sincerely,

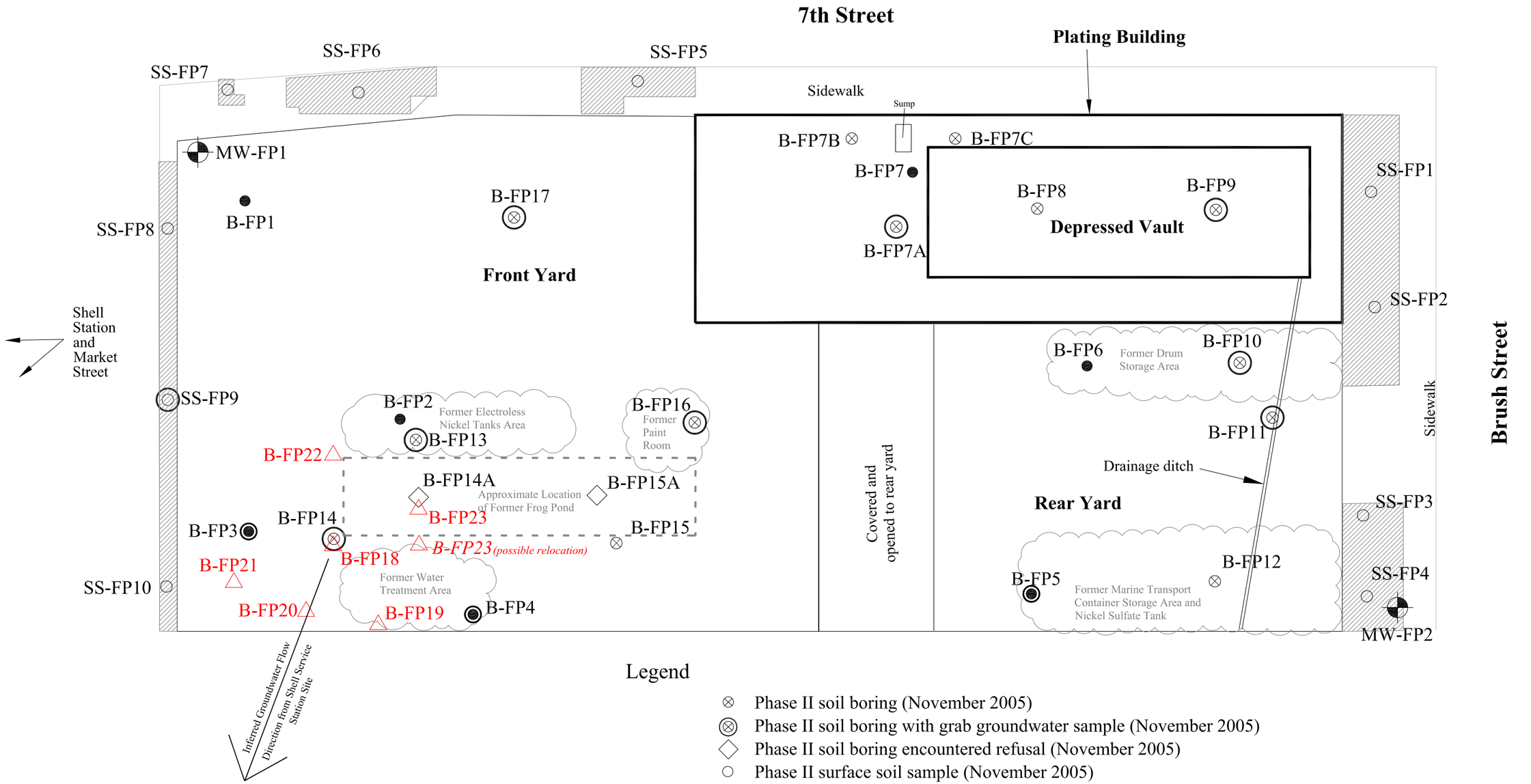
Lydia Huang
P.E. No. 43995

LH:km

Y0323-02.00367 - 2/24/06

PREVIOUS AND PROPOSED PHASE III BORING LOCATIONS

FIGURE 1



Legend

- Phase II soil boring (November 2005)
- Phase II soil boring with grab groundwater sample (November 2005)
- Phase II soil boring encountered refusal (November 2005)
- Phase II surface soil sample (November 2005)
- Phase II surface soil sample with grab groundwater sample (November 2005)
- Phase I soil boring (February 2003)
- Phase I soil boring with grab groundwater sample (February 2003)
- Groundwater monitoring well (February 2003)
- Exposed soil
- Proposed Phase III boring

