

MEMORANDUM

Alameda County
JAN 24 2006
Environmental Health
FILE NO.: Y0323-02

TO: Mr. Barney Chan
Alameda County Health Care Services

FROM: Lydia Huang, BASELINE

Lydia Huang (510) 420-8686

DATE: 20 January 2006

SUBJECT: Update on Phase II Investigation Results and Proposal for Focused Phase III Investigation, 751-785 7th Street, Oakland, Toxic Case RO0002586

Field work to implement the Phase II investigation work plan was conducted at the end of November 2005. Information from the investigation indicates the need for a focused Phase III investigation in the vicinity of the former "Frog Pond" for volatile organic compounds ("VOCs").

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 from the Phase II boring B-FP14 (Figure 1), which was moved just outside of the southwestern corner of the asphalt patch, contained trichloroethene ("TCE") at 1,000 µg/L and cis-1,2-dichloroethene (cis-DCE) at 6,200 µg/L (Table 1). These concentrations are above the Environmental Screening Levels ("ESLs") 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 these compounds (well below ESLs); among these three 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 one minor exception, 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 one exception was 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 (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.

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The Phase II results raised several questions:

1. Is the soil in the unsaturated zone near B-FP14 a source of the chlorinated compounds?
2. Regardless of whether on-site soil is a source, are the chlorinated compounds 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?
3. If the on-site soil is a source, what is the extent and severity of contamination in the soil? Is soil remediation needed? What are the actual concentrations of chlorinated compounds in the groundwater underlying in this portion of the site?

To begin to address these questions, we propose a focused Phase III investigation to assess possible soil contamination and to assess soil gas concentrations in the vicinity of B-FP14. We propose to install five borings near B-FP14. One boring (B-FP18) would be placed immediately adjacent to B-FP14 and be advanced to 15 feet bgs, since the groundwater table was about 19 feet bgs; soil samples would be collected from about five, ten and 15 feet bgs and analyzed for VOCs. The other four borings (B-FP19 through B-FP22) would be located about ten feet away from B-FP14 in four direction; the borings would be advanced to ten feet bgs and samples would be collected at five and ten feet bgs for VOC analysis; if air monitoring using a photo ionization detector performed on the five or ten feet bgs samples from any of these four borings indicates the presence of VOCs, the boring(s) will be extended to also collect a soil sample from 15 feet bgs.

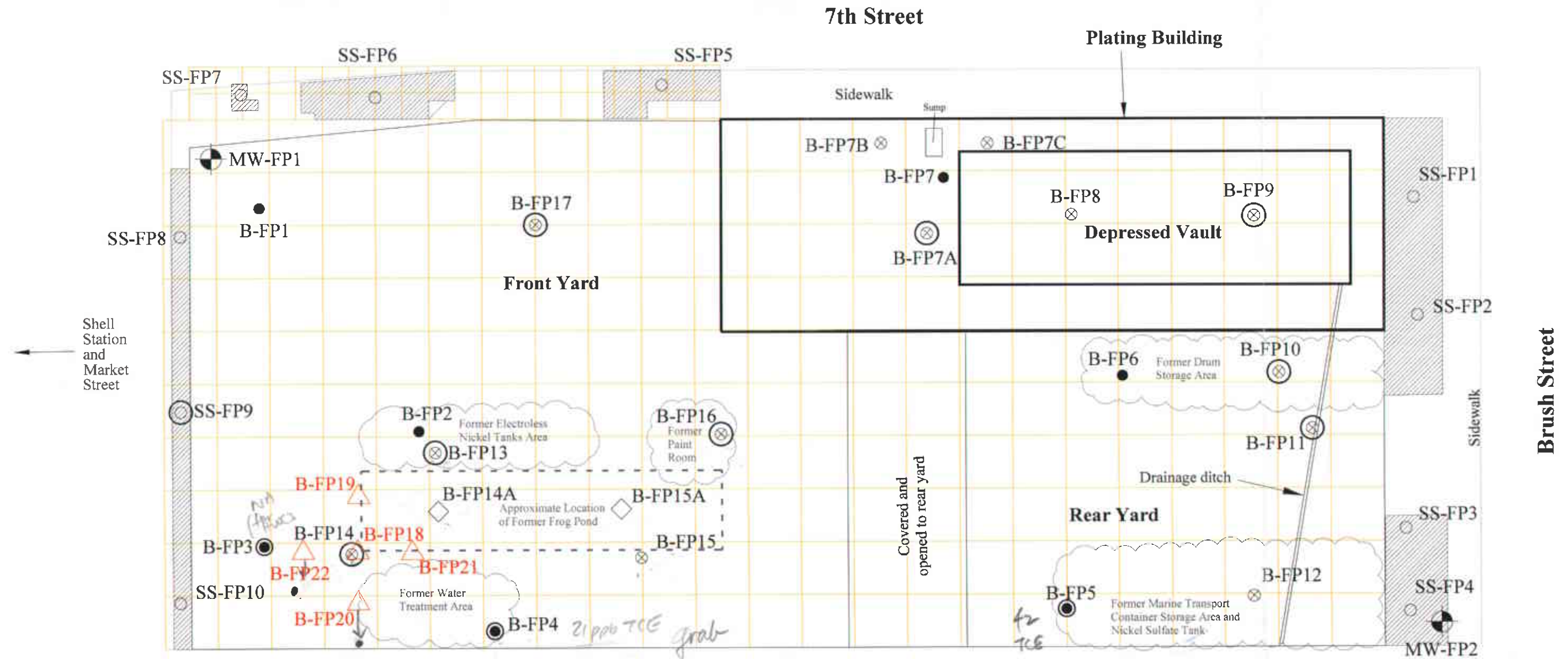
In addition, we propose to collect soil gas samples from these five locations and have the samples analyzed for VOCs. One sample would be collected from about five feet bgs from all five borings in Summa canisters and analyzed for VOCs by U.S. EPA Method TO-15 by a certified laboratory. Three volumes will be purged from the sampling system before the samples are collected.

With the County's consent, we would implement the Phase III investigation at the earliest opportunity and prepare a comprehensive report documenting the results from both the Phase II and Phase III investigations.

Attachments

cc: Mr. Tom McCoy

Y0323-02.00334.wpd - 1/20/06



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



751 - 785 Seventh Street
Oakland, California

**TABLE 1: Abbreviated Summary of VOC Concentrations in Groundwater Samples ($\mu\text{g/L}$)
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.

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ESL INDOOR AIR

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-FP2;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.