0 20 Feet

751 - 785 Seventh Street
Oakland, California

BASELINE

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TABLE 1: Abbreviated Summary of VOC Concentrations in Groundwater Samples (mg/L)
781-785 Seventh Street, Oakland

Matrix	Sample ID	Sample Date	1,1,1-Trichloroethane	1,1-Dichloroethene	2-Chlorotoluene	Acetone	Chloroform	cis-1,2-Dichloroethene	Methylene Chloride	MTBE	o-Xylene	Tetrachloroethene	trans-1,2-Dichloroethene	Trichloroethene	Vinyl Chloride
Water	MW-FP1	02/12/03	<5	<5	<5	<20	<5	<5	<20	<5	<5	<5	<5	<5	<10
Water	MW-FP2	02/12/03	<5	<5	<5	<20	<5	<5	<20	<5	<5	<5	<5	<5	<10
Water	B-FP4	02/05/03	<5	<5	<5	<20	<5	<5	<20	<5	<5	<5	<5	**21**	<10
Water	B-FP5	02/05/03	<5	<5	<5	<20	<5	<5	<20	<5	<5	<5	<5	**42**	<10
Water	MW-FP1	11/28/05	<0.5	<0.5	<0.5	<10	<0.5	<0.5	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Water	MW-FP2	11/28/05	<0.5	<0.5	<0.5	<10	<0.5	<0.5	<10	<0.5	<0.5	<0.5	<0.5	0.6	<0.5
Water	B-FP7A	11/29/05	<0.5	<0.5	<0.5	<10	<0.5	<0.5	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Water	B-FP9	11/22/05	**0.7**	<0.5	<0.5	<10	<0.5	<0.5	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Water	B-FP10	11/28/05	**9.8**	**5.1**	<0.5	<10	<0.5	<0.5	<10	<0.5	<0.5	<0.5	<0.5	**8.9**	<0.5
Water	B-FP11	11/28/05	**1.2**	**0.5**	<0.5	<10	<0.5	<0.5	<10	**7.7**	<0.5	<0.5	<0.5	**1.2**	<0.5
Water	B-FP13	11/29/05	<0.5	<0.5	<0.5	**13**	<0.5	**11**	<10	<0.5	<0.5	<0.5	**0.9**	**13**	<0.5
Water	B-FP14	11/29/05	<20	<20	<20	<400	<20	**2,200**	<400	<20	<20	<20	**58**	**1,000**	<20
Water	B-FP16	11/28/05	<0.5	<0.5	<0.5	<10	**0.6**	<0.5	<10	<0.5	<0.5	<0.5	<0.5	**8**	<0.5
Water	B-FP17	11/28/05	<0.5	<0.5	<0.5	<10	<0.5	<0.5	<10	**1.3**	<0.5	<0.5	<0.5	<0.5	<0.5
Water	SS-FP9	11/29/05	<0.5	<0.5	**4.1**	<10	<0.5	**1.7**	<10	<0.5	**1**	<0.5	<0.5	**3.6**	<0.5

Note: Only compounds with hits or of potential concern are listed.

TABLE 2: Abbreviated Summary of VOC Concentrations in Soil Samples (mg/kg)
781-785 Seventh Street, Oakland

Matrix	Sample ID	Sample Date	1,1,1-Trichloroethane	cis-1,2-Dichloroethene	Methylene Chloride	Tetrachloroethene	trans-1,2-Dichloroethene	Trichloroethene	Vinyl Chloride
Soil	B-FP1;2.5	02/05/03	<0.0049	<0.0049	<0.02	<0.0049	<0.0049	<0.0049	<0.0098
Soil	B-FP1;5.5	02/05/03	<0.0044	<0.0044	<0.018	<0.0044	<0.0044	<0.0044	<0.0088
Soil	B-FP-2;2.5	02/05/03	<0.0047	<0.0047	<0.019	<0.0047	<0.0047	<0.0047	<0.0094
Soil	B-FP2;5.5	02/05/03	<0.0043	<0.0043	<0.017	<0.0043	<0.0043	<0.0043	<0.0086
Soil	B-FP3;1.5	02/04/03	<0.0047	<0.0047	<0.019	<0.0047	<0.0047	**0.024**	<0.0094
Soil	B-FP3;5.0	02/04/03	<0.0047	<0.0047	<0.019	<0.0047	<0.0047	<0.0047	<0.0094
Soil	B-FP4;2.5	02/04/03	<0.005	<0.005	<0.02	<0.005	<0.005	<0.005	<0.01
Soil	B-FP4;5-5.5	02/04/03	<0.0049	<0.0049	<0.02	<0.0049	<0.0049	<0.0049	<0.0098
Soil	B-FP5;2.5	02/04/03	**0.0054**	<0.0044	<0.018	<0.0044	<0.0044	**0.033**	<0.0088
Soil	B-FP5;5.5	02/04/03	<0.0047	<0.0047	<0.019	<0.0047	<0.0047	<0.0047	<0.0094
Soil	B-FP6;2.5	02/05/03	<0.0048	<0.0048	<0.019	<0.0048	<0.0048	<0.0048	<0.0096
Soil	B-FP6;5.5	02/05/03	**0.005**	<0.0044	<0.018	<0.0044	<0.0044	<0.0044	<0.0088
Soil	B-FP7;2.5	02/05/03	<0.0047	<0.0047	<0.019	<0.0047	<0.0047	<0.0047	<0.0094
Soil	B-FP7;5.5	02/05/03	<0.0045	<0.0045	<0.018	<0.0045	<0.0045	<0.0045	<0.0089
Soil	COMP FY	02/05/03	<0.0051	<0.0051	<0.02	<0.0051	<0.0051	<0.0051	<0.01
Soil	COMP RY	02/05/03	<0.0052	<0.0052	<0.021	<0.0052	<0.0052	<0.0052	<0.01
Soil	B-FP8;2.5-3	11/22/05	<0.0048	<0.0048	<0.019	<0.0048	<0.0048	<0.0048	<0.0096
Soil	B-FP9;2-2.5	11/22/05	<0.0045	<0.0045	**0.028**	<0.0045	<0.0045	<0.0045	<0.0091
Soil	B-FP10;0.5-1.0	11/28/05	<0.0047	<0.0047	<0.019	<0.0047	<0.0047	<0.0047	<0.0094
Soil	B-FP11;0.5-1.0	11/28/05	<0.0048	<0.0048	<0.019	<0.0048	<0.0048	<0.0048	<0.0096
Soil	B-FP12;0.5-1.0	11/29/05	<0.0046	<0.0046	<0.019	<0.0046	<0.0046	<0.0046	<0.0093
Soil	B-FP13;0.5-1.0	11/28/05	<0.0045	<0.0045	<0.018	<0.0045	<0.0045	<0.0045	<0.0091
Soil	B-FP14;0.5-1.0	11/29/05	<0.0047	<0.0047	<0.019	<0.0047	<0.0047	**0.0094**	<0.0094
Soil	B-FP15;0.5-1.0	11/29/05	<0.0053	<0.0053	<0.021	<0.0053	<0.0053	<0.0053	<0.011
Soil	B-FP15;3-3.5	11/29/05	<0.0048	<0.0048	<0.019	<0.0048	<0.0048	<0.0048	<0.0096
Soil	B-FP16;0.5-1.0	11/28/05	<0.0046	<0.0046	<0.019	<0.0046	<0.0046	<0.0046	<0.0093
Soil	B-FP17;0.5-1.0	11/28/05	<0.0047	<0.0047	<0.019	<0.0047	<0.0047	<0.0047	<0.0094

Note: Only compounds with hits or of potential concern are listed.